



AGENDA
CITY OF GLENWOOD SPRINGS
Planning and Zoning Commission
Regular Meeting
SEPTEMBER 24, 2019
Council Chambers, First Floor
101 W. 8TH STREET
6:00 PM

- 1 Roll Call
- 2 Receipt of the Minutes
 - A. Regular Meeting Minutes July 23, 2019
 - B. Regular Meeting Minutes August 24, 2019
- 3 Comments from citizens appearing for items not on the agenda
- 4 Continued Items
 - A. 11-19 - Consideration of a special use permit to allow for the construction of a 2,800 square foot convenience store and re-location of underground fuel storage tanks. ITEM WILL BE CONTINUED TO OCTOBER 22, 2019
 - B. 20-19 - Consideration of a Code Amendment to Section 070.040.020(d)(24) of the Glenwood Springs Municipal Code regarding riparian setbacks
- 5 New Items
 - A. 32-19 Special Use Permit for a 66-space surface parking lot in the M-1-Mixed Use Corridor Zoning District. The project includes a variance request from the requirement that no block of parking exceed eight spaces without providing a landscape island.
- 6 Commissioner Comments
- 7 Director Comments
- 8 Adjournment



Planning and Zoning Commission Report

Date: September 24, 2019

To: Planning and Zoning Commission

From:

Subject: Regular Meeting Minutes July 23, 2019

ACTION ITEMS

BACKGROUND

PROJECT SUMMARY

REVIEW CRITERIA AND STAFF ANALYSIS

REVIEWING AGENCY COMMENTS

ACTION ITEMS & STAFF RECOMMENDATIONS

Suggested Findings:



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

4. 16-18 – Consideration of an amendment to a Major Development Permit to allow an extension to a deadline for parking lot paving.

Applicant: Iron Mountain Hot Springs, LLC
Owner: Iron Mountain Hot Springs, LLC
Location: 281 Centennial Street
Zone: RE Resort District

Hannah Klausman presented the staff report. This is a continued item.

- Staff recommends denial.
- Design variance allowed unpaved parking lot for four years from approval or if a new application is made.
- New planning application in 2018.
- This item continued for more information.
- Most conditions satisfied.
- River trail is still being worked on.
- Major site architectural plan is consistent with purpose and intent of code
- Applicant has long-range plans that may change what was envisioned at the beginning
- Compromise is to pave the original 90 parking spaces leaving other areas unpaved.
- Colorado River District is concerned about volume of traffic generated.

Staff recommends denial, meaning that paving would happen now.

Questions to Staff

Commissioner Malloy had many questions about the parking expansion

- No approval was requested, and no approval was granted
- It seems the only argument being presented to not pay it currently is an economic one
- Asked numerous questions regarding redesign or expansion of the various parking areas

Hannah Klausman

- No development happened that would trigger a requirement to expand the parking lot
- Argument is relying heavily on the fact that a redesign of the parking lot would be difficult based on new development calling for it but no specific numbers
- Answered numerous questions regarding redesign of parking area
- Will let applicant present newly submitted design for parking area

Commissioner Grosscup

- Concerned about lighting requirements
- Concerned about the increase in impervious surfaces and when that will be triggered

Hannah Klausman responded

- Variances were granted regarding lighting
- 90 spaces were required per original permit. If any new development requiring more than the said amount of spaces, that would be a major trigger

Commissioner Schachter

- Verified that only original 90 parking spaces are involved and no bearing on future development.
- Does there come a point of violation from using the unpaved parking area?

Hannah Klausman

- There is an active application going on and there are some hang ups. After conversations with application things will be dealt with in a timely manner.

Applicant presentation: Mogli Cooper presented a drawing of the current road and how the future roadway will change when they build employee housing and an office.

- CDOT plans to build new office building and employee housing
- Per applicant's development plan, paving parking lot would require redoing what has been paved
- City lift station is outdated and needs relocation.
- The developer must replace lift station before the housing is built
- Asking for extension of paving to November 2021.
- She circulated photos of buildings and of Centennial Street
- Access exists for emergency vehicles
- Pedestrian access exists in parking lot

Questions to Applicant

Commissioner Wussow stated the applicant answered all her questions, specifically the rationale for being noncompliant.

Commissioner Malloy and Ms. Cooper had a conversation about timeline of development and where the parking would be redesigned. There was also talk about the location of the sewer line and lift station.

Commissioner Schachter and Ms. Cooper discussed the date of extension, mid November 2021, and location of sewer line. Commissioner Schachter also asked when a new development application will be submitted.

Commissioner Shaver asked about the trail easement and City Attorney Anna Itenberg answered they are hashing out the agreements of the easement. Commissioner asked about how future development of rezoned parcel will affect paving.

Ms. Cooper, Ms. Itenberg, and Commissioners followed the approximate easement location on the map provided by Ms. Cooper.

Commissioner Grosscup wondered if Ms. Cooper would be interested in a partial paving. Also asked how certain she is about the impacts of the CDOT employee housing building will have.

Ms. Cooper responded saying the impacts are mostly infrastructure.

Commissioner Malloy made an argument that there should be parts of this parking lot that will be more and less impacted by future development. Also asked when certain material has been included in the packet.

Jenn Ooton explained that until a full application has been submitted it can be very difficult to include that in the packet.

Ms. Cooper explained this has been an ever-changing project and changing plans dealing with CDOT.

Opened public hearing 6:52. No one to speak. Closed.

MOTION: Commissioner Wussow moved to approve extension to November 14, 2021 with

rationale that repaving multiple times does not support Comp Plan. Commissioner Shaver seconded the motion and discussion followed:

- Being asked to make decision with incomplete information.
- Asked for the specific information.
- Wanted to continue for full information.
- Question is whether to continue or grant a full approval
- Why not tie the extension to a more complete application and presentation.
- Allow a continuance for 60 days for better information.

Commissioner Wussow withdrew her motion. Commissioner Shaver withdrew second.

MOTION: Commissioner Malloy moved to continue application until an application for development of the adjacent CDOT parcel or December 31, 2019 whichever comes first. Commissioner Shaver seconded.

Discussion:

- Wanting as much information as possible in order to stop kicking the ball down the road
- Do not want an incomplete application; same issues will still be present
- Information that supports why the paving should not happen now

Ayes: Dehm, Shaver, Schachter, Malloy, Wussow, Wissing
Noes: Grosscup

Motion carried.

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.
- Braggs 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.

6. 16-19 – Consideration of a Special Use Permit to allow for a retail marijuana establishment.

Applicant:	Good People LLC dba Stash
Owner:	Don Garrett and Shawna Renee Patrick
Location:	2550 Highway CO Highway 82, Unit A112
Zone:	M1 Mixed Use Corridor District

Trent Hyatt presented the staff report.

- Current proposal to rehab a space into a retail marijuana outlet
- Retail marijuana is allowed per zone excluding cultivation

- This is half of the former liquor store space
- City and State licenses required per criteria
- Special use permit granted by P&Z and City Council required
- Asked permit holder on South Grand to relinquish his undeveloped SUP
- No comments were received from reviewing agencies or public

Options are approve, approve with conditions, deny or continue for more information.

Questions to Staff:

Commissioner Malloy

- Asked about the other special use permit holder on South Grand
- Concerned about left hand turn entering and exiting the property
- Significant uses in the Glenwood Commercial Center
- Comp Plan says retail that would compete with downtown retail is discouraged

Trent Hyatt

- Confirmed current permit holder would have prevented this store
- Discussed concerns about left turn but nothing planned to be done. CDOT did not want anything to be controlled
- Distance from downtown could preclude it from being considered competition

Commissioner Schachter asked what would happen if a school decided to go within 900 feet of this new marijuana shop and Mr. Hyatt explained the retail marijuana shop would be a legal non-conforming use.

Commissioner Shaver believes there may be need for a code revision on the different distinction of schools.

Commissioner Grosscup wonders why Glenwood is so unique in marijuana buffers from schools.

Shauna and Garrett Patrick spoke on behalf of their application.

- Began as a medical dispensary to help people
- Converted later to a retail shop as a business decision
- Employee and customer education
- Currently grow in Old Snowmass
- Had an offer on their business in downtown Aspen
- They are a mom and pop operation
- Focus on the quality of the product to differentiate themselves

Questions to Applicant

Commissioner Malloy wondered if there were any adverse effects that may negatively impact the community from this establishment and if anything, explaining those impacts were submitted with the application.

Shauna and Garrett explained edibles as depending on what chemicals have been used to extract, can cause stomach problems with the user and they did not include things explaining impacts in the application.

Commissioner Dehm clarified they are not doing medical any more and the applicants confirmed that.

Commissioner Grosscup asked why only retail allows them to service and help more people when other applicants explained the opposite.

Applicant explained switching to retail has allowed more freedom to give discounts and help people.

Commissioner Wussow asked what they purchased in the building and the applicant responded with only one of the two previously occupied spots.

Open to public 9:30 p.m.

Michael Blair opposed to selling marijuana in our community. That location is very difficult for anyone making a turn there. There should be an effort to improve the access point at this location.

Barbara Ford, 502 Hyland Park Dr., owns a retail shop in Glenwood Commercial Center and fully supports this application. She is also concerned that the Commission's focus is only on downtown.

Chris Lynch, 602 Cowdin Drive, owns property at 2554 Hwy 82 in Garfield County. Turns into Glenwood Commercial Center are very dangerous. Parking has been added along the guard rail which should not be there. Concerned about homeless buying and using the product which could start fires. Too many pot shops are already in town and Glenwood does not need any more.

9:43 closed public comments.

MOTION: Commissioner Schachter moved to approve with findings on page 8 and conditions on page 9. Commissioner Grosscup seconded.

Discussion:

Commissioner Schachter

- Question of how many are too many shops
- Access is not applicant's responsibility
- Council makes the determination on that point
- Access to the property is not our jurisdiction, must deal with CDOT

Commissioner Malloy

- Location is remote from the rest of town
- Concerned about safety at this location

Commissioner Wussow

- Meets criteria of Code
- Annexation has been approved by the City and uses to be there
- Use by right

Commissioner Grosscup

- Concerned about how many shops are too many

- Not concerned on this specific application

Commissioner Dehm

- Was here for annexation and the result was deemed okay, regarding the access

Motion carried unanimously.

Motion to extend meeting past 10:00 p.m. Commissioner Malloy seconded by Commissioner Grosscup. Carried by voice vote.

7. 20-19 – Consideration of a Code Amendment to Section 070.040.020(d)(24) of the Glenwood Springs Municipal Code

Applicant: City of Glenwood Springs
Owner: Multiple public and private properties
Location: Applies to areas within 50 feet of the ordinary high-water mark of perennial water courses in the City
Zone: All zone districts City wide

Commissioner Shaver recused himself from this discussion and left the meeting.

Trent Hyatt presented the staff report.

- Instructed to look at river setback.
- 30-foot setback area from the high watermark of any river
- Staff proposes format change
- Prohibits clearing of native vegetation
- 10% exemption to allow property owner to enjoy the river
- 50-feet from ordinary high watermark
- Formal ecological survey but ordinary high-water mark is usually visible
- Examples of other communities and what they are doing for riparian areas
- List of concerns expressed at work session

Recommend approval, deny, approval with conditions

Questions to staff:

Commissioner Malloy

- Does this leave any property undevelopable?
- How is the 10% exemptions calculated?
- Are structures allowed?
- Questions about wildfire mitigation

Trent Hyatt Responded saying property can apply for a variance and the percentage is of the undevelopable square footage area. Structures are currently prohibited.

Commissioner Schacter asked about grandfathering existing structures and pathways. Can structures be improved without having to appear before Planning and Zoning Commission.

Trent Hyatt responded that those structures and pathways would be legal non-conforming and would follow that section of our code.

Trent Hyatt and Commissioner Schacter discussed the further restrictions of the proposed standard regarding replacement of vegetation and buildability on lots.

Commissioner Wussow was concerned about the timeline of replacement of vegetation. Also concerned about how property owners who are impacted were notified. Further discussion with Trent Hyatt about how the public will be notified and educated city-wide if this goes through.

Commissioner Grosscup wondered how the setback number was settled upon.

Trent Hyatt responded saying it had something to do with the current setback and the rivers CFS.

Commissioner Malloy and Trent Hyatt discussed the wildfire mitigation part of this code.

Brendan Langenhuizen, Chair of the River Commission, spoke about the role of the River Commission.

- Received input from many sources
- Too much clearing of vegetation without any regulations to stop it
- Roaring Fork Conservancy worked with them
- Work sessions with the City Council
- Intent is to maintain the majority of the river
- Beautiful lawns look great but don't protect the river banks

Chad Rudow, Roaring Fork Conservancy, serves as an advisor to the River Commission. Spoke of riparian areas and the health of rivers

- Riparian areas act as sponge
- Prevents erosion
- Act as filters of what goes into the rivers
- Provide habitat
- Act as highways by providing migration routes
- Speed bumps to dissipate energy of river during high flows
- Increase property values
- Replenish groundwater
- Plants less likely to burn during a fire

Ashley Moffat, 509 Maple Street, Vice Chairman of River Commission, provided a handout to the Commission.

- Glenwood Springs is only municipality not protecting their riparian areas
- The new way of determining where the setback will start is easier
- Wanted 100 feet but 50 feet is good compromise
- Similar to current code but restricting clear cutting and adding pesticides

Scott Shriver, Engineer, who repairs riparian areas. - Named three reports of interest.

- Keep riparian areas
- Source Water Protection Plan shows Grizzly Creek is our water source and Roaring Fork is alternate source.
- Best management practices
- Education outreach is necessary.
- 303D List: Roaring Fork River's temperature is the concern.

- Highest priority contaminants are urban contaminants.
- MS4 municipal separate sewer systems.
- Storm water is not treated currently.
- Will have to treat storm water as well.

Erica Gibson, 2701 Midland Avenue, River Commissioner,

- Spoke about economic driver associated with our rivers.
- Glenwood Springs tourism is based on water resources.
- Our local economy is based in part on our healthy rivers.
- 320 local jobs that rely on healthy rivers.

10:49 p.m. open to public comment.

Harry Vick

- Listed the wildlife found in his back yard.
- Breaks between river and willows.
- His yard is cleared to the river.
- This setback will prevent redevelopment of a property.
- Too broad of a brush stroke
- He is opposed to the 50-foot distance.
- Concerns about how restrictive this is

Jenn Ooton confirmed they could extend the meeting if the vote is unanimous.

**MOTION: Commissioner Malloy moved to extend the meeting to 11:30 p.m.
Commissioner Grosscup seconded.**

Motion carried unanimously.

Michael Blair 1204 Sprucewood Lane.

- Agreed with Mr. Vick's comments.
- People own property adjacent to the river.
- People have the right to use and develop their property
- Fifty feet sounds arbitrary.

Ken Melby

- This setback will put you right in the middle of his home.
- This would be taking of property rights.
- Not all properties are the same

Chris Lynch, 602 Cowdin Drive

- Talked about her history living along the river.
- The effect of this ordinance would have on her ability to garden on her property.
- Her home was built in 1884. She is concerned that ordinance will prevent her from using her property.
- Value of home will be taken away

Dan Angelaro

- Lives on the river.

- He had plans to add to his home as his family has outgrown the space.
- This would affect his ability to plan for his family's future.

Rick Laffaro, Executive Director of Roaring Fork Conservancy,

- Encouraged the passing of this ordinance as it may not be as limiting as people have predicted.
- Tamarisk and Russian olive have intruded into the native habitat.
- He will work as advisor to City as he already does for Basalt and Garfield County.
- People can continue to enjoy quality of life on the river.
- There is room for variances.
- Provided letters from Roaring Fork Fishing Guide Alliance, Trout Unlimited, American Rivers

11:16 p.m. public comment portion closed.

Questions to staff:

Commissioner Wussow asked if the setback would be more or less in an ideal world.

Brendon Langenhuizen stated it would ideally be more than 50 feet especially in high sloped areas; he considered this a conservative recommendation. This will apply to new development and current development will be grandfathered.

Commissioner Schachter would like to see the distances on a map and are structures grandfathered in.

Commission and staff had discussion about grandfathered structures and nonconforming uses in the code. Ability to rebuild was discussed. Can build on same footprint following a catastrophic event, deterioration. Cannot increase degree of non-conformity.

Commissioner Malloy asked about mapping high water mark of property in riparian area throughout the city and what specifically is different from current and proposed code.

Staff stated that getting an entire survey of riparian area would be costly and timely. Trent Hyatt explained the difference of current code and proposed code.

Commissioner Grosscup and Trent Hyatt discussed about the protection of vegetation.

11:29 p.m.

MOTION: Commissioner Schachter moved to continue discussion of riparian setback, seconded by Commissioner Malloy.

Motion carried unanimously.

8. Commissioner Comments - none

9. Director Comments - none

10. Adjournment 11:30 p.m.

DRAFT



Planning and Zoning Commission Report

Date: September 24, 2019

To: Planning and Zoning Commission

From:

Subject: Regular Meeting Minutes August 24, 2019

REQUEST	
APPLICANT	
OWNER	
LOCATION	
ZONE	
SURROUNDING LAND USES	
LOT SIZE	

ACTION ITEMS

BACKGROUND

PROJECT SUMMARY

REVIEW CRITERIA AND STAFF ANALYSIS

REVIEWING AGENCY COMMENTS

ACTION ITEMS & STAFF RECOMMENDATIONS

Suggested Findings:



MINUTES
City of Glenwood Springs
Planning and Zoning Commission
Regular Meeting
August 27, 2019
Council Chambers, First Floor, City Hall
101 W. 8th Street
6:00PM

1. Work Session – 5PM

A. Civic Clerk Training

2. Regularly Scheduled Meeting – meeting was called to order at 6PM

Carolyn Cipperly motioned to seat Ingrid Wussow as meeting chair. Amber Wissing seconded. The motion carried by voice vote.

3. Roll Call

Present at roll call were Commissioners: Ingrid Wussow, George Shaver, Amber Wissing and Carolyn Cipperly

Absent: Kathryn Grosscup, Sumner Schachter, Tim Malloy, Marco Dehm and Dean Kinkel.

Also present were: Jenn Ooton, Asst. City Manager, Director Community Development Dept.
Gretchen Ricehill, Assistant Director Community Development Dept.
Anna S. Itenberg, City Attorney's Office
Jimmy Uvodich, Planner 1
Kathleen Michel, Admin. Assistant
Catherine Fletcher, City Clerk
Lindsey Christensen, Deputy City Clerk
Alissa Owsley, IT Director

George Shaver motioned to seat Carolyn Cipperly. Amber Wissing seconded the motion. Motion carried by voice vote.

4. Receipt of [minutes](#) from the [July 23, 2019](#) regular meeting. The minutes were continued to the next regular meeting.

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

6. Continued Items

A. 20-19 - Consideration of a Code Amendment to Section 070.040.020(d)(24) of the Glenwood Springs Municipal Code.

Motion to continue: George/Carolyn carried by voice vote.

B. 11-19 - Consideration of a special use permit to allow for the construction of a 2,800 square foot convenience store and re-location of underground fuel storage tanks.

Motion to continue: Commissioner Shaver, seconded by Commissioner Cipperly carried by voice vote

C. 05-19 - Consideration of Access and Circulation Code Text Amendments – Title 070.040.070 and 070.060.070 Glenwood Springs Municipal Code.

Jenn Oton reported on the redraft of the section as requested.

- How would money paid in lieu be used
- Minor improvements should not trigger sidewalk installation
- Fee in lieu in areas where sidewalks do not make sense
- Neighborhood might not want sidewalks
- Street reconstruction and substantial engineering on road
- Exceptions: Midland Avenue; Red Mountain Drive, Cardinal, Rockledge Drive; others in list
- Exceptions drainage issues, Public Works Director determination

Shaver had concerns about streets in the east area at higher elevations

Cipperly had concerns about cost factor for property owners

Open for public comment. No one wished to speak.

Chair called for motion: George moved to accept changes red proposed by staff in consideration of code sections with findings on page 4 & 5 and delete the blue changes. Modified motion re access and circulation only. Carolyn seconded. Carried unanimously.

7. New Items

A. 22-19 - Consideration of a variance from section 070.030.040(d)(1)(g) of the Glenwood Springs Municipal Code for a 2-foot 10-inch side yard setback to allow for the construction of an accessory dwelling unit in an existing detached garage.

Jimmy Uvodich presented the staff report.

- Zoning variance
- 636 sq.ft. garage convert to ADU
- Does not meet setback
- Applicant purchased property in 2013
- Site conditions existed since 1975

- Pre-existing configuration of buildings
- Necessary to remove 2 feet 2 inches from existing building to meet code
- City encourages ADUs
- Provides smaller housing
- Approve deny or continue application
- Staff recommends approval with findings

Commissioner Shaver asked where additional parking would be located.
Commissioner Cipperly was concerned about parking.

Bruce Barth applicant, addressed the parking.

Called for public comment:

Ted Edmonds, Colorado Ave., across street from property. In favor of the ADU. Parking on that block is not an issue. Urged approval of the variance.

Commissioner Cipperly moved to approve zoning variance with findings on page 4 of staff report. Commissioner Shaver seconded. Motion carried unanimously.

B. 25-19 Consideration of a request to convert an existing church building into 13 multi-family units. The project also includes creating a 2-lot subdivision, condominiumization of the 13 units and a design variance from Section 5.2.10(K)(3) which prohibits vehicles from backing into the right-of-way.

Gretchen Ricehill provided a powerpoint presentation in accordance with the staff report. The project converts an existing, vacant church building into 13 one-bedroom multi-family units ranging in size from 535 to 825 square feet. The church was constructed in 1951 and is approximately 8,200 square feet. The building sits on a one-acre lot. The church vacated the building approximately 7 or 8 years ago. Since then the building was occupied by a retail sports store and the lot was used for overflow parking from the nearby Honda dealership.

The project also includes an application to condominiumize the 13 units and a minor subdivision of the parcel into two, roughly ½ acre lots. There is no longer a need for a design variance from the Engineering Standards to allow vehicles to back out onto a city right-of-way. The owner has amended the application to change the parking stalls along 135 Rd. from pull-in to parallel which meets the Engineering Standards requirement.

Ms. Ricehill summarized the review process.

- The 2-lot subdivision is normally an administrative review.
- Because the project involves a land dedication for right-of-way along CR 135, the 13-unit site/architectural plan review is required to be reviewed and approved by City Council. Planning and Zoning Commission will act as a recommending body.
- The 2-lot subdivision remains an administrative review but City Council is required to approve or deny the land dedication.
- The Planning & Zoning Commission is the sole deciding body on the condominiumization application.

Ms. Ricehill reviewed the details of the site/architectural plan including:

- Exterior improvements and residential design standards
- Common open space requirements
- Landscaping, screening and fencing;
- Access and circulation
- Use of the private easement on the east side of the property
- Sidewalk construction
- Bicycle parking and bike circulation system
- Off street parking and plan revisions

Ms. Ricehill reviewed the six criteria for reviewing condominiumization proposals and noted the proposals conformance to many goals of the comprehensive plan. She reviewed the required action items and noted that staff recommended approval with findings and conditions.

Questions of Staff

Commissioner Shaver asked the following:

Clarification of when building materials will be submitted. Staff responded that materials are submitted with the construction plan review which is an interim step prior to submitting a building permit application.

Clarification of owners use of private access road and maintenance responsibility and applicability of Engineering Standards to private accesses. Staff explained that the Engineering Standards and prohibition of backing out did not apply to private roads.

Regarding the roadway maintenance, staff explained that there were three parties to the original agreement. As far as staff is aware, there was not a provision for maintenance responsibilities. Ms. Ricehill explained that maintenance was a private issue between the easement holders. The Commission could include a recommendation that the owner [TB & SB LLC] be responsible for some portion of the maintenance, but the city would not be able to enforce the condition.

Commissioner Shaver asked Anna Itenberg for her opinion about Balcomb & Green's findings regarding the owner's use of the private roadway.

Anna Itenberg, City Attorney's office, indicated that ideally the owner would have an express easement. She suggested that a condition could be that to the satisfaction of the City Attorney, the owner provide evidence of an express easement on record with the County Assessor, or establishment of a prescriptive easement.

Commissioner Wussow asked about -

- Short term rental and whether the units could be used as such. Staff commented that they could unless the condominium declarations precluded this use.
- Sprinkler system and whether it was required. Staff responded that it is a building & fire code requirement that the building have sprinklers.
- ADA requirement for any of the units to be accessible. Staff responded that it is not a requirement that condo units be made accessible.
- Whether the owner intended having any of the units be affordable. Staff responded that it was not a code requirement.
- System improvement fees. Staff responded that this project must pay all fees that are due for residential projects. Some credit may be available for the property's past use.

Applicant Presentation

Brad Jordan, Jordan Architecture, project architect, stated that the owner, his attorney and the project engineer are present tonight. Mr. Jordan discussed -

- Condition of the building
- Need for residential units
- Enhancement of building's appearance
- Materials stone, stucco, cladding on doors & windows, roofing and colors in brown, golds and tans.
- Landscaping enhancements
- Agree with staff's presentation and recommended conditions
- Parking redesign on CR 135; 5-foot wide sidewalk with a ten to thirteen-foot wide landscape buffer next to the building
- Building will be sprinkled.

Commissioner Shaver asked for confirmation that the parallel spaces would be outside of the 15-foot wide easement being granted to the City. Mr. Jordan confirmed.

Asked about the location of a water meter in the northeast corner of the lot.

Commissioner Cipperly encouraged the owner to provide accessible units as there are accessible parking spaces on the east side of the building. Mr. Jordan discussed the difficulty of providing accessible units due to the number of stairs on the east side of the building and clarified that the accessible parking spaces are not solely for people in wheelchairs.

Commissioner Wussow asked about the rationale for providing all one-bedroom units and about storage. Mr. Jordan indicated that it would have been difficult in this existing building to create multi-bedroom units. Storage closets will be provided for some of the units that did not have dedicated storage space within the unit. Bicycle spaces – can the developer provide more than the code required three. Mr. Jordan agreed that additional bike parking spaces could be provided.

Chad Lee, 818 Colorado Ave., Balcomb & Green and counsel for developer, indicated that short term rentals would be subject to the City's new buffer requirement. Perhaps just one unit in the building would be allowed as a short-term rental. Regarding access, the issue surfaced at the last minute. Mr. Lee explained about use of, and right to use the easement. He also explained the steps in establishing a legal prescription. Mr. Lee indicated the owner's interest in helping to maintain the road and preparing a written maintenance agreement. He encouraged the Commission not to include a condition regarding maintenance as it was an issue between the private owners.

Commissioner Shaver asked about a recommendation regarding maintenance. Mr. Lee reiterated his opposition to such a condition.

Commissioner Wussow asked Mr. Lee to clarify the establishment of a prescriptive use and whether it required 18 years of continuous use. Mr. Lee explained that once you establish 18 years of use title automatically transfers. Once established, you are subject to abandonment law. Abandonment needs to be an intentional waiver or relinquishment of a right. In his opinion, eight years of non-use would not qualify. He pointed out that there was commercial use after the church left so there was some continuation of the use.

Dave Kotz, SGM, 118 W. 6th Street, project engineer, reviewed drawings with the Commission regarding location of meters, pedestals outside the property. It was determined that information was inadvertently located in the wrong area when transferred between civil and landscape plans.

Thomas Bartolomoczek, owner TB & SB LLC, 81 River Park Lane, Carbondale, regarding Commissioner Wussow's question about affordable housing the owners have not taken that into consideration at this point but will.

Public comment:

Patrick Hunter, Carbondale, owns a unit at Valley View West Condominiums. He explained about the issues with the access road in the past:

- Carwash at the bottom of the road had a drainage problem.
- Discount Tire bought the property and removed the carwash and fixed the lower portion of the road
- There is no written maintenance agreement
- There are fifty-some units in Valley View West all come and go at same time each day
- There is a lot of use of the private road
- Church had traffic one day a week
- He believed that there was just a gentlemen's agreement regarding use of the road.
- Discount Tire does not really use the road.
- Prefers that there not be back out parking onto the road.
- Prefers that traffic from this development use 135 Rd.
- Prior owner, David McDavid's plans were to only use 135 Rd.

Mr. Lee addressed comments made by Mr. Hunter and clarified that no express easement has been discovered at this time but that he continues to research the issue. He clarified that while churches are mostly used on Sunday, there are also activities on Wednesdays and other days of the week. Mr. Hunter's other comments regarding the roadway and use did not affect his opinion stated in his letter. Regarding Commissioner Shaver's earlier comments about a condition to enter into a maintenance agreement, Mr. Lee was opposed given that there already was a common law obligation to do that but to the extent that the Commission wanted to add a condition, he would favor one that required the owners to negotiate in good faith and to address each party's proportional impacts to that road. .

Item 1: MOTION: Commissioner Wussow moved to recommend that Council approve the site/architectural plan review allowing the conversion of an existing building into 13 multi-family units based on findings and conditions on page 10 and 11 of the report.

Commissioner Wissing seconded the motion. Commissioner Wussow amended her motion to add the condition that the City Attorney find an acceptable or identify an acceptable easement or prescription for access. Commissioner Wissing amended her second.

Commissioner Shaver was not comfortable with some of the loose ends such as the parking situation on the west side and other access issues; defining the private road access; backing out on a private road is a concern. He suggested continuation.

Commissioner Wussow did not feel that the one-bedroom units would cause a great traffic impact. If there were more units or if there were more bedrooms, she may have felt differently. Commissioner Wussow was not in favor of delaying the project and stated that the project still

needs to be reviewed by City Council. She did suggest that the applicant revise plans before the Council hearing.

Commissioner Cipperly also had concerns about the project details: she was concerned that parking was not fully completed; access issues; additional trash dumpster; pavement added under the dumpster; location of the parking space on the northeast corner of the site; landscaping. She felt that the project was a good reuse of the building.

Commissioner Wissing was in favor allowing the application to move forward.

Commissioner Wussow asked for a list of revisions from those Commissioners favoring a continuance.

Commissioner Cipperly: parking; landscaping; access issues; additional trash dumpster; location of utilities off the property; use of one of the parking spaces and impact to rear yard area and landscaping.

Jenn Ooton asked for clarification – Are you looking for additional information related to the application or are you suggesting conditions that need to be satisfied prior to the issuance of a building permit or construction plan review?

Commissioner Cipperly indicated that she was willing to approve the project with those conditions being met.

Commissioner Wussow and Ms. Ooton reminded the Commission about the intent of the general site/architectural plan review and the extra step in the process that requires a detailed construction plan review. That latter step requires staff review to make sure that all of the conditions are met prior to the applicant submitting a building permit application.

Commissioner Cipperly recommended adding the following conditions:

- Required landscaping
- Relocating utilities on to the site
- Revising plans to reflect parallel parking on CR 135;
- Moving and/or adding a second dumpster

Staff clarified that revising the parking on CR 135 was in the list of recommended conditions.

Commissioner Wussow also recommended adding a condition to revise the plans to limit the number of spaces backing out onto the access road.

Commissioner Wussow called for the question:

The motion passed 3-1

Commissioner Shaver voted no.

Action Item 2: Commissioner Wussow moved to approve consideration of an application to condominiumize 13 multi-family units with findings and conditions on page 12 of the staff report. Commission Cipperly seconded the motion.

Commissioner Cipperly commended the owner on the allowance of pets in the building with restrictions; recommended additional storage for the units.

Commissioner Wussow commended the owner on the project and recommended that the owner consider affordability.

Hearing no further discussion, Commissioner Wussow called for the question.

The motion carried unanimously.

2 Commissioner Comments

Commissioner Wissing thought this was an appropriate scale project. Wished Jimmy well.

Commissioner Shaver thought the loading of 225 pages was excessive.

Commissioner Wussow thought using Civic Clerk was like driving someone else's car.

Commissioner Cipperly thought seeing attainable housing was good.

3 Director Comments

October 3 City Council meeting re airport study.

We have a new building official, Victor Meraz.

10 Adjournment 8:38 p.m.

Agenda Item: 11-19 - Consideration of a special use permit to allow for the construction of a 2,800 square foot convenience store and re-location of underground fuel storage tanks. ITEM WILL BE CONTINUED TO OCTOBER 22, 2019

Action Requested:

REQUEST	Consideration of a Special Use Permit for the construction of a 2,800 square foot convenience store and the relocation of underground fuel storage tanks
APPLICANT	Roger Titmus, Stinker Stores, Inc.
OWNER	2122 Grand Avenue, LLC
LOCATION	2122 Grand Avenue (PIN: 2185-164-05-001)
ZONE	M1 Mixed-Use Corridor
SURROUNDING LAND USES	North: Mixed retail South: 22nd Street right-of-way, financial institution East: Parking West: Grand Avenue right-of-way, retail/fuel sales
LOT SIZE	Approximately 15,420 square feet (0.35 acres)

Department: Planning Department

Presented By: Trent Hyatt, Senior Planner

Background Info:

Issues: **Action 1 –Special Use Permit** – to allow for the construction of a 2,800 square foot convenience store and the relocation of underground fuel storage tanks.

Staff Recommendation: The applicant has requested a continuance of the item to the September 24, 2019 meeting.

Agenda Item: 20-19 - Consideration of a Code Amendment to Section 070.040.020(d)(24) of the Glenwood Springs Municipal Code regarding riparian setbacks

Action Requested:

REQUEST	Consideration of a Code Amendment to Section 070.040.020(d)(24) of the <i>Glenwood Springs Municipal Code</i> regarding riparian setbacks
APPLICANT	City of Glenwood Springs
OWNER	Multiple public and private properties
LOCATION	Applies to areas within 50 feet of the ordinary high-water mark of perineal water courses within the City
ZONE	All zone districts City wide, where applicable

Department: Planning Department

Presented By: Trent Hyatt, Senior Planner

Background Info:

Issues: **Action 1 - Code Amendment** – to revise the riparian setback standards of Section 070.040.020(d)(24) of the Glenwood Springs Municipal Code.

Staff Recommendation: The Planning and Zoning Commission (Commission) first considered the proposed text amendment at the July 23, 2019 regular meeting. The staff report and related items from said meeting are attached for your review. Consideration of the proposal was continued to the August regular meeting and then again to the September regular meeting.

Staff has received various comments regarding the proposal since the first meeting which are attached. Comments from Gary Vick provide detailed recommendations and background information for potential alternate language while other comments object to the proposal. While a public hearing was held at the July 23 meeting, staff has received requests from numerous individuals requesting the ability to provide additional comments to the Commission.



Planning and Zoning Commission Report

Date: July 23, 2019
To: Planning and Zoning Commission
From: Trent L. Hyatt, Senior Planner
Subject: #20-19 – Riparian Setback Code Amendment

REQUEST	Consideration of a Code Amendment to Section 070.040.020(d)(24) of the <i>Glenwood Springs Municipal Code</i> regarding riparian setbacks
APPLICANT	City of Glenwood Springs
OWNER	Multiple public and private properties
LOCATION	Applies to areas within 50 feet of the ordinary high-water mark of perennial water courses within the City
ZONE	All zone districts City wide, where applicable

ACTION ITEM:

The Planning and Zoning Commission (Commission) is the recommending body to City Council on any and all revisions to the *Glenwood Springs Municipal Code* (Code).

Action 1 - Code Amendment – to revise the riparian setback standards of Section 070.040.020(d)(24) of the *Glenwood Springs Municipal Code*.

Staff recommendation: Staff recommends **approval** of the Code Amendment with the findings on page 8.

BACKGROUND/ANALYSIS

History/Proposal

On October 4, 2018, City Council held a work session with the River Commission (RC) and Planning and Zoning Commission (Commission) to facilitate a discussion regarding riparian setbacks. The work session followed a previous City Council discussion regarding the matter on April 26, 2018 that occurred in conjunction with a progress update on the development code re-draft which was ongoing at the time. Prior to the development code re-draft discussion in April 2018, City Council received a recommendation from the RC (following a unanimous vote on February 7, 2018) for the inclusion of a 50-foot riparian setback in the re-drafting of the development code. Details and background information from the River Commission are outlined in an attached letter.

To date, no action has been taken on the riparian setback recommended by the RC. As requested by City Council, Community Development is now processing a Code Amendment to allow for review and consideration of the associated revision by the Commission and City Council. Draft standards as well as options to incentivize stewardship in riparian zones are addressed below.

Current Riparian Standard

Per Section 070.040.020(d)(24) of the Code, Development in Waterways and Areas of Special Flood Hazard, the City requires a 30-foot riparian setback as follows:

“No improvement, building, structure, excavation, dumping or backfill shall be placed, built, undertaken or approved within a 30-foot setback area horizontally from the high-water mark of any river or live stream, except for bridges, paths for non-motorized use, irrigation structures or flood control and erosion protection devices.”

Formerly, Section 070.010.010 of the Code stated, "high water mark means for the Roaring Fork River, the level of the 1973 peak flow measured at eight thousand two hundred eighty (8,280) cubic feet per second. For the Colorado River, the level of the 1973 peak flow measured at twenty thousand five hundred (20,500) cubic feet per second. For any other river or stream, its highest peak flow between October 1, 1956, and September 30, 1976." However, "high water mark" is no longer provided for in the definitions section. This appears to be an error in the adoption of the revised development code in August 2018.

River Commission Recommended Standard

Below is the language recommended by the River Commission in February 2018.

a. Purpose

The purpose of this Subsection 070.040.020(d)(24) is to conserve and promote the health of the City's riparian ecosystems and water quality by maintaining a functional natural buffer adjacent to waterways.

- i. No improvement, building, structure, excavation, dumping, clearing of native vegetation, or backfill shall be placed, built, undertaken or approved within a fifty-foot setback area horizontally from the ordinary high-water mark of any river or live perennial stream.
- ii. Within the fifty-foot setback, no live vegetation may be removed except for species listed on the Garfield County noxious weed list, Chinese Elm, or Siberian Elm when replaced with appropriate plant species. The Director has discretion to permit the removal of native vegetation, not to exceed 10 percent of the area of the setback, to allow a property owner private access to and personal enjoyment of the waterway. This shall not be interpreted to allow for permanent structures of any kind within the setback area. The Director may also reduce the setback for bridges, public paths for non-motorized use, public open space areas, wildfire mitigation activities, irrigation structures, flood control and erosion protection devices, or upon demonstration by the applicant that such reduction shall not result in water quality degradation, stream bank erosion, or a reduction in the function and quality of a riparian area or wetland.
- iii. No chemical treatments, including but not limited to fertilizers, pesticides, and/or herbicides, are permitted within the fifty-foot setback area except for the removal of above listed noxious weeds in compliance with applicable regulations.

Discussion

The area of the proposed 50-foot setback as outlined by the RC above begins at "ordinary high water mark" (OHWH) as opposed to the current "high water mark" which is generally lower in elevation along the bank of any given water course. A simple definition of the OHWM is the *mark typically reached on an annual basis within a channel*. The term as defined by the Army Corp of Engineers is *“that line on the shore established by the fluctuations of water and indicated by*

physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.”

As a comparison, the highest mean daily discharge rate for the Roaring Fork River based on USGS data is 7,120 cubic feet per second (cfs) which is significantly higher than the average ordinary high-water discharge between 3,000-4,000 cfs since 1971. Generally, the OHWM is the lowland area of any stream or river that is regulated by the US Army Corp of Engineers, in addition to wetland areas. The diagrams at right and below provides a visual representation of the OHWM. Differing definitions of the OHWM exist based on ecological zone, stream type, flow rates/intervals, etc.



Photo credit: Water Environment Federation

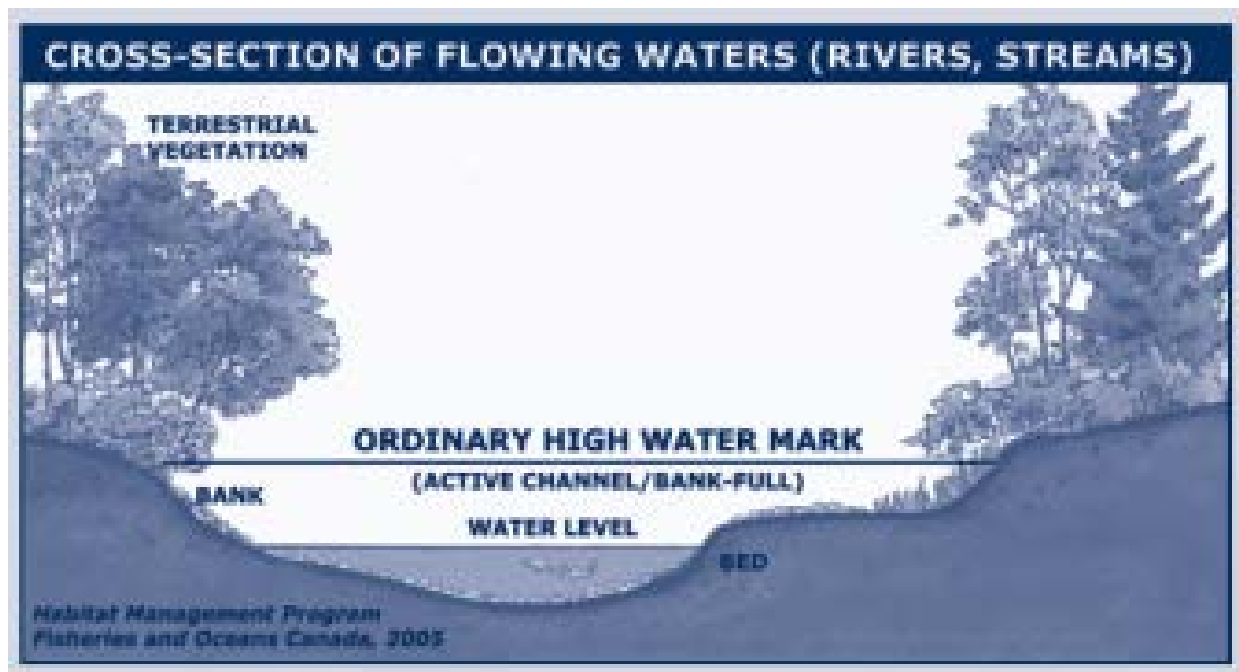


Photo credit: Habitat Management Program

A formal ecological survey can determine the exact location of the OHWM in the riverine areas of the City. A similar survey was recently conducted by the City of Aspen at a cost of approximately \$50,000. Drone technology is sometimes used to help determine the boundary. A simple means of determining the OHWM could be a site visit by staff when if there is a question as to whether a development proposal is impacting the riparian zone.

Staff Riparian Setback Standard

Staff provides the language in *italics* below for consideration to replace the current standard in Section 070.040.020(d)(24) of the Code:

070.040.020(d) Development in Waterways and Areas of Special Flood Hazard

(24) Conservation of Waterways

It is the purpose of this Subsection 070.040.020(d)(24) to conserve and promote the health of the City's riparian ecosystems and water quality by maintaining a functional natural buffer adjacent to waterways.

a. Applicability

All new improvements, buildings, additions, structures, excavations, grading, dumping, clearing of native vegetation, or backfill shall be subject to the requirements of 070.040.020(d)(24)b Standards unless the applicant demonstrates to the City Engineer and the Director by clear and convincing evidence that one or more of the following conditions is met:

- 1. The removal of native vegetation, not to exceed 10 percent of the setback area defined below, to allow a property owner private access to and personal enjoyment of the waterway. This shall not be interpreted to allow for permanent structures of any kind within said area.*
- 2. The construction of bridges, public utilities, public paths for non-motorized use, public open space areas, wildfire mitigation activities, irrigation structures, flood control and erosion protection devices that do not result in water quality degradation, stream bank erosion, or a reduction in the function and quality of a riparian area or wetland.*
- 3. Removal of vegetation listed on the Garfield County noxious weed list, Chinese Elm, or Siberian Elm in compliance with applicable regulations. Vegetation shall be replaced with appropriate riparian plant species to limit erosion.*
- 4. Applicant demonstrates the area does not contain significant riparian plant species or functions or is impacted by previous earth disturbing activities and proposed activity improves water quality, limits erosion, and promotes riparian or wetland restoration.*

b. Standards

- 1. No improvement, building, structure, excavation, grading, dumping, clearing of native vegetation, or backfill shall be placed, built, undertaken or approved within fifty feet of the ordinary high-water mark, measured horizontally, of any river or live perennial stream.*
- 2. No chemical treatments, including but not limited to fertilizers, pesticides, and/or herbicides, are permitted with said fifty-foot setback area.*

Differences in the standards recommended by the RC and staff are mostly related to formatting. However, staff does propose additional exception language, as outlined subsections 2 and 4 above, related to public utilities and areas previously disturbed.

Considerations

A major change in the proposed language from that which is codified today is that it limits the activities permitted in the setback area such as the clearing/removal of native vegetation (excluding invasive species) and the use of chemical treatments such as fertilizers. This may be the most difficult aspect of the regulation for in terms of enforcement by the City and would require some public outreach and education to implement. The letter and supporting information from the RC's February 2018 letter outlines the environmental and economic benefits of increase riparian protections. It also includes support for the proposal from the Roaring Fork Conservancy, the Ferdinand Hayden Chapter of Trout Unlimited, and American Rivers. The information provided by the River Commission also points out that the City is falling behind neighboring communities in terms of riparian protections as outlined in the table below.

REGION	SETBACK	DETAILS
City of Aspen	100ft/100 year floodplain	Development is "subject to heightened review." (Ord. 26.435.040)
Town of Basalt	50ft	Prohibits development and cutting of riparian and wetland vegetation. (Ord. 16-464a)
Town of Carbondale	Unspecific	If new development is proposed adjacent to any river, all practical means should be used to preserve natural grade, drainage patterns, soil and vegetation. (Ord. 4-2007)
Eagle County	75ft/100 year floodplain	No development within 75ft of high water mark or 100 year floodplain (whichever is greater).
Garfield County	35ft	Prohibits removal of any existing native vegetation or conducting any activity which will cause any loss of riparian area unless it involves the approved removal of noxious weeds, nonnative species, or dead or diseased trees.
Pitkin County	100ft/100 year floodplain	100 foot buffer for all activity and development. Setback may be reduced to a minimum of 50 feet if reduction does not result in water quality degradation, stream bank erosion and/or a reduction in the quality of riparian or wetland habitat.

During the April 2018 and October 2018 work sessions, there was a general concern expressed that such a riparian setback could impact development on both residential and commercial vacant lots or land where additional development might occur. Other Council and work session attendee considerations/concerns are outlined below.

- Interested in the proposal but unsure the appropriate setback distance.
- May need to raft/float the rivers to better understand the concepts.
- Need to recognize existing encroachments and use of riparian areas.
- Need to evaluate the impact to each lot.
- Avoid eliminating the ability to develop riverfront properties.
- Consider urban nature of the city and potential impacts to property values.
- Other current applicable regulatory standards yard setback, fire clearances, hillside protection, geologic hazards and floodplain regulations.
- Future redevelopment of properties may be difficult.
- Should guarantee amount of development on each property.
- Standards exist in all surrounding communities that exceed the City's.

- Explanation of the importance of riparian ecosystems was provided.
- Outlined the value of healthy rivers to our local economy.

The impact of the proposed regulation on the development and/or redevelopment of City owned properties such as the Confluence Area, the former Raymond Property, or Two Rivers Park is another consideration. Staff has created a few maps (attached), which depict the approximate limits of a 50-foot riparian setback on various properties within the City. The maps are simply an estimate of the area subject to the proposed setback and are not survey accurate.

Other Options

The Commission and City Council can also consider options in lieu of a specific regulation and/or to implement alongside a regulation to encourage/incentivize the conservation of existing riparian areas and/or the restoration of already disturbed riparian zones. A list of potential options is outlined below. Additionally, examples of incentive programs are attached.

- Grant program/annual funding for property owners to offset the purchase cost and/or installation of appropriate riparian plant species and other restoration projects.
- Education courses for homeowners and/or professional landscaping companies regarding the importance of healthy riparian ecosystems.
- Increased development thresholds/density bonuses for projects which conserve/do not disturb riparian areas.
- Example projects on City owned land similar to Veltus Park and former Raymond property.
- Sponsored riparian educational lunch series.

Code Amendment Approval Criteria

Section 070.060.040(c)(3)d.3 of the Code outlines the approval criteria for revision thereto. Each of the criteria are listed in **bold** below along with comments from staff.

i. Is consistent with the Comprehensive Plan and other City policies;

As shown at right in blue hatching, the *Future Land Use* maps of the *Glenwood Springs Comprehensive Plan* (Comp Plan) depict the City's rivers as Riverside Protection. According to the Comp Plan, the Riverside Protection designation states: "*Land and habitat along the Colorado and Roaring Fork rivers should be protected.*" The current proposal is in compliance with the map designation and description.

"Preserve natural resources" is a community goal outlined in the Executive Summary and subsequent chapters of the Comp Plan. Specific objectives and strategies related to the goal are outlined in the table below.



Comprehensive Plan Goal	Objective and Strategy
-Preserve natural resources	-Promote water conservation (Chapter 7, Page 84) - Plan for the city-owned land adjacent to the river trail (Chapter 8, Page 91) -Enhance and promote world-class fishing (Chapter 8, Page 91) -Continue leadership in protecting the natural setting (Chapter 9, Page 98) -Preserve and enhance the river corridor environment (Chapter 9, Page 100) - Support efforts in protect the Roaring Fork River and Colorado River systems (Chapter 9, Page 100) - Minimize human/wildlife conflicts (Chapter 9, Page 102)

ii. Does not conflict with other provisions of this Code or other provisions in the Glenwood Springs Municipal Code;

It does not appear the proposal conflicts with other provisions of the Code.

iii. Is necessary to address a demonstrated community need;

As outlined above, the City lags behind neighboring communities in the protection of water resources. Protection of riparian areas is essential to improved water quality as it limits the amount of nutrients and chemicals entering our rivers and streams via stormwater runoff.

iv. Is necessary to respond to substantial changes in conditions and/or policy; and

Adoption of the proposed standards would help in the City's future compliance with EPA Municipal Separate Storm Sewer System (MS4) permit requirements anticipated if/when our population exceeding 10,000 with the forthcoming 2020 census.

Some form of amendment to the Code regarding riparian standards is necessary to ensure protection thereof, whether a revision or re-adoption of the former "high water mark" definition.

v. Is consistent with the general purpose and intent of this Code.

The proposal appears to be consistent with the general purpose and intent of the Code. More specifically, integrated development, regulating the development of land upon impacts, and guarding against natural hazards are supported aspects.

Reviewing Agency Comments

No comments related to the proposed were received.

Adjacent Property Owner Comments

No comments from adjacent property owners have been received to date.

ACTION ALTERNATIVES AND STAFF RECOMMENDATION:

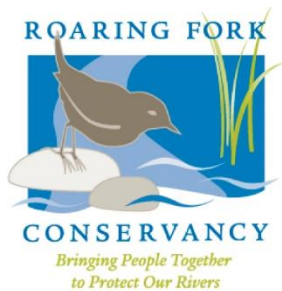
Section 070.060.040(c)(3)d.1 of the Code explains, “*The Planning Commission shall review the Code amendment application and recommend approval, approval with conditions, or denial of the amendment in accordance with 070.060.030(g) and the approval criteria in paragraph 3 below [addressed by staff above].* The Planning Commission may also continue the hearing.

Action 1 – Code Amendment – to revise the riparian setback standards of Section 070.040.020(d)(24) of the *Glenwood Springs Municipal Code*.

Staff recommendation: Staff recommends **approval** of the Code Amendment with the **findings** below:

Recommended Findings:

1. The proposed amendment is consistent with the Comprehensive Plan and other City policies;
2. The proposed amendment does not conflict with other provisions of this Code or other provisions in the Glenwood Springs Municipal Code;
3. The proposed amendment is necessary to address a demonstrated community need;
4. The proposed amendment is necessary to respond to substantial changes in conditions and/or policy; and
5. The proposed amendment is consistent with the general purpose and intent of this Code.



July 19, 2019

City of Glenwood Springs
101 West 8th Street
Glenwood Springs, CO 81601
Attn: Trent Hyatt, Senior Planner/River Commission Staff Liaison

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Business Manager

RE: Recommended city code revision for riparian setbacks

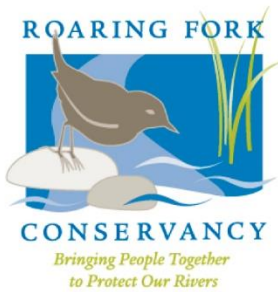
Honorable Mayor, City Council, and Planning and Zoning Commission,

Roaring Fork Conservancy (RFC) wishes to express support for the proposed City of Glenwood Springs riparian setback code revisions. RFC appreciates Glenwood Springs' investment in the continued protection of its water resources and strongly supports the implementation of regulations to preserve this invaluable natural and community asset.

RFC staff currently serves as a technical advisor for the Glenwood Springs River Commission, providing input, resources, and guidance on this and other projects. The collaborative effort between City staff, River Commission, and RFC has resulted in a well vetted code proposal which will conserve and promote the health of the City's riparian ecosystems and water quality into the future.

As a 501(c)(3) not-for-profit organization, RFC emphasizes the use of sound, defensible science to guide decisions regarding the health of local streams and rivers. Current research indicates that healthy wetlands and riparian areas are essential to healthy rivers. The natural functions of healthy riparian areas include:

- Dissipation of stream energy, which mitigates flooding, and reduces erosion and therefore mitigates property damage;
- Water storage during high flows, which return to the stream during late season low flows;
- Multi-storied habitat for wildlife and aquatic life;
- Integral wildlife migration routes;
- Rich and diverse food sources for wildlife and aquatic life;
- Increased shading which serves to lower river temperatures and slow evaporation;
- Buffer zones between the river and uplands, which mitigate sedimentation and erosion; and
- Natural bio-filters, which protect water quality by filtering pollutants.



Riparian buffers provide essential wildlife habitat protection. The Colorado Department of Parks and Wildlife recommends a 300ft setback from rivers and waterways.¹ Additionally, studies show that as riparian buffer size increases, protections from potential physical and chemical damages including sedimentation, erosion, and runoff contaminants increase as well. “It appears that a 100ft buffer is sufficiently wide to trap sediments under most circumstances... An absolute minimum width would be 30ft. To reduce nitrate concentrations, buffers of 50ft are usually sufficient.”² Importantly, when considering code changes such as the ones proposed here, water resource protection is far more cost effective and efficient than subsequent restoration often required when unanticipated events strike areas left vulnerable.

RFC worked diligently with the River Commission and City Staff to develop setbacks appropriate for the City, applying the best available science to the specific attributes of local waterways and unique community character. Based on these careful considerations, RFC recommends adoption of a 50ft riparian setback, as supported by the River Commission to ensure conservation of valuable waterways and irreplaceable wildlife for the present and future benefit of the City, its residents, and visitors. Similarly, in 2013, RFC served as a technical advisor to the Garfield County Board of County Commissioners and recommended adoption of 50ft riparian setback protections county-wide.

For your reference, Table 1 contains riparian protections retained in other Roaring Fork Watershed city and county land use codes. These adaptations are not intended to dictate the policy of the City, however awareness and consistency of policies adapted by others with similar resources could prove useful in the decision making process. Please note that all the setbacks in the table below include protections for riparian vegetation and the ability to make allowances for unique circumstances.

¹ Colorado Division of Wildlife, 2010. Actions to Minimize Adverse Impacts to Wildlife Resources, p.3

² Wegner, S., 1999. A review of the scientific literature of riparian buffer width, extent and vegetation, <http://researchweb8.wpengine.com/rivercenter/wp-content/uploads/sites/17/2015/03/A-Review-of-the-Literature-on-Riparian-Buffer-Width-Extent-and-Vegetation.pdf>

Table 1

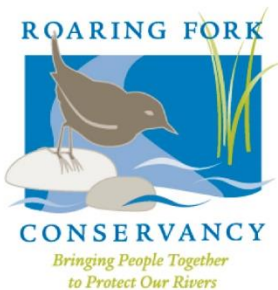
REGION	SETBACK	DETAILS
City of Aspen	100ft/100 year floodplain	Development is "subject to heightened review." (Ord. 26.435.040)
Town of Basalt	50ft	Prohibits development and cutting of riparian and wetland vegetation. (Ord. 16-464a)
Town of Carbondale	Unspecific	If new development is proposed adjacent to any river, all practical means should be used to preserve natural grade, drainage patterns, soil and vegetation. (Ord. 4-2007)
Eagle County	75ft/100 year floodplain	No development within 75ft of high water mark or 100 year floodplain (whichever is greater). ¹
Garfield County	35ft	Prohibits removal of any existing native vegetation or conducting any activity which will cause any loss of riparian area unless it involves the approved removal of noxious weeds, nonnative species, or dead or diseased trees.
Pitkin County	100ft/100 year floodplain	100 foot buffer for all activity and development. Setback may be reduced to a minimum of 50 feet if reduction does not result in water quality degradation, stream bank erosion and/or a reduction in the quality of riparian or wetland habitat.

Implementation of riparian protections also hold significant economic value. Healthy riparian areas:

- Reduce the cost of drinking water treatment by filtering sediment and other pollutants. The City of Glenwood Springs currently has a secondary drinking water intake on the Roaring Fork River near Veltus Park.
- Prevent property damage by protecting against erosion and flooding. Erosive effects are nearly 5 times more likely on non-vegetated stream banks, and up to 30 times more likely on non-vegetated stream bends.³
- Increase property values by improving aesthetics. "Several studies have shown that people will pay a premium to live or work near greenways or other protected areas, and this allows the developer to recoup at least some of the costs of not developing up to the stream bank."⁴
- Support the local fishing economy by maintaining high water quality for the Roaring Fork River's Gold Medal fishery.
- Support local river recreation (i.e. rafting, kayaking, stand-up paddle boarding) economy by providing scenic areas and wildlife viewing opportunities along rivers.

³ Chagrin Watershed Partners, Inc. 2006, Riparian Setbacks: Technical Information for Decision Makers. www.crwp.org/files/riparian_setback_paper_jan_2006.pdf

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- Enhance aesthetics in a tourist economy that is defined by its relationship to water. The Glenwood Springs Chamber of Commerce currently markets Glenwood Springs as “The Land of Water,” a tourist destination based primarily on its water resources.

The adoption of the proposed code will help ensure the prosperity of human and natural communities in Glenwood Springs. Current research indicates “that the influence of riparian corridors on water quality is proportionately much greater than the relatively small area in the landscape they occupy.”⁵ Roaring Fork Conservancy strongly urges the Glenwood Springs Planning and Zoning Commission and City Council adopt the proposed riparian setback code revisions.

Thank you for your time and consideration.

Sincerely

Rick Lofaro
Executive Director

Chad Rudow
Water Quality Coordinator

Roaring Fork Conservancy has inspired people to explore, value, and protect the Roaring Fork Watershed since 1996. We bring people together to protect our rivers and work to keep water in the streams, monitor water quality, and preserve riparian habitat. As one of the largest watershed organizations in Colorado, Roaring Fork Conservancy serves residents and visitors throughout the Roaring Fork Valley through school and community-based Watershed Education programs and Watershed Action projects, including regional watershed planning, water resource

⁵ Chagrin Watershed Partners, Inc. 2006, Riparian Setbacks: Technical Information for Decision Makers. www.crwp.org/files/riparian_setback_paper_jan_2006.pdf



City Council
STAFF REPORT
City of Glenwood Springs
October 4, 2018
 (date)

Agenda Item:	Work Session with the River Commission and Planning and Zoning Commission Regarding Riparian Setbacks
Action Requested:	No action is being requested at this time.
Presented By:	Trent L. Hyatt, Senior Planner/River Commission Staff Liaison, Community Development Department
Background Info:	On February 7th, 2018, the River Commission voted unanimously to recommend to City Council (as outlined in the attached letter) the adoption of a 50-foot riparian setback alongside the re-drafting of the land development code which was ongoing at that time. During a City Council work session regarding progress on the re-draft with the Planning and Zoning Commission on April 26, many in attendance expressed concerns that an increased riparian setback may potentially negatively impact development and/or the redevelopment of various properties. City Council ultimately decided to not include the recommended 50-foot riparian setback in the code re-draft and to instead discuss the matter further in conjunction with the River Commission. A date for the work session was set for October. Concerns raised by those in attendance on April 26 are addressed below. Per Section 070.040.020(d)(24) of the Municipal Code (Code), Development in Waterways and Areas of Special Flood Hazard, the City requires a 30-foot riparian setback: “No improvement, building, structure, excavation, dumping or backfill shall be placed, built, undertaken or approved within a 30-foot setback area horizontally from the high water mark of any river or live stream, except for bridges, paths for non-motorized use, irrigation structures or flood control and erosion protection devices.” The River Commission is requesting to replace the current riparian setback standard with the language (outlined below), which increases the setback by 20 feet for a total of 50 feet. Conservation of Waterways a. Purpose

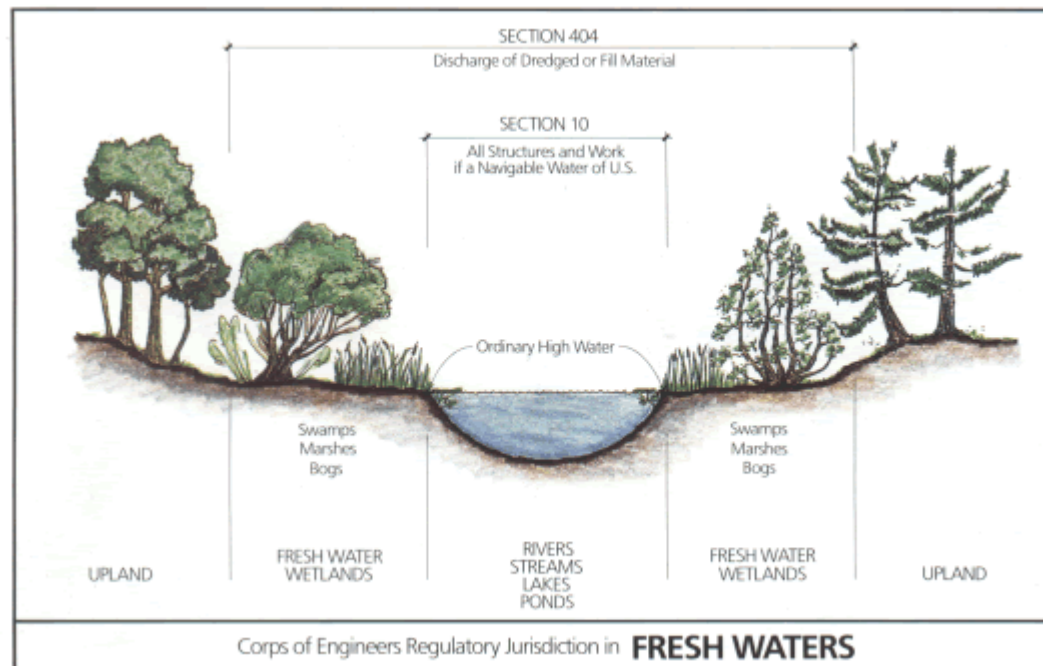
	The purpose of this Subsection 070.040.020(d)(24) is to conserve and promote the health of the City's riparian ecosystems and water quality by maintaining a functional natural buffer adjacent to waterways. i. No improvement, building, structure, excavation, dumping, clearing of native vegetation, or backfill shall be placed, built, undertaken or approved within a fifty foot setback area horizontally from the ordinary high water mark of any river or live perennial stream. ii. Within the fifty foot setback, no live vegetation may be removed except for species listed on the Garfield County noxious weed list, Chinese Elm, or Siberian Elm when replaced with appropriate plant species. The Director has discretion to permit the removal of native vegetation, not to exceed 10 percent of the area of the setback, to allow a property owner private access to and personal enjoyment of the waterway. This shall not be interpreted to allow for permanent structures of any kind within the setback area. The Director may also reduce the setback for bridges, public paths for non-motorized use, public open space areas, wildfire mitigation activities, irrigation structures, flood control and erosion protection devices, or upon demonstration by the applicant that such reduction shall not result in water quality degradation, stream bank erosion, or a reduction in the function and quality of a riparian area or wetland. iii. No chemical treatments, including but not limited to fertilizers, pesticides, and/or herbicides, are permitted within the fifty foot setback area except for the removal of above listed noxious weeds in compliance with applicable regulations. The proposed language explains the intent of the regulation which also limits the activities permitted in the setback such as the clearing/removal of native vegetation (excluding invasive species) and the use of chemical treatments such as fertilizers. This may be the most difficult aspect of the regulation for in terms of enforcement by the City and would require some public outreach and education to implement. The letter and supporting information from the River Commission's February 2018 letter outlines the environmental and economic benefits of increase riparian protections. It also includes support for the proposal from the Roaring Fork Conservancy, the Ferdinand Hayden Chapter of Trout Unlimited, and American Rivers. The information provided by the River Commission also points out that the City is falling behind neighboring communities in terms of riparian protections as outlined in the table below. During the discussion in April, there was a general concern expressed that such a riparian setback could impact development on both residential and commercial vacant land or land where additional development might occur. For example, one question/concern raised at the work session was whether or not the improvements at Iron Mountain Hot Springs completed in 2015 would have been possible under such a regulation as proposed. Related to this, the City has received a request for an encroachment into the existing 30-foot riparian setback for the addition of new soaking pools and as other shoreline
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improvements more recently proposed by the property owner. This is for informational purposes only and should not be discussed in detail at the work session since it is an active planning application.

Another area of concern that was brought up during the discussion was related to river frontage lots along Midland Avenue, which is classified as an arterial roadway. Under the new development code, a 30-foot front yard setback is required for the majority of lots between 13th Street and the 27th Street bridge. This, combined with the required 30-foot riparian setback as well as other development constraints such as hillside/steep slope, geologic hazards and floodplain regulations may impact the development or redevelopment of roughly 26 riverfront properties. A significant investment was made by the owners in the purchase of these properties with likely intentions of building close to and enjoying the river.

The impact of the proposed regulation on the development and/or redevelopment of City owned properties such as the Confluence Area, the former Raymond Property, or Two Rivers Park is another consideration. Staff has created a few maps (attached), which depict the approximate limits of a 50-foot riparian setback on various properties within the City. The maps are simply an estimate of the area subject to the proposed setback and are not survey accurate.

Another important aspect of the proposed regulation is the feature by which to measure the setback, the “ordinary high water mark” (OHWM) as opposed to the “high water mark” as outlined in the current Code. A simple definition of the OHWM is the mark typically reached on an annual basis with a channel. As an a comparison, the highest mean daily discharge rate for the Roaring Fork River since 1906 is 19,800 cubic feet per second (cfs) which is significantly higher than the average ordinary high water discharge of 4,100 cfs per USGS since 1971. How exactly would the City define the OHWM? Generally, the OHWM is the lowland area of any stream or river that is regulated by the US Army Corp of Engineers, in addition to wetland areas. The diagram below provides a visual representation of the OHWM. Many differing definitions of the OHWM exist based on ecological zone, stream type, flow rates/intervals, etc.



Additionally, the City would need to address how the setback impacts smaller stream segments in the City such as Three Mile Creek or Mitchell Creek. Most of these tributaries are already developed and perhaps a reduced setback should be considered for these streams.

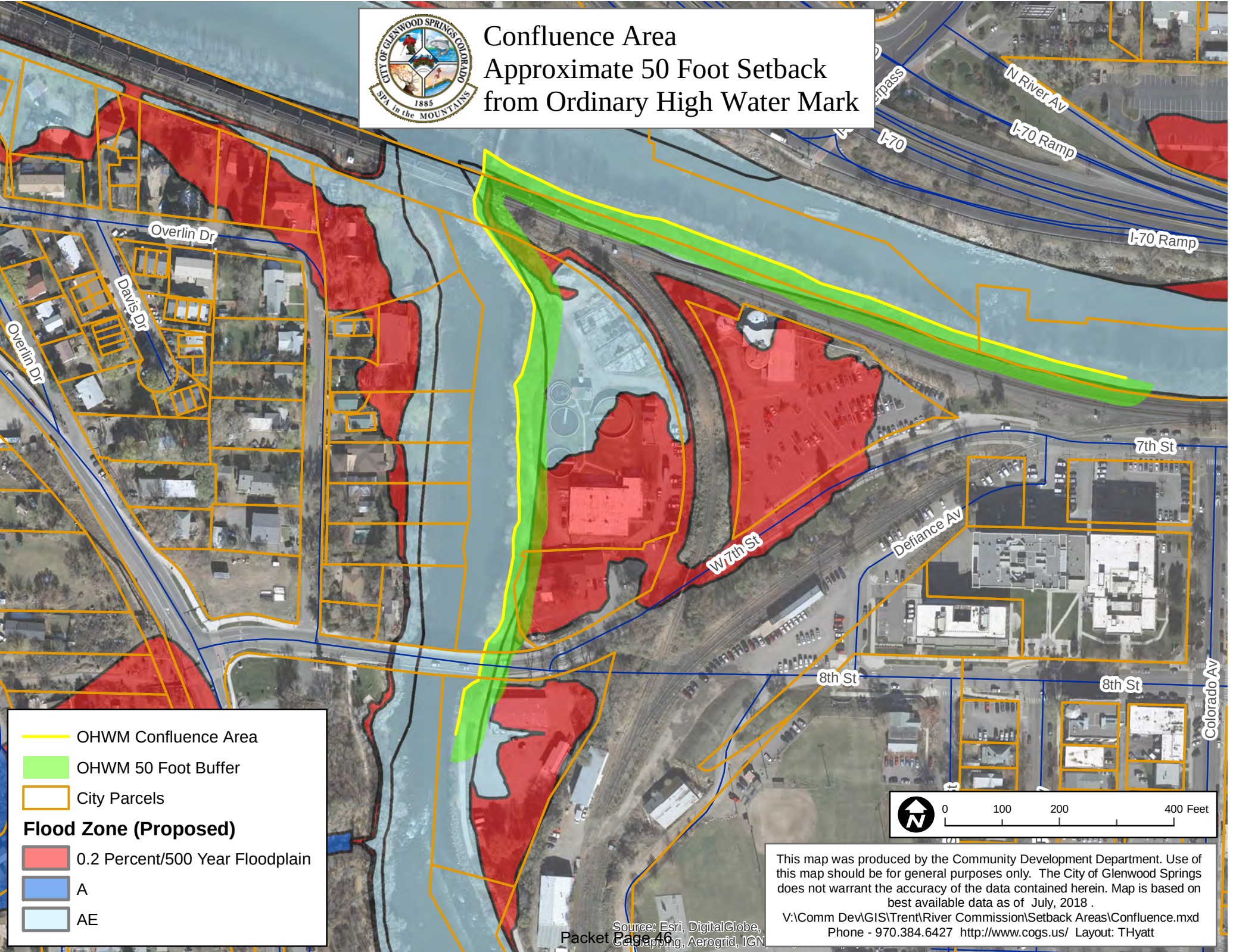
In an effort to allow for the enjoyment of a riverfront property by its owners, an exception for the disturbance of up to 10 percent of the setback area is identified. Additionally, bridges, public paths for non-motorized use, public open space areas, wildfire mitigation activities, irrigation structures, flood control and erosion protection devices are necessary and/or required to occur within riparian areas and are identified as exceptions.

The letter and supporting information from the River Commission's February 2018 letter outlines the environmental and economic benefits of increase riparian protections. It also includes support for the proposal from the Roaring Fork Conservancy, the Ferdinand Hayden Chapter of Trout Unlimited, and American Rivers. The information provided by the River Commission also stresses that the City is falling behind neighboring communities in terms of riparian protections as outlined in the table below.

	REGION SETBACK DETAILS		
	City of Aspen	100ft/100 year floodplain	Development is "subject to heightened review." (Ord. 26,435,040)
	Town of Basalt	50ft	Prohibits development and cutting of riparian and wetland vegetation. (Ord. 16-464a)
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	Pitkin County	100ft/100 year floodplain	100 foot buffer for all activity and development. Setback may be reduced to a minimum of 50 feet if reduction does not result in water quality degradation, stream bank erosion and/or a reduction in the quality of riparian or wetland habitat.
Action Alternatives:	No action being requested at this time. City Council can provide direction to or request additional information from staff if determined necessary.		
Staff Recommendation:	No recommendation from staff is necessary at this time.		



Confluence Area Approximate 50 Foot Setback from Ordinary High Water Mark



OHWM Confluence Area

OHWM 50 Foot Buffer

City Parcels

Flood Zone (Proposed)

0.2 Percent/500 Year Floodplain

A

AE



0 100 200 400 Feet

This map was produced by the Community Development Department. Use of this map should be for general purposes only. The City of Glenwood Springs does not warrant the accuracy of the data contained herein. Map is based on best available data as of July, 2018.

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Phone - 970.384.6427 <http://www.cogs.us/> Layout: THyatt



Shaver Property Approximate 50 Foot Setback from Ordinary High Water Mark

- Parcel Boundary
- OHWM Shaver Property
- OHWM Shaver Property Buffer

Flood Zone (Proposed)

- 0.2 Percent/500 Year Floodplain
- A
- AE



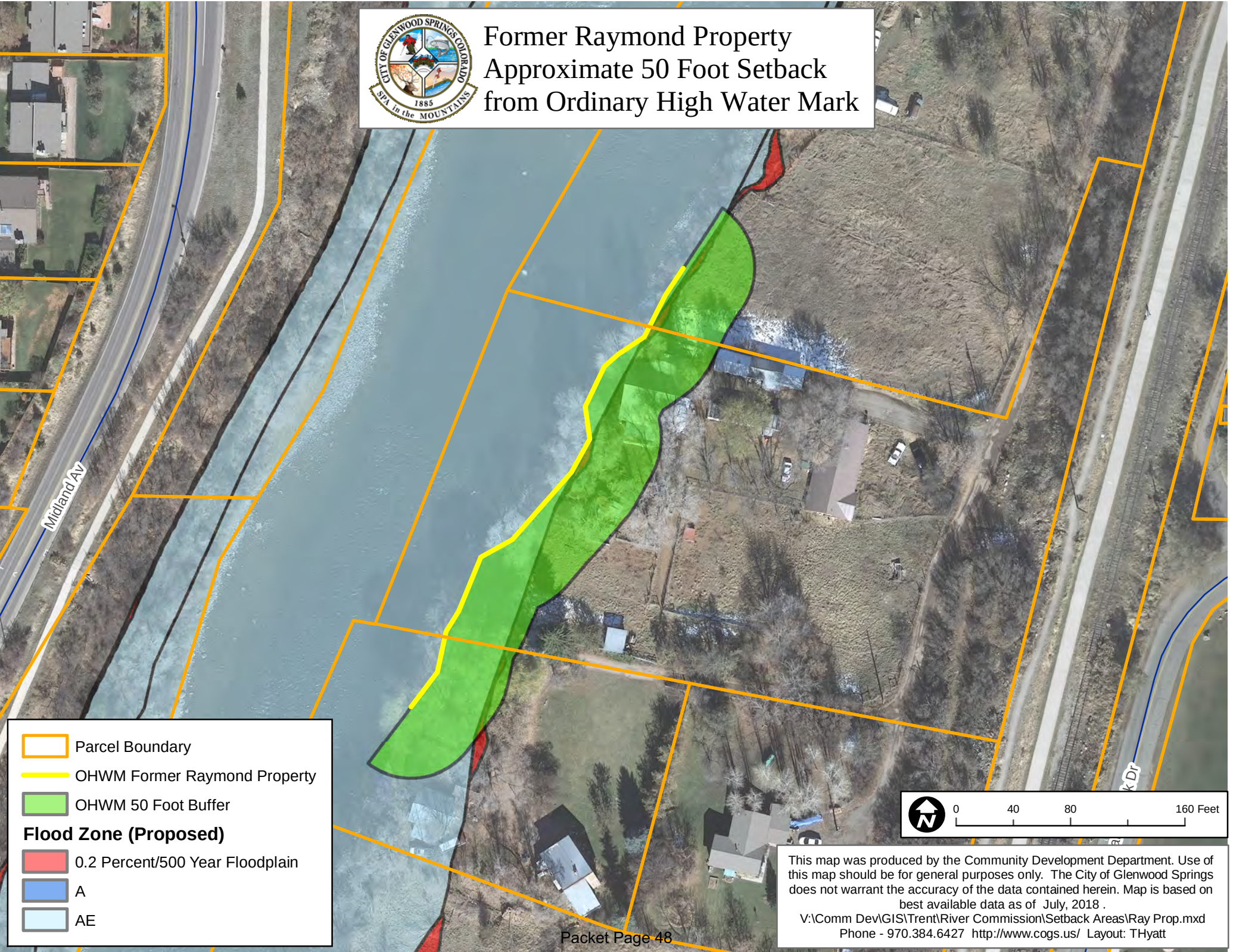
0 25 50 100 Feet

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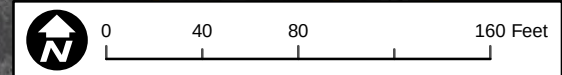
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Phone - 970.384.6427 <http://www.cogs.us/> Layout: THyatt



Former Raymond Property Approximate 50 Foot Setback from Ordinary High Water Mark



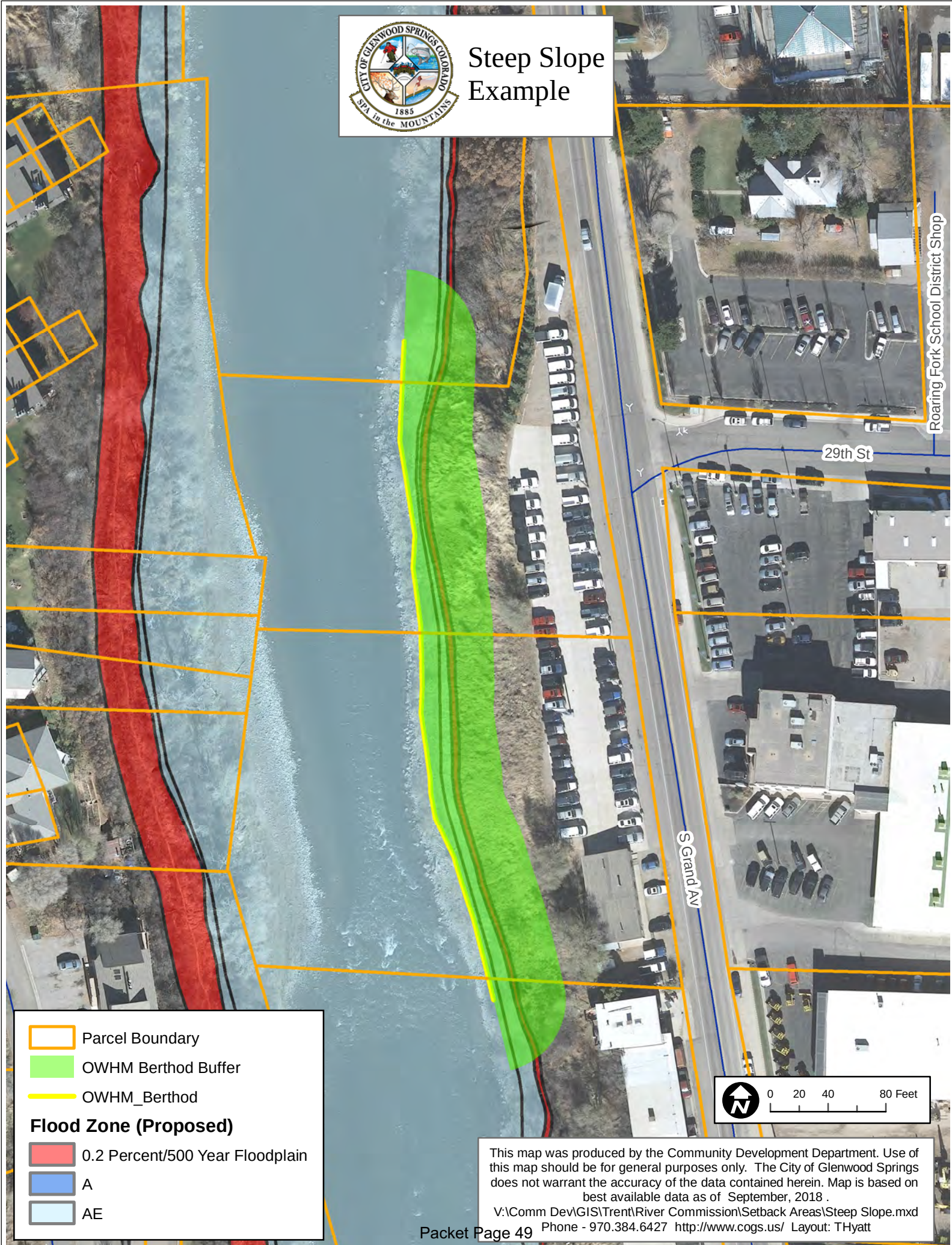
- Parcel Boundary
 - OHWM Former Raymond Property
 - OHWM 50 Foot Buffer
- Flood Zone (Proposed)**
- 0.2 Percent/500 Year Floodplain
 - A
 - AE



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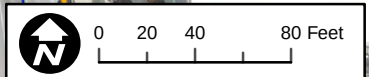
Steep Slope Example



- Parcel Boundary
- OWHM Berthod Buffer
- OWHM_Berthod

Flood Zone (Proposed)

- 0.2 Percent/500 Year Floodplain
- A
- AE



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February 28, 2018

Mayor Gamba and City Council
101 West 8th Street
Glenwood Springs, CO 81601
Attn: Trent L. Hyatt, Senior Planner/River Commission Staff Liaison



RE: Recommended city code revision for riparian setbacks

Honorable Mayor and City Council,

At our February 7th, 2018 meeting, the River Commission **voted unanimously** to recommend City Council adopt a 50 foot riparian setback for incorporation into the re-draft of the land development code. The recommended language is attached for your review.

As you know, the streams that flow through our beautiful City significantly benefit our regional economy by supporting countless jobs and these areas provide immeasurable positive social impacts for our citizens and visitors alike. Each year, the River Commission, Roaring Fork Conservancy, and rafting/fishing guides have observed new and continuous disturbances within the riparian zones adjacent to both the Roaring Fork and Colorado Rivers within the City (pictures attached). While the City has a 30 foot setback from ordinary high water mark requirement for structures and fill, this regulation does not limit the removal of riparian plant species which are vital to the ecosystem.

The River Commission has been discussing this topic for a couple years now and provide this recommendation after thorough review of industry best practices as well as regulations from numerous other neighboring municipalities and counties. We feel the recommended setback strikes a balance between the space/ area required for riparian zones to function efficiently while still providing private owners a means to enjoy their investment in riverfront property.

We respectfully request that you incorporate the new setback into the re-draft of the development code currently under consideration. Also, attached is a letter in support of the setback from Roaring Fork Conservancy. Please let us know if you would like additional information or a work session to discuss the matter further.

Regards,

Brendon Langenhuizen, Chairman
Glenwood Springs River Commission



February 7, 2018

River Commission

Recommendation for Adoption by City Council

070.040.020(d)(25) Conservation of Waterways

a. Purpose

The purpose of this Subsection 070.040.020(d)(25) is to conserve and promote the health of the City's riparian ecosystems and water quality by maintaining a functional natural buffer adjacent to waterways.

i. No improvement, building, structure, excavation, dumping, clearing of native vegetation, or backfill shall be placed, built, undertaken or approved within a fifty foot setback area horizontally from the ordinary high water mark of any river or live perennial stream.

ii. Within the fifty foot setback, no live vegetation may be removed except for species listed on the Garfield County noxious weed list, Chinese Elm, or Siberian Elm when replaced with appropriate plant species. The Director has discretion to permit the removal of native vegetation, not to exceed 10 percent of the area of the setback, to allow a property owner private access to and personal enjoyment of the waterway. This shall not be interpreted to allow for permanent structures of any kind within the setback area. The Director may also reduce the setback for bridges, public paths for non-motorized use, public open space areas, wildfire mitigation activities, irrigation structures, flood control and erosion protection devices, or upon demonstration by the applicant that such reduction shall not result in water quality degradation, stream bank erosion, or a reduction in the function and quality of a riparian area or wetland.

iii. No chemical treatments, including but not limited to fertilizers, pesticides, and/or herbicides, are permitted within the fifty foot setback area except for the removal of above listed noxious weeds in compliance with applicable regulations.



February 7, 2018

River Commission

Recommendation for Adoption by City Council

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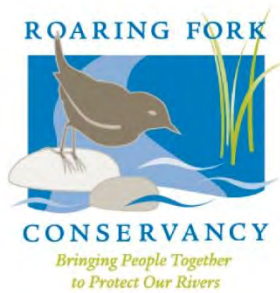
iii. No chemical treatments, including but not limited to fertilizers, pesticides, and/or herbicides, are permitted within the fifty foot setback area except for the removal of above listed noxious weeds in compliance with applicable regulations.

Existing Regulation for Reference

070.030.030 - Suitability of Land for Development.

Land subject to natural hazards such as flooding, falling rock, landslides, mud flows or snowslides shall not be developed or approved for development until plans are submitted to the Director and approved by the City Engineer and the Planning Commission in order to prevent such conditions from endangering life, health or other property.

- (1) Development in waterways and areas of special flood hazard.
 - a. No improvement, building, structure, excavation, dumping or backfill shall be placed, built, undertaken or approved within a thirty-foot setback area horizontally from the high water mark of any river or live stream except for bridges, paths for non-motorized use, irrigation structures or flood control and erosion protection devices.



February 26, 2018

Glenwood Springs City Council
101 West 8th Street
Glenwood Springs, CO 81601
Attn: Trent Hyatt, Senior Planner/River Commission Staff Liaison

BOARD OF DIRECTORS

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President
Diane Schwener
Vice President
Jeff Conklin
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George Kelly
Dick Kipper
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Rick Lofaro
Executive Director
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RE: Recommended city code revision for riparian setbacks

Honorable Mayor and City Council,

Roaring Fork Conservancy (RFC) wishes to express support for the City of Glenwood Springs riparian setback code revisions proposed by the Glenwood Springs River Commission. RFC appreciates Glenwood Springs' investment in the continued protection of its water resources and strongly supports the implementation of regulations to preserve this invaluable natural and community asset.

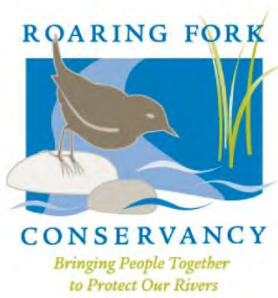
RFC staff currently serves as a technical advisor for the River Commission, providing input, resources, and guidance on this and other projects. The collaborative effort between City staff, River Commission, and RFC has resulted in a well vetted code proposal which will conserve and promote the health of the City's riparian ecosystems and water quality into the future.

PROGRAM STAFF

Rick Lofaro
Executive Director
Heather Lewin
Watershed Action Director
Christina Medved
Watershed Education Director
Liza Mitchell
Education & Outreach Coordinator
Kristen Doyle
Watershed Educator & Office Coordinator
Chad Rudow
Water Quality Coordinator
Sheryl Sabandal
Development Manager
Johnny Cronin
Director of Donor Relations

As a 501(c)(3) not-for-profit organization, RFC emphasizes the use of sound, defensible science to guide decisions regarding the health of local streams and rivers. Current research indicates that healthy wetlands and riparian areas are essential to healthy rivers. The natural functions of healthy riparian areas include:

- Dissipation of stream energy, which mitigates flooding, and reduces erosion and therefore mitigates property damage;
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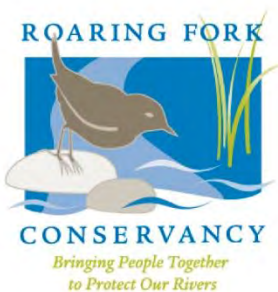
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Eagle County	75ft/100 year floodplain	No development within 75ft of high water mark or 100 year floodplain (whichever is greater). ¹
Garfield County	35ft	Prohibits removal of any existing native vegetation or conducting any activity which will cause any loss of riparian area unless it involves the approved removal of noxious weeds, nonnative species, or dead or diseased trees.
Pitkin County	100ft/100 year floodplain	100 foot buffer for all activity and development. Setback may be reduced to a minimum of 50 feet if reduction does not result in water quality degradation, stream bank erosion and/or a reduction in the quality of riparian or wetland habitat.

Implementation of riparian protections also hold significant economic value. Healthy riparian areas:

- Reduce the cost of drinking water treatment by filtering sediment and other pollutants. The City of Glenwood Springs currently has a secondary drinking water intake on the Roaring Fork River near Veltus Park.
- Prevent property damage by protecting against erosion and flooding. Erosive effects are nearly 5 times more likely on non-vegetated stream banks, and up to 30 times more likely on non-vegetated stream bends.³
- Increase property values by improving aesthetics. "Several studies have shown that people will pay a premium to live or work near greenways or other protected areas, and this allows the developer to recoup at least some of the costs of not developing up to the stream bank."⁴
- Support the local fishing economy by maintaining high water quality for the Roaring Fork River's Gold Medal fishery.
- Support local river recreation (i.e. rafting, kayaking, stand-up paddle boarding) economy by providing scenic areas and wildlife viewing opportunities along rivers.

³ Chagrin Watershed Partners, Inc. 2006, Riparian Setbacks: Technical Information for Decision Makers. www.crwp.org/files/riparian_setback_paper_jan_2006.pdf

⁴ Chagrin Watershed Partners, Inc. 2006, Riparian Setbacks: Technical Information for Decision Makers. www.crwp.org/files/riparian_setback_paper_jan_2006.pdf



- Enhance aesthetics in a tourist economy that is defined by its relationship to water. The Glenwood Springs Chamber of Commerce currently markets Glenwood Springs as “The Land of Water,” a tourist destination based primarily on its water resources.

The adoption of the proposed code will help ensure the prosperity of human and natural communities in Glenwood Springs. Current research indicates “that the influence of riparian corridors on water quality is proportionately much greater than the relatively small area in the landscape they occupy.”⁵ Roaring Fork Conservancy strongly urges the Glenwood Springs City Council adopt the Glenwood River Commission’s proposed riparian setback code revisions.

Thank you for your time and consideration.

Sincerely

Rick Lofaro
Executive Director

Chad Rudow
Water Quality Coordinator

Roaring Fork Conservancy has inspired people to explore, value, and protect the Roaring Fork Watershed since 1996. We bring people together to protect our rivers and work to keep water in the streams, monitor water quality, and preserve riparian habitat. As one of the largest watershed organizations in Colorado, Roaring Fork Conservancy serves residents and visitors throughout the Roaring Fork Valley through school and community-based Watershed Education programs and Watershed Action projects, including regional watershed planning, water resource

⁵ Chagrin Watershed Partners, Inc. 2006, Riparian Setbacks: Technical Information for Decision Makers. www.crwp.org/files/riparian_setback_paper_jan_2006.pdf

February 27, 2018

The City of Glenwood Springs City Council
101 W 8th Street
Glenwood Springs, CO 81601

Dear Council Members,

RE: Development Code Revisions to 070.040.020(d)(25) Conservation of Waterways.

The Ferdinand Hayden Chapter of Trout Unlimited is the local TU Chapter representing members from Aspen to Rifle. FHTU is one of the oldest TU Chapters, being the 8th chapter created nationwide in the 1960's.

We are writing to strongly support the proposed revisions to the City Code regarding stream setbacks and protection of the adjacent riparian areas. The riparian zone adjacent to any stream or river is an integral and vitally important part of the larger stream ecosystem. Ninety percent of the base food material for all of the aquatic life comes from the vegetation growing in the riparian zone. The existing riparian area along the Roaring Fork from Carbondale to Glenwood Springs is in sorry shape, due largely to overzealous development and removal of vegetation by landowners.

Both Glenwood Springs and the larger Roaring Fork Valley depend a great deal on the value and economic benefits that a healthy river ecosystem provide. This is a world class fishery, consistently named by magazines such as Outside and Sunset as one of the best places to be if you like to fish.

We think that this Code revision is a prudent and responsible step for the City to take in order to insure the continued health and vigor of the Roaring Fork River ecosystem through town. We strongly urge you to support and approve this code revision as well.

Sincerely,

Jason Groves

Jason Groves, President
Ferdinand Hayden Chapter (008) of Trout Unlimited



February 27, 2018

City of Glenwood Springs City Council
101 W 8th Street
Glenwood Springs, CO 81601

Dear Council;

American Rivers is a national river conservation organization with offices across the country, including Glenwood Springs, Colorado. Our mission is to promote and work for a nation of clean, healthy rivers that sustain and connect us. American Rivers protects wild rivers, restores damaged rivers, and conserves clean water for people and nature.

We ask that you support and approve the proposed revisions to the City Development Code, **070.040.020(d)(25) Conservation of Waterways**. These revisions will greatly expand needed protections for the riparian zone along the Roaring Fork River and other streams in Glenwood Springs. These riparian areas are not just a strip of vegetation along the river bank, they are an integral part of the larger river ecosystem itself. Riparian areas and the vegetation they contain are absolutely critical to the overall health of ecosystem. They provide the organic food foundation for insects, which in turn support the world class fishery that draws both residents and tourists to Glenwood Springs. These same aquatic insects are also the major food source for many of the migratory and permanent bird species that we enjoy.

This code revision just makes good sense and is long overdue. Landowners adjacent to the river also need to learn more about the vital role of the riparian vegetation on their property for the health of the river that they enjoy.

Please do not hesitate to contact me if I can answer any questions or concerns you may have.

Thank you!

Ken Neubecker, Director
American Rivers Upper Colorado Basin Program within Colorado
24 S Meadow View Ct.
Glenwood Springs, CO 81601
(970) 230-9300
Kneubecker@americanrivers.org

Glenwood Springs Riparian Assessment

Prepared by:

Chad Rudow, Roaring Fork Conservancy (biologist)

Andrea Holland, Glenwood Springs River Commission (retired hydrologist)

Submitted: 2/26/2018

Introduction

The City of Glenwood Springs (GWS) is essentially defined by the confluence of the Roaring Fork and Colorado Rivers. These two waterways provide significant recreation, aesthetic and economic benefits to the community. In addition the lower Roaring Fork is a sourcewater area, providing a backup drinking water supply for GWS. The riparian zone along these rivers is a key component that helps sustain water quality and quantity, as well as fish and wildlife habitat. As the city grows and development continues along these rivers, the potential for increasing impacts to both river and riparian health can be expected. The primary objective of this project is to assess the current condition of the riparian zone and consider ways to maintain or improve these critical components to watershed and river health.

Background

In 2007, the Stream Health Initiative (SHI) conducted by Emerick and Malone, surveyed the riparian and instream habitat of the lower Roaring Fork River. It noted historic impacts from agriculture and more recent residential and commercial impacts and having significantly modified riparian areas throughout the segment when compared to pre-development conditions. Such impacts include “reduced riparian zone width, vegetation quality, and ecosystem function on the majority of reaches”¹. However, it also notes that “a few remnant predevelopment plant communities persist wherever human disturbances are minimized” and these communities are “characterized by a wide riparian zone, a diversity of native riparian plant species, structurally complex habitat, and a more even-age class distribution of trees and shrubs”¹. More information from the SHI can be found in the State of the Roaring Fork Watershed Report 2008 found online at www.roaringfork.org/publications.

Methods

This report documents an informal assessment, conducted October 6, 2017, of riparian conditions along the Roaring Fork and Colorado Rivers within GWS city limits. The river-view assessment relied on qualitative observations and photo-documentation of the integrity of riparian condition and function. See photo location map on page six. Tributaries in GWS such as Threemile Creek, Oasis Creek, and Mitchell Creek also contain riparian areas but were not included in this assessment.

This assessment documented the existing riparian condition including presence and density of riparian vegetation, evidence of erosion, occurrence of development or structures within

¹ Emerick J.C. and Malone, D.G. 2007a. Catalog of stream and riparian habitat quality for the Roaring Fork River and tributaries, Central Colorado. Roaring Fork Stream Health Initiative.

the riparian zone, and human alteration to natural areas. Observations considered the natural functions of a healthy riparian area which provide:

- flood mitigation by dissipating stream energy and reducing erosion and property damage.
- water storage during high flow and releases during low flows.
- multi-storied habitat for wildlife and aquatic life.
- wildlife migration route between habitats.
- rich and diverse food source for wildlife and aquatic life.
- shading that lowers river temperatures and slows evaporation.
- buffers which mitigate sedimentation and prevent erosion.
- natural bio-filters which filter pollutants and protect water quality.

Observations

Roaring Fork River

Within city limits, the banks of the Roaring Fork River are generally high and steep. Nonetheless, areas with minimal development impact indicate the potential for narrow, healthy riparian areas. Occasional lower “benches” of level land exist along this reach, providing the primary opportunity for riparian habitat and related functions.

General observations:

- The west bank through GWS is primarily residential lots while the east bank tends to have more commercial development and mixed uses.
- Two bike paths run adjacent to the Roaring Fork River in Glenwood Spring, the Atkinson Canal Trail along the west bank in south GWS, and the Glenwood River Trail along the east bank through downtown GWS. While these paths provide an important amenity for transportation and river access, their proximity to the river and maintenance represent impacts to the respective riparian areas.
- Despite the steep terrain and density of development, numerous areas within GWS still exhibit robust riparian vegetation. The density of vegetation is typically greatest along a narrow strip next to the river while the upper gradient areas are generally more sparse. Densely vegetated riparian areas typically exhibit good multi-story habitat.
- The west bank of the Roaring Fork River between the Cardiff Bridge and 14th street pedestrian bridge exhibit the majority of recent riparian alterations by private landowners. A few alterations were also noted along the east bank in this reach.
- Riparian trees show a slightly unbalanced age class, with large numbers of tall, mature trees (particularly cottonwoods) and less young tree recruitment for recovery/maintenance of the species.
- Engineered or rip-rap banks exist at numerous locations along this reach. While this meets the initial goal of bank stabilization, it contributes to loss of vegetation, creates a challenging environment for regrowth, and increases channelization of the river and potential related impacts.
- Non-native riparian plant species were noted in riparian areas along this reach. Volunteer projects conducted jointly by City of GWS, Garfield County, Roaring Fork Outdoor Volunteers, and Roaring Fork Conservancy, have significantly reduced

Tamarisk and some Russian Olive near the Threemile Creek confluence and upstream of the municipal airport. Due to these efforts, minimal Tamarisk were noted during this assessment, however numerous Russian Olive still exist in riparian areas along this reach, particularly on private property.

Sections of concern and potential treatments:

- Stream banks at the outlet of Threemile Creek are marginally vegetated and actively eroding. Suggest bank stabilization with long term goal of revegetating slope to native density while still allowing some beach area for public access.
- Backyard development creep and riparian vegetation clearing are increasing. Numerous landowners with private access to the river have created sitting areas ranging from a few chairs tucked into the vegetation to more extensively cleared spaces with grills, tables and numerous chairs. Some have cleared and developed a wide access down the hill slope. The latter impacts may disrupt riparian function and, if copied by neighbors, could result in extensive loss of riparian habitat. Potential treatments include curtailing this kind of bank development in order to preserve riparian function while still allowing private landowner desire to enjoy riverside amenities. Public education is a key component for addressing these concerns.
- Various structures have been constructed within the riparian zone throughout this reach in GWS. They include trails and steps built to access the river, gazebos, boat ramps, and various platforms for chairs and tables. The structures vary in size and amount of disruption to riparian areas. Potential treatments are similar to those listed above regarding riparian vegetation clearing.
- Concrete slabs were deposited along parts of the river and now hinder vegetation growth. Potential treatments include removing engineered banks where feasible and replanting native riparian vegetation.
- The newly constructed 14th street pedestrian bridge resulted in widening and clearing of the river's banks at that location. Riprap was used as the primary bank stabilization feature. Treatments include replacing riprap with vegetation to restore this area to a healthy riparian habitat.
- Removal of critical riparian vegetation, especially cottonwood, along River Meadows Mobile Home Park. A few willow patches have returned but the stream bank consists primarily of open lawn. Trees line the upper terrace of the Park but little vegetation remains along the baseflow edge of the River. Treatments include education for private landowner(s) and possible joint efforts to re-establish vegetation diversity or pocket protection areas.
- Veltus Park contains riparian impacts including eroding banks and some instances of riparian vegetation clearing by city staff. GWS is currently pursuing a redevelopment and restoration plan for this area. It is recommended that this project prioritize the balance of public access to the river, erosion control, and re-establishment of healthy riparian system. Additional education of city staff regarding riparian best management practices to avoid adverse impacts to river health is also encouraged.

Colorado River

This reach has seen over a century of impacts from the construction of the railroad, I-70, Two Rivers Park, commercial development, and most recently a whitewater park. However, there remain localized stretches along the river that contain healthy riparian conditions.

General observations:

- Both banks represent mixed land use with primarily railroad right-of-way and commercial development along the south bank. The north bank combines large stretches of I-70, Two Rivers Park, and some commercial use.
- The railroad and I-70 run along opposite sides the Colorado River and represent existing impacts to riparian areas through impairment of habitat, loss of vegetation and hindrance to wildlife passage. Additionally, operation, maintenance and chemical treatments of these structures represent ongoing impacts. However, these land uses also restrict human access to portions of the remaining riparian areas, thereby limiting other human impacts.
- Riparian trees show unbalanced age class, with large numbers of tall, mature trees (particularly cottonwoods) and a lack of young tree recruitment for recovery and maintenance of the species.
- Engineered or riprap banks exist at numerous locations along this reach. While this meets the initial goal of bank stabilization, it contributes to loss of vegetation creates a challenging environment for regrowth, and increases channelization of the river and potential related impacts.
- Non-native riparian plant species were noted in riparian areas along this reach. Volunteer projects conducted jointly by City of GWS, Garfield County, Roaring Fork Outdoor Volunteers and Roaring Fork Conservancy, have significantly reduced Tamarisk and some Russian Olive near Two Rivers Park and along the river in West GWS. Although these efforts have removed many invasive plants, more of both species remain throughout this reach, particularly in areas which are difficult to access.

Sections of concern and proposed treatments:

- Two Rivers Park represents a significantly impacted riparian area. GWS is currently pursuing a redevelopment and restoration plan for this area, which will include addressing the current conditions. This project as planned should continue to prioritize the balance of public access to the river and re-establishment of healthy riparian system.
- Sections along Devereux Road show signs of impact and may benefit from riparian rehabilitation – further study recommended.
- Riparian vegetation between the river and Iron Mountain Hot Springs is scarce and may have been removed as part of this development. Potential treatments include working with landowner to provide views of the river from the facility balanced with replanting of riparian vegetation.
- Sections along I-70 need removal of non-native vegetation followed by revegetation of native species but may need to study potential impacts of Mag-Chloride and stormwater runoff related to vegetation health before attempting revegetation efforts.

- Some of the largest, most intact riparian areas on city property exist along the south bank of the Colorado River at the west end of GWS along the former Cardinell Homestead in the area of the new wastewater treatment facility. This area has healthy, diverse vegetation, minimal human impacts, and connection to good upland wildlife habitat. It is strongly recommended that this area be kept intact and natural with minimal development or mandated riparian buffers if development is necessary.

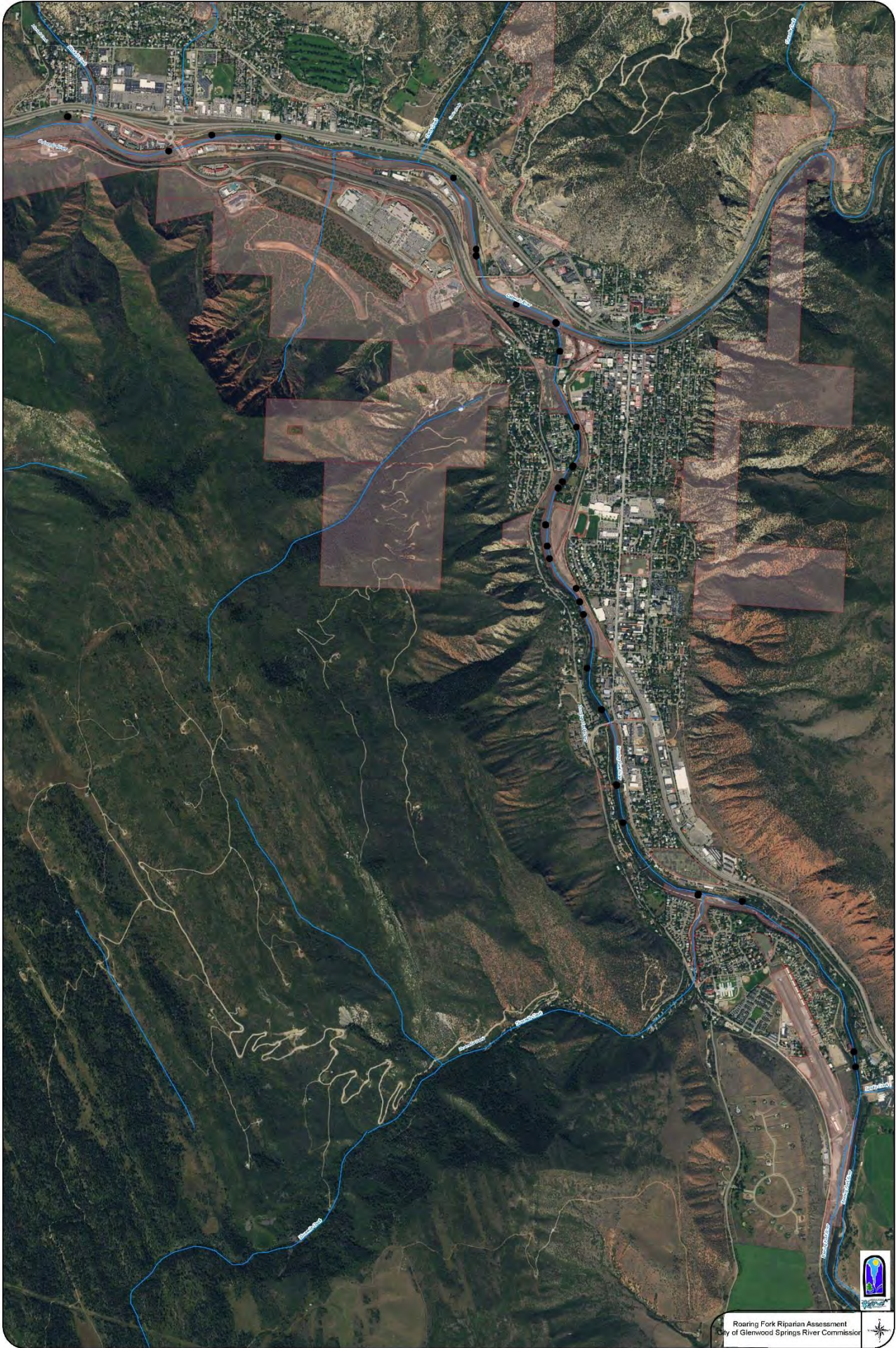
Summary

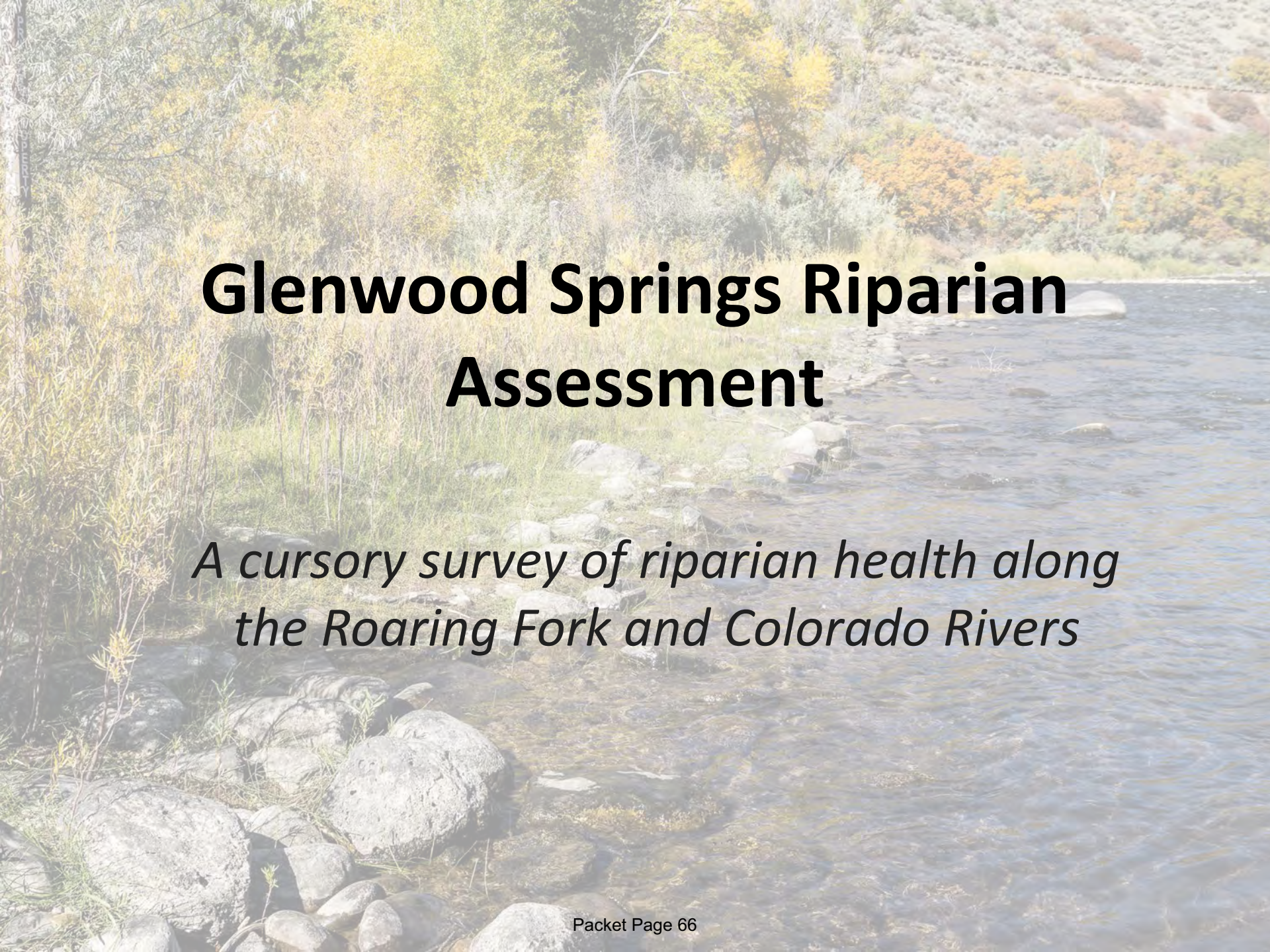
This assessment noted three general categories of riparian conditions within GWS:

- Minimally disturbed areas - exhibit fairly natural conditions and healthy riparian vegetation. These areas were noted throughout GWS although typically in localized pockets. Human impacts to these areas, particularly by private landowners, has been increasing in recent years.
- Partially disturbed areas – exhibit some human impacts and less healthy riparian vegetation. These areas, although exhibiting some disturbance, have the potential to revert to more healthy conditions given the application of best management practices or in many cases simply allowing the natural regrowth of riparian vegetation. These areas represent the largest portion of riparian land throughout GWS.
- Impacted areas – exhibit significant human impacts and alteration of riparian vegetation and conditions. These areas represent a fairly small portion of riparian land yet a fairly significant impact within that localized area. The presence of these areas emphasize the importance of maintaining riparian health in the less disturbed areas and improving riparian health in the partially disturbed areas.

This assessment indicates opportunities within Glenwood Springs where integrity and function of riparian areas can be maintained or improved. It also provides a basis for GWS to consider policy, regulations, public education or other means that recognize the value of riparian health and its associated impacts on river health.

Riparian Assessment Photo Location Map



The background image shows a river flowing through a landscape. In the foreground, there are large, light-colored rocks along the riverbank. The water is dark and reflects the surrounding environment. The background is filled with dense vegetation, including tall grasses and trees with yellow and orange foliage, suggesting an autumn setting. The overall scene is a natural, riparian environment.

Glenwood Springs Riparian Assessment

*A cursory survey of riparian health along
the Roaring Fork and Colorado Rivers*

Primary Objectives

- Photo document the range of riparian area conditions within GWS (healthy, marginal or poor).
- Suggest actions that can improve riparian health where needed.
- Inspire dialogue on how best to maintain or improve riparian conditions within GWS.

Methods

- Qualitative observations and photo documentation from raft, October, 2018
- Past documentation of same area by Design Workshop* and Roaring Fork Conservancy
- Observers have professional backgrounds in assessing the health of physical and biological functions of riparian areas

*Riverside Stewardship Manual, prepared for the City of Glenwood Springs, March 1997.

Key Observations Considered

- Reproduction and vigor of riparian plants
- Presence of non-native noxious plant species
- Connectivity of wildlife migration routes between habitats
- Bank stability
- Extent of active erosion

The Good News



Despite steep slopes and areas of dense development there are river segments within GWS that exhibit robust riparian health.



These images were taken from the Roaring Fork River

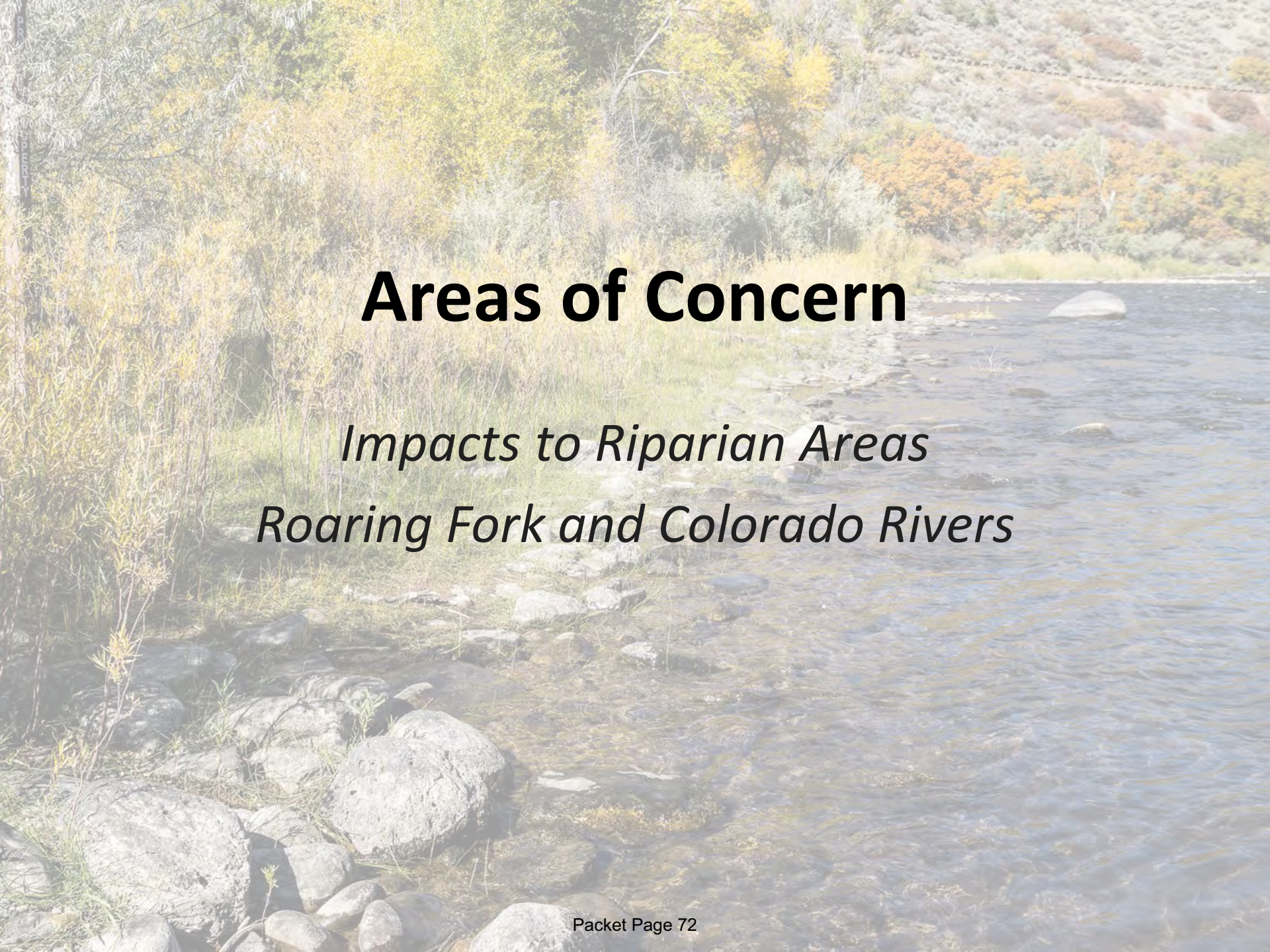
The Potential is There



Municipal development can occur without significantly degrading riparian health.



These images were taken from the Colorado River

A scenic view of a river with a rocky shoreline and autumn foliage. The foreground shows large, light-colored rocks along the bank, with some green and yellow grasses growing between them. The river water is dark and calm, reflecting the sky. In the background, there are trees with yellow and orange autumn leaves, and a hillside with sparse vegetation. The overall scene is peaceful and natural.

Areas of Concern

*Impacts to Riparian Areas
Roaring Fork and Colorado Rivers*

Slope stability



Without sufficient vegetation steep slopes are susceptible to erosion which can impact water quality and property values.

Presence of Non-Native Plants

Minimal Tamarisk were noted likely due to active Tamarisk removal projects.

Russian Olive still occurs in dense stands both on the Roaring Fork and Colorado Rivers



Public Access – Three Mile



Popular site for neighborhood residents, anglers and rafters leaves river banks heavily impacted.

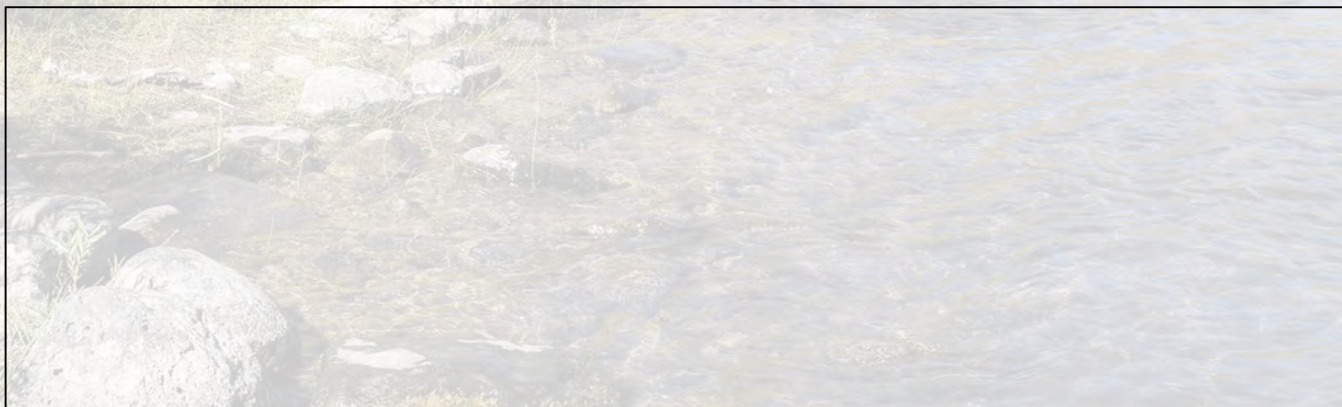
River flow pattern was significantly modified during construction of now abandoned ditch (adding to riparian impacts).



Public Access – Two Rivers Park



Heavy foot traffic can
exasperate riparian
health



Floodplain Clearing

Backyard clearing of riverside vegetation along private lots has been incrementally increasing over time. Impacts to riparian ecosystem vary in scope of removal.



Clearing can be extensive...

or minimal.



This practice appears to be growing as more homeowners seek the aesthetics of developing their riverside backyards.

Private River Access Impacts

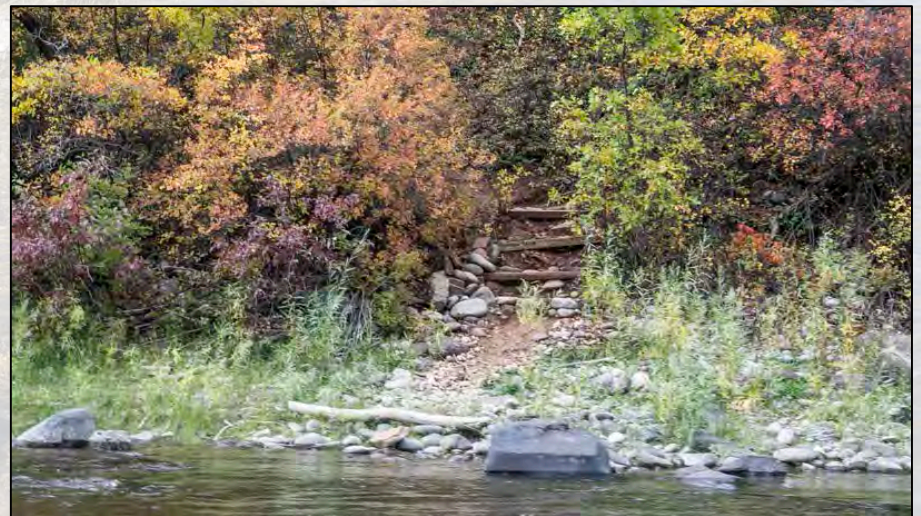


Access design should consider riparian and water quality protection

Top Left: Minimal impact to riparian vegetation and soil cover.

Top Right: Loss of riparian vegetation but decent soil cover.

Right: Improved design could reduce impacts of erosion into the river and protect trail's integrity.



Vegetation Loss in Other Areas



Loss of vegetation can lead to greater bank erosion, reduce river shading and bird habitat and limit its function to filter out sediments and excess nutrients

The Dark Side of Riprap



Riprap may effectively stabilize a river bank but it also inhibits re-establishment of riparian vegetation.



Waste Material Side Cast



Like Riprap, asphalt and concrete tossed onto river banks inhibits vegetation re-growth, ultimately impairing riparian function. (And it's unattractive)



We All Benefit from Healthy Riparian Areas



Riparian Buffer Zones: Functions and Recommended Widths



Prepared by

**Ellen Hawes and Markelle Smith
Yale School of Forestry and Environmental Studies**

For the

Eightmile River Wild and Scenic Study Committee

April 2005

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1. Functions of Riparian Buffers

Riparian buffers are vital elements of watersheds, primarily due to their protection of surface and ground water quality from impacts related to human land use. These vegetated buffers are complex ecosystems that provide food and habitat for unique plant and animal species, and are essential to the mitigation and control of nonpoint source pollution. In fact, the removal of streamside vegetation, primarily for development purposes, has resulted in degraded water resources and diminished value for human consumption, recreation, and industrial use.¹

In the Eightmile River watershed, maintenance of riparian buffers in their natural condition has been identified as one of the most effective means of protecting multiple outstanding resource values (ORVs), including water quality, hydrology, unique species and natural communities, and watershed ecosystem function.

Sedimentation increases turbidity and contributes to rapid siltation of waterbodies, negatively impacting water quality. Increased sediment loads also narrow channel widths and provide substrate for colonization of invasive aquatic plant species. Intact riparian buffers ameliorate these negative impacts by stabilizing streambanks. Roots of riparian vegetation deflect wave action and hold bank soil together. The buffer vegetation also decreases erosional impacts during flood events and prevents undercutting of streambanks.

Excess nitrogen and phosphorous from fertilizers and animal waste, as well as other pollutants originating from pesticides and herbicides, often bond to soil particles. The nutrient-loaded sediment contained in surface runoff then flows to the nearest waterbody and is deposited. This process is the primary cause of accelerated eutrophication of lakes and rivers². Streamside forests function as filters, transformers, and sinks for harmful nutrients and pollutants³. Buffer plants slow sediment-laden runoff and depending upon their width and vegetational complexity, may deposit or absorb 50 to 100% of sediments as well as the nutrients and pollutants attached to them⁴. When surface water runoff is filtered by the riparian buffer approximately 80 to 85% of phosphorous is captured⁵. Nitrogen and other pollutants can be transformed by chemical and biological soil activity into less harmful substances. In addition, riparian plants act as sinks, absorbing and storing excess water, nutrients, and pollutants that would otherwise flow into the river, reducing water quality.

One of the most important functions of riparian buffers is enhanced infiltration of surface runoff⁶. Riparian vegetation in the buffer surrounding a waterbody increases surface roughness and slows overland flows. Water is more easily absorbed and allows for groundwater recharge. These slower flows also regulate the volume of water entering rivers and streams, thereby minimizing flood events and scouring of the streambed.

¹ Welsch 1991

² Jontos 2004

³ Welsch 1991

⁴ Connecticut River Joint Commission 2005

⁵ Connecticut River Joint Commission 2005

⁶ Dillaha et al. 1989

Many plant and animal species depend on the distinctive habitat of riparian buffers, which include elements of both terrestrial and aquatic ecosystems. Forested buffers improve habitat quality by providing shade that cools water temperatures, thereby elevating the dissolved oxygen content that is necessary for many species of fish and aquatic insects. Woody debris from shrubs and trees within the vegetated buffer provides food and cover for a multitude of aquatic species. If large enough, buffers also provide corridors essential for terrestrial wildlife movement.

Vegetated buffers may serve as screens along waterways, protecting the privacy of riverfront landowners and blocking views of any unsightly development. Hiking and camping opportunities are also facilitated by forested buffers, which if large enough, allow outdoor enthusiasts to enjoy the proximity of the water. The diversity of plant species provides visual interest and increases aesthetic appeal.

2. Recommended buffer widths

The width of a buffer depends greatly on what resource you are trying to protect. Scientific studies have shown that efficient buffer widths range from 10 feet for bank stabilization and stream shading, to over 300 feet for wildlife habitat. Furthermore, the necessary width for an individual site may be less or more than the average recommendations, depending on soil type, slope, land use and other factors. The ranges cited below come from four literature reviews by The U.S. Army Corps of Engineers New England Division, the University of Georgia's Institute of Ecology, the U.S. Army Engineer Research and Development Center, and researchers from the UK Forestry Commission.⁷ Results from studies done in New England fall within the ranges cited below, and no evidence was found in the literature to suggest that buffers should be, on average, either wider or narrower.

a. Erosion control

Erodibility of soil type is a key factor when assessing adequate buffer widths. Widths for effective sediment removal vary from only a few feet in relatively well drained flat areas to as much as several hundred feet in steeper areas with more impermeable soils. In order to prevent most erosion, vegetated buffers of 30 feet to 98 feet have been shown to be effective.

b. Water quality

Nutrients - Nitrogen and phosphorous can be retained in buffers that range from 16 to 164 feet. The wider buffers will be able to provide longer-term storage. Nitrogen is more effectively removed than phosphorous. In 1995, a study conducted in Maine found that the effectiveness of buffers at removing phosphorous is variable but in most cases, a 49-foot natural, undisturbed buffer was effective at removing a majority of the nutrient from surface runoff. However, the U.S. Army Corps of Engineers concluded in their 1991 study that there was insufficient evidence

⁷ U.S. Army Corps of Engineers 1991, Wenger 1999, Fischer and Fischenich 2000, Broadmeadow and Nisbet 2004, respectively.

to determine a necessary buffer width for phosphorous retention. It is important, therefore, to combine buffer zones with strategies to reduce phosphorous at its source.

Pesticides – Buffer widths for pesticide removal range from 49 feet to 328 feet. Pesticides that are applied manually require less of a buffer area than aerially-sprayed pesticides.

Biocontaminants – Buffer widths for biocontaminants, such as fecal coliform, were not reviewed in this study. The University of Georgia found that, in general, buffers should be 30 ft. or greater. However, buffers may not be able to adequately filter biocontaminants and it is also important to reduce these pollutants at the source.

c. Aquatic habitat

Wildlife – The minimum width of riparian buffers to protect aquatic wildlife, including trout and invertebrates, range from 33 feet to 164 feet.

Litter and debris input – Recommendations for buffer widths to provide an adequate amount of debris for stream habitat range from 10 feet to 328 feet, although most fall within 50 feet to 100 feet.

Stream temperature. Adequate shading can be provided by a 30-foot buffer, but buffers may need to be up to 230 feet to completely control stream temperature. The amount of shade required is related to the size of the channel. The type of vegetation in the buffer regulates the amount of sunlight reaching the stream channel. Generally, a buffer that maintains 50% of direct sunlight and the rest in dapple shade is considered preferable⁸.

d. Terrestrial habitat

The Eightmile River watershed contains a large number of roadless, undeveloped forest blocks and is more than 80% forested in total. Furthermore, the riparian corridor within 300 ft. of the river and its tributaries has remained mostly intact, supporting a high level of biodiversity as well as protecting water quality. The Eightmile River is host to a number of important species, including native brook trout, freshwater mussels, blue back herring, bobcats, great horned owls and cerulean warblers.

The habitat requirements for birds, mammals, reptiles, amphibians and fish vary widely, and the necessary buffer width to protect each species varies widely as well. While trout and salmon can benefit greatly from the shading, habitat, food, and water quality protection that a 150-foot buffer provides, mammals such as the red fox and the bobcat require riparian corridors of approximately 330 feet. Furthermore, birds such as the cerulean warbler, which requires large areas of forest, may need a buffer that is much greater than 330 ft.⁹ For this reason, we do not believe that it is feasible to capture all of the habitat needs of all species with a uniform buffer. More careful targeting of potential riparian habitat, work with landowners to create conservation

⁸ Broadmeadow and Nisbet 2004

⁹ Chase et al. 1995

easements, as well as the creation of protected areas by the town will aid in more specific approaches to habitat preservation for these species.

For a more detailed look at the range of recommended buffer widths, see Appendix 1.

3. Factors influencing buffer width

There are many factors that influence the effectiveness buffers. These include slope, rainfall, the rate at which water can be absorbed into the soil, type of vegetation in the buffer, the amount of impervious surfaces, and other characteristics specific to the site.

a. Slope

As slope increases, the speed at which water flows over and through the buffer increases. Therefore, the steeper the land within the buffer, the wider it needs to be to have time to slow the flow of water and absorb the pollutants and sediments within it. Many researchers suggest that especially steep slopes serve little value as a buffer, and recommend excluding areas of steep slope when calculating buffer width. The definition of “steep” varies from over 10% to over 40% slope¹⁰.

b. Soil type

The type of soil affects how quickly water can be absorbed. Soils that are high in clay are less permeable and may have greater runoff. On the other hand, soils that are largely made up of sand may drain water so rapidly into the groundwater that roots are not able to effectively trap pollutants. Furthermore, soils that are moister and more acidic have a better capacity to take up nitrogen from the soil and release it to the atmosphere (through denitrification).

c. Vegetation mix

Structurally diverse riparian buffers, i.e. those that contain a mix of trees, shrubs and grasses, are much more effective at capturing a wide range of pollutants than a riparian buffer that is solely trees or grass. Removal efficiencies range from 61% of the nitrate, 72% of the total phosphorous and 44% of the orthophosphates from grass buffers to 92% of the nitrate 93% of the total phosphorous and 85% of the orthophosphates from combined grass and woody buffers.¹¹

¹⁰ Wenger 1999

¹¹ Jontos 2004

Table 1: Estimated reduction of nutrient loads from implementation of riparian buffers¹²

Buffer Type	Nitrogen	Phosphorus	Sediment
Forested	48-74%	36-70%	70-90%
Vegetated Filter Strips	4-70%	24-85%	53-97%
Forested and Vegetated Filter Strips	75-95%	73-79%	92-96%

Source: Delaware Department of Natural Resources and Environmental Control

Generally, the grass filter strip works best for sediment removal, while the forested buffer is better for nitrate removal from subsurface flows¹³. Grasses have a shallower and denser root mat that is more effective in slowing runoff and trapping sediments from the surface flow. Trees have a deeper root system that can trap and uptake nutrients from the groundwater, stabilize banks, and regulate the flow of water to the stream.

Forests provide certain functions that grasses cannot. Trees shade the river and provide an input of leaf litter and branches that are necessary for many aquatic species. In addition, a forested buffer provides important habitat for terrestrial wildlife. Native plants species are preferred to ornamentals or exotics due to the habitat advantage they provide for wildlife. Old trees are especially valuable for providing inputs of coarse woody debris.

The most effective riparian buffers should include a mix of trees, shrubs and herbaceous plants native to the region and appropriate to the environment in which they are to be planted. When planting buffers, it is best to use adjacent reference riparian buffers as the basis for selecting floral composition¹⁴.

Table 2: Plant type vs. removal efficiency

Function	Grass	Shrubs	Trees
Sediment trapping	High	Medium	Low
Filtration of Sediment born Nutrients, Microbe and Pesticides	High	Low	Low
Soluble forms of Nutrients and Pesticides	Medium	Low	Medium
Flood Conveyance	High	Low	Low
Reduce Stream Bank Erosion	Medium	High	High

Source: Jontos 2004 (modified after Fisher and Fischenich 2000)

¹² (Palace, 1998; Lowrance et al., 1995; Franti, T.G., (1997); Parsons et al. (1994); Gilliam et al. (1997); Osmond et al., (2000)

¹³ Triangle J. Council of Governments 1999

¹⁴ Jontos 2004

4. Buffer types

a. Variable Width

Several models have been created to consider individual site factors in determining buffer width. These range from the complex to the relatively simple. The more complex models take into account multiple factors, such as slope, erodibility and infiltration rates¹⁵. Examples of such models include:

Brown et al. (1987):

$$\text{Buffer width} = (\text{average slope/erodibility factor})^{1/2}$$

Cook College Department of Environmental Resources:

$$\text{Buffer width} = 2.5 (\text{time of travel of overland flow}) * (\text{slope})^{0.5}$$

More simple models only take into account slope. A common formula is to set a fixed buffer width and apply 2 feet per percent slope. Many of these models recommend *not* including impervious surfaces or areas of steep slope in the buffer width (**Figure 1**). Cook College recommends excluding anything greater than 15% slope, while Wenger (1999) recommends excluding all slopes over 25%.

b. Fixed Width

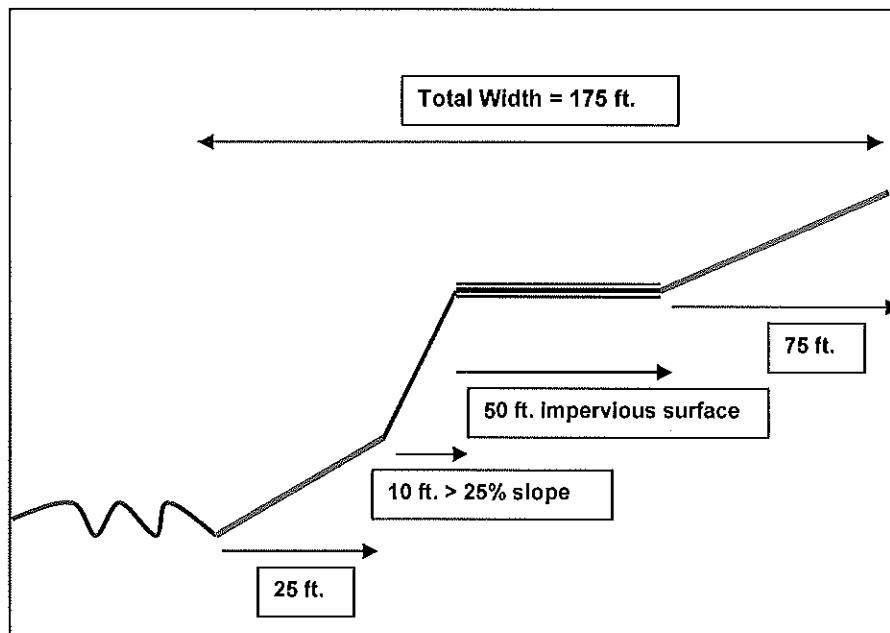
A fixed buffer width is the easiest to administer. However, care must be taken to select the appropriate width for the resources you are targeting. Studies unanimously support the conclusion that buffer efficiency at filtering out pollutants increases with width. However, this does not increase infinitely, and the goal is to find the most efficient width. For example, a study in the Mid-Atlantic¹⁶ found that 90% of sediments were removed by a 62 ft. riparian buffer, but only 94% were removed by more than doubling the buffer width to 164 ft.

If a fixed buffer width is chosen, it should be on the conservative side to provide leeway for slope and soil type. Data for the Eightmile River watershed show that significant areas of the land bordering the river have slopes that are above 15%. Therefore, we believe it is necessary to make a fixed buffer width wider than the average minimum recommendation of 100 ft.

¹⁵ Described in the US Army Corps of Engineers (1991) literature review.

¹⁶ Peterjohn and Corell 1994.

Fig.1: Variable buffer width adjusted from 100 feet to 175 feet to account for effects of slope and impervious surface.



c. Three Zone

The Three Zone system was originally developed as part of an initiative to protect the Chesapeake Bay. The combination of vegetation types (trees, grass and shrubs) helps maximize the efficiency and diversity of benefits that the buffer provides (Figure 2).

Zone 1

Minimum Width: 15 ft.

Composition: Native trees and shrubs

Function: Bank stabilization, habitat, shade, flood prevention

Management: None allowed except bank stabilization and removal of problem vegetation.

Zone 2

Minimum Width: 60 ft.

Composition: Native trees and shrubs.

Function: Removal of nutrient, sediments and pollutants from surface and groundwater, habitat

Management: Some removal of trees to maintain vigorous growth.

Zone 3

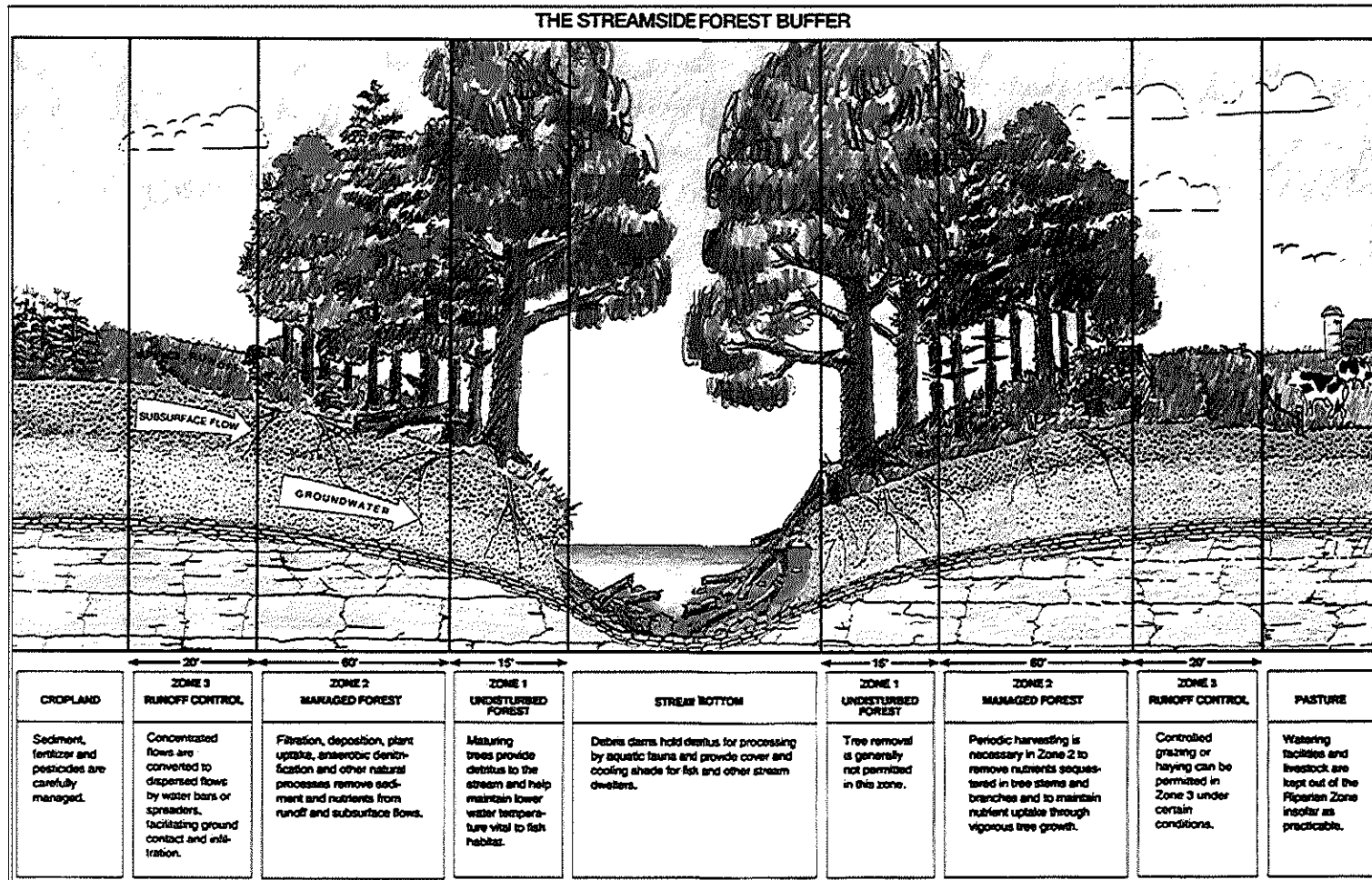
Minimum Width: 30 ft.

Composition: Grasses and herbaceous plants

Function: Slow surface runoff, trap sediments and pesticides

Management: Mowing

Fig. 2: Three-Zone System



Source: Welsch 1991. Riparian Forest Buffers: Function and Design For Protection and Enhancement of Water Resources.

5. What order streams to protect

Buffers are most effective when they are contiguous. Guidelines for buffer widths recommend that long, continuous buffer strips should often be a higher priority than fragmented strips of greater width.¹⁷ Small gaps in vegetation along the bank can channelize runoff into the river and effectively negate the effect of surrounding buffers. For this reason, landowners who currently have lawns that run to the edge of the river should be encouraged to replant trees and shrubs along the bank. In addition, footpaths cleared for river access should be winding, rather than straight, and as narrow as possible to minimize sedimentation.

Failure to extend protection to the smaller headwater streams in the river basin also ignores important sources of sedimentation and pollution. To preserve water quality in the Eightmile River, it is essential to protect all of its tributaries. In fact, smaller order streams often account for the greatest miles of watercourse in a basin. Buffering low order streams (1st, 2nd and 3rd) has greater positive influence on water quality than wider buffers on portions of larger order streams already carrying polluted water. While it may be politically infeasible to set wide buffer zones around intermittent and ephemeral streams, this omission is not justified by the science. A University of Georgia study of riparian buffers warns, "Governments that do not apply buffers to certain classes of streams should be aware that such exemptions reduce benefits substantially."¹⁸ A review of buffers by the U.S. Army also notes that "even the best buffer strips along larger rivers and streams cannot significantly improve water that has been degraded by improper buffer practices higher in the watershed".¹⁹

Smaller headwater streams have the greatest area of land-water interaction, and have the greatest potential to accept and transport sediment. Ephemeral streams, which only exist during periods of high rain, can serve as important sources of sediment and pollutants to the river. It is important that they are maintained in a vegetated condition in order to help trap and slow the flow of pollutants. Furthermore, removing riparian vegetation from the banks of small, heavily shaded streams will have a much greater impact on stream temperature and aquatic habitat throughout the watershed than removing vegetation from larger rivers, where only a fraction of the water is shaded. Rather than ignoring these streams completely, a compromise would be to create a smaller setback. Clinnick et al (1985) advocate a minimum of a 20 m wide buffer for ephemeral streams, and where that is not possible, at least leaving the banks vegetated²⁰.

¹⁷ Fisher and Fischenich 2000

¹⁸ Wenger 1999

¹⁹ Fisher and Fischenich 2000

²⁰ Wenger 1999

Appendix 1–Summary of Effective Buffer Widths from Literature Review

Author	Effective Width of Buffer (in feet)							
	Aquatic Wildlife	Terrestrial Wildlife	Stream Temperature	Litter/Debris input	Nutrient Retention	Sediment Control	Bank Stabilization	Pesticide Retention
Wenger 1999		220-574 ft.	33 – 98 ft.	50 ft.	50 – 100 ft.	82 – 328 ft.	–	> 49 ft.
Army Corps 1991	98 ft.	30 – 656 ft.	33 – 66 ft.	66-102 ft.	52 – 164 ft.	33 – 148 ft.	49 – 98 ft.	49 – 328 ft.
Fisher and Fischenich 2000	> 98 ft.	98-1,640 ft.	–	10 – 33 ft.	16.4-98 ft.	30-200 ft.	30 -66 ft.	–
Broadmeadow and Nisbet 2004	33 –164 ft.	–	49 – 230 ft.	82 – 328 ft.	16.4-98 ft.	49 – 213 ft.	–	–

Appendix 3

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Chase, V., Deming, L., and Latawiec, F. 1995. Buffers for wetlands and surface waters: a guidebook for New Hampshire municipalities. Audubon Society of New Hampshire.

Connecticut River Joint Commission. 2005. Introduction to riparian buffers. *From: Riparian Buffers for the Connecticut River Valley*, no.1. Available online at <http://www.crjc.org/riparianbuffers.htm>. Last accessed April 27, 2005.

Dillaha, T.A., J.H. Sherrard, and D. Lee. 1989. Long-term effectiveness of vegetative filter strips. *Water Environ. Soc.* 1:419-421.

Fischer, R.A. and Fischenich, J.C. 2000. Design recommendations for riparian corridors and vegetated buffer strips. U.S. Army Engineer Research and Development Center, Environmental Laboratory. Vicksburg, MS.

Jontos, R. 2004. Vegetative buffers for water quality protection: an introduction and guidance document. Connecticut Association of Wetland Scientists White Paper on Vegetative Buffers. Draft version 1.0. 22pp.

Krumine, M. 2004. Riparian buffers de-mystified! *Tributary Times*, 3(5). Delaware Department of Natural Resources and Environmental Control, Division of Water Resources. http://www.dnrec.state.de.us/water2000/Sections/Watershed/ws/trib_times_current.htm

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Wenger, S. 1999. A review of the scientific literature of riparian buffer width, extent and vegetation. Institute of Ecology, University of Georgia. Athens, GA

Appendix 2 - General Recommended Widths of Buffer Zones

Source: Jontos 2004 (modified after Fisher and Fischenich 2000)

<i>Function</i>		Recommended Width
Water Quality Protection	Buffers, especially dense grassy or herbaceous buffers on gradual slopes, intercept overland runoff, trap sediments, remove pollutants, and promote ground water recharge. For low to moderate slopes, most filtering occurs within the first 10 m, but greater widths are necessary for steeper slopes, buffers comprised of mainly shrubs and trees, where soils have low permeability, or where NPS loads are particularly high.	5 to 30 m
Stream Stabilization	Buffers, particularly diverse stands of shrubs and trees, provide food and shelter for a wide variety of riparian and aquatic wildlife	10 to 20 m
Riparian Habitat	Riparian vegetation moderates soil moisture conditions in stream banks, and roots provide tensile strength to the soil matrix, enhancing bank stability. Good erosion control may only require that the width of the bank be protected, unless there is active bank erosion, which will require a wider buffer. Excessive bank erosion may require additional bioengineering techniques.	30 to 500 m +
Flood Attenuation	Riparian buffers promote floodplain storage due to backwater effects, they intercept overland flow and increase travel time, resulting in reduced flood peaks.	20 to 150 m
Detrital Input	Leaves, twigs and branches that fall from riparian forest canopies into the stream are an important source of nutrients and habitat.	3 to 10 m

Appendix 4 - Web Resources

Chesapeake Bay Committee. Chesapeake Bay Riparian Handbook: A guide for establishing and maintaining riparian forest buffers.

<http://www.chesapeakebay.net/pubs/subcommittee/nsc/forest/handbook.htm>

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National Agroforestry Center. Riparian forest buffers.

<http://www.unl.edu/nac/riparian.html>

USDA Natural Resources Conservation Service. Buffers for conservation in New Hampshire:

http://www.nh.nrcs.usda.gov/features/Buffers/what_buffers.html

Welsch, D.J. 1991. Riparian forest buffers: function and design for protection and enhancement of water resources. USDA Forest Service, NA-PR-07-91.

http://www.na.fs.fed.us/spfo/pubs/n_resource/buffer/cover.htm

Wenger, S. 1999. A review of the scientific literature of riparian buffer width, extent and vegetation: http://outreach.ecology.uga.edu/tools/buffers/lit_review.pdf

WEDNESDAY, APRIL 25 | 12 PM

Lionshead Welcome Center
Lower level of Lionshead
Parking Structure

A Complimentary
Ecology Presentation

FREE

FREE LUNCH
for attendees

Come enjoy a complimentary lunch and listen to Pete Wadden, Town of Vail Watershed Education Coordinator, discuss the history and ongoing controversy surrounding the philosophies of Conservation and Preservation in the United States. Experts from the Town of Vail, Walking Mountains Science Center, and Eagle River Watershed Council will be on hand to answer questions about what residents can do to help Restore the Gore. There will also be stickers and informational brochures available to attendees.



walking mountains[®]
science center



TOWN OF VAIL
970.479.2144 | lovevail.org

Project Re-Wild

The Town of Vail will provide partial funding to riparian and stream bank restoration projects on private land that reduce sediment and pollution loads in Gore Creek and its tributaries by (1) establishing native vegetation buffers, (2) stabilizing stream banks or (3) reducing impervious surfaces. The town will provide up to 75% funding to projects that staff determine best serve each of the three aforementioned goals.

APPLICATION PROCESS



Homeowners or their agents who wish to apply for partial project funding from the Town of Vail must submit a completed application form in addition to all other local, state, and federal permit applications. Applicants will be asked to take time to provide detailed answers to the questions in the application packet and provide any additional information that is available such as architectural drawings and photos. Town staff will determine whether each proposed project meets the criteria listed below and will award funding to projects which best:

- Prevent erosion or reduce sediment loading in the creek
- Restore native riparian vegetation
- Remove impervious surfaces
- Rehabilitate or create wetlands or floodplains
- Incorporate BMPs in their design
- Improve in-stream habitat (pool/riffle complexes, meanders, etc.)
- Occur in high priority areas (areas of highest concern based on MMI scores)
- Provide detailed map and architectural plan of proposed project
- Have the greatest potential to add Value to the Environment

ELIGIBILITY



This fund will provide assistance to private homeowners in the Town of Vail who wish to restore stream bank on their property abutting Gore Creek or its tributaries. Funds may not be used for projects on Town of Vail stream tract property.

WHAT GOES WHERE

You can help preserve Gore Creek. Here's how.

LANDSCAPE DESIGNER'S GUIDE

As a landscape architect or landscape designer in Vail, you do a lot to keep our town beautiful.

But you may not realize that Gore Creek—the main waterway that meanders through town—is suffering the impact of fertilizers, pesticides, and landscaping techniques that destroy native vegetation.

As rain or melting snow flows across our yards, rooftops, and paved areas, it picks up pollutants including sediment, organic matter, pesticides and fertilizers. Polluted water then flows off these properties to roadways, ditches or through storm drains to Gore Creek, harming important aquatic insects, increasing algae blooms and adding sediment all of which impact the food chain for our prized trout fishery. The cumulative impacts of urbanization in the Gore Creek valley over the past half-century have had a significant impact on the health of Gore Creek, including the insects, fish, birds and vegetation that depend on clean water.

Because landscaping is so closely tied to natural processes, design and maintenance practices can have a significant effect on water quality in Gore Creek and beyond. The good news is you can improve the Creek's health by adopting a few simple practices.

- Add trees and shrubs to your clients' yards to capture, hold and filter rainwater.
- Encourage your clients to use up to three inches of mulch (like leaves, aged wood chips, compost or grass clippings),

primarily in spring and fall. Mulch stabilizes soil temperature, prevents weeds, feeds the soil for healthier plants and helps to conserve water.

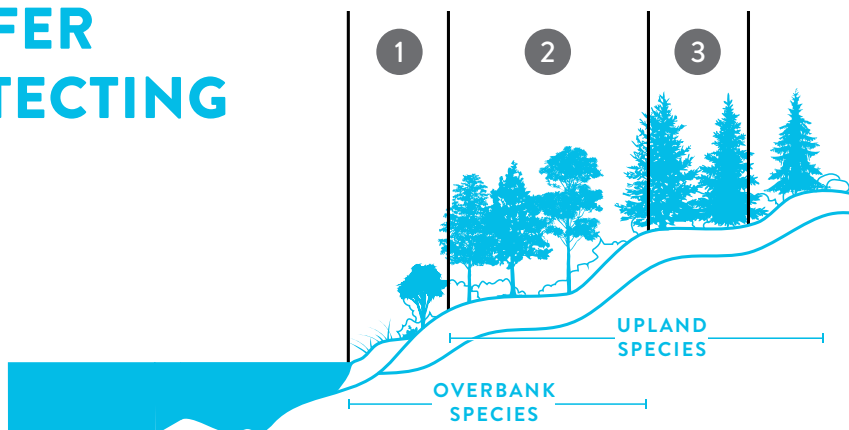
- Incorporate swales and berms into landscapes to slow runoff and prevent it from leaving yards.
- Consider installing a rain garden and directing roof drains to it.
- Consider using porous pavements such as pavers, flagstone and gravel instead of impervious surfaces such as asphalt or concrete for sidewalks and driveways.
- Observe town ordinances regarding riparian buffers and setbacks.
- Use the Three-Zone Buffer System (next page) for guidance on building and landscaping activities within 100 feet of any stream.
- Minimize the use of turf where possible, which will in turn reduce fertilizer, pesticide and water requirements.
- Plant a diverse landscape, which will naturally minimize pest problems.

Thank you for playing a critical role in preserving a special part of Vail's community—Gore Creek.

LEARN MORE AT [LOVEVAIL.ORG](https://lovevail.org)



THREE-ZONE BUFFER SYSTEM FOR PROTECTING GORE CREEK



1 < 25 FEET OVERBANK ZONE

This area is important for bank stability, preventing erosion, filtering and absorbing pollutants, and providing habitat for terrestrial and aquatic wildlife. Contains wetland plants and mature riparian forest.

- Leave native vegetation undisturbed.
- Reintroduce native shrubs, grasses and forbs as a substitute for turf and other manmade improvements.
- Limit the use of pesticides to what is absolutely needed to control invasive weed species.

2 25–75 FEET TRANSITIONAL ZONE

This area lies between upland development and the overbank zone, and is important in filtering stormwater runoff and absorbing pollutants. Contains mature native forest and vegetation.

- Design low-impact landscaping, which reduces maintenance requirements and less need for pesticide and fertilizer.
- Reduce the use of turf and impervious surfaces such as concrete and asphalt paving.
- Create vegetative buffers to filter runoff from roofs, drives and roadways.

3 75–100 FEET UPLAND ZONE

This is an area for actively managed landscapes or natural conditions, which allows water to slowly filter into the ground.

- Lawn, garden, and compost wastes can be stored here, and stormwater BMPs may be installed, but this zone should be left as undisturbed as possible in order to optimize the value of the riparian buffer.
- Minimize turf areas to what is truly needed. Avoid siting any impervious surfaces in this zone.

WHAT TO PLANT

The Rocky Mountains are home to numerous native plant species. These plants are adapted to the highly variable climate and micro-climates found in mountain habitats. This list offers recommendations for areas along Gore Creek, as well as upland and transitional zones away from the water's edge. These plants can be used in

ornamental landscape plantings as buffers between landscaped and native areas or in native habitat restorations. Planting a variety of species provides biodiversity, which protects against pest outbreaks and provides important habitat for native fauna—all key components in improving water quality in Vail.



Thin-leaved
Alder



Twinberry
Honeysuckle



Bog
Birch

COMMON NAME	SCIENTIFIC NAME	HEIGHT	SPREAD
OVERBANK: TREES/SHRUBS			
Thin-leaved Alder	<i>Alnus incana</i>	15-30'	15-20'
Bog Birch	<i>Betula grandulosa</i>	3-6'	3-8'
Red-twig Dogwood	<i>Cornus sericea</i>	6-8'	8-12'
Twinberry Honeysuckle	<i>Lonicera involucrate</i>	3-5'	3-6'
Narrow-leaved Cottonwood	<i>Populus angustifolia</i>	30-50'	20-30'
Lance-leaved Cottonwood	<i>Populus x acuminata</i>	40-60'	30-40'
Drummond's Willow	<i>Salix drummondiana</i>	6-12'	6-12'
Coyote Willow	<i>Salix exigua</i>	6-12'	4-8'
Yellow Mountain Willow	<i>Salix monticola</i>	8-12'	6-8'



Harebells

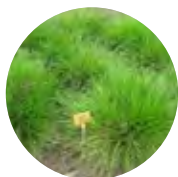


Cow Parsnip



Western Blue Flag

COMMON NAME	SCIENTIFIC NAME
OVERBANK: FORBS	
Monkshood	<i>Aconitum columbianum</i>
Marsh Marigold	<i>Caltha leptosepala</i>
Harebells	<i>Campanula rotundifolia</i>
Chiming Bells	<i>Mertensia ciliata</i>
Cow Parsnip	<i>Heracleum maximum</i>
Western Blue Flag	<i>Iris missouriensis</i>



Tufted
Hairgrass



Slender
Wheatgrass



Baltic
Rush

COMMON NAME	SCIENTIFIC NAME	DISTRIBUTION
OVERBANK: NATIVE SEED MIX		
Tufted Hairgrass	<i>Deschampsia caespitosa</i>	20%
Streambank Wheatgrass	<i>Elymus lanceolatus</i>	20%
Slender Wheatgrass	<i>Elymus trachycaulus</i>	15%
Big Bluegrass	<i>Poa secundiflora</i>	5%
Western Wheatgrass	<i>Pascopyronsmithii</i>	15%
Fowl Bluegrass	<i>Poa palustris</i>	20%
Baltic Rush	<i>Juncus balticus</i>	5%

Thank you for playing a critical role in preserving a special part of Vail's community—Gore Creek.

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Rabbitbrush



Quaking Aspen



Boulder Raspberry

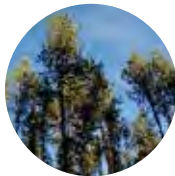
COMMON NAME	SCIENTIFIC NAME	HEIGHT	SPREAD
UPLAND: DECIDUOUS TREES/SHRUBS			
Rocky Mountain Maple	Acer glabrum	20-30'	10-20' <i>(smaller in Vail)</i>
Saskatoon Serviceberry	Amelanchier alnifolia	6-20'	6-12'
Rabbitbrush species	Chrysothamnus nauseosus	2-6'	2-6'
Potentilla or Cinquefoil	Pentaphylloides floribunda	2-3'	2-3'
Quaking Aspen	Populus tremuloides	20-50'	20-30'
Native Chokecherry	Prunus virginiana melanocarpa	8-20'	8-12'
Wax Currant	Ribes cereum	2-4'	2-4'
Woods Rose	Rosa woodsii	3-6'	3-6'
Boulder Raspberry	Rubus deliciosus	3-6'	3-6'
Thimbleberry	Rubus parviflorus	3-5'	4-6'
Red-berried Elder	Sambucus pubens	4-12'	4-12'
Snowberry	Symphoricarpos albus	3-5'	3-5'



Native
White Fir



Rocky Mountain
Juniper



Lodgepole
Pine

COMMON NAME	SCIENTIFIC NAME	HEIGHT	SPREAD
UPLAND: EVERGREEN TREES			
Native White Fir	Abies concolor	40-60'	20-30'
Rocky Mountain Juniper	Juniperus scopulorum	20-30'	8-12'
Engelmann Spruce	Picea engelmannii	40-60'	
Colorado Blue Spruce	Picea pungens	40-60'	
Bristlecone pine	Pinus aristata	10-20'	
Lodgepole pine	Pinus contorta latifolia	50-70'	10-15'
Douglas-fir		50-80'	



Rocky Mountain
Columbine



Silvery
Lupine

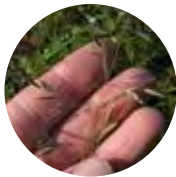


Pussytoes

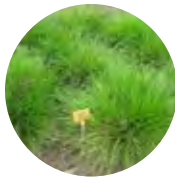
COMMON NAME	SCIENTIFIC NAME
UPLAND: FORBS	
Rocky Mountain Columbine	Aquilegia caerulea
Rocky Mountain Penstemon	Penstemon strictus
Richardson's Geranium	Geranium richardsonii
Silvery Lupine	Lupinus argenteus
Aspen Daisy	Erigeron speciosus
Sulphur Flower	Eriogonum umbellatum
Pussytoes	Antennaria rosea



Mountain
Brome grass



Sandberg
Bluegrass



Tufted
Hairgrass

COMMON NAME	SCIENTIFIC NAME	DISTRIBUTION
UPLAND: NATIVE SEED MIX		
Streambank Wheatgrass	Elymus lanceolatus	20%
Mountain Brome grass	Bromus marginatus	20%
Slender Wheatgrass	Elymus trachycaulus	15%
Blue Wildrye	Elymus glaucus	5%
Big/Canby Bluegrass	Poa secunda	5%
Rocky Mountain Fescue	Festuca saximontana	5%
Sandberg Bluegrass	Poa secunda	5%
Prairie Junegrass	Koeleria cristata	5%
Tufted Hairgrass	Deschampsia caespitosa	5%

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Riparian Setback Code Amendment Planning File #20-19

Planning and Zoning Commission

July 23 , 2019



History

- **May 2019**
 - Staff directed to bring forth proposed setback for discussion and review via the Code Amendment process
- **October 4, 2018**
 - City Council work session with River Commission and Planning and Zoning Commission
- **February 7, 2018**
 - River Commission recommended setback to City Council



Proposal

- **Current Standard**

- *"No improvement, building, structure, excavation, dumping or backfill shall be placed, built, undertaken or approved within a 30-foot setback area horizontally from the high-water mark of any river or live stream, except for bridges, paths for non-motorized use, irrigation structures or flood control and erosion protection devices."*
- Formerly Section 070.010.010 defined "high water mark means for the Roaring Fork River, the level of the 1973 peak flow measured at eight thousand two hundred eighty (8,280) cubic feet per second. For the Colorado River, the level of the 1973 peak flow measured at twenty thousand five hundred (20,500) cubic feet per second. For any other river or stream, its highest peak flow between October 1, 1956, and September 30, 1976."



CITY OF

GLENWOOD
SPRINGS

COLORADO

Proposal

- **Proposed Standard**

070.040.020(d) Development in Waterways and Areas of Special Flood Hazard

(24) Conservation of Waterways

It is the purpose of this Subsection 070.040.020(d)(24) to conserve and promote the health of the City's riparian ecosystems and water quality by maintaining a functional natural buffer adjacent to waterways.

a. Applicability

All new improvements, buildings, additions, structures, excavations, grading, dumping, clearing of native vegetation, or backfill shall be subject to the requirements of 070.040.020(d)(24)b Standards unless the applicant demonstrates to the City Engineer and the Director by clear and convincing evidence that one or more of the following conditions is met:

- 1. The removal of native vegetation, not to exceed 10 percent of the setback area defined below, to allow a property owner private access to and personal enjoyment of the waterway. This shall not be interpreted to allow for permanent structures of any kind within said area.*
- 2. The construction of bridges, public utilities, public paths for non-motorized use, public open space areas, wildfire mitigation activities, irrigation structures, flood control and erosion protection devices that do not result in water quality degradation, stream bank erosion, or a reduction in the function and quality of a riparian area or wetland.*
- 3. Removal of vegetation listed on the Garfield County **noxious weed** list, Chinese Elm, or Siberian Elm in compliance with applicable regulations. Vegetation shall be replaced with appropriate riparian plant species to limit erosion.*
- 4. Applicant demonstrates the area does not contain significant riparian plant species or functions or is impacted by previous earth disturbing activities and proposed activity improves water quality, limits erosion, and promotes riparian or wetland restoration.*

b. Standards

- 1. No improvement, building, structure, excavation, grading, dumping, clearing of native vegetation, or backfill shall be placed, built, undertaken or approved within fifty feet of the ordinary high-water mark, measured horizontally, of any river or live perennial stream.*
- 2. No chemical treatments, including but not limited to fertilizers, pesticides, and/or herbicides, are permitted with said fifty-foot setback area.*



CITY OF

GLENWOOD
SPRINGS

COLORADO

Considerations

- Ordinary High Water Mark

- “mark typically reached on an annual basis within a channel”
- Per Army Corp of Engineers..... “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.”
- Determination
 - Formal ecological survey (approximately \$50,000).
 - Site visit by staff



Photo credit: Water Environment Federation

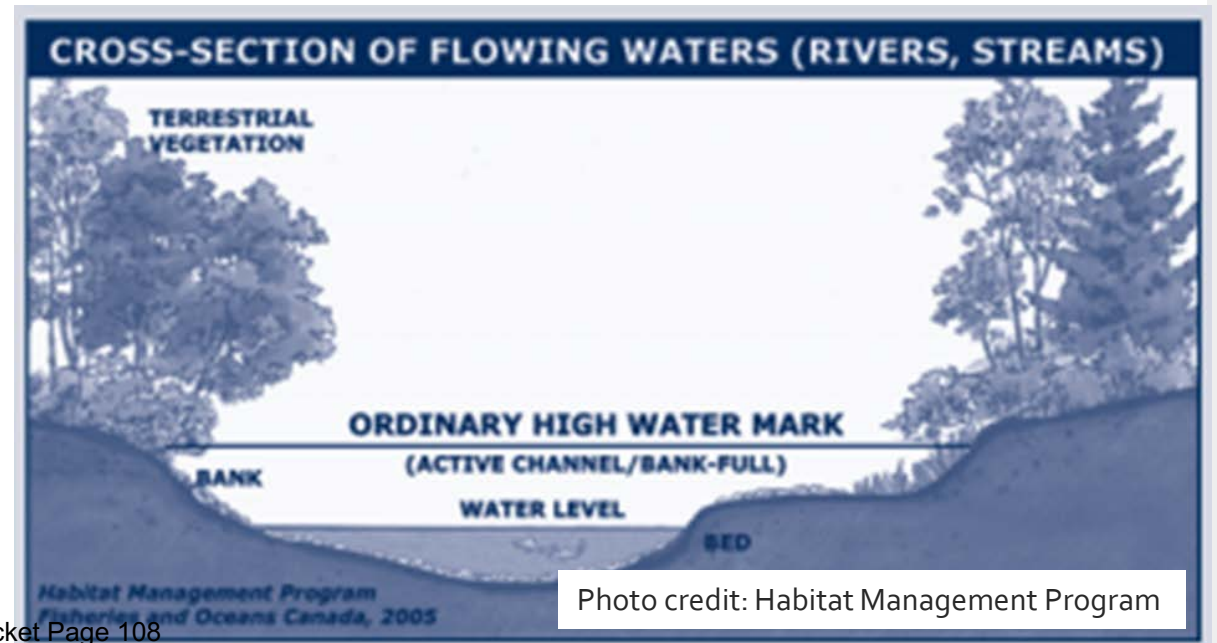


Photo credit: Habitat Management Program



Considerations

- Other communities
 - Garfield County – 35 feet
 - Basalt – 50 feet
 - Carbondale – Preservation of natural grade, drainage patterns, soil, and vegetation
 - Pitkin County – 50 to 100 feet
 - Eagle County – greater of 75 feet or 100 year floodplain
 - Aspen – heightened review with 100 feet or 100 year floodplain



Considerations

- Concerns expressed at work session
 - Interested but unsure the appropriate setback distance
 - May need to float the rivers to better understand concepts
 - Need to recognize existing encroachments/uses
 - Need to evaluate the impact to each lot
 - Avoid eliminating the ability to develop riverfront properties
 - Consider urban nature of the city and potential impacts to property values
 - Other current applicable regulatory standards yard setback, fire clearances, hillside protection, geologic hazards, and floodplain regulations.
 - Future redevelopment of properties may be difficult
 - Should guarantee amount of development on each property
 - Standards exist in all surrounding communities that exceed the City's



Code Amendment Approval Criteria

- 070.060.040(c)(3)d.3
 - i. Is **consistent with the Comprehensive Plan** and other City policies;
 - Riverside Protection
 - “Preserve natural resources” is a community goal
 - ii. Does **not conflict with other provisions of this Code** or other provisions in the Glenwood Springs Municipal Code;
 - Does not conflict
 - iii. Is necessary to **address a demonstrated community need**;
 - City lags behind neighboring communities
 - Essential to improved water quality



Comments

- Reviewing Agency
 - None
- Adjacent Property Owners
 - None received
- Others
 - Support
 - City of Glenwood Springs River Commission
 - Roaring Fork Conservancy
 - American Rivers
 - Trout Unlimited
 - Andrea Holland, Retired Hydrologist/Past River Commissioner



Action Item 1 and Staff Recommendation

- **Section 070.060.040(c)(3)d.1**
 - Recommend to City Council
 - Approval
 - Approval with conditions
 - Denial
 - Continue
- **Staff recommends**
 - Approval of Action Item 1
 - Findings on page 8



Action Item 1 Findings

- **Recommended Findings:**

- 1. The proposed amendment is consistent with the Comprehensive Plan and other City policies;
- 2. The proposed amendment does not conflict with other provisions of this Code or other provisions in the Glenwood Springs Municipal Code;
- 3. The proposed amendment is necessary to address a demonstrated community need;
- 4. The proposed amendment is necessary to respond to substantial changes in conditions and/or policy; and
- 5. The proposed amendment is consistent with the general purpose and intent of this Code.



Gary Vick

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garywvick@icloud.com

September 16, 2019

The City of Glenwood Springs
101 West 8th Street
Glenwood Springs, CO 81601
Attention: Mr. Trent Hyatt, Senior Planner, Community Development

RE: Proposed revision to Ordinance 070.040.020(d)(24) Conservation of Waterways

Honorable Mayor, City Council, and Planning and Zoning Commissioners:

I am grateful for and appreciate your taking the time to review the attached package that is submitted to facilitate your review of the subject revision. I look forward to discussing these items with you at scheduled P&Z and Council meetings.

I respectfully urge you to reject the proposed revision.

The proposed revision puts severe limitations on the use of our property in exchange for no quantifiable, demonstrated gain. There is no outcry for this revision, and it is not required at this time. It will result in potentially severe devaluation of the property values of homeowners along the Roaring Fork River. It ignores the rights of property owners to use and enjoy their land by forwarding the goals of well intentioned but minority environmental groups. The revision has not been subject to even a cursory cost/benefit analysis. The City has not determined how many properties would be made non-compliant by this revision, nor to what extent. There has been no meaningful outreach on the part of the City to solicit stakeholder input or work with citizens to craft an ordinance that can garner stakeholder support. The proposed ordinance does not meet the City's threshold for ordinance change. These arguments are substantiated in the attachments hereto.

Living on a river is magical. It is a truly wonderful experience. As residents living along the Roaring Fork in Glenwood Springs, we are lucky. Most of us purchased our properties for the express purpose of viewing, using, accessing, and enjoying the river. We listen to the river every day. We sleep to it every night. We watch it at breakfast and dinner every day. We fish in it. We watch families of fox, deer, bear, raccoon, mink, geese, ducks, hawks, and bald eagles feed and play in it. We watch the stars by it, picnic by it, and camp by it. We kayak and raft to our own back door. We do so responsibly, caring for the environment that we paid a premium to own.

We use our backyards much as you do, only there is no proposed ordinance revision

that could sterilize and make unusable up to 90% of your backyard's most attractive features without meaningful stakeholder input and without the City demonstrating any quantifiable need for, or quantifiable benefit from, this sterilization. You are not facing an ordinance that would limit your enjoyment and severely impact the value of your property.

I have provided City Staff ("Staff") with alternate language for the ordinance that mitigates many of these concerns (the "Proposed Changes"). I also provided thorough justification for the Proposed Changes. I have asked Staff to provide these documents in your packets.

Staff has reviewed the Proposed Changes and has stated to me that many of the changes are desirable. Perplexingly, none of the Proposed Changes have made it into the text of the code you will review tonight. You are reviewing something that, apparently, Staff might want to modify, that the City has not justified, that negatively impacts stakeholders along the river, and that has not had the benefit of meaningful outreach on the part of the City.

Accordingly, you have no choice other than to deny approval of the ordinance as presented. Alternatively, you could recommend that Council instruct Staff to i) engage stakeholders to solicit their input and concerns, ii) incorporate changes based on such input that Staff feels is appropriate, iii) fully justify the need for the ordinance with a proper cost/benefit analysis, and iv) resubmit the ordinance for approval.

Thank your for your efforts in the review of this material.

Best regards,

/signed by Gary W. Vick/

Gary W. Vick

Attachments

Discussion

The Proposed Ordinance does not appear to meet City Ordinance requirements for an Ordinance Change, section 070.060.040.(c)(3)d.3

- ii. **Does not conflict with other provision of this Code or other provisions of the Glenwood Springs Municipal Code.**

Rebuilding of existing non-conforming structures (such as those in the proposed setback area) is contemplated in the Code, but the Proposed Code stipulates that no excavation may occur in the setback area. Such excavation may be required in order to rebuild a nonconforming structure, and could be a conflict in the code.

- iii. **Is necessary to address a demonstrated community need**

The staff report states that the City lags behind neighboring communities in the protection of water resources.

This statement is not accurate.

The Roaring Fork Conservancy (“RFC”) performed a spot comparison of ordinances found in nearby municipalities and counties. This is shown below.

REGION	SETBACK	DETAILS
City of Aspen	100ft/100 year floodplain	Development is “subject to heightened review.” (Ord. 26.435.040)
Town of Basalt	50ft	Prohibits development and cutting of riparian and wetland vegetation. (Ord. 16-464a)
Town of Carbondale	Unspecific	If new development is proposed adjacent to any river, all practical means should be used to preserve natural grade, drainage patterns, soil and vegetation. (Ord. 4-2007)
Eagle County	75ft/100 year floodplain	No development within 75ft of high water mark or 100 year floodplain (whichever is greater).
Garfield County	35ft	Prohibits removal of any existing native vegetation or conducting any activity which will cause any loss of riparian area unless it involves the approved removal of noxious weeds, nonnative species, or dead or diseased trees.
Pitkin County	100ft/100 year floodplain	100 foot buffer for all activity and development. Setback may be reduced to a minimum of 50 feet if reduction does not result in water quality degradation, stream bank erosion and/or a reduction in the quality of riparian or wetland habitat.

The RFC comparison did not include municipalities downstream from Glenwood Springs from whom no outcry regarding water quality has been heard. The RFC’s inclusion of county ordinances for comparison is not appropriate insofar as municipalities generally have much greater density

and diversity of land use than do counties which can be much more rural, are more agricultural in nature, and require different land use criteria. One has only to compare a drive down Midland Avenue to a drive to Grand Junction to see this. Some individual landowners in nearby counties, for example, can easily have more river frontage than the 50 stakeholders addressed in this letter combined.

Accordingly, I prepared a more thorough comparison of ordinances in neighboring municipalities in the table below. The comparison concentrates on municipalities and omits counties. Though it does not capture every riverfront municipality in the state, it is what could put together in the time available. It captures a much better picture of where Glenwood stands in comparison to its neighbors than does the RFC comparison.

Six of the 10 municipalities reviewed have no riparian setbacks of any kind, and only one, Basalt, applied vegetation limitations retroactively to existing homeowners. Those municipalities without setbacks see no need for them. There is no demonstrated need for revised setbacks in Glenwood Springs.

Glenwood Springs does not lag behind the majority of its neighboring municipalities in the protection of water sources. There is no need to “keep up with the Jones”, and the Proposed Ordinance would be one of the most restrictive to existing homeowners in the comparison.

Municipality	Setback	Vegetation Restriction Retroactive to existing Properties	Summary of Ordinance
Aspen (from RFC)	100'/100 yr Flood-plain	No	Development subject to heightened review
Snowmass Village	25' from Riparian edge	No	<u>New development only.</u> Recreational access sites allowed. Vegetation loss to be minimized, replacement vegetation ratio may be less than 1:1 to facilitate a view of, and use of, the creek.
Basalt (from RFC)	50'	Yes	Apparently very restrictive, prohibits development and cutting of riparian and wetland vegetation.
Carbondale	<u>None</u>	No	Developments shall minimize impacts to...wetlands, and...stands of trees. Such resources... shall be preserved where practicable...development shall be designed to preserve existing waterways...primary vegetation (trees)...and other features.
Vail	30' or 50' from stream CL	No	Decks may extend 10' into setback, <u>no restrictions on vegetation.</u> City historically has paid 75% of regrowth design costs for citizens, is considering more restrictive code <u>after outreach and stakeholder input</u> but staff expects "very serious pushback" from citizens.
Gypsum	<u>None</u>	No	Community Development Director states that nothing is driving the need for an ordinance. City adopted <u>Eagle River Watershed Plan</u> but specifically, and significantly, did not adopt the setbacks associated with the plan.
New Castle	<u>None</u>	No	Planning Department stated no specific restrictions exist
Silt	<u>None</u>	No	Nothing found in review of code, messages left for city staff
Rifle	<u>None</u>	No	Nothing found in review of code, messages left for city staff
Parachute	<u>None</u>	No	...subdivisions... shall preserve, insofar as possible, ... drainage, ..., lakes, rivers, streams and trees. Significant vegetation, including dominant or mature trees & shrubs shall be retained where possible.
Glenwood (existing)	30' from HWM ~ 8127 cfs	No	Entire Ordinance: No improvement, building, structure, excavation, dumping or backfill shall be placed, built, undertaken or approved within a thirty-foot setback area horizontally from the high water mark of any river or live stream, except for bridges, paths for non-motorized use, irrigation structures or flood control and erosion protection devices.
Glenwood (proposed)	50' from OHWM per USGS	Yes	See proposed ordinance and Proposed Changes in letter to Trent Hyatt 8-31-19

You should instruct Staff to provide a more thorough comparison for review, inclusive of additional parameters and municipalities.

iv. Is necessary to respond to substantial changes in conditions and/or policy

Staff states that adoption of the proposed standards would help the City meet future compliance with EPA Municipal Separate Storm Sewer System (MS4) permit requirements if the population exceeds 10,000 in the 2020 census.

The Proposed Ordinance is premature, as is the perceived need to meet MS4 without knowing the results of the census.

If it is necessary to meet MS4, the Proposed Ordinance does not help to meet compliance in a substantial or meaningful way. The lands covered by the Proposed Ordinance represent less than 1% of the City's land area. The vast majority of the City's storm water disposal is untreated, running through yards, streets, and drainage systems directly into the river system. The vast majority of storm water does not go through any riparian environment of any kind. As such, improvement of the riparian environment, even by a substantial amount, would not materially affect overall storm water quality.

The bulk of the City's inability to comply with the MS4 permit, if any inability exists, has nothing to do with the areas addressed by the Proposed Amendment. The interior of the City, where most storm water is generated, should be the focus of this requirement, not the narrow riparian zones along the river.

To use this MS4 as a justification for the Proposed Ordinance is disingenuous and violates the requirements for ordinance change and its intent.

The Proposed Ordinance lacks balance between cost and benefit.

Many endeavors in life can be successful if one simply copies a similar, previously successful process. I didn't invent that phrase: Compaq, Dell, Microsoft, and other successful business did.

A relevant process to follow here is exemplified by the EPA under previous administrations. Prior to implementing clean water regulations the EPA gathers input from stakeholders from all sides the issue. Environmental groups, whom I generally support, are consulted. Industry, citizens, and municipalities are consulted. Significantly, no one group writes the rules. Rather, the EPA balances goals and needs, performs cost/benefit analyses, and writes regulations that generally garner the widest possible support.

Now lets compare this process to the derivation of the Proposed Ordinance that is before you today.

The Proposed Ordinance has been authored by Staff and the River Commission ("RC") with significant input from the RFC and certain members of City Council (collectively, the "Authors"). Staff states that the Proposed Ordinance has been in process for several years. Stakeholders have not been solicited or consulted to any meaningful degree during the drafting of the ordinance and were notified of the Proposed Ordinance through a single mailing approximately two weeks prior to a scheduled vote on the ordinance by the Planning and Zoning Commission ("P&Z"). The ordinance furthers the well intentioned goals of the Authors alone at the expense of reduced property values on the part of stakeholders.

The Authors have not performed any cost/benefit analysis, or even a cursory cost/benefit comparison, to justify the Proposed Ordinance. The Authors have not quantified the benefits of the Proposed Ordinance and have ignored the serious potential impact on the property values of stakeholders.

Significantly, they have not identified the number of properties that will be made non-compliant by the Proposed Ordinance and to what extent they will become non-compliant.

This is no way to run a railroad. Costs and benefits are properly discussed below.

Costs of the Proposed Ordinance

The costs of the Proposed Ordinance will be born by a small number of stakeholders and could be in the million of dollars.

The Proposed Ordinance restricts, or sterilizes, a portion of the land owned by homeowners. It limits a homeowner's use of his property, potentially limits his ability to clear or even trim vegetation so as to be able to see, use, access, and enjoy the river he paid dearly to be able to see, use, access, and enjoy. As proposed, it may limit the ability of a homeowner to rebuild a non-conforming structure or build a new structure at the 50' edge of the setback area due to lack of construction access.

The value of a less restricted property is more than the value of a more restricted property. The only question is to what degree. In my case, I paid a 28% premium for my property to be on the river and have a view of, use of, and access to the river. This premium is born out by square footage tax assessments of my property compared to other properties in my neighborhood.

If a homeowner's view, use, and access to the river are hindered and his ability to develop, redevelop, or rebuild his property is limited by the Proposed Ordinance, then the Proposed Ordinance will cause him to potentially loose the premium associated with his property.

There is no hard data as to how much more homeowners along the Roaring Fork paid to be able to see, use, and access the river, or how much the property value will be reduced by the Proposed Ordinance, but we can get a feel for the order of magnitude of this premium by making some reasonable assumptions. In my case the amount of market value that I will lose under the Proposed Ordinance is on the order of \$100,000 (\$450,000 market price X $(1 - 1/1.28)$ ~ \$100,000).

According to Staff, there are 50 odd private homes along the river that could be affected by the Proposed Ordinance. Though many of these homes are larger and more expensive than mine, if these homes incur a \$100,000 devaluation per property, valuation losses of over \$5 million could be incurred by the stakeholders.

As established in the next section, there is no corresponding benefit associated with this cost.

The Authors claim that there will be no impact on property valuation. None. They claim that property values may increase under the Proposed Ordinance. These claims defy common sense. The value of a less restricted property is more than the value of a more restricted property.

That said, I had the Chairman of the RC tell me that *"Common sense does not apply. We have a study showing that riparian setbacks have no effect on property values and may increase them."* Another member of the RC told me that resale prices would not be affected by the Proposed Ordinance because *"whoever can afford (this) property can afford to get any variance they need"*. I had not realized variances were for sale.

The Chairman of the RC was kind enough to forward me a copy of the subject study performed in 2006 by Dr. Brian A. Mikelbank of Cleveland State University ("CSU") entitled *Hedonic Analysis of Riparian/Wetland Setbacks*. It was performed on a fee basis on behalf of Chagrin River Watershed Partners, Inc. ("CRWP"), a watershed conservancy group similar to the RFC.

The study performed a regression analysis (a statistical analysis of outcomes with respect to multiple variables) on roughly 4,000 home sales over several years in the CRWP watershed area, roughly 400 of which bordered a stream or river. The overwhelming majority of properties bordering a stream or river had setbacks in place. The regression analysis took into account a multitude of variables that could influence transaction prices. The regression analysis did not show a correlation between setbacks and transaction prices.

As a degreed engineer turned CFO that has taken both graduate and post graduate statistics classes, this seemed a bit counterintuitive to me. As a numbers guy I read the study cover to cover, number for number. On page 15 of the study I found the reason why the regression analysis did not find a correlation between setbacks and transactions prices. Page 15 states (emphasis added):

“While a homebuyer valuing the environmental protection the setback provides could explain this result, our focus group meeting indicated that this explanation is unlikely in this market.

The consensus opinion expressed at that meeting was that potential homebuyers do not know about setback designations. Further, the consensus was that it was unlikely that realtors would even know whether or not a property had a designated setback. Thus, the focus group predicted that setback designation would not be an influence in the area housing market. That makes the results of the community specific model somewhat suspect”.

Two things bothered me after I read the study.

First, the vast majority of homes with setbacks were the same homes that were on the river. The setback variable and the streamside variable were therefore coupled. If you get one, you generally get the other. Because the variables were coupled, the higher prices paid for homes with setbacks might be attributed to their being on a stream, a generally desirable trait. Absent common sense, there is no way to know.¹

Second, it seems to me that a buyer would not be in a position to pay more, or less, for a property with, or without, a setback if he or she was unaware of the existence of the setback when the real estate transaction was made. It seems to me that statistically measuring if people will pay more, or less, for a property with, or without, a setback is impossible if the parties do not know about the setback and factor the setback into their pricing decision.²

The Author’s contention that riparian setbacks do not influence real estate transaction prices is based on a study that has fatal flaws. Their conclusion is false. Setbacks will be widely known in Glenwood Springs and required to be disclosed at the time of sale. Setbacks will have a negative impact on transaction prices.

This conclusion is verified by attached emails from two statisticians. One reviewed the study at my request, and the other is Dr. Mickelbank, the author of the study.

¹ For an analogy, consider that Ferraris come with fancy tires not found on other cars. If you do a regression analysis on 1,000 various car sales and include car brand and tire type as variables, the analysis may not be able to distinguish between these two effects because they always come together. So common sense is used to determine whether the buyer paid \$300,000 for the Ferrari, or for the tires.

² Staying with the car sales analogy, suppose that 500 of the 1,000 cars above had a handful of sand thrown into their engines prior to the sale and no one knew about it. The regression analysis would not detect any devaluation in price due to the sand in the engine because no one knew it was there and no one paid less for the car with sand in its engine. Can you conclude that sand in the engine, if known about, has no effect on the price? No.

Benefits of Proposed Ordinance

The Authors have not demonstrated a need for the Proposed Ordinance.

The benefits shown by the RFC have not been shown to be needs, are general in nature, none were quantified, and no credible argument was presented showing that implementation of the Proposed Ordinance would mitigate any of the concerns discussed in the proposed benefits to any meaningful, measureable degree.

The Roaring Fork River is over 70 miles in length. Only about 4 of those miles are in the city of Glenwood Springs. The fact of the matter is that there is no wholesale, overt destruction or degradation of riparian habitat along the banks of the Roaring Fork River through Glenwood Springs by homeowners who live along the river. To the contrary, most homeowners love the river more than the Authors do and are good environmental stewards of the lands they paid a premium to own and use.

In its July 19, 2019 letter to the Mayor, Council, and the P&Z the RFC infers that the Proposed Ordinance will have a positive economic impact because it will:

- *Reduce drinking water costs in the event that the City's secondary water source is required to be used.* This claim is not substantiated. The City's water supply currently meets applicable specification, as does its drinking water.
- *Reduce erosion.* This claim is not quantified, even on a cursory level. Examination of the river from Google Earth, Red Mountain, or by floating the river does reveal some areas of erosion within Glenwood Springs but it is impossible to tell over what time frame these occurred and they do not require a broad-brush ordinance to correct.
- *Increase property values.* This claim is false as shown in the previous section.
- *Support the local fishing economy.* Homeowners along the Roaring Fork generally love to fish. The RFC does not quantify this claim in any fashion whatsoever and there is no measureable degradation to the fishing industry by homeowners along the river or any measureable increase claimed if the Proposed Ordinance is adopted. The statement is completely general.
- *Tourism will be increased by improved aesthetics.* Aesthetics are in the eye of the beholder. Comments shouted to homeowners from passing commercial rafters are universally complimentary with respect to the aesthetics of individual properties. I hear such comments literally every day in the summer season. Not once in 21 years have I heard a derogatory comment relating to the aesthetics of my property or those of my neighbors.

People have impacted their environments as far back as our Native American ancestors. By default, tradeoffs are made between an ecosystem and a municipality. During discussions regarding the Proposed Ordinance, a liaison Council member told me that *"we must do everything possible to protect the river."* Really? Everything? At any cost? The EPA does not see it that way. Nor does Staff.

When I related this conversation to Staff, the planner literally burst out laughing. He stated *“well, in that case we might as well just go shoot ourselves right now, because we will always have some level of impact on the river.”*

You may hear from the Authors that river temperatures are rising and that last summer there was an algae plume in the river. All true. Our environment is getting warmer, and last summer was particularly dry and hot. That is when algae plumes occur. But we are not burning the Amazon along the banks of the Roaring Fork River here in Glenwood Springs. You will not hear the Authors present any credible scientific evidence to support any claim that if the Proposed Ordinance had been in place last summer then these anomalies or any others would have been avoided.

In a document entitled *Glenwood Springs Riparian Assessment* dated February 26, 2018, members of the RC and RFC make the following observations that I comment on below.

- *The Banks at Threemile Creek are marginally vegetated and under erosion.*

The National Forest Service (“NFS”) routinely closes damaged areas to traffic to facilitate revegetation. This problem does not need a broad-brush ordinance to resolve.

- *(summarized) Backyard development creep and riparian vegetation clearing are increasing...some (landowners) have cleared ... access down the hill slope (that) may disrupt riparian function and if copied...could result in extensive loss of riparian habitat. Potential treatments include curtailing ... development ... to preserve riparian function while still allowing private landowner(s)...to enjoy riverside amenities. Public education is a key component for addressing these concerns.*

A number of points regarding vegetation are relevant here.

1. The claim is anecdotal and unsubstantiated.
2. There is no pre and post analysis over any defined time frame to justify a claim that creep is significant or detrimental. There is no objective science here. There is no wholesale or overt degradation of riparian habitat that warrants this broad brush approach.
3. Staff has stated that there are roughly 50 private homes along the river in Glenwood. The extent of their riverfront is therefore limited, and the extent of any cleared or developed riverfront is even more limited. Staff has provided no hard data on this riverfront footage.
4. Property owners have a right to use, enjoy, view, and access the river on the property they paid a premium to own.
5. Efforts to discuss alternative usage scenarios have been rebuffed by the Authors. Property owners currently enjoy 100% use of their

property. The Proposed Ordinance's provision to allow property owners to use only 10% of their riparian area is unfair and insufficient by any standard. It is invasive and an affront to property owners rights. When you live on the river, you understand this.

6. The Assessment states that "*Public Education is a key... (see above)*. So where, exactly, has been this public outreach and education? With the exception of Staff, the Authors have largely refused to engage well intensioned citizens in a constructive revision of the Proposed Ordinance. Instead, it is being considered with scant notice to stakeholders after years of work by the Authors to further their own environmental views.

The Assessment's claim seems rooted to some extent in the Authors' objection to non-native grasses in the riparian zone. The following table was reproduced from a 2005 study provided by the RFC entitled *Riparian Buffer Zones: Functions and Recommended Widths*. As shown below, it suggests that grasses actually fare pretty well in comparison to other types of vegetation.

Function	Grass	Shrubs	Trees
Sediment trapping	High	Medium	Low
Filtration of Sediment born Nutrients, Microbe and Pesticides	High	Low	Low
Soluble forms of Nutrients and Pesticides	Medium	Low	Medium
Flood Conveyance	High	Low	Low
Reduction of Stream Bank Erosion	Medium	High	High

The study goes on to say that the removal efficiency of grasses, compared to an ideal mix of grasses, shrubs, and trees, have a removal efficiency of 61% of nitrates, 72% of phosphorus, and 44% of orthophosphates. Grasses are therefore not completely inept at removal of pollutants. And remember, the existing and potential area of grasses along the riverbank is relatively small.

The takeaway here is that non native homeowner grasses comprise a very small percentage of the short Roaring Fork riverbank through Glenwood Springs, that there is no objective evidence to suggest that the amount of grass coverage is egregious, detrimental, or increasing, that grass is better than or equal to 4 of the 5 functions listed in the table above, that grass provides meaningful absorption of nitrates and phosphorous, and that the vast majority of storm water runoff does not flow through the riparian environment but drains through storm sewers directly into the river which makes concentrating on homeowner riverbanks somewhat of a fruitless exercise.

It cannot be concluded that the Proposed Ordinance would result in meaningful reduction in riparian function or increase water quality to any meaningful, demonstrable degree.

Gary W. Vick

614 Cowdin Drive
Glenwood Springs, CO 81601
(303) 548-0962

August 31, 2019

Mr. Trent Hyatt
Senior Planner, Community Development
The City Glenwood Springs
101 West 8th Street
Glenwood Springs, CO 81601

RE: Basis of changes to proposed Riparian Setback Ordinance

Trent,

I appreciate your meeting with me last Monday to review changes to the proposed ordinance regarding riparian setbacks (the "Proposed Changes"). As we discussed, the vast majority of your original language has been retained and most of the Proposed Changes are expansions and clarifications. Based on our conversations it appears you are in agreement with many of the Proposed Changes.

I recommend that you incorporate these changes prior to the next P & Z meeting and notify affected stakeholders of the changes so that their comments may be considered by P & Z.

The proposed ordinance is somewhat cavalier with respect to the rights of property owners. What follows is a summary of the reasoning for the Proposed Changes and is provided to facilitate discussion among your staff and your advisors.

Purpose

The purpose of the ordinance has been expanded in the Proposed Changes based on consultations with you, members of the River Commission, and members of Council. It now fully reflects the intent of the ordinance as represented to me by these parties. This section is self explanatory.

Definitions

Definitions are added for clarity and will of course need to be relocated to the definitions section of the Code.

Standards

Generally, the standards have been expanded to reflect the consultations mentioned above. Proposed Changes focus on three main areas:

1. **Improvements have been segregated into two separate sections: new and existing to adequately provide for “grandfathering”.**

Section 070.010.070 (Nonconformities) was not designed to, nor does it, address riparian areas. Section 070.10.070 (f) (3) is the closest applicable section and addresses landscaping. It states that the nonconforming features must be upgraded if, among other things, *any* changes are made to parking areas and *certain* changes are made to structures outside of the riparian area. Simply put, an insignificant change to something not impacting the riparian area could result in a loss of grandfathering. This is not the intent of the grandfathering discussed with members of Council and the River Commission. Section 070.10.070 is inappropriate for this particular purpose.

Accordingly, separate sections covering new and existing improvements were added in the Proposed Changes.

2. **Trimming of vegetation is allowed in the Proposed Changes.**

Consultations with you and Council Members affiliated with the River Commission indicate that it is not the intent of the ordinance to restrict a private owner's view and use of the waterway by restricting his ability to trim vegetation. The term “clearing” in the proposed ordinance is vague.

Accordingly, Clearing of Native Vegetation has been added to the definitions and trimming is specifically allowed in the Proposed Changes provided that root systems are not damaged or destroyed.

3. **A 15 foot work zone has been added to facilitate construction, rebuilding, and repair of new and existing structures.** The provision provides that any vegetation disturbed in this process will be reasonably replaced.

It is the intent of the proposed ordinance to allow structures to be built within 50 feet of the OHWM and for existing structures within the setback to be rebuilt or repaired. Unfortunately, the proposed ordinance does not account for the need to have space around a new or existing structure for crews or equipment. The unintended consequence of the proposed ordinance is to increase the setback by the distance required to work around the structure. This is not the intent of the proposed ordinance as presented to me in the consultations reference above.

This is remedied simply by inclusion of a 15 foot perimeter work zone in the Proposed Ordinance, provided that commercially reasonable efforts are made to substantially replace any disturbed vegetation within the 15 foot perimeter. This retains the intent of the riparian setback.

Applicability

Proposed Changes to Applicability relate to two main areas, river access and consistency between subparagraphs 2 and 4.

1. **Consistent threshold for Paragraph 2 and 4.** Paragraphs 2 and 4 have different thresholds of performance and remedy. As currently proposed, City activities are not as limited as homeowner activities. The Proposed Changes correct this and a “do no harm” standard is used for both paragraphs.
2. **Stairs.** Many homeowners have a need for stairs on steeper parts of the banks along the river. Whether stairs do or do not now exist, this is a safety issue and homeowners have a right to safe river access. Stairs are provided for in the Proposed Changes.
3. **River Access.** The Proposed Changes allow for increased access and use of the river vis-à-vis the proposed ordinance. The proposed ordinance allows clearing 10% of the vegetation in the setback area, whereas the Proposed Changes increase this to the greater of 25% or that required to allow for an Access Corridor 30 feet wide through the setback area.

Many homeowners purchased their properties on the Roaring Fork expressly for the purpose of viewing, using, accessing, and generally enjoying the river. Most paid a premium to do so. Living on the river is magical. Take it from someone who does it everyday: the river and its wildlife are healthy. One

only has to float the river or view the river from Red Mountain to confirm that no wholesale, overt destruction of riparian environment is occurring along the banks of the Roaring Fork through Glenwood Spring.

Rather than use local solutions to address local areas of habitat loss, the proposed ordinance would sterilize and makes unusable up to 90% of a homeowners river frontage without meaningful stakeholder input and without the City demonstrating any quantifiable need for, or quantifiable benefit from, this sterilization.

That said, in an attempt to strike a balance between homeowners who own and use the river frontage every day and those who will incur no quantified benefit or any personal cost associated with its sterilization, the Proposed Changes includes an expansion of the usable riparian area that many homeowners may find acceptable.

There is a minimum amount of access a homeowner requires to view, access, use, and enjoy the river, regardless of the size of his lot or the length of his stream frontage.

Different homeowners may have different thoughts, but I recommend 30 feet for the Corridor Width because this allows a small lot owner to have adequate access to the river. I have a 30 foot corridor on my 75 foot lot and in my personal experience this is the minimum you need to get two or three rafts, some kayaks, lawn chairs, coolers, friends, family, and a couple of dogs together along the river bank for a get together. It is also the minimum I need for fishing, relaxing, and viewing. Keep in mind it is my land, not yours. I currently have 75 feet I can use; limiting my unrestricted use to 30 feet is a generous offer on my part.

I recommend 25% as the area parameter because, by any objective measure, telling any home owner that he can only use 10% of what he already owns and can currently use without restriction is authoritarian, heavy handed, one sided, and an affront to the rights of property owners rights. This may not have been the intent, but it is the result. The 10% figure was arrived at by and large by people who don't live on the river and have 100% use of their own back yards to use as they see fit. I might have authored such a 10% proposal myself if I did not live on the river. But I do.

So, how do these Proposed Changes compare to the proposed ordinance? The following calculation is pertinent: There are roughly 4 miles of river through Glenwood Springs. That's about 8 miles of riverbank, or about 42,000 feet of riverbank in aggregate along both sides of the river. The Proposed Changes would allow 50 homeowners to clear 30 feet of vegetation along the riverbank. Not all homeowners would take advantage of this. Some might not want to, and others might not be able to due to topography, and some may have already done so and are grandfathered. Some might put the corridor in areas of no riparian habitat.

But let's make an extremely onerous assumption and say that all 50 homeowners clear a new 30 foot Access Corridor to the riverbank through virgin riparian habitat. That means that 1,500 feet of river front could be cleared. Under this extreme scenario, 1,500 feet out of 42,000 feet, or 3.6% of the riverfront, would not remain sterilized by the Proposed Changes. Said another way, 96.4% would remain sterilized. If one takes into account that grasses could be planted in the Access Corridor, and that these grasses have, according to data provided by the Roaring Fork Conservancy, between 70% and 90% (depending on the pollutant) of the filtering capacity of a mixed riparian habitat, then less than 1% of the filtering capacity of the stream bank would be affected. That's not much. The proposed Changes give you between 96% and 99% of what you are asking for. And frankly that's on the low side, because not everyone will construct such a corridor.

I am not trying to be melodramatic, but homeowners along the Roaring Fork cannot accept the proposed ordinance in its current form. We have the motivation, resources, expertise, and remedies available to successfully contest this issue.

You love the river as much as I do, and I know trampling on property owner rights was not your intent. But the proposed ordinance does exactly that as an unintended consequence. The Proposed Changes are more than reasonable, mitigate many concerns, should be incorporated in their entirety, presented to stakeholders for comment, and subsequently reviewed by P & Z and Council.

Regards,

/ signed by Gary W. Vick/

Gary W. Vick

(24) **Conservation of Waterways**

It is the purpose of the Subsection 070.040.020 (d) (24) to: 1) conserve and promote the health of the City's riparian ecosystems and water quality by maintaining a functional natural buffer adjacent to waterways, 2) allow owners of properties affected by this ordinance to access, use, view, and personally enjoy the river ecosystem and waterway, 3) not materially degrade the underlying value of any property affected by this ordinance, and 4) not impede development or redevelopment of any property affected by this ordinance except as set forth below.

For the purposes of this Subsection 070.040.020 (d) (24):

- **Clearing of Native Vegetation** shall be defined as complete removal of vegetation and the removal or destruction of the root systems associated with that vegetation.
- **Ordinary High Water Mark ("OHWM")** shall be defined */USGS definition to be inserted here/*.
- **Riparian Setback Area** shall be defined as the area within 50 feet of the OHWM measured perpendicular to the OHWM that contains Riparian habitat.
- **Access Corridor** shall be defined as a continuous corridor not to exceed 30 feet in width measured collinear with the OHWM through the Riparian Setback Area.

a. Applicability

All new improvements, buildings, additions, structures, excavations, grading, dumping, clearing of native vegetation, or backfill shall be subject to the requirements of 070.040.020 (d) (24) b *Standards* unless the applicant demonstrates to the City Engineer and the Director by the preponderance of the evidence that one or more of the following conditions is met:

1. The removal of native vegetation, not to exceed the greater of 25% of the Riparian Setback Area or area of the Access Corridor, to allow a property owner private access to, use of, view of, and personal enjoyment of the

river ecosystem and waterway. This shall not be interpreted to allow for permanent structures of any kind within said area (except for access steps no more than 4 feet in width and no more than 18 inches high), nor shall it be interpreted to prevent trimming of native vegetation outside of the Access Corridor or 25% of the Riparian Setback Area so long as that vegetation has historically been trimmed and so long as the root systems of the vegetation are not removed or destroyed.

2. The construction of bridges, public utilities, public paths for non-motorized use, public open spaces, wildfire mitigation activities, irrigation structures, flood control and erosion protection devices that to not result in water quality degradation, increased stream bank erosion, or a reduction in the function and quality of a riparian area or wetland.
3. Removal of vegetation listed on the Garfield County noxious weed list, Chinese Elm, or Siberian Elm in compliance with applicable regulations.
4. Applicant demonstrates that the area does not contain significant riparian plant species or functions or is impacted by previous earth disturbance activities and proposed activity does not result in water quality degradation, increased stream bank erosion, or a reduction in the function and quality of a riparian area or wetlands.

b. Standards

1. No new improvement, building, structure, excavation, grading, dumping, Clearing of Native Vegetation, or backfill shall be placed, built, undertaken or approved within the Riparian Setback Area associated with any river or live perennial stream, provided that: i) trimming of any native vegetation is permitted in the Riparian Setback Area so long as the root systems of the vegetation are not removed or destroyed, and ii) the Riparian Setback Area may be disturbed within the footprint of any new improvement, building structure, or excavation within a 15 foot perimeter of any new improvement, building, structure, or excavation to facilitate construction provided that commercially reasonable efforts are made to substantially replace any disturbed riparian vegetation within the 15 foot perimeter with vegetation of similar type and function.

2. No existing improvement, building, structure, or excavation may be repaired, maintained, rebuilt, or redeveloped within the Riparian Setback Area or any river or live perennial stream, provided that: i) trimming of native vegetation in the Riparian Setback Area is permitted to any extent so long as that vegetation has historically been trimmed and so long as the root systems of the vegetation are not removed or destroyed, and ii) the Riparian Setback Area may be disturbed within the footprint of any existing improvement, building structure, or excavation and within a 15 foot perimeter of any existing improvement, building, structure, or excavation to enable repair, maintenance, rebuilding, or redevelopment of such improvement, building, structure, or excavation provided that commercially reasonable efforts are made to substantially replace any disturbed riparian vegetation within the 15 foot perimeter with vegetation of similar type and function.
3. No chemical treatments, including but not limited to fertilizers, pesticides, and/or herbicides, are permitted within the Riparian Setback Area.

(24) Conservation of Waterways

~~1.~~ It is the purpose of the Subsection 070.040.020 (d) (24) to: 1) conserve and promote the health of the City's riparian ecosystems and water quality by maintaining a functional natural buffer adjacent to waterways, 2) allow owners of properties affected by this ordinance to access, use, view, and personally enjoy the river ecosystem and waterway, 3) not materially degrade the underlying value of any property affected by this ordinance, and 4) not impede development or redevelopment of any property affected by this ordinance except as set forth below.-

For the purposes of this Subsection 070.040.020 (d) (24):

- Clearing of Native Vegetation shall be defined as complete removal of vegetation and the removal or destruction of the root systems associated with that vegetation.
- Ordinary High Water Mark ("OHWM") shall be defined */USGS definition to be inserted here/*.
- Riparian Setback Area shall be defined as the area within 50 feet of the OHWM measured perpendicular to the OHWM that contains Riparian habitat.
- Access Corridor shall be defined as a continuous corridor not to exceed 30 feet in width measured collinear with the OHWM through the Riparian Setback Area.

a. **Applicability**

~~a.~~

All new improvements, buildings, additions, structures, excavations, grading, dumping, clearing of native vegetation, or backfill shall be subject to the requirements of 070.040.020 (d) (24) b *Standards* unless the applicant demonstrates to the City Engineer and the Director by clear and convincing the preponderance of the evidence that one or more of the following conditions is met:

- ~~2.1.~~ The removal of native vegetation, not to exceed ~~the greater of 40~~25% of the ~~setback area~~Riparian Setback Area, or area of the Access Corridor, to allow a property owner ~~private~~ ~~private~~ access to, ~~use of, view of, and~~ ~~and~~ personal enjoyment of the ~~river ecosystem and~~ waterway. This shall not be interpreted to allow for permanent structures of any kind within said area ~~(except for access steps no more than 4 feet in width and no more than 18 inches high), nor shall it be interpreted to prevent trimming of native vegetation outside of the Access Corridor or 25% of the Riparian Setback Area so long as that vegetation has historically been trimmed and so long as the root systems of the vegetation are not removed or destroyed.~~
- ~~3.2.~~ The construction of bridges, public utilities, public paths for non-motorized use, public open spaces, wildfire mitigation activities, irrigation structures, flood control and erosion protection devices that to not result in water quality degradation, ~~increased~~ stream bank erosion, or a reduction in the function and quality of a riparian area or wetland.
- ~~4.3.~~ Removal of vegetation listed on the Garfield County noxious weed list, Chinese Elm, or Siberian Elm in compliance with applicable regulations. ~~Vegetation shall be replaced with appropriate riparian plant species to limit erosion.~~
- ~~5.4.~~ Applicant demonstrates that the area does not contain ~~ss~~significant riparian plant species or functions or is impacted by previous earth disturbance activities and proposed activity ~~does not result in water quality degradation, increased stream bank erosion, or a reduction in the function and quality of a riparian area or wetlands~~improves water quality, ~~limits erosion, and promotes riparian or wetland restoration.~~

b. Standards

1. No ~~new~~ improvement, building, structure, excavation, grading, dumping, ~~ec~~clearing of ~~n~~Native ~~v~~Vegetation, or backfill shall be placed, built, undertaken or approved within ~~fifty feet of the ordinary high water mark,~~

~~measured horizontally, the Riparian Setback Area of associated with any~~
river or live perennial stream, provided that: i) trimming of any native
vegetation is permitted in the Riparian Setback Area so long as the root
systems of the vegetation are not removed or destroyed, and ii) the
Riparian Setback Area may be disturbed within the footprint of any new
improvement, building structure, or excavation within a 15 foot perimeter
of any new improvement, building, structure, or excavation to facilitate
construction provided that commercially reasonable efforts are made to
substantially replace any disturbed riparian vegetation within the 15 foot
perimeter with vegetation of similar type and function.

2. No existing improvement, building, structure, or excavation may be
repaired, maintained, rebuilt, or redeveloped within the Riparian Setback
Area or any river or live perennial stream, provided that: i) trimming of
native vegetation in the Riparian Setback Area is permitted to any extent
so long as that vegetation has historically been trimmed and so long as
the root systems of the vegetation are not removed or destroyed, and ii)
the Riparian Setback Area may be disturbed within the footprint of any
existing improvement, building structure, or excavation and within a 15
foot perimeter of any existing improvement, building, structure, or
excavation to enable repair, maintenance, rebuilding, or redevelopment of
such improvement, building, structure, or excavation provided that
commercially reasonable efforts are made to substantially replace any
disturbed riparian vegetation within the 15 foot perimeter with vegetation
of similar type and function.

~~1.3.~~ No chemical treatments, including but not limited to fertilizers, pesticides,
and/or herbicides, are permitted within ~~said fifty foot~~ the ~~Setback~~
Area ~~Riparian Setback Area~~.

From: Brian A Mikelbank b.mikelbank@csuohio.edu
Subject: RE: Could you please answer a couple of quick questions on a 2006 study you performed?
Date: September 3, 2019 at 3:12 PM
To: Gary Vick garywvick@icloud.com

Hi Gary:

No imposition at all – it is good to know that this research is being discussed!

I have inserted responses below your specific questions.

From: Gary Vick [<mailto:garywvick@icloud.com>]
Sent: Thursday, August 29, 2019 12:42 PM
To: Brian A Mikelbank <b.mikelbank@csuohio.edu>
Subject: Fwd: Could you please answer a couple of quick questions on a 2006 study you performed?

Dr. Mikelbank,

I am retired and live on the Roaring Fork River in Glenwood Springs, Colorado. The City is considering introducing a setback ordinance which limits property owners activities within 50 feet of the Roaring Fork river. There is currently a 30' setback covering structures, but the proposed ordinance increases the setback and restricts other activities in the setback area.

While this may be generally desirable, my neighbors and I are concerned that the proposed ordinance could reduce property values by limiting their use and redevelopment potential in the future. A developer or builder, for example, could be further restricted by the proposed ordinance and therefore might pay less for a more restricted property than he would for a property that is less restricted. At least that's the theory.

Yes! This was exactly the perception CRWP was facing when we started talking about this project.

The City provided me with a copy of your 2006 “Hedonic Analysis of Riparian/Wetland Setbacks”. It is a thorough study and I enjoyed reading it. As you know, it was commissioned by Chagrin River Watershed Partners, a watershed conservancy and reviewed roughly 4,000 home sales in the watershed area, roughly 400 of which bordered a stream or river. As you know, the study concludes that setbacks do not decrease property values and may increase them.

The conclusions seem counterintuitive to me. While I have a background in engineering and finance and have taken undergraduate and graduate statistics courses, I would welcome your comments regarding a couple of observations I have with the study.

1. First, the study was commissioned by a conservancy group (link

1. First, the study was commissioned by a conservancy group (link here: <https://crwp.org>). I don't know that they had an agenda or were seeking a predetermined outcome, but setbacks generally help their cause, as would, by corollary, any data showing setbacks are good for property values. When they ask you to perform the study, were they seeking satisficing data to confirm a theory that setbacks have no impact on property values?

At our college's research centers it is an early conversation that we're being hired to answer a research question, whether or not that answer is what they might be looking for. I think organizations coming to a university know that, but we always review. Given their mission, they obviously thought setbacks were a good thing. And they heard from local realtors that prospective purchasers don't know if there is a setback or not. But when they went to communities to talk about implementing setbacks they were getting pushback exactly along the lines you mentioned earlier – that all else equal, we might reasonably expect deed restrictions to reduce property value. They wanted to know what the data had to say on the matter.

2: Second, the homes with setbacks are, by and large, the same ones that are on a stream or river. It seems to me these variables could be coupled. Any increase in prices for homes with setbacks may have been due to simply being on the stream or river, a generally desirable thing.

Agreed. That is why it was important to have a mix of stream front houses in the sample that did and did not have setback restrictions. Actually, I seem to recall that I should use "setback designation" not "setback restriction"! This allows the regression model to distinguish between the separate effects of being stream front vs. being stream front with a setback designation.

3: Third, the second and third full paragraphs on page 15 of the study state that when properties were bought and sold, the consensus opinion was that neither homeowners nor realtors were aware of any setbacks. It seems to me that a buyer would therefore not be in a position to pay more, or less, for a property with, or without, a setback if he or she was unaware of the existence of the setback. It seems to me that statistically measuring if people paid more, or less, for a property with, or without, a setback is impossible if the buyers did not know about the setback and factor the setback into their pricing decision.

Again, agreed. The issue, though, was the degree to which the assembled focus group captured the entirety of the market reality. Certainly they were a valuable source of information, but they surely hadn't talked to all of the purchasers, sellers (and potential purchasers and sellers) throughout the market, throughout the years being covered in the study.

If designation doesn't impact house price, there are two options – buyers/sellers didn't know, or they knew and didn't care.

We did get a few blips of positive impacts, but it seemed that those weren't very robust.

But you're right, if people don't know, then a statistical finding of positive or negative price impact is really telling you about something else. In the case of Auburn and Bainbridge it seemed to be

capturing some type of “late-in-the-study-period” effect as prices were ramping up (before the housing crisis!). We did have year indicator variables that should have accounted for this, but perhaps not in its entirety.

I think my take-away, looking back, is that the focus group probably had a good sense of the buying and selling public – that setback designations were not on their radar, and thus might not exhibit a strong price impact either way. But I think the experience of you and your neighbors is similar to what CRWP was trying to make sense of. That even though they were hearing from real estate professionals that buyers don’t know of them, when they talked to homeowners about establishing designations in their communities there were concerns over the loss of value and loss of development/expansion potential.

I hope this is helpful and that you are satisfied with how your community moves forward.

Don’t hesitate if you have additional questions,

Brian.

I may have missed something and any comments or clarifications on these items would be greatly appreciated.

I apologize for the imposition but am grateful for your help. Thank you so much.

Regards,

Gary W. Vick
614 Cowdin Dr
Glenwood Springs, CO 81601
(720) 548-0962 (cell)

Link to study:

https://crwp.org/files/final_report_hedonic_analysis_riparian_wetland_setbacks.pdf

6 September 2019

This statement is provided at the request of Gary Vick and in review of the September 2006 study, “Hedonic Analysis of Riparian/ Wetland Setbacks”, prepared by Brian A. Mikelbank.

In statistics, there are three steps used to infer causality or cause-and-effect. The three steps simply put are (1) relationship, (2) temporal precedence, and (3) non-spuriousness. I was asked to review a study for these elements with regard to inferences on the causality between setback policies and real estate valuations. The study shows statistical significance for no effect on the principles of step (1) relationship. The study isolates for temporal precedence by selecting valuations that occurred after the setback policies were enacted, appealing step (2). However, the most important and troublesome step of non-spuriousness was not able to be established. Non-spuriousness refers to showing that the relationship from step 1 is not false or potentially caused by a third extraneous variable. In the provided study, there are several factors that indicate the findings may be due to a spurious (false) relationship between setback policies and real estate prices. To name a couple of these factors, the valuation methods for the real estate did not include the knowledge of a setback policy by the transacting parties, and the resulting regression tools contain variables, such as location, that provide a stronger statistical relationship with real estate prices. So, while the study provides mathematical statistics for a no-effect or no-relation between setback policy and real estate prices, it does not provide causal statistical significance for the effects of consumer valuation through real estate prices from setback policies. [This is not a statement on the value of setback policies or a political opinion/recommendation of the reviewer on such matters.]



Elizabeth T Poulos, Ed.D.
SummitCOPrep@gmail.com

About the Author: Dr. Elizabeth Poulos is a statistics and economics instructor at Colorado Mountain College. In addition to a Doctor of Education, Dr. Poulos’ academic degrees include an MBA, a Master of Financial Analysis, a Master of Business in Financial Risk Management, and a Bachelor of Economics. She is an award-winning scholar with publications and presents on a variety of topics internationally.

From: [Julie Rippy](#)
To: [Trent Hyatt](#)
Subject: Letter sent to P & Z - Consideration of a Code Amendment to Section 070.040.020(d)(24)
Date: Tuesday, September 17, 2019 12:17:58 PM

Hi Trent. Hope you are well! I am not sure if this came across your desk, but below is a letter Randy and I sent to Gretchen requesting she forward it on to the P & Z Commissioners prior to the meeting in July. We also copied council on this letter. I wanted to make sure to send it on to you since you are the Senior Planner on this code amendment proposal

Since the meeting ran so late with the ANB agenda item, many folks who may have wanted to speak on this agenda item did not get the opportunity, as they had to leave. We would like to formally request to you and P & Z Commissioners that the item be opened to public comment at the Sept. 24th meeting.

As always, thank you!

Julie Rippy

Dear Planning & Zoning Commissioners,

Because we are unable to attend the public hearing this evening, we feel compelled to express our views via email on the proposed waterways code amendment topic.

Although we certainly appreciate the spirit of the proposed amendment to the Development in Waterways and Areas of Special Flood Hazard of the municipal code, we do not support the proposed amendment standards and/or the proposed applicability of those standards. We believe this proposal, as is, oversteps the city's authority as to what property owners and tax payers should be able to *responsibly and legally* do on their own property. Plus this would render some existing homes on narrow lots worthless if homeowners chose to remodel their existing homes.

We live on the Roaring Fork River and believe we are good stewards of the river. We agree with the idea of protecting our waterways and currently do so with how we manage our property. However, we feel this proposal is the wrong plan, is far too aggressive and intrusive, and that it impedes upon our rights as property owners to conduct small, benign projects. We are not saying that property owners along the river should clear-cut vegetation or build a full-size home along the river's edge. But we should be allowed, within reason and current code standards, to utilize our property as we see fit. Barring any structure, regardless of size, or barring any removal of native vegetation, regardless of project scope, is not fair to property owners, nor would it necessarily protect the waterways.

For example, if we want to build for a small deck, patio or tree house and clear out some vegetation within 50 feet of the riverbank to allow a line-of-sight of the river, we should have the right to do so... all WITHOUT being subjected to jumping through numerous hoops and navigating through red tape, only with the potential of a negative outcome. We pay extremely high property taxes due to the ever-increasing tax evaluations of property along the river and

this plan inhibits us from being able to enjoy our property how we legally choose.

Also, please consider that this plan does greatly curb a homeowner's ability to freely exercise wildfire mitigation, which could create a vulnerable situation for the homeowner and a liability for the city.

We request that this unreasonable amendment proposal not be considered, as-is, and that planners go back to the drawing board and design a much more balanced and fair amendment proposal while taking the rights of responsible homeowners along the river into consideration.

We appreciate your time and attention to our comments!

Sincerely,

Randy and Julie Rippy
2262 Midland Ave.
Glenwood Springs

Mauriene Howey
2308 Midland Avenue
Glenwood Springs, CO 81601
970-230-9496

To: The Members of the Planning & Zoning Committee
Our Honorable Mayor
City Council Members

My name is Mauriene Howey and I live at 2308 Midland Avenue. The back part of my property fronts on a beautiful stretch of the Roaring Fork River.

I have heard that there is a proposed new code amendment that stands to greatly affect my riverfront.

Please consider the following:

My property is steep along the edge of the river. To access the river safely requires steps. The steps I have now are fairly minimal and will periodically need to be improved. The steps also require a minimal amount of brush trimming to be used safely .

My family respects and appreciates the river and they hope to inherit and use my property for decades to come.

If a rule was passed prohibiting me from maintaining and improving my steps, that rule would basically make the river inaccessible from my own property as the river cannot be accessed safely without the steps.

I am concerned about any rule that would inhibit the use of the river by my grandkids, great grandkids, and guests.

I also have outstanding views of the river **and Mount Sopris**. I am concerned about any rule that would limit my ability to trim brush and maintain trees on my own property. Even if such a rule is loosely enforced, I am concerned that if the rule is written to enable restrictions on brush and tree trimming that such a rule could be more strictly enforced in the future by authorities.

I paid a premium for my property because of the ability to access the river and for the views. My tax values reflect such amenities and I pay a significant amount of taxes based on the physical amenities of the property. Any rules that negate these amenities in any way seem both unfair for the property owner and unwise for the tax values of the city.

If my rights to use the river and maintain the vegetation adjoining such were to be infringed upon in any way, such actions would be an unreasonable taking of private property rights. In this case it would be a significant taking of valuable property rights. This amendment would lower the value of my property because it would limit my access to the river.

I have great concerns that the proposed new code as written infringes on my ability to fully utilize my property as outlined above.

I am 82 years old and admittedly have limited resources to fight this battle if one arises. I would greatly appreciate the city and the planning commission looking after my rights without such a battle. Thank you for your consideration and assistance with the above concerns.

Sincerely,

Mauriene Dickens Howey

970-230-9496

Agenda Item: 32-19 Special Use Permit for a 66-space surface parking lot in the M-1-Mixed Use Corridor Zoning District. The project includes a variance request from the requirement that no block of parking exceed eight spaces without providing a landscape island.

Action Requested:

REQUEST	
APPLICANT	
OWNER	
LOCATION	
ZONE	
SURROUNDING LAND USES	
LOT SIZE	

Department: Planning Department

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

Background Info:

Issues: SEE ATTACHED STAFF REPORT

Staff Recommendation: SEE ATTACHED STAFF REPORT



Planning and Zoning Commission Report

Date: September 24, 2019
To: Planning and Zoning Commission
From: Gretchen Ricehill, Asst. Dir. Community Dev. Dept.
Subject: #32-19- Special Use Permit for a 66-space surface parking lot in the M1 Zoning District. The project includes a variance request from the requirement to provide landscape islands.

REQUEST	Special Use Permit for a 66-space surface parking lot in the M1-Mixed Use Corridor Zoning District. The project includes a variance request from the requirement that no block of parking exceed eight spaces without providing a landscape island.
APPLICANT	Valley View Hospital
OWNER	Firstbank
LOCATION	2014 Grand Ave (PIN: 2185-164-00-004 and -005)
ZONE	M1-Mixed Use Corridor
SURROUNDING LAND USES	North: Commercial, warehouse, storage South: Commercial, Hotel East: Commercial, Residential, Hospital West: Commercial
LOT SIZE	24,307 and 31,363 square feet

ACTION ITEMS

Action 1: Consideration of a variance from the requirement that no block of parking spaces shall exceed eight in a row without providing a landscaped island (Municipal Code section 070.040.060(h)(6)c.1).

Staff recommends approval with suggested findings on page 10 of this report.

Action 2: Consideration of a Special Use Permit to construct a surface parking lot in the M1-Mixed Use Corridor Zoning District.

Staff recommends approval with suggested findings on page 10 and 11 and recommended conditions on page 11 of this report.

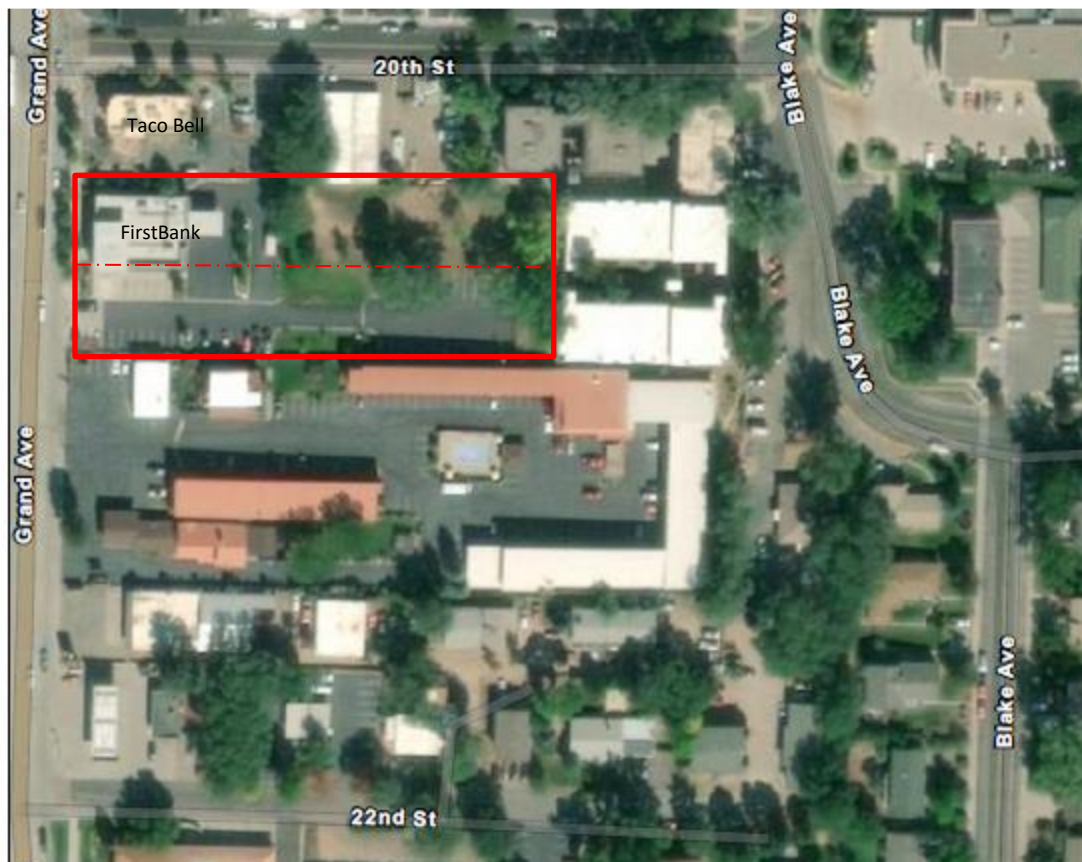
BACKGROUND

In 2012, FirstBank constructed a two-story building at 2014 Grand Avenue. The development site includes a drive through on the east side of the building as well as paved parking areas to the south and east. The bank has two vehicular access points: the first and primary access is from Grand Avenue and the secondary is from 20th Street. The latter access is shared with Taco Bell

The bank's property actually consists of two separate parcels, one 24,307 square feet and the other 31,363 square feet (see aerial below). Together the parcels amount to 1.28 acres. The eastern half of the northern parcel is vacant.

The bank proposes to reorient the existing lot line between its two parcels from east-west to north-south

and sell the remaining vacant lot (currently the east half of both parcels) to Valley View Hospital.



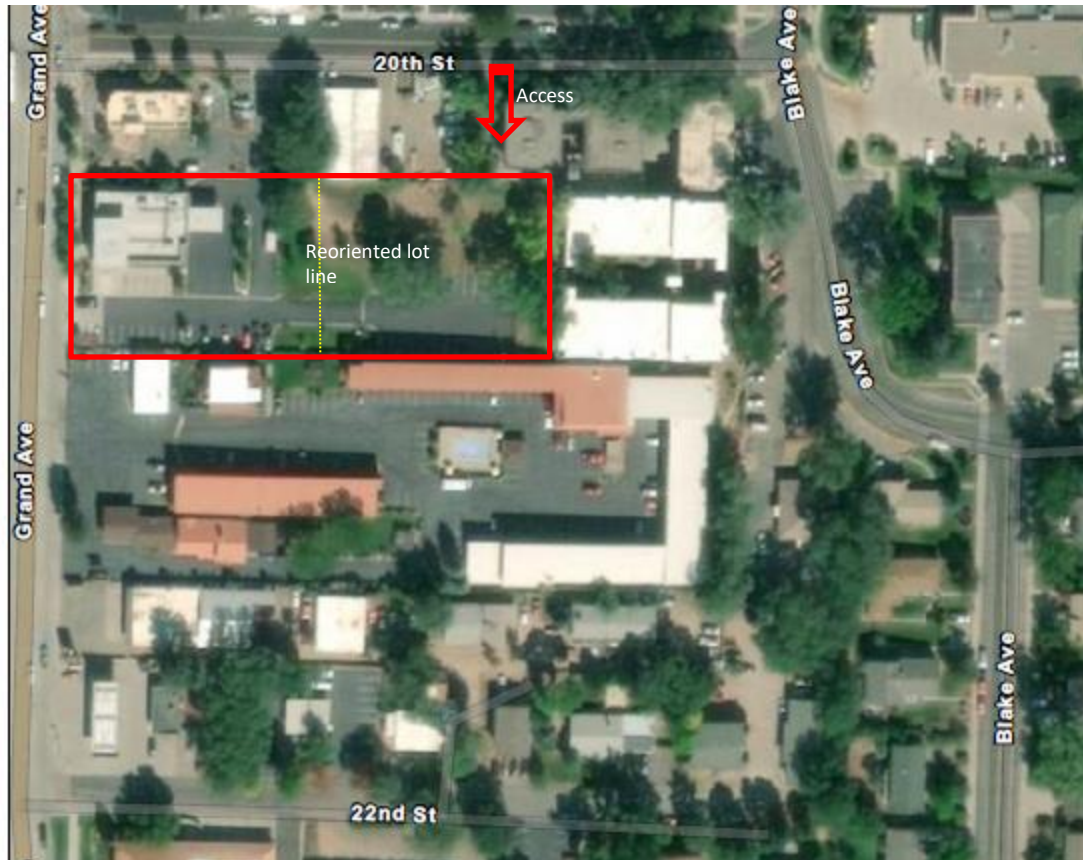
On this vacant parcel, the Hospital proposes to construct a 66-space, gated surface parking lot for its employees. The lot will be accessed from an existing driveway that is located on the west side of the Glenwood Professional Building, 410 20th Street, a building owned by Valley View Hospital Association. The driveway is about 16.5 feet wide, 100 feet long and currently serves the office building's tuck-under parking. Photos of the site, access points, and parking are attached to this report for reference.

The parking lot will include emergency Fire/EMS-only access on the southwest side of the lot. Plans call for a 4-inch mountable curb and securing the access point with a chain between bollards (see application, Civil Plans, sheet C 1.0). There will not be public or Hospital employee access to this parking lot from FirstBank.

The parking lot will be similar in design to surface lots that the Hospital constructed between 19th and 20th Streets in that heavily landscaped areas will double as stormwater detention basins to clean and filter runoff from the parking lot.

The new parking lot will be illuminated with 10-sixteen-foot tall pole lights. Plans call for using the same decorative LED fixture as those used by FirstBank (pictured right).





Aerial view showing proposed reoriented lot line and access to eastern parcel.

Construction of a stand-alone parking lot in the M1 zoning district requires a Special Use Permit.

The project includes a variance request from the Municipal Code requirement that no block of parking exceed eight spaces without providing a landscape island. There are two locations where parking spaces extend to thirteen spaces and one where parking spaces extend to twelve spaces. Overall, the total amount of landscape area provided is 6,488 square feet, or 21.8 percent of the lot, which exceeds the Code requirement by 545 square feet. See further discussion under the Variance section of this report.

Review Process

Per Sections 070.060.050(e) 070.060.070(a) of the *Glenwood Springs Municipal Code* (Code), the Planning and Zoning Commission is the reviewing body for Variance and Special Use Permit applications.

Following approval (with or without conditions), and prior to submitting a grading permit application, Valley View Hospital will be required to submit and receive administrative approval of a Construction Plans application.

This application also includes a request to adjust the east-west boundary between the two parcels owned by FirstBank. Because the parcels are metes & bounds descriptions and not located in a subdivision, section 070.060.060(a) requires that the adjustment follow the minor subdivision process. Minor Subdivisions are reviewed administratively.

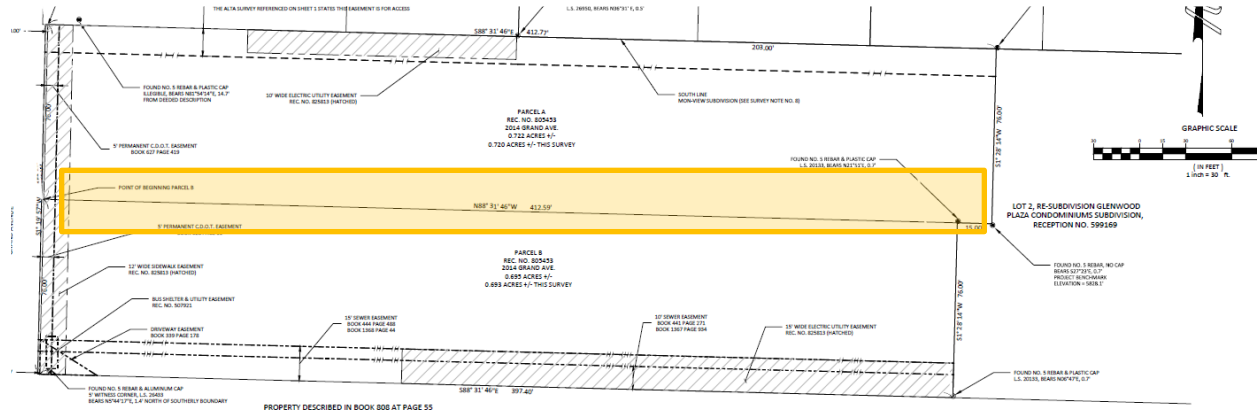
ANALYSIS

Minor Subdivision

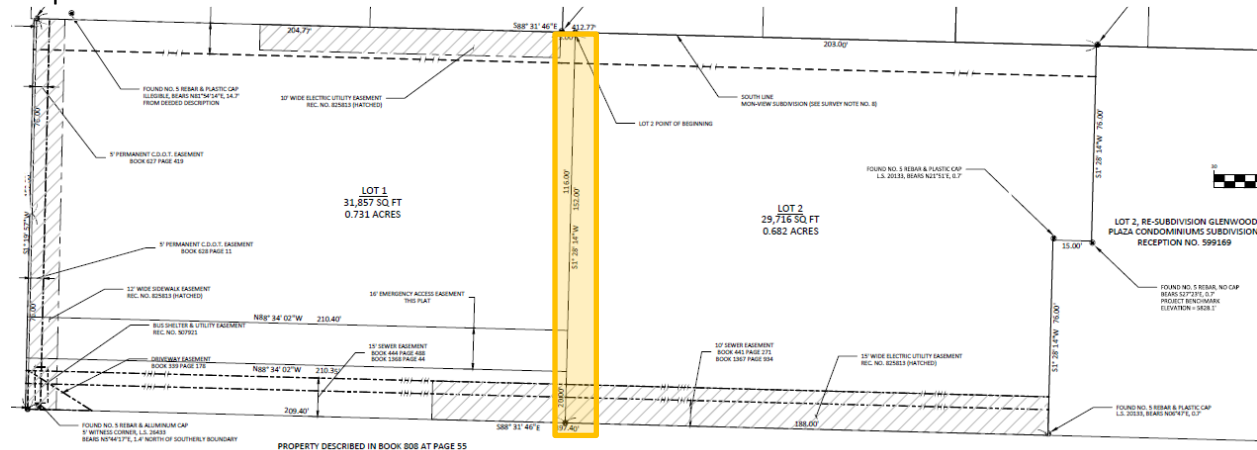
The following is for information only. The proposed subdivision will be reviewed administratively.

As indicated in the project background, the proposal calls for reorienting the existing property boundary from an east-west orientation to north-south (see highlighted areas below).

Current



Proposed



The resulting lots will be roughly the same size as they are currently. Firstbank will retain the western-most lot which consists of 31,857 square feet (0.73 acres). Access to this lot will be via an existing driveway from Grand Avenue and from 20th Street, through property owned by Taco Colorado Inc (Taco Bell). FirstBank and Taco Colorado executed an easement agreement in 2011 allowing each a perpetual non-exclusive easement over and across their respective properties.

The eastern lot is 29,716 square feet (0.68 acres) and will be sold to Valley View Hospital. Access will be via an existing private driveway from 20th Street. Currently the driveway serves 410 -20th Street, a property owned by Valley View Hospital.

In reviewing the Minor Subdivision application, the Code requires that the Director consider whether the proposed subdivision -

- Is consistent with the Comprehensive Plan

- The Comprehensive Plan's future land use map* identifies this parcel as "commercial" which is defined as providing "...a wide range of general retail goods and services for both regional and local markets, in attached and freestanding structures...." (*Note: the future land use map in the 2014 amended Comprehensive Plan is missing a map layer between Hyland Park and 23rd Street. The 2011 version of the plan shows that this area is classified as "Commercial").
- **Is consistent with the intent of the underlying zoning district**
 - This parcel is in the M-1-mixed use corridor zoning district which among other things is intended to accommodate "...lighter-intensity commercial districts with limited auto-oriented uses compatible with surrounding residential neighborhoods."
- **Complies with applicable dimensional, development, and design standards in this code**
 - The subdivision conforms to the minimum lot size requirements of the zone district.
 - The proposed parking lot use requires that the Planning & Zoning Commission consider a special use permit. The Commission is also required to consider a variance request from the requirement that no block of parking exceed 8 spaces without providing a landscape island.
- **Does not affect a recorded easement without approval from the easement holder**
 - The proposed subdivision does not affect recorded easements.
- **Will not result in adverse impacts to surrounding property**
 - The proposed subdivision is not expected to adversely impact surrounding properties.
 - The proposed subdivision will result in FirstBank losing approximately 23-25 parking spaces. Even with this loss, FirstBank remains in compliance with its off-street parking requirements as well as a 2011 easement with Taco Colorado that it provide 6 parking spaces for Taco Bell employees.
- **Will not limit the City's ability to effectively provide facilities or services**
 - The proposed subdivision will not limit the City's ability to provide facilities or services.

ANALYSIS

Variance

The application includes a variance request from a requirement to break up rows of parking with landscape islands. Compliance with the Code would require the construction of three landscape islands, amounting to approximately 513 square feet. As an alternative, the Hospital proposes a 10-foot wide by 115-foot long landscape area that will double as a stormwater detention basin to clean and filter runoff from the parking lot.

When considering variances, the Code requires that the request comply with seven criteria which the applicant addressed in the project narrative. Following is staff's analysis of the variance request:

1. The subject property has an exceptional shape, topography, building configuration or other exceptional site condition that is not a general condition throughout the zone district;

The south half of the property is currently an asphalt parking lot. This lot has been in existence since at least the time that the site was home to the Glenwood Post Independent. The lot most likely was developed when landscape islands were not a Code requirement (prior to 1999).

When FirstBank purchased and redeveloped the property in 2011, it simply resurfaced and

striped the lot. Per the Development Code (Title 070) at the time, the action of resurfacing and striping did not trigger compliance with the landscape island requirement. The lot was accepted as pre-existing and therefore a nonconforming situation.

The current Code, adopted in 2018, greatly expanded regulations and requirements regarding nonconformities including adding a new provision which addressed nonconforming site features such as off-street parking, landscaping, buffers, screening, etc. The new Code (Section 070.010.070(f)(3)a) states that nonconforming landscaping shall be upgraded to comply with Code standards for such features if there is an increase in the total square footage of the vehicular use area, including parking, loading, circulation and driveway areas.

Combining the north and south lots increases the parking and therefore triggers the requirement to provide landscape islands (two islands in the south lot and one in the north lot).

The Hospital proposes that the new north lot would be joined to the existing south lot, this to make one, controlled (gated) access point and to restrict use to Hospital employees-only parking.

Staff notes that in addition to the pre-existing parking lot, there is a grade difference between the north lot and south lots. An approximately 3 to 4-foot tall retaining wall divides the two areas. The applicant has designed the north lot such that the majority of the drainage flows into detention basins adjacent to and above the existing retaining wall.

2. The strict application of the Code standards for which a variance is sought would produce undue hardship;

The applicant notes that the intent of the parking lot is to meet the Code and landscaping requirements while also providing as much parking as possible for Hospital employees. By providing the required three landscape islands, it would require the loss of three parking spaces and increase the amount of asphalt that would have to be removed from the existing parking lot.

Staff adds that construction of three landscape islands (two in the existing south lot and one in the north lot) may also negatively impact the designed drainage system. Plans call for drainage from the south lot to remain unchanged. Water flows into an existing valley pan through FirstBank's parking and to a storm sewer in Grand Avenue. Construction of Code-required islands would interrupt the existing flow such that new valley pans or other conveyance systems will have to be designed and constructed. Drainage from new north lot is designed to flow into three detention basins adjacent to the existing retaining wall. The detention basins will be densely landscaped and act as a stormwater filtration system. Construction of a Code-required island may interrupt stormwater flow and affect the overall function of the detention basin system, or require their elimination entirely thereby negatively affecting runoff water quality.

3. The applicant did not create the hardship by his/her own actions;

The applicant did not construct the south parking area which has been in existence for many decades and predates the Code requirement to provide landscape islands at a rate of one island per each eight parking spaces.

FirstBank owns two parcels and is in the process of reorienting the lot line to make it possible for the Hospital to purchase the existing south lot and create a new (north) parking lot.

The Hospital proposes that the new north lot would be joined with the existing south lot, this to make one, controlled (gated) access point and to restrict use to Hospital employees-only parking.

There is an existing grade difference between the north lot and the existing south lot. An approximately 3 to 4-foot tall retaining wall divides the two areas. The applicant has designed the north lot and drainage therefrom to account for this grade difference.

4. **The variance requested does not harm the public and does not impair the intent or purposes of this Code, goals, and policies, including the specific regulation for which the variance is sought;** Staff does not believe that granting the variance request would harm the public or impair the intent or purposes of the Code, or City goals and policies.

The intent of the requirement to break up parking spaces with landscape islands is to provide shade to parking areas and to mitigate potential environmental and visual impacts of surface parking lots. The proposed project includes landscaped islands and landscaped buffers along the property perimeter. In addition, the applicant is providing a centrally-located densely landscaped bioswale/detention basin. In all, the proposed landscape plan provides significantly more landscaped areas and more plants than required by Code. Staff believes that by designing the center island to act as a stormwater filtration system, there is an overall benefit that likely would not be achieved with individual landscape islands.

In summary, staff believes that the proposed landscape plan achieves the Municipal Code's intent of avoiding the adverse visual impact of large concentrations of exposed parking and of reducing stormwater runoff, reducing heat island effects from large expanses of pavement, and improving water quality.

5. **The variance request demonstrates exceptional hardship not related to purposes of convenience or financial burden;**

The applicant indicated that without the variance the number of parking spaces would be reduced by three. This poses a hardship in that the reason for creating the parking lot is to provide needed, dedicated employee parking. And, by creating employee lots, more parking around the Hospital will be available for patients and visitors. The applicant points out that the more spaces available near the Hospital, the greater the overall community benefit.

6. **The variance request will not violate building or fire code requirements; and**

At the request of the Fire Department, the parking lot has been designed with a 4-inch roll over curb and dedicated, secured access for Fire/EMS vehicles. The variance request does not violate building or fire code requirements.

7. **The variance is the minimum variance that will afford relief of the subject standards of the Code.**

This is the minimum variance that affords the applicant relief from the landscape island requirement.

Although the applicant indicated that it could meet the letter of the Code and provide the required landscape islands, compliance with the Code is problematic due to existing site conditions. 1)The south parking lot was constructed at a time when landscape islands were not required. Implementation of the new Development Code requires that this parking lot

be reconstructed to come into compliance with current code provisions. 2) By providing a heavily landscaped center island that is also a detention basin, the north lot is designed to meet dual Code purposes of both mitigating the adverse visual impact of large concentrations of exposed parking, and reducing stormwater runoff, reducing heat island effects from large expanses of pavement and improving water quality.

ANALYSIS

Special Use Permit

As indicated in the project background, the subject property is zoned M1-Mixed Use Corridor, where parking lots as a principal use require consideration of a special use permit. As such, the parking lot is subject to the following special use criteria (Section 070.060.050(e)(3)e2):

- **The use will be compatible with the surrounding area**
This is a neighborhood of primarily office, commercial and warehouse uses with large and small surface parking areas. For the most part, the proposed parking area will be surrounded by one and two-story tall buildings and therefore shielded from direct view of the nearby public streets.
- **The impacts of the use on surrounding areas have been adequately minimized;**
- **The use minimizes adverse impacts to the health, safety and welfare of the inhabitants of the surrounding areas and the city.**

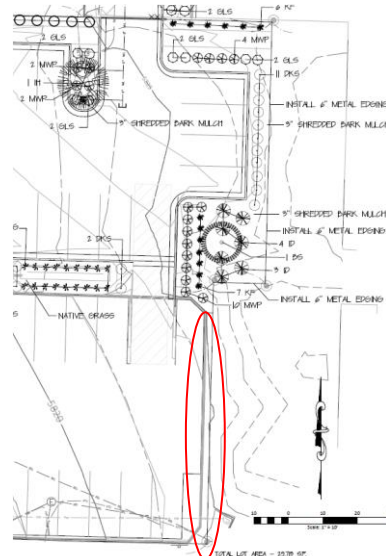
The proposed parking lot will be screened from adjacent uses through landscape plantings and fencing:

North: The existing wooden fence will be replaced. The new fence can be up to six feet in height along this property line. Plans call for planting a row of ornamental grasses and shrubs at the base of the fence.

South: There is an existing screening fence that was constructed along the south property line in 2011 as part of the FirstBank project. That fence will remain.

West: There will be an 8-foot wide by 115-foot long densely planted landscape strip along the west property line which divides the FirstBank parking lot and drive aisle from the Hospital's lot. Landscaping includes deciduous trees, ornamental grasses and shrubs.

East: Rows of ornamental grasses and shrubs will shield the north half of the parking area from the adjacent property. Additionally, plans call for planting a blue spruce and one maple tree. The south half of the parking lot is not currently screened from the adjacent property, Glenwood Plaza Condominiums, a residential use. The Code requires that when parking areas and drive aisles are adjacent to residential uses, the development shall provide a physical or visual barrier that includes a landscaped border, berm, fence or combination thereof. Therefore, the Code considers this to be a nonconforming site feature (Section 070.010.070(f)). The expansion of the parking area triggers the requirement to conform to the current Code. Therefore, along the eastern side of the existing, southern parking area, the Hospital will be required to construct a fence and/or provide a landscaped buffer. There is an existing retaining wall that borders the parking lot. Above the retaining wall



there is about 2 ½ feet of space before the property line. A screening fence is likely the most practical solution.

- **The use will be consistent with the general purpose and intent of the Code**

Section 070.040.060 provides development standards for off-street parking. The purpose of those standards is to ensure that safe and convenient parking areas:

- Respond to transportation and access demands of various land uses throughout the city;
- Avoid and mitigate traffic congestion;
- Avoid and mitigate the adverse visual impact of large concentrations of exposed parking...;
- Reduce stormwater runoff, reduce heat island effects from large expanses of pavement, and improve water quality;
- Provide necessary access for service and emergency vehicles; and
- Provide for safe and convenient interaction between vehicles and pedestrians.

The parking lot is designed to be used as employee-only parking. It is intended that this lot relieve parking pressure on the hospital campus as well as on-street in the blocks surrounding the facility. As part of its application, the Hospital included a parking plan which shows that it has a total of 721 on- and off-site spaces (refer to application pdf page 2). This includes both leased and owned lots. The plan also illustrates the location of employee and patient parking. The new 66-space parking lot, the subject application, will bring the Hospital's total parking count to 787 spaces. The lot is easily accessible to the Hospital campus, which is about ½ block walk away. The parking plan includes constructing a 5-foot wide sidewalk within an existing access easement that parallels the north property boundary. The sidewalk is primarily intended to serve the residents of the adjacent condominium units, but it also can serve parking lot users. It provides a protected, dedicated route across the parking area.

The new parking lot is designed to mitigate any potentially negative impacts to surrounding properties. Mitigation includes providing dense landscape screening along the perimeter and within the lot itself. Many of the landscape areas double as stormwater detention. The Hospital successfully used this design in two other lots it recently constructed between 19th and 20th Streets (see photo of one of the existing detention basins at right).



Regarding lighting, the parking design includes installing pole mounted lights. The fixtures, which are the same as those currently used in the FirstBank lot, provide a down-directed light. The illumination level is within Code requirements.

The project provides an easy Fire/EMS access point at the west side of the parking area. Plans call for constructing a 4-inch roll-over curb. The access will be for Fire/EMS use only and secured with a locked chain stretched between two bollards.

- **The use will comply with all applicable standards of this Code**

Pending consideration of the variance request and review of Construction Plans application, staff finds that the use is in substantial compliance with the Code.

- **The use is in conformance with the Comprehensive Plan and other City plans and policies**
Staff reviewed the Comprehensive Plan and found that there were no goal statements supporting or discouraging the proposed development. However, the Plan recognized the significance of the Hospital as a regional medical center and encouraged support of facility improvements "...as long as they are found compatible with the neighborhood and meet other intentions of this Comprehensive Plan, area plans and the Municipal Code." (p. 54, Glenwood Springs Comprehensive Plan, 2011 amended 2014)

REVIEWING AGENCY COMMENTS

Staff distributed the application to City departments for review and comment. We received comment from the Engineering and Public Works Departments which are attached for review. Most of the comments are technical in nature and will be addressed during the Construction Plans application phase of the project. Comments referencing easements and long-term maintenance have been added as conditions of project approval.

ACTION ITEMS AND STAFF RECOMMENDATIONS

This project requires that the Planning and Zoning Commission consider 2 separate actions.

Section 070.060.030(g)(1)d outlines the review and decision procedures for applications being considered by the Planning and Zoning Commission and/or City Council. The Commission shall approve, approve with conditions, or deny the application based on the applicable approval criteria listed in the application-specific procedures. The Commission may also continue the hearing to with a request for specific additional information.

Action 1:

Action 1: Consideration of a variance from the requirement that no block of parking spaces shall exceed eight in a row without providing a landscaped island (Municipal Code section 070.040.060(h)(6)c.1).

Staff recommends **approval** with suggested findings listed on page 10 of this report.

Suggested Findings:

1. The subject property has an exceptional shape, topography, building configuration or other exceptional site condition that is not a general condition throughout the zone district in that there is an existing parking lot that was in compliance with the Code at the time that it was developed; there is a grade change and retaining wall across the property which makes it difficult to provide the proper drainage and Code-required landscape islands;
2. The strict application of the Code standards for which a variance is sought would produce undue hardship;
3. The applicant did not create the hardship by his/her own actions;
4. The variance requested does not harm the public and does not impair the intent or purposes of this Code, goals, and policies, including the specific regulation for which the variance is sought;
5. The variance request demonstrates exceptional hardship not related to purposes of convenience or financial burden;
6. The variance request will not violate building or fire code requirements; and
7. The variance is the minimum variance that will afford relief of the subject standards of the Code.

Action 2: Consideration of a Special Use Permit for the construction of a surface parking lot in the M1-Mixed Use Corridor zoning district.

Staff recommends approval with suggested findings on page 10 and 11 and recommended conditions on page 11 of this report.

Suggested Findings

1. The use is compatible with the surrounding area;
2. The impacts of the use on surrounding areas have been adequately minimized;
3. The use is consistent with the general purpose and intent of the Code;
4. With the exception of any granted variances, the use complies with applicable Code standards;
5. The use conforms with the Comprehensive Plan and other City plans and policies; and
6. The use minimizes adverse impacts to the health, safety and welfare of the inhabitants of the surrounding areas and the city.

Recommended Conditions

1. 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.
2. Any modifications of the approved plans or condition of approval shall require review and approval of the Community Development Director for compliance with applicable Municipal Code requirements. Modifications may require a new application or amendment of the approved plans per Section 070.060.030(i)(4).
3. Prior to construction the applicant shall:
 - a. Submit Construction Plans application in accordance with Section 070.060.050(c) which incorporates reviewing agency/City department comment and any revisions as required by the Planning and Zoning Commission during the public hearing held September 24, 2019.
 - b. Revise landscaping plans to include a fence and/or a landscape buffer on the east side of the existing south parking area that meets the requirements of 070.040.060(h)(6)c3.
 - c. Submit a grading permit as required by the Engineering Department.
 - d. Submit a Right-of-Way permit application for any work occurring in the city right-of-way as required by the Engineering Department.
 - e. Provide a bond as required by the Engineering Standards for all public improvements and in a format as approved by the City Engineer and/or City Attorney.
4. Prior to certificate of completion, the applicant shall:
 - a. Provide an easement for City access and maintenance of the fire hydrant and other easements as may be required by the City Engineer and/or Public Works Director.
 - b. Provide as-built plans of the project in PDF and AutoCAD .dwg format and on 24 x 36-inch mylar paper.
 - c. Provide evidence of a stormwater drainage and maintenance agreement between FirstBank and Valley View Hospital for shared/jointly-used drainage systems.

APPENDIX
Site Photographs



Looking south from 20th Street and showing access driveway.



Looking southeast from existing driveway at 410 20th Street, showing tuck under parking



Looking north from development parcel. Showing driveway and 410 20th Street (right side)



Looking west showing north half of development parcel. Existing parking lot (south half of development parcel) located far right & center of photo



Looking west/northwest showing FirstBank



Looking north showing existing FirstBank access drive to 20th Street

Water/Wastewater (W/WW) Department Comments

Planning Items: 32-19, 410 20th St
Applicant: Sopris Engineering / Valley View Hospital
Owner: Valley View Hospital
Location: 410 20th St.
Parcel: 218516400004
Date of Comments: 9/3/19

The following are W/WW Department comments based on a review of the application package and the Department Review meeting held on 9/3/19.

Project Understanding

We understand that the applicant is proposing a new parking lot located at 410 20th St. The project will include installation of a new water tap, water service line, and an irrigation system.

W/WW Department Comments

General.

- All publically-owned or maintained water and sewer infrastructure must meet the requirements of the City's engineering standards. The current version can be found at the following link: <http://cogs.us/EngineeringStandards>.
- A right-of-way permit is required for this project. Please contact the City's engineering department to obtain the permit application.
- Per Colorado 811 and City requirements, tracer wire and utility warning tape shall be installed with all underground water and sewer infrastructure.
- Any water/sewer separation distances and crossings must meet State (i.e., CDPHE) and City requirements.

Water Service.

- We understand that a new 8" tap is proposed for this project. The proposed tap location is on the water main in 20th St. Note the following:
 - The applicant is responsible for all costs required to install a new water tap, including applicable system improvements fees and tap fees. Please contact the City Community Development department regarding the improvement fees and the City W/WW Department regarding tap fees.
 - The W/WW department requests that the tap be made using an 8"x8"x8" cut-in tee (vs. a hot tap w/ a sleeve).

- An 8" isolation (gate) valve shall be installed directly on the service-side of the new tee. This valve is the public/private demarcation point and shall be noted on the project plans and development agreement.
- Only City W/WW staff shall perform work on the water main. In certain circumstances, the City may allow a contractor to install a tap, but only when under the direct supervision of W/WW staff. Tap requests shall be scheduled with the W/WW department at least 48 hours in advance but we recommend that you begin coordinating with the department as soon as possible.
- The proposed 8" water line that will extend south from the tap location in 20th street will be privately owned, operated, and maintained, but must meet City design, disinfection, and testing requirements because it will serve a new fire hydrant.
- A new fire hydrant is proposed as part of this project. The hydrant must be installed and tested per City standards. Once accepted, the City will maintain the hydrant and the hydrant lead line up to the discharge connection of the hydrant lead valve. City requires: 1) a 15' square easement centered on the hydrant, 2) a 15' square easement centered on the lead valve, and 3) a 15' easement that runs along the alignment of the hydrant lead line.

Sanitary Sewer.

- Sanitary sewer service is not required for this project.

Irrigation Service.

- We understand that the area where the proposed parking lot will be constructed is currently irrigated by First Bank (2014 Grand Ave). We also understand that First Bank's irrigation system will be modified as part of the project so that the new parking lot landscape will be irrigated by a new irrigation service that will be owned by Valley View Hospital.
- The proposed irrigation system infrastructure including the vault and shut off valve will be privately owned and maintained.
- The irrigation services must be equipped with appropriate cross-connection and backflow prevention devices (see the section below for additional information).

Water Meters.

- All services must be metered.
- Meter accounts must be set up and the meter purchased through the City's finance department before meters will be issued.
- Water meters must be installed per manufacturer's requirements. They may be subjected to performance testing before being accepted by the City.
- Water meters must be installed in a location that can be accessed by the City for inspection and future maintenance. Refer to the attached schematic for meter installation instructions, including additional requirements for isolation valves, pressure reducing valves, and cross-connection devices (see attached water meter installation schematic). Note that if the water system pressure exceeds 80 psi, a pressure reducing valve must be installed downstream of the water meter.

- A water meter inspection must be performed by City staff before a certificate of occupancy will be issued. We recommend that you contact the W/WW department to discuss specific requirements as soon as possible to avoid an unforeseen installation issues.

Cross-connection Control.

- A City-approved cross-connection/ backflow device must be installed on water service lines if a hazard exists. **This project requires that a-cross connection/backflow prevention hazard survey be completed (by the City) before a certificate of occupancy will be issued.**
- At the customer's request, W/WW Department staff will perform an initial Cross Connection Hazard Survey and provided preliminary recommendations during the planning phases of the project. Upon completion of the project, a follow-up inspection of the property is required (per State law) to ensure that acceptable backflow devices have been properly installed and tested. We recommend that you contact the W/WW department to discuss specific requirements as soon as possible to avoid unforeseen installation issues during the construction phase.
- Please note that backflow prevention devices cannot be installed below grade per International Plumbing Code (IPC). In addition, certain backflow prevention devices require drainage requirements. We encourage the customer to consider these requirements and address them during the design phase of the project.

W/WW Department Contact Information:

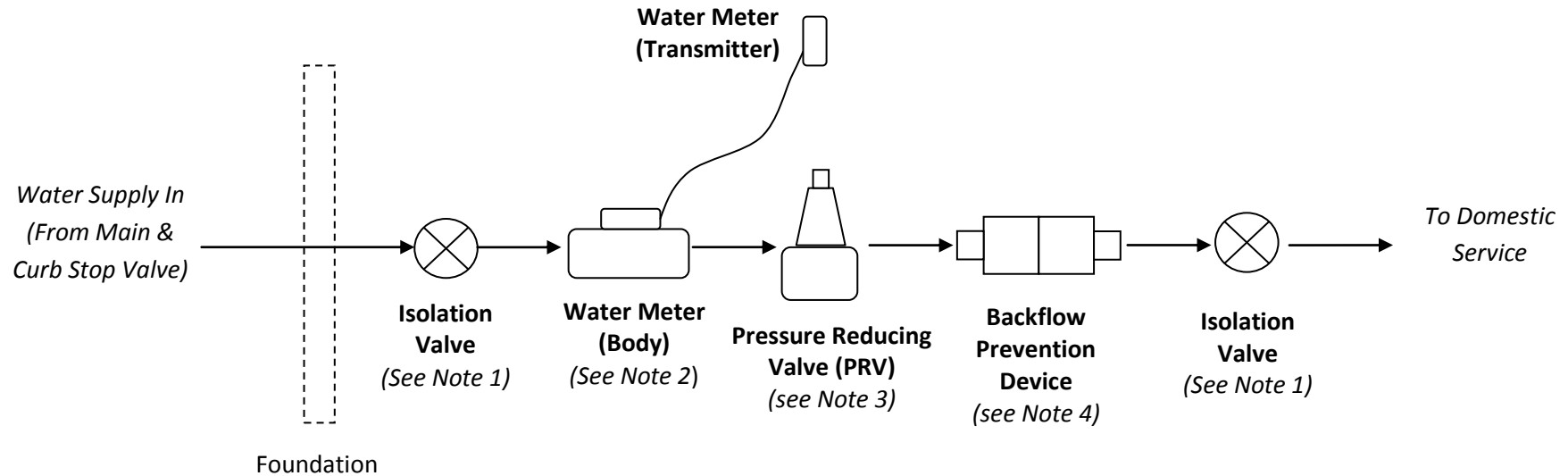
- o Horacio Diaz – 379-1974 (Sewer Services & Taps)
- o Mike Hoffman – 989-3902 (Water Services & Taps, Cross Connections, Water Meter Inspections)
- o Brad Zachman – 384-6388 (General Information)
- o Utility Billing – 384-6400 (Account setup; Water Meter Purchase)
- o Community Development Department – 384-6411 (Improvements Fees)

Attachments:

- o Water Meter Installation Schematic

Water Meter Installation Schematic

Glenwood Springs Water Department



Notes:

1. It is strongly recommended that isolation valves be installed at the locations shown. These valves allow for the water supply to be shut off during repairs or for replacement of the water meter equipment.
2. To assure accurate measurements, water meters must be installed per manufacturer's specific instructions. Contact the City's Water Department for a copy of these instructions or if you have any questions regarding the installation requirements.
3. A pressure reducing valve (PRV) regulates incoming pressure from the main. A PRV is recommended for all installations, but is required for all services that are fed off of water mains with static water pressure of 80 psi or greater. Contact the water department (**384-6344 or 989-3902**) for more information regarding the static water main pressure that serves your property.
4. A backflow prevention device protects the City's water supply from contamination or pollution due to backflow conditions. Please contact the City's cross connection technicians (**384-6345**) to discuss specific backflow prevention requirements and installation procedures.
5. Requests for water meters can be initiated by contacting the City's Utility Billing Office (**384-6400**). Once payment is made, water meters can be picked up from the Water Department at 401 7th St. (**384-6344 or 989-3902**).
6. Contact the Water Department to schedule a final inspection of the meter (**384-6344 or 989-3902**) and the backflow device (**384-6345**).

Updated June 2016

**Engineering
Department**

**Jessica Bowser
Asst. City
Engineer**

Date: September 3, 2019

**To: Gretchen Ricehill, Assistant Director for Economic and Community
Development**

Re: Valley View Hospital Parking, 410 20th Street

The following items should be addressed prior to Development Permit Approval:

1. Show the sight triangles for the access to this parking area and verify that sight distances are met.
2. Verify with the Electric Department on how power will be supplied to the site for the irrigation clock and parking lot lighting.
3. Water line will be private entering the site.
 - a. Hydrant will be maintained by the city and an access and utility easement should be supplied for this purpose.
 - b. Tracer wire should be installed with this hydrant service line per city code.
4. The drainage infrastructure will require a maintenance agreement and easement.
5. Include a brief summary of the investigation and compliance with ADA requirements.

The following will be required prior to issuance of a Right of Way/Grading Permit:

1. Drainage Letter and mapping stamped by a Licensed Professional Engineer should be submitted.
2. Geohazard Letter stamped by a Licensed Engineer should be submitted.
3. All Easements and Lot Line Adjustments should be completed.

The following will be required prior to issuance of a Certificate of Occupancy:

1. Certification Letter verifying that all drainage infrastructure was completed per plan.
2. Certification Letter verifying that the construction still meets the intent of the Geohazard Letter.
3. As-Built Plans are required.



Valley View Hospital

August 12, 2019

Glenwood Springs Community Development
Planning & Zoning Commission

Re: Minor Development/Special Use Application for additional off-site parking

Greetings,

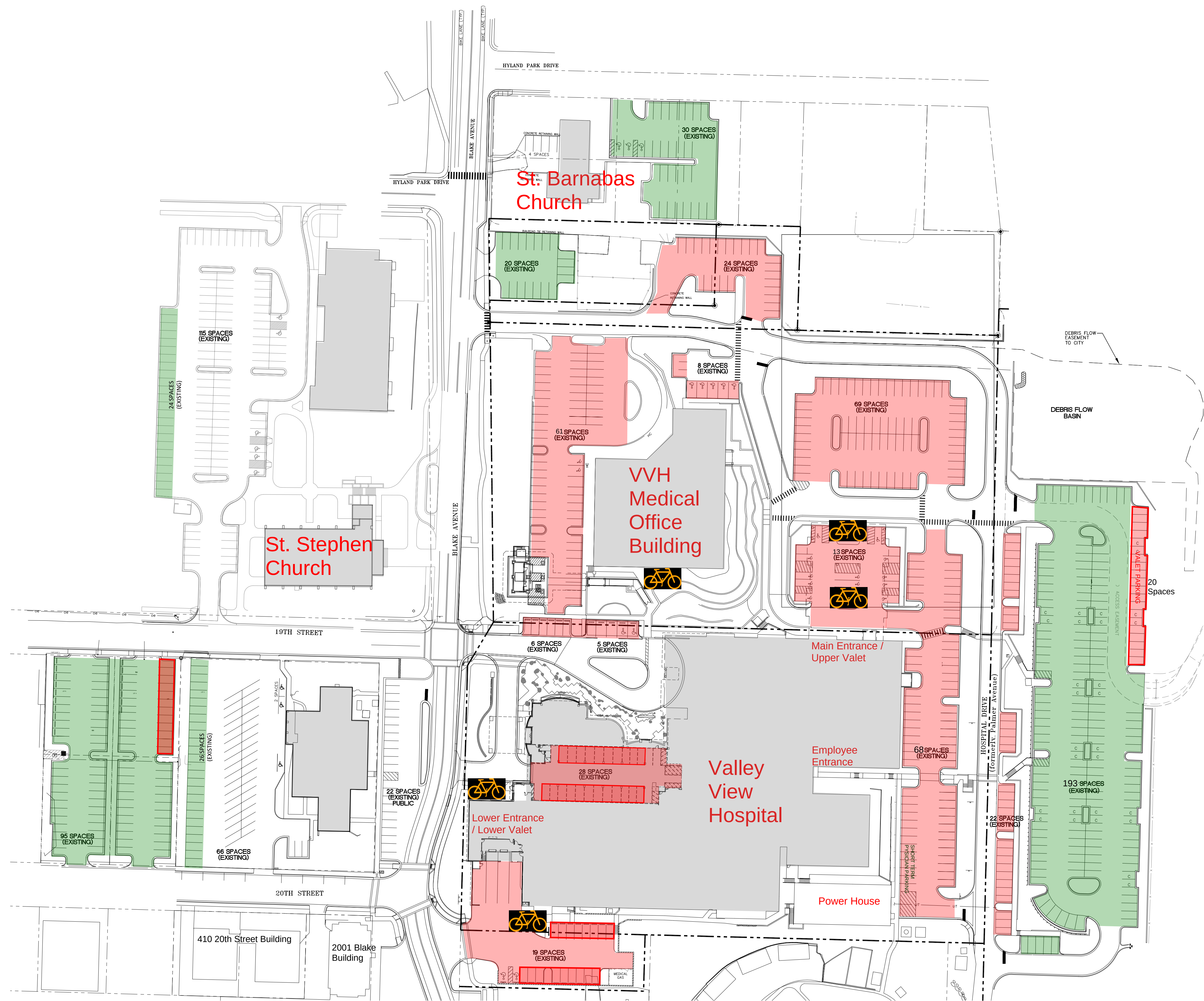
Valley View Hospital Association is requesting an approval for a minor development, special use application to develop an off-site parking lot in the lot adjacent to the 410 building located on 20th Street. We propose to build a total of 66 parking spaces to be utilized by our employees.

We recognize that we are currently under parked on our campus and often have patients, visitors and employees parking in undesignated locations (on the side of the roads on the VVH campus). This additional proposed parking will help to relieve this overcrowding and improve campus safety and patient/visitor access.

Additionally, we are working with our leadership team on a facilities masterplan. We recognize the immediate and future need to provide additional parking. This need will be addressed and included in our planning process.
Thank you for your time and attention.

Sincerely,

Dr. Brian Murphy
CEO, Valley View Hospital Association



Proposed New Parking
66 Total Spaces

Bicycle Parking:	54
Handicap Parking:	15
Peak Parking:	700

VVH Total Spaces:	572
Leased	80
MOB II	69
Grand Total: (Including Handicap)	721

* Please note that VVH staff with specific medical needs may get approval from Employee Health upon request to utilize Valet Services as needed.

** Parking Plan designations are enforced for all Day Shift staff and between the hours of 7:00a - 3:30p Monday - Friday.

- VVH STAFF & PHYSICIAN PARKING
- PATIENT / RESTRICTED PARKING
- VVH VALET RESTRICTED PARKING



ARCHITECTURE
ENGINEERING
PLANNING
INTERIORS

HFR Design, INC.
214 Centerview Drive
Suite 300
Brentwood, TN 37024
615.370.8500 phone
615.370.8530 fax
www.hfrdesign.com web
Nashville, Tennessee
Jackson, Tennessee
Kansas City, Missouri

OVERALL CAMPUS PLAN
VALLEY VIEW HOSPITAL
1906 BLAKE AVE
GLENWOOD SPRINGS, COLORADO

PROJ. NO.: 2013052
DATE: JUNE 19, 2017

SITE LAYOUT

C1.01

Ms. Gretchen Ricehill
 City of Glenwood Planning Department
 Senior Planner
 101 W. 8th Street
 Glenwood Springs, Colorado

RE: Valley View Hospital 410 20th Street Parking Lot- Minor Development/ Special Use Permit Application
 SE Job #: 16201

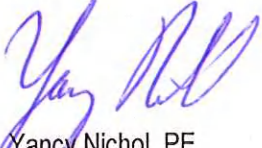
Dear Gretchen,

Enclosed with this letter is a Minor Development/Special Use Permit Application package for the construction of a parking lot for Valley View Hospital employees proposed to be constructed just south of 410 20th Street in Glenwood Springs. The submittal material enclosed with this letter is compiled based upon the June 10th 2019 pre-application meeting with Chris Adelman, the follow up meeting August 2nd 2019 with ourselves and the VVH team as well as the checklist you provided to our team. I have listed the checklist items below and noted where they are addressed in the enclosed packet to help you in your review:

CHECKLIST ITEM	LOCATION TO BE FOUND IN APPLICATION
1-Planning Application:	Enclosed in Appendix 1, also on file in City's office
2-Proof of Ownership of the Subject Property:	Enclosed in Appendix 2, also on file in City's office
3-Project Description:	Included in Section 1 of Application Narrative.
4-Copy of Recorded Subdivision Plat:	Enclosed in Appendix 3, also on file in City's office
5-Development Site Plan	Enclosed in Appendix 4
6(7)-Professional Engineered Drawings and Reports	
a. Utility Plans	Enclosed in Appendix 4, Sheet C3.0
b. Sanitary and Storm Sewer Facilities	No sanitary sewer is proposed nor is it being used. We are not installing any storm sewer facilities; however the grading plan is included in Appendix 4, Sheet C2.0.
c. Proposed Streets	Enclosed in Appendix 4, Sheets C1.0 and C2.0.
d. Any other proposed public improvements	Enclosed in Appendix 4
e. Drainage and Geotech Reports	Drainage report is included in Section 6 of the narrative and the drainage exhibit is included in Appendix 5. The Geotechnical report is included in Appendix 10.
f. Evidence of Adequate Water	The only water which will be utilized is for minimal irrigation and we will be connecting to the existing irrigation system for the 20th Street parking lot. We therefore did not include a narrative to address evidence of adequate water.
g. Traffic Analysis	Included in Section 7 of the Application Narrative
h. Preliminary Cost Estimate	Included in Appendix 6
i. Sewage Disposal	N/A
j. Erosion and Sediment Control Plan	N/A
k. Trails	N/A
l. Easements	Addressed in Section 8 of Application Narrative and detailed in Appendix 7
8-CDOT Access Permit	N/A
9-Landscape Plan	Enclosed in Appendix 8
10 (11)-Lighting Plan	Enclosed in Appendix 9
12-Housing Mitigation Plan	N/A
13-Phasing Schedule	Addressed in Section 9 of Application Narrative
ADD'L ITEM-DESIGN VARIANCES	Addressed in Section 3 of Application Narrative. Completed questionnaires are included in Appendix 11.
ADD'L ITEM-SPECIAL REVIEW	Addressed in Section 2 of Application Narrative

I appreciate you taking the time to review the enclosed application and please feel free to contact me if you have any questions regarding this submittal.

Regards,



Yancy Nichol, PE
Principal

Enc. Minor Development/Special Use Application
Cc. John Schied, Rob Smith, Matthew Felt

502 Main Street • Suite A3 • Carbondale, CO 81623 • (970) 704-0311 • Fax (970) 704-0313

SOPRIS ENGINEERING • LLC

Packet Page 170

civil consultants

20th Street Valley View Hospital First Bank Parking Lot

Minor Development/Special Use Application

Prepared for:
Valley View Hospital

Prepared by:
Sopris Engineering LLC
502 Main Street Suite A3
Carbondale, CO 81623

Date prepared:
August 9, 2019

Index:

1. Project Description
2. Special Review
3. Variance Request
4. Snow Storage
5. Utility Work
6. Drainage Narrative
7. Traffic Analysis
8. Dedication of Easements
9. Phasing
10. Conclusion

Appendix:

1. Planning Application
2. Special Warranty Deed
3. Subdivision Plat
4. Civil Drawings
 - i. C1.0 Site plan and Cover
 - ii. C1.1 Existing Conditions Plan
 - iii. C1.2 Demolition Plan
 - iv. C2.0 Grading Plan
 - v. C3.0 Utility Plan
 - vi. C4.0 Site Details
 - vii. C4.1 Water Details
5. Existing and Proposed Drainage Exhibit
6. Public Improvements Cost Estimate
7. Property Description – *See Section 1 in Report below*
8. Landscape and Irrigation Drawings
 - i. LA1.0 Landscape Plan
 - ii. LA2.0 Irrigation Plan
 - iii. LA3.0 Detail Sheet
9. Lighting Drawings
 - i. L000 Lighting Legend
 - ii. L100 Lighting Plan
 - iii. L101 Lighting Calculations
10. Geotechnical Report
11. Variance Criteria Questionnaire
12. First Bank Authorization Letter

1-Project Description

The proposed project, Valley View Hospital (VVH) 410 20th Street parking lot is located south of 20th Street and east of Grand Avenue on the eastern portions of what currently exist as Parcels A and B of 2014 Grand Avenue. The parking lot is proposed to be a 66 space gated parking lot providing off street parking for existing VVH employees. The site is zoned M1 Mixed Use Corridor and is currently owned by First Bank. First Bank's existing building is located on Parcel A, the northern parcel with open space to the east end. The southern parcel, Parcel B, currently exists as parking lot that serves both First Bank and Taco Bell. The proposal is to do a lot line adjustment, allowing VVH to purchase the eastern halves of both Parcels A and B and make the improvements noted within this narrative to provide the 66 parking spaces with access to the parking lot off of 20th Street along the west side of 410 20th Street which is currently owned by VVH. The parking on the western half of Parcel B will remain serving First Bank and Taco Bell and will be separated from the VVH with only emergency access allowed between the two lots. Additionally, 10 new spaces will be constructed along the eastern side of the First Bank and Taco Bell parking which will also serve the same. The access to the First Bank/Taco Bell parking lot will remain as is with access off of both Grand Avenue and 20th Street.

The City's code allows for a parking lot within M1 Mixed Use Corridor zone with a special review and also requires a minor development permit, both of which this report and application are intended to address. As is stated above, the site is currently owned by First Bank. We have been given permission by First Bank to take this portion of their property through this minor development and special review process (please see attachment number 12 a letter from first bank authorizing this process). The property description of this site is included in Appendix 7.

The proposed development meets the intent of the City's goals, policies and plans by providing additional (needed) parking for VVH and its employees. The existing employees need additional parking spaces so that they are not taking up additional on street public parking within the blocks surrounding the hospital, and so that additional parking can be opened up at the hospital for patient parking. The site is less than ½ of a block walking distance to VVH making it very valuable as employee parking. This parking lot will be gated and will only be accessed by VVH employees who know the area and who can easily access the hospital via a short walk east up 20th Street to Blake Avenue.

Proposed Improvements

Several design iterations were reviewed by our team prior to deciding on the proposed layout included within this application, found in Appendix 4. We looked at removing all the existing parking lot and reconfiguring the parking, however we determined that the most practical option with the least amount of impact to the surrounding neighborhood is to leave the existing parking lot intact to the extent possible and expanding the parking to the north within what currently exists as the eastern portion of Parcel B. This approach reduces the scope of work which helps reduce the length of construction and therefore reduces impacts to the surrounding neighborhood.

Utilizing the existing parking lot along with the expansion to the north, we are able to provide a 66 space parking lot. The parking lot will have a single entrance that is approximately 16.5' along the western side of the 410 20th Street Building. After a meeting with Glenwood Springs Fire Department to discuss the narrow access to the lot it was determined that they would like an additional entrance through the First Bank Lot as well as a fire hydrant located on the site. Please refer to sheet *C1.0-Site Plan* which depicts the access to the parking lot on the north as well as the emergency access/KnoxBox on the west through the First Bank Parking Lot and sheet *C3.0-Utility Plan* for the proposed fire hydrant. Both sheets are located within Appendix 4.

This proposed parking lot will be a gated lot that is for VVH employees only. Employees that are familiar with the area and that turn over at shift changes not multiple times every hour. The employees will know the access and know how to get into the lot as well as access the hospital.

The proposed improvements associated with the VVH 410 20th street parking lot include:

- Removal of concrete entrance down the western side of the 410 Building for installation of a proposed water line and electric line.
- Installation of curb and gutter, landscape, lighting, conduit within the parking lot.
- Drainage detention areas to allow water to stage up and release at existing conditions rate which is further discussed in section 6-*Drainage Narrative* below.

The parking lot will be entered and exited from the current access to the west of the 410 building. There will be two-way traffic (minimum 24-foot wide drive aisles) allowed within the parking lot with a one-way out option at the eastern end of the southern parking aisle which will allow drivers to exit the southern portion to the north of the lot if no parking is available without backing out. We do not anticipate any deliveries or trash pickups to the proposed parking lot, only standard parking lot maintenance.

The primary amenities for the site are mainly designated for parking for the VVH hospital employees. The additional landscape in the area between the parking stalls will decrease stormwater runoff as well as provide additional shade and vegetation to help reduce noise and improve the overall aesthetic of the lot.

The design intent of the landscape area is to match the current aesthetic of the 19th and 20th street parking lots which have just recently been completed. The center islands contain tall grasses, small flowering shrubs and larger trees to provide shade. A landscape plan is included within our submitted plan set for additional information.

Along with the VVH 410 20th Street Parking Lot, we are proposing to install 10-new spaces along the eastern edge of the First Bank parking lot, severing the public access to the new VVH parking lot with the exception of the emergency access along the southern portion of the lot noted above.

2-Special Review

As is noted in Project Description above, construction of a parking lot in the M1 – Mixed Use Corridor zoning requires a special review process. Below we have outlined the required review criteria in *italics* and how this project meets those criteria in **bold**:

- The use will be compatible with the surrounding area:*
This use is permitted within the M1 zone district, the surrounding area is comprised of surface parking lots as well as businesses. We are within close proximity to the Hospital where staff would walk to after parking in the proposed parking lot. The adjacent businesses/buildings; First Bank, Taco Bell, Glenwood Auto Electric, the Glenwood Springs Cedar Lodge all have a combination of building and/or parking lots. We believe this is an excellent location for the parking lot because this lot is somewhat landlocked and does not provide any store front on a roadway to get visibility which would be desirable to any business.
- The impacts of the use on surrounding areas have been adequately minimized:*
There are two phases of the impacts to the surrounding areas; Phase 1: Construction, Phase 2: Completed Construction.

In the first phase (construction) we are trying to mitigate construction impacts by keeping as much of the existing asphalt as possible in order to reduce construction duration, reduce the number of trucks that will be hauling materials out of the site and to reduce additional trucks bringing in new materials.

In the second phase (completed construction), negative impacts to surrounding areas will be eliminated when construction is complete. This is when the community will see the positive impacts of the parking lot construction/expansion. The gated parking lot will be solely serving VVH staff who are familiar with the area and the entrance to the parking lot. They will be specifically directed to park in this lot and therefore will not be circling the neighborhood looking for an on-street parking spot. Instead they can come directly here park, and walk to the hospital. Additionally the parking lot will be carefully landscaped to reduce visual, heat and stormwater impacts to the surrounding community.

- iii. The use will be consistent with the general purpose and intent of the code:
This parking lot will be consistent with the intent of the code, parking spaces are adequately sized, circulation has been considered, landscaping codes with the exception of the one variance request have been met, coordination with the fire department has been accommodated.
- iv. The use will comply with applicable standards of this code:
The use of this parking lot within the M1 Mixed use corridor is in compliance with the municipal code. The standards laid out within the M1 code have been adhered to.
- v. The use is in conformance with the Comprehensive Plan and other City plans and policies:
Through our research of the code as well as our many discussions with the City of Glenwood Springs planning staff, engineering staff, utilities, public works and Fire department we believe that this proposed project is in conformance with the Comprehensive Plan.
- vi. The use minimizes adverse impacts to the health, safety, and welfare of the inhabitants of the surrounding areas and the City:
This parking lot strives to better the surrounding area by taking a very underutilized lot and transforming it into a useful parking lot. This lot has limited access and has little to no visibility to the street. The intent of the design is to match the existing First Bank lighting in order to provide safety for the staff parking in this lot, provide landscaping that will match the 19th and 20th street parking lot which will help reduce runoff, provide aesthetically pleasing vegetation reducing noise and reducing the heating of the asphalt.

3- Variance Request

The First Bank, 410 20th street parking lot requires one variance that we have identified throughout the design process. The variance involves the number of stalls before a landscape island is necessary.

1. 070.040.060(h)(6)c.1- off street parking and loading – Breaking up parking spaces into blocks
 - City Code requires the following:

Parking Area Landscaping Design

Breaking up Parking Spaces into Blocks

Parking area interior landscaping shall be distributed to physically break up blocks of parking spaces. No block of parking spaces shall exceed eight in a row, except that vehicle spaces that are designated as display or storage for automobile sales dealerships or automobile rental agencies or other fleet services, and other uses as determined by the Director, shall be allowed to have vehicle spaces in a tandem arrangement provided the minimum interior landscape requirements and all other applicable Code requirements are met.

One Island Per eight parking spaces; minimum of nine feet wide. (per table 040.10 Parking Area Landscape requirements)

- Variance Request:

Our current site plan has a maximum of (13) spaces between landscape zones similar to what has been approved and was installed for 19th and 20th street parking lots. We would lose an additional (3) spaces on our site plan if we have to go 8 or less spaces between islands. SE does not believe the landscape spaces are warranted for our proposed layout since we are proposing a landscape buffer between the center head in parking spaces, creating the same or more landscape area than would be created with the landscape islands. The proposed design will soften the aesthetics of the site and reduce visual impacts of seeing isle after isle of cars.

Refer to appendix 11 for the variance questionnaire and additional information.

4- Snow Storage

Snow will be stored in noted locations on the attached site plan. If the snowfall amounts are in excess of what can be stored on site, the snow will be temporally stored within the parking lot until it can be removed from the site and trucked to an appropriate location.

5- Utility Work

All utility work on the property is being done to supply service to the property. As requested by the fire district we will be installing an 8" main which will be tapped with a 6" service for a fire hydrant as well as a ¾" service for irrigation. Any additional utility work is for irrigation within the site and site lighting. SE has coordinated with the utility companies to ensure the best service connection locations and that all existing utilities are correctly depicted.

6- Drainage Narrative

Existing Conditions

The current site as mentioned is partially paved and used as a parking lot, with the exception of the northern portion. The northern portion of the site is native grasses with a few trees as well as some walking paths zig-zagging across the lot. The topography of the site is higher ground in the north east portion of the site with a low point in the south west corner of the site. Currently all the ground to the north is substantially higher than the southern portion. There is a retaining wall around the northern, eastern and southern portion of the property currently which currently retains the ground around it allowing the existing parking space.

The southern portion of the lot currently drains out to the west where it is intersected by a valley pan which heads west out of the first bank lot and to Grand Avenue where it is picked up the storm drain system.

Proposed Conditions

The intent of our design is to maintain the same drainage path that currently exists for the entire lot. This will be that all the water will still head out the western property line and out towards Grand Avenue. All the southern parking lot that is currently installed will remain the same and drain as it currently does. The new parking lot to the north will drain to the various curb lines where it will travel until it finds the nearest curb cut. As the water drains into the curb cut it will be detained in shallow landscape buffer areas. These shallow grassy areas will help treat water quality as well as reducing the impacts from the additional impervious area. After the storm water is detained it will be released at the pre development storm release rate which will ensure there are no negative impacts to any downstream users.

The site has been broken up into three existing and proposed basins. The existing and proposed drainage paths are nearly identical so all the basins work for pre and post development. Please refer to *Appendix 5: Existing and Proposed Drainage Exhibit* for basin delineations.

- **EX/DE Basin 1** is the north west portion of the site which will be treated within small detention areas along the western property line, ultimately flowing south and entering the existing valley pan/storm system in the First Bank parking lot and ultimately into the existing storm infrastructure in Grand Avenue.
- **EX/DE Basin 2** is the northern and north eastern portion of the lot. This area will be treated and drained into the landscape area between the northern parking and southern parking stalls and will overflow via a curb cut at the west end of the center island into a new valley pan, ultimately entering the existing valley pan/storm system in the First Bank parking lot and ultimately into the existing storm infrastructure in Grand Avenue.
- **EX/DE Basin 3** is the southern (existing) parking area which will remain almost entirely the same and drain to the west down the valley pan which it currently does, ultimately entering the existing valley pan/storm system in the First Bank parking lot and ultimately into the existing storm infrastructure in Grand Avenue.

Calculations can be seen below in *Table 1: Pre-Post Drainage Calculations* showing the existing and proposed drainage basins. The calculations have been performed using the 25 year and 100 year 10 minutes storms based on the Glenwood Springs IDF curve. The rational method was used to calculate the final flow using the following equation:

$$Q = c * i * a \quad \text{equation 1}$$

Where: Q= flow in cfs
 c=weighted runoff coefficient
 i=rainfall intensity
 a=basin area

Table 1: Pre-Post Drainage Calculations

BASIN	AREA (SF)	AREA (ACRES)	IMPERV AREA (SF)	IMPERV %	C-value	PERVIOUS AREA (SF)	C-value	Weighted C	I 25	I 100	Q 25 (10 min)	Q 100 (10 min)
EX1	13510.14	0.310	10168.68	75.27%	0.95	3341.46	0.4	0.81	3.899	4.645	0.984	1.173
EX2	11333.28	0.260	392.36	3.46%	0.95	10940.92	0.4	0.42	3.899	4.645	0.425	0.506
EX3	5266.74	0.121	0	0.00%	0.95	5266.74	0.4	0.40	3.899	4.645	0.189	0.225
										Total:	1.598	1.904
DE1	13510.14	0.310	12214.42	90.41%	0.95	1295.72	0.4	0.90	3.899	4.645	1.085	1.293
DE2	11333.28	0.260	7979.78	70.41%	0.95	3353.5	0.4	0.79	3.899	4.645	0.799	0.951
DE3	5266.74	0.121	3915.1	74.34%	0.95	1351.64	0.4	0.81	3.899	4.645	0.381	0.454
										Total:	2.265	2.698

Finally the volume required for detention was calculated using the time of concentration and the associated flow.

$$\text{Vol} = (.5) * Q * (T_c + 1.67 * T_c) = \text{CFS} \cdot \text{min} * 60 \text{ min}$$

Where: Vol=Volume
Q=flow in cfs
Tc=Time of concentration

Since our basins are so small we used a minimum Time of concentration of 5 minutes for all basins.

Calculations can be seen below in *Table 2: Pre-Post Detention Requirements*, for both the 25 year 10 minute storm as well as the 100 year 10 minute storm.

Table 2: Pre-Post Detention Requirements

Basin	Q25	Tc	VOLUME (cfs-min)	Volume (cf)	Basin	Q25	Tc	VOLUME (cfs-min)	Volume (cf)	25-Year Pre-Post Difference
EX1	0.984	5	6.57	394.22	DE1	1.085	5	7.24	434.55	40.33
EX2	0.425	5	2.84	170.25	DE2	0.799	5	5.33	319.84	149.60
EX3	0.189	5	1.26	75.52	DE3	0.381	5	2.55	152.71	77.19
										Total:
										267.12
Basin	Q100	Tc	VOLUME (cfs-min)	Volume (cf)	Basin	Q100	Tc	VOLUME (cfs-min)	Volume (cf)	100-Year Pre-Post Difference
EX1	1.173	5	7.83	469.64	DE1	1.293	5	8.63	517.70	48.05
EX2	0.506	5	3.38	202.82	DE2	0.951	5	6.35	381.04	178.22
EX3	0.225	5	1.50	89.97	DE3	0.454	5	3.03	181.93	91.96
										Total:
										318.23

As is required by the City of Glenwood Springs, the developed site is designed to not increase the runoff rate greater than the historical rate for the 25-year storm. Therefore, the site has been designed to retain the TOTAL difference between the pre and post development 25-year storms.

7-Traffic Analysis

The parking that will be constructed for VVH is for existing employees which were already traveling to and parking in the immediate area. There will be no increase in employees with the construction of this parking lot, therefore no additional trips will be created, they will just be slightly redistributed over the area.

The proposed parking lot will increase the hospitals parking count by 66 spaces. Since we are not increasing traffic, simply redistributing along the same routes, we will not be increasing traffic on State HWY 82 by 20% and therefore are not required to obtain an access permit. If anything we believe we will reduce traffic onto HWY 82 by cutting off the direct connection between the existing eastern parking lot and the highway.

8-Dedication of Easements

The existing pedestrian easement along the north side of the property will remain and be a better access for pedestrians going back and forth from the bus stops on Grand Avenue to the apartment buildings to the east. We are working with First Bank to dedicate an emergency access easement for the fire department in order to get to the proposed parking lot in the event of a car fire or other emergency. Additionally VVH will grant an access and utility easement along the western boundary of 410 20th street to allow for access as well as the installation of a water main and other utilities to the parking lot. The proposed easements are shown on sheet *C-1.0 Site Plan* located in Appendix 4.

9-Phasing

The intent of the project is to not have any phasing.

10-Conclusion

SE believes that the new parking lot is a community enhancement. The new VVH parking lot will provide an additional 66 spaces to the hospital and allow for employee parking close to the hospital, while reducing the number of employees that will have to park on the public streets. The parking lot will be well lit and nicely landscape adding to the overall character of the neighborhood. Additionally, by utilizing the existing parking lot with minor changes and/or additions, the impact to the community during construction will be minimal.

APPENDIX 1 PLANNING APPLICATION



PLANNING APPLICATION

CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS
COLORADO, 81801
970-384-6400

<u>Planning Commission Applications & City Council Applications</u>		<u>Planning Commission Applications:</u>	
Major Development Permit	☐	Special Use Permit	☐
Major Subdivision	☐	Minor Development	☒
Zone Change	☐	Minor Subdivision	☐
PUD	☐	<u>Board of Appeals and Adjustment Applications:</u>	
Condominiumization	☐	Appeals	☐
Annexation	☐	Variance	☐
Amendment to Zone Regulations	☐	Off Premise Sign Permit	☐
Street Vacation	☐	Sign Variance	☐
		<u>City Council Only Applications:</u>	
		Appeals	☐
		Street Vacations	☐
		License to Encroach	☐

<u>Applicant/Property Owner Information:</u>			
<u>Sopris Engineering</u>		<u>Valley View Hospital Association</u>	
Applicant:		Owner:	
<u>Civil Engineer</u>		<u>Robert Smith</u>	
Relationship to Owner:		Owner:	
<u>502 Main Street Suite A3</u>		<u>1906 Blake Ave</u>	
<u>Carbondale CO 81623</u>		<u>Glenwood Springs CO 81601</u>	
<u>Applicant's Address</u>		<u>Owner's Address</u>	
<u>970-704-0311 Fax 970-704-0313</u>			
<u>Applicant's Ph: #</u>	<u>Fax #</u>	<u>Owner's Ph: #</u>	<u>Cell#</u>

<u>Property Information:</u>	
2014 Grand Ave	2185-164-00-004
Glenwood Springs CO 81601	
Address	Parcel #
Mon-View Subdivision	Lots 2, 3, 4, & 5 Block 2
Subdivision	Lot & Block Number
M1 MIXED USE CORRIDOR	Existing First Bank Parking and Vacant
Zone District	Existing Land Use

General Project Description:
Construct a new parking lot for VVH employees by reusing most of the existing parking lot on the south portion of the property and re working the north portion for approximately 66 spaces.

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 corporation
 May have the authorized general partner or corporate
 officer sign the application, (Attach additional pages if
 necessary.) I declare under the penalty or perjury that
 the above information is true and correct to the best of
 my knowledge.

Applicant _____ Date 8/7/2019
 Owner _____ Date 8/7/2019
 Owner _____ Date _____

APPENDIX 2

SPECIAL WARRANTY DEED

SPECIAL WARRANTY DEED

THIS DEED, made effective this 15th day of July, 2011, from **COLORADO MOUNTAIN NEWS MEDIA, CO.**, a Nevada corporation ("Grantor"), to **FIRSTBANK**, a Colorado corporation ("Grantee"), whose address is 12345 West Colfax Avenue, Lakewood, Colorado 80215.

WITNESS, that Grantor, for and in consideration of the sum of Ten Dollars (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, has granted, bargained, sold and conveyed, and by these presents does grant, bargain, sell, convey and confirm unto Grantee, its successors and assigns forever, the following real property located in the County of Garfield, State of Colorado:

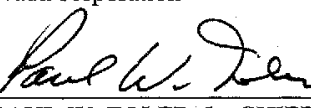
See Exhibit A attached hereto and incorporated herein by this reference.

TOGETHER with all reversions, remainders, easements, rights-of-way, development rights, appurtenances, hereditaments and water or mineral rights appertaining to or otherwise benefiting or used in connection thereof, if any; and all of Grantor's right, title and interest in and to any strips of land, streets and alleys abutting or adjoining such Property, if any; and all the estate, right, title, interest, claim and demand whatsoever of Grantor, either in law or equity, of, in and to the above-bargained Property with the hereditaments and appurtenances (the "Property");

TO HAVE AND TO HOLD the Property unto Grantee, its successors and assigns forever. Grantor, for itself and its successors and assigns, does covenant and agree that it shall and will warrant and forever defend the Property in the quiet and peaceable possession of Grantee, its successors and assigns, against all and every person or persons claiming the whole or any part thereof, by, through or under Grantor, subject to those items listed on Exhibit B to this Special Warranty Deed.

IN WITNESS WHEREOF, Grantor has executed this Special Warranty Deed as of the date first above written.

COLORADO MOUNTAIN NEWS MEDIA, CO.,
a Nevada corporation

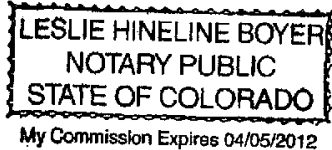
By: 
PAUL W. TOLER, Its CHIEF EXECUTIVE
OFFICER

STATE OF COLORADO)
) ss:
COUNTY OF PITKIN)

The foregoing instrument was acknowledged before me this 15 day of July, 2011, by
PAUL W. TOLER, as CHIEF EXECUTIVE OFFICER of COLORADO MOUNTAIN NEWS
MEDIA, CO., a Nevada corporation.

Witness my hand and official seal.

My commission expires: 4-5-2012



Leslie Hinline Boyer
Notary Public

**Exhibit A
to Special Warranty Deed**

Legal Description

PARCEL A:

A TRACT OF LAND BEING IN THE CITY OF GLENWOOD SPRINGS, AND PREVIOUSLY DESCRIBED IN A WARRANTY DEED, RECORDED AT RECEPTION NO. 592788, 3 DECEMBER 2001, IN THE RECORDS OF THE CLERK AND RECORDER, GARFIELD COUNTY, STATE OF COLORADO, BEING SITUATED IN NE1/4SE1/4 OF SECTION 16, TOWNSHIP 6 SOUTH, RANGE 89 WEST OF THE 6TH PRINCIPAL MERIDIAN, BEING FURTHER DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY SIDE OF COLORADO STATE HIGHWAY NO. 82, PROJECT NO. FR 082-1(4), FROM WHICH THE BRASS CAP AT THE INTERSECTION OF 8TH STREET AND PITKIN BEARS N05°00'41"W A DISTANCE OF 5,466.30 FEET, WITH ALL BEARINGS BEING RELATIVE TO S88°28'00"E A DISTANCE OF 1,765.00 FEET BETWEEN THE BRASS CAPS IN THE STREET INTERSECTIONS OF 8TH STREET & PITKIN AND 8TH STREET & PALMER, CITY OF GLENWOOD SPRINGS; THENCE S01°21'00"W ALONG SAID EASTERLY SIDE OF SAID COLORADO STATE HIGHWAY A DISTANCE OF 76.00 FEET; THENCE S88°28'00"E A DISTANCE OF 413.53 FEET TO THE WESTERLY LINE OF LOT 2, RE-SUBDIVISION GLENWOOD PLAZA CONDOMINIUMS SUBDIVISION, RECEPTION NO. 599169; THENCE N01°32'00"E ALONG THE WESTERLY LINE OF SAID GLENWOOD PLAZA A DISTANCE OF 76.00 FEET TO A POINT ON THE SOUTHERLY LINE OF THE MON-VIEW SUBDIVISION, RECEPTION NO. 197903; THENCE N88°28'00"W ALONG THE SOUTHERLY LINE OF SAID MON-VIEW SUBDIVISION A DISTANCE OF 208.00 FEET TO THE SOUTHWEST CORNER OF SAID SUBDIVISION; THENCE N88°28'00"W A DISTANCE OF 205.78 FEET TO THE POINT OF BEGINNING, CONTAINING 0.7217 ACRES MORE OR LESS.

SUBJECT TO EASEMENTS AND RIGHTS OF WAY OF PUBLIC RECORDED OR SITUATE AND IN USE AND TO RESTRICTIONS CONTAINED IN INSTRUMENT RECORDED IN BOOK 219 AT PAGE 230 AS RECEPTION NO. 156863.

PARCEL B:

A TRACT OF LAND BEING IN THE CITY OF GLENWOOD SPRINGS, AND PREVIOUSLY DESCRIBED IN A WARRANTY DEED, RECORDED AT RECEPTION NO. 592788, 3 DECEMBER 2001, IN THE RECORDS OF THE CLERK AND RECORDER, GARFIELD COUNTY, STATE OF COLORADO, BEING SITUATED IN NE1/4SE1/4 OF SECTION 16, TOWNSHIP 6 SOUTH, RANGE 89 WEST OF THE 6TH PRINCIPAL MERIDIAN, BEING FURTHER DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY SIDE OF COLORADO STATE HIGHWAY NO. 82, PROJECT NO. FR 082-1(4), FROM WHICH THE BRASS CAP AT THE INTERSECTION OF 8TH STREET AND PITKIN BEARS N04°55'27"W A DISTANCE OF 5,541.38 FEET, WITH ALL BEARINGS BEING RELATIVE TO S88°28'00"E A DISTANCE OF 1,765.00 FEET BETWEEN THE BRASS CAPS IN THE STREET INTERSECTIONS OF 8TH STREET & PITKIN AND 8TH STREET & PALMER, CITY OF GLENWOOD SPRINGS; THENCE S01°21'00"W ALONG SAID EASTERLY SIDE OF SAID COLORADO STATE HIGHWAY A DISTANCE OF 76.00 FEET TO A POINT ON THE NORTHERLY LINE OF A PARCEL OF LAND DESCRIBED IN BOOK 808 AT PAGE 55; THENCE S88°28'00"E ALONG THE NORTHERLY LINE OF SAID PARCEL A DISTANCE OF 398.29 FEET TO THE WESTERLY LINE OF LOT 2, RE-SUBDIVISION GLENWOOD PLAZA CONDOMINIUMS SUBDIVISION, RECEPTION NO. 599169; THENCE N01°32'00"E ALONG THE WESTERLY LINE OF SAID GLENWOOD PLAZA A DISTANCE OF 76.00 FEET; THENCE N88°28'00"W A DISTANCE OF 398.53 FEET TO THE POINT OF BEGINNING, CONTAINING 0.6951 ACRES MORE OR LESS

SUBJECT TO EASEMENTS AND RIGHTS OF WAY OF PUBLIC RECORD AND TO RESTRICTIONS AS TO USE CONTAINED IN DEED RECORDED IN BOOK 222 AT PAGE 46.

NOTING THAT PARCEL A AND PARCEL B DESCRIBED ABOVE HAVE HISTORICALLY BEEN CONVEYED AS FOLLOWS:

PARCEL A:

A PORTION OF THE NE1/4SE1/4 OF SECTION 16, TOWNSHIP 6 SOUTH, RANGE 89 WEST OF THE SIXTH PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY SIDE OF COLORADO STATE HIGHWAY NO. 82, WHICH BEARS S. 1 DEGREES 32' W. 432 FEET FROM THE INTERSECTION OF THE EAST-WEST CENTERLINE OF SAID SECTION 16 WITH SAID EASTERLY SIDE OF SAID COLORADO STATE HIGHWAY;
THENCE ALONG THE EASTERLY SIDE OF SAID COLORADO STATE HIGHWAY NO. 82, S. 1 DEGREES 32' W. 76 FEET;
THENCE S. 88 DEGREES 28' E. 415 FEET;
THENCE N. 1 DEGREES 32' E. 76 FEET;
THENCE N. 88 DEGREES 28' W. 415 FEET TO THE POINT OF BEGINNING.

SUBJECT TO EASEMENTS AND RIGHTS OF WAY OF PUBLIC RECORDED OR SITUATE AND IN USE AND TO RESTRICTIONS CONTAINED IN INSTRUMENT RECORDED IN BOOK 219 AT PAGE 230 AS RECEPTION NO. 156863.

PARCEL B:

A PARCEL OF LAND SITUATE IN THE NE1/4SE1/4, SECTION 16, TOWNSHIP 6 SOUTH, RANGE 89 WEST OF THE SIXTH PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY SIDE OF COLORADO STATE HIGHWAY NO. 82 WHICH BEARS S. 1 DEGREES 32' W. 508 FEET FROM THE INTERSECTION OF THE EAST-WEST CENTERLINE OF SAID SECTION 16 WITH SAID EASTERLY SIDE OF SAID COLORADO STATE HIGHWAY;
THENCE ALONG THE EASTERLY SIDE OF SAID COLORADO STATE HIGHWAY NO. 82, S. 1 DEGREES 32' W. 76 FEET;
THENCE S. 88 DEGREES 28' E. 400 FEET;
THENCE N. 1 DEGREES 32' E. 76 FEET;
THENCE N. 88 DEGREES 28' W. 400 FEET TO THE POINT OF BEGINNING.

SUBJECT TO EASEMENTS AND RIGHTS OF WAY OF PUBLIC RECORD AND TO RESTRICTIONS AS TO USE CONTAINED IN DEED RECORDED IN BOOK 222 AT PAGE 46.

COUNTY OF GARFIELD
STATE OF COLORADO

Exhibit B
to Special Warranty Deed
Permitted Exception #'s 1 - 14

1. TAXES AND ASSESSMENTS FOR THE YEAR 2011 AND SUBSEQUENT YEARS, A LIEN NOT YET DUE AND PAYABLE.
2. RIGHT OF WAY FOR DITCHES OR CANALS CONSTRUCTED BY THE AUTHORITY OF THE UNITED STATES AS RESERVED IN UNITED STATES PATENT RECORDED AUGUST 29, 1896, IN BOOK 12 AT PAGE 433.
3. RIGHT OF PROPRIETOR OF A VEIN OR LODE TO EXTRACT AND REMOVE HIS ORE THEREFROM SHOULD THE SAME BE FOUND TO PENETRATE OR INTERSECT THE PREMISES AS RESERVED IN UNITED STATES PATENT RECORDED AUGUST 29, 1896, IN BOOK 12 AT PAGE 433.
4. RIGHT OF WAY TO MOUNTAIN STATES TELEPHONE AND TELEGRAPH CO. RECORDED JUNE 25, 1936 IN BOOK 183 AT PAGE 420
5. TERMS, CONDITIONS AND PROVISIONS OF COVENANTS AND RESTRICTIONS RECORDED APRIL 04, 1946 IN BOOK 219 AT PAGE 230.
6. DITCH RIGHT OF WAY AND RESTRICTIONS RECORDED APRIL 10, 1946 IN BOOK 222 AT PAGE 46
7. RIGHT OF WAY AS DESCRIBED IN DEED RECORDED MAY 16, 1949 IN BOOK 243 AT PAGE 54 AND RECORDED AUGUST 12, 1965 IN BOOK 368 AT PAGE 503
8. TERMS, CONDITIONS AND PROVISIONS OF DRIVEWAY EASEMENT RECORDED FEBRUARY 06, 1962 IN BOOK 339 AT PAGE 178.
9. UTILITY EASEMENT RECORDED FEBRUARY 28, 1973 IN BOOK 441 AT PAGE 271.
10. PERMANENT EASEMENT AS DESCRIBED IN INSTRUMENT RECORDED MAY 26, 1983 IN BOOK 627 AT PAGE 419
11. PERMANENT EASEMENT AS DESCRIBED IN INSTRUMENT RECORDED MAY 16, 1983 IN BOOK 628 AT PAGE 11.
12. TERMS, CONDITIONS AND PROVISIONS OF BUS SHELTER AND UTILITY AGREEMENT RECORDED MAY 06, 1997 AT RECEPTION NO. 507921.
13. SEWER LINE EASEMENT AS CONVEYED BY INSTRUMENT RECORDED JULY 5, 2002 IN BOOK 1368 AT PAGE 44.
14. MATTERS DISCLOSED ON ALTA SURVEY ISSUED BY SCHUESSER GORDON MEYER CERTIFIED JULY 15, 2011, JOB NO. 2011-349.001.

{00947781 / 1}

B-1

APPENDIX 3 SUBDIVISION PLAT

BOUNDARY LINE ADJUSTMENT PLAT OF:

FIRST BANK PROPERTY

2014 GRAND AVE., GLENWOOD SPRINGS, CO 81601
SITUATED IN SECTION 16, TOWNSHIP 6 SOUTH, RANGE 89 WEST OF THE 6th P.M.
CITY OF GLENWOOD SPRINGS, COUNTY OF GARFIELD, STATE OF COLORADO

SHEET 1 OF 1
SHEET 1 - CERTIFICATES & NOTES
SHEET 2 - EXISTING PARCEL A & PARCEL B
SHEET 3 - PROPOSED LOT 1 & LOT 2

CERTIFICATE OF DEDICATION AND OWNERSHIP:

KNOW ALL MEN BY THESE PRESENTS THAT FIRSTBANK, A COLORADO CORPORATION, BEING SOLE OWNERS IN FEE SIMPLE OF ALL THAT REAL PROPERTY DESCRIBED AS FOLLOWS:

(THESE DESCRIPTIONS PER RECEPTION NO. 805453, HAVE BEEN MODIFIED TO BE CONSISTENT WITH THE BASIS OF BEARING IN SURVEY NOTE NO. 3, THE PROPERTIES REFERENCED IN NOTE NO. 8 BELOW AND HIGHWAY 82 PER C.D.O.T. PROJECT NO. FR082-14. BEARINGS AND DISTANCES MODIFIED ARE IN BRACKETS []) PARCEL A

A TRACT OF LAND BEING IN THE CITY OF GLENWOOD SPRINGS AND PREVIOUSLY DESCRIBED IN A WARRANTY DEED, RECORDED AT RECEPTION NO. 592788, 3 DECEMBER 2001, IN THE RECORDS OF THE CLERK AND RECORDER, GARFIELD COUNTY, STATE OF COLORADO, BEING SITUATED IN NE1/4SE1/4 OF SECTION 16, TOWNSHIP 6 SOUTH, RANGE 89 WEST OF THE 6TH PRINCIPAL MERIDIAN, BEING FURTHER DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY SIDE OF COLORADO STATE HIGHWAY NO. 82, PROJECT NO. FR 082-1(4), FROM WHICH THE BRASS CAP AT THE INTERSECTION OF 8TH AND PITKIN BEARS N05°00'41"W A DISTANCE OF 5,466.30 FEET [N05°00'03"W A DISTANCE OF 5467.14 FEET], WITH ALL BEARINGS BEING RELATIVE TO S88°28'00"E [S88°27'03"] A DISTANCE OF 1,765.00 FEET BETWEEN THE BRASS CAPS IN THE STREET INTERSECTIONS OF 8TH STREET & PITKIN AND 8TH STREET & PALMER, CITY OF GLENWOOD SPRINGS; THENCE S01°21'00"W [S01°19'57"W] ALONG SAID EASTERLY SIDE OF SAID COLORADO STATE HIGHWAY A DISTANCE OF 76.00 FEET; THENCE S88°28'00"E [S88°31'46"E] A DISTANCE OF 413.53 [412.59] FEET TO THE WESTERLY LINE OF LOT 2, RE-SUBDIVISION GLENWOOD PLAZA CONDOMINIUMS SUBDIVISION, RECEPTION NO. 599169; THENCE N01°32'00"E ALONG THE WESTERLY LINE OF SAID GLENWOOD PLAZA A DISTANCE OF 76.00 FEET TO A POINT ON THE SOUTHERLY LINE OF THE MON-VIEW SUBDIVISION, RECEPTION NO. 197903; THENCE N88°28'00"W [N88°31'46"W] ALONG THE SOUTHERLY LINE OF SAID MON-VIEW SUBDIVISION A DISTANCE OF 208.00 FEET TO THE SOUTHWEST CORNER OF SAID SUBDIVISION; THENCE N88°28'00"W [N88°31'46"W] A DISTANCE OF 205.78 [204.77] FEET TO THE POINT OF BEGINNING, CONTAINING 0.7217 [0.720] ACRES MORE OR LESS.

SUBJECT TO EASEMENTS AND RIGHTS OF WAY OF PUBLIC RECORDED OR SITUATE AND IN USE AND TO RESTRICTIONS CONTAINED IN INSTRUMENT IN BOOK 219 AT PAGE 230 AS RECEPTION NO. 156863.

PARCEL B

A TRACT OF LAND BEING IN THE CITY OF GLENWOOD SPRINGS AND PREVIOUSLY DESCRIBED IN A WARRANTY DEED, RECORDED AT RECEPTION NO. 592788, 3 DECEMBER 2001, IN THE RECORDS OF THE CLERK AND RECORDER, GARFIELD COUNTY, STATE OF COLORADO, BEING SITUATED IN NE1/4SE1/4 OF SECTION 16, TOWNSHIP 6 SOUTH, RANGE 89 WEST OF THE 6TH PRINCIPAL MERIDIAN, BEING FURTHER DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY SIDE OF COLORADO STATE HIGHWAY NO. 82, PROJECT NO. FR 082-1(4), FROM WHICH THE BRASS CAP AT THE INTERSECTION OF 8TH AND PITKIN BEARS N04°55'27"W A DISTANCE OF 5,541.38 FEET [5542.80], WITH ALL BEARINGS BEING RELATIVE TO S88°28'00"E [S88°27'03"] A DISTANCE OF 1,765.00 FEET BETWEEN THE BRASS CAPS IN THE STREET INTERSECTIONS OF 8TH STREET & PITKIN AND 8TH STREET & PALMER, CITY OF GLENWOOD SPRINGS; THENCE S01°21'00"W [S01°19'57"W] ALONG SAID EASTERLY SIDE OF SAID COLORADO STATE HIGHWAY A DISTANCE OF 76.00 FEET TO A POINT ON THE NORTHERLY LINE OF A PARCEL OF LAND DESCRIBED IN BOOK 808 AT PAGE 55; THENCE S88°28'00"E [S88°31'46"E] ALONG THE NORTHERLY LINE OF SAID PARCEL A DISTANCE OF 398.29 [397.40] FEET TO THE WESTERLY LINE OF LOT 2, RE-SUBDIVISION GLENWOOD PLAZA CONDOMINIUMS SUBDIVISION, RECEPTION NO. 599169; THENCE N01°32'00"E ALONG THE WESTERLY LINE OF SAID GLENWOOD PLAZA A DISTANCE OF 76.00 FEET; THENCE N88°28'00"W [N88°31'46"W] A DISTANCE OF 398.53 [397.59] FEET TO THE POINT OF BEGINNING, CONTAINING 0.6951 [0.693] ACRES MORE OR LESS

SUBJECT TO EASEMENTS AND RIGHTS OF WAY OF PUBLIC RECORD AND TO RESTRICTIONS AS TO USE CONTAINED IN DEED RECORDED IN BOOK 222 AT PAGE 46.

AND CONTAINING A TOTAL FOR BOTH PARCELS OF 1.413 ACRES, MORE OR LESS;

HAVE BY THESE PRESENTS LAID OUT, PLATTED AND SUBDIVIDED THE SAME INTO LOTS AS SHOWN HEREON AND DESIGNATE THE SAME AS BOUNDARY LINE ADJUSTMENT PLAT OF FIRST BANK PROPERTY IN THE CITY OF GLENWOOD SPRINGS, COUNTY OF GARFIELD, COLORADO;

AND DO HEREBY GRANT TO EMERGENCY SERVICE PROVIDERS THE EMERGENCY ACCESS EASEMENT SHOWN ON SHEET 3;

AND SO FURTHER STATE THAT THIS SUBDIVISION SHALL BE SUBJECT TO THE PROTECTIVE COVENANTS FILED AND RECORDED FOR THIS SUBDIVISION IN THE OFFICE OF THE CLERK AND RECORDER OF GARFIELD COUNTY, COLORADO AS RECEPTION NO. _____, AND SUBJECT TO THE SUBDIVISION AGREEMENT FILED AND RECORDED FOR THIS SUBDIVISION IN THE OFFICE OF THE CLERK AND RECORDER OF GARFIELD COUNTY, COLORADO AS RECEPTION NO. _____.

EXECUTED THIS ____ DAY OF _____, A.D. 20__.

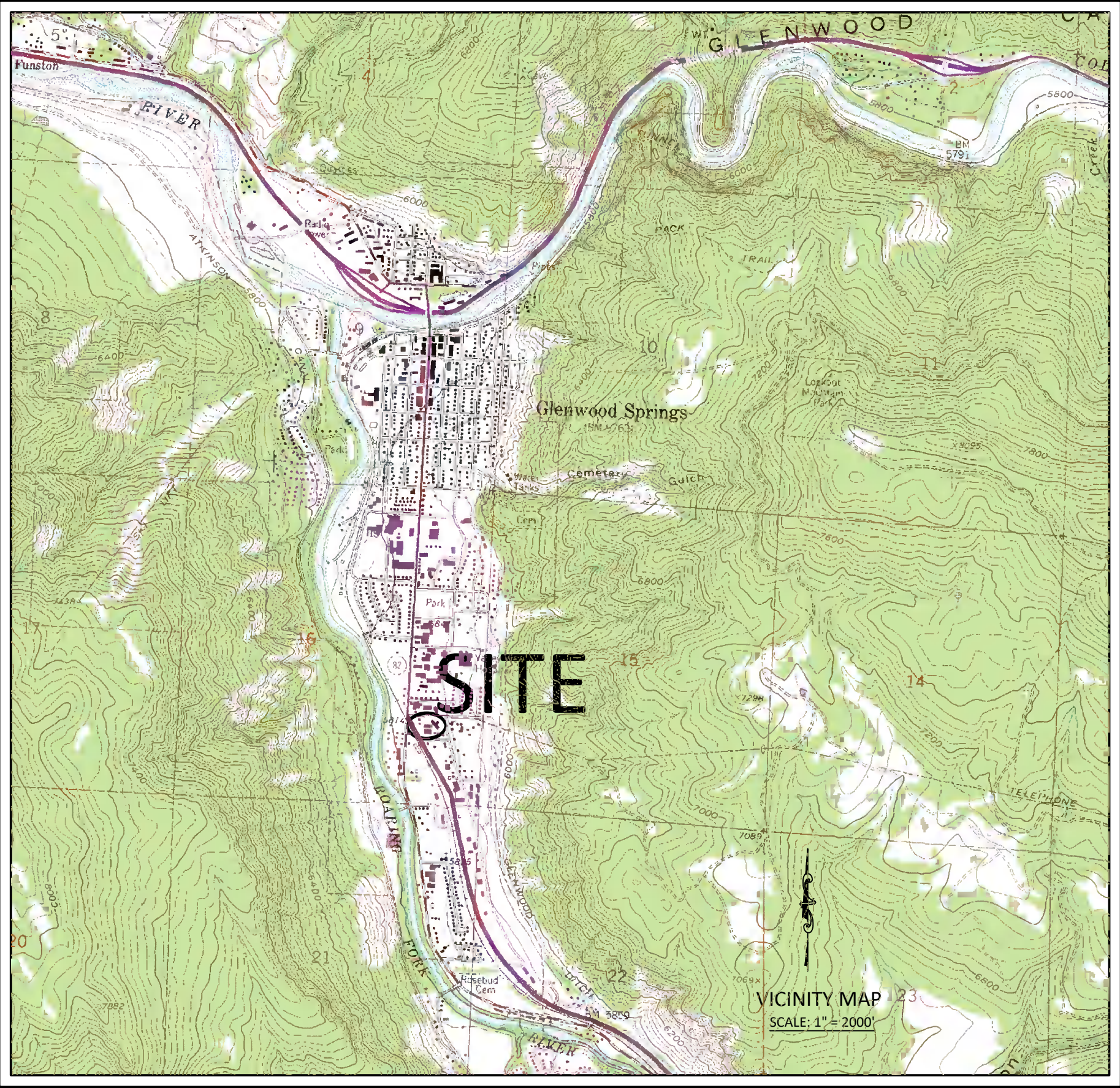
OWNERS _____

STATE OF _____

COUNTY OF _____

THE FOREGOING DEDICATION WAS ACKNOWLEDGED BEFORE ME THIS ____ DAY OF _____, A.D. 20__, BY _____, MY COMMISSION EXPIRES _____.

WITNESS MY HAND AND SEAL, _____ NOTARY PUBLIC



COMMUNITY DEVELOPMENT DIRECTOR CERTIFICATE

THIS PLAT WAS APPROVED BY THE CITY OF GLENWOOD SPRINGS DIRECTOR OF COMMUNITY DEVELOPMENT THIS ____ DAY OF _____, A.D. 2019.

DIRECTOR

SOPRIS ENGINEERING - LLC

CIVIL CONSULTANTS
502 MAIN STREET, SUITE A3
CARBONDALE, COLORADO 81623
(970) 704-0311 SOPRISENG@SOPRISENG.COM

SURVEY NOTES

- 1) DATE OF FIELD WORK: OCTOBER 11, 12, 13, 14, 20 AND 24, 2016.
- 2) DATE OF PREPARATION: OCTOBER, 2016. UPDATED OCTOBER, 2018 AND JULY - AUGUST, 2019.
- 3) BASIS OF BEARING: A BEARING OF N 88°31'46" W ALONG THE NORTH LINE OF THE SE $\frac{1}{4}$ OF SECTION 16 FROM THE ORIGINAL POSITION FOR THE EAST $\frac{1}{4}$ CORNER OF SAID SECTION 16 TO THE CENTER $\frac{1}{4}$ OF SAID SECTION 16. THIS CREATED A CLOCKWISE ROTATION OF 0°03'46".
- 4) BASIS OF SURVEY (RECORDED DOCUMENTS FOUND IN THE GARFIELD COUNTY RECORDS): THE PLAT OF MON-VIEW SUBDIVISION RECORDED MAY 28, 1957 AS RECEPTION NO. 197903 TOGETHER WITH VARIOUS DOCUMENTS OF RECORD, AND THE FOUND MONUMENTS, AS SHOWN.
- 5) THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY SOPRIS ENGINEERING, LLC (SE) TO DETERMINE OWNERSHIP OR EASEMENTS OF RECORD. FOR ALL INFORMATION REGARDING EASEMENTS, RIGHTS OF WAY AND/OR TITLE OF RECORD, SE RELIED UPON THE ABOVE SAID PLATS DESCRIBED IN NOTE 4, THE TITLE REPORT ISSUED BY LAND TITLE GUARANTEE COMPANY AS ORDER NO. ABS63013827-2 WITH AN EFFECTIVE DATE OF MAY 3, 2019 AND THE ALTA SURVEY OF 2014 GRAND AVENUE PREPARE BY SGM (JOB NO. 2011-349.001, DATED JULY 15, 2011).
- 6) THE LINEAR UNIT USED IN THE PREPARATION OF THIS SURVEY IS THE U.S. SURVEY FOOT AS DEFINED BY THE UNITED STATES DEPARTMENT OF COMMERCE, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.
- 7) BASIS OF ELEVATION: PROJECT BASED ON GLOBAL POSITION SYSTEM (GPS) OBSERVATION FROM THE CONTINUOUS OPERATING REFERENCE STATION (CORS) GSC1 UTILIZING THE 2003 GEOID MODEL (GEOID 03) AND BASED THE 1929 NATIONAL GEODETIC VERTICAL DATUM (NGVD 29), THIS ESTABLISHED A SITE BENCHMARK ELEVATION OF 5828.1', SHOWN HEREON.
- 8) THE 1957 RECORD MON-VIEW SUBDIVISION PLAT BOUNDARY POSITION HAS BEEN REESTABLISHED BASED ON THE REFERENCED SENIOR 1903 GARFIELD COUNTY (VALLEY VIEW HOSPITAL) RECORD DOCUMENT (RECEPTION NO. 28494) THIS DEED CALLS THE NORTHERLY BOUNDARY LINE TO BE THE NORTH LINE OF THE SE1/4 OF SECTION 16 AND THE PROPERTY BEING 50 FOOT WIDE IN THE AREA DIRECTLY NORTH OF SAID SUBDIVISION. THE COUNTY DEEDED PORTIONS OF THEIR PROPERTY (RECEPTION NO. 28494) TO THE CITY OF GLENWOOD SPRINGS IN THAT DOCUMENT RECORDED AS RECEPTION NO. 237438 FOR BLAKE AVE. AND 19TH STREET RIGHTS-OF-WAY WHICH ESTABLISHED MON-VIEW SUBDIVISION'S NORTHERLY AND EASTERLY BOUNDARIES.
- 9) THE DOCUMENT RECORDED JUNE 25, 1936 AS BOOK 183 PAGE 420 (OF THE COUNTY RECORDS) GRANTS MOUNTAIN STATES TELEPHONE AND TELEGRAPH CO. A RIGHT OF WAY WITHIN PORTIONS OF SECTION 16. THERE IS NO DESCRIBED RIGHT OF WAY AND THEREFORE IT CANNOT BE GRAPHICALLY SHOWN HEREON.
- 10) MINIMUM SETBACKS FOR THIS PROPERTY FALL UNDER TABLE 020.11: M1 DISTRICT.
- 11) THE SUBJECT PROPERTY IS DESIGNATED AS ZONE B PER FIRM DATED OCTOBER 15, 1985, COMMUNITY-PANEL NO. 080071 1432 C. THE ZONE B FLOOD BOUNDARY COVERING THE SUBJECT PROPERTY IS ALONG GRAND AVENUE TO THE WEST, 15TH STREET TO THE NORTH, ROUGHLY PALMER AVENUE TO THE EAST AND ROUGHLY 27TH STREET TO THE SOUTH.

PLAT NOTES

- 1) THE PURPOSE OF THIS BOUNDARY LINE ADJUSTMENT PLAT IS TO RECONFIGURE PARCELS A AND B INTO LOTS 1 AND 2.
- 2) CONTACT INFORMATION FOR APPLICANT: VALLEY VIEW HOSPITAL ASSOCIATION, A COLORADO NON-PROFIT CORPORATION C/O JOHN SCHIED MANAGER OF FACILITIES & OPERATIONS; 1906 BLAKE AVENUE GLENWOOD SPRINGS, CO 81601; JOHN.SCHIED@VVH.ORG 970-384-6956.

CLERK AND RECORDER'S ACCEPTANCE

THIS PLAT WAS FILED FOR RECORD IN THE OFFICE OF THE CLERK AND RECORDER OF GARFIELD COUNTY, COLORADO, AT _____ O'CLOCK _____, M., ON THE ____ DAY OF _____, 2019, AS RECEPTION No. _____.

CLERK AND RECORDER

BY _____
DEPUTY

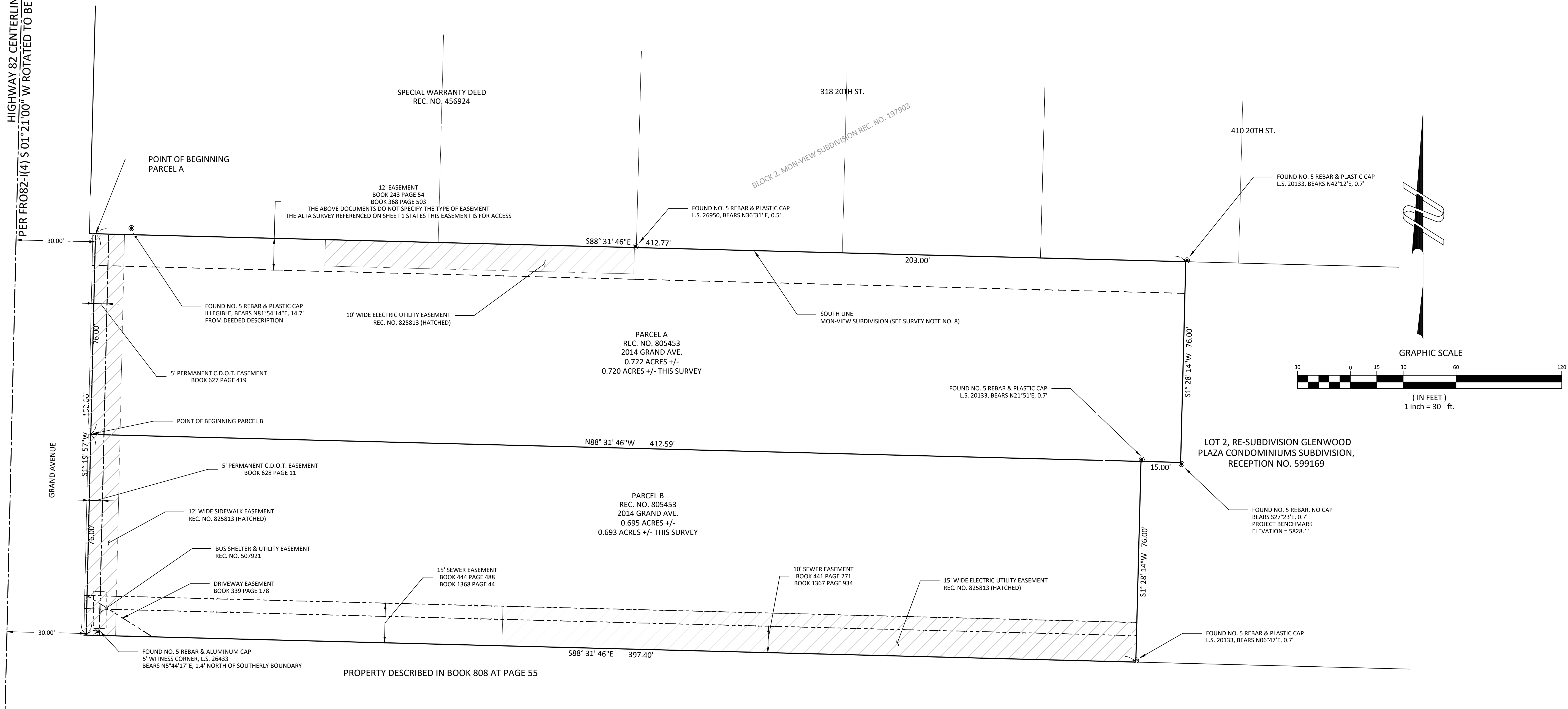
SURVEYOR'S CERTIFICATE

I, MARK S. BECKLER, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR LICENSED UNDER THE LAWS OF THE STATE OF COLORADO, THAT THIS PLAT IS A TRUE, CORRECT AND COMPLETE PLAT OF THE BOUNDARY LINE ADJUSTMENT PLAT OF FIRST BANK PROPERTY AS LAID OUT, PLATTED, DEDICATED AND SUBDIVIDED HEREON, THAT SUCH PLAT WAS MADE FROM AN ACCURATE SURVEY OF SAID PROPERTY BY ME AND UNDER MY SUPERVISION AND CORRECTLY SHOWS THE LOCATION AND DIMENSIONS OF THE LOTS, EASEMENTS AND STREETS OF SAID SUBDIVISION AS THE SAME ARE STAKED UPON THE GROUND IN COMPLIANCE WITH THE CITY OF GLENWOOD SPRINGS REGULATIONS GOVERNING THE SUBDIVISION OF LAND IN WITNESS WHEREOF I HAVE SET MY HAND AND SEAL THIS ____ DAY OF ____ A.D. 2019.

REGISTERED LAND SURVEYOR

BOUNDARY LINE ADJUSTMENT PLAT OF:
FIRST BANK PROPERTY
2014 GRAND AVE., GLENWOOD SPRINGS, CO 81601
SITUATED IN SECTION 16, TOWNSHIP 6 SOUTH, RANGE 89 WEST OF THE 6th P.M.
CITY OF GLENWOOD SPRINGS, COUNTY OF GARFIELD, STATE OF COLORADO
SHEET 2 OF 3
EXISTING PARCELS

HIGHWAY 82 CENTERLINE BEARING S1° 19' 57"W
PER FROM 82-(4) S 01° 21' 00" W ROTATED TO BE CONSISTENT WITH PROJECT BASIS OF BEARING



SOPRIS ENGINEERING - LLC
CIVIL CONSULTANTS
502 MAIN STREET, SUITE A3
CARBONDALE, COLORADO 81623
(970) 704-0311 SOPRISENG@SOPRISENG.COM

DRAFT

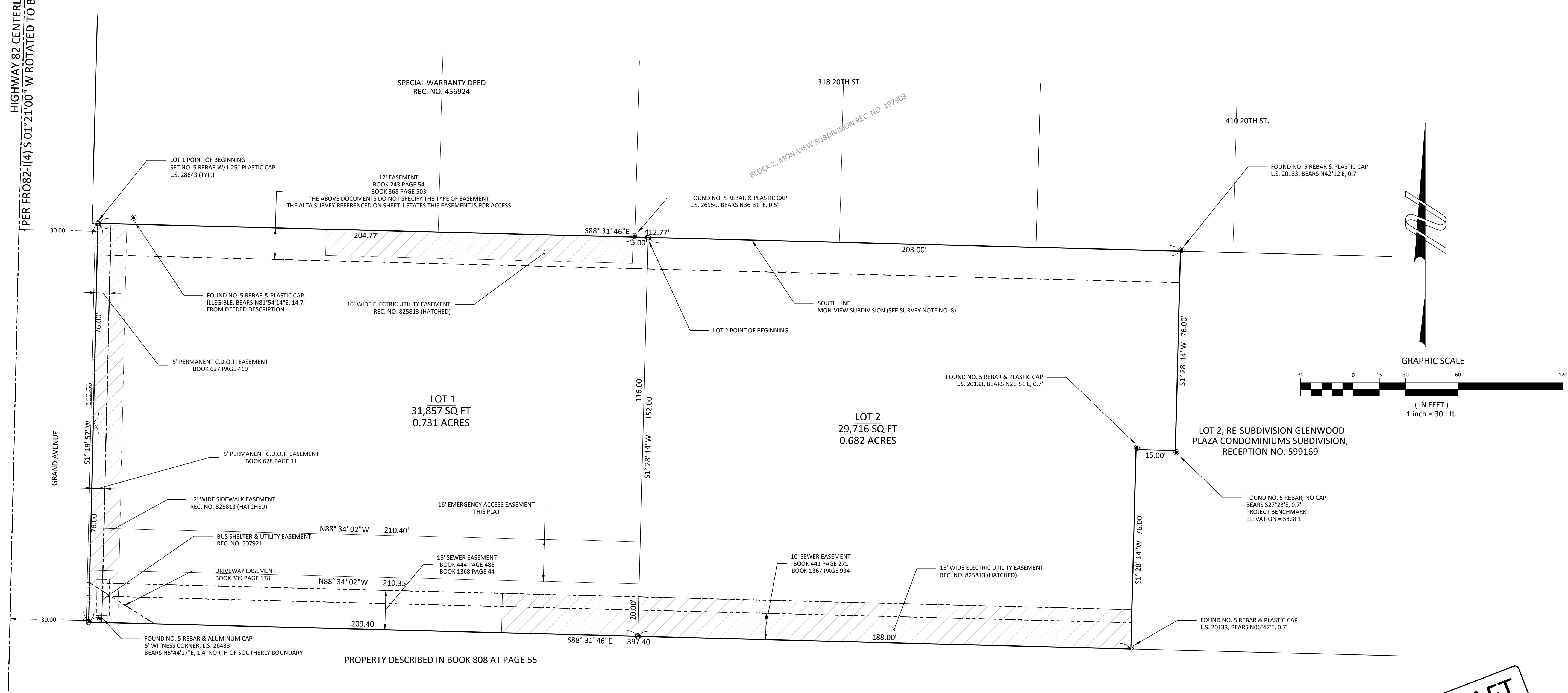
MARK S. BECKLER, P.L.S. #28643

NOTICE- ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

GRK 16201 8/13/2019 G:\2016\16201\SURVEY\SURVEY DWGS\Plat\16201 LOT LINE ADJUST PLAT.dwg

BOUNDARY LINE ADJUSTMENT PLAT OF:
FIRST BANK PROPERTY
2014 GRAND AVE., GLENWOOD SPRINGS, CO 81601
SITUATED IN SECTION 16, TOWNSHIP 6 SOUTH, RANGE 89 WEST OF THE 6th P.M.
CITY OF GLENWOOD SPRINGS, COUNTY OF GARFIELD, STATE OF COLORADO
SHEET 3 OF 3
PROPOSED LOTS

HIGHWAY 82 CENTERLINE BEARING S1° 19' 57" W
PER FRO82-(4) S 01° 21' 00" W ROTATED TO BE CONSISTENT WITH PROJECT BASIS OF BEARING



DRAFT

SOPRIS ENGINEERING - LLC
CIVIL CONSULTANTS
502 MAIN STREET, SUITE A3
CARBONDALE, COLORADO 81623
(970) 704-0311 SOPRISENG@SOPRISENG.COM

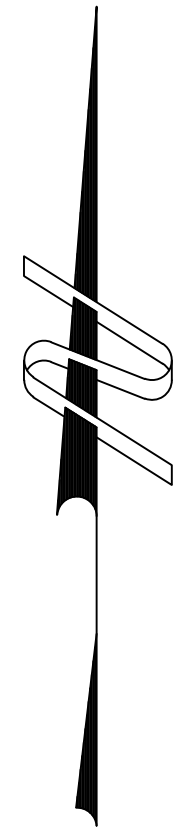
MARK S. BECKLER, P.L.S. #28643

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

GRK 16201 8/13/2019 G:\2016\16201\SURVEY\Survey DWGs\Plat\16201 LOT LINE ADJUST PLAT.dwg

SITUATED IN SECTION 16, TOWNSHIP 6 SOUTH, RANGE 89 WEST OF THE 6th P.M.
CITY OF GLENWOOD SPRINGS, COUNTY OF GARFIELD, STATE OF COLORADO

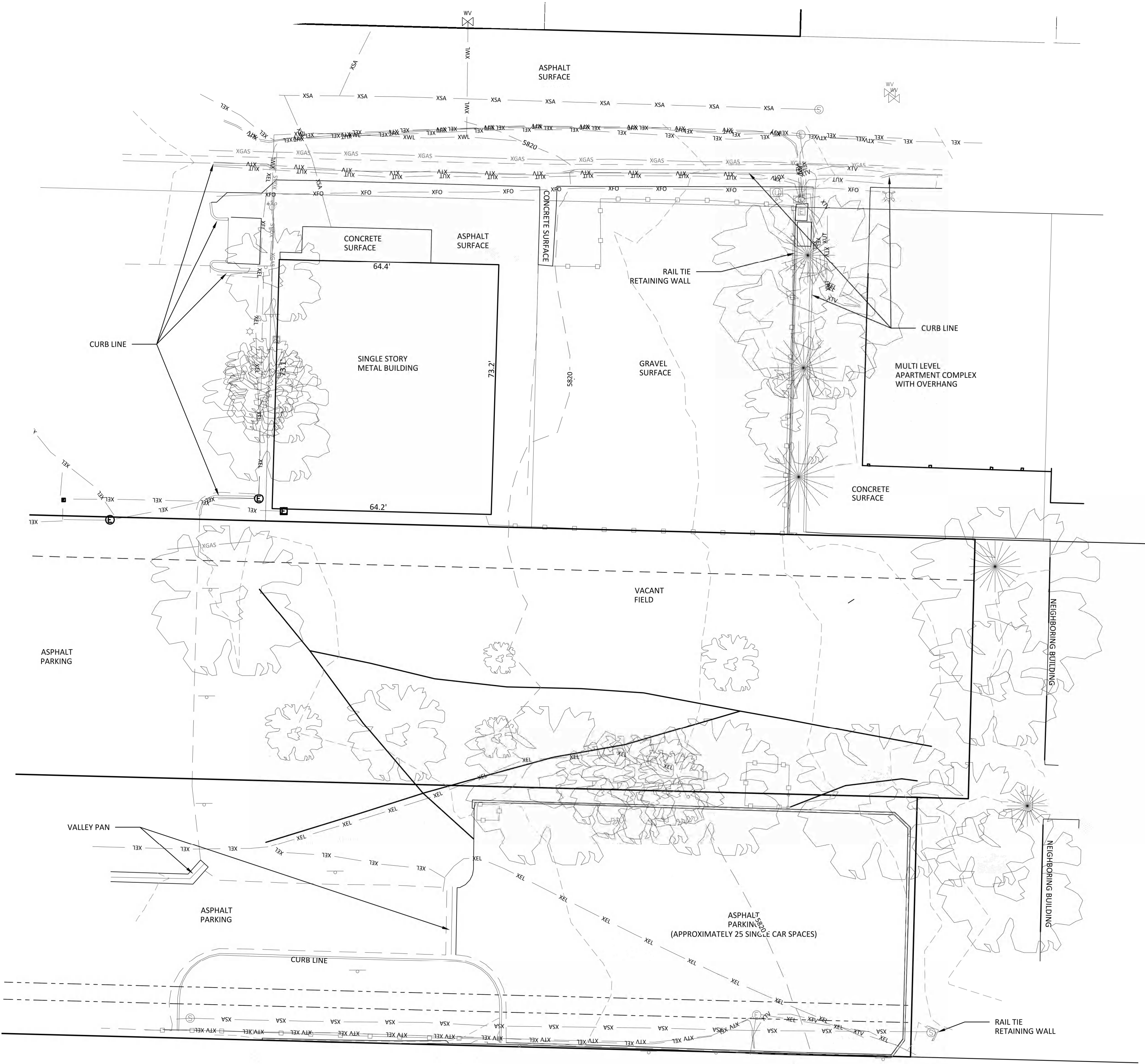
VICINITY MAP
SCALE: 1" = 2000'



MARK S. BECKLER L.S. #28643

IMPROVEMENT SURVEY PLAT OF:
PORTIONS OF 2014 GRAND AVE., 318 & 410 20TH STREET
SITUATED IN SECTION 16, TOWNSHIP 6 SOUTH, RANGE 89 WEST OF THE 6th P.M.
CITY OF GLENWOOD SPRINGS, COUNTY OF GARFIELD, STATE OF COLORADO
SHEET 2 OF 2

EXISTING LEGEND	
---	EXISTING CONTOUR
---	EXISTING CONTOUR INTERVAL
---	EXISTING WATER LINE
---	EXISTING SANITARY LINE
---	EXISTING GAS
---	EXISTING TELEPHONE
---	EXISTING UNDERGROUND ELECTRIC
---	EXISTING CABLE
---	EXISTING FIBER OPTIC
---	EXISTING WOOD FENCE
---	EXISTING FOOT PATH
⊕	EXISTING ELECTRIC MANHOLE
⊕	EXISTING DRAINAGE DRY-WELL
⊕	EXISTING SEWER MANHOLE
⊕	EXISTING TELEPHONE MANHOLE
⊕	EXISTING FIBER OPTIC VAULT
⊕	EXISTING GUY WIRE
⊕	EXISTING POWER POLE
⊕	EXISTING FIRE HYDRANT
⊕	EXISTING WATER VALVE
⊕	EXISTING CURB STOP
⊕	EXISTING GAS METER
⊕	EXISTING ELECTRIC TRANSFORMER
⊕	EXISTING ELECTRIC METER
⊕	EXISTING TELEPHONE PEDESTAL
⊕	EXISTING CATV PEDESTAL
⊕	EXISTING SEWER CLEANOUT
⊕	EXISTING LIGHT POLE
⊕	EXISTING SIGN
⊕	EXISTING STORM INLET
⊕	EXISTING DECIDUOUS TREE
⊕	EXISTING CONIFER TREE



SOPRIS ENGINEERING - LLC
CIVIL CONSULTANTS
502 MAIN STREET, SUITE A3
CARBONDALE, COLORADO 81623
(970) 704-0311 SOPRISENG@SOPRISENG.COM

GENERAL UTILITY NOTES:
1. THE LOCATIONS OF UNDERGROUND UTILITIES HAVE BEEN PLOTTED BASED ON UTILITY MAPS, CONSTRUCTION/DESIGN PLANS, OTHER INFORMATION PROVIDED BY UTILITY COMPANIES AND ACTUAL FIELD LOCATIONS IN SOME INSTANCES. THESE UTILITIES, AS SHOWN, MAY NOT REPRESENT ACTUAL FIELD CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL UTILITY COMPANIES FOR FIELD LOCATION OF UTILITIES PRIOR TO CONSTRUCTION.

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

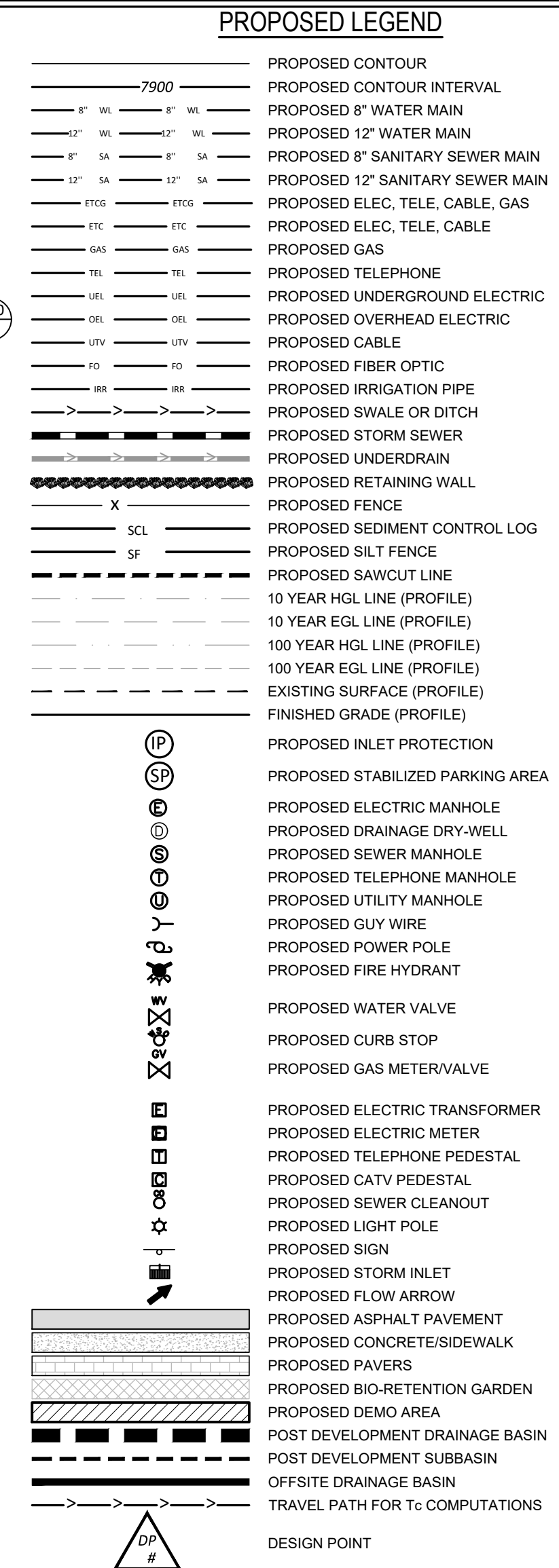
APPENDIX 4 CIVIL DRAWINGS

EXHIBIT D



TOTAL LOT AREA: 29716.00 SQ FT
LANDSCAPE AREA: 6383.78 SQ FT
PERCENT LANDSCAPE AREA: 21.48%

C1.0.....SITE PLAN
C1.1.....EXISTING CONDITIONS
C1.2.....DEMOLITION PLAN
C2.0.....GRADING PLAN
C3.0.....UTILITY PLAN
C4.0.....SITE DETAILS
C4.1.....WATER DETAILS



	EXISTING CONTOUR
	EXISTING CONTOUR INTERVAL
	EXISTING 8" WATER MAIN
	EXISTING 8" SANITARY SEWER MAIN
	EXISTING ELEC. TELE. CABLE, GAS
	EXISTING ELEC. TELE. CABLE
	EXISTING GAS
	EXISTING TELEPHONE
	EXISTING UNDERGROUND ELECTRIC
	EXISTING OVERHEAD ELECTRIC
	EXISTING CABLE
	EXISTING FIBER OPTIC
	EXISTING IRRIGATION PIPE
	EXISTING SWALE OR DITCH
	EXISTING STORM SEWER
	EXISTING EASEMENT
	EXISTING PROPERTY LINE
	EXISTING SETBACK (XX)
	EXISTING ZONE OF INFLUENCE
	EXISTING TOP OF SLOPE
	EXISTING WIRE FENCE
	EXISTING ROCK WALL
	EXISTING ELECTRIC MANHOLE
	EXISTING DRAINAGE DRY-WELL
	EXISTING SEWER MANHOLE
	EXISTING TELEPHONE MANHOLE
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	EXISTING CATV PEDESTAL
	EXISTING SEWER CLEANOUT
	EXISTING LIGHT POLE
	EXISTING SIGN
	EXISTING STORM INLET
	EXISTING FLOW ARROW
	EXISTING DRAINAGE BASIN



DESIGNED BY	CHC	08-09-19
DRAWN BY	CHC	08-09-19
CHECKED BY	XXX	00/00/00
DATE:		08-09-19
JOB NO.		16210

VALLEY VIEW HOSPITAL
410 20TH STREET PARKING LOT
GLENWOOD SPRINGS, COLORADO

MINOR DEVELOPMENT / SPECIAL USE APPLICATION

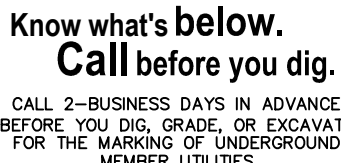
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ARBONDALE, CO 81623
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C-1 1

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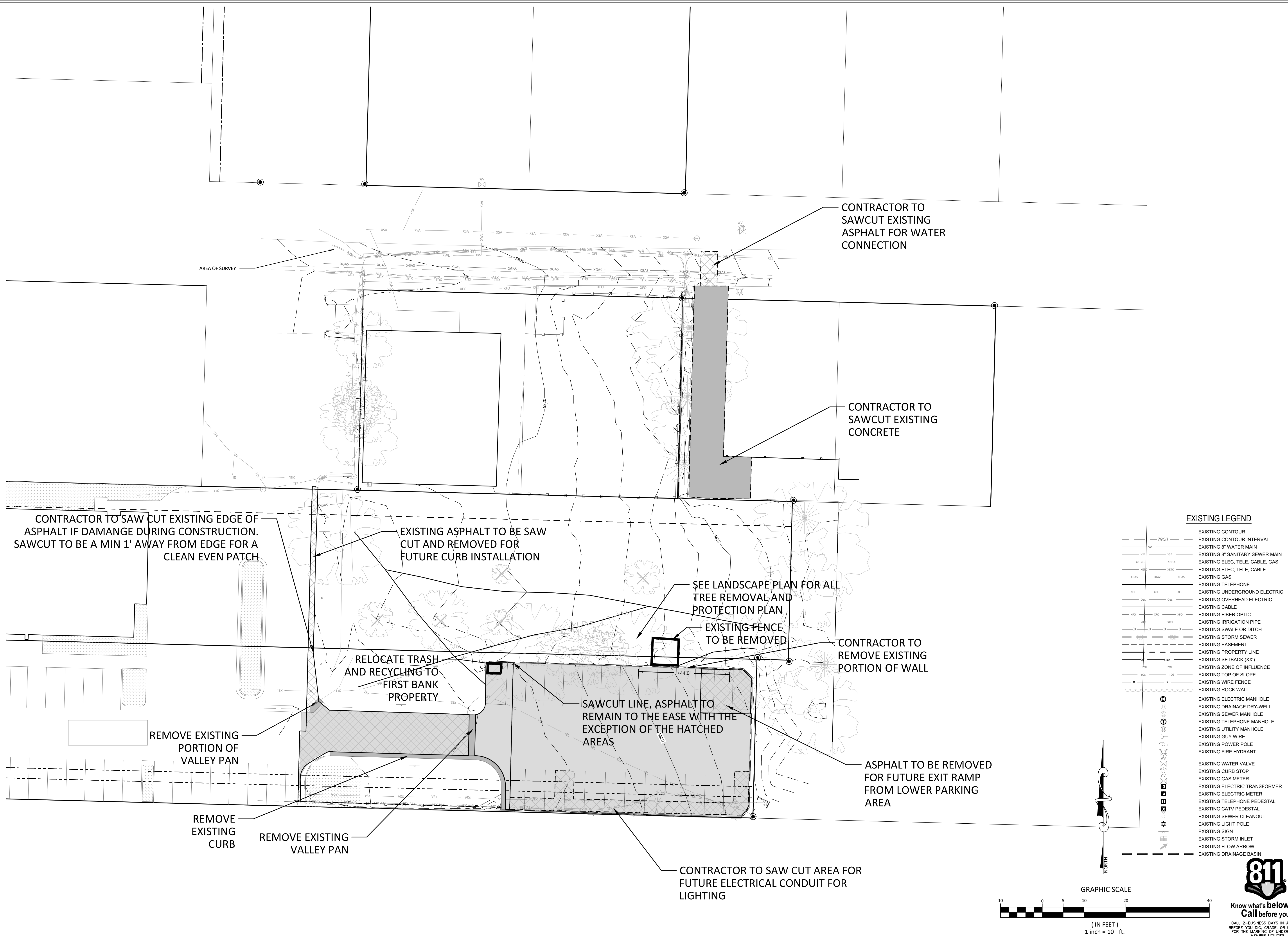
VALLEY VIEW HOSPITAL
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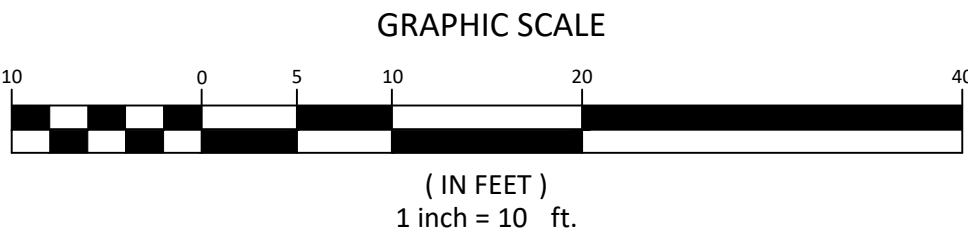
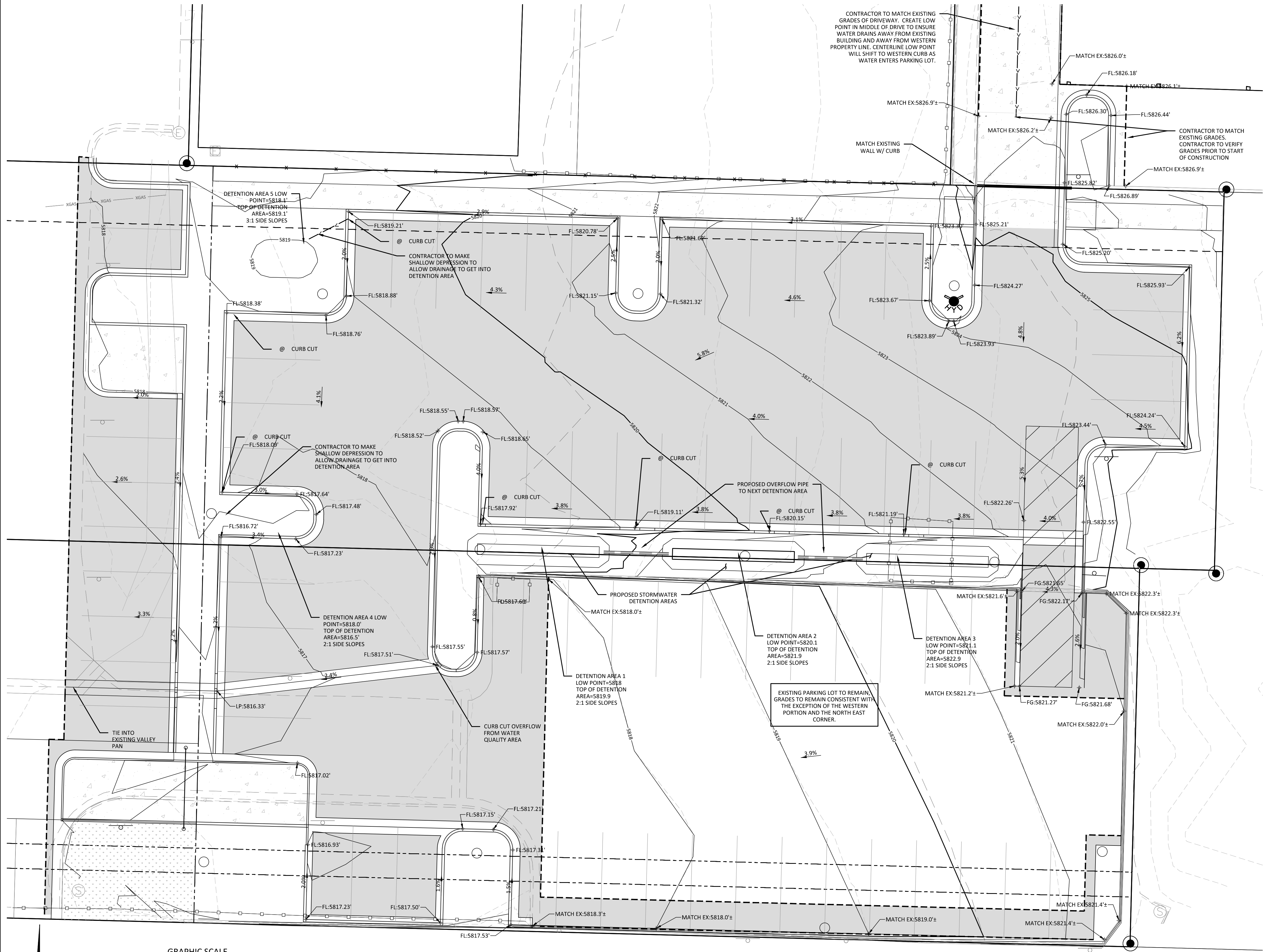
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DEMOLITION PLAN

DRAWING NO.
C-1.2



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SPOT ELEVATION LEGEND

BOW = BOTTOM OF WALL
EOA = EDGE OF ASPHALT
EX = EXISTING GRADE
FTE = FINISHED FLOOR ELEVATION
FG = FINISHED GRADE
FL = FLOW LINE
HP = HIGH POINT
LP = LOW POINT
MATCH EX = MATCH EXISTING
RIM = RIM ELEVATION
TBC = TOP BACK OF CURB
TOC = TOP OF CONCRETE

DRAINAGE DIRECTION/SLOPE

SPOT ELEVATION

EXAMPLE: TOP OF CONCRETE @ 7900.00' =

PROPOSED LEGEND

- PROPOSED CONTOUR
- PROPOSED CONTOUR INTERVAL
- PROPOSED 8" WATER MAIN
- PROPOSED 8" SANITARY SEWER MAIN
- PROPOSED 12" SANITARY SEWER MAIN
- PROPOSED ELEC. TELE. CABLE, GAS
- PROPOSED ELEC. TELE. CABLE, GAS
- PROPOSED GAS
- PROPOSED TELEPHONE
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED OVERHEAD ELECTRIC
- PROPOSED CABLE
- PROPOSED FIBER OPTIC
- PROPOSED IRRIGATION PIPE
- PROPOSED SWALE OR DITCH
- PROPOSED STORM SEWER
- PROPOSED UNDERDRAIN
- PROPOSED RETAINING WALL
- PROPOSED FENCE
- PROPOSED SEDIMENT CONTROL LOG
- PROPOSED SILT FENCE
- PROPOSED SAWCUT LINE (LIMIT OF DISTURBANCE)
- 10 YEAR HGL LINE (PROFILE)
- 10 YEAR EGL LINE (PROFILE)
- 100 YEAR HGL LINE (PROFILE)
- 100 YEAR EGL LINE (PROFILE)
- EXISTING SURFACE (PROFILE)
- FINISHED GRADE (PROFILE)
- PROPOSED INLET PROTECTION
- PROPOSED STABILIZED PARKING AREA
- PROPOSED ELECTRIC MANHOLE
- PROPOSED DRAINAGE DRY-WELL
- PROPOSED SEWER MANHOLE
- PROPOSED TELEPHONE MANHOLE
- PROPOSED UTILITY MANHOLE
- PROPOSED GUY WIRE
- PROPOSED POWER POLE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- PROPOSED CURB STOP
- PROPOSED GAS METER/VALVE
- PROPOSED ELECTRIC TRANSFORMER
- PROPOSED ELECTRIC METER
- PROPOSED TELEPHONE PEDESTAL
- PROPOSED CATV PEDESTAL
- PROPOSED SEWER CLEANOUT
- PROPOSED LIGHT POLE
- PROPOSED SIGN
- PROPOSED STORM INLET
- PROPOSED FLOW ARROW
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED PAVERS
- PROPOSED BIO-RETENTION GARDEN
- PROPOSED DEMO AREA
- POST DEVELOPMENT DRAINAGE BASIN
- POST DEVELOPMENT SUBBASIN
- OFFSITE DRAINAGE BASIN
- TRAVEL PATH FOR TC COMPUTATIONS
- DESIGN POINT

EXISTING LEGEND

- EXISTING CONTOUR
- EXISTING CONTOUR INTERVAL
- EXISTING 8" WATER MAIN
- EXISTING 8" SANITARY SEWER MAIN
- EXISTING ELEC. TELE. CABLE, GAS
- EXISTING ELEC. TELE. CABLE, GAS
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- EXISTING STORM SEWER
- EXISTING EASEMENT
- EXISTING PROPERTY LINE
- EXISTING SETBACK (XX)
- EXISTING ZONE OF INFLUENCE
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- EXISTING DRAINAGE BASIN



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

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PROJECT NO. 16210

VALLEY VIEW HOSPITAL
410 20TH STREET PARKING LOT
GLENWOOD SPRINGS, COLORADO

MINOR DEVELOPMENT / SPECIAL USE APPLICATION

DATE REVISION

00/00/00 XXX

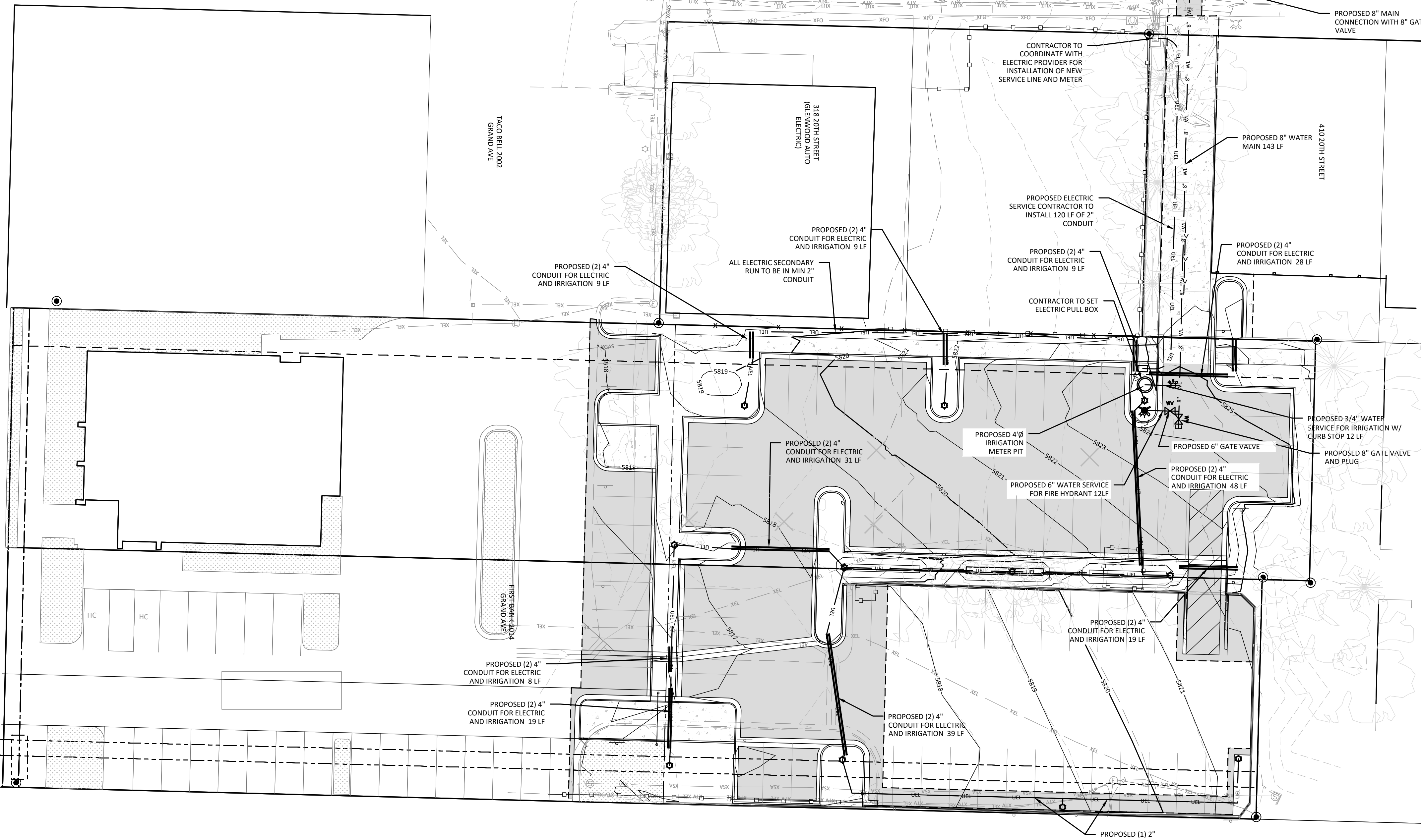
TITLE

GRADING PLAN

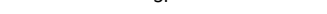
DRAWING NO.

C-2.0

HIGHWAY 82 CENTERLINE BEARING S1° 19' 57"W



PROPOSED LEGEND

- | | | |
|---|--------|----------------------------------|
| | | PROPOSED CONTOUR |
| | | PROPOSED CONTOUR INTERVAL |
| 8" WL | 4" WL | PROPOSED 8" WATER MAIN |
| 12" WL | 4" WL | PROPOSED 12" WATER MAIN |
| 4" SA | 4" SA | PROPOSED 8" SANITARY SEWER MAIN |
| 12" SA | 12" SA | PROPOSED 12" SANITARY SEWER MAIN |
| ETEC | ETEC | PROPOSED ELEC. TELE. CABLE, GAS |
| ETC | ETC | PROPOSED ELEC. TELE. CABLE |
| GAS | GAS | PROPOSED GAS |
| TEL | TEL | PROPOSED TELEPHONE |
| UEL | UEL | PROPOSED UNDERGROUND ELECTRIC |
| OEL | OEL | PROPOSED OVERHEAD ELECTRIC |
| UTV | UTV | PROPOSED CABLE |
| FO | FO | PROPOSED FIBER OPTIC |
| IR | IR | PROPOSED IRRIGATION PIPE |
| > | > | PROPOSED SWALE OR DITCH |
|  | | PROPOSED STORM SEWER |
|  | | PROPOSED UNDERDRAIN |
|  | | PROPOSED RETAINING WALL |
| X | | PROPOSED FENCE |
| SCL | | PROPOSED SEDIMENT CONTROL LOG |
| SF | | PROPOSED SILT FENCE |
|  | | PROPOSED SAWCUT LINE |
| | | 10 YEAR HGL LINE (PROFILE) |
| | | 10 YEAR EGL LINE (PROFILE) |
| | | 100 YEAR HGL LINE (PROFILE) |
| | | 100 YEAR EGL LINE (PROFILE) |
| | | EXISTING SURFACE (PROFILE) |
| | | ENGLISH ROAD (PROFILE) |

- | | |
|---|----------------------------------|
|  | PROPOSED INLET PROTECTION |
|  | PROPOSED STABILIZED PARKING AREA |
|  | PROPOSED ELECTRIC MANHOLE |
|  | PROPOSED DRAINAGE DRY-WELL |
|  | PROPOSED SEWER MANHOLE |
|  | PROPOSED TELEPHONE MANHOLE |
|  | PROPOSED UTILITY MANHOLE |
|  | PROPOSED GUY WIRE |
|  | PROPOSED POWER POLE |
|  | PROPOSED FIRE HYDRANT |
|  | PROPOSED WATER VALVE |
|  | PROPOSED CURB STOP |
|  | PROPOSED GAS METER/VALVE |

- | | |
|---|---|
|  | PROPOSED ELECTRIC TRANSFORMER |
|  | PROPOSED ELECTRIC METER |
|  | PROPOSED TELEPHONE PEDESTAL |
|  | PROPOSED CATV PEDESTAL |
|  | PROPOSED SEWER CLEANOUT |
|  | PROPOSED LIGHT POLE |
|  | PROPOSED SIGN |
|  | PROPOSED STORM INLET |
|  | PROPOSED FLOW ARROW |
|  | PROPOSED ASPHALT PAVEMENT |
|  | PROPOSED CONCRETE/SIDEWALK |
|  | PROPOSED PAVERS |
|  | PROPOSED BIO-RETENTION GARDEN |
|  | PROPOSED DEMO AREA |
|  | POST DEVELOPMENT DRAINAGE BASIN |
|  | POST DEVELOPMENT SUBBASIN |
|  | OFFSITE DRAINAGE BASIN |
|  | TRAVEL PATH FOR T _c COMPUTATIONS |
|  | DESIGN POINT |

EXISTING LEGEND

- EXISTING CONTOUR
 EXISTING CONTOUR INTERVAL
 EXISTING 8" WATER MAIN
 EXISTING 8" SANITARY SEWER MAIN
 EXISTING ELEC. TELE. CABLE GAS
 EXISTING ELEC. TELE. CABLE
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VALLEY VIEW HOSPITAL
410 20TH STREET PARKING LOT
GLENWOOD SPRINGS, COLORADO

MINOR DEVELOPMENT / SPECIAL USE APPLICATION

[illegible]

TITLE	UTILITY PLAN
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DRAWING NO.

C-3.0



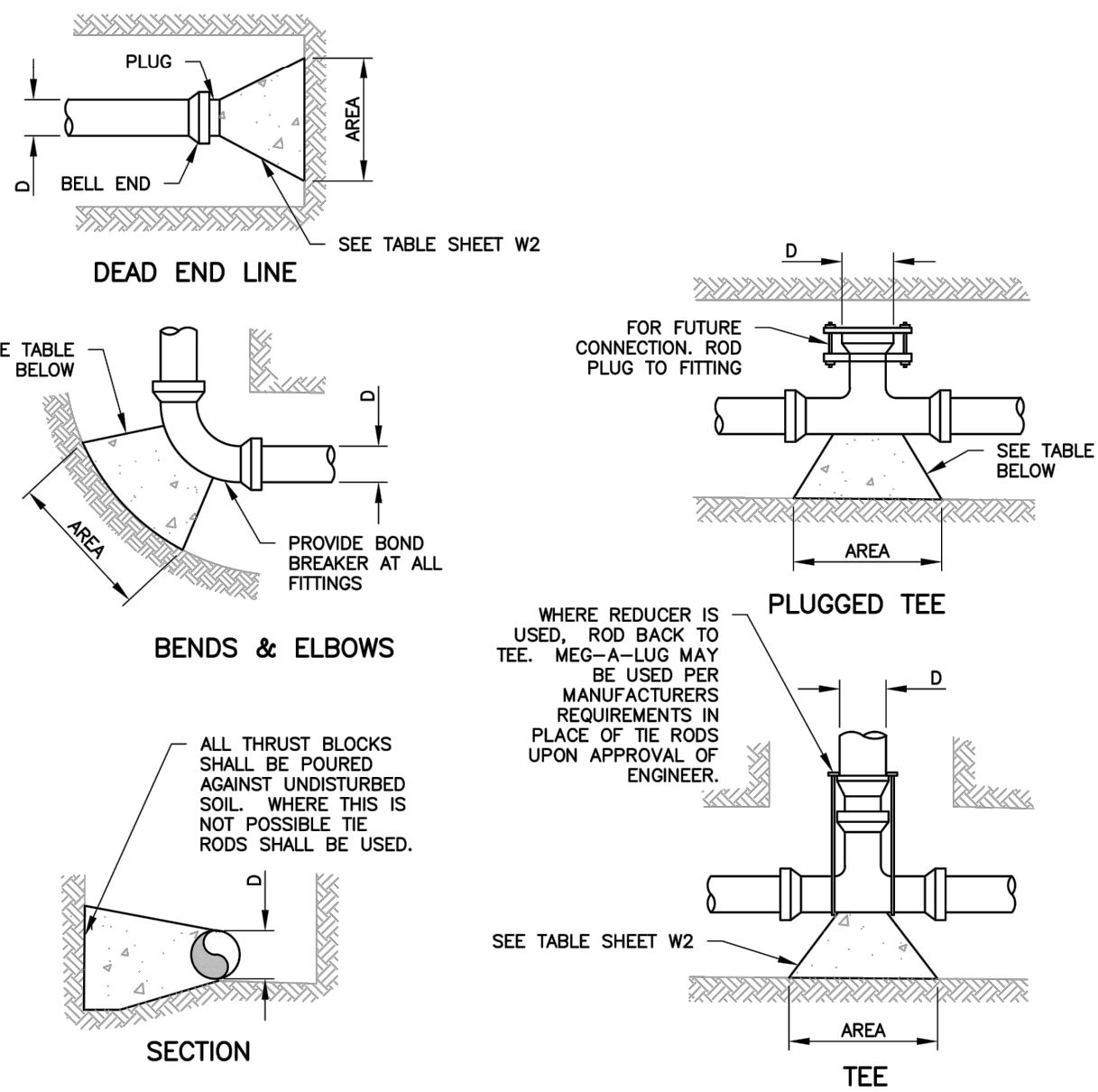
**Know what's below.
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FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES

GRAPHIC SCALE



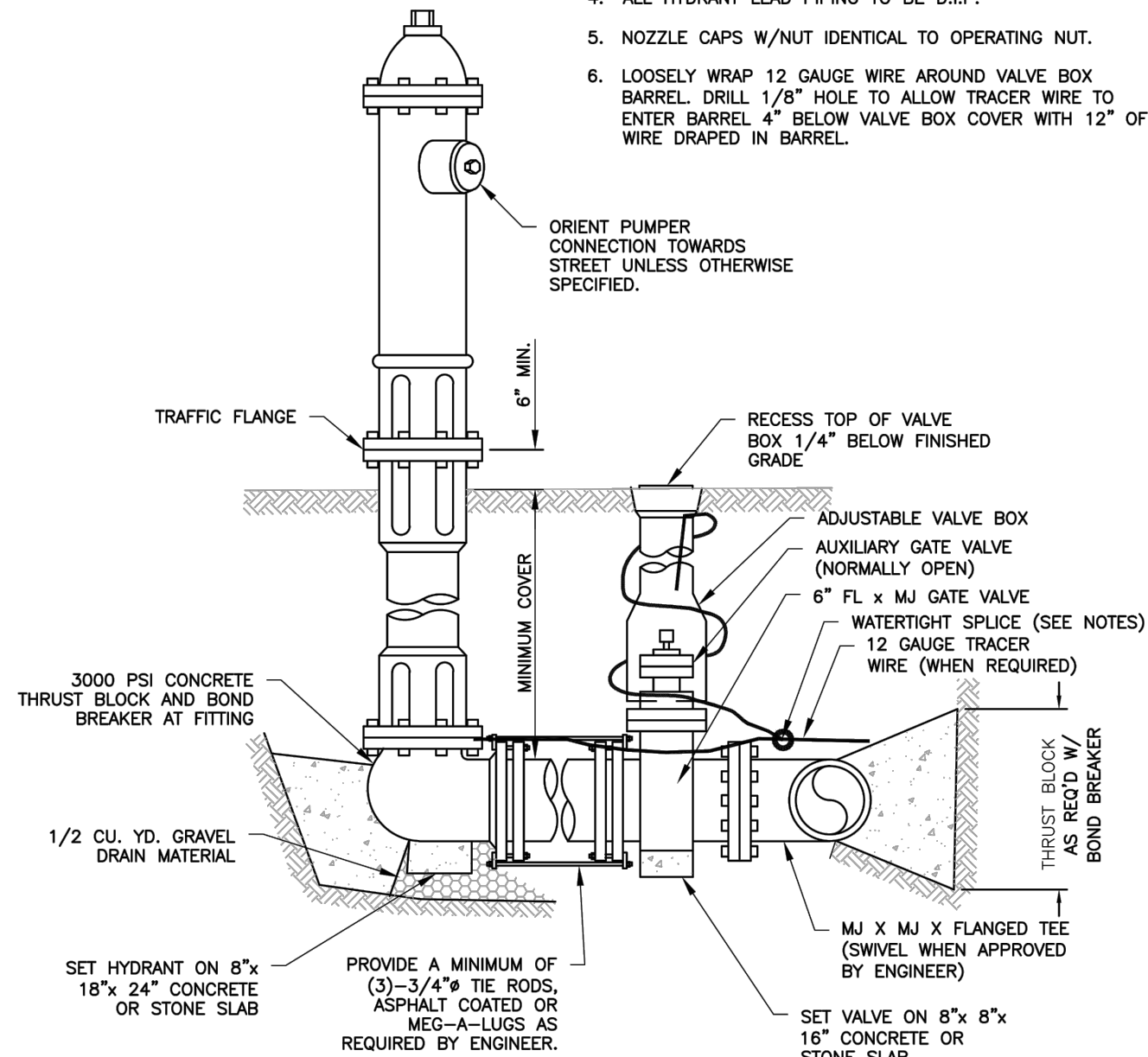
(IN FEET)
1 inch = 20 ft



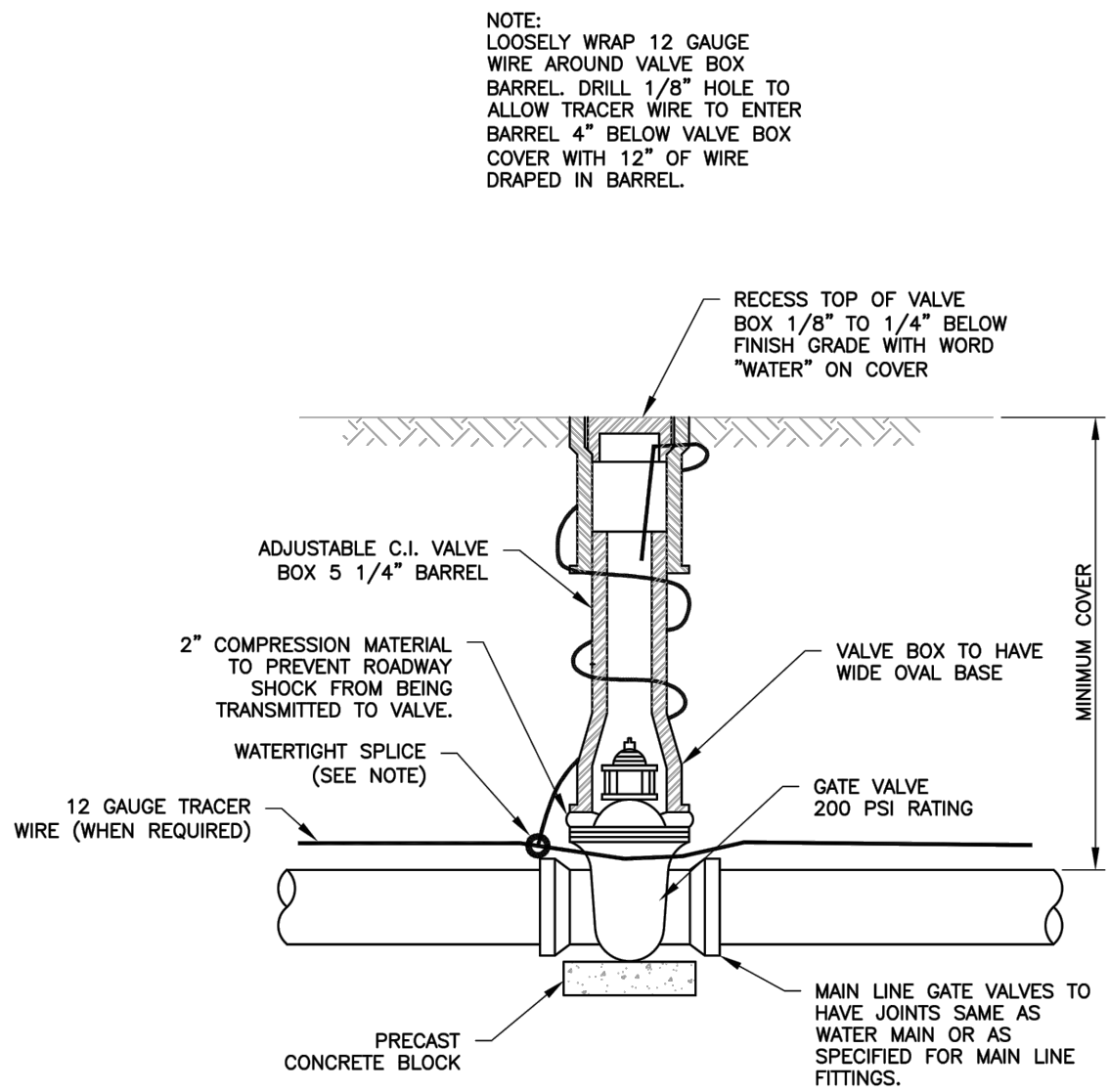
CONCRETE THRUST BLOCK DETAILS

NOTES:

1. ALL JOINTS FROM MAIN TO HYDRANT SHALL BE HARNESSSED MECHANICAL JOINTS OR FLANGED JOINTS.
2. HYDRANT, VALVE & FITTINGS TO BE 250 PSI RATED.
3. POLYETHYLENE WRAP (WHEN REQUIRED) SHALL COVER ASSEMBLY FROM HYDRANT BASE TO WATER MAIN.
4. ALL HYDRANT LEAD PIPING TO BE D.I.P.
5. NOZZLE CAPS W/NUT IDENTICAL TO OPERATING NUT.
6. LOOSELY WRAP 12 GAUGE WIRE AROUND VALVE BOX BARREL. DRILL 1/8" HOLE TO ALLOW TRACER WIRE TO ENTER BARREL 4" BELOW VALVE BOX COVER WITH 12" OF WIRE DRAPED IN BARREL.



FIRE HYDRANT DETAIL



GATE VALVE DETAIL

SIZE	BEARING AREAS (IN SQ. FT.)				TEES, DEAD ENDS, AND CROSS w DEAD END BRANCHES
	90'	45'	22 1/2'	11 1/2'	
3	1.0	0.6	0.3	0	0.7
4	1.8	1.0	0.5	0	1.3
6	4.0	2.2	1.1	0	2.8
8	7.1	3.8	2.0	1.0	5.0
10	11.1	6.0	3.0	1.5	7.8
12	16.0	8.6	4.4	2.2	11.3
14	21.7	11.8	6.0	3.0	15.4
15	25.0	13.5	7.0	3.5	17.6
16	28.4	15.3	8.0	4.0	20.0
18	36.0	19.4	10.0	5.0	25.4
20	44.2	24.0	12.2	6.1	31.4
21	49.0	26.5	13.5	6.8	34.6
22	54.0	29.0	14.8	7.4	38.0
24	64.0	34.5	17.7	8.8	45.0
30	100.0	54.0	27.6	13.8	71.0
36	144.0	78.0	40.0	20.0	102.0

NOTE: TEE SIZE IS BRANCH SIZE.

AREAS GIVEN IN TABLE ARE BASED UPON INTERNAL STATIC PRESSURE OF 100 P.S.I. AND SOIL BEARING CAPACITY OF 1,000 LBS. PER SQ. FT.

BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING TABULATED VALUES BY A CORRECTION FACTOR "F"

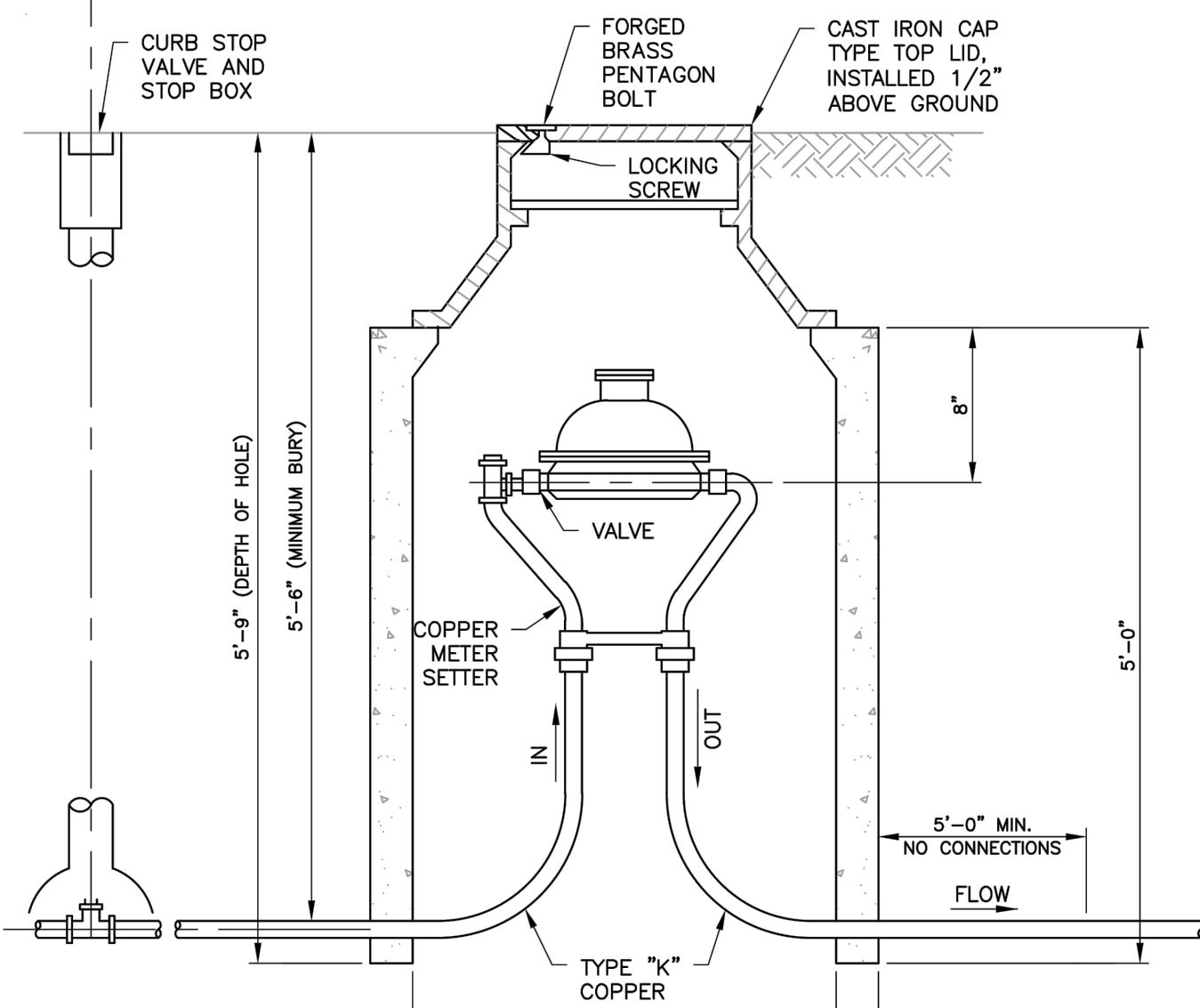
F = ACTUAL SPECIFIED TEST PRESSURE IN HUNDREDS OF LBS.

ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF LBS.

SOIL BEARING CAPACITIES SHALL BE DETERMINED BY THE ENGINEER

ALL WATER LINE PLANS SHALL CONTAIN THE FOLLOWING TABLE, WITH THE VALUES FILLED IN BY THE ENGINEER:

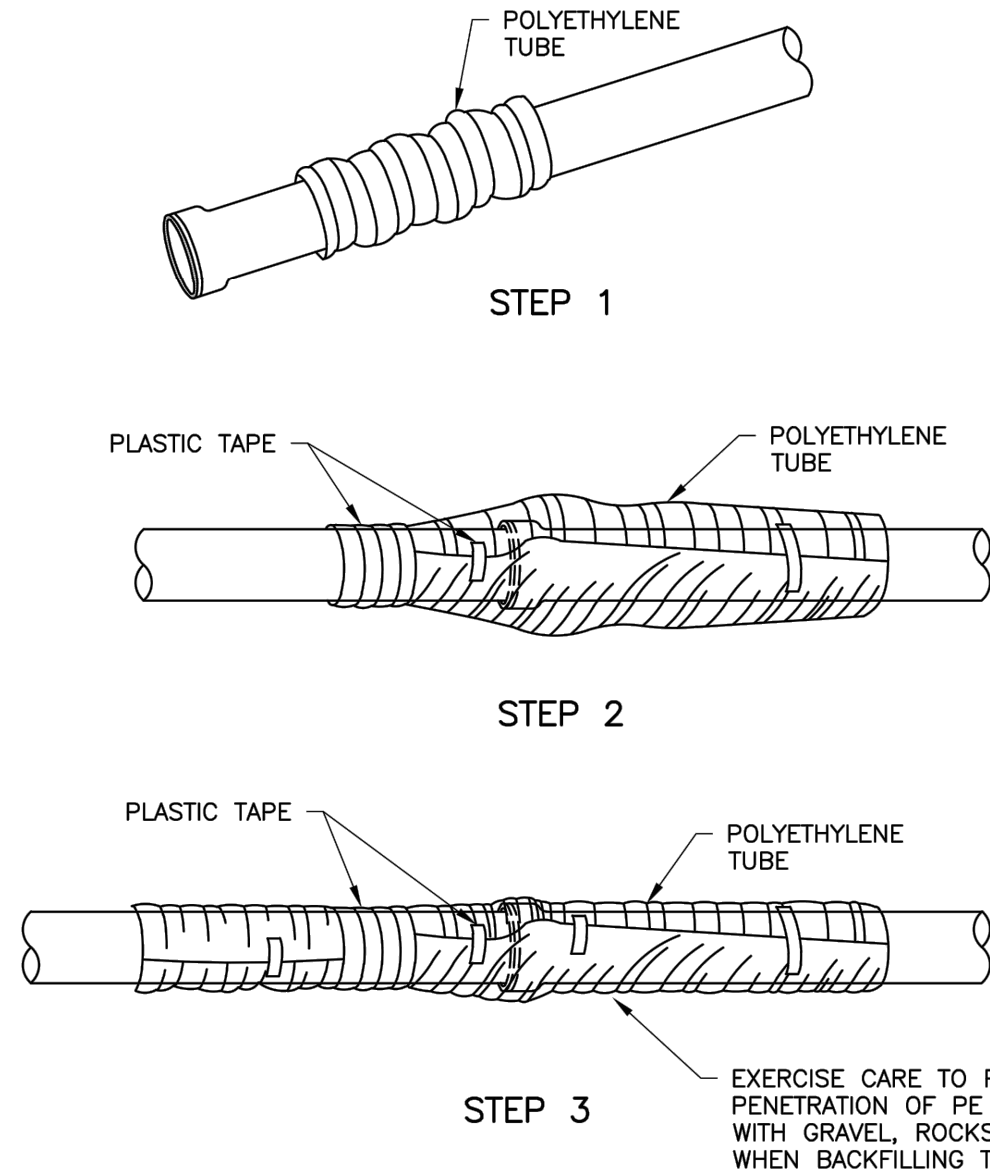
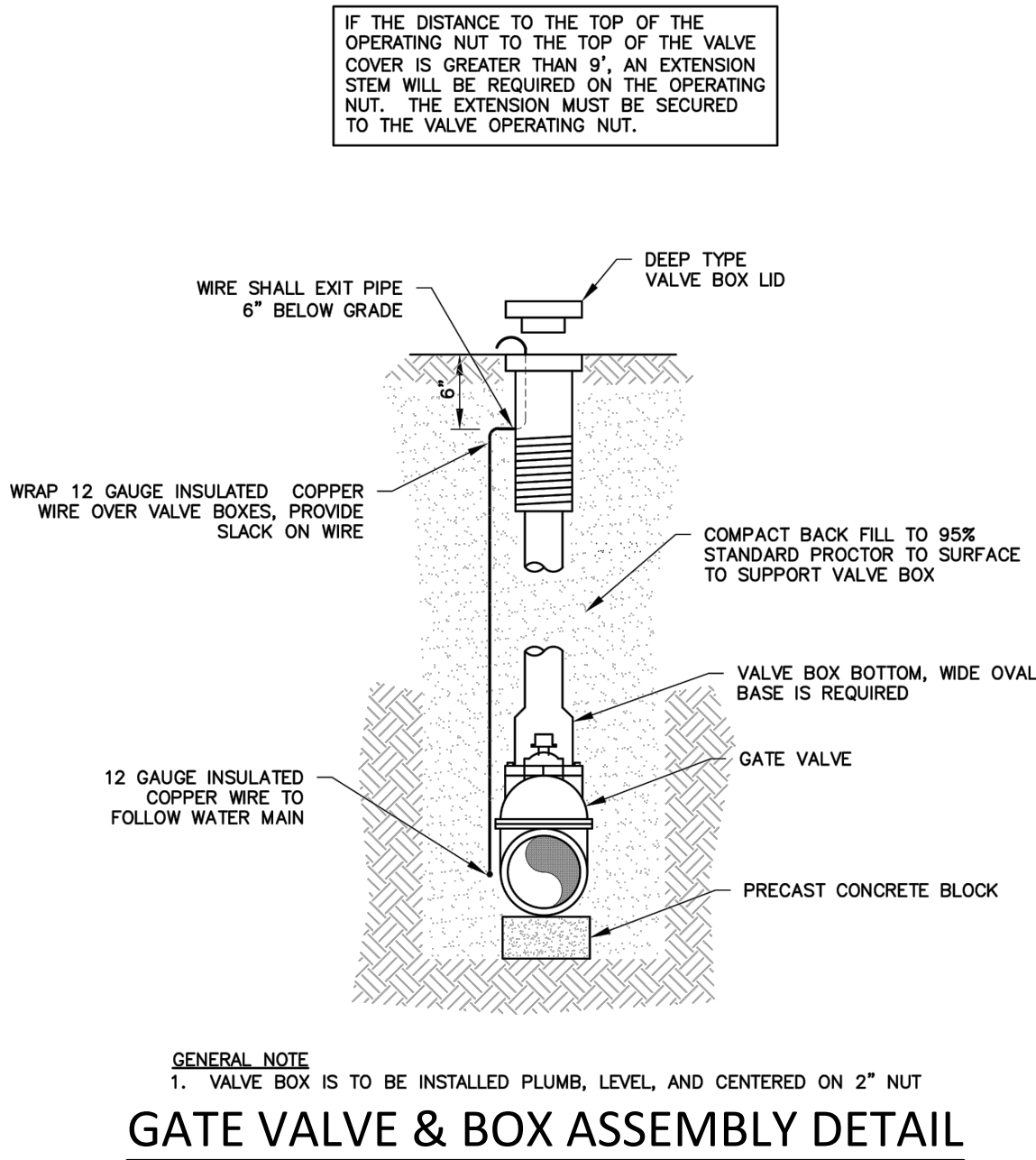
SOIL BEARING CAPACITY - _____ LBS./SQ. FT.
TEST PRESSURE - _____ P.S.I.
BEARING AREA MULTIPLIER (F) - _____



NOTES:

1. NOT FOR INSTALLATION IN ROADWAYS, DRIVEWAYS, OR PARKING AREAS.
2. NO CONCRETE FLOOR TO BE LAID IN METER PIT.
3. ADJUSTMENT RINGS SHALL BE 2", 3", 4" OR 6" IN HEIGHT, USE AS NECESSARY.
4. NO CONNECTIONS OR CHANGES IN PIPE DIAMETER SHALL BE MADE IN THE METER PIT OR IN THE DISTANCE OF FIVE FEET BEYOND THE METER PIT WALL ON THE OUTLET SIDE.
5. LAWN SPRINKLER CONNECTIONS SHALL BE A MINIMUM OF FIVE FEET FROM THE METER PIT WALL ON THE OUTLET SIDE.

WATER METER PIT

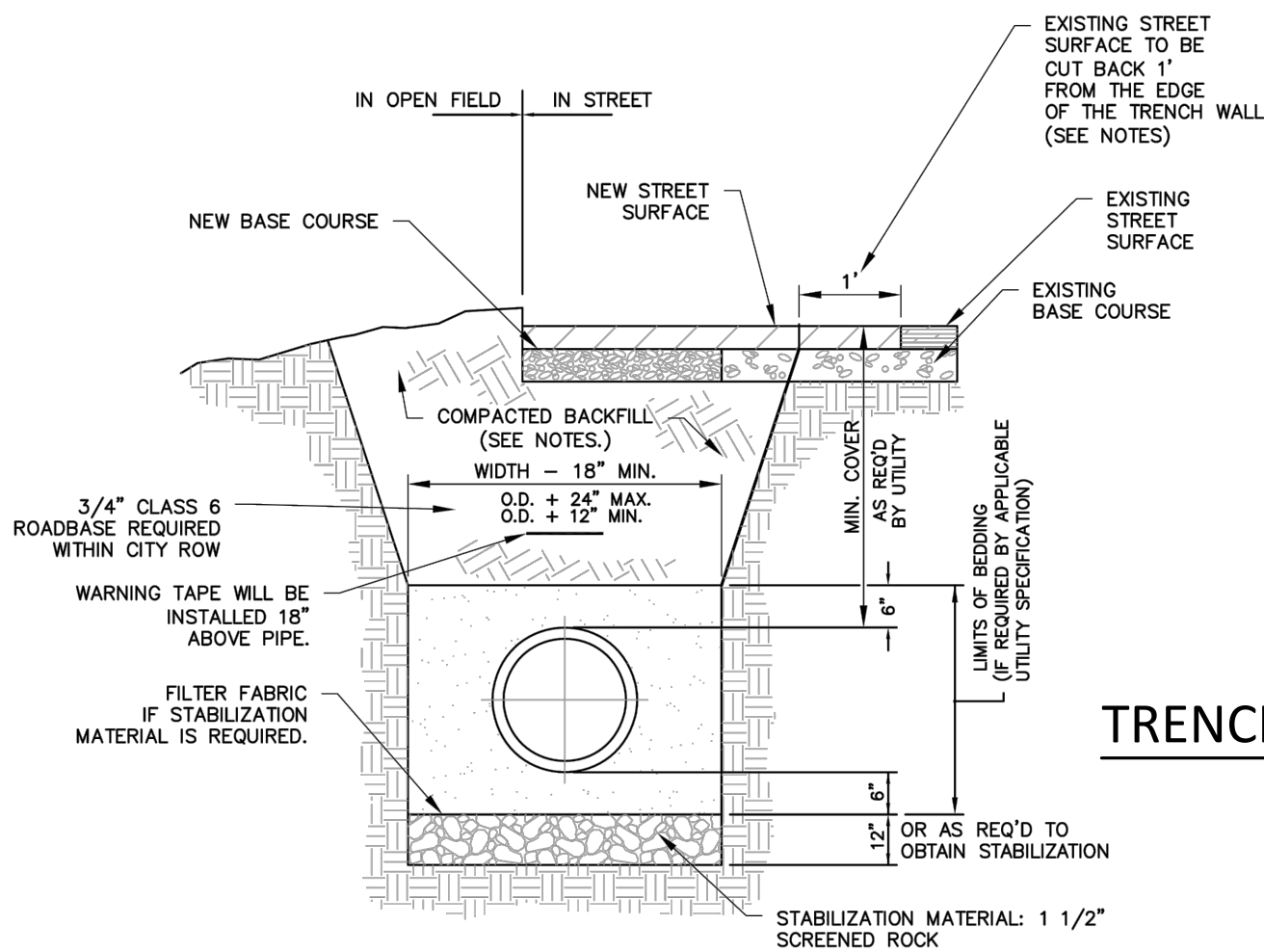


FIELD INSTALLATION - POLYETHYLENE WRAP

WHERE SPECIFICALLY REQUIRED FOR SOIL APPLICATIONS

- STEP 1 - PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO PLACE
- STEP 2 - PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE IN PLACE.
- STEP 3 - OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY UNWOUND UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE AND TAPED IN PLACE.

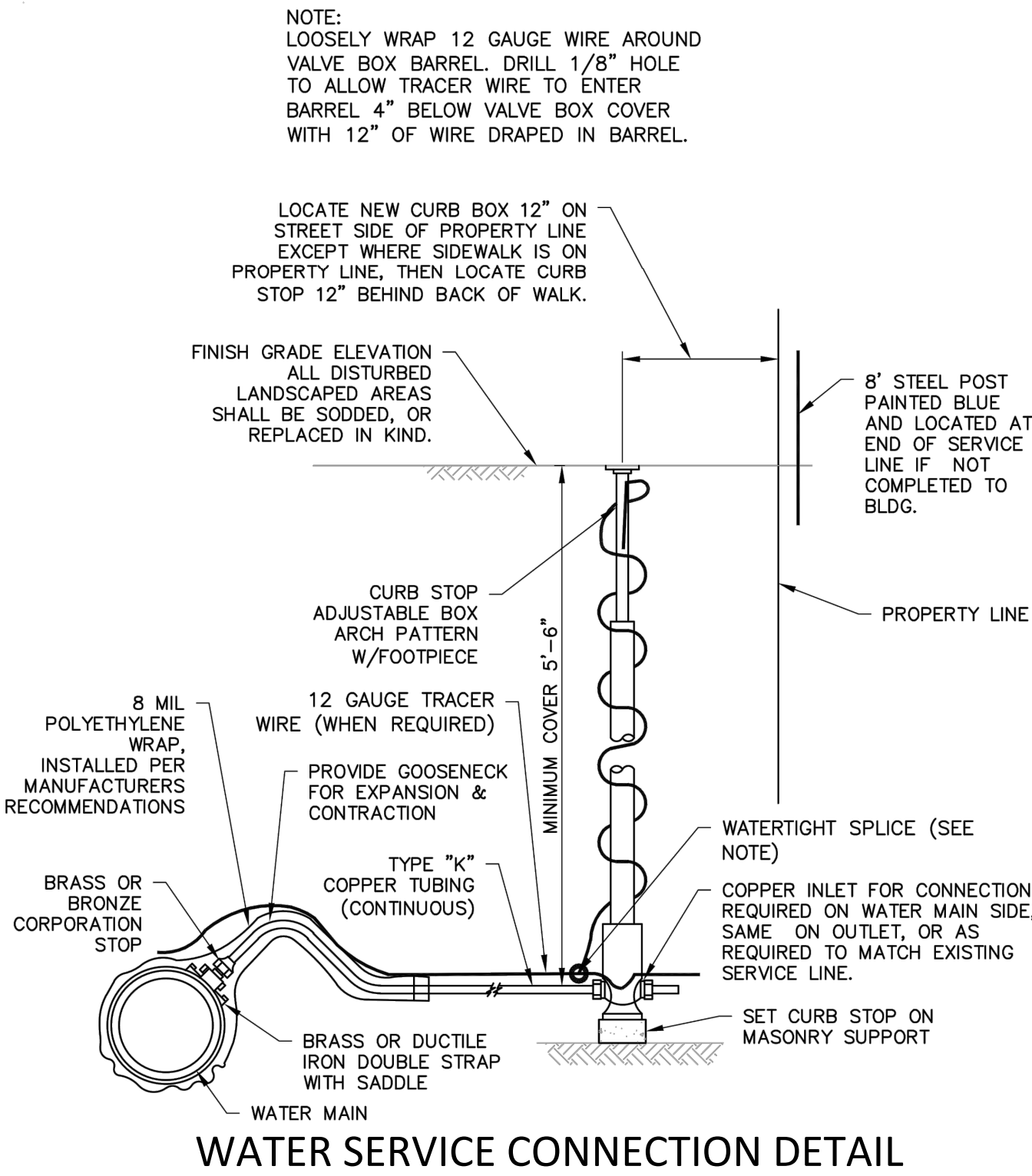
POLYWRAP DETAIL



TRENCH EXCAVATION & BACKFILL DETAIL

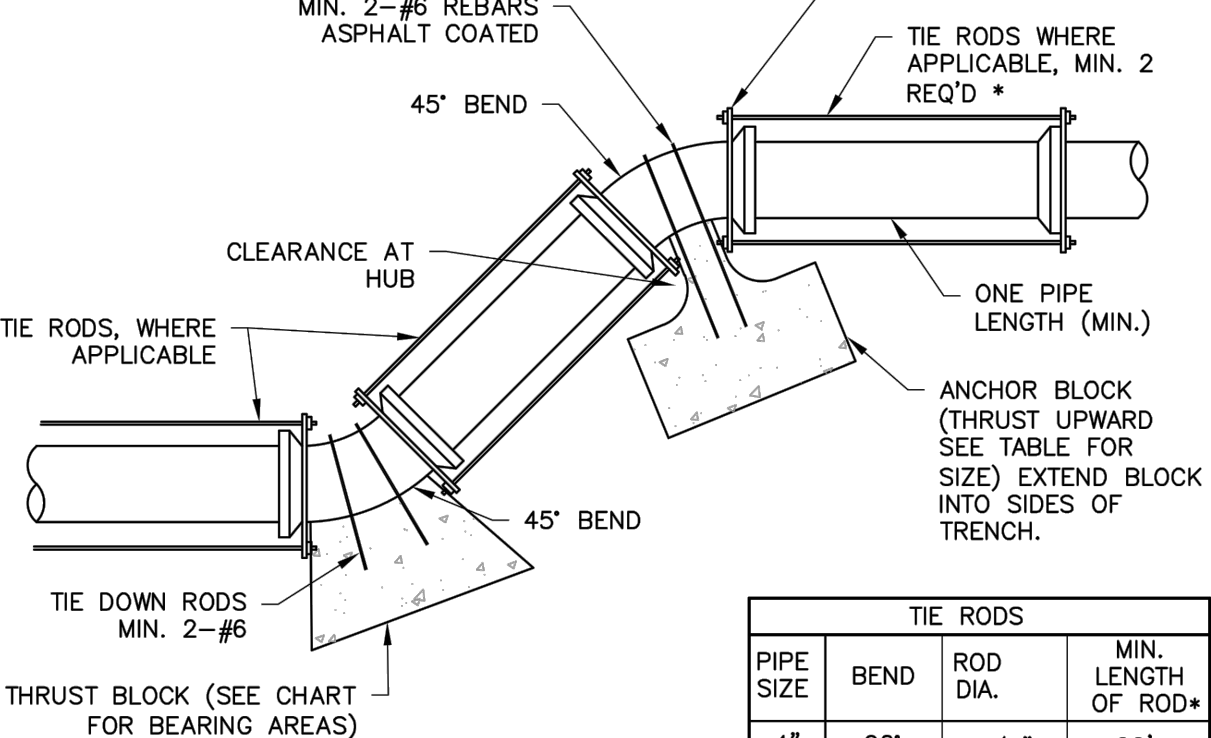
NOTES:

1. RIGHT OF WAY & EASEMENT AREAS SHALL BE GRADED (CUT & FILL) TO SUBGRADE (+/-0.5) AT UTILITY LOCATIONS INCLUDING SERVICES, PRIOR TO UTILITY INSTALLATION.
2. BACKFILL TO BE COMPACTED TO 95% AND WITHIN TWO (2)% OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY A.S.T.M. D-698 DENSITY IN ALL AREAS UNLESS OTHERWISE NOTED.
3. TRENCH EXCAVATION SHALL COMPLY WITH ALL OSHA STANDARDS.
4. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.
5. A ONE FOOT CUT BACK IS NOT REQUIRED IF FLOW FILL IS USED FOR BACKFILL.



NOTES

1. USE CONCRETE THRUST BLOCKS & ANCHOR BLOCK FOR PLASTIC PIPE, (NO TIERODS).
2. FOR CAST IRON PIPE USE EITHER TIE RODS OR CONCRETE BLOCKS.
3. ANCHOR BLOCK WEIGHTS AND TIE ROD SIZE & LENGTH BASED ON 200 PSI PRESSURE & 4-1/2 FT. OF COVER. WHERE WORKING PRESSURE EXCEEDS ABOVE, ANCHORS TO BE SPECIAL CONSTRUCTION.
4. MEGA-LUG MAY BE USED PER MANUFACTURERS REQUIREMENTS IN PLACE OF TIE RODS UPON APPROVAL OF ENGINEER.
5. PIPE LARGER THAN TO BE SPECIFICALLY DESIGNED BY ENGINEER. FORMS SHALL BE 3/8" PLYWOOD.



MIN WEIGHT OF ANCHOR BLOCK			
PIPE SIZE	90° BEND	45° BEND	22 1/2° BEND
2"	150#	150#	150#
3"	900#	450#	150#
4"	1600#	900#	450#
6"	6050#	2400#	700#
8"	12,300#	5750#	2000#
10"	22,500#	12,100#	6200#
12"	32,100#	17,400#	8900#

TIE RODS			
PIPE SIZE	BEND	ROD DIA.	MIN. LENGTH OF ROD*
4"	90°	3/4"	22'
	45°	3/4"	7'
	22 1/2°	3/4"	2'
6"	90°	3/4"	35'
	45°	3/4"	10'
	22 1/2°	3/4"	3'
8"	90°	1"	48'
	45°	3/4"	14'
	22 1/2°	3/4"	4'
12"	90°	1 1/4"	78'
	45°	3/4"	22'
	22 1/2°	3/4"	6'

NOTE:

WEIGHT OF CONCRETE EQUALS 150#/CU. FT.

* ACTUAL LENGTH OF ROD TO BE SUCH THAT STRAP CAN BE PLACED BEYOND FIRST COLLAR OR HUB AT OR BEYOND THE MINIMUM LENGTH SHOWN.

VERTICAL BEND ANCHOR DETAIL

SOPRIS ENGINEERING, LLC
CIVIL CONSULTANTS

502 MAIN STREET
CARBONDALE, CO 81623
(970) 704-0311
FAX: (970) 794-0313

DESIGNED BY CHC 08-09-19

DRAWN BY CHC 08-09-19

CHECKED BY XXX 00/00/00

DATE: 08-09-19

JOB NO. 16210

VALLEY VIEW HOSPITAL
410 20TH STREET PARKING LOT
GLENWOOD SPRINGS, COLORADO

MINOR DEVELOPMENT / SPECIAL USE APPLICATION

DATE REVISION

00/00/00 XXX

TITLE
WATER DETAILS

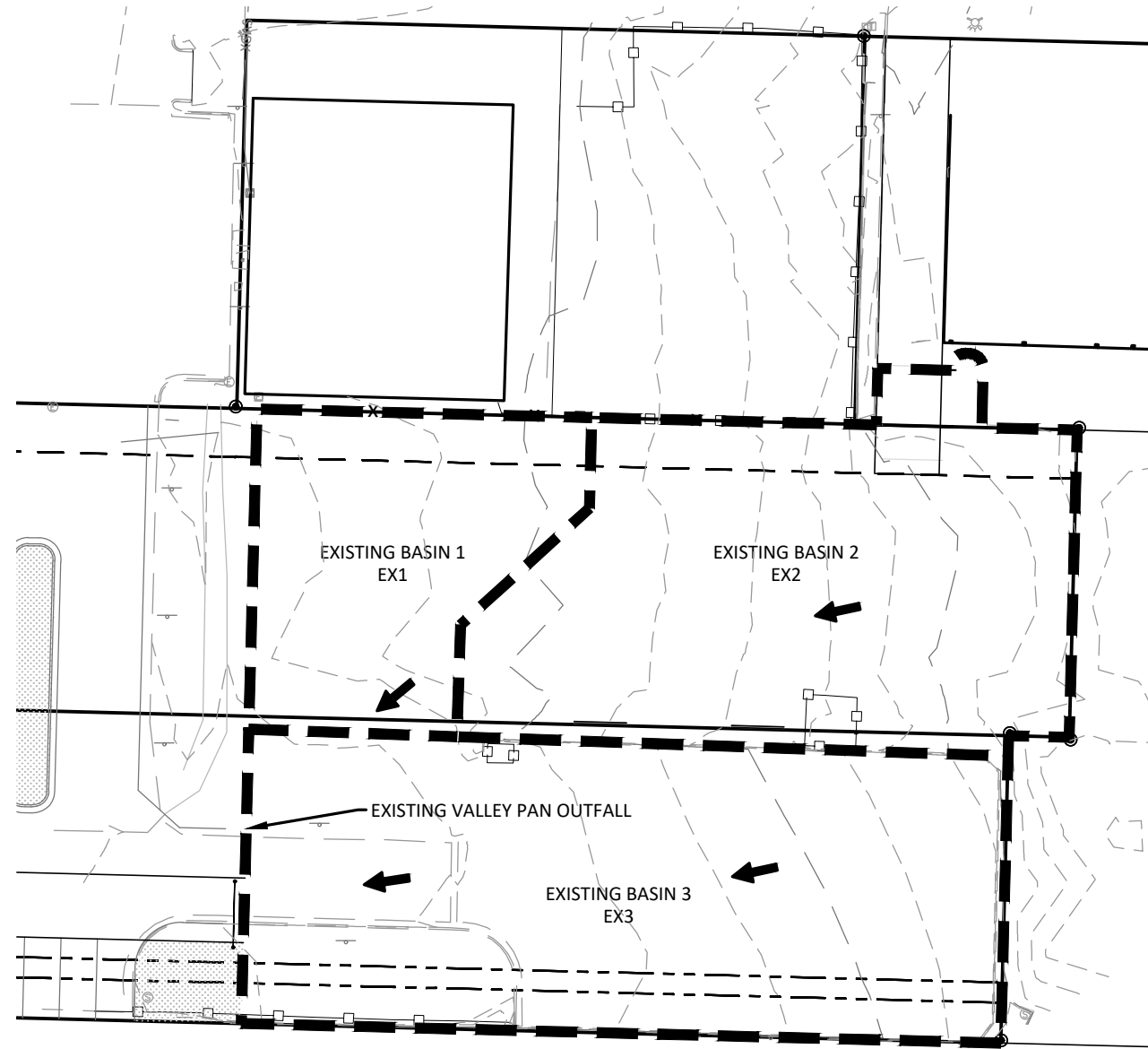
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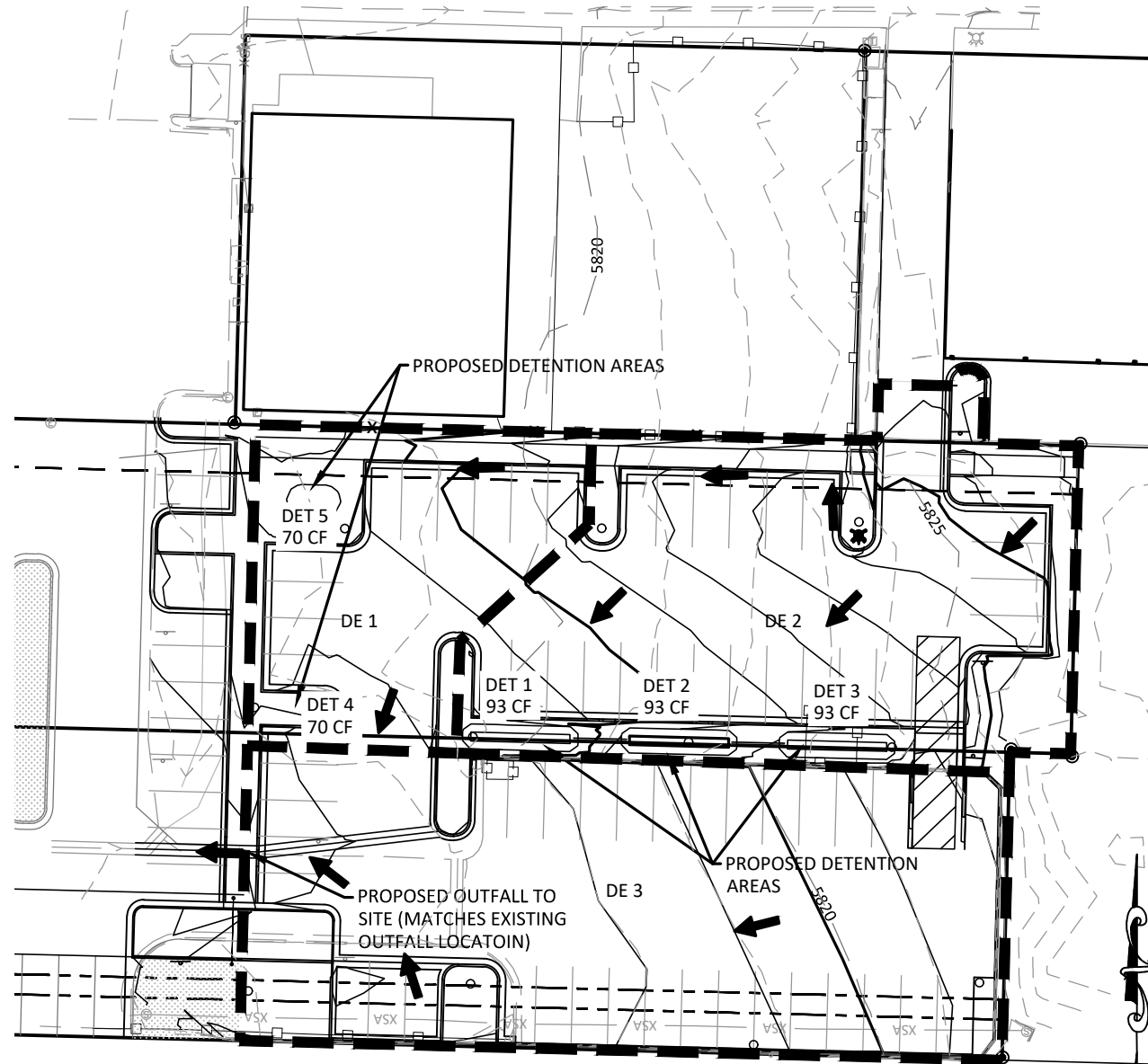
APPENDIX 5

EXISTING AND PROPOSED DRAINAGE EXHIBIT

G:\2016\16201\CIVIL\DWGS\PILOT\16201-DRN-EXH.DWG - Jul 11, 2019 - 2:24pm



EXISTING DRAINAGE BASIN MAP
SCALE: 1" = 40'



PROPOSED DRAINAGE BASIN MAP
SCALE: 1" = 40'

VALLEY VIEW HOSPITAL 410 20TH STREET PARKING LOT GLENWOOD SPRINGS, CO		NO.	REVISION	BY	DATE	S O P R I S E N G I N E E R I N G , L L C . CIVIL CONSULTANTS 502 MAIN STREET CARBONDALE, CO 81623 (970) 704-0311 FAX: (970)-704-0313
EXISTING AND PROPOSED DRAINAGE EXHIBIT						
EXHIBIT						
DATE: 07-12-19						
JOB NO. 16201						
SHEET 1 OF 1						

APPENDIX 6

PUBLIC IMPROVEMENTS COST ESTIMATE

ENGINEER'S OPINION OF ESTIMATED COST
VALLEY VIEW HOSPITAL - 410 20th Street Parking Lot
SE JOB #16201
08/09/2019

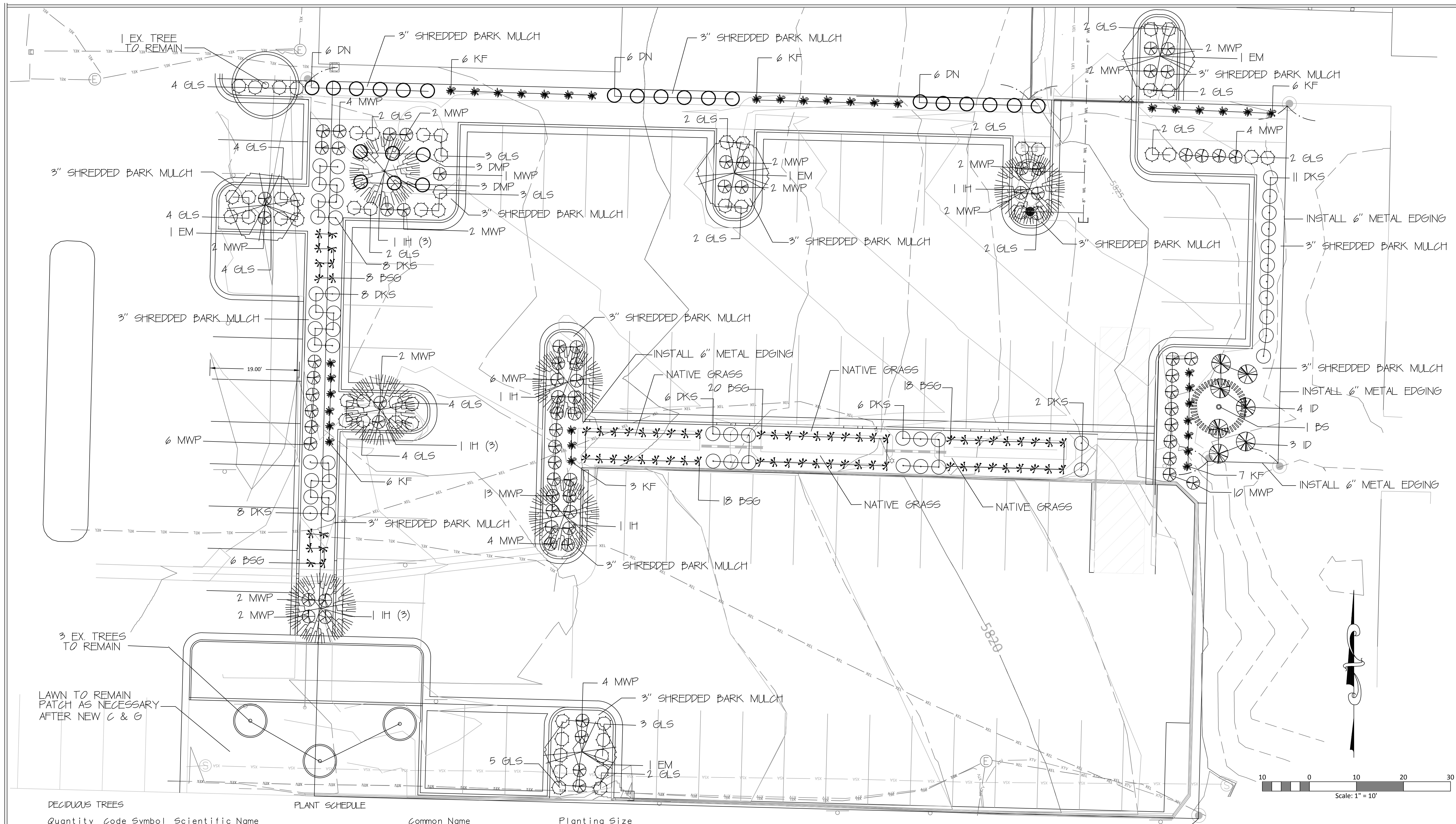
VVH - 410 20th Street Parking Lot - Public Improvements Cost Estimate					
#	ITEM	Quantity	Unit	Unit Cost	Total Cost
O1	Mobilization	1	LS	\$ 2,700.00	\$ 2,700.00
				Sub total:	\$ 2,700.00
DEMOLITION					
D1	Removal of Existing Asphalt	17	SY	\$ 10.00	\$ 170.00
D2	Removal of Existing Concrete	243	SY	\$ 12.00	\$ 2,916.00
D3	Sawcut	35	LF	\$ 2.50	\$ 87.50
				Sub total:	\$ 3,173.50
SITE					
S1	5" Asphalt	4	TONS	\$ 200.00	\$ 800.00
S2	6" Concrete	100	SQFT	\$ 15.00	\$ 1,500.00
				Sub total:	\$ 2,300.00
UTILITIES					
U1	Water main connection	1	EACH	\$ 5,000.00	\$ 5,000.00
U2	8" Gate valve	2	EACH	\$ 3,500.00	\$ 7,000.00
U3	8" water main	140	LF	\$ 180.00	\$ 25,200.00
U4	6" Gate valve	1	EACH	\$ 2,700.00	\$ 2,700.00
U5	6" water main	11	LF	\$ 80.00	\$ 880.00
				Sub total:	\$ 40,780.00
ADDITIONAL FEES					
F1	Construction Staking	1	LS	\$ 1,500.00	\$ 1,500.00
F2	Geotechnical Testing	1	LS	\$ 1,500.00	\$ 1,500.00
F3	Construction Observation and Administration	1	LS	\$ 1,000.00	\$ 1,000.00
F4	Permitting Fees / Review Fees	1	LS	\$ 1,000.00	\$ 1,000.00
				Sub total:	\$ 5,000.00
				Sum of Sub Totals:	\$ 53,953.50
				10% Contingency:	\$ 5,395.35
				Total:	\$ 59,348.85

This opinion of probable cost was prepared for budgeting purposes only. Sopris Engineering, LLC cannot be held responsible for variances from this estimate as actual cost may vary due to bid and market fluctuation.

16201-Cost-Estimate-2019.xlsx

APPENDIX 8

LANDSCAPE AND IRRIGATION DRAWINGS



PLANT SCHEDULE				
DECIDUOUS TREES				
Quantity	Code	Symbol	Scientific Name	Common Name
4	EM		Acer platanoides 'Emerald Queen'	Emerald Queen Maple
3	IH		Gleditsia triacanthos 'Imperial'	Imperial Honeylocust
2	IH (3)		Gleditsia triacanthos 'Imperial'	Imperial Honeylocust
EVERGREEN TREES				
1	BS		Picea pungens 'Glauca'	Colorado Blue Spruce
SHRUBS				
7	ID		Cornus stolonifera 'Isanti'	Isanti Dogwood
76	MWP		Potentilla fruticosa 'McKay's'	McKay's White Potentilla
13	DN		Physocarpus opulifolius 'Nanus'	Dwarf Ninebark
60	GLS		Rhus aromatica	Gro-Low Sumac
6	DMP		Pinus mugo pumilio	Dwarf Mugo Pine
ORNAMENTAL GRASSES (PERENNIALS)				
70	BSG		Panicum virgatum 'Heavy Metal'	Blue Switch Grass
34	KF		Calamagrostis acutiflora Karl Foerster'	Karl Foerster Reed Grass

- GENERAL NOTES:
- PRIOR TO COMMENCEMENT OF LANDSCAPE WORK, CONTACT UTILITY COMPANIES FOR UTILITY LINE LOCATES.
 - CONTRACTOR SHALL PLACE PLANT MATERIAL IN THE FIELD. LANDSCAPE ARCHITECT SHALL VERIFY PLANT LOCATIONS PRIOR TO PLANTING.
 - PROTECT EXISTING PLANT MATERIAL, AS NOTED ON DRAWING, DURING CONSTRUCTION.
 - AUTOMATIC IRRIGATION SYSTEM SHALL BE INSTALLED TO IRRIGATE ALL PLANT MATERIAL. REFER TO SHEET L 20 FOR IRRIGATION PLAN.

REQUIREMENT	REQUIRED	PROPOSED
20% OF TOTAL LOT AREA DEDICATED TO LANDSCAPING	5,943 SF.	6,488 SF. (21.8 %)
TOTAL NUMBER OF PARKING SPACES	NA	66
LANDSCAPE REQUIRED (10 SF./SPACE)	660 SF.	6,488 SF.
NUMBER OF ISLANDS		13
TREES (1/TERRMINAL ISLAND)	13	15
SHRUBS (5/TERRMINAL ISLAND)	60	121
PLANTING STRIPS	3	3

JLT

JOHN L. TAUFER & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE / LAND PLANNING
500 CALDWAY AVENUE
PO BOX 313
GLENWOOD SPRINGS, COLORADO 80645
(970) 246-0957
(970) 246-124 FAX

WH 20TH STREET PARKING 318 AND 410

COLORADO

GLENWOOD SPRINGS

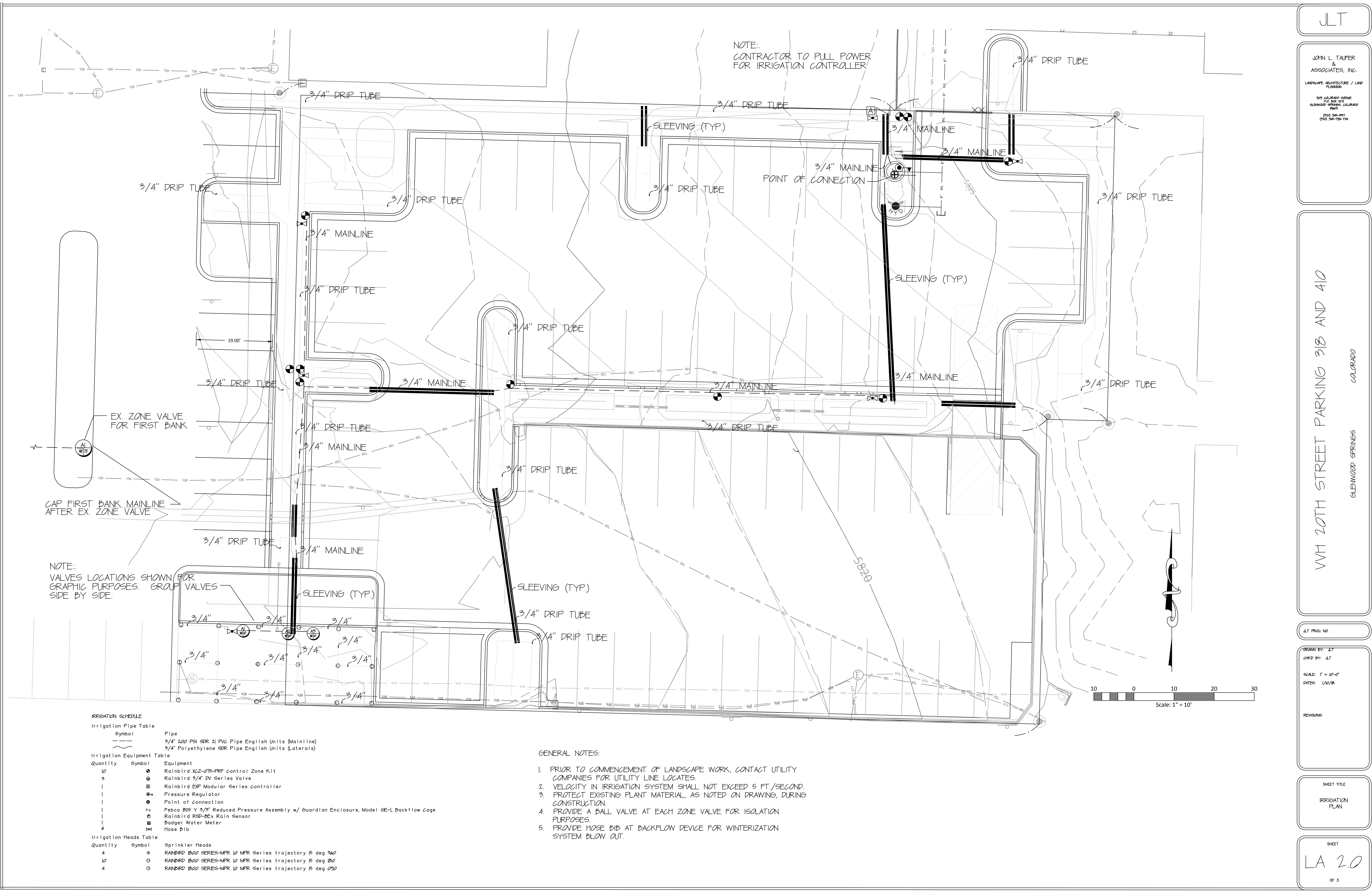
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DATE: 8/9/19

REVISIONS:

SHEET TITLE
LANDSCAPE PLAN

SHEET
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OF 3



NOTE:
CONTRACTOR TO PULL POWER
FOR IRRIGATION CONTROLLER

NOTE:
VALVES LOCATIONS SHOWN FOR
GRAPHIC PURPOSES. GROUP VALVES
SIDE BY SIDE.

IRRIGATION SCHEDULE

Irrigation Pipe Table

Symbol	Pipe
	3/4" 100 PSI SDR 21 PVC Pipe English Units (Mainline)
	3/4" Polyethylene SDR Pipe English Units (Laterals)

Irrigation Equipment Table

Quantity	Symbol	Equipment
10		Rainbird XG2-075-PRF Control Zone Kit
3		Rainbird 3/4" DV Series Valve
1		Rainbird EXP Modular Series Controller
1		Pressure Regulator
1		Point of Connection
1		Fibco 855 Y 3/2" Reduced Pressure Assembly w/ Guardian Enclosure, Model GE-1, Backflow Cage
1		Rainbird RSP-DEX Rain Sensor
1		Dodger Water Meter
6		Hose Bib

Irrigation Heads Table

Quantity	Symbol	Sprinkler Heads
4		RAINBIRD 1800 SERIES-NPR 10 MPR Series trajectory 15 deg 90
10		RAINBIRD 1800 SERIES-NPR 10 MPR Series trajectory 15 deg 180
4		RAINBIRD 1800 SERIES-NPR 10 MPR Series trajectory 15 deg 090

GENERAL NOTES:

1. PRIOR TO COMMENCEMENT OF LANDSCAPE WORK, CONTACT UTILITY COMPANIES FOR UTILITY LINE LOCATES.
2. VELOCITY IN IRRIGATION SYSTEM SHALL NOT EXCEED 5 FT/SECOND.
3. PROTECT EXISTING PLANT MATERIAL, AS NOTED ON DRAWING, DURING CONSTRUCTION.
4. PROVIDE A BALL VALVE AT EACH ZONE VALVE FOR ISOLATION PURPOSES.
5. PROVIDE HOSE BIB AT BACKFLOW DEVICE FOR WINTERIZATION SYSTEM BLOW OUT.

JLT

JOHN L. TAUFER & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE / LAND PLANNING
300 COLORADO AVENUE
SUITE 100
GLENWOOD SPRINGS, COLORADO 80645
(970) 246-0997
(970) 246-7344 FAX

WH 20TH STREET PARKING 318 AND 410

COLORADO

GLENWOOD SPRINGS

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DATES: 1/10/18

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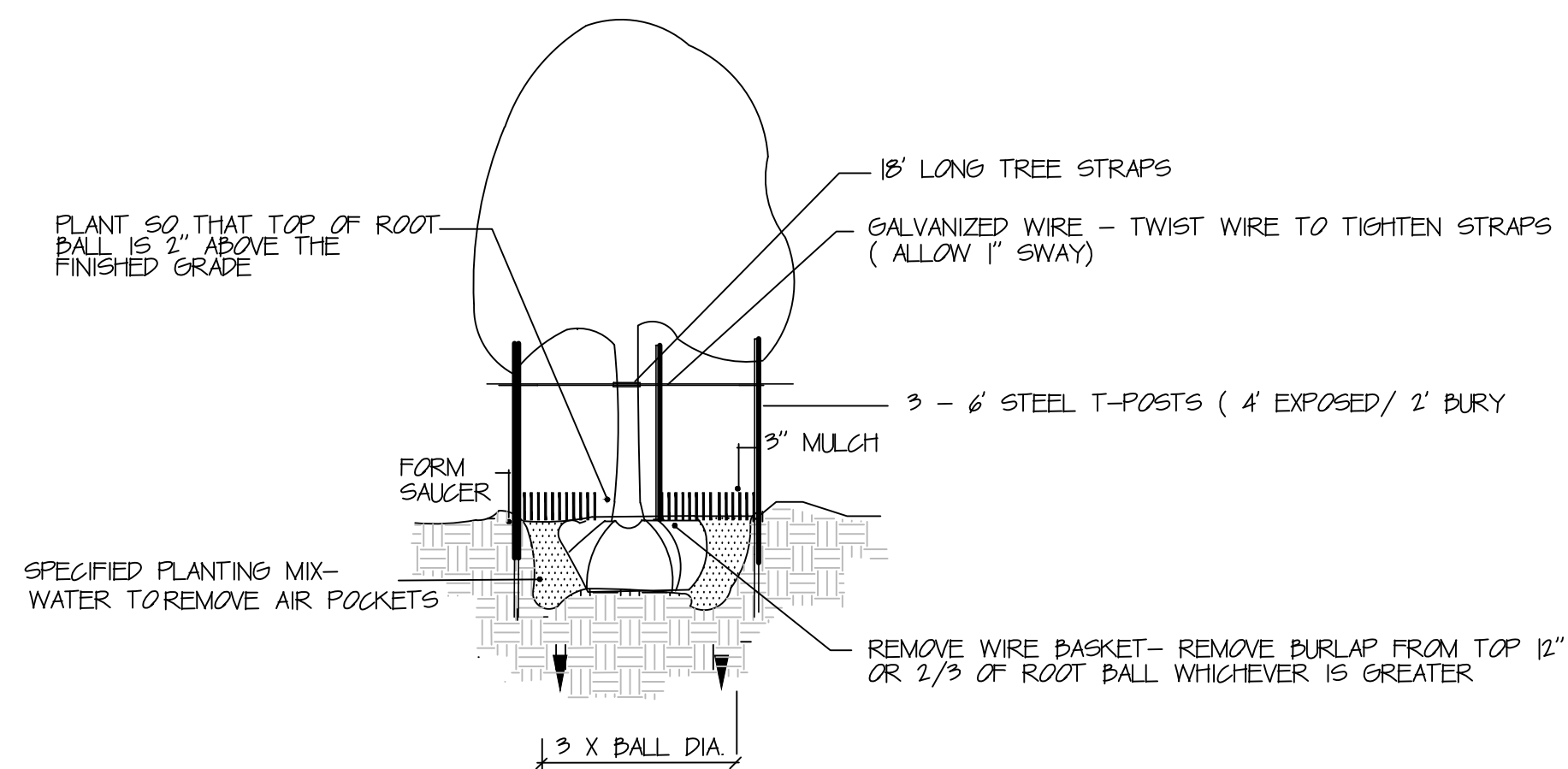
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IRRIGATION PLAN

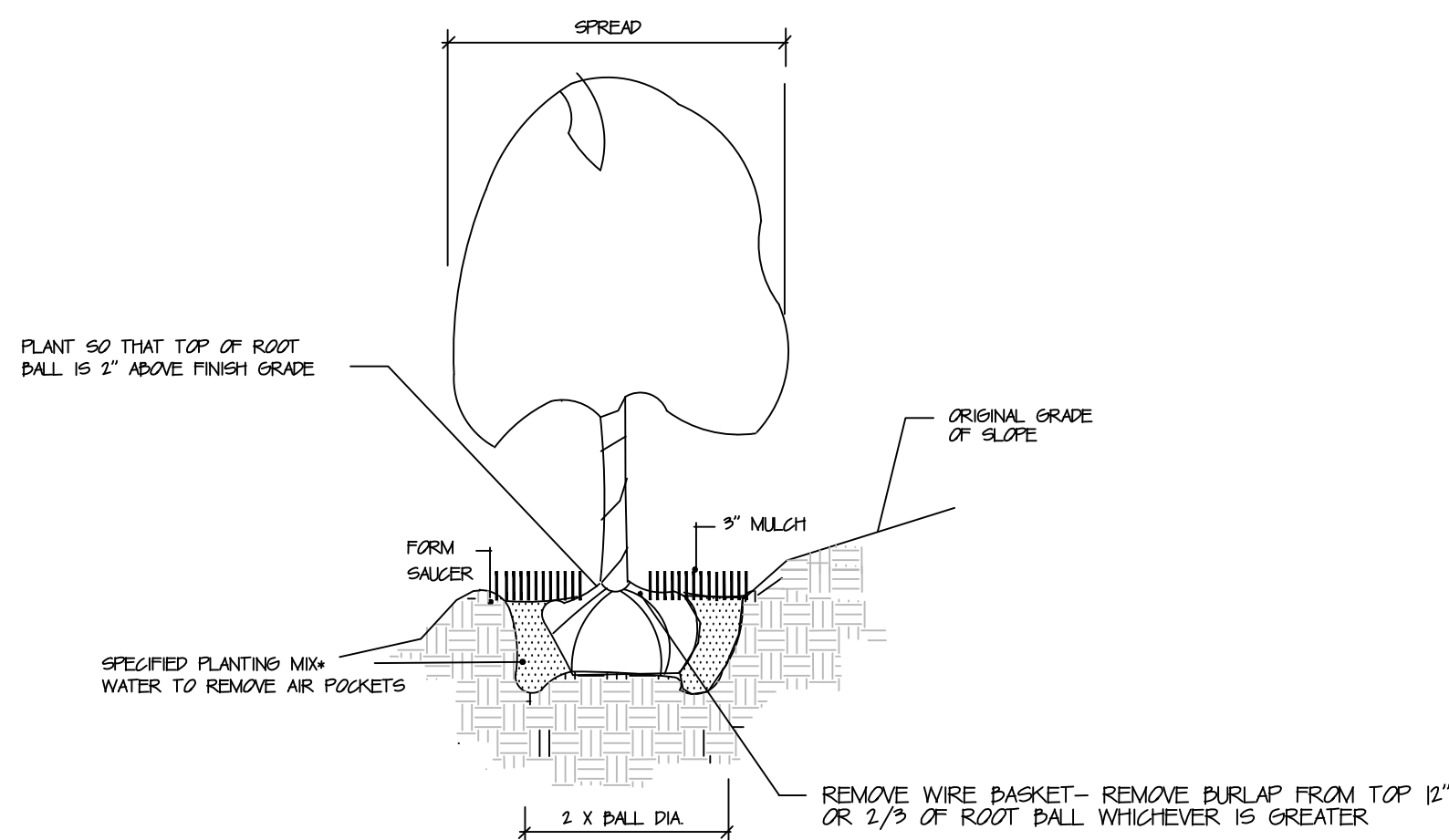
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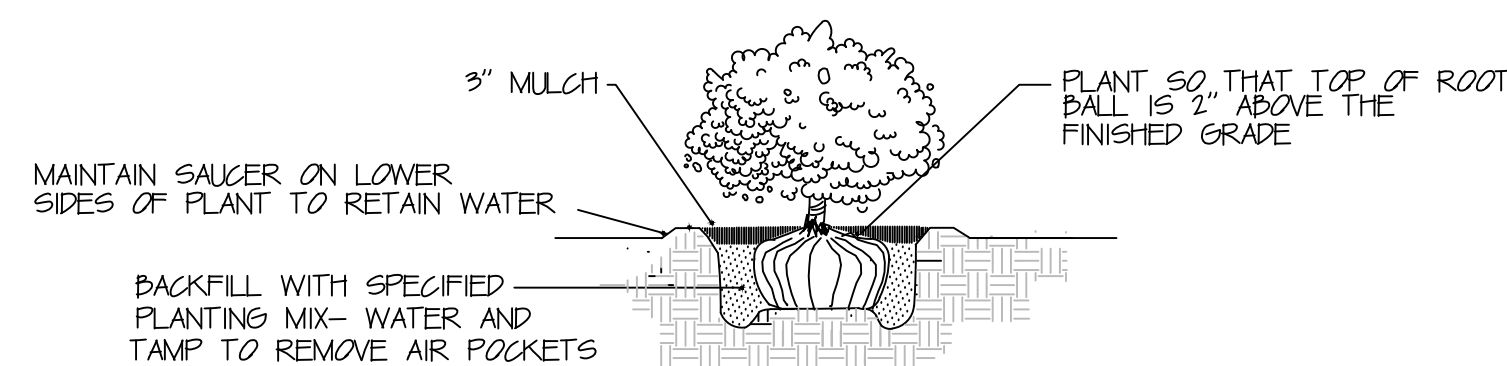
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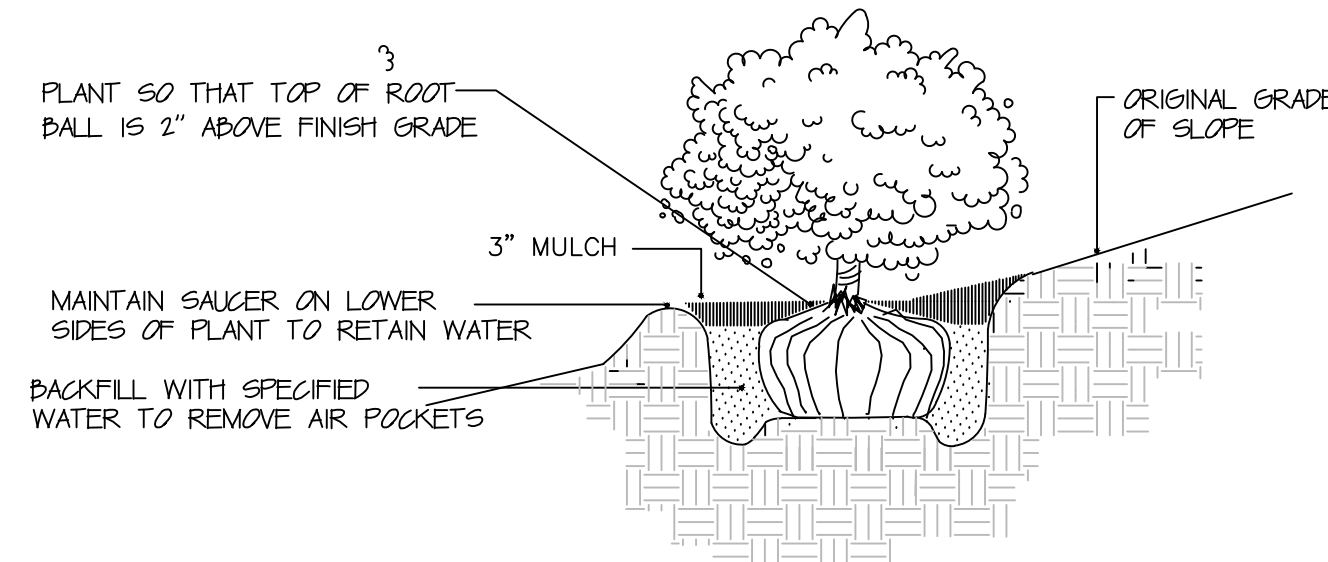
TREE PLANTING ON SLOPES
NOT TO SCALE

PLANTING MIX*

* SPECIFIED PLANTING MIX TO CONSIST OF 1 PART COMPOST TO 4 PARTS TOPSOIL - PLANTING MIX TO BE INCLUDED IN COST OF FURNISHING AND INSTALLATION OF PLANT MATERIAL.



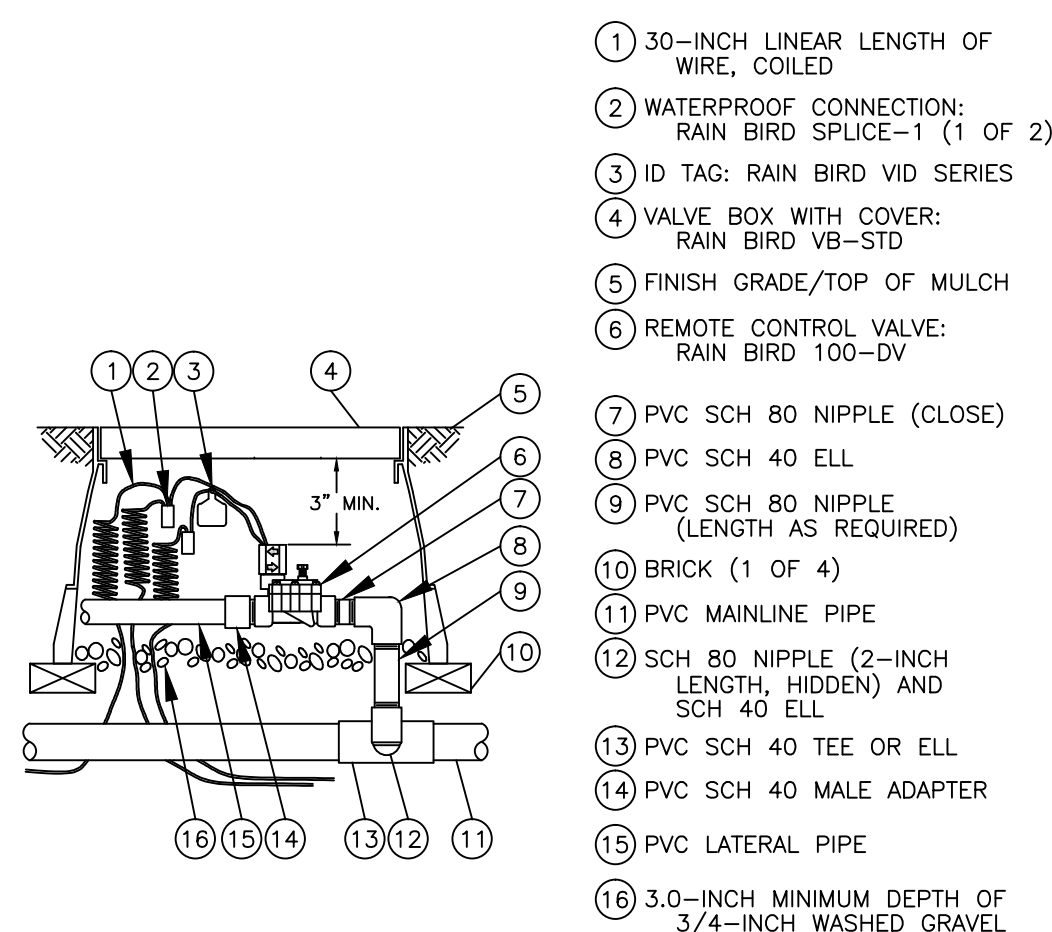
SHRUB PLANTING
NOT TO SCALE



SHRUB PLANTING ON SLOPES
NOT TO SCALE

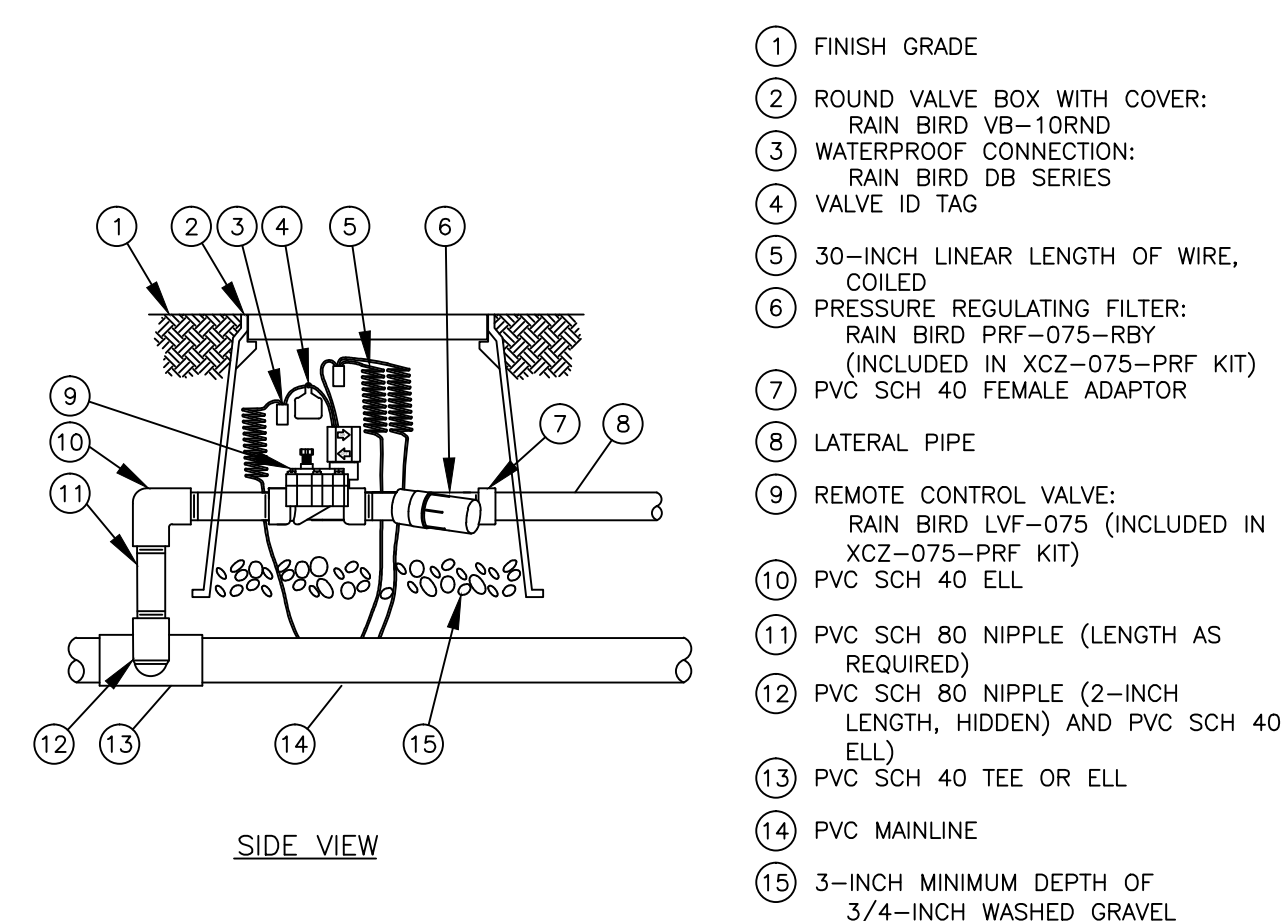
PLANTING MIX*

* SPECIFIED PLANTING MIX TO CONSIST OF 1 PART COMPOST TO 4 PARTS TOPSOIL - PLANTING MIX TO BE INCLUDED IN COST OF FURNISHING AND INSTALLATION OF PLANT MATERIAL.



D ELECTRIC REMOTE-CONTROL VALVE
N.T.S. DV SERIES 075-DV OR 100-DV
1-20-09

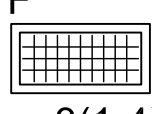
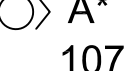
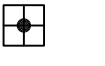
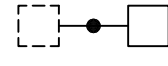
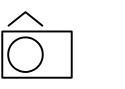
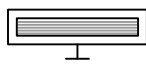
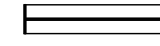
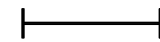
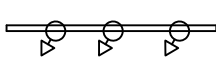
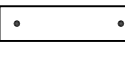
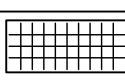
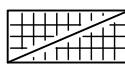
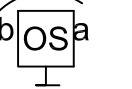
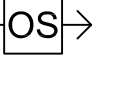
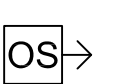
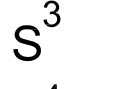
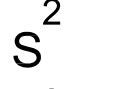
V-075 OR 100-DV DWG

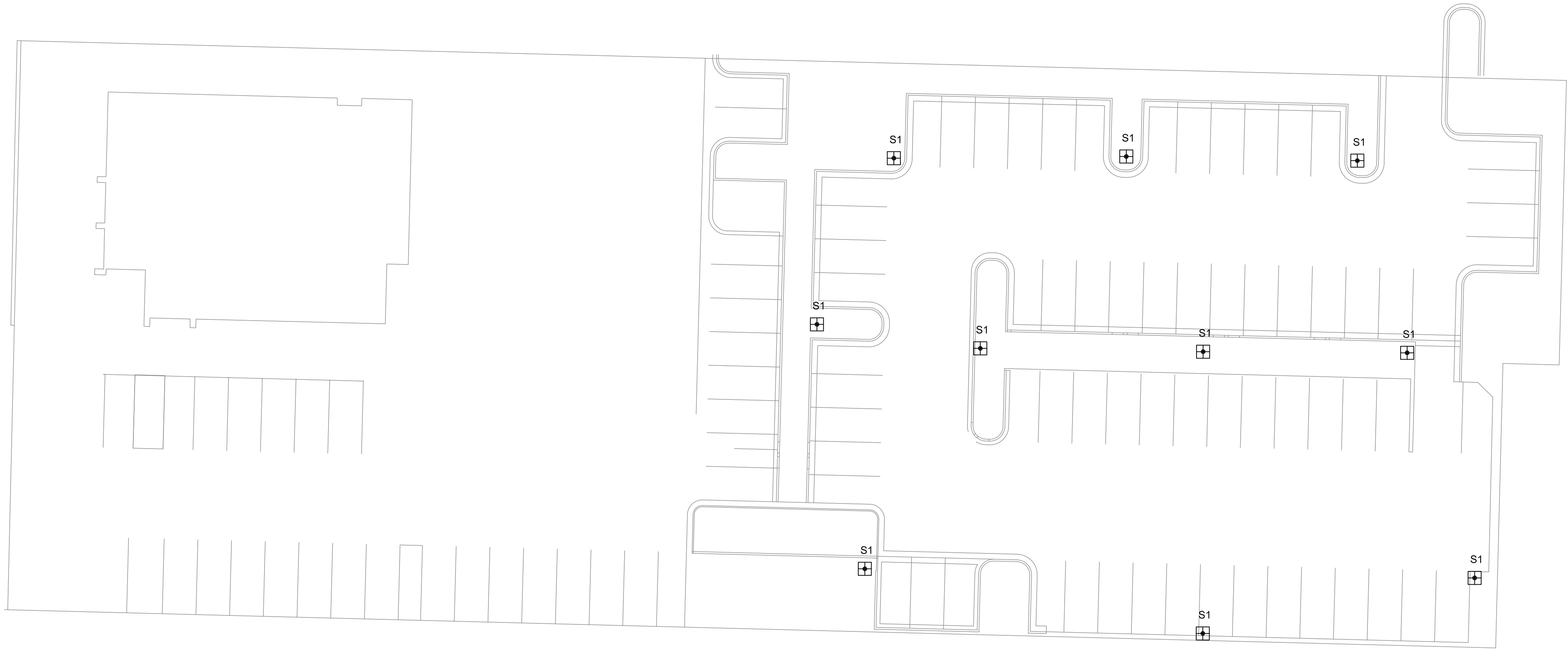


XCZ-075-PRF 3/4" CONTROL
ZONE KIT IN ROUND VALVE BOX
N.T.S. OPTION 2
1-25-10

XCZ-075-PRF Option 2 DWG

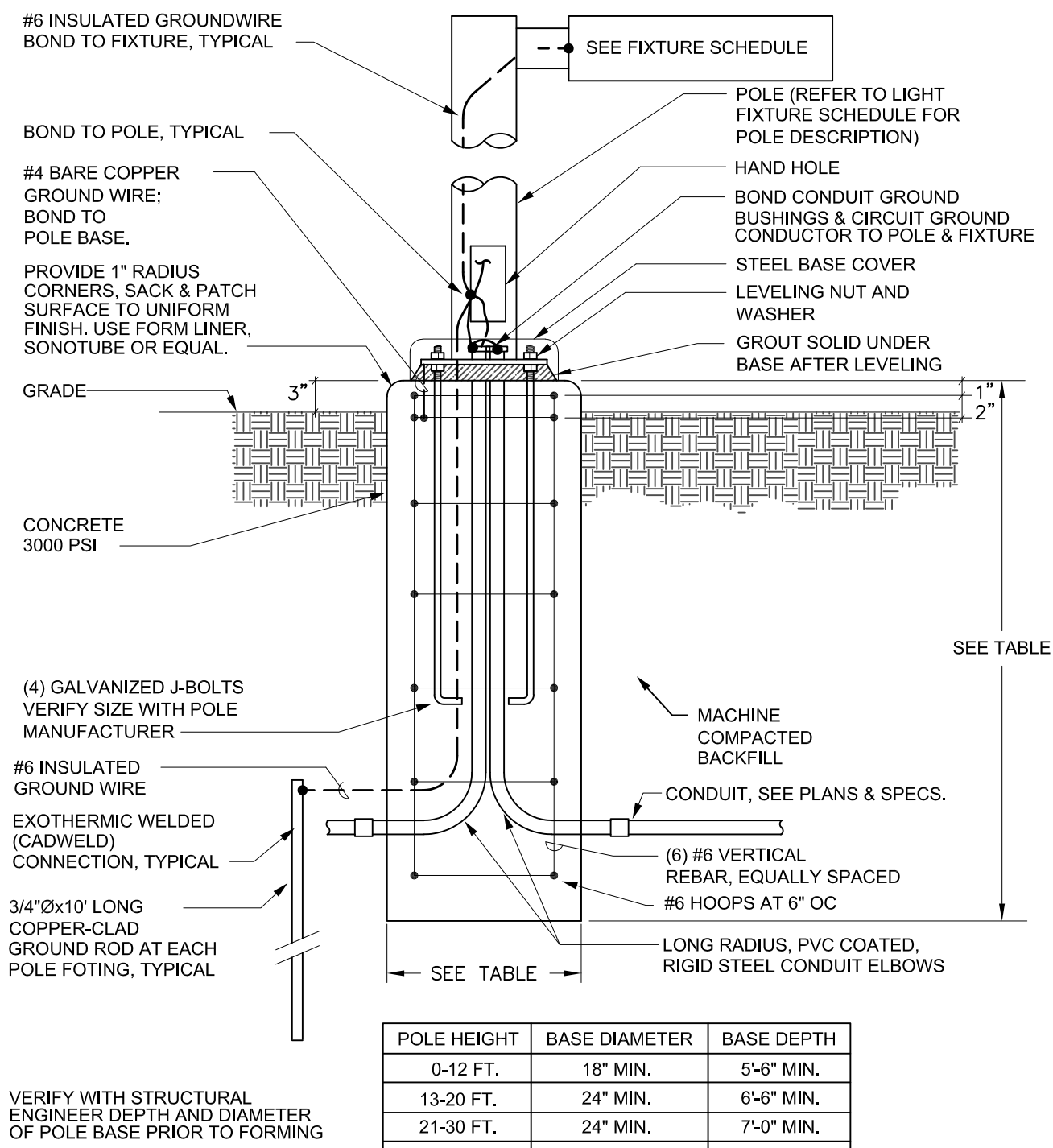
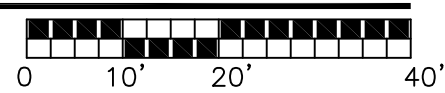
APPENDIX 9 LIGHTING DRAWINGS

GENERAL NOTES		LIGHTING		SWITCHING & CONTROLS	
1. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY FOR A COMPLETE AND FUNCTIONING LIGHTING SYSTEM. 2. THE GENERAL CONTRACTOR, ELECTRICAL CONTRACTOR(S), AND LOW VOLTAGE CONTRACTOR(S) SHALL REFER TO THE LIGHTING PLANS, SCHEDULES, AND DETAILS HEREIN, INCLUDING ANY ATTACHED LIGHTING SPECIFICATIONS AND PRODUCT CUTSHEETS FOR ADDITIONAL INFORMATION. 3. THE CONTRACTOR SHALL LAY OUT ALL LIGHT FIXTURE LOCATIONS AND TRANSFORMER LOCATIONS PRIOR TO INSTALLATION FOR APPROVAL BY ALPENGLOW LIGHTING DESIGN, INC., ARCHITECT, INTERIOR DESIGNER, ENGINEER(S), AND OWNER. 4. MATERIALS AND INSTALLATION SHALL COMPLY WITH CODES, LAWS, AND ORDINANCES OF FEDERAL, STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION. 5. MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY UL., ETL, GSA OR ANOTHER RECOGNIZED TESTING LAB. 6. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE ELECTRICAL WORK. 7. THE CONTRACTOR SHALL PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES AND UTILITY COMPANIES ANY SHOP DRAWINGS AS REQUIRED BY THESE AGENCIES FOR THEIR APPROVAL. 8. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT, OWNER, AND LIGHTING DESIGNER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION. 9. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING AND STANDARDS AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT. 10. ALL MATERIALS, AND EQUIPMENT SHALL BE ERECTED, INSTALLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS. 11. ALL CUTTING, DRILLING, AND PATCHING OF MASONRY, STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THIS CONTRACTOR IN ORDER THAT HIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTION OF THE ARCHITECT, ENGINEER, OR THEIR REPRESENTATIVE. 12. ALL MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED. 13. EXCEPT AS NOTED OTHERWISE, ALL WORK REQUIRED FOR THE INSTALLATION AS SHOWN ON DRAWINGS INCLUDING LABOR, EQUIPMENT, AND MATERIALS SHALL BE IN STRICT COMPLIANCE WITH THE BUILDING STANDARDS. 14. COMMERCIAL APPLICATIONS: THE CONTRACTOR MAY PROVIDE COMPLETE METAL RACEWAY SYSTEMS AND ENCLOSURES FOR ALL WIRING THROUGHOUT THE EXTENT OF THE REQUIRED SYSTEM. RESIDENTIAL APPLICATIONS MAY USE NON METALLIC WIRE (ROMEX). 15. MC CABLE MAY BE USED FOR ALL BRANCH CIRCUITING. MC CABLE SHALL NOT ENTER INTO PANELBOARDS. ELECTRICAL CONTRACTOR SHALL UTILIZE EMT OUT OF THE PANELBOARD INTO A FULL BOX, GUTTER, OR SIMILAR DEVICE, AND THEN RUN MC CABLE FOR THE REMAINDER OF BRANCH CIRCUITING RUN. MINIMUM RACEWAY SIZE SHALL BE 1/2" UNLESS OTHERWISE INDICATED. MC CABLE MAY ONLY BE USED IN CONCEALED LOCATIONS. 16. FLEXIBLE CONDUIT CONNECTIONS TO RECESSED LIGHTING FIXTURES SHALL BE MADE WITH FLEXIBLE STEEL CONDUIT, 3/4" MINIMUM. 17. ALL NEW CIRCUITS SHALL HAVE A GROUND WIRE INSTALLED. 18. ALL WIRE NOT INSTALLED IN CONDUIT AND IN THE CEILING SHALL BE PLENUM RATED. 19. IN SUSPENDED CEILINGS, SUPPORT CONDUIT AND JUNCTION BOXES DIRECTLY FROM THE STRUCTURAL SLAB, DECK, OR FRAMING PROVIDED FOR THAT PURPOSE. LIGHTING BRANCH CIRCUIT CONDUITS SHALL NOT BE CLIPPED TO THE CEILING SUPPORT WIRES OR SPLINE UNLESS THE CEILING HAS BEEN SPECIFICALLY DESIGNED FOR THAT PURPOSE. 20. SHOULD ACTUAL FIELD CONDITIONS REQUIRE INDICATED CIRCUIT DESIGNATIONS TO VARY, INDICATE THE CIRCUIT NUMBER USED ON THE AS-BUILT DRAWINGS. 21. ALL FACE PLATE AND DEVICE COLORS SHALL BE APPROVED BY ARCHITECT, INTERIOR DESIGNER, AND OWNER. 22. ALL BATTERY BACKUP EMERGENCY LIGHTING AND EXIT LIGHTS SHALL BE WIRED AHEAD OF ANY LOCAL SWITCHING, UNLESS OTHERWISE NOTED. 23. THE CONTRACTOR SHALL VERIFY THE CEILING TYPE BEFORE ORDERING LIGHTING FIXTURES. 24. THE CONTRACTOR IS TO REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ALL FIRE-RATED PENETRATION INSTALLATION REQUIREMENTS. 25. THE CONTRACTOR IS TO NOTIFY THE ARCHITECT PRIOR TO INSTALLING ANY FIXTURES WITHIN A FIRE RATED CEILING OR WALL. FIRE RATING MUST BE MAINTAINED FOR THIS TYPE OF INSTALLATION WITH DRYWALL TENTING OR LISTED FIREBOX ASSEMBLY. 26. BIDS SHALL HAVE LINE-ITEM PRICING. BIDS WHICH SHOW LOT PRICING FOR LIGHTING FIXTURES AND/OR LIGHTING CONTROLS SHALL BE REJECTED WITHOUT CONSIDERATION. BIDDER SHALL HAVE FIVE (5) BUSINESS DAYS TO RESUBMIT LINE-ITEM PRICING. AFTER FIVE (5) BUSINESS DAYS, BID SHALL BE CONSIDERED TO BE NULL AND VOID AND WILL BE REJECTED. BIDDERS WARRANT THEIR COMPLIANCE WITH THE ROBINSON-PATMAN AND CLAYTON ACTS. 27. SUBMIT PRODUCT DATA DESCRIBING FIXTURES, LAMPS, BALLASTS, AND EMERGENCY LIGHTING UNITS WITHIN 30 DAYS OF DIRECTION TO PROCEED FROM THE OWNER. ALL NOTATIONS SHALL BE .PDF FORMAT OR LASER PRINTED. ARRANGE PRODUCT DATA FOR FIXTURES IN ORDER OF FIXTURE DESIGNATION. AFTER 30 DAYS, THE PROFESSIONAL AMOUNT OF TIME TO CONSIDER ANY SUBMITTAL SHALL BE PAID FOR BY THE CONTRACTOR. SUCH PAYMENT DOES NOT GUARANTEE APPROVAL. COSTS INCURRED TO THE PROJECT DUE TO PROBLEMS ARISING FROM LATE SUBMITTALS ARE TO BE PAID BY THE CONTRACTOR. TWO (2) RESUBMITTALS SHALL BE ALLOWED PER PROJECT. AFTER TWO (2) RESUBMITTALS, THE PROFESSIONAL TIME TO CONSIDER ANY RESUBMITTALS SHALL BE PAID FOR BY THE CONTRACTOR. SUCH PAYMENT DOES NOT GUARANTEE APPROVAL. COSTS INCURRED TO THE PROJECT DUE TO PROBLEMS ARISING FROM MULTIPLE RESUBMITTALS ARE TO BE PAID FOR BY THE CONTRACTOR. 28. THE EXPRESSION "...OR AS APPROVED" OR "...OR APPROVED EQUAL" OR "...OR EQUAL" MEANS THAT COMPETING PRODUCTS OF A SIMILAR NATURE ARE THOUGHT TO EXIST. THE CONTRACTOR IS ENCOURAGED TO PROPOSE SUBSTITUTION REQUESTS OF SUCH EQUIVALENT PRODUCTS AS LONG AS THE PRODUCT CONFORMS TO ALL PARTS OF THIS SPECIFICATION. WHERE THE ABOVE NOTED EXPRESSIONS ARE OMITTED OR EXPRESSION SUCH AS "NO SUBSTITUTIONS" APPEARS THE CONTRACTOR SHALL PROVIDE ONLY THE PRODUCT INDICATED. 29. SUBSTITUTION REQUESTS AND VALUE ENGINEERING RECOMMENDATIONS FROM THE CONTRACTOR		WILL BE CONSIDERED IF SUBMITTED WITHIN 30 DAYS OF DIRECTION TO PROCEED FROM THE OWNER. EACH LUMINAIRE SUBSTITUTION REQUEST SHALL INDICATE THE ESTIMATED OR POTENTIAL SAVINGS TO THE OWNER FOR THAT LUMINAIRE FROM THE SPECIFIED DESIGN. AFTER 30 DAYS, THE PROFESSIONAL TIME TO CONSIDER ANY SUCH REQUEST SHALL BE PAID FOR BY THE CONTRACTOR. SUCH PAYMENT DOES NOT GUARANTEE APPROVAL. SUBMITTAL OF ANY SUBSTITUTION REQUEST OR VALUE ENGINEERING RECOMMENDATION SHALL NOT BE CONSTRUED AS APPROVAL IN ANY WAY. THE OWNER, ARCHITECT AND LIGHTING DESIGNER RESERVE THE RIGHT TO REJECT ANY SUBSTITUTION OR VALUE ENGINEERING RECOMMENDATION WITHOUT EXPLANATION. 31. CONTRACTOR MAY BE REQUIRED TO PROVIDE TABLE TOP SAMPLES AND/OR A FAIR MOCKUP OF SPECIFIED FIXTURE AND PROPOSED ALTERNATE. THIS REQUIREMENT SHALL BE EXERCISED AT THE OPTION OF OWNER, ARCHITECT, OR LIGHTING DESIGNER. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL COSTS INCURRED BY SUBSTITUTION REQUEST SAMPLE AND/OR MOCKUP PRODUCTION AND REVIEW INCLUDING PROFESSIONAL TIME AND TRAVEL EXPENSES. 32. SUBSTITUTIONS OR VALUE ENGINEERING RECOMMENDATIONS SHALL ACCOMMODATE THE IMPACT ON OTHER SPECIFIED SYSTEMS OR PRODUCTS, SUCH AS BALLASTS, DRIVERS, AND DIMMING SYSTEMS. THE LIGHTING SYSTEMS ARE DESIGNED AS COMPLETE AND IT IS THE CONTRACTOR'S RESPONSIBILITY FOR ANY IMPACTS OF ANY CHANGE RECOMMENDED. CONTRACTOR SHALL SUBMIT PRODUCTS WHICH RESULT IN A FULLY FUNCTIONING LIGHTING SYSTEM WHICH OPERATES AS ORIGINALLY DESIGNED. 33. SUBSTITUTION REQUESTS AND VALUE ENGINEERING RECOMMENDATIONS SHALL BE DESCRIBED ON CSI STANDARD FORMS AND SHALL INCLUDE PRODUCT CUTSHEET. PRODUCTS SUBMITTED WITHOUT PROPER CSI FORMS SHALL NOT BE APPROVED. 34. WHEN REQUESTING A SUBSTITUTION, CONTRACTOR SHALL PROVIDE UNIT AND EXTENDED PRICING FOR SPECIFIED LIGHT FIXTURE, UNIT AND EXTENDED PRICING FOR PROPOSED ALTERNATE, AND UNIT AND EXTENDED DELTA SAVINGS TO OWNER TO BE REALIZED BY USING PROPOSED ALTERNATE. CONTRACTOR SHALL PROVIDE UNIT PRICING FOR EACH FIXTURE TYPE SPECIFIED TO PROVIDE BASELINE COMPARISON FOR SUBSTITUTION REQUEST. CONTRACTOR SHALL GUARANTEE PRICING ON ALL FIXTURE TYPES FOR WHICH A SUBSTITUTION REQUEST HAS BEEN GRANTED. THIS PRICE GUARANTEE SHALL BE PER UNIT AND SHALL BE MAINTAINED THROUGH THE END OF CONSTRUCTION REGARDLESS OF QUANTITY PURCHASED. 35. EQUIPMENT DELIVERY LEAD-TIME SHALL NOT BE HELD AS A VALID REASON FOR REQUESTING FIXTURE SUBSTITUTION UNLESS FIXTURE LEAD-TIME FROM SPECIFIED MANUFACTURER IS IN EXCESS OF 14 WEEKS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE NECESSARY EQUIPMENT LEAD TIMES. DELIVER SUBMITTALS FOR REVIEW IN A TIMELY FASHION, AND PLACE ORDERS ACCORDINGLY TO ENSURE TIMELY DELIVERY. 36. CONTRACTOR SHALL ADJUST AIMABLE LUMINARIES AS DIRECTED BY LIGHTING DESIGNER. CONTRACTOR SHALL PROVIDE MANPOWER AND EQUIPMENT, INCLUDING LADDERS, LIFTS, TOOLS, ETC., AND ALLOW FOR THIS ACTIVITY TO OCCUR DURING PREMIUM NIGHT AND/OR WEEKEND TIME. CONTRACTOR SHALL INCLUDE A MINIMUM OF 20 HOURS IN HIS BID FOR THIS EFFORT. 37. CONTRACTOR SHALL CONCEAL REMOTE POWER SUPPLIES AND TRANSFORMERS IN ATTICS, CRAWL SPACES, OR SIMILAR ACCESSIBLE LOCATIONS. MAXIMUM WIRE RUN TO THE END OF THE FIXTURE SHALL NOT EXCEED 75 FEET. 38. THE GENERAL CONTRACTOR, ELECTRICAL CONTRACTOR(S), AND LOW VOLTAGE CONTRACTOR(S) SHALL ASK QUESTIONS VIA TELEPHONE, EMAIL, OR WRITTEN CORRESPONDENCE PRIOR TO MAKING A COMPLETE MESS OF THINGS. CONTRACTORS WHO FAIL TO ASK QUESTIONS SHALL BE FED TO THE RAVENOUS BUGBLATTER BEAST OF TRAIL. 39. THE GENERAL CONTRACTOR SHALL CONFIRM THAT ALL BIDDERS AND SUBCONTRACTORS HAVE READ THE PRECEDING THIRTY-EIGHT NOTES BY SUBMITTING A SCAN OR PHOTOGRAPH OF THIS NOTE, SIGNED BY THE BIDDER(S). BIDDERS WHO FAIL TO SUBMIT THIS NOTE SHALL HAVE THEIR BIDS REJECTED WITHOUT CONSIDERATION. 40. THE GENERAL CONTRACTOR SHALL PROVIDE A MINIMUM OF TWELVE (12) PERFORATED PASTRY UNITS AND COFFEE AT ALL CONSTRUCTION MEETINGS. DECAFFEINATED COFFEE SHALL BE REJECTED WITHOUT CONSIDERATION. THE CONTRACTOR SHALL PROTECT THE CONSTRUCTION DOCUMENTS FROM DIRECT CONTACT WITH THE PERFORATED PASTRY UNITS.	SYMBOL  RECESSED LENSED TROFFER (SIZE/SHAPE VARIES) RECESSED PARABOLIC TROFFER (SIZE/SHAPE VARIES) SURFACE LENSED LUMINAIRE (SIZE/SHAPE VARIES) SURFACE PARABOLIC TROFFER (SIZE/SHAPE VARIES) SHADING OF ANY LUMINAIRE INDICATES CONNECTION TO ALTERNATE POWER SOURCE (EMERGENCY, UPS, STANDBY, ETC.) PER CIRCUITING INDICATED SUSPENDED LINEAR PENDANT (SIZE/SHAPE VARIES) DECORATIVE PENDANT (SIZE, SHAPE VARIES) DOWNLIGHT OR POINT SOURCE - SURFACE, RECESSED CEILING MTD. DIRECTIONAL OR WALLWASH - SURFACE, RECESSED CEILING MTD. RECESSED BATH FAN OR FAN/LIGHT SURFACE OR PENDANT CEILING FAN - PROVIDE APPROPRIATE BRACED JUNCTION BOX LINEAR LOW VOLTAGE COVE OR UNDERCABINET TRACK OR LOW VOLTAGE LIGHTING WITH HEADS STRIPLIGHT STRIPLIGHT WITH REFLECTOR OR LENS SCONCE, "FOOT" INDICATES WALL MOUNTING. VERIFY HEIGHT WITH ARCHITECT, INTERIOR DESIGNER. WALL MOUNTED LINEAR (SIZES VARY) RECESSED STEPLIGHT BATTERY POWER EMERGENCY UNIT EQUIPMENT (SEE LUMINARE SCHEDULE FOR QUANTITY OF HEADS) - WALL, CEILING MOUNTED. ILLUMINATED EXIT SIGN, SHADED QUADRANT INDICATES FACES, ARROWS AS SHOWN FLOOR OR GRADE MOUNTED BOLLARD FLUSH GRADE POINT SOURCE POLE MOUNTED LUMINAIRE- SINGLE OR DUAL HEAD POLE TOP MOUNTED LUMINAIRE LUMINAIRE MARKING CONVENTIONS: LETTER DESIGNATION FOLLOWED BY SEQUENTIAL NUMBER F* = FLUORESCENT A* = INCANDESCENT H* = HID L* = LED D* = DECORATIVE (NUMBERED BY ROOM, i.e. D107) S* = SITE SPECIFIC X* = EXIT SIGN E* = EMERGENCY SPECIFIC RESIDENTIAL CIRCUITING: 107# = ARCHITECTURAL ROOM NUMBER ###1 = SEQUENTIAL CIRCUIT IN ROOM. COMMERCIAL CIRCUITING: 3(1-4) = CIRCUIT NUMBER/CONTROLLED BY LOW VOLTAGE CONTROL (ZONE INDICATED WITHIN PARENTHESIS). SEE LIGHTING CONTROL SCHEDULE.	SYMBOL  S_a S² S³ S⁴ S^K D S_{JAMB} S^{TS} S^{XP} S^{WP} S^{FAN} S_# PC TC OS OS OS➔ ←OS➔ OS_A LCP # T	DESCRIPTION SINGLE POLE SWITCH (SUPERScript DENOTES SIMILARLY MARKED LUMINAIRES CONTROLLED TOGETHER. NO SUBSCRIPT INDICATES SWITCH TO CONTROL ALL LIGHTING WITHIN ROOM, U.O.N.). TWO POLE SWITCH THREE WAY SWITCH FOUR WAY SWITCH KEY OPERATED SWITCH DIMMER SWITCH. NUMBER INDICATES WATTAGE RATING. IF NOT SHOWN THEN EQUAL TO LOAD. JAMB SWITCH TIMER SWITCH EXPLOSION PROOF SWITCH WEATHERPROOF SWITCH LINE VOLTAGE, VARIABLE SPEED FAN CONTROL LOCATE ADJACENT TO ADJACENT TO LIGHT SWITCHES MULTI-BUTTON LIGHTING CONTROL SWITCH INDIVIDUAL SWITCH CONFIGURATION VARIES. PHOTOCELL TIME CLOCK OCCUPANCY SENSOR - WALL MOUNTED 360 DEGREE OCCUPANCY SENSOR - CEILING MTD. 180 DEGREE OCCUPANCY SENSOR - CEILING MTD. CORRIDOR/AISLE OCCUPANCY SENSOR - CEILING MOUNTED OCCUPANCY SENSOR & SWITCH GANGED UNDER A COMMON COVER PLATE. OCCUPANY SENSOR TO CONTROL ALL LIGHT FIXTURES IN ROOM WITH 1/2 LIGHT REDUCTION CONTROLLED BY SWITCH, DESIGNATED BY LETTER. LIGHTING CONTROL PANEL AND ASSOCIATED COMPONENTS. PROVIDE 120V OR 277V CONTROL POWER AS REQUIRED OR AS INDICATED. REMOTE MOUNTED LINE TO LOW-VOLTAGE FUSED TRANSFORMER OR POWER SUPPLY. CONCEAL FROM VIEW.
PERMIT original issue date: 12/11/17 revision dates: 08/06/19					
VH 20TH STREET PARKING 318 AND 410 GLENWOOD SPRINGS, COLORADO					
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LIGHTING LEGEND					
L-000					



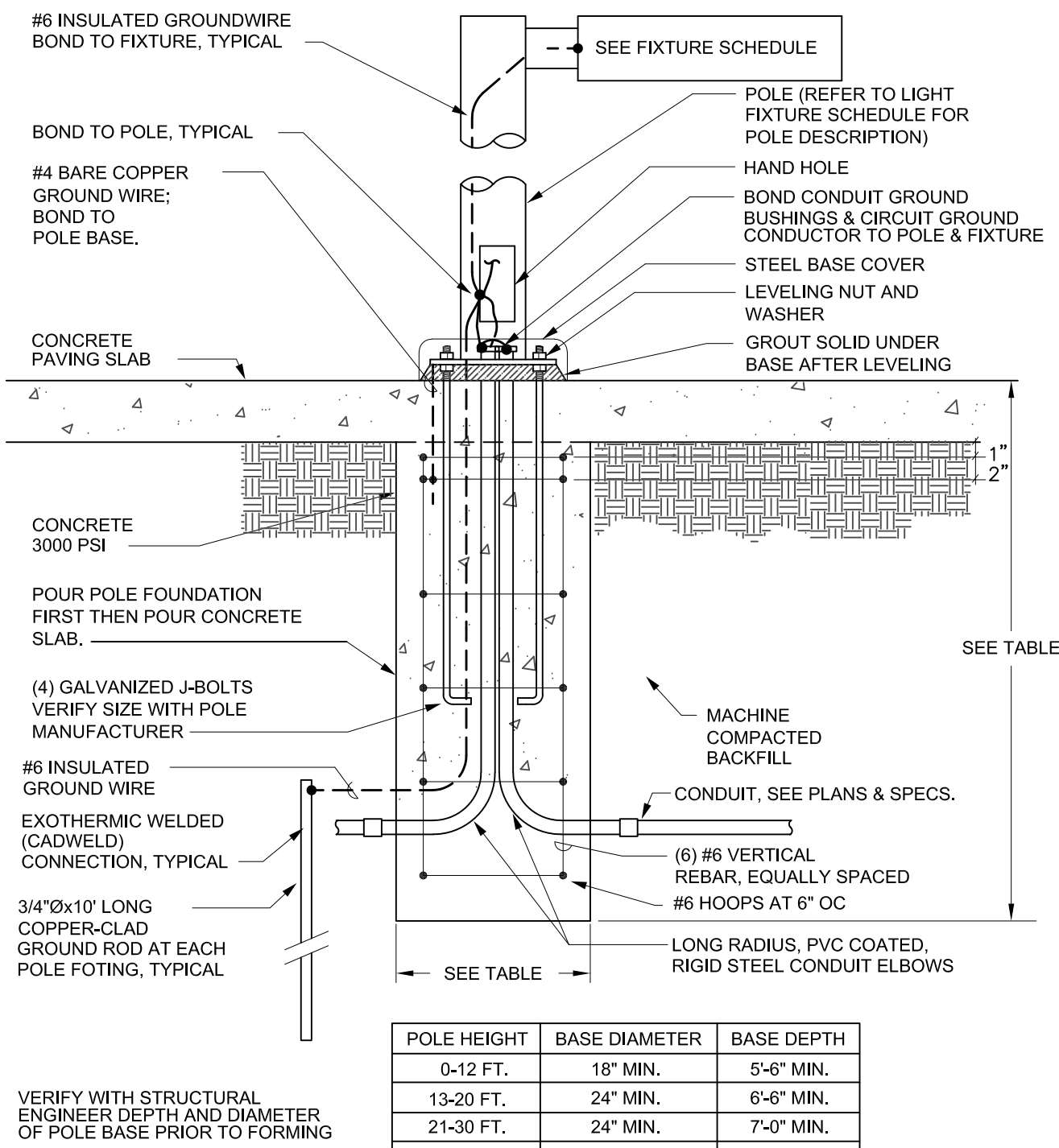
1 LIGHTING PLAN

SCALE: 1" = 20'-0"



2 OUTDOOR NON-TRAFFIC AREA
POLE BASE INSTALLATION

SCALE: NONE



3 OUTDOOR CONCRETE SLAB
POLE BASE INSTALLATION

SCALE: NONE

LUMINAIRE SCHEDULE												VVH PARKING	
TYPE	SPECIFICATION / DESCRIPTION		LAMP INFORMATION			TOTAL WATTS	MANUFACTURER	CATALOG NUMBER	VOLT	MOUNTING	RECESS DEPTH	REMARKS	
			TYPE	QTY.	LAMP TYPE COLOR TEMP CRI								
S1	SITE LUMINAIRE, INTEGRAL LED, CAST ALUMINUM HOUSING, 4.5" DIAMETER POLE INTEGRAL POWER SUPPLY, POWDER COAT FINISH 16" POLE (TO TOP OF LUMINAIRE).		LED	1	LED 3500°K	60	LOUIS POULSEN	LPNEST-60LED3000K	120	SITE		MATCH EXISTING	
NOTES: 1. CONTRACTOR TO CONFIRM CEILING TYPE AND THICKNESSES PRIOR TO ORDERING. 2. CONTRACTOR TO CONFIRM VOLTAGE OF BRANCH CIRCUITS AND LUMINAIRES PRIOR TO ORDERING. 3. 4.													A. SHADING OF ANY FIXTURE DESIGNATES EMERGENCY CIRCUIT. B. C. D.

VVH 20TH STREET PARKING
318 AND 410
GLENWOOD SPRINGS, COLORADO



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LIGHTING
PLAN

L-100

LP Nest

Project name:

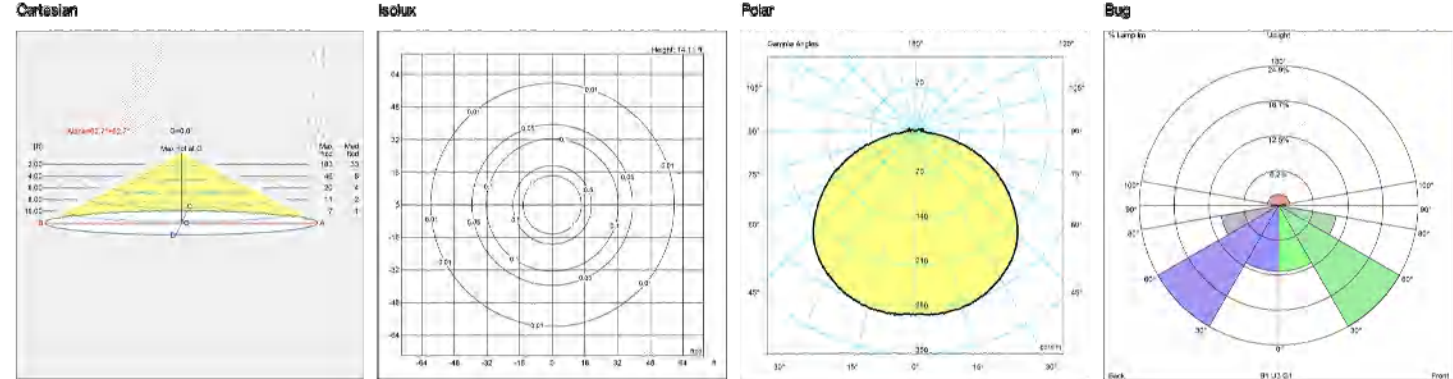
Project type:

Notes:

29.5"

13.0"

Light distribution diagrams



Variant options

Light source	Voltage frequency	Color	Transition to pole	Lighting control
SRV LED3000K	120-277V/60Hz	☒ Graph	T-EBM-LA III	Dim 0-10V
SRV LED3000K		☐ Flat paint alu		

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poulsen**

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Design
System Acrofix

Finish
Graph, flat paint alu

Voltage
120-277V/60Hz

Weight
Min 21.150 lbs Max 21.150 lbs

Specification notes
© Consult factory for product specifications for Photo Sensor and Wireless Control options.

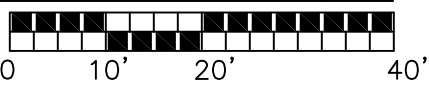
**louis
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1 LIGHTING CALCULATIONS (EXISTING + NEW AREA)

SCALE: 1" = 20'-0"

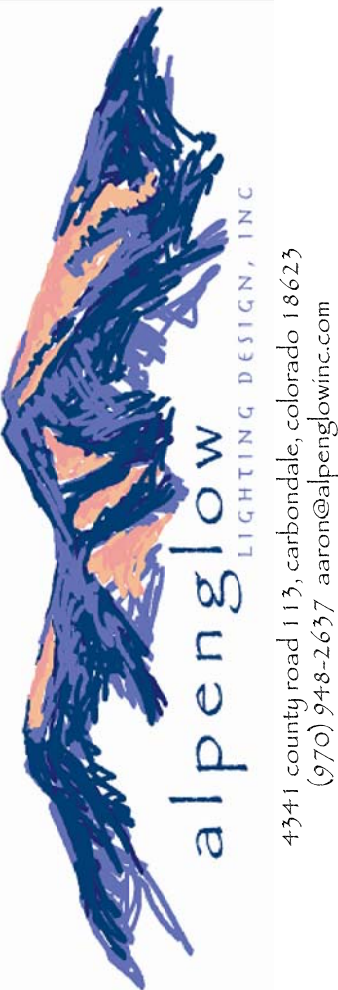


Luminaire list (Site 1)								
Index	Manufacturer	Article name	Item number	Fitting	Luminous flux	Light loss factor	Connected load	Quantity
1	Louis Poulsen Lighting	Nest LED 3000K Alu		1xLED 3000K	3362 lm	0.80	53 W	15
#	Name	Parameter	Min	Max	Average	Min/average	Min/max	
1	site	Perpendicular illuminance	0.000 fc	2.94 fc	0.36 fc	0.00	0.00	

VVH 20TH STREET PARKING

318 AND 410

GLENWOOD SPRINGS, COLORADO



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**LIGHTING
CALCULATIONS**

L-101

APPENDIX 10 GEOTECHNICAL REPORT

November 20, 2017

Sopris Engineering
Attn: Stephanie Helfenbein
502 Main Street, Suite A3
Carbondale, Colorado 81623
stephanie@sopriseng.com

Project No. 17-7-730

Subject: Subsoil Study for Pavement Section Design, Proposed Parking Lot, South of 318
and 410 20th Street and East of First National Bank, Glenwood Springs, Colorado

Dear Ms. Helfenbein:

As requested, H-P/Kumar performed a subsoil study for design of pavement sections at the subject site. The study was conducted in accordance with our agreement for geotechnical engineering services to Sopris Engineering, dated September 28, 2017. The data obtained and our recommendations based on the proposed construction and subsurface conditions encountered are presented in this report. Hepworth-Pawlak Geotechnical (now H-P/Kumar) previously conducted subsurface exploration at the subject site which has been used to supplement the current subsoil study information.

Proposed Construction: The proposed parking lot will be asphalt pavement and located on the property as shown on Figure 1. The existing parking lot in the south half will be reconfigured. Development plan, traffic loadings were not provided to us at the time of our study. The existing pavement could be replaced or overlaid. Cut and fill depths where needed are assumed to be relatively minor and range between about 2 to 3 feet. Traffic loading is assumed to be relatively light and mainly from passenger vehicles but there could be heavier vehicles in the entryway area from the existing bank parking and driveway.

If development conditions or traffic loadings are significantly different from those described above, we should be notified to re-evaluate the recommendations presented in this report.

Site Conditions: The south half of the site is developed with an asphalt paved parking lot with access from the First National Bank property. About the west half of this area was previously occupied by a commercial building which was razed for the bank building and existing parking lot development. The north half of the site is vacant and vegetated with grass, weeds and

scattered trees. Low retaining walls were used for grading of the existing parking lot, otherwise the ground surface across the site is gently sloping down to the southwest with about 10 feet of total elevation difference.

Geologic Conditions: The upper, eastern part of the property is mapped as being impacted by a moderate debris flow potential transitioning to a slight debris flow hazard in the western part (Lincoln-DeVore, 1978). The debris flow potential is from a series of coalescing ephemeral drainages on the east valley side. The site is within the mapped 1977 debris flow limits (Lincoln-DeVore, 1978) with a measured flow depth in this area of about ½ to 1 foot. The existing development upslope of the property may help to reduce the debris flow risk but cannot be totally relied on as mitigation to the project site. The site grading for the proposed parking lot development should consider the potential for debris flooding. Grading design should also be planned to not adversely impact adjacent properties from potential storm runoff flows.

The subsoils at the site are mapped as colluvial and alluvial fan deposits with a potential for hydro-compression (Lincoln-DeVore, 1978 and Kirkham and Others, 1995). Based on the subsoil information obtained for this study, the hydro-compression potential is low. Foundation design recommendations provided below should be followed to help reduce the risk of foundation settlement and distress.

Subsurface Conditions: The subsurface conditions at the site were evaluated by drilling a total of 4 exploratory borings at the approximate locations shown on Figure 1. Borings 1 and 2 were drilled for the current study and Borings 4 and 5 were drilled in 2011 for the First National Bank subsoil study. The logs of the borings are presented on Figure 2. The subsoils encountered, below about 3 inches of asphalt or about 6 inches of topsoil, mainly consist of native, medium stiff to stiff sandy silt and clay with scattered gravel. In Borings 2 and 5, about 1½ to 3½ feet of mixed sandy silty clay and gravel fill was encountered above the native soils. At depths of about 10½ to 17 feet in Borings 2, 4 and 5, dense slightly silty sandy gravel with cobbles was encountered to depths of 16 to 18½ feet where practical auger drilling refusal was encountered.

Results of clay and silt fraction (minus No. 200 sieve) gradation analyses, Atterberg limits and unconfined compressive strength testing indicate the clay and silt soils are sandy with low plasticity and medium stiff to stiff consistency. The fill materials also are expected to have low plasticity. Results of swell-consolidation testing performed on the silt and clay sample indicate low to moderate compressibility under loading and wetted conditions. No free water was observed in the borings at the time of drilling and the soils were slightly moist to moist.

Pavement Section Recommendations: A pavement section is designed to distribute concentrated traffic loads to the subgrade. Pavement design procedures are based on strength properties of the subgrade and pavement materials assuming stable, uniform subgrade conditions. Certain soils, such as the fine-grained soils encountered on this site, are frost susceptible and could impact pavement performance. Frost susceptible soils are problematic when there is a free water source. If those soils are wetted, the resulting frost heave movements can be large and erratic. Therefore, pavement design procedures assume dry subgrade conditions by providing proper surface and subsurface drainage.

The fine-grained soils encountered at the site are mainly low plasticity sandy silts and clays which are considered a poor support for pavement materials. The soil classification tests show the soils to have AASHTO Classification of A-4 with group indices of 1 to 2 that indicate a Hveem stabilometer 'R' value in the range of 8. For design purposes, the soil support value of the subgrade was selected based on an Hveem 'R' value of 8 for flexible (asphalt) pavements and a modulus of subgrade reaction of 50 pci was selected for rigid (portland cement) pavements. The soils are considered moderately susceptible to frost action.

Since anticipated traffic loading information was not available at the time of report preparation, an 18 kip equivalent daily load application (EDLA) of 5 and 15 were assumed for combined automobile and light truck traffic in the parking area and in the entryway, respectively. These loadings are typical of a parking lot and light duty driveway, and should be checked by the project civil engineer. A Regional Factor of 2 was assumed for this area of Garfield County based on the site terrain, drainage and climatic conditions.

Based on the assumed parameters, new pavement section in areas of combined automobile and truck traffic (driveway) should consist of 8 inches of CDOT Class 6 aggregate base course and 4 inches of asphalt surface, and in the parking area should consist of 8 inches of CDOT Class 6 aggregate base course and 3 inches of asphalt surface. If the existing asphalt surface is determined suitable for overlay, we recommend a minimum thickness of 2 inches of asphalt at the parking area and the driveway. This assumes a minimum existing section of 3 inches of asphalt above 6 inches of base course. As an alternative to asphalt pavement and in areas where truck turning movements are concentrated, the pavement section can consist of 6 inches of CDOT Class D portland cement concrete on 4 inches of CDOT Class 6 aggregate base course. The section thicknesses assume structural coefficients of 0.14 for aggregate base course, 0.44 for new asphalt surface and design strength of 4,500 psi for portland cement concrete. The material properties and compaction should be in accordance with the project specifications.

Prior to placing new pavement materials, the subgrade should be stripped of debris, topsoil and unsuitable fill materials, scarified at least 6 inches to adjust the moisture content to near optimum and compacted to at least 95% of the maximum standard Proctor density. Fill soils can contain construction debris and be highly moist and may need to be stabilized or removed. The pavement subgrade should be proof-rolled with a heavily loaded pneumatic-tired vehicle. Pavement design procedures assume a stable subgrade. Areas which deform excessively under heavy wheel loads are not stable and should be removed and replaced to achieve a stable subgrade prior to paving. Backfill needed in sub-excavated areas can consist of the onsite soils or a relatively well-graded granular soil excluding debris and rocks larger than 6 inches compacted to at least 95% of standard Proctor density within 2 percentage points of optimum.

The collection and diversion of surface drainage away from paved areas is extremely important to the satisfactory performance of pavement. Drainage design should provide for the removal of water from paved areas and prevent wetting of the subgrade soils.

Foundation Recommendations: Considering the subsoil conditions encountered in the exploratory borings, spread footings placed on the undisturbed natural soil designed for an allowable soil bearing pressure of 1,500 psf can be used for support of lightly loaded site features such as grade change retaining walls. The soils tend to compress after wetting and there could be some post-construction foundation settlement. Footings should be a minimum width of 16 inches for continuous walls and 2 feet for columns. Loose disturbed soils and existing fill encountered at the foundation bearing level within the excavation should be removed and the footing bearing level extended down to the undisturbed natural soils. Exterior footings should be provided with adequate cover above their bearing elevations for frost protection. Placement of footings at least 36 inches below the exterior grade is typically used in this area. Continuous foundation walls should be heavily reinforced top and bottom to span local anomalies such as by assuming an unsupported length of at least 12 feet. Grade change retaining walls separate from other structures should be designed to resist a lateral earth pressure based on an equivalent fluid unit weight of at least 50 pcf for the on-site soil as backfill.

Limitations: This study has been conducted in accordance with generally accepted geotechnical engineering principles and practices in this area at this time. We make no warranty either express or implied. The conclusions and recommendations submitted in this report are based upon the data obtained from the exploratory borings drilled at the locations indicated on Figure 1 and to the depths shown on Figure 2, the proposed type of construction, and our experience in the area. Our findings include interpolation and extrapolation of the subsurface conditions

identified at the exploratory borings and variations in the subsurface conditions may not become evident until excavation is performed. If conditions encountered during construction appear different from those described in this report, we should be notified at once so re-evaluation of the recommendations may be made.

This report has been prepared for the exclusive use by our client for design purposes. We are not responsible for technical interpretations by others of our information. As the project evolves, we should provide continued consultation and field services during construction to review and monitor the implementation of our recommendations, and to verify that the recommendations have been appropriately interpreted. Significant design changes may require additional analysis or modifications to the recommendations presented herein. We recommend on-site observation of excavations and testing of structural fill by a representative of the geotechnical engineer.

If you have any questions or if we may be of further assistance, please let us know.

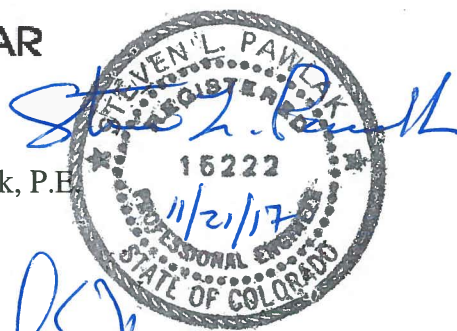
Respectfully Submitted,

H-P KUMAR

Steven L. Pawlak, P.E.

Reviewed by:

Daniel E. Hardin, P.E.



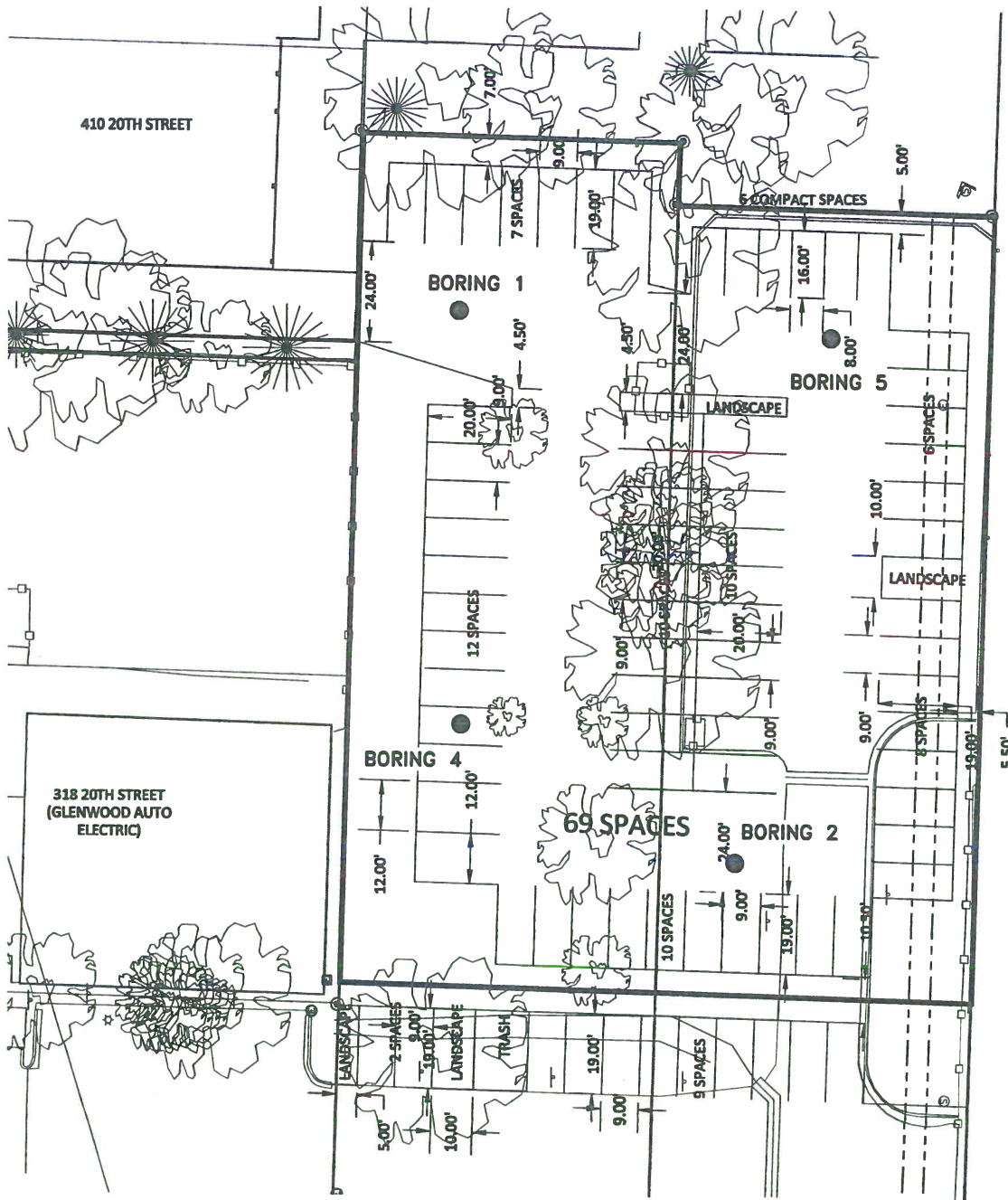
SLP/kac

Attachments: Figure 1 – Location of Exploratory Borings
Figure 2 – Logs of Exploratory Borings
Figure 3 – Legend and Notes
Figure 4 – Swell-Consolidation Test Results
Table 1 – Summary of Laboratory Test Results

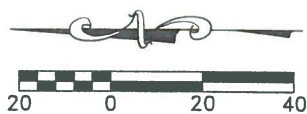
REFERENCES:

Lincoln-DeVore, 1978. *Geologic Hazards of the Glenwood Springs Metropolitan Area, Garfield County, Colorado*. Colorado Geologic Survey Open File Report 78-10.

Kirkham, R.M. and Others, 1995. *Geologic Map of the Glenwood Springs Quadrangle, Garfield County, Colorado*. Colorado Geologic Survey Open File Map 95-3.



FIRST NATIONAL BANK
2014 GRAND AVENUE



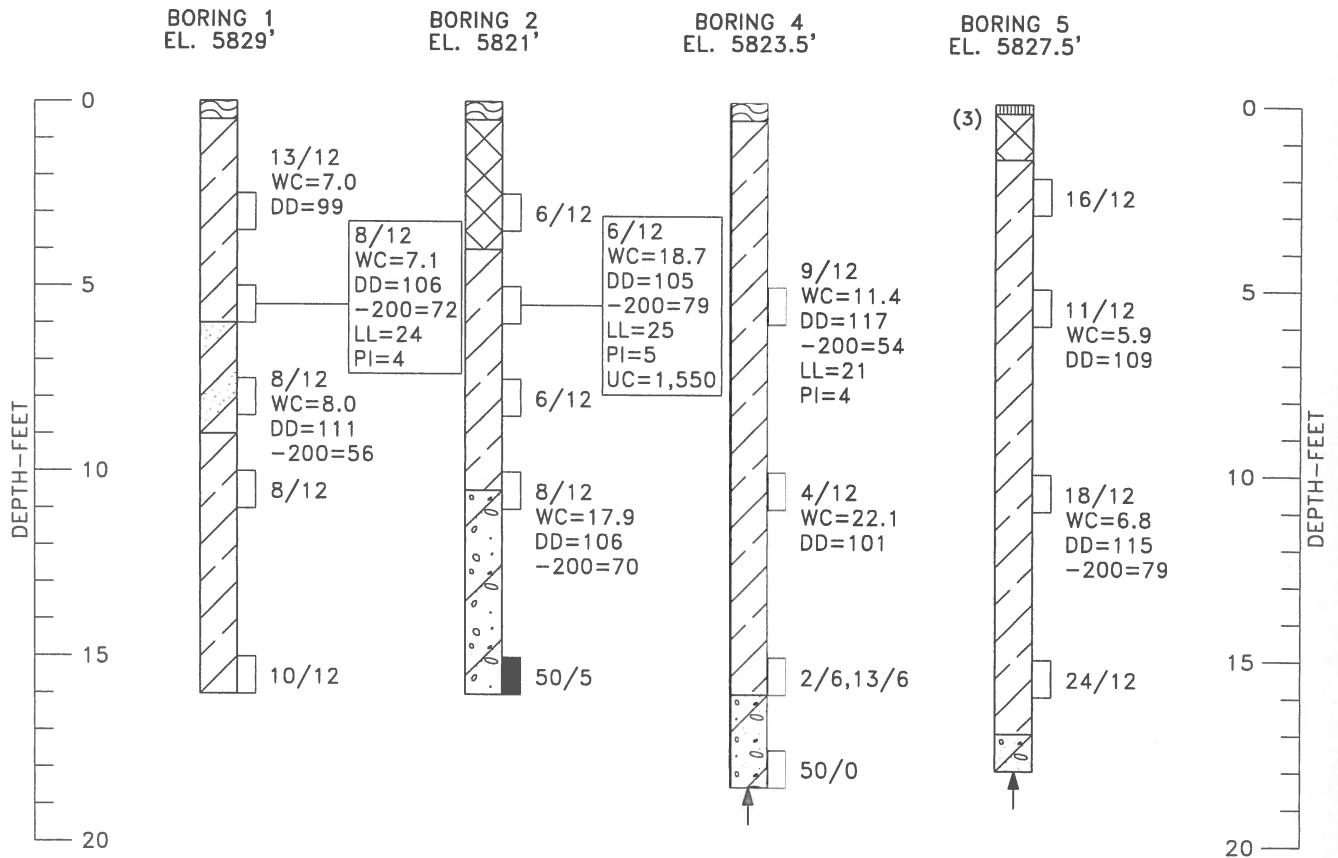
APPROXIMATE SCALE- FEET

17-7-730

H-P KUMAR

LOCATION OF EXPLORATORY BORINGS

Fig. 1



17-7-730

H-P KUMAR

LOGS OF EXPLORATORY BORINGS

Fig. 2

LEGEND

- (3)  ASPHALT, THICKNESS IN INCHES SHOWN IN PARENTHESES TO LEFT OF THE LOG.
-  TOPSOIL; ORGANIC SANDY SILT AND CLAY, FIRM, DARK BROWN.
-  FILL; MIXED SANDY SILTY CLAY AND GRAVEL, SOME CONCRETE DEBRIS, LOOSE, MOIST, MIXED BROWN.
-  SILT AND CLAY (ML-CL); SANDY WITH SCATTERED GRAVEL, MEDIUM STIFF TO STIFF, SLIGHTLY MOIST TO MOIST, REDDISH BROWN, LOW PLASTICITY.
-  SAND AND SILT (SM-ML); CLAYEY, STIFF, SLIGHTLY MOIST, REDDISH BROWN.
-  GRAVEL (GM-GP); SLIGHTLY SILTY, SANDY, COBBLES, DENSE, SLIGHTLY MOIST, BROWN, ROUNDED ROCK.
-  RELATIVELY UNDISTURBED DRIVE SAMPLE; 2-INCH I.D. CALIFORNIA LINER SAMPLE.
-  DRIVE SAMPLE; STANDARD PENETRATION TEST (SPT), 1 3/8 INCH I.D. SPLIT SPOON SAMPLE, ASTM D-1586.
- 13/12 DRIVE SAMPLE BLOW COUNT. INDICATES THAT 13 BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES WERE REQUIRED TO DRIVE THE CALIFORNIA OR SPT SAMPLER 12 INCHES.
- ↑ PRACTICAL AUGER REFUSAL.

NOTES

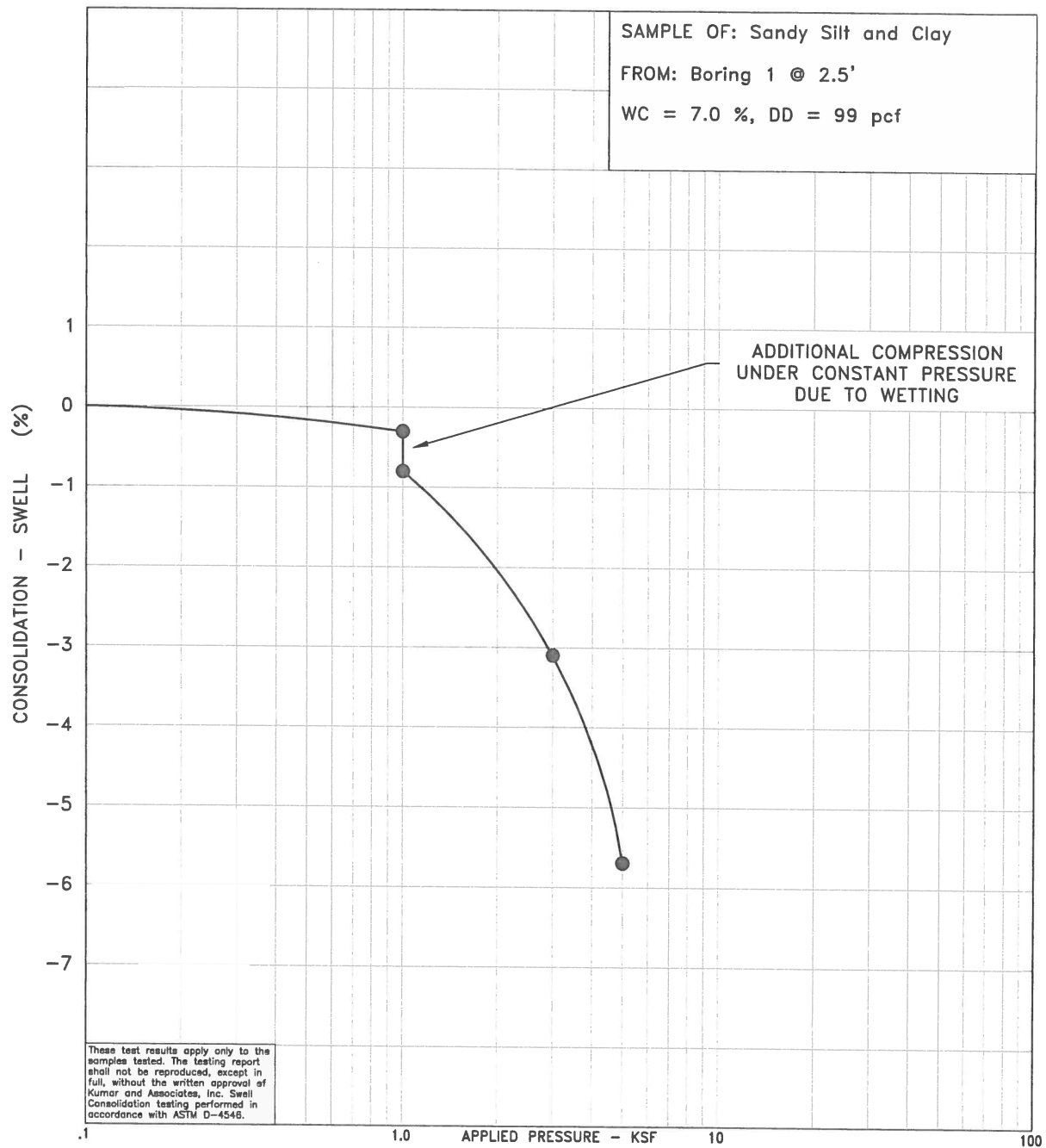
- BORINGS 1 AND 2 WERE DRILLED ON OCTOBER 9, 2017 AND BORINGS 4 AND 5 WERE DRILLED ON JULY 1, 2011 (H-P GEOTECH JOB NO. 111 144A) WITH A 4-INCH DIAMETER CONTINUOUS FLIGHT POWER AUGER.
- THE LOCATIONS OF THE EXPLORATORY BORINGS WERE MEASURED APPROXIMATELY BY PACING FROM FEATURES SHOWN ON THE SITE PLAN PROVIDED.
- THE ELEVATIONS OF THE EXPLORATORY BORINGS 1 & 2 WERE MEASURED BY HAND LEVEL AND REFER TO CONTOUR ESTIMATED ELEVATIONS OF BORINGS 4 & 5.
- THE EXPLORATORY BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.
- THE LINES BETWEEN MATERIALS SHOWN ON THE EXPLORATORY BORING LOGS REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN MATERIAL TYPES AND THE TRANSITIONS MAY BE GRADUAL.
- GROUNDWATER WAS NOT ENCOUNTERED IN THE BORINGS AT THE TIME OF DRILLING.
- LABORATORY TEST RESULTS:
 WC = WATER CONTENT (%) (ASTM D 2216);
 DD = DRY DENSITY (pcf) (ASTM D 2216);
 -200= PERCENTAGE PASSING NO. 200 SIEVE (ASTM D 1140);
 LL = LIQUID LIMIT (ASTM D 4318);
 PI = PLASTICITY INDEX (ASTM D 4318);
 UC = UNCONFINED COMPRESSIVE STRENGTH (psf) (ASTM D 2166).

17-7-730

H-P KUMAR

LEGEND AND NOTES

Fig. 3



Project No. 17-7-730

Project No. 17-7-730

APPENDIX 11

VARIANCE CRITERIA QUESTIONNAIRE

Variance Criteria

If your application includes a request to deviate from a Municipal Code requirement you must address how your variance request meets all the criteria listed below.

Instructions

1. Use this questionnaire if your project includes variances, which are deviations from Municipal Code requirements. Examples include deviations from setback requirements, building height maximums, design standards, minimum number of off-street parking spaces, and permitted light levels.
2. Complete this questionnaire after you have had your pre-application conference. Once completed, submit this questionnaire along with the other items on the checklist. Complete one questionnaire for each variance you are requesting. Use a separate sheet if necessary.
3. It is important to remember that the decision to approve or deny a variance is a discretionary action based on how well you meet all the variance criteria. This is your opportunity to describe in detail the reason why you need to deviate from the Municipal Code. If you are unable to provide justification of how your application meets each of the criteria below, you may want to consider whether a variance is truly warranted.

Variance type

Explain what Municipal Code requirement you are requesting a variance from and what it is that you are proposing that does not meet this requirement.

WE ARE REQUESTING A VARIANCE FROM THE CODE 070.040.060(h)(6)c.1. REQUIRING ONE LANDSCAPE ISLAND PER EIGHT PARKING SPACES. WE ARE PROPOSING THE REUSE OF THE EXISTING ASPHALT PARKING, WHICH CURRENTLY DOESN'T MEET THE REQUIREMENT. IT IS OUR OPINION THAT MODIFYING THE EXISTING ASPHALT TO INSTALL LANDSCAPE ISLANDS WILL CAUSE MORE DISTURBANCE TO THE NEIGHBORHOOD. ADDITIONALLY WE HAVE WIDENED THE LANDSCAPE ISLAND BETWEEN DOUBLE LOADED PARKING SPACES TO INCREASE THE LANDSCAPE AREA.

Variance Criteria

1. **Explain how your property has an exceptional shape, topography, building configuration or other exceptional site condition that is not a general condition throughout the zone district.** _____

OUR SITE CURRENTLY EXISTS WITH HALF OF THE LOT AS AN ASPHALT PARKING LOT. IN ORDER TO REDUCE IMPACTS TO THE COMMUNITY AND DISTURBANCE TO THE EXISTING LOT, WE BELIEVE WE CAN UTILIZE THE EXISTING WALLS, ASPHALT AND TOPOGRAPHY WITH MINOR MODIFICAITONS, AND THEREFORE REDUCE CONSTRUCTION TIME, CONSTRUCTION TRAFFIC AND IMPACTS TO THE COMMUNITY.

2. Explain how the strict application of the Code standards for the variance you are seeking produces undue hardship. _____

THE INTENT OF THIS PARKING LOT IT TO MEET THE GWS CODE WHILE PROVIDING AS MUCH VVH PARKING AS POSSIBLE AND YET STILL PROVIDING THE NECESSARY LANDSCAPE AREA. THIS CODE THAT REQUIRES A LANDSCAPE ISLAND EVERY 8 PARKING SPACES WOULD CUT AN ADDITIONAL 3 SPACES OUT OF THE PARKING LOT AND GREATLY INCREASE THE AMOUNT OF ASPHALT/HARDSCAPE THAT WOULD NEED TO BE HAULED OFF SITE.

3. Explain how you did not create the hardship by your own actions. _____

THIS VARIANCE IS A SLIGHT AMENDEMENT TO THE LANDSCAPING CODE. WE STILL WILL BE PROVIDING ALL THE REQUIRED LANDSCAPE JUST IN A DIFFERENT CONFIGURATION THEN THE CODE SUGGESTS. WE HAVE NOT CREATED A HARDSHIP BY OUR OWN ACTIONS.

4. Explain how the requested variance does not harm the public and does not impair the intent or purposes of this Code, goals, and policies, including the specific regulation in question. _____

WE BELIEVE THE CODE IS INTENDED TO PROVIDE GREEN ISLANDS AND PROVIDE TREES TO HELP KEEP HARDSCAPE SURFACES COOLER AND DECREASE THE HEAT AND RUNOFF OF A SITE. DUE TO THE LAYOUT OF OUR SITE WE ARE ABLE TO MEET AND EXCEED THE MINIMUM LANDSCAPE REQUIREMENTS. OUR PROJECT INTENDS ON MATCHING THE LANDSCAPE CHARACTER OF OUR PREVIOUS SURFACE LOTS AT 19 & 20TH STREET WHICH WE BELIEVE MEET THE INTENT OF THE CODE AND ALSO HAVE THIS SAME VARIANCE.

5. Explain how the variance request demonstrates exceptional hardship not related to purposes of convenience or financial burden. _____

WITHOUT THIS VARIANCE WE REQUEST WE WOULD REDUCE THE NUMBER OF PROPOSED PARKING SPACES BY 3. BY CREATING AS MANY DESIGNATED STAFF PARKING SPACES AS POSSIBLE MORE PARKING AROUND THE HOSPITAL CAN BE MADE AVAILBLE FOR PATIENTS AND VISITORS CLOSER TO THE HOSPITAL. THE MORE SPACES WE MAKE AVAILABLE NEAR THE HOSPITAL THE BIGGER OF A COMMUNITY BENEFIT WE CAN PROVIDE. THIS IS NOT OUT OF CONVENIENCE OR FINANCIAL BURDEN.

6. Explain how the variance request will not violate building or fire code requirements. _____

SINCE THIS IS A PARKING LOT WE ARE NOT VIOLATING ANY BUILDING CODES, THERE WILL BE NO STRUCTURES ON THIS PROPERTY. WE HAVE MET WITH THE FIRE MARSHALL OT ENSURE WE CAN PROVIDE THE ACCESS THEY WOULD LIKE AS WELL AS AN ADDITIONAL WATER MAIN TO SERVE A FIRE HYDRANT ON THE PROPERTY IN CASE OF A CAR FIRE. ADDITIONALLY, WE ARE PROVIDING A SECONDARY ACCESS FOR FIRE TO THE BACKSIDE OF SOME OF THE SURROUNDING BUILDINGS AND WITH THE ADDITION OF A FIRE HYDRANT.

7. Explain how the variance is the minimum variance that will afford relief of the subject standards of the Code. _____

IN OUR CASE THE CODE CAN BE MET. TO OUR GROUP AND PROJECT TEAM IT SEEMS MORE FEASIBLE TO ENSURE WE HAVE THE 3 ADDITIONAL PARKING SPACES WHILE REDUCING DISTURBANCE TO EXISTING ASPHALT AND STILL MAINTAINING OVER THE MINIMUM REQUIRED LANDSCAPE SPACE. ALL ADDITIONAL PARKING SPACES WILL GREATLY BENEFIT THE HOSPITAL AND ADDITIONALLY THE COMMUNITY BY TAKING ADDITIONAL PARKING OFF THE SURROUNDING COMMUNITY.

APPENDIX 12

FIRST BANK AUTHORIZATION LETTER



HOLDING COMPANY

12345 WEST COLFAX AVENUE LAKEWOOD, COLORADO 80215 303-232-3000

July 15, 2019

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

RE: Consent to Lot Line Adjustment Application, 2014 Grand Avenue

Community Development Office,

This letter is to confirm that FirstBank hereby consents to and authorizes Valley View Hospital Association to submit a lot line adjustment application for the parcels located at 2014 Grand Avenue, Glenwood Springs, Colorado 81601, which parcels are owned by FirstBank. The parcels are numbered 218516400004 and 218516400005.

Sincerely,

Adam Snyder, FirstBank EVP of Real Estate