

CITY OF CODY  
PLANNING, ZONING AND ADJUSTMENT BOARD  
TUESDAY, JUNE 23, 2020  
CITY HALL COUNCIL CHAMBERS @ 12:00 NOON

1. Call meeting to order
2. Roll Call, excused members
3. Pledge of Allegiance
4. Approval of Agenda
5. Approval of Minutes of the June 9, 2020 regular meeting
6. BUSINESS:
  - A. Downtown architectural district sign review for Mercury Leather Works, located at 1356 Sheridan Avenue
  - B. Downtown architectural district sign review for Fern Ridge Counseling, located at 1120 Beck Avenue.
  - C. Site plan review for two storage buildings for Mike and Carisa Wood, located at 508 & 512 Blackburn Street.
  - D. Final plat for The Landing Subdivision, a 55-lot subdivision located at the north end of 37<sup>th</sup> Street.
7. P & Z Board Matters (announcements, comments, etc.)
8. Council Update
9. Staff Items
10. Adjourn

The public is invited to attend all Planning, Zoning and Adjustment Board meetings. If you need special accommodations to participate in the meeting, please call the City office at (307) 527-7511 at least 24 hours in advance of the meeting.

**City of Cody**  
**Planning, Zoning, and Adjustment**  
**Board Meeting June 9, 2020**

A meeting of the City of Cody Planning, Zoning and Adjustment Board was held in the Council Chambers of City Hall in Cody, Wyoming on Tuesday, June 9, 2020 at 12:00 pm.

Present: Kayl Mitchell; Richard Jones; Rodney Laib; Klay Nelson; City Deputy Attorney Sandee Kitchen; City Planner Todd Stowell; Administrative Coordinator Bernie Butler; Public Works Director Phillip Bowman

Absent: Erynne Selk, Sandi Fisher, Wade McMillin

Kayl Mitchell called the meeting to order at 12:00 pm, followed by the pledge of allegiance.

Rodney Laib made a motion, seconded by Klay Nelson to approve the agenda for the June 9, 2020 meeting. Vote on the motion was unanimous, motion carried

Richard Jones made a motion, seconded by Rodney Laib to approve the minutes from the May 26, 2020 meeting. Vote on the motion was unanimous, motion carried.

**NEW BUSINESS:**

A. Todd Stowell presented a minor architectural review for an addition to a building located at 627 15th Street. Applicant would like to construct a wrap-around porch and update the exterior of the building. Richard Jones made a motion, seconded by Klay Nelson to approve the project. Vote on the motion was unanimous, motion carried.

B. Todd Stowell presented the final plat for the Anvil 2-lot minor subdivision, located at southwest corner of the Wyoming Avenue and 13<sup>th</sup> Street intersection. The preliminary plat was previously approved with conditions. Those conditions are partially complete. There was a discussion on the sidewalk with the Board and Public Works Director Phillip Bowman.

Klay Nelson made a motion, seconded by Richard Jones, to recommend that the City Council approve the Final Plat of the Anvil Subdivision, with conditions 1-3 in the staff report. Vote on the motion was unanimous, motion carried.

C. Klay Nelson made a motion, seconded by Richard Jones to remove from the table, the site plan review for 4C Storage Buildings #3, and #4, located at 1913 Big Horn Avenue. Vote on the motion was unanimous, motion carried.

Todd Stowell presented the site plan application for the 4C Storage buildings #3 and #4, located at 1913 Big Horn Avenue. These two building will be identical in color to buildings #1 and #2 which are already there. Todd reviewed the criteria for Open Business / Light Industrial (D-3) zoning district, which permits storage warehouse buildings.

Richard made a motion, seconded by Richard Jones, to approve the 4C Storage Buildings #3 and #4, with staff recommendations 1-8 in the staff report. Vote on the motion was unanimous, motion carried.

D. Richard Jones made a motion, seconded by Rodney Laib to table agenda item D, the preliminary plat review of the 2-lot HGI Minor Subdivision, located at 1923 Big Horn Avenue until a future meeting. Vote on the motion was unanimous, motion carried.

E. Todd Stowell presented an updated site plan for the Park County Coroner's Building, located behind the Law Enforcement Center property at 1402 Riverview Drive. This project was reviewed and approved with conditions at the March 24, 2020 meeting. One of the conditions of approval was that all utilities must be removed from under the proposed building pad and relocated to a location agreeable to the City.

The applicant is asking for a modification to that condition. If the fiberoptic and cable TV lines are in conduit under the proposed building pad they can remain there.

Klay Nelson made a motion, seconded by Richard Jones to amend the condition as requested. Vote on the motion was unanimous, motion carried.

Rodney Laib made a motion, seconded by Klay Nelson to adjourn the meeting. Vote on the motion was unanimous. Meeting was adjourned at 1:45 pm.

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Bernie Butler, Administrative Coordinator

DRAFT

**CITY OF CODY  
PLANNING, ZONING AND ADJUSTMENT BOARD  
STAFF REPORT**

<b>MEETING DATE:</b>	JUNE 23, 2020	<b>TYPE OF ACTION NEEDED</b>	
<b>AGENDA ITEM:</b>		P&Z BOARD APPROVAL:	X
<b>SUBJECT:</b>	DOWNTOWN ARCHITECTURAL DISTRICT SIGN REVIEW: MERCURY LEATHER WORKS. SGN 2020-09	RECOMMENDATION TO COUNCIL:	
<b>PREPARED BY:</b>	TODD STOWELL	DISCUSSION ONLY:	

**PROJECT DESCRIPTION:**

Trajan Vieira of Mercury Leather Works has submitted a sign application for a new sign at 1356 Sheridan Avenue. Two aluminum sign panels would be used, and the design would consist of white vinyl lettering on a black background. The sign panels would replace the recent “Yancy Interiors + Home” sign panels that project from the front of the building. Each sign panel would measure 62” by 28” (12 sq. ft.), and read “Mercury Leather Works” as depicted here.



**REVIEW CRITERIA:**

The property is within the Downtown Architectural District established by Section 9-2-2 of the Cody City Code. Pursuant to Subsection 9-2-2(B), *“The planning, zoning and adjustment board shall examine and evaluate applications and plans involved in building and sign permits insofar as they pertain to the exterior of commercial buildings within the downtown district as herein described and shall make recommendations and suggestions to the applicants, property owners or occupants.”*

The sign(s) must also comply with applicable provisions of the sign code.

**STAFF COMMENTS:**

The sign is classified as a projecting sign under the sign code, and up to 25 square feet of projecting sign per panel is permitted. The proposed sign, at 12 square feet each panel, is within the allowable amount and will be mounted to provide sufficient clearance above the sidewalk below to meet City code.

The purpose of the Downtown Architectural District is understood to be the promotion of architectural compatibility and preservation of historic features. The sign installation will not affect the architecture of the building and sign materials are of the same quality as other signs on Sheridan Avenue.

**ALTERNATIVES:**

Approve the proposed sign, with or without making recommendations and suggestions.

**RECOMMENDATION:**

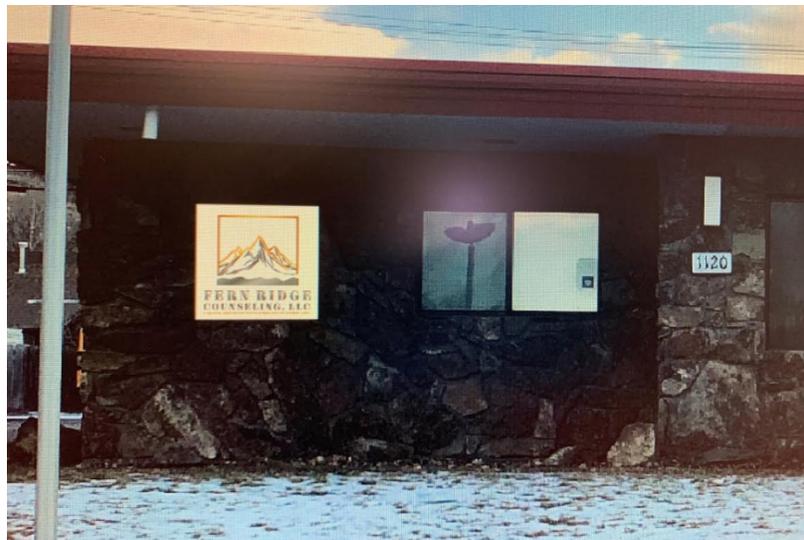
Approve the "Mercury Leather Works" projecting sign as proposed.

**CITY OF CODY  
PLANNING, ZONING AND ADJUSTMENT BOARD  
STAFF REPORT**

<b>MEETING DATE:</b>	JUNE 23, 2020	<b>TYPE OF ACTION NEEDED</b>	
<b>AGENDA ITEM:</b>		P&Z BOARD APPROVAL:	X
<b>SUBJECT:</b>	DOWNTOWN ARCHITECTURAL DISTRICT SIGN REVIEW: FERN RIDGE COUNSELING. SGN 2020-10	RECOMMENDATION TO COUNCIL:	
<b>PREPARED BY:</b>	TODD STOWELL	DISCUSSION ONLY:	

**PROJECT DESCRIPTION:**

We have received a sign application from Fern Ridge Counseling to install a 38" by 36" wall sign at 1120 Beck Avenue, near the front entry. The sign is depicted here.



**REVIEW CRITERIA:**

The property is within the Downtown Architectural District established by Section 9-2-2 of the Cody City Code. Pursuant to Subsection B of 9-2-2, *"The planning, zoning and adjustment board shall examine and evaluate applications and plans involved in building and sign permits insofar as they pertain to the exterior of commercial buildings within the downtown district as herein described and shall make recommendations and suggestions to the applicants, property owners or occupants.*

The signs must also meet the size and location requirements of the sign code.

**STAFF COMMENTS:**

The property is within the downtown architectural district, but the D-2 sign district. The D-2 sign district allows any individual wall sign to be up to 150 square feet in size, and total signage on the property no more than 300 square feet. The individual sign size and total amount of wall signage is well within the allowable amount. The sign otherwise meets the dimensional and locational requirements of the sign code.

The purpose of the Downtown Architectural District is understood to be the promotion of architectural compatibility and preservation of historic features. The proposed sign does not affect the architecture of the building and is of professional quality.

**RECOMMENDATION:**

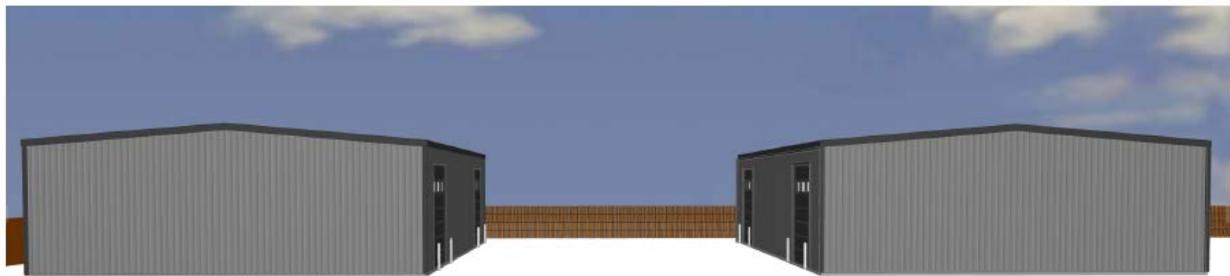
Approve the wall sign as proposed.

**CITY OF CODY  
PLANNING, ZONING AND ADJUSTMENT BOARD  
STAFF REPORT**

<b>MEETING DATE:</b>	JUNE 23, 2020	<b>TYPE OF ACTION NEEDED</b>	
<b>AGENDA ITEM:</b>		P&Z BOARD APPROVAL:	X
<b>SUBJECT:</b>	SITE PLAN REVIEW: STORAGE/SHOP BUILDINGS BY MIKE WOOD. SPR 2020-13	RECOMMENDATION TO COUNCIL:	
<b>PREPARED BY:</b>	TODD STOWELL, CITY PLANNER	DISCUSSION ONLY:	

**PROJECT DESCRIPTION:**

Michael & Carisa Wood have submitted an application to construct two 50' by 75' storage/shop buildings on their property located east of Blackburn Street, approximately 350 south of Big Horn Avenue. One building will be located on the lot that also contains Sprague Roofing. The other building will be located on a lot that contains an existing residence and the authorized storage compound for the Eagle Recovery towing and auto repair business. The buildings are not intended for use by Eagle Recovery, but would be rented to others.



**REVIEW CRITERIA:**

Section 10-10C-5 of the zoning regulations states:

*All structures within the district shall be architecturally compatible. Architectural and landscaping plans shall be submitted to the planning and zoning commission for approval. Architectural and landscaping details shall be maintained as shown by the approved plans.*

Section 9-2-3 is as follows:

*Before the issuance of any permit under the international building code for commercial buildings situated within the city, the applicant, property owner and occupant shall meet with the planning, zoning and adjustment board to review the*

*application and plans insofar as they pertain to the exterior of a commercial building and site plan conditions. The issuance of a permit shall be conditioned upon the applicant receiving an affirmative vote of a majority of the planning, zoning and adjustment board members in attendance at said meeting.*

In addition, the site plan is reviewed for compliance with specific development standards of the zoning ordinance.

View from Blackburn Street:



**STAFF COMMENTS:**

The property is zoned Open Business/Light Industrial (D-3), which allows storage buildings and contractor shops. The surrounding area is as follows:

<i>DIRECTION</i>	<i>EXISTING USE</i>	<i>ZONING</i>
North	Residence.	D-3
East	Residence east of north building, parking for Yellowstone Behavioral Health east of south building.	D-3
South	Eagle Recovery.	D-3
West	UPS distribution facility and SWI fencing.	D-3

**Architecture:**

The architectural elevations of the building are attached. The buildings are of typical vertical metal siding and metal roofing. The sidewalls would be 16 feet in height. The roof pitch is 1:12. The wall color is proposed as "ash gray", and all trim is "charcoal gray", which colors match the Eagle Recovery building to the south. The roof would be standard galvalume (galvanized gray). The elevation drawings show no windows or architectural enhancements. However, both buildings are being plumbed for a restroom to allow a shop/office option. As a result, a person door is needed in each building, per building code. It is also possible that windows or front entryways could be added in the future.

Due to the distance of the buildings from the public way, the proposed buildings would not be highly visible. In addition, they actually help screen the vehicle storage on the property from the residences to the north and northeast. Staff is not overly concerned with the lack of architectural features due to these factors, so long as landscaping is used to improve the overall appearance of the site.

Landscaping:

There is some landscaping along the west end of the Sprague Roofing building, but it is heavily infested with weeds and the trees and shrubs need pruned. The application does not include a landscaping plan.

The property is not in the entry corridor overlay, so there is not a specific percent of the property that must be in landscaping, but the property is on a relatively high traffic street and should provide a visual enhancement to the community. While many options are available, staff would propose the following as an acceptable option.

Rejuvenate the existing landscaped area at the west end of the Sprague Roofing building on the property by trimming the dead wood out of the trees, treating the area for weeds, and if needed reseeding the grass. In addition, as part of defining the entrance to the property (see access discussion), extend a strip of landscaping (minimum 10-foot depth recommended and 15+ feet preferred) from the existing landscaped area to the north side of the approach—in the area where the site plan shows the landscape timbers. The landscape timbers alone do not provide sufficient height to visually define the property entrance in inclement weather (easily buried in snow). Use shrubs or trees in the new landscaped area to fix that issue. The landscape area in front of the Eagle Recovery building is an example of using landscaping to help define the approach.



Access/Property Configuration/Easements:

The connection to Blackburn Street is defined by a 30-foot access easement on the underlying subdivision that created the lots. The site plan properly shows that access point being paved (concrete or asphalt) and utilized to serve the proposed development. However, the access easement ends before it reaches the south building.

The options would be to provide an access easement for the south building across the north lot, remove the property line between the lots, or relocate the property line to another suitable location through the lot line adjustment process. Each of those options require a legal document to be prepared and recorded. Without it, there is no legal access to get vehicles in or out of the south building.

The application shows the required gravel surfacing of the access drive and the area for the emergency vehicle turnaround under the fire code (note large turn radii).

#### Parking:

The use of the buildings as a shop (occupied area) triggers the requirement for parking. Using the standard of 1.1 spaces per 1,000 square feet for light industrial shops, four parking spaces are required per building. The spaces are shown as required. However, it is noted that the required backup area for the south building extends across an existing property line. Either an easement must be established, or the property line shifted out of the backup area.

The ADA parking spaces are shown as required. They layout of the ADA space and concrete walk is based on the access door being located on the front corner of each building.

#### Exterior Lighting

Exterior lighting details were not found in the plans. As a default, the Board could authorize either one medium-intensity or two low-intensity wall packs of the full cut-off style on the front of each building. One low-intensity porch light for each person door could also be authorized by default. Any additional exterior lighting would need Board review.

#### Neighborhood Compatibility, Setbacks and Buffers, Fencing and Height Requirements

There are no specified zoning setbacks or building height limits in this zone other than the buffer and fence requirement when developing next to residential zoning. The area of the buildings does not directly border any residential zoning (residential zoning is just to the south, next to the storage yard).

The city nuisance ordinance has specific requirements for storage of wrecked and inoperable vehicles that requires "the area within which the vehicles are kept to be fenced on all sides, and the fence is to be a lawful six foot (6') fence or wall which complies with city ordinances, and which provides a solid visual screen."

The south building is reducing the size of the existing fenced compound in which Eagle Recovery is authorized to store wrecked and inoperable vehicles. No other portion of the

Wood property is authorized for storage of wrecked and inoperable vehicles. While the reduction in size of the fenced compound does not violate any standard, it must be fully understood that wrecked and inoperable vehicles cannot be stored outside of such a fenced area. As can be seen in this photo, the compound is full.



There have been violations of this in the past on the property. Currently, only a few wrecked and inoperable vehicles are outside of the fenced compound. If the Woods wish to designate an enlarged or additional fenced storage compound for the Eagle Recovery towing and auto repair business, this would be an opportunity to present it to the Board for consideration.



No wrecked or inoperable vehicles may be stored on these lots outside of the authorized compound. It is recommended that the Board require the applicant to demonstrate compliance with this requirement prior to issuance of the building permits.

#### Storm Water Plan:

A detailed storm water/grading plan has been submitted. In summary, storm water is planned to be collected and taken to swales towards and around the backs of the buildings. The swales have the capacity required.

The swale shown south of the south building will need to be shifted about 5 feet west from where it is planned, so that the 10-foot City utility easement along the east property line is passable.

#### Snow Storage

No snow storage area is shown. The area north of the north parking area would be ideal, as it would allow the snow to melt into the storm water swale. To the east of the south building would be another suitable area.

### Utility Services

The buildings will utilize domestic water, power, gas, and sewer service. As each building is on its own lot, individual city utility services must be used for both buildings, as indicated.

The gas company will need an easement for their line. In addition, the plans show the sewer services heading to the east, which would require running the service for the north building on the Richard Noble property and the south service on the Yellowstone Behavioral Health property, to the City sewer main. Easements from the affected property owner(s) must be acquired before those lines can be installed. Alternatively, the sewer could be run to the west, to the main in Blackburn Street.

The site plan also shows electrical services coming from the poles along the east side of the property. That line does not have transformers, and the designated point of service for these lots is from the pad mounted transformer near Blackburn Street (serves existing Eagle Recovery building). The route will need to be modified accordingly. Provide the proposed route to the City electrical engineer for review. Any needed easements for the electrical extension will need to be provided before the line is connected.

Utility fees will apply for connection to the water and sewer system, and will need to be paid at the time of the building permits.

### Signs

No signs are proposed at this time.

### Hydrant

The building relies on the fire hydrant at the northwest corner of the property for fire protection.

### Frontage Status

The frontage of the property is not currently improved to full city street standards, lacking curb and gutter, sidewalk, and streetlights. As done for other recent projects on Blackburn Street, it is proposed that the frontage improvements not be installed at this time due to the lack of similar improvements to connect into. The property is already obligated to participate in any improvement district for their installation at such time the City determines improvements are necessary. The commitment is found in the subdivision plat from when the property was divided in 2009.

### Garbage

There are existing dumpsters towards the east end of the Sprague roofing building that are available. Additional dumpsters can be added if needed.

### **ATTACHMENTS:**

Application materials.

**ALTERNATIVES:**

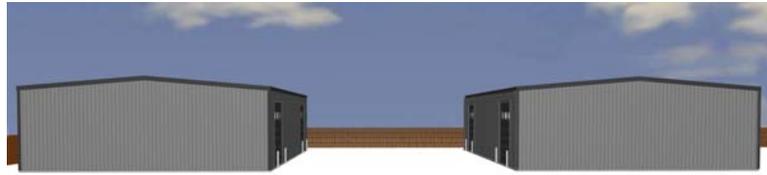
Approve or deny the site plan with or without changes.

**RECOMMENDATION:**

It is recommended that the Planning and Zoning Board approve the project subject to the following conditions:

1. Prior to issuance of a building permit, provide verification that there are no wrecked or inoperable vehicles stored outside of the authorized fenced compound.
2. Verify the planned location of the person door on each building, and ensure that each ADA route extends to each.
3. If the sewer services are to be run to the east, applicable easements must be provided before a plumbing permit is issued for the sewer services. If the sewer services are run to the main in Blackburn Street, provide a utility easement for that route. Cleanouts must be installed per plumbing code. (Note: the 30-foot access easement is not currently designated for utilities.)
4. Any sewer cleanouts or water curb stops that are installed in a driving area are to be protected with concrete collars per City details.
5. Provide plans for extending electrical service to each building from the designated transformer next to Blackburn Street. Coordinate with Bert Pond.
6. Unless the applicant provides a different landscaping plan acceptable to the Board, the applicant must rejuvenate the existing landscaped area at the west end of the Sprague Roofing building on the property by trimming the dead wood out of the trees, treating the area for weeds, and if needed reseeding the grass. In addition, as part of defining the entrance to the property (see access discussion), extend a strip of landscaping (minimum 10-foot depth recommended and 15+ feet preferred) from the existing landscaped area to the north side of the approach—in the area where the site plan shows the landscape timbers. Use shrubs and/or trees, and groundcover, in the new landscaped area.
7. Easements must be provided where needed, for any components of the project that cross property lines, including but not limited to utility services, access to the south building, and parking backup/aisle on Lot 3A. (The parking backup/aisle on Lot 3A could be done by parking agreement instead of easement.) Coordinate easement locations and widths with the City. Unless specified otherwise (e.g. #3), the easements must be provided prior to occupancy of the buildings (including any temporary occupancy).
8. Shift the location of the proposed storm water swale south of the south building to be off the City easement.
9. Any applicable city utility fees (water, sewer, electrical) are to be paid prior to building permit issuance—coordinate with Public Works.
10. A street encroachment permit must be obtained for all work within the street right-of-way (e.g. utility connections).

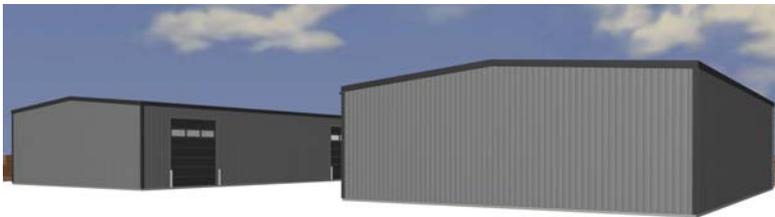
11. Once constructed, the applicant's engineer is to certify that the storm water system was constructed as designed, or equivalent.
12. All exterior lighting must comply with the limitations noted in the staff report.
13. The project must otherwise comply with the site plan and applicable building, fire, and electrical codes.
14. A building permit must be obtained within three years or this authorization will expire.



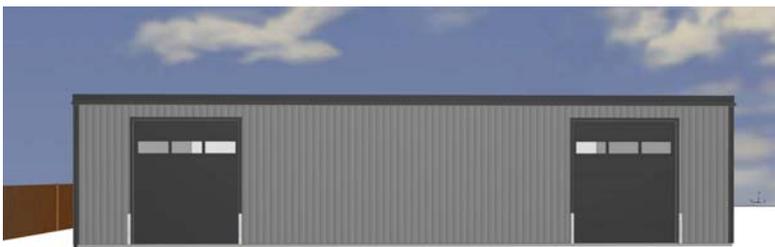
PERSPECTIVE VIEW  
N.T.S.



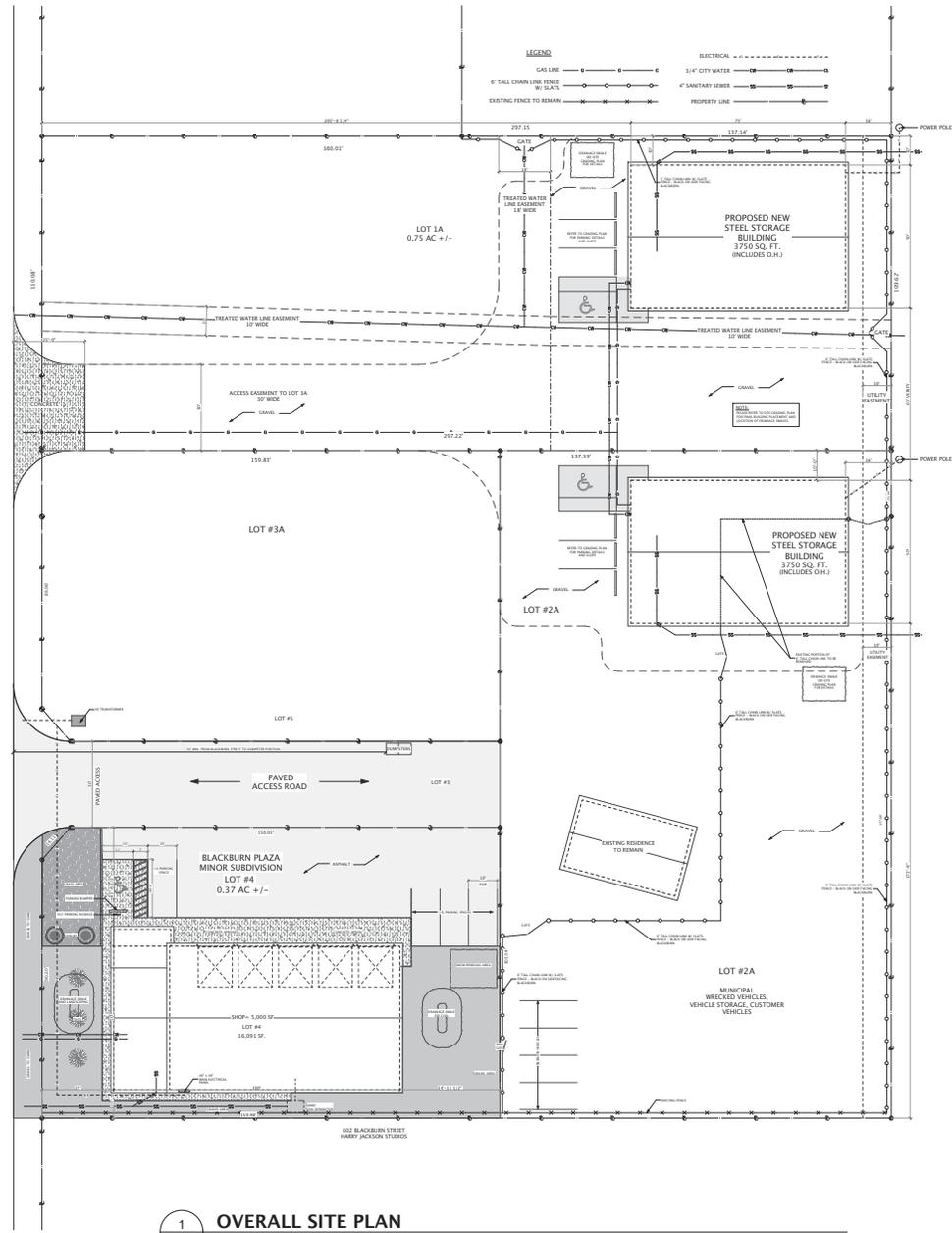
PERSPECTIVE VIEW  
N.T.S.



PERSPECTIVE VIEW  
N.T.S.



PERSPECTIVE VIEW  
N.T.S.



**PRECISION PLAN AND DESIGN INC.**

A CUSTOM PLAN SERVICE

930 12TH STREET  
CODY, WYOMING 82414

307.587.8227 | 307.272.5700

MEMBER I.L.B.A. No. 1271

PROJECT LOCATION

CODY, WY

**MIKE WOOD STORAGE**

**MIKE WOOD**

1135 S. 24th ST

CODY, WYOMING 82414

P. 307.887.8897 or 307.888.3023

E. enghrecovery307@gmail.com



**NOTE:**  
ALTHOUGH GREAT CARE AND EFFORT HAVE GONE INTO THIS PLAN TO CREATE A PRECISE INTERPRETATION OF THE FINISHED PROJECT, IT IS IMPOSSIBLE TO GUARANTEE THAT THIS PLAN IS WITHOUT IMPERFECTIONS. THEREFORE PRECISION PLAN AND DESIGN INC AND/OR ASSOCIATES ASSUMES NO LIABILITY FOR ANY PROJECT CONSTRUCTED FROM THIS PLAN. THE BUILDER/OWNER MUST VERIFY ALL DIMENSIONS. THIS PLAN IS SUBJECT TO CHANGE PER ENGINEER AND/OR LOCAL CODES AND STANDARDS.

DATE: 06.18.20

REVISION: 3

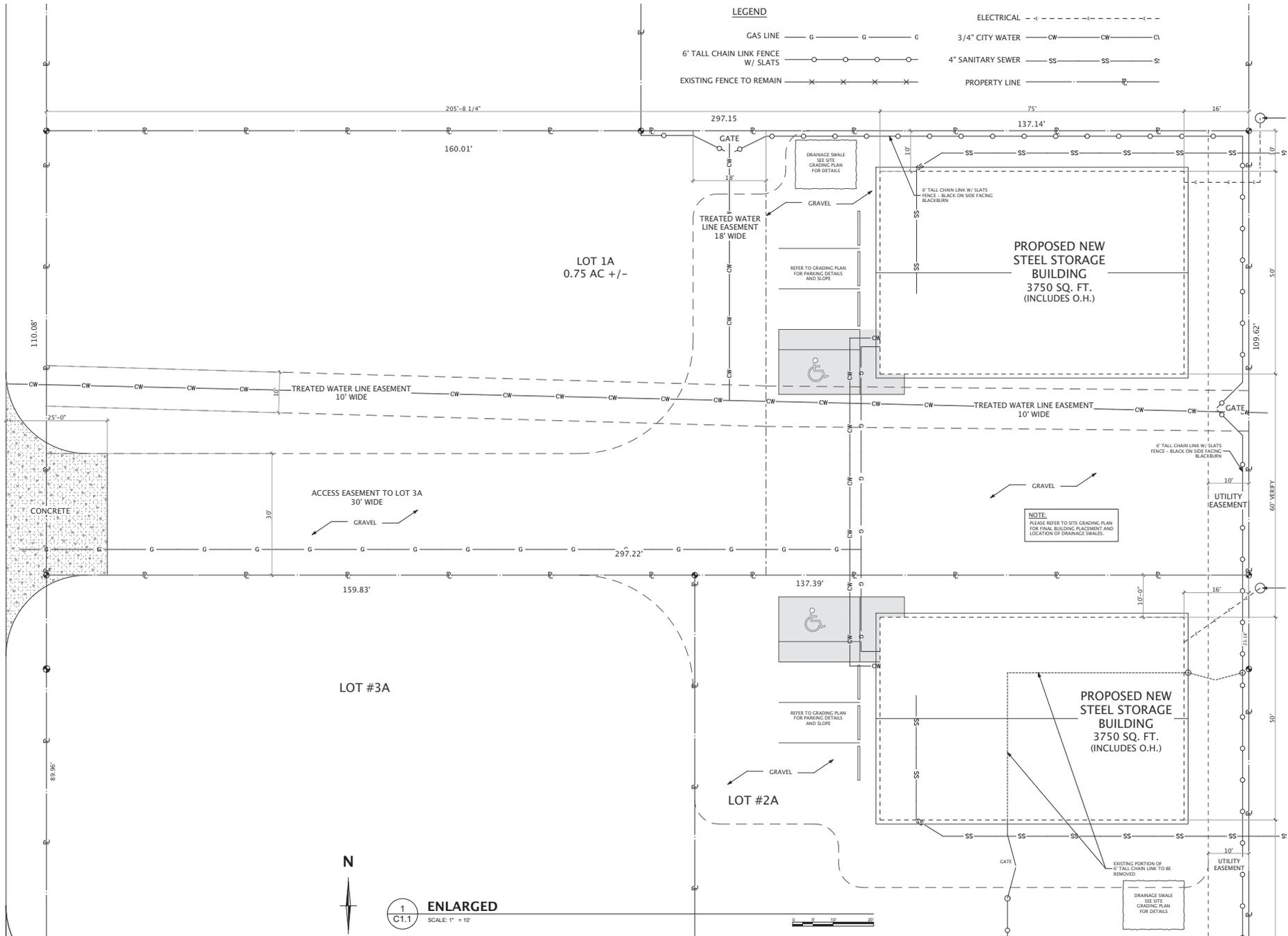
PROJECT NO.

**1752**

SHEET #

**C1.0**

OVERALL SITE PLAN







**ENGINEERING ASSOCIATES**  
**CONSULTING ENGINEERS & SURVEYORS**  
**ENGINEERINGWYOMING.COM**

Mr. Philip Bowman, PE  
Cody City Public Works Administrator  
P.O. Drawer 2200  
Cody, WY 82414

RE: Eagle Recovery Storage Buildings drainage report

Dear Phillip,

Eagle Recovery is proposing two new storage buildings located north of their existing shop on lots 1A and 2A of the Blackburn Plaza. The proposed development encompasses approximately 0.57 acres. Historically Lot 1A has drained off site to the northwest. A majority of Lot 2A's drainage was addressed in the drainage report for Eagle Recovery's previous development where two drainage swales were constructed to address the drainage in the fenced area of Lot 2A. As shown on the plans the north drainage swale will be relocated south of the southern building. Average slope of the existing site is 1.2%. This drainage report includes drainage for the proposed buildings, graveled areas, and road.

**Historic Run-Off**

**Lot 1A**

Lt Veg/Gravel = 0.5 ac, Lawn = 0.03 ac, Hard Gravel=0.16 ac, Roof/Conc=0.06 ac

Total = 0.75 acres

$C_{ave} = 0.465$

10-year, 2-hour storm Flow Rate:

Rainfall Intensity,  $I = 0.53$  inches/hour

**Total Historic Run-off**

$$Q = C_{ave}IA = 0.465 (0.53) (0.75) = \mathbf{0.18 \text{ cfs}}$$

**Historic Volume:**  $(0.18)(60)(60)(2) = 1296 \text{ cf} = 48 \text{ cy}$

**Lot 2A (Outside existing fenced area)**

Lt Veg/Gravel = 0.25 ac

Hard Gravel=0.02 ac

Total = 0.27 acres

$C_{ave} = 0.34$

10-year, 2-hour storm Flow Rate:

Rainfall Intensity,  $I = 0.53$  inches/hour

**Total Historic Run-off**

$$Q = C_{ave}IA = 0.34 (0.53) (.27) = \mathbf{0.05 \text{ cfs}}$$

**Historic Volume:**  $(0.05)(60)(60)(2) = 360 \text{ cf} = 13.33 \text{ cy}$



**ENGINEERING ASSOCIATES**  
**CONSULTING ENGINEERS & SURVEYORS**  
**ENGINEERINGWYOMING.COM**

**Developed Run-off**

**Lot 1A**

Lt Veg/Gravel = 0.25 ac, Lawn = 0.03 ac, Hard Gravel=0.32 ac, Roof/Conc=0.15 ac  
Total = 0.75 acres

$C_{ave} = 0.66$

10-year, 2-hour Storm Flow Rate:

Rainfall Intensity,  $I = 0.53$  inches/hour

**Total Developed Run-off**

$$Q = C_{ave}IA = 0.66(0.53)(0.75) = \mathbf{0.26 \text{ cfs}}$$

**Developed Volume:**  $(0.26)(60)(60)(2) = 1872 \text{ cf} = 69 \text{ cy}$

**Historic to Developed difference:  $0.26 - 0.18 = +0.08 \text{ cfs}$**

**Volume: +21 cy**

**Lot 2A**

Lt Veg/Gravel = 0.10 ac, Hard Gravel=0.08 ac, Roof/Conc=0.09 ac Total = 0.27 acres

$C_{ave} = 0.68$

10-year, 2-hour Storm Flow Rate:

Rainfall Intensity,  $I = 0.53$  inches/hour

**Total Developed Run-off**

$$Q = C_{ave}IA = 0.68(0.53)(0.27) = \mathbf{0.10 \text{ cfs}}$$

**Developed Volume:**  $(0.10)(60)(60)(2) = 720 \text{ cf} = 27 \text{ cy}$

**Historic to Developed difference:  $0.10 - 0.05 = +0.05 \text{ cfs}$**

**Volume: +14 cy**

**North swale volume (west side): 21.63 cy**

**North swale volume (east side): 17.37 cy**

**Total North: 39 cy**

**South swale volume: 22 cy**

**Total Berm Storage: 71 cy**

Proposed run off from the developed areas associated with the buildings including the access road, roof, and site grading will be retained in the developed drainage swales located around the buildings. The remainder of the site will continue to drain as it has done historically.

Sincerely,

ENGINEERING ASSOCIATES

Ian Morrison, PE

Encl

cc: 20020.00