Town of Paonia
214 Grand Avenue
Monday, November 3, 2025 6:00 PM
Planning Commission Agenda
https://us02web.zoom.us/j/84895161043
Meeting ID: 848 9516 1043

A) **Roll Call**

B) **Approval of Agenda**

C) **Approval of Minutes**

1) October 6, 2025, Planning Commission Meeting Minutes

D) **Appointment of Officers**

E) **Public Hearing**

1) Consideration of a Special Use Review to add an additional guest parking spot, west of Unit #4 in the Silver Leaf Co-Housing Development at the address of 1200 3rd St, Unit 4 Paonia, CO, 81428 from Michael Cook.

F) **Actions & Presentations**
Public comments must be related to the agenda item, 3-minute time limit.

G) **Adjournment**

As Adopted By:
Town of Paonia, Colorado
Resolution No. 2017-10 – Amended May 22, 2018

I. Rules of Procedure

Section 1. Schedule of Meetings. Regular Board of Trustees meetings shall be held on the second and fourth Tuesdays of each month, except on legal holidays, or as re-scheduled or amended and posted on the agenda prior to the scheduled meeting.

Section 2. Officiating Officer. The meetings of the Board of Trustees shall be conducted by the Mayor or, in the Mayor's absence, the Mayor Pro-Tem. The Town Clerk or a designee of the Board shall record the minutes of the meetings.

Section 3. Time of Meetings. Regular meetings of the Board of Trustees shall begin at 6:30 p.m. or as scheduled and posted on the agenda. Board Members shall be called to order by the Mayor. The meetings shall open with the presiding officer leading the Board in the Pledge of Allegiance. The Town Clerk shall then proceed to call the roll, note the absences and announce whether a quorum is present. Regular Meetings are scheduled for three hours, and shall be adjourned at 9:30 p.m., unless a majority of the Board votes in the affirmative to extend the meeting, by a specific amount of time.

Section 4. Schedule of Business. If a quorum is present, the Board of Trustees shall proceed with the business before it, which shall be conducted in the following manner. Note that all provided times are estimated:

(a) Roll Call - (5 minutes)
(b) Approval of Agenda - (5 minutes)
(c) Announcements (5 minutes)
(d) Recognition of Visitors and Guests (10 minutes)
(e) Consent Agenda including Approval of Prior Meeting Minutes (10 minutes)
(f) Mayor's Report (10 minutes)
(g) Staff Reports: (15 minutes)
(1) Town Administrator's Report
(2) Public Works Reports
(3) Police Report
(4) Treasurer Report

(h) Unfinished Business (45 minutes)
(i) New Business (45 minutes)
(j) Disbursements (15 minutes)
(k) Committee Reports (15 minutes)
(l) Adjournment

* This schedule of business is subject to change and amendment.

Section 5. Priority and Order of Business. Questions relative to the priority of business and order shall be decided by the Mayor without debate, subject in all cases to an appeal to the Board of Trustees.

Section 6. Conduct of Board Members. Town Board Members shall treat other Board Members and the public in a civil and polite manner and shall comply with the Standards of Conduct for Elected Officials of the Town. Board Members shall address Town Staff and the Mayor by his/her title, other Board Members by the title of Trustee or the appropriate honorific (i.e.: Mr., Mrs. or Ms.), and members of the public by the

appropriate honorific. Subject to the Mayor's discretion, Board Members shall be limited to speaking two times when debating an item on the agenda. Making a motion, asking a question or making a suggestion are not counted as speaking in a debate.

Section 7. Presentations to the Board. Items on the agenda presented by individuals, businesses or other organizations shall be given up to 5 minutes to make a presentation. On certain issues, presenters may be given more time, as determined by the Mayor and Town Staff. After the presentation, Trustees shall be given the opportunity to ask questions.

Section 8. Public Comment. After discussion of an agenda item by the Board of Trustees has concluded, the Mayor shall open the floor for comment from members of the public, who shall be allowed the opportunity to comment or ask questions on the agenda item. Each member of the public wishing to address the Town Board shall be recognized by the presiding officer before speaking. Members of the public shall speak from the podium, stating their name, the address of their residence and any group they are representing prior to making comment or asking a question. Comments shall be directed to the Mayor or presiding officer, not to an individual Trustee or Town employee. Comments or questions should be confined to the agenda item or issue(s) under discussion. The speaker should offer factual information and refrain from obscene language and personal attacks.

Section 9. Unacceptable Behavior. Disruptive behavior shall result in expulsion from the meeting.

Section 10. Posting of Rules of Procedure for Paonia Board of Trustees Meetings. These rules of procedure shall be provided in the Town Hall meeting room for each Board of Trustees meeting so that all attendees know how the meeting will be conducted.

II. Consent Agenda

Section 1. Use of Consent Agenda. The Mayor, working with Town Staff, shall place items on the Consent Agenda. By using a Consent Agenda, the Board has consented to the consideration of certain items as a group under one motion. Should a Consent Agenda be used at a meeting, an appropriate amount of discussion time will be allowed to review any item upon request.

Section 2. General Guidelines. Items for consent are those which usually do not require discussion or explanation prior to action by the Board, are non-controversial and/or similar in content, or are those items which have already been discussed or explained and do not require further discussion or explanation. Such agenda items may include ministerial tasks such as, but not limited to, approval of previous meeting minutes, approval of staff reports, addressing routine correspondence, approval of liquor licenses renewals and approval or extension of other Town licenses. Minor changes in the minutes such as non-material Scribner errors may be made without removing the minutes from the Consent Agenda. Should any Trustee feel there is a material error in the minutes, they should request the minutes be removed from the Consent Agenda for Board discussion.

Section 3. Removal of Item from Consent Agenda. One or more items may be removed from the Consent Agenda by a timely request of any Trustee. A request is timely if made prior to the vote on the Consent Agenda. The request does not require a second

or a vote by the Board. An item removed from the Consent Agenda will then be discussed and acted on separately either immediately following the consideration of the Consent Agenda or placed later on the agenda, at the discretion of the Board.

III. Executive Session

Section 1. An executive session may only be called at a regular or special Board meeting where official action may be taken by the Board, not at a work session of the Board. To convene an executive session, the Board shall announce to the public in the open meeting the topic to be discussed in the executive session, including specific citation to the statute authorizing the Board to meet in an executive session and identifying the particular matter to be discussed "in as much detail as possible without compromising the purpose for which the executive session is authorized." In the event the Board plans to discuss more than one of the authorized topics in the executive session, each should be announced, cited and described. Following the announcement of the intent to convene an executive session, a motion must then be made and seconded. In order to go into executive session, there must be the affirmative vote of two thirds (2/3) of Members of the Board.

Section 2. During executive session, minutes or notes of the deliberations should not be taken. Since meeting minutes are subject to inspection under the Colorado Open Records Act, the keeping of minutes would defeat the private nature of executive session. In addition, the deliberations carried out during executive session should not be discussed outside of that session or with individuals not participating in the session. The contexts of an executive session are to remain confidential unless a majority of the Trustees vote to disclose the contents of the executive session.

Section 3. Once the deliberations have taken place in executive session, the Board should reconvene in regular session to take any formal action decided upon during the executive session. If you have questions regarding the wording of the motion or whether any other information should be disclosed on the record, it is essential for you to consult with the Town Attorney on these matters.

IV. Subject to Amendment

Section 1. Deviations. The Board may deviate from the procedures set forth in this Resolution, if, in its sole discretion, such deviation is necessary under the circumstances.
Section 2. Amendment. The Board may amend these Rules of Procedures Policy from time to time.

Town of Paonia
214 Grand Avenue
Monday, October 6, 2025 6:00 PM
Planning Commission Minutes

RECORD OF PROCEEDINGS

Commissioner Bachran calls the meeting to order at 6:00 PM.

Roll Call
Present:
Commissioner Bachran
Commissioner Smith
Commissioner Stelter
Commissioner Wynn

Absent:
Vice-Chair Howe
Commissioner Hunter

Approval of Agenda

Commissioner Smith makes a motion to approve the agenda. Seconded by Commissioner Wynn.

The motion carries unanimously.

Approval of Minutes

- September 8, 2025 Planning Commission Meeting Minutes

Commissioner Wynn makes a motion to approve the September 8, 2025, meeting minutes with a spelling correction noted. Seconded by Commissioner Smith.

The motion carries unanimously.

Actions & Presentations

No items for this month.

Adjournment

Commissioner Bachran adjourns the meeting at 6:02 PM.

DRAFT

_____ _____
Ruben Santiago, Deputy Town Clerk Lynn Howe, Vice Chair

TOWN OF PAONIA
PLANNING COMMISSION & COMMUNITY DEVELOPMENT
STAFF REPORT

REPORT OF THE TOWN ADMINISTRATOR

APPLICATION FOR SPECIAL USE REVIEW

*(Real Estate Parcel Number: **324505273004**,*

Commonly known as 1200 3rd St. Unit 4 Paonia, CO 81428)

For Public Hearing on November 3, 2025

Background

SRV 2025-01 Application for Special Use Review as outlined in § 16-4-40 of the Town of Paonia's Municipal Code of Ordinances for the Parcel Number 324506114016, the property commonly known as: 325 Grand Avenue Paonia, CO 81428. The property is currently listed as C-1, Core Commercial District.

The applicant has submitted **SRV 2025-01** requesting approval for a driveway and parking space along Clark Avenue serving Unit 4 of the Silverleaf Townhomes. The parcel is within the Silverleaf Subdivision, governed by the Silverleaf Development Agreement (2016) and associated as-built drawings recorded with Delta County. The proposed location lies within the subdivision's bioswale and drainage swale system constructed for stormwater conveyance along Clark Avenue.

Field verification indicates that the proposed parking space is angled relative to the roadway rather than perpendicular as required by Town standards, and that there is an approximate five- to six-foot fall between the roadway edge and the proposed parking pad elevation. The driveway shown in the 2016 plans was previously relocated during subdivision construction to avoid severe grade conflicts between both 3rd Street and Clark Avenue, as noted in the as-built drawings and engineer's narrative.

General Information

Zoning and Land Use:
The property is zoned **R-2, Medium Density Residential**, within the Silverleaf Subdivision. All access improvements must conform to the subdivision's recorded plans, the Paonia Municipal Code, and referenced Delta County standards.

Applicable Regulations:

- Paonia Municipal Code (PMC) Chapter 16 – Zoning, particularly § 16-6-10 through § 16-7-70 (Off-Street Parking and Access).
- Delta County Roadway Design Standards (August 15, 2014), adopted by reference in the Silverleaf Development Agreement for access and drainage design.
- Silverleaf Development Agreement (2016), establishing common drainage features, shared maintenance responsibilities, and required conformance with approved construction plans.

- C.R.S. § 42-4-1204, prohibiting parking in any location that obstructs traffic, within a drainage or excavation area, or where stopping would interfere with roadway safety.

Documents Reviewed:

- SRV 2025-01 Application and Site Plan
- Silverleaf Development Agreement (2016)
- Delta County Roadway Standards (August 15, 2014)
- Chapter 16 – Zoning, Town of Paonia Municipal Code
- Recorded Deeds for Unit 4 (2016)
- Property Record Card – R024578
- Silverleaf As-Built Construction Drawings
- Planning Commission Minutes – January 14, 2016
- Joint Town Board & Planning Commission Minutes – January 26, 2016
- Board of Trustees Minutes – February 23, 2016, confirming subdivision approval and execution of the Development Agreement

Required Findings Needed to Consider a Special Use Review:

As established in PMC §16-4-50, Site Plan Review Criteria and Performance Standards.

(a) The criteria for review and performance standards are as follows:

(1) *Compliance of the application with this Code in general*.

The proposed driveway and parking pad do not comply with the requirements of **Article 6 – Off-Street Parking and Loading**.

- **§16-6-10** requires off-street spaces to be located on the lot and unobstructed. The proposed pad lies **within a public drainage easement**, not within the private lot's approved boundaries, and therefore cannot qualify as an off-street parking space.
- **§16-6-60(a)–(b)** requires all parking areas to be unobstructed and provide lawful access to and from a street. The proposed location obstructs the engineered bioswale and lacks a legal access point.

- **§16-6-60(c)** requires a **durable surface** such as asphalt or concrete. The applicant has not provided a surfacing plan or structural edge treatment.

- **§16-6-60(j)** requires driveways and parking areas to be designed with adequate aisle spacing and safe approach geometry. The proposed space is angled, not perpendicular, and features a five-to-six-foot elevation change from the roadway edge, creating an unsafe entry grade.

- **§16-6-60(h)** requires landscaped drainage areas. The proposed pad would **replace** an existing bioswale with impervious surface, eliminating required stormwater functionality.

The angled configuration and location within the subdivision's bioswale violate both the Town's zoning and engineering standards, as well as the Silverleaf Development Agreement (2016), which mandates conformance to approved drainage and grading plans. Therefore, the application fails to meet general compliance with the Paonia Municipal Code.

The proposal fails to comply with multiple provisions of Article 6 and therefore does not meet the minimum standards of the Paonia Municipal Code.

(2) *The compatibility of the proposed use and site plan with the character of the surrounding area*.

The surrounding properties within the Silverleaf Subdivision maintain consistent, approved access points and unified drainage infrastructure. The proposed modification introduces an unapproved and unsafe deviation from the subdivision's established pattern, potentially affecting shared stormwater performance. As such, the proposal is not compatible with the subdivision's design character or existing residential access patterns.

The application is incompatible with the surrounding residential development pattern and the subdivision's recorded design intent.

(3) *The desirability and need for the proposed use*.

While the applicant's intent to add off-street parking is understandable, the subdivision was approved and constructed with designated parking and access consistent with Town standards. The proposed additional driveway does not represent a public necessity and may undermine the approved subdivision drainage system. Therefore, the desirability and need are outweighed by the potential negative impacts on shared infrastructure and public safety.

The proposed additional parking does not represent a public necessity and may harm established infrastructure.

(4) *The potential for adverse environmental influences that might result from the proposed use*.

The proposed driveway is located directly within an engineered bioswale designed to convey runoff from Clark Avenue. Altering this drainage feature by filling or paving could reduce stormwater flow capacity, create ponding, and redirect runoff toward adjacent properties. This would constitute an adverse environmental influence contrary to Section 3.1 of the Silverleaf Development Agreement requiring preservation of common drainage improvements.

The project presents clear adverse environmental impacts by obstructing stormwater infrastructure.

(5) *Compatibility of the proposed use and site plan with the policies and guidelines of the Comprehensive Plan*.

The 2025 Paonia Comprehensive Plan establishes a clear policy framework under its Infrastructure Element that prioritizes dependable, safe, and sustainable infrastructure systems. The Plan envisions infrastructure that is proactive, environmentally responsible, and protective of community assets and neighboring properties. Several adopted goals and policies directly relate to the proposed site modification:

- **INFRA Goal 2** calls for the Town to *"plan, budget, operate, and maintain stormwater, water treatment, and green infrastructure that support quality public services in health, water availability, and safety."*

- **INFRA Goal 11** seeks to *"protect the community from adverse flooding and pollution impacts of runoff with efficient and progressive stormwater management practices."*

- **Stormwater Policy 2** directs the Town to *"codify and create standards for stormwater mitigation requirements for new development and ensure that drainage system design and construction are kept current,"* while **Stormwater Policy 3** requires that *"new development preserve natural drainage courses and, where necessary, be supported by an engineered drainage system."*

The proposed driveway and parking pad would obstruct an engineered bioswale that functions as a shared stormwater management feature, directly conflicting with the Plan's commitment to resilient, environmentally sound infrastructure. By disrupting natural and engineered drainage pathways, the project undermines the Town's stormwater goals of reducing pollutant discharge, preventing flooding, and coordinating with regional partners such as Delta County and local ditch companies.

Furthermore, the Comprehensive Plan's Infrastructure Vision promotes proactive maintenance, preservation of public safety, and design consistency within established residential areas. The introduction of non-engineered private improvements within a shared drainage easement is incompatible with the Plan's guiding principles of equitable infrastructure stewardship and neighborhood-scale resilience.

The proposed project does not align with the 2025 Comprehensive Plan's infrastructure, stormwater, or land use goals. It compromises established drainage systems, contradicts stormwater management policies, and fails to uphold the Town's long-term vision for safe, sustainable, and well-coordinated infrastructure.

(b) *Lights and signs shall be located in a manner that will not be distracting to adjoining properties or passing motorists*.

No additional lighting or signage is proposed as part of this application. Therefore, this criterion is **not applicable**.

(c) *Landscaping shall be provided in areas near public right-of-way and located with consideration for energy conservation. An acceptable plan must be provided for the maintenance of the required landscaped areas*.

The driveway encroaches into an area designated for stormwater management rather than landscaped open space. Disturbing this feature would eliminate vegetation critical to infiltration and erosion control. Restoration or replacement of this landscaping would be necessary if any work were approved.

(d) *Control of storm drainage shall be provided so as to not damage adjoining properties. The plan must be approved by the Town Engineer*.

Control of storm drainage is a critical deficiency in this application. The proposed location within the bioswale would obstruct designed flow paths and potentially damage adjoining properties. Any approval would require an engineered drainage plan reviewed and certified by a Colorado-licensed engineer and approved by the Town Administrator or designee. Without such documentation, the plan fails to satisfy this standard.

The design does not include an engineered culvert or certified drainage plan to maintain the bioswale's function. Any alteration of a subdivision drainage facility requires professional engineering review and Town approval.

Without such a design, the project fails to meet the performance standard for drainage control under **§16-4-50(d)** and the intent of **Article 6**.

(e) *Site design and building plans shall include provisions for the needs of handicapped individuals as required by the Building Code or other ordinances of the Town.*

Not applicable; the proposal concerns vehicular access to a private unit and does not include pedestrian or ADA-accessible design elements.

(f) *Approved landscaping or solid fencing capable of screening adjacent properties shall be provided where commercial uses abut residential uses*.

Not applicable; the use is residential in character and does not abut a commercial zone. However, any grading or drainage modifications shall maintain existing vegetative cover consistent with subdivision standards.

(g) *Commercial and Industrial uses shall conform to the following performance standards*:

Not applicable; the subject property is zoned R-2 (Medium Density Residential) and does not involve commercial or industrial activity. However, general nuisance and environmental standards are relevant to ensure no adverse drainage, glare, or noise impacts extend beyond the property line.

In addition, Colorado Revised Statutes must also be followed, the proposal as presented doesn't follow CRS. The steep slope and angled orientation create unsafe conditions for vehicles entering or exiting the space. The design also places parked vehicles adjacent to the roadway edge, conflicting with **C.R.S. §42-4-1204(1)(e)**, which prohibits stopping or parking along excavations or obstructions that impede traffic.

TOWN OF PAONIA
PLANNING COMMISSION & COMMUNITY DEVELOPMENT
STAFF REPORT

Summary of Findings:

Based on the evidence and documentation reviewed, the proposed driveway and parking space at 1200 3rd Street, Unit 4:

- Fail to meet the minimum design and safety requirements of PMC §16-6-10 through §16-6-70.
- Conflict with the Silverleaf Development Agreement (2016) and recorded as-builts.
- Present unacceptable drainage and grading impacts.
- Pose potential safety and traffic hazards under C.R.S. §42-4-1204. Accordingly, the proposal does not satisfy the Site Plan Review Criteria and Performance Standards set forth in PMC §16-4-50 and is not recommended for approval.

Staff Analysis:

The applicant's proposal presents multiple conflicts with approved subdivision drainage and safety standards. Relocating or redesigning the access outside of the bioswale would be required for compliance. Engineering evidence shows the bioswale was intentionally constructed to protect both roadway integrity and private improvements downstream, and any disturbance without engineered mitigation may cause flooding or sedimentation.

While staff recognizes the desire for direct access to Clark Avenue, the physical and regulatory constraints make this site location infeasible without substantial modification and professional design. The application, as submitted, does not meet the intent of the Town's access, drainage, or safety standards.

Staff Recommendation

Staff recommends denial of SRV 2025-01 based on the following findings:

1. The proposed driveway conflicts with the **Silverleaf Development Agreement (2016)** and approved **as-built drainage infrastructure**.
2. The design does not comply with **Delta County Roadway Standards (2014)** or **PMC § 16-6-10 through §16-6-70**.
3. The location presents **significant safety and drainage risks** inconsistent with public welfare.
4. The proposal may result in a **violation of C.R.S. § 42-4-1204** by locating parking adjacent to an active drainage system.

Alternative (Conditional) Approval – If Granted by the Commission:

If the Planning Commission determines the request may proceed, staff recommends conditional approval subject to the following minimum requirements:

1. **Engineer's Design:** A licensed Colorado engineer shall prepare drainage and access plans verifying that stormwater capacity and roadway safety are maintained.

2. **Culvert Installation:** The engineer shall design and size a culvert adequate to preserve the bioswale's function.

3. **Perpendicular Alignment:** The driveway must be realigned to intersect Clark Avenue at a perpendicular angle.

4. **Concrete Edge Treatment:** A reinforced concrete edge pan (minimum **6 inches wide and 8 inches deep**) shall be installed at the street interface.

5. **Post-Construction Certification:** The applicant shall provide a certified engineer's letter confirming that the bioswale and roadway edge have been restored to design standards.

Potential Motions:

1) I move to recommend conditional approval of SRV 2025-01, subject to the conditions outlined by staff, finding that the application can meet the intent of Town standards with appropriate engineering design.

2) I move to recommend denial of SRV 2025-01 as the proposed driveway conflicts with the Silverleaf Development Agreement and adopted roadway and drainage standards, and does not serve the public health, safety, and welfare

PAONIA
C·O·L·O·R·A·D·O

Special Use Review Application
Town of Paonia, Colorado

1. Applicant Information

- **Applicant Name:** Michael Cook
- **Applicant Address:** 1200 3rd Street, Unit 4
- **Applicant Contact Information:**
  - Phone: 303-618-0765
  - Email: mcook@mjcusa.com
- **Property Owner Name (if different):** _____
- **Property Owner Address:** _____

2. Property Information

- **Legal Description of Property:** Unit 4, Silver Leaf Co-Housing within Block 1 of the Hammond's Addition to the Town of Paonia, County of Delta, State of Colorado
  (Attach legal description, typically from a deed or survey.)
- **Property Address:** 1200 3rd Street, Unit 4, Paonia, CO 81428
- **Parcel Number(s)** PROJECT DESCRIPTION IS ATTACHED

3. Site Plan

The following details must be included in the site plan, which should be drawn to scale on **Mylar**:

- **Site Plan Requirements:**
  - ☒ **Location of all buildings, structures, and other improvements** on the property. (A building envelope may be used for flexibility in placement.) See Exhibits E, E1 and F
  - ☒ **Off-street parking and loading areas** with dimensions and number of spaces.
  - ☒ **Ingress and egress points** (access points for buildings and parking).

- [x] **Service and refuse collection areas** (locations and type).
- [ ] **Major screening proposals** (type, location, and size of barriers or landscaping to minimize visual impact).
- [ ] **Signage details**, including size, shape, height, and character of all proposed signs.
- [ ] **Open space and recreational areas** (designated areas for public or private recreation, including their size and location).
- [ ] **Outdoor lighting details**, including type and placement of fixtures to avoid light pollution and impact on neighboring properties.
- [ ] **Landscaping plan**, including:
    - Type of plant material
    - Minimum size
    - Quantity of each species
    - Location of landscaping areas on the site plan.
- [x] **Proposed stormwater management solutions**, including drainage plans and runoff control measures.
- [ ] **Handicapped access provisions** (per Town building code requirements).
- [ ] **Timeframe for project completion**, and phasing if applicable.

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4. Legal Agreement

An agreement will be placed on the original site plan with the following:

- A statement that the property will be developed **only according to the approved special review site plan** and in compliance with Town of Paonia zoning regulations.
- **Signatures of all owners and lienholders** of the property, notarized.
- **Designated party** responsible for implementation of the site plan and improvements.

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5. Title Policy copy of Warranty Deed is attached

- **Title Policy Submission**: Provide a title policy indicating that the property is free of ownership disputes, liens, or encumbrances that would impair the use of the property. The policy must:
    - Be effective within **24 hours of Board approval**.
    - Confirm signatures of **all owners and lienholders** on the special review site plan.
    - Be submitted to the **Town Clerk within 7 days** of Board approval.

6. Supporting Documents

Attach the following documents:

- **List of Property Owners Within 200 Feet**: Provide names and addresses of all property owners within 200 feet of the subject property.
- **Additional Reports/Studies** (if applicable):
    - Traffic analysis
    - Soils or geological reports
    - Drainage or engineering studies
    - Environmental impact assessments
    - Noise studies
    - Air quality studies
    - Any other relevant information requested by the Town for further analysis.

7. Review Criteria and Performance Standards

In order for the Board of Trustees to approve the application, the following criteria must be met:

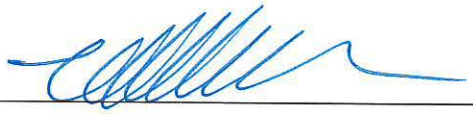
1. **Compliance with Zoning Code**: R-2 Medium Density Residential District
   The application must comply with the Town of Paonia Zoning Code and all applicable ordinances.
   attached
2. **Compatibility with Surrounding Area**:
   The proposed use and site plan must be compatible with the character of the surrounding area.
3. **Need and Desirability**:
   The proposed use should meet a demonstrated need for the community.
4. **Environmental Considerations**:
   The application must address any potential adverse environmental impacts.
5. **Comprehensive Plan Compatibility**:
   The proposed use must align with the Town's Comprehensive Plan policies and guidelines.
6. **Performance Standards for Commercial/Industrial Uses**:
    - **Lights and Signs**: No distraction to neighboring properties or motorists.
    - **Landscaping**: Provide energy-efficient landscaping, especially near public right-of-way.
    - **Storm Drainage**: Must prevent damage to adjoining properties.

- **Handicapped Access**: Required by law.
- **Commercial Use Screening**: Commercial and industrial uses abutting residential areas must provide adequate screening.
- **Environmental Performance**:
  - No dust, odor, gas, fumes, glare, or vibration beyond property boundaries.
  - No emissions of particulate matter above specified limits.
  - Noise levels must be kept below 75 decibels, with no sudden, shrill, or intermittent sounds.
  - No water pollution from the activity.
  - Restrictions on truck traffic and hours of operation for certain commercial/industrial zones.
- **Payment of Fees**
  - $250 Application Fee for Special Use Reviews within zoning districts (Must be paid at time of filing).
  - Administrative Review billed at $80 per hour in 15-minute increments if review takes longer than 1-hour (Not required at time of filing).
  - Attorney Review billed at $235 per hour in 15-minute increments, if necessary (Not required at time of filing).

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8. Signature of Applicant

By signing below, the applicant affirms that all information provided in this Special Use Review Application is true and complete to the best of their knowledge, and agrees to abide by the terms outlined in the application and related documents.

Applicant Signature: 

Date: 9/15/2025

Town Use Only
Received by: _____
Date Received: _____

PROJECT DESCRIPTION

Special Use Review Application of Michael Cook for Additional Guest Parking Space West of Unit #4 of Silver Leaf Co-Housing Development aka Silver Leaf Homeowners Association, Inc.

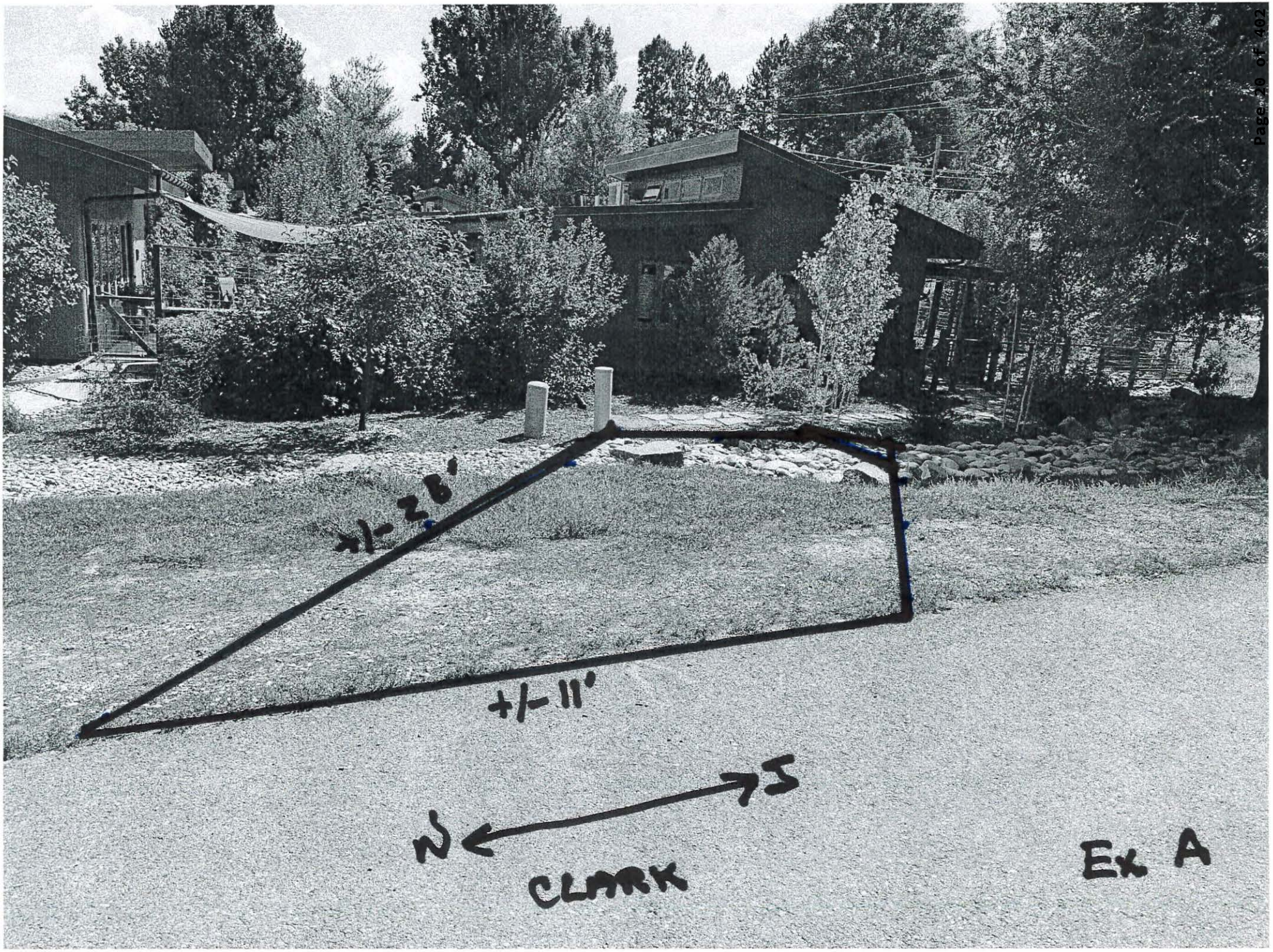
Project Description: The project will add a single guest parking space off Clark Street in almost the exact location in which guest parking spaces are called for in the site plan attached to the Development Agreement between the Town and Silver Leaf. See Exhibit E and E1 which show the location of the originally designated parking spaces. It is not known why the actual parking spaces were relocated. The additional parking space will slightly increase the number or guest parking spaces available at Silver Leaf, will create a convenient location for loading and unloading for Unit 4, will create a conveniently located guest parking space for Unit 4 and will create an additional EV charging location at Silver Leaf. All of which will benefit the community.

The precise location and layout of the additional parking space is shown on Exhibits A – F, attached to the application. The project will be implemented and installed using a weed matt, 2 – 3 inches of ½'- ¾" of clean, compacted washed aggregate over a small amount of gravel file material to smooth and level the topography on which the aggregate is placed. The aggregate will be the same type of material currently used throughout Silver Leaf for parking surfaces. A metal garden type barrier will be installed around the perimeter of the parking space to keep the aggregate within the footprint of the parking area.

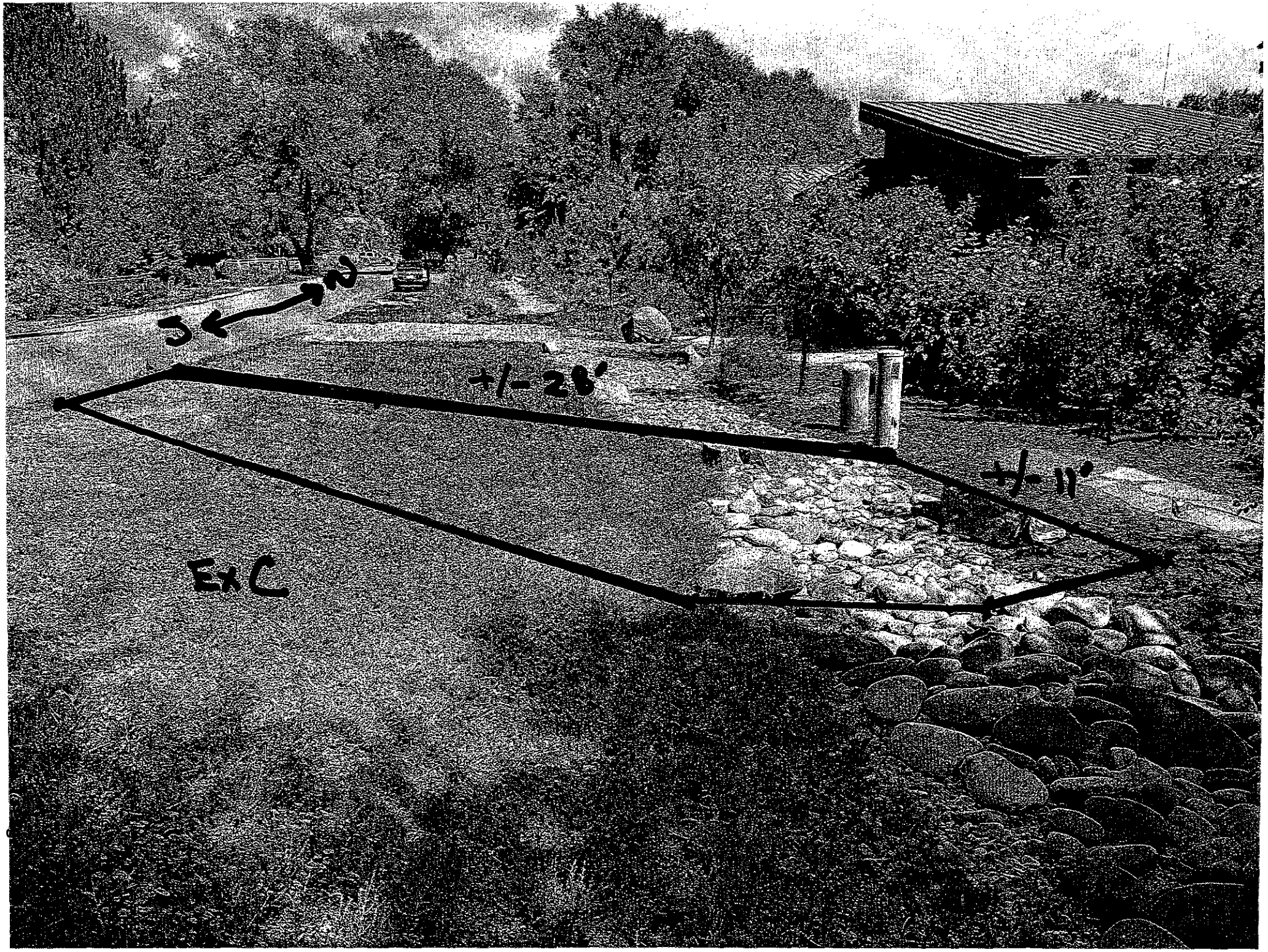
Drainage: The parking space will not change or impact the drainage in the parking area. The parking space will overlay an area on its east end, adjacent to Unit 4, which appears to be a flood control trench. In fact, it is believed that much of the area that appears to be the top of the trench is actually an aesthetic addition that is not part of a functioning flood control trench. In checking with a person involved in the construction of the trench, the applicant was informed that where the trench exists, it is filled with 1" – 2" rock intended to hold water. The trench has no drainage outlet. During construction, the exact location of the functioning trench will be determined and a double layer of weed matt will be installed

over the trench to prevent fines and small rocks from infiltrating the trench and interfering with its intended function.

Silver Leaf HOA Approval: The plan for the location and construction of the parking space has been presented to the Silver Leaf HOA. A letter from the HOA supporting and approving the additional guest parking space is attached.


+/- 26'
+/- 11'
N
S
CLARK
Ex A

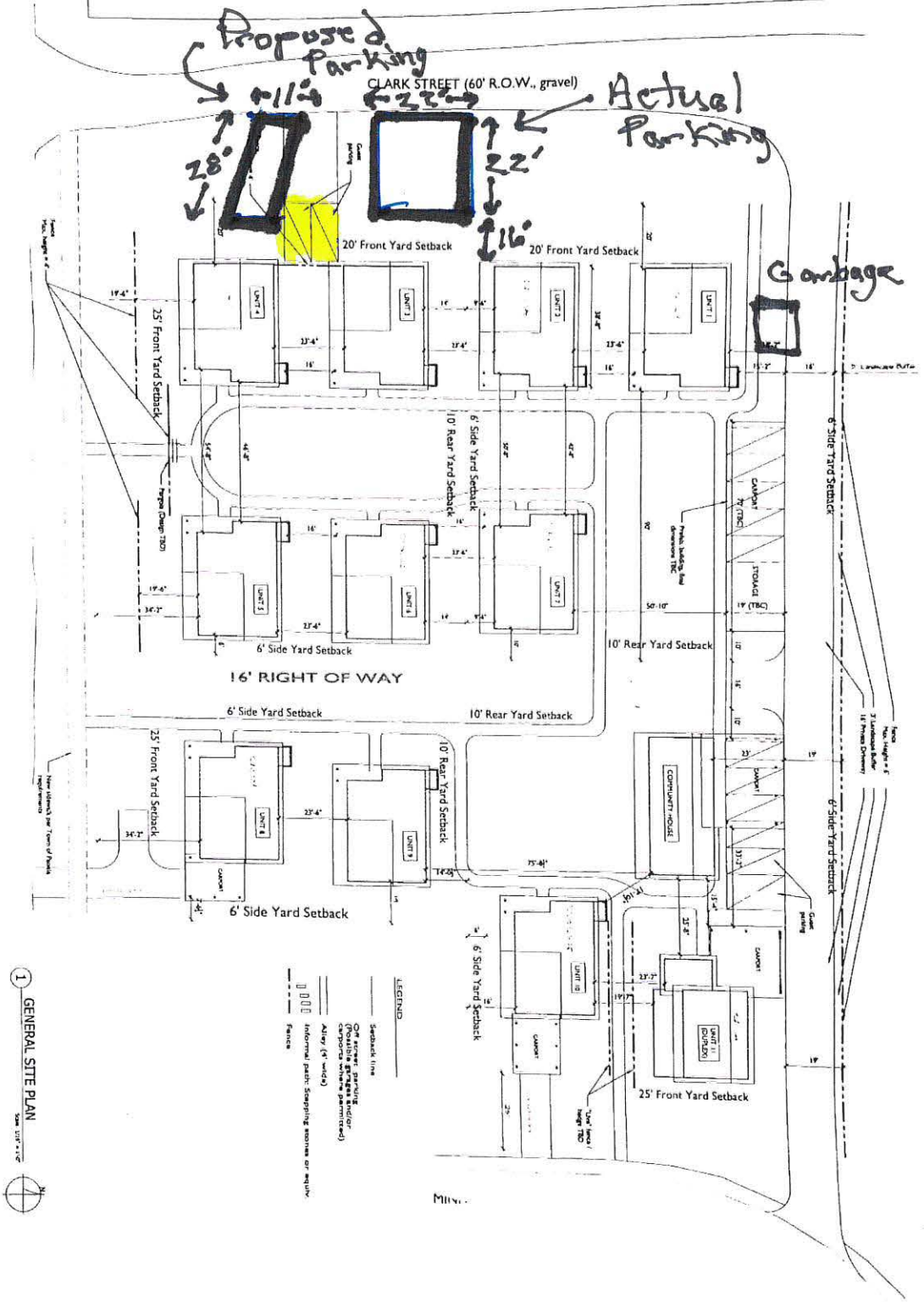
+12+
Fx 8 cirk 2


+/- 28'
+/- 11'
EHC

EX-13

Hand drawings Not to Scale Shows approximate Locations
Garbage
Actual Parking
Proposed Parking
CLARK STREET (60' R.O.W., gravel)
20' Front Yard Setback
6' Side Yard Setback
10' Rear Yard Setback
25' Front Yard Setback
UNIT 1
UNIT 2
UNIT 3
UNIT 4
UNIT 5
UNIT 6
STORAGE
Pergola (Design TBD)
EXIT

Hand Drawings Not To Scale - Show approximate locations



1 GENERAL SITE PLAN

Ex E1

Ex E

SHEET A0.0 SITE PLAN

DRAWN BY
SCALE
DATE 01.28.17
ISSUE
REVISIONS

3Rd & Clark St.
Paonia, CO. 8145/16

SILVER L
CO-HOUS

IMPROVEMENT LOCATION CERTIFICATE

THIS IS NOT A SURVEY

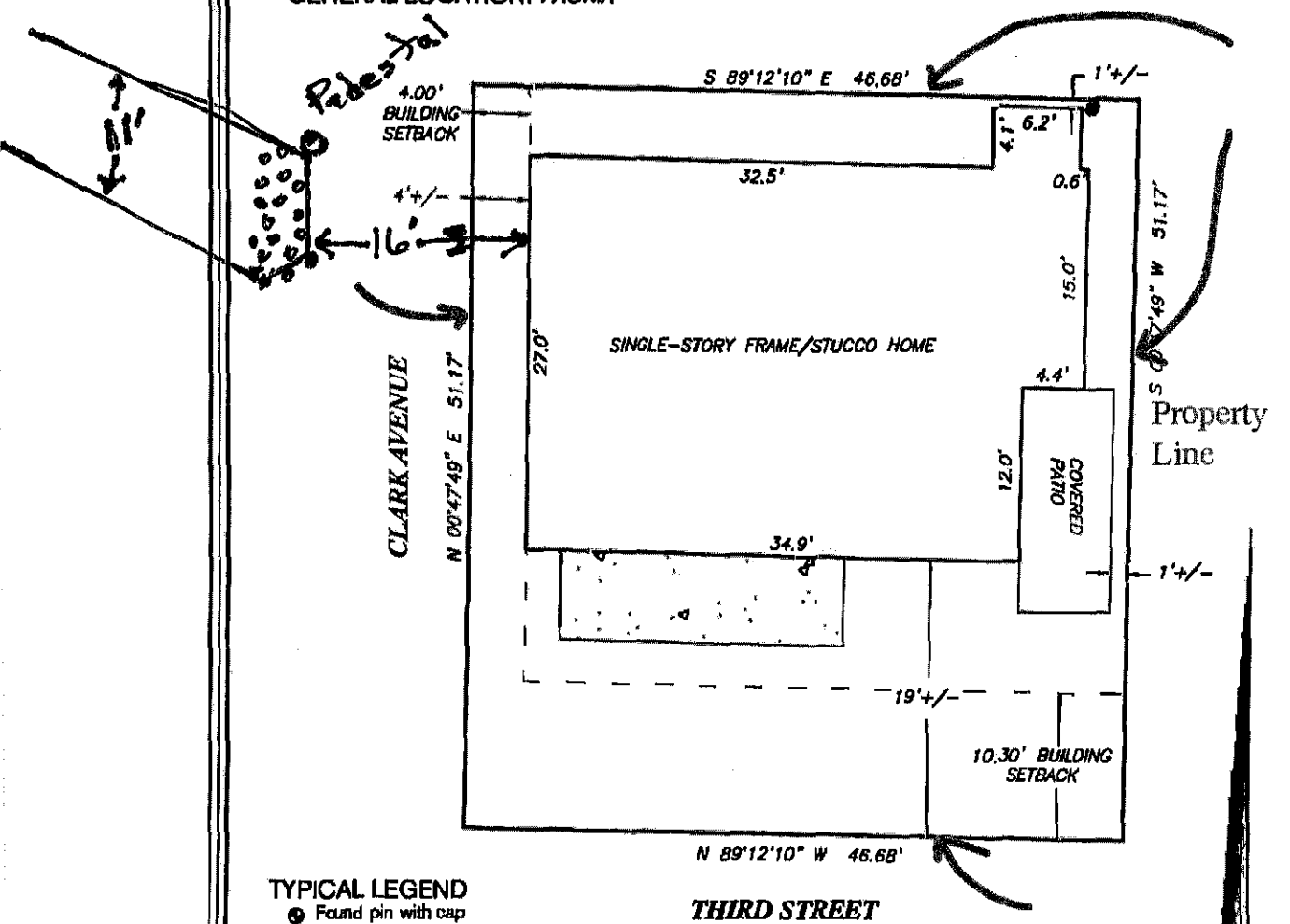
BUYER: *BONNASUE*

DATE: *APRIL 10, 2019*

ORDERED BY: *CORNERSTONE HOME LENDING*

PROPERTY ADDRESS: *1200 3RD STREET #4*

GENERAL LOCATION: *PAONIA*



TYPICAL LEGEND

- Found pin with cap
- Fencelines
- Tel. line
- Electric (overhead) (subject to easement)
- Gas line
- Water line
- Easement
- Setback Line
- Concrete
- Gravel Driveway

LEGAL DESCRIPTION:

UNIT 4 OF THE SILVER LEAF CO-GOUSING WITHIN BLOCK 1 OF THE HAMMOND'S ADDITION TO THE TOWN OF PAONIA DELTA COUNTY, STATE OF COLORADO

NOTE:

BOUNDARY LINES ARE UNKNOWN WITHOUT A SURVEY. NO MONUMENTS WERE FOUND. THE IMPROVEMENTS APPEAR TO BE WITHIN THE BOUNDARY LINES.

N

0 5 10

SCALE 1"=10'

INVESTIGATION BY WILMORE AND COMPANY PROFESSIONAL LAND SURVEYING INC., P.O. BOX 1652, 406 GRAND AVENUE, PAONIA, COLORADO 81428 (970) 527-4200 FAX (970) 527-4202

I hereby certify that this IMPROVEMENT LOCATION CERTIFICATE was prepared solely for THE TITLE COMPANY OF DELTA COUNTY AND BONNASUE, that it is NOT a survey plat, and that it is not to be relied upon for the establishment of fences, buildings, or other future improvement construction lines. I further certify that the improvements on the above described parcels on this 10TH day of APRIL, 2019, EXCEPT as may be shown above, that there are no apparent encroachments upon the described parcel by improvements on an adjoining property, EXCEPT as indicated, and that there is no apparent evidence of any easement crossing or burdening this parcel, EXCEPT AS NOTED.

Ex F

WILMORE & COMPANY

PROFESSIONAL LAND SURVEYING, INC.

406 Grand Avenue 970.527-4200

P.O. Box 1652 970.527-4202

Paonia, Colorado 81428

COLORADO REGISTERED ANDY A. WILMORE 25972 PROFESSIONAL LAND SURVEYOR

PROFESSIONAL LAND SURVEYOR COLO# 25972

Defining Boundaries

JOB# ILC19040 APRIL 10, 2019 DRAWN BY: TW

RECEPTION#: 754882, 08/09/2024 at 02:13:18 PM, 1 OF 1, R $13.00 D $39.38
TERI A. STEPHENSON, DELTA COUNTY, CO CLERK AND RECORDER

Land Title
GUARANTEE COMPANY
Since 1967

General Warranty Deed

(Pursuant to C.R.S. 38-30-113(1)(a))

State Documentary Fee
Date: August 09, 2024
$39.38

This Deed, effective as of **August 9th, 2024**, signed on the date(s) acknowledged below, by Grantor(s), **DALE A. CECIL**, whose street address is **P.O. BOX 1131, Grand Junction, CO 81502**, City or Town of **Grand Junction**, County of **Mesa** and State of **Colorado** , for the consideration of **($393,800.00) ***Three Hundred Ninety Three Thousand Eight Hundred and 00/100***** dollars, in hand paid, hereby sell(s) and convey(s) to **MICHAEL J. COOK**, whose street address is **1728 IVANHOE STREET, Denver, CO 80220**, City or Town of **Denver**, County of **Denver** and State of **Colorado**, the following real property in the County of **Delta** and State of Colorado, to wit:

UNIT 4, SILVER LEAF CO-HOUSING WITHIN BLOCK 1 OF THE HAMMOND'S ADDITION TO THE TOWN OF PAONIA, COUNTY OF DELTA, STATE OF COLORADO

also known by street and number as: **1200 3RD STREET, UNIT 4, PAONIA, CO 81428**

with all its appurtenances and warrant(s) the title to the same, subject to Statutory Exceptions.

Dale A. Cecil

Dale A. Cecil

State of **Colorado**)
)ss.
County of **Delta**)

The foregoing instrument was acknowledged before me on this day of **August 9th, 2024** by **DALE A. CECIL**

Witness my hand and official seal

My Commission expires: 1/30/25

Notary Public

Victoria Paradise
Notary Public
State of Colorado
Notary ID 20094001701
My Commission Expires: January 30, 2025

When recorded return to: **MICHAEL J. COOK**
1728 IVANHOE STREET, Denver, CO 80220

Sec. 16-2-40. - R-2, Medium-Density Residential District.

It is the intent of this District to allow for the orderly and creative development of attached and detached single-family, two-family and multiple-family dwellings at moderate densities. Such areas are intended to serve as a transition between the lower-density zoning districts and the higher-density residential areas and commercially zoned areas.

(Ord. No. 2000-02, Art. IX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

September 12, 2025

To: Town of Paonia

Re: Special use review application of Michael Cook for additional Guest parking space on the West side of unit #4 of Silver Leaf Homeowners Association, Inc.

Dear Sir or Madam:
At a Silver Leaf Homeowners Association, Inc. (HOA) meeting on September 6th 2025 Michael Cook, the owner of unit 4 of the Silver Leaf Development, reviewed with members of the HOA his proposed plan for an additional guest parking spot on the West side of #4. That proposed plan is reflected in exhibits A-F attached to this letter which we understand, will also be attached to his Special Use Review Application (Application) submitted to you. We understand, the proposed plan will be implemented and installed using a week matt and 2-3 inches of ½"-3/4" clean, compacted washed aggregate. A relatively small amount gravel fill material may also be used to level and smooth the topography on which the aggregate is placed.

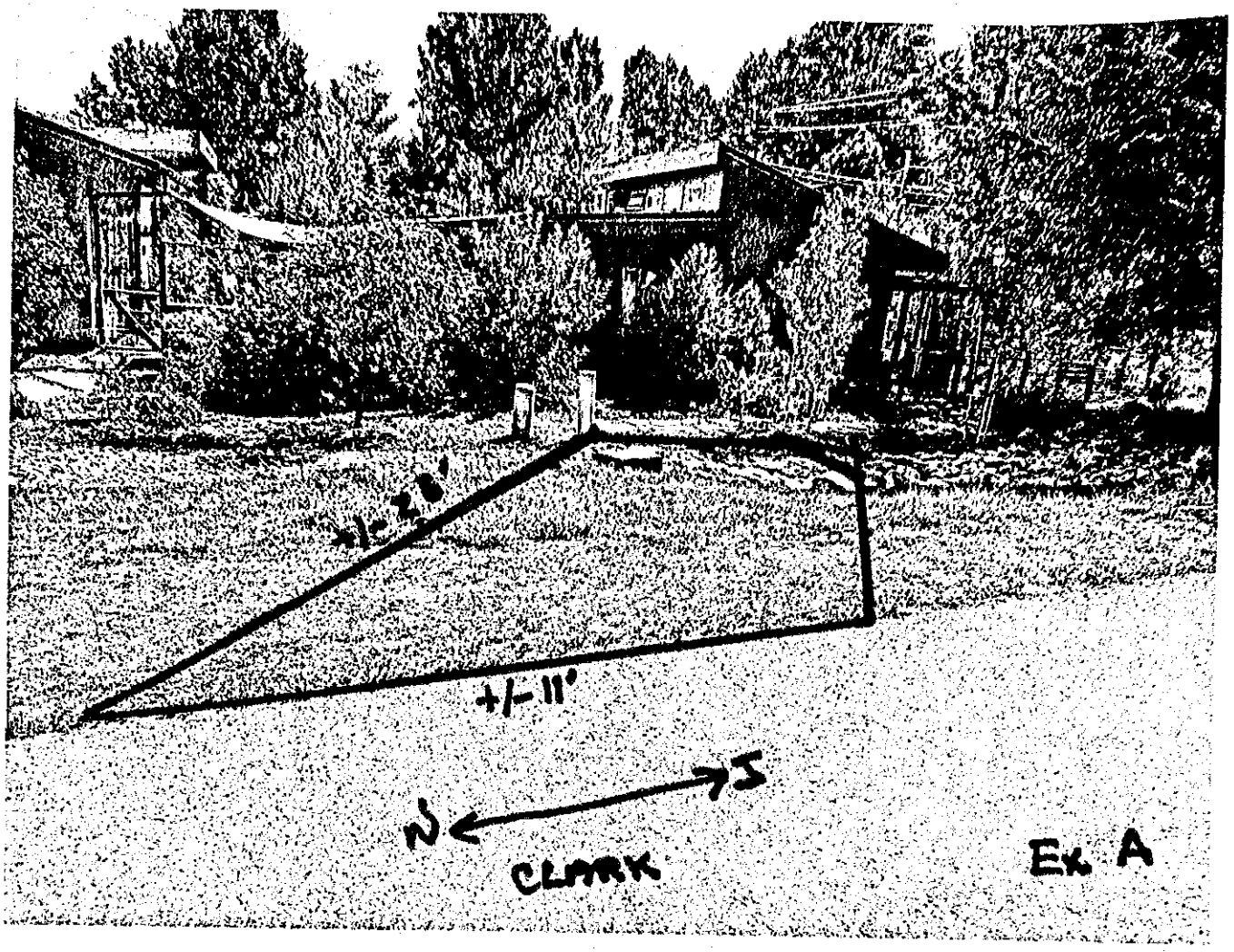
We understand that, as part of the application, you require that the HOA support and approve the proposed plan and application. The purpose of this letter is to inform you that the HOA does support and approve the application of an additional guest parking spot and the proposed construction as described in the preceding paragraph.

This application has been reviewed by the Board- Read Hunker, Krista Dudley & Paula Knighton. I am the current president of the HOA and am authorized on behalf of the HOA to execute this letter of support and approval on behalf of the HOA.

Best regards,

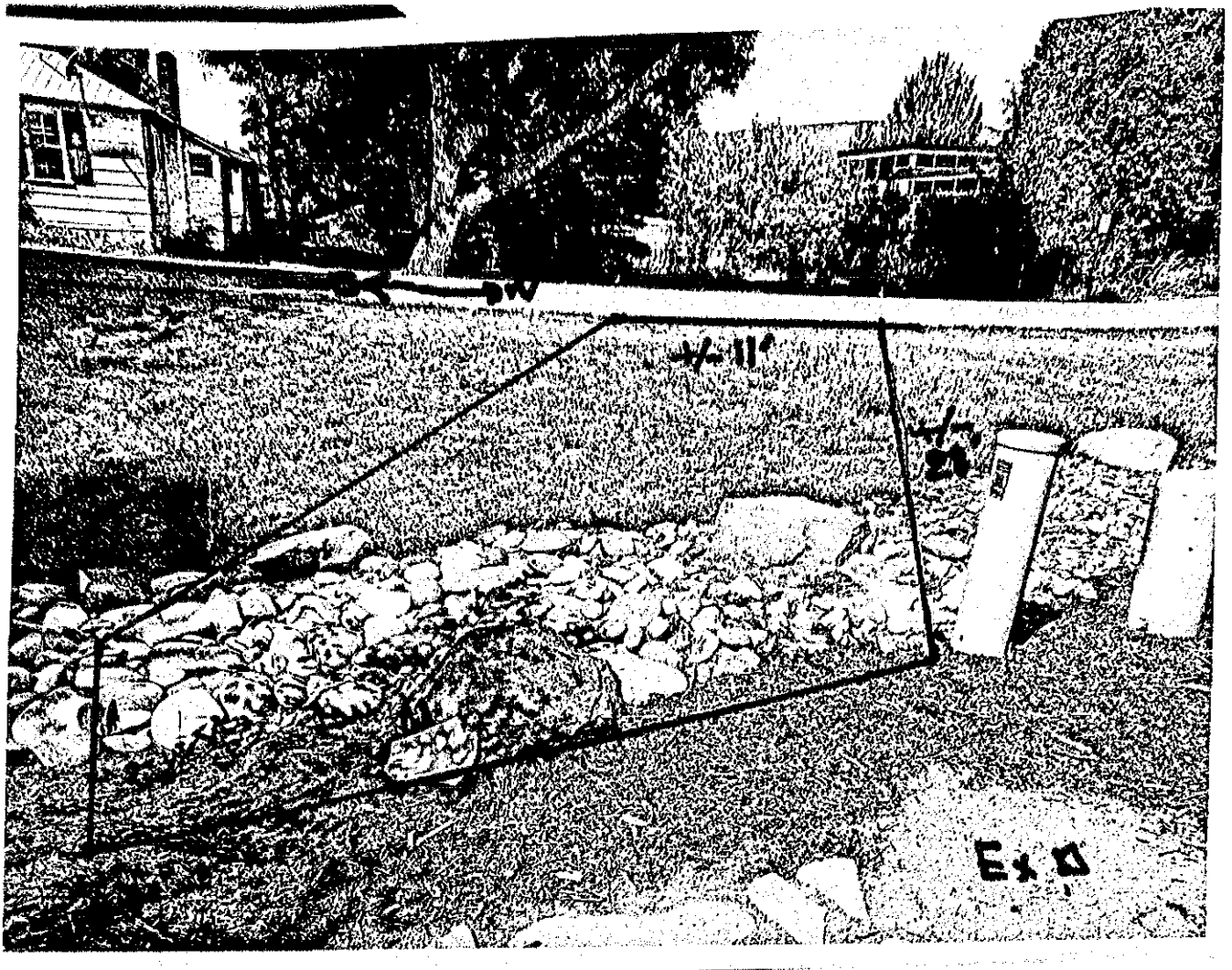
Read Hunker

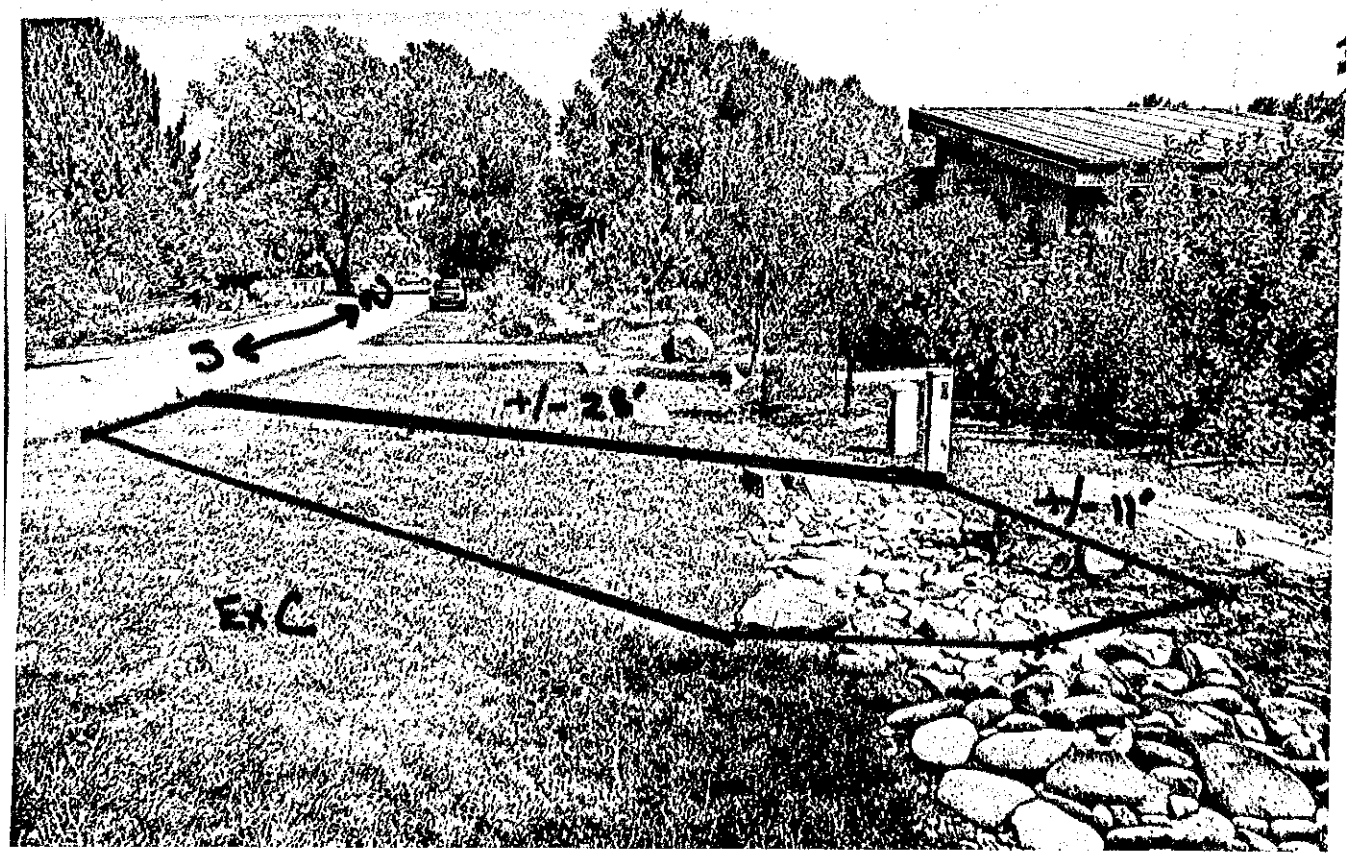
President, Silver Leaf Homeowners Association, Inc.



RA




W
+/- 11'
+/- 28'
Ex D

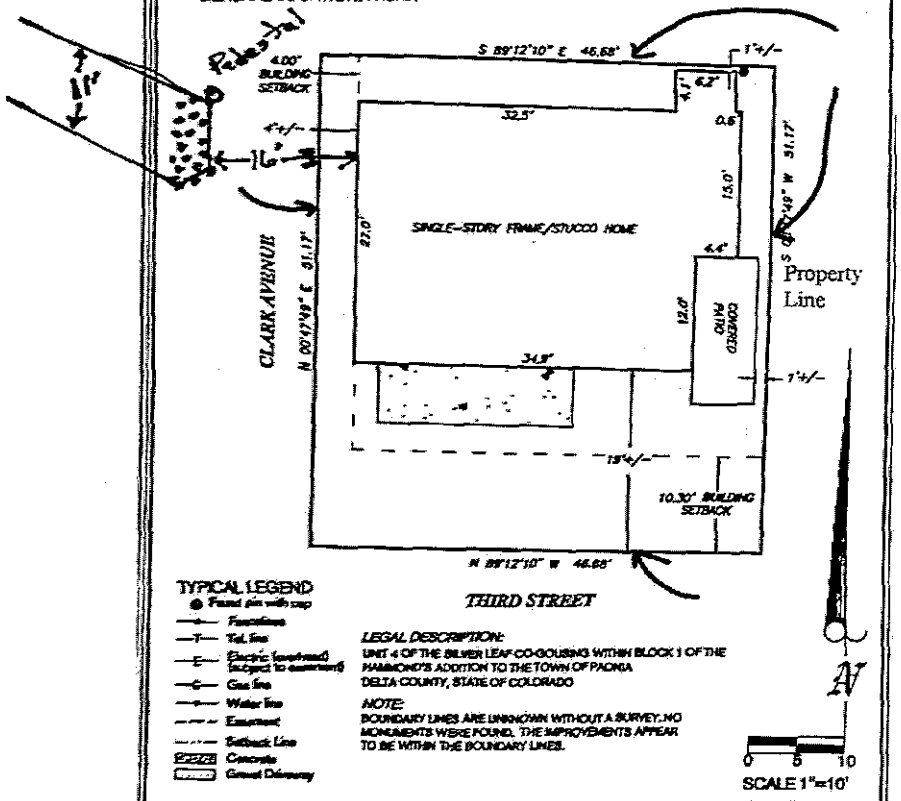

S
+/- 28'
+/- 11'
Ex C

IMPROVEMENT LOCATION CERTIFICATE

THIS IS NOT A SURVEY

BUYER: BONNASUE
ORDERED BY: CORNERSTONE HOME LENDING
PROPERTY ADDRESS: 1200 3RD STREET #4
GENERAL LOCATION: PAONIA

DATE: APRIL 10, 2019



TYPICAL LEGEND
- Found pin with cap
- Fenceline
- Tel. line
- Electric (overhead) (subject to easement)
- Gas line
- Water line
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- Setback Line
- Concrete
- Gravel Driveway

LEGAL DESCRIPTION:
UNIT 4 OF THE SILVER LEAF CO-HOUSING WITHIN BLOCK 1 OF THE HAMMOND'S ADDITION TO THE TOWN OF PAONIA DELTA COUNTY, STATE OF COLORADO

NOTE:
BOUNDARY LINES ARE UNKNOWN WITHOUT A SURVEY. NO MONUMENTS WERE FOUND. THE IMPROVEMENTS APPEAR TO BE WITHIN THE BOUNDARY LINES.

INVESTIGATION BY WILMORE AND COMPANY PROFESSIONAL LAND SURVEYING INC., P.O. BOX 1662, 408 GRAND AVENUE, PAONIA, COLORADO 81428 (970) 527-4200 FAX (970) 527-4202

I hereby certify that this IMPROVEMENT LOCATION CERTIFICATE was prepared solely for THE TITLE COMPANY OF DELTA COUNTY AND BONNASUE, that it is NOT a survey plat, and that it is not to be relied upon for the establishment of fences, buildings, or other future improvement construction lines. I further certify that the improvements on the above described parcels on this 10TH day of APRIL, 2019, EXCEPT as may be shown above, that there are no apparent encroachments upon the described parcel by improvements on an adjoining property, EXCEPT as indicated, and that there is no apparent evidence of any easement crossing or burdening this parcel, EXCEPT AS NOTED.

Ex F

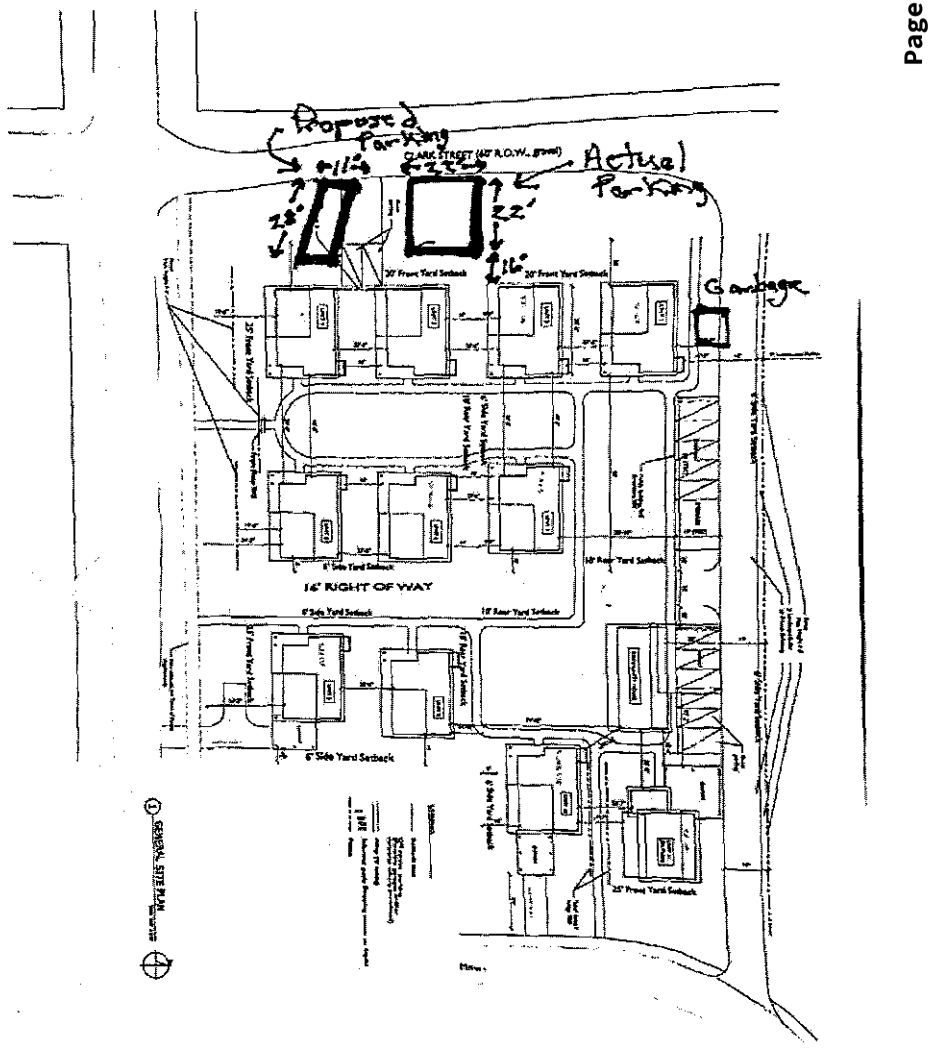
WILMORE & COMPANY
PROFESSIONAL LAND SURVEYING, INC.
408 Grand Avenue 970.527-4200
P.O. Box 1662 970.527-4202
Paonia, Colorado 81428

COLORADO REGISTERED PROFESSIONAL LAND SURVEYOR

PROFESSIONAL LAND SURVEYOR COLO# 25972

Defining Boundaries

JOB# ILC19040 APRIL 10, 2019 DRAWN BY: TW



Ex E

RECEPTION#: 686005, 03/02/2016 at 04:36:26 PM, 1 OF 32, R $166.00
TERI A. STEPHENSON, DELTA COUNTY, CO CLERK AND RECORDER

TOWN OF PAONIA, COLORADO
"SILVER LEAF" SENIOR CO-HOUSING
DEVELOPMENT AGREEMENT

This Development Agreement is made by the TOWN OF PAONIA, COLORADO, a municipal corporation ("Town"), and CIRCLE DEVELOPMENT CORPORATION, a not-for-profit corporation ("Developer"). The Town of Paonia and Circle Development Corporation are jointly referred to as "the Parties."

STATEMENT OF PURPOSE

Developer is the owner of property located in Paonia, Delta County, Colorado, legally described as shown on Exhibit A, attached.

Developer desires to construct a senior cohousing development consisting of ten detached single-family homes, one duplex, a common building, accessory buildings, landscaping, and other appurtenances on the property described in Exhibit A (hereinafter the "Development").

On February 23, 2016, the Board of Trustees of the Town of Paonia conducted a review and granted approval to Developer for the Special Review Application of the Project as described herein, subject to the execution of this Development Agreement, the Special Review Application (Exhibit B) and the Site Plan (Exhibit C), and Developer's timely and successful compliance with all terms and conditions as herein contained.

The Town and Developer desire to enter into this Agreement so as to specify and confirm the terms and conditions associated with the approval and implementation of the Project.

The Town and Developer acknowledge that this Agreement and the terms and conditions set forth herein are necessary to advance and serve the public health, safety and welfare.

STATEMENT OF AGREEMENT

The Parties agree to the following:

1. Developer shall timely and satisfactorily construct or install, at Developer's sole cost and expense, the improvements as specified on the Special Review Application attached hereto as Exhibit B, and the Site Plan attached hereto as Exhibit C, and fully incorporated herein by this reference.

2. The construction and/or installation of all improvements and infrastructure shall be commenced and completed in conformity with the time schedule(s), if any, set forth in the Exhibit D.

3. All construction of improvements shall be performed in strict compliance with designs, drawings, materials, and specifications approved by the Town and as established in the Paonia Municipal Code.

4. Should Developer fail to adhere to any term or condition as contained in this Agreement, then Developer shall be in default and the Town may, without limitation, halt work on the Development, suspend permits as may have been issued for the Development, or revoke development approval for the Development.

5. Should the Town determine or have reasonable grounds to believe that Developer has failed, or will fail, to satisfactorily comply with a term or condition of the Project's development approval or this Agreement, or any applicable provision of the municipal code, then Town shall provide written notice of same to Developer by mail, or personal delivery, or by delivery of the notice to an employee, agent or representative of the Developer at the Project site. The notice shall be dated and state in ordinary and concise language the nature of the default and any facts illustrating same, and shall specify those steps Developer must take to correct or cure the default. The notice shall further state the period of time in which the Developer must correct or cure the default.

6. Developer may challenge or appeal any notice of default by requesting a hearing before the Town's Board of Trustees. Such request must be made in writing and be delivered to the Town Administrator within seven (7) business days from the date of the notice of default. In the event a challenge or appeal is filed, the board of trustees shall hear and decide same at its next regular meeting, or as soon thereafter as can be accommodated.

7. Should a hearing not be requested by Developer within the time period allowed, or should a hearing be conducted and it is determined that Developer is failing or has failed to correct or cure a default, Town shall be entitled to recover from Developer such reasonable costs, including attorney fees, as are incurred to implement and administer the correction or cure of the default.

8. In addition to any other remedy as may be available to Town in circumstances where Developer has defaulted, the Town shall also be entitled to exercise and enforce the following remedies, which are non-exclusive and cumulative:

(a) Suspension of all development approvals for the Project, including the suspension or withholding of any utility connection or building permit(s)

(b) Specific performance and injunctive relief, inclusive of enjoining the transfer or sale of any lots created by the Project's subdivision approval.

9. A failure by Developer to satisfactorily perform a term or condition of the Agreement shall not relieve or lessen the duty of Developer to comply with any other term or condition of the Agreement.

10. Developer acknowledges and agrees that in the event of a default by Town in regard to any term or condition of this Agreement or the Development's Special Review approval, Developer's remedies shall be limited to equitable non-monetary remedies, such as specific performance or mandatory or prohibitory injunction. Both parties acknowledge that Town would not have entered into this Agreement if it were to be liable in damages under or with

respect thereto and Developer specifically waives any right to money damages it could or might have under the constitutions or laws of the United States or state of Colorado for any breach or default as may be committed by Town.

11. Before bringing any action against Town under this Agreement, Developer must give Town advance written notice of same specifying the grounds therefore and allowing the Town sixty (60) days to correct or cure any alleged breach or default.

12. This Agreement may be amended or cancelled as deemed necessary by the parties subject to the same requirements and procedures by which it was initially approved and executed. Insubstantial amendments to the Development Improvements as may be necessary for technical or engineering purposes may be made by and between the parties without requiring formal amendment to the Agreement itself.

13. Developer shall defend, indemnify and save harmless Town, its officers and employees, against any and all suits, claims, damages or actions, and expenses, to which Town, its officers and employees, may be subjected by reason of any act or omission of the Developer or landowner, or their employees, contractors or agents, in connection with their implementation or performance of the terms and conditions of the Agreement and the Development.

14. Developer may be permitted to sell, transfer or assign any or all of its rights and obligations under the Agreement upon the prior written consent of Town, which consent shall not be unreasonably withheld.

15. This Agreement shall constitute an agreement running with all of the Development land and shall be binding upon and inure to the benefit of Developer and Town and their respective successors and assigns. Town shall file the Agreement in the records of the Delta County Clerk and Recorder as soon as possible after its execution. Developer shall pay the costs of recordation.

16. This Agreement shall be interpreted and enforced in accordance with Colorado law and any action concerning its enforcement or interpretation shall only be brought in the district court in and for Delta County, Colorado.

17. The waiver or forgiveness of a breach of any of the provisions of this Agreement by either party shall not constitute a continuing or new waiver or forgiveness of any subsequent breach of the same or other provision of the Agreement.

18. All notices, certificates or other communication under the Agreement shall be deemed sufficient when personally delivered, or after the lapse of five (5) days following mailing

For the Town	For the Developer
Town Manager	Circle Development Corporation
Town of Paonia	Robert S. Dick, President
P.O. Box 460	1133 Race Street, 4N
Paonia,CO 81428	Denver, CO 80206

Or at any other address as a party may from time to time designate by written notice to the other party.

19. The following constitute the exhibits or attachments attached to this Agreement and made a part hereof.

(a) Exhibit "A" – Legal Description.

(b) Exhibit "B" – Special Review Application

(c) Exhibit "C" – Site Plan.

(d) Exhibit "D" – Construction Schedule.

IN WITNESS WHEREOF, the Town and Developer have executed this Development Agreement as of the day and year first set forth above.

Town of Paonia, Colorado

By: _____
Neal Schwieterman, Mayor

Attest:

By: _____
Jane Berry, Town Manager/ Clerk

Developer: Circle Development Corporation, a not-for-profit corporation

By: _____
Robert S. Dick, President

Attest:

By: _____
Title: Deputy Town Clerk

"ATTACHMENT A"

LEGAL DESCRIPTION

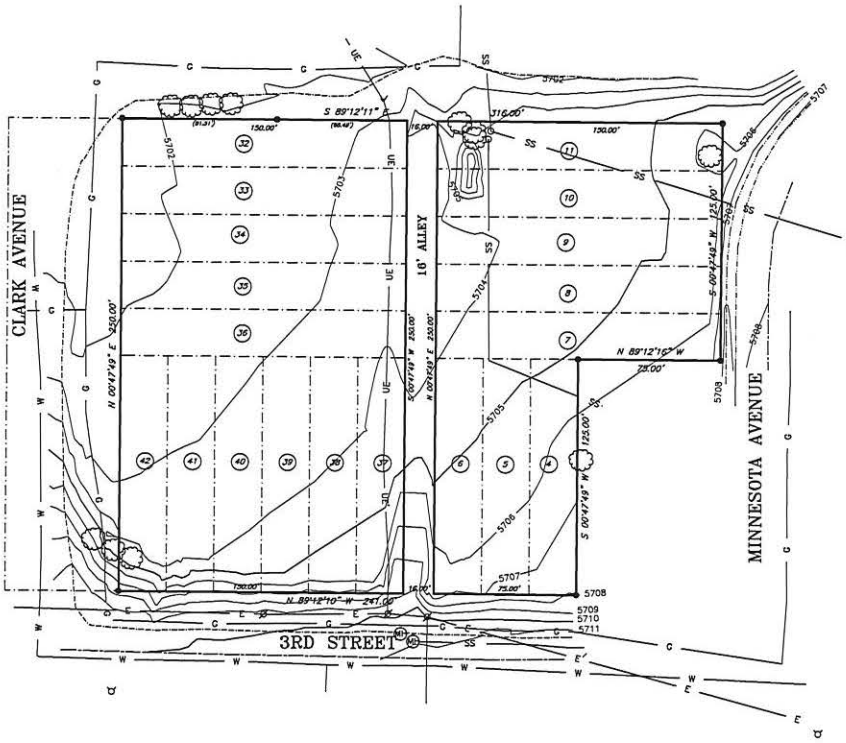
SILVER LEAF SENIOR CO-HOUSING PROJECT

APPROVED SPECIAL REVIEW

"Attachment A" Silver Leaf Co-Housing Project Legal Description

SITE PLAN PREPARED FOR CIRCLE DEVELOPMENT CORPORATION
WITHIN BLOCK 1 OF THE HAMOND'S ADDITION
SEC. 5, T.14S., R.91W., 6TH P.M.
TOWN OF PAONIA, DELTA COUNTY, COLORADO

LEGAL DESCRIPTION
Lots 4, 5, 6, 7, 8, 9, 10, 11, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41 and 42, Block 1 of the Hammond's Addition to the Town of Paonia, County of Delta, State of Colorado.



SEE PLAT

CONTROL MAP



AREA LOCATOR

TYPICAL LEGEND
- Set Mag Nail in Asphalt
- Found 5/8" rebar 30" long with 2" aluminum cap PLS25972

Fencelines
Electric (overhead)
Electric (underground)
Water line
Easement
Lot Lines

BASIS OF BEARINGS:
ASTRONOMICAL NORTH
GPS OBSERVATION
SCALE 1"=30 U.S. SURVEY FEET
0 15 30 60

E ELECTRIC OVERHEAD
UE ELECTRIC UNDERGROUND
G GAS LINE
SS SEWER LINE
MH MAN HOLE
POWER POLE
TREE
FIRE HYDRANT
EDGE OF ROAD
CL ROAD
FL OR BACK OF WALK

SURVEYOR'S CERTIFICATION
I, Randy A. Wilmore, do hereby certify that the above described parcel has been surveyed by me and under my direct supervision and that such survey is accurately represented hereon, and is based upon my knowledge, information and belief, and is in accordance with applicable standards of practice and is not a guaranty or warranty, either expressed or implied.

Date:_____ Signed:_____
COLORADO PROFESSIONAL LAND SURVEYOR #25972

NOTE: According to Colorado law you must legal action based upon a defect in this survey must be commenced within three years after such defect is discovered. In no event may any action based upon any defect in this survey be commenced more than ten years from the date shown on the certification hereon.

WILMORE & COMPANY
PROFESSIONAL LAND SURVEYING, INC.
406 Grand Avenue
P.O. Box 1652
Paonia, Colorado 81428
970.527-4200 PHONE
970.527-4202 FAX
www.wilmorelandsurveying.com
EMAIL wilmoreandcompany@tds.net
Defining Boundaries

FIELD CREW: RAW, KC
DRAFTER: RAW, KC
CHECKED BY: RAW, KC

SITE PLAN PREPARED FOR CIRCLE DEVELOPMENT CORPORATION
WITHIN HAMOND'S ADDITION
SEC. 5, T.14S., R.91W., 6TH P.M.
TOWN OF PAONIA, DELTA COUNTY, COLORADO

J15141SKETCH | 5 OCTOBER 2015

"ATTACHMENT B"

SPECIAL REVIEW APPLICATION

SILVER LEAF SENIOR CO-HOUSING PROJECT

APPROVED SPECIAL REVIEW

"Attachment B"

Town File Copy Opened 2-16-16 JB

TOWN OF PAONIA

SPECIAL REVIEW/VARIANCE APPLICATION

P&Z Hearing Date 1/14/16

Town Board Hearing Date 2/23/16 Approved Ethel Berry Town Manager

Name: 'SILVER LEAF' SENIOR CO-HOUSING

Application Date: 12/11/15

Property Address: 3Rd & Clark St., Paonia CO81428

Telephone: (970)-846 8786 (Rob Dick, Developer)

11.01: **Intent.** Each established zoning district is intended for a specific type or category of land use (e.g., single family dwelling in an R-1 district). However, there are certain uses, which may or may not be appropriate in a particular district depending on the situation. For example, the location, nature of the proposed use, character of the surrounding area, traffic capacities of adjacent streets, and potential environmental effects all may dictate that the circumstances of the development should be individually reviewed. The special review process is established to provide for these specific uses without establishing numerous separate zoning classifications. It is the intent of this chapter to provide a review of such uses so that the community is assured that the proposed uses are compatible with the location and surrounding land uses.

11.02: **When Allowed.** Within each zoning district, certain land uses are permitted by right, by special review or prohibited. Special review uses may be permitted in designated districts upon review by the Planning and Zoning Commission and approval by the Town Board.

11.03: **Site Plan and Supporting Documents.** There shall be filed with each special review application a site plan drawn to scale and an appropriate number of copies as determined by the Town Manager. The site plan shall be drawn in black ink on Mylar. Following approval by the Town Board the applicant shall submit a reproducible copy of the original site plan to the Town for the Town's permanent records.

The special review application shall include the following:

1. The site plan showing the location of all buildings, structures and other improvements to be placed on the real property. A building envelope may be used in lieu of showing the exact building or structure location to allow for minor variations in the location.
2. A legal description of the property, which may require a survey.
3. A list of the names and addresses of all property owners within 200 ft. of the property.
4. All off-street parking and loading areas.
5. The location of all ways for ingress and egress to all buildings, and parking areas.
6. Service and refuse collection areas.
7. Major screening proposals.
8. The size, shape, height and character of all signs.
9. The area and location of all open space and recreation areas.
10. The location and type of outdoor lighting.
11. The character and type of landscaping to be provided. The landscaping shall be indicated in tabular form showing the type of plant material, minimum size and quantity. The approximate location of landscaping shall be indicated on the site plan.

12. The anticipated timetable for completion. If the project is to be completed in phases then the data for completion of each phase shall be indicated.
13. All owners and lien-holders of the property shall sign the following agreement that will be placed on the original special review site plan: *The undersigned agree that the real property described on the site plan shall be developed only in accordance with the approved special review site plan and other provisions of the zoning regulations of the Town of Paonia.*

Site Plan:

Any application for Special Review/Variance that includes a new structure or improvement to an existing structure will require a Site Plan. Plans may be hand drawn, but must be clearly written with accurate measurements indicated. The Site Plan may be submitted as two separate drawings or one drawing with an overlay.

I. Project Summary

Please answer only the questions that apply to your particular Special Review/Variance request. Any additional information, which would be beneficial in the consideration, may be noted in the "Comments" section:

a. **Reason for Special Review/Variance:**

Proposal for a Senior Cohousing development on a 1.5 Ac. parcel in Paonia. The proposed project will consist of 13 dwelling units (12 residences and a Common Building), additional accessory buildings (carports / garages), and landscaped recreational areas.

b. **Current Zoning of Property:**

R2

c. **What land boundary changes are necessary? -**

d. **What addition/changes to existing buildings/structures will be made? -**

e. **What new buildings/structures will be constructed?**

The proposed project consists of the following new structures:

- ten 950 sq.ft. two bedroom houses, two of which will have attached garages/carports
- one duplex with an attached 2-car garage
- one common building with attached carports
- 8 detached carports/ garages.

f. **What additions/changes in utilities will be necessary? Include water, sewer, gas, and electric.**

The property is currently raw with utilities, with main lines for water, sewer, electrical and gas bordering the site. A DMEA 3-phase line and a sewer line servicing neighboring properties cross the site (the exact location can be seen on the attached Survey Plan). For the development of the proposed project, new water, sewer, electrical and gas connections will be necessary. Appropriately sized water and sewer taps will be acquired from the Town of Paonia, a new electrical connection from DMEA, and gas from Source Gas. The existing

the new water taps, general layout and design of all utility connections, and any new easements are described in the attached Civil Engineering plans.

g. **Will the property have Commercial/Private or Public Use?**

The property will have Private use.

h. **Anticipated traffic flow and volume?**

The development will generate an average of 75 end trips / day. Nevertheless, it is expected that the actual number of trips will be less on average due to the co-operative nature of the development, the age group of the residents, and the fact that most dwelling units will only have one permanent resident.

i. **Detail the Safety and Disabled Access accommodation?**

All new structures will be ADA accessible and will be connected by 4' wide pathways with appropriately designed wheelchair accessible ramps where changes in grade require it.

j. **Detail the possible environmental impact; such as noise, lighting glare, pollutants, etc.**

The proposed project is a residential cohousing development for the elderly, therefore there are no pollutants associated to its functioning, and the noise level is expected to be minimal as well. The intensity of the lighting glare is expected to be on the low side; the outdoor lighting will consist of switch-activated or motion sensor wall mounted lights. The landscape will be designed to mitigate the glare caused by headlights around all parking spaces and carports or garages.

Comments:

Documents attached to the Application Form:

- Project Description
- The list of all neighbors within 200 ft. from the property, provided by Delta County GIS Department
- Site Plan Design Package, including the Survey plan provided by Wilmore & Co., the Proposed Site Plan and Civil plans (utilities, grading and storm drainage).

II. Public Notice Requirements

All property owners within 200 feet of the property being reviewed shall be notified via certified mail of a public hearing whereby the Planning and Zoning Commission shall consider this application. It is incumbent upon the applicant to request the names of the property owners from the Delta County GIS Department (874-2119). Please have the GIS e-mail the information to townofpaonia@tds.net. Applications for Special Review shall be filed at least 30 days in advance of the meeting at which they are to be considered by the Planning and Zoning Commission. Incomplete applications shall result in denial of application acceptance and returned for completion, consequentially delaying hearings.

III. Acknowledgement to Pay Fees

This application must be completed and a fee of **$75.00** is assessed for the initial costs of correspondence, publication and certified mailings to property owners within 200 feet of said property. **Payment must accompany this application.**

the Planning and Zoning Commission, a building permit must be applied and approved by the Building Inspector, if applicable.

Robert S Dick
President

SIGNED Circle Development Corp

PRINTED NAME ROBERT S DICK

DATE December 4 **20** 15

Project Description

Silver Leaf Senior Cohousing

Paonia, Colorado

Silver Leaf, a senior cohousing community, is being developed by Circle Development Corporation, a not-for-profit corporation established for this project. The principals of Circle Development Corporation are:

- Rob Dick, President. Rob is an experienced affordable housing developer and housing financier.
- Trudy Welty, Vice President. Trudy is a minister with a particular interest in Native American healing. She will be a resident of Silver Leaf.
- Krista Dudley, Secretary. Krista is psychotherapist with a strong interest in Native American healing as well as organic farming. Krista is also a future resident of Silver Leaf.
- Kathy Crawford (Rob's wife), Treasurer. Kathy has worked with Rob for 39 years financing and developing housing projects all over the country. Kathy has a degree in Public Administration specializing in accounting and financial management. Kathy and Trudy have been friends for over 40 years.

The rest of the project team includes the following local professionals.

- Architectural Design: Mara Mantoiu, 3Cycle Studio
- Landscape Design: 3Cycle Studio
- Surveyor: Randy Wilmore, Wilmore Company Professional Land Surveying, Inc.
- Excavator: To be determined
- Builder: To be determined
- Engineer: Jeff Ruppert, PE; Odisea LLC.

Silver Leaf Senior Cohousing is located on an approx. 1.5 acre site on Third Street, between Clark Street and Minnesota Street in Paonia, Colorado.

Silver Leaf Senior Cohousing consists of 10 detached single-family homes, one duplex and a common building. The project is designed for and with senior citizens intending to live there.

The homes are approximately 950 square feet in size with two bedrooms and one or one and a half bathrooms. The homes are on one level and universally designed to be wheelchair accessible. They are designed to facilitate aging in place physically, socially, and spiritually. The duplex, not yet designed, may have two stories with one of the stories for a potential caregiver to one or more of the residents should it be needed. The majority of the units will be owner occupied.

The site plan is designed to maximize passive solar gain and preserve as much open space as possible given the majority of the homes are single story. This site will also have ample space and easy access to organic gardens. It is anticipated a good deal of the produce consumed by residents will be grown on site.

The project will also include a common building that will be used for various activities by the community residents. The shared community building will, in all likelihood, include space for a kitchen, dining area, multi-purpose room for social and educational gatherings, guest room(s), creative art/work space, a shop, laundry room, and space for exercise and yoga. The ultimate uses of the common building will be determined by the residents and in large part will be determined by cost. This building will have one and a half stories with a footprint of approximately 1,200 square feet.

We plan to begin construction in the spring of 2016 and complete construction by the fall of 2018. Completion will depend on having committed residents.

The cohousing development concept began in Denmark and was brought to the United States by an architect, Charles Durrett, in 1989. There are hundreds of multigenerational cohousing projects successfully built and working well in the United States and Canada. In 2009 Durrett published the Senior Cohousing Handbook identifying the need for, and the steps to create a senior cohousing community. With baby boomers at or approaching retirement age, there is much interest in senior cohousing and a number of projects have been built or are currently in the planning stage.

The residents of Silver Leaf Senior Cohousing in Paonia choose to live there because they love Paonia, many have long standing ties to the community, and they embrace the following mission, vision, and values established by the founding members of Silver Leaf.

Mission

Silver Leaf Senior Cohousing is a community of artistic, caring, and creative individuals committed to living cooperatively and harmoniously within our community, the land, the local environment and the community at large. We are committed to live simply, on a smaller footprint, allowing time and resources for the pursuit of creative endeavors.

Vision

Our shared project vision is to cooperatively create our homes and community in Paonia, Colorado, on Third Street between Clark and Minnesota Streets. The community will consist of twelve small, universally designed/accessible homes, and common amenities to include an organic garden, native landscaping, a wood-burning bread oven, and a shared community building. The shared community building will include space for a kitchen, dining area, multi-purpose room for social and educational gatherings, guest room(s), creative art/work space, a shop, laundry room, and space for exercise and yoga.

Values

Cooperation
Tolerance
Trust
Responsibility

The Senior Cohousing concept and need for it is well described in the attached article "Senior Cohousing in Canada: How Baby Boomers Can Build Social Portfolios for Aging Well," written by Margaret Critchlow, a Professor of Anthropology, Director of the Canadian Senior Cohousing Society, and founding member and soon to be resident of the Harbourside Senior Cohousing Community in Sooke, BC. Marjorie True, a nurse practitioner, hospice nurse, and future resident of Silver Leaf, and Krista Dudley (introduced above) recently took a course given by Margaret and her colleagues, and visited the Harbourside Senior Cohousing Community (the project described in the attached article). They are anxious to share what they learned with the rest of the group, future Silver Leaf residents, and the Paonia Community.

Silver Leaf Senior Cohousing has many advantages to the Paonia Community including:

- Providing housing that is barrier free.
- The entire site will be designed with a common design theme and landscaping which will be more attractive than individual efforts that may or may not be aesthetically compatible with one another on the site.
- The project is being developed by a nonprofit corporation with the idea of providing housing for people to live from and not for. The homes are small and attainable, if not affordable. Most of the residents are downsizing and this will leave more time and money for them to spend in the community and working on creative endeavors.
- The project is designed for senior citizens and most of the homes will have one resident with a minimal number of automobile trips per day and very minimal impact on the roads and other community services.
- The project will provide jobs and business to local companies and residents.
- Cohousing communities by their very nature (mission, vision and values) attract the kind of community-minded residents the rest of the community will welcome. Those attracted to cohousing embrace community, understand cooperative efforts, and typically are active community members and leaders in the towns in which they live.

CONTACT:

Circle Development Corporation
Rob Dick, President
1133 Race St. 4N, Denver CO 80206
(970) 846-8786

3Cycle Studio (Architectural and Landscape design)
26579 Redlands Mesa Rd. Hotchkiss CO 81419
(970) 835-4499

Odisea (Civil Engineering)
P.O. Box 1809, Paonia CO 81428
(970) 948-5744

Wilmore & Co. (Land Surveying)
P.O. Box 1652, Paonia CO 81428
(970) 527-4200

What is Cohousing?

"Cohousing is an intentional community of private homes clustered around shared space. Each attached or single family home has traditional amenities, including a private kitchen. Shared spaces typically feature a common house, which may include a large kitchen and dining area, laundry, and recreational spaces. Shared outdoor space may include parking, walkways, open space, and gardens. Neighbors also share resources like tools and lawnmowers.

Households have independent incomes and private lives, but neighbors collaboratively plan and manage community activities and shared spaces. The legal structure is typically an HOA, Condo Association, or Housing Cooperative. Community activities feature regularly-scheduled shared meals, meetings, and workdays. Neighbors gather for parties, games, movies, or other events. Cohousing makes it easy to form clubs, organize child and elder care, and carpool.

Common Characteristics:

Relationships

- Neighbors commit to being part of a community for everyone's mutual benefit.
- Cohousing cultivates a culture of sharing and caring.
- Design features and neighborhood size (typically 20-40 homes) promote frequent interaction and close relationships.

Privacy and Community

- Cohousing neighborhoods are designed for privacy as well as community.
- Residents balance privacy and community by choosing their own level of engagement.

Participation

- Decision making is participatory and often based on consensus.
- Self-management empowers residents, builds community, and saves money.

Shared Values

- Cohousing communities support residents in actualizing shared values.
- Cohousing communities typically adopt green approaches to living."

Cohousing.org

"Cohousing communities are intentional, collaborative neighborhoods created with a little ingenuity. They bring together the value of private homes with the benefits of more sustainable living. That means residents actively participate in the design and operation of their neighborhoods, and share common facilities and good connections with neighbors. All in all, they stand as innovative and sustainable answers to today's environmental and social problems."

Cohousing.org

"Six components of Cohousing

Cohousing can be found in many forms – from urban factory loft conversions to suburban cities to small towns. Whatever the form, cohousing projects share the six components that are listed here [...]:

1. Participatory Process: Residents help organize and participate in the planning and design process for the housing development, and they are responsible as a group for final decisions.
2. Deliberate Neighborhood Design: The physical design encourages a strong *sense of community.*
3. Extensive common facilities: Common areas are an integral part of the *community,* designed for daily use and to supplement private living areas.
4. Complete Resident Management: Residents manage the development, making *decisions of common concern at community meetings.*
5. Non-Hierarchal Structure: There are not really leadership roles. The responsibilities for the decisions are shared by the community's adults.
6. Separate Income Sources: Residents have their own primary incomes; the community does not generate income.

Charles Durett, *The Senior Cohousing Handbook*

Environmental Advantages

In addition to its social advantages, cohousing offers numerous environmental benefits. Although there is room for more data, it appears that, depending on the design, cohousers on average drive about 60 percent less and use 50-75 percent less energy for heating and cooling than they did in their previous homes (for a family of three). In our Nevada City single-family house, where we lived before moving into the Nevada City cohousing community, our energy bill ran right at $150/month both in winter and summer. Living in Nevada City Cohousing, our bill for house heat and domestic hot water ran about $15/month. Air conditioning for this hot summer climate was zero because the building envelope was so energy efficient and because the passive cooling measures (cross ventilation, holding the night cooling, etc., were so effective. Every other new house built in the area and almost all old houses employ an air conditioner.

Cohousing residences are about 60 percent the size of average new American houses, and cohousing communities on average occupy less than 30 percent as much land as the average new subdivision for the same number of households and 50 percent as much as the same individuals did before moving into cohousing. And cohousing members drive about 60% less.

What impresses me most about working with cohousing communities is watching the best intentions of the group for living lighter on the planet percolate to the collective consciousness after being initiated by a few individuals. And as much as I'd like to take credit as the architect, my job is really little more than provoking the group a little, sharing a great deal of experience with them, and then as best I can, facilitating the co-education process of the participants (see Study Group II). But community is really the secret ingredient to living lighter on the planet. First and foremost, we need to know how to do it and learn how to cooperate. When people listen to their neighbors and prospective neighbors about saving energy, they seem to hear it better than by listening to an architect.

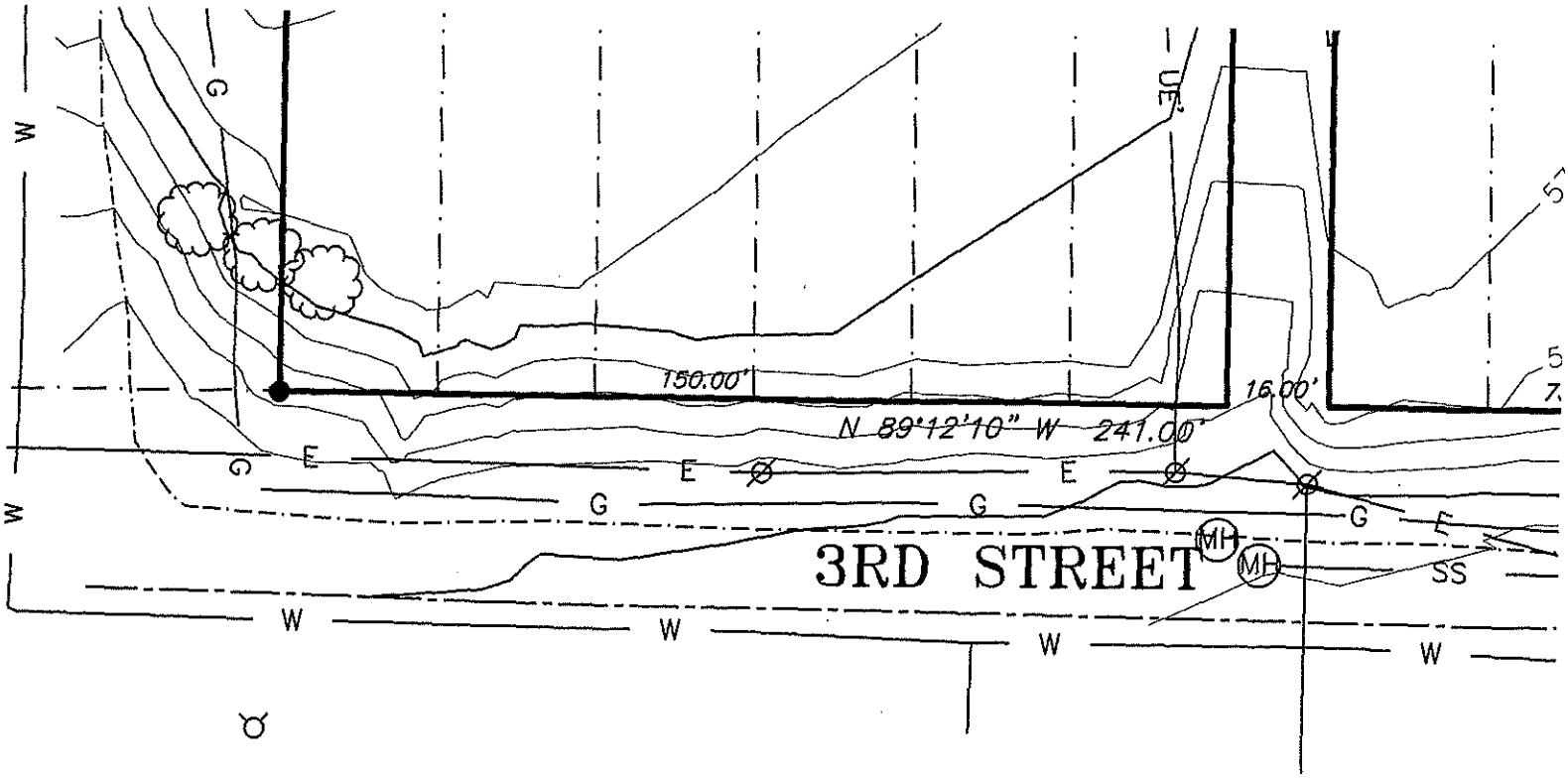
Charles Durett, The Senior Cohousing Handbook

"ATTACHMENT C"

SITE PLAN

SILVER LEAF SENIOR CO-HOUSING PROJECT

APPROVED SPECIAL REVIEW APPLICATION & SITE PLAN



The undersigned agree that the real property described on this Site Plan shall be developed only in accordance with the approved Special Review Site Plan and other provisions of the Zoning Regulations of the Town of Paonia, Colorado.

Trudy L Kelly

The signatures above were subscribed and sworn to before me in the County of Delta, State of Colorado, this 4th day of February, 2016.

Notary Public

My commission expires August 20, 2017

CYNTHIA JONES
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID #20134052308
My Commission Expires August 20, 2017

Attachment "A"
Site Plan
Silverleaf Co-Housing Project

SITE PLAN PREPARED FOR CIRCLE DEVELOPMENT CORPORATION
WITHIN BLOCK 1 OF THE HAMOND'S ADDITION
SEC. 5, T.14S., R.91W., 6TH P.M.
TOWN OF PAONIA, DELTA COUNTY, COLORADO

SEE PLAT

CONTROL MAP



AREA LOCATOR

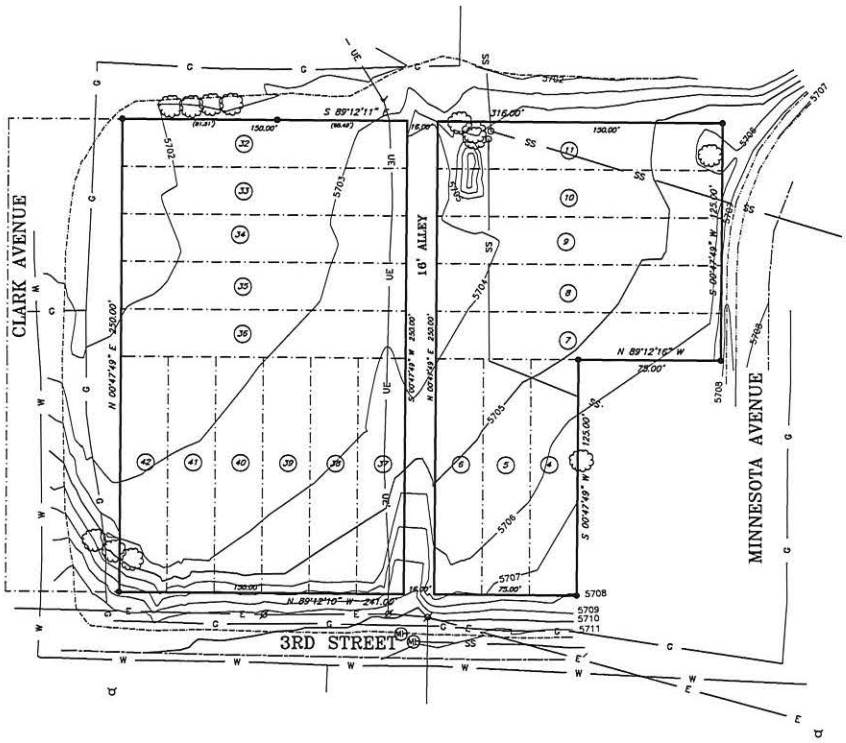
TYPICAL LEGEND

- Set Mag Nail in Asphalt
- Found 5/8" rebar 30" long with 2" aluminum cap PLS25972

Fencelines
Electric (overhead)
Electric (underground)
Water line
Easement
Lot Lines

BASIS OF BEARINGS:

ASTRONOMICAL NORTH
GPS OBSERVATION
SCALE 1"=30 U.S. SURVEY FEET
0 15 30 60



LEGAL DESCRIPTION
Lots 4, 5, 6, 7, 8, 9, 10, 11, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41 and 42, Block 1 of the Hammond's Addition to the Town of Paonia, County of Delta, State of Colorado.

E ELECTRIC OVERHEAD
UE ELECTRIC UNDERGROUND
G GAS LINE
SS SEWER LINE
MH MAN HOLE
Ø POWER POLE
TREE
FIRE HYDRANT
EDGE OF ROAD
CL ROAD
FL OR BACK OF WALK

SURVEYOR'S CERTIFICATION
I, Randy A. Wilmore, do hereby certify that the above described parcel has been surveyed by me and under my direct supervision and that such survey is accurately represented hereon, and is based upon my knowledge, information and belief, and is in accordance with applicable standards of practice and is not a guaranty or warranty, either expressed or implied.

Date:_____ Signed:_____
COLORADO PROFESSIONAL LAND SURVEYOR #25972

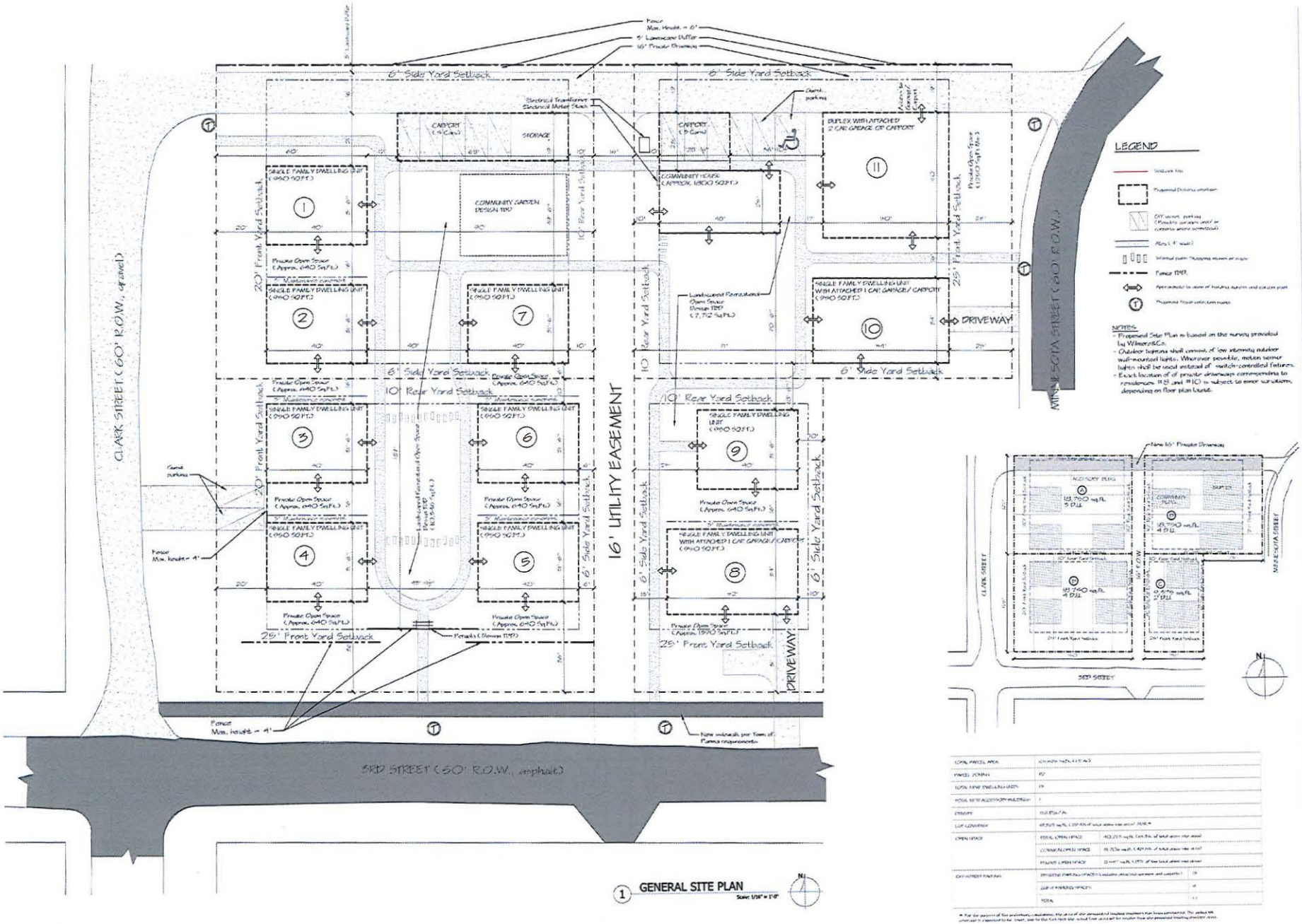
NOTE: According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date shown on the certification hereon.

WILMORE & COMPANY
PROFESSIONAL LAND SURVEYING, INC.
406 Grand Avenue
P.O. Box 1652
Paonia, Colorado 81428
970.527-4200 PHONE
970.527-4202 FAX
www.wilmorelandsurveying.com
EMAIL wilmoreandcompany@tds.net
Defining Boundaries

FIELD CREW: RAW, KC
DRAFTER: RAW, KC
CHECKED BY: RAW, KC

SITE PLAN PREPARED FOR CIRCLE DEVELOPMENT CORPORATION
WITHIN HAMOND'S ADDITION
SEC. 5, T.14S., R.91W., 6TH P.M.
TOWN OF PAONIA, DELTA COUNTY, COLORADO

J15141SKETCH | 5 OCTOBER 2015



1 GENERAL SITE PLAN
Scale: 1/16" = 1'-0"

TOTAL PARCEL AREA		
PARCEL ZONING		
TOTAL NEW DWELLING UNITS		
TOTAL SITE ACCESSORY BUILDINGS		
DENSITY		
LOT COVERAGE		
OPEN SPACE	TOTAL OPEN SPACE	
	COMMUNAL OPEN SPACE	
	PRIVATE OPEN SPACE	
OFF-STREET PARKING		
	TOTAL	

3Cycle studio
brett@3cyclestudio.com
mark@3cyclestudio.com
O. 970.728.4440
C. 720.212.7741
3CYCLESTUDIO.COM

SILVER LEAF CO-HOUSING

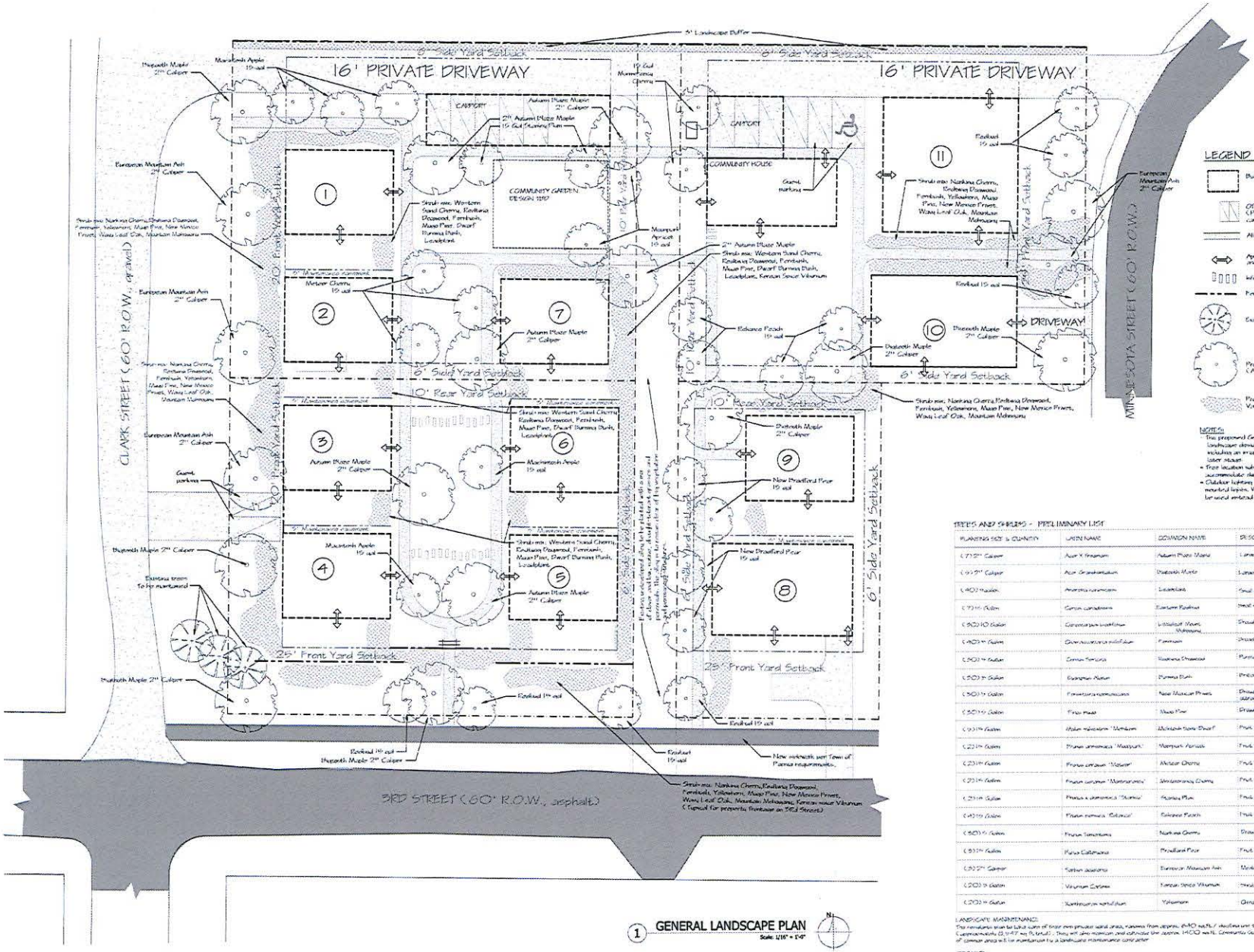
3Rd & Clark St.
Paonia, CO. 8145/16



DRAWN BY:
SCALE:
DATE: 10.22.15
ISSUE:
REVISIONS:
R1 - 02.11.2016

SHEET:
A1.0
PROPOSED SITE PLAN

COPYRIGHT 2015 3cycle Studio



1 GENERAL LANDSCAPE PLAN
Scale: 1/16" = 1'-0"

LEGEND

- Building envelope
- Off-street parking (Permeable surfaces used / or carports where permitted)
- Alley (4" wide)
- Approximate location of building entrance and common point
- Informal path: Stepping stones or mulch
- Fence (TBD)
- Existing Trees
- Proposed Trees (Species, location)
- Proposed Shrub Mix (Varieties not exact location TBD)

NOTES:

- This proposed General Landscape Plan reflects the preliminary landscape design concept. A detailed Landscape Plan, including an irrigation plan and details, to be developed at a later stage.
- Tree location subject to minor change in order to accommodate dwelling unit solar exposure.
- Outdoor lighting shall consist of low intensity, shielded, wall-mounted lights. Wherever possible, motion sensor lights shall be used instead of switch-controlled fixtures.

TREES AND SHRUBS - PRELIMINARY LIST

PLANTING SIZE & QUANTITY	LATIN NAME	COMMON NAME	DESCRIPTION
(7) 2" Caliper	Acer X freemani	Autumn Blaze Maple	Large shade tree with brilliant red fall color
(6) 2" Caliper	Acer Grandidentatum	Bigtooth Maple	Large shade tree with brilliant red fall color
(40) 5 Gallon	Amelanchier canadensis	Serviceberry	Small ornamental tree or shrub with brilliant purple flower
(7) 15 Gallon	Cercis canadensis	Eastern Redbud	Small shade tree with intense purple vernal flower
(30) 10 Gallon	Cotoneaster bullatus	Hollyleaf Rose Cotoneaster	Shrub with arching dimension
(40) 5 Gallon	Cotoneaster multiflorus	Peegee	Shrub/tree with arching with Fragrant white flower
(20) 5 Gallon	Cornus florida	Koreana Dogwood	Purple fall color and red winter color
(20) 5 Gallon	Euonymus Alatus	Burning Bush	Brilliant red fall color
(30) 5 Gallon	Forestiera neomexicana	New Mexican Privet	Dramatic tolerant, hardy and adaptable
(30) 5 Gallon	Privet Ibota	Mugo Pine	Dramatic tolerant, dramatic mass
(9) 15 Gallon	Malus sargentii 'Tantau'	Tantau Sargent Dwarf	Fruit Tree Apple
(2) 15 Gallon	Prunus armeniaca 'Moorpark'	Moorpark Apricot	Fruit Tree Apricot
(2) 15 Gallon	Prunus cerasus 'Meteor'	Meteor Cherry	Fruit Tree Eastern Cherry
(2) 15 Gallon	Prunus cerasus 'Montmorency'	Montmorency Cherry	Fruit Tree Pie Cherry
(2) 15 Gallon	Prunus x domestica 'Stanley'	Stanley Plum	Fruit Tree Plum
(4) 15 Gallon	Prunus persica 'Belicious'	Belicious Peach	Fruit Tree Peach
(30) 5 Gallon	Prunus tomentosa	Nankina Cherry	Dramatic tolerant, Prolific and lush with yellow fall color
(6) 15 Gallon	Pyrus Calleryana	Bradford Pear	Fruit Tree Pear
(30) 2" Caliper	Tilia cordata	European Mountain Ash	Medium Shade Tree, heat tolerator, nice fall color
(20) 5 Gallon	Viburnum Carlesii	Korean Spice Viburnum	Shrub with very fragrant flower similar to lilac
(20) 5 Gallon	Xanthoceras sorbifolium	Yellowhorn	Genus small with medium flower

LANDSCAPE MAINTENANCE:
The remainder shall be sold sum of lawn and private patio areas, gardens from adjacent, 6+10 sq.ft. / dwelling unit to private area (100 sq.ft. / dwelling unit). Commonwealth (3,947 sq.ft. total). They will also maintain and administer the central HOD sq.ft. Community Garden. The remainder approximately 50,500 sq.ft. of common area will be maintained by a landscape maintenance contractor.

IRRIGATION:
The landscaped areas shall be irrigated per an irrigation plan to be determined at a later stage. Sprinklers shall be used for the lawn and grasses/ wildflower areas. Drip emitters shall be used for perennials, shrubs and trees, according to each variety's moisture need and water requirements. The irrigation zone 2 water shall be from the Standard Plan & Governor Consent Law shall be in the amount of approx. 25 (+ add'l min.).

3cycle studio

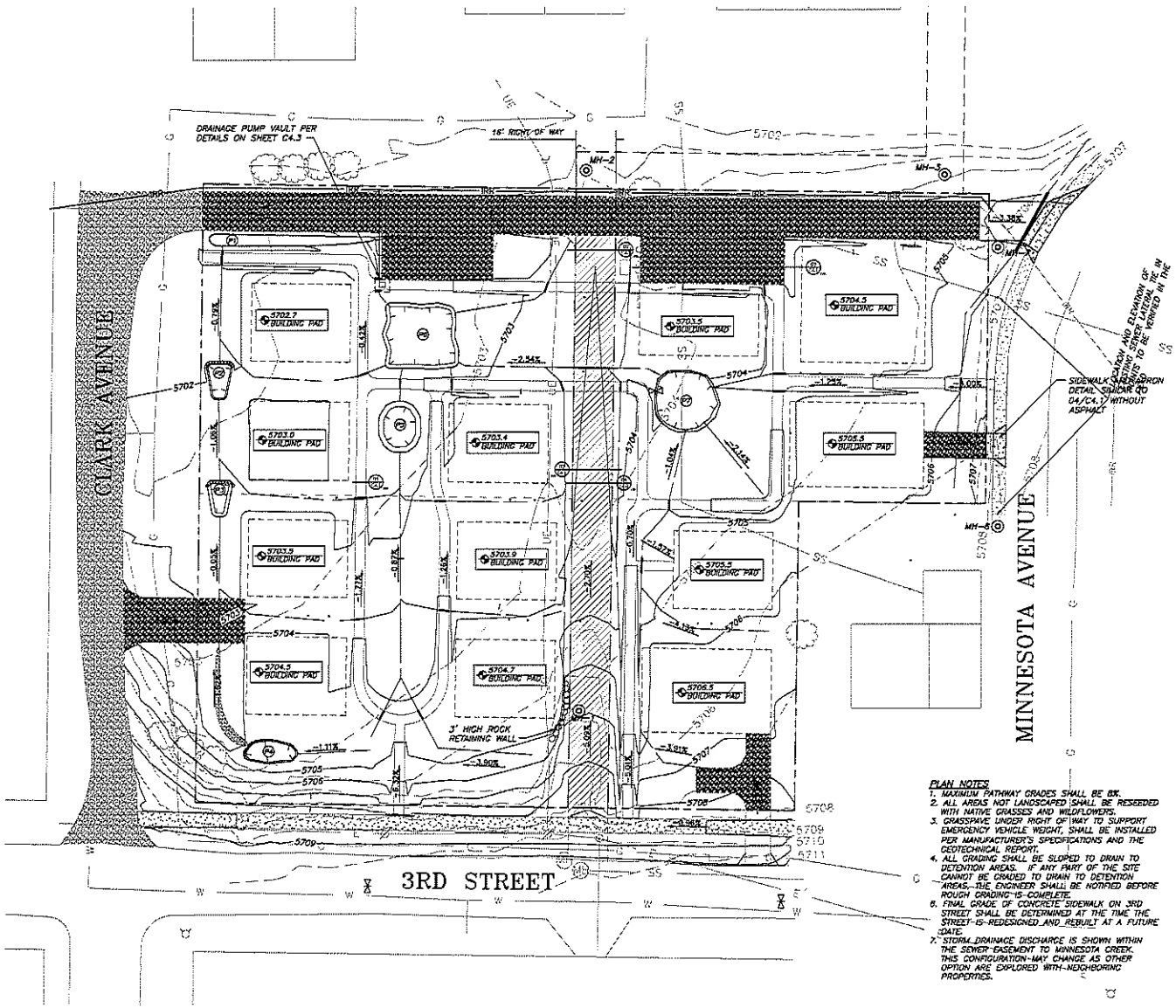
SILVER LEAF CO-HOUSING

3Rd & Clark St.
Paonia, CO. 8145/16

DRAWN BY:
SCALE:
DATE: 12.11.15
ISSUE:
REVISIONS:
R1 - 02.11.2016

SHEET:
L1.0
GENERAL LANDSCAPE PLAN

COPYRIGHT 2016 3cycle Studio



01 | GRADING PLAN

SCALE 1"=20'

Site Excavation Volumes	
Type of Excavation	Volume (CY)
CUT	598
FILL	641
NET	43 (FILL)

Detention Volumes		
Detention ID	Rim Elevation	Volume (cf)
P1	5702.0	260
P2	5702.3	120
P3	5702.7	120
P4	5704.2	150
P5	5702.7	300
P6	5702.5	700
P7	5704.1	600

NOTES:
1. ALL DETENTION AREAS ARE 1' DEEP WITH 3:1 (MAX) SLOPES.
2. DETENTION AREAS CAN VARY IN SHAPE FROM WHAT IS SHOWN, BUT SHALL MAINTAIN THE MINIMUM STORAGE VOLUME SHOWN IN THE TABLE ABOVE BELOW THE RIM ELEVATION.
3. DETENTION AREAS SHALL BE SEEDED WITH NATIVE GRASSES AND WILDFLOWERS OR TURF, AND ARE TO BE MAINTAINED TO ALLOW STORMWATER TO OVERFLOW IN THE DIRECTION SHOWN ON THE PLAN.
4. DEBRIS SHALL BE REMOVED FROM THE DETENTION AREAS ON AN ANNUAL BASIS TO MINIMIZE THE IMPACT ON STORAGE VOLUMES.

PLAN NOTES
1. MAXIMUM PATHWAY GRADES SHALL BE 8%.
2. ALL AREAS NOT LANDSCAPED SHALL BE RESEEDED WITH NATIVE GRASSES AND WILDFLOWERS.
3. GRASSPAVE UNDER RIGHT-OF-WAY TO SUPPORT EMERGENCY VEHICLE WEIGHT, SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND THE GEOTECHNICAL REPORT.
4. ALL GRADING SHALL BE SLOPED TO DRAIN TO DETENTION AREAS. IF ANY PART OF THE SITE CANNOT BE GRADED TO DRAIN TO DETENTION AREAS, THE ENGINEER SHALL BE NOTIFIED BEFORE ROUGH GRADING IS COMPLETE.
5. FINAL GRADE OF CONCRETE SIDEWALK ON 3RD STREET SHALL BE DETERMINED AT THE TIME THE STREET IS REDESIGNED AND REBUILT AT A FUTURE DATE.
6. STORM DRAINAGE DISCHARGE IS SHOWN WITHIN THE SEWER EASEMENT TO MINNESOTA CREEK. THIS CONFIGURATION MAY CHANGE AS OTHER OPTION ARE EXPLORED WITH NEIGHBORING PROPERTIES.

LEGEND

- PROPERTY BOUNDARY
- 5704 EXISTING TOPOGRAPHY
- 5704 PROPOSED TOPOGRAPHY
- FLOWLINE INVERT
- MH-1 SANITARY SEWER MANHOLE
- 4' FOOTPATH (CRUSHER FINES)
- 6"ø CULVERT UNDER FOOTPATH
- 6" CONCRETE SIDEWALK
- 18' ACCESS (DRIVEWAY) AND PARKING
- DETENTION AREA
- D_{50}=10" RIPRAP AT ALL SWALES OVER 2% SLOPE
- GRASSPAVE UNDER RIGHT-OF-WAY FOR EMERGENCY ACCESS

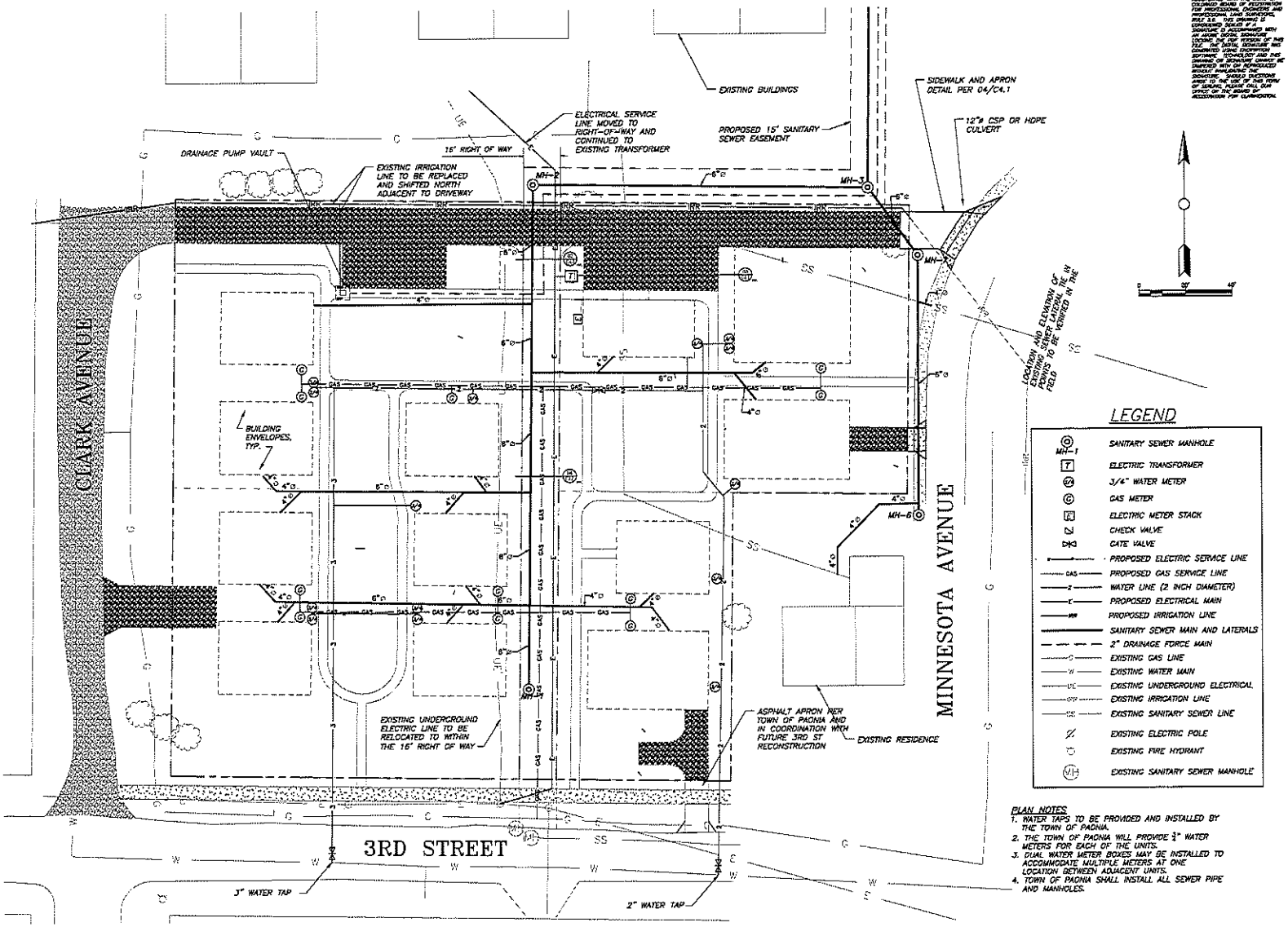
THE SIGNATURE HERE IS AN ELECTRONIC SIGNATURE IN ACCORDANCE WITH THE RULES OF COLORADO BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS, RULE 3.9. THIS DRAWING IS CONSIDERED SEALED IF A SIGNATURE IS ACCOMPANIED WITH AN ENGINEER SEAL, SIGNATURE OF THIS DRAWING BY ANY VERSION OF THIS DRAWING BY ANY VERSION OF ANY ELECTRONIC MEDIA, ENCRYPTION SOFTWARE, TECHNOLOGY AND THIS DRAWING OR MIXTURE THEREOF BE TAMPERED WITH OR REPRODUCED WITHOUT EMPLOYING THE SIGNATURE, SHOULD QUESTIONS ARISE TO THE USE OF THIS PLAN OR SIGNING, PLEASE CALL OUR OFFICE OR THE BOARD OF REGISTRATION FOR CLARIFICATION.

ODISEA LLC
Civil Engineering & Land Planning
Colorado Springs, CO 80918
(719) 425-1169
phone 9258443701
www.odisea.com

DESIGNED BY: CDR
DRAWN BY: CDR
CHECKED BY: CDR
SUBMITTED BY:
DATE: 09/19/18 (1.2021)
DESCRIPTION
DATE
REV. #

SILVER LEAF COHOUSING
CORNER OF CLARK AVENUE AND THIRD STREET
PAONIA COLORADO

GRADING AND DRAINAGE PLAN
C1.0
SHEET 1 OF 8



01 | UTILITIES PLAN

SCALE 1"=20'

SILVER LEAF COHOUSING

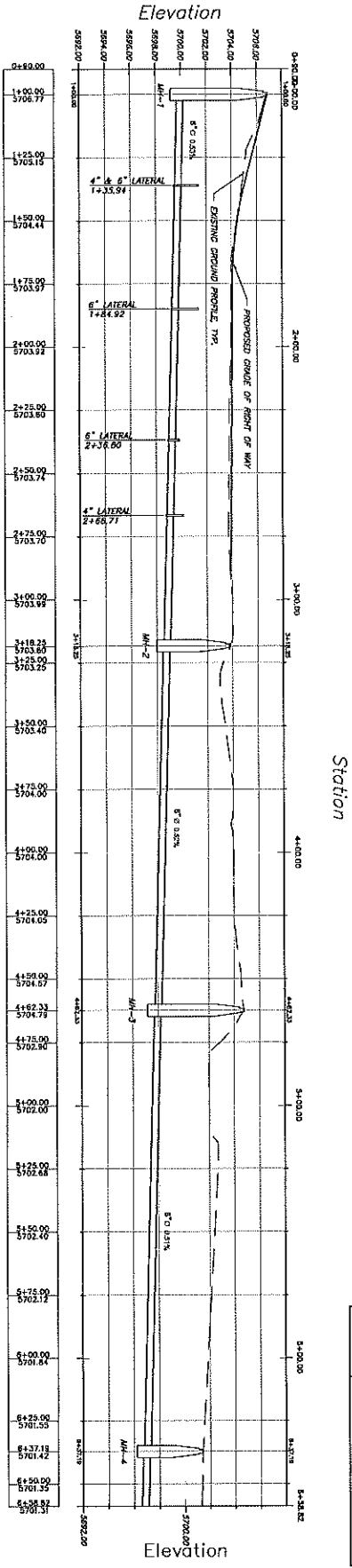
CORNER OF CLARK AVENUE AND THIRD STREET
PAONIA COLORADO

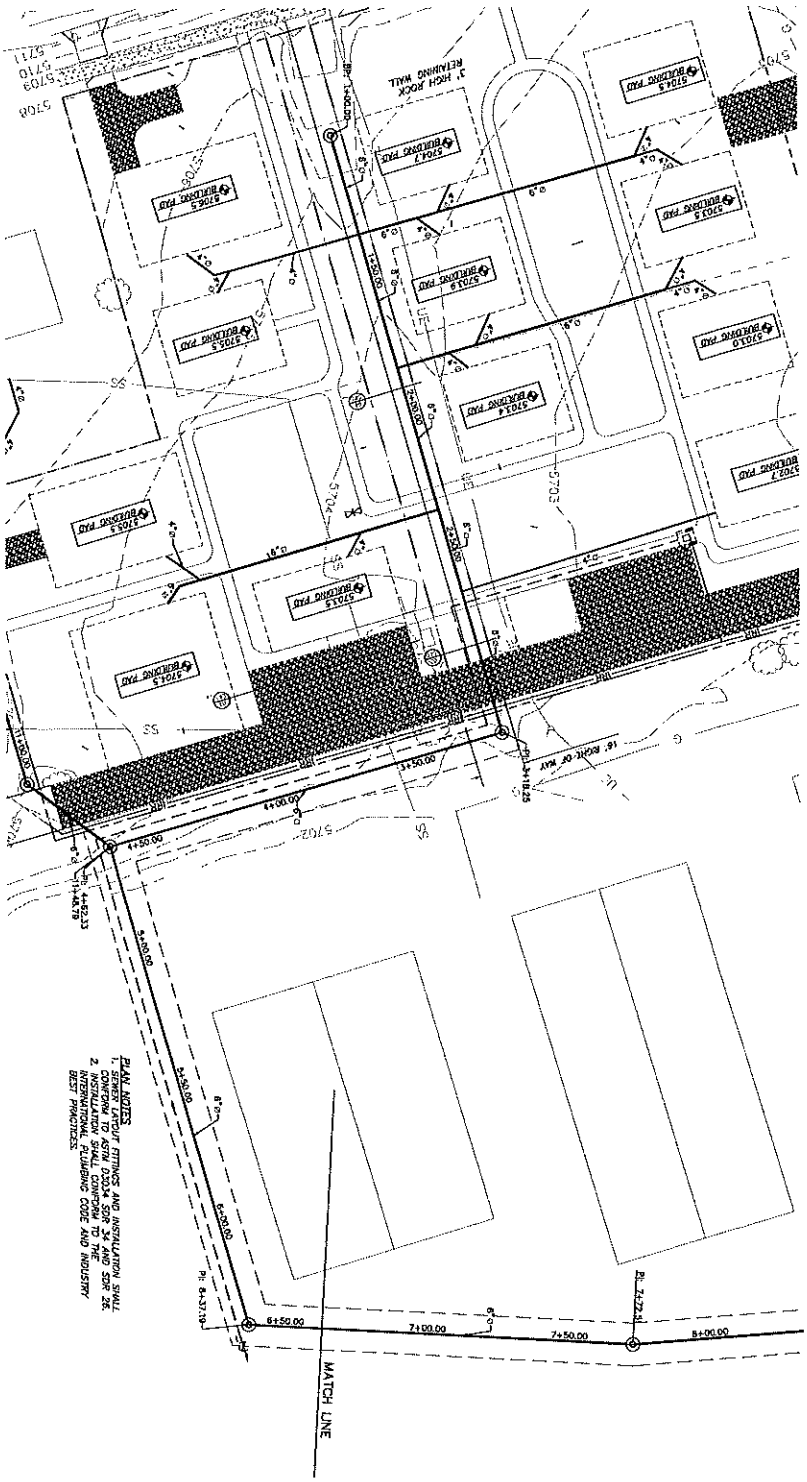
ODISEA

UTILITY PLAN

C2.0

SHEET 2 OF 8





PLAN NOTES
1. SEWER LAYOUT, FITTINGS AND INSTALLATION SHALL CONFORM TO ASTM D3034 SDR 34 AND SDR 26.
2. INSTALLATION SHALL CONFORM TO THE INTERNATIONAL PLUMBING CODE AND INDUSTRY BEST PRACTICES.

Structure Name	Structure Details
MH-1	RIM = 5706.673 SUMP = 5695.700 Pipe – (1) 6" IN = 5695.700 Pipe – (1) 6" OUT = 5695.700
MH-2	RIM = 5703.730 SUMP = 5695.350 Pipe – (1) 6" IN = 5695.350 Pipe – (2) 6" OUT = 5695.500
MH-3	RIM = 5704.750 SUMP = 5697.700 Pipe – (2) 6" IN = 5697.700 Pipe – (3) 6" OUT = 5697.700
MH-4	RIM = 5704.130 SUMP = 5695.800 Pipe – (3) 6" IN = 5695.800 Pipe – (4) 6" OUT = 5695.720
MH-5	RIM = 5705.000 SUMP = 5695.534 Pipe – (4) 6" IN = 5695.975 Pipe – (5) 6" OUT = 5695.850
EX-MH	RIM = 5700.880 SUMP = 5694.410 Pipe – (5) 6" IN = 5695.850
MH-6	RIM = 5700.000 SUMP = 5697.883 Pipe – (5) 6" IN = 5697.833 Pipe – (6) 6" OUT = 5698.250
MH-7	RIM = 5700.000 SUMP = 5697.883 Pipe – (5) 6" IN = 5698.250 Pipe – (32) 6" OUT = 5698.000

SEWER PLAN AND PROFILE
C3.0
SHEET 3 OF 9

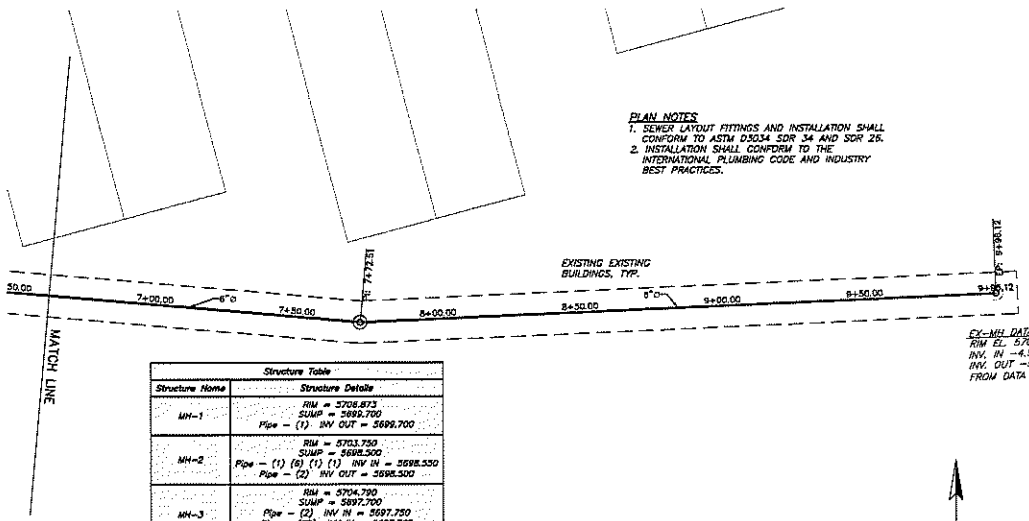
SILVER LEAF COHOUSING

CORNER OF CLARK AVENUE AND THIRD STREET
PAONIA COLORADO

ODISEA
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(m) P.O. Box 1505
Paonia, CO 81428
phone 970.948.5744
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DESIGNED BY: JSR
DRAWN BY: JSR
CHECKED BY: LLH
REVIEWED BY: LLH
SUBMITTED BY:
DATE: DECEMBER 11,2020
REV. 0
FILE NAME:
PLOT SCALE:
PLOT DATE: DECEMBER 11, 2020

SYMBOL	DESCRIPTION	DATE	APPR.

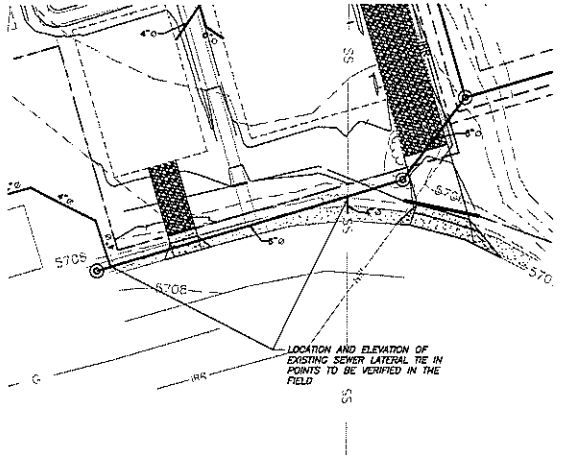


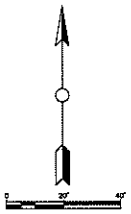
PLAN NOTES

1. SEWER LAYOUT FITTINGS AND INSTALLATION SHALL CONFORM TO ASTM D3034 SDR 34 AND SDR 26.
2. INSTALLATION SHALL CONFORM TO THE INTERNATIONAL PLUMBING CODE AND INDUSTRY BEST PRACTICES.

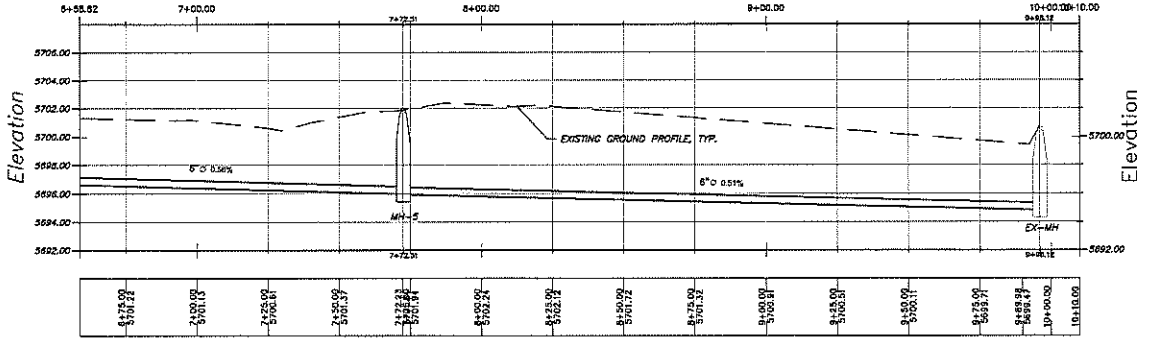
EX-MH DATA
RIM EL. 5700.69'
INV. IN -4.93
INV. OUT -5.13
FROM DATA SEPT 5, 2008

Structure Table	
Structure Name	**Structure Details**
MH-1	RIM = 5706.873 SUMP = 5699.700 Pipe – (1) INV OUT = 5699.700
MH-2	RIM = 5703.750 SUMP = 5698.500 Pipe – (1) (5) (1) INV IN = 5698.550 Pipe – (2) INV OUT = 5698.500
MH-3	RIM = 5704.790 SUMP = 5697.700 Pipe – (2) INV IN = 5697.750 Pipe – (32) INV IN = 5697.750 Pipe – (3) INV OUT = 5697.700
MH-4	RIM = 5701.419 SUMP = 5695.750 Pipe – (3) INV IN = 5695.800 Pipe – (4) INV OUT = 5695.750
MH-5	RIM = 5702.000 SUMP = 5693.934 Pipe – (4) INV IN = 5695.992 Pipe – (5) INV OUT = 5693.930
EX-MH	RIM = 5700.690 SUMP = 5694.810 Pipe – (5) INV IN = 5694.810
MH-6	RIM = 5707.993 SUMP = 5698.833 Pipe – (51) INV OUT = 5698.950
MH-7	RIM = 5706.000 SUMP = 5697.933 Pipe – (51) INV IN = 5698.250 Pipe – (52) INV OUT = 5698.000

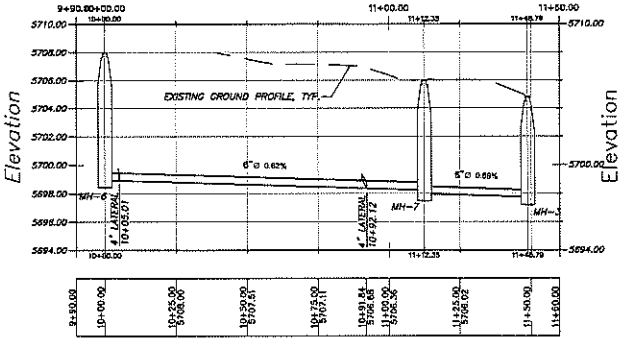




Station



Station



3/19/2007

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NO.	DESCRIPTION	DATE

DESIGNED BY: DRAWN BY: CHECKED BY: REVIEWED BY: SUBMITTED BY:
DATE: DESCRIPTION: REV
FILENAME:
PLOT SCALE:
PLOT DATE: SIZE: ARCH D

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Civil and Water Engineering, Inc.
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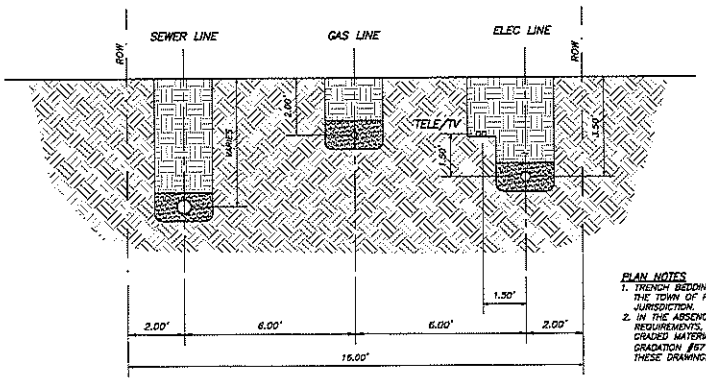
SILVER LEAF COHOUSING

CORNER OF CLARK AVENUE AND THIRD STREET
PAONIA COLORADO

SEWER PLAN AND PROFILE

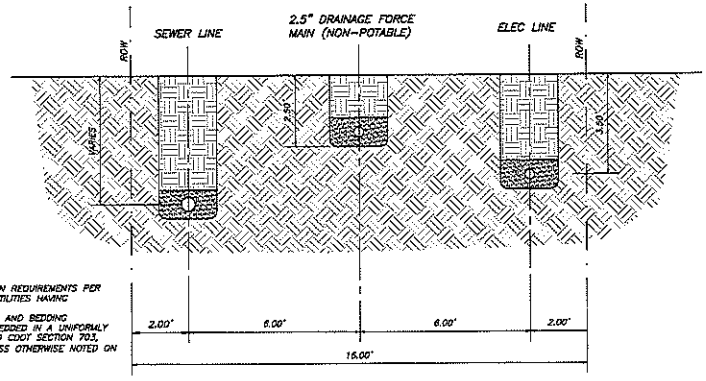
C3.1

SHEET # OF #



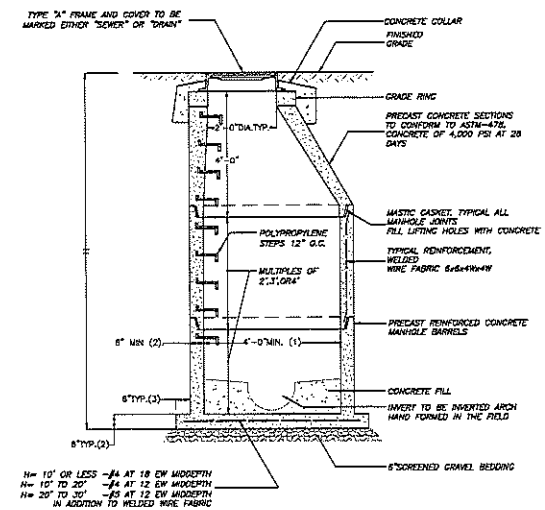
01 | RIGHT OF WAY TRENCH SECTION
SCALE 1"=2'

PLAN NOTES
1. TRENCH BEDDING AND COMPACTION REQUIREMENTS PER THE TOWN OF PAONIA AND THE UTILITIES HAVING JURISDICTION.
2. IN THE ABSENCE OF COMPACTION AND BEDDING REQUIREMENTS, PIPE SHALL BE BEDDED IN A UNIFORMLY GRADED MATERIAL CONFORMING TO CDOT SECTION 703, GRADATION #67 AS SHOWN, UNLESS OTHERWISE NOTED ON THESE DRAWINGS.

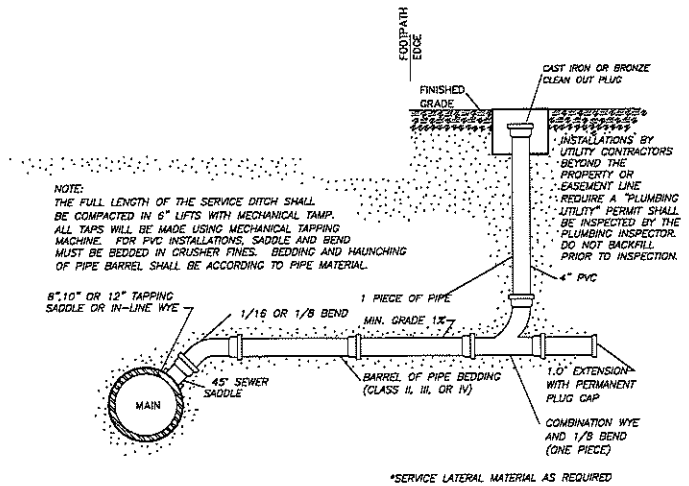


02 | RIGHT OF WAY TRENCH SECTION
SCALE 1"=2'

NOTES:
(1.)5'-0" DIAMETER FOR ALL MANHOLE DEPTHS GREATER THAN 20 FEET OR WHEN ORDERED BY THE ENGINEER.
(2.)8" MIN. WALL THICKNESS AND 7 INCH MIN. BASE THICKNESS WITH 3'-0" DIAMETER MANHOLES.
(3.)6 INCH LIP OPTIONAL UNLESS OTHERWISE NOTED.
(4.)CONCRETE INVERT AND SHELF MAY BE SUBSTITUTED IN STORM DRAIN MANHOLES AS DIRECTED BY THE ENGINEER.



03 | MANHOLE SECTION
SCALE NTS



04 | SEWER LATERAL CONNECTION TO MAIN
SCALE NTS

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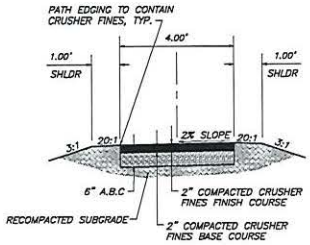
NO.	DESCRIPTION	DATE	APPR.

DESIGNED BY: JSR
DRAWN BY: JSR
CHECKED BY: JSR
REVIEWED BY: CLH
SUBMITTED BY:
DATE: DECEMBER 15, 2021
FILE NAME:
PLOT SCALE:
PLOT DATE: DECEMBER 16, 2021

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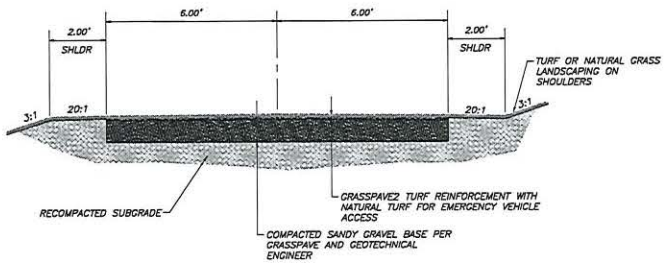
SILVER LEAF COHOUSING
CORNER OF CLARK AVENUE AND THIRD STREET
PAONIA COLORADO

DETAILS
C4.0
SHEET 5 OF 8



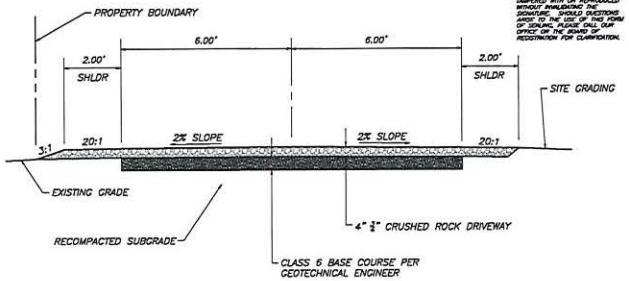
01 | TYPICAL FOOTPATH SECTION

SCALE 1"= 2'



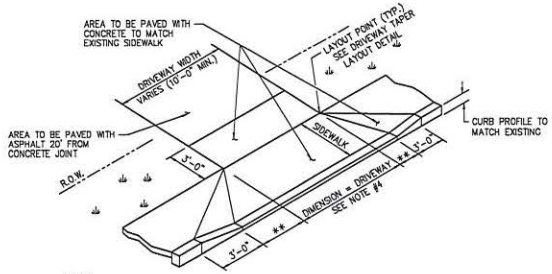
02 | TYPICAL INTERIOR RIGHT-OF-WAY SECTION

SCALE 1"= 2'



03 | TYPICAL DRIVEWAY SECTION

SCALE 1"= 2'



NOTES:

1. TOPSOIL AND SEED ALL DISTURBED AREAS.
2. EXPANSION JOINT MATERIAL TO BE PLACED PER TOWN OF PAONIA SPECIFICATIONS.
3. WIDTH OF DRIVEWAY APRONS AT THE LAYOUT POINT SHALL MATCH EXISTING WIDTH.
4. CURB SECTION SHOWN, GUTTER SECTION SIMILAR. HIGHWAY EDGE OF PAVEMENT (CURB FACE) EQUALS BACK EDGE OF PROPOSED GUTTER. TIP-UP SECTION IS APPLICABLE ONLY WITH CURBING.

04 | TYPICAL DRIVEWAY APRON DETAIL

SCALE N.T.S.

GRASSPAVE2 SYSTEM NOTES

SYSTEM DESCRIPTION

A. THE GRASSPAVE2 POROUS PAVEMENT SYSTEM PROVIDES VEHICULAR AND PEDESTRIAN LOAD SUPPORT FOR GRASS AREAS, WHILE PROTECTING GRASS ROOTS FROM HARMFUL EFFECTS OF TRAFFIC.

B. MAJOR COMPONENTS OF THE COMPLETE SYSTEM

1. GRASSPAVE2 UNITS, ASSEMBLED IN ROLLS.
2. ENGINEERED SAND AND GRAVEL BASE COURSE.
3. HYDROGROW SOIL AMENDMENT AND FERTILIZER, SUPPLIED WITH GRASSPAVE2.
4. SAND FILL OR USGA GREENS MIX.
5. SELECTED GRASS FROM SEED, HYDROSEEDING/HYDRO-MULCHING, OR SOD.
6. SELECTED TOPSOIL (ONLY FOR SEEDED INSTALLATION).
7. MULCH (NEEDED ONLY FOR SEEDED OR HYDROSEEDED INSTALLATIONS).

C. THE GRASSPAVE2 GRASS PAVING UNITS, SAND, AND BASE COURSE WORK TOGETHER TO SUPPORT IMPOSED LOADING.

D. THE GRASSPAVE2 GRASS PAVING UNITS, HYDROGROW, AND SAND FILL CONTRIBUTE TO VEGETATION SUPPORT.

DELIVERY, STORAGE, AND HANDLING

A. STORE PRODUCTS IN MANUFACTURER'S UNOPENED PACKAGING UNTIL READY FOR INSTALLATION.

B. PROTECT GRASSPAVE2 UNITS/ROLLS FROM DAMAGE DURING DELIVERY AND STORE ROLLS UPRIGHT, UNDER TARP, TO PROTECT FROM SUNLIGHT, WHEN TIME FOR DELIVERY TO INSTALLATION EXCEEDS ONE WEEK.

C. STORE HYDROGROW IN A DARK AND DRY LOCATION

D. HANDLING: PROTECT MATERIALS DURING HANDLING AND INSTALLATION TO PREVENT DAMAGE

A. OUR LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REFURNISHING OF MATERIALS AND DOES NOT INCLUDE ANY RESPONSIBILITY FOR INCIDENTAL, CONSEQUENTIAL, OR OTHER DAMAGES OF ANY NATURE.

MANUFACTURERS

A. ACCEPTABLE MANUFACTURER: INVISIBLE STRUCTURES, INC., WHICH IS LOCATED AT: 1600 JACKSON ST. SUITE 310 ; GOLDEN, CO 80401; TOLL FREE TEL: 800-233-1510; TEL: 303-233-8383; EMAIL: REQUEST INFO (SALES@INVISIBLESTRUCTURES.COM); WEB: WWW.INVISIBLESTRUCTURES.COM.

B. SUBSTITUTIONS: NOT PERMITTED.

GRASSPAVE2

A. COMPOSITION:

1. MANUFACTURED IN THE USA.
2. HIGH DENSITY POLYETHYLENE (HDPE): 100 PERCENT RECYCLED MATERIALS.
3. COLOR: BLACK
4. COLOR UNIFORMITY: UNIFORM COLOR THROUGHOUT ALL UNITS ROLLS.
5. CARBON BLACK FOR ULTRAVIOLET LIGHT STABILIZATION.
6. HYDROGROW SOIL AMENDMENT AND FERTILIZER, PROVIDED BY MANUFACTURER WITH GRASSPAVE2.

B. PERFORMANCE PROPERTIES:

1. MAXIMUM LOADING CAPABILITY: 15,940 PSI (109,906 KPA) WHEN FILLED WITH SAND.
2. WHEELCHAIR ACCESS TESTING FOR ADA COMPLIANCE: PASSING ASTM F 1951-08.
3. WHEELCHAIR ACCESS TESTING FOR ADA COMPLIANCE: PASSING ROTATIONAL PENETROMETER TESTING.
4. TENSILE STRENGTH, PULL-APART TESTING: 458 LBF/IN FROM ASTM D638 MODIFIED.
5. SYSTEM PERMEABILITY (GRASSPAVE2, SAND, BASE COURSE): 2.63 TO 38.55 INCHES OF WATER PER HOUR.
6. EFFECTIVE IMPERVIOUSNESS (E.I.): 10%.

C. DIMENSIONS (INDIVIDUAL UNITS ARE ASSEMBLED AND DISTRIBUTED INTO ROLLS):

1. ROLL AREA: FROM 108 SQ FT (10 SQ M) TO 538 SQ FT (50 SQ M), IN 108 SQ FT (10 SQ M) INCREMENTS
2. ROLL WIDTHS: FROM 3.3 FT (1 M) TO 8.2 FT (2.5 M), IN 1.6 FT (0.5 M) INCREMENTS.
3. ROLL LENGTHS: FROM 32.8 FT (10M) TO 65.6 FT (20 M), IN 3.3 FT (1 M) INCREMENTS.
4. ROLL WEIGHTS: FROM 41 LBS (19KG) TO 205 LBS (93KG), IN 41 LBS (19 KG) INCREMENTS.
5. UNIT NOMINAL WIDTH BY LENGTH: 20 INCHES BY 20 INCHES (0.5 M BY 0.5 M) OR 40 INCHES BY 40 INCHES (1 M BY 1 M).
6. NOMINAL DEPTH: 1 INCH (2.5 CM) – FOR ROLLS AND INDIVIDUAL UNITS.
7. UNIT WEIGHT: 18 OZ (510 G) OR 5 LBS. (2.27 KG).
8. VOLUME SOLID: 8 PERCENT.

SYSTEM MATERIALS

NOTES: ALL MEASUREMENTS ARE SUBJECT TO MANUFACTURING TOLERANCES, UNLESS OTHERWISE SPECIFIED.

A. BASE COURSE: SANDY GRAVEL MATERIAL FROM LOCAL SOURCES COMMONLY USED FOR ROAD BASE CONSTRUCTION (RECYCLED MATERIALS SUCH AS CRUSHED CONCRETE OR CRUSHED ASPHALT ARE NOT ACCEPTABLE).

1. CONFORMING TO THE FOLLOWING SIEVE ANALYSIS AND REQUIREMENTS:

1.a. 100 PERCENT PASSING SIEVE SIZE 1 INCH (25 MM).

1.b. 90-100 PERCENT PASSING SIEVE SIZE 3/4 INCH (19 MM).

1.c. 70-80 PERCENT PASSING SIEVE SIZE 3/8 INCH (9 MM).

1.d. 55-70 PERCENT PASSING SIEVE SIZE #4.

1.e. 45-55 PERCENT PASSING SIEVE SIZE #10.

1.f. 25-35 PERCENT PASSING SIEVE SIZE #40.

1.g. 3-8 PERCENT PASSING SIEVE SIZE #200.

2. PROVIDE A BASE COURSE MATERIAL NEARLY NEUTRAL IN PH (RANGE FROM 6.5 TO 7.2) TO PROVIDE ADEQUATE ROOT ZONE DEVELOPMENT FOR TURF.

3. MATERIAL MAY BE EITHER "PIT RUN" OR "CRUSHER RUN." AVOID USING CLAY BASED CRUSHER RUN/PIT RUN. CRUSHER RUN MATERIAL WILL GENERALLY REQUIRE COARSE, WELL-DRAINING SAND CONFORMING TO AASHTO M6 OR ASTM C 33 TO BE ADDED TO MIXTURE (20 TO 30 PERCENT BY VOLUME) TO ENSURE LONG-TERM POROSITY.

4. ALTERNATIVE MATERIALS SUCH AS CRUSHED SHELL, LIMEROCK, OR CRUSHED LAVA MAY BE USED FOR BASE COURSE USE, PROVIDED THEY ARE MIXED WITH SHARP SAND (20 TO 30 PERCENT) TO ENSURE LONG-TERM POROSITY, AND ARE BROUGHT TO PROPER COMPACTION. WITHOUT ADDED SAND, CRUSHED SHELL AND LIMEROCK SET UP LIKE CONCRETE AND BECOME IMPERVIOUS.

5. ALTERNATIVE SIZE AND/OR COMPOSITION OF BASE COURSE MATERIALS SHOULD BE SUBMITTED TO INVISIBLE STRUCTURES, INC. (MANUFACTURER) FOR APPROVAL.

B. SAND FILL FOR RINGS AND SPACES BETWEEN RINGS: CLEAN SHARP SAND (WASHED CONCRETE SAND). CHOOSE ONE OF THE FOLLOWING:

1. COARSE, WELL-DRAINING SAND, SUCH AS WASHED CONCRETE SAND CONFORMING TO AASHTO M6 OR ASTM C-33.

2. UNITED STATES GOLF ASSOCIATION (USGA) GREENS, SECTION – SAND MIX "THE ROOT ZONE MIXTURE."

C. TURF CONDITIONER:

1. HYDROGROW A PROPRIETARY SOIL AMENDMENT MANUFACTURED BY INVISIBLE STRUCTURES, INC. AND PROVIDED WITH GRASSPAVE2.

2. NO SUBSTITUTIONS.

NOTES: USE GRASS SPECIES RESISTANT TO WEAR BY TRAFFIC GENERALLY A BLUE/RYE/FESCUE MIX USED FOR ATHLETIC FIELDS IN NORTHERN CLIMATES, AND ZOYSIA, FESCUE, OR BERMUDA TYPES IN SOUTHERN CLIMATES. CHECK WITH LOCAL SOD AND SEED SUPPLIERS FOR PREFERRED MIXTURES. DEDICATED FIRE LANES CAN USE SAME GRASS SPECIES USED ON SURROUNDING TURF. PARKING APPLICATIONS REQUIRE GREATEST WEAR-RESISTANT SPECIES POSSIBLE, GENERALLY AVAILABLE ONLY BY SEED OR HYDROSEEDING/HYDRO-MULCHING.

D. GRASS – CHOOSE EITHER SOD OR SEED:

1. SOD: USE 13 MM (0.5") THICK (SOIL THICKNESS) ROLLED SOD FROM A REPUTABLE LOCAL GROWER. SPECIES SHOULD BE WEAR RESISTANT, FREE FROM DISEASE, AND IN EXCELLENT CONDITION. SOD SHALL BE GROWN IN SAND OR SANDY LOAM SOILS ONLY. SOD GROWN IN SOILS OF CLAY, SILT, OR HIGH ORGANIC MATERIALS SUCH AS PEAT, WILL NOT BE ACCEPTED.

2. SEED: USE SEED MATERIALS, OF THE PREFERRED SPECIES FOR LOCAL ENVIRONMENTAL AND PROJECTED TRAFFIC CONDITIONS, FROM CERTIFIED SOURCES. SEED SHALL BE PROVIDED IN CONTAINERS CLEARLY LABELED TO SHOW SEED NAME, LOT NUMBER, NET WEIGHT, % WEED SEED CONTENT, AND GUARANTEED % OF PURITY AND GERMINATION. PURE LIVE SEED TYPES AND AMOUNT SHALL BE AS SHOWN ON PLANS.

2.a. MULCH – NEEDED ONLY FOR HYDROSEEDING: WOOD OR PAPER CELLULOSE COMMERCIAL MULCH MATERIALS COMPATIBLE WITH HYDROSEEDING OPERATIONS. MULCH DEPTH ACCORDING TO MULCH MANUFACTURERS' RECOMMENDATION. DO NOT USE MULCH OF STRAW, PINE NEEDLES, ETC., BECAUSE OF THEIR LOW MOISTURE HOLDING CAPACITY.

2.b. TOPSOIL – NEEDED ONLY FOR SEEDING, RECOMMENDED FOR HYDROSEEDING: OBTAIN SPECIFIED TOPSOIL FOR A LIGHT "DUSTING" (NO MORE THAN ½" OR 13MM) ABOVE RINGS FILLED WITH SAND FOR SEEDING GERMINATION.

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NO.	DESCRIPTION	DATE	APPR.

DESIGNED BY: JSK
DRAWN BY: JSK
REVIEWED BY: LSH
SUBMITTED BY:
DATE: DECEMBER 11, 2015
CKD BY: LSH
REVISIONS:
PLOT SCALE:
PLOT DATE: DECEMBER 11, 2015
REV 0

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SILVER LEAF COHOUSING

CORNER OF CLARK AVENUE AND THIRD STREET
PAONIA COLORADO

DETAILS

C4.1

SHEET 6 OF 8

PROJECT DESCRIPTION

1. THIS PROJECT CONSISTS OF A NEW CO-OPERTIVE HOUSING DEVELOPMENT IN THE TOWN OF PAONIA, COLORADO.
2. THE EXISTING SITE IS UNDEVELOPED.
3. SEWER AND WATER SERVICES WILL BE SUPPLIED BY THE TOWN OF PAONIA.
4. NATURAL GAS WILL BE SUPPLIED BY SOURCEGAS.
5. ELECTRICITY WILL BE SUPPLIED BY DELTA-MONTROSE ELECTRIC ASSOCIATION (DMEA)
6. THE SITE IS DESIGNED TO MINIMIZE DRAINAGE IMPACTS TO THE BY USING PERMEABLE SURFACES EVERYWHERE EXCEPT FOR THE STRUCTURES. ALL FOOTPATHS AND ACCESS WILL BE GRAVEL AND/OR CRUSHER FINE SURFACES, ALLOWING FOR INFILTRATION OF STROMWATER. THE SITE INCORPORATES A NUMBER OF SHALLOW STORMWATER DETENTION AREAS THAT ARE DESIGNED TO CAPTURE AND INFILTRATE STORMWATER UP TO THE 25-YEAR RAINFALL EVENT. RUNOFF IN EXCESS OF THE 25-YR EVENT WILL BE DISCHARGED TO MINNESOTA CREEK AT HISTORICAL DISCHARGE RATES.

GENERAL NOTES

1. ALL WORK WITHIN THE RIGHT-OF WAY WILL REQUIRE THE APPROVAL OF TOWN OF PAONIA.
2. CONTACT THE PUBLIC WORKS DIRECTOR AT 48 HOURS PRIOR TO ANY OF THIS WORK.
3. ALL WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, TOWN OF PAONIA.
4. THE CONTRACTOR SHALL USE AN UNDERGROUND LOCATE SERVICE AT A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION WITHIN THE RIGHT-OF-WAY TO LOCATE ALL UTILITIES.
5. ALL PAVING REMOVAL SHALL BE SAWCUT AT THE FIELD ENGINEER'S DIRECTION. MINIMUM DEPTH OF CUT: 0.12".
6. PAVING SHALL BE SAWCUT AND REMOVED A MINIMUM OF 1' FROM CURB AND GUTTER DURATION OF RECONSTRUCTION.
7. THE PROTECTION AND ADJUSTMENT OF ALL UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND/OR RELOCATE ALL TRAFFIC SIGNS AND TRAFFIC SIGNALS AS SHOWN ON THE PLANS OR AS REQUIRED BY THE TOWN.
9. REPORTS OF COMPACTION WITHIN THE RIGHT-OF-WAY SHALL BE SUBMITTED TO AND ACCEPTED BY THE FIELD ENGINEER PRIOR TO PLACING ANY PAVING.
10. IN THE EVENT THAT EXISTING STRIPING IS OBLITERATED BY CONSTRUCTION, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE SAID STRIPING.
11. PRIOR TO CONSTRUCTION, ALL SURVEY POINTS THAT MAY BE DISTURBED SHALL BE TIED OUT AND A CORNER RECORD OF EACH POINT SHALL BE FILED WITH THE TOWN SURVEYOR AND COUNTY. A COPY OF THE RECORDED CORNER RECORD SHALL BE SUBMITTED TO THE TOWN'S PUBLIC WORKS DIVISION.
12. FOLLOWING THE COMPLETION OF THE CONSTRUCTION, A CORNER RECORD OF EACH POINT THAT WAS DISTURBED SHALL BE FILED WITH THE TOWN SURVEYOR AND COUNTY. A COPY OF THE RECORDED CORNER RECORD SHALL BE SUBMITTED TO THE TOWN'S PUBLIC WORKS DIVISION PRIOR TO THE RECORDING OF A CERTIFICATE OF COMPLETION OR RELEASE OF BONDS.
13. ALL NECESSARY UTILITY CONSTRUCTION WITHIN THE STREET RIGHT-OF-WAY SHALL BE COMPLETED PRIOR TO PAVING PER THIS PLAN.
14. ADJUST ALL STORM DRAIN AND SEWER MANHOLES AND WATER VALVES TO GRADE AFTER PLACING FINAL LIFT OF ASPHALT, IF NECESSARY.
15. NO EXPANSIVE SOIL MAY BE USED WITHIN THE PUBLIC RIGHT-OF-WAY.
16. THE TOWN OF PAONIA WILL SUPPLY AND INSTALL THE WATER TAPS.
17. MAINTAIN 4 FEET OF COVER FOR ALL WATER LINES.
18. A TEMPORARY TRAFFIC CONTROL PLAN (TCP) IS REQUIRED BEFORE ANY WORK CAN COMMENCE WITHIN THE PUBLIC RIGHT OF WAY.
19. IN THE ABSENCE OF GEOTECHNICAL RECOMMENDATIONS OR BACKFILL DETAILS, ALL BACKFILL SHALL BE COMPACTED TO 95% OF THE MODIFIED PROCTOR DENSITY.
20. LOCATIONS OF EXISTING STRUCTURES AND UTILITIES ARE FOR INFORMATION PURPOSES ONLY. APPLICANT/CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH (ELEVATION) OF EXISTING UTILITIES AND OTHER FIELD CONDITIONS PRIOR TO CONSTRUCTION.
21. PRE-CONSTRUCTION MEETING REQUIRED. CONTRACTOR TO CONTACT THE TOWN OF PAONIA PUBLIC WORKS DIRECTOR A MINIMUM OF 5 BUSINESS DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION TO SCHEDULE MEETING.

SEWER NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST SEWER SPECIFICATIONS AND STANDARD DRAWINGS OF THE TOWN OF PAONIA PUBLIC WORKS DEPARTMENT OR AN APPROVED STANDARD EQUIVALENT OR BETTER TO GRAND JUNCTION, CO.
2. THE CONTRACTOR SHALL CONSTRUCT THE SANITARY SEWER IN ACCORDANCE WITH THE STAMPED PLANS APPROVED BY THE TOWN OF PAONIA PUBLIC WORKS DEPARTMENT. THESE PLANS WILL BE PROVIDED TO THE CONTRACTOR BY THE PROJECT INSPECTOR PRIOR TO CONSTRUCTION. WORK SHALL NOT BE DONE WITHOUT THE CURRENT SET OF APPROVED PLANS.
3. FINAL APPROVAL AND ACCEPTANCE OF ALL SEWER CONSTRUCTION WILL BE BY THE TOWN OF PAONIA PUBLIC WORKS DEPARTMENT.
4. SEWER INSPECTIONS WILL BE DONE BY THE TOWN OF PAONIA PUBLIC WORKS DEPARTMENT AND THEIR DECISIONS SHOULD BE CONSIDERED AS FINAL. THE CONTRACTOR WILL NOTIFY THE TOWN OF PAONIA PUBLIC WORKS DEPARTMENT 48 HOURS PRIOR TO CONSTRUCTION. TOWN OF PAONIA CITY WILL PROVIDE PERIODIC INSPECTIONS FOR AN EIGHT-HOUR DAY, FROM 8:00 A.M. TO 5:00 P.M., FOR A FORTY HOUR WEEK.
5. SEWER CONSTRUCTION SHALL MEET SPECIFIC DETAILS AND REQUIREMENTS OF THE COLORADO STANDARDS FOR PUBLIC WORKS CONSTRUCTION.
6. GROUNDWATER LEVELS SHALL BE MAINTAINED BELOW THE BOTTOM OF THE TRENCH DURING THE PIPE LAYING AND PIPE JOINING OPERATIONS. ALL MANHOLES LOCATED WITHIN LIMITS OF SEASONAL GROUNDWATER SHALL HAVE THE EXTERIOR OF ALL CONCRETE SURFACES COATED WITH TWO COATS OF COAL TAR EPOXY.
7. THE HORIZONTAL SEPARATION OF POTABLE WATER AND SEWER MAINS SHALL BE A MINIMUM OF TEN (10) FEET. WHERE IT IS NECESSARY FOR SEWER AND WATER TO CROSS EACH OTHER AND THE SEWER LINE IS LESS THAN 18 INCHES BELOW OR ABOVE THE WATER MAIN, THE SEWER LINE CROSSING SHALL BE P.V.C. PRESSURE PIPE CONFORMING TO AWWA C-900 OR ASTM D2241, FOR A DISTANCE OF 10' ON BOTH SIDES OF WATER LINE. ONE FULL LENGTH OF BOTH WATER MAIN AND SEWER LINE SHALL BE CENTERED OVER THE CROSSING POINT SO THAT ALL JOINTS WILL BE AS FAR FROM THE CROSSING AS POSSIBLE.
8. ALL STATIONING RELATES TO THE GRAVITY SEWER CENTERLINE.
9. THE CONTRACTOR SHALL PROVIDE TOWN OF PAONIA'S INSPECTOR WITH "CUT SHEETS" FOR THE STAKING PROVIDED FOR CONSTRUCTION OF THE SANITARY SEWER. "CUT SHEETS" SHALL BE PROVIDED TO THE CITY PRIOR TO CONSTRUCTION. ADDITIONALLY, TEMPORARY BENCH MARKS MUST BE PROVIDED TO THE TOWN OF PAONIA PUBLIC WORKS DEPARTMENT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
10. PRIOR TO CONSTRUCTION, TEMPORARY BENCH MARKS (TBM'S) SHALL BE SET IN THE FIELD BY A LICENSED SURVEYOR OR ENGINEER AND SHALL BE FLAGGED AND CLEARLY VISIBLE FROM ALL DIRECTIONS. A TBM SHALL BE LOCATED WITHIN 100 FEET OF THE TIE-IN TO EXISTING SEWER AND SPACED NO GREATER THAN 500 FEET ALONG THE SEWER ALIGNMENT THEREAFTER. TBM'S SHALL HAVE ELEVATIONS TIED TO THE NAVD 1988 DATUM.
11. SEWER PIPE WITH COVER OF GREATER THAN 3 FEET, SHALL BE BELL AND SPIGOT, POLYVINYL CHLORIDE (PVC), SDR 35, ASTM D-3034 FOR 4-INCH THROUGH 15-INCH AND ASTM F679 FOR 18-INCH THROUGH 27-INCH AS SET FORTH BY THE TOWN OF PAONIA PUBLIC WORKS DEPARTMENT. SEWER PIPE WITH LESS THAN 3 FEET OF COVER SHALL BE DUCTILE IRON CONFORMING TO ANSI A-21.51 OR AWWA C-151 MINIMUM CLASS 50, A RUBBER RING IS TO BE INSTALLED WHERE THE PIPE IS IN CONTACT WITH THE MANHOLE BASE AND/OR ITS CHANNEL IN ORDER TO ENSURE A WATER-TIGHT SEAL.
12. THE SEWER CONTRACTOR SHALL SUPPLY ALL LID ASSEMBLIES AND THE REQUIRED NUMBER OF RISER AND GRADE RINGS. THE SEWER CONTRACTOR SHALL FIELD VERIFY THE ELEVATION OF THE TOP OF THE MANHOLE CONE TO ASSURE THAT RING ELEVATIONS MATCH FINAL STREET GRADES. THE MAXIMUM HEIGHT OF THE GRADE RINGS SHALL BE SUCH THAT THE FINISHED GRADE LOCATION OF THE MANHOLE FRAME AND COVER SHALL NOT BE MORE THAN TWENTY-ONE (21") INCHES ABOVE THE TOP OF THE MANHOLE CONE.
13. THE PAVING CONTRACTOR SHALL SET THE GRADE RINGS AND POUR THE CONCRETE COLLARS PER STANDARD DRAWING NO. SD 508. THE PAVING CONTRACTOR SHALL CONTACT THE TOWN OF PAONIA 24 HOURS PRIOR TO POURING CONCRETE COLLARS.
14. THE TRENCH BACKFILL ABOVE THE PIPE ZONE WILL BE INSPECTED BY THE TOWN OF PAONIA OR BY THE DEVELOPER'S ENGINEER. COMPACTION TESTS ARE REQUIRED ON THE BACKFILL ABOVE THE PIPE ZONE, WITHIN PUBLIC RIGHT-OF-WAYS. TESTING SHALL BE CONDUCTED TO MEET ALL TOWN OF PAONIA REQUIREMENTS AND THE RESULTS SHALL BE SUBMITTED TO TOWN OF PAONIA PUBLIC WORKS DEPARTMENT AND TOWN OF PAONIA PRIOR TO FINAL ACCEPTANCE.
15. THE TOWN OF PAONIA PUBLIC WORKS DEPARTMENT MAY TEST THE COMPACTION OF THE SEWER PIPELINE BEDDING. TESTING WILL BE DONE BY AN INDEPENDENT TESTING LABORATORY. THE COST OF THE FIRST TEST WILL BE PAID BY THE TOWN OF PAONIA PUBLIC WORKS DEPARTMENT. IF THE FIRST TEST FAILS TO MEET REQUIRED COMPACTION, ALL RE-TESTING SHALL BE PAID BY THE SEWER CONTRACTOR. THE CONTRACTOR SHALL CONTACT THE TOWN OF PAONIA PUBLIC WORKS DEPARTMENT AND/OR TESTING LABORATORY TO SCHEDULE THE TESTS PRIOR TO ANY PIPE LAYING AND BACKFILLING.
16. THE CONTRACTOR SHALL LEAVE THE EXCAVATION FOR THE UPSTREAM END OF ALL SERVICE LINES OPEN FOR FIELD VERIFICATION OF THE INVERT ELEVATION BY THE CITY'S INSPECTOR. THE CONTRACTOR SHALL NOT BACKFILL THE ENDS OF SERVICE LINES UNTIL HE HAS OBTAINED APPROVAL FROM TOWN OF PAONIA CITY'S INSPECTOR OR MADE OTHER ARRANGEMENTS FOR THE VERIFICATION OF SERVICE LINE INVERT ELEVATIONS.
17. PRIOR TO FINAL ACCEPTANCE, AFTER ALL UTILITIES ARE IN AND PRIOR TO PAVING, AN AIR TEST SHALL BE CONDUCTED. THE CONTRACTOR SHALL CONTACT THE CITY OF TOWN OF PAONIA A MINIMUM OF 24 HOURS PRIOR TO TESTING. ALL MANHOLES SHALL BE TESTED IN ACCORDANCE WITH THE ISPWC AND TOWN OF PAONIA CITY'S MODIFICATIONS.
18. THE SEWER MAIN SHALL BE TESTED FOR DEFLECTION IN ACCORDANCE WITH THE ISPWC AND TOWN OF PAONIA CITY'S MODIFICATIONS. ALL SEWER LINES SHALL BE TELEVISED WITH A CLOSED CIRCUIT TELEVISION CAMERA IN ACCORDANCE WITH THE ISPWC AND TOWN OF PAONIA CITY'S MODIFICATIONS. NO STANDING WATER SHALL BE PRESENT.

EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL SUBMIT AN EROSION SEDIMENT AND POLLUTION CONTROL PLAN FOR APPROVAL PRIOR TO THE COMMENCEMENT OF WORK.
2. APPROVAL OF AN EROSION SEDIMENT AND POLLUTION CONTROL PLAN (ESPCP) DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.)
3. THE IMPLEMENTATION OF AN ESPCP AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF ESPCP FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED, VEGETATION/LANDSCAPING IS ESTABLISHED.
4. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THE ESPCP SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
5. THE ESPCP FACILITIES SHOWN ON THE PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM ROADWAYS OR VIOLATE APPLICABLE WATER STANDARDS.
6. THE ESPCP FACILITIES SHOWN ON THE PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THOSE ESPCP FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS, AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DOES NOT LEAVE THE SITE.
7. THE ESPCP FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
8. THE ESPCP FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A WEEK OR WITHIN THE 24 HOURS FOLLOWING A STORM EVENT.
9. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

WATER SYSTEM (SERVICE LINES)

1. THE WORK SHOWN ON THESE PLANS SHALL CONFORM TO THE TOWN OF PAONIA PUBLIC WORKS STANDARDS FOR WATER DISTRIBUTION SYSTEMS, THE AWWA AND ALL OF THE REFERENCES INCLUDED ON THESE PLANS.
2. THE WATER PIPE MATERIALS MAY BE HIGH DENSITY POLYETHYLENE OR PVC PER THE SPECIFICATIONS ON THESE PLANS.
3. ALL DOMESTIC WATER MAIN AND SERVICE LINES SHALL HAVE 5 FEET MINIMUM COVER FROM FINISHED GRADE TO TOP OF PIPE.
4. IN ALL CASES, MAINTAIN 10 FEET HORIZONTAL DISTANCE BETWEEN WATER AND SEWER LINES.
5. POTABLE WATER MAINS MUST BE INSTALLED ABOVE SANITARY SEWER LINES, STORM LINES, AND NON-POTABLE WATER LINES OR THESE LINES MUST BE ENCASED IN CONCRETE TEN FEET (10') TO BOTH SIDES OF THE POTABLE WATER LINE CROSSING.

TESTING

1. HYDROSTATIC LEAKAGE TESTING IS RECOMMENDED AND SHALL COMPLY WITH ASTM F 2164, ASTM F 1412, AWWA MANUAL OF PRACTICE M55 CHAPTER 9, AND PPI HANDBOOK OF POLYETHYLENE PIPE CHAPTER 2 (2ND EDITION). IF THE TEST SECTION FAILS THIS TEST, THE CONTRACTOR SHALL REPAIR OR REPLACE ALL DEFECTIVE MATERIALS AND/OR WORKMANSHIP AT NO ADDITIONAL COST TO THE OWNER.
2. PNEUMATIC (COMPRESSED AIR) LEAKAGE TESTING OF HDPE PRESSURE PIPING IS PROHIBITED FOR SAFETY REASONS.

CLEANING AND DISINFECTING

3. CLEANING AND DISINFECTING OF POTABLE WATER SYSTEMS SHALL BE IN ACCORDANCE WITH AWWA C651 AND AWWA MANUAL OF PRACTICE M55 CHAPTER 10, AND PPI HANDBOOK OF POLYETHYLENE PIPE CHAPTER 2 (2ND EDITION).
4. AFTER INSTALLATION AND PRESSURE TESTING, NEW WATER MAINS SHOULD BE DISINFECTED ACCORDING TO AWWA C651.
5. THE DISINFECTION CHEMICALS SHOULD BE LIMITED TO LESS THAN 12% ACTIVE CHLORINE. THE DURATION OF THE DISINFECTION SHOULD NOT EXCEED 24 HOURS.
6. UPON COMPLETION, THE SYSTEM SHOULD BE THOROUGHLY FLUSHED WITH FRESH WATER, AND RETESTED TO VERIFY THE DISINFECTANT CHLORINE LEVEL HAS BEEN REDUCED TO POTABLE DRINKING WATER CONCENTRATIONS IN ALL SERVICE WATER TUBING AND BRANCH LATERAL PIPES.

POLYVINYL CHLORIDE (PVC) WATER PIPE

1. PIPE AND FITTINGS: ALL PVC WATER PIPE AND FITTINGS SHALL BE MANUFACTURED IN ACCORDANCE WITH ONE OF THE FOLLOWING STANDARD SPECIFICATIONS:
   a. AWWA C900, "POLYVINYL CHLORIDE (PVC) PRESSURE PIPE AND FABRICATED FITTINGS, 4 IN. THROUGH 12 IN. (100 MM THROUGH 300 MM) FOR WATER DISTRIBUTION"
   b. AWWA C905, "POLYVINYL CHLORIDE (PVC) PRESSURE PIPE AND FABRICATED FITTINGS, 14 IN. THROUGH 48 IN. (350 MM THROUGH 1,200 MM), FOR WATER IDN AND DISTRIBUTION"
   c. AWWA C907, "POLYVINYL CHLORIDE (PVC) PRESSURE FITTINGS FOR WATER – 4 IN. THROUGH 8 IN (100 MM THROUGH 200 MM)"
   d. AWWA C909, "MOLECULARLY ORIENTED POLYVINYL CHLORIDE (PVCO) PRESSURE PIPE, 4 IN. THROUGH 24 IN. (100 MM THROUGH 300 MM), FOR WATER DISTRIBUTION"
   e. ASTM D2241, "POLYVINYL CHLORIDE (PVC) PRESSURE-RATED PIPE (SDR PR SERIES)"
2. JOINTS: PIPE JOINTS SHALL BE GASKET, PUSH-ON TYPE. GASKETS SHALL BE PART OF A COMPLETE PIPE SECTION AND PURCHASED AS SUCH. LUBRICANT SHALL BE AS RECOMMENDED BY THE PIPE OR FITTING MANUFACTURER AND SHALL NOT ADVERSELY AFFECT THE POTABLE QUALITIES OF THE WATER TO BE TRANSPORTED. THE GASKETED JOINT SHALL MEET THE LABORATORY PERFORMANCE REQUIREMENTS SPECIFIED IN ASTM D3139. (THIS IS A QUALIFICATION TEST TO VERIFY A LEAK-FREE DESIGN OF THE SPECIFIED JOINT.)
3. CERTIFICATIONS: PVC WATER PIPE SHALL BE CERTIFIED TO NSF INTERNATIONAL STANDARD NO. 61.
4. ACCEPTANCE: PIPE MAY BE REJECTED FOR FAILURE TO COMPLY WITH ANY REQUIREMENT OF THIS SPECIFICATION.

DESIGN AND INSTALLATION

1. PRESSURE CLASS: ALL PVC WATER PIPE SHALL HAVE A PRESSURE CLASS (PC) OR PRESSURE RATING (PR) THAT EQUALS OR EXCEEDS THE ANTICIPATED WORKING PRESSURE FOR THE PIPE SECTION BEING DESIGNED OR REPLACED. "WORKING PRESSURE" IS DEFINED AS THE MAXIMUM SUSTAINED OPERATING PRESSURE.
2. EMBEDMENT REQUIREMENTS: THE EMBEDMENT REQUIREMENTS FOR PVC WATER PIPE SHALL BE IN ACCORDANCE WITH AWWA STANDARD C605 FOR "UNDERGROUND INSTALLATION OF POLYVINYL CHLORIDE (PVC) PRESSURE PIPE AND FITTINGS FOR WATER".
3. SERVICE CONNECTIONS: ALL SERVICE LINE CONNECTIONS TO PVC WATER PIPE SHALL BE MADE IN ACCORDANCE WITH THE RECOMMENDATIONS OF AWWA C605.
4. POLYVINYL CHLORIDE (PVC) WATER PIPE POST-INSTALLATION TEST REQUIREMENT
5. HYDROSTATIC TEST: A POST- INSTALLATION HYDROSTATIC TEST SHALL BE PERFORMED ON THE INSTALLED SYSTEM IN ACCORDANCE WITH AWWA C605. LINES SHALL BE FILLED SLOWLY WITH POTABLE WATER AT A MAXIMUM VELOCITY OF 1 FT/S (0.3 M/S) WHILE VENTING ALL AIR. PRECAUTIONS SHALL BE TAKEN TO PREVENT ENTRAPPING AIR IN THE LINES.
6. NO INSTALLATION WILL BE ACCEPTED IF THE MAKE-UP WATER IS GREATER THAN THAT DETERMINED BY THE FORMULA:

$$Q = \frac{LD\,P}{148{,}000}$$

WHERE Q IS THE ALLOWABLE MAKE-UP WATER, IN GALLONS PER HOUR; L IS THE LENGTH OF PIPE SECTION BEING TESTED; D IS THE NOMINAL DIAMETER OF THE PIPE, IN INCHES; AND P IS THE AVERAGE TEST PRESSURE DURING THE TEST, IN POUNDS PER SQUARE INCH (GAUGE).

7. THE DURATION OF THE TEST SHALL BE TWO HOURS, UNLESS OTHERWISE SPECIFIED.

HIGH DENSITY POLYETHYLENE PIPE (HDPE)

1. GENERAL
   1.1. HDPE PIPES/FITTINGS SHALL BE ALLOWED FOR USE AS WATER, WASTEWATER, AND RECLAIMED WATER PRESSURE PIPE WHERE COMPATIBLE WITH THE SPECIFIC CONDITIONS OF THE PROJECT.
   1.2. THE USE OF MATERIAL OTHER THAN HDPE PIPE MAY BE REQUIRED BY THE TOWN OF GEMPRADGE IF IT IS DETERMINED THAT HDPE PIPE IS UNSUITABLE FOR THE PARTICULAR APPLICATION.
   1.3. ALL HDPE PIPE FURNISHED UNDER THIS SPECIFICATION SHALL BE MANUFACTURED IN STRICT ACCORDANCE WITH AWWA C901 AND C906, AND SHALL CONFORM TO THE FOLLOWING ADDITIONAL REQUIREMENTS.
2. SIZE OF PIPE
   2.1. 2 INCH THROUGH 24 INCH PER AWWA C906
3. JOINT TYPE
   3.1. JOINT TYPE SHALL BE THERMAL BUTT-FUSION (HDPE PIPE TO HDPE PIPE) ACCORDING TO ASTM D3261 OR MECHANICAL ADAPTER FOR VALVE, FITTING, OR DISSIMILAR PIPE TO PIPE CONNECTIONS.
4. MATERIAL
   4.1. POLYETHYLENE PIPE SHALL BE MADE FROM HDPE MATERIAL HAVING A MATERIAL DESIGNATION CODE OF PE3608 OR HIGHER. THE MATERIAL SHALL MEET THE REQUIREMENTS OF ASTM D 3350 AND SHALL HAVE A MINIMUM CELL CLASSIFICATION OF PE345464C.
   4.2. IN ADDITION, THE MATERIAL SHALL BE LISTED AS MEETING NSF-61.
5. PRESSURE RATING
   5.1. 2 INCH THROUGH 24 INCH: 160 PSI (DR 11)
6. PIPE MARKING
   6.1. PERMANENT IDENTIFICATION SHALL BE PROVIDED BY CO-EXTRUDING MULTIPLE EQUALLY SPACED COLOR STRIPE INTO THE PIPE OUTSIDE SURFACE OR BY SOLID COLORED PIPE SHELL.
7. FITTINGS
   7.1. POLYETHYLENE MECHANICAL JOINT (MJ) ADAPTERS FITTINGS SHALL BE PE3408 HDPE, CELL CLASS 345464C PER ASTM D3350.
   7.2. MECHANICAL CONNECTIONS OF HDPE PIPE (2 INCH THROUGH 24 INCH DIAMETER) TO DUCTILE IRON OR PVC PIPING, FITTINGS OR VALVES SHALL BE BY A SELF-RESTRAINING, FUSIBLE MECHANICAL JOINT ADAPTER WITH OR WITHOUT AN INTEGRAL, INTERNAL STAINLESS STEEL INSERT.
   7.3. MECHANICAL JOINT ADAPTER SHALL BE OF THE SAME SDR RATING AS THE PIPE.
   7.4. A STAINLESS STEEL TYPE INSERT IS REQUIRED FOR PIPE SIZES THROUGH 12 INCH.
   7.5. PROVIDE THE MECHANICAL JOINT ADAPTER WITH LONGER TEE BOLTS OR STAINLESS STEEL THREAD RODS WITH NUTS AT THE MECHANICAL JOINT.
   7.6. POLYETHYLENE PIPE MAY BE JOINED USING ELECTROFUSION COUPLINGS.
   7.7. FITTINGS SHALL BE PE3408 HDPE, CELL CLASS 345464C PER ASTM D3350.
   7.8. ELECTROFUSION COUPLINGS SHALL CONFORM TO ASTM F1055.
   7.9. FITTINGS SHALL HAVE A PRESSURE RATING EQUAL TO THE PIPE.
   7.10. ALL ELECTROFUSION COUPLINGS SHALL BE SUITABLE FOR PRESSURE USE PER AWWA C906 WITH NOMINAL BURST VALUE OR 3.5 TIMES THE WORKING PRESSURE OF THE FITTING.
8. MINIMUM SAPCING OF WATERLINES IN TRENCH IS 12".

THE MONITORING WORK IS AN ELECTRONIC SYSTEM IN ACCORDANCE WITH THE STATE OF COLORADO BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS, RULE 3.0. THIS DRAWING IS CONSIDERED SEALED IF A SIGNATURE IS ACCOMPANIED WITH A STATEMENT REFERRING TO THE LOCATION OF THE FILE. THE DIGITAL SIGNATURE WAS GENERATED USING ENCRYPTION SOFTWARE TECHNOLOGY AND ONLY THE PERSON WHO SIGNATURE CONTACT BE EMPLOYED WITH OR AUTHORIZED WITHOUT INVALIDATING THE SIGNATURE. SHOULD QUESTIONS ARISE AS TO THE AUTHENTICITY OF THE SEALED PLANS, CALL OR EMAIL THE BOARD OF REGISTRATION FOR CLARIFICATION.

NO.	DESCRIPTION	DATE	APPR.

DESIGNED BY: JDH
DRAWN BY: JDH
CHECKED BY: JDH
QA/QC BY: LDH
SUBMITTED BY:
DATE: DECEMBER 11 2015
REVISIONS:
FILENAME:
PLOT SCALE:
PLOT DATE: (ACCORDING TO PC)

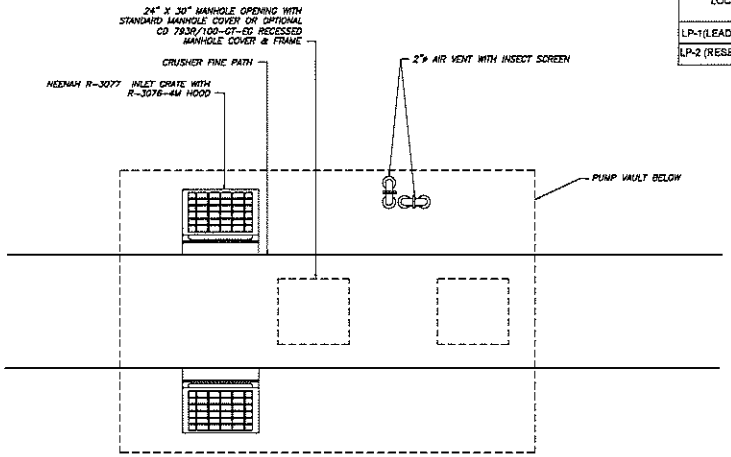
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CORNER OF CLARK AVENUE AND THIRD STREET
PAONIA COLORADO

NOTES

C4.2
SHEET 7 OF 8

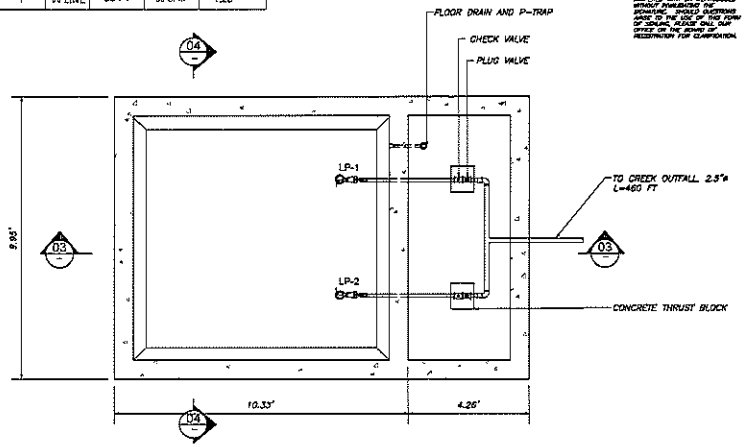
PUMP SCHEDULE							
LOCATION	TYPE	MODEL	NUMBER	SERVICE	HEAD OF PUMP	DISHCARGE QUANTITY	DISCHARGE SIZE
LP-1(LEAD PUMP)	MUNRO	FSA215	1	W LINE	30 FT	90 GPM	1.25"
LP-2 (RESERVE PUMP)	MUNRO	FSA215	1	W LINE	30 FT	90 GPM	1.25"



01 | PUMP VAULT PLAN VIEW

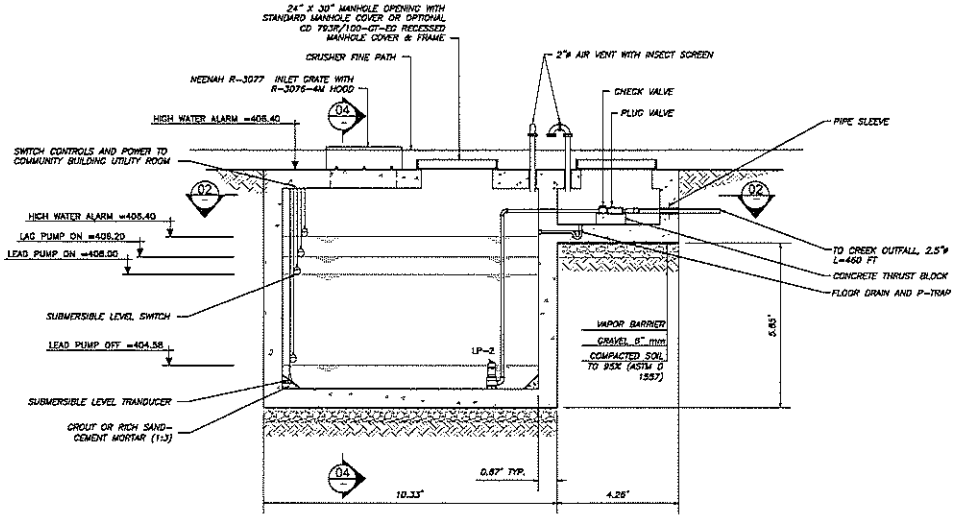
SCALE 1"= 2'

PLAN NOTES
1. GRADES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD DURING ROUGH GRADING ACTIVITIES.
2. PUMP VAULT SHALL BE DESIGNED FOR WHEEL LOADING OF 8,000 LBS.
3. BACKFILLING AROUND PUMP VAULT SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY.
4. PUMPS SHALL BE AS SHOWN OR EQUAL IN CAPACITY, HEAD AND GRINDER SPECIFICATION.



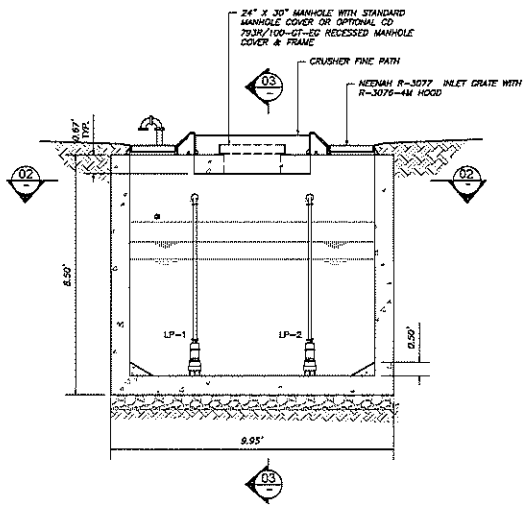
02 | PUMP VAULT PLAN SECTION

SCALE 1"= 2'



03 | PUMP VAULT SECTION

SCALE 1"= 2'



04 | PUMP VAULT SECTION

SCALE 1"= 2'

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PAONIA COLORADO

DETAILS

C4.3

SHEET 5 OF 6

Delta County

Roadway Design and Construction Standards



12 December 2005

Delta County Roadway Design and Construction Standards

Table of Contents

Section Topic Page

Article 1 – General Provisions

1.1 Title…… 1
1.2 Purpose…….. 1
1.3 Applicability…….. 1
1.4 Authority…… 1
1.5 Amendments and Revisions…….. 1

Article 2 – Administration

2.1 The County Road System…….. 2
2.2 Road System Additions……. 2
2.2.1 Planning……. 2
2.2.2 Design…… 2
2.2.3 Right of Way Dedication/Acceptance…… 3
2.2.4 Inspection……... 3
2.2.5 Acceptance of Public Roads for Maintenance……... 3
2.3 Permit Requirements……. 4
2.4 Road Systems Impacts……... 5
2.5 Public Use - Privately Maintained Roads…….. 5
2.6 Private Roads……. 5

Article 3 – Roadway Functional Classification

3.1 Delta County Roadway Classifications……. 7
3.2 Functional Classifications…….. 7
3.3 Terrain Classifications……... 9

Article 4 – Design Standards

4.1 General……...10
4.1.1 Design Period Criteria……10
4.1.2 Policy on the Use of Standards…….. 10
4.2 Design Speed……. 11
4.3 Geometric Standards……..11
4.3.1 Horizontal Curves…….. 11
4.3.2 Vertical Alignment……13
4.4 Sight Distance……14

Table of Contents

Section	Topic	Page
4.5	Cross Section Standards	16
4.5.1	Cross Section Slopes	16
4.5.2	Road Right of Way	16
4.5.3	Border Areas	18
4.5.4	Construction Involving Significant Cuts or Fills	18
4.6	Roadway Drainage	18
4.6.1	Drainage Determination	19
4.6.2	Culverts	21
4.6.3	Open Channel and Ditches	21
4.6.4	Subsurface Drainage	22
4.6.5	Use of Cross Pans at Road Intersections	22
4.6.6	Cross Section in Road Dip Section	23
4.6.7	Drainage on Superelevated Curves	23
4.7	Bridges	23
4.7.1	Bridge Hydraulic Capacity	24
4.7.2	Bridges Within FEMA Designated Flood Hazard Areas	24
4.8	Intersections	24
4.8.1	Intersection Alignment and Profile	24
4.8.2	Angle of Intersections	26
4.8.3	Intersection Sight Distance	26
4.8.4	Intersection Return Radii	27
4.9	Access Standards	27
4.9.1	Implementation	27
4.9.2	Application For and Issuance of Permits	28
4.9.3	Access Control Standards	29
4.9.4	Access to Arterial and Collector Roads	29
4.9.5	Access to Local Access Roads	29
4.9.6	Construction of Access	30
4.9.7	Use of Access	30
4.9.8	Unauthorized Access	31
4.9.9	Access Drainage	31
4.9.10	Driveways	32
4.9.11	Access Appurtenances	33
4.10	Utility Installation Standards	34
4.10.1	Installation	34
4.11	Roads Within Previously Dedicated Public Right-of-Way	35
4.12	Non-Through Streets	36
4.12.1	Cul-de-Sac Roads	36
4.12.2	No Outlet Roads	36

Table of Contents

Section Topic Page

4.13 Roadway Appurtenances……... 37
4.13.1 Road Signs and Traffic Control Devices……... 37
4.13.2 Guardrails……...37
4.13.3 Cattle Guards……..38

Article 5 – Construction Policy Standards

5.1 Control of Work…….39
5.2 Authority of Inspector……40
5.3 The Project Engineer's Role……..40
5.4 Inspection and Testing……...41
5.5 Removal of Unacceptable or Unauthorized Work…….42
5.6 Use of Approved Plans and Specifications……42
5.7 Acceptance of Work…….. 43
5.7.1 Partial Acceptance……..43
5.7.2 Final Acceptance……43

Delta County Roadway Design and Construction Standards

Table of Contents

Section Topic Page

Appendices

Appendix 1 Definitions……... 1-1
Item 1 Document Terminology…….. 1-2
Item 2 Definitions and Acronym Translation…… 1-3
Appendix 2 Document Requirements……. 2-1
Item 1 Construction Drawing Requirements…….. 2-2
Appendix 3 Tables and Charts…… 3-1
Item 1 Road Design Criteria by Functional Classification…… 3-2
Item 2 Stopping Sight Distance on Horizontal Curves…….. 3-3
Item 3 Stopping Sight Distance on Crest Vertical Curves……. 3-4
Item 4 Tangent Sections Between Curves in the Same Direction…….. 3-5
Item 5 Tangent Sections Between Reverse Curves…… 3-6
Item 6 Vertical Curves……... 3-7
Appendix 4 Construction Design Standards……... 4-1
Item 1 Standard Details…….. 4-2
Item 2 Modifications to CDOT Specifications…….. 4-9
Item 3 Layered Pavement Design…….. 4-11
Item 4 Roadway Prism……... 4-12
Item 5 Design Nomograph – Flexible Pavements……..4-13
Item 6 Design Nomograph − Gravel Roads Serviceability Criteria…….. 4-14
Item 7 Design Nomograph − Gravel Roads Rutting Criteria…….4-15
Item 8 Equivalent Thickness; Sub-base vs. Base……...4-16
Item 9 Total Damage vs. Layer Thickness…….4-17
Item 10 Soil Support Values…… 4-18
Item 11 Road Design Worksheet……. 4-19
Item 12 Aggregate Classification Table……...4-20
Item 13 Road Cuts and Repairs……4-21
Appendix 5 Typical Roadway Cross Sections & Designs…….. 5-1
Item 1 Cross Section – Principal Arterial……... 5-2
Item 2 Cross Section – Minor Arterial……... 5-3
Item 3 Cross Section – Collector…… 5-4
Item 4 Cross Section – Local Access……. 5-5
Item 5 Cross Section – Local Service, Commercial……... 5-6
Item 6 Cross Section – Local Service, Industrial……... 5-7
Item 7 Cross Section – Local Service, Residential…… 5-8
Item 8 Cross Section − Local Service - Gravel, Residential…….. 5-9
Item 9 Cross Section − Local Access, Residential;
Public Use - Privately Maintained Road…….5-10
Item 10 Cross Section − Local Access-Gravel, Residential;
Public Use - Privately Maintained Road…….5-11

Table of Contents

Section	Topic	Page
Item 11	Cross Section − Local Service Public Use - Privately Maintained Road	5-12
Item 12	Cross Section − Local Service-Gravel; Public Use - Privately Maintained Road	5-13
Item 13	Driveway Spacing	5-14
Item 14	Driveway Profile	5-15
Item 15	Cross Section − Urban Driveway	5-16
Item 16	Cross Section − Rural Driveway	5-17
Item 17	Cul-De-Sac Detail	5-18
Item 18	Offset Cul-De-Sac	5-19
Item 19	Utility Location and Easement Guidelines	5-20
Item 20	Roadway Turnabout Designs	5-21
Appendix 6	Roadway Appurtenances	6-1
Item 1	Mailbox Supports – 1 of 3	6-2
Item 2	Mailbox Supports – 2 of 3	6-3
Item 3	Mailbox Supports – 3 of 3	6-4
Item 4	Mailbox Turnout	6-5
Item 5	Culvert Headwalls	6-6
Item 6	Culvert Inlet – Outlet Design	6-7
Item 7	Ramp Curb and Gutter Design	6-8
Item 8	Cattle Guard Design Details − 1 of 2	6-9
Item 9	Cattle Guard Design Details − 2 of 2	6-10
Item 10	Cross Pan Design	6-11
Appendix 7	Asphalt Pavement and Gravel Road Design Examples	7-1
Item 1	Asphalt Pavement	7-2
Item 2	Gravel Road Design	7-4

ARTICLE 1 – GENERAL PROVISIONS

1.1 Title

These regulations together with all future amendments shall be known as the "Delta County Roadway and Design Standards" (hereafter called the STANDARDS).

1.2 Purpose

The intent of the STANDARDS is to provide a set of defined procedures for the planning, design, construction, permitting and acceptance of roadways and related facilities. The purpose is to standardize the methods for the administration of the Delta County Road System and public roads under the jurisdiction of Delta County and in a manner consistent with applicable federal, state and local statutes, ordinances and regulations. The STANDARDS identify the minimum requirements necessary to achieve public safety, functional effectiveness, maintainability and desired aesthetics while minimizing environmental impact.

1.3 Applicability

The STANDARDS shall apply to roadway facilities to be constructed within Delta County except where other jurisdictions have direct authority (e.g. Colorado Department of Transportation, an incorporated city, etc.). The STANDARDS shall apply to new construction or improvements to existing assets in the County of Delta. The Board of County Commissioners may grant a variance to the STANDARDS provided the Board finds that such a variance shall not adversely affect public health, safety, welfare and is deemed in the best interests of Delta County.

1.4 Authority

The STANDARDS have been adopted pursuant to the authority conferred within: Article 28 of Title 30; Article 2 of Title 43 and other applicable sections of the Colorado Revised Statutes of 1973, as amended.

1.5 Amendments and Revisions

The STANDARDS may, when deemed necessary, be altered, amended, or revised upon resolution of the Delta County Board of County Commissioners after the appropriate public review.

ARTICLE 2 – ADMINISTRATION

2.1 The County Road System

The Board of County Commissioners will adopt and have on public record a Delta County Road Map showing all roads that have been officially made a part of the County Road System. This map will be updated annually to reflect all additions, deletions and alterations to the County Road System.

2.2 Road System Additions

The Board of Commissioners is authorized by Section 43-2-112, C.R.S. 1973, to layout, widen, or change any County road and to acquire lands of private persons for County roads. The Board also has authority to accept, deny, transfer, or cease responsibility for the maintenance of roads. Delta County has staff responsibility for planning, designing, right-of-way acquisition/dedication, construction, inspection and recommendation for acceptance of maintenance responsibilities.

2.2.1 Planning

The planning or layout of a new road shall be subject to the review of the Delta County Planning Department, the County Engineering Department and is subject to the approval of the BOCC. If a road is created through the subdivision process, all provisions of the Delta County Subdivision Regulations shall be met.

2.2.2 Design

The design of any new road shall be in accordance with Design Standards article of the STANDARDS. Road plans and specifications provided to the County shall be certified by a professional engineer licensed to practice in the State of Colorado. Plans and specifications are subject to the approval of the Board of County Commissioners. A written statement from Delta County of the plan approval will validate the submitted plan as acceptable and allow activity to proceed from the planning to the construction phase of activity. Plan approval shall remain valid for two (2) calendar years from plan approval date unless specifically noted otherwise within the STANDARDS and will expire without notice.

2.2.3 Right-of-Way Dedication/Acceptance

A road created through the subdivision process shall have a specified right-of-way width shown on the plat along with a dedication statement. Acceptance of the plat by Delta County constitutes acceptance of the right-of way, but does not constitute acceptance of the road for maintenance. A public road right-of way may also be deeded to the County outside of the subdivision process.

Any right-of way conveyed by deed shall meet the same standards as right-of ways created through the subdivision process as required by the Delta County Subdivision Regulations and the STANDARDS. Acceptance of the deed by Delta County constitutes acceptance of the right-of way but does not constitute acceptance of the road for maintenance.

A road does not become accepted for maintenance and part of the County Road System until it is constructed according to the STANDARDS, inspected and specifically accepted for maintenance by resolution of the Board of County Commissioners.

2.2.4 Inspection

Inspections and the review of test results shall be performed by the County to ensure compliance to the STANDARDS. The inspection process will be the basis for a recommendation to the Board of County Commissioners for or against acceptance and release of performance guarantees. Requirements for inspection and testing are contained in the STANDARDS and the STANDARDS appendices and are the sole responsibility of the developer.

2.2.5 Acceptance of Public Roads for Maintenance

Roads within the jurisdiction of Delta County may be accepted for maintenance by the Board of County Commissioners by resolution. The County shall require a warranty period of a minimum of two (2) years after the date of County acceptance for construction as part of the acceptance process. After that period, the roadway may become a candidate of consideration for acceptance of maintenance. Upon request, the County will inspect the roadway and notify the Applicant in writing of any necessary repairs. All such repairs shall be completed by the Applicant prior to acceptance of the road for maintenance by Delta County. Should the repairs be of a significant nature as determined by the County Engineer, the warranty period shall be extended up to but no more than two additional years, based on the nature and severity of the repairs. The extended warranty period will begin at the time the repairs were accepted for construction. At the concluded time period, the acceptance process shall be repeated.

A road shall only be considered for County maintenance after all of the following requirements are met:

a. A designated County Inspector has inspected the road in accordance with the Construction Policy Standards article of the STANDARDS and the County has recommended acceptance for maintenance.

b. The road connects to another maintained County road, state highway or municipal road.

c. If within a subdivision, the road terminates at an intersection or is constructed with an approved turnabout feature.

d. All required road signs and traffic control devices have been installed in accordance with the STANDARDS and the MUTCD (Manual on Uniform Traffic Control Devices).

e. All required subsurface utilities have been installed in the roadway prior to finishing the subgrade. All laterals crossing the roadway have been installed prior to the road inspection.

f. All survey monuments that were in a roadway or a road right-of-way have been reestablished by a surveyor licensed in the State of Colorado.

g. An acceptable copy of reproducible, as-built drawings have been submitted to the County Engineer. A complete file copy of as-built drawings in an acceptable AutoCAD dxf file format, or of a compatible nature, have been submitted to the County Engineer. Reference Appendix Two, Documentation Requirements for drawing expectations. The drawings will accurately show all road construction details, utility and lateral locations and depths, property boundaries and corners, and other pertinent information as required. Upon its submission to the County Engineer, the copies become and remain the property of the County.

2.3 Permit Requirements

Any and all work performed within a County right-of-way shall require a permit from Delta County. No work shall commence in a county right-of-way prior to the applying and obtaining approval of a County work permit. The permitting process is initiated through the Delta County Planning Department.

The Applicant shall obtain approval at least forty-eight (48) hours – in a regular business hour period (Monday through Friday, holidays excluded), prior to any commencement of construction. Construction involving road closures must have approval at least seven (7) days prior to commencement of construction.

2.4 Road System Impacts

Upon review of a proposed development plan, the Board of County Commissioners may determine that due to the nature or magnitude of the development, the imposition of an impact fee would be justified. Any required impact fees for all traffic generating types of development adopted in lieu of improvements to road system shall be calculated in an amount proportional to the need or demand generated by the proposed development, as determined by one or more studies commissioned and approved by the Board of County Commissioners. The impact fee shall be the sole responsibility of the Developer.

2.5 Public Use - Privately Maintained Roads

Delta County shall assume no maintenance responsibility on public use - privately maintained roads provided however, the County may become a party to a maintenance agreement in which the rights and responsibilities of the parties will be defined by a contractual arrangement subject to review and approval of the Board of County Commissioners.

The County shall assume no oversight or maintenance of utilities on a public use - privately maintained road.

The County shall have no responsibility regarding the use of a public use - privately maintained roads by emergency, postal delivery, or school pickup services. The party responsible for the maintenance and oversight of the roadway has sole responsibility for the arrangement of these services.

The County shall assume no responsibility regarding the maintenance of traffic devices and signage on a public use - privately maintained roads. The party responsible for the maintenance and oversight of the roadway shall maintain all traffic devices and signage of the roadway.

2.6 Private Roads

Delta County shall assume no maintenance responsibility on private roads; provided however, the County may become a party to a maintenance agreement in which the rights and responsibilities of the parties will be defined by a contractual arrangement subject to review and approval of the Board of County Commissioners.

The County shall assume no oversight or maintenance of utilities on private roads.

The County shall have no responsibility regarding the use of a private road by emergency, postal delivery, or school pickup services. The party responsible for the maintenance and oversight of the roadway has sole responsibility for the arrangement of these services.
The County shall assume no responsibility regarding the maintenance of traffic devices and signage on a private road. The party responsible for the maintenance and oversight of the roadway shall maintain all traffic devices and signage of the roadway.

ARTICLE 3 – ROADWAY FUNCTIONAL CLASSIFICATION

3.1 Delta County Roadway Classifications

The Colorado Department of Transportation (CDOT) has classified all roads within Delta County in conformance with Highway Functional Classification Concepts, Criteria, and Procedures by the United States Department of Transportation, Federal Highway Administration (FHWA). Delta County believes it to be in the best interest of the public at large for Delta County's functional classification system and classification of each road to be as consistent as possible with the CDOT classification system. With these considerations as well as those determined by the specific needs of the County, the County shall classify all roads in Delta County and incorporate the results into the Delta County Roadway Functional Classification System and Delta County Roadway Functional Classification Map. The Study and Map will be periodically revised and updated.

3.2 Functional Classifications

The functional classifications used in Delta County are stated below (Also See Appendix 3). While these classifications follow Federal Highway Administration (FHWA) guidelines, some adaptation has been applied to better reflect circumstances in Delta County. As such, the classification of Principal Arterial road systems found below would be equivalent to the FHWA defined subcategory of Other Principal Arterial. Delta County does not have nor foresee the possibility of roadways in the FHWA Interstate subcategory.

Likewise, the nature of Delta County's road system does not warrant the need to distinguish between a Minor and a Major Collector road. The STANDARDS will simply refer to these FHWA classifications as Collector roads. However, Delta County is served by a large number of roads that would fall under the Local Road classification. To better manage this category, Local Roads will be broken up into Local Access Roads and Local Service Roads.

Functional classifications can be further qualified by descriptions such as urban, small urban, or rural (example – urban collector road). The overwhelming majority of the roads within the jurisdiction of Delta County belong to the rural qualification.

Other descriptions, such as scenic byway, commercial, or industrial may be used when such designations better define the nature of the road use which may impact road design requirements. Surface descriptions (paved, gravel, etc.) provided with the road classification are the requirements for new construction and may not reflect surface conditions for existing roadways.

a. Principal Arterial (Paved)
Residential, commercial, and recreational traffic of significant economic importance to the County; characterized by corridor traffic movement with maximum emphasis on mobility. (example: U.S. Highway 50)

U.S. Highway 50 and State Highway 92 from U.S. Highway 50 to State Highway 65 will, by definition, be classified as Principal Arterials for County purposes.

b. Minor Arterial (Paved)
Residential, commercial and recreational traffic of significant economic importance to the County; characterized by traffic movement of a town to town nature emphasizing mobility. (example: Crawford Road)

All remaining State Highways not defined as Principal Arterial roadways will fall in the category of Minor Arterial roads for County purposes.

c. Collector (Paved)
Residential, commercial and recreational traffic of significant economic importance to the County; characterized by providing traffic movement connections from Local roadways to Arterial roadways while sharing emphasis on mobility with land access. (example: F Road, east and west of Delta)

d. Local Access Road (Paved)
Primarily residential or agricultural use; characterized by traffic movement with maximum emphasis on land access from abutting properties to Collector roadways. (example: H 75 Road, east of Delta)

e. Local Service Road (Paved or Gravel)
Primarily residential or agricultural use; characterized by traffic movement solely intended for land access from abutting properties to Local Access or Collector roadways, typically from isolated sites with little potential for future development. (example: Sorrento Lane, east of Cedaredge)

f. Primitive Roads (Native Surface)
Limited or seasonal use only. Historical or rudimentary roads – rough, narrow and typically used for recreational access or possibly commercial uses. (example: Old Grand Mesa Road)

g. Public Use – Privately Maintained (Paved or Gravel)
Not a true functional classification but rather a special circumstance of roadway which would fall under one of the above functional classifications. Primarily residential or agricultural use; characterized by private party responsibility of the roadway.

As a Public Use – Privately Maintained roadway, allowance will be shown for specific parameters, such as the road construction design, which if constructed to would be substandard to those for a county road. As such, the Public Use – Privately Maintained Road , though permitted for construction, would not be considered for acceptance of maintenance due to its substandard nature. See the STANDARDS section regarding Public Use - Privately Maintained for further elaboration.

Should a Public Use – Privately Maintained Road at some later time wished to be considered for acceptance, the County would be contacted with a request for consideration and the acceptance process and requirements shall be the same as defined in the STANDARDS for the appropriate road functional classification.

h. Private Road (Paved or Gravel)
Not a true functional classification but rather a special circumstance of roadway which would fall under one of the above functional classifications Primarily residential or agricultural use; characterized by private party responsibility of the roadway. See the STANDARDS section regarding Private Roads for further elaboration.

3.3 Terrain Classifications

Terrain in Delta County can be characterized within one of the three following categories:

a. Level Terrain
Level terrain is that condition where road sight distances, determined by both horizontal and vertical restrictions, are generally long or can be made so with minor terrain alteration. This would be characterized by an average natural cross slope of less than eight (8) percent.

b. Rolling Terrain
Rolling terrain is that condition where the natural slopes consistently rise and fall below the road grade line and where occasional steep slopes offer restriction to normal horizontal and vertical alignment. This would be characterized by an average natural cross slope from eight (8) to fifteen (15) percent.

c. Mountainous Terrain
Mountainous terrain is a condition where longitudinal and transverse changes in elevation of the ground with respect to the road are abrupt and where the roadbed is obtained by frequent benching or side hill excavation. This would be characterized by an average natural cross slope in excess of fifteen (15) percent.

ARTICLE 4 – DESIGN STANDARDS

4.1 General

This section describes the geometric requirements for each road classification. This section also covers subjects such as driveway entrances, pavement transitions and design, roadway structures, construction and other design factors. Almost all requirements are based on safety considerations. Therefore, these standards should be considered the minimum or of the lowest limit of design acceptability.

4.1.1 Design Period Criteria

Geometric designs shall be based on estimated traffic volumes projected 20 years into the future. All collector and arterial roads shall be designed to provide a level-of-service C or better throughout the 20 year design period. Local roads may be designed to a level-of-service D or better throughout the 20 year design period. Reference ITE (Institute of Transportation Engineers) Standards for traffic volume and AASHTO (American Association of State Highway and Transportation Officials) Standards for level-of-service guidelines.

4.1.2 Policy on the Use of Standards

The policies set forth in the STANDARDS in conjunction with the following standards shall establish acceptable guidelines for roadway design. When standards differ, the instruction in the STANDARDS shall govern.

a. AASHTO Standards

The American Association of State Highway and Transportation Officials (AASHTO) has published policies on highway practice. These are approved references to be used in conjunction with this Section. AASHTO policies represent nationwide standards, which do not always satisfy local conditions.

b. MUTCD

All traffic control devices and road striping must be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) prepared by the U.S. Department of Transportation.

c. ITE Standards

All traffic generation estimates shall be in accordance with the publication Trip Generation by the Institute of Transportation Engineers.

d. CDOT Standards

Unless otherwise specified herein or specifically modified herein, the Colorado Department of Transportation M & S Standards and Specifications for Road and Bridge Construction shall control the design and construction of roadway improvements or details not specifically covered by the STANDARDS.

4.2 Design Speed

The design of geometric features, such as horizontal and vertical curves, will depend upon the design speed selected for the road. The choice of the design speed is primarily determined by the road functional and terrain classification. The design speed is the maximum speed for safe operation of a vehicle that can be maintained over a specific section of road when conditions are so favorable that the design features of the road govern. Design speeds for the various classifications of roads may be found in Appendix 3, Tables and Charts.

4.3 Geometric Standards

4.3.1 Horizontal Curves

Horizontal alignment should provide for safe and continuous operation of motor vehicles at uniform design speed for substantial lengths of road. A horizontal curve is required when the angle of change in horizontal alignment is equal to or greater than one degree. The minimum radius of curvature will be determined by the design speed or by the stopping sight distance. For further details, see the AASHTO publication A Policy on Geometric Design of Highways and Streets.

a. Standards for Curvature

The table that follows shall require the minimum radius of curvature for each of several selected design speeds with and without a superelevation of 0.02 ft/ft. Wherever possible, the radii used in the design should be larger. If stopping sight distance conditions require a larger radius than one shown in the following table, then the larger radius shall be used. All listed radii are to the centerline.

Minimum Road Curve Radii (ft)

Design Speed (mph)	Normal Crown Road minimum radius (ft)	0.02 ft/ft Superelevation Road minimum radius (ft)
20	125	105
25	250	180
30	400	310
35	600	450
40	850	650
45	1,100	850
50	1,400	1,050
55	1,800	1,350
60	2,200	1,650
65	2,700	2,000

b. Reduced Design Speed on Curves

The reduction of a road design speed on a curve should be avoided. However, where physical restrictions prohibit increasing the radius of the curve or the clear distance, the design speed for the curved section may be reduced. The difference between the design speed for the roadway approaching the curve and the design speed for the curve shall not be greater than 10 MPH. In such circumstances, road signs in accordance with the MUTCD guidelines shall be required.

c. Superelevation in Curves

Superelevation rates of 0.02 ft./ft may be used on all functional classifications of roads. The following table shall set the maximum superelevation rates:

Maximum Superelevation Rates

Road Classification	Rural Road e (ft/ft)	Urban Road e (ft/ft)
principal	.08	.06
minor arterial	.08	.06
collector	.06	.04

The superelevation transition should be based upon the superelevation rate and the width of rotation. The axis of rotation is generally about the pavement centerline. One-third (1/3) of the superelevation transition should be on the entrance and exit of the curve itself while two-thirds (2/3) of the transition should be on the adjacent tangent sections.

The superelevation rate will impact minimum curve radius values, allowing a smaller design radius for a greater superelevation rate at a given design speed. Reference the AASHTO publication A Policy on Geometric Design of Highways and Streets for guidance.

d. Other Design Factors for Curves

For central angles smaller than one degree, no curve is required. In no event shall sight distance or other safety considerations be compromised when a curve is not provided.

A compound curve is two curves of the same direction with different radii joined with no tangent between them. Compound curves shall not be permitted. Reference Appendix 3, Tables and Charts for minimum tangential distances between two curves of the same direction.

A broken-back curve is two curves in the same direction joined by a short tangent. Broken-back curves shall not be permitted.

A reverse curve is two curves in opposite directions joined directly together or with a short tangent between them. Reverse curves shall not be permitted. Reference Appendix 3, Tables and Charts for minimum tangential distances between two curves of the opposite direction.

Spiral curves provide a radial transition upon the lead in and lead out to a circular curve. When properly designed, they assist in vehicular control for negotiating a curve. The use of spiral curves should be considered when road design speed warrants its use – generally thought to be design speeds in excess of 30 mph.

4.3.2 Vertical Alignment

Change in the vertical alignment or grade of a road is necessary for many reasons, including changes in topography, drainage requirements and aesthetic factors. A vertical curve is required when a grade change equal to or greater than 2.0% occurs. All sections of a road's vertical alignment shall meet stopping and passing sight distance requirements for the design speed established for the road. When considering alternative grade profiles, economic and aesthetic comparisons should be made. For further details, see the AASHTO publication A Policy on Geometric Design of Highways and Streets.

a. Minimum and Maximum Grades

To provide for adequate drainage, the minimum sustained grades shall be no less than 0.5 percent on roadway sections with curb and gutter and one (1%) percent on all other roads.

Maximum permissible sustained grades for new roads are related to design speed and shall be as follows:

Maximum Allowable Grades vs. Design Speed

terrain classification	15 mph	20 mph	25 mph	30 mph	40 mph	50 mph	60 mph
flat or rolling	6%	6%	6%	6%	6%	5%	4 %
mountainous	11%	10%	9%	9%	8%	6%	na

The maximum design grade should be used infrequently rather than as a value to be used in most cases. For short grades less than three hundred (300) feet, the maximum gradient may be increased by one percent.

b. Vertical Curves

Regarding vertical curve design, a parabolic vertical curve is to be used. Item 6 in Appendix 3 gives all the necessary mathematical relations for computing a vertical curve, either crest or sag.

4.4 Sight Distance

Sight distance is the continuous length of road ahead that is visible to the driver. In design, two sight distances are considered: passing sight distance and stopping sight distance. Stopping sight distance is the minimum sight distance to be provided at all points on multi-lane roads and on two-lane local roads where passing sight distance is not required. Stopping sight distance shall also be provided for all elements of intersections at grade including private road connections.

Passing sight distance is the minimum sight distance that must be available to enable the driver of one vehicle to pass another vehicle safely and comfortably, without interfering with the speed of an oncoming vehicle traveling at the design speed if it came into view after the passing maneuver is started.

When items such as walls, buildings, bridge piers, cut slopes or vegetation growth are near the roadway on the inside of a curve, they can block a driver's view of the road ahead. If they are too close, the driver will not have sufficient distance along the curved roadway to stop when a hazardous condition comes into view.

Minimum permissible stopping sight distances for new road designs shall be as follows:

Minimum Stopping Sight Distance

Design Speed (mph)	Minimum Sight Distance Stopping (ft)	Minimum Sight Distance Passing (ft)
20	125	800
25	155	950
30	200	1,100
35	245	1,300
40	300	1,500
45	370	1,650
50	450	1,850
55	545	1,950
60	645	2,100
65	750	2,300

Also see Appendix 3 for Stopping Sight Distance on horizontal and vertical curves.

Basic considerations regarding these sight distances are covered in the AASHTO Publication, A Policy on Geometric Design of Highways and Streets.

4.5 Cross Section Standards

4.5.1 Cross Section Slopes

The typical road cross sections are found between road intersections where there are no dip sections for drainage flow across the road. Undivided roads should have a normal crown that is a two-way cross slope with the cross section high point on the road centerline. Divided roads should have a cross slope on each pavement section with the high point of each section on the edge of the pavement nearest the median. Unusual conditions may cause cross slope requirements to vary, but normally the cross slope shall be in accordance with the following:

Standards for Pavement Cross Slopes

Surface Material	Slope (%)
Concrete	2.0
Bituminous Mix Pavement	2.0 – 2.5
Gravel	2.0 – 3.0

Reference Appendix 4 and Appendix 5 for the standard details on cross section design for all functional road classifications.

4.5.2 Road Right-of-Way

The basic minimum right-of-way width for each road classification is specified in the table below. Right-of-way widths in excess of the standard width may be required in special circumstances such as when:

- Cut or fill slopes cannot be confined within the standard width;

- Minimum sight distance lines on horizontal curves are not within the STANDARDS;

- Minimum sight distances at intersections are not within the STANDARDS;

- Additional right-of-way is required to accommodate storm water drainage facilities;

- Additional right-of-way is required for snow removal or storage;

- Additional right-of-way is required to accommodate roads designated as scenic by- ways.

Cross Sectional Road Design Criteria by Functional Classification

Classification	Surface	Minimum ROW (ft)	Lane Width (ft)	Shoulder** Width (ft)
principal arterial	paved	120	12	8
minor arterial	paved	100	12	6
collector	paved	80	12	4
local access road	paved	60	10	2
local access road privately maintained*	paved or gravel	60	7.5	2
local service road	paved or gravel	60	10	2
local service road privately maintained*	gravel	60	7.5	2
primitive road	native	n/a	n/a	n/a

* a public use – privately maintained roadway

** Roads above 7,000 feet in elevation may require additional shoulder width and /or right of way for snow storage at the determination of the County.

The basic minimum right-of-way distance shall not incorporate, in part or as a whole, any previously existing right-of-way without the review and approval of the County. Existing right-of-ways for above ground structures, such as irrigation canals, utility lines, and railroad travel ways should not be incorporated toward part of the roadway right-of-way design and are to be considered in addition to requirements for the roadway right-of way.

4.5.3 Border Areas

All Public Roads as well as any Private Roads which have been initiated through the subdivision process shall have an offset of a minimum of eight (8) feet to establish a border area between the beginning of a construction cut or fill of a roadway feature and a boundary feature.

A roadway feature would include drainage, shoulder or traveled surface structures.

The boundary feature for a Public Roadway will be the line defining the right of way. For a Private Road, the boundary feature will be a property line.

Border area restrictions shall apply to the full length of Public or Private Roads.

4.5.4 Construction Involving Significant Cuts or Fills

Significant cuts or fills will be defined as a horizontal change of terrain by three (3) feet or more.

All cut and fill features shall have a side slope profile limited to a range of 1.5:1 thru 3:1 and is dependent on the soil conditions at the site. Proper side slope definition shall be subject to the approval of the County Engineer.

Side cut profiles may include features such as retaining walls where there are limitations on road cross sectional width. These designs shall be subject to the County Engineer's approval.

All Private Roads and Driveways initiated through the subdivision process which have designs involving significant cuts or fills in terrain shall be subject to side slope profile restrictions which will apply to the full length of the Private Road or Driveway.

4.6 Roadway Drainage

The primary objective of drainage design is the protection of County roads and property while minimizing possible flood damage to surrounding properties and structures. It should be emphasized that good drainage is one of the most important factors in road design. It preserves the appearance as well as the level of service of the road while minimizing maintenance costs.

Culverts under all roads shall be designed to accommodate a 25-year frequency factor for storm run-off utilizing the maximum head. The maximum available head should be determined by the uppermost ponding elevation chosen to prevent flood damage to upstream properties.

Inlets and other facilities draining the road surface shall be designed to accommodate the 10-year frequency factor for storm run-off. All roads shall remain free of ponding.

All drainage installations shall be designed to allow free unobstructed passage of debris and silt or provide for their deflection and/or collection at a point upstream in a manner that will not create an expensive maintenance problem. Settlement basins shall be provided when excessive silting may create a problem downstream.

Modification of natural channels or transferring run-off from one basin to another is not allowed except where no reasonable alternative exists and where the proposal has been reviewed and approved by the County.

Drainage installations shall not introduce standing bodies of water or environments which will be a contributing factor for insect breeding. Any environment that would contribute to the possible spread of the West Nile Virus must be mitigated.

4.6.1 Drainage Determination

The following methods shall be acceptable to determine peak flow rates. A written explanation as to why the particular method was selected shall be required as part of the drainage report.

a. Rational Method

$$Q = CiA_d$$

where: Q = run-off, ft^3/sec
C = a "run-off" coefficient expressing the ratio of rate of run-off to rate of rainfall
i = intensity of rainfall, in/hr, for a duration equal to the time of concentration
A_d = drainage area, acres

Coefficients for the Rational Method Formula are given below. Rainfall intensity is obtained from records of nearby weather stations in the form of graphs showing rainfall intensity in relation to rainfall duration for various recurrence intervals. Selection of the value for rainfall intensity is based on estimates of the acceptable frequency of occurrence and on the time of concentration for the area. The latter is the time required for water to reach the outlet from the most remote point in the basin. The Rational Method should be restricted to use for areas less than 100 acres located in a drainage basin of less than 200 acres.

Coefficients of Run-Off*

Type of Drainage Area	C
Concrete or Bituminous Pavement	0.8 - 0.9
Gravel Roadways	0.4 - 0.6
Bare Earth (high values for steep slope)	0.2 - 0.8
Turf Meadow	0.1 - 0.4
Cultivated	0.2 -0 .4
Forest	0.1 - 0.2

*Coefficients are for storms of 5 to 10 frequencies. Less frequent, higher intensity storms will require higher coefficient values.

b. Soil Conservation Service Method

Soil Conservation Service (SCS) Method. The SCS method was developed particularly for agricultural watersheds. This widely used method is applicable to the mountainous regions on areas from two hundred (200) acres up to ten square miles, and above 6,000 feet in elevation. The method is presented in Procedures forDetermining Peak Flows in Colorado (U.S. Department of Agriculture, Soil Conservation Service, 1980)

c. Soil Conservation Service (SCS) Unit Hydrograph Method and SCS Tabular Hydrograph Method

In most drainage basins, rainfall runoff data from which unit hydrographs can be derived is unavailable, thus a synthetic unit hydrograph must be developed. The USDA (U.S. Department of Agriculture) Soil Conservation Service has developed a method of hydrograph syntheses which is now being widely used. The Tabular Hydrograph Method provides a tabular approach to estimating peak discharges from urban areas using the time of concentration and travel time. This method can readily predict the increase in peak flow when all or a portion of the watershed is to be developed.

d. Regional Analysis

A statistical or regional approach appears to be most appropriate for those areas in Delta County where peak flows occur from seasonal snow melt**.** Run-off from stream records would be necessary for this method.

4.6.2 Culverts

The culvert should slope downward in the direction of natural flow and be designed to be self-cleaning whenever possible. The outlet should be designed not to discharge on unprotected fills or unstable material or at adverse angles to streams or open channels. Headwall, riprap, or other means of protection are required at inlets or outlets where erosion might occur.

Reinforced concrete, corrugated metal pipe, or acceptable polymer pipe as specified by the M & S Standard Specifications for Road and Bridge Construction, CDOT, shall be considered acceptable materials for culvert construction. Steel pipe shall be galvanized and polycoated or paved where soils are corrosive or other conditions exist that may attack the steel. The minimum diameter for round pipe shall be 12 inches. Reference Appendix 4, Modifications to CDOT Specifications for more information.

Polymer pipe culverts shall not be allowed in areas where the practice of ditch burning does or can occur.

For design purposes, a single pipe is preferable to a battery of drainage pipes. When a battery of pipes is permitted by the County Engineer, a clear spacing of 1/2 the pipe diameter (1 foot minimum, 4 foot maximum) must be provided between pipes. Minimum and maximum cover, pipe metal gauge, and strength classification shall be as specified in M 603-1 (CDOT) Metal Culvert Pipe.

4.6.3 Open Channels and Ditches

Channels and ditches are to be designed to avoid roadside safety hazards. The minimum flow line slope shall be 2% if the channel is paved and 3% for channels of other materials. Maximum slopes shall be controlled by the maximum permissible velocities given in the table below. Greater velocities of flow shall require appropriate channel protection.

Mannings equation shall be used to estimate velocities:

$$v = \frac{1.486\, R^{2/3}\, S^{1/2}}{n}$$

where: v = velocity of flow in channel in feet per second
n = roughness coefficient
R = hydraulic radius in feet
S = slope in feet per foot

Maximum Permissible Velocities

Channel Material	n	Velocity (ft/sec)
Slit	.025	2.0
Sand	.030	2.5
Smooth, Stiff Clay	.025	4.0
Fine Gravel	.035	3.5
Coarse Gravel	.040	4.5
Small, Sharp-edges Rocks	.070	6.0
Cobbles and Shingles	.060	6.0
Shales and Hardpans	.030	6.0

4.6.4 Subsurface Drainage

Sub-grades subject to poor drainage, underground seepage or a high water table shall be adequately drained for roadbed stabilization. Drains must be installed to prevent the high ground water level from coming within 4 feet of the roadway pavement. Perforated pipe should always be used to carry away collected water. Gravel drains which contain no pipe are unsatisfactory.

4.6.5 Use of Cross Pans at Road Intersections

Proper drainage shall be part of every intersection and access design. In this regard, cross pan drainage can be considered part of a proper drainage design. However, cross pans shall not be used across roads in the following types of intersections:

Arterial – Arterial
Arterial – Collector
Collector – Collector

The gutter profiles for arterial roads and collector roads should be designed with sag curves or sump conditions located as far away from the intersection as practical. This will allow the interception or removal of light storm water and nuisance water, with only the larger flows still reaching and passing through the intersection.

Where cross pans are allowed, they shall be designed and constructed in accordance to the Colorado Department of Transportation M Standards. In no case will cross pans be less than 8 feet in width at road intersections on the stop-controlled road, nor less than 12 feet in width for all other locations.

4.6.6 Cross Section in Road Dip Sections

Where storm drainage runoff flows must cross the road, dip sections are required. The pavement through the dip section, to carry the flow, shall have a one-way slope (no crown) and curbing and medians must not be raised. Transitions back to normal road cross slopes shall be at both ends of the dip section.

4.6.7 Drainage on Superelevated Curves

Whenever superelevation is allowed on a divided road, a storm drainage system to collect the runoff along the median curb shall be provided. In no case shall nuisance water from the higher traveled way be allowed to cross over the lower traveled way.

4.7 Bridges

For the purposes of this section, the term bridge will mean any structure designed for the purpose of allowing a road to cross over any waterway having a span of 4 or more feet. This will include box culverts and pipe culverts 48 inches or larger in diameter

All bridge structures to be constructed within the public right-of-way shall be designed by a professional engineer licensed in the State of Colorado and qualified to perform such work. All bridge designs will be in accordance with the Standard Specifications for Highway Bridges adopted by AASHTO, latest edition, and the Colorado Department of Transportation's design and detail memos. Design loading for all bridge structures within a public right-of-way shall be HS 20-44, unless otherwise specified.

Plans are to be prepared by a qualified structural engineer and submitted to the County Engineer for review and approval. Clear deck width shall accommodate the full width of the traveled lanes and shoulders of approach roads. Bridges shall be designed with a minimum of one foot freeboard. Additional freeboard shall be required when debris-laden flows are anticipated.

Pedestrian walkways and railings shall be required as warranted. Flared approach railings shall be used on all bridges when guard rails are necessary and shall be installed at both the entrance and exit portions of the railing. Reference the Guard Rails section in the STANDARDS for more information.

4.7.1 Bridge Hydraulic Capacity

The required minimum hydraulic capacity for bridges shall be determined using a design storm frequency based on the following criteria (Q_{50} = peak flow from a 50 year storm event):

Storm Frequency Design Determination

Road Functional Classification	Q_{50}	Storm Frequency (years)
principal arterial	–	100
minor arterial	–	100
collector - urban	–	100
collector - rural	> 4000 cfs	50
collector - rural	< 4000 cfs	25
local	> 4000 cfs	50
local	< 4000 cfs	25

4.7.2 Bridges Within FEMA Designated Flood Hazard Areas

For any structure to be located within a FEMA (Federal Emergency Management Agency) designated flood hazard area, documentation will be submitted by the design engineer demonstrating that no increase in the 100-year flood elevation will occur due to the structure. Documentation will include a Hec 2 analysis and an approved flood hazard area development permit.

4.8 Intersections

4.8.1 Intersection Alignment and Profile

Intersections occurring on horizontal or crest vertical curves are undesirable from the standpoint of operation and sight distance. When there is latitude in the selection of intersection locations, vertical or horizontal curvature should be avoided. A line or grade change is frequently warranted when major intersections are involved. If a curve is unavoidable, it should be as flat as site conditions permit.

Restriction Distances for Profile and Alignment

Intersecting Roadway	Local Service (feet)	Local Access (feet)	Collector (feet)
Driveway	20	30	40
Local Service	30	40	40
Local Access		50	60
Collector			80
Private Road	see note*		

* note – the functional classification based on the road design and purpose will define the restrictions for this type of road. The majority of Private Roads tend to fall under the Local Service classification.

Where the grade of the intersecting road in flat or rolling terrain is greater than 4%, flattening through the intersection shall be required. Reference the included table regarding the minimum distance of the restriction based on the functional road classification. The grade shall be maintained to 4% or less for the distance as measured from the edge of the traveled surface of the intersected road.

Grades greater than 4% which can not be reasonably addressed through excavation or relocation may be permitted only if approved by the County.

In mountainous terrain, the maximum value up to 6% grade will be allowable, with all other stipulations for grade at an intersection being the same as for flat and rolling terrain.

Regardless of the roadway description, including Private Roads and Driveway accesses, the grade of the intersecting road shall slope downward and away from the through road at the same rate as the normal cross slope of the intersected road or 2%, whichever is more suitable, and for a distance of no less than 10 feet from the edge of the traveled way.

4.8.2 Angle of Intersections

A right-angle intersection provides the shortest crossing distance for intersecting traffic streams. It also provides the most favorable condition for drivers to judge the relative position and speed of intersecting vehicles. Intersections shall be at a right angle (90 degrees) to the intersected roadway. The same rules will apply for intersection angles as would for road grade in terms of restriction distances. The roadway shall be restricted to a right angle for a distance as defined in the table, Restriction Distances for Profile and Alignment for the appropriate road classification. Intersection angle designs other than as described will be permitted only if approved by the County.

4.8.3 Intersection Sight Distance

In order to provide the opportunity for vehicles on a stop-controlled intersection leg to safely cross or make left or right turns onto a non-controlled intersection leg, adequate sight distance must be provided. Two sight distance triangles may be drawn to represent the areas which must be free of all objects, vegetation and topography in excess of two feet above the road surface below the driver's eye on the stop-controlled intersection leg. The AASHTO publication, A Policy on Geometric Design of Highways and Streets, identifies the acceptable means for determining the size of the sight distance triangles based upon many variables, including speed, width of the non-controlled leg, and other design factors. Each new road intersection or proposed modification of an existing road intersection shall be evaluated in accordance with the AASHTO sight distance design procedure.

The required stopping sight distance necessary, as measured from the traveling vehicle approaching the intersection on the through road, shall be determined according to the table, Minimum Stopping Site Distance. Note that the sight distance for a vehicle at the intersecting stop-controlled road is not the same.

Below is a table for sight distance relevant to the vehicle at the intersecting road entering or crossing the through road. It is to be used as a guideline and is included to show the distinction between the sight distances of the through road and the intersecting road. It also shows the affect of other variables on sight distance and the importance for their consideration for proper intersection design.

Sight Distances For Vehicles On Intersecting Roadways

Vehicle Type	Two Lane Through Road (ft / 10mph of posted speed)	Four Lane Through Road (ft / 10mph of posted speed)
car	100	120
single-unit truck	130	150
multi-unit truck	170	200

4.8.4 Intersection Return Radii

The intersection return radius is the distance as measured from the edge of the traveled surface of each of the respective intersecting roads to a common center of curvature, defining a curve between the two roadways. Note that for gravel roads, the traveled way is the road width exclusive of the shoulders.

The minimum return radius of a residential road shall be twenty (20) feet. For industrial or commercial areas or roadways, the minimum return radius shall be forty (40) feet.

4.9 Access Standards

Pursuant to Section 43-2-147(1), C.R.S., local governments are authorized to regulate vehicular access to and from any public roadway under their respective jurisdictions as well as from and to property adjoining the roadway.

It is the purpose of this section to provide the standards and procedures necessary to protect the public health, safety and welfare, maintain smooth traffic flow, maintain proper roadway drainage and to protect the functional level of the County road system while meeting state, regional, local and private transportation needs and interests.

Access to roadways is a form of a roadway intersection. As such, access design shall comply with all the relevant requirements defined in the Intersections section of the STANDARDS.

4.9.1 Implementation

No person shall construct any direct access to or from any roadway maintained by Delta County or from property adjoining the roadway without an approved access permit issued by the County.

4.9.2 Application For And Issuance of Permits

For a direct access to a County roadway, one will need to apply to the County Planning Department for a permit. In addition to the permit form, the County shall require all of the following items as part of the access application:

a. A site plan showing the location of the proposed access and the proposed improvements. The plan shall show all existing access locations to the site. All existing access to the County road by sites immediately surrounding the site of interest shall also be presented on the plan, including driveways and roadways. This will include access points on the opposite side of the County road of the site of interest.

b. Roadway and/or driveway plan and profile.

c. Drainage plan of the proposed access and its integration to any existing County drainage system.

d. Any proposed improvements, modifications, or structures within the County right-of-way.

Upon receiving a complete and acceptable application for an access permit, the County shall inspect the site and review the application and access design for site specific requirements for the construction of the access. Such requirements may include grade alterations, line of sight improvements, culvert or other drainage structure requirements, width of access specifications, and other necessary design factors. Once an application is acceptable and the design has been reviewed and determined by the County to be satisfactory, the application would then be approved and the access will be allowed for construction as defined in the application. Approval of construction does not grant access to a County roadway. Approval of the application only allows construction of an access to a County road.

Upon completion of construction of the access, the County shall inspect and issue the actual access permit if the access is deemed acceptable.

If construction of an access does not commence within one year of the date of application approval, the application shall become null and void.

4.9.3 Access Control Standards

It is the policy of Delta County by which direct access to the public road system shall be provided by the way of the lowest classified road possible. For example, no direct access shall be granted to a property from an arterial road when the property can be accessed from a collector or lower classified road. Similarly, no direct access shall be granted to a property from a collector road when the property can be accessed from a local access road. This may require an access design which is longer or less direct than other options in order to satisfy this requirement. Exceptions to this policy will be made only when it is demonstrated that a severe hardship would be caused to the property owner by strict enforcement of the policy, a hardship arising from the unique circumstances or characteristics of the particular site.

4.9.4 Access to Arterial and Collector Roads

When direct access is allowed to a Principal, Minor Arterial, or to Collector roadways, the following restrictions shall apply:

a. No more than one access approach shall be provided to an individual parcel or to contiguous parcels under the same ownership, unless it can be demonstrated that additional accesses would be beneficial to the safety and operation of the road system.

b. On two lane roadways, access approaches may be limited to only right-in and right-out turning movements if the access is within 500 feet of the nearest intersection.

c. No access shall be permitted within 300 feet of a median opening unless the access is directly aligned with the median opening.

d. No access configuration will be allowed that requires a vehicle to back out onto the roadway.

Intersections shall be spaced no less than one half mile apart on Principal Arterials and one quarter mile apart on Minor Arterials and Collectors, unless such spacing is impractical or impossible due to topographic or other physical limitations as determined by the County Engineer. Subdivisions should be designed to provide a future alternative access if that option exists.

4.9.5 Access to Local Access Roads

Roadway intersections shall be spaced no less than 150 feet apart.

4.9.6 Construction of Access

The expected dates of construction and use of the access shall be included on the application for the permit. The Applicant shall notify the County at least 48 hours (business hour time period) prior to any construction within the County right-of-way.

The construction of the access and its appurtenances as required by the terms and conditions of the permit application shall be the responsibility and are to be completed at the sole expense of the Permittee. Delta County will not supply materials or labor for the construction of the access or appurtenances.

All roadway access improvements including pavement, curbs, gutters, sidewalks, drainage structures, ditches and auxiliary lanes shall be within the County right-of-way. Any additional right-of-way required for such improvements must be dedicated or deeded to Delta County prior to construction beginning.

All roadway access construction which affects existing structures within the County right-of-way, such as pavement, curbs, gutters, sidewalks, drainage structures, ditches and auxiliary lanes shall be required to incorporate the existing structure as part of the final access design. For example, an access that intersects with an existing sidewalk will need to include acceptable transitional features to incorporate the intersection of the sidewalk to the access as part of an acceptable final access design.

4.9.7 Use of Access

Access permits are issued for a specific use or type of service. No change in the type of use or service may be made without the property owner applying for an amended access permit and securing approval from Delta County (example - from agricultural to residential would require an amended permit). Any change in the land use of the property served by the access which, in the opinion of the County, can be reasonably expected to result in a significant change in the volume or type of traffic using the access, may necessitate issuance of a new or amended access permit.

Any access, whether constructed before, on, or after the date of adoption of the STANDARDS, may be required by the County to be reconstructed or relocated to conform to the STANDARDS at the property owner’s expense if necessitated by a change in the use of the property which occurs after the adoption of the STANDARDS.

If the reconstruction or relocation of an access is necessitated by changes in road or traffic conditions, it will be at the expense of the County.

4.9.8 Unauthorized Access

Any access for which any of the following statements is true shall be considered an unauthorized access:

a. The access was installed without an access permit being issued.

b. The access was installed or is being used contrary to the terms and conditions of an approved access permit application or an issued access permit.

c. The land use of the property or the type of service for which the access is being used has changed significantly without an access permit or amended permit being granted.

Upon discovery of an access considered unauthorized under the terms of this section, the County will send written notice to the property owner by means of the United States Postal Service mail delivery with return receipt requested. The letter will be sent to the last known address of the owner as shown in the records of the County Assessor's Office. Should there be no response within a reasonable amount of time, a final notice will be sent by means of certified mail. The notice will include a description of all steps necessary to bring the access into compliance. If the property owner fails to bring the access into compliance within 30 days of the written notice, the County may, at its option, install barriers across or remove the access. Should this be required, it shall be at the sole expense of the property owner.

4.9.9 Access Drainage

The roadway drainage system is for the protection of the Delta County roadway and right-of-way. It is not designed or intended to serve the drainage requirements of abutting properties beyond the levels which have historically flowed to the County right-of-way.

All roadway access shall be constructed so they will not interfere with the existing drainage system of the roadway. Drainage structures that approach the County roadway should become an integral part of the existing drainage system. Such drainage structures shall impose erosion control methods to minimize silt, sediment, and debris from being introduced into the existing roadway system.

The maintenance of the drainage structure shall be the responsibility of the property owner. Reference 4.6, Roadway Drainage and specifically 4.6.2, Culverts for drainage requirement details. Length, diameter, cover, type, and inlet and outlet elevation of all drainage structures is subject to approval of the County.

Accesses should be constructed in such a manner that minimizes erosion and shall not result in deposition of silt and debris upon the County roadway. Accesses which slope down toward the public road will be constructed to include suitable means of assuring that water does not run onto or across the traveled public way. This may include crown, borrow ditches, pans or other methods along the access sufficient to direct water to the existing drainage facilities along the public road.

4.9.10 Driveways

Residential or private Driveways are a specific form of access to a County roadway. As such, all relevant requirements defined in the Access Standards section shall pertain to Driveways. Requirements found in this section will address the more specific nature of Driveways and shall be in addition to or will revise the Access Standards for the particular case of Driveway access.

Location, spacing and profile of Driveways shall be in accordance with Items 10 and 11 in Appendix 5. Examples of Driveway construction for urban and rural environments are also illustrated in Appendix 5 and are recommended designs for those situations. Also reference Section 4.5.3 – Construction Involving Significant Cuts or Fills for further Driveway profile restrictions and requirements.

Only one residential access per lot or parcel should be allowed. Should reasons be shown for safety, necessity, or extenuating circumstances, the County may allow more than one access.

Access for agricultural operations, as defined in Appendix 1, Definitions, would justify a need for additional allowable parcel access. The additional access shall be limited in number as shown by need and each access shall include a gate. The agricultural access shall be constructed to allow for the use of the gate without vehicular or equipment obstruction of the County road.

Below are requirements that shall apply to Driveway design:

a. Only one residential access per lot or parcel is allowed for a property frontage which is less than one hundred (100) feet.

b. If the Driveway is not paved, it shall be constructed as defined in the Appendix from the edge of the traveled surface to the right-of-way boundary line or for a minimum of ten (10) feet. Reference Appendix 5, Item 16.

c. If an unlined drainage ditch exists along the road to be accessed, the Applicant must supply and install a culvert pipe in the Driveway. The diameter of the pipe shall be a minimum of twelve (12) inches in diameter. The length of the pipe shall be such that the pipe inlet/outlet extends a minimum of twelve (12) inches beyond the surrounding embankment of the Driveway. The pipe will be bedded with a minimum of 6 inches of Class 6 aggregate base course material with a minimum of six (6) inches of cover over the pipe, compacted to 95% of standard Proctor density. Reference 4.6, Roadway Drainage and specifically 4.6.2 - Culverts for more elaboration on drainage requirements.

   If the roadside drainage ditch is too shallow to allow for a proper drainage system utilizing a twelve inch diameter culvert, a concrete cross pan shall be considered an acceptable option. The final design of the cross pan shall be subject to approval by the County Engineer. Reference Appendix 6 for further information on cross pan designs.

d. The Driveway shall slope downward and away at the same slope as the intersected road for a minimum of ten (10) feet. The Driveway alignment and grade profile at the approach to the County roadway shall meet the requirements defined in Section 4.7 – Intersections of the STANDARDS. Reference Appendix 5 for further information on Driveway profiles.

The following Driveway access shall not be allowed:

a. Within fifty (50) feet of the nearest right-of-way line of an intersecting non-arterial road;

b. Within one hundred (100) feet of the nearest right-of-way line of an intersecting arterial road;

c. Within one hundred (100) feet of an approved median opening location on an arterial road;

d. Within twenty five (25) feet of a guardrail terminus;

e. Within one hundred (100) feet of a bridge structure;

f. Within the minimum spacing as established by Item 10 in Appendix 5;

g. When adequate sight distance cannot be provided to vehicles on the Driveway attempting to access the road;

4.9.11 Access Appurtenances

An access approach that is gated shall be designed so that the longest vehicle using it can completely clear the traveled way when the gate is closed. In no event shall the distance from the gate to the edge of the traveled surface be less than thirty five (35) feet. Any overhead entry structures shall have at least a thirteen feet, six inches (13’ 6”) height as clearance measured from the access surface.

Mailboxes may be located in the public road right-of-way and shall not create a roadside hazard, obstruct or hinder vehicular or pedestrian traffic, or interfere with road maintenance activities such as snowplowing and weed mowing.

On roads that are designed to accommodate traffic volumes in excess of 2,000 vehicle trips per day, mailboxes shall be located at least 8 feet away from the edge of the traveled way. In high-density areas, group or cluster mailboxes may be required.

Installation of mailboxes should comply with the appropriate Items in Appendix 6, Roadway Appurtenances. Care and maintenance of the mailbox and immediate area are the responsibility of the property owner. This would include snow removal and vegetation control.

Wear, damage, or breakage to mailboxes, fencing, decorative items, signage, or any other appurtenances throughout the property roadside frontage due to thrown snow and inclusions from snow removal activities on a County maintained road will **NOT** be the responsibility of the County.

4.10 Utility Installation Standards

Any utility within a road right-of-way must be designed and located primarily to maximize public safety and secondarily to minimize road maintenance and snowplowing costs. All utilities requiring above-ground risers or boxes at intersections shall be a minimum of twenty-eight feet (28') from the centerline of all existing roads.

When a utility company must make an emergency repair of their equipment which involves cutting a County roadway to restore service, they may do so. The company shall notify the County within 48 hours and provide an acceptable road repair plan within one (1) business day to the County Engineer or County designee following notification. Reference Appendix 4 - Road Cuts and Repairs for information on proper road repair methods.

Acquisition of additional right-of-way for the installation of utilities is the obligation of the Permittee.

4.10.1 Installation

Where the installation crosses a paved roadway, it shall be made by boring or jacking beneath the road surface. Open cutting shall be allowed to the edge of the shoulder portion of the road. No water shall be used in boring and no tunneling shall be permitted. In no circumstance shall an existing culvert be used for an installation of a new underground utility.

Pavement cuts for installation are only permitted when approved in advance by the County Engineer. Such requests shall require a repair plan that is reviewed and approved by the County. All repairs are subject to final inspection and acceptance by the County and all expenses are the responsibility of the Permittee. See the Appendix – regarding Road Cuts and Repairs for further details.

The Permittee shall be responsible for roadway failure repair for a period of twelve (12) months after completion of the repair. Failure shall include surface patch failure and surface settlement. Corrections may be made by the County and billed directly to the Permittee. Under such circumstances, the County shall provide notice to the Permittee to properly complete the work within fifteen (15) days of notice or be subject to County action.

No cleated or track equipment shall work on or move over a bituminous surface or a magnesium-chloride treated surface without mats. Any damage to the roadway, roadway drainage, curbs, shoulders, sidewalks, or roadway appurtenances as a result of the installation or repair of utilities shall be the responsibility of the Permittee to repair.

No underground utility may be installed within a road right-of-way if such installation would interfere in any fashion with any existing utility installation or water course, including a corral, ditch or culvert, except with the prior written authorization of the owner of the existing utility installation or water course.

The Permittee shall be responsible for the complete reclamation of areas disturbed within the right-of-way to prevent the introduction or spread of noxious weeds and manage soil erosion.

In new construction, a sequence of installation from the deepest utility to the shallowest shall be required.

4.11 Roads Within Previously Dedicated Public Right-of-Way

There are numerous road rights-of way within Delta County which were created and dedicated to the public by subdivision plats that pre-date the present regulations (i.e. prior to August 1972). In many instances, the roads were never actually constructed or were constructed too poorly to be accepted by the County for maintenance. Instances arise where

a private property owner has no legal access to their property except over and across a platted, deeded or dedicated right-of-way in which no road exists. Delta County will not issue access permits for any property whose sole access is a public right-of-way not maintained by Delta County unless the Applicant desiring to use the right-of-way agrees to one of the following:

1. The Applicant shall apply for an access permit with a design to construct the road from the intersection with a maintained public road to a point along the frontage of the property to be accessed. The construction plan objective will be in compliance with the STANDARDS applicable to the road's functional classification. Upon completion and issuing of the access permit, application may be made to the Board of County Commissioners for acceptance of the road for maintenance by the County, if appropriate. Roadways built to the standards defined for a Public Use – Privately Maintained Road would not be appropriate for this request.

OR,

2. The Applicant shall apply to the Board of County Commissioners for a vacation of the public road right-of-way. Should the vacation of the road be granted, the Applicant wishing to use the resulting Private Road for the sole access to their property shall be allowed to apply for an access permit. The process for access application and permitting would then be the same as stated in the STANDARDS for the appropriate access classification, which in most cases would be for a Local Service Road.

4.12 Non-through Streets

Roadways that end without exiting onto a connecting roadway shall be provided with the necessary signage warning approaching through traffic of the no outlet nature of the roadway.

4.12.1 Cul-de-Sac Roads

A cul-de-sac is a road that serves more than one property owner and has only one intersection with the public road system. The following requirements apply to the creation by plat or deed of new cul-de-sac roads, both public and private. The length of a cul-de-sac is measured between the centerline of the intersecting road and the radius point of the cul-de-sac. A cul-de-sac road shall not be longer than 1,200 feet. Cul-de-sacs shall be designed to provide adequate snow storage.

4.12.2 No Outlet Roads

No outlet roads will be allowed only where a future extension of the road would be necessary to serve adjacent properties or provide access to roadway channelization when developed at a future date. When a no outlet road is allowed, a temporary turn-around shall

be provided. Temporary turn-arounds shall match the physical requirements for cul-de-sac roads and shall be provided with a temporary easement allowing for maintenance.

4.13 Roadway Appurtenances

4.13.1 Road Signs and Traffic Control Devices

All road signs, striping, delineators, barricades, signals, and other traffic control devices shall conform to the Manual on Uniform Traffic Control Devices (MUTCD) published by U.S. Department of Transportation, Federal Highway Administration, and any applicable Colorado supplement. All road signage shall also conform to the County's Uniform Addressing Standards for the relevant signs.

The Permittee shall be required to install all necessary signage and shall bear all expenses for the fabrication and installation of road name signs, permanent barricades, and signs for implementing the approved project design (i.e. one way, no parking, no outlet, stop sign, speed limit, etc.) Necessary signage shall include signs required on County roads as a consequence of the Applicant's project, such as regulatory, guide, or warning signs. Signs and barricades shall be in place prior to road acceptance.

4.13.2 Guard Rails

When guard rails are used in conjunction with roadside curbs, the face of the guard rail shall be flush with the face of the curb regardless of shoulder width. This is to prevent the take-off ramp effect which may turn a vehicle over. When no curb is present, the face of the guard rail shall be flush with the edge of the shoulder. Where pedestrians are expected to use the shoulder, a walkway should be provided around the end of the guard rail outside the normal shoulder line and guard rail installation.

When guard rails are required, reference CDOT'S Standard Specifications for Road and Bridge Construction, Miscellaneous Construction – Guardrail for guidelines on guard rail construction requirements and installation procedures.

Guidelines when guard rails shall be considered appropriate are provided below.

a. On curves requiring a reduction in approach speeds, the following conditions may require a guard rail on the outside curve:

    i. Height of embankment is more than 10 feet.

    ii. Side slopes are steeper than 4:1.

iii. Shoulder or pavement widths are substandard.

iv. Roadside hazards are present.

b. Where there is a history of roadway accidents which guard rails would help prevent or reduce the severity of the accident, guard rails shall be required.

c. In areas subject to dense fog, snow or icy conditions or where traffic speed and volumes are high, a guard rail may be justified where it would otherwise be questionable under less adverse conditions.

d. An obstruction or sudden constriction on width may require the installation of a guard rail.

e. An isolated sharp curve on a road otherwise built to higher standards may warrant a guard rail.

f. Guard rails may be needed at approaches to bridge piers, abutments, trees, or other obstructions.

g. A guard rail should be placed at the ends of all bridges on the right of approaching traffic.

4.13.3 Cattle Guards

Cattle guards shall be installed where they are necessary for the control of livestock. The clear opening of the cattle guard shall extend from the edge of the shoulder to edge of shoulder for the standard roadway section approved. Each cattle guard location shall also have a gate installed to allow livestock passage. Cattle guard and gate design shall be approved by the County Engineer prior to installation. Appendix 6, Items 8 and 9 − Typical Details, Cattle Guard shall define the expectations for acceptable design. The expense of the foundation design, fabrication and installation of cattle guards shall be the responsibility of the Permittee.

ARTICLE 5 – CONSTRUCTION POLICY STANDARDS

During the execution of road and bridge construction and related work, all materials, performance, and quality of work shall conform to the requirements of the STANDARDS, the applicable sections for the most current edition of the Department of Transportation, State of Colorado Standard Specifications for Road and Bridge Construction, Division of Highways M & S Standards, and the American Association of State Highway and Transportation Officials Standard Specification for Highway Bridges.

If the STANDARDS, the CDOT M & S Standards, or the AASHTO Standard Specifications for Highway Bridges do not cover a specific situation during the course of work, applicable specifications must be approved by or obtained from the County. In the event that there is conflict between the various reference specifications, they shall govern in the following order:

1. the STANDARDS

2. Department of Transportation, State of Colorado, Standard Specifications for Road and Bridge Construction; Division of Highways M & S Standards

3. AASHTO Standard Specifications for Highway Bridges

5.1 Control of Work

All work done within County road right-of-way and applicable work done on private property shall be inspected and documented by Delta County to ensure compliance with the STANDARDS, the approved plans and any subdivision improvements agreement. The County shall have the authority to control work as determined by the STANDARDS, judge the quality and acceptability of materials furnished or the work performed, or as to the rate of progress of the work and will have final say as to the interpretation of the approved plans. The County will use acceptable engineering techniques and prudent, professional judgment in the oversight and control of work.

The County Engineer shall have the authority to suspend the work in whole or in part. The following situations shall justify such action:

a. The failure of the contractor to correct conditions unsafe for the general public;

b. The failure to carry out provisions of the STANDARDS or approved plans;

c. The failure to carry out written or verbal instructions from the County as a result of items previously found to be unacceptable or unsatisfactory;

d. For periods of time due to unsuitable weather conditions;

e. For conditions considered unsuitable for the proper prosecution of the work;

f. For conditions or reasons deemed to be in the public interest or to protect the public health, safety and welfare.

All notifications of work suspension will be presented by the County in writing.

The County shall be authorize to take immediate corrective measures, to include repairs and alterations, should a condition exist where the consequence of work performed presents an significant and immediate threat to the public safety and well being. The expense of all corrective measures shall be the sole responsibility of the Permittee.

The Permittee will have the ability to contest County decisions regarding the control and suspension of work by appealing to the Board of County Commissioners.

5.2 Authority of the Inspector

The County shall be represented by a Construction Inspector, or other official as designated by the County, who is authorized to inspect all work done and materials furnished. The Construction Inspector shall not be authorized to waive any provisions of the STANDARDS or the approved plans, nor to issue instructions contrary to the STANDARDS or the approved plans. The Construction Inspector will not act as a foreman for the Permittee nor supervise or direct the work.

5.3 The Project Engineer's Responsibilities

The Project Engineer shall be the duly authorized agent of the developer and/or Permittee and has immediate charge of engineering details of the work. It shall be the responsibility of the Project Engineer:

a. To provide to the Construction Inspector any engineering details, documentation or any relevant information regarding the prosecution of the work.

b. To provide the Construction Inspector with regular and timely project progress reports, if required as part of the approved plans.

c. To provide to the County Engineering Department written approval for any proposed alterations to the approved plans and specifications before any such modifications are incorporated into the work.

d. To provide “as-built” plans to the County Engineering Department upon completion of all work to be performed on the project as a condition of final approval of the work.

e. To furnish and set construction stakes and marks establishing all lines, grades, and measurements necessary to the proper prosecution of the work in its final location as shown on the approved plans.

f. To provide all materials testing necessary to establish parameters required to inspect work for compliance with approved plans and specifications.

g. To stop earth fill work when frost levels reach four (4) inches.

5.4 Inspection and Testing

To ensure compliance with the STANDARDS and the approved plans, adequate in-progress inspection and testing is required. Expected test reports shall include all results from test pits, compaction tests and proof rolling. Reference the Appendix for testing details.

All materials and each part or detail of the work will be subject to the inspection of the Construction Inspector. The Construction Inspector shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Project Engineer as required, to accomplish a complete and detailed inspection.

When the construction specifications of other jurisdictions (such as CDOT or a municipality) are used to govern a portion of the work as part of the approved plans, written approval of that portion of work by all appropriate jurisdictions shall be provided and made available to the Construction Inspector prior to final acceptance of the work.

Regular in-progress materials testing shall be provided to the Construction Inspector in a timely manner during the course of the work and shall be a requirement of final acceptance. The interval of in-progress materials testing shall conform to the most current testing schedule established by the Colorado Department of Transportation, Materials Testing Section, Field Materials Manual, latest edition. A test plan for the project shall be provided and is subject to the approval of the County Engineer. As part of the test plan, all materials testing will be performed by an independent laboratory under the supervision of a Colorado licensed professional engineer at the expense of the developer or contractor. The Delta County Engineering Department may, at its option, perform such additional quality control testing, as it deems appropriate and necessary or desirable at its own expense.

Any work done or materials used without inspection or testing shall be subject to removal or replacement. The Construction Inspector may, at any time before acceptance of the work, direct the contractor to remove or uncover any portion of the finished work. After examination and approval of the work by the Construction Inspector, the Contractor shall

restore the portions of the work disturbed to the standard required by the plans and specifications.

Inspection by the County shall not relieve the developer and/or contractor or their designated representatives of the responsibility to control the work and insure compliance with the approved plans and specifications. The County shall not be responsible for insuring project compliance with the approved plans and specifications.

5.5 Removal of Unacceptable Work or Unauthorized Work

All work which does not conform to the STANDARDS or the approved plans will be considered unacceptable work − whether the result of poor workmanship, use of defective materials, damage through carelessness or any other cause found to exist prior to final acceptance of the work. Unacceptable work shall be subject to removal and restoration prior to acceptance of the work. Any work done contrary to the instructions of the Project Engineer or Construction Inspector will be considered unauthorized and shall be subject to removal and restoration.

Any work performed without approved plans and specifications will be considered unauthorized and shall be subject to removal and restoration.

Responsibility for the corrective measures along with all expenses attributable to unacceptable or unauthorized work shall be the sole responsibility of the developer or contractor.

5.6 Use of Approved Plans and Specifications

The approved plans, specifications, supplementary specifications, standards, supplementary standards and any special provision required or approved by the County shall be considered complimentary to describe and provide for complete work.

The Contractor shall not act to take advantage of any error or omission in the approved plans, standards and specifications. In the event an apparent error or omission is discovered, the Project Engineer and the Construction Inspector shall be notified, corrections will determined and corrective actions will be taken with the final approval from the County.

5.7 Acceptance of Work

5.7.1 Partial Acceptance

Immediately after component portions of work are completed, such as a section of the subgrade, structures, trench backfill, and other such intermediate roadway components, acceptance of this element may be required prior to proceeding with the next element of construction. The partial acceptance inspections shall be defined steps found in the inspection plan. An example would be acceptance of subgrade prior to the placement of subbase. The County's approval of partial acceptance shall be required before the next phase of work begins.

After partial acceptance of an element of work is issued, should conditions change due to the next phase not being constructed for a normally expected period of time, or should other circumstances warrant it, the County may require re-inspection for partial acceptance.

5.7.2 Final Acceptance

Upon written notice from the developer of the completion of all work, the Construction Inspector shall make a final inspection. If all project work is determined by the County to be in compliance with the STANDARDS, the approved plans, the performance guarantee and/or subdivision improvement agreement and all other complimentary plan documentation, the procedure for acceptance by the Board of County Commissioners for maintenance or release of the performance guarantee shall be initiated.

If the inspection discloses any work in whole or in part as being unsatisfactory or incomplete, the County shall notify the developer in writing of the deficient items. The developer shall reschedule a follow-up inspection upon completion of the corrective measures and the final acceptance process will be re-initiated. In the event the work is not complete, the developer is responsible for maintenance of the work until such time of final acceptance.

Chapter 16
ZONING

ARTICLE 1. GENERAL PROVISIONS

Sec. 16-1-10. Short title.

This Chapter shall be known as and may be cited and referred to as the "Paonia Zoning Code."

(Ord. No. 83-116, Art. II, 1983; Ord. No. 2000-02, Art. II, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-1-20. Purpose.

This Chapter shall be based upon the Comprehensive Plan of the Town and is intended to alleviate congestion in the streets; to secure safety from fire, panic, floodwaters and other dangers; to promote health and general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; and to facilitate the adequate provision of transportation, water, sewage, schools, parks and other public requirements. This Chapter is drawn with reasonable consideration, among other things, as to the character of the district and its peculiar suitability for particular uses and with a view to conserving the value of buildings and encouraging the most appropriate uses of land throughout the Town.

(Ord. No. 83-116, Art. I, 1983; Ord. No. 2000-02, Art. I, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-1-30. Authority.

(a) The Board of Trustees shall have the authority as set forth in Section 31-4-101, C.R.S.

(b) The Planning Commission, as established in Chapter 2 of this Code, shall prepare a master plan for the development of the Town and, in the preparation thereof, shall make careful and comprehensive surveys and studies of present conditions and future growth of the Town with due regard to its relation to neighboring territory. The plans shall be made with the general purpose of guiding and accomplishing a coordinated, adjusted and harmonious development of the Town and its environs, which will in accordance with present and future needs best promote health, safety, morals, order, convenience, prosperity and general welfare, as well as efficiency and economy in the process of development, including among other things adequate provision for traffic, the promotion of safety from fire and other dangers, adequate provision for light and air, the promotion of healthful and convenient distribution of population, the promotion of good civic design and arrangement, wise and efficient expenditure of public funds and the adequate provision of public utilities and other public requirements.

(Ord. No. 2000-02, Art. I, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-1-40. Interpretation.

In their application and interpretation, the provisions of this Chapter shall be held to be minimum requirements. This Chapter is not intended to repeal, abrogate, annul or in any way impair or interfere with

existing provisions of other laws or with existing provisions of private agreements, except that where this Chapter imposes greater restriction than that imposed by such existing provisions of law, contract or deed, the provisions of this Chapter shall control.

(Ord. No. 2000-02, Art. XXIII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-1-50. Incorporation of map.

The location and boundaries of the zone districts established by this Chapter are shown upon the "Zone District Map of the Town of Paonia," which is hereby incorporated into this Chapter. Said zoning map, together with all data shown thereon and all amendments thereto, is by reference hereby made a part of this Chapter. The Zone District Map shall be identified by signature of the Mayor, attested by the Town Clerk and bear the seal of the Town and the date of the adoption. Changes in the boundary of any zone district shall be made only upon amendment to the Zoning Ordinance and shall promptly be entered on the Zone District Map with an entry on the map giving the number of the amending ordinance, the date and the signature of the Mayor and attested by the Town Clerk. The Zone District Map shall be located in the office of the Town Clerk.

(Ord. No. 83-116, Art. III, 1983; Ord. No. 2000-02, Art. III, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-1-60. Zone district boundaries.

Except where otherwise indicated, zone district boundaries shall follow municipal corporation limits, section lines, lot lines or right-of-way lines, centerlines of streets or extensions thereof. In property that is not subdivided or where a zone district boundary divides a lot or parcel, the scale of the Zone District Map, unless indicated by dimension, shall determine the location of such boundary. Where a zone district boundary coincides with a right-of-way line and said right-of-way is abandoned, the zone district boundary shall then follow the centerline of the former right-of-way. Land not part of a public railroad or utility right-of-way which is not indicated as being in any zone district shall be considered to be included in the most restricted adjacent zone district even when such district is separated from the land in question by a public railroad or utility right-of-way.

(Ord. No. 83-116, Art. IV, 1983; Ord. No. 2000-02, Art. IV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-1-70. Zoning of annexed territory.

All territory annexed to the Town shall be zoned according to district classifications of this Chapter. Such classification shall be determined by the Board of Trustees after a recommendation by the Planning Commission. The proposed zoning shall be established in accordance with applicable state statutes.

(Ord. No. 83-116, Art. V, 1983; Ord. No. 2000-02, Art. V, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-1-80. Application of regulation.

Except as hereinafter provided:

(1) No building or structure shall be erected, any existing building or structure moved, altered or extended, or any land, building or structure be used, designed to be used or intended to be used for any purpose or in any manner, other than as provided for among the uses hereinafter listed in the district regulation for the district in which such land, building or structure is located.

(2) No building or structure shall be erected, any existing building or structure be moved, altered or extended, or any open space surrounding any building or structure be encroached upon or reduced in

any manner, except in conformity with the setback, building site area, building location and height provision hereinafter provided in the regulations for the district in which such building structure or open space is located.

(3) No lot area, yard, frontage, open space or parking provided about any building for the purpose of complying with provisions of this Chapter shall be considered as meeting the requirements for lot area, yard, frontage, open space or parking for any other building on any other lot unless approved as a PUD or as specifically permitted in the zoning district.

(Ord. No. 83-116, Art. VI, 1983; Ord. No. 2000-02, Art. VI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-1-90. Rules of construction.

(a) The word *lot* includes plot/parcel.

(b) The phrase *used for* shall be construed to include arranged for, designed for, maintained for and occupied for.

(c) Words used in the singular number include the plural, and words in the plural include the singular, unless the context clearly indicates the contrary.

(d) The word *shall* is always mandatory. The word *may* is permissive.

(Ord. No. 83-116, Art. VII, 1983; Ord. No. 2000-02, Art. VII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-1-100. Definitions.

For purposes of this Chapter, the following terms shall have the meanings ascribed to them as follows:

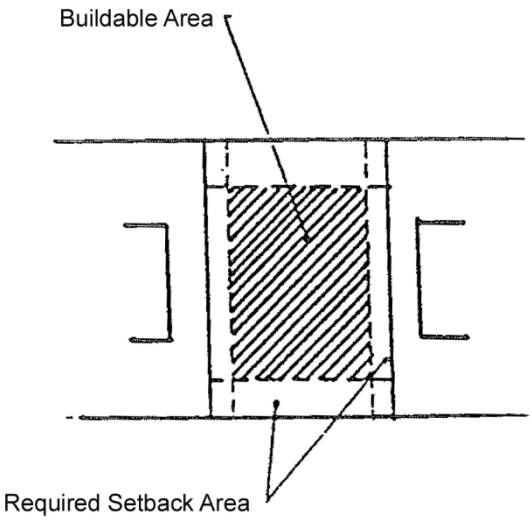
Accessory building, structure or use means a building, structure or use located on the same lot as the principal building, structure or use, which is clearly incidental to and subordinate to and customarily found in connection with the principal building structure or use. Accessory buildings, structures or uses shall not be used for living or sleeping quarters.

Alley means a public right-of-way within a block upon which the rear of building lots generally abut. Its use is intended for secondary access to a lot for service purposes and not intended for general travel.

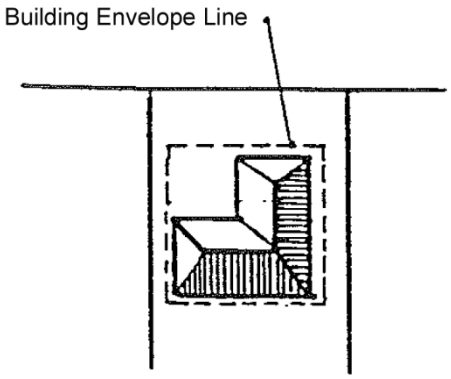
Bed and breakfast establishment means a facility of residential character, which provides sleeping accommodations for hire for two (2) weeks or less, on a day-to-day basis, with one (1) or more meals per day included and a manager residing on the premises.

Boarding or *roominghouse* means a building other than a hotel, cafe or restaurant where, for compensation, lodging and/or meals are provided for three (3) or more boarders and/or roomers exclusive of the occupant's family. In such facilities, the length of stay is normally thirty (30) days or more.

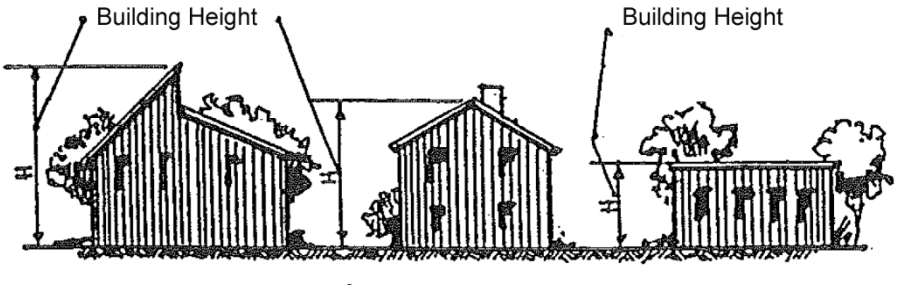
Buildable area means the portion of a lot, parcel or tract of land excluding all required yard area where a building could be located in accordance with provisions of this Chapter.



Building envelope means the two-dimensional space within which a building is proposed to be located on a lot, parcel or tract of land.



Building height means the vertical distance measured from the average finished grade at the setback lines to the highest point of the roof surface exclusive of chimneys, ventilators, pipes and similar apparatus.



Developable lot area means the total area of a lot, tract or parcel less that portion of the lot, tract or parcel that is located in an area with a high flood hazard and is in the floodway as defined by the Federal Emergency Management Agency (FEMA), and less those portions with slopes in excess of twenty-five percent (25%).

Dwelling, multiple-family means a single building used by three (3) or more families living independently of each other in separate dwelling units but does not include motels, hotels, boarding houses or tourist homes.

Dwelling, single-family means a detached building used as a dwelling exclusively by one (1) family as an independent living unit. A single-family dwelling does not include a mobile home. See Section 16-2-30 of this Chapter.

Dwelling, two-family means a single building containing two (2) dwelling units and occupied by two (2) families living independently of each other.

Dwelling unit means one (1) room, or rooms connected together constituting a separate, independent housekeeping establishment for owner occupancy, rental or lease on a monthly or longer basis. The dwelling unit shall be physically separated from any other rooms or dwelling units that may be in the same structure and served by no more than one (1) gas meter, one (1) electric meter and one (1) water meter and sewer tap.

Family means any individual, two (2) or more persons related by blood or marriage or between whom there is a legally recognized relationship, or a group of not more than three (3) unrelated persons occupying the same dwelling unit.

Floor area means the gross area of the building measured along the outside walls of the building, including each habitable floor level and interior balconies but excluding interior courtyards, garages and enclosed parking areas and mechanical areas and one-half (½) of the area used exclusively for storage.

Formula business means a business which is required by contractual or other arrangement to maintain one or more of the following items: standardized ("formula") array of services and/or merchandise, trademarks, logos, servicemarks, symbols, decor, architecture, layout, uniforms, or similar standardized features and which causes it to be substantially identical to more than five other businesses regardless of ownership or location. Formula businesses can include, but are not limited to restaurants, retail stores, banks, real estate sales offices, spas, hair and nail salons, and hotel/motel/inn/B&B.

Group homes and *homes for the developmentally disabled* means those facilities licensed by the State which serve not more than eight (8) developmentally disabled persons. Developmentally disabled persons means to include, but is not limited to, those persons having cerebral palsy, multiple sclerosis, mental retardation, autism and epilepsy.

Home occupation means a business or profession that is conducted within a dwelling unit, an enclosed garage or accessory building and is in conformance with the provision of Section 16-11-20 of this Chapter.

Lot means a parcel of land occupied or intended to be occupied by a building or use and its accessories, and arranged to meet all the requirements of this Chapter and have at least twenty-five (25) feet of frontage on a public street.

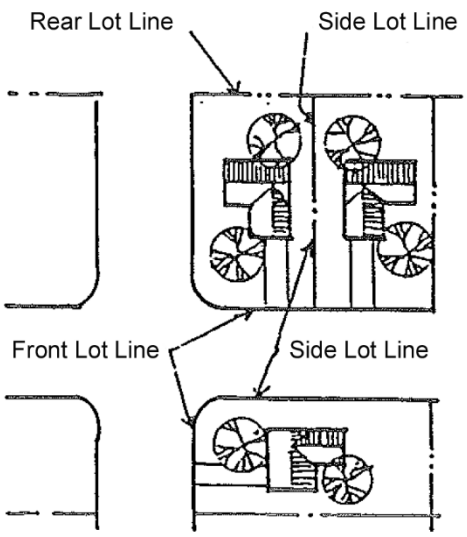
Lot, corner means a lot abutting two (2) or more streets at their intersection.

Lot, double-frontage means a lot which is located between two (2) parallel streets so that the front lot line and the rear lot line abut a street.

Lot line, front means the property line dividing a lot from the right-of-way of a street. On a corner lot, the shorter street right-of-way line shall be considered the front lot line.

Lot line, rear means the property line opposite the front lot line.

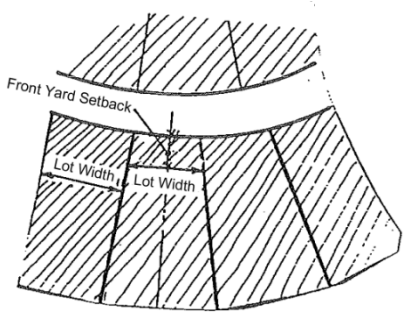
Lot line, side means any lot line other than a front or rear lot line.



Lot width. The lot width shall be determined as follows:

a. If the side lot lines are parallel, the lot width is the perpendicular distance between the side lot lines;

b. If the side lot lines are not parallel, the lot width shall be the length of the line measured at right angles to the line or axis connecting the midpoints of the front lot line and the rear lot line. The length of the line shall be measured at the point equal to the front yard setback for the zoning district in which the lot is located.



Manufactured building means a building that is (1) mass produced in a factory, (2) designed and constructed for transportation to a site for installation and use when connected to required utilities and (3) is either an independent individual building or module for construction with other elements to form a building on the site. The term manufactured is synonymous with the term modular.

Manufactured home means a single-family dwelling which is partially or entirely manufactured in a factory and is not less than twenty-four (24) feet in width and thirty-six (36) feet in length. It is installed on a manufactured, designed or engineered permanent foundation, has brick, wood or cosmetically equivalent exterior siding and a three-twelfths (3/12) or more pitched roof of asphalt shingle, Pro-panel or cosmetically equivalent material. It is certified pursuant to the National Manufactured Housing Construction and Safety Standards Act of 1974, 42 U.S.C., § 5401, et seq., as amended, and is built for the State climate and snow loads according to the Department of Housing and Urban Development standards established under the provisions of 42 U.S.C., § 5401, et seq., called HUD. (See Article 8)

Manufactured housing unit means a manufactured building or portion of a building designed for long-term residential use. A manufactured housing unit must be built to one (1) of two (2) building codes: the Building Code adopted by the Town or the U.S. Department of Housing and Urban Development Code called HUD.

Mobile home means any wheeled vehicle exceeding eight (8) feet in width or thirty-two (32) feet in length, including towing gear and bumpers, without motor power, built on a permanent chassis designed for long-term residential occupancy or temporary office use, containing complete electrical, plumbing and sanitary facilities and designed to be installed in a permanent or semi-permanent manner without a permanent foundation, and is capable of being drawn over public highways by a motor vehicle. Factory-built homes and manufactured homes shall not be considered mobile homes. The term mobile home shall not include travel trailers, recreational vehicles, campers, self-contained motor homes or camper buses. (See Article 8)

Mobile home or *camper sales lot* means a plot of land that is used primarily for the sale of mobile homes or campers. Such uses are permitted only in commercially zoned areas and not as part of mobile home parks or subdivisions. This definition does not apply to any mobile home which is being sold by the person actually residing in the unit.

Mobile home park or *community* means any park, trailer park, trailer court, camp site, lot, parcel or tract of land designed, maintained or intended for the purpose of supplying a rental location or accommodation for any mobile home to be parked, and includes all buildings used or intended for use as part of the equipment where a charge is made. *Mobile home park* or *community* may include mobile homes which are parked, like a "spec" home for purposes of inspection, for sale or rental within the park.

Mobile home space means a plot of ground within a mobile home park designated for the accommodation of one (1) mobile home and its accessory structures.

Mobile home subdivision means a parcel of land subdivided into lots, each lot individually owned and utilized as the site for placement of single-family mobile homes or manufactured homes. Such a subdivision shall not be included in the definition of a mobile home park.

Neighborhoodcommercial uses means commercial or business uses that are low intensity of use, have minimal traffic generation and offer convenient shopping for residential areas. Neighborhood commercial uses may include small food stores, artist studios, antique or gift shops, specialty shops and other similar type uses. The maximum floor area for a neighborhood commercial use shall be two thousand (2,000) square feet.

Neighborhood convenience centers means small combinations of neighborhood commercial uses located near residential areas, possibly as a part of a PUD, that offer convenience goods or services. Neighborhood convenience centers should be compatible in scale and materials with surrounding residential areas. The maximum floor area for a *neighborhood convenience center* should be ten thousand (10,000) square feet, with no single neighborhood commercial use with a floor area greater than two thousand (2,000) square feet.

Nonconforming building means a building that was legally constructed prior to the effective date of the initial ordinance codified herein which does not comply with the height, floor area, lot coverage or other provisions of this Chapter.

Nonconforming lot means a legally recorded lot which at the time it was recorded fully complied with all applicable laws and ordinances but which does not fully comply with the lot requirements of this Chapter concerning minimum area, minimum lot width or minimum frontage upon a public street.

Nonconforming use means a use of land that was legally established prior to the effective date of the initial ordinance codified herein which is not in conformance with the use regulations of this Chapter, including the land use, minimum lot area per dwelling unit, off-street parking requirements or open space requirements.

Open space means land retained in an open or unimproved condition, except for agricultural, for the placement of landscape materials, including trees, shrubs, grasses, structures limited to footpaths and bridges, irrigation structures, erosion-protection devices and underground utilities, or improved for park use as defined

herein. Ownership of such land may be private with an easement or reservation for open space use by deed restriction. It may be deeded or reserved to a property owner's association, or it may be dedicated to the public. Designation of an open space does not imply the provision of access by the public.

Open space, landscaped means a lot, tract or parcel of land that has been improved by the preservation, rearrangement, installation or planting of different trees, shrubs, grass and decorative materials. Decorative materials means materials which augment and enhance the botanical landscaping, including rocks, gravel, driftwood, bark, ponds, fountains, walls or other landscape design features approved by the Town. Such land may be used for plazas, walkways, arcades and pedestrian areas.

Planned Unit Development (PUD) means an area of land, controlled by one (1) or more landowners, to be developed under the unified control or unified plan of development for residential, commercial, educational, recreational or industrial uses or any combination of the foregoing. A *PUD* is a project designed to provide variety and diversity by allowing greater flexibility than would ordinarily be achieved by strict application of the zoning and subdivision standards. *PUDs* are permitted in all zoning districts and allow density averaging over the entire parcel. A *PUD* may include a combination of different dwelling types, grouping of dwelling units into clusters or a variety of land uses which complement each other and harmonize with existing and proposed land uses in the vicinity.

Principal building or *principal use* means the main or primary purpose for which a building or parcel of land is designed, arranged or intended, or for which it may be occupied or maintained under this Chapter.

Public building or *public use* means any building or use open to general use, participation or enjoyment of the public and owned by the Town, County, State or federal government or by a public utility corporation. All public buildings shall conform to the Americans with Disabilities Act.

Rooming unit means a room providing minimum housing accommodations for a roomer, arranged primarily for sleeping and/or study, and which may include a private bath but shall not include a separate kitchen.

School means any building used for educational purposes through the 12th grade by more than ten (10) persons or by ten (10) or fewer persons for more than twelve (12) hours per week or more than four (4) hours in any one (1) day.

Setbacks are measured from the front yard, side yard and rear property lines. Front setbacks are to be measured from the front edge of any porch or wall of a structure excluding an eave with a maximum of a twenty-four-inch projection into the setback area. Rear setbacks are measured from the front edge of any porch or wall of a structure excluding an eave with a maximum of a twenty-four-inch projection into the setback area. Side yard setbacks are measured from the vertical plane of the foundation wall with a maximum of a twenty-four-inch eave projection into the setback area.

Special review use means a use that is permitted within a zoning district only with the prior review by the Planning Commission and approval by the Board of Trustees in accordance with procedures and requirements stated in Article 4 of this Chapter.

Street means a right-of-way reserved for public or private use which provides vehicular and pedestrian access to adjacent properties, including the designations of road, highway, thoroughfare, avenue, lane, boulevard or alley. Streets shall be further classified as set forth below.

Street, arterial means a street whose primary function is to facilitate the flow of traffic through the Town. Limited access is provided to adjoining properties. Arterial streets are designed to accommodate higher volumes of traffic than collector or local streets. Arterial streets may be further classified as major arterial and minor arterial, depending on the potential volume of traffic and local conditions.

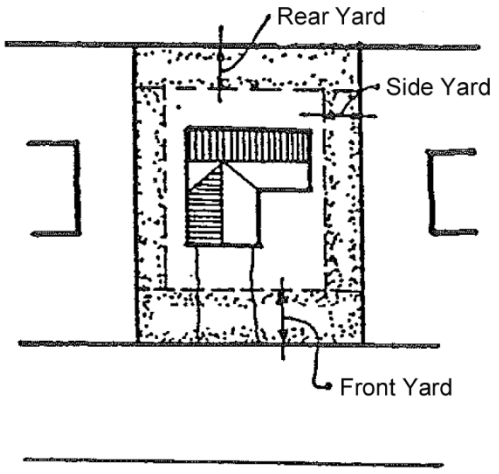
Street, collector means a street with moderate traffic volumes that provide access to residential and commercial areas and to channel traffic from the local streets to the arterial streets. *Collector streets* may be further classified as major collectors and minor collectors depending on the potential volume of traffic and local conditions.

Street, local means a street with low traffic volumes that is intended to provide direct access to adjacent residential or commercial lots.

Structure means anything constructed or erected with a fixed location on the ground above grade.

Travel trailer, camper or *recreational* vehicle means a portable structure, mounted on wheels and drawn by a stock passenger automobile or designed to be loaded onto or affixed to the bed or chassis of a truck, or portable structure mounted on wheels and constructed with collapsible partial side walls of fabric, plastic or other pliable material which fold for towing by another vehicle and unfold at the campsite to provide for temporary living quarters for recreational camping or travel use. The term travel trailer shall include the units designated as campers, pop-ups, motor homes, camper buses or recreational vehicles.

Yard area, required means the open space area that is not occupied by a principal building with a depth or distance from a property line specified by the setback regulations for the district in which the lot is located.



(Ord. No. 83-116, Art. VIII, 1983; Ord. No. 2000-02, Art. VIII, 2000; Ord. No. 2003-07, § 1, 2003; Ord. No. 2004-01, § 1, 2004; Ord. No. 2014-04, § 1, 1-13-2015; Ord. No. 2019-10, § 2, 8-13-2019)

Sec. 16-1-110. Severability.

If a provision of this Chapter is invalidated by decision of a court of competent jurisdiction, it is hereby declared to be the legislative intent that the effect of the decision shall be limited to the provision which is expressly stated in the decision to be invalid, and the decision shall not affect, impair or nullify this Chapter in its entirety.

(Ord. No. 2000-02, Art. XXVI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 2. ZONING DISTRICTS

Sec. 16-2-10. Establishment.

In order to carry out the purpose and provisions of this Chapter, the Town is hereby divided into the following zoning districts:

E-1	Estate Residential District

R-1	Low-Density Residential District
R-2	Medium-Density Residential District
R-3	Higher-Density Residential District
MH	Mobile Home Park Subdivision District
MH1	Mobile Home Parks Subdistrict
MH2	Mobile Home Subdivisions Subdistrict
C-1	Core Commercial District
C-2	Community Commercial District
I-1	Light Industrial District
I-2	Industrial District
DR	Developing Resource District
P	Public District

The intent of each zoning district is as described in the following sections.

(Ord. No. 83-116, Art. IX, 1983; Ord. No. 2000-02, Art. IX, 2000)

Sec. 16-2-20. E-1, Estate Residential District.

It is the intent of this District to provide for orderly development of single-family residential areas on three- to ten-acre lots. Farm-type animals, including horses, sheep, llamas, cattle and goats, will be allowed. Other animals will require approval of the Town. This District requires adequate irrigation water rights if the property to be improved has been previously irrigated and water rights were utilized, and must have a plan for distribution (see Section 16-3-110 of this Chapter).

(Ord. No. 2000-02, Art. IX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-2-30. R-1, Low-Density Residential District.

It is the intent of the this District to provide for the orderly development of single-family residential site-built or manufactured built homes, depending on covenants for the area.

(Ord. No. 2000-02, Art. IX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-2-40. R-2, Medium-Density Residential District.

It is the intent of this District to allow for the orderly and creative development of attached and detached single-family, two-family and multiple-family dwellings at moderate densities. Such areas are intended to serve as a transition between the lower-density zoning districts and the higher-density residential areas and commercially zoned areas.

(Ord. No. 2000-02, Art. IX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-2-50. R-3, Higher Density Residential District.

It is the intent of this District to provide for the orderly and creative development of residential areas with density substantially higher than the Low-Density or Medium-Density Districts yet compatible with the present scale and character of the Town. Higher density residential areas may be appropriately located as a part of planned developments, adjacent to medium-density residential areas, commercially zoned areas, adjacent to the core commercial area or downtown and within close proximity to major collector or arterial streets.

(Ord. No. 2000-02, Art. IX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-2-60. MH, Mobile Home Park Subdivision District.

It is the intent of this District to be composed of two (2) subdistricts, Mobile Home Parks (MH1) and Mobile Home Subdivisions (MH2). Mobile homes will be restricted to this District except as specified in Article 8 of this Chapter. This District is designed to provide orderly development of single-family residential mobile home parks having rented lots and subdivisions having homeowner lots. These subdistricts may require appropriate screening and/or buffer zones from other districts and zones. (See Article 8 of this Chapter for regulations.)

(Ord. No. 2000-02, Art. IX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-2-70. C-1, Core Commercial District.

It is the intent of this District to provide for the orderly development of those commercial and business uses, government, educational and cultural facilities that are characteristic of downtown areas and promote comparison shopping and pedestrian activity in the core area. This District is not intended for businesses and commercial uses that are oriented to the automobile and require extensive ground-level floor area.

(Ord. No. 2000-02, Art. IX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-2-80. C-2, Community Commercial District.

It is the intent of this District to augment the commercial and business needs of the community by providing for the orderly development of commercial facilities that, because of their specific nature, require closer access to arterial routes or immediate access to large parking areas or require generally larger ground-level floor areas than the smaller retail shops as encouraged in the core commercial areas.

(Ord. No. 2000-02, Art. IX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-2-90. I-1, Light Industrial District.

It is the intent of this District to provide for the development of industrial uses that will enhance the economy of the Town and be designed and planned in a manner that will be compatible with the character of the community and not add pollution or other undesirable effects to the adjoining properties or to the community as a whole.

(Ord. No. 2000-02, Art. IX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-2-100. I-2, Industrial District.

The intent of this District is to allow for basic or primary industries which are generally not compatible with residential and/or commercial activity. Certain extremely obnoxious, hazardous and noisy uses will require special permission to locate in this District.

(Ord. No. 2000-02, Art. IX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-2-110. DR, Developing Resource District.

It is the intent of this District to provide for the zoning of those areas to be annexed that are eligible for annexation and are designated in the Comprehensive Plan as potentially suitable for urban development but not in the immediate future because of lack of utilities or other public services. DR District zoning should be applied to existing agricultural or open space areas with minimal present development.

(Ord. No. 2000-02, Art. IX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-2-120. P, Public District.

It is the intent of this District to provide a special district for those lands that are dedicated for public use for recreational or educational purposes or for other public facilities or services. New construction and development will require special review.

(Ord. No. 2000-02, Art. IX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 3. DISTRICT REGULATIONS

Sec. 16-3-10. Schedules of uses and requirements.

To facilitate public understanding of this Chapter and for convenient reference and use, the following schedules are provided for all districts. These schedules are a part of this Chapter and may be amended as with any other part of this Chapter.

(1) *Schedule of Uses.* The schedule of uses indicates, by district, those uses that are:

P - Permitted by right

S - Permitted by special review

X - Prohibited

Any use that is not specifically permitted shall be deemed to be excluded. If a question arises as to whether a specific use does not fall within the expressed use categories, any person may apply to the Planning Commission for a determination as to whether a specific use is permitted.

(2) *Schedule of Requirements.* The schedule of requirements includes minimum lot areas, setback, density and open space requirements for each residential and commercial zone. Additional requirements are listed for uses permitted by special review.

(Ord. No. 83-116, Art. X, 1983; Ord. No. 2000-02, Art. X, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-3-20. Schedule of uses, residential districts.

Table 16-1
Schedule of Uses - Residential Districts

Use	R-1 District	R-2 District	R-3 District	E-1 District	MH District
Single-family dwellings	P	P	P	P	P
Two-family dwellings	X	P	P	S	X
Multiple-family dwellings, apartments/townhouses not exceeding 6 units per lot	X	S	P	X	X
Multiple-family dwellings, apartments/townhouses in excess of 6 units per lot	X	X	S	X	X
Mobile home parks	X	X	X	X	S 1
Mobile home subdivisions	X	X	X	X	P
Parks and recreation areas	P	P	P	P	P
Private schools	S	S	S	S	X
Public or governmental uses	S	S	S	S	X
Group homes for the developmentally disabled	S	S	S	S	S
Churches	S	S	S	S	S
Nursing homes/assisted living apartments	X	S	S	X	X
Rooming houses/bed and breakfasts	X	S	S	S	X
Professional offices 2	X	S	S	X	S
Neighborhood convenience centers 3	S	S	S	S	S
Antenna structures (towers)	S	S	S	S	S

Horses, barns and pastures	X	X	X	P	X
Mobile homes (single unit)	X	X	X	X	P
Neighborhood commercial uses 4	X	X	X	X	P

P = Permit by right

S = Permit by special review

X = Prohibited use

[1] See Article 8 of this Chapter.

[2] Professional offices as home occupations are permitted in all districts, subject to provisions in Section 16-11-20 of this Chapter.

[3] Neighborhood commercial uses may include small food stores, specialty shops, gift, antique shops or similar type uses. Maximum floor area shall be 2,000 square feet total.

[4] Neighborhood convenience center shall have a maximum total floor area of 10,000 square feet and no single business with a greater total floor area than 2,000 square feet.

(Ord. No. 2000-02, Art. X, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-3-30. Schedule of requirements, residential districts.

Table 16-2
Schedule of Requirements[1]- Residential Districts

	R-1 District		R-2 District		R-3 District		E-1 District		MH District	
Minimum Lot Area Requirements	Dwelling units	Min. lot area (sq. ft.)	Dwelling units	Min. lot area (sq. ft.)	Dwelling units per story	Min. lot area (sq. ft.)	Dwelling units	Min. lot area (sq. ft.)	Dwelling units	Min. lot area (sq. ft.)
Residential uses permitted by right	1	6,000	1	6,000	1	6,000	1	3 acres	1	5,000
			2	8,000	2	6,000	2		N/A	N/A
					3	8,000				
					4	10,000				
					5	12,500				
					6	15,000				

Residential uses permitted by special review			3	12,000	Over 6 units	15,000 sq. ft.				
			4	16,000		+				
			5	20,000		2,500 sq. ft.				
			6	24,000		for each unit over 6				

Yard Requirements[2]	R-1 District	R-2 District	R-3 District	E-1 District	MH District
All yard areas adjacent to an arterial street major and minor	50 ft.	35 ft.	35 ft.	75 ft.	50 ft.
Front yard setback					
Collector (major and minor)	25 ft.	25 ft.	25 ft.	50 ft.	25 ft.
Local	20 ft.	20 ft.	20 ft.	35 ft.	20 ft.
Side yard	6 ft.	6 ft.	10 ft.[3]	20 ft.	6 ft.
Rear yard	10 ft.	10 ft.	20 ft.	20 ft.	15 ft.
Minimum lot width	50 ft.	50 ft.	50 ft.	200 ft.	50 ft.
Minimum landscaped open space (% of lot area)	-	20%	20%	30%	-
Minimum lot coverage	30%	30%	30%	20%	50%
Maximum building height	25 ft.	25 ft.	35 ft.	30 ft.	25 ft.

[1] See also the following provisions: 16-3-40 to 16-3-60 pertaining to average lot areas, side yard setback variation and front yard variation.

[2] See supplementary requirements in Section 16-10-60.

[3] When a building is 3 stories, a 15-foot setback is required.

(Ord. No. 2000-02, Art. X, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-3-40. Average lot area.

(a) When a group of ten (10) or more single-family dwellings are proposed for development as a unit, the minimum lot area may be varied in order to achieve flexibility and creativity in design. However, in no case shall:

(1) The lot area be less than four thousand five hundred (4,500) square feet;

(2) The average lot size for the unit be less than six thousand (6,000) square feet; and

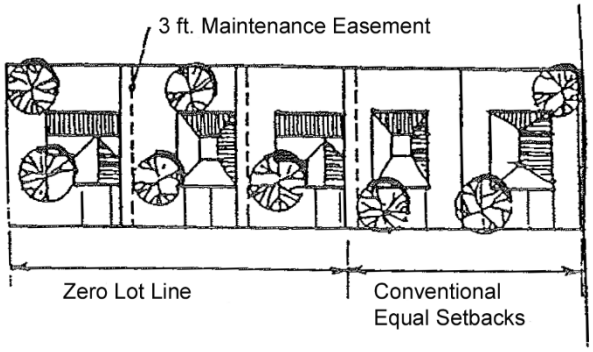
(3) More than twenty percent (20%) of the lots be less than six thousand (6,000) square feet.

(b) When such development procedures are followed, the Town-approved subdivision plat must be on record in the County Clerk and Recorder's office.

(Ord. No. 2000-02, Art. X, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-3-50. Side yard setback variation.

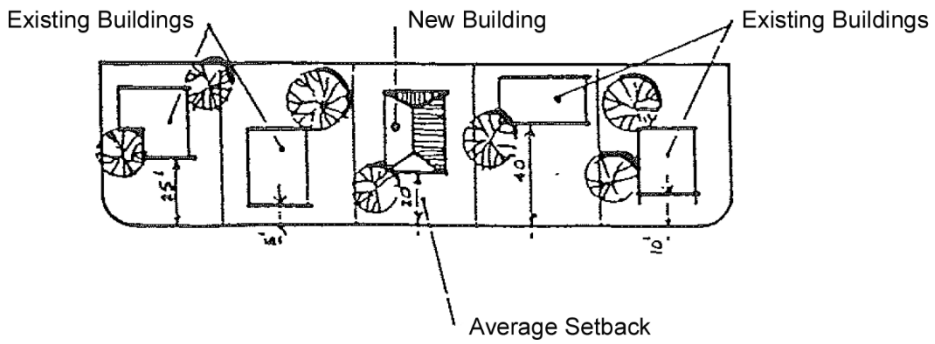
When a group or cluster of three (3) or more single-family dwellings are proposed for development as a unit, the side yard requirement may be reduced subject to the approval of the Town Administrator. However, the minimum spacing between two (2) structures shall not be less than twelve (12) feet. In the case of zero-lot-line developments, permitted by this provision, a minimum of a three-foot-wide maintenance easement shall be provided on the property adjacent to the wall that is placed along the side lot line.



(Ord. No. 2000-02, Art. X, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-3-60. Front yard variation.

In areas established and predominantly built out prior to the effective date of the initial ordinance codified herein, the front yard setback shall be equal to the average setbacks for the other buildings on the same block or a maximum of that required by the new regulation as herein provided.



(Ord. No. 2000-02, Art. X, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-3-70. Schedule of uses, commercial and industrial districts.

Table 16-3
Schedule of Uses - Commercial and Industrial Districts

Use	C-1 District	C-2 District	I-1 District	I-2 District
Auto sales and service repair	X	S	S	P
Automobile wrecking yards	X	X	X	S
Scrap processing when yard is enclosed by 6-foot screening of wall. (No junk allowed outside of screening)				
Banking, savings and loan	P	P	X	X
Bulk large storage of flammable liquid gas facilities	X	X	X	S
500 gallons and under	S	S	S	S
Campgrounds, recreational vehicle parks	X	S	X	S
Child care	P	P	S	X
Churches	S	S	X	X
Commercial recreational including pool halls, bowling alleys, skating rinks and golf courses	S	S	S	X
Dental or medical clinics	P	P	S	X

Drive-up windows for banks, businesses and restaurants	S	S	S	X
Dwelling units as a part of a business use	S	S	S	X
Dwelling units secondary to the business use	P	P	S	X
Fabricating/manufacturing industry	S	S	S	P
Fast food and drive-thru restaurants	S	S	S	X
Fertilizer storage or manufacturing of	X	X	X	S
Formula businesses	X	S	S	S
Fruit/packing	X	X	P	P
Fruit/produce processing	X	X	S	P
Gas stations	X	S	S	S
Grain warehouses	X	X	X	P
Group homes for the developmentally disabled	S	S	X	X
Livestock areas or barns	X	X	X	S
Lumber yards	X	S	S	P
Manufacture and storage of explosives	X	X	X	X
Manufacturing	X	X	S	P
Membership clubs	S	S	S	S
Mining of natural resource material	X	X	X	S
Mobile home sales/service	X	S	S	P
Motels, hotels and lodging facilities (including room houses and bed and breakfasts)	S	P	X	X
Multiple-family dwellings	S	S	X	X
Nursing homes	S	P	P	P
Parking lots	P	P	P	P
Parks and recreation areas	P	P	P	P
Personal services shops, including barber, beauty	P	P	S	X

shops, shoe repair, self-service laundries, travel agencies, etc.				
Professional and business offices when part of permitted light industry	P	P	S	X
Public and governmental facilities	P	P	S	X
Public or private schools	S	S	S	X
Ready-mix concrete and asphalt plants	X	X	X	P
Restaurants	P	P	S	X
Retail businesses	P	P	S	S
Service and keeping of heavy industrial equipment	X	X	X	P
Small animal clinic	X	S	P	X
Storage sheds (rental spaces)	S	S	S	S
Utilities2	X	X	S	P
Utility substations 8	X	S	S	S
Warehouses	S	S	P	P
Wholesale businesses (factory outlets)	S	S	S	S

P = Permitted by right

S = Permitted by special review

X = Prohibited

(Ord. No. 2000-02, Art. X, 2000; Ord. No. 2014-04, § 1, 1-13-2015; Ord. No. 2016-06, exh. A. 8-23-2016; Ord. No. 2019-10, § 2, 8-13-2019)

Sec. 16-3-80. Schedule of requirements, commercial and industrial districts.

Table 16-4
Schedule of Requirements - Commercial and Industrial Districts

Requirements	C-1 District	C-2 District	I-1 District	I-2 District
Minimum Lot Area				
Nonresidential	2,500 sq. ft.	8,000 sq. ft.	8,000 sq. ft.	10,000 sq. ft.

Residential	6,000 sq. ft.[1]	6,000 sq. ft.[2]		
Combined residential/commercial	2,500 sq. ft.	8,000 sq. ft.		
Minimum Lot Width	25 ft.	50 ft.	50 ft.	100 ft.
Maximum Building Height	35 ft.	35 ft.	25 ft. 2	35 ft.
Yard requirements				
All yard areas adjacent to an arterial street	0 ft.	50 ft.	50 ft.	75 ft.
Front yard setback				
arterial	0 ft.	50 ft.	50 ft.	75 ft.
collector	0 ft.	25 ft.	35 ft.	50 ft.
local	0 ft.	25 ft.	25 ft.	50 ft.
Side yard setback	0 ft.	10 ft.	10 ft.	20 ft.
Rear yard setback	20 ft.	20 ft.	20 ft.	30 ft.
Minimum landscaped open space	-	10%	10%	10%

[1] For residential development in the C-1 and C-2 acres, the minimum lot sizes shall be the same as the requirements of the R-3 District.

[2] Unless the building is set back at least 150 feet from adjacent lot of lots in the R-1 or R-2 Districts, and if it is determined that the building will not block the view of adjoining R-1 or R-2 developed properties.

(Ord. No. 2000-02, Art. X, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-3-90. Developing Resource District.

(a) *Permitted uses.* Uses permitted by right in the Developing Resource District include those existing uses of the land at the time of annexation, including:

(1) Single-family residence.

(2) Raising of crops, grain.

(3) Ranching.

(4) Other agricultural uses.

(b) *Rezoning required.* No uses other than those existing at the time of annexation shall be permitted on property zoned DR unless the property is rezoned to a zoning district that permits the proposed use.

(c) *Uses permitted by special review.* New dwelling units shall be permitted by special review.

(d) *Park dedication requirements and water rights.* The properties that are annexed and zoned DR, Developing Resource, shall not be subject to requirements for park dedications or cash payment in lieu of dedicating park land or for water rights fees or requirements, except as to secured uses by right or permitted uses by special review, until the property is rezoned, wherein full satisfaction of the requirements of this Chapter shall then be due.

(Ord. No. 2000-02, Art. X, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-3-100. Public District.

(a) *Permitted uses.* Uses permitted by right in the Public District include the following:

(1) Park recreational areas dedicated to the Town.

(2) Public educational facilities existing at the time of adoption of the initial ordinance codified herein.

(3) Public building and facilities existing at the time of the adoption of the initial ordinance codified herein.

(b) *Uses permitted by special review.*

(1) New public educational facilities.

(2) New public buildings and facilities.

(Ord. No. 2000-02, Art. X, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-3-110. Estate Residential District.

On those properties where livestock and poultry are allowed, the following performance standards shall be observed.

(1) All manure shall be removed periodically or incorporated into the soil on a regular basis such that the manure does not draw flies or other insects or cause obnoxious odors.

(2) Adequate overflow drainage on drinking facilities shall be provided to prevent the saturation of soil on adjacent property.

(3) Spillage and leftovers from livestock feedings must be removed or so disposed of as to prevent fly, bird or rodent propagation or creation of odors.

(4) Any shed, shelter, pen or enclosure for livestock shall not be closer than one hundred (100) feet to any off-property residence or place of business and shall be set back twenty (20) feet from the side lot line and fifty (50) feet from the front lot line.

(5) All sheds or other shelter for livestock shall be kept reasonably free of rodents and insects and shall be kept in good repair.

(6) Adequate drainage facilities or improvements shall be constructed to protect any adjacent rivers, streams or other bodies of water from pollution.

(7) In subdivided areas, all livestock shall be kept within a fenced area.

(8) Adherence to the Colorado Confined Animal Feeding Regulations, promulgated by the Colorado Department of Public Health and Environment, Water Quality Control Commission shall be observed.

(9) The maximum number of allowable livestock per lot does not apply to young animals below the weaning age or six (6) months of age, whichever is less.

(10) The number of livestock permitted shall be two (2) horses, one (1) cow, one (1) llama, three (3) sheep, or three (3) goats per three (3) acres. There shall be twenty-four (24) poultry total allowed.

(Ord. No. 2000-02, Art. X, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Secs. 16-3-120, 16-3-130. Reserved.

Sec. 16-3-140. Formula business.

(1) *Intent.* The purpose of these formula business requirements is to maintain and protect Paonia's historic downtown core as the civic, social and business hub of the community, ensure the vitality and diversity of the Town's commercial districts and enhance the quality of life of residents and visitors.

(2) *Applicability.* These regulations shall apply to formula businesses as defined in Section 16-3-100 of the Code.

(3) *Related definitions.* For purposes of this Section, the following definitions apply:

(a) *Color scheme* means the selection of colors used throughout the business, such as on the walls, furnishings, permanent fixtures or on the building façade.

(b) *Décor* means the interior design and furnishings that may include style of furnishings, shelving, display shelving/racks, wall coverings or other permanent fixtures.

(c) *Façade* means the principal exterior face or front of a building, including awnings, overhangs, and porte-cocheres that are oriented towards a street, alley or open space.

(d) *Servicemark* means a word, phrase, symbol or design or a combination of words, phrases, symbols or designs that identifies and distinguishes the source of a service of one party from those of others.

(e) *Signage* means a sign as detailed Section 18-6-10.

(f) *Standardized array of merchandize* means fifty percent (50%) or more of the in-stock merchandise is from a single manufacturer or distributor bearing uniform markings.

(g) *Standardized array of services* means a substantially similar set of services or food and beverage menus that are priced, prepared and performed in a consistent manner.

(h) *Trademark* means a word, phrase, symbol or design, or a combination of words, phrases, symbols or designs legally registered or established by use that distinguishes the source of the product of one party from those of others.

(i) *Uniform apparel* means standardized items of clothing, including but not limited to standardized aprons, pants, shirts, vests, smocks or dresses, and hat and pins (other than name tags) with standardized colors and fabrics.

(4) *Exemptions.* The following formula businesses are exempt from these formula business requirements:

(a) Formula businesses in operation prior to the effective date of these regulations.

(b) Construction work on a pre-existing, approved or exempt formula business that is required to comply with fire and/or life safety standards.

(c) Disability access improvements to a pre-existing, approved or exempt formula business.

(5) *Formula Business Location Requirements.* Formula retail businesses may be permitted as a Special Review in the C-2, I-1 or I-2 zone district.

Formula businesses that are legally in existence as of the effective date of this Ordinance may remain in their current location as a non-conforming use. The same or substantially similar type of use may be transferrable upon sale or transfer of the commercial space or ownership of the business and/or building.

Formula businesses that are legally in existence as of the effective date of this Ordinance may be renovated and/or expanded up to fifteen percent (15%) of the existing gross floor area or a maximum of one thousand five hundred (1,500) square feet, whichever is less.

(6) *Compliance with the Code.* Formula business shall comply with all applicable standards of the underlying zone district and the applicable regulations of the Town Code.

(7) *Formula Business Additional Criteria.* No conditional use permit for a formula business shall be approved unless the following criteria are met:

(a) The formula business complements existing businesses and promotes quality, diversity and variety to assure a balanced mix of commercial uses and range of local, regional and national goods and services for residents and visitors.

(b) The formula business has submitted plans, drawings, renderings, visual simulations or other examples that illustrate how it will be consistent with the historic nature of the Town of Paonia.

(c) The formula business does not include any drive-through facilities.

(Ord. No. 2019-10, § 3, 8-13-2019)

ARTICLE 4. SPECIAL REVIEW APPLICATION REQUIREMENTS AND PROCEDURES

Sec. 16-4-10. Intent.

Each established zoning district is intended for a specific type or category of land use (e.g., single-family dwelling in an R-1 district). However, there are certain uses, which may or may not be appropriate in a particular district, depending on the situation. For example, the location, nature of the proposed use, character of the surrounding area, traffic capacities of adjacent streets and potential environmental effects all may dictate that the circumstances of the development should be individually reviewed. The special review process is established to provide for these specific uses without establishing numerous separate zoning classifications. It is the intent of this Article to provide a review of such uses so that the community is assured that the proposed uses are compatible with the location and surrounding land uses.

(Ord. No. 83-116, Art. XI, 1983; Ord. No. 2000-02, Art. XI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-4-20. When allowed.

Within each zoning district, certain land uses are permitted by right or by special review or prohibited. Special review uses may be permitted in designated districts upon review by the Planning Commission and approval by the Board of Trustees.

(Ord. No. 83-116, Art. XI, 1983; Ord. No. 2000-02, Art. XI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-4-30. Site plan and supporting documents.

There shall be filed with each special review application a site plan drawn to scale and an appropriate number of copies as determined by the Town Administrator. The site plan shall be drawn in black ink on Mylar. Following approval by the Board of Trustees, the applicant shall submit a reproducible copy of the original site plan to the Town for the Town's permanent records. The special review application shall include the following:

(1) The site plan showing the location of all buildings, structures and other improvements to be placed on the real property. A building envelope may be used in lieu of showing the exact building or structure location to allow for minor variations in the location.

(2) A legal description of the property.

(3) A list of the names and addresses of all property owners within two hundred (200) feet of the property.

(4) All off-street parking and loading areas.

(5) The location of all ways for ingress to and egress from all buildings and parking areas.

(6) Service and refuse collection areas.

(7) Major screening proposals.

(8) The size, shape, height and character of all signs.

(9) The area and location of all open space and recreation areas.

(10) The location and type of outdoor lighting.

(11) The character and type of landscaping to be provided. The landscaping shall be indicated in tabular form showing the type of plant material, minimum size and quantity. The approximate location of landscaping shall be indicated on the site plan.

(12) The anticipated timetable for completion. If the project is to be completed in phases, then the date for completion of each phase shall be indicated.

(13) The following agreement will be placed on the original special review site plan, signed by all owners and lienholders of the property: The undersigned agree that the real property described on the site plan shall be developed only in accordance with the approved special review site plan and other provisions of the zoning regulations of the Town of Paonia. The signatures of all owners and lien holders shall be notarized. The agreement shall further designate who is specifically responsible for the proposed improvements.

(14) In addition to the site plan, a title policy indicating that the property is free and clear of all ownership disputes, liens or encumbrances whatsoever which would impair the use of the property for the uses approved. The title policy shall provide verification that all owners and lien holders have signed the special review site plan. The title policy shall be effective within twenty-four (24) hours after the date of approval by the Board of Trustees. If the title policy is not provided to the Town Clerk within seven (7) days after action by the Board of Trustees, the action by the Board of Trustees shall be automatically voided.

(15) Other information as needed by the Town to analyze the feasibility and impacts of the special review use, which may include, but are not limited to, traffic analyses, soils or geological reports or drainage and engineering studies.

(Ord. No. 83-116, Art. XI, 1983; Ord. No. 2000-02, Art. XI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-4-40. Procedures for securing approval of special review application.

(a) *Preapplication conference.* The applicant shall schedule a conference with the Town Administrator prior to submitting a formal application. This will serve to better acquaint the applicant with the Town's policies, requirements, procedures and the Master Plan objectives. The preapplication conference should be held before the applicant has entered into binding commitments or incurs substantial expenses in the preparation of plans, surveys and other studies.

(b) *Filing deadline.* Applications for special review shall be filed at least thirty (30) days in advance of the meeting at which they are to be considered by the Planning Commission. The Town will provide the applicant with a list of filing deadlines and meeting dates. Applications that are incomplete at the time of filing will not be scheduled for review by the Planning Commission.

(c) *Fees.* All persons filing a special review application shall be charged a fee to cover the cost of advertising and processing. The amount of the fee shall be established by resolution of the Board of Trustees.

(d) *Review by the Town Administrator.* The Town Administrator shall review the application for compliance with the provisions of this Code, the site plan review criteria and performance standards of this Section and for consistency with the Master Plan. The Town Administrator shall receive comments from all other pertinent Town departments and other agencies and from the Development Review Committee. The Town Administrator may then submit his or her recommendations and comments to the Planning Commission for its consideration at its next regularly scheduled meeting. Copies of staff recommendations shall be available to the applicant prior to the Planning Commission's meeting.

(e) *Action by the Planning Commission.* At a duly noticed public hearing the Planning Commission shall consider the special review application and the comments and recommendations of the Town Administrator. As a part of their review of the proposed special review use, the Planning Commission shall consider the Special Review Site Plan review criteria and performance standards of Section 16-4-50 below.

(f) *Action by the Board of Trustees.* Within thirty (30) days after the action by the Planning Commission, the Board of Trustees shall consider the special review request and the recommendations of the staff and the Planning Commission. The Board of Trustees shall then make the final decision to approve the application, approve the application with modifications or deny the application.

(Ord. No. 83-116, Art. XI, 1983; Ord. No. 2000-02, Art. XI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-4-50. Site plan review criteria and performance standards.

(a) The criteria for review and performance standards are as follows:

(1) Compliance of the application with this Code in general.

(2) The compatibility of the proposed use and site plan with the character of the surrounding area.

(3) The desirability and need for the proposed use.

(4) The potential for adverse environmental influences that might result from the proposed use.

(5) Compatibility of the proposed use and site plan with the policies and guidelines of the Comprehensive Plan.

(b) Lights and signs shall be located in a manner that will not be distracting to adjoining properties or passing motorists.

(c) Landscaping shall be provided in areas near the public right-of-way and located with consideration for energy conservation. An acceptable plan must be provided for the maintenance of the required landscaped areas.

(d) Control of storm drainage shall be provided so as to not damage adjoining properties. The plan must be approved by the Town Engineer.

(e) Site design and building plans shall include provisions for the needs of handicapped individuals as required by the Building Code or other ordinances of the Town.

(f) Approved landscaping or solid fencing capable of screening adjacent properties shall be provided where commercial uses abut residential uses.

(g) Commercial and industrial uses shall conform to the following performance standards:

(1) No dust, odor, gas, fumes, glare or vibration shall extend beyond lot lines. Glare pertains to sunlight reflected from windows or other integral portions of buildings, as well as from lighting fixtures and signs.

(2) Smoke shall not be emitted at a density greater than #1 on the Ringleman's scale.

(3) No particles of fly ash shall exceed two-tenths percent (0.2%) grains per cubic foot of the flue gas at a stack temperature of fifty (50) degrees Fahrenheit.

(4) Noise. No noise shall be emitted which exceeds a maximum of seventy-five (75) decibels with a maximum increase of five (5) decibels permitted for a maximum of fifteen (15) minutes in any one (1) hour. In addition, every activity shall be conducted so that no noise produced is objectionable due to intermittence, beat frequency or shrillness.

(5) Water pollution. No water pollution shall be emitted by the manufacturing or other processing.

(6) Outside storage areas that adjoin R-1, R-2 or R-3 Districts must be screened from view with screening of at least eight (8) feet high. The screening shall be constructed of board fencing, screened metal fencing or shrubs.

(7) Truck traffic to and from the I-1 and I-2 District facilities must be restricted to truck routes. The weight of the trucks is limited to standard highway limits unless otherwise posted.

(8) Industrial activity within the I-1 District will be restricted to 7:00 a.m. to 9:00 p.m.

(Ord. No. 83-116, Art. XI, 1983; Ord. No. 2000-02, Art. XI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-4-60. Effect of special review approval.

(a) Following approval of a special review application, all real property described in the application must be improved, developed and used in accordance with the approved application, the site plan and any written proposals submitted therewith within the completion date or dates set by the Board of Trustees.

(b) Any changes or modifications to the special review application or site plan shall be permitted only in accordance with the procedures stated in Section 16-4-70 below.

(c) It is unlawful for the owner of the property subject to an approved special review application to fail to complete all improvements within the approved completion date set by the Town or to use the property for any use not set forth in an approved special review application. Each day of violation shall be considered as a separate violation of the provisions of this Chapter.

(Ord. No. 83-116, Art. XI, 1983; Ord. No. 2000-02, Art. XI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-4-70. Changes or modification to approved application and special review site plans.

Changes or modifications to an approved special review application and site plan shall be permitted by following the procedures of this Chapter for rescinding a special review application and securing approval of the original application, except as follows:

(1) For minor variations in the location of structures, improvements or open areas caused by engineering or other unforeseen difficulties, the Planning Commission may authorize a modification to an approved site plan without public hearing. Such changes or modifications authorized by this Paragraph shall not modify use, character or density of an approved special review application or site plan. All site plans so modified shall be amended to show the authorized modifications.

(2) The Planning Commission may also grant, without a public hearing, an extension of the time schedule for a period not to exceed six (6) months. Not more than two (2) such extensions may be granted without a duly noticed public hearing.

(Ord. No. 83-116, Art. XI, 1983; Ord. No. 2000-02, Art. XI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-4-80. Termination of approved special review applications.

Approved special review applications may be terminated as follows:

(1) *By Board of Trustees action.* If construction is not completed and use established on a property subject to an approved special review application in accordance with and within the time schedule set forth in the application, the Board of Trustees may require the property owner to appear before it and present evidence establishing that he or she has not abandoned the use of the property as approved by the Board of Trustees and that he or she has the ability to complete the development of the property. In the event the Board of Trustees finds that the conditions which existed at the time of the approval of the application have changed so that reasonable questions exist regarding the property owner's ability and intention to comply with the application, it may withdraw its approval. Upon such rescission, all uses permitted by the application shall terminate at its discretion, and for good cause shown, the Board of Trustees may extend the period of time for completion of construction and use of the property as provided in the application.

(2) *By owner's action.* The owner of a property subject to a special review application may petition the Board of Trustees to rescind its approval of the special review application pertaining to his or her property or any part thereof. Such petition shall be signed and filed with the Town Clerk in the number and within the time provided in this Chapter for special review applications. The petition shall be submitted to the Planning Commission for its consideration. The Planning Commission shall then consider the petition and submit its recommendation to the Board of Trustees. The Board of Trustees shall then consider the petition and determine whether or not to grant the same. If the petition is granted, the Board of Trustees shall rescind its approval of the subject special review application as to the property described in the petition.

(Ord. No. 83-116, Art. XI, 1983; Ord. No. 2000-02, Art. XI, 2000)

ARTICLE 5. PLANNED UNIT DEVELOPMENT

DIVISION 1. GENERAL PROVISIONS

Sec. 16-5-10. Intent.

(a) It is the intent of these PUD regulations to promote the following objectives on areas of five (5) acres or more to:

(1) Permit greater flexibility in the location of buildings, mixtures of land uses, housing types and open space and consequently promote more imaginative design than would generally be possible under conventional zoning requirement. Limited variations to applicable zoning and subdivision requirements may be possible through the PUD process.

(2) Allow for a greater diversity in the choice of housing types and provide more economical subdivision design which may assist in creating more affordable housing.

(3) Promote a higher level of development design, including greater landscaping, open space, energy efficient design and convenient pedestrian and vehicular circulation.

(4) Encourage more innovative land use and site design and to carry out the goals and policies of the Comprehensive Plan.

(b) Exceptions to development standards. To assist developers in achieving the intent of the PUD as stated above, the Planning Commission may allow modifications and exceptions to said standards, provided that such exceptions are consistent with the intent of this Article and the Comprehensive Plan, and that such actions pose no threat to the property values, health, safety and general welfare of the people of the community and the owners or occupants of adjacent or nearby land.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-20. Authority.

The Town hereby adopts the PUD regulations contained in this Article in accordance with Title 24, Article 67, C.R.S. The purposes set forth in Section 24-67-102, C.R.S., are incorporated herein by reference in addition to the statements of intent listed above in Section 16-5-10.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-30. Where permitted.

A PUD may be permitted in any zoning district within the corporate boundaries of the Town subject to the review and approval requirements of this Article.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-40. Uses permitted.

Within each zoning district, a PUD may include those land uses designated as a permitted use by right or by special review in that district. The Board of Trustees may also allow appropriate mixtures of housing types and supporting neighborhood commercial uses, provided that they are in accordance with the standards and criteria provided in this Chapter and are consistent with the policies of the Comprehensive Plan.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-50. Effect of designation.

(a) Approval of a PUD shall have the effect of overlaying the existing zoning and, therefore, adding to and modifying the existing zoning requirements. If there is a conflict between the provisions of the existing zoning district and the PUD regulations that are applied to a particular development, then the provisions approved for the planned development shall apply.

(b) When a PUD is approved by the Town, the zoning designation for that lot, tract or parcel on the official zoning shall include the suffix "PUD". An approved site for a PUD that is zoned R-1 would then have the designation "R-1 (PUD)."

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

DIVISION 2. APPLICATION PROCEDURE

Sec. 16-5-110. Procedures for securing approval of PUD.

(a) Preapplication conference. Prior to submittal of a formal PUD application, the applicant is required to hold a preapplication conference with the Town Administrator to present a tentative sketch plan for review. The preapplication conference should address itself to the following:

(1) The proper relationship between the proposed project and the Comprehensive Plan and/or stated planning and development objectives.

(2) The names, addresses and phone numbers of neighboring property owners within two hundred (200) feet.

(3) The nature, design and appropriateness of the proposed land use arrangement for the zone and configuration of the property involved.

(4) The adequacy of open space areas in existence and as proposed to serve the development.

(5) Adequate irrigation water rights if the property to be improved has been previously irrigated and water rights were utilized, with a plan for distribution.

(b) The conference should be held before the applicant has entered into binding commitments or has incurred substantial expense in the preparation of plans or other studies.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-120. PUD sketch plan review; intent.

The purpose of the sketch plan is to acquaint the staff, the Planning Commission and the Board of Trustees with the nature of the proposed PUD and to identify potential problems or conflicts before substantial time and cost are invested by the applicant. This step in the process is optional. For smaller projects, a preapplication conference with the Town Administrator may be sufficient. However, for larger projects or those that may require major policy decisions, a sketch plan review by either the Planning Commission or the Board of Trustees or both may be strongly advisable. The Town Administrator may recommend that a sketch plan be prepared by the applicant prior to proceeding to a more detailed phase of the process. The sketch plan must be submitted to the Town Clerk thirty (30) days prior to the Planning Commission meeting at which it is being considered.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-130. PUD master plan and preliminary development plan; intent.

The PUD master plan is intended for those projects that will be developed in more than one (1) phase. The PUD master plan may be submitted and reviewed prior to or simultaneously with the preliminary development plan for the first phase of development.

(1) *Filing deadline.* Applications for a PUD master plan and preliminary development plan shall be filed at least thirty (30) days prior to the Planning Commission meeting at which time the matter is to be heard. If public hearing is needed, neighboring property owners within two hundred (200) feet shall be notified.

(2) *Development Review Committee.* Prior to the Planning Commission meeting, the matter shall be reviewed by the Development Review Committee. The applicant or his or her representative shall be invited to attend this review session. The Development Review Committee's comments shall be forwarded to the Planning Commission. See Chapter 17 of this Code.

(3) *Planning Commission action.* At a public hearing, the Planning Commission shall consider the PUD master plan and/or preliminary development plan and the comments and recommendations of the Development Review Committee. The Planning Commission shall review the application with respect to the criteria and standards for PUD provided in this Article. The Planning Commission may then recommend to the Board of Trustees that the matter be approved, approved with modifications or denied.

(4) *Board of Trustees action.* At the next scheduled Board of Trustees meeting, the PUD master plan and/or preliminary development plan shall be considered by the Board of Trustees. The Board of Trustees shall consider the recommendations of the Planning Commission and the staff and review criteria and standards for PUD provided in this Article. The Board of Trustees may then approve the plan, approve the plan with modifications or deny the application.

(5) *Effect of approval.* Once a PUD master plan and/or preliminary development plan is approved, all property within the area described in the application must be developed in accordance with the plan. No building permits will be issued for the property unless a PUD preliminary development plan and final development plan are approved in accordance with the remaining sections in this Article.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-140. Final development plan.

(a) *Filing deadline.* Final development plans shall be submitted at least thirty (30) days prior to the Planning Commission meeting at which time the matter is to be heard.

(b) *Development Review Committee.* Prior to the Planning Commission meeting, the matter shall be reviewed by the Development Review Committee. The applicant or his or her representative shall be invited to attend this review session. The Development Review Committee's comments shall be forwarded to the Planning Commission. See Chapter 17 of this Code.

(c) *Planning Commission action.* At a public hearing, the Planning Commission shall consider the final development plan and the comments and recommendations of the Development Review Committee. The Planning Commission shall review the application with respect to the criteria and standards for PUDs and special review applications and for consistency with the PUD master plan and preliminary development plan.

(1) If there are substantial differences between the final development plan and the preliminary development plan, a revised preliminary development plan must be considered under the review process in Section 16-5-120 above.

(2) If the Final development plan is consistent with the PUD master plan and/or the preliminary development plan, the Planning Commission may then recommend to the Board of Trustees that the matter be approved, approved with modifications or denied.

(d) *Board of Trustees action.* Within thirty (30) days after action by the Planning Commission, the final development plan shall be considered by the Board of Trustees. All modifications to the site plan and application as recommended by the Planning Commission shall have been completed prior to the meeting of the Board of Trustees. The Board of Trustees shall consider the recommendations of the Planning Commission and the staff and review standards and criteria for PUDs provided in this Article. The Board of Trustees may then approve the plan, approve the plan with modifications or deny the plan.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-150. Determination of completeness.

Upon receipt of a PUD master plan, preliminary or final development plan, the Town Administrator shall review the application to determine whether it is in an acceptable format and includes the requirements of Section 16-5-210 of this Article. If the Town Administrator finds that the application is in the proper format and is complete, he or she shall initiate the process contained herein. If the Town Administrator determines that the application is incomplete, he or she shall notify the applicant of the specific deficiencies. Any notice of deficiency shall be sent to the applicant within fifteen (15) business days after the filing of the application. Formal processing of the application shall not begin until the deficiency is corrected and the application is resubmitted. The date of the resubmission, not the date of the initial application, shall govern the timing of the process.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-160. Application fees for PUD.

Application fees for a PUD sketch plan, PUD master plan, preliminary development plan and final development plan shall be established by resolution of the Board of Trustees.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

DIVISION 3. APPLICATION REQUIREMENTS

Sec. 16-5-210. Application requirements.

Applications for a PUD shall include the requirements set out in this Division.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-220. PUD sketch plan optional.

If a PUD Sketch Plan is submitted by an applicant for review by the Town staff, the Planning Commission and/or the Board of Trustees, the sketch plan must include at least the following information:

(1) *Written information:*

a. A statement of the objectives of the PUD.

b. A description of the proposed uses, including number of dwelling units, square feet of commercial uses and open space.

c. A statement of how the proposed relates to the Master Plan.

d. A statement of how utilities are to be provided.

e. The names of property owners, planner, engineer and surveyor.

(2) *Graphic materials:*

a. A vicinity map drawn to scale showing the location of the property with respect to the Town limits and the Town street system.

b. A map drawn to scale of at least 1" = 100' showing the location of the proposed uses, major streets and land subdivisions, if applicable.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-230. PUD master plan.

A PUD master plan comprised of written materials and site plans as provided below shall be required for all unit developments to be developed in phases.

(1) *Written information:*

a. A legal description of the property.

b. A statement of the existing and proposed zoning.

c. A list of the names, addresses and phone numbers of all property owners and lien holders.

d. A list of the names and addresses of all property owners within two hundred (200) feet as on file at the County Assessor's Office.

e. A statement describing the planning objectives to be achieved by the PUD and the relationship to the Master Plan.

f. A statement indicating the owner's intentions with respect to future selling or leasing of all or portions of the unit development, including land area and dwelling units.

g. A development schedule indicating the estimated timing and phasing of construction activities. The schedule shall include the estimated area allocations for each land use in each phase of development. The total area of common open space provided at any phase of the development shall be provided.

h. Quantitative data shall be provided for the following:

1. The total number and type of dwelling units.

2. The proposed maximum residential density.

3. The maximum area of proposed nonresidential construction.

4. The development intensity expressed as the ratio of the floor area to the gross area of each tract or parcel.

5. The area of open space and the percentage of the open space to the gross site area.

6. The amount of off-street parking for use by residents and guests for residential use, or by employees and customers for business or industrial use.

7. Adequate irrigation water rights, if the property to be improved has been previously irrigated and water rights have been utilized, and a plan for distribution.

i. A statement of plans or programs that demonstrate the means by which all open space and recreational areas, walkways and private streets are to be maintained.

j. A statement of intent as to the dedication of open space and streets for public use. If streets are to be retained for private ownership and maintenance, an easement shall be reserved for access rights for police, fire and other emergency services.

k. The owner's certification of acceptance of the conditions and restrictions set forth in the site plan and accompanying materials.

l. Projected impacts on utilities, including water demands; summer and winter average-day, maximum-day and peak-hour flow; fire flows, sewage discharge, flow and type of discharge, demand on electric, gas, irrigation and other utilities, if any.

m. Documentation of water rights needed and available for dedication to the appropriate managing agency.

(2) *Site plans and supporting data.* Site plans and supporting maps or data are required showing the major details, including:

a. Vicinity map showing the site and the surrounding area within a distance of at least one (1) mile, showing existing zoning, traffic circulation, public facilities and densities of adjacent residential areas.

b. The existing site conditions, including topography and unique natural features.

c. A site plan drawn at a scale of 1" = 100' on a twenty-four (24) inch by thirty-six (36) inch sheet with date, scale and north arrow, illustrating the general location and proposed floor area of all existing and proposed land uses, including maximum heights, type of dwelling units, density, floor area ratio and type of nonresidential use.

d. An eight and one-half (8½) inch by eleven (11) inch reduction of the site plan.

e. The location and area of all land to be used for common open space, recreation areas, public parks, school sites or other public uses.

f. The existing and proposed vehicular circulation system, including arterial, collector and local streets, off-street parking areas, service and loading areas and major points of access to public rights-of-way.

g. The existing and proposed pedestrian circulation system, including the relationship with the vehicular traffic system indicating proposed treatment at points of intersection.

h. Information and description of the land areas adjacent to the proposed development with respect to land uses, zoning and traffic patterns.

i. Preliminary plans for storm drainage and water and sewer service to the proposed development.

j. Additional material, data or studies as required by the Planning Commission or Board of Trustees which will facilitate an understanding of the PUD master plan and the planning objectives of the unit development. These may include, but are not limited to, fiscal impact evaluations, market studies and transportation studies.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-240. Preliminary development plan.

(a) Contents. A preliminary development plan shall consist of all applicable application requirements set forth above for the master plan and the items set forth in this Section.

(b) Written information shall include the following.

(1) Statement of planning objectives, including the character of the proposed development.

(2) Notes to indicate disposition, maintenance responsibility and service responsibility for water and sanitation, energy supplies and other services and areas which will serve the PUD.

(3) Referral letters from affected utilities and public agencies.

(4) The proposed development schedule indicating:

a. The approximate date on which construction of the project can be expected to begin.

b. The stages in which the project will be built, the approximate date when the construction of each phase can be expected to begin and the approximate population at each phase.

c. Estimate of the anticipated rate of development (i.e., number of units per year, etc.).

d. The approximate dates when the development of each of the stages in the development will be completed.

e. The area and location of common open space that will be provided at each stage.

(5) List of the names, addresses and phone numbers of all property owners and/or authorized agents.

(6) Name, address and phone number of the person preparing the plan.

(7) Legal description and tie to an accepted survey monument.

(8) Copies of any special agreements, conveyances, restrictions or covenants which will govern the use, maintenance and continued protection of the PUD and any of its common areas.

(9) Owner's certification of acceptance of the conditions and restrictions as set forth on the Preliminary development plan.

(10) A plan to include the proposed form of unified control which shall include identification and description of corporations, partnerships, trusts, owner's associations or other legal entities having the right to assess individual landowners within the development and identification of the method proposed to enforce the required assessments.

(11) Names and addresses of all property owners within two hundred (200) feet.

(12) Reports concerning the following:

a. Geologic characteristics of the area significantly affecting the land use.

b. Soils report including:

1. Special physical and chemical characteristics of the soil.

2. Prediction of stability and erosion potential.

3. Suitability of the soil types for the land use proposed for the PUD.

c. Preliminary stormwater drainage report.

(13) Data including:

a. Gross area in acres and square feet.

b. Total number and type of dwelling units.

c. Total bedrooms per each dwelling unit type.

d. Gross residential density.

e. Floor area ratio.

f. Total acreage with a breakdown by land use.

g. Number of off-street parking spaces, including guest parking and common storage for recreational vehicles.

h. Area in square feet of recreational open space.

i. Area in square feet of "private" open space and percentage of gross area.

(c) Site plans and supporting documents shall include the following.

(1) Proposed lot lines and dimensions.

(2) Tentative location of existing and proposed buildings.

(3) Location and approximate dimensions for each area designated as common open space and recreational open space.

(4) Topography at five-foot contour intervals in areas of ten percent (10%) slope or greater and two-foot contour intervals in areas of less than ten percent (10%) slope. Existing contours to be shown in dashed line and proposed contours with solid lines.

(5) Approximate location, length, width and use of all existing and proposed easements, utility rights-of-way, major utility facilities, intersections, bridges, culverts and drainageways (indicate underground facilities).

(6) Preliminary utility drawings to include the following:

a. Drainage and detention.

b. Water and sewer service.

c. Flood protection.

d. Fire protection.

(7) Off-street parking areas, service areas, trash receptacles, loading areas and major points of access to public rights-of-way with appropriate dimensions.

(8) Existing and proposed streets with names. Approximate length of street centerlines, radii of curves, centerline grades and type of curb, gutter and sidewalks. Designation of streets to be private or public.

(9) Location of temporary model homes, sales office and/or construction facilities, including temporary signs and parking lots. Length of time such temporary facilities will be in place and whether they will require sewer and water taps.

(10) Location of pedestrian and bicycle paths.

(11) Location, height and size of proposed project-related or commercial signs, lighting and advertising devices.

(12) Location of pools, fences or accessory buildings.

(13) Location of low-income, elderly or other specialized housing.

(14) Location of land intended to be conveyed, dedicated or reserved for public use as park sites, school sites, etc. Public tracts shall be dedicated by a statement on the plat; responsibility of maintenance of all tracts shall be noted.

(15) General landscaping plan, including:

a. The location, type and size of major existing trees and shrubs and their fate.

b. The location, general type, minimum size and quantity of proposed plant material.

c. The proposed treatment of the perimeter of the PUD.

d. The provisions for control of dust during construction.

(16) Other graphics.

a. Street cross-section schematics for both public and private accessways.

b. Architectural intent drawings. Elevations and perspective drawings of all typical structures and improvements, except single-family detached residences and their accessory buildings. The drawings are intended to show the relationship of the proposed structures to the surroundings and need not be the result of final architectural design and need not be in detail. Note: Final architectural drawings will be required when applying for a building permit.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-250. Final development plan.

(a) The final development plan shall be consistent with the preliminary development plan and include all the written and graphic information required for the preliminary development plan. In addition, the following more detailed information is required for the final plan.

(b) The site plan shall include all information and signatures as required for a use permitted by special review as stated in Article 4 of this Chapter.

(c) A final summary data chart shall be provided, including the information required for the preliminary development plan. This data must be updated based on the finalized site plan.

(d) A detail landscape plan shall include the following:

(1) The location, type and size of existing trees and major shrubs which are to be retained.

(2) The location, type, minimum size and quantity of proposed plant material. Scale shown on the plan for plant materials shall reflect three-quarters (¾) mature size.

(e) Final utility plans shall be provided.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

DIVISION 4. REGULATIONS

Sec. 16-5-310. Time limit for PUD.

The development shall be constructed in a timely manner.

(1) *Master plan for the PUD.* A Preliminary development plan for all or a portion of the development area shall be filed within twelve (12) months after the approval of a PUD master plan. If no preliminary development plan is filed within the allowed time, the approvals granted for the PUD master plan shall expire. The Planning Commission shall have the authority to extend this time period for good cause for not more than two (2) successive six-month periods. Any further extensions must be considered by the Board of Trustees.

(2) *Preliminary development plan.* Within a maximum of twelve (12) months of the approval of a preliminary development plan, a final development plan for all or part of the development area must be filed. If no final development plan is filed within the allowed time period, the approvals granted for the preliminary development plan shall expire. The Planning Commission shall have the authority to extend this time period for good cause for not more than two (2) successive six-month periods. Any further extensions must be considered by the Board of Trustees.(3) Final development plans. Each Final development plan shall include a definite timetable for completion. This time period shall be established at the time of approval.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-320. Termination of approved PUD application.

The Board of Trustees may rescind approval of a PUD application in the same manner as described for termination of special review uses in Article 4 of this Chapter.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-330. Spacing between structures or buildings.

The purpose of specifying space requirements between structures is to ensure adequate privacy, light, ventilation and fire protection while at the same time encouraging more creative design than is normally allowed with conventional setback requirements. It is the intent that primary living spaces should not face directly onto another living space unless there is adequate space between structures.

(1) *Residential buildings.* If the building walls contain windows for major daytime use, such as entrances, living rooms and dining rooms, the minimum distance between buildings shall be twenty-five (25) feet.

(2) *Commercial buildings.* The minimum distance between a commercial building and a residential building shall be twenty-five (25) feet. The minimum distance between commercial structures shall be ten (10) feet.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-340. Maintenance of open space, recreational areas, walkways and private streets.

(a) It shall be the responsibility of the property owner to provide an acceptable program for the continuing maintenance of private open space, recreational areas, walkways and private streets within a PUD.

(b) The developer shall submit a legal instrument setting forth a plan providing for the permanent care and maintenance of open spaces, recreational areas and communally owned facilities and parking lots. The same shall be submitted to the Town Attorney and shall not be accepted until approved as to legal form and effect. If the common open space is deeded to a homeowners' association, the applicant shall file the proposed documents governing the association. Such documents shall meet the following requirements:

(1) The homeowners' association, with covenants, must be established before any residences are sold.

(2) Membership in the homeowners' association must be mandatory for each residence owner.

(3) Open space restrictions must be permanent.

(4) The homeowners' association must be made responsible for liability insurance, taxes and maintenance of recreational and other facilities.

(5) The homeowners' association, with covenants, will have the power to levy assessments, which can become a lien on individual premises, for the purpose of paying the cost of operating and maintaining common facilities.

(c) In the event the organization established to own and maintain the open spaces and other common facilities fails to maintain the facilities in accordance with the approved plan, the Board of Trustees shall direct a written notice to the property owners demanding that the deficiencies be corrected within thirty (30) days and that a hearing will be held on the matter within fifteen (15) days after the notice is sent. If the deficiencies are not corrected within the time established by the Board of Trustees, the Town may enter

upon the properties and maintain the properties until the owners of the property show cause why maintenance by the Town is not required. The cost of maintenance by the Town shall be a lien against the common facilities of the PUD and the private properties within the development. The Town shall have the right to make assessments against the properties for maintenance of the development on the same basis that the organization responsible for maintenance could make such assessments.

(d) Any unpaid assessment shall be a lien against the property responsible for the same, enforceable the same as a mortgage against such property. The Town may further foreclose its lien on the common facility by certifying the same to the County Treasurer for collection as in the case of collection of general property taxes.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-350. Relationship of PUD process to subdivision regulations.

When applicable, PUDs must comply with the requirements and procedures relative to subdivisions and annexation. However, it is intended that certain requirements and hearing procedures not be duplicative. Therefore, applications may in certain instances be reviewed concurrently.

(1) A preliminary development plan for a PUD may be accepted as satisfying all requirements for a preliminary plat, provided that all the requirements and provisions of the subdivision regulations are met as part of the PUD application.

(2) If a PUD involves a subdivision, the final subdivision plat must be approved by the Board of Trustees prior to any sale of land or building permits being issued.

(3) A Final development plan for a PUD can be considered for final action by the Board of Trustees only if action has previously been taken by the Board of Trustees annexing and zoning the property.

(4) Any subsequent subdivision and land approved as a PUD must be consistent with the PUD plans as approved. Any major change from the approved PUD shall require that an amended PUD be considered under the same hearing and review process as the original application.

(5) Annexation of property proposed for a PUD may be finalized at any point in the process by the Board of Trustees, provided that all the requirements for annexation have been met.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

DIVISION 5. APPROVAL STANDARDS

Sec. 16-5-410. Standards and criteria for approval of PUDs.

The findings of the Town staff, Planning Commission and Board of Trustees shall be based upon the following criteria and performance standards and requirements:

(1) *General considerations.*

a. The PUD proposal is consistent with the Comprehensive Plan.

b. The plan conforms to the provisions of this Article.

c. The proposed development will not have adverse environmental impacts, such as excessively increased traffic hazards or congestion, overload utilities or otherwise be detrimental to the general welfare of the community.

d. The proposed development will be compatible with the existing development in the area.

(2) *Residential density.* The density permitted within a PUD shall generally be the same as that permitted in the underlying zone.

a. Provisions of low- or moderate-income housing unit. A low- or moderate-income unit is a unit that is offered for rent or sale to those with incomes that are eighty percent (80%) or less of the median household income for the area as determined by the U.S. Department of Housing and Urban Development. All proposals developed within this provision will be required to demonstrate that they will continue to be available in the future for low- or moderate-income individuals or families.

b. Dedications of lands in addition to those required by the park dedication ordinance as adopted by the Town. The additional dedication must clearly be in the public interest and may include potential sites for community facilities, such as for utilities, public easements, river front access, walkways, community parks, school sites or police or fire station sites.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

DIVISION 6. DESIGN STANDARDS AND REQUIREMENTS

Sec. 16-5-510. Streets and traffic circulation.

Standards for street design shall be approved as a part of the PUD master plan and may vary from requirements found in the subdivision regulations and the adopted street standards and specifications for the Town. Variation in the adopted street standards for both public and private streets may be granted by the Board of Trustees upon determination that the following performance standards and design requirements are met:

(1) Ingress to and egress from the internal circulation system to the external circulation system can safely and efficiently accommodate the volumes and types of the traffic both existing and anticipated.

(2) Points of ingress and egress are designed to discourage through traffic on local streets within the PUD.

(3) Circulation plans to and from nonresidential PUD uses will not adversely affect other elements of the circulation system.

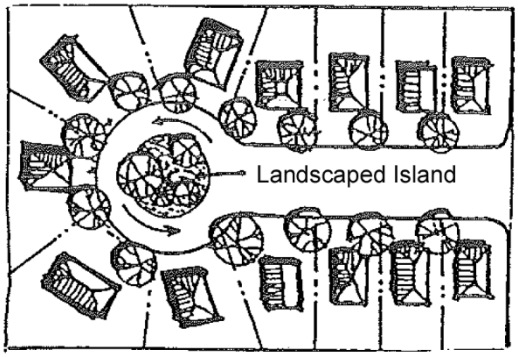
(4) The design of the internal system is sensitive and responsive to such points as safety, convenience, access to dwelling units and any nonresidential facilities, emergency and maintenance access, segregation of vehicular and nonvehicular traffic, noise, congestion and overall attractiveness.

(5) Pedestrian and other nonvehicular elements of the system minimize street crossings and provide safe access to schools, nonresidential facilities and common open space.

(6) Construction specifications as proposed shall be subject to Town review and approval. Streets shall be dedicated to the Town in accordance with the subdivision regulations, unless the Board of Trustees shall approve ownership of the streets within a PUD by a homeowners' association or other legal entity. The Board of Trustees shall approve ownership of the streets by an entity other than the Town only if it finds that such entity has the legal, financial and managerial ability to maintain such streets in a way consistent with the public health, safety and welfare and with the needs of the residents within the PUD.

(7) The design of the development should minimize the length of streets.

(8) When possible, islands created in cul-de-sac areas should be landscaped and maintained by a homeowners' association.



(9) All streets external to the PUD area must be constructed in accordance with the adopted street standards for the Town.

(10) Collector streets that are within the boundaries of the PUD may have a minimum of thirty (30) feet of pavement within a fifty-foot right-of-way, provided that the following conditions are met:

a. Driveway access to collector streets is prohibited.

b. A four-foot sidewalk is placed on at least one (1) side of the street. In areas that are within one (1) mile of a school, sidewalks must be placed on both sides.

c. For the minimum width, parallel on-street parking shall be allowed on one (1) side of the street only.

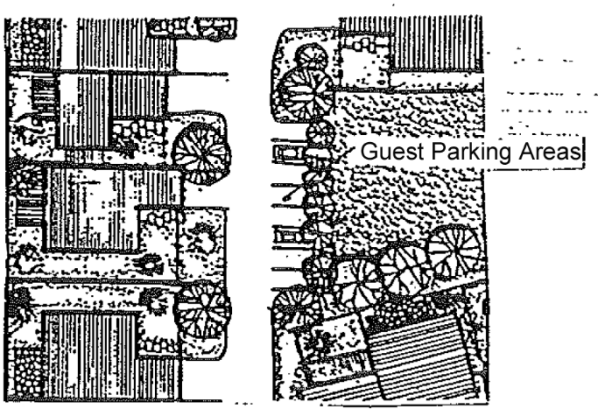
(11) Local streets that are within the boundaries of a PUD may have a minimum pavement width of twenty-eight (28) feet within a forty-foot right-of-way, provided the following conditions are met:

a. The local streets are designed so that use by through traffic is discouraged.

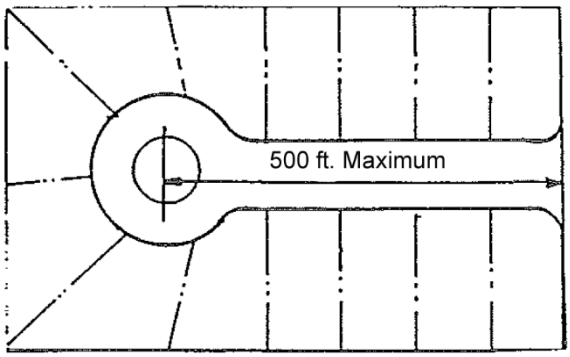
b. A four-foot sidewalk is placed on at least one (1) side of the street. In areas that are within one (1) mile of a school, sidewalks must be placed on both sides.

c. Parallel on-street parking is not permitted on either side.

d. Guest parking areas are dispersed at convenient locations throughout the development.



(12) Cul-de-sac streets shall have a maximum length of five hundred (500) feet measured from the right-of-way line of the connecting street to the center of the turn-around area at the closed end of the cul-de-sac. Each cul-de-sac radius shall be fifty (50) feet.



(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-520. Parking.

(a) Parking areas shall be arranged so as to prevent through traffic to other parking areas and shall be screened by decorative fence, wall, landscape material, landscape berm, natural topography or other materials to provide a buffer strip and appropriate screening that reduces the visual impacts of the parking areas from any public street and residential units.



(b) Guest parking shall be dispersed throughout the development area to be within convenient walking distance to and from the residential areas.

(c) Provisions of common storage areas for campers, boats, trailers and recreational vehicles are encouraged.

(d) PUDs shall provide the parking spaces required by Article 6 of this Chapter, including guest parking spaces in the ratio of twenty-five one-hundredths (0.25) spaces per unit located within one hundred (100) feet of the dwellings they are intended to serve. Variations to the required number of parking spaces can only be approved under the following conditions.

(1) Where the expected need for off-street parking is lessened due to the unusual characteristics of the use, and comparable data is available to establish that there is a lesser need for the parking.

(2) There is a specific plan for joint use of common parking areas, varying time periods of use.

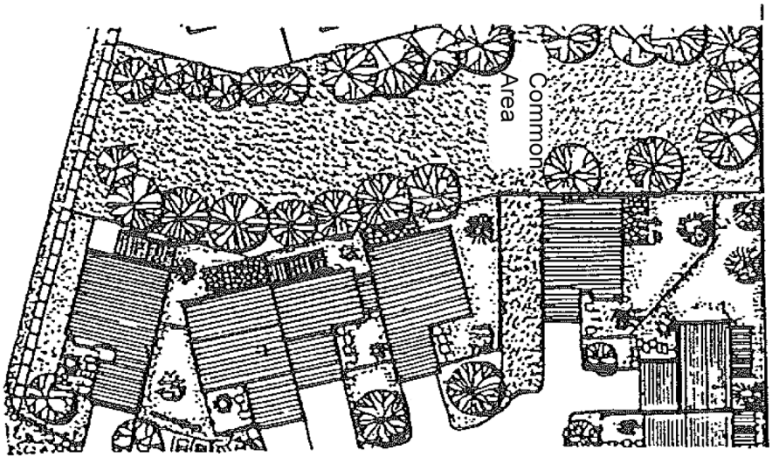
(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-530. Open space.

(a) The impacts of development on valuable natural resources and unique natural features, including but not limited to agricultural soils, steep slopes, aquifers and aquifer recharge areas, prime deciduous and prime

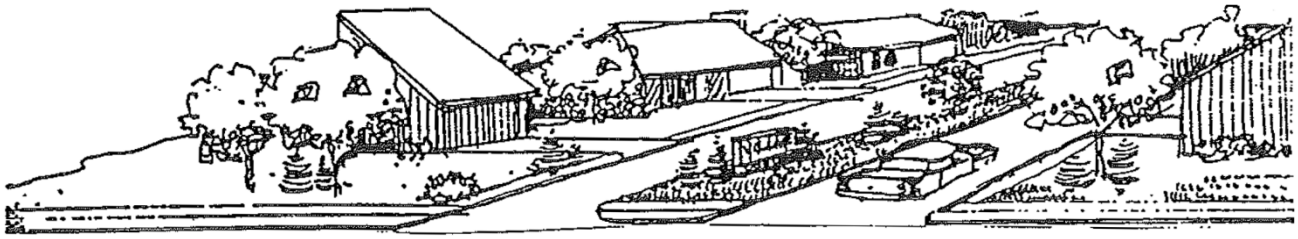
coniferous tree stands, marshes, swamps and other wetlands, floodplains and such other features as review of a particular site may indicate are worthy of preservation or special protection, shall be minimized by the developer of a proposed PUD through sound environmental planning and careful implementation thereof.

(b) Open space areas should be easily accessible to all residential areas and should maximize pedestrian use.



(c) Landscaped areas should include use of native plant materials that require little water or maintenance. While nonvegetative landscape material is permitted, these areas should be small in scale with extensive planted areas interspersed.

(d) Planted median areas are encouraged, as well as attractive landscaped entryways to the PUD area.



(e) Open space areas should be designed to provide pedestrian connections to the various areas within and adjacent to the development.

(f) Common open space. At least twenty percent (20%) of the gross area of a residential PUD and ten percent (10%) of a nonresidential PUD shall remain as open space for the common use of the residents or visitors to the area. In a PUD which contains both residential and nonresidential areas, the open space requirements shall be computed by applying the twenty-percent factor to the portion of the development devoted to residential use and the ten-percent factor to the portion devoted to nonresidential use.

(g) Recreational open space for residential developments.

(1) Recreational open space shall comprise not less than seventy-five percent (75%) of the total required common open space. All areas to be considered recreational open space shall have a minimum dimension of thirty (30) feet, except for bicycle paths. No more than twenty-five percent (25%) of the required recreational open space shall have impervious surfacing.

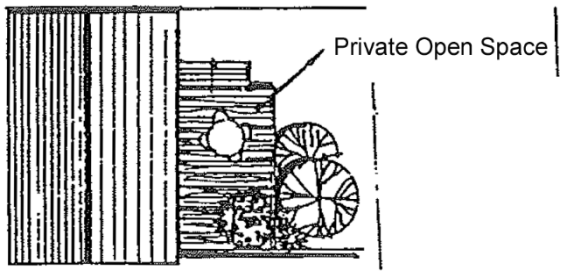
(2) Recreational open space shall not include slopes greater than ten percent (10%).

(3) Recreational open space shall not be obstructed except by improvements that enhance its usability. Recreational open space shall provide for organized sports or includes playground apparatus, tennis courts, bicycle paths, swimming pools or similar active areas.

(4) All required recreational open space shall be planted in lawn or other appropriate groundcover suitable for foot traffic.

(5) Special consideration and exceptions to the above requirements may be approved by the Planning Commission for open space that provides for public access to the North Fork, Gunnison River and Minnesota Creek.

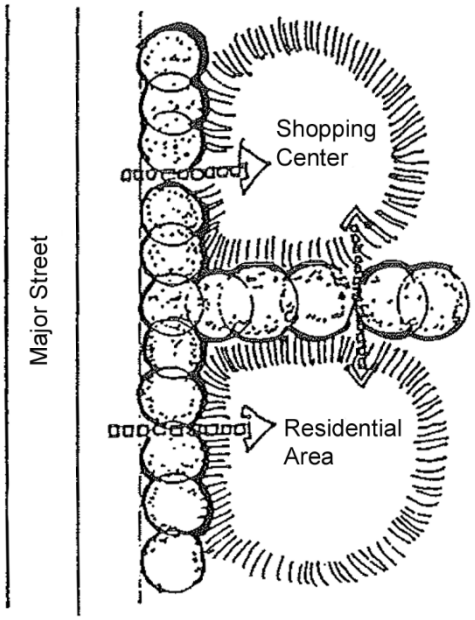
(h) Private open space. At least one hundred fifty (150) square feet of private open space shall be provided for each ground-level dwelling unit. Private open space shall include patios, decks, lawn areas and balconies. At least fifty (50) square feet of private open space shall be provided for above-ground units.



(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-540. Landscaping.

(a) A permanently maintained landscaped buffer zone shall be provided adjacent to arterial and collector streets and parking lots or between residential development and adjacent commercial, industrial or incongruent uses. The minimum width of the buffer zone shall be twenty (20) feet. The Planning Commission may consider reducing the width of the buffer strip when dense landscaping or mature plant materials are provided.



(b) A comprehensive landscaping and irrigation plan shall be submitted designating all existing and proposed species, size and placement. The plan shall specify all irrigation features and a program for continued maintenance. The comprehensive landscaping and irrigation plan shall be reviewed and approved by the Town Administrator and Town Engineer.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-550. Energy conservation.

(a) Solar access shall be preserved as much as possible by orienting streets and buildings for maximum southern exposure for the living spaces.

(b) Consideration should be given for protection of solar access through solar easements for subdivision lots.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-560. Building design.

(a) The character of the building designs in the PUD should be compatible with and enhance the architectural character and scale of the surrounding neighborhood.

(b) Accessory buildings, detached garages and fences should be of a design compatible to the architectural character of the project and the surrounding neighborhood.

(c) The floor plan should be carefully organized to gain maximum daylight and direct access from rear and side yards. The outdoor space should be planned as a practical extension of indoor living space.

(d) Large amounts of glass should be avoided on the north side of dwelling units, and northern exposures should be protected with berming and landscaping.

(Ord. No. 83-116, Art. XII, 1983; Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-5-570. Application fees for a Planned Unit Development.

Application fees for a PUD Sketch Plan, PUD Master Plan, Preliminary Development Plan and Final Development Plan shall be established by resolution of the Town Board.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 6. OFF-STREET PARKING AND LOADING

Sec. 16-6-10. Off-street parking spaces required.

(a) The following number of off-street parking spaces shall be provided with the construction, addition or change of use, which requires a special review to any of the buildings, and uses listed in Table 16-5 below.

(b) Parking spaces shall be at least nine (9) feet by nineteen (19) feet, except that up to twenty-five percent (25%) of the required spaces may be designated for compact cars with a minimum space of eight (8) feet by sixteen (16) feet.

(c) Table 16-5 below sets forth the parking requirements for uses.

Table 16-5
Off-Street Parking Space Requirements

Use	Parking Requirements
Residential units:	
Efficiency or one-bedroom	1.5 spaces per unit
Two-bedroom	2.0 spaces per unit
Three-bedroom	2.5 spaces per unit
Four or more bedrooms	3.0 spaces per unit
Additional requirements for multiple-family residential and mobile home parks with 6 or more units (guest parking)	0.25 space for each unit
Multiple-family housing for the elderly or the handicapped	1.0 space per unit
Educational facilities:	

Preschool nurseries or child care centers, Kindergarten and elementary schools and middle schools	1.0 space per classroom plus 1.0 space per employee
High schools	1.0 space per employee, plus 1.0 space for every 4 students, plus 1.0 space for every 4 seats in the principal place of assembly (bench capacity is determined as 1.0 seat per 30")
Commercial uses:	
Animal hospitals	1.0 space for every 300 sq. ft.
Business and professional offices	1.0 space for every 250 sq. ft. of floor space
Drive-thru or fast food restaurants	1.0 space for every 2 seats or 1.0 space for every 100 sq. ft., whichever is greater, plus 1.0 largest work shift
Furniture and appliance stores	1.0 space for every 500 sq. ft. of floor area
Hospitals	1.0 space for every 2 beds plus 1.0 space for every employee in the largest work shift
Indoor restaurants and bars	1.0 space for every 3 seats or 1.0 space for every 200 sq. ft. of floor area, whichever is greater
Libraries	1.0 space for every 400 sq. ft. of floor area

	plus 1.0 space for every 2 employees
Medical and dental offices and clinics	1.0 space for every 200 sq. ft. of floor space
Motels, hotels, lodges and bed and breakfasts	1.0 space per unit plus 2.0 spaces for the owner or manager's unit
Motor vehicle sales	1.0 space for every 500 sq. ft.
Motor vehicle service and repair	1.0 space for every 300 sq. ft. of floor area
Nursing homes and rest homes	1.0 space per 4 beds plus 1.0 space for each employee
Retail businesses except for furniture and appliance stores	1.0 space for every 300 sq. ft. of floor area
Wholesale businesses and warehouses	1.0 space for every 1,000 sq. ft. (excluding offices) or 1.0 space for every 2 employees, whichever is greater
Industrial uses	1.0 space for every 500 sq. ft. (excluding offices) or 1.0 space for every 2 employees, whichever is greater
Places of public assembly such as churches, auditoriums, meeting rooms, funeral homes	1.0 space for every four seats or benches in the principal place of assembly (Bench capacity is determined as on seat per 30 inches)

(Ord. No. 83-116, Art. XIII, 1983; Ord. No. 2000-02, Art. XIII, 2000; Ord. No. 2003-08, 2003; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-6-20. Combinations of uses.

When one (1) building is planned to include a combination of different uses, the minimum parking required will be determined by applying the above requirements based upon the floor area for each use. The minimum number of parking spaces required for the building shall be the sum of the requirements for each separate use.

(Ord. No. 83-116, Art. XIII, 1983; Ord. No. 2000-02, Art. XIII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-6-30. Parking requirements for uses not listed.

For specific uses not listed, the Planning Commission shall determine the appropriate number of parking spaces required based upon the type of activity, intensity, number of employees and similarity to listed uses.

(Ord. No. 83-116, Art. XIII, 1983; Ord. No. 2000-02, Art. XIII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-6-40. Off-site parking.

For any business use, the off-street parking requirements may also be met as follows:

(1) Additional off-street parking spaces may be provided on a site within three hundred (300) feet of the lot that generates the parking requirements, provided that the site is owned by the owner of the parking generating property;

(2) The owner of the lot generating the need for parking spaces may participate in a parking district or joint venture requiring the payment of a fee in lieu of providing on-site parking. The fees collected by the district or joint venture would be then used to provide off-street parking and assure that the Town's requirements were met. All such parking districts or joint ventures shall be subject to the approval of the Board of Trustees; or

(3) When a business use is unable to provide the required on-site parking and/or loading requirements, the property owner or applicant shall be required to contribute to the Parking Fund a sum as set forth in Section 16-5-50 below per required parking space.

(Ord. No. 83-116, Art. XIII, 1983; Ord. No. 2003-08, 2003; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-6-50. Parking Fund.*

[Suspended.]

(Ord. No. 83-116, Art. XIII, 1983; Ord. No. 99-02, 1999; Ord. No. 2003-08, 2003; Ord. No. 2014-04, § 1, 1-13-2015)

* The provisions of this Section are suspended indefinitely.

Sec. 16-6-60. Design requirements for parking areas.

(a) All off-street parking areas shall be unobstructed and free of all other uses.

(b) All off-street parking spaces shall have unobstructed access to and from a street, except that in single-family areas parking spaces provided on the garage apron or driveway may be counted as a part of meeting off-street parking requirements in addition to parking in garage or a carport.

(c) All off-street parking areas except those for single-family or two-family dwellings shall be surfaced with asphalt or concrete or other dustless surface approved by the Planning Commission.

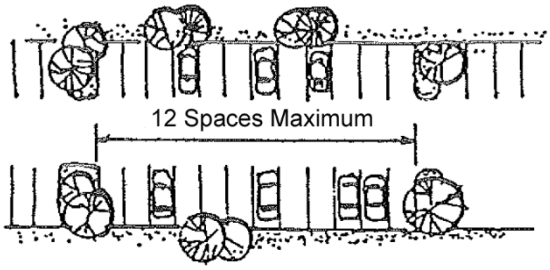
(d) Off-street parking areas with six (6) or more spaces shall be adequately landscaped with a plan approved by Planning Commission special review.

(e) Lighting from any parking area shall not be directed toward any adjacent residential area or public street.

(f) Off-street parking areas may be located to jointly serve two (2) or more buildings or uses, provided that the total number of spaces is not less than that required for the total combined number of buildings or uses.

(g) Bicycle parking spaces may be acceptable in lieu of vehicle spaces in the ratio of six (6) bicycle spaces for one (1) vehicle space, provided that not more than ten percent (10%) of the off-street parking requirements are met with bicycle parking. A bicycle parking space shall include secured stanchions and racks that enable the bicycle frame, not just a wheel, to be anchored. At least two (2) feet of spacing should be provided between the bicycle racks so that cyclist may place or remove the bikes with minimum risk of damage to other bikes.

(h) No more than twelve (12) parking spaces shall be permitted in a contiguous row without being interrupted by a landscaped area of at least five (5) feet wide and ten (10) feet long. These areas will provide drainage for runoff, with additional areas as needed.

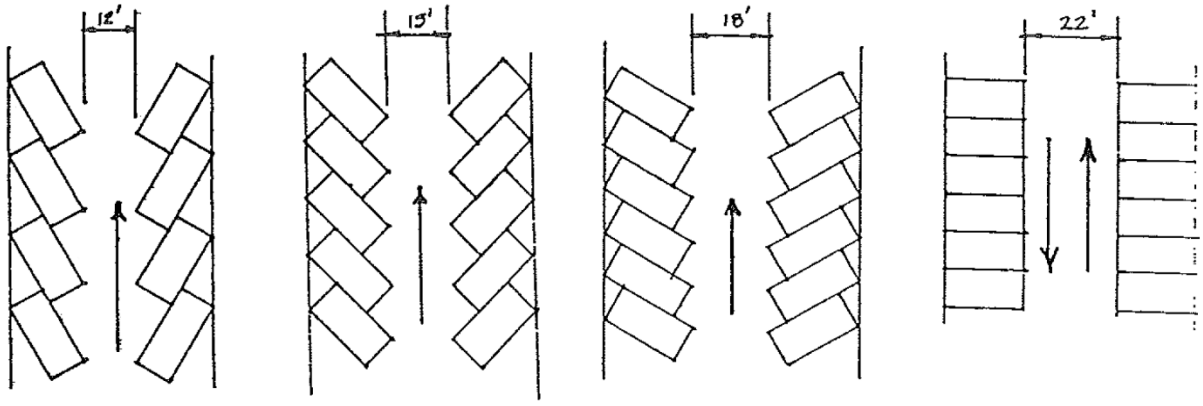


(i) In multiple-family areas, areas included in driveways or otherwise required to move cars in and out of parking spaces shall not be considered to meet off-street parking requirements.

(j) Spacing between rows of parking shall be determined based upon the parking angle in accordance with the following schedule:

Parking Angle	Minimum Aisle Space Between Two Rows
30 degrees	12 feet
45 degrees	15 feet
60 degrees	18 feet
90 degrees	22 feet

Spacing between Rows



(k) A minimum of one (1) parking space for the handicapped shall be required for each use that requires fifteen (15) parking spaces. For uses requiring more than fifteen (15) spaces, one (1) additional space designated for the handicapped shall be provided for each additional twenty (20) spaces required. Parking spaces for handicapped persons shall be twelve (12) feet wide.

(Ord. No. 83-116, Art. XIII, 1983; Ord. No. 2000-02, Art. XIII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-6-70. Off-street loading areas.

For all business and industrial uses, off-street loading spaces containing five hundred (500) square feet with no dimension less than ten (10) feet shall be required for new construction or major additions involving an increase in floor area as follows:

(1) New floor area between five thousand (5,000) and twenty thousand (20,000) square feet: one (1) off-street loading space.

(2) New floor area in excess of twenty thousand (20,000) square feet: one (1) off-street loading space for each twenty thousand (20,000) square feet or fraction thereof.

(Ord. No. 83-116, Art. XIII, 1983; Ord. No. 2000-02, Art. XIII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 7. OUTDOOR LIGHTING REGULATIONS

Sec. 16-7-10. Purpose.

The purposes of these outdoor lighting regulations are to:

(a) Maintain nighttime visibility and safety while maintaining the rural atmosphere and small-town character of Paonia.

(b) Minimize light pollution and glare. Protect citizens from unwanted outdoor lighting that would enter homes and businesses.

(c) Promote energy conservation by promoting efficient use of lighting.

(d) Prevent unnecessary or inappropriate outdoor lighting that impacts the dark sky resource, qualifying Paonia as an International Dark Sky Association (IDA) designated community.

(e) Help mitigate sleep and wildlife migration related issues through use of minimum necessary outdoor lighting and by using light bulbs with a warmer color.

(Ord. No. 2022-05, § 2(Exh. A), 7-29-2022)

Sec. 16-7-20. Definitions.

For the purpose of this Article, the following terms shall have the meanings set forth below:

Adaptive controls means devices such as timers, motion-sensors, light-sensitive switches, and other means used to actively regulate the emission of light from light fixtures.

Correlated color temperature (CCT) means specification of the color appearance of the light emitted by a lamp, relating its color to the color of light from a reference source when heated to a particular temperature, measured in degrees kelvin (K).

Dark Sky resource means the dark sky unpolluted by artificial light sources typically as seen on moonless nights.

Fully shielded fixture means an outdoor light fixture that is designed and mounted such that all light rays are emitted by the installed fixture at angles below the horizontal plane and such that no light rays are emitted at angles which will allow the light to pass directly off the premises appurtenant to the fixture.

Light trespass means light falling where it is not intended to illuminate property, grounds, or buildings in an objectionable manner.

Lumens means a measure of brightness that is defined as a unit of luminous flux in the International System of Units, that is equal to the amount of light given out through a solid angle by a source of one candela intensity radiating in all directions. 850 lumens is equivalent to 60-watts. See Note 4.

Lumens per net acre means the amount of light specified in lumens that is allocated to the developed portion (net acre) of the gross size of a lot parcel. See Note 2.

The definitions contained in Section 16-1-100 of the Code shall otherwise apply to this Article.

(Ord. No. 2022-05, § 2(Exh. A), 7-29-2022)

Sec. 16-7-30. Applicability.

This Article shall apply to all exterior lighting installed after the effective date of the Ordinance adopting this Article. All lawful nonconforming exterior lighting prior to the effective date of the Ordinance adopting this Article shall be subject to the nonconforming lighting section of this Article.

(Ord. No. 2022-05, § 2(Exh. A), 7-29-2022)

Sec. 16-7-40. General provisions and requirements.

(a) Requirements. All non-exempt outdoor light fixtures and illuminating devices permanently or temporarily installed outdoors, including but not limited to devices to illuminate signs, shall meet the following requirements:

(1) Shielding. Unless exempted elsewhere in this Article, all luminaires whose initial lumens exceed one hundred (100) lumens shall be fully shielded. See Note 5 for examples of shielded and unshielded luminaires.

(2) All fixtures designed to illuminate signs or structures shall be fully shielded and with a CCT as specified in items (a)(1) and (a)(4) of general provisions and requirements. The lighting fixtures shall be mounted above the area of the sign or structure to be illuminated.

(3) Blinking, flashing, rotating, or moving lights are prohibited.

(4) Maximum color temperature of all lighting fixtures: The correlated color temperature (CCT) of any outdoor lighting fixture shall not exceed three thousand degrees kelvin (3,000°K). See note 4 below.

(5) The following lumen limits are established to prevent over lighting. Each site should use responsible lighting practices including using the lowest number of lumens needed for the site to provide for safety and functionality:

a. For non-residential, and mixed-use properties the total amount of outdoor lighting shall not exceed twenty-five thousand (25,000) lumens per net acre. Each lighting fixture shall be limited to one thousand five hundred (1,500) lumens.

b. For multiple-family and two-family dwellings the total amount of outdoor lighting, shall not exceed twenty thousand (20,000) lumens per net acre. Each fixture shall be limited to eight hundred fifty (850) lumens.

c. For single-family dwellings, the total amount of outdoor lighting, shall not exceed six thousand five hundred (6,500) lumens. Each fixture shall be limited to eight hundred fifty (850) lumens.

d. All properties shall use adaptive controlled lighting where practical.

(6) Unshielded lighting shall be prohibited, except for special cases meeting exemption requirements of Subsection (b), and also meeting lumen limits in Subsection (c).

(7) Existing overhead street lighting owned, operated, or leased by the Town of Paonia shall be compliant with the listed lighting requirements in Subsections (a)(1) to (a)(4) of this Section and shall be limited to a lumens cap of five thousand (5,000) lumens per lamp, unless required for safety reasons as approved by the Board of Trustees.

(8) Lighting curfews:

a. Lighting used at community and athletic events (including outdoor concerts and other Town-approved events) shall be turned off one (1) hour after the conclusion of the event.

b. Lighting in Town buildings shall be turned off one (1) hour after close of business or other approved activities unless authorized by appropriate Town authority for safety or maintenance reasons.

c. Commercial lighting shall be turned off one (1) hour after close of business, except for safety of employees or customers if operations are throughout the night.

d. Adaptive controls (such as motion, light sensitive detectors, etc.) shall be used in outdoor commercial and residential lighting where practical.

(9) New public lighting, owned and operated by the Town of Paonia, either streetlights, walkway lights, or external building lighting shall be allowed as recommended by the Town Administrator in situations where a public health hazard exists which can only be mitigated by artificial light at night and shall be in compliance with Subsection (a). Adaptive controls or curfews shall be employed in all new public outdoor lighting installations.

(10) The following restrictions shall be required on the installation and operation of outside illuminated signs:

a. Luminance levels for operation between sunset and sunrise shall not exceed one hundred (100) nits (one hundred (100) candelas per square meter) as measured under conditions of a full white display.

b. Sign illumination shall be extinguished completely one (1) hour after sunset and remain off until one (1) hour before sunrise, or at the close of business; whichever is later.

c. The luminous/illuminated surface area of an individual sign shall not exceed defined limits in Town Code.

(b) Exemptions. The following are exempt from the provisions of Subsection (a), provided the provisions in Subsection (c) are met.

(1) Lights used to illuminate athletic fields, outdoor recreation areas, and areas used for concerts and other outdoor community events shall be exempt from provisions of Subsection (a) provided all the following conditions are met:

a. Illuminating Engineering Society (IES) lighting guidelines (RP-6) are followed according to the appropriate class of play.

b. Field lighting is provided exclusively for illumination of the surface of play and viewing stands, and not for any other applications.

c. Illuminance levels must be adjustable based on the task (e.g., active play vs. field maintenance).

d. Off-site impacts of the lighting will be limited to the greatest practical extent possible.

e. A curfew such that lights must be extinguished by one (1) hour after the end of activity, and no later than 10:30 p.m. Standard Time/11:30 p.m. Daylight Savings Time. Variances can be permitted on a case-by-case review for special events that go to midnight.

f. Timers must be installed to prevent lights being left on accidentally over-night by automatically extinguishing them.

(2) Signs, postings which are illuminated by building interior light sources, such as neon signs or other lights, provided such signs are lit only during the property owner's business hours.

(3) Official traffic control devices and lights owned and operated by or pursuant to proper authority of the United States of America, the State of Colorado or any of their agencies, and such other lights as are specifically required by federal or state law.

(4) Lawful vehicle lights.

(5) Holiday lights, provided all conditions are met:

a. Holiday lighting shall be temporary and illuminated no more than seventy-five (75) days during any one-year period.

b. Holiday displays of over one thousand two hundred fifty (1,250) total lumens per parcel, and holiday luminaires exceeding eight hundred fifty (850) lumens each, are subject to a curfew, and must be turned off from 10:30 pm until one (1) hour before sunrise each night.

(6) Flagpoles. Property owners are encouraged to not illuminate flagpoles at night, but rather to hoist flags after dawn and lower flags before sunset. If flags are illuminated at night, lighting of up to a total of two (2) flags per property is permitted with the following conditions:

a. The flags must either be the flag of the United States of America or the flag of the State of Colorado for illumination to be permitted.

b. If nighttime illumination is used, flagpoles shall be illuminated only from above. This may be achieved by utilizing a luminaire attached to the top of the flagpole or a luminaire mounted above the top of the flagpole on a structure within fifteen (15) feet of the flagpole and must comply with all Sections of this Article. The total light output from any luminaire mounted on top of or above a flagpole shall not exceed eight hundred (800) initial lumens.

(c) Maximum allowed amounts of unshielded lighting. On no parcel shall the amount of allowed unshielded lighting to exceed, in the aggregate, the following values per net acre according to lighting zone:

(1) For mixed use/industrial: One thousand (1,000) lumens.

(2) For multi-unit residential: One thousand (1,000) lumens.

(3) For single-family units: One thousand (1,000) lumens.

(4) Temporary holiday lights are not counted toward these limits.

(d) Interior lighting. Interior lighting direct rays shall be blocked from trespassing (straying) beyond the property boundaries of the source.

(e) Greenhouse lighting shall meet the following requirements: All greenhouse lighting is subject to general provisions and requirements in this Section. In addition:

(1) Greenhouses shall be fully covered with blackout tarps or covers so that no light spills from the premises onto adjacent lands or into the night sky.

(2) Greenhouse lighting that is not fully covered is subject to a curfew and shall be extinguished at night between 10:00 p.m. and 6:00 a.m. local time.

(Ord. No. 2022-05, § 2(Exh. A), 7-29-2022)

Sec. 16-7-50. Nonconforming lights.

(a) Lights which were lawfully existing and in use at the time they became nonconforming with the requirements of this Article by virtue of the initial adoption of this Article, subsequent amendment to this Article or by annexation into the Town, may continue to be used and operated subject to the limitations of this Article.

(b) The right to operate lawful nonconforming fixtures and or lawful nonconforming lamps shall terminate upon any of the following:

(1) Replacement of the light fixture or lamp.

(2) Damage to the light fixture so that the cost of repair is fifty (50) percent or more of the cost to replace it with a conforming fixture.

(c) All nonconforming public and private lighting either, owned or leased shall be brought into compliance with this Article within ten (10) years from the effective date of this ordinance.

(Ord. No. 2022-05, § 2(Exh. A), 7-29-2022)

Sec. 16-7-60. Administration and enforcement.

(a) The provisions of this Article shall be administered by the building official or other authorized Town officer or employee.

(b) It shall be unlawful to violate any provision of this Article.

(c) Any continuing violation of this Article is hereby declared to be a nuisance, which may be abated by the Town in any lawful manner or enjoined by a court of competent jurisdiction.

(d) No building permit or occupancy permit shall be issued for work which has noncomplying light fixtures (see Town of Paonia Building Permit Checklist).

(e) Changes or upgrades to existing outdoor lighting will utilize town provided education materials on shielded fixtures and energy efficient dark sky compliant lamps. See Notes 3 to 5.

(Ord. No. 2022-05, § 2(Exh. A), 7-29-2022)

Sec. 16-7-70. Appeals and variances.

Any person aggrieved by an interpretation of this Article or decision of the Town made in the administration of this Article, may appeal the interpretation or decision to the Board of Trustees pursuant to the applicable provisions of the Town Code. The Board of Trustees may grant a variance only upon a determination that the following criteria are met:

(a) The variance will be consistent with the public health, safety, and welfare.

(b) The variance is justified by unreasonable hardship not created by the activities of the applicant or strict compliance is unfeasible.

(c) The variance will be substantially consistent with the purposes of this Article to avoid nuisances to others, preserve the natural dark sky resource and to maintain IDA community dark sky designation, conserve energy, reduce glare, promote traffic and pedestrian safety, preserve the small-town character of Paonia and promote the Town's master plan.

(Ord. No. 2022-05, § 2(Exh. A), 7-29-2022)

Notes:

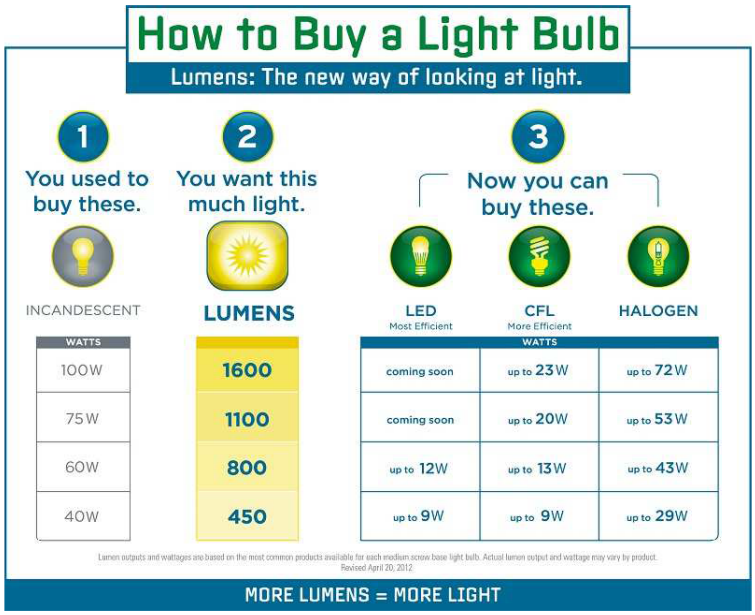
1. Since 2012, the Federal Trade Commission has required that labelling of all light bulbs include temperature (Kelvins) and light output (lumens). Concerning color temperatures, a CCT of about 5,000K approximates sunlight and a CCT of 3,000K will have a slightly yellow appearance.

2. Lumens per net acre: For example, a one-acre (44,000 sq. ft.) lot is developed with a 6,000 sq. ft. multiunit condo plus a 2,000 sq. ft. wrap-around deck, a 2,000 sq. ft. detached garage and adjacent developed patio of 1,000 sq. ft. Additionally, landscaping improvements around the condo, deck, patio and detached garage adds another 5,000 sq. ft. bringing the total developed portion of the lot to 16,000 sq. ft. or 16,000/44,000 — approximately 36% of that gross one-acre lot. The lumens allocation for this multiunit example is 20,000/per net acre or 20,000*0.36 = 7,272 lumens.

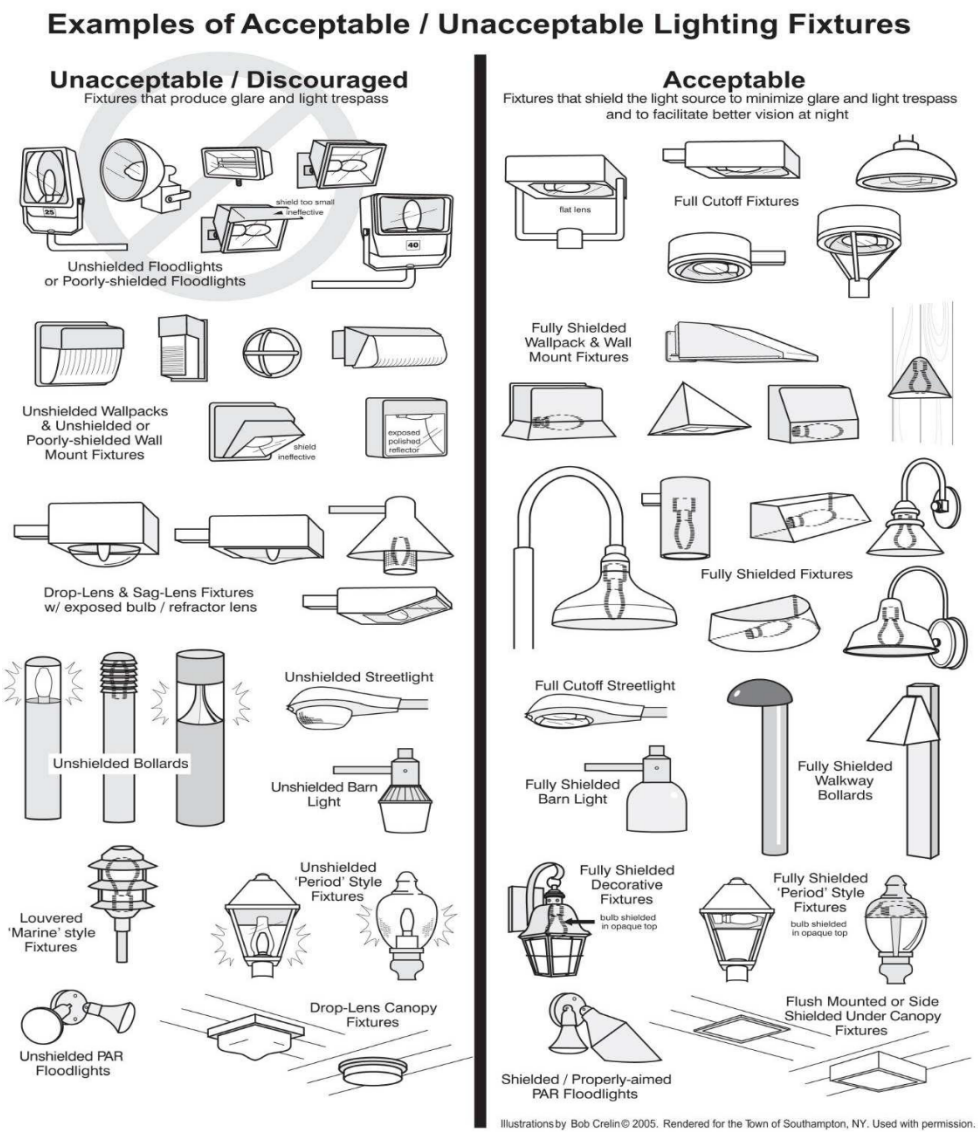
3. Color Temperature Comparison:



4. Lumens to Wattage Conversion:



5. Examples of Acceptable (fully shielded) and Unacceptable Dark Sky lighting:



(Ord. No. 2022-05, § 2(Exh. A), 7-29-2022)

ARTICLE 8. MANUFACTURED/MOBILE HOME REQUIREMENTS AND REGULATIONS

DIVISION 1. GENERAL PROVISIONS

Sec. 16-8-10. Intent.

It is the intent of this Article to provide for the orderly and creative development of mobile home parks as a part of a MH District in the Town and to regulate standards and requirements of manufactured homes installations. (See Section 16-8-400.) It is further the intent of this Chapter to:

(1) Encourage a high standard of planning and design for mobile home parks.

(2) Maintain design standards that are equal to or greater than conventional single- or multiple-family developments.

(3) Require minimum safety standards for utilities, fire protection and protection from excessive winds, snow and flooding.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-20. Definitions.

The following terms shall have the definitions as follows:

Manufactured home means a dwelling unit, which is fabricated in one (1) or more sections at a location other than the home site by an assembly line-type production technique or by other construction methods unique to an off-site manufactured process. Every section shall bear a label certifying that it was built in compliance with the Federal Manufactured Home Construction and Safety Standards Act of 1974 (UBC). For mobile homes built prior to June 15, 1976, a label certifying compliance to the Standard for Mobile Homes, NFPA 501, ANSI 225.1 (HUD) in effect at the time of manufacture is required. A manufactured home is designed to be towed on its own chassis or be site delivered by alternative means.

Manufactured housing: See Section 16-8-400 of this Article.

Mobile home is defined by the following specifications:

a. The unit shall be a minimum of eight (8) feet in width and thirty-two (32) feet in length, excluding towing gear and bumpers.

b. The unit shall have a nonmetallic, brick, wood, vinyl or cosmetically equivalent exterior siding and pitched roof of one-twelfth (1:12) or more.

c. The unit shall be installed on the manufacturer-suggested foundation, poured concrete or precast concrete piers with tie downs and shall meet the requirements of Paragraph 16-9-310(4) of this Chapter and all other applicable flood protection provisions.

d. The unit shall be no more than five (5) years old.

e. The landowner shall purge title.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-30. Application of regulations.

(a) *General.* The provisions of this Article shall apply to construction, alteration, extension, location, installation, use and maintenance of all mobile homes in the Town. It shall be unlawful for any person to construct, alter, extend, install, use or maintain a mobile home within the Town except within compliance with this Article.

(b) *Existing mobile homes; nonconforming uses.*

(1) Wherever a mobile home was in existence in the Town on the effective date of the initial ordinance codified herein or was annexed to the Town after such date, and the mobile home was in compliance with the applicable codes, then, in effect, the mobile home shall be legally nonconforming.

(2) Legally nonconforming mobile homes shall not be subject to the provisions of this Article except for licensing requirements and provisions relating to utilities when such services are available. However, if the existing mobile home is proposed to be altered or expanded, then the alteration or expansion must be in accordance with this Chapter.

(3) If a nonconforming use is discontinued for a period of ninety (90) days or more, then the mobile home shall not be reoccupied until it is in conformance with all applicable regulations herein.

(4) A nonconforming mobile home may be replaced with a like mobile home not more than five (5) years old.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

DIVISION 2. LICENSES

Sec. 16-8-110. Licenses required.

(a) A mobile home park license is required to operate and maintain a mobile home park in the Town. The annual license fee for a mobile home park shall be established by resolution of the Board of Trustees. No license shall be issued without the prior approval of the special review of the property as a mobile home park.

(b) Applications for a mobile home park license shall be filed with the Town Clerk and such license issued by the Board of Trustees. Said applications shall be in writing, signed by the property owner and applicant and shall contain the following:

(1) The names and addresses of the property owner and applicant.

(2) The location and legal description of the property.

(3) A copy of the approved special review site plan.

(4) A request, if applicable, to replace existing mobile home with a new or no more than five-year-old used mobile or manufactured home.

(c) All mobile home parks in existence upon the effective date of the initial ordinance codified herein shall obtain a license and in all respects comply fully with the requirements of this Chapter except as follows:

(1) Special review approval of existing mobile homes and mobile home developments shall not be required, unless the use is proposed for expansion.

(2) Building permits shall not be required for existing units, unless the units are to be moved or altered.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-120. Revocation of license.

The Board of Trustees may, after a public hearing, revoke any license to operate and maintain a mobile home park when the licensee has violated any rules or regulations of the Town or any provisions of this Chapter. After such revocation, the licensee may have the license reissued by the Board of Trustees if the circumstances causing such violation have been remedied or corrected.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-130. Posting of license.

The license certificate shall be conspicuously posted in the office or premise of the mobile home park at all times.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

DIVISION 3. STANDARDS AND DESIGN GUIDES

Sec. 16-8-210. Mobile home development standards and design guides.

Mobile home developments shall conform to the requirements of the MH District.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-220. Location.

(a) The mobile home park shall be located on a well-drained site and shall be located so that its drainage will not constitute an unreasonable hazard or nuisance to persons, property or water supply in the immediate vicinity of the site. The site shall be free from marshes, swamps or other potential breeding places for insects or rodents.

(b) Mobile home park sites shall not be subject to undue flooding, fire or safety hazards and shall not be exposed to nuisances, such as undue noise, smoke, fumes or odors. The topography of the site should be favorable to minimum grading, mobile home placement and ease of maintenance.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-230. Site design.

The site design shall provide for a desirable residential environment for mobile home residents, which is an asset to the community and the neighborhood in which it is located. Site planning and improvements shall provide facilities and amenities which are appropriate to the needs of the residents; safe, comfortable and sanitary use by the residents under all weather conditions; and practical and efficient operation and maintenance facilities at reasonable costs. Innovative and imaginative design shall be encouraged.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-240. Minimum area required.

The minimum area required for a mobile home park or subdivision is four (4) acres. In special circumstances, due to topographical conditions or other unique site conditions, the Planning Commission may approve mobile home developments on a site that is less than four (4) acres.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-250. Maximum density.

The maximum gross density for any mobile home park or subdivision is seven (7) units per acre.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-260. Recreation area and open space.

Not less than ten percent (10%) of the total site area shall be used for recreation facilities and landscaped open space. All open space areas and recreational areas shall be in convenient locations from mobile home lots or spaces. Recreation areas may include space for community-use facilities and buildings, swimming pools and tennis courts.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-270. Mobile home spaces.

(a) Mobile home spaces within a mobile home park shall be adequate to provide for:

  (1) A minimum of fifteen (15) feet between mobile homes.

  (2) An outdoor living and service area on the mobile home space of not less than three hundred (300) square feet.

(b) In determining the required yard and space areas, the use of doublewide mobile homes and accessory structures shall be taken into consideration. The area required for a mobile home space shall not include additional area required by this Article for access roads, off-street parking and storage areas, service buildings, recreation areas, office and similar mobile home parks needs.

(c) Paved driveways, the minimum width of which shall be ten (10) feet, shall be provided where necessary for convenient access to the mobile homes.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-280. Minimum lot area.

Minimum lot area requirements are set forth in Section 16-3-30 of this Chapter.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-290. Reserved storage areas.

Storage areas for boat trailers, travel trailers and detachable pickup campers should be provided within the mobile home park in an amount equal to one hundred (100) square feet per mobile home space. Required areas within the mobile home park for accommodation of travel trailers, campers and the like, on a temporary occupancy basis, shall be provided in a location where the parking, use and occupancy of such vehicles do not constitute a nuisance to other residents of the mobile home park. Travel trailer areas shall be screened from the rest of the mobile home spaces and adjoining residential areas with opaque screening and landscaping in such a manner that undue noise and other disturbances are reduced. Anchors and cables with turnbuckles shall be provided for tying down travel trailers.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-300. Setbacks.

(a) Setback requirements are set forth in Section 16-3-30 of this Chapter.

(b) No mobile home shall overhang or obstruct any driveway, access road or walkway.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-310. Screening.

All mobile home parks or subdivisions adjacent to other residential, commercial or industrial uses shall be provided with screening such as solid fencing or landscaping along the property boundary separating the mobile home development from the adjacent use.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-320. Windbreaks.

Where any mobile home park is located on flat, open land without natural barriers, such as hills, bluffs or large stands of trees to barricade strong winds, windbreaks shall be required to protect mobile homes from the effects of such winds. Windbreak design and location shall be relative to known wind velocities and direction and to the existing and proposed topography and vegetation, and shall be subject to landscape review and approval by the Planning Commission. Windbreak screening techniques may include landscape buffering, earth berming and fencing.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-330. Streets.

(a) The mobile home park site shall have at least two (2) direct accesses to a public street or highway, and access roads shall be provided to each mobile home space.

(b) All streets and accessways providing ingress to and egress from the mobile home park and circulation within the mobile home park shall be constructed in accordance with specification of the Town for like streets and accessways on public ways and shall be completed within a period of one (1) year after the date of issuance of the mobile home park license. All such streets and accessways shall include sidewalks, curbs and gutters.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-340. Walkways and lighting.

(a) Paved walkways at least four (4) feet wide shall be provided from all mobile home spaces to service buildings and other community areas and along all access roads.

(b) Pedestrian circulation areas shall be lighted at night by seven thousand (7,000) lumen lighting standards (equal to 175-watt mercury vapor bulbs) spaced not more than three hundred (300) feet apart with a maximum height of twenty-five (25) feet, or by other lighting methods producing an equivalent level of light at the ground level.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-350. Off-street parking.

Parking shall be provided as required by Article 6 of this Chapter.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-360. Foundation and tie-down requirements.

(a) Every owner or occupant of a mobile home within the Town or subject to Town regulations shall secure his or her mobile home against wind and flood damage in accordance with the requirements of Article 9 of this Chapter and the adopted Building Code.

(b) All mobile homes shall have a skirting or retaining wall and, when installed, be made of material suitable for exterior exposure and contact with the ground, and must be able to withstand both vertical and horizontal pressure.

(c) Each mobile home shall be provided with tie-downs to the main framing members of the mobile home as required by Article 9 of this Chapter.

(d) Each mobile home shall be able to withstand the following loads:

(1) Snow load - thirty (30) p.s.f.

(2) Wind load - fifteen (15) p.s.f.

(3) Frost depth - thirty (30) inches

(e) Only poured-in-place concrete piers, foundations parallel to frame rails, precast concrete blocks or premanufactured steel jacks will be used to support the frame of the unit. Treated or natural decay-resistant wood may be used for final leveling of unit.

(f) Tie downs: See Article 9 of this Chapter.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-370. Minimum clearance for mobile homes.

(a) A minimum distance of eighteen (18) inches will be maintained between the bottom of the frame rails and concrete footings.

(b) A minimum of six (6) inches will be maintained from the lowest point of the exterior siding to the finished earth grate.

(c) An under-floor access opening will be provided. Such opening shall not be less than eighteen (18) inches in the least dimension and not less than three (3) square feet in area and located so that the water and sewer drain connections are accessible.

(d) The water meter pit will be located to the street side of the mobile home and outside of the footings, stem walls and/or skirting. The Public Works Department will designate this location.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-380. Vents and crawl space.

(a) Vents in retaining walls, stem walls or foundations are required and will be installed in compliance with the IBC requirements (one [1] square foot of vent space for each one hundred fifty [150] square feet of floor space).

(b) HUD only; structural additions. Additions shall be designed and installed as stand-alone structures and in no way be supported on or by the mobile home foundation system and shall conform to UBC standards.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-390. Compliance.

(a) All used housing shall otherwise comply with other provisions and requirements of this Code not inconsistent with the requirements of this Article.

(b) A mobile home that does not meet the requirements of this Article must be brought into compliance prior to the issuance of a certificate of occupancy by the Building Inspector.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-393. Revocation of License.

The Town Board may, after a public hearing, revoke any license to operate and maintain a mobile home park when the license has violated any rules or regulations of the Town of Paonia or any provisions of the chapter. After such revocation, the licensee may have the license reissued by the Town board of the circumstances causing such violation have been remedied or corrected.

(Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-395. Posting of license.

The license certificate shall be conspicuously posted in the office or premises of the mobile home park at all times.

(Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-400. Manufactured housing.

(a) Manufactured housing units in Colorado are built to the specifications of one (1) of two (2) building codes, the International Building Code (IBC) and the so-called "HUD Code" promulgated by the U.S. Department of Housing and Urban Development pursuant to the National Manufacturing Housing Construction and Safety Standards Act of 1974. Zoning ordinances become unnecessarily confusing and cumbersome when they provide separate definitions and uses for single-family dwellings and manufactured or factory-built units. This confusion can typically be avoided if zoning officials include manufactured housing units (both UBC and HUD Code) within the definition of single-family dwelling. When the term single-family dwelling is defined in this fashion, manufactured housing units are, under the applicable schedule of uses, permitted along with site-built homes in any zone which permits single-family dwellings. Under this approach, manufactured homes are treated the same as site-built homes with size, foundation, installations and appearance standards adopted by the community for single-family dwellings applying equally to both types of housing.

(b) *Dwelling or residence, single-family* means a detached principal building, other than a mobile home, designed for and used as a single dwelling unit by one (1) family. The term single-family residence includes a manufactured home.

(c) A manufactured home has the following:

(1) A minimum of twenty-four (24) feet in width and thirty-six (36) feet in length.

(2) Installation on a manufactured guideline or an engineered permanent foundation.

(3) Brick, wood or cosmetically equivalent siding and a three-twelfths (3:12) or more pitched roof of pro-panels or asphalt shingles or any other equivalent material.

(4) Is no more than five (5) years old.

(5) The title of the manufactured home is purged.

(6) May replace an existing mobile home.

(d) Installation and requirements of manufactured homes.

(1) This minimum requirement guideline is intended to assist both professionals and nonprofessionals with the requirements that must be complied with in order to install a manufactured home within the Town limits. It is intended as an informational guideline only. Installations will have specific requirements as to location, grade of lot and floodplain requirements.

(2) You will be required to provide to the Town the following items:

a. A copy of the bill of sale.

b. A copy of the floor plan and a copy of the foundation plan from the manufacture's guide. If not available, an engineered foundation will be required.

c. A plot plan showing the proposed location of home.

d. A complete application for a building permit with an accurate cost estimate.

e. A completed excavation permit, if required; twenty-five-dollar bond fee.

f. A completed floodplain permit, if required; one-hundred-dollar fee.

g. A street cutting permit, if required.

h. A water and sewer tap.

i. All fees shall be paid in full before construction can begin.

(3) The builder/owner of property must have curb, gutter and sidewalk or any street repairs installed according to specifications of the Public Works Department.

(4) The manufactured home must comply with all single-family dwelling regulations. See Article 3 of this Chapter.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-8-410. Additional regulations.

In addition to the requirements of this Article, all mobile homes and mobile home parks and facilities shall be operated in compliance with the existing laws of the State, ordinances of the Town and such codes and regulations as may be adopted by the Board of Trustees.

(Ord. No. 83-116, Art. XV, 1983; Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 9. RESERVED[1]

Secs. 16-9-10—16-9-410. Reserved.

ARTICLE 10. RESERVED[2]

Secs. 16-10-10—16-10-80. Reserved.

ARTICLE 11. ACCESSORY BUILDINGS, STRUCTURES AND USES

Sec. 16-11-10. Generally.

Accessory buildings, structures and uses may include, but are not limited to, the following:

(1) Home occupations.

(2) Renting of rooms.

(3) Horses and household pets.

(4) Fences, hedges and walls.

(5) Private greenhouses.

(6) Private swimming pools.

(7) Storage and merchandise in commercial districts.

(8) Fallout shelters.

(9) Detached garages.

(10) Tennis courts.

(11) Storage sheds for residential areas.

(Ord. No. 83-116, Art. XVIII, 1983; Ord. No. 2000-02, Art. XVIII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

[1]Editor's note(s)—Ord. No. 2017-11, § 2, adopted October 10, 2017, repealed §§ 16-9-10—16-9-130, 16-9-210—16-9-240, 16-9-310—16-9-380, 16-9-410, which pertained to flood damage prevention. See Code Comparative Table for complete derivation. Subsequently, § 3 of such ordinance added §§ 18-7-10—18-7-130, 18-7-210—18-7-240, 18-7-310—18-7-380, 18-7-410.

[2]Editor's note(s)—Ord. No. 2017-11, § 2, adopted October 10, 2017, repealed §§ 16-10-10—16-10-80, which pertained to supplementary regulations. See Code Comparative Table for complete derivation. Subsequently, § 3 of such ordinance added §§ 18-8-10—18-8-50.

Sec. 16-11-20. Home occupations.

A home occupation shall be permitted as an accessory use, provided that a home occupation permit is granted by the Town and the criteria for home occupations are met.

(1) *Permit required.* A person desiring to establish a home occupation within the Town shall apply as follows:

(a) An application shall for home occupation shall be made to the Town Administrator, or its designee, in the form provided by the Town and accompanied by the appropriate fee as set by Resolution of the Board of Trustees.

(b) Upon the receipt of a completed application for a home occupation permit, the Town Administrator, or its designee, shall notify the applicant within ten (10) days that such application is complete.

(c) Thereafter the Town Administrator, or its designee, shall notify the applicant and set a date of public hearing before the Town Board of Trustees that will allow time for publication and notification of adjoining property holders.

(d) Upon the setting of a public hearing before the Board of Trustees the Town Clerk shall notify the property owners within two hundred (200) feet of the applicant's property by regular mail at the applicant's expense. The notification will include the nature of the application, a copy of this Article and the time and place of a public hearing.

(2) *Revoke the permit.* A home occupation permit may be revoked by the Town Administrator if at any time the home occupation fails to meet the criteria listed below.

(3) *Nontransferability.* Home occupation permits are issued to an individual for a specific property and use. Permits are not transferable should the property be sold or rented to other persons.

(4) *Criteria for home occupations.* A home occupation shall be allowed as a permitted accessory use, provided that the following conditions are met:

(a) The use must be conducted entirely within a dwelling or accessory structure and carried on by the occupants of the dwelling and no more than one (1) non-occupant employee.

(b) The use must be clearly incidental and secondary to the use of the dwelling for dwelling purposes and must not change the residential character thereof.

(c) The total area used for such purposes may not exceed twenty-five percent (25%) of the first-floor area of the user's dwelling unit.

(d) There shall be no change in the outside appearance of the building or premises or other visible evidence of the conduct of such home occupation, including advertising signs or displays or advertising that solicits or directs persons to the address. A wall-mounted identification sign of not more than two (2) square feet shall be permitted.

(e) There shall not be conducted on the premises the business of selling inventory, supplies or products, provided that incidental retail sales may be made in connection with other permitted home occupation.

(f) There must be no exterior storage on the premises of material or equipment used as a part of the home occupation.

(g) No equipment or process shall be used in such home occupation, which creates any glare, fumes, odors or other objectionable conditions detectable to the normal senses off the lot if the

occupation is conducted in a single-family dwelling or outside the dwelling unit if conducted in other than a single-family dwelling.

(h) No traffic shall be generated by such home occupation in greater volumes than would normally be expected in a residential neighborhood, and any need for parking generated by the conduct of the home occupation shall be met with additional off-street parking spaces that are not located in a required yard adjacent to a street.

(i) Under no circumstances shall any of the following be considered a home occupation: Antique shop, barber shop, a beauty parlor (with more than one [1] chair), clinic, mortuary, nursing home, restaurant, veterinarian's clinic or dance studio.

(Ord. No. 83-116, Art. XVIII, 1983; Ord. No. 2000-02, Art. XVIII, 2000; Ord. No. 2014-04, § 1, 1-13-2015; Ord. No. 2019-06, § 2, 8-13-2019)

Sec. 16-11-30. Renting of rooms.

(a) Single-unit dwellings. The renting of rooms to one (1) or two (2) persons, not members of the family residing in the same single-unit dwelling, may be permitted as an accessory use, provided that the following conditions are met:

(1) The total number of unrelated persons, including roomers in any one (1) dwelling unit, must not exceed three (3).

(2) Quarters used by the roomers must not be more than twenty-five percent (25%) of the total floor area of the dwelling unit.

(3) The dwelling unit must have only one (1) electric meter.

(4) Where the renting of rooms is to two (2) roomers, at least one (1) additional off-street parking space must be provided per room.

(b) Multi-unit dwellings. The renting of rooms to one (1) or two (2) persons, not members of the family residing in the same multi-unit dwelling, may be permitted as an accessory use, provided that the total number of unrelated persons, including roomers, in any dwelling unit must not exceed three (3). Where the renting of rooms is to two (2) roomers, at least one (1) additional off-street parking space must be provided per room.

(c) In addition to normal residential off-street parking requirements, one (1) additional off-street parking space shall be provided on site for each lodging room. Ingress and egress shall meet requirements of the IBC and ADA. Separate bath and sanitary facilities from those of the host must be provided for each two (2) guest rooms.

(d) In residential districts, landscaping and screening shall be provided to maintain the residential character of the building and preserve the right of neighboring residents to enjoy a peaceful occupancy of their homes.

(Ord. No. 83-116, Art. XVIII, 1983; Ord. No. 2000-02, Art. XVIII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-11-40. Reserved.

Editor's note(s)—Ord. No. 2017-11, § 2, adopted October 10, 2017, repealed § 16-11-40, which pertained to fences, hedges and walls. See Code Comparative Table for complete derivation. Subsequently, § 3 of such ordinance added § 18-9-10.

Sec. 16-11-50. Reserved.

Editor's note(s)—Ord. No. 2017-11, § 2, adopted October 10, 2017, repealed § 16-11-50, which pertained to swimming pools, hot tubs, and Jacuzzis. See Code Comparative Table for complete derivation. Subsequently, § 3 of such ordinance added § 18-9-20.

Sec. 16-11-60. Requirements for accessory buildings and uses.

(a) All detached accessory buildings shall be located in the rear one-half (½) of the lot.

(b) On an interior lot, the minimum setback from the rear lot line shall be ten (10) feet and from the side yard line shall be six (6) feet if there is no alley or five (5) feet from an existing alley easement line.

(c) On double-frontage lots, the minimum setback from the rear property line shall be the same as the front yard setback for principal uses within that district.

(d) On corner lots, the accessory building shall not be located closer to the street-side property than the required six (6) feet for the principal use.

(e) Accessory buildings shall not exceed fifteen (15) feet in height.

(f) The floor area of accessory uses shall be included in the determination of the maximum lot coverage.

(Ord. No. 83-116, Art. XVIII, 1983; Ord. No. 2000-02, Art. XVIII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 12. RESERVED[3]

Secs. 16-12-10—16-12-40. Reserved.

ARTICLE 13. NONCONFORMING BUILDINGS

Sec. 16-13-10. Objectives.

Certain uses of land or buildings, sizes of lots or location or size of structures may be found to be in existence at the time of the passage of the initial ordinance codified herein, which do not meet the requirements of this Chapter. It is the intent of this Article to allow the continuance of such nonconformance but not to encourage its enlargement or to allow its continuance should the use be discontinued for a period of one (1) year. Such nonconformance is declared to be incompatible with other uses in the district. Each situation needs to be considered by the Planning Commission and Board of Trustees on its own merits.

(Ord. No. 83-116, Art. XX, 1983; Ord. No. 2007-05, 2007; Ord. No. 2014-04, § 1, 1-13-2015)

[3]Editor's note(s)—Ord. No. 2017-11, § 2, adopted October 10, 2017, repealed §§ 16-12-10—16-12-40, which pertained to building permit and site plan review requirements. See Code Comparative Table for complete derivation. Subsequently, § 3 of such ordinance added §§ 18-10-10—18-10-40.

Sec. 16-13-20. Nonconforming lots.

(a) Some nonconforming lots of record at the time of the passage of the initial ordinance codified herein may be built upon or used after the passage of said ordinance, but only:

(1) With a principal use in the zone district; and

(2) By approval of the Board of Adjustment.

(b) No lot that is conforming in size at the time of the passage of said ordinance may be subdivided or reduced in size in such a way that it would become nonconforming or cause any building, space or use to become nonconforming.

(Ord. No. 83-116, Art. XX, 1983; Ord. No. 2000-02, Art. XX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-13-30. Alterations and extensions.

(a) Nonconforming buildings as of the effective date of the initial ordinance codified herein shall not be altered or extended in a way that would increase the degree of nonconformance. Therefore, all new additions, alterations or extensions shall be in accordance with the applicable zoning requirements, including but not limited to setbacks, height, open space and parking. Exceptions to this requirement may be allowed if the following conditions apply:

(1) The purpose of the alteration or extension is for repairs to a building or structure that is ordered by a public official to make it safe.

(2) The purpose of the alteration is to make maintenance repairs that are needed to keep the building in good condition.

(3) There is a special hardship created by strict application of this Code and a variance is granted by the Board of Adjustment in accordance with the provisions of Article 15 of this Chapter.

(b) Nonconforming uses may be expanded or altered in the same manner as nonconforming buildings, except that the area of a nonconforming use may not be expanded by more than twenty-five percent (25%) of its existing floor area.

(Ord. No. 83-116, Art. XX, 1983; Ord. No. 2000-02, Art. XX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-13-40. Restoration.

A nonconforming building or use which is been damaged or destroyed by any calamity, except flood, may be restored to its original condition if such restoration commences within one (1) year from the date of the calamity. If any nonconforming structure is damaged to the extent of fifty percent (50%) of its actual value by flood, said nonconforming structure shall be restored only in compliance with Article 9 of this Chapter.

(Ord. No. 83-116, Art. XX, 1983; Ord. No. 2007-05, 2007; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-13-50. Abandonment.

If any nonconforming use of land, a building or a structure is abandoned for a period exceeding one (1) year, no nonconforming use may be reestablished upon such land or within such building or structure.

(Ord. No. 83-116, Art. XX, 1983; Ord. No. 2000-02, Art. XX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-13-60. Previously approved uses.

Any building, use or structure that had been officially approved or for which a building permit had been issued prior to the passage of the initial ordinance codified herein may proceed to construct or use such building, structure or land, provided that the structural members of such building or structure are completed within one (1) year of said effective date.

(Ord. No. 83-116, Art. XX, 1983; Ord. No. 2000-02, Art. XX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-13-70. Change to another nonconforming use.

No nonconforming use of a building or structure may be changed to another nonconforming use except when the new nonconforming use is of a more restrictive nature as may be determined and approved by the Planning Commission.

(Ord. No. 83-116, Art. XX, 1983; Ord. No. 2000-02, Art. XX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 14. AMENDMENT PROCEDURES

Sec. 16-14-10. Authority.

The Town may from time to time amend the number, shape or boundaries of any zone district or any regulation of or within such district or any other provision of this Chapter.

(Ord. No. 83-116, Art. XXV, 1983; Ord. No. 2000-02, Art. XXV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-14-20. Procedures.

Amendments to this Chapter shall be considered by the Board of Trustees only when the following requirements have been observed:

(1) Requests for amendment may only be presented by a legal title owner of real property within the area proposed for a change, by the Planning Commission or the Board of Trustees. Requests for a change in the boundary of any zone district by a legal title owner of real property within the area proposed for change shall be accompanied by a petition requesting such change signed by owners of at least fifty percent (50%) of the area of the lots included in such change.

(2) Each amendment shall be submitted to the Planning Commission for its recommendations. Such action by the Planning Commission shall be filed in a report to the Board of Trustees.

(Ord. No. 83-116, Art. XXV, 1983; Ord. No. 2000-02, Art. XXV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-14-30. Board of Trustees public hearing.

Prior to final adoption of any amendment to this Chapter, the Board of Trustees shall hold a public hearing thereon. Notice shall be given as provided in Section 16-16-10 of this Chapter.

(Ord. No. 83-116, Art. XXV, 1983; Ord. No. 2000-02, Art. XXV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-14-40. Fee.

For all proposed amendments to this Chapter, except for amendments proposed by the Board of Trustees or the Planning Commission, a fee shall be charged to cover advertising and processing costs. The amount of the fee shall be established by resolution of the Board of Trustees.

(Ord. No. 83-116, Art. XXV, 1983; Ord. No. 2000-02, Art. XXV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-14-50. Decisions.

In case of protest against an amendment signed by the owners of twenty percent (20%) or more, either of the area of lots included in such proposed amendment or of those immediately adjacent to the area thereof extending one hundred (100) feet therefrom or from those directly opposite thereto extending one hundred (100) feet therefrom or from those opposite thereto extending one hundred (100) feet from the street frontage of such opposite lots, such amendment shall not become effective except by a favorable vote of two-thirds (⅔) of all the voting members of the Board of Trustees.

(Ord. No. 83-116, Art. XXV, 1983; Ord. No. 2000-02, Art. XXV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 15. ZONING BOARD OF ADJUSTMENT

Sec. 16-15-10. Procedures.

(a) Appeals to the Board of Adjustment may be taken by any person aggrieved by his or her inability to obtain a building permit based upon the decision of any administrative officer or agency made in the course of the administration or enforcement of the provisions of this Code. Appeal may be taken by an officer, department, board or bureau of the Town affected by the refusal of a building permit or by other decision of an administrative officer or agency made in the course of the administration or enforcement of this Code. Appeals to the Board of Adjustment must be made in writing and filed with the Town Clerk no later than 4:30 p.m. of the seventh day following the action or decision from which the appeal is taken. In the event the seventh day falls on a Saturday, Sunday or holiday, the next regular business day of the Town shall be deemed the seventh day. The day of the action or decision shall not be included in the seven-day calculation.

(b) An appeal stays all proceedings in furtherance of the action appealed from, unless the officer from whom the appeal is taken certifies to the Board of Adjustment after the notice of appeal has been filed with him or her that, by reason of facts stated in the certificate, a stay, in his or her opinion, would cause imminent peril to life and property, in which case proceedings shall not be stayed other than by a restraining order which may be granted by the Board of Adjustment or a court of record on application, on notice to the officer from whom the appeal is taken and on whom due cause is shown.

(c) Where, by reason of exceptional narrowness, shallowness or shape of a specific piece of property at the time of enactment of the initial ordinance codified herein, or by reason of exceptional topographic conditions or other extraordinary and exceptional situation or condition of such piece of property, the strict application of any regulation enacted under this Chapter would result in peculiar and exceptional practical difficulties to, or exceptional and undue hardship upon, the owner of such property, the Board of Adjustment may authorize, upon an appeal relating to said property, a variance from such strict application so as to relieve such difficulties or hardship; provided, however, that:

    (1) The variance granted is the minimum necessary to alleviate such practical difficulties or undue hardship upon the owner of said property.

(2) Such relief may be granted without substantial detriment to the public good and without substantially impairing the intent and purpose of the general plan or this Chapter.

(3) The circumstances found to constitute a hardship were not created by the appellant, are not due to or the result of general conditions in the district and cannot be practically corrected.

(Ord. No. 83-116, Art. XXI, 1983; Ord. No. 2000-02, Art. XXI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-15-20. Hearings.

All hearings on the appeals to the Board of Adjustment shall be held within thirty (30) days of the filing of the appeal. Hearings held in regard to variance from strict application of the provisions of this Chapter shall be conducted at a public hearing following public notice requirements as provided in Article 16 of this Chapter.

(Ord. No. 83-116, Art. XXI, 1983; Ord. No. 2000-02, Art. XXI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-15-30. Fee.

For all applications for a variance or interpretation of this Code, a fee shall be charged to cover the costs of advertising and processing. The amount of the fee shall be established by resolution of the Board of Trustees.

(Ord. No. 83-116, Art. XXI, 1983; Ord. No. 2000-02, Art. XXI, 2000)

Sec. 16-15-40. Decisions.

The concurring vote of four (4) members of the Board of Adjustment shall be necessary to reverse any order, requirement, decision or determination of any such administrative official or agency or to decide in favor of the appellant.

(Ord. No. 83-116, Art. XXI, 1983; Ord. No. 2000-02, Art. XXI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 16. PUBLIC NOTICE REQUIREMENTS

Sec. 16-16-10. Required notice.

For special review requests, variance requests, PUD hearings and rezoning requests, the following public notice requirements shall be met:

(1) A public notice shall be published in a newspaper of general circulation within the Town at least fifteen (15) days in advance of the hearing.

(2) Notice shall be sent to all property owners within two hundred (200) feet of the property in question at least ten (10) days in advance of the hearing.

(3) A notice shall be posted on the subject property at least ten (10) days prior to the hearing. The applicant shall be required to post the notice on the property in the manner prescribed by this Article and as directed by the Town Administrator.

(4) In the case of rezoning of a large area, the entire Town or a portion of the Town initiated by the Planning Commission and Board of Trustees, public notice shall be as follows:

a. A public notice shall be published in a newspaper of general circulation within the Town at least fifteen (15) days in advance of the public hearing. Such notice shall include a map of the boundaries of the proposed zone changes.

b. Notices shall be posted at several places throughout the areas to be rezoned and along the perimeter of the areas. Such notices shall be posted at least ten (10) days prior to the hearing.

(5) In determining the time periods for notice requirements, the day of the action or public hearing is not included in the calculation.

(Ord. No. 83-116, Art. XXII, 1983; Ord. No. 2000-02, Art. XXII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-16-20. Notice information.

All notices shall include the following information:

(1) The name of the applicant or appellant and the description of the property.

(2) A description of the nature of the request.

(3) The time, date and place of the public hearing.

(4) The agency or office and phone number where further information may be obtained.

(Ord. No. 83-116, Art. XXII, 1983; Ord. No. 2000-02, Art. XXII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 17. MISCELLANEOUS PROVISIONS

Sec. 16-17-10. Certificate of occupancy.

(a) No vacant land shall be occupied and used, and no building hereafter erected shall be occupied or used, until a certificate of occupancy has been issued by the Building Inspector.

(b) A certificate of occupancy for a new building or the alteration of an existing building shall be applied for coincident with the application for a building permit and shall be issued within ten (10) days after the erection or alteration of such building has been completed in conformity with the provisions of these regulations.

(c) A certificate of occupancy for the use of vacant land or the change in the use of land as herein provided shall be applied for before such land is occupied or used, and a certificate of occupancy shall be issued within ten (10) days after the application has been made, provided that such use is in conformity with these requirements.

(d) A certificate of occupancy shall state that the building or land complies with all the building and health laws and ordinances and with the provisions of this Code. A record of all certificates shall be kept on file in the office of the Building Inspector, and copies shall be furnished upon request to any person having proprietary or tenancy interest in the building affected. No fee shall be charged for an original certificate applied for coincident with the application of a building permit. For all certificates or for copies of the original certificate, there shall be a charge of one dollar ($1.00).

(Ord. No. 2000-02, Art. XXIV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-17-20. Nonliability for damages.

This Chapter shall not be construed to hold the Town, in any manner, responsible for any damages to persons or property resulting from any inspection as herein authorized, resulting from any failure to so inspect, resulting from the issuance or denial of a building permit as herein provided, resulting from the institution of court action as hereinabove set forth or resulting from the forbearance by the Town to so proceed.

(Ord. No. 2000-02, Art. XXIX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-17-30. Nonliability of officials.

Any Town official or employee charged with the enforcement of this Chapter acting in good faith and without malice on behalf of the Town in the discharge of his or her official duties shall not thereby render himself or herself personally liable for any damages which may accrue to persons or property resulting from any such act or omission committed in the discharge of such duties. Any suit or proceeding instituted against such official or employee stemming from any act or omission performed by him or her in the enforcement or attempted enforcement of any provision of this Chapter shall be defended by attorneys provided by the Town until final termination of the proceedings.

(Ord. No. 2000-02, Art. XXX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 18. ENFORCEMENT

Sec. 16-18-10. Violation.

It shall be unlawful to erect, construct, reconstruct or use any building or structure or to use any parcel or tract of land in violation of any provision of this Chapter or amendment thereof. Any person either as owner, lessee, occupant or otherwise, who violates any of the provisions of this Chapter or any amendment thereof or who interferes in any manner with any person in the performance of a right or duty granted or imposed upon him or her by the provisions of this Chapter shall be guilty of a violation of this Chapter.

(Ord. No. 2000-02, Art. XXVII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-18-20. Penalty.

Any person upon conviction of a violation of this Chapter, shall be fined in accordance with the provisions of Section 1-4-20 of this Code.

(Ord. No. 2000-02, Art. XXVII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 16-18-30. Remedies.

In case any building or structure is erected, constructed, reconstructed, altered, repaired, converted or maintained or any building, structure or land is used in violation of this Chapter or other regulation made under authority conferred hereby, the Town, in addition to other remedies, may institute any appropriate action or proceedings to prevent such unlawful erection, construction, reconstruction, alteration, repair, conversion, maintenance or use to restrain, correct or abate such violation to prevent any illegal act, conduct, business or use in or about such premises.

(Ord. No. 2000-02, Art. XXVII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Chapter 17
SUBDIVISIONS

ARTICLE 1. GENERAL PROVISIONS

Sec. 17-1-10. Purpose.

The purpose of this Article shall be to ensure the health, safety and general welfare of the citizens of the Town and to provide minimum standards for design of improvements and subdivision of land in order to promote a safe and efficient street system, a proper distribution of population and public facilities, adequate public utilities and to protect purchasers from unexpected obligations and assessments.

(Ord. No. 2000-02, Art. I, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-1-20. Authority.

These Subdivision Regulations are adopted under the authority granted by Title 31, Article 23, C.R.S. No final subdivision plat shall be approved and accepted by the Board of Trustees unless it conforms to the provisions of this Chapter.

(Ord. No. 2000-02, Art. II, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-1-30. Jurisdiction.

This Chapter shall be applicable within the following areas:

(1) All land located within the boundaries of the Town.

(2) All unincorporated land within three (3) miles of the corporate boundaries of the Town for major street plan purposes when a major street plan has been approved in accordance with the requirements of state statutes.

(3) All land that is in the process of annexation to the Town.

(Ord. No. 2000-02, Art. III, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-1-40. Applicability and enforcement.

(a) Whoever divides or participates in the division of a lot, tract or parcel of land into two (2) or more lots, tracts, parcels or other divisions of land for the purpose, whether immediate or future, of sale or building development, whether for residential, industrial, office, business or other use, shall make the transaction subject to the provisions of this Chapter, including the approval of a final subdivision plat by the Board of Trustees. The terms of any such transactions shall include and refer to any division of land previously subdivided or platted.

(b) Exceptions to the above shall include any division of land to heirs through an estate proceeding and any division of land by virtue of the foreclosure of a deed of trust.

(c) No final plat of a subdivision located within the area of planned jurisdiction of the Town shall be filed or recorded with the County Clerk and Recorder until said plat has received final approval in writing by the Planning Commission and by the Board of Trustees. Any owner or agent of the owner of any land located within a subdivision who transfers, sells, agrees to sell or negotiates to sell any land by reference to or by use of a plat for a subdivision, before such plat has been recorded or filed in the office of the County Clerk and Recorder, shall be deemed guilty of a misdemeanor. In addition, the Town may enjoin such transfer, sale or agreement by action for injunction brought in any court of equity jurisdiction or may recover the penalty of civil action in a court of competent jurisdiction.

(Ord. No. 2000-02, Art. IV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-1-50. Administration.

(a) *Public notice requirements.* A public hearing shall be required, for consideration of preliminary subdivision plats and annexation maps, by the Planning Commission and, for consideration of final subdivision plats and annexation maps, by the Board of Trustees. The following public notice requirements shall be met:

(1) A public notice shall be published in a newspaper of general circulation within the Town at least fifteen (15) days in advance of the hearing.

(2) Notice shall be sent to all property owners within two hundred (200) feet of the property in question at least ten (10) days in advance of the hearing. The applicant shall pay postage.

(3) A notice shall be posted on the subject project for at least ten (10) days prior to the hearing. The applicant shall be required to post this notice as directed by the Town Administrator.

(4) All notices shall include the following information:

a. The name of the applicant or appellant and the description of the property.

b. A description of the nature of the request.

c. The time, date and place of the public hearing.

d. The agency or office and phone number where further information may be obtained.

(b) *Exceptions.*

(1) The Planning Commission may recommend the granting of exceptions from the design and improvement standards set forth in Article 4 of this Chapter at a public hearing conducted upon notice as set forth in Subsection (a) above. In recommending the granting of an exception, the Planning Commission can recommend the imposition of any of the conditions set forth in the subdivision agreement. In order to obtain an exception, the applicant must show and the Planning Commission must find all of the following where applicable:

a. The strict application of the relevant standards will result in peculiar and exceptional practical difficulties to, or exceptional and undue hardship upon, the owner of the property in question due to the exceptional shape, topographic condition or other extraordinary and exceptional situation or condition of the property in question which does not occur generally to other property in the same zone district.

b. The exception to be granted is the minimum necessary to alleviate the practical difficulties and undue hardship upon the owner of the property.

c. The exception to be granted does not substantially impair the intent and purpose of the Comprehensive Plan, this Chapter, Chapter 16 of this Code and the standard from which the exception is sought.

d. The circumstances relating to or causing the practical difficulties or hardship upon the owner of the property were not created through or induced by any fault or action of the owner of the property, are not due to or the result of general conditions in the zone district or in the surrounding area outside of the zone district and cannot practicably be corrected by a means other than an exception.

e. Notwithstanding the above, an exception to the subdivision regulations may be recommended by the Planning Commission and approved by the Board of Trustees if the exception is considered necessary to achieve the objectives of a PUD.

(2) The Planning Commission may, in recommending the granting of an exception, recommend the imposition of any conditions set forth in the subdivision agreement or which it deems necessary to carry out the intent of the provisions of this Chapter or any other provision of this Code.

(3) An exception shall not be allowed until the application for an exception is reviewed and approved by the Board of Trustees. If the Planning Commission recommends an exception with or without conditions, the Board of Trustees shall review and act upon the application for exception after giving the same type of notice as was given prior to the hearing before the Planning Commission. The Board of Trustees may grant, deny or grant with conditions an application for an exception, and the decision of the Board of Trustees shall be final from which an appeal may be taken to a court of law.

(Ord. No. 2000-02, Art. VI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-1-60. Word usage.

(a) The word *lot* includes plot and parcel.

(b) The phrase *used for* shall be construed to include *arranged for*, *designed for*, *intended for*, *maintained for* and *occupied for*.

(c) Words used in the singular number include the plural, and the words in the plural include the singular, unless the context clearly indicates the contrary.

(d) The word *shall* is always mandatory. The word *may* is permissive.

(Ord. No. 2000-02, Art. V, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-1-70. Definitions.

For purposes of this Chapter the following words shall have the meanings ascribed to them as follows:

Boundary adjustment means the relocation of a lot line or lines that does not create new lots or the elimination of a lot line or lines that results in two (2) or more lots being combined into a lesser number of lots provided, however, that no more than ten (10) lot lines may be so adjusted on a Town approved and recorded plat.

Condominium means a subdivision in which the interests created are separate fee simple estates in individual air space units of a multi-unit property together with individual fee simple interests in common elements as defined by state statutes.

Drainage or *erosion control structure* means all facilities necessary to control the direction, depth, velocity and volume of water flow within a proposed subdivision and to mitigate the erosion and related water quality impacts resulting from development. Such facilities are considered to be public improvements as defined by this Chapter.

Driveway means an access facility between the driveway approach point on a roadway, shared access facility or emergency vehicle access and the abutting property used by vehicular traffic. A driveway is that portion of a lot intended to be the area upon which vehicles travel from a road, public or private, to a dwelling or other improvements located upon the lot.

Driveway approach means any area, construction or facility between the roadway and the driveway, shared access facility or emergency vehicle access serving the abutting property which provide access for vehicular traffic.

Easement means a grant of one (1) or more property rights by the property owner to and/or for the use by public, a corporation or another person or entity.

Lot means a parcel of land of at least sufficient size, and containing sufficient buildable area, to meet the minimum zoning requirements for use, coverage and area and to provide such yards and other open spaces as are required by the Land Development Regulations. The word *lot* includes the word plot, parcel and shall also mean the same as building site and that portion of a condominium subdivision project designed and intended for separate ownership and/or exclusive use.

Major street plan means that portion of the Master Plan of the Town which establishes the general location, character and extent of streets, thoroughfares, bridges, waterways, boulevards, parkways, parks and other public ways, grounds and open spaces that may be necessary for transportation purposes.

Major subdivision means any subdivision of land that does not fall within the definition of a *minor subdivision.*

Minor subdivision means the division of land that meets at least one (1) of the following conditions:

a. The division of a parcel of land into three (3) lots or less. A parcel of land may only be subdivided once into three (3) lots or less under the minor subdivision procedures once, but the relocation or adjustment of lot lines may be permitted multiple times on the same parcel of land, provided that such modification conforms to all other applicable provisions of these regulations. Any subsequent subdivision, except for Subparagraph b. below, must follow the procedures for a major subdivision.

b. The relocation or adjustment of a lot line that does not create new lots.

Paonia control system includes the following:

a. *Horizontal control* means a system of plane coordinates which has been established by the Town Engineer for the purpose of defining and stating the positions or the location of points on the surface of the earth within the Town and surrounding area.

b. *Paonia Control System Map* means a map on file at the office of the Town Clerk showing the location, coordinates and vertical elevation of the *Paonia control system* or control stations.

c. *Vertical control* means a vertical elevation system based on the USGS datum of 1929, which has been established by the Town Engineer for vertical control within the Town and surrounding area.

Parent parcel means a parcel of land lawfully in existence and through which a private road was extended prior to the effective date of this Section.

Private road means a roadway facility in private ownership providing private access and used for travel of vehicles by the owner or those having express or implied permission from the owner, but not other persons. *Private road* also means any road or thoroughfare for vehicular traffic contained within a private road easement

which is privately owned and maintained and which provides access for up to four (4) parcels abutting the private road easement.

Private road easement means an easement which is granted exclusively for a private access for up to four (4) abutting parcels of land and which contains or is intended to contain a private road.

Public street means a publicly owned and maintained thoroughfare dedicated for the purpose of traffic circulation and the principal means of access to abutting property.

Shared access facility means a privately owned driveable surface which serves up to and including four (4) lots for access to single-family dwelling units.

Shared driveway means a driveway as defined herein but used by two (2) lots.

Shared driveway easement means an easement which is granted exclusively for a private access to two (2) abutting parcels of land and which contains or is intended to contain a private driveway.

Street right-of-way means land, property or a property interest, usually in a strip, acquired for or devoted to transportation purposes which has been dedicated for public use.

Subdivide means any person, partnership, joint venture, association, corporation or other legal entity or legal representative who shall participate in any manner in the division of land or air space for the purpose, whether immediate or future, of sale or building development.

Subdivision means the division of a lot, tract, parcel or structure into two (2) or more parcels, building sites, tracts, lots or estates in land for the purpose, whether immediate or in the future, of sale or building development. *Subdivision* includes resubdivision of a subdivided tract into a greater number of parcels, building sites, tracts, lots or estates in land. *Subdivision* further includes the conversion of existing structures to the condominium form of ownership pursuant to Section 38-33-101, et seq., C.R.S. When appropriate, *subdivision* relates to the process of subdividing or to the lands or territories or structures subdivided.

(Ord. No. 2000-02, Art. V, 2000; Ord. No. 2007-01, § 1, 2007; Ord. No. 2010-03, § 1, 2010; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 2. PLANNING COMMISSION AND BOARD OF TRUSTEES

Sec. 17-2-10. Planning Commission.

The Planning Commission is responsible for making investigations and reports on the design and improvements of proposed subdivisions and requiring conformity of such subdivisions with the Comprehensive Plan, the state statutes and this Chapter, utilizing the assistance and cooperation of the elected and appointed officials of the Town, the County and the State, as well as the services of consultants when they are required. No plat of a major subdivision of land shall be filed and recorded until the Planning Commission has approved the preliminary plat and the Chair of the Planning Commission has signed the final plat. The final plat must be consistent with the preliminary plat approved by the Planning Commission. If there are major changes or discrepancies between the preliminary plat and the final plat, the final plat must be reviewed by the Planning Commission before the Planning Commission Chair is authorized to sign the final plat. The Town Administrator or Board of Trustees shall make the decision concerning a minor subdivision application, and no final plat thereof shall be filed and recorded without an approval signature thereon on behalf of the Town.

(Ord. No. 2000-02, Art. VI, 2000; Ord. No. 2007-01, § 2, 2007; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-2-20. Board of Trustees.

The Board of Trustees has final jurisdiction in the acceptance of lands and improvements proposed for dedication to the Town as a result of the subdivision process, and such approval shall be indicated by the signature of the Mayor on the final plat, which shall be attested by the Town Clerk and dated.

(Ord. No. 2000-02, Art. VI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-2-30. Development Review Committee.

(a) A Development Review Committee shall be established by the Board of Trustees to assist in the technical review of development applications prior to the consideration by the Planning Commission and/or the Board of Trustees. It is intended by the formation of the Development Review Committee to resolve technical details and application deficiencies prior to scheduled formal public hearings and, therefore, to expedite the process. A meeting of the Development Review Committee shall be scheduled, when necessary, to review submittals prior to the time those items are to be considered by the Planning Commission. The comments provided by the Development Review Committee shall be included as a part of the Town Administrator's report on each item.

(b) The Development Review Committee may be comprised of representatives of the Town staff (e.g., Public Works and Utilities, Building Inspector, Town Administrator, Police and Fire), representatives of utility companies, telephone company, highway department and school district. In the event a member cannot attend a scheduled committee meeting, comments on an application may be conveyed to the Town Administrator prior to the meeting.

(Ord. No. 2000-02, Art. VII, 2000; Ord. No. 2007-01, § 3, 2007; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-2-40. Establishment of fees.

The Board of Trustees shall establish fees for the processing of subdivision and annexation applications. Actual fees shall be established by resolution of the Board and shall be reviewed periodically. Fees shall cover applications for sketch plan review, preliminary plats, final subdivision plats or annexation maps for major and minor subdivisions. Additional fees for consulting services required for proper review of applications shall be determined for specific applications as required.

(Ord. No. 2000-02, Art. VIII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 3. PLANNED UNIT DEVELOPMENTS

Sec. 17-3-10. Planned Unit Developments.

(a) To promote excellence of subdivision design and improvements, the Planning Commission may recommend the approval of a subdivision that departs from the usual design of regular platted lots and blocks devoted to a single classification of land use, but the PUD shall conform to the requirements of Chapter 16 of this Code and the provisions relating to PUDs.

(b) In the event the land is to be subdivided and developed as a PUD, the person subdividing shall submit, in addition to the required information and documents required in this Chapter, such additional information as may be required in Chapter 16, Article 5 of this Code.

(c) Simultaneous hearings may be held for the review and approval of a subdivision and PUD involving the same land. In such instances the following may apply.

(1) The optional sketch plan requirements for the PUD may also serve as the sketch plan for a subdivision or annexation.

(2) It is intended that the preliminary plat and preliminary development plan for a PUD be considered concurrently if the PUD is proposed for subdivision. The documents submitted for the PUD preliminary development plan may also serve as the preliminary plat application, provided that the information required for the preliminary plat is submitted.

(3) Each simultaneous hearing must be preceded by notice consistent with Chapter 16, Article 16 of this Code.

(4) Because of the complexity and special policy implications of certain PUD applications, the Planning Commission and/or Board of Trustees may require more time for review. In such cases, it may be in the best interest of the Town as well as the applicant to table a matter to allow more time for study and review of application materials. If this is necessary, the person subdividing will be requested to agree in writing to waive the statutory requirements for action on a subdivision request within thirty (30) days.

(Ord. No. 2000-02, Art. IX, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-3-20. Distribution of application materials.

The Town Administrator shall distribute appropriate sheets of preliminary plats to the following entities for their review and comments:

(1) All concerned Town departments.

(2) The school district.

(3) All utilities companies serving the area.

(4) All special districts serving the area.

(5) The Colorado Department of Public Health and Environment, when new sewage treatment facilities are proposed.

(6) The County Planning Office.

(7) The Colorado Department of Transportation when the proposed subdivision or annexation abuts any state highway.

(Ord. No. 2000-02, Art. X, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-3-30. Copies required.

A minimum of fifteen (15) copies of all application materials for preliminary and final plats or maps shall be filed with the Town Administrator.

(Ord. No. 2000-02, Art. X, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-3-40. Dedication of land for public use.

If the subdivision results in one (1) or more additional dwelling units or building sites, the Town shall require the person subdividing to dedicate a parcel of land, chosen by the Town, from the subdivision area equal to ten

percent (10%) of the land area or one (1) acre for every one hundred twenty-five (125) potential residents, or fraction thereof, whichever is greater. At the Town's option, the person subdividing in lieu of dedicating the land shall pay a fee that is equivalent to the cost of acquiring new land for parks, recreation areas or schools in the vicinity of the developing area where the subdivision is located. This fee shall be based upon land values for undeveloped property in the areas adjacent to the Town considering future development potential, and shall be established by a professional appraisal of the property. The applicant shall pay for the appraisal. The dedication requirement shall be based upon the following:

(1) The required land dedication is ten percent (10%) of the total site area or one (1) acre per one hundred twenty-five (125) potential residents, whichever is greater.

(2) Future population shall be based upon the following household occupancy table:

Type	***Occupancy***
Single-family unit:	3 persons per unit
Duplex unit:	3 persons per unit
Multiple-family unit:	21/2 persons per unit
Mobile home unit:	2 persons per unit

(3) Dedication requirements for commercial development are based upon ten percent (10%) of the land area.

(Ord. No. 2000-02, Art. XI, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 4. DESIGN STANDARDS

Sec. 17-4-10. General provisions.

(a) All subdivisions shall be designed, developed and improved in accordance with the standards and requirements in this Chapter.

(b) To the extent these design standards conflict with any other resolution or ordinance of the Town, these design standards shall control.

(c) If the Town does not have sufficient personnel or expertise in its staff members to properly analyze and review engineering data, land use designs or any other data required to be furnished by a person subdividing by this Chapter, the Town Administrator may select and hire independent experts to conduct such analysis and review for the Town. The initial filing fee shall include an amount to cover the cost of professional assistance, if necessary. In the event all the funds are not needed, the applicant will be refunded the remaining amount.

(d) If the property to be improved has been previously irrigated and water rights were utilized, the property requires adequate irrigation water rights, and the applicant must have a plan for distribution.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-4-20. Natural hazards.

These standards are intended to assure that new development will not be permitted in areas where the environmental characteristics of the area may create hazardous conditions for new residents or for adjoining property owners.

(1) Building development is generally discouraged on slopes that exceed twenty-five percent (25%). In special cases, development may be permitted, provided that approved mitigation techniques are employed. All development proposed for sites with slopes in excess of twenty-five percent (25%) must be reviewed under the special review application procedures of Chapter 16, Article 4 of this Code. In such cases, independent professional geologists and engineers must provide analyses.

(2) Hazards shall include subsidence unstable soils, rockfall hazards and flooding.

(3) All development shall be subject to the provisions of the floodplain regulations of the Town.

(4) Mitigation techniques may include, but are not limited to:

a. Slope stabilization by landscaping, revegetation or other means.

b. Elevation of structures or approved floodproofing.

c. Catchment walls for rockfall hazards.

d. Control of potential debris diversion structures.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-4-30. Survey information.

(a) The boundary survey, internal property lines and monumentation as depicted on the final plat shall meet all requirements established under state statute. The Planning Commission prior to approval of the final plat shall review survey data.

(b) Monuments shall be set to specifications of the Board of Trustees with at least one (1) monument on the boundary established as a permanent benchmark. All survey traverses shall close within an allowable error of no more than one (1) foot in five thousand (5,000) feet.

(c) No approval of a final plat shall be deemed as assurance, guarantee or representation by the Town that the survey data is accurate.

(d) The Board of Trustees shall require a survey prepared by a state licensed land surveyor showing the location of proposed improvements prior to the issuance of a building permit in an approved subdivision.

(e) All final subdivision plats shall bear the seal and signature of a state licensed land surveyor attesting to the following:

I, _____ being a licensed land surveyor in the State of Colorado, duly swear that this map or plat, entitled _____ has been prepared by me or under my supervision and that the survey is accurately represented on this map and the statements contained thereon are true based upon my knowledge.

Name_____

No._____

(SEAL)

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-4-40. Street design.

(a) The street pattern shall be designed to afford safe and convenient access to all lots within the subdivision.

(b) Streets shall have a logical relationship to the topography and be designed to be parallel to the existing contours as much as possible.

(c) All streets shall intersect at right angles.

(d) Streets or alleys shall not be closer than one hundred (100) feet from another street intersection.

(e) Proposed streets, which are extensions of existing public rights-of-way shall be designed to effect a smooth transition from existing to proposed improvements and shall be named accordingly.

(f) Where developable but unplatted land is separated by a proposed subdivision from an existing public right-of-way, the street pattern of the proposed subdivision shall include streets extended to the boundary common to both tracts to prevent land locking of the unplatted tract and promote access to future development of adjacent unplatted land.

(g) Dead-end streets and alleys shall be provided with a cul-de-sac with a minimum radius of fifty (50) feet. The maximum length of a dead-end street shall be five hundred (500) feet measured from the right-of-way line of the connecting street to the center of the turn-around area at the closed end of the cul-de-sac.

(h) The minimum street gradient shall be five-tenths percent (0.5%) and the maximum street gradient shall be seven percent (7%) for local streets and five percent (5%) for collector and arterial streets. Except where, in the Town's opinion, the terrain requires a greater gradient, streets shall not exceed a gradient of four percent (4%) within one hundred (100) feet of an intersection. Changes in street grades shall be accomplished by vertical curves of sufficient length to maintain safe sight distances.

(i) Street names. All street names shall be subject to the approval of the Planning Commission. The Planning Commission, subject to the approval of the Board of Trustees, may adopt a uniform street naming policy.

(j) All public and private streets, curbs and gutters shall be laid out and graded, a base course of gravel installed and an asphalt wearing course installed to the full width of the traveled way, all to the specification of the Town's street design specifications. All alleys shall be laid out and graded, a base course of gravel installed and an all-weather surface installed to the full width of the traveled way, all to the specification of the Town's street design specifications and the Building Specifications and Standard Construction Specifications, as the same may be from time to time amended.

(k) Minimum street widths and design characteristics are shown on the schedule of requirements, Table 17-1 below.

(l) Curbs, gutters and sidewalks are required on all streets of subdivisions.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2003-04, 8-12-2003; Ord. No. 2014-04, § 1, 1-13-2015)

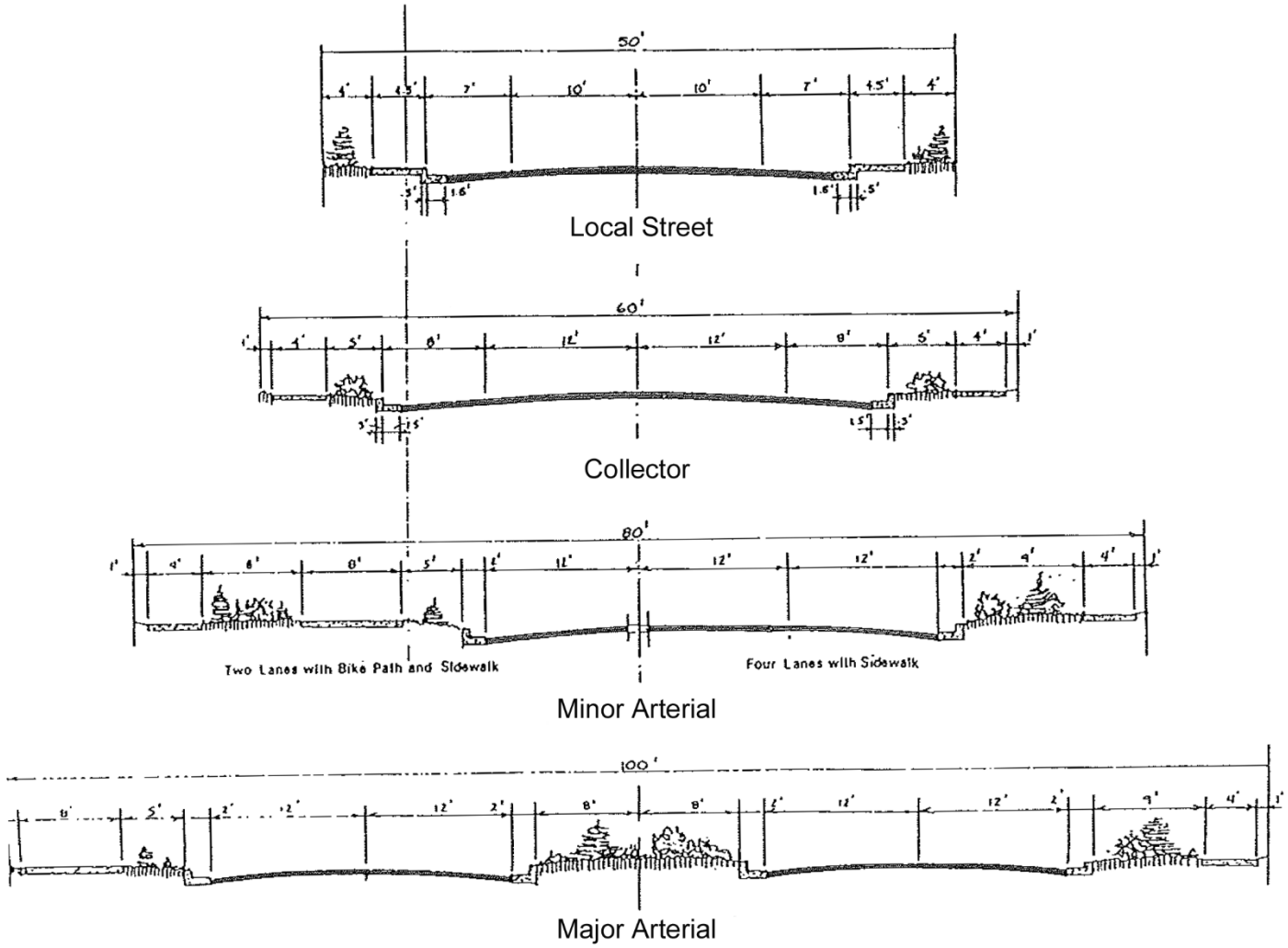
Sec. 17-4-50. Street design; schedule of requirements.

The following Table sets out the requirements for street design:

Table 17-1
Street Design - Schedule of Requirements[1]

	Local Street	*Major and Minor Collector*	*Minor Arterial*	*Major Arterial*	*Alleys*
Minimum right-of-way	50 ft.	60 ft.	80 ft.	100 ft.	25 ft.
Travel lanes	2-10 ft.	2-12 ft.	2 or 4 lanes	12 ft.	25 ft.
On-street parking lanes	2-7 ft.	2-8 ft.			
Minimum pavement width curb to curb	34 ft.	40 ft.	See cross-section		
Sidewalk	Attached curbwalk 2-4 ft.	Detached 2-4 ft.	Detached 2-4 ft.	Detached 2-4 ft.	
Minimum radius of curvature	100 ft.	300 ft.	400 ft.	600 ft.	100 ft.
Maximum % of grade	7%	5%	5%	5%	
Radius of cul-de-sac		50 ft. residential	N/A	N/A	
Minimum paved area right-of-way	45 ft.	60 ft. commercial			
Bicycle path	May be designated on selected streets	Selected streets may include required bicycle paths. Minimum 8-10 ft.			

[1] These requirements apply to new developing areas and may not be applicable to older areas of the community. All determinations as to the applicability of these requirements shall be made by the Planning Commission.



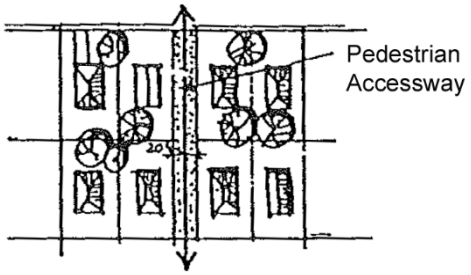
(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2003-04, 8-12-2003; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-4-60. Lot and block design.

(a) Each lot shall be designed to provide an adequate accessible building site for a structure devoted to the intended use of the land.

(b) Each lot shall meet or exceed the minimum requirements of the applicable zone district regulations or PUD plan, whichever applies, and shall have a minimum of twenty-five (25) feet of linear footage on a dedicated public street if access to said lot is by a dedicated public street. For multiple-family townhouse PUDs, the Planning Commission may waive the required twenty-five (25) feet of frontage on a public street.

(c) Blocks shall not exceed one thousand (1,000) feet, unless a pedestrian walkway is provided through the block. The walkway shall consist of a twenty-foot easement near the middle of the block.



(d) In tracts containing more than one (1) block, the blocks shall be designated in numerical order. Lots shall be designated numerically beginning with the number I in each block. Large tracts of land that are not further subdivided into lots and blocks shall be designated alphabetically beginning with the letter A. Outlots shall also be numbered alphabetically.

(e) Double-frontage or through lots may be permitted, provided that access control restrictions are provided on the plat.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-4-70. Storm drainage.

(a) Complete drainage systems for the entire subdivision area shall be designed by a professional engineer licensed in the State and qualified to perform such work and shall be shown graphically. All existing drainage features shall be so identified. If the final plat is to be presented in phases, a general drainage plan for the entire area shall be presented with the first phase, and appropriate development stages for the drainage system for each phase shall be indicated.

(b) The drainage plans shall be designed to permit the unimpeded flow of natural watercourses and to ensure adequate drainage of all low points.

(c) Drainage plans shall include all proposed surface drainage structures and all appropriate designs, details and dimensions necessary to clearly explain proposed construction materials and elevations.

(d) The drainage system shall be designed to consider the drainage basin as a whole. All new development shall ensure that surface runoff from the development site shall not, after development, exceed the predevelopment flow for the peak condition of a ten-year storm. Adequate area for retention, percolation and absorption of all surface runoff generated by the project shall be provided either on the site or in cooperation with similar developments in the vicinity. A qualified engineer shall certify such surface runoff control designs.

(e) All detention ponds shall be designed so that no standing water will remain beyond five (5) days after the end of the storm. The design of the detention facility must include consideration of the off-site runoff based upon present conditions. Detention facility design shall be in conformance with the requirements of the Town Engineer. Design data shall include, but not be limited to, soil boring logs and soils classifications water table elevations.

(f) Drainage easements shall be provided to assure the perpetuity of detention areas when constructed as permanent drainage facilities.

(g) Maintenance of drainage easements, detention areas and other structures shall be determined as a part of the subdivision agreement.

(h) The developer shall make all practical efforts to assure that the water quality of post-development runoff is not less than the predevelopment runoff.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-4-80. Erosion control and site grading.

(a) All new development shall ensure that erosion and sedimentation caused during construction and in the post-construction stage is prevented from causing any off-site effects in excess of what occurred in the predevelopment condition. The universal soil loss equation shall be used to calculate the amount of erosion to be generated by construction, and an interim stabilization and final stabilization plan shall be provided by the developer to ensure the containment of wind and water erosion effects on site during and after construction.

(b) On slopes greater than ten percent (10%), slope stabilization and revegetation will be required. Plans shall include a description of existing vegetation to be planted and other slope-stabilization measures to be installed. New vegetation should be selected and located to be compatible with the surrounding vegetation, soil and ecological characteristics of the area.

(c) Slopes shall be finished to match or blend with the natural contours of the adjacent terrain by eliminating sharp grade transitions of cut-and-fill slopes.

(d) All existing trees that are to be retained and are over three (3) inches in diameter measured three (3) feet above grade shall be protected during construction and grading operations by placing fencing outside of the drip line of the tree.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-4-90. Bridges.

Any bridge planned as part of a proposed subdivision shall be designed and constructed and paid for by the subdivider in accordance with American Association of State Highway Officials recommendations, which recommendations are incorporated herein by this reference as if set forth verbatim. Where an existing bridge is a part of a proposed subdivision and does not meet specifications of this Chapter, it is the responsibility of the subdivider to repair or replace such bridge as necessary to meet the requirements of H20 live load prior to acceptance by the Board of Trustees for maintenance. No lot served by such bridge shall be built upon or occupied until such improvements have been completed. The width of such bridge shall not be less than the width of the roadways approaching it on either side.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-4-100. Water systems.

Water distribution systems shall be designed to connect with the Town water system and make water available to each lot and proposed site of use in the proposed subdivision. Fire hydrants shall be located to ensure protection of each lot based on utilization of existing Town firefighting equipment. Design and engineering of the system shall be the responsibility of the subdivider, with all plans subject to approval of the Town. Installation of the system shall be to Town specifications. Financial responsibility for the water distribution system shall belong to the subdivider and shall be subject to existing Town regulations and agreements executed by the Town and the subdivider.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-4-110. Sanitary sewer systems.

The sanitary sewer system for the subdivision shall be designed to connect with the Town's system and shall provide service for each lot and proposed building site within the subdivision. Design and installation of the system shall be subject to the approval of the Town and in accordance with the specifications of the Town. The developer shall pay for the sanitary sewage collection system subject to all regulations of the Town, State and federal government.

(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-4-120. Energy conservation.

It is important that special attention be given to the conservation of energy throughout the planning, design and construction of new subdivisions. New subdivisions should be designed to provide for energy efficiency in the orientation of streets, lots and buildings. The following provide guidelines to be considered in the design and review of future subdivisions. While it may not be possible to follow these guidelines in every instance, every subdivision should be based on these fundamental site-planning principles that can result in lower energy costs.

(1) Take advantage of south-facing slopes for solar orientation, especially for higher density development.

(2) Lot layouts should emphasize north-south orientation as much as possible.

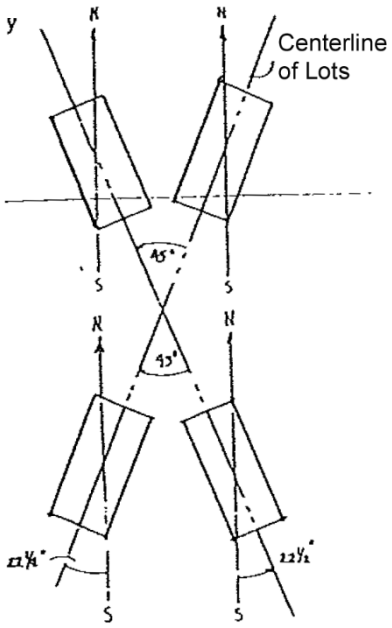
(3) Street layout in the design of subdivisions should have an east-west orientation as much as possible within the limits of the topography to allow the proper orientation of buildings with respect to the sun.

(4) If north-south orientation of streets are necessary, then the lots or buildings should be planned to maximize southern solar access.

(5) Lot lines should extend from north to south even if streets are necessarily designed at an angle.

(6) Special consideration should be given to the potential shadows created on a lot by building development and by landscaping.

(7) Subdivision covenants should encourage building development close to the north property line, therefore allowing greater area to the south for solar access.



(Ord. No. 2000-02, Art. XII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 5. APPLICATION REQUIREMENTS

Sec. 17-5-10. Sketch plan optional.

If an applicant, for review, submits a sketch plan to the Town staff, the Planning Commission and/or the Board of Trustees, the sketch plan must include at least the following information:

(1) *Written information.* This information shall be provided on the subdivision/annexation summary form including the following information:

a. A description of proposed land uses.

b. A statement of planning objectives.

c. A description of adjoining land uses.

d. Existing and proposed zoning.

e. An estimate of the proposed number of residential units and an estimate of the population (see Subsection 17-3-40(2) of this Chapter) or square footage of the commercial area.

f. The names and addresses of the owner, applicant and the individual who prepared the sketch plan.

g. The total site area.

h. A statement as to how the development will be served by utilities.

i. A general statement describing the geological characteristics of the land, soil types, slope and stability. This information may be based on secondary data available from the Town, soil conservation service or other sources.

(2) *Site plans and supporting documents.* The sketch plan shall be drawn to a scale of 1" = 100' or larger and include the following:

a. A vicinity map drawn to a scale of one inch (1") = two thousand feet (2000') showing the general location of the land for consideration and the surrounding area within a one-mile radius.

b. The topography of the land.

c. The location of proposed land uses.

d. The approximate location of proposed public or private open space areas.

e. The location of existing or proposed water and sewer lines to serve the area.

f. The proposed lot or block pattern and street layout.

(Ord. No. 2000-02, Art. XIII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-5-20. Preliminary plat.

(a) *Purpose.* It is intended that the preliminary plat provide the necessary information to permit the staff, the Planning Commission and the Board of Trustees to properly review the proposal and to resolve potential planning or engineering details that may arise before the final plat is prepared. The preliminary plat, therefore, requires extensive information and engineering studies.

(b) *Written information.*

(1) The names and addresses of the owners and applicants.

(2) The names, addresses and telephone numbers of the surveyor, engineer, and planner of the subdivision.

(3) The names and addresses of all property owners within a two-hundred-foot radius of the property. All names and addresses shall be as they appear upon the records in the County Assessor's office.

(4) All data and information required on the subdivision/annexation summary form and for the optional sketch plan listed in Section 17-5-10 above.

(5) A description of any proposed convenants.

(6) Proposed terms of reservations and dedications of public rights-of-way, easements and other public lands.

(7) Evidence that provision has been made for facility sites, easements and rights of access for electrical and natural gas utility service sufficient to ensure reliable and adequate electric or, if applicable, natural gas service for any proposed subdivision. Submission of a letter of agreement between the subdivider and the utility serving the site shall be deemed sufficient to establish that adequate provision for electric or, if applicable, natural gas service to a proposed subdivision has been made.

(c) *Plans and supporting data.*

(1) A plat of the proposed subdivision shall be drafted in preliminary form to a scale of at least 1" = 100' on a sheet at least twenty-four (24) by thirty-six (36) inches and shall show the information listed below. In addition, an eight and one-half (8 ½) by eleven (11) inch reduction of the plat shall also be provided to the Town.

(2) Title, north arrow, graphic and numerical scale and date of preparation.

(3) Key diagram if the area requires more than one (1) twenty-four-by-thirty-six-inch sheet.

(4) The name of the proposed subdivision which shall be different from any existing recorded subdivision in the County.

(5) Street layout of the proposed subdivision, including relationship to existing public rights-of-way and the widths and names of proposed streets.

(6) Lot and block layout of the proposed subdivision, including a block- and lot-numbering system. In the case of a PUD, the types of uses, the supplementary requirements and area setback information on each lot if a variance with otherwise applicable zone district regulations are also required.

(7) Existing and proposed easements and structures for irrigation, drainage and utilities.

(8) Contours of the plan proposed by the subdivision at five-foot intervals; however, the Town Administrator may approve ten-foot intervals if the topography is so steep that five-foot-interval contours will be so numerous as to dominate or obscure the other features depicted on the plat.

(9) Drainage plan. When the plat of a proposed subdivision includes a stream course, a mud flow course or dry wash subject to flood crest or heavy runoff generated by precipitation or rapid spring thaw runoff, a drainage plan based on an engineering analysis of the catchment and the tributary area and detailed drainage easements and structures necessary to accommodate a design one-hundred-year storm, mud flow or flooding shall be provided by an engineer registered in the State.

(10) Utility plan. A plan corresponding to the preliminary plat showing the line and related facilities' locations, sizes and gradients for the proposed subdivision in relation to existing Town installations and those of any special district. The utility plan shall also indicate that underground distribution of electrical power and communications lines is to be utilized, and a description of the system or systems shall be shown on the plan. If the property to be improved has been previously irrigated and water rights were utilized, the plan requires the provision of adequate irrigation water rights, and must have a plan for distribution.

(11) Street profile centerline profiles of proposed streets shall be plotted at a horizontal scale consistent with the preliminary plat and a distorted vertical scale with sufficient detail to ensure the proposed streets meet the gradient limitations established by this Chapter and bear a logical relationship to the grade of existing public streets at points of intersection.

(12) Existing landscaping and trees with a caliper of three (3) inches measured three (3) feet above grade shall be located on the plan.

(Ord. No. 2000-02, Art. XIII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-5-30. Final plat.

(a) *Purpose.* The purpose of the final map or plat for an annexation or subdivision is to provide a legal document that will be a part of Town and county records describing the development conditions and land descriptions for the property. The final plat application shall include all binding agreements between the owners and the Town.

(b) *Written information.* The final plat shall include:

(1) All information required for the preliminary plat.

(2) The title under which the subdivision is to be recorded.

(3) The names and addresses of all property owners within two hundred (200) feet of the property to be annexed or subdivided.

(4) A surveyor's certificate signed and sealed by a state-licensed surveyor responsible for the survey and preparation of the final plat.

(5) A Planning Commission certificate certifying that the final plan is consistent with the approved preliminary plat and is approved subject to acceptance by the Board of Trustees.

(6) A Board of Trustees certificate of approval and acceptance.

(7) The County Clerk and Recorder's certificate for time and date of recording.

(8) Three (3) copies of any protective covenants or restrictions placed on the subdivision.

(9) The name and address of the person to whom the notice of public hearing should be sent.

(10) A subdivision agreement, to be executed by the Town and by the subdivider, wherein the subdivider covenants and agrees to perform all conditions imposed by the Town. Such conditions and agreement may include, and the Town is empowered to require, the obligation of the subdivider to pay for and install or cause to be installed all required water distribution systems, trash collection facilities and areas, storm drain structures, devices to inhibit access to such structures by children, curbs and gutters, street-base course material, asphalt-wearing course material, bridges, underground wiring, ornamental street lighting, underground communications systems, underground gas distribution systems, underground cable television wiring, fire hydrants, fire street signs, traffic control devices, measures to stabilize soil or to limit floods, mud slides and snow slides as may be required by and according to the specifications of the Town and sanitary sewer collection systems. The subdivision agreement shall include a covenant and agreement by the subdivider to convey ownership to the Town of any or all public improvements or facilities listed above subject to the acceptance of the Town and guarantees as provided in Article 7 of this Chapter.

(11) A title policy shall be provided to the Town indicating that the property is free and clear of all encumbrances whatsoever, which would impair the property to be utilized as proposed by the final plat. The title policy shall provide verification that all owners and lien holders have signed the final plat. The title policy shall be effective within twenty-four (24) hours after the date of approval by the Board of Trustees. If the title policy is not provided to the Town Clerk within seven (7) days after action by the Board of Trustees, the approval by the Board of Trustees shall be automatically voided.

(c) *Final plat; plans and supporting documents.*

(1) The final map or plat shall be drawn in ink on a permanent, reproducible Mylar sheet that is twenty-four (24) by thirty-six (36) inches. The final map or plat shall be drawn to scale of at least 1" = 100'. If the area requires more than one (1) sheet, then a key diagram shall be provided on each separate sheet. In addition, an eight and one-half (8 ½) by eleven (11) inch reduction of the final map or plat shall be submitted.

(2) Accurate dimensions shall be shown for all lines, angles and curves used to describe lot boundaries, streets, alleys, easements, areas to be reserved for public use and other important features. All curves shall be circular arcs and shall be defined by radius, central angle, tangent, arc and chord lengths. All dimensions, both linear and angular, shall be determined by an accurate control survey in the field, which must balance and close within a limit of one (1) in ten thousand (10,000). Approximate dimensions (plus or minus indications) shall not be approved on a final map or plat.

(3) The name of adjoining subdivisions shall be shown with dotted lines indicated for abutting lots.

(4) All lots or blocks shall be properly numbered in accordance with an approved identification system.

(5) Identification of the streets, alleys, easements, parks and other facilities shall be shown on the plat and a dedication thereof to public use. Areas reserved for future public acquisition shall also be delineated on the map or plat.

(6) A legal description of the area to be subdivided or annexed with reference to its location in the records of the County shall be provided, together with the total area of each lot created by the subdivision and the names of all streets within the subdivision.

(7) A description of all monuments, both found and set, which mark the boundaries of the property and a description of all control monuments used in conducting the survey shall be shown. This shall include a tie to a section corner.

(8) Final engineering documents prepared by a registered professional engineer in the State for streets, water, sewer and drainage and the engineer's cost estimates for all improvements to be installed by the subdivider in dedicated land, rights-of-way or easements or as may be required by this Chapter.

(Ord. No. 2000-02, Art. XIII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-5-40. Condominium application requirements.

In addition to the general requirements for a subdivision, a request to develop condominiums shall provide the following:

(1) *Preliminary plat.*

a. Lot sizes of each proposed condominium unit and their relation to the overall project.

b. Existing and proposed off-street parking areas.

c. Existing and proposed facilities, including all buildings and structures.

d. Preliminary landscaping plan, including existing and proposed landscaping types, sizes and quantities.

e. Plans for ingress to and egress from each condominium unit.

f. Building plans indicating compliance with all design, building, fireproofing, soundproofing and utility standards of the Town.

g. A copy of the proposed condominium documents, including a copy of the proposed condominium declarations and condominium map, bylaws, the rules and regulations of the condominium or homeowners association and an estimate of the annual budget of the condominium or homeowners association for a period of two (2) years from the conversion or creation of the condominium units. In addition to all other requirements imposed in this Section, the developer shall submit a proposed condominium agreement with the Town setting forth, at a minimum:

1. Notice procedures shall be outlined for granting existing tenants no less than ninety (90) days' written notice of intent to develop condominiums, which notice shall specify the sale price of the particular unit. A provision whereby each tenant shall have a ninety-day nonassignable option to purchase his or her unit at said specified sale price, which price shall not be varied by more than ten percent (10%) for a period of six (6) months after completion of the condominiums.

2. The applicant shall state and demonstrate that the supply of low- and moderate-income housing and rental space will not be significantly decreased as a result of condominium construction.

3. The developer shall state whether or not he or she intends to make special provisions for the elderly or low-income citizens now residing within the structure proposed for condominium living.

(2) *Final plat requirements.* To the extent possible, the final plat shall correspond with all requirements of this Code.

(3) *Additional public notice requirements.* In addition to the public notice requirements of Section 17-1-50 of this Chapter, all tenants of a building proposed for condominium restructuring shall be sent notices at least fifteen (15) days prior to the public hearings on the preliminary and final plats.

(Ord. No. 2000-02, Art. XIII, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 6. APPROVAL OF SUBDIVISION OR ANNEXATION APPLICATION

DIVISION 1. GENERAL PROVISIONS

Sec. 17-6-10. Preapplication conferences.

Before commencing the annexation or subdivision of any parcel of land, the applicant shall consult with the Town Administrator for general information regarding the Town's regulations, procedures and policies. Any statements made by the Town Administrator or staff concerning a proposed development shall not be binding on the Planning Commission or the Board of Trustees.

(Ord. No. 2000-02, Art. XIV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-6-20. Filing deadlines.

All applications, except for a minor subdivision procedure, shall be filed at least thirty (30) days in advance of the Planning Commission meeting at which the matter is to be considered. Applications regarding a minor subdivision procedure shall be filed with the Town Administrator. Final plats shall be filed fifteen (15) days in advance of a scheduled meeting. Applications to be accepted must be complete. If an application is determined to be incomplete, the Town Administrator shall not schedule the matter for review. All application fees must be paid at the time of filing the application.

(Ord. No. 2000-02, Art. XIV, 2000; Ord. No. 2007-01, § 4, 2007; Ord. No. 2014-04, § 1, 1-13-2015)

DIVISION 2. MAJOR SUBDIVISION

Sec. 17-6-110. Major subdivision procedures.

(a) *Preliminary subdivision plat or annexation map.*

(1) *Development Review Committee action.* The Town Administrator shall refer the matter to the representatives of the various departments and agencies assigned to the Development Review Committee. Copies of the plan may be mailed to the other agencies or utility companies. Within fifteen (15) days following the filing deadline, the Development Review Committee shall meet to review the application. The applicant shall be notified of the meeting and invited to be in attendance. Based upon the comments of the Development Review Committee, the Town Administrator shall then prepare his or her report and recommendations to the Planning Commission. If the deficiencies in the application warrant additional work by the applicant or require further discussion by the Development Review Committee and the applicant, the Town Administrator may defer sending the matter to the Planning

Commission. In such case, the applicant will be requested to waive, in writing, the statutory requirement of review within thirty (30) days. Formal processing of the application shall not begin until the deficiencies are corrected and the application is resubmitted. The date of the resubmission should govern the timing of the process and not the date of the initial submittal.

(2) *Planning Commission action.* The Planning Commission, at its next regular meeting thirty (30) days after the filing of the complete application, shall hold a public hearing on the application and consider the recommendations of the Town staff and the merits of the proposed annexation or subdivision. The Planning Commission may recommend to the Board of Trustees approval, approval with modifications or denial of the application.

(3) *Board of Trustees action.* Within thirty (30) days following the Planning Commission action, The Board of Trustees shall consider the application. The Board of Trustees may then approve, approve with modifications, or deny the application or refer the matter back to the Planning Commission for further study.

(b) *Final subdivision plat or annexation map.*

(1) *Development Review Committee action.* Once the Board of Trustees has approved the preliminary plan, the final plan may be submitted (unless considered concurrently). Within fifteen (15) days after the filing deadline, the Development Review Committee shall meet to review the final details and to assure that the final plan is consistent with the preliminary plan. The Chair of the Planning Commission will be requested to review the final plat to determine if the final plat is consistent with the preliminary plat approved by the Planning Commission.

(2) *Board of Trustees action.* Following review by the Development Review Committee, and if all matters are complete, the final plan will be scheduled for a public hearing before the Board of Trustees. The Board of Trustees may then approve, approve with modifications or deny the application. If the final map is an annexation request, the ordinances for annexation and zoning may be considered concurrently in the manner prescribed by state statues. The order of consideration shall generally be as follows:

a. Annexation proceedings;

b. Zoning;

c. Planned unit development application; and

d. Subdivision.

(Ord. No. 2000-02, Art. XIV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-6-120. Condominium review procedures.

A condominium is defined by these regulations as a subdivision. Therefore, all condominiums shall comply with the provisions of this Chapter insofar as they are applicable. The Board of Trustees may determine that certain provisions are not applicable depending upon the nature of the condominium request. The review procedures shall be the same as for any subdivision. The developer or applicant may file a preliminary and final plat concurrently.

(Ord. No. 2000-02, Art. XIV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-6-130. Time limits for approvals.

(a) *Preliminary plat.* Once the Board of Trustees has approved a preliminary plat, the applicant shall have a maximum of one (1) year to file a final plat for the entire plat or for the first portion of a phased project. If more than one (1) year has lapsed, a new preliminary plat must be approved by the Planning Commission and Board of Trustees.

(b) *Final plats.* Final plats shall be approved subject to a development schedule determined at the time of approval. If the final plat is a part of a PUD, the final plat shall be subject to the schedule approved as a part of the PUD. If development of buildings has not occurred in accordance with the approved schedule, the Board of Trustees may rescind its approval of the final plat. Procedures for rescinding approval shall be the same as described for termination of special review applications in Section 16-4-80 of this Code.

(Ord. No. 2000-02, Art. XIV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-6-140. Recording final map and plats.

Within thirty (30) days following the approval of a final subdivision plat or final annexation map, the applicant shall record the final plat, applicable covenants and restrictions and the subdivision agreement with the County Clerk and Recorder's office in the manner prescribed by that office. A notice providing proof of recording shall then be submitted to the Town Clerk within the thirty-day deadline.

(Ord. No. 2000-02, Art. XIV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

DIVISION 3. MINOR SUBDIVISION

Sec. 17-6-210. Application for minor subdivision review.

All applications for approval of a minor subdivision shall be processed by making an application to the Town Administrator. The application shall include the following minimum information:

(1) The required application fees.

(2) The legal description of the property and proof of ownership of the property acceptable to the Town.

(3) Location Improvement Certificate certified by a Colorado licensed surveyor.

(4) A plat of the proposed subdivision parcels sufficient to determine the size and area of each proposed parcel, proposed lot line adjustment or lot line elimination in relation to the original lot lines and describing each such parcel, as a portion of a lot, or tract, or parcel, or lots, or tracts, or parcels on the Town Plat. The plat shall also identify the location of all public rights-of-way, the location and size of the vehicular access to each parcel and the location of all utilities and all utility easements.

(5) A narrative statement describing the following:

a. How fire protection will be provided;

b. Whether there is any potential for damage to public or private property by fire, flood or erosion and what mitigation measures will be undertaken to minimize such damage;

c. How emergency access will be provided;

d. How flood protection will be provided; and

e. A description of the proposed access to each proposed parcel.

(6) A copy of the restrictive covenants, if any, that are proposed or have been recorded affecting the lots, tracts, or parcels that are the subject of the subdivision.

(7) Proof of legal ownership of all property involved, names and addresses of all property owners and any lienholders of all the property involved.

(8) A current copy of a title commitment (not more than sixty (60) days old) for all the property involved in the application.

(9) Any other information or documents requested by the Town Administrator that is necessary to render a decision under the criteria hereinafter set forth.

(Ord. No. 2007-01, § 5, 2007; Ord. No. 2014-04, § 1, 1-13-2015; Ord. No. 2018-03, 6-26-2018)

Sec. 17-6-220. Procedure for Town Administrator approval.

The Town Administrator may recommend for approval by the Board of Trustees the subdivision, boundary adjustment or lot line elimination, as a minor subdivision, if he/she determines from the information submitted in accordance with Section 17-6-210 that:

(1) All such proposed parcels are divided by, or parallel to and part of the original lot, tract or parcel lines on the Town Plat;

(2) All the developed proposed parcels have the applicable yard setbacks which can be required for the existing structures;

(3) All structures on proposed parcels do not exceed the maximum coverage area allowed in the subject zone district;

(4) All of the proposed areas of the proposed parcels conform to the zoned uses and dimensional characteristics of lots or tracts in the applicable Zone District of the Town regulations;

(5) The minor subdivision application creates no more than three additional parcels;

(6) None of the proposed parcels violates any section of the Town regulations;

(7) The minor subdivision complies with the criteria in Section 17-6-250;

(8) The application has been referred to all affected Town departments and utility companies for review and comment at least fifteen (15) days prior to a decision on the application;

(9) Minor subdivision applications shall not be available more than one time on the same lot or adjacent lots under the same ownership.

Based on the review criteria as outlined in this Section 17-6-220, the Town Administrator shall issue a recommendation as to whether to approve or disapprove of the minor subdivision. The decision shall be in writing, shall list the reasons for the decision and shall be sent to the applicant no more than thirty (30) days after receipt of a complete and conforming application in accordance with Section 17-6-210. The applicant shall then inform the Town Administrator within fourteen (14) days as to whether they want the determination to be sent to the Board of Trustees for final determination. The Town Administrator's decision shall be referred to the Board of Trustees for a final determination of the minor subdivision at the next regular meeting after the fourteen (14) period except for when the applicant requests additional time, or if the applicant withdrawals the application.

(Ord. No. 2007-01, § 5, 2007; Ord. No. 2014-04, § 1, 1-13-2015; Ord. No. 2018-03, 6-26-2018)

Sec. 17-6-230. Application for review by Board of Trustees.

If the Town Administrator denies the application, the applicant may request review of the application by the Board of Trustees. The request must be in writing and directed to the Town Clerk. The Town Clerk shall schedule the review at a regular meeting of the Board of Trustees no less than thirty (30) days after receipt of the request for review, and shall send notice to all property owners within two hundred (200) feet of the property in question at least ten (10) days in advance of the hearing. The Town Clerk shall cause the notice of review to be posted.

(Ord. No. 2007-01, § 5, 2007; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-6-240. Procedure for Board of Trustees review.

(1) No minor subdivision shall be approved unless the Board of Trustees finds that it complies with all of the criteria in Section 17-6-250. If the subdivision does not comply with Section 17-6-250, it shall either be approved with conditions which assure compliance with all such criteria, continued to a date certain, or it shall be denied.

(2) Recording of final plat. The Final Plat must be approved by the Town Attorney and be certified by the Town Administrator or the Board of Trustees as being in compliance with the requirements hereof and shall be recorded within thirty (30) days of the final decision, by the Town Clerk, in the real property records of the office of the Clerk and Recorder for Delta County.

(Ord. No. 2007-01, § 5, 2007; Ord. No. 2014-04, § 1, 1-13-2015; Ord. No. 2018-03, 6-26-2018)

Sec. 17-6-250. Criteria for review and approval of minor subdivision.

No minor subdivision shall be approved unless the Board of Trustees finds that it complies with all of the following criteria. The minor subdivision must:

(1) Comply with all applicable zoning requirements of the zone district in which the minor subdivision is located;

(2) Have a front parcel line on a street only, and such parcel access shall have the following characteristics:

a. Said front parcel line must be at least twenty-five (25) feet long or the minimum lot width for the applicable zone district, whichever is shorter;

b. The vehicular access to any primary structure on a parcel shall be from a street, must be a minimum of twenty-five (25) feet wide along its entire length, and must be owned in fee simple by the owner of the parcel being accessed;

c. Vehicular access to a primary structure from an alley, including the access required pursuant to this Subsection, may be approved by the Board of Trustees only if either one (1) of the following conditions exists:

1. The primary vehicular access existed from an alley prior to the filing of the application for a minor subdivision approval; or

2. The division between subdivision parcels is a stream or similar physical barrier preventing vehicular access from the street (in such case, the applicant shall provide additional land to create an alley at least twenty (20) feet wide from the subject parcel to the nearest Town street and upgrade the alley to Town standards or in the absence thereof, to the approval of the Town Public Works Director); or

3. No street access exists.

(3) Provide for underground utilities upon each building site;

(4) Provide for adequate fire and flood protection and emergency access;

(5) Not increase the potential for breach of the public safety, or damage to public or private property by fire, flood or erosion;

(6) Not create congestion, automotive or pedestrian safety problems or other traffic hazards;

(7) To be designed in a manner that directs the placement of roads, utilities and structures away from any unstable soils, or mitigates the effect of unstable soils, geologic hazards, and other site conditions so as to minimize the potential for breach of the public safety, or damage to public or private property;

(8) Not create significant adverse effects to public facilities, rights-of-way or utilities;

(9) Not create significant adverse impacts on the use of adjacent property;

(10) Otherwise be consistent and comply with the objectives purposes, conditions and requirements of these subdivision regulations and the zoning ordinance of the Town regulations; and

(11) If deemed appropriate by the Town Administrator or the Board of Trustees, execute a subdivision improvements agreement memorializing the applicant's obligation and agreement to construct, at the applicant's cost and expense, all public and private utility and street improvements in accordance with the Town's utility and street standards. The guaranty that such will be timely completed to the Town's satisfaction shall be secured by a bond or other security acceptable to the Town, in the sole discretion of the Board of Trustees, equal to one hundred fifty percent (150%) of the estimated cost of completion of such improvements, as determined by the Board of Trustees.

(Ord. No. 2007-01, § 5, 2007; Ord. No. 2014-04, § 1, 1-13-2015; Ord. No. 2018-03, 6-26-2018)

Sec. 17-6-260. Minor subdivision procedures.

(a) *Application for minor subdivision review.* All applications for approval of a minor subdivision shall be processed by making an application to the Town Administrator. The application shall include the following minimum information:

(1) The required application fee.

(2) The legal description of the property, and proof of ownership of the property acceptable to the Town.

(3) Location Improvement Certificate certified by a Colorado licensed surveyor.

(4) A plat of the proposed subdivision parcels sufficient to determine the size and area of each proposed parcel, proposed lot line adjustment or lot line elimination in relation to the original lot lines and describing each such parcel, as a portion of a lot, or tract, or parcel, or lots, or tracts, or parcels on the Town Plat. The plat shall also identify the location of all public rights-of-way, the location and size of the vehicular access to each parcel and the location of all utilities and all utility easements.

(5) A narrative statement describing the following:

a. How fire protection will be provided;

b. Whether there is any potential for damage to public or private property by fire, flood or erosion and what mitigation measures will be undertaken to minimize such damage;

c. How emergency access will be provided;

d. How flood protection will be provided; and

e. A description of the proposed access to each proposed parcel.

(6) A copy of the restrictive covenants, if any, that are proposed or have been recorded affecting the lots, tracts, or parcels that are the subject of the resubdivision.

(7) Proof of legal ownership of all property involved, names and addresses of all property owners and any lienholders of all the property involved.

(8) A current copy of a title commitment (not more than sixty [60] days old) for all the property involved in the application.

(9) Any other information or documents requested by the Town Administrator that is necessary to render a decision under the criteria hereinafter set forth.

(b) *Procedure for Town Administrator approval.* The Town Administrator may approve the resubdivision, boundary adjustment or lot line elimination, as a minor subdivision, if he/she determines from the above information that:

(1) All such proposed parcels are divided by, or parallel to and part of the original lot, tract or parcel lines on the Town Plat;

(2) All the developed proposed parcels have the applicable yard setbacks which can be required for the existing structures;

(3) All structures on proposed parcels do not exceed the maximum coverage area allowed in the subject zone district;

(4) All of the proposed areas of the proposed parcels conform to the zoned uses and dimensional characteristics of lots or tracts in the applicable Zone District of the Town regulations.

(5) The minor subdivision application creates no more than three parcels.

(6) The minor subdivision application results in the elimination of not more than ten (10) lot lines.

(7) None of the proposed parcels violates any Section of the Town regulations.

(8) The minor subdivision complies with the criteria in Subsection e, below.

(9) The application has been referred to all affected town departments and utility companies for review and comment at least fifteen (15) days prior to a decision on the application.

(10) Property has been posted notifying meeting with the Development Review Committee. Said sign to be at least two (2) feet by two (2) feet (2' x 2') and posted for at least fifteen (15) days prior to said meeting.

(11) Minor subdivision applications shall not be available more than one time on the same lot or adjacent lots under the same ownership.

The Town Administrator's decision shall be in writing, shall list the reasons for the decision and shall be sent to the subdivider no more than thirty (30) days after receipt of a complete and conforming application. The Town Administrator in his or her sole discretion may refer a boundary adjustment or lot line elimination to the Board of Trustees for review in accordance with the provisions of Subsection c, below.

(c) *Application for Board of Trustees review.* If the Town Administrator denies the application, the applicant may request review of the application by the Board of Trustees, provided the applicant pays a deposit of seventy-five dollars ($75.00), and agrees to pay all costs related to the review process in excess of such deposit on or before the review schedule date. The request must be in writing, directed to the Town Clerk. The Clerk shall schedule the review, at a regular meeting of the Board of Trustees, no less than thirty (30) days after the receipt of the request for review and shall send notice to all property owners within two hundred (200) feet

of the property in question at least ten (10) days in advance of the hearing. The Clerk shall cause the notice of review to be posted.

(d) *Procedure for Board of Trustees review.*

(1) No minor subdivision shall be approved unless the Town Administrator or the Board of Trustees finds that it complies with all of the criteria in Subsection E., set forth below. If the resubdivision does not comply with all of the above referenced criteria, it shall either be approved with conditions which assure compliance with all such criteria, continued to a date certain, or it shall be denied.

(2) Recording of final plat. The Final Plat must be approved by the Town Attorney and be certified by the Town Administrator or the Board of Trustees as being in compliance with the requirements hereof and shall be recorded within thirty (30) days of the final decision, by the Town Clerk, in the real property records of the office of the Clerk and Recorder for Delta County.

(e) *Criteria for review and approval of minor subdivision.* No minor subdivision shall be approved unless the Town Administrator or Board of Trustees finds that it complies with all of the following criteria. The resubdivision must:

(1) Comply with all applicable zoning requirements of the zone district in which the resubdivision is located;

(2) Have a front parcel line on a street only, and such parcel access shall have the following characteristics:

a. Said front parcel line must be at least twenty-five (25) feet long or the minimum lot width for the applicable zone district, whichever is shorter;

b. The vehicular access to any primary structure on a parcel shall be from a street, must be a minimum of twenty-five (25) feet wide along its entire length, and must be owned in fee simple by the owner of the parcel being accessed;

c. Vehicular access to a primary structure from an alley, including the access required pursuant to this Subsection, may be approved by the Board of Trustees only if either one (1) of the following conditions exists:

1. The primary vehicular access existed from an alley prior to the filing of the application for a minor subdivision approval; or

2. The division between resubdivision parcels is a stream or similar physical barrier preventing vehicular access from the street (in such case, the applicant shall provide additional land to create an alley at least twenty (20) feet wide from the subject parcel to the nearest Town street and upgrade the alley to Town standards or in the absence thereof, to the approval of the Town Public Works Director);

3. No street access exists.

(3) Provide for underground utilities upon each building site;

(4) Provide for adequate fire and flood protection, and emergency access;

(5) Not increase the potential for breach of the public safety, or damage to public or private property by fire, flood or erosion;

(6) Not create congestion, automotive or pedestrian safety problems or other traffic hazards;

(7) To be designed in a manner that directs the placement of roads, utilities and structures away from any unstable soils, or mitigates the effect of unstable soils, geologic hazards, and other site conditions so as to minimize the potential for breach of the public safety, or damage to public or private property;

(8) Not create significant adverse effects to public facilities, rights-of-way or utilities;

(9) Not create significant adverse impacts on the use of adjacent property;

(10) Otherwise be consistent and comply with the objectives purposes, conditions and requirements of these subdivision regulations and the zoning ordinance of the Town regulations; and

(11) If deemed appropriate by the Town Administrator or the Board of Trustees, execute a subdivision improvements agreement memorializing the subdivider's/owner's obligation and agreement to construct, at the subdivider's/owner's cost and expense, all public and private utility and street improvements in accordance with the Town's utility and street standards. The guaranty that such will be timely completed to the Town's satisfaction shall be secured by a bond or other security acceptable to the Town, in the sole discretion of the Board of Trustees, equal to one hundred fifty percent (150%) of the estimated cost of completion of such improvements, as determined by the Board of Trustees.

(Ord. No. 2010-03, § 2, 2010; Ord. No. 2014-04, § 1, 1-13-2015)

ARTICLE 7. PUBLIC IMPROVEMENTS ACCEPTANCE AND GUARANTEES

Sec. 17-7-10. Installation.

Prior to the issuance of any building permit in any area within any addition or subdivision, all improvements and any other conditions and requirements imposed by this Code or by the Board of Trustees must be installed in a manner acceptable to the Town, or a satisfactory guarantee of such installation or performance must be made by the property owner in compliance with the plans and specifications approved by the Town Engineer.

(Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-7-20. Improvement guarantees.

(a) The Board of Trustees shall require that the costs of providing all public improvements applicable to the subdivision shall be paid prior to the issuance of the first building permit for the subdivision. The costs shall include all improvements described in the subdivision agreement. The improvement guarantee may be provided with a surety bond, cash, acceptable collateral or an acceptable letter of credit.

(b) All guarantees shall be deposited with the Town Clerk in an amount not less than the estimate of the entire amount of the uncompleted public improvements required by the subdivision agreement. The cost estimates shall be prepared by a professional engineer registered in the State and subject to the approval of the Town Engineer.

(Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-7-30. Time for completion; release of bond.

The time for completion or performance of all such improvements shall be eighteen (18) months from the date of the application for the first building permit. The Board of Trustees may extend the time period for completion or performance. Upon completion or performance of such improvements, conditions and requirements within the required time and the approval of the Town Administrator, the bond, deposit of escrow or letter of credit shall be released within thirty (30) days of written notice that the required improvements are completed or performed. If the improvements are not completed within the required time, the monies may be used to complete the improvements. The Town Administrator may cause a portion of the improvement guarantees to be released as specific improvements are completed and approved. Such release shall be within thirty (30) days after receiving written notice that the improvements are completed.

(Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-7-40. Development area boundaries established.

For developments containing ten (10) lots or less, all required improvements must be completed, or the entire estimated cost of improvement must be guaranteed as specified below, before a building permit can be issued. For larger subdivisions, the subdivider may establish boundaries for areas containing at least ten (10) lots. The cost of improvement for this area must be guaranteed prior to the issuance of the first building permit.

(Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Sec. 17-7-50. Acceptance of public improvements.

At the time of the conveyance, the subdivider shall supply a statement of the costs of the facilities conveyed, mechanic's lien waivers from all involved contractors, subcontractors, suppliers and existing as-built specifications and other available data concerning the location, construction, operation and maintenance of such facilities. The subdivider shall also warrant the conveyed facilities to be fit for the purpose intended and of merchantable quality and to be free for one (1) year from the date of conveyance from all defects in materials and workmanship. All warranties of vendors or suppliers of such facilities or components shall be assignable upon demand to the Town, and the subdivider shall notify the vendors and suppliers that the warranties are to be assigned to the Town. Nothing herein shall limit the right of the Town as to any expressed or implied warranties concerning such facilities from persons manufacturing, selling or installing the facilities.

(Ord. No. 2000-02, Art. XV, 2000; Ord. No. 2014-04, § 1, 1-13-2015)

Chapter 18
BUILDING REGULATIONS[4]

ARTICLE 1. BUILDING CODE

Sec. 18-1-10. Adoption.

(a) Pursuant to Title 31, Article 16, Part 2, C.R.S., there is hereby adopted as the building code of the Town, by reference thereto, for the purpose of providing minimum standards to protect persons, property and public welfare the International Building Code, 2018 edition as published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795.

[4]Ord. No. 2022-09, § 2(Exh. A), adopted January 10, 2023, repealed the former chapter 18, §§ 18-1-10—18-1-50, 18-2-10—18-2-30, 18-3-10—18-3-30, 18-4-10—18-4-40, 18-5-10—18-5-50, 18-6-10—18-6-200, 18-7-20—18-7-230, 18-7-210—18-7-240, 18-7-310—18-7-380, 18-7-410, 18-8-10—18-8-50, 18-9-10, 18-9-20, 18-10-10—18-10-40, and enacted a new chapter 18 as set out herein. The former chapter 18 pertained to similar subject matter and derived from Ord. No. 337, § 1, 1974; Ord. No. 355, § 2, 1976; Ord. No. 356, 1976; Ord. No. 376, § 1, 1978; Ord. No. 97-03, § 1, 1997; Ord. No. 2006-03, 2006; Ord. No. 2014-04, § 1, 1-13-2015; Ord. No. 2017-05, § 1, 3-28-2017; Ord. No. 2017-11, § 3, 10-10-2017; Ord. No. 2019-02, § 2, 2-12-2019; Ord. No. 2020-06, § 2, 7-13-2020; Ord. No. 2021-03, § 2, 5-11-2021.

(b) The scope of the International Building Code includes all buildings except detached one- and two-family dwellings and townhouses up to three stories. Chapters 1 through 35 inclusive and Appendix Chapters C, E, G, I and J, are hereby adopted by reference as the Town of Paonia Building Code as if fully set out in this Article with the additions, deletions, insertions, and changes as set forth in Section 18-1-30 below and pertains to all buildings except detached one- and two-family dwellings and townhouses up to three (3) stories.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-1-20. Copy on file.

At least one (1) copy of the International Building Code, 2018 edition, certified to be a true copy, is on file in the office of the Town Clerk and may be inspected by any interested person during regular business hours.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-1-30. Amendments.

The code adopted herein is hereby modified by the following amendments:

(a) References to jurisdiction in Section 101.1 (Title) and elsewhere mean the Town of Paonia.

(b) Section 101.4.1 (Gas) is amended to read: The provisions of the International Fuel Gas Code as amended and adopted by the State of Colorado Plumbing Board (see 3 CCR 7201 of the Code of Colorado Regulations) shall be enforced by the State of Colorado.

(c) Section 101.4.3 (Plumbing) is amended to read: The provisions of the International Plumbing Code as amended and adopted by the State of Colorado Plumbing Board (see 3 CCR 720-1 of the Code of Colorado Regulations) shall be enforced by the State of Colorado.

(d) Section 101.4.4 (Property Maintenance) is hereby deleted.

(e) Sections 104.10.1 (Flood Hazard Areas), 1612.3 (Establishment of Flood Hazard Areas) and 1612.4 (Flood Hazard Documentation) are amended to read: Consideration of Flood Hazard Areas shall be as adopted by Chapter 18 Article 11 of this Municipal Code.

(f) Section 105.2 (Work exempt from permit) is amended to exempt the following from permit requirements:

(1) One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses provided the floor area cannot exceed 200 square feet. Such structures shall be located in accordance with Section 705.3 with respect to other structures on the same lot and in accordance with Chapter 16 Zoning Regulations.

(2) Fences not over 6 feet high; however, all fence-plans must be reviewed and approved as per Municipal Code Section 18-13-10

(3) Item 14 is added and reads: Window and door replacement provided no structural changes are needed or proposed.

(4) Item 15 is added and reads: Decks not exceeding 200 square feet (18.58 m2) in area, that are not more than 30 inches (762 mm) above grade at any point; however, a siteplan is required and subject to approval with regards to setback requirements.

(5) Item 16 is added and reads: Re-siding without alteration of wall structure provided, however, the proposed weather barrier is not a stucco-type product*. (*If the stuccotype product will be

applied over an existing masonry or concrete surface it too shall be exempt from requiring a permit.)

(g) Section 109.2 (Schedule of permit fees) is amended to read: Fees shall be assessed as established by Resolution of the Town Board.

(h) Section 109.4 (Work commencing before permit issuance) is amended to read: Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a fee established by Resolution of the Town Board that shall be in addition to the required permit fees. Payment of this fee does not constitute approval of work already completed and does not assure that a permit will be issued for the project under consideration.

(i) Section 109.6 (Refunds) is amended to read: Refunds shall be determined as established by Resolution of the Town Board.

(j) Section 113 (Board of Appeals) is amended to read: Means of Appeal shall be initiated and addressed pursuant to Article 8 of this Chapter.

(k) Section 114 (Violations) is amended to read: Violations shall be processed pursuant to Article 9 of this Chapter.

(l) Section 310.4.1 (Care facilities within a dwelling) is hereby deleted.

(m) All foundation designs submitted for habitable structures or additions to habitable structures, excluding patio covers and carports shall be site specific, stamped and signed by an engineer registered in the State of Colorado.

(n) The following Appendix Chapters of the International Building Code, 2018 Edition, are adopted:

(1) Appendix C: Group U Agricultural Buildings.

(2) Appendix E: Supplementary.

(3) Appendix F: Accessibility Requirements.

(4) Appendix G: Flood-Resistant Construct.

(5) Appendix I: Patio Covers.

(6) Appendix J: Grading.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

ARTICLE 2. RESIDENTIAL CODE

Sec. 18-2-10. Adoption.

(a) Pursuant to Title 31, Article 16, Part 2, C.R.S., there is adopted for the purpose of providing minimum standards to protect persons, property and public welfare as the residential building code of the Town, by reference thereto, the International Residential Code, 2018 edition, as published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.

(b) The subject matter of the International Residential Code includes the standards for the design, erection, construction, enlargement, alteration, repair, moving, removal, conversion, demolition, occupancy, equipment, use, height, area, and maintenance of one- and two-family dwellings and townhouses not more than three (3) stories above grade, and providing for the issuance of permits and collection of fees therefor.

Chapters 1 through 32 inclusive and Appendix Chapters B, F, H, J, K, M, Q, R and S are hereby adopted by reference as the Town of Paonia Residential Building Code as if fully set out with the additions, deletions, insertions, and changes as set forth in Section 18-2-30 below.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-2-20. Copy on file.

At least one (1) copy of the International Residential Code, 2018 edition, certified to be a true copy, is on file in the office of the Town Clerk and may be inspected by any interested person during regular business hours.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-2-30. Amendments.

The code adopted herein is hereby modified and amended by the following:

(a) References to jurisdiction in Section RI 01.1 (Title) and elsewhere shall mean the Town of Paonia.

(b) R104.10.1 (Flood hazard areas), RI 05.3.1.1 (Permits/Determination of substantially improved or substantially damaged existing buildings in flood hazard areas), R301.2.4 (Design criteria/Floodplain construction), R309.3 (Garages and carports/Flood hazard areas), and R322 (Flood resistant construction) are amended to read: Consideration of Flood Hazard Areas shall be as adopted by Chapter 18 Article 11 of this Code.

(c) Section R105.2 (Work exempt from permit) is amended in part and with items added to read as exempt from permit requirements:

(1) Building:

a. Item 2 - Fences not over 6 feet high; however, all fence-plans must be reviewed and approved as per Section 18-13-10 of this Code.

b. Item 10 - Decks not exceeding 200 square feet (18.58 m2) in area, that are not more than 30 inches (762 mm) above grade at any point; however, a site-plan is required and subject to approval with regards to setback requirements.

c. Item 11 is added and reads: Window and door replacement provided no structural changes are needed or proposed.

d. Item 12 is added and reads: Re-siding without alteration of wall structure provided, however, the proposed weather barrier is not a stucco-type product*. (*If the stucco-type product will be applied over an existing masonry or concrete surface it too shall be exempt from requiring a permit.)

(2) Electrical: All exemptions are subject to the laws established by the Colorado State Electrical Board.

(3) Plumbing: All exemptions are subject to the laws established by the Colorado State Plumbing Board.

(d) Section RI 05.5 (Permit expiration) is amended to read:

(1) Work must commence within 180 days of issuing the permit.

(2) Unless determined otherwise by the Building Official because of the size or complexity of the project, each inspection must be completed within 180 days of the previous mandated inspection according to the following schedule:

a. Reinforcement in footings or structural (monolithic) slab.

b. Reinforcement in stem-wall or basement-wall.

c. Wall and roof sheathing.

d. Framing (plumbing, electrical and mechanical must have already passed inspection or will be inspected at the time of the framing inspection).

e. Insulation.

f. Drywall or other interior wall coverings.

g. All final inspections.

(e) Section R108.2 (Schedule of permit fees) is amended to read: Fees shall be assessed as established by Resolution of the Town Board.

(f) Section R108.5 (Refunds) is amended to read: Refunds shall be determined as established by Resolution of the Town Board.

(g) Section R108.6 is amended to read: Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a fee established by Resolution of the Town Board that shall be in addition to the required permit fees. Payment of this fee does not constitute approval of work already completed and does not assure that a permit will be issued for the project under consideration.

(h) Section R112 (Board of Appeals) is amended to read: Means of Appeal shall be initiated and addressed pursuant to Article 8 of this Chapter.

(i) Section R113 (Violations) is amended to read: Violations shall be processed pursuant to Article 9 of this Chapter.

(j) All foundation designs submitted for habitable structures or additions to habitable structures, excluding patio covers and carports shall be site specific, stamped and signed by an engineer registered in the State of Colorado. The Building Official has the right to waive this requirement when the Building Official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code.

(k) Amend Table R301.2(1) (Climatic and Geographic Design Criteria) Manual J Design Criteria:

(1) Elevation: 5,682.

(2) Latitude: 38.

(3) Winter Heating: 3.

(4) Summer Cooling: 87.

(5) Altitude Correction Factor: .84.

(6) Indoor Design Temperature: 70.

(7) Design Temperature Cooling: 75.

(8) Heating Temperature Difference: 67.

(9) Cooling Temperature Difference: 12.

(10) Wind Velocity Heating: N/A.

(11) Wind Velocity Cooling: N/A.

(12) Coincident Wet Bulb: 58.

(13) Daily Range: H.

(14) Winter Humidity: 30%.

(15) Summer Humidity: 50%.

(16) Ground Snow Load: 33 psf.

(17) Minimum Roof Snow Load: 25 psf.

(18) Wind Speed: 105 mph Ultimate/Exposure B or C.

(19) Topographic Effects: N/A.

(20) Special Wind Region: N/A.

(21) Windborne Debris Zone: N/A.

(22) Seismic Design Category: C.

(23) Weathering: Severe.

(24) Frost Line Depth: 24".

(25) Termite: Moderate.

(26) Winter Design Temp.: 3 degrees F.

(27) Ice Barrier Underlayment: No.

(28) Flood Hazards: Those set forth in FIRM Map Nos. 08029C0313D, 08029C0501D, and 08029C0502D (effective 8-19-2010), as they may be amended, and any other applicable FIRM, FBFM, or other flood hazard map, if any.

(29) Air Freezing Index: 1500.

(30) Mean Annual Temp.: 49.

(l) Amend Exceptions to Section R302.1 (Exterior walls) to read:

(1) Exception #2 is hereby deleted.

(2) Exception #3 is hereby deleted.

(m) Section 324.4.1 (Structural requirements) is amended to read: Rooftop-mounted photovoltaic systems - Structural requirements to include: For PV systems with a total installed weight not to exceed 3-psf and with staggered fasteners attaching to an existing roof, an engineer's review of the roof structure shall not be required.

(n) Section R326.1 (Swimming pools, spas and hot tubs) is hereby deleted.

(o) Section R908.3.1.1 (Roof cover not allowed) #3 is amended to read: Where the existing roof has two or more applications of any type of roof covering unless the third covering is metal panels and appropriate length fasteners are used.

(p) Add a new subsection R908.7 to read as follows: R908.7 Attic ventilation shall be made to be in compliance with Section R806 (Roof ventilation).

(q) Section G2445 (Unvented Room Heaters) is amended to read: Unvented room Heaters are prohibited.

(r) Section G2406.2 (Appliance prohibited locations) is amended to delete Exceptions #3 and #4.

(s) Section G2425.8 (Appliances not required to be vented) is amended to delete item #7.

(t) Section N1102.4.1.2 (Energy efficiency/Air leakage/Testing) is deleted.

(u) Section N1103.3.3 (Energy efficiency/Systems/Duct testing) is deleted.

(v) Section N1103.3.4 (Energy efficiency/Systems/Duct leakage) is deleted.

(w) Section N1103.5.1 (Energy efficiency/Systems/Heated water circulation and temperature maintenance systems) is amended as follows: When these systems are installed, heated water circulation systems shall be in accordance with Section R403.5.1.1. Heat trace temperature maintenance systems shall be in accordance with Section R403.5.1.2. Automatic controls, temperature sensors and pumps shall be accessible. Manual controls shall be readily accessible.

(x) Section N1103.5.2 (Energy efficiency/Systems/Demand recirculation water systems) is amended as follows: When installed, demand recirculation water-systems shall have controls that comply with both of the following:

(1) The controls shall start the pump upon receiving a signal from the action of a user of a fixture or appliance, sensing the presence of a user of a fixture or sensing the flow of hot or tempered water to a fixture fitting or appliance.

(2) The controls shall limit the temperature of the water entering the coldwater piping to not greater than 104°F (40°C).

(y) Section N1103.5.4 (Energy efficiency/Systems/Drain water heat recovery units) is amended as follows: When installed, drain water heat recovery units shall comply with CSA B55.2. Drain water heat recovery units shall be tested in accordance with CSA B55.1. Potable water-side pressure loss of drain water heat recovery units shall be less than 3 psi (20.7 kPa) for individual units connected to one or two showers. Potable waterside pressure loss of drain water heat recovery units shall be less than 2 psi (13.8 kPa) for individual units connected to three or more showers.

(z) Chapter 33 is hereby deleted.

(aa) Chapters 34-43 regarding electrical requirements are hereby deleted. Note, that pursuant to CRS 12-115-107, the electrical code as enforced by the State of Colorado approved Electrical Inspector shall apply to all electrical work within the Town.

(bb) The following Appendix Chapters of the International Residential Code, 2018 Edition, are adopted:

(1) Appendix B: Vent Sizing.

(2) Appendix F: Radon Control.

(3) Appendix H: Patio Covers.

(4) Appendix J: Existing Buildings and Structures is amended to read as follows: Section AJ501.5 Electrical repairs and upgrades are subject to the National Electrical Code as adopted by the state of Colorado Electrical Board.

(5) Appendix K: Sound Transmission.

(6) Appendix M: Home Day Care.

(7) Appendix Q: Tiny Homes.

(8) Appendix R: Light Straw-Clay Construction.

(9) Appendix S: Strawbale Construction.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

ARTICLE 3. EXISTING BUILDING CODE

Sec. 18-3-10. Adoption.

(a) Pursuant to Title 31, Article 16, Part 2, C.R.S., there is adopted for the purpose of providing minimum standards to protect persons, property and public welfare as the existing building code of the Town, by reference thereto, the International Existing Building Code, 2018 edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795.

(b) The Existing Building Code provides the standards for the alteration, repair, addition, moving, change of occupancy and relocation of existing buildings, and providing for the issuance of permits and collection of fees therefor. Chapters 1 through 16 inclusive, all Appendix Chapters and Resource "A" are hereby adopted by reference as the Town of Paonia Existing Building Code as if fully set out with the additions, deletions, insertions, and changes as set forth in Section 18-3-30 below.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-3-20. Copy on file.

At least one (1) copy of the International Existing Building Code, 2018 edition, certified to be a true copy is on file in the office of the Town Clerk and may be inspected by any interested person during regular business hours.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-3-30. Amendments.

The code adopted herein is hereby modified and amended by the following:

(a) Reference to "jurisdiction" in Section 101.1 (Title) and elsewhere shall mean the Town of Paonia.

(b) Section 108.2 (Schedule of permit fees) is amended to read: Fees shall be assessed as established by Resolution of the Town Board.

(c) Section 108.6 (Refunds) is amended to read: Refunds shall be determined as established by Resolution of the Town Board.

(d) Section 112 (Board of Appeals) is amended to read: Means of Appeal shall be initiated and addressed pursuant to Article 8 of this Chapter.

(e) Section 113 (Violations) is amended to read: Violations shall be processed pursuant to Article 9 of this Chapter.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

ARTICLE 4. ENERGY CONSERVATION CODE

Sec. 18-4-10. Adoption.

(a) Pursuant to Title 31, Article 16, Part 2, C.R.S., there is adopted as the energy conservation code of the Town, by reference thereto, the International Energy Conservation Code, 2018 edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795.

(b) The subject matter of the adopted code includes regulations governing energy efficient building envelopes and installation of energy efficient mechanical, lighting and power systems, and providing for the issuance of permits and collection of fees therefor. Chapters 1 through 6 and Appendix A designed for Commercial and Residential provisions, respectively, are hereby adopted by reference as the Town of Paonia International Energy Conservation Code as if fully set out with the additions, deletions, insertions, and changes as set forth in Section 18-4-30 below.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

See. 18-4-20. Copy on file.

At least one (1) copy of the International Energy Efficiency Code, 2018 edition, certified to be a true copy is on file in the office of the Town Clerk and may be inspected by any interested person during regular business hours.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-4-30. Amendments.

The code adopted herein is hereby modified by the following amendments:

(a) Commercial.

(1) Section C101.1 (Title) is amended as follows: This code shall be known as the Energy Conservation Code of Town of Paonia, Colorado, and shall be cited as such. It is referred to herein as "this code."

(b) Residential.

(1) Section R101.1 (Title) is amended as follows: This code shall be known as the Energy Conservation Code of Town of Paonia, Colorado, and shall be cited as such. It is referred to herein as "this code."

(2) Section R402.4.1.2 (Testing) is deleted.

(3) Section R403.3.3 (Duct testing) is deleted.

(4) Section R403.3.4 (Duct leakage) is deleted.

(5) Section R403.5.1 (Heated water circulation and temperature maintenance systems) is amended as follows: When these systems are installed, heated water circulation systems shall be in accordance with Section R403.5.1.1. Heat trace temperature maintenance systems shall be in accordance with Section R403.5.1.2. Automatic controls, temperature sensors and pumps shall be accessible. Manual controls shall be readily accessible.

(6) Section R403.5.2 (Demand recirculation water systems) is amended as follows: When installed, demand recirculation water systems shall have controls that comply with both of the following:

a. The controls shall start the pump upon receiving a signal from the action of a user of a fixture or appliance, sensing the presence of a user of a fixture or sensing the flow of hot or tempered water to a fixture fitting or appliance.

b. The controls shall limit the temperature of the water entering the coldwater piping to not greater than 104°F (40°C).

(7) Section R403.5.4 (Drain water heat recovery units) is amended as follows: When installed, drain water heat recovery units shall comply with CSA B55.2. Drain water heat recovery units shall be tested in accordance with CSA B55.1. Potable water-side pressure loss of drain water heat recovery units shall be less than 3 psi (20.7 kPa) for individual units connected to one or two showers. Potable water-side pressure loss of drain water heat recovery units shall be less than 2 psi (13.8 kPa) for individual units connected to three or more showers.

(8) R403.6 (Mechanical ventilation) - append this Section by adding: Automatic controls for heating incoming-air shall be provided.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

ARTICLE 5. MANUFACTURED HOUSING INSTALLATION

Sec. 18-5-10. Adoption.

Pursuant to Title 31, Article 16, Part 2, C.R.S., there is adopted as the manufactured housing code of the Town, for the purpose of providing minimum standards to protect persons, property and public welfare, by reference thereto, the Installation Handbook for Manufactured Homes and Factory Built Housing, January 2020 edition, published by the Colorado Department of Local Affairs. The subject matter of the adopted code includes regulations governing the installation of manufactured homes in the Town and is adopted in its entirety without amendment.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-5-20. Copy on file.

At least one (1) copy of the Installation Handbook for Manufactured Homes and Factory Built Housing, January 2020, certified to be a true copy is on file in the office of the Town Clerk and may be inspected by any interested person during regular business hours.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-5-30. Definitions.

For purposes of this Article, the following definitions will apply:

Dependent mobile home means a mobile home which does not have a flush toilet and a bath or shower.

Independent mobile home means a mobile home which has a flush toilet, a bath or a shower and a sink.

Mobile home means any vehicle, trailer coach, house trailer or similar portable structure designed or constructed to permit occupancy for dwelling or sleeping purposes and designed to be transported on wheels.

Modular home means a factory-built or prefabricated structure designed for residential occupancy which is wholly or in substantial part made, fabricated, formed or assembled by a manufacturer for installation or assembly and installation on a residential building site.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-5-40. Permit for location and installation.

(a) It shall be unlawful for any person to use or occupy a dependent mobile home for human habitation within the limits of the Town.

(b) It shall be unlawful for any person to install, erect, use or occupy any independent mobile home or modular home that has less than six hundred (600) square feet of living space.

(c) It shall be unlawful for any person to install, erect, use or occupy any independent mobile home or modular home for human habitation within the limits of the Town without first obtaining a permit therefor upon written application on a form to be furnished by the Town Clerk. Each such application shall describe the land on which the installation is to be made, shall be accompanied by plans and specifications of the foundation for the proposed installation showing its location on the building site, shall be signed by the applicant, shall be accompanied by evidence of application for a State Permit from the Colorado Department of Housing and shall give such other information as may be required by the Building Official. The application plans and specifications shall be checked by the Building Official, and if he or she is satisfied that the installation therein described will conform to the requirements of paragraphs (1) through (6) below, he or she shall issue a permit therefor to the applicant. Fees for the permit shall be a minimum of three hundred dollars ($300.00) or otherwise in accordance with the Permit Fee Rate Schedule adopted by Resolution based on the value of the foundation, exterior stairs, landings, porches and any other added feature exterior to the Manufactured Structure. Thereafter, the Building Official shall make such inspections as reasonably necessary to determine that all requirements of Subparagraphs (1) through (6) below are complied with, and he or she shall either approve the installation at each inspection or notify the permit holder when it fails to comply with said requirements. No mobile home or modular home shall be used or occupied until the Building Official has issued a certificate of occupancy which shall be issued to the permittee after final inspection of the installation and approval of the same by the Building Official in accordance with the foregoing. The certificate of occupancy shall contain the permit number, the address of the installation, the name of the owner, a statement that the mobile home or modular home installation complies with the requirements of this Article, the date issued and the signature of the Building Official.

    (1) The proposed location shall be in compliance with Chapter 16 of this Code. No mobile home or modular home shall be located or placed on or within an area of less than five thousand (5,000) square feet.

    (2) No mobile home or modular home shall be located closer than twelve (12) feet to any building and shall also be located as to comply with all requirements as to setback lines and side and rear yards as now or hereafter provided for dwelling structures by Chapter 16 of this Code.

    (3) The plumbing and electrical connections shall be in accordance with the provisions of this Code and in accordance with State Law as set forth in paragraph (6) below.

    (4) All mobile homes or modular homes using liquefied petroleum gas, kerosene, gasoline or fuel oil for heating or cooking purposes shall have their stoves properly vented with flues of adequate size and construction; and, with the exception of a supply container for each mobile home, no gasoline, kerosene or fuel oil shall be stored on the premises. Said supply container must be approved by the Fire Chief. Every connection between a liquefied petroleum gas container and its appliance shall be of metal pipe. No liquefied petroleum gas container shall be permitted inside of any mobile home. All

mobile homes and modular homes shall comply with the regulations of the Colorado State Department of Public Health and Environment controlling carbon monoxide poisoning.

(5) Every mobile home and modular home shall be supported on solid masonry or concrete footings which shall be of sufficient size to safely support the loads imposed as determined from the character of the soil. The foundation walls or piers shall extend at least six (6) inches above the finished grade adjacent to the wall at all points. The foundation walls or piers shall be directly below the load-bearing beams or stringers of the mobile home or modular home. If piers are used, they shall be installed pursuant to requirements of the home manufacturer and State Laws, except that design and specifications shall be provided by a Colorado Licensed Engineer for all "permanent foundations." Every mobile home and modular home shall be anchored in such a way as to resist wind loads established per the IRC and approved as per State Laws, except that design and specifications for anchoring shall be provided by a Colorado Licensed Engineer for all "permanent foundations." Foundations for all mobile homes and modular homes shall be level or shall be stepped so that both top and bottom of such foundation are level. After such foundations have been constructed, each mobile home or modular home shall have a wood or metal skirt firmly attached to all exterior walls and extended to the ground along the entire outside perimeter.

(6) Pursuant to the Laws of the State of Colorado, Department of Housing, no permanent utilities are to be released to the home prior to the affixing of the installation-insignia, and occupancy of the structure is prohibited prior to affixing the installation-insignia.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

ARTICLE 6. INTERNATIONAL MECHANICAL CODE

Sec. 18-6-10. Adoption.

(a) Pursuant to Title 31, Article 16, Part 2, C.R.S., there is adopted as the mechanical code of the Town, for the purpose of providing minimum standards to protect persons, property and public welfare, by reference thereto, the International Mechanical Code, 2018 edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795.

(b) The adopted code regulates the design and installation of mechanical systems and appliances, appliance venting, duct and ventilation systems, combustion air provisions, hydronic systems and solar systems, issuance of permits and collection of fees therefor. Chapters 1 through 15 inclusive and all Appendix Chapters are hereby adopted by reference as the Town of Paonia Mechanical Code as if fully set out with the additions, deletions, insertions, and changes as set forth in Section 18-6-30 below.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-6-20. Copy on file.

At least one (1) copy of the International Mechanical Code, 2018 edition, certified to be a true copy, is on file in the office of the Town Clerk and may be inspected by any interested person during regular business hours.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-6-30. Amendments.

The code adopted herein is hereby modified by the following amendments:

(a) Reference to "jurisdiction" in Section 101.1 (Title) and elsewhere shall mean the Town of Paonia.

(b) Section 106.5.2 (Fee schedule) is amended to read: Fees shall be assessed as established by Resolution of the Town Board.

(c) Section 106.5.3 (Fee refunds) is amended to read: Refunds shall be determined as established by Resolution of the Town Board.

(d) Section 108 (Violations) is amended to read: Violations shall be processed pursuant to Article 9 of this Chapter.

(e) Section 109 (Means of appeal) is amended to read: Means of Appeal shall be initiated and addressed pursuant to Article 8 of this Chapter.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

ARTICLE 7. INTERNATIONAL FUEL GAS CODE

Sec. 18-7-10. Adoption.

(a) Pursuant to Title 31, Article 16, Part 2, C.R.S., there is adopted as the fuel gas code of the Town, by reference thereto, the International Fuel Gas Code, 2018 edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795

(b) The subject matter of the adopted code includes regulations governing fuel gas systems and gas-fired appliances and the issuance of permits and collection of fees therefor. Chapters 1 through 8 inclusive and all Appendix Chapters are hereby adopted by reference as the Town of Paonia International Fuel Gas Code as if fully set out with the additions, deletions, insertions, and changes as set forth in Section 18-7-30 below.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-7-20. Copy on file.

At least one (1) copy of the International Fuel Gas Code, 2018 edition, certified to be a true copy, is on file in the office of the Town Clerk and may be inspected by any interested person during regular business hours.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-7-30. Amendments.

The code adopted herein is hereby modified by the following amendments:

(a) Reference to "jurisdiction" in Section 101.1 (Title) and elsewhere shall mean the Town of Paonia.

(b) Section 106.6.2 (Fee schedule) is amended to read: Fees shall be assessed as established by Resolution of the Town Board.

(c) Section 106.6.3 (Fee refunds) is amended to read: Refunds shall be determined as established by Resolution of the Town Board.

(d) Section 108 (Violations) is amended to read: Violations shall be processed pursuant to Article 9 of this Chapter.

(e) Section 109 (Means of Appeal) is amended to read: Means of Appeal shall be initiated and addressed pursuant to Article 8 of this Chapter.

(f) Section 501.8 (Appliances not required to be vented) #8 (Hot plates and laundry stove) is hereby deleted.

(g) Section 621 (Unvented Room Heaters) is amended to read: Unvented Room Heaters are hereby prohibited.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

ARTICLE 8. BUILDING CODE BOARD OF APPEALS

Sec. 18-8-10. Establishment and purpose of Building Code Board of Appeals.

(a) There is hereby created the Building Code Board of Appeals. Unless otherwise conflicted, the five (5) members of the Building Code Board of Appeals shall serve as the members of the Zoning Board of Adjustment. The Board of Appeals shall consist of five (5) members, who are qualified by experience and training to pass upon matters pertaining to building construction. In evaluating the qualifications and experience of the five (5) members, the qualifications in Appendix B of the version of the IBC adopted by the Town shall serve as guidance in selecting members to the Board of Appeals.

(b) The purpose of the Board of Appeals is to hear and decide appeals arising under the codes adopted by reference under this title, except with respect to the National Electric Code and International Plumbing Code. Zoning appeals pursuant to Chapter 16 shall be heard in accordance with Chapter 16.

(c) Such Building Code Board of Appeals shall have jurisdiction to decide any appeals from a decision of the Building Official, or his/her designee, if the decision of the Building Official or his/her designee concerns suitability of alternate materials, method of construction or reasonable interpretations of the codes adopted pursuant to this title. Provided, however, the Building Code Board of Appeals shall not be entitled to hear appeals of life safety matters, or the administrative provisions of the codes adopted pursuant to this title, nor shall the Building Code Board of Appeals be empowered to waive requirements under said codes.

(d) The Building Code Board of Appeals may adopt reasonable rules and regulations not inconsistent with this Code for conducting its business, meetings, and deliberations.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-8-20. Membership.

Membership shall be as prescribed in Section 2-8-20, Zoning Board of Adjustment. Four of the five members shall be qualified by experience and training to pass upon matters pertaining to building construction. In evaluating the qualifications and experience of the four (4) members, the qualifications in Appendix B of the version of the IBC adopted by the Town shall serve as guidance in selecting members to the Building Code Board of Appeals.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-8-30. Appeal procedures.

(a) Appeals to the Building Code Board of Appeals may be taken by any person aggrieved by a decision of the Building Official, or his/her designee, denying, issuing, or revoking a permit or in applying the provisions of

this title or any code adopted by reference thereunder, to the construction, alteration, or repair of a structure.

(b) Appeals to the Building Code Board of Appeals must be made in writing and filed with the Town Clerk no later than 4:30 p.m. of the tenth (10) day following the date of the decision of the Building Official, or his/her designee, by filing a written notice of appeal with the Town Clerk setting forth the decision appealed from and the grounds for said appeal. Upon receipt, the Town Clerk shall transmit the notice of appeal to the Building Official and the Building Code Board of Appeals.

(c) In the event the tenth (10) day falls on a Saturday, Sunday or holiday, the next regular business day of the Town shall be deemed the tenth (10) day. The day of the action or decision shall not be included in the ten-day calculation.

(d) An appeal to the Building Code Board of Appeals stays all proceedings in furtherance of the action appealed from, unless the Building Official, or his/her designee, from whom the appeal is taken, certifies to the Zoning Board of Adjustment after the notice of appeal has been filed with him or her that, by reason of facts stated in the certificate, a stay, in his or her opinion, would cause imminent peril to life and property, in which case proceedings shall not be stayed other than by a restraining order which may be granted by the Zoning Board of Adjustment or a court of record on application, on notice to the Building Official, or his/her designee, from whom the appeal is taken and on whom due cause is shown.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-8-40. Scheduling of hearing.

Upon receipt of a notice of appeal, the Town Clerk shall schedule said appeal for hearing within thirty (30) days from the date of receipt of the notice of appeal. The Town Clerk shall thereupon mail written notice of the date, time, and place of the hearing to the Building Official, or his/her designee and to the appellant.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-8-50. Hearing.

(a) The hearing on the appeal from a decision of the Building Official, or his/her designee shall be public and shall permit the appellant and the Building Official, or his/her designee to call witnesses, introduce evidence, examine and cross examine witnesses, and otherwise provide each of the parties with due process of law.

(b) At hearings, all witnesses shall be sworn-in, and the Chairperson will utilize such procedures as the Building Code Board of Appeals finds will ensure fairness and efficiency. The Building Code Board of Appeals shall not be required to observe formal rules of evidence but may consider any testimony or other evidence the Building Code Board of Appeals finds reasonably reliable and calculated to aid the Building Code Board of Appeals in reaching an accurate determination of the issue involved. Rulings on questions of procedure, admissibility of evidence, and exhibits will be made by the Chairperson and will stand unless objected to by a member of the Building Code Board of Appeals, in which event the question will be decided by a majority vote of the members of the Board present.

(c) The Building Code Board of Appeals shall have the authority to review any written final decisions of the Building Official regarding the suitability of alternate materials, methods of construction, or regarding the technical application and interpretation of the building codes adopted by reference, and any amendments thereto, within this Chapter 18. The Building Code Board of Appeals shall also be authorized to issue advisory opinions and policies regarding such matters at the request of the building official. The Building Code Board of Appeals shall not have the authority to waive requirements of any such code, nor shall the Building Code Board of Appeals have the authority to recommend decreasing public safety or fire-resistive standards set

forth in any section of such codes. A decision of the Board shall not be considered a precedent for future decisions of the building official. The Building Code Board of Appeals shall act in each instance based upon the facts presented in the appeal.

(d) In the event of a conflict between any building codes adopted by the Town and this Chapter 18, Article 9, the Town Code shall take precedent. Notwithstanding the foregoing, for any matter which the Town Code is silent, the Building Code Board of Appeals shall take into account direction and guidance from the relevant building code(s).

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-8-60. Decisions.

Building Code Board of Appeals, shall issue its findings and decision of a majority of the members on an appeal in writing no later than thirty (30) days after the conclusion of the hearing. The Town Clerk shall mail copies of the findings and decision to the Building Official, or his/her designee and the appellant.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-8-70. Appeals from the board.

Any decision issued by the Building Code Board of Appeals filed under this chapter shall be final. Any further appeal from the decision of the Building Code Board of Appeals shall be made to the District Court as provided by law.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

ARTICLE 9. VIOLATIONS

Sec. 18-9-10. Violations—Penalty.

(a) Except as may otherwise be provided in this title, any person, firm, or corporation violating any of the provisions of this title shall be deemed guilty of a municipal misdemeanor and subject to the Town's general penalty provision, and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this title is committed, continued or permitted. Said offense shall be deemed to be one of "strict liability." Only the Town of Paonia, by and through its Building Official, or his/her designee, the Town Attorney, or the Police Department, shall be permitted to initiate the filing of a complaint in the Paonia Municipal Court for violation of any of the provisions of this title and the primary codes adopted by reference herein.

(b) In the event any building or structure is or is proposed to be erected, constructed, reconstructed, altered, remodeled, used, or maintained in violation of this title or any primary code adopted by reference herein, the Town Attorney, upon request of the Building Official or the Town Manager, in addition to other remedies provided by law, may institute an appropriate action for injunction, mandamus, or abatement to prevent, enjoin, abate, or remove such unlawful erection, construction, reconstruction, alteration, remodeling, maintenance, or use, in any court of competent jurisdiction.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

ARTICLE 10. SIGNS

Sec. 18-10-10. Intent.

It is the intent of these regulations to provide for the proper control of signs in the Town. It is recognized that signs are a necessary means of visual communication for the convenience of the public and also for the benefit of businesses. It is intended to provide for a reasonable balance between the right of the individual to identify his or her business and the right of the public to be protected against visual discord and clutter resulting from the unrestricted proliferation of signs. It is further intended that the public be protected from signs that are structurally unsafe or obscure the vision of motorists or conflict with necessary traffic signals and signs.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-10-20. Scope.

The provisions of this Article shall apply to the display, construction, erection, alteration, use, maintenance and location of all signs within the Town. All signs displayed, constructed, erected or altered after the date of the adoption of the initial ordinance codified herein shall be in conformance with the provisions of this Code. All signs that are existing at such time shall not be altered or enlarged without being in conformance with this Code. The Building Official is hereby authorized and directed to enforce the provisions of this Article.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

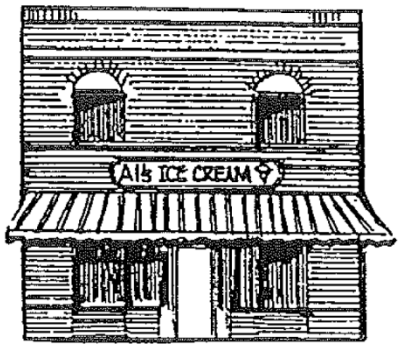
Sec. 18-10-30. Definitions.

For purposes of this Chapter, the following terms shall be defined as follows:

Awning sign means a sign that is written on the face or edge of an awning.

Building frontage means the horizontal, linear dimension of that side of a building which abuts a street, parking area or other circulation area open to the general public. Where more than one (1) use occupies a building, each such use having a public entrance or main window display shall be considered to have its own building frontage, which shall be the front width of the portion of the building occupied by that use.

Business sign means a sign which identifies and directs attention to the business, service, profession or activities conducted.



Construction sign means a temporary sign identifying a subdivision, development or property improvement by a builder, contractor or other person furnishing materials, labor or services to the premises.

Freestanding sign means a sign that is supported by one (1) or more columns, uprights or poles extended from the ground or from an object on the ground, or a sign that is erected on the ground. No part of the sign may be attached to a building.



Free Standing Sign

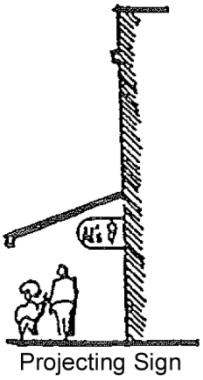
Identification sign includes name plates, signs or symbols establishing the identity of a building, combination of name and street address, landmark or natural features or plaques that are an integral part of the structure.

Joint identification sign means a sign that serves a common or collective identification for two (2) or more businesses or industrial uses.



Joint Identification Sign

Projecting sign means a sign attached to a building and extending in whole or in part fifteen (15) inches or more horizontally beyond the surface of the building to which the sign is attached.


Projecting Sign

Real estate sign means a sign indicating the availability for sale, rent or lease of a specific lot or building.

Sign means any written, pictorial representation, form, emblem, flag, banner or figure of similar character which has one (1) or more of the following characteristics:

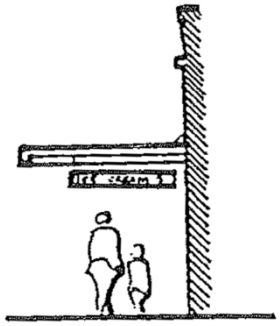
a. Is a structure or part thereof.

b. Is written, printed, projected, painted, constructed or otherwise placed or displayed upon or designed into a building canopy, awning or vehicle.

c. *Is designed to attract attention or used as a* means of identification or advertisement.

Sign face means the surface of a sign upon, against or through which the message is displayed or illustrated.

Suspended sign means a sign suspended from the ceiling of an arcade, marquee or canopy.



Suspended Sign

Wall sign means a sign displayed upon or against the wall of an enclosed building where the exposed face of the sign is in the plane parallel to the plane of the wall and extended not more than fifteen (15) inches from the face of the wall.

Window sign means a sign that is printed on glass only. Window signs are allowed in commercial and industrial zones only.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-10-40. Exemptions.

The following signs shall be exempt from the provisions of this Article:

(1) Official government notices posted by government officers in the performance of their duties to control traffic or to provide warning. Identification signs or bulletin boards accessory to government buildings are not exempt from the provisions of this Article.

(2) Temporary decorations or displays which are clearly incidental to and are customarily associated with any national, local or religious holiday or celebration.

(3) Temporary or permanent signs erected by a public utility company or construction company to warn of dangerous or hazardous conditions.

(4) Political signs for temporary use during an election.

(5) Temporary yard sale signs.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-10-50. Prohibited signs.

(a) There shall be no flashing lights connected to or a part of any sign.

(b) There shall be no freestanding signs placed at the intersection of two (2) streets within the triangular area defined by a line extending from a point thirty (30) feet from the intersection of curb lines along one (1) street to a point thirty (30) feet from the intersection along the other curb line.

(c) There shall be no signs with visible moving, revolving or rotating parts, other mechanical movement or apparent movement achieved by electrical, electronic or mechanical means, except for time-temperature-and-date signs.

(d) Signs shall be prohibited that are structurally unsafe or constitute a hazard to safety or health by reason of inadequate maintenance or dilapidation.

(e) Signs shall be prohibited that create an unsafe visual distraction or obstruct the view of motor vehicle operators.

(f) Roof signs shall be prohibited.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-10-60. Setback requirements for freestanding signs.

Freestanding signs in any zoning district shall be set back from the property line the following distances:

Zone	Minimum Setback
R-1, R-2, E-1	10 ft.
R-3, MH	10 ft.
C-1	0 ft.
C-2	15 ft.
I-1, I-2	25 ft.

No portion of any sign shall extend into the sidewalk area.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-10-70. Permits required.

(a) It shall be unlawful to display, erect, relocate or alter any sign without first obtaining a sign permit from the Building Official, except as provided in Section 18-10-40 above.

(b) Once a sign permit has been issued, it shall be unlawful to change, modify or deviate from the terms or conditions of the approved permit without the consent of the Building Official.

(c) The application for a sign permit shall be made by the owner, tenant or the authorized agent of the owner or tenant of the property on which the sign is to be placed. The application shall be made on forms provided by the Building Official and shall be signed by the applicant.

(d) The application shall include applicable information as to the size, character, construction, height and proposed location of the sign.

(e) Permit fees shall be established by the Board of Trustees.

(f) Any sign erected without a permit shall have imposed a fine of one hundred dollars ($100.00) unless the sign is removed within thirty (30) days.

(g) For the procedure for variances to the provisions of this Article refer to Section 18-7-240 of this Chapter.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-10-80. Structural requirements.

Signs and structures for signs shall be designed in conformity with the building code adopted by the Town, including but not limited to consideration for wind loads, seismic loads, allowable stresses, materials and anchorage requirements.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-10-90. Existing nonconforming signs.

All previously approved existing signs that are not in conformance with the provisions of these regulations may be continued and shall be maintained in good condition but shall not be:

(1) Changed to another nonconforming sign.

(2) Structurally altered so as to prolong the life of the sign except for safety reasons.

(3) Altered or expanded so as to increase the degree of nonconformity of the sign.

(4) Continued in use after cessation or change of business or activity to which the sign pertains.

(5) Re-established after damage or destruction if the estimated cost or reconstruction exceeds fifty percent (50%) of the appraised value (as determined by the Building Official).

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-10-100. Sign regulations; schedule of requirements.

The following table sets forth the schedule of requirements for sign regulations.

Zoning District	Functional Type	Structural Type	Maximum Area	Maximum Number of Signs	Maximum Height of Freestanding Signs
R-1, R-2, E-1, MH	Identification	Wall	2 sq. ft.	1 per dwelling	-
	Real estate	Freestanding	4 sq. ft. per face	1 per dwelling	4 ft.
R-3	Identification	Wall	Maximum area 10 sq. ft. for each permitted sign	1 wall sign per street footage	

	Real estate or construction (temporary)	Freestanding	4 sq. ft. per face a total of 8 sq. ft.	1 per dwelling	4 ft.
R-1, R-2, R-3, E-1, MH	Permanent subDiv. identification	Freestanding	15 sq. ft.	1 per project	4 ft.
Churches	Identification/information	Wall/ freestanding	20 sq. ft.	2 per church	5 ft.
Home occupation	Identification/information	Wall	2 sq. ft.	1 per dwelling (See Subparagraph 16-11-20(4)d.)	
C-1	Business or identification	Wall	Wall sign or canopy sign shall not exceed 1 sq. ft. of building frontage with a maximum area of 50 sq. ft.	1 sign per building except for corner buildings which may have 2 separate signs; provided that the total area does not exceed 75 sq. ft.	
	Business	Projecting or suspended	Area shall not exceed 6 sq. ft. per face or a total of 12 sq. ft. if internally illuminated or 9 sq. ft. per face or total of 18 sq. ft. if not illuminated	1 sign per building	
	Real estate or construction (temporary)	Freestanding	4 sq. ft. per face or a total of 8 sq. ft.	1 sign per lot	4 ft.
C-2	Business	Wall	Wall sign or canopy signs	1 sign per business	-

			shall not exceed 1 sq. ft. for each linear ft. of building frontage or a maximum of 50 sq. ft. per business	except for corner buildings which may have 2 separate signs, provided that the total area does not exceed 75 sq. ft.	
	Business	Freestanding	Freestanding individual identification signs shall be limited to 25 sq. ft. per face or a maximum of 50 sq. ft.	1 sign per business	10 ft.
	Joint identification	Freestanding	Freestanding signs for community shopping centers shall not exceed 50 sq. ft. per face or a total of 100 sq. ft. When permitted, no other freestanding sign shall be permitted in the shopping center.	1 sign per shopping center	20 ft.
	Business	Projecting or suspended	Area shall not exceed 6 sq. ft. per face or a total of 12 sq. ft. if sign is internally	1 sign per business	-

			illuminated and 9 sq. ft. per face or a total of 18 sq. ft. if not illuminated		
	Real estate or construction (temporary)	Freestanding	16 sq. ft. per face or a total of 32 sq. ft.	1 sign per street frontage	20 ft.
I-1, I-2	Business or identification	Wall	Wall signs shall not exceed 1 sq. ft. for each linear ft. of building frontage or a maximum of 100 sq. ft. per business	1 sign per business, except for corner buildings which may have 2 separate signs, provided that the total area does not exceed 100 sq. ft.	-
	Business	Freestanding	25 sq. ft. per face or a max of 50 sq. ft.	1 sign per business	10 ft.
	Joint identification	Freestanding	For an industrial park or center, a freestanding joint identification sign shall not exceed 75 sq. ft. per face or a total of 150 sq. ft.	1 freestanding sign per industrial park or center	20 ft.
	Real estate or construction (temporary)	Freestanding	16 sq. ft. per face or a total of 32 sq. ft.	1 sign per street frontage	20 ft.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

ARTICLE 11. FLOOD DAMAGE PREVENTION

DIV. 1. GENERAL PROVISIONS

Sec. 18-11-10. Statutory authorization.

The Legislature of the State has, in Title 29, Article 20, C.R.S., delegated the responsibility of local governmental units to adopt regulations designed to minimize flood losses. Therefore, the Board of Trustees hereby adopts the following floodplain management regulations.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-20. Findings of fact.

(a) The flood hazard areas of the Town are subject to periodic inundation, which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services and extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety and general welfare.

(b) These flood losses are created by the cumulative effect of obstructions in floodplains, which cause an increase in flood heights and velocities, and by the occupancy of flood hazards areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, floodproofed or otherwise protected from flood damage.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-30. Statement of purpose.

It is the purpose of this Article to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

(1) Protect human life and health;

(2) Minimize expenditure of public money for costly flood control projects;

(3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

(4) Minimize prolonged business interruptions;

(5) Minimize damage to public facilities and utilities, such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;

(6) Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas; and

(7) Ensure that potential buyers are notified that property is in a flood area.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-40. Methods of reducing flood loss.

In order to accomplish its purposes, this Article uses the following methods:

(1) Restrict or prohibit uses that are dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities;

(2) Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction;

(3) Control the alteration of natural floodplains, stream channels and natural protective barriers, which are involved in the accommodation of floodwaters;

(4) Control filling, grading, dredging and other development which may increase flood damage; and

(5) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-50. Definitions.

Unless specifically defined below, words or phrases used in this Article shall be interpreted to give them the meaning they have in common usage and to give this Article its most reasonable application.

100-year flood means a flood having a recurrence interval that has a one-percent chance of being equaled or exceeded during any given year (1-percent-annual-chance flood). The terms one-hundred-year flood and one-percent-chance flood are synonymous with the term 100-year flood. The term does not imply that the flood will necessarily happen once every one hundred (100) years.

100-year floodplain means the area of land susceptible to being inundated as a result of the occurrence of a one-hundred-year flood.

500-year flood means a flood having a recurrence interval that has a 0.2-percent chance of being equaled or exceeded during any given year (0.2-percent-chance annual flood). The term does not imply that the flood will necessarily happen once every five hundred (500) years.

500-year floodplain means the area of land susceptible to being inundated as a result of the occurrence of a five-hundred-year flood.

Addition means any activity that expands the enclosed footprint or increases the square footage of an existing structure.

Alluvial fan flooding means flooding occurring on the surface of an alluvial fan or similar landform which originates at the apex and is characterized by high-velocity flows; active processes of erosion, sediment transport and deposition; and unpredictable flow paths.

Apex means a point on an alluvial fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and alluvial fan flooding can occur.

Area of shallow flooding means a designated Zone AO, AH or VO on a community's Flood Insurance Rate Map (FIRM) with a one-percent chance or greater annual chance of flooding to an average depth of one (1) to three (3) feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Area of special flood hazard means the land in the floodplain within a community subject to a one-percent or greater chance of flooding in any given year. The area may be designated as Zone A on the Flood Hazard Boundary

Map (FHBM). After detailed ratemaking has been completed in preparation for publication of the FIRM, Zone A usually is refined into Zones A, AE, AH, AO, A1-99, VO, V1-30, VE or V.

Base flood means the flood having a one-percent chance of being equaled or exceeded in any given year.

Base flood elevation (BFE) means the elevation shown on a FEMA Flood Insurance Rate Map for Zones AE, AH, A1-A30, AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO, V1-V30 and VE that indicates the water surface elevation resulting from a flood that has a one-percent chance of equaling or exceeding that level in any given year.

Basement means any area of the building having its floor sub-grade (below ground level) on all sides.

Channel means the physical confine of a stream or waterway consisting of a bed and stream banks, existing in a variety of geometries.

Channelization means the artificial creation, enlargement or realignment of a stream channel.

Code of Federal Regulations (C.F.R.) means the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the federal government. It is divided into fifty (50) titles that represent broad areas subject to federal regulation.

Community means any political subdivision in the State that has authority to adopt and enforce floodplain management regulations through zoning, including but not limited to cities, towns, unincorporated areas in the counties, Indian tribes and drainage and flood control districts.

Conditional letter of map revision (CLOMR) means FEMA's comment on a proposed project which does not revise an effective floodplain map that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodplain.

Critical facility means a structure or related infrastructure, but not the land on which it is situated, as specified in Section 18-11-380 of this Article, that, if flooded, may result in significant hazards to public health and safety or interrupt essential services and operations for the community at any time before, during and after a flood. See Section 18-11-380 of this Article.

Critical feature means an integral and readily identifiable part of a flood protection system, without which the flood protection provided by the entire system would be compromised.

Development means any man-made change in improved and unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

DFIRM database means a database, usually spreadsheets containing data and analyses, that accompany DFIRMs. The FEMA Mapping Specifications and Guidelines outline requirements for the development and maintenance of DFIRM databases.

Digital flood insurance rate map (DFIRM) means a FEMA digital floodplain map. These digital maps serve as "regulatory floodplain maps" for insurance and floodplain management purposes.

Drain way means a natural or artificial land surface depression with or without perceptively defined beds and banks to which surface runoff gravitates and collectively forms a flow of water continuously or intermittently in a definite direction.

Elevated building means a non-basement building (i) built, in the case of a building in Zones A1-30, AE, A, A99, AO, AH, B, C, X and D, to have the top of the elevated floor, or in the case of a building in Zones V1-30, VE or V, to have the bottom of the lowest horizontal structure member of the elevated floor elevated above the ground level by means of pilings, columns (posts and piers) or shear walls parallel to the floor of the water; and (ii) adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of Zones A1-30, AE, A, A99, AO, AH, B, C, X and D, elevated building also

includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of floodwaters. In the case of Zones V1-30, VE or V, elevated building also includes a building otherwise meeting the definition of elevated building, even though the lower area is enclosed by means of breakaway walls if the breakaway walls met the standards of Section 60.3(e)(5) of the National Flood Insurance Program regulations.

Existing construction means, for the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. Existing construction may also be referred to as existing structures.

Existing manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

Expansion to an existing manufactured home park or subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads).

Federal Register means the official daily publication for Rules, proposed Rules and notices of federal agencies and organizations, as well as executive orders and other presidential documents.

FEMA means the Federal Emergency Management Agency, the agency responsible for administering the National Flood Insurance Program.

Fill means a deposit of materials of any kind by artificial means.

Flood or flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from:

a. The overflow of inland or tidal waters;

b. The unusual and rapid accumulation or runoff of surface waters from any source; or

c. Mudslides or mudflows that occur from excess surface water that is combined with mud or other debris that is sufficiently fluid so as to flow over the surface of normally dry land areas, such as earth carried by a current of water and deposited along the path of the current.

Flood control structure means a physical structure designed and built expressly or partially for the purpose of reducing, redirecting or guiding flood flows along a particular waterway. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

Flood fringe means that portion of the floodplain inundated by the 100-year return frequency flood not within the floodway.

Flood insurance rate map (FIRM) means an official map of a community, on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

Flood insurance study (FIS) means the official report provided by the Federal Emergency Management Agency. The report contains flood profiles and water surface elevation of the base flood, as well as the Flood Boundary-Floodway Map.

Flood profile means a graph or longitudinal profile showing the relationship of the water surface elevation of a flood event to location along a stream or river.

Flood protection system means those physical structural works for which funds have been authorized, appropriated and expended and which have been constructed specifically to modify flooding in order to reduce

the extent of the areas within a community subject to a special flood hazard and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

Floodplain or flood-prone area means any land area susceptible to being inundated by water from any source. See definition of Flooding.

Floodplain Administrator means the community official designated by title to administer and enforce the floodplain management regulations.

Floodplain development permit means a permit required before construction or development begins within any special flood hazard area (SFHA). If FEMA has not defined the SFHA within a community, the community shall require permits for all proposed construction or other development in the community, including the placement of manufactured homes, so that it may determine whether such construction or other development is proposed within flood-prone areas. Permits are required to ensure that proposed development projects meet the requirements of the NFIP and this Article.

Floodplain management means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

Floodplain management regulations means zoning ordinances, subDiv. regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance or erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

Floodproofing means any combination of structural and nonstructural additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Floodway (regulatory floodway) means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

Freeboard means the vertical distance in feet above a predicted water surface elevation intended to provide a margin of safety to compensate for unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood, such as debris blockage of bridge openings, and the increased runoff due to urbanization of the watershed.

Functionally dependent use means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

Highest adjacent grade means the highest natural elevation of the round surface prior to construction next to the proposed walls of a structure.

Historic structure means any structure that is:

a. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

b. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary of the Interior to qualify as a registered historic district;

c. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or

d. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:

1. By an approved state program as determined by the Secretary of the Interior; or

2. Directly by the Secretary of the Interior in states without approved programs.

Letter of map revision (LOMR) means FEMA's official revision of an effective flood insurance rate map (FIRM) or flood boundary and floodway map (FBFM), or both. LOMRs are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective base flood elevations (BFEs), or the special flood hazard area (SFHA).

Letter of map revision based on fill (LOMR-F) means FEMA's modification of the special flood hazard area (SFHA) shown on the flood insurance rate map (FIRM) based on the placement of fill outside the existing regulatory floodway.

Levee means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide protection from temporary flooding.

Levee system means a flood protection system which consists of a levee or levees and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Lowest floor means the lowest floor of the lowest enclosed area (including basement). Lowest floor also means an unfinished or flood-resistant enclosure usable solely for parking or vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirement of Section 60.3 of the National Flood Insurance Program regulations.

Manufactured home means a structure transportable in one (1) or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term manufactured home does not include a recreational vehicle.

Manufactured home park or subdivision means a parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.

Material safety data sheet (MSDS) means a form with data regarding the properties of a particular substance. An important component of product stewardship and workplace safety, it is intended to provide workers and emergency personnel with procedures for handling or working with that substance in a safe manner, and includes information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment and spill-handling procedures.

Mean sea level means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's flood insurance rate map are referenced.

National Flood Insurance Program (NFIP) means FEMA's program of flood insurance coverage and floodplain management administered in conjunction with the Robert T. Stafford Relief and Emergency Assistance Act. The NFIP has applicable federal regulations promulgated in Title 44 of the Code of Federal Regulations. The U.S. Congress established the NFIP in 1968 with the passage of the National Flood Insurance Act of 1968.

New construction means, for the purpose of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever

is later, and includes any subsequent improvements to such structures. For floodplain management purposes, new construction means structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

New manufactured home park or subdivision means a manufactured home park or subDiv. for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by a community.

No-rise certification means a record of the results of an engineering analysis conducted to determine whether a project would increase flood heights in a floodway. A no-rise certification must be supported by technical data and signed by a registered Colorado professional engineer. The supporting technical data should be based on the standard step-backwater computer model used to develop the 100-year floodway shown on the flood insurance rate map (FIRM) or flood boundary and floodway map (FBFM).

Physical map revision (PMR) means FEMA's action whereby one (1) or more map panels are physically revised and republished. A PMR is used to change flood risk zones, floodplain and/or floodway delineations, flood elevations and/or planimetric features.

Recreational vehicle means a vehicle which is:

a. Built on a single chassis;

b. Four hundred (400) square feet or less when measured at the largest horizontal projections;

c. Designed to be self-propelled or permanently towable by a light duty truck; and

d. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.

Regulatory flood datum means the reference elevation above mean sea level, which represents the peak elevation of the 100-year return-frequency flood.

Regulatory flood protection elevation means the elevation one and one-half feet above the regulatory flood datum.

Special flood hazard area means the land in the floodplain within a community subject to a one percent (1%) or greater chance of flooding in any given year, i.e., the 100-year floodplain.

Start of construction (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (Pub. L. 97-348)), includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement was within one hundred eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure means a walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

Substantial improvement means any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before start of construction of the improvement. This includes structures which have incurred substantial damage, regardless of the actual repair work performed. The term does not, however, include either:

a. Any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary conditions; or

b. Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

Variance means a grant of relief to a person from the requirement of this Article when specific enforcement would result in unnecessary hardship. A variance, therefore, permits construction or development in a manner otherwise prohibited by this Article. (For full requirements see Section 60.6 of the National Flood Insurance Program regulations.)

Violation means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications or other evidence of compliance required in Section 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4) or (e)(5) is presumed to be in violation until such time as that documentation is provided.

Water surface elevation means the height, in relation to the North American Vertical Datum (NAVD) of 1988 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-60. Lands to which this Article applies.

This Article shall apply to all special flood hazard areas and areas removed from the floodplain by the issuance of a FEMA letter of map revision based on fill (LOMR-F) within the jurisdiction of the Town.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-70. Basis for establishing areas of special flood hazard.

The special flood hazard areas identified by the Federal Emergency Management Agency in a scientific and engineering report entitled, "The Flood Insurance Study for Delta County, Colorado," dated August 19, 2010, with accompanying flood insurance rate maps and/or flood boundary-floodway maps (FIRM and/or FBFM), and any revisions thereto, are hereby adopted by reference and declared to be a part of this Article. These special flood hazard areas identified by the FIS and attendant mapping are the minimum area of applicability of this Article and may be supplemented by studies designated and approved by the Town. The Floodplain Administrator shall keep a copy of the flood insurance study (FIS), DFIRMs, FIRMs and/or FBFMs on file and available for public inspection.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-80. Establishment of development permit.

A floodplain development permit shall be required to ensure conformance with the provisions of this Article.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-90. Compliance.

No structure or land shall hereafter be located, altered or have its use changed within the special flood hazard area without full compliance with the terms of this Article and other applicable regulations. Nothing herein shall prevent the Town from taking such lawful action as is necessary to prevent or remedy any violation. These regulations meet the minimum requirements as set forth by the Colorado Water Conservation Board and the National Flood Insurance Program.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-100. Abrogation and greater restrictions.

This Article is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions; however, where this Article and another ordinance, resolution, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-110. Interpretation.

In the interpretation and application of this Article, all provisions shall be:

(1) Considered as minimum requirements;

(2) Liberally construed in favor of the governing body; and

(3) Deemed neither to limit nor repeal any other powers granted under state statutes.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-120. Warning and disclaimer of liability.

The degree of flood protection required by this Article is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This Article does not imply that land outside the special flood hazard area or uses permitted within such areas will be free from flooding or flood damages. This Article shall not create liability on the part of the community or any official or employee thereof for any flood damages that result from reliance on this Article or any administrative decision lawfully made thereunder.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-130. Severability.

This Article and the various parts thereof are hereby declared to be severable. Should any section of this Article be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the Article as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

DIV. 2. ADMINISTRATION

Sec. 18-11-210. Designation of Floodplain Administrator.

The Building Official of the Town is hereby appointed the Floodplain Administrator to administer and implement the provisions of this Article and other appropriate sections of 44 C.F.R. (National Flood Insurance Program Regulations) pertaining to floodplain management. The Town Administrator may appoint a designee to assist, facilitate and enforce the provisions hereof.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-220. Duties and responsibilities of Floodplain Administrator.

Duties and responsibilities of the Floodplain Administrator shall include, but not be limited to, the following:

(1) Maintain and hold open for public inspection all records pertaining to the provisions of this Article, including the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures and any floodproofing certificate required by Section 18-11-230 below.

(2) Review, approve or deny all applications for floodplain development permits required by adoption of this Article.

(3) Review floodplain development permit applications to determine whether a proposed building site, including the placement of manufactured homes, will be reasonably safe from flooding.

(4) Review permits for proposed development to assure that all necessary permits have been obtained from those federal, state or local governmental agencies (including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334) from which prior approval is required.

(5) Inspect all development at appropriate times during the period of construction to ensure compliance with all provisions of this Article, including proper elevation of the structure.

(6) Where interpretation is needed as to the exact location of the boundaries of the special flood hazard area (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Floodplain Administrator shall make the necessary interpretation.

(7) When base flood elevation data has not been provided in accordance with Section 18-11-70 of this Article, the Floodplain Administrator shall obtain, review and reasonably utilize any base flood elevation data and floodway data available from a federal, state or other source, in order to administer the provisions of Div. 3 of this Article.

(8) For waterways with base flood elevations for which a regulatory floodway has not been designated, no new construction, substantial improvements or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative

effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one-half (½) foot at any point within the community.

(9) Under the provisions of 44 C.F.R. Chapter 1, Section 65.12, of the National Flood Insurance Program regulations, a community may approve certain development in Zones A1-30, AE and AH on the community's FIRM which increases the water surface elevation of the base flood by more than one-half (½) foot, provided that the community first applies for a conditional FIRM revision through FEMA (conditional letter of map revision), fulfills the requirements for such revisions as established under the provisions of Section 65.12 and receives FEMA approval.

(10) Notify, in riverine situations, adjacent communities and the state coordinating agency, which is the Colorado Water Conservation Board, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA.

(11) Ensure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-230. Permit procedures.

(a) Application for a floodplain development permit shall be presented to the Floodplain Administrator on forms furnished by him or her and may include, but not be limited to, plans in duplicate drawn to scale showing the location, dimensions and elevation of proposed landscape alterations, existing and proposed structures, including the placement of manufactured homes, and the location of the foregoing in relation to areas of special flood hazard. Additionally, the following information is required:

(1) Elevation (in relation to mean sea level), of the lowest floor (including basement) of all new and substantially improved structures;

(2) Elevation, in relation to mean sea level, to which any nonresidential structure shall be floodproofed;

(3) A certificate from a registered professional engineer or architect that the nonresidential floodproofed structure shall meet the floodproofing criteria of Paragraph 18-11-320(2) of this Article;

(4) Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development; and

(5) Maintain a record of all such information in accordance with Section 18-11-220 above.

(b) Approval or denial of a development permit by the Floodplain Administrator shall be based on all of the provisions of this Article and the following relevant factors:

(1) The danger to life and property due to flooding or erosion damage;

(2) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

(3) The danger that materials may be swept onto other lands to the injury of others;

(4) The compatibility of the proposed use with existing and anticipated development;

(5) The safety of access to the property in times of flood for ordinary and emergency vehicles;

(6) The costs of providing governmental services during and after flood conditions, including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical and water systems;

(7) The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site;

(8) The necessity to the facility of a waterfront location, where applicable;

(9) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;

(10) The relationship of the proposed use to the comprehensive plan for that area.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-240. Variance procedures.

(a) The Appeal Board, as established by the community, shall hear and render judgment on requests for variances from the requirements of this Article.

(b) The Appeal Board shall hear and render judgment on an appeal only when it is alleged there is an error in any requirement, decision or determination made by the Floodplain Administrator in the enforcement or administration of this Article.

(c) Any person or persons aggrieved by the decision of the Appeal Board may appeal such decision in the courts of competent jurisdiction.

(d) The Floodplain Administrator shall maintain a record of all actions involving an appeal and shall report variances to the Federal Emergency Management Agency upon request.

(e) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the state inventory of historic places, without regard to the procedures set forth in the remainder of this Article.

(f) Variances may be issued for new construction and substantial improvements to be erected on a lot of one-half (½) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, provided that the relevant factors in Section 18-11-230 above have been fully considered. As the lot size increases beyond the one-half (½) acre, the technical justification required for issuing the variance increases.

(g) Upon consideration of the factors noted above and the intent of this Article, the Appeal Board may attach such conditions to the granting of variances as it deems necessary to further the purpose and objectives of this Article.

(h) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

(i) Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

(j) Prerequisites for granting variances:

(1) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(2) Variances shall only be issued upon:

a. Showing a good and sufficient cause;

b. A determination that failure to grant the variance would result in exceptional hardship to the applicant; and

c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing local laws, resolutions or ordinances.

(3) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with the lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

(k) Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use, provided that:

(1) The criteria outlined in Subsections 18-11-240(a)—(i) of this Section are met, and

(2) The structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

DIV. 3. PROVISIONS FOR FLOOD HAZARD REDUCTION

Sec. 18-11-310 General standards.

In all areas of special flood hazards, the following provisions are required for all new construction and substantial improvements:

(1) All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;

(2) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;

(3) All new construction or substantial improvements shall be constructed with materials resistant to flood damage;

(4) All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;

(5) All manufactured homes shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces;

(6) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;

(7) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the system and discharge from the systems into floodwaters; and

(8) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-320. Specific standards.

In all areas of special flood hazards where base flood elevation data has been provided as set forth in Section 18-11-70, Paragraph 18-11-220(7) or Section 18-11-370 of this Article, the following provisions are required:

(1) *Residential construction.* New construction and substantial improvement of any residential structure shall have the lowest floor (including basement) elevated to at least one (1) foot above the base flood elevation. Upon completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a registered Colorado professional engineer, architect or land surveyor. Such certification shall be submitted to the Floodplain Administrator.

(2) *Nonresidential construction.* With the exception of critical facilities outlined in Section 18-11-380, new construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement) elevated to or above the base flood elevation or, together with attendant utility and sanitary facilities, be designed so that below the one (1) foot above base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered Colorado professional engineer or architect shall develop and/or review structural design, specifications and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this Section. Such certification shall be maintained by the Floodplain Administrator, as proposed in Section 18-11-230 of this Article.

(3) *Enclosures.* New construction and substantial improvements with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered Colorado professional engineer or architect or meet or exceed the following minimum criteria:

a. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided.

b. The bottom of all openings shall be no higher than one (1) foot above grade.

c. Openings may be equipped with screens, louvers, valves or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.

(4) *Manufactured homes.*

a. All manufactured homes that are placed or substantially improved within Zones A1-30, AH and AE on the community's FIRM on sites (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subDiv. or (iv) in an existing manufactured home park or subDiv. on which a manufactured home has incurred substantial damage as a result of a flood, shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to one (1) foot above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

b. All manufactured homes placed or substantially improved on sites in an existing manufactured home park or subDiv. within Zones A1-30, AH and AE on the community's FIRM that are not subject to the provisions of Subparagraph a. above shall be elevated so that either:

1. The lowest floor of the manufactured home is one (1) foot above the base flood elevation; or

2. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and is securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

(5) *Recreational vehicles.* It is required that recreational vehicles placed on sites within Zones A1-30, AH and AE on the community's FIRM, shall either:

a. Be on the site for fewer than one hundred eighty (180) consecutive days;

b. Be fully licensed and ready for highway use; or

c. Meet the permit requirements of Section 18-11-230 and the elevation and anchoring requirements for "manufactured homes" in Paragraph (4) above. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-330. Standards for subDiv. proposals.

(a) All subDiv. proposals, including the placement of manufactured home parks and subdivisions, shall be consistent with Sections 18-11-20, 18-11-30 and 18-11-40 of this Article.

(b) All proposals for the development of subdivisions, including the placement of manufactured home parks and subdivisions, shall meet development permit requirements of Section 18-11-80 of this Article and the provisions of Div. 3 of this Article.

(c) Base flood elevation data shall be generated for subDiv. proposals and other proposed development, including the placement of manufactured home parks and subdivisions which are greater than fifty (50) lots or five (5) acres, whichever is lesser, if not otherwise provided pursuant to Section 18-11-70 or Paragraph 18-11-220(8) of this Article.

(d) All subDiv. proposals, including the placement of manufactured home parks and subdivisions, shall have adequate drainage provided to reduce exposure to flood hazards.

(e) All subDiv. proposals, including the placement of manufactured home parks and subdivisions, shall have public utilities and facilities, such as sewer, gas, electrical and water systems, located and constructed to minimize or eliminate flood damage.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-340. Standards for areas of shallow flooding (AO/AH zones).

Located within the areas of special flood hazard established in Section 18-11-70 of this Article are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable

and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply:

(1) *Residential construction.* All new construction and substantial improvements of residential structures must have the lowest floor (including basement) elevated above the highest adjacent grade at least one (1) foot above the depth number specified in feet on the community's FIRM (at least three (3) feet if no depth number is specified). Upon completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a registered Colorado professional engineer, architect or land surveyor. Such certification shall be submitted to the Floodplain Administrator.

(2) *Nonresidential construction.* With the exception of critical facilities, outlined in Section 18-11-380 of this Division, all new construction and substantial improvements of nonresidential structures must have the lowest floor (including basement) elevated above the highest adjacent grade at least one foot above the depth number specified in feet on the community's FIRM (at least three (3) feet if no depth number is specified), or, together with attendant utility and sanitary facilities, be designed so that the structure is watertight to at least one (1) foot above the base flood level with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered Colorado professional engineer or architect shall submit a certification to the Floodplain Administrator that the standards of this Section, as proposed in Section 18-11-230 of this Article, are satisfied.

Within Zones AH or AO, adequate drainage paths around structures on slopes are required to guide floodwaters around and away from proposed structures.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-350. Floodways.

Floodways are administrative limits and tools used to regulate existing and future floodplain development. The state has adopted floodway standards that are more stringent than the FEMA minimum standard (see definition of Floodway in Section 18-11-50 of this Article). Located within special flood hazard areas established in Section 18-11-70 of this Article are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that carry debris, potential projectiles and erosion potential, the following provisions shall apply:

(1) Encroachments are prohibited, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway, unless it has been demonstrated through hydrologic and hydraulic analyses performed by a Colorado professional engineer in accordance with standard engineering practice that the proposed encroachment would not result in any increase (requires a no-rise certification) in flood levels within the community during the occurrence of the base flood discharge.

(2) If Paragraph (1) above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this Division.

(3) Under the provisions of 44 C.F.R. Chapter 1, Section 65.12, of the National Flood Insurance Regulations, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the community first applies for a CLOMR and floodway revision through FEMA.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-360. Alteration of watercourse.

For all proposed developments that alter a watercourse within a special flood hazard area, the following standards apply:

(1) Channelization and flow diversion projects shall appropriately consider issues of sediment transport, erosion, deposition and channel migration, and properly mitigate potential problems through the project as well as upstream and downstream of any improvement activity. A detailed analysis of sediment transport and overall channel stability should be considered, when appropriate, to assist in determining the most appropriate design.

(2) Channelization and flow diversion projects shall evaluate the residual 100-year floodplain.

(3) Any channelization or other stream alteration activity proposed by a project proponent must be evaluated for its impact on the regulatory floodplain and be in compliance with all applicable federal, state and local floodplain rules, regulations and ordinances.

(4) Any stream alteration activity shall be designed and sealed by a registered Colorado professional engineer or certified professional hydrologist.

(5) All activities within the regulatory floodplain shall meet all applicable federal, state and Town floodplain requirements and regulations.

(6) Within the regulatory floodway, stream alteration activities shall not be constructed unless the project proponent demonstrates through a floodway analysis and report, sealed by a registered Colorado professional engineer, that there is not more than a 0.00-foot rise in the proposed conditions compared to existing conditions in the floodway resulting from the project, otherwise known as a no-rise certification, unless the community first applies for a CLOMR and floodway revision in accordance with Section 18-11-340 above.

(7) Maintenance shall be required for any altered or relocated portions of watercourses so that the flood-carrying capacity is not diminished.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-370. Properties removed from floodplain by fill.

A floodplain development permit shall not be issued for the construction of a new structure or addition to an existing structure on a property removed from the floodplain by the issuance of a FEMA letter of map revision based on fill (LOMR-F), with a lowest floor elevation placed below the base flood elevation with one (1) foot of freeboard that existed prior to the placement of fill.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-11-380. Standards for critical facilities.

(a) A *critical facility* is a structure or related infrastructure, but not the land on which it is situated, as specified in Rule 6 of the Rules and Regulations for Regulatory Floodplains in Colorado, that, if flooded, may result in significant hazards to public health and safety or interrupt essential services and operations for the community at any time before, during and after a flood.

(1) Classification of critical facilities. Critical facilities are classified under the following categories: (a) essential services; (b) hazardous materials; (c) at-risk populations; and (d) vital to restoring normal

services. It is the responsibility of the Town to identify and confirm that specific structures in their community meet the following criteria:

a. Essential services facilities include public safety, emergency response, emergency medical, designated emergency shelters, communications, public utility plant facilities and transportation lifelines.

    1. These facilities consist of:

        a) Public safety (police stations, fire and rescue stations, emergency vehicle and equipment storage and emergency operation centers);

        b) Emergency medical (hospitals, ambulance service centers, urgent care centers having emergency treatment functions, and nonambulatory surgical structures, but excluding clinics, doctors' offices and non-urgent care medical structures that do not provide these functions);

        c) Designated emergency shelters;

        d) Communications (main hubs for telephone, broadcasting equipment for cable systems, satellite dish systems, cellular systems, television, radio and other emergency warning systems, but excluding towers, poles, lines, cables and conduits);

        e) Public utility plant facilities for generation and distribution (hubs, treatment plants, substations and pumping stations for water, power and gas, but not including towers, poles, power lines, buried pipelines, transmission lines, distribution lines and service lines); and

        f) Air transportation lifelines (airports [municipal and larger], helicopter pads and structures serving emergency functions, and associated infrastructure [aviation control towers, air traffic control centers, and emergency equipment aircraft hangars]).

    2. Specific exemptions to this category include wastewater treatment plants (WWTP), nonpotable water treatment and distribution systems and hydroelectric power generating plants and related appurtenances.

    3. Public utility plant facilities may be exempted if it can be demonstrated to the satisfaction of the Town that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same utility or available through an intergovernmental agreement or other contract) and connected, the alternative facilities are either located outside of the 100-year floodplain or are compliant with the provisions of this Article and an operations plan is in effect that states how redundant systems will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the Town on an as-needed basis upon request.

b. Hazardous materials facilities include facilities that produce or store highly volatile, flammable, explosive, toxic and/or water-reactive materials.

    1. These facilities may include:

        a) Chemical and pharmaceutical plants (chemical plant, pharmaceutical manufacturing);

        b) Laboratories containing highly volatile, flammable, explosive, toxic and/or water-reactive materials;

c) Refineries;

d) Hazardous waste storage and disposal sites; and

e) Aboveground gasoline or propane storage or sales centers.

2. Facilities shall be determined to be critical facilities if they produce or store materials in excess of threshold limits. If the owner of a facility is required by the Occupational Safety and Health Administration (OSHA) to keep a material safety data sheet (MSDS) on file for any chemicals stored or used in the workplace, and the chemicals are stored in quantities equal to or greater than the Threshold Planning Quantity (TPQ) for that chemical, then that facility shall be considered to be a critical facility. The TPQ for these chemicals is: either five hundred (500) pounds or the TPQ listed (whichever is lower) for the three hundred fifty-six (356) chemicals listed under 40 C.F.R., § 302 (2010), also known as Extremely Hazardous Substances (EHS); or ten thousand (10,000) pounds for any other chemical. This threshold is consistent with the requirements for reportable chemicals established by the Colorado Department of Health and Environment. OSHA requirements for MSDS can be found in 29 C.F.R., § 1910 (2010). The Environmental Protection Agency (EPA) regulation, "Designation, Reportable Quantities, and Notification," 40 C.F.R., § 302 (2010) and OSHA regulation, "Occupational Safety and Health Standards," 29 C.F.R., § 1910 (2010) are incorporated herein by reference and include the regulations in existence at the time of the promulgation of this Article, but exclude later amendments to or editions of the regulations.

3. Specific exemptions to this category include:

a) Finished consumer products within retail centers and households containing hazardous materials intended for household use and agricultural products intended for agricultural use.

b) Buildings and other structures containing hazardous materials for which it can be demonstrated to the satisfaction of the local authority having jurisdiction by hazard assessment and certification by a qualified professional (as determined by the local jurisdiction having land use authority) that a release of the subject hazardous material does not pose a major threat to the public.

c) Pharmaceutical sales, use, storage and distribution centers that do not manufacture pharmaceutical products.

These exemptions shall not apply to buildings or other structures that also function as critical facilities under another category outlined in this Article.

c. At-risk population facilities include medical care, congregate care and schools. These facilities consist of:

1. Elder care (nursing homes);

2. Congregate care serving twelve (12) or more individuals (day care and assisted living);

3. Public and private schools (preschools, K-12 schools), before-school and after-school care serving twelve (12) or more children;

d. Facilities vital to restoring normal services, including government operations.

1. These facilities consist of:

a) Essential government operations (public records, courts, jails, building permitting and inspection services, community administration and management, maintenance and equipment centers);

b) Essential structures for public colleges and universities (dormitories, offices and classrooms only).

2. These facilities may be exempted if it is demonstrated to the Board of Trustees that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same entity or available through an intergovernmental agreement or other contract), the alternative facilities are either located outside of the 100-year floodplain or are compliant with this Article and an operations plan is in effect that states how redundant facilities will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the Board of Trustees on an as-needed basis upon request.

(b) *Protection for critical facilities.* All new and substantially improved critical facilities and new additions to critical facilities located within the special flood hazard area shall be regulated to a higher standard than structures not determined to be critical facilities. For the purposes of this Article, protection shall include one (1) of the following:

(1) Location outside the special flood hazard area; or

(2) Elevation or floodproofing of the structure to at least two (2) feet above the base flood elevation.

(c) *Ingress and egress for new critical facilities.* New critical facilities shall, when practicable as determined by the Board of Trustees, have continuous non-inundated access (ingress and egress for evacuation and emergency services) during a 100-year flood event.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

DIV. 4. PENALTIES

Sec. 18-11-410. Penalties for noncompliance.

No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this Article and other applicable regulations. Violation of the provisions of this Article by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Any person who violates this Article or fails to comply with any of its requirements shall be considered in violation of the Code and ordinances of the Town and shall, upon conviction thereof, be fined not more than one thousand dollars ($1,000.00) or imprisoned for not more than ninety (90) days, or both, for each violation and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent the Town from taking such other lawful action as deemed necessary to prevent or remedy any violation.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

ARTICLE 12. SUPPLEMENTARY REGULATIONS

Sec. 18-12-10. Temporary uses.

Upon application to the Town Clerk and approval by the Board of Trustees, a temporary use permit may be issued for the following uses for the period of time indicated. Such permits shall be valid only for the period of time specified. Extension of time may be granted by the Board of Trustees.

(1) Construction office and yards incidental thereto from construction on the premise: Nine (9) months.

(2) Carnivals, circuses, bazaars and fairs: One (1) week.

(3) Tent meetings and crusades: Two (2) weeks.

(4) Parking for authorized temporary uses.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-12-20. Exceptions to maximum height requirements.

The following uses may be excepted from the maximum height requirements, provided that written approval is granted by the Planning Commission, which shall have found that the use would not injure the value of or use of or prevent the proper access of light and air to, adjacent properties or be out of harmony with the intent and purpose of this Chapter:

(1) Radio and television towers and antennae.

(2) Church towers.

(3) Water tanks.

(4) Elevator enclosures.

(5) Parapet walls which may exceed height limitation by four (4) feet.

(6) Public utility poles and towers.

(7) Monuments.

(8) Chimneys, cupolas and vanes.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-12-30. Building on slopes greater than 25 percent.

Any building proposed for a site with a slope of twenty-five percent (25%) or greater shall be subject to the special review requirements of Article 4. (See Section 17-4-20 of Chapter 17 of this Code.)

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-12-40. Utilities.

Nothing in this Article shall be construed to prevent the construction or installation of public utilities transmission facilities, including mains or distribution lines, in any zone district. Substations for a public utility, storage, maintenance facilities and business offices shall be restricted to their appropriate zone district. Location of power transmission lines with a capacity of one hundred (100) kW or over shall be subject to review by the Planning Commission.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-12-50. Solar access protection.

(a) When a solar energy collection system (including an active or passive system) has been constructed or installed on a lot, the principal building, accessory structures or vegetation on abutting lots shall not be located so as to block the solar access to the solar collector between the hours of 9:00 a.m. and 3:00 p.m. This Section does not apply to principal buildings, accessory structures and vegetation existing on an abutting lot at the time of installation of the solar energy collection system or on the effective date of the initial ordinance codified herein, whichever is later. A statement that a solar energy collection system is installed in the lot may be filed and recorded with the County Clerk and Recorder, and the date of installation shall be the date of recording such notice.

(b) If application of this provision requires more restrictive height, setback or area requirements than stated in the district requirement, the provisions of this Section shall apply.

(c) In the event the strict application of this provision results in undue hardship upon an individual property owner, the aggrieved party may appeal to the Board of Trustees for an exception to the requirements. The Board of Trustees may approve, approve with conditions or deny the exception.

(d) All determinations of the solar access shall be based upon standard references for sky space and shadow data for December 21 (Winter Solstice) at the latitude for the area.

(e) Airspace easements may be purchased, reserved, granted or otherwise obtained.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

ARTICLE 13. ACCESSORY BUILDINGS, STRUCTURES AND USES

Sec. 18-13-10. Fences, hedges and walls.

All fences, hedges, and walls (combined "fence(s)) are subject to the applicable sections of the International Building Code version as adopted by the Town.

(1) Prior to the installation of a new fence the property owner or their agent shall file for a fence review with the Town Building Official, Town Clerk or designee and shall pay the appropriate review fee as may be set by the Town Board of Trustees via resolution. The purpose of the Town requiring a fence review application and fee is to allow the Town Building Official, Town Clerk, or designee to inspect the proposed fence plan to confirm that it meets the provisions of the Town Code, and that the fence will not encroach on a public right-of-way.

(2) No fence may extend beyond or across a property line unless it is done with the joint agreement of the abutting property owners. It shall be the responsibility of the property owner to locate all property lines.

(3) No fence shall encroach upon a public right-of-way or a public sidewalk.

(4) No barbed wire, sharp-pointed or electrically charged fence shall be permitted in the Town.

(5) The Town requires a maximum height of four (4) feet for fences from the required setback line as determined by Chapter 16-3 (zoning schedule of requirements) to the front property line and a maximum height of six (6) feet for fences in all other yard areas on the property. The height shall be measured at the finished grade on the side of the fence nearest the street or abutting property.

(6) On corner lots, no fence exceeding forty-eight (48) inches in height shall be placed in a triangular area formed by three (3) points as established by:

a. The intersection of the property lines at the corner (Point A);

b. Points B and C measured thirty (30) feet along the property lines from Point A; and

c. A shorter height may be required to assure corner sight triangles at intersecting streets and alleys.

(7) The Town Administrator may grant a permit for fences and walls that exceed the maximum height upon application in specific cases and subject to compliance with the following standards:

a. The proposed fence or wall shall not adversely affect traffic safety or appropriate use of adjacent property.

b. Any section of an over-height fence or wall in the Primary Street setback shall be less than 50 percent solid over its entire area.

c. The fence is necessary to provide security, privacy, or protection from traffic impacts such as noise or lights.

d. The fence shall not detract from the safety or pedestrian character of the right-of-way.

e. Such request shall be reviewed at the staff level and may be approved in the event the following is met:

i. Subsections 18-13-10(1) through (4) have been complied with;

ii. The Town Administrator, Public Safety Department and Public Works Department sign off on the excess height; and

iii. All property owners adjoining the property owner have filed a letter of support of the deviation.

(8) any person requesting a variance from these code provisions shall apply for the same in accordance with Section 18-10-40 of the Town Code.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-13-20. Swimming pools, hot tubs and Jacuzzis.

(a) Swimming pools, hot tubs and Jacuzzis may be located in any zoning district as an accessory use, provided that such pools are situated on a lot, tract or parcel in a manner which is not detrimental to the health, safety and welfare of the users of the pool or the adjacent property owners.

(b) All new swimming pools, hot tubs and Jacuzzis shall be completely enclosed with a minimum of a six-foot-high fence or be elevated at least four (4) feet above the ground level.

(c) Gates, ladders or entrances to the swimming pool, hot tub and Jacuzzi area shall be kept closed, locked and made inaccessible without the knowledge and consent of the owner.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

ARTICLE 14. BUILDING PERMIT AND SITE PLAN REVIEW REQUIREMENTS

Sec. 18-14-10. Site plan required.

All applications for building permits shall include a site plan drawn to scale in a form acceptable to the Town Administrator and showing the following information:

(1) The actual dimensions of the lot to be built upon.

(2) The location of all buildings and structures with respect to the property lines.

(3) The location of off-street parking areas.

(4) Ingress and egress points to and from all public streets.

(5) The size, location and height of all signs.

(6) The location and intensity of exterior lighting, including height and type.

(7) The location, type and size of landscaping and a statement as to how the landscaping is to be maintained.

(8) A site drainage plan.

(9) Tabulations showing the area of the site, number of dwelling units, number of parking spaces and percentage of open space provided.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-14-20. Review standards.

The site plan shall be reviewed for conformity with site plan review standards as delineated for special review application as listed in Section 16-4-50 of Chapter 16. The site plan shall be reviewed by the Town Administrator.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-14-30. Record of site plans and applications.

A careful record of site plans and applications shall be kept in the office of the Building Inspector. Notice of approval of a building permit shall be posted on the property within twenty-four (24) hours of such approval.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

Sec. 18-14-40. Variance.

When a permit application indicates the need for a variance, the Building Inspector or Town Administrator shall refer the variance application to the Planning Commission. The applicant shall be directed to apply for a variance.

(1) The application for special review/variance will be provided by the Town Clerk in conjunction with a copy of the provisions of this Chapter that apply.

(2) The Planning Commission shall hold a hearing within thirty (30) days of the application and payment of the application fee (as set by the Board of Trustees). Variance from strict application of this Chapter shall be considered at a public hearing following public notice as required in Article 16 of Chapter 16.

(3) The Planning Commission will recommend final approval or denial to the Board of Trustees, which will act on the request.

(Ord. No. 2022-09, § 2(Exh. A), 1-10-2023)

APPENDIX

Appendix A.

Cross Connection Control DefinitionsAPPX:3

Appendix B.

Types Of Facilities Representing Cross Connection HazardsAPPX:5

Appendix C.

Building SpecificationsAPPX:7

Appendix D.

Standard Construction SpecificationsAPPX:15

APPENDIX A. CROSS CONNECTION CONTROL DEFINITIONS

The following terms shall have the following meanings unless the context clearly indicates otherwise:

Air gap separation means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture or other device and the overflow level rim of the receptacle, and shall be at least double the diameter of the supply pipe measured vertically above the flood level of the rim of the vessel, but in no case less than one inch.

Auxiliary water supply means any water source or system, other than the public water supply, that may be available in the building or premises.

Backflow means the flow other than the intended direction of flow, of any foreign liquids, gases or substances into the distribution system of a public water supply.

Backflow prevention assembly means any double check valve or reduced pressure principle backflow preventer having resilient-seat shut-off valves on both the upstream and downstream end and the necessary test cocks as integral parts of the assembly.

Consumer means the owner or person in control of any premises supplied by or in any manner connected to a public water system.

Containment means protection of the public water supply by installing a backflow prevention assembly or air gap separation on the main service line to a facility.

Contamination means impairment of the quality of the water by sewage, process fluids or other wastes to a degree which could create an actual hazard to the public health through poisoning or through spread of disease by exposure.

Cross connection means any physical link between a potable water supply and any other substance, fluid or source which makes possible contamination of the potable water supply due to the reversal of flow of the water in the piping or distribution system.

Hazard, degree of, means an evaluation of the potential risk to public health and the adverse effect of the hazard upon the potable water system.

Hazard, health, means any condition, device, or practice in the water supply system and its operation which could create or may create a danger to the health and well-being of the water consumer.

Hazard, plumbing, means a plumbing type cross connection in a consumer's potable water system that has not been properly protected by a vacuum breaker, air gap separation or backflow prevention assembly.

Hazard, pollution, means an actual or potential threat to the physical properties of the water system or to the potability of the public or the consumer's potable water system but which would constitute a nuisance or be aesthetically objectionable or could cause damage to the system or its appurtenances, but would not be dangerous to health.

Hazard, system, means an actual or potential threat of severe damage to the physical properties of the public potable water system or the consumer's potable water system, or of a pollution or contamination which would have a protracted effect on the quality of the potable water in the system.

Industrial process system means any system containing a fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration such as would constitute a health, system, pollution or plumbing hazard if introduced into a potable water supply.

Isolation means protection of a facility's internal plumbing system by installing a backflow prevention assembly, air gap separation or other backflow prevention device on an individual fixture, appurtenance or system.

Pollution means the presence of any foreign substance (organic, inorganic or biological) in water which tends to degrade its quality so as to constitute a hazard or impair the usefulness of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably affect such waters for domestic use.

Public potable water system means any publicly or privately owned water system supplying water to the general public which is satisfactory for drinking, culinary and domestic purposes and meets the requirements of the Colorado Department of Public Health and Environment.

Service connection means the terminal end of a service line from the public water system. If a meter is installed at the end of the service, then the service connection means the downstream end of the meter.

Water purveyor means the owner, operator or individual responsible for or in charge of a public water system.

(Ord. No. 2008-01 § II, 2008; Ord. No. 2014-04, § 1, 1-13-2015)

APPENDIX B. TYPES OF FACILITIES REPRESENTING CROSS CONNECTION HAZARDS

(a) Aircraft and missile manufacturing plants;

(b) Automotive plants including those plants which manufacture motorcycles, automobiles, trucks, recreational vehicles and construction and agriculture equipment;

(c) Potable water dispensing stations which are served by a public water system;

(d) Beverage bottling plants including dairies and breweries;

(e) Canneries, packing houses and reduction plants;

(f) Car washes;

(g) Chemical, biological and radiological laboratories including those in high schools, trade schools, colleges, universities and research institutions;

(h) Hospitals, clinics, medical buildings, autopsy facilities, morgues, mortuaries and other medical facilities;

(i) Metal or plastic manufacturing, fabrication, cleaning, plating or processing facilities;

(j) Plants manufacturing paper and paper products;

(k) Plants manufacturing, refining, compounding or processing fertilizer, film, herbicides, natural or synthetic rubber, pesticides, petroleum products, pharmaceuticals, radiological materials or any chemical which would be a contaminant to the public water system;

(l) Commercial facilities that use herbicides, pesticides, fertilizers or any other chemical which would be a contaminant to the public water system;

(m) Plants processing, blending or refining animal, vegetable or mineral oils;

(n) Commercial laundries and dye works;

(o) Sewage, storm water and industrial waste treatment plants and pumping stations;

(p) Industrial facilities which recycle water;

(q) Restricted or classified facilities or other facilities closed to the supplier of water or the department;

(r) Fire sprinkler systems using any chemical additive;

(s) Auxiliary water systems;

(t) Irrigation systems with facilities for injection of pesticides, herbicides or other chemicals or provisions for creating backpressure;

(u) Portable tanks for transporting water from a public water system; and

(v) Facilities which have pumped or repressurized cooling or heating systems that are served by a public water system, including all boiler systems.

(Ord. No. 2008-01 § VI, 2008; Ord. No. 2014-04 § 1, 1-13-2015)

APPENDIX C. BUILDING SPECIFICATIONS

General Provisions.

The requirements of the Town of Paonia for building, remodeling and certain repairs within the Town are those of the most recent edition of the International Building Code officially adopted by action of the Board of Trustees. This set of specifications also sets forth certain additional local requirements of our Town.

Building permit applications are made in the Town Office during regular business hours.

Separate publications that may also apply to specific projects include the latest edition of "Paonia Land Development Regulations" and "Paonia Standard Specifications" copies of which are available on request, as well as office reference to the Building Code, Fire Code, Federal Accessibility Standards (ADA), Manufactured Housing Standards, etc.

Plumbing, electrical, fuel storage and manufactured hosing permits are serviced by the applicable stated inspectors.

Provisions in this set of specifications were hereby officially approved and adopted by the Town Council of the Town of Paonia through ordinance on January 21, 2001.

Building Procedures.

A. Provide two (2) sets of building plans and one (1) plot plan.

B. Include foundation plan stamped on set.

C. Complete application for building permit. Have new address assigned, if required.

D. Complete excavation permit, if required - four hundred dollar ($400.00) bond fee.

E. Complete flood plain permit, if required - one hundred dollar ($100.00) fee.

F. Obtain street cutting permit, if required.

G. Obtain water and sewer tap.

H. Pay all fees due - Building permit, plan check fee, water and sewer tap fee, excavation permit and street cutting permit paid in full before construction can begin.

I. Permit issued and construction can begin.

J. Builder/Owner must have curb, gutter and sidewalk or any street repairs installed according to specifications of the Town of Paonia Public Works Department.

Contacts:

Building Inspector: 970-527-2487

Town Administrator: 970-527-4101

Design Guidelines.

Climate design criteria:

Snow load	40 lbs.
Wind load	70 mph
Frost depth	36 inches

Inspection Schedule.

(1) Site inspection (building corners staked in place).

(2) Footer forms and rebar in place.

(3) Stem wall forms and rebar in place.

(4) Rough framing and roof sheathing.

(5) Insulation.

(6) Sheetrock nailing or screw patterns.

(7) Final inspection - before occupation.

*Note: It is the responsibility of owner/contractor to schedule inspections with the Building Inspector.

Minimum Information Required.

(1) Plan Check Review:

a. Owner of building.

b. General contractor.

c. Provide two (2) sets of legible plans showing job address.

d. Provide fully dimensioned lot plan (Building or addition in relation to property lines, roads, easements or other structures located on property).

e. Submit copies of all specially engineered designs where required.

f. Submit a minimum of four (4) elevations for new structures; front, rear and both sides, two (2) for additions showing relationship to existing building.

(2) Concrete.*

a. Footer Stem wall Foundation.

1. Show end view of footer and stem wall, showing all dimensions in inches and strength of concrete mix (3000# minimum).

2. Specify size and placement of rebar, #4 bar (one-half [1/2] inch) minimum, twenty-four (24) inches laps with two (2) ties.

3. Show depth of footer and stem wall in relation to finished final grade (minimum six [6] inches of stem wall exposed).

4. Show all anchor bolts, size and placement.

b. Foundation Plan.

1. Show all pads or continuous footers used within foundation perimeter.

2. Show depths (thickness) of all flat work (sidewalks, patios, garage slabs or porches) specify all reinforcement steel, wire mesh, etc.

*Refer to reference sheet of this handout for typical cross-section of concrete foundations.

(3) Framing.

a. General.

1. Show dimensioned floor plan for each floor of building; include planned use for each room (bedroom, bath, kitchen, etc.)

2. Specify grade and type of wood materials to be used.

b. Floor Section.

1. Illustrate and specify location and spacing for all floor construction members. (Posts, beams, girders, etc.)

2. Specify spacing and length of floor joists.

3. Show thickness and grade of sub floor to be used.

4. Show type and location of bridging to be used.

5. Specify all wood plates to be in contact with concrete walls, footings, etc., to be of an approved treated wood or wood with natural resistance to decay (redwood).

6. Illustrate and specify all doubled joists at stairwells or other openings in floors.

7. In crawlspaces, show distance from bottom of floor joists to finished grade (eighteen [18] inches minimum required).

c. Wall Sections.

1. Show ceiling height (minimum required).

2. Show and specify type of wind bracing to be used.

3. Show double plates on top of all stud walls.

4. Describe all headers with clear spans over forty-eight (48) inches (Type of material, how built and size).

5. Specify interior and exterior wall coverings (show type and R-value of insulation used in exterior walls (minimum R-19).

d. Roof Section.

1. Show spacing, length of span and pitch to be used for trusses, beams, rafters, ceiling joists, etc.

2. Specify roof underlayment and sheathing to be used.

3. Specify type of roofing to be used.

4. Specify type of material to cover ceiling.

(4) Windows.

a. Show dimensions for all window openings (See Section 1205A-C of UBC for minimum requirements).

b. Show locations of all window openings.

c. All windows to be double-glazed.

d. Specify safety glass, where applicable, within eighteen (18) inches of floor or within twenty-four (24) inches of doors.

e. UBC requires all windows between house and carport/garage to be fixed.

(5) Fire Safety.

a. Specify at least one (1) egress window in each bedroom that does not have a door leading directly to the outside. (See UBC section on windows for sill height forty-four [44] inches maximum) and minimum net clear opening (5.7 sq. ft.).

b. Show location of all smoke/fire alarms.

c. Specify all common walls between house and garage to have minimum one-hour fire rating.

d. Specify use of a twenty-minute fire resistant self-closing door between attached garage and dwelling.

e. Show all fireplaces or woodstoves and size of hearth extensions.

(6) Ventilation.

a. Specify bath or laundry rooms not having an opening window to have mechanical ventilation.

b. All attic or crawlspaces to have one (1) square foot of vent for each one hundred fifty (150) square feet of floor space. (Combination of attic/soffit vents required).

(7) Miscellaneous.

a. Show "R" value of insulation used (minimum of R-19 walls, R-30 ceilings, R-11 floor).

b. Show height of chimney(s) above roof line.

c. Show size of supporting members of porches and decks.

d. Show width of all stairs and hallways (three (3) feet minimum).

e. Specify tread length, riser height and headroom for all stairs.

f. Minimum height for all doors is six (6) feet eight (8) inches.

g. Show height of all handrails (minimum is thirty-four [34] inches; maximum is thirty-eight [38] inches).

h. Specify height of all guardrails other than stairway guardrails (thirty-six [36] inches minimum height).

i. Specify size of openings in guardrails (a four-inch sphere cannot pass through).

j. Submit any other data required to comply with current UBC in use by the Town of Paonia.

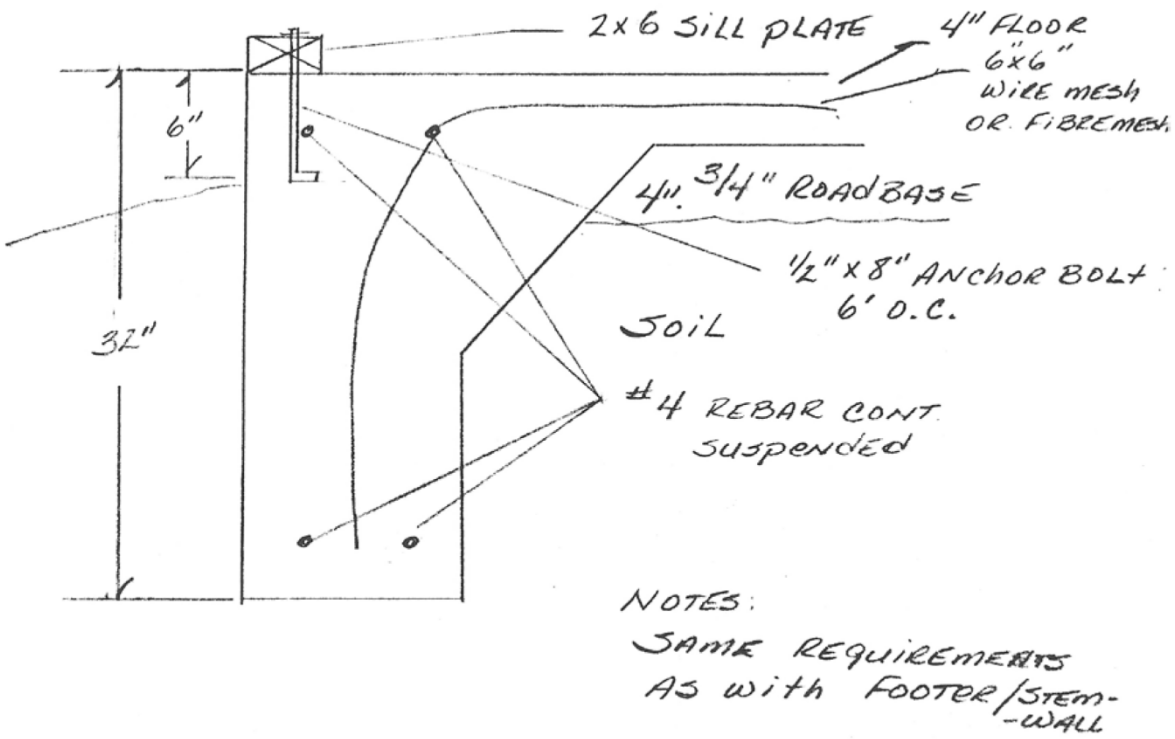
k. Any corrections or additions to original plan must be approved by Building Department.

l. All water lines must be buried a minimum of thirty-six (36) inches and be of three-quarter inch minimum copper to within five (5) feet of building.

m. All sewer lines shall be a minimum of four-inch diameter and be installed to accommodate a two-percent grade. (Some variations are permissible; consult building inspector or public works for more information).

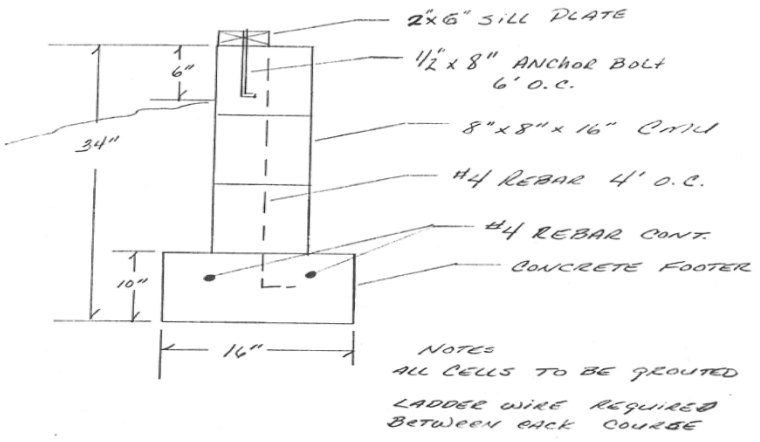
(Ord. No. 2001-01, 2001)

Typical Monolithic Foundation
Not drawn to scale.



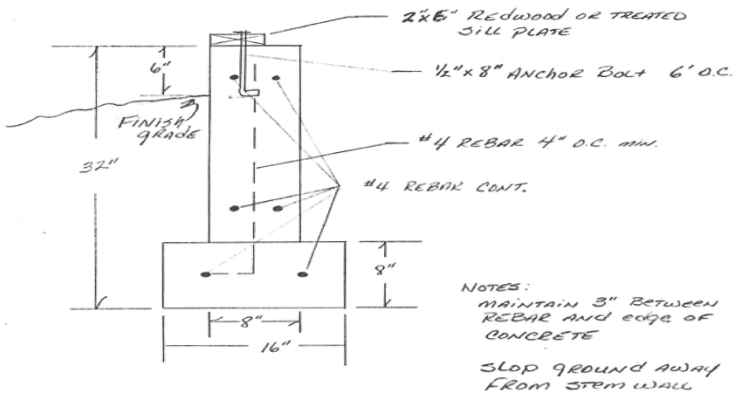
Minimum monolithic foundation requirements

Typical CMU Foundation
***Not drawn to scale**



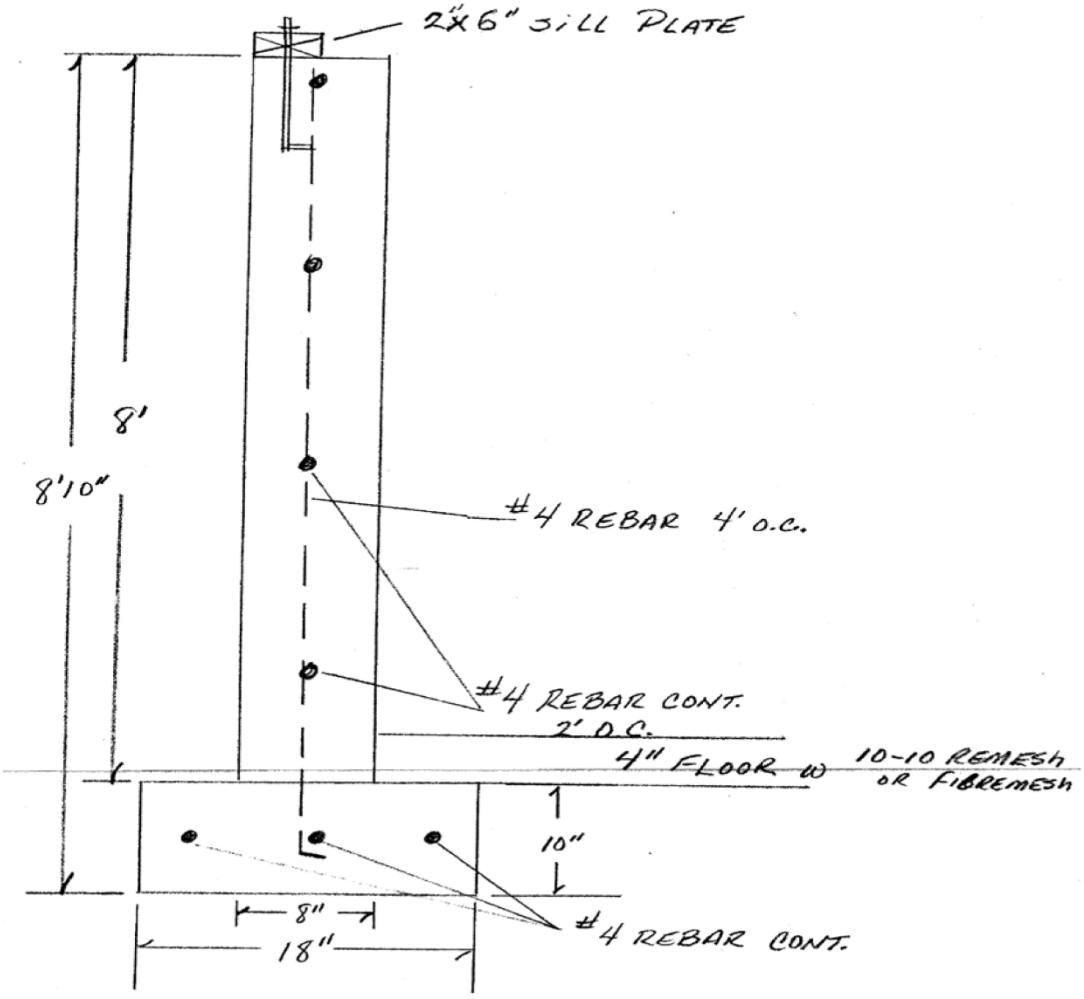
Cinderblock foundation

Typical Crawlspace Foundation
***Not drawn to scale**



Minimum footer/stem wall requirements
(or as approved by the Building Official)

Typical Basement Wall/Floor
***Not drawn to scale**



Minimum basement wall/ footer requirements
***Not drawn to scale**

(Ord. No. 2001-01, 2001; Ord. No. 2014-04 § 1, 1-13-2015)

APPENDIX D. STANDARD CONSTRUCTION SPECIFICATIONS

GENERAL SPECIFICATIONS

General Provisions.

The provisions stipulated in this section are general in nature and shall be considered as applicable to all parts of these specifications, including any supplements and revisions.

Definitions. Wherever the following words, phrases or abbreviations appear in the specifications, they shall have the following meanings:

1. *Engineer* shall mean the Town Engineer, Town of Paonia, Colorado, or his or her authorized representative acting on behalf of the Town.
2. *Inspector* shall mean an authorized representative of the Town and/or Town's Engineer at the site of work.
3. *Representative* shall mean any person or persons (including Engineer) authorized by the Town of Paonia acting on behalf of the Town.
4. *Town* shall mean the Town of Paonia, Colorado.
5. *Town Code* shall mean the official adopted Town Code Regulations of Paonia, Colorado.
6. *Utility* shall mean the Water and Sewer Utilities of the Town of Paonia and all other utilities (e.g. power, telephone, gas, etc.) provided by other entities.
7. Wherever the words *as directed*, *as required*, *as permitted* or words of like meaning are used, it shall be understood that the direction, requirements or permission of the Town is intended. Similarly, the words *approved*, *acceptable* and *satisfactory* shall refer to approval by the Town or its Representative.
8. Whenever references are made to standard specification, methods of testing materials, codes, practices and requirements, it shall be understood that the latest revision of said references should govern unless a specific revision is stated. Wherever any of the following abbreviations appear, they shall have the following meaning:

Abbreviation	***Reference***
AASHTO	American Association of State Highway and Transportation Officials
ASA	American Standards Association
ASTM	American Society for Testing and Materials
APWA	American Public Works Association

9. Wherever the words*these specifications* or words of similar connotation are used, it shall be understood that reference is made to the Town of Paonia Street Construction and Design Standards and Specification, including all parts, supplements and revisions pertaining thereto.

Plans.

The Developer shall submit completed plans and specifications for a proposed development to the Town for review. The developer will be provided with written comments and questions, which result from the review. Unless the Town waives the requirement, plans and specifications shall be prepared and stamped by a registered professional engineer licensed in the State of Colorado.

An overall plan shall be submitted which shows lots and blocks to be served and the locations of all utilities to be constructed. Plans for water lines shall have a minimum scale of one (1) inch equals fifty (50) feet unless the minimum lot size is larger than one-half (0.5) acre, in which case the minimum scale shall be one (1) inch equals one hundred (100) feet. Water plans shall show the location of the water mains with all appurtenances and all service lines with reference to property lines. Profiles may be required by the Engineer on an individual-project basis, and, if so, they shall give dimensions, grades and shall show valve locations of the water main to be constructed. Roads and sewer lines shall have the same minimum scale and shall include both plan and profile. The plan view shall include at least five-foot contours to show overall topography of the lots to be served.

Detail drawings shall be of a scale sufficient to clearly describe the particular item. The type, size, approximate location and number of all known underground utilities shall be shown on all drawings.

The cost of plan review will be based on the Town's out-of-pocket costs. The fee shall be fifty dollars ($50.00) plus out-of-pocket costs the Town incurs for engineers, technical review, attorney's fees and/or other reasonable expenses.

The Town shall review and return said plans with either a stamp of approval or a letter designating necessary revisions required to receive approval. Upon presentation of the plans revised as per this letter, the Town will approve the plans without undue delay.

Construction plans approved by the Town shall be effective for a period of twelve (12) months from the date of approval. After twelve (12) months, the documents for work not yet constructed shall be subject to re-review by the Town to bring those portions of the documents into compliance with current Town standards and drawings.

Authority of Town.

The Town Engineer or representative designated by the Trustees shall have the authority on behalf of the Town to ascertain that all design and construction of facilities are equal to or better than the minimum requirements set forth in the Town specifications and other known applicable State and Federal requirements. The designer shall have the additional authority to assign an inspector to check any and all work, including materials to be incorporated in the work and all construction methods and practice.

Contractor's Responsibility.

It shall be the responsibility of the contractor to read and fully comply with all the provisions of the specification and all laws and regulations that apply to local and state agencies.

Submittals.

The contractor shall provide submittal information, including samples, drawings and data as appropriate on all specific materials to be supplied for review and approval by the Town for conformance with Town specifications. Materials for construction shall not be purchased prior to such approval. Shop drawings shall be provided for major mechanical installations such as lift stations, pressure-reducing stations, etc. shop drawings shall be of a scale sufficiently large enough to show all pertinent features of the item and its layout, setting, method of connection, etc., to the work.

The Town reserves the right to reject any materials or equipment that does not fully meet the Town's specifications.

Notification by Contractor.

The contractor shall notify the Town at least three (3) working days before beginning any work. If, for any reason, the work should be halted on a project during any stage of construction for more than one (1) working day, it shall be the responsibility of the contractor to notify the Town or its designated representative twenty-four (24) hours prior to resuming construction. If the contractor intends to work more than eight (8) hours per day or more than forty (40) hours per week or hours other than the normal work hours of Town personnel, the contractor shall notify the Town at least twenty-four (24) hours prior to such work, except in the event of an emergency. Failure to provide such notification may provide sufficient cause for the suspension of the project. Over time the developer or contractor shall reimburse expenses incurred by the Town.

Inspection.

The Town reserves the right to provide full-time construction inspection of all water and sewer extensions. The cost of such inspection will be charged to the developer at a predetermined hourly rate. the inspector must be acceptable to the Town. Any complaints from the contractor, developer or inspector will be reviewed promptly by the Town.

The Town Inspector, if provided, is assigned to assist the contractor in complying with these specifications. The inspector has the authority to reject defective material, defective workmanship and to suspend work until such time as the contractor shall correct the situation in question, subject to final decision.

Unless the Town waives the requirement, a preconstruction conference shall be held prior to commencing construction. In attendance shall be the developer, the developer's contractor, including the on-site project superintendent and representatives of the Town as designated by the Town. Representatives of other utilities that will be impacted by the project shall be given notice of the meeting sufficiently in advance to reasonably allow their attendance. The purpose of the meeting will be to review and coordinate construction schedules, review Town requirements during construction, address any questions, discuss anticipated problems, establish ground rules for working together and develop an inspection schedule.

The developer or his or her representative shall be responsible for providing notice to the Town at least twenty-four (24) hours in advance of any testing which will be to demonstrate compliance with the plans and specifications. A representative of the Town shall be present at all tests for conformance with the plans and specifications and, where applicable, shall determine where and how the tests are performed. Should the contractor fail to provide such notification and a representative of the Town not be present during any testing, the tests shall be deemed to have been at the convenience of the contractor rather than for acceptance by the Town. The Town shall have the right to require re-testing including re-exposing the work should that be necessary.

Rejected Materials.

All materials installed shall be free of defects of manufacture. Any defective or damaged materials found in the construction or on the construction site shall be marked and removed from the site. In the event the contractor fails to remove rejected materials from the construction site within a reasonable length of time, the Town may arrange for such removal at the expense of the contractor.

Disruption in Service.

Should it be necessary for any utility service to existing consumers to be disrupted for any reason, the developer shall provide as much notice as possible to those whose service will be disrupted. At a minimum, the developer shall provide written notice to each affected consumer at least twenty-four (24) hours in advance. Notice shall be by personal contact and written notice to each structure. When service to commercial customers will be disrupted, the developer and the Town shall meet with each business at least three (3) days in advance and determine when it would be least inconvenient to have service disrupted. If at all possible, the service interruption shall be at such a time which will have the least impact on all the consumers affected.

When service is unexpectedly disrupted, the developer shall notify each affected consumer as expeditiously as possible as to when service will be restored and shall use all means at his or her disposal to minimize the length of disruption.

The length of disruption in service shall be kept to an absolute minimum. All work which can be done in advance shall be done and inspected and found acceptable by the Town and other appropriate entities before the service interruption is begun. All personnel, materials and tools shall be on site and ready prior to disrupting service. The developer shall make use of personnel, materials and equipment that will reduce the length of service

disruption. For example, megalugs and temporary restraints shall be provided in addition to required thrust blocks, so water lines can be re-pressurized as soon as initial backfill is compacted.

When the work that will cause the disruption can be phased, the developer, in coordination with the Town, shall work with the affected customers to determine whether one (1) long or multiple shorter disruptions are preferable.

Protection of Existing facilities.

The contractor shall notify all utility companies and interested parties prior to commencement of work in order to ensure that there will not be interruptions of services during construction. The contractor, at all times, shall take proper precautions for the protection of utility lines, manholes, valve boxes, survey monuments and other structures. Hand excavation shall be used where necessary. The contractor shall be liable for all damages to existing structures, public or private, and he or she shall save the Town harmless from any liability or expense for injuries, damages or repairs to such facilities. The contractor shall, at all times, take proper precautions for the protection of and replacement or restoration of driveway culverts, street intersection culverts or aprons, storm drains or inlets, fences, irrigation ditches and crossings and diversion boxes, mail boxes, shrubbery, flowers and ornamental trees, driveway approaches and all other public and private installations that may be encountered during construction. The contractor shall have the responsibility of providing each property with access to and from the property during the time of construction. Existing driveways shall be cut, filled and graded as required. Existing driveways shall be resurfaced with the presently existing type of surfacing, whenever existing surface is destroyed.

Responsibility for Repair.

Should any utility be damaged in the construction operations, the contractor shall immediately notify the owner of such utility, and unless authorized by the owner of the utility, the contractor shall not attempt to make repairs.

In the event that during construction it is determined that any underground utility conduit, including sewers, water mains, gas mains and drainage structures, and any above-ground utility facilities are required to be relocated, the contractor shall notify the utility owner well in advance of his or her approach to such utility so that arrangements with the Town and/or owners of the affected utility can be completed without delay of the work.

Changes to Approved plans and specifications.

All proposed changes, except field changes, to the approved plans and specifications shall be submitted to the Town for review and written approval obtained prior to commencing construction. Such changes shall be submitted as soon as they are contemplated to allow as much review time as is possible and to adjust any other facilities that may be impacted by the change. Changes include additions and deletions as well as changes to all utilities and improvements located in public rights-of-way or utility easements.

Copies of other approved changes shall be given to the contractor, developer and the developer's engineer. No work shall proceed on that portion of the project being revised until said revisions are submitted, approved and distributed.

Field changes shall be discussed with the Town and shall receive a verbal approval before being implemented. Field changes shall be defined as minor deviations in the work which do not result in significant changes in location, function or minimum standard of the item being altered or a change in contract price.

Traffic Control.

The contractor shall be required to provide adequate construction signage, flagmen, barricades, etc., to warn vehicular and pedestrian traffic of work in progress and to divert traffic as may be required in the course of construction. All signage and traffic control shall be subject to the approval of the Town police. when specifically authorized by the Town, portions of a street may be allowed to be partially closed to traffic for construction. The contractor shall make every attempt to minimize the length of time of such closures. it shall be the responsibility of the contractor to notify the police, sheriff, fire, ambulance and other applicable emergency services at least twenty-four (24) hours prior to such closures.

Safety Requirement.

All installations shall be made in a safe manner that complies with current osha and other applicable local, state and federal requirements. the contractor shall be solely responsible for providing adequate safety on the project.

As-Built and Operation and maintenance data.

Unless otherwise agreed in writing, during construction the contractor shall keep a log of the construction progress and the field location of the new facilities. Lines shall be tied to surface monuments at two-hundred-foot intervals or less. Valves and manholes shall be tied to a minimum of three surface monuments. Depths shall be recorded at each station as well. As-built drawings shall be prepared noting the final sizes, locations and ties at all of the required locations. These drawings shall also note the brand names, model numbers and sizes of all manufactured equipment installed as part of the project.

Where equipment is installed which is not the same as equipment already in use in the Town system, the contractor shall submit manufacturer's literature on the equipment or device. If necessary, the contractor shall provide supplemental O&M data on materials, if there is not sufficient detail in the manufacturer's literature to operate and maintain the equipment and for complete repair of all repairable parts. Such information shall be submitted and approved by the Town prior to the Town accepting the project as substantially complete. Any specialized tools required to perform such O&M shall be provided to the Town at no expense to the Town. Unless the Town already has an inventory of spare parts for the particular equipment, the contractor (or developer) shall provide a complete set of spare parts to overhaul the equipment to the Town prior to substantial completion.

Acceptance, Operation and maintenance.

Following the satisfactory completion of construction, all required testing as defined in applicable minimum and standard specifications and delivery of necessary documents to convey the system and appurtenant easements to the Town, the Town will give preliminary acceptance to the project. At this time, the facilities may be tied into the Town system and service provided. For the first twelve (12) months thereafter, the developer will be responsible for all operation, maintenance and repair costs. During that period, the Town shall be notified when O&M and/or repairs will be performed on the facilities, and, at the Town's option, it may elect to have an inspector present during such operations. Alternately, the developer may choose to hire the Town to perform such services, if agreed to by the Town.

At the end of the twelve-month period, there shall be a warranty inspection of the system that will include a physical inspection of the construction and a review of the O&M records. If, in the opinion of the Town, the system is performing satisfactorily, the Town will accept the facilities following proper assignment of all contractor and vendor warranties on the project, and assume maintenance of it. The Town may elect to extend the period of developer maintenance beyond twelve (12) months until any problems are corrected. If the developer fails to correct any problems within one (1) month of notification, the Town may correct the problems and collect the

costs it incurs from the developer. Such costs, if not promptly paid, shall be a delinquent charge that may be assessed against the developer's property, in addition to any other rights and remedies the Town may have.

Service Rates.

The Town reserves the right to set rates for supplying services to the development which are commensurate with the costs associated with providing the services. This means that in some instances it may be necessary to place a surcharge or to charge a higher rate to provide services to certain areas.

During the twelve-month period when the Town is providing services, but before the warranty inspection, the Town will charge users for the services and control all taps as provided in Town ordinances and regulations.

The foregoing provisions may be modified by appropriate utility extension agreements.

EXCAVATION, TRENCH EXCAVATION AND BACKFILL

PART ONE-GENERAL

General Provisions.

These specifications are general in nature and are designed to cover excavation and backfill for pipeline and structure. In cases where a provision is applicable to a particular type of construction or use, it is covered in the specification for the specific application, e.g., standard specifications for sewer mains. Where there is a more stringent requirement in such a specification, compliance shall be with the specific specification that is directly applicable to the situation.

A contractor shall comply with all applicable laws and regulations, including "Rules and Regulations Governing Excavation Work" of the State of Colorado and receive an excavation permit from the Town when working on Town rights-of-way.

Existing Conditions.

Prior to commencing construction, the contractor shall be responsible for documenting the existing condition of the construction site and surrounding areas. Photographs and written descriptions of all substandard pre-existing conditions are recommended. width of gravel and/or pavement, depth of such and existence of drainage should be noted for roadways, as should broken fences and other private structures that are in need of repair. Unless substandard conditions are adequately documented prior to commencing construction, the contractor will be held responsible for restoring the site to conditions which the Town consider to be those which are standard and/or were pre-existing. Since construction equipment tends to be destructive of gravel and asphalt roads, particular attention should also be paid to recording conditions of roads which will be traversed by construction equipment even if there will not be any construction along the specific roadway.

Protection of Existing Utilities.

The Town will assist the contractor in locating existing utilities of which it has knowledge. The contractor shall be responsible for scheduling with the Town sufficiently in advance for the Town to have someone available to provide such assistance. It will be the contractor's responsibility to contact all other utilities to get assistance in locating their lines and buried structures. The contractor will be responsible for verifying the locations of all utilities and for repairing any damage caused by his or her work. The contractor must file notice of intent to excavate with each of these entities at least forty-eight (48) hours prior to commencing work. All utility lines,

including cables and pipelines, in the vicinity of the work shall be exposed by the contractor before work is started. If, after exposure, a conflict is discovered, the contractor shall propose a remedy that shall be subject to approval of the Town and all other affected parties.

PART TWO-PRODUCTS

Bedding Materials.

Class I	3500 psi Class B concrete as specified in CDOH Specification
Class II	Well-graded crushed stone or crushed gravel meeting the requirements of ASTM C33, Gradation 67 (¾ inch to No. 4)
Class III	Selected soil free from clods and stones greater than ¾ inch in maximum dimension and free of all unsuitable materials as defined below.

Unsuitable; Materials.

Expansive materials and material that contain debris, roots, organic or frozen materials, stone or concrete having a maximum dimension larger than four (4) inches or materials that are unsuitable for providing stable slopes, fill, backfill, foundation or subgrade material for structures or surfaces shall be classified as unsuitable. Otherwise suitable material which is unsuitable due to excess moisture content will not be classified as unsuitable unless it cannot be dried by manipulation, aeration or blending with other materials satisfactorily to meet moisture limits for proper compaction.

PART THREE-EXECUTION

Clearing and Grubbing.

The area to be occupied by permanent construction shall be cleared and grubbed of trees, stumps, roots, brush, rubbish and other objectionable matter to the extent necessary for orderly performance of the work. All clearing limits shall be staked by the contractor and approved by the Town prior to any construction. No trees shall be removed or injured outside the area to be occupied by the work without the prior approval of the property owner and/or the Town. The Town will mark trees within the clearing limits to be removed.

Where applicable, strip existing topsoil prior to trenching operations. Depth of stripping shall be determined in the field by the Town. Stockpile topsoil material for replacement after all backfilling and compacting operations are completed.

The contractor shall be responsible for the protection of all surface improvements, structures, buried utilities and plantings that have not been designated for removal or modification as part of this project. The contractor shall exercise care in his or her work to ensure that no damage will occur to lawns, shrubs, hedges, trees and other plantings adjacent to the right-of-way or in areas of access to the work. If there is disturbance to structures or plantings, the contractor shall take remedial action at his or her own expense. No act, representation or instruction of the Town shall in any way relieve the contractor from liability for damages or costs that result from activities of the contractor. The contractor may, with permission of the property owner, remove fences and other property to expedite trenching operations. These shall be repaired to the satisfaction of the property owner as soon as backfilling operations are completed.

Removal of Cleared and Unsuitable Materials.

Materials from the clearing operations shall be the responsibility of the contractor and shall be removed from the site of the work and disposed of in a manner satisfactory to the owner and Town and in accordance with State and local regulations.

During the process of clearing or trench excavation, soils such as peat, soft clay, quicksand or other materials that are unsuitable for bedding may be encountered. These materials shall be removed from the site and disposed of by the contractor. If removal of unsuitable materials results in excavation below the grade required for bedding, the area shall be backfilled to grade with suitable bedding materials complying with the provisions of applicable specifications for the work being constructed.

Access Roads and Bypasses.

The contractor shall be responsible for providing all access roads required to get materials and equipment to the work areas. When required, the contractor shall construct and maintain detours or bypasses around portions of the work that conflict with traffic. All barricades and safety devices required to protect persons from injury and to avoid property damage shall be determined and furnished by the contractor. When necessary, the contractor shall provide suitable bridges at crossings where traffic must cross open trenches. Construction of access ways on private or government property must have written approval of the property owner prior to commencing construction.

No road will be completely closed. If a detour around the construction is not feasible, then the installation across the road will be made one-half (½) at a time to allow through traffic around the construction. Adequate traffic control and signage must be provided by the contractor and is subject to approval of the Town Administrator.

Pavement Cutting.

Where trench excavation requires the removal of asphalt pavement, the pavement shall be cut in a straight line parallel with the direction of trench excavation. The cut shall be made with a spade-bit air hammer, by sawing or with similar approved equipment to obtain a straight, square and clean break. Ripping the asphalt will not be allowed. The pavement cuts shall be at least one (1) foot wider in each direction than the anticipated limits of the open trench. No excavation in paved areas will be started until after the pavement has been cut. The contractor shall dispose of the paving material obtained from excavations in paved areas. At the contractor's option, the material may be broken into small pieces (less than four [4] inches in maximum dimension) and included in the trench backfill material, except that the material may not be placed within one (1) foot of the pipe in any direction, nor may it be nested. All areas where pavement is removed shall be restored as specified herein and shown on the typical drawings. Temporary surfaces shall be placed until the permanent repair can be made.

All surface improvements consisting of, but not limited to, pavements, gutters, driveways, curbs and sidewalks damaged by the contractor during the progress of work shall be replaced at the contractor's expense. The construction of the repairs shall result in work equal to or better than that that existed before the damage was done.

Excavation.

Excavation for pipe shall be by open trenches unless otherwise specified or shown on the approved plans. The trench shall be excavated using conventional methods. Any method that is not in accordance with normally accepted practice must receive prior approval of the Town. excavation shall be made to line and grade shown on

the approved plans. The banks of the trench shall be kept as nearly vertical as soil conditions will permit but shall not exceed the angle of repose of the soil. Vertical trench walls shall be used in the pipe zone.

Grade Stakes.

The developer's engineer shall provide grade stakes for all pipeline excavation. These stakes shall locate the pipelines both horizontally and vertically for sewer and at least horizontally for water. Where finished grade of the ground will differ significantly from existing grade, vertical control shall be provided for water and other utilities. Maximum distance between grade stakes shall be fifty (50) feet. All appurtenances and structures shall be staked for location and elevation.

Stockpiling Material.

Where material is excavated from the trenches and piled adjacent thereto, it shall be piled sufficiently away from the edge of the trench to prevent caving of the trench wall and to permit safe access along the trench. In unsupported trenches, the minimum distance from the edge of the trench to the toe of the spoil bank should not be less than one-half (½) the total depth of the excavation, nor less than two (2) feet. With sheeted trenches, the toe of the spoil bank should be at least three (3) feet from the edge of the trench.

Sheeting, Bracing and Shoring.

Where necessary, excavation shall be braced and sheeted to provide complete safety to persons working in or around the trenches and shall comply with applicable federal (OSHA), State and local laws and ordinances. The contractor shall be fully responsible for sufficiency and adequacy of bracing excavations with respect to work under construction and to adjacent utility lines and private property. If sheeting is used to support the excavated trench, the contractor shall remove the sheeting. Remove sheeting and shoring as excavations are backfilled in a manner to protect the material, construction and compaction and/or other structures, utilities or property. No such sheeting will be permitted to remain in the trench except when, in the opinion of the project engineer and the Town, field conditions or the type of sheeting or methods of construction used by the contractor are such as to make the removal of sheeting impractical. In such cases, they may permit portions of the sheeting to be cut off to such depth as they may approve and permit lower portions thereof to remain in the trench.

Drainage and Groundwater Control.

Maintain the excavations and site free from water throughout the work. Remove any water encountered in the trench to the extent necessary to provide firm subgrade, to keep water level below final pipe grade and to prevent entrance of water into the pipeline. The contractor shall furnish and operate adequate pumping equipment to keep the water level below the grade of construction. Water shall not be permitted to run through lengths of pipe already laid without written approval of the Town. Ends of all pipes shall be capped or plugged to ensure that water, dirt, etc., does not enter the pipe. Should any dirt, mud, etc., enter the pipe during installation, the contractor shall flush the pipe thoroughly in the presence of the Town's representative to ensure complete removal of all foreign objects prior to connection to the existing system and shall disinfect the line according to the requirements in "Disinfection of Potable Waterline" under "Distribution".

Use drainage methods that will prevent softening of foundation bottoms, undercutting of footings or other conditions detrimental to proper construction procedures. Accomplish the foregoing by the use of sumps and gravel blankets, well points, drain lines or other means approved by the Town. Grade as necessary to prevent surface water from flowing into trenches or other excavations. Remove any surface or ground water accumulated in the excavation by the use of well points, pumps or other approved methods. If the trench bottom becomes unstable due to the entrance of surface water into the open excavation, the saturated soil shall be removed and suitable backfill placed and compacted to pipe grade.

Use of Explosives.

Should the use of explosives be required, and their use approved by the Town, exercise all possible precautions in the use, storage or transport of same. Employ only competent, experienced personnel. Comply with all local and State requirements. The contractor assumes full responsibility and liability for all damage that may be caused by his or her use of explosives.

Sequencing.

The contractor shall excavate in advance of pipe laying only a sufficient length to assure steady progress in the installation of pipe. The length of open trench shall be limited where necessary to accommodate traffic, public safety or as required by the Town and/or other entities with authority, in the vicinity of the work being performed.

Pipeline installation shall follow trench excavation within one hundred (100) lineal feet. Trench backfill shall follow pipe installation within one hundred (100) lineal feet. Approved cleanup shall follow trench excavation within three hundred (300) lineal feet. Particular care shall be taken to provide minimum interference with mail delivery and school bus operation. If the work will require a road to be closed, the contractor shall notify the proper agencies, preferably in writing, with a copy of the notice to the Town. In State and County road rights-of-way, the amount of open trench permitted shall be in accordance with the requirements of the respective agencies.

Excavation to Grade.

All installation of utilities and structures shall be to the grade designated on the approved plans and in conformance with Town specifications and standards. Excavation for water lines shall be to a depth sufficient to provide a minimum cover below finished grade of the depth listed in the water specification or shown on the approved drawings. Specific authorization may be given by the Town to reduce the minimum cover by up to six (6) inches along short sections to eliminate or minimize conflict with other utilities or to facilitate connections, if O&M problems are not likely to result from such a change. Additional trench depth shall be provided where street and roadway grades will probably be lowered under future construction and where necessary to provide clearance between ditches, culverts and other structures. The Town shall determine in the field the additional trench depth required in locations where possible future lowering of street grades or other future construction makes greater depth desirable.

Sewer line excavation shall be to the depth necessary to provide the grade and bury depth shown on the approved plans. When tying into an existing line, the contractor shall excavate at the manhole or approved tie-in and shall begin laying pipe from the existing facility unless otherwise authorized by the Town. More detailed specifications are discussed in other sections of this document.

Trench Width.

Alignment of trenches shall be carefully controlled so that uniform distances are maintained from property lines and so that the pipe will be laid with adequate space for compaction of backfill between the pipe and trench walls. All excavation shall be of sufficient width to provide ample room for proper joining of pipe and fittings. Minimum trench width shall be twelve (12) inches plus pipe OD. Maximum trench width will be restricted to pipe diameter plus two (2) feet unless otherwise approved by the Town. If the maximum trench width is exceeded, provide special bedding, encasement or higher strength pipe as approved by the Town. If other dimensions for trenching or cave-in protection devices are required to meet OSHA regulations, such shall be provided.

Pipe Bedding.

Bedding Classes. Refer to trench width and backfill details shown on the drawings and to Bedding Details in this Section.

Class A - Concrete Cradle - Class A bedding shall be defined as bedding in which the lower half of the pipe is set in 3000-psi minimum concrete. The minimum thickness of the concrete shall be six (6) inches. The width of the concrete shall be at least equal to the outside pipe diameter plus eight (8) inches. Use where indicated on the plans and where improper trenching or unexpected trench conditions require its use as determined by the Town.

Class B - Use Granular Bedding details for all flexible pipe such as PVC sewer and water pipe, fiberglass pipe, lightweight steel pipe, polyethylene pipe and other similar pipes. Class II or Class II (see Part II of this section) bedding is required up to the spring line and shall be used for the select backfill. Shaped Bottom detail may be used for rigid pipe. Select backfill may be Class II or III materials except if noted otherwise in specific specifications.

Class C - Use only for pipelines in marshy or swampy ground or where approved by the Town Engineer. Uniformly graded one-and-one-half-inch rock shall be used for trench stabilization.

Class D - Impermissible bedding where the pipe is placed on an earth foundation with little or no care being exercised to shape the foundation to fit the lower quadrant of the pipe barrel or to refill all spaces under and around the pipe, or where bedding materials are unsuitable to adequately support the load of the pipe and backfill. In no case will this type of bedding be acceptable.

Bedding Preparation.

The bottom of the trenches shall be accurately graded to provide uniform bearing and support throughout the pipe length. Excess loading of the bell will not be permitted under any circumstances. Dig bell holes and depressions for joints after trench bottom has been graded. Bell holes and depressions shall be only of such length, depth and width as required for properly making the particular type of joint. The use of earth mounds for bedding the pipe will not be permitted.

All sharp stones, trash and other materials which may damage the pipe or interfere with the proper bedding of the pipe and the placement and compaction of the backfill shall be removed from the trench. The soil in the bottom of the trench shall be loose and at the optimum moisture so that uniform bedding and compaction around the pipe is easily obtainable. Should any material be encountered which would prevent the obtaining of suitable bedding, e.g., wet, unstable, etc., the trench shall be overexcavated to a depth of six (6) inches minimum below the outside bottom of the conduit, except at points of rock and earth transitions, at which point the rock shall be excavated to a minimum of twelve (12) inches below the outside bottom of the flexible conduit as shown on the typical drawing for pipe bedding. Backfill any overexcavation, required or inadvertent, with materials equivalent to, and compacted as specified for haunching materials according to these specifications.

If the trench bottom becomes unstable due to the entrance of water into the excavation, the saturated soil shall be removed and suitable bedding placed and compacted to pipe grade.

Placing Bedding Material.

The bottom of the trench must be dry or well-drained before bedding and backfilling is started. Place material below and around the pipe by hand to prevent damage or displacement of the pipe. Place in lifts not to exceed three (3) inches in compacted thickness in the pipe zone.

Whenever flexible pipe is used, special care shall be employed in the pipe bedding. Flexible pipes include PVC sewer and water pipe, fiberglass pipe, lightweight steel pipe, polyethylene pipe and other similar pipes. Conform to recommendations of: (1) AWWA C 900 Appendix A Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 inch

Through 12 inch for Water; (2) Uni-Bell PVC Handbook and relevant Uni-Bell recommended practice manuals; and (3) ASTM Designation D 2321 Standard Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe.

Backfill and Compaction.

The contractor shall proceed with backfilling as soon as practicable, but not until the Town and the Engineer do inspection work. Compaction or consolidation shall follow as soon after the placing as is practical.

Backfill material shall consist of material that, after placement and compaction, will result in a stabilized soil condition capable of supporting the normal traffic and use loads that may be encountered. Normally the backfill material will be obtained from the soil banks accumulated from the trench excavation. The backfill materials shall be free of vegetation, lumps, trash, lumber and other unsuitable or objectionable materials. The backfill placed within twelve (12) inches of the pipe (the pipe zone), shall be a Class II or III material and shall not contain any sharp rocks, stones larger than three-quarters (¾) of an inch in diameter or other objects that might damage the pipe. In no event shall rocks or other objects whose largest dimension exceeds four (4) inches be used as backfill material. All such material shall be removed from the work area and disposed of in a manner acceptable to the Town. Moisture control of fill will be required to facilitate achieving acceptable soil densities.

Pipe Zone Compaction.

After the pipeline has been installed, suitable backfill material shall be hand placed in up to three-inch lifts to the pipe centerline (spring line) and hand tamped and compacted to provide firm, uniform support for the pipe. Take care to ensure that sufficient material has been worked under the haunch of the pipe to provide adequate side support. With rigid pipe, if care has been taken to shape the bedding material to the curvature of the pipe, only one (1) stage of placement will be required to bring the haunching material to the spring line. Compact haunching material to a minimum of ninety-five percent (95%) Standard Proctor Density. Additional backfill shall then be hand placed and hand compacted in three-inch lifts to provide at least six (6) inches of suitable cover over the top of the pipe before any material is placed with machinery. Take care to avoid contact between the pipe and compaction equipment to avoid damage or displacement.

Compaction of initial backfill and backfill materials shall be done in such a way that sufficient backfill has been placed to ensure that such compaction equipment will not have a damaging effect on the pipe or its installation. The contractor shall repair any damage resulting from the backfilling or compaction of the backfill in a timely manner. At all times precautions should be taken to prevent flotation of the pipeline due to entry of water into the trench. Compaction in the pipe zone shall be to ninety-five percent (95%) Standard Proctor unless authorized or noted on the approved plans.

Upper Trench Compaction.

The degree of upper-trench compaction required for the backfill will depend upon the location of the pipeline and the material used in the backfill. Under roads and other potential driving surfaces, minimum compaction through the entire depth shall be ninety-five percent (95%) of maximum dry density. Elsewhere within public rights-of-way the minimum compaction shall be at least ninety-two percent (92%). In no case shall compaction be less than eighty-five percent (85%) or original soil density whichever is greater.

In general, backfill shall be mechanically compacted by means of tamping rollers, sheep foot rollers, pneumatic tire rollers, vibrating roller or other mechanical tampers that are appropriate for the material being compacted. Compaction by jetting or flooding shall not be permitted. The trench shall be filled to provide a minimum of three (3) feet of cover over the pipe before rolling equipment is used and fifty (50) inches before utilizing a hydro hammer during compaction. The maximum density shall be determined by the Standard Proctor Test, except that Modified Proctor may be used for Class 6 materials.

Typical Methodology.

The following method of compaction is typically acceptable. use of alternate methods must first be reviewed and given approval by the Town.

Bedding and backfill in the pipe zone shall be hand placed with a shovel and hand compacted with a tamping bar. Backfill below the three-foot level but above the pipe zone shall be placed and compacted in lifts not to exceed eight (8) inches in uncompacted thickness. Required compaction shall be obtained by using suitable pneumatic or vibratory equipment below the three-foot depth. Above three (3) feet of fill, twelve-inch lifts may be placed if adequate compaction can be achieved. It is the intent of this specification to permit the compaction of pipe line trenches by traversing with heavy rubber-tired equipment above three (3) foot of fill, provided that adequate compaction can be obtained over the full depth by this method without damage to the pipe. If suitable compaction cannot be obtained, the backfill material shall be placed in thinner layers and/or other types of compaction equipment shall be provided. Rolling and backfilling will continue until the trench is filled and compacted to original grade. If approved by the Town, outside roadways excess material shall be mounded over the trench, allowed to settle and the area re-graded.

On graveled and paved roads, six (6) inches of gravel will be added to the subgrade and compacted to ninety percent (90%) Modified Proctor. Where the trench lies within improved streets and where the trench crosses any street or road, the nonpipe zone backfill will be compacted with equipment suitable for the fill materials to a density of ninety-five percent (95%) Standard Proctor density as determined in accordance with ASTM 698. The materials shall be placed in the trench in lifts not exceeding eight (8) inches in thickness at a moisture content near optimum, unless the contractor demonstrates ability to adequately compact larger lifts.

In improved streets or streets programmed for immediate paving, at all road crossings, paved or not, and in other areas designated by the Town, the upper layer of backfill shall be CDOH Class 6 road base material, compacted to ninety percent (90%) Modified Proctor. The cohesive material below the road base shall be compacted with impact-type equipment in a manner similar to that described above for open areas. In most cases, wheel rolling of the backfilled trench with heavy rubber-tired equipment will be adequate. No wheel rolling of trenches with less than three (3) feet of fill will be permitted. Cohesionless materials shall be compacted to densities comparable to those specified above, but the most satisfactory compaction is likely to be achieved through vibratory equipment.

Compaction Around Appurtenances.

Backfill around appurtenances such as pump stations, vaults, meter pits, valve boxes, lift stations, manholes, etc., shall conform to the same requirements for material, compaction and site restoration as specified herein for trench backfill. Materials shall be compacted to ninety-five percent (95%) Standard Proctor.

Soil Compaction Tests.

Conduct tests for determination of maximum density and optimum moisture in accordance with the requirements of ASTM 698, Moisture density relations of soils, using a five and one-half pound hammer and twelve-inch drop. Use method A, B, C or D as appropriate, based on the soil condition and the judgment of the party conducting the tests. Samples tested shall be representative of materials to be placed.

Obtain optimum moisture density curve and Atterburg limits for each type of material or combination of materials encountered or utilized.

Use test results as a basis for density control of compaction operations.

Density Control.

Conduct tests for density control to verify the compaction of the materials in any area of backfill in accordance with the requirements of ASTM D 2922, density of soil and soil aggregate in-place by nuclear methods, or ASTM D 1556, density of soil in-place by the sand-cone method. nuclear gauge must be calibrated with sand cone densities and laboratory moisture measurements.

Backfill under all structures, adjacent to all structures and in all utility trenches when under a roadway or sidewalk and at a rate of at least three (3) tests for every one thousand (1,000) feet of utility lines installed. Exact location of tests shall be as directed by the Town Engineer. Tests may be taken to verify the compaction through the depth of trench or at a depth designated by the Town. The contractor shall excavate to depths directed to accommodate testing and backfill test hole in accordance with the above provisions.

Surface Restoration.

On completion of backfill operations and other work, the entire site shall be cleared of all debris, and ground surfaces shall be finished to smooth, uniform slopes and shall present a neat and workmanlike appearance. The final grade in unpaved streets and other areas will be graded to match existing grades without producing drainage problems. areas that are to receive pavements, surfacing, topsoil or landscaping shall be graded as required to allow installation of the specific surface treatment. Restoration of grass, shrubs and other plants shall be done to the extent required to restore the damaged areas to a condition as close as practical to that which existed prior to construction. Replace topsoil without compacting to the depth that was stripped in landscaped areas. Tree damage shall be repaired in accordance with good horticultural practice.

No permanent pavement shall be restored until the flow fill is determined to be adequate. All paved areas shall be replaced with suitable pavement.

The finished surface of roads will be restored to their original condition as determined by the owner(s) involved. The Town, County or State Road Department, as applicable, shall be notified twenty-four (24) hours prior to pavement repair so that a final inspection can be made. Pavement repair shall be guaranteed for a period of one (1) year.

Prior to replacing asphalt on properly compacted backfill, square up any ragged edges of adjoining pavement. Such cutting shall be done in accordance with the "Pavement Cutting" paragraph above. Apply MC-70 or other approved price coat to Class 6 road base on top and against sides where pavement is to be placed in accordance with manufacturer's recommendations. Lay two (2) two-inch mats of hot bituminous asphalt in the area and compact to ninety-five percent (95%) of Marshal Density. Place patching material around the edges and work inward. Unless otherwise specified herein, materials and construction methods shall comply with the Colorado Departments of Highways (CDOH) Specifications, Section 401 - Hot Mix Pavements.

Concrete work shall be removed and replaced to the nearest joint on each side of the trench. (See Town standard drawing for concrete replacement.) Concrete shall be a three-quarter-inch 6 sack mix meeting CDOH Class B requirements from Section 601. Thickness of the concrete mat shall equal the thickness of the surrounding concrete but not less than four (4) inches thick. Immediately prior to placing concrete, foundation shall be thoroughly moistened. After placing, the surface shall be shaped to match the surrounding surface, floated with a wooden or magnesium float and given a broom finish. All outside edges of slab and all joints shall be edged with a one-quarter-inch radius-edging tool. Expansion joints shall be placed to match surrounding concrete. Dummy joints to divide concrete into sections shall extend one-third (⅓) of the depth and approximately one-eighth (⅛) inch wide. Construction joints shall be formed around all appurtenances. Pre-molded expansion joint filler or thicker shall be installed in the joints for the full depth. Immediately upon completion of concrete, finishing shall be moistened and kept moist for three (3) days or curing may be by curing with a membrane-forming curing compound subject to approval of the Town. During curing all traffic both pedestrian and traffic shall be excluded.

The Town shall be the final judge of the acceptance of restoration work. The contractor shall be responsible for returning all roadways traversed with his or her equipment to conditions at least as good as existed prior to commencing construction. Again, in cases where substandard conditions existed prior to beginning construction, it shall be the contractor's responsibility to have documented such conditions or to restore the site to standard conditions acceptable to the Town.

WATER, WATER DISTRIBUTION SYSTEM - MINIMUM DESIGN STANDARDS

Materials.

Pipe, fittings, valves and fire hydrants shall conform to the latest standards issued by the AWWA, Colorado Department of Health, and shall comply with the Town's detailed standard specifications. In the absence of such standards, materials meeting applicable product standards may be submitted to the Town for review and approval. Jointing material used in joining pipe shall meet pipe manufacturer's specifications and AWWA standards as well as the Town's standards.

Plastic Pipe (PVC) - Water	
Conformance	AWWA C 900
Thickness	Class 150
Pressure rating	150 PSI, unless greater required by field conditions
Joints	Rubber gasket, bell and spigot, integral bells
Fittings	Ductile iron AWWA C 153 when available or C 110 Under 4" PVC with 200 PSI rating allowable
Marking	Metallic marking tape placed 12" above pipe
Gate Valves	
Conformance	AWWA C 500
Material	Iron body, bronze mounted
Type	Resilient seat, non-rising stem
Pressure rating	150 PSI
Joints	Flange or mechanical joint end as required typically flanged to fitting, mechanical joint to pipe
Operating nut	2" square, open counterclockwise
Acceptable models	Mueller or Waterous (Only these products will be accepted by the Town)
Valve Box	
Type	Slip type, two piece 5¼", traffic rated
Base	Suitable for valve size and operating mechanism
Material	Cast iron, ¼" minimum wall thickness

Cover	Cast iron, traffic type, marked "WATER"
Location	All buried gate valves
Fire Hydrants	
Conformance	AWWA C 502
Material	Cast iron body, fully bronze mounted
Pressure rating	150 PSI
Type	Breakaway traffic w/easily replaced flange
Size	6" with 6" mechanical joint inlet, 5' minimum bury
Joints	Flange or Megalug O.A.E. restraints on mechanical joints
Outlets	Two 2½" hose nozzles, one 4½" pumper nozzle, all with National Standard Thread
Operating nut	1½" National Standard hex, open counterclockwise
Main shut off	Gate valve per specification above
Acceptable models	Mueller Modern Centurion (Only this model will be accepted by the Town)

Minimum Flow.

Design shall be based on an average peak flow of four (4) gallons per minute (gpm) per tap and eight (8) gpm per dead end for lines servicing five (5) or more taps. Instantaneous residential flow shall be assumed to be fifteen (15) gpm. fire flow in residential areas shall be at least one thousand (1,000) gpm. The required flow may be from more than one (1) hydrant provided the additional hydrants are accessible to all possible fire locations.

Commercial and industrial flows shall be designed based on the nature of the business using such references as Department of Health guidelines for sizing lines. The Town will have final review authority on all such lines. Fire flow in commercial and industrial areas shall be at least one thousand (1,000) gpm, and if the business has an above average hazard, the fire flow will be determined by the Town with assistance from the State Fire Marshal's office to ensure no detrimental impact on the fire rating of the Town.

All areas shall be designed to have a maximum static head of two hundred thirty-one (231) feet (one hundred [100] psi) with Town mains designed to have ninety (90) psi or less except for short distances. A minimum static head of one hundred three (103) feet (forty-five [45] psi) distribution systems shall be designed to maintain a thirty (30) psi residual pressure during required fire flow and peak residential flows. Pressure zones shall conform to existing Town zones as approved by the Town.

Line Size.

Size and location of all water lines shall be designed by a competent, licensed engineer and must be approved by the Town. The Town may, at its option, waive the requirement for an engineered design when the line is less than one hundred (100) feet and will serve less than five (5) residential taps. The minimum line size shall be six (6) inches except that four-inch mains may be installed on permanent dead ends less than one hundred fifty (150) feet long which serve three (3) or less houses and when a permanent flushing hydrant is provided. Any lines

that temporarily dead end and that will be tapped for service before being extended shall be provided with a temporary-flushing hydrant.

If the Town anticipates future expansion from the area which would require a larger main than that required by the proposed development, the Town will work with the applicant in determining an equitable breakdown for the additional cost (in most cases only the price difference for the increase in materials costs).

Water Line Looping.

Water mains shall be designed through subdivision so that a continuous loop is provided for an alternate source of water, better circulation and more even pressure. A variance of the alternate source looping requirement will be considered when the amount of pipe required to complete the loop will exceed seventy percent (70%) of the line required to serve the subdivision in accordance with Town specifications and the total cost of the water system extension will exceed three thousand dollars ($3,000.00) per tap plus inflation (based on 1992).

Valve Spacing.

A sufficient number of valves shall be provided on water mains so that inconvenience and sanitary hazards will be minimized during repairs. The water system for residential areas shall be designed so that only one (1) block need be closed off in the event of a water line break. Gate valves shall be placed at all pipe line intersections so that each segment of line can be isolated while minimizing the number of customers out of water. Where the line runs as a single segment for long distances, valves should be placed at least at one-quarter-mile intervals with more frequent intervals being required on larger lines and in densely populated areas.

Valves shall be placed at each fire hydrant and permanent flush hydrant. Air vacuum valves shall be installed at high points on primary feeders and where venting high points through a fire hydrant is not feasible on other mains.

Hydrants.

Fire hydrants shall be placed at the intervals recommended by the state insurance services office, generally, at five-hundred-foot intervals. Hydrants shall also be located to facilitate flushing and draining even if that necessitates reducing the spacing. Hydrant leads shall be a minimum of six (6) inches in diameter. Auxiliary valves shall be installed on all hydrant leads in conformance with typical drawings. Fire hydrant bottom valve size shall be at least five (5) inches. Nozzle size and threads shall be confirmed with the requirements of the fire district.

Hydrant weep hole and leach area shall not be connected to or located within ten (10) feet of sanitary sewers or storm drains. In cases where an existing sewer conflicts with a proposed hydrant leach area, the Town may allow concrete encasement of the sewer or other solution on a case by case basis.

Propylene glycol shall be the only antifreeze utilized for freeze protection of hydrants.

Cross Connections.

There shall be no connection between the distribution system and any pipes, pumps, hydrants or tanks whereby unsafe water or other contaminated materials may be discharged or drawn into the Town potable water system. Any interconnections between potable water supplies shall have prior written approval of the Town.

Service Connections.

The installation of service lines and taps will be performed by the Town public works staff, or with Town approval, under Town supervision. a three-quarter-inch tap shall serve residential lots. No direct taps will be allowed under any circumstances. Stainless steel tapping saddles of nonrigid construction shall be used on pvc pipe. Materials shall conform to materials specified in the standard specifications and installation according to typical water tap and meter installation drawings.

Service lines shall be installed perpendicular to the main and shall be located ten (10) feet inside the uphill property line. Any variance of this layout will require justification and approval of the Town. Meter cans shall be set in the public right-of-way at the property line or just to the street side of the sidewalk. Service lines shall be stubbed across the property line through the width of the utility easement with the end sealed with a watertight seal and marked full depth with a 2 x 4 painted blue and brought to grade.

Proximity Statement.

Water lines shall not be laid closer horizontally than ten (10) feet edge to edge from any existing or proposed sewer or other nonpotable pipe lines, and the water lines shall be at a higher elevation than the sewer. If this is not possible, separate trenches will be required, and the water line shall be at least eighteen (18) inches above the sewer. When water and sewer lines cross each other, the water line shall be at least eighteen (18) inches above the sewer. If this distance is less than three (3) feet, the sewer shall be of ductile iron for a distance of ten (10) feet each side of the crossing with no point closer than eight (8) feet from the crossing. If the sewer pipe is of concrete, clay or pvc, it shall be encased in concrete for a distance of ten (10) feet each side of the crossing or replaced with ductile iron pipe.

Force main sewers require a separation from the water main of at least ten (10) feet measured horizontally. There shall be a two-foot vertical separation at crossings as is required above. There shall be a casing pipe around the sewer pipe, and the ends of the casing shall have a watertight seal and have adequate structural support. No water pipe shall pass through or come within ten (10) feet of a sewer manhole unless absolutely unavoidable, in which case adequate protection as determined by the Town Engineer must be provided.

Testing.

Testing of water lines, services and appurtenances shall conform to the requirements of AWWA and the applicable standard specifications of the Town.

WATER, STANDARD SPECIFICATIONS - WATER LINE CONSTRUCTION

PART ONE - GENERAL

The water lines and appurtenances shall be constructed according to standard accepted practices and as specified herein. Reference to standard specifications, e.g., AWWA, ASTM, etc., made a portion of these specifications by reference shall be the latest edition and revision thereof. All water line improvements and additions must also comply with the Minimum Standards portion of this document, and all applicable Colorado Department of Health and EPA regulations.

Description.

This Section covers the furnishing, installation and testing of water distribution lines and appurtenances. the contractor shall furnish all equipment necessary for said work and testing.

The contractor shall follow the manufacturer's recommended procedures in all handling and installation operations. All water line improvement must also comply with the Town's Minimum Standards and all applicable codes, laws and regulations.

The Town will work with the contractor to establish in the field the final location for new lines, fittings, valves, hydrants, etc. The contractor shall make such excavations as are necessary to determine the exact location of existing utilities that affect new construction. Where practical, new lines shall be routed to facilitate installation and to minimize construction problems.

Related Work Specified Elsewhere.

Minimum Standards - Water Line Construction

Excavation, Backfill, and Compaction Specifications

Water Service Connections Specifications

Proximity Statement.

Water lines shall not be laid closer horizontally than ten (10) feet edge to edge from any existing or proposed sewer lines, and the water lines shall be at a higher elevation than the sewer. If this is not possible, installation shall be in accordance with the requirements of the Town Minimum Standards for water and Colorado Department of Health and uniform plumbing code requirements.

Force main sewers require a separation from the water main of at least ten (10) feet measured horizontally. There shall be a two-foot vertical separation at crossings as is required above. There shall be a casing pipe around the sewer pipe, and the ends of the casing shall have a watertight seal and have adequate structural support. No water pipe shall pass through or come within ten (10) feet of a sewer manhole unless absolutely unavoidable, in which case adequate protection as determined by the Town Engineer must be provided.

Water lines shall have at least five-foot horizontal separation from wire utilities.

PART TWO - PRODUCTS

All materials shall be new, unused and of the best standard quality available for the purpose intended. Where materials are specified by brand names, materials of equal quality may be substituted if the contractor submits adequate technical and descriptive data and secures the approval of the Town. The Town or its designated representative shall be the sole judge of the suitability and acceptance of materials. The Town in some instances may insist on a particular brand or model (to match materials in use) to minimize the parts inventory and/or O&M requirements. Pressure ratings listed are minimum requirements. When static pressures can exceed one hundred twenty-five (125) psi, higher-rated pipe, fittings and valves will be required by the Town based on field conditions.

Ductile Iron Pipe	
Conformance	AWWA C 151
Thickness	Class 50

Pressure rating	150 PSI
Joints	Rubber gasket integral bells or MJ AWWA C 111 with conductivity straps
Fittings	ANSI/AWWA C 153 when available or C 110
Coating	Polyethylene tubes and sealed with tape
Plastic Pipe (PVC) Water	
Conformance	AWWA C 900
Thickness	Class 150
Pressure rating	150 PSI
Joints	Rubber gasket, bell and spigot, integral bells
Fittings	Ductile iron AWWA C 153 when available or C 110 under 4", PVC with 200 PSI rating allowable
Marking	Metallic marking tape, located 12" above water line
Restraints	Megalug 2000 series & thrust block where restraint required
Gate Valves	
Conformance	AWWA C 500
Material	Iron body, bronze mounted
Type	Resilient seat, nonrising stem
Coating	Epoxy interior
Pressure rating	150 PSI, minimum
Joints	Flange or mechanical joint end as required typically flanged to fitting, mechanical joint to pipe
Operating nut	2" square, open counterclockwise
Acceptable models	Mueller or Waterous (Only these products will be accepted by the Town)
Valve Box	
Type	Slip type, 2- or 3-piece 5¼", as required, traffic rated
Base	Cast iron, ¼" minimum wall thickness
Material	Suitable for valve size, depth and operating mechanism
Cover	Cast iron, traffic type, marked "WATER"
Location	All buried gate valves
Fire Hydrants	

Conformance	AWWA C 502
Material	Cast iron body, fully bronze mounted
Pressure rating	150 PSI minimum
Type	Breakaway traffic with easily replaced flange
Size	6" with 6" mechanical joint inlet, 5' minimum bury
Piping	Ductile iron
Joints	Megalug O.A.E. restraints on mechanical joints
Outlets	Two 2½" hose nozzles, one 4½" pumper nozzle, all with National Standard Thread
Operating nut	1½" National Standard hex, open counterclockwise
Main shut off	Gate valve per specification above
Acceptable models	Mueller Modern Centurion (Only this model will be accepted by the Town)
Air Valves	
At high points in water mains where air can accumulate, provisions shall be made to remove air by means of air relief valves or other means approved by the Town. Air relief valves shall be placed in vaults that allow convenient service of the valve and provide for adequate drainage.	
Material	Cast iron body, ASTM approved materials
Pressure rating	150 PSI
Size	¾" minimum, sized by air flow requirements
Connection	¾" tapping saddle, tap at high point in line
Main shut off	Corporation stop
Support	Support weight so it is not transferred to the waterline
Vent	12" above ground, pointed downward, covered with #24 mesh
Acceptable models	APCO or Valmatic automatic valves, cross connection control valves

Cross Connection Control Valves.

Where there is a potential of backflow, either backpressure or backsiphonage, of a hazardous liquid into the potable water supply, the hazardous liquid shall be isolated from the potable supply by a backflow prevention device such as a reduced pressure principal device (RP) or a pressure or atmospheric vacuum breaker depending on the location and nature of the hazard. The Town shall approve the type of device to be installed. All cross

connection control devices shall meet the standards of the Foundation for Cross Connection Control and Hydraulic Research. The valve shall be used only as recommended by the Foundation, and installation shall be in accordance with its recommendations. A list of currently approved devices and valves is available from the Colorado Department of Public Health and Environment. Valves shall be installed in vaults that allow for convenient testing and maintenance of the valves.

Miscellaneous Valves.

Plans for all large valves, pressure-reducing valves and other specialized valves shall be submitted to the Town for review and approval. In all cases, such valves shall be installed in vaults or pits that are sufficiently large enough to accommodate all operation and maintenance required. Bypass lines are required.

PART THREE - EXECUTION

Field Locations.

The Town will work with the contractor to establish in the field the final location for new lines, fittings, valves, hydrants, etc. The contractor shall make such excavations as are necessary to determine the exact location of existing utilities that affect new construction. Where practical, new lines shall be routed to facilitate installation and to minimize construction problems.

Service Disruption.

Service disruption shall conform to the requirements in the general requirements. When possible, any construction operations which will result in disruption of services to residential consumers, shall be done between the hours of 10 a.m. and 4 p.m. or 11 p.m. to 4 a.m. Notice of the time and day of the shutoff and the estimated length of the time the utility will be out of service should be given to affected consumers twenty-four (24) hours in advance in accordance with general requirements. When unexpected disruptions in service occur, the contractor shall notify consumers as expeditiously as possible as to when service will be restored.

Receiving, Handling and Storage.

Upon receipt, make an overall inspection that the pipe has been received in good condition. Pipes should be inspected for any damage or imperfections, and problem joints should be set aside. The Town reserves the right to inspect all materials received and reject any which does not meet the requirements of Town specifications and standards.

Pipes should be unloaded, handled and stored in accordance with manufacturer's recommendations. Pipes shall be handled during all phases of construction in a manner that will provide the maximum protection of the pipe and any coating or lining and will prevent the intrusion of dirt or other foreign materials into the pipe. All slings, hooks and other lifting or handling equipment which comes in contact with pipes and appurtenances shall be padded. Dropping the pipe during unloading or placing in the trench is prohibited and will be cause for rejecting that material.

Only the amount of pipe and fittings necessary to ensure efficient installation progress shall be strung along the trenches. All other pipe and fittings shall be stored in the contractor's yard. Piping strung or stored shall be protected at all times from damage by traffic, workmen, construction operations and other hazards. PVC pipe stored for a prolonged period of time shall be protected from sunlight.

Alignment and Grade.

Pipe shall be laid and maintained to the required line and/or grade shown on the approved plans with fittings, valves and hydrants at the required locations with spigots centered in the bells. Changes in horizontal or vertical alignment of the pipe at a joint shall not exceed the manufacturer's recommended deflection for the type and size pipe being laid. When the change required is more than that recommended, a fitting or several short joints of pipe shall be used. All changes in direction in excess of eight (8) degrees shall require a fitting, unless otherwise approved by the Town.

When new pipe is to be connected to an existing pipe or when crossing existing pipe line, the contractor shall excavate the existing lines well in advance of the laying of the new line to enable the Town's representative to verify their elevation and placement and to make any adjustments in grade and/or alignment of the new pipe line that may be required.

The contractor shall proceed with caution in the excavation and preparation of the trench so that the exact location of underground structures, both known and unknown may be determined, and he or she shall be held responsible for the repair or replacement of such structures when broken or otherwise damaged. The contractor at his or her expense shall furnish temporary support, adequate protection and maintenance of all underground and surface utility structures, drains, sewers and other structures encountered in the progress of the work.

Whenever obstructions are encountered during the progress of the work and interfere to such an extent that an alteration in the approved plans is required, the contractor shall notify the Town, and the Town shall have the authority to change the plans and order a deviation from the line and/or grade or arrange with the owners of the structures for the removal, relocation or reconstruction of the obstructions.

All pipes shall be laid to the depth shown on the approved plans or pipeline typical drawing. The depth of cover shall be measured from the top of the barrel of the pipe to the established finished grade of the street, unless changes in street grade are proposed, in which case the cover shall be measured to the proposed depth.

Excavation and Trench Preparation.

Excavation shall be in accordance with Trench Excavation, Compaction and Backfilling Standard Specifications except as more stringent requirements are outlined herein.

Pipe Laying.

Lowering pipe into trench: proper implements, tools and facilities shall be provided and used by the contractor for the safe and convenient performance of the work. All pipe, fittings, valves and hydrants shall be carefully lowered into the trench piece by piece by means of a derrick, ropes or other suitable tools or equipment in such a manner as to prevent damage to pipe and fittings. Under no circumstances shall the pipe or accessories be dropped or dumped into the trench.

Inspection before installation: The pipe and accessories shall be carefully inspected for cracks and other damage before installation into the final position. The Town, who will determine if the material shall be repaired or rejected, shall set defective or unsound material aside for inspection. The contractor from the job shall remove rejected materials.

Keeping pipe clean: Every effort shall be made to keep the interior of pipes and fittings clean during all phases of construction. This is especially important if the tablet method of disinfection is to be allowed. The interior of the pipe shall be thoroughly cleaned of foreign material before being lowered into the trench and shall be kept clean during operations by plugging or other approved means. Fittings shall be thoroughly cleaned with a wire brush, if necessary. If the pipe laying crew cannot keep pipe clean while placing the pipe in the trench, the

Town may require that the ends of the pipe be covered before placing it in the trench and that the covers only be removed as the joints are assembled. The Town may require swabbing if cleanliness is in question.

Laying of pipe: The full length of each section of pipe shall rest solidly upon the bed with recesses excavated to accommodate bells and joints. Pipe shall be laid with bell ends facing the direction of laying unless directed otherwise by the Town. Pipe laid on slopes ten percent (10%) and steeper shall be laid from the bottom and proceed upward and have restraints approved by the Town. Pipe shall not be laid in water or when trench or weather conditions are unsuitable for the work unless expressly permitted by the Town.

The subgrade upon which the pipe is placed shall consist of materials suitable for supporting the pipe without excessive settlement or stress development. Fine earthen materials shall be carefully placed and compacted around the pipe and up to a depth of six (6) inches over the top of the pipe. Care shall be taken in backfilling to see that the pipe is not displaced, crushed, cracked or otherwise damaged. In the event that rock or excessively spongy materials are encountered, they shall be removed to a depth of not less than six (6) inches below the bottom of the proposed lines and replaced with an approved material and mechanically compacted to grade. If no suitable subgrade material is available from the upper portion of the excavation, approved material shall be imported to the job site.

The sealing surface of the pipe, the bell to be joined and the elastomeric gaskets shall be cleaned immediately before assembly. Assembly shall be made as recommended by the manufacturer. Unless otherwise directed, the gasket and the bell or the plain end of the pipe to be jointed shall both be lubricated with a suitable soft vegetable soap compound. The spigot end shall be centered in the bell and the pipe forced home and brought to correct line and grade. Pipe that is not furnished with a depth mark shall be marked before assembly to assure that the spigot end is inserted to the full depth of the joint. Care shall be taken to ensure that no damage is done to the pipe, collar, gasket or bell when the pipe is being homed. Any pipe that has had the grade or joint disturbed during or after laying shall be taken out and relaid.

Any section of pipe, fittings, valves or hydrants already laid and found to be defective shall be taken up and replaced without additional expense to the Town.

Flange and mechanical joints shall be made with properly sized machine bolts and nuts. All nuts and bolts utilized in underground connections shall be stainless steel, coated high-strength cast iron or coated high-strength wrought iron depending on soil conditions. All components of these types of joints shall be cleaned before joining. Only one (1) gasket will be permitted in a flange joint. In a mechanical joint, the plain-end pipe shall be fully seated before the gland and gasket is slipped up to the bell. Care shall be taken to locate the gasket evenly around the entire joint. Alternating nuts one hundred eight (180) degrees apart shall tighten all nuts on both types of joints by hand first. Deflection at a mechanical joint shall not exceed either the manufacturer's recommendation or Table 1 in AWWA C 600. Buried bolts and nuts on mechanical and flanged joints shall be covered with a double layer of four-millimeter plastic and taped closed.

When work is not in progress, open ends of pipe shall have a watertight plug to prevent entry of foreign materials and/or water. If there is water in the trench, the seal shall remain in place until the trench is pumped completely dry. Whenever water is in the trench, enough backfill shall be placed on the pipe to prevent floating. Should any foreign material be allowed to enter the line or to remain in the line after installation, the contractor shall remove such accumulation with a pipeline scraper or other approved means. Should the contractor repeatedly fail to prevent dirt or other material from entering the line, he or she will be required to clean each section of pipe with a pipeline scraper or swab as it is installed. If pipeline cleanliness is in question, the tablet method of disinfection will not be permitted.

Sequencing: Pipeline installation shall follow trench excavation within one hundred (100) lineal feet. Trench backfill shall follow pipe installation to within one hundred (100) lineal feet. Approved cleanup shall follow trench excavation to within one hundred (100) lineal feet. The Town may allow changes in these requirements if field conditions warrant.

Cutting of Pipe: The pipe shall be cut in a neat and workmanlike manner in accordance with manufacturer recommendations. No damage shall be done to the pipe or any lining or coating, and the cut shall leave a smooth end at right angles to the axis of the pipe. Flame cutting of iron pipe by means of an oxyacetylene torch shall not be allowed.

Connection to and Crossing of Existing Lines: When new pipe is to be connected to or cross existing pipe, the contractor shall excavate the existing line well in advance of the laying of the new line to enable the Town's representative to verify elevation and placement and to allow for approval of any changes in grade and/or alignment of the new pipe line that may be required. Connections to existing lines shall be made at the locations shown on the approved plans unless the Town approves changes. Coordinate timing of the cut with the Town and provide required notice to affected customers. In cutting the existing pipe, take great care to minimize contamination of existing line. Keep water level in the trench below the level of the pipes. Make connection using required fittings and restrain the joint. Disinfect the line as called for below for a repaired line. Cut off and seal the abandoned section.

Crossings: Details for crossing roadways, canals, ditches and arroyos (draws) are covered in a separate specification entitled "Crossings". All river and canal crossings shall be submitted to the Town for specific review and approval.

Setting of Fittings, Valves and Hydrants: All hydrants, valves, plugs, caps and fittings shall be provided as shown on the approved plans and set and joined to the pipe in the manner specified herein for cleaning, laying and joining pipe.

Dead Ends: All unconnected ends of pipe shall have a valve, plug or cap installed with appropriate restraint. In general, plugs shall be inserted into the bells of all dead-end fittings. Spigot ends of accessories, fittings and plain ends of plastic pipe shall be capped. A reaction or thrust block shall be provided at all dead-ends of pipe.

Thrust Blocks: A reaction or thrust block shall be provided at each bend, tee, valve, hydrant, plug and at reducers or fittings where changes in pipe diameter or direction occur. The size and shape of the thrust blocking shall be as shown on the typical drawing. Concrete shall be a 5½ sack, 3000 psi at twenty-eight (28) days mix approved by the Town. Maximum water in concrete shall be 5½ gallons per sack of concrete. The concrete shall be poured between the pipe and the undisturbed wall of the trench. The concrete shall be placed in such a manner that no concrete is in contact with any bolts or nuts on the fitting, etc., so that the pipe and fitting joints will be accessible for repair. Typically, the joints shall be wrapped with plastic and taped closed. If the connection is to be pressurized before the concrete has time to achieve adequate strength, a joint restraint system such as Megalugs shall also be provided.

Valves and Valve Boxes: Gate valves shall be installed as shown on the Town typical drawing and in accordance with the Minimum Standards adopted by the Town. In general, a valve shall be provided on each branch of a tee or cross. Care shall be taken to assure that the valve and box are plumb and that the valve box is properly supported on a concrete base and adjusted for the correct finished grade. A box shall be provided for each buried valve, and the box shall not transmit shock or stress to the valve and shall be centered over the valve nut.

Hydrants: Hydrants shall be located as shown on the approved plans. Final location will be approved by the Town in the field and should provide complete accessibility and minimize the possibility of damage from vehicles or injury to pedestrians. Hydrants shall be accurately set to the proper bury lines so that bolts are accessible and shall be securely anchored when it is plumb. A gravel fill shall be placed around the hydrant barrel drain port as shown on the typical drawings. Each hydrant shall be connected to the main with a six-inch minimum diameter branch controlled by an independent six-inch gate valve, installed in accordance with the typical drawings for hydrant and gate valve installation adopted by the Town. The contractor in the presence of the Town shall test each hydrant by operating it through several open and close cycles.

Air Valves: Air valves shall be installed in all locations where air is likely to accumulate in the water line, most often at high spots in the line. A tap shall be made in the top of the line and a corporation stop installed in the tap.

The line shall then be connected to an air valve installed in a manhole or vault that meets the requirements of the material specifications above and shall be installed in accordance with the standard drawing adopted by the Town. The valve shall be installed at four (4) feet below finished grade. A frost-free lid shall be provided. Adequate insulation shall be installed around the valve to protect it from freezing.

Cross connection Control Valves: Cross connection control valves shall be installed in a manner that conforms to the recommendations of the Foundation for Cross connection Control and Hydraulic Research and shall have sufficient space around and access to the valve to allow for proper testing.

Vaults: Vaults, where required, shall be of concrete with minimum wall thickness of six (6) inches or the minimum required to properly encase the re-enforcing steel required by the structure. The vault shall be of such size as to allow easy operation and maintenance of the equipment contained therein. A twenty-four-inch minimum access hatch shall be provided over the manway steps to allow access to the vault. Vaults shall include either a floor drain or sump depending on groundwater conditions.

Concrete Encasements: Concrete shall be the same as for thrust blocks. Prior to placing the concrete for cradles or encasement, temporary supports consisting of concrete blocks or bricks shall be used to support the pipe in place. Size and frequency of such support shall be the minimum that will support the pipe. No encasement shall be poured until the Town has inspected and approved the pipe to be encased and its support.

Bedding and Compaction.

Bedding, backfilling and compaction shall be in accordance with Excavation Backfill and Compaction Standard Specifications of the Town and pipe manufacturer's specification. Special attention shall be given to placing and compacting select bedding material in the pipe zone. The haunching on PVC pipe shall be compacted to nine percent (9%) Standard Proctor. Backfill shall not be wheel compacted until there is a minimum of thirty-six (36) inches of compacted cover over the top of the pipe.

Hydrostatic Testing.

The contractor shall be required to perform hydrostatic tests on all water mains, laterals, dead ends and service lines in accordance with AWWA specifications C600. Prior to making the test, the contractor shall advise the Town of the time and place of the test so that adequate inspection can be provided. Prior to performance of the test, the pipeline shall be completely filled with water for a period of twenty-four (24) hours.

The test shall be conducted in the presence of the Town or its authorized representative. The testing of the lines shall be done without being connected to existing lines unless approved by the Town. All necessary apparatus for pressure testing, including the pump, pipe connection, gauges and measuring devices shall be furnished by the contractor at no cost to the Town. If the Town allows connections to the existing lines, it is with the understanding that the contractor assumes any and all responsibility in case of damage or failure of the existing system. Leakage through connections to the existing system, leaks in the existing lines or leaking valves under the test pressure will invalidate the test and required the contractor to find another means to test the line.

Prior to testing, all air shall be bled from the lines. If permanent air vents are not located at all high points, the contractor shall install corporation cocks at such high points so the air can be expelled as the line is filled then the corps closed. The lines shall be tested at 150 psi or one and one-half (1½) times the normal working pressure of the lines, whichever is greater, for not less than two (2) hours when performing the combined pressure and leakage test. Test pressure shall be measured at the high point in the line. All taps, gauges and necessary equipment shall be provided by the contractor as approved by the Town; however, the Town may utilize its own gauges if it so elects. Each section of the new line between valves shall be tested to demonstrate that each valve will hold the test pressure.

No pipe installed will be accepted if the leakage is greater than that determined by the following formula:

N*D*/P

L= ——

7400

Where:

L = allowable leakage (gal/hr)

N = number of joints in the line

D = nominal pipe diameter (inches)

P = test pressure (psi)

During the test, the test pressure shall not lose more than ten (10) psi without being pumped back up to the test pressure. The total gallons of water required returning the line to the test pressure at the end of the test period is the total leakage. If the total leakage is less than the allowable, the line can be given preliminary acceptance. All visible leaks will be repaired regardless of the amount of leakage. If leakage exceeds that allowed based on the above formula, the contractor shall identify problems, make repairs and repeat the test until the leakage is less than or equal to the allowable leakage.

When separate pressure and leakage tests are to be performed, test procedures shall conform to the procedures detailed in AWWA C600. The duration of the pressure test shall be a minimum of one (1) hour, and the duration of the leakage test shall be a minimum of four (4) hours.

Each gate valve shall be tested to ensure that it operates properly and provides watertight seal under one and one-half (1½) times operating pressure in the closed position.

Disinfection of Potable Waterlines.

General: Flushing and disinfection of potable waterlines shall be done in accordance with the procedure set forth in AWWA C601, Disinfecting Water Mains. All waterlines and sections of waterline that have been exposed, including lines owned by other parties must be disinfected. The contractor shall provide all temporary blow offs, pumps, chlorination equipment, chlorine and all other necessary apparatus required. The placement of powder chlorine in each joint of pipe will not be allowed.

Pipe Cleaning: If the pipe contains dirt or heavy encrusted matter that, in the opinion of the Town Engineer, will not be removed during the flushing operation, the contractor shall clean and swab the interior of the pipe with a five percent (5%) chlorine solution.

Preliminary Flushing: The pipeline shall be flushed prior to disinfection, except when the tablet method is used, to remove all remaining foreign material. The flushing operation shall develop a minimum velocity of five (5) feet per second for five (5) minutes minimum through the length of the pipe. If dirt cannot, in the opinion of the Town Engineer, be removed by flushing, the pipe shall be cleaned and swabbed with a five percent (5%) hypochlorite disinfecting solution.

Chlorine Application: In general, chlorine shall be applied using the continuous feed method. The tablet method may be used on short extensions (up to two thousand five hundred [2,500] feet) of small diameter mains (twelve-inch and smaller).

Continuous Feed Method: Introduce water into the line at a constant rate while adding chlorine at a minimum concentration of fifty (50) milligrams per liter. Maintain the chlorinated water in the pipeline for a minimum of twenty-four (24) hours, after which period the treated water shall contain no less than twenty-five (25) milligrams per liter of chlorine throughout the entire length. Repeat the above procedure if the residual at the end of the twenty-four (24) hours fails to meet the minimum concentration.

Tablet Method: This method shall not be used if trench water or foreign material has entered the line or if the water is below five (5) degrees C (forty-one [41] degrees F). Because preliminary flushing cannot be used with this method, the tablet method shall only be used when scrupulous cleanliness has been exercised. Place tablets in each section of pipe in sufficient number to produce a dose of fifty (50) milligrams per liter. Refer to Table 3 of AWWA C601 for the required minimum number of tablets (two [2] tablets for six-inch pipe and three [3] for eight-inch pipe in twenty-foot joints). All tablets within the main must be attached at the top of the pipe with an adhesive appropriate for potable water. Tablets shall also be placed on all hydrants. Introduce water into the pipeline at a rate no greater than one (1) foot per second, and retain the water in the pipeline for a period of twenty-four (24) hours. The minimum residual shall be five (5) milligrams per liter throughout the line.

Disinfecting Existing Mains: The procedure outlined in this section applies primarily when mains are wholly or partially de-watered. Leaks or breaks that are repaired with clamping devices while the mains remain full of water under pressure present little danger of contamination and may not require disinfection.

When an old line is opened, either by accident or by design, the excavation is likely to be wet and could be contaminated. Liberal quantities of hypochlorite applied to open trench areas will lessen the danger from such pollution. Tablets have the advantage in such a situation because they dissolve slowly and continue to release hypochlorite as water is pumped from the excavation.

The following procedure is considered the minimum that may be used:

Swabbing with Hypochlorite Solution: The interior of all pipe and fittings used in making the repair (particularly couplings and tapping sleeves) shall be swabbed with a five percent (5%) hypochlorite solution before they are installed.

Flushing: Thorough flushing is the most practical means of removing contamination introduced during repairs. If valve and hydrant locations permit, flushing from both directions is recommended. Flushing shall be started as soon as the repairs are completed and continued until discolored water is eliminated. Lines shall be flushed in a manner which will not cause any environmental harm or any damage to property.

Where practicable, in addition to the above procedures, a section of main in which the break is located shall be isolated, all service connections shut off and the section flushed and chlorinated as described for new lines, except that the dose may be increased to as much as five hundred (500) milligrams per liter and the contact time reduced to as little as one-half (½) hour. After chlorination, flushing shall be resumed and continued until discolored water is eliminated and chlorine concentration is equal to that in the system.

Bacteriologic samples shall be taken after repairs to provide a record by which the effectiveness of the procedures can be determined. If the direction of flow is unknown, samples shall be taken on each side of the main break.

Final Flushing: After the required retention period, flush all heavily chlorinated water from the main until the chlorine concentration is no higher than that prevailing in the system or less than one (1) milligram per liter. When the tablet method has been used, provide a flushing velocity equal to that of the preliminary flushing specified above.

Bacteriologic Tests: After completion of the final flushing and prior to placing the pipeline in service, collect samples from the end of the line and test for bacteriologic quality to show the absence of coliform organisms. The number and frequency of samples shall conform to the requirements of the public health authority having jurisdiction, but in no case shall the number be less than one (1) for chlorinated supplies and two (2) collected twenty-four (24) hours apart for unchlorinated supplies. Collect samples in steri1e bottles from a standard corporation stop installed in the main. Do not collect samples using a hose or fire hydrant. Sterilize the corporation stop prior to sampling.

Repetition of Procedure: If the original disinfection fails to produce satisfactory samples, repeat the disinfection procedure until satisfactory results are obtained.

WATER, STANDARD SPECIFICATIONS - WATER SERVICE CONNECTIONS

PART ONE - GENERAL

Work Included.

Water service connections shall be installed as designated on the approved plans. These shall be served off the water line parallel to their property line unless otherwise indicated. Service lines shall be perpendicular to the main unless otherwise approved by the Town. Installations shall be in accordance with details shown on the standard drawing.

Service connections for all pipe diameters and classes shall be made by means of a saddle with a corporation stop. There shall be no direct taps.

Related Work Specified Elsewhere.

Excavation and Backfilling.

Water Line Construction.

PART TWO - PRODUCTS

The Town has, based on experience, selected the specific products listed below for the quality of the specific products and models. These are the same products that are used by the Town in Town-constructed installations. Unless specifically stated for a particular product, alternate products will not be accepted.

Corporation Stops.

Corporation ball stops shall be of all bronze with individually lapped ground keys. Inlet shall be Mueller pipe thread. Outlet shall be for use with copper tubing, flared or compression joints. Stops shall be Mueller H-15000, Ford FB600, Hayes or an approved equal.

Service Saddles.

Service saddles shall be cast ductile with painted steel double strap, with an O-ring gasket seal on the main. Gaskets shall be neoprene. saddles shall be Romac style 202. No direct taps will be allowed.

Angle Meter Valve.

Inverted key angle meter valve Ford BA23-332W, copper by meter coupling with padlock wings and ball valve.

Yokes.

Ford Model VBHC82W with dual check anti-backflow valve, ball valve, padlock wings, dual-purpose connection or Mueller equivalent only.

Meter Cans.

Sonoco twenty (20) inches in diameter and forty-eight (48) inches tall.

Lids.

Ford with frost-proof no. W4 Wabash style double lid cover with large (11/32") pentagonal bolt.

Service Pipe

Pipe for water service shall be type "k" copper tubing conforming to ASTM B-88-62 or polybutylene conforming to ASTM and NSF standards for potable water service unless other types of tubing are specified on the drawings.

Reduced Pressure Backflow Preventive.

Backflow device for three-quarter (¾) inch and one (1) inch service shall be a Febco 825Y Reduced Pressure Device and shall be installed in the main water service meter can. For services greater than one (1) inch, the reduced pressure device and its installation will be subject to review and approval by the Town.

Meter.

Residential meters shall be five-eighths inch by three-quarter inch (⅝" x ¾"), piston magnetic drive consisting of three (3) main components, main case, measuring chamber and hermetically sealed register. The case shall be bronze, and the register shall read in gallons with ten (10) gallons per revolution. (Frost protection will be required, so bottom plates of cast iron or equal will be required.) Inlets and outlets are to have iron pipe threads. Meters shall be Sensus SRII to match existing meters.

Pressure Regulators.

Pressure regulators with strainers shall be installed on the mainline side of meters when the pressure through the meter will exceed eighty (80) psi. Regulators will be diaphragm type, easily field adjustable for pressure and shall be accessible for repair without removal from the pipeline. Unless otherwise approved, regulators shall be preset at fifty (50) psi. a "y" type strainer with plug and screen removable without removing the strainer or regulator shall be installed at the inlet end of each regulator.

PART THREE - EXECUTION

General.

All water services shall be stubbed out through the utility easement. Generally meters shall be set at property line. When sidewalks are set close to property line, meters shall be set in the green belt near the

sidewalk. In town, in all cases, owner responsibility for the service line shall begin at the meter. Out-of-town responsibility will be begin at the connection to the Town-owned main.

Installation of service lines shall be by open cut, unless otherwise approved in writing by the Town, with bedding, backfill and compaction in conformance with Standard Water Line Specifications and Standard Specifications for Excavation, Backfill and Compaction.

Depth of Bury.

All water services shall have a minimum of five (5) feet of bury.

Meter Lid Elevation.

The lid for the meter can boxes shall be sufficiently high enough to be readily visible but shall be adjusted to blend to finished grade of the surrounding property and landscape.

Installation.

Care shall be taken in laying the service line to prohibit kinks in the line. In placing backfill around pipe, use only select materials which will bed and support the pipe and not cause damage to it.

Copper tubing shall only be cut and flared with tools especially designed for those purposes.

SEWER, SEWER SYSTEM SPECIFICATIONS - MINIMUM DESIGN STANDARDS

Plan Approval.

In addition to the requirements for plan approval in the general requirements, the plans shall clearly show the lots and blocks to be served and the location of the sanitary sewer mains with reference to property lines. All service "y's" shall be stationed for proper control and future location. Profiles shall give dimensions, grade, rim elevations and invert elevations into and out of the manholes of the sewer to be constructed. The plan view shall include topographic information with at least five-foot contours for all lots in the service area.

Design Flow.

The design shall include consideration for providing service to the entire area tributary to the out-fall point. Estimates of residential sewage contribution shall be based on seventy-five (75) gallons per capita per day with a peak hour factor of two and one-half (2½). Minimum residential population density shall be figured on a basis of three and one-half (3½) persons per house, three and one-half (3½) houses per acre and seventy percent (70%) of total land area developed as residential unless otherwise zoned, subdivided or restricted.

Institutional, commercial and industrial sewage contribution estimates shall be based on the design criteria set by the Colorado Department of Public Health and Environment with review by the Town. Allowance shall be made for infiltration flow of two hundred fifty (250) gallons per day per inch diameter per mile of pipe. Design flow shall be the sum of the peak flow as computed above and the flow due to infiltration as determined above or by actual field experience, if worse.

Sewers fifteen (15) inches in diameter and smaller shall carry the design flow at a maximum flow depth of one-half (½) the pipe diameter. Sewers eighteen (18) inches in diameter and larger may be designed to flow up to three-quarters (¾) full at design flow rate. The minimum velocity at the design flow rate shall be two (2) feet per

second (fps). Where actual flow will be much below normal for several years, the minimum velocity shall be achieved by suitable grades at the partial design flow.

Piping Details.

Piping materials shall meet the requirements specified in the standard specifications for sewer mains. In most cases, pipe shall be SDR 35 PVC. Use of materials other than PVC pipe shall be permitted only with prior approval of the Town.

Normally sanitary sewer mains shall be eight (8) inches in diameter or larger to facilitate maintenance. Service connections shall be four (4) inches in diameter or larger. Six-inch sewer mains may be installed under special conditions where two (2) or three (3) residential connections will be made to the line, if approved by the Town. Smaller force mains may be used under certain conditions with approval of the Town.

The following minimum grades shall apply unless hydraulic (flow) requirements above supersede the grade criteria:

Sewer Diameter	***Minimum Grade (percent)***
4-inch	2.0 or ½ inch per foot
6-inch	0.64
8-inch	0.40
10-inch	0.28
12-inch	0.22
15-inch	0.15
18-inch or larger	As approved by the Town

When pipe is exclusively PVC, the minimum grade can be reduced by approximately twenty percent (20%) with approval by the Town.

Under special conditions, slopes slightly less than those required for the two-feet-per-second velocity when flowing full may be permitted. Such decreased slopes will only be considered where the depth of flow will be three-tenths (0.3) of the diameter or greater for design average flow. Whenever such decreased slopes are selected, the design engineer must furnish, with his or her report, computations of the depth of flow in such pipes at minimum, average and daily or hourly rates of flow. It must be recognized that decreased slopes may cause additional sewer maintenance expense, and if in the Town's opinion the expense will be excessive, it will not permit the reduced slopes.

Sewer on slopes of twenty percent (20%) or greater shall be anchored securely with concrete anchors or equal. Spacing shall be not over thirty (30) feet on center for slopes from twenty percent (20%) to thirty-five percent (35%) and not over twenty (20) feet for slopes thirty-five percent (35%) to fifty percent (50%). Where velocities greater than fifteen (15) feet per second are attained, special provisions shall be made to protect against displacement by erosion and shock.

Manholes shall be provided at every change in direction or grade, or connection with other sewer main; maximum spacing shall be four hundred (400) feet for lines fifteen (15) inches or smaller and four hundred fifty (450) feet for lines eighteen (18) inches and larger. A minimum of one-tenth (0.10) foot drop shall be provided in manholes with a maximum change in direction of forty-five (45) degrees for lines eighteen (18) inches and larger

and two-tenths (0.20) feet for changes in direction greater than forty-five (45) degrees. For lines less than eighteen (18) inches, one-tenth (0.10) foot of fall through the manhole is required for changes in direction of less than sixty (60) degrees and two-tenths (0.20) feet for greater than sixty (60) degrees. Sewer lines shall be straight and not curved between manholes in both line and grade. Manholes shall be stubbed out with suitable size pipe wherever future extension of the sewer is anticipated. Services six (6) inches in diameter and greater shall enter the sewer main at a manhole.

Provide a flexible joint in the pipe twelve (12) to eighteen (18) inches from all manhole walls and other solid structures.

Cleanouts may be provided instead of a manhole at dead ends if the total length above the last manhole is less than fifty (50) feet and serves a maximum of two (2) residential connections. Where underdrains are to be constructed under sewer mains (or other locations), cleanouts or manholes shall be provided at each manhole or at four-hundred-foot maximum intervals for the underdrain. The Town must approve use of drop manholes. In general, drop manholes should be provided when the change in elevation through the manhole is in excess of twenty-four (24) inches.

Minimum cover on sewer mains shall normally be eight (8) foot to ground surface. Bury of seven (7) to fourteen (14) feet is considered normal. Depths outside this range will require specific approval of the Town.

Service Connections.

Full body "y's" shall be provided in the sewer main for service connections at each building site located inside the property line a minimum of five (5) feet and shall be shown on the plans. Whenever possible, service lines shall be installed perpendicular to the main and shall be located ten (10) feet inside the downhill property line. Tapping saddles will only be allowed with approval of the Town for circumstances that necessitate their use. Fittings shall be angled upwards so that the upper invert of one-eighth (⅛) bend connected to the fitting will have an elevation equal to or higher than the inside crown of the sewer main. Service lines shall be stubbed across the property line through the width of the utility easement and the end sealed with a watertight seal and marked with a 2 x 4 brought to grade. Minimum cover for service lines shall be three (3) feet at property line where there will be no basements. Minimum slope of four-inch service lines shall be two percent (2%). Riser connections shall be installed where the elevation of the top of the fitting is more than twelve (12) feet below finished ground surface. See standard specifications and typical drawing for more detail on service stub-ins and connections.

Sewer mains shall be extended to a point at least ten (10) feet up from the lowest lot corner adjacent to the sewer main of the uppermost lot to be served and terminate in a cleanout or manhole. Service connections will not be allowed at manholes except when the diameter of the service line is fifty percent (50%) or more of the main in which case a special manhole shall be added for that purpose. Only with the approval of the Town may service connections be allowed immediately above or below a manhole.

Construction.

In general, construction shall conform to the standard specifications for sewer mains and for manholes as well as with the excavation and backfill specifications. Select bedding shall extend from six (6) inches below the pipe barrel to spring line (half way up the pipe). Compaction in this region is critical to support the pipe and must be ninety-five percent (95%) Standard Proctor. The first one (1) foot of backfill over the pipe shall be hand placed, hand compacted and select material as defined in the excavation and backfill specifications.

In places where the sewer has less than four (4) feet of cover, provisions shall be made to protect the pipe from impact loading. An approved cutoff wall shall be constructed on the lower side of crossings such as under open ditches, canals or creeks to prevent water from following the sewer trench. Where design velocities exceed fifteen (15) fps, special provisions shall be made to protect against pipe displacement by shock or erosion.

Underdrains, where required, shall be formed by substituting one and one-half (1½) inch well graded washed rock or gravel for the sewer pipe bedding and covering the sewer pipe and bedding with plastic sheeting or geotextile appropriate to the application and approved by the Town.

Protection of Water Supplies.

There shall be no physical connection between a public or private potable water supply system and a sewer or appurtenance thereto which would permit the passage of any sewage or polluted water into the potable supply.

Whenever possible, sewer mains and service lines should be laid at least ten (10) feet, horizontally, from any existing or proposed water main. Should local conditions prevent a lateral separation of ten (10) feet, a sewer may be laid closer than ten (10) feet to a water main if it is laid in a separate trench or it is laid in the same trench with the water mains located at one (1) side on a bench of undisturbed earth with at least five (5) feet of horizontal separation. Unless there is at least ten (10) feet horizontal separation, the elevation of the crown of the sewer must be at least eighteen (18) inches below the invert of the water main.

Whenever sewer lines must cross under water mains, the sewer shall be laid at such an elevation that the top of the sewer is at least eighteen (18) inches below the bottom of the water main. When the elevation of a sewer cannot be buried to meet the above requirement, the water main may be relocated to provide this separation or the sewer pipe shall be encased by either a single joint of PVC or ductile iron pipe for a distance of ten (10) feet on each side of the sewer. When possible, one (1) full length of water main shall be centered over the sewer so that both joints will be as far from the sewer as possible.

When sewer lines or services cross above water mains or services, the water mains must be protected at a minimum by installation of an impervious and structural sewer (e.g., ductile iron pipe or heavy walled PVC pipe) and/or impervious and structural encasement for a distance of ten (10) feet on each side of the water pipe. In all cases, there shall be no joints within ten (10) feet on each side of the water line. When the sewer line is above the water, then a casing shall be required, and the ends of the casing shall be sealed in a watertight manner with a reducing no-hub gasket or other approved method. Both lines should be pressure tested to assure they are watertight.

There shall be a minimum clear distance vertically of eight (8) inches between the uppermost part of the lower utility and the lowermost part of the upper utility, including casings, to allow for proper bedding. In all cases, suitable backfill or other structural protection shall be provided to preclude settling and/or failure of any of the pipes.

The Town shall have final review authority of all proposed designs that do not provide adequate separation. These requirements for protection of the water system against contamination from nonpotable water conveyances shall apply equally to water mains and service connections.

Miscellaneous Requirements.

Rain water leaders, roof drains, surface drains or ground water drains shall not be connected to the sanitary sewer. Each sanitary sewer service system shall be separate from the drainage system.

Grease and sand/oil traps shall be installed where required by the provisions of the Colorado Uniform Plumbing Code or determined to be necessary by the Town Building Official and/or Engineer to protect the Town sewage collection and treatment facilities. Grease and sand/oil traps shall be maintained in accordance with good operating practice so as to prevent grease and sand/oil from being discharged to the Town collection system. Improperly maintained grease traps are a hazard to safety, health and public welfare.

Testing.

Testing of sewer lines and services, manholes and appurtenances shall conform to the requirements of the applicable portions of the standard specifications of the Town regarding lamping, in- and ex-filtration and pressure testing.

SEWER, SEWER MAINS - STANDARD SPECIFICATIONS

PART ONE - GENERAL

Related Work Specified Elsewhere.

Standard Specifications - Excavation, Backfill and Compaction.

Minimum Design Standards - Sewage System.

Description.

Work specified in this section includes furnishing and installation of sewage piping, manholes, service connections and lines and testing requirements for the sewage collection systems.

Sewers shall be constructed of such size and laid to such grades as approved by the Town. The Town must be notified at least twenty-four (24) hours prior to when pipe will be laid. No pipe shall be laid or covered until the Town has inspected it.

Pressure sewer lines shall conform with applicable sections of these specifications and with the sections of Water Line Standard Specifications as they apply to installation and testing of piping lines under pressure.

Certificates of Compliance.

A Certificate of Compliance shall be submitted to the Town Engineer stating all pipe and materials furnished under these specifications do, in fact, comply with all referenced specifications.

Referenced Standards.

Uni-Bell PVC Pipe Association - recommended practice for the installation of polyvinyl chloride sewer pipe (UNI-B-5) latest revision

Uni-Bell PVC Pipe Association - Recommended Practice for Low Pressure Air Testing of Installed Sewer Pipe (UNI-B-6) latest revision

ASTM C-12 - Recommended Practice for Installing Clay Sewer Pipe.

PART TWO - PRODUCTS

Pipe Materials.

Polyvinyl Chloride (PVC) pipe

Conformance	SDR 35, 3034 PVC sewer or heavier
Pressure rating	Gravity, open channel flow
Joints**	UniBell bell and spigot, elastomeric gasket
Service maximum warp	Gravity sewer lines, sewer service lines 1/16 inches per foot
Conformance	ASTM 1785 or AWWA C900
Pressure rating	150 psi working pressure
Joints**	UniBell bell and spigot, elastomeric gasket
Fittings	AWWA C151/A21.51
Service	Pressure sewer lines
Conformance	Schedule 40 PVC
Pressure rating	150 psi working pressure
Joints**	Solvent weld conforming to ASTM D2564 and D2855 (Specifications and Recommended practices for Solvent-Cemented Joints with PVC pipe)
Fittings service	Schedule 40 - solvent-cemented per ASTM D2564 (Force mains less than 3" in diameter only)
Ductile Iron Pipe and Fittings	
Conformance	AWWA C151/A21.51
Class	Class 50
Lining	Cement mortar
Coating	Polyethylene wrap tubes, tape seal ends
Pressure rating	100 psi working pressure
Joints**	Push on, Super Bell-ite
Type	Vitrified with extra strength classification
Conformance	ASTM C200
Joints**	Bell and spigot ends with elastomeric gaskets, compression joints conforming to ASTM C425 except maximum in- or ex-filtration shall be 75 gal/inch dia./mile/day
**Prior to purchasing the pipe and fittings, the Town shall approve joints.	

Manhole Materials.

Bases, Risers, cones and tops

Precast manhole sections shall be constructed in accordance with the latest revision of ASTM C478 including the use of four thousand (4,000) psi concrete and the amount, type and location of reinforcement. Precast sections shall have a minimum wall thickness of five (5) inches.

The manhole sections shall have a minimum inside diameter of four (4) feet. The sections shall be provided with ends so formed that when the manhole risers and tops are assembled, they will make a continuous and uniform manhole with no leakage or infiltration. The Town, prior to purchasing the materials (see below), must approve the watertight, flexible gasket joints. Openings for pipe shall be formed in the manhole. Where possible, neoprene pipe boots shall be installed in the precast manhole for all pipes passing through the manhole. Watertight seals shall be used at all plastic-to-concrete connections to prevent leakage.

Conical tops for manholes shall be eccentric cones with a minimum height of three (3) feet and five-foot maximum. The eccentric cones shall have a uniform taper from the diameter of the manhole to a minimum clear opening two (2) feet in diameter. The eccentric cone shall terminate about twelve (12) inches below the finished ground or street surface.

Flat slab lids shall be used on all manholes with a depth of five (5) feet or less and shall be installed to provide the maximum allowable working space in the manhole. Flat slab tops shall have a minimum thickness of six (6) inches for manhole sections four (4) foot and less in diameter. One (1) inch increase in slab thickness will be required on manholes greater than four (4) foot and up to six (6) foot in diameter. Reinforcing in the slab shall conform to ASTM C-478 with reinforcement in both directions and additional reinforcement at the openings. Complete details of the slab construction shall be provided to the Town for approval before being purchased.

The manhole sections and tops shall be substantially free of fractures, cracks and surface roughness. The planes of the ends of the manhole sections shall be perpendicular to their longitudinal axis. All manhole sections shall be marked with the date of manufacture and the name or trademark of the manufacturer.

Manhole sections may be rejected for any of the following reasons:

(1) Fractures or cracks passing through the shell, except for a single end crack that does not exceed the depth of the joint.

(2) Defects that indicate imperfect proportioning, mixing and molding.

(3) Surface defects indicating honeycombing or open texture.

(4) Damaged ends where such damage would prevent making a satisfactory joint.

Concrete manholes constructed on the job site shall be made with concrete conforming to the specifications for 3500 psi concrete, 6 sack mix and shall have a minimum wall thickness of six (6) inches. Forms for the manhole and the amount and type of reinforcement will be approved by the Town. The use of poured-in-place manholes will be discouraged except under special circumstances approved by the Town. At a minimum, dimensions and quality of the poured-in-place manholes shall meet the specifications for precast manholes as above.

Frame and Cover.

When located within road or highway rights-of-way, the manhole frames and cover shall be made of cast iron and have a clear opening of twenty-four (24) inches. In highway rights-of-way, the manhole must also comply with Highway Department specifications. All wrought iron and cast iron shall be free from imperfections, thoroughly cleaned while new and coated with two (2) coats of asphalt varnish or equal. No iron shall be installed until it is protected in this manner. Where approved by the Town, in nontraffic areas, the manhole frame and cover may be cast from an alloy of aluminum with physical properties exhibiting strength comparable to cast iron. The cover shall weigh about sixty (60) pounds and the total assembly about one hundred fifty (150) pounds. In traffic areas, cast iron covers will be required. The assembly shall have a clear opening of twenty-four (24) inches.

A good fit will be required between the frame and cover to prevent rattling in traffic and to avoid inflow. To ensure a good fit, the seat in the frame on which the cover rests and the matching face of the cover shall be

machined. Provisions for opening the manhole shall consist of a pick-hole or notch along the edge of the cover. Other means of opening the manhole shall be approved by the Town before the material is purchased.

Manhole Steps.

Epoxy-coated cast iron, aluminum alloy, plastic or other approved corrosion-resistant metal steps shall be built into each manhole. The steps shall be at least nine (9) inches wide, shall protrude approximately five (5) inches from the wall of the manhole and shall be held in the wall by at least four (4) inches of bar on each side. The steps shall be designed to provide an edge that will prevent the foot from slipping off the side of the step. Standard manufactured manhole steps shall be used. Reinforcing steel or other steel bars and material bent to form a step will not be permitted. Steps shall be spaced evenly at twelve-inch intervals with each step being directly below the next. Spacing from the rim to the first step shall be between fifteen (15) and eighteen (18) inches.

Non-shrink Grout

Commercial factory-mixed product made especially for intended use in maintaining watertight manholes. Must be approved by Town.

Plastic Gasket Joints

Preformed flexible plastic conforming to Fed. Spec. SSS-S-00210 (GAS-FSS), Type I Rope and Form ASTM C-433.

All manhole joints shall be sealed with an approved sealant that will provide a watertight joint. The sealant shall be flexible gasket material such as Ram-Nek flexible plastic gaskets with primer or equal. All pipes entering or leaving manholes shall have a flexible water stop.

PART THREE - EXECUTION

Preparation.

Excavation.

Excavation shall be in accordance with the excavation, backfill and compaction standard specifications except as modified in this section of the specifications and the minimum design standards for sewer. excavated materials not required for backfill shall be removed from site as directed by the engineer.

Excavation for manholes and other accessories requires twelve-inch minimum clearance on all sides.

Excavation shall not be carried below the required level. Excess excavation below required level shall be backfilled with earth, sand, gravel or concrete, as appropriate for proper backfill and use, and shall be thoroughly tamped to achieve the density required in the pipe zone or manhole foundation as appropriate.

Underground Obstructions.

The contractor shall proceed with caution in the excavation and preparation of the trench so that the exact location of underground structures, both known and unknown, may be determined. Hand excavation shall be used where necessary. If required, the contractor will excavate and locate existing utilities ahead of trench excavation in order that necessary grade changes or utility adjustments may be known ahead of time. The contractor will be responsible for notifying all appropriate utilities, such as gas, electric, telephone, cable, etc., when working in areas where there may be such utilities.

The contractor shall preserve intact any underground utilities encountered during construction, unless they interfere with new pipelines or structures being installed. When underground utilities will interfere with proposed construction, notify the utility and the Town and make suitable arrangements to adjust the proposed construction. In case any such utilities or other structures are accidentally broken, they shall be immediately replaced in a condition at least equal to that in which they were found, at the contractor's expense.

Handling and Storage.

Exercise proper precautions in unloading, handling, stockpiling and installation in order to prevent damage to materials and to ensure delivery and installation in a sound and acceptable condition. Special care shall be taken to protect the plastic on the spigot ends from any contact with the earth.

Remove any broken or damaged materials from the construction site and do not use in any portion of the construction. Any damaged, broken or otherwise defective materials that are included in the construction shall be removed and replaced by the contractor at no expense to the owner. Handle pipe using wide slings. The use of hooks or other equipment that could damage the pipe will not be permitted. During pipe handling, protect against impact shocks and fall.

All clay pipes shall be inspected by the Town's representative in order to cull and reject all pipes that fail to meet the requirements of this specification. Any chipped areas, embedment of foreign material or other damage to the plastic joint material shall be cause to reject a piece of pipe. Defects shall be marked with a colored marker so as to not disfigure the rejected pipe. Rejected pipe shall be removed from the job site within twenty-four (24) hours.

Installation.

Excavation and preparation of the trench bottom shall be in accordance with Excavation, Backfill and Compaction Standard Specifications as should all backfill and compaction.

Laying Sewer Pipe.

Lay pipe in accordance with the applicable portions of the publications referenced in standards for the type of materials being installed.

Begin pipe lying at the lowest point, unless otherwise directed by the Engineer, and install the pipe with the spigot ends pointing in the direction of flow. A firm bed must be prepared for each pipe to the required depth true to line and grade with uniform bearing for the pipe barrel and the material hollowed out underneath the bell so that the body of the pipe shall be supported for its entire length upon the bed so prepared. Scraping away shall make adjustments to line and grade or adding properly compacted bedding materials under the pipe and not by using wedges and blocks or beating on the pipe.

All changes in grade and direction shall be made at manholes. Lay all pipes straight between changes in alignment and at uniform grade between changes in grade, unless directed otherwise by the Town. If, in making any joint, previous lengths are disturbed, such lengths must be uncovered and re-laid.

Provision shall be made for expansion and contraction of the pipe in the trench.

Avoid the introduction of excavation material or other foreign substances into the pipe interior. The interior of the pipe shall be carefully freed of all dirt, joint compound and foreign material of every description as the work

progresses. Seal open ends of the pipeline with a tight-fitting plug at all times except during actual pipe lying. Lower pipes into the trench carefully. Do not let pipe fall in from the trench bank. All water must be kept out of the pipe and bell hole until the joint is completed, and no water shall be allowed to rise in or about the pipe until the trench has been filled at least one (1) foot above the pipe. No length of pipe shall be laid until the previous length has had sufficient backfilling placed about it to hold it securely in place.

During construction, the contractor shall provide and maintain adequate equipment to properly remove and dispose of all excessive water entering the trench or any other work areas. Use of the sewer under construction for disposing of the water will not be permitted unless specifically authorized by the Town. Before any pipe is laid, the trench shall be dry and shall be kept dry while joints are completed. Adequate precautions shall be taken by the contractor to prevent possible uplift. If any portion of the pipeline does float, that entire portion shall be re-laid to line and grade. In areas where unstable soil is encountered below the bottom of the pipe, the contractor shall excavate such material to the limit determined by the Town and backfill with approved bedding material.

Land surveyors retained by the developer will provide basic surveying and control and stationing. Basic control shall be set with stakes, spikes, shiners or crosses set at the surface and on an offset from the sewer line. Benchmarks shall be provided within two hundred (200) feet of each manhole. The contractor shall transfer line and grade from these control points to the construction work in a manner approved by the Town, with spot checks by the Town's representative. The preservation of stakes and other line and grade references provided by the Town is the responsibility of the contractor.

In most cases, line and grade of the sewer shall be set with a laser alignment system, approved by the Town. The laser shall be a type that projects a low-power, coherent, red beam along an optically straight path for an operational distance of three hundred (300) feet or more. It shall be approved for use for sewer alignment and be compatible with solvent and other materials used in making pipe joints. Line and grade shall be transferred to the bottom of the trench using an accurate method recommended by the manufacturer and satisfactory to the Town for the particular laser.

The laser shall be located in the trench bottom unless otherwise approved by the Town. When the equipment is placed in the trench, it shall be positioned in such a manner that the laser will describe the center of the conduit. As each pipe section is installed, a special target or template shall be placed in the pipe's end and the vertical and horizontal alignment checked. The beam projected through the previously placed conduit sections shall also be used to provide line and grade for trench excavation and placement of bedding materials. The light beam shall be periodically checked against surface control points to ensure its correct vertical and horizontal alignment. Reasonable care must be taken to ensure that the conduit line is properly ventilated.

Pipelines shall be checked by the contractor to determine whether any displacement or other damage has occurred after the trench has been backfilled approximately two (2) feet above the pipe. If this check shows the pipeline to be out of alignment, broken or otherwise damaged, the defects will be corrected by the contractor before proceeding with other pipe lying. The Town may require lamping or other testing at this stage of backfill or may decide to only test the completely backfilled lines. It shall be the responsibility of the contractor to check his or her work as he or she proceeds.

Pipe Jointing.

Pipes should be supported free of the bedding or foundation during the jointing process to avoid disturbances of the subgrade. Care shall be taken in jointing to ensure that the bell and spigot are dry, clean and free of any foreign materials. For solvent weld joints, brushes shall be natural bristles with a width equal to the joint depth.

Joint materials vary with the type of pipe used and with the manufacturer. All joints shall be properly made using the jointing methods and materials recommended by the manufacturer. All joints shall be sufficiently tight to meet the requirements of infiltration and exfiltration tests.

Prior to joining, the pipe shall be set in position and checked for line and grade, using care to keep the joint absolutely free of dirt. When final grade is okayed, the joint shall be carefully pushed home using approved leverage methods so as to not damage the integrity of the pipe. Care shall be taken so that the bell end of the pipe will not be deflected to the extent that the gasket is pinched or rolled. Working bedding material in around the pipe may then make adjustments in line and grade. If O-ring gaskets are used, immediately after completing each joint, the gasket seating shall be checked around the entire circumference of the pipe by visual and finger inspection. The pipe shall be secured in place by installation of the bedding material tamped under and along it up to spring line. This haunching material shall be compacted to ninety-five percent (95%) standard Proctor for all flexible pipes, e.g., PVC pipes.

If come-alongs or other mechanical devices are used to aid in making compression-type joints, proper steps shall be taken to avoid damage to the pipe or displacement of the bedding material. Walking on the pipe or otherwise disturbing any conduit after jointing will not be permitted.

Prior to making a solvent weld joint, all water shall be removed from the trench, and the pipe shall be clean and dry. The trench and pipe shall remain dry until the welded joint has had time to cure. The length of the cure time shall be as stated on the welding solvent as corrected for the temperature. The minimum curing time shall be two (2) hours for the rapid-set solvent.

Trench excavation and preparation as well as backfill and compaction of sewer lines and services shall conform with recommendations found in UNI-Bell UNI-B- 5 Recommended Practice for Installation of PVC Sewer Pipe and with the Town's Excavation, Backfill and Compaction Standard Specifications unless otherwise superseded herein.

Unless other protection work is directed, trenches shall be backfilled immediately after the pipe has been installed and inspected. Water shall not be permitted to rise in trenches that are not backfilled after the pipe has been installed. Backfill material in the pipe zone shall consist of clean earth free from hard lumps, brush, junk or large rocks equivalent to select bedding in the Excavation, Backfill and Compaction Standard Specifications. The backfill material shall be hand placed and tamped to a level of one (1) foot over the top of bedded pipe. No rocks with any dimension greater than three-quarter (¾) inch will be placed in this area. Tamping shall be accomplished so that the line will not be misaligned in the horizontal or vertical direction. The remainder of the trench shall be backfilled in a manner to obtain a minimum density equal to ninety-eight percent (98%) of the density of undisturbed sides of the trench outside the public right-of-way and ninety-five percent (95%) Standard Proctor density in the public right-of-way unless more stringent specifications are required for the area by other specifications. No rock in excess of four (4) inches in maximum dimension shall be used in the backfill above the pipe zone. Water shall be added to the backfill material in such quantity to obtain optimum moisture content for the required density.

For clay pipe, the section between the first two (2) manholes of all sewer projects shall be tested before further construction to permit initial observation of the quality of construction workmanship and to determine whether the specified results are achievable with joint proposed for use.

"Y's" and Risers

The contractor shall place "Y's", stubs and risers where required by the approved construction plans. "Y's" shall be angled upwards so that the upper invert of a one-eighth (⅛) band connected to the fitting will have an elevation equal to or higher than the inside crown of the sewer main. Riser connections shall be installed where the elevation of the top of the branch is more than twelve (12) feet below finished ground. Riser connections shall ordinarily reach to a grade of eight (8) feet below finished ground surface. Watertight plugs shall be installed in each branch pipe or stub. "Y" and riser locations shall be marked as described above in Materials. Details for service line connections and pipe lying are covered below, and construction details are shown on typical drawings. As-built measurements shall be made by the contractor to reference the "Y" or riser connection to the nearest manhole before backfilling.

Service Installation

In general, materials for service lines must meet the above specifications for each type of material. All installation work shall conform to applicable portions of the pipe manufacturer's installation instructions in addition to the requirements on the Town Standard Drawing for sewer service and contained herein.

Unless otherwise approved by the Town based on native soil types, all service pipe shall be bedded on three (3) inches of well graded sand conforming to select bedding material in the standard specifications for Excavation and Backfill.

Sanitary sewer service lines shall be constructed on the shortest and straightest route possible. When necessary, the service may be constructed with one (1) horizontal one-eighth (⅛) bend between the house plumbing and the sanitary sewer main when constructed with adequate cleanouts. At no time shall the service line be any closer than five (5) feet to the side property line, and no service line may be constructed through or in front of any adjoining property. When possible, the service line shall be located ten (10) feet uphill of the downhill property line. Service lines installed during main line construction shall extend across the front utility easement and be plugged with a compression stop.

Measurements shall be taken of the distances of the service line from a manhole, the main and the depth from back of the sidewalk to invert at dead-end stub. In addition, when a curb is present, the location shall be marked on the curb by a backwards "2" symbol. The end should also be marked with a #20 copper wire with yellow insulation run from the plugged end up to twelve (12) inches below the ground surface and tied off to a twenty-four-inch piece of 2" x 4" lumber or by a length of 2" x 4" lumber from the end of the pipe to one (1) foot above the ground.

In no instance shall a trench extend beneath an existing sidewalk or curb unless excavation conforms to Town standards for concrete structure removal. The pipe shall typically be bored, jacked or tunneled through the earth under the curb or sidewalk. Alternately, the contractor may remove the existing sidewalk back to joints on either side of the trench, backfill in accordance with the Standard Specifications for backfill and then replace the sidewalk.

Where full-bodied service "Ys" have not been installed in the main sewer, the main shall be cut and a section of pipe installed with full-bodied "Ys" and full-bodied repair clamps, or if allowed by the Town the service may be tapped by machine drilling a hole in the pipe sized to fit the saddle for the service line such that the tap is smooth and watertight. The Town shall approve the drilling machine and method of drilling. The Town's representative shall inspect the main and saddle at every tap prior to backfilling. In the event the tap is covered before it is inspected, the contractor shall dig it out, and any concrete or mortar around the fitting shall be removed to allow visual inspection of the tap and the main. If the main sewer line is cracked or broken during the process of locating and/or tapping, it shall be repaired immediately by replacing the broken section, in which case a full-bodied "Y" shall be installed.

A manhole shall be installed instead of a service tap when a six-inch connection is to be made to an eight-inch or larger main. Whenever the service line is more than fifty percent (50%) of the main line, the service should enter at a manhole. Service taps to existing manholes shall be done in accordance with the Manhole section of these specifications.

Sewer service pipe shall be laid in accordance with the Pipe Laying portion of these specifications. Sewer and water service lines must be a minimum of ten (10) feet apart horizontally. If not, concrete or sealed-end PVC encasement of the sewer line will be required. Minimum fall on six-inch sewer service lines shall be one-eighth (⅛) inch (1%) per foot and for four-inch pipe, one-quarter (¼) inch per foot (2%). These minimum slopes will only be allowed if the line is engineered and line and grade are controlled by an approved method. Minimum cover of the sewer service shall be three (3) feet at the property line.

Before a contractor or property owner shall begin to build a basement or any inhabitable structure below ground, the owner or contractor shall ensure that the level of the most adjacent sewer manhole cover is six (6) inches in elevation lower than the flood level of the lowest fixture or drain in said basement. This requirement will be waived if the contractor or owner installs a sewer lift station or an approved backflow prevention valve. Any

such lift station shall have approval of the Town prior to installation, but shall remain the property or responsibility of the individual user.

Manhole Construction.

Base Construction.

The cast-in-place manhole base shall be constructed of 3500 psi, 6 sack concrete and be a minimum of six (6) inches thick. Concrete for the base will be confined in some manner as it is poured. The base may be formed or the concrete may be poured against undisturbed earth if the sidewalls of the excavation are sufficiently strong and high enough to support the concrete during compaction.

Inverts.

The main sewer shall be carried through manholes by split pipe wherever practical. Concrete foundations shall extend at least eight (8) inches below the bottom of the pipe and shall be benched up to at least two (2) inches over the top of the pipe. The concrete manhole floor between the sewer pipe and the outer portions of the bench shall be flush with the top edges at the pipe spring line and shall slope upward at two (2) inches per foot.

Wherever grade and alignment permit, the sewer shall be laid continuously through the manhole locations and the manhole built later. In such cases, the foundation shall be poured as above and the floor of the manhole sloped upward at two (2) inches per foot out from the spring line of the pipe. When pouring the base, care must be taken to prevent floating of the pipe. After the manhole is built, the upper half of the pipe shall be cut out and the rough edges smoothed with cement grout.

When it is not practical to use split pipe through manholes due to breaks in alignment, grade or elevation of intersecting pipes, the sewer inverts shall be made of smoothly troweled monolithic concrete with a semicircular bottom of the same diameter as the adjacent sewer section. The invert channel shall be U-shaped with side heights equal to the diameter of the sewer pipes that they connect. They shall be so finished that there will be no angular offset to offer obstruction to floating sewage of any kind.

When there are changes in the size of sewers, size of inverts shall be made gradually and evenly. Changes in the direction of the sewer and entering branches shall be made with curves having as large a radius of curvature as possible and at a minimum equal to one and one-half (1½) times the diameter of the sewer pipe. Elevation changes through the manhole shall occur uniformly from one (1) side of the manhole to the other. Inverts shall be plastered with cement mortar and left smooth and clean. Where called for on the plans, a pipe bell shall be stubbed out and plugged. The bell shall be placed as close to the manhole wall as possible.

Any invert that has been constructed without proper elevation change through the manhole, without proper changes in direction, without proper slopes on the benches adjacent to the channel, lacking proper channel width or that prevents free flow of sewage due to roughness or other reasons, shall be repaired by the contractor at his or her expense prior to preliminary acceptance by the Town.

Assembly of Precast Manholes.

Precast manhole sections shall not be placed on the foundation until after it has reached sufficient strength to provide support without damage. If the manhole base was not installed level so that the manhole sections will rise vertically, the first precast section shall be placed on cement mortar made with a mixture of one (1) part Portland cement, two (2) parts sand and water as required not to exceed six (6) gallons per sack. The mortar shall be of a proper consistency and thickness to provide a level base for the manhole section. The mortar shall at minimum be at least one (1) inch thick and five (5) inches wide. The base of the section to be placed on the mortar shall be thoroughly soaked with water before it is installed. The first precast section shall be carefully lowered onto the bench so that the mortar bed will be forced out from under the section evenly on all sides. The mortar shall be allowed to set up before the remaining manhole sections are placed.

If the base is level, it shall be primed and a suitable sealant such as Ram-Nek or equal sealant applied. The bottom of the manhole section shall be primed and set in place over the gasket material. Gasket material shall be applied in compliance with manufacturer's recommendations. Subsequent sections of the manhole shall be installed in the same manner. The top of the manhole shall consist of an eccentric cone or a flat slab, as determined by the conditions at the location and shape installed as herein specified.

The manhole sections shall be so aligned that the manhole steps provide a vertical ladder located over the largest portion of the bench on the manhole base. The steps shall not be located over the channel or in front of the pipe of an intersecting sewer in a drop manhole.

All openings for sewer pipes or for placing of the manhole sections shall be made in a watertight manner. If repair is necessary, it shall be made with concrete made of the same proportions as used in the base. The filling concrete shall be so placed that when it is cured and the repair complete, all filling shall be bonded tightly to the surface of the holes and shall be sound and free from shrinkage cracks. Other sealing materials may be used with Town approval.

Drop Manholes.

Drop manholes shall conform to the requirements of other portions of these specifications for base, invert and manhole construction. Drop manholes will be required where the difference in elevation between the incoming sewer and the manhole invert is greater than two (2) feet. The drop will occur in a vertical pipe located adjacent to the manhole as shown on the typical drawing. The invert in the manhole base shall be constructed to receive the incoming sewage and to channel it into the lower sewer. A mortar dam, or other acceptable dam, shall be constructed in the invert of the incoming sewer where it intercepts the wall of the manhole. The vertical drop pipe and the two (2) one-eighth (⅛) turns shall be encased in concrete as shown on the plans. The hole made in the manhole at the intersection of the incoming sewer shall be sealed in accordance with these specifications to a watertight condition.

Frame and Cover Finish.

All manholes shall be constructed to an elevation such that when the manhole frame and cover are in place, the cover will be flush with the finished surface of the paved street. If the street is not paved or if the manhole is located in an alley or an unimproved area, the cover shall be four (4) inches below finished grade. The manhole cover frame shall be concreted to the top grade ring or to the top of the manhole.

Underdrains.

Where excessive groundwater is encountered, and in other areas where it is deemed advantageous or necessary, gravel or piped underdrains shall be installed. Underdrains shall daylight to the nearest suitable point as approved by the Town. In no case shall water from underdrains be directed into a sanitary sewer. The trench shall be excavated to the required depth and width and backfilled with underdrain bedding material. Where underdrain pipe is required, it shall be installed to a true line and grade and held in place with underdrain bedding material. Additional underdrain bedding material shall then be placed to a level four (4) inches over the top of the underdrain pipe and the sewer pipe installed. The sewer pipe shall be bedded to spring line and this bedding covered with a layer of six (6) millimeter polyethylene plastic sheeting conforming to ASTM - D2103. Underdrain pipes shall be provided with cleanouts within each manhole installed on the sewer line. Underdrain pipe shall be continued under manholes by use of suitable bend and other fittings.

Lift Stations and Force Mains.

The need for pumping facilities and the design of these facilities shall be discussed with the Town prior to beginning design. The use of lift stations is discouraged unless truly necessary. The Town reserves the right to dictate the location and type of pumping facilities to be constructed and to require extra maintenance services from the developer.

Where necessary, and with approval of the Town, force mains shall be constructed from pumping facilities to tie into the gravity collection system. At design average flow, a cleansing velocity of at least two (2) feet per second shall be maintained. Force mains shall enter the gravity sewer system at a point not more than two (2) feet above the flow line of the receiving manhole. Automatic air relief valves shall be placed at high points in the force main to prevent air locking. Such valves shall be designed to handle sewage and be equipped with fittings to allow cleaning.

Adequate sanitary protection shall be provided on all force mains.

Inverted Siphons.

The use of inverted siphons is discouraged especially in low-flow and intermittent-flow situations. If the Town does approve the use of a siphon system, the system shall have not less than two (2) barrels, with a minimum pipe size of six (6) inches and shall be provided with necessary appurtenances for convenient flushing and maintenance. The manholes shall have adequate clearances for rodding. In general, sufficient head shall be provided with pipe sizes selected to secure velocities of at least three (3) feet per second for average flows. The inlet and outlet details shall be arranged so that the normal flow is diverted to one (1) barrel and so that either barrel may be out of service for cleaning.

Leakage Testing.

Infiltration Test.

An Infiltration Test shall be used only when excessive ground water prevents satisfactory testing by the Exfiltration Test. In addition, the Infiltration Test must be performed after backfilling, after services are installed but before any service connections are functioning and at a time when the groundwater is over the entire section of pipe at or near its maximum level.

The procedure for conducting an Infiltration Test shall be as follows:

(1) Clean the pipe section (manhole to manhole reach of sewer) being tested by propelling a snug-fitting inflated ball, or other adequate method, through the pipe with water.

(2) Determine the groundwater table. The groundwater table shall be determined for each section of sanitary sewer tested.

(3) Plug the upstream pipe outlet from upstream manhole of the sections being tested with a plug that will assure a tight seal against flow from the upstream portion of the sewer system. Also plug all house laterals and any other connections to the section being tested.

(4) Install a ninety-degree V-notch weir in the downstream manhole of the section being tested. The weir must be installed plumb and sealed to the pipe wall surface.

(5) A sufficient period of time must be allowed to permit the infiltrated waters to collect and flow over the weir. Water shall flow over the weir for at least thirty (30) minutes prior to taking measurements.

(6) The head (H) of water flowing over the weir must be measured accurately and the measurement taken at least eighteen (18) inches upstream from the crest of the weir.

(7) Discharge over the ninety-degree V-notch weir shall be calculated according to:

Q = 3240 H2.5

H = Head in inches

Q = Discharge in gallons per day

The allowable infiltration shall be fifty (50) gallons per one (1) inch of pipe diameter per mile of pipe per day. When there is significantly more than two (2) feet of groundwater above the top of the pipe at the highest point of

the section being tested, ten percent (10%) additional infiltration above the permitted fifty-(50)-gallon-per-one-(1)-inch-of-pipe-diameter-per-mile-per-day limit will be allowed for every two (2) feet of additional head.

Exfiltration Test.

An Exfiltration Test may be conducted wherever the groundwater level is below the crown of the pipe at the highest elevation of the section of sanitary sewer being tested. If the groundwater level is above the crown of the pipe, an Infiltration Test should be used.

The procedure for conducting an Exfiltration Test shall be as follows:

(1) Clean the pipe section (manhole to manhole reach of sewer) being tested by propelling a snug-fitting inflated ball, or other adequate method, through the pipe with water.

(2) Plug the downstream pipe outlet to the manhole with a plug that will assure a tight seal against water leakage. Also plug all house laterals and any other connections to the section being tested.

(3) If the upstream manhole is to be used as a reservoir for maintaining the pressure head on the sewer pipe, the inlet sewer pipe or pipes must be plugged. If a standpipe is to be used as a reservoir for maintaining the pressure head on the sewer pipe, the standpipe must be connected to the sewer pipe in the upstream manhole by a tightly sealed connection.

(4) The amount of water (volume required to fill the section of sewer under test plus the manhole or standpipe) shall be calculated.

(5) Water shall then be introduced through the manhole or standpipe. The amount of water introduced shall be metered. The amount of water introduced to fill the sewer should be approximately equal to the calculated amount. If the amount of water required to fill the sewer pipe is significantly greater than the calculated amount, it is an indication of a leak or leaks and consequent saturation of the backfill around the sewer pipe. Saturation of the backfill will invalidate the test.

(6) The level of water in the manhole or standpipe shall be at least two (2) feet above the crown of the pipe at the highest section of sanitary sewer being tested.

(7) After filling the pipe, at least one (1) hour shall be allowed for water absorption in the pipe. For some materials, up to six (6) hours may be required. After the absorption period, the manhole or standpipe shall be refilled to the established measuring mark and the test begun.

(8) If the upstream manhole is used as a reservoir for maintaining the pressure head on the sewer pipe, the difference in water surface elevation from original to final level in a two-hour period shall be used to calculate the water lost. The water lost in a two-hour period shall be converted into gallons per day. If a standpipe is used as a reservoir for maintaining the pressure head on the sewer pipe, the standpipe shall be refilled periodically during the two-hour test period to maintain an essentially constant head of water on the test section of the pipe. The amount of water added shall be measured and shall be used to calculate the loss in gallons per day.

The allowable Exfiltration shall not exceed fifty (50) gallons per inch diameter per mile per day. The internal water head shall be two (2) feet higher than the top of the pipe or two (2) feet higher than the groundwater level, whichever is greater.

If the sanitary sewer line fails to pass the Exfiltration Test, a re-test shall be permitted only after the groundwater conditions surrounding the pipe return to a condition similar to those existent at the beginning of the test period. The groundwater elevation shall be determined prior to initiation of the second test.

Air Test.

An Air Test shall be conducted under all conditions of groundwater levels surrounding the sanitary sewer pipe. If the groundwater is above the crown of the pipe, the air pressure shall be increased by an increment equal to the pressure exerted by the groundwater over the pipe.

All persons conducting an air test must be made aware of the fact than an air test may be dangerous if improperly conducted. The following procedure is taken from Uni-Bell UNI-B-6 Recommended Practice for low-pressure Air Testing of Installed Sewer Pipe. Air Testing shall be conducted in conformance with UNI-B-6.

Responsibility.

Only lines tested after backfilling to final grade will be considered for acceptability. However, the installer, as a presumptive test to determine the condition of the line prior to backfilling, may also use this test. Unless otherwise specified, the contractor shall furnish all the necessary equipment and be responsible for conducting all low-pressure air tests. In addition, the contractor is responsible for any necessary repair work on sections that do not pass the test. No sealant shall be used in any newly installed sewer.

The Town shall witness all low-pressure air tests and verify the accuracy and acceptability of the equipment utilized. The Engineer must approve contractor-proposed methods of repair in the event one (1) or more sections fail to pass the low-pressure air test.

Safety.

Safety during testing shall be the sole responsibility of the contractor.

Plug Restraint: It is extremely important that all plugs be installed and braced in such a way that blowouts are prevented. As an example of the hazard, a force of two hundred fifty (250) pounds is exerted on an eight-inch plug by an internal pipe pressure of five (5) psig, and a force of two thousand two hundred fifty (2,250) pounds is exerted on a twenty-four-inch plug by an internal pressure of five (5) psig. The sudden expulsion of a poorly installed plug or of a plug that is partially deflated before the pipe pressure is released is very dangerous. Every plug shall be positively braced against the manhole walls, and no one should be allowed in the manhole adjoining a line being tested so long as pressure is maintained in the line.

No internal pressure of more than nine (9) psig will be permitted except for leak location equipment where the plugs are firmly tied together.

Relief Valve: A pressure relief valve set at nine (9) psig shall be included in the test apparatus to avoid overpressurizing and displacing temporary or permanent plugs. As an added safety precaution, the pressure in the test section should be continuously monitored to make certain that it does not at any time exceed nine (9) psig.

Equipment.

Plug Design: Either mechanical or pneumatic plugs may be used. all plugs shall be designed to resist internal testing pressures without the aid of external bracing or blocking. however, the contractor should internally restrain or externally brace the plugs to the manhole wall as an added safety precaution throughout the test.

Singular Control Panel: To facilitate test verification by the inspecting Engineer, all air used shall pass through a single, above-ground control panel.

Equipment Controls: The above-ground air control equipment shall include a shutoff valve, pressure regulating valve, pressure relief valve, input pressure gauge and a continuous monitoring pressure gauge having a pressure range from zero (0) to at least ten (10) psi. The continuous monitoring gauge shall be no less than four (4) inches in diameter with minimum divisions of 0.10 psi and an accuracy of +0.04 psi.

Separate Hoses: Two (2) separate hoses shall be used to:

(1) Connect the control panel to the sealed line for introducing low-pressure air; and

(2)\A separate hose connection for constant monitoring of air pressure buildup in the line. This requirement greatly diminishes any chance for overpressurizing the line.

Pneumatic Plugs: If pneumatic plugs are utilized, a separate hose shall also be required to inflate the pneumatic plugs from the above-ground control panel.

Line Preparation.

Laterals, Stubs and fittings: during sewer construction, all service laterals, stubs and fittings into the sewer test section shall be properly capped or plugged so as not to allow for air loss that could cause an erroneous air test result. It may be necessary and is always advisable to restrain gasketed caps, plugs or short pipe lengths with bracing, stakes, clamps and tie rods or wire harnesses over the pipe bells.

Test Procedure.

Plug Installation and testing: after a manhole-to-manhole reach of pipe has been backfilled to final grade, prepared for testing and the specified waiting period has elapsed, the plugs shall be placed in the line at each manhole and secured.

It is advisable to seal test all plugs before use. Seal testing may be accomplished by laying one (1) length of pipe on the ground and sealing it at both ends with the plugs to be checked. The sealed pipe should be pressurized to nine (9) psig. The plugs shall hold against this pressure without bracing and without any movement of the plugs out of the pipe. No persons shall be allowed in the alignment of the pipe during plug testing.

It is advisable to plug the upstream end of the line first to prevent any upstream water from collecting in the test line. This is particularly important in high groundwater situations.

When plugs are being placed, the pipe adjacent to the manhole shall be visually inspected to detect any evidence of shear in the pipe due to differential settlement between the pipe and the manhole. A probable point of leakage is at the junction of the manhole and the pipe, and the pipe plug may cover this fault. This not revealed by the air test but will appear during manhole testing.

Line Pressurization: Low-pressure air shall be slowly introduced into the sealed line until the internal air pressure reaches four (4) psig greater than the average backpressure of any groundwater above the pipe, but not greater than nine (9) psig. If groundwater is present, refer to "Determination of Ground Water Elevation and Air Pressure Adjustment."

Pressure Stabilization: After a constant pressure of four (4) psig (greater than the average groundwater backpressure) is reached, the air supply shall be throttled to maintain that internal pressure for at least two (2) minutes. This time permits the temperature of the entering air to equalize with the temperature of the pipe wall.

Timing Pressure Loss: When temperatures have been equalized and the pressure stabilized at four (4) psig (greater than the average groundwater backpressure), the air hose from the control panel to the air supply shall be shut off or disconnected. The continuous monitoring pressure gauge shall then be observed while the pressure is decreased to no less than three and one-half (3.5) psig (greater than the average backpressure of any groundwater over the pipe). At a reading of three and one-half (3.5) psig, or any convenient observed pressure reading between three and one-half (3.5) psig and four (4) psig (greater than the average groundwater backpressure), timing shall commence with a stopwatch or other timing device that is at least ninety-nine and eight-tenths percent (99.8%) accurate.

A predetermined required time for a 1.0-psig-pressure drop shall be used to determine the line acceptability. If the Town allows a specified pressure drop of 0.5-psig, then the required test times for a 1.0-psig-pressure drop must be halved. All requirements for a specified 0.5-psig drop are given in parentheses.

Determination of Line Acceptance: If the time shown in Table I (or Table II), for the designated pipe size and length, elapses before the air pressure drops 1.0 psig (or 0.5 psig); the section undergoing test shall have passed and shall be presumed to be free of defects. The test may be discontinued once the prescribed time has elapsed even though the 1.0-psig (or 0.5-psig) drop has not occurred.

Determination of Line Failure: If the pressure drops 1.0 psig (or 0.5 psig) before the appropriate time shown in Table I (or Table II) has elapsed, the air loss rate shall be considered excessive, and the section of pipe has failed the test.

Line Repair or Replacement: If the section fails to meet these requirements, the contractor shall determine at his or her own expense the source, or sources, of leakage, and he or she shall repair or replace all defective materials and/or workmanship to the satisfaction of the Engineer. The extent and type of repair which may be allowed, as well as results, shall be subject to the approval of the Engineer. The completed pipe installation shall then be retested and required to meet the requirements of this test.

Manhole Testing.

All sanitary sewer manholes shall be tested for leakage by plugging the inlet and outlet sewer pipes with tight plugs, filling the manhole with water to a depth of five (5) feet above the top of the pipe or three (3) feet above the existing groundwater level, whichever is greater, and allowing one (1) hour for saturation of the manhole material. after the one-hour saturation period, the manhole shall be refilled to the original level. four (4) hours after refilling, the difference in water surface elevation from the original to the final level shall be measured and converted into gallons per hour lost through manhole leakage. if water depth drops more than four (4) inches during the test, water shall be added to maintain the same head during the test.

The allowable leakage for manholes shall be four-tenths (0.4) gallons per hour per foot diameter of the manhole.

Inspection, Cleaning and Lamping.

Final acceptance of the sewer line shall be based on an inspection for compliance with all items in these specifications. No pipe spalls, rocks, dirt, joint compounds, cement mortar, or other trash and obstructions shall be left in a sewer pipeline of any size or type. If this debris is removed by flushing, the manhole outlet shall be bagged or plugged before construction so that this debris will not be carried into or contaminate the existing lines.

All lines laid shall be lamped from manhole to manhole, in order to determine the accuracy of line and grade and presence of obstructions. The lines, when lamped, shall reveal ninety-two and one-half percent (92.5%) of the cross-sectional area of the pipe. The contractor shall remedy at his or her own expense any poor alignment or any other defects in workmanship or materials. Acceptance of construction will be based upon reinspection of the sewer after appropriate repairs and connections are completed.

When due to unusual circumstances as deemed necessary, the Town may require completed sewer lines be inspected by means of a television camera. The contractor will provide certified videotape records, identified by stations of all lines so inspected.

Flow of any kind into the existing sewer system shall not be allowed until the sewer has been satisfactorily completed and the Town approves such a connection.

Restoration and Cleanup.

The contractor shall restore or replace all removed or damaged road base, paving, curbing, walks, sod, shrubbery, fences, irrigation ditches or other structures or surfaces to a condition at least equal to that before the

work began and to the satisfaction of the Town. The construction site shall be left neat and orderly. Restoration and cleanup shall also comply with the Standard Specifications for Excavation, Backfill and Compaction.

The contractor shall remove surplus materials tools, and temporary structures. The contractor shall dispose of all dirt, rubbish and excess earth from excavations, and the construction site shall be left clean and orderly.

The contractor shall maintain the surface over the trenches in approved condition against any settlement or deterioration throughout the warranty period.

STREETS, MINIMUM DESIGN STANDARDS - CURB, GUTTER, SIDEWALKS & STREETS

General.

All curb, gutter, sidewalk and street construction design, rights-of-way widths and street widths shall conform to the minimum requirements enumerated on the town typical drawings and the requirements of the subdivision regulations of the Town of Paonia. Care shall be taken to ensure continuity of grades, widths, etc., of proposed, existing and future installations. Deviations from these standards and specifications may be permitted when, in the opinion of the Town, the quality of the finished work would not vary materially from the intent of these requirements.

Plan Approval.

Plans for proposed street construction should be submitted on twenty-four-by-thirty-six-inch (24" x 36") sheets to the Town for approval. An overall plan shall be submitted along with individual plan and profile sheets. The plans shall show lots and blocks, shall give centerline street grades and show vertical curves and the original ground profile. Grades shall be indicated for the curb and gutter for each side of the street; elevations of curb and gutter at the ends of each block shall be indicated. Cross-pans shall be indicated on the street plan. The roadway width and type of curb, gutter and sidewalk shall be indicated for each street.

Street Construction.

All streets shall be paved except if otherwise approved by the Town board of trustees for residential streets.

When asphalt pavement is to be provided, minor residential streets serving fewer than ten (10) lots shall have a minimum of six (6) inches of Class 6 base course with prime coat and a three-inch asphalt concrete surface. Other residential and collector streets shall have a minimum of six (6) inches of Class 6 base course with prime and four (4) inches of asphalt concrete surface. An engineer, based on traffic load and soils conditions, shall design base and surface treatment for arterial streets.

All paved streets shall have curb, gutter and sidewalk on both sides. The curb, gutter and sidewalk shall conform to Town standard drawings and specifications for that work.

Street widths shall be in accordance with Town Subdivision Regulations

Street Layout.

Street widths shall conform to Town standard drawings for the type of street being designed. Gravel streets shall have a cross-slope of three percent (3%), and paved streets shall have at least two percent (2%) cross-slope.

The minimum grade for all streets is one-half percent (0.5%). The maximum grades shall not exceed seven percent (7%) on any street and five percent (5%) on collector streets. Minimum length of vertical curves for all

streets shall be three hundred (300) feet, except that where the algebraic change in grades is less than two percent (2%), vertical curves may be omitted. On local streets the minimum radius of horizontal curves shall be one hundred (100) feet and one hundred fifty (150) feet on all other streets.

In special topographic conditions, the Town may allow deviations from these requirements in order to provide the Town with better drainage or a better intersection design.

Multiple tee intersections shall have the leg of the tees at least one hundred twenty-five (125) feet apart centerline to centerline to facilitate a reasonable line of sight between the intersections. If the width of the street rights-of-way is more than sixty (60) feet, the separation of the tees shall be increased proportionally.

Sidewalks shall be located six (6) inches outside the private property line unless otherwise approved by the Town.

Service Line Installation.

All service lines shall be installed (in accordance with the appropriate Town standards) prior to paving any street.

Drainage.

All streets shall be designed to provide continuous surface drainage directed to storm drain inlets and drainage courses. Grade shall permit flow without ponding. A check shall be made to be sure of continuity of drainage design between the proposed construction and existing or future construction. In no case shall surface drainage be permitted to be disposed of overland except by approved storm drainage facilities. The developer shall remedy any problems that are created by the addition of storm drainage from his or her subdivision to any existing drainage.

Culverts shall only be installed where V-ditches, gutters and valley pans will not carry the necessary flow. Culverts shall be corrugated, galvanized metal with metal end sections, unless otherwise authorized by the Town. Diameter and slope shall be based on flows. Minimum diameter in roadways shall be eighteen (18) inches, and minimum in driveways shall be twelve (12) inches.

Monumentation.

Centerline monuments shall be set at each street intersection upon completion of street construction. If an existing street is to be resurfaced, the monuments shall be restored or set as necessary. Monuments in gravel streets shall be a bar and cap set in concrete a minimum of four (4) inches and a maximum of six (6) inches below finished grade. In paved streets the bar and cap set in concrete shall be set under a valve box cover labeled survey marker with the cover set at finished grade.

STREETS, STANDARDS AND SPECIFICATIONS - CURB, GUTTER & SIDEWALK

Sec. 1.00. Scope.

The work covered by this specification concerns the furnishing of all labor, equipment and materials and performing all operations in connection with the construction of curb, gutter, cross pans, sidewalks and driveways in strict accordance with this specification and the applicable drawings.

STREETS, RELATED WORK SPECIFIED ELSEWHERE - GENERAL REQUIREMENTS SPECIFICATION

Sec. 2.00. General provisions.

Except as noted below, the General Provisions applicable to this specification are covered in the General Requirements Specification.

Sec. 3.00 Protection of existing facilities.

3.01. General.

The contractor shall notify all utility companies and interested parties forty-eight (48) hours prior to commencement of work in order to ensure that there will not be interruptions of services during construction. The contractor shall be liable for all damages to existing structures, public or private, and he or she shall save the Town harmless from any liability or expense for injuries, damages or repairs to such facilities.

3.02. Responsibility for repair.

Should any utility be damaged in the construction operations, the contractor shall immediately notify the owner of such utility, and unless authorized by the owner of the utility, the contractor shall not attempt to make repairs.

In the event that during construction it is determined that any underground utility conduit, including sewers, water mains, gas mains and drainage structures and any above-ground utility facilities are required to be relocated, the contractor shall notify the utility owner well in advance of his or her approach to such utility so that arrangements with the Town and/or owners of the affected utility can be completed without delay of the work. Prior to constructing over another utility, notify the utility and resolve any conflicts.

Sec. 4.00. Materials.

4.01. Select Material.

Select material shall consist of a natural or artificial mixture of hard, durable stones, rock fragments and soil binder free from soft particles and excess clay and conforming to the following gradation:

Sieve Designation	*Percent by Weight Passing*
¾"	100
No. 4	30 to 60
No. 10	25 to 50
No. 200	5 to 12

4.02. Concrete.

Concrete shall be composed of cement, coarse and fine aggregate, water and entrained air. the concrete shall contain a minimum of six (6) sacks of cement per cubic yard, a maximum of five and eight-tenths (5.8) gallons of water per sack of cement, air content of six percent (6%) by volume and a maximum coarse aggregate size of three-quarter (¾) inch unless concrete thickness exceeds eight (8) inches. In no case shall aggregate exceed one and one-half (1½) inches. The finished concrete shall have a minimum twenty-eight-day compressive strength of three thousand five hundred (3,500) psi. The Town Engineer must approve any admixture, including accelerators and retarders, except air-entraining agent.

4.03. Cement.

Cement used shall conform to the standard specification for Portland cement, ASTM 0150, Type I or II, or ASTM C175 for air-entraining Portland cement, Type IA or IIA.

4.04. Aggregate.

Aggregate shall conform to the standard specification for concrete aggregate, ASTM C33.

4.05. Wire Reinforcement.

Welded steel wire fabric shall be a minimum size of six-by-six-inch 10-gauge wire and shall conform to ASTM A185.

4.06. Air-Entraining Agents.

Air-entraining agents shall conform to ASTM C260.

4.07. Curing Compounds.

Liquid membrane curing compounds shall conform to ASTM specification C309.

4.08. Expansion Joint material.

Expansion joint material shall be nonextruding, preformed joint filler and shall conform to ASTM specification D1751 or D1752.

4.09. Water.

Water used for mixing or curing concrete shall be clean and free from injurious amounts of oil, acids, salt, alkali or organic substances harmful to concrete. notify the engineer for prior approval of the use of nonpotable water.

Sec, 5.00. Grading.

Excavation shall be performed to the lines, grades and cross-sections indicated on the approved drawings and staked out on the ground. Suitable material removed from the excavations shall be used as far as practicable for embankments and backfilling. Unsuitable material shall be excavated below the grade shown on the drawings or indicated by grade stakes as directed by the Town and replaced with select material. Any material which the Engineer determines to be uncompactable shall be considered unsuitable and shall be removed and replaced. Excavated materials that are considered unsuitable and any surplus of excavated material not required for embankments or the contractor shall dispose of backfill.

Embankments shall be constructed by depositing, placing and compacting materials of acceptable quality above the natural ground in accordance with lines, grades and cross-sections shown on the approved plans and/or staked out on the ground. Before any embankment is placed, clearing, tree removal and topsoil removal shall be performed as directed by the Town Engineer. Clearing shall include removal and disposal of obstructions and rubbish to a minimum depth of twelve (12) inches below subgrade elevation; sod will be removed to a minimum depth of six (6) inches and trees and stumps to a minimum depth of eight (8) inches below subgrade elevation. Each lift of embankment material not to exceed six (6) inches of loose depth shall be thoroughly mixed and

moistened to full depth and compacted to uniform minimum density of ninety percent (90%) of maximum density (ASTM D1557), and optimum moisture content of plus or minus two percent (2%). Embankments shall be constructed to a width two (2) feet greater than the width of the section to be constructed with the top four (4) inches of compacted base being three-quarter-inch gravel.

The subgrade under the forms shall be compacted and shaped to a firm, even surface and so that the forms, when set, will be uniformly supported for its entire length at the specified elevation. The finished grade shall be maintained in a smooth and compacted condition until concrete has been placed.

5.01 Compaction.

Compact native backfill to ninety-five percent (95%) of maximum density obtained at optimum moisture as determined by AASHO T 180-57, method A, and class 3 and 6 road base to ninety percent (90%) Modified Proctor. certification of compaction tests must be submitted to the Town prior to concrete placement.

Sec. 6.00. Forms.

Forms shall be metal or wood such that exposed concrete is true, clean and free of deviation and defects and shall have a depth equal to or greater than the section being placed. Approved flexible forms shall be used for construction where the radius is one hundred fifty (150) feet or less. The supply of forms shall be sufficient to permit their remaining in place for a minimum of six (6) hours after the concrete has been placed. Face plates for curb and gutter may be removed as soon as practicable. Each section of form shall be straight and free from warps and bends. Maximum deviation of the top surface shall not exceed one-quarter (¼) inch in ten (10) feet and the inside face not more than one-quarter (¼) inch in ten (10) feet. The method of connection between sections shall be such that the joint just formed is tight and free from movement in any direction. Forms that have been previously used shall be cleaned of all mortar and dirt before being set. Forms shall be set true to established line and grade and shall be thoroughly staked in place. Bracing and staking of forms shall be such that the forms remain in both horizontal and vertical alignment until their removal.

At the option of the contractor and with the approval of the Engineer, slip-form equipment may be used for the construction of concrete curb and gutter.

Slip-form equipment shall be provided with traveling side and top forms of suitable dimensions, shapes and strength to support the concrete for a sufficient length of time during placement to produce curb and gutter of the required cross-section. The equipment shall spread, consolidate and screed the freshly placed concrete in such a manner as to provide a dense and homogeneous product.

The slip-form equipment shall have automatic sensor controls that operate from an offset control line. The line and grade of the slip-form equipment shall be automatically controlled.

Sec. 7.00. Mixing concrete.

7.01. Job-Mixed Concrete.

Job-mixed concrete shall be mixed in a drum-type mixer that shall conform to the standards of the Mixer Manufacturers Bureau of the Associated General Contractors of America. The mixer shall be capable of combining the aggregates, cement and water into a thoroughly mixed and uniform mass within the specified time and discharge the material without segregation. The entire contents of the drum shall be discharged before recharging. The volume of the mixed materials per batch shall not exceed the manufacturers rated capacity of the mixer. Mixers must be kept clean of hardened concrete. Job-mixed concrete must comply with Section 4.06.

The mixing of each batch shall continue for not less than one (1) minute after all materials, except water, are in the drum. All mixing water shall be introduced before one-quarter (¼) the mixing time has elapsed. The mixer shall rotate at the rate recommended by the manufacturer but not less than fourteen (14) or more than twenty (20) revolutions per minute. When concrete is mixed at the site, cement must be Type IA or IIA. The addition of any admixture at the job is prohibited, except where required or approved by Town representative.

7.02. Ready-Mixed Concrete.

Ready-mixed concrete shall be proportioned, mixed and transported in accordance with the current ASTM Specifications for Ready-Mixed Concrete (Designation C-94).

Delivery of central-mixed concrete shall not be made in nonagitating equipment without securing the prior written approval of the Engineer of the type of equipment to be used and method of operation. Concrete shall conform to Section 4.02 of these specifications.

7.03. Retempering Of concrete.

Retempering of concrete which has partially hardened by re-mixing, with or without water, will not be permitted.

Sec. 8.00. Consistency.

Concrete shall have a slump of not less than two (2) inches or more than four (4) inches when tested in accordance with the standard method of test for slump of Portland Cement Concrete, ASTM C-143.

Sec. 9.00 Placing concrete.

9.01 General.

The contractor, immediately ahead of concrete placement and necessary corrections made, shall check the alignment and grade elevations of the forms. Any forms that have been disturbed or subgrade that has become unsuitable shall be corrected and forms reset and rechecked. Any variations in grade and alignment shall be subject to approval by the Town prior to placing the concrete. Forms shall be oiled, and the foundation shall be thoroughly moistened, immediately prior to placing the concrete.

After the Town has approved the forms and subgrade, the concrete shall be deposited on the subgrade to the required depth and width in successive batches and in a continuous operation. Concrete shall be placed in curb and gutter forms in horizontal layers not exceeding six (6) inches in thickness, each layer being spaded along the forms and thoroughly tamped. Concrete may be placed in layers of more than six (6) inches in thickness only when authorized by the Engineer and the spading and tamping is sufficient to consolidate the concrete for its entire depth. The concrete shall be placed as uniformly as possible to minimize the amount of spreading necessary. While being placed, the concrete shall be tamped, spaded and/or vibrated with suitable tools to prevent the formation of voids or honeycomb.

After the concrete for walk has been placed, a strike off shall be used to bring the surface to the proper elevation when compacted. It shall be spaded along the form faces and tamped to assure a dense and compact mass and to force the larger aggregate down while bringing to the surface not less than three-eighths (⅜) inch of the free mortar for finishing purposes.

Concrete shall be placed in cross gutters in horizontal layers of not more than six (6) inches in thickness, each layer being spaded along the form faces and thoroughly tamped into a dense and compact mass. If internal vibrators are used, the full-specified thickness may be placed in one (1) operation. After the concrete has been placed and tamped, the upper surface shall be struck off to the specified grade.

Any evidence of lack of consolidation shall be regarded as sufficient reason for requiring the removal of the section involved and its replacement with new concrete. The contractor shall be responsible for any defects in the quality and appearance of completed work.

9.02. Cold Weather Concreting.

Except by specific written authorization, concrete shall not be placed unless the air temperature is thirty (30) degrees Fahrenheit and ascending, and placing shall cease when the descending air temperature in the shade and away from artificial heat falls below forty (40) degrees Fahrenheit.

When concreting is permitted during cold weather, the temperature of the mix shall be not less than fifty (50) degrees Fahrenheit at the time of placing. Aggregates or water shall not be heated to a temperature exceeding one hundred fifty (150) degrees Fahrenheit. Materials containing frost or lumps of frozen material shall not be used.

Before placing concrete, ice, snow and frost shall be removed from the forms and subgrade. In no case shall concrete be placed against frozen ground or against ground containing frost.

After placing, the temperature of the concrete shall be maintained above fifty (50) degrees Fahrenheit for at least four (4) days, and the concrete temperature shall be maintained above the freezing point for at least ten (10) days by the use of not less than twelve (12) inches of loose, dry straw or with insulated curing blankets. With the use of high early strength cement (the use of which must be preapproved in writing by the Town), the concrete temperature shall be maintained above fifty (50) degrees Fahrenheit for two (2) days and above freezing by the use of straw or blankets for five (5) days. Concrete damaged by frost action shall be removed and replaced at the contractor's expense.

9.03. Hot Weather Concreting.

Except by written authorization, concrete shall not be placed if the temperature of the plastic concrete cannot be maintained at ninety (90) degrees Fahrenheit or lower. To facilitate the placement of concrete in hot weather, the aggregate or water may be cooled.

After the concrete has been placed and consolidated in the forms, it shall be finished. A float shall be used to bring the surface of the concrete to its final form; excessive working of the surface will not be permitted. The final texture of all exposed surfaces shall be obtained by light brooming. After completion of brooming and before the concrete has taken its initial set, all edges in contact with the forms shall be tooled with an edger having a one-half-inch radius. No plastering, dusting, topping of the surface or sprinkling with water to facilitate finishing will be permitted.

9.05 Joints

1. Dummy Joints. Transverse joints shall be located at intervals of five (5) feet in sidewalk slabs. The joints shall be tooled to a minimum depth of one-quarter (¼) inch.
2. Contraction Joints. Unless otherwise approved by the Engineer, combination curb, gutter and sidewalk shall be constructed in ten-foot, monolithic sections with contraction joints averaging one-quarter (¼) inch thick between sections. The templates for the contraction joints shall be made and set to allow three (3) inches clearance between bottom place of the concrete and lower edge of template.
3. Expansion Joints. Expansion joints shall be provided approximately every fifty (50) feet in sidewalks and at cross-pans and shall extend for the full depth and width of the concrete. Expansion joint material shall also be installed between new structure slabs and existing concrete slabs, around fire hydrants, poles, etc., and also between the ends of sidewalk slabs and curbs. Expansion joint material must be set vertical and with the top edge flush with the finished surface. The joint shall be edged with a suitable edging tool.

Sec. 10.00 Curing.

Protecting it against moisture loss, rapid temperature change and from rain, flowing water and mechanical damage for a period of not less than five (5) days after placement shall cure concrete. It shall be the contractor's responsibility to protect the concrete from traffic and the elements. Concrete shall be cured by the following method:

10.01 Liquid Membrane Curing.

Curing compound may be used and shall be applied immediately after the water sheen has left the finished concrete. The compound shall be applied at a rate to completely cover the surface uniformly and at a rate that will achieve the performance requirements specified in ASTM specification C309. The compound shall be kept agitated while being applied to prevent the pigment from settling. After the forms have been removed, the exposed edges shall be covered immediately with the compound.

Sec. 11.00. Defaced, Defective and Damaged Concrete.

It shall be the contractor's responsibility to protect fresh concrete from damage as a result of vandalism or other cause; defective or damaged concrete shall be removed and replaced by and at the expense of the contractor.

Sec. 12.00 Backfilling.

No power equipment used for the preparation of subgrade will be permitted adjacent to concrete curb, gutter or alley intersections until the fourth day following placement of the concrete. The placement of bituminous pavement adjacent to concrete curb, gutter or alley intersections will not be permitted until the seventh day following the placement of concrete and which has a strength of at least two thousand five hundred (2,500) psi nor will concrete paving operations be permitted until the seventh day and at least two thousand eight hundred (2,800) psi compressive strength where placing or finishing equipment will ride on the previously placed concrete. If admixtures, additional cement or Type III cement is used to obtain high early strength concrete, grading operations will be permitted on the second day following the placement of the concrete and paving operations on the third day as long as the compressive strength has reached two thousand five hundred (2,500) psi and two thousand eight hundred (2,800) psi respectively.

When side forms are removed, the space adjoining the concrete shall be promptly backfilled with suitable material, properly compacted and brought flush with the surface of the concrete and adjoining ground surface. Such compaction shall be done at a time and in a manner that it will not harm the curing concrete. In embankments, the backfill shall be level with the top of the concrete for at least two (2) feet and then sloped to the property line.

Sec. 13.00 Opening to traffic.

Walks shall not be opened to pedestrian traffic for at least twenty-four (24) hours after placement. Driveways, curb, gutter and cross-pans shall not be opened to vehicular traffic for at least seven (7) days after placement. The contractor shall maintain suitable barricades to comply with the foregoing requirements.

Sec. 14.00. Connections with existing sidewalks.

Where new sidewalk construction abuts existing sidewalks, the work shall be accomplished so that no abrupt change in grade between the old and new work results.

Sec. 15.00. Repairs.

Where repairs are made in existing sidewalks, all edges of the old sidewalk allowed to remain shall be saw cut to a minimum depth of one and one-half (1½) inches. No rough edges will be permitted where new construction joins old. No section less than five (5) feet in length shall be placed or left in place.

Sec. 16.00. Acceptance by the Town.

The contractor shall guarantee curb, gutter, walks, driveways and cross-pans for a period of one (1) year after completion against defective workmanship and materials and shall keep the same in good order and repair. The determination of the necessity, during such guarantee period, for the contractor to repair said curb, gutters, walks, driveways or cross pans, or any portion thereof, shall rest entirely with the Town, whose decision upon the matter shall be final and obligatory upon the contractor.

STREETS, STREET DESIGN AND CONSTRUCTION - STANDARD SPECIFICATIONS

PART ONE - GENERAL

Scope.

The work covered by this specification concerns the furnishing of all labor, equipment and materials and performing all operations in connection with the design and construction of streets in strict accordance with this specification and the applicable drawings.

Related Work Specified Elsewhere.

Excavation, Backfill and Compaction Standard Specifications.

Minimum Standards - Curb, Gutter, Sidewalks, and Streets.

Curb, Gutter, and Sidewalk Standard Specifications.

Plan Submission and Approval.

Plan submission shall comply with the requirements of the General Specifications as well as the requirements in this Section. Plans for proposed street construction should be submitted on twenty-four-by-thirty-six (24 x 36) inch sheets to the Town for approval. An overall plan shall be submitted along with individual plan and profile sheets. The plans shall show lots and blocks with topography, shall give centerline street grades and shall show vertical curves and the original ground profile. Grades shall be indicated for the curb and gutter for each side of the street; elevations of curb and gutter at the ends of each block shall be indicated. Cross-pans, including elevations, shall be indicated on the street plan. The roadway width and type of curb, gutter and sidewalk shall be indicated for each street. Approval of the plans shall be per the General Specifications.

Quality Assurance.

Qualification of Asphalt Concrete Producer.

Use only materials that are furnished by a bulk asphalt concrete producer regularly engaged in production of hot-mix, hot-laid asphalt concrete.

Qualification of Testing Agency.

A certified testing agency acceptable to the Town shall establish job-mix formulas and perform the quality control sampling and testing required during excavation, subgrade, subbase, base and paving operations.

Design Criteria.

Provide final surfaces of uniform texture, conforming to required grades and cross-sections and in compliance with the requirements for density, thickness and surface smoothness.

Maintain material within allowable tolerances of the governing standards as required under the sections for submittals and products.

PART TWO - MATERIALS

Select Borrow Material.

Select subgrade material shall be a well-graded mixture of sound mineral aggregate particles containing sufficient, proper quality bonding material to secure a firm, stable foundation when placed and compacted on the roadway.

When tested with laboratory sieves, the select subgrade shall meet the following gradation requirements:

Percentage by Weight	
Standard Size of Sieve	Passing Sieve
3 inch	100
2 inch	90—100
No.4	30—60
No. 200	5—15
Liquid limit	35 maximum
Plasticity	6 maximum

The contractor will be required to provide a screen or other means to eliminate fines passing the No. 10 sieve if such fines prove to be objectionable at any time during the construction. If tests reveal that material being procured is not of suitable quality for which it is intended, the contractor shall provide other material as approved by the Town.

Subbase.

The bottom of the excavation for the pavement (or road surface) or top of the fill shall be known as the pavement subbase and shall conform to the lines, grades and cross-sections shown on the approved plans. This item shall consist of a foundation course composed of granular material constructed on the prepared subgrade in accordance with these specifications and to the grade indicated on the plans.

Gradation

This material need not be crushed but can be of the pit run variety provided that it is graded with the following limits:

Standard Size of Sieve	*Percentage by Weight Passing*
6 inch	100
No. 200	5—15
Liquid limit	35 maximum
Plasticity index	6 maximum
Resistance value	75 Mm.

The material supplied shall be a well-graded mixture, consisting of sound aggregate particles and sufficient filler or other proper quality binding material which, when placed and compacted, will result in a firm, dense, unyielding foundation.

Base Course.

Crushed gravel or crushed stone base course material shall consist of hard, durable particles or fragments of stone or gravel crushed to required size and a filler of sand or other finely divided mineral matter. The portion of the material retained on a No. 4 sieve shall be known as coarse aggregate, and that portion passing a No. 4 sieve shall be know as filler. When produced from gravel, not less than sixty percent (60%) by weight of the coarse aggregate particles shall be particles having at least one (1) fractured face and, if necessary to meet this requirement or to eliminate an excess of filler, the gravel shall be screened. The composite base course material shall be free from vegetable matter and lumps or balls of clay and shall meet the following grading requirements:

Standard Size of Sieve	*Percentage by Weight Passing*
¾ inch	100
No. 4	30—65
No. 8	25—55
No.200	3—12
Liquid limit	25 maximum*
Plasticity index	6 maximum
Resistance value	Mm. R = 78
*30 maximum if nonplastic	

Bearing value and/or stabilimeter tests may be required to properly evaluate the quality of the material.

Coarse aggregate shall show a loss of not more than fifty percent (50%) when tested in accordance with AASHTO standard method of test for abrasion of coarse aggregate by use of the Los Angeles machine, designation: T-96 (ASTM C131)

Prime Coat.

The prime coat shall be a medium-curing asphalt conforming to ASTM Specification D598 or D2027. Cutback AC-10 may be used in lieu of MC-70, when approved in writing by Town Engineer.

Tack Coat.

The tack coat material shall be an asphalt of a grade approved by the Town, typically conforming with the Standard Specifications of the Colorado Department of Highways (Section 407) using SS-1 emulsion at a rate of one-tenth (0.10) gallons or less per square yard of surface area. The solution shall be prepared by mixing one (1) gallon of SS-1 emulsion to one (1) gallon of clean water.

The asphalt surface course shall be composed of mineral aggregate and bituminous material, mixed in a central mixing plant, and shall be placed on the prepared base in conformity with the cross-section and grades shown on the plans.

Aggregates.

Aggregate shall be of uniform quality, crushed to size as necessary and shall be composed of sound, tough, durable pebbles or fragments with or without natural or mineral fillers, as required. The aggregate shall be free from vegetable matter, lumps, balls of clay, adherent films of clay or other matter that would prevent thorough coating with bituminous material and shall be free of an excess of flat or elongated pieces.

Coarse aggregate shall be crushed stone, crushed gravel or crushed slag conforming to ASTM D692.

Fine aggregate shall be crushed stone, crushed gravel, natural sand or slag screenings conforming to ASTM D1073.

Aggregate shall be composed of coarse and fine aggregate combined in the proper proportions to meet the Standard Specification, Grading C, of the Colorado Department of Highways, as follows:

Sieve Size	***Percent Passing***
¾ inch	100
½ inch	70—95
No. 4	38—72
No. 8	25—58
No. 50	9—32
No. 200	3—12

When tested for abrasion, coarse aggregate shall show a loss of not more than fifty percent (50%) when tested in accordance with AASHTO standard method test for abrasion of coarse aggregate by use of the Los Angeles machine, designation: T-96 (ASTM 0131).

At least sixty percent (60%) of all mineral aggregate passing the No. 4 sieve shall have at least one (1) fractured face. The mineral aggregate retained on the No. 8 sieve shall be clean, free from disintegrated stone, vegetable material or other deleterious substances. Material passing the No. 200 sieve shall be less than one-half (½) the material passing the No. 8 sieve. The material passing the No. 40 sieve shall have a liquid limit of not more the twenty-five (25) and a plasticity index of not more than six (6). Tests for liquid limit and plasticity index shall be made in accordance with AASHTO Standard Methods T89 and T90. If sufficient fine material of satisfactory quality is not naturally present in the mineral aggregate, it shall be added. Material consisting of finely powdered limestone, Portland cement, hydrated lime or other approved materials may be used for the filler.

Paving Asphalt.

The paving asphalt shall be a homogenous product derived from asphalt crudes and shall be free from water and any mineral matter other than naturally contained in the asphalt. The paving asphalt shall meet the requirements for AC-b (or alternate if approved by Town) and shall contain an anti-strip additive of a percentage as determined by a job-mix formula. Sampling and testing of paving asphalt shall be in accordance with applicable AASHTO and ASTM Tests.

Determination Of Percentage of Bituminous Material.

The percentage of bituminous material, by weight, to be added to the aggregate will usually be between five and three-quarters (5 ¾%) and seven percent (7%) of the weight of the dry aggregate. The exact percentage to be used shall be fixed by the contractor on the basis of preliminary laboratory tests and field sieve analysis of the aggregate furnished. The Town and/or its Engineer reserves the right to review these tests and to order any changes in the percentage of bituminous material deemed necessary during the progress of the work.

PART THREE - EXECUTION

Subgrade Preparation.

Field Control.

Field parties under the supervision of a professional engineer shall set control stakes. Whenever necessary, the field parties shall be available to check field control and to provide assistance to the contractor. A set of approved plans shall be kept on the job site at all times by the contractor.

Grading.

Excavation.

Prior to the street being excavated or filled, compaction of cuts shall be checked to see if the backfill meets density requirements. If deficient, they shall be tamped and brought up to the proper density.

The following standards will be in affect: Soils meeting State Highway Classifications shall be compacted to a minimum of ninety percent (90%) of Modified Proctor Density as determined by ASTM-1557. Other soils shall be compacted to a minimum of ninety-five percent (95%) of Standard Proctor, and the minimum moisture content shall not be less than two percent (2%) below or more than two percent (2%) above optimum.

No paving, subbase or base material shall be placed upon a soft, spongy or frozen subgrade or otherwise unsuitable subgrade, the stability of which is unsuitable for the placement of subbase or base.

Excavation shall be performed to the lines, grades and cross-sections indicated on the approved drawings. Except as otherwise permitted by the Town, all excavated areas shall be excavated in such a manner that will permit adequate drainage. Suitable material removed from the excavations shall be used as far as practicable for embankments and backfilling. Unsuitable material shall be excavated below the grade shown on the drawings or indicated by grade stakes as directed by the Town and replaced with select material. The contractor shall dispose of excavated materials that are considered unsuitable and any surplus of excavated material not required for embankments.

Embankments.

Embankments shall be constructed by depositing, placing and compacting materials of acceptable quality above the natural ground or other surface in accordance with lines, grades and cross-sections shown on the plans and/or as required by the Town. Before any embankment is placed, clearing, tree removal and topsoil removal shall be performed as directed by the Town Engineer. Clearing shall include removal and disposal of obstructions and rubbish to a minimum depth of twelve (12) inches below subgrade elevation; sod will be removed to a minimum depth of six (6) inches, and trees and stumps to a minimum depth of eight (8) inches below subgrade elevation. Each lift of embankment material, not to exceed six (6) inches of loose depth shall be thoroughly and uniformly mixed and moistened to full depths and compacted by roller or vibratory equipment suitable for the type of embankment material to be compacted to uniform minimum density of ninety percent (90%) of maximum density (ASTM D1557), and optimum moisture content of plus or minus two percent (2%). Where required by the Town Engineer or shown on the approved plans, select subgrade material shall be furnished as fill material instead of using native materials.

Heavy construction equipment or loaded trucks shall be driven over the subgrade and deflections noted. Soft and yielding material and portions of the subgrade which show deflection shall be scarified and re-rolled or shall be removed and replaced with base course material, placed and compacted as specified herein. Subgrade shall not be approved for base course construction until it is uniformly hard and unyielding.

Embankments shall be constructed to a width two (2) feet greater than the width of the section to be constructed.

Select Borrow Material.

In the event sufficient material is not available for constructing subgrade embankments or filling excavations from which unsuitable material is removed, the contractor shall procure select subgrade material for these purposes.

Subbase Placement and Compaction.

Each layer of subbase material shall be placed in layers not to exceed six (6) inches in loose depth. Each layer shall be wetted or aerated, if necessary, and compacted to ninety percent (90%) Modified Proctor Density. No subbase material shall be placed upon a soft, spongy or frozen subgrade or other subgrade the stability of which is, in the opinion of the Engineer, unsuitable for the placement thereof.

Base Course.

Base course shall consist of a foundation course composed of crushed gravel or crushed stone and filler constructed on the prepared subbase in accordance with these specifications and to the grade indicated on the plan.

Placing and Spreading.

The base course material shall be deposited and spread in a uniform layer and without segregation of size to such loose depth that, when compacted, the layer shall have a thickness not to exceed four (4) inches. The base course shall be rolled with a rubber-tired roller of minimum size of eight (8) to twelve (12) tons and a vibrated roller. Water may be added to produce a stable condition such that when heavy construction equipment or loaded trucks are driven over the base course, it is uniformly hard and unyielding. The material shall be compacted to a minimum density of ninety percent (90%) of Modified Proctor Density.

No base course material shall be placed upon a soft, spongy or frozen subbase or other subbase the stability of which is, in the opinion of the Engineer, unsuitable for the placement thereof.

Asphalt Paving.

General.

All asphalt paving shall conform and all work shall be done in accordance with the standard specifications of the Colorado Department of Highways (section 401).

Job Conditions.

Weather Limitations.

Apply bituminous prime and tack coats only when the ambient temperature in the shade is a minimum of fifty (50) degrees F and when the temperature has not been below thirty-five (35) degrees F for twelve (12) hours immediately prior to application.

Do not apply when the base surface is wet or contains an excess of moisture that would prevent uniform distribution and the required penetration.

Construct asphalt concrete surface course only when atmospheric temperature is above forty (40) degrees F., when the underlying base is dry and when weather is not rainy.

Grade Control.

Establish and maintain the required lines and grades, including crown and cross-slope for each course during construction operations.

Traffic Control.

Maintain vehicular and pedestrian traffic during paving operations as required for other construction activities.

Provide flagmen, barricades, warning signs and warning lights for movement of traffic and safety to cause the least interruption to the work and inconvenience to the public.

Prime Coat.

The grade of asphalt and the rate of application shall be approved by the Engineer and shall be determined by considering the condition of the base course, temperature and other conditions affecting application. When, in the opinion of the Town, the prepared base is thoroughly dry and satisfactory to receive the prime coat, the surface shall be cleaned by sweeping or other approved methods. The cleaning shall be continued until the embedded aggregates are uncovered but not dislodged, and dust, mud and foreign matter removed. The equipment used to apply the prime coat shall be of the proper type and condition of maintenance to distribute the materials evenly and smoothly in the quantity specified. The material shall be heated to the proper temperature when applied, and shall only be applied when the outside temperature is above fifty (50) degrees Fahrenheit. Apply enough material to penetrate and seal, but not flood, the surface. The prime coat shall be permitted to cure until thorough and proper penetration has been obtained, but at no time shall the curing period be less than twenty-four (24) hours. Pools of bituminous material occurring in depressions shall be removed from the surface before applying the asphalt surfacing. Blot with sand and remove loose sand before paving. Protect surfaces of curb and gutter, sidewalks and other structures to prevent any asphalt oil from being sprayed on them. Any surfaces inadvertently sprayed will be thoroughly cleaned at the expense of the contractor.

All spots unavoidably missed by the distributor or areas that are inaccessible to the distributor shall be hand sprayed.

All vertical contact surfaces of curbs, gutters, manholes and other structures projecting into or abutting asphalt concrete pavement shall be primed by brushing with hot asphalt oil prior to placing the pavement.

At no time during the period of curing shall traffic be allowed upon the primed surface.

Tack Coat.

Whenever new asphalt pavement is placed on existing pavement, a bituminous tack coat shall be applied to the existing pavement prior to placing the new pavement.

The surface to receive the tack coat shall be dry and cleaned by an approved method until all dust, debris and foreign matter are removed. The tack coat material shall be applied at a rate and temperature approved by the Engineer which will provide a very thin coating uniformly distributed over the entire area to be covered, typically 0.05 - 0.15 gallons per square yard. The tack coat shall not be applied when the outside temperature is below fifty (50) degrees Fahrenheit. Apply no more tack coat than necessary for the day's operation.

Apply tack coat to primed surfaces if "dusting" has occurred which will result in poor bonding between treated surface and bituminous pavement.

Job-Mixing Formula.

No work shall be started on the project nor any mixture accepted until the contractor has submitted for the approval of the Engineer a satisfactory job-mix formula based upon tests of the materials to be furnished. The contractor to the Town, indicating the definite percentage for each sieve fraction of aggregate and for asphalt, shall submit the formula in writing. The intended temperature of completed mixture at the time it is discharged from the mixer must be between two hundred thirty-five (235) degrees Fahrenheit and three hundred (300) degrees Fahrenheit. The material furnished shall conform to the approved job-mix formula within the tolerances specified herein.

7.03.5 Job-Mix Tolerance	***Plus or Minus***
Aggregate passing No. 4 sieve	8%
Aggregate passing No. 8 sieve	6%
Aggregate passing No. 200 sieve	3%
Mixture temperature upon delivery at job site	20° F
Paving asphalt (Bitumen)	0.5%

Should a change in sources of material be made, a new job-mix formula shall be established before the new material is used. Prepared job-mix formula for each course to meet the following test criteria:

Marshall-Method	***Minimum***	***Maximum***
Stability, lbs.	500	
flow, units of 0.01 inch	8	18
% air voids		
surface course	3	5
base course	3	8
% air voids in mineral aggregate—surface course	14	
Compaction blows	50	

Mixing Plant.

The paving plant shall be of standard design and contain all the necessary components to ensure proper mixing of the materials. The plant shall be subject to approval by the Town and/or Engineer. The Town and/or its

representatives shall have access at any reasonable time to all parts of the plant for the verification of weights and portions, character of materials and determination of temperatures used in the preparation of the mixture. All materials shall be mixed in accordance with standard procedures.

Transporting Asphalt.

Transport asphalt concrete mixtures from mixing site in trucks having tight, clean, smooth, metal beds.

Coat hauling compartments with limewater mixture to prevent asphalt concrete mixture from sticking. Elevate and drain compartment of excess solution before loading mix.

When the asphalt is subject to cooling during long haul, it shall be covered with a tarp in the truck to maintain proper temperature for laying. The asphalt shall not be hotter than three hundred twenty-five (325) degrees Fahrenheit at the plant. During periods of cold weather or for long-distance deliveries, provide insulation around entire truck bed surfaces and provide covers securely fastened.

Equipment.

Provide the size and quantity of equipment to ensure a uniform continuity of operation and to complete the work specified within the project time schedule.

Asphalt Distributor.

The distributor shall be in good mechanical condition and shall be capable of uniformly distributing the prime coat throughout a reasonable range of widths, pressures, temperatures and application rates.

Distributor equipment shall include a tachometer, pressure gauges, accurate volume-measuring devices or a calibrated tank and thermometer for measuring temperatures of tank contents. They shall be equipped with a power unit for the pump and full-circulation spray bars adjustable laterally and vertically.

Bituminous Pavers.

Pavers shall be self-contained, power-propelled units, provided with an activated screed or strike-off assembly, heated if necessary, that shall effectively produce a finished surface of the required evenness and texture without tearing, shoving or gouging the mixture and control pavement edges to true lines and grades without the use of stationary forms.

The paver shall be equipped with a receiving hopper having sufficient capacity for a uniform spreading operation and shall be equipped with a distributor system to place the mixture uniformly in front of the screed.

Rolling Equipment.

Rollers shall be self-propelled, steel-wheeled rollers, pneumatic-tired rollers or vibrating rollers capable of reversing without backlash.

The number and weight of rollers shall be sufficient to compact the mixture to the required density while it is still in a workable condition.

Hand Tools.

Provide rakes, lutes, shovels, tampers, smoothing irons, pavement cutters, portable heaters and other miscellaneous small tools to complete the work specified.

Placement.

Prior to placement of the surface course, the base shall be cleaned of all dirt or other foreign matter. When the new pavement abuts the old paving, the contractor shall, at his or her own expense, cut back the old pavement as directed by the Engineer and paint the edge of the old pavement with a coat of hot asphalt cement. The asphalt pavement shall be placed only when the base is dry and weather conditions are suitable. The asphalt pavement shall have a density of not less than ninety percent (90%) of the calculated density of a voidless mixture composed

of the same material in like proportions. While the surface is being compacted and finished, the contractor shall carefully trim the outside edges of the pavement to the proper alignment. No surfacing shall be placed unless the atmospheric temperature in the shade is at least forty (40) degrees Fahrenheit and rising, or fifty (50) degrees Fahrenheit if falling, and other weather conditions are suitable. In no case shall pavement be laid on foundations in which frost is present.

Allowable Tolerances.

Density: Compare density of in-place material against laboratory specimen of the same asphalt-concrete mixture when subjected to fifty (50) blows of a standard Marshall hammer on each side of the specimen. Minimum acceptable density of in-place materials shall be ninety-five percent (95%) of the recorded laboratory specimen density for any course.

Thickness: In-place compacted thickness will not be acceptable if exceeding the following allowable variations from thickness shown on the drawings:

Individual samples	¼ inch
Surface course	¼ inch, plus or minus
Base course	¼ inch, plus or minus

Overall average of samples: The compacted average thickness of both base course and surface course, computed by summing the individual sample thickness and dividing by the total number of samples, shall be no less than that specified on the drawings for each layer, respectively.

Surface Smoothness.

Finished surfaces of each asphalt concrete course shall be checked for smoothness using a ten-foot straight edge applied parallel to and at right angles to the centerline of paved areas. Surfaces will not be acceptable if exceeding the following:

Surface course	3/16in 10 feet
Base course	¼ in 10 feet

Placing the Mix.

A paving machine, as specified, capable of spreading the mixture true to line, grade and crown will place the asphalt concrete mixture.

The mixture shall be spread at a temperature of not less the two hundred fifty (250) degrees F. The desired temperature shall be set by the Engineer and shall be maintained within plus or minus thirty (30) degrees F.

Hand placing and spreading will be permitted in inaccessible and small areas.

Place each course in one (1) or more lifts to provide a nominal compacted thickness conforming to the indicated grade, cross-section, finish thickness and density, as specified and shown on the drawings. No more than three and one-half (3½) inches compacted thickness shall be placed in one (1) lift unless approved by the Town based on available compaction equipment.

Continuity of Operations.

It is essential to place the mixture in as continuous an operation as practicable to ensure a good plant-mix asphalt paving with good riding qualities and uniform density.

The paver speed will be maintained in balance with the plant production, and a sufficient number of trucks should be available to assure uniform capacity operation of the asphalt plant and pavers.

Defects caused by unnecessary stopping due to lack of coordination between mixing, hauling and lay down shall be removed and replaced.

Paver Placing.

Paving operations shall begin along the concrete gutter or low side of the street and in the direction of traffic flow and work toward crown from both sides of the street.

After the first truckload of the day has been spread, the loose and compacted depths shall be checked so that a ratio can be established for the correction of loose depth.

If segregation of materials should occur, the spreading operation will be stopped immediately and not resumed until the cause is determined and corrected.

Any asphalt mix that clings to the sides of the hopper shall be continually loosened and pushed into the active mix. No mix shall be retained in the hopper when there is a delay in the asphalt concrete supply.

Immediately after any course is screeded, and before roller compaction is started, the surface shall be checked. Any area showing an excess or deficiency of bituminous material shall be removed and replaced, and all irregularities in alignment and grade shall be corrected by the addition or removal of mixture.

Complete base courses for a section before placing surface courses.

Hand Placing.

Place mixture at a rate that will ensure handling and compaction before mixture becomes cooler than acceptable working temperatures.

The mixture will be spread, tamped and finished to a uniform density and to the correct depth. The surface will be checked as required under paver placing.

Joints.

Carefully make joints between old and new pavements, or between successive days' work, to ensure a continuous bond between adjoining work. Saw cut existing old pavement so that an even vertical surface is exposed. Apply tack coat and butt new pavement up to saw cut edge of existing pavement.

Construct joints shall have the same texture, density and smoothness as the adjacent section of asphalt concrete course.

Clean contact surfaces free of sand, dirt or other objectionable material and apply tack coat. Also apply tack coat to contact surfaces of old pavement joints before placing mixture against them.

Cut back edge of previously placed course to expose an even, vertical surface of full-course thickness.

Offset longitudinal joints in succeeding courses not less than six (6) inches. Offset transverse joints in succeeding courses not less than twenty-four (24) inches.

When the edges of longitudinal joints are irregular, honeycombed or inadequately compacted, cut back unsatisfactory sections to expose an even, vertical surface of full-course thickness.

Compacting the Mix.

A minimum of two (2) rollers will be required, and as many additional rollers as necessary shall be used to compact the asphalt mixture at the proper temperature to obtain the specified pavement density.

Begin rolling operations as soon after placing when the mixture will bear weight of roller without excessive displacement. Delays in rolling of fresh mixture shall not be tolerated.

The roller wheels shall be kept moist with only enough water to avoid picking up the material. A detergent may be added to the water, but no oil will be permitted for this purpose.

Do not permit heavy equipment, including rollers, to stand on finished surface before it has thoroughly cooled or set.

Compact mixture with hot hand tampers or vibrating plate compactors in areas inaccessible to rollers.

The lanes placed in the paving operation shall be rolled in the following order:

(1) Transverse joints.

(2) Longitudinal joints.

(3) Outside edge.

(4) Breakdown rolling. Start rolling longitudinally at extreme lower side of sections and proceed toward the high side. Roll to slightly different lengths on alternate roller runs.

(5) Intermediate rolling. Same as breakdown rolling.

(6) Finish rolling.

The line of rolling should not be suddenly changed or the direction of rolling suddenly reversed, thereby displacing the mix. If rolling causes displacement of materials, the affected areas shall be loosened at once with lutes or rakes and restored to the original grade with loose material before being re-rolled.

Testing.

The contractor shall make tests for conformity with the specified crown and grade immediately after initial compression, and any variation shall be corrected by removing or adding materials and continuing the rolling.

The finished surface shall not vary more than one-quarter (¼) inch for the wearing course when tested with a sixteen-foot straight edge applied parallel with or at right angles to the center line.

After completion of final rolling, the smoothness of the course shall again be tested, and the jumps or depressions exceeding the specified tolerances or that retain water on the surface shall be immediately corrected by removing the defective work and replacing with new material or by adding additional material as directed by the Town and at the expense of the contractor.

Density Control.

Conduct tests for density control during compaction operations in accordance with the requirements of ASTM D2950 - tests for density of bituminous concrete in-place by nuclear method.

Depth of Asphalt control.

Conduct tests of in-place compacted thickness to ensure the required thicknesses are achieved as specified on the drawings and herein.

A minimum of one (1) core sample for every one thousand two hundred (1,200) square yards is required to measure thickness and Marshall stability and flow.

Conduct a minimum of one (1) compaction test on bituminous pavement for every twelve thousand (12,000) square yards at locations designated by the Engineer.

For the determination of composition, compaction and density of the pavement, the contractor shall remove suitable size samples of the completed pavement if directed by the Engineer. The Engineer may take samples for each day or fraction thereof when mixtures are placed. The contractor shall replace the pavement where the samples are removed, and the contractor, free of charge, shall install these replacements. After samples have been removed from the completed pavement, the Engineer, for density and composition, will test them. If the deficiency in composition of compaction exceeds the limits of toleration from the specified, satisfactory corrections shall be made.

Drainage.

Culverts shall be installed where V-ditches, gutters and valley pans will not carry the necessary flow. Culverts shall be corrugated, galvanized metal with metal end sections, unless otherwise authorized by the Town. Diameter and scope shall be based on flows. Minimum diameter in roadways shall be eighteen (18) inches, and minimum diameter in driveways shall be twelve (12) inches.

Cleaning.

After completion of paving operation, clean surface of spilled asphalt materials.

Protection.

After final rolling, do not permit vehicular traffic on asphalt concrete pavement until it has cooled and hardened and in no case sooner than six (6) hours. Provide barricades and warning devices as required to protect pavement and the general public. Cover openings of structures in the area of paving until permanent coverings are placed.

Patching.

Remove and replace defective areas. Cut out and fill with fresh, hot asphalt concrete. Compact by rolling to specified surface density and smoothness. Remove deficient areas for full depth of course. Cut sides perpendicular and parallel to the direction of traffic with edges vertical. Apply tack coat to exposed surfaces before placing new asphalt concrete mixture.

Adjusting Utility Grades.

The contractor shall adjust all existing manholes and valve boxes to final grade. Where spacer rings are installed, they shall have a wide slotted flange for support and is equal to Clay Bailey #3100 or as approved by the Town. If any existing manhole rings and covers or valve boxes are found to be defective, they shall be replaced as directed by the Town.

Frame Adjustments.

Set frames of subsurface structures to one-eighth (⅛) inch below final grade as a part of this work, including existing frames and new frames furnished under other work of this project.

Placing Frames.

The existing frames are to be stored while a temporary cover is used to support equipment while the paving operation is being completed to finish grade. The temporary frame is to be removed, and the existing or new frames are then installed and adjusted to finish grade and slope.

The area between the frames and existing pavement is then filled with hot asphalt concrete and compacted with the use of a hand tamper.

The same sequence is to be followed for water valve boxes, except that no temporary frames are required.

Acceptance by Town.

The contractor shall guarantee all portions of street construction for a period of one (1) year after completion against defective workmanship and materials and shall keep same in good order and repair. The determination of the necessity, during such guarantee period, for the contractor to repair said street, or any portion thereof, shall rest entirely with the Town and Town's Engineer, whose decision upon the matter shall be final and obligatory upon the contractor.

POWER, POWER AND BURIED WIRES - MINIMUM REQUIREMENTS

General.

All buried power, phone, cables and other buried wires installed within the Town of Paonia shall conform to these basic requirements and to the requirements of the appropriate utility owner. Before installation of any buried utility, the installer shall have the approval of the Town and the utility owner and shall obtain all necessary permits. All work within Town rights-of-way shall also conform to all applicable Town requirements.

Depth of Bury.

Primary power shall have a consistent depth of bury at four (4) feet below finished grade.

Secondary power shall have a depth of bury of at least two (2) feet below finished grade.

Other wires, such as phone and cable, shall have a minimum bury of two (2) feet below finished grade.

Wire Locations.

Primary power shall be located four (4) feet inside the property line within the utility easement. Secondary power and phone shall be located at six (6) feet inside the easement. Variances from these locations will require express approval of the Town.

Bedding.

All wires and PVC encasements shall be bedded in select bedding material for a minimum of six (6) inches around the wires and pipe. If the native materials are rocky, over-excavation of six (6) inches of material and replacement with select material is required.

Marking Tape.

Marking tape shall be placed above the primary power consistently two (2) feet above the wires or pipe as applicable.

Separation From Other Utilities.

Minimum separation between primary power and water, sewer, gas and irrigation shall be a minimum of five (5) feet horizontally. Minimum separation between primary power and phone and cable shall be two (2) feet minimum horizontally.

Line in Public Rights-of-Way.

When power lines are in public rights-of-way they shall be encased in Schedule 80 PVC pipe for the entire length the wires are inside the right-of-way.

Crossing Other Utilities.

When power lines cross other utilities, the power lines shall be encased for at least five (5) feet on either side of the crossing in Schedule 80 PVC pipe.

CROSSINGS, STANDARD SPECIFICATIONS

Roadway Crossings.

Where the pipeline crosses State roadways, it shall be encased in a pipe of larger diameter, as detailed below, and the crossing shall be as nearly perpendicular to the roadway as physically possible. This pipeline shall be installed by the method of boring or jacking beneath the road surface. However, open cut shall be permitted up to a point near the shoulders of the roadway in accordance with Department of Highways regulations.

At the contractor's option he or she may petition the State Highway Department for permission to open cut a highway. If approved, the contractor shall obtain a written special permit from the Department of Highways, and the approved permit shall be filed with the Town before making any open cut. Repair of any open cut made shall conform to regulations of the State Highway Department and applicable portions of the Excavation and Backfill and these specifications and typical drawings.

The contractor will be required to protect the public during construction with proper signs and warning signals day and night, as necessary, in conformance with Department of Highway regulations. The contractor shall at all times during construction assume full responsibility for any and all damage and injury to the roadway, users of the roadway, abutting land owners, Department of Highway property and personnel and any other persons or property when such damage or injury is caused in any manner by the operation of the contractor during this construction.

All work on State highways shall be carried out under the general supervision of the State Highway Department and shall be coordinated with the activities of the Department to cause the least possible inconvenience.

The disturbed portion of the State right-of-way shall be restored to its original condition and seeded according to the provisions of the State Highways Department.

If a portion of the pipeline is to be installed across County or Town roads, encasing pipe shall be installed from shoulder to shoulder. When crossing gravel or unpaved roads with main lines, open cut may be permitted provided that the County and/or Town is consulted and the method of crossing is approved in writing. Where paved roads are crossed with main lines, encasing pipe shall be installed under the paved portion by boring or jacking. Open cut will be permitted only when conditions are such that boring or jacking cannot make the crossing. Open cuts will be permitted to the shoulders of paved roadways.

Particular care shall be exercised during construction and cleanup operations to prevent undue damage to graveled and paved surfaces. No water shall be used in boring, and no tunneling shall be permitted. The roads shall be repaired and restored as nearly as possible to their original condition.

All road crossings shall be backfilled as called for on the typical drawings and in the Excavation and Backfill specifications. The contractor shall place a smooth riding surface equal to the original surface. Materials for the repair shall be furnished by the contractor and shall be approved by the Town.

Arroyo and Canal crossings.

Crossings under irrigation canals and ditches shall be made in accordance with the regulations of the affected irrigation company. Where possible, crossings shall be made by boring or jacking. The Town, prior to commencing construction, shall approve boring equipment and construction methods. If it is not possible to bore or jack, the contractor shall obtain written permission from the irrigation company to make an open cut. Backfill and compaction of the open cut shall comply with the irrigation company requirements or applicable portions of the Towns standard specifications, whichever is more stringent.

Crossings under canals shall be encased. Crossings under ditches are not required to be encased. Minimum cover under canals and ditches shall be sixty (60) inches to the top of the encasing pipe and main pipe respectively.

Arroyo crossings shall be made by open cut unless otherwise required by the Town. Encasement shall not normally be required, but depth of bury shall be eight (8) feet to the top of the pipe.

Encasing Pipe.

Encasing pipe shall be steel of the size and minimum wall thickness enumerated below:

Carrier Pipe	***Steel-Encasing Pipe***	***Wall Thickness (inches)***
½ inch	4 inches	0.135 (10 gauge)
2 inches	6 inches	0.135 (10 gauge)
3 inches	8 inches	0.1875 (3/16")
4 inches	10 inches	0.1875 (3/16")
6 inches	12 inches	0.1875 (3/16")
8 inches	16 inches	0.25 (¼")
10 inches	18 inches	0.25 (¼")
12 inches	20 inches	0.3125 (5/16")

Overhead Insulated Crossings.

Crossings over canals, large ditches and arroyos may be made when all of the following requirements are met and with the approval of the Town:

a. Having adequate depth on each bank to furnish sixty (60) inches of cover over the pipeline.

b. Having adequate depth in the canal, ditch, etc., so that high water level will not endanger the pipeline. (usually eighteen [18] inches above high water)

c. Having a span not to exceed the limits of the casing pipe. (If approved by the appropriate authorities, suspension from bridges is permitted.)

d. Providing adequate and proper insulation of the pipeline and support of the pipeline within the casing.

Pipe insulation will comply with one (1) of the following:

a. Factory-fabricated insulated pipe systems consisting of PVC plastic carrier pipe of the same class as the pipeline leading to the crossing, polyurethane foam insulation and PVC plastic outer jacket. Joints shall be gasketed bell and spigot. The exterior of the system shall be wrapped with a weatherproof layer to protect the PVC from degradation from UV light. Factory insulated piping systems shall be as manufactured by Ricwil, Inc., P.O. Box 151, Brecksville, OH 44141 and have a minimum R-value of eleven (11).

b. Fiberglass insulation shall be as manufactured by Certainteed Corporation, Valley Forge, PA, or equal. The insulation shall be snap-on fiberglass with factory-applied all-service jacket with minimum thickness of six (6) inches. Wooden "donuts" shall be prepared with the same O.D. as the pipe plus insulation and shall be installed at each end and at three-foot intervals along each joint of pipe.

c. Isocyanurate insulation prefabricated with a hole in the center of sufficient diameter to accept the carrier pipe and of sufficient thickness to a minimum R-value of twenty-four (24). Such insulation shall be secured according to manufacturer's recommendations. Alternately, the space between the carrier and encasing pipe may be filled with an isocyanurate spray if the contractor can demonstrate that the spray can be applied to provide a uniform R-value of twenty-four (24) or more.

The encasing pipe shall extend a minimum of five (5) feet into the ground on each side of the crossing. Ends of the encasing pipe shall be sealed with a wooden "donut" and plastic wrap.

Unless otherwise authorized by the Town, encasing pipe shall be steel meeting the following minimum standards depending on the required thickness of the insulation. One-half-inch weep holes shall be cut into the bottom of the encasing pipe at two-foot intervals as shown on the typical drawing.

Carrier Pipe (inches)	***Encasing Pipe (inches)***	***Wall Thickness (inches)***	***Span (feet)***
2	10	¼	47
3	10	¼	47
4	12	¼	49
6	14	¼	49
8	16	¼	50
10	18	¼	51
12	20	¼	52

MISCELLANEOUS

TOWN OF PAONIA

EXCAVATION PERMIT APPLICATION

Permit # _____ Date: _____

Owner: _____

Address: _____

Phone Number: _____

Contractor (if applicable): _____

Address: _____

WORK TO BE DONE AT: _____

Is it paved? Yes: ____ No: ____

PURPOSE OF WORK: _____

SIZE OF EXCAVATION

Length: _____

Width: _____

Depth: _____

Estimated Cost/Bid of Excavation: $_____

Work to be started on: _____ and completed on: ;p0; _____

Bond $_____ Cashier's Check $_____

Letter of Credit $_____

Cost of Permit: $25.00

Contractor: _____

Permittee: _____

Approved by the Town of Paonia:

_____ _____ Town Administrator — Date

TERMS AND CONDITIONS OF PERMIT

1. No work shall be conducted on Town property without an approved permit.

2. All work shall be done subject to and in accordance with the requirements of this Permit, Town Code and ordinances, Town standards and regulations for streets and other improvements and good engineering practice.

3. Work shall not commence prior to _____ and all work shall be completed, including all restoration and clean up by _____. Thereafter, the Town may cause the work to be completed, excavation backfilled, surfaces restored and damages repaired and collect the cost of so doing from the Permittee unless the Town has provided a written extension to this permit.

4. Permittee shall notify Town Hall no later than forty-eight (48) hours prior to the beginning of excavation.

5. Prior to commencing construction, permittee shall notify telephone, power, cable TV, irrigation, water, sewer, gas and any other entities that may have underground facilities in the area for location of such utilities. Magnetic marking tape shall be placed twelve (12) inches above all buried lines and pipes or as otherwise required by Town specifications. Unless otherwise approved by the Town, utility lines and pipes shall be perpendicular or parallel to the rights-of-way lines in a location designated by the Town.

6. Any utilities, facilities or improvements that are disturbed or damaged by the work shall be repaired at the permittee's expense. The surface area shall be restored to its prior condition or better. Street and sidewalk surfaces and subsurfaces, which are cut or disturbed, shall be restored to their pre-existing conditions. Backfill, compaction, gravel and paving requirements are as set out in the Town specifications.

7. Allowance shall be made to avoid interrupting the flow in any drainage ditches, flumes, canals or similar facilities.

8. At the close of each day, all work shall be completed and excavations properly cleaned up unless otherwise authorized by the Town. Thereafter, the Town may cause the work to be completed, excavation backfilled, surfaces restored and damages repaired and collect the cost of so doing from the permittee.

9. No cleated or tracked equipment shall work on any pavement without mats or other appliances adequate to prevent damage to such surfaces.

10. Signs and barricades and other safety provisions shall be provided by the permittee, and comply with Part VI of the Manual of Uniform Traffic Control Devices.

11. The Town shall have access to the work site at all times to inspect the progress of the work. The Town may stop the work on account of violations of the terms of this Permit or to ensure safety or traffic movement and require the surface and subsurface to be restored. No more than one-half (½) of a street may be blocked at one (1) time without specific Town permission and in conformance with the Town's General Specifications.

12. Compliance with terms of this Permit must be guaranteed by a surety bond or a cashier's check in favor of the Town in penal sum of twenty-five percent (25%) of the estimated cost of the project or the bid to complete the project or four hundred dollars ($400.00), whichever is greater and conditioned upon the faithful performance of such work in strict compliance with Ordinance 99-07 and other specifications, rules, regulations and ordinances of the Town and within the specified time limit. The bond shall be discharged or the cashier's check returned to the applicant upon completion of the work as set forth herein, a review of said work by the Director of Public Works or his or her designee and a sworn statement by the applicant that he or she has done the work in strict compliance with Ordinance 99-07 and this permit, and other specifications, rules, regulations and ordinances of the Town of Paonia, Colorado. Approval of the work shall be in accordance with the requirements of Ordinance 99-07.

13. Permittee agrees to hold the Town, its officers, consultants and employees harmless on account of any damages suffered to the persons or property of the contractor or permittee arising out of his or her operations hereunder or the installation and maintenance of their facilities, utilities or improvements upon Town-owned property. The permittee agrees to defend and indemnify the Town, its officers, consultants and employees from any damages claimed or adjudged against the Town, its officers, consultants and employees arising out of permittee's operations or installation and maintenance of permittee's utilities, improvements, encroachment or facilities installation or maintenance within Town-owned property by permittee.

14. Permittee agrees to properly maintain permittee's encroachment, utilities, improvements or installations and shall be responsible to repair any damages to Town property, street surfaces or improvements which result or are caused in any manner by the excavation, installation, operation or maintenance of permittee's encroachment, pursuant to this permit.

15. In the event it is necessary to relocate any utility, improvement or facility of the permittee installed within Town property, pursuant to this permit, on account of change of any street grade, relocation, realignment or expansion of any street, other improvements to Town property or installation, replacement, maintenance or operation of any Town property, utility or facility, the permittee shall be responsible to relocate such facilities to a location approved by the Town at the permittee's sole expense.

16. The individuals signing on behalf of the permittee and contractor are hereby designated as agents for service of process on behalf of the permittee and contractor.

17. In the event the Town incurs any cost, including reasonable engineering and/or attorney's fees, enforcing any provision of the permit, the Town may recover such costs from the permittee.

18. All obligations, terms and conditions of this permit upon permittee shall be the joint and several obligations of the permittee and contractor.

19. The permittee and contractor represent that they have read and understand the foregoing terms and conditions of the permit, that they have read and understand the Town requirements including Town specifications and standards pertaining to the work being done under this permit and that the undersigned have authority to sign for and bind the permittee and contractor.

20. The work shall be conducted and encroachment maintained pursuant to the plans attached as Exhibit "A."

21. Any breach of the conditions set forth in this permit or of Town standards, specifications or requirements pertaining to work authorized by this permit may cause the revocation of the permit and the stoppage of the work.

22. By their signatures, the permittee and contractor acknowledge receipt of the Town Code and Paonia's Standards and Specifications and agree to comply with all the terms and conditions of this permit.

23. The Paonia Town Board or the Paonia Town Administrator may revoke this permit for any reason as deemed appropriate in the Town's sole discretion. Upon revocation, any encroachment shall be removed and the surface restored at the permittee's expense.

24. The additional conditions imposed by the Town set out in exhibit "B," if applicable, shall apply.

COMMERCIAL WASTEWATER QUESTIONNAIRE

TOWN OF PAONIA

P.O. BOX 460

PAONIA, COLORADO 81428

970-527-4101

Please answer all questions and return this questionnaire prior to requesting water or sewer connections. If additional space is required, be sure to number responses in accordance with this form.

GENERAL INFORMATION

1. Company Name: _____

2. Mailing Address: _____

3. City, State, Zip Code: _____

4. Address of Premises: _____

5. Signatory Official 6. Contact Official

Name _____ Name _____

Title _____ Title _____

Phone _____ Phone _____

7. Brief Description of Commercial or Service activity at premises address:

_____

_____

_____

WATER CONSUMPTION AND LOSS

8. Water Sources:

a. Town of Paonia: Meter Size: _____ Quantity: _____ gal/day

b. List Other Sources: _____ Quantity: _____ gal/day

_____ Quantity: _____ gal/day

TOTAL: _____ gal/day

NOTE: Records of water consumption from other sources may be required to be presented to the Town. The Town may refuse to provide domestic water and/or sewer services if it feels that the integrity of the Town's water supply could be compromised.

9. List Water Consumption by type of use within the premises:

Type of Use	Est'd Average Use
a. Sanitary	_____ gal/day
b. Process	_____ gal/day
c. Cooling	_____ gal/day
d. Landscaping	_____ gal/day
e. _____	_____ gal/day

10. Please attach a list of all chemicals including cleaning agents used in your business activity. Also include information on biological parameters (e.g., BOD, TSS, VSS, bacterial, etc) of the wastewater, if available.

SEWER CONNECTION AND DISCHARGE INFORMATION

11. List plant sewer outlets, size and estimated flow: (assign a sequential number to each sewer outlet starting w/ No. 1)

Reference number	***Sewer Size***	***Descriptive Location of sewer connection***	***Type of Wastewater discharge in each line (per # 12 above)***	***Average flow (gpd)***
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

NOTE: A scaled drawing of the facility will be required if there is more than one sewer outlet and for all industrial facilities. The drawing should show location of sewers referenced above, location of any wastewater treatment processes. Show locations of possible sampling points for sewer lines and, if applicable, each process. For reference, buildings, streets, alleys and other pertinent physical structures should be included.

12. I certify that, to the best of my knowledge and belief, the information contained in this questionnaire is true, complete and accurate.

_____ _____

Date Signature of Company Official

PERMIT REQUIREMENTS (TOWN WILL COMPLETE THIS PORTION)

Is a Discharge Permit application required for this facility? (____) Yes (____) No.

If yes, permit application # _____

Questionnaire Review by: _____ Date: _____

————————

COMMERCIAL WASTEWATER QUESTIONAIRE

TOWN OF PAONIA

P.O. BOX 460

970-527-4101

Please answer all questions and return this questionnaire prior to requesting water or sewer connections. If additional space is required, be sure to number responses in accordance with this form.

GENERAL INFORMATION

1. Company Name: _____
2. Mailing Address: _____
3. City, State, Zip Code: _____
4. Address of Premises: _____
5. Signatory Official 6. Contact Official

Name _____ Name _____

Title _____ Title _____

Phone _____ Phone _____

7. Brief Description of Commercial or Service activity at premises address:

_____

_____

_____

WATER CONSUMPTION AND LOSS

8. Water Sources:

a. Town of Paonia Meter Size _____ Quantity _____ gal/day

b. List Other Sources Meter Size _____ Quantity _____ gal/day

NOTE: Records of water consumption from other sources may be required to be presented to the Town. The Town may refuse to provide domestic water and/or sewer services if it feels that the integrity of the Town's water supply could be compromised.

9. List Water Consumption by type of use within the premises

Type of Use	Est'd Average Use
a. Sanitary	_____ gal/day
b. Process	_____ gal/day
c. Cooling	_____ gal/day
d. Landscaping	_____ gal/day
e. _____	_____ gal/day
f. _____	_____ gal/day

10. Please attach a list of all chemicals including cleaning agents used in your business activity. Also include information on biological parameters (e.g. BOO, TSS, VSS, bacterial, etc) of the wastewater, if available.

SEWER CONNECTION AND DISCHARGE INFORMATION

11. List plant sewer outlets, size and estimated flow: (assign a sequential number to each sewer outlet starting w/ No. 1)

Reference number	***Sewer Size***	***Descriptive Location of sewer connection***	***Type of Wastewater discharge in each line (per # 12 above)***	***Average flow (gpd)***
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

NOTE: A scaled drawing of the facility will be required if there is more than one sewer outlet and for all industrial facilities. The drawing should show location of sewers referenced above, location of any wastewater treatment processes. Show locations of possible sampling points for sewer lines and, if applicable, each process. For reference, buildings, streets, alleys and other pertinent physical structures should be included.

12. Industrial Only: Do processes have a Standard Industrial Classification

Code (SIC)? Yes _____ No _____ Not Applicable _____

If yes, provide SIC Code, brief description of process, and if the discharge is continuous or batch.

If no, provide only description of process.

PRETREATMENT

13. Will your facility have a process for removing pollutants before discharging to the sanitary system (i.e., grit/grease trap, chemical treatment. biological treatment, etc.)

(____) Yes (____) No

If yes, briefly describe the processes and average concentration of pollutants present in the discharge

_____

_____

_____

14. If raw water or wastewater is being treated, what is being done with the waste sludge produced? Please answer each question below for each sludge.

a. List the material hauled.

b. Where is material hauled to?

c. Who does the hauling?

d. How is material disposed of at that site?

15. Is water recycling or material reclamation utilized? ( ) Yes ( ) No If yes, Describe:

_____
_____

16. Is a Spill Prevention Control and Countermeasure Plan prepared for the facility?

(____) Yes (____) No. If yes, attach plan to questionnaire.

17. I certify that, to the best of my knowledge and belief, the information contained in this questionnaire is true, complete and accurate.

_____ _____

Date Signature of Company Official

PERMIT REQUIREMENTS (TOWN WILL COMPLETE THIS PORTION)

Is a Discharge Permit application required for this facility? (____) Yes (____) No.

If yes, permit application # _____.

Questionnaire Review by: _____ Date: _____

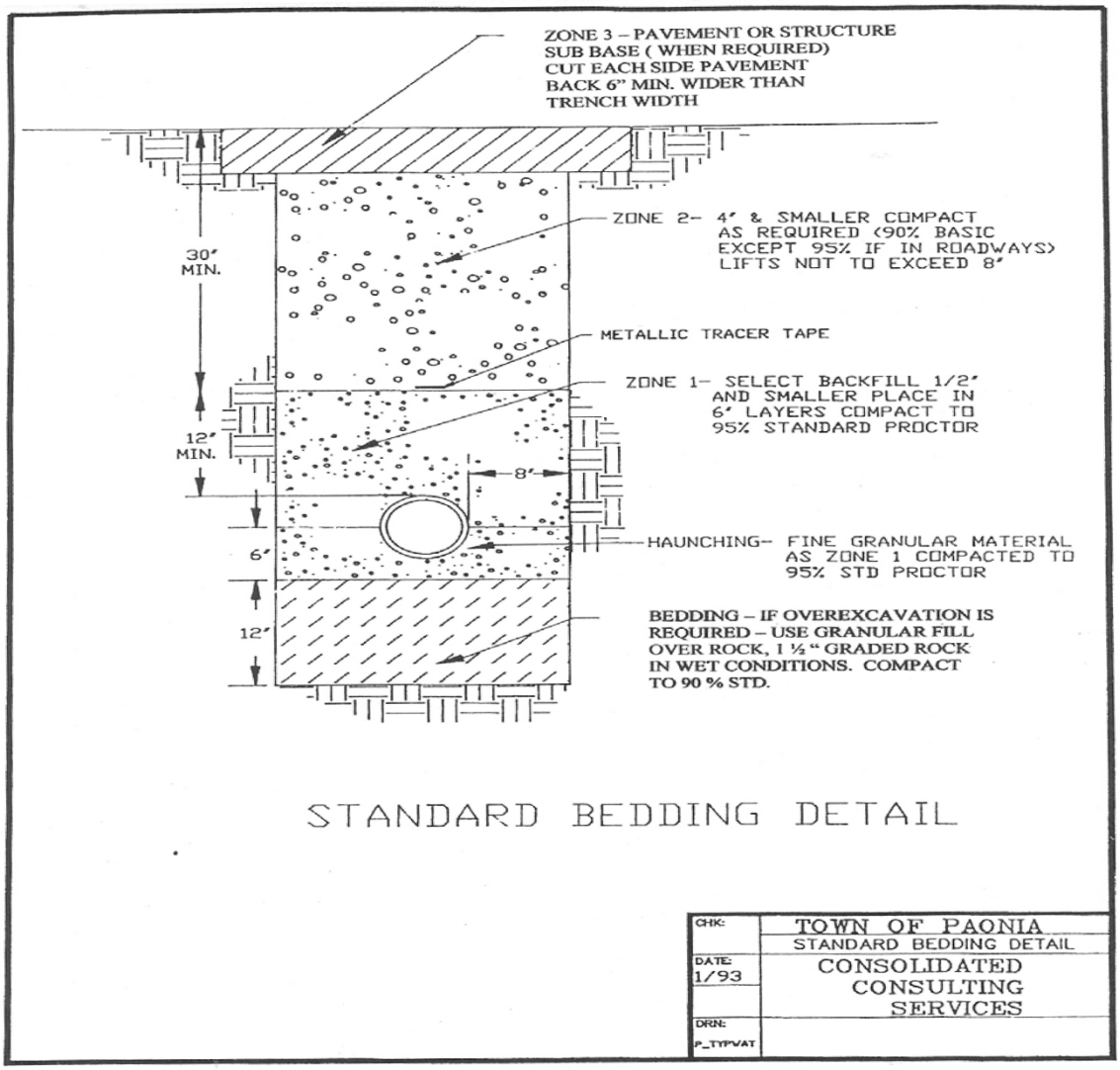


Figure D-1
Standard Bedding Detail

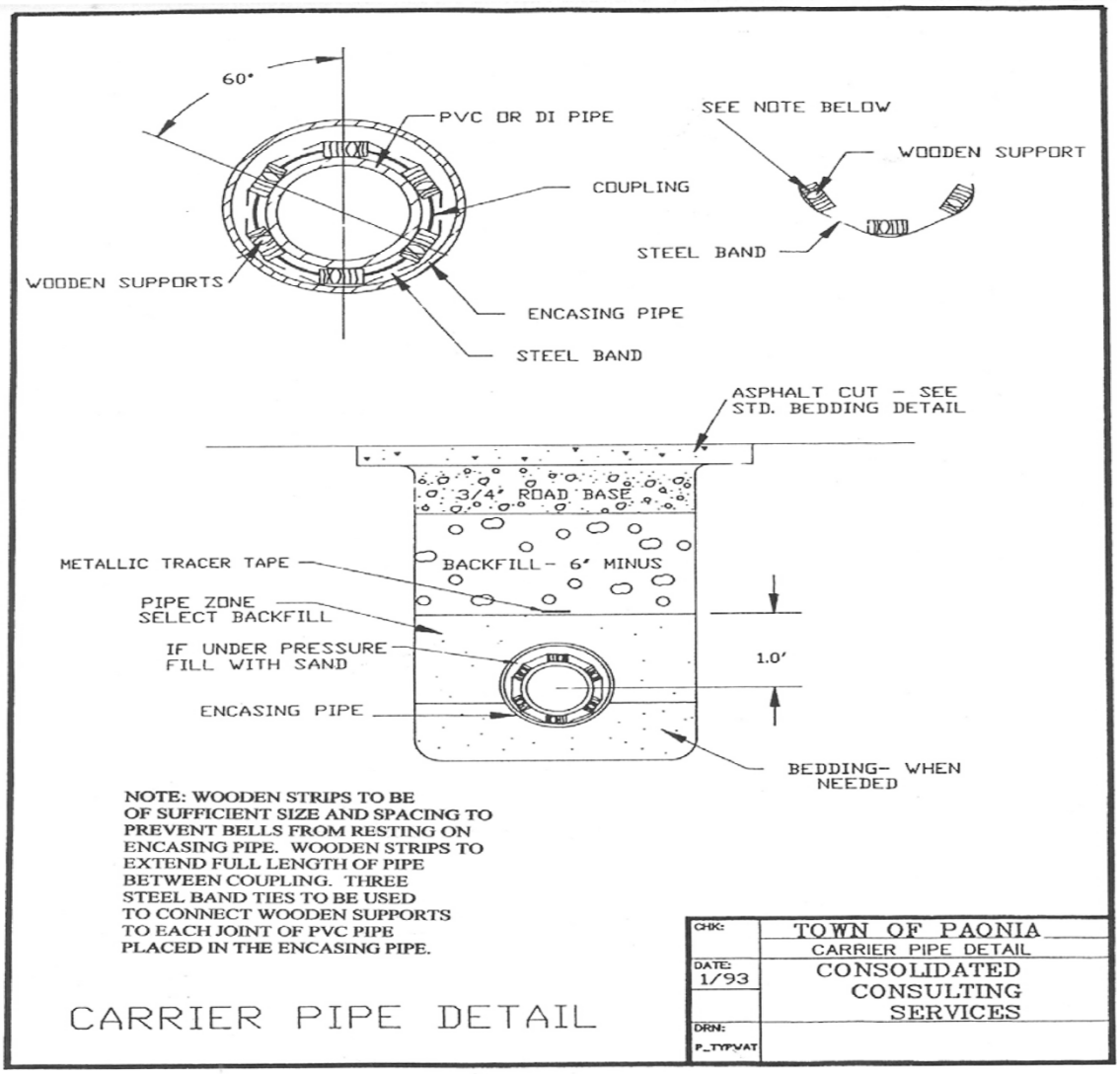


Figure D-2
Carrier Pipe Detail

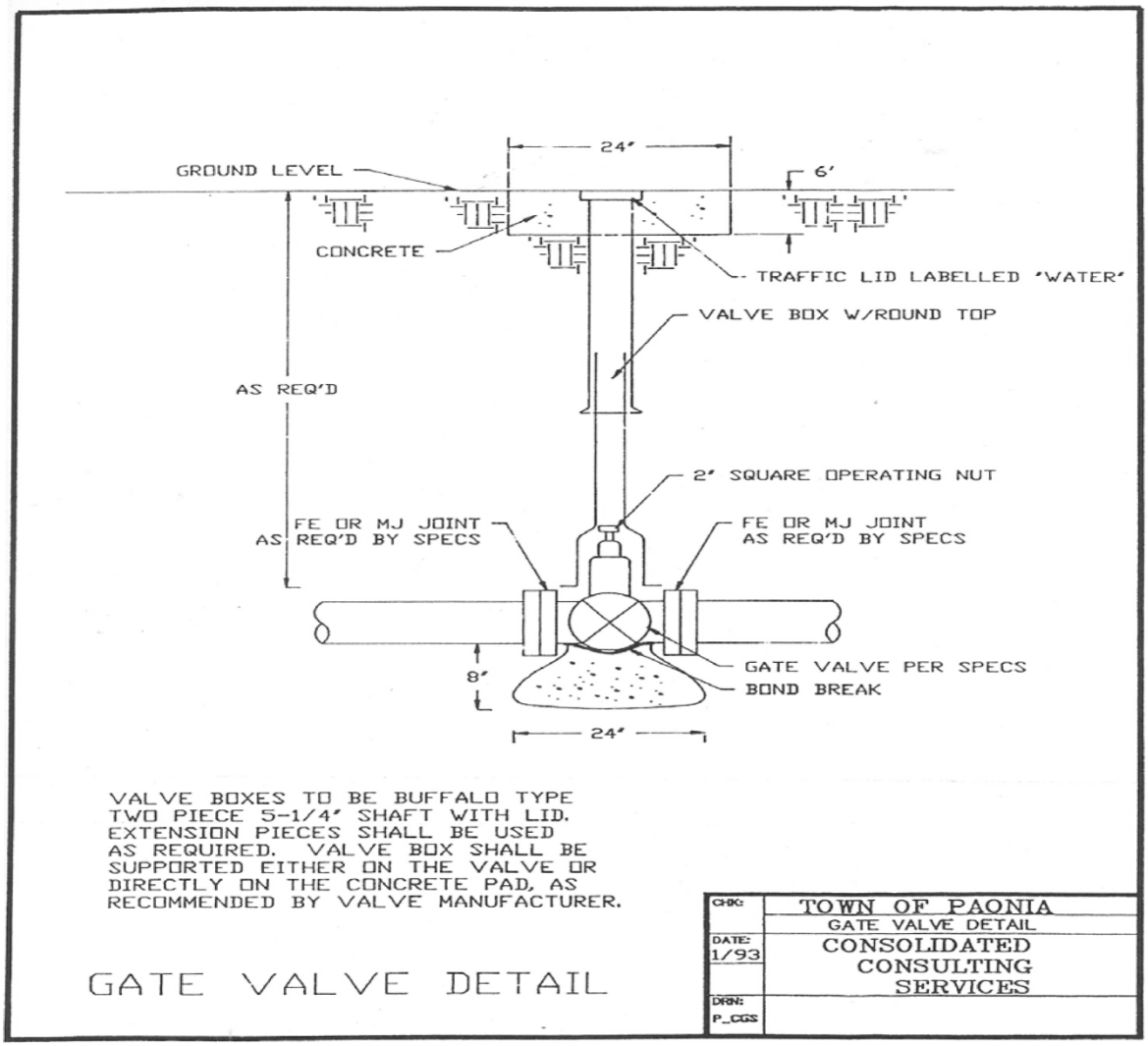


Figure D-3
Gate Valve Detail

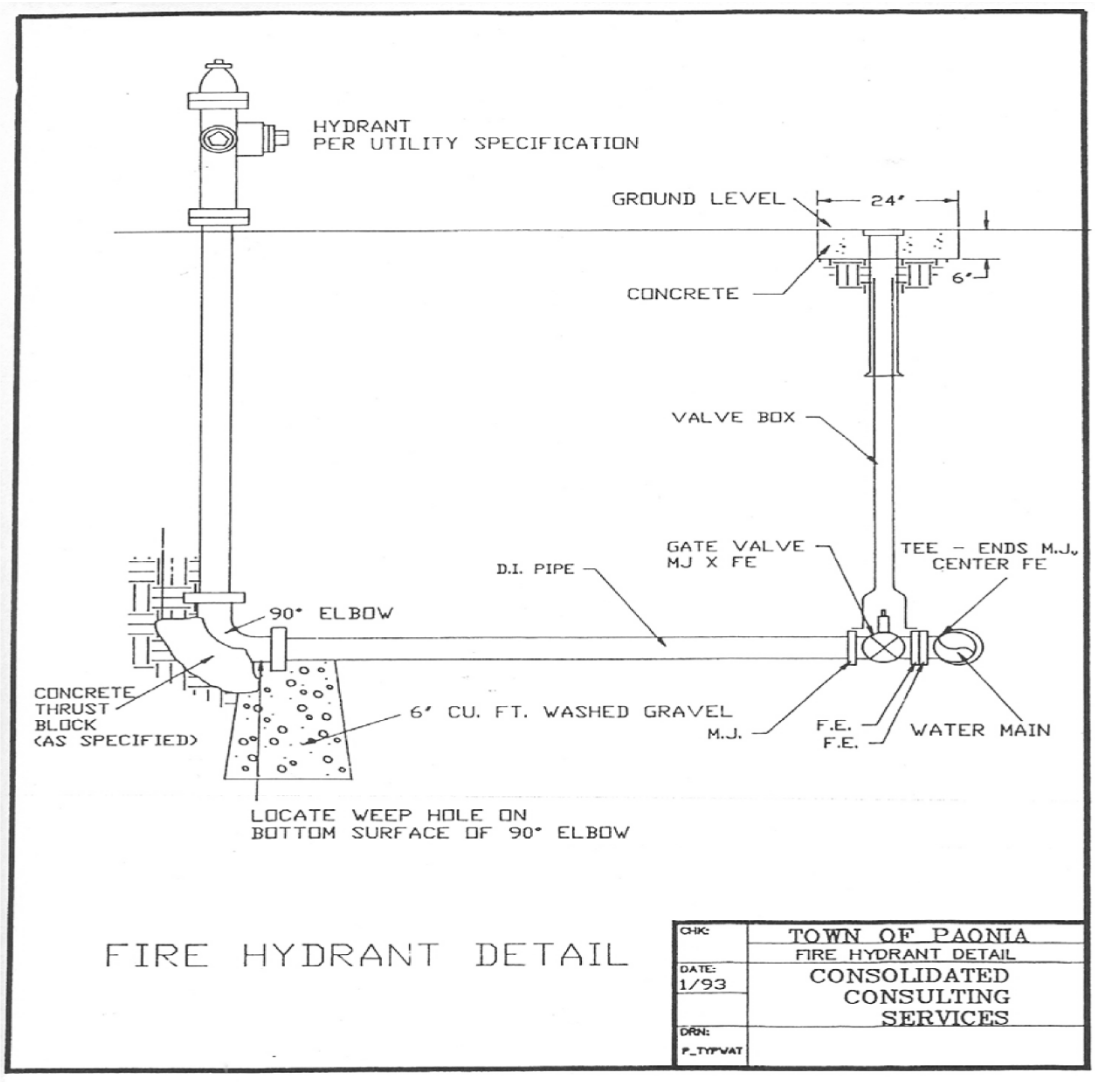


Figure D-4
Fire Hydrant Detail

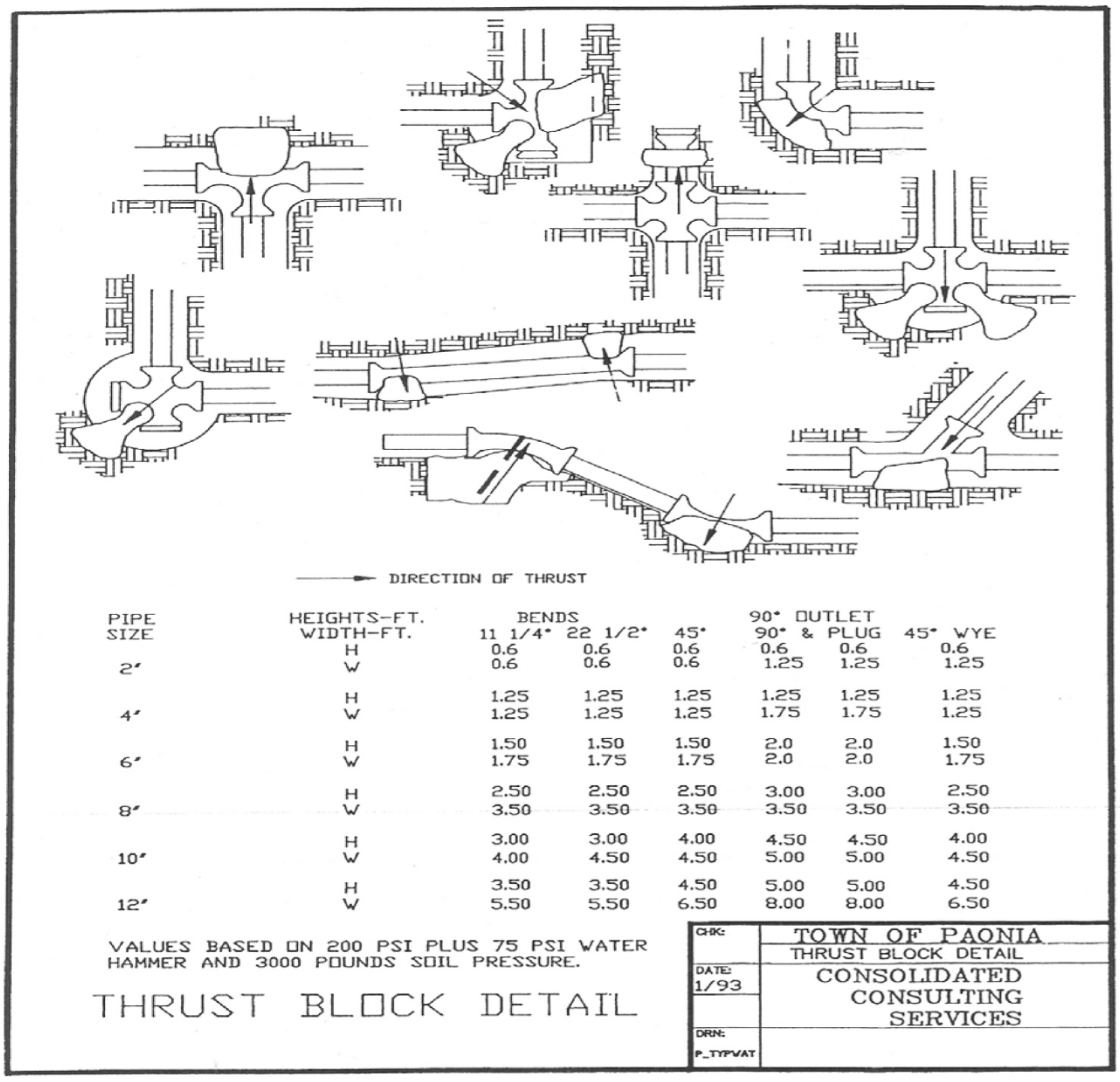


Figure D-5
Thrust Block Detail

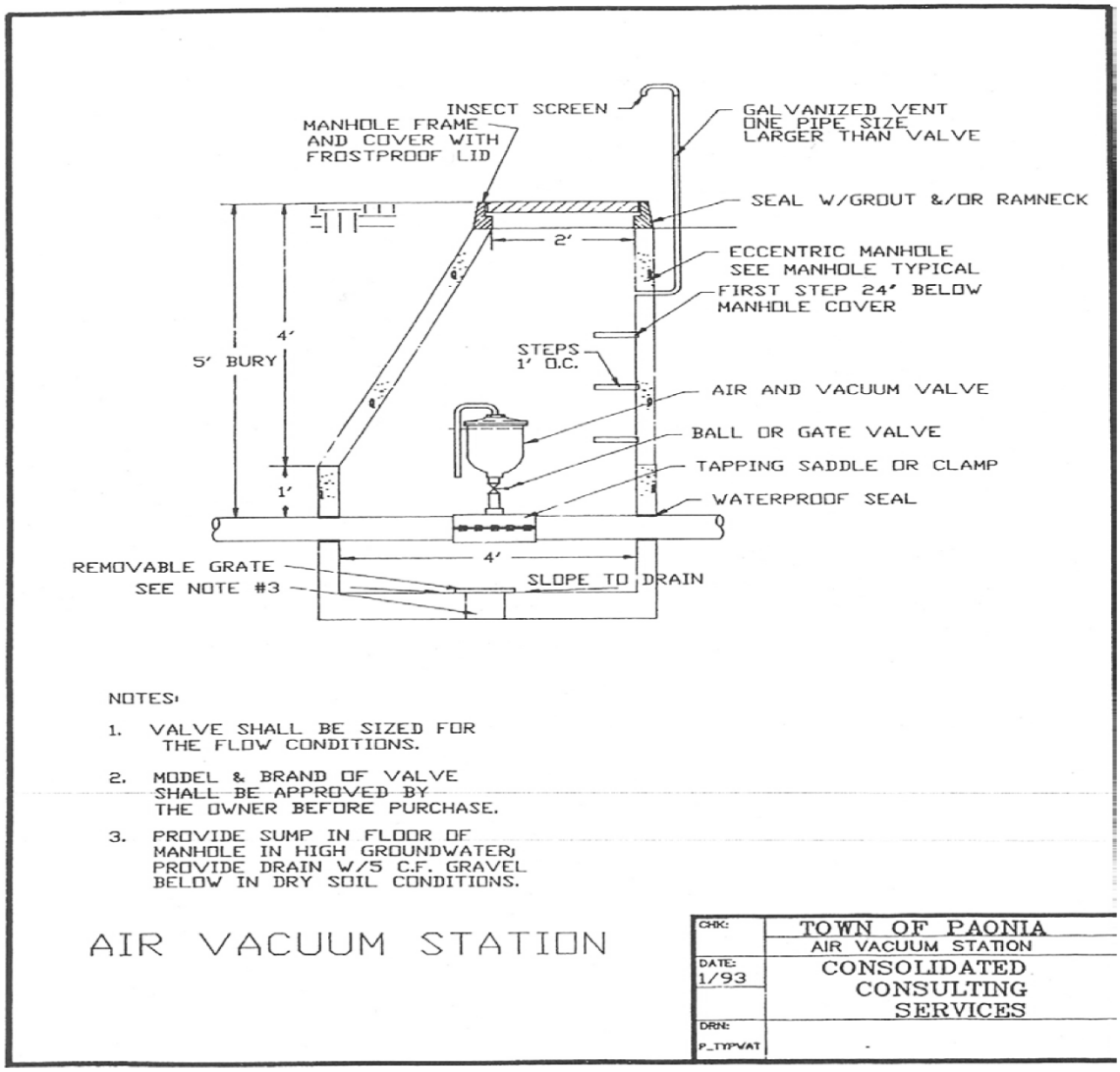


Figure D-6
Air Vacuum Station

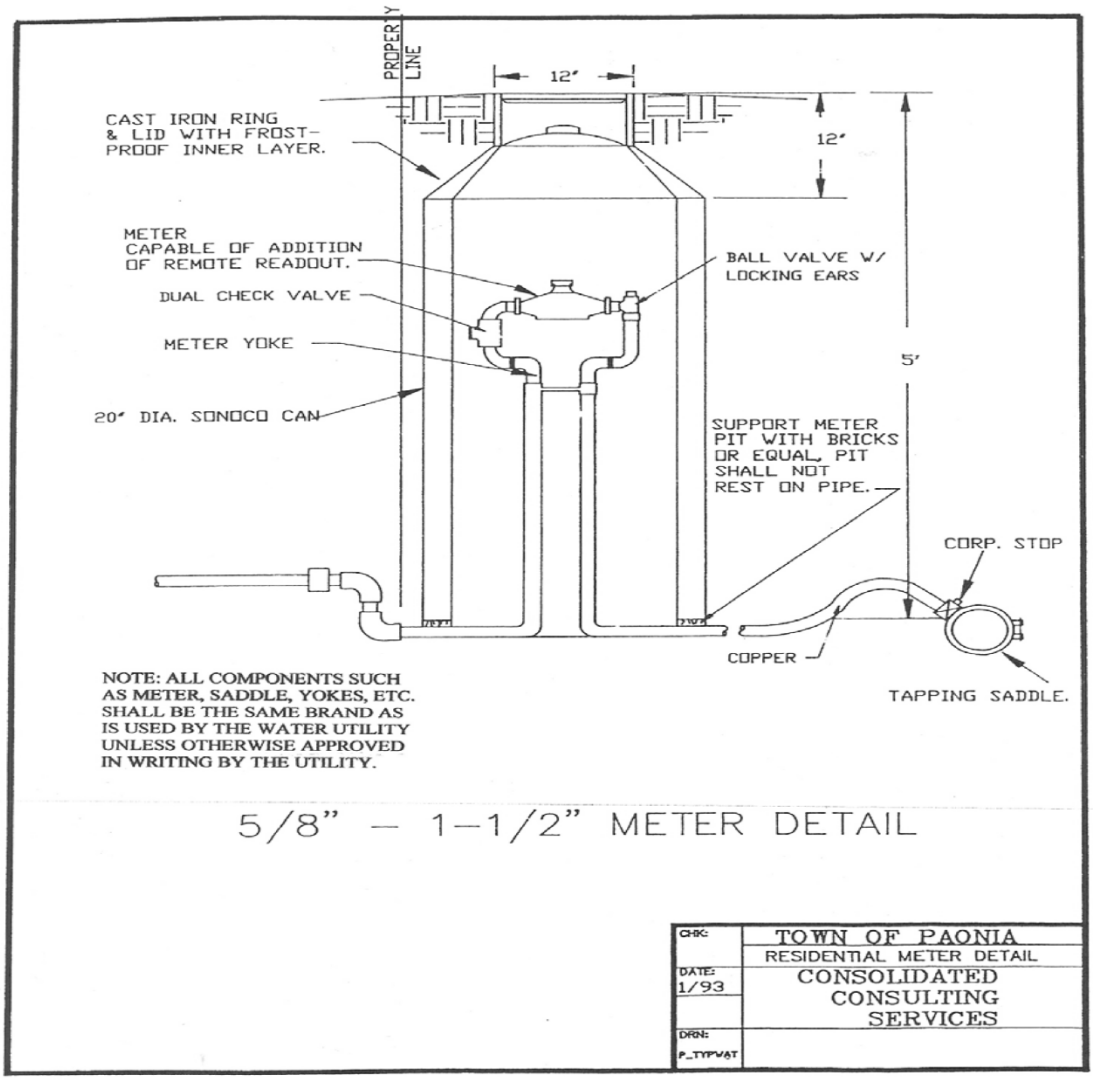


Figure D-7
5/8"—1-1/2" Meter Detail

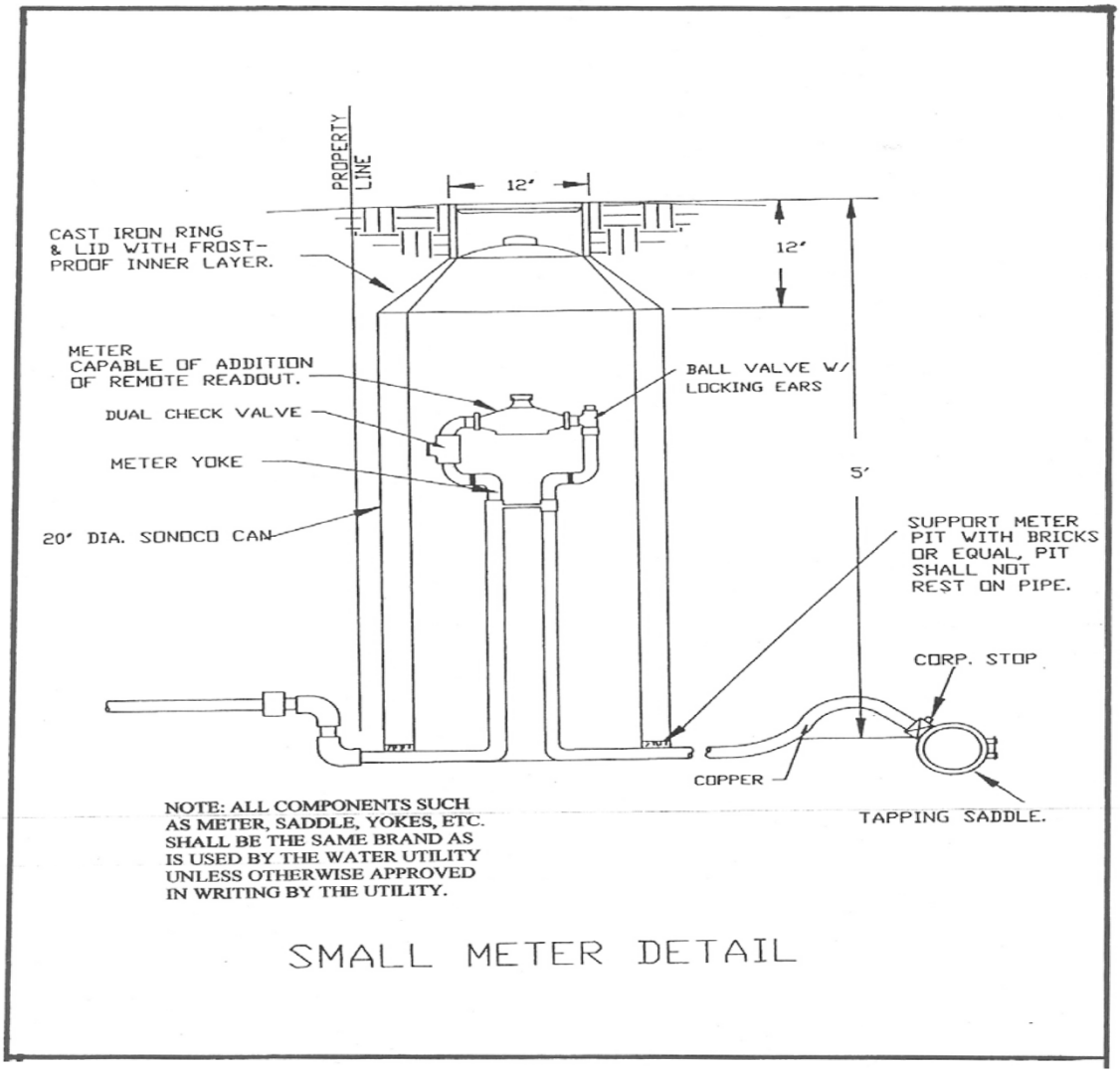


Figure D-8
Small Meter Detail

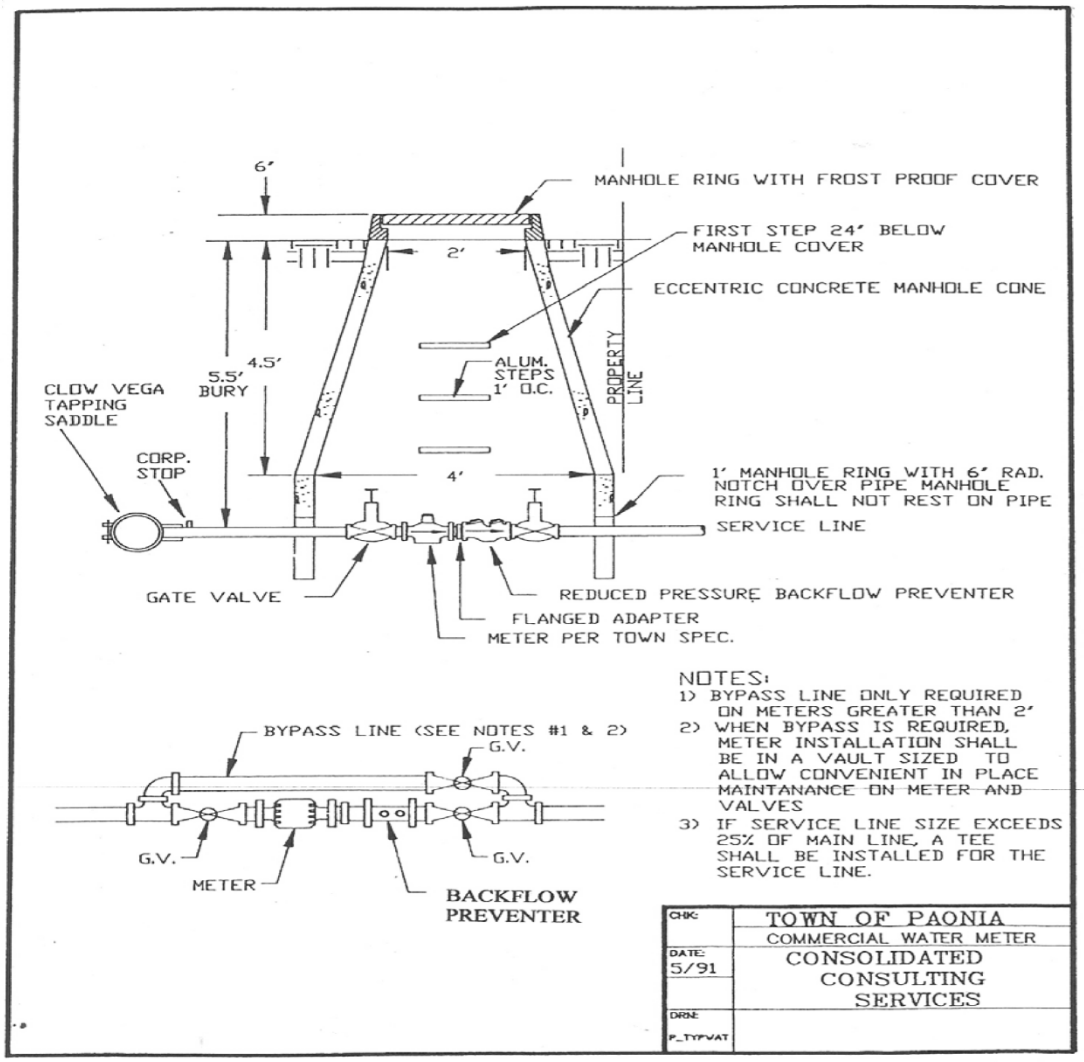


Figure D-9
Commercial Water Meter

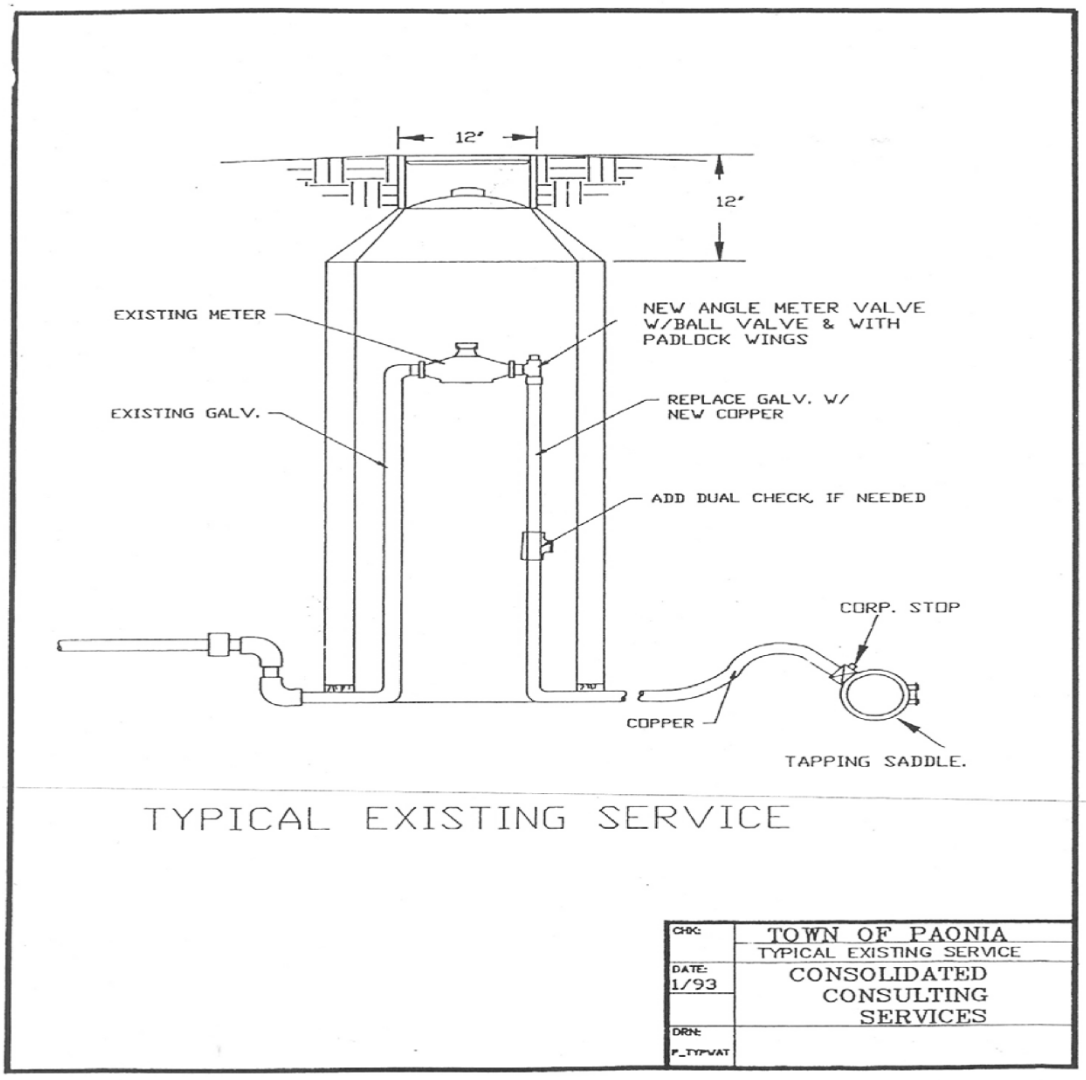


Figure D-10
Typical Existing Service

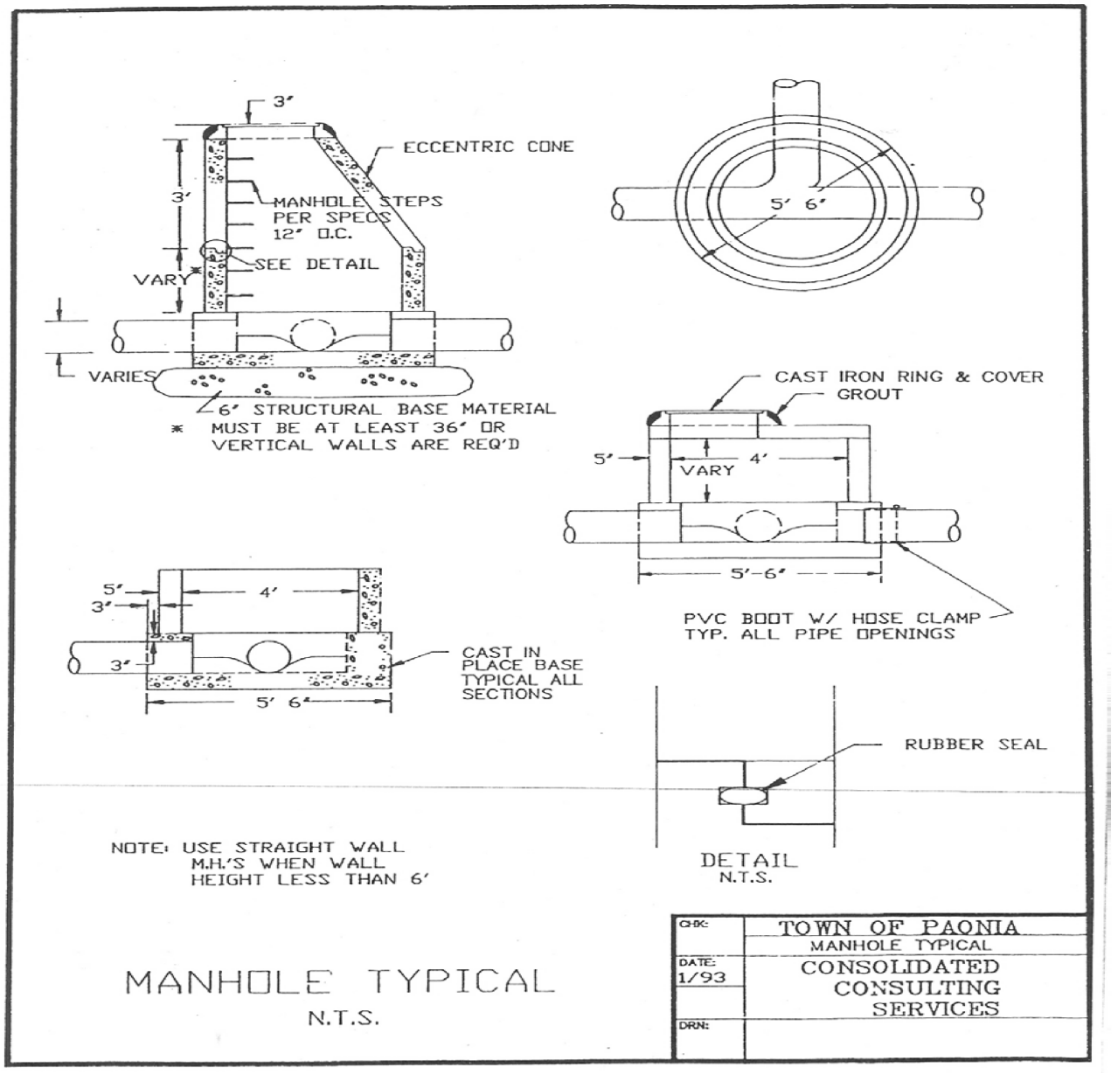


Figure D-11
Manhole Typical

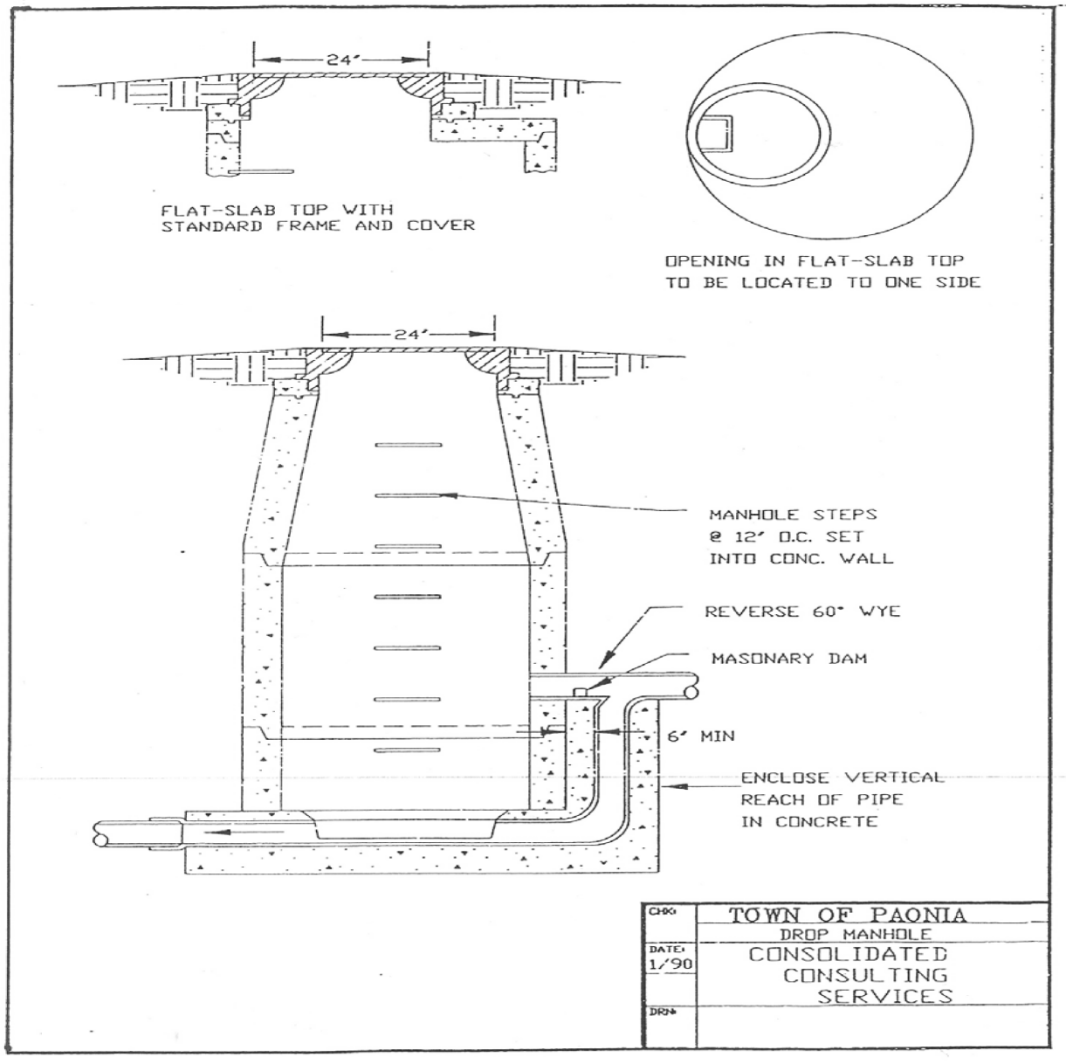


Figure D-12
Drop Manhole

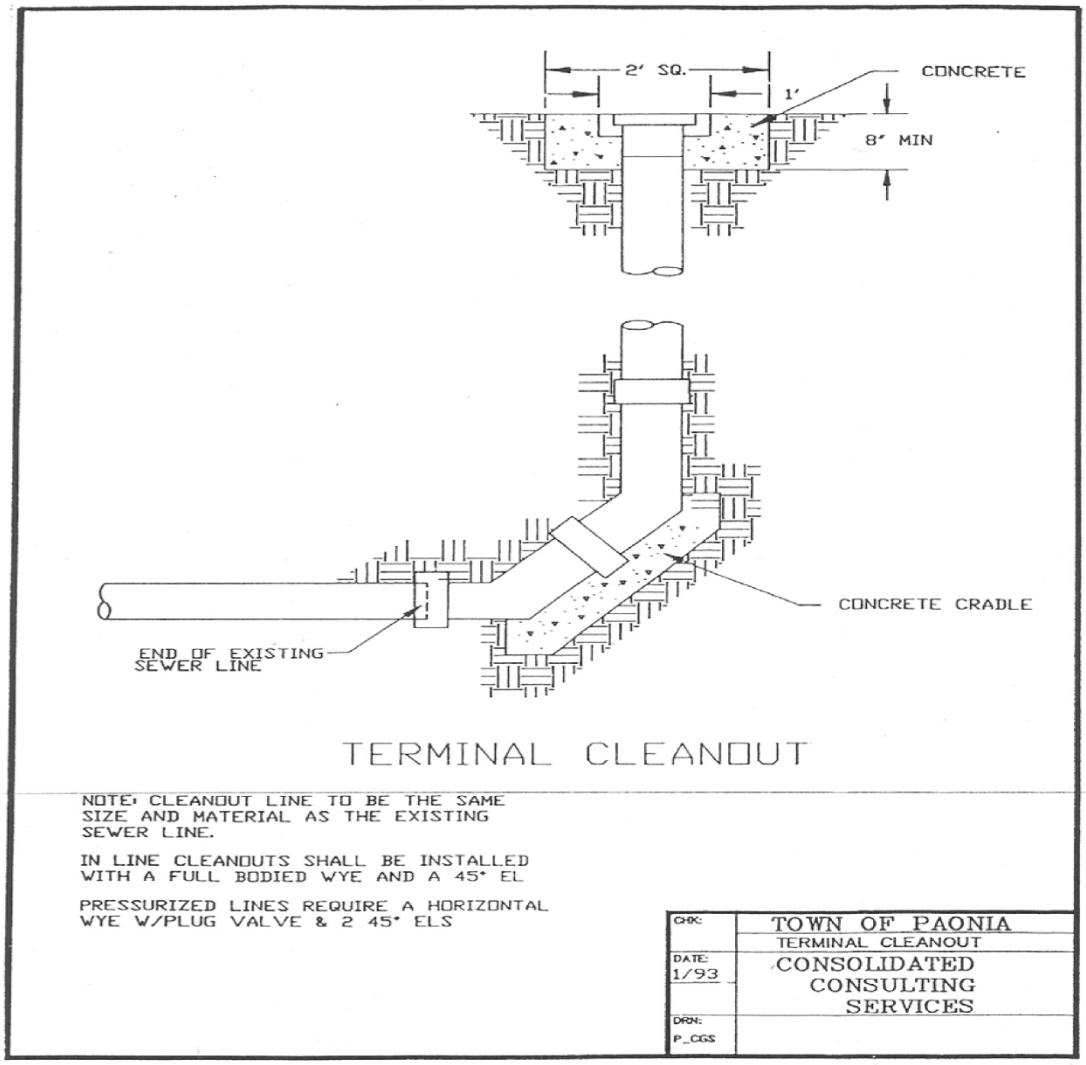


Figure D-13
Terminal Cleanout

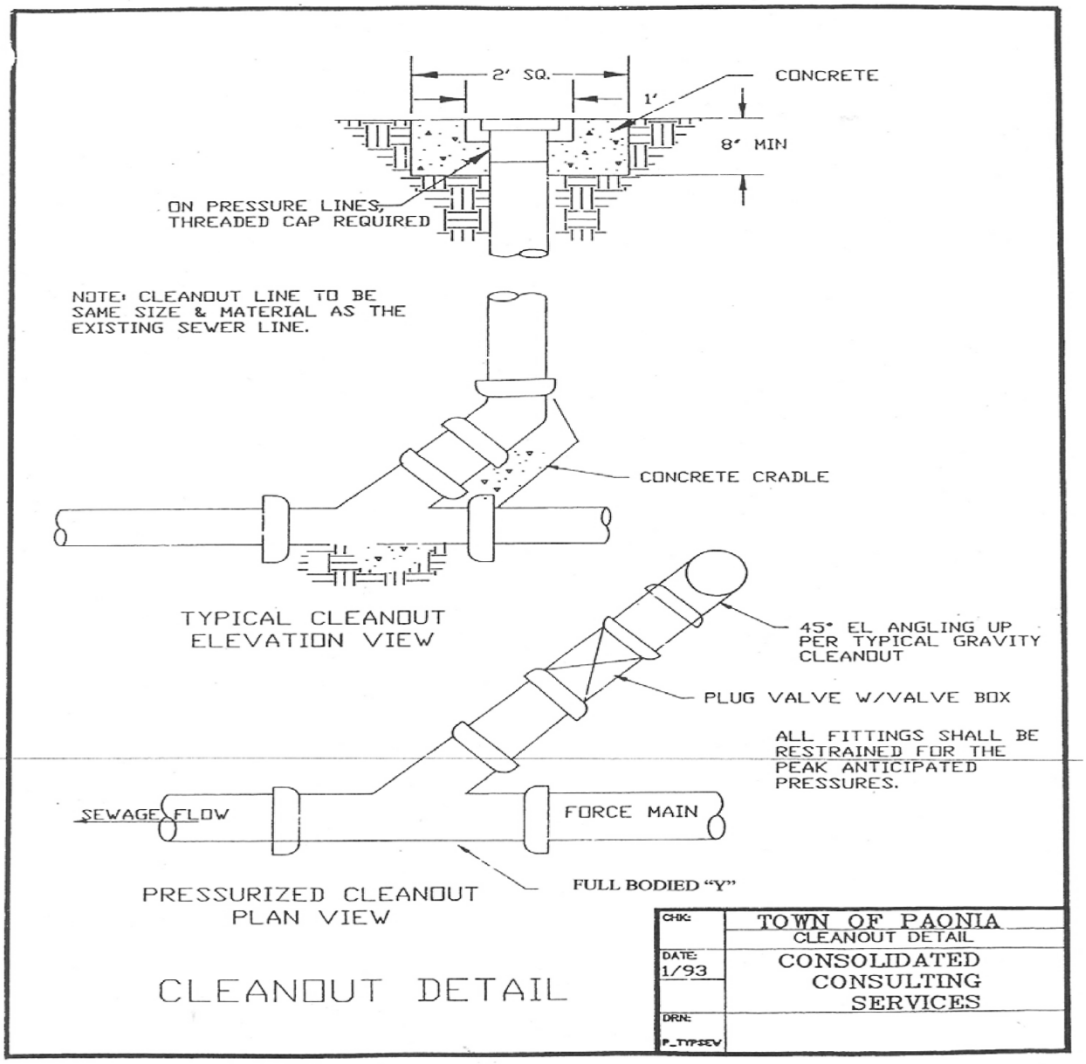


Figure D-14
Cleanout Detail

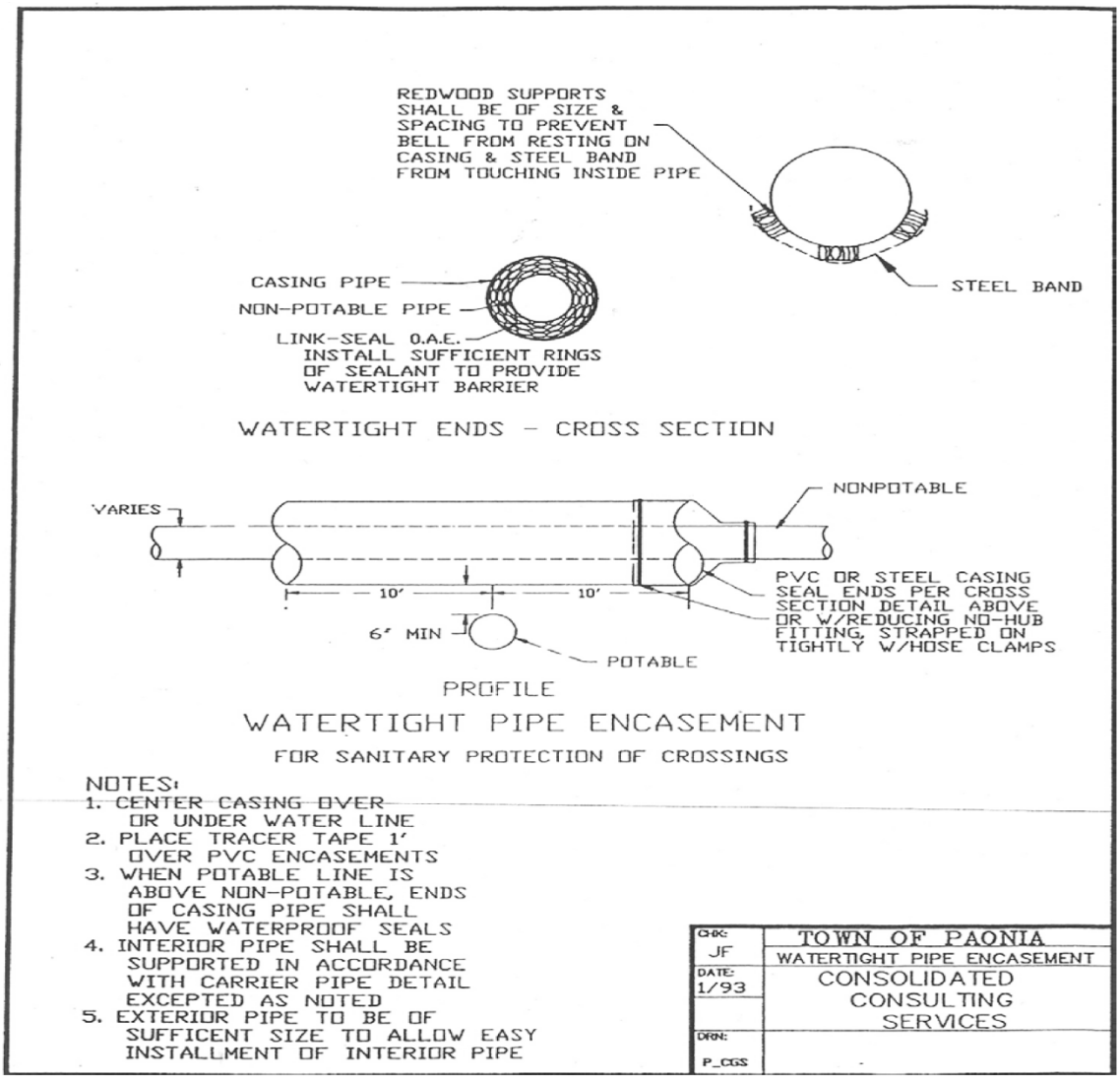


Figure D-15
Watertight Pipe Encasement

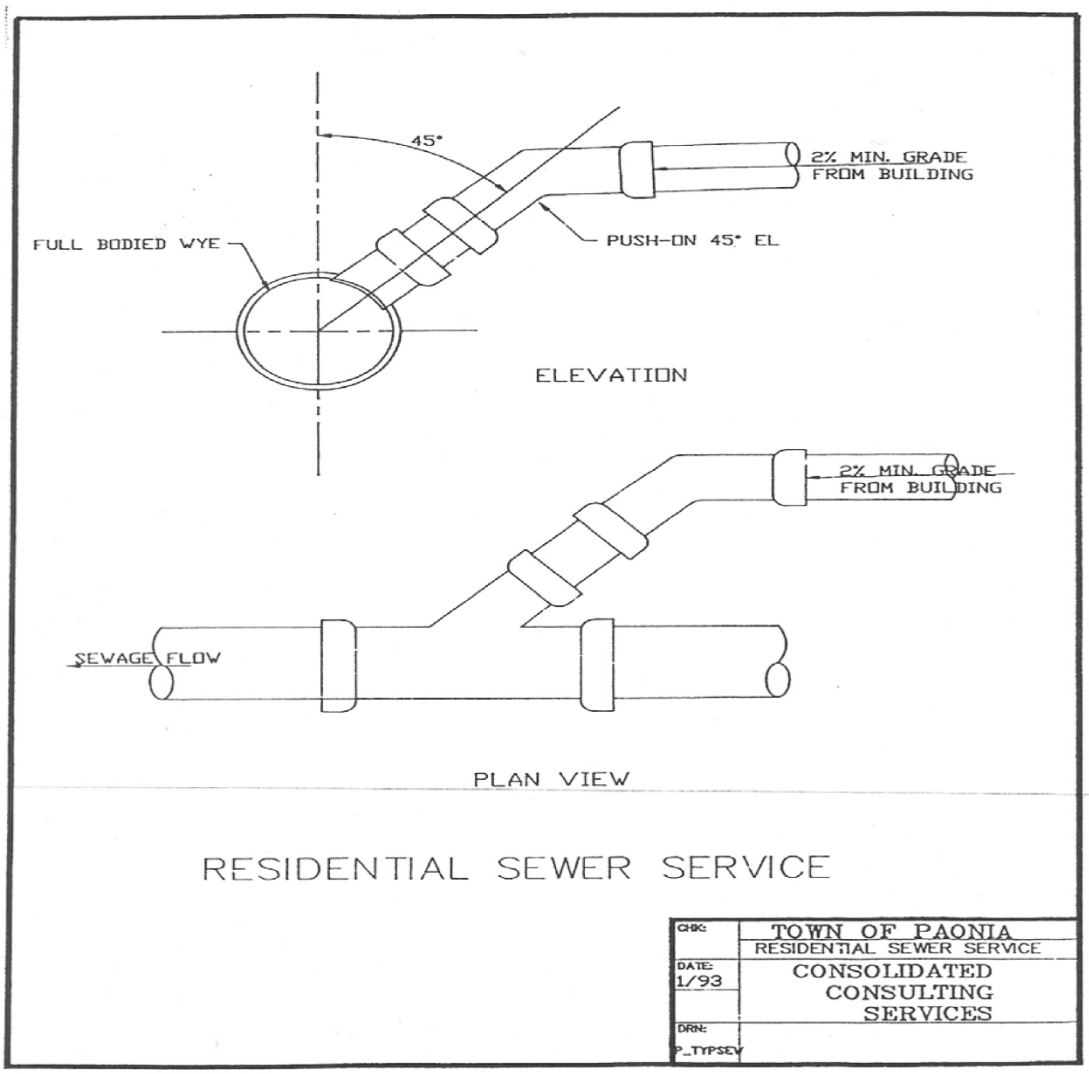


Figure D-16
Residential Sewer Service

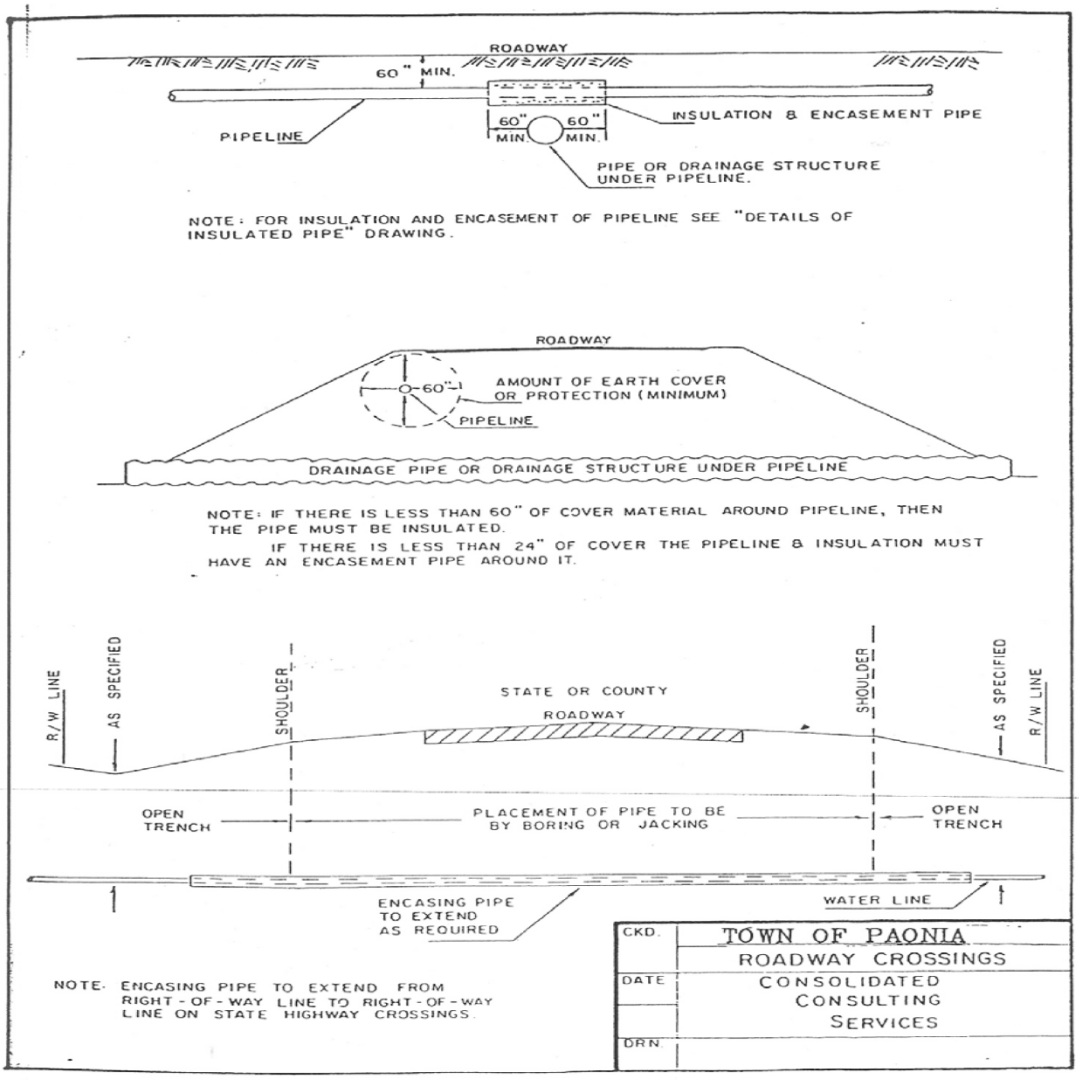


Figure D-17
Roadway Crossings

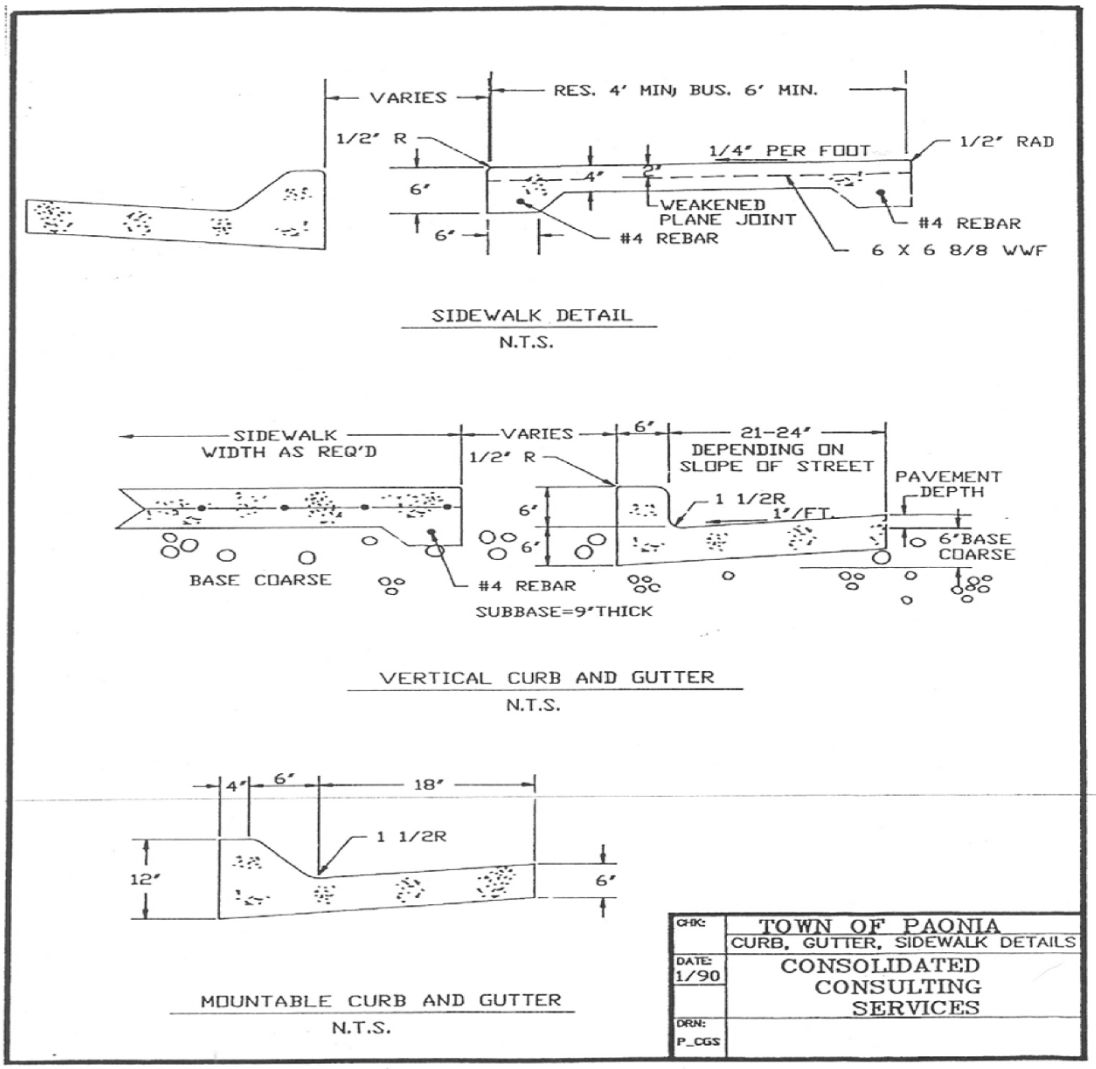


Figure D-18
Curb, Gutter, Sidewalk Details

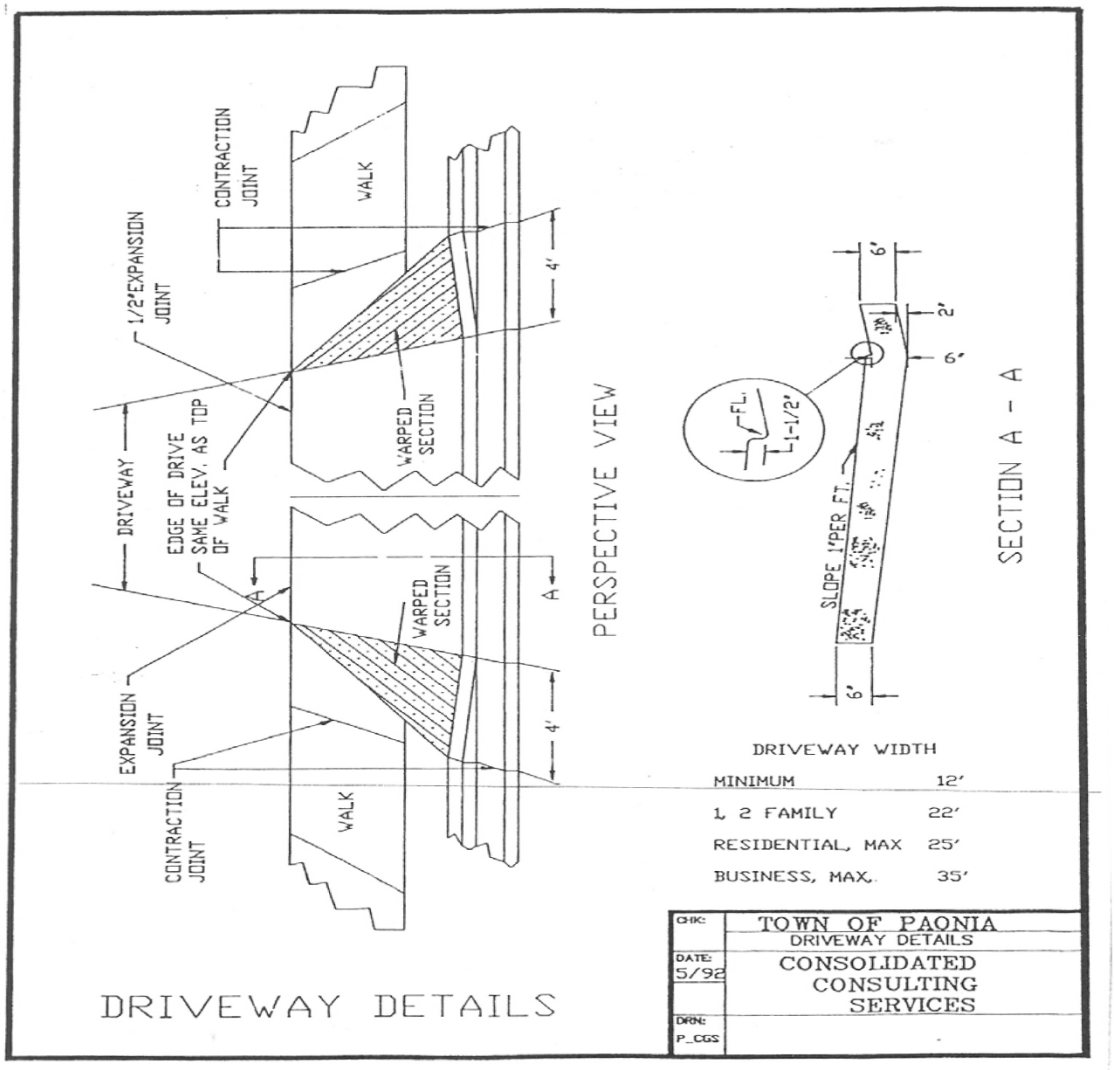


Figure D-19
Driveway Details

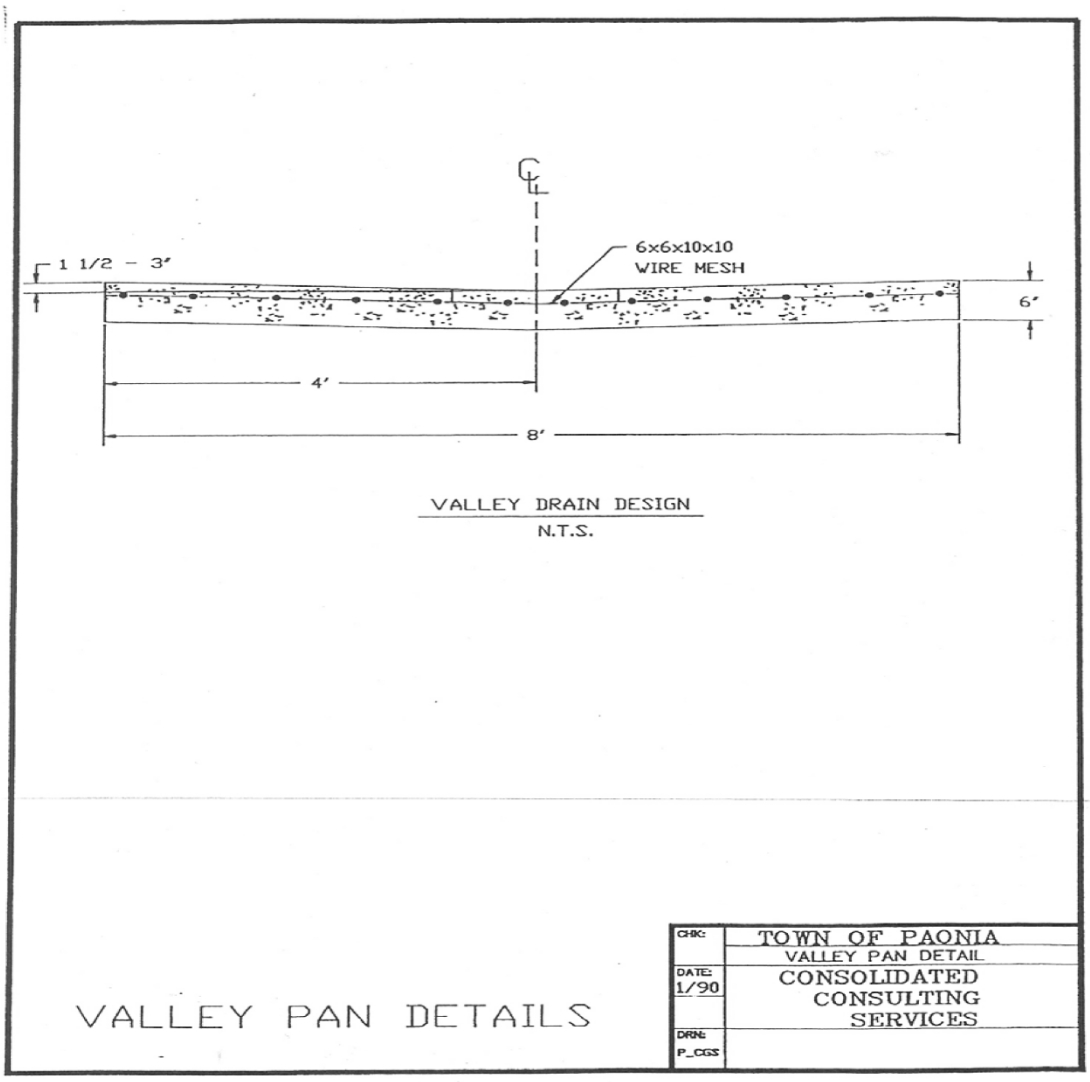


Figure D-20
Valley Pan Details

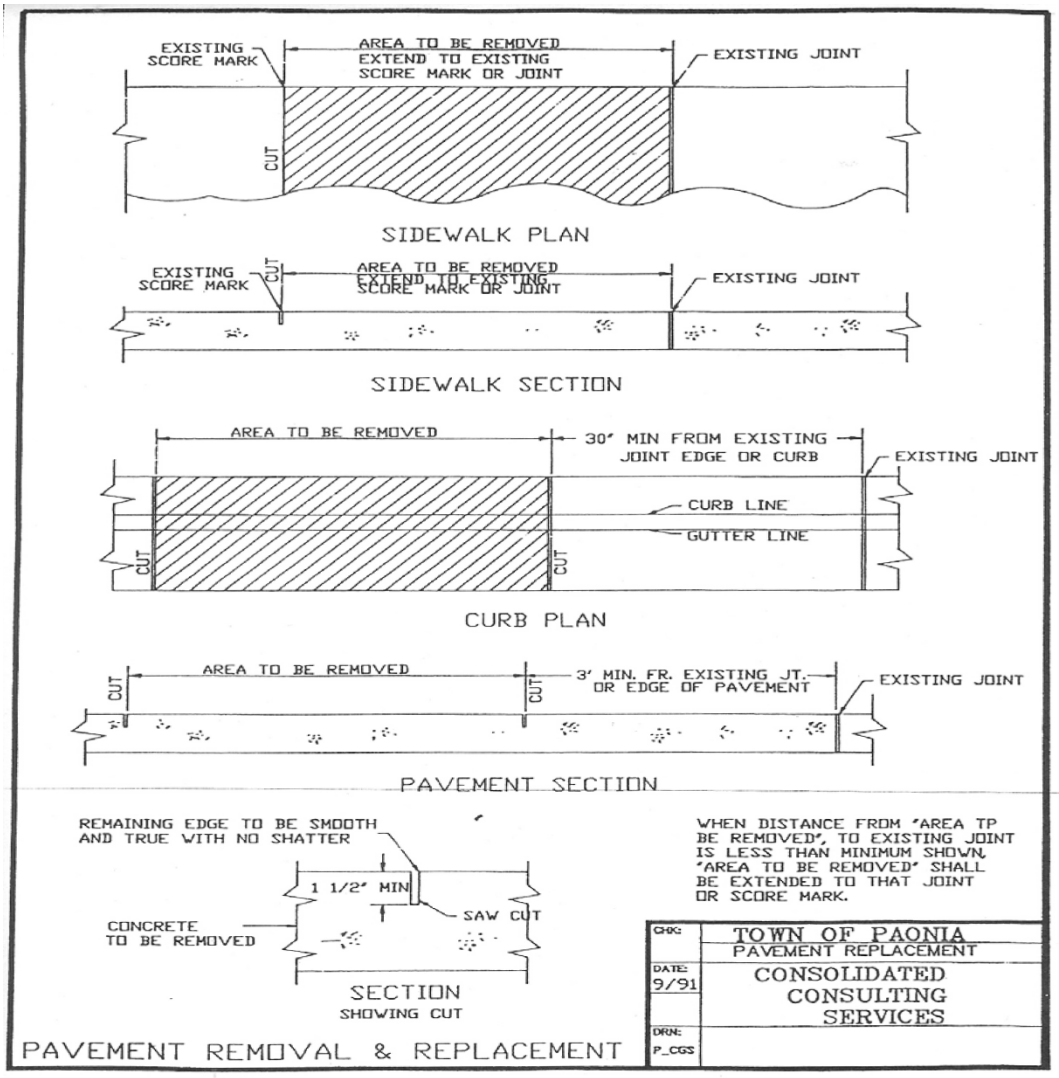
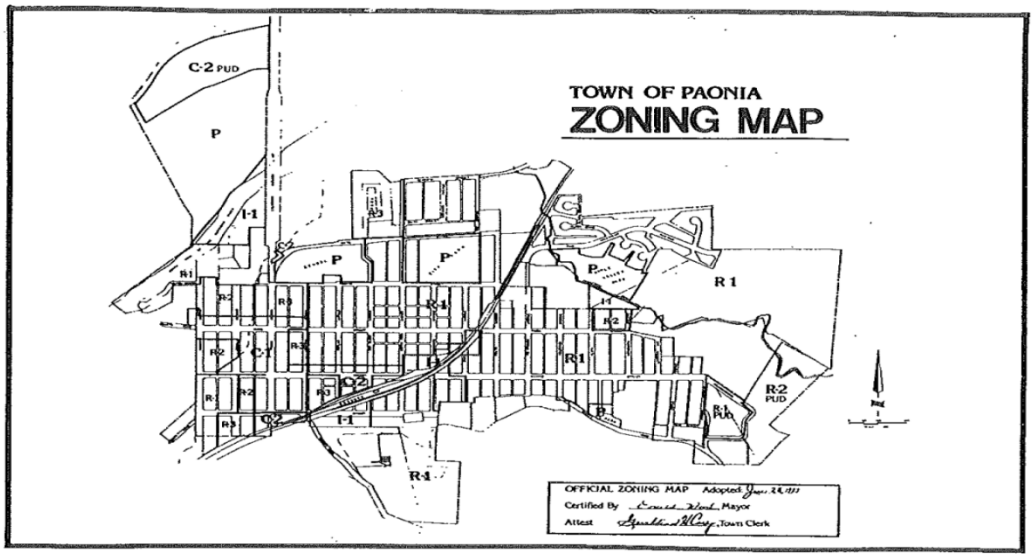
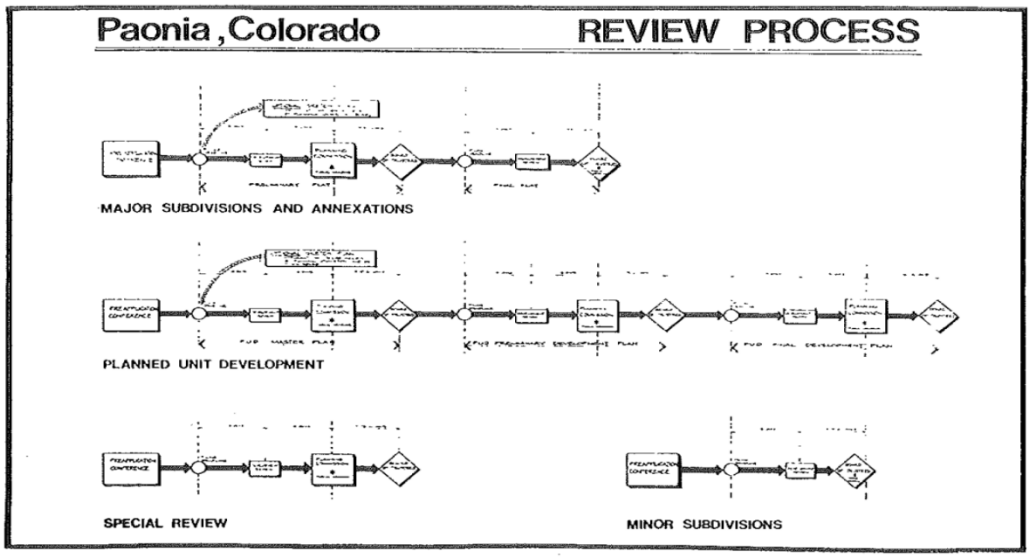


Figure D-21
Pavement Replacement





(Ord. No. 2014-04, § 1, 1-13-2015)

TERI A. STEPHENSON, DELTA COUNTY, CO CLERK AND RECORDER

Rec 700703

WARRANTY DEED

Circle Development Corporation, whose address is 1133 Race Street, Suite 4N, Denver CO 81206-2869, for the consideration of $51,715.00, hereby sells and conveys to **BonnaSue**, whose address is 1200 3rd St #4 Paonia CO 81428 the following property located in the County of Delta, State of Colorado, to-wit:

Unit 4 of the Silver Leaf Co-Housing within Block 1 of the Hammond's Addition to the Town of Paonia

Also known as tbd 3rd St., Unit 4, Paonia CO 81428

With all its appurtenances, including one Town of Paonia water and sewer tap, and warrants the title to the same except for the general taxes for 2018, and covenants, conditions, and restrictions of record.

Signed this 8 day of January, 2018

Circle Development Corporation

By Trudy Welty President
Trudy Welty, President

State of Colorado)
) ss
County of Delta)

The foregoing instrument was acknowledged before me this 8th day of January, 2018, by Trudy Welty, President of Circle Development Corporation.

Witness my hand and official seal.

Amber Voight-Byers
Notary Public

AMBER VOIGHT-BYERS
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID #20064043883
My Commission Expires October 25, 2018

UNOFFICIAL COPY

Property Record Card

DELTA COUNTY Delta County Assessor

COOK MICHAEL J
1728 IVANHOE STREET
DENVER, CO 80220-1422

Account: R024578
Tax Area: BR- - - BR-
Acres: 0.055

Parcel: 324505273004
Situs Address:
1200 3rd ST #4
PAONIA, 81428

Value Summary

Value By:	Market	Override
Land (1)	$60,000	N/A
Residential (1)	$337,692	N/A
Total	**$397,692**	**$397,692**



Legal Description

1200 3rd ST #4 PAONIA 81428 S: 5 T: 14S R: 91W Subdivision: SILVERLEAF CO-HOUSING INC Lot: 4 TOTAL AC-.055+- UNIT 4 SILVER LEAF CO-HOUSING INC. PT LTS 40,41 & 42 BLK 1 HAMMONDS ADDITION TO THE TOWN OF PAONIA SEC 5 T14S R91W 6PM.BEG WH SW COR BRS S48*14'13"W 21.71';N0*47'49"E 51.17';S89*12'10"E 46.68';S0*47'49"W 51.17';N89*12'10"W 46.68' TO POB PLAT R-695741 R-695787 COVENANTS R-700703 R-710381 QC R-713274 QC R717590BE R754883-H2O R754882

Public Remarks

Entry Date	Model	Remark
12/05/2017		OLD ACCT R-8492 NEW ACCTS R-24575, R-24576, R-24577, R-24578,R-24579, R-24580, R-24581, R-24582, R-24583, R-24584,R-24585, R-24586, R-24587, R-24588
12/13/2017		UPDATE VALUE TAB FOR SPLIT
02/02/2018		TD/INVENTORY FORMS MAILED.DLS
03/07/2019		10/2018 MEASURED SFR-POURED CONCRETE EXTERIOR WALLS- PUMICE CRETE-JT
12/17/2019		TD CONFIRMATION LETTER RETURNED AND SCANNED
01/16/2020		1/8/2020 SITE VISIT TO VERIFY SALE-ALREADY MEASURED AND CHECKED-JT
02/22/2024		UPDATED MAILING ADDRESS PER TAX COUPON- KD
08/12/2024		TD FORMS MAILED- KD

Sale Data

Doc. #	Sale Date	Deed Type	Validity	Verified	Sale Price	Ratio	Adj. Price	Ratio	Time Adj. Price	Ratio
754882	08/09/2024	GW	QV	Y	$393,800	100.99	$393,800	100.99	$393,800	100.99
715230	11/22/2019	SP	QV	Y	$298,000	133.45	$298,000	133.45	$309,222	128.61
700703	01/08/2018	WD	UI	Y	$51,800	767.75	$51,800	767.75	$51,800	767.75

Property Record Card

DELTA COUNTY Delta County Assessor

Sale Data

700703	01/08/2018	WD	UI	Y	$51,800	767.75	$51,800	767.75	$51,800	767.75

Land Occurrence 1

LVal	100416 - PAO TOWN LOT < .13 AC	Abstract Code	1112 - 1112 - single family residence- land
Lot Front	0	Lot Depth	0
Adj 1	100	Adj 2	100
Adj 3	100	Adj 4	100
Neighborhood	41001 - PAONIA	Road	6 - S PAVED
TOPO	0 - N/A	Utilities	0 - N/A
Appr Dist	3 - PAONIA - CHRIS	Subdivision	40061 - SILVERLEAF CO-HOUSING INC
Use Code	1000	Review Date	202001 - 20-Jan

SubArea		ADJUSTED	HEATED	PRIME	ACTUAL
LT		1			1
Total		1.00			1.00
	Value	**Rate**	**Rate**	**Rate**	**Rate**
	$60,000	60,000.00			60,000.00

Residential Occurrence 1

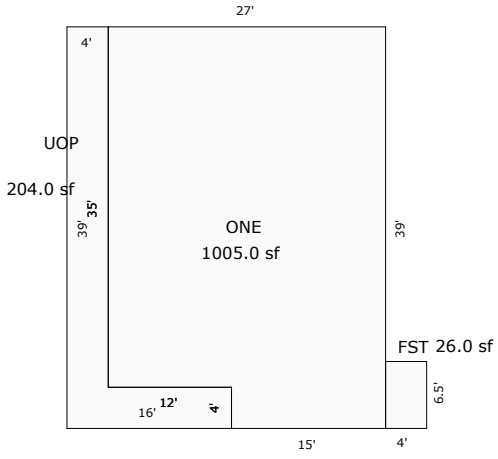
Abstract Code	1212 - 1212 - single family residence-improvements	BVAL	121203 - SFR PAONIA
Arch Style	7 - RANCH	Exterior wall	17 - CB STUCCO
RCVR	12 - MODULAR METAL	RSTR	2 - SHED
Interior Wall	5 - DRYWALL	Flooring	15 - HARDTILE 10 - FORMICA/LAMINATE
Heating Fuel	3 - GAS	Heating Type	14 - GLYCOL IN FLOOR RADIANT
QUAL	3 - AVERAGE	Frame type	3 - MASONRY
Appr Dist	PAONIA - CHRIS	STYS	1 - 1
Subdivision	40061 - SILVERLEAF CO-HOUSING INC	Number of Baths	1.5
RMS	3	Number of Bedrooms	2
Actual Year Built	2018	Use Code	1000
DEPR01	2018 - DEPR01	Neighborhood	41001 - PAONIA

SubArea		ADJUSTED	HEATED	PRIME	ACTUAL
FST - FIN/STOR		13			26
ONE - ONE STORY		1,005	1,005	1,005	1,005
UOP - UF/OPN/PRC		41			204
Total		1,058.80	1,005.00	1,005.00	1,235.00
	Value	**Rate**	**Rate**	**Rate**	**Rate**
	$337,692	318.94	336.01	336.01	273.43

Property Record Card

DELTA COUNTY Delta County Assessor

Residential Occurrence 1



Sketch by Apex Medina™

Abstract Summary

Code	Classification	Non-School Actual Value	Non-School Taxable Value	School Actual Value	School Taxable Value	Actual Override	Taxable Override
1112	1112 - single family residence- land	$60,000	$3,750	$60,000	$4,230	$60,000	$3,750
1212	1212 - single family residence- improvements	$337,692	$21,106	$337,692	$23,807	$337,692	$21,106
Total		**$397,692**	**$24,856**	**$397,692**	**$28,037**	**$397,692**	**$24,856**

MINUTES
Planning Commission Meeting
Town of Paonia, Colorado
January 14, 2016

RECORD OF PROCEEDINGS

The Meeting of the Planning Commission of the Town of Paonia held on Thursday, January 14, 2016 was called to order at 2:04 PM by Chairman Constantine Hirschfeld.

Planning Commission Members present were as follows:

Chairman Constantine Hirschfeld
Vice-Chairman Barbara Heck
Mayor Neal Schwieterman
Trustee Eric Goold

Planning Commissioner Douglas Long was absent.

Town Staff present were as follows:

Town Manager/Town Clerk Jane Berry
Town Attorney David Marek
Building Inspector Chad Gartman

A quorum was present and the Planning Commission Chairman Constantine Hirschfeld proceeded with the meeting.

APPROVAL OF THE AGENDA

Motion by Commissioner Schwieterman, Supported by Commissioner Goold to approve the agenda as presented. Motion carried with four (4) ayes and zero (0) nays.

Town Manager Jane Berry presented opening remarks, procedures of the Planning Commission and explained how the Public Hearing will be conducted.

CITIZEN COMMENTS

No citizens addressed the Planning Commission on matters not on the meeting's agenda.

UNFINSHED BUSINESS

There was no "Unfinished Business" of the Planning Commission to be considered.

It was suggested and agreed to have Circle Development Corporation make their presentation prior to the Public Hearing as this may create additional public comment and questions regarding the proposal development.

NEW BUSINESS

A presentation of their Special Review Application by Circle Development Corporation, known as the Silver Leaf Senior Co-Housing Development Project, was given by President Robert Dick. Rob Dick began his presentation with remarks and an introduction as well as description of his vast development experience in numerous locations across the country. Mr. Dick went on to explain "what is co-housing?" and what are its origins to both the Planning Commission and public in attendance.

Mr. Dick spoke of a new movement for growing older that is a whole new part of life as a second maturity. A key point of Rob Dick's remarks was the statement that real estate is secondary to the intent and focus of this project. The project has a new website that further elaborates on the concept of co-housing as well as the details for the Silver Leaf project: silverleafcohousing.com

Joe Simmons, PhD. was introduced as a member of the Circle Development Corporation team as "backup" to Rob Dick. Simmons is a planning consultant and university professor having extensive experience in the financing of housing.

Mara Mantoiu was introduced as the Project Architect and Designer. Mantoiu spoke to the design specifics of the project and its planning challenges as to how to develop and group the lots while preserving the project's goals as a balance between open and developed areas. The project has been designed with respect to its natural environment.

Mantoiu used a PowerPoint presentation to review the proposed Site Plan with the Planning Commission. The project is planned for:

1. 13 dwelling units: 10 homes each at 950 square feet; 1 duplex containing 2 dwelling units, and a dwelling unit to be located in the community house potentially for use by caregivers and or home health workers.
2. An accessory building which is the community house.
3. 17 off-street parking spaces.
4. Accessory structures/Carports, for resident/homeowner parking.
5. 16 foot private driveway that will be between Clark and Minnesota Avenue along the northern boundary of the site.
6. New sidewalks along the perimeters of the site.

The project has been designed to accomplish interaction and social connections amongst the residents as well as the ability to freely move around the site. A major consideration of the project by its principals is that vehicular parking and the housing units have physical separation encouraging a physically active healthy living lifestyle.

Ben Bookout introduced the "Landscape Plan" for the development project. Bookout noted that large shade trees will be planted along the perimeter of the site; fruit trees and smaller interior trees within the development; extensive shrub hedges for privacy; a "living fence" for screening on the north side of the development, and the site also possesses 2 shares with the Stewart Ditch providing for more than adequate site irrigation.

Mara Mantoiu continued with the visual presentation of floor plan images, day use areas with southern exposure, and a demonstration of the differing degrees of privacy that will occur throughout the development. Mantoiu spoke to the housing product's "core values and desires of the elder clients to be functional but beautiful" as well as a community created within an established neighborhood.

Jeff Ruppert, PE, a Principal with the local engineering firm of Odisea presented the engineering designs and plans for the utilities and infrastructure to be constructed for the project. The project has been designed as a "sustainable development." Ruppert spoke to the issues of drainage and other permeable surfaces, pathways within the site, utility locations and placement, the private driveway, emergency access, traffic volumes and patterns to be generated by the development, the Town owned alley that traverses the site, and relocation of privately owned utilities that currently are on the site.

The development project has made a commitment to work with the existing privately owned utilities that are on the site to be relocated at no cost to both the Kinser and Velez parties.

Trudy Welty, a Principal with Circle Development Corporation addressed the Planning Commission on the idea about eldering and setting an example of how to live close together. Providing early intervention to allow people to remain independent longer is a key component and objective of the co-housing project.

Marjorie True, another team member and local resident with an extensive health care and nursing background spoke of this project as a first step toward an "intentional community". In this proposed community there will be no isolation only support.

Carol "Woody" Hickam, a team member, local resident and retired Psychologist spoke of her own personal process of moving from the Front Range to Paonia having lived in a co-housing development in Golden, Colorado. The benefits of living in a co-housing development for seniors are both intellectual as well as physical. Companionship, structures for care, shared responsibilities,

increased awareness and communication, flexibility and creativity in your thinking as well as the opportunity to live independently longer are all key benefits of co-housing.

PUBLIC HEARING

A Public Hearing was scheduled for 2:00 PM for Special Review Application No. PC-2015-01.

At 3:28 PM Chairman Hirschfeld opened the Public Hearing. The purpose of the Public Hearing was to receive public comment on an application for Special Review from the provisions of Codified Ordinances of the Town of Paonia, Chapter 16 Zoning, Article 4 – Special Review Application Requirements and Procedures of the Paonia Zoning Ordinance.

The Applicant has submitted a Special Review Application for the "Silver Leaf Senior Co-Housing" Development Project.

The subject property of this Special Review Application is located at 3rd Street and Clark Avenue, Paonia, Colorado 81428. The application has been submitted by the owner of the property listed as Circle Development Corporation, President Robert S. Dick and is Zoned R-2, Medium Density Residential District.

The Applicant requested a "Residential Uses Permitted by Special Review" be granted to allow for the development of a total of nineteen (19) lots that will consist in total of no more than thirteen (13) dwelling units and in addition accessory buildings and landscaped open space recreational areas.

No more than four (4) dwelling units on lots totaling a minimum of 16,000 square feet will be developed, in accordance with the current Town Zoning Ordinance Schedule of Requirements for Residential Districts.

Public Hearing comments:

1. Tom Glor spoke to be on the record as in support of the project stating it is a golden opportunity and with the jobs to be created what else can be said. Glor has met with both Town and project representatives having addressed any questions or concerns as to the project as he represents the neighboring property owner (Bear Ranch) to the north of the site.
2. Paul Douglas stated he is supportive and appreciates all the effort of the project. Douglas expressed several concerns including there be no cost to residents for sewer relocations, parking questions have been answered, 1 way driveway how to enforce, zero clearance questions in the NE section of site, proper fire protection concerns, irrigation and concerns for landscaping, on street parking concerns, underground utility concerns, water and sewer taps, fire hydrants, paving, curb and gutter issues, emergency access, and public land open space concerns.
3. Paul Millerman a residential neighbor to the site spoke to having watched the property for many years, the opportunity for development, is the Town Land Development Regulations online or can paper copies be available, will there be a homeowner's association, are there age requirements to be a home owner in the project, concerns for ice and snow removal, will flat roofs be an issue, and stated he is looking forward to new neighbors coming in.
4. Callie West a residential neighbor to the site spoke she would hand pick the Silver Leaf group for neighbors, is giving her "conditional support", the proposal is a perfect use for the lot, feels it is the right thing to do, has conditions she would like to see in terms of traffic, 1 way access, Clark Street is not adequate for an additional 7-10 drivers a day with the potholes and no defined boundaries, covenants in regard to pets and other issues, and a condition the project use local contractors and labor.
5. Georgia Finnegan stated concerns for what happens when the creek floods, the gas line is "scary" running through the community, the statement that older persons not using cars much is not true, concerned about the parking design which is critical for aging persons, irrigation concerns, animal concerns, how will an ambulance get to a home, when the water freezes on Minnesota Avenue how will this be alleviated.
6. John Hickam expressed concerns about the existing Town alley in relationship to the development.
7. Karen Budinger inquired about housing design, construction, quality, and heating and cooling issues.

8. Dave Knutson inquired about Clark Avenue concerns expressed by earlier speakers.
9. Elaine Brett stated she loves the idea of the project and inquired if this is a not for profit project.

Rob Dick, President of Circle Development Corporation responded to several concerns and questions countering one statement that "walking to a house is not appropriate for seniors." Four (4) homes will have drive-up, parking at the home. The site design has been recommended and approved by seniors who will reside at Silver Leaf. The gas line and its location is not an issue. Pets will be encouraged but with rules. The project will not lose money and will cover its costs. As the developer does not believe in the "build it and they will come" philosophy.

Mr. Dick further stated for the record in response to concerns expressed that Circle Development Corporation as part of its project costs and commitment will pay for all sewer relocations to neighbors and provide for easements for the same.

With no further public desiring to comment and or ask questions, Chairman Hirschfeld closed the Public Hearing at 4:20 PM.

Planning Commissioner Heck inquired regarding a home owner's association and any guidelines or covenants to be created. Rob Dick responded stating there will be a HOA with guidelines and or covenants with a provision there will be no preclusion for a homeowner to rent their property. Mr. Dick also discussed with the Planning Commission the development continues to explore storage issues such as in the carport areas.

Planning Commissioner Goold stated the Town of Paonia is working with the developer on infrastructure work and costs with the Town paying for the cost of relocating its sewer main that serves this side of the community.

Town Manager Jane Berry stated that Silver Leaf will "get rid of stereotypes" who would be commonly thought to desire to live in this type of housing. Commissioner Goold responded stating he is 42 years old and would "love to live there."

Motion by Commissioner Goold, Supported by Commissioner Heck to approve the Special Review Application and Site Plan submitted by Circle Development Corporation subject to the recommendations and comments regarding the application and plan by the Town Manager (attached to these minutes) together with addressing the Clark Avenue concerns and improvements as a Town of Paonia responsibility and to recommend approval of the same to the Town Board.
Ayes: Schwieterman, Heck, Goold, Hirschfeld
Nays: None
Motion carried unanimously.

Town Manager Jane Berry reminded the Planning Commission there will be a joint meeting with the Town Board on January 26, 2016 at 5:30 PM. The purpose of the Joint Special Meeting is to review and discuss the Town's Special Review process, procedures, requirements, criteria, site plan review and criteria in preparation for the Town Board meeting on February 23, 2016 at which time a Special Review Application will be considered either for approval or denial.

Adjournment:

The meeting was adjourned by Chairman Hirschfeld at 4:35 PM.

Jane A. Berry, Town Manager/Town Clerk
Planning Commission Secretary

Constantine Hirschfeld, Chairman

Town Manager PC 2015-01 January 11, 2016 Special Review Application Report and Recommendation to the Town of Paonia Planning Commission. See attached.

TOWN OF PAONIA

TO: **Members of the Town of Paonia Planning Commission**
FROM: Jane A. Berry, Town Manager
RE: Special Review Application PC-2015-01: Silver Leaf Senior Co-Housing Project
Circle Development Corporation, Owner
DATE: January 11, 2016

PROJECT AND SPECIAL REVIEW APPLICATION DESCRIPTION

The Town of Paonia Planning Commission, will convene a Special Meeting of the Commission on Thursday, January 14, 2016, to conduct a duly noticed Public Hearing pursuant to the provisions and requirements of the Codified Ordinances of the Town of Paonia, Chapter 16 Zoning, Article 4 – Special Review Application Requirements and Procedures of the Paonia Zoning Ordinance.

Applicant has submitted a Special Review Application for the "Silver Leaf Senior Co-Housing" Development Project.

The subject property of this Special Review Application is located at 3rd and Clark Streets, Paonia, Colorado 81428. The application has been submitted by the owner of the property listed as Circle Development Corporation, President Robert S. Dick and is Zoned R-2, Medium Density Residential District.

The Special Review consideration is required given the Town's Zoning Ordinance R-2 Schedule of Requirements for Residential Districts, dwelling units' density per minimum lot area desired by the applicant for the proposed new housing development

PROJECT PLANNING, DEVELOPMENT/PRE-APPLICATION CONFERENCES

As the Town Manager, I have been meeting with representatives of the proposed project, Town Staff, and Town Consultants for the past nine months, performing project planning preliminary development reviews in coordination with the applicant.

The requirements and provisions of the Town's Zoning Ordinance have been emphasized with responsive consideration and compliance of all review points by the applicant's consultants and representatives.

Plan review and written comments concerning the Special Review Application have been received by the Town's Consultant Brandyn Bair, SGM, Engineers and are being submitted to the Planning Commission. Additional reviews and verbal comments have been submitted to the Town Manager by Travis Loberg, Town of Paonia Public Works Director and Town Attorney David Marek. Plans were submitted to Fire Chief Mike Byers for review by public safety representatives but as of this point in time no comments have been received.

TOWN MANAGER COMMENTS AND RECOMMENDATIONS

I have reviewed the Proposed Site Plan and Special Review Application submitted by the Applicant, Circle Development Corporation for the Silver Leaf Senior Co-Housing Development Project, located at Third and Clark Streets, and offer the following comments and recommendations:

1. The Proposed Site Plan and Special Review Application submitted by the applicant are in compliance with the Town of Paonia's Site Plan Review Criteria and Performance Standards as well as Special Review Application Requirements and Procedures of the Paonia Zoning Ordinance.
2. With the exception of the parking and carport areas on the north portions of the site, the planned project would have little to no impact on any adjacent property due to minimal pedestrian and street lighting as well as the landscape plan submitted by the applicant.
3. The private drive for the parking and carport areas on the northern portion of the site should be marked as a one way drive as the parking areas do not lend themselves well to a two-way traffic pattern.
4. Issues regarding the relocation of sewer connections which service two (2) separate neighboring property owners must be resolved to the satisfaction of all parties (specifically in compliance with all applicable ordinances of the Town of Paonia including the Town's Standard Specifications) prior to any consideration of the Special Review Application by the Paonia Town Board.
5. The Town in following our engineer's recommendation, requests the applicant and developer loop waterlines internally within the development. In addition, the engineer recommends the installation of isolation valves within the development's internal water system.
6. Following the Town's Standard Specifications, Ordinances, and recommendation of our Public Works Director and Engineer will require the applicant/developer install a 3" water service connection (tap) and a 2" water service connection (tap) to adequately and appropriate service the proposed development.

COMPLIANCE WITH THE TOWN OF PAONIA COMPREHENSIVE PLAN

In addition, the Special Review Application submitted by the Applicant has also been reviewed in consideration of the Town of Paonia Comprehensive Plan (August 1996), and the following excerpts/provisions of the Comprehensive Plan are offered in support of the application:

Residential Land Uses:

In-Town Expansion/Urban Service Area Development

In-fill development within the existing urban service area and Town boundaries are encouraged by the comprehensive plan. Densities within this area may vary, depending on the type of residential product proposed; however, higher densities consistent with the overall character of the town (densities in the range of 4-6 units/acre) are envisioned. Appropriate uses include, single family, 2-family dwellings, multi-family and other more affordable housing types.

GOALS: *Maintain Rural and Agricultural Setting of Community/Maintain Small Community Closeness*

GOALS: *Provide Affordable Housing Opportunities for Residents/Encourage the Development of Assisted Living and Senior Housing Products*

"Affordable" housing, including housing for seniors and "adult care" facilities should be encouraged for areas within Town and close to services to facilitate daily need of the residents.

Density bonuses should be awarded as encouragement for providing "affordable' housing within the Town limits (including apartments, duplexes, triplexes, senior and adult care housing, and other attached housing types.)

Allow assisted living and senior housing developments in all residential zones.

Encourage the development of a variety of residential products and or densities thereby expanding the opportunity of choice in housing product types while minimizing public investment in capital expenditures for infrastructure.

TOWN MANAGER RECOMMENDATION TO THE PLANNING COMMISSION

With the exception of these comments and recommendations, the proposed development appears to be well designed such that there will be minimal to no impact on surrounding uses, as well as in conformity with the goals and provisions of the Town of Paonia's current Comprehensive Plan.

Therefore, I am pleased to recommend to the Planning Commission, the Site Plan and Special Review Application submitted for the Silver Leaf Senior Co-Housing Development Project be favorably considered for approval with the above listed comments and recommendations as stipulations to motions for approval consideration.

SECTION 16-4-30: SITE PLAN AND SUPPORTING DOCUMENTS

There shall be filed with each special review application a site plan drawn to scale and an appropriate number of copies as determined by the Town Administrator.

The site plan shall be drawn in black ink on Mylar.

Following approval by the Board of Trustees, the applicant shall submit a reproducible copy of the original site plan to the Town for the Town's permanent records.

The Special Review Application shall include the following:

(1) The site plan showing the location of all buildings, structures and other improvements to be placed on the real property. A building envelope may be used in lieu of showing the exact building or structure location to allow for minor variations in the location.
(2) A legal description of the property.
(3) A list of the names and addresses of all property owners within two hundred (200) feet of the property.
(4) All off-street parking and loading areas.
(5) The location of all ways for ingress to and egress from all buildings and parking areas.
(6) Service and refuse collection areas.
(7) Major screening proposals.
(8) The size, shape, height and character of all signs.
(9) The area and location of all open space and recreation areas.
(10) The location and type of outdoor lighting.
(11) The character and type of landscaping to be provided. The landscaping shall be indicated in tabular form showing the type of plant material, minimum size and quantity. The approximate location of landscaping shall be indicated on the site plan.
(12) The anticipated timetable for completion. If the project is to be completed in phases, then the date for completion of each phase shall be indicated.
(13) The following agreement will be placed on the original special review site plan, signed by all owners and lienholders of the property: The undersigned agree that the real property described on the site plan shall be developed only in accordance with the approved special review site plan and other provisions of the zoning regulations of the Town of Paonia. The signatures of all owners and lien holders shall be notarized. The agreement shall further designate who is specifically responsible for the proposed improvements.
(14) In addition to the site plan, a title policy indicating that the property is free and clear of all ownership disputes, liens or encumbrances whatsoever which would impair the use of the property for the uses approved. The title policy shall provide verification that all owners and lien holders have signed the special review site plan. The title policy shall be effective within twenty-four (24) hours after the date of approval by the Board of Trustees. If the title policy is not provided to the Town Clerk within seven (7) days after action by the Board of Trustees, the action by the Board of Trustees shall be automatically voided.
(15) Other information as needed by the Town to analyze the feasibility and impacts of the special review use, which may include,
but are not limited to, traffic analyses, soils or geological reports or drainage and engineering studies.

SECTION 16-4-50: SITE PLAN REVIEW CRITERIA AND PERFORMANCE STANDARDS

The criteria for review and performance standards are as follows:

(1) Compliance of the application with this Code in general.
(2) The compatibility of the proposed use and site plan with the character of the surrounding area.
(3) The desirability and need for the proposed use.
(4) The potential for adverse environ-mental influences that might result from the proposed use.
(5) Compatibility of the proposed use and site plan with the policies and guidelines of the Comprehensive Plan.
(6) Lights and signs shall be located in a manner that will not be distracting to adjoining properties or passing motorists.
(7) Landscaping shall be provided in areas near the public right-of-way and located with consideration for energy conservation. An acceptable plan must be provided for the maintenance of the required landscaped areas.
(8) Control of storm drainage shall be provided so as to not damage adjoining properties. The plan must be approved by the Town Engineer.
(9) Site design and building plans shall include provisions for the needs of handicapped individuals as required by the Building Code or other ordinances of the Town.
(10) Approved landscaping or solid fencing capable of screening adjacent properties shall be provided where commercial uses abut residential uses.
(11) Commercial and industrial uses shall conform to the following performance standards:
(a) No dust, odor, gas, fumes, glare or vibration shall extend beyond lot lines. Glare pertains to sunlight reflected from windows or other integral portions of buildings, as well as from lighting fixtures and signs.
(b) Smoke shall not be emitted at a density greater than #1 on the Ringleman's scale.
(c) No particles of fly ash shall exceed two-tenths percent (0.2%) grains per cubic foot of the flue gas at a stack temperature of fifty (50) degrees Fahrenheit.
(d) Noise. No noise shall be emitted which exceeds a maximum of seventy-five (75) decibels with a maximum increase of five (5) decibels permitted for a maximum of fifteen (15) minutes in any one (1) hour. In addition, every activity shall be conducted so that no noise produced is objectionable due to intermittence, beat frequency or shrillness.
(e) Water pollution. No water pollution shall be emitted by the manufacturing or other processing.
(f) Outside storage areas that adjoin R-1, R-2 or R-3 Districts must be screened from view with screening of at least eight (8) feet high. The screening shall be constructed of board fencing, screened metal fencing or shrubs.
(g) Truck traffic to and from the I-1 and I-2 District facilities must be restricted to truck routes. The weight of the trucks is limited to standard highway limits unless otherwise posted.
(h) Industrial activity within the I-1 District will be restricted to 7:00 a.m. to 9:00 p.m.

Minutes
Town Board Regular Meeting
Town of Paonia, Colorado
February 23, 2016

RECORD OF PROCEEDINGS

The Regular Meeting of the Town Board of Trustees held Tuesday, February 23, 2016 was called to order at 7:00 p.m. by Mayor Neal Schwieterman, followed by the Pledge of Allegiance.

Trustees present were as follows:
Mayor Neal Schwieterman
Trustee Charles Stewart
Trustee David Bradford
Trustee Ross King
Trustee Amber Kleinman
Trustee Suzanne Watson

Trustee Eric Goold was absent.

Town Staff present were as follows:
Town Manager/Town Clerk Jane Berry
Deputy Clerk Corinne Ferguson
Public Works Director Travis Loberg

Sergeant Neil Ferguson was absent.

A quorum was present and Mayor Schwieterman proceeded with the meeting.

Approval of Agenda

Motion by Trustee Stewart, Supported by Trustee King to approve the agenda as amended, removing item number 3 – Consideration to Approve Spiegel Industrial Contract Modification. Motion carried with five (5) ayes and zero (0) nays.

Announcements

None

Visitors

None

Unfinished Business

None

New Business

Consideration to Approve Special Review Application No PC-2015-01 Silver Leaf Senior Co-Housing Development Project

Subject property of this Special Review Application is located at 3rd and Clark Streets, Paonia, Colorado. Owner of the property listed as Circle Development Corporation, President Robert S. Dick and is Zoned R-2, Medium Density Residential District. Applicant is requesting a "Residential Uses Permitted by Special Review" be granted to allow for the development of a total of nineteen (19) lots that will consist in total of no more than thirteen (13) dwelling units and in addition accessory buildings and landscaped open space recreational areas. No more than four (4) dwelling units on lots totaling a minimum of 16,000 square feet will be developed, in accordance with the current Town Zoning Ordinance Schedule of Requirements for Residential Districts.

Rob Dick – President of Circle Development Corporation, in conjunction with Mara Mantiou, architect and designer, presented the Silver Leaf Cohousing project to the Board.

Mayor Schwieterman read for the record the Planning Commission recommendation to approve the Silver Leaf Cohousing project and read a letter of support from First Colorado National Bank President Brad Harding.

Two community members spoke in favor of the project, contingent upon the Town and developers coming forward with a plan to improve Clark Avenue.

Two community members spoke against the planning process and review.

Tom Glor, the spokesman for the neighboring property owned by Bear Ranch, spoke in favor of the project and reiterated Bear Ranches willingness to cooperate with the Town regarding easements, etc.

Discussion ensued regarding subdivisions, special reviews, sewer installation and associated costs and traffic flows.

Motion by Trustee King, Supported by Trustee Kleinman, to accept the Planning Commission recommendation and approve the Special Review Application for the Silver Leaf Cohousing project. Motion carried with four (4) ayes and one (1) nay from Trustee Watson.

Consideration to Approve Special Review Development Agreement with Circle Development Corporation

Motion by Trustee King, Supported by Trustee Kleinman, to approve the Special Review Development Agreement between the Town of Paonia and Circle Development Corporation. Motion carried with four (4) ayes and one (1) nay from Trustee Watson.

Consideration to Approve Letter of Support for Elsewhere Studios NEA Grant Application

Karen Goode – on behalf of Elsewhere Studios, requests a letter of support from the Town of Paonia for a grant application that supports artists for a short residency and artistic interaction within the Town.

Motion by Trustee Kleinman, Supported by Trustee King, to provide a letter of support for Elsewhere Studios NEA Grant Application. Motion carried with five (5) ayes and zero (0) nays.

Regular Business

Mayor's Report: Mayor Neal Schwieterman reported:

1. The proposed changes for the Safe Routes to School project located at the intersection of Grand Avenue and Fifth Street are at the county engineer's office for review. A Memorandum of Understanding (MOU) has been requested from Delta County regarding the area of County property that will become Town property should the suggested changes be approved.

Town Manager Report: Town Manager Jane Berry reported:

1. A letter of support was provided to the North Fork Ambulance Association.
2. The joint meeting between the Town and Bone Mesa Water District to discuss upgrades and improvements on the Gelwick and Mays Springs was very productive.
3. The Town is working through several items prior to CDPHE releasing the Town from the current Enforcement Order.
4. The Consumer Report and Tier II water notice will be issued in April.
5. Requesting permission to negotiate a renewal on the cleaning contract for Town Hall.
6. The Letter of Engagement with RubinBrown is being executed with a caveat that should costs begin to approach the contracted $28,000 an amendment will be provided to the Board for review.
7. The DOLA Regional Manager and Executive Director will be in Town Wednesday, February 24th for a tour of the water treatment plants.
8. A reminder to all municipal election candidates to comply with all campaign finance requirements.
9. A Public Works conference call with Steve LaBonde is scheduled for Thursday February 25th at 1:30pm.

Public Works Department Report: Public Works Director Travis Loberg reported:

1. The 2MG water treatment plant is making water at ½ capacity. Full capacity is expected to be reached by the end of the week.

Police Department Report: Sergeant Neil Ferguson was absent:

Town Manager Berry reported:

1. A $2,200 grant from POST has been obtained to offset the cost for ammunition.
2. Repairs to one of the 2004 Ford Explorers is included in the disbursements.
3. A written report is included in the packet.

Committee/Meeting Reports:

- Finance and Personnel: Nothing to report
- Public Works: A phone conference was held with Leroy Cruz regarding the water and sewer rate survey. Engineering proposals are under review regarding potential water main repairs.
- Governmental Affairs: Nothing to report.
- Services & Recreation: The WSCC continues to work of Paonia River Park signage. The Committee is satisfied that the signage is acceptable and will offer a recommendation to approve when the WSCC brings the final design to the Board.
- Facilities & Development: Are waiting for a formal plan prior to providing a letter of support for the combined bike trail system.
- Public Safety: Nothing to report

Minutes:

Motion by Trustee King, Supported by Trustee Stewart to approve the Town Board Regular Meeting Minutes as amended for February 9, 2016. Motion carried with five (5) ayes and zero (0) nays.

Motion by Trustee King, Supported by Trustee Kleinman to approve the Town Board Special Meeting Minutes for February 9, 2016. Motion carried with five (5) ayes and zero (0) nays.

Disbursements:

Motion by Trustee Stewart, Supported by Trustee King to authorize the disbursements through the period of February 22, 2016 as reviewed by the Finance Committee with the Town's Finance Officer. Motion carried with five (5) ayes and zero (0) nays.

Adjournment:

The meeting was adjourned by Mayor Neal Schwieterman at 9:15pm

/s/ _____
J. Corinne Ferguson, Deputy Town Clerk

/s/ _____
Neal Schwieterman, Mayor

Minutes
Town Board Special Meeting
Planning Commission Special Meeting
Town of Paonia, Colorado
January 26, 2016

RECORD OF PROCEEDINGS

The Special Meeting of the Town Board of Trustees held Tuesday, January 26, 2016 was called to order at 5:30 PM by Mayor Neal Schwieterman, followed by the Pledge of Allegiance.

Trustees present were as follows:

Mayor Neal Schwieterman
Trustee Charles Stewart
Trustee David Bradford
Trustee Ross King
Trustee Suzanne Watson entered the meeting at 5:32 PM

Trustee Eric Goold entered the meeting at 5:45 PM

Trustee Amber Kleinman was absent.

Members of the Town Planning Commission present were as follows:

Chairman Constantine Hirschfeld
Vice-Chairman Barbara Heck
Commission Doug Long

Town Staff present were as follows:

Town Manager/Town Clerk Jane Berry

Quorums were present for both the Town Board and Planning Commission; Mayor Schwieterman proceeded with the meeting.

The purpose of the Joint Special Meeting was to review and discuss the Town's Special Review process, procedures, requirements, criteria, site plan review and criteria in preparation for the Town Board meeting on February 23, 2016 at which time a Special Review Application will be considered either for approval or denial.

Town Manager Jane Berry proceeded with the review of a handout of the applicable sections of the Town's Zoning Ordinance (Land Development Regulations) pertaining to Special Review Applications and the roles/responsibilities of Town Staff, Planning Commission, and the Town Board as well as those of the applicant.

An interactive discussion ensued between Staff, the Planning Commission and the Town Board regarding the review of this topic. One citizen, Paul Douglas also addressed the boards regarding this issue and the proposed project for which the Special Review process is being considered.

Adjournment:

The meeting was adjourned by Mayor Schwieterman at 6:53 PM

\s\ _____
Jane A. Berry, Town Manager/Town Clerk

\s\ _____
Neal Schwieterman, Mayor

Minutes
Town Board Special Meeting
Planning Commission Special Meeting
Town of Paonia, Colorado
January 26, 2016

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\s\ _____
Jane A. Berry, Town Manager/Town Clerk

\s\ _____
Neal Schwieterman, Mayor

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Town of Paonia, Colorado
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J. Corinne Ferguson, Deputy Town Clerk

/s/ _____
Neal Schwieterman, Mayor