



**Planning and Community  
Development Department**  
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**DEVIATION REQUEST  
AND DECISION FORM**

Updated: 6/26/2019

**PROJECT INFORMATION**

Project Name : Trails at Aspen Ridge Filing No. 2  
 Schedule No.(s) : 5500000412  
 Legal Description : Unplatted Land

**APPLICANT INFORMATION**

Company : COLA, LLC  
 Name : Tim Buschar  
 Owner    Consultant    Contractor  
 Mailing Address : 555 Middle Creek Pkwy, Suite 380  
 Colorado Springs, CO 80921  
  
 Phone Number : (719) 382-9433  
 FAX Number :  
 Email Address :

**ENGINEER INFORMATION**

Company : Matrix Design Group  
 Name : Nicole Schanel  
 Colorado P.E. Number : 52434  
 Mailing Address : 2435 Research Parkway, Suite 300  
 Colorado Springs, CO 80920  
  
 Phone Number : 719-575-0100  
 FAX Number :  
 Email Address : Nicole\_schanel@matrixdesigngroup.com

**OWNER, APPLICANT, AND ENGINEER DECLARATION**

To the best of my knowledge, the information on this application and all additional or supplemental documentation is true, factual and complete. I am fully aware that any misrepresentation of any information on this application may be grounds for denial. I have familiarized myself with the rules, regulations and procedures with respect to preparing and filing this application. I also understand that an incorrect submittal will be cause to have the project removed from the agenda of the Planning Commission, Board of County Commissioners and/or Board of Adjustment or delay review until corrections are made, and that any approval of this application is based on the representations made in the application and may be revoked on any breach of representation or condition(s) of approval.

*Tim Buschar*

*4/15/20*

Signature of owner (or authorized representative)

Date

Engineer's Seal, Signature  
And Date of Signature



**DEVIATION REQUEST** (Attach diagrams, figures, and other documentation to clarify request)

A deviation from the standards of or in Section **Section 3.3.1** of the Engineering Criteria Manual (ECM) is requested.

Identify the specific ECM standard which a deviation is requested:

Per Section 3.3.1 A. "The design of storm sewers shall be done in accordance with these standards, the DCM 1 and 2..."  
Per the DCM 1, Chapter 9, Section 6.4, "The drop within a manhole from the upstream to downstream pipe invert should normally not exceed 1-foot. There are cases when a drop larger than 1-foot may be necessary to avoid a utility conflict, reduce the slope of the downstream pipe, match the crowns of the upstream and downstream pipes or to account for the energy losses in the manhole. Drops that exceed 1-foot will be evaluated on a case-by-case basis and additional analysis may be required."

State the reason for the requested deviation:

Storm MH-202 - A drop greater than one foot is necessary to provide acceptable velocities within the proposed storm sewer, aid in hydraulic loss which could result in HGL values out of compliance with ECM standards, avoid upstream utility conflicts (sanitary sewer and water) and to optimize the elevation at which the storm sewer enters the proposed East Pond full spectrum detention pond for the proposed development.

Explain the proposed alternative and compare to the ECM standards (May provide applicable regional or national standards used as basis):

The proposed sanitary sewer presents a challenge for the installation of the storm sewer. Without the drop manhole storm sewer will be placed in deep installations (greater than 18 feet) due to the size of the pipe and to avoid sanitary sewer service conflicts of the existing sanitary sewer. By using the drop manholes, the storm sewer is above the services within Big Johnson Drive with a more conventional installation and the deep sewer installation is limited to short segments. Drop manholes in excess of 1-ft have been approved under the DCM Volume 1 for similar situations within adjacent municipalities. Drops greater than 1-ft require additional concrete strength and scour protection which is proposed with this design in the form of Class D concrete for the manholes and provision of a 1' sump for energy dissipation.

**LIMITS OF CONSIDERATION**

(At least one of the conditions listed below must be met for this deviation request to be considered.)

- The ECM standard is inapplicable to the particular situation.
- Topography, right-of-way, or other geographical conditions or impediments impose an undue hardship and an equivalent alternative that can accomplish the same design objective is available and does not compromise public safety or accessibility.
- A change to a standard is required to address a specific design or construction problem, and if not modified, the standard will impose an undue hardship on the applicant with little or no material benefit to the public.

Provide justification:

The storm sewer installation needs to coordinate to avoid conflict with proposed sanitary sewer mains and associated sanitary sewer services. The design as presented, eliminates deep storm sewer installation that would require excessive shoring and sanitary sewer protection (because it may have to be installed below the sanitary) and potentially dangerous installation and long-term deep manhole access points for maintenance. Downstream of the drop manhole, the storm sewer is adjusted to a flatter grade to daylight to the existing pond and does not require a steeper pipe slope which would increase velocities (above 18 fps).

**CRITERIA FOR APPROVAL**

Per ECM section 5.8.7 the request for a deviation may be considered if the request is **not based exclusively on financial considerations**. The deviation must not be detrimental to public safety or surrounding property. The applicant must include supporting information demonstrating compliance with **all of the following criteria**:

The deviation will achieve the intended result with a comparable or superior design and quality of improvement.

Per Section 5.8 of the ECM, "*Section 5.8 of the ECM establishes a mechanism whereby an engineering design standard can be modified when if strictly adhered to, would cause unnecessary hardship or unsafe design because of topographical or other conditions particular to the site, and that a departure may be made without destroying the intent of such provision*"

The design revision provides a superior design to the storm drain with relation to the existing utility constraints, conventional construction practices, and enables the pipe velocities to meet EPC criteria.

The deviation will not adversely affect safety or operations.

The proposed deviation will not adversely impact safety or operations by allowing the shallow installation of the storm drain and creating shallower manholes instead of deep (greater than 18-ft) access manholes for maintenance. Construction safety will be enhanced because the installation will not require additional protective shoring and working around existing installed utilities.

The deviation will not adversely affect maintenance and its associated cost.

Proposed access to the drop manhole will be in conformance with all pertinent safety and maintenance guidelines and will not increase maintenance costs.

The deviation will not adversely affect aesthetic appearance.

Aesthetic appearance will not be changed as the proposed deviation is a storm manhole and will appear as such in the field.

The deviation meets the design intent and purpose of the ECM standards.

By raising the upstream storm pipe to avoid utility conflict with proposed sanitary sewer, and by lowering the downstream pipe to reduce pipe velocities/HGL's to within acceptable range, the 7.0-foot drop meets the design intent and purpose of the ECM standards.

The deviation meets the control measure requirements of Part I.E.3 and Part I.E.4 of the County's MS4 permit, as applicable.

The proposed deviation is in conformance with Part I.E.3 and Part I.E.4 of the County's MS4 permit.

**REVIEW AND RECOMMENDATION:**

**Approved by the ECM Administrator**

This request has been determined to have met the criteria for approval. A deviation from Section \_\_\_\_\_ of the ECM is hereby granted based on the justification provided.

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**Denied by the ECM Administrator**

This request has been determined not to have met criteria for approval. A deviation from Section \_\_\_\_\_ of the ECM is hereby denied.

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L J

**ECM ADMINISTRATOR COMMENTS/CONDITIONS:**

## **1.1. PURPOSE**

The purpose of this resource is to provide a form for documenting the findings and decision by the ECM Administrator concerning a deviation request. The form is used to document the review and decision concerning a requested deviation. The request and decision concerning each deviation from a specific section of the ECM shall be recorded on a separate form.

## **1.2. BACKGROUND**

A deviation is a critical aspect of the review process and needs to be documented to ensure that the deviations granted are applied to a specific development application in conformance with the criteria for approval and that the action is documented as such requests can point to potential needed revisions to the ECM.

## **1.3. APPLICABLE STATUTES AND REGULATIONS**

Section 5.8 of the ECM establishes a mechanism whereby an engineering design standard can be modified when if strictly adhered to, would cause unnecessary hardship or unsafe design because of topographical or other conditions particular to the site, and that a departure may be made without destroying the intent of such provision.

## **1.4. APPLICABILITY**

All provisions of the ECM are subject to deviation by the ECM Administrator provided that one of the following conditions is met:

- The ECM standard is inapplicable to a particular situation.
- Topography, right-of-way, or other geographical conditions or impediments impose an undue hardship on the applicant, and an equivalent alternative that can accomplish the same design objective is available and does not compromise public safety or accessibility.
- A change to a standard is required to address a specific design or construction problem, and if not modified, the standard will impose an undue hardship on the applicant with little or no material benefit to the public.

## **1.5. TECHNICAL GUIDANCE**

The review shall ensure all criteria for approval are adequately considered and that justification for the deviation is properly documented.

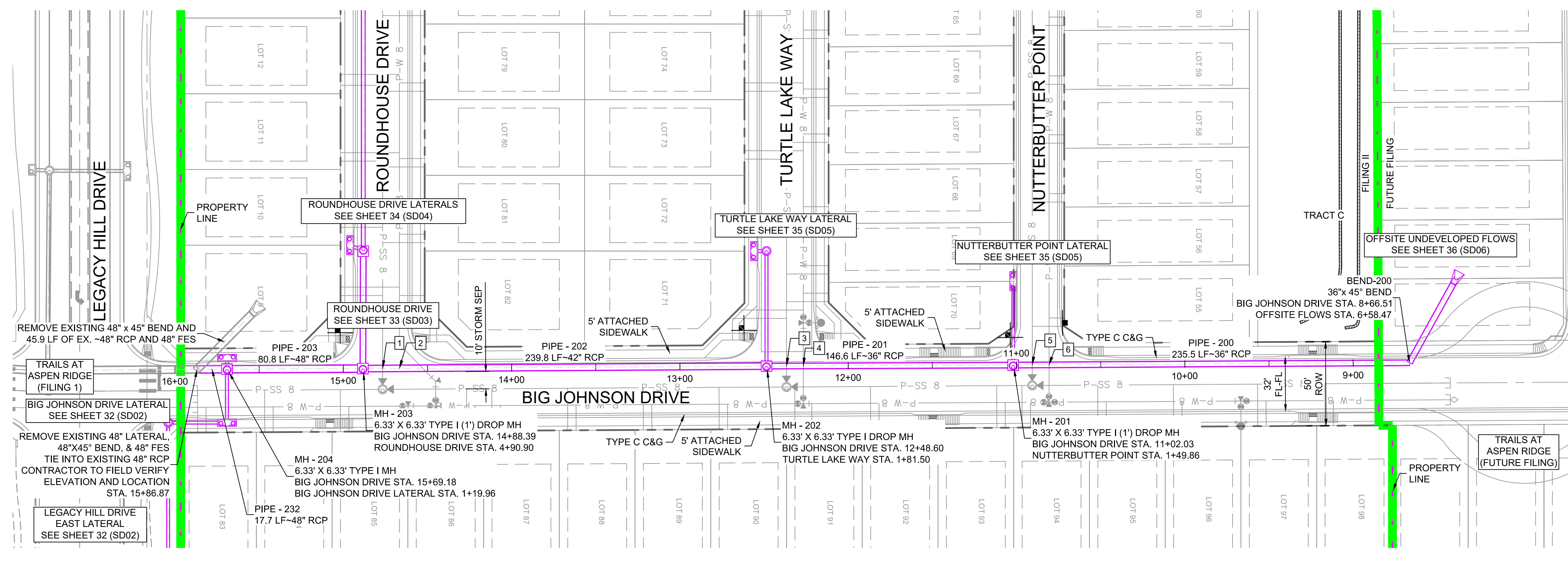
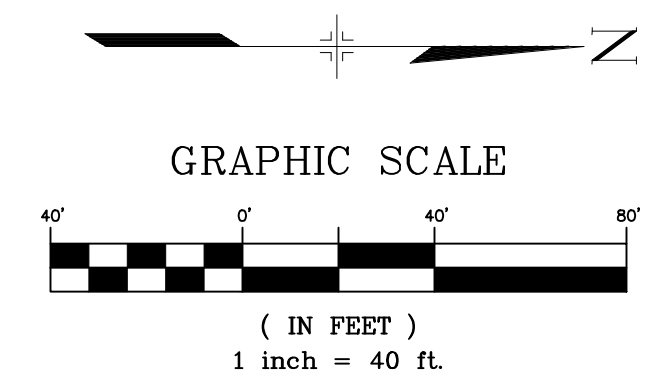
## **1.6. LIMITS OF APPROVAL**

Whether a request for deviation is approved as proposed or with conditions, the approval is for project-specific use and shall not constitute a precedent or general deviation from these Standards.

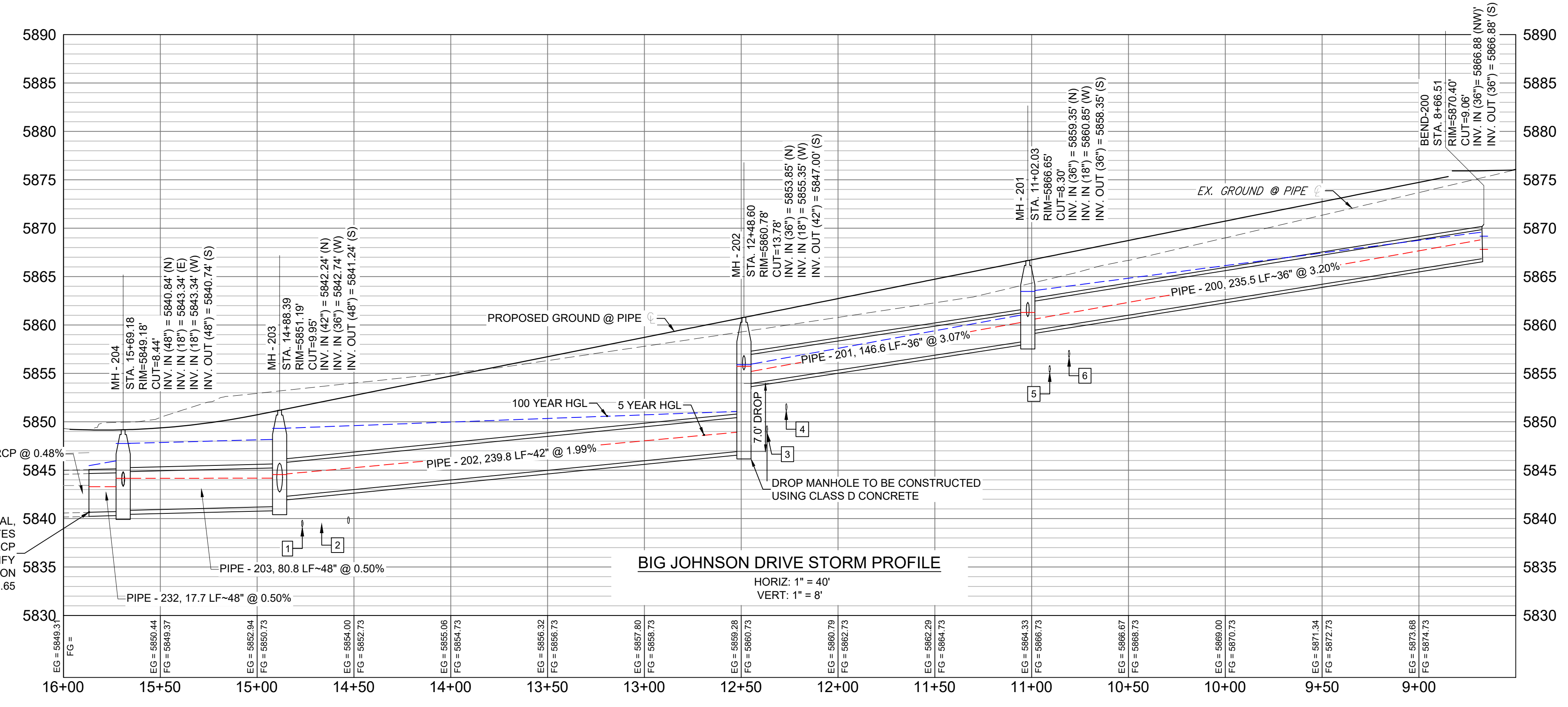
## **1.7. REVIEW FEES**

A Deviation Review Fee shall be paid in full at the time of submission of a request for deviation. The fee for Deviation Review shall be as determined by resolution of the BoCC.





| STRUCTURE TABLE |                                   |  |                           |
|-----------------|-----------------------------------|--|---------------------------|
| NAME            | TYPE                              | DETAILS  | N & E                     |
| BEND-200        | 36"x 45" BEND                     | RIM = 5870.40<br>PIPE - 227 INV IN (36") = 5866.88<br>PIPE - 200 INV OUT (36") = 5866.88   | N: 7630.64<br>E: 13998.89 |
| MH - 201        | 6.33' X 6.33' TYPE I (1') DROP MH | RIM = 5866.65<br>PIPE - 200 INV IN (36") = 5859.35<br>PIPE - 205 INV IN (18") = 5860.85<br>PIPE - 201 INV OUT (36") = 5858.35                                      | N: 7395.12<br>E: 14000.31 |
| MH - 202        | 6.33' X 6.33' TYPE I DROP MH      | RIM = 5860.78<br>PIPE - 201 INV IN (36") = 5853.85<br>PIPE - 208 INV IN (18") = 5855.35<br>PIPE - 202 INV OUT (42") = 5847.00                                      | N: 7248.56<br>E: 14000.93 |
| MH - 203        | 6.33' X 6.33' TYPE I (1') DROP MH | RIM = 5851.19<br>PIPE - 202 INV IN (42") = 5842.24<br>PIPE - 221 INV IN (36") = 5842.74<br>PIPE - 203 INV OUT (48") = 5841.24                                      | N: 7008.77<br>E: 14002.39 |
| MH - 204        | 6.33' X 6.33' TYPE I MH           | RIM = 5849.18<br>PIPE - 203 INV IN (48") = 5840.84<br>PIPE - 223 INV IN (18") = 5843.34<br>PIPE - 222 INV IN (18") = 5843.34<br>PIPE - 232 INV OUT (48") = 5840.74 | N: 6927.98<br>E: 14002.74 |



| PIPE TABLE |             |        |       |         |
|------------|-------------|--------|-------|---------|
| PIPE NAME  | BEARING     | LENGTH | SLOPE | SIZE    |
| PIPE - 200 | S00°20'47"E | 235.5' | 3.20% | 36" RCP |
| PIPE - 201 | S00°14'21"E | 146.6' | 3.07% | 36" RCP |
| PIPE - 202 | S00°20'59"E | 239.8' | 1.99% | 42" RCP |
| PIPE - 203 | S00°15'04"E | 80.8'  | 0.50% | 48" RCP |
| PIPE - 232 | S00°24'33"E | 17.7'  | 0.50% | 48" RCP |

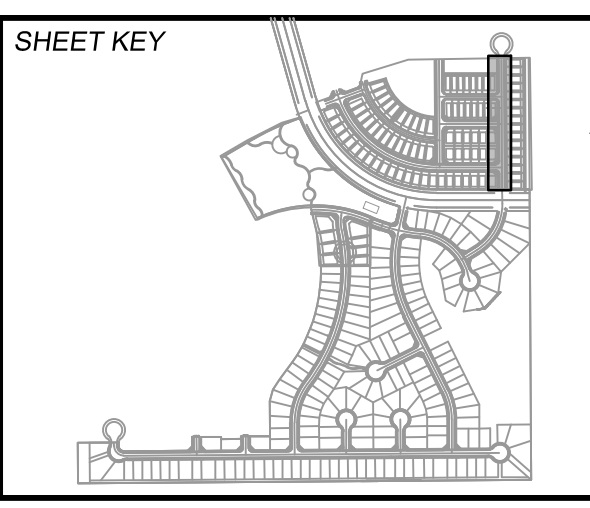
| STORM CROSSING DETAILS |                           |                         |                          |            |
|------------------------|---------------------------|-------------------------|--------------------------|------------|
| CROSSING #             | N & E                     | TOP OF PIPE             | BTM OF PIPE              | SEPARATION |
| 1                      | N 7,020.48<br>E 14,002.32 | 8" PVC SAN<br>5839.85   | 42" RCP STORM<br>5842.10 | 2.25'      |
| 2                      | N 7,030.48<br>E 14,002.26 | 8" PVC WATER<br>5840.30 | 42" RCP STORM<br>5842.30 | 2.00'      |
| 3                      | N 7,260.45<br>E 14,000.88 | 8" PVC SAN<br>5849.60   | 36" RCP STORM<br>5853.88 | 4.28'      |
| 4                      | N 7,270.45<br>E 14,000.84 | 8" PVC WATER<br>5851.89 | 36" RCP STORM<br>5854.19 | 2.30'      |
| 5                      | N 7,406.48<br>E 14,000.25 | 8" PVC SAN<br>5855.82   | 36" RCP STORM<br>5859.38 | 3.56'      |
| 6                      | N 7,416.45<br>E 14,000.19 | 8" PVC WATER<br>5857.39 | 36" RCP STORM<br>5859.70 | 2.31'      |

- NOTES:
- ALL STATION, OFFSET, AND NORTHING/EASTING VALUES ARE TO THE CENTER OF ALL STRUCTURES UNLESS OTHERWISE NOTED.
  - PIPE LENGTHS ARE MEASURED FROM CENTER TO CENTER OF ALL STRUCTURES.
  - ALL PIPE BENDS ANGLES ARE MEASURED FROM THE CENTER OF PIPE.
  - CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING STRUCTURES.
  - TOP OF BOX ELEVATIONS GIVEN FOR CDOT TYPE R INLETS REFER TO THE COUNTY STANDARD DETAIL FOR CORRESPONDING DESIGN ELEVATIONS.
  - ALL RCP PIPE SHALL BE CLASS III UNLESS OTHERWISE NOTED.
  - PIPES OF DIFFERENT SIZES ARE TO BE MATCHED TO THE CROWN OF THE INSIDE WALL OF PIPE.
  - PER THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL, MANHOLES SHALL BE INSTALLED 18" BELOW THE SURFACE OF THE PAVEMENT ON THE LOWEST SIDE OF THE MANHOLE.
  - SECTIONS OF STORM PIPE WITH PRESSURE HEAD DURING THE 100 YR STORM SHALL USE WATERTIGHT JOINTS WITH A 100 YR SERVICE LIFE PER ECM 3.3.1.B.2.
  - ALL STORM SEWER IS PUBLIC UNLESS OTHERWISE NOTED

| REFERENCE DRAWINGS |                              |
|--------------------|------------------------------|
| 19-886-PR-UTIL     | X-886-PR STORM F1            |
| 19-886-PR-UTIL     | SANITARY                     |
| 886-PR             | Legacy Drive                 |
| GEC                | Titleblock                   |
| X-886-PR-SITE-F1   | X-886-PR SITE-FUTURE FILINGS |
| X-886-PR-UTIL-F2   | X-886-PR SITE-F2             |
| X-886-PR-CROSSINGS |                              |

| No.  | DATE | DESCRIPTION | BY |
|--|------|-------------|----|
| COMPUTER FILE MANAGEMENT   |      |             |    |
| FILE NAME: S:\19.886.014 (Trails at Aspen Ridge - F2)\100 Dwg\104 Plan Sets\Construction Plans\Road & Storm Plans\SD01.dwg |      |             |    |
| CTB FILE: ---  |      |             |    |
| PLOT DATE: February 25, 2020 10:32:16 AM   |      |             |    |
| THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE.  |      |             |    |



**BENCHMARK**  
 COLORADO SPRINGS UTILITIES (FIMS) MONUMENT F206  
 A BERNTSEN TOP SECURITY MONUMENT SYSTEM WITH A 3.5-INCH DIAMETER ALUMINUM CAP IN A ROAD BOX, LOCATED ON THE NORTHWEST CORNER OF FONTAINE BOULEVARD AND POWERS BOULEVARD,  
 ELEVATION = 5897.89' U.S. SURVEY FT

**BASIS OF BEARING**  
 BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M. SAID LINE BEARS S89°51'23"E FROM THE NORTHWEST CORNER OF SAID SECTION 9 (2 1/2' AULM. CAP PLS 17664) TO THE N 1/4 CORNER OF SAID SECTION 9 (3 1/2' AULM. CAP PLS 10377)

PREPARED BY:

| SEAL                                  |                       |                             |                  |  |
|---------------------------------------|-----------------------|-----------------------------|------------------|--|
| <b>TRAILS AT ASPEN RIDGE</b>          |                       |                             |                  |  |
| FILING NO. 2                          |                       |                             |                  |  |
| ROADWAY & STORM IMPROVEMENT PLANS     |                       |                             |                  |  |
| <b>STORM DRAIN PLAN &amp; PROFILE</b> |                       |                             |                  |  |
| DESIGNED BY: NMS                      | SCALE: HORIZ 1" = 40' | DATE ISSUED: FEBRUARY, 2020 | DRAWING No. SD01 |  |
| DRAWN BY: CRD                         | VERT. 1" = 8'         | SHEET 31 OF 36              |                  |  |
| CHECKED BY: NMS                       |                       |                             |                  |  |