



COLORADO

**Division of Reclamation,
Mining and Safety**

Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

October 6, 2015

Notice to Parties and Interested Persons

Re: Recommendation to Approve Amendment No. 2 (AM-02) with Objection, Brannan Sand and Gravel Company, L.L.C., Pit 29, DRMS Permit No. M-1980-183

Dear Party and/or Interested Person:

The Division of Reclamation, Mining and Safety (Division) hereby issues its recommendation for approval of the Reclamation Permit Amendment Application No. 2 (AM-02) for the Pit 29, DRMS Permit No. M-1980-183, submitted by Brannan Sand and Gravel Company, L.L.C.

This recommendation is based on the Division's determination that the application satisfied the requirements of Section 34-32.5-115(4) of the Colorado Land Reclamation Act for the Extraction of Construction Materials, 34-32.5-101 et seq., C.R.S. A copy of the Division's rationale for its recommendation is enclosed for your review.

The Division's recommendation is to the Colorado Mined Land Reclamation Board (Board). The Division's recommendation and the application with an objection will be considered by the Board during a formal hearing, scheduled to occur October 28-29, 2015, at 1313 Sherman Street, Room 318, Denver, Colorado, beginning at 9:00 a.m., or as soon thereafter as the issue may be considered. Pursuant to Rule 2.8.1(1) of the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials (the Rules), any party who does not attend the Board hearing forfeits its party status and all associated rights and privileges.

All parties and interested persons who intend to participate in the Board hearing are strongly encouraged to attend the Pre-hearing Conference. Pursuant to Rule 2.7.3(4), any party who does not attend the Pre-hearing Conference forfeits its party status and all associated rights and privileges, unless such party provides a fully executed proxy authorization form to the Pre-hearing Conference Officer and the party's authorized representative is present. The Pre-hearing Conference is scheduled to occur October 13, 2015, at 1313 Sherman Street, Room 220, Denver, Colorado, beginning at 10:00 a.m. and terminating at or before 12:30 p.m.

If you need additional information please contact me.

Sincerely,

Tyler O'Donnell
Environmental Protection Specialist

Attachment: Certificate of Service

Enclosure: Rationale for Recommendation to Approve



10/6/2015

CERTIFICATE OF SERVICE

I, Tyler O'Donnell, hereby certify that on this 6th day of October, 2015, I deposited a true copy of the foregoing document, Re: Recommendation to Approve Amendment No. 2 (AM-02) with Objection, Brannan Sand and Gravel Company, L.L.C., Pit 29, DRMS Permit No. M-1980-183 and associated rationale with enclosures, in the United States Mail, postage paid, addressed to the following:

Fred Marvel
Brannan Sand & Gravel Company
2500 East Brannan way
Denver, CO 80229

Tom Hatton
Applegate Group, Inc.
1490 West 121st Avenue, Suite 100
Denver, CO 80234

Eugene J. Riordan, Esq.
Vranesh and Raisch, LLP
1720 14th St., Suite 200
Boulder, CO 80302

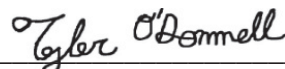
Ben Frei
Albert Frei & Sons Inc.
P.O. Box 700
Henderson, CO 80640

Steve O'Brian
Environment, Inc.
7985 Vance Dr., #205A
Arvada, CO 80003

And by electronic transmission to the following:

Tony Waldron, DRMS
Wally Erickson, DRMS
Bruce Stover, Pre-hearing Officer
John Roberts, Esq., AGO for the MLRB
Jeff Fugate, Esq., AGO for DRMS
Scott Schultz, Esq., AGO for DRMS

Tom Hatton, Applegate Group, Inc.
Ben Frei, Albert Frei & Sons Inc.
Fred Marvel, Brannan Sand & Gravel Company
Eugene J. Riordan, Esq., Vranesh and Raisch, LLP
Steve O'Brian, Environment, Inc.



Tyler O'Donnell



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**Division of Reclamation,
Mining and Safety**

Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

October 6, 2015

**Re: Rationale for Recommendation to Approve a 112c Application Reclamation Permit,
Amendment Application No. 2 (AM-02) with an Objection,
Pit 29, DRMS Permit No. M-1980-183**

Introduction

Herein, all references to the Act and Rules refer to the Colorado Land Reclamation Act for the Extraction of Construction Materials, 34-32.5-101 *et seq.*, C.R.S. (the Act), and to the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials (the Rules or Rule). Copy of the Act and Rules are available through the Division's web site at <http://mining.state.co.us>.

On October 6, 2015, the Division of Reclamation, Mining and Safety (Division) issued its recommendation to approve the Permit Amendment Application No. 2 (AM-02) for Pit 29, DRMS File No. M-1980-183, over a public objection. This document is intended to explain the process by which the Division arrived at its recommendation to approve, over a public objection, and respond to the issues raised by the objecting party. The Division reserves the right to further supplement, amend, modify, or clarify this document and recommendation with additional details as necessary.

Summary of the Review Process

On November 13, 2014, The Mined Land Reclamation Board (Board), issued a Board Order which required Brannan Sand and Gravel Company, L.L.C. (Applicant) to submit a Permanent Groundwater Mounding Mitigation Plan (Permanent Plan) on or before December 12, 2014. The Applicant submitted the AM-02 application to the Division on December 12, 2014, as required by the Board Order. AM-02 was found complete for purposes of filing on January 9, 2015. The original submittal described a Permanent Plan which had a French drain that would eliminate the groundwater mounding outside of the slurry wall along the southwest side of Pit 29. During the review period for AM-02, the Applicant modified the Permanent Plan through the submittal of two different amendments to the AM-02 application. Through the two separate amendments to the AM-02 application the alignment of the French drain was altered. Notice of the filing occurred each time AM-02 was amended. The three separate notices were done in accordance with the general requirements of the Act and Rules. During the three different public comment periods the Division received written comments from the following individuals and agencies:



Timely Comment:

- 1) Division of Water Resources (DWR), received January 12, 2015
- 2) Division of Water Resources (DWR), received May 5, 2015
- 3) History Colorado (SHPO), received January 22, 2015
- 4) History Colorado (SHPO), received July 14, 2015
- 5) Colorado Parks & Wildlife (CPW), received February 10, 2015
- 6) Norman and & Charlene Einspahr, received February 25, 2015

Timely Letters of Objection:

- 1) Albert Frei & Sons, received via email August 10, 2015

The Division forwarded copies of all comments to the Applicant and scheduled the application for a Formal Board Hearing and a Pre-hearing Conference. The Division provided notice of the scheduled Board hearing and Pre-hearing Conference to all parties and interested persons. Due to the timely objection, on the decision date the Division would not make a decision on the application, but rather a recommendation to the Board.

Issues Raised by the Objecting Party

The issues raised by the objecting party are represented by italic bold font. The Division's response follows in standard font.

1) Concerns regarding the impact the French drain will have on the neighboring Worthing Pit property and the Worthing Pit Groundwater Mounding Mitigation Ditch.

The amended application for AM-02 demonstrates that the Permanent Plan will minimize disturbance to the prevailing hydrologic balance, a requirement of Rule 3.1.6 and C.R.S. 34-32.5-116(4)(h), as well as protect off site areas from damage, a requirement of Rule 3.1.5(3) and C.R.S. 34-32.5-116(4)(i). As such, the Division believes there will be no adverse impact to the Worthing Pit property or to the Worthing Pit Ditch.

Henderson Aggregate (the landowner of the Worthing property and a subsidiary of Albert Frei & Sons, Inc.) has entered into a private lease agreement with the Applicant allowing the Applicant to use the Worthing Pit Ditch. The private lease agreement between the parties also requires the Applicant to maintain a maximum functional elevation of the ditch. In a situation where the water elevation in the ditch exceeds the set elevation the Applicant is required to make improvements to the ditch, as necessary to ensure the ditch continues to function as designed.

Pursuant to Rule 6.4.19(a), the Applicant provided damage compensation agreements to all structure owners located within 200-feet of the proposed French drain. The damage compensation agreement for the Worthing Pit Ditch was accepted and executed by Henderson Aggregate, on August 18, 2015.

2) Concerns regarding the elevation of the French drain in comparison to the pre-mining historic groundwater elevations.

Through the review of the AM-02 application the Division reviewed the groundwater elevations in the surrounding area. The Division specifically looked at groundwater elevations along the course of the French drain from A to A` (enclosed Datum shift letter from the applicant). The pre-mining groundwater elevation at A was estimated to be approximately 5007 feet while at A` the pre-mining groundwater elevation was estimated to be approximately 5005 feet (enclosed groundwater contour map). Pre-mining groundwater contour map was created using a NGVD29 datum. This assumption is based on the fact that the map was created in 1980 prior to the release of the NAVD88 datum. The datum of the map is significant because the elevation difference between NGVD29 datum and NAVD88 datum is 2.878 feet (enclosed Datum shift letter from the applicant). Therefore, all elevations collected in NGVD29 must have 2.878 feet added to the elevation to be comparable to NAVD88 elevations.

If the estimated pre-mining groundwater elevations are converted to the NAVD88 datum the pre-mining groundwater elevation at A is approximately 5009.878 feet and at A` it is approximately 5007.878 feet. The Applicant has proposed setting the French drain at A at an elevation of 5009 feet and at an elevation of 5007 feet at A`. The proposed elevations of the French drain are lower than the adjusted pre-mining groundwater elevations.

Based on the datum shift, the Division determined that the Applicant has designed the French drain at an elevation that would comply with the terms of the Board Order issued on November 13, 2014. The Board Order required the Applicant to design a plan to permanently eliminate groundwater mounding. By installing the French drain at an elevation just below the pre-mining groundwater elevation the Applicant has demonstrated compliance with, the Board Order, Rule 3.1.6(1) and 32-32.5-116(4)(h) C.R.S.

3) *Concerns regarding plans for a splash basin or armoring at the outfall of the French drain where the discharge enters the Worthing Pit Groundwater Mounding Mitigation Ditch.*

In the submittal of the second amendment to the AM-02 application the Applicant provided a size specification for rip-rap. The Applicant stated that the rip-rap would be placed at the French drain outfall to protect the affected lands from erosion. In response to the objection letter, the Applicant provided a general engineering design for the placement of the rip-rap, the design has been incorporated into the proposed reclamation plan detailed in the AM-02 application. The Division determined that the general engineering drawings and rip-rap specifications, meet the minimum requirements of Rule 6.4.5 and Rule 3.1.6(3) by demonstrating that affected land will be protected from erosion.

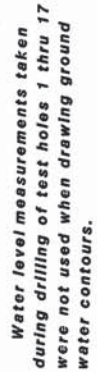
4) *Concerns regarding the datum used.*

In subsequent responses received after the submittal of the objection, the Applicant clarified that all design work and survey work was done using a NAVD88 datum (please see the enclosed letter). The Division determined that all final versions of the maps and drawings provided by the Applicant meet the minimum requirements of Rule 6.2.1(2).

Conclusion

Therefore, on October 6, 2015, the Division determined that the permit amendment application satisfied the requirements of Section 34-32.5-115(4) C.R.S., and issued its recommendation to approve the 112c Permit Amendment application No.2 for Pit 29, DRMS File No. M-1980-183.

Enclosures: Groundwater Contour Map
Datum Shift Letter from Applegate, received September 25, 2015



It is proposed that the water supply for the lots resulting from the reclamation plan will be provided by a plan of augmentation utilizing shares of the Fulton Ditch. At the appropriate time prior to subdividing the lots under the augmentation plan, specific details will be developed and implemented through the plan for augmentation through the Water Division Number 1 Water Court. At this time, it is proposed that the domestic in-house water and irrigation water will be provided by individual domestic wells.

BLATCHLEY ASSOCIATES, INC.
Consulting Water Engineers

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September 25, 2015

Mr. Tyler O'Donnell
Division of Reclamation, Mining and Safety
1313 Sherman Street, RM 215
Denver, CO 80203

RE: Brannan Sand & Gravel Company Pit 29, Permit No. M-1980-183, Amendment to AM-02,
Datum Shift

Dear Mr. O'Donnell:

This letter updates my letter of September 18, 2015, concerning the AM-02 objection letter filed by Albert Frei & Sons (AFS). That letter identified an AFS concern that there should be "a way to correlate the elevations being proposed in the amendment to [AFS Worthing Pit and Stagecoach Pit] approved elevations so we all know they will not cause a problem we will have to fix later."

To clarify my September 18 letter, while the AFS objection letter might suggest that the depth of the french drain be adjusted to a lower elevation if NAVD 88 elevations were consistently used, the wording of the AFS objection suggests only that a survey clarification occur if, as in this case, baseline, pre-mining groundwater elevations were not based on the NAVD 88 survey presently in common use. As detailed below, that survey clarification is appropriate and, with this letter, now part of the AM-02 record.

Correction

As another initial note, in my September 18 letter, I discussed Brannan's justification for placement of the french drain four feet below the ground surface, and our concern that adjusting this plan to a deeper elevation could have adverse impacts. Specifically, we reported that Mr. Einspahr, the immediate neighbor to the south of AM-02, was concerned about shallow wells and vegetation on his property. We believed it was appropriate to account for these concerns in the design of the french drain regardless of whether they are real or perceived. However, independent of these concerns and based on the detailed discussion below, we believe the french drain is properly located to minimize any disturbance to the prevailing hydrologic balance.

Detailed discussion of survey clarification

In my September 18 letter, I stated that it is entirely possible that the benchmark french drain elevation of 5007 is the same as the documented pre-mining groundwater surface elevation in this location. I have been able to locate a source to resolve the datum issue. NOAA (specifically the National Geodetic Survey, NGS) has an online tool that converts the old datums to the new datums.

In 1929 the NGVD (National Geodetic Vertical Datum) 29 was established. This was the vertical control datum in the country until it was replaced by NAVD 88, which is still in use today.

The topographic map in use in 1980, when the water level contour map was made and included in the original Brannan Pit 29 application, was dated 1965 (photo revised 1979). That map was revised in 1994. Therefore the 1965 map was the one in use in 1980. A copy of the legends of both maps is attached. The vertical datum in use in 1980 was NGVD29.

NOAA has an online tool called VERTCON:

http://www.ngs.noaa.gov/cgi-bin/VERTCON/vert_con.prl

This tool converts NGVD 29 to NAVD88. Using a NGVD29 datum (1965 map) of 5005 feet, the tool result is a NAVD88 datum of 5007.878 ft. Attached is the print of the result.

Based on this conversion, our drain elevation of 5007' at the west end is accurate and would replicate the historic ground water level. Datum conversion using the VERTCON tool is appropriate for the purposes of correlating this groundwater data. Attached is a revised Exhibit E adding a NAVD88 datum note.

Conclusion

The french drain specified in AM-02 is designed to permanently eliminate groundwater mounding on the south and west sides of Pit 29. By placing the french drain at the elevation and gradient of the pre-mining groundwater surface elevation, the plan is designed to prevent future groundwater levels from exceeding those pre-mining contours.

If you have any questions please call me at your convenience.

Cordially,
Applegate Group, Inc.



Tom Hatton
Senior Project Manager

TH/ta
Enclosures

cc: Eugene Riordan, Esq.
Alex Schatz, Brannan Sand and Gravel
AG File No. 10-116

Questions concerning the VERTCON process may be mailed to [NGS](#)

Latitude: 39.9289

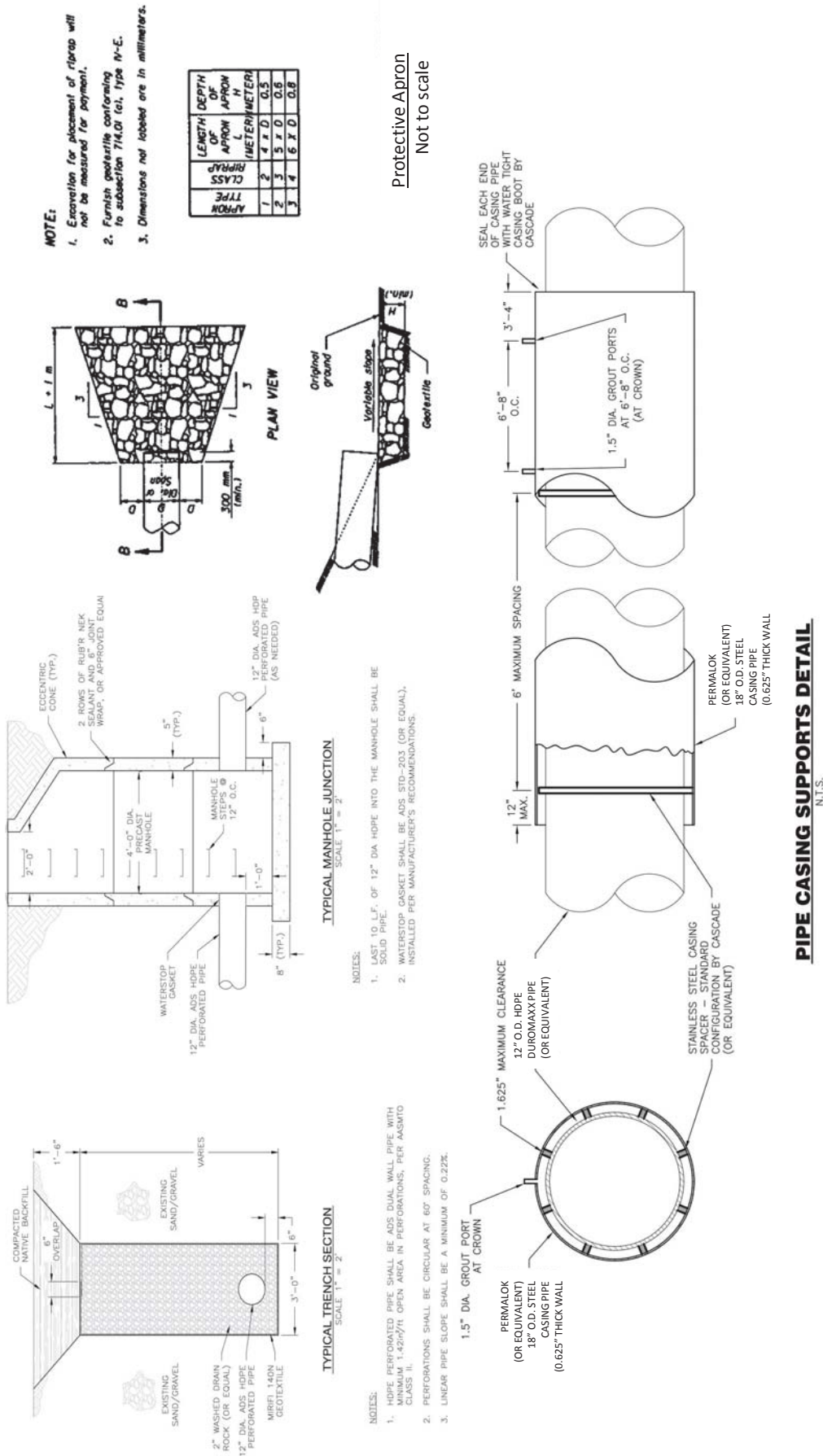
Longitude: 104.8594

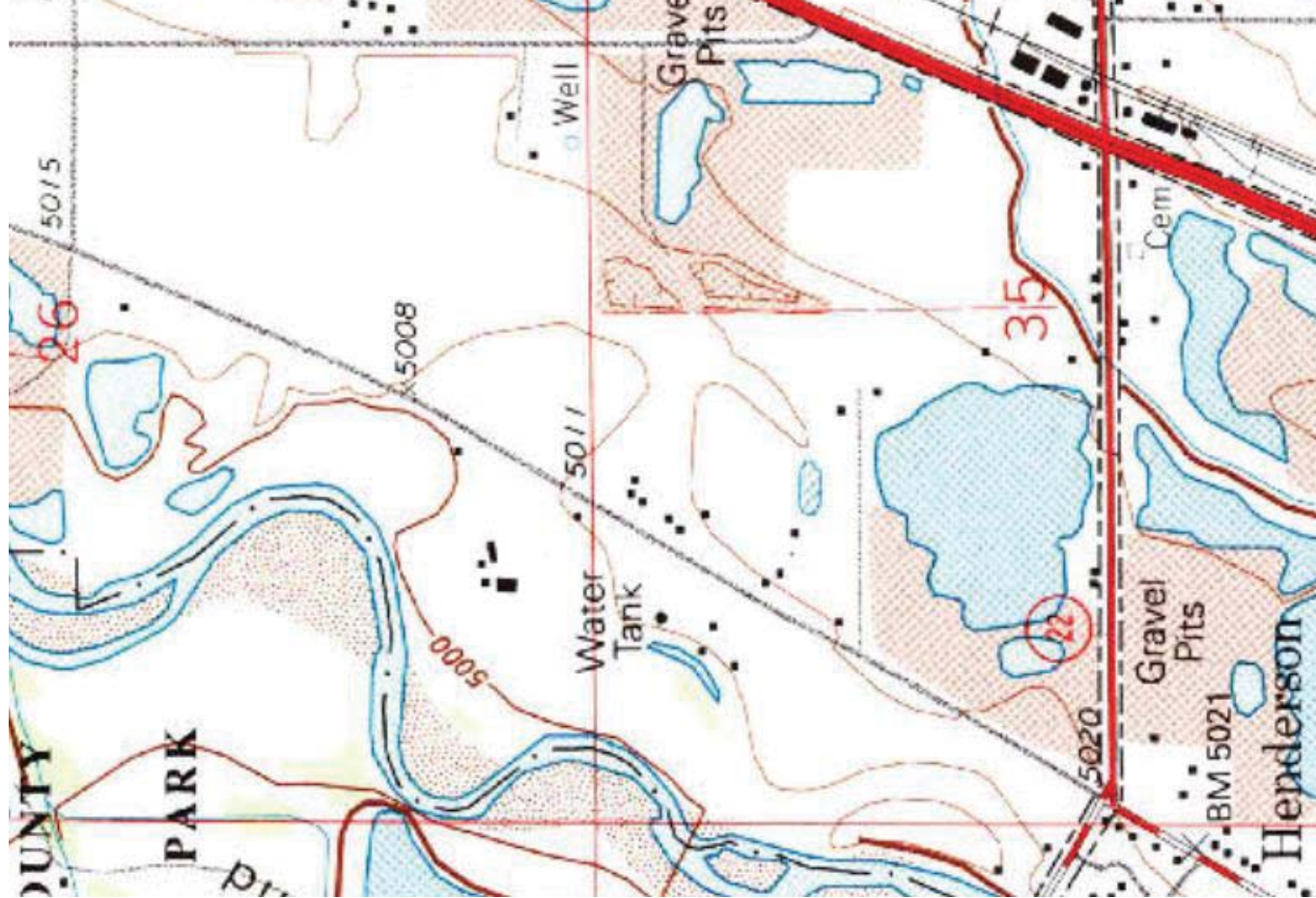
NGVD 29 height: 5005.00 ft

Datum shift(NAVD 88 minus NGVD 29): 2.877 feet

Converted to NAVD 88 height: 5007.878 feet

Job #: 10-116





Produced by the United States Geological Survey Control by USGS and NOS/NOAA

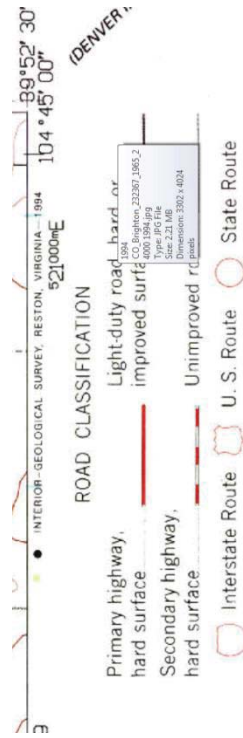
Compiled from aerial photographs taken 1964. Field checked 1965
Revised from aerial photographs taken 1988 and other sources
Map edited 1994. Contours and land elevations have not been
revised and may conflict with other content

North American Datum of 1927 (NAD 27). Projection and
blue 1000-meter Universal Transverse Mercator ticks, zone 13
10 000-foot ticks: Colorado Coordinate System, north zone

North American Datum of 1983 (NAD 83) is shown by dashed
corner ticks. The values of the shift between NAD 27 and NAD 83
for 7.5-minute intersections are obtainable from National Geodetic
Survey NADCON software

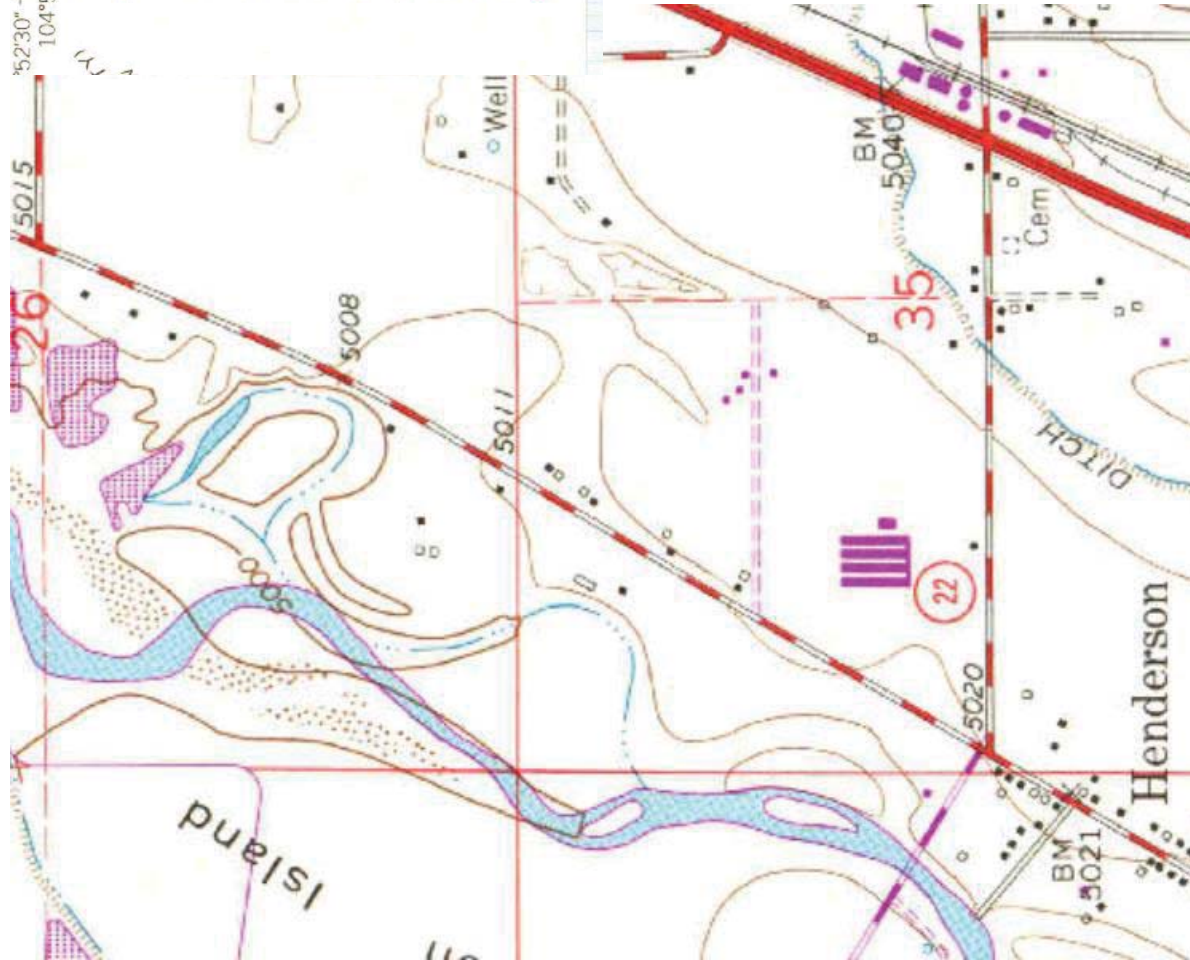
There may be private inholdings within the boundaries of the
National or State reservations shown on this map

Gray tint indicates areas in which only landmark buildings are shown



BRIGHTON, CO
39104-H7-TF-024

1965
REVISED 1994
DMA 5063 IV NE-SERIES V877



52°30' 104°52'30" 511 COMMERCE CITY 6 MI. DENVER CIVIC CENTER 12 MI. 2 180 000 FEET

Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1964. Field checked 1965. Supersedes map dated 1957

Polyconic projection. 1927 North American datum
10,000 foot grid based on Colorado coordinate system, north zone
1000-meter Universal Transverse Mercator grid ticks,
zone 13, shown in blue

Red tint indicates areas in which only landmark buildings are shown

Fine red dashed lines indicate selected fence lines

To place on the predicted North American Datum 1983
move the projection lines 5 meters north and
47 meters east as shown by dashed corner ticks

Purple tint indicates extension of urban areas

Revisions shown
taken 1978 and
field checked.

INTERIOR GEOLOGICAL SURVEY, RESTON, VIRGINIA 22160 104°45'

ROAD CLASSIFICATION

Light-duty
Medium-duty
Unimproved dirt
U.S. Route
State Route

TOPO CO 24000

BRIGHTON, COLO.

N3952.5-W10445/7 5

Indicates of
s map

1965

PHOTOREVISED 1979

DMA 5063 IV NE-SERIES V877