ACA PRODUCTS
"ASPHALT, CONCRETE, & AGGREGATES"
P. O. Box 1887 • 702 Gregg Drive • Buena Vista CO 81211
Phone: (719) 395-3790 Fax: (719) 395-3794

February 25, 2022

Colorado Division of Reclamation, Mining, and Safety
Attn: Dustin Czapla
1313 Sherman Street, Room 215
Denver, CO 80203

RE: R.B Pit, File No. M-2022-002, Objection to 112c Application Response

Mr. Czapla:

On February 25, 2022, ACA Products, Inc. (Applicant) received an objection notice (*Exhibit 1*) from the Division of Reclamation, Mining and Safety (DRMS) for the above referenced application on the behalf of Shannon Allen. The objection notice contains a comment/objection narrative dated February 23, 2022, that in part states the following:

> *"First, the Application references a "primary entrance location" on a road the County has explicitly prohibited the applicant from using. Chaffee County Resolution 2017-58, Section 1. (j) prohibits any "incidental use of CR 140 or CR 250 in connection with the operation" of the gravel pit. The Application nonetheless indicates at #10 the "Primary Mine Entrance Location" as Latitude (N) 38.53769 Longitude (W) -106.14258, which is located at the end of Chaffee County's CR 140. As such, the application is in direct violation of Chaffee County's prohibition.*
>
> *Second, despite misleading language in its application, ACA similarly lacks the ability to legally transport materials using Colorado State Highway 50 as an access point. It is true that ACA has applied for Colorado Department of Transportation(CDOT) permit. However, ACA has failed to complete any of the terms and conditions required for ACA to be granted permission to use Highway 50 as an access point, and any transport of material would be unauthorized. Although its application misleads the DRMS to the contrary, ACA does not have a legal right to use this route."*

The R.B. Pit will be accessed from US 50 at Mile Point (MP) 212.62 Left (L). No access to mining operations will be from Chaffee County Road (CR) 140 or CR 250. As required by Chaffe County Resolution 2017-58, the Applicant has thus far properly obtained legal access to the proposed mine location on the subject property by obtaining the Colorado Department of Transportation (CDOT) Highway Access Permit No. 520022 (*Exhibit 2*). The latitude and

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longitude listed in section #10 of the above referenced application is intended to be the location on US 50 at MP 212.62 L.

As part of the CDOT Highway Access Permit No. 520022, there are terms and conditions that must be met to ensure safe access to the proposed mine site. Among these conditions are approved Design Plans, which are shown in *Exhibit 3*. Also, part of these terms and conditions require CDOT inspections during and upon completion of the access construction. Full approval of CDOT Highway Access Permit No. 520022 will not occur until construction is complete and approved in accordance with CDOT and the Design Plans. Upon successfully obtaining a permit from DRMS, the Applicant plans to start construction on the US 50 highway access, as legally permitted.

As demonstrated herein, the Applicant has thus far taken the steps to obtain legal right to access, and transport mined materials from the proposed mine location as approved by Chaffee County. Do not hesitate to contact Blake Bennetts, ACA Products, if any further information is needed or any other questions arise.

Sincerely,

Blake Bennetts, P.E.
Sales and Development Manager
ACA Products, Inc.
702 Gregg Drive; PO Box 1887
Buena Vista, CO 81211
Cell: (719) 248-4138
Email: bbennetts@acaproducts.com

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Exhibit 1—Objection Letter

February 25, 2022

Blake Bennetts
ACA Products, Inc.
702 Gregg Drive
Buena Vista, CO 81211

COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

RE: R.B. Pit, File No. M-2022-002, Objection to 112c Application

Mr. Bennetts:

On February 23, 2022 the Division of Reclamation, Mining and Safety (Division) received an objection (copy enclosed) to the above referenced application from Shannon Allen.

Please inform the Division of how the Applicant will respond to the jurisdictional issues presented by Shannon Allen. Please submit your response by March 4, 2022.

If you require additional information, or have questions or concerns, please contact me.

Sincerely,

Dustin Czapla
Environmental Protection Specialist
Division of Reclamation, Mining and Safety
Phone: (303) 866-3567, ext. 8188

Permitting Action Comment OR Objection

COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

CONTACT INFORMATION

Date of Comment or Objection

02/23/2022

* *Indicates a Required Field*

Comment or Objection *

- (•) Objection
- ( ) Support
- ( ) General Comment
- ( ) Agency Comment

Contact Type *

- (•) Individual
- ( ) Group
- ( ) Agency
- ( ) Attorney

Please select the appropriate option above to identify who you represent.

Your First Name *

Shannon

Your Last Name *

Allen

Your Address *

13580 County Road 140

Your Address 2

Your City *

Salida

Your State

CO

Your Zip Code *

Maximum of 10 digits. (Example) 80202

81201

Email Address *

Enter a valid email address in this field to receive a confirmation e-mail.

shannon@andersonallen.com

Your Phone Number *

Used only to follow up.

3035482306

Extension

Alternate Phone Number

Used only to follow up.

Alternate Phone Extension

Connection to Operation *

Select all that apply

- [ ] Land Owner of affected land
- [ ] Mineral Owner
- [ ] Adjacent Land Owner
- [ ] Government Agency
- [ ] Structure Owner within 200' of affected land
- [x] Nearby Resident
- [x] Concerned Citizen
- [ ] Other

DESCRIPTION OF COMMENT OR OBJECTION

You are providing a comment or objection to the public record of a permitting action currently under review by the Division of Reclamation, Mining and Safety. This form is not intended for reporting of possible violations or illegal activity. Please be as specific as possible.

Comment/Objection Narrative *

I am the owner of a neighboring property to the applicant, and I am requesting that you deny the application referenced herein. There is no legal access on any public road to the proposed surface mine.

First, the Application references a “primary entrance location” on a road the County has explicitly prohibited the applicant from using. Chaffee County Resolution 2017-58, Section 1. (j) prohibits any “incidental use of CR 140 or CR 250 in connection with the operation” of the gravel pit. The Application nonetheless indicates at #10 the “Primary Mine Entrance Location” as Latitude (N) 38.53769 Longitude (W) -106.14258, which is located at the end of Chaffee County’s CR 140. As such, the application is in direct violation of Chaffee County’s prohibition.

Second, despite misleading language in its application, ACA similarly lacks the ability to legally transport materials using Colorado State Highway 50 as an access point. It is true that ACA has applied for Colorado Department of Transportation (CDOT) permit. However, ACA has failed to complete any of the terms and conditions required for ACA to be granted permission to use Highway 50 as an access point, and any transport of material would be unauthorized. Although its application misleads the DRMS to the contrary, ACA does not have a legal right to use this route.

As there are no other roads, public or private, available to access to the proposed surface mining site, and because the application deliberately misleads the DRMS, the application should be denied.

Please feel free to contact me to discuss this further.

Permit Number *

Enter valid letter and then numbers, for example M1977999, M1999777UG or C1981201.

M2022002

Permitting Action Type

Select revision type or leave blank if comment pertains to a new permit application or NOI

Permit Type

County *

Chaffee

Enter one county only

Site Name

Permittee/Operator Name

ADDITIONAL INFORMATION

Are there supporting photos, maps, or documents you wish to upload? *

- ○ Yes
- ◉ No

By submitting this form electronically you agree to receive any/all follow up correspondence from the Division of Reclamation, Mining, and Safety at the email address you have provided.

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Exhibit 2— Colorado Department of Transportation Highway Access Permit

COLORADO
Department of Transportation
Region 5

Traffic & Safety
3803 N. Main Avenue, Suite 100
Durango, CO 81301

October 13, 2021

ACA Products, Inc.
Blake Bennetts
PO Box 1887
Buena Vista, CO 81211

Re: Extension of Access Permit No. **520022, US 50, MP 212.62 L** in Chaffee County

Dear Mr. Bennetts:

We received on October 7, 2021 your request for a one-year extension of time to construct the above-referenced access permit.

Pursuant to the 1998 State Highway Access Code, Section 2.11(d), please consider this letter as authorization for a one-year extension for Access Permit No. **520022** per the request. This authorization will **expire on June 2, 2022**. If you do not proceed with construction prior to the above expiration date, **the permit will become null and void.**

The above-referenced permit includes the following requirements:

The access shall be constructed in accordance with a set of approved design plans, which must be furnished to CDOT well in advance of construction. When the final design plans, including, but not limited to material specifications, Certifications of Compliance, and a construction schedule, are accepted and approved, a pre-construction conference must be scheduled with this office well in advance of construction. After the pre-construction meeting issues have been resolved, CDOT will issue a **Notice To Proceed** that will allow construction to begin.

This authorization is hereby considered an attachment to the permit referenced above. **All terms and conditions of Permit No. 520022 remain valid**. Please have this authorization letter and your copies of the issued permit available for review at the construction site by CDOT personnel.

If you have any questions, please call me at (970) 385-3626.

Sincerely,

Randee Reider
Region 5 Access Manager
Cc: Access File
Chaffee County
Maintenance

COLORADO DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY ACCESS PERMIT

CDOT Permit No.	State Highway No / Mp / Side	Permit Fee	Date of Transmittal	Region / Section / Patrol / Name	Local Jurisdiction
520022	050A / 212.62 / Left	$300.00		5 / 07 / 17	Chaffee County

The Permittee(s):

Frank Holman
14110 CR 140
Salida, Colorado 81201
(719) 539-9138

The Applicant(s):

Blake Bennetts
ACA Products, Inc.
PO Box 1887
Buena Vista, Colorado 81211
(719) 395-3790

is hereby granted permission to have an access to the state highway at the location noted below. The access shall be constructed, maintained and used in accordance with this permit, including the State Highway Access Code and any attachments, terms, conditions and exhibits. This permit may be revoked by the Issuing Authority if at any time the permitted access and its use violate any parts of this permit. The issuing authority, the Department and their duly appointed agents and employees shall be held harmless against any action for personal injury or property damage sustained by reason of the exercise of the permit.

Location: Access to be located on the North side of State Highway 050, a distance of approximately 3274 feet East from Milepost 212.

Access to Provide Service to:

(Land Use Code)	(Size)	(Units)
991 - Gravel Pit	**191.98**	**Acres**

Additional Information:

* See attached pages 2-3 of Form 101, and all other attachments, enclosures, and exhibits for additional terms and conditions. *

MUNICIPALITY OR COUNTY APPROVAL

Required only when the appropriate local authority retains issuing authority.

Signature	Print Name	Date	Title
N/A			

Upon the signing of this permit the permittee agrees to the terms and conditions and referenced attachments contained herein. All construction shall be completed in an expeditious and safe manner and shall be finished within 45 days from Initiation. The permitted access shall be completed in accordance with the terms and conditions of the permit prior to being used.

The permittee shall contact Shay Hatch with the Colorado Department of Transportation, at (970) 385-8362 to schedule a pre-construction inspection at least 5 days prior to desired construction start date.

The person signing as the permittee must be the owner or legal representative of the property served by the permitted access and have full authority to accept the permit and its terms and conditions.

	Print Name	Date
Permittee Signature DocuSigned by: Frank Holman	Frank Holman	6/1/2020 | 5:35 PM MDT
Applicant Signature DocuSigned by: Blake Bennetts	Blake Bennetts	5/27/2020 | 9:59 AM PDT

This permit is not valid until signed by a duly authorized representative of the Department.

COLORADO DEPARTMENT OF TRANSPORTATION

Signature	Print Name	Title	Date (of issue)
DocuSigned by: Julie Constan	Julie Constan		6/4/2020 | 1:56 PM MDT

Copy Distribution: Required: 1.Region 2.Applicant 3.Staff Access Section 4.Central Files — Make copies as necessary for: Local Authority Inspector MTCE Patrol Traffic Engineer

The following paragraphs are excerpts of the State Highway Access Code. These are provided for your convenience but do not alleviate compliance with all sections of the Access Code. A copy of the State Highway Access Code is available from your local issuing authority (local government) or the Colorado Department of Transportation (Department). When this permit was issued, the issuing authority made its decision based in part on information submitted by the applicant, on the access category which is assigned to the highway, what alternative access to other public roads and streets is available, and safety and design standards. Changes in use or design not approved by the permit or the issuing authority may cause the revocation or suspension of the permit.

APPEALS

1. Should the permittee or applicant object to the denial of a permit application by the Department or object to any of the terms or conditions of a permit placed there by the Department, the applicant and permittee (appellant) have a right to appeal the decision to the [Transportation] Commission [of Colorado]. To appeal a decision, submit a request for administrative hearing to the Transportation Commission of Colorado within 60 days of transmittal of notice of denial or transmittal of the permit for signature. Submit the request to the Transportation Commission of Colorado, 4201 East Arkansas Avenue, Denver, Colorado 80222-3400. The request shall include reasons for the appeal and may include changes, revisions, or conditions that would be acceptable to the permittee or applicant.

2. Any appeal by the applicant or permittee of action by a local issuing authority shall be filed with the local authority and be consistent with the appeal procedures of the local authority.

3. In submitting the request for administrative hearing, the appellant has the option of including within the appeal a request for a review by the Department's internal administrative review committee pursuant to [Code] subsection 2.10. When such committee review is requested, processing of the appeal for formal administrative hearing, 2.9(5) and (6), shall be suspended until the appellant notifies the Commission to proceed with the administrative hearing, or the appellant submits a request to the Commission or the administrative law judge to withdraw the appeal. The two administrative processes, the internal administrative review committee, and the administrative hearing, may not run concurrently.

4. Regardless of any communications, meetings, administrative reviews or negotiations with the Department or the internal administrative review Committee regarding revisions or objections to the permit or a denial, if the permittee or applicant wishes to appeal the Department's decision to the Commission for a hearing, the appeal must be brought to the Commission within 60 days of transmittal of notice of denial or transmittal of the permit.

PERMIT EXPIRATION

1. A permit shall be considered expired if the access is not under construction within one year of the permit issue date or before the expiration of any authorized extension. When the permittee is unable to commence construction within one year after the permit issue date, the permittee may request a one year extension from the issuing authority. No more than two one-year extensions may be granted under any circumstances. If the access is not under construction within three years from date of issue the permit will be considered expired. Any request for an extension must be in writing and submitted to the issuing authority before the permit expires. The request should state the reasons why the extension is necessary, when construction is anticipated, and include a copy of page 1 (face of permit) of the access permit. Extension approvals shall be in writing. The local issuing authority shall obtain the concurrence of the Department prior to the approval of an extension, and shall notify the Department of all denied extensions within ten days. Any person wishing to reestablish an access permit that has expired may begin again with the application procedures. An approved Notice to Proceed, automatically renews the access permit for the period of the Notice to Proceed.

CONSTRUCTION

1. Construction may not begin until a Notice to Proceed is approved. (Code subsection 2.4]

2. The construction of the access and its appurtenances as required by the terms and conditions of the permit shall be completed at the expense of the permittee except as provided in subsection 2.14. All materials used in the construction of the access within the highway right-of-way or on permanent easements, become public property. Any materials removed from the highway right-of-way will be disposed of only as directed by the Department. All fencing, guard rail, traffic control devices and other equipment and materials removed in the course of access construction shall be given to the Department unless otherwise instructed by the permit or the Department inspector.

3. The permittee shall notify the individual or the office specified on the permit or Notice to Proceed at least two working days prior to any construction within state highway right-of-way. Construction of the access shall not proceed until both the access permit and the Notice to Proceed are issued. The access shall be completed in an expeditious and safe manner and shall be finished within 45 days from initiation of construction within the highway right-of-way. A construction time extension not to exceed 30 working days may be requested from the individual or office specified on the permit.

4. The issuing authority and the Department may inspect the access during construction and upon completion of the access to ensure that all terms and conditions of the permit are met. Inspectors are authorized to enforce the conditions of the permit during construction and to halt any activities within state right-of-way that do not comply with the provisions of the permit, that conflict with concurrent highway construction or maintenance work, that endanger highway property, natural or cultural resources protected by law, or the health and safety of workers or the public.

5. Prior to using the access, the permittee is required to complete the construction according to the terms and conditions of the permit. Failure by the permittee to abide

by all permit terms and conditions shall be sufficient cause for the Department or issuing authority to initiate action to suspend or revoke the permit and close the access. If in the determination of the Department or issuing authority the failure to comply with or complete the construction requirements of the permit create a highway safety hazard, such shall be sufficient cause for the summary suspension of the permit. If the permittee wishes to use the access prior to completion, arrangements must be approved by the issuing authority and Department and included in the permit. The Department or issuing authority may order a halt to any unauthorized use of the access pursuant to statutory and regulatory powers. Reconstruction or improvement of the access may be required when the permittee has failed to meet required specifications of design or materials. If any construction element fails within two years due to improper construction or material specifications, the permittee shall be responsible for all repairs. Failure to make such repairs may result in suspension of the permit and closure of the access.

6. The permittee shall provide construction traffic control devices at all times during access construction, in conformance with the M.U.T.C.D. as required by section 42-4-104, C.R.S., as amended.

7. A utility permit shall be obtained for any utility work within highway right-of-way. Where necessary to remove, relocate, or repair a traffic control device or public or private utilities for the construction of a permitted access, the relocation, removal or repair shall be accomplished by the permittee without cost to the Department or issuing authority, and at the direction of the Department or utility company. Any damage to the state highway or other public right-of-way beyond that which is allowed in the permit shall be repaired immediately. The permittee is responsible for the repair of any utility damaged in the course of access construction, reconstruction or repair.

8. In the event it becomes necessary to remove any right-of-way fence, the posts on either side of the access shall be securely braced with an approved end post before the fence is cut to prevent any slacking of the remaining fence. All posts and wire removed are Department property and shall be turned over to a representative of the Department.

9. The permittee shall ensure that a copy of the permit is available for review at the construction site at all times. The permit may require the contractor to notify the individual or office specified on the permit at any specified phases in construction to allow the field inspector to inspect various aspects of construction such as concrete forms, subbase, base course compaction, and materials specifications. Minor changes and additions may be ordered by the Department or local authority field inspector to meet unanticipated site conditions.

10. Each access shall be constructed in a manner that shall not cause water to enter onto the roadway or shoulder, and shall not interfere with the existing drainage system on the right-of-way or any adopted municipal system and drainage plan..

11. By accepting the permit, permittee agrees to save, indemnify, and hold harmless to the extent allowed by law, the issuing authority, the Department, its officers, and employees from suits, actions, claims of any type or character brought because of injuries or damage sustained by any person resulting from the permittee's use of the access permit during the construction of the access.

CHANGES IN ACCESS USE AND PERMIT VIOLATIONS

1. It is the responsibility of the property owner and permittee to ensure that the use of the access to the property is not in violation of the Code, permit terms and conditions or the Act. The terms and conditions of any permit are binding upon all assigns, successors-in-interest, heirs and occupants. If any significant changes are made or will be made in the use of the property which will affect access operation, traffic volume and or vehicle type, the permittee or property owner shall contact the local issuing authority or the Department to determine if a new access permit and modifications to the access are required.

2. When an access is constructed or used in violation of the Code, section 43-2-147(5)(c), C.R.S., of the Act applies. The Department or issuing authority may summarily suspend an access permit and immediately order closure of the access when its continued use presents an immediate threat to public health, welfare or safety. Summary suspension shall comply with article 4 of title 24, C.R.S.

MAINTENANCE

1. The permittee, his or her heirs, successors-in-interest, assigns, and occupants of the property serviced by the access shall be responsible for meeting the terms and conditions of the permit, the repair and maintenance of the access beyond the edge of the roadway including any cattle guard and gate, and the removal or clearance of snow or ice upon the access even though deposited on the access in the course of Department snow removal operations. Within unincorporated areas the Department will keep access culverts clean as part of maintenance of the highway drainage system. However, the permittee is responsible for the repair and replacement of any access-related culverts within the right-of-way. Within incorporated areas, drainage responsibilities for municipalities are determined by statute and local ordinance. The Department will maintain the roadway including auxiliary lanes and shoulders, except in those cases where the access installation has failed due to improper access construction and/or failure to follow permit requirements and specifications in which case the permittee shall be responsible for such repair. Any significant repairs such as culvert replacement, resurfacing, or changes in design or specifications, requires authorization from the Department.

Worker Safety and Health

All workers within the State Highway right of way shall comply with their employer's safety and health policies/procedures, and all applicable U.S. Occupational Safety and Health Administration (OSHA) regulations – including, but not limited to the applicable sections of 29 CFR Part 1910 – Occupational Safety and Health Standards and 29 CFR Part 1926 – Safety and Health Regulations for Construction.

Personal protective equipment (e.g. head protection, footwear, high visibility apparel, safety glasses, hearing protection, respirators, gloves, etc.) shall be worn as appropriate for the work being performed, and as specified in regulation. At a minimum, all workers in the State Highway right of way, except when in their vehicles, shall wear the following personal protective equipment:

- Head protection that complies with the ANSI Z89.1-1997 standard;
- At all construction sites or whenever there is danger of injury to feet, workers shall comply with OSHA's PPE requirements for foot protection per 29 CFR 1910.136, 1926.95, and 1926.96;
- High visibility apparel as specified in the Traffic Control provisions of this permit (at a minimum, ANSI/ISEA 107-1999, Class 2).

Where any of the above-referenced ANSI standards have been revised, the most recent version of the standard shall apply.

Environmental Clearance

It is the applicant's responsibility to contact the appropriate agencies and obtain all environmental clearances that apply to their activities. Such clearances may include but are not limited to Corps of Engineers 404 Permits or Colorado Discharge Permit System permits, or ecological, archeological, historical, or cultural resource clearances. The CDOT Environmental Clearances Information Summary presents contact information for agencies administering certain clearances and information about prohibited discharges; copy attached.

LEVEL 3 - ACCESS PERMIT TERMS & CONDITIONS
FULL-MOVEMENT ACCESS WITH AUXILIARY LANES

A. PERMIT REQUIREMENTS SPECIFIC TO THIS ACCESS:

1. **Permit Number 520022 is issued by the Colorado Department of Transportation (CDOT) in accordance with the 1998 Access Code and is based upon the information submitted by the Permittee.**
   - **a. Any changes in the herein permitted type and use and/or volume of traffic using the access, drainage, or other operational aspects shall render this permit void, requiring that a new application be submitted for review based upon currently existing and anticipated future conditions.**
   - **b. Upon completion of the improvements identified in this permit, Permit Number 520022 shall replace and void all previous access permits for this location.**
   - **c. If the requirements of this Permit are not satisfied or this Permit expires, the access rights will revert to the access permit issued prior to this permit. If there is no valid prior permit then the access rights and uses shall revert to the historic use.**
   - **d. This permit is not valid unless the land use(s) enumerated herein have been approved by the local (City/County) Land Use Planning Authority.**

2. Permit Number **520022** is issued for the **construction and use** of:
   - a. A **Paved Full-Movement access** on **State Highway 050** for **Frank Holman/ACA Products, Inc.** at approximate mile marker **212.62 Left.**
   - b. A **left turn ingress deceleration lane** from **eastbound State Highway 050 into the access. Details for this lane shall be submitted by Permittee/Applicant in Exhibit "B," Reserved (Designs Plans) and approved by CDOT prior to construction.**
   - **c.** A **right turn ingress deceleration lane** from **westbound State Highway 050 into the access. Details for this lane shall be submitted by Permittee/Applicant in Exhibit "B," Reserved (Designs Plans) and approved by CDOT prior to construction.**

3. The access shall be **Paved a distance of 50 feet** from the edge of traveled way and may be paved or gravel surfaced any remaining distance within State Highway ROW. The access shall have a width of **35 feet** and radius of **50 feet**.

4. The access shall be **perpendicular** to the travel lanes of the State Highway for a minimum distance of **40 feet from the edge of pavement or to the ROW, whichever is furthermost. It shall slope down and away** from the adjacent pavement edge at a rate of **two percent (2%)** for a minimum of **20 feet**, then not to exceed **eight percent (8%)** grade up or down to the ROW line.

5. **Temporary Traffic Control, with prior written approval by CDOT,** is required at all times during construction of the access in accordance with the **Traffic Control Plan (TCP) and corresponding Methods of Handling Traffic (MHT)**. The **MHT's shall be developed and implemented** by a **Traffic Control Supervisor (TCS) certified** by the

American Traffic Safety Services Association (ATSSA) or the **Colorado Contractors Association (CCA).**

6. The category for this section of Highway **050** is **R-A.** The access shall be in conformance with the State of Colorado State Highway Access Code, Volume Two, Code of Colorado Regulations 601-1, August 31, 1998 as amended.

7. The access shall serve a tract of land located in **Section 1, Township 49 North, Range 8 West, N.M.P.M., Chaffee County, Colorado; also known as 14100 County Road 140, Salida, CO 81201.**

8. Incorporated as part of this permit are the following:
   a. State Highway Access Permit pages 1-3 and Page 101a
   b. Access Permit Terms and Conditions Pages **1 through 12**
   c. **EXHIBIT "A,"** (Traffic Impact Study dated **April 7, 2020**)
   d. **EXHIBIT "B," Reserved** (Plans).
   e. CDOT Late Fall, Winter and Spring Special Provisions for Access Construction and Utility Installations
   f. CDOT Environmental Clearances Information Summary
   g. Water Quality Program Summary
   h. State Highway Access Permit Application (CDOT Form No. 137) received **February 21, 2020.**

9. This Permit describes the access and improvements that will serve the following land uses:
   a. 191.98 Acre Gravel Pit (ITE Code 991).

10. This permit is only for the purpose stated herein. Any changes in the type, use and/or volume of traffic using the access will require a new permit.

11. The maximum traffic generation to **SH 050** for the development listed in **9.a.** above is as follows:
    a. ACA Products, Inc. gravel pit – shall generate no more than a maximum of **228** daily new external vehicle trips, **50** AM Peak Hour movements, and **50** PM Peak Hour movements as identified in **EXHIBIT "A,"**.

12. If any future development impacts this State Highway connection, CDOT will review the changes and shall determine if a traffic impact study is needed. CDOT will make the determination based on the potential degradation of the access below an acceptable level of service **"C"** for the classification of **SH 050** of **National Truck Route** in **Mountainous** terrain. If in the sole judgment of CDOT a new traffic impact study is needed, it shall be completed at no cost to CDOT and the new development shall be required to mitigate any impacts revealed by the traffic impact study.

13. At the access location, **SH 050** has a posted speed limit of **65 mph** with approximate **6:1 foreslopes** and a daily traffic volume of **3,000** AADT, which correlates to a minimum Clear

Zone of **28** feet from the edge of traveled way. The Permittee/Contractor shall take the minimum Clear Zone into consideration during the design and construction of the access.

14. **All required access improvements will be installed prior to any use of this access.**

15. "Right-of-Way" means the entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of the public for purposes of vehicular travel or the entire width of every way declared to be a public highway by any law of this state.

16. Internal site circulation and parking must be adequate to serve the land uses described here.

17. No backing into the Right-of-Way will be allowed under any circumstances.

18. No parking within the Right-of-Way will be allowed under any circumstances.

19. Both backing into the Right-of-Way and parking within the Right-of-Way are considered to be traffic offenses and can be ticketed by any law enforcement officer of the jurisdiction in which the access is located.

20. Any violation of the above provisions may be grounds for revocation by the Department of this access permit and may result in physical closure of the access.

B. REQUIREMENTS PRIOR TO SUBMISSION OF DESIGN PLANS:

1. Plan development shall include:
   a. Design Scoping - prior to beginning design, the permittee and their Design Engineer shall schedule a scoping with **CDOT prior to design commencing.**
   b. Once 30% Design is achieved, the permittee and their Design Engineer shall schedule a Field Initial Review of the plans, specifications and Estimate (PS&E) package with CDOT.
   c. Once 90% Design is achieved the permittee and their Design Engineer shall schedule a Final Office Review of the PS&E package with CDOT.
   d. Once FOR comments are incorporated, the permittee/design engineer shall submit a final PS&E package for approval by CDOT.

C. REQUIREMENTS PRIOR TO NOTICE-TO-PROCEED (NTP) FOR CONSTRUCTION:

1. It is the responsibility of the Permittee/Applicant to determine which **environmental clearances** and/or regulations apply to the project, and to obtain any clearances that are required directly from the appropriate agency. Please refer to "CDOT Environmental Clearance Information Summary" for details. **FAILURE TO COMPLY WITH REGULATORY REQUIREMENTS MAY RESULT IN SUSPENSION OR REVOCATION OF THE CDOT ACCESS PERMIT, OR ENFORCEMENT ACTIONS BY OTHER AGENCIES.**

Prior to the request for Notice-to-Proceed (NTP), you must first contact CDOT's Environmental Specialist at 970-385-1425, and provide the necessary environmental clearances as identified in the Permit Terms & Conditions and Permit Attachments. This office will not issue a Notice-to-Proceed (NTP) without written Environmental Clearance Certification.

2. A **written request for a Notice to Proceed** must be submitted to this issuing office along with the following items. Only after the Permittee complies with items a through l of this section will a **Notice-to-Proceed (NTP)** be issued to allow the commencement of construction.

   a. The Permittee shall provide **written approval** from the Local Authority for the proposed land use that will be served by the access. Granting of an access permit in no way implies CDOT concurrence or non-concurrence with the Permittee's proposed land use.

   b. Once the Land Use has been approved by the Local Authority, the Permittee will furnish the Colorado Department of Transportation (CDOT) **one (1) electronic set of design plans** for review. These plans must be scaled to 11x17" paper.

   c. The **design plans shall show the existing highway ROW, property lines and easements, as determined by a Professional Land Surveyor, for the entire length of the access improvements along the highway**. If the **proposed improvements along the highway encroach on the existing ROW or easements, ROW plans are required** for the dedication and/or acquisition of the necessary ROW/easements. **The permitee shall request a ROW plan coordination meeting with the Region 5 Access Manager prior to developing any ROW plans**. **No grading, construction, structures or toes of slopes necessary for site development shall be placed within CDOT ROW.**

   d. Once accepted, CDOT will sign the plans as approved. **Once approved, the design plans will become final and labeled EXHIBIT "B," (Plans)** and incorporated as part of this permit. The access approach and all related highway improvements will be constructed in accordance with the approved final design plans. The remainder of the terms and conditions of this permit shall refer to the final design plans as **EXHIBIT "B,"** reserved. If the Permittee wishes a **waiver** from the design standards the request shall be in conformance with section 4.12 of the State Highway Access Code utilizing CDOT Form No. 112. CDOT may or may not approve the waiver. CDOT will only issue a NTP for approved designs.

   e. The Permittee shall provide documentation showing that current (less than 1 year old) CDOT approved **mix designs** will be used for Hot Mix Asphalt (HMA) and Concrete as well as documentation listing the sources of materials for use on the project. The documentation shall be submitted to the CDOT Region 5 Access Manager for verification a minimum of five (5) working days prior to the requested NTP date. A NTP shall **NOT** be issued **PRIOR** to obtaining approval for all materials from the Region Materials Engineer (RME).

f. The Permittee shall provide a **Traffic Control Plan (TCP)** which will be **submitted as part of the aforementioned design plans.** The TCP shall include the typical applications (which may be a reference to one or more of the cases illustrated in the MUTCD or in the CDOT S Standard Plans) showing the different phases of construction, the locations of signs, signals, and pavement marking. A tabulation of necessary pavement markings, signing quantities, schedule of construction traffic control devices and project specifications are also required. In addition to the TCP, the actual **Methods of Handling Traffic (MHT)** shall be submitted by the **Traffic Control Supervisor (TCS)** at the pre-construction conference. Any additional MHT's required during the course of construction **shall be submitted** to the Region 5 Access Manager for review and acceptance **a minimum of three (3) working days prior to the desired implementation date.** Traffic Control of any nature will not be allowed unless authorized in writing by CDOT.

g. A **Performance Bond** to CDOT shall be required to be in place to insure completion of the required highway improvements in conformance with all CDOT standards and specifications. The bond must be in the amount of at least 110% of the cost of the construction. A Cost Estimate certified by the Engineer and a draft of the bond must be provided to CDOT for review and approval by CDOT before acceptance of the final bond and before a pre-construction will be scheduled. Upon completion and acceptance of the highway improvements, CDOT will release the performance bond after an approved **Warranty Bond** in the amount of 20% of the cost of the construction is received. The warranty bond shall be held for two (2) years after the construction acceptance date.

h. The Department will require the **Permittee to retain a Professional Engineer (PE)** to be in Responsible Charge of Construction oversight. A written confirmation from the Permittee is required to show that the requirement in this term is met.

i. The Permittee/Contractor is required to obtain **Insurance** in conformance with Standard Specification Section 107 Responsibility for Damage Claims, Insurance Types and Coverage Limits. **Professional Liability insurance, as described in Section 107, is required for the design plans, design and construction surveying, as well as for the Professional Engineer in responsible Charge of Construction oversight.** Copies of insurance coverage will be submitted to the Region 5 Access Manager prior to the issuing of the NTP or approving the Design Plans **EXHIBIT "B"** reserved. A copy of the insurance policy is required to be available at the construction site at all times for inspection.

j. A **Construction Schedule** detailing the execution of the project shall be submitted to the Region 5 Access Manager prior to scheduling the pre-construction conference.

k. A **pre-construction conference** is required prior to the issuance of the NTP. It is the responsibility of the Permittee to schedule and coordinate this meeting. At least five (5) working days prior to the pre-construction conference the Permittee will submit the following packet of information to CDOT for review:

a. Baseline Construction Schedule
b. Material Submittals
c. Asphalt and Concrete Mix Designs
d. Methods of Handling Traffic
e. Performance Bond
f. Liability Insurance
g. Witten confirmation of PE for Construction

l. The Permittee/Contractor must contact the Region 5 Traffic Construction Coordinator at 3803 North Main Avenue, Durango, CO or telephone (970) 385-3633 to schedule a **pre-construction conference**.

D. GENERAL DESIGN REQUIREMENTS:

1. **Design of improvements** within the highway ROW shall be in compliance with the most current editions of the following manuals and documents except as indicated:
   a. CDOT Design Guide
   b. CDOT Drainage Design Manual
   c. CDOT Standard Plans M&S Standards
   d. AASHTO Roadside Design Guide
   e. AASHTO Policy on Geometric Design of Highways and Streets
   f. CDOT Standard Specifications for Road and Bridge Construction
   g. CDOT Standard Special Provisions
   h. Manual on Uniform Traffic Control Devices (MUTCD)
   i. 1998 State Highway Access Code, Volume 2, Code of Regulations 601-1, as amended
   j. ITE Traffic Engineering Handbook
   k. ITE Trip Generation Manual, **6th Edition**
   l. 2011 CDOT CAD Manual

2. **No grading, construction, structures or toes of slopes necessary for site development shall be placed within CDOT ROW.**

3. The design standards listed under item 1 of this section will override the final design plans, **EXHIBIT "B,"** reserved should an oversight, omission or conflict occur.

4. CDOT assumes no liability or responsibility whatsoever for the accuracy, completeness or correctness of the Permittee's final design plans, **EXHIBIT "B,"** reserved. Any design errors are the sole responsibility of the Permittee and their Engineer.

5. Permittee is required to comply with the **Americans with Disabilities Act Accessibility Guidelines (ADAAG)** that have been adopted by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board), and incorporated by the U.S. Attorney General as a federal standard. These guidelines are defining traversable slope requirements and prescribing the use of a defined pattern of truncated domes as detectable warnings at street

crossings. The current Standard Plans reflect these requirements.

6. It is the responsibility of the Permittee/Applicant to determine which **environmental clearances** and/or regulations apply to the project, and to obtain any clearances that are required directly from the appropriate agency. Please refer to "CDOT Environmental Clearance Information Summary" for details. **FAILURE TO COMPLY WITH REGULATORY REQUIREMENTS MAY RESULT IN SUSPENSION OR REVOCATION OF THE CDOT ACCESS PERMIT, OR ENFORCEMENT ACTIONS BY OTHER AGENCIES.**

7. ALL discharges are subject to the provisions of the Colorado Water Quality Control Act and the Colorado Discharge Permit Regulations. Prohibited discharges include substances such as: wash water, paint, automotive fluids, solvents, oils or soaps.

8. Unless otherwise identified by CDOT or the Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division (WQCD) as not being a source of pollutants to the waters of the State, the following discharges to storm water systems are allowed without a Colorado Discharge Permit System permit: landscape irrigation, diverted stream flows, uncontaminated ground water infiltration to separate storm sewers, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, footing drains, water line flushing, flows from riparian habitats and wetlands, and flow from firefighting activities, and water incidental to street sweeping (including associated sidewalks and medians) and that is not associated with construction. Discharges from these sources may still require separate CDPS permit coverage to be obtained by the discharger.

9. ANY OTHER DISCHARGES may require Colorado Discharge Permit(s) or separate permits from CDPHE or the appropriate agency before work begins. For additional information and forms, go to the CDPHE website at: http://www.cdphe.state.co.us/wq/PermitsUnits/wqcdpmt.html or contact the CDOT Water Quality Program Manager at 303-757-9343.

10. Discharges may also be subject to additional State and Local restrictions, such as MS4 (Municipal Separate Storm Water Sewerage Systems) requirements for permanent sediment control, TMDL (Total Maximum Daily Limit), TMAL (Total Maximum Annual Limit) or discharge.

11. **Any removal of existing fence, in excess of opening required for the access, or installation of a fence that is erected adjacent to the highway ROW requires a separate CDOT Fencing Agreement.** All fencing described by the CDOT Fencing Agreement shall be shown in the design plans.

12. **Any landscaping** within CDOT ROW requires a separate **CDOT Landscaping Permi**t. All landscaping described by the CDOT Landscaping Permit shall be shown in the design plans.

13. **Any Utility work** within CDOT ROW requires a separate **CDOT Utility Permit**. All utilities and utility work described by the CDOT Utility Permit shall be shown in the design plans.

E. DRAINAGE DESIGN REQUIREMENTS:

1. No site drainage from the constructed access shall enter onto the traveled way of the highway.

2. Drainage to the State Highway Right-of-Way shall not exceed the historical undeveloped rate of flow. Detention ponds may be required to control drainage flow from developed properties at or below historical flow rates.

3. Any drainage study shall consider and the design reflect the 25 year flood for rural two lane highways, 50 year flood for four lane highways, and 100 year flood in all urban areas.

4. Required Cross Culverts under the State Highway, Side Drain Culverts under the Access, Curb, Gutter, Inlets, Manholes, Sidewalk and Driveways shall conform to CDOT Standards and facilitate proper drainage along the State Highway. Culvert ends not contained within manholes or inlets shall be fitted with standard end sections. The Drainage design shall be included in **EXHIBIT "B,"** reserved.

F. PAVEMENT DESIGN REQUIREMENTS:

a. Pavement design materials shall conform with:
   a. Section 304 - Aggregate Base Course (ABC) - Class 1 or 2 and Class 6, with resistance values of at least 70 and 78 respectively when tested by the Hveem Stabilometer method.
   b. Section 403 - Hot Mix Asphalt Grading S or SX.
   c. Section 412 & 601 - Concrete Pavement Class P = 4,200 psi

b. The permittee/applicant is responsible for submitting a pavement design for improvements within current or proposed CDOT ROW. At its discretion, CDOT may provide the pavement design required for the improvements.

G. FINAL STABILIZATION REQUIREMENTS:

1. Topsoil, seeding, fertilizer and mulching shall be required within the ROW limits on all disturbed areas not surfaced immediately upon completion of the access.

2. A minimum of 4 inches of topsoil shall be placed on all slopes which are to be seeded and mulched.

3. The following types of seed and application rates shall be used unless a separate Landscaping

Permit states otherwise:

Seed Requirements:

COMMON NAME	BOTANICAL NAME	LBS. PLS\ACRE
Western Wheatgrass (V. Arriba)	Pascopyrum Smithii	16
Slender Wheatgrass (V. San Luis)	Elymus Trachycaulus	6
Indian Ricegrass (V. Paloma)	Oryzopsis Hymenoides	6
Hard Fescue (V. Durar)	Festuca Ovina Duriuscula	6
Alsike Clover	Trifolium Hybridium	4
Sand Dropseed	Sporobolus Cryptandrus	0.50
Total lbs/acre		38.50

Seed shall be mechanically drilled to a depth of 0.25 or 0.5 inches into the soil on slopes flatter than 3:1. Seed shall be broadcast on slopes 3:1 or steeper and raked into soil.

4. **Fertilizer Requirements:**

Nutrient Type	% AVAILABLE	LBS\ACRE
Nitrogen:	18	45
Phosphorus:	46	115

Fertilizer shall be incorporated to a depth of 2" to 4" into the topsoil.

5. **Mulching Requirements and Application:** 2 tons/acre straw mechanically crimped into soil on slopes flatter than 3:1. Place a soil retention blanket consisting of woven wood or straw coconut material on slopes 3:1 or steeper.

H. GENERAL CONSTRUCTION REQUIREMENTS:

1. **A COPY OF THIS PERMIT AND THE VALIDATED NOTICE TO PROCEED MUST BE ON THE JOB WITH THE CONTRACTOR AT ALL TIMES OR ANY WORK ONSITE AND OFFSITE WILL BE ORDERED TO BE IMMEDIATELY SUSPENDED UNTIL THIS TERM IS COMPLIED WITH.**

2. The PE in responsible charge of construction observation shall evaluate insure compliance with plans and specifications with regard to the roadway improvements and Traffic Control within the State Highway ROW. **The PE's responsibilities shall be as defined in Section 5 of the Bylaws and Rules of The State Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors** and the relevant sections of the latest CDOT Standard Specifications for Road and Bridge Construction. The PE shall be experienced and competent in road and bridge construction management, inspection and materials testing.

3. **Construction Activities** within the highway ROW shall be in compliance with the most current editions of the following manuals:
   a. CDOT Standard Specifications for Road and Bridge Construction
   b. CDOT Standard Special Provisions

c. CDOT Standard Plans M&S Standards
d. CDOT Construction Manual
e. CDOT Field Materials Manual
f. CDOT Laboratory Manual of Test Procedures
g. Manual on Uniform Traffic Control Devices (MUTCD) Part IV and the Colorado Supplement
h. **EXHIBIT "B,"** reserved

4. The Permittee/Contractor is responsible for obtaining any necessary additional **Federal, State and/or City/County permits or clearances** required for construction of the access. Approval of this access permit does not constitute verification of this action by the Permittee.

5. The Permittee will be responsible for **verification of existing utility locations**. The Permittee must notify owners or operators of **underground utility facilities** at least two (2) business days prior to beginning excavation in the vicinity of such facilities, as required under Section 9-1.5-103, Colorado Revised Statutes. **Call Utility Notification Center of Colorado** (UNCC), **811** or 1-800-922-1987 for marking of member utilities. Call non-member utilities directly.

6. The Permittee/Contractor shall coordinate access construction with any utility installations.

7. Any damage to utilities during construction shall be the Permittee's responsibility to repair or replace the utility at no cost to the Department.

8. The Permittee/Contractor shall not make any changes to the access design without prior approval from the Region 5 Access Manager or other authorized Region 5 CDOT representative. If necessary, minor changes, corrections, and/or additions to this permit will be ordered by CDOT to meet unanticipated site conditions.

9. Any damage to any existing highway facilities shall be repaired by the Permittee prior to continuing other work.

I. SAFETY, WORKING TIMES AND TRAFFIC CONTROL:

1. CDOT reserves the right to suspend any construction activities, to include Traffic Control, that interfere with the safe operation of the State Highway. Any such suspensions shall require a written plan of action detailing how the Permittee/Contractor will prevent further safety infractions prior to recommencing construction activities.

2. All equipment, materials or any other non-crashworthy item shall be stored outside the clear zone during non-working times.

3. Existing highway signs requiring removal within the limits of the construction activities shall be removed and delivered to the CDOT Maintenance Shop for storage and future replacement by the Permittee unless otherwise agreed to by CDOT and Permittee. Installation shall be as

directed by CDOT.

4. The Permittee/Contractor will be responsible for keeping the State Highway travel lanes and shoulders clear of any mud or debris tracked onto it throughout construction of the access on a daily basis or as otherwise directed by CDOT.

5. The existing paved shoulder edge shall not be saw cut back until the future pavement is ready to be installed. The shoulder shall be saw cut a minimum of one (1) foot from the existing pavement edge to assure a straight edge for placement of adjacent asphalt material.

6. Any pavement drop-offs that will be left overnight shall be delineated with appropriate channelizing devices and any reasonably obtained lateral buffer space.

7. Any required pavement marking(s) and signing shall be installed by the Permittee/Contractor prior to opening any roadway to traffic.

8. The Permittee/Contractor shall comply with Revision of Section 107.06 of the CDOT Specifications regarding Safety, Health, and Sanitation Provisions.

9. No work within the highway ROW will be allowed on Saturdays, Sundays, legal holidays, or during periods of adverse weather conditions.

10. All construction activities within the state highway ROW will not be allowed to begin before sunrise and shall be required to cease prior to sunset. Traffic Control operations may begin one half hour before sunrise and continue until one half hour after sunset.

11. No disruption of traffic flow will be allowed during the morning (7:00 AM to 8:30 AM) and evening (4:30 PM to 6:00 PM) peak hour traffic flows, unless otherwise authorized in writing by CDOT.

J. FINAL PROJECT ACCEPTANCE:

1. **Engineering Certification Submittal:** Prior to final acceptance by CDOT, the PE shall certify to CDOT in writing that all inspections, materials, materials testing, and construction methods conform to the plans, specifications and purpose of the design. The certification shall be supported by the submittal of project documentation complying with the requirements of this permit. The submittal shall be sent to the Region 5 Access Manager, Colorado Department of Transportation, 3803 Main Avenue, Suite 100, Durango, Colorado 81301. The submittal shall:
   a. Have the stamp and signature of the PE in responsible charge of construction oversight signifying that the engineering services addressed therein have been performed by the PE, or directly under the PE's supervision.
   b. Be based upon the PE's knowledge and information regarding the project.

c. Be in accordance with applicable standards of practice.

2. Upon completion of the work, the Engineer **shall submit 3-sets of "As Constructed" plans** showing in detail all ROW easements, construction improvements and any modifications or revisions made to the design plans during construction. All changes, modifications or revisions shall be signed and sealed by the engineer.

3. **Final Project Acceptance** will be by the Regional Transportation Director (RTD) or their authorized designee.

4. **Reconstruction or improvements** to the access will be required when the Permittee fails to meet the required design and/or materials specifications. If any construction element fails within two years of CDOT's final acceptance due to improper construction or materials, the Permittee is responsible for all such repairs.

DocuSigned by:
Frank Holman
36BB2C3C0D904EA...

PERMITTEE:_____ DATE 6/1/2020 | 5:35 PM MDT

Frank Holman

DocuSigned by:
Blake Bennetts
C4D23580F42B4ED...

APPLICANT:_____ DATE 5/27/2020 | 9:59 AM PDT

Blake Bennetts for ACA Products, Inc.

Traffic Impact Study

ACA Products

Highway 50
Chaffee County

Prepared For:
ACA Products
PO Box 1887
Buena Vista, CO

Prepared By:

112 Rubey Dr Ste 210
Golden, CO 80403
303-940-9966

Fred Lantz
Traffic Engineer

August 2019
Revised December 2019
Revised April 2020

Table of Contents

Introduction

This Traffic Impact Study will address the amount of traffic that the ACA Products development is expected to generate and the impact on the roadway system. The proposed development is located on the north side of Hwy 50 east of County Road 219 and West of Poncha Springs. The property is presently vacant. Figure 1 below shows the site location.

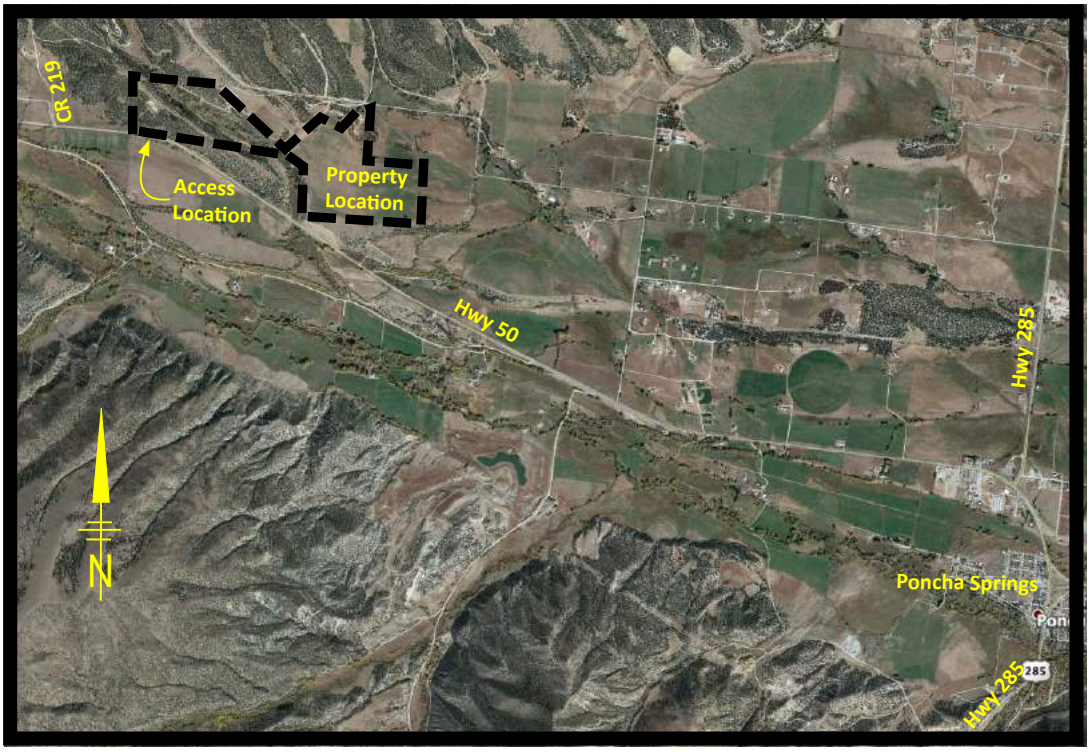

Figure 1 - Site Location

Existing Conditions

Highway 50 is classified as an RA – Regional Highway with a 65 mph speed limit. It is a 2 lane roadway. All Traffic Data Services Inc. conducted a 24-hour directional traffic count on Hwy 50 at the proposed site of the development. The traffic counts were taken on Tuesday June 4, 2019. The traffic counts indicated that there were 1858 vehicles per day in the eastbound direction and 2031 vehicles per day in the westbound direction. The total for both directions was 3889 vehicles per day. The highest hours are 391

vehicles from 11-12 in the AM and 365 vehicles from 1-2 in the PM. These counts are consistent with CDOT's on line information in OTIS. The traffic counts are included in the appendix.

Proposed Development

The proposed development is a Sand and Gravel Pit. An access is proposed on Hwy 50 2112' east of County Road 219. Because of the type of traffic at the site, deceleration lanes are proposed along Hwy 50 at the access. The eastbound left turning volume calculated in Figure 3 will be a high of 5 passenger car equivalents per hour. While this number is less than the volume required for a left turn lane in the State Highway Access Code (>10 vehicles per hour), it was decided to include the eastbound left turn lane because of the type of vehicles normally seen at a Sand and Gravel Pit. Likewise, the westbound right turn lane is calculated at a high of 21 passenger car equivalents per hour which, is less than the 25 listed in the State Highway Access Code as the threshold requiring a right turn deceleration lane.

The length of these lanes was calculated using tables 4-5, 4-6, and 4-8 of the State Highway Access Code. Table 4-5 states that for the Access Category R-A, the left turn length is the deceleration length plus the storage. The storage length from table 4-8 is 25' as the left turning volume (5 pce's) is below 30 in the table. Table 4-6 calls for a deceleration length of 800' for 65 mph. Thus the minimum left turn lane should be 800' (deceleration) plus 25' (storage) or a total of 825'. The proposed lane is 847', which exceeds the minimum length requirement.

The westbound right turn deceleration lane only needs to include the deceleration length according to table 4-5 of the State Highway Access Code for the R-A Category. Table 4-6 indicates the deceleration of 800' for 65 mph. Thus the proposed right turn lane at 800', lequals the length required in the State Highway Access Code.

Sight distance for entering traffic will exceed the 1105' requirement for Multi-Unit Trucks as shown in Table 4-2 of State Highway Access Code.

Figure 2 below shows a sketch of the Proposed Roadway Improvements.

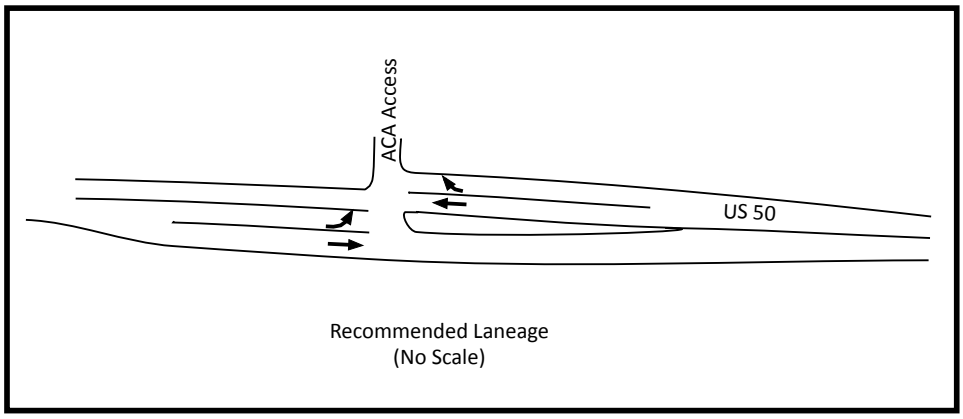

Figure 2 – Proposed Laneage at Access

Trip Generation

The trips generated by the development were estimated using the information provided by the owner as the Institute of Transportation Engineers *Trip Generation Manual, 10th Edition* does not have a listing for a Sand and Gravel Pit or a Quarry. Trips are based on the type and the number of vehicles that will be on-site. The number of large trucks is based upon the fact that the Sand and Gravel Pit can only accommodate a maximum of 6 trucks per hour. Those trips were converted to Passenger Car Equivalents by multiplying by 3 as required by the State Highway access code. A total of 3 employees are planned on-site between 7 am and 5 pm, with these trips posted during the AM and PM peak periods as well as a couple of mid-day trips. It is also estimated that there will be 100 miscellaneous trips daily that include deliveries, other employees, and visitors.

Both Daily and Peak Hour trips are estimated for the development.

Table 1 shows the number of trips that could be generated by the proposed land use broken down by trip type.

Trip Type	Unit	Trips Generated - Weekday						
		Daily	AM Peak Hour			PM Peak Hour		
			Enter	Exit	Total	Enter	Exit	Total
Gravel Trucks	PCE	120	18	18	36	18	18	36
Employees	Veh	8	3	1	4	1	3	4
Misc Trips	Veh	100	5	5	10	5	5	10
Total Trips		**228**	**26**	**24**	**50**	**24**	**26**	**50**

PCE = Passenger car equivalents (1 Truck = 3 PCE)
Veh = Vehicle

Table 1 – Development Trip Generation

As the Trip Generation Table indicates, this development is expected to generate 228 daily trips with 50 AM peak hour and 50 PM peak hour trips.

Initial Traffic During AM/PM Peak Hours

Discussions with the owner indicated that most of the traffic would come from the east. Employees will most likely live in Poncha Springs, Salida or Buena Vista. The products from the Sand and Gravel pit will also go toward the populations in Poncha Springs, Salida and Buena Vista. There will be a few trips to the west, thus a distribution of 80% to the east and 20% to the west was decided on. The AM and PM peak hour trips in the Trip Generation table were assigned to Highway 50 with 80% of the trips going to/from the east and 20% of the trips going to/from the west. The site peak hours would have the highest volume of traffic entering and leaving the development with a 7 am to 5 pm workday.

Figure 3 below shows the Site Peak Hour Trips at the access with Highway 50. The Highway 50 volumes were obtained from the traffic count that was taken on Tue June 4, 2019 for the corresponding 7 am and the 5 pm hours. These hours were selected to match the peak hours of the Sand and Gravel Pit. The Sand and Gravel Pit is ready to open as soon as they are able to obtain their access permit, so the 2019 traffic volumes are appropriate to use. CDOT counts in the area were checked and they indicate that the summer months have higher traffic volumes than the winter months.

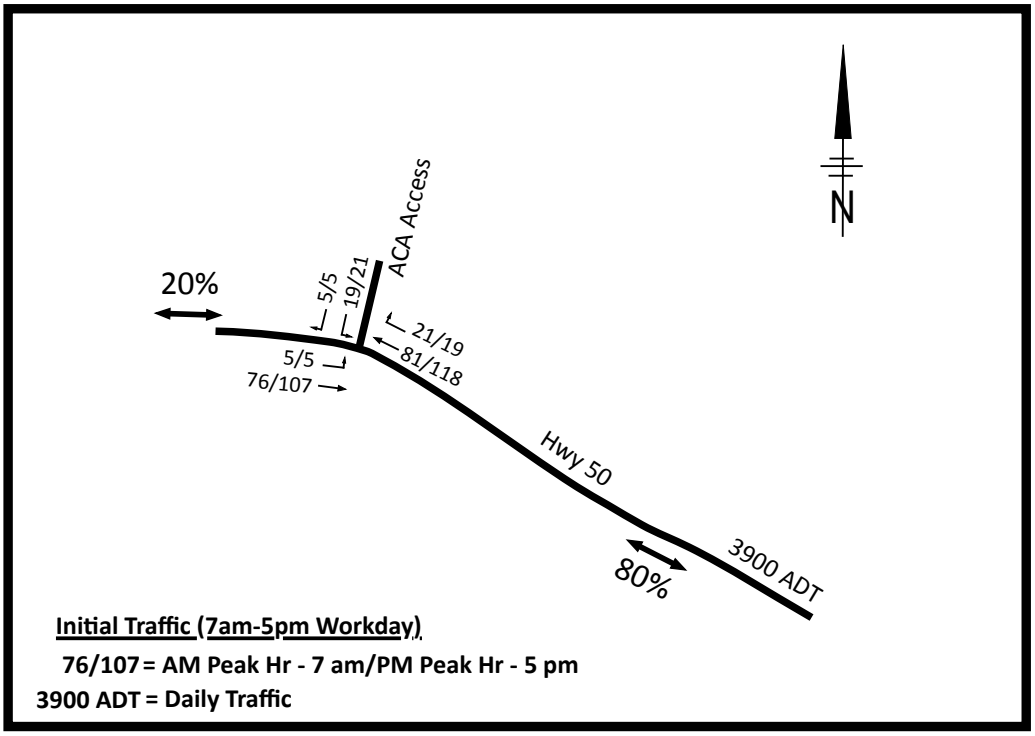

Figure 3 – Site Peak Hour Volumes (2019)

Initial Traffic During the Highest Roadway Hours

The traffic counts taken on Tue June 4, 2019 indicate the highest hours on Highway 50 occur at 11 am and 1 pm. The Sand and Gravel Pit peak hours occur at 7 am and 5 pm. Since the highest roadway hours do not coincide with the highest development hours, the development traffic was also calculated for the later morning and early afternoon highway peak hours. The employee traffic would not normally be included in these hours, just the trucks and the miscellaneous trips.

Figure 4 below shows the Trips at the access with Highway 50 during the highest highway hours. The Highway 50 volumes were obtained from the traffic count for the corresponding high am and the high pm hours.

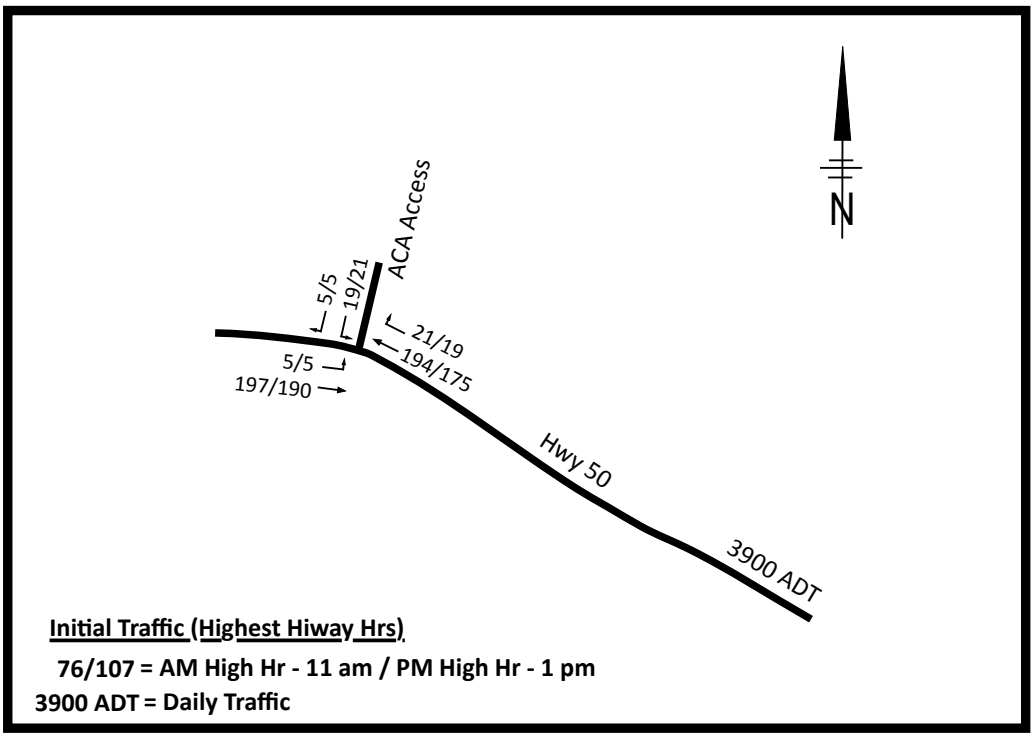

Figure 4 – Highest Highway AM and PM Hours (2019)

Future Traffic During AM/PM Peak Hours

In order to determine the impact of the development in the future, the roadway traffic was inflated using the 20 year growth rate from the CDOT OTIS web site. The 20 year factor was determined to be 1.13 for this section of Highway 50. Thus the existing volumes were inflated by the growth factor to represent the volumes that would be present in the future (20 years).

It is assumed the Sand and Gravel Pit will remain the same size. If the development increases significantly in the future, this TIS should be updated. It should also be noted that a new access permit will be needed if the site adds additional traffic.

Figure 5 below shows the Site Peak Hour Trips at the access with Highway 50. The Highway 50 volumes were obtained from the inflated traffic count for the corresponding 7 am and the 5 pm hours.

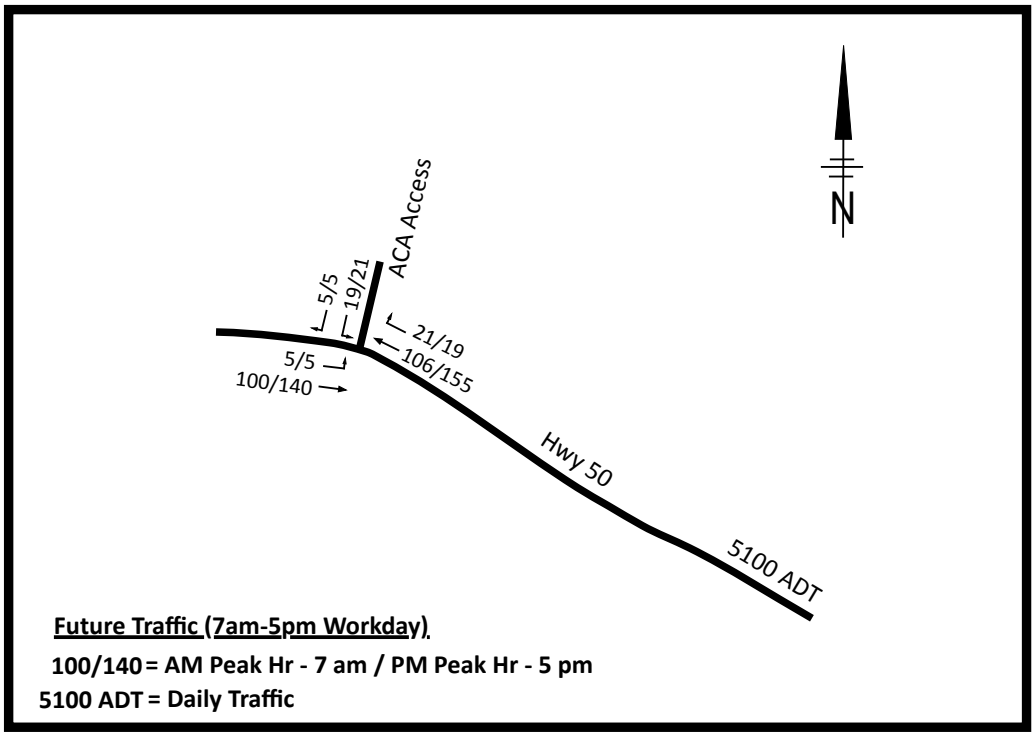

Figure 5 – Future Site Peak Hour Volumes (2039)

Future Traffic During the Highest Roadway Hours

The future traffic was calculated for the inflated highest am and pm highway hours

Figure 6 below shows the Trips at the access with Highway 50 during the future highest highway hours. The Highway 50 volumes were obtained from the inflated traffic count for the corresponding high AM and the high PM hours.

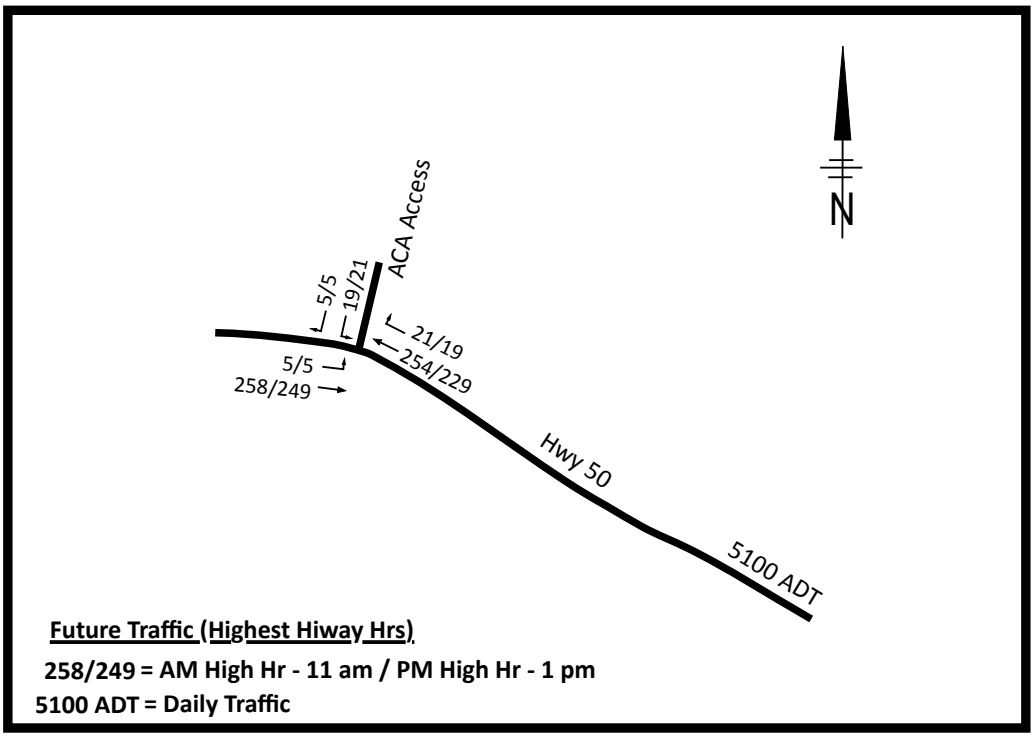

Figure 6 – Future Highest Highway AM and PM Hours (2039)

LOS Analysis

The volumes for the AM and PM peak hours and the highest AM and PM highway hours for the initial period and for the future (20 year) were entered into the computer program Synchro 10 to determine the Level of Service (LOS) at the access.

The following Table 2 summarizes the LOS for the left turn into the access and the SB access exit. The printouts are included in the appendix.

Movement	Initial Peak Hrs		Initial High Hrs		Future Peak Hrs		Future High Hrs	
	AM	PM	AM	PM	AM	PM	AM	PM
EB Left	A	A	A	A	A	A	A	A
SB	B	B	B	B	B	B	B	B

Table 2 – LOS

As the above table indicates, the traffic at the access intersection on Hwy 50 will not experience any delays with the development now or in the future. The queue lengths will be 1 vehicle or less.

Conclusion and Recommendation

The development of a Sand and Gravel Pit on Highway 50 east of CR 219 will not have any discernable impact on the traffic flow in the area with the turn lanes proposed. Because of the type and volume of traffic, deceleration lanes are proposed for the westbound right turn lane and the eastbound left turn lane even though the volumes do not meet the threshold in State Highway Access Code. The volumes at the access do not warrant acceleration lanes as specified in the Access Code.

The development will generate 228 daily trips with 50 AM peak hour trips and 50 PM peak hour trips. The peak hour trips were examined to determine the LOS at the intersection at those hours. Because the street peak hours are different than the development peak hours, the AM and PM street peak hours were also examined to determine the LOS at the intersection. The intersection will operated at LOS B and better for all periods indicating little to no delay.

Sight distance is adequate at the intersection and the location of the access was chosen to have the access at the optimal point in the horizontal curve.

Appendix

Traffic Counts
Synchro Reports

All Traffic Data Services
www.alltrafficdata.net

Site Code: 1
Station ID:
HWY 50 W/O PONCHA SPRINGS

Start Time	04-Jun-19 Tue	EB	WB							Total
12:00 AM		5	7							12
01:00		5	3							8
02:00		4	12							16
03:00		6	5							11
04:00		6	12							18
05:00		14	26							40
06:00		48	44							92
07:00		76	81							157
08:00		92	122							214
09:00		149	122							271
10:00		140	172							312
11:00		**197**	**194**							**391**
12:00 PM		176	172							348
01:00		**190**	**175**							**365**
02:00		163	169							332
03:00		131	150							281
04:00		129	152							281
05:00		107	118							225
06:00		74	96							170
07:00		61	82							143
08:00		37	56							93
09:00		23	31							54
10:00		14	16							30
11:00		11	14							25
Total		1858	2031							3889
Percent		47.8%	52.2%							
AM Peak	-	11:00	11:00	-	-	-	-	-	-	11:00
Vol.	-	197	194	-	-	-	-	-	-	391
PM Peak	-	13:00	13:00	-	-	-	-	-	-	13:00
Vol.	-	190	175	-	-	-	-	-	-	365
Grand Total		1858	2031							3889
Percent		47.8%	52.2%							
ADT		ADT 3,889		AADT 3,889						

The following information can be found in the Highway Capacity Manual, Transportation Research Board, 2000: Chapter 10 – Urban Streets Concepts Signalized Intersections and Chapter 17 – Unsignalized Intersections.

Level Of Service (LOS) for Signalized Intersections

Levels of service are defined to represent reasonable ranges in control delay.

LOS A

Describes operations with low control delay, up to 10 s/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.

LOS B

Describes operations with control delay greater then 10 and up to 20 s/veh. This level generally occurs with good progressions, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

LOS C

Describes operations with control delay greater than 20 and up to 35 s/veh. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at the level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LOS D

Describes operations with control delay greater than 35 and up to 55 s/veh. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

LOS E

Describes operations with control delay greater than 55 and up to 80 s/veh. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

LOS F

Describes operations with control delay in excess of 80 s/veh. This level, considered unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

Level of Service (LOS) for Unsignalized TWSC Intersections

Level of Service	Average Control Delay (s/veh)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	76	81	21	19	5
Future Vol, veh/h	5	76	81	21	19	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	550	-	-	500	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	50	50
Mvmt Flow	5	83	88	23	21	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	111	0	-	0	181	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	93	-
Critical Hdwy	4.12	-	-	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	2.218	-	-	-	3.95	3.75
Pot Cap-1 Maneuver	1479	-	-	-	710	853
Stage 1	-	-	-	-	828	-
Stage 2	-	-	-	-	823	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1479	-	-	-	708	853
Mov Cap-2 Maneuver	-	-	-	-	708	-
Stage 1	-	-	-	-	826	-
Stage 2	-	-	-	-	823	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1479	-	-	-	734
HCM Lane V/C Ratio	0.004	-	-	-	0.036
HCM Control Delay (s)	7.4	-	-	-	10.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	107	118	19	21	5
Future Vol, veh/h	5	107	118	19	21	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	550	-	-	500	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	50	50
Mvmt Flow	5	116	128	21	23	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	149	0	-	0	254	128
Stage 1	-	-	-	-	128	-
Stage 2	-	-	-	-	126	-
Critical Hdwy	4.12	-	-	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	2.218	-	-	-	3.95	3.75
Pot Cap-1 Maneuver	1432	-	-	-	642	808
Stage 1	-	-	-	-	792	-
Stage 2	-	-	-	-	794	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1432	-	-	-	640	808
Mov Cap-2 Maneuver	-	-	-	-	640	-
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	794	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1432	-	-	-	667
HCM Lane V/C Ratio	0.004	-	-	-	0.042
HCM Control Delay (s)	7.5	-	-	-	10.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	197	194	21	19	5
Future Vol, veh/h	5	197	194	21	19	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	550	-	-	500	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	50	50
Mvmt Flow	5	214	211	23	21	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	234	0	-	0	435	211
Stage 1	-	-	-	-	211	-
Stage 2	-	-	-	-	224	-
Critical Hdwy	4.12	-	-	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	2.218	-	-	-	3.95	3.75
Pot Cap-1 Maneuver	1333	-	-	-	498	722
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	712	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1333	-	-	-	496	722
Mov Cap-2 Maneuver	-	-	-	-	496	-
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	712	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1333	-	-	-	531
HCM Lane V/C Ratio	0.004	-	-	-	0.049
HCM Control Delay (s)	7.7	-	-	-	12.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	190	175	19	21	5
Future Vol, veh/h	5	190	175	19	21	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Stop	-	None	-	None
Storage Length	550	-	-	500	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	50	50
Mvmt Flow	5	207	190	21	23	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	211	0	-	0	407	190
Stage 1	-	-	-	-	190	-
Stage 2	-	-	-	-	217	-
Critical Hdwy	4.12	-	-	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	2.218	-	-	-	3.95	3.75
Pot Cap-1 Maneuver	1360	-	-	-	518	743
Stage 1	-	-	-	-	740	-
Stage 2	-	-	-	-	718	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1360	-	-	-	516	743
Mov Cap-2 Maneuver	-	-	-	-	516	-
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	718	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1360	-	-	-	548
HCM Lane V/C Ratio	0.004	-	-	-	0.052
HCM Control Delay (s)	7.7	-	-	-	11.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	100	106	21	19	5
Future Vol, veh/h	5	100	106	21	19	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Stop	-	None	-	None
Storage Length	550	-	-	500	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	50	50
Mvmt Flow	5	109	115	23	21	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	138	0	-	0	234	115
Stage 1	-	-	-	-	115	-
Stage 2	-	-	-	-	119	-
Critical Hdwy	4.12	-	-	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	2.218	-	-	-	3.95	3.75
Pot Cap-1 Maneuver	1446	-	-	-	660	822
Stage 1	-	-	-	-	803	-
Stage 2	-	-	-	-	800	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1446	-	-	-	658	822
Mov Cap-2 Maneuver	-	-	-	-	658	-
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	800	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1446	-	-	-	687
HCM Lane V/C Ratio	0.004	-	-	-	0.038
HCM Control Delay (s)	7.5	-	-	-	10.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	140	155	19	19	5
Future Vol, veh/h	5	140	155	19	19	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Stop	-	None	-	None
Storage Length	550	-	-	500	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	50	50
Mvmt Flow	5	152	168	21	21	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	189	0	-	0	330	168
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	162	-
Critical Hdwy	4.12	-	-	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	2.218	-	-	-	3.95	3.75
Pot Cap-1 Maneuver	1385	-	-	-	577	765
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	763	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1385	-	-	-	575	765
Mov Cap-2 Maneuver	-	-	-	-	575	-
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	763	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1385	-	-	-	606
HCM Lane V/C Ratio	0.004	-	-	-	0.043
HCM Control Delay (s)	7.6	-	-	-	11.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	258	254	21	19	5
Future Vol, veh/h	5	258	254	21	19	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Stop	-	None	-	None
Storage Length	550	-	-	500	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	50	50
Mvmt Flow	5	280	276	23	21	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	299	0	-	0	566	276
Stage 1	-	-	-	-	276	-
Stage 2	-	-	-	-	290	-
Critical Hdwy	4.12	-	-	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	2.218	-	-	-	3.95	3.75
Pot Cap-1 Maneuver	1262	-	-	-	413	661
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	662	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1262	-	-	-	411	661
Mov Cap-2 Maneuver	-	-	-	-	411	-
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	662	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1262	-	-	-	446
HCM Lane V/C Ratio	0.004	-	-	-	0.058
HCM Control Delay (s)	7.9	-	-	-	13.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	249	229	19	21	5
Future Vol, veh/h	5	249	229	19	21	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Stop	-	None	-	None
Storage Length	550	-	-	500	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	50	50
Mvmt Flow	5	271	249	21	23	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	270	0	-	0	530	249
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	281	-
Critical Hdwy	4.12	-	-	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	2.218	-	-	-	3.95	3.75
Pot Cap-1 Maneuver	1293	-	-	-	435	686
Stage 1	-	-	-	-	693	-
Stage 2	-	-	-	-	668	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1293	-	-	-	433	686
Mov Cap-2 Maneuver	-	-	-	-	433	-
Stage 1	-	-	-	-	690	-
Stage 2	-	-	-	-	668	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1293	-	-	-	466
HCM Lane V/C Ratio	0.004	-	-	-	0.061
HCM Control Delay (s)	7.8	-	-	-	13.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

Region 5, Traffic and Safety Unit
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Durango, CO 81301
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(970) 385-8361 Fax

LATE FALL, WINTER AND SPRING SPECIAL PROVISIONS FOR ACCESS CONSTRUCTION AND UTILITY INSTALLATIONS

It's that time of year again when work within the Right of Way (ROW) becomes a special concern. Due to Southwest Colorado's unpredictable weather, utility work in the ROW can create several types of hazards for the traveling public, contractors and their personnel. The condition of the highway can change quickly. Mud tracked onto the highway by equipment, or ice and snowpack are just a few of the conditions that make the roadway more hazardous for all concerned. The terrain within the ROW must be kept clear of hazards as well. Holes, trenches, equipment and materials can make the terrain "unrecoverable" for a driver should his/her vehicle leave the highway. **Activities must be shut down when the roadway is other than dry.** The use of frozen materials for backfilling will only lead to settlement. The contractor must make extra effort to compact the excavation. In the spring, any settlement of backfill shall be repaired. The re-vegetation shall take place yet this fall or early next spring.

COLORADO DEPARTMENT OF TRANSPORTATION Environmental Clearances Information Summary

PURPOSE - This summary is intended to inform entities external to CDOT that may be entering the state highway right-of-way to perform work related to their own facilities (such as Utility, Special Use or Access Permittees), about some of the more commonly encountered environmental permits/clearances that may apply to their activities. This listing is not all-inclusive - additional environmental or cultural resource permits/clearances may be required in certain instances. Appropriate local, state and federal agencies should be contacted for additional information if there is any uncertainty about what permits/clearances are required for a specific activity. **IMPORTANT – Please Review The Following Information Carefully – Failure to Comply With Regulatory Requirements May Result In Suspension or Revocation of Your CDOT Permit, Or Enforcement Actions By Other Agencies.**

CLEARANCE CONTACTS - As indicated in the permit/clearance descriptions listed below, the following individuals or agencies may be contacted for additional information:

- Colorado Department of Public Health and Environment (CDPHE): General Information – (303) 692-2035
  Water Quality Control Division (WQCD): (303) 692-3500
  Environmental Permitting Website https://www.colorado.gov/pacific/cdphe/all-permits
- CDOT Water Quality Program Manager: (303) 757-9343 https://www.codot.gov/programs/environmental/water-quality
- CDOT Asbestos Project Manager: Phil Kangas, (303) 512-5519
- Colorado Office of Archaeology and Historic Preservation: (303) 866-5216
- U.S. Army Corps of Engineers, District Regulatory Offices: Omaha District (NE CO), Denver Office (303) 979-4120
  http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/Colorado.aspx
  Sacramento Dist. (Western CO), Grand Junction Office (970) 243-1199
  http://www.spk.usace.army.mil/Missions/Regulatory.aspx Albuquerque
  District (SE CO), Pueblo Office (719)-543-9459
  http://www.spa.usace.army.mil/Missions/RegulatoryProgramandPermits.aspx
- CDOT Utilities, Special Use and Access Permitting: (303) 757-9654 https://www.codot.gov/business/permits

Wildlife Resources - Disturbance of wildlife shall be avoided to the maximum extent practicable. Entry into areas of known or suspected threatened or endangered species habitat will require special authorization from the CDOT permitting office. If any threatened or endangered species are encountered during the progress of the permitted work, work in the subject area shall be halted and the CDOT Regional Permitting Office and Region Planning and Environmental Manager shall be contacted immediately. Authorization must be provided by CDOT prior to the continuation of work. Information about threatened or endangered species may be obtained from the CDOT website, http://www.codot.gov/programs/environmental/wildlife/guidelines, or the Colorado Parks and Wildlife (CPW) website, http://www.cpw.state.co.us/learn/Pages/SOC-ThreatenedEndangeredList.aspx. Additional guidance may be provided by the appropriate Region Planning and Environmental Manager (RPEM).

Cultural Resources - The applicant must request a file search of the permit area through the Colorado Office of Archaeology and Historic Preservation (OAHP), Denver, to ascertain if historic or archaeological resources have previously been identified (http://www.historycolorado.org/oahp/file-search). Inventory of the permit area by a qualified cultural resources specialist may be necessary, per the recommendation of CDOT. If archaeological sites/artifacts or historic resources are known to exist prior to the initiation of the permitted work or are encountered as the project progresses, all work in the subject area shall be halted and the CDOT Regional Permitting Office and Region Planning and Environmental Manager shall be contacted immediately. Authorization must be provided by CDOT prior to the continuation of work. Additional guidance may be provided by the Regional Permitting Office and RPEM. ***Contact Information:*** Contact the OAHP for file searches at (303) 866-5216.

Paleontological Resources - The applicant must request a fossil locality file search through the University of Colorado Museum, Boulder (https://cumuseum.colorado.edu/research/paleontology/vertebrates/policies), and the Denver Museum of Nature and Science (http://www.dmns.org/science/collections/earth-science-collections/) to ascertain if paleontological resources have been previously identified in or near the permit area. Inventory of the permit area by a qualified paleontologist may be necessary, per the recommendation of CDOT. If fossils are encountered during the permitted work, all work in the subject area shall be halted and the CDOT Regional Permitting Office and Region Planning and Environmental Manager shall be contacted immediately. Authorization must be provided by CDOT prior to the continuation of work. Additional guidance may be provided by the Regional Permitting Office in the Permit Special Provisions. ***Contact Information:*** See the museum websites listed above for Paleontological Collections Manager contact information. Contact the CDOT Paleontologist for further information at nicole.peavey@state.co.us or (303) 7579632. The CDOT Paleontologist will not conduct a comprehensive file search independently of the museums.

Hazardous Materials, Solid Waste - The Solid Wastes Disposal Sites and Facilities Act C.R.S. 30-20-100, et al, and Regulations Pertaining to Solid Waste Disposal Sites and Facilities (6 CCR 1007-2), prohibit solid waste disposal without an approved Certificate of Designation (a landfill permit). The Colorado Hazardous Waste Act C.R.S. 25-15-301 et al, and the Colorado Hazardous Waste Regulations (6 CCR 1007-3) prohibit the transfer, storage or disposal (TSD) of hazardous waste except at permitted TSD sites. There are no permitted landfills or TSD sites within the State Highway Right of Way. Therefore, all solid or hazardous wastes that might be generated by the activities of entities entering the State Highway Right of Way must be removed from the ROW and disposed of at a permitted facility or designated collection point (e.g., for solid waste, a utility or construction company's own dumpster). If pre-existing solid waste or hazardous materials contamination (including oil or petroleum contaminated soil, asbestos, chemicals, mine tailings, etc.) is encountered during the performance of work, the permittee shall halt work in the affected area and immediately contact the CDOT Regional Permitting Office for direction as to how to proceed. ***Contact Information:*** Theresa Santangelo-Dreiling, CDOT Hazardous Materials Management Supervisor: (303) 512-5524.

Asbestos Containing Materials, Asbestos Contaminated Soil - All work on asbestos containing materials (ACM) must comply with the applicable requirements of the CDPHE Air Pollution Control Division's (APCD) Regulation 8. Disposal of ACM, and work done in asbestos-contaminated soil, must comply with the CDPHE Hazardous Materials and Waste Management Division's (HMWMD) Solid

Waste Regulations. The application for any CDOT permit must specifically identify any ACM involved in the work for which [illegible] requirements may be specified in the permit special provisions. ***Contact Info:*** CDPHE APCD and HMWMD Regulations can be accessed via the CDPHE Environmental Permitting Website listed above. Additional information **concerning clearance on CDOT projects** is available from the CDOT Asbestos Project Manager (303) 5125519, or Theresa Santangelo-Dreiling, Hazardous Materials Management Supervisor: (303) 512-5524.

Transportation of Hazardous Materials - No person may offer or accept a hazardous material for transportation in commerce unless that person is registered in conformance with the United States Department of Transportation regulations at 49 CFR, Part 171. The hazardous material must be properly classed, described, packaged, marked, labeled, and in condition for shipment as required or authorized by applicable requirements, or an exemption, approval or registration has been issued. Vehicles requiring a placard, must obtain authorization and a State HAZMAT Permit from the Colorado Public Utilities Commission. ***Contact Information:*** For authorization and more info call the Federal Motor Safety Carrier Administration, US DOT for inter- and intra-state HAZMAT Registration (303) 969-6748. Colorado Public Utilities Commission: (303) 894-2868.

Discharge of Dredged or Fill Material – 404 Permits Administered By the U.S. Army Corps of Engineers, and Section 401 Water Quality Certifications Issued by the CDPHE WQCD - Corps of Engineers 404 permits are required for the discharge of dredged or fill materials into waters of the United States, including wetlands. There are various types of 404 permits, including nationwide permits, which are issued for activities with relatively minor impacts. For example, there is a nationwide permit for utility line activities (nwp #12). Depending upon the specific circumstances, it is possible that either a "general" or "individual" 404 permit would be required. If an individual 404 permit is required, section 401 water quality certification from the CDPHE WQCD is also required. Contact the appropriate Corps District Regulatory Office for information about what type of 404 permit may be required (contact information above). Contact the CDPHE Water Quality Control Division at (303) 692-3500.

Working on or in any stream or its bank - In order to protect and preserve the state's fish and wildlife resources from actions that may obstruct, diminish, destroy, change, modify, or vary a natural existing stream or its banks or tributaries, it may be necessary to obtain a Senate Bill 40 certification from the Colorado Department of Natural Resources. A stream is defined as 1) represented by a solid blue line on USGS 7.5' quadrangle maps; and/or 2) intermittent streams providing live water beneficial to fish and wildlife; and/or 3) segments of streams supporting 25% or more cover within 100 yards upstream or downstream of the project; and/or 4) segments of streams having wetlands present within 200 yards upstream or downstream of the project measured by valley length. The CPW application, as per guidelines agreed upon by CDOT and CPW, can be accessed at https://www.codot.gov/programs/environmental/wildlife/guidelines.

Stormwater Construction Permit (SCP) and Stormwater Discharge From Industrial Facilities - Discharges of stormwater runoff from construction sites disturbing one acre or more - or certain types of industrial facilities, such as concrete batch plants - require a CDPS Stormwater Permit. ***Contact Information:*** Contact the CDPHE Water Quality Control Division at (303) 692-3500. Website: https://www.colorado.gov/pacific/cdphe/wq-construction-general-permits and https://colorado.gov/pacific/cdphe/wq-commerce-andindustry-permits.

Construction Dewatering (Discharge or Infiltration) and Remediation Activities - Discharges of water encountered during excavation or work in wet areas may require a Construction Dewatering or Remediation Activities Discharge Permit. ***Contact Information:*** For Construction Dewatering and Remediation Activities Discharge Permits, contact the CDPHE WQCD at (303) 6923500. For Applications and Instructions (CDPHE website): https://www.colorado.gov/pacific/cdphe/wq-construction-general-permits.

Municipal Separate Storm Sewer System (MS4) Discharge Permit - Discharges from the storm sewer systems of larger municipalities, and from the CDOT highway drainage system that lies within those municipalities, are subject to MS4 Permits issued by the CDPHE WQCD. For facilities that lie within the boundaries of a municipality that is subject to an MS4 permit, the owner of such facility should contact the municipality regarding stormwater related clearances that may have been established under that municipality's MS4 permit. All discharges to the CDOT highway drainage system or within the Right of Way (ROW) must comply with the applicable provisions of the Colorado Water Quality Control Act, the Water Quality Control Commission (WQCC) Regulations (https://www.colorado.gov/pacific/cdphe/wqcc-regulations-and-policies-and-water-quality-statutes) and the CDOT MS4 Permit # COS000005 (https://www.codot.gov/programs/environmental/water-quality/documents). Discharges are subject to inspection by CDOT and CDPHE. Contact the CDPHE Water Quality Control Division at (303) 692-3500 for a listing of municipalities required to obtain MS4 Permits, or go to https://www.colorado.gov/pacific/cdphe/wq-municipal-ms4-permits. For CDOT-related MS4 regulations, go to: https://www.codot.gov/programs/environmental/water-quality/stormwater-programs.html.

General Prohibition – Discharges - All discharges are subject to the provisions of the Colorado Water Quality Control Act and the Colorado Discharge Permit Regulations. Prohibited discharges include, but are not limited to, substances such as wash water, paint, automotive fluids, solvents, oils or soaps and sediment. ***Contact Information:*** Contact the CDPHE Water Quality Control Division at (303) 692-3500.

General Authorization - Allowable Non-Stormwater Discharges - Unless otherwise identified by CDOT or the WQCD as significant sources of pollutants to the waters of the State, the following discharges to stormwater systems are allowed without a Colorado Discharge Permit System permit: landscape irrigation, diverted stream flows, uncontaminated ground water infiltration to separate storm sewers, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, uncontaminated springs, footing drains, water line flushing, flows from riparian habitats and wetlands, and flow from firefighting activities. Allowable non-stormwater discharges can be found under Illicit Discharge PDD at: https://www.codot.gov/programs/environmental/water-quality/stormwater-programs.html. ***Contact Information:*** The CDPHE Water Quality Control Division (telephone #'s listed above).

Erosion and Sediment Control Practices - For activities requiring a Stormwater Construction Permit, erosion control requirements will be specified in that permit. In situations where a stormwater permit is not required, all reasonable measures should be taken to minimize erosion and sedimentation according to CDOT Standard Specifications 107.25, 208, 213 and 216 (https://www.codot.gov/business/designsupport/2011-construction-specifications/2011-Specs/2011-specs-book). All disturbances require a stabilization plan, native seeding or landscape design plan according to applicable CDOT Standard Specifications 212-217 and 623. The CDOT Erosion Control and Stormwater Quality Guide (available from the Bid Plans Office at (303) 757-9313) should be used to design erosion controls and restore disturbed vegetation.

Disposal of Drilling Fluids - Drilling fluids used in operations such as Horizontal Directional Drilling may be classified as "discharges" [illegible] removed from the construction area, removed from the State Highway Right of Way, and disposed of at permitted facilities that specifically accept such wastes. Disposal of drilling fluids into storm drains, storm sewers, roadside ditches or any other type of man-made or natural waterway is prohibited by Water Quality Control and/or Solid Waste regulations. Small quantities of drilling fluid solids (less than 1 cubic yard of solids) may be left on-site after either being separated from fluids or after infiltration of the water, provided: 1) the drilling fluid consists of only water and bentonite clay, or, if required for proper drilling properties, small quantities of polymer additives that are approved for use in drinking water well drilling; 2) the solids are fully contained in a pit, and are not likely to pose a nuisance to future work in the area, 3) the solids are covered and the area restored as required by CDOT permit requirements (Utility, Special Use, or Access Permits, etc.). ***Contact Information:*** Contact CDPHE (telephone #'s listed above).

Noxious Weeds and Invasive Species Management Plan – Noxious Weeds and Invasive Species guidance can be found by contacting the Colorado Department of Agriculture (https://www.colorado.gov/pacific/agconservation/noxiousweeds) and the Colorado Division of Parks and Wildlife (http://cpw.state.co.us/aboutus/Pages/RS-NoxiousWeeds.aspx). In either case, management plans involving the control of noxious weeds associated with the permitted activity and cleaning of equipment will be required.

Concrete Washout - Waste generated from concrete activities shall NOT be allowed to flow into the drainage ways, inlets, receiving waters, or in the CDOT ROW. Concrete waste shall be placed in a temporary concrete washout facility and must be located a minimum of 50 feet from state waters, drainageways, and inlets. Concrete washout shall only be performed as specified by the CDOT Environmental Program and shall be in accordance to CDOT specifications and guidelines. ***Contact Information****:* Contact CDPHE or find additional information on the CDOT website: https://www.codot.gov/business/designsupport/2011-constructionspecifications/2011-Specs and refer to the specifications and their revisions for sections 101, 107 and 208.

Spill Reporting - Spills shall be contained and cleaned up as soon as possible. Spills shall NOT be washed down into the storm drain or buried. All spills shall be reported to the CDOT Illicit Discharge Hotline at (303) 512-4446 (4H20), as well as the Regional Permitting Office and Regional Maintenance Supervisor. Spills on highways, into waterways, any spill in the highway right-of-way exceeding 25 gallons, or that may otherwise present an immediate danger to the public shall be reported by calling 911, and shall also be reported to the CDPHE at 1-877-518-5608. More information can be found at https://www.colorado.gov/pacific/cdphe/emergencyreporting-line.

About This Form - Questions or comments about this Information Summary may be directed to Dan Roussin, Program Administrator, CDOT Access Management Unit, at (303) 757-9841, daniel.roussin@state.co.us

COLORADO
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What is stormwater runoff?

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like roads and sidewalks prevent stormwater from naturally soaking into the ground

Why is stormwater runoff a problem?

Stormwater can pick up debris, chemicals, dirt and other pollutants and flow into CDOT's storm drain system or directly into a stream, river, lake, wetland or reservoir. Anything that enters CDOT's storm drain system is discharged untreated into the waterways we use for fishing, swimming, and providing drinking water.

Dredged spoil, dirt, slurry, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, chemical waste, biological nutrient, biological material, radioactive material, heat, pH, wrecked or discarded equipment, rock, sand, any industrial, municipal, or agricultural waste.

Tips for Reporting an Illicit Discharge

Call the illicit discharge hotline at **(303) 512-4426**
From a safe distance try to estimate the amount of the discharge.
Identify characteristics of the discharge (color, odor, algae, etc.).
Obtain information on the vehicle dumping the waste (if applicable).
Do not approach!
Call *CSP for illicit dumping.
If possible, take a photo, record a license plate.

REMEMBER:
Never get too close to the illicit discharge, it may be dangerous!!!

For more information on CDOT Utility Permits:

https://www.codot.gov/business/permits/utilitiesspecialuse

For more information on CDOT Access Permits:

https://www.codot.gov/business/permits/accesspermits

For more information on CDOT Water Quality Program:

Water Quality Program Manager
4201 E. Arkansas Ave.
Shumate Building
Denver, Colorado 80222
303-757-9343

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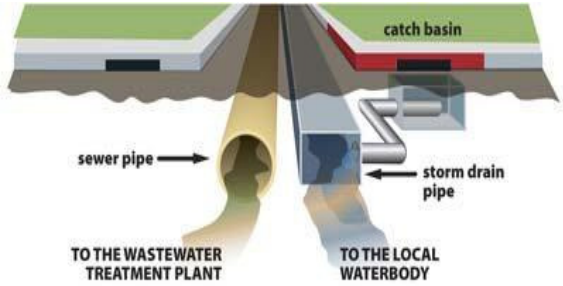
Water Quality Program Industrial Facilities Program

CDOT has a Municipal Separate Storm Sewer System permit, otherwise known as (MS4) from the Colorado Department of Public Health and Environment. The permit states that only stormwater can be discharged from CDOT's storm drain system



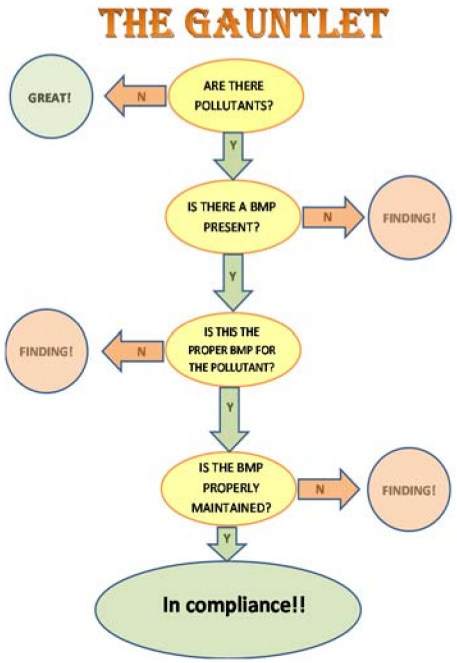
As part of the permit, CDOT has several different programs to prevent pollutants from entering into the storm drain system:

- Construction Site Program
- New Development Redevelopment Program
- Illicit Discharge Program
- Industrial Facilities Program
- Public Education and Outreach Program
- Pollution Prevention and Good Housekeeping Program
- Wet Weather Monitoring Program

COLORADO
Department of Transportation

Control Measures for Industrial Facilities

Industrial facilities can use control measures (CM) otherwise known as Best Management Practices (BMP) during the construction of a facility and when operating the facility. Control measures are schedules of activities, maintenance procedures, and other management practices to prevent and reduce pollution entering into CDOT's storm drain system. Control Measures also include treatment, operating procedures, and practices to control site run off which can include structural and non-structural controls.



CDOT defines a utility, or utility facility as any privately, publicly, or cooperatively owned line, facility, or system producing, transmitting or distributing the following:

- ✓ Communications
- ✓ Cable television
- ✓ Power
- ✓ Electricity
- ✓ Light
- ✓ Heat Gas
- ✓ Oil
- ✓ Crude Products
- ✓ Water
- ✓ Stream
- ✓ Waste
- ✓ Stormwater not connected with highway drainage
- ✓ Similar Commodity

COLORADO
Department of Transportation

Industrial Facilities Program Elements:

1. **Educate and outreach to owners or operators that have potential to contribute substantial pollutant to water.**
2. **Report and include information on discharge and water quality concerns. Provide written notification within 15 days of discovery to CDPHE.**
3. **Submit an annual report to CDPHE containing the number of informational brochures distributed; name and title of each individual trained.**

Education

There are instances when a utility company or other entity doing work in the state highway right-of-way will require some type of environmental permit or clearance for that work. CDOT has put together an Environmental Clearances Information Summary for those applying for a CDOT Utility and Special Use Permit or Access Permit to obtain all required clearances. This fact sheet is given to each permittee and is available at:
http://www.coloradodot.info/programs/environmental/resources/guidance-standards/Environmental%20Clearances%20Info%20Summary.pdf

COLORADO DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ACCESS PERMIT APPLICATION

Issuing authority application acceptance date:

Instructions: **Please print or type**

- Contact the Colorado Department of Transportation (CDOT) or your local government to determine your issuing authority.
- Contact the issuing authority to determine what plans and other documents are required to be submitted with your application.
- Complete this form (some questions may not apply to you) and attach all necessary documents and Submit it to the issuing authority.
- Submit an application for each access affected.
- If you have any questions contact the issuing authority.
- For additional information see CDOT's Access Management website at **https://www.codot.gov/business/permits/accesspermits**

1) Property owner (Permittee)		2) Applicant or Agent for permittee (if different from property owner)	
FRANK HOLMAN		ACA PRODUCTS, INC	
Street address		Mailing address	
14100 COUNTY ROAD 140		PO BOX 1887	
City, state & zip	Phone #	City, state & zip	Phone # (required)
SALIDA, CO 81201	(719) 239-1894	BUENA VISTA, CO 81211	(719) 395-3790
E-mail address		E-mail address if available	
FHOLMAN51@OUTLOOK.COM		BBENNETTS@ACAPRODUCTS.COM	

3) Address of property to be served by permit (required)
N/A

4) Legal description of property: If within jurisdictional limits of Municipality, city and/or County, which one?

county	subdivision	block	lot	section	township	range
CHAFFEE				35 & 36	50N	7 E. NEW MEX

5) What State Highway are you requesting access from?
HIGHWAY 50

6) What side of the highway?
☒ N ☐ S ☐ E ☐ W

7) How many feet is the proposed access from the nearest mile post?
2006 feet ☐ N ☐ S ☐ E ☒ W) from: MMP 213

How many feet is the proposed access from the nearest cross street?
2112 feet ☐ N ☐ S ☒ E ☐ W) from: COUNTY ROAD 219

8) What is the approximate date you intend to begin construction?
4/1/2020

9) Check here if you are requesting a:
☒ new access ☐ temporary access (duration anticipated:) ☐ improvement to existing access
☐ change in access use ☐ removal of access ☐ relocation of an existing access (provide detail)

10) Provide existing property use
AGRICULTURAL

11) Do you have knowledge of any State Highway access permits serving this property, or adjacent properties in which you have a property interest?
☒ no ☐ yes, if yes - what are the permit number(s) and provide copies: and/or, permit date:

12) Does the property owner own or have any interests in any adjacent property?
☒ no ☐ yes, if yes - please describe:

13) Are there other existing or dedicated public streets, roads, highways or access easements bordering or within the property?
☒ no ☐ yes, if yes - list them on your plans and indicate the proposed and existing access points.

14) If you are requesting agricultural field access - how many acres will the access serve?
NO

15) If you are requesting commercial or industrial access please indicate the types and number of businesses and provide the floor area square footage of each.

business/land use	square footage	business	square footage
SAND & GRAVEL PIT			

16) If you are requesting residential developement access, what is the type (single family, apartment, townhouse) and number of units?

type	number of units	type	number of units
N/A			

17) Provide the following vehicle count estimates for vehicles that will use the access. Leaving the property then returning is two counts.

Indicate if your counts are ☐ peak hour volumes or ☒ average daily volumes.	# of passenger cars and light trucks at peak hour volumes	# of multi unit trucks at peak hour volumes
	108	120
# of single unit vehicles in excess of 30 ft.	# of farm vehicles (field equipment)	**Total count of all vehicles**
40	0	268

18) Check with the issuing authority to determine which of the following documents are required to complete the review of your application.

a) Property map indicating other access, bordering roads and streets.
b) Highway and driveway plan profile.
c) Drainage plan showing impact to the highway right-of-way.
d) Map and letters detailing utility locations before and after development in and along the right-of-way.
e) Subdivision, zoning, or development plan.
f) Proposed access design.
g) Parcel and ownership maps including easements.
h) Traffic studies.
i) Proof of ownership.

1- It is the applicant's responsibility to contact appropriate agencies and obtain all environmental clearances that apply to their activities. Such clearances may include Corps of Engineers 404 Permits or Colorado Discharge Permit System permits, or ecological, archeological, historical or cultural resource clearances. The CDOT Environmental Clearances Information Summary presents contact information for agencies administering certain clearances, information about prohibited discharges, and may be obtained from Regional CDOT Utility/Special Use Permit offices or accessed via the CDOT Planning/Construction-Environmental-Guidance webpage: **https://www.codot.gov/programs/environmental/resources/guidance-standards/environmental-clearances-info-summary-august-2017/view**

2- All workers within the State Highway right of way shall comply with their employer's safety and health policies/ procedures, and all applicable U.S. Occupational Safety and Health Administration (OSHA) regulations - including, but not limited to the applicable sections of 29 CFR Part 1910 - Occupational Safety and Health Standards and 29 CFR Part 1926 - Safety and Health Regulations for Construction.

Personal protective equipment (e.g. head protection, footwear, high visibility apparel, safety glasses, hearing protection, respirators, gloves, etc.) shall be worn as appropriate for the work being performed, and as specified in regulation. At a minimum, all workers in the State Highway right of way, except when in their vehicles, shall wear the following personal protective equipment: High visibility apparel as specified in the Traffic Control provisions of the documentation accompanying the Notice to Proceed related to this permit (at a minimum, ANSI/ISEA 107-1999, class 2); head protection that complies with the ANSI Z89.1-1997 standard; and at all construction sites or whenever there is danger of injury to feet, workers shall comply with OSHA's PPE requirements for foot protection per 29 CFR 1910.136, 1926.95, and 1926.96. If required, such footwear shall meet the requirements of ANSI Z41-1999.

Where any of the above-referenced ANSI standards have been revised, the most recent version of the standard shall apply.

3- The Permittee is responsible for complying with the Revised Guidelines that have been adopted by the Access Board under the American Disabilities Act (ADA). These guidelines define traversable slope requirements and prescribe the use of a defined pattern of truncated domes as detectable warnings at street crossings. The new Standards Plans and can be found on the Design and Construction Project Support web page at:
https://www.codot.gov/business/civilrights/ada/resources-engineers

If an access permit is issued to you, it will state the terms and conditions for its use. Any changes in the use of the permitted access not consistent with the terms and conditions listed on the permit may be considered a violation of the permit.

The applicant declares under penalty of perjury in the second degree, and any other applicable state or federal laws, that all information provided on this form and submitted attachments are to the best of their knowledge true and complete.

I understand receipt of an access permit does not constitute permission to start access construction work.

Applicant or Agent for Permittee signature	Print name	Date
Blake Bennetts	BLAKE BENNETTS	2/10/20

If the applicant is not the owner of the property, we require this application also to be signed by the property owner or their legally authorized representative (or other acceptable written evidence). This signature shall constitute agreement with this application by all owners-of-interest unless stated in writing. If a permit is issued, the property owner, in most cases, will be listed as the permittee.

Property owner signature	Print name	Date
Frank D Holman	FRANK HOLMAN	2/10/20

ACA PRODUCTS
"ASPHALT, CONCRETE, & AGGREGATES"
P. O. Box 1887 • 702 Gregg Drive • Buena Vista CO 81211
Phone: (719) 395-3790 Fax: (719) 395-3794

Exhibit 2—Highway Access Permit Design Plans

CONSTRUCTION DOCUMENTS
HIGHWAY 50 TURN LANES

LOCATED WITHIN SECTIONS 1 AND 2, TOWNSHIP 49 NORTH, RANGE 7 EAST AND SECTIONS 35 AND 36, TOWNSHIP 50 NORTH, RANGE 7 EAST OF THE NEW MEXICO MERIDIAN.

ACCESS PERMIT #_____
MM 212.7

GENERAL NOTES

1. FOR PRELIMINARY PLAN QUANTITIES OF PAVEMENT MATERIALS, THE FOLLOWING RATES OF APPLICATION WERE USED:
   - TACK COAT DILUTED EMULSIFIED ASPHALT @ 0.1 GALS./SQ. YD.(DILUTED)
   - EMULSIFIED ASPHALT (PRIME COAT) @ 0.3 GALS./SQ. YD.
   - HOT MIX ASPHALT @ 110 LBS./SQ. YD./INCH
2. A TACK COAT OF EMULSIFIED ASPHALT (SLOW SETTING) IS TO BE APPLIED TO IMPROVE BOND AT THE FOLLOWING LOCATIONS:
   - BEFORE PLACING NEW PAVEMENT OVER EXISTING PAVEMENT OR BASE COURSE MATERIAL,
   - ALONG THE FACE OF ALL SURFACES AGAINST WHICH ASPHALT WILL BE PLACED, AND
   - BETWEEN PAVEMENT COURSES.
3. DILUTED EMULSIFIED ASPHALT FOR TACK COAT SHALL CONSIST OF 1 PART EMULSIFIED ASPHALT AND 1 PART WATER. RATES OF APPLICATION SHALL BE AS DETERMINED BY THE ENGINEER AT THE TIME OF APPLICATION.
4. WATER SHALL BE USED AS A DUST PALLIATIVE WHERE REQUIRED. LOCATIONS SHALL BE AS DIRECTED BY THE ENGINEER.
5. THE FOLLOWING SHALL BE FURNISHED WITH EACH BITUMINOUS PAVER:
   - A SKI TYPE DEVICE AT LEAST 30 FEET IN LENGTH.
   - SHORT SKI OR SHOE.
   - 1500 FEET OF CONTROL LINE AND STAKES.
6. ANY LAYER OF BITUMINOUS PAVEMENT THAT IS TO HAVE A SUCCEEDING LAYER PLACED THEREON SHALL BE COMPLETED FULL WIDTH BEFORE SUCCEEDING LAYER IS PLACED.
7. PRIOR TO PLACING BITUMINOUS PAVEMENT, THE PAVED SURFACE SHALL BE SWEPT AND CLEANED.
8. THE CONTRACTOR MAY USE AN EXPOSED LONGITUDINAL JOINT FOR A MAXIMUM OF ONE DAY. THE JOINT WILL CONSIST OF A VERTICAL FACE 1 INCH DEEP, AND AT THE BOTTOM OF THE VERTICAL FACE, A 3:1 SLOPE TO THE EXISTING PAVEMENT (OR SUBGRADE). THE MAXIMUM DEPTH OF THE 3:1 SLOPE SHALL BE 2 INCHES. AT THE END OF ONE DAY, PLACEMENT OF HMA ON THE ADJACENT LANE IS REQUIRED.
9. ALL CONCRETE SHALL BE MANUFACTURED ACCORDING TO THE REQUIREMENTS OF TABLE 601-2 IN SECTION 601.04 FOR A CLASS 2 SULFATE EXPOSURE LEVEL.
10. WHERE NEW PAVEMENT IS TO ABUT EXISTING PAVEMENT, THE EXISTING PAVEMENT SHALL BE CUT TO A NEAT VERTICAL LINE USING A CUTTING SAW OR OTHER METHOD AS APPROVED BY THE ENGINEER.
11. NO EXCAVATION WORK SHALL BEGIN UNTIL THE CONTRACTOR HAS OBTAINED, AT HIS EXPENSE, ANY PERMITS REQUIRED TO PERFORM THE PROPOSED WORK.
12. DURING HMA PAVING OPERATIONS, TEMPORARY PAVEMENT MARKINGS SHALL BE PROVIDED AND PLACED/REMOVED BY THE CONTRACTOR AT THE END OF EACH DAY. LOCATING, ALIGNING, AND PLACING SHALL BE DONE UNDER THE SUPERVISION OF THE TRAFFIC CONTROL SUPERVISOR AND IN ACCORDANCE WITH STANDARD PLANS S-627-1.
13. DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:
   - FULL DEPTH OF ALL EMBANKMENTS:
   - BASES OF CUTS AND FILLS 6 INCHES.
   - FULL DEPTH OF EMBANKMENT SECTIONS USED FOR DITCHES AND CHANNEL CHANGES.
   - FULL DEPTH OF STRUCTURE BACKFILL MATERIAL.
14. TYPE OF COMPACTION FOR EMBANKMENT FOR THIS PROJECT WILL BE AASHTO T-99. WATER FOR COMPACTION WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
15. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN DRAINAGE DURING THE WORK.
16. THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO THOSE AREAS WITHIN THE LIMITS OF DISTURBANCE AND/OR TOES OF SLOPES AS SHOWN ON THE PLANS AND CROSS-SECTIONS. ANY DISTURBANCE BEYOND THOSE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. CONSTRUCTION ACTIVITIES IN ADDITION TO NORMAL CONSTRUCTION PROCEDURE SHALL INCLUDE PARKING OF VEHICLES OR EQUIPMENT, DISPOSAL OF LITTER AND ANY OTHER ACTION WHICH WOULD ALTER EXISTING CONDITIONS.
17. THE CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION DESIGNATED TO REMAIN FROM DAMAGE DURING CONSTRUCTION OPERATIONS. ANY MONUMENTS DISTURBED BY THE CONTRACTOR THAT ARE NOT DESIGNATED FOR RELOCATION, SHALL BE RESET AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR AND ENGINEER SHALL NOTE THESE MONUMENTS IN THE FIELD PRIOR TO CONSTRUCTION. SEE TABULATION OF SURVEY.

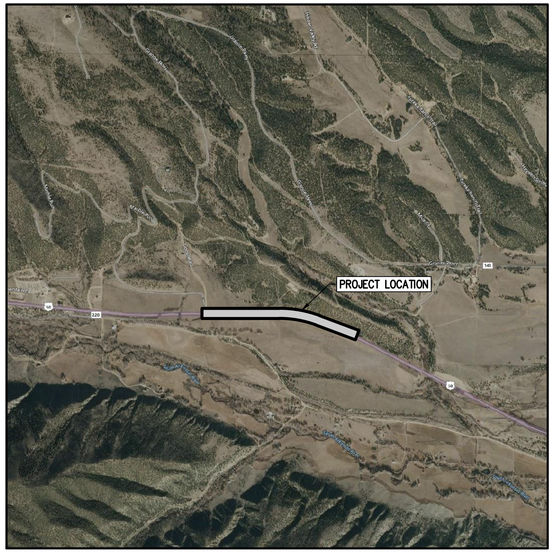
DRAINAGE GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEWATERING AND DIVERSION INCLUDING BUT NOT LIMITED TO LIVE STREAM FLOW AND GROUNDWATER, IF NEEDED, AND OBTAINING THE APPLICABLE DEWATERING PERMIT FOR CONSTRUCTION AT THE SITE. THIS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS THEREIN CONTAINED.
2. ALL STRUCTURE INLET AND OUTLET ELEVATIONS HAVE BEEN APPROXIMATED USING DESIGN SURVEY ELEVATIONS. ADJUSTMENTS MAY BE NECESSARY DURING CONSTRUCTION. ALL CHANGES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

EROSION CONTROL NOTES:

1. TO THE EXTENT PRACTICABLE, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO GRADING ACTIVITIES. AT ALL TIMES DURING PROJECT CONSTRUCTION, ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO PREVENT ACCELERATED EROSION ON THE SITE AND ON ANY ADJACENT PROPERTIES.
2. ALL TOPSOIL, WHERE PHYSICALLY PRACTICABLE, SHALL BE SALVAGED AND NO TOPSOIL SHALL BE REMOVED FROM SITE EXCEPT AS SET FORTH IN THE APPROVED PLANS. TOPSOIL AND OVERBURDEN SHALL BE SEGREGATED AND STOCKPILED SEPARATELY. TOPSOIL AND OVERBURDEN SHALL BE REDISTRIBUTED WITHIN THE GRADED AREA AFTER ROUGH GRADING TO PROVIDE A SUITABLE BASE FOR AREAS WHICH WILL BE SEEDED AND PLANTED. RUNOFF FROM STOCKPILED AREA SHALL BE CONTROLLED TO PREVENT EROSION AND RESULTANT SEDIMENTATION OF RECEIVNG WATER.
3. PERMANENT OR TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED TO DISTURBED AREAS WITHIN 14 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. SOIL STABILIZATION MEASURES SHALL BE APPLIED WITHIN 14 DAYS TO DISTURBED AREAS WHICH MAY NOT BE AT FINAL GRADE, BUT WILL BE LEFT DORMANT FOR LONGER THAN 30 DAYS. IT IS RECOMMENDED THAT THE PERMANENT SEED MIX BE PLANTED AFTER OCTOBER TO KEEP SEEDLINGS FROM DEVELOPING BEFORE WINTER. TEMPORARY VEGETATIVE COVER CONSISTING OF ANNUAL RYE GRASS SHALL BE HYDRO SEEDED AT 20 POUNDS PURE LIVE SEED PER ACRE.
4. FUGITIVE DUST EMISSIONS RESULTING FROM GRADING ACTIVITIES AND/OR WIND SHALL BE CONTROLLED USING THE BEST AVAILABLE CONTROL TECHNOLOGY AS DEFINED BY THE COLORADO DEPARTMENT OF HEALTH AT THE TIME OF GRADING.
5. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DURING CONSTRUCTION AND SHALL BE INSTALLED WITHIN 24 HOURS IF REQUIRED BY THE STORMWATER COORDINATOR OR THEIR REPRESENTATIVE.
6. AREAS WHERE SILT FENCE IS NOT INDICATED, WILL REQUIRE SOME FORM OF SEDIMENT CONTROL. CONTRACTOR TO CRIMP MULCH INTO THE SLOPE.

BASIS OF ELEVATION:
PROJECT ELEVATIONS ARE BASED ON GPS OBSERVATION DERIVED FROM AN OPUS SOLUTION USING GEOID12B, HELD ON CONTROL POINT CP-1, AS MONUMENTED BY A NO. 5 REBAR WITH 2 INCH ALUMINUM CAP STAMPED CP-1 WITH AN NAVD88 ELEVATION OF 8011.90 FEET.



1 / C1 | C1 — VICINITY MAP
SCALE: 1" = 2000'

Index of Sheets

PREPARED FOR:
ACA PRODUCTS
PO BOX 1887
BUENA VISTA, CO 81211
(719) 395-3790

GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION WORK PERFORMED AND MATERIALS SUPPLIED SHALL CONFORM TO THE SITE WORK SPECIFICATIONS TO THE CURRENT EDITIONS OF "CDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND THE "CDOT STANDARD PLANS, M&S STANDARDS" AND SUPPLEMENTALS, UNLESS OTHERWISE NOTED ON THE PLANS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES AND GOVERNMENTAL AGENCIES WHO MIGHT HAVE UTILITY LINES ON OR ACROSS THE PREMISES, OR WHO MIGHT BE AFFECTED BY THE CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE HIS ACTIVITIES WITH THE UTILITY COMPANIES TO ENSURE COMPLIANCE WITH THE PROJECT SCHEDULE ESTABLISHED BY THE GENERAL CONTRACTOR. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT EXISTING UTILITY LINES, AND SHALL REPAIR ANY DAMAGES AT HIS OWN EXPENSE. CALL THE UTILITY NOTIFICATION CENTER OF COLORADO AT 1-800-922-1987 AT LEAST 2 DAYS IN ADVANCE BEFORE COMMENCEMENT OF WORK.
3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSURANCE OF MATERIALS, INSTALLATION AND MAINTENANCE OF THE SILT FENCE AND EROSION CONTROL LOG BARRIER AROUND THE LIMITS OF CONSTRUCTION AND AS SHOWN ON THE APPROVED PLAN, DURING CONSTRUCTION AND UNTIL ALL WORK IS COMPLETE AND VEGETATION IS REESTABLISHED.
4. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES, SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION. ALL PAVEMENT STRIPING SHALL BE FOUR (4) INCHES WIDE, UNLESS SHOWN OTHERWISE ON THE PLANS.
5. ALL PAVEMENT REMOVAL CONTIGUOUS TO PAVEMENT REMAINING, SHALL BE SAW-CUT IN A STRAIGHT LINE TO THE FULL DEPTH OF THE EXISTING PAVEMENT. ALL DEBRIS FROM REMOVAL OPERATIONS SHALL BE REMOVED FROM THE SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS ON-SITE WILL NOT BE PERMITTED.
6. UNLESS OTHERWISE STATED IN THE GENERAL CONDITIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTING. ALL SUBGRADE, CONCRETE AND ASPHALTIC PAVEMENT TESTING SHALL CONFORM TO THE CDOT STANDARD SPECIFICATIONS. ALL TEST RESULTS SHALL BE FORWARDED TO THE ENGINEER FOR HIS REVIEW AND APPROVAL.
7. THE CONTRACTOR SHALL PROTECT ALL STRUCTURES DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTING AND MAINTAINING BARRICADES AND OTHER TRAFFIC CONTROL DEVICES AS NECESSARY AROUND THE PERIMETER AND ADJACENT PUBLIC STREETS. CONTRACTOR TO PROVIDE A TRAFFIC CONTROL PLAN TO CDOT FOR REVIEW AND APPROVAL.

AGENCY LIST:

CIVIL ENGINEER
BASELINE ENGINEERING
1950 FORD STREET
GOLDEN, CO 80401
CONTACT: NOAH NEMMERS, P.E.
303.940.9966

OWNER/CONTRACTOR
ACA PRODUCTS
PO BOX 1887
BUENA VISTA, CO 81211
CONTACT: SHIELA MOORE
719.395.3790

REVIEWING AGENCY
CDOT REGION 5
3803 NORTH MAIN AVE.
SUIT 100
DURANGO, CO 81301
970.385.3626

LEGEND

EXISTING LINETYPES	PROPOSED LINETYPES	
81	81	MINOR CONTOUR (1' INTERVAL)
5280	5280	MAJOR CONTOUR (5' INTERVAL)
		RIGHT-OF-WAY
		SECTION LINE
		EDGE OF ASPHALT
		EDGE OF GRAVEL
		DITCH FLOWLINE
		LOT LINE
		WIRE FENCE
OHU		OVERHEAD UTILITY
T T		UNDERGROUND TELEPHONE
		WATER SURFACE

EXISTING SYMBOLS	PROPOSED SYMBOLS	
		CONTROL POINT
		FOUND PROPRTY PIN AS DESCRIBED
		WATER WELL
		POWER POLE
		GUY WIRE
		COMMUNICATION PEDISTAL
		SIGN
		DOUBLE POST SIGN
		T-POST
		CONIFEROUS TREE
	SF	SILT FENCE
	CD	CHECK DAMS
	IP	INLET PROTECTION
	OP	OUTLET PROTECTION
	PS	PERMANENT SEEDING
	CWA	CONCRETE WASHOUT AREA
		ASPHALT PAVING

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DESIGNED BY	DRAWN BY	CHECKED BY
NJN	WAC	NJN

REVISION DESCRIPTION	PREPARED BY	DATE

ACA PRODUCTS, INC.
UNINCORPORATED CHAFFEE COUNTY
HIGHWAY 50 TURN LANES
HIGHWAY 50 & COUNTY ROAD 219
COVER SHEET

PREPARED UNDER THE DIRECT SUPERVISION OF
COLORADO LICENSED NOAH J. NEMMERS 39820 PROFESSIONAL ENGINEER
FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM	BASELINE
SURVEY DATE	05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_Cover & Details.dwg
SHEET	1 OF 21

C1

N:\co3383 - ACA Hwy 50 Turn Lanes\Drawings\Construction Documents\3383PR_Cover & Details.dwg, 2/6/2020 2:56:37 PM, Wade Cato

PLAN NUMBER	NEW OR REVISED	M STANDARD TITLE	PAGE NUMBER
M-100-1		STANDARD SYMBOLS (3 SHEETS)	1-3
M-100-2		ACRONYMS AND ABBREVIATIONS (4 SHEETS)	4-7
M-203-1	☐	APPROACH ROADS (REVISED ON JULY 08, 2013)	~~8~~
M-203-2		DITCH TYPES	9
M-203-11		SUPERELEVATION CROWNED AND DIVIDED HIGHWAYS (3 SHEETS)	10-12
M-203-12		SUPERELEVATION STREETS (2 SHEETS)	13-14
M-206-1		EXCAVATION AND BACKFILL FOR STRUCTURES (2 SHEETS)	15-16
M-206-2		EXCAVATION AND BACKFILL FOR BRIDGES (2 SHEETS)	17-18
M-208-1	■	TEMPORARY EROSION CONTROL (11 SHEETS) (REVISED ON APRIL 01, 2019)	~~19-30~~
M-210-1		MAILBOX SUPPORTS (2 SHEETS)	31-32
M-214-1		PLANTING DETAILS	33
M-216-1	☐	SOIL RETENTION COVERING (2 SHEETS) (NEW ON JULY 16, 2015)	
M-412-1	☐	CONCRETE PAVEMENT JOINTS (5 SHEETS) (REVISED ON JANUARY 18, 2018)	~~34-38~~
M-510-1		STRUCTURAL PLATE PIPE H-20 LOADING	39
M-601-1	■	SINGLE CONCRETE BOX CULVERT (CAST-IN-PLACE) (2 SHEETS) (REVISED ON APRIL 05, 2019)	~~40-41~~
M-601-2	☐	DOUBLE CONCRETE BOX CULVERT (CAST-IN-PLACE) (2 SHEETS) (REVISED ON APRIL 05, 2019)	~~42-43~~
M-601-3	☐	TRIPLE CONCRETE BOX CULVERT (CAST-IN-PLACE) (2 SHEETS) (REVISED ON APRIL 05, 2019)	~~44-45~~
M-601-10		HEADWALL FOR PIPES	46
M-601-11		TYPE "S" SADDLE HEADWALLS FOR PIPE	47
M-601-12	■	HEADWALLS AND PIPE OUTLET PAVING	48
M-601-20	■	WINGWALLS FOR PIPE OR BOX CULVERTS (2 SHEETS) (REVISED ON SEPTEMBER 04, 2018)	~~49~~
M-603-1	■	METAL PIPE (4 SHEETS) (REVISED ON OCTOBER 02, 2014)	~~50-53~~
M-603-2	☐	REINFORCED CONCRETE PIPE (REVISED ON OCTOBER 02, 2014)	~~54~~
M-603-3	☐	PRECAST CONCRETE BOX CULVERT (REVISED ON APRIL 05, 2019)	~~55~~
M-603-4	☐	CORRUGATED POLYETHYLENE PIPE (AASHTO M294) (REVISED ON OCT. 02, 2014)	~~56~~
M-603-5	☐	POLYVINYL CHLORIDE (PVC) PIPE (AASHTO M304) (REVISED ON OCT. 02, 2014)	~~57~~
M-603-6	☐	STEEL REINFORCED POLYETHYLENE RIBBED PIPE (AASHTO MP 20) (NEW ON APRIL 30, 2015)	
M-603-10	☐	CONCRETE AND METAL END SECTIONS (2 SHEETS) (REVISED ON MAY 1, 2018)	~~58-59~~
M-604-10		INLET, TYPE C	60
M-604-11		INLET, TYPE D	61
M-604-12		CURB INLET TYPE R (2 SHEETS)	62-63
M-604-13		CONCRETE INLET TYPE 13	64
M-604-20		MANHOLES (3 SHEETS)	65-67
M-604-25		VANE GRATE INLET (5 SHEETS)	68-72
M-605-1		SUBSURFACE DRAINS	73
M-606-1	☐	GUARDRAIL TYPE 3 W-BEAM (20 SHEETS) (REVISED ON OCTOBER 27, 2014)	~~74-92~~
M-606-1	☐	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES (19 SHEETS) (REVISED ON DECEMBER 21, 2018)	
M-606-13	☐	GUARDRAIL TYPE 7 F-SHAPE BARRIER (4 SHEETS) (REVISED ON AUGUST 30, 2013)	~~93-96~~
M-606-14		PRECAST TYPE 7 CONCRETE BARRIER (3 SHEETS)	97-99
M-606-15	☐	GUARDRAIL TYPE 9 SINGLE SLOPE BARRIER (11 SHEETS) (REVISED ON JULY 16, 2018)	

PLAN NUMBER	NEW OR REVISED	M STANDARD TITLE	PAGE NUMBER
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M-607-2		CHAIN LINK FENCE (3 SHEETS)	103-105
M-607-3		BARRIER FENCE	106
M-607-4	■	DEER FENCE, GATES, AND GAME RAMPS (5 SHEETS) (REVISED ON APRIL 30, 2015)	~~107-109~~
M-607-10		PICKET SNOW FENCE	110
M-607-15		ROAD CLOSURE GATE (9 SHEETS)	111-119
M-608-1	☐	CURB RAMPS (10 SHEETS) (REVISED ON MAY 3, 2019)	~~120-125~~
M-609-1	☐	CURBS, GUTTERS, AND SIDEWALKS (4 SHEETS) (REVISED ON JULY 24, 2012)	~~126-129~~
M-611-1		CATTLE GUARD (2 SHEETS)	130-131
M-611-2	☐	DEER GUARD (2 SHEETS) (NEW ON APRIL 30, 2015)	
M-613-1		ROADWAY LIGHTING (4 SHEETS)	132-135
M-614-1		RUMBLE STRIPS (3 SHEETS)	136-138
M-614-2		SAND BARREL ARRAYS (2 SHEETS)	139-140
M-615-1		EMBANKMENT PROTECTOR TYPE 3	141
M-615-2		EMBANKMENT PROTECTOR TYPE 5	142
M-616-1		INVERTED SIPHON	143
M-620-1		FIELD LABORATORY CLASS 1	144
M-620-2		FIELD LABORATORY CLASS 2 (2 SHEETS)	145-146
M-620-11		FIELD OFFICE CLASS 1	147
M-620-12		FIELD OFFICE CLASS 2	148
M-629-1		SURVEY MONUMENTS (2 SHEETS)	149-150

COLORADO
DEPARTMENT OF TRANSPORTATION

M&S STANDARDS PLANS LIST

July 04, 2012

Revised on May 03, 2019

ALL OF THE M&S STANDARD PLANS, AS SUPPLEMENTED AND REVISED, APPLY TO THIS PROJECT WHEN USED BY DESIGNATED PAY ITEM OR SUBSIDIARY ITEM.

NEW OR REVISED STANDARD PLAN SHEETS APPLICABLE TO THIS PROJECT, INDICATED BY A MARKED BOX ■, WILL BE ATTACHED TO THE PLANS.

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S-612-1	■	DELINEATOR INSTALLATIONS (8 SHEETS) (REVISED ON APRIL 12, 2018).	~~151-157~~
S-614-1	■	GROUND SIGN PLACEMENT (2 SHEETS) (REVISED ON DECEMBER 12, 2014).	~~158-159~~
S-614-2	■	CLASS I SIGNS (REVISED ON JUNE 24, 2016)	~~160~~
S-614-3		CLASS II SIGNS	161
S-614-4	☐	CLASS III SIGNS (3 SHEETS) (REVISED ON DECEMBER 17, 2014)	~~162-164~~
S-614-5	☐	BREAK-AWAY SIGN SUPPORT DETAILS (REVISED ON FEBRUARY 8, 2017) FOR GROUND SIGNS (2 SHEETS)	~~165-166~~
S-614-6	☐	CONCRETE FOOTINGS AND SIGN ISLANDS FOR CLASS III SIGNS (2 SHEETS) (REVISED ON SEPTEMBER 16, 2013)	~~167-168~~
S-614-8	☐	TUBULAR STEEL SIGN SUPPORT DETAILS (7 SHEETS) (REVISED ON APRIL 12, 2018)	~~169-173~~
S-614-9	☐	PEDESTRIAN PUSH BUTTON POST ASSEMBLY (REVISED ON MAY 24, 2016)	~~174~~
S-614-10		MARKER ASSEMBLY INSTALLATIONS	175
S-614-11		MILEPOST SIGN DETAIL FOR HIGH SNOW AREAS	176
S-614-12	☐	STRUCTURE NUMBER INSTALLATION (2 SHEETS) (REVISED ON APRIL 30, 2018)	~~177~~
S-614-14		FLASHING BEACON AND SIGN INSTALLATIONS (3 SHEETS)	178-180
S-614-20		TYPICAL POLE MOUNT SIGN INSTALLATIONS	181
S-614-21	☐	CONCRETE BARRIER SIGN POST INSTALLATIONS (REVISED ON MAY 24, 2016)	~~182~~
S-614-22		TYPICAL MULTI-SIGN INSTALLATIONS	183
S-614-40	☐	TYPICAL TRAFFIC SIGNAL INSTALLATION DETAILS (5 SHEETS) (REVISED ON JUNE 17, 2016)	~~184-188~~
S-614-40A	☐	ALTERNATIVE TRAFFIC SIGNAL INSTALLATION DETAILS (4 SHEETS) (REVISED ON JUNE 17, 2016)	~~189-192~~
S-614-41	☐	TEMPORARY SPAN WIRE SIGNALS (REVISED ON APRIL 02, 2015)	~~193~~
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S-614-44	☐	PEDESTAL POLE SIGNALS (2 SHEETS) (REVISED ON JUNE 17, 2016)	
S-614-50	☐	STATIC SIGN MONOTUBE STRUCTURES (12 SHEETS) (REVISED ON JUNE 17, 2016)	~~208-219~~
S-614-60	☐	DYNAMIC SIGN MONOTUBE STRUCTURES (14 SHEETS) (REVISED ON JUNE 17, 2016)	~~220-233~~
S-627-1	■	PAVEMENT MARKINGS (8 SHEETS) (REVISED ON FEBRUARY 08, 2017)	~~234-238~~
S-630-1	☐	TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION (24 SHEETS) (REVISED ON JUNE 23, 2016)	~~239-258~~
S-630-2	■	BARRICADES, DRUMS, CONCRETE BARRIERS (TEMP) AND VERTICAL PANELS (REVISED ON JUNE 23, 2016)	~~259~~
S-630-3		FLASHING BEACON (PORTABLE) DETAILS	260
S-630-4		STEEL SIGN SUPPORT (TEMPORARY) INSTALLATION DETAILS (2 SHEETS)	261-262
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S-630-6		EMERGENCY PULL-OFF AREA (TEMPORARY)	265
S-630-7		ROLLING ROADBLOCKS FOR TRAFFIC CONTROL (3 SHEETS)	266-268

Computer File Information		Sheet Revisions	
Creation Date: 07/04/12 Initials: JBK		Date:	Comments
Last Modification Date: 05/03/19 Initials: LTA	(R-X)		
Full Path: www.coloradodot.info/business/designsupport	(R-X)		
Drawing File Name: Standards Plans List.dgn	(R-X)		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)		

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Division of Project Support JBK/LTA

STANDARDS PLANS LIST

Issued By: Project Development Branch July 4, 2012

STANDARD PLAN NO.

STANDARD PLANS LIST

Sheet No. 1 of 1

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DESIGNED BY NJN | DRAWN BY WAC | CHECKED BY NJN

REVISION DESCRIPTION | PREPARED BY | DATE

ACA PRODUCTS, INC.

UNINCORPORATED CHAFFEE COUNTY

HIGHWAY 50 TURN LANES
HIGHWAY 50 & COUNTY ROAD 219
CDOT STANDARD PLANS LIST

PREPARED UNDER THE DIRECT SUPERVISION OF
COLORADO LICENSED
NOAH J. NEMMERS
39820
PROFESSIONAL ENGINEER
FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM	BASELINE
SURVEY DATE	05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_Cover & Details.dwg
SHEET	2 OF 21

C2

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TO ESTABLISH GEOMETRIC CONTROL FOR THE CONSTRUCTION OF THIS PROJECT, THE DEPARTMENT HAS PROVIDED THE FOLLOWING INFORMATION:

Format *

- ☐ 3D Design Modeling Electronic Files _____
- ☐ Horizontal Control _____
- ▨ Vertical Control _____
- ▨ Roadway Alignment _____
- ☐ Original Terrain Data _____
- ☐ Other: _____

* Specify the information format, ie., plan sheet, computer disk, computer printout, or other. The information marked is either contained on the plans or is available from the Engineer.

TYPE OF PROJECT

- ☐ Landscaping
- ☐ Signalization
- ☐ Safety Improvement
- ☐ Asphalt Overlay
- ☐ Concrete Overlay
- ☐ Minor Widening
- ☐ Major Reconstruction
- ☐ New Roadway Construction
- ☐ Bridge Replacement
- ☐ Bridge Widening
- ☐ New Bridge
- ☐ Other: _____

SURVEY WORK TO BE PERFORMED BY OTHERS:_____

WORK PERFORMED BY THE CONTRACTOR'S SURVEYOR UNDER SECTION 625:

- ___ ☐ A complete passing Base Line report (completed within 6 months prior to the start of the project)
- ___ ☐ An instrument calibration Certification (completed within 6 months prior to the start of the project)
- ___ ☐ Establish and Maintain Project Centerline or Engineer Approved Offset Line(s)
- ___ ☐ Verification and Maintenance of Horizontal and Vertical Control
- ___ ☐ Verify or Determine existing grades and alignments
- ___ ☐ Verify or Determine existing topography
- ___ ☐ Clearing and Grubbing Limits (Section 201)
- ___ ☐ Removal Limits (Section 202)
- ___ ☐ Reset Items (Section 210)
- ___ ☐ Excavation and Embankment (Section 203)
  - ___ ☐ Excavation
    - ___ ☐ Unclassified
    - ___ ☐ Stripping
    - ___ ☐ Muck
    - ___ ☐ Rock
    - ___ ☐ Borrow
    - ___ ☐ Other: _____
    - ___ ☐ Potholing
  - ___ ☐ Embankment
  - ___ ☐ Site Grading
  - ___ ☐ Erosion Control (Perm)
  - ___ ☐ Other: _____
  - ___ ☐ As Staked Earthwork Quantities (See General Notes)

	Slope Staking (Y/N)	Grid (Y/N)	Grade (Y/N)	Special Interval
Excavation	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
Embankment	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

- ___ ☐ Landscaping
  - ___ ☐ Top Soil (Section 207)
  - ___ ☐ Seeding (Section 212)
  - ___ ☐ Mulching (Section 213)
  - ___ ☐ Planting (Section 214)
  - ___ ☐ Herbicide (Section 217)
  - ___ ☐ Other: _____
- ___ ☐ Erosion Control (Section 208)
  - ___ ☐ Seeding (Temp)
  - ___ ☐ Silt Fence
  - ___ ☐ Erosion Bales
  - ___ ☐ Erosion Logs
  - ___ ☐ Riprap (Temp)
  - ___ ☐ Other: _____
- ___ ☐ Roadway Bases
  - ___ ☐ Untreated Subgrade
  - ___ ☐ Treated Subgrade
  - ___ ☐ Aggregate Base Course (Section 304)
  - ___ ☐ Reconditioning
  - ___ ☐ PMBB - Plant Mix Bituminous Base
  - ___ ☐ Other: _____

	Grid (Y/N)	Grade (Y/N)	Special Interval	Special Offset
Roadway Bases	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

- ___ ☐ Pavements
  - ___ ☐ HMA - Hot Mix Asphalt (Section 403)
  - ___ ☐ Concrete (Section 412)
  - ___ ☐ Heating & Scarifying Treatment
  - ___ ☐ Prime Coat, Tack Coat & Rejuvenating Agent (Section 407)
  - ___ ☐ Seal Coat or Chip Seal (Section 409)
  - ___ ☐ Other: _____
- ___ ☐ Roadway Elements
  - ___ ☐ Curb and Gutter (Section 609)
  - ___ ☐ Drop inlets - alignment and grades (Section 604)
  - ___ ☐ Retaining Walls
  - ___ ☐ Guard Rail (Section 606)
  - ___ ☐ Sidewalk (Section 608)
  - ___ ☐ Overlay Stationing
  - ___ ☐ Other: _____
- ___ ☐ Riprap (Perm) (Section 506)
- ___ ☐ Slope and Ditch Paving (Section 507)
- ___ ☐ Minor Structures
  - ___ ☐ Structure Excavation limits (Section 206)
  - ___ ☐ Culverts (Section 603)
  - ___ ☐ Culverts w/ Headwalls and Wingwalls (Section 601)
  - ___ ☐ Concrete Box Culverts w/ Headwalls and Wingwalls
  - ___ ☐ Pipes (Section 603)
    - ___ ☐ Sanitary Sewer
    - ___ ☐ Storm Sewer
    - ___ ☐ Water
    - ___ ☐ Irrigation
    - ___ ☐ Miscellaneous
  - ___ ☐ Manholes (Section 604)
  - ___ ☐ Inlets (Section 604)
  - ___ ☐ Permanent Water Quality BMP (Section 208)
  - ___ ☐ Other: _____
- ___ ☐ Major Structures - Overhead Signs (Section 614), Concrete Box Culverts, Bridges - and all other structures assigned a structure number
  - ___ ☐ Structure Excavation limits (Section 206)
  - ___ ☐ Concrete Box Culverts (Section 603) w/ Headwalls and Wingwalls (Section 601)
  - ___ ☐ Piling locations and cut off elevations (Section 502)
  - ___ ☐ Caisson locations and elevations (Section 503)
  - ___ ☐ Footing locations, alignment, and elevations
  - ___ ☐ Abutment/Pier locations, alignment, and elevations
  - ___ ☐ Wingwall skew angles/offsets
  - ___ ☐ Structural concrete form locations
  - ___ ☐ Substructure As-constructed survey required for Bridges (Subsection 601 .12) and Overhead signs (S-614-50)
  - ___ ☐ Bridge expansion joint(s) alignment and grade (longitudinal and transverse)
  - ___ ☐ Deck grades at Girder 10th or "n" th point locations and elevations
  - ___ ☐ Slope and Ditch Paving (Section 507)
  - ___ ☐ Other: _____
- ___ ☐ Fencing (Section 607)
  - ___ ☐ Temporary
  - ___ ☐ Permanent
  - ___ ☐ Sound Barrier
  - ___ ☐ Other: _____
- ___ ☐ Delineators (Section 612)
  - ___ ☐ Temporary
  - ___ ☐ Permanent
- ___ ☐ Lighting (Section 613) and Traffic Control Devices (Permanent) (Section 614)
  - ___ ☐ Signal pole locations and elevations
  - ___ ☐ Light pole locations and elevations
  - ___ ☐ Sign locations
  - ___ ☐ Field verify sign post locations, elevations, and lengths before fabrication.
  - ___ ☐ Other: _____

	Grid (Y/N)	Special Interval	Special Offset
Pavements	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

	Tangent Interval	Curve Interval	Special Offset
Curb & Gutter	-	-	-

	Left Interval	Center Interval	Right Interval
Stationing	-	-	-

- ___ ☐ Pavement Marking (Section 627)
  - ___ ☐ Striping (Temp)
  - ___ ☐ Striping (Perm)
  - ___ ☐ Symbols
  - ___ ☐ Other: _____
- ___ ☐ Temporary Lighting and Construction Traffic Control Devices (Section 630)
  - ___ ☐ Signal pole locations and elevations (Temp)
  - ___ ☐ Light pole locations and elevations (Temp)
  - ___ ☐ Sign Locations (Temp)
  - ___ ☐ Other: _____
- ___ ☐ All Easements (Temp Staking by P.L.S. Only)
- ___ ☐ Right of Way (Temp Staking by P.L.S. Only)

WORK PERFORMED BY THE CONTRACTOR'S SURVEYOR UNDER SECTION 629:

- ___ ☐ Monumentation (Section 629)
  - ___ ☐ Control
  - ___ ☐ Right of Way
  - ___ ☐ Land corners, Aliquot corners
  - ___ ☐ Easements
  - ___ ☐ Reference the specified existing monuments:** _____
  - ___ ☐ Replace the specified existing monuments: ** _____
  - ___ ☐ Locate monuments. It is estimated ___ hours are required.

NOTE: All 629 items shall include adequate research, calculations, and evaluations of evidence for monuments to be set.

** A Tabulation of Survey Monuments may be provided on the plans.

GENERAL NOTES:

1. Unless indicated otherwise on this Survey Tabulation Sheet, all survey work and staking intervals shall be done in accordance with the latest edition of the CDOT Survey Manual.
2. Adequate information for establishing lines, grades, and locations for all work items have been specified on the plans. Any additional information required to stake the item or element shall be generated by the Contractor's surveyor.
3. The Contractor's surveyor shall provide an estimate of the man-hours necessary to complete the work items indicated on this sheet. A copy of this sheet, with the estimated man-hours written on the blank line to the left of the specified items, shall be submitted with the Survey Schedule to the Engineer _____ days prior to the Presurvey Conference - Construction Survey.
4. Stakes and Monuments which are damaged or destroyed by the progress of construction shall be replaced by the Contractor at no additional cost to the Department.
5. The Contractor shall furnish an As Staked (or 3D Design Modeling Electronic Files) Earthwork Quantity report to the Engineer prior to completion of twenty percent (20%) of the planned earthwork in any phase as per the CDOT Survey Manual. A printed copy of the As Staked (or 3D Design Modeling Electronic Files) Earthwork data report and a computer disk with that information on it, in the specified format shall be submitted to the Engineer. The Contractor shall field verify original ground cross sections at a maximum 500 feet intervals.
6. Prior to beginning work on any subsequent operation, such as placing base course or paving, the Contractor shall certify in writing to the Engineer that the final grade is within specified tolerance.
7. The Contractor's surveyor shall perform all field surveying and calculations necessary to tie plan grades into field grades.
8. The Contractor shall coordinate construction staking on the project with any utility work.
9. Fieldbooks shall contain daily records of points set and or measurements observed. The information recorded shall contain: date, crew members' names, point no., description, staking information, and sketches. If the survey information is collected electronically, information recorded shall be provided to the Project Engineer in a hard copy format that is intuitive, clear and related to the supplemental information recorded in the field books. All linear surveys, such as slope stakes and blue tops, shall have the station and offset information related to the measured information. Non-linear surveys such as structures staking shall have sketches relating electronic information, such as point numbers, to the sketch.
10. The Contractor's surveyor shall submit the following fieldbooks to the Engineer:
    - ☐ Horizontal Control (Primary & Secondary)
    - ☐ Vertical Control (i.e. Benchmarks)
    - ☐ Property Pin Ties
    - ☐ Horizontal Alignment
    - ☐ Grading
    - ☐ Slope Staking
    - ☐ Minor Structures
    - ☐ Major Structures
    - ☐ One fieldbook for each work category shown on this sheet
    - ☐ Other Fieldbook(s): _____
11. The Contractor's surveyor shall submit the following (prior to surveying on the project) to the Engineer:
    - ☐ All required Instrument Calibrations

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REVISION DESCRIPTION | PREPARED BY | DATE

ACA PRODUCTS, INC.
UNINCORPORATED CHAFFEE COUNTY
HIGHWAY 50 TURN LANES
HIGHWAY 50 & COUNTY ROAD 219
HIGHWAY 50 SURVEY TABULATION

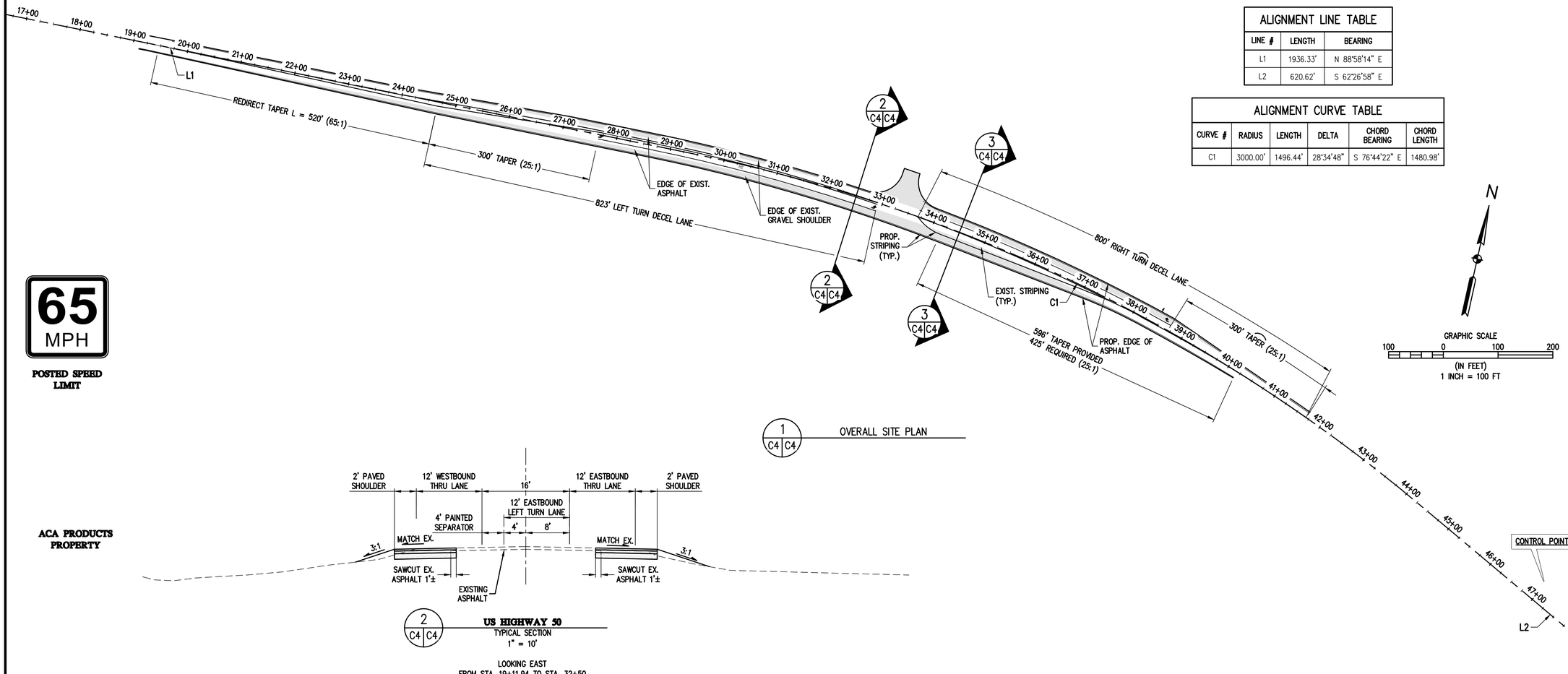
PREPARED UNDER THE DIRECT SUPERVISION OF

COLORADO LICENSED NOAH J. NEMANICH 39820 PROFESSIONAL ENGINEER

FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM	BASELINE
SURVEY DATE	05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_Cover & Details.dwg
SHEET	3 OF 21

C3



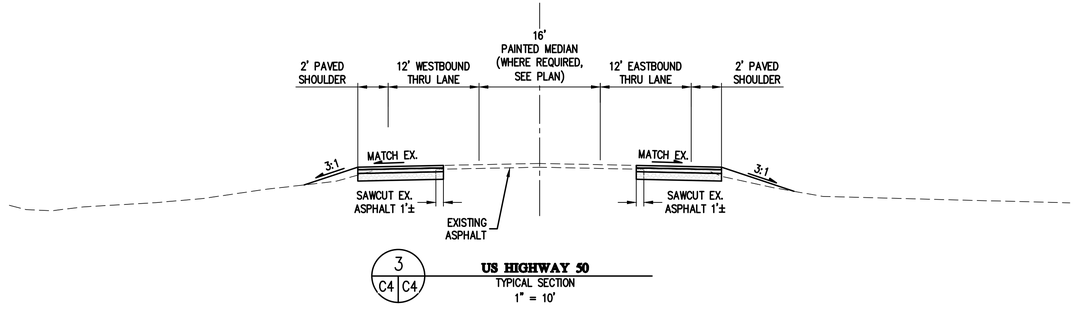
1 C4 C4 OVERALL SITE PLAN

ALIGNMENT LINE TABLE		
LINE #	LENGTH	BEARING
L1	1936.33'	N 88°58'14" E
L2	620.62'	S 62°26'58" E

ALIGNMENT CURVE TABLE					
CURVE #	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C1	3000.00'	1496.44'	28°34'48"	S 76°44'22" E	1480.98'

2 C4 C4 **US HIGHWAY 50**
TYPICAL SECTION
1" = 10'

LOOKING EAST
FROM STA. 19+11.94 TO STA. 32+50



3 C4 C4 **US HIGHWAY 50**
TYPICAL SECTION
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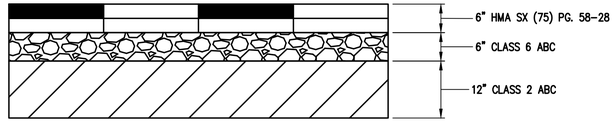
LOOKING EAST
FROM STA. 34+25 TO STA. 47+52.49



4 C4 C4 PAVEMENT DETAIL
NOT TO SCALE

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ACA PRODUCTS, INC.

HIGHWAY 50 TURN LANES

HIGHWAY 50 & COUNTY ROAD 219
OVERALL SITE PLAN

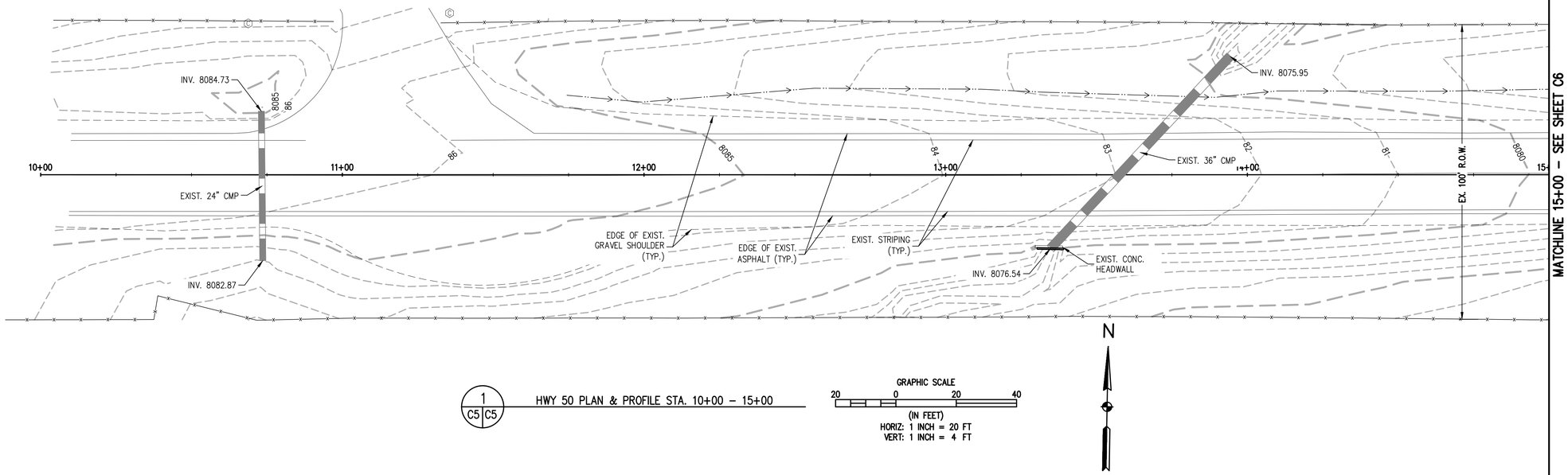
PREPARED UNDER THE DIRECT SUPERVISION OF

COLORADO LICENSED NO. N.J. NEMANICH 39820 PROFESSIONAL ENGINEER

FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM BASELINE	SURVEY DATE 05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_OVERALL SITE PLAN.dwg
SHEET	4 OF 21

C4



1 / C5 | C5 HWY 50 PLAN & PROFILE STA. 10+00 – 15+00

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(IN FEET)
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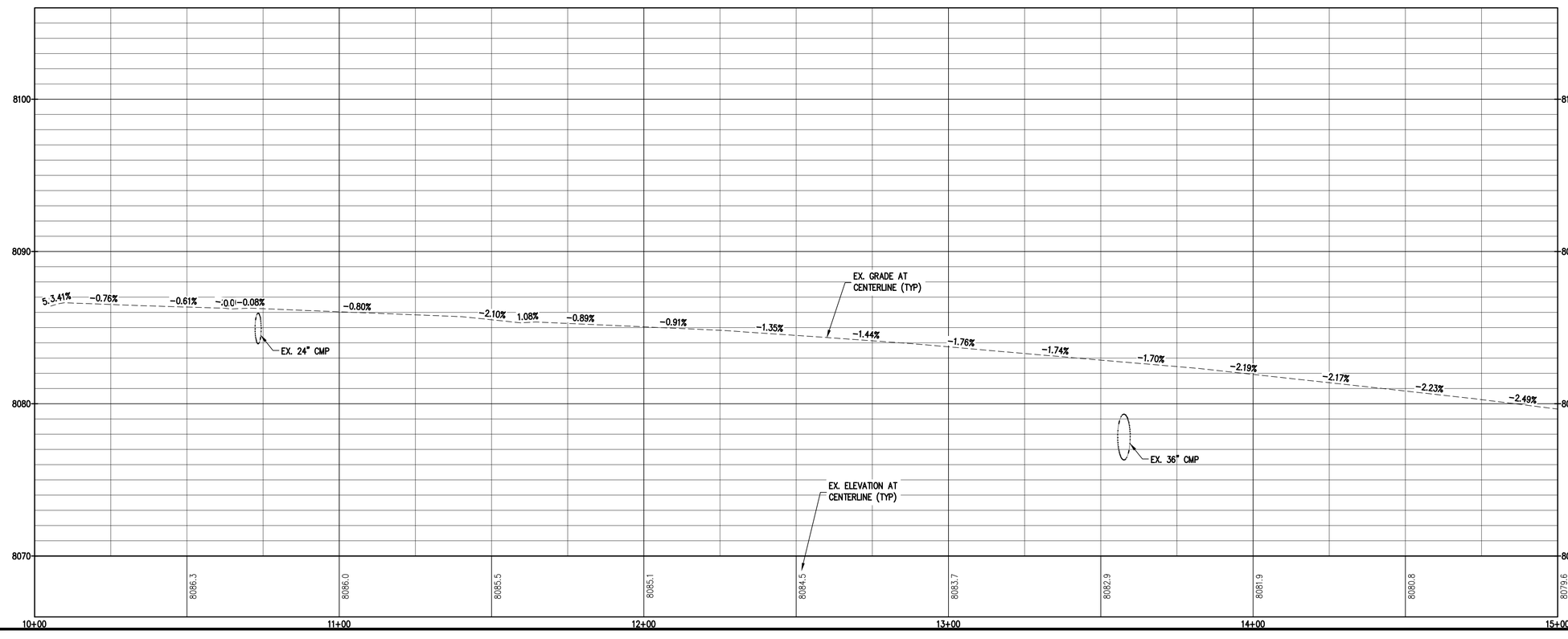
VERT: 1 INCH = 4 FT



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HIGHWAY 50 TURN LANES
HIGHWAY 50 & COUNTY ROAD 219
HWY 50 PLAN & PROFILE STA. 10+00 – 15+00

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FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM	SURVEY DATE
BASELINE	05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_Hwy 50 P&P.dwg
SHEET 5 OF 21	

C5

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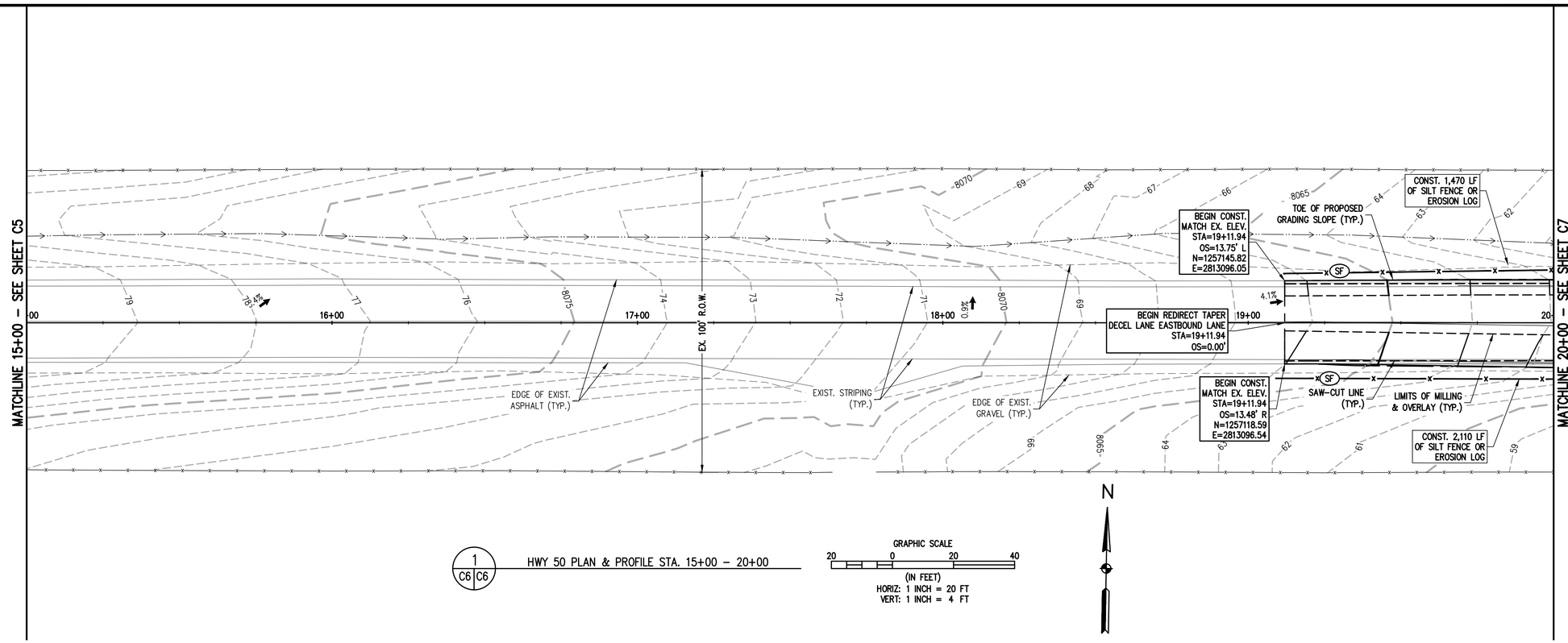

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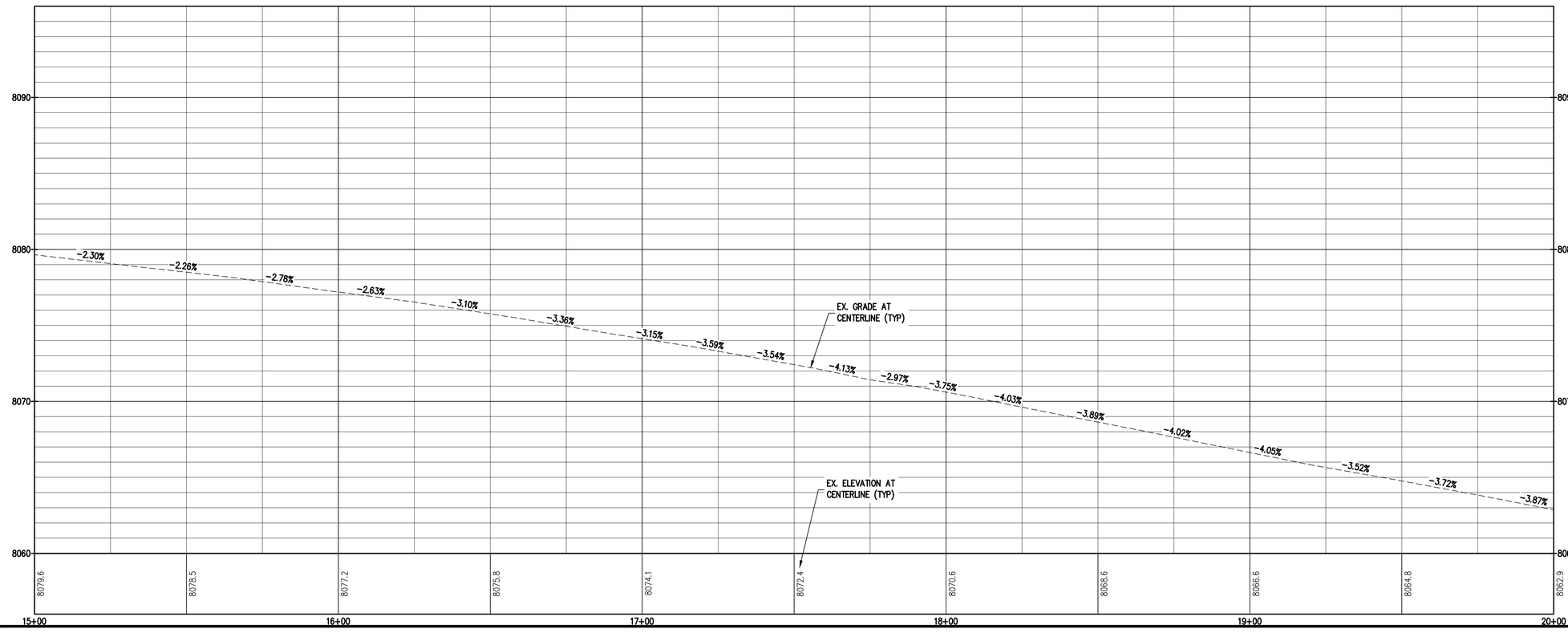

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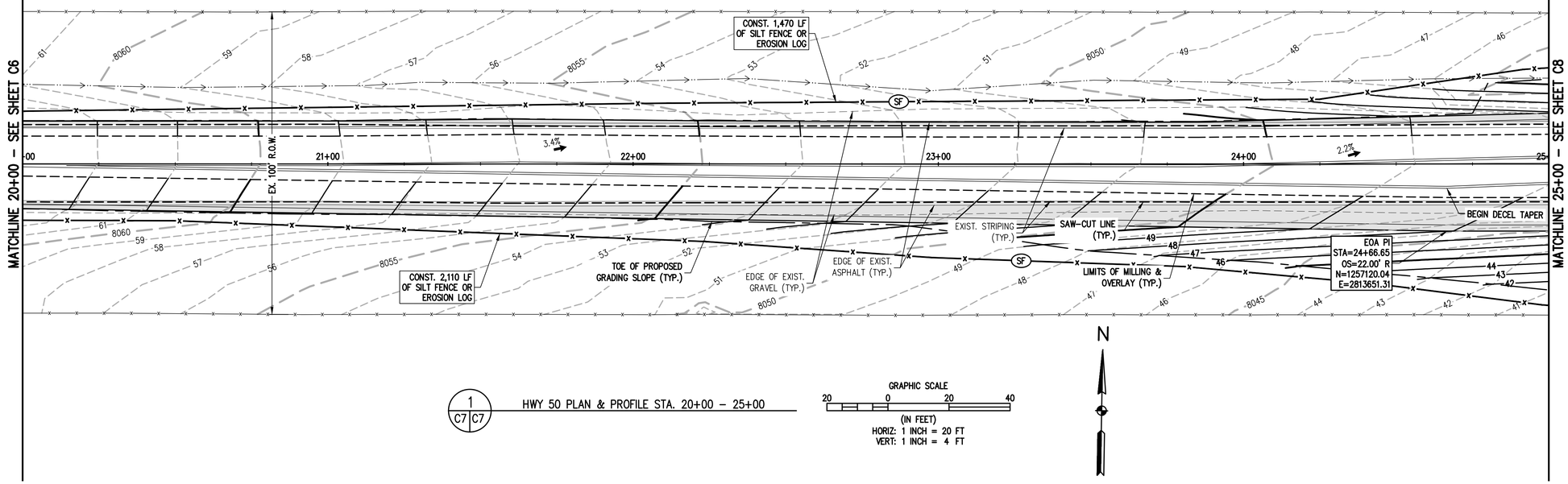
SURVEY FIRM	SURVEY DATE
BASELINE	05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_Hwy 50 P&P.dwg
SHEET 6 OF 21	

C6



1 / C7 | C7 HWY 50 PLAN & PROFILE STA. 20+00 – 25+00

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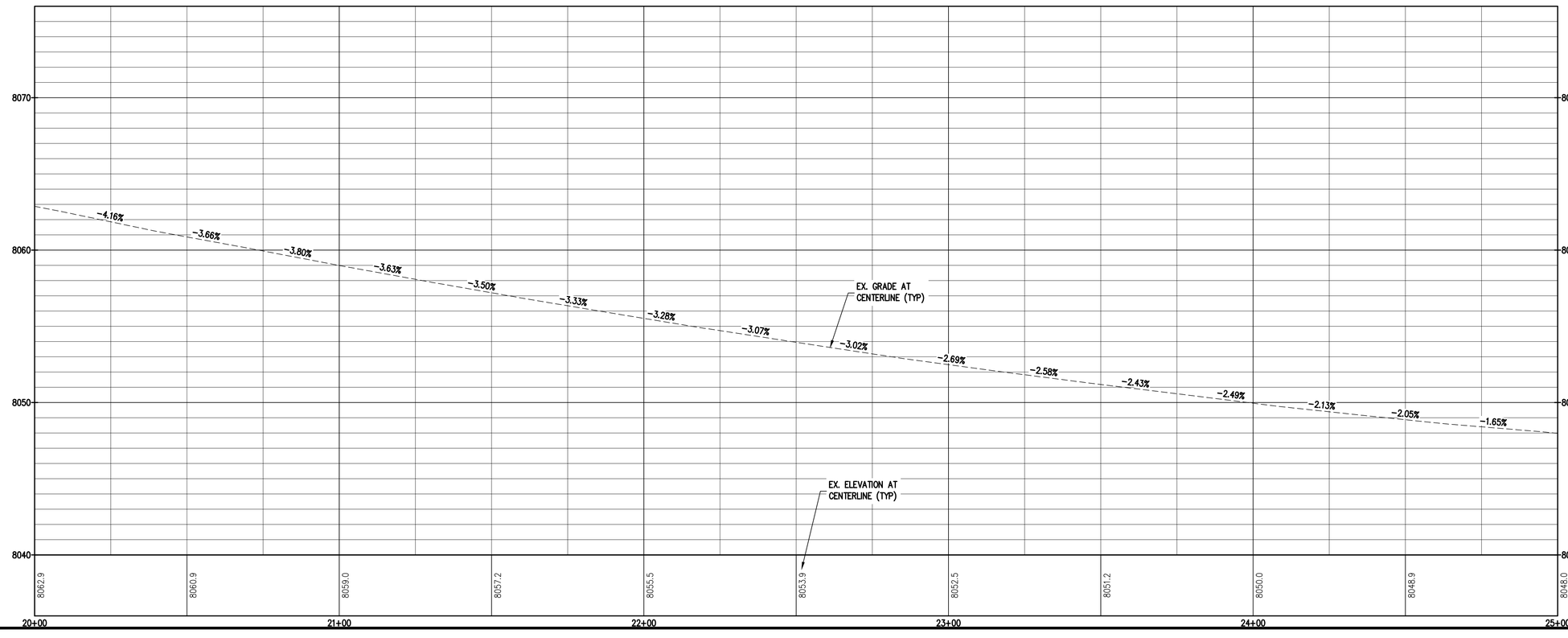

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SURVEY FIRM	SURVEY DATE
BASELINE	05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_Hwy 50 P&P.dwg
SHEET 7 OF 21	

C7

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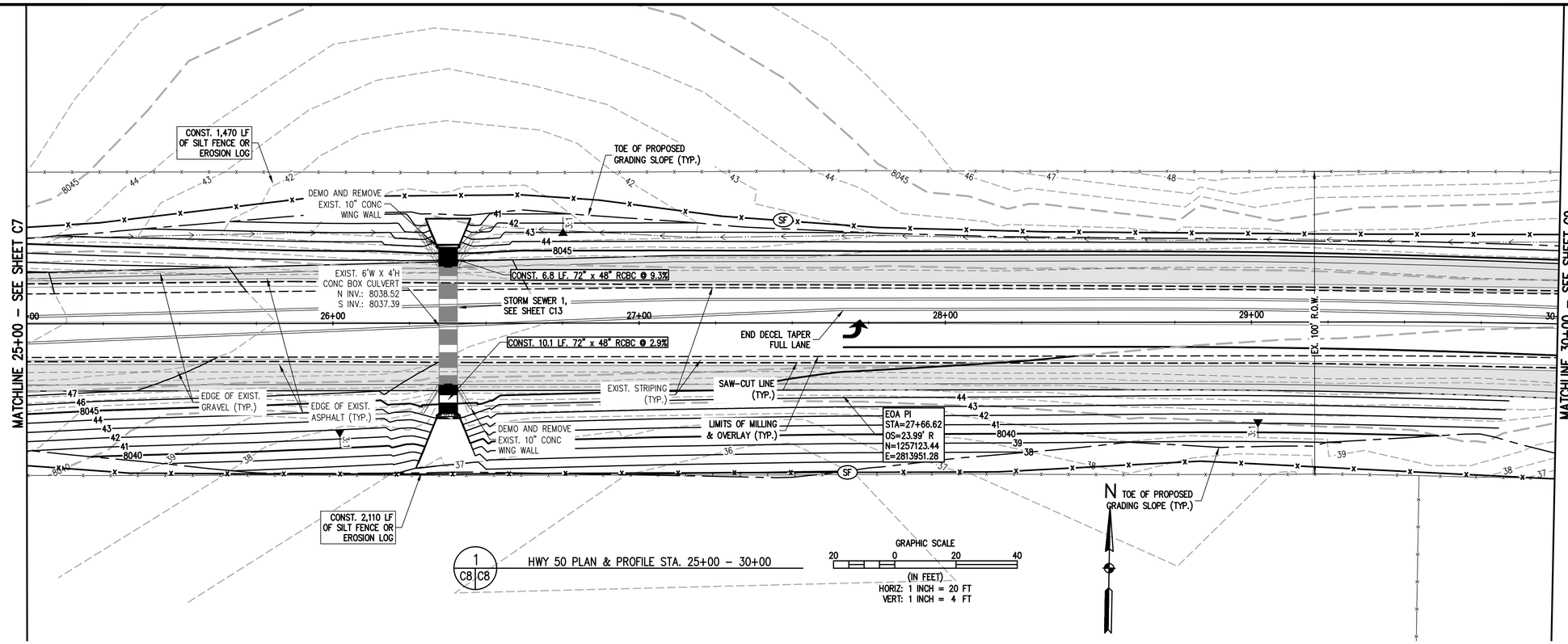

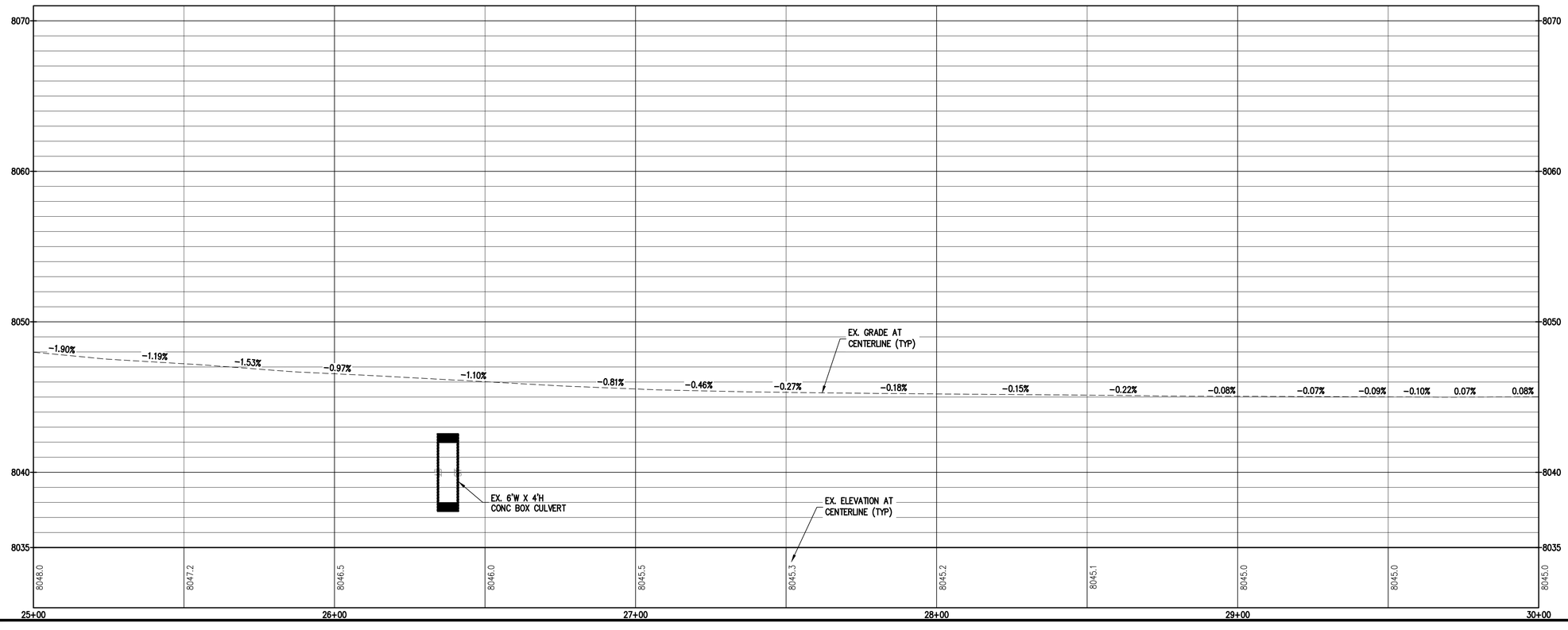

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HIGHWAY 50 & COUNTY ROAD 219

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SURVEY FIRM	SURVEY DATE
BASELINE	05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_Hwy 50 P&P.dwg
SHEET 8 OF	21

C8

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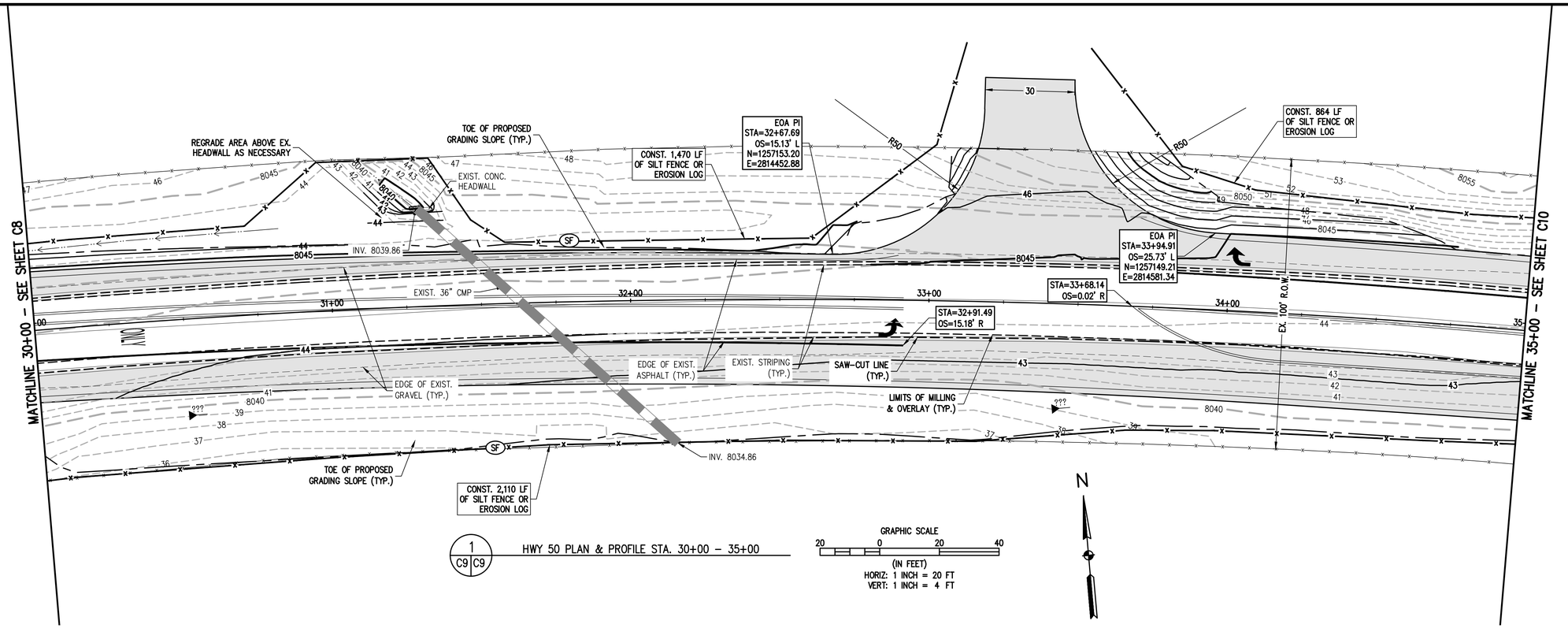

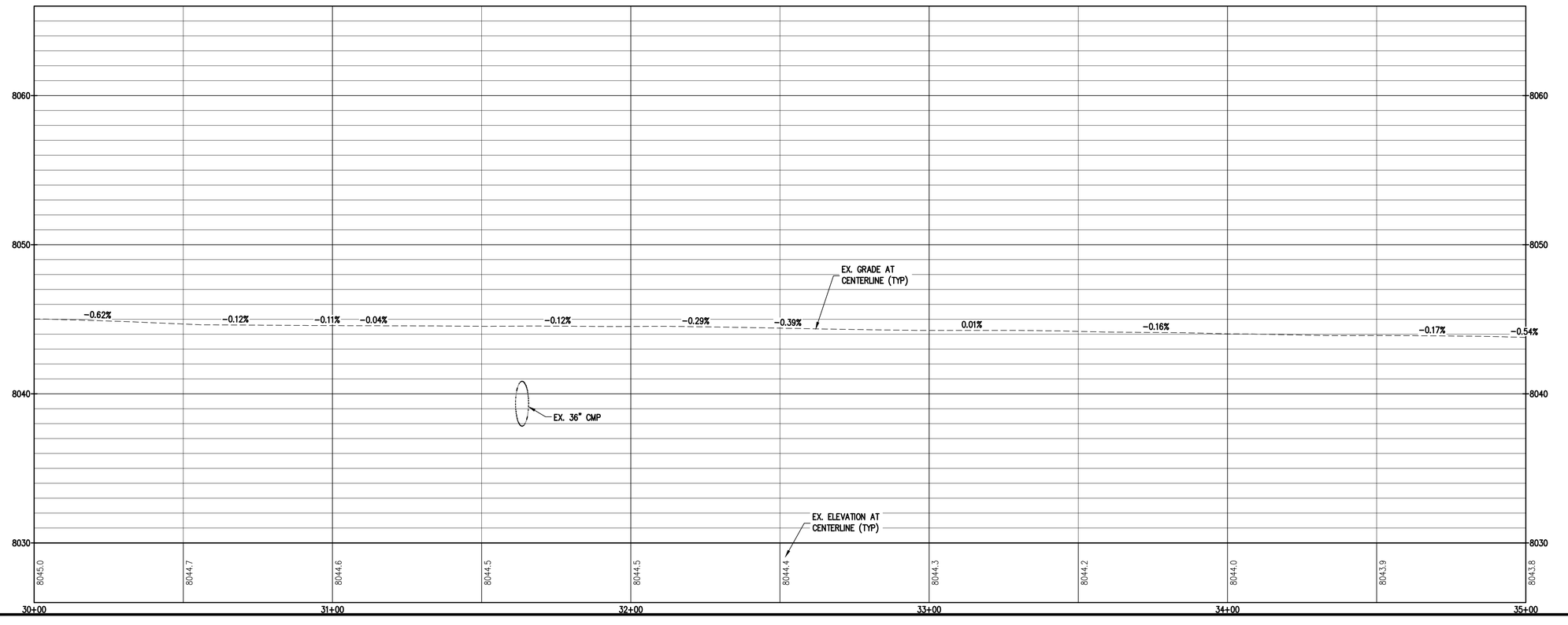

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HIGHWAY 50 & COUNTY ROAD 219

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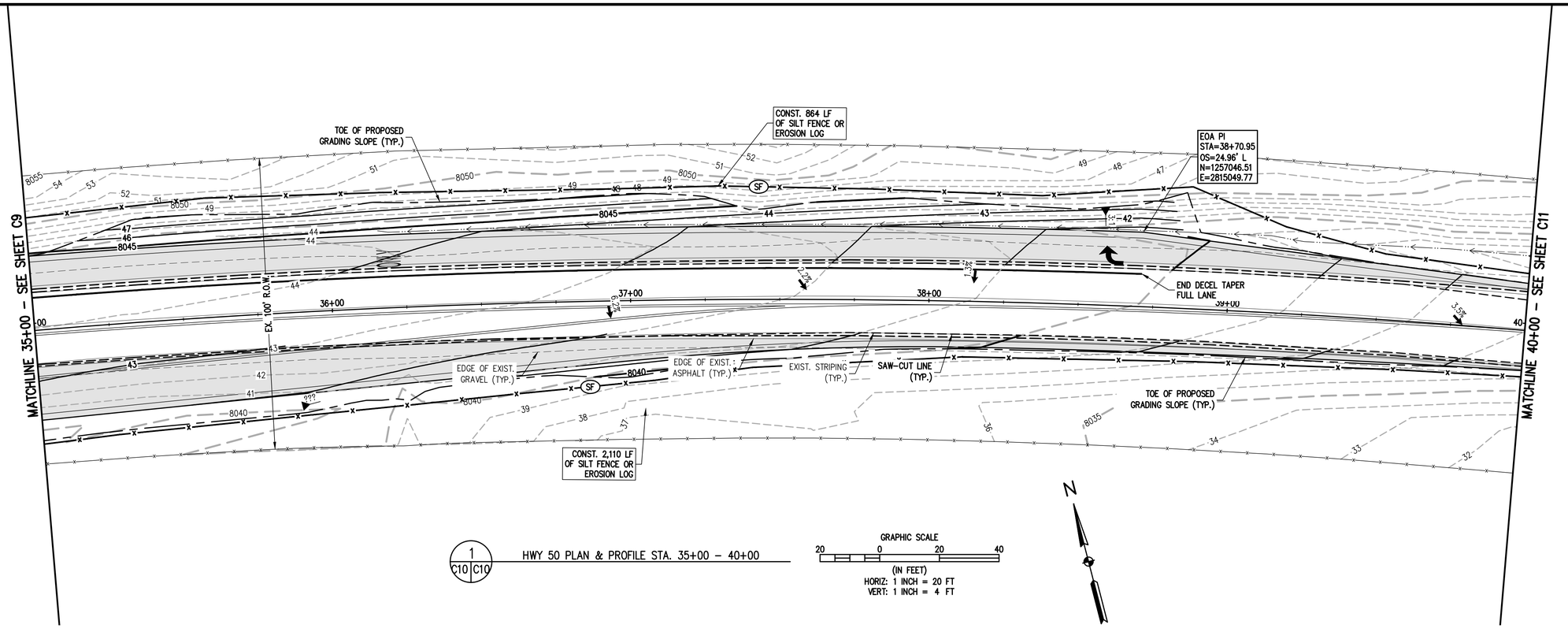
DRAWING SIZE	22" X 34"
SURVEY FIRM	SURVEY DATE
BASELINE	05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_Hwy 50 P&P.dwg
SHEET	9 OF 21

C9



1 / C10 | C10 — HWY 50 PLAN & PROFILE STA. 35+00 – 40+00

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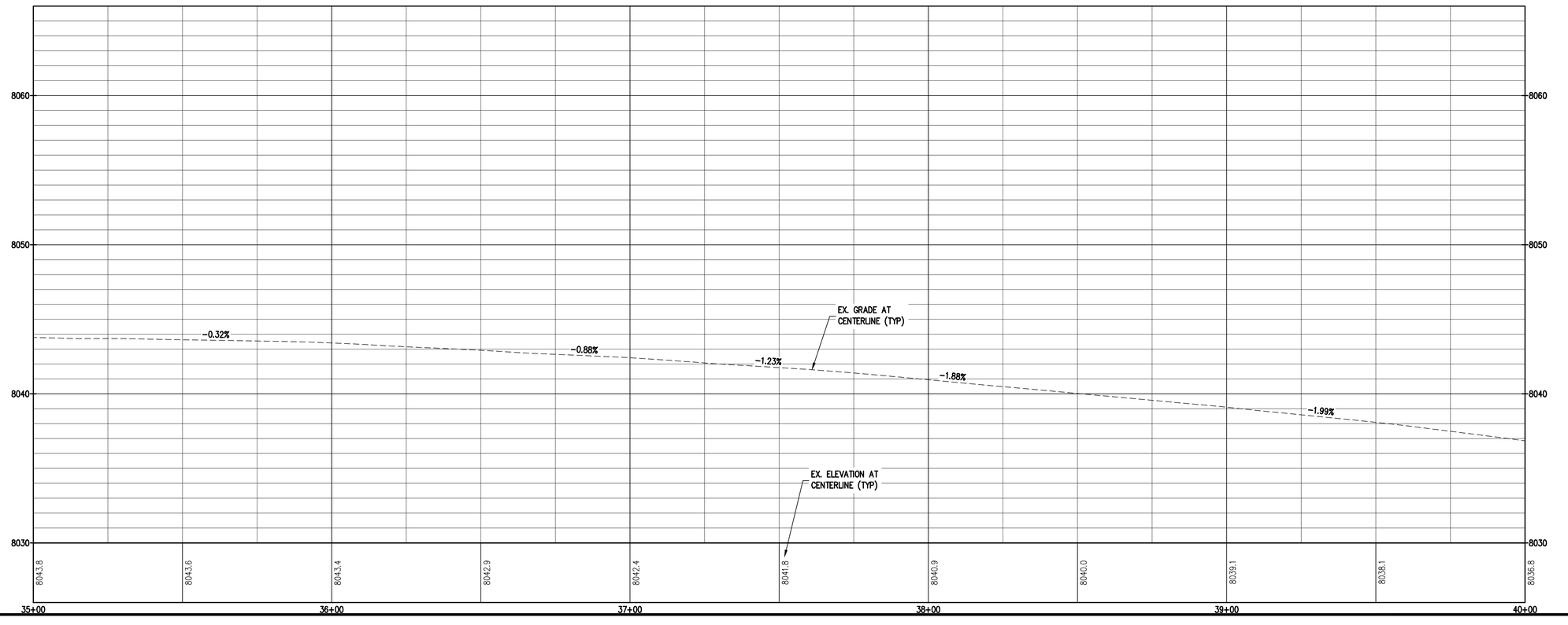
VERT: 1 INCH = 4 FT



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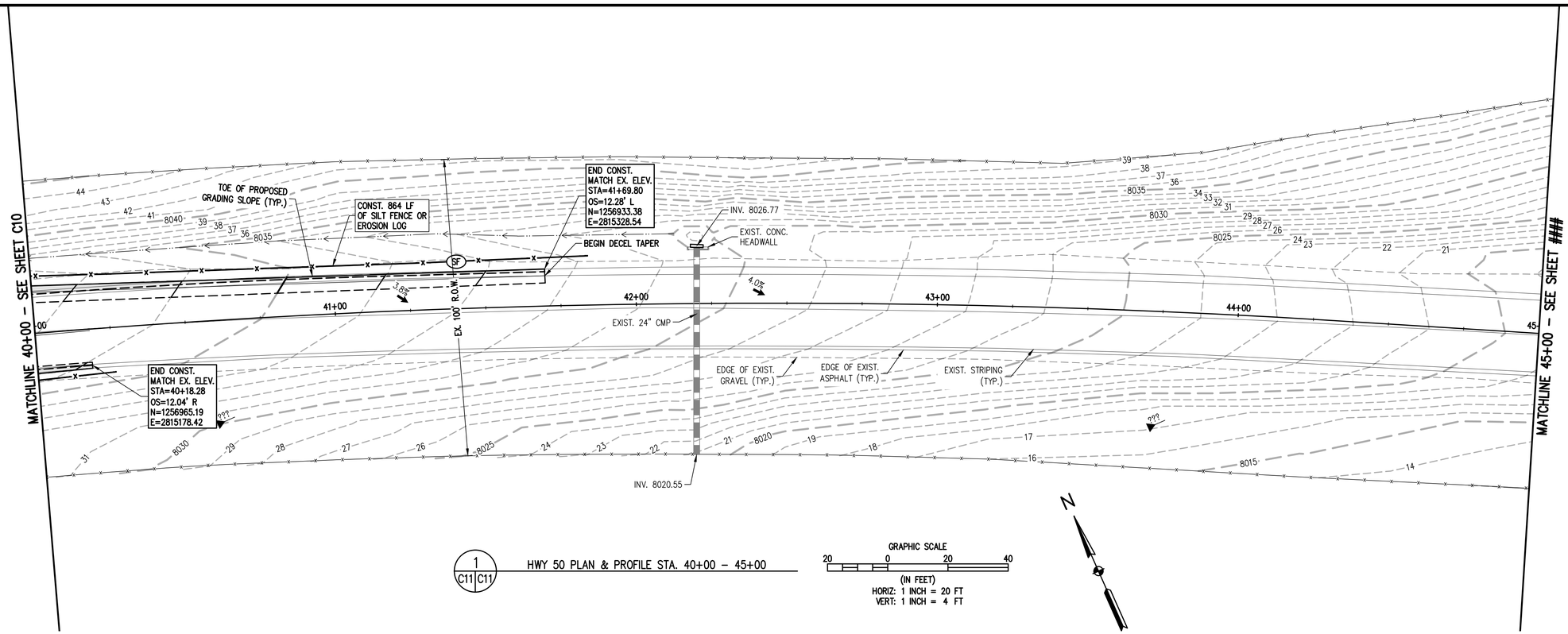
UNINCORPORATED CHAFFEE COUNTY

HIGHWAY 50 TURN LANES
HIGHWAY 50 & COUNTY ROAD 219
HWY 50 PLAN & PROFILE STA. 35+00 – 40+00

PREPARED UNDER THE DIRECT SUPERVISION OF
COLORADO LICENSED NOAH J. NEMMERS 39820 PROFESSIONAL ENGINEER
FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM: BASELINE	SURVEY DATE: 05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_Hwy 50 P&P.dwg
SHEET 10 OF 21	

C10



1 / C11 | C11 — HWY 50 PLAN & PROFILE STA. 40+00 – 45+00

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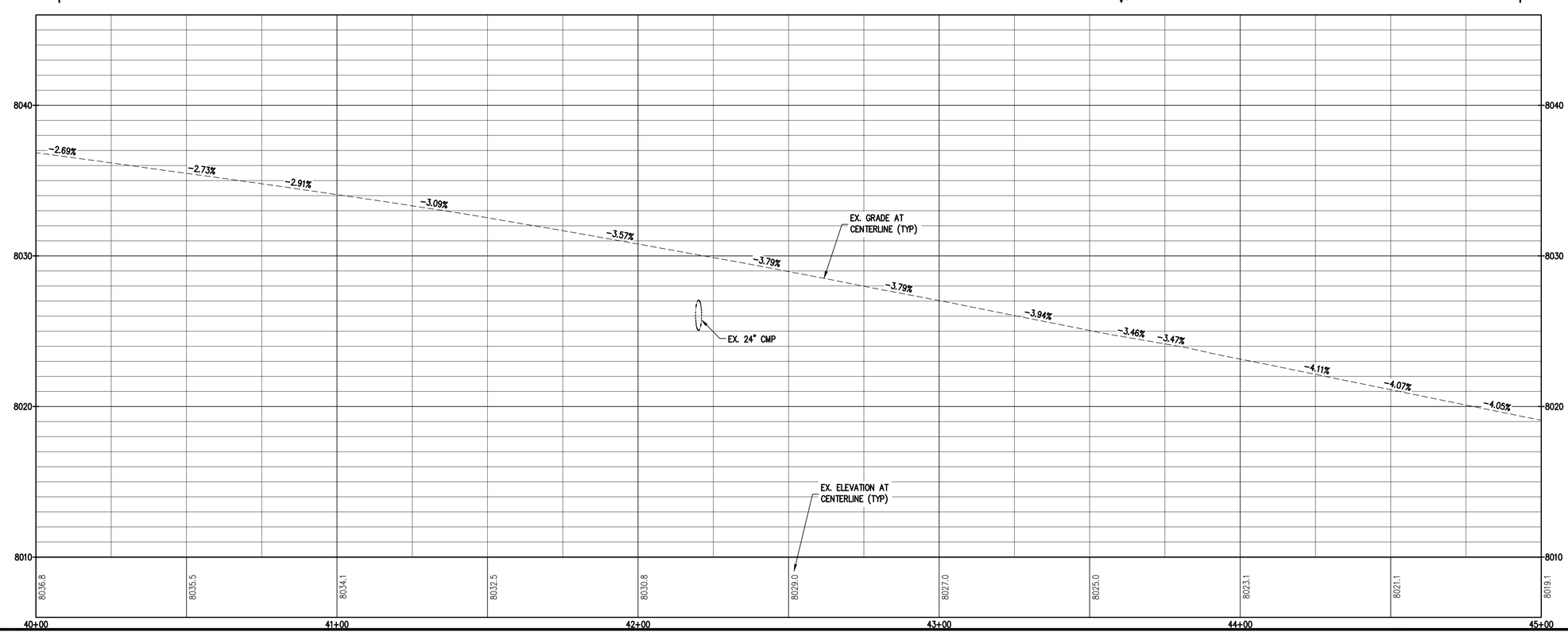

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UNINCORPORATED CHAFFEE COUNTY

HIGHWAY 50 TURN LANES

HIGHWAY 50 & COUNTY ROAD 219
HWY 50 PLAN & PROFILE STA. 40+00 – 45+00

PREPARED UNDER THE DIRECT SUPERVISION OF

COLORADO LICENSED NOAH J. NEMMERS 39820 PROFESSIONAL ENGINEER

FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	01/27/2020
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SURVEY FIRM: BASELINE	SURVEY DATE: 05/23/19
JOB NO.	C03383
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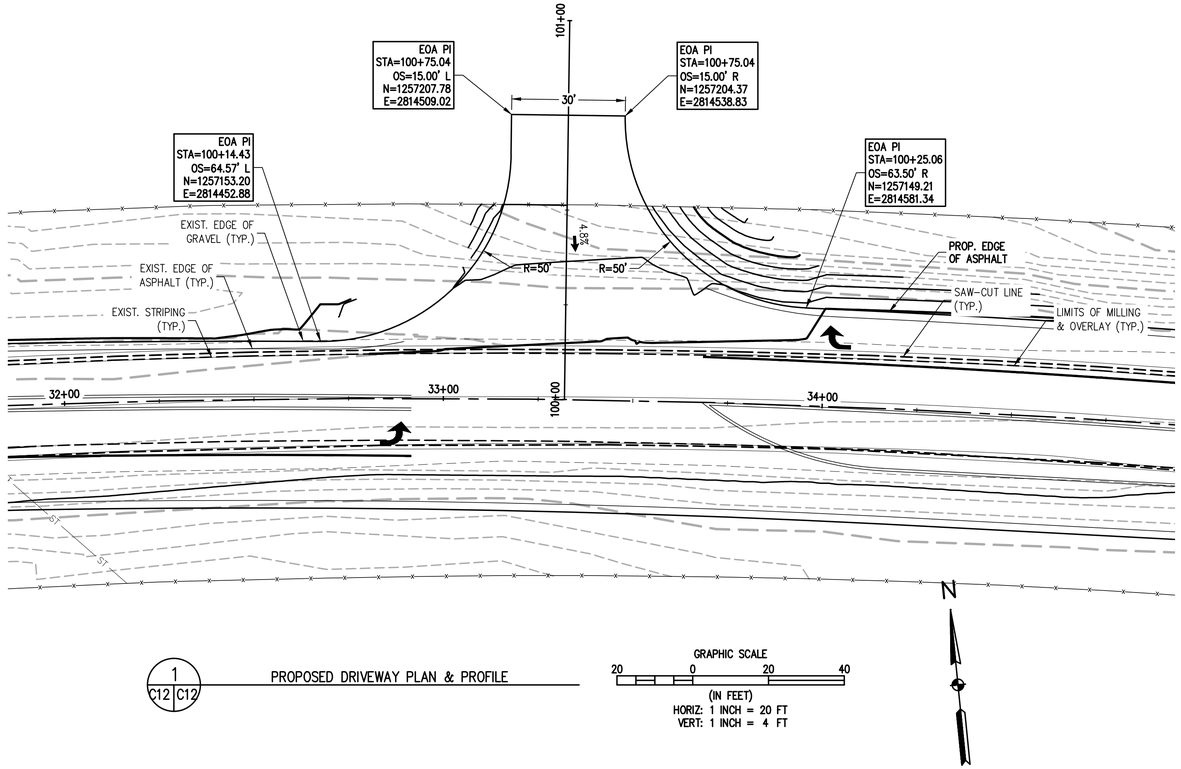
SHEET 11 OF 21	

C11



1 / C12 | C12 PROPOSED DRIVEWAY PLAN & PROFILE

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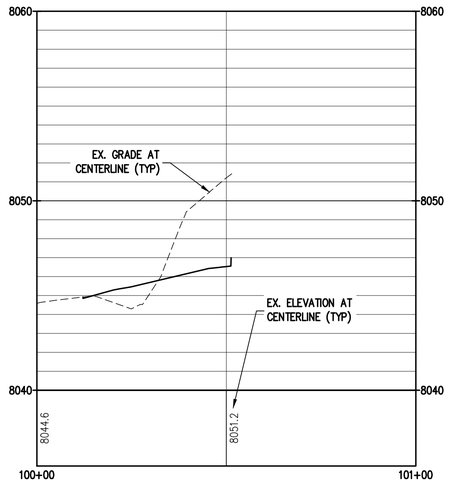
VERT: 1 INCH = 4 FT



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DESIGNED BY	DRAWN BY	CHECKED BY
NJN	WAC	NJN

REVISION DESCRIPTION	PREPARED BY	DATE

ACA PRODUCTS, INC.

UNINCORPORATED CHAFFEE COUNTY

HIGHWAY 50 TURN LANES
HIGHWAY 50 & COUNTY ROAD 219
PROPOSED DRIVEWAY PLAN & PROFILE

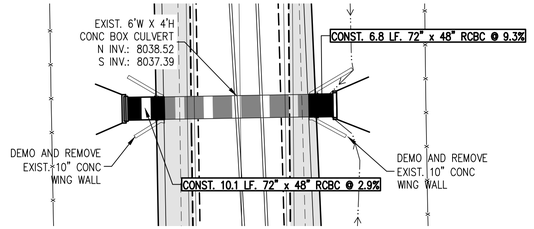
PREPARED UNDER THE DIRECT SUPERVISION OF

COLORADO LICENSED
NOAH J. NEMMERS
39820
PROFESSIONAL ENGINEER

FOR AND ON BEHALF OF BASELINE CORPORATION

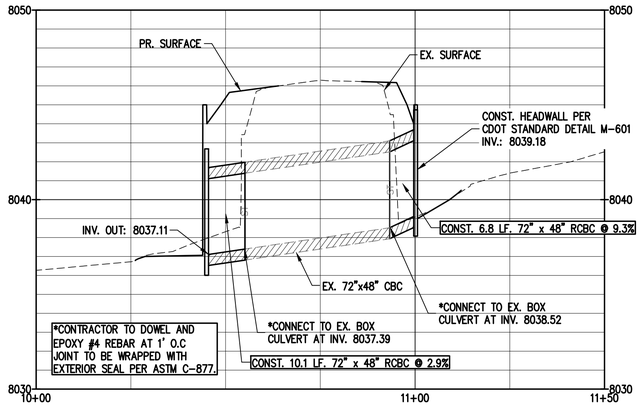
INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM: BASELINE	SURVEY DATE: 05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_Prop Drive P&P.dwg
SHEET 12 OF 21	

C12

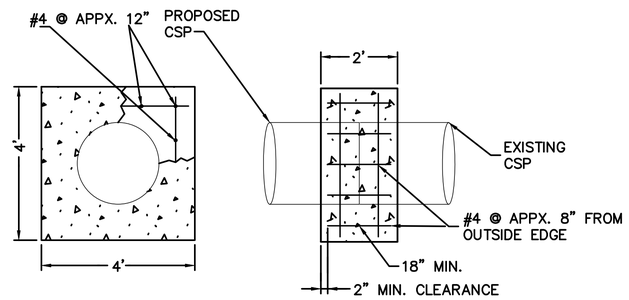


1 / C13 | C13 STORM 1 PROFILE

GRAPHIC SCALE
20 0 20 40
(IN FEET)
HORIZ: 1 INCH = 20 FT
VERT: 1 INCH = 4 FT



SINGLE OPENING BOX CULVERT STRUCTURE DIMENSIONS					GRADE 60 REINFORCING BAR SCHEDULE (BAR SIZE, SPACING AND LENGTH DIMENSIONS)																	
DIM		0 – 10 FT BURIAL DESIGN FILL "A"			"bb"		"cc"		"dd"		"bb", "cc" & "dd"	"ff"			"hh"				"jj"		"kk"	
SPAN "S" INSIDE	HEIGHT "H" INSIDE	TOP SLAB "TT"	BOTTOM SLAB "TB"	WALLS OUTER "WO"	SIZE	SPACING	SIZE	SPACING	SIZE	SPACING	LENGTH	SIZE	SPACING	LENGTH	SIZE	SPACING	"CH" LENGTH	"CV" LENGTH	SIZE	STAGGERED SPACING	SIZE	STAGGERED SPACING
4'–0"	2'–6"	7.5"	8.5"‵	7.5"	#4	12"	#4	6"	#4	6"	4'–11"	#4	12"	3'–5"	#4	6"	25"	28"	#4	6"	#4	6"



CONCRETE COLLAR DETAIL

NOTES:

1. CONTRACTOR SHALL PROVIDE A WATER TIGHT SEAL WITH RAMNECK OR APPROVED EQUAL BETWEEN EXISTING CULVERT AND PIPE EXTENSION.

2. CONCRETE COLLARS, CONNECTING BANDS AND OTHER CONNECTION DEVICES WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.

3. CONCRETE SHALL BE CLASS D.

5 / C13 | C13 CONCRETE COLLAR DETAIL

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REVISION DESCRIPTION	PREPARED BY	DATE

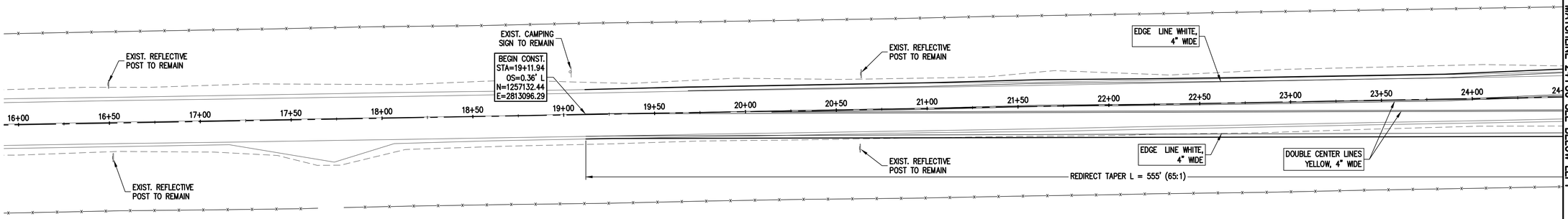
DESIGNED BY: NJN
DRAWN BY: WAC
CHECKED BY: NJN

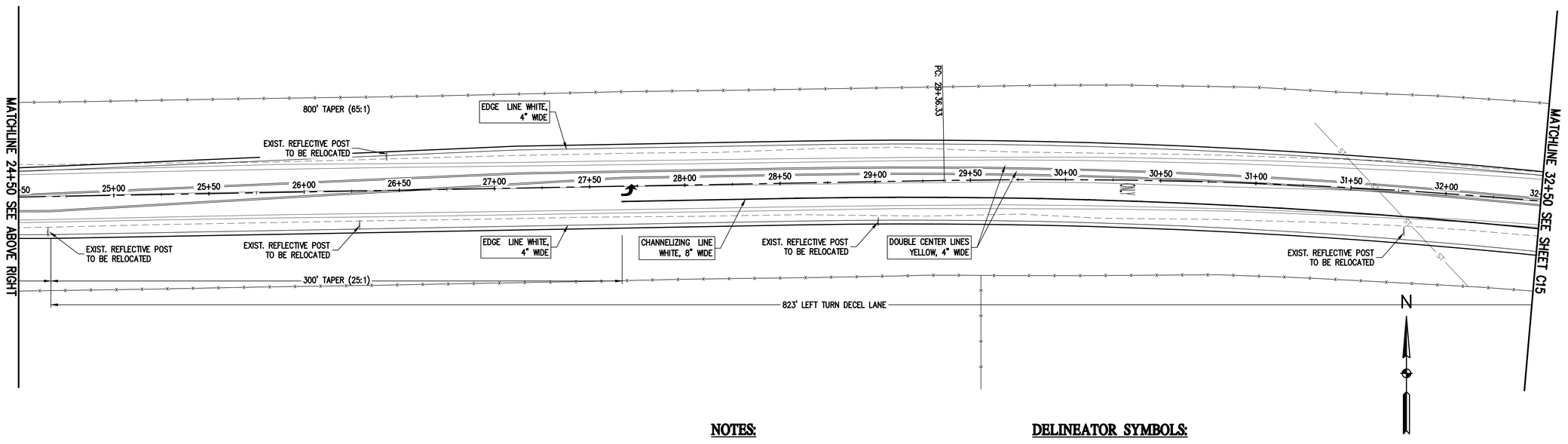
ACA PRODUCTS, INC.
UNINCORPORATED CHAFFEE COUNTY
HIGHWAY 50 TURN LANES
HIGHWAY 50 & COUNTY ROAD 219
STORM PROFILES

PREPARED UNDER THE DIRECT SUPERVISION OF
COLORADO LICENSED
NO. A.J. NEMMERS
39820
PROFESSIONAL ENGINEER
FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM: BASELINE	SURVEY DATE: 05/23/19
JOB NO.	C03383
DRAWING NAME: 3383PR_Storm.dwg	
SHEET 13 OF 21	

C13





NOTES:

1. PROPOSED STRIPING SHALL ADHERE TO CDOT STANDARD SPECIFICATION 627 EPOXY PAVEMENT MARKING MATERIAL.
2. PAVEMENT MARKING SYMBOLS AND WORDS SHALL BE PREFORMED THERMOPLASTIC PAVEMENT MARKING AND INLAID PER CDOT STANDARD SPECIFICATIONS.
3. DELINEATOR INSTALLATION SHALL BE PER CDOT M&S STANDARD S-612-1.

DELINEATOR SYMBOLS:

- TYPE I (CRYSTAL)
- TYPE II (2 CRYSTAL)
- TYPE III (3 YELLOW)

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 INCH = 30 FT

1 / C14 | C14 HWY 50 SIGN & STRIPING PLAN

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DESIGNED BY NJN | DRAWN BY WAC | CHECKED BY NJN

REVISION	DESCRIPTION	PREPARED BY	DATE

ACA PRODUCTS, INC.

UNINCORPORATED CHAFFEE COUNTY

HIGHWAY 50 TURN LANES

HIGHWAY 50 & COUNTY ROAD 219

HWY 50 SIGN & STRIPING PLAN

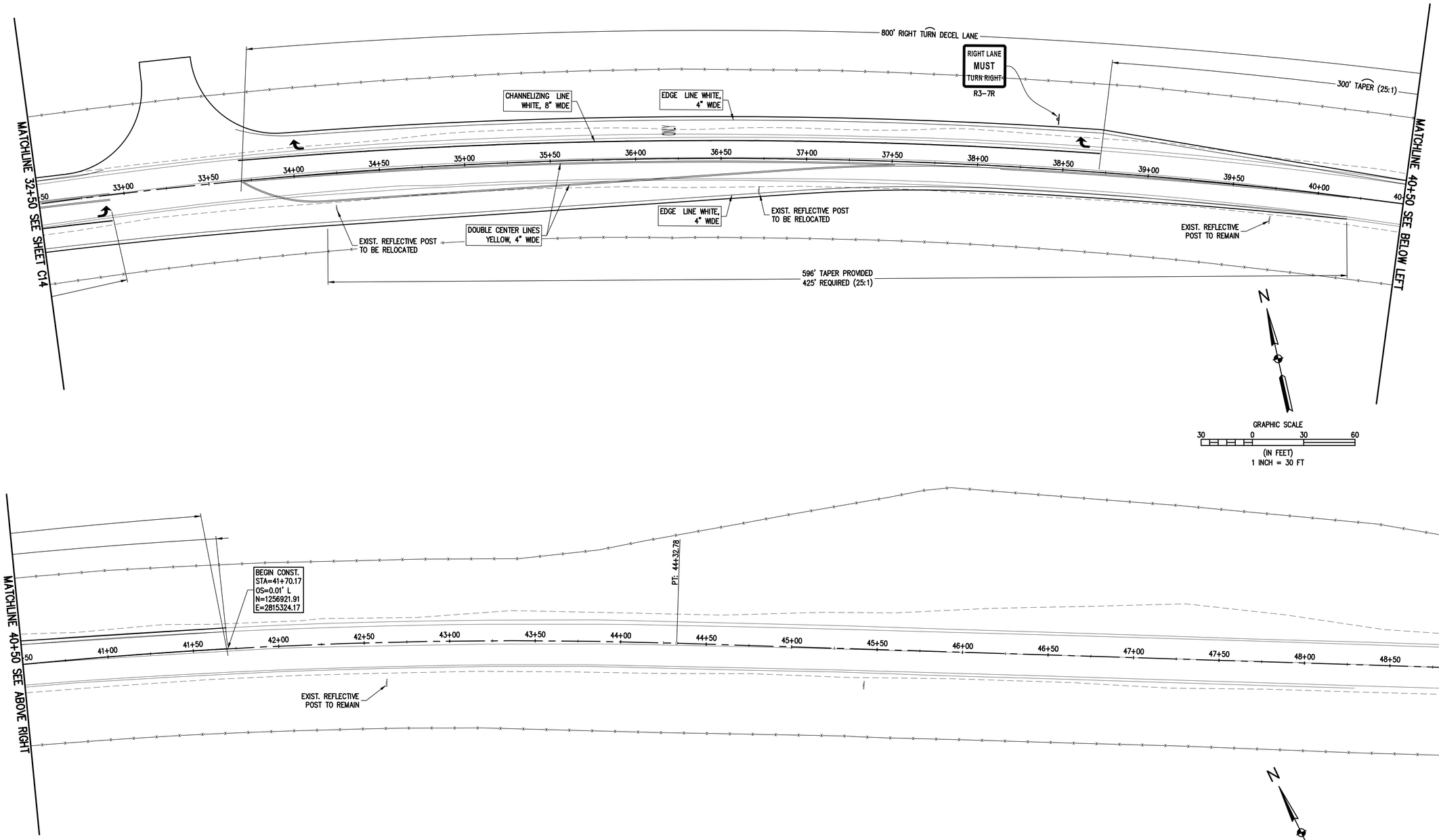
PREPARED UNDER THE DIRECT SUPERVISION OF

COLORADO LICENSED NOAH J. NEMMERS 39820 PROFESSIONAL ENGINEER

FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM	BASELINE
SURVEY DATE	05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_Sign&Stripe.dwg
SHEET	14 OF 21

C14



NOTES:

1. PROPOSED STRIPING SHALL ADHERE TO CDOT STANDARD SPECIFICATION 627 EPOXY PAVEMENT MARKING MATERIAL.
2. PAVEMENT MARKING SYMBOLS AND WORDS SHALL BE PREFORMED THERMOPLASTIC PAVEMENT MARKING AND INLAID PER CDOT STANDARD SPECIFICATIONS.
3. DELINEATOR INSTALLATION SHALL BE PER CDOT M&S STANDARD S-612-1.

DELINEATOR SYMBOLS:

- TYPE I (CRYSTAL)
- TYPE II (2 CRYSTAL)
- TYPE III (3 YELLOW)

1 / C15 | C15 HWY 50 SIGN & STRIPING PLAN

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DESIGNED BY	DRAWN BY	CHECKED BY
NJN	WAC	NJN

REVISION DESCRIPTION	PREPARED BY	DATE

ACA PRODUCTS, INC.

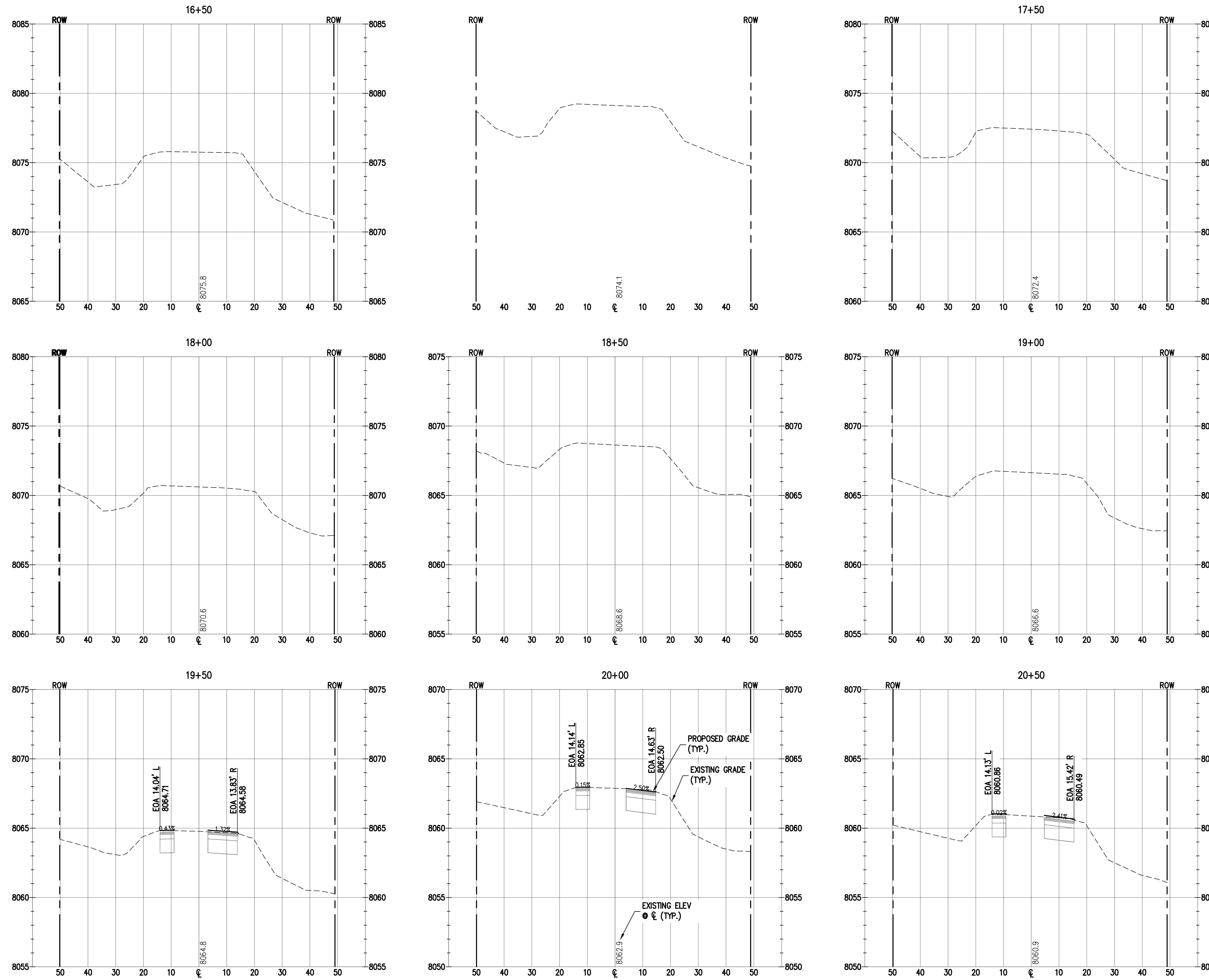
UNINCORPORATED CHAFFEE COUNTY

HIGHWAY 50 TURN LANES
HIGHWAY 50 & COUNTY ROAD 219
HWY 50 SIGN & STRIPING PLAN

PREPARED UNDER THE DIRECT SUPERVISION OF
COLORADO LICENSED PROFESSIONAL ENGINEER
NOAH J. NEMMERS
39820
FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM	BASELINE
SURVEY DATE	05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_Sign&Stripe.dwg
SHEET	15 OF 21

C15



GRAPHIC SCALE

20 0 20 40

(IN FEET)
HORIZ: 1 INCH = 20 FT
VERT: 1 INCH = 4 FT

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DESIGNED BY NJN
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CHECKED BY NJN

REVISION DESCRIPTION	PREPARED BY	DATE

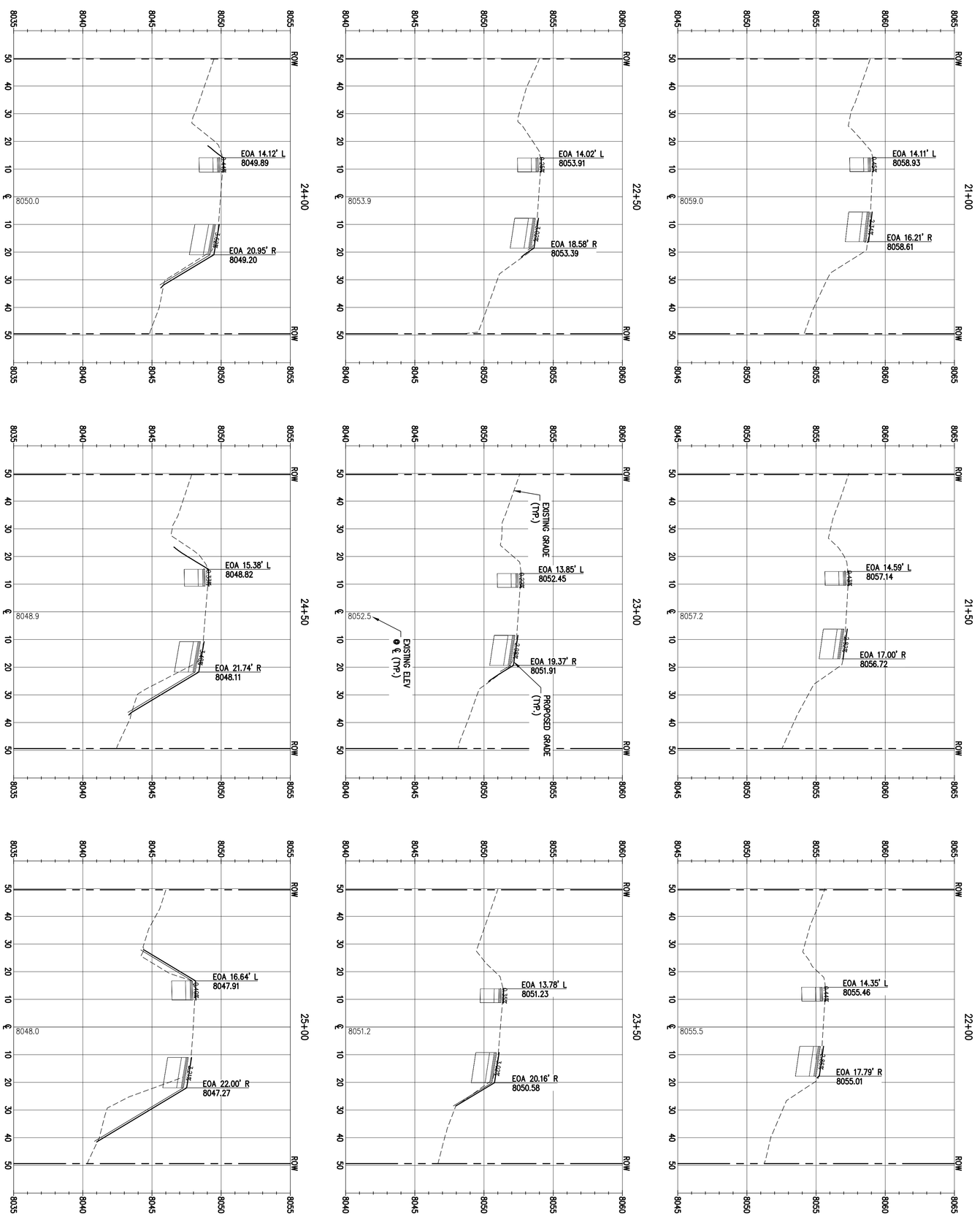
ACA PRODUCTS, INC.
UNINCORPORATED CHAFFEE COUNTY
HIGHWAY 50 TURN LANES
HIGHWAY 50 & COUNTY ROAD 219
CROSS SECTIONS STA. 16+50 – 20+50

PREPARED UNDER THE DIRECT SUPERVISION OF
COLORADO LICENSED NOAH J. NEMMERS 39820 PROFESSIONAL ENGINEER
FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM BASELINE	SURVEY DATE 05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_Hwy 50 X-Sects.dwg
SHEET 16 OF 21	

C16

N:\co3383 -- ACA Hwy 50 Turn Lanes\Drawings\Construction Documents\3383PR_Hwy 50 X-Sects.dwg, 2/6/2020 2:57:53 PM, Wade Cato



GRAPHIC SCALE
20 0 20 40
(IN FEET)
HORIZ. 1 INCH = 20 FT
VERT. 1 INCH = 4 FT

PREPARED UNDER THE DIRECT SUPERVISION OF:
COLORADO LICENSED PROFESSIONAL ENGINEER NO. 39820

INITIAL SUBMITTAL 01/21/2020
DRAWING SIZE 22" X 34"
SURVEY FIRM BASELINE
SURVEY DATE 05/22/19
JOB NO. C03383
DRAWING NAME 3383PR_Hwy 50 X-Sects.dwg
SHEET 17 OF 21
C17

ACA PRODUCTS, INC.

UNINCORPORATED CHAFFEE COUNTY

HIGHWAY 50 TURN LANES

HIGHWAY 50 & COUNTY ROAD 219

CROSS SECTIONS STA. 21+00 – 25+00

REVISION DESCRIPTION	PREPARED BY	DATE

DESIGNED BY NJN
DRAWN BY WAC
CHECKED BY NJN

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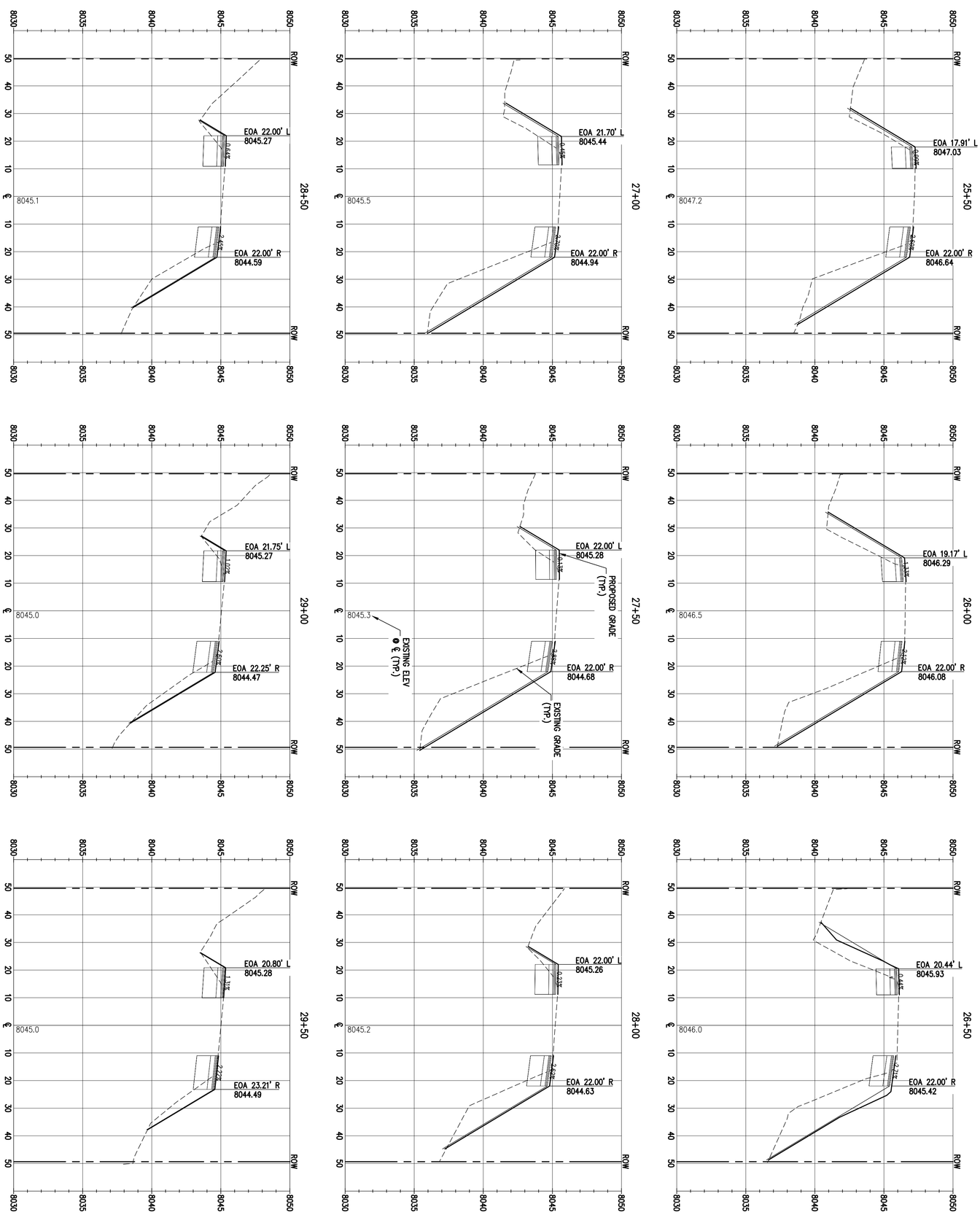

GRAPHIC SCALE
20 0 20 40
(IN FEET)
HORZ: 1 INCH = 20 FT
VERT: 1 INCH = 4 FT

INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM	BASELINE
SURVEY DATE	06/12/19
JOB NO.	CO3383
DRAWING NAME	3383PR_Hwy 50 X-Sects.dwg
SHEET	18 OF 21

C18

PREPARED UNDER THE DIRECT SUPERVISION OF:
COLORADO LICENSED PROFESSIONAL ENGINEER NO. 39820

FOR AND ON BEHALF OF:
PUBLIC IMPROVEMENT CORPORATION

ACA PRODUCTS, INC.

UNINCORPORATED — CHAFFEE COUNTY

HIGHWAY 50 TURN LANES

HIGHWAY 50 & COUNTY ROAD 219

CROSS SECTIONS STA. 25+50 – 29+50

REVISION DESCRIPTION	PREPARED BY	DATE

DESIGNED BY	NJN
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CHECKED BY	NJN

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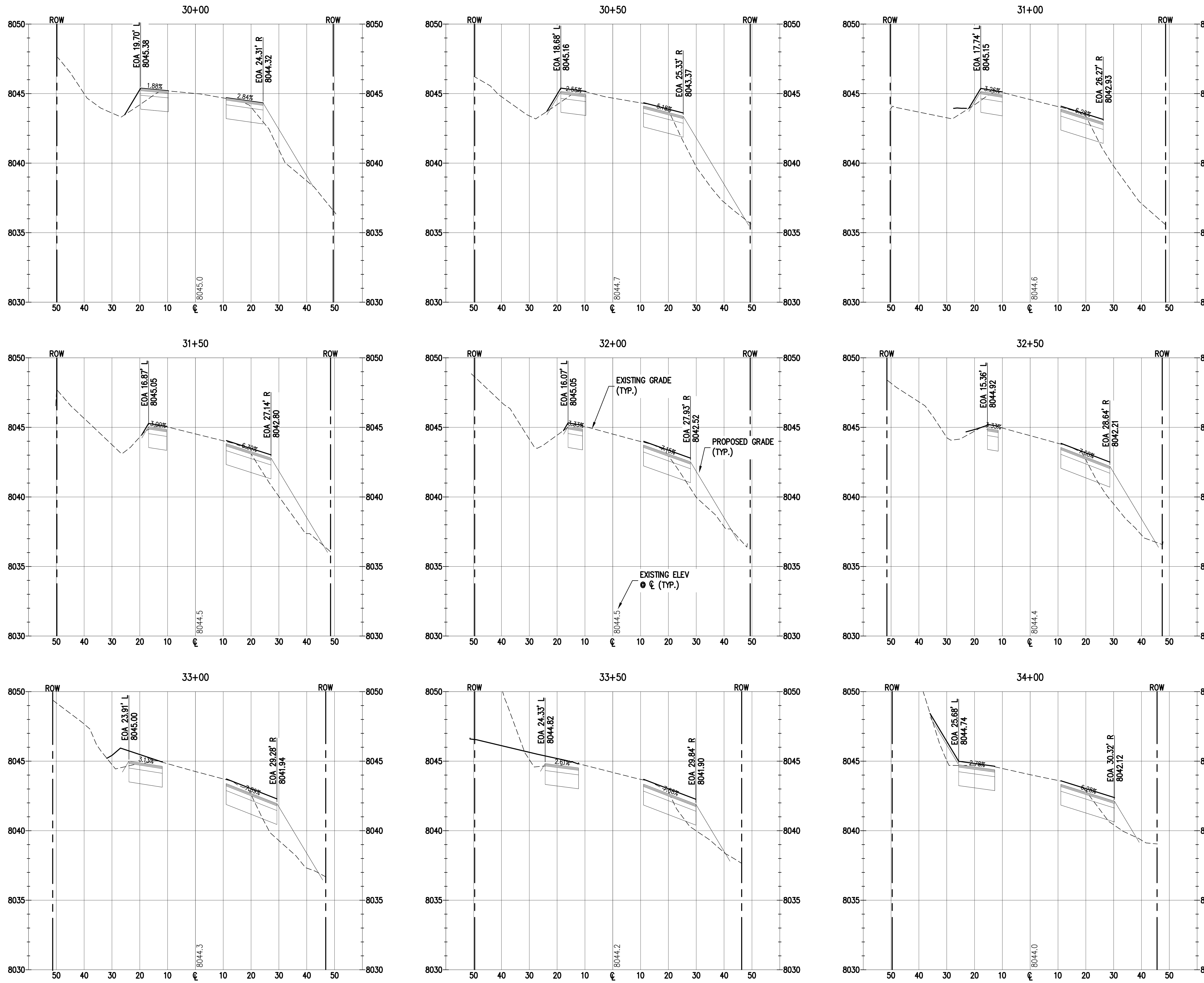

GRAPHIC SCALE

20 0 20 40

(IN FEET)
HORIZ: 1 INCH = 20 FT
VERT: 1 INCH = 4 FT

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DESIGNED BY	DRAWN BY	CHECKED BY
NJN	WAC	NJN

REVISION DESCRIPTION	PREPARED BY	DATE

ACA PRODUCTS, INC.

UNINCORPORATED CHAFFEE COUNTY

HIGHWAY 50 TURN LANES
HIGHWAY 50 & COUNTY ROAD 219
CROSS SECTIONS STA. 30+00 – 34+00

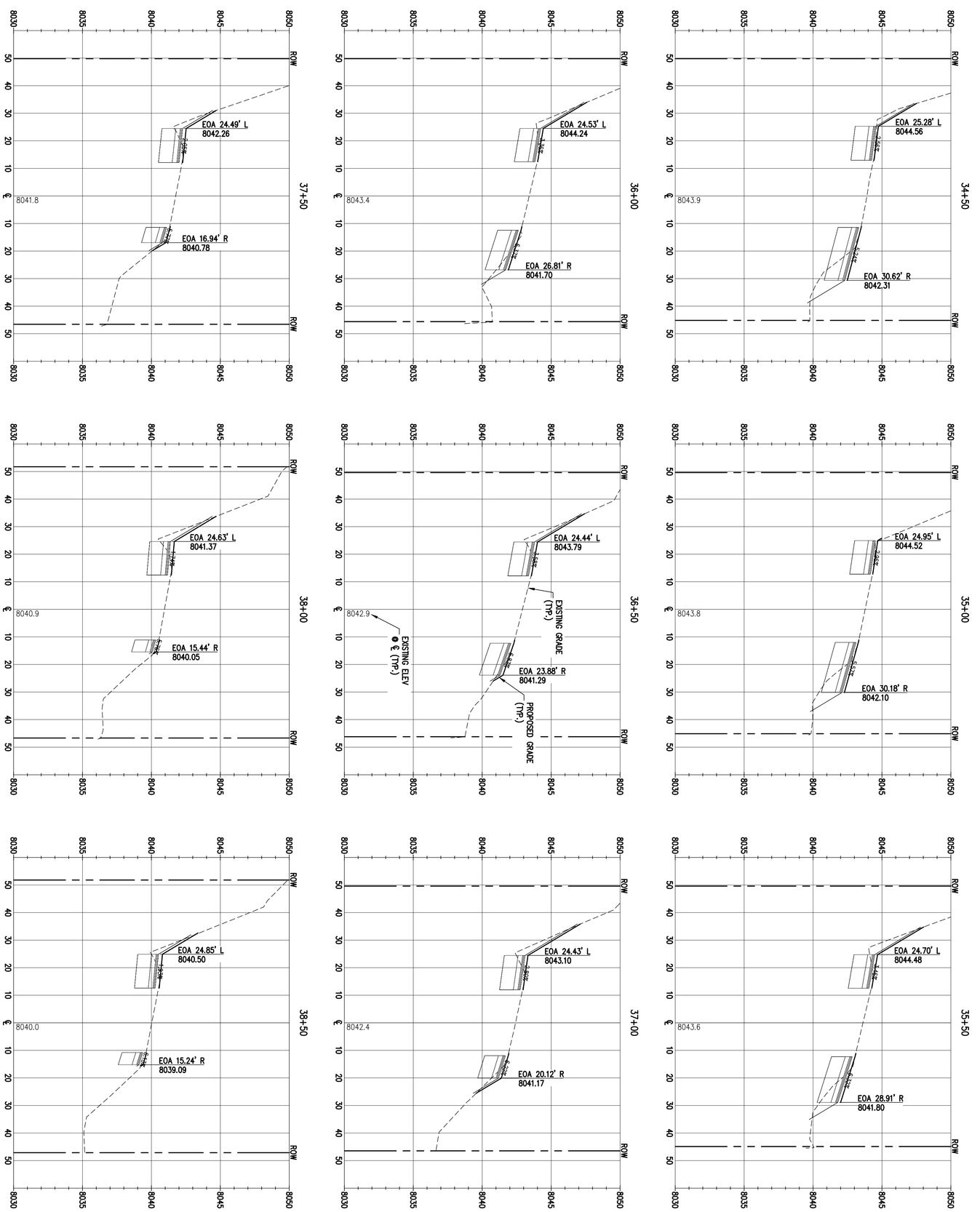
PREPARED UNDER THE DIRECT SUPERVISION OF

COLORADO LICENSED PROFESSIONAL ENGINEER NOAH J. NEMMERS 39820

FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM BASELINE	SURVEY DATE 05/23/19
JOB NO.	C03383
DRAWING NAME 3383PR_Hwy 50 X-Sects.dwg	
SHEET 19 OF 21	

C19



GRAPHIC SCALE (IN FEET)
HORZ: 1 INCH = 20 FT
VERT: 1 INCH = 4 FT

INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM	BASELINE
SURVEY DATE	06/12/19
JOB NO.	CO3383
DRAWING NAME	3383PR_Hwy 50 X-Sects.dwg
SHEET	20 OF 21

C20

PREPARED UNDER THE DIRECT SUPERVISION OF:
COLORADO LICENSED
NO. 39820
PROFESSIONAL ENGINEER

ACA PRODUCTS, INC.

UNINCORPORATED — CHAFFEE COUNTY

HIGHWAY 50 TURN LANES

HIGHWAY 50 & COUNTY ROAD 219
CROSS SECTIONS STA. 34+50 – 38+50

REVISION DESCRIPTION	PREPARED BY	DATE

DESIGNED BY	NJN
DRAWN BY	WAC
CHECKED BY	NJN

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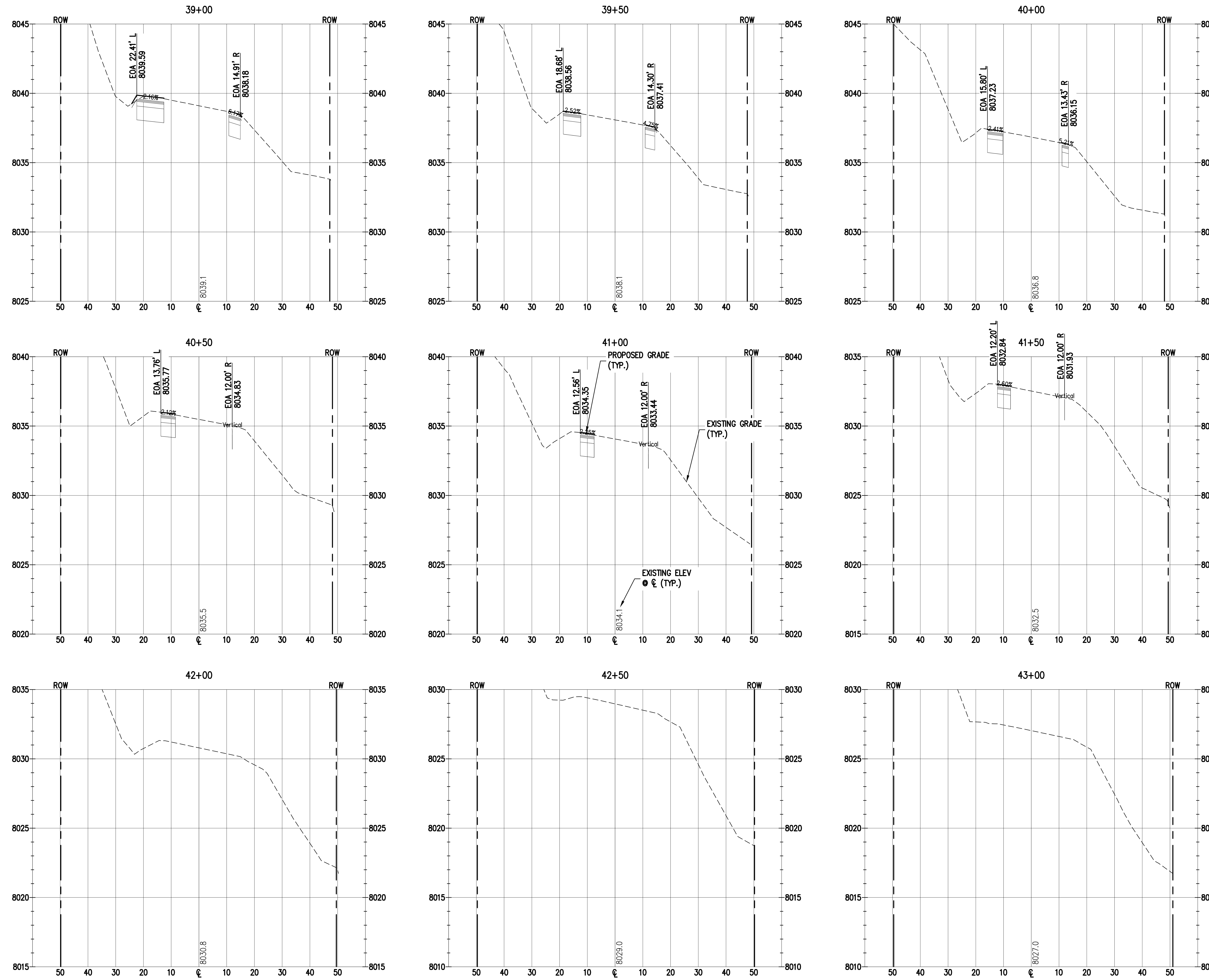

GRAPHIC SCALE

20 0 20 40

(IN FEET)
HORIZ: 1 INCH = 20 FT
VERT: 1 INCH = 4 FT

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DESIGNED BY NJN | DRAWN BY WAC | CHECKED BY NJN

REVISION DESCRIPTION	PREPARED BY	DATE

ACA PRODUCTS, INC.

UNINCORPORATED CHAFFEE COUNTY

HIGHWAY 50 TURN LANES

HIGHWAY 50 & COUNTY ROAD 219
CROSS SECTIONS STA. 39+00 – 43+00

PREPARED UNDER THE DIRECT SUPERVISION OF

COLORADO LICENSED NOAH J. NEMMERS 39820 PROFESSIONAL ENGINEER

FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	01/27/2020
DRAWING SIZE	22" X 34"
SURVEY FIRM BASELINE	SURVEY DATE 05/23/19
JOB NO.	C03383
DRAWING NAME	3383PR_Hwy 50 X-Sects.dwg
SHEET 21 OF 21	

C21