

Appendix A – Public Outreach



La Plata County



PLANNING FOR FUTURE GROWTH

Town of Bayfield, La Plata County & Colorado Department of Transportation (CDOT)

Invite you to an
Open House
for the

US Highway 160 Access Management Plan

The public open house will provide the community with an opportunity to:

- Learn about planning for future growth along US Highway 160
- Discuss future access points along the US 160 corridor in the Town of Bayfield, Gem Village, and La Plata County with project representatives.
- Provide comments on access points to US 160.

Thursday, August 14th, 2014

6:00 pm to 9:00 pm
(formal presentation at 7:00 pm)

Town of Bayfield Town Hall
1199 Bayfield Parkway

For more information, contact:
Chris La May, Town Manager
Town of Bayfield
(970) 884-9544
clamay@bayfieldgov.org



La Plata County



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Chris La May, Town Manager
Town of Bayfield
(970) 884-9544
clamay@bayfieldgov.org

**Bayfield US 160 Access Plan
Public Open House - August 14, 2014
Bayfield, CO**

Name	Whom Representing	Phone #	Email
BRIAN KIMMEL	Grush Family	259-2629	swlsinc@frontier.net
CAROLYN HUNTER	LEE MCCUTCHEN	947-9082	contextarch@yahoo.com
Dr. Rick K Smith	Town	759-2229	
JERRY HAGA	SELF SELF	759-9081	Jerry Haga @ Yahoo.com
JIM SOWER	Pine River Valley Band	884-2711	Jims@frontier.net
GREG ROTH	NO BODY BUT ME	884-4521	ROTHHOSHEAVEN@SKYWEX.COM
DARYL YOST	BAYFIELD AUTO	884-9727	DARYLYOST@HOTMAIL.COM
Jim Parrish	myself	9041	
Ashleigh Tarkington	Self	884-9155	ashleightarkington@yahoo.com
Paul Peoples	SELF	884-9523	
Rich Hillier	Southwest Ag	884-4101	rich@swaginc.com
Bob Martin	self	4-4926	diamondm@wic.net
GARRY HULLER	SOUTHWEST AG	884-4101	GARRY@SWAGINC.COM
Phyllis Knoke	Heritage Days Committee	884-6108	Phyllisjan7@aol.com
Bob Koemis	SELF	884-9409	blonds_place@yahoo.com
HA KOEMIS	PERSONAL	769-1523	halo.koemis@yahoo.com
Casey Cole	PERSONAL	759-6204	CEUBED@my.purple.com
HARRY GOFF	SELF	719-8741	hgoff@frontier.net
Melanie Mazer	PINE RIVER TIMES	884-2331	prt@pinerivertimes.com
Perkins Family	Gwen & Barry	749-5078	rr_perkins@msn.com



**COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE - AUGUST 14, 2014**

Name: Carl Blitnick Representing: Self / School Board member

Address: _____ City: _____ State: _____

Zip Code: _____ Phone: _____ Email: _____

Do you want to be added to the mailing list? Yes _____ No _____

Are you a (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Property Owner along US 160 | <input type="checkbox"/> La Plata County Resident in project area |
| <input type="checkbox"/> Business Owner/Lessee along US 160 | <input checked="" type="checkbox"/> Member of the General Public |
| <input type="checkbox"/> Bayfield Resident in project area | <input type="checkbox"/> Other |

What elements of the access plan do you support?

What elements of the access plan do you dislike?

Do you have any concerns about how the access plan will be implemented?

Other comments:

Please visit with the school dist. They are taking 1st steps for planning, need detail permit of property due to encroaching @ the elementary

Please leave this with us, mail, or email by **August 27, 2014** to:
Andrew Amend, P.E. Stolfus & Associates, Inc.
5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

Contact Tony Zales - 884-2496

Thank you for your participation

**COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE - AUGUST 14, 2014**

Name: Rich Hillier Representing: Southwest Az
Address: 39927 Hwy 160 City: Bayfield State: Co
Zip Code: 81122 Phone: 970-884-4101 Email: rich@swoginc.com
Do you want to be added to the mailing list? Yes No

Are you a (check all that apply):

- | | |
|--|---|
| <input checked="" type="checkbox"/> Property Owner along US 160 | <input type="checkbox"/> La Plata County Resident in project area |
| <input checked="" type="checkbox"/> Business Owner/Lessee along US 160 | <input checked="" type="checkbox"/> Member of the General Public |
| <input type="checkbox"/> Bayfield Resident in project area | <input type="checkbox"/> Other |

What elements of the access plan do you support?

Safer aspects of Hwy

What elements of the access plan do you dislike?

Consider C.R. 507 intersection in middle of
Gem Village for better Business Access

Do you have any concerns about how the access plan will be implemented?

Other comments:

Please leave this with us, mail, or email by **August 27, 2014** to:
Andrew Amend, P.E. Stolfus & Associates, Inc.
5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

Thank you for your participation

**COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE - AUGUST 14, 2014**

Name: GARRY HULLYER Representing: SOUTHWEST AG INC.

Address: 39927 U.S. HWY 160 City: BAYFIELD State: CO

Zip Code: 81222 Phone: 970-884-4101 Email: GARRY@SWAGINC.COM

Do you want to be added to the mailing list? Yes No

Are you a (check all that apply):

- | | |
|--|---|
| <input checked="" type="checkbox"/> Property Owner along US 160 | <input type="checkbox"/> La Plata County Resident in project area |
| <input checked="" type="checkbox"/> Business Owner/Lessee along US 160 | <input type="checkbox"/> Member of the General Public |
| <input type="checkbox"/> Bayfield Resident in project area | <input type="checkbox"/> Other |

What elements of the access plan do you support?

BAYFIELD PARKWAY INTERSECTIONS

What elements of the access plan do you dislike?

CONSIDER C.R. 507 ACCESS AT GREAT VILLAGE

Do you have any concerns about how the access plan will be implemented?

Other comments:

LOWER EXISTING HWY 160 GRADE THROUGH GREAT VILLAGE TO ALLOW FOR ADDING LEFT TURN LANES AS A POSSIBLE INTERIM IMPROVEMENT BEFORE THE BYPASS IS CONSTRUCTED.

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303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

Thank you for your participation

**COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE - AUGUST 14, 2014**

Name: DARYL YOST Representing: BAYFIELD AUTO

Address: _____ City: _____ State: _____

Zip Code: _____ Phone: _____ Email: DARYL YOST @HOTMAIL.COM

Do you want to be added to the mailing list? Yes _____ No _____

Are you a (check all that apply):

- | | |
|--|---|
| <input type="checkbox"/> Property Owner along US 160 | <input type="checkbox"/> La Plata County Resident in project area |
| <input checked="" type="checkbox"/> Business Owner/Lessee along US 160 | <input type="checkbox"/> Member of the General Public |
| <input type="checkbox"/> Bayfield Resident in project area | <input type="checkbox"/> Other |

What elements of the access plan do you support?

What elements of the access plan do you dislike?

Do you have any concerns about how the access plan will be implemented?

B

Other comments:

BAYFIELD SCHOOLS ALLOWED TO OPERATE
OUT OF THERE ACCESS PERMIT AT COMERCE DR

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5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

PLEASE ADD ME TO YOUR EMAIL LIST

Thank you for your participation

**COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE - AUGUST 14, 2014**

Name: BRIAN KUMMEL ^{Southwest} _{land services, Inc} Representing: Grush Family/Trout Trust

Address: PO Box 2673 City: Durango State: CO

Zip Code: 81302 Phone: 259-2629 Email: swlsing@stentia.net

Do you want to be added to the mailing list? Yes X No

Are you a (check all that apply):

- | | |
|---|---|
| <input checked="" type="checkbox"/> Property Owner along US 160 | <input type="checkbox"/> La Plata County Resident in project area |
| <input type="checkbox"/> Business Owner/Lessee along US 160 | <input type="checkbox"/> Member of the General Public |
| <input type="checkbox"/> Bayfield Resident in project area | <input type="checkbox"/> Other |

What elements of the access plan do you support?

safe access

What elements of the access plan do you dislike?

potential access across agricultural lands when other routes are available and the need to cross this property with a County Road is of questionable value.

Do you have any concerns about how the access plan will be implemented?

remember to alert property owners of interest with plenty of notice !!!

Other comments:

let it rain

Please leave this with us, mail, or email by **August 27, 2014** to:
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5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

Thank you for your participation

**COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE - AUGUST 14, 2014**

Name: Jim Parrish Representing: _____

Address: 671 C.R. 506 City: _____ State: _____

Zip Code: 81122 Phone: 884-9041 Email: _____

Do you want to be added to the mailing list? Yes No

Are you a (check all that apply):

- | | |
|---|--|
| <input checked="" type="checkbox"/> Property Owner along US 160 | <input checked="" type="checkbox"/> La Plata County Resident in project area |
| <input type="checkbox"/> Business Owner/Lessee along US 160 | <input checked="" type="checkbox"/> Member of the General Public |
| <input checked="" type="checkbox"/> Bayfield Resident in project area | <input type="checkbox"/> Other |

What elements of the access plan do you support?

I have no problem with the current proposal

What elements of the access plan do you dislike?

Do you have any concerns about how the access plan will be implemented?

None.

Other comments:

Please leave this with us, mail, or email by **August 27, 2014** to:
Andrew Amend, P.E. Stolfus & Associates, Inc.
5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

Thank you for your participation

8-16-14

COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE - AUGUST 14, 2014

Name: HARRY GOFF Representing: WIFE AND SELF

Address: 1824 EASTLAWN City: DURANGO State: CO

Zip Code: 81301 Phone: 247-1153 Email: hgoff@frontier.net

Do you want to be added to the mailing list? Yes No

Are you a (check all that apply):

- Property Owner along US 160
- Business Owner/Lessee along US 160
- Bayfield Resident in project area
- La Plata County Resident in project area
- Member of the General Public
- Other

What elements of the access plan do you support?

MOST EVERYTHING EXCEPT SEE BELOW

What elements of the access plan do you dislike?

I WOULD PREFER THE CENTRAL ENTRY INTO GEM VILLAGE (I THINK IT LINES UP WITH (OR 506)). OTHERWISE G.V. IS SORT OF SKIPPED OVER COMING FROM THE WEST.

Do you have any concerns about how the access plan will be implemented?

THE MEETING WAS VERY INFORMATIVE. THE BEST ON THIS SUBJECT I HAVE ATTENDED. MIKE McVAUGH AND STOLFUS DID A GOOD JOB AND ANSWERED QUESTIONS.

Other comments:

I WOULD LIKE TO SEE THE DESIGN TEAM LOOK AT A CONNECTION BETWEEN BAYFIELD PARKWAY, AT THE WEST END OF THE CHURCH OF CHRIST PROPERTY AND MOUNTAIN VIEW TO THE NORTH. THIS WOULD REQUIRE (CONTINUED BELOW)

Please leave this with us, mail, or email by August 27, 2014 to:

Andrew Amend, P.E. Stolfus & Associates, Inc.
5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

RAISING THE GRADE OF US 160 AND AN UNDERPASS FOR THE CONNECTION. COMMERCE DRIVE COULD BE

ELIMINATED AS AN INTERSECTION w/160. I THINK IT'S WORTH A LOOK. Ⓜ

Thank you for your participation

COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE - AUGUST 14, 2014

Name: Melanie Mazar Representing: Pine River Times
Address: Box 830 City: Bayfield State: CO
Zip Code: 81122 Phone: 884-2331 Email: prt@PINERIVERTIMES.com
Do you want to be added to the mailing list? Yes X No

Are you a (check all that apply):

- | | |
|---|--|
| <input type="checkbox"/> Property Owner along US 160 | <input checked="" type="checkbox"/> La Plata County Resident in project area |
| <input type="checkbox"/> Business Owner/Lessee along US 160 | <input type="checkbox"/> Member of the General Public |
| <input type="checkbox"/> Bayfield Resident in project area | <input checked="" type="checkbox"/> Other <u>media elite</u> |

What elements of the access plan do you support?

EASTERN access near Alta Convergence.

What elements of the access plan do you dislike?

~~Alta~~ Commerce Drive access needs
to be guaranteed until an Eastern
access is constructed

Do you have any concerns about how the access plan will be implemented?

Please try to include as many sidewalks
bike trails, etc as feasible

Other comments:

Please leave this with us, mail, or email by **August 27, 2014** to:
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5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

Thank you for your participation

Andrew Amend

From: Andrew Amend
Sent: Monday, September 15, 2014 3:29 PM
To: 'Carole McWilliams'
Cc: Elizabeth Stolfus; mike.mcvaugh@state.co.us; Jim Horn (james.b.horn@state.co.us); Jim Davis; Heinlein - CDOT, Jo; 'Chris Lamay'
Subject: RE: Bayfield Hwy 160 access control plan

Dear Ms. McWilliams,

On behalf of the project team, including Town of Bayfield, La Plata County, and CDOT, I would like to thank you for participating in the access planning process and providing written comments. We are currently evaluating your comments along with comments provided by others to improve the draft access plan presented this summer. The project team expects to present an updated plan in October.

We encourage you to attend future planning events and to continue to offer any feedback you may have.

Sincerely,
Andrew

Andrew Amend, PE | Transportation Engineer www.stolfusandassociates.com Stolfus & Associates, Inc. | 5690 DTC Boulevard, Suite 101W | Greenwood Village, CO 80111
P: 303 221 2330 | andrew@stolfusandassociates.com

-----Original Message-----

From: Carole McWilliams [<mailto:news@pinerivertimes.com>]
Sent: Wednesday, August 27, 2014 10:16 AM
To: Andrew Amend
Subject: Bayfield Hwy 160 access control plan

Here are my comments re. the Bayfield Highway 160 Access Control Plan.

Bayfield and CDOT have had an adversarial relationship for almost 20 years. CDOT's stranglehold on highway access has thwarted economic development in Bayfield, resulting in a large share of locals clogging Highway 160 to commute to jobs in Durango. In October 1999, the Transportation Commission imposed the expressway designation over the town's very strong objections. I was one of the people who travelled to Denver for that meeting. The expressway designation, as described in the access code, did not match conditions on the ground, but that didn't seem to matter. Funny thing, all the protests of designations at that meeting were from Region 5, all saying pretty much the same thing. No matter.

The message to Bayfield has always been that CDOT cares more about through travelers than Colorado residents, the local needs and desires. Locals using the highway are seen as an inconvenience to the through travelers. Refer back to Bayfielders commuting to Durango because of lack of economic development here.

I have developed an extremely cynical and dis-trustful attitude about CDOT since the late 1990s, and as a result, I have what some might consider obsessive documentation of what has transpired. I hope the current access control plan represents a change in how CDOT deals with Bayfield. The powerpoint presentation to town trustees in July said

project goals include safe and efficient local access along with effective through travel; and compatibility with a local vision, including a plan consistent with local intersection priorities, that supports the economic viability of the area. Those would indeed be a change in how CDOT relates to Bayfield.

My fundamental thought is that an access control plan wouldn't be needed if we could get rid of the expressway designation and get the designation Bayfield asked for in 1998. Absent that, I support the town plans to keep the west end Bayfield Parkway intersection where it is, with some reconfiguration and access on the north side of the highway. I support the new north side access at the east edge of Bayfield, opening that area for residential and commercial development, and creating an alternative for traffic now accessing the highway from Commerce Drive. My understanding is that the town and local developers would pay the costs of those east and west end intersection improvements. I stress that Commerce Drive has been and will continue to be an essential link between the north and south halves of town. It is vital for our businesses, such as they are.

Thank you for your consideration of these comments.

Carole McWilliams
PO Box 693, Bayfield CO 81122

**COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE - AUGUST 14, 2014**

Name: CREZ ROTH Representing: N/A
Address: 38280 HIGHWAY 160 City: BAYFIELD State: COLORADO
Zip Code: 81122 Phone: 9708844521 Email: ROTH.HOBHEAVEN@SKYWORKS.COM

Do you want to be added to the mailing list? Yes ✓ No _____

Are you a (check all that apply):

- | | |
|---|---|
| <input checked="" type="checkbox"/> Property Owner along US 160 | <input type="checkbox"/> La Plata County Resident in project area |
| <input type="checkbox"/> Business Owner/Lessee along US 160 | <input type="checkbox"/> Member of the General Public |
| <input type="checkbox"/> Bayfield Resident in project area | <input type="checkbox"/> Other |

What elements of the access plan do you support?

CLOSING ACCESSSES ALONG THE ROUTE AND 3/4 TURNS

* LETS LOWER THE HIGHWAY THRU GEM VILLAGE NOW,
AND GAIN SOME TURN LANES

What elements of the access plan do you dislike?

WHERE THE ACCESS IS TO BE FOR GEM VILLAGE.
IT SHOULD AND NEEDS TO BE DIRECTLY SOUTH OF
THE COUNTY ROAD

* LETS LOWER THE HIGHWAY THRU GEM VILLAGE NOW

Do you have any concerns about how the access plan will be implemented?

NOPE

Other comments:

TELL THE EASTERN SLOPE TO GO TO PURGATORY
AND SEND US MORE MONEY

* LETS LOWER THE HIGHWAY THRU GEM VILLAGE NOW
AND GAIN SOME TURN LANES

Please leave this with us, mail, or email by **August 27, 2014** to:
Andrew Amend, P.E. Stolfus & Associates, Inc.
5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

Thank you for your participation

**COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
GEM VILLAGE PUBLIC OPEN HOUSES - SEPTEMBER 2014**

Name: Candace Dial & Crystal Ross Representing: Village Junction Antiques

Address: 39793 US Hwy 160 City: Bayfield State: CO

Zip Code: 81122 Phone: 970-884-2445 Email: villagejunctionantiques@yahoo.com

Do you want to be added to the mailing list? Yes No

Are you a (check all that apply):

- | | |
|--|---|
| <input checked="" type="checkbox"/> Property Owner along US 160 | <input type="checkbox"/> La Plata County Resident in project area |
| <input checked="" type="checkbox"/> Business Owner/Lessee along US 160 | <input type="checkbox"/> Member of the General Public |
| <input type="checkbox"/> Gem Village Resident in project area | <input type="checkbox"/> Other |

What elements of the access plan do you support?

What elements of the access plan do you dislike?

Our customer base is largely tourists, or people traveling to and from Pagosa Springs & Durango. We feel this would be detrimental to our retail sales.

Do you have any concerns about how the access plan will be implemented?

We would need good signage to encourage travelers to turn off to Gem Village business

Other comments:



Please leave this with us, mail, or email by **September 30, 2014** to:
Andrew Amend, P.E. Stolfus & Associates, Inc.
5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

Michael D. McVaugh
Traffic & Safety Engineer

Thank you for your participation





October 14, 2014

Candace Dial and Crystal Ross
Village Junction Antiques
39793 US Hwy 160
Bayfield, CO 81122

RE: Bayfield - US 160 Access Plan in Gem Village

Dear Ms. Dial and Ms. Ross,

On behalf of the project team: the Town of Bayfield, La Plata County, and CDOT, I would like to thank you for providing written comments regarding the Bayfield - US 160 Access Plan. We are currently evaluating your comments along with those provided by others to improve the draft access plan. The project team expects to present an updated plan in December.

We appreciate your concerns regarding the future of US 160 through Gem Village. The proposed alignment of US 160 shown in our plan reflects the US 160 Record of Decision (ROD) alignment of the highway in this area. This alignment was evaluated and selected through an Environmental Impact Statement process that began in 1996 and concluded in 2006. That process included public input, safety evaluations, resource impact studies, as well as other technical evaluations. Currently, the improvements to US 160 at Gem Village are unfunded and do not have a planned date for implementation.

The US 160 Access Plan is limited, by Colorado Statute, to the regulation of accesses only. The Plan therefore uses the US 160 ROD alignment as a basis for evaluating access to and from the highway without consideration of alternative highway alignments. The findings of the US 160 Access Plan evaluations will specify where each access will be located and what types of vehicular movements will be allowed at each access point.

In response to your comment regarding signage for travelers, we have included a pamphlet with information regarding CDOT's Tourist Oriented Directional Sign program. This program provides business identification and directional information along state highways for tourist oriented activities.

Thank you again for your participation in the US 160 Access Plan. We encourage you to attend future planning events and to continue to offer any feedback you may have.

Very Truly Yours,

STOLFUS & ASSOCIATES, INC.

A handwritten signature in blue ink that reads "Andrew Amend". The signature is fluid and cursive.

Andrew Amend, P.E.
Transportation Engineer

COMMENT SHEET

BAYFIELD US 160 ACCESS PLAN

GEM VILLAGE PUBLIC OPEN HOUSES - September 2014

Name: Robert & Denise Plant Representing: Plant Family
Address: 1212 Homestead Dr City: Bayfield State: CO
Zip Code: 81422 Phone: 884-4375 Email: rplant2k@yahoo.com
Do you want to be added to the mailing list? Yes No

Are you a (check all that apply):

- Property owner along US160
- Business Owneressee along US160
- Gem Village Resident in project area
- La Plata County Resident in project area
- Member if the General Public
- Other

What elements of the access plan do you support?

NONE

What elements of the access plan do you dislike?

The FLOW OF TRAFFIC - LIGHTS OF INCOMING CARS WILL SHINE IN OUR HOME - DISRUPTIVE THROUGH TRAFFIC IN OUR SUBDIVISION - HOMESTEAD TRAILS

Do you have any concerns about how the access plan will be implemented?

Yes - Many too disruptive to residents & wild life

STATE OF COLORADO



Department of Transportation
Division 5
33 North Main Avenue, Suite 100
Durango, Colorado 81301
(970) 385-8360, FAX (970) 385-8361
email: mike.mcvaugh@state.co.us

Michael D. McVaugh
Traffic & Safety Engineer

Please leave this with us, mail, or email by September 30, 2014 to:

Andrew Amend, P.E. Stolfus & Associates, Inc.

5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111

303.221.2300 (Phone) 303.221.2331 (Fax)

andrew@stolfusandassociates.com

COMMENT SHEET

BAYFIELD US 160 ACCESS PLAN

GEM VILLAGE PUBLIC OPEN HOUSES - September 2014

Name: Brian + Dawn Schultz Representing: Homestead Trails
Address: 1398 Homestead Dr City: Bayfield State: CO
Zip Code: 81122 Phone: 970-884-5298 Email: brianschultz4444@gmail.com

Do you want to be added to the mailing list? Yes No

Are you a (check all that apply):

- Property owner along US160
- La Plata County Resident in project area
- Business Owneressee along US160
- Member if the General Public
- Gem Village Resident in project area
- Other

What elements of the access plan do you support?

None

What elements of the access plan do you dislike?

The highway project is going to our way too close to our house. Too much highway noise. It will decrease the value of our home. Too many lights from cars directing in to our home. We have children + worry about their safety with the highway that close.

Do you have any concerns about how the access plan will be implemented?

It's a waste of money to move the highway that's perfectly functional the way it is.
We were never notified of any meetings + are very concerned about this!

This will wreck our quite neighborhood. We didn't buy our home with the intention of staying at a noisy highway in front of our house.

Please leave this with us, mail, or email by September 30, 2014 to:

Andrew Amend, P.E. Stolfus & Associates, Inc.

5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111

303.221.2300 (Phone) 303.221.2331 (Fax)

andrew@stolfusandassociates.com

STATE OF COLORADO



Department of Transportation

Region 5

3803 North Main Avenue, Suite 100

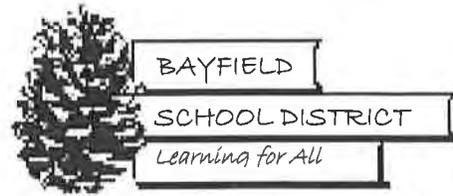
Durango, Colorado 81301

(970) 385-8360, FAX (970) 385-8361

E-mail: mike.mcvaugh@state.co.us

Michael D. McVaugh

Traffic & Safety Engineer



November 19, 2014

Jo Heinlein
Colorado Department of Transportation
3803 N. Main Avenue, Suite 100
Durango, CO 81301

Dear Jo:

Thank you for your recent visit to Bayfield to discuss the long-range plans for Highway 160 through Bayfield. As we discussed, the District currently owns two pieces of property that may be impacted by any changes to Highway 160 through Bayfield corridor.

42456 Highway 160, Bayfield

The District leases this building as a source of income that directly benefits student extracurricular activities. Given the significance of this funding, the District supports maintaining access from Highway 160.

TBD Oak Drive, Bayfield (Parcel #5677-013-00-016)

This vacant property was purchased by the District in December 2012 to be used as a future school site. We anticipate building on this property within the next three to five years, due to growth in our lower grade levels. Given its proximity to our property, we would like to participate in future discussions surrounding the installation of a traffic light at the intersection of Highway 160 and Bayfield Parkway.

On behalf of the Bayfield School District, I request the addition of this letter to any public comments related to the long-range plans for the Highway 160 corridor through Bayfield. Please do not hesitate to contact me directly if you would like further detail.

Sincerely,

Troy Zabel
Superintendent

Bayfield School District 10 Jt-R
24 Clover Drive
Bayfield, CO 81122
970-884-2496, 970-884-4284 (fax)



February 4, 2015

Troy Zabel
Bayfield School District 10 Jt-R
24 Clover Drive
Bayfield, CO 81122

RE: Bayfield - US 160 Access Plan in Gem Village

Dear Mr. Zabel,

On behalf of the project team: the Town of Bayfield, La Plata County, and CDOT, I would like to thank you for your letter addressed to Jo Heinlein of CDOT regarding the Bayfield - US 160 Access Plan. We are currently evaluating your comments along with those provided by others to improve the plan. The project team expects to present the final plan to Town and County Boards in March for adoption.

The Access Plan identifies where and how highway access will occur in the future. Control of access provides benefits to highway operation and safety, while also taking into account local development and transportation planning. The Access Plan addresses each of the District properties you mentioned in your letter as follows:

42456 Highway 160, Bayfield

Closure of this property's highway access will not occur unless the use of the lot is expanded or enlarged. If the use is expanded or enlarged, the property would retain access to the local street system at E. Pony Lane only. Additionally, highway improvements may require restrictions of access at an earlier date. While it is recognized that the school property provides an alternate source of income for the District; without future restriction of the access, the Commerce Drive intersection with US 160 may not be able to function safely and efficiently.

TBD Oak Drive, Bayfield (Parcel #5677-013-00-016)

District planning for this property was considered in the development of the the Access Plan, which calls for future north-side access to US 160 across from Bayfield Parkway at the east end of town. The Access Plan allows all movements and for a future traffic signal at this location. Public street connections to the highway access point will be established by Town and/or County planning efforts separate from this Access Plan. Signalization of the highway intersection will be implemented as warranted according to the *Manual on Uniform Traffic Control Devices*.

Thank you again for your participation in the US 160 Access Plan. We encourage you to continue to offer any feedback you may have.

Very Truly Yours,

STOLFUS & ASSOCIATES, INC.

A handwritten signature in blue ink that reads "Andrew Amend".

Andrew Amend, P.E.
Transportation Engineer

**Bayfield US 160 Access Plan
Public Open House - December 4, 2014
Bayfield, CO**

Name	Whom Representing	Phone #	Email
Mike Russell	Homestead	385-4546	michael@russellpe.com
Grant Richards	Homestead	777-1747	grantkawai@msp.com
MARSHA MORELAND	"	749-2682	marsha@gobrainstem.net
Stephanie Strain	"	749-7386	jsastrain@yahoo.com
Don Willmet	Self	884-2318	dlw2048@msn.com
Paul Black	L-J Ranch LLC	884-9042	ljar@Hotmail.com
Carole McWilliam	Pine River Times	884-2331	news@pinerivertimes.com
TERRY GRUSH	HOMESTEAD	944-5699	TGRUSH32@YAHOO.COM
RON DUNAVANT	FIRST NATIONAL BANK OF DURANGO	382-5637	rdunavant@fnbdurango.com
Robert Denise Plant	Homestead	884-4375	rplant2k@yahoo.com
Bill & Cathy Gothard	ACE Storage	749-6749	gothardboe@yahoo.com
HARRY STOFF	SELF	749-8741	hgoff@frontier.net
Rich Hillier	S.W. & Self	749-7783	rich@swaginc.com
GARRY HILLIER	SWAG & SELF	884-4101	GARRY@SWAGINC.COM
Dennis Hillier	SWAG & Self	884-9899	dennis@swaginc.com
GREG ROTH	NOBODY	884-4521	ROTHHOGHEAVEN@SKYWERX.COM
Pete Zorn	Annoa River Wetlands	247-0206	pete@annoriverwetlands.com
Mac Thomson	self	903-9751	riskmac@gmail.com
Monte Miller	self	884-4327	monte.miller.2008@gmail.com
Michelle Nelson	self MiniMerc	884-9904	michelle@bayfieldminimerc.com



COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE – December 4, 2014

Name: DARYL YOST Representing: BUS OWNER

Address: 360 MOUNTAIN VIEW PO BOX 1402 City: BAYFIELD State: CO

Zip Code: 81222 Phone: 970-769-5334 Email: DARYL.YOST@HOTMAIL.COM

Do you want to be added to the mailing list? Yes No

Are you a (check all that apply):

- | | |
|--|---|
| <input checked="" type="checkbox"/> Property Owner along US 160 | <input type="checkbox"/> La Plata County Resident in project area |
| <input checked="" type="checkbox"/> Business Owner/Lessee along US 160 | <input type="checkbox"/> Member of the General Public |
| <input type="checkbox"/> Bayfield Resident in project area | <input type="checkbox"/> Other |

What elements of the access plan do you support?

What elements of the access plan do you dislike?

Do you have any concerns about how the access plan will be implemented?

THAT NO CHANGES BE MADE AT COMMARCE DR
UNTIL A NEW EAST SIDE CONNECTION IS MADE
WITH EASMENTS AND ACESS TO COMMARCE

Other comments:

502 COULD HAVE RT TURN ONLY HEADING WEST
VS A GATE

Please leave this with us, mail, or email by **December 18, 2014** to:
Andrew Amend, P.E. Stolfus & Associates, Inc.
5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

Thank you for your participation

COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE – December 4, 2014

Name: Michelle Nelson Representing: Mini Merc / Sower Properties

Address: PO Box 1503 City: Bayfield State: CO

Zip Code: 81122 Phone: 884-9904 Email: michelle@bayfieldminimerc.com

Do you want to be added to the mailing list? Yes No

Are you a (check all that apply):

- | | |
|--|---|
| <input checked="" type="checkbox"/> Property Owner along US 160 | <input type="checkbox"/> La Plata County Resident in project area |
| <input checked="" type="checkbox"/> Business Owner/Lessee along US 160 | <input checked="" type="checkbox"/> Member of the General Public |
| <input checked="" type="checkbox"/> Bayfield Resident in project area | <input type="checkbox"/> Other |

What elements of the access plan do you support?

What elements of the access plan do you dislike?

Do you have any concerns about how the access plan will be implemented?

Make sure to open new access at EAST
end before making Commerce Dr
a 3/4 Intersection.

Other comments:

Good job listening to comments
along the way.

Please leave this with us, mail, or email by **December 18, 2014** to:
Andrew Amend, P.E. Stolfus & Associates, Inc.
5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

Thank you for your participation

COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE – December 4, 2014

Name: MARSHA A. MORELAND Representing: SELF (Homeowner)
Address: 278 HOMESTEAD CIRCLE City: BAYFIELD State: CO
Zip Code: 81122 Phone: 970-749-2682 Email: marsha@gobrainstorm.net
Do you want to be added to the mailing list? Yes No

- Are you a (check all that apply):
- Property Owner along US 160
 - Business Owner/Lessee along US 160
 - Bayfield Resident in project area
 - La Plata County Resident in project area
 - Member of the General Public
 - Other

What elements of the access plan do you support?
I do not have a problem w/ improvements or upgrades to Highway 160, however I don't want needless money spent to lengthen hwy. when not necessary.

What elements of the access plan do you dislike?
I don't care for the extension of Hwy. into Homestead trails at cul-de-sac whereby properties will be deleted from our subdivision plan for fees on our infrastructure. Lots being bought out or deleted.

Do you have any concerns about how the access plan will be implemented?
Since Homestead Trls. is a small subdivision, even at buildout. To have less lots carry costs of maintaining roads, water system, etc. will hurt our Homeowners in this economy. Remove lot next (EAST) of cul-de-sac and come out there.

Other comments: * Most important to me is to have the intersection tight at Parkway Blvd. + Hwy. 160 (West end) by entrance to business route. Built in ASAP. Very, very dangerous right now - bad plan years ago!

*Protn
Dem
+ busi.*

Please leave this with us, mail, or email by **December 18, 2014** to:
Andrew Amend, P.E. Stolfus & Associates, Inc.
5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

Thank you for your participation

**COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE – December 4, 2014**

Name: Mike Russell Representing: Homestead

Address: 934 Main Ave. Unit C City: DURANGO State: CO

Zip Code: 81301 Phone: 970-385-4546 Email: michael@russellpe.com

Do you want to be added to the mailing list? Yes No

Are you a (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Property Owner along US 160 | <input type="checkbox"/> La Plata County Resident in project area |
| <input type="checkbox"/> Business Owner/Lessee along US 160 | <input type="checkbox"/> Member of the General Public |
| <input type="checkbox"/> Bayfield Resident in project area | <input checked="" type="checkbox"/> Other <u>Consultant for Homestead</u> |

What elements of the access plan do you support?

Revised Gem Village by-pass with keeping the US 160-West Bayfield Parkway intersection in the same "general" location.
Consolidation of accesses into a new right-in-right out on the stretch just east of Gem Village

What elements of the access plan do you dislike?

The location of the proposed south leg of the US 160/West Bayfield Parkway intersection bisects the existing ~~Bay~~ Homestead Parcel in a manner that creates two small undevelopable parcels. Shifting the alignment east would help preserve this parcel for economic development

Do you have any concerns about how the access plan will be implemented?

The sooner the better!
When the Gem Village intersection is developed a connection to the Homestead ~~Ranch~~^{Subdivision} should be installed as well to ensure connectivity.

Other comments:

Please move forward with updating the EIS ASAP and begin working on funding the construction of the Gem Village bypass.

Please leave this with us, mail, or email by **December 18, 2014** to:
Andrew Amend, P.E. Stolfus & Associates, Inc.
5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

Thank you for your participation

**COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE – December 4, 2014**

Name: Grant Richards Representing: Homestead Trails

Address: 1315 Mountain View Dr City: Bayfield State: CO

Zip Code: 81122 Phone: 799-1747 Email: grantkenai@msn.com

Do you want to be added to the mailing list? Yes No

Are you a (check all that apply):

- | | |
|--|--|
| <input checked="" type="checkbox"/> Property Owner along US 160 | <input checked="" type="checkbox"/> La Plata County Resident in project area |
| <input checked="" type="checkbox"/> Business Owner/Lessee along US 160 | <input checked="" type="checkbox"/> Member of the General Public |
| <input type="checkbox"/> Bayfield Resident in project area | <input type="checkbox"/> Other |

What elements of the access plan do you support?

ALL.

What elements of the access plan do you dislike?

The South leg of the US 160, Bayfield Parkway
Intersection bisects a Homestead at Bayfield
LLC Parcel rendering both remaining parcels
useless. Moving this intersection East would be a

Do you have any concerns about how the access plan will be implemented? BENEFIT.

I am concerned when this plan would be
implemented. It would greatly improve safety
if done soon. I am concerned about noise
at the East end of the Gem Village bypass.

Other comments:

Hopefully you will update the EIS and
work on funding for the Gem Village
bypass.

Please leave this with us, mail, or email by **December 18, 2014** to:
Andrew Amend, P.E. Stolfus & Associates, Inc.
5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

Thank you for your participation



January 29, 2015

Mike Russell, P.E.
Russell Planning & Engineering
934 Main Avenue, Unit C
Durango, CO 81301

Cc: Grant Richards

RE: Bayfield - US 160 Access Plan in Gem Village

Dear Mr. Russell,

On behalf of the project team, I would like to thank you for providing written comments regarding the Bayfield - US 160 Access Plan. We are currently evaluating your comments along with those provided by others to improve the plan. The project team expects to present the final plan to Town and County Boards in February for adoption.

We appreciate your concerns regarding the proposed realignments of Bayfield Parkway and Homestead Drive. The alignments are based on recommendations made in the Town of Bayfield - Traffic Feasibility Study, which was completed in May 2014. The US 160 Access Plan uses recommendations from the Traffic Feasibility Study to specify where and how highway access may occur, but does not specify off-highway improvements.

The concept recommended in the Traffic Feasibility Study was based on projected future traffic demands, physical constraints, roadway design standards, and stakeholder input. A primary concern of the project team was ensuring sufficient distance between the proposed Bayfield Parkway/Homestead Drive intersection and US 160 so that a traffic signal on the highway could be accommodated in the future. In the absence of specific development proposals and field survey information, recommendations from the Traffic Feasibility Study represent potential solutions that will require further engineering study prior to implementation. Design of these roadway improvements will likely be influenced by better defined development plans for the area and by more detailed information regarding physical constraints. No timetable for these improvements has been established, but local stakeholders including Homestead Trails will be involved when design moves forward.

Thank you again for your participation in the US 160 Access Plan. We encourage you to continue to offer any feedback you may have.

Very Truly Yours,

STOLFUS & ASSOCIATES, INC.

A handwritten signature in blue ink that reads "Andrew Amend".

Andrew Amend, P.E.
Transportation Engineer

**COMMENT SHEET
BAYFIELD US 160 ACCESS PLAN
PUBLIC OPEN HOUSE – December 4, 2014**

Name: Maryalice Copeland Representing: Self (+ neighbors)
Address: 39640 U.S. Hwy 160 (Gem Village) City: Bayfield State: CO
Zip Code: 81122 Phone: 884-2419 Email: maryacope@g.com
Do you want to be added to the mailing list? Yes No

Are you a (check all that apply):

- | | |
|---|--|
| <input checked="" type="checkbox"/> Property Owner along US 160 | <input checked="" type="checkbox"/> La Plata County Resident in project area |
| <input type="checkbox"/> Business Owner/Lessee along US 160 | <input type="checkbox"/> Member of the General Public |
| <input type="checkbox"/> Bayfield Resident in project area | <input type="checkbox"/> Other |

What elements of the access plan do you support?

North side W access should be R'd, R'd for safety -

What elements of the access plan do you dislike?

Concern: West access to Hwy on S. side in Gem Village -
Map shows desire of C DOT to close. There is a lot of use of this
access - some by large/larger vehicles proceeding East along the frontage
road. Garbage truck still has to back up along service road to W of this access.

Do you have any concerns about how the access plan will be implemented?

If it is closed, there will be multiple problems w/ lge vehicles having
to back up long distance along frontage road. This W + S access
is often used by emergency vehicles when Hwy. is blocked &
traffic needs to be moved either E or W -

Other comments:

Some vehicles turn R at this S + W access to allow Hwy through
traffic to continue more smoothly - Some have pulled off to change
tires, talk on phone, etc - It is a safety "valve" at times -
Please do NOT close this access on the W and South side of the Village.

Please leave this with us, mail, or email by **December 18, 2014** to:
Andrew Amend, P.E. Stolfus & Associates, Inc.
5690 DTC Boulevard, Suite 101W, Greenwood Village, CO 80111
303.221.2330 (Phone) 303.221.2331 (Fax)
andrew@stolfusandassociates.com

Thank you for your participation



January 29, 2015

Mary Alice Copeland
39640 U.S. Highway 160
Bayfield, CO 81122

RE: Bayfield - US 160 Access Plan in Gem Village

Dear Ms. Copeland,

On behalf of the project team: the Town of Bayfield, La Plata County, and CDOT, I would like to thank you for providing written comments regarding the Bayfield - US 160 Access Plan. We are currently evaluating your comments along with those provided by others to improve the access plan. The project team expects to present the final plan to Town and County Boards in February for adoption.

We appreciate your concerns regarding the south-side frontage road access point to US 160 at the west end of Gem Village. The project team agrees that the mobility of large vehicles on the frontage road must be supported while also achieving the Access Plan goal of increasing intersection safety. The plan will be updated to reflect a Right-In, Right-Out access at this location until an adequate large vehicle turnaround can be provided. Conversion of the access point from full-movement to Right-In, Right-Out may occur as part of highway safety improvement project or when development in the vicinity increases traffic at the access by more than 20%.

Thank you again for your participation in the US 160 Access Plan. We encourage you to continue to offer any feedback you may have.

Very Truly Yours,

STOLFUS & ASSOCIATES, INC.

A handwritten signature in blue ink that reads "Andrew Amend". The signature is fluid and cursive.

Andrew Amend, P.E.
Transportation Engineer

Appendix B - Existing Access Inventory

US 160 - Existing Access Inventory

Access ID No.	Reference Point (Windshield)	Owner/Description	Current Business	Existing Configuration	Side	Type	Notes
	100.01	MP 100					
1	100.30	Gem Lane		Unsignalized Full Movement	LT	PRU	Access to Frontage Road
2	100.38	US 160 Frontage Road (South)		Unsignalized Full Movement	RT	PRU	Access to Frontage Road
3	100.56	CO RD 507		Unsignalized Full Movement	LT	PRU	Access to Frontage Road
4	100.56	US 160 Frontage Road (South)		Unsignalized Full Movement	RT	PRU	Access to Frontage Road
5	100.80	US 160 Frontage Road (South)		Unsignalized Full Movement	RT	PRU	Access to Frontage Road
6	100.80	US 160 Frontage Road (North)		Unsignalized Full Movement	LT	PRU	Access to Frontage Road
7	100.90	Homestead Trails Property Owners Association		Unsignalized Full Movement	RT	FA	GATED
8	100.90	Smith, Calvin L & Cecelia E Trustees		Unsignalized Full Movement	LT	FA	GATED
9	100.94	Smith, Calvin L & Cecelia E Trustees		Unsignalized Full Movement	LT	RA	Perkins, James B & Gwen B Cross Access
	100.99	MP 101					
10	101.03	Homestead Trails Property Owners Association		Unsignalized Full Movement	RT	FA	GATED
11	101.03	Perkins, James B & Gwen B		Unsignalized Full Movement	LT	FA	GATED
12	101.08	Homestead at Bayfield LLC, The		Unsignalized Full Movement	RT	PRU	Access to Lift Station
		Homestead at Bayfield LLC, The		Unsignalized Full Movement	RT	FA	No direct highway access
		Homestead at Bayfield LLC, The		Unsignalized Full Movement	RT	FA	No direct highway access
		Homestead at Bayfield LLC, The		Unsignalized Full Movement	RT	FA	No direct highway access
13	101.09	Beaver, Phyllis A		Unsignalized Full Movement	LT	RA	
14	101.37	Tucker, Don		Unsignalized Full Movement	RT	RA	GATED
15	101.42	Bayfield Parkway (West)		Unsignalized Full Movement	RT	PRU	
16	101.42	Peeples, Peyton Paul & Dianne M		Unsignalized Full Movement	LT	RA	GATED
17	101.50	Casper, Charles C & Shirley A		Unsignalized Full Movement	LT	FA	GATED
18	101.59	Casper, Charles C & Shirley A		Unsignalized Full Movement	LT	RA	
19	101.83	Grush, Kevin R & Terry S & Trout, Carol		Unsignalized Full Movement	RT	FA	

Legend
 PRS - Public Road Signalized
 PRU - Public Road Unsignalized
 PVRU - Private Road Unsignalized
 BA - Business Access
 RA - Residential Access
 FA - Field Access

US 160 - Existing Access Inventory

Access ID No.	Reference Point (Windshield)	Owner/Description	Current Business	Existing Configuration	Side	Type	Notes
20	101.83	Sivers, Robert R		Unsignalized Full Movement	LT	FA	
	101.98	MP 102					
21	102.00	CO RD 506		Unsignalized Full Movement	LT	PRU	
22	102.24	CO RD 502		Unsignalized Full Movement	LT	PRU	
23	102.27	Grush, Kevin R & Terry S & Trout, Carol		Unsignalized Full Movement	RT	FA	Ditch Access
24	102.27	Burse, Lynne T Trustee & Goodloe, Helen		Unsignalized Full Movement	LT	FA	Ditch Access
25	102.37	Bayfield, Town of	Bayfield Visitor Center/Pine River Park	Unsignalized Full Movement	RT	BA	Gated
26	102.48	Bayfield, Town of		Unsignalized Full Movement	RT	BA	Gated Recreational Access
27	102.48	Riverside RV LLC	Bayfield Riverside Riverside RV Park	Unsignalized Full Movement	LT	BA	Ag/Res Property Neighbor
28	102.81	Buck Highway		Signalized Full Movement	RT	PRS	
29	102.81	CO RD 501		Signalized Full Movement	LT	PRS	
30	102.87	Elliott, Denise		Unsignalized Full Movement	RT	FA	
	102.90	MP 103					
31	103.10	N. Commerce Dr		Unsignalized Full Movement	LT	PRU	
32	103.10	Bayfield School District		Unsignalized Full Movement	RT	BA	
33	103.30	Peoples Real Estate Investments LLLP		Unsignalized Full Movement	LT	RA	
34	103.30	Haga, Jerry D & Zelma		Unsignalized Full Movement	RT	FA	GATED
35	103.45	Southwestern Foods Inc		Unsignalized Full Movement	LT	RA	Lee W Properties LLC Cross Access
36	103.53	Bayfield Parkway (East)		Unsignalized Full Movement	RT	PRU	
38	103.81	Yarina, David P & Brenda A		Unsignalized Full Movement	RT	FA	GATED
39	103.82	Byrd, Oscar & Nancy Trustees		Unsignalized Full Movement	LT	PVRU	RA / AG Access

Legend
 PRS - Public Road Signalized
 PRU - Public Road Unsignalized
 PVRU - Private Road Unsignalized
 BA - Business Access
 RA - Residential Access
 FA - Field Access

Appendix C – Traffic Methodology, Data Analysis



Memorandum

To: Mike McVaugh, PE
Chris La May
Jim Davis, PE

cc: Elizabeth Stolfus, PE
Jo Heinlein

From: Andrew Amend, PE

Date: September 26, 2013

Re: US 160 Bayfield Traffic Feasibility Analysis - Draft Methodology

This memorandum describes the general traffic engineering and transportation planning approach proposed by Stolfus & Associates, Inc. for the US 160 Traffic Feasibility Analysis near Bayfield, Colorado. The purpose of this memorandum is to outline, for the benefit of the Town, County and CDOT, the primary assumptions and procedures that will be used in developing future traffic projections. All traffic analyses conducted in the feasibility analysis will be in accordance with this methodology and be used to support access-related decisions made during the course of the project.

STUDY AREA

The study limits cover US 160 through and adjacent to the Town of Bayfield in La Plata County. The US 160 analysis limits will generally extend from Gem Lane (MP 100.468) to Bayfield Parkway (MP 103.624). This section of US 160 functions as a Principal Arterial per FHWA guidelines and falls within the E-X: Expressway access category. The study area will primarily compare the highway and access configuration shown in the preferred alternative from the May 2006 *US 160 Final EIS* to any new access configurations proposed by the project team.

EXISTING TRAFFIC VOLUMES

Daily traffic counts were collected on Wednesday, August 14th and Thursday, August 15th, 2013. The two counts were located on US 160, west of CR 507 and east of Bayfield Parkway. Average Daily Traffic (ADT) at those locations was found to be 11,800 and 5,900, respectively. It is also noted there was 10% more traffic on August 14th than August 15th at both count locations. At the western count location, morning and afternoon peak hour traffic was 8.2% and 8.6% of daily traffic, respectively.

August 15th and 16th, 2012 count data from the CDOT Automatic Traffic Recorder (ATR) 000217 located east of Homestead Drive shows ADT of 11,200. Daily traffic data collected on Tuesday, June 5th, 2012 east of Bayfield Parkway shows ADT of 5,700 at that location. Based on these CDOT sources, data collected in 2013 is thought to be consistent with the typical traffic patterns in area and representative of peak season traffic volumes. CDOT data indicates truck percentages of 4.8% and 9.6% at the Homestead Drive and Bayfield Parkway locations, respectively.

ATR data from July 31, 2013 indicated peaks in traffic demand during the two hour periods beginning at 7:00 a.m. and 4:00 p.m. Turning Movement Counts (TMCs) were then collected during those times on August 13th and 15th, 2013 at seven locations along US 160. System peaks in traffic were determined by adding total intersection volumes of all counted intersections. The system peak hours began at 7:15 a.m. and 5:00 p.m. TMC data from these peak hours is shown in the attached exhibit.

BACKGROUND TRAFFIC PROJECTIONS

In the EIS, future traffic demands were estimated by growing traffic 1.79% per year. Consistent with this growth rate assumption, the current CDOT estimate of 20-year growth at ATR 000217 is a factor of 1.43, which equates to 1.80% compounded annually. A straight line analysis of historical data from the ATR shows August ADT increasing from 7,700 in 1992 to 10,600 in 2012. This equates to an annual compound growth rate of 1.60%.

In order to maintain consistency with the EIS and current CDOT growth estimates, an annual compound growth rate of 1.80% will be applied to 2013 traffic volumes to predict future highway traffic volumes. At this rate, 2025 p.m. peak hour traffic demands at the US 160/CR 501 intersection are estimated to be approximately 11% lower than projected in the EIS. However, this traffic feasibility analysis will consider a 20 year horizon for growth projections. 2033 traffic demands at the intersection are forecasted to be 3% greater than the 2025 demands from the EIS.

Tube counts have also been collected on county roads in the study area. This data indicates varying growth patterns along the various roads. Using counts between 1991 and 2012, growth on CR 502 was 1.45% compounded annually. This growth rate will be applied to existing traffic on all county roads in the study area.

PLANNED DEVELOPMENT

Planned development accounted for in this study considered properties near US 160 with development potential. Generally, those properties were consistent with those considered in the *US 160/160B (West Side) Transportation Study* prepared by Drexel, Barrell & Co. in 2011. This study is not intended to define the future land use of specific properties so only a rough estimate of development intensity will be made. Roughly consistent with the 2011 *Transportation Study*, 380 acres will be considered for development.

Areas adjacent to US 160 will be assumed to be developed as retail and areas farther from the highway will be assumed to be single family homes. The following summarizes the traffic generating impacts of these assumptions from the *ITE Trip Generation, 9th Edition* based on average rates for Single-Family Detached Housing and Shopping Center:

- 35,600 Daily Trips Generated
- 1,130 trips generated during the morning peak hour
- 3,200 trips generated during the afternoon peak hour

Development trips will be reduced to account for internal trips and pass-by trips where applicable. The distribution of development generated trips along US 160 will match that in the attached trip distribution figure.

TRAFFIC MODELS

Traffic models of access configurations will primarily consist of assessing trip reassignment as a result of access change. The FHWA Cap-X tool for the planning of junctions will then be used to evaluate the capacity of highway access points. Two scenarios will be evaluated for each proposed configuration:

- Year 2035 without implementation of any US 160 EIS improvements (No-EIS scenario)
- Year 2035 with full implementation of US 160 EIS improvements (EIS scenario)

The No-EIS scenario will consider how a new access will function assuming that no other changes are made along the corridor beyond those upon which the new access is contingent. The EIS scenario will evaluate the new access and how it interacts with all improvements proposed in the US 160 EIS. Evaluation of an interim or phased scenario will only be considered at the request of the project team. Peak hour traffic signal warrants described in the Manual on Uniform Traffic Control Devices (MUTCD) will be used as a planning level tool to determine if full movement intersections may be signalized in future scenarios.

The Cap-X tool separates junction types into intersections, roundabouts, and interchanges. Numerous configurations of these junction types can be evaluated at a planning level with results presented as volume-to-capacity ratio (v/c) for the junction. Right-of-Way constraints and State Highway Access Code auxiliary lane requirements will be considered along with turn demand when selecting lane configurations at the junctions. The results of these analyses and comparisons, in combination with physical and other constraints, will assist the project team in making access-related decisions.

Attachments (2)

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / Gem Ln			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	August 2013			
Analysis Time Period	AM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: Gem Ln				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	0	249			555	5		
Peak-Hour Factor, PHF	0.90	0.90	1.00	1.00	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	0	276	0	0	616	5		
Percent Heavy Vehicles	2	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT			TR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				10	0	5		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	0	0	0	11	0	5		
Percent Heavy Vehicles	0	0	0	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	1	0		
Configuration				LTR				
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LTR	
v (veh/h)	0						16	
C (m) (veh/h)	960						352	
v/c	0.00						0.05	
95% queue length	0.00						0.14	
Control Delay (s/veh)	8.8						15.7	
LOS	A						C	
Approach Delay (s/veh)	--	--					15.7	
Approach LOS	--	--					C	

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / County Rd 507			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	August 2013			
Analysis Time Period	AM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: County Rd 507				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	3	251	5	8	553	5		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	3	278	5	8	614	5		
Percent Heavy Vehicles	2	--	--	2	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LTR			LTR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	2	1	2	5	0	5		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	2	1	2	5	0	5		
Percent Heavy Vehicles	2	2	2	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR	LTR			LTR		
v (veh/h)	3	8	5			10		
C (m) (veh/h)	961	1279	344			329		
v/c	0.00	0.01	0.01			0.03		
95% queue length	0.01	0.02	0.04			0.09		
Control Delay (s/veh)	8.8	7.8	15.6			16.3		
LOS	A	A	C			C		
Approach Delay (s/veh)	--	--	15.6			16.3		
Approach LOS	--	--	C			C		

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / Homestead Drive			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	August 2013			
Analysis Time Period	AM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: Homestead Drive				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	1	256	0	6	574	31		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	1	284	0	6	637	34		
Percent Heavy Vehicles	2	--	--	2	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LTR			LTR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	0	0	0	6	0	3		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	0	0	0	6	0	3		
Percent Heavy Vehicles	2	2	2	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR	LTR			LTR		
v (veh/h)	1	6	0			9		
C (m) (veh/h)	919	1278				284		
v/c	0.00	0.00				0.03		
95% queue length	0.00	0.01				0.10		
Control Delay (s/veh)	8.9	7.8				18.1		
LOS	A	A				C		
Approach Delay (s/veh)	--	--				18.1		
Approach LOS	--	--				C		

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Max Rusch			Intersection	160A / Bayfield Parkway West		
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County		
Date Performed	12/10/2014			Analysis Year	August 2013		
Analysis Time Period	AM						
Project Description 13021							
East/West Street: Highway 160A				North/South Street: Bayfield Parkway			
Intersection Orientation: East-West				Study Period (hrs): 1.00			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)		217	48	4	530		
Peak-Hour Factor, PHF	0.96	0.90	0.90	0.90	0.90	0.96	
Hourly Flow Rate, HFR (veh/h)	0	241	53	4	588	0	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			1				0
Lanes	0	1	1	0	1		0
Configuration		T	R	LT			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	78	0	9				
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	86	0	10	0	0	0	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)		0			0		
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0				0
Lanes	0	1	1	0	0		0
Configuration	LT		R				
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration		LT	LT		R		
v (veh/h)		4	86		10		
C (m) (veh/h)		1326	336		798		
v/c		0.00	0.26		0.01		
95% queue length		0.01	1.02		0.04		
Control Delay (s/veh)		7.7	19.4		9.6		
LOS		A	C		A		
Approach Delay (s/veh)	--	--	18.4				
Approach LOS	--	--	C				

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst				Intersection	160A / County Rd 506			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	August 2013			
Analysis Time Period	AM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: County Rd 506				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	2	223			517	1		
Peak-Hour Factor, PHF	0.90	0.90	1.00	1.00	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	2	247	0	0	574	1		
Percent Heavy Vehicles	2	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	2	0		
Configuration	LT				T	TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				4	0	9		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	0	0	0	4	0	10		
Percent Heavy Vehicles	0	0	0	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	1	0		
Configuration					LTR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LTR	
v (veh/h)	2						14	
C (m) (veh/h)	994						533	
v/c	0.00						0.03	
95% queue length	0.01						0.08	
Control Delay (s/veh)	8.6						11.9	
LOS	A						B	
Approach Delay (s/veh)	--	--					11.9	
Approach LOS	--	--					B	

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / County Rd 502			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	August 2013			
Analysis Time Period	AM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: County Rd 502				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	15	212			496	5		
Peak-Hour Factor, PHF	0.90	0.90	1.00	1.00	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	16	235	0	0	551	5		
Percent Heavy Vehicles	2	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT			TR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				15	0	30		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	0	0	0	16	0	33		
Percent Heavy Vehicles	0	0	0	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	1	0		
Configuration				LTR				
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LTR	
v (veh/h)	16						49	
C (m) (veh/h)	1015						449	
v/c	0.02						0.11	
95% queue length	0.05						0.37	
Control Delay (s/veh)	8.6						14.0	
LOS	A						B	
Approach Delay (s/veh)	--	--					14.0	
Approach LOS	--	--					B	

Capacity Analysis for Planning of Junctions

Input Worksheet

Project Name:	US 50 - Bayfield Traffic Feasibility PM Peak	Critical Lane Volume Sum			
Project Number:	13021	Acceptable Configurations			
Location:	Bayfield, CO	< 1200	1200 - 1399	1400 - 1599	≥ 1600
Date:	December 19, 2013	28	0	0	0

Results for Intersections

#	TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Ranking
			CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C		
1	Conventional	FULL	/	/	/	/	/	/	/	/	463	0.29	0.29	10
2	Conventional Shared RT LN	CSRL	/	/	/	/	/	/	/	/	503	0.31	0.31	13
3.1	Quadrant Roadway	S-W	/	/	475	0.30	/	/	291	0.18	371	0.23	0.30	11
3.2		N-E	382	0.24	/	/	312	0.20	/	/	308	0.19	0.24	7
3.3		S-E	/	/	351	0.22	351	0.22	/	/	263	0.16	0.22	5
3.4		N-W	230	0.14	/	/	/	/	312	0.20	348	0.22	0.22	4
4.1	Partial Displaced Left Turn	N-S	249	0.16	175	0.11	/	/	/	/	322	0.20	0.20	3
4.2		E-W	/	/	/	/	236	0.15	176	0.11	321	0.20	0.20	2
5	Displaced Left Turn	FULL	249	0.16	175	0.11	236	0.15	176	0.11	248	0.15	0.16	1
6.1	Restricted Crossing U-Turn	N-S	368	0.23	257	0.16	526	0.33	559	0.35	/	/	0.35	15
6.2		E-W	359	0.22	351	0.22	361	0.23	379	0.24	/	/	0.24	6
7.1	Median U-Turn	N-S	235	0.15	268	0.17	/	/	/	/	494	0.31	0.31	12
7.2		E-W	/	/	/	/	256	0.16	424	0.26	513	0.32	0.32	14
8.1	Partial Median U-Turn	N-S	185	0.12	326	0.20	/	/	/	/	456	0.29	0.29	8
8.2		E-W	/	/	/	/	230	0.14	250	0.16	456	0.29	0.29	8

Capacity Analysis for Planning of Junctions

Input Worksheet

Results for Roundabouts

#	TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Ranking
		Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3		
9.1	1 X 1	0.40	/	/	0.30	/	/	0.37	/	/	0.37	/	/	0.40	5
9.2	1 X 2	0.36	/	/	0.13	0.17	/	0.33	/	/	0.23	0.14	/	0.36	4
9.3	2 X 1	0.22	0.19	/	0.27	/	/	0.10	0.26	/	0.35	/	/	0.35	3
9.4	2 X 2	0.20	0.17	/	0.12	0.16	/	0.10	0.24	/	0.22	0.13	/	0.24	2
9.5	3 X 3	0.09	0.12	0.15	0.03	0.09	0.14	0.01	0.09	0.21	0.05	0.17	0.13	0.21	1

Results for Interchanges

#	TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Ranking
			CLV	V/C												
10.1	Diamond	N-S	/	/	/	/	319	0.20	286	0.18	/	/	/	/	0.20	8
10.2		E-W	/	/	/	/	254	0.16	203	0.13	/	/	/	/	0.16	5
11.1	Partial Cloverleaf	N-S	/	/	/	/	90	0.06	197	0.12	/	/	/	/	0.12	2
11.2		E-W	/	/	/	/	192	0.24	160	0.10	/	/	/	/	0.12	1
13.1	Displaced Left Turn	N-S	234	0.15	/	/	246	0.15	128	0.08	/	/	168	0.11	0.15	4
13.2		E-W	249	0.16	/	/	274	0.17	153	0.10	/	/	292	0.18	0.18	6
14.1	Double Crossover Diamond	N-S	97	0.06	207	0.13	190	0.12	158	0.10	124	0.08	168	0.11	0.13	3
14.2		E-W	263	0.16	212	0.13	230	0.14	190	0.12	298	0.19	311	0.19	0.19	7
15.1	Single Point	N-S	187	0.12	/	/	396	0.25	/	/	/	/	260	0.16	0.25	10
15.2		E-W	263	0.16	/	/	369	0.23	/	/	/	/	267	0.17	0.23	9

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Max Rusch			Intersection	160A / North Commerce Drive		
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County		
Date Performed	12/10/2014			Analysis Year	August 2013		
Analysis Time Period							
Project Description 13021							
East/West Street: Highway 160A				North/South Street: North Commerce Drive			
Intersection Orientation: East-West				Study Period (hrs): 1.00			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	99	143	0	0	184	42	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR (veh/h)	110	158	0	0	204	46	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			0				0
Lanes	1	1	0	0	1		1
Configuration	L		TR	LT			R
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	0	1	0	38	0	131	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR (veh/h)	0	1	0	42	0	145	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)		0			0		
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0				0
Lanes	1	1	0	0	1		1
Configuration	L		TR	LT			R
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	L	LT	L		TR	LT	R
v (veh/h)	110	0	0		1	42	145
C (m) (veh/h)	1316	1422	283		367	396	837
v/c	0.08	0.00	0.00		0.00	0.11	0.17
95% queue length	0.27	0.00	0.00		0.01	0.36	0.63
Control Delay (s/veh)	8.0	7.5	17.7		14.8	15.2	10.2
LOS	A	A	C		B	C	B
Approach Delay (s/veh)	--	--	14.8			11.3	
Approach LOS	--	--	B			B	

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Max Rusch			Intersection	160A / Bayfield Parkway East		
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County		
Date Performed	12/10/2014			Analysis Year	August 2013		
Analysis Time Period	AM						
Project Description 13021							
East/West Street: Highway 160A				North/South Street: Bayfield Parkway East			
Intersection Orientation: East-West				Study Period (hrs): 1.00			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	0	135	41	21	158	0	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR (veh/h)	0	150	45	23	175	0	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			0				0
Lanes	0	1	0	0	1		0
Configuration	LTR			LTR			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	72		10	0		0	
Peak-Hour Factor, PHF	0.90	0.96	0.90	0.90	0.96	0.90	
Hourly Flow Rate, HFR (veh/h)	80	0	11	0	0	0	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)		0			0		
Flared Approach		N			N		
Storage		0			0		
RT Channelized			1				0
Lanes	1	0	1	0	0		0
Configuration	L		R	LR			
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	LTR	LTR	L		R		LR
v (veh/h)	0	23	80		11		0
C (m) (veh/h)	1401	1378	558		872		
v/c	0.00	0.02	0.14		0.01		
95% queue length	0.00	0.05	0.50		0.04		
Control Delay (s/veh)	7.6	7.7	12.5		9.2		
LOS	A	A	B		A		
Approach Delay (s/veh)	--	--	12.1				
Approach LOS	--	--	B				

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / Gem Ln			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	August 2013			
Analysis Time Period	PM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: Gem Ln				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	5	637			337	10		
Peak-Hour Factor, PHF	0.96	0.96	1.00	1.00	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	5	663	0	0	351	10		
Percent Heavy Vehicles	2	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT			TR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				5	0	0		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	0	0	0	5	0	0		
Percent Heavy Vehicles	0	0	0	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	1	0		
Configuration				LTR				
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LTR	
v (veh/h)	5						5	
C (m) (veh/h)	1198						258	
v/c	0.00						0.02	
95% queue length	0.01						0.06	
Control Delay (s/veh)	8.0						19.2	
LOS	A						C	
Approach Delay (s/veh)	--	--					19.2	
Approach LOS	--	--					C	

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Max Rusch			Intersection	160A / County Rd 507		
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County		
Date Performed	12/10/2014			Analysis Year	August 2013		
Analysis Time Period	PM						
Project Description 13021							
East/West Street: Highway 160A				North/South Street: County Rd 507			
Intersection Orientation: East-West				Study Period (hrs): 1.00			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	0	642	5	6	338	4	
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	0	668	5	6	352	4	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration	LTR			LTR			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	7	0	9	15	2	2	
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	7	0	9	15	2	2	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration	LTR			LTR			
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	LTR	LTR	LTR			LTR	
v (veh/h)	0	6	16			19	
C (m) (veh/h)	1203	918	298			222	
v/c	0.00	0.01	0.05			0.09	
95% queue length	0.00	0.02	0.17			0.28	
Control Delay (s/veh)	8.0	8.9	17.8			22.7	
LOS	A	A	C			C	
Approach Delay (s/veh)	--	--	17.8			22.7	
Approach LOS	--	--	C			C	

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / Homestead Drive			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	August 2013			
Analysis Time Period	PM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: Homestead Drive				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	1	670	0	2	337	7		
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	1	697	0	2	351	7		
Percent Heavy Vehicles	2	--	--	2	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LTR			LTR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	0	0	17	17	0	0		
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	0	0	17	17	0	0		
Percent Heavy Vehicles	2	2	2	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR	LTR			LTR		
v (veh/h)	1	2	17			17		
C (m) (veh/h)	1201	899	441			192		
v/c	0.00	0.00	0.04			0.09		
95% queue length	0.00	0.01	0.12			0.29		
Control Delay (s/veh)	8.0	9.0	13.5			25.6		
LOS	A	A	B			D		
Approach Delay (s/veh)	--	--	13.5			25.6		
Approach LOS	--	--	B			D		

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection				
Agency/Co.	Stolfus and Associates			Jurisdiction		La Plata County		
Date Performed	12/10/2014			Analysis Year		August 2013		
Analysis Time Period	PM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: Bayfield Parkway West				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)		541	162	296	9			
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	0	563	168	308	9	0		
Percent Heavy Vehicles	2	--	--	2	--	--		
Median Type	Undivided							
RT Channelized			1				0	
Lanes	0	1	1	0	1	0		
Configuration		T	R	LT				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	52	0	9					
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	54	0	9	0	0	0		
Percent Heavy Vehicles	2	2	2	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	1	0	0	0		
Configuration	LT		R					
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	LT		R			
v (veh/h)		308	54		9			
C (m) (veh/h)		1008	144		526			
v/c		0.31	0.38		0.02			
95% queue length		1.32	1.73		0.05			
Control Delay (s/veh)		10.1	44.8		12.0			
LOS		B	E		B			
Approach Delay (s/veh)	--	--	40.1					
Approach LOS	--	--	E					

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / County Rd 506			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	August 2013			
Analysis Time Period	PM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: County Rd 506				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	8	546			303	4		
Peak-Hour Factor, PHF	0.96	0.96	1.00	1.00	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	8	568	0	0	315	4		
Percent Heavy Vehicles	2	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	2	0		
Configuration	LT				T	TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				3	0	2		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	0	0	0	3	0	2		
Percent Heavy Vehicles	0	0	0	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	1	0		
Configuration					LTR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LTR	
v (veh/h)	8						5	
C (m) (veh/h)	1238						381	
v/c	0.01						0.01	
95% queue length	0.02						0.04	
Control Delay (s/veh)	7.9						14.6	
LOS	A						B	
Approach Delay (s/veh)	--	--					14.6	
Approach LOS	--	--					B	

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / County 502			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	August 2013			
Analysis Time Period	PM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: County 502				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	30	519			290	10		
Peak-Hour Factor, PHF	0.96	0.96	1.00	1.00	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	31	540	0	0	302	10		
Percent Heavy Vehicles	2	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT			TR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				5	0	15		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	0	0	0	5	0	15		
Percent Heavy Vehicles	0	0	0	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	1	0		
Configuration				LTR				
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LTR	
v (veh/h)	31						20	
C (m) (veh/h)	1248						536	
v/c	0.02						0.04	
95% queue length	0.08						0.12	
Control Delay (s/veh)	8.0						12.0	
LOS	A						B	
Approach Delay (s/veh)	--	--					12.0	
Approach LOS	--	--					B	

Capacity Analysis for Planning of Junctions

Input Worksheet

Project Name:	US 50 - Bayfield Traffic Feasibility PM Peak	Critical Lane Volume Sum			
Project Number:	13021	Acceptable Configurations			
Location:	Bayfield, CO	< 1200	1200 - 1399	1400 - 1599	≥ 1600
Date:	December 19, 2013	28	0	0	0

Results for Intersections

#	TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Ranking
			CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C		
1	Conventional	FULL	/	/	/	/	/	/	/	/	488	0.31	0.31	10
2	Conventional Shared RT LN	CSRL	/	/	/	/	/	/	/	/	587	0.37	0.37	14
3.1	Quadrant Roadway	S-W	/	/	460	0.29	/	/	428	0.27	418	0.26	0.29	5
3.2		N-E	476	0.30	/	/	320	0.20	/	/	437	0.27	0.30	7
3.3		S-E	/	/	273	0.17	273	0.17	/	/	437	0.27	0.27	4
3.4		N-W	241	0.15	/	/	/	/	325	0.20	321	0.20	0.20	1
4.1	Partial Displaced Left Turn	N-S	296	0.18	300	0.19	/	/	/	/	464	0.29	0.29	6
4.2		E-W	/	/	/	/	328	0.20	261	0.16	333	0.21	0.21	3
5	Displaced Left Turn	FULL	296	0.18	300	0.19	328	0.20	261	0.16	328	0.21	0.21	2
6.1	Restricted Crossing U-Turn	N-S	417	0.26	391	0.24	674	0.42	798	0.50	/	/	0.50	15
6.2		E-W	559	0.35	459	0.29	349	0.22	569	0.36	/	/	0.36	13
7.1	Median U-Turn	N-S	287	0.18	226	0.14	/	/	/	/	509	0.32	0.32	11
7.2		E-W	/	/	/	/	369	0.23	523	0.33	555	0.35	0.35	12
8.1	Partial Median U-Turn	N-S	213	0.13	176	0.11	/	/	/	/	485	0.30	0.30	8
8.2		E-W	/	/	/	/	357	0.22	448	0.28	485	0.30	0.30	8

Capacity Analysis for Planning of Junctions

Input Worksheet

Results for Roundabouts

#	TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Ranking
		Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3		
9.1	1 X 1	0.51	/	/	0.72	/	/	0.30	/	/	0.42	/	/	0.72	5
9.2	1 X 2	0.45	/	/	0.38	0.34	/	0.26	/	/	0.28	0.15	/	0.45	3
9.3	2 X 1	0.18	0.33	/	0.65	/	/	0.11	0.19	/	0.39	/	/	0.65	4
9.4	2 X 2	0.17	0.29	/	0.35	0.31	/	0.09	0.16	/	0.26	0.13	/	0.35	2
9.5	3 X 3	0.04	0.14	0.26	0.09	0.28	0.29	0.01	0.10	0.16	0.07	0.19	0.13	0.29	1

Results for Interchanges

#	TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Ranking
			CLV	V/C												
10.1	Diamond	N-S	/	/	/	/	405	0.25	474	0.30	/	/	/	/	0.30	9
10.2		E-W	/	/	/	/	254	0.16	252	0.16	/	/	/	/	0.16	2
11.1	Partial Cloverleaf	N-S	/	/	/	/	86	0.05	108	0.07	/	/	/	/	0.07	1
11.2		E-W	/	/	/	/	384	0.30	263	0.16	/	/	/	/	0.24	8
13.1	Displaced Left Turn	N-S	195	0.12	/	/	261	0.16	288	0.18	/	/	262	0.16	0.18	4
13.2		E-W	297	0.19	/	/	225	0.14	203	0.13	/	/	328	0.20	0.20	6
14.1	Double Crossover Diamond	N-S	149	0.09	249	0.16	245	0.15	215	0.13	214	0.13	262	0.16	0.16	3
14.2		E-W	319	0.20	346	0.22	295	0.18	184	0.12	366	0.23	271	0.17	0.23	7
15.1	Single Point	N-S	283	0.18	/	/	554	0.35	/	/	/	/	423	0.26	0.35	10
15.2		E-W	319	0.20	/	/	320	0.20	/	/	/	/	207	0.13	0.20	5

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Max Rusch			Intersection	160A / North Commerce Drive		
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County		
Date Performed	12/10/2014			Analysis Year	August 2013		
Analysis Time Period	PM						
Project Description 13021							
East/West Street: Highway 160A				North/South Street: North Commerce Drive			
Intersection Orientation: East-West				Study Period (hrs): 1.00			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	216	224	1	0	215	65	
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	225	233	1	0	223	67	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			0				0
Lanes	1	1	0	0	1	1	
Configuration	L		TR	LT			R
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	4	0	0	70	1	116	
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	4	0	0	72	1	120	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)		0			0		
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0				0
Lanes	1	1	0	0	1	1	
Configuration	L		TR	LT			R
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	L	LT	L		TR	LT	R
v (veh/h)	225	0	4		0	73	120
C (m) (veh/h)	1272	1333	163			222	817
v/c	0.18	0.00	0.02			0.33	0.15
95% queue length	0.64	0.00	0.08			1.44	0.52
Control Delay (s/veh)	8.4	7.7	27.6			29.1	10.2
LOS	A	A	D			D	B
Approach Delay (s/veh)	--	--				17.3	
Approach LOS	--	--				C	

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Max Rusch			Intersection	160A / Bayfield Parkway East		
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County		
Date Performed	12/10/2014			Analysis Year	August 2013		
Analysis Time Period	PM						
Project Description 13021							
East/West Street: Highway 160A				North/South Street: Bayfield Parkway East			
Intersection Orientation: East-West				Study Period (hrs): 1.00			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	0	200	102	12	195	0	
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	0	208	106	12	203	0	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration	LTR			LTR			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	81		33	0		0	
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	84	0	34	0	0	0	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)		0			0		
Flared Approach		N			N		
Storage		0			0		
RT Channelized			1			0	
Lanes	1	0	1	0	0	0	
Configuration	L		R		LR		
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	LTR	LTR	L		R		LR
v (veh/h)	0	12	84		34		0
C (m) (veh/h)	1369	1246	486		778		
v/c	0.00	0.01	0.17		0.04		
95% queue length	0.00	0.03	0.62		0.14		
Control Delay (s/veh)	7.6	7.9	14.0		9.8		
LOS	A	A	B		A		
Approach Delay (s/veh)	--	--	12.8				
Approach LOS	--	--	B				

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / Gem Ln			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	2035			
Analysis Time Period	AM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: Gem Ln				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	0	370			823	7		
Peak-Hour Factor, PHF	0.90	0.90	1.00	1.00	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	0	411	0	0	914	7		
Percent Heavy Vehicles	2	--	--	0	--	--		
Median Type	Raised curb							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT			TR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				14	0	7		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	0	0	0	15	0	7		
Percent Heavy Vehicles	0	0	0	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	1	0		
Configuration				LTR				
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LTR	
v (veh/h)	0						22	
C (m) (veh/h)	741						304	
v/c	0.00						0.07	
95% queue length	0.00						0.23	
Control Delay (s/veh)	9.9						17.8	
LOS	A						C	
Approach Delay (s/veh)	--	--					17.8	
Approach LOS	--	--					C	

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst				Intersection	160A / County Rd 507		
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County		
Date Performed	12/10/2014			Analysis Year	2035		
Analysis Time Period	AM						
Project Description 13021							
East/West Street: Highway 160A				North/South Street: County Rd 507			
Intersection Orientation: East-West				Study Period (hrs): 1.00			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	4	373	7	11	821	7	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR (veh/h)	4	414	7	12	912	7	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration	LTR			LTR			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	3	1	3	7	0	7	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR (veh/h)	3	1	3	7	0	7	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration		LTR			LTR		
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	LTR	LTR	LTR			LTR	
v (veh/h)	4	12	7			14	
C (m) (veh/h)	743	1138	189			176	
v/c	0.01	0.01	0.04			0.08	
95% queue length	0.02	0.03	0.12			0.26	
Control Delay (s/veh)	9.9	8.2	24.8			27.2	
LOS	A	A	C			D	
Approach Delay (s/veh)	--	--	24.8			27.2	
Approach LOS	--	--	C			D	

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Max Rusch			Intersection	160A / Homestead Drive		
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County		
Date Performed	12/10/2014			Analysis Year	2035		
Analysis Time Period	AM						
Project Description 13021							
East/West Street: Highway 160A				North/South Street: Homestead Drive			
Intersection Orientation: East-West				Study Period (hrs): 1.00			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	1	380	0	8	854	43	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR (veh/h)	1	422	0	8	948	47	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration	LTR			LTR			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	0	0	0	8	0	4	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR (veh/h)	0	0	0	8	0	4	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration		LTR			LTR		
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	LTR	LTR	LTR			LTR	
v (veh/h)	1	8	0			12	
C (m) (veh/h)	695	1137				144	
v/c	0.00	0.01				0.08	
95% queue length	0.00	0.02				0.27	
Control Delay (s/veh)	10.2	8.2				32.3	
LOS	B	A				D	
Approach Delay (s/veh)	--	--				32.3	
Approach LOS	--	--				D	

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Max Rusch			Intersection	160A / Bayfield Parkway West		
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County		
Date Performed	12/10/2014			Analysis Year			
Analysis Time Period	AM						
Project Description 13021							
East/West Street: Highway 160A				North/South Street: Bayfield Parkway West			
Intersection Orientation: East-West				Study Period (hrs): 1.00			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	0	327	66	5	794	0	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR (veh/h)	0	363	73	5	882	0	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			1				0
Lanes	0	1	1	0	1		0
Configuration	LT		R	LTR			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	107	0	10				
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	118	0	11	0	0	0	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)		0			0		
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0				0
Lanes	0	2	0	0	0		0
Configuration	LT		TR				
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	LT	LTR	LT		TR		
v (veh/h)	0	5	118		11		
C (m) (veh/h)	767	1196	188		682		
v/c	0.00	0.00	0.63		0.02		
95% queue length	0.00	0.01	4.48		0.05		
Control Delay (s/veh)	9.7	8.0	55.0		10.4		
LOS	A	A	F		B		
Approach Delay (s/veh)	--	--	51.2				
Approach LOS	--	--	F				

TWO-WAY STOP CONTROL SUMMARY								
General Information			Site Information					
Analyst	Max Rusch		Intersection	160A / County Rd 506				
Agency/Co.	Stolfus and Associates		Jurisdiction	La Plata County				
Date Performed	12/10/2014		Analysis Year	2035				
Analysis Time Period	AM							
Project Description 13021								
East/West Street: Highway 160A			North/South Street: County Rd 506					
Intersection Orientation: East-West			Study Period (hrs): 1.00					
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	3	331			776	1		
Peak-Hour Factor, PHF	0.90	0.90	1.00	1.00	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	3	367	0	0	862	1		
Percent Heavy Vehicles	2	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	2	0		
Configuration	LT				T	TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				5	0	12		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	0	0	0	5	0	13		
Percent Heavy Vehicles	0	0	0	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	1	0		
Configuration					LTR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LTR	
v (veh/h)	3						18	
C (m) (veh/h)	775						355	
v/c	0.00						0.05	
95% queue length	0.01						0.16	
Control Delay (s/veh)	9.7						15.7	
LOS	A						C	
Approach Delay (s/veh)	--	--					15.7	
Approach LOS	--	--					C	

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / County Rd 502			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	2035			
Analysis Time Period	AM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: County Rd 502				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	21	317			738	7		
Peak-Hour Factor, PHF	0.90	0.90	1.00	1.00	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	23	352	0	0	820	7		
Percent Heavy Vehicles	2	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT			TR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				41	0	0		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	0	0	0	45	0	0		
Percent Heavy Vehicles	0	0	0	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	1	0		
Configuration				LTR				
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LTR	
v (veh/h)	23						45	
C (m) (veh/h)	804						192	
v/c	0.03						0.23	
95% queue length	0.09						0.91	
Control Delay (s/veh)	9.6						29.5	
LOS	A						D	
Approach Delay (s/veh)	--	--					29.5	
Approach LOS	--	--					D	

Capacity Analysis for Planning of Junctions

Input Worksheet

Project Name:	US 50 - Bayfield Traffic Feasibility PM Peak	Critical Lane Volume Sum			
Project Number:	13021	Acceptable Configurations			
Location:	Bayfield, CO	< 1200	1200 - 1399	1400 - 1599	≥ 1600
Date:	December 19, 2013	28	0	0	0

Results for Intersections

#	TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Ranking
			CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C		
1	Conventional	FULL	/	/	/	/	/	/	/	/	639	0.40	0.40	10
2	Conventional Shared RT LN	CSRL	/	/	/	/	/	/	/	/	684	0.43	0.43	12
3.1	Quadrant Roadway	S-W	/	/	650	0.41	/	/	398	0.25	504	0.31	0.41	11
3.2		N-E	523	0.33	/	/	453	0.28	/	/	384	0.24	0.33	6
3.3		S-E	/	/	483	0.30	483	0.30	/	/	411	0.26	0.30	5
3.4		N-W	318	0.20	/	/	/	/	362	0.23	472	0.30	0.30	4
4.1	Partial Displaced Left Turn	N-S	341	0.21	242	0.15	/	/	/	/	442	0.28	0.28	3
4.2		E-W	/	/	/	/	346	0.22	87	0.05	423	0.26	0.26	2
5	Displaced Left Turn	FULL	341	0.21	242	0.15	346	0.22	87	0.05	322	0.20	0.22	1
6.1	Restricted Crossing U-Turn	N-S	312	0.20	379	0.24	695	0.43	426	0.27	/	/	0.43	13
6.2		E-W	492	0.31	481	0.30	429	0.27	541	0.34	/	/	0.34	7
7.1	Median U-Turn	N-S	324	0.20	367	0.23	/	/	/	/	859	0.54	0.54	15
7.2		E-W	/	/	/	/	287	0.18	604	0.38	709	0.44	0.44	14
8.1	Partial Median U-Turn	N-S	256	0.16	447	0.28	/	/	/	/	626	0.39	0.39	8
8.2		E-W	/	/	/	/	249	0.16	365	0.23	626	0.39	0.39	8

Capacity Analysis for Planning of Junctions

Input Worksheet

Results for Roundabouts

#	TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Ranking
		Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3		
9.1	1 X 1	0.46	/	/	0.52	/	/	0.59	/	/	0.40	/	/	0.59	5
9.2	1 X 2	0.44	/	/	0.23	0.29	/	0.51	/	/	0.17	0.23	/	0.51	4
9.3	2 X 1	0.25	0.21	/	0.46	/	/	0.17	0.42	/	0.36	/	/	0.46	3
9.4	2 X 2	0.24	0.20	/	0.20	0.26	/	0.15	0.37	/	0.16	0.21	/	0.37	2
9.5	3 X 3	0.10	0.14	0.18	0.04	0.17	0.23	0.02	0.14	0.32	0.08	0.08	0.18	0.32	1

Results for Interchanges

#	TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Ranking
			CLV	V/C												
10.1	Diamond	N-S	/	/	/	/	440	0.28	393	0.25	/	/	/	/	0.28	8
10.2		E-W	/	/	/	/	264	0.17	183	0.11	/	/	/	/	0.17	1
11.1	Partial Cloverleaf	N-S	/	/	/	/	125	0.08	270	0.17	/	/	/	/	0.17	2
11.2		E-W	/	/	/	/	278	0.33	116	0.07	/	/	/	/	0.17	3
13.1	Displaced Left Turn	N-S	321	0.20	/	/	339	0.21	176	0.11	/	/	231	0.14	0.21	5
13.2		E-W	187	0.12	/	/	306	0.19	232	0.15	/	/	422	0.26	0.26	7
14.1	Double Crossover Diamond	N-S	321	0.20	285	0.18	260	0.16	217	0.14	170	0.11	231	0.14	0.20	4
14.2		E-W	207	0.13	158	0.10	338	0.21	107	0.07	276	0.17	448	0.28	0.28	9
15.1	Single Point	N-S	465	0.29	/	/	635	0.40	/	/	/	/	358	0.22	0.40	10
15.2		E-W	207	0.13	/	/	416	0.26	/	/	/	/	381	0.24	0.26	6

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / North Commerce Drive			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year				
Analysis Time Period								
Project Description 13021								
East/West Street: Highway 160A				North/South Street: North Commerce Drive				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	136	227	0	0	291	58		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	151	252	0	0	323	64		
Percent Heavy Vehicles	2	--	--	2	--	--		
Median Type	Undivided							
RT Channelized			0				0	
Lanes	1	1	0	0	1	1		
Configuration	L		TR	LT			R	
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	0	1	0	52	0	180		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	0	1	0	57	0	200		
Percent Heavy Vehicles	2	2	2	2	2	2		
Percent Grade (%)		0			0			
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0				0	
Lanes	1	1	0	0	1	1		
Configuration	L		TR	LT			R	
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	LT	L		TR	LT		R
v (veh/h)	151	0	0		1	57		200
C (m) (veh/h)	1171	1313	142		229	242		718
v/c	0.13	0.00	0.00		0.00	0.24		0.28
95% queue length	0.44	0.00	0.00		0.01	0.92		1.15
Control Delay (s/veh)	8.5	7.7	30.4		20.8	24.4		11.9
LOS	A	A	D		C	C		B
Approach Delay (s/veh)	--	--	20.8			14.7		
Approach LOS	--	--	C			B		

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Max Rusch			Intersection	160A / Bayfield Parkway East		
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County		
Date Performed	12/10/2014			Analysis Year	2035		
Analysis Time Period	AM						
Project Description 13021							
East/West Street: Highway 160A				North/South Street: Bayfield Parkway East			
Intersection Orientation: East-West				Study Period (hrs): 1.00			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	0	205	56	29	244	0	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR (veh/h)	0	227	62	32	271	0	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			0				0
Lanes	0	1	0	0	1		0
Configuration	LTR			LTR			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	99		14	0		0	
Peak-Hour Factor, PHF	0.90	0.96	0.90	0.90	0.96	0.90	
Hourly Flow Rate, HFR (veh/h)	110	0	15	0	0	0	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)		0			0		
Flared Approach		N			N		
Storage		0			0		
RT Channelized			1				0
Lanes	1	0	1	0	0		0
Configuration	L		R		LR		
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11 12
Lane Configuration	LTR	LTR	L		R		LR
v (veh/h)	0	32	110		15		0
C (m) (veh/h)	1292	1273	407		781		
v/c	0.00	0.03	0.27		0.02		
95% queue length	0.00	0.08	1.10		0.06		
Control Delay (s/veh)	7.8	7.9	17.1		9.7		
LOS	A	A	C		A		
Approach Delay (s/veh)	--	--	16.2				
Approach LOS	--	--	C				

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / Gem Ln			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	2035			
Analysis Time Period	PM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: Gem Ln				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	7	937			500	14		
Peak-Hour Factor, PHF	0.96	0.96	1.00	1.00	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	7	976	0	0	520	14		
Percent Heavy Vehicles	2	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT			TR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				7	0	0		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	0	0	0	7	0	0		
Percent Heavy Vehicles	0	0	0	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	1	0		
Configuration				LTR				
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LTR	
v (veh/h)	7						7	
C (m) (veh/h)	1034						130	
v/c	0.01						0.05	
95% queue length	0.02						0.17	
Control Delay (s/veh)	8.5						34.3	
LOS	A						D	
Approach Delay (s/veh)	--	--					34.3	
Approach LOS	--	--					D	

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Max Rusch			Intersection	160A / County Rd 507		
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County		
Date Performed	12/10/2014			Analysis Year	2035		
Analysis Time Period	PM						
Project Description 13021							
East/West Street: Highway 160A				North/South Street: County Rd 507			
Intersection Orientation: East-West				Study Period (hrs): 1.00			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	0	954	7	8	503	5	
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	0	993	7	8	523	5	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration	LTR			LTR			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	10	0	12	21	3	3	
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.90	
Hourly Flow Rate, HFR (veh/h)	10	0	12	21	3	3	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration		LTR			LTR		
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	LTR	LTR	LTR			LTR	
v (veh/h)	0	8	22			27	
C (m) (veh/h)	1039	692	145			101	
v/c	0.00	0.01	0.15			0.27	
95% queue length	0.00	0.04	0.53			1.06	
Control Delay (s/veh)	8.5	10.3	34.3			53.5	
LOS	A	B	D			F	
Approach Delay (s/veh)	--	--	34.3			53.5	
Approach LOS	--	--	D			F	

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / Homestead Drive			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	2035			
Analysis Time Period	PM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: Homestead Drive				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	1	996	0	3	500	10		
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	1	1037	0	3	520	10		
Percent Heavy Vehicles	2	--	--	2	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LTR			LTR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	0	0	23	23	0	0		
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	0	0	23	23	0	0		
Percent Heavy Vehicles	2	2	2	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR	LTR			LTR		
v (veh/h)	1	3	23			23		
C (m) (veh/h)	1037	670	281			80		
v/c	0.00	0.00	0.08			0.29		
95% queue length	0.00	0.01	0.27			1.16		
Control Delay (s/veh)	8.5	10.4	19.0			67.9		
LOS	A	B	C			F		
Approach Delay (s/veh)	--	--	19.0			67.9		
Approach LOS	--	--	C			F		

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Max Rusch			Intersection	160A / Bayfield Parkway West		
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County		
Date Performed	12/10/2014			Analysis Year			
Analysis Time Period	PM						
Project Description 13021							
East/West Street: Highway 160A				North/South Street: Bayfield Parkway West			
Intersection Orientation: East-West				Study Period (hrs): 1.00			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	0	821	222	296	9	0	
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	0	855	231	308	9	0	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			1				0
Lanes	0	1	1	0	1		0
Configuration	LT		R	LTR			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	52	0	9				
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	54	0	9	0	0	0	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)		0			0		
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0				0
Lanes	0	2	0	0	0		0
Configuration	LT		TR				
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	LT	LTR	LT		TR		
v (veh/h)	0	308	54		9		
C (m) (veh/h)	1611	785	84		358		
v/c	0.00	0.39	0.64		0.03		
95% queue length	0.00	1.92	4.22		0.08		
Control Delay (s/veh)	7.2	12.5	117.5		15.3		
LOS	A	B	F		C		
Approach Delay (s/veh)	--	--	102.9				
Approach LOS	--	--	F				

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / County Rd 506			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	2035			
Analysis Time Period	PM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: County Rd 506				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	11	810			449	5		
Peak-Hour Factor, PHF	0.96	0.96	1.00	1.00	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	11	843	0	0	467	5		
Percent Heavy Vehicles	2	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	2	0		
Configuration	LT				T	TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				4	0	3		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	0	0	0	4	0	3		
Percent Heavy Vehicles	0	0	0	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	1	0		
Configuration					LTR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LTR	
v (veh/h)	11						7	
C (m) (veh/h)	1086						222	
v/c	0.01						0.03	
95% queue length	0.03						0.10	
Control Delay (s/veh)	8.3						21.7	
LOS	A						C	
Approach Delay (s/veh)	--	--					21.7	
Approach LOS	--	--					C	

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / County 502			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/10/2014			Analysis Year	2035			
Analysis Time Period	PM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: County 502				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	41	772			433	21		
Peak-Hour Factor, PHF	0.96	0.96	1.00	1.00	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	42	804	0	0	451	21		
Percent Heavy Vehicles	2	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT					TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				7	0	21		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	0	0	0	7	0	21		
Percent Heavy Vehicles	0	0	0	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	1	0		
Configuration					LTR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LTR	
v (veh/h)	42						28	
C (m) (veh/h)	1090						356	
v/c	0.04						0.08	
95% queue length	0.12						0.26	
Control Delay (s/veh)	8.4						16.0	
LOS	A						C	
Approach Delay (s/veh)	--	--					16.0	
Approach LOS	--	--					C	

Capacity Analysis for Planning of Junctions

Input Worksheet

Project Name:	US 50 - Bayfield Traffic Feasibility PM Peak	Critical Lane Volume Sum			
Project Number:	13021	Acceptable Configurations			
Location:	Bayfield, CO	< 1200	1200 - 1399	1400 - 1599	≥ 1600
Date:	December 19, 2013	27	1	0	0

Results for Intersections

#	TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Ranking
			CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C		
1	Conventional	FULL									974	<u>0.61</u>	0.61	14
2	Conventional Shared RT LN	CSRL									848	<u>0.53</u>	0.53	13
3.1	Quadrant Roadway	S-W			764	<u>0.48</u>			588	<u>0.37</u>	553	<u>0.35</u>	0.48	12
3.2		N-E	500	<u>0.31</u>			435	<u>0.27</u>			671	<u>0.42</u>	0.42	7
3.3		S-E			421	<u>0.26</u>	421	<u>0.26</u>			474	<u>0.30</u>	0.30	1
3.4		N-W	374	<u>0.23</u>					393	<u>0.25</u>	547	<u>0.34</u>	0.34	4
4.1	Partial Displaced Left Turn	N-S	427	<u>0.27</u>	390	<u>0.24</u>					677	<u>0.42</u>	0.42	8
4.2		E-W					456	<u>0.28</u>	420	<u>0.26</u>	499	<u>0.31</u>	0.31	3
5	Displaced Left Turn	FULL	427	<u>0.27</u>	390	<u>0.24</u>	456	<u>0.28</u>	420	<u>0.26</u>	492	<u>0.31</u>	0.31	2
6.1	Restricted Crossing U-Turn	N-S	469	<u>0.29</u>	725	<u>0.45</u>	1226	<u>0.77</u>	1036	<u>0.65</u>			0.77	15
6.2		E-W	579	<u>0.36</u>	701	<u>0.44</u>	664	<u>0.42</u>	665	<u>0.42</u>			0.44	9
7.1	Median U-Turn	N-S	300	<u>0.19</u>	404	<u>0.25</u>					701	<u>0.44</u>	0.44	10
7.2		E-W					619	<u>0.39</u>	672	<u>0.42</u>	764	<u>0.48</u>	0.48	11
8.1	Partial Median U-Turn	N-S	242	<u>0.15</u>	293	<u>0.18</u>					649	<u>0.41</u>	0.41	5
8.2		E-W					516	<u>0.32</u>	655	<u>0.41</u>	649	<u>0.41</u>	0.41	6

Capacity Analysis for Planning of Junctions

Input Worksheet

Results for Roundabouts

#	TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Ranking
		Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3		
9.1	1 X 1	<u>0.45</u>	/	/	1.10	/	/	1.01	/	/	0.81	/	/	1.10	5
9.2	1 X 2	<u>0.38</u>	/	/	<u>0.58</u>	<u>0.52</u>	/	0.81	/	/	<u>0.52</u>	<u>0.29</u>	/	0.81	3
9.3	2 X 1	<u>0.16</u>	<u>0.29</u>	/	0.99	/	/	<u>0.36</u>	<u>0.65</u>	/	<u>0.69</u>	/	/	0.99	4
9.4	2 X 2	<u>0.14</u>	<u>0.24</u>	/	<u>0.53</u>	<u>0.47</u>	/	<u>0.30</u>	<u>0.52</u>	/	<u>0.45</u>	<u>0.25</u>	/	0.53	2
9.5	3 X 3	<u>0.01</u>	<u>0.14</u>	<u>0.23</u>	<u>0.12</u>	<u>0.43</u>	<u>0.45</u>	<u>0.08</u>	<u>0.27</u>	<u>0.51</u>	<u>0.13</u>	<u>0.36</u>	<u>0.25</u>	0.51	1

Results for Interchanges

#	TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Ranking
			CLV	V/C												
10.1	Diamond	N-S	/	/	/	/	649	<u>0.41</u>	555	<u>0.35</u>	/	/	/	/	0.41	9
10.2		E-W	/	/	/	/	340	<u>0.21</u>	409	<u>0.26</u>	/	/	/	/	0.26	4
11.1	Partial Cloverleaf	N-S	/	/	/	/	149	<u>0.09</u>	118	<u>0.07</u>	/	/	/	/	0.09	1
11.2		E-W	/	/	/	/	553	<u>0.31</u>	378	<u>0.24</u>	/	/	/	/	0.35	7
13.1	Displaced Left Turn	N-S	233	<u>0.15</u>	/	/	386	<u>0.24</u>	365	<u>0.23</u>	/	/	331	<u>0.21</u>	0.24	3
13.2		E-W	420	<u>0.26</u>	/	/	278	<u>0.17</u>	358	<u>0.22</u>	/	/	523	<u>0.33</u>	0.33	6
14.1	Double Crossover Diamond	N-S	233	<u>0.15</u>	277	<u>0.17</u>	302	<u>0.19</u>	329	<u>0.21</u>	358	<u>0.22</u>	331	<u>0.21</u>	0.22	2
14.2		E-W	327	<u>0.20</u>	578	<u>0.36</u>	374	<u>0.23</u>	352	<u>0.22</u>	535	<u>0.33</u>	553	<u>0.35</u>	0.36	8
15.1	Single Point	N-S	446	<u>0.28</u>	/	/	760	<u>0.47</u>	/	/	/	/	522	<u>0.33</u>	0.47	10
15.2		E-W	327	<u>0.20</u>	/	/	466	<u>0.29</u>	/	/	/	/	463	<u>0.29</u>	0.29	5

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Max Rusch			Intersection	160A / North Commerce Drive		
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County		
Date Performed	12/10/2014			Analysis Year	2035		
Analysis Time Period	PM						
Project Description 13021							
East/West Street: Highway 160A				North/South Street: North Commerce Drive			
Intersection Orientation: East-West				Study Period (hrs): 1.00			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	296	363	1	0	338	89	
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	308	378	1	0	352	92	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	1	1	0	0	1	1	
Configuration	L		TR	LT		R	
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	5	0	0	96	1	159	
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	5	0	0	100	1	165	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)		0			0		
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	1	1	0	0	1	1	
Configuration	L		TR	LT		R	
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	L	LT	L		TR	LT	R
v (veh/h)	308	0	5		0	101	165
C (m) (veh/h)	1116	1179	62			101	692
v/c	0.28	0.00	0.08			1.00	0.24
95% queue length	1.14	0.00	0.26			12.31	0.94
Control Delay (s/veh)	9.5	8.1	68.1			293.9	11.8
LOS	A	A	F			F	B
Approach Delay (s/veh)	--	--				118.9	
Approach LOS	--	--				F	

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Max Rusch			Intersection	160A / Bayfield Parkway East		
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County		
Date Performed	12/10/2014			Analysis Year	2035		
Analysis Time Period	PM						
Project Description 13021							
East/West Street: Highway 160A				North/South Street: Bayfield Parkway East			
Intersection Orientation: East-West				Study Period (hrs): 1.00			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	0	311	140	16	299	0	
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	0	323	145	16	311	0	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			0				0
Lanes	0	1	0	0	1		0
Configuration	LTR			LTR			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	111		45	0		0	
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly Flow Rate, HFR (veh/h)	115	0	46	0	0	0	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)		0			0		
Flared Approach		N			N		
Storage		0			0		
RT Channelized			1				0
Lanes	1	0	1	0	0		0
Configuration	L		R		LR		
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	LTR	LTR	L		R		LR
v (veh/h)	0	16	115		46		0
C (m) (veh/h)	1249	1094	328		653		
v/c	0.00	0.01	0.35		0.07		
95% queue length	0.00	0.04	1.60		0.23		
Control Delay (s/veh)	7.9	8.3	21.9		10.9		
LOS	A	A	C		B		
Approach Delay (s/veh)	--	--	18.7				
Approach LOS	--	--	C				

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / County Rd 507			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/11/2014			Analysis Year	2035			
Analysis Time Period	AM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: County Rd 507				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	5	358	7	11	799	65		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	5	397	7	12	887	72		
Percent Heavy Vehicles	2	--	--	2	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	2	1	1	2	1		
Configuration	L	T	R	L	T	R		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	20	1	8	29	0	18		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	22	1	8	32	0	20		
Percent Heavy Vehicles	2	2	2	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			1			0		
Lanes	1	1	1	1	1	1		
Configuration	L	T	R	L	T	R		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L	T	R	L	T	R
v (veh/h)	5	12	22	1	8	32	0	20
C (m) (veh/h)	713	1151	233	139	842	156	152	612
v/c	0.01	0.01	0.09	0.01	0.01	0.21	0.00	0.03
95% queue length	0.02	0.03	0.31	0.02	0.03	0.76	0.00	0.10
Control Delay (s/veh)	10.1	8.2	22.1	31.1	9.3	34.0	28.7	11.1
LOS	B	A	C	D	A	D	D	B
Approach Delay (s/veh)	--	--	19.1			25.2		
Approach LOS	--	--	C			D		

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / Bayfield Parkway West			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/11/2014			Analysis Year	2035			
Analysis Time Period	AM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: Bayfield Parkway West				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	23	309	66	5	740	8		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	25	343	73	5	822	8		
Percent Heavy Vehicles	2	--	--	2	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	2	1	1	2	1		
Configuration	L	T	R	L	T	R		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	85	0	5	26	0	54		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	94	0	5	28	0	60		
Percent Heavy Vehicles	2	2	2	2	2	2		
Percent Grade (%)		0			0			
Flared Approach		N			N			
Storage		0			0			
RT Channelized			1			0		
Lanes	1	1	1	1	1	1		
Configuration	L	T	R	L	T	R		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L	T	R	L	T	R
v (veh/h)	25	5	94	0	5	28	0	60
C (m) (veh/h)	798	1139	238	170	870	175	154	639
v/c	0.03	0.00	0.39	0.00	0.01	0.16	0.00	0.09
95% queue length	0.10	0.01	1.91	0.00	0.02	0.57	0.00	0.31
Control Delay (s/veh)	9.7	8.2	29.9	26.2	9.2	29.5	28.4	11.2
LOS	A	A	D	D	A	D	D	B
Approach Delay (s/veh)	--	--	28.9			17.0		
Approach LOS	--	--	D			C		

Capacity Analysis for Planning of Junctions

Input Worksheet

Project Name:	US 50 - Bayfield Traffic Feasibility PM Peak	Critical Lane Volume Sum			
Project Number:	13021	Acceptable Configurations			
Location:	Bayfield, CO	< 1200	1200 - 1399	1400 - 1599	≥ 1600
Date:	December 19, 2013	28	0	0	0

Results for Intersections

#	TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Ranking
			CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C		
1	Conventional	FULL									639	<u>0.40</u>	0.40	10
2	Conventional Shared RT LN	CSRL									684	<u>0.43</u>	0.43	12
3.1	Quadrant Roadway	S-W			650	<u>0.41</u>			398	<u>0.25</u>	504	<u>0.31</u>	0.41	11
3.2		N-E	523	<u>0.33</u>			453	<u>0.28</u>			384	<u>0.24</u>	0.33	6
3.3		S-E			483	<u>0.30</u>	483	<u>0.30</u>			411	<u>0.26</u>	0.30	5
3.4		N-W	318	<u>0.20</u>					362	<u>0.23</u>	472	<u>0.30</u>	0.30	4
4.1	Partial Displaced Left Turn	N-S	341	<u>0.21</u>	242	<u>0.15</u>					442	<u>0.28</u>	0.28	3
4.2		E-W					346	<u>0.22</u>	87	<u>0.05</u>	423	<u>0.26</u>	0.26	2
5	Displaced Left Turn	FULL	341	<u>0.21</u>	242	<u>0.15</u>	346	<u>0.22</u>	87	<u>0.05</u>	322	<u>0.20</u>	0.22	1
6.1	Restricted Crossing U-Turn	N-S	312	<u>0.20</u>	379	<u>0.24</u>	695	<u>0.43</u>	426	<u>0.27</u>			0.43	13
6.2		E-W	492	<u>0.31</u>	481	<u>0.30</u>	429	<u>0.27</u>	541	<u>0.34</u>			0.34	7
7.1	Median U-Turn	N-S	324	<u>0.20</u>	367	<u>0.23</u>					859	<u>0.54</u>	0.54	15
7.2		E-W					287	<u>0.18</u>	604	<u>0.38</u>	709	<u>0.44</u>	0.44	14
8.1	Partial Median U-Turn	N-S	256	<u>0.16</u>	447	<u>0.28</u>					626	<u>0.39</u>	0.39	8
8.2		E-W					249	<u>0.16</u>	365	<u>0.23</u>	626	<u>0.39</u>	0.39	8

Capacity Analysis for Planning of Junctions

Input Worksheet

Results for Roundabouts

#	TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Ranking
		Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3		
9.1	1 X 1	<u>0.46</u>	/	/	<u>0.52</u>	/	/	<u>0.59</u>	/	/	<u>0.40</u>	/	/	0.59	5
9.2	1 X 2	<u>0.44</u>	/	/	<u>0.23</u>	<u>0.29</u>	/	<u>0.51</u>	/	/	<u>0.17</u>	<u>0.23</u>	/	0.51	4
9.3	2 X 1	<u>0.25</u>	<u>0.21</u>	/	<u>0.46</u>	/	/	<u>0.17</u>	<u>0.42</u>	/	<u>0.36</u>	/	/	0.46	3
9.4	2 X 2	<u>0.24</u>	<u>0.20</u>	/	<u>0.20</u>	<u>0.26</u>	/	<u>0.15</u>	<u>0.37</u>	/	<u>0.16</u>	<u>0.21</u>	/	0.37	2
9.5	3 X 3	<u>0.10</u>	<u>0.14</u>	<u>0.18</u>	<u>0.04</u>	<u>0.17</u>	<u>0.23</u>	<u>0.02</u>	<u>0.14</u>	<u>0.32</u>	<u>0.08</u>	<u>0.08</u>	<u>0.18</u>	0.32	1

Results for Interchanges

#	TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Ranking
			CLV	V/C												
10.1	Diamond	N-S	/	/	/	/	440	<u>0.28</u>	393	<u>0.25</u>	/	/	/	/	0.28	8
10.2		E-W	/	/	/	/	264	<u>0.17</u>	183	<u>0.11</u>	/	/	/	/	0.17	1
11.1	Partial Cloverleaf	N-S	/	/	/	/	125	<u>0.08</u>	270	<u>0.17</u>	/	/	/	/	0.17	2
11.2		E-W	/	/	/	/	278	<u>0.33</u>	116	<u>0.07</u>	/	/	/	/	0.17	3
13.1	Displaced Left Turn	N-S	321	<u>0.20</u>	/	/	339	<u>0.21</u>	176	<u>0.11</u>	/	/	231	<u>0.14</u>	0.21	5
13.2		E-W	187	<u>0.12</u>	/	/	306	<u>0.19</u>	232	<u>0.15</u>	/	/	422	<u>0.26</u>	0.26	7
14.1	Double Crossover Diamond	N-S	321	<u>0.20</u>	285	<u>0.18</u>	260	<u>0.16</u>	217	<u>0.14</u>	170	<u>0.11</u>	231	<u>0.14</u>	0.20	4
14.2		E-W	207	<u>0.13</u>	158	<u>0.10</u>	338	<u>0.21</u>	107	<u>0.07</u>	276	<u>0.17</u>	448	<u>0.28</u>	0.28	9
15.1	Single Point	N-S	465	<u>0.29</u>	/	/	635	<u>0.40</u>	/	/	/	/	358	<u>0.22</u>	0.40	10
15.2		E-W	207	<u>0.13</u>	/	/	416	<u>0.26</u>	/	/	/	/	381	<u>0.24</u>	0.26	6

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / North Commerce Drive			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/11/2014			Analysis Year	2035			
Analysis Time Period	AM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: North Commerce Drive				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	136	363			291	58		
Peak-Hour Factor, PHF	0.90	0.90	0.96	0.96	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	151	403	0	0	323	64		
Percent Heavy Vehicles	2	--	--	2	--	--		
Median Type	Undivided							
RT Channelized			0				0	
Lanes	1	2	0	0	2	1		
Configuration	L	T			T	R		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)						180		
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.90		
Hourly Flow Rate, HFR (veh/h)	0	0	0	0	0	200		
Percent Heavy Vehicles	2	2	2	2	2	2		
Percent Grade (%)		0			0			
Flared Approach		N			N			
Storage		0			0			
RT Channelized			1				0	
Lanes	0	0	0	0	0	1		
Configuration						R		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L							R
v (veh/h)	151							200
C (m) (veh/h)	1168							882
v/c	0.13							0.23
95% queue length	0.45							0.88
Control Delay (s/veh)	8.5							10.3
LOS	A							B
Approach Delay (s/veh)	--	--				10.3		
Approach LOS	--	--				B		

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / Bayfield Parkway East			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/11/2014			Analysis Year	2035			
Analysis Time Period	AM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: Bayfield Parkway East				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	0	153	56	29	244	0		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	0	170	62	32	271	0		
Percent Heavy Vehicles	2	--	--	2	--	--		
Median Type	Undivided							
RT Channelized			0				0	
Lanes	1	2	1	1	2	1		
Configuration	L	T	R	L	T	R		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	99	1	14	52	0	0		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly Flow Rate, HFR (veh/h)	110	1	15	57	0	0		
Percent Heavy Vehicles	2	2	2	2	2	2		
Percent Grade (%)		0			0			
Flared Approach		N			N			
Storage		0			0			
RT Channelized			1				0	
Lanes	1	1	1	1	1	1		
Configuration	L	T	R	L	T	R		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L	T	R	L	T	R
v (veh/h)	0	32	110	1	15	57	0	0
C (m) (veh/h)	1289	1333	552	457	973	499	422	911
v/c	0.00	0.02	0.20	0.00	0.02	0.11	0.00	0.00
95% queue length	0.00	0.07	0.74	0.01	0.05	0.39	0.00	0.00
Control Delay (s/veh)	7.8	7.8	13.1	12.9	8.8	13.1	13.5	9.0
LOS	A	A	B	B	A	B	B	A
Approach Delay (s/veh)	--	--	12.6			13.1		
Approach LOS	--	--	B			B		

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / County Rd 507			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/11/2014			Analysis Year	2035			
Analysis Time Period	AM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: County Rd 507				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	8	945	7	8	495	32		
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	8	984	7	8	515	33		
Percent Heavy Vehicles	2	--	--	2	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	2	1	1	2	1		
Configuration	L	T	R	L	T	R		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	18	0	19	74	3	18		
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	18	0	19	77	3	18		
Percent Heavy Vehicles	2	2	2	2	2	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			1			0		
Lanes	1	1	1	1	1	1		
Configuration	L	T	R	L	T	R		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L	T	R	L	T	R
v (veh/h)	8	8	18	0	19	77	3	18
C (m) (veh/h)	1018	693	117	109	575	176	113	779
v/c	0.01	0.01	0.15	0.00	0.03	0.44	0.03	0.02
95% queue length	0.02	0.04	0.54	0.00	0.10	2.23	0.08	0.07
Control Delay (s/veh)	8.6	10.3	41.3	38.0	11.5	41.1	37.7	9.7
LOS	A	B	E	E	B	E	E	A
Approach Delay (s/veh)	--	--	26.0			35.3		
Approach LOS	--	--	D			E		

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / Bayfield Parkway West			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/11/2014			Analysis Year	2035			
Analysis Time Period	PM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: Bayfield Parkway West				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	52	774	222	12	422	26		
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	54	806	231	12	439	27		
Percent Heavy Vehicles	2	--	--	2	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	2	1	1	2	1		
Configuration	L	T	R	L	T	R		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	57	0	6	11	0	54		
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	59	0	6	11	0	56		
Percent Heavy Vehicles	2	2	2	2	2	2		
Percent Grade (%)		0			0			
Flared Approach		N			N			
Storage		0			0			
RT Channelized			1			0		
Lanes	1	1	1	1	1	1		
Configuration	L	T	R	L	T	R		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L	T	R	L	T	R
v (veh/h)	54	12	59	0	6	11	0	56
C (m) (veh/h)	1092	666	134	129	646	194	97	818
v/c	0.05	0.02	0.44	0.00	0.01	0.06	0.00	0.07
95% queue length	0.16	0.06	2.23	0.00	0.03	0.18	0.00	0.22
Control Delay (s/veh)	8.5	10.5	52.6	32.9	10.6	24.7	42.1	9.7
LOS	A	B	F	D	B	C	E	A
Approach Delay (s/veh)	--	--	48.7			12.2		
Approach LOS	--	--	E			B		

Capacity Analysis for Planning of Junctions

Input Worksheet

Project Name:	US 50 - Bayfield Traffic Feasibility PM Peak	Critical Lane Volume Sum			
Project Number:	13021	Acceptable Configurations			
Location:	Bayfield, CO	< 1200	1200 - 1399	1400 - 1599	≥ 1600
Date:	December 19, 2013	27	1	0	0

Results for Intersections

#	TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Ranking
			CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C		
1	Conventional	FULL	/	/	/	/	/	/	/	/	974	<u>0.61</u>	0.61	14
2	Conventional Shared RT LN	CSRL	/	/	/	/	/	/	/	/	848	<u>0.53</u>	0.53	13
3.1	Quadrant Roadway	S-W	/	/	764	<u>0.48</u>	/	/	588	<u>0.37</u>	553	<u>0.35</u>	0.48	12
3.2		N-E	500	<u>0.31</u>	/	/	435	<u>0.27</u>	/	/	671	<u>0.42</u>	0.42	7
3.3		S-E	/	/	421	<u>0.26</u>	421	<u>0.26</u>	/	/	474	<u>0.30</u>	0.30	1
3.4		N-W	374	<u>0.23</u>	/	/	/	/	393	<u>0.25</u>	547	<u>0.34</u>	0.34	4
4.1	Partial Displaced Left Turn	N-S	427	<u>0.27</u>	390	<u>0.24</u>	/	/	/	/	677	<u>0.42</u>	0.42	8
4.2		E-W	/	/	/	/	456	<u>0.28</u>	420	<u>0.26</u>	499	<u>0.31</u>	0.31	3
5	Displaced Left Turn	FULL	427	<u>0.27</u>	390	<u>0.24</u>	456	<u>0.28</u>	420	<u>0.26</u>	492	<u>0.31</u>	0.31	2
6.1	Restricted Crossing U-Turn	N-S	469	<u>0.29</u>	725	<u>0.45</u>	1226	<u>0.77</u>	1036	<u>0.65</u>	/	/	0.77	15
6.2		E-W	579	<u>0.36</u>	701	<u>0.44</u>	664	<u>0.42</u>	665	<u>0.42</u>	/	/	0.44	9
7.1	Median U-Turn	N-S	300	<u>0.19</u>	404	<u>0.25</u>	/	/	/	/	701	<u>0.44</u>	0.44	10
7.2		E-W	/	/	/	/	619	<u>0.39</u>	672	<u>0.42</u>	764	<u>0.48</u>	0.48	11
8.1	Partial Median U-Turn	N-S	242	<u>0.15</u>	293	<u>0.18</u>	/	/	/	/	649	<u>0.41</u>	0.41	5
8.2		E-W	/	/	/	/	516	<u>0.32</u>	655	<u>0.41</u>	649	<u>0.41</u>	0.41	6

Capacity Analysis for Planning of Junctions

Input Worksheet

Results for Roundabouts

#	TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Ranking
		Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3		
9.1	1 X 1	<u>0.45</u>	/	/	1.10	/	/	1.01	/	/	<u>0.81</u>	/	/	1.10	5
9.2	1 X 2	<u>0.38</u>	/	/	<u>0.58</u>	<u>0.52</u>	/	<u>0.81</u>	/	/	<u>0.52</u>	<u>0.29</u>	/	<u>0.81</u>	3
9.3	2 X 1	<u>0.16</u>	<u>0.29</u>	/	<u>0.99</u>	/	/	<u>0.36</u>	<u>0.65</u>	/	<u>0.69</u>	/	/	<u>0.99</u>	4
9.4	2 X 2	<u>0.14</u>	<u>0.24</u>	/	<u>0.53</u>	<u>0.47</u>	/	<u>0.30</u>	<u>0.52</u>	/	<u>0.45</u>	<u>0.25</u>	/	<u>0.53</u>	2
9.5	3 X 3	<u>0.01</u>	<u>0.14</u>	<u>0.23</u>	<u>0.12</u>	<u>0.43</u>	<u>0.45</u>	<u>0.08</u>	<u>0.27</u>	<u>0.51</u>	<u>0.13</u>	<u>0.36</u>	<u>0.25</u>	<u>0.51</u>	1

Results for Interchanges

#	TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Ranking
			CLV	V/C												
10.1	Diamond	N-S	/	/	/	/	649	<u>0.41</u>	555	<u>0.35</u>	/	/	/	/	<u>0.41</u>	9
10.2		E-W	/	/	/	/	340	<u>0.21</u>	409	<u>0.26</u>	/	/	/	/	<u>0.26</u>	4
11.1	Partial Cloverleaf	N-S	/	/	/	/	149	<u>0.09</u>	118	<u>0.07</u>	/	/	/	/	<u>0.09</u>	1
11.2		E-W	/	/	/	/	553	<u>0.31</u>	378	<u>0.24</u>	/	/	/	/	<u>0.35</u>	7
13.1	Displaced Left Turn	N-S	233	<u>0.15</u>	/	/	386	<u>0.24</u>	365	<u>0.23</u>	/	/	331	<u>0.21</u>	<u>0.24</u>	3
13.2		E-W	420	<u>0.26</u>	/	/	278	<u>0.17</u>	358	<u>0.22</u>	/	/	523	<u>0.33</u>	<u>0.33</u>	6
14.1	Double Crossover Diamond	N-S	233	<u>0.15</u>	277	<u>0.17</u>	302	<u>0.19</u>	329	<u>0.21</u>	358	<u>0.22</u>	331	<u>0.21</u>	<u>0.22</u>	2
14.2		E-W	327	<u>0.20</u>	578	<u>0.36</u>	374	<u>0.23</u>	352	<u>0.22</u>	535	<u>0.33</u>	553	<u>0.35</u>	<u>0.36</u>	8
15.1	Single Point	N-S	446	<u>0.28</u>	/	/	760	<u>0.47</u>	/	/	/	/	522	<u>0.33</u>	<u>0.47</u>	10
15.2		E-W	327	<u>0.20</u>	/	/	466	<u>0.29</u>	/	/	/	/	463	<u>0.29</u>	<u>0.29</u>	5

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / North Commerce Drive			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/11/2014			Analysis Year	2035			
Analysis Time Period	PM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: North Commerce Drive				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	296	363			344	89		
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	308	378	0	0	358	92		
Percent Heavy Vehicles	2	--	--	2	--	--		
Median Type	Undivided							
RT Channelized			0				0	
Lanes	1	2	0	0	2	1		
Configuration	L	T			T	R		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)						159		
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	0	0	0	0	0	165		
Percent Heavy Vehicles	2	2	2	2	2	2		
Percent Grade (%)		0			0			
Flared Approach		N			N			
Storage		0			0			
RT Channelized			1				0	
Lanes	0	0	0	0	0	1		
Configuration							R	
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L							R
v (veh/h)	308							165
C (m) (veh/h)	1107							863
v/c	0.28							0.19
95% queue length	1.15							0.71
Control Delay (s/veh)	9.5							10.2
LOS	A							B
Approach Delay (s/veh)	--	--				10.2		
Approach LOS	--	--				B		

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Max Rusch			Intersection	160A / Bayfield Parkway East			
Agency/Co.	Stolfus and Associates			Jurisdiction	La Plata County			
Date Performed	12/11/2014			Analysis Year	2035			
Analysis Time Period	PM							
Project Description 13021								
East/West Street: Highway 160A				North/South Street: Bayfield Parkway East				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	0	215	141	16	299	0		
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	0	223	146	16	311	0		
Percent Heavy Vehicles	2	--	--	2	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	2	1	1	2	1		
Configuration	L	T	R	L	T	R		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	117	0	45	96	1	0		
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96		
Hourly Flow Rate, HFR (veh/h)	121	0	46	100	1	0		
Percent Heavy Vehicles	2	2	2	2	2	2		
Percent Grade (%)		0			0			
Flared Approach		N			N			
Storage		0			0			
RT Channelized			1			0		
Lanes	1	1	1	1	1	1		
Configuration	L	T	R	L	T	R		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L	T	R	L	T	R
v (veh/h)	0	16	121	0	46	100	1	0
C (m) (veh/h)	1246	1186	518	426	940	460	351	888
v/c	0.00	0.01	0.23	0.00	0.05	0.22	0.00	0.00
95% queue length	0.00	0.04	0.91	0.00	0.15	0.83	0.01	0.00
Control Delay (s/veh)	7.9	8.1	14.1	13.5	9.0	15.0	15.3	9.1
LOS	A	A	B	B	A	B	C	A
Approach Delay (s/veh)	--	--	12.7			15.0		
Approach LOS	--	--	B			B		

Appendix D – Access Plan Methodology and Evaluation Process

DRAFT Traffic Feasibility Study and Access Plan Compatibility Index



Alternatives will be evaluated using the following criteria to determine if they meet established project goals. Traffic Feasibility criteria will be limited to those items highlighted.

Project Goal	Evaluation Criteria	Rating		Reasoning	Status with Respect to Criteria		
					Favorable (+)	Neutral (0)	Unfavorable (-)
Provide effective through travel for traffic on US 160	Highway LOS	Favorable	1	The Access Plan is compatible with the US 160 EIS improvements, which improve the highway from a two-lane undivided section to a four-lane divided highway. This improvement, along with the restriction would result in a higher LOS for the corridor according to the Highway Capacity Manual.	Improves from No-ACP scenario	Little or no change from No-ACP scenario	Worsens from No-ACP scenario
	Number of Access Points	Favorable	1	The number of access points is reduced from 39 to 17.	Less access	No change in access	More access
Provide safe and effective access to and from US 160 for businesses, residents, and emergency responders	Intersection Sight Distance	Favorable	1	Existing access points with inadequate sight distance are restricted or eliminated.	More intersections have adequate sight distance	Same number of intersections have adequate sight distance	Fewer intersections have adequate sight distance
	Intersection v/c	Favorable	1	Analysis of future traffic shows reduced v/c ratios with the Access Plan when compared to no improvements in the area.	v/c decreases for most intersections as compared to the No-ACP scenario	Little or no change to v/c for most intersections as compared to the No-ACP scenario	v/c increases for most intersections as compared to the No-ACP scenario
	Conformance with State Highway Access Code Auxiliary Lane Requirements	Neutral	0	Most existing access points that may someday warrant auxiliary lanes already have sufficient spacing.	More locations meet auxiliary lane standards	Some locations meet auxiliary lane standards	Fewer locations meet auxiliary lane standards
	Out of Direction Travel Distance	Unfavorable	-1	Access restrictions require traffic from individual properties to turn right on to the highway and then turn around at the next intersection.	Less out-of-direction travel distance is required	No change	More out-of-direction travel distance is required
	Intersection Crash Risk	Favorable	1	The number of the conflict points at intersections in the corridor is reduced.	Reduced by implementing needed physical improvements and access control measures	Maintained by implementing needed physical improvements only	Increased due to failure to implement needed physical improvements or access control
Maintain compatibility with existing and proposed off-highway circulation routes	Local Route Connectivity	Unfavorable	-1	Restricted access at the existing CR 506 and CR 502 intersections with US 160 will require local traffic to travel farther for highway access.	Improve connectivity of local routes	Maintain connectivity of local routes	Reduce connectivity of local routes
	Serviceability of Local Routes to Developments and Properties within the Study Area	Favorable	1	Access Plan allows for future local road connectivity with US 160 at CR 507 and Bayfield Parkway (East and West).	Improve serviceability of local routes	Maintain serviceability of local routes	Reduce serviceability of local routes
Provide a plan that can be implemented in phases	Funding Opportunities	Neutral	0	Future local roads on the north side of US 160 at Bayfield Parkway (East and West) and the future connection from CR 507/US 160 to Homestead Drive allow access to currently undeveloped land. Both developer and/or local funding could be used to make the improvements. The north leg of the future CR 507 intersection with US 160 would likely be funded publicly with the US 160 EIS improvements, but could also attract some private funds. The local road connection from CR 502 to CR 506 as well as improvements on the south side of US 160 at Bayfield Parkway (West) are unlikely to attract private funding.	Commitment for public and/or private funding	Opportunity for public and/or private funding	Opportunity for public and/or private funding unlikely
	Phasing Opportunities	Favorable	1	With the exception of the Bayfield Parkway/Homestead Drive improvements on the south side of US 160, local road improvements are compatible with development and can be easily phased to progress toward the final access plan.	Plan recommendations can be segmented into logical, compatible pieces funded by private development	Plan recommendations can be segmented into logical, compatible pieces requiring public & private funding	Plan recommendations not easily segmented and require significant public investment to implement
Support the economic viability of the project area	Business Access	Neutral	0	The plan generally maintains existing access for businesses in Bayfield and Gem Village, with the exception of the south Commerce Drive driveway.	Expands market area for the majority of businesses in the corridor	Market area maintained for a majority of businesses in the corridor	Reduced market area for a majority of businesses in the corridor
Maintain compatibility with the intent of previous planning efforts	Compatibility with Local Planning	Favorable	1	The Access Plan is compatible with local road plans for Bayfield Parkway (East). Additionally, access points at Bayfield Parkway (West) and US 160 are set for future planning.	Expands/improves upon the intent of previous local planning recommendations	Consistent with the intent of previous local planning recommendations	Not consistent with the intent of previous local planning efforts
	Compatibility with the US 160 EIS	Neutral	0	The Access Plan maintains the same number of full movement access points as the US 160 ROD.	Plan is consistent with the Purpose and Need and enhances the Preferred Alternative	Plan is consistent with the Purpose and Need	Plan is not consistent with the Purpose and Need
Provide a plan that is consistent with local intersection priorities	Compatibility with the improvement priorities of Town and County staff	Favorable	1	The Access Plan establishes access points at the intersections with the highest local priority located at both ends of Bayfield Parkway.	Plan prioritizes most of the intersections most in need of improvement	Plan prioritizes some of the intersections most in need of improvement	Plan does not prioritize the intersections most in need of improvement
Endeavor to provide a plan that is adoptable by all entities	Physical Constraints	Neutral	0	Local Road connections at Bayfield Parkway (West) and the connection from CR 502 to CR 506 face significant, but not unmanageable physical constraints.	No physical constraints	Manageable physical constraints	Physical constraints are not manageable
	Support from Town Board and County Commission	Favorable	1	The Town and County Boards both support the plan.	Plan is favored by most officials	Plan support is balanced	Plan is not favored by most officials

Appendix E – Intergovernmental Agreement

**INTERGOVERNMENTAL AGREEMENT
BETWEEN
THE TOWN OF BAYFIELD (THE TOWN), LA PLATA COUNTY (THE COUNTY) and
THE STATE OF COLORADO DEPARTMENT OF TRANSPORTATION
(THE DEPARTMENT)
FOR THE BAYFIELD ACCESS CONTROL PLAN**

THIS INTERGOVERNMENTAL AGREEMENT is entered into effective as of this ___ day of _____ 20___, by and between the Town, the County, and the Department, all of said parties being referred to collectively herein as “Agencies.”

RECITALS

- A. The Agencies are authorized by the provisions of Article XIV, Section 18(2)(a), Colorado Constitution, and Sections 29-1-201 et. Seq., C.R.S., to enter into contracts with each other for the performance of functions which they are authorized by law to perform on their own; and
- B. Each Agency is authorized by Section 43-2-147(I)(a), C.R.S., to regulate access to public highways within its respective jurisdiction; and
- C. The coordinated regulation of vehicular access to public highways is necessary to maintain the efficient and smooth flow of traffic, to reduce the potential for traffic accidents, to protect the functional level and optimize the traffic capacity, and to provide an efficient spacing of traffic signals and access points; and
- D. The Agencies desire to provide for the coordinated regulation of vehicular, pedestrian, and bicycle access and safety for the US Hwy 160 corridor through Gem Village (La Plata County) and Bayfield as follows:

MP 100.25 and MP 103.82 (hereafter referred to as the “Segments”) which is within the jurisdiction of the Agencies; and
- E. The Agencies are authorized pursuant to Section 2.12 of the 1998 State Highway Access Code, 2 C.C.R. 601-1, (the “Access Code”) to enter into a written agreement adopting and implementing a comprehensive and mutually acceptable highway access control plan for the Segments for the purposes above recited; and
- F. The Agencies specifically find and determine that this access control plan is a necessary exercise of each Agency’s legislative, governmental, or police powers to promote and protect the public health, safety, and general welfare of the citizens of the Town, County, and State; and
- G. The development of this Access Control Plan (ACP) adheres to the requirements of the Access Code, Section 2.12.

NOW THEREFORE, for and in consideration of the mutual promises, agreements, and commitments herein contained, the Agencies agree as follows:

- 1. The Access Control Plan, dated _____, for the Segments (herein referred to as the “ACP”) is attached hereto as Exhibits A, B, and C, and incorporated herein by this reference.

2. The Agencies shall regulate access to Highway 160 in accordance with the ACP, C.R.S. Section 42-2-147 C.R.S. (the “Access Law”), and the applicable sections of the Access Code. Vehicular access to Highway 160 within the Segments may be permitted only when such access is in compliance with this Agreement, the ACP, the Access Law, and the applicable sections of the Access Code. Per section 2.12(3) of the Access Code, all action taken in regard to access shall be in conformance with the plan and current Code design standards unless both the Department and the local authority(s) approve a geometric design waiver under the waiver subsection of the Code.
3. Access points that were in existence prior to the effective date of this Agreement may continue in existence until such time as a change in the access is required by the Access Control Plan, the Access Law, in the course of highway reconstruction, or as determined appropriate in the course of development, redevelopment, subdivision actions or change of use by the Town or County. When closure, modification, or relocation of access is necessary or required, the Agencies having jurisdiction shall utilize appropriate legal process to effect such action.
4. Actions taken by the Agencies with regard to transportation planning, transportation facilities, and traffic operations within the ACP shall be in conformity with this Agreement. The Agencies agree to develop and adopt the necessary ordinances, official documents, plans and maps to fulfill their respective responsibilities under this Agreement.
5. Parcels of real property created after the effective date of this Agreement which adjoin the Segments shall be provided with access to the Segments as documented in the ACP, so long as the use, location, and design thereof, conform to the provisions of this Agreement, the Town and County Codes, or based upon approved amendments to the ACP.
6. This Agreement is based upon and intended to be consistent with the Access Law and Access Code.
7. This Agreement does not create any current specific financial obligation for any of the Agencies. Any further financial obligation of any Agency shall be subject to the execution of an appropriate encumbrance document, where required. Agencies involved in or affected by any particular or site-specific undertaking provided for herein will cooperate with each other to agree upon a fair and equitable allocation of the costs associated therewith. Notwithstanding any provision of this Agreement, no Agency shall be required to expend its public funds for such undertaking without the express prior approval of its governing body or director. All financial obligations of the Agencies hereunder shall be approved by its governing body or director. All financial obligations of the Agencies hereunder shall be contingent upon sufficient funds therefore being appropriated, budgeted, and otherwise made available.
8. Should any section(s) or provision(s) of this Agreement be judicially determined invalid or unenforceable, such judgment shall not affect, impair, or invalidate the remaining provisions of this Agreement, the intention being that the various provisions hereof are severable.
9. This Agreement supersedes and controls all prior written and oral agreements and representations of the Agencies concerning regulating vehicular access to the Segments. No additional or different oral representation, promise, or agreement shall be binding on any Agency.

10. This Agreement may be amended or terminated only in writing executed by the Agencies with express authorization from their respective governing bodies or legally designated officials. To the extent the Access Control Plan is modified by a change, closure, relocation, consolidation, or addition of an access, the Agencies may amend the attached Access Control Plan so long as the amendment is executed in writing and amended in accord with Access Law and the Access Code. The Access Control Plan Amendment Process is attached hereto and is incorporated in Exhibit C.
11. By Signing this Agreement, the Agencies acknowledge and represent to one another that all procedures necessary to validly contract and execute this Agreement have been performed, and that the persons signing for each Agency have been duly authorized to sign.
12. No portion of this Agreement shall be deemed to constitute a waiver of any immunities the parties or their officers or employees may possess, nor shall any portion of this Agreement be deemed to have created a duty of care which did not previously exist with respect to any person not a party to this Agreement.
13. It is expressly understood and agreed that the enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to the undersigned parties and nothing in this Agreement shall give or allow any claim or right of action whatsoever by any other person not included in this Agreement. It is an express intention of the undersigned parties that any entity other than the undersigned parties receiving services or benefits under this Agreement shall be an incidental beneficiary only.

IN WITNESS THEREOF, the Agencies have executed this Agreement effective as of the day and year written above.

Town of Bayfield, Colorado

ATTEST:

Dr. Rick K. Smith Date
Mayor, Town of Bayfield

Name of Town Clerk Date
Town Clerk

Approved as to Form:

Town Attorney Date

La Plata County, Colorado

ATTEST:

Gwen Lachelt Date
Board of County Commissioners, Chair

Name of Clerk Date
Clerk to the Board

Approved as to Form:

County Attorney Date

**State of Colorado
Department of Transportation**

Kerrie Neet Date
Region Transportation Director

CONCUR:

ATTEST:

Joshua Laipply, PE, Date
Chief Engineer

Chief Clerk Date

Exhibit A & B

ACCESS CONTROL PLAN

United States Highway 160 between MP 100.25 and MP 103.82

Town of Bayfield, La Plata County, and the State of Colorado Department of Transportation

I. Purpose

The purpose of this Access Control Plan (ACP) is to provide the Agencies with a comprehensive roadway access control plan for the pertinent segments of United States Highway 160 through Bayfield, Colorado.

II. Authority

The development of this Access Control Plan was completed pursuant to the requirements of the Access Code, Section 2.12, and adopted by the attached Agreement.

III. Responsibilities

It is the responsibility of each of the Agencies to this Agreement to ensure that vehicular access to the Segments shall only be in conformance with this Agreement. The cost of access improvements, closures and modifications shall be determined pursuant to section 43-2-147(6)(b) C.R.S., the Agreement, and this Access Control Plan. All access construction shall be consistent with the design criteria and specifications of the Access Code.

IV. Existing and Future Access

- A. The attached table (Exhibit A) provides a listing of each existing and future access point in the Segments. The Attached Map (Exhibit B) shows the access points along the Segments of United States Highway 160 through Bayfield. For each access point the following information is provided: location, description of the current access status, and the proposed configuration or condition for change (Access Plan). All access points are defined by the approximate Department mile point (in hundredths of a mile) along United States Highway 160. All access points are located at the approximate centerline of the access.
- B. All highway design and construction will be based on the assumption that the Segments will have a sufficient cross section to accommodate all travel lanes and sufficient right-of-way to accommodate longitudinal installation of utilities.

Exhibit C

ACCESS CONTROL PLAN AMENDMENT PROCESS United States Highway 160 between MP 100.25 and MP 103.82

Town of Bayfield, La Plata County, and the State of Colorado Department of Transportation

Any request for amendment must be submitted to the Department's Region 5 Access Manager by a signatory of the Agreement (either of the Agencies). The amendment must be located within the jurisdiction and have the written support of the submitting signatory. Amendments shall be required for any change to the Access Control Plan as shown in the Exhibit A and B, including, but not limited to, any new or changes to the location of:

1. Signalized intersections
2. Full movement intersections/access points
3. $\frac{3}{4}$ intersections/access points
4. Right-in/right-out only intersections/access points

The amendment request shall include the following documents:

1. Descriptions of the proposed access and changes to the Access Control Plan.
2. Justification for the requested amendment.
3. For signalized intersections, a supporting Traffic Impact Study per the State Highway Access Code.
4. A list of any requested design waivers as applicable.
5. A proposed revised plan sheet clearly depicting the access modifications. The revised plan sheet will replace the corresponding sheet in Exhibit B.

Upon Submission of Information:

1. The Department shall review the submittal for completeness and for consistency with the access objectives, principles, and strategies described in the United States Highway 160 - Town of Bayfield Access Control Plan and the State Highway Access Code ("Access Code"). The Department shall also determine if any applicable design waivers can be granted. Any amendment request that results in a violation of the Access Code or for which a design waiver cannot be granted will not be considered.
2. If the amendment request is found to be complete, it will be forwarded, along with a brief report, to an Access Control Plan Advisory Committee, consisting of representatives from the Town, the County and the Department. Each Agency is responsible for appointing one Advisory Committee Member. An Alternative Advisory Committee Member may be appointed as an alternate.
3. After receipt of the conditions or modifications, each Advisory Committee Member will be responsible for coordinating their Agency review and providing a decision on whether to accept or decline the amendment. The Advisory Committee Members will have 30 days to submit their Agency's vote to the Department Region 5 Access Manager in writing.

4. A unanimous decision of the Agencies will be necessary to approve the amendment. An agency not responding within the 30-day period will be interpreted as a “decline” decision. The Department will provide voting results, to include a tally sheet documenting each agency vote, to all Advisory Committee Members within 15 days of receiving all votes, or following the 30 day review period. If the votes of the Advisory Committee members are not unanimous, the Advisory Committee shall convene a meeting of its membership to jointly discuss the amendment request and the positions of each member.
5. Acceptable votes from the Agencies include: accept without modifications; accept with conditions or modifications; or disapprove.
6. If an Agency accepts with conditions or modifications, the Agency requesting the condition or the modification must provide supporting justification and any applicable requests for a design waiver. Any vote to accept with conditions or modifications that results in a violation of the Access Code or for which a design waiver cannot be granted will not be considered.
7. If found to be complete, the Department will forward the conditions or modifications to all members of the Access Control Plan Advisory Committee.
8. After the receipt of the conditions or modifications, each Advisory Committee Member will be responsible for coordinating their Agency review and providing a decision on whether to accept or decline the conditions and modifications.
9. The Advisory Committee Members will have 20 days to submit their agency’s subsequent vote to the Department in writing.
10. A unanimous vote of the Agencies will be necessary to approve the conditions and modifications. An Agency not responding within the 20-day period will be interpreted as a “decline” decision.
11. The Department will provide voting results to all Advisory Committee Members within 10 days of receiving all votes, or following the 20 day review period.

**EXHIBIT A- ACCESS CONTROL PLAN TABLE
UNITED STATES HIGHWAY 160 BETWEEN MP 110.25 AND MP 103.82**

Access ID No.	Reference Point ¹	Side ²	Parcel Number	Description/Current Owner	Existing Configuration	Proposed Configuration ³	Condition ⁴
1	100.30	LT		CR 508/Gem Lane	Unsignalized Full Movement	Right-In, Right-Out Special Use Access Only	Gated at next Special Use Permit Application. Temporary access available with Special Use Permit only. Restricted to Right-In, Right-Out with US 160 improvement on current alignment.
2	100.38	RT		US 160 Frontage Road (South)	Unsignalized Full Movement	Close Access - Access via CR 507 available	Restricted to Right-In, Right Out with redevelopment affecting traffic operations and/or safety, or with US 160 improvement on current alignment. Close access when a Frontage Road (South) turnaround for heavy vehicles is available.
3	100.56	LT		CR 507	Unsignalized Full Movement	Unsignalized Full Movement	
4	100.56	RT		US 160 Frontage Road (South)	Unsignalized Full Movement	Unsignalized Full Movement	
5	100.80	RT		US 160 Frontage Road (South)	Unsignalized Full Movement	3/4 Movement (Left-In, Right-In, and Right-Out only)	Restricted with redevelopment affecting traffic operations and/or safety, or with US 160 improvement on current alignment.
6	100.80	LT		US 160 Frontage Road (North)	Unsignalized Full Movement	3/4 Movement (Left-In, Right-In, and Right-Out only)	Restricted with redevelopment affecting traffic operations and/or safety, or with US 160 improvement on current alignment.
7	100.90	RT	567715201800	Homestead Trails Property Owners Association	Unsignalized Full Movement	Close Access - Access available via Homestead Dr	Closed with property redevelopment or US 160 improvement on current alignment.
8	100.90	LT	567715200807	Smith, Calvin L & Cecelia E Trustees	Unsignalized Full Movement	Close Access - Shared at Access 9	Closed with property redevelopment or US 160 improvement on current alignment.
9	100.94	LT	567715200807	Smith, Calvin L & Cecelia E Trustees	Unsignalized Full Movement - Shared Access	Right-In, Right-Out - Shared Access	Restricted with property redevelopment or US 160 improvement on current alignment. Cross-access exists with Property No. 567715200111 and shall be formalized with redevelopment of either property.
	100.99			Milepost 101			
10	101.03	RT	567715201800	Homestead Trails Property Owners Association	Unsignalized Full Movement	Close Access - Access available via Homestead Dr	Closed upon property redevelopment or US 160 improvement on current alignment.
11	101.03	LT	567715200111	Perkins, James B & Gwen B	Unsignalized Full Movement	Close Access - Shared at Access 9	Closed with Cross Access Agreement at Access 9 and either property redevelopment or US 160 improvement on current alignment.
12	101.08	RT		Utility Access Road	Unsignalized Full Movement	Right-In, Right-Out Maintenance Access Only	Restricted upon US 160 improvement.
12a	101.10*	RT	567715202801	Homestead at Bayfield LLC, The	Unsignalized Full Movement	Close Access - Access available via Homestead Drive	Closed with property redevelopment.
12b	101.15*	RT	567715202801	Homestead at Bayfield LLC, The	Unsignalized Full Movement	Close Access - Access available via Homestead Dr	Closed with property redevelopment.
12c	101.17*	RT	567715202800	Homestead at Bayfield LLC, The	Unsignalized Full Movement	Close Access - Access via Homestead Dr	Closed with property redevelopment.
13	101.09	LT	567715200021	Beaver, Phyllis A	Unsignalized Full Movement	Right-In, Right-Out	Restricted with property redevelopment or US 160 improvement.
14	101.37	RT	567715100082	Tucker, Don	Unsignalized Full Movement	Close Access - Access available via future secondary roadways or shared access	Restricted to Right-In, Right Out with US 160 improvement or property redevelopment. Close access with property redevelopment and secondary roadway/shared access to Access 15 (Bayfield Parkway West).

* No direct highway access

¹ Defined per 2013 CDOT Windshield - Route 160A

² Oriented up-milepost

³ Access may be further restricted if safety or operational issues develop

⁴ Redevelopment is a change in land use and/or modification to a property

**EXHIBIT A- ACCESS CONTROL PLAN TABLE
UNITED STATES HIGHWAY 160 BETWEEN MP 110.25 AND MP 103.82**

Access ID No.	Reference Point ¹	Side ²	Parcel Number	Description/Current Owner	Existing Configuration	Proposed Configuration ³	Condition ⁴
15	101.42	RT		Bayfield Parkway (West)	Unsignalized Full Movement	Full Movement with potential for signalization	Signalization is only allowable with secondary roadway improvements that correct intersection geometry and provide sufficient vehicle storage between US 160 and Bayfield Parkway. Signal shall be implemented only when warranted by current MUTCD standards.
16	101.42	LT	567710400801	Peeples, Peyton Paul & Dianne M	Unsignalized Full Movement	Full Movement with potential for signalization	Signalization is only allowable with secondary roadway improvements to correct intersection geometry and provide sufficient vehicle storage between US 160 and Bayfield Parkway. Signal shall be implemented only when warranted by current MUTCD standards. Cross access agreement shall be required between Property Nos. 567710400018, 567710400033, 567710300800, and 567710400034 upon redevelopment or ownership change.
17	101.50	LT	567710400018	Casper, Charles C & Shirley A	Unsignalized Full Movement	Close Access - Access 18 available	Closed with property redevelopment or US 160 improvement.
18	101.59	LT	567710400018	Casper, Charles C & Shirley A	Unsignalized Full Movement	Close Access - Access available via future secondary roadways/shared access	Restricted to Right-In, Right Out with US 160 improvement. Close access with property redevelopment and secondary roadway/shared access to Access 16 (Bayfield Parkway West).
19	101.83	RT	567711300800	Grush, Kevin R & Terry S & Trout, Carol	Unsignalized Full Movement	Close Access - Access to CR 509 available	Restricted to Right-In, Right Out with US 160 improvement. Closed with property redevelopment.
20	101.83	LT	567710400044	Sivers, Robert R	Unsignalized Full Movement	Close Access - Access to CR 506 available	Closed with property redevelopment or US 160 improvement.
	101.98			Milepost 102			
21	102.00	LT		CR 506	Unsignalized Full Movement	Close Access - Access available via future secondary roadways	Restricted to Right-In, Right Out with US 160 improvement. Closed with a secondary roadway connection between CR 506 and Access 16 (Bayfield Parkway).
22	102.24	LT		CR 502	Unsignalized Full Movement	Close Access - Access available via future secondary roadways	Restricted to Right-In, Right Out upon US 160 improvement. Closed when a secondary roadway connections from CR 502 to CR 506 and to Access 16 (Bayfield Parkway West) are constructed. Once closed, Gated Right-In, Right-Out Emergency Access shall be maintained until equivalent CR 502 response times are available using new stations or new secondary roadway connections.
23	102.27	RT	567711300800	Grush, Kevin R & Terry S & Trout, Carol	Unsignalized Full Movement	Right-In, Right-Out Ditch Access	Restricted with US 160 improvement.
24	102.27	LT	567711200005	Bursey, Lynne T Trustee & Goodloe, Helen	Unsignalized Full Movement	Right-In, Right-Out Ditch Access	Restricted with US 160 improvement.
25	102.37	RT	567711300109	Bayfield, Town of	Unsignalized Full Movement	Right-In, Right-Out	Restricted with property redevelopment or US 160 improvement.
26	102.48	RT	567711300109	Bayfield, Town of	Unsignalized Full Movement	3/4 Movement (Left-In, Right-In, and Right-Out only)	Restricted with property redevelopment or US 160 improvement.

* No direct highway access

¹ Defined per 2013 CDOT Windshield - Route 160A

² Oriented up-milepost

³ Access may be further restricted if safety or operational issues develop

⁴ Redevelopment is a change in land use and/or modification to a property

**EXHIBIT A- ACCESS CONTROL PLAN TABLE
UNITED STATES HIGHWAY 160 BETWEEN MP 110.25 AND MP 103.82**

Access ID No.	Reference Point ¹	Side ²	Parcel Number	Description/Current Owner	Existing Configuration	Proposed Configuration ³	Condition ⁴
27	102.48	LT	567711200053	Riverside RV LLC	Unsignalized Full Movement - Shared Access	3/4 Movement (Left-In, Right-In, and Right-Out only) - Shared Access	Restricted with redevelopment of either property or US 160 improvement. Cross-access currently exists with Property No. 567711100022 and shall be formalized with redevelopment or ownership change of either property. Cross access shall be extended to CR 501 with redevelopment and/or ownership change of Property No. 567711100022.
28	102.81	RT		CR 521	Signalized Full Movement	Signalized Full Movement	
29	102.81	LT		CR 501	Signalized Full Movement	Signalized Full Movement	
30	102.87	RT	567711100011	Elliott, Denise L	Unsignalized Full Movement	Close Access - Access available via Bayfield Parkway	Closed with property redevelopment or US 160 improvement.
	102.90			Milepost 103			
31	103.10	LT		N. Commerce Dr	Unsignalized Full Movement	3/4 Movement (Left-In, Right-In, and Right-Out only)	Restricted with a secondary roadway connection to Access 37 (Bayfield Parkway East), when US 160 is improved, or when required to address a safety issue mitigable by turning movement restrictions.
32	103.10	RT	567712206006	Pine River Trading Company/Bayfield School District	Unsignalized Full Movement	Close Access - Access available via secondary roadways	Restricted with US 160 improvement or restrictions at Access 31 (N. Commerce Drive). Closed with redevelopment affecting traffic operations and/or safety.
33	103.30	LT	567712200004	Peeples Real Estate Investments LLLP	Unsignalized Full Movement	Close Access - Access available via Colorado Drive	Restricted to Right-In, Right-Out with US 160 improvement. Close with property redevelopment or improved access to Colorado Dr. Cross-access agreement required with Property No. 567712200029 for future public access to Access 37 (Bayfield Parkway East) when either property redevelops.
34	103.30	RT	567712200007	Haga, Jerry D & Zelma	Unsignalized Full Movement	Close Access - Access available via Bayfield Parkway	Closed with property redevelopment or US 160 improvement.
35	103.45	LT	567712200029	Southwestern Foods Inc	Unsignalized Full Movement - Shared Access	Close Access - Access available via future secondary roadways	Restricted to Right-In, Right-Out with property redevelopment or US 160 improvement. Cross-access with Property No. 567712200028 exists and shall be formalized to provide future public access to Access 37 (Bayfield Parkway) when either property redevelops. Access Closed with secondary roadway connection for both properties to Access 37 (Bayfield Parkway East). Cross-access agreement required with Property No. 567712200004 for future public access to Access 37 when either property redevelops.
36	103.53	RT		Bayfield Parkway (East)	Unsignalized Full Movement	Full Movement with potential for signalization	Signal shall be implemented only when warranted by current MUTCD standards.
37	103.53	LT		Future Public Street		Full Movement with potential for signalization	Signal shall be implemented only when warranted by current MUTCD standards. Property Nos. 567712200028, 567701400017, 567701300016, and 567712200029 shall access US 160 at this location via future secondary roadway.
38	103.81	RT	567712115010	Yarina, David P & Brenda A	Unsignalized Full Movement	Right-In, Right-Out Maintenance Access	Restricted with US 160 improvement.

* No direct highway access

¹ Defined per 2013 CDOT Windshield - Route 160A

² Oriented up-milepost

³ Access may be further restricted if safety or operational issues develop

⁴ Redevelopment is a change in land use and/or modification to a property

**EXHIBIT A- ACCESS CONTROL PLAN TABLE
UNITED STATES HIGHWAY 160 BETWEEN MP 110.25 AND MP 103.82**

Access ID No.	Reference Point ¹	Side ²	Parcel Number	Description/Current Owner	Existing Configuration	Proposed Configuration ³	Condition ⁴
39	103.82	LT	567701400017	Koinonia Properties LLC	Unsignalized Full Movement	Close Access - Access available via future secondary roadways	Restricted to Right-In, Right-Out with US 160 improvement. Closed with a secondary roadway connection to Access 37 (Bayfield Parkway East).
40	100.56	RT		Future US 160/CR 507 intersection		Full Movement with potential for signalization	Unsignalized Full Movement intersection with US 160 realignment. Signal shall be implemented only when warranted by current MUTCD standards.
41	100.56	LT		Future US 160/CR 507 intersection		Full Movement with potential for signalization	Unsignalized Full Movement intersection with US 160 realignment. Signal shall be implemented only when warranted by current MUTCD standards.

* No direct highway access

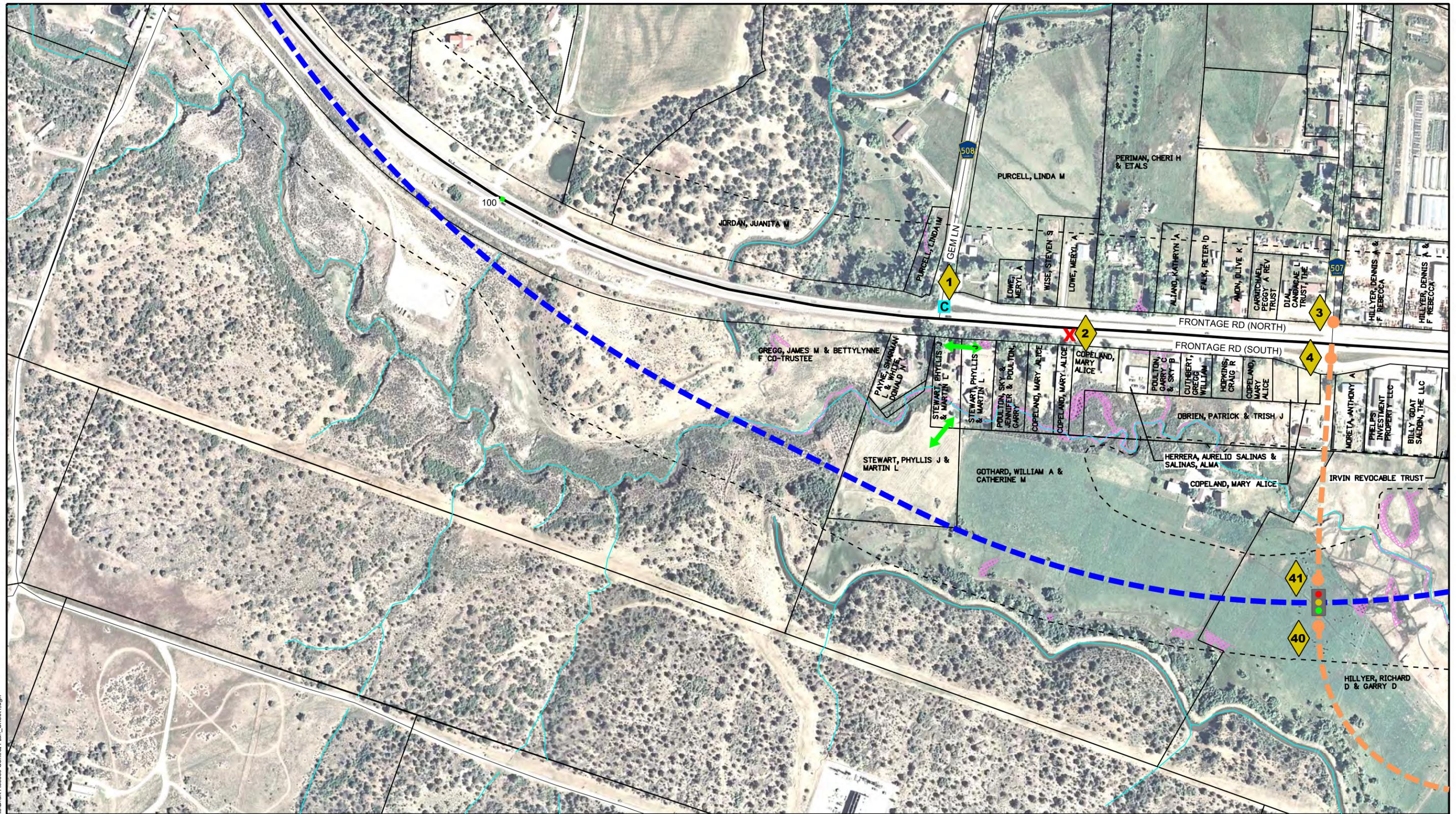
¹ Defined per 2013 CDOT Windshield - Route 160A

² Oriented up-milepost

³ Access may be further restricted if safety or operational issues develop

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| Access Point | Right-In, Right-Out | Milepost | US 160 EIS Wetland Survey Limits |
| Full Movement | 3/4 Movement Left-In | Future US 160 EIS Alignment | Documented Wetland |
| Conditional | Access closed with change in land use or alternative connection | Future Public Street (Conceptual Alignment) | Potential Wetland Area |
| Potential Signal | Cross Access for Shared Access Point | Town Limits | |
| Existing Signal | Cross Access by Common Ownership | | |

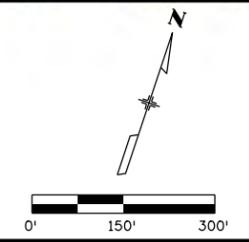
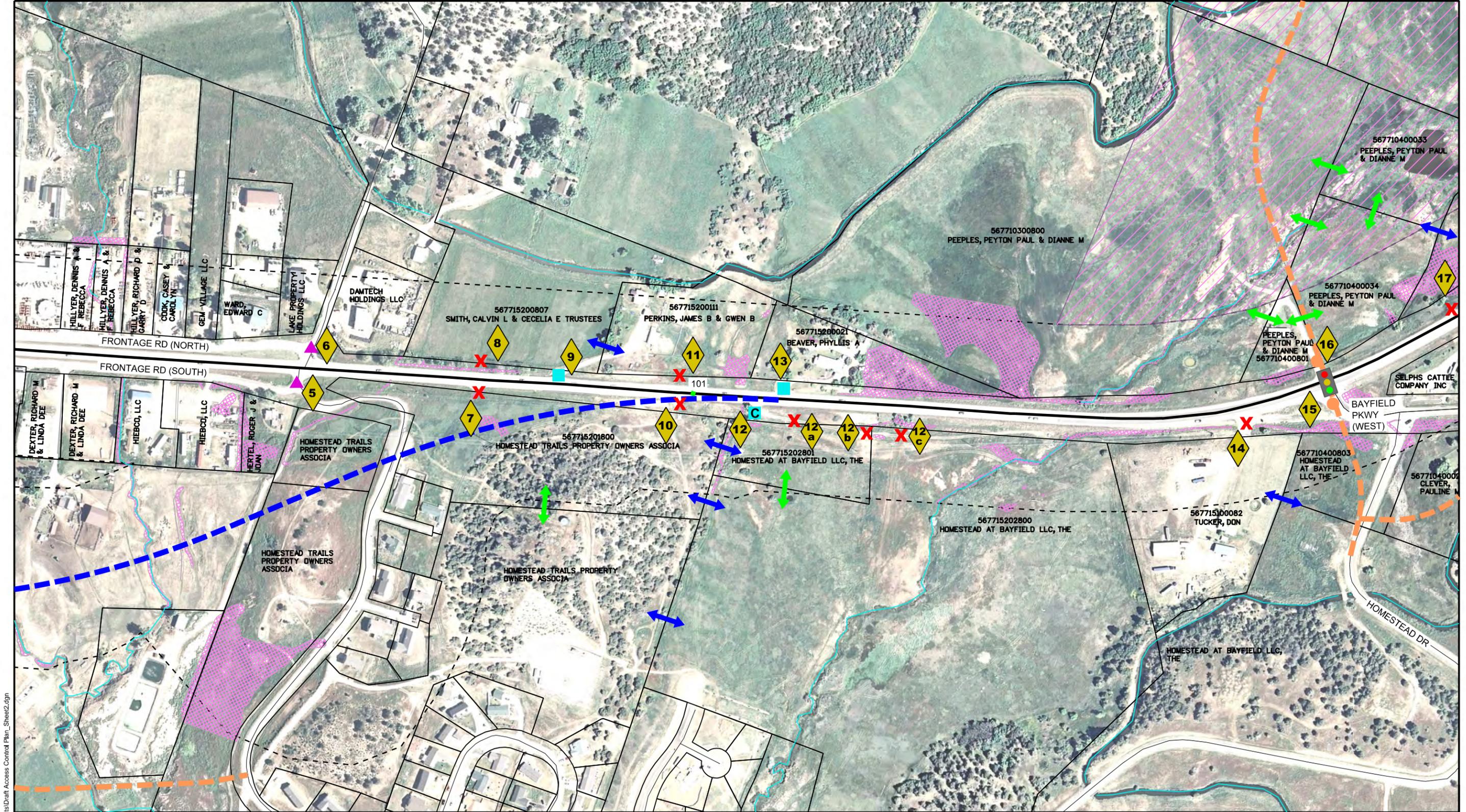


Exhibit B
Access Control Plan Map
United States Highway 160
between MP 100.25 and MP 103.82
Sheet 1 of 5



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|------------------|---|---|----------------------------------|
| Access Point | Right-In, Right-Out | Milepost | US 160 EIS Wetland Survey Limits |
| Full Movement | 3/4 Movement Left-In | Future US 160 EIS Alignment | Documented Wetland |
| Conditional | Access closed with change in land use or alternative connection | Future Public Street (Conceptual Alignment) | Potential Wetland Area |
| Potential Signal | Cross Access for Shared Access Point | Town Limits | |
| Existing Signal | Cross Access by Common Ownership | | |

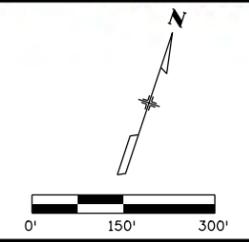
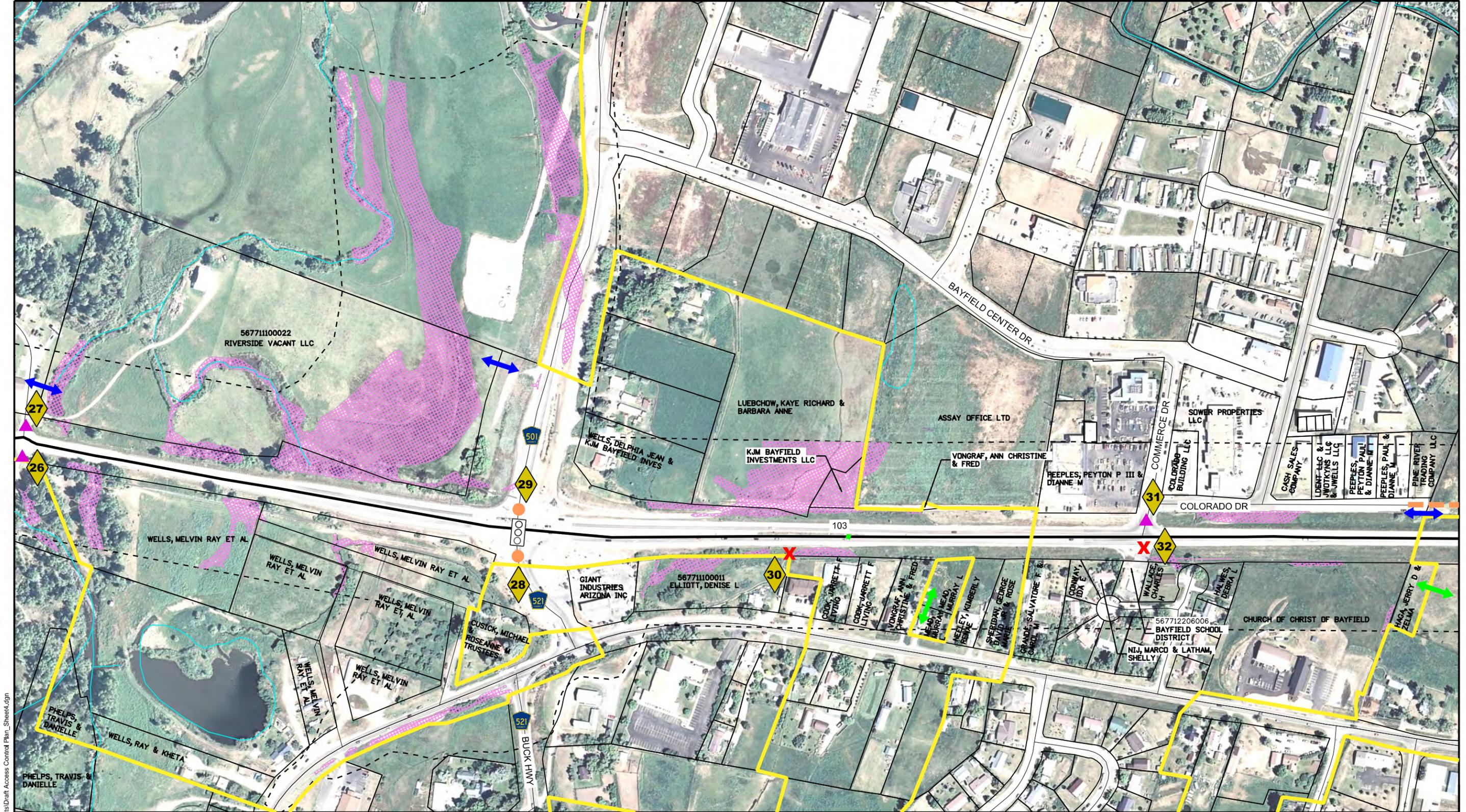


Exhibit B
Access Control Plan Map
United States Highway 160
between MP 100.25 and MP 103.82
Sheet 2 of 5



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| Access Point | Right-In, Right-Out | Milepost | US 160 EIS Wetland Survey Limits |
| Full Movement | 3/4 Movement Left-In | Future US 160 EIS Alignment | Documented Wetland |
| Conditional | Access closed with change in land use or alternative connection | Future Public Street (Conceptual Alignment) | Potential Wetland Area |
| Potential Signal | Cross Access for Shared Access Point | Town Limits | |
| Existing Signal | Cross Access by Common Ownership | | |

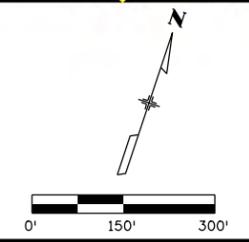


Exhibit B
Access Control Plan Map
United States Highway 160
between MP 100.25 and MP 103.82
Sheet 4 of 5



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|------------------|---|---|----------------------------------|
| Access Point | Right-In, Right-Out | Milepost | US 160 EIS Wetland Survey Limits |
| Full Movement | 3/4 Movement Left-In | Future US 160 EIS Alignment | Documented Wetland |
| Conditional | Access closed with change in land use or alternative connection | Future Public Street (Conceptual Alignment) | Potential Wetland Area |
| Potential Signal | Cross Access for Shared Access Point | Town Limits | |
| Existing Signal | Cross Access by Common Ownership | | |

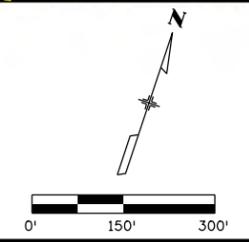


Exhibit B
Access Control Plan Map
United States Highway 160
between MP 100.25 and MP 103.82
Sheet 5 of 5