



**ROOM A | 130 6TH STREET WEST
COLUMBIA FALLS, MT 59912**

**PHONE (406) 892-4391
FAX (406) 892-4413**

**CITY COUNCIL REGULAR MEETING
AGENDA
MONDAY, NOVEMBER 01, 2021
COUNCIL CHAMBERS CITY HALL**

FINANCE COMMITTEE – 6:30 P.M

(Barnhart, Piper, Robinson)

NOTE: The Council Meeting is held in the Council Chambers as well as by ZOOM virtual meeting. Please contact City Clerk Barb Staalnd no later than 6 pm on the night of the meeting to register for ZOOM meeting access by calling (406) 892-4391 or email: staalndb@cityofcolumbiafalls.com

REGULAR MEETING – 7:00 P.M.

CALL TO ORDER

ROLL CALL

PLEDGE OF ALLEGIANCE

APPROVAL OF AGENDA

CONSENT AGENDA:

- 1.** Approval of Claims - November 1, 2021 - \$117,628.72
- 2.** Approval of Regular Payroll Claims - October 29, 2021 - \$130,948.99
- 3.** Approval of October 18, 2021 Regular City Council Meeting Minutes
- 4.** Approval of Interagency Agreement, Effective October 1, 2021 - October 1, 2023 - Flathead County Children's Advocacy Center & Multidisciplinary Child Information Team

VISITORS/PUBLIC COMMENT (Items not on agenda)

NEW BUSINESS:

- 5.** Proclamation - Small Business Saturday - November 27, 2021

ORDINANCES / RESOLUTIONS:

- 6.** **Second and Final Reading - Ordinance # 811** - An Ordinance of the City Council of the City of Columbia Falls, Montana Repealing 12.40.020 Closing Hours - Hoerner Park

- [7.](#) **Second and Final Reading - Ordinance # 812** - An Ordinance of the City Council of the City of Columbia Falls, Montana Amending Title 18 Zoning Test for Provisions Related to Adult Use Marijuana Business
- [8.](#) **Second and Final Reading - Ordinance # 813** - An Ordinance of the City Council of the City of Columbia Falls, Montana Amending Chapter 10.57 Stopping, Standing and Parking
- [9.](#) **First Reading - Ordinance # 814** - An Ordinance of the City Council of the City of Columbia Falls, Montana, Amending the Columbia Falls Zoning Map to Add the Marijuana Business Overlay Zone
- [10.](#) **Resolution # 1866** - A Resolution of the City Council of the City of Columbia Falls, Montana, Approving the Final Plat of The Benches Subdivision, Phases 1 and 2, Described as Tract 3A of COS #21378 in the SW 1/4 NE 1/4 and W 1/2 SE 1/4 Section 16, Township 30 North, Range 20 West, P.M.M., Flathead County Montana.
- [11.](#) **Resolution # 1867** - A Resolution by the City Council of the City of Columbia Falls, Montana Adopting the November 2021 Comprehensive Urban Area Transportation Plan

REPORTS / BUSINESS FROM MAYOR & COUNCIL

CITY MANAGER REPORT

CITY ATTORNEY REPORT

MISCELLANEOUS

- [12.](#) Correspondence

ADJOURN

Next Scheduled Meetings:

City Council – Regular Meeting, **Monday, November 15, 2021** – 7:00 PM

Planning Board – TBD - No meeting in November

10/28/21
17:35:35

CITY OF COLUMBIA FALLS
Claim Approval List
For the Accounting Period: 10/21

Page: 1 of 13
Report ID: AP100V

* ... Over spent expenditure

Claim/	Check	Vendor #/Name/ Invoice #/Inv Date/Description	Document \$/ Line \$	Disc \$	PO #	Fund Org Acct	Object Proj	Cash Account
42456		3112 406 CLEANING OF COLUMBIA FALLS	3,600.00					
	536	10/21/21 FAC-OCT JANITORIAL SERVICE	3,600.00			1000 411200	399	101000
		Total for Vendor:	3,600.00					
42466		3 AMERICAN WATER WORKS ASSOCIATION	338.00					
	7001959685	09/19/21 WTR-MEMBSHP RENEW 1/1-12/3	169.00			5210 430500	335	101000
	7001959685	09/19/21 SWR-MEMBSHP RENEW 1/1-12/3	169.00			5310 430600	335	101000
		Total for Vendor:	338.00					
42495		999999 ARCHERHALL	1,260.00					
	789-01	10/27/21 PUBLIC RECORD REQUEST	1,260.00			1000 411100	351	101000
		Total for Vendor:	1,260.00					
42489		999999 BACKSLOPE BREWING	750.96					
		3RD AVE CUT OFF TRAIL MATERIALS						
	4668493	10/11/21 PRKS-3RD AVE E CUT OFF TRAIL	643.68			1000 460400	240	101000
	4669026	10/15/21 PRKS-3RD AVE E CUT OFF TRAIL	107.28			1000 460400	240	101000
		Total for Vendor:	750.96					
42488		999999 BURNS, CELESTIAL	108.96					
	102621	10/26/21 WTR-DEPOSIT REFUND	108.96			5210 214010		101000
		Total for Vendor:	108.96					
42462		1260 CARQUEST AUTO PARTS	174.06					
	15651-1045	10/14/21 STRS-ENGINE OIL/FILTER	73.03			2500 430200	231	101000
	15651-1097	10/25/21 PRKS-SEAFOAM 4EA	31.96			1000 460400	240	101000
	15651-1096	10/25/21 STRS-SEAFOAM 4EA FILTER	45.51			2500 430200	240	101000
	15651-1069	10/19/21 STRS-SPARKPLUGS/AIR FILTER	23.56			2500 430200	232	101000
		Total for Vendor:	174.06					
42480		3028 CENTURYLINK - BUSINESS SERVICES	1,408.56					
	246878132	10/20/21 ADMIN-9/20/21-10/19/21	33.80			1000 410400	345	101000
	246878132	10/20/21 FIN-9/20/21-10/19/21	93.10			1000 410500	345	101000
	246878132	10/20/21 COMP-9/20/21-10/19/21	790.22			1000 410580	345	101000
	246878132	10/20/21 PD-9/20/21-10/19/21	169.00			1000 420100	345	101000
	246878132	10/20/21 FD-9/20/21-10/19/21	54.85			1000 420400	345	101000

10/28/21
17:35:35

CITY OF COLUMBIA FALLS
Claim Approval List
For the Accounting Period: 10/21

Page: 2 of 13
Report ID: AP100V

* ... Over spent expenditure

Claim/	Check	Vendor #/Name/	Document \$/	Disc \$						Cash
		Invoice #/Inv Date/Description	Line \$		PO #	Fund Org	Acct	Object	Proj	Account
		246878132 10/20/21 BLDG-9/20/21-10/19/21	16.90			2394	420500	345		101000
		246878132 10/20/21 WTR-9/20/21-10/19/21	36.62			5210	430500	345		101000
		246878132 10/20/21 SWR-9/20/21-10/19/21	36.62			5310	430600	345		101000
		246878132 10/20/21 STRS-9/20/21-10/19/21	8.45			2500	430200	345		101000
		246878132 10/20/21 CRTS-9/20/21-10/19/21	169.00			1000	410360	345		101000
		Total for Vendor:	1,408.56							
42459	E	997 CENTURYLINK - ELECTRONIC PAY	841.32							
OCTOBER 2021										
		101821 10/18/21 CRTS-10/19/21-11/18/21	33.14			1000	410360	345		101000
		101821 10/18/21 PD-10/19/21-11/18/21	129.50			1000	420100	345		101000
		101821 10/18/21 FD-10/19/21-11/18/21	65.12			1000	420400	345		101000
		101821 10/18/21 POOL-10/19/21-11/18/21	36.16			1000	460445	345		101000
		101821 10/18/21 STRTS-10/19/21-11/18/21	134.72			2500	430200	345		101000
		101821 10/18/21 WTR-10/19/21-11/18/21	205.03			5210	430500	345		101000
		101821 10/18/21 SWR-10/19/21-11/18/21	237.65			5310	430600	345		101000
		Total for Vendor:	841.32							
42474		14 CITY OF COLUMBIA FALLS	1,953.11							
		102521 10/25/21 FAC-9/17/21-10/18/21	98.90			1000	411200	342		101000
		102521 10/25/21 FD-9/17/21-10/18/21	33.41			1000	420400	342		101000
		102521 10/25/21 PRKS-9/17/21-10/18/21	1,595.25			1000	460400	342		101000
		102521 10/25/21 STRS-9/17/21-10/18/21	95.27			2500	430200	342		101000
		102521 10/25/21 WTR-9/17/21-10/18/21	47.05			5210	430500	342		101000
		102521 10/25/21 SWR-9/17/21-10/18/21	83.23			5310	430600	342		101000
		Total for Vendor:	1,953.11							
42447		3137 CMG ENGINEERING, INC.	360.00							
CONCRETE STRENGTH TESTING FIRE HALL										
		9420 10/19/21 FAC-CONCRETE TEST FIRE HALL	360.00			4000	411200	930		101000
		Total for Vendor:	360.00							
42483		2945 CRAPO LTD	3,734.70							
118.00 PER TON										
		27210 10/20/21 STRS-31.65 TONS BLUE ICE MELT	3,734.70			2820	430200	221		101000
		Total for Vendor:	3,734.70							

10/28/21
17:35:35

CITY OF COLUMBIA FALLS
Claim Approval List
For the Accounting Period: 10/21

Page: 3 of 13
Report ID: AP100V

* ... Over spent expenditure

Claim/	Check	Vendor #/Name/	Document \$/	Disc \$							Cash
		Invoice #/Inv Date/Description	Line \$		PO #	Fund	Org	Acct	Object	Proj	Account
42451		2962 CURTIS, KRISTI	472.86								
COLJ	JUDGES CONF	9/27-9/30/21									
	101221	10/12/21 CRT-TRAVEL,HOTEL,MEALS	472.86			1000		410360	380		101000
		Total for Vendor:	472.86								
42477		3129 DAD BOD DIESEL & MECHANICAL	938.43								
2016	FORD F350 REPAIR										
	175	10/25/21 WTR-FORD F 350 REPAIR	938.43			5210		430500	361		101000
		Total for Vendor:	938.43								
42461		438 FERGUSON WATERWORKS	1,445.48								
	REPAIR FIRE HYDRANT RAN OVER BY FENHOLT PARK										
	0799568	10/20/21 WTR-REPAIR FIRE HYDRANT	561.74			5210		430500	240		101000
	0796874	10/15/21 WTR-TAPPING BIT FOR 1.5" SVC	179.23			5210		430500	220		101000
	0800106	10/15/21 WTR-HYDRANT GATE VALVE	704.51			5210		430500	240		101000
		Total for Vendor:	1,445.48								
42475		3104 FIRST CALL COMPUTER SOLUTIONS,	1,700.00								
	NOVEMBER IT SERVICES										
	76450	11/01/21 COMP-NOVEMBER IT SERVICES	1,700.00			1000		410580	355		101000
		Total for Vendor:	1,700.00								
42452		1892 FLATHEAD COUNTY	150.00								
	5491	10/20/21 CERT OWNER-SARA REEDER	75.00			1000		411000	390		101000
	5497	10/22/21 CERT OWNER-COLIN NOLAN	75.00			1000		411000	390		101000
		Total for Vendor:	150.00								
42493		400 GFOA	310.00								
	SUSAN & SHAWN GFOA MEMBERSHIP										
	2111003	10/21/21 ADMIN-GFOA MBRSHIP THRU 11/22	80.00			1000		410400	335		101000
	2111003	10/21/21 FIN-GFOA MBRSHIP THRU 11/22	230.00			1000		410500	335		101000
		Total for Vendor:	310.00								

10/28/21
17:35:35

CITY OF COLUMBIA FALLS
Claim Approval List
For the Accounting Period: 10/21

Page: 4 of 13
Report ID: AP100V

* ... Over spent expenditure

Claim/	Check	Vendor #/Name/ Invoice #/Inv Date/Description	Document \$/ Line \$	Disc \$	PO #	Fund Org Acct	Object Proj	Cash Account
42454		1378 GLACIER CLEAN CAR WASH	150.00					
	132-2021	10/19/21 PD-FLEET WASH CARD-33073	150.00			1000 420100	361	101000
		Total for Vendor:	150.00					
42467		3113 GLOBAL ARCHIVES INC	181.32					
	21171	10/25/21 WTR-MONTHLY STORAGE AS BUILTS	90.66			5210 430500	363	101000
	21171	10/25/21 SWR-MONTHLY STORAGE AS BUILTS	90.66			5310 430600	363	101000
		Total for Vendor:	181.32					
42460		3095 GREAT NORTHERN LOCK AND SAFE	82.50					
		FINANCE OFFICE BACK DOOR REPAIR						
	9289	10/22/21 FAC-LABOR, SVC CALL BACK DOOR	82.50			1000 411200	360	101000
		Total for Vendor:	82.50					
42443		2806 HANSON'S HARDWARE	41.17					
	599372	10/13/21 SWR-BULB, CLAMP LIGHT CORD	18.97			5310 430600	240	101000
	599376	10/13/21 SWR-OUTLET ADAPTER	4.29			5310 430600	240	101000
	599446	10/20/21 SWR-ZINC J BOLT	11.92			5310 430600	240	101000
	599449	10/20/21 FAC-TOILET WAX RING OFFICE BAT	5.99			1000 411200	240	101000
		Total for Vendor:	41.17					
42469		1119 HDR ENGINEERING, INC.	2,294.83					
	1200381859	10/13/21 SWR-BIOSOLIDS DEWATERING M	2,294.83			5310 430600	354	101000
		Total for Vendor:	2,294.83					
42481		1659 HIGH COUNTRY LINEN SUPPLY	219.71					
	0474919	10/11/21 FAC-CITY HALL, POLC, CRT, FIN	189.93			1000 411200	224	101000
	0474920	10/11/21 FAC-FIRE HALL	29.78			1000 411200	224	101000
		Total for Vendor:	219.71					
42472		2849 J2 BUSINESS PRODUCTS	2,126.19					
	884875-0	10/06/21 FIN-TAX FORM A-Z FOLDER	27.93			1000 410500	210	101000
	884461-0	10/04/21 WTR-INK PAD/FILE FOLDERS	11.45			5210 430500	210	101000
	884461-0	10/04/21 SWR-INK PAD/FILE FOLDERS	11.45			5310 430600	210	101000
	884461-0	10/04/21 FIN-INK PAD/FILE FOLDERS	11.45			1000 410500	210	101000
	884461-0	10/01/21 PLNG-INK PAD/FILE FOLDERS	11.45			1000 411000	210	101000

10/28/21
17:35:35

CITY OF COLUMBIA FALLS
Claim Approval List
For the Accounting Period: 10/21

Page: 5 of 13
Report ID: AP100V

* ... Over spent expenditure

Claim/	Check	Vendor #/Name/	Document \$/	Disc \$							Cash
		Invoice #/Inv Date/Description	Line \$		PO #	Fund	Org	Acct	Object	Proj	Account
	886290-0	10/20/21 WTR-HANGING FOLDER/COPY PAPE	47.75			5210		430500	210		101000
	886290-0	10/20/21 SWR-HANGING FOLDER/COPY PAPE	47.75			5310		430600	210		101000
	886290-0	10/20/21 FIN-HANGING FOLDER/COPY PAPE	47.76			1000		410500	210		101000
	886290-0	10/20/21 PLNG-HANGING FOLDER/COPY PAP	47.75			1000		411000	210		101000
	886283-0	10/20/21 WTR-FINE TIP SHARPIES	3.32			5210		430500	210		101000
	886283-0	10/20/21 SWR-FINE TIP SHARPIES	3.32			5310		430600	210		101000
	886283-0	10/20/21 FIN-FINE TIP SHARPIES	3.32			1000		410500	210		101000
	886283-0	10/20/21 PLNG-FINE TIP SHARPIES	3.32			1000		411000	210		101000
	886589-0	10/22/21 WTR-D BATTERIES	4.48			5210		430500	210		101000
	886589-0	10/22/21 SWR-D BATTERIES	4.48			5310		430600	210		101000
	886589-0	10/22/21 STRS-D BATTERIES	4.48			2500		430200	210		101000
	886589-0	10/22/21 FIN-D BATTERIES	4.48			1000		410500	210		101000
	885712-0	10/13/21 FAC-FIRE HALL HAND SOAP	48.61			1000		411200	224		101000
	885806-0	10/14/21 FAC-HAND SOAP/SANITIZER	171.69			1000		411200	224		101000
	145284	10/19/21 FIN-COPIER MAINT CONTRACT	459.47			1000		410500	363		101000
	145284	10/19/21 WTR-COPIER MAINT CONTRACT	459.47			5210		430500	363		101000
	145284	10/19/21 SWR-COPIER MAINT CONTRACT	459.47			5310		430600	363		101000
	884876-0	10/06/21 PD-MARKERS, TONER	186.13			1000		420100	210		101000
	884461-1	10/05/21 FIN-PLANNER FOR TRAILBLAZER	8.37			1000		410500	210		101000
	884461-2	10/06/21 WTR-MOUSE PAD FOR CHRIS H	1.68			5210		430500	210		101000
	884461-2	10/06/21 SWR-MOUSE PAD FOR CHRIS H	1.68			5310		430600	210		101000
	884461-2	10/06/21 STRS-MOUSE PAD FOR CHRIS H	1.68			2500		430200	210		101000
	884461-2	10/06/21 FIN-MOUSE PAD FOR CHRIS H	1.68			1000		410500	210		101000
	886503-0	10/22/21 SWR-LONG SCRAPER	30.32			5310		430600	212		101000
		Total for Vendor:	2,126.19								
42468		999999 JACKOLA ENGINEERING &	1,700.00								
	9987	09/30/21 TIFF NUCLEUS BULB ENGINEERING	1,700.00			2310		470300	354		101000
		Total for Vendor:	1,700.00								
42482		3004 JIFFY LUBE	89.98								
	33763713	10/25/21 PD-2016 POLICE INTERCEPTOR	89.98			1000		420100	361		101000
		Total for Vendor:	89.98								

10/28/21
17:35:35

CITY OF COLUMBIA FALLS
Claim Approval List
For the Accounting Period: 10/21

Page: 6 of 13
Report ID: AP100V

* ... Over spent expenditure

Claim/	Check	Vendor #/Name/ Invoice #/Inv Date/Description	Document \$/ Line \$	Disc \$	PO #	Fund Org Acct	Object Proj	Cash Account
42492		2093 JOHNSON, MIKE	18.98					
		REIMBURSEMENT FOR SOUND METER BATTERIES						
	102221	10/22/21 PD-SOUND METER BATTERIES	18.98			1000 420100	220	101000
		Total for Vendor:	18.98					
42485		3143 KERTUSHA ENTERPRISES LLC	8,910.00					
		FIRE STATION EXTERIOR PAINTING						
	1247	10/26/21 FAC-FIRE STATION EXT PAINTING	9,000.00			1000 411200	366	101000
	1247	10/26/21 FAC- 1% STATE W/H	-90.00			1000 411200	366	101000
		Total for Vendor:	8,910.00					
42453		97 KNIFE RIVER	737.00					
	2077580	10/08/21 STRS-U.P.M.	737.00			2500 430200	471	101000
		Total for Vendor:	737.00					
42464		1095 MCMASTER-CARR SUPPLY CO.	221.61					
	66545081	10/12/21 SWR-DAFT PIT SCREEN	221.61		18690	5310 430600	240	101000
		Total for Vendor:	221.61					
42455		3003 MERIWETHER MECHANICAL AND DRAIN	643.53					
		REPLACE AUTO BOILER VALVE REPLACE 1" TEE ON OUTLET SIDE OF BOILER THAT SPLIT.						
		REFILL SYSTEM & PURGE AIR						
		TACO AUTO FILL VALVE						
		1" BRASS TEE						
		3/4" COPPER PRO PRESS COUPLING						
	638	10/19/21 FD-REPLACE BOILER VALVE	643.53			1000 420400	366	101000
		Total for Vendor:	643.53					
42486		707 MONTANA DEPT. OF REVENUE	90.00					
		KERTUSHA PAINTING - 1% STATE W/H - FIRE STATION EXTERIOR PAINTING						
	1247	10/26/21 FAC-KERTUSHA 1% STATE W/H	90.00			1000 411200	366	101000
42490		707 MONTANA DEPT. OF REVENUE	598.74					
		SANDON CONSTRUCTION - FIRE STATION #41 CONCRETE - 1% STATE W/H						
	9546	10/20/21 FAC-SANDON CONST 1% W/H	598.74			4000 411200	930	101000
		Total for Vendor:	688.74					

10/28/21
17:35:35

CITY OF COLUMBIA FALLS
Claim Approval List
For the Accounting Period: 10/21

Page: 7 of 13
Report ID: AP100V

* ... Over spent expenditure

Claim/	Check	Vendor #/Name/ Invoice #/Inv Date/Description	Document \$/ Line \$	Disc \$	PO #	Fund Org Acct	Object Proj	Cash Account
42496		2707 MOUNTAIN ALARM	90.75					
		ALARM MONITORING 11/1/21-11/31/21						
	2579612	11/01/21 FAC-CITY HALL NOVEMBER 2021	42.35			1000 411200	366	101000
	2578449	11/01/21 FAC-FD NOVEMBER 2021	48.40			1000 411200	366	101000
		Total for Vendor:	90.75					
42441		52 NAPA AUTO PARTS	24.67					
	983047	10/14/21 FD-3W LAMP & 2W LAMP	24.67			1000 420400	232	101000
		Total for Vendor:	24.67					
42497		908 NEWMAN SIGNS, INC.	651.41					
	TRFINV0350	10/25/21 STRS-TRAFFIC SIGNS/POSTS	651.41			2500 430200	242	101000
		Total for Vendor:	651.41					
42445		999999 NORBERG ELECTRIC	120.00					
		ELECTRICAL PERMIT WAS OVER CHARGED. ONE OF THE FIELDS ON THE FORM WAS MARKED INCORRECTLY.						
		PERMIT SHOULD HAVE BEEN FOR \$65.00 NOT \$185.00						
	E21-1473	10/20/21 REFUND ELECTRICAL PERMIT	120.00			2394 323020		101000
		Total for Vendor:	120.00					
42478		2678 O'NEIL PRINTERS, INC	696.00					
		2 BOXES BUSINESS WINDOW ENVELOPES, MATCHING LOGO COLORS, DELIVERED.						
		6 BOXES BUSINESS ENVELOPES TO COURT.						
	1364	10/21/21 FIN-1000 WINDOW ENVELOPES	78.00			1000 410500	210	101000
	1364	10/21/21 WTR-1000 WINDOW ENVELOPES	78.00			5210 430500	210	101000
	1364	10/21/21 SWR-1000 WINDOW ENVELOPES	78.00			5310 430600	210	101000
	1363	10/21/21 CRT-3000 BUSINESS ENVELOPES	462.00			1000 410360	210	101000
		Total for Vendor:	696.00					
42444		2816 O'REILLY AUTO PARTS	39.97					
	4774371283	10/14/21 WTR-NITRILE GLOVES, BATTER	32.98			5210 430500	220	101000
	4774371658	10/17/21 PD-MOTOR OIL	6.99			1000 420100	231	101000
		Total for Vendor:	39.97					

10/28/21
17:35:35

CITY OF COLUMBIA FALLS
Claim Approval List
For the Accounting Period: 10/21

Page: 8 of 13
Report ID: AP100V

* ... Over spent expenditure

Claim/	Check	Vendor #/Name/ Invoice #/Inv Date/Description	Document \$/ Line \$	Disc \$	PO #	Fund Org Acct	Object Proj	Cash Account
42479		3085 ORTHOPEDIC REHAB INC	200.00					
		N RILEY EMPLOYMENT PHYSICAL						
	18640 10/18/21	WTR- N RILEY PHYSICAL	66.67			5210 430500	390	101000
	18640 10/18/21	PRKS-N RILEY PHYSCIAL	66.67			1000 460400	390	101000
	18640 10/18/21	STRS-N RILEY PHYSCIAL	66.66			2500 430200	390	101000
		Total for Vendor:	200.00					
42484		3100 PEDROS PROPERTIES	1,750.00					
		CITY'S SHARE FOR JUSTIN LEAVENS WATERLINE REPLACEMENT						
		1117 2ND AVE W						
	2021-13 10/15/21	WTR-30% SHARE WATERLINE REPLA	750.00			5210 430500	360	101000
	2021-13 10/15/21	WTR-50% SHARE MAIN TO CURBSTO	1,000.00			5210 430500	360	101000
		Total for Vendor:	1,750.00					
42473		3142 PERFORMANCE HEATING & AIR	7,742.50					
		50% PAYMENT FOR THE INSTALLATION OF A MINI-SPLIT HEAT PUMP. INDOOR AIR HANDLER						
		FOR COUNCIL CHAMBERS, CITY MANAGERS OFFICE AND PUBLIC WORKS OFFICE.						
	21-242 09/16/21	FAC-HVAC CITY HALL MINI-SPLIT	7,742.50			4000 411200	930	101000
		Total for Vendor:	7,742.50					
42448		1495 PLATT ELECTRIC SUPPLY	33.99					
		PVC ELBOW						
	2C79731 10/06/21	PRKS-PVC COND ELBOW	33.99			4010 460400	930	101000
		Total for Vendor:	33.99					
42494		3007 PROFORCE LAW ENFORCEMENT	169.95					
	464940 10/21/21	PD-LASER TASER BATTERIES	169.95			1000 420100	220	101000
		Total for Vendor:	169.95					
42449		2620 ROBERT PECCIA AND ASSOCIATES	488.58					
		GENERAL ENGINEERING & SURVEYING						
		ACE HARDWARE, MILEAGE FOR TENNIS COURTS INSPECTON FROM LAST INVOICE						
	21106.02 10/13/21	WTR-PLAN REVIEW ACE	236.05			5210 430500	354	101000
	21106.02 10/13/21	SWR-PLAN REVIEW ACE	236.06			5310 430600	354	101000
	21106.02 10/13/21	INSPECT-MILEAGE TENNIS COURT	16.47			4010 460400	930	101000
		Total for Vendor:	488.58					

10/28/21
17:35:35

CITY OF COLUMBIA FALLS
Claim Approval List
For the Accounting Period: 10/21

Page: 9 of 13
Report ID: AP100V

* ... Over spent expenditure

Claim/	Check	Vendor #/Name/ Invoice #/Inv Date/Description	Document \$/ Line \$	Disc \$	PO #	Fund Org Acct	Object Proj	Cash Account
42491		3144 SANDON CONSTRUCTION CO. INC	59,275.26					
		FIRE STATION #41 CONCRETE APRON REPLACEMENT						
	9546	10/20/21 FAC-STA #41 CONCRETE APRON	59,874.00			4000 411200	930	101000
	9546	10/20/21 FAC-SANDON 1% STATE W/H	-598.74			4000 411200	930	101000
		Total for Vendor:	59,275.26					
42458		1042 SANDS SURVEYING, INC.	6,094.30					
	34824	10/22/21 P/Z-ROUTINE SRVS 10/13-10/20/2	5,756.80			1000 411000	399	101000
	34825	10/22/21 PRKS-PATH SURVEY PIN LOCATE	337.50			1000 460400	399	101000
		Total for Vendor:	6,094.30					
42470		2755 SHERWIN-WILLIAMS CO	39.33					
	7756-0	10/15/21 PRKS-COBBLE BROWN PAINT	39.33			1000 460400	240	101000
		Total for Vendor:	39.33					
42476		862 SUCCESSFUL SIGNS AND AWARDS	48.00					
	73566	10/22/21 FIN-S BATES NAME PLATE	12.00			1000 410500	210	101000
	73566	10/22/21 PD-G DENHAM NAME PLATE	12.00			1000 420100	210	101000
	73566	10/22/21 P/Z- D VALADE NAME PLATE	12.00			1000 411000	210	101000
	73566	10/22/21 WTR-C HANLEY NAME PLATE	3.00			5210 430500	210	101000
	73566	10/22/21 SWR-C HANLEY NAME PLATE	3.00			5310 430600	210	101000
	73566	10/22/21 STRS-C HANLEY NAME PLATE	3.00			2500 430200	210	101000
	73566	10/22/21 FAC-C HANLEY NAME PLATE	3.00			1000 411200	210	101000
		Total for Vendor:	48.00					
42450		3068 SUPERIOR LAND & LAWN CARE LLC	200.00					
		STATION 42 SEP 2021 LAWN MOWING						
	1684	10/07/21 FD-STATION 42 SEP MOWING X2	200.00			1000 420400	399	101000
		Total for Vendor:	200.00					
42465		1644 THE CHEMNET CONSORTIUM	110.00					
	110263	10/21/21 WTR-C BECKER DRUG SCREEN	55.00			5210 430500	399	101000
	110263	10/21/21 PRKS-N RILEY DRUG SCREEN	18.33			1000 460400	399	101000
	110263	10/21/21 WTR-N RILEY DRUG SCREEN	18.34			5210 430500	399	101000
	110263	10/21/21 STRS-N RILEY DRUG SCREEN	18.33			2500 430200	399	101000
		Total for Vendor:	110.00					

10/28/21
17:35:35

CITY OF COLUMBIA FALLS
Claim Approval List
For the Accounting Period: 10/21

Page: 10 of 13
Report ID: AP100V

* ... Over spent expenditure

Claim/	Check	Vendor #/Name/ Invoice #/Inv Date/Description	Document \$/ Line \$	Disc \$	PO #	Fund Org Acct	Object Proj	Cash Account
42463		1623 THE UPS STORE #4515	28.33					
		TRACKING #1ZWA36710363619361						
		TRACKING #1ZWA36710355710811						
		2021-9722 10/22/21 PD-EVIDENCE SHIPPING	17.62			1000 420100	310	101000
		2021-9702 10/21/21 PD-EVIDENCE SHIPPING	10.71			1000 420100	310	101000
		Total for Vendor:	28.33					
42471		1390 TOTAL GARAGE SOLUTIONS	150.00					
		40387 10/13/21 WTR-SHOP DOOR ADJUSTMENT	150.00			5210 430500	360	101000
		Total for Vendor:	150.00					
42457		919 VALLEY GLASS INC.	490.00					
		REPLACE WINDOW IN SHAWNS OFFICE						
		K0201114 10/20/21 FAC-WINDOW REPLACEMENT	490.00			1000 411200	366	101000
		Total for Vendor:	490.00					
42446	E	1218 VERIZON WIRELESS	1,236.36					
		9890557014 10/12/21 ADMIN-9/13-10/12/21	22.44			1000 410400	345	101000
		9890557014 10/12/21 FIN-9/13-10/12/21	22.45			1000 410500	345	101000
		9890557014 10/12/21 FIRE-9/13-10/12/21	60.43			1000 420400	345	101000
		9890557014 10/12/21 FAC-9/13-10/12/21	12.44			1000 411200	345	101000
		9890557014 10/12/21 STRT-9/13-10/12/21	78.80			2500 430200	345	101000
		9890557014 10/12/21 PD-9/13-10/12/21	747.75			1000 420100	345	101000
		9890557014 10/12/21 WTR-9/13-10/12/21	151.02			5210 430500	345	101000
		9890557014 10/12/21 SWR-9/13-10/12/21	101.26			5310 430600	345	101000
		9890557014 10/12/21 CRT-9/13-10/12/21	39.77			1000 410360	345	101000
		Total for Vendor:	1,236.36					
42442		84 WESTERN BUILDING CENTER	83.95					
		4669569 10/20/21 FAC-FLOOD LIGHTS	83.95			1000 411200	220	101000
		Total for Vendor:	83.95					
42487		999999 WHITE, TERINA	213.37					
		102621 10/26/21 WTR-DEPOSIT REFUND	213.37			5210 214010		101000
		Total for Vendor:	213.37					
		# of Claims 57	Total:	117,628.72				
		Total Electronic Claims		2,077.68				
		Total Non-Electronic Claims		115551.04				

10/28/21
17:35:36

CITY OF COLUMBIA FALLS
Fund Summary for Claims
For the Accounting Period: 10/21

Page: 12 of 13
Report ID: AP110

Fund/Account	Amount
1000 GENERAL FUND	
101000 CASH/CASH EQUIVALENTS	\$31,618.88
2310 TAX INCREMENT DISTRICT FUND	
101000 CASH/CASH EQUIVALENTS	\$1,700.00
2394 BUILDING CODE ENFORCEMENT FUND	
101000 CASH/CASH EQUIVALENTS	\$136.90
2500 SPECIAL STREET MAINTENANCE DISTRICT FUND	
101000 CASH/CASH EQUIVALENTS	\$1,941.90
2820 GAS TAX FUND	
101000 CASH/CASH EQUIVALENTS	\$3,734.70
4000 CAPITAL PROJECTS FUND - Building	
101000 CASH/CASH EQUIVALENTS	\$67,976.50
4010 CAPITAL PROJECTS FUND - Parks	
101000 CASH/CASH EQUIVALENTS	\$50.46
5210 WATER ENTERPRISE FUND	
101000 CASH/CASH EQUIVALENTS	\$6,323.81
5310 SEWER ENTERPRISE FUND	
101000 CASH/CASH EQUIVALENTS	\$4,145.57
Total:	\$117,628.72

10/28/21
17:35:36

CITY OF COLUMBIA FALLS
Claim Approval Signature Page
For the Accounting Period: 10 / 21

Page: 13 of 13
Report ID: AP100A

Council Meeting Date: 11/01/2021

Claims Submitted to Council: \$ 117,628.72

Claims Denied/Withheld by Council Finance Committee: \$ _____ Claim #'s: _____

Prepared By: Shawn Bates, Finance Director

Shawn Bates

Approved by Susan M. Nicosia, City Manager

Susan Nicosia

City Council to Approve by motion on consent agenda

The following claims are significant:

Performance Heating & Air - \$7,742.50 50% down payment on mini split units for council chambers, managers office,
and public works office. (Fund 4000)
Kertusha Enterprises - \$8910.00 Fire station #41 exterior paint. (Fund 1000)
Sandon Construction Co Inc. - \$59,874.00 Fire Station #41 concrete apron replacement. (Fund 4000)

The remaining claims are routine. Please let me know if you have any questions.
Shawn

10/28/21
16:02:29

CITY OF COLUMBIA FALLS
Payroll Summary For Payrolls from 10/29/21 to 10/29/21

Page: 1 of 2
Report ID: P130

Total for Payroll Checks

	Employee	Employer	Amount
	-----	-----	-----
COMA HOURS (Comp Time Accumulated)	1.88		
COMP HOURS (Comp Time Used)	0.50		10.12
HOL HOURS (Holiday Pay)	238.73		6,678.57
HOLW HOURS (Holiday Worked @ 2.5x)	8.00		412.80
J003 HOURS (PD HOL WK)	43.50		1,885.78
OVER HOURS (Overtime)	21.75		944.37
PERS HOURS (Personal Time Used)	0.50		16.35
REG HOURS (Regular Time)	1,976.50		54,785.13
SHFN HOURS (Shift B)	331.00		331.00
SHFQ HOURS (OVT B)	4.50		6.75
SHFU HOURS (Hol wk B)	24.00		60.00
SICK HOURS (Sick Time)	146.00		4,806.78
VACA HOURS (Vacation Time Used)	152.25		3,955.04
GROSS PAY	73,892.69	0.00	
NET PAY	53,047.14	0.00	
CHILD SUPPORT	88.61	0.00	
CHILD SUPPORT P	413.07	0.00	
CITY OF COLUMBI	20.00	0.00	
FIT	6,929.47	0.00	
MEDICARE	1,071.45	1,071.45	
MT ST FIRE ASSO	29.68	0.00	
P.E.R.S.	3,458.49	3,883.16	
PERS/FURS	317.60	426.24	
PERS/POLICE	2,173.47	3,479.95	
SIT	3,491.00	0.00	
SOCIAL SECURITY	2,714.25	2,714.25	
UNEMPL. INSUR.	0.00	406.42	
WA CHILD SUPPOR	138.46	0.00	
WORKERS' COMP	0.00	2,094.52	
CHARLES SCHWAB	1,689.24	0.00	
FIRST INTERSTAT	2,180.24	0.00	
FREEDOM BANK	1,361.47	0.00	
GLACIER BANK KA	6,288.28	0.00	
GLACIER BANK/CF	18,091.38	0.00	
GLACIER BANK/WF	1,728.42	0.00	
PARKSIDE CR U	10,097.18	0.00	
THREE RIVERS	1,165.60	0.00	
USAA FEDERAL	1,313.18	0.00	
USBANK.	2,293.78	0.00	
VALLEY BANK KAL	100.00	0.00	
VERIDIAN CREDIT	400.00	0.00	
WELLS FARGO	1,757.55	0.00	
WELLS FARGO GA	1,328.19	0.00	
WFISH CR UNION	3,252.63	0.00	
FIT/SIT BASE	67,943.13	0.00	
MEDICARE BASE	73,892.69	0.00	
PERS BASE	70,896.30	0.00	
SOC SEC BASE	43,778.52	0.00	

10/29/21
Payroll
\$130,948.99
Raul Stankland

10/28/21
16:02:29

CITY OF COLUMBIA FALLS
Payroll Summary For Payrolls from 10/29/21 to 10/29/21

Page: 2 of 2
Report ID: P130

UN BASE	73,892.69	0.00
WC BASE	72,949.33	0.00

Total	14,075.99
Total Payroll Expense (Gross Pay + Employer Contributions):	87,968.68

Check Summary

Payroll Checks Prev. Out.	\$22,901.48
Payroll Checks Issued	\$46,171.07
Payroll Checks Redeemed	\$21,757.29
Payroll Checks Outstanding	\$47,315.26
Electronic Checks	\$84,777.92

Deductions Accrued	Carried Forward From Previous Month	Deduction Checks Issued	Difference	Liab Account
Social Security	5428.50	5428.50		212260
Medicare	2142.90	2142.90		212260
P.E.R.S.	7341.65	7341.65		212270
Unempl. Insur.	406.42	1239.20	1645.62	212210
Workers' Comp	2094.52	6704.27	8798.79	212220
FIT	6929.47	6929.47		212260
SIT	3491.00	3491.00		212260
AFLAC-PRETAX	0.00			212230
NATIONWIDE/EMP	0.00			212280
Teamsters dues	0.00			212310
PERS/Police	5653.42	5653.42		212240
TEAMSTERS INIT	0.00			212310
NATIONWIDE/CITY	0.00			212280
AFLAC-POSTTAX	0.00			212230
PERS/FURS	743.84	743.84		212275
MT ST FIRE ASSO	29.68	29.68		212315
HEALTHINS/PRE	0.00	45243.70	-6360.60	212400
CITY OF COLUMBI	20.00	20.00		212450
UNUM LIFE INS.	0.00	237.55	0.01	212400
FLEX ALLEGIANCE	0.00			212285
CHILD SUPPORT	88.61	88.61		212330
CHILD SUPPORT P	413.07	413.07		212330
WA CHILD SUPPOR	138.46	138.46		212330
FOP	0.00			212335
FLEX DEP CARE	0.00			212285
Total Ded.	34921.54	47064.13	4083.82	

**** Carried Forward column only correct if report run for current period.

**CITY OF COLUMBIA FALLS
CITY COUNCIL REGULAR MEETING MINUTES
HELD OCTOBER 18, 2021**

REGULAR MEETING – 7:00 P.M.

Mayor Barnhart called the meeting to order at 7:00 p.m.

ROLL CALL: Councilor Fisher, Councilor Lovering, Councilor Piper, Councilor Robinson, Councilor Shepard, Councilor Karper (via ZOOM) and Mayor Barnhart.

Also present: City Manager Nicosia, City Clerk Staaland, City Attorney Breck, City Planner Mulcahy and Police Chief Peters.

PLEDGE OF ALLEGIANCE

APPROVAL OF AGENDA: Councilor Robinson motioned to approve the Agenda, seconded by Councilor Piper and the motion carried.

CONSENT AGENDA: Councilor Fisher made motion to approve the Consent Agenda noting all claims appeared to be in order, seconded by Councilor Lovering with Council voting as follows. Ayes: Fisher, Karper Lovering, Piper, Robinson, Shepard and Barnhart.

Approval of Claims - October 18, 2021 - \$115,220.43

Approval of Regular Payroll Claims - October 15, 2021 - \$88,760.80

Approval of October 4, 2021 Regular City Council Meeting Minutes

Approval of Updated Job Description - October 2021 - Detective

Approval of Morrison-Maierle, Inc. Task Order # 5 - \$3,500 - Horine Park Generator

OATH OF OFFICE:

City Clerk Staaland administered Oath of Office to Lieutenant Gary Denham. Mayor, Council and Staff congratulated Lieutenant Denham on his recent promotion.

NOTICE OF PUBLIC HEARINGS/PUBLIC HEARINGS:

Mayor Barnhart read the Notice of Public Hearing - Comprehensive Transportation Plan:

On October 18, 2021, during the 7:00 p.m. regular council meeting, the City Council of the City of Columbia Falls, shall conduct a public hearing for the purpose of taking public comment on the Comprehensive Transportation Plan.

The City is preparing the Columbia Falls Comprehensive Transportation Plan with the MT Department of Transportation (MDOT) and Flathead County for the Columbia Falls Urban Transportation Area. The Transportation Plan must meet specific criteria established by MDOT. The City held open houses and work sessions on Monday, September 27th to provide the public with detailed information and the opportunity to review the draft plan. The draft plan and the work session power point are available at:

columbiafalls.transportationplan.net. The City Council will formally adopt the Columbia Falls Transportation Plan at their regular meeting on Monday, November 1, 2021.

Nicosia introduced the City's engineering consultant, Wade Kline. Wade Kline, KLJ Engineering, said it has been a pleasure working with The City of Columbia Falls on the Comprehensive Urban Area Transportation Plan. Mr. Kline reviewed the draft plan with Council, noting that MDOT has also completed their formal review. Mr. Kline said they had a good turnout at the Monday, September 27th, 2021, public meetings held at City Hall. Kline said three sessions were held and there was a variety of public input with over 400 residents participating either online or at the meetings throughout the process of developing the City's first Comprehensive Urban Area Transportation Plan. Mr. Kline said he was happy to answer any questions from Council. City Manager said all correspondence received thus far has been provided to Council.

Mayor Barnhart opened the Public Hearing at 7:31 p.m.

Ruben Castren, representing Citizens for a Better Flathead, 135 S. Main, Kalispell. Mr. Castren thanked City Staff, Wade Kline and Council for this well-done Transportation Plan. Mr. Castren said his group would like to see some minor adjustments before the plan is adopted. On page 86 where it states when roads are being redone that bike and pedestrian facilities can be redone in junction with them, we would like to see the word "can" replaced with "should." Castren said they would like to see traffic calming techniques on Highway 2 with pedestrian crossing on the east side of the Flathead River, with new residential coming in they would like to see a pedestrian crossing.

Mayor Barnhart closed the Public Hearing at 7:35 p.m. and noted that Council will formally adopt the Transportation Plan at the November 1, 2021 Regular Council Meeting.

Mayor Barnhart read the Notice of Public Hearing - Title 18 Zoning Text Amendments and Map Overlay:

The Columbia Falls City-County Planning Board held their regular meeting on Tuesday, October 12, 2021 at 6:30 p.m. The Planning Board held a public hearing for the following items and forwarded their recommendations to the Columbia Falls City Council. The Columbia Falls City Council will also hold a public hearing on these items at their regular meeting of Monday, October 18, 2021 beginning at 7 p.m. Both meetings will be held in the Council Chambers of City Hall, 130 6th Street West, Columbia Falls, Montana.

ZONING REGULATIONS TEXT AMENDMENTS: The City proposes to incorporate text amendments to the Columbia Falls Area Zoning Ordinance, Municipal Code Title 18 in regards to adding the definitions and statutory provisions applicable to the regulation of recreational marijuana. The Planning Board and City Council may also consider the implementation of a map amendment with an appropriate overlay zone also related to these provisions.

Mayor Barnhart asked Planner Mulcahy to present the staff report. City Planner Mulcahy presented Staff Report CZTA-21-01 noting that these amendments are necessary with the recent State Legislature Adult Use Marijuana provisions. Mulcahy said the request is to add Marijuana Dispensary as a permitted use in the CB-2 General Business zoning district with a Marijuana Business Zoning overlay, add Marijuana cultivation and manufacturing to the CI-1 and CI-2 zones, add Marijuana cultivation to the CSAG-10 zoning districts and add definitions for Marijuana cultivation, Marijuana dispensary and Marijuana manufacturing within the Columbia Falls Zoning Code (Chapter 18 of the Columbia Falls Municipal Code). The overlay area will be located with

Meadow Lake Boulevard on the west, O'Neil Way on the south, the Burlington Northern Sante Fe railway tracks on the east and a distance of between approximately 455 feet to approximately 270 feet from Highway 2 on the North. The total acreage proposed for the overlay is approximately 45 acres.

With no public comments Mayor Barnhart opened and closed the Public Hearing at 7:42 p.m.

Councilor Fisher asked if the two shops on Nucleus Ave. would be a grandfathered use. Mulcahy said that is correct but they will still be subject to state law with distances from schools and churches.

Mayor Barnhart stated that the text amendments and overlay zone map are well thought out and thanked the Planning Staff for the thoroughness of the report.

Council Fisher motioned to adopt Staff Report CZTA-21-01 as Findings of Fact as amended by the Planning Board, seconded by Councilor Shepard with Council voting as follows. Ayes: Fisher, Karper, Lovering, Piper, Robinson, Shepard and Barnhart.

Mayor Barnhart read the Public Hearing - Alley Abandonment:

NOTICE IS HEREBY GIVEN to all persons that a petition has been filed with the City Council of the City of Columbia Falls, Montana, requesting the abandonment, discontinuance and vacating of a certain public way in the City of Columbia Falls, Montana, more particularly described as follows:

The 12' undeveloped alleyway in Block 4 of the Hoerner Addition Subdivision. Abandonment of this alleyway will allow the property owner who owns all of the adjacent lots to develop the property without the alleyway encumbrance and will place the property on the tax role.

The benefiting property owner will pay all surveying and recording costs. The abandonment request was reviewed and the existing public utilities, a sewer service line and electrical poles, will be relocated at the expense of the property owner.

City Manager Nicosia reported the City received a request to abandon the alley in Block 4 of the Hoerner Addition Subdivision from Fellowship Church, the owner of the entire Block 4. Fellowship Church Pastor Joe Fisher met with city staff on site and staff reviewed utilities. Nicosia said there is a sewer main that only serves the church and the Church has agreed to move it back to the edge of the property. Nicosia said the only other utility is a power pole which only serves the Fellowship property and it too will be moved. Pursuant to the resolution, Nicosia noted that the benefiting property owner will pay all surveying and recording costs. Nicosia reported that there were no public comments received prior to the meeting and Staff recommends approval of the abandonment.

Mayor Barnhart opened the Public Hearing at 7:47 p.m. Pastor Joe Fisher was present to support the requested abandonment. Mayor Barnhart closed the Public Hearing at 7:48 p.m.

Mayor Barnhart read the Notice of Public Hearing - Parking and Park Text Amendments:

On October 18, 2021, during the 7:00 p.m. regular council meeting, the City Council of the City of Columbia Falls, shall conduct a public hearing for purpose of adopting changes to the Columbia Falls Municipal Code Title 10 Vehicles and Traffic and Title 12 Streets, Sidewalks and Public Places.

City Council will consider text amendments to Title 12 Streets, Sidewalks and Public Places addressing right of way maintenance and encroachments, and an amendment to the City park rules and Title 10 Vehicles and Traffic to address parking issues.

City Manager Nicosia said as previously discussed, staff is requesting repealing Chapter 12.40 City Parks 12.40.020 closing hours at Hoerner Park. This text amendment will make Hoerner Park open for public use for the same hours as all other City parks as set in 12.40.010. Nicosia reviewed Ordinance 811 with Council.

Nicosia reported that the Police Department has reviewed Chapter 10.57 Stopping, Standing and Parking and proposed modifications, as attached to Ordinance 813, for clarification and consistency. Nicosia reminded Council that the code was updated two years ago, removing outdated and antiquated language. Nicosia noted that staff supports the text amendments.

Mayor Barnhart opened and closed the public hearing at 7:58 p.m.

NEW BUSINESS:

FECC OPS Board Reappointment - Police Chief Clint Peters

City Manager Nicosia said the Police Chief has received a letter from the Flathead County Board Commissioners asking for his letter of interest for consideration of re-appointment to the Board of County Commissioners by Friday Nov. 12, 2021. Staff recommends Council approval for City appointment to the OPS Board.

Councilor Lovering motioned to recommend re-appointment of Police Chief Peters to the Flathead Emergency Communications Center Operations Board as the Columbia Falls representative, second by Councilor Shepard and the motion carried.

ORDINANCES / RESOLUTIONS:

First Reading - Ordinance # 811 - An Ordinance of the City Council of the City of Columbia Falls, Montana Repealing 12.40.020 Closing Hours - Hoerner Park

Councilor Shepard motioned to approve the First Reading of Ordinance #811, seconded by Councilor Robinson and the motion carried.

First Reading - Ordinance # 812 -An Ordinance of the City Council of the City of Columbia Falls, Montana Amending Title 18 Zoning Text for Provisions Related to Adult Use Marijuana Business and Amending the Columbia Falls Zoning Map for the Addition of an Adult Use Marijuana Business Overlay Zone

Councilor Fisher made motion to approve the First Reading of Ordinance # 812, seconded by Councilor Shepard and the motion carried.

First Reading - Ordinance # 813 - An Ordinance of the City Council of the City of Columbia Falls, Montana Amending Chapter 10.57 Stopping, Standing and Parking

Councilor Shepard motioned to approve the First Reading of Ordinance # 813, seconded by Councilor Lovering and the motion carried.

Resolution # 1865 - A Resolution of the City Council of Columbia Falls, Montana Abandoning, Discontinuing and Vacating the Alleyway in Block 4, Hoerner Addition Subdivision, Columbia Falls, Montana

Councilor Fisher motioned to approve Resolution # 1865, seconded by Councilor Lovering with Council voting as follows. Ayes: Fisher, Karper, Lovering, Piper, Robinson, Shepard and Barnhart.

REPORTS / BUSINESS FROM MAYOR & COUNCIL

Councilor Fisher commented on all the bear activity around town. There is bear scat around his home and on City trails. Fisher said he ran into Tim Manley with FWP and he confirmed grizzly presence, he informed Fisher they have trapped four grizzlies just outside of city limits and have camera footage of five other siting's across the railroad tracks.

Mayor Barnhart said the Fire Hall is looking really good with the new cement pad and fresh paint on the building.

Mayor said the Ruis building is starting to take shape on Nucleus Ave. Mayor asked City Manager Nicosia if there were other commercial projects coming up. Nicosia said there will be something coming forward on the lot next door to the current Ruis project on Nucleus Ave. Nicosia also noted that Uptown Hearth is putting the finishing touches on their plan with construction potentially starting in the spring.

CITY MANAGER REPORT

The Building Department has slowed down this month. We do have building permits ready to pick up and are just waiting for contractors to get them.

Mayor Barnhart inquired about the water leak detection survey. Nicosia said the City has a contractor completing a thorough leak detection survey, including service lines. Nicosia noted that the City was not awarded a competitive grant for the water system as we didn't receive as many preparedness points. The next round of grant applications are due in January so the City will be preparing a new grant request for water service line repairs using the leak detection survey.

Nicosia noted that Council approved the task order with Morrison & Maierle to prepare the call for bids for the backup generator for the Horine Well.

Mayor Barnhart asked if the City has continued to work on the low income and workforce housing issue, a noted priority of the Council. Nicosia said she has been working with Kim Morisaki with Northwest Montana Land Trust looking for land and potential projects. Nicosia said she attended the Habitat for Humanity ribbon cutting for two new qualifying families and the Habitat Director expressed interest in following the National Habitat for Humanity program where they update older houses and multi-family units and rehab them to HUD standards.

The City has continued working with the Quiet Zone officials and we are getting close to scheduling the required on-site meeting with BNSF, City, State and County officials.

Police Chief thanked the Council and Public Safety Committee for implementing the Lieutenant position.

Mayor Barnhart asked if the City is getting any response on the advertised Detective position. Chief Peters said no applications have been received yet.

MISCELLANEOUS

Police Activity - September 2021

Finance - September 2021

Correspondence

ADJOURN: Motion made by Councilor Lovering to adjourn at 8:18 p.m. seconded by Councilor Shepard.

Mayor

Attest:

City Clerk

**Flathead County Children's Advocacy Center and
Multidisciplinary Child Information Team
Interagency Agreement**

COPY

**Effective
October 01, 2021 - October 01, 2023**

I. Statement of Purpose

The Flathead County Multidisciplinary Child Information Team (MDT) seeks to protect children from abuse and neglect, including criminal abuse, by coordinating efforts in the areas of criminal investigation, social services, pediatric medicine, mental health treatment and victim services.

The member agencies have established the MDT pursuant to M.C.A. § 52-2-211.

II. Member Agencies

The MDT member agencies include:

Logan Health, Flathead County Sheriff's Office, Department of Public Health and Human Services – Child and Family Services Division, Whitefish Police Department, Kalispell Police Department, Columbia Falls Police Department, Flathead County Attorney's Office, Logan Health Newman Center, and Flathead County Youth Court Services.

III. Understandings

The undersigned have primary decision-making authority for the agencies we represent and are pledging our renewed commitment to the Flathead County MDT and the Flathead County Children's Advocacy Center by supporting the participation of designated staff to fully participate on the team. It is further understood that, in designating a representative, the agency head certifies that the representative has passed a background check and meets the minimum training standards as established by the National Children's Alliance (hereafter called NCA), for their respective discipline.

IV. Operational Policies

A. Referrals

1. Referrals to the Flathead County Children's Advocacy Center (FCCAC) may only be made by law enforcement or child protective services.
2. Once a referral has been made, the Director/Coordinator will notify the team and work with the appropriate team members to schedule a forensic interview.

B. Meetings

1. The MDT will convene on Wednesday of the third week of each month from 1:00 – 3:00 p.m. The location will be determined by the Director or designee and be capable of accommodating the MDT to conduct case review, identify upcoming training opportunities, and advance the work of the MDT.
2. The MDT may hold an alternate meeting when necessary to staff specific child protection cases.

C. Advisory Board

1. The Advisory Board will be comprised of each agency head or their designee. Each member will participate when called upon to review systems issues, inter-agency coordination, and to advise the Flathead County Sheriff's Office in operations of the FCCAC.

D. Director

1. Selection Process

The Flathead County Sheriff's Office will select the Director who will be subject to fiduciary administration by the Flathead County Sheriff's Office – Flathead County Government.

2. Meeting Facilitation

The Director/Coordinator shall be responsible for organizing group meetings as well as the dissemination of information about upcoming training opportunities.

E. Inter-team coordination

1. The MDT will coordinate its efforts with any other "child protective team," under M.C.A. § 41-3-108, or "youth placement committee," under M.C.A. § 41-5-121, within the County.
2. The MDT will inquire within the team as to whether any member is also a member of another child protective team or youth placement committee.
3. Once another team or committee has been identified, the MDT will seek to enter into a coordination agreement with that team or committee.
4. Each agency commits to allow its personnel who have been trained in forensic interviewing to be available to conduct forensic interviews on a regular basis.

5. Each agency commits to allow at least one representative, who routinely works child abuse cases to participate in regular MDT monthly Case Review Meetings.

V. Confidentiality and Information Management

All member agencies agree to safeguard the confidentiality of all information shared during case review meetings. Information discussed during MDT meetings may only be shared within member agencies when necessary to ensure the protection of a child. Member agencies are prohibited from revealing any information discussed during a team meeting with any person outside of the team. If any information is shared in writing, it will be prominently labeled as confidential. At the beginning of every meeting, if feasible, all attendees will sign a brief confidentiality agreement.

VI. Auxiliary Team Policy

The members of the team or their designees may form one or more auxiliary teams for the purpose of providing service to a single child, a group of children, or children with a particular type of problem or for any other purpose, as provided by M.C.A. § 52-2-211(3).

VII. Training Opportunities

The MDT will identify multidisciplinary training opportunities aimed at enhancing cooperation among the member agencies and developing the appropriate skills within each agency.

VIII. Term of Service

This agreement shall enter into force once it has been signed by all participating agencies and shall be reviewed bi-annually.

date:

Heidi Sturm
LOGAN HEALTH
KALISPELL, MT

date:

Brian Heino
FLATHEAD COUNTY SHERIFF
KALISPELL, MT

date:_____

Jennifer Blodgett
REGIONAL ADMINISTRATOR, DEPARTMENT OF FAMILY SERVICES
KALISPELL, MT

date:_____

Bridger Kelch
CHIEF OF POLICE
WHITEFISH, MT

date:_____

Doug Overman
CHIEF OF POLICE
KALISPELL, MT

 date: 10/7/21

Clint Peters
CHIEF OF POLICE
COLUMBIA FALLS, MT

date:_____

Travis Ahner
CHIEF COUNTY ATTORNEY
KALISPELL, MT

date:_____

Caleb Jordt
LOGAN HEALTH NEWMAN CENTER
KALISPELL, MT

date:_____

Nick Nyman
CHIEF PROBATION OFFICER
KALISPELL, MT

Proclamation

Small Business Saturday

Whereas, the government of City of Columbia Falls, celebrates our local small businesses and the contributions they make to our local economy and community; and

Whereas, according to the United States Small Business Administration, there are 31.7 million small businesses in the United States, they represent 99.7% of firms with paid employees, and they are responsible for 65.1% of net new jobs created from 2000 to 2019; and

Whereas, small businesses employ 47.1% of the employees in the private sector in the United States, 88% of U.S. consumers feel a personal commitment to support small businesses in the wake of the pandemic, and 92% of small business owners have pivoted the way they do business to stay open during the pandemic; and

Whereas, 97% of Small Business Saturday® shoppers recognize the impact they can make by shopping small, 85% of them also encouraged friends and family to do so, too; and

Whereas, 56% of shoppers reported they shopped online with a small business on Small Business Saturday in 2020; and more than 50% of consumers who reported shopping small endorsed a local business on social media or shopped at a local business because of a social media recommendation; and

Whereas, The City of Columbia Falls supports our local businesses that create jobs, boost our local economy, and preserve our communities; and

Whereas, advocacy groups, as well as public and private organizations, across the country have endorsed the Saturday after Thanksgiving as Small Business Saturday.

Now, Therefore, I, Mayor Donald Barnhart, Mayor of The City of Columbia Falls do hereby proclaim, November 27, 2021, as:

SMALL BUSINESS SATURDAY

And urge the residents of our community, and communities across the country, to support small businesses and merchants on Small Business Saturday and throughout the year.

Signature, Mayor Barnhart

Date

**CITY OF COLUMBIA FALLS
ORDINANCE 811**

CHAPTER 12.40 CITY PARKS

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF COLUMBIA
FALLS, MONTANA REPEALING 12.40.020 CLOSING HOURS - HOERNER PARK**

WHEREAS, the City Council of the City of Columbia Falls desires to amend and update this portion of the municipal code having appropriated funds to install new tennis courts and playground equipment at Hoerner Park for the use of the public;

WHEREAS, the City Council wishes to have Hoerner Park open for public use for the same hours as all of the other City parks as set in 12.40.010 Park Hours; and

WHEREAS, the City Council held a public hearing, duly noticed, on this municipal code amendment on October 18, 2021 whereby Council considered any and all public comments.

NOW THEREFORE, be it ordained by the Council of the City of Columbia Falls, in the State of Montana, as follows:

SECTION 1: **REPEAL** “12.40.020 Closing Hours-Hoerner Park” of the Columbia Falls Municipal Code is hereby *repealed* as follows:

R E P E A L

~~12.40.020 Closing Hours-Hoerner Park~~ (*Repealed*)

~~Hours of operation for Hoerner Park shall be all hours of each day parks are open except between eight a.m. and four p.m. on those days while school is in session, and when school is not in session the park shall be open all hours except ten p.m. to six a.m. However, when the park is scheduled by this provision to be closed the park shall nevertheless be open for supervised school activities when a teacher is present, and for baseball league activities when a coach or supervisor is present.~~

SECTION 2: **REPEALER CLAUSE** All ordinances or resolutions or parts thereof, which are in conflict herewith, are hereby repealed.

SECTION 3: **SEVERABILITY CLAUSE** Should any part or provision of this Ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the Ordinances a whole or any part thereof other than the part so declared to be unconstitutional or invalid.

SECTION 4: **EFFECTIVE DATE** This Ordinance shall become effective thirty (30) days after its final passage and approval by the City Council of the City of Columbia Falls, Montana.

PASSED AND ADOPTED BY THE CITY OF COLUMBIA FALLS COUNCIL

	AYE	NAY	ABSENT	ABSTAIN
Barnhart	_____	_____	_____	_____
Fisher	_____	_____	_____	_____
Karper	_____	_____	_____	_____
Lovering	_____	_____	_____	_____
Piper	_____	_____	_____	_____
Robinson	_____	_____	_____	_____
Shepard	_____	_____	_____	_____

Presiding Officer

Attest

Donald Barnhart, Mayor, City of
Columbia Falls

Barb Staaland, Clerk City of
Columbia Falls

**CITY OF COLUMBIA FALLS
ORDINANCE 812**

TITLE 18 ZONING REGULATIONS

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF COLUMBIA
FALLS, MONTANA AMENDING TITLE 18 ZONING TEXT FOR PROVISIONS
RELATED TO ADULT USE MARIJUANA BUSINESS AND AMENDING THE
COLUMBIA FALLS ZONING MAP FOR THE ADDITION OF AN ADULT USE
MARIJUANA BUSINESS OVERLAY ZONE**

WHEREAS, the City Council desires to amend and update municipal code pursuant to State Legislature adoption of provisions related to Adult Use Marijuana businesses; and

WHEREAS, the Columbia Falls City-County Planning Board held a public hearing on Tuesday, October 12, 2021 whereby they adopted an amended Staff Report CZTA-21-01 and recommended approval to the City Council; and

WHEREAS, the City Council held a public hearing on Monday, October 18, 2021 during its regular meeting, after said hearing was advertised according to law; and at the hearing, the City Council considered any and all comments filed or voiced with respect to the text and map amendments; and

WHEREAS, the City Council has determined that said amendments to the Columbia Falls Municipal Code and Zoning Map are in the best interests of the City.

NOW THEREFORE, be it ordained by the Council of the City of Columbia Falls, in the State of Montana, as follows:

SECTION 1: **AMENDMENT** “18.336.020 Permitted Uses” of the Columbia Falls Municipal Code is hereby *amended* as follows:

AMENDMENT

18.336.020 Permitted Uses

- A. Accessory building or use;
- B. Assembly halls, coliseums, stadiums;
- C. Automobile sales (new and used) and accessory sales;
- D. Automobile parking, commercial enterprise;
- E. Automobile parking, in conjunction with permitted uses;
- F. Automobile service station;
- G. Banks and other financial institutions;
- H. Boat sales, new and used;

- I. Car wash, automatic coin-operated;
- J. Car washing and waxing, enclosed;
- K. Clinic, medical and dental;
- L. Clubs and other places of entertainment operated as commercial enterprises;
- M. Colleges, business schools, trade schools, music conservatories, dance schools;
provided that no students reside on campus;
- N. Commercial recreation area;
- O. Drug stores;
- P. Dwelling, single-family;
- Q. Food stores, supermarkets, delicatessens;
- R. Hotel, motel;
- S. Laundromat, self-service coin-operated;
- T. Laundry pick-up station;
- U. Libraries, museums, and art galleries;
- V. Lodges, fraternal and social organizations provided that any such establishment shall
not be conducted primarily for gain;
- W. Lumber yards, building materials; storage and sales;
- X. Marijuana dispensary within a Marijuana Business Overlay;
- Y. Nursery, landscaping materials;
- Z. Office; professional, public and private;
- AA. Parks;
- AB. Pet shops, bird stores, taxidermists;
- AC. Pharmacy;
- AD. Public transportation shelter stations;
- AE. Public utility service installations;
- AF. Quasi-public buildings, nonprofit;
- AG. Recreational vehicle park;
- AH. Restaurants, except drive-ins;
- AI. Retail sales and service;
- AJ. Shopping malls;
- AK. Storage, within the building, of goods intended for retail sales on premises;
- AL. Taverns;
- AM. Taxi stands;
- AN. Theaters, housed in permanent indoor structures;
- AO. Micro-Brewery, Brew Pub and Mini Brewery;
- AP. Vacation Rental.

SECTION 2: **AMENDMENT** “18.342.020 Permitted Uses” of the Columbia Falls Municipal Code is hereby *amended* as follows:

AMENDMENT

18.342.020 Permitted Uses

The permitted uses in the CI-1 district are as follows:

- A. Accessory building or use;
- B. Automobile and boat sales and service;
- C. Automobile service station;
- D. Building supply outlets;
- E. Contractors yards;
- F. Heavy equipment sales, rental, and service;
- G. Manufacturing, fabricating, processing, repairing, packing, or storage facilities provided that such uses do not produce objectionable by-products (dirt, noise, glare, heat, odors, smoke, etc.) beyond the lot lines and that the uses do not involve materials that are explosive, hazardous, or toxic;
- H. Marijuana Cultivation and Manufacturing;
- I. Nurseries and landscape materials, wholesale and retail;
- J. Parcel delivery services;
- K. Parks;
- L. Research laboratories and institutions;
- M. Tire sales, recapping and retreading.

SECTION 3: **AMENDMENT** “18.344.020 Permitted Uses” of the Columbia Falls Municipal Code is hereby *amended* as follows:

AMENDMENT

18.344.020 Permitted Uses

The permitted uses in the CI-2 district are as follows:

- A. Accessory building or use;
- B. Contractors yards;
- C. Manufacturing, fabricating, processing, repairing, packing, or storage facilities;
- D. Marijuana Cultivation and Manufacturing;
- E. Parcel delivery services;
- F. Parks;
- G. Petroleum products, wholesale and retail;
- H. Railroad yards.

SECTION 4: **AMENDMENT** “18.318.020 Permitted Uses” of the Columbia Falls Municipal Code is hereby *amended* as follows:

AMENDMENT

18.318.020 Permitted Uses

The permitted uses in the CSAG-10 district are as follows:

- A. Accessory building or use;
- B. Agricultural/horticultural uses including orchards, nurseries, and the grazing, breeding, or raising of livestock on a commercial scale;
- C. Class A manufactured homes;
- D. Dairy farm;
- E. Dairy products processing, bottling, and distribution;
- F. Dwelling, single-family;
- G. Guest house;
- H. Home Occupations (see Special Provisions);
 - I. Marijuana Cultivation;
 - J. Nursery, landscaping materials;
- K. Parks;
- L. Produce stands;
- M. Public transportation shelter stations;
- N. Public utility service installations;
- O. Riding academy, rodeo arena;
- P. Stables, public and private.

SECTION 5: **ADOPTION** “Chapter 18.447 Marijuana Dispensaries” of the Columbia Falls Municipal Code is hereby *added* as follows:

ADOPTION

Chapter 18.447 Marijuana Dispensaries(*Added*)

- A. The city council may amend the zoning jurisdiction regulations and create within the CB-2 district a specific geographic area defined as marijuana business overlay zone.

B. A marijuana dispensary may only be located within a CB-2 district in a location specifically designated marijuana business overlay zone on the official zoning jurisdiction map and in compliance with Montana Code Annotated (MCA) restrictions. The dispensary use may not be within 500 feet of, and on the same street as a building used exclusively as a church, synagogue, or other place of worship or as a school or postsecondary school other than a commercially operated school. This distance must be measured in a straight line from the center of the nearest entrance of the place of worship or school to the nearest entrance of the dispensary premises.

SECTION 6: **ADOPTION** “18.626.042 Marijuana” of the Columbia Falls Municipal Code is hereby *added* as follows:

ADOPTION

18.626.042 Marijuana(*Added*)

“Marijuana “means all plant material from the genus Cannabis containing tetrahydrocannabinol (THC) or seeds of the genus capable of germination. It does not include hemp, including any part of that plant, including the seeds and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3% on a dry weight basis, or commodities or products manufactured with hemp, or any other ingredient combined with marijuana to provide topical or oral administrations, food, drink, or other products. The term also does not include a drug approved by the United States Food and Drug Administration pursuant to Section 505 of the Federal Food, Drug, and Cosmetics Act, 21 U.S.C. 301, et seq.

SECTION 7: **ADOPTION** “18.626.043 Marijuana Cultivation” of the Columbia Falls Municipal Code is hereby *added* as follows:

ADOPTION

18.626.043 Marijuana Cultivation(*Added*)

“Marijuana cultivation” means a use operated by a person licensed by the State of Montana to (a) plant, cultivate, grow, harvest, and dry marijuana; and (b) package and relabel marijuana produced at the location in a natural or naturally dried form that has not been converted, concentrated, or compounded for sale through a licensed dispensary. The use and placement of marijuana cultivation must be in compliance with Montana Code Annotated (MCA). The use may not be within 500 feet of, and on the same street as a building used exclusively as a church, synagogue, or other place of worship or as a school or postsecondary school other than a commercially operated school. This distance must be measured in a straight line from the center of the nearest entrance of the place of worship or school to the nearest entrance of the cultivation premises. A cultivator may not cultivate marijuana in a manner that is visible from the street or other public area without the use of binoculars, aircraft, or other optical aids.

SECTION 8: **ADOPTION** “18.626.044 Marijuana Dispensary” of the Columbia Falls Municipal Code is hereby *added* as follows:

ADOPTION

18.626.044 Marijuana Dispensary(*Added*)

“Marijuana dispensary” means a licensed premises from which a person licensed by the State of Montana may (a) obtain marijuana or marijuana products from a licensed cultivator, manufacturer, dispensary, or other licensee approved by the State; and (b) sell marijuana or marijuana products to registered cardholders, adults that are 21 years of age, or both. The location of a marijuana dispensary shall be located within CB-2/marijuana business zoning and shall be in compliance with Montana Code Annotated (MCA). The use may not be within 500 feet of, and on the same street as a building used exclusively as a church, synagogue, or other place of worship or as a school or postsecondary school other than a commercially operated school. This distance must be measured in a straight line from the center of the nearest entrance of the place of worship or school to the nearest entrance of the dispensary premises.

SECTION 9: **ADOPTION** “18.626.045 Marijuana Manufacturing” of the Columbia Falls Municipal Code is hereby *added* as follows:

ADOPTION

18.626.045 Marijuana Manufacturing(*Added*)

“Marijuana manufacturing” means a use operated by a person licensed by the State of Montana to convert or compound marijuana into marijuana products, marijuana concentrates, or marijuana extract and package, repackage, label, or relabel marijuana products. The use of marijuana manufacturing must be in compliance with Montana Code Annotated (MCA). The use may not be within 500 feet of, and on the same street as a building used exclusively as a church, synagogue, or other place of worship or as a school or postsecondary school other than a commercially operated school. This distance must be measured in a straight line from the center of the nearest entrance of the place of worship or school to the nearest entrance of the manufacturing premises. A manufacturer may not manufacture marijuana products in a manner that is visible from the street or other public area without the use of binoculars, aircraft, or other optical aids.

SECTION 10: **REPEALER CLAUSE** All ordinances or resolutions or parts thereof, which are in conflict herewith, are hereby repealed.

SECTION 11: **SEVERABILITY CLAUSE** Should any part or provision of this Ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the Ordinances a whole or any part thereof other than the part so declared to be unconstitutional or invalid.

SECTION 12: **EFFECTIVE DATE** This Ordinance shall become effective thirty (30) days after its final passage and approval by the City Council of the City of Columbia Falls, Montana.

PASSED AND ADOPTED BY THE CITY OF COLUMBIA FALLS COUNCIL

_____.

	AYE	NAY	ABSENT	ABSTAIN
Barnhart	_____	_____	_____	_____
Fisher	_____	_____	_____	_____
Karper	_____	_____	_____	_____
Lovering	_____	_____	_____	_____
Piper	_____	_____	_____	_____
Robinson	_____	_____	_____	_____
Shepard	_____	_____	_____	_____

Presiding Officer

Attest

Donald Barnhart, Mayor, City of
Columbia Falls

Barb Staaland, Clerk City of
Columbia Falls

**CITY OF COLUMBIA FALLS
ORDINANCE 813**

CHAPTER 10.57 STOPPING, STANDING AND PARKING

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF COLUMBIA
FALLS, MONTANA AMENDING CHAPTER 10.57 STOPPING, STANDING AND
PARKING**

WHEREAS, the City Council updated outdated municipal code in February 3, 2020 with the adoption of Ordinance 799 and now wishes to amend the code for clarification; and

WHEREAS, the text amendments were considered at a public hearing, advertised according to law, on October 18, 2021 at the regular Council meeting; and at said hearing, the City Council considered any and all comments filed or voiced with respect to said changes; and

WHEREAS, the City Council has determined that said amendments to the Columbia Falls Municipal Code are in the best interests of the City.

NOW THEREFORE, be it ordained by the Council of the City of Columbia Falls, in the State of Montana, as follows:

SECTION 1: **AMENDMENT** “10.57.060 Where Prohibited-No Signs Required” of the Columbia Falls Municipal Code is hereby *amended* as follows:

A M E N D M E N T

10.57.060 Where Prohibited-No Signs Required

- A. No person shall stop, stand, or park a vehicle, except when necessary to avoid conflict with other traffic or in compliance with law or the directions of a police officer or traffic-control device, in any of the following places:
1. On a sidewalk, alley or bike path;
 2. Within three (3) feet of or in front of a public or private driveway;
 3. Within an intersection;
 4. Within fifteen feet of a fire hydrant;
 5. On a crosswalk;
 6. Within twenty feet of a crosswalk at an intersection;
 7. Within thirty feet upon the approach to any flashing beacon, stop sign, or traffic-control signal located at the side of a roadway;
 8. Between a safety zone and the adjacent curb or within thirty feet of points on the curb immediately opposite the ends of a safety zone, unless the public

- works director has indicated a different length by signs or markings;
9. Within fifty feet of the nearest rail of a railroad crossing;
 10. Within twenty feet of the driveway entrance to any fire station and on the side of the street opposite the entrance to any fire station within seventy-five feet of such entrance;
 11. Alongside or opposite any street excavation or obstruction when stopping, standing or parking would obstruct traffic;
 12. On a roadway side of any vehicle stopped or parked at the edge or curb of a street;
 13. Upon any bridge or other elevated structure upon a highway or within a highway tunnel;
 14. At any place where official signs prohibit stopping;
 15. On any front or side yard unless hard packed gravel, asphalt or cement driveways and parking spaces are provided, not including the boulevard or right of way
- B. No person shall move a vehicle not lawfully under his control into any such prohibited area or away from a curb such distance as it is unlawful.
- C.

SECTION 2: **AMENDMENT** “10.57.080 Parking In Alleys” of the Columbia Falls Municipal Code is hereby *amended* as follows:

AMENDMENT

10.57.080 Parking In Alleys

No person shall park a vehicle within an alley on City right of way or obstructing City right of way in such a manner or under such conditions as to leave available less than ten feet of the width of the roadway for the free movement of vehicular traffic, and no person shall stop, stand, or park a vehicle within an alley in such position as to block the driveway entrance to any abutting property.

SECTION 3: **AMENDMENT** “10.57.090 Parking Prohibited For Certain Purposes” of the Columbia Falls Municipal Code is hereby *amended* as follows:

AMENDMENT

10.57.090 Parking Prohibited For Certain Purposes

No person shall park a vehicle upon any roadway for the principal purpose of:

- A. Displaying such vehicle for sale;
- B. Washing, greasing, or repairing such vehicle except repairs necessitated by an emergency.
- C. Storing any such vehicle or motor vehicle not then in transit or actual use and service.
- D. Camping or overnight sleeping.

SECTION 4: **AMENDMENT** “10.57.143 Parking Trucks, Truck-Tractor, Campers, Trailers And Boats” of the Columbia Falls Municipal Code is hereby *amended* as follows:

AMENDMENT

10.57.143 Parking Trucks, Truck-Tractor, Campers, Trailers And Boats

No person shall stand or park any truck, truck-tractor, camper, trailer, semi-trailer or boat on any street right of way for any purpose or period of time other than for the expeditious loading or unloading of such vehicles.

PASSED AND ADOPTED BY THE CITY OF COLUMBIA FALLS COUNCIL

_____.

	AYE	NAY	ABSENT	ABSTAIN
Barnhart	_____	_____	_____	_____
Fisher	_____	_____	_____	_____
Karper	_____	_____	_____	_____
Lovering	_____	_____	_____	_____
Piper	_____	_____	_____	_____
Robinson	_____	_____	_____	_____
Shepard	_____	_____	_____	_____

Presiding Officer

Attest

Donald Barnhart, Mayor, City of
Columbia Falls

Barb Staaland, Clerk City of
Columbia Falls

FIRST READING

ORDINANCE NO.814

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF COLUMBIA FALLS, MONTANA, AMENDING THE COLUMBIA FALLS ZONING MAP TO ADD THE MARIJUANA BUSINESS OVERLAY ZONE.

WHEREAS, the City of Columbia Falls has requested an amendment to the Columbia Falls zoning map to add an overlay zone to address the provisions of Adult Use Marijuana Business as adopted by the Montana Legislature; and

WHEREAS, the Columbia Falls Planning Department, on October 1, 2021, in Staff Report CZTA-21-01, recommended approval of the requested overlay zone in concert with the text amendments; and

WHEREAS, said request was considered by the Columbia Falls City-County Planning Board in a public hearing at its regularly scheduled meeting on October 12, 2021 at which the Board adopted Staff Report CTZA-21-01 and recommended approval of the requested overlay zone; and

WHEREAS, a hearing on the Text Amendments and Zoning Map Overlay Zone was held by the City Council of the City of Columbia Falls, Montana, at its regular meeting on Monday, October 18, 2021, after said hearing was advertised according to law; and at said hearing on said date, the City Council considered the recommendation of the Planning Board, the report of the Columbia Falls Planning Office, together with any and all comments filed or voiced with respect to said change; and

WHEREAS, the City Council has determined that the zoning map amendment request to add the overlay zone is in the best interest of the City.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF COLUMBIA FALLS, MONTANA AS FOLLOWS:

Section One. Findings of Fact: That the Columbia Falls Planning Office Report #CTZA-21-01, dated October 1, 2021 and as amended by the Planning Board on October 12, 2021 is hereby adopted by the Council as findings of fact with respect to said zoning map amendment request.

Section Two. Overlay Zone Addition: That the requested zoning map amendment adding an Overlay Zone is hereby adopted as described fully on the attached legal description, Exhibit A and as shown on Exhibit B.

Section Three. The Council finds that the proposal complies with the Columbia Falls City Growth Policy.

Section Four. Inconsistent Provisions: All ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section Five. Severability: The provisions of this Ordinance are severable. If any provision of this Ordinance is held invalid, such invalidity shall not affect other provisions or applications of this Ordinance which can be given effect without the invalid provision.

Section Six. Effective Date: This Ordinance shall become effective thirty (30) days after its final passage and approval by the City Council of the City of Columbia Falls, Montana.

PASSED AND APPROVED BY THE CITY COUNCIL OF COLUMBIA FALLS, MONTANA THIS ____ DAY OF NOVEMBER, 2021, THE COUNCIL VOTING AS FOLLOWS:

AYES:

NOES:

ABSENT:

City Clerk

APPROVED BY THE MAYOR OF COLUMBIA FALLS, MONTANA THIS ____ DAY OF NOVEMBER, 2021.

Mayor

ATTEST:

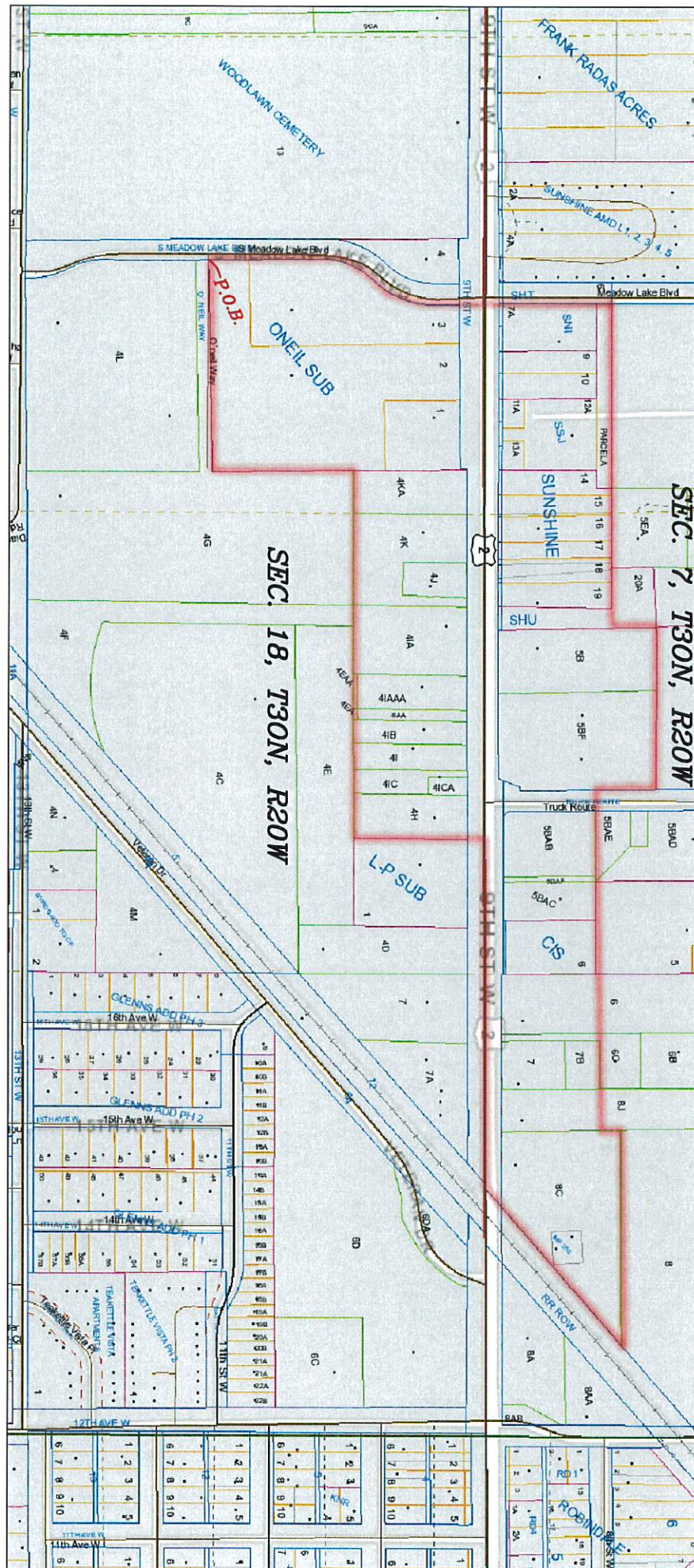
City Clerk

EXHIBIT A - PROPOSED MARIJUANA BUSINESS OVERLAY

A TRACT OF LAND BEING IN THE SOUTH HALF OF THE SOUTHEAST QUARTER AND IN THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 7; AND IN THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER AND IN THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 18, ALL OF TOWNSHIP 30 NORTH, RANGE 20 WEST, P.M.,M., FLATHEAD COUNTY, MONTANA, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS TO WIT:

BEGINNING at the southwest corner of Lot 2 of the plat of O'Neil Subdivision, which is on the easterly R/W of South Meadow Lake Boulevard; Thence northerly along said easterly R/W of South Meadow Lake Boulevard 750.43 feet to a point on the southerly R/W of U.S. Highway 2; Thence northerly 120 feet more or less to the southwest corner of Lot 7A of the plat of Sunshine Revisited No. 2, which is on the easterly R/W of Meadow Lake Boulevard; Thence along said easterly R/W of Meadow Lake Boulevard, N00°05'07"E 318.78 feet to the northwest corner of Parcel A of the plat of Sunshine Revisited; Thence leaving said R/W and along the north boundary of said Parcel A, N89°54'06"E 525.25 feet to the northeast corner of said Parcel A; Thence continuing easterly along the north boundary of Lots 14 through 19 of the plat of Sunshine, 319.4 feet more or less, to the northeast corner of said Lot 19; Thence continuing easterly along the extension of the north boundary of said Lot 19, a distance of 66.00 feet to a point on the east boundary of Lot 20 A of the Amended Plat of Lot 20 of Sunshine; Thence N05°46'50"E 117.04 feet to the northeast corner of said Lot 20A, and being the northwest corner of Tract 1 as shown on Certificate of Survey No. 3804; Thence along the north boundaries of Tracts 1 and 2 of said Certificate of Survey No. 3804, S88°19'53"E 468.99 feet to a point on the westerly R/W of a City street known as Truck Route; Thence S01°39'20"W along said westerly R/W approximately 150 feet more or less to a point that is N88°04'17"W from the northwest corner of Tract 3 of Certificate of Survey No. 13264; Thence leaving said westerly R/W, S88°04'17"E 60 feet to the northwest corner of said Tract 3; Thence S88°04'17"E 100.74 feet; Thence S87°58'33"E 100.01 feet to the southwest corner of Lot 5 of the plat of Columbia Falls Industrial Sites; Thence S88°00'29"E 264.78 feet to the southeast corner of said Lot 5; Thence continuing S88°00'29"E 455 feet more or less to a point on the east boundary of Tract 5 of Certificate of Survey No. 5160; Thence along said east boundary of Tract 5, N00°16'53"E 49.2 feet more or less to the southwest corner of Tract 6 on said Certificate of Survey No. 5160; Thence along said south boundary of said Tract 6, S89°50'13"E 577.80 feet to a point on the northwesterly R/W of the BNSF Railroad; Thence along said Railroad R/W, S48°38'56"W 571.45 feet to a point on the north boundary of the Northeast Quarter of Section 18, T30N, R20W; Thence along said north Section line, N89°50'13"W 1004.7 feet more or less to a point that is NORTH from the northwest corner of Lot 1 of the plat of L-P Subdivision; Thence leaving said Section line, SOUTH 50 feet more or less to the northwest corner of said Lot 1; Thence SOUTH 330.00 feet to the southwest corner of said Lot 1; Thence S89°41'52"W 1034.00 feet more or less to a point on the east boundary of Lot 2 of said O'Neil Subdivision; Thence SOUTH 407.10 feet to the southeast corner of said Lot 2; Thence along the south boundary of said Lot 2, WEST 605.90 feet to the point of beginning.

EXHIBIT B



Return to:
City of Columbia Falls
130 6th Street West
Columbia Falls, MT 59912

RESOLUTION NO. 1866

A RESOLUTION OF THE CITY COUNCIL OF COLUMBIA FALLS, MONTANA APPROVING THE FINAL PLAT OF THE BENCHES SUBDIVISION, PHASES 1 AND 2, DESCRIBED AS TRACT 3A OF COS #21378 IN THE SW 1/4 NE 1/4 AND W 1/2 SE 1/4 SECTION 16,TOWNSHIP 30 NORTH, RANGE 20 WEST, P.M.M., FLATHEAD COUNTY, MONTANA.

WHEREAS, Siderius Construction, LLC, purported owners/applicants of the subject property, have applied for final approval of the 49 lot subdivision on approximately 54.747 acres of land more particularly described as follows:

TRACT 3A OF COS #21378 IN THE SW 1/4 NE 1/4 AND W 1/2 SE 1/4 SECTION 16, TOWNSHIP 30 NORTH, RANGE 20 WEST, P.M.M., FLATHEAD COUNTY, MONTANA.

WHEREAS, the conditions of said subdivision plat were considered and found to be satisfied and the final plat was approved by the City Council of the City of Columbia Falls at the regular council meeting on Monday, November 1, 2021.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF COLUMBIA FALLS, MONTANA AS FOLLOWS:

Section One. Findings of Fact. That the findings of fact set forth in the Final Plat Report, CFP-21-01, prepared by the City of Columbia Falls Planning Department dated October 20, 2021 are adopted, and the plat of The Benches Subdivision, Phases 1 and 2, is approved and is a 49 lot subdivision of the Planning & Zoning Jurisdiction of the City of Columbia Falls, Flathead County, Montana.

Section Two. Effective Date. This Resolution shall be effective immediately upon its passage and approval by the City Council.

PASSED AND ADOPTED BY THE CITY COUNCIL OF COLUMBIA FALLS, MONTANA THIS 1st DAY OF NOVEMBER, 2021, THE COUNCIL VOTING AS FOLLOWS:

AYES:

NOES:

ABSENT:

City Clerk

APPROVED BY THE MAYOR OF COLUMBIA FALLS, MONTANA THIS ____ DAY OF NOVEMBER, 2021.

Mayor

ATTEST:

City Clerk

CITY OF COLUMBIA FALLS PLANNING DEPARTMENT

FINAL PLAT REPORT

For: The Benches
 Report No.: CFP-21-01
 Date: October 20, 2021
 Prepared By: Eric H. Mulcahy, AICP – City Planner

Recommendation: Grant Final Plat approval for the Benches.

Site History:

The Columbia Falls City Council approved the preliminary plat of The Benches on October 13, 2021, by Resolution 1808, subject to 29 conditions. At the time the applicants proposed the subdivision in two phases. The applicants are bringing phase 1 and 2 to City Council as a single phase, where all improvements are complete for both phases and all approval documents have been provided for both phases.

Lot 1 of the Benches was originally proposed as a site for 30 resort cabins utilizing a PUD. The PUD was denied by the Columbia Falls City Council, which means that any use of Lot 1 defaults to the permitted uses in the CR-3 zoning designation of the Columbia Falls Zoning Ordinance. The CR-3 zone is a One-family zoning district which allows a single family residence as a permitted use. Stand-alone commercial use on Lot 1 is prohibited.

On September 30, 2021, three groups submitted a letter to the City of Columbia Falls requesting that the City, should it receive an application for final plat of the Benches Subdivision, deny the application on the “basis of inadequate and flawed science that directly implicates condition 11 on its preliminary plat.” The three parties that submitted this letter are: the Upper Flathead Neighborhood Association, Citizens for a better Flathead, and Water for Flatheads Future.

The Montana Platting Act and the Columbia Falls Subdivision Regulations clearly spell out the process for final plat. The Planning Office must make sure that the submitted Final Plat and Documents are complete and in compliance with:

- a. The approved preliminary plat
- b. The preliminary Plat Conditions
- c. The City of Columbia Falls Subdivision Regulations
- d. The Montana Subdivision and Platting Act

Staff has reviewed the Final Plat and all of the documents and finds that they comply with the Montana Platting Act and Section 17.12.110.C.1.a – d of the Columbia Falls Subdivision Regulations. Specifically, to the September 30th letter, Condition 11 of the preliminary plat states that:

“The sewer and water facilities shall be reviewed and approved by the Flathead City County Health Department and Montana Department of Environmental Quality. The water and sewer shall be constructed in accordance with the approved plan and the construction shall be certified by a registered engineer that they meet the approved specifications.”

The applicants provided the approval statements from the MDEQ Approval EQ#20-2332 (1/21/21) – Phase 1 and MDEQ Approval EQ#20-2333 (1/21/21) – Phase 2. The applicants have met Condition 11, as well as all other remaining conditions for approval, and the City has no legal authority to appeal or deny these permits which were issued ten months ago. In addition, the developer of the Benches relied on these approvals and has spent a significant amount of time and money constructing the subdivision to meet these approval statements and conditions.

Based on the submitted documents, staff finds that all conditions of the preliminary plat have been met and that the City is contractually obligated to approve the Final Plat of the Benches. See Section 17.12.110.D.1.a – Columbia Falls Municipal Code Subdivision Regulations.

Submittals:

Please find included with this report the following documents:

- ✓ Final Plat Application and Fees.
- ✓ The prescribed quantity of plat drawings.
- ✓ MDEQ Approval EQ#20-2332 (1/21/21) – Phase 1
- ✓ MDEQ Approval EQ#20-2333 (1/21/21 – Phase 2
- ✓ Cover Letter for Conditions (10/1/21)
- ✓ Engineer’s Certification Letter and supporting Documents – A to Z Engineering, Robert Smit PE (10/1/21)
- ✓ Columbia Falls Public Works Department - Approval Letter
- ✓ MDT Approach Permit (3/5/21)
- ✓ Flathead County Approach Permit (AE-3201 3/29/19)
- ✓ Email – Northwest Energy (6/11/21)
- ✓ Email – Badrock Fire chief, Kirk Katzenmeyer (8/21/21)
- ✓ Email – MDEQ approval of live hydrant (6/30/21)
- ✓ USPS Letter (6/16/21)
- ✓ Email – School District 6 – Bus stop approval (8/24/21)

- ✓ Flathead City-County Health Department Approval (1/5/21) – Phase 1
- ✓ Flathead City-County Health Department Approval (1/5/21) – Phase 2
- ✓ Letter – MDEQ Approval Water Supply and Stormwater Facilities (EQ#20-2334 dated 1/21/21) – Phases 1 and 2
- ✓ DNRC Water Right Abstract/Water Right (76LJ30148753)
- ✓ Letter- A2Z Engineering As-Built Submission (10/1/21)
- ✓ Geotechnical Investigation, Slopeside Engineering, Joshua Smith, PE
- ✓ Weed Management Plan (7/17/21)
- ✓ Email – Army Corps of Engineers- Jurisdictional Determination (8/31/20)
- ✓ Flathead Conservation District Determination (6/22/20)
- ✓ Warranty for Improvements (8/26/21)
- ✓ Will Serve Letter – Evergreen Disposal (7/9/19)
- ✓ Letter – A2Z Engineering cut/fill Certification (8/9/21)
- ✓ CC&R's The Benches ()
- ✓ As-Built – A2Z Engineering (Paper and Digital)
- ✓ Title report First American Title, dated September 28, 2021, Guarantee #5010500-1007400-FT, Order # 1007400-FT.
- ✓ Tax Certification

Significance of Changes Finding:

In accordance with CFMO 17.12.110 C., the Planning Director has determined that the proposed Final Plat and Documents conform to the Preliminary Plat. Per Section 17.12.110 C.5, there were two minor and insignificant changes to the conditions. See discussion on Condition #7 regarding the change from a cistern to live hydrants and Condition #21 for parkland dedication and the Conditions of Preliminary Plat Approval.

Compliance with Preliminary Plat Conditions per Resolution 1678:

1. All road right-of-ways within the subdivision shall be privately owned and maintained but open to the public.

This condition is met. The dedication statement appears on the face of the plat as well as in the notes of the plat

2. The applicants shall provide at final plat, Road Users Agreement or CC&R's that address the road maintenance and snow plowing. A note

shall be placed on the face of the plat informing the lot owner of the road maintenance responsibility.

This condition is met. The applicant provided a set of CC&R's and Sections 2.6 and 4.4 describe the road, Bench Run, and maintenance. Article VI addresses assessment for maintenance.

3. The road construction shall meet the requirements of Chapter 17.18 of the City of Columbia Falls Subdivision Regulations and the Flathead County Public Works Standards and certified by a registered engineer that they meet such standards. The construction plan shall be reviewed and approved by the City prior to construction.

This condition is met. The letter from Robert Smith, PE of A2Z Engineering certifies the construction of the subdivision roads.

4. The City shall approve a trail plan prior to construction of the project. The trails shall be designed to provide access to each lot along one side of the street or the other or along a common area at the back of lots. The trails shall be constructed prior to final plat with hard surfacing of either asphalt or concrete and a minimum width of five feet.

This condition is met. See letter from Columbia Falls Public Works Department dated 8/13/21.

5. The applicants shall secure a new "Approach Permit" from the MDOT for use of the Highway 2 access. In addition, the applicant shall secure an approach permit from the Flathead County Road Department for the access onto Rogers Road.

This condition is met. See MDOT Approach Permit dated 3/5/21 and Flathead County Approach Permit dated 3/29/19.

6. The applicant shall provide proof that they secured design approval from Northwestern Energy for any utility and road crossing the gas line easement. The applicant shall include in the CC&R'

This condition is met. See email from Northwest Energy dated 6/11/21.

7. The applicants shall install a 30,000 gallon tanker recharge facility on-site. The design and location of which shall be approved by the Badrock Volunteer Fire District Fire Chief. The hydrant location shall include a pull-out for fire trucks.

This condition is met with a modification approving live hydrants as opposed to the Cistern. The email for the Badrock Fire Chief dated August 23, 2021 indicates that the live hydrants are preferred.

8. A note shall be placed on the face of the plat requiring that each structure provide defensible space as prescribed by the then current regulations of the fire service area jurisdiction. This requirement shall also be placed in the CC&R's.

This condition is met. See note #6 on the face of the plat.

9. The responsible postmaster shall approve a common mailbox facility at an approved location. The facility shall meet the requirements of 17.18.250. The facility shall be installed prior to final plat or included in an SIA.

This condition is met. See letter from the USPS – Columbia Falls. The mailboxes are installed at the pull out in the front of the subdivision.

10. Developer shall provide a student loading/unloading facility at an approved location as directed by School District 6 or provide a letter from the School District stating that the bus stop is not required.

This condition is met. The applicant provided an email from School District #6 indicating that the bus and mailbox turnaround will meet the district's standards.

11. The sewer and water facilities shall be reviewed and approved by the Flathead City County Health Department and Montana Department of Environmental Quality. The water and sewer shall be constructed in accordance with the approved plan and the construction shall be certified by a registered engineer that they meet the approved specifications.

This condition is met. See MDEQ Approval EQ#20-2332 (1/21/21) – Phase 1 and MDEQ Approval EQ#20-2333 (1/21/21 – Phase 2.

12. All lots shall be served the proposed public water system located at a location approved by the Flathead County Health Department and Montana Department of Environmental Quality. The well(s) shall be constructed in accordance with requirements of these departments and certified as such. The applicants shall provide approval of water rights for water system at Final Plat of Phase 1.

This condition is met. See MDEQ approval EQ#20-2334 (Public Water Supply System) and Water Right/Provisional Permit 76LJ30148753.

13. A drainage plan approved and stamped by a certified engineer and approved by Montana Department of Environmental Quality shall be implemented prior to final plat of each phase.

This condition is met. See MDEQ Approval EQ#20-2332 (1/21/21) – Phase 1 and MDEQ Approval EQ#20-2333 (1/21/21 – Phase 2.

14. Given the proximity of the wetlands, a geotech report shall be required for the development of Lot 1. Recommendations of the Geotech Report shall be followed in the construction of the cabins, roadways, and utilities for this area.

This condition is met. The applicants hired Slopeside Engineering to conduct a Geotechnical Investigations with recommendations. The recommendations were used in the construction of the subdivision road.

15. A note shall be place on the face of the Final Plat stating: “All dwellings shall have house numbers visible from the internal subdivision road”.

This condition is met. The note #7 appears on the face of the Final Plat.

16. The applicants shall provide copies of the final plat drawing and as-built construction drawings for all public infrastructure and utilities existing or constructed in the right-of-way or easements. Copies of drawings shall be in both paper and digital. Digital copies shall be in a format prescribed by the City.

This condition is met. The applicants provided “as-builts” as required per this condition.

17. All utilities shall be installed underground and stubbed to each lot prior to the paving of the roads.

This condition is met. The utilities are underground

18. The Flathead County Weed Department shall approve a Weed Management Plan for the Development prior to Final Plat. A note shall be placed on the face of the final plat stating: “Lot owners are subject to the Weed Management Plan approved by the Flathead County Weed Department.”

This condition is met. See attached Weed Management Plan.

19. The applicant shall secure the 404 permit or other applicable permits from the ACOE prior to any disturbance of the wetlands.

This condition is met. The applicants consulted with the Army Corps of Engineers (ACOE) and the Flathead Conservation District. The ACOE provided a Jurisdictional Determination indicating the wetland areas are not regulated under the Clean Water Act and therefore are not subject to their permits. The Flathead Conservation District provided a determination stating that the wetland areas are not subject to their regulations.

20. The applicant shall include maintenance of the parks, open space and public water system in the CC&R's prior to final plat

This condition is met. Section 2.6, Article IV, Article V, and Article VI describe the maintenance and assessment for these items.

21. That the parkland requirement shall be met by providing 16.632 acres (30% of 55.44 acres) of land as park/common area as prescribed in the PUD regulations.

This condition is no longer applicable. The 30% open space requirement is a PUD requirement and the PUD was denied for the subject property. Parkland dedication per the Columbia Falls Subdivision Regulations is 7% of the land in lots measuring ½ acre to one acre and 5% for Lot measuring one acre to three acres in size. The developer is providing 16.42 acres which is 30% of the 54.757 acre identified on the plat. Therefore, the applicant is greatly exceeding the parkland dedication.

22. Assessment for taxation and special assessments for lands within the common areas shall be proportionally shared among all lots in the subdivision. The proportion may be equal or based upon the area of the lot in proportion to the total area of all lots. Such assessment shall be reported to Flathead County, billed and collected with other tax and assessment due each lot.

This condition is met. See note #3 on the face of the final plat.

23. Plat notes shall be added to the face of the plat delineating that the parks and common area are dedicated in perpetuity and that said space(s) will be owned and maintained by the Homeowners Association. Changes to the use and/or management of the common

space or parks shall be approved by the Homeowners Association and the City.

This condition is met. See note #9 on the face of the final plat.

24. The Preliminary Plat is approved with two phases. The Phasing of the subdivision shall comply with the Phasing Plan provided in the preliminary plat application. The applicants may amend or combine phases with approval of the Columbia Falls Planning Staff.

This condition is met. The applicant is bringing the whole subdivision in as a single phase.

25. All improvements to the public right-of-way shall be complete or guaranteed through a SIA prior to final plat approval. The Developer shall warranty all infrastructure improvements (including the Public Water System) for a minimum of one (1) year after approval of the final plat.

This condition is met. See the letter from Robert Smith, P.E, A2Z Engineering dated 10/1/21 and included with this application.

26. The applicant shall provide a letter from the applicable Solid Waste Contractor stating that Solid waste Service is available to the Subdivision. The CC&R's will encourage use of a Solid Waste contractor for residences in the subdivision.

This condition is met. See Letter from Evergreen Disposal and Section 8.9 of the CC&R's

27. The preliminary plat shall expire three (3) years after the approved effective date stipulated by the City Council if the first phase does not go to final plat. With the final plat of Phase 1 the subsequent phase(s) will expire in two (2) year from the date of approval of Phase 1 or the previously approved phase. Extensions may be granted by the City Council if the applicant requests extension 30-days prior to the expiration of the plat or any remaining phase.

This condition is met. The preliminary Plat was approved on October 21, 2019

28. To accept the Fish Wildlife and Parks Recommendations A – K in Jessy Coltrane's PhD, Letter received 09/10/19.

This condition is met. The CC&R's requires trash receptacles (Section 8.9) and BBQ's (Section 7.27) be stored indoors. Fruit trees are strongly discouraged (Section 7.26). Residents are warned of wildlife damage and strictly prohibits feeding of wildlife and addresses birdfeeder requirements (Section 7.19). Pets, petfood storage and pets at large are addressed in Section 7.18. These sections address the recommendations A-K raised in the FW&P letter.

29. All cut and fill areas will be contained within the road rights of ways or easements.

This condition is met. The letter from A2Z Engineering certifies to this requirement.



Planning Department

130 6TH STREET WEST
ROOM A
COLUMBIA FALLS, MT 59912

PHONE (406) 892-4391

FAX (406) 892-4413

Item No.10.

FINAL PLAT APPLICATION

FILING FEE ATTACHED \$4820

SEE FEE SHEET

Project/Subdivision Name: The Benches Subdivision, Phases 1 & 2

Contact Person:

Name: Robert Smith, A2Z Engr.

Address: 138 E Center St, Suite A

Kalispell, MT 59901

Phone No.: 406.755.7888

Owner & Mailing Address:

Siderius Construction, LLC

737 Egan Rd

Kalispell, MT 59901

406.253.6891

Date of Preliminary Plat Approval: October 7, 2019

Type of Subdivision: Residential X Industrial Commercial PUD Other

Total Number of Lots in Subdivision 49

Land in Project (acres) 54.757

Parkland (acres) 16.428 Cash-in-Lieu \$ Exempt 7.756

No. of Lots by Type:

Single Family 49 Townhouse Mobile Home Park

Duplex Apartment Recreational Vehicle Park

Commercial Industrial Planned Unit Development

Condominium Multi-Family Other

Legal Description of the Property

Tract 3A of C.O.S. #21378 in the SW 1/4 NE 1/4 and W 1/2 SE 1/4 of Section 16, Township 30 North,

Range 20 West, P.M.,M., City of Columbia Falls, Flathead County, Montana.

Attached Not Applicable **(MUST CHECK ONE)**

<u>X</u>	_____	Health Department Certification (Original)
<u>X</u>	_____	Title Report (Original, not more than 90 days old)
<u>X</u>	_____	Tax Certification (Property taxes must be paid)
<u>X</u>	_____	Consent(s) to Plat (Originals and notarized)
_____	<u>N/A</u>	Subdivision Improvements Agreement (Attach collateral)
_____	<u>N/A</u>	Parkland Cash-in-Lieu (Check attached)
<u>X</u>	_____	Maintenance Agreement
<u>X</u>	_____	Plats: 1 opaque OR 2 mylars
		1 mylar copy 1 signed blueline
		4 bluelines 4 bluelines, unsigned
		11X17 Copy 11X17 Copy

****The plat must be signed by all owners of record, the surveyor and the examining land surveyor.**

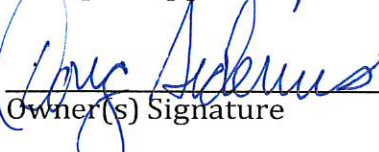
Attach a letter, which lists each condition of preliminary plat approval, and individually state how each condition has specifically been met. In cases where documentation is required, such as an engineer's certification, State Department of Health certification, etc., original letters shall be submitted. Blanket statements stating, for example, "all improvements are in place" are not acceptable.

A complete final plat application must be submitted no less than **60 days** prior to expiration date of the preliminary plat.

When all application materials are submitted to the Columbia Falls Planning Office, and the staff finds the application is complete, the staff will submit a report to the governing body. The governing body must act within 30 days of receipt of the revised preliminary plat application and staff report. Incomplete submittals will not be accepted and will not be forwarded to the governing body for approval. Changes to the approved preliminary plat may necessitate reconsideration by the planning board.

I certify that all information submitted is true, accurate and complete. I understand that incomplete information will not be accepted and that false information will delay the application and may invalidate any approval. The signing of this application signifies approval for Columbia Falls Planning staff to be present on the property for routine monitoring and inspection during the approval and development process.

****NOTE: Please be advised that the County Clerk & Recorder requests that all subdivision final plat applications be accompanied with a digital copy.**


Owner(s) Signature

9/4/21
Date

****A digital copy of the final plat in a Drawing Interchange File (DXF) format or an AutoCAD file format, consisting of the following layers:**

1. Exterior boundary of subdivision
2. Lot or park boundaries
3. Easements
4. Roads or rights-of-way
5. A tie to either an existing subdivision corner or a corner of the public land survey system



A2Z Engineering, PLLC • 138 East Center Street, Suite A • Kalispell, MT 59901
Phone: (406) 755-7888 • Website: a2z-engineering.com

October 1, 2021

City of Columbia Falls
Attn: Eric Mulcahy, Contract City Planner
130 6th Street West, Room A
Columbia Falls, MT 59912
406.892.4391

Re: The Benches Subdivision
Final Plat Submittal

A2Z Engineering herein submits the following information pertaining to the completion of the conditions of final plat for The Benches Subdivision (conditions listed in red text):

1. All road right-of-way within the subdivision shall be privately owned and maintained but open to the public as noted on the face of the final plat.

Response: See the enclosed plat, note #4.

2. The applicants shall provide at final plat, Road Users Agreement or CC&R's that address the road maintenance and snow plowing. A note shall be placed on the face of the plat informing the lot owner of the road maintenance responsibility.

Response: The Road Users Agreement or CC&R's are enclosed; reference section 4.4. See the enclosed plat, note #5.

3. The road construction shall meet the requirements of Chapter 17.18 of the City of Columbia Falls Subdivision Regulations and the Flathead County Public Works Standards and certified by a registered engineer that they meet such standards. The construction plan shall be reviewed and approved by the City prior to construction.

Response: See the enclosed certification by a registered engineer. See also the enclosed city public works director's approval.

4. The City shall approve a trail plan prior to construction of the project. The trails shall be designed to provide access to each lot along one side of the street or the other or along a common area at the back of lots. The trails shall be constructed prior to final plat with hard surfacing of either asphalt or concrete and a minimum width of five feet.

Response: See the enclosed city public works director's approval.

5. The applicants shall secure a new "Approach Permit" from the MDOT for use of the Highway 2 access. In addition, the applicant shall secure an approach permit from the Flathead County Road Department for the access onto Rogers Road.

Response: See the enclosed MDT and county approach permits.

6. The applicant shall provide proof that they secured design approval from Northwestern Energy for any utility and road crossing the gas line easement. The applicant shall include those restrictions in the CC&R's.

Response: See the enclosed communication from Joe Carmody at NW Energy. See the restrictions found in the certified road plans and the enclosed CC&R's, more specifically sections 4.5 and 8.7.

7. The applicants shall install a 30,000 gallon tanker recharge facility on-site. The design and location of which shall be approved by the Badrock Volunteer Fire District Fire Chief. The hydrant location shall include a pull-out for fire trucks.

Response: During the construction of the subdivision, the developer and the fire chief discussed the capacity of the groundwater wells and made an agreement to switch from a cistern facility to a live fire hydrant adjacent to the wellhouse. Correspondence is included from the fire chief and from the MDEQ approving the change.

8. A note shall be placed on the face of the final plat requiring that each structure provide defensible space as prescribed by the then current regulations of the fire service area jurisdiction. This requirement shall also be placed in the CC&R's.

Response: See enclosed plat, note #6. Also see the CCR's section 7.22.

9. The responsible postmaster shall approve a common mailbox facility at an approved location. The facility shall meet the requirements of 17.18.250. The facility shall be installed prior to final plat or included in an SIA.

Response: See the enclosed postmaster's approval.

10. Developer shall provide a student loading/unloading facility at an approved location as directed by School District 6 or provide a letter from the School District stating that bus stop is not required.

Response: See the enclosed school district's approval.

11. The sewer and water facilities shall be reviewed and approved by the Flathead City County Health Department and Montana Department of Environmental Quality. The water and sewer shall be constructed in accordance with the approved plan and the construction shall be certified by a registered engineer that they meet the approved specifications.

Response: See the enclosed approvals from Flathead County Health Department and MDEQ. Also see the enclosed public water supply system certification by a registered engineer. A certification of the septic systems cannot be provided at this time since they have not been permitted or built (typically done during home construction).

12. All lots shall be served with the proposed public water system located at a location approved by the Flathead City-County Health Department and Montana Department of Environmental Quality. The well(s) shall be constructed in accordance with requirements of these departments and certified as such. The applicants shall provide approval of water rights for water system at Final Plat of Phase I.

Response: See the enclosed approvals from Flathead County Health Department and MDEQ. Also see the enclosed provisional water rights permits from the MT DNRC for the subdivision.

13. A drainage plan approved and stamped by a certified engineer and approved by Montana Department of Environmental Quality shall be implemented prior to final plat of each phase.

Response: See the enclosed approvals from MDEQ.

14. Given the proximity of the wetlands, a geotechnical report shall be required for the development of Lot 1 and the primary access road in the vicinity of the wetlands. Recommendations of the Geotechnical Report shall be followed in the construction of the cabins, roadways, and utilities for this area.

Response: See the enclosed report.

15. A note shall be placed on the face of the Final Plat stating: "All dwellings shall have house numbers visible from the internal subdivision road."

Response: See the enclosed plat, note #7.

16. The applicants shall provide copies of the final plat drawing and as-built construction drawings for all public infrastructure and utilities existing or constructed in the right-of-way or easements. Copies of drawings shall be in both paper and digital. Digital copies shall be in a format prescribed by the City.

Response: See the enclosed plat and as-built drawings.

17. All utilities shall be installed underground and stubbed to each lot prior to the paving of the roads.

Response: All utilities have been installed underground and stubbed to each lot. The roads have been paved.

18. The Flathead County Weed Department shall approve a Weed Management Plan for the Development prior to Final Plat. A note shall be placed on the face of the final plat stating: "Lot owners are subject to the Weed Management Plan approved by the Flathead County Weed Department."

Response: See the enclosed plat, note #8.

19. The applicant shall secure the 404 permit or other applicable permits from the ACOE prior to any disturbance of the wetlands.

Response: See the enclosed communications from the Army Corps of Engineers and the Flathead Conservation District.

20. The applicant shall include maintenance of the parks, open space and public water system in the CC&R's prior to final plat.

Response: See the attached CCR's, more specifically sections 4.1, 5.1, 5.2 and 5.3.

21. That the parkland requirement shall be met by providing 16.632 acres (30% of 55.44 acres) of land as park/common area as prescribed in the PUD regulations.

Response: The plat shows an "OPEN SPACE / COMMON AREAS" dedication of 16.428 acres. The PUD for this subdivision was not approved by the city council.

22. Assessment for taxation and special assessments for lands within the common areas shall be proportionally shared among all lots in the subdivision. The proportion may be equal or based upon the area of the lot in proportion to the total area of all lots. Such assessment shall be reported to Flathead County, billed and collected with other tax and assessment due each lot.

Response: See the enclosed plat, note #3.

23. Plat notes shall be added to the face of the plat delineating that the parks and common area are dedicated in perpetuity and that said space(s) will be owned and maintained by the Homeowners Association. Changes to the use and/or management of the common space or parks shall be approved by the Homeowners Association and the City.

Response: See the enclosed plat, note #9.

24. The Preliminary Plat is approved with two phases. The Phasing of the subdivision shall comply with the Phasing Plan provided in the preliminary plat application. The applicants may amend or combine phases with approval of the Columbia Falls Planning Staff.

Response: The developer seeks to combine all phases for immediate approval and platting. See the enclosed plat.

25. All improvements to the public right-of-way shall be complete or guaranteed through a SIA prior to final plat approval. The Developer shall warranty all infrastructure improvements (including the Public Water System) for a minimum of one (1) year after approval of the final plat.

Response: All improvements to the public right-of-way are complete. A warranty is provided.

26. The applicant shall provide a letter from the applicable Solid Waste Contractor stating that Solid Waste Service is available to the Subdivision. The CC&R's will encourage use of a Solid Waste contractor for residences in the subdivision.

Response: A letter is provided from Evergreen Disposal. See also the CCR's, more specifically section 8.9.

27. The preliminary plat shall expire three (3) years after the approved effective date stipulated by the City Council if the first phase does not go to final plat. With the final plat of Phase 1 the subsequent phase(s) will expire in two (2) year from the date of approval of Phase 1 or the previously approved phase. Extensions may be granted by the City Council if the applicant requests extension 30-days prior to the expiration of the plat or any remaining phase.

Response: This submittal is being made for the platting of the entire subdivision in less than the three years allowed.

28. To accept the Fish Wildlife and Parks recommendations A-K in Jessy Coltrane's PhD, letter received 09/10/19:

- a. Homeowners must be aware of the potential for vegetation damage by wildlife, particularly from deer feeding on lawns, gardens, flowers, ornamental shrubs, and trees in this subdivision. Homeowners need to take the responsibility to plant nonpalatable vegetation or protect their vegetation (Fencing, netting, repellents) In order to avoid problems. Landscape plantings of certain species of native vegetation are less likely to suffer extensive feeding damage by deer. We recommend the excellent booklet, Minimizing Deer Damage to Residential Plantings, put out by the Montana State University Animal & Range Sciences Extension Service and available online at: http://www.animalrangeextension.montana.edu/articles/wildlife/deer_damage.htm
- b. Fruit-producing trees and shrubs should not be allowed because they attract bears. if present, they must be fenced with electric fencing to deter bears. Keep produce and any fruit picked and off the ground. Ripe or rotting fruit or vegetable material attracts bears, deer, skunks, and other wildlife. To help keep wildlife such as deer out of gardens, fences should be 8 feet or taller. Electric fencing for deer should be at a minimum of 8 feet, as well.
- c. Garbage must be stored either in secure, bear-resistant containers or indoors, preferably both, to avoid attracting wildlife such as bears and raccoons. If stored indoors, garbage cans may not be set out with the morning of garbage pickup and must be brought in no later than that same evening. If home sites are occupied seasonally or if the occupants are to be away from the household for 7 days or more, garbage from the home, other buildings, or containers must be removed from the property prior to their departure.
- d. Do not feed wildlife or offer supplements such as salt or mineral blocks, attractants, or bait for deer or other wildlife. Feeding wildlife results in unnatural concentrations of animals that can lead to overuse of vegetation, disease transmission, and other adverse effects to wildlife such

as foundering of deer). Such actions unnecessarily accustom wild animals to humans, which can be dangerous for both. It is against state law (MCA 87-3-130) to purposely or knowingly attract ungulates, bears, or mountain lions with supplemental food attractant; (any food, garbage, salt block, hay, grain, or other attractant for game animals) or to provide supplemental feed attractants in a manner that results in "an artificial concentration of game animals that may potentially contribute to the transmission of disease or that constitutes a threat to public safety." Also, homeowners must be aware that deer might attract mountain lions to the area.

- e. Birdseed is an attractant to bears, deer, and turkeys. Use of bird feeders is not recommended from April 1 through November 30. If used, bird feeders must be suspended a minimum of 10 feet above ground level (measured from bottom of catch plate), be at least 4 feet from any support poles or points, and be designed with a catch plate located below the feeder and fixed such that it collects the seed knocked off the feeder by feeding birds. Hummingbird feeders will follow the same criteria.
- f. Pets at large, particularly dogs and cats, are a real threat to wildlife. Pets must be confined to the house, a fenced yard, or an outdoor kennel when not under the immediate control of the owner, and not allowed to roam. Under state law it is illegal for dogs to chase hoofed game animals (MCA 87-3-124). Keeping pets confined also helps protect them from predatory wildlife. We recommend the FWP brochure *Living with Dogs & Cats*.
- g. Pet food must be stored indoors, in closed sheds, or in bear-resistant containers in order to avoid attracting wildlife such as bears, mountain lions, skunks, and other wildlife. When feeding pets, do not leave food out overnight.
- h. Barbecue grills must be stored indoors, and permanent outdoor barbecue grill shall not be allowed in this subdivision. Keep all portions of the barbecues routinely clean. Food spills and smells on and near the grill attract bears and other wildlife.
- i. Fencing of lot boundaries is discouraged. If used, rail or smooth wire fences will be erected that are no higher than 40" at the top rail/wire and no lower than 18" at the bottom rail/wire in order to facilitate wildlife movement and help avoid animals becoming ensnared and killed by the fence or injuring themselves when trying to jump the fence. Please refer to the helpful booklet on wildlife-friendly fences available from FWP and online at: <http://fwp.mt.gov/fishAndWildlife/landowners/>.
- j. Compost piles and beehives can attract bears and must be fenced with electric fencing to prevent access to them or not allowed in the subdivision.
- k. Domestic animals such as horses, cattle, pigs, sheep, goats, llama, poultry, etc. (including those kept as 4-H projects), can attract bears, mountain lions, and coyotes. Animals must be housed with this in mind, and livestock feeds, especially grain-related, must be fed in a manner that does not allow deer or bears to have access to them.

Response: These are covered in the CCR's sections 7.12 through 7.27.

29. All cut and fill areas will be contained within road rights of ways or easements.

Response: A certification from a state licensed professional engineer is provided.

Please call me if you have any questions or concerns.

Sincerely,

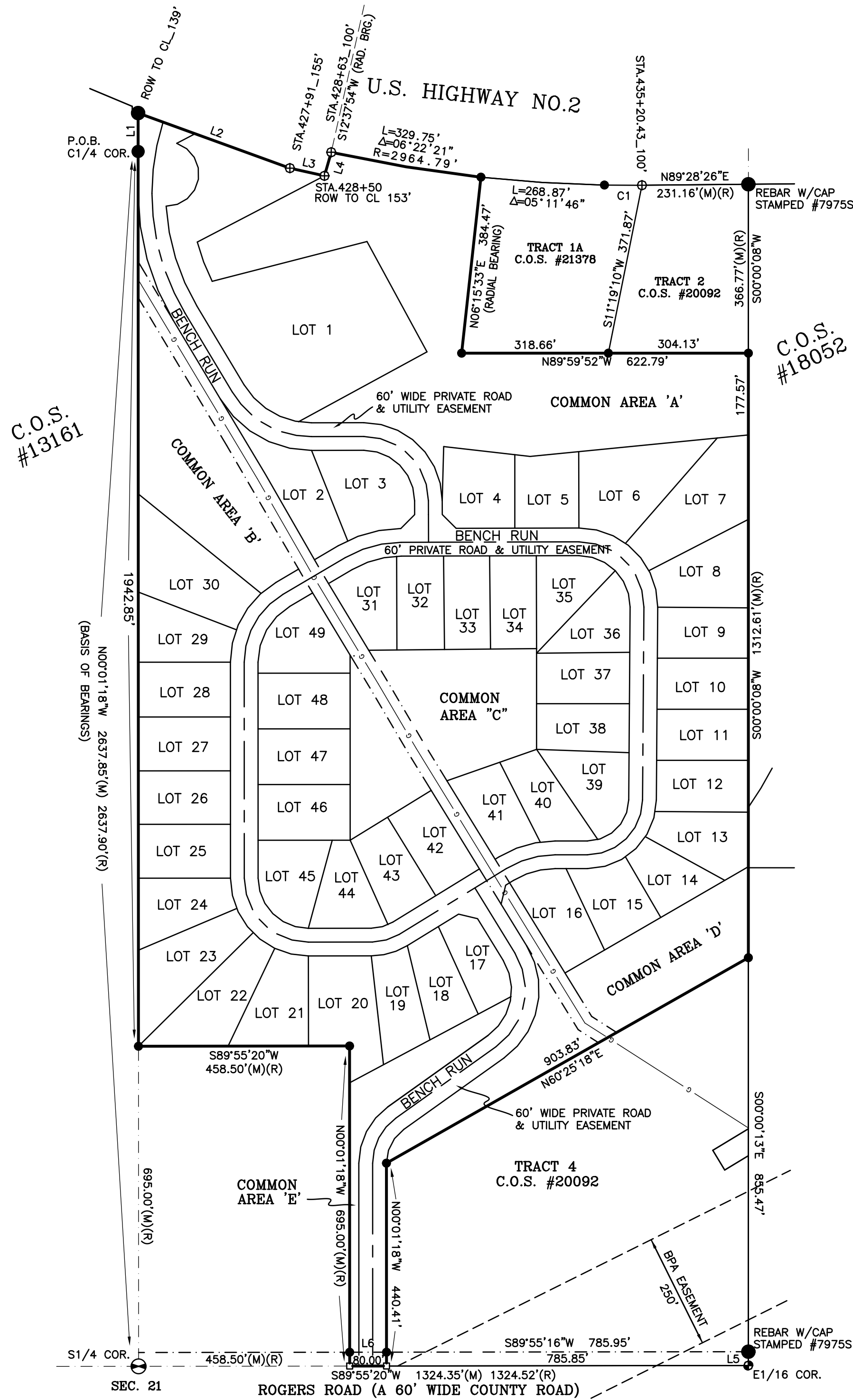
A handwritten signature in blue ink, appearing to read 'Robert Smith', with a stylized, cursive script.

Robert Smith, PE
Project Engineer



FINAL PLAT OF THE BENCHES

A SUBDIVISION OF TRACT 3A OF C.O.S. #21378
IN THE SW1/4 NE1/4 & W1/2 SE1/4, SEC. 16, T30N, R20W, P.M.,M.,
CITY OF COLUMBIA FALLS, FLATHEAD COUNTY, MONTANA



SEE NOTE #3			
Lot	Acres	Sq. Feet	Acres(G)
1	3.788	165,000.67	4.281
2	0.615	26,808.56	1.109
3	0.897	30,348.18	1.190
4	0.596	25,963.81	1.090
5	0.511	22,240.28	1.005
6	0.900	39,209.64	1.393
7	0.930	40,507.92	1.423
8	0.649	28,264.81	1.142
9	0.498	21,699.19	0.992
10	0.504	21,966.61	0.998
11	0.506	22,053.71	0.999
12	0.513	22,342.29	1.006
13	0.543	23,642.28	1.036
14	0.411	17,907.14	0.905
15	0.511	22,244.14	1.004
16	0.561	24,442.22	1.054
17	0.432	18,814.22	0.926
18	0.466	20,299.11	0.960
19	0.480	20,902.44	0.974
20	0.762	33,198.90	1.255
21	0.584	25,454.65	1.078
22	0.701	30,556.13	1.194
23	0.759	33,070.94	1.252
24	0.531	23,113.20	1.024
25	0.537	23,400.00	1.030
26	0.533	23,200.00	1.026
27	0.537	23,400.00	1.030
28	0.546	23,791.57	1.039
29	0.530	23,103.66	1.024
30	0.887	38,653.90	1.380
31	0.475	20,673.69	0.969
32	0.479	20,872.02	0.973
33	0.466	20,268.41	0.959
34	0.467	20,338.87	0.961
35	0.462	20,139.62	0.956
36	0.461	20,079.37	0.955
37	0.513	22,340.05	1.006
38	0.475	20,689.56	0.969
39	0.551	23,986.28	1.044
40	0.478	20,813.00	0.972
41	0.496	21,603.87	0.990
42	0.511	22,261.34	1.005
43	0.497	21,651.77	0.991
44	0.470	20,490.63	0.964
45	0.534	23,278.12	1.028
46	0.555	24,183.81	1.049
47	0.555	24,182.00	1.049
48	0.555	24,182.00	1.049
49	0.555	24,181.99	1.049
TOTAL 49 30.573 54.757			
COMMON AREAS 16.428			
PRIVATE ROADS 7.756			
TOTAL 54.757			

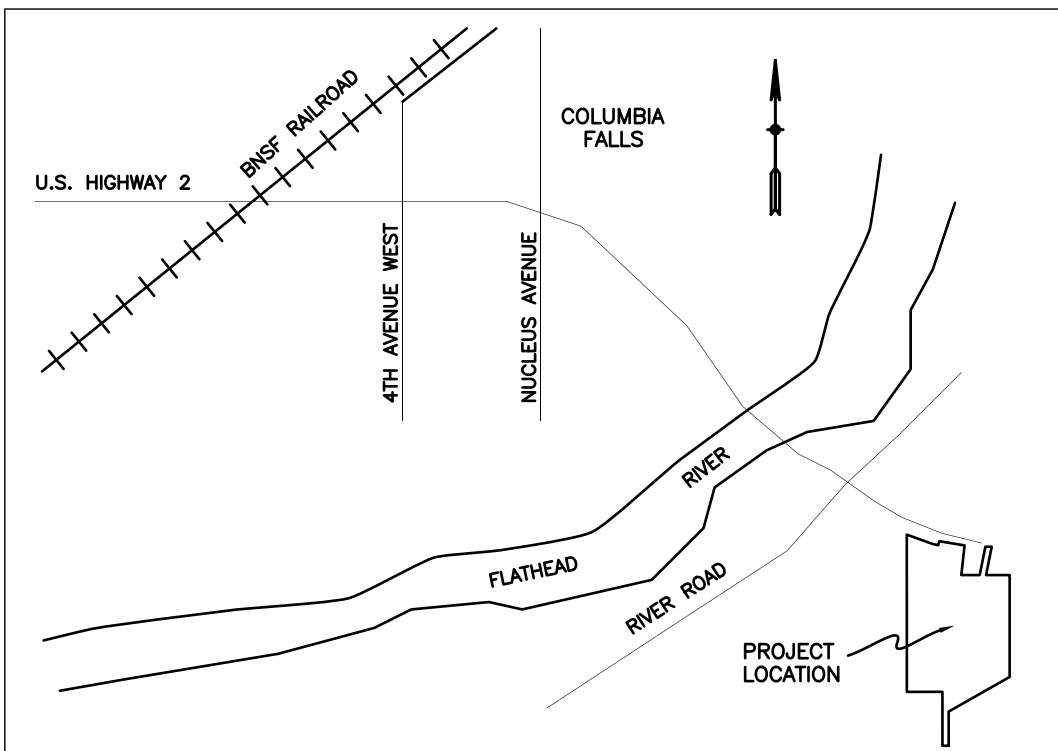
COMMON AREAS	16.428
PRIVATE ROADS	7.756
TOTAL	54.757

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	RADIAL IN	RADIAL OUT
C1	2964.79'	81.51'	01°34'31"	S01°03'48"W	S00°30'43"E

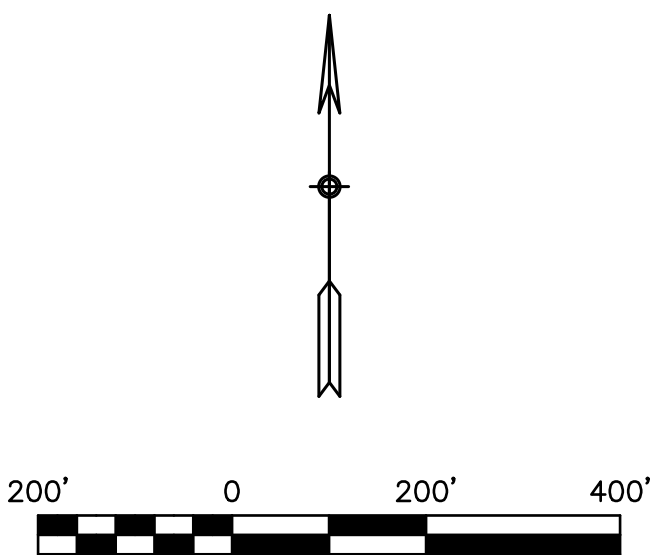
LEGEND

- ⊙ SOUTH 1/4 COR., SEC. 16, FOUND 2" DIAMETER BRASS CAP STAMPED #9560ES
- CENTER 1/4 COR., SEC. 16, FOUND REBAR W/CAP STAMPED #9560ES
- EAST 1/16 COR., SEC. 16, FOUND 2" DIAMETER ALUMINUM CAP, NO STAMP FOUND REBAR W/CAP, STAMPED #15627LS (UNLESS OTHERWISE NOTED)
- FOUND 2" DIAMETER ALUMINUM CAP, MDOH STATION & DISTANCE TO ROW CENTERLINE
- COMPUTED POINT
- P.O.B. POINT OF BEGINNING
- (M) MEASURED DISTANCE
- (R) RECORDED DISTANCE
- 20' UNDERGROUND GAS LINE,
- 40' WIDE EASEMENT
- CENTER LINE OF 60' WIDE PRIVATE ROAD & UTILITY EASEMENT

LINE	BEARING	DISTANCE
L1	N00°00'39"E	83.40'(M) 83.30'(R)
L2	S70°02'57"E	350.65'
L3	S77°30'43"E	76.96'
L4	N15°59'25"E	53.29'(M) 53.00'(R)
L5	S00°00'08"W	30.01'(M) 30.00'(R)
L6	S89°55'20"W	80.00'(M)(R)



VICINITY MAP
NOT TO SCALE



CERTIFICATE OF DEDICATION

I, Doug Siderius, partner of SIDERIUS CONSTRUCTION, LLP, the undersigned property owner, do hereby certify that I have caused to be surveyed, subdivided and platted into lots, blocks, streets and alleys, as shown by the plat hereto annexed, the following described land situated in Flathead County, Montana, to-wit:

That portion of the Southwest one-quarter of the Northeast one-quarter (SW1/4 NE1/4) and the West one-half of the Southeast one-quarter (W1/2 SE1/4) of Section Sixteen (16), Township Thirty North (T30N), Range Twenty West (R20W), Principal Meridian, Montana, Flathead County, Montana, more particularly described as follows:

Beginning at the Center one-quarter (C1/4) corner of said Section Sixteen (16); thence North00°00'39"East 83.40 feet along the westerly boundary of the West one-half (W1/2) of said Section Sixteen (16) to the southerly right of way of U.S. Highway Number 2; thence the following four (4) courses and distances along said southerly right of way: South70°02'57"East 350.65 feet, South77°30'43"East 76.96 feet, North15°59'25"East 53.29 feet to the beginning of a non-tangent curve concave to the north having a radius of 2964.79 feet and to which a radial line bears South12°37'54"West, easterly 329.75 feet along said curve through a central angle of 06°22'21"; thence South06°15'33"West 384.47 feet; thence South89°59'52"East 622.79 feet to the easterly boundary of the West one-half of the Southeast one-quarter (W1/2 SE1/4) of said Section Sixteen (16); thence South00°00'08"West 131.261 feet along said easterly boundary; thence South60°25'18"West 903.83 feet; thence South00°01'18"East 440.41 feet to the southerly boundary of said Section Sixteen (16); thence South89°55'20"West 80.00 feet along said southerly boundary; thence North00°01'18"West 695.00 feet; thence North89°55'20"West 458.50 feet to the westerly boundary of the West one-half of the Southeast one-quarter (W1/2 SE1/4) of said Section Sixteen (16); thence North00°01'18"West 1942.85 feet along said westerly boundary to the point of beginning and containing 54.757 acres of land, grass measure, more or less. All as shown hereon.

Subject to and together with all appurtenant easement of record.

The above described tract of land is to be known and designated as THE BENCHES SUBDIVISION, and the lands included in all streets, avenues and alleys shown on said plat are hereby granted and donated to the use of the public forever. The roadways dedicated to the public are accepted for public use, but the City of Columbia Falls and Flathead County accept no responsibility for maintaining the same. The owner agrees that the City of Columbia Falls and Flathead County have no obligation to maintain the roads hereby dedicated tot the public use.

The undersigned herby grants unto each and every person, firm, or corporation, whether public or private, providing or offering to provide telephone, telegraph, electric power, gas, cable television, water or sewer service to the public, the right to the joint use of an easement for the construction, maintenance, repair, and removal of their lines and other facilities, in, over, and across each area designated on this plat as "Utility Easement" to have and to hold forever.

Dated this_____day of _____, 20_____.

DOUG SIDERIUS, Partner
SIDERIUS CONSTRUCTION, LLP

STATE OF _____)
County of _____) SS

On this _____ day of _____, before me, the undersigned, a Notary Public for the State of _____, personally appeared Doug Siderius, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same. In witness whereof, I have hereunto set my hand and affixed my Notarial Seal the day and year first above written.

Signature

Print Name

Notary Public for the State of _____

Residing at _____, _____

My Commission expires _____

CERTIFICATE OF FINAL PLAT APPROVAL — CITY

The City of Columbia Falls, Montana, does hereby certify that it has examined this subdivision plat and, having found the same to conform to law, approves it, and hereby accepts the dedication to public use of any and all lands shown on this plat as being dedicated to such use.

Dated this_____day of _____, 20_____.

City Clerk

Mayor

CERTIFICATE OF CITY ATTORNEY

I, City Attorney for the City of Columbia Falls, Montana, do hereby certify that I have examined the Certificatae of Title, issued by a licensed title company, attached hereto, of land described in the Certificate of Dedication of the plat of The Benches Subdivision of Columbia Falls, Montana, and find that the owners in fee simple of record have consented to the platting of said Subdivision.

Dated this_____day of _____, 20_____.

City Attorney — City of Columbia Falls, Montana

CERTIFICATE OF PROFESSIONAL LAND SURVEYOR

I, Thomas Sibson, a registered Professional Land Surveyor in the State of Montana do hereby certify that I have performed the survey shown on the attached plat of The Benches Subdivision; that such survey was made on June 3, 2021; that said survey is true and complete as shown and that the monuments found and set are of the character and occupy the positions shown thereon.

Dated this_____day of _____, 20_____.

Thomas Sibson, Registration No. 15627LS

CERTIFICATE OF SURVEYOR

THOMAS SIBSON-REGISTRATION NO. 15627LS
EXAMINED: _____

EXAMINING LAND SURVEYOR REG. NO. 7328S

STATE OF MONTANA
County of Flathead SS

Filled on the _____ day of _____
A.D. _____ at _____ o' clock _____ M.

CLERK AND RECORDER

BY: _____ DEPUTY

INSTRUMENT REC. NO. _____

TOTAL AREA
54.757 AC.± (GROSS)
ROAD RIGHT OF WAY
7.756 AC.±
OPEN SPACE/Common Areas
(INCLUDES GAS EASEMENT)
16.428 AC.±

SHEET 1 OF 2

SAM CORDI
REGISTERED LAND SURVEYOR
974 COLORADO AVE.
P.O. BOX 323
WHITEFISH, MT 59937
PHONE: (406)-862-9977

FINAL PLAT OF THE BENCHES
A SUBDIVISION OF TRACT 3A OF C.O.S. #21378
IN THE SW1/4 NE1/4 & W1/2 SE1/4, SEC. 16, T30N, R20W, P.M.,M.,
CITY OF COLUMBIA FALLS, FLATHEAD COUNTY, MONTANA

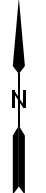
TOTAL AREA
54.757 AC.± (GROSS)
ROAD RIGHT OF WAY
7.756 AC.±
OPEN SPACE/Common Areas
(INCLUDES GAS EASEMENT)
16.428 AC.±

LINE	BEARING	DISTANCE
L1	S77°30'43"E	76.96'(M)(R)
L2	N15°59'25"E	53.29'(M) 53.00'(R)
L3	N00°01'18"W	90.98'
L4	S89°50'44"W	113.54'
L5	N89°50'44"E	113.48'
L6	N00°12'55"W	30.00'
L7	S00°12'54"E	30.00'
L8	N45°07'27"W	42.40'
L9	S44°52'30"W	42.45'
L10	S00°05'38"E	31.26'
L11	S00°05'38"E	31.32'
L12	S89°29'23"E	33.44'
L13	N89°59'52"W	69.86'
L14	N89°59'52"W	46.15'
L15	N89°59'52"W	23.71'
L16	S58°25'56"W	10.00'
L17	S58°25'56"W	10.00'
L18	S58°25'56"W	10.00'
L19	S89°58'42"W	38.96'
L20	N00°01'18"W	39.24'
L21	N00°01'18"W	23.94'
L22	N59°29'08"E	57.25'
L23	N59°29'08"E	59.75'
L24	N59°29'08"E	59.73'
L25	S89°55'20"W	60.00'
L26	S89°55'20"W	20.00'
L27	N30°54'40"W	189.95'
L28	N62°27'47"E	45.00'
L29	S13°28'48"W	42.41'
L30	N76°34'04"W	42.43'
L31	S58°25'56"W	40.00'
L32	N59°29'06"E	40.00'
L33	S00°01'18"E	30.00'
L34	N00°01'18"W	30.00'

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	RADIAL BEARING-IN	RADIAL BEARING-OUT
C1	476.70'	229.21'	27°32'57"	N86°38'17"E	N59°05'20"E
C2	536.70'	289.40'	30°55'43"	N89°59'03"E	N59°05'20"E
C3	170.00'	175.96'	59°18'20"	N59°05'20"E	N00°13'01"W
C4	170.00'	147.65'	49°45'48"	N59°05'20"E	N09°19'31"E
C5	170.00'	28.31'	9°32'32"	N09°19'31"E	N00°13'01"W
C6	230.00'	238.03'	58°18'20"	N59°05'20"E	N00°13'01"W
C7	170.00'	267.04'	90°00'00"	S89°50'44"W	S00°09'16"E
C8	110.00'	172.79'	90°00'00"	S89°50'44"W	S00°09'16"E
C9	70.00'	198.60'	162°33'31"	N00°51'03"E	S18°17'33"W
C10	170.73'	269.85'	90°33'44"	N89°35'32"W	S00°09'16"E
C11	170.73'	108.42'	36°23'09"	S36°13'53"W	S00°09'16"E
C12	170.73'	78.96'	26°30'01"	S62°43'54"W	S36°13'53"W
C13	170.73'	82.47'	27°40'33"	N89°35'32"W	S62°43'54"W
C14	110.73'	175.01'	90°33'44"	N89°35'32"W	S00°09'16"E
C15	110.73'	87.51'	45°16'52"	S45°07'36"W	S00°09'16"E
C16	110.73'	87.51'	45°16'52"	N89°35'32"W	S45°07'36"W
C17	90.00'	140.73'	89°35'40"	N00°00'08"E	N89°35'32"W
C18	90.00'	117.52'	74°48'53"	N14°46'40"W	N89°35'32"W
C19	90.00'	23.22'	14°46'47"	N00°00'08"E	N14°46'40"W
C20	150.00'	234.56'	89°35'40"	N00°00'08"E	N89°35'32"W
C21	150.00'	25.10'	9°35'08"	N80°00'24"W	N89°35'32"W
C22	150.00'	59.22'	22°37'11"	N57°23'13"W	N80°00'24"W
C23	150.00'	62.15'	23°44'27"	N33°38'46"W	N57°23'13"W
C24	150.00'	88.09'	33°38'54"	N00°00'08"E	N33°38'46"W
C25	232.70'	128.22'	31°34'12"	S00°00'08"W	S31°34'04"E
C26	232.70'	32.47'	7°59'41"	S00°00'08"W	S07°59'34"E
C27	232.70'	95.75'	23°34'31"	S07°59'34"E	S31°34'04"E
C28	172.70'	95.16'	31°34'12"	S00°00'08"W	S31°34'04"E
C29	90.00'	11.91'	7°34'55"	N31°34'04"W	N23°59'09"W
C30	90.00'	37.55'	23°54'29"	N23°59'09"W	N00°04'40"W
C31	168.95'	265.56'	90°03'22"	N89°58'42"E	N00°04'40"W
C32	168.95'	75.48'	25°35'53"	N25°31'13"E	N00°04'40"W
C33	168.95'	58.51'	19°46'30"	N45°17'42"E	N25°31'13"E
C34	168.95'	64.06'	21°43'32"	N67°01'14"E	N45°17'42"E
C35	168.95'	67.70'	22°57'28"	N89°58'42"E	N67°01'14"E
C36	108.95'	171.25'	90°03'22"	N89°58'42"E	N00°04'40"W
C37	200.77'	208.51'	59°30'24"	S30°30'54"E	N89°58'42"E
C38	200.77'	72.02'	20°33'16"	S69°28'02"E	N89°58'42"E
C39	200.77'	96.49'	54°32'37"	S35°28'41"E	N89°58'42"E
C40	140.77'	146.20'	59°30'24"	S30°30'54"E	N89°58'42"E
C41	270.97'	119.55'	25°16'43"	S00°18'08"E	S25°34'51"E
C42	270.97'	23.34'	4°56'04"	S25°34'51"E	S30°30'54"E
C43	270.97'	142.89'	30°12'46"	S00°18'08"E	S30°30'54"E
C44	210.97'	111.79'	30°21'38"	S00°09'16"E	S30°30'54"E
C45	210.97'	101.79'	27°48'57"	S02°52'17"E	S30°30'54"E
C46	210.97'	10.00'	2°43'01"	S00°09'16"E	S02°52'17"E
C47	181.83'	273.20'	86°05'23"	N35°28'41"W	S88°25'56"W
C48	121.83'	183.05'	86°05'23"	N35°28'41"W	S88°25'56"W
C49	150.00'	142.79'	54°32'37"	S35°28'41"E	N89°58'42"E
C50	90.00'	85.67'	55°32'37"	S35°28'41"E	N89°58'42"E
C51	2964.79'	81.51'	1°34'31"	N01°03'48"E	N00°30'43"W
C52	421.83'	91.36'	12°24'46"	N75°27'44"E	N63°02'57"E
C53	121.83'	81.95'	38°32'25"	N83°01'39"W	S68°25'56"W
C54	121.83'	101.10'	47°32'58"	N35°28'41"W	N83°01'39"W
C55	200.77'	40.00'	11°24'55"	S30°30'54"E	S41°55'50"E
C56	150.00'	82.44'	31°29'24"	N00°04'40"W	N31°34'04"W
C57	90.00'	49.46'	31°29'24"	N00°04'40"W	N31°34'04"W

LEGEND

- ⊙ SOUTH 1/4 COR., SEC. 16, FOUND 2.5" DIAMETER BRASS CAP STAMPED #9560ES
- ⊙ CENTER 1/4 COR., SEC. 16, FOUND REBAR W/CAP STAMPED #9560ES
- ⊙ EAST 1/16 COR., SEC. 16, FOUND 2" DIAMETER ALUMINUM CAP, NO STAMP
- FOUND REBAR W/CAP, STAMPED #15627LS (UNLESS OTHERWISE NOTED)
- ⊕ FOUND 2" DIAMETER ALUMINUM CAP, MOOH STATION & DISTANCE TO ROW CENTERLINE
- SET 1/2" X 24" REBAR W/PLASTIC CAP STAMPED #15627LS
- COMPUTED POINT
- P.O.B. POINT OF BEGINNING
- (M) MEASURED DISTANCE
- (R) RECORDED DISTANCE
- 20' UNDERGROUND GAS LINE,
- 40' WIDE EASEMENT
- CENTER LINE OF 60' WIDE PRIVATE ROAD & UTILITY EASEMENT



SHEET 2 OF 2

SAM CORDI
REGISTERED LAND SURVEYOR
974 COLORADO AVE.
P.O. BOX 323
WHITEFISH, MT 59937
PHONE: (406)-862-9977

OWNER: SIDERIUS CONSTRUCTION, LLP
DATE: JUNE 30, 2021

THE BENCHES SUBDIVISION

PLATTING CONDITION #1

See attached plat.

PLATTING CONDITION #2

See attached plat.

PLATTING CONDITION #3 & #4

See on the following pages:

- Registered engineer's roadway certification
- City public works director's approval of roads and trails



A2Z Engineering, PLLC • 138 East Center Street, Suite A • Kalispell, MT 59901
Phone: (406) 755-7888 • Website: a2z-engineering.com

October 1, 2021

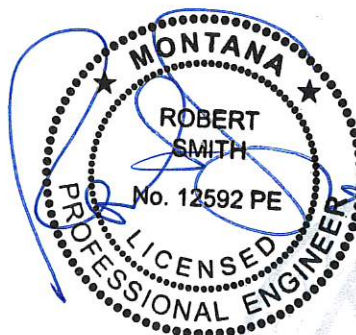
City of Columbia Falls
Attn: Susan M. Nicosia, City Manager / Planning Director
130 6th Street West
Columbia Falls, MT 59912
406.892.4384

Re: Final Platting of The Benches Subdivision, Phases 1 & 2
Engineering Certification of the Roadways

In conformance with Section 17.18.090.B. of the February 2020 edition of the Subdivision Regulations for the City of Columbia Falls, A2Z Engineering has performed the engineered design, construction inspection, made visual inspections, and reviewed of testing reports on the Benches Subdivision Phase 1 and 2.

A2Z Engineering having made a good faith effort within the standards of care common to the profession and local practice, provides the following certification:

All private roads within a proposed subdivision were designed by a licensed professional engineer and upon completion of construction are certified by a licensed professional engineer that they are in compliance with these regulations.



10-1-2021



PUBLIC WORKS DEPARTMENT

130 6TH STREET WEST
COLUMBIA FALLS MT. 59912

PHONE: (406) 892-4430
FAX: (406) 892-4413

August 13, 2021

Robert Smith, PE, PTOE
Project Engineer
A2Z Engineering, PLLC

Re: The Benches Subdivision, Phase 1 & 2- Roadwork Plans

Dear Robert,

I have completed a review of the revised plans submitted to Public Works for the Benches Subdivision project and have found them to meet the requirements of Chapter 17.18 of the City of Columbia Falls Subdivision Regulations, and Flathead County Public Works Standards.

If you have any questions please call me at (406) 892-4430

Sincerely,

Chris Hanley

City of Columbia Falls-Public Works Director

PLATTING CONDITION #5

See on the following pages:

- MDT approach permit for US Highway 2
- County road department approach permit for Rogers Road



MDT-MAI-006 11/13

Page 1 of 2

State of Montana
Montana Department of Transportation
Driveway Approach Application and Permit

2701 Pr Item No.10.
PO Box 201001
Helena, MT 59620-1001
Phone: (406) 444-7237
Fax (406) 444-0807
TTY: (406) 444-7696
www.mdt.mt.gov

be filled in by Department of Transportation Personnel[Print Form](#)

F.A. Route No: C-1 (US 2)	Milepost: 137.6	Project: F 38-1(5)4	Approach Station: 425+00 RT
-------------------------------------	---------------------------	-------------------------------	---------------------------------------

District: Missoula	County: Flathead	Maint Section No: 1202
------------------------------	----------------------------	----------------------------------

Drainage as determined by Department of Transportation

Type: N/A	Size: N/A	Length: N/A
------------------	------------------	--------------------

Sight Distance (feet):	Right: 1,200	Left: 1,200
-------------------------------	---------------------	--------------------

James M. Firebaugh
Approach Recommended by District Traffic
Engineer or Traffic & Safety Bureau

03/05/21
Date

[Signature]
Approach Application Approved by
District Administrator or Designee

3/05/2021
Date

Access Control: ☐ Yes ☒ No

If Access Control is Yes:

Approach Recommended by Access Manager, R/W Bureau

Date

APPLICANT (PROPERTY OWNER)**Name**

Doug Siderius

Phone\Fax Number

406-253-6891

Address

737 Egan Rd

City

Kalispell

State

MT

Zip Code

59901

E-mail

dougside@hotmail.com

herein termed the applicant, requests permission to construct approach(es) described and shown on attached site plan or plan and profile and hereby made a part of this application

Use of Property or Facility: Multit-family Residence

The Benches 49-lot residential subdivision

An environmental checklist must be filled out, signed and attached in order for this application to be considered complete.

[Link to Environmental Checklist](#)

Location

City or Town: (If rural, direction & approx.
distance from nearest city or town)

Columbia Falls

Street Name, if any:

Highway 2 (55 mph)

Roadway or Highway

Surfacing

asphalt

Width

82' (5 lanes)

Approach

Estimated number of trips per day:

470

Side of Roadway

S

Width:

24 feet

Flare:

25 feet

Other Comments

This permit is for changing the use of an existing field approach to a 49-lot residential subdivision. See attachment for additional conditions.



MDT-MAI-006 11/13

Page 2 of 2

State of Montana

Montana Department of Transportation

Driveway Approach Application and Permit

Item No.10.

2701 Prospect Avenue
PO Box 201001
Helena, MT 59620-1001
Phone: (406) 444-7237
Fax (406) 444-0807
TTY: (406) 444-7696
www.mdt.mt.gov

(INSTRUCTIONS CONCERNING USE OF THIS FORM)

Applicant will complete and deliver this form in duplicate to the District Administrator serving the area in which the Approach Permit is requested.

The District Administrator, in conjunction with the District Traffic Engineer, is delegated authority to approve curb cuts, public and private approaches serving businesses, residences and agricultural uses in rural or urban areas without further consultation if the traffic conditions are not congested. In congested areas, usually urban situations, the District Administrator and District Traffic Engineer can request the Traffic and Safety Engineer in Helena for additional technical assistance. If this is necessary, the approach should be scaled onto existing plan and profile sheets showing the highway right-of-way and sent to Helena.

- APPROACH PERMIT -

Subject to the following terms and conditions, the permit applied for upon the reverse side hereof, is hereby granted:

- 1) **TERM.** This permit shall be in full force and effect from the date hereof until revoked as herein provided.
- 2) **REVOCATION.** This permit may be revoked by State upon giving thirty (30) days notice to Permittee by ordinary mail, directed to the address shown in the application hereto attached, but the State reserves the right to revoke this permit without giving said notice in the event Permittee breaks any of the conditions or terms set forth herein.
- 3) **COMMENCEMENT OF WORK.** No work shall be commenced until Permittee notifies the Department of Transportation when work is proposed to commence.
- 4) **CHANGES IN HIGHWAY.** If the State changes the highway, or there are other changes to adjoining streets, alleys, etc., which necessitate alterations in structures or installations installed under this permit, Permittee shall make the necessary alterations at Permittee's sole expense or in accordance with a separate agreement.
- 5) **STATE SAVED HARMLESS FROM CLAIMS.** In accepting this permit the Permittee, its/his successors or assigns, agree to protect the State and save it harmless from all claims, actions or damage of every kind and description which may accrue to, or be suffered by, any person or persons, corporations or property by reason of the performance of any such work, character of materials used, or manner of installations, maintenance and operation, or by the improper occupancy of said highway right of way, and in case any suit or action is brought against the State and arising out of, or by reason of, any of the above causes, the Permittee, its/his successors or assigns, will upon notice to it/him of the commencement of such action, defend the same at its/his sole cost and expense and satisfy any judgment which may be rendered against the State in any such suit or action.
- 6) **PROTECTION OF TRAFFIC.** Submit a traffic control plan for review and approval prior to any work being performed in MDT Right-of-Way. Traffic control must meet current MUTCD and MDT standards and guidance. The approval shall in no way operate to relieve or discharge the Permittee from any of the obligations assumed by acceptance of this permit, and especially those set forth under Section 6 thereof.
- 7) **HIGHWAY DRAINAGE.** If the work done under this permit interferes in any way with the drainage of the State Highway affected, Permittee shall, at its/his own expense, make such provisions as the State may direct to take care of said drainage.
- 8) **RUBBISH AND DEBRIS.** Permittee is responsible for debris that is carried onto the roadway by this construction with sweeping and cleaning done daily at permittee's expense. Upon completion of work contemplated under this permit, all rubbish and debris shall be immediately removed and the roadway and the roadside left in a neat and presentable condition satisfactory to the State.
- 9) **WORK TO BE SUPERVISED BY STATE.** All work contemplated under this permit shall be done under the supervision of and to the satisfaction of the authorized representative of the State, and the State hereby reserves the right to order the change of location or removal of any structure or installation authorized by this permit at any time, said changes or removal to be made at the sole expense of the permittee.
- 10) **STATE'S RIGHT NOT TO BE INTERFERED WITH.** All such changes, reconstructing or relocation shall be done by Permittee, in such a manner as will cause the least interference with any of the State's work, and the State shall in no way be liable for any damage to the Permittee by reason of any such work by the State, its agents, contractors or representatives, or by the exercise of any rights by the State upon the highways by the installations or structures placed under this permit.
- 11) **REMOVAL OF INSTALLATIONS OR STRUCTURES.** Unless waived by the State, upon termination of this permit, the Permittee shall remove the installations or structures contemplated by this permit and restore the premises to the condition existing at the time of entering upon the same under this permit, reasonable and ordinary wear and tear and damage by the elements, or by circumstances over which the Permittee has no control, excepted.
- 12) **MAINTENANCE AT EXPENSE OF PERMITTEE.** Permittee shall maintain, at its/his sole expense the installations and structures for which this permit is granted, in a condition satisfactory to the State.
- 13) **STATE NOT LIABLE FOR DAMAGE TO INSTALLATIONS.** In accepting this permit the Permittee agrees that any damage or injury done to said installations or structures by a contractor working for the State, or by any State employee engaged in construction, alteration, repair, maintenance or improvement of the State Highway, shall be at the sole expense of the Permittee.
- 14) **STATE TO BE REIMBURSED FOR REPAIRING ROADWAY.** Upon being billed therefor Permittee agrees to promptly reimburse State for any expense incurred in repairing surface or roadway due to settlement at installation, or for any other damage to roadway as a result of the work performed under this permit.
- 15) **OTHER CONDITIONS AND/OR REMARKS.**
 - a. All approach side slopes will preferably be constructed on 10 to 1 slope but not less than 6 to 1 slope, unless otherwise approved.
 - b. No private signs or devices etc., will be constructed or installed within the highway right-of-way limits.
 - c. This permit is valid only if approach construction is completed within specified months from date of issue, 6 Months
 - d. Prior to Starting work, for construction inspection and approval of completed approach contact Dennis Oliver 406-751-2012
 - e. ☒ See attached addendum

Digitally signed by
Dated at: **Doug Siderius** Agreement Date

The undersigned, the "Permittee" mentioned in the foregoing instrument, hereby accepts this permit together with all of the terms and conditions set forth herein.

Doug Siderius
Construction LLP,
ou,
email=dougsider@
hotmail.com, c=US
Date: 2021.03.05
20:26:38 -07'00'

To be filled in by Department of Transportation Personnel

Completed Approach Inspection By:

Date

Title:

2/2021

Attachment for The Benches development:

US 2 MP 137.6 Sta. 425+00 RT

This attachment includes terms and conditions in addition to those listed on page 2 of the permit form.

- A. This permit is for a change in use of an existing farm/filed approach to access The Benches development for a 49-lot residential subdivision.
- B. **With the construction of the MDT path project this past year along this development's Highway 2 frontage, the permittee will now need to tie into the existing constructed path instead of reconstructing the entire approach as per the plans submitted by A2Z Engineering.**
- C. Any affected ground on MDT right of way must be graded to match surroundings and reseeded with certified weed free seed.
- D. Parking is not allowed on MDT right of way. Landscaping or beautification on right of way requires a separate encroachment permit.
- E. The permittee must obtain approvals from downstream landowners if their proposed facility impacts downstream properties (easements, etc.) and provide documentation of appropriate coordination with affected landowners. If any aquatic resources, such as streams, canals, wetlands, etc. will be impacted because of this project, the appropriate water quality permits must be obtained from state, federal, tribal, and/or local agencies.
- F. The permittee is solely responsible for any environmental impacts incurred because of this project and is solely responsible for obtaining any necessary environmental permits, notifications, and /or any other necessary environmental clearances.
- G. **Prior to starting construction activities in the right-of-way contact the area supervisor, Rod Day at 406-892-2073. For permit to be valid, all work must be completed, and a final inspection done by MDT. If work is not completed in 6 months, permittee must request an extension from MDT.**

Permittee Initials:



FLATHEAD COUNTY APPROACH PERMIT

 AE - 3201
Permit No.

 ASAP
Email

1. Applicant Information: PRINCE DOG DEVELOPMENT LLC
719 3RD SAW
WINTERGAT MT 59937
406-266-9432 (Phone No.) JIM@DISCOVERADHITASH.COM (Email Address)
2. Property Address of Approach: 441 ROGERS ROAD, COMBIA FALLS
 (Obtained from the GIS Department)
3. Type of Approach:
- | | | |
|-------------------------------------|--|---------------------------------|
| ☐ | Agricultural | \$100.00 |
| ☒ | Single Driveway | \$100.00 |
| ☐ | Shared Driveway
(2 lot approach only) | \$150.00 |
| ☐ | Minor Subdivision
(5 or fewer lots) | \$300.00/approach + \$30.00/lot |
| ☐ | Major Subdivision
(6 or more lots) | \$650.00/approach + \$30.00/lot |
4. If Subdivision: Name N/A @ this time - no active application
 Does the access comply with Subdivision Regulations for Approaches: Yes ☒ No ☐
 Is Area Zoned: Yes ☒ No ☐ Zoning Classification: C2-3
 Planning & Zoning Representative Sign and Date: [Signature] 3/22/19
Currently Proposing one SR - approval for one house
5. Location must be flagged with address posted for pre-construction inspection. Date 3-22-19
 when location will be flagged. Road Department will provide lathe or applicant will have equivalent of lathe
 with bright orange flagging attached or painted a bright orange.
 Give description at or near which installations or structures will be installed (ie: 300 feet North of
 intersection of Roads A & B, fence line, etc.)
 a. Provide area map with directions to location, plus a Certificate of Survey map or plat map of property.
 b. LEGAL: Section: 16 Township: 30 N Range: 20 W
6. Completion date of preliminary approach before paving will be within 90 days from approval of this permit.
 Approaches that are required to be paved and were approved between October 1st and May 1st, will be granted
 an additional 30 days after June 1st, to complete the paving portion of the requirements, due to availability of
 asphalt material.

INSTRUCTIONS CONCERNING USE OF THIS FORM

Applicant will complete this form and submit it to the Flathead County Road Department. This application
 is for all approaches on County right-of-way. When applicant has signed both sides of application and
 application is approved or denied, a copy will be made available to applicant. See reverse side for
 additional rules and regulations.

THE TERMS OF THIS PERMIT APPLICATION ARE ACCEPTED AND AGREED BY:

[Signature] MEMBER 3-22-19
 Signature of Applicant(s) Date

REVIEW OF APPLICATION FOR APPROACH PERMIT

- To be filled in by Flathead County Road Dept Representative -

PRELIMINARY INSPECTION OF APPLICATION RECOMMENDED FOR:

APPROVAL CONDITIONAL X DISAPPROVAL
APPROVAL
[Signature] 3.29.19
 Flathead County Road Dept Representative Date

Conditions of approval attached to permit. Circled items are requirements for this approach only.

The Road Department is to be notified upon completion of work for scheduling of inspection.

	OFFICE USE ONLY	
Completed Application	☒ Yes	☐ No
Plans/Maps/Specifications	☒ Yes	☐ No
Subdivision/Zoning Info	☒ Yes	☐ No
Fees Paid	☒ Yes	☐ No

\$100 Amount
1592 Check Number
943413 Receipt Number

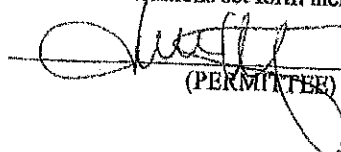
CONDITIONS OF PERMIT

Subject to the following terms and conditions, the permit applied for upon the reverse side, hereof, is hereby granted:

1. **TERM:** This permit shall be in full force and in effect from the date hereof until revoked as herein provided.
2. **REVOCATION:** This permit may be revoked by the County upon giving 10 days notice to Permittee by ordinary mail, directed to the address shown in the application hereto attached, but the County reserves the right to revoke this permit without giving said notice in the event Permittee breaks any of the conditions or terms set forth herein.
3. **COMMENCEMENT OF WORK:** No work shall be commenced until Permittee notifies the County authorized representatives, as listed on the front of this application, as to the proposed commencement of work.
4. **CHANGES IN HIGHWAY:** If the County changes highway, necessitating changes in structure or installations under this permit, Permittee shall make necessary changes without expense to County.
5. **TRENCHING OR PAVEMENT ALTERATIONS:** Removal of pavement must be preceded by sawing the existing pavement around the area(s) to be removed. Replacement base and subbase materials must be compacted to a minimum of 95% relative density. Replacement of pavement must be accomplished within 48 hours of pavement removal.
6. **COUNTY SAVED HARMLESS FROM CLAIMS:** In accepting this permit, the Permittee, its/his successors or assigns, agree to protect the County and save it harmless from all claims, actions, or damage of any kind and description which may accrue to, or be suffered by, any person, or persons, corporations, or property by reason of the performance of any such work, character of materials used, or manner of installations, maintenance and operation, or by the improper occupancy of said highway right-of-way, and in case of any suit or action brought against the County and arising out of, or by reason of, any of the above causes, the Permittee, its/his successors or assigns, will, upon notice to it /him of the commencement of such action, defend the same at its/his sole cost and expense and satisfy any Judgment which may be rendered against the County in any suit or action.
7. **PROTECTION OF TRAFFIC:** Insofar as the interests of the County and the traveling public are concerned, all work performed under this permit shall be done under the supervision of the County Road Department and its authorized representatives, and he/they shall indicate the traffic control devices, the lighting thereof at night, placing of flagmen and watchmen, the acceptable manner in which traffic is to be handled, and shall specify to Permittee how road surface is to be replaced if it is disturbed during operations, but said supervision shall in no way operate to relieve or discharge Permittee from any of the obligations assumed by acceptance of this permit and especially those set forth under Section 6 hereof.
8. **HIGHWAY DRAINAGE:** If the work done under this permit interferes in any way with the drainage of the County highway affected, Permittee shall, at its/his own expense, make such provisions as the County may direct to take care of said drainage.
9. **RUBBISH AND DEBRIS:** Upon completion of work contemplated under this permit, all rubbish and debris shall be immediately removed and roadway and roadside left in a neat and presentable condition satisfactory to the County.
10. **WORK TO BE SUPERVISED BY COUNTY:** All work contemplated under this permit shall be done under the supervision of and to the satisfaction of the authorized representative of the County, and the County hereby reserves the right to order the change of location or removal of any structure of installation authorized by this permit at any time, said changes or removal to be made at the sole expense of the Permittee.
11. **COUNTY'S RIGHT NOT TO BE INTERFERED WITH:** All such changes, reconstructing, and relocation shall be done by Permittee in such a manner as will cause the least interference with any of the County's work, and the County shall in no way be liable for any damage to the Permittee by reason of any such work by the County, its agents, contractors, or representatives, or by the exercise of any rights by the County upon the highways by the installation or structures placed under this permit.
12. **REMOVAL OF INSTALLATIONS OR STRUCTURES:** Unless waived by the County, upon termination of this permit, the Permittee shall remove the installation or structures contemplated by this permit and restore the premises to the condition existing at the time of entering upon the same under this permit, reasonable and ordinary wear and tear and damage by the elements, or by circumstances over which the Permittee has no control, excepted.
13. **MAINTENANCE AT EXPENSE OF PERMITTEE:** Permittee shall maintain, at its/his sole expense the installations and structures for which this permit is granted, in a condition satisfactory to the County.
14. **COUNTY NOT LIABLE FOR DAMAGE TO INSTALLATIONS:** In accepting this permit the Permittee agrees that any damage or injury done to said installations or structures by a contractor working the County or by any County employee engaged in construction, alteration, repair, maintenance, or improvement of the County right-of-way shall be at the sole expense of the Permittee.
15. **COUNTY TO BE REIMBURSED FOR REPAIRING ROADWAY:** Upon being billed therefore, Permittee agrees to promptly reimburse the County for any expense incurred in repairing surface of roadway due to settlement at installation, or for any other damage to roadway as a result of the work performed under this permit, including any incurred legal fees.

Dated this 22 day of MARCH 2011.

The undersigned, the "PERMITTEE" mentioned in the foregoing instrument, hereby accepts this permit, together with all of the terms and conditions set forth therein.


(PERMITTEE) NEWBEE

(PERMITTEE)

441 Rogers Rd
ChallisAPPROACH PERMIT REQUIREMENTSTHE ATTACHED PERMIT IS GRANTED IF THE
FOLLOWING CONDITIONS ARE MET:

(Circled items pertain to this permit only)

1. All brush, trees, fences, etc are to be removed from the county road right-of-way on each side of the approach for a distance of at least the entire length of the property and a setback to the outside edge of the right-of-way. This will facilitate improved roadway maintenance, safety and sight distance.
2. A corrugated metal culvert having a minimum diameter of (12, 15, 18) inches be installed beneath the approach such that the culvert bottom (invert) be even with and at the same grade as the ditch bottom. The culvert must meet the 6:1 slope either by cutting the culvert at an angle or attaching flared ends. (The culvert will provide adequate drainage should water accumulate in the ditch.) See the attached diagrams on pages 5 and 6.
3. The approach must have a 20-foot long landing graded 3 percent away from the county road. (See the attached sheet for details.) (This will reduce the amount of gravel loss and the possibility of drainage from the approach on to the county road.) See the attached diagram on page 7.
4. All approaches onto a county road shall meet the road at a 90-degree angle.
5. All approaches will be 24 feet wide to the outside edge of the right-of-way. This will help Emergency vehicles to access your property easier.
6. All approaches onto a paved road shall be paved a minimum of 3 inches compacted by 24 feet wide and from the paved road to the outside edge of the right-of-way. See the attached diagram on page 3.
7. All areas within the county right-of-way disturbed during construction must be reseeded. Contact the Flathead County Weed Department for seeding requirements. (Reseeding will reduce the potential for growth of noxious weeds adjacent to the county road as well as the adjacent property.) See reseeding specs on page 4.
8. Contact the Road Department to schedule a post construction inspection.

PLATTING CONDITION #6

See on the following page the communication from NW Energy.

The following information was received by Doug Siderious by email from Joe Carmody at Northwestern Energy on June 11, 2021.

After doing the pot holes at the two proposed street crossings, where we found the top of the gas transmission pipeline to be at 27 inches. Northwestern Energy engineers did a wheel load analysis on needed cover to safely cross over the pipelines with the two streets. It was determined, the two road crossings will require an additional 12 inches of cover over the pipeline, with 3 inches of this cover being asphalt. All utility crossings will require a minimum of between 18-24 inches of separation between Northwestern Energy's transmission pipeline and any foreign utility. No permanent structures may be built within the pipeline right of way. If you have any further need of clarification on any item concerning Northwestern Energy's pipeline and the ROW, please let me know.

Thanks

Joe Carmody

Damage Prevention Coordinator

joe.carmody@northwestern.com

O (406) 497-2276

C (406) 422-3276

F (406) 497-2048

11 E Park St

Butte, MT 59701-9394

PLATTING CONDITION #7

See on the following pages:

- Email from Badrock VFD Chief Kirk Katzenmeyer authorizing the change from a cistern to a live fire hydrant
- Email from Montana DEQ authorizing the change from a cistern to a live fire hydrant
- Plan and construction detail sheets showing the change

rsmith@a2z-engineering.com

From: kirk@plumbritemt.com
Sent: Monday, August 23, 2021 11:54 AM
To: rsmith@a2z-engineering.com
Subject: RE: The Benches Subdivision - Fire Hydrant

Good Morning,

The New/Proposed Design using the proposed fire hydrant for The Benches Subdivision is approved by the Badrock Fire Department.

This is preferable to the underground water storage accessed by a drafting hydrant.

Thank you,

Kirk Katzenmeyer, Chief
 Badrock Fire Department
 406-751-8434 cell

From: rsmith@a2z-engineering.com <rsmith@a2z-engineering.com>
Sent: Monday, August 16, 2021 12:28 PM
To: kirk@plumbritemt.com
Subject: The Benches Subdivision - Fire Hydrant

Good afternoon Chief Katzenmeyer –

The owner / developer of the Benches Subdivision located between US Highway 2 and Rogers Road near Columbia Falls would like to request your approval to modify the provision for fire protection water at the development.

Previous Design: The original design was to provide an underground concrete cistern containing approximately 30,000 gallons of stored water. This would be accessed by a drafting hydrant located adjacent to Bench Run road in the development. This cistern was to be filled with a ¾" service line from the subdivision's public water system.

New / Proposed Design: The new design proposes to place a live fire hydrant beside Bench Run road in the development. The public water supply system will provide water directly to the hydrant from the two groundwater wells. These wells will be configured so that in an emergency they will both be pumped at the same time. The wells are capable of providing at least 300 GPM each, for a combined flowrate of 600 GPM.

Please indicate if this is an acceptable alternative; and let me know if you have any questions or concerns.

Thanks,

Robert Smith, PE, PTOE
 Project Engineer

A2Z Engineering, PLLC
 138 East Center Street, Suite A
 Kalispell, MT 59901
 406.755.7888
A2Z-Engineering.com

rsmith@a2z-engineering.com

From: Lipetzky, Steve <Steven.Lipetzky@mt.gov>
Sent: Wednesday, June 30, 2021 2:23 PM
To: rsmith@a2z-engineering.com; 'Wendee Jacobs'
Cc: 'doug siderius'; 'Matt Nerdig'
Subject: RE: [EXTERNAL] PWS Change - Benches Subdivision, Phases I & II, EQ#20-2332 & 20-2333
Attachments: Revised Water Sheets.pdf

Rob,

The proposed deviation, shown in the attached plans, from the January 21, 2021 approval issued for EQ#20-2334 is hereby approved. Please include a copy of this email and the changes in the certified as-builts when they are submitted.

Sincerely,

Steve Lipetzky, PE
 Environmental Engineer P.E.
 (406) 444-5368



From: rsmith@a2z-engineering.com <rsmith@a2z-engineering.com>
Sent: Monday, May 10, 2021 10:08 AM
To: Lipetzky, Steve <Steven.Lipetzky@mt.gov>; 'Wendee Jacobs' <wjacobs@flathead.mt.gov>
Cc: 'doug siderius' <dougsider@hotmail.com>; 'Matt Nerdig' <mnerdig@a2z-engineering.com>
Subject: [EXTERNAL] PWS Change - Benches Subdivision, Phases I & II, EQ#20-2332 & 20-2333

Dear Mr. Lipetzky and Ms. Jacobs,

A2Z Engineering and the developer of the Benches project would like to request your review of a minor change to the provision of emergency services truck refill water from the proposed Benches Subdivision PWS. Previously an approval was written for a design that included a typical cistern and dry pumping hydrant to provide water for fire truck refills in emergency situations.

After consultation with the owner, PWS wellhouse contractor, and local fire chief (Chief Kirk Katzenmeyer 406.751.8434), we would propose deleting the cistern and dry pumping hydrant and replacing this with a more typical fire hydrant. The new design is:

- There will only be one hydrant provided on the system, located adjacent to the well control house
- The hydrant will only be used for emergency situation fire truck refill (and therefore under emergency exemption water right)
- The hydrant will be fed by the activation of both source groundwater wells (these wells typically only operate in an alternating pattern)
- An increase in water line size to 6" from the convergence of the two well feed lines (each 4" diameter) to the location of the hydrant will allow for full unimpeded flow of approximately 600 GPM

PWS plan sheets W13, W14, W21 & W24 were modified to show the new design.

Thanks,

Robert Smith, PE, PTOE
Project Engineer

A2Z Engineering, PLLC

138 East Center Street, Suite A
Kalispell, MT 59901
406.755.7888
A2Z-Engineering.com

Keyed Notes for Pump House:

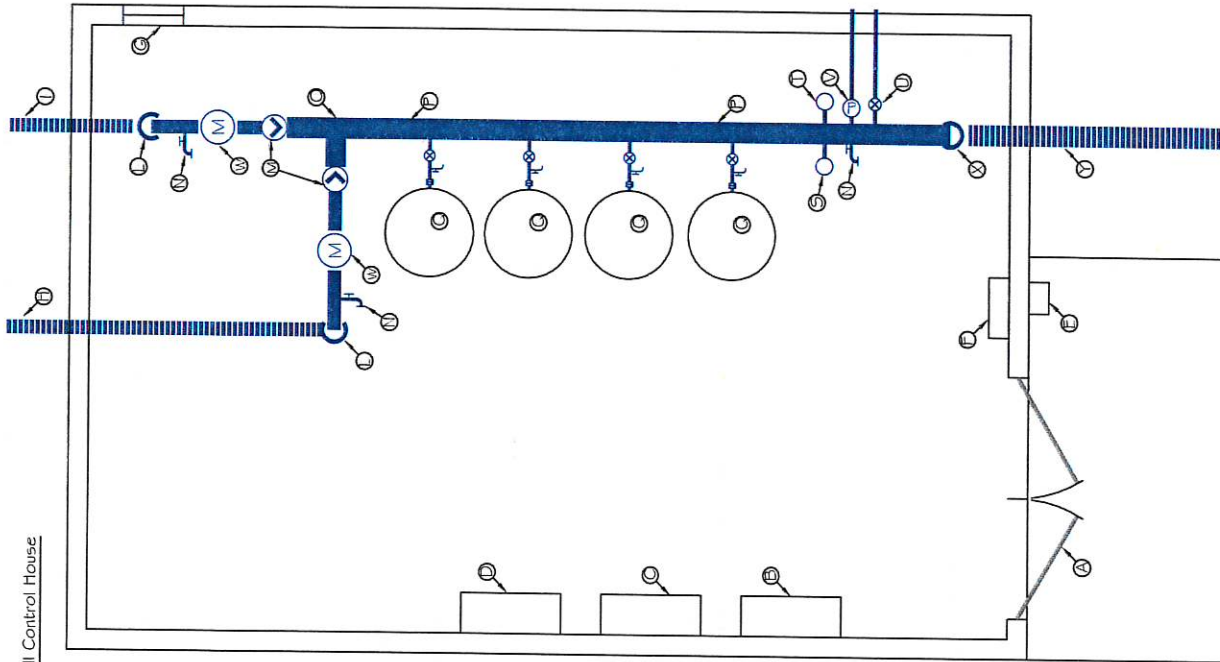
- Pump House & Controls
 - A. Exterior steel entry door, 36" minimum width
 - B. Electrical circuit supply panel
 - C. FMS well #1 pump controls
 - D. FMS well #2 pump controls
 - E. Exterior visual alarm posted with operator's contact information, connected to pump controller fault circuits
 - F. Electric wall unit heater with fan, thermostat controlled
 - G. Insulated electric ventilation fan with humidistat, vented to exterior
- Buried Water Lines
 - H. 4"Ø line from well #1
 - I. 4"Ø line from well #2
 - J. n/a
 - K. n/a
- Plumbing Fittings & Fixtures
 - L. In ground 90° threaded floor penetration & 4"Ø G.I. riser pipe up to 18" above the floor, 90° threaded G.I. check valves & 4"Ø to 6"Ø reducers
 - M. 4"Ø threaded G.I. check valves & 4"Ø to 6"Ø reducers
 - N. Non-threaded sample tap
 - O. 6"Ø threaded G.I. tee
 - P. 6"Ø G.I. manifold pipe
 - Q. Ambrol WX-350 pressure tank (typical, 1.0 total) connected to the 6"Ø G.I. manifold pipe with 6"x6"x1, 25" tee, 1, 25" ball valve, threaded spagot, and 1, 25" union
 - S. 2" dial pressure gauge, 0 to 200 PSI
 - T. Electronic pressure switches for pump control
 - U. 2"Ø ball valve for flushing, vented to side of building
 - V. 75 PSI, 150 GPM, 2"Ø pressure relief valve, vented to side of building
 - W. 4"Ø totalizing water meter
 - X. In ground 6"Ø 90° bend, floor penetration & 6"Ø G.I. riser pipe up to 18" above the floor, 6"Ø 90° threaded G.I. bend
 - Y. 6"Ø buried water main leaving wellhouse

Pipe Supports: Note: Contractor shall use manufactured pipe supports with specifications that are adequate for the proposed plumbing pipe and fixture's shown.

Building Notes: Building shall be typical framing on a concrete slab with thickened edge foundation. Finished floor shall be at least 6" above grade on all sides and finished grading shall provide positive slope away from structural all directions. Floor drains shall be provided which are plumbed to day-lighted outlets.

Emergency Use Note: A hydrant is provided near the well control building for the purpose of allowing emergency service vehicles to fill. This falls under emergency only type water rights appropriations and shall be used for no other non-emergency purposes. Well pump controls shall have a setting allowing for both wells to pump when the emergency use hydrant is activated.

Schematic for Well Control House
Not to Scale



138 E. Center St., Ste A
Kalispell, MT 59901
Phone: 406.735.7666
A2Z Engineering.com



05-10-2021

REVISION:	
REVISION #1: 1/1/2021	
REVISION #2: 1/1/2021	
REVISION #3: 1/1/2021	
REVISION #4: 1/1/2021	
REVISION #5: 1/1/2021	
REVISION #6: 1/1/2021	
REVISION #7: 1/1/2021	
REVISION #8: 1/1/2021	
REVISION #9: 1/1/2021	
REVISION #10: 1/1/2021	



The Benches Subdivision, Phase 1
Water System Plans
Well Control Building
Columbia Falls, Montana

Plan Sheet Number:

W13

Item No.10.

W14

The Benches Subdivision, Phase I
Water System Plans
Emergency Truck Fill Hydrant
Columbia Falls, Montana



REVISIONS
DESCRIPTION #1 - 5/1/2021
DESIGNED BY: R. Smith
CHECKED BY: R. Smith

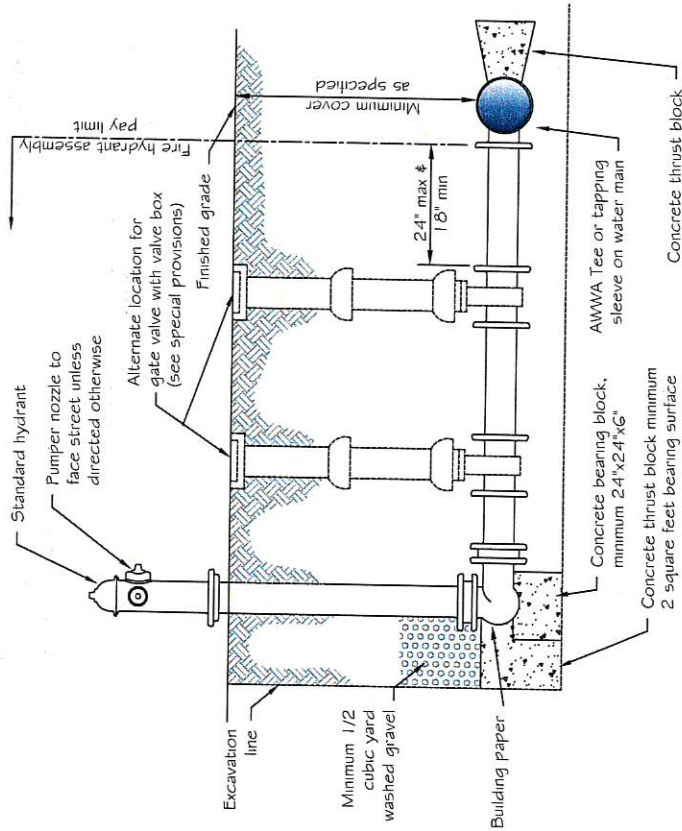
05-10-2021



138 E. Center St., Ste. A
Kalispell, MT 59901
Phone 406.755.7888
AEE-Engineering.com



Detail Note: This detail is drawn from the Montana Public Works Standard Specification, standard drawing #02660-4. The MPWSS document shall control if there are any discrepancies.



- Fire Hydrant Notes:
1. Thrust blocking To be in conformance with MPWSS standard drawing 2713-1.
 2. For bolted fittings, blocking shall not obstruct bolts.
 3. Hydrant weep holes to remain unobstructed.

Fire Hydrant Setting Detail
Not to Scale



138 E. Center St., Ste A
Kalispell, MT 59901
Phone 406.755.7888
AZZ Engineering.com

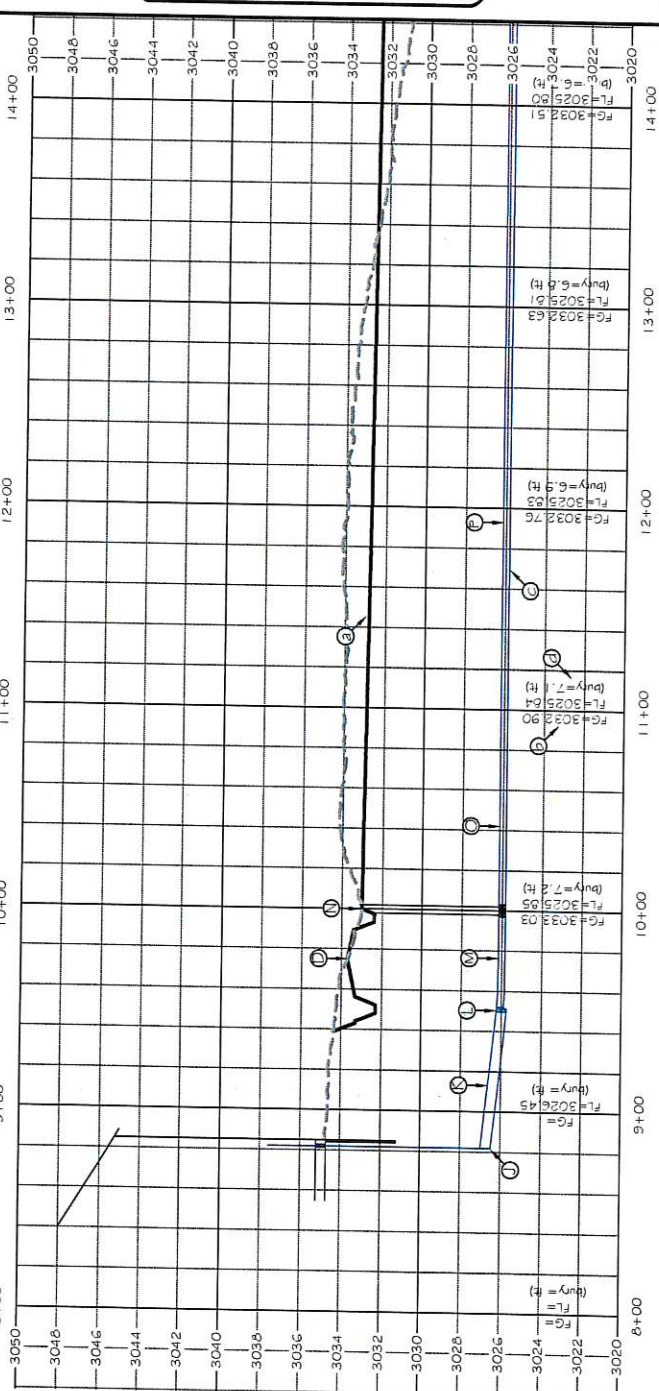
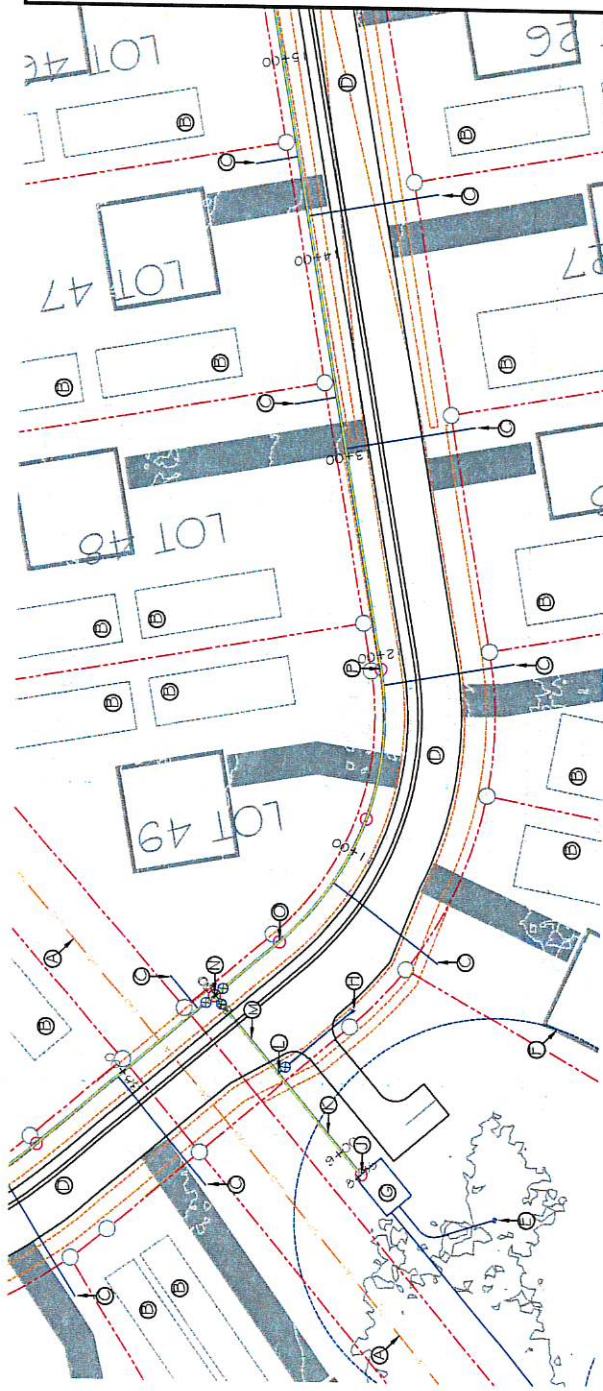


05-10-2021
REVISION: 5/10/21
DESIGNED BY: R. Smith
CHECKED BY: R. Smith



The Benches Subdivision, Phase I
Water System Plans
Plan & Profile Sheet
Columbia Falls, Montana

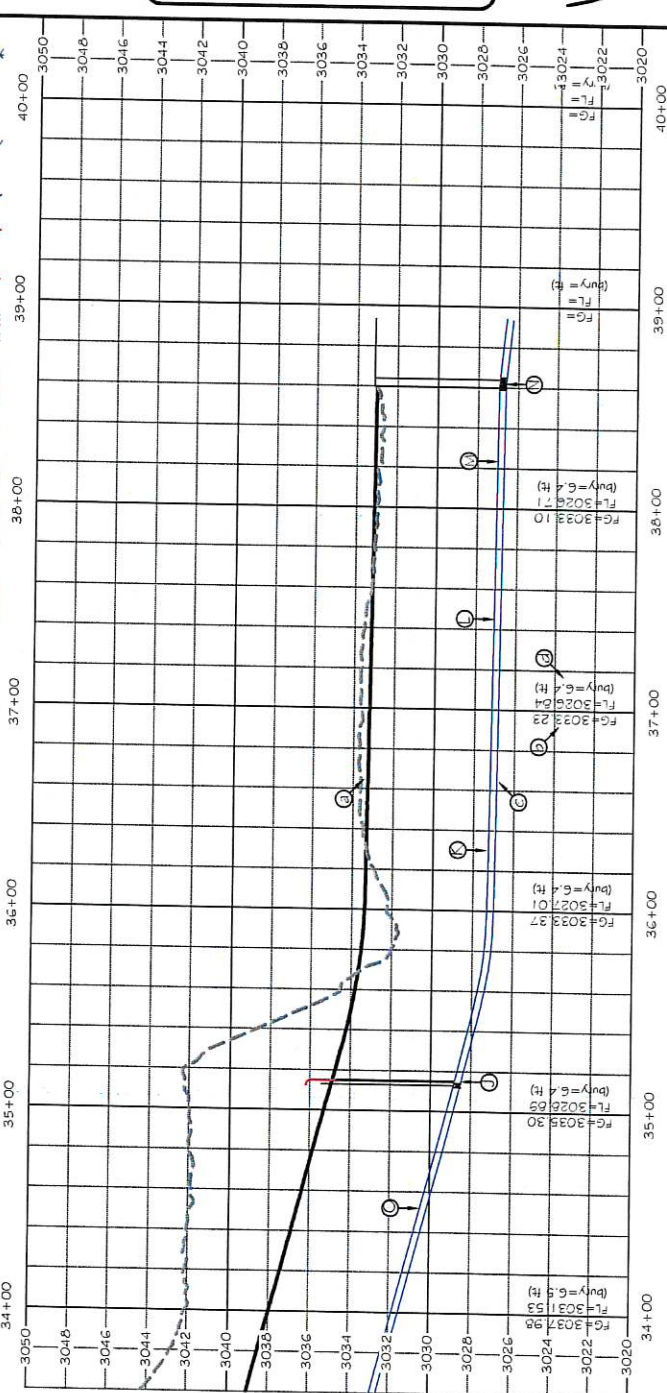
W21



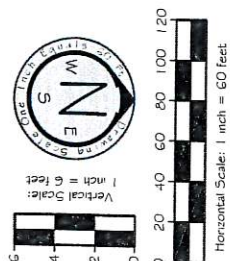
- Keyed Notes for Water Main Plan & Profile:**
- Existing high pressure gas line
 - Proposed typical septic drainfield area
 - Proposed typical water service connection
 - Proposed PWS groundwater wellhead
 - Proposed PWS groundwater wellhead
 - Proposed PWS groundwater wellhead
 - Proposed PWS groundwater wellhead
 - Proposed PWS groundwater wellhead
 - Proposed emergency truck fill hydrant
 - Sta 08+85 - Begin construction of 6" water main, existing from wall control building
 - 65' linear feet of 6" water main from Sta 08+85 to Sta 09+50
 - Sta 09+50 - Proposed 6" tee fitting, 6"x4" reducer fitting (NE), 6" valve & valve box (SE), 45' feet of 6" pipe (SE), and fire hydrant (SE).
 - 50' linear feet of 4" water main from Sta 09+50 to Sta 10+00
 - Sta 10+00 & 30+62 - Proposed 4" tee fitting and three valves & valve boxes
 - Sta 10+42 - Begin 146' foot radius curve left
 - Sta 11+93 - End 146' foot radius curve
 - Finished ground surface profile
 - Finished ground surface elevation
 - Proposed water main flowline profile
 - Proposed water main flowline elevation

- Water Main Materials and Installation Notes:**
- All water main shall be either 4" C900 DR10 PVC pipe or 4" SDR11 I.P.S. HDPE pipe, EXCEPT the section from Sta 08+85 to 09+50, which shall be 6" C900 DR10 PVC pipe or 6" SDR11 I.P.S. HDPE pipe.
 - Minimum burial depth of water main shall be 3' feet below finished grade (without insulation) unless otherwise noted.
- Water Main Services Notes:**
- Water services shall be installed at the following locations:
- Sta 10+82 Lot 30
 - Sta 11+85 Lot 29
 - Sta 13+04 Lot 26
 - Sta 13+50 Lot 46





- | Water Main Services Notes: | |
|---|-----------|
| Water Services shall be installed at the following locations: | |
| Lot 4 (future use in Phase 2) | Lot 4 |
| Lot 1 - install 1.5" tap and service line | Lot 1 |
| Lot 32 | Lot 32 |
| Lot 31 | Lot 31 |
| Lot 36+48 | Lot 36+48 |
| Lot 37+22 | Lot 37+22 |
| Lot 3 | Lot 3 |
| Lot 37+97 | Lot 37+97 |
| Lot 49 | Lot 49 |
| Lot 38+49 | Lot 38+49 |
| Lot 35+10 | Lot 35+10 |
| Lot 36+23 | Lot 36+23 |
| Lot 36+32 | Lot 36+32 |



PLATTING CONDITION #8

See attached plat and CCR's.

PLATTING CONDITION #9

See on the following page the communication from the postmaster.



Wednesday, June 16, 2021

James C. McIntyre, Broker
719 3rd St. W.
Whitefish, MT 59937

Dear James C. McIntyre,

Thank you for requesting approval for the placement of mailboxes for the Benches Subdivision, a planned unit development of tract 3A of C.O.S. #21378 in the SW ¼ NE ¼ & W ½ SE ¼ of Section 16, Township 30 North, Range 20 West, P.M.M. Flathead County, Montana.

James C. McIntyre, the applicant, has met the requirements for establishing rural mail delivery to this Subdivision. We have discussed the CBU placement and the USPS STD-4C specifications that require 1 parcel locker for every five mail compartments. 1:5 ratio of parcel lockers to mail compartments.

Any questions please contact the Columbia Falls, MT Postmaster Shawna Crum at 406-892-7621.

Thanks,

Shawna Crum
Postmaster
65 1st St. E.
Columbia Falls, MT 59912
406-892-7621 or 406-892-7622
Cell: 406-897-3020

HCR/CPU Offices
Colum, MT 59913
Hungry Horse, MT 59919
Martin City, MT 59926
Polebridge, MT 59928

PLATTING CONDITION #10

See on the following page the communication from the school district.

rsmith@a2z-engineering.com

From: Jim McIntyre <jim@discoverwhitefish.com>
Sent: Tuesday, August 24, 2021 1:34 PM
To: Rob Smith
Subject: Fwd: Benches subdivision bus turnaround and loading/unloading facility

----- Forwarded message -----

From: **Bob Rupp** <b_rupp@cfmtschoools.net>
Date: Tue, Jun 15, 2021 at 2:16 PM
Subject: Re: Benches subdivision bus turnaround and loading/unloading facility
To: Jim McIntyre <jim@discoverwhitefish.com>

Jim
On Monday the 14th of June, 2021 I went out and inspected your Bus turnaround area for the Benches Subdivision. The turnaround is very adequate for the turnaround. Thanks, it will work .
Bob Rupp
Columbia Falls School District #6.

On Mon, Jun 14, 2021 at 11:00 AM Jim McIntyre <jim@discoverwhitefish.com> wrote:
Bob,

I have attached the Benches subdivision plat along with an exhibit showing the bus turnaround and loading/unloading facility at the entrance to the subdivision.

As we discussed, please send me an approval by School District 6 of this facility as required for the Final Plat of The Benches Subdivision.

Thank you,

Jim McIntyre
406-261-9432
719 3rd Str. W.
Whitefish, MT 59947
jim@discoverwhitefish.com

for the developer of the subdivision, Siderius Construction, LLC

--
Bob Rupp
4068926550 EXT 1431
b_rupp@cfmtschoools.net
Director of Transportation & Maintenance
Columbia School District #6
Columbia Falls, Montana 59912

PLATTING CONDITION #11, 12 & 13

See on the following pages:

- Flathead County Environmental Health Department approval of the subdivision, phase 1.
- Flathead County Environmental Health Department approval of the subdivision, phase 2.
- MDEQ approval of the subdivision public water supply and stormwater facilities, phases 1 & 2
- COSA issued by MDEQ for the subdivision phase 1
- COSA issued by MDEQ for the subdivision phase 2
- Provisional water rights abstract from DNRC for whole development
- Certification of construction by a registered engineer



Flathead City-County Health Department

1035 First Ave. West Kalispell, MT 59901

(406) 751-8101 FAX 751-8102

www.flatheadhealth.org

Community Health Services
751-8110 FAX 751-8111
Environmental Health Services
751-8130 FAX 751-8131
Family Planning Services
751-8150 FAX 751-8151
Home Health Services
751-6800 FAX 751-6807
WIC Services
751-8170 FAX 751-8171
Animal Shelter
752-1310 FAX 752-1546

January 5, 2021

Montana Department of Environmental Quality

Subdivision Program

Attn: Steve Lipetzky, PE

PO Box 200901

Helena MT 59620-0901

SUBJECT: The Benches Phase 1, SW $\frac{1}{4}$ NE $\frac{1}{4}$ & W $\frac{1}{2}$ SE $\frac{1}{4}$ of Sec. 16, T30N, R20W, P.M., M., Flathead County, EQ# 20-2332, owner: Prairie Dog Development, LLC

Dear Steve,

A site visit was conducted July 2, 2020, for the above-referenced application. This application proposes 22 lots (Lots 1-3, 17-32, & 42-49. One individual living unit per lot is proposed served by individual drainfields and a new public water supply that serves both Phase 1 and 2. Lot 1 proposes one 10-bedroom bed and breakfast facility. The proposed drainfield and well sites meet siting requirements and setbacks in accordance with ARM 17.36.322-325 and Flathead County Regulations for Onsite Sewage Treatment Systems. Soils from test pit were logged as loamy sand at the infiltrative surface depth. An application rate of 0.6 is recommended and was used for drainfield design for all lots except Lots 27-30. Soils from test pits for Lots 27-30 were logged as silt loam at the infiltrative surface depth. An application rate of 0.4 is recommended and was used for drainfield design for lots Lots 27-30.

Proposed water and wastewater facilities and designs comply with local laws and regulations in effect when the subdivision application was submitted.

This office has no objection to approval once DEQ's concerns are addressed and review has been completed.

Professionally,

Wendee Jacobs, R.S.
Flathead County Sanitarian

Cc: consultant





Flathead City-County Health Department
1035 First Ave. West Kalispell, MT 59901
(406) 751-8101 FAX 751-8102
www.flatheadhealth.org

Community Health Services
751-8110 FAX 751-8111
Environmental Health Services
751-8130 FAX 751-8131
Family Planning Services
751-8150 FAX 751-8151
Home Health Services
751-6800 FAX 751-6807
WIC Services
751-8170 FAX 751-8171
Animal Shelter
752-1310 FAX 752-1546

January 5, 2021

Montana Department of Environmental Quality
Subdivision Program
Attn: Steve Lipetzky, PE
PO Box 200901
Helena MT 59620-0901

SUBJECT: The Benches Phase 2, SW $\frac{1}{4}$ NE $\frac{1}{4}$ & W $\frac{1}{2}$ SE $\frac{1}{4}$ of Sec. 16, T30N, R20W, P.M., M., Flathead County, EQ# 20-2333, owner: Prairie Dog Development, LLC

Dear Steve,

A site visit was conducted July 2, 2020, for the above-referenced application. This application proposes 22 lots (Lots 4-16 & 33-41. One individual living unit per lot is proposed served by individual drainfields and a new public water supply that serves both Phase 1 and 2. The proposed drainfield and well sites meet siting requirements and setbacks in accordance with ARM 17.36.322-325 and Flathead County Regulations for Onsite Sewage Treatment Systems. Soils from test pit were logged as loamy sand at the infiltrative surface depth. An application rate of 0.6 is recommended and was used for drainfield design. Lots 40 and 41 require a 36-inch trench to be located in the loamy sand soil horizon.

Proposed water and wastewater facilities and designs comply with local laws and regulations in effect when the subdivision application was submitted.

This office has no objection to approval once DEQ's concerns are addressed and review has been completed.

Professionally,

Wendee Jacobs, R.S.
Flathead County Sanitarian

Cc: consultant





January 21, 2021

Robert Smith, PE
A2Z Engineering PLLC
138 East Center Street, Suite A
Kalispell, MT 59901

RE: **The Benches Phase 1 and Phase 2 Public Water Supply System and Stormwater Facilities
EQ #20-2334**

Dear Mr. Smith:

I have reviewed the plans and design reports submitted under the seal of Robert Smith, PE# 12592. Project plans indicate that work will be constructed in accordance with Montana Public Works Standard Specifications. The subject project was reviewed in accordance with Department Design Standards Circular DEQ-1 and DEQ-8. The submittal was received on June 15th, 2020. Additional information, including final plans and specifications was received on December 30th, 2020. **The request to install a public water supply system and stormwater drainage facilities to serve The Benches Subdivision Phase 1 and Phase 2 near Columbia Falls, MT is hereby approved.**

A copy of the plan set and specifications bearing the approval stamp of the Department of Environmental Quality is enclosed. A second set will be retained as Department record. A third set will be provided to the Flathead County Public Health Department.

The project is generally located south of US Highway 2E and east of the Flathead River near Columbia Falls, Montana. The proposed water system improvements and storm drainage improvements are intended to serve The Benches Subdivision Phase 1 and Phase 2, reviewed pursuant to MCA 76-4 under EQ 20-2332 and EQ 20-2333 respectively. The new public water supply system proposed under this project, along with wells drilled and tested under EQ 20-1171, will comprise The Benches Subdivision Public Water Supply System (PWS ID MT 0005069).

The project generally consists of installing the following:

- Phase 1 Water System Improvements
 - Installation of two Goulds 320L submersible well pumps and water main to connect two community public water wells, approved under EQ 20-1171, at a common header within a new well house. The well house will contain variable speed pump controls and four Amtrol WX-350 pressure tanks.

- Approximately 1,780 linear feet of 4-inch C900 DR18 PVC pipe, flushing hydrants, service connections and appurtenances.
- Phase 1 Drainage System Improvements
 - Roadway construction with roadside ditches with check dams to retain additional runoff generated by the proposed impervious area within Phase 1 of the subdivision.
 - An individual retention swale is proposed on Lot 1 with a minimum volume of 388 cubic feet.
 - Culverts at drainage crossings
 - A conveyance swale and berm is proposed along the southern boundary of the subdivision to direct offsite runoff from the southern access road to 18-inch CMP culverts and drop structures that will ultimately daylight in a conveyance swale along the southern boundary of Lots 20-23.
- Phase 2 Water System Improvements
 - Approximately 1,200 linear feet of 4-inch C900 DR18 PVC pipe, flushing hydrants, service connections and appurtenances.
- Phase 2 Drainage System Improvements
 - Roadway construction with roadside ditches with check dams to retain additional runoff generated by the proposed impervious area within Phase 2 of the subdivision.

Department approval of this project covers only those portions of the plans and specifications that are subject to the Department's review authority under the Public Water Supply Laws (MCA 75-6) and the Administrative Rules promulgated thereunder (ARM 17.38). This approval does not cover items found within the plans and specifications that are outside of the Department's review authority, including but not limited to, electrical work, architecture, site grading or water and wastewater service connections.

The project may not be placed into service until the project engineer or designer certifies by letter to the Department that the activated portion of the project was constructed in substantial accordance with the plans and specifications approved by the Department and there are no deviations from the design standards other than those previously approved by the department. Within 90 days after the completion of construction, a complete set of certified "as-built" drawings must be signed and submitted to the department.

In addition to the items noted in the previous paragraph, please submit copies of the final wellhead control zones and supporting information with the final plat as required under Circular DEQ-1 Section 3.2.3.2.

Construction of this project must be completed within three years of this date. If more than three years elapse before completing construction, plans and specifications must be resubmitted and approved before construction begins.

Thank you for your efforts to meet our requirements. If I can offer any further information or assistance, please feel free to contact me at (406) 444-5368 or Steven.Lipetzky@mt.gov.

Sincerely,



Steve Lipetzky, PE
Public Water and Subdivisions Bureau

Enclosed: One (1) set of Phase 1 Public Water System Plans – Approved
 One (1) set of Phase 2 Watermain Extension Plans – Approved
 One (1) set of Phase 1 Stormwater Plans – Approved
 One (1) set of Phase 2 Stormwater Plans – Approved

cc: Flathead County Public Health Department
 File: EQ #20-2334

Page 1 of 7
 The Benches Subdivision Phase 1
 Flathead County, Montana
 E.Q. # 20-2332

STATE OF MONTANA
 DEPARTMENT OF ENVIRONMENTAL QUALITY
 CERTIFICATE OF SUBDIVISION PLAT APPROVAL
 (Section 76-4-101 et seq.)

TO: County Clerk and Recorder
 Flathead County
 Kalispell, Montana

E.Q. #20-2332
 Corrected

THIS IS TO CERTIFY THAT the plans and supplemental information relating to the subdivision known as **The Benches Subdivision Phase 1**

A tract of land located in the Southwest $\frac{1}{4}$ of the Northeast $\frac{1}{4}$ and the West $\frac{1}{2}$ of the Southeast $\frac{1}{4}$ of Section 16 of Township 30 North, Range 20 West, P.M.M., Flathead County, Montana as found in the records of the Flathead County Clerk & Recorder,

consisting of thirty-two (32) lots have been reviewed by personnel of the Water Quality Division, and,

THAT the documents and data required by ARM Chapter 17 Section 36 have been submitted and found to be in compliance therewith, and,

THAT the approval of the plat is made with the understanding that the following conditions shall be met:

THAT the Lot sizes as indicated on the plat to be filed with the county clerk and recorder will not be further altered without approval, and,

THAT Lots 2, 3, 17 through 32, and 42 through 49 shall be used for one living unit with up to five ~~four (4)~~ bedrooms, and,

THAT Lot 1 shall be used for one living unit with up to ten (10) bedrooms, and,

THAT Common Area B will be used for the public water supply wells, and,

THAT Common Area C shall be used for the individual drainfield for Lot 1, and,

THAT Common Area A, D and E are not approved for structures that require water, wastewater or stormwater facilities, and,

THAT water supply to the lots shall be through individual connections to the Benches Subdivision Public Water Supply (PWS ID MT0005069), and,

THAT the public water supply wells were reviewed and approved under EQ #20-1171, and,

THAT the public water main extensions were reviewed and approved under EQ #20-2334, and,

Page 2 of 7
The Benches Subdivision Phase 1
Flathead County, Montana
E.Q. # 20-2332

THAT each individual sewage treatment system will consist of a septic tank, effluent filter, dose tank and pressure-dosed subsurface drainfield of such size and description as will comply with Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM and the most current standards of the Department of Environmental Quality, and,

THAT the pressure-dosed subsurface drainfield for Lot 1 will be located via easement on 'Common Area C'

THAT the pressure-dosed subsurface drainfield for Lot 1 shall have an absorption area of sufficient size to provide for an application rate of 0.6 gpd/square foot and,

THAT the pressure-dosed subsurface drainfield for Lots 2, 3, 17 through 26, 31, 32, and 42 through 49 shall have an absorption area of sufficient size to provide for an application rate of 0.6 gpd/square foot and,

THAT the pressure-dosed subsurface drainfield for Lots 27 through 30 all have an absorption area of sufficient size to provide for an application rate of 0.4 gpd/square foot and,

THAT the bottom of the infiltrative trenches on Lots 23 and 24 shall be 36 inches below ground surface, and,

THAT the bottom of the drainfield shall be at least four feet above the water table, and,

THAT no sewage treatment system shall be constructed within 100 feet of the maximum highwater level of a 100-year flood of any stream, lake, watercourse, or irrigation ditch, nor within 100 feet of any domestic water supply source, and,

THAT storm drainage facilities shall be constructed as shown on the lot layout, signed and stamped by Robert Smith, Montana Professional Engineer Number 12592 PE, and approved under EQ #20-2334, and,

THAT the operation and maintenance of water supply, sewage treatment system, and stormwater facilities shall be the responsibility of each lot owner, and,

THAT water supply systems, sewage treatment systems and storm drainage systems will be located as shown on the approved plans, and,

THAT the developer and/or owner of record shall provide each purchaser of property with a copy of the Plat, approved location of water supply, sewage treatment system and storm drainage structures as shown on the attached lot layout, and a copy of this document, and,

THAT instruments of transfer for this property shall contain reference to these conditions, and,

THAT plans and specifications for any proposed sewage treatment systems will be reviewed and approved by the county health department and will comply with local regulations and ARM, Title 17, Chapter 36, Subchapters 3 and 9, before construction is started.

Page 3 of 7
The Benches Subdivision Phase 1
Flathead County, Montana
E.Q. # 20-2332

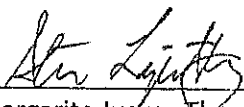
THAT departure from any criteria set forth in the approved plans and specifications and Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM when erecting a structure and appurtenant facilities in said subdivision without Department approval, is grounds for injunction by the Department of Environmental Quality.

Pursuant to Section 76-4-122 (2)(a), MCA, a person must obtain the approval of both the State under Title 76, Chapter 4, MCA, and local board of health under section 50-2-116(1)(i), before filing a subdivision plat with the county clerk and recorder.

YOU ARE REQUESTED to record this certificate by attaching it to the Plat filed in your office as required by law.

DATED this 20th of January 2021. Corrected this 30th day of June 2021.

Chris Dorrington,
DIRECTOR

By: 
FOR: Margarite Juarez Thomas, Supervisor
Public Water & Subdivision Section
Engineering Bureau
Water Quality Division
Department of Environmental Quality

Owner's Name: Prairie Dog Development LLC

Page 1 of 7
The Benches Subdivision Phase 2
Flathead County, Montana
E.Q. # 20-2333

STATE OF MONTANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF SUBDIVISION PLAT APPROVAL
(Section 76-4-101 et seq.)

TO: County Clerk and Recorder
Flathead County
Kalispell, Montana

E.Q. #20-2333
Corrected

THIS IS TO CERTIFY THAT the plans and supplemental information relating to the subdivision known as **The Benches Subdivision Phase 2**

A tract of land located in the Southwest $\frac{1}{4}$ of the Northeast $\frac{1}{4}$ and the West $\frac{1}{2}$ of the Southeast $\frac{1}{4}$ of Section 16 of Township 30 North, Range 20 West, P.M.M., Flathead County, Montana as found in the records of the Flathead County Clerk & Recorder,

consisting of twenty-two (22) lots have been reviewed by personnel of the Water Quality Division, and,

THAT the documents and data required by ARM Chapter 17 Section 36 have been submitted and found to be in compliance therewith, and,

THAT the approval of the plat is made with the understanding that the following conditions shall be met:

THAT the Lot sizes as indicated on the plat to be filed with the county clerk and recorder will not be further altered without approval, and,

THAT Lots 4 through 16 and Lots 33 through 41 shall be used for one living unit with up to five (5) ~~four (4)~~ bedrooms, and,

THAT water supply to the lots shall be through individual connections to the Benches Subdivision Public Water Supply (PWS ID MT0005069), and,

THAT the public water supply wells were reviewed and approved under EQ #20-1171, and,

THAT the public water main extensions were reviewed and approved under EQ #20-2334, and,

THAT each individual sewage treatment system will consist of a septic tank, effluent filter, dose tank and pressure-dosed subsurface drainfield of such size and description as will comply with Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM and the most current standards of the Department of Environmental Quality, and,

Page 2 of 7
The Benches Subdivision Phase 2
Flathead County, Montana
E.Q. # 20-2333

THAT the pressure-dosed subsurface drainfields shall have an absorption area of sufficient size to provide for an application rate of 0.6 gpd/square foot and,

THAT the bottom of the infiltrative trenches on Lots 40 and 41 shall be 36 inches below ground surface, and,

THAT the bottom of the drainfield shall be at least four feet above the water table, and,

THAT no sewage treatment system shall be constructed within 100 feet of the maximum highwater level of a 100-year flood of any stream, lake, watercourse, or irrigation ditch, nor within 100 feet of any domestic water supply source, and,

THAT storm drainage facilities shall be constructed as shown on the lot layout, signed and stamped by Robert Smith, Montana Professional Engineer Number 12592 PE, and approved under EQ #20-2334, and,

THAT the operation and maintenance of water supply, sewage treatment system, and stormwater facilities shall be the responsibility of each lot owner, and,

THAT water supply systems, sewage treatment systems and storm drainage systems will be located as shown on the approved plans, and,

THAT the developer and/or owner of record shall provide each purchaser of property with a copy of the Plat, approved location of water supply, sewage treatment system and storm drainage structures as shown on the attached lot layout, and a copy of this document, and,

THAT instruments of transfer for this property shall contain reference to these conditions, and,

THAT plans and specifications for any proposed sewage treatment systems will be reviewed and approved by the county health department and will comply with local regulations and ARM, Title 17, Chapter 36, Subchapters 3 and 9, before construction is started.

THAT departure from any criteria set forth in the approved plans and specifications and Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM when erecting a structure and appurtenant facilities in said subdivision without Department approval, is grounds for injunction by the Department of Environmental Quality.

Pursuant to Section 76-4-122 (2)(a), MCA, a person must obtain the approval of both the State under Title 76, Chapter 4, MCA, and local board of health under section 50-2-116(1)(i), before filing a subdivision plat with the county clerk and recorder.

Page 3 of 7
The Benches Subdivision Phase 2
Flathead County, Montana
E.Q. # 20-2333

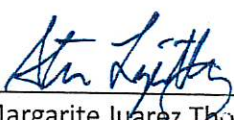
YOU ARE REQUESTED to record this certificate by attaching it to the Plat filed in your office as required by law.

DATED this 20th day of January 2021. Corrected this 30th day of June 2021.

Chris Dorrington,
DIRECTOR

By:

For:


Margarite Juarez Thomas, Supervisor
Public Water & Subdivision Section
Engineering Bureau
Water Quality Division
Department of Environmental Quality

Owner's Name: Prairie Dog Development LLC

STATE OF MONTANA
DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
1424 9TH AVENUE P.O.BOX 201601 HELENA, MONTANA 59620-1601

GENERAL ABSTRACT

Water Right Number: 76LJ 30148753 PROVISIONAL PERMIT
Version: 1 -- ORIGINAL RIGHT

Version Status: ACTIVE

Owners: SIDERIUS CONSTRUCTION LLP
737 EGAN RD
KALISPELL, MT 59901-7826

Priority Date: APRIL 15, 2020 at 01:07 P.M.

Enforceable Priority Date: APRIL 15, 2020 at 01:07 P.M.

Purpose (use): MULTIPLE DOMESTIC
LAWN AND GARDEN

Maximum Flow Rate: 300.00 GPM

Maximum Volume: 82.21 AC-FT

Maximum Acres: 25.70

Source Name: GROUNDWATER

Source Type: GROUNDWATER

Point of Diversion and Means of Diversion:

<u>ID</u>	<u>Govt Lot</u>	<u>Qtr</u>	<u>Sec</u>	<u>Twp</u>	<u>Rge</u>	<u>County</u>
1		SWNWSE	16	30N	20W	FLATHEAD

Period of Diversion: JANUARY 1 TO DECEMBER 31

Diversion Means: WELL

Well Depth: 227.00 FEET

Static Water Level: 51.00 FEET

2		SWNWSE	16	30N	20W	FLATHEAD
---	--	--------	----	-----	-----	----------

Period of Diversion: JANUARY 1 TO DECEMBER 31

Diversion Means: WELL

Well Depth: 227.00 FEET

Static Water Level: 51.00 FEET

Purpose (Use): MULTIPLE DOMESTIC

Households: 50

Volume: 27.86 AC-FT

Period of Use: JANUARY 1 to DECEMBER 31

Place of Use:

<u>ID</u>	<u>Acres</u>	<u>Govt Lot</u>	<u>Qtr</u>	<u>Sec</u>	<u>Twp</u>	<u>Rge</u>	<u>County</u>
1			W2SE	16	30N	20W	FLATHEAD

Purpose (Use): LAWN AND GARDEN

Volume: 54.35 AC-FT

Period of Use: APRIL 20 to OCTOBER 10

Place of Use:

<u>ID</u>	<u>Acres</u>	<u>Govt Lot</u>	<u>Qtr</u>	<u>Sec</u>	<u>Twp</u>	<u>Rge</u>	<u>County</u>
1	25.70		W2SE	16	30N	20W	FLATHEAD

Total: 25.70

Geocodes/Valid: 07-4186-16-4-02-01-0000 - Y

Remarks:

Remarks:

CLARK FORK RIVER BASIN LAW

THIS PROVISIONAL WATER USE PERMIT HAS A PRIORITY DATE THAT IS JUNIOR TO THE RIGHTS OF SENIOR WATER RIGHT HOLDERS IN THE CLARK FORK RIVER BASIN. IN ACCORDANCE WITH MONTANA LAW, YOU MAY BE SUBJECT TO A CALL BY SENIOR WATER RIGHT HOLDERS, IN WHICH CASE YOU MAY BE REQUIRED TO DISCONTINUE YOUR USE OF WATER FOR THE PERIOD OF THE CALL.

CONFEDERATED SALISH AND KOOTENAI TRIBES - RESERVED WATER RIGHTS

THIS RIGHT IS SUBJECT TO ALL PRIOR INDIAN RESERVED WATER RIGHTS OF THE CONFEDERATED SALISH AND KOOTENAI TRIBES IN THE SOURCE OF SUPPLY. IT IS THE TRIBE'S POSITION THAT THE EXERCISE OF JUNIOR WATER RIGHTS EITHER WITHIN OR OUTSIDE OF THE EXTERIOR BOUNDARIES OF THE FLATHEAD INDIAN RESERVATION MAY AFFECT THE RESERVED WATER RIGHTS OF THE TRIBE WITHIN THE EXTERIOR BOUNDARIES OF THE RESERVATION. IT IS THE TRIBE'S POSITION THAT ECONOMIC INVESTMENTS MADE IN RELIANCE UPON THIS RIGHT DO NOT CREATE IN THE APPROPRIATOR ANY EQUITY OR VESTED RIGHT AGAINST THE TRIBES. THE APPROPRIATOR IS HEREBY NOTIFIED THAT ANY FINANCIAL OUTLAY OR WORK INVESTED IN A PROJECT PURSUANT TO THIS RIGHT IS AT APPROPRIATOR'S RISK. THE ISSUANCE OF THIS RIGHT DOES NOT REDUCE THE APPROPRIATOR'S LIABILITY FOR DAMAGE CAUSED BY THE EXERCISE OF THE RIGHT. IT DOES NOT MAKE THE DEPARTMENT LIABLE FOR DAMAGE CAUSED BY THE EXERCISE OF THE RIGHT. NOR IS THE DEPARTMENT LIABLE FOR ANY LOSS TO THE APPROPRIATOR CAUSED BY THE EXERCISE OF SENIOR RESERVED WATER RIGHTS.

WATER MEASUREMENT INFORMATION

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED IN-LINE FLOW METER AT A POINT IN THE DELIVERY LINE APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN MONTHLY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY JANUARY 31 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR UNTIL PROJECT COMPLETION. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF A PERMIT OR CHANGE. THE RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY

OWNERSHIP UPDATE RECEIVED

OWNERSHIP UPDATE TYPE 608 # 216934 RECEIVED 04/19/2021.



A2Z Engineering, PLLC • 138 East Center Street • Kalispell, MT 59901
 Phone: (406) 755-7888 • Fax: (406) 755-7880 • www.a2z-engineering.com

October 1, 2021

MDEQ PWS & Subd Bureau
 PO Box 200901
 Helena, MT 59620-0901

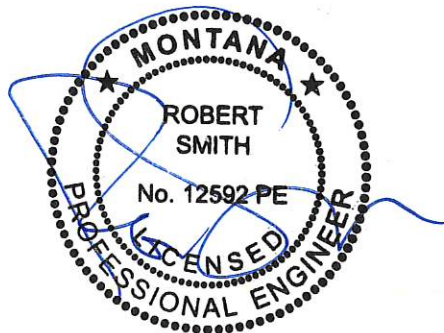
Re: The Benches Subdivision, Phase 1 & 2
 EQ# 20-2332, EQ# 20-2333, EQ# 20-2334
 As-built Plan Submission

This letter and the enclosed plans are submitted to your agency in accordance with the State of Montana's ARM section 17.38.101(13) and 17.38.101(14), which states:

17.38.101(13) A person may not commence or continue the operation of a public water supply or public sewage system, or any portion of such system, prior to certifying by letter to the department or a delegated division of local government that the system, or portion of the system constructed, altered, or extended to that date, was completed in substantial accordance with plans and specifications approved by the department and there are no deviations from the design standards of the applicable circulars other than those previously approved by the department pursuant to ARM 17.38.101. For a system or any portion of a system designed by a professional engineer, an engineer shall sign and submit the certification letter to the department or a delegated division of local government.

17.38.101(14) Within 90 days after the completion of construction, alteration, or extension of a public water supply or wastewater system, or any portion of such system, a complete set of certified "as-built" drawings must be signed and submitted to the department or a delegated division of local government. The department may require that the "as-built" submittal be accompanied by an operation and maintenance manual. For a system or any portion of a system designed by a professional engineer, the engineer shall sign and submit the certified "as-built" drawings to the department or a delegated division of local government.

As an engineer licensed by the State of Montana (PE#12592), I hereby certify that the Public Water Supply System was completed in accordance with the plans and specifications approved by the department and there were no deviations from the design standards other than those previously approved by the Department.



10-1-2021



PLATTING CONDITION #14

See on the following pages the information from the geotechnical engineer.



October 7, 2021

Siderius Construction, LLP
737 Egan Road
Kalispell, MT, 59901

**Subject: Geotechnical Investigation
 The Benches Development
 Columbia Falls, Montana
 Job No. 21-457**

Dear Mr. Doug Siderius,

At your request, Slopeside Engineering, LLC (Slopeside) has conducted a geotechnical investigation for the The Benches Development in Kalispell, Montana. The Vicinity Map, Figure 1, shows the general location of the site. The investigation was conducted to evaluate subsurface materials, observe conditions at the site, and develop recommendations for site preparation, earthwork, general foundation guidelines, concrete flatwork, asphaltic concrete pavement (AC) sections, and utility trench construction. In addition, slope stability assessments and recommendations for construction near and on slopes are provided. The investigation included a review of existing subsurface information for the site vicinity, subsurface explorations, and engineering analyses. This report summarizes the work accomplished and provides a written document of previously provided verbal conclusions and recommendations for use in the design and construction of the site development phase of this project. Slopeside has strived to perform the investigation and develop recommendations in a manner consistent with the degree of care that is presently standard to the geotechnical engineering profession.

PROJECT DESCRIPTION

The project site is located east of the Flathead River, west of MT Hwy 206, and south of US



slopesideeng@gmail.com

406-270-3480

*181 Deerfoot Trail
Kalispell, MT, 59901*

Hwy 2, on the east side of Columbia Falls, Montana. We understand the planned development will consist of numerous residential lots throughout the site. We anticipate site improvements will consist of site grading, construction of utilities, construction of asphaltic concrete paved roadways and concrete sidewalks, and the creation of numerous residential building lots. The planned site layout is located on Figure 2, Site Plan. Based on our understanding, the majority of the property development is planned for the middle relatively flat benches of the property; however, roadways and Lot 1 will be constructed in the low lying area near US Hwy 2.

SITE DESCRIPTION

General

The project site is located east of Columbia Falls. The site is bordered by agricultural fields to the west and east, US Hwy 2 to the north, and Rogers Drive to the south. Some residential development also surrounds the property. Past development of the site is minimal, consisting mostly of minor site grading and some access road construction. The property remains largely undisturbed and portions of the property has been used as pasture. The steep slopes are vegetated with evergreen trees, deciduous trees, underbrush, and grasses. The low lying areas on the north quarter of the property contain wet areas with cat tails and grasses.

Seeps and springs were not observed at the ground surface within the planned development area; however, established drainage and wet marshy areas are present in some portions of the north part of the property.

Topography

A geologic reconnaissance of the site indicates minor surficial creep and erosion has periodically occurred in the vicinity of the steep slopes, as is typical for steep slopes in cohesionless soils. Recent signs of slope instability were not observed. Site observations indicate the majority of the planned lots will be relatively flat with only the access roads crossing the steep slopes. The steep slopes are present along the north quarter of the property and the south quarter. The steep areas slope downward to the north at average slopes of about 2H:1V. Observations of the steeper terrain indicate consistent uniform slopes. Seeps and springs were not observed outside of the low lying area on the north end of the site.

Geology

The project site lies in the Rocky Mountain Trench bounded by the Salish Mountains to the West and the Swan Range to the East. The trench was traversed by the Flathead Glacier and was covered by substantial areas of glacial lakes during recession of the ice mass. The surficial geology of the area consists of alluvial river gravels and sands deposited during the migration of the Flathead River. These soils are present for extensive depths and are underlain by Precambrian bedrock.

SUBSURFACE CONDITIONS

General

Subsurface materials and conditions at the site were investigated on August 12 and 13, 2020 with ten borings, designated B-1 through B-10. The borings were drilled in areas of large slopes, low lying wet areas, and areas of planned large cuts and fills. The borings were advanced to depths

of 5.3 to 50.3 ft below the ground surface. The approximate locations of the subsurface explorations are shown on Figure 2. A detailed discussion of the field exploration and laboratory testing programs completed for this investigation are provided in Appendix A. Logs of the borings are provided in Appendix A on Figures 1A through 10A.

Soils

Typical soils observed at the ground surface consist of silt with varying percentages of sand over sand with varying percentages of gravel, cobbles and boulders, and/or gravel with varying percentages of sand, cobbles and boulders. Fill was encountered in Boring B-1, located on the access road in the vicinity of a low wet area. For the purpose of discussion, the materials and soils disclosed by the subsurface investigation have been grouped into the following categories:

- 1. TOPSOIL and FILL**
- 2. SILT and Silty CLAY**
- 3. Poorly Graded SAND**
- 4. Poorly Graded GRAVEL**

1. TOPSOIL and FILL. All explorations advanced for this project encountered topsoil or fill material at the ground surface. Borings B-1 through B-4, and B-6 through B-10 encountered topsoil comprised of silt with varying percentages of sand and abundant organics at the ground surface. The topsoil ranges from 6 to 15 inches thick, with an average thickness of about 10 inches. Fill material comprised of $\frac{3}{4}$ inch minus base course and 3 inch minus subbase was encountered at the ground surface in Boring B-5. The gravel fill extends to a depth of 12 inches and is underlain by fill comprised of silt with brown and dark brown inclusions. Standard penetration test (SPT) blow counts of 8 to 29 blows per ft indicate the fill material is medium stiff and medium dense. Moisture contents of the fill range from 6 to 19 percent of the soil's dry weight. Moisture contents of the topsoil range from 10 to 23 percent. The topsoil and fill are underlain by silt, silty clay, sand, or gravel at depths of 6 inches to 6 ft below the ground surface.

2. SILT and Silty CLAY. Borings B-2 through B-4, B-6, and B-8, encountered silt or silty clay below the topsoil. The silt and silty clay are typically light brown to gray, and tends to have rust colored mottling in the low lying areas. Depending on the location, the silt and silty clay is moist to wet, and contains varying percentages of fine grained sand. The sand percentages in the silt tend to increase with depth and can vary significantly across the site. Silt layers were also encountered at deeper depths in Borings B-5, B-6, B-8, and B-9, at depths of 13 to 40 ft. Based on Standard Penetration Test (SPT) blow counts of 8 to 62, it appears the silt soils are medium stiff to hard. The soils encountered at deeper depths are typically stiff to hard. Moisture contents range from 5 to 25 percent in the upper silt and silty clay layers, and from 20 to 30 percent in the lower silt layer. All borings that encountered the upper layer of silt or silty clay encountered sand or gravel soils at depths of 2.0 to 8.8 ft below the ground surface. Borings B-5, B-6, B-8, and B-9 were all terminated in the lower silt layer at depths of 20.3 to 50.3 ft.

3. Poorly Graded SAND. Poorly graded sand with varying percentages of silt was encountered in Borings B-1, B-5, and B-6, at 1.3, 6.0, and 4.5 ft, respectively. The sand soils are typically poorly

graded, and fine to medium grained sand. The sand is generally loose to medium dense, based on SPT blow counts of 5 to 17. Moisture contents of the sand soils range from 12 to 28 percent of the soil's dry weight and vary significantly depending on the groundwater level. The sand layers in Borings B-1, B-5, and B-6 extend to depths of 8.8 to 13.0 ft and is underlain by silt or gravel.

4. Poorly Graded GRAVEL. Poorly graded gravel with varying percentages of sand, cobbles and boulders was encountered in Borings B-1 through B-4, and B-6 through B-10. The gravel was encountered at varying depths ranging from 0.5 to 12.5 ft below the ground surface. Based on SPT blow counts of 14 blows per ft to 50 blows for 2 inches, the gravel soils appear medium dense to very dense. The gravel is fine to coarse and subround to round. The gravel soils typically contain minor amounts of silt and are damp unless encountered below the ground water table, where the gravel is wet. Borings B-6, B-8, and B-9 encountered silt below the gravel layer at depths of 13.8 to 40 ft below the ground surface. Borings B-1 through B-4, B-7, and B-10 were all terminated in the gravel soils at depths of 5.3 to 20.3 ft.

Groundwater

Groundwater was observed at varying depths across the site. In the low lying area in the north quarter, groundwater was observed at the ground surface in some areas, and ranged from 1.5 to 8.0 ft below the ground surface in Borings B-1 through B-5. Groundwater was encountered between 14 and 24 ft in Borings B-6 and B-8 on the middle bench, and at 49 ft in Boring B-9, on the upper bench. It should be noted that seasonal seepage due to rainfall, snowmelt, and other factors are likely to occur randomly above the measured water levels. Numerous other factors may contribute to groundwater fluctuations and occurrence of seepage; evaluation of these factors requires special study that is beyond the scope of this report.

ENGINEERING ANALYSIS

General

Based on discussions with the project team at the time of this investigation, we understand the development will consist of multiple phases to construct residential lots. Access to the lots will be provided by AC paved roadways. Underground utilities will provide services to the constructed lots.

Site Preparation

The soils encountered at the ground surface in the vicinity of the planned improvements consist of topsoil underlain by silt, silty clay, sand, and gravel. Site stripping will need to be conducted in all planned development areas. We anticipate the topsoil and rooted zones will vary between 6 inches and 15 inches in most areas. Larger topsoil thicknesses may be present in low lying areas at the toes of slopes and in drainage swales. We anticipate an average stripping thickness of about 10 inches for this site. In addition, existing fill material shall be removed down to firm native soils and brought back to subgrade elevation using Structural Fill as described in the Recommendations section of this report.

Many of the soils encountered near the ground surface within the planned site development

area consist primarily of fine-grained moisture-sensitive soils. Based on past experience, the near-surface fine-grained soils encountered during this investigation have little cohesion. As a result, these soils can be easily disturbed and strength diminished during construction if in-situ moisture contents are greater than the optimum moisture content for compaction. This is of particular concern during the seasonally wet times of the year when seepage or surface water is allowed to pond and infiltrate. Therefore, positive site drainage is of critical importance to both construction and long-term performance of the proposed improvements. Based on our experience in the project vicinity and observations during the subsurface investigation, we anticipate groundwater depths will be greater than 14 ft below the ground surface at most locations, and will likely be below the planned excavation limits and utility construction. However, the groundwater level in the north quarter of the site will be near the ground surface and will likely be encountered during the installation of subsurface utilities in that portion of the project.

Earthwork

We understand it is desirable to use on-site soils for the construction of Structural Fill. Near surface, on-site soils consist primarily of silt, sand and gravel. With the exception of topsoil, all soils encountered during this investigation are suitable for Structural Fill construction as long as the soils are free of organics, deleterious materials, and cobbles or boulders larger than 6 inches. Compaction of Structural Fill shall be accomplished when moisture contents are within 3 percent of the optimum moisture content as determined by ASTM D698. Observations revealed that in most areas, the in situ soils are typically near or dry of the optimum moisture content as determined by ASTM D698, indicating water will likely need to be added to these soils and the soils will need to be moisture conditioned prior to compaction. In the event that the natural moisture contents of the in situ soils are greater than the optimum moisture content as determined by ASTM D698, the soils will need to be moisture conditioned by drying methods to approach the optimum moisture content. Construction of Structural Fill during relatively wet weather or when temperatures are below freezing (including nightly low temperatures), will significantly reduce the efficiency of earthwork operations. Limiting mass grading to the relatively dry and warm late spring, summer or early fall months will reduce the likelihood of weather affecting construction operations.

Foundation Design

Shallow foundations for typical residential structures shall be established in the native, stiff to very stiff fine grained soils, compacted Structural Fill, sand, or gravel. Assuming Slopeside's recommendations are followed, we anticipate the site will be suitable for typical residential construction. Depending on planned grading and lot locations, we anticipate below grade spaces are feasible on most lots. Care will be necessary to provide below grade living spaces with proper drainage and protection from moist floors. Construction on Lot 1 in the north quarter of the site is feasible; however, concrete slab on grade floors, with no crawl spaces or basements should be planned for that lot. Slopeside recommends additional Geotechnical Engineering recommendations be provided when more specifics regarding the planned development of Lot 1 are known. Depending on the planned structure and use, deep foundations consisting of helical piers advanced to depths of about 10 to 15 ft, may be necessary to provide appropriate support for the planned structure. However, it is also possible that shallow foundations will be appropriate, and will depend on the structure size, loading, and intended use.

Pavement Analysis

Flexible pavement designs have been conducted using the 1993 edition of the AASHTO Guide to Pavement Design. Local low volume road pavement sections are provided based on the intended use of the paved areas and our experience with similar projects. Local road pavement sections should be used for interior roads at the development. A CBR value of 10 was used to model the subgrade, assuming the subgrade is compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698 and the moisture content is within 3 percent of the optimum moisture content at the time of compaction. The pavement section is presented in the **Recommendations** section of this report.

RECOMMENDATIONS

1.0 General Site Preparation

- 1.1 The removal of topsoil and other organic material, including the clearing and grubbing of surficial vegetation and root zones, should be accomplished within the construction zone prior to any earthwork construction. An average stripping thickness of about 10 inches to remove topsoil and cultivated zones is anticipated across the entire site. Following removal of surface organics, the underlying soils shall be evaluated by a qualified geotechnical engineer for suitability as a subgrade material in all pavement, earthwork, and building areas. Roadway subgrade shall consist of sand or gravel soils, scarified to a depth of 8 inches, and then compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698, and be within 3 percent of the optimum moisture content at the time of compaction.

In areas where fill construction is required across low lying wet areas, Slopeside recommends removal of the near surface organic rich soils. When firm, undisturbed silt soils are encountered, Slopeside recommends fill operations begin with large 6 inch to 24 inch subangular to angular cobbles and boulders. Additional recommendations for constructing road fill over wet areas is provided in the Earthwork section of the Recommendations.

- 1.2 Surface drainage should be established to direct runoff away from the construction area. Ditching and detention/retention ponds with sump pumps may be needed to control the flow of runoff water.
- 1.3 Excavated material or structural fill to be placed as backfill shall not be stockpiled within 100 ft of the crest of the steep slopes separating the various flat benches of the property. Stockpiling soil on or near the steep slopes will add weight to the slope that will reduce the factor of safety against sliding.
- 1.4 In some areas, soils encountered near the ground surface have a relatively high silt percentage. These soils are fine grained, moisture-sensitive soils that are easily disturbed by construction activities and traffic when moisture contents are greater than the optimum moisture content for compaction. In the event moisture contents of the silt soils are greater than the optimum moisture content for compaction, we recommend construction traffic not

travel over the fine grained subgrade soils. In areas where heavy construction traffic is anticipated, haul roads with a minimum gravel thickness of 2 feet should be constructed over the planned subgrade. The gravel shall consist of a well-graded gravel with a maximum size of 3 inches with no more than 7 percent passing the No. 200 sieve. Geotextile fabric placed between the fine-grained soils and gravel for the haul road will reduce the risk of continued maintenance of the haul road during construction. Provided that the haul road is constructed over firm subgrade stripped of organics, it can be used as a portion of the subbase course for the roadways.

- 1.5 The stability of construction excavations and associated worker safety are the responsibility of the contractor in accordance with current OSHA regulations; this responsibility may require design by a registered professional engineer. Based on the predominant soil types encountered during our investigation, temporary construction excavations for dry conditions that are to be planned in accordance with OSHA provisions should assume Type B material conditions for the silt soils, and Type C conditions for the relatively clean sand and gravel soils encountered. Actual subsurface conditions at the time of excavation should be observed by a geotechnical engineer to determine whether slope flattening, bracing or other stabilization is necessary due to seepage or other unexpected conditions.

2.0 Excavation, Earthwork, and Construction Materials

- 2.1 Based on observations during Slopeside's subsurface investigation, we anticipate subgrade soil moisture contents will be at or less than the optimum moisture content for compaction. However, if the moisture contents of subgrade soils are greater than the optimum moisture content as determined by ASTM D698, track-mounted hydraulic excavators should be used to accomplish excavation to subgrade in all Structural Fill, roadway and foundation areas. The use of track-mounted equipment will reduce the risk of disturbing the underlying moisture-sensitive, fine-grained soils. Rubber-tired equipment, including graders and scrapers, used within 2 feet of subgrade elevation will greatly increase the risk of disturbing the underlying subgrade soils when moisture contents are greater than the optimum moisture content for compaction.

- 2.2 Structural Fill constructed within proposed roadways, parking lots, building pads, engineered slopes and all other areas that are settlement sensitive shall be comprised of soils that are free of organics and deleterious materials. All Structural Fill material shall be placed in no greater than 12-inch thick lifts and compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698. In addition, the moisture content of the Structural Fill at the time of compaction shall be within 3 percent of the optimum moisture content as determined by ASTM D698. Cobbles and boulders larger than 6 inch maximum size shall not be used as fill material. Structural Fills shall consist of on-site soils or be from a material source approved by our geotechnical engineer and meet the following composition guidelines:

- The sand and gravel-size particles comprising the fill shall be hard, durable rock materials that will not degrade by moistening or under mechanical action of the

compacting equipment; i.e. not shale or other clayey rock types.

- The binder/fines should have maximum Liquid Limit and Plasticity Index values of 25 and 10 percent, respectively.
- No frozen, organic, or other deleterious materials should be present in the Structural Fill.

- 2.3 In the event that fill operations are planned for the relatively wet fall, winter and spring months, the fill material may need to be comprised of granular Structural Fill free of organics and deleterious materials. All granular Structural Fill material shall be compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698. In addition, the moisture content of the granular Structural Fill at the time of compaction shall be within 3 percent of the optimum moisture content as determined by ASTM D698. Granular Structural Fills shall consist of aggregate from a material source approved by our geotechnical engineer and meet the following gradation and composition guidelines:

Screen or Sieve Size	Percent Passing by Weight
3-inch	100
1½-inch	85-100
No. 4	30-60
No. 200	10 maximum

- The sand and gravel-size particles comprising the fill should be hard, durable rock materials that will not degrade by moistening or under mechanical action of the compacting equipment; i.e. not shale or other clayey rock types.
- The binder/fines should have maximum Liquid Limit and Plasticity Index values of 25 and 10 percent, respectively.
- No frozen, organic, or other deleterious materials should be present in the Structural Fill.

- 2.4 Fill placement should be observed and tested by our geotechnical site representative. Any areas of rutting, excessive deformation, or other non-uniform performance should be moisture conditioned and recompact, or removed and replaced, as recommended by our geotechnical engineer. Structural Fill should not be placed on frozen subgrade material or previously placed Structural Fill or subgrade that has frozen.

- 2.5 Utility trench backfill material should be approved by our geotechnical engineer, be placed in uniform lifts of maximum 8-inch loose thickness, and be compacted to at least 95 percent of the maximum dry density as determined by ASTM D698. In our opinion, on-site silt, sand, and gravel are acceptable for backfill purposes, provided the soils are compacted

within 3 percent of the optimum moisture content and they are free of construction debris, and frozen or deleterious material. Utility trench backfill with on site soils may be a deviation from the City of Columbia Falls Standards and will need to be approved by the Public Works Department in areas within the City's right of way. Cobbles and boulders greater than 4 inch maximum size should not be used as trench backfill material. Backfill should not be placed on frozen subgrade material or previously placed backfill that has frozen. Based on observations during the subsurface investigation, it appears the on site sand soils may be suitable for pipe bedding material. Assuming the sand soils meet the gradation and composition guidelines per the City of Columbia Falls Construction Standards, in our opinion, the sand is a suitable pipe bedding material.

- 2.6 Since it is difficult to compact the surface of fill slopes, we recommend fill slopes be overbuilt by 2 feet and trimmed back after construction to provide a surface that is more resistant to localized sloughing. Following construction of all slopes, topsoil can be placed and "track walked" with an appropriately sized dozer. It is important to vegetate and promote root growth after placement of the topsoil on sand and silt soils to reduce the risk of localized sloughing.
- 2.7 Permanent cut and fill slopes shall be no steeper than 2H:1V in dry areas, and 3H:1V in the vicinity of storm water detention ponds or other areas where periodic inundation with water is anticipated.
- 2.8 Structural Fill constructed on slopes steeper than 5H:1V shall be benched into the existing grade as shown on Figure 1.
- 2.9 In the event fill materials are planned for low lying areas where water is present, Slopeside recommends fill materials from subgrade elevation following site stripping to 1 ft above the water level consist of 6 inch to 24 inch subangular to angular cobbles and boulders. Following filling above the water level, the fill material shall be compacted using vibratory methods until well keyed. Following placement of the large cobble and boulder fill, Slopeside recommends placement of a nonwoven drainage geotextile (Mirafi 140N or equivalent). Over the geotextile, a minimum thickness of 1 ft of Granular Structural Fill shall be placed and compacted. Following compaction of the Granular Structural Fill, typical construction for subgrade or additional fill can resume.
- 3.0 Site Drainage**
 - 3.1 Finished site grades should be positively sloped away from foundation and backfill zones. Upslope grading should be designed and maintained to route runoff away from the building areas.
 - 3.2 Due to the sensitive nature of existing slopes, stormwater, drains, and roof gutters shall not be allowed to outlet on slopes steeper than 3H:1V.

4.0 Asphaltic Concrete Pavement

4.1 In preparation for subbase course, the subgrade shall be scarified to a depth of 8 inches, moisture conditioned, and compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698. In areas where Structural Fill has been previously compacted as part of the Earthwork operations for this project, scarifying and recompacting the subgrade will not be necessary unless the subgrade has previously frozen or is disturbed. Any areas where rutting, yielding, or non-uniform subgrade performance is observed, shall be repaired and improved as recommended by our geotechnical engineer. Compacted sand or gravel is the assumed pavement subgrade material.

4.2 The following flexible pavement thickness design section assumes a 20-year design period, and are consistent with low volume local roadways with a minimum subgrade CBR value of 10. The pavement section assumes construction procedures and material requirements as outlined in the *Montana Public Works Standard Specifications, Sixth Edition, 2010*, are followed.

Pavement Component	Local Street
Asphaltic Concrete Pavement	3 in.
$\frac{3}{4}$ -inch minus or $1\frac{1}{2}$ Crushed Base Course	10 in.

5.0 Exterior Concrete Flatwork

5.1 Concrete flatwork that is allowed to move independently, such as sidewalks, typically have minimal damage of the concrete due to frost heave. As long as the concrete is allowed to raise and lower without being fixed at the edges, minimal cracking due to frost heave is anticipated.

5.2 To reduce the risk of frost heave occurring within the limits of the exterior concrete flatwork and affecting entryways and fixed concrete slabs, Slopeside recommends a combination of reducing water infiltration and removing some of the frost susceptible soils. Slopeside recommends reducing the amount of surface water infiltrating into the ground by collecting roof water in gutters and hard piping the runoff to an acceptable outlet approved by the Civil Engineer. Slopeside also recommends the frost susceptible subgrade soils be overexcavated to a depth of about 2 ft below the bottom of concrete elevation and backfilled with at least 18 inches of Structural Fill consisting of 3 inch minus "pit run" gravel with no more than 5 percent passing the No. 200 sieve, and compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698. The upper 6 inches of base material below the concrete should consist of $\frac{1}{4}$ inch to 1 inch open-graded angular drain rock. The drain rock shall be compacted using vibratory methods until well-keyed, and positive drainage shall be provided to allow water to exit from the open graded gravel.

6.0 Construction Services and Quality Control

- 6.1 Geotechnical observation should be provided to monitor the site preparation, earthwork, and AC pavement stages of construction. These geotechnical services should ascertain that subsurface conditions are reasonably consistent with those determined by our investigation, and should ascertain that site and subgrade preparation are consistent with our recommendations. This is of critical importance due to the location of the improvements in relationship to the existing slopes.

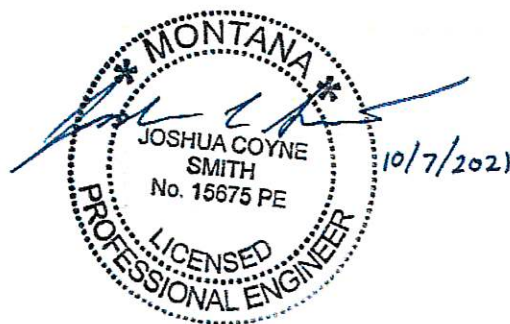
CONCLUSION

The foregoing recommendations present our initial geotechnical input for design and construction of the project. In order for these recommendations to be properly incorporated in the subsequent design and construction stages we recommend that our geotechnical engineering staff remain involved with the project to ascertain that our recommendations have been properly interpreted both during design and construction. These services will reduce the potential for misinterpretation of subsurface conditions and geotechnical design recommendations that are important in the preparation of project plans, specifications and bid documents.

LIMITATIONS

Slopeside Engineering, LLC, has strived to prepare this report in accordance with generally accepted geotechnical engineering practices in this area solely for use by the client for design purposes and is not intended as a construction or bid document representing subsurface conditions in their entirety. The conclusions and recommendations presented are based upon the data obtained during the investigation as applied to the proposed design and construction details discussed in this report. The nature and extent of variations between the subsurface explorations may not become evident until construction. If variations are then exposed, it will be necessary to reevaluate the recommendations of this report.

Sincerely,



Joshua C. Smith, P.E.
Principal Geotechnical Engineer



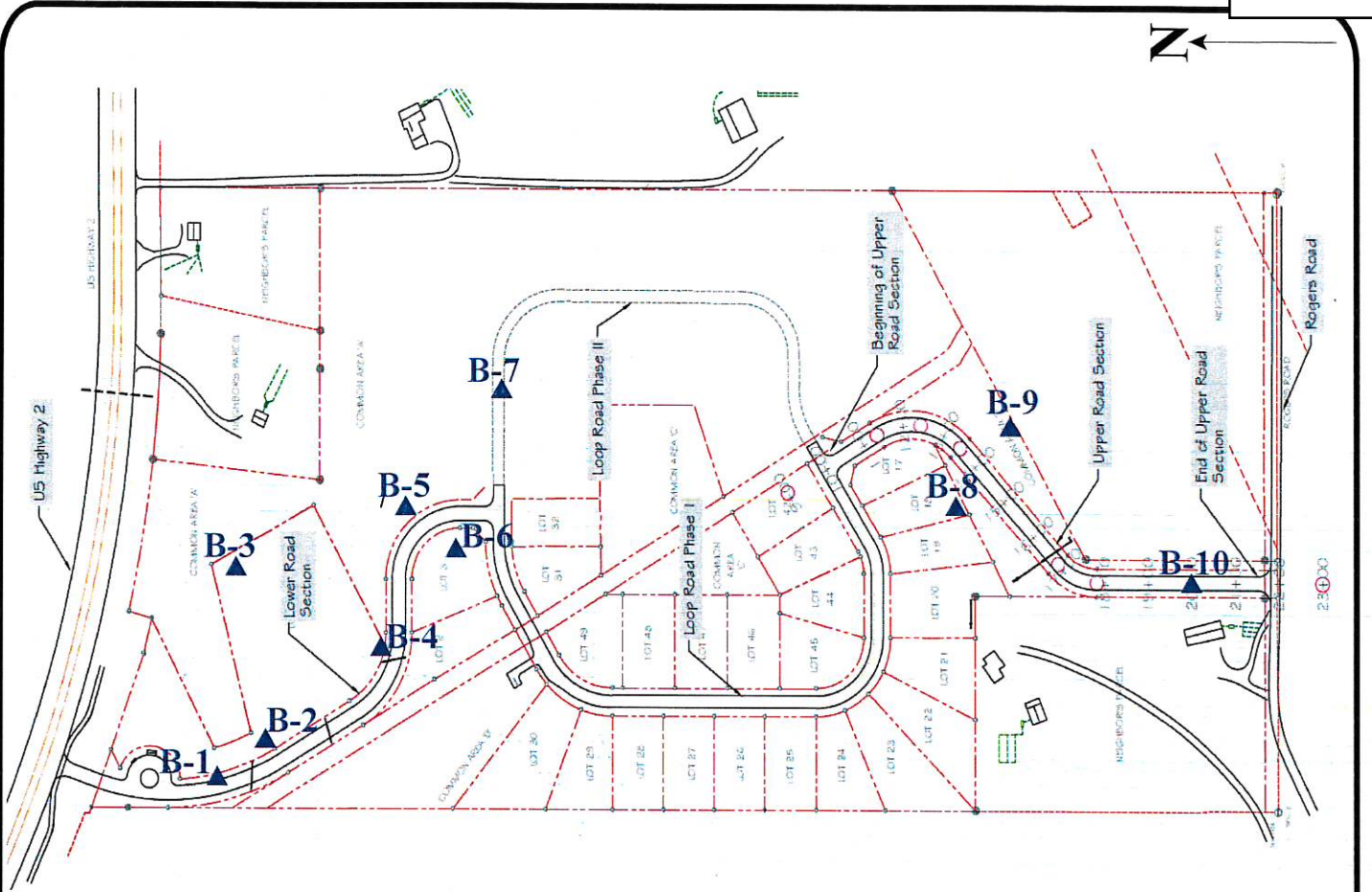
Project: The Benches Development
Columbia Falls, Montana

Job Number:
Date:

21-457
October 5, 2021

Vicinity Map
Slopeside Engineering, LLC
Kalispell, MT
FIGURE 1





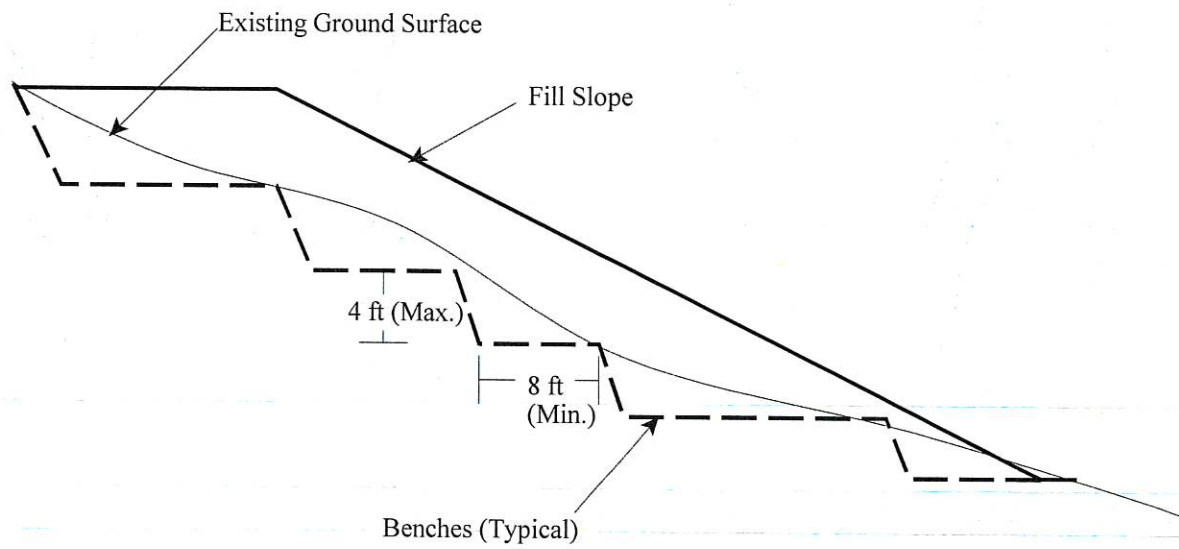
Project: The Benches Development
Columbia Falls, Montana

Job Number: 21-457
Date: October 5, 2021

Site Plan
Slopeside Engineering, LLC
Kalispell, MT
FIGURE 2



Benching Detail for Fill Slopes



No Scale Intended

Project: The Benches Development
Columbia Falls, Montana

Job Number:
Date:

21-457
October 5, 2021

Benching Detail for Fill Slopes
Slopeside Engineering, LLC
Kalispell, MT
Figure 1



APPENDIX A

Field Explorations and Laboratory Testing

FIELD EXPLORATIONS AND LABORATORY TESTING

FIELD EXPLORATIONS

General

The subsurface materials and conditions at the site were investigated by Slopeside on August 12 and 13, 2020, with ten borings designated B-1 through B-10. The locations of the subsurface explorations are shown on the Site Plan, Figure 2. All field explorations were observed by an experienced engineer or geologist provided by our firm, who maintained a detailed log of the materials disclosed during the course of the work. The following subsections contain a detailed description of the field investigation completed for this project.

Borings

Borings B-1 through B-10 were completed to depths of 5.3 to 50.3 ft. The borings were drilled with hollow-stem auger techniques using a truck-mounted Mobile B61 drill rig provided and operated by Crowley Environmental Drilling of Butte, Montana. Disturbed samples were obtained from the borings at 2.5- to 5-ft intervals of depth. Disturbed samples were obtained using a standard split-spoon sampler and undisturbed samples were obtained using a thin-walled Shelby-tube sampler when deemed appropriate. At the time of sampling, the Standard Penetration Test (SPT) was conducted. This test consists of driving a standard split-spoon sampler into the soil a distance of 18 in. using a 140-lb hammer dropped 30 in. The number of blows required to drive the sampler the last 12 in. is known as the Standard Penetration Resistance, or N-value. The N-values provide a measure of the relative density of granular soils, such as sand, and the relative consistency or stiffness of cohesive soils, such as silt and clay. The soil samples obtained in the split-spoon sampler were carefully examined in the field, and representative portions were saved in airtight plastic bags for further examination and physical testing in our laboratory. Logs of the borings are provided on Figures 1A through 10A. Each log presents a descriptive summary of the various types of materials encountered and notes the depth where the materials and/or characteristics of the materials change. To the left of the descriptive summary, the numbers and types of samples taken during drilling operations are indicated. To the right, N-values are shown graphically, along with the natural moisture contents, Atterberg Limits, and Torvane shear strength values.

LABORATORY TESTING

General

All samples obtained from the subsurface explorations were returned to our laboratory or taken to a local laboratory where the physical characteristics of the samples were noted, and field classifications were modified where necessary. The laboratory testing program consisted of natural moisture contents.

Natural Moisture Content

Natural moisture content determinations were made in conformance with ASTM D2216.



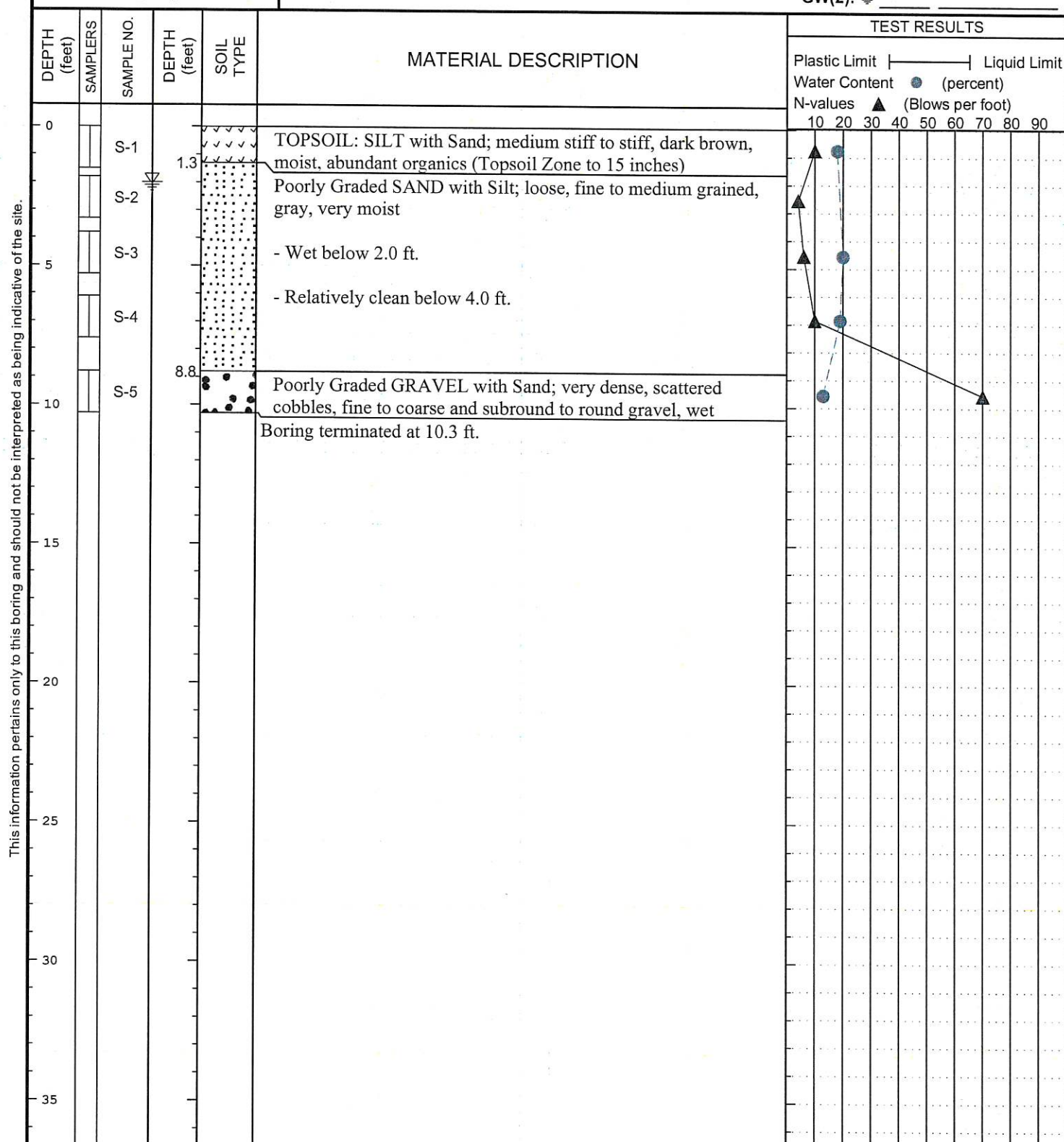
BORING LOG B-1

PROJECT: The Benches DevelopmentCLIENT: Siderius Construction, LLPLOCATION: See Site PlanSUBCONTRACTOR: Crowley Environmental DrillingMETHOD: Mobile B-61 Hollow stem augerPROJECT NO.: 21-457DATE: August 12, 2020

ELEVATION: _____

LOGGED BY: Joshua SmithGW: 2.0 8/12/2020

GW(2): _____



Groundwater encountered at 2.0 ft below the ground surface.

Figure 1A



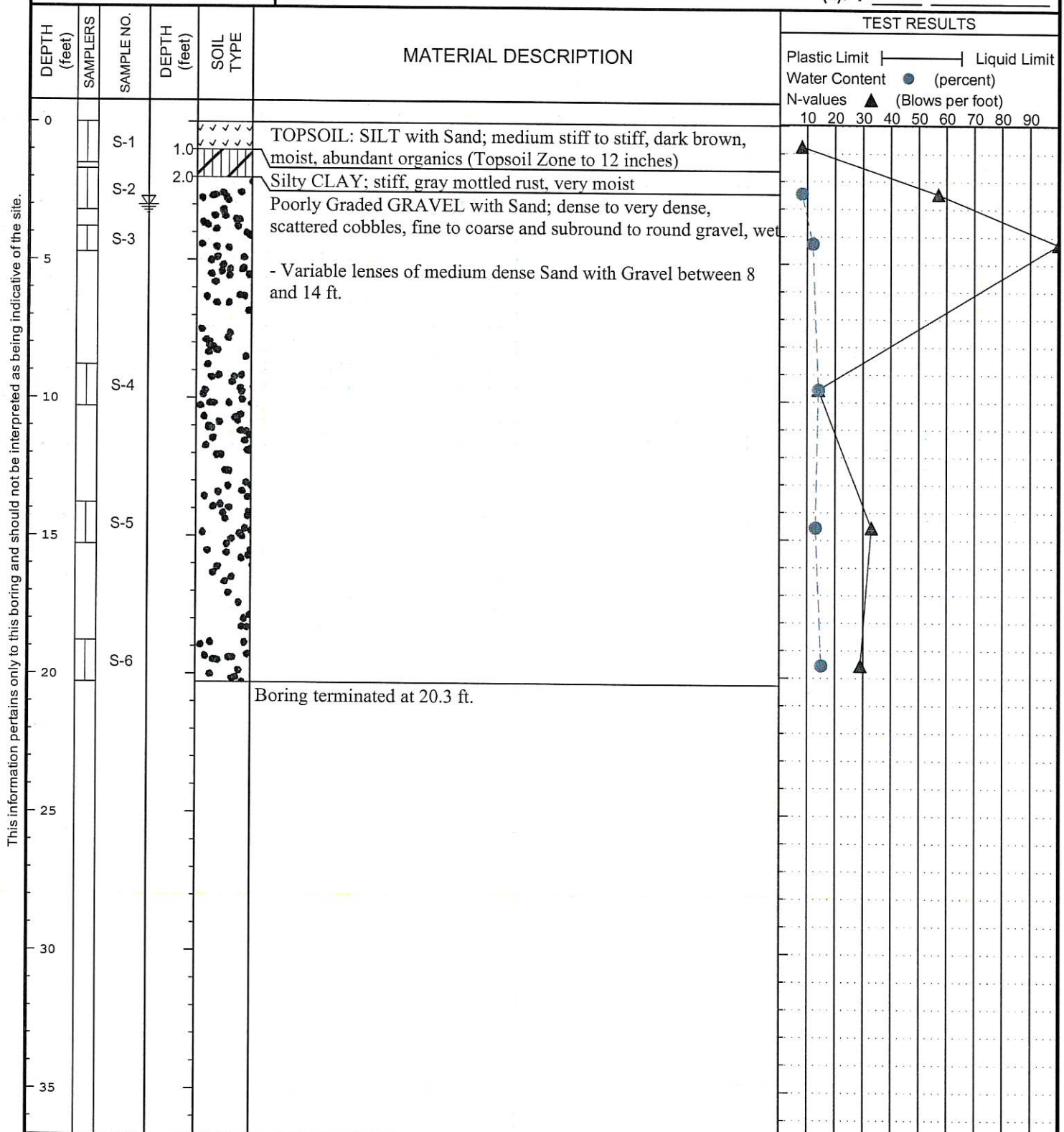
BORING LOG B-2

PROJECT: The Benches DevelopmentCLIENT: Siderius Construction, LLPLOCATION: See Site PlanSUBCONTRACTOR: Crowley Environmental DrillingMETHOD: Mobile B-61 Hollow stem augerPROJECT NO.: 21-457DATE: August 12, 2020

ELEVATION: _____

LOGGED BY: Joshua SmithGW: 3.0 8/12/2020

GW(2): _____



Groundwater encountered at 3.0 ft below the ground surface.

Figure 2A

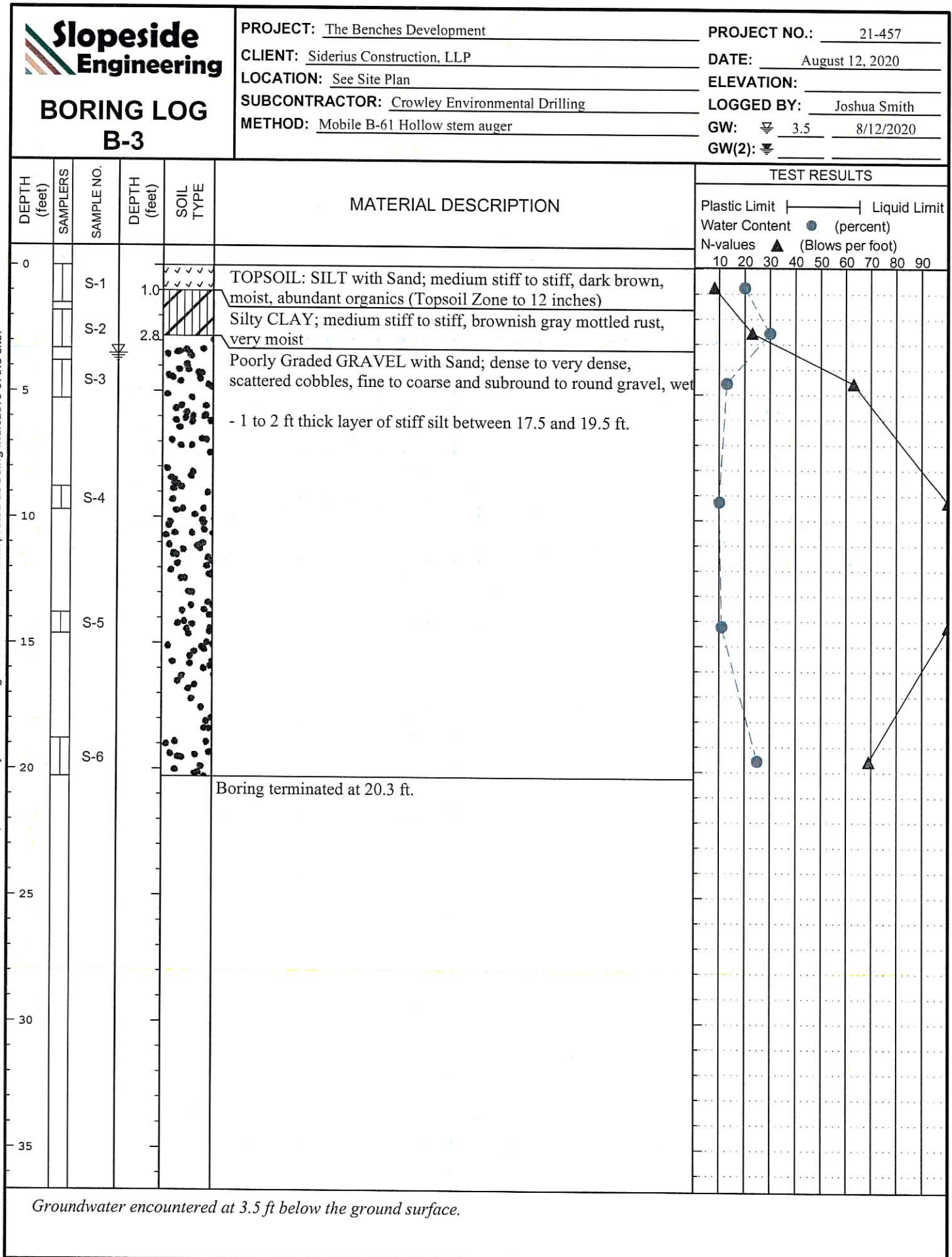


Figure 3A



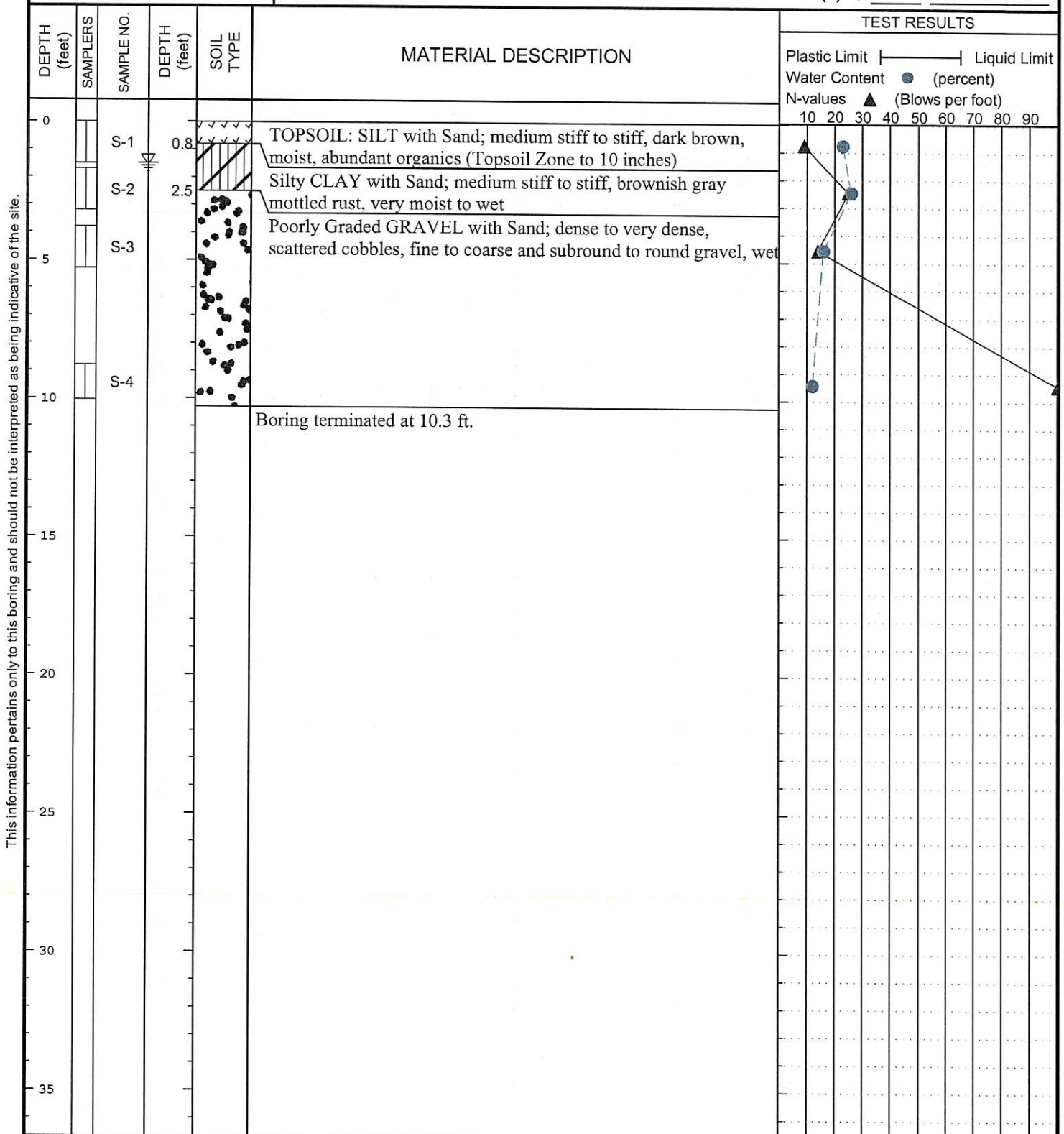
BORING LOG B-4

PROJECT: The Benches DevelopmentCLIENT: Siderius Construction, LLPLOCATION: See Site PlanSUBCONTRACTOR: Crowley Environmental DrillingMETHOD: Mobile B-61 Hollow stem augerPROJECT NO.: 21-457DATE: August 12, 2020

ELEVATION: _____

LOGGED BY: Joshua SmithGW: 1.5 8/12/2020

GW(2): _____



This information pertains only to this boring and should not be interpreted as being indicative of the site.

Figure 4A



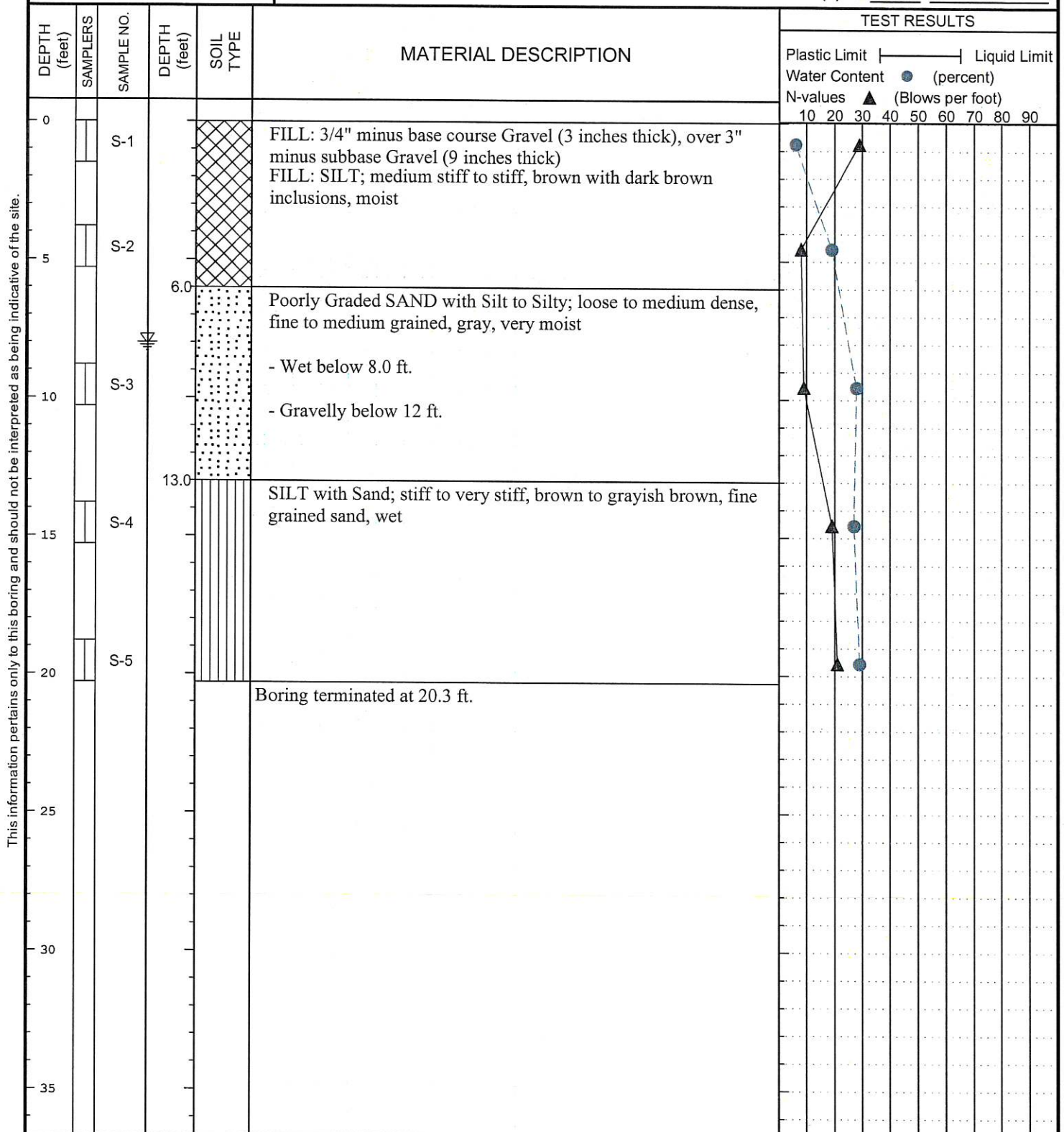
BORING LOG **B-5**

PROJECT: The Benches DevelopmentCLIENT: Siderius Construction, LLPLOCATION: See Site PlanSUBCONTRACTOR: Crowley Environmental DrillingMETHOD: Mobile B-61 Hollow stem augerPROJECT NO.: 21-457DATE: August 12, 2020

ELEVATION: _____

LOGGED BY: Joshua SmithGW: 8.0 8/12/2020

GW(2): _____



Groundwater encountered at 8.0 ft below the ground surface.

Figure 5A

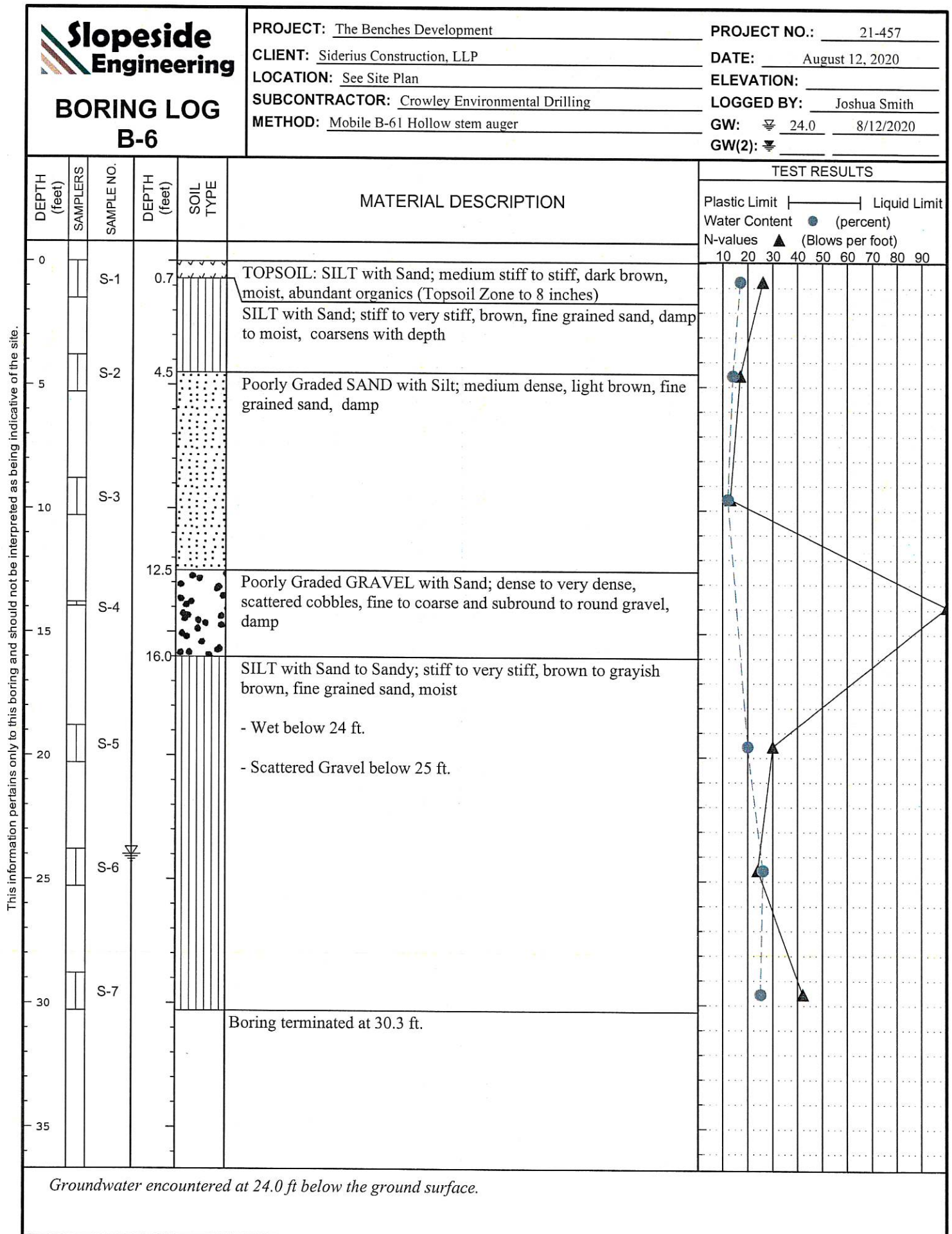


Figure 6A



BORING LOG B-7

PROJECT: The Benches DevelopmentPROJECT NO.: 21-457CLIENT: Siderius Construction, LLPDATE: August 13, 2020LOCATION: See Site Plan

ELEVATION: _____

SUBCONTRACTOR: Crowley Environmental DrillingLOGGED BY: Joshua SmithMETHOD: Mobile B-61 Hollow stem augerGW: ☐GW(2): ☐

This information pertains only to this boring and should not be interpreted as being indicative of the site.

DEPTH (feet)	SAMPLERS	SAMPLE NO.	DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	TEST RESULTS										
						Plastic Limit ———— Liquid Limit										
						Water Content ● (percent)										
						N-values ▲ (Blows per foot)										
						10 20 30 40 50 60 70 80 90										
0		S-1	0.7		TOPSOIL: SILT with Sand; medium stiff to stiff, dark brown, moist, abundant organics (Topsoil Zone to 8 inches)											
					Poorly Graded GRAVEL with Sand; dense to very dense, scattered cobbles and boulders, fine to coarse and subround to round gravel, damp											
5		S-2														
10		S-3														
15		S-4														
20		S-5														
25																
30																
35																

Boring terminated at 19.2 ft.

Groundwater not encountered.



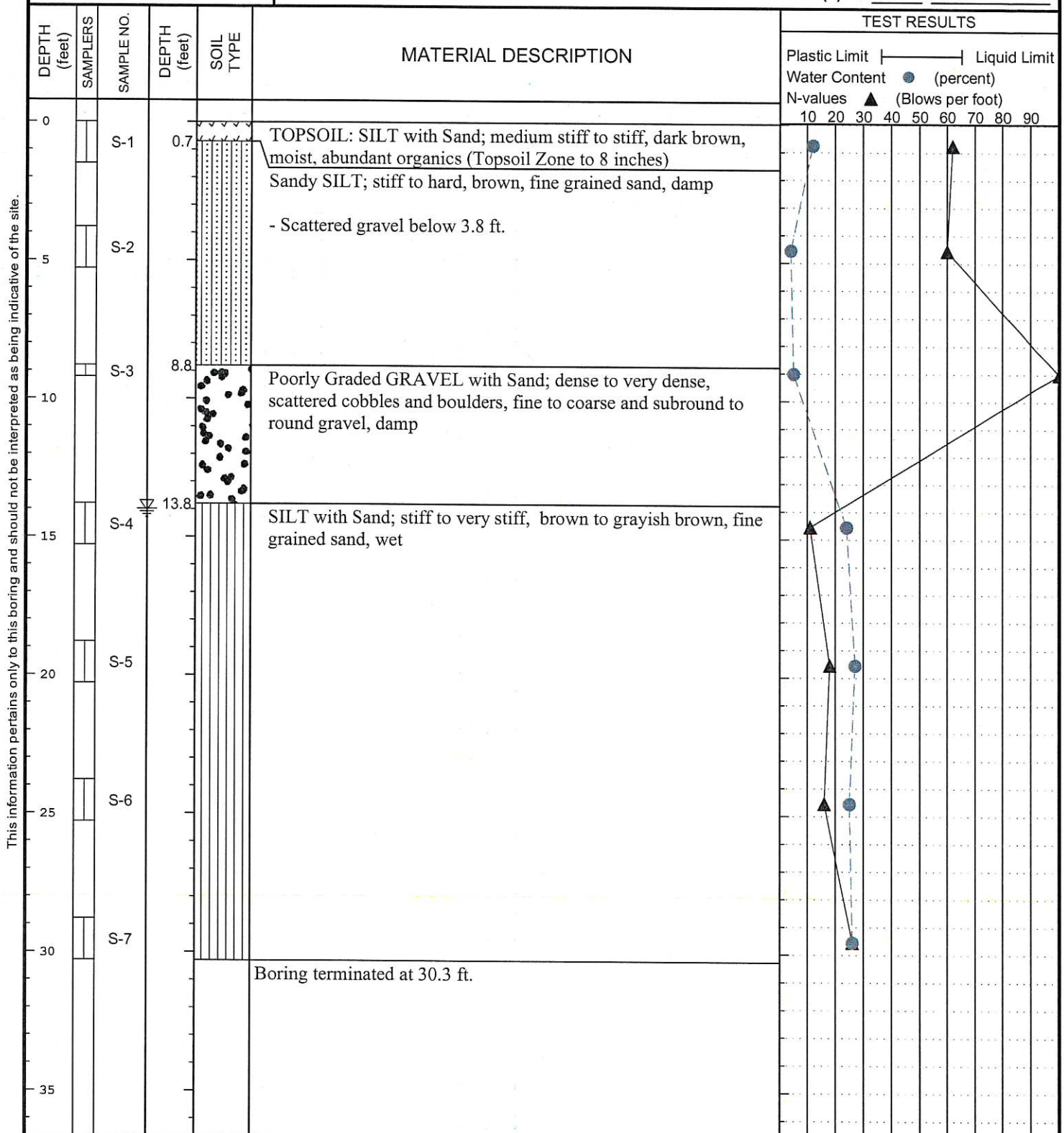
BORING LOG B-8

PROJECT: The Benches DevelopmentCLIENT: Siderius Construction, LLPLOCATION: See Site PlanSUBCONTRACTOR: Crowley Environmental DrillingMETHOD: Mobile B-61 Hollow stem augerPROJECT NO.: 21-457DATE: August 13, 2020

ELEVATION: _____

LOGGED BY: Joshua SmithGW: 14.0 8/13/2020

GW(2): _____



Groundwater encountered at 14 ft below the ground surface.

Figure 8A

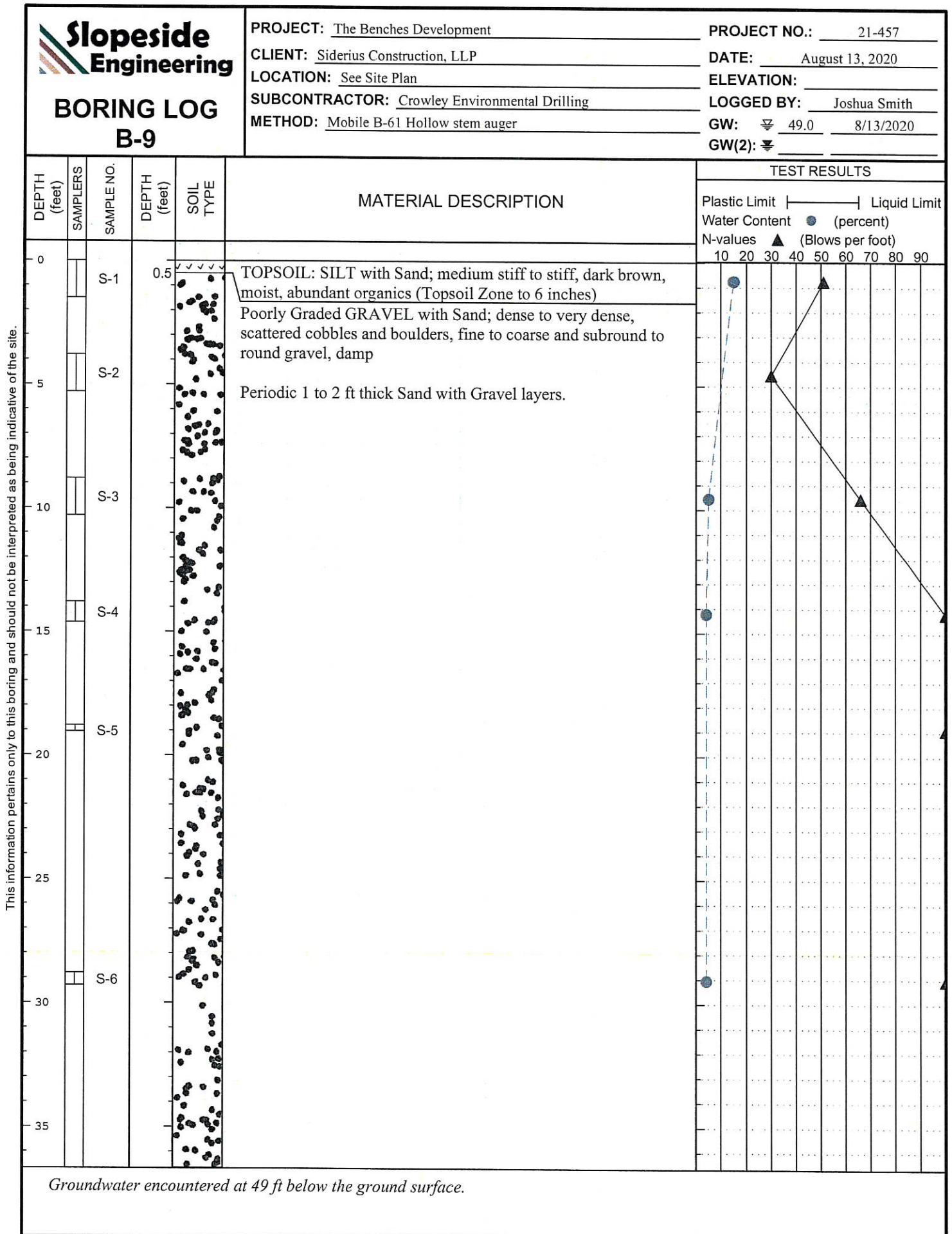


Figure 9A

 BORING LOG B-9				PROJECT: The Benches Development CLIENT: Siderius Construction, LLP LOCATION: See Site Plan SUBCONTRACTOR: Crowley Environmental Drilling METHOD: Mobile B-61 Hollow stem auger		PROJECT NO.: 21-457 DATE: August 13, 2020 ELEVATION: LOGGED BY: Joshua Smith GW: 49.0 8/13/2020 GW(2):									
DEPTH (feet)	SAMPLERS	SAMPLE NO.	DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	TEST RESULTS									
						Plastic Limit	—————				Liquid Limit				
						Water Content	● (percent)								
						N-values	▲ (Blows per foot)								
						10	20	30	40	50	60	70	80	90	
40.0		S-7	40.0		SILT with Sand; stiff, brown, fine grained sand, wet										
50.3		S-8			Boring terminated at 50.3 ft.										
55															
60															
65															
70															
75															

This information pertains only to this boring and should not be interpreted as being indicative of the site.

Figure 9A

				PROJECT: <u>The Benches Development</u>		PROJECT NO.: <u>21-457</u>		
				CLIENT: <u>Siderius Construction, LLP</u>		DATE: <u>August 13, 2020</u>		
				LOCATION: <u>See Site Plan</u>		ELEVATION: _____		
				SUBCONTRACTOR: <u>Crowley Environmental Drilling</u>		LOGGED BY: <u>Joshua Smith</u>		
				METHOD: <u>Mobile B-61 Hollow stem auger</u>		GW: <u>☒</u> _____		
						GW(2): <u>☒</u> _____		
					TEST RESULTS			
					Plastic Limit ————— Liquid Limit Water Content ● (percent) N-values ▲ (Blows per foot)			
					10 20 30 40 50 60 70 80 90			
0					0.7	TOPSOIL: SILT with Sand; medium stiff to stiff, dark brown, moist, abundant organics (Topsoil Zone to 8 inches)	●	▲
		S-1						
		S-2				Poorly Graded GRAVEL with Sand; dense to very dense, scattered cobbles and boulders, fine to coarse and subround to round gravel, damp	●	▲
		S-3					●	▲
5						Boring terminated at 5.3 ft.		
10								
15								
20								
25								
30								
35								

Groundwater not encountered.

Figure 10A

PLATTING CONDITION #15

See attached plat.

PLATTING CONDITION #16

See the attached final plat drawings and as-built construction drawings. These will be provided in electronic formats to the city as well.

PLATTING CONDITION #17

All utilities have been installed underground and stubbed to each lot prior to paving of the roads.



A2Z Engineering, PLLC • 138 East Center Street, Suite A • Kalispell, MT 59901
Phone: (406) 755-7888 • Website: azz-engineering.com

October 1, 2021

City of Columbia Falls
Attn: Susan M. Nicosia, City Manager / Planning Director
130 6th Street West
Columbia Falls, MT 59912
406.892.4384

Re: Final Platting of The Benches Subdivision, Phases 1 & 2
Platting Condition #17

A2Z Engineering has reviewed the construction in the Benches Subdivision Phase 1 and 2, and all utilities have been installed underground and were stubbed up to each lot prior to roadway paving.



PLATTING CONDITION #18

See attached weed management plan. See attached plat, note #8.

Flathead County Weed Control District - 309 FFA Drive, Kalispell MT 59901
406.758.5798 FAX 406.758.5888 email: weedscompliance@flathead.mt.gov

Subdivision/Soil Disturbance Weed Management Plan

Subdivisions, Disturbed Areas, Industrial Parks, Gravel Pits and/or Utility Installations

Instructions: Complete before disturbance begins and submit to the above address a minimum of two weeks prior to review deadline with Planning Board and/or Commissioners. A copy will be returned to you after it is reviewed in this office.

Subdivision/Project Name Benchs' Subdivision
Physical Location 7085 US Hwy. 2 E. Columbia Falls, MT 59912
Acres and # of Lots 55.4 Acres 49 Lots

Landowner's Name (PLEASE PRINT) Siderius Construction, AKA Doug Siderius
Mailing Address 737 Egan Rd
City, State, Zip Kalispell MT 59901
Phone/Cell 406-253-6891 Fax NA
Email dougsider@hotmail.com

Contact Name (PLEASE PRINT) Doug Siderius
Mailing Address 737 Egan Rd
City, State, Zip Kalispell MT 59901
Phone/Cell 406-253-6891 Fax NA
Email dougsider@hotmail.com

Knowledge of the property's terrain, water table and soil type will aid in evaluation of methods needed for weed control. A perfect time for herbicide application is when weeds are young and actively growing but difficult to see. A reference map or drawing of weed locations is ideal to have on hand.

Indicate noxious weeds present. Meadow hawkweed - Oxeye daisy

Disturbance cause:

☒ Subdivision ☒ Road Installation ☒ Utility Installation
☐ Mining/Gravel ☐ Ripping/Scraping ☒ Excess Topsoil Stockpile
☐ Other (please describe)

Describe plans to reseed areas where original vegetation has been damaged, disturbed or removed, including phone, gas or power line burials, or power poles.

☒ Site Preparation Cultivate
☒ Seed Varieties and Rates CHS Roadside Pasture Mix Hard Fescue, Canyon Can, Bluegrass, Meadow Broomrape
☒ Time of Seeding Sept. 2021 Tall Fescue Kentucky 32, Ryegrass Big Bang Co.
☒ Method of Seeding Broadcast Seed Slender Wheatgrass Revenue Cert.

Flathead County Weed Control District - 309 FFA Drive, Kalispell MT 59901
406.758.5798 FAX 406.758.5888 email: weedscompliance@flathead.mt.gov

Weed management methods:

_____ Biocontrol Insects/Fungi ☒ Herbicides *list names below
_____ Cultivate ☒ Landscape
_____ Graze, Sheep/Goats _____ Mow
_____ Hand Pull ☒ Revegetation/Reseed

Herbicides (list) De-Amine - 4/6 Glyphosate - Grass & Weed Killer - Roundup

YEAR ONE Annual work to begin Month Sept Year 2021
YEAR TWO Annual work to begin Month May Year 2022
YEAR THREE Annual work to begin Month May Year 2023

Additional comments: _____

Other methods of weed management for disturbed area, subdivision, industrial park, gravel pit and/or utility installation:

☒ Contract, conditions, covenants of subdivision sale to include weed treatment
☒ Contractor required to maintain site weed free for a specified period of time
☒ Develop road maintenance plan including weed control
☒ Landscape
_____ Monitor site to ensure new weeds are promptly eradicated
_____ Reuse or remove excess topsoil
_____ Wash equipment used in infested areas

Assignment of responsibility:

☒ Landowner (until all properties are sold)
_____ Codes, Covenants & Restrictions
_____ Commercial Applicator - Company Name/Contact/Phone _____
_____ Homeowner's Association - Contact/Phone _____

I hereby agree to the plan as stated.

Landowner's Signature: [Signature] Date: 7/17/21

Approved ☒ or Disapproved () Flathead County Weed Board

Comments or amendments to the submitted plan as reviewed by the Flathead County Weed Board:

Thank you!

Signature of Board Representative [Signature] Date 7/26/21

Agreed: Landowner's Signature _____ Date _____

PLATTING CONDITION #19

See on the following pages:

- Email and other documents from the Army Corps of Engineers
- Letter and other documents from the Flathead Conservation District



Jim McIntyre <jim@discoverwhitefish.com>

WO-2019-00653-MTM Approved JD for Prairie Dog Development, LLC on The Benches subdivision, Columbia Falls

3 messages

Schroeder, Christina L CIV USARMY CENWO (USA)
<Christina.L.Schroeder@usace.army.mil>
To: Jim McIntyre <jim@discoverwhitefish.com>

Mon, Aug 31, 2020 at 3:46 PM

Dear Mr. McIntyre,

Please see the following Approved Jurisdictional Determination letter for the above referenced property. The Corps has made the determination under the Navigable Waters Protection Rule that the wetlands on your property are Non-adjacent and are not regulated under the Clean Water Act. A Corps permit is not required in order to place fill into the wetlands delineated on this property.

Sincerely,

Christina Schroeder
Senior Regulatory Project Manager
Missoula Field Office
1600 North Avenue West
Suite 105
Missoula, MT 59801
Work Cell: 406-459-9719

The Montana Regulatory Office is now accepting digital submittals! Effective immediately, please submit new requests in digital form to Montana.Reg@usace.army.mil for initial in-processing. (NOTE: Emails including attachments cannot exceed 40Mb). Further information and instructions regarding submitting requests electronically can be found at: <https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Montana/>

Regulatory Customer Service Survey: http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0

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

From: Jim McIntyre [mailto:jim@discoverwhitefish.com]
Sent: Wednesday, August 12, 2020 10:47 AM
To: Schroeder, Christina L CIV USARMY CENWO (USA) <Christina.L.Schroeder@usace.army.mil>
Subject: Re: [Non-DoD Source] JD for Prairie Dog Development, LLC on The Benches subdivision, Columbia Falls

Christina,

I mailed a copy several weeks ago.

I have attached a copy. I did check an additional box on this one saying that I intend to contest jurisdiction but that probably doesn't make any difference to your determination.

Let me know if this application is sufficient.

Thanks.

Jim McIntyre

On Wed, Aug 12, 2020 at 10:53 AM Schroeder, Christina L CIV USARMY CENWO (USA)
<Christina.L.Schroeder@usace.army.mil <mailto:Christina.L.Schroeder@usace.army.mil> > wrote:

Hi Jim,

I haven't received the form. Did you email it or mail a hard copy? An email will work fine. Glad you checked in.

-2-

This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. A Notification of Appeal Process (NAP) and Request for Appeal (RFA) form is enclosed. If you request to appeal this determination you must submit a completed RFA form to the Northwestern Division Office at the following address:

Regulatory Appeals Review Officer
US Army Corps of Engineers
Northwestern Division
Post Office Box 2870
Portland, Oregon 97208-2870.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. part 331.5, and that it has been received by the Division Office within **60 days** of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by **October 30, 2020**. It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

This determination has been conducted to identify the limits of Corps of Engineers' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are U.S. Department of Agriculture (USDA) program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

This determination is valid for five (5) years from the date of this letter, unless new information warrants revision of the determination before the expiration date.

Please refer to identification number NWO-2019-00653-MTM in any correspondence concerning this project. If you have any questions, please contact Christina Schroeder by email at Christina.L.Schroeder@usace.army.mil, or by telephone at (406) 459-9719.

Sincerely,



Sage L. Joyce
Montana Program Manager

Enclosures:
NAP/RFA



**U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE**

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 8/26/2020

ORM Number: NWO-2019-00653-MTH

Associated JDs: N/A

Review Area Location¹: State/Territory: Montana City: Columbia Falls County/Parish/Borough: Flathead

Center Coordinates of Review Area: Latitude 48.3625° Longitude -114.1633°

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list **MUST** be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)²

§ 10 Name	§ 10 Size	§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters): ³				
(a)(1) Name	(a)(1) Size	(a)(1) Criteria	Rationale for (a)(1) Determination	
N/A.	N/A.	N/A.	N/A.	

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination	
N/A.	N/A.	N/A.	N/A.	

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size	(a)(3) Criteria	Rationale for (a)(3) Determination	
N/A.	N/A.	N/A.	N/A.	

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size	(a)(4) Criteria	Rationale for (a)(4) Determination	
N/A.	N/A.	N/A.	N/A.	

¹ Map(s)/figure(s) are attached to the AJD provided to the requestor.

² If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.

³ A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.



**U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE**

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)): ⁴				
Exclusion Name	Exclusion Size		Exclusion ⁵	Rationale for Exclusion Determination
WL-1	4.98	acre(s)	(b)(1) Non-adjacent wetland.	WL-1 is a depressional wetland that is dominated by facultative wet species and has a shallow seasonal pond component. The depression wetland occupies an old channel scar over six hundred feet away from the Flathead River. Hydrology is supported by groundwater. There is no outlet or surface water connection. The six hundred foot wide upland swath is 30 feet higher in elevation compared to the wetland elevation. There are culverts at both the east and west side of the wetland that continue under highway 2 that terminate in upland on the north side of the highway. These culverts not only terminate in upland on the north side but are surrounding in all directions by ground that is higher in elevation and no conveyance of water is directed to or away from the culverts. On the wetland side, the culverts had standing, ponded water during the Corps' site visit. No water was observed on the north ends of both culverts.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

- ☒ Information submitted by, or on behalf of, the applicant/consultant: Prairie Dog Development. Prepared by River Design Group June 2019

This information is sufficient for purposes of this AJD.

Rationale: N/A or describe rationale for insufficiency (including partial insufficiency).

- ☐ Data sheets prepared by the Corps: Title(s) and/or date(s).
- ☒ Photographs: Aerial and Other: GoogleEarth Pro 7/26/2014 and ground photos submitted with report dated June 2019
- ☒ Corps site visit(s) conducted on: 07/17/2020
- ☐ Previous Jurisdictional Determinations (AJDs or PJDs): ORM Number(s) and date(s).
- ☐ Antecedent Precipitation Tool: provide detailed discussion in Section III.B.
- ☐ USDA NRCS Soil Survey: Title(s) and/or date(s).
- ☐ USFWS NWI maps: Title(s) and/or date(s).
- ☐ USGS topographic maps: Title(s) and/or date(s).

⁴ Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.

⁵ Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.



**U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE**

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.
Other Sources	N/A.

B. Typical year assessment(s): N/A

C. Additional comments to support AJD: N/A



FLATHEAD

CONSERVATION DISTRICT
Locally led Conservation Since 1945

133 Interstate Lane, Kalispell, MT 59901 | www.flatheadcd.org | 406-752-4220

ATTACHMENT

MONTANA NSLPA 310 APPLICATION: #2020015, Unnamed, Prairie Dog Development
Legal Description: S16 T30 R20
Landowner: Prairie Dog Development LLC, 719 3rd Street W., Whitefish, MT 59937
Applicant: James McIntyre, 719 3rd St. W., Whitefish, MT 59937
Stream: Unnamed
Decision Date: 6/22/2020

Based upon the recommendation of the Flathead Conservation District Board of Supervisors and Montana Fish, Wildlife and Parks, the Board has determined that this is not a project under our jurisdiction, because it is not near a perennial stream. No further action will be taken on this application.

The FCD Board of Supervisors advises that it is the landowner's responsibility to secure any other necessary permits prior to work. If you have any questions, please do not hesitate to contact the district office.

Lori Curtis HB
Lori Curtis, Supervisor

cc: Montana Fish, Wildlife & Parks, Kalispell

310-PERMIT CONSERVATION DISTRICT'S DECISION

DECISION DATE: 6/22/2020

Notice: THIS AUTHORIZATION DOES NOT GIVE PERMISSION TO CARRY OUT A PROJECT ON LAND THAT IS NOT OWNED BY THE HOLDER OF THIS PERMIT. Landowner permission, easements or other federal, state, or local permits, licenses, special use permits, or authorizations may be required before construction of the project. It is the duty of the holder of this permit to determine which are necessary and obtain them prior to construction of the project.

Landowner Name/Address: **Prairie Dog Development LLC, 719 3rd Street West, Whitefish, MT 59937**
 Applicant Name/Address: **James McIntyre, 719 3rd Street West, Whitefish, MT 59937**
 Perennial Stream: **Unnamed** Section: **16** Township: **30** Range: **20**

Supervisors' Decision (check)

- ☐ Approved
☐ Approved With Modifications
☐ Denied
☒ Not A Project

Explanation: _____

road installation☒ See Attached (if more room is necessary)

☐ Check here if 15-day waiting period has been waived

Work may begin on or after: N/APermit Expiration Date: N/ADate Transmitted to Applicant & DFWP: 7/22/2020

Supervisors' Signatures

Donna Pedmore
Verdell Jackson
FLXSDA
Pete C. Spar
Ronald Buentemian
Lori Curtis HB
Lech Naumovich HB

TO BE COMPLETED BY THE APPLICANT

Check the appropriate box, sign and return a copy to the district office within 30 days of receipt of this permit.

- ☒ I agree to proceed with the project in accordance with the approved application and specifications outlined in this permit and will allow a follow-up inspection. N/A
- ☐ I disagree with the terms of this permit and I will seek judicial review in district court within 30 days of receipt of this permit. (This box may only be checked if you did not sign an arbitration agreement when you submitted your application.)
- ☐ I disagree with the terms of this permit and hereby request arbitration. I agree to abide by the arbitration agreement attached to or on the reverse of this form – OR, if an arbitration agreement was signed when the permit application was submitted, I will abide that agreement.

Signature of Applicant: _____ Date: _____

FLATHEAD CONSERVATION DISTRICT

133 Interstate Lane, Kalispell, MT 59901 Phone: 406-752-4220 Fax: 406-752-4077 www.flatheadcd.org

310-PERMIT APPLICATION #FL2020015, Unnamed, Prairie Dog Development LLC

NATURAL STREAMBED AND LAND PRESERVATION ACT - ARBITRATION AGREEMENT

The Natural Streambed and Land Preservation Act arbitration process is governed by the Uniform Arbitration Act, MCA §27-5-111 through §27-5-324, except as expressly provided as provided herein. According to MCA §75-15-112, any team member may request arbitration. The team includes the applicant, a representative of the Department of Fish, Wildlife and Parks, and a representative of the conservation district.

- 1. Parties.** The applicant and the conservation district are always a party to the arbitration process. If the applicant requests arbitration, parties will include the applicant and the conservation district. If the Department of Fish, Wildlife and Parks requests arbitration, parties will include the Department of Fish, Wildlife and Parks, the applicant, and the conservation district. If the conservation district representative requests arbitration, the parties will include the conservation district, the conservation district's representative, and the applicant. The team member requesting arbitration is the contesting party.
- 2. Administering Agency.** The conservation district or the county attorney will act as the administering agency for the arbitration process. The conservation district shall provide clerical services to collect fees associated with the costs of the arbitration panel.
- 3. Selection of the Arbitration Panel.** Within 30 days of the request for arbitration, the contesting party and the conservation district will submit to the administering agency the names and qualifications of three consenting persons who reside in the judicial district in which the dispute is taking place. The consenting persons must reside in the judicial district in which the dispute takes place. The parties may agree on a list of no less than four consenting persons to act as the arbitrators to be submitted to the senior judge. That list shall contain all of the names and qualifications of the consenting persons without designating the party submitting the names to the conservation district. The senior judge will select three persons from the list who, from a review of the qualifications, appear to be the most impartial to serve as arbitrators. If the contesting party fails to submit names within 30 days, the request for arbitration is deemed withdrawn. If the other parties fail to submit names and qualifications, the arbitrators must be selected from the list provided by the administering agency by the senior district judge. The arbitration panel shall only sit for the period of time necessary to settle the dispute before it and will review the proposed project pursuant to this arbitration agreement and in accordance with the statutory criteria set forth in MCA §75-7-112, implementing rules, and the policy set forth by MCA §75-7-102. The panel may appoint a chair. The powers of the arbitration panel shall be exercised by majority agreement of the panel. If during the course of the hearing an arbitrator ceases to act, the remaining panel members may continue with the hearing and make a determination on the dispute.
- 4. Costs of the Arbitration.** Costs of the arbitration panel, computed as for jurors' fees under MCA §3-15-201, shall be borne by the contesting party. Clerical costs of the panel shall be paid by the non-prevailing party as determined by the panel. For all other expenses, including counsel fees, each party shall bear its own costs.
- 5. Prehearing.** The panel may call a prehearing conference to set the arbitration schedule, and to request specific written information from the parties.
- 6. Date, Time, and Place of Hearing.** The panel will select the time and place for the hearing. The hearing must be held in the judicial district in which the dispute takes place. The panel may consider requests for specific locations for the hearing. The panel may conduct on-site inspections. The panel may require the parties to submit copies of exhibits and a summary of its case, including a list of witnesses, to the panel and all other parties, prior to the hearing.
- 7. Notice of Hearing.** Not less than ten days before the hearing, the administering agency shall give notice to each party. The notice must be by personal delivery or by certified mail. The notice shall include a description of the subjects and issues involved and the time and place of the hearing.
- 8. Representation.** All parties have the right to be represented by an attorney. The arbitration panel may request the district court issue subpoenas for the attendance of witnesses and the production of books, records, documents, and other evidence and may administer oaths. The provisions of law providing for service of subpoenas are applicable. The arbitration panel may permit a deposition to be taken of a witness who cannot be subpoenaed or is unable to attend the hearing. At the conclusion of the hearing, the panel may take the matter under advisement. A majority of the panel will render a final decision.
- 9. Procedure at the Hearing.** Each party may give opening statements, describing, generally, their position on the supervisors' decision. The contesting party will then present its witnesses and evidence. If there is more than one contesting party, then the chair shall determine the order of presentation by the contesting parties. The other parties will follow, in turn as directed by the chair, with their witnesses and evidence. A witness is subject to cross-examination by the parties to the proceeding. A panel member may ask questions of any witness or party to the dispute. Each party may conclude with closing remarks or statements summarizing their positions and evidence. The hearing must be tape-recorded. If the judicial review is necessary, the tapes or relevant portions of the tapes may be transcribed. The parties may arrange for a transcription of the hearing at their own cost.
- 10. Award.** The award is the final decision of the arbitration panel. The award must be in writing and signed by the arbitrators. The arbitration panel's award must be issued within 60 days after the hearing. The arbitration panel shall deliver a copy of the decision to each of the parties and the district judge either personally or by certified mail. The district court shall confirm the panel's award, unless a party applies and shows grounds for vacating, modifying, or correcting the award.
- 11. Judicial Review.** If the panel's decision is contested, the court will review the panel's decision in accordance with MCA §27-5-312 and 313, Uniform Arbitration Act.
- 12. Other.** Please specify.

Requesting Party _____ Date: _____

Conservation District _____ Date: _____

PLATTING CONDITION #20

See the CCR's.

PLATTING CONDITION #21

See the enclosed plat.

PLATTING CONDITION #22

See the enclosed plat, note #3.

PLATTING CONDITION #23

See the enclosed plat, note #9.

PLATTING CONDITION #24

The developer seeks to combine all phases for immediate approval and platting. See the enclosed plat.

PLATTING CONDITION #25

See owner's warranty of construction in the right-of-way on the following page.

APPENDIX E: WARRANTY FOR IMPROVEMENTS

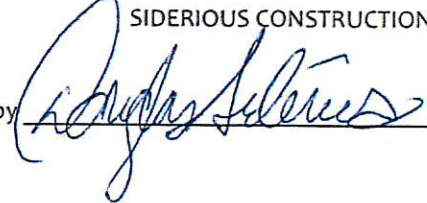
I, the undersigned property owners, do hereby warrant that work performed in the construction of improvements required as a condition of approval of **THE BENCHES SUBDIVISION, PHASES 1 & 2**, conforms to the approved construction plan and standards and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Subdivider or any Contractor or Subcontractor or any lower-tier subcontractor or supplier at any tier.

This warranty shall continue for a period of one (1) year from the date of final acceptance of the work.

I shall remedy at my expense any failure to conform, or any defect. In addition, I shall remedy at my expense any damage to governing authorities' owned or controlled real or personal property, when that damage is the result of the following: My failure to conform to the approved construction plans or construction standards; or Any defect of equipment, material, workmanship, or design furnished.

I shall restore any work damaged in fulfilling the terms and conditions of this clause. Our warranty with respect to work repaired or replaced will run for one (1) years from the date of repair or replacement.

I have been informed that if I fail to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the governing authority shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the our expense and has the right to pursue by any available means reimbursement of any and all expenses associated with the repair, including any legal fees and court costs.

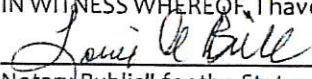
SIDERIOUS CONSTRUCTION, LLC
 by , Partner

STATE OF MONTANA

COUNTY OF FLATHEAD

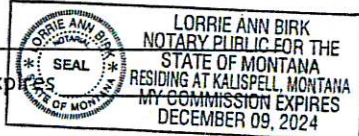
On this 26 day of 8 2021, before me the undersigned, a Notary Public for the State of Montana, personally appeared Douglas Siderius known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notary Seal the day and year above written.


 Notary Public" for the State of Montana

Residing at _____

My Commission Expires _____



PLATTING CONDITION #26

See the letter provided on the following page.



July 9, 2019

Jim McIntyre
Prairie Dog Development, LLC
719 3rd St. W.
Whitefish, MT 59937

RE: THE BENCHES SUBDIVISION – TRACT 3 OF C.O.S. #20092
SW1/4 NE1/4 & W1/2 SE1/4, SEC. 16, T30N, R20W, P.M., M., FLATHEAD COUNTY

This letter is to notify you that Evergreen Disposal is the private waste hauler for the above referenced property. We are capable of providing containers ranging from a household 90 gallon bin up to a 6 yard metal bin with weekly service.

Please let me know if you have any questions.

Sincerely,

Cindy Owens

Office Manager
Evergreen Disposal



PLATTING CONDITION #27

This submittal is being made for the platting of the entire subdivision in less than the three years allowed.

PLATTING CONDITION #28

The statements from the FWP are contained within the CC&R's provided to all purchasers.

PLATTING CONDITION #29

See the certification provided on the following page.



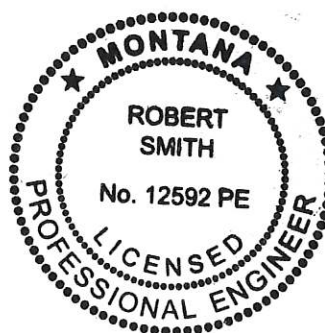
A2Z Engineering, PLLC • 138 East Center Street, Suite A • Kalispell, MT 59901
Phone: (406) 755-7888 • Website: a2z-engineering.com

August 9, 2021

City of Columbia Falls
130 6th Street West, Room A
Columbia Falls, MT 59912
406.892.4391

A2Z Engineering has visually inspected the Benches Subdivision and herein certifies that all cut and fill areas are contained within road right-of-ways, easements and common areas.

Robert Smith, PE
Project Engineer



**DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS
OF
THE BENCHES**

ARTICLE 1. DECLARATION - PURPOSES

Section 1.1: Declarant: The undersigned, Doug Siderius as Partner of Siderius Construction, LLP, the Declarant and owner of all property encompassed in The Benches, a subdivision according to the map or plat thereof on file or of record in Flathead County, Montana. The Declarant hereby declares for itself, its successors, and assigns, that all property in The Benches shall at all times be owned, held, used, and occupied subject to the provisions contained in this Declaration of Covenants, Conditions, and Restrictions. The Declarant is to hold all rights and responsibilities of the future Homeowners Association as detailed in this declaration in order to care for and manage The Benches during the Period of Declarant Control.

Section 1.2: Property: Shall mean all residential lots and common areas in The Benches according to the final plat on record in the office of the Clerk on Recorder of Flathead County, Montana. Additional property to be added to The Benches shall also be subject to and comply with this declaration. Declarant has the right to modify property and easements during the Period of Declarant Control.

Section 1.3: Purpose: The purpose of these Covenants, Conditions, and Restrictions is to establish and maintain guidelines for developing, building, maintaining, living, and governing in The Benches in order to ensure and preserve attractiveness, safety, livability, and values for the benefit of homeowners and residents in the subdivision. This declaration is meant to ensure all properties maintain a minimum standard of care and quality and to guard against improper use of homes or property.

Section 1.4: Term: These Covenants, Conditions, and Restrictions shall be binding to all property within The Benches and shall transfer to all future owners.

Section 1.5: Amendments: Shall there be a need to modify these Covenants, Conditions, and Restrictions, an amendment(s) signed by three directors of the homeowners' association for this subdivision and stating that a majority of property owners voted in favor of any changes and stating the changes must be recorded. Amendments shall be binding upon recording.

ARTICLE II. DEFINITIONS

Section 2.1: Architectural Review Committee or ARC means the committee formed to review project proposals for architecture, design, construction, landscaping, fencing, and exterior improvements to ensure compliance with this declaration and attractiveness and harmony throughout The Benches.

Section 2.2: Articles of Incorporation shall mean Articles of Incorporation of The Benches Homeowners Association, as the same may be amended from time to time.

Section 2.3: Assessments means the annual, special, and default assessments levied to meet the estimated financial requirements of The Benches Homeowners Association.

Section 2.4: Board of Directors means board of directors of The Benches Homeowners Association.

Section 2.5: Bylaws shall mean the bylaws of The Benches Homeowners Association which establish methods and procedures of its operation, as the same may be amended from time to time. A copy of the current bylaws has been recorded with this document and any amendments to the bylaws shall also be recorded with the Clerk and Recorder of Flathead County, Montana.

Section 2.6: Common Area shall mean all property in The Benches subject to this declaration but excluding individual lots within the property. Common areas are for common use and benefit to all homeowners. Common area maintenance is the responsibility of the Homeowners Association. Common areas include Common Area A, Common Area B, Common Area C, Common Area D, and the road shown as Bench Run on the plat of The Benches Subdivision on file and of record in the office of the Clerk and Recorder of Flathead County, Montana. The roadways within The Benches shall be maintained in good and passable conditions at all times.

Section 2.7: Common Expenses means expenses to maintain The Benches as defined by The Benches Homeowners Association. Common Expenses include road maintenance and plowing and common area maintenance, servicing, conserving, management, administration, duties to comply with this declaration, and any other expenses deemed necessary by the Homeowners Association for care of The Benches.

Section 2.8: Declarant means that Terry Dirt, LLC, its successors, or assigns acting as the original owner(s) of the property.

Section 2.9: Declaration means this Declaration of Covenants, Conditions, and Restrictions for The Benches, as it may be amended from time to time.

Section 2.10: Design Guidelines are guidelines specified in this declaration meant to provide design standards for the exteriors of any lot or common area.

Section 2.11: The Benches shall mean The Benches subdivision as defined on recorded plat as well as all real property which in the future becomes part of The Benches.

Section 2.12: Homeowners Association or HOA means Homeowners Association of The Benches subdivision and its successors and assigns.

Section 2.13: Improvements means all buildings, parking areas, fences, walls, landscaping, lighting, driveways, roads, trails, gates, signs, changes in any exterior color or shape, excavation and all other site work, including, without limitations, grading, road construction, utility improvements, removal or maintenance of trees or plants, and any new exterior construction or exterior improvement which may not be included in the foregoing. Improvements does not include turf repair or negligible improvements which will not affect colors or exterior appearance. Improvements means all current and future improvements.

Section 2.14: Lot means parcel of land designated as a lot the boundaries and acreage are delineated on a plat and each lot is identified by the number noted on the recorded plat. The roads and common areas shown on any plat and owned by the Homeowners Association are not considered Lots.

Section 2.15: Member means any person or entity holding membership in The Benches Homeowners Association.

Section 2.16: Owner means the person or persons, entity or entities, who own of record, according to the real property records of Flathead County, Montana, fee simple title to a Lot, except that a person purchasing a Lot under contract for deed which is recorded in the records of Flathead County, Montana.

Section 2.17: Period of Declarant Control means the period beginning on the date this declaration is first recorded in the office of the Clerk and Recorder of Flathead county, Montana, and ending on the earlier of: (a) the date which is 20 years later, or (b) the date on which the declarant has sold all of the Lots on all of the plats for The Benches. After the Period of Declarant Control, Declarant, if still an Owner, will continue to have all the rights and duties ordinarily given to Owners under this Declaration.

Section 2.18: Plat means recorded survey of all or part of the property.

ARTICLE III. HOMEOWNERS ASSOCIATION

Section 3.1: Homeowners Association: The Benches Homeowners Association, or HOA, shall act as a homeowner's association for The Benches. The Homeowners Association shall be established by the declarant.

Section 3.2: Membership: All owners of lots within The Benches shall be members of the Homeowners Association. The owners of any lot shall automatically become members of the HOA until ownership of the lot(s) ceases for any reason. The Declarant shall be a member to the extent of the lot ownership of the same.

(a) **Contact Information:** Upon acquiring ownership of a lot, owner shall immediately inform HOA of names and contact information. Owners shall be responsible for informing HOA of any change in contact information.

Section 3.3: Board of Directors: At establishment of the Homeowners Association, there shall be inaugurated a manager of the HOA who will sit on the board of directors. The HOA may establish other directors as necessary. The Board of Directors is responsible for organizing and managing all duties of the HOA. The Board of Directors shall schedule HOA meetings from time to time as needed and shall manage expenses and assessments. Except for management and execution of obligations of the HOA, the Board of Directors shall have no other powers except those granted to all members. The HOA shall establish terms for members of the board of directors as they see fit.

Section 3.4: Voting: There shall be one vote for each lot after the Period of Declarant control. Prior to that time all voting rights shall be vested in the Declarant. Declarant may agree with a majority of the lot owners to assign certain specific voting rights to the lot owners. Such assignment will be done as an amendment to this document. After the Period of Declarant control there shall be one vote for each Lot. If a person or entity owns more than one Lot, that person or entity shall have as many votes as the number of Lots owned. If more than one person or entity has ownership interest in a single Lot, such persons or entities must decide among themselves how the single vote for the Lot shall be cast.

Section 3.5: Management During Period of Declarant Control: During the Period of Declarant Control, Declarant may appoint, remove, and replace from time to time any or all, of the directors and officers of the Homeowners Association. If Declarant so elects, Declarant may from time to time relinquish, either on a temporary or permanent basis, the right to appoint all or a portion of the directors

and officers of the Homeowners Association, provided that any such relinquishment shall be expressed in writing to the Homeowners Association.

Section 3.6: Powers and Duties: Subject to the rights and obligations of this declaration, the HOA shall have all such powers as permitted by the laws of the State of Montana and will be responsible for the administration and operation of The Benches.

Section 3.7: Common Expenses: The HOA is responsible for managing common expenses shared by all owners. Common expenses shall include road maintenance, snow removal in common areas, common area maintenance, servicing, conserving, management, administration, duties to comply with this declaration, and any other expenses deemed necessary by the Homeowners Association for care of The Benches.

Section 3.8: Books and Records: The HOA is responsible for keeping updated books, records, documents, and financial statements and will make them available for inspection by Owners upon request.

Section 3.9: Budget and assessments: The HOA is responsible for keeping a budget and estimating yearly expenses for The Benches. The HOA is responsible for setting and collecting annual assessments and managing money and expenses throughout the year.

Section 3.10: Committees: The HOA may delegate duties and responsibilities to any committee or other entity that the HOA may choose to form. The HOA shall support and maintain an active Architectural Review Committee to review ongoing improvements in the subdivision.

Section 3.11: Meetings: The HOA is responsible for scheduling and holding meetings from time to time. All owners shall be notified of all HOA meetings not less than 30 days in advance of any meeting.

Section 3.12: Remedies: for non-compliance to Declaration of Covenants, Conditions, and Restrictions: The HOA may establish and charge fines for violations of this declaration. The HOA has the right to take action for violations to this declaration to the extent allowed by law.

ARTICLE IV. COMMON AREA

Section 4.1: Common Areas: The HOA is responsible for maintaining common areas for safe use by all and visual appeal. The HOA may grant easements, rights-of-way, leases, licenses, and concessions through or over the common area for the purpose of accommodating minor encroachments by utilities, adjacent property owners, or other purposes that do not unreasonably interfere with the use of the Common Area by owners. The Homeowners Association shall have jurisdiction and control over the common area.

Section 4.2: Easements over all Common Areas: The HOA has the right to access easements on individual lots for the purpose of inspections and maintenance of utilities or access to common areas. Except for underground utility maintenance, upkeep of easements on individual lots is the responsibility of the corresponding owner(s) of the lot. The Owners shall have an easement for use and enjoyment of all of the Common Areas, subject to such rules and regulations as Homeowners Association may develop from time to time, and also subject to rights reserved to Declarant and the reserved rights of any third parties with respect to the Common Area.

Section 4.3: Retained Easements for Roads: Declarant shall have an easement over all the roads and ingress, egress and utilities. Declarant may permit others to use the roads and grant further easements to other for us of the roads.

Section 4.4: Road Maintenance: The roads within The Benches shall be maintained, repaired, and replaced by the HOA including plowing of snow. The roads shall be maintained in good condition to allow year-round access to all Lots. During the Period of Declarant Control, no gates, other impediments, or signage may be placed on any roads without the prior written consent of Declarant.

Section 4.5: Utilities: HOA is responsible for coordinating maintenance and repair of underground utilities in common areas as needed including secured design approved from Northwestern Energy for any utility and road crossing the gas line easement in The Benches. Owners are responsible for repair of utilities serving individual lots and at connections to main utility lines in the street. Owners are responsible for repair of utilities serving an individual lot, even if the location of repair is in a Common Area. HOA is not responsible for utility repairs at connections or to individual lots. Community Water system will be owned and operated by Siderius Construction at the time of Declarant begins building.

Section 4.6: Weed Control: Weed Control in Common Areas is the responsibility of the HOA. The HOA shall guard against noxious weeds as defined in approved Weed Management Plan for The Benches by Flathead County Weed Department. The HOA shall control weeds and landscaping in common areas in order to maintain visual appeal throughout the subdivision per the Weed Management Plan. The HOA is not responsible for weed control on individual lots or on easements which are on individual lots. If an owner of a lot is not exercising weed control deemed necessary by the HOA, the HOA may take action on account of non-compliance with this declaration.

Section 4.7: Property Taxes: It is acknowledged that, for property tax purposes, Flathead County and the State of Montana may allocate to each lot a fractional, proportional portion of the value attributable to the Common Areas. By accepting a deed to a Lot, the Owner agrees to this mechanism for property taxation and agrees to pay a proportional share (as allocated by Flathead County and the state of Montana) of the taxes attributable to the value of the common Areas, while at the same time allowing the HOA to administer and control the Common Areas.

Section 4.8: No Dedication to the Public: Nothing in this Declaration or any other document relating to The Benches will be construed as a dedication to public use or grant to any public municipal or quasi-municipal authority or utility, or and assumption of responsibility of the maintenance of any Common Area by such authority or utility, absent an express written agreement to that effect. The roads within The Benches shall be private roads, to be used by the Owners and their guests and invitees only.

ARTICLE V. WATER SYSTEM

Section 5.1: Water System: Each Lot shall be served by a water system owned and operated initially by Siderius Construction. Each structure designed for occupancy will connect to the water system. No individual wells shall be permitted on any Lots.

Section 5.2: Water Service Charges: Each Owner may be responsible to pay usage charges annually for water supplied by water system and used at owned home. Owner will be responsible for furnishing a specific individual water meter if required per the HOA.

Section 5.3: Use of Water: The Water System is intended for domestic household and yard and garden use only, and not for any form of commercial irrigation. No Owner shall sell, transport, or utilize water

from the Water System on any property other than the Owners Lot (except in the event of an emergency) The HOA may use water in connection with its maintenance of the Common Areas or for other purposes.

ARTICLE VI. ASSESSMENTS

Section 6.1: Assessments: Each owner of any lot, by acceptance of the deed to a lot, is deemed to covenant and agree to pay to the HOA assessments for common expenses. All types of assessments shall be payable to the HOA in installments and on dates determined by the HOA. The HOA shall notify owners of assessments, installments, and due dates no less than thirty (30) days prior to due dates.

Section 6.2: Annual Assessments: (a) The HOA shall figure and collect annual assessments from each owner in an amount equal for each lot based on estimated common expenses for the year. Annual Assessments shall be prorated for lots which transfer ownership during a year. The Annual Assessment shall reflect the Board of Directors estimate of the requirements of the HOA to cover items including, without limitation, the cost of the maintenance, repair and operation of the Common Area; expenses of management; premiums for insurance coverage as deemed desirable or necessary by the HOA; snow removal, landscaping, care of grounds and common lighting within the Common Area; routine renovations within the Common Area, common water and utility charges for the Common Area; legal and accounting fees; management fees; expenses and liabilities incurred by the HOA under or by reason of this declaration; payment of any deficit remaining from a previous Assessment period; and the creation or supplementing of a reserve fund for general, routine maintenance, repairs and replacement of improvements within the Common Area on a periodic basis as needed.

- b)** The annual Assessment shall be equal for each Lot, unless the Board of Directors determines in good faith that a portion of the Annual Assessment benefits fewer than all the lots, in which case such portions shall be assessed only against the benefited Lots. Road maintenance, repair and replacement shall be considered to benefit all Lot equally, and such costs shall be apportioned equally among all Lots.
- c)** The initial Annual Assessment shall be in the sum of \$500.00 (Five Hundred Dollars and No/100) per year for The Benches.
- d)** Payment of the Annual Assessment shall be due and payable annually on the 28th of February of each year or in instalments or otherwise, as Board of Directors may provide.
- e)** For Lots that are sold by Developer during a year, the Annual Assessment shall be prorated and paid by the purchaser at closing

Section 6.3: Special Assessments: Special Assessments may be collected for capital improvements or other purposes agreed upon within the HOA and not included in annual assessments. Special Assessments shall be equal for each lot. Payments of the Special Assessments shall be due and payable as the Board of Directors may provide.

Section 6.4: Default Assessments: (a) Any cost or expense (including attorney's fees) incurred by the HOA as a result of the failure of an Owner to abide by the provisions of this Declaration, or any expense of the HOA which is the obligation of an Owner, or which is incurred by the HOA on behalf of the Owner pursuant to this Declaration (other than Annual, Water or Special Assessments) constitutes a Default Assessment.

- b)** Default Assessments are levied against the Lot or Lots of an Owner who incurs a Default Assessment.
- c)** Default Assessments shall be immediately due and payable by the Owner upon notice from the HOA of the amount of the Default Assessment.

Section 6.5: Water Assessment: Water Assessments may be collected in the event that the HOA takes ownership of the community Water System. The Board of Directors may levy and collect assessments relating to the operation, maintenance, repair, and replacement of the Water System. Initial annual Water System fee will be \$500.00 (Five Hundred Dollars No/100) and paid to the Owner of the Water System, Siderius Construction. Water System fee will be prorated at time of purchase accordingly.

Section 6.6: Remedies for Nonpayment of Assessment: Any installment of an Assessment which is not paid within thirty (30) days after its due date will be delinquent. In the event of delinquency, the HOA may take any or all of the following actions:

- a) Charge interest from the date of delinquency at uniform rates set by the Board of Directors.
- b) Assess a late charge for each delinquency at uniform rates set by the Board of Directors from time to time;
- c) The HOA or manager may bring an action at law against an owner personally and/or place and foreclose a lien against the property;
- d) Suspend the voting rights of the Owner during any period of delinquency.
- e) Accelerate all remaining Assessments installments for the fiscal year in questions so that unpaid Assessments for the remainder of the fiscal year will be due and payable at once.
- f) File a statement of lien with respect to the Lot and foreclose.

Section 6.7: No refunds: No owner shall be entitled to any rebate, return, or refund of any amount of assessments paid to the HOA which are held as cash on hand or in any reserve account.

Section 6.8: No Assessments for Declarant: Notwithstanding the ownership of any empty lot, the Declarant shall not be obligated to pay any assessments.

Section 6.9: Assessment Lien: Any assessment chargeable to a Lot will constitute a lien on the Lot, effective the due date of the assessment. If the Assessment is not paid within 30 (thirty) days of its due date, the HOA may prepare and record a written lien statement with respect to the Lot, setting forth the name of the Owner, the legal description of the Lot, the name of the HOA and the delinquent assessments amounts then owing. Any such statement will be signed by an officer or director of the HOA and will be served upon Owner by mail to the address that HOA has on record for the Owner. Thirty days following the mailing of the such notice to the owner, the HOA may proceed to foreclose the statement of lien in the same manner as provided for the foreclosure of mortgages under the statutes of the State of Montana. The HOA will have the power to bid on a Lot at the foreclosure sale and to acquire, hold, lease, mortgage and convey the Lot.

Section 6.10: Liability for Assessment: All Owners of a Lot are personally responsible, jointly, and severally, for all Assessments which become due at the time of their ownership, including interest, late charges, costs, expenses, and attorney's fees incurred in the collection of such Assessments. All successors to the fee simple title of a Lot, except as provided in Section 6.11 and Section 6.12, will be jointly and severally liable with the prior Owner or Attorney's fees incurred in collection of such Assessments, including interest, late charges, cost, expenses and attorney's fees incurred in collection of such assessments. However, a successor will be entitled to rely on the statement of status of Assessments given by the HOA.

Section 6.11: Statement of Status of Assessment: On written request, the HOA will furnish to an Owner or his designee or to any mortgagee a statement setting forth the amount of unpaid Assessments then levied against the Lot in which the Owner, designee or mortgagee has an interest. The information contained in such a statement, when signed by an officer or director of the HOA, will be conclusive upon

the HOA, the Board, and every Owner as to the person or persons to whom such a statement is issued and who rely on it in good faith.

Section 6.12: Declarant's Responsibility for Assessments: Notwithstanding the foregoing, the Declarant, although a member of the HOA, shall not be responsible at any time for payment of any of the Assessments for Lots owned by Declarant, unless and until Declarant constructs a home on such lot. The Declarant, however shall at all time pay all proportionate share of all current expenses of administration actually incurred by the HOA from time to time for snowplowing, and routine maintenance. For purposes of the foregoing sentence, The Declarant's proportional share of such expenses shall be based upon the ratio of all Lots which are listed for sale owned by the Declarant at the time expense is incurred (i.e., the number o Lots which are for sale) to the total number of such Lots plus Lots owned by third parties (i.e. the total number of sold Lots plus Lots which are for sale) In no event shall the Declarant be responsible for payment of the costs of any improvements, or for other Special Assessments. So long as Declarant owns any Lots, any increase in the Annual Assessment and an Special Assessment shall require the Declarant's writing consent. Further, the Declarant shall in no event be liable for any assessment levied I whole or in part to purchase any lot from Declarant or to finance any litigation or other claim against the Declarant, any cost of investigating and preparing such litigation or claim, or similar related costs.

Section 6.13: Priority of Lien for Assessment: The lien of the Assessments will be superior to and prior to any household exemption provided now or int the future by the laws of the State of Montana, and to all other liens and encumbrances except the following:

- (a) Liens and encumbrances recorded before the date of the recording of this Declaration;
- (b) Liens for real estate taxes and other governmental assessments or charges duly imposed against the Lot by a Montana governmental or political subdivision or special taxing district, or any other liens made superior by statute;
- (c) The lien for all sums unpaid on a First Mortgage recorded before the date of filing of a written lien statement for delinquent Assessments, including any and all advances made by the First Mortgagee, Even though some or all of such advances may have been made subsequent to the date of filing of a written lien statement for delinquent Assessments. And First Mortgagee who acquires title to ta Lot by virtue of foreclosing the First Mortgagee or by virtue of a deed or assignment in lieu of such a foreclosure, or any purchaser at a foreclosure sale of the First Mortgagee, will take the Lot free of any claims for unpaid Assessments, interest, late charges, costs, expenses, and attorney's fees against the Lot which accrue prior to the time such First Mortgagee or purchaser acquires title to the Lot.

All other persons who hold a lien or encumbrance of any type not described in subsection (a), (b) or (c), above will be deemed to consent that their lien or encumbrance will be subordinate to the HOA's future liens for Assessments, interest, late charges, costs, expenses and attorney's fees, as provided in this Article, whether or not such consent is specifically set forth in the instrument creating any such lien or encumbrances.

Section 6.14: Protection of First Mortgage: No violation or breach of, or failure to comply with, any provision contained in this Declaration and no action to enforce any such provision shall affect, defeat, render invalid or impair the lien of any First Mortgage on any property taken in good faith and for value and perfected by recording in the office of the Clerk and Recorder of Flathead County, Montana, prior to the time of recording in said office of an instrument describing such property and listing the name or names of the Owner or Owners and giving notice of such violation, breach or failure to comply. No violation, breach, failure to comply or action to enforce this Declaration shall affect, defeat, render invalid or impair the title or interest of the holder of any First Mortgage or the title or interest acquired by any purchaser upon foreclosure of any First Mortgage or result in any liability, personal or otherwise of an such holder or purchaser. Any such purchaser upon foreclosure shall, however, take subject to this Declaration.

ARTICLE VII. PROPERTY USE RESTRICTIONS

Section 7.1: Easements: The property will be subject to all easements shown on any recorded Plat.

Section 7.2: Land Use: Each lot may be used for a single-family home. There shall be no commercial use on the property. Rentals for a term of one month or more shall not be considered commercial use. Rentals for a term of less than 30 days will be considered commercial use and not permitted. Home office or related uses which do not result in increased vehicular traffic shall not be considered commercial use. Garage sales shall be permitted, as long as no more than two such sales are conducted per year on any lot. Any sales activity by Declarant including model homes and sales office shall not be considered commercial use and shall be allowed.

Section 7.3: No subdivision of Lots: No Lot shall be further subdivided in any manner. A change in boundary lines between adjacent owners shall not be considered a subdivision.

Section 7.4: Structures: There shall be no more than one single family residence and associated outbuildings per Lot. Each residential unit shall include, at a minimum, a two-car attached garage.

Section 7.5: Set Backs: There shall be no building of any kind within 25' of the front lot line, 5' from each side lot line, 15' from side-corner lot lines and 20' rear lot line. However, variances as to set backs may be granted by the Architectural Review Committee.

Section 7.6: Dwelling size: Each home shall have a minimum of 1200 square feet of total living space, not including garages or outdoor spaces. Two story dwellings shall have at least 700 square feet of living space at ground level.

Section 7.7: Garage: Each home shall have an attached garage for at least 2 cars.

Section 7.8: Driveways: Each home shall have a driveway paved in asphalt or concrete. Driveways shall be constructed so as to not interfere with drainage and shall include culverts where necessary.

Section 7.9: Dwelling Construction: All dwellings shall be constructed on the lot with new materials. There shall be no trailer homes, mobile homes, modular homes, or prefabricated homes placed on any lot. Used materials in good condition, such as brick, stone, or timber beams may be utilized provided advance approval has been obtained from the Architectural Review Committee. All construction must conform to Local Building Codes and Fire Codes. All construction shall be completed within 12 months after the start of construction.

Section 7.10: Outbuilding: All outbuildings on a Lot shall be constructed in keeping with the construction and architecture of the other buildings located on the Lot and shall present and exterior appearance similar to the other buildings located on the Lot. All outbuildings shall be kept and maintained in good condition, repair and appearance. All outbuildings and their location on Lot must be approved by the Architectural Review Committee.

Section 7.11: No temporary structures: No temporary structures including but not limited to trailers, tents, garage, or other outbuildings shall be used on any Lot at a time as residence either temporarily or permanently.

Section 7.12: Fences: No fences shall be over 6 feet in height with the exception of specific fences surrounding a garden or tree on Lot. There shall be no fence forward of the middle point of the house forward to street. Fencing Lot boundaries is discouraged in order to facilitate wildlife movement through subdivision. Fences shall be limited to a smooth top rail and bottom rail as to prevent entanglement and death of wildlife. Tan vinyl fences are encouraged in community. All fences including construction materials, location and height are subject to Architectural Review Committee approval.

Section 7.13: Drainage Control: Reasonable precaution shall be taken during construction and thereafter to prevent erosion and drainage problems. All disturbed soil areas shall be revegetated within a reasonable time in such a fashion to minimize erosion. Homeowners shall follow the certified drainage plan provided by the engineer and approved by the Montana Department of Environmental Quality for any changes to their property that could affect the flow of water within their lot, from lot to lot, or onto adjacent lots. Any such alterations must be approved in advance by the Montana Department of Environmental Quality (MDEQ) and the Architectural Review Committee. Homeowners will be responsible for following the approved drainage plan for community. Driveways will be constructed in conformance with the approved drainage plan.

The original engineering stormwater report and calculations approved by the MDEQ had the following provisions for a typical or average lot:

- a home with up to 2,700 square feet of hardscape areas including roof, patio, extra parking and sidewalk areas
- an asphalted driveway connecting the home to the city street, being up to 1,700 square feet
- drainage from all the above mentioned hardscaped areas being directed to the city street's roadside swales, to the greatest extent practicable
- the driveway having a width in the city street right-of-way of no more than 25 feet included side slopes, to minimized loss of capacity within those roadside swales
- the shape of the city street roadside swales at the front of each lot, after finished landscaping of the lot, SHALL HAVE A MINIMUM OF:
 - A 4 foot wide flat bottom
 - Left bank having a slope no steeper than 4:1 horizontal to vertical and at least 4 feet wide
 - Right bank having a slope no steeper than 4:1 horizontal to vertical and at least 4 feet wide
 - Allowing for a minimum fill depth of 12" without overtopping/flooding the city street, driveways, drainfields, yards or homes
 - Having 8" high check dams installed in sloping areas as shown on the MDEQ approved drainage plan

Specific assumptions, calculations, drainage and swale designs pertaining to Lot #1, homeowners parks / common areas and city streets are found in the DEQ approved drainage plan and the engineer's original stormwater report.

Section 7.14: Utilities: All utilities shall be placed underground.

Section 7.15: Antennas, Poles, and other structures: No antennas, poles, cellular telephone towers, communication towers, or other structures shall be erected unless approved by the Architectural Review Committee prior to installation. Any satellite dish receiver must be 24 inches or less in diameter and shall be shielded from view of any road.

Section 7.16: House numbers: Owners shall maintain house numbers which are clearly visible from the street and either posted on the house itself or at the entrance of the driveway.

Section 7.17: Vehicles: All vehicles shall be parked in the garages or driveways with a limit of 3 visible vehicles on a regular basis, and no vehicle shall be parked on the common area or street except on a temporary basis. The parking or storage of toys or recreational vehicles such as but not limited to campers, camping trailers, seasonal vehicles, boats, snowmobiles, trailers, or unlicensed vehicles is only allowed if in an enclosed garage or screened from view by a privacy fence. No outdoor maintenance, service, rebuilding, dismantling, painting, or repair work shall be performed on any vehicle outside of an enclosed garage, except for washing, polishing or oil change with a maximum of 24 hour exposure. No abandoned or inoperable vehicles shall be parked on any Lot. Toys or Recreational vehicles will be allowed to be parked in front of house for a limited 24 hour period while loading or unloading on an occasional basis. Each Lot will have a maximum of 2 toys or recreational vehicles shielded from view, not including garaged property.

Section 7.18: Animals: No more than 5 total small household pets with limits of dogs (no more than 3) or cats (no more than 3) or other small household pets may be kept, providing that they are not kept, bred, or maintained for any commercial purpose. No livestock shall be raised, bred, or kept on any lot. Household pets must be contained upon owner's lot. In common areas, pets must be kept on leashes and cleaned up after. All pet enclosures shall be kept in the rear yard of a lot. No dog which barks and can be heard on any frequent or continuing basis shall be kept on any lot. Pets constituting a nuisance may be ordered by the HOA to be kept within the residence of the owner or ordered expelled from The Benches. Pet food must be stored indoors, in closed sheds or in bear resistant containers in order to avoid attracting wildlife such as bears, mountain lions, skunks, racoons and other wildlife when feeding pets. Owners are reminded that pets at large are a real threat to wildlife and casing hoofed game animals is illegal.

Section 7.19: Wildlife: Feeding or providing supplements such as salt or mineral blocks for deer or other wildlife is strictly prohibited as it will attract mountain lions and bears and endanger people and property and other wildlife. Owners are encouraged to contact Montana Fish, Wildlife & Parks for stewardship practices as they relate to interactions with wildlife. Bird feeds are discouraged from April 1 through November 30 as birdseed is an attractant to bears and wild turkeys. If bird feeds are used, they are required to be suspended a minimum of 10 feet above ground level and be at least 4 feet from any support poles or points and be designed with a catch plate located below the feeder and fixed such that it collects the seed knocked off the feeder by feeding birds. Hummingbird feeders will follow the same criteria.

Section 7.20: Signs: No signs, billboards, banners, or advertising devices of any nature except as may be authorized by the Architectural Review Committee shall be erected on any lot except for temporary standard size For Sale signs. The foregoing restriction shall not apply to Declarant while any Lots remain unsold.

Section 7.21: Outdoor Lighting: Lighting shall serve only the lot on which it is located. A reasonable effort should be exercised to limit light pollution and lights shining onto neighboring properties. Ground level lighting of patio, deck, driveway, and entryway areas on any Lot that do not light areas outside such Lot or create glare are permitted. No additional exterior lighting is permitted except as may be authorized by the Architectural Review Committee.

Section 7.22: Lot Landscaping: Basic landscaping including finish grading, seeding or sodding of entire lot must occur within 120 days after date of occupancy (weather permitting). Each Owner shall have the responsibility to maintain the grounds of his Lot including the mowing of grass, removal of

weeds, and proper trimming of bushes and trees. Each Owner is responsible for re-vegetation of disturbed areas on that Owner's Lot and for the control and eradication of noxious weeds on that Owner's Lot in accordance with the requirements of Flathead County Weed and Parks Department Weed Management Plan for The Benches attached as Exhibit A. If the HOA receives complaints from the Owners, then and in that event it shall have the right to notify the Owner, and if the Owner does not immediately maintain his Lot the HOA may have such maintenance of the grounds of the Lot performed as the HOA shall determine as being reasonable, and the charges therefore shall be assessed against the Lot as Default Assessment. Owners must be aware of potential for vegetation damage by wildlife, particularly from deer feeding on lawns, gardens, flowers and ornamental shrubs and trees in this subdivision. HOA recommends Owners refer to booklet "Minimizing Deer Damage to Residential Plantings" put out by the Montana State University Animal & Range Sciences Extension Services to appropriate nonpalatable vegetation to use in their landscaping as well as fencing, netting and repellents. Compost piles are discouraged in subdivision. Landscaping shall provide defensible space as prescribed by the then current regulation of the fire service area jurisdiction.

Section 7.23: Common Landscaped Areas: All areas throughout The Benches which landscaping was furnished by the Declarant, his successor, or assignees, or by the HOA, shall be maintained by the HOA and shall include planning, ground cover, bedding, lighting and irrigation. The HOA shall be responsible for the re-vegetation of disturbed areas on the Common Area and for control and eradication of noxious weeds on the Common Area in accordance with the requirements of the Flathead County Weed Department Weed Management Plan for The Benches.

Section 7.24: No Noxious weeds: No Noxious weeds, as defined by Flathead County, may be allowed on any lot or in any common area.

Section 7.25: No hunting and fireworks: No hunting of any kind shall be permitted in The Benches. No discharge of firearms is permitted in The Benches. Fireworks may be limited in type, location or time or prohibited entirely by the HOA or the HOA may conduct its own fireworks display.

Section 7.26: Trees: Because it is desirable to maintain a wooded buffer between dwellings, there shall be no cutting down of trees, shrubs, or vegetation within 25 feet of any lot line without prior approval from the Architectural Review Committee. Planting Fruit producing trees and shrubs are strongly discouraged as they attract bears. If already present they must be fenced with electric fencing to deter bears. Produce and fruit must be picked and kept off the ground.

Section 7.27: Barbecue Grills: Barbecue grills must be stored indoors when not being used and cleaned regularly to avoid smells attracting bears or other wildlife to the subdivision. No permanent outdoor barbecue grills shall be allowed in The Benches.

Section 7.28: No fuel tanks: No fuel tanks, whether above or below ground, shall be permitted in The Benches.

Section 7.29: No oil drilling: No oil drilling, oil development operations, oil refining, quarrying, or mining operation of any kind shall be permitted upon or in any lot, nor shall oil wells, tanks, tunnels, mineral excavations or shafts be permitted upon or in any lot. No derrick or other structures designed for use in boring for natural gas shall be erected, maintained, or permitted upon any lot.

ARTICLE VIII. OWNERS RIGHTS AND RESPONSIBILITIES

Section 8.1: Abide by Declaration: Agreed upon at acceptance of a deed to any lot, all owners and residents in The Benches must conform and abide to all portions of this declaration.

Section 8.2: Homeowners Association: All owners are automatically equal members of the Homeowners Association as of its initiation. All Owners have equal voting rights, however all votes must be collected at times given and through methods established by the HOA in order to be counted.

(a) **Contact Information:** Owner is responsible for providing to the HOA current contact information including phone number, email and mailing address and notifying the same of any updates to contact information immediately.

Section 8.3: Assessments: All owners must pay assessments as levied by the HOA. Nonpayment of assessments is subject to action as allowed by this declaration and by law. Any assessment not paid within two months of the due date is deemed to be consent of the lot owner(s) to the filing of a lien for the assessments which lien shall include interest at the legal rate and attorney fees.

Section 8.4: Maintenance: Owners are responsible for maintaining all structures, land, driveways, sidewalks, and any other features on the lot in working order and in appealing condition to promote safety, health, visual attractiveness, and value in the neighborhood. All expenses incurred as a result of maintenance shall be the responsibility of the owner. If reasonable maintenance is not being exercised in the opinion of the HOA, the HOA may take action for non-conformance to this declaration. If any structure is damaged in any way the Owner shall exercise due diligence to rebuild, repair or restore the structure to its appearance and condition prior to the casualty. Reconstruction shall be completed within 9 months of any casualty.

Section 8.5: Improvements: Improvements are encouraged to maintain quality and increase value. Improvements that change the exterior of the home or the lot must be submitted to and approved by the Architectural Review Committee prior to initiation of any project including but not limited to additional patios, sidewalks or decks.

Section 8.6: Weeds: Owners are responsible for guarding against and treating weeds on any part of the Lot.

Section 8.7: Easement Access: Access must be granted to easements by the HOA or utility companies for inspections and maintenance. HOA and Declarant shall follow attached direction from Northwestern Energy Right-Of-Way Development Provisions when accessing, working, drilling or constructing buildings or roadways around or near Northwestern's high pressure gas line easement and will receive approval for all work done before work is started.

Section 8.8: Easement Maintenance: Easements on any individual lot shall be maintained by the Owner of the Lot.

Section 8.9: Trash: Solid Waste Service removal is available for subdivision through Evergreen Disposal and is the responsibility of the Owners to set up and contract for their property. No trash or debris shall be collected, piled, or burned on any part of any lot. The HOA encourages the use of solid waste contractor for residences in the subdivision at a minimum of 2 trash pick-ups per month per home. All trash receptacles shall be kept in a garage or indoors until the morning of pick up at that time they will be moved to the edge of the driveway at the street. Trash receptacles shall be moved back to garage or indoor area by the evening of the scheduled pick-up day.

Section 8.10: Snow Removal: Snow removal on any driveway or private sidewalk is the responsibility of the Owner. Driveways and sidewalks shall be cleared as needed to maintain safety for residents and visitors.

Section 8.11: Landscaping: Landscaping shall be maintained regularly to promote health, safety, value, and guard against weeds. Landscaping on any lot is the responsibility of the owner. Landscaping shall be established and maintained on each entire lot to provide erosion control and visual appeal. Lawns and landscaping features shall be irrigated and mowed/trimmed as needed.

Section 8.12: No noxious activity: No noxious or offensive activity including noise (such as those from sound systems, bells, whistles or other sound devices) shall be carried on upon any lot, nor shall anything be done thereon which may be or may become an annoyance or nuisance to the neighborhood or objects that create an offensive odor. As used herein, the term “nuisance” shall not include any activities of Declarant or its agents, contractors, or designers which are reasonably necessary to the development of an construction of The Benches.

ARTICLE IX. DESIGN GUIDELINES

Section 9.1: Purpose: The purpose of design guidelines is to provide guidelines and expectations for the exterior appearance and quality of all structures in The Benches to owners, builders, or any other entities involved in establishing, maintaining, or improving all areas in The Benches except the interiors of residences. The Design Guidelines are meant to ensure all structures in The Benches meet a high standard of quality and appearance in order to maintain pride and value throughout the subdivision.

Section 9.2: Applicable Features: All exterior structures, landscaping, hardscapes, fencing, and all other exterior features, whether permanent or temporary, shall be subject to these design guidelines. Any exterior improvement that changes the appearance or quality of the lot or structures on the lot must comply with the design guidelines.

Section 9.3: Enforcement: All new structures or improvements to exteriors must be submitted and approved by the Architectural Review Committee prior to commencement of any project. If any feature is created which has not been approved by the Architectural Review Committee, the HOA may take action for non-compliance with this declaration including but not limited to demanding removal of the unapproved feature, charging a fine for a violation, or taking action as allowed by law.

Section 9.4: Architecture: Homes and secondary structures shall be of complementary architecture to other structures in the neighborhood.

Section 9.5: Exterior Finishes: Exterior colors shall be pleasant and complementary to surrounding exterior finishes in the neighborhood. Colors in the subdivision shall be complementary, but not matching in order to achieve pleasing variation. The primary home structure on each lot must have at least two colors. Neighboring homes must have reasonable variation in color. Only Class A or B roofing materials, as rated by the National Fire Protection Association, shall be allowed on all structures. No structure on any Lot shall have a roof or exterior siding which is silver or metallic colored, reflective, or shiny. Use of wood shakes is discouraged, due to their flammability.

Section 9.6: Secondary structures: sheds, canopies, or other yard structures must complement the primary structure in architecture and exterior finishes and must be approved by the Architectural Review Committee prior to construction or installation.

Section 9.7: Landscaping: Each lot shall be landscaped completely to provide erosion control and visual appeal. A mixture of grass lawn, trees, hardscape areas, and garden areas is encouraged. Plant species natural to the area are encouraged.

Section 9.8: Fencing: Fencing must comply with Flathead County zoning restrictions. No fencing is allowed forward of the front of the primary residential structure. Allowable fencing options include but are not limited to wood, chain link, and vinyl. Other fencing materials may be permitted at the discretion of the Architectural Review Committee.

ARTICLE X. ARCHITECTURAL REVIEW COMMITTEE

Section 10.1: Committee and Purpose: An Architectural Review Committee (ARC) shall exist to review and ensure compliance with the design guidelines and property use regulations in order to ensure standards of quality and visual appeal throughout The Benches. During the Period of Declarant Control, the ARC shall consist of at least two members appointed by the declarant.

(a) Members and Management: The HOA shall manage the ARC and establish membership practices and terms. Members of the ARC may be HOA members, or the HOA may choose to hire external consultants as members for the ARC. The ARC must be comprised of at least two committee members at all times. One member of the ARC shall be the main contact person and shall receive submittals and communicate on behalf of the ARC.

Section 10.2: Scope: The Architectural Review Committee must review and approve of the appearance and materials of all structures on the exterior of the home on any lot. The ARC is NOT responsible for reviewing construction methods or practices for safety or compliance with building codes. The ARC shall not have control of or influence over anything on the interior of any structure. Items that must be submitted and approved by the ARC include but are not limited to: new homes, new accessory structures, fencing, landscaping, tree removal, and improvements, including new paint colors, to any of the same. ARC review for the foregoing is necessary for work on all lots and in all common areas. ARC approval is not necessary for planting small gardens, bushes, or trees. The ARC must review submittals based on this declaration and the design guidelines. The ARC may use its judgement and interpretation of this declaration while reviewing submittals. Wherein a submittal, or portion of a submittal, is not addressed in this declaration, the ARC may use discretion based on the appearance and values of the subdivision. Previous or existing construction or installation of exterior features or elements in the subdivision does not justify future approvals of similar elements, and each submittal will be reviewed individually and considered on a case by case basis.

Section 10.3: Required Submittals: The ARC shall keep a list of approved builders and designs. An owner using an approved builder need to seek the approval of ARC, but simply must advise ARC that they are using an approved builder and the builder will notify ARC of the approved design. ARC will only have to approve changes in the design and the color of the structure. The provisions below are waived.

Section 10.4: Required Submittals If Not An Approved Builder: An owner, builder, or other representative must provide detailed plans for new construction or improvements for ARC review. Plans shall show location and the exterior appearance of the structure. Plans must include colors and types of materials as well as measurements. Plans and other necessary documents may be emailed to the designated ARC contact person. The HOA shall keep current contact information for the ARC contact person and shall share the information upon request. The ARC may request additional information or materials such as color or material samples if they feel it is necessary to review any given project.

Section 10.5: Fees: The HOA may decide to charge a fee for Architectural Review to compensate for review time, meeting and submittal management, or outside hires if applicable. The fee and any details regarding the fee must be disclosed to all owners prior to being levied for any project.

Section 10.6: Review Process: The ARC may choose to have regular meeting or scheduled meetings, but a meeting may not be required in all cases. The ARC members may choose to communicate in person or in any other manner about submittals. The designated ARC contact shall collect submittal documents and disperse them to the committee using a method agreed upon by the committee. The ARC contact person shall respond to the submittal in writing with the conclusion of the review agreed upon by all members of the ARC. The conclusion may be approval, disapproval, or conditional approval. Commencement of any project shall not occur until final approval has been granted by the ARC and any applicable fees have been paid.

Section 10.7: Timeline: The ARC shall have thirty (30) days from the date of submittal to complete the review process and issue a response. The ARC shall issue a written response within 30 days. Construction or installation of approved projects may begin when approval is issued provided any appropriate fees have been paid. Where disapprovals exist, future submittals for the same project shall be treated as new submittals and are subject to an additional 30 day review timeline. Where conditional approvals exist, work may commence after the required conditions are agreed upon in writing, providing any applicable fees have been paid. In an event in which no response is issued by the ARC within the 30 day review timeline, the project shall be deemed approved, however it is the responsibility of the owner to ensure it meets standards in this declaration.

Section 10.8: Liability: Neither the Declarant, the Homeowners Association or the Architectural Review Committee nor their respective members, officers, directors employees or the agents shall be responsible for liable for the defects in any plans specifications submitted, revised or approved under this Article, nor for any defects in construction pursuant to such plans and specifications. Approval of plans and specifications under this Article shall not be deemed in lieu of compliance by Owner with applicable building codes or other governmental laws or regulations.

Section 10.9: Revisions to Processes: The ARC and the HOA jointly shall have the power to change, add, or modify ARC processes, applications, and practices as necessary. Any change must be written and recorded prior to initiation of new or changed processes.

ARTICLE XI. DURATION AND AMENDMENT

Section 11.1: Duration of Declaration: The provisions of this Declaration are intended to be easements and covenants running with the land, and are intended to be perpetual, except as amended or terminated as provided below. If any provisions contained in this Declarations is subject to the laws or rules sometimes referred to as the rule against perpetuities or the rule prohibiting unreasonable restraints on alienation, such provisions shall continue and remain in full effect for the period of 21 years following the death of the last to die of the Declarants and the now living children of the Declarants, or until the provisions contained in this Declaration are amended or terminated as provided below, whichever first occurs.

Section 11.2: Amendment during Period of Declarant Control: During the period of Declarant Control, Declarant may amend this Declaration. Declarant shall prepare form of amendment. The form of amendment and a notice of the Owners' rights under this section 11.2 shall be mailed or emailed to each Owner to the address of the Owner on the record of the HOA. Unless written objection is received by the Declarant from the Owners holding 80% or more of the votes within 30 days of the notice given to the Owners, the action proposed to be taken by the Declarant shall then record in the records of Flathead

County, Montana, a document stating the action, take together with a certificate certifying that notice was given to the Owners as required herein and that fewer than 80% of the Owners objected to the action.

Section 11.3: Amendment after Period of Declarant Control: After Period of Declarant Control Declaration may be amended or repealed as provided in this section 11.3. Any amendment shall require the consent of the Owners of 60% of the Lots. Such consent may be evidenced by written consent or y vote at a regular or special meeting of the HOA or by a combination of written consents and votes.

Section 11.4: Unilateral Amendment by Declarant: At any time, before or after the Period of Declarant Control, so long as Declarant owns a Lot, Declarant may unilaterally amend the Declaration (1) is such amendment is solely to comply with applicable law or correct technical or typographical error, (2) if such amendment does not adversely alter any substantial rights of any Owner or mortgagee, or (3) in order to meet the guidelines or regulations of a mortgagor or insurer including, but not limited to, the Federal national Mortgage Association, the Federal Home Loan Mortgage Corporation, The Federal Housing Administration, or the Veterans Administration or any similar agency. Such amendments shall not require approval of any Owners.

ARTICLE XII. MISCELLANEOUS

Section 12.1: Limited Liability: Neither the declarant, the HOA, the ARC, nor their respective members shall be liable to any party for any action or for any failure to act with respect to any matter if the action taken or failure to act was in good faith and without malice.

Section 12.2: Severability: Invalidity or unenforceability of any provision contained in this declaration in whole or in part shall not affect the validity or enforceability of any other provision of the declaration.

Section 12.3: Successors and Assigns: Except as otherwise provided herein, the provisions contained in this Declaration shall be binding upon and shall inure to the benefit of the Declarant, the HOA, and each Owner and their respective heirs, personal representatives, successors and assigns.

Section 12.4: No Waiver: Failure to enforce any provision contained in this declaration shall not operate as a waiver of any such provision or of any other provision of this declaration.

Section 12.5: Enforcement and Remedies: Each provision contained in this Declartiaon shall be enforceable by the HOA or by any Owner who has first made written demand on the HOA to enforce such provision and 30 days have lapsed without appropriate actions having been taken by the HOA. Any enforcement action may be by a proceeding for such relief as may be provided at law or in equity, including but not limited to a temporary or permanent injunction and/or a suit or action to recover damages.

Section 12.6: Attorneys' Fees: In the even of a dispute arising under any provision contained in this Declaration, the prevailing party shall be intitled to its reasonable costs and attorneys' fees incurred.

Section 12.7: Independent Investigation: By taking title to ta Lot, each and every Owner acknowledges and agrees that the Owner has conducted an independent investigation of the suitability of the Lot for the Owner's purposes and intended construction herein, including but not limited to the condition of soils and potential for high groundwater. Neither Seller nor Sellers agents make any warranties or representations to Buyer about the Lots. There ar no verbal or other agreements which modify or affect this agreement. **EACH OWNER AGREES TO TAKE TILE TO THEIR LOT "AS-**

IS” AND IN ITS PRESENT CONDITION AND STATE OF REPAIR, AND ACKNOWLEDGES THAT THE DECLARANT IS MAKING NO WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE CONDITION OF THE LOT OR ITS SUITABILITY FOR THE OWNERS INTENDED USE.

Section 12.8: Entirety: This declaration shall be binding in its entirety and any article or section of this document cannot stand alone.

Signature of Declarant

Merna Terry, Secretary
Terry Dirt, LLC

Date:_____

STATE OF MONTANA, COUNTY OF FLATHEAD

On this _____ day of _____, 20____, before me, the undersigned, a Notary public for the State of Montana, personally appeared Merna Terry, Secretary, Terry Dirt, LLC, known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that such person executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year first above written.

CERTIFICATE OF SUBDIVISION APPROVALS

STATE OF MONTANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF SUBDIVISION PLAT APPROVAL
(Section 76-4-101 et seq.)

TO: County Clerk and Recorder
Flathead County
Kalispell, Montana

E.Q. #20-2332
Corrected

THIS IS TO CERTIFY THAT the plans and supplemental information relating to the subdivision known as **The Benches Subdivision Phase 1**

A tract of land located in the Southwest ¼ of the Northeast ¼ and the West ½ of the Southeast ¼ of Section 16 of Township 30 North, Range 20 West, P.M.M., Flathead County, Montana as found in the records of the Flathead County Clerk & Recorder,

consisting of thirty-two (32) lots have been reviewed by personnel of the Water Quality Division, and,

THAT the documents and data required by ARM Chapter 17 Section 36 have been submitted and found to be in compliance therewith, and,

THAT the approval of the plat is made with the understanding that the following conditions shall be met:

THAT the Lot sizes as indicated on the plat to be filed with the county clerk and recorder will not be further altered without approval, and,

THAT Lots 2, 3, 17 through 32, and 42 through 49 shall be used for one living unit with up to five ~~(5) four (4)~~ bedrooms, and,

THAT Lot 1 shall be used for one living unit with up to ten (10) bedrooms, and,

THAT Common Area B will be used for the public water supply wells, and,

THAT Common Area C shall be used for the individual drainfield for Lot 1, and,

THAT Common Area A, D and E are not approved for structures that require water, wastewater or stormwater facilities, and,

THAT water supply to the lots shall be through individual connections to the Benches Subdivision Public Water Supply (PWS ID MT0005069), and,

THAT the public water supply wells were reviewed and approved under EQ #20-1171, and,

THAT the public water main extensions were reviewed and approved under EQ #20-2334, and,

THAT each individual sewage treatment system will consist of a septic tank, effluent filter, dose tank and pressure-dosed subsurface drainfield of such size and description as will comply with Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM and the most current standards of the Department of Environmental Quality, and,

THAT the pressure-dosed subsurface drainfield for Lot 1 will be located via easement on 'Common Area C'

THAT the pressure-dosed subsurface drainfield for Lot 1 shall have an absorption area of sufficient size to provide for an application rate of 0.6 gpd/square foot and,

THAT the pressure-dosed subsurface drainfield for Lots 2, 3, 17 through 26, 31, 32, and 42 through 49 shall have an absorption area of sufficient size to provide for an application rate of 0.6 gpd/square foot and,

THAT the pressure-dosed subsurface drainfield for Lots 27 through 30 all have an absorption area of sufficient size to provide for an application rate of 0.4 gpd/square foot and,

THAT the bottom of the infiltrative trenches on Lots 23 and 24 shall be 36 inches below ground surface, and,

THAT the bottom of the drainfield shall be at least four feet above the water table, and,

THAT no sewage treatment system shall be constructed within 100 feet of the maximum highwater level of a 100-year flood of any stream, lake, watercourse, or irrigation ditch, nor within 100 feet of any domestic water supply source, and,

THAT storm drainage facilities shall be constructed as shown on the lot layout, signed and stamped by Robert Smith, Montana Professional Engineer Number 12592 PE, and approved under EQ #20-2334, and,

THAT the operation and maintenance of water supply, sewage treatment system, and stormwater facilities shall be the responsibility of each lot owner, and,

THAT water supply systems, sewage treatment systems and storm drainage systems will be located as shown on the approved plans, and,

THAT the developer and/or owner of record shall provide each purchaser of property with a copy of the Plat, approved location of water supply, sewage treatment system and storm drainage structures as shown on the attached lot layout, and a copy of this document, and,

THAT instruments of transfer for this property shall contain reference to these conditions, and,

THAT plans and specifications for any proposed sewage treatment systems will be reviewed and approved by the county health department and will comply with local regulations and ARM, Title 17, Chapter 36, Subchapters 3 and 9, before construction is started.

Page 3 of 7
The Benches Subdivision Phase 1
Flathead County, Montana
E.Q. # 20-2332

THAT departure from any criteria set forth in the approved plans and specifications and Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM when erecting a structure and appurtenant facilities in said subdivision without Department approval, is grounds for injunction by the Department of Environmental Quality.

Pursuant to Section 76-4-122 (2)(a), MCA, a person must obtain the approval of both the State under Title 76, Chapter 4, MCA, and local board of health under section 50-2-116(1)(i), before filing a subdivision plat with the county clerk and recorder.

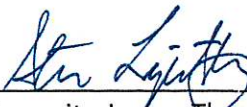
YOU ARE REQUESTED to record this certificate by attaching it to the Plat filed in your office as required by law.

DATED this 20th of January 2021. Corrected this 30th day of June 2021.

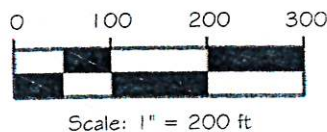
Chris Dorrington,
DIRECTOR

By:

FOR:


Margarite Juarez Thomas, Supervisor
Public Water & Subdivision Section
Engineering Bureau
Water Quality Division
Department of Environmental Quality

Owner's Name: Prairie Dog Development LLC



Design Engineer:
Robert Smith, Montana PE #12592
A2Z Engineering, PLLC
138 East Center Street, Ste A, Kalispell, MT 59901
phone 406.755.7888

- A. Existing typical exterior property boundary line
- B. Existing neighbor's residence
- C. Existing neighbor's groundwater well
- D. Existing neighbor's septic system
- E. Existing neighbor's graveled or paved drive
- F. Existing high pressure gas line
- G. Existing groundwater direction: South 12° West
- H. Existing PWS wellheads
- I. Existing PWS well 100 ft radius control zones
- J. Existing delineated wetland area
- K. Existing open water pond area
- L. Existing typical soil test pit location
- M. Proposed Bench Run roadway

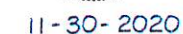
- N. Future Bench Run roadway (Phase 2)
- O. Proposed internal lot boundary lines
- P. Proposed 4"Ø PWS well supply lines
- Q. Proposed PWS well control building
- R. Proposed PWS graveled access drive
- S. Proposed emergency water storage cistern
- T. Proposed typical 4"Ø water main
- U. Proposed 1.5"Ø water service to Lot #1
- V. Proposed typical 1"Ø water service lines
- W. Proposed typical primary drainfield area
- X. Proposed typical replacement drainfield area
- Y. Proposed 100 ft drainfield mixing zone
- Z. Proposed easement for Lot #1 septic system

Section 16, Township 30 North, Range 20 West

- AA. Typical drainfield topographic slope
- AB. Proposed storm retention
- AC. Proposed roadside storm retention swale
- AD. Proposed typical house site
- AE. Proposed typical lot driveway
- AF. Proposed 24"Ø CMP culvert
- AG. Proposed 18"Ø CMP culvert
- AH. Proposed 15"Ø storm sewer piping

The drainfields on lots number 27, 28, 29 & 30 shall have an application rate of 0.4 GPD/SF; the rate for all others is 0.6 GPD/SF. Also the drainfields on lots number 23 and 24 shall have a 36" trench depth requirement.

a.	Soil profile pit no. 1
b.	Soil profile pit no. 2
c.	Soil profile pit no. 3
d.	Soil profile pit no. 4
e.	Soil profile pit no. 5
f.	Soil profile pit no. 6
g.	Soil profile pit no. 7
h.	Soil profile pit no. 8
i.	Soil profile pit no. 9
j.	Soil profile pit no. 10
k.	Soil profile pit no. 11
l.	Soil profile pit no. 12
m.	Soil profile pit no. 13
n.	Soil profile pit no. 14



REVISIONS:

DRAWN BY: R Smith

CHECKED BY: R Smith

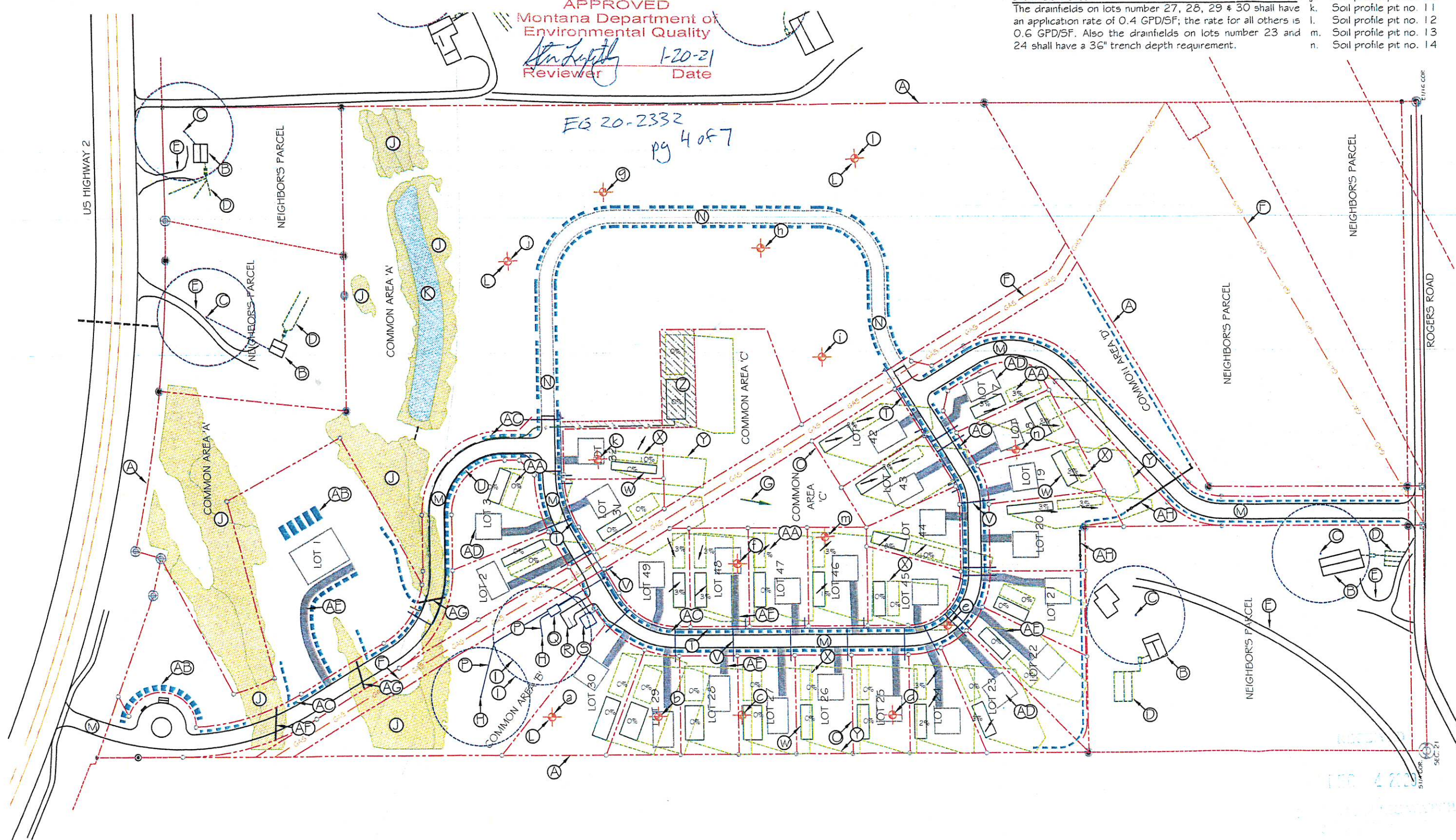


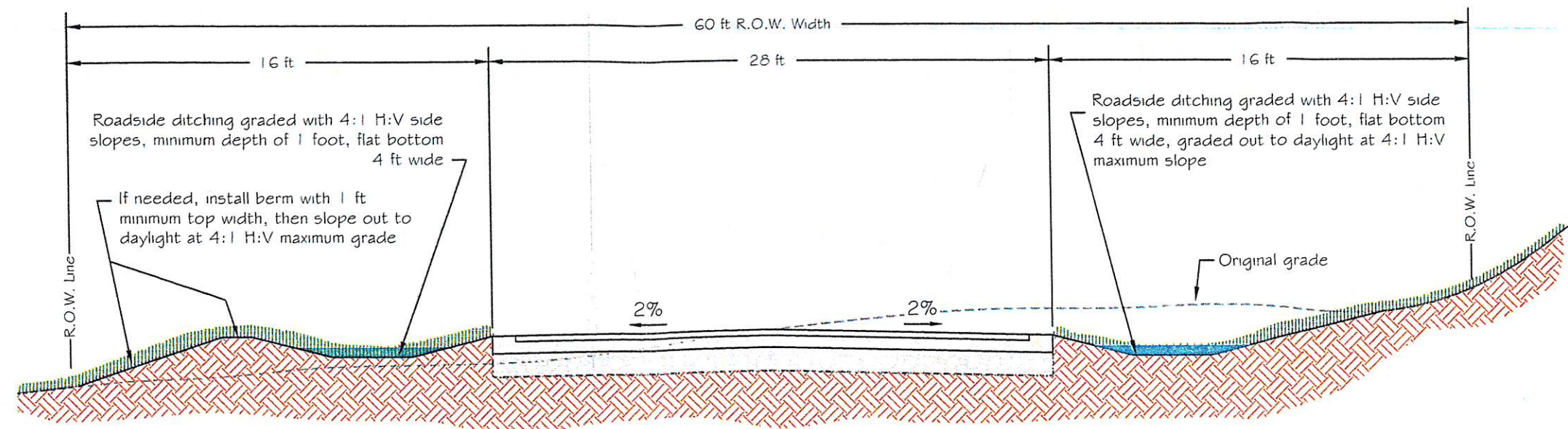
Columbia Falls, Montana

Plan Sheet Number:

LL

- 177

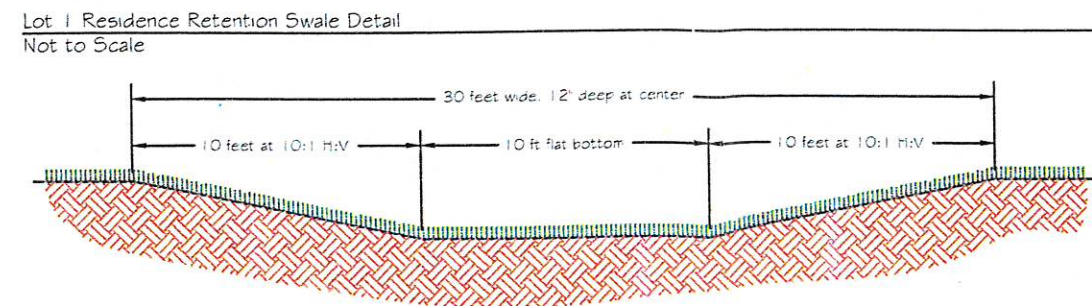
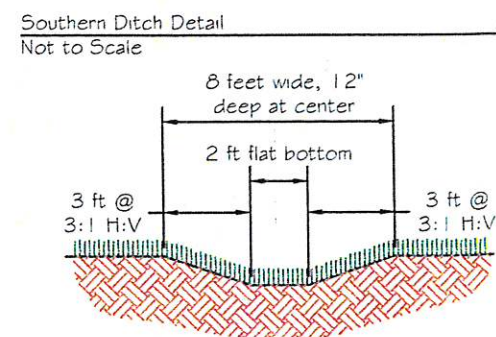
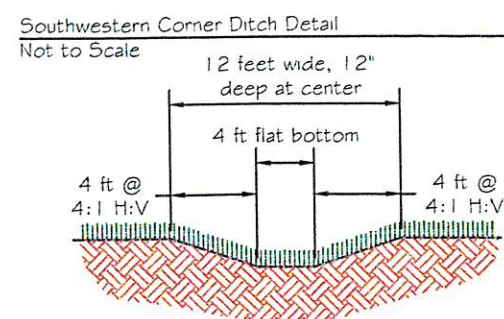
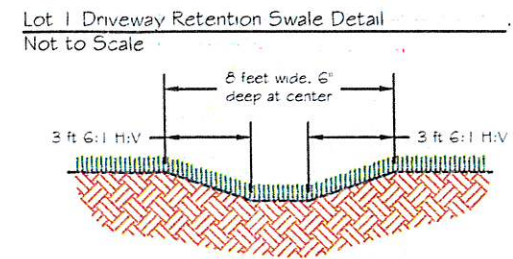
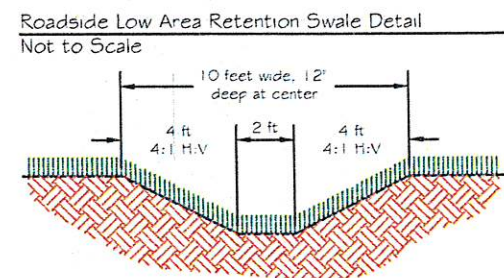
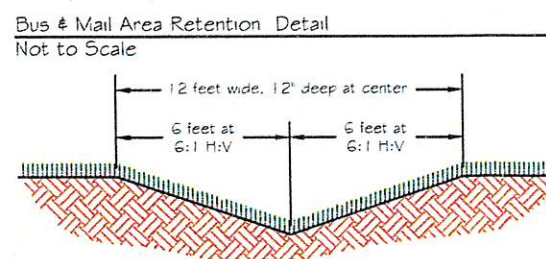




APPROVED
Montana Department of
Environmental Quality

Reviewer 4th Lt. Lytle Date 1-20-21

EQ 20-2332
pg 5 of 7



138 E. Center St., Ste A
Kalispell, MT 59901
Phone 406.755.7888
A2Z-Engineering.com



11-30-2020

REVISIONS:
DRAWN BY: R Smith
CHECKED BY: R Smith



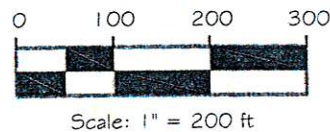
The Benches Subdivision, Phase I

Lot Layout Sheets
Stomwater Retention

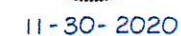
Columbia Falls, Montana

Plan Sheet Number:

LL2



Section 16, Township 30 North, Range 20 West



REVISIONS:

DRAWN BY: R Smith

CHECKED BY: R Smith

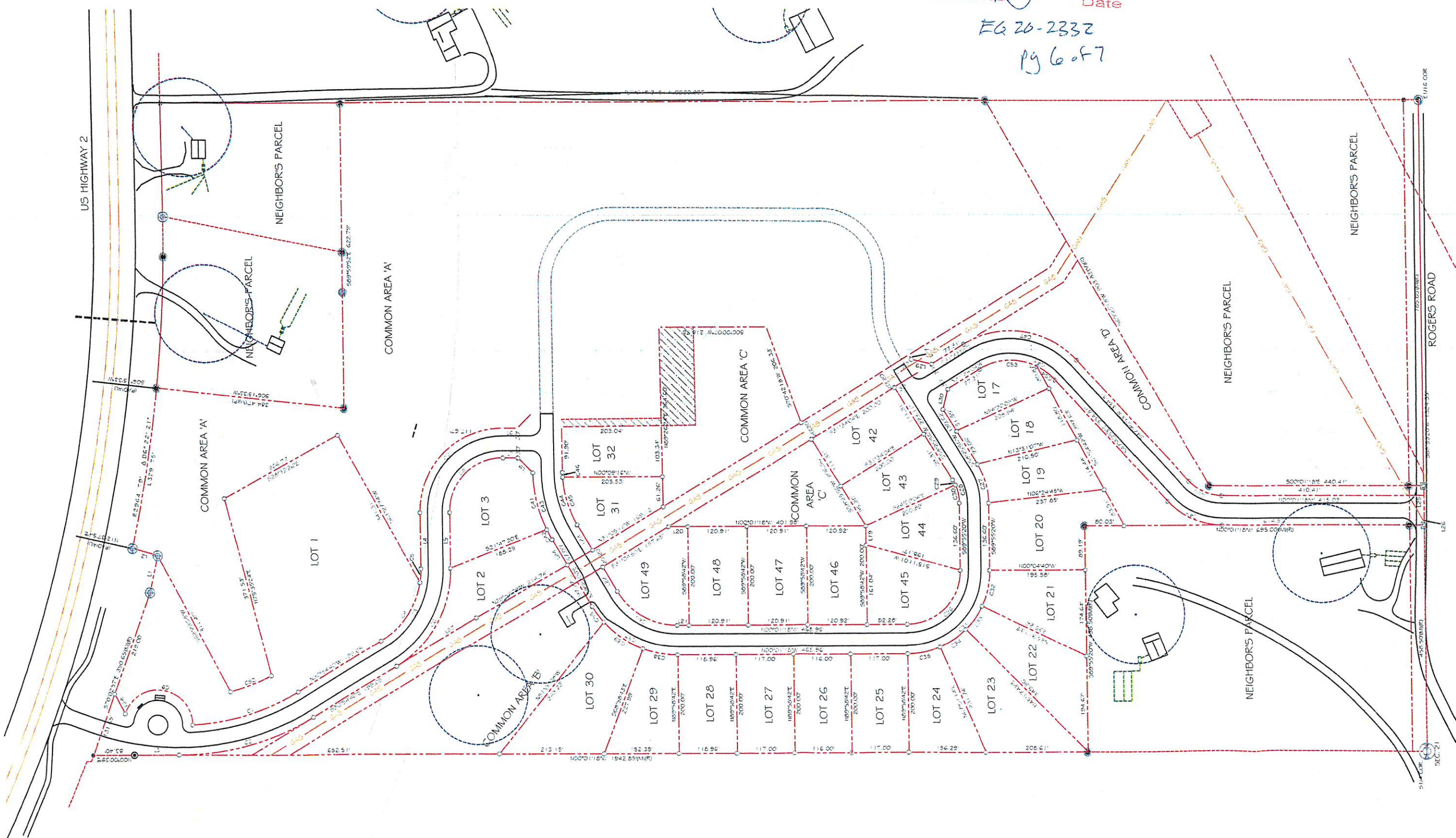


Lot Layout Sheets
Lot Boundaries

Columbia Falls, Montana

LL3

- 179 -



Lot	Acres	Sq. Feet	Acres(G)
1	3.886	169,283.98	4.376
2	0.615	26,808.56	1.107
3	0.697	30,348.18	1.189
17	0.432	18,814.22	0.924
18	0.466	20,299.11	0.958
19	0.480	20,902.44	0.972
20	0.762	33,198.90	1.254
21	0.584	25,454.65	1.076
22	0.701	30,556.13	1.193
23	0.759	33,070.94	1.251
24	0.531	23,113.20	1.023
25	0.537	23,400.00	1.029
26	0.533	23,200.00	1.025
27	0.537	23,400.00	1.029
28	0.546	23,791.57	1.038
29	0.530	23,103.66	1.022
30	0.887	38,653.90	1.379
31	0.475	20,673.69	0.967
32	0.479	20,872.02	0.971
42	0.511	22,261.34	1.003
43	0.497	21,651.77	0.989
44	0.470	20,490.63	0.962
45	0.534	23,278.12	1.026
46	0.555	24,183.81	1.047
47	0.555	24,182.00	1.047
48	0.555	24,182.00	1.047
49	0.555	24,181.99	1.047

LINE	BEARING	DISTANCE
L1	S77°30'43"E	76.96'(M)(R)
L2	N15°59'25"E	53.29'(M) 53.00'(R)
L3	N00°01'18"W	90.98'
L4	S89°50'44"W	113.54'
L5	N89°50'44"E	113.48'
L6	N00°12'55"W	30.00'
L7	S00°12'54"E	30.00'
L8	N45°07'27"W	42.40'
L9	S44°52'30"W	42.45'
L10	S00°05'38"E	31.26'
L11	S00°05'38"E	31.32'
L12	S83°29'23"E	33.44'
L13	N89°59'52"W	69.86'
L14	N89°59'52"W	46.15'
L15	N89°59'52"W	23.71'
L16	S58°25'56"W	10.00'
L17	S58°25'56"W	10.00'
L18	S58°25'56"W	10.00'
L19	S89°58'42"W	38.96'
L20	N00°01'18"W	39.24'
L21	N00°01'18"W	23.94'
L22	N59°29'06"E	57.25'
L23	N59°29'06"E	59.75'
L24	N59°29'06"E	59.73'
L25	S89°55'20"W	60.00'
L26	S89°55'20"W	20.00'
L27	N30°54'40"W	146.11'
L28	N62°27'47"E	45.00'
L29	S13°26'48"W	42.41'
L30	N76°34'04"W	42.43'

pg 7 of 7

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	RADIAL BEARING-IN	RADIAL BEARING-OUT
C1	476.70'	229.21'	27°32'57"	N86°38'17"E	N59°05'20"E
C2	536.70'	289.40'	30°53'43"	N89°59'03"E	N59°05'20"E
C3	170.00'	175.96'	59°18'20"	N59°05'20"E	N00°13'01"W
C4	170.00'	147.65'	49°45'48"	N59°05'20"E	N09°19'31"E
C5	170.00'	28.31'	9°32'32"	N09°19'31"E	N00°13'01"W
C6	230.00'	238.07'	59°18'20"	N59°05'20"E	N00°13'01"W
C7	170.00'	267.04'	90°00'00"	S89°50'44"W	S00°09'16"E
C8	110.00'	172.79'	90°00'00"	S89°50'44"W	S00°09'16"E
C9	70.00'	198.60'	162°33'31"	N00°51'03"E	S18°17'33"W
C10	170.73'	269.85'	90°33'44"	N89°35'32"W	S00°09'16"E
C11	170.73'	108.42'	36°23'09"	S36°13'53"W	S00°09'16"E
C12	170.73'	78.96'	26°30'01"	S62°43'54"W	S36°13'53"W
C13	170.73'	82.47'	27°40'33"	N89°35'32"W	S62°43'54"W
C14	110.73'	175.01'	90°33'44"	N89°35'32"W	S00°09'16"E
C15	110.73'	87.51'	45°16'52"	S45°07'36"W	S00°09'16"E
C16	110.73'	87.51'	45°16'52"	N89°35'32"W	S45°07'36"W
C17	90.00'	140.73'	89°35'40"	N00°00'08"E	N89°35'32"W
C18	90.00'	117.52'	74°48'53"	N14°46'40"W	N89°35'32"W
C19	90.00'	23.22'	14°46'47"	N00°00'08"E	N14°46'40"W
C20	150.00'	234.56'	89°35'40"	N00°00'08"E	N89°35'32"W
C21	150.00'	25.10'	9°35'08"	N80°00'24"W	N89°35'32"W
C22	150.00'	59.22'	22°37'11"	N57°23'13"W	N80°00'24"W
C23	150.00'	62.15'	23°44'27"	N33°38'46"W	N57°23'13"W
C24	150.00'	88.09'	33°38'54"	N00°00'08"E	N33°38'46"W
C25	232.70'	128.22'	31°34'12"	S00°00'08"W	S31°34'04"E
C26	232.70'	32.47'	7°59'41"	S00°00'08"W	S07°59'34"E
C27	232.70'	95.75'	23°34'31"	S07°59'34"E	S31°34'04"E
C28	172.70'	95.16'	31°34'12"	S00°00'08"W	S31°34'04"E
C27	150.00'	82.44'	31°29'24"	N00°04'40"W	N31°34'04"W
C28	90.00'	49.46'	31°29'24"	N00°04'40"W	N31°34'04"W
C29	90.00'	11.91'	7°34'55"	N31°34'04"W	N23°59'09"W
C30	90.00'	37.55'	23°54'29"	N23°59'09"W	N00°04'40"W
C31	168.95'	265.56'	90°03'22"	N89°58'42"E	N00°04'40"W
C32	168.95'	75.48'	25°35'53"	N25°31'13"E	N00°04'40"W
C33	168.95'	58.31'	19°46'30"	N45°17'42"E	N25°31'13"E
C34	168.95'	64.06'	21°43'32"	N67°01'14"E	N45°17'42"E
C35	168.95'	67.70'	22°57'28"	N89°58'42"E	N67°01'14"E
C36	108.95'	171.25'	90°03'22"	N89°58'42"E	N00°04'40"W
C37	200.77'	208.51'	59°30'24"	S30°30'54"E	N89°58'42"E
C38	200.77'	72.02'	20°33'16"	S69°28'02"E	N89°58'42"E
C39	200.77'	96.49'	27°32'12"	S41°55'50"E	S69°28'02"E
C40	140.77'	146.20'	59°30'24"	S30°30'54"E	N89°58'42"E
C41	270.97'	119.55'	25°16'43"	S00°18'08"E	S25°34'51"E
C42	270.97'	23.34'	4°56'04"	S25°34'51"E	S30°30'54"E
C43	270.97'	142.89'	30°12'46"	S00°18'08"E	S30°30'54"E
C44	210.97'	111.79'	30°21'38"	S00°09'16"E	S30°30'54"E
C45	210.97'	101.79'	27°38'37"	S02°52'17"E	S30°30'54"E
C46	210.97'	10.00'	2°43'01"	S00°09'16"E	S02°52'17"E
C47	181.83'	273.20'	86°05'23"	N35°28'41"W	S58°25'56"W
C48	121.83'	183.05'	86°05'23"	N35°28'41"W	S58°25'56"W
C49	150.00'	142.79'	54°32'37"	S35°28'41"E	N89°58'42"E
C50	90.00'	85.67'	54°32'37"	S35°28'41"E	N89°58'42"E
C51	2964.79'	81.51'	1°34'31"	N01°03'48"E	N00°30'43"W
C52	421.70'	91.36'	12°24'46"	N75°27'44"E	N63°02'57"E
C53	121.83'	81			

 $LL\Delta$

STATE OF MONTANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF SUBDIVISION PLAT APPROVAL
(Section 76-4-101 et seq.)

TO: County Clerk and Recorder
Flathead County
Kalispell, Montana

E.Q. #20-2333
Corrected

THIS IS TO CERTIFY THAT the plans and supplemental information relating to the subdivision known as **The Benches Subdivision Phase 2**

A tract of land located in the Southwest $\frac{1}{4}$ of the Northeast $\frac{1}{4}$ and the West $\frac{1}{2}$ of the Southeast $\frac{1}{4}$ of Section 16 of Township 30 North, Range 20 West, P.M.M., Flathead County, Montana as found in the records of the Flathead County Clerk & Recorder,

consisting of twenty-two (22) lots have been reviewed by personnel of the Water Quality Division, and,

THAT the documents and data required by ARM Chapter 17 Section 36 have been submitted and found to be in compliance therewith, and,

THAT the approval of the plat is made with the understanding that the following conditions shall be met:

THAT the Lot sizes as indicated on the plat to be filed with the county clerk and recorder will not be further altered without approval, and,

THAT Lots 4 through 16 and Lots 33 through 41 shall be used for one living unit with up to five (5) ~~four (4)~~ bedrooms, and,

THAT water supply to the lots shall be through individual connections to the Benches Subdivision Public Water Supply (PWS ID MT0005069), and,

THAT the public water supply wells were reviewed and approved under EQ #20-1171, and,

THAT the public water main extensions were reviewed and approved under EQ #20-2334, and,

THAT each individual sewage treatment system will consist of a septic tank, effluent filter, dose tank and pressure-dosed subsurface drainfield of such size and description as will comply with Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM and the most current standards of the Department of Environmental Quality, and,

Page 2 of 7
The Benches Subdivision Phase 2
Flathead County, Montana
E.Q. # 20-2333

THAT the pressure-dosed subsurface drainfields shall have an absorption area of sufficient size to provide for an application rate of 0.6 gpd/square foot and,

THAT the bottom of the infiltrative trenches on Lots 40 and 41 shall be 36 inches below ground surface, and,

THAT the bottom of the drainfield shall be at least four feet above the water table, and,

THAT no sewage treatment system shall be constructed within 100 feet of the maximum highwater level of a 100-year flood of any stream, lake, watercourse, or irrigation ditch, nor within 100 feet of any domestic water supply source, and,

THAT storm drainage facilities shall be constructed as shown on the lot layout, signed and stamped by Robert Smith, Montana Professional Engineer Number 12592 PE, and approved under EQ #20-2334, and,

THAT the operation and maintenance of water supply, sewage treatment system, and stormwater facilities shall be the responsibility of each lot owner, and,

THAT water supply systems, sewage treatment systems and storm drainage systems will be located as shown on the approved plans, and,

THAT the developer and/or owner of record shall provide each purchaser of property with a copy of the Plat, approved location of water supply, sewage treatment system and storm drainage structures as shown on the attached lot layout, and a copy of this document, and,

THAT instruments of transfer for this property shall contain reference to these conditions, and,

THAT plans and specifications for any proposed sewage treatment systems will be reviewed and approved by the county health department and will comply with local regulations and ARM, Title 17, Chapter 36, Subchapters 3 and 9, before construction is started.

THAT departure from any criteria set forth in the approved plans and specifications and Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM when erecting a structure and appurtenant facilities in said subdivision without Department approval, is grounds for injunction by the Department of Environmental Quality.

Pursuant to Section 76-4-122 (2)(a), MCA, a person must obtain the approval of both the State under Title 76, Chapter 4, MCA, and local board of health under section 50-2-116(1)(i), before filing a subdivision plat with the county clerk and recorder.

Page 3 of 7
The Benches Subdivision Phase 2
Flathead County, Montana
E.Q. # 20-2333

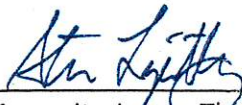
YOU ARE REQUESTED to record this certificate by attaching it to the Plat filed in your office as required by law.

DATED this 20th day of January 2021. Corrected this 30th day of June 2021.

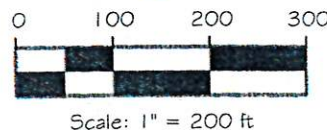
Chris Dorrington,
DIRECTOR

By:

FOR:


Margarite Juarez Thomas, Supervisor
Public Water & Subdivision Section
Engineering Bureau
Water Quality Division
Department of Environmental Quality

Owner's Name: Prairie Dog Development LLC



Design Engineer:
Robert Smith, Montana PE #12592
A2Z Engineering, PLLC
138 East Center Street, Ste A, Kalispell, MT 59901
phone 406.755.7888

- A. Existing typical exterior property boundary line
- B. Existing neighbor's residence
- C. Existing neighbor's groundwater well
- D. Existing neighbor's septic system
- E. Existing neighbor's graveled or paved drive
- F. Existing high pressure gas line
- G. Existing groundwater direction: South 12° West
- H. Existing PWS wellheads
- I. Existing PWS well 100 ft radius control zones
- J. Existing delineated wetland area
- K. Existing open water pond area
- L. Existing typical soil test pit location
- M. Proposed Bench Run roadway

- O. Proposed internal lot boundary lines
- P. Proposed 4"Ø PWS well supply lines
- Q. Proposed PWS well control building
- R. Proposed PWS graveled access drive
- S. Proposed emergency water storage cistern
- T. Proposed typical 4"Ø water main
- V. Proposed typical 1"Ø water service lines
- W. Proposed typical primary drainfield area
- X. Proposed typical replacement drainfield area
- Y. Proposed 100 ft drainfield mixing zone
- Z. Proposed easement for Lot #1 septic system

Section 16, Township 30 North, Range 20 West

- AA. Typical drainfield topographic slope
- AB. Proposed storm retention
- AC. Proposed roadside storm retention swale
- AD. Proposed typical house site

Drainfield Notes:

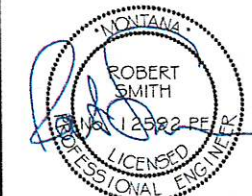
The drainfields on lots number 40 and 41 shall have a 36" trench depth requirement.

Keyed Notes for Test Pits:

- | | |
|----|-------------------------|
| a. | Soil profile pit no. 1 |
| b. | Soil profile pit no. 2 |
| c. | Soil profile pit no. 3 |
| d. | Soil profile pit no. 4 |
| e. | Soil profile pit no. 5 |
| f. | Soil profile pit no. 6 |
| g. | Soil profile pit no. 7 |
| h. | Soil profile pit no. 8 |
| i. | Soil profile pit no. 9 |
| j. | Soil profile pit no. 10 |
| k. | Soil profile pit no. 11 |
| l. | Soil profile pit no. 12 |
| m. | Soil profile pit no. 13 |
| n. | Soil profile pit no. 14 |



138 E. Center St., Ste A
Kalispell, MT 59901
Phone 406.755.7888
A2Z-Engineering.com



11-30-2020

REVISIONS:

DRAWN BY: R Smith



The Benches Subdivision, Phase 2

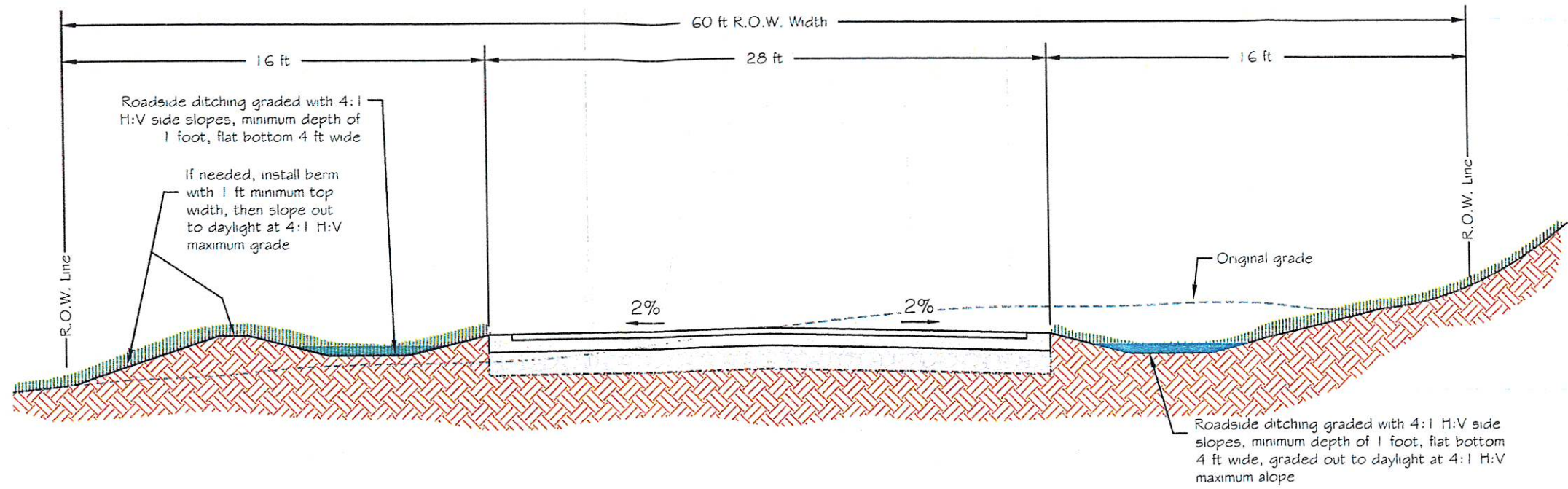
Lot Layout Sheets
Overall Layout

Columbia Falls, Montana

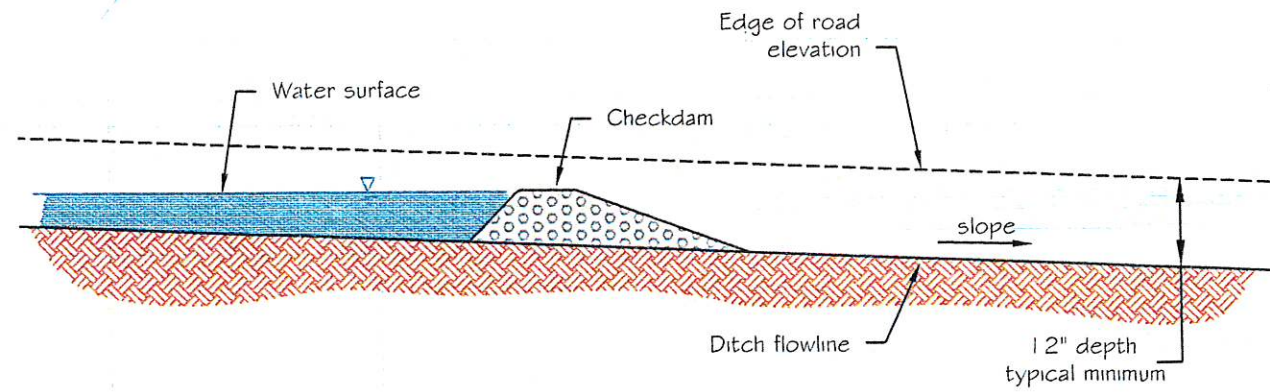
Plan Sheet Number:

LL

- 184 -



Schematic Typical Elevation View of Road Ditch with Checkdams
Not to Scale



Note: Rock check dam shall be constructed of crushed $\frac{3}{4}$ inch diameter stone. Check dams shall be spaced based upon the slope of the road according to the table. Check dams shall be 8 inches high maximum.

Road Grade	Dam Spacing (ft)
0.50%	83
1.00%	41
1.50%	28
2.00%	21
2.50%	17
3.00%	14
3.50%	12
4.00%	10
4.50%	9
5.00%	8
5.50%	8

APPROVED
Montana Department of
Environmental Quality
Ann Lutz
Reviewer 1-20-21
Date

EQ 20-2333

pg 5 of 7



138 E. Center St., Ste A
Kalispell, MT 59901
Phone 406.755.7888
A2Z-Engineering.com



11-30-2020

REVISIONS:

DRAWN BY: R. Smith

CHECKED BY: R. Smith



The Benches Subdivision, Phase 2

Lot Layout Sheets
Stomwater Retention

Columbia Falls, Montana

Plan Sheet Number:

LL2



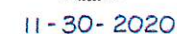
Scale: 1" = 200 ft

Section 16, Township 30 North, Range 20 West

Reviewer Steve Lytle Date 1-20-21

EQ 20-2333

Pg 6 of 7



REVISIONS:

DRAWN BY: R Smith



Lot Layout Sheets
Lot Boundaries

Columbia Falls, Montana

Plan Sheet Number:

LL3

- 186 -

Lot Averages

Lot	Acres	Sq. Feet	Acres(G)
4	0.596	25,963.81	1.088
5	0.511	22,240.28	1.003
6	0.900	39,209.64	1.392
7	0.930	40,507.92	1.422
8	0.649	28,264.81	1.141
9	0.498	21,699.19	0.990
10	0.504	21,966.61	0.996
11	0.506	22,053.71	0.998
12	0.513	22,342.29	1.005
13	0.543	23,642.28	1.035
14	0.411	17,907.14	0.903
15	0.511	22,244.14	1.003
16	0.561	24,442.22	1.053
33	0.465	20,268.41	0.957
34	0.467	20,341.50	0.959
35	0.462	20,139.62	0.954
36	0.461	20,079.37	0.953
37	0.513	22,340.05	1.005
38	0.475	20,689.56	0.967
39	0.551	23,986.28	1.043
40	0.478	20,813.00	0.970
41	0.496	21,603.87	0.988

APPROVED
Montana Department of
Environmental Quality
Reviewer 1-20-21
Date

EG 20-2333
pg 7 of 7

Plat Line Dimensions

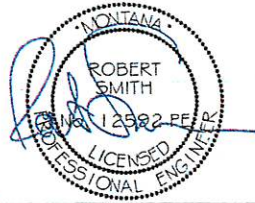
LINE	BEARING	DISTANCE
L1	S77°30'43"E	76.96'(M)(R)
L2	N15°59'25"E	53.29'(M) 53.00'(R)
L3	N00°01'18"W	90.98'
L4	S89°50'44"W	113.54'
L5	N89°50'44"E	113.48'
L6	N00°12'55"W	30.00'
L7	S00°12'54"E	30.00'
L8	N45°07'27"W	42.40'
L9	S44°52'30"W	42.45'
L10	S00°05'38"E	31.26'
L11	S00°05'38"E	31.32'
L12	S83°29'23"E	33.44'
L13	N89°59'52"W	69.86'
L14	N89°59'52"W	46.15'
L15	N89°59'52"W	23.71'
L16	S58°25'56"W	10.00'
L17	S58°25'56"W	10.00'
L18	S58°25'56"W	10.00'
L19	S89°58'42"W	38.96'
L20	N00°01'18"W	39.24'
L21	N00°01'18"W	23.94'
L22	N59°29'06"E	57.25'
L23	N59°29'06"E	59.75'
L24	N59°29'06"E	59.73'
L25	S89°55'20"W	60.00'
L26	S89°55'20"W	20.00'
L27	N30°54'40"W	146.11'
L28	N62°27'47"E	45.00'
L29	S13°26'48"W	42.41'
L30	N76°34'04"W	42.43'

Plat Curve Dimensions

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	RADIAL BEARING-IN	RADIAL BEARING-OUT
C1	476.70'	229.21'	27°32'57"	N86°38'17"E	N59°05'20"E
C2	536.70'	289.40'	30°53'43"	N89°59'03"E	N59°05'20"E
C3	170.00'	175.96'	59°18'20"	N59°05'20"E	N00°13'01"W
C4	170.00'	147.65'	49°45'48"	N59°05'20"E	N09°19'31"E
C5	170.00'	28.31'	9°32'32"	N09°19'31"E	N00°13'01"W
C6	230.00'	238.07'	59°18'20"	N59°05'20"E	N00°13'01"W
C7	170.00'	267.04'	90°00'00"	S89°50'44"W	S00°09'16"E
C8	110.00'	172.79'	90°00'00"	S89°50'44"W	S00°09'16"E
C9	70.00'	198.60'	162°33'31"	N00°51'03"E	S18°17'33"W
C10	170.73'	269.85'	90°33'44"	N89°35'32"W	S00°09'16"E
C11	170.73'	108.42'	36°23'09"	S36°13'53"W	S00°09'16"E
C12	170.73'	78.96'	26°30'01"	S62°43'54"W	S36°13'53"W
C13	170.73'	82.47'	27°40'33"	N89°35'32"W	S62°43'54"W
C14	110.73'	175.01'	90°33'44"	N89°35'32"W	S00°09'16"E
C15	110.73'	87.51'	45°16'52"	S45°07'36"W	S00°09'16"E
C16	110.73'	87.51'	45°16'52"	N89°35'32"W	S45°07'36"W
C17	90.00'	140.73'	89°35'40"	N00°00'08"E	N89°35'32"W
C18	90.00'	117.52'	74°46'53"	N14°46'40"W	N89°35'32"W
C19	90.00'	23.22'	14°46'47"	N00°00'08"E	N14°46'40"W
C20	150.00'	234.56'	89°35'40"	N00°00'08"E	N89°35'32"W
C21	150.00'	25.10'	9°35'08"	N80°00'24"W	N89°35'32"W
C22	150.00'	59.22'	22°37'11"	N57°23'13"W	N80°00'24"W
C23	150.00'	62.15'	23°44'27"	N33°38'46"W	N57°23'13"W
C24	150.00'	88.09'	33°38'54"	N00°00'08"E	N33°38'46"W
C25	232.70'	128.22'	31°34'12"	S00°00'08"W	S31°34'04"E
C26	232.70'	32.47'	7°59'41"	S00°00'08"W	S07°59'34"E
C27	232.70'	95.75'	23°34'31"	S07°59'34"E	S31°34'04"E
C28	172.70'	95.16'	31°34'12"	S00°00'08"W	S31°34'04"E
C27	150.00'	82.44'	31°29'24"	N00°04'40"W	N31°34'04"W
C28	90.00'	49.46'	31°29'24"	N00°04'40"W	N31°34'04"W
C29	90.00'	11.91'	7°34'55"	N31°34'04"W	N23°59'09"W
C30	90.00'	37.55'	23°54'29"	N23°59'09"W	N00°04'40"W
C31	168.95'	265.56'	90°03'22"	N89°58'42"E	N00°04'40"W
C32	168.95'	75.48'	25°35'53"	N25°31'13"E	N00°04'40"W
C33	168.95'	58.31'	19°46'30"	N45°17'42"E	N25°31'13"E
C34	168.95'	64.06'	21°43'32"	N67°01'14"E	N45°17'42"E
C35	168.95'	67.70'	22°57'28"	N89°58'42"E	N67°01'14"E
C36	108.95'	171.25'	90°03'22"	N89°58'42"E	N00°04'40"W
C37	200.77'	208.51'	59°30'24"	S30°30'54"E	N89°58'42"E
C38	200.77'	72.02'	20°33'16"	S69°28'02"E	N89°58'42"E
C39	200.77'	96.49'	27°32'12"	S41°55'50"E	S69°28'02"E
C40	140.77'	146.20'	59°30'24"	S30°30'54"E	N89°58'42"E
C41	270.97'	119.55'	25°16'43"	S00°18'08"E	S25°34'51"E
C42	270.97'	23.34'	4°56'04"	S25°34'51"E	S30°30'54"E
C43	270.97'	142.89'	30°12'46"	S00°18'08"E	S30°30'54"E
C44	210.97'	111.79'	30°21'38"	S00°09'16"E	S30°30'54"E
C45	210.97'	101.79'	27°38'37"	S02°52'17"E	S30°30'54"E
C46	210.97'	10.00'	2°43'01"	S00°09'16"E	S02°52'17"E
C47	181.83'	273.20'	86°05'23"	N35°28'41"W	S58°25'56"W
C48	121.83'	183.05'	86°05'23"	N35°28'41"W	S58°25'56"W
C49	150.00'	142.79'	54°32'37"	S35°28'41"E	N89°58'42"E
C50	90.00'	85.67'	54°32'37"	S35°28'41"E	N89°58'42"E
C51	2964.79'	81.51'	1°34'31"	N01°03'48"E	N00°30'43"W
C52	421.70'	91.36'	12°24'46"	N75°27'44"E	N63°02'57"E
C53	121.83'	81.95'	38°32'25"	N83°01'39"W	S58°25'56"W
C54	121.83'	101.10'	47°32'58"	N35°28'41"W	N83°01'39"W
C55	200.77'	40.00'	11°24'55"	S30°30'54"E	S41°55'50"E



138 E. Center St., Ste A
Kalispell, MT 59901
Phone 406.755.7888
A2Z-Engineering.com



11-30-2020

REVISIONS:

DRAWN BY: R. Smith
CHECKED BY: R. Smith



The Benches Subdivision, Phase 2
Lot Layout Sheets
Lot Line Dimensions

Columbia Falls, Montana

Plan Sheet Number:

LL4

January 21, 2021

Robert Smith PE
A 2 Z Engineering
138 East Center Suite A
Kalispell MT 59901

RE: The Benches Phase 1
Flathead County
E.Q. #20-2332

Dear Mr. Smith:

The plans and supplemental information relating to the water supply, sewage, solid waste disposal, and storm drainage (if any) for the above referenced division of land have been reviewed as required by ARM Title 17 Chapter 36(101-805) and have been found to be in compliance with those rules.

Two copies of the Certificate of Subdivision Plat Approval are enclosed. The original is to be filed at the office of the county clerk and recorder. The duplicate is for your personal records.

Development of the approved subdivision may require coverage under the Department's General Permit for Storm Water Discharges Associated with Construction Activity, if your development has construction-related disturbance of one or more acre. If so, please contact the Storm Water Program at (406) 444-3080 for more information or visit the Department's storm water construction website at <http://www.deq.state.mt.us/wqinfo/MPDES/StormwaterConstruction.asp>. Failure to obtain this permit (if required) prior to development can result in significant penalties.

In addition, your project may be subject to Federal regulations relating to Class V injection wells. Please contact the United States Environmental Protection Agency regarding specific rules that may apply.

Your copy is to inform you of the conditions of the approval. Please note that you have specific responsibilities according to the plat approval statement primarily with regard to informing any new owner as to any conditions that have been imposed.

If you have any questions, please contact this office.

Sincerely,


Ashley Kroon, Supervisor
Subdivision Review Section

AK/le

cc: County Sanitarian
County Planning Board (e-mail)
Owner

Page 1 of 7
The Benches Subdivision Phase 1
Flathead County, Montana
E.Q. # 20-2332

STATE OF MONTANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF SUBDIVISION PLAT APPROVAL
(Section 76-4-101 et seq.)

TO: County Clerk and Recorder
Flathead County
Kalispell, Montana

E.Q. #20-2332

THIS IS TO CERTIFY THAT the plans and supplemental information relating to the subdivision known as **The Benches Subdivision Phase 1**

A tract of land located in the Southwest $\frac{1}{4}$ of the Northeast $\frac{1}{4}$ and the West $\frac{1}{2}$ of the Southeast $\frac{1}{4}$ of Section 16 of Township 30 North, Range 20 West, P.M.M., Flathead County, Montana as found in the records of the Flathead County Clerk & Recorder,

consisting of thirty-two (32) lots have been reviewed by personnel of the Water Quality Division, and,

THAT the documents and data required by ARM Chapter 17 Section 36 have been submitted and found to be in compliance therewith, and,

THAT the approval of the plat is made with the understanding that the following conditions shall be met:

THAT the Lot sizes as indicated on the plat to be filed with the county clerk and recorder will not be further altered without approval, and,

THAT Lots 2, 3, 17 through 32, and 42 through 49 shall be used for one living unit with up to four (4) bedrooms, and,

THAT Lot 1 shall be used for one living unit with up to ten (10) bedrooms, and,

THAT Common Area B will be used for the public water supply wells, and,

THAT Common Area C shall be used for the individual drainfield for Lot 1, and,

THAT Common Area A, D and E are not approved for structures that require water, wastewater or stormwater facilities, and,

THAT water supply to the lots shall be through individual connections to the Benches Subdivision Public Water Supply (PWS ID MT0005069), and,

THAT the public water supply wells were reviewed and approved under EQ #20-1171, and,

THAT the public water main extensions were reviewed and approved under EQ #20-2334, and,

Page 1 of 7
The Benches Subdivision Phase 1
Flathead County, Montana
E.Q. # 20-2332

STATE OF MONTANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF SUBDIVISION PLAT APPROVAL
(Section 76-4-101 et seq.)

TO: County Clerk and Recorder
Flathead County
Kalispell, Montana

E.Q. #20-2332
Corrected

THIS IS TO CERTIFY THAT the plans and supplemental information relating to the subdivision known as **The Benches Subdivision Phase 1**

A tract of land located in the Southwest $\frac{1}{4}$ of the Northeast $\frac{1}{4}$ and the West $\frac{1}{2}$ of the Southeast $\frac{1}{4}$ of Section 16 of Township 30 North, Range 20 West, P.M.M., Flathead County, Montana as found in the records of the Flathead County Clerk & Recorder,

consisting of thirty-two (32) lots have been reviewed by personnel of the Water Quality Division, and,

THAT the documents and data required by ARM Chapter 17 Section 36 have been submitted and found to be in compliance therewith, and,

THAT the approval of the plat is made with the understanding that the following conditions shall be met:

THAT the Lot sizes as indicated on the plat to be filed with the county clerk and recorder will not be further altered without approval, and,

THAT Lots 2, 3, 17 through 32, and 42 through 49 shall be used for one living unit with up to five ~~(5) four (4)~~ bedrooms, and,

THAT Lot 1 shall be used for one living unit with up to ten (10) bedrooms, and,

THAT Common Area B will be used for the public water supply wells, and,

THAT Common Area C shall be used for the individual drainfield for Lot 1, and,

THAT Common Area A, D and E are not approved for structures that require water, wastewater or stormwater facilities, and,

THAT water supply to the lots shall be through individual connections to the Benches Subdivision Public Water Supply (PWS ID MT0005069), and,

THAT the public water supply wells were reviewed and approved under EQ #20-1171, and,

THAT the public water main extensions were reviewed and approved under EQ #20-2334, and,

Page 2 of 7
The Benches Subdivision Phase 1
Flathead County, Montana
E.Q. # 20-2332

THAT each individual sewage treatment system will consist of a septic tank, effluent filter, dose tank and pressure-dosed subsurface drainfield of such size and description as will comply with Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM and the most current standards of the Department of Environmental Quality, and,

THAT the pressure-dosed subsurface drainfield for Lot 1 will be located via easement on 'Common Area C'

THAT the pressure-dosed subsurface drainfield for Lot 1 shall have an absorption area of sufficient size to provide for an application rate of 0.6 gpd/square foot and,

THAT the pressure-dosed subsurface drainfield for Lots 2, 3, 17 through 26, 31, 32, and 42 through 49 shall have an absorption area of sufficient size to provide for an application rate of 0.6 gpd/square foot and,

THAT the pressure-dosed subsurface drainfield for Lots 27 through 30 all have an absorption area of sufficient size to provide for an application rate of 0.4 gpd/square foot and,

THAT the bottom of the infiltrative trenches on Lots 23 and 24 shall be 36 inches below ground surface, and,

THAT the bottom of the drainfield shall be at least four feet above the water table, and,

THAT no sewage treatment system shall be constructed within 100 feet of the maximum highwater level of a 100-year flood of any stream, lake, watercourse, or irrigation ditch, nor within 100 feet of any domestic water supply source, and,

THAT storm drainage facilities shall be constructed as shown on the lot layout, signed and stamped by Robert Smith, Montana Professional Engineer Number 12592 PE, and approved under EQ #20-2334, and,

THAT the operation and maintenance of water supply, sewage treatment system, and stormwater facilities shall be the responsibility of each lot owner, and,

THAT water supply systems, sewage treatment systems and storm drainage systems will be located as shown on the approved plans, and,

THAT the developer and/or owner of record shall provide each purchaser of property with a copy of the Plat, approved location of water supply, sewage treatment system and storm drainage structures as shown on the attached lot layout, and a copy of this document, and,

THAT instruments of transfer for this property shall contain reference to these conditions, and,

THAT plans and specifications for any proposed sewage treatment systems will be reviewed and approved by the county health department and will comply with local regulations and ARM, Title 17, Chapter 36, Subchapters 3 and 9, before construction is started.

Page 3 of 7
The Benches Subdivision Phase 1
Flathead County, Montana
E.Q. # 20-2332

THAT departure from any criteria set forth in the approved plans and specifications and Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM when erecting a structure and appurtenant facilities in said subdivision without Department approval, is grounds for injunction by the Department of Environmental Quality.

Pursuant to Section 76-4-122 (2)(a), MCA, a person must obtain the approval of both the State under Title 76, Chapter 4, MCA, and local board of health under section 50-2-116(1)(i), before filing a subdivision plat with the county clerk and recorder.

YOU ARE REQUESTED to record this certificate by attaching it to the Plat filed in your office as required by law.

DATED this 20th of January 2021. Corrected this 30th day of June 2021.

Chris Dorrington,
DIRECTOR

By:

FOR:


Margarite Juarez Thomas, Supervisor
Public Water & Subdivision Section
Engineering Bureau
Water Quality Division
Department of Environmental Quality

Owner's Name: Prairie Dog Development LLC



0 100 200 300
Scale: 1" = 200 ft

Existing Well & Drainfield Note: There are no known wells or drainfields located upon or within 150 feet of the project property other than those shown on this lot layout.

Floodplain Note: The project site contains no areas of 1% chance floodplain as per FEMA flood insurance rate map panel 30029C1435J effective date 11-4-2015.

Design Engineer:
Robert Smith, Montana PE #12592
A2Z Engineering, PLLC
138 East Center Street, Ste A, Kalispell, MT 59901
phone 406.755.7888

Keyed Notes for Lot Layout:

- A. Existing typical exterior property boundary line
- B. Existing neighbor's residence
- C. Existing neighbor's groundwater well
- D. Existing neighbor's septic system
- E. Existing neighbor's graveled or paved drive
- F. Existing high pressure gas line
- G. Existing groundwater direction: South 12° West
- H. Existing PWS wellheads
- I. Existing PWS well 100 ft radius control zones
- J. Existing delineated wetland area
- K. Existing open water pond area
- L. Existing typical soil test pit location
- M. Proposed Bench Run roadway
- N. Future Bench Run roadway (Phase 2)
- O. Proposed internal lot boundary lines
- P. Proposed 4"Ø PWS well supply lines
- Q. Proposed PWS well control building
- R. Proposed PWS graveled access drive
- S. Proposed emergency water storage cistern
- T. Proposed typical 4"Ø water main
- U. Proposed 1.5"Ø water service to Lot #1
- V. Proposed typical 1"Ø water service lines
- W. Proposed typical primary drainfield area
- X. Proposed typical replacement drainfield area
- Y. Proposed 100 ft drainfield mixing zone
- Z. Proposed easement for Lot #1 septic system

The Benches Subdivision, Phase 1

Section 16, Township 30 North, Range 20 West

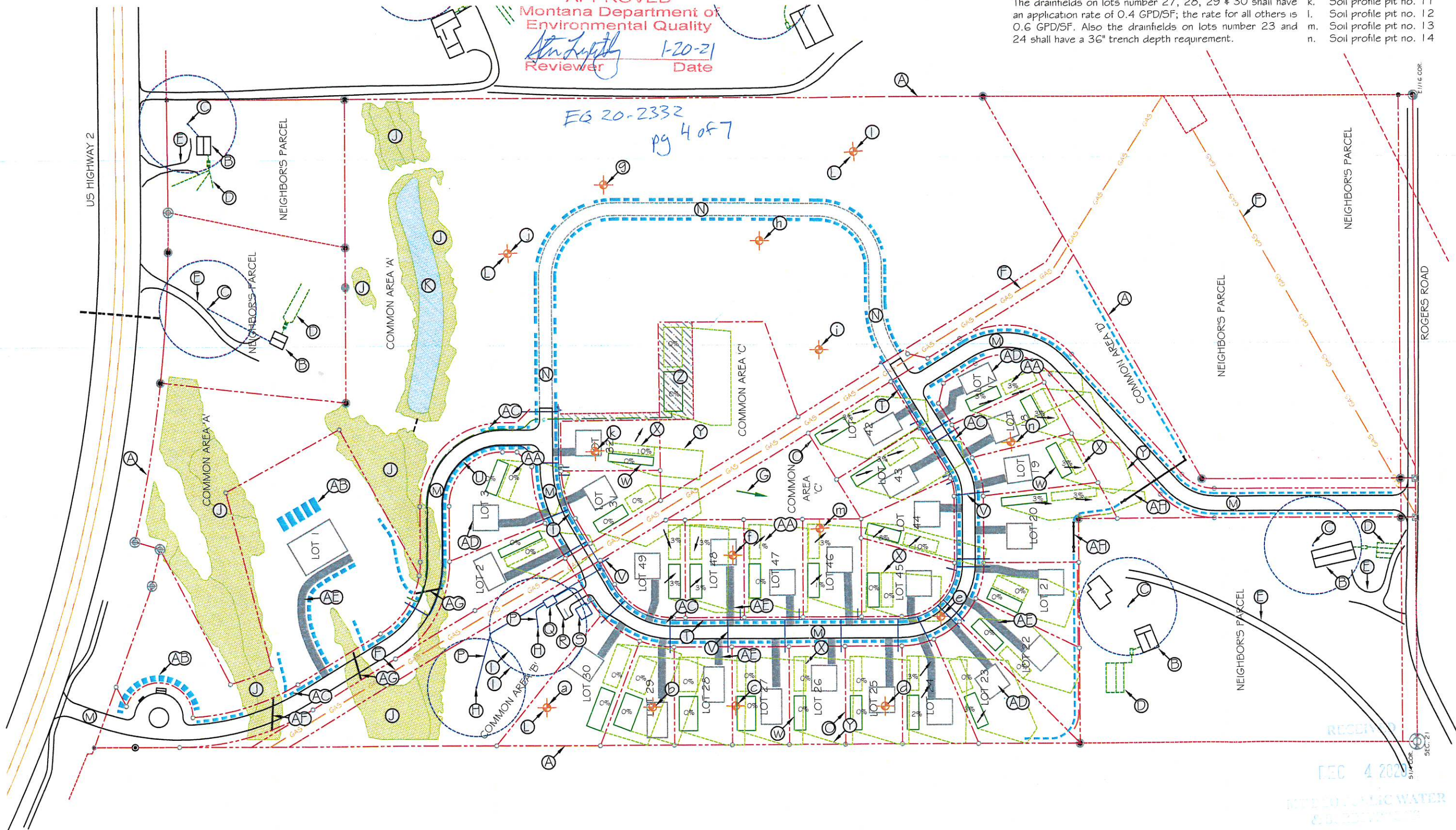
- AA. Typical drainfield topographic slope
- AB. Proposed storm retention
- AC. Proposed roadside storm retention swale
- AD. Proposed typical house site
- AE. Proposed typical lot driveway
- AF. Proposed 24"Ø CMP culvert
- AG. Proposed 18"Ø CMP culvert
- AH. Proposed 15"Ø storm sewer piping

Drainfield Notes:

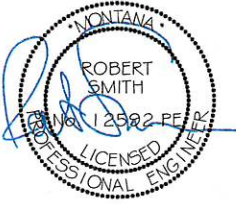
The drainfields on lots number 27, 28, 29 & 30 shall have an application rate of 0.4 GPD/SF; the rate for all others is 0.6 GPD/SF. Also the drainfields on lots number 23 and 24 shall have a 36" trench depth requirement.

Keyed Notes for Test Pits:

- a. Soil profile pit no. 1
- b. Soil profile pit no. 2
- c. Soil profile pit no. 3
- d. Soil profile pit no. 4
- e. Soil profile pit no. 5
- f. Soil profile pit no. 6
- g. Soil profile pit no. 7
- h. Soil profile pit no. 8
- i. Soil profile pit no. 9
- j. Soil profile pit no. 10
- k. Soil profile pit no. 11
- l. Soil profile pit no. 12
- m. Soil profile pit no. 13
- n. Soil profile pit no. 14



138 E. Center St., Ste A
Kalispell, MT 59901
Phone 406.755.7888
A2Z-Engineering.com



11-30-2020

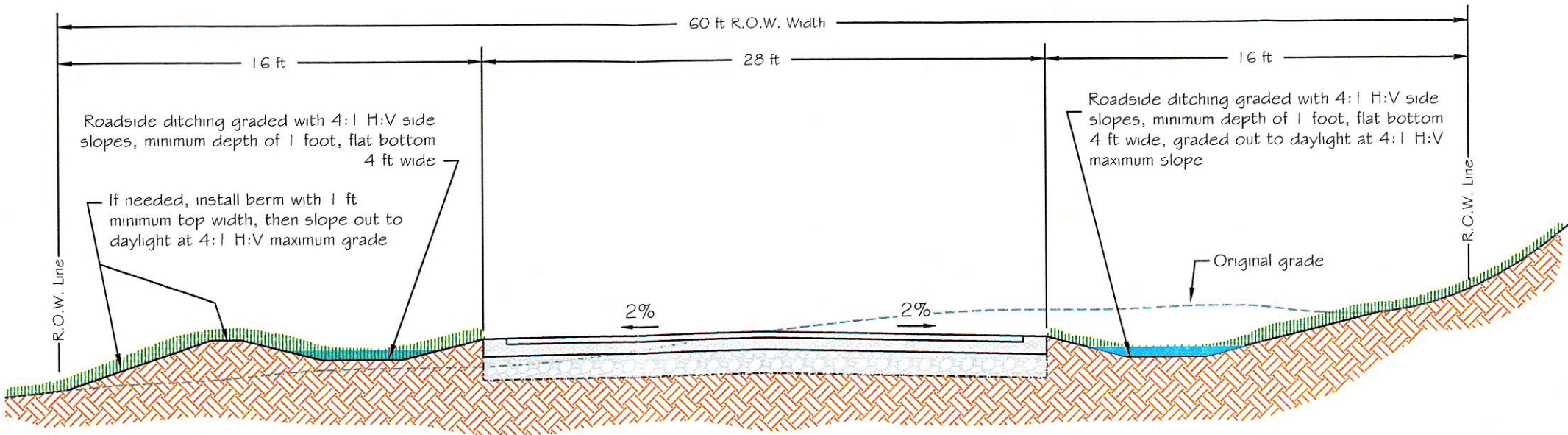
REVISIONS:

DRAWN BY: R Smith
CHECKED BY: R Smith



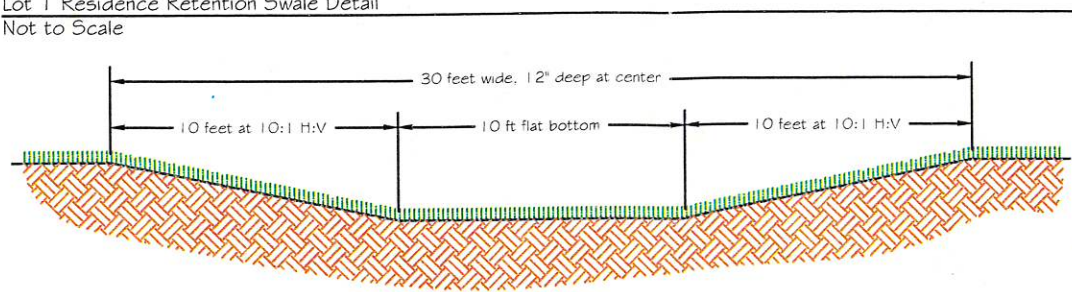
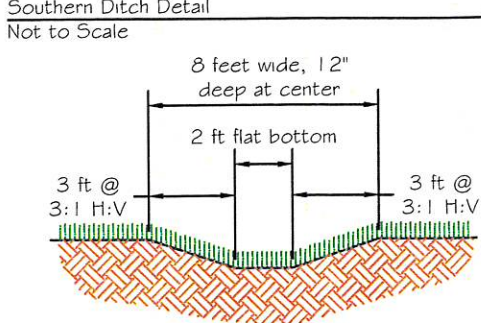
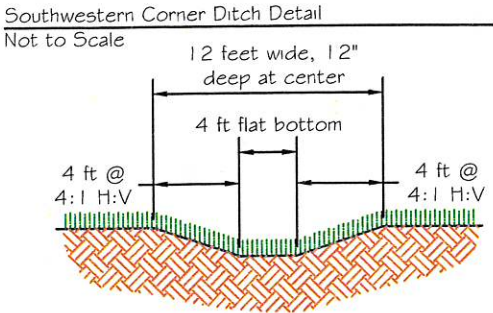
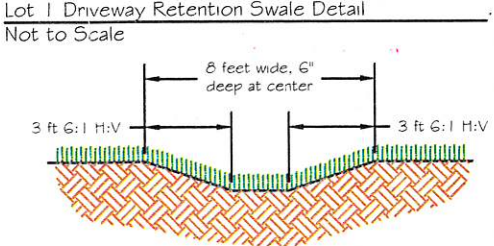
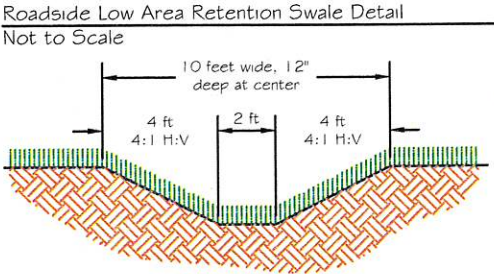
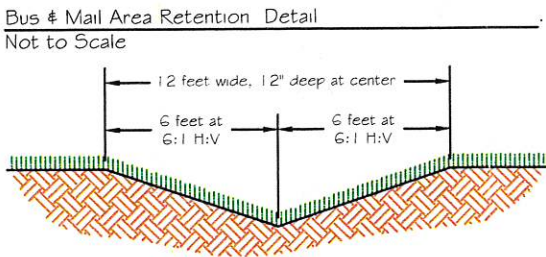
The Benches Subdivision, Phase 1
Lot Layout Sheets
Overall Layout
20-2332
Columbia Falls, Montana
Plan Sheet Number:

LLI

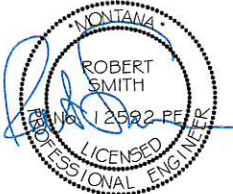


APPROVED
Montana Department of
Environmental Quality
Alm Lupton
Reviewer Date

EG 20-2332
pg 5 of 7



138 E. Center St., Ste A
Kalispell, MT 59901
Phone 406.755.7888
A2Z-Engineering.com



11-30-2020

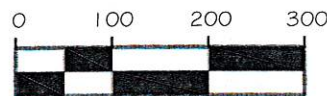
REVISIONS:
DRAWN BY: R. Smith
CHECKED BY: R. Smith



The Benches Subdivision, Phase 1
Lot Layout Sheets
Stormwater Retention
Columbia Falls, Montana

Plan Sheet Number:

LL2



Scale: 1" = 200 ft

Section 16, Township 30 North, Range 20 West

APPROVED
Montana Department of
Environmental Quality

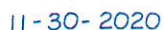
Reviewer Ann Lupton Date 1-20-21

EQ 20-2332

pg 6 of 7



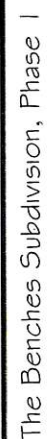
138 E. Center St., Ste A
Kalispell, MT 59901
Phone 406.755.7888
A2Z-Engineering.com



REVISIONS:

DRAWN BY: R Smith

CHECKED BY: R Smith

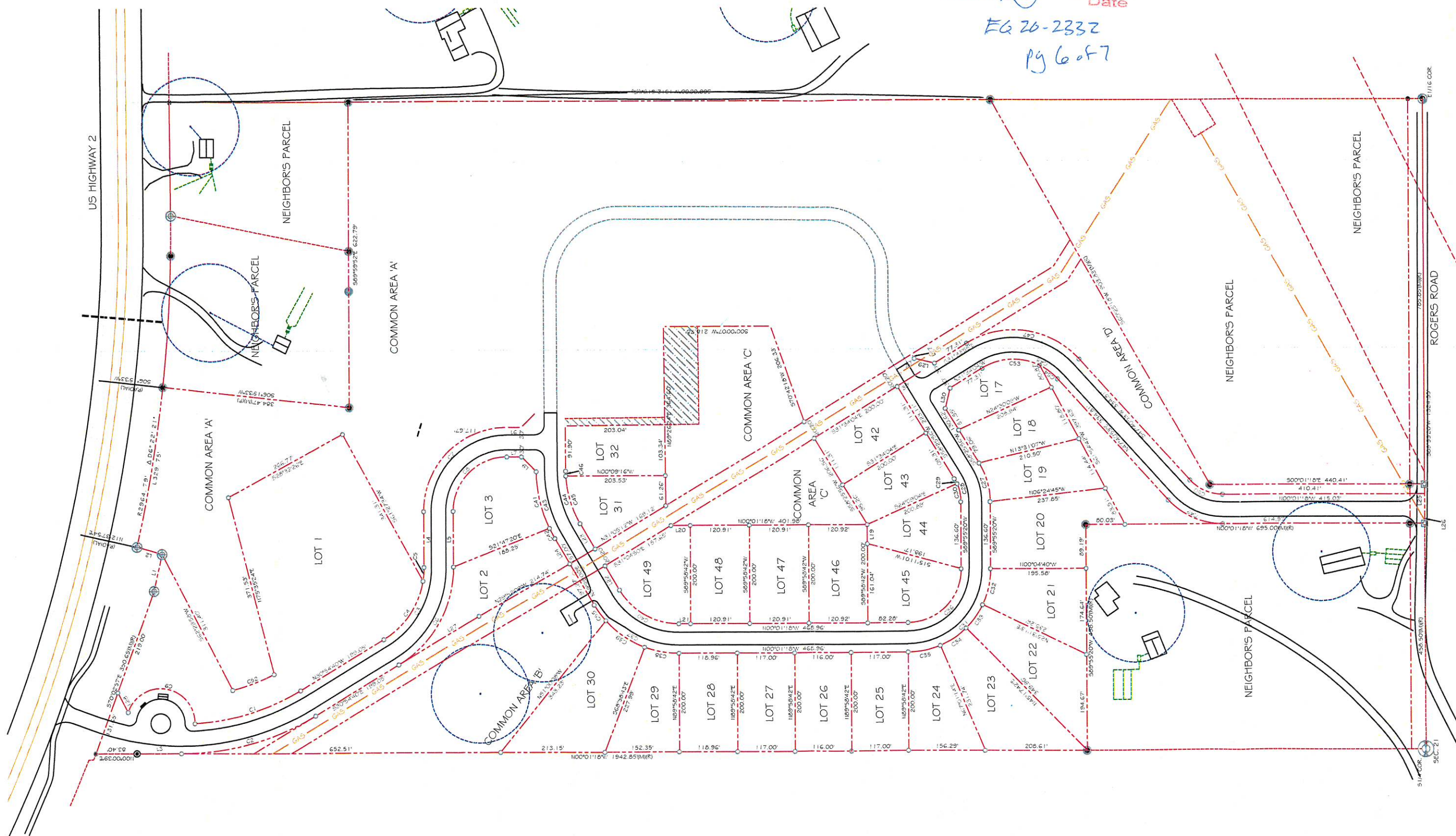


Lot Layout Sheets
Lot Boundaries

Plan Sheet Number

LL3

- 195 -



Lot	Acres	Sq. Feet	Acres(G)
1	3.886	169,283.98	4.376
2	0.615	26,808.56	1.107
3	0.697	30,348.18	1.189
17	0.432	18,814.22	0.924
18	0.466	20,299.11	0.958
19	0.480	20,902.44	0.972
20	0.762	33,198.90	1.254
21	0.584	25,454.65	1.076
22	0.701	30,556.13	1.193
23	0.759	33,070.94	1.251
24	0.531	23,113.20	1.023
25	0.537	23,400.00	1.029
26	0.533	23,200.00	1.025
27	0.537	23,400.00	1.029
28	0.546	23,791.57	1.038
29	0.530	23,103.66	1.022
30	0.887	38,653.90	1.379
31	0.475	20,673.69	0.967
32	0.479	20,872.02	0.971
42	0.511	22,261.34	1.003
43	0.497	21,651.77	0.989
44	0.470	20,490.63	0.962
45	0.534	23,278.12	1.026
46	0.555	24,183.81	1.047
47	0.555	24,182.00	1.047
48	0.555	24,182.00	1.047
49	0.555	24,181.99	1.047

LINE	BEARING	DISTANCE
L1	S77°30'43"E	76.96'(M)(R)
L2	N15°59'25"E	53.29'(M) 53.00'(R)
L3	N00°01'18"W	90.98'
L4	S89°50'44"W	113.54'
L5	N89°50'44"E	113.48'
L6	N00°12'55"W	30.00'
L7	S00°12'54"E	30.00'
L8	N45°07'27"W	42.40'
L9	S44°52'30"W	42.45'
L10	S00°05'38"E	31.26'
L11	S00°05'38"E	31.32'
L12	S83°29'23"E	33.44'
L13	N89°59'52"W	69.86'
L14	N89°59'52"W	46.15'
L15	N89°59'52"W	23.71'
L16	S58°25'56"W	10.00'
L17	S58°25'56"W	10.00'
L18	S58°25'56"W	10.00'
L19	S89°58'42"W	38.96'
L20	N00°01'18"W	39.24'
L21	N00°01'18"W	23.94'
L22	N59°29'06"E	57.25'
L23	N59°29'06"E	59.75'
L24	N59°29'06"E	59.73'
L25	S89°55'20"W	60.00'
L26	S89°55'20"W	20.00'
L27	N30°54'40"W	146.11'
L28	N62°27'47"E	45.00'
L29	S13°26'48"W	42.41'
L30	N76°34'04"W	42.43'

EG 20-2332
pg 7 of 7

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	RADIAL BEARING-IN	RADIAL BEARING-OUT
C1	476.70'	229.21'	27°32'57"	N86°38'17"E	N59°05'20"E
C2	536.70'	289.40'	30°53'43"	N89°59'03"E	N59°05'20"E
C3	170.00'	175.96'	59°18'20"	N59°05'20"E	N00°13'01"W
C4	170.00'	147.65'	49°45'48"	N59°05'20"E	N09°19'31"E
C5	170.00'	28.31'	9°32'32"	N09°19'31"E	N00°13'01"W
C6	230.00'	238.07'	59°18'20"	N59°05'20"E	N00°13'01"W
C7	170.00'	267.04'	90°00'00"	S89°50'44"W	S00°09'16"E
C8	110.00'	172.79'	90°00'00"	S89°50'44"W	S00°09'16"E
C9	70.00'	198.60'	162°33'31"	N00°51'03"E	S18°17'33"W
C10	170.73'	269.85'	90°33'44"	N89°35'32"W	S00°09'16"E
C11	170.73'	108.42'	36°23'09"	S36°13'53"W	S00°09'16"E
C12	170.73'	78.96'	26°30'01"	S62°43'54"W	S36°13'53"W
C13	170.73'	82.47'	27°40'33"	N89°35'32"W	S62°43'54"W
C14	110.73'	175.01'	90°33'44"	N89°35'32"W	S00°09'16"E
C15	110.73'	87.51'	45°16'52"	S45°07'36"W	S00°09'16"E
C16	110.73'	87.51'	45°16'52"	N89°35'32"W	S45°07'36"W
C17	90.00'	140.73'	89°35'40"	N00°00'08"E	N89°35'32"W
C18	90.00'	117.52'	74°48'53"	N14°46'40"W	N89°35'32"W
C19	90.00'	23.22'	14°46'47"	N00°00'08"E	N14°46'40"W
C20	150.00'	234.56'	89°35'40"	N00°00'08"E	N89°35'32"W
C21	150.00'	25.10'	9°35'08"	N80°00'24"W	N89°35'32"W
C22	150.00'	59.22'	22°37'11"	N57°23'13"W	N80°00'24"W
C23	150.00'	62.15'	23°44'27"	N33°38'46"W	N57°23'13"W
C24	150.00'	88.09'	33°38'54"	N00°00'08"E	N33°38'46"W
C25	232.70'	128.22'	31°34'12"	S00°00'08"W	S31°34'04"E
C26	232.70'	32.47'	7°59'41"	S00°00'08"W	S07°59'34"E
C27	232.70'	95.75'	23°34'31"	S07°59'34"E	S31°34'04"E
C28	172.70'	95.16'	31°34'12"	S00°00'08"W	S31°34'04"E
C27	150.00'	82.44'	31°29'24"	N00°04'40"W	N31°34'04"W
C28	90.00'	49.46'	31°29'24"	N00°04'40"W	N31°34'04"W
C29	90.00'	11.91'	7°34'55"	N31°34'04"W	N23°59'09"W
C30	90.00'	37.55'	23°54'29"	N23°59'09"W	N00°04'40"W
C31	168.95'	265.56'	90°03'22"	N89°58'42"E	N00°04'40"W
C32	168.95'	75.48'	25°35'53"	N25°31'13"E	N00°04'40"W
C33	168.95'	58.31'	19°46'30"	N45°17'42"E	N25°31'13"E
C34	168.95'	64.06'	21°43'32"	N67°01'14"E	N45°17'42"E
C35	168.95'	67.70'	22°57'28"	N89°58'42"E	N67°01'14"E
C36	108.95'	171.25'	90°03'22"	N89°58'42"E	N00°04'40"W
C37	200.77'	208.51'	59°30'24"	S30°30'54"E	N89°58'42"E
C38	200.77'	72.02'	20°33'16"	S69°28'02"E	N89°58'42"E
C39	200.77'	96.49'	27°32'12"	S41°55'50"E	S69°28'02"E
C40	140.77'	146.20'	59°30'24"	S30°30'54"E	N89°58'42"E
C41	270.97'	119.55'	25°16'43"	S00°18'08"E	S25°34'51"E
C42	270.97'	23.34'	4°56'04"	S25°34'51"E	S30°30'54"E
C43	270.97'	142.89'	30°12'46"	S00°18'08"E	S30°30'54"E
C44	210.97'	111.79'	30°21'38"	S00°09'16"E	S30°30'54"E
C45	210.97'	101.79'	27°38'37"	S02°52'17"E	S30°30'54"E
C46	210.97'	10.00'	2°43'01"	S00°09'16"E	S02°52'17"E
C47	181.83'	273.20'	86°05'23"	N35°28'41"W	S58°25'56"W
C48	121.83'	183.05'	86°05'23"	N35°28'41"W	S58°25'56"W
C49	150.00'	142.79'	54°32'37"	S35°28'41"E	N89°58'42"E
C50	90.00'	85.67'	54°32'37"	S35°28'41"E	N89°58'42"E
C51	2964.79'	81.51'	1°34'31"	N01°03'48"E	N00°30'43"W
C52	421.70'	91.36'	12°24'46"	N75°27'44"E	N63°02'57"E
C53	121.83'	81			



January 21, 2021

Robert Smith PE
A 2 Z Engineering
138 East Center Suite A
Kalispell MT 59901

RE: The Benches Phase II
Flathead County
E.Q. #20-2333

Dear Mr. Smith:

The plans and supplemental information relating to the water supply, sewage, solid waste disposal, and storm drainage (if any) for the above referenced division of land have been reviewed as required by ARM Title 17 Chapter 36(101-805) and have been found to be in compliance with those rules.

Two copies of the Certificate of Subdivision Plat Approval are enclosed. The original is to be filed at the office of the county clerk and recorder. The duplicate is for your personal records.

Development of the approved subdivision may require coverage under the Department's General Permit for Storm Water Discharges Associated with Construction Activity, if your development has construction-related disturbance of one or more acre. If so, please contact the Storm Water Program at (406) 444-3080 for more information or visit the Department's storm water construction website at <http://www.deq.state.mt.us/wqinfo/MPDES/StormwaterConstruction.asp>. Failure to obtain this permit (if required) prior to development can result in significant penalties.

In addition, your project may be subject to Federal regulations relating to Class V injection wells. Please contact the United States Environmental Protection Agency regarding specific rules that may apply.

Your copy is to inform you of the conditions of the approval. Please note that you have specific responsibilities according to the plat approval statement primarily with regard to informing any new owner as to any conditions that have been imposed.

If you have any questions, please contact this office.

Sincerely,



Ashley Kroon, Supervisor
Subdivision Review Section

AK/le

cc: County Sanitarian
County Planning Board (e-mail)
Owner

Page 1 of 7
The Benches Subdivision Phase 2
Flathead County, Montana
E.Q. # 20-2333

STATE OF MONTANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF SUBDIVISION PLAT APPROVAL
(Section 76-4-101 et seq.)

TO: County Clerk and Recorder
Flathead County
Kalispell, Montana

E.Q. #20-2333
Corrected

THIS IS TO CERTIFY THAT the plans and supplemental information relating to the subdivision known as **The Benches Subdivision Phase 2**

A tract of land located in the Southwest $\frac{1}{4}$ of the Northeast $\frac{1}{4}$ and the West $\frac{1}{2}$ of the Southeast $\frac{1}{4}$ of Section 16 of Township 30 North, Range 20 West, P.M.M., Flathead County, Montana as found in the records of the Flathead County Clerk & Recorder,

consisting of twenty-two (22) lots have been reviewed by personnel of the Water Quality Division, and,

THAT the documents and data required by ARM Chapter 17 Section 36 have been submitted and found to be in compliance therewith, and,

THAT the approval of the plat is made with the understanding that the following conditions shall be met:

THAT the Lot sizes as indicated on the plat to be filed with the county clerk and recorder will not be further altered without approval, and,

THAT Lots 4 through 16 and Lots 33 through 41 shall be used for one living unit with up to five (5) ~~four (4)~~ bedrooms, and,

THAT water supply to the lots shall be through individual connections to the Benches Subdivision Public Water Supply (PWS ID MT0005069), and,

THAT the public water supply wells were reviewed and approved under EQ #20-1171, and,

THAT the public water main extensions were reviewed and approved under EQ #20-2334, and,

THAT each individual sewage treatment system will consist of a septic tank, effluent filter, dose tank and pressure-dosed subsurface drainfield of such size and description as will comply with Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM and the most current standards of the Department of Environmental Quality, and,

Page 2 of 7
The Benches Subdivision Phase 2
Flathead County, Montana
E.Q. # 20-2333

THAT the pressure-dosed subsurface drainfields shall have an absorption area of sufficient size to provide for an application rate of 0.6 gpd/square foot and,

THAT the bottom of the infiltrative trenches on Lots 40 and 41 shall be 36 inches below ground surface, and,

THAT the bottom of the drainfield shall be at least four feet above the water table, and,

THAT no sewage treatment system shall be constructed within 100 feet of the maximum highwater level of a 100-year flood of any stream, lake, watercourse, or irrigation ditch, nor within 100 feet of any domestic water supply source, and,

THAT storm drainage facilities shall be constructed as shown on the lot layout, signed and stamped by Robert Smith, Montana Professional Engineer Number 12592 PE, and approved under EQ #20-2334, and,

THAT the operation and maintenance of water supply, sewage treatment system, and stormwater facilities shall be the responsibility of each lot owner, and,

THAT water supply systems, sewage treatment systems and storm drainage systems will be located as shown on the approved plans, and,

THAT the developer and/or owner of record shall provide each purchaser of property with a copy of the Plat, approved location of water supply, sewage treatment system and storm drainage structures as shown on the attached lot layout, and a copy of this document, and,

THAT instruments of transfer for this property shall contain reference to these conditions, and,

THAT plans and specifications for any proposed sewage treatment systems will be reviewed and approved by the county health department and will comply with local regulations and ARM, Title 17, Chapter 36, Subchapters 3 and 9, before construction is started.

THAT departure from any criteria set forth in the approved plans and specifications and Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM when erecting a structure and appurtenant facilities in said subdivision without Department approval, is grounds for injunction by the Department of Environmental Quality.

Pursuant to Section 76-4-122 (2)(a), MCA, a person must obtain the approval of both the State under Title 76, Chapter 4, MCA, and local board of health under section 50-2-116(1)(i), before filing a subdivision plat with the county clerk and recorder.

Page 3 of 7
The Benches Subdivision Phase 2
Flathead County, Montana
E.Q. # 20-2333

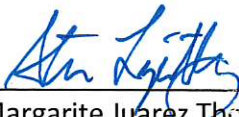
YOU ARE REQUESTED to record this certificate by attaching it to the Plat filed in your office as required by law.

DATED this 20th day of January 2021. Corrected this 30th day of June 2021.

Chris Dorrington,
DIRECTOR

By:

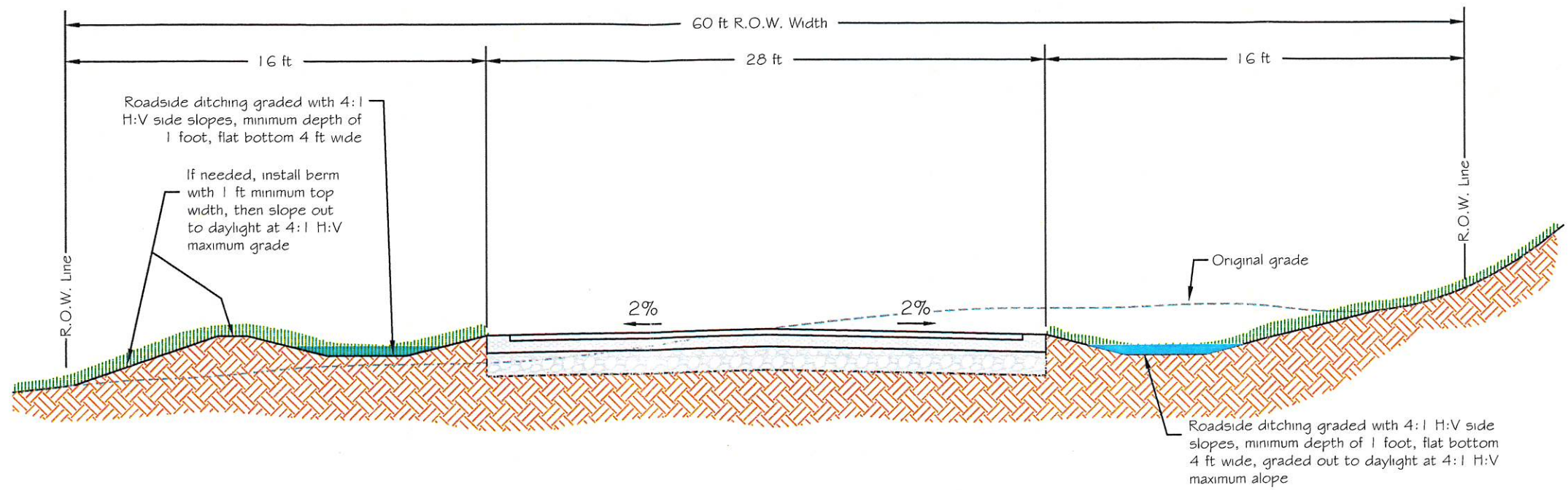
FOR:


Margarite Juarez Thomas, Supervisor
Public Water & Subdivision Section
Engineering Bureau
Water Quality Division
Department of Environmental Quality

Owner's Name: Prairie Dog Development LLC

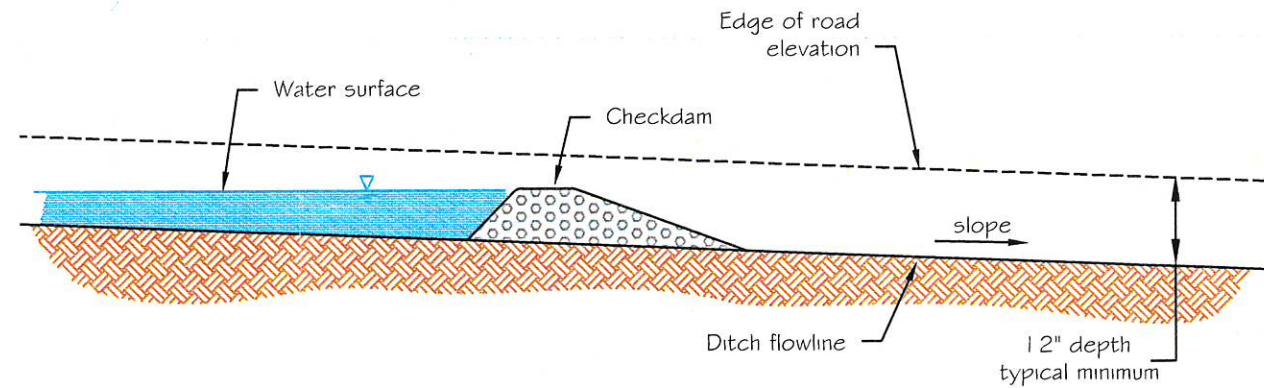


- 201



Schematic Typical Elevation View of Road Ditch with Checkdams
Not to Scale

Road Grade	Dam Spacing (ft)
0.50%	83
1.00%	41
1.50%	28
2.00%	21
2.50%	17
3.00%	14
3.50%	12
4.00%	10
4.50%	9
5.00%	8
5.50%	8



Note: Rock check dam shall be constructed of crushed $\frac{3}{4}$ inch diameter stone. Check dams shall be spaced based upon the slope of the road according to the table. Check dams shall be 8 inches high maximum.

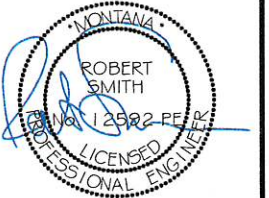
APPROVED
Montana Department of
Environmental Quality
Ann Lutz
Reviewer 1-20-21
Date

EQ 20-2333

pg 5 of 7



138 E. Center St., Ste A
Kalispell, MT 59901
Phone 406.755.7888
A2Z-Engineering.com



11-30-2020

REVISIONS:

DRAWN BY: R Smith

CHECKED BY: R Smith



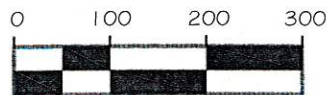
The Benches Subdivision, Phase 2

Lot Layout Sheets
Stomwater Retention

Columbia Falls, Montana

Plan Sheet Number:

L2



Scale: 1" = 200 ft

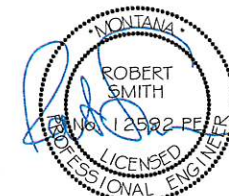
The Benches Subdivision, Phase 2

Section 16, Township 30 North, Range 20 West



Item No.10

138 E. Center St., Ste A
Kalspell, MT 59901
Phone 406.755.7888
A2Z-Engineering.com



11-30-2020

REVISIONS

DRAWN BY: P. Smith

CHECKED BY: R. Smit



The Benches Subdivision, Phase 2

Lot Layout Sheets
Lot Boundaries

Columbia Falls, Montana

Plan Sheet Number:

LL3

- 203



APPROVED
Montana Department of
Environmental Quality

Environmental Quality
 1-20-21
 Reviewer Date

EQ 20-2333

pg 6 of 7

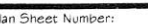
Lot	Acres	Sq. Feet	Acres(G)
4	0.596	25,963.81	1.088
5	0.511	22,240.28	1.003
6	0.900	39,209.64	1.392
7	0.930	40,507.92	1.422
8	0.649	28,264.81	1.141
9	0.498	21,699.19	0.990
10	0.504	21,966.61	0.996
11	0.506	22,053.71	0.998
12	0.513	22,342.29	1.005
13	0.543	23,642.28	1.035
14	0.411	17,907.14	0.903
15	0.511	22,244.14	1.003
16	0.561	24,442.22	1.053
33	0.465	20,268.41	0.957
34	0.467	20,341.50	0.959
35	0.462	20,139.62	0.954
36	0.461	20,079.37	0.953
37	0.513	22,340.05	1.005
38	0.475	20,689.56	0.967
39	0.551	23,986.28	1.043
40	0.478	20,813.00	0.970
41	0.496	21,603.87	0.988

Reviewer Ann Lipton Date 1-20-21

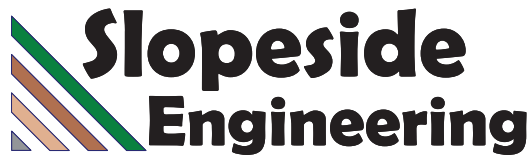
pg 7 of 7

LINE	BEARING	DISTANCE
L1	S77°30'43"E	76.96'(M)(R)
L2	N15°59'25"E	53.29'(M) 53.00'(R)
L3	N00°01'18"W	90.98'
L4	S89°50'44"W	113.54'
L5	N89°50'44"E	113.48'
L6	N00°12'55"W	30.00'
L7	S00°12'54"E	30.00'
L8	N45°07'27"W	42.40'
L9	S44°52'30"W	42.45'
L10	S00°05'38"E	31.26'
L11	S00°05'38"E	31.32'
L12	S83°29'23"E	33.44'
L13	N89°59'52"W	69.86'
L14	N89°59'52"W	46.15'
L15	N89°59'52"W	23.71'
L16	S58°25'56"W	10.00'
L17	S58°25'56"W	10.00'
L18	S58°25'56"W	10.00'
L19	S89°58'42"W	38.96'
L20	N00°01'18"W	39.24'
L21	N00°01'18"W	23.94'
L22	N59°29'06"E	57.25'
L23	N59°29'06"E	59.75'
L24	N59°29'06"E	59.73'
L25	S89°55'20"W	60.00'
L26	S89°55'20"W	20.00'
L27	N30°54'40"W	146.11'
L28	N62°27'47"E	45.00'
L29	S13°26'48"W	42.41'
L30	N76°34'04"W	42.43'

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	RADIAL BEARING—IN	RADIAL BEARING—OUT
C1	476.70'	229.21'	27°32'57"	N86°38'17"E	N59°05'20"E
C2	536.70'	289.40'	30°53'43"	N89°59'03"E	N59°05'20"E
C3	170.00'	175.96'	59°18'20"	N59°05'20"E	N00°13'01"W
C4	170.00'	147.65'	49°45'48"	N59°05'20"E	N09°19'31"E
C5	170.00'	28.31'	9°32'32"	N09°19'31"E	N00°13'01"W
C6	230.00'	238.07'	59°18'20"	N59°05'20"E	N00°13'01"W
C7	170.00'	267.04'	90°00'00"	S89°50'44"W	S00°09'16"E
C8	110.00'	172.79'	90°00'00"	S89°50'44"W	S00°09'16"E
C9	70.00'	198.60'	162°33'31"	N00°51'03"E	S18°17'33"W
C10	170.73'	269.85'	90°33'44"	N89°35'32"W	S00°09'16"E
C11	170.73'	108.42'	36°23'09"	S36°13'53"W	S00°09'16"E
C12	170.73'	78.96'	26°30'01"	S62°43'54"W	S36°13'53"W
C13	170.73'	82.47'	27°40'33"	N89°35'32"W	S62°43'54"W
C14	110.73'	175.01'	90°33'44"	N89°35'32"W	S00°09'16"E
C15	110.73'	87.51'	45°16'52"	S45°07'36"W	S00°09'16"E
C16	110.73'	87.51'	45°16'52"	N89°35'32"W	S45°07'36"W
C17	90.00'	140.73'	89°35'40"	N00°00'08"E	N89°35'32"W
C18	90.00'	117.52'	74°48'53"	N14°46'40"W	N89°35'32"W
C19	90.00'	23.22'	14°46'47"	N00°00'08"E	N14°46'40"W
C20	150.00'	234.56'	89°35'40"	N00°00'08"E	N89°35'32"W
C21	150.00'	25.10'	9°35'08"	N80°00'24"W	N89°35'32"W
C22	150.00'	59.22'	22°37'11"	N57°23'13"W	N80°00'24"W
C23	150.00'	62.15'	23°44'27"	N33°38'46"W	N57°23'13"W
C24	150.00'	88.09'	33°38'54"	N00°00'08"E	N33°38'46"W
C25	232.70'	128.22'	31°34'12"	S00°00'08"W	S31°34'04"E
C26	232.70'	32.47'	7°59'41"	S00°00'08"W	S07°59'34"E
C27	232.70'	95.75'	23°34'31"	S07°59'34"E	S31°34'04"E
C28	172.70'	95.16'	31°34'12"	S00°00'08"W	S31°34'04"E
C27	150.00'	82.44'	31°29'24"	N00°04'40"W	N31°34'04"W
C28	90.00'	49.46'	31°29'24"	N00°04'40"W	N31°34'04"W
C29	90.00'	11.91'	7°34'55"	N31°34'04"W	N23°59'09"W
C30	90.00'	37.55'	23°54'29"	N23°59'09"W	N00°04'40"W
C31	168.95'	265.56'	90°03'22"	N89°58'42"E	N00°04'40"W
C32	168.95'	75.48'	25°35'53"	N25°31'13"E	N00°04'40"W
C33	168.95'	58.31'	19°46'30"	N45°17'42"E	N25°31'13"E
C34	168.95'	64.06'	21°43'32"	N67°01'14"E	N45°17'42"E
C35	168.95'	67.70'	22°57'28"	N89°58'42"E	N67°01'14"E
C36	108.95'	171.25'	90°03'22"	N89°58'42"E	N00°04'40"W
C37	200.77'	208.51'	59°30'24"	S30°30'54"E	N89°58'42"E
C38	200.77'	72.02'	20°33'16"	S69°28'02"E	N89°58'42"E
C39	200.77'	96.49'	27°32'12"	S41°55'50"E	S69°28'02"E
C40	140.77'	146.20'	59°30'24"	S30°30'54"E	N89°58'42"E
C41	270.97'	119.55'	25°16'43"	S00°18'08"E	S25°34'51"E
C42	270.97'	23.34'	4°56'04"	S25°34'51"E	S30°30'54"E
C43	270.97'	142.89'	30°12'46"	S00°18'08"E	S30°30'54"E
C44	210.97'	111.79'	30°21'38"	S00°09'16"E	S30°30'54"E
C45	210.97'	101.79'	27°38'37"	S02°52'17"E	S30°30'54"E
C46	210.97'	10.00'	2°43'01"	S00°09'16"E	S02°52'17"E
C47	181.83'	273.20'	86°05'23"	N35°28'41"W	S58°25'56"W
C48	121.83'	183.05'	86°05'23"	N35°28'41"W	S58°25'56"W
C49	150.00'	142.79'	54°32'37"	S35°28'41"E	N89°58'42"E
C50	90.00'	85.67'	54°32'37"	S35°28'41"E	N89°58'42"E
C51	2964.79'	81.51'	1°34'31"	N01°03'48"E	N00°30'43"W
C52	421.70'	91.36'	12°24'46"	N75°27'44"E	N63°02'57"E
C53	121.83'	8			



LL4



October 7, 2021

Siderius Construction, LLP
737 Egan Road
Kalispell, MT, 59901

**Subject: Geotechnical Investigation
 The Benches Development
 Columbia Falls, Montana
 Job No. 21-457**

Dear Mr. Doug Siderius,

At your request, Slopeside Engineering, LLC (Slopeside) has conducted a geotechnical investigation for the The Benches Development in Kalispell, Montana. The Vicinity Map, Figure 1, shows the general location of the site. The investigation was conducted to evaluate subsurface materials, observe conditions at the site, and develop recommendations for site preparation, earthwork, general foundation guidelines, concrete flatwork, asphaltic concrete pavement (AC) sections, and utility trench construction. In addition, slope stability assessments and recommendations for construction near and on slopes are provided. The investigation included a review of existing subsurface information for the site vicinity, subsurface explorations, and engineering analyses. This report summarizes the work accomplished and provides a written document of previously provided verbal conclusions and recommendations for use in the design and construction of the site development phase of this project. Slopeside has strived to perform the investigation and develop recommendations in a manner consistent with the degree of care that is presently standard to the geotechnical engineering profession.

PROJECT DESCRIPTION

The project site is located east of the Flathead River, west of MT Hwy 206, and south of US

Hwy 2, on the east side of Columbia Falls, Montana. We understand the planned development will consist of numerous residential lots throughout the site. We anticipate site improvements will consist of site grading, construction of utilities, construction of asphaltic concrete paved roadways and concrete sidewalks, and the creation of numerous residential building lots. The planned site layout is located on Figure 2, Site Plan. Based on our understanding, the majority of the property development is planned for the middle relatively flat benches of the property; however, roadways and Lot 1 will be constructed in the low lying area near US Hwy 2.

SITE DESCRIPTION

General

The project site is located east of Columbia Falls. The site is bordered by agricultural fields to the west and east, US Hwy 2 to the north, and Rogers Drive to the south. Some residential development also surrounds the property. Past development of the site is minimal, consisting mostly of minor site grading and some access road construction. The property remains largely undisturbed and portions of the property has been used as pasture. The steep slopes are vegetated with evergreen trees, deciduous trees, underbrush, and grasses. The low lying areas on the north quarter of the property contain wet areas with cat tails and grasses.

Seeps and springs were not observed at the ground surface within the planned development area; however, established drainage and wet marshy areas are present in some portions of the north part of the property.

Topography

A geologic reconnaissance of the site indicates minor surficial creep and erosion has periodically occurred in the vicinity of the steep slopes, as is typical for steep slopes in cohesionless soils. Recent signs of slope instability were not observed. Site observations indicate the majority of the planned lots will be relatively flat with only the access roads crossing the steep slopes. The steep slopes are present along the north quarter of the property and the south quarter. The steep areas slope downward to the north at average slopes of about 2H:1V. Observations of the steeper terrain indicate consistent uniform slopes. Seeps and springs were not observed outside of the low lying area on the north end of the site.

Geology

The project site lies in the Rocky Mountain Trench bounded by the Salish Mountains to the West and the Swan Range to the East. The trench was traversed by the Flathead Glacier and was covered by substantial areas of glacial lakes during recession of the ice mass. The surficial geology of the area consists of alluvial river gravels and sands deposited during the migration of the Flathead River. These soils are present for extensive depths and are underlain by Precambrian bedrock.

SUBSURFACE CONDITIONS

General

Subsurface materials and conditions at the site were investigated on August 12 and 13, 2020 with ten borings, designated B-1 through B-10. The borings were drilled in areas of large slopes, low lying wet areas, and areas of planned large cuts and fills. The borings were advanced to depths

of 5.3 to 50.3 ft below the ground surface. The approximate locations of the subsurface explorations are shown on Figure 2. A detailed discussion of the field exploration and laboratory testing programs completed for this investigation are provided in Appendix A. Logs of the borings are provided in Appendix A on Figures 1A through 10A.

Soils

Typical soils observed at the ground surface consist of silt with varying percentages of sand over sand with varying percentages of gravel, cobbles and boulders, and/or gravel with varying percentages of sand, cobbles and boulders. Fill was encountered in Boring B-1, located on the access road in the vicinity of a low wet area. For the purpose of discussion, the materials and soils disclosed by the subsurface investigation have been grouped into the following categories:

- 1. TOPSOIL and FILL**
- 2. SILT and Silty CLAY**
- 3. Poorly Graded SAND**
- 4. Poorly Graded GRAVEL**

1. TOPSOIL and FILL. All explorations advanced for this project encountered topsoil or fill material at the ground surface. Borings B-1 through B-4, and B-6 through B-10 encountered topsoil comprised of silt with varying percentages of sand and abundant organics at the ground surface. The topsoil ranges from 6 to 15 inches thick, with an average thickness of about 10 inches. Fill material comprised of $\frac{3}{4}$ inch minus base course and 3 inch minus subbase was encountered at the ground surface in Boring B-5. The gravel fill extends to a depth of 12 inches and is underlain by fill comprised of silt with brown and dark brown inclusions. Standard penetration test (SPT) blow counts of 8 to 29 blows per ft indicate the fill material is medium stiff and medium dense. Moisture contents of the fill range from 6 to 19 percent of the soil's dry weight. Moisture contents of the topsoil range from 10 to 23 percent. The topsoil and fill are underlain by silt, silty clay, sand, or gravel at depths of 6 inches to 6 ft below the ground surface.

2. SILT and Silty CLAY. Borings B-2 through B-4, B-6, and B-8, encountered silt or silty clay below the topsoil. The silt and silty clay are typically light brown to gray, and tends to have rust colored mottling in the low lying areas. Depending on the location, the silt and silty clay is moist to wet, and contains varying percentages of fine grained sand. The sand percentages in the silt tend to increase with depth and can vary significantly across the site. Silt layers were also encountered at deeper depths in Borings B-5, B-6, B-8, and B-9, at depths of 13 to 40 ft. Based on Standard Penetration Test (SPT) blow counts of 8 to 62, it appears the silt soils are medium stiff to hard. The soils encountered at deeper depths are typically stiff to hard. Moisture contents range from 5 to 25 percent in the upper silt and silty clay layers, and from 20 to 30 percent in the lower silt layer. All borings that encountered the upper layer of silt or silty clay encountered sand or gravel soils at depths of 2.0 to 8.8 ft below the ground surface. Borings B-5, B-6, B-8, and B-9 were all terminated in the lower silt layer at depths of 20.3 to 50.3 ft.

3. Poorly Graded SAND. Poorly graded sand with varying percentages of silt was encountered in Borings B-1, B-5, and B-6, at 1.3, 6.0, and 4.5 ft, respectively. The sand soils are typically poorly

graded, and fine to medium grained sand. The sand is generally loose to medium dense, based on SPT blow counts of 5 to 17. Moisture contents of the sand soils range from 12 to 28 percent of the soil's dry weight and vary significantly depending on the groundwater level. The sand layers in Borings B-1, B-5, and B-6 extend to depths of 8.8 to 13.0 ft and is underlain by silt or gravel.

4. Poorly Graded GRAVEL. Poorly graded gravel with varying percentages of sand, cobbles and boulders was encountered in Borings B-1 through B-4, and B-6 through B-10. The gravel was encountered at varying depths ranging from 0.5 to 12.5 ft below the ground surface. Based on SPT blow counts of 14 blows per ft to 50 blows for 2 inches, the gravel soils appear medium dense to very dense. The gravel is fine to coarse and subround to round. The gravel soils typically contain minor amounts of silt and are damp unless encountered below the ground water table, where the gravel is wet. Borings B-6, B-8, and B-9 encountered silt below the gravel layer at depths of 13.8 to 40 ft below the ground surface. Borings B-1 through B-4, B-7, and B-10 were all terminated in the gravel soils at depths of 5.3 to 20.3 ft.

Groundwater

Groundwater was observed at varying depths across the site. In the low lying area in the north quarter, groundwater was observed at the ground surface in some areas, and ranged from 1.5 to 8.0 ft below the ground surface in Borings B-1 through B-5. Groundwater was encountered between 14 and 24 ft in Borings B-6 and B-8 on the middle bench, and at 49 ft in Boring B-9, on the upper bench. It should be noted that seasonal seepage due to rainfall, snowmelt, and other factors are likely to occur randomly above the measured water levels. Numerous other factors may contribute to groundwater fluctuations and occurrence of seepage; evaluation of these factors requires special study that is beyond the scope of this report.

ENGINEERING ANALYSIS

General

Based on discussions with the project team at the time of this investigation, we understand the development will consist of multiple phases to construct residential lots. Access to the lots will be provided by AC paved roadways. Underground utilities will provide services to the constructed lots.

Site Preparation

The soils encountered at the ground surface in the vicinity of the planned improvements consist of topsoil underlain by silt, silty clay, sand, and gravel. Site stripping will need to be conducted in all planned development areas. We anticipate the topsoil and rooted zones will vary between 6 inches and 15 inches in most areas. Larger topsoil thicknesses may be present in low lying areas at the toes of slopes and in drainage swales. We anticipate an average stripping thickness of about 10 inches for this site. In addition, existing fill material shall be removed down to firm native soils and brought back to subgrade elevation using Structural Fill as described in the Recommendations section of this report.

Many of the soils encountered near the ground surface within the planned site development

area consist primarily of fine-grained moisture-sensitive soils. Based on past experience, the near-surface fine-grained soils encountered during this investigation have little cohesion. As a result, these soils can be easily disturbed and strength diminished during construction if in-situ moisture contents are greater than the optimum moisture content for compaction. This is of particular concern during the seasonally wet times of the year when seepage or surface water is allowed to pond and infiltrate. Therefore, positive site drainage is of critical importance to both construction and long-term performance of the proposed improvements. Based on our experience in the project vicinity and observations during the subsurface investigation, we anticipate groundwater depths will be greater than 14 ft below the ground surface at most locations, and will likely be below the planned excavation limits and utility construction. However, the groundwater level in the north quarter of the site will be near the ground surface and will likely be encountered during the installation of subsurface utilities in that portion of the project.

Earthwork

We understand it is desirable to use on-site soils for the construction of Structural Fill. Near surface, on-site soils consist primarily of silt, sand and gravel. With the exception of topsoil, all soils encountered during this investigation are suitable for Structural Fill construction as long as the soils are free of organics, deleterious materials, and cobbles or boulders larger than 6 inches. Compaction of Structural Fill shall be accomplished when moisture contents are within 3 percent of the optimum moisture content as determined by ASTM D698. Observations revealed that in most areas, the in situ soils are typically near or dry of the optimum moisture content as determined by ASTM D698, indicating water will likely need to be added to these soils and the soils will need to be moisture conditioned prior to compaction. In the event that the natural moisture contents of the in situ soils are greater than the optimum moisture content as determined by ASTM D698, the soils will need to be moisture conditioned by drying methods to approach the optimum moisture content. Construction of Structural Fill during relatively wet weather or when temperatures are below freezing (including nightly low temperatures), will significantly reduce the efficiency of earthwork operations. Limiting mass grading to the relatively dry and warm late spring, summer or early fall months will reduce the likelihood of weather affecting construction operations.

Foundation Design

Shallow foundations for typical residential structures shall be established in the native, stiff to very stiff fine grained soils, compacted Structural Fill, sand, or gravel. Assuming Slopeside's recommendations are followed, we anticipate the site will be suitable for typical residential construction. Depending on planned grading and lot locations, we anticipate below grade spaces are feasible on most lots. Care will be necessary to provide below grade living spaces with proper drainage and protection from moist floors. Construction on Lot 1 in the north quarter of the site is feasible; however, concrete slab on grade floors, with no crawl spaces or basements should be planned for that lot. Slopeside recommends additional Geotechnical Engineering recommendations be provided when more specifics regarding the planned development of Lot 1 are known. Depending on the planned structure and use, deep foundations consisting of helical piers advanced to depths of about 10 to 15 ft, may be necessary to provide appropriate support for the planned structure. However, it is also possible that shallow foundations will be appropriate, and will depend on the structure size, loading, and intended use.

Pavement Analysis

Flexible pavement designs have been conducted using the 1993 edition of the AASHTO Guide to Pavement Design. Local low volume road pavement sections are provided based on the intended use of the paved areas and our experience with similar projects. Local road pavement sections should be used for interior roads at the development. A CBR value of 10 was used to model the subgrade, assuming the subgrade is compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698 and the moisture content is within 3 percent of the optimum moisture content at the time of compaction. The pavement section is presented in the **Recommendations** section of this report.

RECOMMENDATIONS

1.0 General Site Preparation

- 1.1 The removal of topsoil and other organic material, including the clearing and grubbing of surficial vegetation and root zones, should be accomplished within the construction zone prior to any earthwork construction. An average stripping thickness of about 10 inches to remove topsoil and cultivated zones is anticipated across the entire site. Following removal of surface organics, the underlying soils shall be evaluated by a qualified geotechnical engineer for suitability as a subgrade material in all pavement, earthwork, and building areas. Roadway subgrade shall consist of sand or gravel soils, scarified to a depth of 8 inches, and then compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698, and be within 3 percent of the optimum moisture content at the time of compaction.

In areas where fill construction is required across low lying wet areas, Slopeside recommends removal of the near surface organic rich soils. When firm, undisturbed silt soils are encountered, Slopeside recommends fill operations begin with large 6 inch to 24 inch subangular to angular cobbles and boulders. Additional recommendations for constructing road fill over wet areas is provided in the Earthwork section of the Recommendations.

- 1.2 Surface drainage should be established to direct runoff away from the construction area. Ditching and detention/retention ponds with sump pumps may be needed to control the flow of runoff water.
- 1.3 Excavated material or structural fill to be placed as backfill shall not be stockpiled within 100 ft of the crest of the steep slopes separating the various flat benches of the property. Stockpiling soil on or near the steep slopes will add weight to the slope that will reduce the factor of safety against sliding.
- 1.4 In some areas, soils encountered near the ground surface have a relatively high silt percentage. These soils are fine grained, moisture-sensitive soils that are easily disturbed by construction activities and traffic when moisture contents are greater than the optimum moisture content for compaction. In the event moisture contents of the silt soils are greater than the optimum moisture content for compaction, we recommend construction traffic not

travel over the fine grained subgrade soils. In areas where heavy construction traffic is anticipated, haul roads with a minimum gravel thickness of 2 feet should be constructed over the planned subgrade. The gravel shall consist of a well-graded gravel with a maximum size of 3 inches with no more than 7 percent passing the No. 200 sieve. Geotextile fabric placed between the fine-grained soils and gravel for the haul road will reduce the risk of continued maintenance of the haul road during construction. Provided that the haul road is constructed over firm subgrade stripped of organics, it can be used as a portion of the subbase course for the roadways.

- 1.5 The stability of construction excavations and associated worker safety are the responsibility of the contractor in accordance with current OSHA regulations; this responsibility may require design by a registered professional engineer. Based on the predominant soil types encountered during our investigation, temporary construction excavations for dry conditions that are to be planned in accordance with OSHA provisions should assume Type B material conditions for the silt soils, and Type C conditions for the relatively clean sand and gravel soils encountered. Actual subsurface conditions at the time of excavation should be observed by a geotechnical engineer to determine whether slope flattening, bracing or other stabilization is necessary due to seepage or other unexpected conditions.

2.0 Excavation, Earthwork, and Construction Materials

- 2.1 Based on observations during Slopeside's subsurface investigation, we anticipate subgrade soil moisture contents will be at or less than the optimum moisture content for compaction. However, if the moisture contents of subgrade soils are greater than the optimum moisture content as determined by ASTM D698, track-mounted hydraulic excavators should be used to accomplish excavation to subgrade in all Structural Fill, roadway and foundation areas. The use of track-mounted equipment will reduce the risk of disturbing the underlying moisture-sensitive, fine-grained soils. Rubber-tired equipment, including graders and scrapers, used within 2 feet of subgrade elevation will greatly increase the risk of disturbing the underlying subgrade soils when moisture contents are greater than the optimum moisture content for compaction.
- 2.2 Structural Fill constructed within proposed roadways, parking lots, building pads, engineered slopes and all other areas that are settlement sensitive shall be comprised of soils that are free of organics and deleterious materials. All Structural Fill material shall be placed in no greater than 12-inch thick lifts and compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698. In addition, the moisture content of the Structural Fill at the time of compaction shall be within 3 percent of the optimum moisture content as determined by ASTM D698. Cobbles and boulders larger than 6 inch maximum size shall not be used as fill material. Structural Fills shall consist of on-site soils or be from a material source approved by our geotechnical engineer and meet the following composition guidelines:
- The sand and gravel-size particles comprising the fill shall be hard, durable rock materials that will not degrade by moistening or under mechanical action of the

compacting equipment; i.e. not shale or other clayey rock types.

- The binder/fines should have maximum Liquid Limit and Plasticity Index values of 25 and 10 percent, respectively.
- No frozen, organic, or other deleterious materials should be present in the Structural Fill.

- 2.3 In the event that fill operations are planned for the relatively wet fall, winter and spring months, the fill material may need to be comprised of granular Structural Fill free of organics and deleterious materials. All granular Structural Fill material shall be compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698. In addition, the moisture content of the granular Structural Fill at the time of compaction shall be within 3 percent of the optimum moisture content as determined by ASTM D698. Granular Structural Fills shall consist of aggregate from a material source approved by our geotechnical engineer and meet the following gradation and composition guidelines:

Screen or Sieve Size	Percent Passing by Weight
3-inch	100
1½-inch	85-100
No. 4	30-60
No. 200	10 maximum

- The sand and gravel-size particles comprising the fill should be hard, durable rock materials that will not degrade by moistening or under mechanical action of the compacting equipment; i.e. not shale or other clayey rock types.
 - The binder/fines should have maximum Liquid Limit and Plasticity Index values of 25 and 10 percent, respectively.
 - No frozen, organic, or other deleterious materials should be present in the Structural Fill.
- 2.4 Fill placement should be observed and tested by our geotechnical site representative. Any areas of rutting, excessive deformation, or other non-uniform performance should be moisture conditioned and recompact, or removed and replaced, as recommended by our geotechnical engineer. Structural Fill should not be placed on frozen subgrade material or previously placed Structural Fill or subgrade that has frozen.
- 2.5 Utility trench backfill material should be approved by our geotechnical engineer, be placed in uniform lifts of maximum 8-inch loose thickness, and be compacted to at least 95 percent of the maximum dry density as determined by ASTM D698. In our opinion, on-site silt, sand, and gravel are acceptable for backfill purposes, provided the soils are compacted

within 3 percent of the optimum moisture content and they are free of construction debris, and frozen or deleterious material. Utility trench backfill with on site soils may be a deviation from the City of Columbia Falls Standards and will need to be approved by the Public Works Department in areas within the City's right of way. Cobbles and boulders greater than 4 inch maximum size should not be used as trench backfill material. Backfill should not be placed on frozen subgrade material or previously placed backfill that has frozen. Based on observations during the subsurface investigation, it appears the on site sand soils may be suitable for pipe bedding material. Assuming the sand soils meet the gradation and composition guidelines per the City of Columbia Falls Construction Standards, in our opinion, the sand is a suitable pipe bedding material.

- 2.6 Since it is difficult to compact the surface of fill slopes, we recommend fill slopes be overbuilt by 2 feet and trimmed back after construction to provide a surface that is more resistant to localized sloughing. Following construction of all slopes, topsoil can be placed and "track walked" with an appropriately sized dozer. It is important to vegetate and promote root growth after placement of the topsoil on sand and silt soils to reduce the risk of localized sloughing.
- 2.7 Permanent cut and fill slopes shall be no steeper than 2H:1V in dry areas, and 3H:1V in the vicinity of storm water detention ponds or other areas where periodic inundation with water is anticipated.
- 2.8 Structural Fill constructed on slopes steeper than 5H:1V shall be benched into the existing grade as shown on Figure 1.
- 2.9 In the event fill materials are planned for low lying areas where water is present, Slopeside recommends fill materials from subgrade elevation following site stripping to 1 ft above the water level consist of 6 inch to 24 inch subangular to angular cobbles and boulders. Following filling above the water level, the fill material shall be compacted using vibratory methods until well keyed. Following placement of the large cobble and boulder fill, Slopeside recommends placement of a nonwoven drainage geotextile (Mirafi 140N or equivalent). Over the geotextile, a minimum thickness of 1 ft of Granular Structural Fill shall be placed and compacted. Following compaction of the Granular Structural Fill, typical construction for subgrade or additional fill can resume.
- 3.0 Site Drainage**
 - 3.1 Finished site grades should be positively sloped away from foundation and backfill zones. Upslope grading should be designed and maintained to route runoff away from the building areas.
 - 3.2 Due to the sensitive nature of existing slopes, stormwater, drains, and roof gutters shall not be allowed to outlet on slopes steeper than 3H:1V.

4.0 Asphaltic Concrete Pavement

- 4.1 In preparation for subbase course, the subgrade shall be scarified to a depth of 8 inches, moisture conditioned, and compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698. In areas where Structural Fill has been previously compacted as part of the Earthwork operations for this project, scarifying and recompacting the subgrade will not be necessary unless the subgrade has previously frozen or is disturbed. Any areas where rutting, yielding, or non-uniform subgrade performance is observed, shall be repaired and improved as recommended by our geotechnical engineer. Compacted sand or gravel is the assumed pavement subgrade material.
- 4.2 The following flexible pavement thickness design section assumes a 20-year design period, and are consistent with low volume local roadways with a minimum subgrade CBR value of 10. The pavement section assumes construction procedures and material requirements as outlined in the *Montana Public Works Standard Specifications, Sixth Edition, 2010*, are followed.

Pavement Component	Local Street
Asphaltic Concrete Pavement	3 in.
$\frac{3}{4}$ -inch minus or 1½ Crushed Base Course	10 in.

5.0 Exterior Concrete Flatwork

- 5.1 Concrete flatwork that is allowed to move independently, such as sidewalks, typically have minimal damage of the concrete due to frost heave. As long as the concrete is allowed to raise and lower without being fixed at the edges, minimal cracking due to frost heave is anticipated.
- 5.2 To reduce the risk of frost heave occurring within the limits of the exterior concrete flatwork and affecting entryways and fixed concrete slabs, Slopeside recommends a combination of reducing water infiltration and removing some of the frost susceptible soils. Slopeside recommends reducing the amount of surface water infiltrating into the ground by collecting roof water in gutters and hard piping the runoff to an acceptable outlet approved by the Civil Engineer. Slopeside also recommends the frost susceptible subgrade soils be overexcavated to a depth of about 2 ft below the bottom of concrete elevation and backfilled with at least 18 inches of Structural Fill consisting of 3 inch minus “pit run” gravel with no more than 5 percent passing the No. 200 sieve, and compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698. The upper 6 inches of base material below the concrete should consist of $\frac{1}{4}$ inch to 1 inch open-graded angular drain rock. The drain rock shall be compacted using vibratory methods until well-keyed, and positive drainage shall be provided to allow water to exit from the open graded gravel.

6.0 Construction Services and Quality Control

- 6.1 Geotechnical observation should be provided to monitor the site preparation, earthwork, and AC pavement stages of construction. These geotechnical services should ascertain that subsurface conditions are reasonably consistent with those determined by our investigation, and should ascertain that site and subgrade preparation are consistent with our recommendations. This is of critical importance due to the location of the improvements in relationship to the existing slopes.

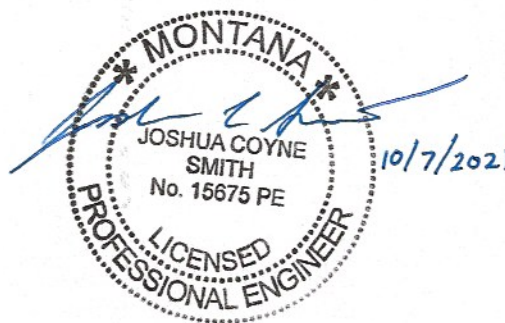
CONCLUSION

The foregoing recommendations present our initial geotechnical input for design and construction of the project. In order for these recommendations to be properly incorporated in the subsequent design and construction stages we recommend that our geotechnical engineering staff remain involved with the project to ascertain that our recommendations have been properly interpreted both during design and construction. These services will reduce the potential for misinterpretation of subsurface conditions and geotechnical design recommendations that are important in the preparation of project plans, specifications and bid documents.

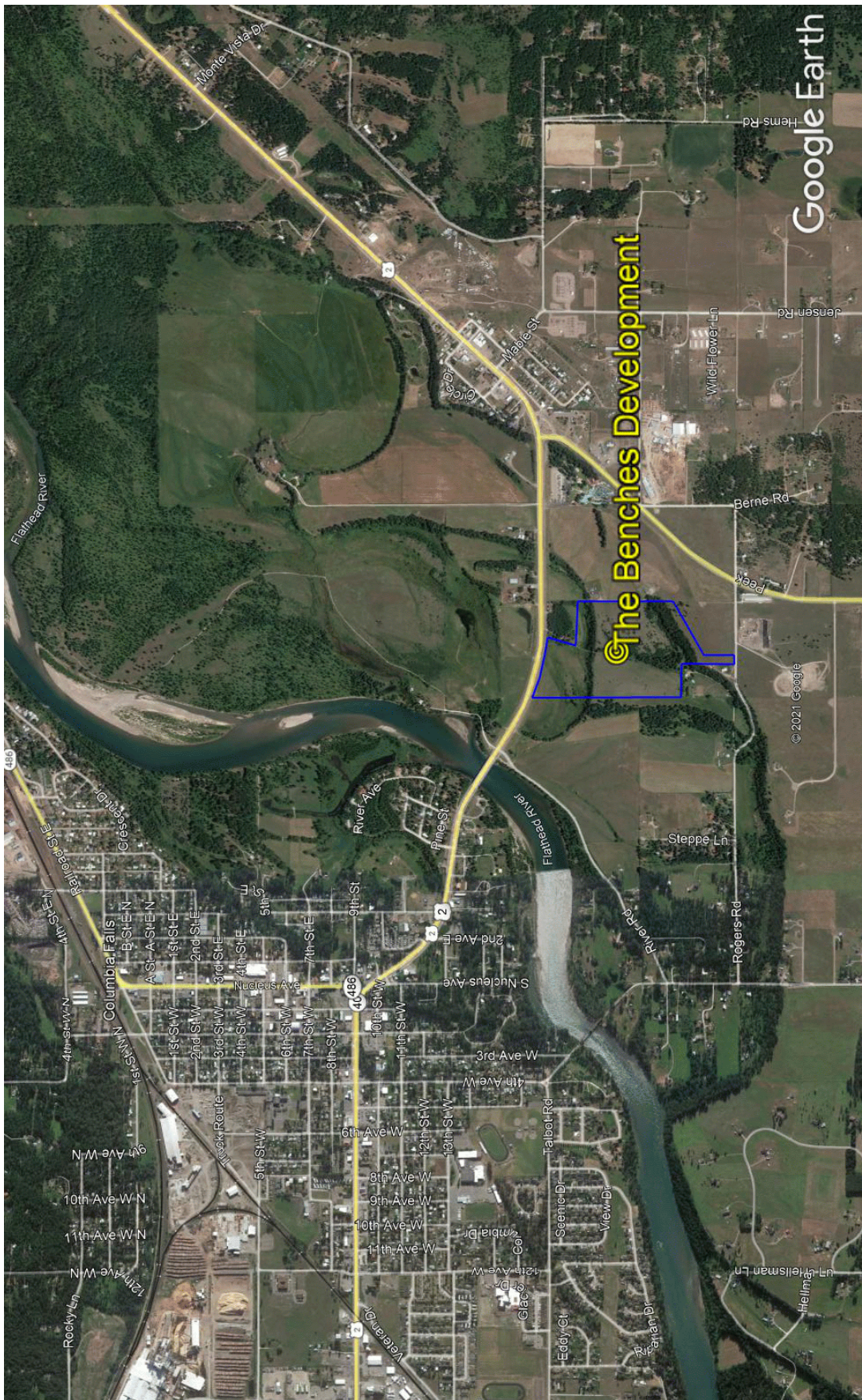
LIMITATIONS

Slopeside Engineering, LLC, has strived to prepare this report in accordance with generally accepted geotechnical engineering practices in this area solely for use by the client for design purposes and is not intended as a construction or bid document representing subsurface conditions in their entirety. The conclusions and recommendations presented are based upon the data obtained during the investigation as applied to the proposed design and construction details discussed in this report. The nature and extent of variations between the subsurface explorations may not become evident until construction. If variations are then exposed, it will be necessary to reevaluate the recommendations of this report.

Sincerely,



Joshua C. Smith, P.E.
Principal Geotechnical Engineer

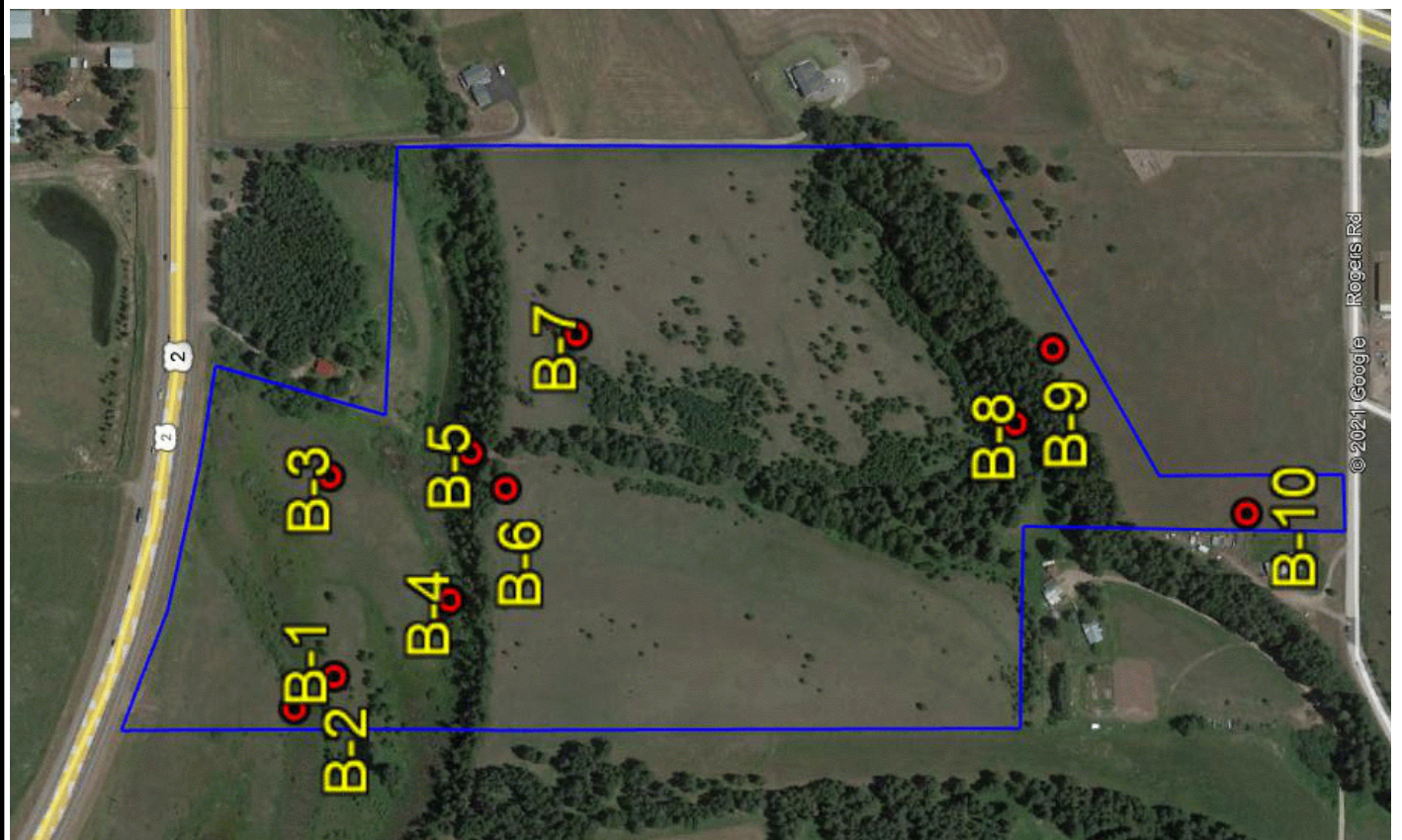
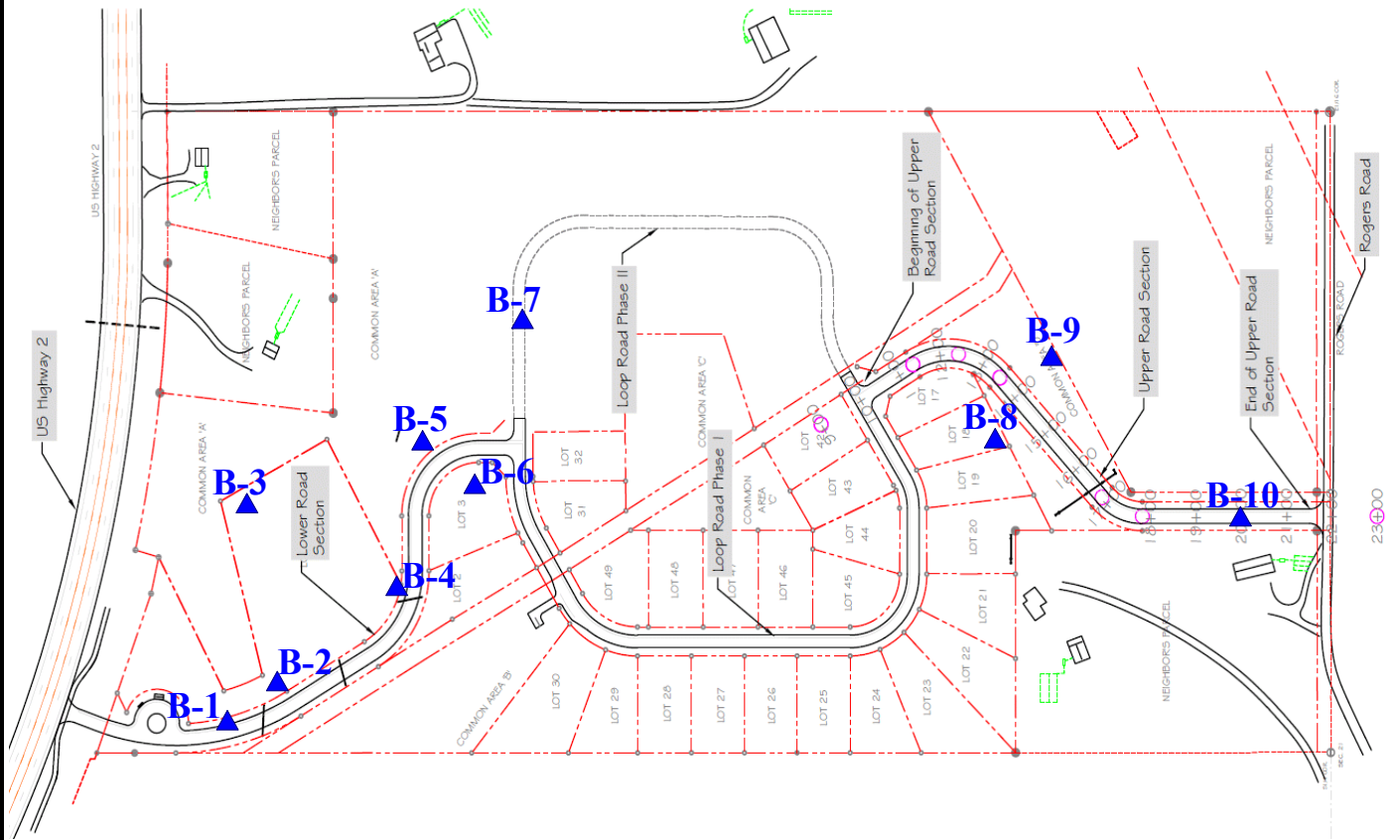


Project: The Benches Development
Columbia Falls, Montana

Job Number: 21-457
Date: October 5, 2021

Vicinity Map
Slopeside Engineering, LLC
Kalispell, MT
FIGURE 1

**Slopeside
Engineer**



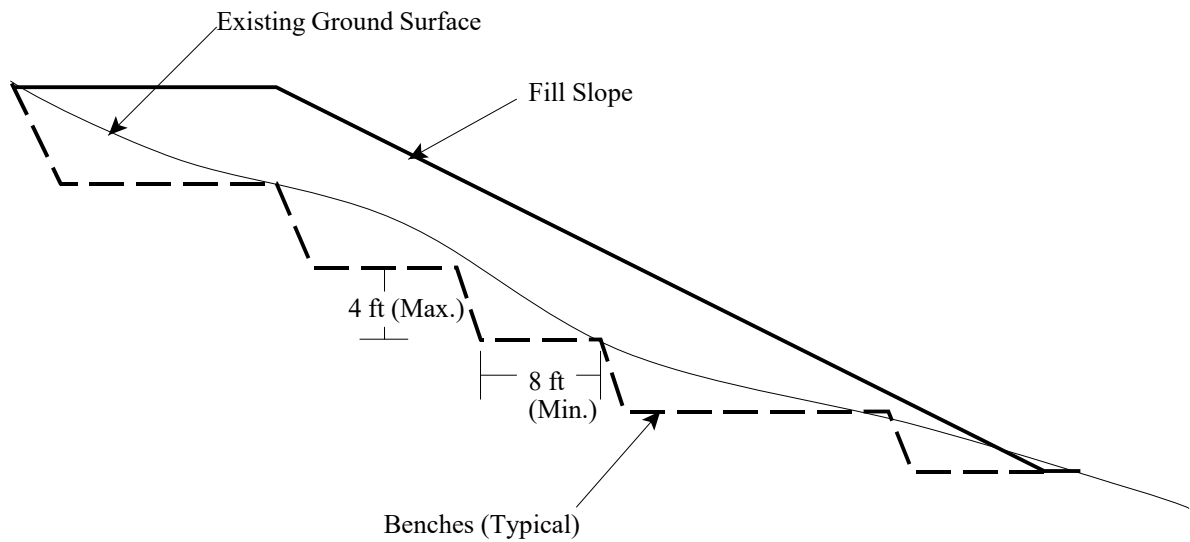
Project: The Benches Development
Columbia Falls, Montana

Job Number: 21-457
Date: October 5, 2021

Site Plan
Slopeside Engineering, LLC
Kalispell, MT
FIGURE 2

**Slopeside
Engineer**

Benching Detail for Fill Slopes



No Scale Intended

Project: The Benches Development
Columbia Falls, Montana

Job Number: 21-457
Date:

October 5, 2021

Benching Detail for Fill Slopes

Slopeside Engineering, LLC
Kalispell, MT
Figure 1



APPENDIX A

Field Explorations and Laboratory Testing

FIELD EXPLORATIONS AND LABORATORY TESTING

FIELD EXPLORATIONS

General

The subsurface materials and conditions at the site were investigated by Slopeside on August 12 and 13, 2020, with ten borings designated B-1 through B-10. The locations of the subsurface explorations are shown on the Site Plan, Figure 2. All field explorations were observed by an experienced engineer or geologist provided by our firm, who maintained a detailed log of the materials disclosed during the course of the work. The following subsections contain a detailed description of the field investigation completed for this project.

Borings

Borings B-1 through B-10 were completed to depths of 5.3 to 50.3 ft. The borings were drilled with hollow-stem auger techniques using a truck-mounted Mobile B61 drill rig provided and operated by Crowley Environmental Drilling of Butte, Montana. Disturbed samples were obtained from the borings at 2.5- to 5-ft intervals of depth. Disturbed samples were obtained using a standard split-spoon sampler and undisturbed samples were obtained using a thin-walled shelly-tube sampler when deemed appropriate. At the time of sampling, the Standard Penetration Test (SPT) was conducted. This test consists of driving a standard split-spoon sampler into the soil a distance of 18 in. using a 140-lb hammer dropped 30 in. The number of blows required to drive the sampler the last 12 in. is known as the Standard Penetration Resistance, or N-value. The N-values provide a measure of the relative density of granular soils, such as sand, and the relative consistency or stiffness of cohesive soils, such as silt and clay. The soil samples obtained in the split-spoon sampler were carefully examined in the field, and representative portions were saved in airtight plastic bags for further examination and physical testing in our laboratory. Logs of the borings are provided on Figures 1A through 10A. Each log presents a descriptive summary of the various types of materials encountered and notes the depth where the materials and/or characteristics of the materials change. To the left of the descriptive summary, the numbers and types of samples taken during drilling operations are indicated. To the right, N-values are shown graphically, along with the natural moisture contents, Atterberg Limits, and Torvane shear strength values.

LABORATORY TESTING

General

All samples obtained from the subsurface explorations were returned to our laboratory or taken to a local laboratory where the physical characteristics of the samples were noted, and field classifications were modified where necessary. The laboratory testing program consisted of natural moisture contents.

Natural Moisture Content

Natural moisture content determinations were made in conformance with ASTM D2216.



BORING LOG B-1

PROJECT: The Benches Development

CLIENT: Siderius Construction, LLP

LOCATION: See Site Plan

SUBCONTRACTOR: Crowley Environmental Drilling

METHOD: Mobile B-61 Hollow stem auger

PROJECT NO.:

Item No.10.

DATE: August 12, 2020

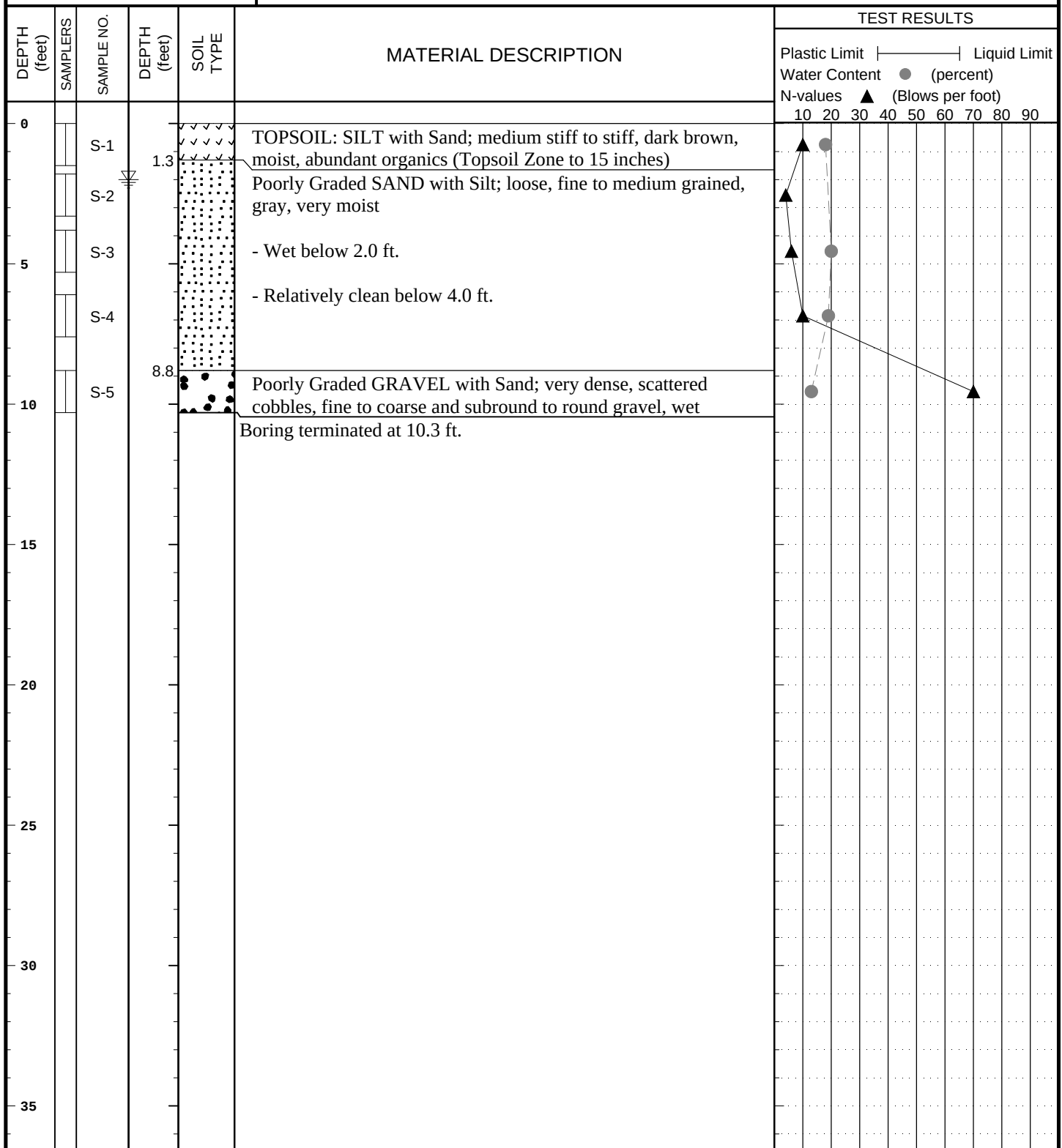
ELEVATION:

LOGGED BY: Joshua Smith

GW: 2.0 8/12/2020

GW(2):

This information pertains only to this boring and should not be interpreted as being indicative of the site.



Groundwater encountered at 2.0 ft below the ground surface.



BORING LOG B-2

PROJECT: The Benches Development

CLIENT: Siderius Construction, LLP

LOCATION: See Site Plan

SUBCONTRACTOR: Crowley Environmental Drilling

METHOD: Mobile B-61 Hollow stem auger

PROJECT NO.: Item No.10.

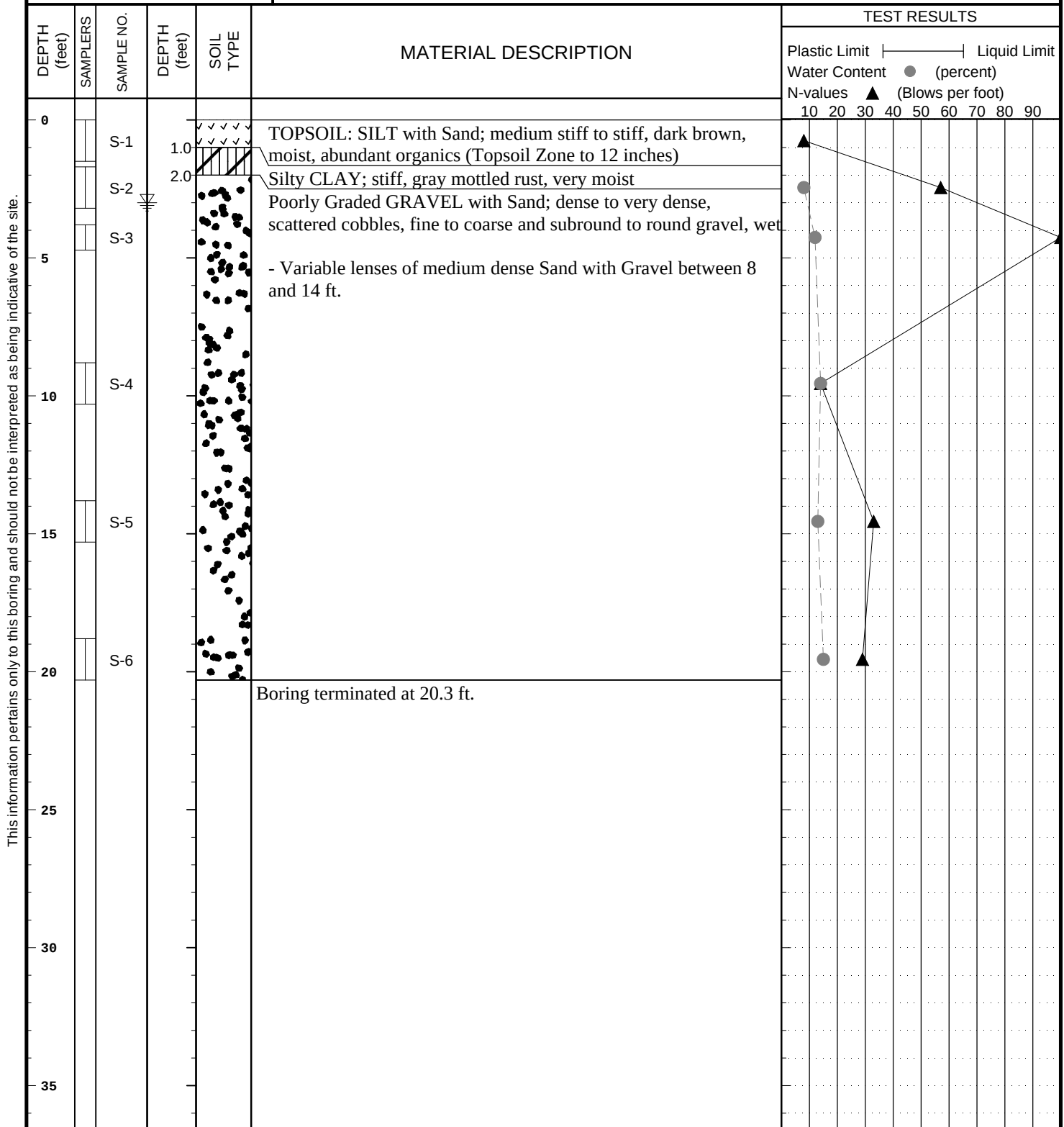
DATE: August 12, 2020

ELEVATION:

LOGGED BY: Joshua Smith

GW: 3.0 8/12/2020

GW(2):



Groundwater encountered at 3.0 ft below the ground surface.



BORING LOG B-3

PROJECT: The Benches Development

CLIENT: Siderius Construction, LLP

LOCATION: See Site Plan

SUBCONTRACTOR: Crowley Environmental Drilling

METHOD: Mobile B-61 Hollow stem auger

PROJECT NO.:

Item No.10.

DATE: August 12, 2020

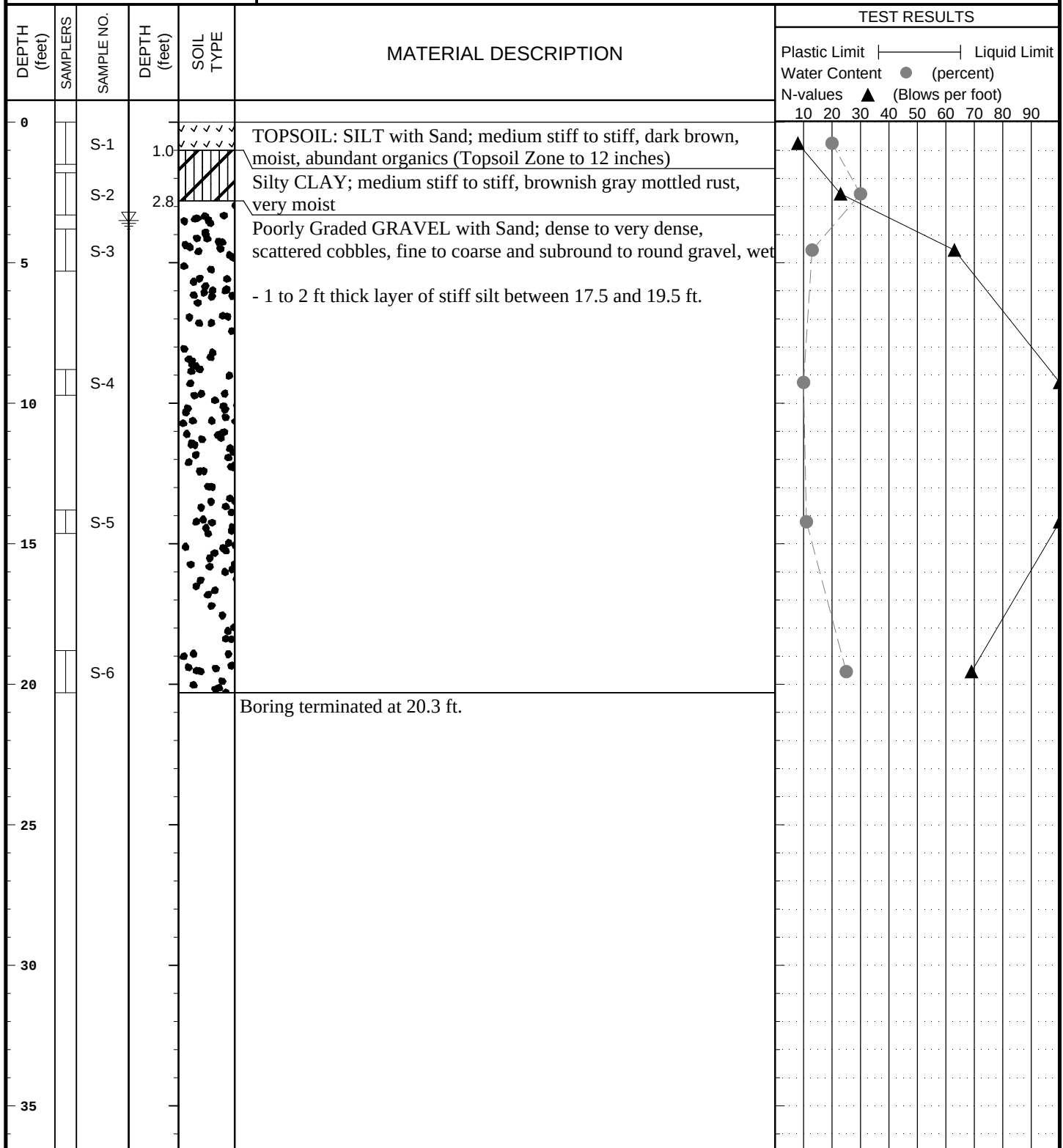
ELEVATION:

LOGGED BY: Joshua Smith

GW: 3.5 8/12/2020

GW(2):

This information pertains only to this boring and should not be interpreted as being indicative of the site.



Groundwater encountered at 3.5 ft below the ground surface.



BORING LOG B-4

PROJECT: The Benches Development

CLIENT: Siderius Construction, LLP

LOCATION: See Site Plan

SUBCONTRACTOR: Crowley Environmental Drilling

METHOD: Mobile B-61 Hollow stem auger

PROJECT NO.:

Item No.10.

DATE: August 12, 2020

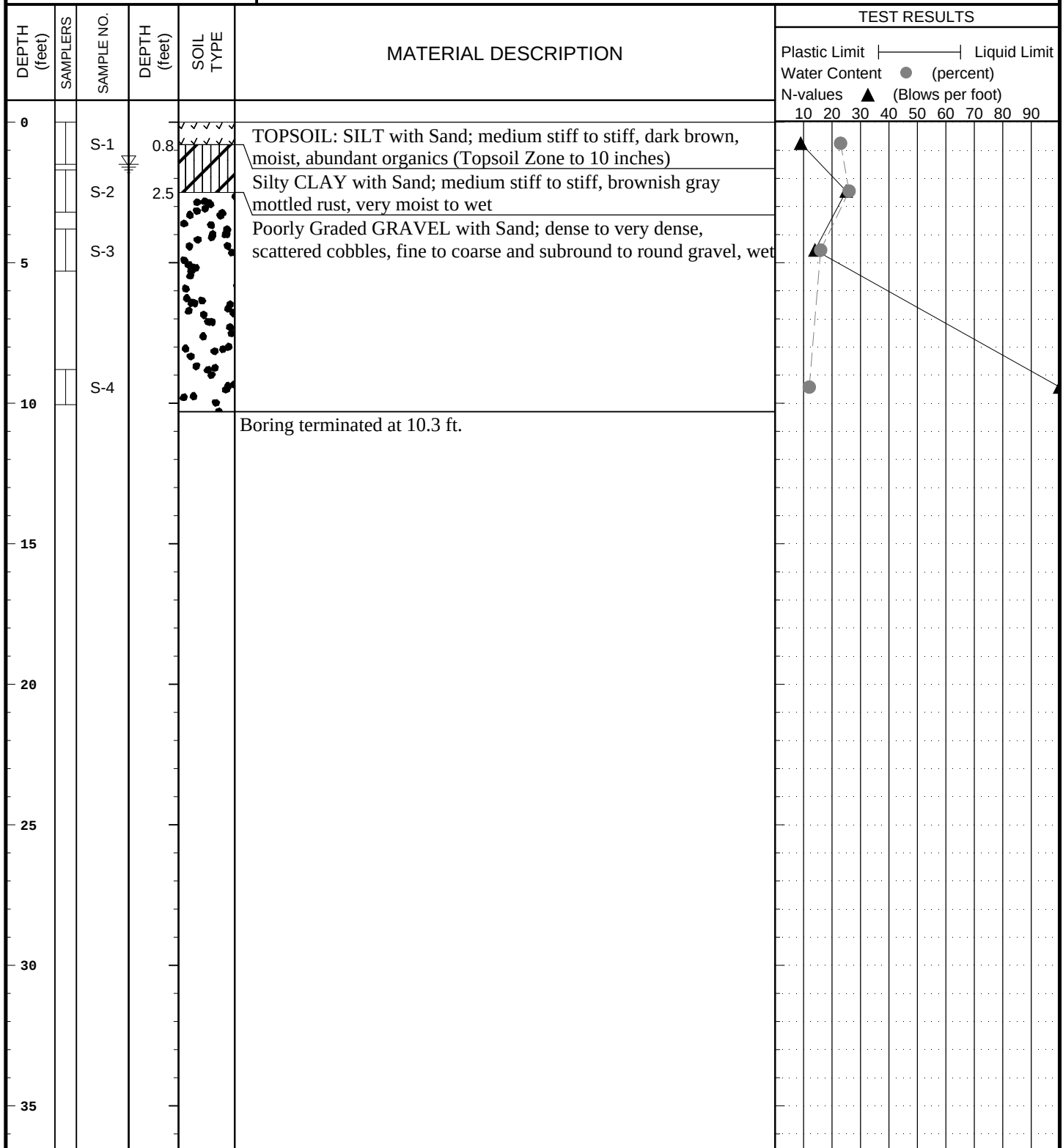
ELEVATION:

LOGGED BY: Joshua Smith

GW: 1.5 8/12/2020

GW(2):

This information pertains only to this boring and should not be interpreted as being indicative of the site.



Groundwater encountered at 1.5 ft below the ground surface.



BORING LOG B-5

PROJECT: The Benches Development

CLIENT: Siderius Construction, LLP

LOCATION: See Site Plan

SUBCONTRACTOR: Crowley Environmental Drilling

METHOD: Mobile B-61 Hollow stem auger

PROJECT NO.:

Item No.10.

DATE: August 12, 2020

ELEVATION:

LOGGED BY: Joshua Smith

GW: 8.0 8/12/2020

GW(2):

This information pertains only to this boring and should not be interpreted as being indicative of the site.

DEPTH (feet)	SAMPLERS	SAMPLE NO.	DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	TEST RESULTS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
						Plastic Limit		Liquid Limit		Water Content		N-values																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								</

Groundwater encountered at 8.0 ft below the ground surface.



BORING LOG B-6

PROJECT: The Benches Development

CLIENT: Siderius Construction, LLP

LOCATION: See Site Plan

SUBCONTRACTOR: Crowley Environmental Drilling

METHOD: Mobile B-61 Hollow stem auger

PROJECT NO.:

Item No.10.

DATE: August 12, 2020

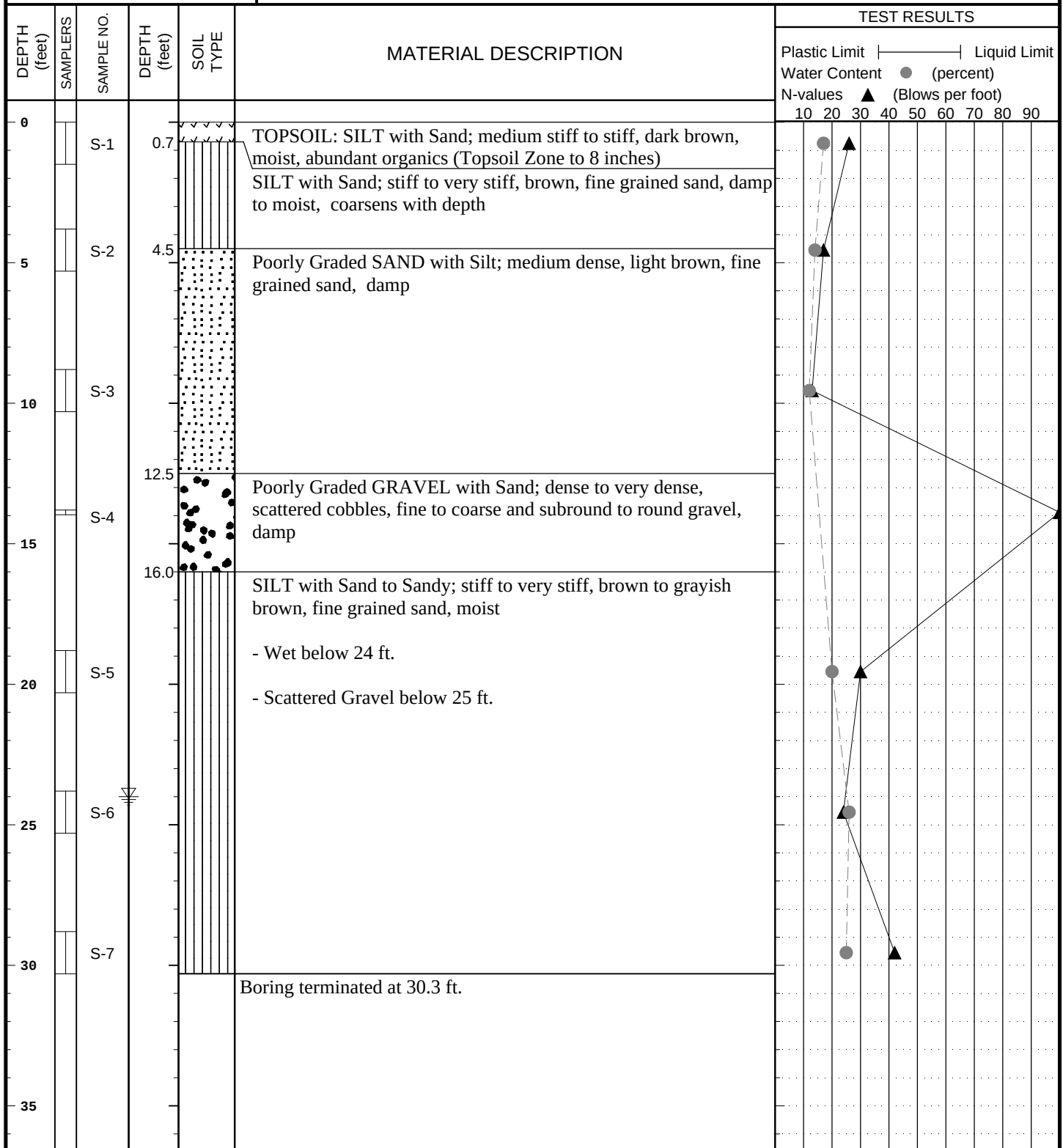
ELEVATION:

LOGGED BY: Joshua Smith

GW: 24.0 8/12/2020

GW(2):

This information pertains only to this boring and should not be interpreted as being indicative of the site.



Groundwater encountered at 24.0 ft below the ground surface.



BORING LOG B-7

PROJECT: The Benches Development

CLIENT: Siderius Construction, LLP

LOCATION: See Site Plan

SUBCONTRACTOR: Crowley Environmental Drilling

METHOD: Mobile B-61 Hollow stem auger

PROJECT NO.: Item No.10.

DATE: August 13, 2020

ELEVATION: _____

LOGGED BY: Joshua Smith

GW: ☐

GW(2): ☐

This information pertains only to this boring and should not be interpreted as being indicative of the site.

DEPTH (feet)	SAMPLERS	SAMPLE NO.	DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	TEST RESULTS										
						Plastic Limit			Liquid Limit	Water Content	●	(percent)	N-values	▲	(Blows per foot)	
0						10	20	30	40	50	60	70	80	90		
0.7		S-1	0.7		TOPSOIL: SILT with Sand; medium stiff to stiff, dark brown, moist, abundant organics (Topsoil Zone to 8 inches)											
					Poorly Graded GRAVEL with Sand; dense to very dense, scattered cobbles and boulders, fine to coarse and subround to round gravel, damp											
5		S-2														
10		S-3														
15		S-4														
20		S-5														
20					Boring terminated at 19.2 ft.											
25																
30																
35																

Groundwater not encountered.



BORING LOG B-8

PROJECT: The Benches Development

CLIENT: Siderius Construction, LLP

LOCATION: See Site Plan

SUBCONTRACTOR: Crowley Environmental Drilling

METHOD: Mobile B-61 Hollow stem auger

PROJECT NO.: Item No.10.

DATE: August 13, 2020

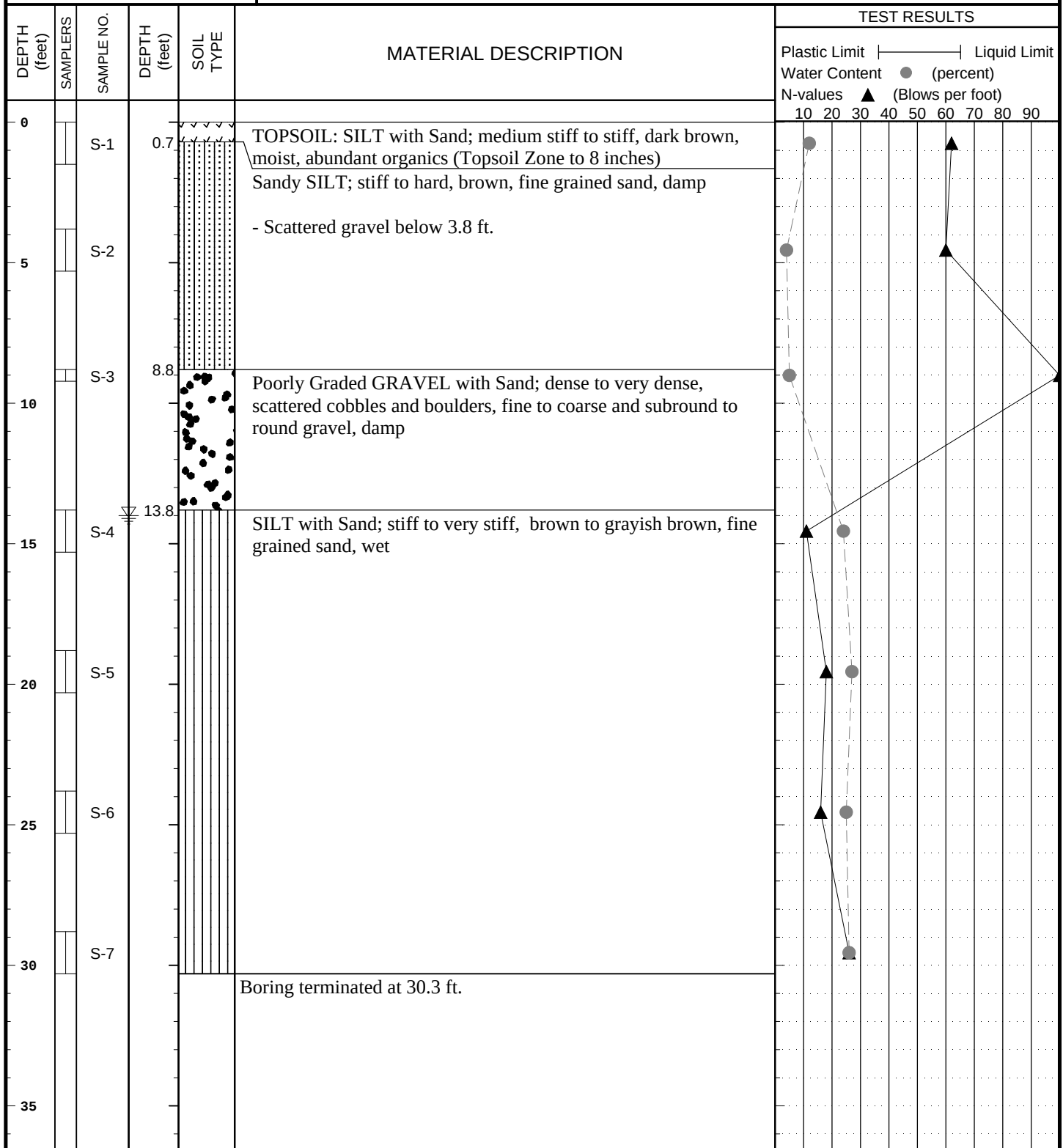
ELEVATION:

LOGGED BY: Joshua Smith

GW: 14.0 8/13/2020

GW(2):

This information pertains only to this boring and should not be interpreted as being indicative of the site.



Groundwater encountered at 14 ft below the ground surface.



BORING LOG B-9

PROJECT: The Benches Development

CLIENT: Siderius Construction, LLP

LOCATION: See Site Plan

SUBCONTRACTOR: Crowley Environmental Drilling

METHOD: Mobile B-61 Hollow stem auger

PROJECT NO.: Item No.10.

DATE: August 13, 2020

ELEVATION:

LOGGED BY: Joshua Smith

GW: 49.0 8/13/2020

GW(2):

This information pertains only to this boring and should not be interpreted as being indicative of the site.

DEPTH (feet)	SAMPLERS	SAMPLE NO.	DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	TEST RESULTS									
						Plastic Limit	Water Content	N-values	Liquid Limit	(percent)	(Blows per foot)				
0		S-1	0.5	✓✓✓✓	TOPSOIL: SILT with Sand; medium stiff to stiff, dark brown, moist, abundant organics (Topsoil Zone to 6 inches)										
5		S-2			Poorly Graded GRAVEL with Sand; dense to very dense, scattered cobbles and boulders, fine to coarse and subround to round gravel, damp										
10		S-3			Periodic 1 to 2 ft thick Sand with Gravel layers.										
15		S-4													
20		S-5													
25															
30		S-6													
35															

Groundwater encountered at 49 ft below the ground surface.



BORING LOG B-9

PROJECT: The Benches Development

CLIENT: Siderius Construction, LLP

LOCATION: See Site Plan

SUBCONTRACTOR: Crowley Environmental Drilling

METHOD: Mobile B-61 Hollow stem auger

PROJECT NO.: Item No.10.

DATE: August 13, 2020

ELEVATION:

LOGGED BY: Joshua Smith

GW: 49.0 8/13/2020

GW(2):

This information pertains only to this boring and should not be interpreted as being indicative of the site.

DEPTH (feet)	SAMPLERS	SAMPLE NO.	DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	TEST RESULTS										
						Plastic Limit			Liquid Limit							
						Water Content	●		(percent)							
						N-values	▲		(Blows per foot)							
						10	20	30	40	50	60	70	80	90		
40		S-7	40.0		SILT with Sand; stiff, brown, fine grained sand, wet											
45																
50		S-8			Boring terminated at 50.3 ft.											
55																
60																
65																
70																
75																



BORING LOG B-10

PROJECT: The Benches Development

CLIENT: Siderius Construction, LLP

LOCATION: See Site Plan

SUBCONTRACTOR: Crowley Environmental Drilling

METHOD: Mobile B-61 Hollow stem auger

PROJECT NO.: Item No.10.

DATE: August 13, 2020

ELEVATION: _____

LOGGED BY: Joshua Smith

GW: ☐

GW(2): ☐

This information pertains only to this boring and should not be interpreted as being indicative of the site.

DEPTH (feet)	SAMPLERS	SAMPLE NO.	DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	TEST RESULTS									
						Plastic Limit	Water Content	N-values	Liquid Limit	(percent)	(Blows per foot)				
0		S-1	0.7		TOPSOIL: SILT with Sand; medium stiff to stiff, dark brown, moist, abundant organics (Topsoil Zone to 8 inches)	●	●	▲							
		S-2			Poorly Graded GRAVEL with Sand; dense to very dense, scattered cobbles and boulders, fine to coarse and subround to round gravel, damp	●	●	▲							
5		S-3			Boring terminated at 5.3 ft.	●	●	▲							
10															
15															
20															
25															
30															
35															

Groundwater not encountered.

GUARANTEE

Issued by

Insured Titles

44 4th Street West/P.O. Box 188, Kalispell, MT 59901

Title Officer: Andrea Reum

Phone: (406)755-5028

FAX: (406)755-3299



First American Title™

Item No.10.

Form 5010500 (7-1-14)

Guarantee Number: 501055-1007400

Guarantee Face Page

Issued By

FIRST AMERICAN TITLE INSURANCE COMPANY



First American Title™

First American Title Insurance Company

Dennis J. Gilmora, President

Greg L. Smith, Secretary

This jacket was created electronically and constitutes an original document

SCHEDULE OF EXCLUSIONS FROM COVERAGE OF THIS GUARANTEE

Item No.10.

1. Except to the extent that specific assurances are provided in Schedule A of this Guarantee, the Company assumes no liability for loss or damage by reason of the following:
 - (a) Defects, liens, encumbrances, adverse claims or other matters against the title, whether or not shown by the public records.
 - (b) (1) Taxes or assessments of any taxing authority that levies taxes or assessments on real property; or, (2) Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not the matters excluded under (1) or (2) are shown by the records of the taxing authority or by the public records.
 - (c) (1) Unpatented mining claims; (2) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (3) water rights, claims or title to water, whether or not the matters excluded under (1), (2) or (3) are shown by the public records.
2. Notwithstanding any specific assurances which are provided in Schedule A of this Guarantee, the Company assumes no liability for loss or damage by reason of the following:
 - (a) Defects, liens, encumbrances, adverse claims or other matters affecting the title to any property beyond the lines of the land expressly described in the description set forth in Schedule (A), (C) or in Part 2 of this Guarantee, or title to streets, roads, avenues, lanes, ways or waterways to which such land abuts, or the right to maintain therein vaults, tunnels, ramps or any structure or improvements; or any rights or easements therein, unless such property, rights or easements are expressly and specifically set forth in said description.
 - (b) Defects, liens, encumbrances, adverse claims or other matters, whether or not shown by the public records; (1) which are created, suffered, assumed or agreed to by one or more of the Assureds; (2) which result in no loss to the Assured; or (3) which do not result in the invalidity or potential invalidity of any judicial or non-judicial proceeding which is within the scope and purpose of the assurances provided.
 - (c) The identity of any party shown or referred to in Schedule A.
 - (d) The validity, legal effect or priority of any matter shown or referred to in this Guarantee

GUARANTEE CONDITIONS AND STIPULATIONS**1. DEFINITION OF TERMS.**

The following terms when used in the Guarantee mean:

- (a) the "Assured": the party or parties named as the Assured in this Guarantee, or on a supplemental writing executed by the Company.
- (b) "land": the land described or referred to in Schedule (A)(C) or in Part 2, and improvements affixed thereto which by law constitute real property. The term "land" does not include any property beyond the lines of the area described or referred to in Schedule (A)(C) or in Part 2, nor any right, title, interest, estate or easement in abutting streets, roads, avenues, alleys, lanes, ways or waterways.
- (c) "mortgage": mortgage, deed of trust, trust deed, or other security instrument.
- (d) "public records": records established under state statutes at Date of Guarantee for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without knowledge.
- (e) "date": the effective date.

2. NOTICE OF CLAIM TO BE GIVEN BY ASSURED CLAIMANT.

An Assured shall notify the Company promptly in writing in case knowledge shall come to an Assured hereunder of any claim of title or interest which is adverse to the title to the estate or interest, as stated herein, and which might cause loss or damage for which the Company may be liable by virtue of this Guarantee. If prompt notice shall not be given to the Company, then all liability of the Company shall terminate with regard to the matter or matters for which prompt notice is required; provided, however, that failure to notify the Company shall in no case prejudice the rights of any Assured unless the Company shall be prejudiced by the failure and then only to the extent of the prejudice

3. NO DUTY TO DEFEND OR PROSECUTE.

The Company shall have no duty to defend or prosecute any action or proceeding to which the Assured is a party, notwithstanding the nature of any allegation in such action or proceeding.

4. COMPANY'S OPTION TO DEFEND OR PROSECUTE ACTIONS; DUTY OF ASSURED CLAIMANT TO COOPERATE.

Even though the Company has no duty to defend or prosecute as set forth in Paragraph 3 above:

- (a) The Company shall have the right, at its sole option and cost, to institute and prosecute any action or proceeding, interpose a defense, as limited in (b), or to do any other act which in its opinion may be necessary or desirable to establish the title to the estate or interest as stated herein, or to establish the lien rights of the Assured, or to prevent or reduce loss or damage to the Assured. The Company may take any appropriate action under the terms of this Guarantee, whether or not it shall be liable hereunder, and shall not thereby concede liability or waive any provision of this Guarantee. If the Company shall exercise its rights under this paragraph, it shall do so diligently.
- (b) If the Company elects to exercise its options as stated in Paragraph 4(a) the Company shall have the right to select counsel of its choice (subject to the right of such Assured to object for reasonable cause) to represent the Assured and shall not be liable for and will not pay the fees of any other counsel, nor will the Company pay any fees, costs or expenses incurred by an Assured in the defense of those causes of action which allege matters not covered by this Guarantee.
- (c) Whenever the Company shall have brought an action or interposed a defense as permitted by the provisions of

this Guarantee, the Company may pursue any litigation to final determination by a court of competent jurisdiction and expressly reserves the right, in its sole discretion, to appeal from an adverse judgment or order.

- (d) In all cases where this Guarantee permits the Company to prosecute or provide for the defense of any action or proceeding, an Assured shall secure to the Company the right to so prosecute or provide for the defense of any action or proceeding, and all appeals therein, and permit the Company to use, at its option, the name of such Assured for this purpose. Whenever requested by the Company, an Assured, at the Company's expense, shall give the Company all reasonable aid in any action or proceeding, securing evidence, obtaining witnesses, prosecuting or defending the action or lawful act which in the opinion of the Company may be necessary or desirable to establish the title to the estate or interest as stated herein, or to establish the lien rights of the Assured. If the Company is prejudiced by the failure of the Assured to furnish the required cooperation, the Company's obligations to the Assured under the Guarantee shall terminate.

5. PROOF OF LOSS OR DAMAGE.

In addition to and after the notices required under Section 2 of these Conditions and Stipulations have been provided to the Company, a proof of loss or damage signed and sworn to by the Assured shall be furnished to the Company within ninety (90) days after the Assured shall ascertain the facts giving rise to the loss or damage. The proof of loss or damage shall describe the matters covered by this Guarantee which constitute the basis of loss or damage and shall state, to the extent possible, the basis of calculating the amount of the loss or damage. If the Company is prejudiced by the failure of the Assured to provide the required proof of loss or damage, the Company's obligation to such Assured under the Guarantee shall terminate. In addition, the Assured may reasonably be required to submit to examination under oath by any authorized representative of the Company and shall produce for examination, inspection and copying, at such reasonable times and places as may be designated by any authorized representative of the Company, all records, books, ledgers, checks, correspondence and memoranda, whether bearing a date before or after Date of Guarantee, which reasonably pertain to the loss or damage. Further, if requested by any authorized representative of the Company, the Assured shall grant its permission, in writing, for any authorized representative of the Company to examine, inspect and copy all records, books, ledgers, checks, correspondence and memoranda in the custody or control of a third party, which reasonably pertain to the loss or damage. All information designated as confidential by the Assured provided to the Company pursuant to this Section shall not be disclosed to others unless, in the reasonable judgment of the Company, it is necessary in the administration of the claim. Failure of the Assured to submit for examination under oath, produce other reasonably requested information or grant permission to secure reasonably necessary information from third parties as required in the above paragraph, unless prohibited by law or governmental regulation, shall terminate

any liability of the Company under this Guarantee to the Assured for that claim.

6. OPTIONS TO PAY OR OTHERWISE SETTLE CLAIMS: TERMINATION OF LIABILITY.

In case of a claim under this Guarantee, the Company shall have the following additional options:

- (a) To Pay or Tender Payment of the Amount of Liability or to Purchase the Indebtedness.
The Company shall have the option to pay or settle or compromise for or in the name of the Assured any claim which could result in loss to the Assured within the coverage of this Guarantee, or to pay the full amount of this Guarantee or, if this Guarantee is issued for the benefit of a holder of a mortgage or a lienholder, the Company shall have the option to purchase the indebtedness secured by said mortgage or said lien for the amount owing thereon, together with any costs, reasonable attorneys' fees and expenses incurred by the Assured claimant which were authorized by the Company up to the time of purchase. Such purchase, payment or tender of payment of the full amount of the Guarantee shall terminate all liability of the Company hereunder. In the event after notice of claim has been given to the Company by the Assured the Company offers to purchase said indebtedness, the owner of such indebtedness shall transfer and assign said indebtedness, together with any collateral security, to the Company upon payment of the purchase price. Upon the exercise by the Company of the option provided for in Paragraph (a) the Company's obligation to the Assured under this Guarantee for the claimed loss or damage, other than to make the payment required in that paragraph, shall terminate, including any obligation to continue the defense or prosecution of any litigation for which the Company has exercised its options under Paragraph 4, and the Guarantee shall be surrendered to the Company for cancellation.
- (b) To Pay or Otherwise Settle With Parties Other Than the Assured or With the Assured Claimant.
To pay or otherwise settle with other parties for or in the name of an Assured claimant any claim assured against under this Guarantee, together with any costs, attorneys' fees and expenses incurred by the Assured claimant which were authorized by the Company up to the time of payment and which the Company is obligated to pay. Upon the exercise by the Company of the option provided for in Paragraph (b) the Company's obligation to the Assured under this Guarantee for the claimed loss or damage, other than to make the payment required in that paragraph, shall terminate, including any obligation to continue the defense or prosecution of any litigation for which the Company has exercised its options under Paragraph 4.

7. DETERMINATION AND EXTENT OF LIABILITY.

This Guarantee is a contract of Indemnity against actual monetary loss or damage sustained or incurred by the Assured claimant who has suffered loss or damage by reason of reliance upon the assurances set forth in this Guarantee and only to the extent herein described, and subject to the

Exclusions From Coverage of This Guarantee.

The liability of the Company under this Guarantee to the Assured shall not exceed the least of:

- (a) the amount of liability stated in Schedule A or in Part 2;
- (b) the amount of the unpaid principal indebtedness secured by the mortgage of an Assured mortgagee, as limited or provided under Section 6 of these Conditions and Stipulations or as reduced under Section 9 of these Conditions and Stipulations, at the time the loss or damage assured against by this Guarantee occurs, together with interest thereon; or
- (c) the difference between the value of the estate or interest covered hereby as stated herein and the value of the estate or interest subject to any defect, lien or encumbrance assured against by this Guarantee.

8. LIMITATION OF LIABILITY.

- (a) If the Company establishes the title, or removes the alleged defect, lien or encumbrance, or cures any other matter assured against by this Guarantee in a reasonably diligent manner by any method, including litigation and the completion of any appeals therefrom, it shall have fully performed its obligations with respect to that matter and shall not be liable for any loss or damage caused thereby.
- (b) In the event of any litigation by the Company or with the Company's consent, the Company shall have no liability for loss or damage until there has been a final determination by a court of competent jurisdiction, and disposition of all appeals therefrom, adverse to the title, as stated herein.
- (c) The Company shall not be liable for loss or damage to any Assured for liability voluntarily assumed by the Assured in settling any claim or suit without the prior written consent of the Company.

9. REDUCTION OF LIABILITY OR TERMINATION OF LIABILITY.

All payments under this Guarantee, except payments made for costs, attorneys' fees and expenses pursuant to Paragraph 4 shall reduce the amount of liability pro tanto.

10. PAYMENT OF LOSS.

- (a) No payment shall be made without producing this Guarantee for endorsement of the payment unless the Guarantee has been lost or destroyed, in which case proof of loss or destruction shall be furnished to the satisfaction of the Company.
- (b) When liability and the extent of loss or damage has been definitely fixed in accordance with these Conditions and Stipulations, the loss or damage shall be payable within thirty (30) days thereafter.

11. SUBROGATION UPON PAYMENT OR SETTLEMENT.

Whenever the Company shall have settled and paid a claim under this Guarantee, all right of subrogation shall vest in the Company unaffected by any act of the Assured claimant. The Company shall be subrogated to and be entitled to all rights and remedies which the Assured would have had against any person or property in respect to the claim had this Guarantee not been issued. If requested by the Company,

the Assured shall transfer to the Company all rights and remedies against any person or property necessary in order to perfect this right of subrogation. The Assured shall permit the Company to sue, compromise or settle in the name of the Assured and to use the name of the Assured in any transaction or litigation involving these rights or remedies. If a payment on account of a claim does not fully cover the loss of the Assured the Company shall be subrogated to all rights and remedies of the Assured after the Assured shall have recovered its principal, interest, and costs of collection.

12. ARBITRATION.

Unless prohibited by applicable law, either the Company or the Assured may demand arbitration pursuant to the Title Insurance Arbitration Rules of the American Arbitration Association. Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the Assured arising out of or relating to this Guarantee, any service of the Company in connection with its issuance or the breach of a Guarantee provision or other obligation. All arbitrable matters when the Amount of Liability is \$1,000,000 or less shall be arbitrated at the option of either the Company or the Assured. All arbitrable matters when the amount of liability is in excess of \$1,000,000 shall be arbitrated only when agreed to by both the Company and the Assured. The Rules in effect at Date of Guarantee shall be binding upon the parties. The award may include attorneys' fees only if the laws of the state in which the land is located permits a court to award attorneys' fees to a prevailing party. Judgment upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.

The law of the situs of the land shall apply to an arbitration under the Title Insurance Arbitration Rules.

A copy of the Rules may be obtained from the Company upon request.

13. LIABILITY LIMITED TO THIS GUARANTEE; GUARANTEE ENTIRE CONTRACT.

- (a) This Guarantee together with all endorsements, if any, attached hereto by the Company is the entire Guarantee and contract between the Assured and the Company. In interpreting any provision of this Guarantee, this Guarantee shall be construed as a whole.
- (b) Any claim of loss or damage, whether or not based on negligence, or any action asserting such claim, shall be restricted to this Guarantee.
- (c) No amendment of or endorsement to this Guarantee can be made except by a writing endorsed hereon or attached hereto signed by either the President, a Vice President, the Secretary, an Assistant Secretary, or validating officer or authorized signatory of the Company.

14. NOTICES, WHERE SENT.

All notices required to be given the Company and any statement in writing required to be furnished the Company shall include the number of this Guarantee and shall be addressed to the Company at **First American Title Insurance Company, Attn: Claims National Intake Center, 1 First American Way, Santa Ana, California 92707. Phone: 888-632-1642.**



First American Title

Guarantee

Subdivision Guarantee

Item No.10.

ISSUED BY

First American Title Insurance Company

GUARANTEE NUMBER

5010500-1007400-FT

Subdivision or Proposed Subdivision: The Benches Subdivision

Order No.: 1007400-FT

Reference No.:

Fee: \$150.00

SUBJECT TO THE EXCLUSIONS FROM COVERAGE, THE LIMITS OF LIABILITY, AND OTHER PROVISIONS OF THE CONDITIONS AND STIPULATIONS HERETO ANNEXED AND MADE A PART OF THIS GUARANTEE, FIRST AMERICAN TITLE INSURANCE COMPANY, A CORPORATION HEREIN CALLED THE COMPANY GUARANTEES:

Siderius Construction, LLP - Owner AND Sam Cordi - Surveyor

FOR THE PURPOSES OF AIDING ITS COMPLIANCE WITH FLATHEAD COUNTY SUBDIVISION REGULATIONS,

in a sum not exceeding \$5,000.00.

THAT according to those public records which, under the recording laws of the State of Montana, impart constructive notice of matters affecting the title to the lands described on the attached legal description:

TRACT 3A OF CERTIFICATE OF SURVEY NO. 21378 LOCATED IN THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER AND THE WEST HALF OF THE SOUTHEAST QUARTER OF SECTION 16, TOWNSHIP 30 NORTH, RANGE 20 WEST, P.M.M., FLATHEAD COUNTY, MONTANA.

(A) Parties having record title interest in said lands whose signatures are necessary under the requirements of Flathead County Subdivision Regulations on the certificates consenting to the recordation of Plats and offering for dedication any streets, roads, avenues, and other easements offered for dedication by said Plat are:

Siderius Construction, LLP

(B) Parties holding liens or encumbrances on the title to said lands are:
NONE

(C) Easements, claims of easements and restriction agreements of record are:

1. County road rights-of-way not recorded and indexed as a conveyance of record in the office of the Clerk and Recorder pursuant to Title 70, Chapter 21, M.C.A., including, but not limited to any right of the Public and the County of Flathead to use and occupy those certain roads and trails as depicted on County Surveyor's maps on file in the office of the County Surveyor of Flathead County.

2. 2021 taxes and special assessments are a lien; amounts not yet determined or payable. The first one-half becomes delinquent after November 30th of the current year, the second one-half becomes delinquent after May 31st of the following year.

Item No.10.

General taxes as set forth below. Any amounts not paid when due will accrue penalties and interest in addition to the amount stated herein:

Year	1st Half	2nd Half	Parcel Number
2020	\$137.97 PAID	\$137.96 PAID	0101500 (Covers Prem. & OP)

3. Easement for transmission of gas granted to The Montana Power company, recorded March 5, 1962 in Book 443, Page 884, as Instrument No. 2057.
4. Easement for ingress and egress for the purpose of operating and maintaining gas facilities granted to The Montana Power Company, recorded October 30, 1962 in Book 450, Page 284, as Instrument No. 8236 AND corrected April 28, 1965 in Book 473, Page 130 as Instrument No. 3475.
5. Ordinance No. 639 by the City Council of the City of Columbia Falls for changing the Zoning Classification, recorded March 20, 2003 as Instrument No. 2003-079-15040.
6. Easement granted to Northwestern Corporation D/B/A Northwestern Energy, recorded May 11, 2006 as Instrument No. 2006-131-16270.
7. Ordinance No. 681 by the City Council of the City of Columbia Falls for amending the Columbia Falls Zoning, recorded December 21, 2006 as Instrument No. 2006-355-08003.
8. Ordinance No 689 by the City Council of the City of Columbia Falls for changing the Zoning Classification, recorded December 21, 2006 as Instrument No. 2006-355-08004.
9. Resolution No. 1427 by the City Council of the City of Columbia Falls for approving the Preliminary Plat of Columbia Range, recorded December 29, 2006 as Instrument No. 2006-263-10250.
10. All matters, covenants, conditions, restrictions, easements and any rights, interests or claims which may exist by reason thereof, disclosed by Certificate of Survey(s) No. 20092 and 21378, but deleting any covenant, condition or restriction indicating a preference, limitation or discrimination based on race, color, religion, sex, handicap, familial status, or national origin to the extent such covenants, conditions or restrictions violate 42 USC 3604(c).
11. Ordinance No. 772, Amending the Columbia Falls Zoning Map, recorded April 25, 2018, as Doc. No. 2018-000-08036.

NOTE: The Proposed Plat is located in Badrock Fire District.

Date of Guarantee: September 28, 2021 at 7:30 A.M.

Insured Titles

By:


Authorized Countersignature



Privacy Notice

Effective: October 1, 2019

Notice Last Updated: January 1, 2021

This Privacy Notice describes how First American Financial Corporation and its subsidiaries and affiliates (together referred to as "First American," "we," "us," or "our") collect, use, store, and share your information. This Privacy Notice applies to information we receive from you offline only, as well as from third parties, when you interact with us and/or use and access our services and products ("Products"). For more information about our privacy practices, including our online practices, please visit <https://www.firstam.com/privacy-policy>. The practices described in this Privacy Notice are subject to applicable laws in the places in which we operate.

What Type of Information Do We Collect About You? We collect a variety of categories of information about you. To learn more about the categories of information we collect, please visit <https://www.firstam.com/privacy-policy/>.

How Do We Collect Your Information? We collect your information: (1) directly from you; (2) automatically when you interact with us; and (3) from third parties, including business parties and affiliates.

How Do We Use Your Information? We may use your information in a variety of ways, including but not limited to providing the services you have requested, fulfilling your transactions, comply with relevant laws and our policies, and handling a claim. To learn more about how we may use your information, please visit <https://www.firstam.com/privacy-policy/>.

How Do we Share Your Information? We do not sell your personal information. We only share your information, including to subsidiaries, affiliates, and to unaffiliated third parties: (1) with your consent; (2) in a business transfer; (3) to service providers; and (4) for legal process and protection. To learn more about how we share your information, please visit <https://www.firstam.com/privacy-policy/>.

How Do We Store and Protect your Information? The security of your information is important to us. That is why we take commercially reasonable steps to make sure your information is protected. We use our best efforts to maintain commercially reasonable technical, organizational, and physical safeguards, consistent with applicable law, to protect your information.

How Long Do We Keep Your Information? We keep your information for as long as necessary in accordance with the purpose for which it was collected, our business needs, and our legal and regulatory obligations.

Your Choices We provide you the ability to exercise certain controls and choices regarding our collection, use, storage, and sharing of your information. You can learn more about your choices by visiting <https://www.firstam.com/privacy-policy/>.

International Jurisdictions: Our Products are offered in the United States of America (US), and are subject to US federal, state, and local law. If you are accessing the Products from another country, please be advised that you may be transferring your information to us in the US, and you consent to that transfer and use of your information in accordance with this Privacy Notice. You also agree to abide by the applicable laws of applicable US federal, state, and local laws concerning your use of the Products, and your agreements with us.

We may change this Privacy Notice from time to time. Any and all changes to this Privacy Notice will be reflected on this page, and where appropriate provided in person or by another electronic method. **YOUR CONTINUED USE, ACCESS, OR INTERACTION WITH OUR PRODUCTS OR YOUR CONTINUED COMMUNICATIONS WITH US AFTER THIS NOTICE HAS BEEN PROVIDED TO YOU WILL REPRESENT THAT YOU HAVE READ AND UNDERSTOOD THIS PRIVACY NOTICE.**

Contact us dataprivacy@firstam.com or toll free at 1-866-718-0097.



First American Title™

For California Residents

If you are a California resident, you may have certain rights under California law, including but not limited to the California Consumer Privacy Act of 2018 ("CCPA"). All phrases used in this section shall have the same meaning as those phrases are used under California law, including the CCPA.

Right to Know. You have a right to request that we disclose the following information to you: (1) the categories of **personal information** we have collected about or from you; (2) the categories of sources from which the **personal information** was collected; (3) the business or commercial purpose for such collection and/or disclosure (4) the categories of third parties with whom we have shared your **personal information**; and (5) the specific pieces of your **personal information** we have collected. To submit a verified request for this information, go to our online privacy policy at www.firstam.com/privacy-policy to submit your request or call toll-free at 1-866-718-0097. You may also designate an authorized agent to submit a request on your behalf by going to our online policy at www.firstam.com/privacy-policy to submit your request or by calling toll-free at 1-866-718-0097.

Right of Deletion. You also have a right to request that we delete the **personal information** we have collected from and about you. This right is subject to certain exceptions available under the CCPA and other applicable law. To submit a verified request for deletion, go to our online privacy policy at www.firstam.com/privacy-policy to submit your request or call toll-free at 1-866-718-0097. You may also designate an authorized agent to submit a request on your behalf by going to our online privacy policy at www.firstam.com/privacy-policy to submit your request or by calling toll-free at 1-866-718-0097.

Verification Process. For either a request to know or delete, we will verify your identity before responding to your request. To verify your identity, we will generally match the identifying information provided in your request with the information we have on file about you. Depending on the sensitivity of the information requested, we may also utilize more stringent verification methods to verify your identity, including but not limited to requesting additional information from you and/or requiring you to sign a declaration under penalty of perjury.

Notice of Sale. We do not sell California resident information, nor have we sold California resident information in the past 12 months. We have no actual knowledge of selling the Information of minors under the age of 16.

Right of Non-Discrimination. You have a right to exercise your rights under California law, including under the CCPA, without suffering discrimination. Accordingly, First American will not discriminate against you in any way if you choose to exercise your rights under the CCPA.

Notice of Collection. To learn more about the categories of **personal information** we have collected about California Residents over the last 12 months, please see "What Information Do We Collect About You" in www.firstam.com/privacy-policy. To learn about the sources from which we collected that information, the business and commercial purpose for its collection, and the categories of third parties with whom we have shared that information, please see "How Do We Collect Your Information", "How Do We Use Your Information", and "How Do We Share Your Information" in www.firstam.com/privacy-policy.

Notice of Sale. We have not sold the **personal information** of California residents in the past 12 months.

Notice of Disclosure. To learn more about the categories of **personal information** we may have disclosed about California residents in the past 12 months, please see "How Do We Use Your Information", and "How Do We Share Your Information" in www.firstam.com/privacy-policy.



Plat Room
Flathead County, Montana
800 S. Main St.
Kalispell, MT 59901
(406) 758-5510

This Form is for Subdivisions Only

BY : Cordi

FOR : Siderius Construction LLP

DATE : 06/18/2021

DESCP : The Benches Subdivision

PURPOSE : Subdivision

YEARS

ASSESSOR #

2018 thru 2020

0101500

I hereby certify that there are no outstanding taxes on the property assigned the assessor numbers listed above, for the years indicated for each assessor number.

JUN 21 2021

J Workman

Deputy Treasurer



TO: City of Columbia Falls

City Manager, Susan Nicosia
 Mayor, Donald W. Barnhart
 Council Member, Darin Fisher
 Council Member, Doug Karper
 Council Member, Jenny Lovering
 Council Member, John Piper
 Council Member, Paula Robinson
 Council Member, Mike Shepard

RECEIVED
 SEP 30 2021
 CITY OF COLUMBIA FALLS

This letter is sent to the City of Columbia Falls on behalf of the Upper Flathead Neighborhood Association, Water for Flathead's Future, and Citizens for a Better Flathead; all Montana not-for-profit membership associations dedicated to protecting and conserving clean water, a healthy environment, and to sound land use planning and governance within the larger Flathead.

We are reaching out to share with the City first-hand that we have filed a legal complaint in state district court challenging the Montana Department of Environmental Quality's decision making concerning the Benches Subdivision Project, located just off Highway 2 and east of the City of Columbia Falls.

More specifically, our legal complaint challenges:

- The Dept. of Environmental Quality's failure to provide for public participation on its decision-making concerning review and approval of wastewater treatment and disposal systems violates Montana citizen's constitutional right to meaningful public process before the decisionmakers;
- The Dept. of Environmental Quality's issuance of a certificate of subdivision plat approval and non-degradation finding failed to adequately assess potential impacts on surface water, including the Flathead River which is located just 600' west and downgradient of the Benches; and
- The Dept. of Environmental Quality's issuance of subdivision plat approval and non-degradation finding failed to adequately assess cumulative and synergistic impacts of the project, which is to say impacts taken in consideration with other known and reasonably foreseeable projects also contributing pollution to local waters.

Our hope with this letter is be transparent, honest, and act with integrity knowing we all live, work, play and appreciate the Flathead. We hope this letter makes clear that our legal action today expresses our dismay and serious concerns with what we believe are critical flaws and failures in the Dept. of Environmental Quality's decision making, not the City's decision making concerning the approved preliminary plat for the Benches Subdivision Project.

Why We've Taken Legal Action

As you may be aware, our organizations' missions and day-to-day work include advocating for sustainable policies and sound government decision making that protects and prioritizes the

11/1 Council
 Bench Final Plat Public comment

essential character of the Flathead: a clean and healthful environment. As part of that work our organizations actively advocate for the use of best available science to inform all decisions affecting the environment.

We are aware, as you may be, that numerous governmental bodies including the Flathead Basin Commission, Montana Dept. of Environmental Quality, Montana Bureau of Mines and Geology, and the federal Environmental Protection Agency have identified cumulative nutrient pollution as a leading threat to Flathead Lake, local drinking water, aquatic life, and local stream quality. So too, we are aware of the scientific consensus that widespread development in the Flathead relying on septic systems, as opposed to centralized systems or state of the art wastewater treatment facilities in municipalities, is a leading contributor of cumulative nutrient pollution.

Almost one year ago we attempted to share with the Dept. of Environmental Quality expert water resources science indicating that fundamental assumptions about underlying hydrology of the Benches subdivision project area made by engineers were flawed, before final decisions were rendered on water resources infrastructure. The Dept., however, refused to listen to our concerns or even accept our comments. Dr. Willis Weight, a renowned expert on the hydrogeology of the Flathead Valley, produced an independent expert report showing how DEQ's decisions did not utilize best available science and thereby risked unnecessary degradation of local water resources. We've attached that report and findings here for you to consider.

Despite our work to ensure sound science guides decision making, our organizations were effectively blocked from any meaningful opportunity to engage with the Dept. of Environmental Quality regarding its consideration and ultimate approval of wastewater pollution controls for the Benches subdivision project. Doing so not only violates our rights as Montanans to public participation, but also begets poor decision making that will not adequately protect our shared environment from degradation and decline.

We understand and appreciate the legal mandates and constraints under which the City is required to review and process new proposed development. We also appreciate that the City is not in fact water quality experts; rather, the City – as is proper – specifically requires that projects coordinate and receive proper authorizations from the Dept. of Environmental Quality as regards water resources infrastructure. Here, as discussed above, we believe the Dept. of Environmental Quality has failed to do its job, and therefore as citizens and organizations with direct interests in sound governance and lawful, science-based decision making we've taken legal action against the DEQ.

A Request

We respectfully request that the City carefully consider the expert science attached to this letter and, should the Benches subdivision project apply for final plat approval, request that the City exercise its discretion under 17.12.110 (E) Final Plat Process to deny the application on the basis of inadequate and flawed science that directly implicates condition 11 on its preliminary plat (sufficiency of sewage infrastructure).

Conclusion

If we are to ever realize the common goals of conserving the Flathead's environment for current and future generations, we must ensure that our expert resource agencies' policies and procedures reflect both a hard, science-based look at the environmental consequences of projects

and provide meaningful opportunities for citizens to engage decisionmakers on matters under consideration before decisions are rendered. We respect the City's work to balance diverse, competing interest and hope that while we may disagree, we can cordially disagree as Montana neighbors, not as adversaries. We also welcome the opportunity to discuss these matters with you or the City Manager should you so desire.

Respectfully

Shirley Folkwein, Chairperson of Upper Flathead Neighborhood Association, 406-890-1659

Mayre Flowers, Co-Chair Citizens for a Better Flathead, 406-755-4521, 406-253-0872

Steve Moore, Chairperson, Water for Flathead's Future.

Attachments:

- Complaint filed 9-30-2021
- Dr. Weights comprehensive report

Guy Alsentzer Esq., MT Bar # 11147
P.O. Box 128
Bozeman, MT 59771
Tel: (406) 570-2202
guyalsentzer@gmail.com

Attorney for Plaintiffs

FILED

SEP 30 2021

By LISA KALLIC, Clerk of District Court
ANGIE SPARKS, Deputy Clerk

MONTANA FIRST JUDICIAL DISTRICT, LEWIS AND CLARK COUNTY

UPPER FLATHEAD NEIGHBORHOOD
ASSOCIATION, WATER FOR
FLATHEAD'S FUTURE, and CITIZENS
FOR A BETTER FLATHEAD

Plaintiffs,

v.

MONTANA DEPARTMENT OF
ENVIRONMENTAL QUALITY,
an agency of the State of Montana

Defendant.

Case No. BDV 2021 981

**COMPLAINT FOR DECLARATORY
RELIEF AND APPLICATION OF
MANDAMUS**

MICHAEL F MCMAHON
PRESIDING JUDGE

COMES NOW Plaintiffs, Upper Flathead Neighborhood Association, Water for Flathead's Future, and Citizens for a Better Flathead (collectively, "Citizens"), through counsel, and in support of their complaint seeking review of the January 21, 2021 decision of the Montana Department of Environmental Quality (DEQ) granting a Certificate of Subdivision Plat Approval and integral February 12, 2020 Determination of Nonsignificance/Nondegradation for the Benches Subdivision Project, declaratory relief, and their other claims and causes of action, state and allege as follows:

INTRODUCTION

1. This case challenges a final decision by the Montana Department of Environmental Quality that has the potential to degrade water quality in the renowned Flathead River and exacerbate nutrient pollution in the downstream Flathead Lake.
2. Specifically, this case challenges DEQ's decision to approve wastewater controls for a new subdivision nearby the Flathead River without adequately assessing potential impacts to nearby surface water, and without allowing any public participation on its Montana Water Quality Act decisionmaking, in violation of DEQ's clear legal duties.
3. The Benches Subdivision Project (Benches) is a proposed 48-lot subdivision on 55.4 acres east of the City of Columbia Falls off US Highway 2.
4. The Benches is approximately 600 feet east upgradient of the Flathead River.
5. Sewage from the Benches subdivision's 48 proposed septic systems on individual lots will contribute to pollution in groundwater.
6. Groundwater underlying the Benches subdivision is hydrologically connected to the Flathead River.
7. The Benches subdivision will discharge nutrients to groundwater, to the Flathead River, and ultimately to Flathead Lake, a surface water already identified by Defendant as degraded by and at risk for nutrient pollutants.
8. Despite requests from the public, including Plaintiffs (Citizens), DEQ failed to provide the public any opportunity to participate in its Nondegradation Policy decisionmaking pursuant to the Montana Water Quality Act, thereby violating Citizens' fundamental constitutional rights to public participation.

9. DEQ also failed to comply with its mandatory duties under the Montana Water Quality Act to consider whether sewage from the Benches, either alone or cumulatively, would lead to degradation of surface water, including the Flathead River.
10. DEQ's issuance of a certificate of plat approval and nonsignificance determination for the Benches Subdivision Project constitute a final agency action that failed to include adequate Nondegradation Policy review or mandatory public process, and therefore are arbitrary, capricious, and in violation of the law.

JURISDICTION AND VENUE

11. Jurisdiction is based on, *inter alia*, Article II, Sections 3, 8, 9, and 16, Article VII Section 4(1), and Article IX Section 1, of the Montana Constitution; the Montana Water Quality Act MCA § 75-5-101 *et seq.*; the Montana Declaratory Judgment Act, MCA § 27-8-101 *et seq.* (uniform declaratory relief); MCA § 27-26-102 (mandamus), and as an informal administrative agency action.
12. Venue is proper in this district under § 25-2-126, MCA, because the Defendant is a state agency located in Helena, Montana.
13. Plaintiff Upper Flathead Neighborhood Association is a Montana non-profit public-benefit corporation that works to promote the protection of natural resources, water quality, bird and wildlife habitat, and rural landscapes, and to maintain the quality of life and economic vitality in the Flathead Valley through citizen participation, education, and land use planning for sensible growth.
14. Plaintiff Water for Flathead's Future is a Montana non-profit, public-benefit corporation that works to advocate for the sustainable use of our surface and underground water resources to

assure that the needs of the people, and fish and wildlife of the Flathead Valley of Montana, can be met now and for generations to come.

15. Plaintiff Citizens for a Better Flathead is a Montana non-profit, public-benefit corporation that works to foster informed and active citizen participation in the decisions shaping the Flathead's future, and to champion the democratic principles, sustainable solutions, and shared vision necessary to keep the Flathead special forever.
16. Members of each of these organizations live in the State of Montana, in and around the City of Columbia Falls and the Flathead watershed. These members use the Flathead River and Flathead Lake, including areas downstream of the Benches subdivision, and have an interest in preserving water quality. The environmental, health, aesthetic, and commercial interests of Citizens will be adversely affected by DEQ's actions at issue herein.
17. In addition, Citizens all share interests in the goals of protecting water quality, promoting sound land use planning and lawful process, involving citizens in decisionmaking affecting land and water resources, protecting the area's rural aesthetic character, and promoting sustainable use of water resources, and such interests are adversely affected by DEQ's unlawful actions herein. These adverse impacts may be redressed by granting the relief requested herein. This action is brought on behalf of Citizens and their members.
18. Defendant DEQ is an agency of the State of Montana. It regulates degradation to state waters from subdivisions and is responsible for implementing the Montana Water Quality Act and its Nondegradation Policy.

FACTUAL BACKGROUND

A. Urban Sprawl and Water Pollution

19. The Flathead Basin, including the Flathead-Stillwater watershed north of Flathead Lake, has experienced rapid population growth and high use of septic systems from 1990 to present.
20. Septic tank and drainfield systems treat wastewater by settling solids and partly digesting the organic matter, allowing liquid effluent – which still contains nutrients and pathogens (bacteria, protozoa, and viruses) – to be discharged into the soil around a drainfield.
21. Septic systems are a significant source of water quality degradation in groundwater and surface water in the Flathead Basin, including waters comprising the upper Flathead watershed.
22. The use of septic systems in Montana river valleys can contribute to unnaturally elevated groundwater nitrate concentrations.
23. Nitrate is a very soluble chemical, which is transported readily in groundwater and can eventually reach surface water.
24. Nitrate and nitrogen are pollutants.
25. Total nitrogen arises in four forms: nitrate, nitrite, ammonia, and organic nitrogen (total nitrogen is the sum of ammonia and organic nitrogen components).
26. The nitrogen in raw wastewater is comprised primarily of ammonia. Through treatment in septic tanks and drainfield, ammonia is converted to nitrite and ultimately nitrate. Therefore, most of the nitrogen in raw wastewater can be transformed into nitrate.
27. Nutrient enrichment, or eutrophication, is the over-fertilization of surface water by nitrogen and/or phosphorus, and is one of the leading causes of water pollution in lakes, rivers, and coastal regions in the United States.

28. Nutrient enrichment can cause a host of negative ecological effects on streams and lakes, including loss of water clarity, proliferation of aquatic weeds, algae blooms, and drop-offs in dissolved oxygen (a critical health factor for fish and other aquatic life).
29. Nitrogen, in its nitrate form, is a direct risk to human and livestock health if it reaches high concentrations in drinking water.
30. The levels of nitrogen and phosphorus that can cause ecological damage in lakes and rivers are far lower – usually more than 10 times lower – than the levels which are toxic to humans and livestock.
31. DEQ is responsible for controlling pollutant discharges to state waters including review, conditioning, and approval of sewage treatment and disposal systems of new subdivisions.
32. Groundwater standards are based on the human health standards given in Circular DEQ-7 and include trigger criterion based on Nondegradation Policy and rules.
33. Montana's Nondegradation Policy requires DEQ to consider degradation of surface water and nitrogen concentrations at the end of the mixing zone. MCA § 75-5-301(5)(d).
34. Sewage treatment systems discharging to state waters must comply with all applicable water quality standards, including nondegradation requirements in ARM 17.30.701 *et seq.*, and MCA § 75-5-301 *et seq.*
35. In accordance with ARM 17.30.706(2), DEQ is required to determine whether a new or increased source may cause degradation to state waters and whether the discharge from a new or increased source is significant according to ARM 17.30.715.

B. Hydrology of the Flathead Lake Basin & Flathead Valley

36. Flathead Lake is the hydrologic end-point for tributaries of the Flathead Lake Basin. Its primary tributary is the Flathead River, which collects and transports water from the roughly

312 square miles of the Flathead Valley and upstream tributaries, flowing generally north to south, ending at Flathead Lake.

37. The Flathead Valley is a north-northwest-trending subbasin of the Flathead Lake Basin, encompassing an area of approximately 312 square miles and including the communities of Kalispell and Bigfork to the south, Columbia Falls to the northeast, and Whitefish to the northwest.
38. The east and west hydrologic boundaries of the Flathead Valley include bedrock mountains that define the valley margins. The Benches subdivision Project and larger Columbia Falls lie on the northeast corner of the Flathead Valley at or near the bedrock margin.
39. Groundwater flow tends to follow surface topography throughout the Flathead Lake Basin, moving from high elevations to low elevations and valley centers, culminating in primary surface waters at the valley floor.
40. Aquifers in the Flathead Lake Basin typically form both a shallow groundwater flow system and a deep groundwater flow system. These systems are typically separated by a low permeability (i.e., low or no hydraulic connectivity) confining layer, but in some areas the confining layer is pinched and can disappear altogether, functionally allowing the connection of shallow and deep groundwater systems.
41. The surface water and groundwater systems are closely interrelated in the Flathead Valley Basin. After entering the basin as precipitation, water may interchange between systems several times by way of springs, seeps, and wetlands and leave as either stream flow, underflow, or water vapor.
42. In addition to being responsible for issuing authorizations controlling discharges of pollutants to groundwater, DEQ is responsible for completing Total Maximum Daily Loads (TMDL)

plans, which assess the maximum ability of any surface water to hold pollutants without impairing beneficial uses, and allocate pollution from all sources at levels necessary to maintain water quality standards and eliminate pollution from the watershed.

43. The Flathead River mainstem from its confluence north of Columbia Falls to its discharge to Flathead Lake is classified as a B-1 high-quality water by DEQ.
44. The larger Columbia Falls region, including the Benches subdivision, falls within the Flathead-Stillwater watershed, which terminates at its discharge to Flathead Lake.
45. Downstream, Flathead Lake has struggled with nutrient pollution challenges since at least the 1990s and remains listed on DEQ's biannual Integrated Reports as a nutrient impaired waterbody since 1996.
46. Septic-based pollution has been a significant water pollution concern within the Flathead Basin for over two decades. Numerous reports, guidance, and watershed planning documents from the Flathead Basin Commission, the Montana Bureau of Mines and Geology, the federal Environmental Protection Agency, and Montana DEQ reference the water quality threat posed by septic systems and the importance of better controlling septic pollution to protect local water quality.
47. In 2001 DEQ issued a nitrogen and phosphorus TMDL for Flathead Lake in response to its failure to fully attain its aquatic life beneficial use. A revised Flathead Lake Watershed Restoration Plan was adopted in 2014, reaffirming the Lake's and upstream Flathead Basin's continued challenges with nutrient pollution.

C. The Benches Project

48. On August 6, 2019, Prairie Dog Development LLC submitted a major subdivision preliminary plat to the City of Columbia Falls' Planning Department for what is now named the Benches Project.
49. The Benches Project is a 55.4 acre plot of bench land and upland wetlands, hidden from view of Highway 2, between the Flathead River Bridge east of Columbia Falls and Columbia Heights.
50. The Benches Project contemplates 48 single-family residential lots on 32.5 acres, each with its own septic system.
51. Neighboring property owners, including some of the Plaintiffs, first became aware of the Benches Project subdivision proposal upon receiving notice of a public hearing held by the City of Columbia Falls concerning the request for a Planned Unit Development and Major Subdivision in late summer 2019.
52. At a September 10, 2019 City of Columbia Falls Planning Board public hearing on the Benches Project more than a half-dozen adjacent landowners to the Project, including some of the Plaintiffs, spoke in opposition to the proposal.
53. On October 7, 2019 the City Council of Columbia Falls held a hearing to consider the Project where again approximately a dozen citizens spoke in opposition. At this hearing the City Council approved a preliminary plat for the 48-residence portion of the Benches Project with 27 conditions.
54. The City's preliminary plat approval specifically required as a contingent condition that the Project receive future DEQ approval for its wastewater control plans.

55. A recurring theme voiced in public opposition to the Project concerned foreseeable negative water and land impacts from authorizing new sprawl development to the east of Columbia Falls, across the Flathead River, which is a relatively rural, undeveloped landscape lying within the City's planning jurisdiction although without access to City infrastructure or centralized sewer.
56. After issuance of a preliminary plat authorization from local government an applicant may submit documentation necessary to commence DEQ decisionmaking concerning water and land resources under the Montana Subdivisions and Platting Act, the Montana Sanitation in Subdivisions Act, and the Montana Water Quality Act.
57. DEQ exercises significant discretion under the Montana Water Quality Act to approve, deny, or condition a proposed subdivision's desired subsurface wastewater treatment system on the basis of a project's compliance with, among other items, the Nondegradation Policy at M.C.A. § 75-5-301 *et seq.* and DEQ's implementing rules at ARM §§ 17.30.701, 17.30.1001 *et seq.*
58. Plaintiff Upper Flathead Neighborhood Association (UFNA) submitted a formal letter and several attachments dated December 28, 2020 to DEQ, expressing concerns with the Project including but not limited to inadequate data concerning potential negative impacts to water resources, the lack of public participation concerning Nondegradation Policy decisionmaking, and requested files relevant to DEQ's water pollution control decisionmaking. *See Exhibit A, attached hereto.*
59. UFNA's letter explicitly referenced a lack of public participation concerning DEQ's nondegradation review and provided scientific evidence, contra to that the applicant provided

during its preliminary plat approval before the City, indicating potential flaws in assumed Project hydrologic conditions and potential water resource impacts. *Id.*

60. In a response email dated December 28, 2020 DEQ refused to accept or consider UFNA's letter, comments, or proffered scientific evidence, alleging that DEQ may only consider public comment on proposed subdivisions under public processes laid out by the Sanitation Act, M.C.A. § 76-4-101 and the Montana Subdivisions and Platting Act, M.C.A. § 73-3-101. *See Exhibit B, attached hereto.*

61. UFNA, working collaboratively with Plaintiff Citizens For a Better Flathead (CBF), pursued a public records request in 2021 to understand DEQ's water resources decisionmaking on the Benches subdivision, both in terms of process and substance.

62. Plaintiffs' lay review of the Benches' records request indicated likely flaws in science and process corresponding to Plaintiff's earlier attempted submission of concerns and data to DEQ.

63. To assist in their comprehension of these issues Plaintiff's hired an expert hydrogeologist, Dr. Willis Weight of Carroll College in Helena, MT, to investigate water resource data, the applicant's assumptions and assertions, and DEQ's determinations for the Benches Project. *See Exhibit C, attached hereto.*

64. Dr. Weight's comprehensive expert report examining the Benches subdivision project and DEQ decisionmaking (hereinafter "expert report") identified substantive flaws in both the applicant's presumed hydrologic conditions and the degradation potential of proposed sewage treatment and disposal systems, including but not limited to showing that shallow groundwater underlying the Project will transport nutrient pollutants discharged by proposed

sewage treatment systems directly west & north towards the downgradient Flathead River, instead of south as averred by the applicant. *Id.*

D. DEQ's Non-Degradation Policy Review of the Benches Project

65. Consideration of the potential for water degradation and standards for controlling the effects of a new subdivision proposal's sewage on state waters arise under mandates of the Montana Water Quality Act, MCA § 75-5-101 *et seq.*, the Montana Sanitation in Subdivisions Act, MCA § 76-4-101 *et seq.*, and the Montana Subdivisions and Platting Act, MCA § 76-3-101 *et seq.*
66. Nondegradation Policy is the preliminary mechanism by which DEQ performs a Montana Water Quality Act review of a new subdivision's proposed sewage treatment and disposal system.
67. Nondegradation Policy requirements and considerations pursuant to MCA § 75-5-101 *et seq.* and ARM 17.30.701 *et seq.* encompass different considerations and legal standards than those standards under the Montana Sanitation in Subdivisions Act or the Montana Subdivisions and Platting Act.
68. The preliminary step in DEQ's Nondegradation Policy review of a proposed discharge to state waters is a significance determination.
69. A project may be considered nonsignificant and exempted from a full Nondegradation Policy analysis if several legal predicates are met.
70. Together, issuance of a certificate of plat approval and a nonsignificance determination conclude DEQ's substantive water resources and nondegradation review of the Benches Project.

71. In a letter dated December 18, 2019 DEQ denied the Benches' initial application for a determination of non-significance under Nondegradation Policy.
72. DEQ's December 18, 2019 letter to the Benches applicant identified, among other items, issues with the adequacy of representative wells, background nitrate calculations used in application materials, and the presence of shallow groundwater underlying the Project.
73. In a letter dated January 9, 2020 the Benches' applicant responded to DEQ and provided new data and application materials in support of a non-significance determination.
74. On February 12, 2020 DEQ issued a finding of non-significance, which concluded the Project will not degrade state waters.
75. DEQ's February 12, 2020 nondegradation significance review found that the Project will affect high quality state waters.
76. DEQ's February 12, 2020 significance review found that the Project is a new or increased source of pollutants.
77. DEQ's February 12, 2020 significance review found that the Project is not significant under ARM 17.30.715(2). There are no notes or other written rationale supporting this finding.
78. ARM 17.30.715(2) contemplates several manners in which a project could be significant for the purposes of Nondegradation Policy despite compliance with other corollary rules.
79. The Project's estimation of regional groundwater flow is based upon static water-level measurements from two different aquifers, from wells outside the Project's boundary.
80. DEQ's nondegradation finding for the Project relied upon the applicant's estimation of regional groundwater flow.
81. The Project's proposed subsurface wastewater treatment systems would sit and contribute pollutants to groundwater connected to a shallow confined aquifer.

82. The applicant's nondegradation submittal to DEQ dated January 13, 2020 uses groundwater hydraulic conductivity values estimated from well tests at the Project's water supply wells, at a depth of 227 feet in gravels.
83. DEQ's nondegradation finding uses hydraulic conductivity values found in the Project's water supply wells, over 200 feet below the surface in a deep gravel aquifer, for hydraulic conductivity values of the Project's subsurface wastewater treatment systems, which are proposed for use in a separate, confined, shallow and sandy aquifer lying close to the surface.
84. Hydraulic conductivity values for groundwater near the Project's drinking supplies, found in the deep aquifer, are different than hydraulic conductivity values for groundwater within the shallow aquifer.
85. DEQ did not independently determine the Project's groundwater data, but rather relied on values provided by the applicant.
86. Dr. Weight's expert report indicates that groundwater in the confined, shallow aquifer underlying the Project moves directly west by northwest towards the Flathead River, approximately 600 feet distant.
87. DEQ decisionmaking for the Benches failed to use groundwater data specific to the shallow aquifer underlying the Project in background nitrate calculations, mixing zones, or hydraulic conductivity values.
88. DEQ failed to provide any analysis of the Project's proposed sewage treatment systems' potential impacts on surface water.
89. DEQ failed to consider the Project's potential cumulative or synergistic impacts on downgradient high-quality waters or the nutrient-impaired Flathead Lake in conjunction with other known and reasonably foreseeable projects also contributing nutrient pollution.

90. DEQ did not provide for any public participation on its decisionmaking of the Project's wastewater treatment systems under Nondegradation Policy.

FIRST CLAIM FOR RELIEF

(Violation of Right to Meaningful Public Participation in Agency Decisionmaking)

91. The allegations in the foregoing paragraphs are re-alleged and incorporated herein by reference.
92. Article II, Section 8 of the Montana Constitution guarantees the public a "right to expect government agencies to afford such reasonable opportunity for citizen participation in the operation of the agencies prior to the final decision as may be provided by law."
93. Article II, Section 9 of the Montana Constitution guarantees "no person shall be deprived of the right to examine documents or to observe the deliberations of all public bodies or agencies of state government and its subdivisions, except in cases in which the demand of individual privacy clearly exceeds the merits of public disclosure."
94. Article II, Sections 8 and 9 are cooperative mechanisms through which concerned citizens can advocate for their right to a clean and healthful environment under Article II, Section 3 of the Montana Constitution.
95. Article II, Section 3 and Article IX, Section 1 were intended to provide protections that are both anticipatory and preventative, imposing a duty on public and private parties to act in a forward-thinking manner to prevent degradation of the environment.
96. Mindful of these constitutional obligations, the legislature enacted the Montana Water Quality Act, MCA § 75-5-101 *et seq.*
97. Any state or private action that implicates these environmental rights is subject to strict scrutiny.

98. While the City of Columbia Falls held a public hearing on the Benches' preliminary plat proposal, DEQ – not local government – substantively reviewed proposed sewage pollution control plans for the Benches and DEQ, in its penultimate authority over Nondegradation Policy review, made final decisions concerning the adequacy of those plans under the Montana Water Quality Act.
99. DEQ's Nondegradation Policy review process was the critical time when the Project's regulatory significance and substantive compliance with Nondegradation Policy under the Montana Water Quality Act were determined.
100. DEQ's review and issuance of a nonsignificance and no degradation determination under the Montana Water Quality Act for the Benches' sewage plans was wholly insulated from any public participation.
101. DEQ's failure to provide for any public participation on its Montana Water Quality Act decisionmaking on sewage pollution control plans for the Benches Project implicates Citizens' and their members' constitutional environmental rights in Articles II and IX of the Montana Constitution, because those rights cannot be effectively protected unless decisionmakers provide an adequate process through which citizens can both know the information a decisionmaker is considering and a meaningful opportunity to provide input, before a decision is rendered.
102. Rules that infringe upon or implicate Montanan's constitutional fundamental rights are subject to strict scrutiny.
103. Here, Citizens could not have reasonably tracked – much less participated - in DEQ's Nondegradation Policy decisionmaking for the Benches due to the agency's practice of making such decisions behind closed doors without notice, hearing, or a comment period.

104. Plaintiff UFNA's attempt to express water pollution concerns and scientific evidence about the Benches Project with DEQ was wholly rejected before DEQ finalized its decisionmaking, and Plaintiffs were forced to use a lengthy public records request process to gain documents purportedly explaining what decisions DEQ had made and the basis for those decisions.
105. Expert analysis of those public documents by Dr. Weight in summer 2021 indicates substantive flaws in DEQ's nondegradation finding, and such expert analysis is precisely the type of public comment that would inform DEQ decisionmaking if in fact DEQ provided for a meaningful public participation process on its review of subdivision water degradation pursuant to the Montana Water Quality Act.
106. Therefore, as-applied here DEQ's Nondegradation Policy decisionmaking procedure – or the lack thereof - for the Benches Project violated Citizens' right to a meaningful opportunity to participate in agency decisionmaking, implicating their fundamental constitutional rights in Article II, Sections 8 & 9 of the Montana Constitution.

SECOND CLAIM FOR RELIEF

(Violation of Nondegradation Policy Regarding Nitrogen Pollution)

107. The allegations in the foregoing paragraphs are re-alleged and incorporated herein by reference.
108. The objective of the Montana Water Quality Act (MWQA) is to “conserve water by protecting, maintaining, and improving the quality and potability of water for public water supplies, wildlife, fish and aquatic life, agriculture, industry, recreation, and other beneficial uses...[achieved by] provid[ing] a comprehensive program for the prevention, abatement, and control of water pollution.” M.C.A. § 75-5-101(1)-(2).

109. In furtherance of this objective and in conjunction with the pollution control mandates imposed on delegated states implementing the federal Clean Water Act, the MWQA imposes a nondegradation requirement that applies to agency consideration of projects with the potential to impact state waters. *See* M.C.A. § 75-5-303, 40 C.F.R. § 131.12.
110. In addition, the Montana Constitution Article II, Section 3 and Article IX, Section 1 require the Defendant to be anticipatory and preventative in its duties to protect the state's waters from pollution.
111. DEQ's nonsignificance determination for the Project failed to consider whether nitrogen discharges from the Project would cause degradation of surface water, as required by M.C.A. § 75-5-301(5)(d), and ARM § 17.30.715(d).
112. DEQ's nondegradation determination did not include analysis regarding the Project's likelihood of discharging sewage that could degrade the downgradient Flathead River.
113. To the extent DEQ relied on setbacks under ARM 17.30.716(2)(a) to justify its failure to consider whether nitrogen discharges would cause degradation of surface water, DEQ's reliance is unlawful, invalid and/or inapplicable.
114. DEQ's failure to consider whether the nitrogen discharges authorized by its approval of the Benches Project would degrade surface water was arbitrary, capricious, and a violation of the Montana Water Quality Act.

THIRD CLAIM FOR RELIEF

(Violation of Nondegradation Policy: Failure to Take a Hard Look at Cumulative Impacts)

115. The allegations in the foregoing paragraphs are re-alleged and incorporated herein by reference.
116. DEQ's nondegradation determination for the Benches Project failed to consider

potential cumulative or synergistic impacts, as required by ARM § 17.30.715(2)(a).

117. DEQ utilized a perfunctory checklist with no supporting rationale in finding that the Project had no potential cumulative impacts.
118. DEQ's failure to consider potential cumulative impacts of the Project's wastewater discharges was arbitrary, capricious, and a violation of the nondegradation provisions of the Montana Water Quality Act.

FOURTH CLAIM FOR RELIEF

(Writ of Mandate)

119. The allegations in the foregoing paragraphs are re-alleged and incorporated herein by reference.
120. Defendant has non-discretionary legal duties to review and make decisions on sewage treatment and disposal systems proposed for use in new development to ensure no unlawful degradation of state waters, and to provide for adequate public participation in that process. MCA §§ 75-5-301, 75-5-301, Mont. Const. Art. II, Sec. 8 & 9.
121. Defendants violated these clear legal duties.
122. Citizens have no other plain, speedy, or adequate remedy at law. MCA § 27-26-101(2).
123. Pursuant to Montana Code Annotated § 27-26-101 *et seq.*, a peremptory writ of mandamus should issue directing DEQ to reconsider its decisionmaking under the Montana Water Quality Act for the Benches and provide a process ensuring meaningful public participation.

REQUEST FOR RELIEF

WHEREFORE, Citizens pray for relief against Defendant DEQ as follows:

- A. For an order declaring void *ab initio* DEQ's certificate of plat approval and nonsignificance determination authorizing wastewater discharges for the Benches Project, and remanding to DEQ for reconsideration in light of its lawful mandates.
- B. For a determination and declaration that issuance of the Benches Project nonsignificance determination is illegal and violates the Montana Water Quality Act for its failure to take a hard look at impacts to surface water and cumulative impacts.
- C. Issue a writ of mandamus directing DEQ to reconsider its Montana Water Quality Act decisionmaking and to ensure the public is afforded an opportunity to participate in the Benches' nondegradation review process pursuant to the Montana Constitution.
- D. Award Plaintiffs their reasonable attorneys' fees and expenses under the Private Attorney General Theory, MCA § 27-26-402, and/or as otherwise provided by law.
- E. For costs of suit.
- F. For such relief as this Court deems equitable and just.

Respectfully submitted on this _30th_ day of September 2021.

Guy Alsentzer, Esq.
Attorney for Petitioners

*Neighborhood and Conservation Groups Challenge DEQ's Authorization of
More Polluting Septic Systems that Endanger Local Water Quality*

FOR IMMEDIATE RELEASE:

September 30, 2021

CONTACT: Shirley Folkwein, Chairperson of Upper Flathead Neighborhood Association, 406-890-1659; if unable to reach Shirley contact Mayre Flowers at 406-755-4521.

Columbia Falls, MT – Upper Flathead Neighborhood Association (UFNA), Citizens for a Better Flathead (CBF), and Water for Flathead's Future (WFF) have jointly filed a complaint against Montana's Department of Environmental Quality (DEQ) for unlawfully approving 48 individual septic systems for a new subdivision adjacent to U.S. Highway 2 and about 600 feet east of the Flathead River. DEQ rejected attempts for public participation on its decision making, as well as failed to adequately analyze impacts of septic waste pollution on water quality or the nearby Flathead River as required by the Montana Water Quality Act.

"DEQ is doing a disservice to all Montanans and our waterways by failing to do a thorough job of reviewing new sprawling developments for proper water pollution controls and forcing citizens to hire experts to do the work we expect DEQ to do to protect our 'clean and healthful environment' that is guaranteed by our Montana Constitution," said Shirley Folkwein, chairperson of UFNA.

The Benches is a roughly 55-acre subdivision with 48 individual septic systems proposed just east and across the Flathead River from the City of Columbia Falls. This proposed subdivision is not served by the City's sewer and water system and is the first new significant housing development to the east of the City and near the Flathead River, with others likely to follow, also likely on additional septic systems.

The Benches received preliminary plat approval from the City of Columbia Falls with 27 conditions in October 2019. Among the many public concerns voiced during the City's public hearing was the foreseeable detrimental impacts of the project's septic waste pollution on local ground water, neighborhood wells, the Flathead River, and some five acres of wetlands. Before receiving final plat approval from the City, a subdivision must meet all of the conditions listed in its preliminary plat approval. A standard condition for a major subdivision like Benches when septic systems are involved requires the subdivision to undergo a totally separate state technical review by DEQ. A key

component of that technical review is governed by the Montana Water Quality Act, which is a distinct and separate process from the City's preliminary plat and final plat approval process. As such, the City of Columbia Falls is not named in the suit.

The Upper Flathead Neighborhood Association, concerned at this new development project being proposed so close to the Flathead River, attempted to provide DEQ with expert scientific evidence highlighting major flaws in the development's assumed underground hydrology. DEQ, however, refused to consider any public comments from UFNA despite the fact that DEQ was conducting – behind closed doors – separate decision making about the Project's septic waste treatment and disposal plans.

"Montanan's have a fundamental right to participate in our agencies' decision making, yet DEQ rejected our attempt to provide it with expert science that could inform its review of the projected septic waste and pollution controls needed to protect our wells and ground and surface water, including the Flathead River, from the cumulative impacts of poorly sited or designed septic systems," said Folkwein.

UFNA worked with Citizens for a Better Flathead to understand how to obtain additional information from DEQ, and UFNA subsequently pursued a public records request to better understand what DEQ was factually considering and what its decision making actually entailed.

After obtaining those public documents UFNA hired renowned Montana hydrogeologist Dr. Willis Weight to independently evaluate DEQ's analysis. Dr. Weight's review highlighted significant errors in the applicant's hydrologic understanding of the area under consideration.

Among the significant errors relied upon by the applicant, and accepted by the DEQ without verification, was the faulty belief that septic waste pollution from the subdivision's multiple systems would be transported away from the River when, in fact, septic waste pollution will follow the prevailing groundwater flow into the River, further burdening the River with excess pollution.

"With the Flathead Valley experiencing unprecedented population growth and enormous development pressure, it's more important than ever that our agencies both listen to legitimate public concerns and use best available science to protect local water quality," said Steve Moore, Chairperson of WFF.

Dr. Weight's comprehensive evaluation of the Benches subdivision project casts significant doubt on the results of DEQ's non-degradation analysis pertaining to the local water quality. Multiple errors of scientific record undermine the validity of DEQ's January 2021 issuance of a Certificate of Subdivision Approval (COSA) and determination of non-significant septic waste pollution.

UFNA, CBF, and WFF jointly filed a legal complaint (attached) challenging DEQ's flawed water pollution control analyses and the lack of any public participation in the DEQ's analyses for the Benches subdivision .

"Montanans have a constitutional right to a 'clean and healthful environment', requiring state agencies to be proactive in both identifying troublesome water pollution trends and in taking steps to control pollution that is degrading our waterways. So, too, do citizens have a constitutional right to know and participate in agency decision making. Yet as seen with the Benches subdivision, DEQ continues to rubber stamp new developments that exacerbate ongoing water pollution challenges instead of protecting the public's right to clean water and informed decision making" said Mayre Flowers, Co-Chair of CBF

###

Willis D. Weight, PhD, PE Hydrogeologist
3781 Yuhas Ave, Helena MT 59602 406-498-0530 (work)

Benches Subdivision Analysis and Neighboring Lands
Prepared for the Upper Flathead Neighborhood Association

Introduction

Prairie Dog Development LLC, the developer, has submitted and received approval for Phase 1 and 2 of the Benches Subdivision encompassing 55.4 acres in the southwest quarter of the northeast quarter and west half of the southeast quarter of Section 16, T 30 N, R 20 W to sell 49 lots, with approximately 49 subsurface wastewater treatment systems (SWTS). The property is accessed via Hwy 2 from the north and Rogers Rd from the south. Given that additional surrounding lands might also be of interest for development, the Upper Flathead Neighborhood Association (UFNA) has retained WDW Writing, Consulting & Planning INC to answer specific technical questions and perform the work described below.

1. What is the nature of the hydrogeology of the area? Will the influence of the Benches Subdivision; as approved, or others that also could be developed become "new sources" of wastewater effluent that may have a negative impact on the State's surface waters or residential groundwater (Non-Degradation Manual, 2015)?
2. How will the approximately 49 SWTS's potentially affect the water quality of the Shallow Aquifer system including potential impacts to the Flathead River?
3. Did the applicant for the Benches Subdivision provide correct data and information so the planning board and DEQ could make well-informed decisions?

Scope of Work

My services are being retained to develop and construct a three-dimensional (3D) model that would help all parties understand the potential influence of SWTS effluent from the Benches Subdivision and any other proposed subdivisions on other residential users of the regional aquifer systems and on nearby State surface-waters. A field visit near the site was conducted on May 18, 2021 to obtain an appropriate local area perspective. This model, the field work, and review of existing data form the basis for my expert testimony. In order to provide the outcomes listed above I needed to perform the following tasks:

- Review existing subdivision reports, GWIC well logs, and static water-level data to develop a conceptual model of the localized aquifer systems.
- Construct a geologic model to better visualize model layers and their thicknesses.
- Evaluate the direction of groundwater and surface water movement at the site through a field visit and other documents,
- Point out any potential issues from the misunderstanding of the local hydrogeology and why permitting the Benches Subdivision was a mistake.

Conceptual Model of Local Hydrogeology

Willis D. Weight, PhD, PE Hydrogeologist
3781 Yuhass Ave, Helena MT 59602 406-498-0530 (work)

It is useful to develop a conceptual model of the local hydrogeology to better understand the role of the surface topography and underlying aquifer properties that may influence surface water and groundwater movement. There is a good source of publicly available drillhole and digital elevation data through the Montana Bureau of Mines and Geology (MBMG), Groundwater Information Center (GWIC), and other online sources. These data and on-the-ground field observations have helped answer some of the following questions: Where is first water (shallowest groundwater, Non-Degradation Manual, p 13, (2015))? Where will effluent from the SWTS's go? Is there a risk of contamination to other land owners? Will the newly proposed SWTS's in the Benches Subdivision have the potential to impact Montana's high-quality waters (Non-Degradation Manual, (2015), where the administrative rules (ARMS) are identified)? What happens when one urbanizes an area near the Flathead River?

Providing an appropriate conceptual model is a basic step in characterizing the occurrence and movement of surface water and groundwater in the "first water" zone (Non-Degradation Manual, 2015, page 13). Having an incorrect conceptual model leads one to a poor characterization of water movement and potential water-quality problems when relying upon the proposed subdivision design. It is noted here that I am listed in the references section of the Non-Degradation Manual (2015).

Applicant's Conceptual Model

The applicant's conceptual model for groundwater flow (which also affects drain-field mixing, nitrate, and phosphate non-degradation analysis) is described from information supplied by their consultants.

As has been my experience of evaluating hydrogeologic settings as a consultant since 1989, the surface-water flow system is easier to visualize and evaluate than the subsurface groundwater system. At the Benches Subdivision there are step-like topographic features that represent older (paleo) terraces formed from where the Flathead River used to be; hence the name Benches. The effect is that the topography can be characterized by flat areas with steep drop-off ledges (Appendix Figure 1, sourced from the Consultants Stormwater Drainage Report). The direction of surface-water drainage essentially moves from topographic highs to topographic lows. Appendix Figure 2 (also taken from the Consultants Stormwater Drainage Report) shows the interpretation by the consultants of where surface-water would naturally drain (the blue arrows). Note how surface drainage was understood to generally flow to the north or westward towards the Flathead River.

Unfortunately, my review of the documentation provided for the Benches Subdivision by the applicant, indicates that the applicant and his consultants have not provided the public or the DEQ a correct understanding of the local hydrogeology and the direction of groundwater flow. The local hydrogeology can be described from the land surface downward as an upper sand and gravel Shallow Aquifer unit underlain by a clay (mostly)

Willis D. Weight, PhD, PE Hydrogeologist
3781 Yuhas Ave, Helena MT 59602 406-498-0530 (work)

or cemented gravel confining unit. The Shallow Aquifer unit represents the shallowest groundwater in the area or "first water". The confining unit separates the surface aquifer from the deeper aquifers. Immediately below the confining unit is another coarser-grained (typically gravel) aquifer unit which is where the Benches Subdivision public water-supply wells are completed. It is important to understand that the hydraulic heads of wells completed in the Shallow Aquifer are distinctly higher in elevation than the water levels in the deeper aquifer within the area of interest. This was verified in the field on May 18, 2021 by measuring the static water levels (SWL) in six wells completed in the Shallow Aquifer and additional wells in the deeper aquifer (Table 1). The SWTS's are to be being placed within highly permeable sediments within the Shallow Aquifer and will therefore influence the water quality of its groundwater. The direction of groundwater flow in the Shallow Aquifer is controlled by the upper surface of the confining layer. Infiltrating waters (from precipitation and SWTS's) move downward until they reach the shallowest groundwater above the confining unit, also known as the water table. These infiltrating waters will mix with the saturated sediments of the Shallow aquifer. The groundwater within the water-table aquifer will move down slope in the down-gradient direction. This is usually determined by surveying the elevations of the SWL's in three wells completed in the *same* aquifer.

Table 1 Static water levels measured in wells surrounding the greater Benches Subdivision area on May 18, 2021. All measurements were taken by Willis D Weight PhD, PE

Well (GWIC or Name)	Well Depth (ft)	Static Water Level (ft)	TOC measuring point above GS (ft)
Riv-1	26 - Shallow	8.4	0.74
103610 (Sea)	28 - Shallow	15.54	3.25
Wh (hand dug)	20 - Shallow	5.15	-6 ft below grade
293410 (Jaq)	26 - Shallow	12.07	1.65
Tank (hand dug)	10 - Shallow	4.7	4.5
85526 (Ms)	28 - Shallow	9.64	1.2
Bau	60 – deeper below Clay	29.48	1.35

An important consideration of understanding the appropriate hydrogeology of a site is addressing the issue of: where is first water? "First water", or shallowest groundwater, must be determined to properly perform the non-degradation analysis for nitrate and phosphorus. Prairie Dog Development LLC had two wells drilled (227 feet) on the Benches Subdivision property into the deeper gravel aquifer as public supply wells, without acknowledging where "first water" occurred. Three borehole perforations are supposed to be drilled on a property to determine where "first water" is and what direction it moves (Non-Degradation Manual, P. 33). The significance of determining the direction of groundwater flow is that it is used in other analyses and allows one to estimate down-gradient impacts.

Willis D. Weight, PhD, PE Hydrogeologist
3781 Yuhas Ave, Helena MT 59602 406-498-0530 (work)

Consultants for the applicant estimated the direction of regional groundwater flow based upon static water-level (SWL) measurements from *two different* aquifers from wells *outside* the property limits (Appendix Figure 3). The well log for the Jaq well (within the Shallow Aquifer) with a total well depth of 26 feet was used along with other wells drilled down to depths up to 117 feet (Deeper aquifer). The Shallow Aquifer is typically less than 30 feet thick with higher elevation SWLs, and “sits” on top of the confining unit below it. This results in the SWLs of both systems to act somewhat independent of one another (For example, compare the dramatic differences between the SWL measurements of the Jaq Well and the other wells in Appendix Figure 3, see also Table 1 in comparing with the Bau well). The consultant’s large-scale regional interpretation of the direction of groundwater flow is shown in (Appendix Figure 4). From having performed a numerical model of the entire Kalispell Valley from Whitefish Lake to Flathead Lake, my data and analysis show that groundwater recharge to the shallow and deeper aquifers comes from the Swan Mountain Range to the east and groundwater moves directly westward toward the Flathead River, rather than the consultants claim that groundwater moves 41,000 feet angled to the south before reaching the Flathead River (Appendix Figure 4).

If the assumed direction of groundwater flow is wrong, as my research clearly indicates, a negative domino affect takes place. This is because this error is included in other analyses that also use an assumed direction of groundwater flow. For example, the direction of groundwater flow is required in the nitrate and phosphorus non-degradation analyses. In this process a direction of groundwater flow is assumed along with the appropriate aquifer properties to see what the expected nitrate concentration values might be at the down-gradient edge of the property. Let us consider the 49 lots shown in the Benches Subdivision (Appendix Figure 5). If mixing zones from adjacent properties overlap (and they do) a cumulative impact must be estimated. The cumulative effect must be below 5 mg/L as Nitrogen at the down-gradient end of the flow path. This is usually demonstrated via worst-case scenarios where the maximum number of overlapping mixing zones occur. (The consultants already indicate cumulative nitrate values in excess of 4.1 mg/L as N, Appendix Figure 7). The cumulative effect analysis is fairly sensitive to the K-value used and the number of properties (mixing zones) included in the flow path, where high-K values are helpful (to the applicant) in diluting the outcomes.

In an effort to reduce the length of this report, the following 10 points summarize, from my independent research, the inaccuracies and false conclusions in the Benches Subdivision consultant’s subdivision application and associated reports, which the DEQ was provided for their review in approving this subdivision application:

Willis D. Weight, PhD, PE Hydrogeologist
3781 Yuhas Ave, Helena MT 59602 406-498-0530 (work)

1. First water is located in the Shallow Aquifer. The SWTS's will "sit" in this aquifer and will influence the water quality of its groundwater and eventually impact the Flathead River.
2. The direction of groundwater flow was erroneously estimated from three wells *off of the property from 2 different aquifers*. Where are the 3 required boreholes *within* the property (Non-Degradation Manual, P. 33)?
3. Aquifer testing was performed on the public water supply wells (drilled to the depth of 227 feet in gravels) and then the hydraulic properties from those tests (hydraulic conductivity, K) were applied in the non-degradation analyses. It is *not* appropriate to use a "K" appropriate for gravel (375.47 ft/day, value the consultants used) for the sand and gravel in the "first water" shallowest aquifer! The materials described in the soil-test pits (gravelly loam, sandy loam, coarse sand etc.) is where the septic systems will be placed, not in the lower gravels! (Appendix Figures 6 and 7 show K-values used in the nitrate analysis)
4. Early in the application process the consultants used a water sample tested for nitrates from a deeper aquifer (a pristine value of 0.01 mg/L as N) and then later a sample was taken from the Jaq well (within the Shallow Aquifer) showing a value of 0.62 mg/L (60 times higher, Appendix Figure 8). Samples *should have* been collected from the Shallow Aquifer *on* the Benches Subdivision property.
5. The consultant's worst-case non-degradation scenarios are also incorrect (wrong flow direction and K-values applied are too high). These would likely fail during a subsequent cumulative impact analysis where up to nine or ten lots (mixing zones) would be considered. If the K-values were lowered to a more appropriate value (100 ft/day), in the correct direction of groundwater flow, the results would likely fail.
6. The erroneous interpreted direction of groundwater flow in the non-degradation analysis is shown in Appendix Figure 9, along with the proposed lots for Phase 1. The direction was assumed based upon the issue mentioned in #2.
7. A 10-bedroom lot (Lot 1, Appendix Figure 5) is located in the floodplain on soils with depths to groundwater less than 48 inches! (Appendix Figure 10 and 11).
8. A soils map is shown in Appendix Figure 11, with soil-type descriptions shown in Figures 11 and 12. The soils descriptions all indicate that the seepage rates are very high 2 inch/hr to 6 inch/hr. Since septic systems are typically 4 feet below the land surface (Appendix Figure 13), it won't take very long to reach first water. The yellow areas highlighted in Appendix Figures 11 and 12 are where depths to water are very shallow.
9. The number of soil test pits and analysis were reduced via a variance letter instead of sampling the normally higher percentage of the lots (Appendix Figure 14). This is an admission that the soil properties associated with "first water" are fairly uniform. Once again assigning K-values representative of gravels to sandy materials is not appropriate for the Shallow Aquifer where "first water" occurs.
10. In the consultant's wetlands delineation report, page 8, they state that "The project (Benches Subdivision) is located approximately 600 feet away from the

Willis D. Weight, PhD, PE Hydrogeologist
3781 Yuhas Ave, Helena MT 59602 406-498-0530 (work)

Flathead River *without* a surface-water connection" (Appendix Figure 15). The reality is that we observed at least three culverts that drain or could drain water under Highway 2 to the north with another culvert that passes under the North River Road directly to the Flathead River (Appendix Figure 16 and Figure 17, field visit photos May 18, 2021). We have video showing the movement of surface water through these culverts. It is of concern to me that surface water connection was apparently also not provided by the Benches subdivision applicant to the Flathead Conservation District or the Army Corps of Engineers for their consideration in issuing the permits required for this development by these agencies.

Upper Flathead Conceptual Model

My conceptual model of the general hydrogeology was interpreted from 27 GWIC wells and from Lidar digital elevation data with a vertical resolution of 3 feet (Appendix Figure 18). Each well or lithology from the GWIC boreholes were incorporated into Groundwater Modeling Systems (GMS) software (Aquaveo, LLC). All well logs penetrate the upper coarse sands and gravels of the Shallow Aquifer. The next unit encountered is a confining layer, mostly described by drillers as: clay, clay-bound gravels, sandy-clay, tan-clay-gravel, or cemented gravel (Appendix Figure 19). In a few places the clay unit might be missing; however, the next unit encountered described by drillers is a cemented gravel (Appendix Figure 20). Both the clay and cemented gravel units make up the confining unit and separate the Shallow Aquifer from the deeper gravel aquifer units. The deeper aquifers are where public supply water is being sourced from (Appendix Figure 21). In Appendix Figure 21 one notices the SWL and source groundwater for wells completed in the Shallow Aquifer come from water on top of the confining unit (clay and or cemented gravels). Water from wells that penetrate the confining unit come from the deeper gravels and are under pressure so the SWL rises above the top of the gravels but below the Shallow Aquifer. I have written three textbooks on field hydrogeology for McGraw-Hill Publishers and describe such settings in these references (Weight, 2019).

Upper Flathead Numerical Model

A three-dimensional (3D) numerical groundwater flow model was constructed using the GMS software maintained by Aquaveo, LLC (2020). Referring back to Appendix Figure 18, the 27 boreholes representing the wells were constructed at their respective surface locations. Once the boreholes were created a lidar surface was downloaded and brought in as the top surface of layer 1 (the Shallow Aquifer surface). An oblique view of the boreholes with a vertical exaggeration of 5 times to show more detail is shown in Appendix Figure 22. My interpretation of the lithology between wells are exhibited as cross-sections (Appendix Figure 23). I have over 30 years' experience performing and teaching this type of analysis and constructing three-dimensional models.

Willis D. Weight, PhD, PE Hydrogeologist
3781 Yuhas Ave, Helena MT 59602 406-498-0530 (work)

Once the boreholes and cross-sections were constructed one can interpret the distribution of the geologic solids (Appendix Figure 24). Tools within GMS allow one to then cut cross-sections through the solids in any direction and evaluate the thicknesses of individual model layers and their distribution (Appendix Figures 19, 20, 23 and 24). A single layer model of the upper Shallow Aquifer was created (Appendix Figure 25) to show the occurrence and movement of groundwater flow within the Shallow Aquifer to demonstrate the potential direction of effluent movement from the SWTS anywhere within the model domain.

If one spins Appendix Figure 25 around so the view is from the north the bench-like topographic surface becomes evident (Appendix Figure 26). This also corroborates with surface profiles surveyed by the consultants of the Benches Subdivision (Appendix Figures 1 and 2).

The geologic model described above was converted into MODFLOW layers. MODFLOW is a FORTRAN code developed by the U.S. Geological Survey and incorporated into the GMS software (Aquaveo, 2020). This software code processes and solves the partial differential equations associated with the model grid by using the boundary conditions and hydraulic properties of the aquifer to interpret the distribution of hydraulic head (the shape and slope of the surface of the water table) (Harbaugh, 2005). The grid was given a uniform cell size dimension of 100 feet by 100 feet. GMS provides a variety of tools to more easily input the topographic surface, boreholes (wells), making of cross-sections, generation of solids, and visualizing the output. The midline of the Flathead River was used as the top boundary (western margin) of model and the bottom boundary was simulated using the general head package (GHB package in MODFLOW) (Appendix Figure 18). The sand and gravel unit was assigned a hydraulic conductivity (K) of 100 ft/day and the porosity was assumed to be 30 %. These were reasonable values based upon many years of field and modeling experience. Google Earth Pro was used to estimate the elevations of the nodes with in the GHB Package. A conductance of 25 ft²/d/ft was used. A sensitivity analysis was also performed and the flow-budget error is approximately 1 %.

Model Results

The GMS software has a variety of visualization tools to show the output of the distribution of hydraulic head and SWTS effluent movement. Appendix Figure 27 shows the 5-foot contour colors of hydraulic head (water table) from the eastern edge with maximum elevation of 3083 to the stage elevation of the Flathead River on May 18, 2021 (2991 feet) in the furthest downstream corner (western side). Flow arrows were added to show the flow direction anywhere within the model domain (Appendix Figure 28). In addition, U.S. geological Survey package MODPATH (Pollack, 2016) was used to show the trajectory of SWTS effluent movement. Since the distance of septic-system placement will be within 10 feet of the water table and the permeability of the aquifer materials is high, it was assumed that SWTS effluent would reach the water table within

Willis D. Weight, PhD, PE Hydrogeologist
3781 Yuhass Ave, Helena MT 59602 406-498-0530 (work)

a matter of days. Locations of SWTS within the Benches Subdivision were used as an example of the direction it would move (Appendix Figure 29). It is clear from modeling that the ultimate terminus of wastewater movement is Montana's high-quality State waters - the Flathead River! Other locations within the model domain can be estimated based upon the trajectory of the flow arrows in (Appendix Figure 28).

As a private consultant and registered professional engineer, I use the practice of evaluating worst-case scenario conditions to see whether there might be any issues of compromised septic tanks or other potential dangers should the weather conditions be significantly different than during the time when data were collected in the application process. In Figure 30 the clients provided a photo of the super flood conditions of 1964. With climate change and the weather becoming stranger it is worth considering what would happen if a similar flooding event occurred once again.

Conclusions and Recommendations (Appendix Figures 31 and 32)

- The conceptual model for groundwater flow is incorrect!
- "First water", or shallowest groundwater is located in the Shallow Aquifer. The SWTS's will "sit" in this aquifer and will influence the water quality of its groundwater and eventually the Flathead River.
- The direction of groundwater flow was erroneously estimated from three wells *off of the property from 2 different aquifers*.
- Where are the 3 required boreholes within the property (Non-Degradation Manual, Page 33)?
- Aquifer testing was performed on the water supply wells (depth of 227 feet in gravels) and then the hydraulic properties (hydraulic conductivity, K) were applied to sandy materials during the non-degradation analyses (Appendix Figures 6 and 7).
- It is *not* appropriate to use a "K"-value, determined from aquifer testing a gravel aquifer (375.47 ft/day, used), and applying this to the first water aquifer's sand and gravel. This is where the septic systems will be placed, not in the lower gravels!
- Samples for Nitrates *should have* been collected from the Shallow Aquifer *within* the Benches Subdivision property.
- The assumed worst-case scenarios for non-degradation analysis are incorrect and would likely fail during a subsequent cumulative impact analysis. (The background flow direction is incorrect and the K-values assigned are too high)
- A potential 10-bedroom home (within Lot 1 and an assumed SWTS discharge of 833 gpd) is located in the floodplain on soils with depths to groundwater less than 48 inches (Appendix Figures 10 and 11).
- Test pits within the Benches Subdivision indicate that the seepage rates are very high (2 inch/hr to 6 inch/hr). It won't take very long to reach "first water".

Willis D. Weight, PhD, PE Hydrogeologist
3781 Yuhas Ave, Helena MT 59602 406-498-0530 (work)

- It was stated: "The project (Benches Subdivision) is located approximately 600 feet away from the Flathead River *without* a surface-water connection" We have field evidence this is not true.
- In my professional opinion, should the Benches Subdivision move forward as currently proposed, the Shallow Aquifer wells of neighboring properties to the west are at risk and septic influenced waters will end up in the Flathead River.
- Any additional proposed subdivisions in this area should be required to show that their proposed lot densities (urbanization) will not create any similar issues. In addition, consultants or future applicants should not rely on the inaccuracies demonstrated in the Benches Subdivision application.

Recommendations are that the size of any lots of any proposed should be increased by a at least a factor of 5 or greater to keep from urbanizing the area and reducing SWTS impact, or perhaps that the handling and treatment of wastewater effluent be brought across the Flathead River by the City of Columbia Falls. Should there be any questions about the content of this report please feel free to contact me. I appreciate being called upon to provide my honest opinion based upon 30 years' experience working as a registered professional engineer.

Willis D Weight

Willis D. Weight, PhD, PE
President of WDW Writing, Consulting,
& Planning Inc.
3781 Yuhas Ave.
Helena, MT 59602



References

Aquaveo LLC, (2020). GMS 10.4 <http://www.aquaveo.com/>

Harbaugh, A. (2005) MODFLOW-2005, The U.S. Geological Survey Modular Ground-Water Model—the Ground-Water Flow Process, U.S. Geological Survey Techniques and Methods 6-A16. <https://pubs.usgs.gov/tm/2005/tm6A16/PDF/TM6A16.pdf>
Surfaces, p. 424, Wiley. ISBN 0471810339.

Non-Degradation Manual. (2015), How to Perform a Non-Degradation Analysis For Subsurface Wastewater Treatment Systems (SWST) Under the Subdivision Review Process. Montana Department of Environmental Quality Public Water and Subdivisions Bureau, October 2015, 52 Pages.

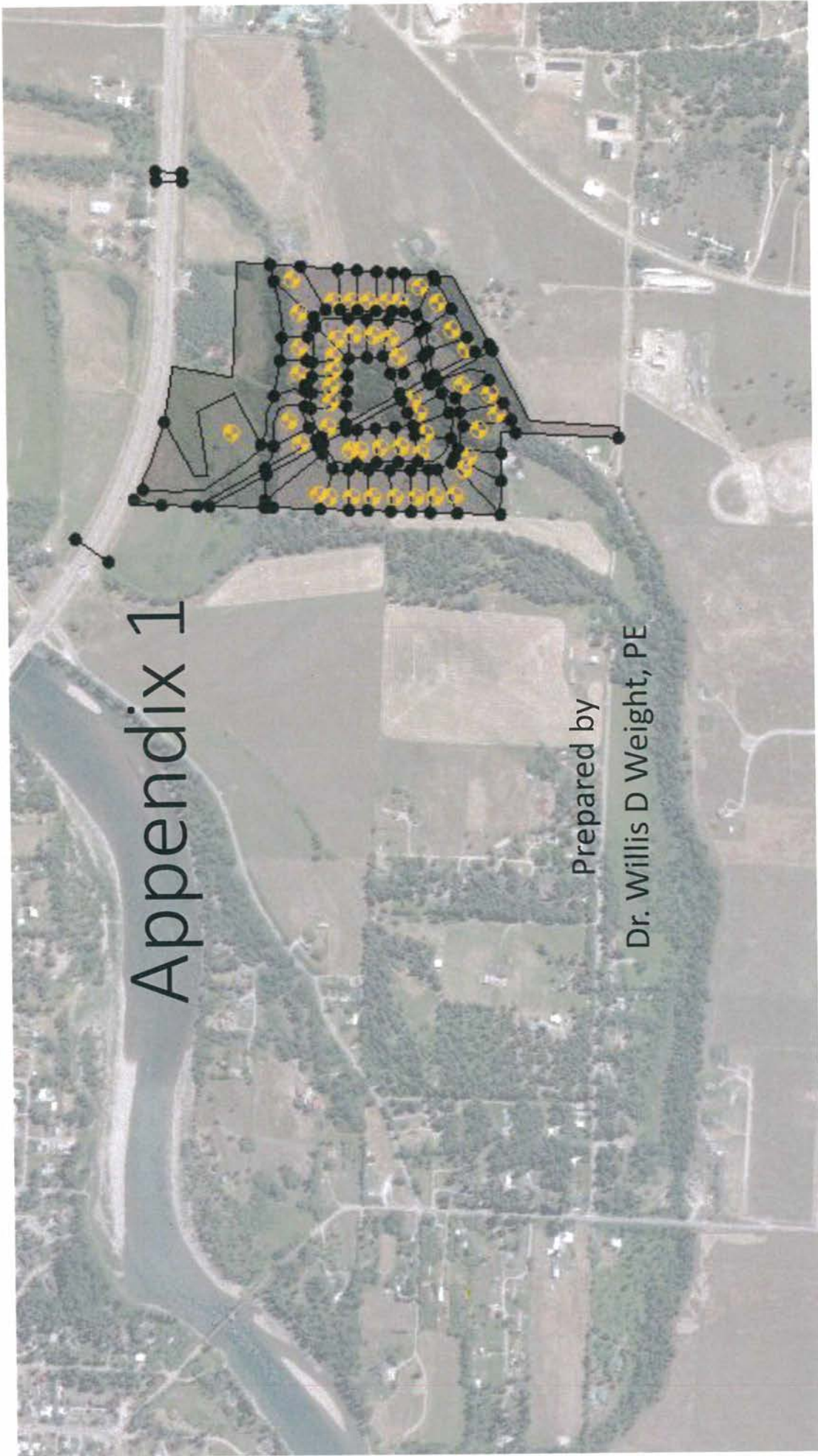
Willis D. Weight, PhD, PE Hydrogeologist
3781 Yuhas Ave, Helena MT 59602 406-498-0530 (work)

Pollock, D.W., 2016, User guide for MODPATH Version 7 -- A particle-tracking model for MODFLOW: U.S. Geological Survey Open-File Report 2016-1086, 35 p., <http://dx.doi.org/10.3133/ofr20161086>.

Weight, W.D. (2019) Practical Hydrogeology: Principles and Field Applications 3rd Ed., McGraw-Hill Education, New York, N.Y. ISBN No. 978-1-260-11689-2, 777 pages.

Appendix 1

Prepared by
Dr. Willis D Weight, PE



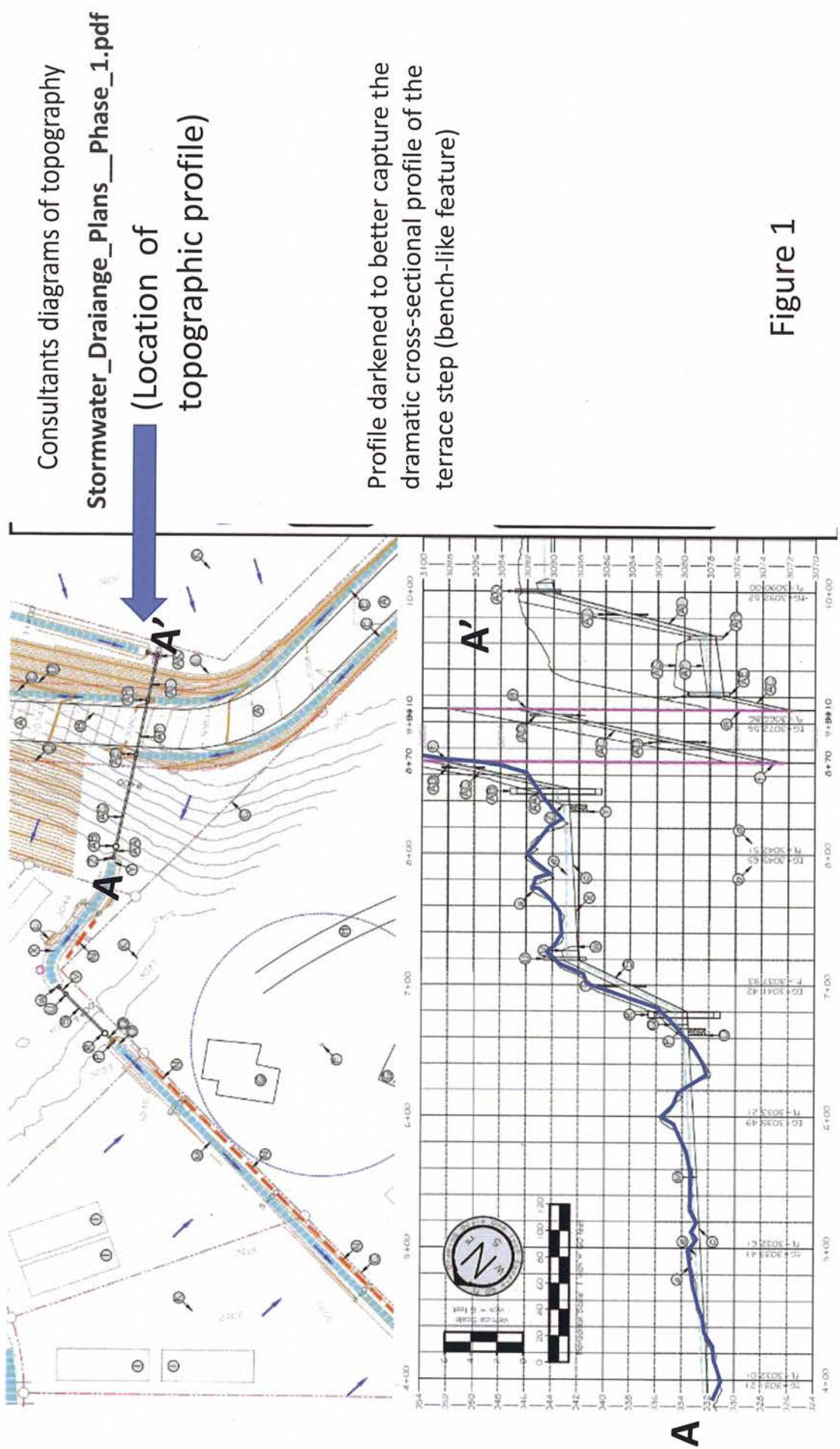
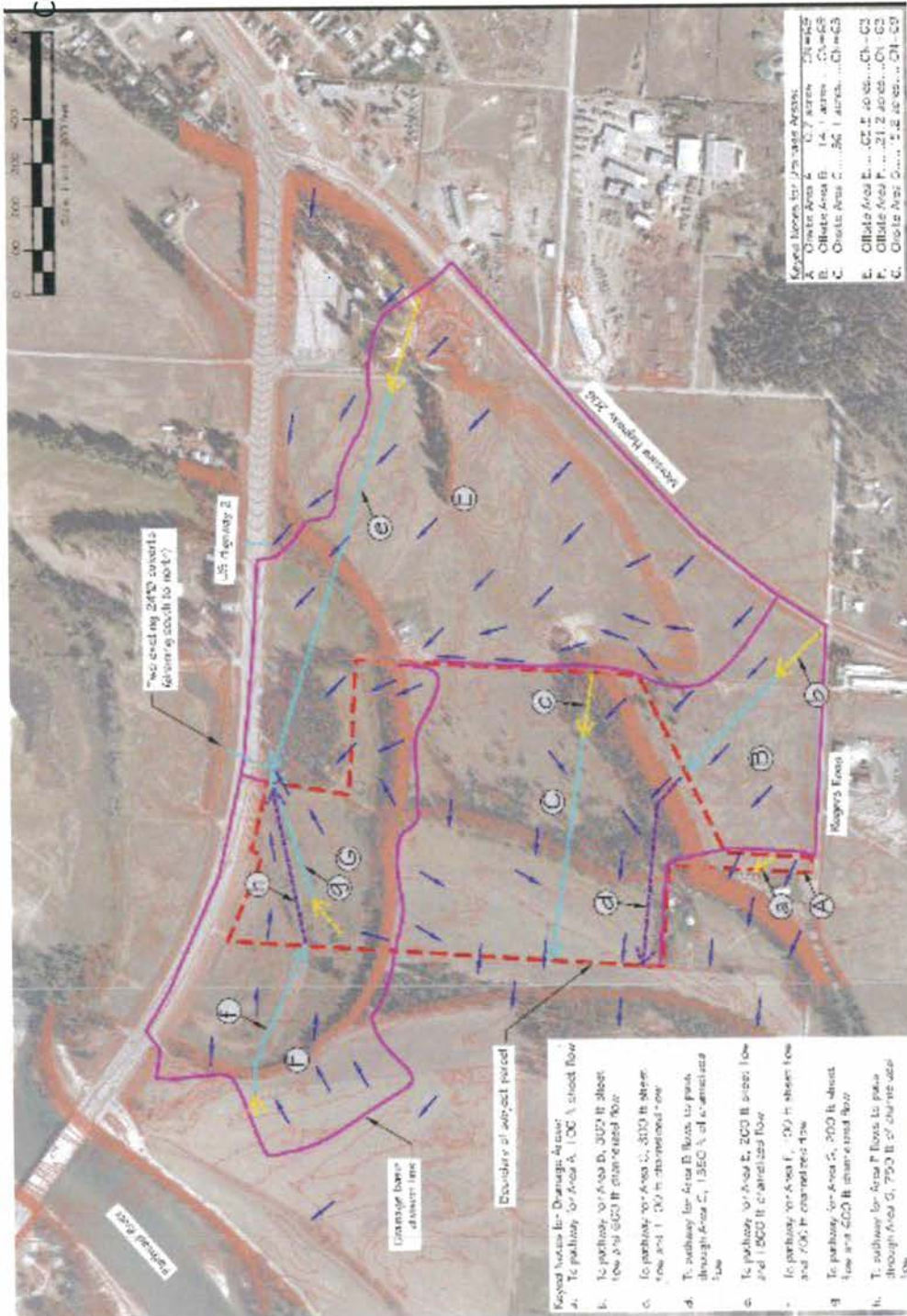
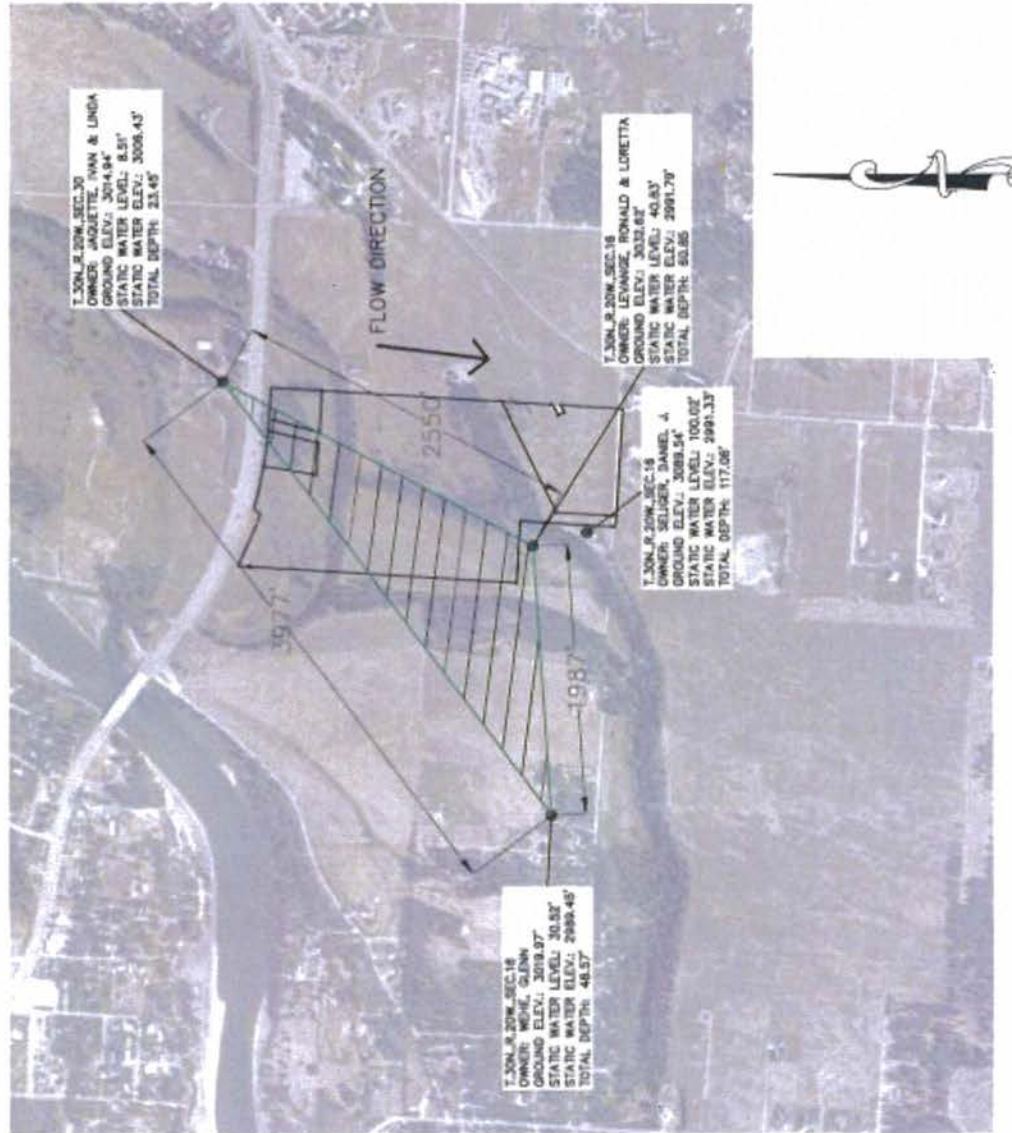


Figure 1

Figure 2



WELL TRIANGULATION EXHIBIT
(04.18.19)



Consultants diagrams of
estimated groundwater
flow direction

Interpretation of
groundwater flow
direction based
upon wells
completed **above**
and below a
confining layer.
Note how all wells
are located
outside the
property
boundary.

Figure 3

Consultants diagrams of estimated groundwater flow direction

From Page 64 in the Environmental Assessment Report, where an analysis of distance to State surface waters was performed.



Figure 4

Consultants diagrams of
 Lot layout sourced from:
 DEQ Records request 10-
 13 Lot_layout1
 Phase 1 and phase 2
 Rotated and Drainfield
 Map Page 155 Complete
 scanned file.

Figure 5



- 287 -

Appendix E
MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

NITRATE SENSITIVITY ANALYSIS

SITE NAME:
COUNTY:
NOTES:

BY: ROBERT SMITH, PE, A2Z ENGINEERING
DATE: 01/03/2020

Nitrate at end of mixing zone(s) with no cumulative effects

Variable	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	(X)	(Y)	(Z)	NI		
LOT #	Hydr. cond. (m/day)	Hydr. grad. (ft)	Hydr. zone thick. (ft)	Mix. zone dist. (ft)	Down. dist. (ft)	Down. grad. (ft/ft)	Drain. width (ft)	Back. field width (ft)	Nitrate in precip. (mg)	Effluent conc. (mg)	# of single family homes	Annual precip. (in/yr)	Percent recharge	Drain. grad. (ft/ft)	Mix. area (ft ²)	Mix. zone area (ft ²)	Ground water flow (ft/day)	Recharge flow (ft/day)	Effluent flow (ft/day)
1	375.47	0.0065	15.0	100	74	0.62	44	1.0	50.0	4.4	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	66.37	174.51
2	375.47	0.0065	15.0	100	44	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	6.08	26.70
3	375.47	0.0065	15.0	100	60	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.11	26.70
4	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70
5	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70
6	375.47	0.0065	15.0	100	48	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	5.38	26.70
7	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70
8	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70
9	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70
10	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70
11	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70
12	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70
13	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70
14	375.47	0.0065	15.0	100	65	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	6.79	26.70
15	375.47	0.0065	15.0	100	83	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	6.62	26.70
16	375.47	0.0065	15.0	100	63	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	6.62	26.70
17	375.47	0.0065	15.0	100	54	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	5.88	26.70
18	375.47	0.0065	15.0	100	54	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	5.88	26.70
19	375.47	0.0065	15.0	100	54	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	5.88	26.70
20	375.47	0.0065	15.0	100	33	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	5.33	26.70
21	375.47	0.0065	15.0	100	24	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	4.23	26.70
22	375.47	0.0065	15.0	100	52	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	5.71	26.70
23	375.47	0.0065	15.0	100	66	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.09	26.70
24	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70
25	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70
26	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70
27	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70
28	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70
29	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	1.0	50.0	26.70	18.0	0.2	161.50	2422.50	83750.00	5912.20	7.27	26.70

Consultants diagrams of
Non-degradation analysis of
Nitrate, from: Page 56
Environmental
Assessment

Nitrate Analysis based upon
well from deeper aquifer
0.01 mg/L. Then used
Jacquettes place at 0.62
mg/L but still used a high
hydraulic conductivity 375
ft/day representing a gravel
and not sand and gravel or
sandy loam. Low NO3 and
High K = good Nitrate
Analysis.

Worst Case scenarios are
over 4 mg/L, What if got
correct flow direction?

Figure 7

Appendix E:

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
NITRATE SENSITIVITY ANALYSIS

SITE NAME: THE BENCHES
COUNTY: FLATHEAD COUNTY
NOTES: CUMULATIVE EFFECTS ALONG CENTER OF SUBDIVISION
BY: ROBERT SMITH, PE, A2Z ENGINEERING
DATE: 01/03/20

Nitrate at end of mixing zone(s) with no cumulative effects

Variable	(K)	(l)	(D)	(L)	(Y)	(N)	(M)	(E)	(R)	(Q)	(P)	(V)	(W)	(A)	(S)	(Qg)	(Qr)	(Qe)	Nt
Hydr. cond. (m/s)	Hydr. grad. (m/m)	Mix. zone thick. (feet)	Down grad. (feet)	Drain. field width (feet)	Back. ground nitrate (mg/L)	Nitrate in precip. (mg/L)	Effluent conc. (mg/L)	# of single family homes	Effluent drain. (g/day)	Annual precip. (in/yr)	Percent precip. recharge	Down grad. width (feet)	Mix. zone area (ft ²)	Mix. zone surface area (ft ²)	Mix. zone area (ft ²)	Ground water flow (m ³ /day)	Recharge flow (m ³ /day)	Effluent flow (m ³ /day)	Resulting nitrate (mg/L)
LOT #																			
4.8.5	375.47	0.0065	15.0	100	71	0.62	1.0	50.0	2.0	26.70	18.0	0.2	48.50	1327.50	8850.00	3238.81	7.27	53.40	1.42
33.8.34	375.47	0.0065	15.0	100	71	0.87	1.0	50.0	2.0	26.70	18.0	0.2	48.50	1327.50	8850.00	3238.81	7.27	53.40	1.67
1	375.47	0.0065	15.0	100	74	1.66	1.0	50.0	4.4	26.70	18.0	0.2	61.30	1372.50	9150.00	3348.83	7.52	117.44	3.29
41.8.42	375.47	0.0065	15.0	100	56	2.29	1.0	50.0	2.0	26.70	18.0	0.2	73.50	1102.50	7350.00	2898.69	6.04	53.40	3.21
17.18.6.19	375.47	0.0065	15.0	100	54	2.74	1.0	50.0	3.0	26.70	18.0	0.2	71.50	1072.50	7150.00	2817.47	5.88	60.10	4.14

Nitrate at end of mixing zones with cumulative effects

Variable	(K)	(l)	(D)	(L)	(Y)	(N)	(M)	(E)	(R)	(Q)	(P)	(V)	(W)	(A)	(S)	(Qg)	(Qr)	(Qe)	Nt
LOT #																			
4.8.5	375.47	0.0065	15.0	1274	71	0.62	1.0	50.0	2.0	26.70	18.0	0.2	262.55	4498.25	37482.30	10761.02	307.60	53.40	0.87
33.8.34	375.47	0.0065	15.0	106	71	0.87	1.0	50.0	2.0	26.70	18.0	0.0	88.55	1343.25	9432.39	3278.28	0.00	53.40	1.06
1	375.47	0.0065	15.0	936	74	1.66	1.0	50.0	4.4	26.70	18.0	0.0	241.30	3019.50	22082.80	3833.58	0.00	117.44	2.28
41.8.42	375.47	0.0065	15.0	548	56	2.29	1.0	50.0	2.0	26.70	18.0	0.0	151.90	2278.50	83241.20	3566.60	0.00	53.40	2.74
17.18.6.19	375.47	0.0065	15.0	102	54	2.74	1.0	50.0	3.0	26.70	18.0	0.0	71.50	1072.50	7103.00	2817.50	0.00	60.10	4.14

NOTES:

- = fill in values in these cells
- = these cells are calculated for you
- Hydr. cond. = K Hydraulic Conductivity
- Hydr. grad. = I Hydraulic Gradient
- Mix. zone thick. = D Thickness of Mixing Zone up to a Maximum of 15 feet (usually constant at 15 feet)
- Down grad. distance = L Mixing Zone Length (see ARM 17.30.517(3)(d)(vi)), or this may also be the distance to end of last mixing zone when calculating cumulative effects.
- Drainfield width = Y Width of Drainfield Perpendicular to Ground Water Flow
- Background nitrate = Ng Background Nitrate (as Nitrogen) Concentration
- Nitrate in precip. = Nr Nitrate (as Nitrogen) Concentration in Precipitation (usually constant at 1.0 mg/L)
- Effluent Nitrate conc. = Ne Nitrate (as Nitrogen) Concentration in Effluent (50 for conventional, 24 for level 1a, 40 for level 1b)
- # single family homes = Nf Number of Single Family Homes on the Drainfield (leave as 1 if effluent volume in next column is adjusted to equal total effluent from drainfield)
- Effluent per drain. = Qf Quantity of Effluent from drainfield (average rate varies depending on number of bedrooms)
- Annual precip. = P Annual local Precipitation
- Percent precip recharge = V Percent of Precipitation Recharging Ground Water (usually constant at 0.2)
- Down grad. width = W Width of Mixing Zone Perpendicular to Ground Water Flow = (0.175)(L) + (Y)
- Mix. zone area = Am Cross Sectional Area of Aquifer Mixing Zone = (D)(W)
- Mix. zone surface area = As Surface Area of Mixing Zone = (L)(W)
- Ground water flow = Qg Ground Water Flow Rate = (K)(I)(Am)
- Recharge flow = Qr Recharge Flow Rate = (As)(P)(1/365)(V)
- Effluent flow = Qe Effluent Flow Rate = (Nf)(Qf)
- Resulting nitrate (N) = Nt Nitrate (as Nitrogen) Concentration at End of Mixing Zone = ((Ng)(Qg) + (Nr)(Qr) + (Ne)(Qe)) / ((Qg) + (Qr) + (Qe))
(or nitrate concentration to use as background nitrate for next downgradient drainfield when determining cumulative effects)



ANALYTICAL REPORT

Montana Environmental Laboratory LLC
1170 N. Meridian Rd., P.O. Box 8900, Kalispell, MT 59904-1900
Phone: 406-755-2131 Fax: 406-257-5359 www.melab.us

Consultants image

Figure 8

Jim McIntyre
Prairie Dog Development LLC
719 3rd St. W.
Whitefish, MT 59937

PWS ID:
Project:

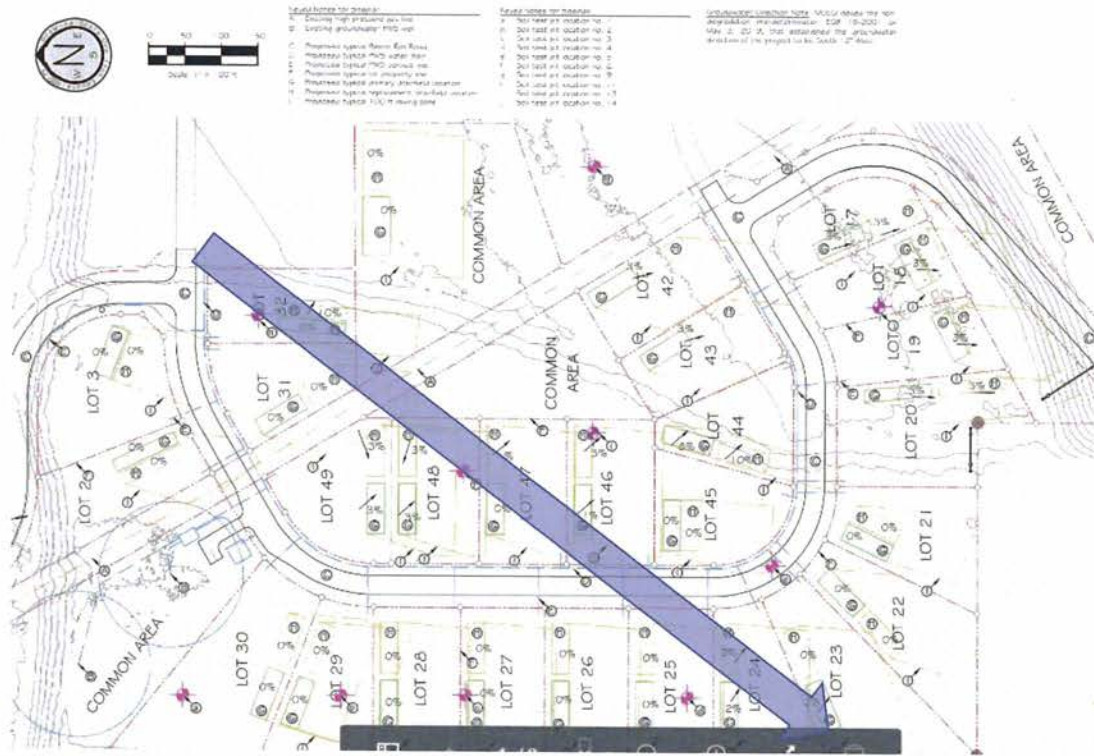
Client Sample ID: 7100 Hwy 2 E. - South Yard Hydrant
Matrix: DRINKING WATER

Lab ID: 1913225-02
Received: 12/20/2019 15:15

Collected: 12/20/2019 11:20

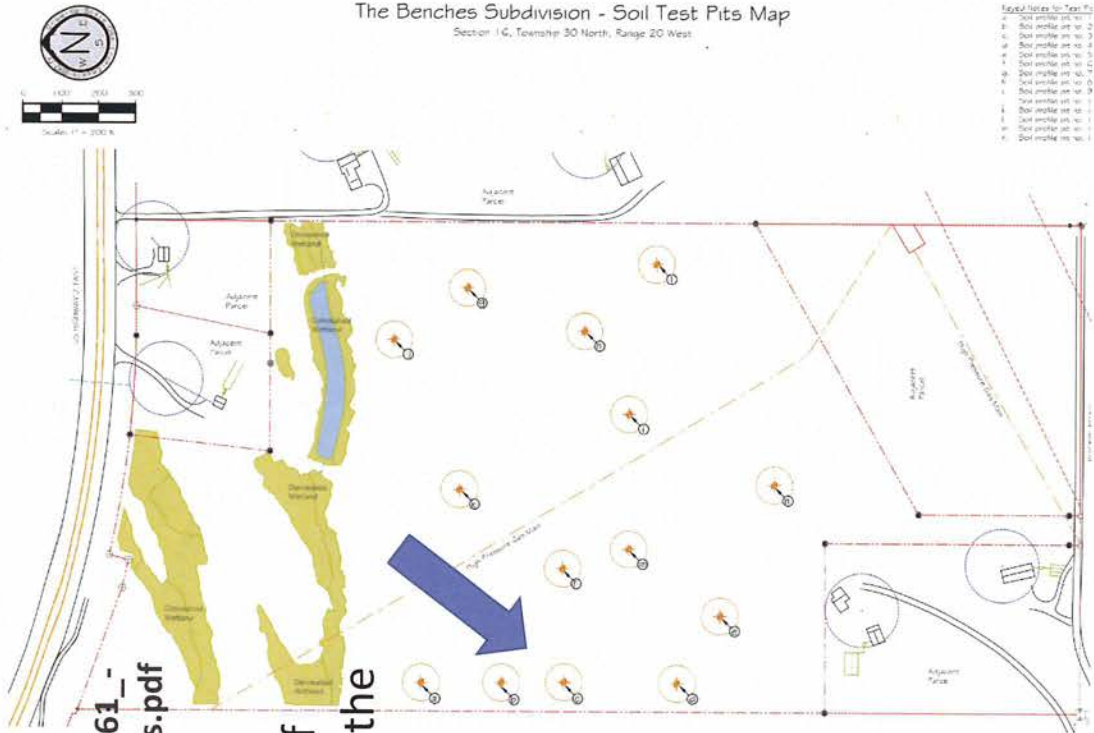
<u>Analyses</u>	<u>Result</u>	<u>Units</u>	<u>MDL</u>	<u>MCL</u>	<u>Method</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>
Conductivity	901	umhos/cm	0.1		SM2510B		12/27/2019 13:47	GDM
Nitrate + Nitrite, Total	0.62	mg/L	0.01	10	E353.2		12/27/2019 14:39	GDM

Item No.10.



The Benches Subdivision - Soil Test Pits Map

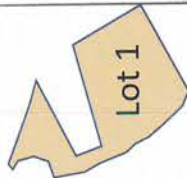
Section 16, Township 30 North, Range 20 West



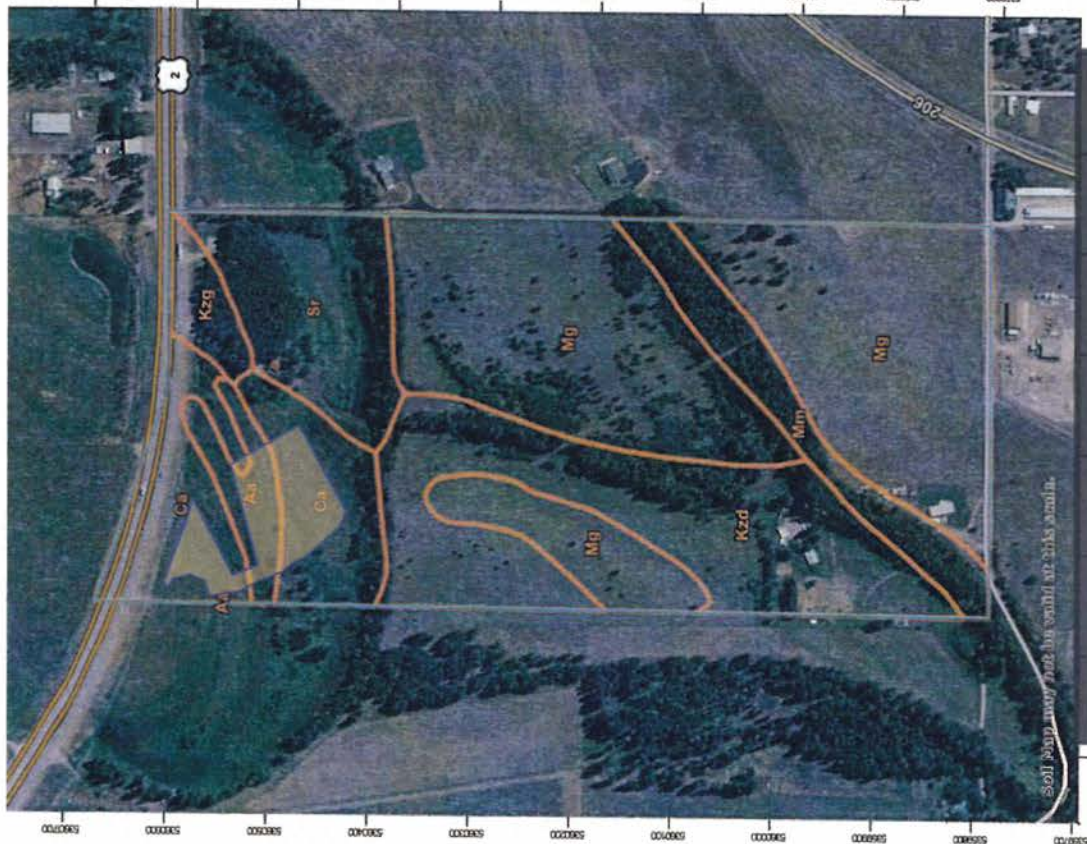
Consultants diagram from:161_-_177_waiver_for_test_pits.pdf

Assumed direction of groundwater flow in the application.

Figure 9



Approximate site of Lot 1



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Aa	Alluvial land, poorly drained	2.3	2.9%
Ca	Chamokane soils, 0 to 3 percent slopes	10.7	13.2%
Kzd	Kiwanis fine sandy loam, 0 to 4 percent slopes	17.1	21.1%
Kzg	Kiwanis-Birch fine sandy loams, 0 to 5 percent slopes	1.9	2.3%
Mg	Mires gravelly loam, 0 to 3 percent slopes	35.7	44.1%
Mm	Mires gravelly loam, 12 to 30 percent slopes	5.2	6.4%
Sr	Swims silty clay loam, 0 to 4 percent slopes	8.0	9.9%
Totals for Area of Interest		80.9	100.0%

Aa – Setting – Flood Plains

Typical profile

H2 - 20 to 50 inches: stratified gravelly sandy loam to silty clay loam

H3 - 50 to 60 inches: stratified gravelly loamy sand to coarse sandy loam

Properties and qualities

Slope: 0 to 4 percent

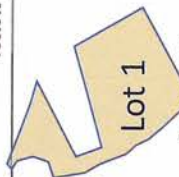
Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: About 18 to 36 inches

Frequency of flooding: Frequent



Approximate site of Lot 1

Figure 11

From Page 10 of consultants
Wetlands Delineation
Report

161 - 177__waiver_for_test_pits.pdf

Consultants 161_-
_177__waiver_for_test_pits.pdf

Kzd – Setting - Stream Terraces

Typical profile

A - 0 to 9 inches: fine sandy loam
C1 - 9 to 39 inches: fine sandy loam
2C2 - 39 to 70 inches: very gravelly sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Figure 12

Ca – Setting - Floodplains

Typical profile

A - 0 to 7 inches: loam
C1 - 7 to 24 inches: fine sandy loam
2C2 - 24 to 60 inches: gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: Occasional

Sr – Setting - Terraces

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
E - 1 to 5 inches: silty clay loam
Bw - 5 to 12 inches: silty clay loam
Bk - 12 to 26 inches: silt loam
C1 - 26 to 55 inches: stratified very fine sandy loam to silty clay loam
2C2 - 55 to 60 inches: loamy fine sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 5.95 in/hr)
Depth to water table: About 48 inches
Frequency of flooding: None

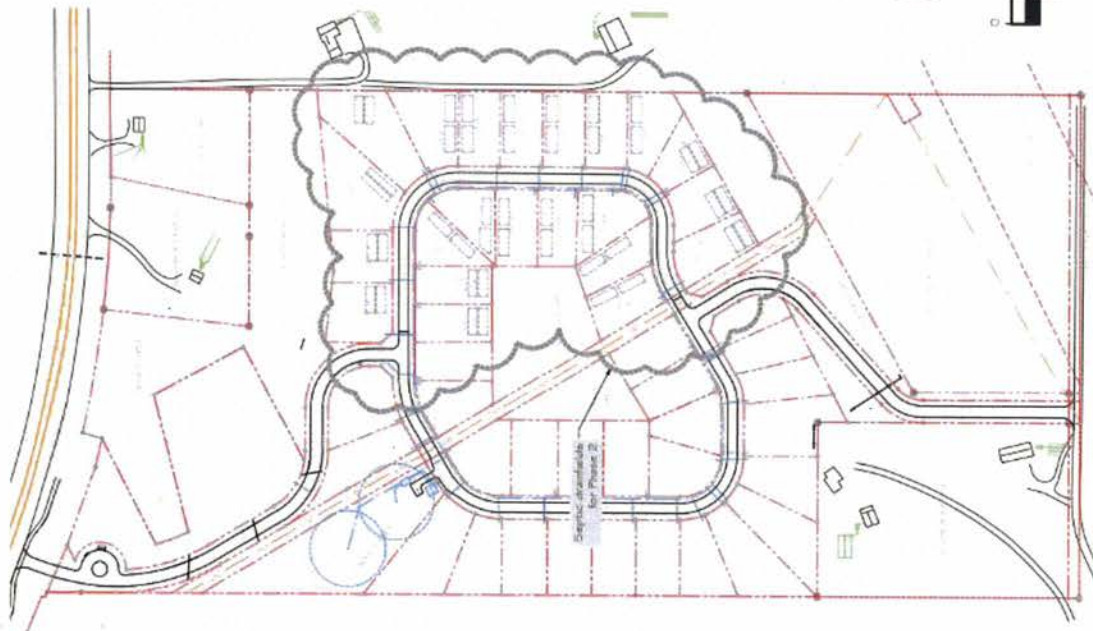
Mg – Setting - Outwash Fans - Terraces

Typical profile

A - 0 to 8 inches: gravelly loam
Bw - 8 to 18 inches: very gravelly loam
2C - 18 to 60 inches: very gravelly loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None



Flat

Standard Absorption Trench:
Not to Scale

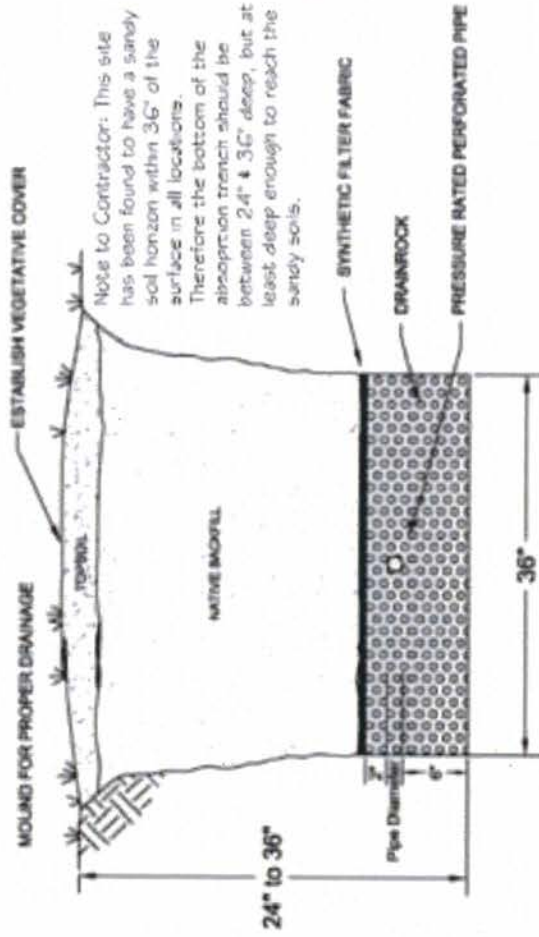


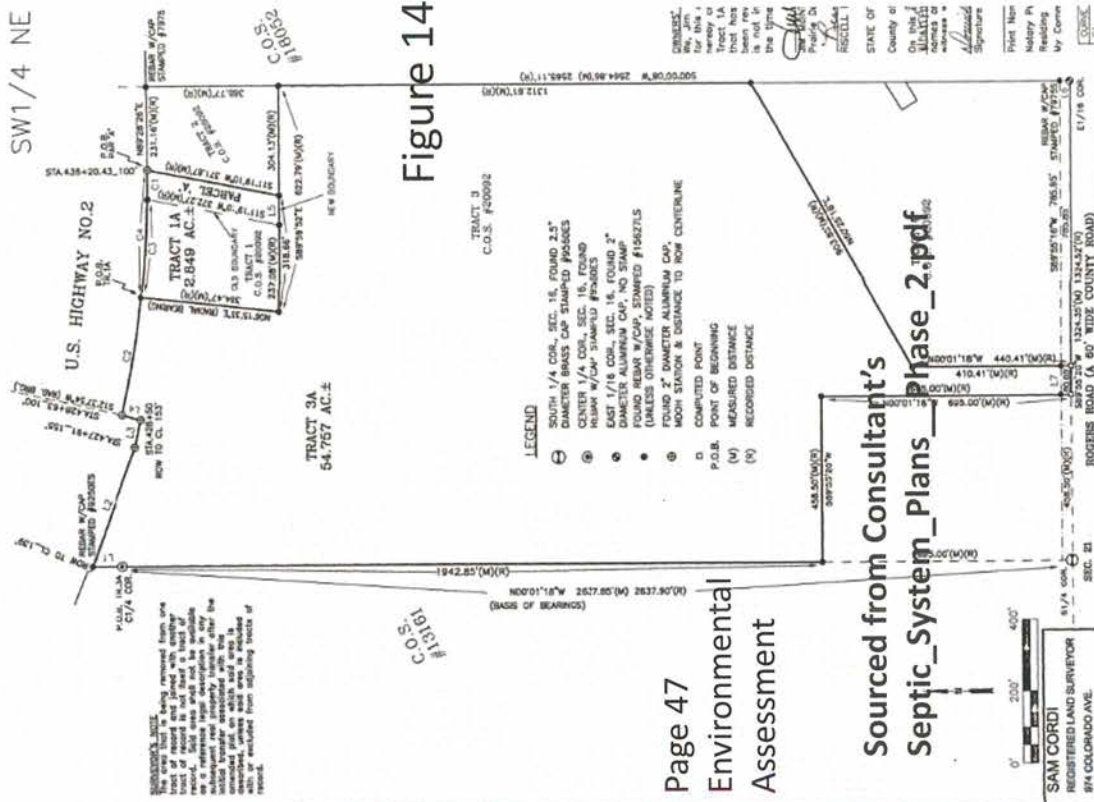
Figure 13

Sourced from Consultant's
Septic_System_Plans_Phase_2.pdf



0 150 300 450
Scale 1" = 300 ft

TEST HOLE LAYOUT EXHIBIT
(06.21.19)



Wetlands Delineation Report

The Flathead River is a Traditionally Navigable Water (MT Dept of State Lands 1987). The project is located approximately 600 feet away from the Flathead River without a surface water connection (Figure 1-1).

Sourced From: Page 8
Wetlands Delineation
Report



Figure 15



West side of culvert under
North River Road which
discharges directly to
Flathead River

Figure 16



North side of culvert which
passes under Hwy 2



South side of culvert which
passes under Hwy 2

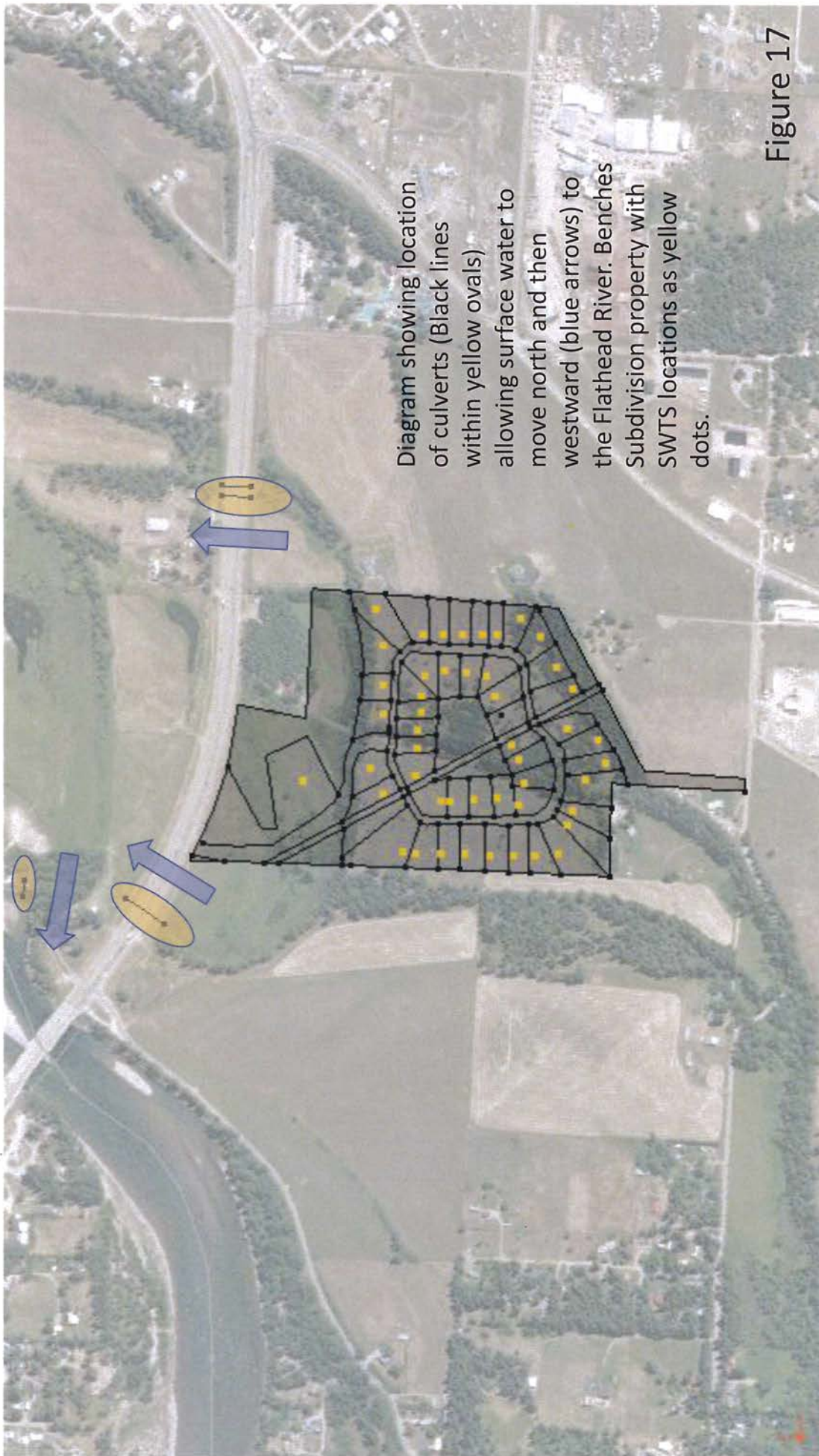


Figure 17



Figure 18

Model Boundary and Borehole (well) locations

Oblique view of the Clay unit, showing the Surface of the unit and thickness. (Benches Subdivision shown for scale). This surface controls the direction groundwater flow of where "first water" is.

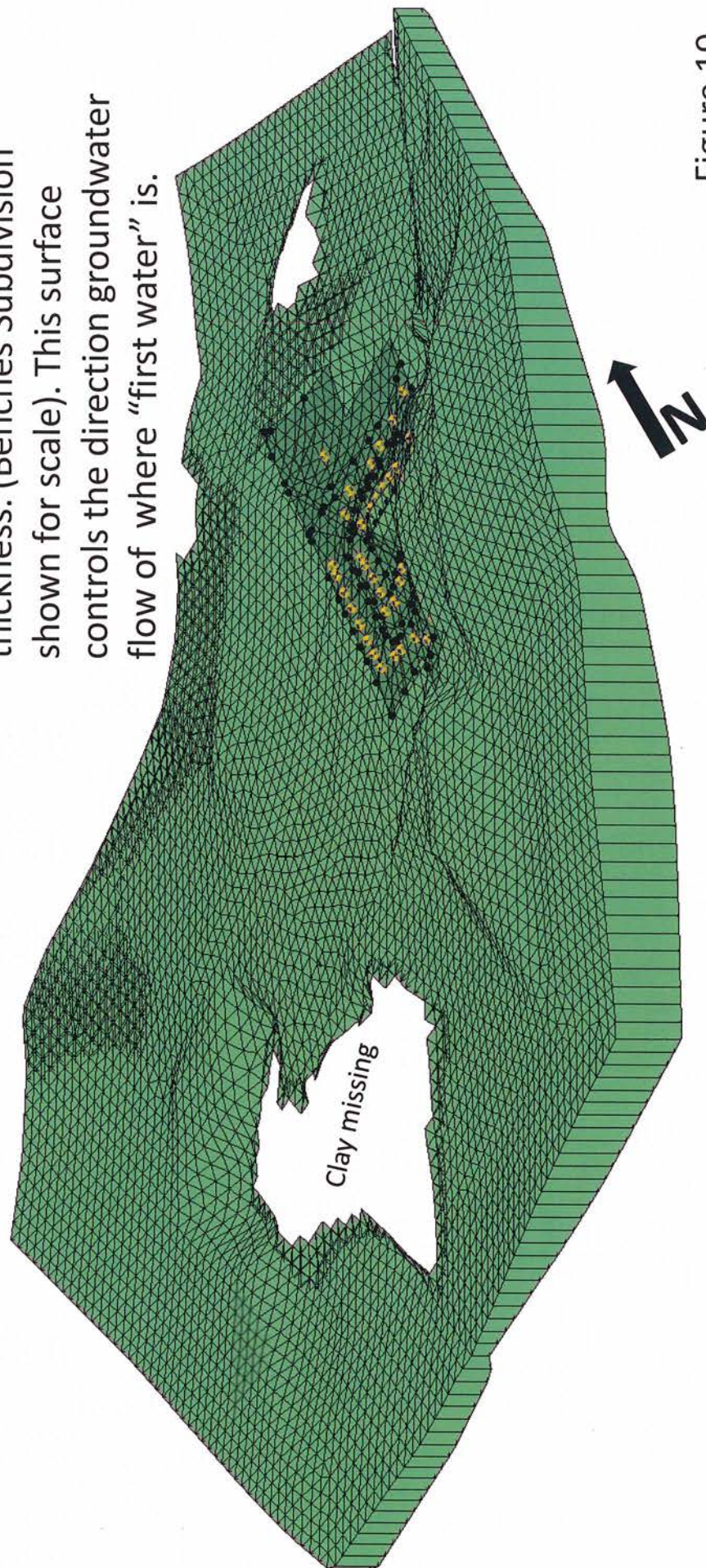


Figure 19

Distribution and thickness of the cemented gravel unit below the clay. Both units separate the Shallow Aquifer from the Deeper ones. (Benches Subdivision shown for scale).



Figure 20

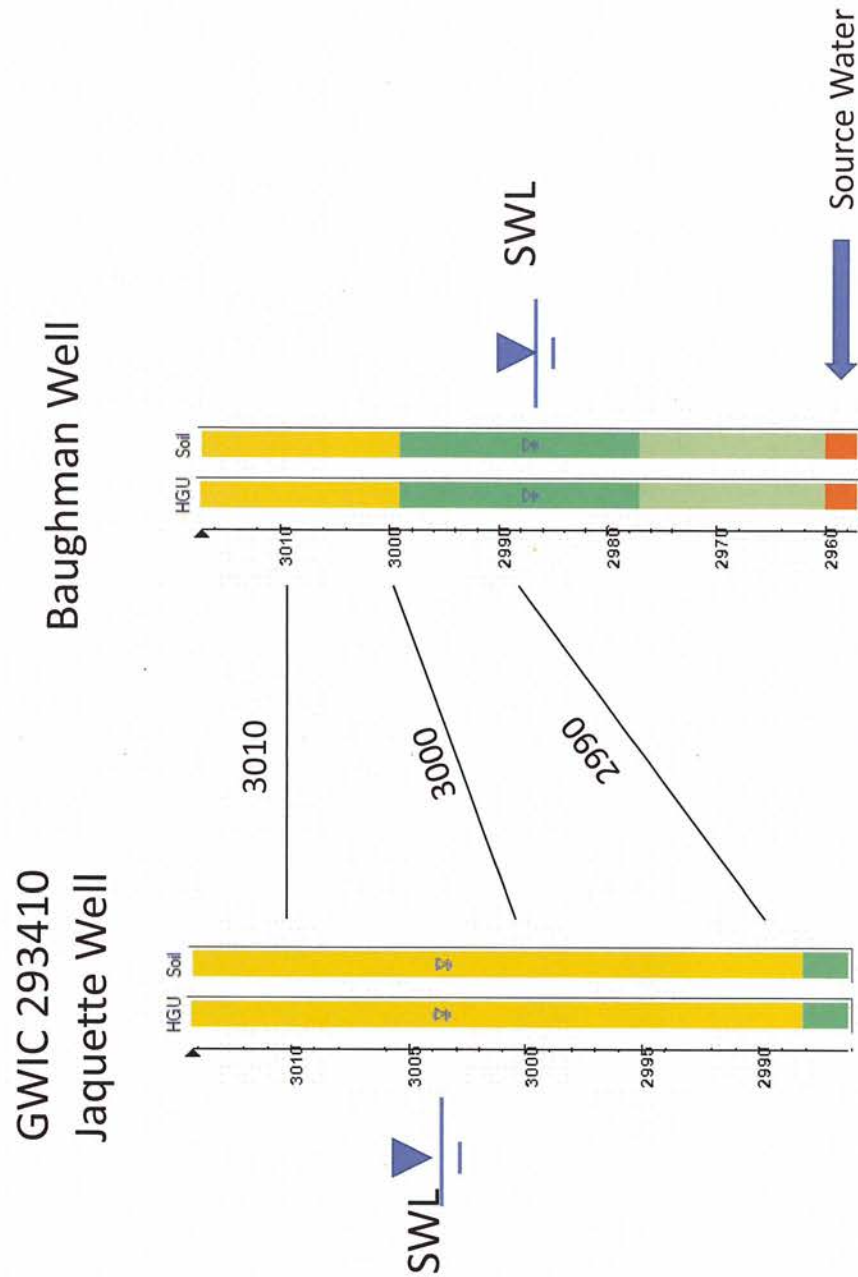
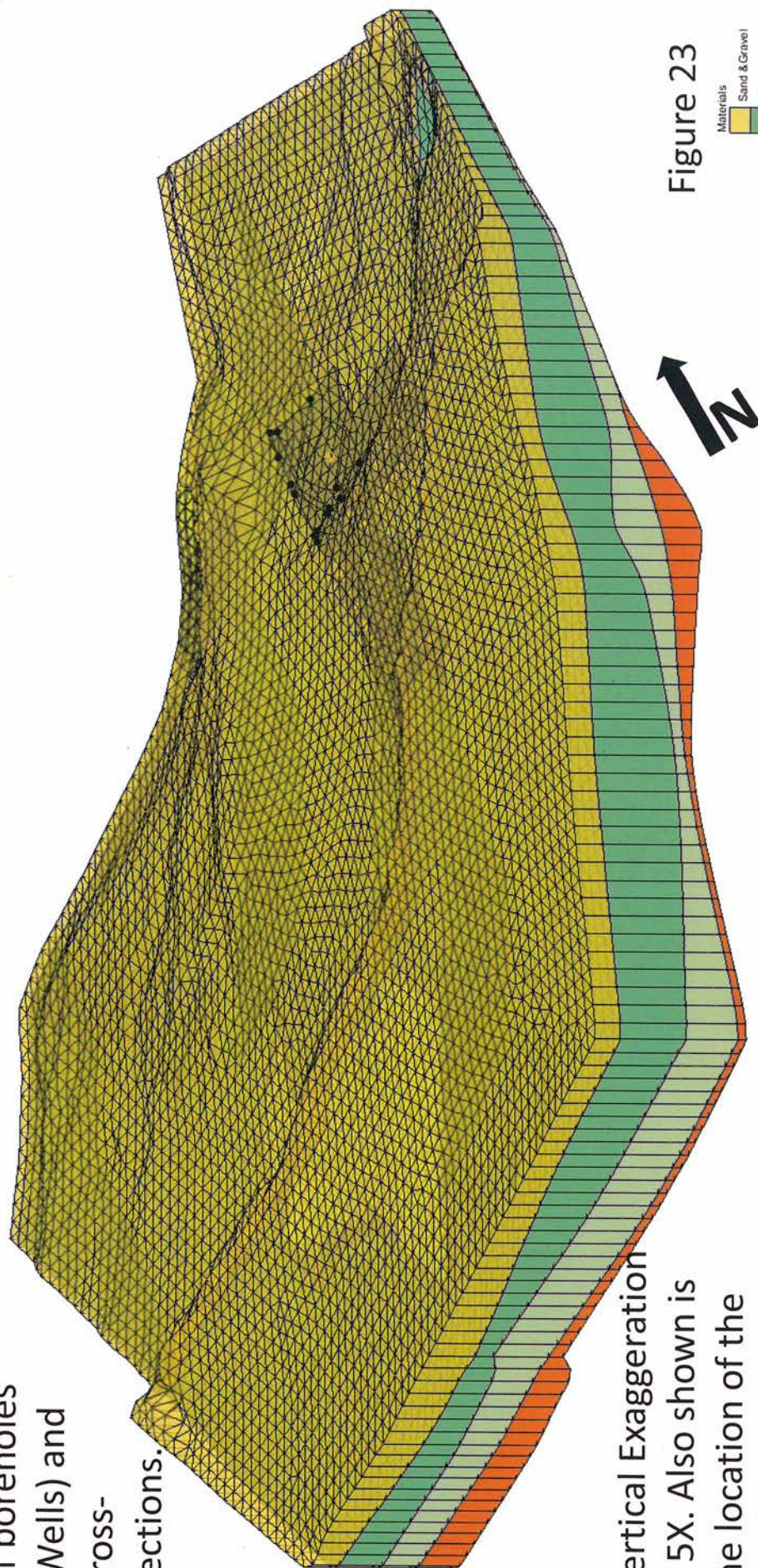


Figure 21

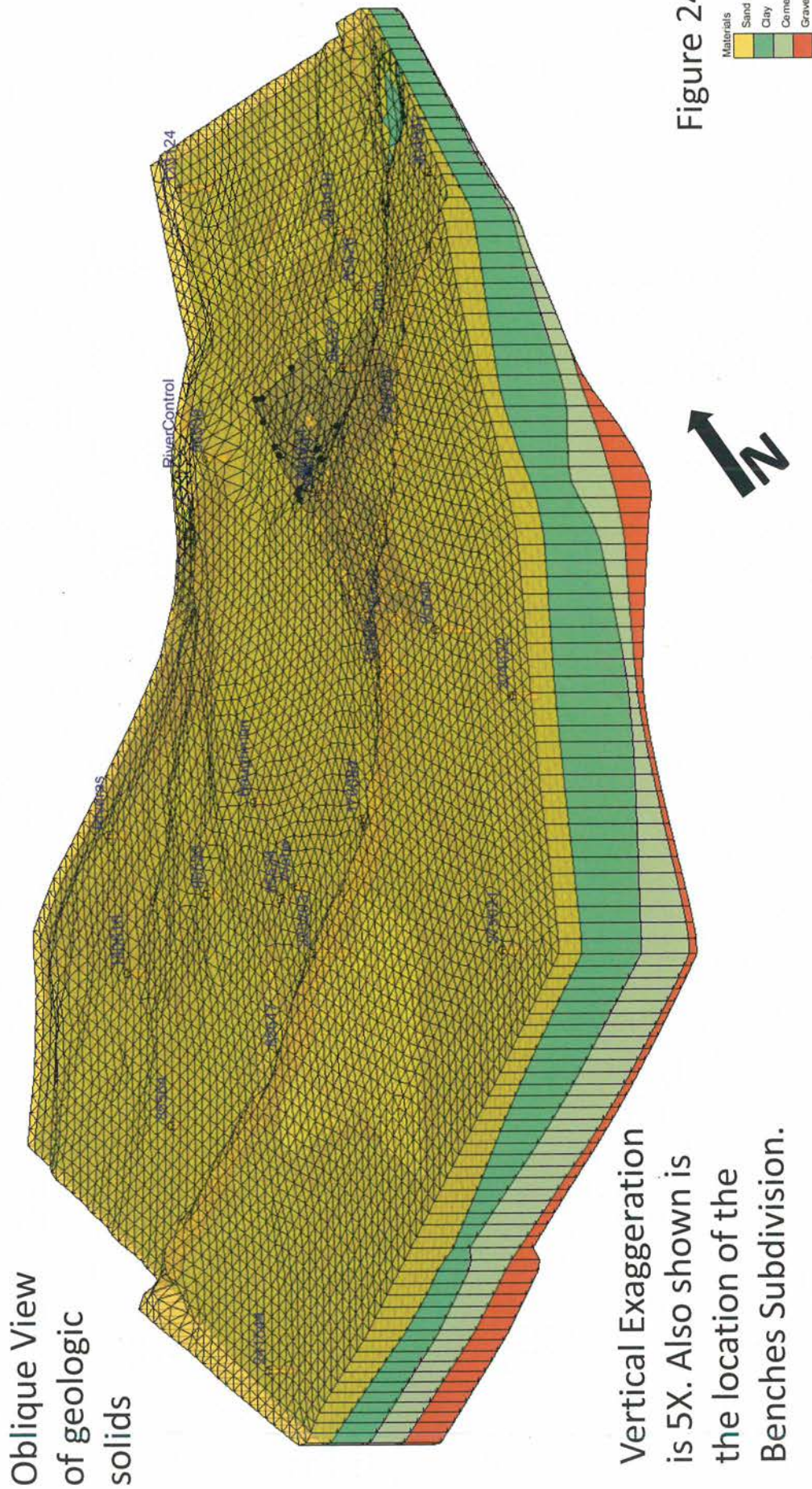
Oblique View
of boreholes
(Wells) and
cross-
sections.



Vertical Exaggeration
is 5X. Also shown is
the location of the
Benches Subdivision.

Figure 23





Oblique View
of Layer 1 Solid

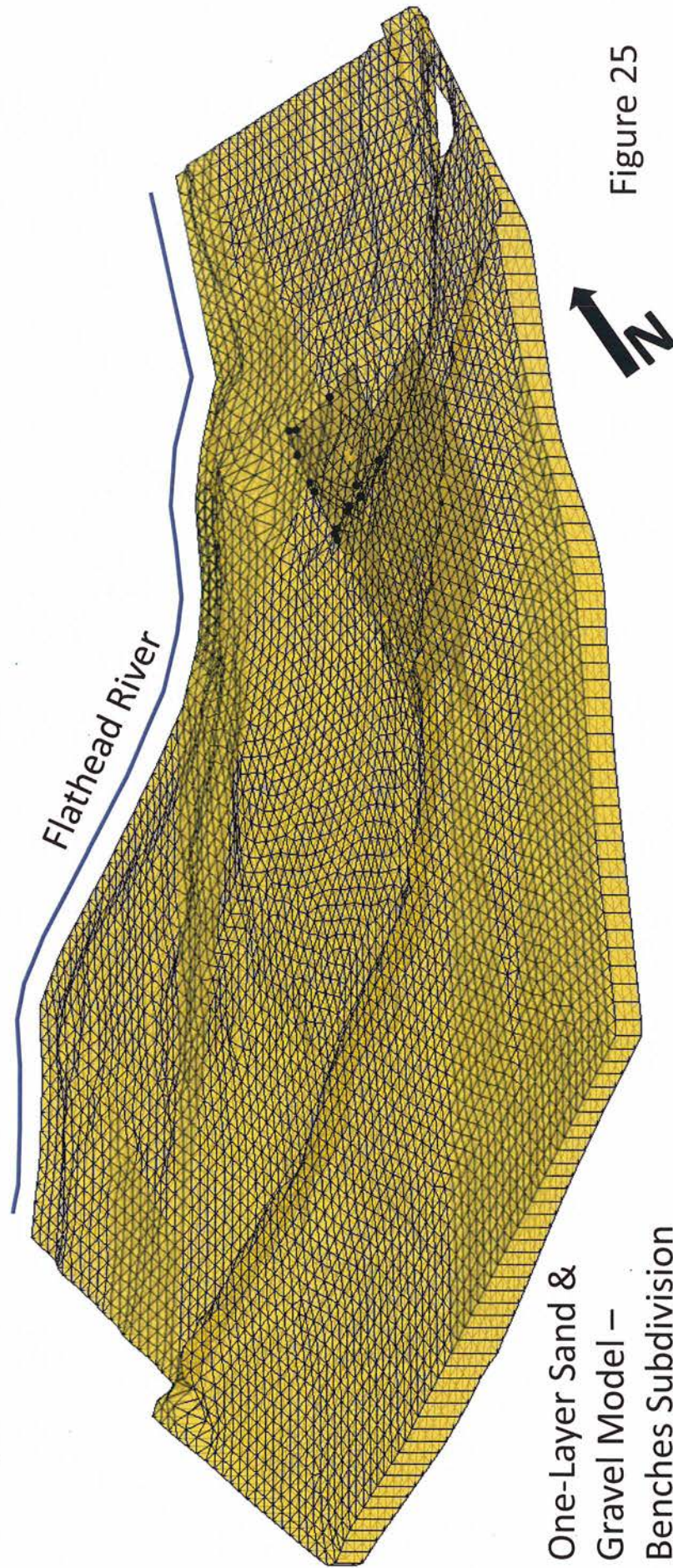
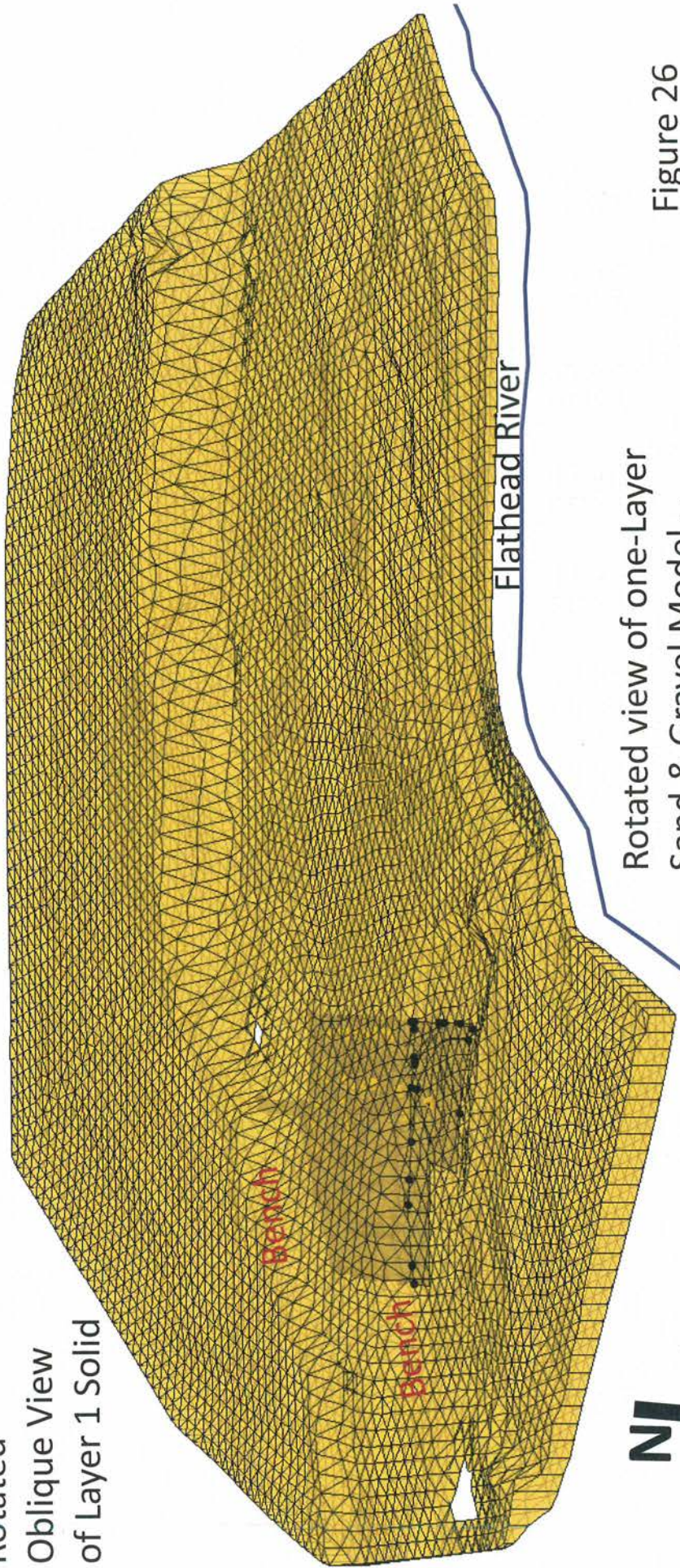


Figure 25

One-Layer Sand &
Gravel Model –
Benches Subdivision
Boundary for Scale

Rotated
Oblique View
of Layer 1 Solid



Rotated view of one-Layer
Sand & Gravel Model –
Benches Subdivision
Boundary for Scale

Figure 26

Vertical Exaggeration is 5X

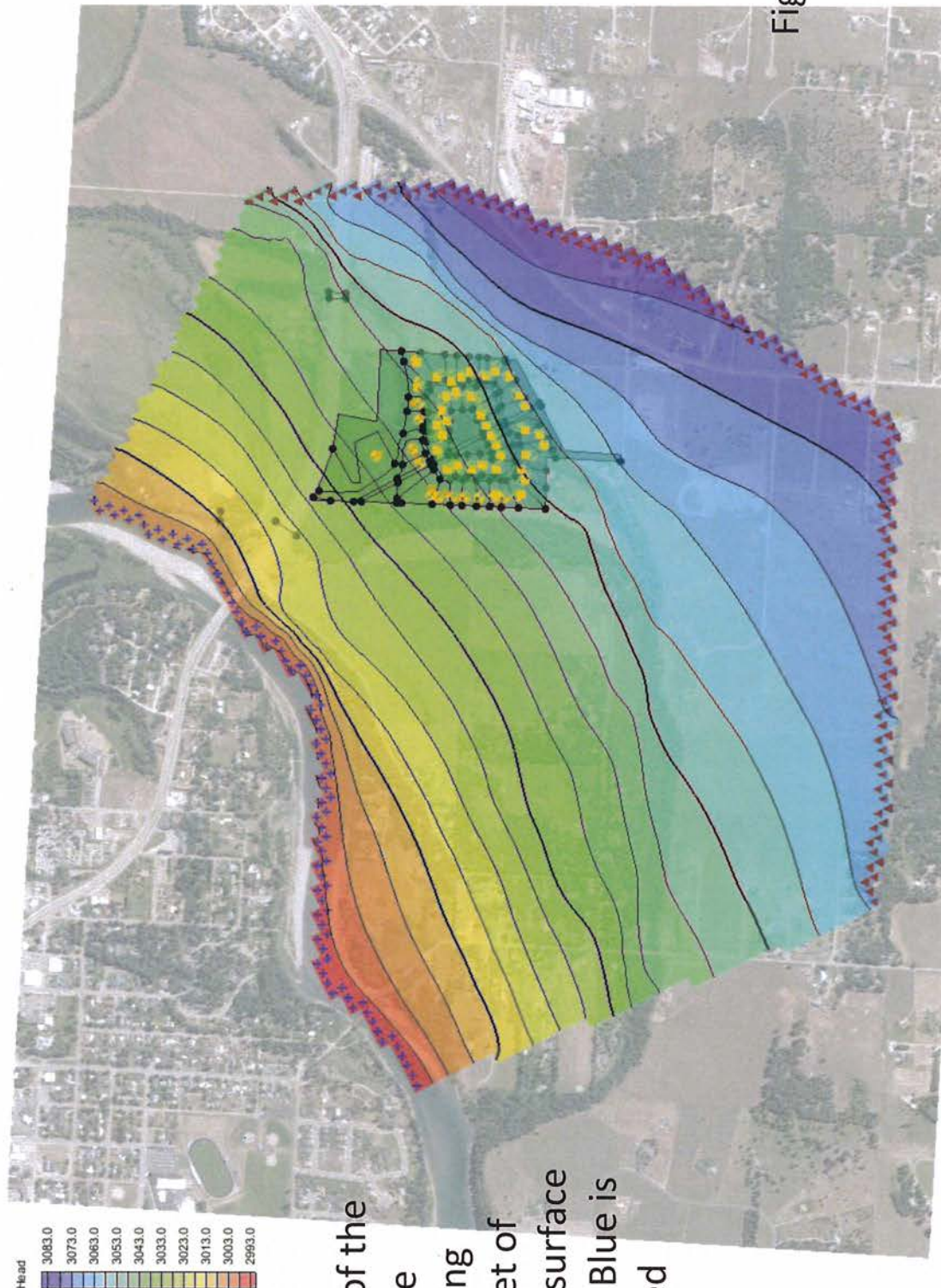


Figure 27

Contours of the water table representing every 5 feet of change in surface elevation. Blue is highest, red lowest.

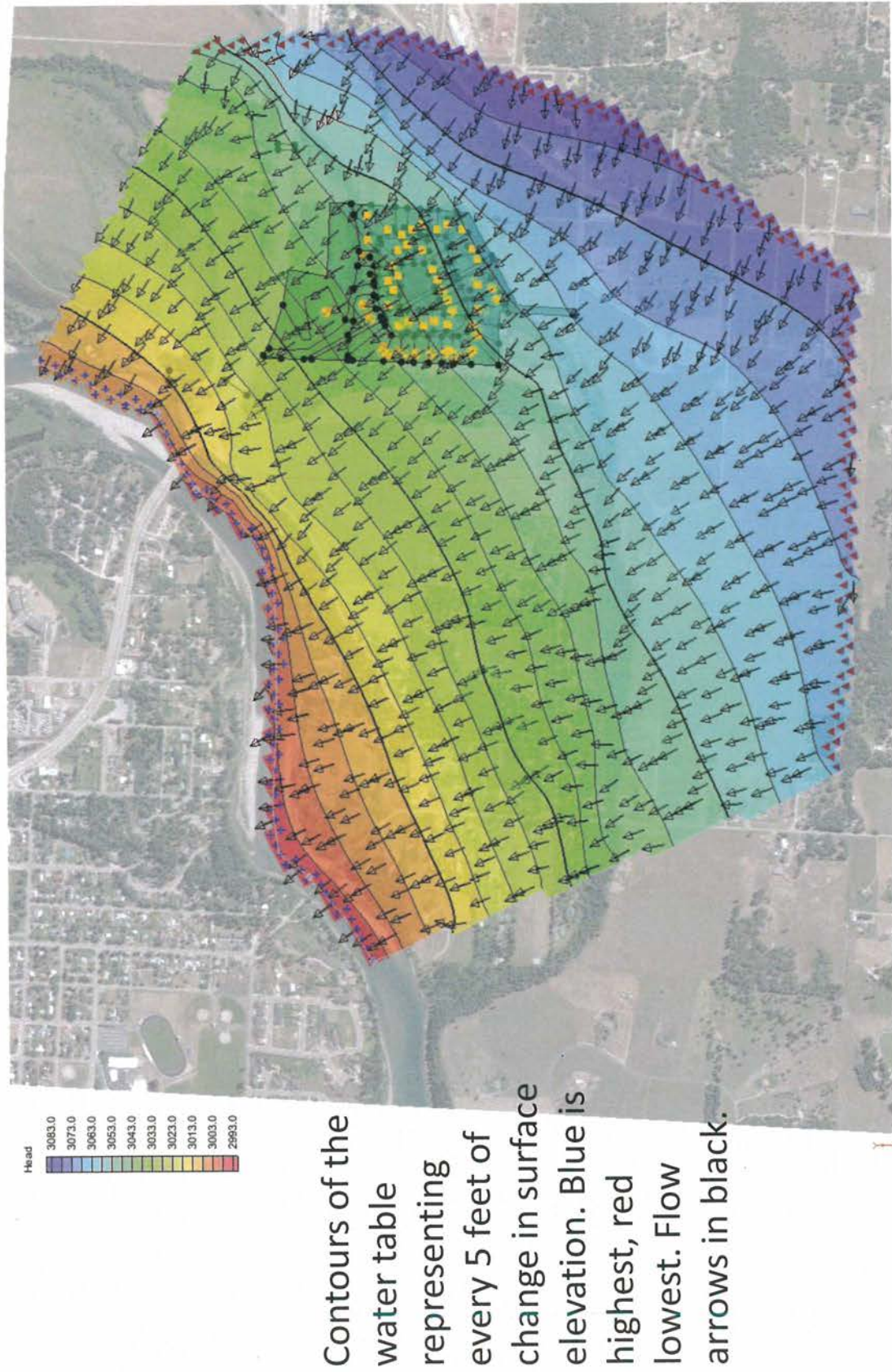


Figure 28

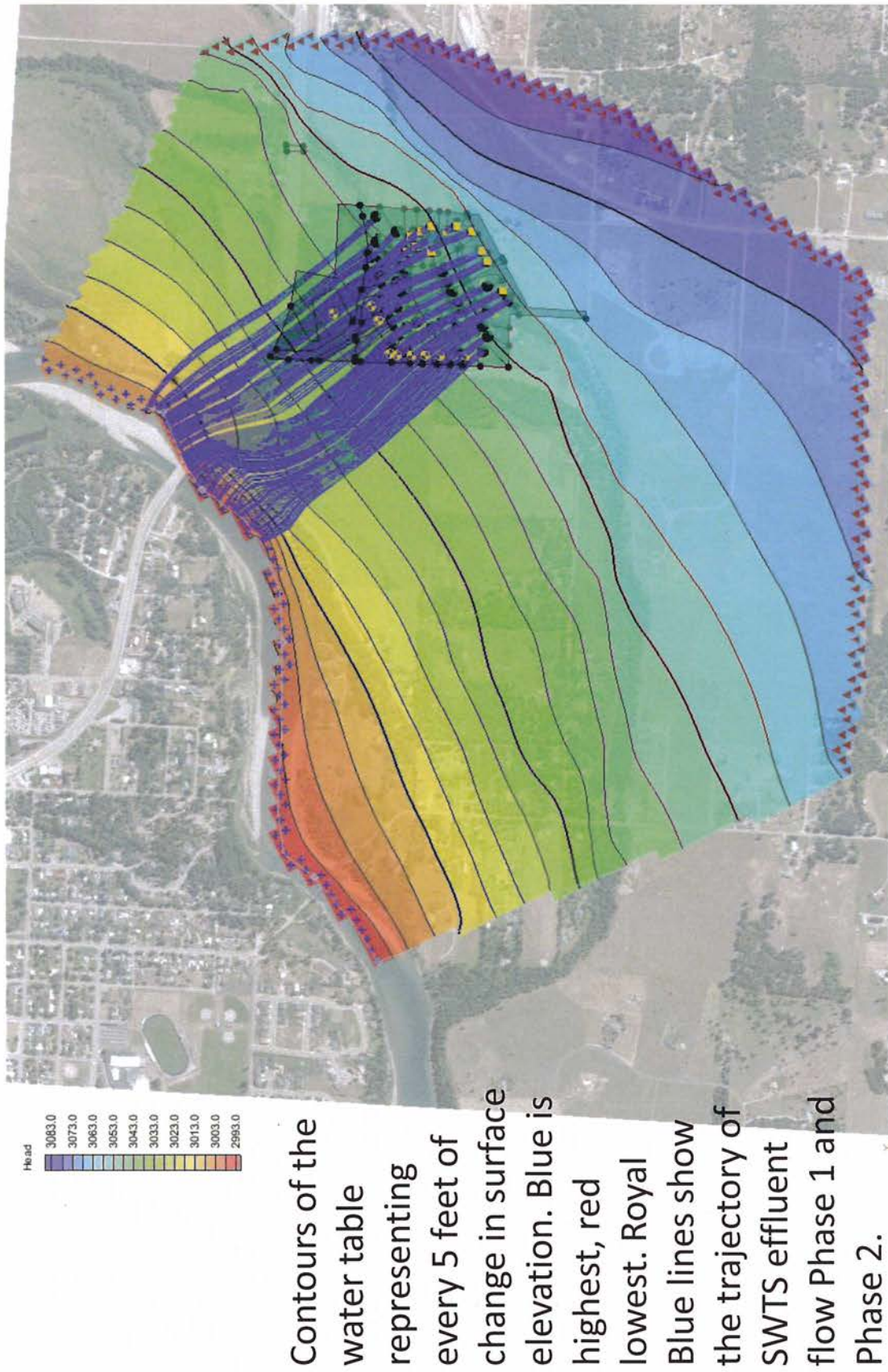


Figure 29

Flathead River Flood of 1964 taken from Hwy 2

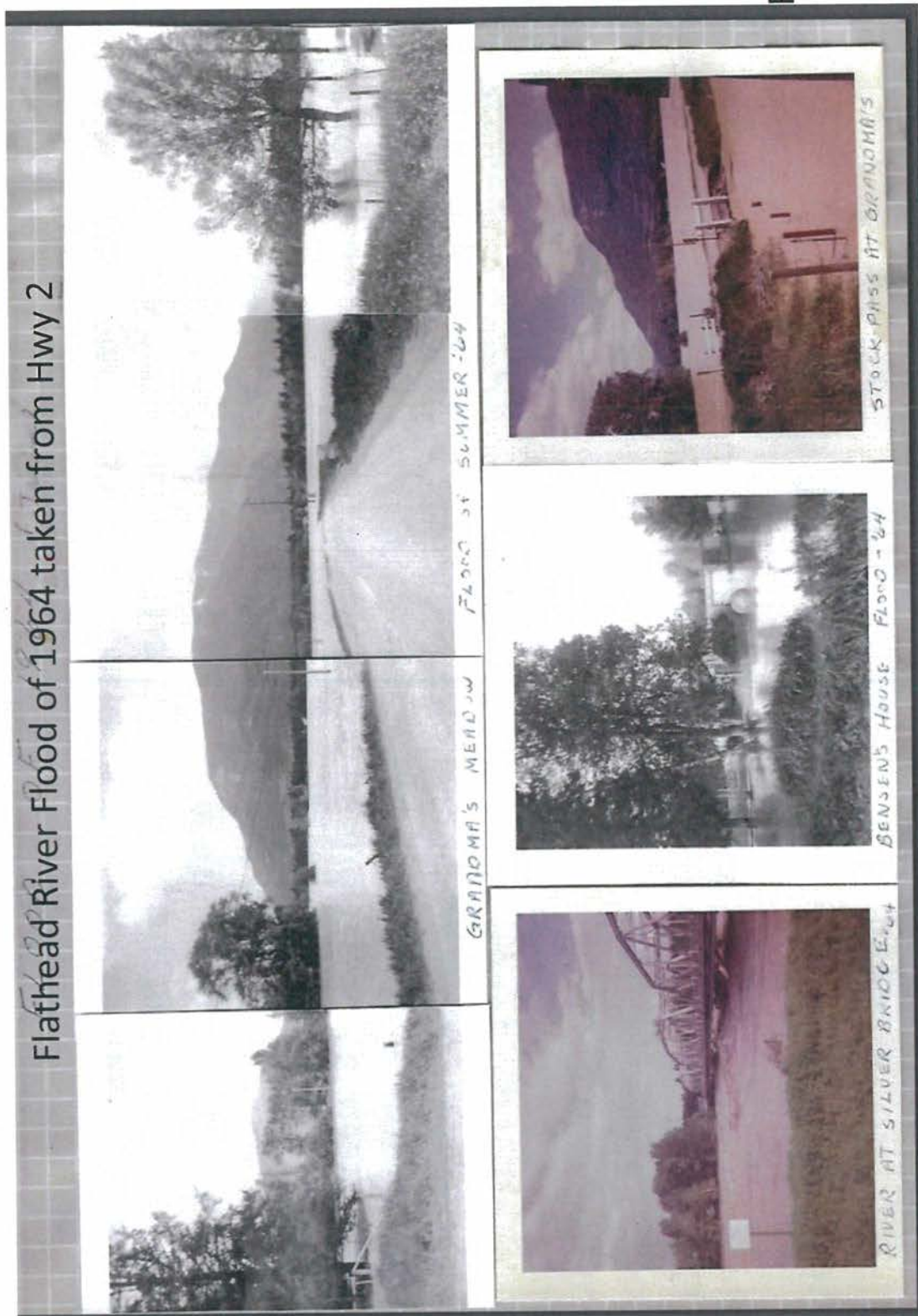


Figure 30

Conclusions & Recommendations

- The conceptual model for groundwater flow is incorrect!
- “First water” is located in the Shallow Aquifer. The SWTS’s sit in this aquifer and will influence the water quality of its groundwater and eventually reach the Flathead River.
- The direction of groundwater flow was erroneously estimated from three wells off of the Benches property boundary *from 2 different aquifers*.
- Where are the 3 required boreholes within the Benches Subdivision property (Non-Degradation Manual, Page 33)?
- Aquifer testing was performed on the water supply wells (depth of 227 feet in gravels) and then the hydraulic properties (hydraulic conductivity, K) were applied to sandy materials in the non-degradation analyses.
- It is *not* appropriate to use a “K” value tested in gravel (375.47 ft/day, used) and applying this to sandy materials in the Shallow Aquifer. This is where the septic systems will be placed, not in the lower gravels!

Figure 31

Conclusions & Recommendations -cont-

- Samples for Nitrates *should have* been collected from the Shallow Aquifer *within* the Benches Subdivision property.
- The assumed worst-case scenarios for non-degradation analysis are incorrect and would likely fail during a subsequent cumulative impact analysis. (Background flow direction is not representative and K-values are too high)
- A 10-bedroom lot (Lot 1) is located in the floodplain on soils with depths to groundwater less than 48 inches (Appendix Figure 10 and 11).
- Test pits within the Benches Subdivision indicate that the seepage rates are very high (2 inch/hr to 6 inch/hr). It won't take very long to reach "first water".
- It was stated: "The project (Benches Subdivision) is located approximately 600 feet away from the Flathead River *without* a surface-water connection" We have field evidence showing this is not true.

Figure 32



Non-Point Source Pollution: Septic Leachate

A SUMMARY OF SEPTIC LEACHATE STUDIES & MITIGATION EFFORTS IN MONTANA

December 2019

Overview/Background

Septic Leachate as a National Water Pollution Issue

Non-Point Source (NPS) pollution comes from runoff, precipitation, drainage, atmospheric deposition, seepage or modification of hydrology. NPS pollution is caused by rainfall or snowmelt moving over and through the ground. The runoff then picks up natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, and ground waters. NPS can include excess fertilizers, pesticides, oil, sediment, salts, as well as bacteria and nutrients from livestock and faulty septic systems. The US Environmental Protection Agency cites that states report NPS pollution is the leading remaining cause of water quality problems. These pollutants have harmful effects on drinking water supplies, recreation, fisheries and wildlife.

Septic systems consist of a tank that receives household effluent from toilets, sinks, showers and washing machines, and a drainfield. Septic 'leachate' is the liquid that remains after the wastewater drains through septic solids. More than one in five households in the US (~21.5 million) have individual or small community septic systems. Septic systems that are properly planned, designed, sited, installed, operated and maintained can achieve satisfactory wastewater treatment. However, systems that are sited in densities that exceed the treatment capacity of regional soils and systems that are poorly designed, installed, operated or maintained can cause problems. Poor drainage, surface ponding, and groundwater contamination can result. The most serious documented problems involve contamination of surface waters and ground water with disease-causing pathogens, pharmaceutical compounds and nitrates. Other problems include excessive nitrogen discharges and phosphorus pollution, which increases algal growth, nuisance aquatic plants and lowers dissolved oxygen levels. The US Bureau of Census has indicated that at least 10 percent of onsite systems are no longer working, with some communities reporting failure rates as high as 70 percent.

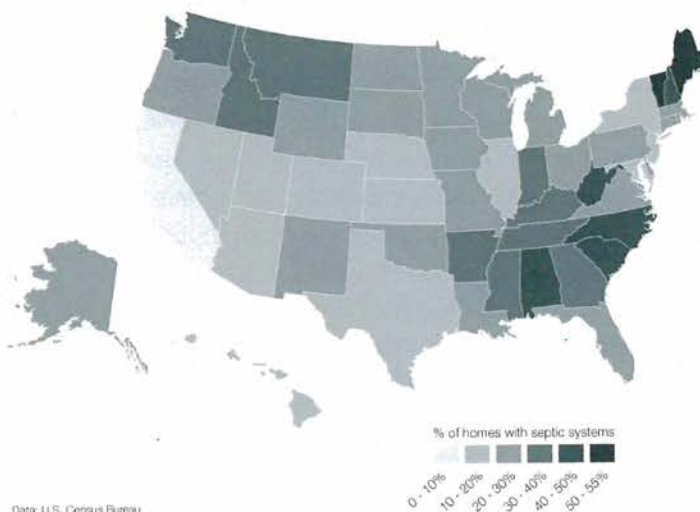


Figure 1: Percentage of Homes with Septic Systems Nationwide (US Census Bureau)

Best Management Practices have helped to address NPS by decreasing fertilization, better manage livestock and pet waste, install wells at greater distances from septic systems, and manage stormwater. However, decreasing septic leachate pollution is difficult because individuals are responsible for their own systems. For example, both hormones and pharmaceutical compounds were found in the groundwater near septic systems on Fire Island, New York, and in New England, according to a [January 2015 study](#) from U.S. Geological Survey. In Ohio, the state health department estimates that nearly one out of every three septic systems is failing. Researchers with the Baylor College of Medicine are discovering a resurgence of parasitic diseases in rural Alabama because of poor sanitation and



Non-Point Source Pollution: Septic Leachate

A SUMMARY OF SEPTIC LEACHATE STUDIES & MITIGATION EFFORTS IN MONTANA

septic system failure. Nationally, some 28,821 miles of streams are designated as “threatened or impaired” by the U.S. Environmental Protection Agency (EPA) because of septic systems.

Many things need to happen for septic tanks to operate as they are intended. The tank must be well designed. The drain field must be rigorously evaluated. Sandy or limestone soils are too porous and often allow waste to percolate too quickly into the water table. Soils that are too compact, like clay, cause the waste to flow directly into rivers and streams. The drain field must also be located far enough away from waterbodies that the soil microbes have time to digest. Too much density is also bad for septic as it overwhelms the treatment capacity of the soil or raises the water table too high. Even properly installed and maintained septic systems have a finite life expectancy – between 15-30 years depending on site specific conditions. Added up, failing septic systems and the threats they cause are a relatively new recognized and serious feature of the nation’s unaddressed water pollution problem.

In Montana, there is no requirement to maintain or inspect septic tanks. We have some of the lowest standards in the US. Oversight and enforcement of operational requirements to keep septic systems from leaking raw wastes onto the land or into ground and surface water is weak across much of outer suburban and rural America where most systems are installed. There are no federal rules that address septic systems, it is up to the states, counties and tribes to regulate, so there is a lot of variability in implementation and enforcement of standards. Montana Department of Environmental Quality provides standards for design, but local governments oversee the installation of septic systems.

Studies

Summary of Montana Septic Leachate Studies/Literature by Date

The bulk of existing studies and literature in Montana regarding septic leachate has been conducted in the Flathead Basin. On Flathead Lake alone, over half of the homes are on private septic fields.

- 2014 – *Investigation of Water Quality in Dayton, Montana (Bansak, T. and S. Rosso. Report to Project Partners by Flathead Biological Station and the Flathead Lakers).*
 - Environmental regulations exist to protect human health and surface and ground waters. Protective measures include proper construction and siting of septic systems and drainfields. Soil absorption sites in drainfields typically exhausted after 15-30 years. Dayton residents raised concern about possible water contamination, including septic systems that may be failing. The surface water sites at Dayton Creek and Winery Spring yielded some concerning results, particularly in for nutrients and bacteria found in ditches, including total coliform and *E. coli*. Phosphorus levels in the ditches were consistently higher than long term mean for the lake. Degraded water quality and presence of bacteria in the creeks and ditches pose threats to Flathead Lake water quality as well as human health. This may be caused by an interception of groundwater flow of septic leachate from seasonally inundated septic systems.
- 2012 - *Investigation of Septic Leachate to the Shoreline Area of Whitefish Lake (RRG-11-1474. Prepared for Whitefish County Water District by Whitefish Lake Institute).*
 - Study determined spatial and temporal extent of septic leachate to the shoreline area, and provided a scientific basis for identifying ecological threats to the lake, economic threats to the



Non-Point Source Pollution: Septic Leachate

A SUMMARY OF SEPTIC LEACHATE STUDIES & MITIGATION EFFORTS IN MONTANA

community, and potential public health risks resulting from water quality impacts. Presence of Optical Brightening Agents provide excellent indication of septic system failure. Study methods included fluorometry, dissolved organic carbon, fluorometry/DOC ratio, *E. coli* enumeration, human DNA biomarkers, conductivity, total dissolved solids, and GIS methodologies and tools. Septic leachate contamination confirmed at City Beach Bay, Viking Creek and Lazy Bay. The study also found medium - high potential for contamination in additional areas of the lake.

- 2007 - *Assessment of septic leachate: A survey of Lake McDonald, Glacier National Park (Hauer, F.R. FLBS Report 199-07. Prepared for Glacier National Park by Flathead Lake Biological Station, The University of Montana).*
 - Lake McDonald is one of the most oligotrophic large lakes in the US, with particularly low concentrations of phosphorus, low algal productivity, and very high water clarity. However, numerous locations near shoreline homes/cottages have elevated levels of algal growth, which could be indicative of slow leaking septic systems. In a dye study, evidence of leaking septs was evident; in one case a complete septic failure was confirmed. Recommendations include connecting homes within the central system area within 5 years and ensuring all septic leach fields are at least 200 meters away from the shoreline.
- 1997 – *Water Quality Data and Analyses to Aid in the Development of Revised Water Quality Targets for Flathead Lake, Montana (Stanford, J.A., B.K. Ellis, J.A. Craft and G.C. Poole. FLBS Report 142-97. Flathead Lake Biological Station, University of Montana).*
 - Deterioration of water quality demonstrated by long-term analyses; management of nutrient loading to preventing excess algal blooms in the water column and shoreline is the primary water quality concern in Flathead Lake. Anthropocentric nutrient loading must be reduced to reverse trends of increasing primary productivity. Algae growths are heaviest in areas of high nutrient input from shoreline sources, including septic systems.
- 1996 – *Contribution of Nearshore Nutrient Loads to Flathead Lake (Makepeace. S. and B. Mladenich. Prepared for US EPA by the Confederated Salish & Kootenai Tribes Natural Resources Department).*
 - Diminished water quality indicators increasing since 1977; increased algal blooms and decreased water clarity. Onsite septic systems contribute to phosphorus loading, accounting for 2-6 percent of total loading to lake. Proactive attempts to reduce nutrient loading counteracted by growth within basin. Report does not address nutrient loading that may occur during failure of septic systems.

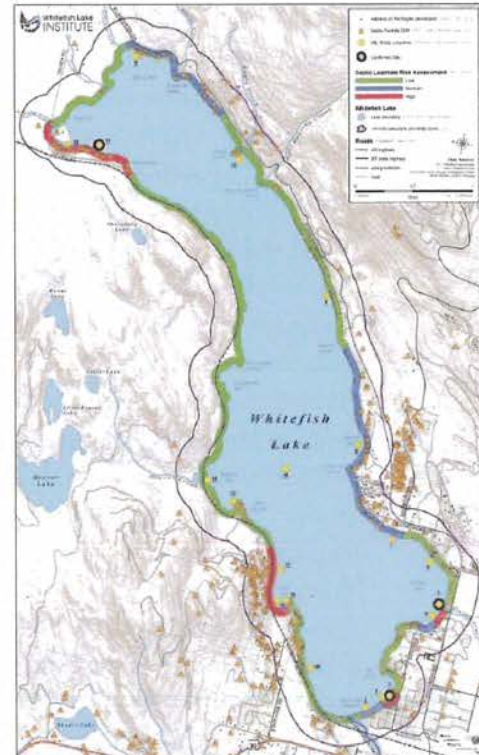


Figure 2: Septic Leachate Contamination & Risk Map



Non-Point Source Pollution: Septic Leachate

A SUMMARY OF SEPTIC LEACHATE STUDIES & MITIGATION EFFORTS IN MONTANA

- 1989 - *Whitefish County Water & Sewer District Facilities Plan* (Christian, Spring, Sielbach & Associates).
 - Septic drainfields causing leachate to enter lake; continued use not viable. Study found 10% failed septic systems and 22% that were not performing properly. Fourteen sites were less than 100' from the lake. Total phosphorus entering soil from septic tanks is 46% of current balance of lake.
- 1989 - *A Study of Shoreline Septic Leachates in Echo Lake, Montana* (Hauer, F.R. FLBS Report 104-89. Flathead Lake Biological Station, the University of Montana).
 - Echo Lake appears to have a very close association with groundwater. Increase in algal blooms, aquatic plant growth and fish kills. The lake appears to need only relatively small additional nutrient loadings to hasten the eutrophication process. Interconnectivity of lake to surrounding groundwaters may be occurring deeper in lake (than along shoreline as was found to be the case in Flathead Lake).
- 1988 - *Study of Shoreline Sewage Leachates in Flathead Lake, Montana* (Hauer, F.R. FLBS Report 099-88. Flathead Lake Biological Station, the University of Montana).
 - Study conducted lake-wide evaluation of seeps and springs to identify locations most susceptible to increased nutrients as a result of failing septic systems. Septic leachates important nutrient source along shorelines where groundwaters flow into the lake, particularly during times when water circulation is reduced. 35 sites were identified via fluorometry, conductivity or high algal growth to warrant further investigation.
- 1986 - *Investigation of Septic Contaminated Groundwater Seepage at Whitefish Lake* (Jourdonnais et al. Flathead Lake Biological Station).
 - A study sponsored by the Whitefish County Water and Sewer District and conducted by the investigated septic contaminated groundwater seepage as a nutrient source to Whitefish Lake. Evidence of septic contaminated groundwater and surface water along shoreline locations around the lake detected. This report was instrumental in providing baseline data for comparison in 2012.
- 1986 - *Final Progress Report of an Evaluation of Water Quality and Shoreline Septic Leachates in Echo Lake, Montana* (Hauer, F.R., J.A. Stanford and J.H. Jourdonnais. FLBS Report 089-86. Flathead Lake Biological Station, the University of Montana).
 - Echo Lake, near Big Fork experienced significant development along shoreline areas in the 1980s. Study results indicated an increase in productivity resulting in anoxic conditions and algal blooms within Echo Lake.
- 1985 - *Verification of Shoreline Sewage Leachates in Flathead Lake, Montana* (Jourdonnais J.S. and J.A. Stanford. FLBS Report 082-85. Flathead Lake Biological Station, the University of Montana).
 - Documents nutrient pollution and impacts such as nuisance and harmful algae blooms to Flathead Lake from domestic sewage. Detection of leachates in surface waters during low pool provided information on general locations of problem areas along the shoreline, including Lakeside and Polson Bay. This study also increased the body of knowledge on sampling for septic leachates, including the use of seepage meters, fluorometry, and detection of Optical Brightening Agents as indicator. 9/14 sites were found to have relatively high levels of septic leachates.
- 1984 - *Laboratory Analysis of Color Infrared Aerial Photographs* (US EPA).



Non-Point Source Pollution: Septic Leachate

A SUMMARY OF SEPTIC LEACHATE STUDIES & MITIGATION EFFORTS IN MONTANA

- Aerial photos were stereoscopically examined for indications of malfunctioning septic systems. And determined several septic systems failing along lakeshore of Whitefish Lake. Local, state and federal agencies concerned over deteriorating water quality of Whitefish Lake. EPA study indicated significant drainfield failures; 85 possible failed septic systems of the 147 investigated.
- 1981 – *Flathead County Sanitarian Dye Studies (Whitefish County Water and Sewer District)*.
 - Dye tests confirmed that septic tank effluent was entering Whitefish Lake from a number of sites along the eastern shore. Also found a number of additional septic failure areas beyond the lakeshore.

Recommendation/Moving Forward

After completing a report on Whitefish Lake (2012), the Whitefish Lake Institute, the City of Whitefish, and other partners worked to address the septic leachate issue at the local level. The City offered affected neighborhoods deferred annexation and other incentives. Additionally, the City of Whitefish, DNRC, Flathead Conservation District and the Whitefish County Water District funded Preliminary Engineering Reports for two neighborhoods which detailed mitigation strategies and associated cost estimates. However, due to funding complexities, the need for a Rural Special Improvement District, and the involvement of multiple jurisdictions, among other concerns, mitigation of the issue has not moved forward to date.

Recently, the Whitefish Lake Institute drafted septic leachate “study bill” language for consideration of the Flathead Basin Commission, who have prioritized non-point source pollution in strategic planning efforts. The Flathead Basin Commission is now working to coalesce a group of Flathead County legislators to carry a septic leachate study bill in the next legislative session.

The proposed study bill is not intended to further explore this issue scientifically. There exists a preponderance of evidence locally, regionally and nationally that septic systems create water quality issues. Rather, the study bill is intended to identify the socio-economic hurdles that are preventing mitigation of this issue in Montana.

Your support in this effort will ensure that this issue will be closely examined, and that solutions will be identified to fully inform local and state government so that tools will become available to address this concern to the world class aquatic ecosystems that we all share.

October 29, 2021

To: Mayor & Council

From: City Manager Nicosia

RE: Resolution # 1867 – Adopting Comprehensive Urban Area Transportation Plan

Here is a summary of the changes made by the engineers, City staff and MDOT after reviewing and considering all of the recommended changes and public comment between the last draft and the final:

- Updated the date on front cover and chapter covers to read "November 2021"
- Revised content within Chapter 2: Public Engagement to describe the second open house in more detail
- Added text describing the PAC and its role within Chapter 2: Public Engagement -Corrected various typos
- Amended page 86 from "can" to "should."

Staff recommends adoption of Resolution # 1867 – Final Adoption of the Comprehensive Urban Area Transportation Plan

RESOLUTION NO. 1867

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF COLUMBIA FALLS
FORMALLY ADOPTING THE NOVEMBER 2021 COMPREHENSIVE URBAN AREA
TRANSPORTATION PLAN

WHEREAS, the City of Columbia Falls was designated as urban by the State of Montana for Transportation purposes; and

WHEREAS, the Columbia Falls Urban Transportation Committee was formed shortly thereafter including City, County and State Department of Transportation officials; and

WHEREAS, the City of Columbia Falls wished to adopt a Comprehensive Urban Area Transportation Plan; and

WHEREAS, the State of Montana approved the plan to adopt a Columbia Falls Urban Area Transportation Plan; and

WHEREAS, the City, County and State followed the process to complete a Comprehensive Urban Area Transportation Plan, including significant public outreach and comment.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF COLUMBIA FALLS, AS FOLLOWS:

SECTION 1. The City Council of the City of Columbia Falls hereby adopts the attached November 2021 Comprehensive Urban Area Transportation Plan, Exhibit A.

PASSED AND ADOPTED BY THE CITY COUNCIL OF COLUMBIA FALLS THIS 1st DAY OF NOVEMBER, 2021. THE COUNCIL VOTING AS FOLLOWS:

AYES:

NOES:

ABSENT:

City Clerk

APPROVED BY THE MAYOR OF COLUMBIA FALLS, MONTANA THIS __ DAY OF NOVEMBER, 2021.

Mayor

ATTEST:

City Clerk



NOVEMBER 2021





CONTENTS

Chapter 1. Introduction	1
Chapter 2. Public Engagement	9
Chapter 3. Existing Conditions	17
Chapter 4. Projected Conditions Analysis	45
Chapter 5. Pavement Management	55
Chapter 6. Project Development and Identification	67
Chapter 7. Project Recommendations Prioritization	77
Chapter 8. Active Transportation	83
Chapter 9. Financial Plan	89
Chapter 10. Policy Plan	99
Appendix A: Public Engagement Survey Comments	A-1
Appendix B: Study Area Traffic County Locations	B-1
Appendix C: Urban Routes Pavement Summary	C-1
Appendix D: Quiet Zone	D-1
Appendix E: Intersection Analysis	E-1

Figure 1.1: Columbia Falls Urban Area Transportation Plan Study Area	5	Figure 3.19: Columbia Falls Schools	42	Figure 10.7: Minor Collector Cross Section	107
Figure 2.1: Interactive Map Comment Types	12	Figure 3.20: Mountain Climber Bus Stops	43	Figure 10.8: Minor Collector Cross Section (shared-use path)	107
Figure 2.2: Bike/Ped-Related Comments ..	13	Figure 4.1: 2040 AADT Growth	49	Figure 10.10: Access and Mobility	108
Figure 2.3: Traffic-Related Comments	14	Figure 4.2: 2040 AADT (inset)	50	Figure 10.9: Local Road Cross Section ..	108
Figure 2.4: Traffic-Related Comments (US Highway 2 & MT 40)	15	Figure 4.3: Existing Intersection Level of Service	53	Figure 10.11: Speed/Pedestrian Injury Severity Correlation	111
Figure 3.1: Job Inflow/Outflow (2017 ACS)	22	Figure 4.4: 2040 Intersection Level of Service	54	Figure 10.12: Multi-Lane Roundabout – King Avenue and 40th Street, Billings, MT	115
Figure 3.2: Commute Destinations from Columbia Falls	22	Figure 5.1: Pavement Condition – Preventative Maintenance vs. Rehabilitation	57	Figure 10.13: Hybrid Multi-lane Roundabout (2x1) – E North Pacific Avenue and Airway Boulevard, Belgrade, MT	115
Figure 3.3: Functional Class Access and Mobility	23	Figure 5.2: Distribution of Paved Roadways by RSL	58	Figure 10.14: Single-lane Roundabout – Smelter Avenue and Division Road, Great Falls, MT	115
Figure 3.4: Functionally Classified Roadways in the Study Area	24	Figure 5.3: Cyclical Pavement Management Program Process	60	Figure 10.15: Mini Roundabout – Toole Avenue and Scott Street, Missoula, MT ..	115
Figure 3.5: Functionally Classified Roadways in the Study Area Inset	25	Figure 5.4: Spot Reconstruction and Overlay Projects	62	Figure 10.17: Roundabouts by State	116
Figure 3.6: Highway Systems in the Study Area	27	Figure 5.5: Pavement Management Districts and Prioritization Tiers	64	Figure 10.16: Types of Roundabouts in the U.S. (NCHRP)	116
Figure 3.7: Roadway Maintenance in Study Area	29	Figure 6.1: Transportation System Management Projects	71	Figure 10.18: Roundabouts by Year Constructed	117
Figure 3.8: 2018 Traffic Counts	30	Figure 6.2: Major Street Network Projects	74	Figure 10.19: Vehicle Conflict Point Comparison	118
Figure 3.9: 2018 Traffic Counts Inset	31	Figure 6.3: Corridor Preservation Projects	76	Figure 10.20: Pedestrian Conflict Point Comparison	118
Figure 3.10: Crashes by Severity (2014–2018)	32	Figure 7.1: TSM Prioritization	81	Figure D.1: BNSF Mainline at 2nd Avenue WN	D-4
Figure 3.11: Crashes by Type (2014–2018)	33	Figure 7.2: MSN Prioritization	82	Figure D.2: BNSF Mainline at 4th Avenue	D-5
Figure 3.12: Crash Density and Severity (2014–2018)	34	Figure 8.1: Proposed Bicycle and Pedestrian Improvements	87	Figure D.3: 2nd Avenue Quiet Zone Typical Section	D-6
Figure 3.13: Crashes by Intersection (2014-2018)	35	Figure 10.1: Proposed City of Columbia Falls Functional Classification Map	103	Figure E.1: 12th Avenue W and 13th Street W	E-4
Figure 3.14: Passenger Volumes at Kalispell-Glacier Park International Airport ..	36	Figure 10.2: Proposed City of Columbia Falls Functional Classification Map (inset)	104	Figure E.2: Talbot Road and 4th Avenue W (four-way intersection)	E-5
Figure 3.15: Truck Traffic Volumes and Major Routes	37	Figure 10.3: Major Collector Cross Section	105	Figure E.3: Talbot Road and 4th Avenue W (compact roundabout)	E-6
Figure 3.16: Railroad Crossings in the Study Area	38	Figure 10.4: Major Collector Cross Section (Shared-Use Path)	105	Figure E.4: US Highway 2 and Nucleus Avenue	E-8
Figure 3.17: Facility Types in Columbia Falls	39	Figure 10.5: Major Collector Cross Section (bike lanes)	106		
Figure 3.18: Bicycle and Pedestrian Facilities and Crashes	41	Figure 10.6: Major Collector Cross Section (Downtown/ Nucleus Avenue)	106		

TABLES

Item No.11.

Table 1.1: Columbia Falls Urban Area Transportation Plan Goal Areas	4	Table 4.3: Level of Service Thresholds by Intersection Delay	48	Table 7.1: Columbia Falls Urban Area Transportation Plan Project Prioritization Criteria	79
Table 2.1: Top 10 Comment Clusters	16	Table 4.4: 2020 AM and PM Peak Hour Intersection Level of Service	51	Table 7.2: TSM Prioritization	80
Table 3.1: Regional Population Growth	20	Table 4.5: 2040 AM and PM Peak Hour Intersection Level of Service	51	Table 7.3: MSN Prioritization	80
Table 3.2: Population Age Cohorts	20	Table 5.1: Roadway System Miles by Recommended Treatment	58	Table 9.1: Montana's Urban Areas	92
Table 3.3: Housing Stock	20	Table 5.2: Major Rehabilitation and Reconstruction Projects	59	Table 9.2: BaRSAA Increases	97
Table 3.4: Largest Employers in Flathead County	21	Table 5.3: Spot Reconstruction and Overlay Projects	61	Table 10.1: Total Mileage by Functional Classification – Existing and Proposed Functional Classification Maps	101
Table 3.5: Largest Industries in Flathead County	21	Table 5.4: Percentage of Roadway Miles Eligible for Chip Sealing by Tier and RSL for each PMD	63	Table 10.2: Characteristics of Good and Poor Access Management	109
Table 3.6: Commute Mode (ACS 2017)	22	Table 5.5: Recommended Preventative Maintenance Program – Cycle 1 (present-day costs)	66	Table 10.3: Access Spacing Guidelines	111
Table 3.7: Existing Functional Classification Mileage and FHWA Recommended Ranges	28	Table 6.1: Transportation System Management Projects	70	Table 10.4: Traffic Calming Toolbox	113
Table 3.8: High Crash Intersections (2014–2018)	33	Table 6.2: Major Street Network Projects	73	Table 10.5: Roundabout Type Comparison	114
Table 3.9: Existing Multimodal Facilities	39	Table 6.3: Corridor Preservation Projects	75	Table 10.6: Montana Roundabouts by Location	116
Table 3.10: Mountain Climber Service Indicators	40			Table 10.7: Comparison of Roundabouts to Other Traffic Control Types	117
Table 3.11: Transit Ridership by Route	40			Table D.1: Quiet Zone Cost Estimates	D-7
Table 4.1: Twenty Highest Count Locations by 2040 AADT Estimate	47			Table E.1: Nucleus Avenue & 5th Street Intersection Operations	E-9
Table 4.2: Population Projections	48			Table E.2: Nucleus Avenue & 7th Street Intersection Operations	E-9

A

AADT (annual average daily traffic) 28
 ACS (American Community Survey) 20
 ADA (Americans with Disabilities Act of 1990) 86
 ASCT (Adaptive Signal Control Technology) 119
 AVL (Automatic Vehicle Location) 120

B

BaRSAA (Bridge and Road Safety and Accountability Act) 97

C

CMAQ (Congestion Mitigation and Air Quality Improvement Program) 94
 CO (carbon monoxide) 94

F

FAST Act (Fixing America's Surface Transportation Act) 91
 FLAP (Federal Lands Access Program) 94
 FRA (Federal Railroad Administration) D-3
 FTA (Federal Transit Administration) 96
 FY (fiscal year) 93

H

HSIP (Highway Safety Improvement Program) 93
 HSSRA (Highway State Special Revenue Account) 91

I

ITS (Intelligent Transportation Systems) 101

L

LOS (Level of Service) 48

M

MACI (Montana Air and Congestion Initiative) 94
 MAP-21 (Moving Ahead for Progress in the 21st Century Act) 93
 MCA (Montana Code Annotated) 91
 MRFL (Montana Rail Freight Loan Program) 96
 MSN (Major Street Network) 59

N

NCHRP: National Cooperative Highway Research Program 116
 NHFP (National Highway Freight Program) 93
 NHPP (National Highway Performance Program) 91
 NHS (National Highway System) 26

P

PAC (Project Advisory Committee) 3
 PM10 (particulate matter 10) 94
 PMD (Pavement Management Districts) 61
 PMP (pavement management program) 57

R

RLC (Red Light Cameras) 119
 RM (Ramp Meters) 119
 RSL (Remaining Service Life) 57
 RT (Recreational Trails) 91

S

SSMs (supplemental safety measures) 70
 STBG (Surface Transportation Block Grant Program) 91
 STIP (State Transportation Improvement Program) 91
 STPB (Surface Transportation Program – Bridge Program) 91
 STPP (Surface Transportation Program Primary Highways) 91
 STPS (Surface Transportation Program Secondary Highways) 91
 STPU (Surface Transportation Program Urban Highways) 91

T

TA (Transportation Alternatives) 91
 TCP (Transportation Coordination Plan) 40
 TIFIA (Transportation Infrastructure Finance and Innovation Act) 95
 TIS (Traffic Impact Study) 109
 TSM (Transportation System Management) 69
 TSP (Transit Signal Priority) 119

U

UPP (Urban Pavement Preservation Program) 65
 U.S.C. (US Code) 91

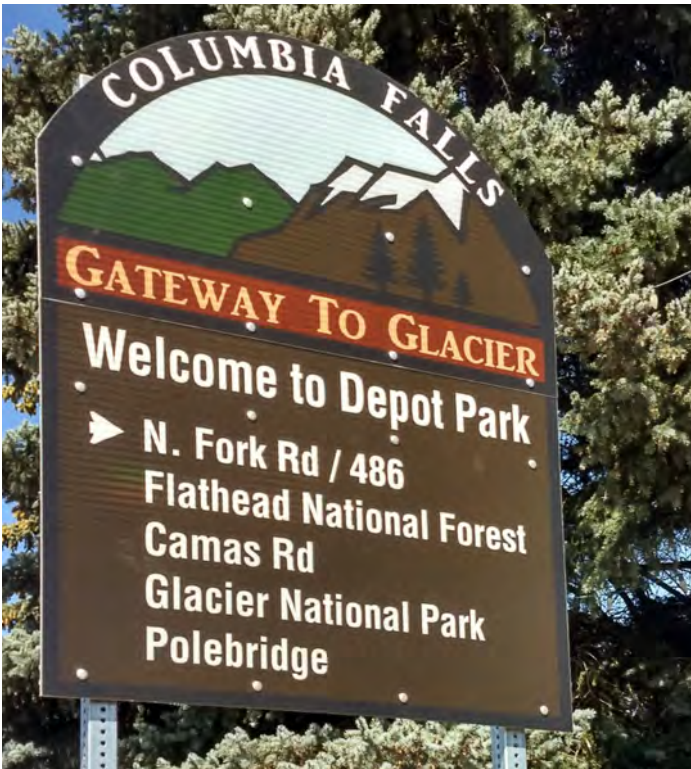


NOVEMBER 2021



ENGINEERING, REIMAGINED

Chapter 1. Introduction



The Columbia Falls Urban Area Transportation Plan is designed to guide transportation planning activities by setting forth direction and strategies to help shape the City's and region's transportation network through the year 2040. It considers all modes of transportation including driving, walking, bicycling, transit, rail, and air to create a consolidated vision for the future. The Area Transportation Plan was developed through a collaborative approach involving stakeholders, agency partners, and community members, and maps the development of the transportation system using the community's goals and priorities as a foundation.

BACKGROUND

The City of Columbia Falls has historically served as the industrial hub of Flathead County and provides an important tourism gateway to Glacier National Park and the North Fork Valley. The City enjoys immediate access to the Flathead River, Hungry Horse Dam and Reservoir, the Bob Marshall Wilderness Complex, the Flathead National Forest, several golf courses, and the Whitefish Mountain Ski Resort.

Columbia Falls is bounded by the Flathead River to the east and south and by Burlington Northern railroad tracks to the north. These factors have somewhat restricted the urban growth in these three directions, and consequently,

the City's physical expansion has been primarily to the west. The City is located approximately 8 miles from Whitefish and 15 miles from Kalispell, being directly linked to these communities by State Highway 40 and U.S. Highway 2, respectively.

Logging was the original industry in Columbia Falls, with early logging sales dating back to the 1890s. By 1907, there were at least five lumber companies operating in the community and utilizing the railroad to log and move timber across the country. The population of Columbia Falls grew with the timber industry and, in the 1950s, was bolstered due to the opening of the Anaconda Aluminum Company Aluminum Reduction Plant two miles northeast of the city.

Once known as the "Industrial Hub of Flathead Valley", the economy of Columbia Falls is now largely service-based, following several years of decline in timber and manufacturing economic sectors and related closure of the timber mills and then the Columbia Falls Aluminum Plant in 2009. Census information, recorded over a one-hundred-year period beginning in 1910, indicates that Columbia Falls' population has continued to grow over the past several decades, even considering the overall decline in natural resource and industry-based employment.

The City of Columbia Falls, with support from Flathead County and the Montana Department of Transportation (MDT), has created a long-range transportation plan that will address the current needs of the community and chart a course for future growth. It incorporates the input collected through community engagement, as well as the policy direction put forth in local and regional planning documents.

PLANNING PROCESS

The Columbia Falls Urban Area Transportation Plan represents a collaborative effort to refine the vision of the region's transportation network and identify a coordinated set of multimodal projects to achieve this future. The plan addresses existing issues and anticipated concerns for congestion, safety, security, access, and connectivity. The planning process involved collaboration between multiple jurisdictions, key stakeholders, and citizens, and was designed to create an open dialogue within the community on transportation. The Project Advisory Committee (PAC) played a central advisory role throughout the planning process by providing direction at key decision points and helping to assure that the plan was reflective of the community's transportation priorities. Further information on the plan's public engagement component is provided in **CHAPTER 2**.

STUDY AREA

The study area for the project was established in collaboration with the City, MDT, and the PAC. It includes the census-based urban boundary, a large portion of the Growth Policy planning boundary,¹ and additional areas outside of the urban boundary.

The study area is larger than the City and its urban boundary to account for areas already developing and those areas that could see growth over the twenty-year study horizon. The larger study area allows the Columbia Falls Urban Area Transportation Plan to assess the impact of traffic generated from recent and future commercial development along US Highway 2, as well as residential development within rural and quasi-rural areas surrounding the City. Understanding the traffic impacts from both within and outside of the Columbia Falls city boundaries will allow for better planning of the future road network. **FIGURE 1.1** shows the study area.

POLICY FRAMEWORK

The Columbia Falls Urban Area Transportation Plan policy framework serves as the plan's policy foundation and charts a course for future transportation investment within the study area. The framework is designed to be long-range and comprehensive, reflecting the transportation system as a whole and incorporating the community's priorities to support current and future residents. The framework champions local needs while placing the City's transportation vision within a larger regional context.

The framework was developed in close coordination with the PAC, neighboring local governments, and MDT. It incorporates input collected through the community engagement process, as well as the policy direction put forth in local and regional planning documents.

The Policy Framework consists of three elements: Vision, Goals, and Strategies.

Vision: The transportation vision communicates the aspirations and priorities that will guide the City's transportation investments in order to achieve its desired future.

Goals: Goals are broad statements that describe a desired end state. The goals represent key priorities for desired outcomes for the transportation system, and for the well-being and prosperity of the community. Goals are visionary statements that reflect key priority areas.

Strategies: Strategies are specific statements that support the achievement of goals. Strategies "operationalize" the goals: they refine goals into discrete, policy-based actions that are used to guide decision making towards achievement of the vision. There are multiple strategies for each goal.

TRANSPORTATION VISION

The transportation vision will serve as an anchor for future development of the Columbia Falls area transportation system. The transportation **vision** is as follows:

The City of Columbia Falls will develop a transportation system that incorporates high network connectivity, supports commerce, and provides efficient, dependable mobility for community members and visitors. The transportation system will serve as a foundation for the City's growth and prosperity, supporting a more livable, vibrant community for residents and an increasingly attractive destination for visitors.

GOALS AND STRATEGIES

The project team defined six goal areas in collaboration with the PAC, stakeholders, and the public. In addition, the goal areas presented in MDT's TranPlanMT served as a basis for the Plan goal areas. The goal areas were used to develop the final set of six Plan goals.

The public involvement process was fundamental in establishing the Plan goal areas. Input collected during engagement events allowed for the project team to craft a set of goals that closely reflect the needs, preferences, and desires of the community.

The six goal areas are shown in **TABLE 1.1**, where they are presented in relation to the MDT TranPlanMT goals. The goal areas, as presented here, do not imply an order of priority.

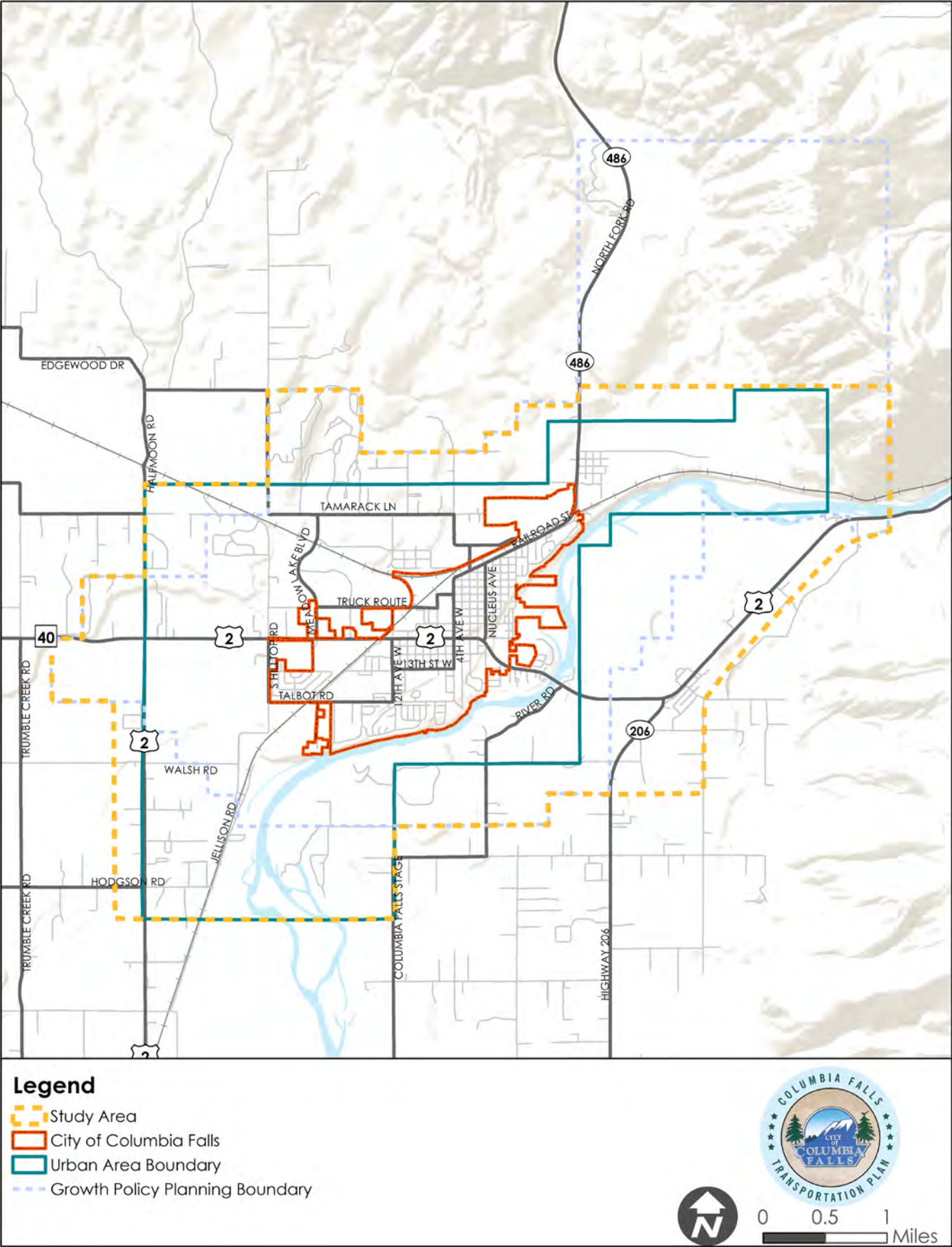
Table 1.1: Columbia Falls Urban Area Transportation Plan Goal Areas

Columbia Falls Urban Area Transportation Plan Goal Area	MDT TranPlanMT Goal
Safety and Security	Safety
Congestion Reduction	Accessibility and Connectivity
Environmental Sustainability	Environmental Stewardship
Infrastructure Condition	System Preservation and Maintenance
Reduce Project Delays	Business Operations and Management
Freight Movement/Economic Vitality	Mobility and Economic Vitality

The goal areas were used to define the final set of six Transportation Plan goals. For each goal, various strategies are defined.

¹ https://www.cityofcolumbiainfalls.org/sites/default/files/fileattachments/planning__amp__zoning/page/3331/growth-policy-2019.pdf

Figure 1.1: Columbia Falls Urban Area Transportation Plan Study Area



1. Safety and Security

GOAL: *Create a transportation system that incorporates safety and security throughout all modes and for all users.*

- Support Montana's State Highway Safety Plan "Vision Zero" as a goal to move toward zero deaths and zero serious injuries.
- Reduce the incidence of all motor vehicle and non-motor vehicle (pedestrian and cyclist) crashes, with an emphasis on serious injury and fatal crashes.
- Regularly review and update Emergency Routes, coordinating as needed with Flathead County and MDT to facilitate the rapid movement of first responders and support incident management during times of emergency.
- Target safety improvement projects to address the top 11 high crash locations, as identified in the Columbia Falls Urban Area Transportation Plan.
- Enhance crash data integration and analysis to support decision making and issue identification.
- Improve education on bike safety and increase the awareness of both bicyclists and motorists regarding bike related laws, rules, and responsibilities.
- Require that sidewalks be included on both sides of new streets in neighborhood and business districts, and that they be incorporated into major construction projects for existing streets within these districts.
- Incorporate street trees into projects to buffer pedestrians from traffic, improve community and neighborhood aesthetics, and provide shade.

2. Congestion Reduction

GOAL: *Create a transportation system that optimizes mobility and connectivity, allowing users to move from one place to another in a direct route with minimal travel times and delays.*

- Improve system-wide bicycle and pedestrian connectivity by implementing transportation investments identified within the Columbia Falls Urban Area Transportation Plan Active Transportation element.
- Implement operational improvements to optimize the efficiency of the transportation system, including geometric improvements, access management, and updated intersection control.
- Implement a consistent approach for investment, design, connectivity, and maintenance of pedestrian and bicycle facilities.
- Identify and consider accessibility and connectivity needs on improvement projects for roads, paths, and sidewalks.



- Utilize the development review process to require new developments to provide adequate pedestrian and bicycle access to essential services, amenities, and destinations.
- Work with Mountain Climber to improve route efficiency, promote and continue service connecting to major employment centers, education facilities, medical offices, commercial developments, and tourist destinations.
- When improving sections of street, upgrade existing pedestrian and bicycle facilities or construct such facilities if none are present.
- Provide an integrated system of bike and pedestrian trails and greenways to future neighborhoods, employment centers, and recreational amenities.
- Provide a complete system of locally-maintained pedestrian and bicycle paths along the US Highway 2 corridor.

3. Environmental Sustainability

GOAL: *Prioritize environmental stewardship in the development, maintenance, and operation of the transportation system.*

- Minimize the transportation system's impacts on the natural and built environment.
- Promote transportation investments that support infill, mixed-use development patterns.
- Provide transportation infrastructure design guidance that fits within the context of the built environment.

- Maintain a planning process that integrates and coordinates transportation planning with land use, water, and natural resource conservation.
- Foster positive working relationships with resource agencies and stakeholders through early coordination and consultation.

4. Infrastructure Condition

GOAL: *Proactively preserve and maintain existing transportation system infrastructure.*

- Continue to employ a pavement management system to inventory pavement condition, prioritize projects, allocate investment, and comply with the requirements of MDT's Urban Pavement Preservation Program (UPP).
- Seek to invest in cost-effective preventative maintenance projects to reduce the need for more costly structural improvements.
- Progressively upgrade the system of rural roads providing access to the existing rural residential development surrounding Columbia Falls. As Columbia Falls continues to grow, there will be significant cost in improving these streets to an urban standard with wider travel lanes, sidewalks, and often, paving for the first time.
- Develop a capital improvement program that implements the prioritized Transportation System Management and Major Street Network projects presented in the Columbia Falls Urban Area Transportation Plan.



5. Reduce Project Delays

GOAL: *Provide efficient, cost-effective management and operation to accelerate transportation project delivery and ensure system reliability.*

- Use local funds and alternative funding sources leveraged with federal transportation funds to construct transportation upgrades.
- Use developer installed improvements where facilities abut or intercept proposed subdivisions or individual projects.
- Pursue all available state and federal transportation funding sources due to limited local funding sources.
- Seek out development of a formal venue to engage MDT, Flathead County, Whitefish and Kalispell in regional discussion on issues of transportation planning and programming.
- Assess the condition of subgrade water and sewer utilities in order to package utility improvements with street upgrade projects.
- Develop policies to support consistent application of development-related improvement requirements and streamlined project development.
- Invest at the appropriate level to ensure adequate funding for system maintenance and operations.
- Use the Columbia Falls Urban Area Transportation Plan list of prioritized projects to guide transportation investment and make effective use of funding when it becomes available.

6. Freight Movement/Economic Vitality

GOAL: *Create a transportation system that supports economic competitiveness, vitality, and prosperity by providing for the efficient movement of people and goods.*

- Enhance the efficient and safe movement of freight and goods by investing in congestion reduction and safety improvements on critical freight corridors.
- Promote investments in network connectivity to allow industrial areas immediate access to air, rail, and arterial or collector streets.
- Support projects that decrease travel time between major activity centers.
- Encourage public/private partnerships to leverage funding from federal, state and other sources.
- Give priority to transportation projects that improve and provide access to area tourist destinations and amenities.
- Improve right-of-way preservation and access management standards to support the reliability of collector and arterial roadway systems to efficiently distribute and move traffic.
- Improve east-west vehicle connectivity by extending streets and providing additional railway crossings at key locations.
- Enhance pedestrian and bicyclist connectivity by adding and improving crossings at key barrier points, including US Highway 2 and the Flathead River.
- Incorporate pedestrian facilities and encourage pedestrian-centered streetscape designs to support the revitalization, growth, and sense of place of the historical downtown district (Nucleus Ave).

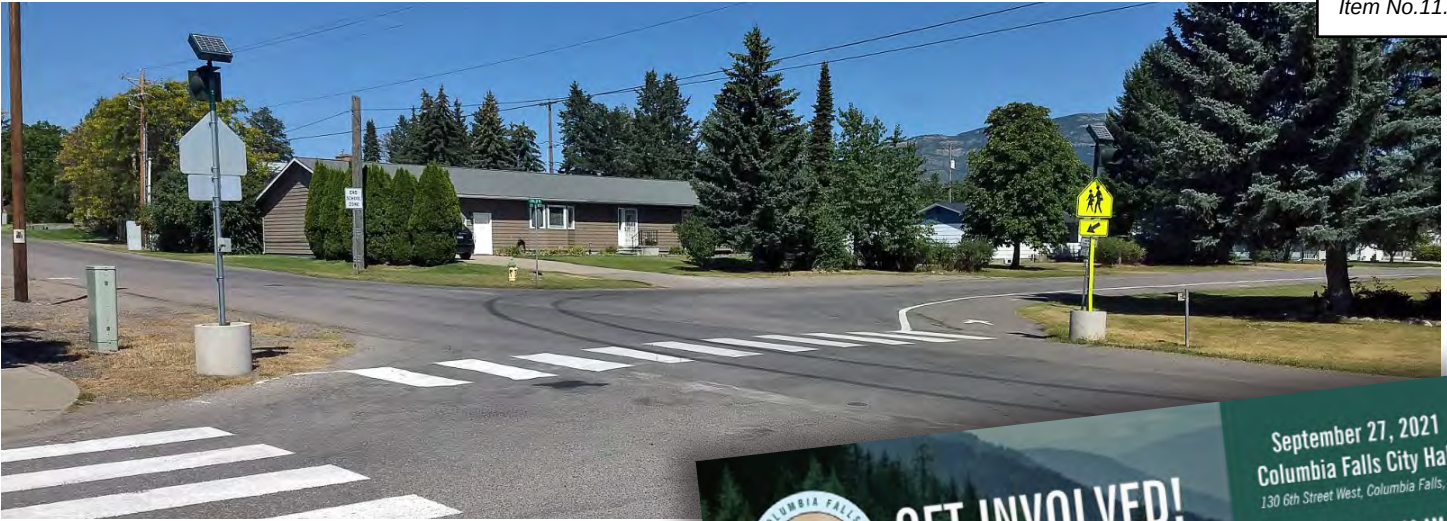


NOVEMBER 2021



ENGINEERING, REIMAGINED

Chapter 2. Public Engagement

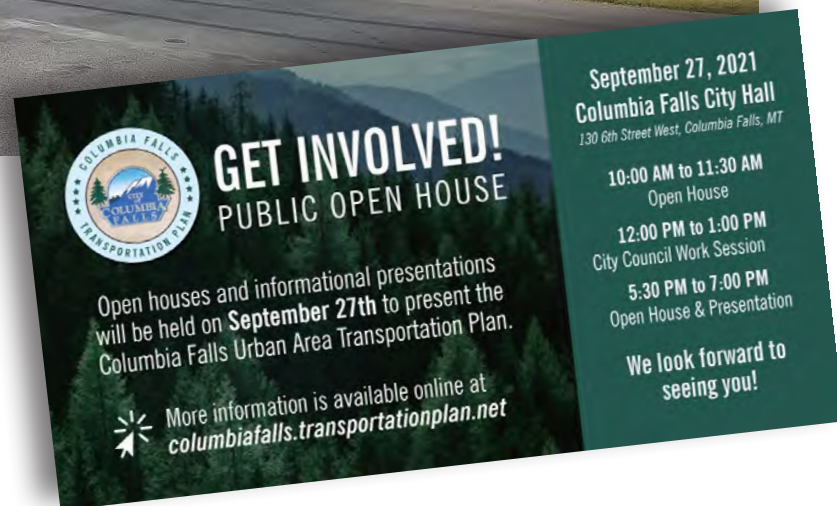


INTRODUCTION

The public engagement phase for the Columbia Falls Transportation Plan was comprised of three parts: an initial series of listening sessions at the City Fire Hall, a project website with an interactive issues map, and a final open house event at the end of the project. The initial series of listening sessions (two sessions) took place on October 15, 2020 and acted both as an opportunity to educate the public on the transportation plan and to gather open-ended input on transportation issues in the study area. The sessions were advertised through a variety of channels including the Police Department, Chamber of Commerce, posts on Facebook, an ad in *Hungry Horse News*, and an ad in the *Daily Interlake*. Due to the COVID-19 pandemic, project materials and an interactive issues map were hosted on a project website. On the website, visitors could review project documents, watch a prerecorded presentation of the project, and leave comments on the interactive map.

A final open house was held on September 27, 2021 to present the Plan results and recommendations to the public. The event consisted of a morning open house session, a midday City Council work session, and an evening open house and presentation. During the event, stakeholders and members of the public were invited to view posters presenting the Plan's recommendations, discuss Plan results with the project team, and submit any additional feedback. The final open house was advertised through a variety of traditional and digital media channels.

This public engagement summary describes the results from the listening sessions and the online open house.



PROJECT ADVISORY COMMITTEE

Development of the Columbia Falls Urban Area Transportation Plan was guided by the PAC. The PAC was formed at the onset of the planning process at the direction of the City of Columbia Falls. The PAC members included a variety of City, County, and MDT staff. The PAC played a fundamental role throughout the planning process by providing direction at key decision points and helping to ensure that the plan was reflective of the community's transportation vision. The PAC met on four occasions and included the following representatives:

- Don Barnhart – Mayor
- Mike Shepard – Councilor
- Susan Nicosia – City Manager
- Tyler Bradshaw – Public Works - City
- Dave Prunty – Public Works – County
- Eric Mulcahy – City-County Planner
- Sam Kavanagh – Planning Board
- Kelly Hamilton – Community Member
- Vicki Crnich – MDT
- James Freyholtz – MDT

ONLINE INTERACTIVE MAP

The project website was used to collect input from the community using an online interactive issues map that was open from early October until November 6th, 2020. Visitors were able to explore the study area and view comments left by others, add their own comments in discussion, and react to comments with an “up vote” or “down vote”. In total, 123 comments and 362 reactions were added to the interactive map by 395 unique visitors. **FIGURE 2.1** shows share of comments by topic, as identified by the commenter.

All comments are included in **APPENDIX A: PUBLIC ENGAGEMENT SURVEY COMMENTS** with a unique identifier that corresponds to the numbers shown on the maps in **FIGURE 2.2** through **FIGURE 2.4**. In each map, the top 10 most reacted-to comments are highlighted.

Figure 2.1: Interactive Map Comment Type

Item No.11.

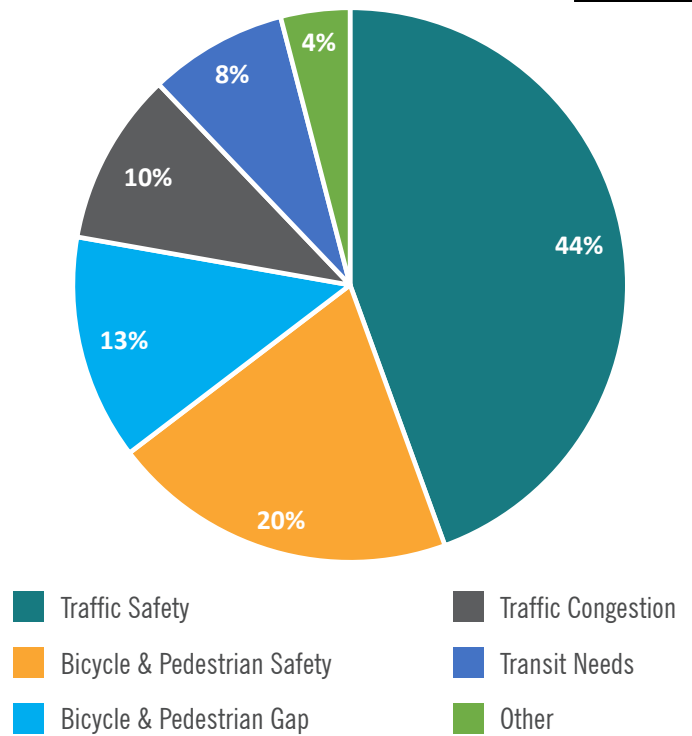
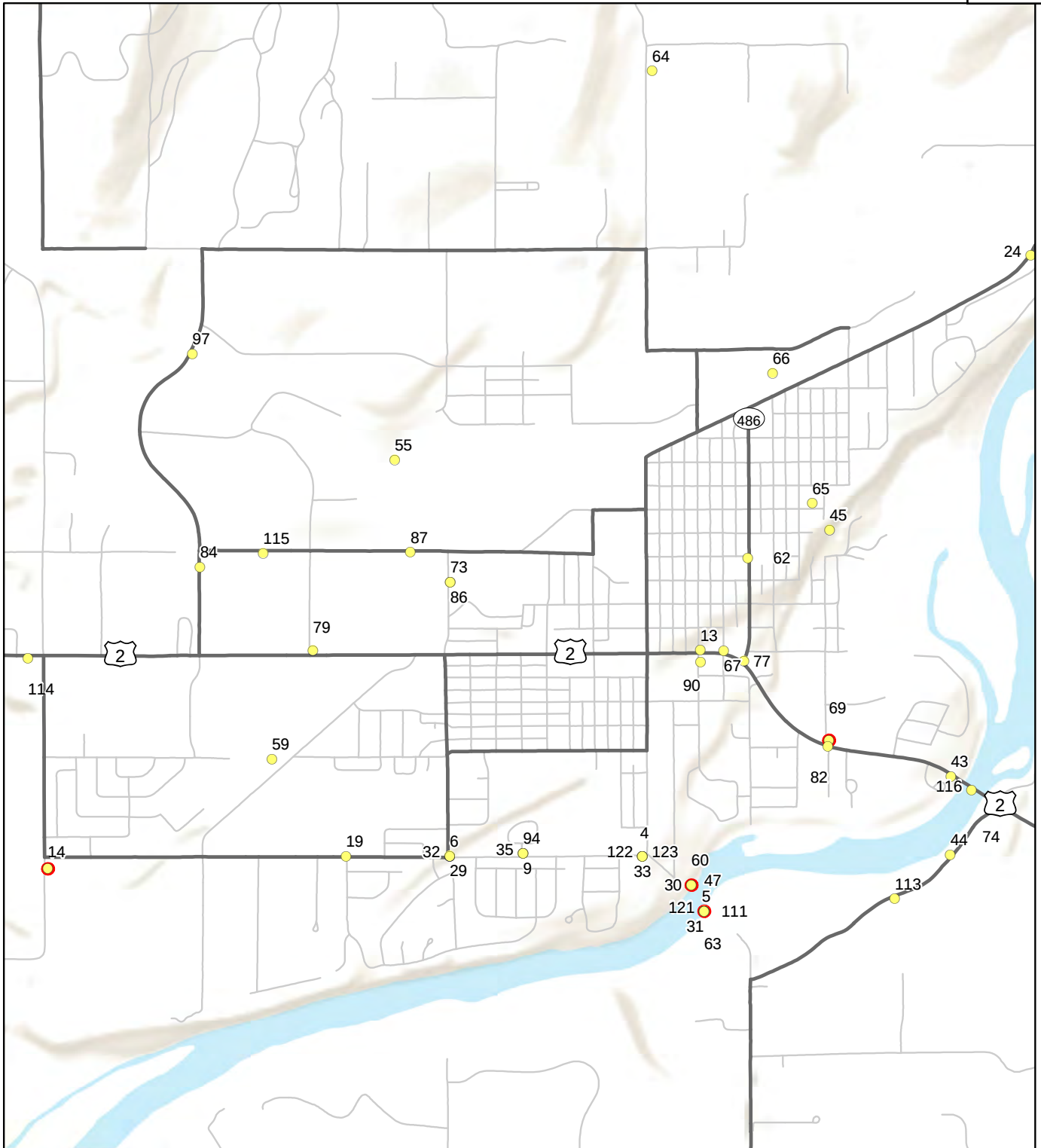


Figure 2.2: Bike/Ped-Related Comments

Item No.11.



Legend

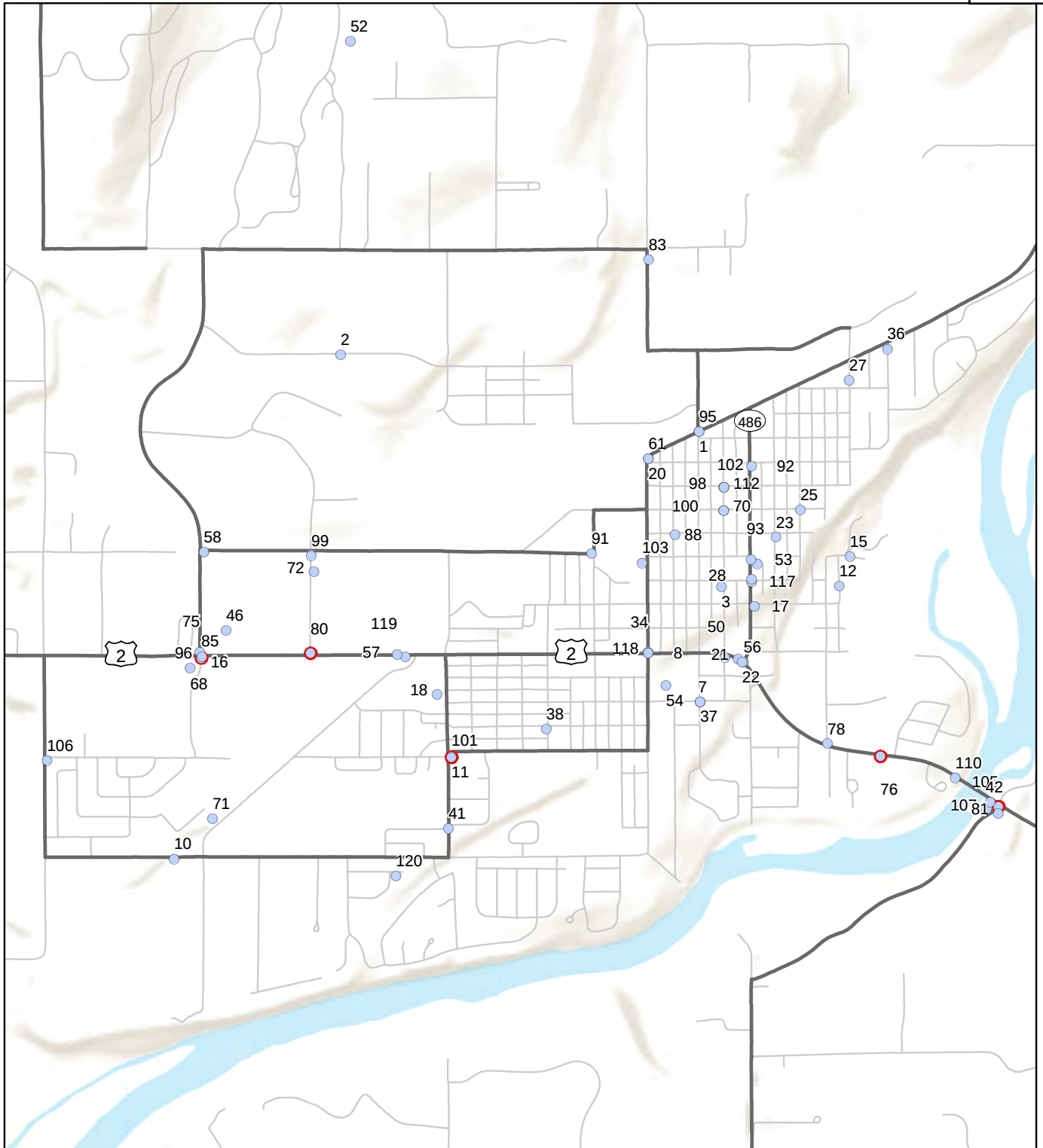
- Bike/Ped-related comment (Numbering corresponds to comment IDs in Appx. A)
- Top 10 Comment (Please refer to Table 2.1)



0 0.25 0.5 Miles

Figure 2.3: Traffic-Related Comments

Item No.11.



Legend

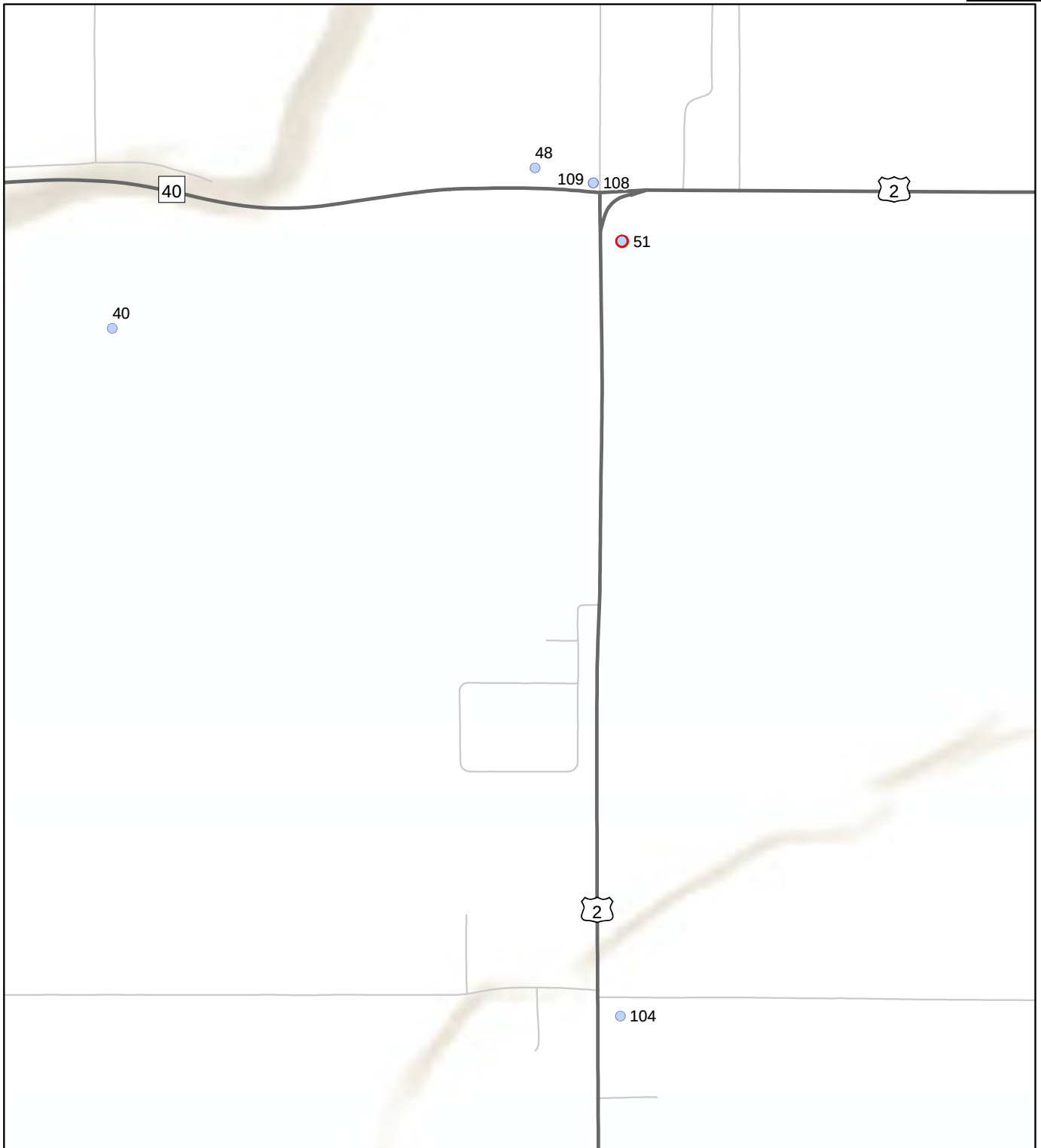
- Traffic-related comment (Numbering corresponds to comment IDs in Appx. A)
- Top 10 Comment (Please refer to Table 2.1)



0 0.25 0.5 Miles

Figure 2.4: Traffic-Related Comments (US Highway 2 & MT 40)

Item No.11.



Legend

- Traffic-related comment (Numbering corresponds to comment IDs in Appx. A)
- Top 10 Comment (Please refer to Table 2.1)



0 0.125 0.25 Miles

COMMENT CLUSTERS

Many of the comments on the interactive map were related to other comments in content or geographic location. When posting a comment, community members had the option to either choose a location on the map to post a comment or post a response to an existing comment. If a new comment was posted in response to an existing comment, the two

comments would share a geographic location. After adding the location and content of each comment added to the map, clusters were identified to highlight common concerns among community members. **TABLE 2.1** shows the top ten clusters by total number of reactions. The total number of up votes and down votes from the comments within each cluster were aggregated.

Item No.11.

Table 2.1: Top 10 Comment Clusters

Comment IDs	Cluster Name Primary Concern	Up Votes	Down Votes
21, 22, 42, 50, 56, 76, 78, 81, 105, 107, 110	US Hwy 2 (East of Nucleus Avenue) Traffic congestion and safety	50	18
43, 67, 69, 71, 74, 77, 82, 90, 116	US Hwy 2 (East of Nucleus Avenue) Bike/ped safety	49	5
14, 45, 49, 59, 64, 65, 66, 84, 86, 87, 97, 115	New Bike/Ped Facilities (several locations) Desire for new dedicated paths	39	0
5, 30, 47, 60, 63, 111, 113, 121	Old Red Bridge Restoration Desire for bike/ped connection	28	1
68, 75, 85, 96	Meadow Lake Blvd and 9th Street West Intersection safety	27	1
72, 80, 99	Truck Route Traffic congestion	20	1
17, 28, 53, 62, 92, 93, 117	Nucleus Avenue Intersection safety and congestion	12	6
48, 51, 108, 109	US Hwy 2 and MT Hwy 40 Intersection safety	16	0
1, 10, 57, 95, 119	Railroad Crossings Traffic delay	7	2
4, 6, 9, 19, 29, 32, 33, 35, 94, 123	Talbot Road Bike/ped safety	4	4



NOVEMBER 2021



ENGINEERING, REIMAGINED

Chapter 3. Existing Conditions

INTRODUCTION

The City of Columbia Falls is a vibrant community and regional leader in lumber production and manufacturing. Planning for future transportation needs requires an understanding of the city's assets as well as the unique challenges facing the community. The following chapter describes the existing conditions in Flathead County and Columbia Falls. A summary of demographics, economic trends, and travel trends is provided, followed by an overview of existing transportation infrastructure for all modes and an analysis of crash trends within the study area.

BACKGROUND

In 2010 the City of Columbia Falls exceeded a population of 5,000, giving the city Urban designation as defined by

Item No.11.
FHWA. The City of Columbia Falls is growing and a growing region, increasing the need for the community to develop a long range transportation plan. This transportation plan considers changes in population and economic trends within the larger study area, including the Flathead Valley. Localized conditions, coupled with larger regional trends, have a combined measurable impact on transportation within the City of Columbia Falls.

The Columbia Falls Transportation Plan has a 20-year planning horizon and evaluates growth to the year 2040. Projections to the year 2040 point to continued growth and development within Columbia Falls and throughout Flathead County. This plan will establish a set of recommended goals, initiatives, and projects to address projected needs facing the City of Columbia Falls to the year 2040.



EXISTING CONDITIONS

An understanding of the existing conditions is required to plan for the long-range transportation needs of a growing community and region. The following section describes the demographics, housing, and economic trends of Columbia Falls, Flathead County, and the State of Montana.

DEMOGRAPHICS OVERVIEW

Flathead County is the fifth-fastest-growing county in Montana since 2010, adding nearly 13,500 residents over the last decade. The total population of Flathead County grew from 51,966 in 1980 to 104,357 in 2020, for an increase of 52,391 residents or 101 percent. Overall population trends during the last 50 years indicate steady growth in the county, punctuated by short periods of slow or no growth associated with regional and national economic downturns.

Between 2010 and 2020, the population in Columbia Falls increased by 22 percent, considerably faster than the county's population growth of 15 percent over the same period. **TABLE 3.1** shows a population growth comparison of Columbia Falls and the surrounding area over the last 40 years.

Table 3.1: Regional Population Growth

	Flathead County	City of Columbia Falls	City of Whitefish	City of Kalispell
1980	51,966	3,112	3,703	10,648
1990	59,518	2,942	4,368	11,917
2000	74,471	3,645	5,032	14,223
2010	90,928	4,688	6,352	19,927
2020	104,357	5,308	7,751	24,558
Average Annual Change	2.5%	1.8%	2.7%	3.3%

POPULATION DYNAMICS

The population of Columbia Falls was relatively stagnant between 1980 and 2000, but has since grown at a similar rate to that of Whitefish and Kalispell. The demographic composition of Columbia Falls has varied more widely than the surrounding region since 2000. Between 2010 and 2018, the median age in Columbia Falls increased dramatically from 31.4 to 42.6 years old. Some of this change can be explained by the completion of the 60-unit Timber Creek Assisted Living Facility and the 46-unit Bee Hive Assisted Living Facility during the seven year period. Additionally, Columbia Falls lost some manufacturing jobs in 2009 with the closure of the Columbia Falls Aluminum Plant. More recently, demographics within Columbia Falls have

been similar to Flathead County and the State of Montana. **Item No.11.**

TABLE 3.2 provides details on the population of Columbia Falls and the greater region.

Table 3.2: Population Age Cohorts

Area	2000	2010	2018 ACS
CITY OF COLUMBIA FALLS			
Median Age	35.7	31.4	42.6
Younger than 18	28.3%	29.7%	21.1%
18 to 64	58.3%	60.3%	63.5%
Greater than 64	13.4%	10.0%	15.4%
FLATHEAD COUNTY			
Median Age	39.0	41.2	42.4
Younger than 18	25.9%	23.4%	21.7%
18 to 64	61.1%	62.2%	58.1
Greater than 64	13.0%	14.4%	20.2%
STATE OF MONTANA			
Median Age	37.5	39.8	40.1
Younger than 18	25.5%	22.6%	21.6%
18 to 64	61.1%	62.6%	59.6%
Greater than 64	13.4%	14.8%	18.8%

(ACS: American Community Survey)

HOUSING

A survey administered to Columbia Falls residents as a part of the 2019 Growth Policy planning process found housing to be the second most important issue facing the community. Housing is the bedrock of a community and can determine transportation needs and economic conditions. Housing type and variety are important considerations in local land-use and transportation decision-making processes. **TABLE 3.3** shows the estimated number of households, average household size in 2018, and annual average percent change in number of units.

Table 3.3: Housing Stock

	City of Columbia Falls	Flathead County
2000	1,470	34,773
2010	1,816	46,963
2018 ACS	2,368	49,088
Avg. Annual Change	3.4%	2.3%
Persons per Household	2.06	2.12
Owner-occupied	70.5%	72.1%
Renter-occupied	29.5%	27.9%
Median price	\$192,800	\$320,400
Median Household Income	\$47,716	\$53,193

ECONOMIC TRENDS

Columbia Falls is a wood products hub of Flathead County hosting two lumber companies, Weyerhaeuser and Stoltze, and several smaller associated timber enterprises. Significant commercial expansion has occurred along the US Highway 2 corridor, and the historic downtown district along Nucleus Avenue continues to experience new growth and revitalization.

Healthcare, retail trade, and accommodation and food services are the three largest industries in Flathead County, employing nearly 20,000 people. **TABLE 3.4** shows the largest industries in the county as well as their average employment.

Table 3.4: Largest Employers in Flathead County

Employer
MORE THAN 1,000 EMPLOYEES
Kalispell Regional Medical Center
500–999 EMPLOYEES
Weyerhaeuser
250–499 EMPLOYEES
AON Service Corporation
Applied Materials Inc.
Glacier Bank
Health Center Northwest
Immanuel Lutheran Home
North Valley Hospital
Super 1 Foods
Teletech
Wal-Mart
Whitefish Mountain Resort
100–249 EMPLOYEES
A Plus Healthcare
Brendan House
Costco
L C Staffing Service
Lodge at Whitefish Lake
McDonalds
Smith's Food and Drug
Summit Medical Fitness Center

According to the Montana Department of Labor & Industry's Local Area Profile for Flathead County, the county represents a tourism hotspot in Montana due to Glacier National Park, Flathead Lake, the local ski industry at

Whitefish Mountain Resort and Blacktail Mountain and the Bob Marshall Wilderness. The tourism economy offers significant employment opportunities, although much of this sector of the County's economy is centered on service industry jobs which typically represent lower wage earners.

The county's labor force was estimated to be 47,793 in 2018, according to local area employment statistics (this number has not been seasonally adjusted). While county unemployment rates have been on a steady decline since the 2008 recession, the current unemployment rate sits at 4.8 percent, over a percentage point higher than the state average unemployment rate of 3.7 percent.

According to the 2017 ACS Community Profile narratives for both Columbia Falls and Flathead County:

- Flathead County's federal, state, and local government sector employment represents 13.4 percent of the workforce in the county. Nearly 80 percent of the workforce is in private industry.
- Key industries in Flathead County are educational services, health care and social assistance (23.5 percent); retail trade (13.8 percent); arts, entertainment and recreation (10.9 percent); and professional, scientific and tech services (9.8 percent).
- In Columbia Falls, federal, state, and local government sector employment is around 19 percent of the workforce in the city. About 77 percent of the workforce is in private industry.
- Key industries in Columbia Falls are educational services, health care and social assistance (23.4 percent); Retail Trade (16.3 percent); and Manufacturing (9.5 percent).

Table 3.5: Largest Industries in Flathead County

Industry	Average Employment
Health Care and Social Assistance	7,157
Retail Trade	6,366
Accommodation and food Services	6,130
Government – All Levels	4,976
Food Services and Drinking Places	4,352
Construction	3,296
Manufacturing	2,837
Ambulatory Health Care Services	2,215
Professional and Technical Services	2,042
Specialty Trade Contractors	2,024
Finance and Insurance	1,839

TRAVEL TRENDS

The vast majority of workers in the City of Columbia Falls drive to work alone. Compared to the rest of the region, Columbia Falls residents drive alone in higher proportion than residents of neighboring cities and the State of Montana. **TABLE 3.6** shows the regional mode share recorded during the 2017 American Community Survey. In Columbia Falls, a smaller percent of residents work from home than the comparison regions, and a much smaller percent walk to work.

Job Inflow/Outflow

FIGURE 3.1 shows the commute patterns to and from the city of Columbia Falls. These numbers were determined using the city limits and the total number of jobs recorded in the 2017 American Community Survey. It is likely that many of the workers in the first column live within the city limits but outside of the city limits. Among the employed population that lived within the city limits, about 80 percent commuted to a job outside of

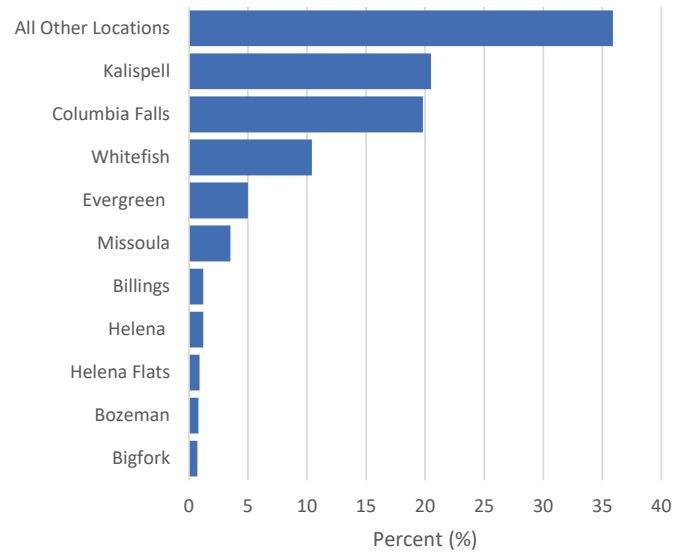
the city limits. Because an individual can hold multiple jobs, these numbers are meant to approximate commuter behavior.

Figure 3.1: Job Inflow/Outflow (2017 ACS)



FIGURE 3.2 shows the work locations of employed individuals that live within the Columbia Falls city limits. In 2017, 393 workers commuted to Kalispell, 200 commuted to Whitefish, and 379 stayed in Columbia Falls for their work. These numbers indicate that many residents have chosen to live in Columbia Falls despite their job being located elsewhere.

Figure 3.2: Commute Destinations from Columbia Falls



Household Income

According to the 2018 American Community Survey, the median household income for families living in Columbia Falls was \$47,716 annually. About 13 percent of individuals living in the city were determined to have an income below the poverty level. In comparison, residents of Kalispell had a median annual income of \$47,362 and a poverty rate of 14.8 percent, while Whitefish had a median annual income of \$51,059 and poverty rate of 9.9 percent.

Table 3.6: Commute Mode (ACS 2017)

	Columbia Falls	Whitefish	Kalispell	Flathead County	Montana
Drove alone	88.9%	74.9%	82.8%	81.4%	75.6%
Carpooled	4.3%	6.8%	6.6%	6.9%	9.7%
Transit	0.0%	1.1%	1.6%	0.8%	0.8%
Walked	0.7%	9.7%	2.4%	3.3%	5.1%
Other	3.2%	2.9%	2.0%	1.9%	2.4%
Worked at home	2.8%	4.5%	4.6%	5.8%	6.4%
Average commute time	18.4 minutes	16.4 minutes	15.4 minutes	19.1 minutes	17.8 minutes

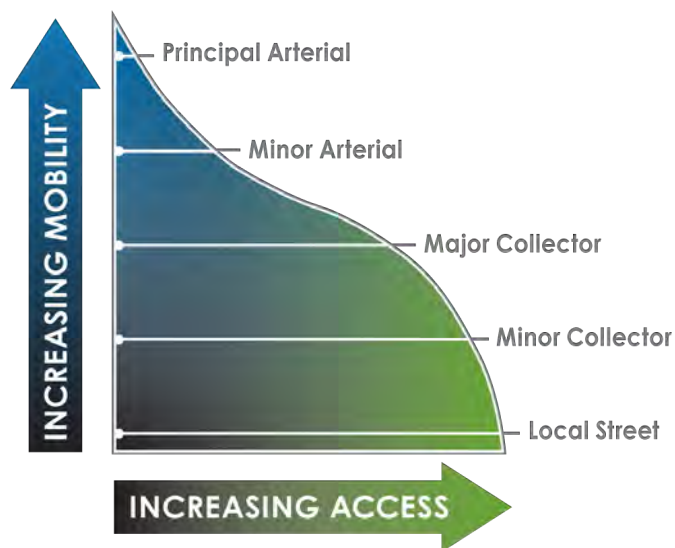
EXISTING TRANSPORTATION CONDITIONS

The existing transportation system was analyzed to establish baseline traffic conditions and evaluate existing and future issues. This data was provided by MDT, City of Columbia Falls, and Flathead County. The analysis includes all modes of transportation, including personal automobile, bicycle, pedestrian, transit, truck freight, rail, and air.

FUNCTIONAL CLASS

The operation of a community's road network is defined by functional classification of the roadway system. These classifications define the service each road segment plays in serving the flow of traffic through the street network. By utilizing this classification system, the operation of traffic can be designed to work in a logical and efficient manner. In Columbia Falls, the roadways are grouped into a hierarchy of five general functional classifications. **FIGURE 3.3** demonstrates the relationship between access and mobility for each functional classification.

Figure 3.3: Functional Class Access and Mobility



Explanation

Most streets and highways have a predominant function: either to provide the motorist with access to abutting land or to allow movement through an area. Traffic that gains access to abutting land is considered “local” whereas all other traffic is considered “through.” Through traffic neither originates nor terminates within a designated area, but simply passes through. On the other hand, local traffic has origins or destinations within the designated area.

Urban and rural areas have different characteristics in terms of density and types of land use, nature of travel patterns, density of street and highway networks, and the way in which all these elements are related to highway function. Federal guidelines recognize these differences through separate urban and rural functional classification systems and associated criteria.

Item No.11.

Functional Class Definitions

Below is a definition of each of the functional classifications. Functionally classified roadways in the study area are shown in **FIGURE 3.4** and **FIGURE 3.5**.

PRINCIPAL ARTERIALS

Arterials provide the means of regional and interstate transportation of people and goods. This is done by having roads which have the highest speed and uninterrupted trips and broken into principal and minor arterial routes. In urban areas they serve as corridors with the highest traffic volume and carry the most trips through urban areas.

MINOR ARTERIALS

The minor arterial routes in the street system provide connections and support the principal arterial system. The trips are generally shorter in nature and spread out over a smaller geographic area.

MAJOR AND MINOR COLLECTORS

Collectors serve a critical role in the roadway network by gathering traffic from local roads and funneling them to the arterial network. Within the context of functional classification, Collectors are broken down into two categories: major collectors and minor collectors.

The distinctions between major collectors and minor collectors are often subtle. Generally, major collector routes are longer in length, have higher access control, have higher speed limits, have higher annual average traffic volumes, and may have more travel lanes than minor collectors. In general, major collectors offer more mobility, while minor collectors provide more access.

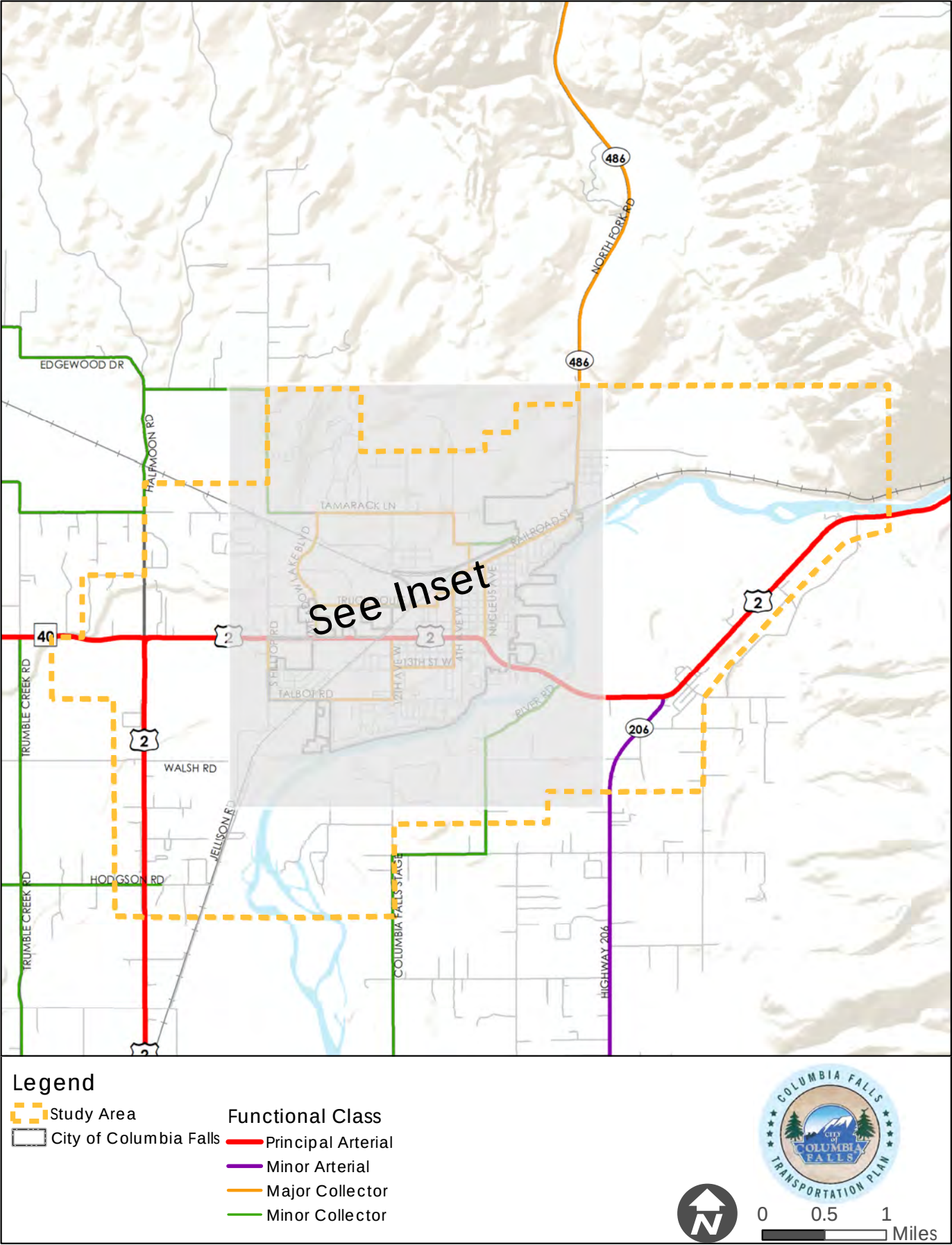
LOCAL STREETS

Local streets are all streets not defined above in the hierarchy with the purpose to provide basic access between residential and commercial properties. These streets are generally slower and have the addition of traffic calming measures. These are the largest element in the American public road network in terms of mileage.

HIGHWAY SYSTEMS IN MONTANA

For the purpose of allocating state and federal highway funds, Montana's public highways and streets are placed on systems based in part on the functional classification system. It is important to note that changes to functional classification and highway system designation do not

Figure 3.4: Functionally Classified Roadways in the Study Area





automatically lead to increased funding for improvements. Factors such as funding availability, project eligibility, and project prioritization are equally important considerations. The following system designations are used in Montana to assist with programming and funding of roadways. Specific designations of these roadways within the study area are shown in **FIGURE 3.6**.

Federally Designated Highway Systems

NATIONAL HIGHWAY SYSTEM (NHS)

A federal system of public highways as defined in Title 23, USC and designated by Congress or the Secretary of Transportation that includes the Interstate System as well as other roads important to the nation's economy, defense, and mobility.

Interstate NHS

The Dwight D. Eisenhower National System of Interstate and Defense Highways consists of routes of highest importance to the nation, which connect, as directly as practicable, the principal metropolitan areas, cities, and industrial centers including important routes into, through, and around urban areas, serve the national defense and, to the greatest extent possible, connect at suitable border points with routes of continental importance in Canada and Mexico

Non-Interstate NHS

Principal arterials other than the Interstate that serve major travel destinations and transportation needs, connectors to major transportation terminals, the Strategic Highway Network and connectors, and high priority corridors identified by law.

State Designated Highway Systems (MCA 60-2-125(6))

PRIMARY HIGHWAY SYSTEM

Highways that have been functionally classified by FHWA as either principal or minor arterials and that have been selected by the Transportation Commission to be placed on the Primary Highway System. There are no primary highways within the study area.

SECONDARY HIGHWAY SYSTEM

Highways that have been functionally classified by MDT as either minor arterials or major collectors and that have been selected by the Transportation Commission, in cooperation with the boards of county commissioners, to be placed on the Secondary Highway System. North Fork Road and Secondary Hwy 206 are examples of secondary highways within the study area.

URBAN HIGHWAY SYSTEM

Highways and streets in and near incorporated cities with populations of over 5,000 and within urban boundaries established by the Department, that have been functionally classified as either urban arterials or collectors, and that have been selected by the Transportation Commission, in cooperation with local government authorities, to be placed on the Urban Highway System.

Evaluation of Existing Functional Class in Study Area

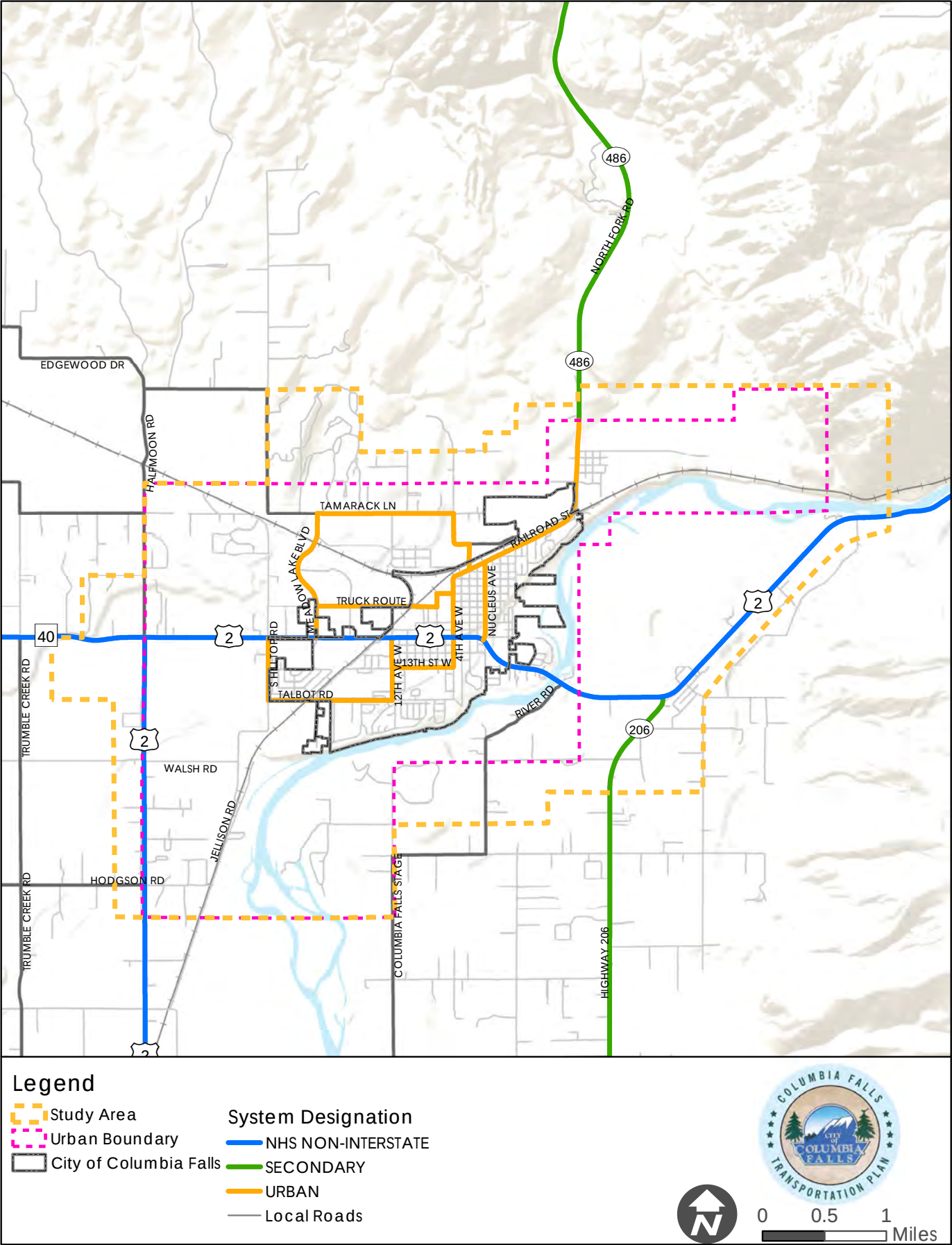
TABLE 3.7 shows the total road miles by classification using the FHWA system. These numbers were evaluated against current FHWA guidelines for recommended percentages for each functional classified roadway. The rural classification recommendations are presented given that Montana is considered a rural state for the purpose of these guidelines (rural states are those with a maximum of 75 percent of their population in urban centers). Principal arterials are near the high end of the rural recommended range, likely as a result of US Highway 2 running the full extent of the study area. Minor arterials are below the FHWA recommendation due to the rural nature of the community. Finally, minor collectors are on the low end of the recommended range, but can be increased to meet rural standards through an evaluation of the local road mileage.

CHANGING FUNCTIONAL CLASSIFICATION

Local governments may request functional classification changes at any time significant changes in operating characteristics occur. After receiving a request, MDT staff analyzes the route in accordance with FHWA guidelines to determine if the proposed change is justified and makes a recommendation to the Montana Transportation Commission. If approved by the Commission, it goes to FHWA for final approval.



Figure 3.6: Highway Systems in the Study Area



Maintenance Responsibility

Roadways in the study area are maintained by different agencies. MDT maintains US Highways such as US Highway 2. MDT is also responsible for State Highways and designated Primary and Secondary roadways such as Secondary Highway 206, Secondary Highway 486, and Highway 40. Flathead County maintains several roads throughout the study area. The remaining roads are maintained by the City of Columbia Falls.

FIGURE 3.7 demonstrates identified roadway maintenance obligations according to MDT.

Traffic Volumes

Annual average daily traffic (AADT) volumes show the number of vehicles that travel on a road segment per day, averaged across an entire year. The project team assembled traffic volume information provided by MDT for roadway segments within the study area. All traffic data represents 2018 counts.

The highest recorded traffic volumes are found on state highway system facilities, including US Highway 2, MT 40, Secondary Highway 486, and Secondary Highway 206. Within the city boundaries, various count locations on US Highway 2 demonstrated AADT volumes greater than 15,000. On city-maintained roadways, the highest volumes were found on higher-classed facilities and designated freight routes. The most traveled city-maintained facilities include Railroad Street (3,102), Truck Route (2,342), and 6th Avenue West (2,285) running along the BNSF mainline on the north of the city. Traffic count locations within the study area are shown in **FIGURE 3.8** and **FIGURE 3.9**.



Table 3.7: Existing Functional Classification Mileage and FHWA Recommended Ranges

Functional Class	Miles	% of Total	FHWA Rural Recommendation	Within Range
Principal Arterial	9.94	8.4%	4% to 9%	Yes
Minor Arterial	0.94	0.8%	7% to 14%	No
Major Collector	10.03	8.4%	3% to 16%	Yes
Minor Collector	4.37	3.7%	3% to 16%	Yes
Local Streets	93.46	78.7%	62% to 74%	No
TOTAL	118.73	100.0%		

Figure 3.7: Roadway Maintenance in Study Area

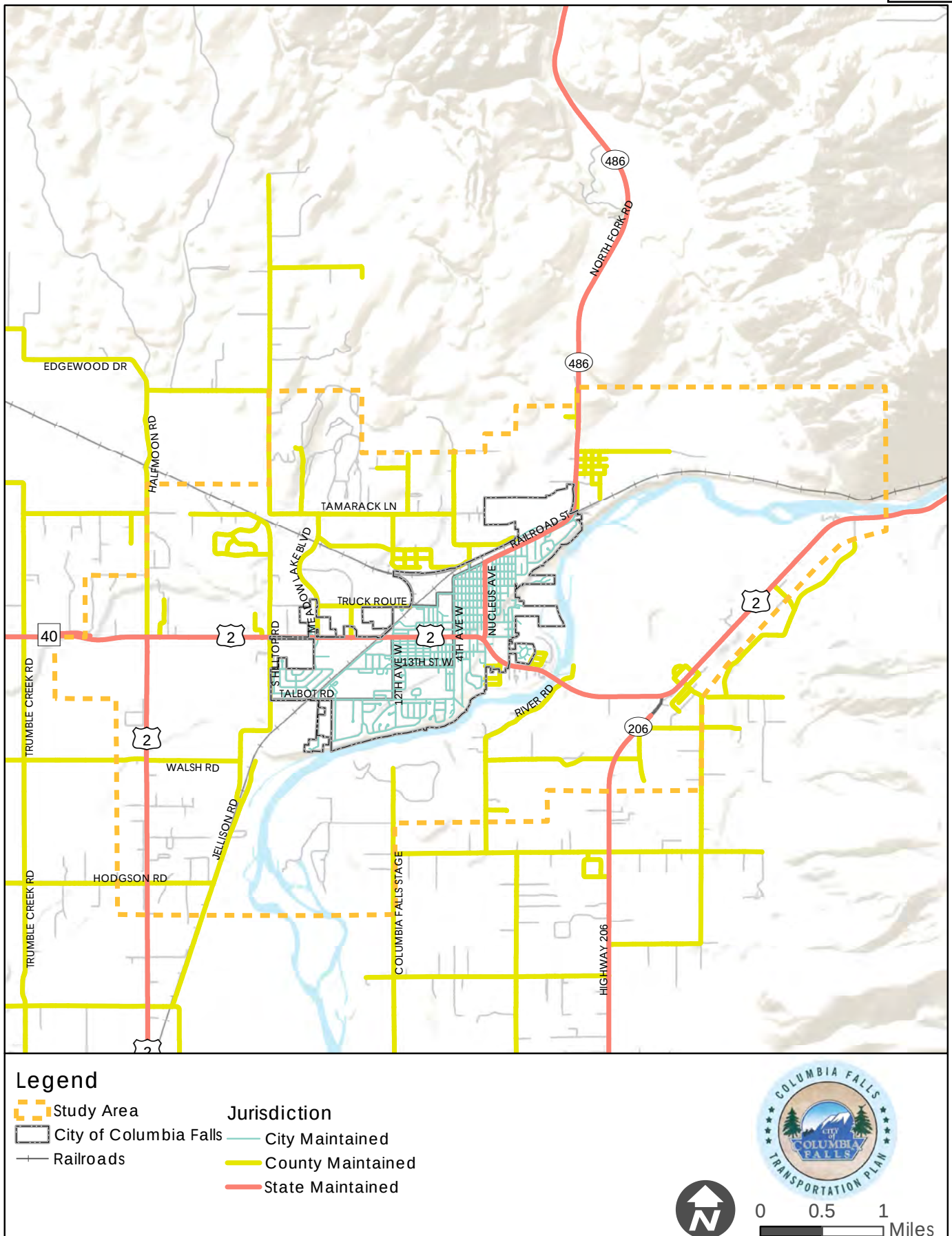
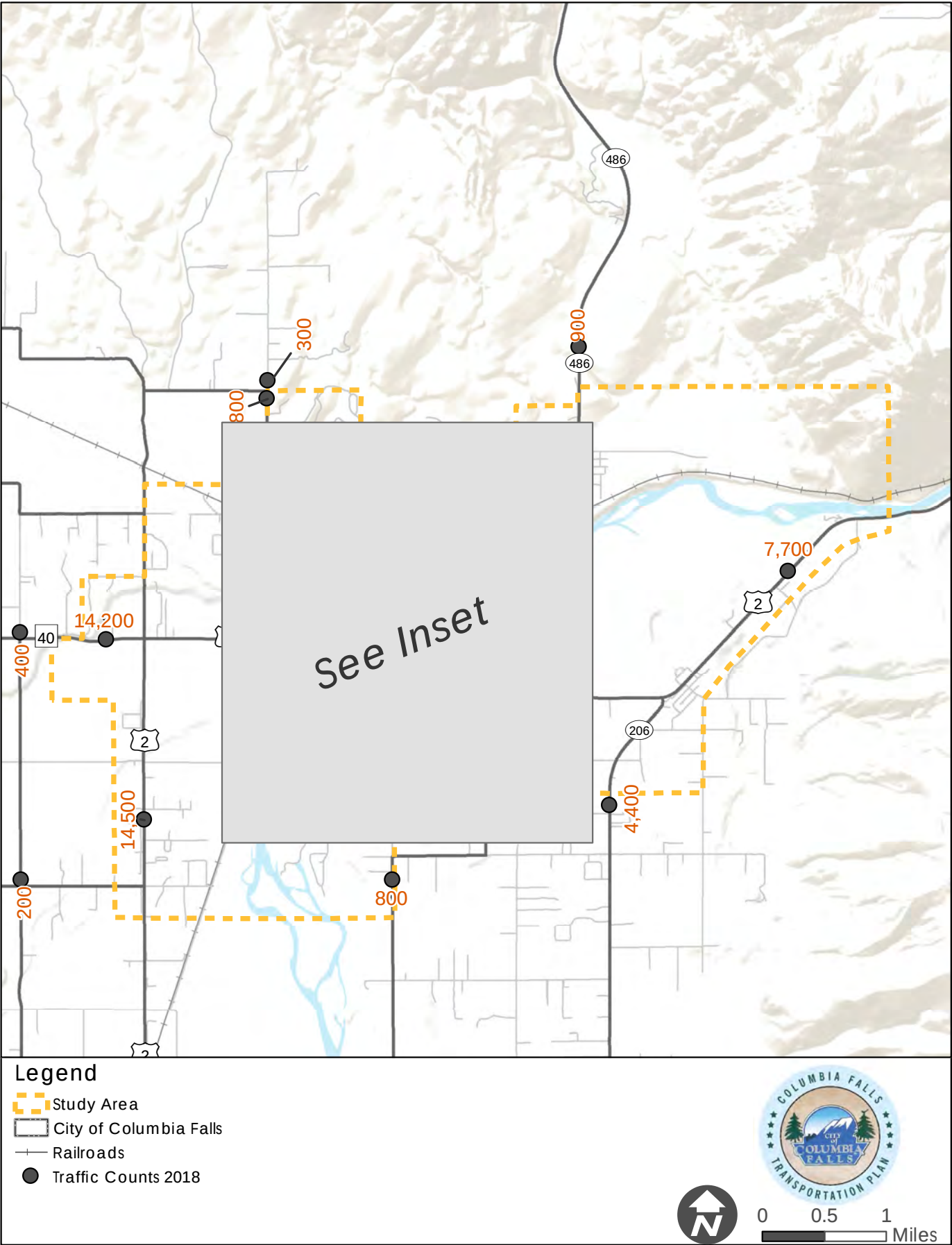


Figure 3.8: 2018 Traffic Counts





SAFETY ANALYSIS

Transportation safety is an essential component of the transportation planning process supporting the Columbia Falls Transportation Plan. Improving transportation safety requires more than just fixing a road or increasing police patrols. In order to be most effective, safety improvements need to consider the “four E’s” of transportation safety: Education, Enforcement, Engineering, and Emergency Services. The objective of the safety analysis is to improve the safety and well-being of all users of the transportation system and work towards MDT’s Vision Zero initiative to achieve zero deaths and zero injuries on Montana roads.

CRASH ANALYSIS

Crash data between 2014 and 2018 data was provided by MDT Traffic and Safety Bureau to investigate the traffic crash trends in the study area. Between 2014 and 2018, there were 635 crashes reported in the study area. This corresponds to 127 crashes per year. The high-level trends are discussed below with more detailed information later in this section.

- There were three crashes that resulted in a fatality, and 24 crashes that resulted in serious injury.
- There were six pedestrian involved crashes, including one crash that resulted in serious injury.
- There were six bicycle involved crashes.
- About 36 percent of crashes occurred at intersections.
- The largest number of crashes occurred on roads with greatest miles traveled, such as US Highway 2 and MT Hwy 40.
- Nearly 10 percent of crashes involved a collision with an animal.
- Nearly eight percent crashes involved impaired drivers.

The crash data included the spatial records which were analyzed to understand patterns of existing motorized vehicular crashes and identify high-risk areas. This was done through a hot-spot analysis which identifies clusters of dense accident occurrence, as shown in **FIGURE 3.12 ON PAGE 34**.

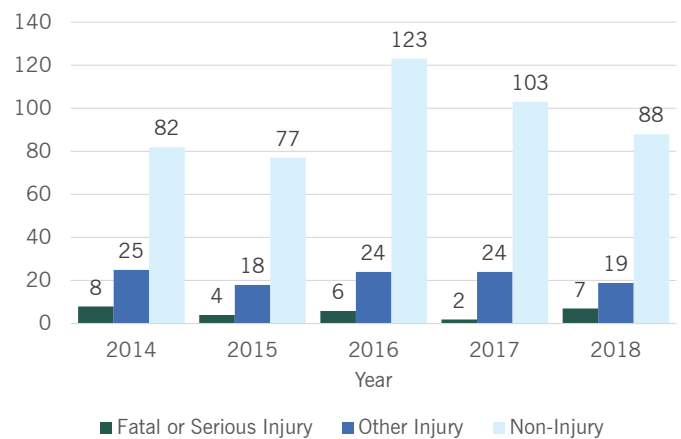
Crash Severity

Crash severity is very important for implementation of safety related counter measures needed to compare and assess the roadway. The crash data categorized the crashes by the following severity levels:

- Fatal Crash
- Suspected Serious Injury Crash
- Suspected Minor Injury Crash
- Possible Injury Crash
- Property Damage Only Crash

Crash severity is categorized based on the most severe injury of the crash. For example, if a crash involved two vehicles that resulted in one serious injury and two possible injury crash, the crash is reported as suspected serious injury crash. A Suspected Serious Injury crash is defined as an injury, other than fatal which prevents the injured individual from walking, driving, or normally continuing the activities they could perform before the injury. There were three crashes reported that resulted in death, 24 crashes that resulted in serious injury, 110 crashes that resulted in non-serious injury, 473 crashes that resulted in property damage only, and 25 unknown severity type crashes. **FIGURE 3.10** shows the number of injury and non-injury crashes by severity type during the analysis period. **FIGURE 3.12** shows the location of fatal and incapacitating injury crashes.

Figure 3.10: Crashes by Severity (2014–2018)



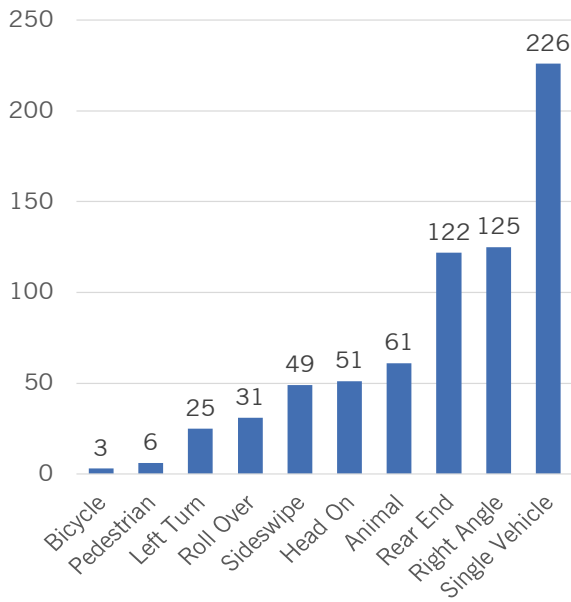
Crash Type

Identifying crash type at roadways assists in developing counter measures to mitigate or minimize the crash type. During the analysis period, single vehicle related (226), right angle (125), and rear-end (122) crashes represented the typical crash types in the study area. **FIGURE 3.11** shows the crashes by crash type during the analysis period.

Crash Occurrence Period

Typically, traffic varies significantly by time of day and day of the week, particularly during weekday peak hours. Crash data for the study area was evaluated based on the period of occurrence on the crash with respect to time of the day, day of the week, and month.

- The most common time for crashes (17 percent) was 3 PM.
- 76 percent of crashes occurred during weekdays. The fewest crashes occurred on Sundays.
- November through January generally experienced more vehicular crashes (34 percent). November is the peak month for crash frequency. Challenging winter road conditions including snow, sleet, and ice can contribute to the higher number of crashes.

Figure 3.11: Crashes by Type (2014–2018)

Crashes Involving Impaired Drivers

Montana has one of the highest fatality rates in the nation for number of deaths caused by impaired drivers per vehicle mile traveled. The statewide data from 2018 indicates that 64 percent of all fatalities statewide were the result of impaired driving. This is up from 61 percent in 2017. Within the study area, there were 48 crashes (13 percent) involving impaired drivers. Of these crashes, two crashes resulted in fatality, and nine crashes resulted in serious injury.

Crashes Involving Animals

From 2014 to 2018, there were 61 crashes (9.6 percent) that involved collision with wild animals, which corresponds to 12.2 crashes per year. This is likely understated as many animal-vehicle collisions go unreported if the crash does not

involve property damage or injury. Of these animal collisions, 80 percent occurred on high-volume, high-speed roadways like US Highway 2 and Secondary Highway 486.

Intersection and Segment Crash Evaluation

To assess the intersections and segments safety performances, two methods were applied: Crash Rate and Severity Rate. These methods apply an easy-to-use statistical test to determine whether the crash rate and severity rate for a location is significantly higher than the average crash rate and severity rate for other locations in the jurisdiction (or region) having similar characteristics.

- The crash rate is calculated as the number of crashes per million entering vehicles for intersections and the number of crashes per million vehicle miles traveled for segments.
- The severity rate applies a weight to crashes based on severity, including 5.0 for fatal crashes, 4.0 for incapacitating injury crashes, 3.0 for non-incapacitating injury crashes, 2.0 for possible injury crashes, and 1.0 for property damage only crashes.

For each intersection, a critical severity rate is determined based on the number of entering vehicles, which represents a severity rate that would be unusually high for the given intersection. In **TABLE 3.8**, an intersection's severity rate is highlighted red if greater than or equal to the critical rate, and yellow if the severity rate is below the critical rate.

If a location is identified as a high crash rate or high severity location, additional evaluation should be used to assess the needs of the location.

Eleven intersections were identified with the highest number of crashes in the area. **TABLE 3.8** summarizes the crash rate and severity rates of the intersections. The location of the intersections is shown in **FIGURE 3.13**. The larger the circle, the more crashes that occurred at that intersection.

Table 3.8: High Crash Intersections (2014–2018)

Intersection (shown in FIGURE 3.13)	Entering vehicles during study period (million)	Crashes			Crash Rate	Severity Rate
		Injury	Non-Injury	Total		
1 US 2 & MT Hwy 40	46.2	8	27	35	0.76	1.08
2 US 2 & Meadow Lake Blvd	47.2	9	13	22	0.47	0.85
3 US 2 & Hodgson Rd	27.8	5	7	12	0.43	0.79
4 9th St W & 12th Ave W	47.1	2	6	8	0.17	0.21
5 9th St W & 6th Ave W	43.3	1	7	8	0.18	0.21
6 9th St W & Truck Route Rd	46.3	3	4	7	0.15	0.24
7 9th St W & Hilltop Rd	41.3	2	4	6	0.15	0.22
8 9th St W & Nucleus Ave	43.7	2	4	6	0.14	0.21
9 2nd Ave W & 4th St W	1.4	1	4	5	3.53	4.95
10 US 2 & River Rd	38.2	2	3	5	0.13	0.26
11 Nucleus Ave & 5th St W	19.0	2	3	5	0.26	0.42

Figure 3.12: Crash Density and Severity (2014–2018)

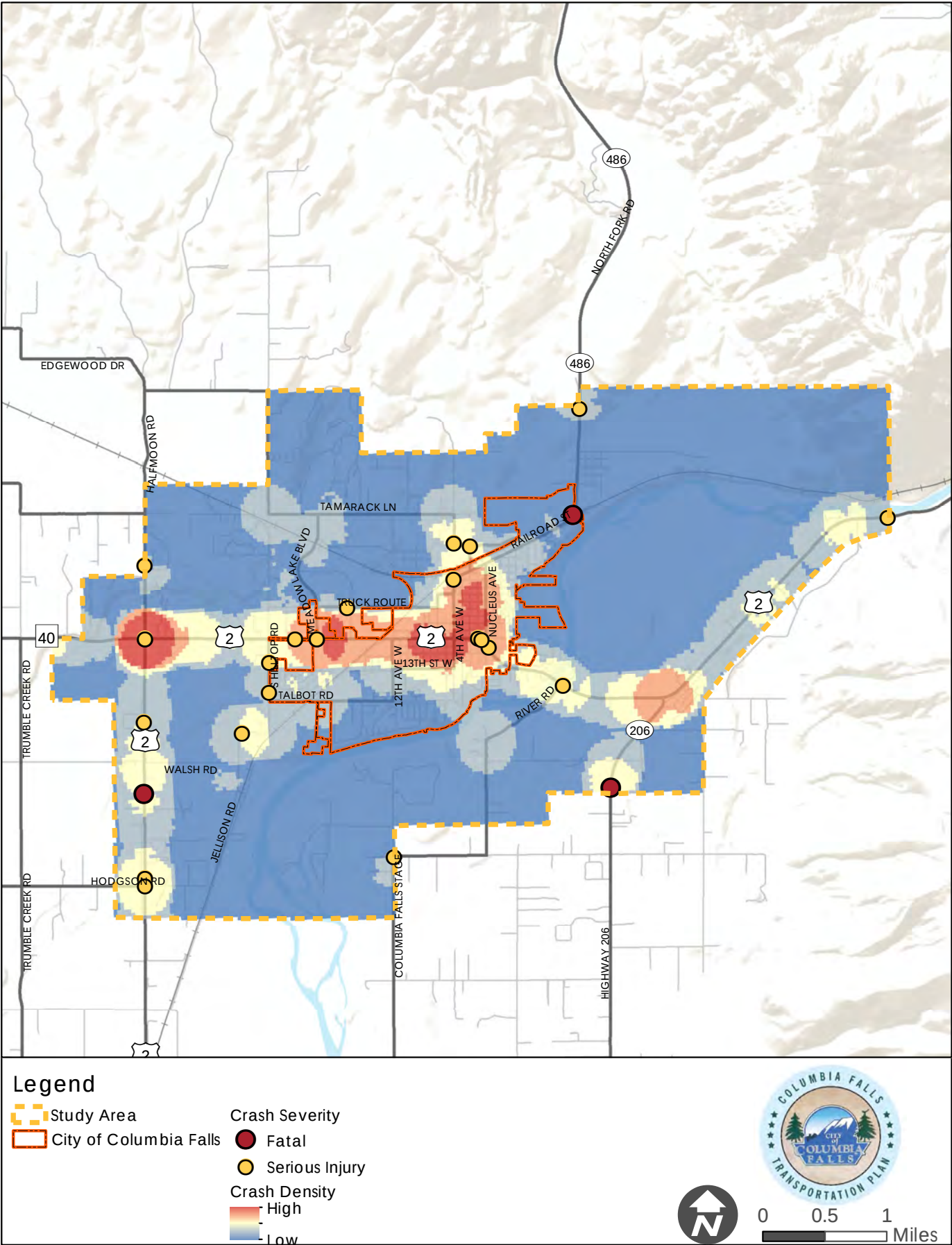
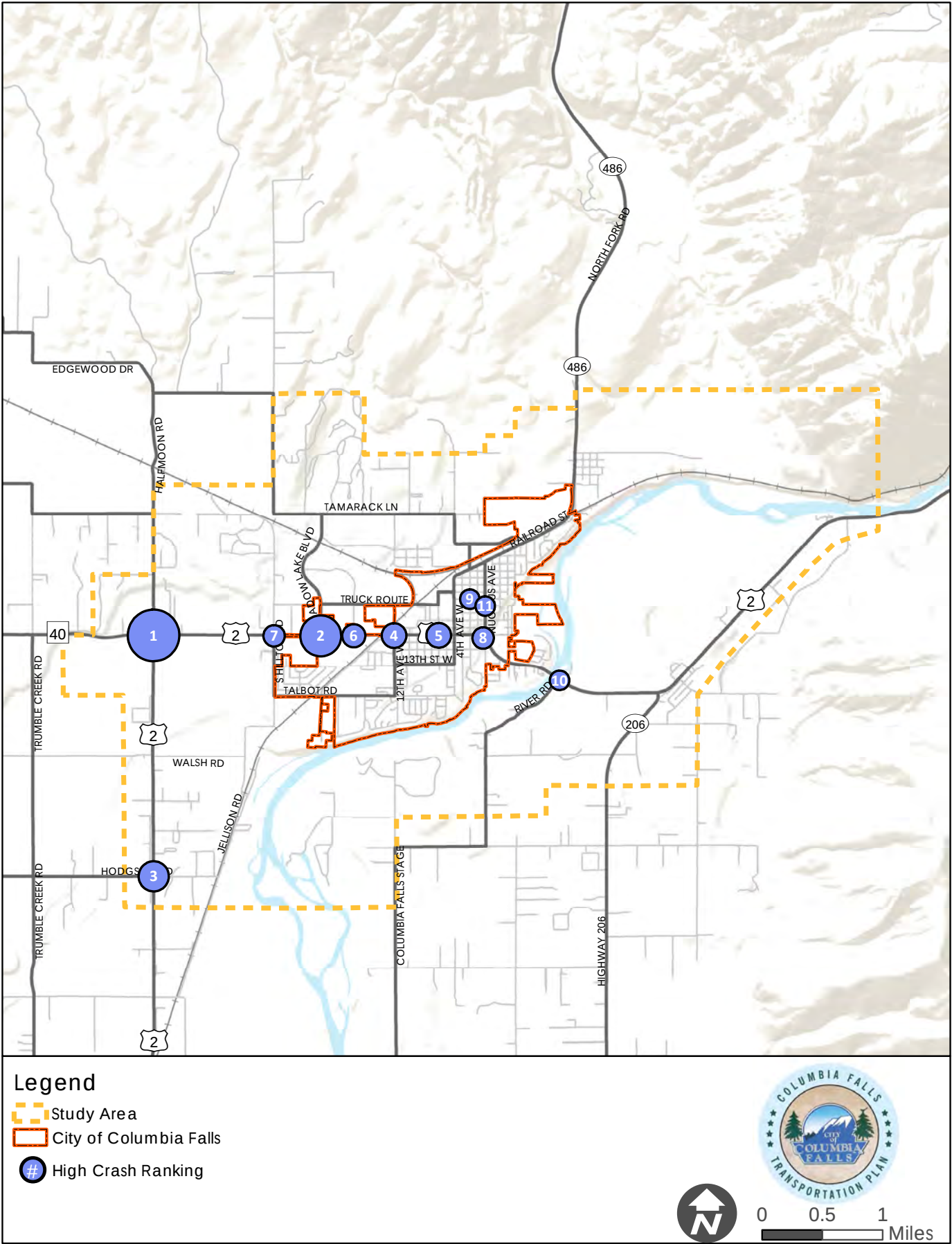


Figure 3.13: Crashes by Intersection (2014-2018)



FREIGHT SYSTEMS

Columbia Falls is served by US Highway 2 which connects the city to regional and national trade routes. The stretch of highway through town presents challenges in balancing freight traffic with local automobile, pedestrian, and bicycle traffic. Because truck activity centers can influence the entire network by slowing down traffic and creating safety hazards, it is important to document high activity centers within the study area. **FIGURE 3.15** shows the primary truck routes and generators in the study area.

As of 2016, approximately 16 percent of the labor force in Columbia Falls works in basic industries, or industries that export a majority of their products. Flathead County is historically the largest timber-related employer in the State of Montana. While Columbia Falls is a center for industrial activity, of the 500 acres of industrially developed land within one mile of the city, only 190 acres are inside the city limits. This strains the city's tax base and causes the city to function more closely to a bedroom community than an industrial hub. In planning the transportation system, understanding and balancing the needs of freight and local traffic will be critical to effectively serve the community.

RAIL SYSTEMS

Columbia Falls sits on the main line of the Burlington Northern Santa Fe (BNSF) Railroad. The railroad tracks run east-west along the northern boundary of the city limits, and has at-grade crossings at 2nd Avenue and 4th Avenue. Within the city limits, a spur line of the railroad track begins and continues southwest towards Kalispell. This line has four crossings within the city limits: US Highway 2, Talbot Road, the Truck Route, and 12th Avenue. **FIGURE 3.16** shows the railroad alignment and crossings within the study area.

The BNSF Railroad is an important part of the local economy, connecting local manufacturing to national shipping routes. It also creates challenges for the transportation network by blocking access from parts of the city on one side of the tracks to the other. In the 2019 Growth Policy Plan, the construction of a railroad crossing on 13th Street West was listed as a critical infrastructure need.

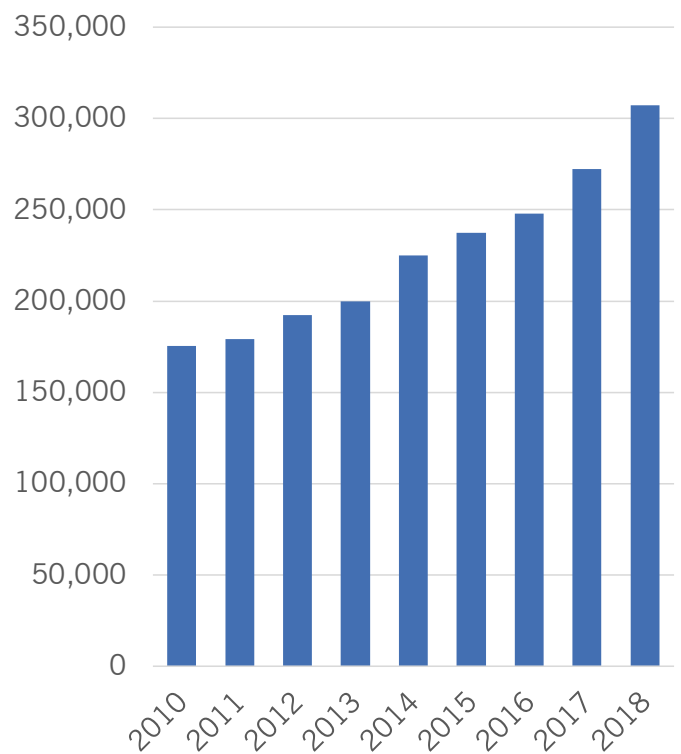
The City of Columbia Falls has expressed an interest in developing a quiet zone along the BNSF mainline through the northern part of the community. The project will require coordination with BNSF, Cedar Creek Industrial Park and other adjacent property owners. The effort would look to consolidate, close and better coordinate existing at grade crossings to support development of a quiet zone. The effort will also need to improve access north of the tracks back to the North Fork Road/State Secondary 486 and improve access to Cedar Creek Industrial Park. More detailed evaluation of a quiet zone will take place at later stages in the planning process.

AIR TRANSPORTATION

Kalispell-Glacier International Airport

The Kalispell-Glacier Park International Airport lies southwest of Columbia Falls on US Highway 2. Alaska Airlines, Allegiant, American Airlines, Delta, and United provide regular scheduled commercial flights. These airlines provided flights to 306,487 passengers in 2018, the highest passenger volume ever recorded at the airport. Over the past five years the airport has seen a 33 percent increase in passenger volume and a 75 percent increase since 2010 as seen in **FIGURE 3.14**. Starting in 2020, the airport is expanding by 40,000 square feet to keep up with growing passenger volumes.

Figure 3.14: Passenger Volumes at Kalispell-Glacier Park International Airport



The following are the major destinations and air carriers of the airport:

- Delta: Salt Lake City, Minneapolis, St. Paul, Atlanta (Seasonal), and Los Angeles (Seasonal)
- United: Denver and Chicago (Seasonal)
- Alaska: Seattle and Portland (Seasonal)
- Allegiant Air: Las Vegas, Phoenix, Oakland (Seasonal), Los Angeles (Seasonal)
- American Airlines: Chicago (Seasonal), Dallas (Seasonal), Los Angeles (Seasonal)

Figure 3.15: Truck Traffic Volumes and Major Routes

Item No.11.

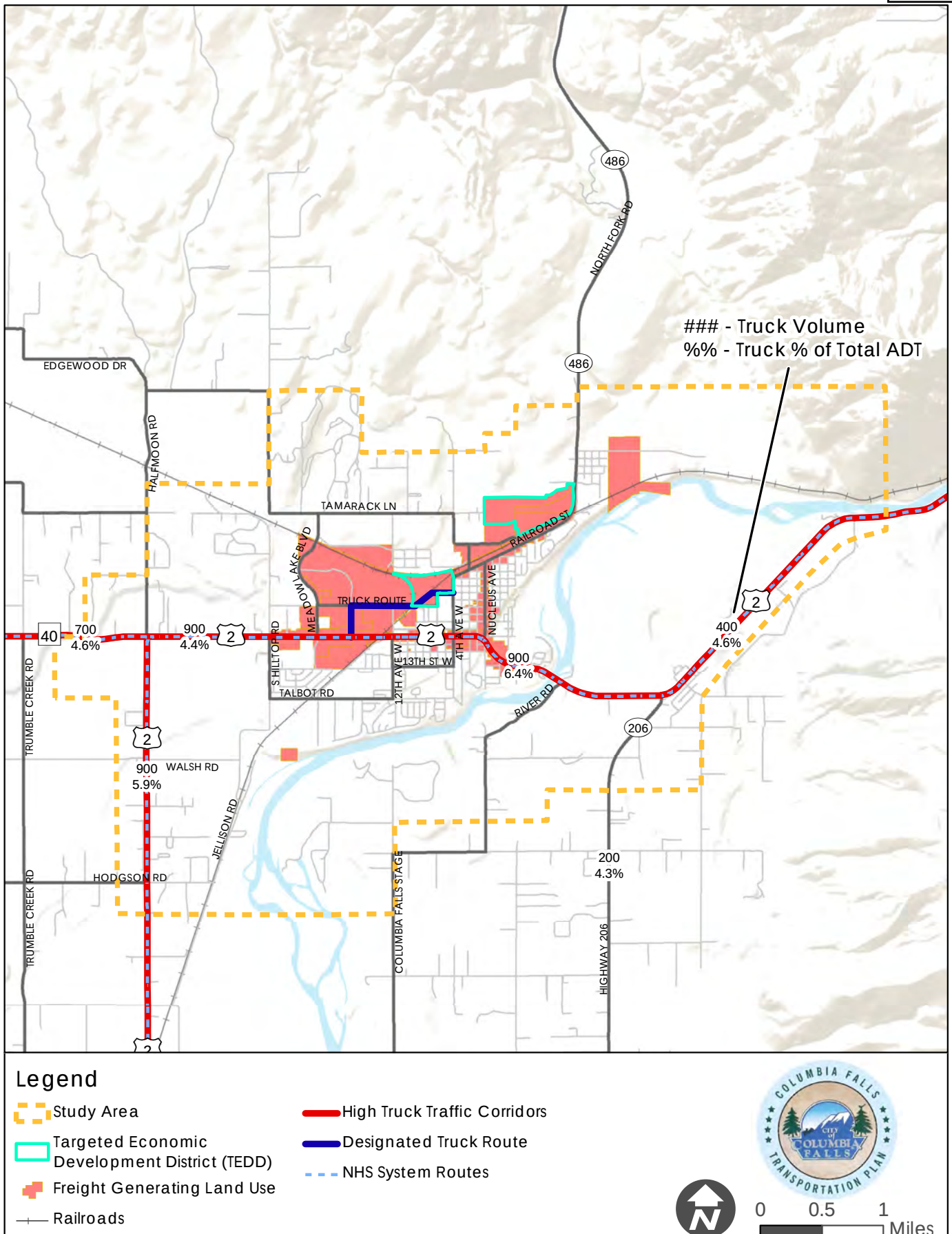
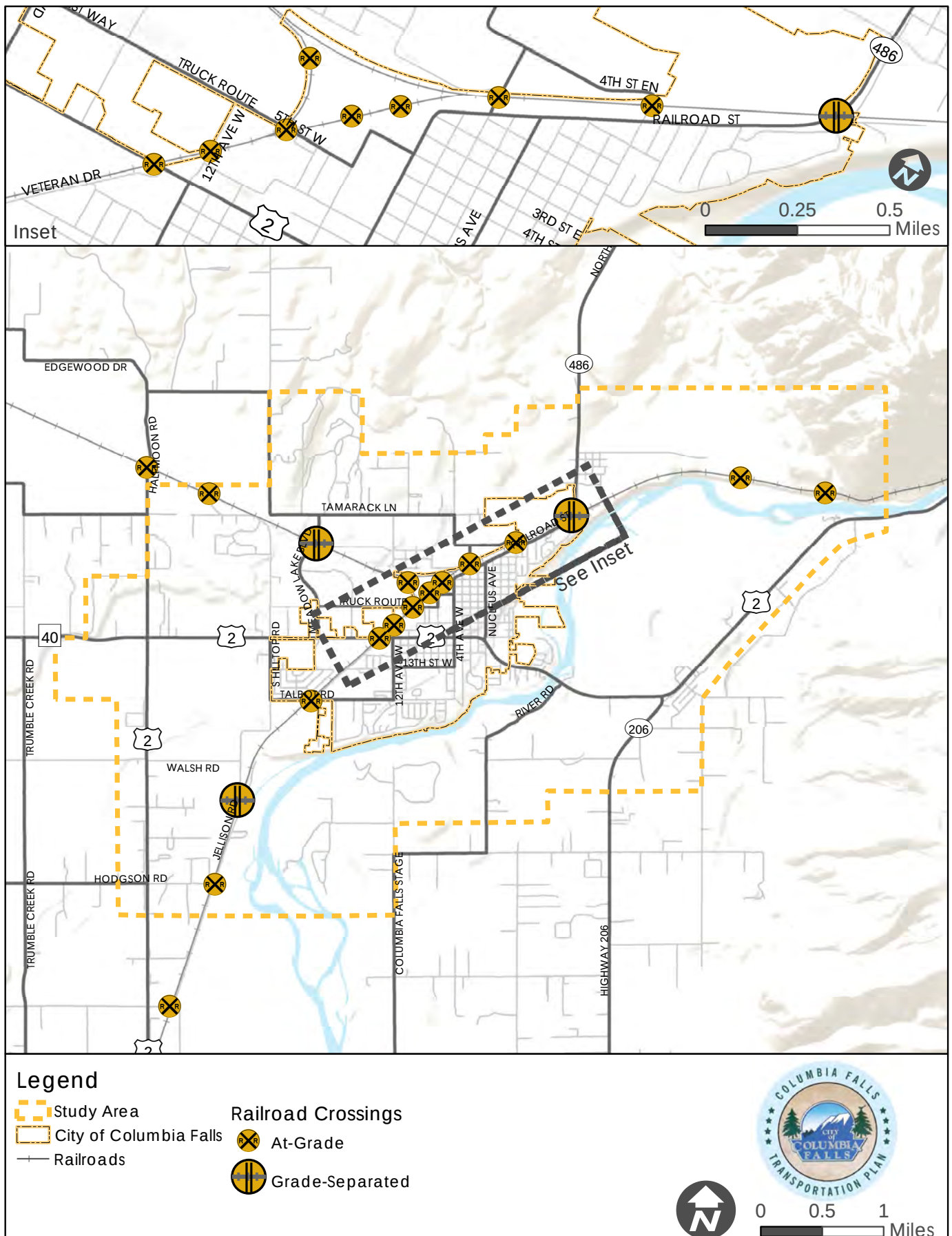


Figure 3.16: Railroad Crossings in the Study Area

Item No.11.





BICYCLE AND PEDESTRIAN SYSTEM

The 2019 Columbia Falls Growth Policy Plan identified the development and expansion of the existing trail system as a key opportunity for future

development. Additionally, the lack of curbs and sidewalks/bike paths are highlighted as weaknesses of the community. **TABLE 3.9** summarizes the existing facilities in the study area and examples are shown in **FIGURE 3.17**. Each facility type is described below.

- **Asphalt paths** – shared-use pedestrian and bicycle facilities.
- **Sidewalks** – pedestrian paths along the side of a roadway.
- **Primitive trails** – unpaved paths primarily used by pedestrians.

Table 3.9: Existing Multimodal Facilities

Facility	Length (miles)
Asphalt Path	4.44
Sidewalk	16.37
Primitive Trail	0.09

The future bicycle and pedestrian network should plan to address gaps within the existing facilities and expand pedestrian and bicycle facilities to rural developments that surround the urban area. For community members, the existence of these facilities is both a matter of access and safety. To improve accessibility, the 2019 Growth Plan, discussed later in this chapter, warns against the construction of new cul-de-sacs. To address safety, the Plan states that sidewalks are necessary on both sides of all neighborhood and business district streets and all neighborhoods should be served by bike paths.

Figure 3.17: Facility Types in Columbia Falls



BICYCLE AND PEDESTRIAN CRASHES

Between 2014 to 2018, there were six pedestrian and three bicycle related crashes, as shown in **FIGURE 3.18**. Minor crashes that do not involve injury or significant property damage are often left unreported, making it possible that pedestrian and bicycle crash numbers are higher than the data suggests.

Among the six pedestrian crashes within the study area, there was one serious injury, two minor injuries, and three possible injury type crashes. One serious injury crash involving a pedestrian occurred near the intersection of S Hilltop Road and Bethany Street during dark conditions (2014). Among the three bicycle crashes, one was minor and two resulted in possible injury.

During the study period, no clear trends emerged to aid in determining the most dangerous locations or facilities for pedestrians and cyclists. One pedestrian crash occurred at an intersection, one occurred at a driveway, and the rest along roadways. Notably, no pedestrian crashes occurred on shared-use paths or sidewalks. Among the bicycle crashes, one occurred at an intersection, one on a shared-use path, and the third along a roadway.

SAFE ROUTES TO SCHOOL

Safe routes to school is an important component of the bicycle and pedestrian system. Over the past several years, the city has been proactive with new crosswalk striping and pedestrian signage. **FIGURE 3.19** shows the locations of the four schools in Columbia Falls and the existing network of sidewalks and trails.

TRANSIT

Mountain Climber provides fixed, fixed-deviated, and paratransit public transportation in Flathead County for the cities of Kalispell, Whitefish, and Columbia Falls.¹ It is operated by Flathead County and the Area IX Agency on Aging. Transit service and investment is guided through the planning efforts in the 2021 Transportation Coordination Plan (TCP), which was adopted in February 2020. Below is a summary of the transit existing conditions. **FIGURE 3.20** shows the fixed-route stops as well as the paratransit service area.

The City of Columbia Falls contributes \$5,500 annually to Mountain Climber to support public transportation services. Mountain Climber operates three routes that serve Columbia Falls: the Columbia Falls Express, the Tri-City Commuter, and the Columbia Falls City Bus. The Tri-City Commuter operates Monday through Friday and offers two morning rides and one evening ride to Whitefish and Kalispell. The Columbia Falls Express makes one morning trip from

Kalispell to Columbia Falls and one afternoon trip Columbia Falls to Kalispell. Ridership across all Mountain Climber routes and services increased 36 percent between 2017 and 2019, from 85,305 rides during the 2017 fiscal year to 116,017 rides during the 2019 fiscal year. Ridership is highest during the summer months, and disabled and elderly riders make up 72 percent of total ridership year-round.

PARATRANSIT SERVICE

The Columbia Falls City Bus is a fixed/deviated route that runs Monday through Friday between 10:00 AM and 2:00 PM. Between 10:00 AM and 11:00 AM, the bus exclusively serves dial-a-ride passengers. The service is curb-to-curb, or door-to-door on request, and is available by appointment during the same hours the city bus operates. The Americans with Disabilities Act requires fixed route operators to provide paratransit within a three-quarter mile radius of fixed route service. In Columbia Falls, the combined fixed/deviated route uses a 15-passenger vehicle, and makes 13 fixed stops, shown in **FIGURE 3.20**. During the 2019 fiscal year, the City Bus provided 4,288 rides, which was a 35 percent increase over the 2018 fiscal year.

Table 3.10: Mountain Climber Service Indicators

Paratransit Service Indicator	FY 2018
Passenger Trips	31,659
Operating Costs	\$525,160
Passengers per Revenue Hour	2.25
Passengers per Revenue Mile	0.23
Cost per Passenger	\$16.59
Cost per Revenue Hour	\$37.40
Farebox Recovery Ratio	3.54%

Table 3.11: Transit Ridership by Route

Route	FY 2018	FY 2019	FY 2020
Whitefish City Bus	4,336	6,390	5,792
Columbia Falls City Bus	3,185	4,288	3,024
Tri-City Commuter	9,103	5,771	4,540

¹ Due to impacts related to COVID-19 Mountain Climber is currently restructuring its services. This data reflects operational conditions as of 7/1/2020, as well as historical conditions.

Figure 3.18: Bicycle and Pedestrian Facilities and Crashes

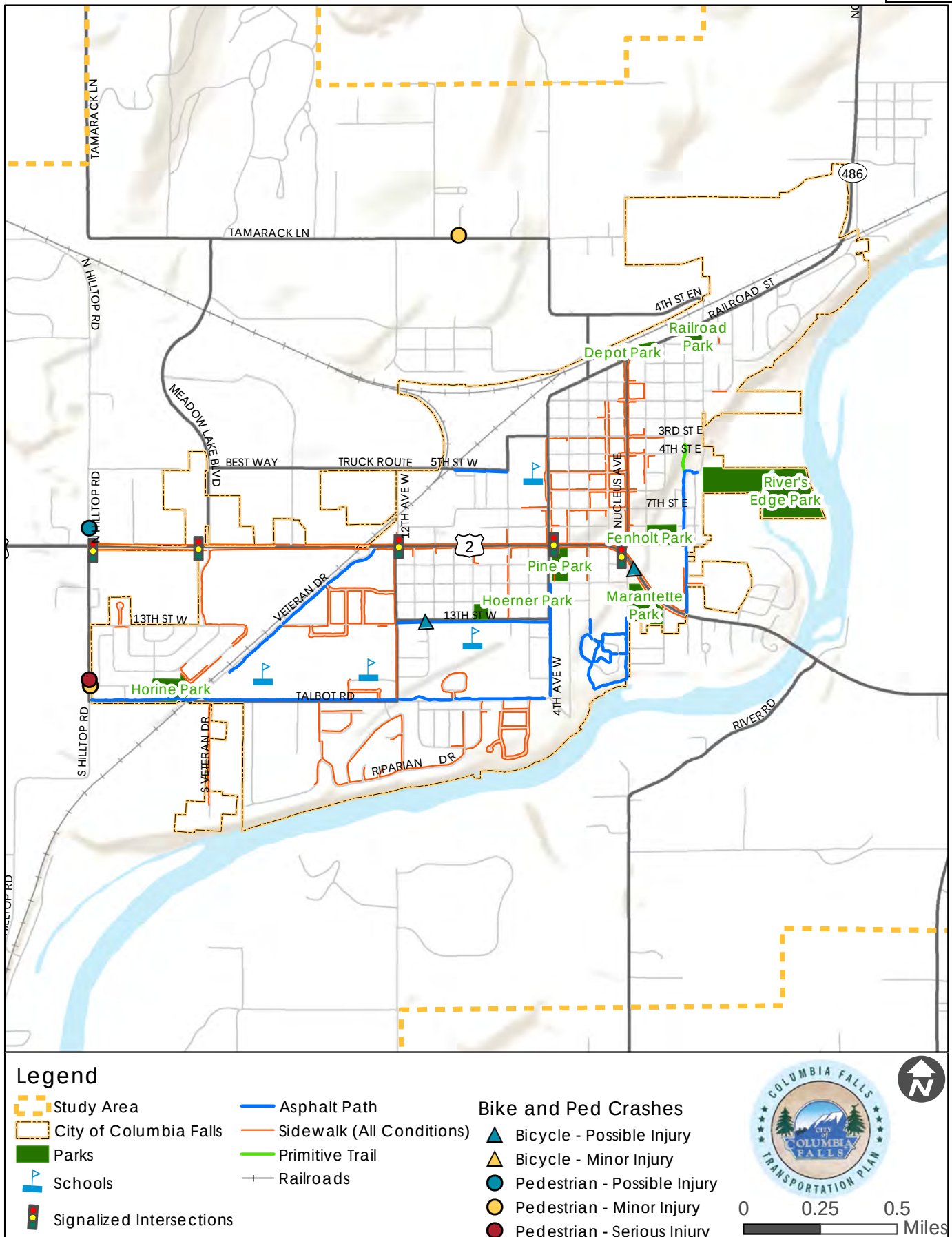
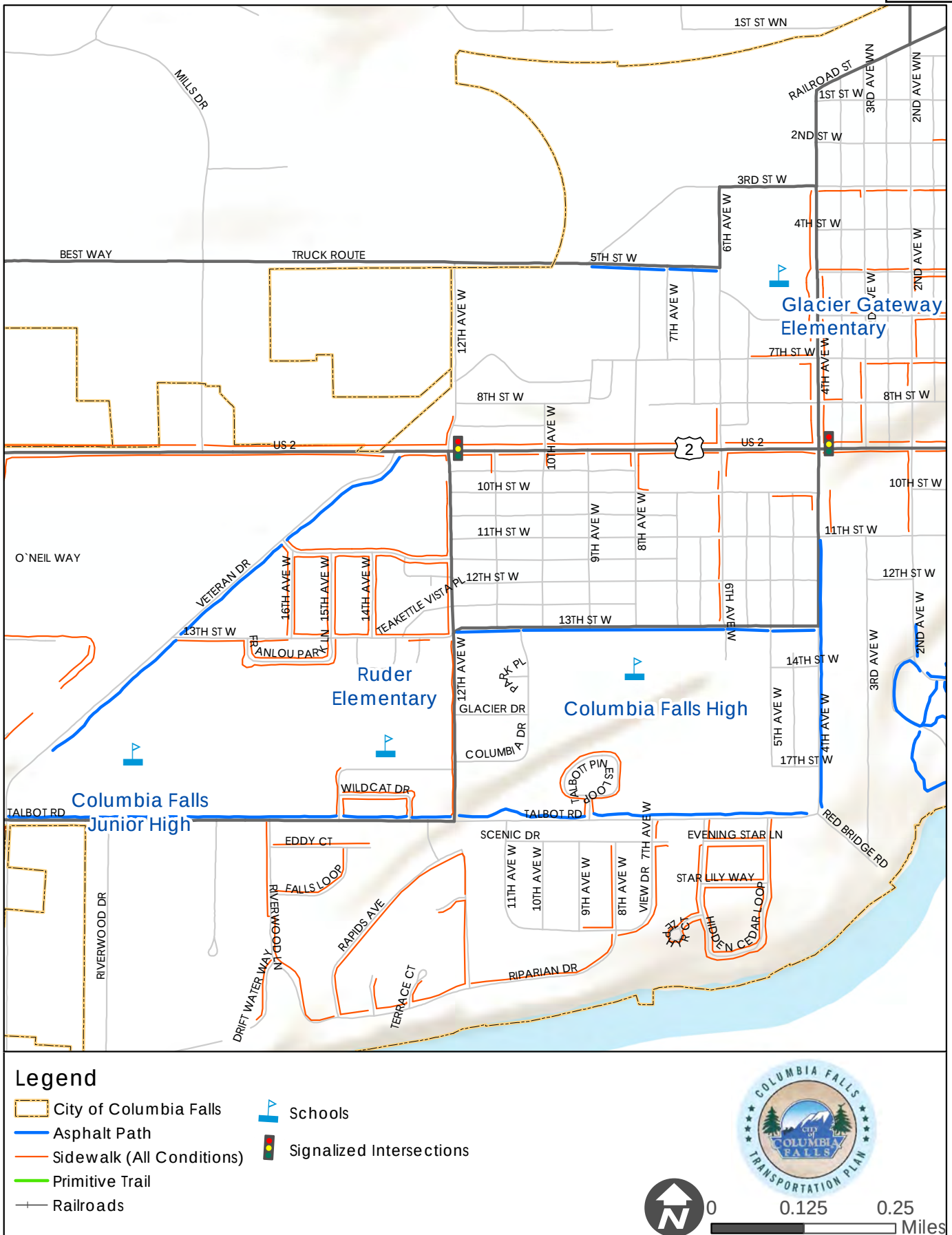


Figure 3.19: Columbia Falls Schools

Item No.11.







NOVEMBER 2021



ENGINEERING, REIMAGINED

Chapter 4. Projected Conditions Analysis

BACKGROUND

As part of the Columbia Falls Transportation Plan, a projected conditions analysis was performed for the plan study area. The analysis incorporated recent traffic data as well as population and employment information in order to glean an understand of the community's future transportation needs. The project team conducted the projected conditions analysis in coordination with the PAC, City staff, and MDT.

PROJECTED TRAFFIC VOLUMES

The project team projected traffic volumes for the study area roadway system based on growth rates developed in collaboration with City staff, MDT and the PAC. The stakeholders agreed that a rate of 1.5 percent would be applied to state highway volumes, including US Highway 2, MT 40 and Secondary Hwy 486. For all other corridors, volumes were projected using a growth rate of 1.1 percent. The 1.5 percent and 1.1 percent rates are based on historical growth

in traffic volume for State Highways and local roads within the study area. The project team used pre-COVID 19 data to calculate historical growth rates.

This analysis highlighted various future traffic volume trends within the study area. The 20 highest count locations by 2040 annual average daily traffic (AADT) estimate can be seen in **TABLE 4.1**. A list of all 50 count locations can be seen in **APPENDIX B: STUDY AREA TRAFFIC COUNTY LOCATIONS**.

Most traffic is expected to accumulate on the major highways, including U.S. 2, MT 40, and Secondary Hwy 486. Some count locations on River Road, Hilltop Road, a portion of 4th Avenue W, Tamarack Lane, and Columbia Falls Stage Road are expected to have AADT greater than 1,000 by 2040. However, this growth is not anticipated to result in capacity issues by 2040.

AADTs for 2018 and 2040 can be seen in **FIGURE 4.1** and **FIGURE 4.2**.

Table 4.1: Twenty Highest Count Locations by 2040 AADT Estimate

Site ID	Corridor	Terminus 1	Terminus 2	AADT 2018	2040 Estimate
15-4A-028	US 2	12th Ave W	Meadow Lake Blvd	23,200	32,200
15-4A-012	US 2	Meadow Lake Blvd	JCT MT 40	21,300	29,500
15-4A-029	US 2	4th Ave W	12th Ave W	17,600	24,400
15-4A-030	US 2	4th Ave W	Secondary Hwy 486	17,000	23,600
15-4A-031	US 2	Secondary Hwy 486	Flathead River	14,700	20,400
15-4A-014	US 2	JCT MT 40	Limit of Study Area	14,500	20,100
15-4A-011	MT 40	JCT US 2	Limit of Study Area	14,200	18,900
15-4A-013	US 2	Flathead River	JCT MT 206	12,100	16,800
15-4A-002	US 2	JCT MT 206	Limit of Study Area	7,700	10,700
15-4A-032	Secondary Hwy 486	US 2	6th St	6,400	8,900
15-4A-033	Secondary Hwy 486	6th St	2nd St	5,700	7,900
15-4A-001	Secondary Hwy 206	JCT US 2	Limit of Study Area	4,400	6,100
15-4A-055	Meadow Lake Blvd	Truck Route	US 2	3,600	4,500
15-4A-034	Secondary Hwy 486	Railroad St	2nd St	3,300	4,500
15-4A-063	Railroad St	Nucleus Ave	2nd Ave W	3,100	3,900
15-4A-056	Meadow Lake Blvd	Tamarack Ln	Truck Route	2,900	3,700
15-4A-062	3rd St W	4th Ave W	6th Ave W	2,300	3,000
15-4A-061	6th Ave W	3rd St W	5th St W	2,300	2,900
15-4A-035	Secondary Hwy 486	Nucleus Ave	Railroad Tracks	2,100	2,900
15-4A-039	River Rd	Columbia Falls Stage	US 2	2,200	2,800

Item No.11.

POPULATION PROJECTIONS

Population projections for the City of Columbia Falls were completed for the 2040 horizon year. Population totals were extrapolated through the year 2040 by applying a linear growth rate based on the City's population growth from 2000 to 2020. The City's 2020 Census totals served as a base for the projection. According to this methodology, a per-decade linear growth rate of 22.8 percent (2.3 percent annual growth) was applied to the base 2020 population total through the horizon year. Population projections can be seen in **TABLE 4.2**.

TRAFFIC OPERATIONS

Existing traffic operations were evaluated at eleven study intersections using methodologies from the *Highway Capacity Manual*. The intersections were selected based on the

availability of recent turning movement data. Peak turning movement counts were sourced from counts provided by MDT and the City of Columbia Falls.

Item No.11.

Traffic operations are described in terms of Level of Service (LOS), with levels of service ranging from LOS A to LOS F, as described below. The LOS calculations incorporate traffic volumes, intersection geometry, signal timing, and other parameters to estimate the delay per vehicle at the intersection. LOS A indicates near free-flow traffic conditions with little delay and LOS F indicates breakdown of traffic flow with very high amounts of delay. At oversaturated intersections and approaches, the delay may only reflect the vehicles that can be processed in the analysis period and not the total delay for that intersection, thus underreporting the actual delay experienced by drivers.

LOS C or better is considered acceptable. The LOS thresholds for intersection delay are shown in **TABLE 4.3**.

Table 4.2: Population Projections

	2000	2010	2016	2020	2025	2030	2040
City of Columbia Falls	3,645	4,688	4,960	5,308	6,593	6,519	7,730

Table 4.3: Level of Service Thresholds by Intersection Delay

Level of Service	Average Delay (Seconds per Vehicle)		Description
	Unsignalized Intersection	Signalized Intersection	
A	≤ 10	≤ 10	Near free-flow traffic
B	> 10 and ≤ 15	> 10 and ≤ 20	Minor delays
C	> 15 and ≤ 25	> 20 and ≤ 35	Some delays, but not resulting in significant traffic congestion
D	> 25 and ≤ 35	> 35 and ≤ 55	Delays with some traffic congestion
E	> 35 and ≤ 50	> 55 and ≤ 80	Significant delays with significant traffic congestion, approaching capacity
F	> 50	> 80	Breakdown of traffic flow, major traffic congestion

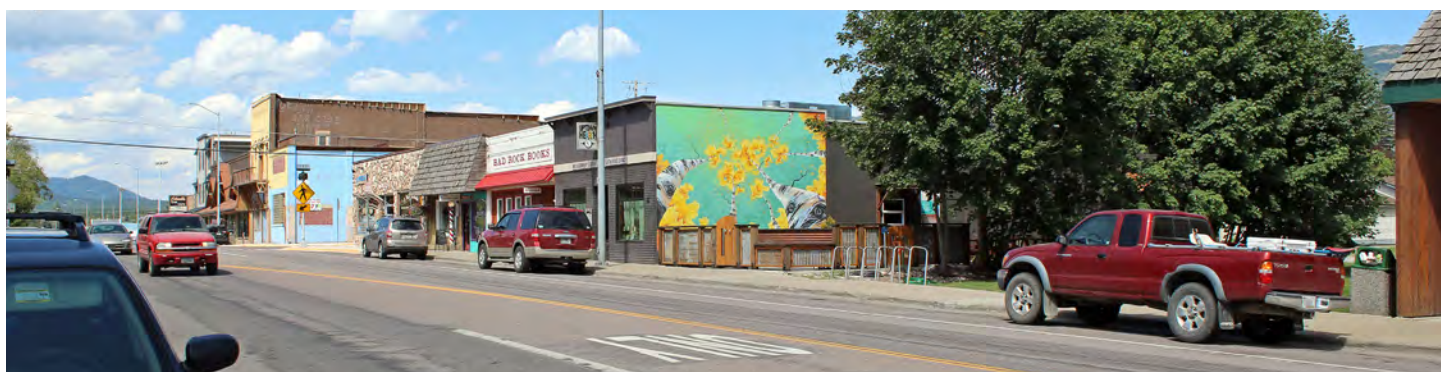
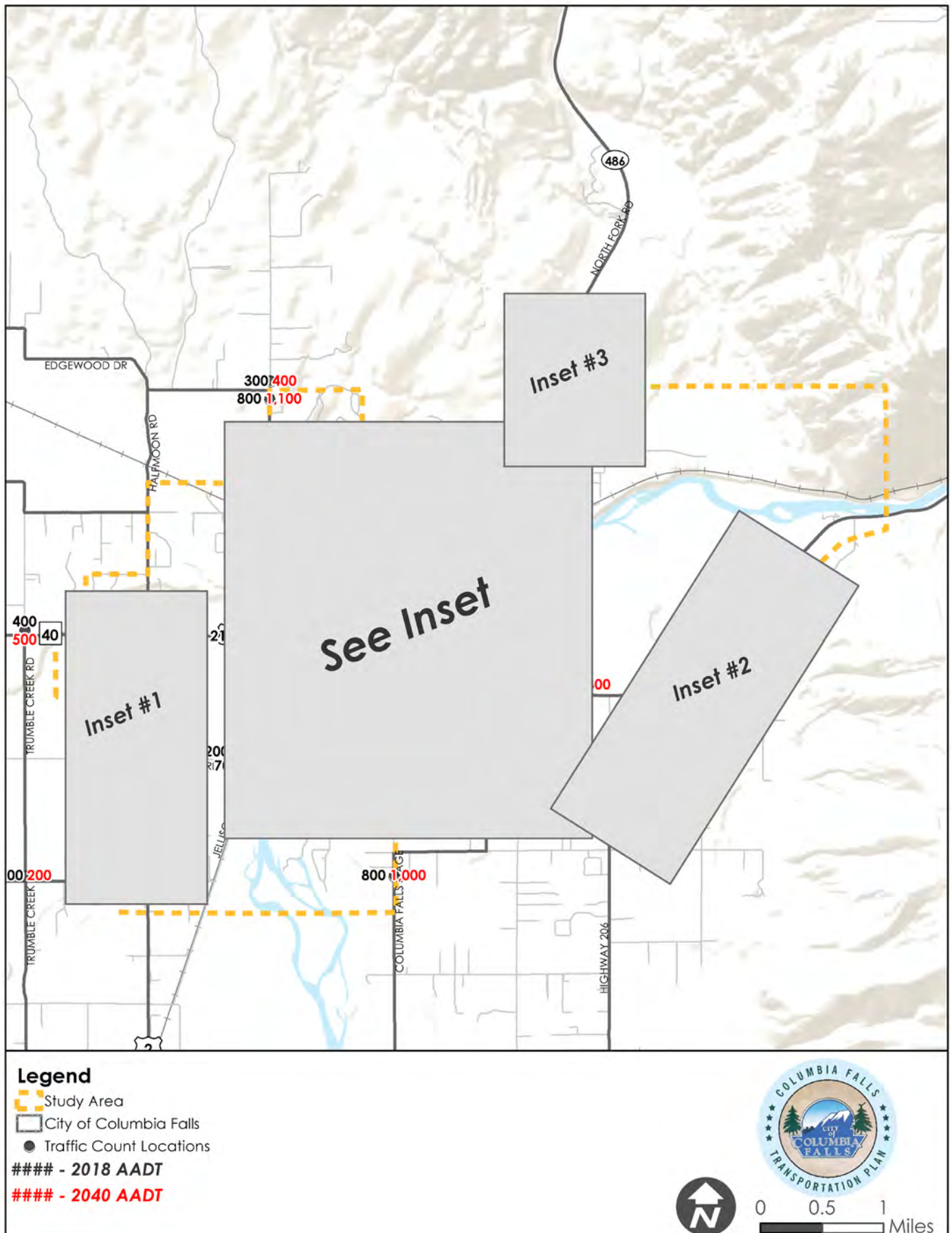


Figure 4.1: 2040 AADT Growth

Item No.11.





EXISTING TRAFFIC OPERATION RESULTS

Intersection LOS analysis was performed for eleven intersections within the study area based on existing conditions. Most study intersections operate effectively at LOS C or better during both peak hours, as shown in **TABLE 4.4** and **FIGURE 4.3 ON PAGE 53**. However, there are a few intersections that experience acceptable overall intersection levels of service but deficient approach levels of service during one or both peak hours. These include:

- The southbound approach of MT Highway 40 and US Highway 2 intersection operates at LOS D during the PM peak.
- The northbound approach of 12th Avenue W and US Highway 2 intersection operates at LOS D during the AM peak.
- The northbound approach of 6th Avenue W and US Highway 2 intersection operates at LOS D during the AM and PM peak.

Table 4.4: 2020 AM and PM Peak Hour Intersection Level of Service

ID	Intersection	Traffic Control	Peak	Level of Service				
				EB	WB	NB	SB	Int
1	MT Hwy 40 & US 2	Signal	AM	B	B	B	C	B
			PM	C	C	B	D	C
2	Hilltop Rd & US 2	Signal	AM	A	A	C	B	A
			PM	A	A	B	C	A
3	Meadowlake Rd & US 2	TWSC	AM	A	A	B	A	A
			PM	B	A	C	B	B
4	12th Ave W & US 2	TWSC	AM	A	A	D	B	A
			PM	B	A	C	C	B
5	6th Ave W & US 2	TWSC	AM	A	A	D	C	A
			PM	A	A	D	C	A
6	4th Ave W & US 2	TWSC	AM	A	A	C	B	A
			PM	A	A	C	B	A
7	Nucleus Ave & US 2	Signal	AM	A	A	—	B	A
			PM	A	B	—	C	B
8	MT 206 & US 2	TWSC	AM	A	B	B	—	B
			PM	A	B	B	—	B
9	Truck Route & US-2	TWSC	AM	A	A	E	E	C
			PM	A	A	C	C	B
10	3rd Ave & US 2	TWSC	AM	A	A	B	—	A
			PM	A	A	C	—	B
11	Nucleus Ave & 9th Ave	TWSC	AM	—	B	A	A	A
			PM	—	B	A	A	B

- At the intersection of Truck Route and US Highway 2, the northbound and southbound approaches operate at LOS E during the AM peak.

Item No.11.

2040 TRAFFIC OPERATION RESULTS

Projections for intersection traffic volumes were made for the eleven intersections. These projections were based on the same annual growth rate assumptions used to project corridor volumes. A growth rate of 1.5 percent was used for state highways, while a growth rate of 1.1 percent was used for all other roadway types. The growth rate that was determined for a given intersection as a whole was applied to each individual turning movement to represent the projected conditions. The intersection LOS was calculated using the existing street layout, lane-use configuration, and traffic control devices. The results of this analysis are presented in **TABLE 4.5** and **FIGURE 4.4 ON PAGE 54** for the intersections, respectively.

Most study intersections and their approaches operate effectively at LOS C or better during both peak hours, except for a few. These include:

Table 4.5: 2040 AM and PM Peak Hour Intersection Level of Service

ID	Intersection	Traffic Control	Peak	Level of Service				
				EB	WB	NB	SB	Int
1	MT Hwy 40 & US 2	Signal	AM	C	C	B	C	B
			PM	D	D	C	D	D
2	Hilltop Rd & US 2	Signal	AM	A	A	C	B	A
			PM	B	A	C	C	B
3	Meadowlake Rd & US 2	Signal	AM	A	A	B	B	A
			PM	D	C	D	D	C
4	12th Ave W & US 2	Signal	AM	A	A	D	B	B
			PM	C	B	D	D	C
5	6th Ave W & US 2	Signal	AM	A	A	D	C	A
			PM	A	A	D	B	A
6	4th Ave W & US 2	Signal	AM	A	A	C	B	A
			PM	A	B	C	C	B
7	Nucleus Ave & US 2	Signal	AM	A	A	—	B	B
			PM	B	C	—	C	B
8	MT 206 & US 2	Signal	AM	B	B	C	—	B
			PM	B	D	C	—	C
9	Truck Route & US 2	TWSC	AM	A	A	F	F	F
			PM	A	A	E	F	C
10	3rd Ave & US 2	TWSC	AM	A	A	B	-	A
			PM	A	A	C	-	C
11	Nucleus Ave & 9th Ave	TWSC	AM	-	B	A	A	B
			PM	-	A	A	A	A

- The intersection of MT Highway 40 and US Highway 2 operates at LOS D during the PM Peak.
- The intersection of Truck Route and US Highway 2 operates at LOS F during the AM Peak. The overall intersection operates at acceptable LOS during the PM peak, but the northbound and southbound approaches operate at LOS E and LOS F, respectively.
- The northbound, southbound, and eastbound approaches of the Meadow Lake Road and US Highway 2 intersection operate at LOS D during the PM peak.
- The northbound approach of the 12th Avenue Highway 2 intersection operates at LOS D during the AM and PM peak, while the southbound approach operates at LOS D during the PM peak.
- The northbound approach of the 6th Avenue W and US Highway 2 intersection operates at LOS D during the AM and PM peak.



Figure 4.3: Existing Intersection Level of Service

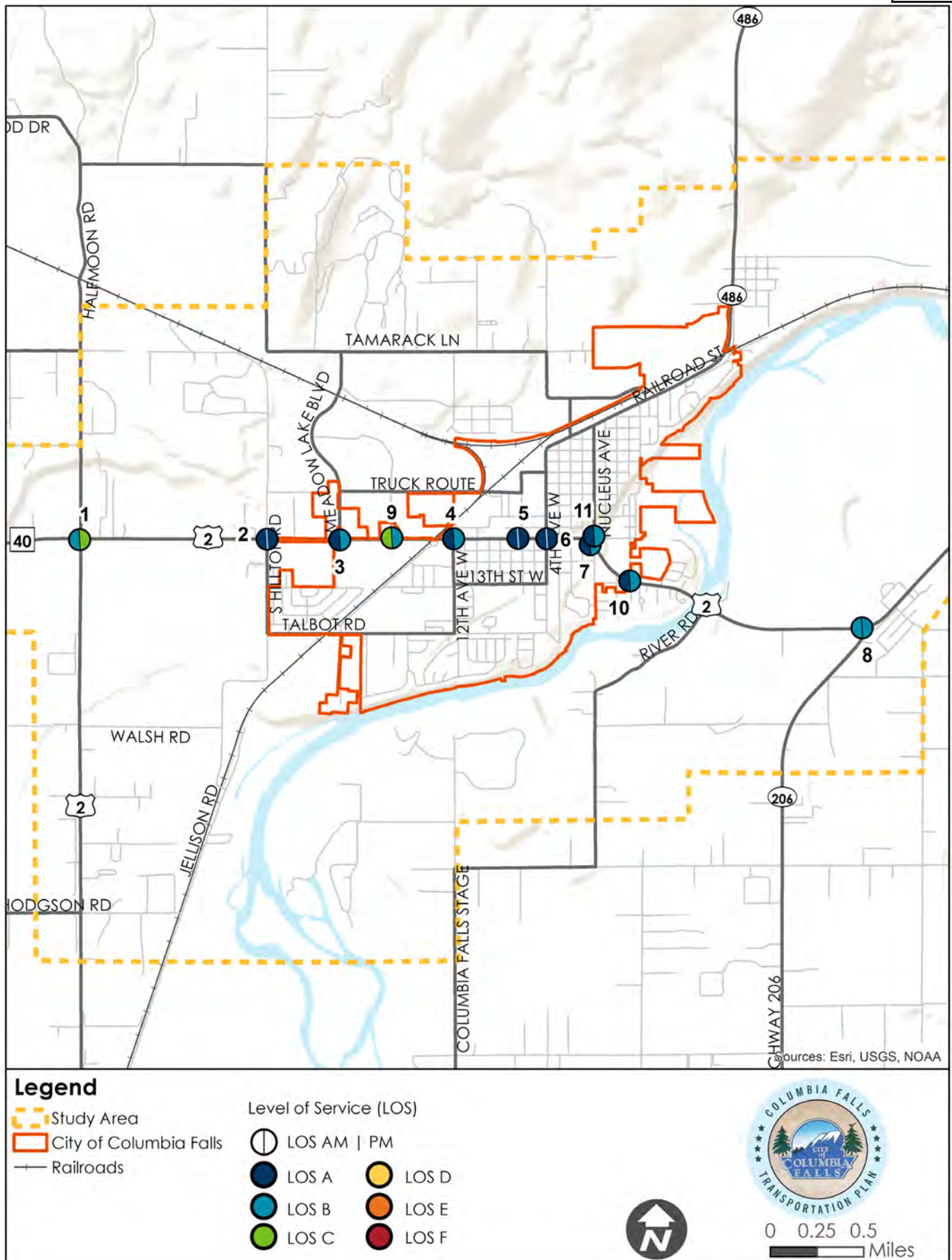
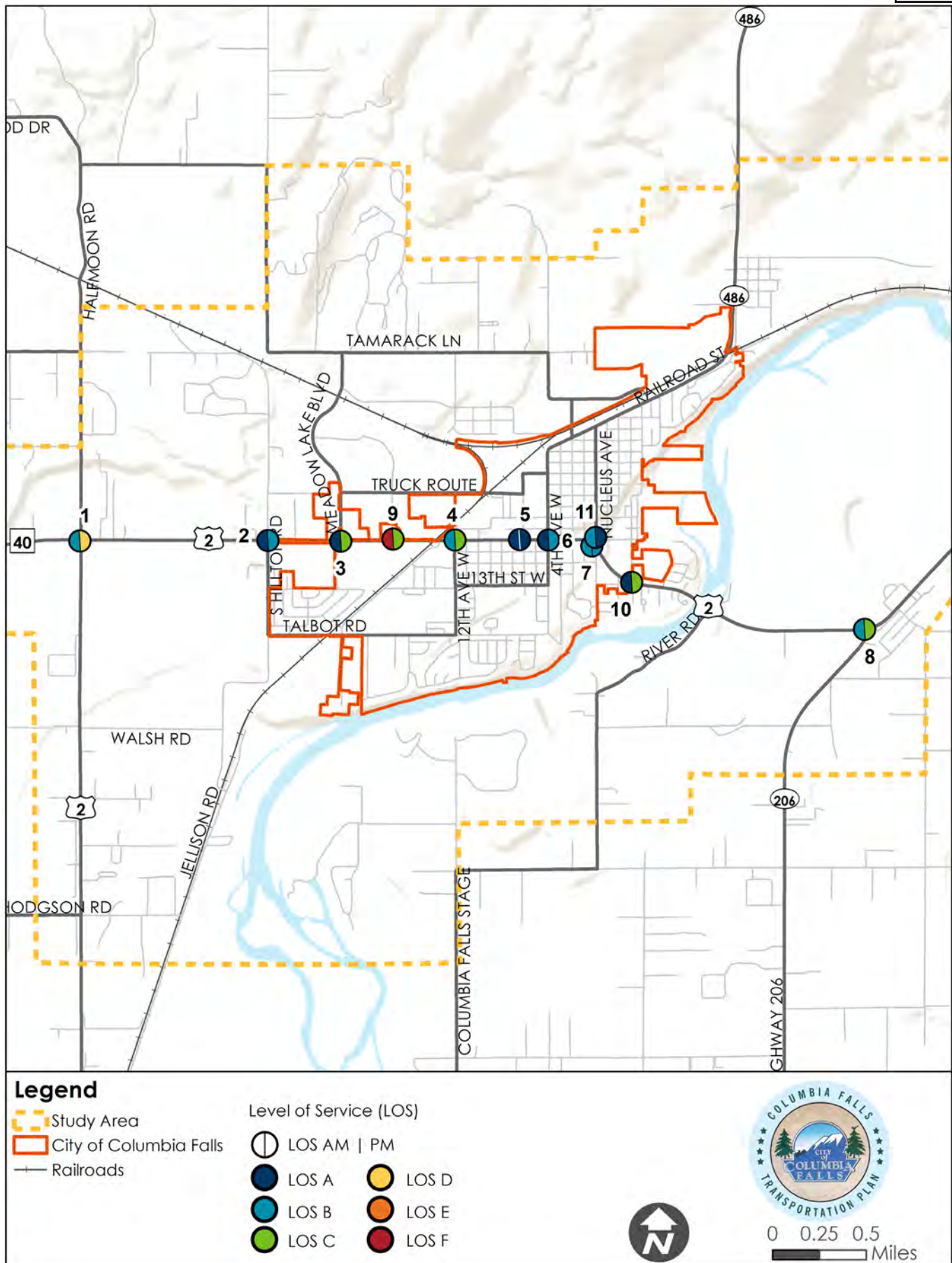


Figure 4.4: 2040 Intersection Level of Service





NOVEMBER 2021



ENGINEERING, REIMAGINED

Chapter 5. Pavement Management

BACKGROUND

Since 2004, the City of Columbia Falls (City) has employed Iworq Systems Inc.'s (Iworq) pavement management software to inventory the condition of its roadway system. The software allows tracking of roadway pavement maintenance and improvements and provides recommended future treatments for local roadways at intervals based on industry standards, traffic volumes and ongoing visual inspection. In July of 2019, the City contracted Iworq to perform an on-site inventory of street conditions throughout the city to update the condition ratings and Remaining Service Life (RSL) of all roadway segments within the software program. Appropriate pavement treatments were then recommended for each roadway segment based on its corresponding RSL range. This dataset, as well as an initial approach for prioritizing and programming projects, was presented in the 2019 memo entitled *City Streets – Pavement Evaluations Summary and Public Works Recommendations Report*. Both the dataset and 2019 memo serve as the basis for development of the Pavement Management element of the Columbia Falls Urban Area Transportation Plan.

An effective pavement management program (PMP) consists of three general components:

- 1 Inventory all local roads and streets
- 2 Periodically evaluate the condition of all pavements
- 3 Use the condition evaluations and other factors to set properties for projects

The City addresses the first two components with the aid of Iworq software and through periodic assessments of all paved streets. A framework for the third component was developed as part of the Plan. The framework lays out an approach for implementing preventative maintenance and addressing larger rehabilitation and reconstruction capital projects on a cyclical basis. Details of the framework are presented within the Pavement Management Program Definition section.

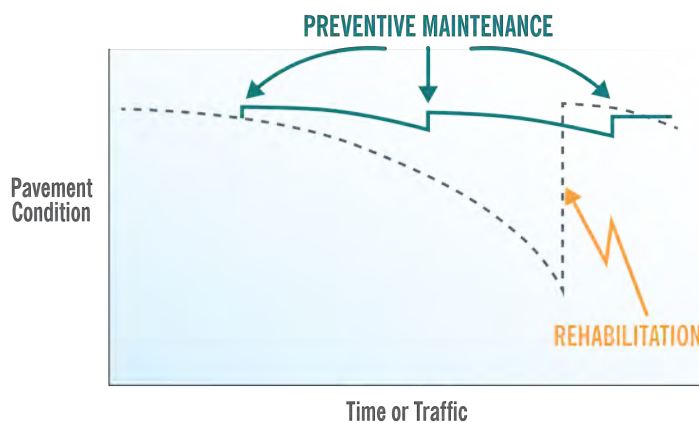
This framework is designed to aid the city in prioritizing and addressing pavement needs on a continuous basis, with emphasis on preventative maintenance that will reduce the need for expensive structural improvements in the future. This approach is further discussed below.

PAVEMENT PRESERVATION APPROACH

The output of the Iworq road condition assessment allows the city to understand which of its roadway segments are of highest priority and plan appropriately to address these needs according to its budget. Research suggests that it is more cost-effective to keep a road in good operating condition than to repair a road that has deteriorated past a certain point. By prioritizing investment in preventative maintenance

such as crack sealing, chip sealing, etc., a roadway can be extended at a far lower cost than waiting until structural improvements are required (overlays, milling, reconstruction, etc.). As illustrated in **FIGURE 5.1**, pavement condition does not decline at a constant rate, but rather, deterioration accelerates over time. Roads left to deteriorate can soon require expensive corrective and emergency repairs. Maintaining a roadway at an acceptable pavement condition will result in less repair costs over the long run.

Figure 5.1: Pavement Condition – Preventative Maintenance vs. Rehabilitation



BASELINE CONDITIONS

The City maintains approximately 39 miles of roadways and alleyways, approximately 30 miles of which are paved and were evaluated by Iworq in 2019. For each segment of roadway, typically delineated by block, the assessment provides RSL estimates based on current conditions and assuming no maintenance action will be taken. **FIGURE 5.2** presents the distribution of paved roadways by RSL.

A pavement treatment was recommended for each segment based on its RSL. Treatments include routine maintenance, such as crack sealing and patching, as well as more extensive treatments such as chip seal, overlays and reconstruction, which can significantly increase service life. **TABLE 5.1** shows the recommended pavement treatments, their general RSL ranges¹, and the number of roadway miles for which each treatment was recommended.

Based on current conditions, approximately 12 percent or 3.4 miles of roadways are in need of rehabilitation/reconstruction treatment, such as overlays, rebuilds and complete structural reconstruction. Chip sealing is recommended for nearly 8 miles or roughly 26 percent of system roadways. Finally, roughly 62 percent of the system currently only requires ongoing preventative maintenance through regularly scheduled patching and crack sealing, or requires no maintenance at this time. Using this initial assessment and set of baseline conditions, a more detailed set of system

¹ While there are some exceptions, most roadway segments for which these treatments have been recommended fall within the indicated RSL ranges.

Figure 5.2: Distribution of Paved Roadways by RSL

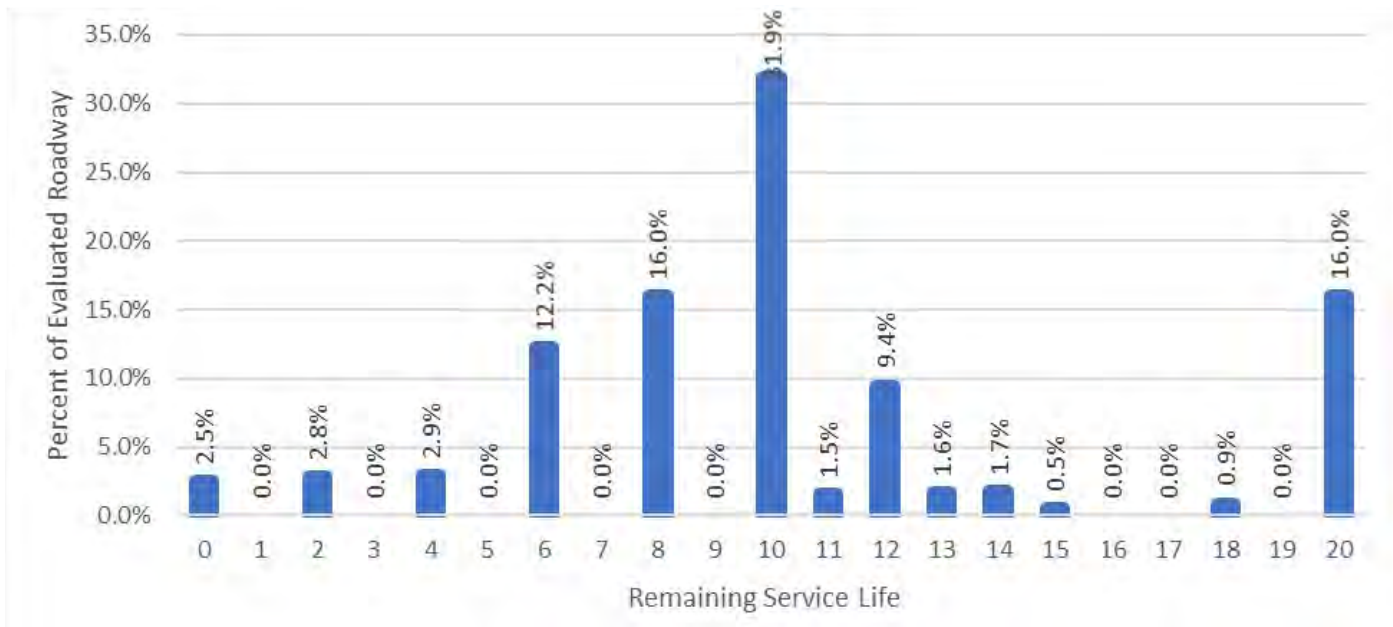


Table 5.1: Roadway System Miles by Recommended Treatment

Recommended Treatment	RSL Range	Roadway Miles
No maintenance	10+	13.4
Crack seal	10	3.3
Patching	6–10	1.8
Chip seal	6–10	7.7 ¹
Overlay – 2 inch thick	6	1.0
Rebuild/overlay – 3+ inch thick	4	0.9
Reconstruction	0–2	1.6
TOTAL		29.7

¹ The City completed two miles of chip sealing in 2020.

recommendations was developed for the City of Columbia Falls.

PAVEMENT MANAGEMENT PROGRAM DEFINITION

OVERVIEW

Existing conditions data show that there are more improvements necessary than there is funding available. This is not an uncommon problem for today's public works departments as infrastructure needs continue to grow. In this context, development of a targeted improvement program is critical in order for every dollar to be used as effectively as possible. The recommended PMP will aid the city in implementing a continuous maintenance and capital improvement plan to prolong the service life of existing pavements where feasible and reconstruct failing streets as needed. The PMP functions as follows:

- The PMP is conducted in five-year cycles, with a total of four cycles to be completed over the 20-year planning horizon. At the onset of each cycle, projects are identified for each of two PMP project categories: Major Rehabilitation and Reconstruction and Preventative Maintenance (chip sealing).¹
- The identified Major Rehabilitation and Reconstruction projects (recommended overlays, rebuilds and complete reconstruction) are combined with the list of Major Street Network (MSN) projects and prioritized through the Plan's MSN prioritization process.
- The identified Preventative Maintenance (chip sealing) projects are prioritized and programmed according to the PMP methodology (FIGURE 5.3). Per the methodology, chip sealing needs are addressed across five maintenance districts during the five-year PMP cycle, with one district addressed each year.
- In order for the City to accurately identify Major Rehabilitation and Reconstruction and Preventative Maintenance projects each PMP cycle, a new Iworq assessment is completed during the fourth year of the cycle (at a minimum). The results of the Iworq assessment are processed using the PMP methodology, and each new cycle begins with a current assessment of project needs.

The cyclical PMP process can be visualized in FIGURE 5.3.

The main components of the PMP are discussed in the Major Rehabilitation and Reconstruction and Preventative Maintenance sections.

MAJOR REHABILITATION AND RECONSTRUCTION

Item No.11.

The City currently has three and a half miles of roadway for which overlays, rebuilds and complete reconstruction are recommended. Segments within this group have a RSL of 6 years or less, and each has been recommended one of the following treatments:

- Overlay – 2 inch thick (RSL of 6 years)
- Rebuild/overlay – 3+ inch thick (RSL of 4 years)
- Reconstruction (RSL of 0-2 years)

These treatment recommendations were used to develop "Major Rehabilitation and Reconstruction" projects by logically aggregating segments based on proximity and orientation. These projects were combined with other regional transportation needs to form the full set of MSN projects. The Major Rehabilitation and Reconstruction projects are listed in TABLE 5.2. Within the table, Project IDs correspond to the MSN Map IDs provided in CHAPTER 6.

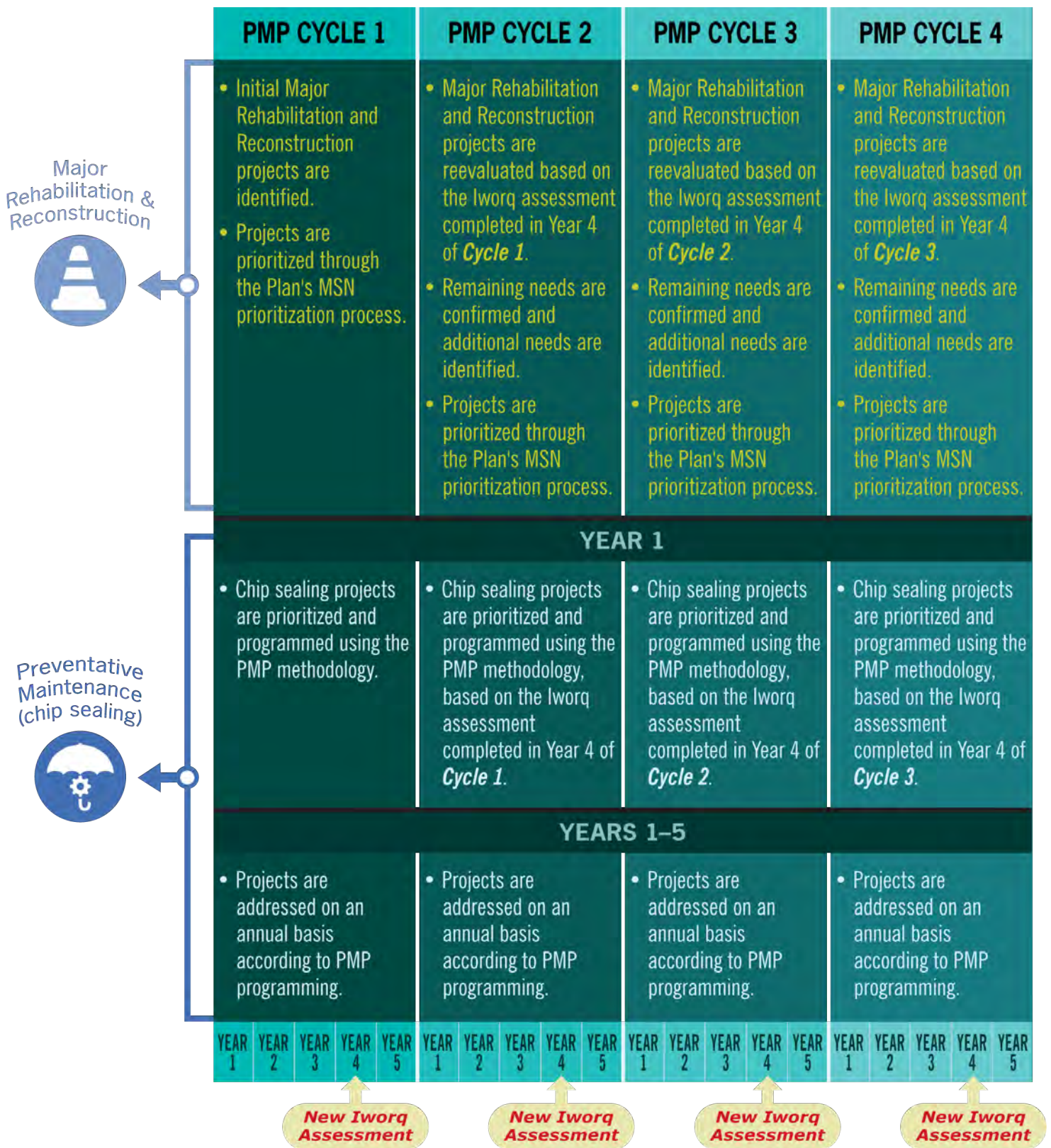
Table 5.2: Major Rehabilitation and Reconstruction Projects

Project ID	Corridor	Termini	Termini	Description
8	Beth Rd/ Martha Rd	Talbot Rd	13th St	Overlay 2 inches thick
9	6th Ave West	End of road	3rd St W	Overlay 2 inches thick
10	5th Ave West	15th St	Hwy 2	Rebuild/Thick Overlay 3 inches – 4 inches thick
11	Talbot Rd/ 3rd Ave West/ 12th St West	4th Ave West	2nd Ave West	New Street/ Reconstruction
12	Vans Ave	Crescent Dr	Frontage Rd	Rebuild/Thick Overlay 3 inches – 4 inches thick
13	3rd St E and 4th St E	Nucleus Ave/2nd Ave	End	New Street/ Reconstruction; Overlay 2 inches thick
14	9th St E/1st Ave E/5th St E	Nucleus Ave	2nd Ave E	New Street/ Reconstruction
16	S Nucleus Ave	13th St E	11th St W	Rebuild/Thick Overlay 3 inches – 4 inches thick

¹ The City will continue to perform routine maintenance such as crack sealing, spot patching and pothole repair on an as-needed basis. Preventative maintenance funds will be focused on chip sealing as a cost-effective strategy for postponing larger capital projects. As such, the Preventative Maintenance component focuses exclusively on chip sealing.

Figure 5.3: Cyclical Pavement Management Program Process

Item No.11.



Spot Reconstruction and Overlay Projects

Not all major rehabilitation/reconstruction roadway segments lend themselves to inclusion within a logical MSN project. For example, small, isolated segments are difficult to aggregate logically with other segments. To address these needs, it is recommended that a portion of funds be allocated every year for Spot Reconstruction and Overlay projects. This annual funding allocation is discussed within the Program Summary (Initial PMP Cycle) section.

The Spot Reconstruction and Overlay projects are listed in **TABLE 5.3** and shown in **FIGURE 5.4**. A cost estimate has been included with each project to aid in assessing overall budget needs for the PMP. The cost estimation methodology used for MSN projects was also used for the Spot Reconstruction and Overlay projects. This methodology is based on detailed project cost estimates completed for the Columbia Falls 2021 RAISE grant application, as well as standard cost-per-mile estimates sourced from MDT. The project costing methodology is presented in further detail in **CHAPTER 6**.

PREVENTATIVE MAINTENANCE

The preventative maintenance (chip sealing) component of the PMP was developed by incorporating and expanding upon the City's current approach. Specifically, the team adopted the City's progressive district-based method to programming, however, additional criteria were added to further prioritize projects within districts. The Iworq assessment designated 7.7 miles of roadway for chip sealing, and two miles of chip sealing were completed by the City in 2020. The approach prioritizes the remaining chip sealing needs through the following elements:

Pavement Management Districts (PMD)

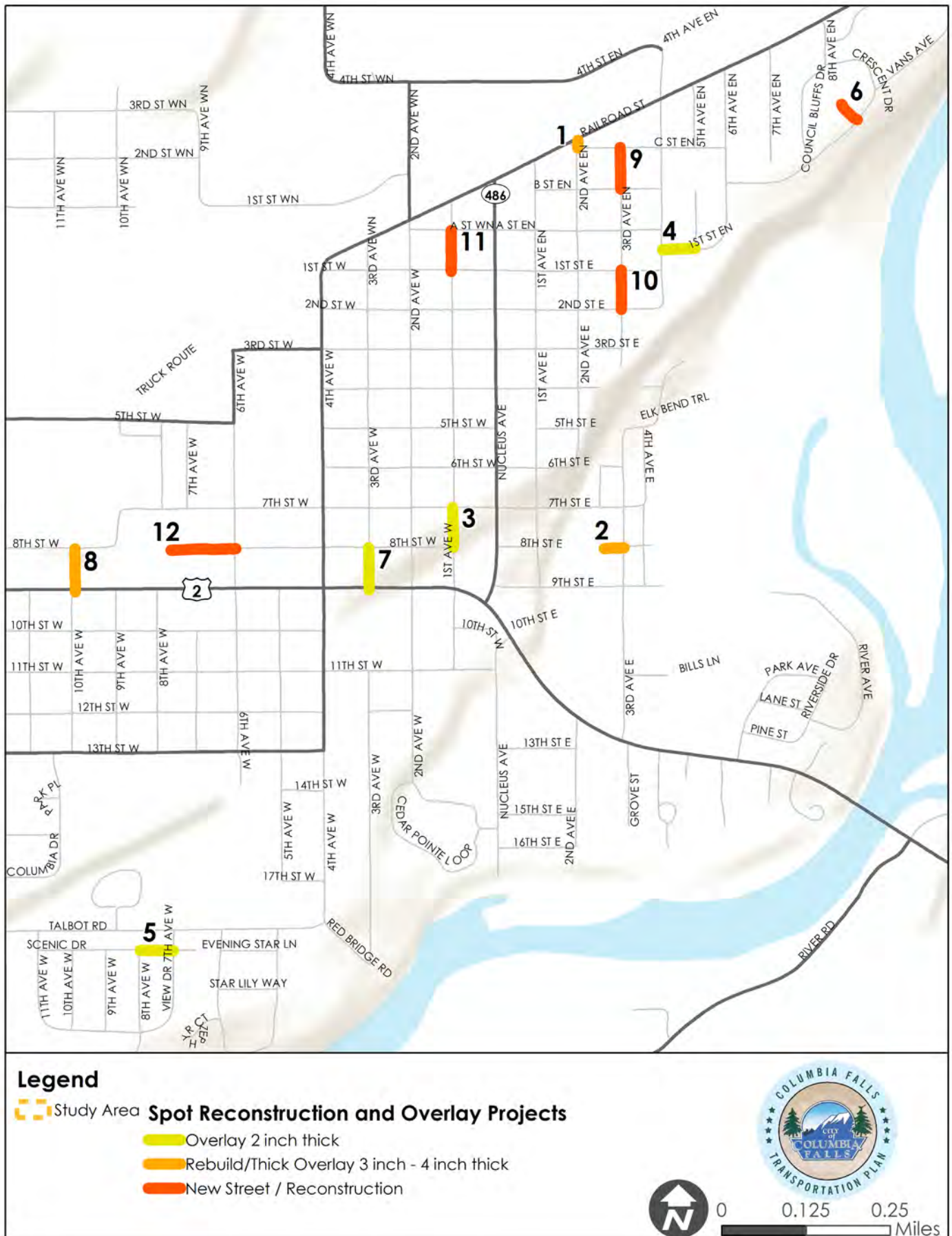
Chip sealing is to be conducted for the five PMDs such that one district is addressed every year and all districts are addressed after five years. Similar to the City's current method, this approach seeks to address needs within confined geographic areas in order to minimize mobilization/demobilization costs. The PMDs are shown in **FIGURE 5.5 ON PAGE 64**.

Table 5.3: Spot Reconstruction and Overlay Projects

Map ID	Road	From	To	Recommended Treatment	Cost Estimate
1	2nd Ave En	C St En	Railroad St	Rebuild/Thick Overlay 3 inches – 4 inches thick	\$6,300
2	8th St E	End	3rd Ave E	Rebuild/Thick Overlay 3 inches – 4 inches thick	\$16,000
3	1st Ave W	7th St W	8th St W	Overlay 2 inches thick	\$19,400
4	1st St En	4th Ave En	5th Ave En	Overlay 2 inches thick	\$16,000
5	Scenic Dr	View Dr	8th Ave W	Overlay 2 inches thick	\$16,400
6	Crescent Cir	Crescent Dr	End	New Street/Construction	\$33,100
7	3rd Ave W	8th St W	9th St W	Overlay 2 inches thick	\$20,600
8	10th Ave W	8th St W	9th St W	Rebuild/Thick Overlay 3 inches – 4 inches thick	\$35,100
9	3rd Ave En	B St En	C St En	New Street/Construction	\$62,100
10	3rd Ave E	1st St E	2nd St E	New Street/Construction	\$58,500
11	1st Ave Wn	1st St W	A St Wn	New Street/Construction	\$60,400
12	8th St W	6th Ave W	End	New Street/Construction	\$96,600
TOTAL					\$440,500

Figure 5.4: Spot Reconstruction and Overlay Projects

Item No.11.



Prioritization Tiers

Prioritization tiers give preference to high-volume urban roadways of regional importance. The tiering system provides a prioritization framework for roadways within each PMD. The pavement prioritization tiers are defined as follows:

- **Tier 1:** Roadways on the Urban Highway System.
- **Tier 2:** Other roadways of significance, mainly off the Urban Highway System.
- **Tier 3:** Balance of the roadway system, primarily lower-volume residential streets.

The prioritization tiers are shown in **FIGURE 5.5**.

Inter-Tier Prioritization Criteria

Once segments are grouped by tier within a specific PMD, inter-tier prioritization criteria are used to further prioritize segments within tiers. This document refrains from defining a complete set of inter-tier prioritization criteria in order to allow for flexibility. However, it is recommended that a roadway's RSL as well as the proximity of eligible segments to one another be considered, at a minimum.

Accordingly, the chip sealing maintenance program would encompass the following general workflow:

- 1 Identify the appropriate PMD according to the annual district-based maintenance schedule.
- 2 Identify the Tier 1, Tier 2, and Tier 3 segments eligible for chip sealing within the PMD.
- 3 Apply the inter-tier prioritization criteria to rank segments within each tier. Conduct chip sealing for the highest-ranked projects within each tier.



RECOMMENDED PREVENTATIVE MAINTENANCE PROGRAM

Based on cost estimates from the Iworq pavement assessment, the current total cost of chip sealing within Columbia Falls is \$357,700¹. This is based on the 2019 Iworq condition assessment, and should be viewed as a “full build” system needs amount were all chip sealing to be conducted immediately.

As maintenance investments are staggered according to the five-year program outlined above, pavement will continue to age, and some roadways may deteriorate past the point where chip sealing remains an effective treatment. For this reason, it is important to prioritize the PMDs with roadways that are at or approaching the minimum RSL for which chip sealing is recommended (6 years). **TABLE 5.4** shows the percentage of roadway miles eligible for chip sealing by Tier and RSL for each PMD.

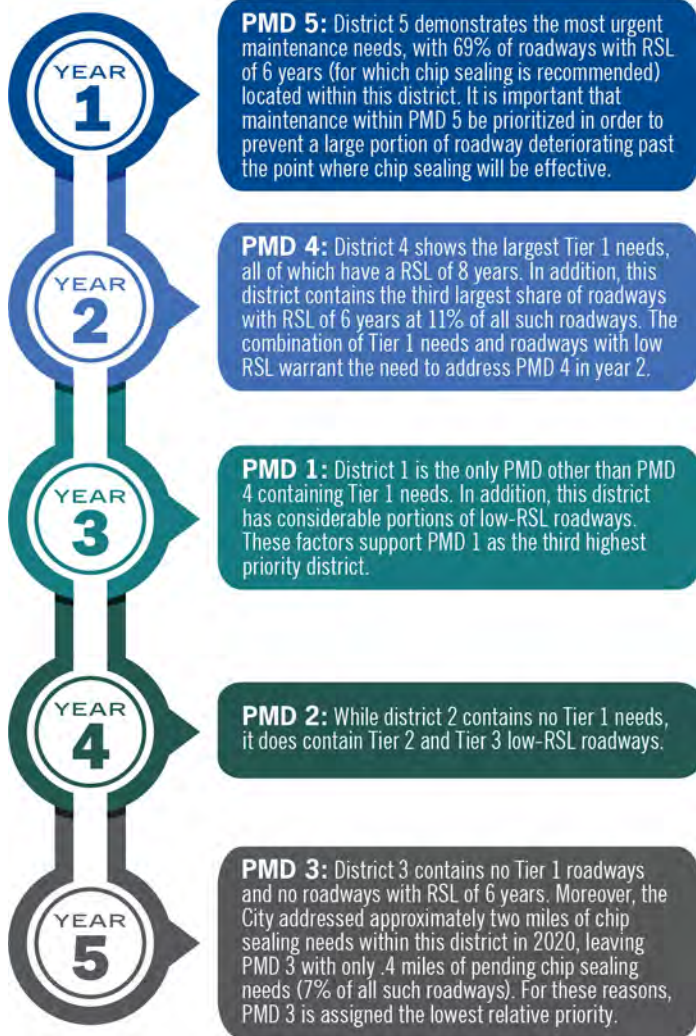
Table 5.4: Percentage of Roadway Miles Eligible for Chip Sealing by Tier and RSL for each PMD

	PMD 1	PMD 2	PMD 3	PMD 4	PMD 5	Totals
TIER 1						
RSL 8	0.95%	0.00%	0.00%	2.18%	0.00%	3.13%
<i>Tier 1 Subtotal</i>	<i>0.95%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>2.18%</i>	<i>0.00%</i>	3.13%
TIER 2						
RSL 6	0.00%	0.00%	0.00%	2.27%	0.00%	2.27%
RSL 8	0.00%	2.25%	7.03%	8.45%	0.00%	17.73%
<i>Tier 2 Subtotal</i>	<i>0.00%</i>	<i>2.25%</i>	<i>7.03%</i>	<i>10.72%</i>	<i>0.00%</i>	20.00%
TIER 3						
RSL 6	1.01%	3.07%	0.00%	0.00%	14.04%	18.13%
RSL 8	19.50%	15.82%	0.00%	8.37%	14.09%	57.79%
RSL 10	0.00%	0.55%	0.00%	0.40%	0.00%	0.96%
<i>Tier 3 Subtotal</i>	<i>20.51%</i>	<i>19.45%</i>	<i>0.00%</i>	<i>8.77%</i>	<i>28.13%</i>	76.87%
GRAND TOTAL	21.46%	21.70%	7.03%	21.68%	28.13%	100.00%

¹ The 2019 cost estimates were inflated by 3 percent per year for the period of 2019 – 2021 (two years).



Based on this breakout by Tier and PMD, it is recommended that management districts be addressed in the following order:



This assessment recommends the following program to aid the City in developing an initial five-year cycle for its PMP. The program supports a maintenance approach that addresses the most urgent needs while preventing deterioration past the point at which preventative maintenance is no longer effective.

The Gas Tax has historically provided annual funds of approximately \$80,000 for chip sealing projects. While this amount is sufficient to fully or nearly address chip sealing needs for some years of the recommended program, other years would require additional funds to fully address needs. This analysis assumes that funds will not be sufficient to roll over from year to year.

In addition to the Gas Tax funds for chip sealing, the recommended program includes annual funding for Spot Reconstruction and Overlay projects.

PROGRAM SUMMARY (INITIAL PMP CYCLE)

The recommended program for the initial PMP cycle has the following characteristics:

- Annual funds are allocated sufficient to address chip sealing needs in every year of the program. The maximum estimated annual cost for chip sealing is \$101,800 (year 1).
- Spot Reconstruction and Overlay projects are addressed over a ten-year period, with the City allocating approximately \$44,100 annually for this purpose.

The recommended program would address all current chip sealing needs over the first five-year PMP cycle. Pavement condition would be reassessed during year 4 of the cycle, and the PMP methodology would be applied to initiate the second cycle with an accurate appraisal of project needs. Details of the chip sealing allocations are shown in **TABLE 5.5**.

The recommended program would address approximately half of the Spot Reconstruction and Overlay needs over the first PMP cycle, with an estimated \$220,300 allocated for these projects over five years. Spot Reconstruction and Overlay needs are reassessed at the beginning of each PMP cycle, and annual funds allocations are adjusted such that needs are addressed over a ten-year period.

URBAN PAVEMENT PRESERVATION PROGRAM

Developed by MDT in 2001, the Urban Pavement Preservation Program (UPP) funds cost-effective treatments to the existing Urban Highway System that preserve the system, impede future deterioration, and maintain or improve the functional condition of the system without increasing structural capacity. Specific projects eligible for funding may include crack seals, thin lift overlays, seal and covers, fog seals and other preventative maintenance treatments.

In order for an urban area to be eligible for funding under the UPP, the City must complete an inventory of 100 percent of their Urban Highway System every two years. To prepare Columbia Falls for participation in the UPP, an Urban Routes Pavement Summary document was created, which compiles Iworq pavement assessment results for roadways located on the Urban Highway System.¹ The Urban Routes Pavement Summary can be found in **APPENDIX C: URBAN ROUTES PAVEMENT SUMMARY**.

¹ Only Urban Highway System routes within the Columbia Falls city limits and under City jurisdiction were included in the 2019 Iworq assessment. It is recommended that the City coordinate with MDT and Flathead County in the future to maintain a uniform pavement inventory for all Urban Routes in the study area.

Table 5.5: Recommended Preventative Maintenance Program – Cycle 1 (present-day costs)

Year 1	PMD 1												PMD 2		PMD 3		PMD 4		PMD 5		Totals					
	Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost			
	Tier 1		0.05		\$ 3,000		0.00		\$ -		0.00		\$ -		0.12		\$ 7,400		0.00		\$ -		0.18		\$ 10,400	
	Tier 2		0.00		\$ -		0.13		\$ 9,300		0.40		\$ 19,200		0.61		\$ 44,900		0.00		\$ -		1.14		\$ 73,300	
	Tier 3		1.17		\$ 70,200		1.11		\$ 74,100		0.00		\$ -		0.50		\$ 27,800		1.60		\$ 101,800		4.39		\$ 273,800	
Year 1 Pre-Maintenance Totals		1.22		\$ 73,200		1.24		\$ 83,400		0.40		\$ 19,200		1.24		\$ 80,100		1.60		\$ 101,800		5.70		\$ 357,700		
Year 1 Maintenance Reduction		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -		1.60		\$ 101,800		
End-of-Year Totals		1.22		\$ 73,200		1.24		\$ 83,400		0.40		\$ 19,200		1.24		\$ 80,100		0.00		\$ -		4.10		\$ 255,900		

Year 2	PMD 1												PMD 2		PMD 3		PMD 4		PMD 5		Totals					
	Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost			
	Tier 1		0.05		\$ 3,000		0.00		\$ -		0.00		\$ -		0.12		\$ 7,400		0.00		\$ -		0.18		\$ 10,400	
	Tier 2		0.00		\$ -		0.13		\$ 9,300		0.40		\$ 19,200		0.61		\$ 44,900		0.00		\$ -		1.14		\$ 73,300	
	Tier 3		1.17		\$ 70,200		1.11		\$ 74,100		0.00		\$ -		0.50		\$ 27,800		0.00		\$ -		2.78		\$ 172,000	
Year 2 Pre-Maintenance Totals		1.22		\$ 73,200		1.24		\$ 83,400		0.40		\$ 19,200		1.24		\$ 80,100		0.00		\$ -		4.10		\$ 255,900		
Year 2 Maintenance Reduction		0.00		\$ -		0.00		\$ -		0.00		\$ -		1.24		\$ 80,100		0.00		\$ -		1.24		\$ 80,100		
End-of-Year Totals		1.22		\$ 73,200		1.24		\$ 83,400		0.40		\$ 19,200		0.00		\$ -		0.00		\$ -		2.86		\$ 175,800		

Year 3	PMD 1												PMD 2		PMD 3		PMD 4		PMD 5		Totals					
	Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost			
	Tier 1		0.05		\$ 3,000		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.05		\$ 3,000	
	Tier 2		0.00		\$ -		0.13		\$ 9,300		0.40		\$ 19,200		0.00		\$ -		0.00		\$ -		0.53		\$ 28,500	
	Tier 3		1.17		\$ 70,200		1.11		\$ 74,100		0.00		\$ -		0.00		\$ -		0.00		\$ -		2.28		\$ 144,200	
Year 3 Pre-Maintenance Totals		1.22		\$ 73,200		1.24		\$ 83,400		0.40		\$ 19,200		0.00		\$ -		0.00		\$ -		2.86		\$ 175,800		
Year 3 Maintenance Reduction		1.22		\$ 73,200		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -		1.22		\$ 73,200		
End-of-Year Totals		0.00		\$ -		1.24		\$ 83,400		0.40		\$ 19,200		0.00		\$ -		0.00		\$ -		1.64		\$ 102,600		

Year 4	PMD 1												PMD 2		PMD 3		PMD 4		PMD 5		Totals					
	Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost			
	Tier 1		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -	
	Tier 2		0.00		\$ -		0.13		\$ 9,300		0.40		\$ 19,200		0.00		\$ -		0.00		\$ -		0.53		\$ 28,500	
	Tier 3		0.00		\$ -		1.11		\$ 74,100		0.00		\$ -		0.00		\$ -		0.00		\$ -		1.11		\$ 74,100	
Year 4 Pre-Maintenance Totals		0.00		\$ -		1.24		\$ 83,400		0.40		\$ 19,200		0.00		\$ -		0.00		\$ -		1.64		\$ 102,600		
Year 4 Maintenance Reduction		0.00		\$ -		1.24		\$ 83,400		0.00		\$ -		0.00		\$ -		0.00		\$ -		1.24		\$ 83,400		
End-of-Year Totals		0.00		\$ -		0.00		\$ -		0.40		\$ 19,200		0.00		\$ -		0.00		\$ -		0.40		\$ 19,200		

Year 5	PMD 1												PMD 2		PMD 3		PMD 4		PMD 5		Totals					
	Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost		Miles		Cost			
	Tier 1		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -	
	Tier 2		0.00		\$ -		0.00		\$ -		0.40		\$ 19,200		0.00		\$ -		0.00		\$ -		0.40		\$ 19,200	
	Tier 3		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -	
Year 5 Pre-Maintenance Totals		0.00		\$ -		0.00		\$ -		0.40		\$ 19,200		0.00		\$ -		0.00		\$ -		0.40		\$ 19,200		
Year 5 Maintenance Reduction		0.00		\$ -		0.00		\$ -		0.40		\$ 19,200		0.00		\$ -		0.00		\$ -		0.40		\$ 19,200		
End-of-Year Totals		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -		0.00		\$ -		



NOVEMBER 2021



ENGINEERING, REIMAGINED

Chapter 6. Project Development and Identification

INTRODUCTION

The project identification process was used to define three categories of projects: Transportation System Management (TSM), MSN, and Corridor Preservation projects. This process is outlined below:

- First, a preliminary set of project recommendations was developed in coordination with the Project Advisory Committee. These preliminary recommendations were based on available data, transportation priorities as expressed by the City, and public input received during the planning process.
- Second, the project team developed additional project recommendations based on the results of the 2019 Iworq pavement assessment. The recommendations were created by aggregating roadway segments needing major rehabilitation or reconstruction into logical groups. These projects are included within the MSN category. This process is discussed in **CHAPTER 5. PAVEMENT MANAGEMENT**.
- Third, the set of project recommendations was assessed against current and historical conditions, such as roadway safety within the study area.
- Fourth, the set of project recommendations was assessed against projected conditions, including future traffic operations and forecast areas of concentrated employment and population growth.

This process provided a progressive approach by which the project team could narrow, adjust, and refine the universe of projects based on existing and projected conditions. It should be noted that future MSN projects developed should include accommodations for bicycle and pedestrian users. A more specific set of Project recommendations related to active transportation will be presented in the **CHAPTER 8. ACTIVE TRANSPORTATION**.

TRANSPORTATION SYSTEM MANAGEMENT

TSM projects reflect intersection-level improvements which respond to both safety- and operations-related issues at an isolated location. TSM projects were developed based on a review of more localized existing and projected conditions.

TSM projects are listed in **TABLE 6.1** and shown in **FIGURE 6.1**. Each TSM project listing includes a map ID, a summary of the corridor location, related termini, and a short description.

QUIET ZONE

The City of Columbia Falls has discussed a quiet zone along the BNSF mainline for several years. As part of the Urban Area Transportation Plan, planning-level layouts for quiet zone improvements were developed. TSM #8 and TSM #9 reflect the location of quiet zone improvements. A detailed



Item No.11.

discussion of quiet zone efforts and planning-level layouts is provided in **APPENDIX D: QUIET ZONE**.

INTERSECTION EVALUATIONS

As part of the Urban Area Transportation Plan, the City expressed interest in evaluating three intersections in greater detail. These include 12th Avenue W and 13th Street W (TSM #10), Talbot Road and 4th Avenue W (TSM #16), and US Highway 2 and Nucleus Avenue (TSM #1). Based on this analysis, recommendations were developed and layouts were prepared for each intersection. A detailed discussion of the analysis and layouts is provided in **APPENDIX E: INTERSECTION ANALYSIS**.

TSM COSTING METHODOLOGY

Various cost assumptions were used to complete planning-level cost estimates for TSM Recommendations. Cost assumptions for roundabouts and turn lane additions were developed to account for construction and construction engineering costs, and include a 20 percent contingency. Projects already agreed to through a development agreement or programmed in the STIP are listed as committed. Specific costing assumptions are detailed below. All cost estimates are shown as present-day (2021) dollars.

- Roundabout: \$1,500,000
- Turn Lane Addition: \$80,000
- Project-specific estimates were prepared for TSM #1, TSM #8, TSM #9, and TSM #15

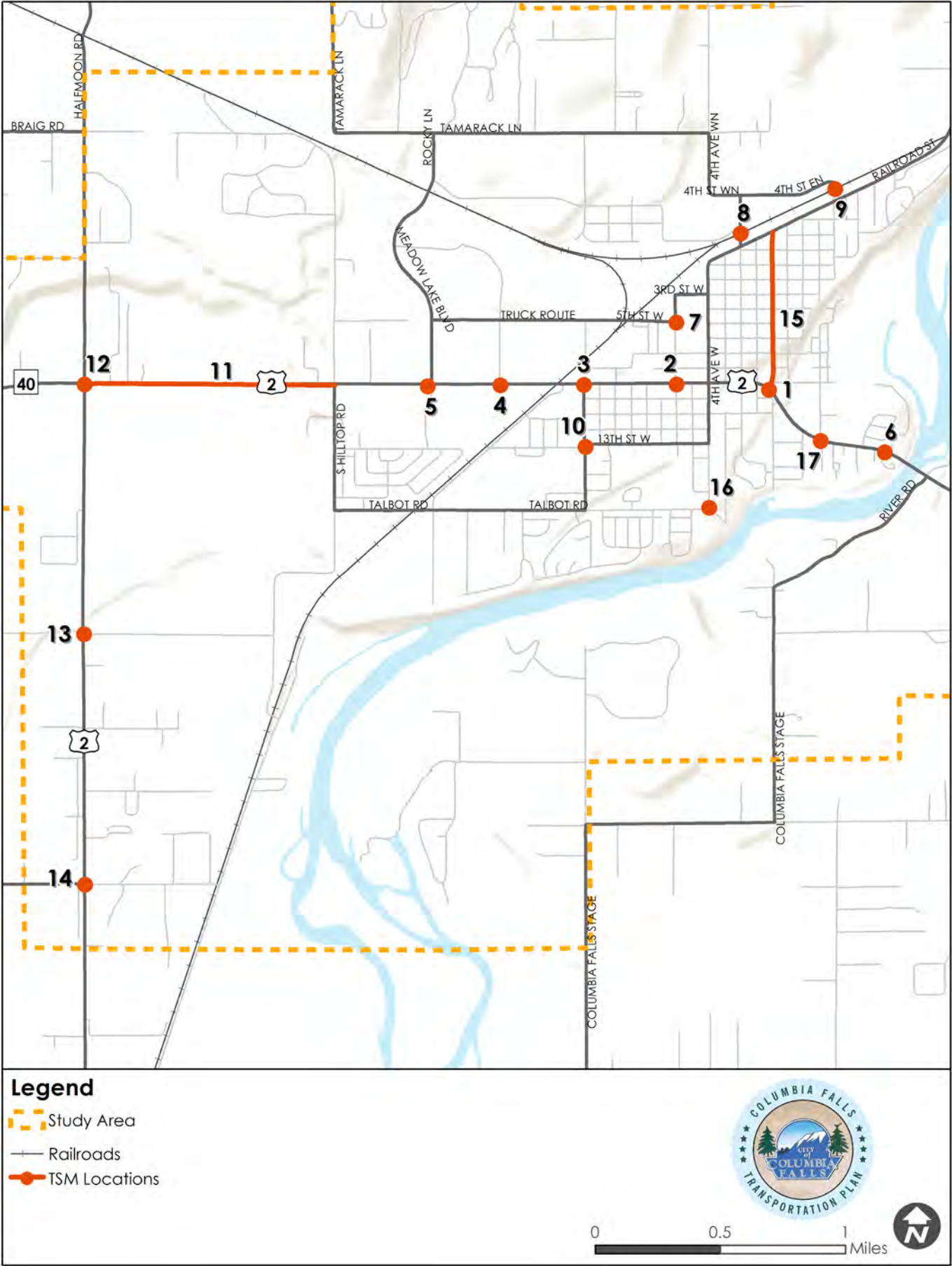
Table 6.1: Transportation System Management Projects

Item No.11.

Map ID	Corridor	Termini/ Intersection	Termini/ Intersection	Description	Cost
1	Highway 2	Nucleus		Increase EB turn lane storage; add median and improve pedestrian crossing, reduce access at 1st Avenue West	\$1,430,000
2	Highway 2	6th Avenue West		Monitor for NB/SB operations	N/A
3	Highway 2	12th Avenue West		Monitor for NB/SB operations	N/A
4	Highway 2	Truck Route		Signalize intersection	\$500,000
5	Highway 2	Meadow Lake		Add EB right turn lane; monitor for NB/SB operations	\$80,000
6	Highway 2	Flathead River Bridge		EB right turn lane into Tea Kettle River Access	\$80,000
7	Truck Route	6th Avenue		Evaluate intersection following completion of Glacier Elementary	N/A
8	BNSF Mainline	2nd Avenue N		Supplemental safety measures (SSMs)	\$583,500
9	BNSF Mainline	4th Avenue N		Close crossing	\$618,600
10	12th Street	13th Avenue		Intersection improvements	\$1,500,000
11	Highway 2	Hilltop Rd	MT 40	½ mile access preservation in coordination with preservation project #17	N/A
12	Highway 2	MT 40		Monitor intersections for operations/safety improvements. Consider addition of lane improvements/signal phasing to improve southbound traffic movements.	N/A
13	Highway 2	Walsh Road/Conn Road		Monitor intersections for operations/safety improvements	N/A
14	Highway 2	Brunner/Hodgson Road		Monitor intersections for operations/safety improvements	N/A
15	Nucleus Avenue	Highway 2	Railroad Street	Convert to two-lane section with parking upgrade; include streetscape and pedestrian improvements	TBD
16	Talbot Road	4th Avenue West		Intersection improvement	\$1,500,000
17	Highway 2	3rd Ave E		Monitor for Signal Warrants/Pedestrian Crossing	N/A
Study Area Wide				Update pavement assessment every five years (to be completed on fourth year of PMP cycle)	TBD

All cost estimates are shown as present-day (2021) dollars.

Figure 6.1: Transportation System Management Projects





MAJOR STREET NETWORK

The MSN recommendations list reflects improvements that have been identified as necessary in order for a corridor to meet the design standards of its existing or projected functionality. Recommended projects on this list include larger corridor-level investments such as infrastructure upgrades, major overlay and rehabilitation projects, and the addition of new connections or extensions. MSN projects are listed in **TABLE 6.2** and shown in **FIGURE 6.2**.

Each MSN project listing includes a map ID, a summary of the corridor location, related termini, and a short description. Several MSN projects were developed using the results of the 2019 Iworq pavement assessment; *these projects are indicated with an asterisk under the “Map ID” column.*

MSN COSTING METHODOLOGY

Various cost assumptions were used to complete planning-level cost estimates for MSN Recommendations. These assumptions are based on detailed project cost estimates completed for the Columbia Falls 2021 RAISE grant

application. Projects already agreed to through a development agreement or programmed in the STIP are listed as committed. Specific costing assumptions are detailed below. All cost estimates are shown as present-day (2021) dollars.

- Corridor Upgrade, New Connection, and Major Rehabilitation (new street/reconstruction) projects use a cost-per-mile estimate of \$4,861,720. This includes a variety of major corridor improvements and accounts for construction and construction engineering costs, and a 20 percent contingency.
- Major Rehabilitation (>3” overlay) projects use a cost-per-mile estimate of \$550,000. This includes construction and construction engineering costs, and a 20 percent contingency.
- Major Rehabilitation (2” overlay) projects use a cost-per-mile estimate of \$330,000. This includes construction and construction engineering costs, and a 20 percent contingency.
- Projects 1a – 1d use project-specific cost estimates developed for the Columbia Falls 2021 RAISE grant application.

Table 6.2: Major Street Network Projects

Item No.11.

Map ID	Corridor	Termini/ Intersection	Termini/ Intersection	Description	Cost
1a	13th St West	12th Avenue W	4th Avenue W	Reconstruct, add sidewalk and multiuse path	\$2,776,000
1b	4th Ave West	13th St W	Railroad Street	Reconstruct, add sidewalk and multiuse path (Railroad Street to Hwy 2); widen pavement, add sidewalk (Hwy 2 to 13th Street)	\$4,242,000
1c	Railroad Street	4th Avenue W	Nucleus	Reconstruct roadway, add multiuse path 4th Avenue to Nucleus; add multiuse path Nucleus to 8th Avenue	\$1,548,000
1d	7th St E	4th Ave W	Nucleus Avenue	Reconstruct roadway, add sidewalk	\$1,233,000
2	South Hilltop	Hwy 2	Talbot	Corridor Upgrade – Major Collector	\$2,434,000
3	Truck Route	Hwy 2	12th Avenue W	Corridor Upgrade – Major Collector	\$2,922,000
4*	Truck Route	12th Avenue W	4th Avenue W	Corridor Upgrade – Major Collector	\$2,924,000
5	Best Way	Meadow Lake Blvd	Truck Route	Corridor Upgrade – Major Collector	\$1,359,000
6	12th Avenue W	Talbot Road	Hwy 2	Corridor Upgrade – Major Collector	\$2,446,000
7	12th Avenue W	Hwy 2	Truck Route	Corridor Upgrade (Committed 2021/2022)	Committed
8*	Beth Rd/Martha Rd	Talbot Rd	13th St	Major rehabilitation/reconstruct – per Pavement Management Plan	\$155,000
9*	6th Ave. West	End of road	3rd St W	Major rehabilitation/reconstruct – per Pavement Management Plan	\$59,000
10*	5th Ave West	15th St	Hwy 2	Major rehabilitation/reconstruct – per Pavement Management Plan	\$274,000
11*	Talbot Rd/3rd Ave West/12th St West	4th Ave West	2nd Ave West	Major rehabilitation/reconstruct – per Pavement Management Plan	\$2,563,000
12*	Vans Ave	Crescent Dr	Frontage Rd	Major rehabilitation/reconstruct – per Pavement Management Plan	\$319,000
13*	3rd St E and 4th St E	Nucleus/ 2nd Ave	End	Major rehabilitation/reconstruct – per Pavement Management Plan	\$1,504,000
14*	9th St E/1st Ave E/ 5th St E	Nucleus Ave	2nd Ave E	Major rehabilitation/reconstruct – per Pavement Management Plan	\$1,821,000
15	13th St W	Diane Rd	Veteran Dr	New connection (construct railroad crossing)	\$608,000
16*	S Nucleus Ave	13th St E	11th St W	Major rehabilitation/reconstruct – per Pavement Management Plan	\$64,000

Note: Asterisks indicate projects developed using the results of the 2019 Iworq pavement assessment
All cost estimates are shown as present-day (2021) dollars.



CORRIDOR PRESERVATION PROJECTS

The Corridor Preservation recommendations list enables local planning officials to better manage the access and design of roadways. The list reflects identified needs to preserve specific corridors to meet the design standards of their intended future function. Recommendations were completed by evaluating the current transportation system, assessing anticipated changes in land use and development

patterns, considering the direction of established g and emphasizing improvements to overall system efficiency. It is recommended that, over the life of this plan, land use and transportation decision making be based on the proposed function of the corridors indicated here. Corridor Preservation recommendations are listed in **TABLE 6.3** and shown in **FIGURE 6.3**.

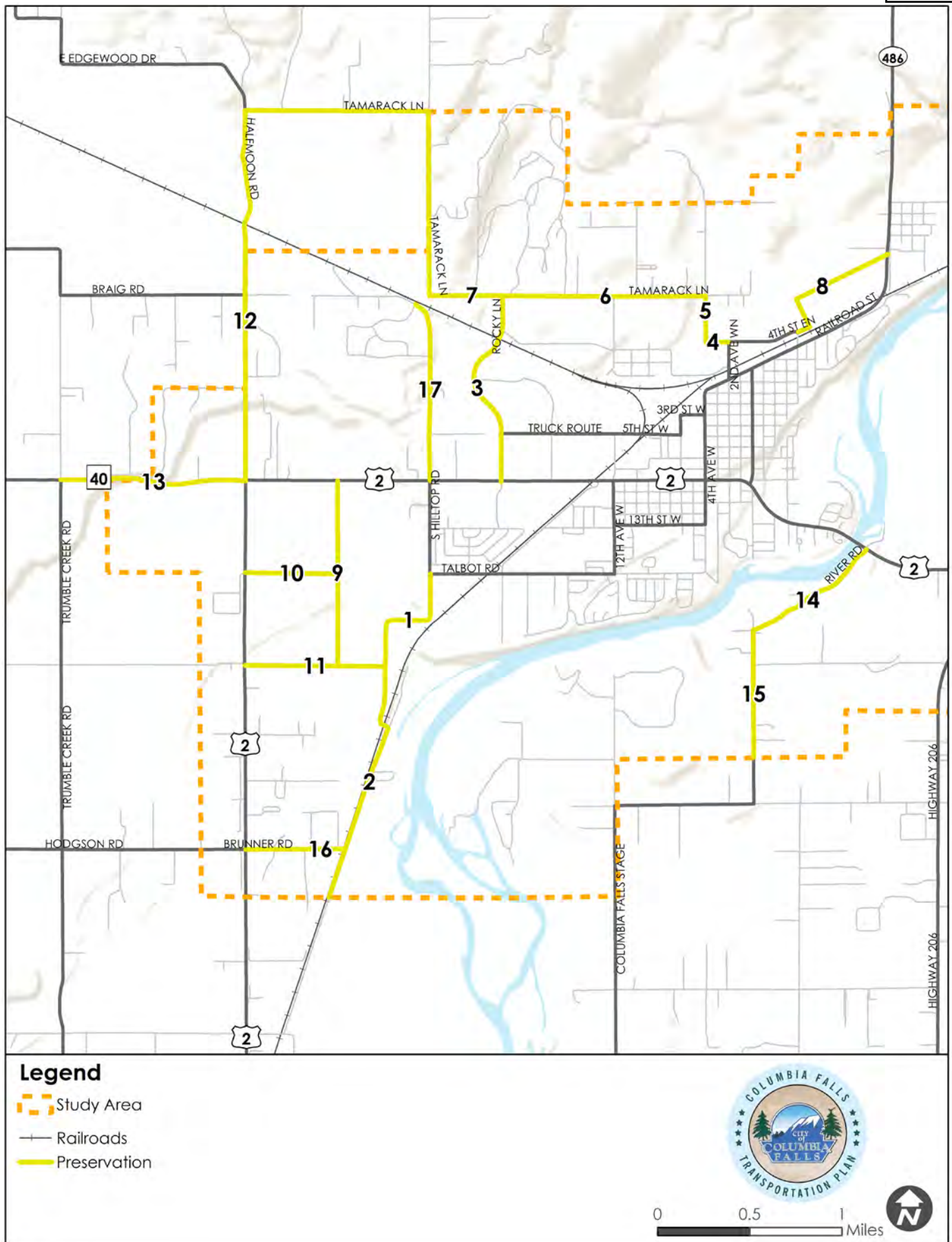
Each Corridor Preservation recommendation listing includes a map ID, a summary of the corridor location, related termini, and a short description.

Item No.11.

Table 6.3: Corridor Preservation Projects

Map ID	Corridor	Termini/Intersection	Termini/Intersection	Description
1	South Hilltop	Talbot	Walsh Road	Corridor Preservation – Major Collector
2	South Hilltop	Walsh Road	South Study Area Boundary	Corridor Preservation – Minor Collector
3	Meadlow Lake Blvd	Hwy 2	Tamarack Lane	Corridor Preservation – Major Collector
4	4th Street WN	4th Avenue WN	2nd Avenue WN	Corridor Preservation – Major Collector
5	4th Avenue WN	Tamarack Lane	4th Street WN	Corridor Preservation – Major Collector
6	Tamarack Lane	Meadow Lake Blvd	4th Avenue W	Corridor Preservation – Major Collector
7	Tamarack Lane	Halfmoon Rd	Meadow Lake Blvd	Corridor Preservation – Minor Collector
8	New Corridor	4th Avenue WN	North Fork Road	New Corridor – Minor Collector
9	New Connection	Walsh Road	Highway 2	Establish 1/4-mile roads – Minor Collector
10	New Connection	Hwy 2	New Connection	Establish 1/4-mile roads – Minor Collector
11	Walsh Rd	South Hilltop	Highway 2	Corridor Preservation – Major Collector
12	Halfmoon Road	Hwy 2	Tamarack Lane	Corridor Preservation – Minor Collector
13	MT 40	Hwy 2	Trumble Creek	Corridor Preservation – Minor Arterial
14	River Road	Columbia Falls Stage	Highway 2	Corridor Preservation – Major Collector
15	Columbia Falls Stage	South Study Area Boundary	River Road	Corridor Preservation – Major Collector
16	Brunner Road	Jellison Road	Highway 2	Corridor Preservation – Minor Collector
17	North Hilltop	Hwy 2	Dawn Dr	Corridor Preservation – Minor Collector

Figure 6.3: Corridor Preservation Projects





NOVEMBER 2021



ENGINEERING, REIMAGINED

Chapter 7. Project Recommendations Prioritization

INTRODUCTION

As discussed in **CHAPTER 1**, the Columbia Falls Urban Area Transportation Plan goals express key priorities and desired outcomes for the area's transportation system. The goals help to establish the long-term vision for both the City and adjacent planning area. For this reason, transportation project recommendations should play a role in making progress towards the goals. The goals are not necessarily quantitative in nature, however, and more specific measures are needed to compare various projects based on their adherence to the community's transportation vision. The goals and vision were used as a foundation to develop a methodology for prioritizing the MSN and TSM project recommendations.

METHODOLOGY

A prioritization approach was developed to reflect the City's and community's most critical transportation issues. To do this, the project team identified a set of prioritization criteria that would reflect the spirit of the transportation goals and vision, as well as key issues identified through public engagement and emphasized by the City. The resulting methodology employed a set of seven criteria to rank the Plan's project recommendations in terms of relative importance.

PRIORITIZATION CRITERIA

The prioritization criteria were developed to incorporate the transportation goals and vision, as well as key issues identified through the planning process. Bonus points were assigned to projects that had been specifically highlighted during public outreach, or that represent a previously identified need. The final prioritization methodology allowed for an objective evaluation of project recommendations according to their potential to address the community's most imperative needs.

The prioritization criteria are presented in **TABLE 7.1**.

PRIORITIZATION RESULTS

The prioritization results for TSM and MSN projects are presented in **TABLE 7.2** and **TABLE 7.3**, and shown in **FIGURE 7.1** and **FIGURE 7.2**. Projects were grouped into High, Medium, and Low tiers according to their prioritization rank relative to other projects.

While TSM and MSN projects are shown separately for clarity, all projects were scored together (the "Priority Tier" column within the tables communicates the absolute tier of a project when all projects are organized into a single table). A project's Map ID can be used to locate the project on its respective TSM or MSN map.

Bicycle and pedestrian projects are discussed separately in **CHAPTER 8**.

Table 7.1: Columbia Falls Urban Area Transportation Plan Prioritization Criteria

Item No.11.

Criteria	Methodology
Freight/Economic Development	Does the project improve a corridor that benefits freight movement and/or economic development?
Livability/Sustainability	Does the project improve community livability/sustainability through improvements to alternative transportation systems?
Pavement Management	Does the project advance recommendations from the Columbia Falls pavement management program?
State of Good Repair	Does the project provide for maintenance and preservation of existing infrastructure/transportation systems (exclusive of recommendations from the Columbia Falls pavement management program)?
Safety & Connectivity	- Does the project address high crash/severe crash locations? - Does the project improve the removal of barriers faced by pedestrians and cyclists?
Safe Routes to School	Does the project improve connections to/from school facilities within the City of Columbia Falls?
Bonus Points	- Does the project represent a previously identified need? - Was the project specifically identified during public outreach?

Table 7.2: TSM Prioritization

Map ID	Corridor	From	To	Priority Tier
1	Highway 2	Nucleus		High
15	Nucleus Avenue	Highway 2	Railroad Street	
5	Highway 2	Meadow Lake		
9	BNSF Mainline	4th Avenue N		
7	Truck Route	6th Avenue		
10	12th Street	13th Avenue		Medium
8	BNSF Mainline	2nd Avenue N		
12	Highway 2	MT 40		
4	Highway 2	Truck Route		
14	Highway 2	Brunner/Hodgson Road		Low
6	Highway 2	Flathead River Bridge		
17	Highway 2	3rd Ave E		
3	Highway 2	12th Avenue West		
11	Highway 2	Hilltop Rd	MT 40	
2	Highway 2	6th Avenue West		
13	Highway 2	Walsh Road/Conn Road		
16	Talbot Road	4th Avenue West		

Table 7.3: MSN Prioritization

Map ID	Corridor	From	To	Priority Tier
1b	4th Ave West	13th St W	Railroad Street	High
9	6th Ave. West	End of road	3rd St W	
13	3rd St E and 4th St E	Nucleus/2nd Ave	End	
4	Truck Route	12th Avenue W	4th Avenue W	
7	12th Avenue W	Hwy 2	Truck Route	
1d	7th St E	4th Ave W	Nucleus Avenue	
3	Truck Route	Hwy 2	12th Avenue W	
1a	13th St West	12th Avenue W	4th Avenue W	
1c	Railroad Street	4th Avenue W	Nucleus	Medium
2	South Hilltop	Hwy 2	Talbot	
6	12th Avenue W	Talbot Road	Hwy 2	
8	Beth Rd/Martha Rd	Talbot Rd	13th St	
10	5th Ave West	15th St	Hwy 2	
11	Talbot Rd/3rd Ave West/12th St West	4th Ave West	2nd Ave West	
12	Vans Ave	Crescent Dr	Frontage Rd	
16	S Nucleus Ave	13th St E	11th St W	Low
14	9th St E/1st Ave E/5th St E	Nucleus Ave	2nd Ave E	
15	13th St W	Diane Rd	Veteran Dr	
5	Best Way	Meadow Lake Blvd	Truck Route	

Figure 7.1: TSM Prioritization

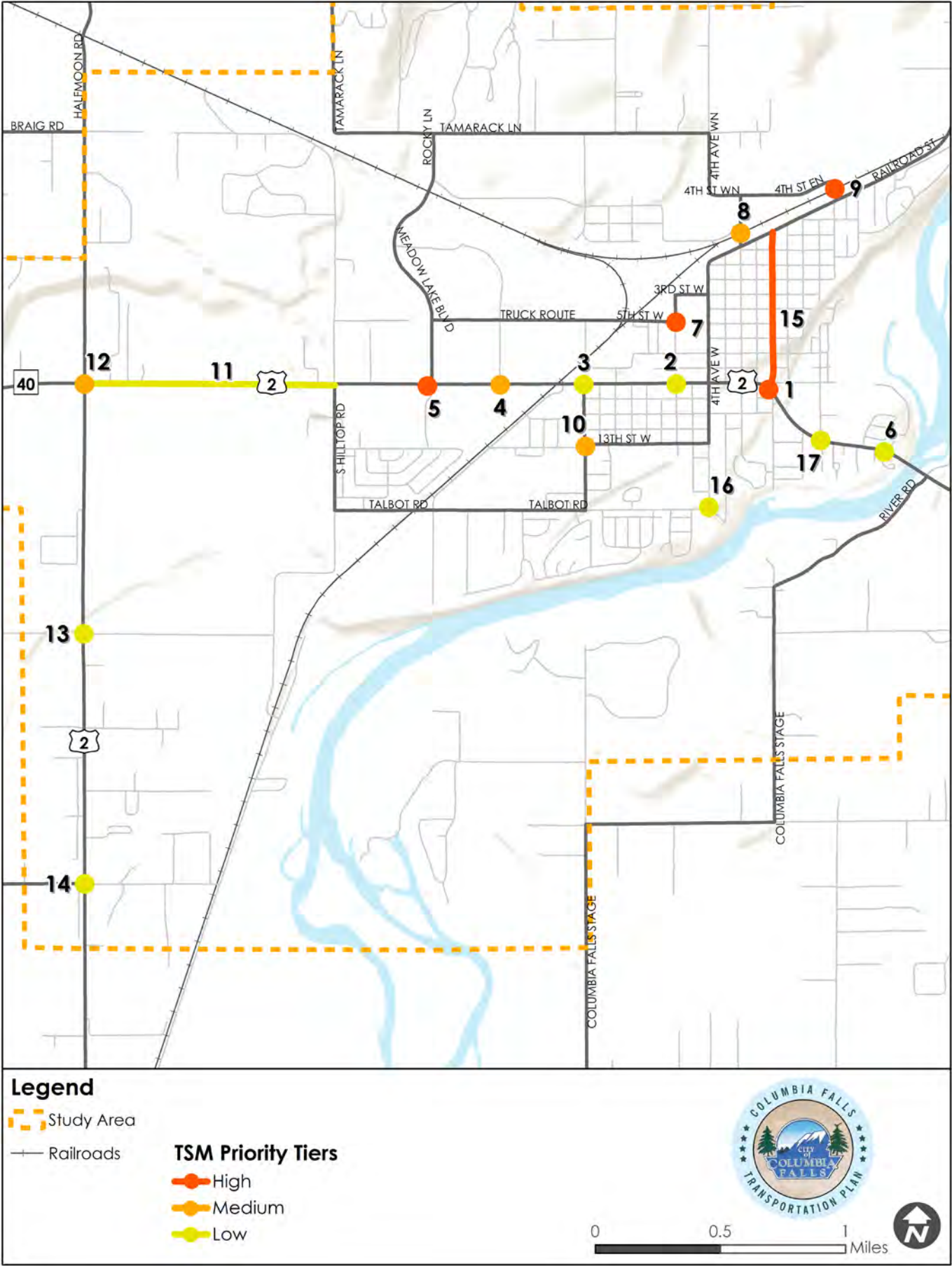
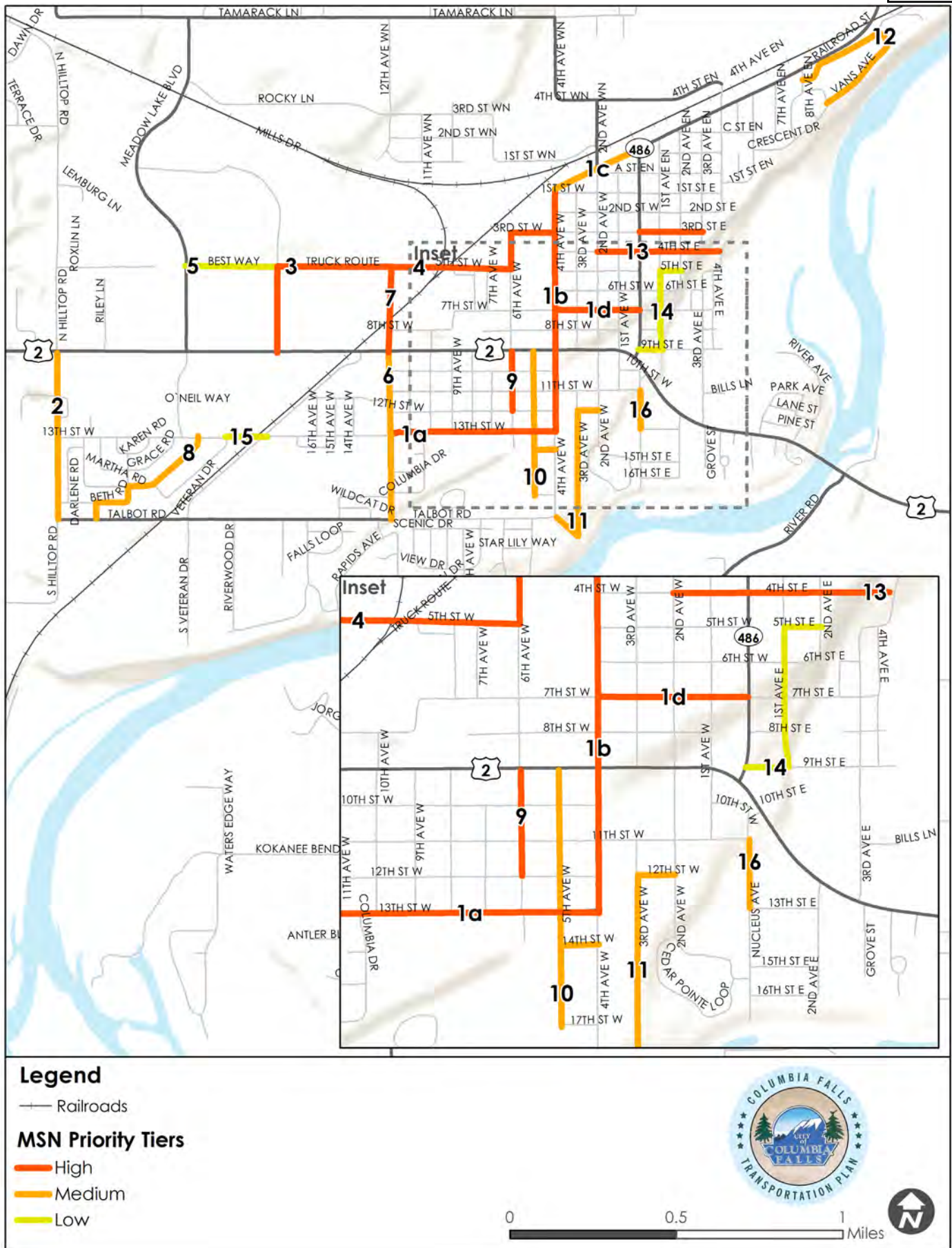


Figure 7.2: MSN Prioritization





NOVEMBER 2021



ENGINEERING, REIMAGINED

Chapter 8. Active Transportation

INTRODUCTION

Bicycle and pedestrian (bike/ped) facilities serve many purposes for residents and visitors of Columbia Falls, providing safe, convenient travel and promoting an active lifestyle and outdoor enjoyment. The needs for these facilities range from critical travel to leisure activities. Critical needs include connections between neighborhoods and schools and the provision of secure, viable travel options for residents without access to a private vehicle or with mobility restrictions. Leisure needs are met by facilities that are enjoyable to use and serve a recreational benefit, such as providing connections between neighborhoods, parks, visitor amenities and destination areas. From both a visitor and resident standpoint, bicycle and pedestrian facilities are essential transportation infrastructure that improves quality of life and adds to a vibrant community. There were a significant number of public comments received during the planning process reflecting the need to add safer pedestrian crossings and linkages within Columbia Falls. These comments have been taken into account in the recommended bike/ped projects.

Bicycle and pedestrian recommendations within this chapter are separated into three categories:

- **Bicycle and Pedestrian Crossings:** Additional and improved crossing points will allow movement across barriers and help close network gaps.
- **Bicycle and Pedestrian Connections:** Improved major and minor bike/ped connections will increase access to regional destinations and facilitate travel throughout the community.
- **Downtown/Nucleus Avenue:** Pedestrian improvements along Nucleus Avenue will support a safe and attractive downtown core for residents and visitors.

BICYCLE AND PEDESTRIAN CROSSINGS

Adequate bike/ped crossing locations is a critical aspect of providing a safe, enjoyable, and efficient transportation network for all users. This transportation plan has identified several needed crossing locations, as outlined below.

Crossing at US Highway 2 and 1st Ave. W.

There is a significant amount of pedestrian traffic in the downtown area during events, such as farmer's markets. Currently, the only convenient pedestrian crossings on US Highway 2 are located at the signalized intersection on Nucleus Avenue or at the intersection on 4th Ave. W. Many pedestrians choose to cross US Highway 2 at 1st Ave. W. out of convenience, even though there is no designated crossing at this intersection. A number of public comments highlighted this issue. Adding a designated crosswalk at this location would improve the north-south pedestrian connectivity and alleviate bottlenecks during crowded events.



Crossing on US Highway 2 near 3rd Ave. E., east of Marantette Park

The existing shared use path along 3rd Ave. E. begins at US Highway 2 and heads north to River's Edge Park. Bicyclists or pedestrians coming from the south part of town to use this path or access the park must cross the highway at the designated crossing at US Highway 2 and Nucleus Ave., located approximately 1,600 ft. west of the path. To avoid such a lengthy detour, some users choose to cross US Highway 2 at the uncontrolled intersection at 3rd Ave. E. This presents a variety of safety concerns. The road is 100 ft. wide with five lanes, and sight distances at this intersection are poor due to the speed of traffic and road geometry. The road is curved, and trees block the view of oncoming cars past a certain distance. New development in this area gives additional priority to adding a safe crossing in this vicinity for a convenient north-south connection.

Red Bridge crossing

The community has been expressing its desire for a Red Bridge crossing for several years. Numerous public comments were shared supporting the need to improve the bridge to allow for a shared use path. This would provide an important connection from different parts of the City to the broader regional trail system, as well as serving as a landmark destination in and of itself. One challenge of this project is the need to retrofit the historic bridge and make it structurally sound for use. In addition to rehabilitating the structural steel and bridge decking, one of the bridge piers needs repair, an effort that alone would require significant design and permitting efforts as well as significant funds. Investments required to return the Red Bridge to safely function as a bike/ped facility are not currently understood. However, these costs need to be measured against other high priority bike/ped needs in the Columbia Falls community. Regardless, the concept of restoring the Red Bridge should remain a possibility until such time as it is deemed fully unfeasible from a technical and financial perspective.

BICYCLE AND PEDESTRIAN CONNECTIONS

Columbia Falls has created a basic framework of bike/ped paths throughout the City supporting a variety of users, from children walking to school to those engaging in recreational pursuits. During the evaluation for this transportation plan, several missing pieces were identified that would help support a more connected bike/ped network.

Major bike/ped loops/connections

An important consideration for the overall bike/ped network is what connections are available to destinations that would be desirable for bicyclists and pedestrians. These major destinations include the Gateway to Glacier trail system (a shared use path that leads from Columbia Falls to West Glacier), downtown Columbia Falls and Nucleus Avenue, the North Fork, and Whitefish. To support these connections, major shared use path loops around the City's perimeter connect densely populated areas with key destination points, and "share the road" markings can help bring driver awareness to bicycle traffic.

Minor bike/ped connections

Minor connections provide basic travel for bicyclists and pedestrians including trips to school, jobs, and amenities. For those without access to a private vehicle, safe and convenient bicycle and pedestrian connections throughout the community are essential. An important aspect of connectivity within the City is improving connections between bike and pedestrian networks and existing public access points along the Flathead River. Minor connections can be provided in a variety of ways, either through sidewalks, shared use paths, or on-street bike lanes, typically on local streets and minor collectors.

DOWNTOWN/NUCLEUS AVENUE

Nucleus Avenue is the downtown core of Columbia Falls with coffee shops, bars, restaurants, gift shops, businesses, multi-family residential buildings, and grocery stores. There are sidewalks on each side of Nucleus Avenue, and several intersections have had Americans with Disabilities Act of 1990 (ADA) improvements made in recent years. However, further improvements are needed to make Nucleus Avenue a safer and more pedestrian-friendly corridor. First, the intersection of Nucleus with 5th Street W. (near the grocery store) has a number of safety issues related to the angled sidewalk crossing, and it is difficult for pedestrians to see oncoming traffic past the parked cars on Nucleus when crossing. Wider sidewalks and the addition of boulevard trees can make for a more pedestrian-focused feel to downtown and improve walkability. ADA accessibility is of central importance. Removing obstacles that are in the middle of the sidewalk, such as light poles, trash cans, and signposts, will improve safety and increase accessibility for all users.

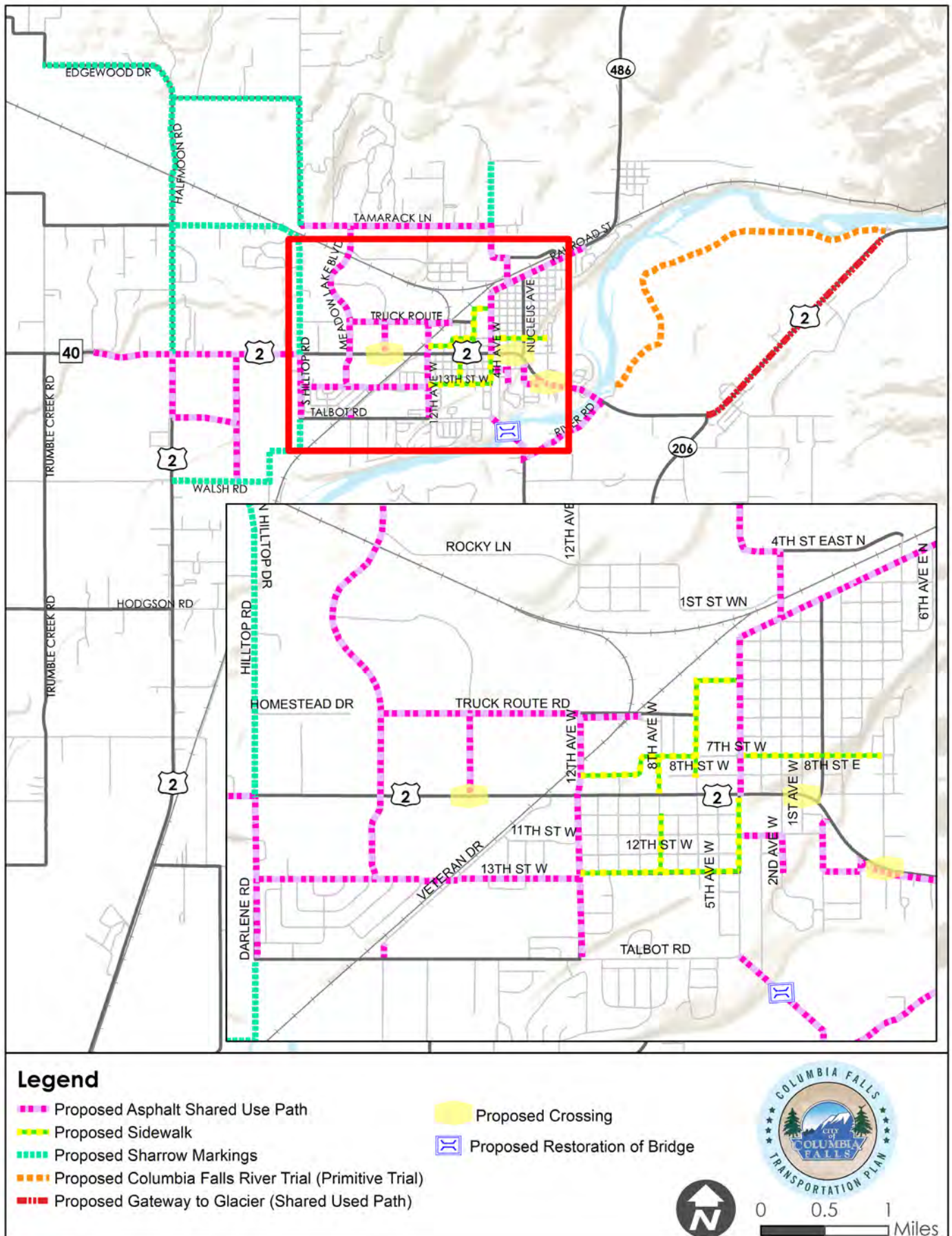
PROPOSED BICYCLE AND PEDESTRIAN PLAN

As road reconstruction projects take place, bike/ped facilities should be added as part of the reconstruction efforts. This creates cost savings by avoiding duplicative construction costs. These facilities can be added over time, allowing the City to build towards the overall bike/ped networks identified in this transportation plan.

FIGURE 8.1 shows proposed bicycle and pedestrian improvements for the Columbia Falls study area.



Figure 8.1: Proposed Bicycle and Pedestrian Improvements





NOVEMBER 2021



ENGINEERING, REIMAGINED

Chapter 9. Financial Plan

INTRODUCTION

This element of the Columbia Falls Urban Area Transportation Plan provides a general overview of transportation funding relevant to the study area. Most transportation dollars directed to the study area are derived from federal and state sources. MDT administers several programs that are funded from state and federal sources. The City of Columbia Falls is dependent on a number of these programs to support transportation infrastructure investments. This Plan recommends that the City of Columbia Falls allocate annual funding to preventative maintenance and “spot” rehabilitation/reconstruction pavement projects (**CHAPTER 5**). While this funding has historically come from the Gas Tax, additional local funding may need to be considered in the future to adequately address pavement needs.

Each year, in accordance with Montana Code Annotated (MCA) 60-2-127 the Montana Transportation Commission allocates a portion of available federal-aid highway funds for construction purposes and for projects located on the various systems in the state as described throughout this document.

The Fixing America’s Surface Transportation Act (FAST Act) was signed into law on December 4, 2015, and authorizes federal transportation funding for federal fiscal years 2016 through 2020. Funding sources and allocations change with each authorization and may vary following completion of the next federal authorization.

FEDERAL FUNDING SOURCES

The following sections summarize relevant federal transportation funding categories received by the state through US Code (U.S.C.) Title 23 and U.S.C. Title 49, including state developed implementation or sub-programs that may be potential sources for projects. To receive project funding under these programs, projects must be included in the State Transportation Improvement Program (STIP), where relevant.

NATIONAL HIGHWAY PERFORMANCE PROGRAM

The National Highway Performance Program (NHPP) funds are federally apportioned for the NHS roads and bridges, which includes the Interstate and non-Interstate NHS routes. The purpose of the NHS is to provide an interconnected system of principal arterial routes which will serve major population centers, international border crossings, intermodal transportation facilities, and other major travel destinations; meet national defense requirements; and serve interstate and interregional travel. The NHS includes all Interstate routes, a large percentage of urban and rural principal arterials, the defense strategic highway network, and strategic highway connectors.

Allocations and Matching Requirements

NHPP funds are federally apportioned to Montana and allocated to financial districts based on need by the Montana Transportation Commission. Also, consideration is given to balancing needs using the MDT Performance Programming Process. The funds are allocated to three programs:

- Interstate Maintenance
- National Highway System (Non-Interstate)
- NHPP Bridge

FIGURE 3.6 ON PAGE 27 of CHAPTER 3 shows the roadways eligible for NHPP funds.

Eligibility and Planning Considerations

Activities eligible for NHPP funding include:

- Construction, reconstruction, resurfacing, restoration, and rehabilitation of roadways on the NHS.
- Construction, replacement, rehabilitation, preservation and protection of NHS bridges.
- Projects or part of a program supporting national goals for improving infrastructure condition, safety, mobility, or freight movements on the NHS.
- Operational improvements and highway safety improvements.
- Other miscellaneous activities that may qualify for NHPP funding include bikeways and pedestrian walkways, environmental mitigation, restoration and pollution control, infrastructure based intelligent transportation systems, vehicle-to-infrastructure communication equipment, traffic and traveler monitoring and control, and construction of intra or inter-city bus terminals serving the NHS.

The Transportation Commission establishes priorities for the use of NHPP funds and projects are let through a competitive bidding process.

SURFACE TRANSPORTATION BLOCK GRANT PROGRAM

Surface Transportation Block Grant Program (STBG) funds are federally apportioned to Montana and allocated by the Montana Transportation Commission to various programs including the Surface Transportation Program Primary Highways (STPP), Surface Transportation Program Secondary Highways (STPS), the Surface Transportation Program Urban Highways (STPU), and the Surface Transportation Program – Bridge Program (STPB), as well as set-asides for programs including Transportation Alternatives (TA) and Recreational Trails (RT). The federal share for these projects is 86.58 percent with the state share typically funded through a Highway State Special Revenue Account (HSSRA).

The Montana Transportation Commission establishes priorities for the use of STBG funds and projects are let through a competitive bidding process.

Primary Highway System (STPP)¹

The federal and state funds available under this program are used to finance transportation projects on the state-designated Primary Highway System. The Primary Highway System includes highways that have been functionally classified by MDT and FHWA as either principal or minor arterials and that have been selected by the Montana Transportation Commission to be placed on the primary highway system MCA 60-2-126(b).

ALLOCATIONS AND MATCHING REQUIREMENTS

Primary funds are distributed statewide (MCA 60-3-205) to each of five financial districts. The Commission distributes STPP funding based on system performance. The federal share for this program is 86.58 percent and the state is responsible for the remaining 13.42 percent. The state share is funded through the HSSRA.

ELIGIBILITY AND PLANNING CONSIDERATIONS

STPP funds are eligible for resurfacing, rehabilitating or reconstructing roads and bridges on the Primary System.

Secondary Highway System (STPS)²

The federal and state funds available under this program are used to finance transportation projects on the state-designated Secondary Highway System. The Secondary Highway System includes any highway that is not classified as a local route or rural minor collector and that has been selected by the Montana Transportation Commission to be placed on the Secondary Highway System. Funding is distributed by formula and is utilized to resurface, rehabilitate, and reconstruct roadways and bridges on the Secondary System.

ALLOCATIONS AND MATCHING REQUIREMENTS

Secondary funds are distributed statewide (MCA 60-3- 206) to each of five financial districts, based on a formula, which takes into account the land area, population, road mileage, and bridge square footage. Federal funds for secondary highways must be matched by non-federal funds. The federal share for this program is 86.58 percent and the state is responsible for the remaining 13.42 percent. Normally, the match on these funds is from the HSSRA.

ELIGIBILITY AND PLANNING CONSIDERATIONS

Eligible activities for the use of Secondary funds fall under three major types of improvements: reconstruction, rehabilitation, and pavement preservation in addition to vehicle-to-infrastructure communication equipment. The reconstruction and rehabilitation categories are allocated at 65

percent of the program funds with the remaining 35 percent dedicated to pavement preservation. Priorities are identified in consultation with the appropriate local government and approved by the Montana Transportation Commission.

Item No.11.

Urban Highway System (STPU)³

The federal and state funds available under this program are used to finance transportation projects on Montana's Urban Highway System (MCA 60-3-211). STPU allocations are based on a per capita distribution and are recalculated each decade following the census.

ALLOCATIONS AND MATCHING REQUIREMENTS

State law guides the allocation of STPU funds to Montana's urban areas (population of 5,000 or greater) through a statutory formula based on each area's population compared to the total population in all urban areas. The federal share for this program is 86.58 percent and the State is responsible for the remaining 13.42 percent. The state share is funded through the HSSRA.

Table 9.1: Montana's Urban Areas

• Anaconda	• Columbia Falls	• Helena	• Miles City
• Belgrade	• Kalispell	• Glendive	• Missoula
• Billings	• Great Falls	• Laurel	• Sidney
• Bozeman	• Hamilton	• Lewistown	• Whitefish
• Butte	• Havre	• Livingston	

ELIGIBILITY AND PLANNING CONSIDERATIONS

STPU funds are eligible for rehabilitation, resurfacing, reconstruction of existing facilities, operational improvements, vehicle-to-infrastructure communication equipment, bicycle facilities, pedestrian walkways, carpool projects, and traffic operation projects on the 430 miles of the state-designated Urban Highway System. Priorities for the use of STPU funds are established at the local level through local planning processes with final approval by the Montana Transportation Commission.

Bridge Program (STPB)

The federal and state funds available under this program are used to finance bridge projects for on-system and off-system routes in Montana. Title 23 U.S.C. requires that a minimum amount (equal to 15 percent of Montana's 2009 Federal Bridge Program apportionment) be set aside for off-system bridge projects. The remainder of the Bridge Program funding is established at the discretion of the state. Bridge Program funds are primarily used for bridge rehabilitation or reconstruction activities on Primary, Secondary, Urban, or

1 State funding program developed to distribute federal funding within Montana.
2 State funding program developed to distribute federal funding within Montana.
3 State funding program developed to distribute federal funding within Montana.

off-system routes. Projects are identified based on bridge condition and performance metrics.

UPP¹

The UPP is a sub-allocation of the larger Surface Transportation Program that provides funding to urban areas with qualifying Pavement Management Systems (as determined jointly by MDT and FHWA). This sub-allocation is approved annually by the Transportation Commission and provides opportunities for pavement preservation work on urban routes (based on system needs identified by the local Pavement Management Systems).

Set-Aside (Previously “Transportation Alternatives (TA) Program” under “Moving Ahead for Progress in the 21st Century Act” [MAP-21])

The Set-Aside Program (TA) requires MDT to obligate 50 percent of the funds within the state based on population, using a competitive process, while the other 50 percent may be obligated in any area of the state.

Funds may be obligated for projects submitted by:

- Local governments
- Transit agencies
- Natural resource or public land agencies
- School district, schools, or local education authority
- Tribal governments
- Other local government entities with responsibility for recreational trails for eligible use of these funds

ELIGIBILITY AND PLANNING CONSIDERATIONS

Eligible categories include:

- On-road and off-road trail facilities for pedestrians and bicyclists, including ADA improvements.
- Historic Preservation and rehabilitation of transportation facilities.
- Archeological activities relating to impacts for a transportation project.
- Any environmental mitigation activity, including prevention and abatement to address highway related stormwater runoff and to reduce vehicle/animal collisions including habitat connectivity.
- Turnouts, overlooks, and viewing areas.
- Conversion/use of abandoned railroad corridors for trails for non-motorized users.
- Inventory, control, and removal of outdoor advertising.
- Vegetation management in transportation right-of-way for safety, erosion control, and controlling invasive species.

- Construction, maintenance, and restoration of development and rehabilitation of trailside and trailhead facilities. Item No.11.
- Development and dissemination of publications and operation of trail safety and trail environmental protection programs.
- Education funds for publications, monitoring, and patrol programs and for trail-related training.
- Planning, design, and construction of projects that will substantially improve the ability of students to walk and bicycle to school.
- Non-infrastructure-related activities to encourage walking and bicycling to school, including public awareness campaigns, outreach to press and community leaders, traffic education and enforcement near schools, student sessions on bicycle and pedestrian safety, health, and environment, and funding for training.

COMPETITIVE PROCESS

The state is required to allocate TA funds through a competitive process which allows eligible applicants an opportunity to submit projects for funding. MDT’s process emphasizes safety, ADA, relationships to state and community planning efforts, existing community facilities, and project readiness.

NATIONAL HIGHWAY FREIGHT PROGRAM

The National Highway Freight Program (NHFP) was created by the FAST Act to invest in freight projects on the National Highway Freight Network. This program is apportioned to states by formula and a state must have had a freight plan in place beginning fiscal year (FY) 2018 to receive formula funding. Activities eligible for NHFP funding include planning, environmental review, preliminary engineering, design work, construction, reconstruction, rehabilitation work and/or operational improvements that directly result in improved system performance – as well as interchange improvements, truck-only lanes, shoulder widening, traffic signal optimization, highway ramp metering and roadway capacity projects (that address freight bottlenecks). Generally, the federal share for this program is 91.24 percent and the state is responsible for the remaining 8.76 percent. The state share is typically funded through the HSSRA for projects on state highways and local governments provide the match for local projects.

HIGHWAY SAFETY IMPROVEMENT PROGRAM

Highway Safety Improvement Program (HSIP) funds are apportioned to Montana for safety improvement projects approved by the Commission and are consistent with the strategic highway safety improvement plan. In Montana, the primary focus of the HSIP program involves identifying locations with crash trends (where feasible countermeasures exist) and prioritizing work according to benefit/cost

¹ State funding program developed to distribute federal funding within Montana.

ratios. However, MDT also advances systemic improvements (such as rumble strip projects, curve signing and wrong-way warnings) to address safety issues at the network level. Additionally, a portion of Highway Safety Improvement Program funds are designated to improve safety at rail-road crossings via the installation of protective devices or the elimination of hazards. The Commission approves and awards the projects which are let through a competitive bidding process. Generally, the federal share for the HSIP projects is 90 percent and the State is responsible for the remaining 10 percent. Typically, the state share is funded through the HSSRA.

CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM

Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds available under this program are used to finance transportation projects and programs to help improve air quality and meet the requirements of the Clean Air Act. Montana's air pollution problems are attributed to carbon monoxide (CO) and particulate matter 10 (PM₁₀) micrometers or less in diameter.

Allocations and Matching Requirements

CMAQ funds are federally apportioned to Montana and allocated to various eligible programs by formula and by the Commission. As a minimum apportionment state, a federally-required formula based distribution of CMAQ funds goes to projects in Missoula since it was Montana's only designated and classified air quality non-attainment area. The remaining, non-formula funds, referred to as "flexible CMAQ" are primarily directed to areas of the state with emerging air quality issues through various state programs. The Commission approves and awards all projects on MDT right-of-way. Infrastructure and capital equipment projects are let through a competitive bidding process. The federal share for this program is 86.58 percent and the state is responsible for the remaining 13.42 percent. The state share is funded through the HSSRA for projects on state highways and local governments provide the match for local projects.

Eligibility and Planning Considerations

In general, eligible activities include transit improvements, ADA upgrades, traffic signal synchronization, bicycle pedestrian projects, intersection improvements, travel demand management strategies, traffic flow improvements, air-quality equipment purchases, vehicle-to-infrastructure communication equipment, and public fleet conversions to cleaner fuels. At the project level, the use of CMAQ funds is not constrained to a particular system (i.e., Primary, Urban, and NHS). A requirement for the use of these funds is the

estimation of the reduction in pollutants resulting from implementing the program/ project. These estimates are reported yearly to the FHWA.

CMAQ (FORMULA)

Mandatory CMAQ funds that come to Montana based on a federal formula are directed to Missoula, Montana's only classified, moderate CO non-attainment area. Projects are prioritized through the Missoula metropolitan planning process.

MONTANA AIR AND CONGESTION INITIATIVE–GUARANTEED PROGRAM (FLEXIBLE)¹

The Montana Air and Congestion Initiative (MACI) – Guaranteed Program is a state program funded with flexible CMAQ funds that the Commission allocates annually to Billings and Great Falls to address carbon monoxide issues in these designated, but "not classified", CO non-attainment areas. The air quality in these cities is roughly equivalent to Missoula. However, these cities are "not classified" so they do not get direct funding through the federal formula. Projects are prioritized through the respective Billings and Great Falls metropolitan planning processes.

MONTANA AIR AND CONGESTION INITIATIVE–DISCRETIONARY PROGRAM (FLEXIBLE)²

The MACI – Discretionary Program provides funding for projects in areas designated non-attainment or recognized as being "high-risk" for becoming non-attainment. Since 1998, MDT has used MACI-Discretionary funds to get ahead of the curve for CO and PM10 problems in non-attainment and high-risk communities across Montana. District administrators and local governments nominate projects cooperatively. Projects are prioritized and selected based on air quality benefits and other factors. The most beneficial projects to address these pollutants have been sweepers and flushers, intersection improvements and signal synchronization projects.

FEDERAL LANDS ACCESS PROGRAM

The Federal Lands Access Program (FLAP) was created by the MAP-21 to improve access to federal lands and is continued in the FAST Act. FHWA's Western Federal Lands Division administers the program and MDT is an eligible applicant for the funds.

The program is directed towards public highways, roads, bridges, trails, and transit systems that are under state, county, town, township, tribal, municipal, or local government jurisdiction or maintenance and provide access to federal lands. FLAP funds improvements to transportation facilities that provide access to, are adjacent to, or are located within federal lands. The program supplements state and local resources for public roads, transit systems, and

¹ State funding program developed to distribute federal funding within Montana.

² State funding program developed to distribute federal funding within Montana.

other transportation facilities, with an emphasis on high-use recreation sites and economic generators. Program funds are subject to the overall federal-aid obligation limitation. Funds are allocated among the states using a statutory formula based on road mileage, number of bridges, land area, and visitation.

Eligibility and Planning Considerations

The following activities are eligible for consideration on federal lands access transportation facilities:

- Preventive maintenance, rehabilitation, restoration, construction, and reconstruction.
- Adjacent vehicular parking areas.
- Acquisition of necessary scenic easements and scenic or historic sites.
- Provisions for pedestrian and bicycles.
- Environmental mitigation in or adjacent to Federal land to improve public safety and reduce vehicle-wildlife mortality while maintaining habitat connectivity.
- Construction and reconstruction of roadside rest areas, including sanitary and water facilities.
- Operation and maintenance of transit facilities.

Proposed projects must be located on a public highway, road, bridge, trail or transit system that is located on, is adjacent to, or provides access to federal lands for which title or maintenance responsibility is vested in a state, county, town, township, tribal, municipal, or local government.

Allocation and Matching Requirements

The federal share for this program is 86.58 percent and the State provides match for projects on state highways that address MDT identified infrastructure condition deficiencies; local governments provide the match for off-system projects. The state share is funded through the HSSRA. Funding is authorized and allocated for each state under U.S.C. Title 23, Chapter 2, MAP-21, Division A, Title I, Subtitle A, Section 1119 distribution formula.

CONGRESSIONALLY-DIRECTED OR DISCRETIONARY FUNDS

Congressionally-directed funds may be received through highway program authorization or annual appropriations processes. These funds are generally described as “demonstration” or “earmark” funds. Discretionary funds are typically awarded through a federal application process or Congressional direction. If a locally-sponsored project receives these types of funds, MDT will administer the funds in accordance with the Montana Transportation Commission Policy #5 – “Policy resolution regarding Congressionally-directed funding: including Demonstration Projects, High Priority Projects, and Project Earmarks.”

Nationally-Significant Freight and Highway Projects

This program was also established by the FAST Act to create competitive grants or Transportation Infrastructure Finance and Innovation Act (TIFIA) loans for projects greater than \$100 million. This is a discretionary freight-focused grant program that allows states, metropolitan planning organizations, local governments, tribal governments, special purpose districts, public authorities (including port authorities), and other parties to apply for funding to complete projects that improve safety and hold the greatest promise to eliminate freight bottlenecks and improve critical freight movements. Generally, the federal share for this program is 91.24 percent and the state is responsible for the remaining 8.76 percent. The state provides match for projects on state highways that addresses MDT identified infrastructure condition deficiencies; local governments provide the match for off-system projects. The state share is typically funded through the HSSRA.

ELIGIBLE ACTIVITIES

- Highway freight projects on the National Highway Freight Network.
- NHS highway/bridge projects, projects in National Scenic Areas.
- Freight rail/intermodal/port projects.
- Rail-highway grade crossings or grade separation projects.

TRANSIT CAPITAL & OPERATING ASSISTANCE FUNDING

The MDT Transit Section provides federal and state funding to eligible recipients through federal and state programs. Federal funding is provided through the Section 5310 and Section 5311 transit programs and state funding is provided through the TransADE program. MAP-21 incorporated the JARC and New Freedoms Programs into the Section 5311 and 5310 programs, respectively. It also created a new bus and bus facilities discretionary formula program (Section 5339) for fixed route bus operators. All projects funded must be derived from a locally developed, coordinated public transit-human services transportation plan (a “coordinated plan”).

The coordinated plan must be developed through a process that includes representatives of public, private, and nonprofit transportation and human service providers and participation from the public.

Bus and Bus Facilities (Section 5339)

This program provides capital funding to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities. Federal funds pay 80 percent of

capital costs. The remaining 20 percent must come from the local recipient. Funds are eligible to be transferred by the state to supplement urban and rural formula grant programs (5307 and 5311, respectively).

Enhanced Mobility of Seniors and Individuals with Disabilities (Section 5310)

Section 5310 authorizes capital grants to eligible organizations to assist in providing transportation for the elderly and/or persons with disabilities. Federal Transit Administration (FTA) funds 80 percent of all costs for equipment, with 20 percent match provided by the local recipient. Eligible recipients for this program are private, nonprofit organizations; public bodies approved by the state to coordinate services for elderly persons; and persons with disabilities; or public bodies which certify to the Governor that no nonprofit organization is readily available in a service area to provide this transportation service. Ten percent of the state's Section 5310 apportionment can be used to administer the program, to plan, and to provide technical assistance.

Formula Grants for Rural Areas (Section 5311)

This program enhances the access of people in non-urbanized areas by providing public transportation. Federal funds pay 86.58 percent of capital costs and 54.11 percent of deficit operating costs, 80 percent of administrative costs, and 80 percent of maintenance costs. The remaining 13.42, 45.89, 20, and 20 percent respectively must come from the local recipient. Eligible recipients of these funds can be a state agency, a local public body, a nonprofit agency, or an operator of public transportation services. Ten percent of the state's Section 5311 apportionment is dedicated to carry out a program to develop and support intercity bus transportation.

STATE FUNDING SOURCES

RAIL/LOAN FUNDS

Administration and Matching Requirements

The Montana Rail Freight Loan Program (MRFL) is a revolving loan fund administered by the Montana Department of Transportation to encourage projects for construction, reconstruction, or rehabilitation of railroads and related facilities in the state and implements MCA 60-11-113 to MCA 60-11-115. Loans are targeted to rehabilitation and improvement of railroads and their attendant facilities, including sidings, yards, buildings, and intermodal facilities. Rehabilitation and improvement assistance projects require a 30 percent loan-to-value match. Facility construction assistance projects require a 50 percent match.

Eligibility and Planning Consideration

Eligible applicants for loans under the program include railroads, cities, counties, companies, and regional rail authorities. Port authorities may also qualify, provided they have been included in the state transportation planning process. Projects must be integrally related to the railroad transportation system in the state and demonstrate that they will preserve and enhance cost-effective rail service to Montana communities and businesses.

TRANS ADE

The TransADE grant program offers operating assistance to eligible organizations providing transportation to the elderly and persons with disabilities.

Allocations and Matching Requirements

This is a state funding program within Montana statute. State funds pay 54.11 percent of deficit operating costs, 80 percent of administrative costs, and 80 percent of maintenance costs. The remaining 45.89, 20, and 20 percent respectively must come from the local recipient. Applicants are also eligible to use this funding as match for the federal transit grant programs.

Eligibility and Planning Considerations

Eligible recipients of this funding are counties, incorporated cities and towns, transportation districts, or non-profit organizations. Applications are due to the MDT Transit Section by the first working day of March each year. To receive this funding the applicant is required by state law (MCA 7-14-112) to develop a strong, coordinated system in their community and/or service area.

STATE FUNDS FOR TRANSIT SUBSIDIES

The 46th Montana Legislature amended Section 7-14- 102 MCA providing funds to offset up to 50 percent of the expenditures of a municipality or urban transportation district for public transportation. The allocation to operators of transit systems is based on the ratio of its local support for public transportation to the total financial support for all general-purpose transportation systems in the state. Local support is defined as:

$$\text{LOCAL SUPPORT} = \frac{\text{Expenditures for public transportation operations}}{\text{Mill value of city or urban transportation district}}$$

STATE FUEL TAX ALLOCATIONS

The state of Montana assesses a tax on each gallon of gasoline and clear diesel fuel sold in the state and used for transportation purposes. According to state law, each incorporated city and town within the state receives an allocation of the total tax funds based upon:

- ① **The ratio of the population** within each city and town to the total population in all cities and towns in the state, and
- ② **The ratio of the street mileage** within each city and town to the total street mileage in all incorporated cities and towns in the state. (The street mileage is exclusive of the Federal-Aid Interstate and Primary Systems.)

State law also establishes that each county be allocated a percentage of the total tax funds based upon:

- ① **The ratio of the rural population** of each county to the total rural population in the state, excluding the population of all incorporated cities or towns within the county and State;
- ② **The ratio of the rural road mileage** in each county to the total rural road mileage in the state, less the certified mileage of all cities or towns within the county and state; and
- ③ **The ratio of the land area** in each county to the total land area of the State.

Effective July 1, 2017, HB473, the Bridge and Road Safety and Accountability Act (BaRSAA) incrementally increases Montana's fuel tax rate for gasoline and for special fuel. HB473 directs the fuel tax rate increase each biennium, until 2023, at the following increments as shown in **TABLE 9.2**.

Table 9.2: BaRSAA Increases

Item No.11.

Date	State Gas Rate	State Diesel Rate
July 1, 2017	0.315	0.2925
July 1, 2019	0.32	0.2945
July 1, 2021	0.325	0.2955
July 1, 2023	0.33	0.2975

A portion of the revenue generated by the increase will be allocated to local governments in addition to the existing fuel tax distributions provided for in MCA 15-70-101 and 7-14-102(2). BaRSAA funds are allocated in the same proportion and using the same ratios provided for in MCA 15-70-101(2) (b), (2)(c), and (3). Allocations are calculated based upon the statutory formula.

Local governments can use BaRSAA funds for the construction, reconstruction, maintenance, and repair of rural roads or city streets and alleys the local government has the responsibility to maintain which does not include the purchase of capital equipment. Funds may also be used to match federal funds used for the construction of roads and streets that are part of the national, primary, secondary or urban highway systems; or road and streets a local government has the responsibility to maintain.

Beginning March 1, 2018, local governments have been able to request distribution of their allocation from MDT. Local governments must match each \$20 requested for distribution with at least \$1 of local government budgeted matching funds. Local governments can request distributions of allocated funds between March 1 and November 1 of the calendar year the funds were allocated. Reservation requests can be made between September 1st and November 1st.



NOVEMBER 2021



ENGINEERING, REIMAGINED

Chapter 10. Policy Plan

INTRODUCTION

The Policy Plan element of the Columbia Falls Urban Area Transportation Plan provides policy guidance to support development of the transportation system. The Plan encompasses the priorities and policy direction established within other local plans, and leverages collaboration with stakeholders and agency partners to set forth a vision for mobility, accessibility, and connectivity that will serve the community for decades to come.

The Transportation Policy Plan covers several policy areas that will support the economic success and vibrancy of the Columbia Falls area. The policy areas included in the Plan are summarized below:

- **Proposed Functional Class Map:** Presents and discusses the Columbia Falls proposed functional class map.
- **Typical Street Cross Sections:** Presents street cross section concepts for major collectors, minor collectors, and local roads.
- **Access Management:** Provides an overview of access management and discusses best practices to operate an effective access management program.
- **Traffic Calming:** Presents a sample toolbox of traffic calming techniques, and discusses their appropriateness for different road types.
- **Overview of Roundabouts:** Presents an overview of best practices for roundabouts, including types of roundabouts, their warrants, and a comparison with other traffic control devices.
- **Intelligent Transportation Systems (ITS):** Provides an overview of ITS and presents several solutions for consideration within the Columbia Falls area.

PROPOSED FUNCTIONAL CLASS MAP

A proposed functional class map was developed in collaboration with the City. The map was created by evaluating the existing functional classification system within the study area against current FHWA guidelines for recommended percentages for each functional classified roadway. These guidelines refer to FHWA best practices for urban and rural areas based on the *2013 Highway Functional Classification Concepts, Criteria and Procedures* manual. The existing functional classification system was evaluated against both urban and rural recommendations to account for the fact that, while Columbia Falls is considered an urban area, it only just recently crossed the urban threshold, so retains rural attributes.

The project team's assessment revealed the following for the existing system:

- Principle arterial mileage is above the FHWA recommended ranges
- Minor arterial mileage is below the FHWA recommended ranges
- Local road mileage is above the FHWA recommended ranges

The City's proposed functional classification map strives to align the roadway system with FHWA best practices to the extent possible. **TABLE 10.1** shows total mileage by functional classification for the existing and proposed functional classification maps, and provides a comparison with FHWA best practices.

Table 10.1: Total Mileage by Functional Classification – Existing and Proposed Functional Classification Maps

Functional Class Name	FHWA Rural Best Practice	Existing FC Map			Proposed FC Map		
		Miles	% of Total	Within Range	Miles	% of Total	Within Range
Principal Arterial	4% to 9%	9.9	9.1%	No	9.9	8.7%	No
Minor Arterial	7% to 14%	0.9	0.9%	No	0.9	0.8%	No
Major Collector	3% to 16%	10.0	9.2%	Yes	12.5	10.9%	Yes
Minor Collector	3% to 16%	4.4	4.0%	Yes	16.1	14.1%	Yes
Local	62% to 74%	83.7	76.8%	No	74.8	65.5%	Yes
TOTAL		109.0	100.0%		114.2	100.0%	



The City's proposed functional classification map is shown in **FIGURE 10.1**¹ and **FIGURE 10.2**². For an existing built roadway, the proposed functional class map shows the intended function of the roadway to meet both existing and projected demand. These designations should guide future roadway investments in terms of access and typical section standards.

For roadways not yet constructed or not yet urbanized (i.e., paved or gravel rural standard roadways) the proposed functional class map is intended to show the functional class standard to which that roadway should be built as it is improved. This is particularly important for local roadways in growth areas which have not yet been urbanized to support access management and right-of-way preservation.

¹ This map is for local planning purposes and does not represent the FHWA-approved functional classification.

² This map is for local planning purposes and does not represent the FHWA-approved functional classification.

Figure 10.1: Proposed City of Columbia Falls Functional Classification Map

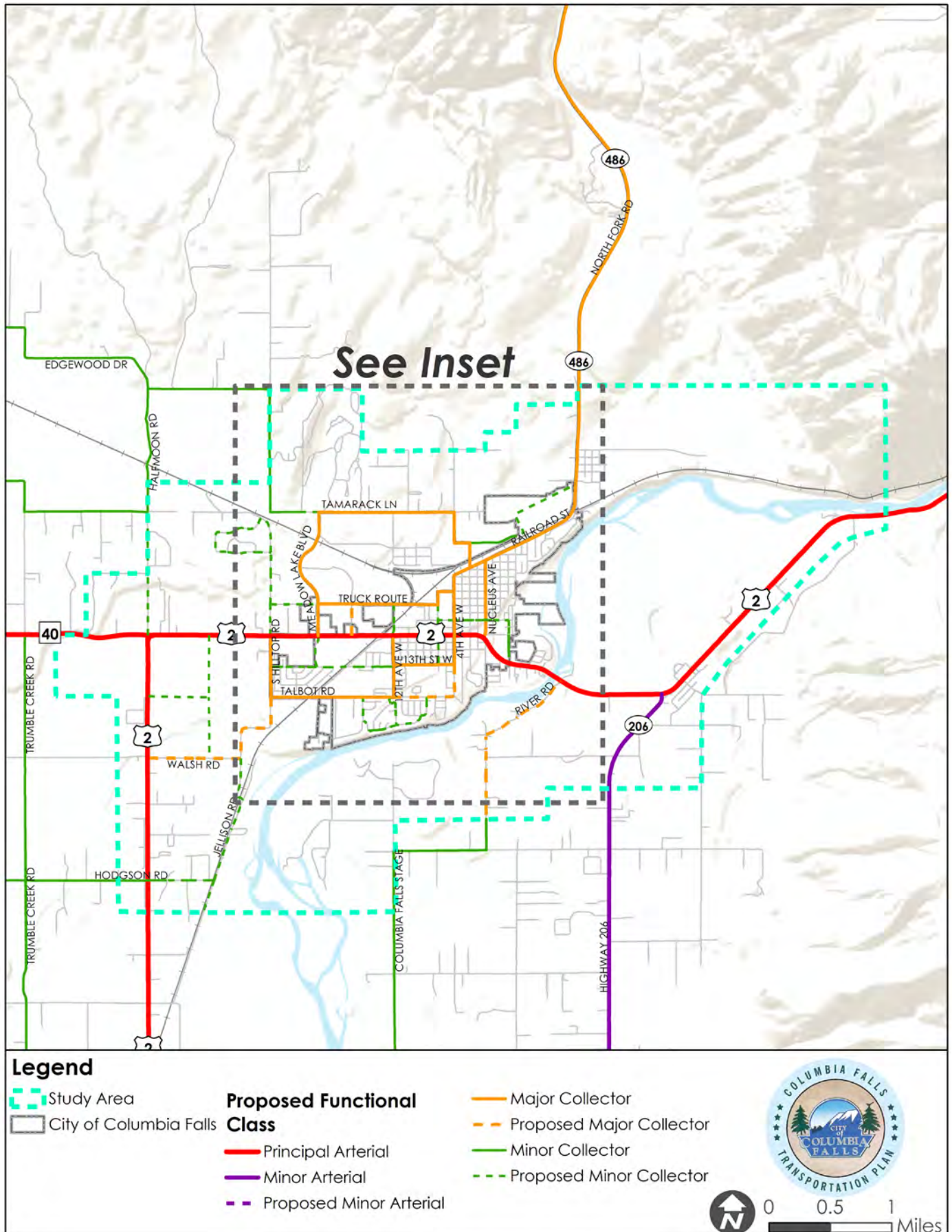
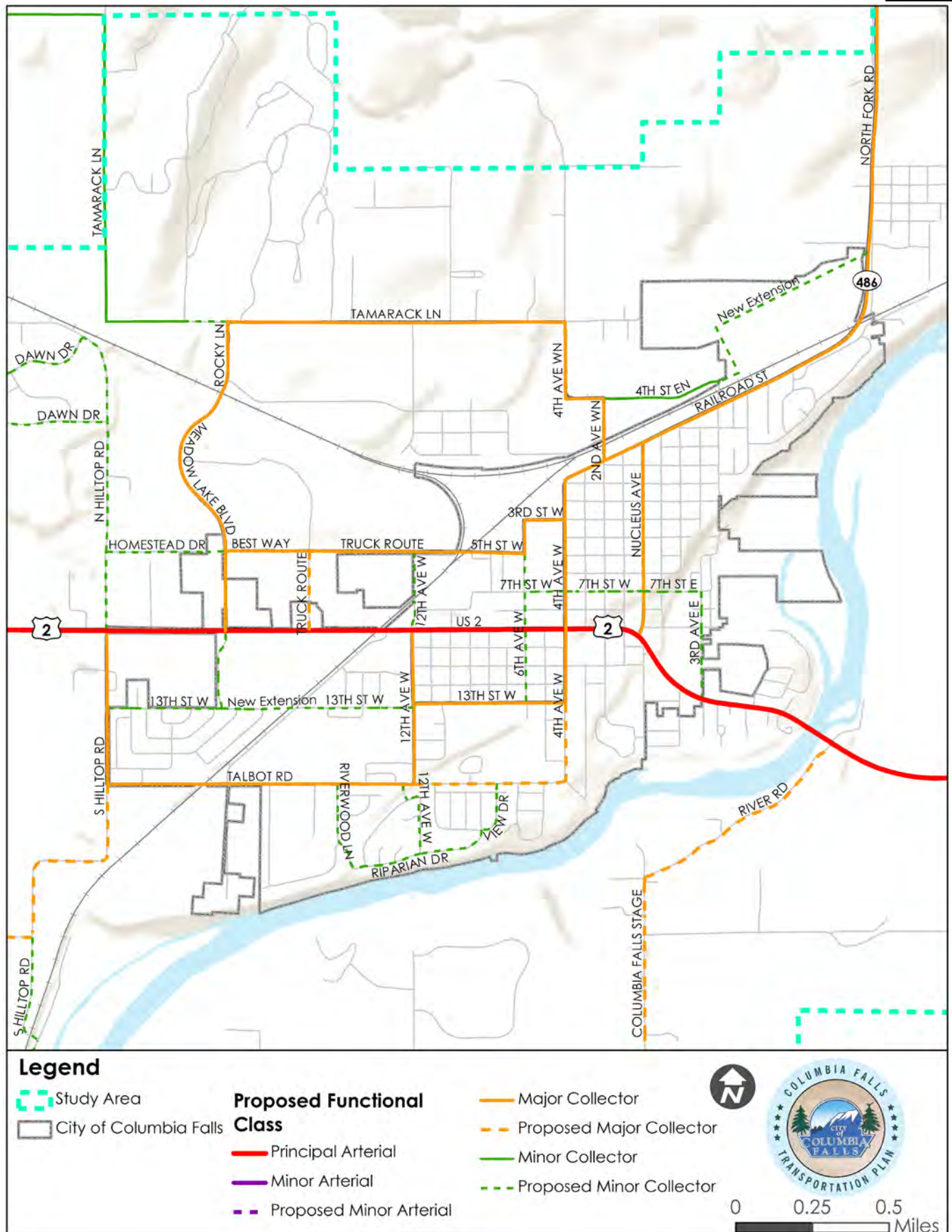


Figure 10.2: Proposed City of Columbia Falls Functional Classification Map (inset)

Item No.11.



TYPICAL STREET CROSS SECTIONS

To support the city's proposed functional class map, planning-level roadway cross sections are presented below for Columbia Falls. The concepts presented here are intended to be illustrative and aspirational, and do not constitute approved or compulsory standards. Typical cross section concepts are provided for the following functional classifications:

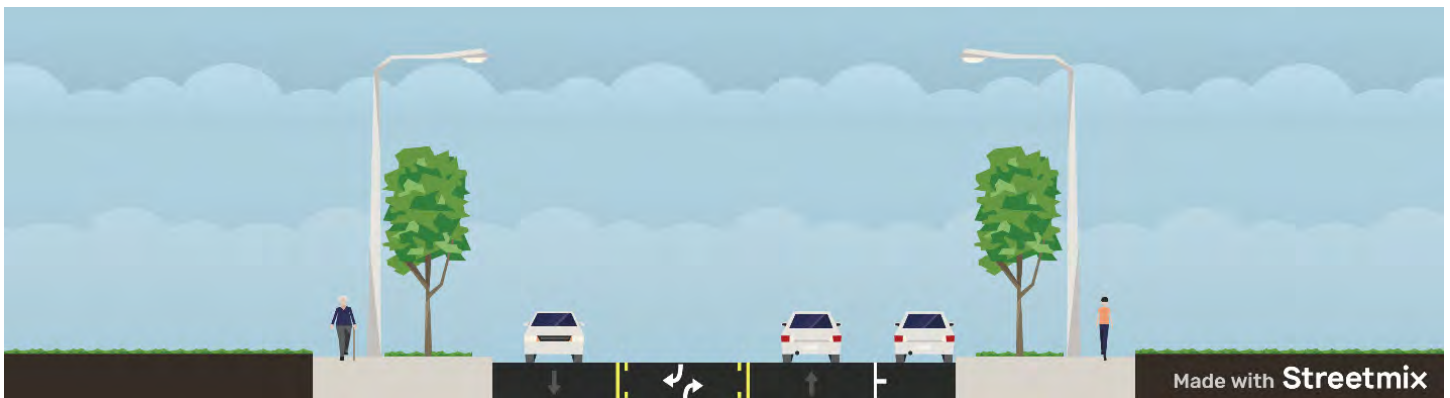


MAJOR COLLECTOR (STANDARD)

The standard major collector cross section is presented as a three-lane facility with the following characteristics:

- 80' ROW
- 12' travel lanes
- 13' TWCLTL
- 8' parking lane
- 8½' boulevards
- 6' sidewalks

Figure 10.3: Major Collector Cross Section

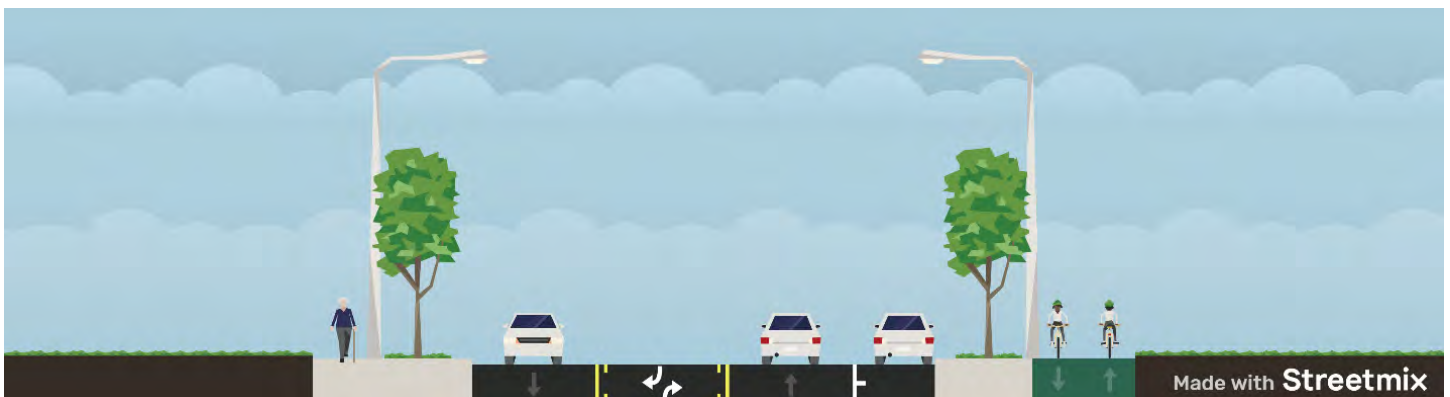


MAJOR COLLECTOR (SHARED-USE PATH)

This variation of the major collector uses a shared-use path instead of a sidewalk on one side of the road. This option has the following characteristics:

- 80' ROW
- 12' travel lanes
- 13' TWCLTL
- 8' parking lane
- 6' sidewalk
- 10' shared-use path
- 6½' boulevards

Figure 10.4: Major Collector Cross Section (Shared-Use Path)



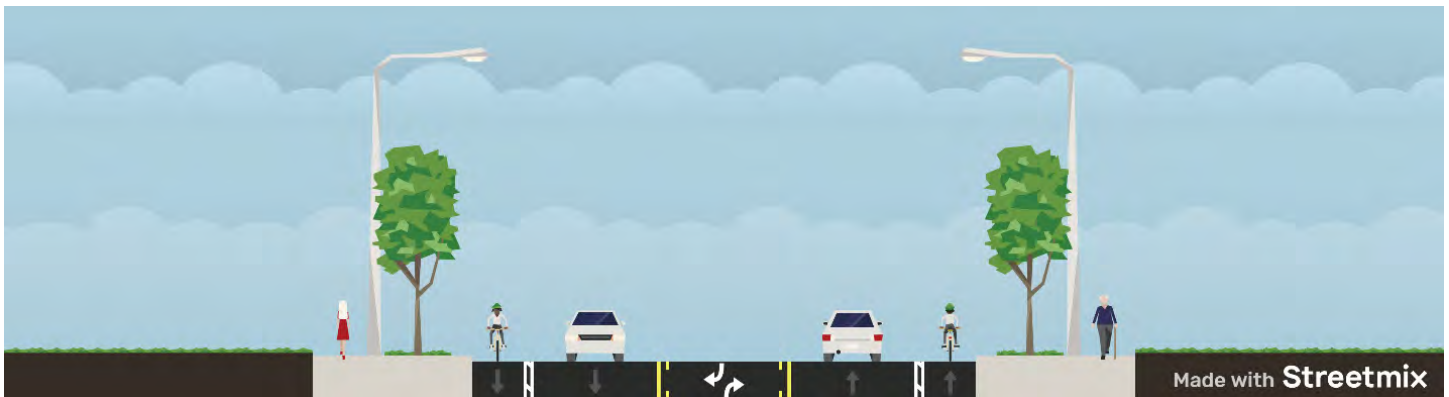
MAJOR COLLECTOR (BIKE LANES)

This variation of the major collector includes on-street bike lanes, as well as sidewalks on both sides of the road. This option has the following characteristics:

- 80' ROW
- 12' travel lanes
- 13' TWCLTL
- 6' sidewalk
- 5' bike lanes
- 6½' boulevards

Item No.11.

Figure 10.5: Major Collector Cross Section (bike lanes)



MAJOR COLLECTOR (DOWNTOWN/NUCLEUS AVE)

This variation of the major collector explores the conversion from three to two lanes along Nucleus Avenue. Any changes to Nucleus Avenue require coordination with MDT. This option has the following characteristics:

- 100' ROW
- 12' travel lanes
- 10' parking lanes
- 10' sidewalks
- 10' boulevards

Figure 10.6: Major Collector Cross Section (Downtown/Nucleus Avenue)



MINOR COLLECTOR (STANDARD)

The standard minor collector cross section is presented with two travel lanes and parking lanes on both sides of the road:

- 80' ROW
- 12' sharrows
- 8' parking lanes
- 11' boulevard
- 6' sidewalks

Item No.11.

Figure 10.7: Minor Collector Cross Section

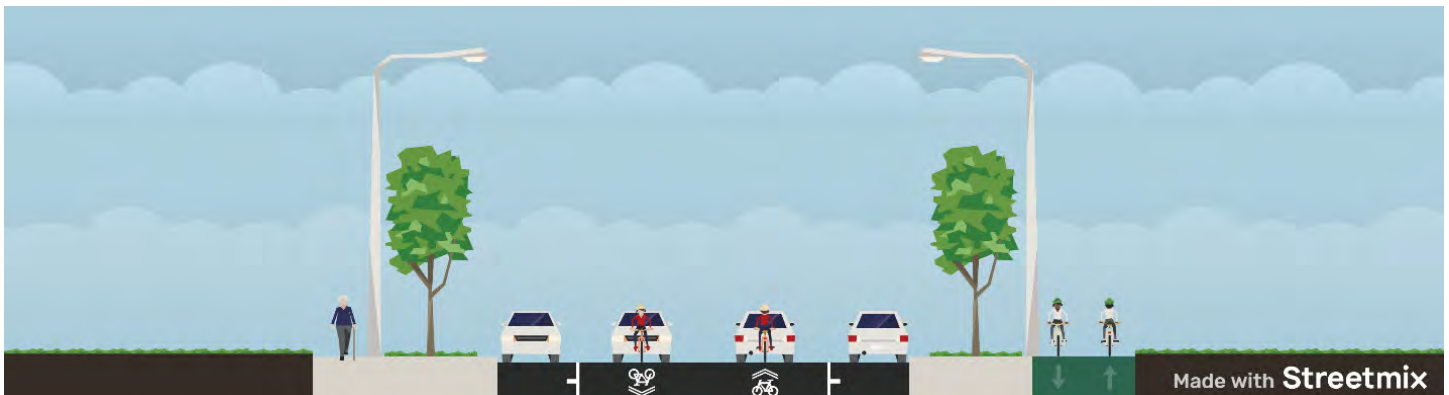


MINOR COLLECTOR (SHARED-USE PATH)

This variation of the minor collector uses a shared-use path instead of a sidewalk on one side of the road. This option has the following characteristics:

- 80' ROW
- 12' sharrows
- 8' parking lanes
- 9' boulevards
- 6' sidewalk
- 10' shared-use path

Figure 10.8: Minor Collector Cross Section (shared-use path)



Local Road

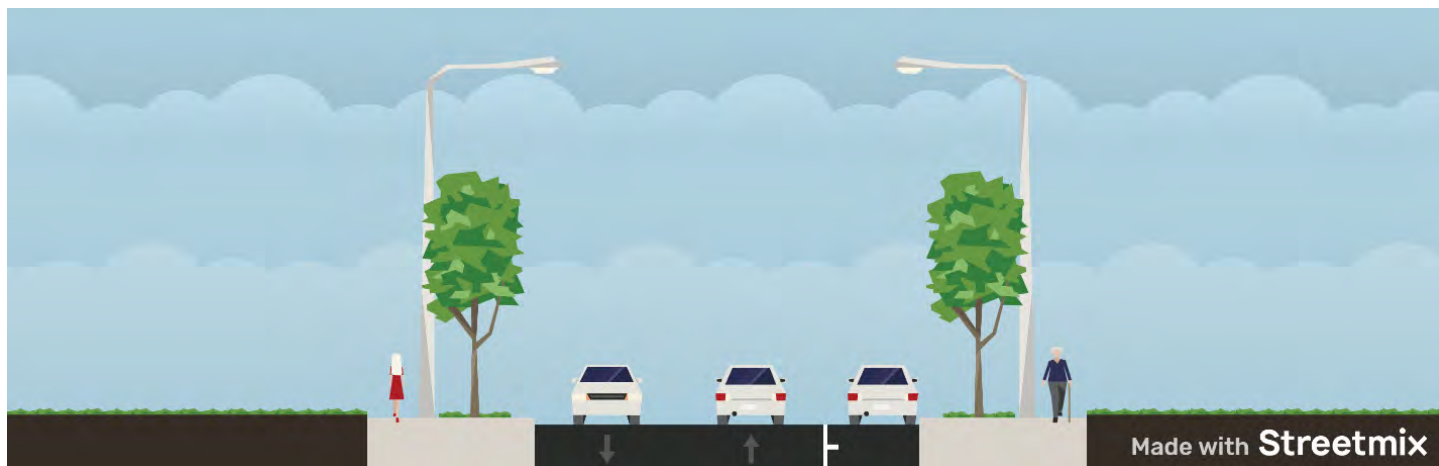
The local road cross section is presented with two travel lanes and a parking lane on one side of the road:

- 60' ROW
- 12' travel lanes
- 8' parking lane

- 6' boulevards
- 5' sidewalk

Item No.11.

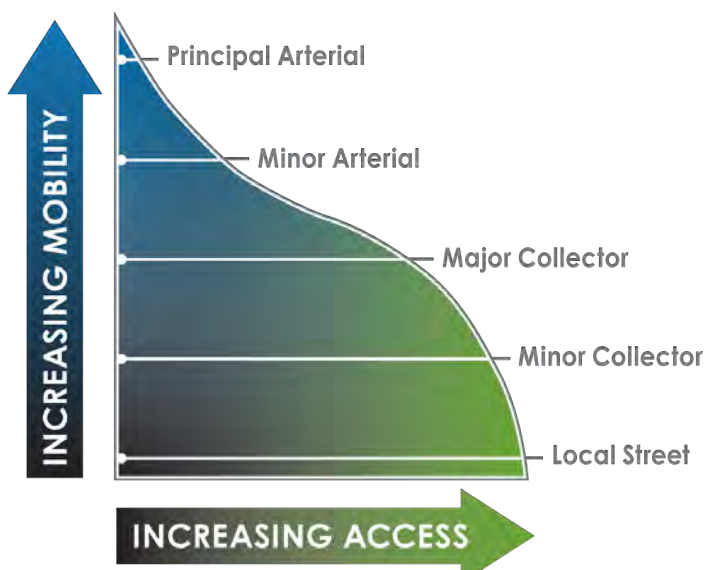
Figure 10.9: Local Road Cross Section



ACCESS MANAGEMENT

According to MDT, access management is a “strategy for managing the type of development along and physical connections to transportation corridors by regulating the frequency or location of access points along roadways”.¹ While access points, such as intersections, pedestrian crossings, and driveways, are essential in allowing users to reach their destinations, poorly designed access management can increase the risk of crashes among vehicles and other roadway users.

Figure 10.10: Access and Mobility



Access management addresses the classic trade-off between corridor-wide throughput (or “mobility”) and local accessibility (**FIGURE 10.10**). At one extreme, no minor street conflicts exist on a corridor and traffic flows freely, with influences on function limited to density, weather, and integrity of the roadway. When minor-street conflicts are introduced, the mainline flow is affected by the resulting combination of slowing, turning, merging, entering, and stopped vehicles. Inadequate access management may result in growing corridors that deteriorate functionally and aesthetically. The characteristics of good and poor access management are compared in **TABLE 10.2**.

ACCESS MANAGEMENT BEST PRACTICES

Each access point along a facility creates opportunities for conflict between turning vehicles and through traffic. Access management seeks to limit the number, spacing, and location of vehicle-to-vehicle conflict points, reduce the speed differentials between turning vehicles and through traffic, and require proof of necessity for access from developers.

There are six basic principles of access management that are used to achieve the desired outcome of safer and more efficient roadways:

- 1 Limit the number of conflict points
- 2 Separate the different conflict points
- 3 Separate turning vehicles from through traffic
- 4 Locate traffic signals to facilitate traffic movement
- 5 Maintain a hierarchy of roadways by function
- 6 Limit direct access on higher speed roads

¹ Please see: <https://www.mdt.mt.gov/research/toolkit/m1/pptools/ds/am.shtml>

Table 10.2: Characteristics of Good and Poor Access Management

Good Access Management	Poor Access Management
• Reduced congestion and better overall traffic flow	• Poor capacity throughput
• Lower potential for crashes due to fewer opportunities for vehicle conflicts with other vehicles, with pedestrians and with bicyclists	• Increases in crashes and crash rates
• Decreased travel times for commuters, truck drivers, and others	• Reduced roadway efficiency
• Easier movement between properties, increasing the attractiveness of adjacent neighborhoods	• Decreased property values and less livable neighborhoods
• Preservation of public investment in transportation infrastructure	• Waste of public funds resulting from disrupted traffic movement (public not “getting what they paid for” in terms of the intended function of a roadway)
• Better control over the intended character of a corridor and its adjacent neighborhoods	• Potential for unsightly strip development • Potential for unwanted neighborhood cut-thru traffic • Less desirable corridor user experience

Access management encompasses a set of techniques that local governments can use to control access to highways, major arterials, and other roadways. The following represents a “toolbox” of access management best practices that can be used to preserve roadway capacity, improve safety, and plan for future growth.

Access Denial, Removal, or Relocation

A city may control the number of conflict points by denying, removing, relocating, and consolidating access points. If proof of necessity cannot be adequately demonstrated for a proposed access onto a major roadway, then the access permit request may be denied and alternate means of access explored.

A Traffic Impact Study (TIS) may be required before a new access is permitted. The purpose of a TIS is to evaluate the effects of a proposed development on the surrounding transportation network. The TIS assesses the ability of the intended land use traffic to efficiently and safely enter/exit the site, and makes recommendations for any mitigation measures needed to accommodate the additional traffic volumes resulting from the proposed entrances.

Access Spacing Standards

Access spacing standards establish the minimum distance between access points with the intent of separating potential conflict points involving turning vehicles and through-moving vehicles. Access spacing standards govern the distance between driveways, between unsignalized intersections, and between intersections and the nearest driveway. Access spacing standards will vary based on the functional classification of the adjacent roadway, the desired land use, and the type of access. An indirect method to reinforce the minimum access spacing requirements is to require an increased minimum lot frontage on major roadways for all new development.

Frontage Roads

Frontage roads can reduce the frequency of conflicts along the main travel lanes of high-volume roadways. Direct access to adjoining property is provided from the frontage road and is restricted or prohibited from the main roadway. The restricted access along the main roadway allows for fewer access points with increased spacing.

Median Alternatives

Medians can be used to create space between access points, restrict some turning movements at access points, and facilitate auxiliary lanes for turning vehicles. For example, use of a non-traversable median is an effective way to limit disruptive left-turn movements into and out of access points to only those spots designed for turning vehicles. All other mid-block access points would be restricted to right-turn only movements, reducing dangerous cross-traffic movements.

Property Access Restriction

The regulation of access location can be accomplished by restricting each parcel to a specific number of access points, typically one. If a parcel is further subdivided, the new lots would have to share the single permitted access point. Denying major roadway access would force developments to provide internal lot access and utilize minor street networks or other pre-approved access roads. This technique encourages a connected street system with residential access served by low-volume neighborhood streets rather than major arterials or collectors.

Turn Lanes

Turn lanes can serve as an effective access management technique as they separate through traffic from vehicles slowing and turning. Separating traffic turning from through traffic reduces the speed differentials that increase the risk

of crashes and increase delay, thereby improving safety and increasing capacity. Turn lanes are often incorporated as a separate lane or traversable median, such as a two-way left-turn lane, or are included as turning bays within non-traversable medians.

Traffic Signal Spacing

Signalized intersections should be spaced uniformly to maintain optimal signal timing and progression. The installation of traffic signals can assist access management by establishing the location and spacing of major access points. The signalized access points allow for protected movements to and from these accesses. Signal design and timing operation often incorporate access management techniques involving turn lanes and medians to efficiently remove potential conflicts between turning and through traffic.

Corridor Preservation Measures

Corridor preservation is the process of preventing or minimizing development along a defined transportation corridor through the use of building setback standards and local guidelines. These measures are intended to address potential future land development and transportation improvements along the corridor, which may include additional vehicle travel lanes, bikeways, multi-use trails, high occupancy vehicle lanes, and fixed-rail lines, etc. Corridor preservation measures ensure that new developments along planned transportation corridors are designed to accommodate future transportation facilities.

State, regional, and local governments across the country use access management programs to preserve the functionality of their roadway systems. This is often done by designating an appropriate level of access control for each of a variety of facilities. For example, local residential roads are allowed full access, while major highways and freeways allow very little. Between these classifications are a series of road types that require standards to help ensure the free flow of traffic and minimize crashes, while still allowing access to major businesses and other land uses along a road.

For roadways on the state system and under the jurisdiction of MDT, MDT develops an access control plan defining minimum access point spacing, access geometrics, etc. For other roadways, the adoption of an access classification system based upon the functional classification of the roadway is recommended. These local regulations should serve to govern minimum spacing of driveway approaches/connections and median openings along a given roadway in an effort to fit the roadway into the context of the adjacent land uses and the overall roadway system.

SAMPLE GUIDELINES BY FUNCTIONAL CLASSIFICATION

While the development of specific access and spacing guidelines is beyond the scope of the Columbia Falls Urban Area Transportation Plan, the project team compiled a set of sample standards by roadway type to aid the City as it considers improvements to its existing access management program. The sample standards are based upon peer research, and represent the approach used by various small (<50,000) cities within the Midwest. It is important to note that, while the sample guidelines provide a valuable point of reference, an effective access management program must be tailored to consider a roadway's specific context and reflect the community's unique transportation and land use goals.

TABLE 10.3 provides sample guidelines for minimum access spacing by roadway functional classification.

Note: When determining minimum spacing for one intersection with respect to another intersection of a different access roadway functional classification, it is recommended that the minimum spacing corresponding to the lower-tier functional classification intersection be used.

TRAFFIC CALMING

Traffic calming supports the livability and vitality of residential and commercial areas through improvements in non-motorist safety, mobility, and comfort. These objectives are achieved by reducing vehicle speeds or volumes on a single street or a street network. Traffic calming approaches use a variety of physical measures and driver-perception techniques to produce desired effects. An effective traffic calming program can help to transform streets and aid in creating a sense of place for communities.

The importance of reducing vehicle speeds in an area where there is potential for conflict between a pedestrian and a motor vehicle is undeniable. Simply stated, the slower the speed of a motor vehicle, the greater the chances are for survival for a pedestrian. **FIGURE 10.11** illustrates the relationship between the speed of a vehicle and the potential for pedestrian injury.

TRAFFIC CALMING TOOLBOX

As part of the Plan, a sample toolbox of traffic calming measures was compiled to support the development of a traffic calming program. It is important to remember that the application of a calming measure must consider the specific problem to be addressed, as even very effective measures will produce little benefit in the wrong context.

Table 10.3: Access Spacing Guidelines

Type of Access	Principal Arterial	Minor Arterial	Major Collector	Minor Collector	Local Road
Private Residential Driveways	No direct access	No direct access	No direct access	No direct access	As required
Commercial Driveways	No direct access	No direct access	1/8 mile (660')	1/8 mile (660')	Based on: Speed, Traffic Volume, Sight Distances, etc. (min. 100 ft.)
Non-Continuous ¹ Local Roads	No direct access	1/8 mile (660')	1/8 mile (660')	1/8 mile (660')	(150')
Continuous Local Roads	No direct access	1/4 mile (1,320')	1/8 mile (660')	1/8 mile (660')	(150')
Collector Streets	1/2 mile (2,640')	1/4 mile (1,320')	1/8 mile (660')	1/8 mile (660')	1/8 mile (660')
Minor Arterials	1 mile (5,280')	1/2 mile (2,640')	1/4 mile (1,320')	1/4 mile (1,320')	1/4 mile (1,320')
Minimum Spacing Between Intersection and Nearest Driveway ²	N/A	N/A	330'	330'	100' for commercial driveways; 35' for residential driveways

1 "Non-continuous" roads refer to cul-de-sacs or short length streets, typically less than one-half mile in length, which do not cross the roadway providing access (three-legged intersections).

2 Please see: Access Management Guidelines for the Urbanized Area (<https://ccrpc.org/wp-content/uploads/2015/03/access-management-2013-04-17-final.pdf>)

Figure 10.11: Speed/Pedestrian Injury Severity Correlation

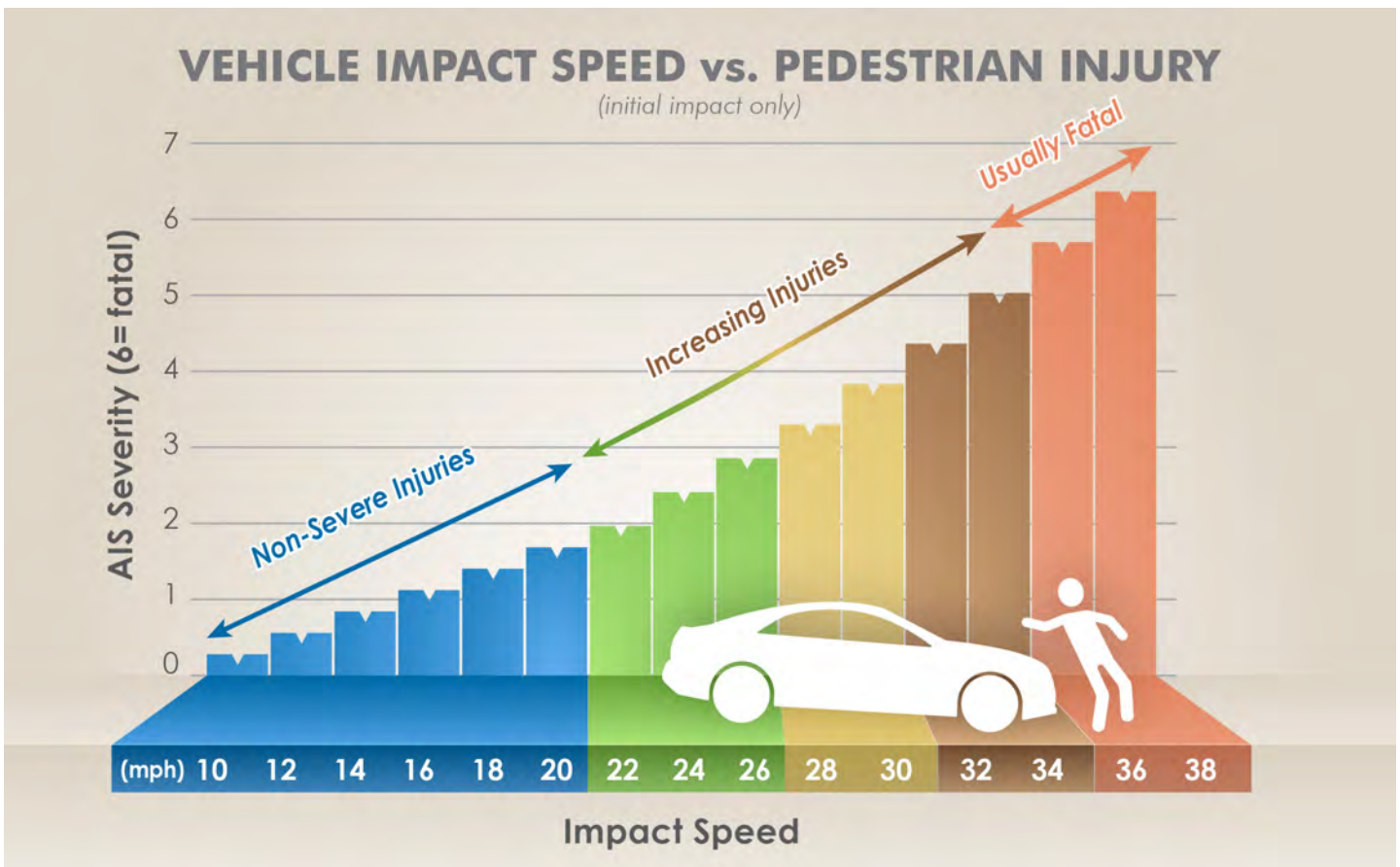


TABLE 10.4 presents the toolbox of traffic calming measures, including a description of each measure and an indication of the type of roadway for which the measure may be most appropriate. The toolbox is not comprehensive, but rather provides a sample of effective calming measures. Much of the toolbox content was adapted from the FHWA Traffic Calming ePrimer.¹ The table separates measures into four general categories:

- **Horizontal deflection** limits the ability of a motorist to drive in a straight line by creating a horizontal shift in the roadway
- **Vertical deflection** creates a change in the height of the roadway that forces a motorist to slow down in order to maintain an acceptable level of comfort
- **Street width reduction** makes increases driver attentiveness and naturally lowers vehicle speeds
- **Routing restriction** prevents turns or through movements into specific areas to reduce traffic or create pedestrian zones

The appropriateness of a specific measure by road type is indicated with the numbers 3 to 1, with 3 reflecting a high level of potential appropriateness, 2 reflecting a moderate level, and 1 representing a low level.

THE FOUR “E’S” OF TRAFFIC CALMING

The traffic calming toolbox represents the third component of what is commonly referred to as the “four E’s” of traffic calming: Education, Enforcement, Engineering, and Evaluation. This approach reflects the fact that pure engineering solutions are not always the most effective way of achieving the goals of traffic calming. Rather, many safety issues are addressed more effectively, and more economically, through education and enforcement or a combination of education, enforcement, and engineering. It is recommended that education and enforcement be considered prior to engineering alternatives; if these are unsuccessful, engineering solutions—such as those presented in the traffic calming toolbox—should be considered. Evaluation, the fourth “E”, is conducted throughout the process to gauge the effectiveness of solutions and help an agency tailor its traffic calming approach.

The traffic calming response process begins when the community reports a specific traffic or safety issue. The process would encompass the following general steps:

1 PROBLEM IDENTIFICATION AND ASSESSMENT

- › City staff collects information on the affected location.

This may include site visits, crash history reviews, sight distance reviews, analysis of traffic and speed data, and monitoring of pedestrian and bicycle activity.

- › City staff facilitates a neighborhood meeting to gather input on the issue and inform residents of the ongoing analysis.

2 EDUCATION AND ENFORCEMENT

- › If staff’s assessment of the reported issue has demonstrated the need for traffic calming measures, education and enforcement efforts will begin.
- › Education involves working with residents of the neighborhood to correct driver behavior using information and neighborhood awareness. Effective measures include vehicle-activated speed alerts, embedded flashing-light systems at crossings, neighborhood yard signs, and neighborhood social networking services such as Nextdoor, among others.
- › Enforcement involves increased levels of police presence and speed monitoring to change driver behavior. Speed limit reductions may also be considered.

3 ENGINEERING SOLUTIONS

- › City staff monitors the affected location for changes in driver behavior. If the reported issue persists, engineering solutions may be considered.
- › An inclusive planning process is conducted with the neighborhood to choose the correct solution(s) considering the nature and severity of the issue, and available project budget.

4 ENGINEERING SOLUTIONS

- › City staff evaluates the effectiveness of solutions implemented during steps 2 and 3.
- › Evaluation is essential in helping an agency decide when a strategy has been effective, and when additional options, such as engineering solutions, should be considered.

CONCLUSION

Traffic calming involves trade-offs between the need to provide an efficient transportation network and maintaining a livable and safe environment for bicyclists, pedestrians, drivers, and adjacent land uses. The challenge of traffic calming is selecting the appropriate measures and locations to reach that balance. The City is encouraged to refer to the FHWA Traffic Calming ePrimer and its recommended resources as it develops and updates its traffic calming plan.

¹ Please see: https://safety.fhwa.dot.gov/speedmgt/traffic_calm.cfm

Table 10.4: Traffic Calming Toolbox

Item No.11.

Measure	Description	Appropriateness
HORIZONTAL DEFLECTION		
Chicane	A series of alternating curves or lane shifts that force a motorist to steer back and forth out of a straight travel path. The curvilinear path is intended to reduce the speed at which a motorist is comfortable travelling through a facility. Chicane curves can be created with a curb extension that alternates from one side of the street to the other.	Arterials: 1 Collectors: 3 Local Roads: 3
Realigned Intersection	The reconfiguration of an intersection with perpendicular angles to have skewed approaches or travel paths through the intersection. The expectation is that these physical features will discourage fast vehicle movements through the intersection.	Arterials: 1 Collectors: 3 Local Roads: 3
Traffic Circle	A raised island, placed within an unsignalized intersection, around which traffic circulates. A circle forces a motorist to use reduced speed when entering and passing through an intersection, whether the vehicle path is straight through or involves a turn onto an intersecting street.	Arterials: 1 Collectors: 2 Local Roads: 3
VERTICAL DEFLECTION		
Speed Hump	An elongated mound in the roadway pavement surface extending across the travel way at a right angle to the traffic flow. A speed hump produces sufficient discomfort to a motorist driving above the speed hump design speed to discourage speeding.	Arterials: 1 Collectors: 3 Local Roads: 3
Speed Table	A raised area placed across the roadway designed to limit the speed at which a vehicle can traverse it. Like a speed hump, it extends across the travelway. Unlike a speed hump, a speed table has a long enough flat top (typically 10 feet) to accommodate the entire wheelbase of most passenger cars. This flat top enables comfortable and safe vehicle speeds that are faster than allowed by a speed hump.	Arterials: 2 Collectors: 3 Local Roads: 3
Raised Crosswalk	A variation of a flat-topped speed table, a raised crosswalk is marked and signed as a pedestrian crossing. A raised crosswalk improves pedestrian safety by causing motorist speed to decrease at the crossing. Additionally, the height of the crosswalk increases the visibility of a pedestrian to motorists and improves the line of sight for a pedestrian toward an oncoming vehicle.	Arterials: 2 Collectors: 3 Local Roads: 3
STREET WIDTH REDUCTION		
Curb Extension	A horizontal extension of the sidewalk into the street resulting in a narrower roadway section. This method may be used at either a corner or midblock. A curb extension at an intersection is called a corner extension, while at midblock it is referred to as a choker. A corner extension shortens pedestrian crossing distance, and can be combined with a vertical speed control device (e.g., a raised crosswalk) to achieve a greater reduction in vehicle speed.	Arterials: 3 Collectors: 3 Local Roads: 3
Median Island	A raised island located along the street centerline that narrows the travel lanes at that location, encouraging motorists to slow. A median island can double as a pedestrian refuge island if a cut in the island is provided along a marked crosswalk. When placed at or near the entrance to a neighborhood, a median island provides a visual cue to the motorist about the preferred vehicle speed	Arterials: 3 Collectors: 3 Local Roads: 3
Road Diet	The conversion of an undivided roadway to a cross-section with fewer or narrower through motor vehicle travel lanes. The most common application is the conversion of an undivided four-lane roadway to a three-lane roadway consisting of two through lanes and a center two-way left-turn lane. This lane reduction may also accommodate the inclusion of multimodal elements such as bicycle lanes, sidewalks, pedestrian refuge islands, and transit.	Arterials: 3 Collectors: 3 Local Roads: 2
ROUTING RESTRICTION		
Diagonal Diverter	A diagonal diverter is a physical barrier placed diagonally across a four-legged intersection. The barrier creates two unconnected intersections. Traffic approaching the intersection is restricted to one receiving leg, rather than three. A strategically placed diagonal diverter can reduce traffic volume by preventing straight-through traffic movements at an intersection.	Arterials: 1 Collectors: 2 Local Roads: 2
Full Closure	A physical barrier placed across a street to close the street completely to through vehicle traffic. Full closure can be done at either an intersection or midblock. A full closure can be designed to allow bicyclists and pedestrians to pass through. It is important to consider where the diverted traffic is likely to shift, in particular the availability, capacity, and appropriateness of the alternative routes.	Arterials: 1 Collectors: 2 Local Roads: 2
Median Barrier	A median barrier is a raised island placed through an intersection, along the centerline of a roadway, preventing a motorist from traveling straight through the intersection on the side street. A median barrier can be designed to allow turns to and from the main street, while preventing through traffic from the side street from crossing the main roadway.	Arterials: 2 Collectors: 3 Local Roads: 3

OVERVIEW OF ROUNDABOUTS

PRIMARY ROUNDABOUT TYPES

TABLE 10.5 compares the characteristics of the primary roundabout types. The primary types/configurations of the modern roundabout in the United States include:

- A **Multi-Lane Roundabout (FIGURE 10.12)** has two or more approach lanes for each leg of the intersection and two or more circulating lanes throughout the entire roundabout.
- A **Hybrid Multi-Lane Roundabout (FIGURE 10.13)**, commonly referred to as a “2x1 Roundabout”, is

classified as having a mixture of one- and two-approaches and circulating lanes.

Item No.11.

- A **Single-Lane Roundabout (FIGURE 10.14)** has one approach lane and a circulating lane throughout the entire footprint.
- A **Mini Roundabout (FIGURE 10.15)** is a single-lane roundabout with design features that make it more compressed and suitable for compact urban environments. Mini roundabouts have become more common across the United States in recent years. In the right circumstances they can achieve the same benefits as a single-lane roundabout at a substantially lower price.

Table 10.5: Roundabout Type Comparison

Characteristics	Multi-Lane Roundabout	Hybrid Multi-Lane Roundabout	Single-Lane Roundabout	Mini Roundabout
Desired Entry Speed	25 to 30 mph	Varies	20 to 25 mph	15 to 20 mph
Typical Inscribed Circle (Curb to Curb of the circulating roadway)	150 to 300 ft	Varies	90 to 180 ft	45 to 90ft
Planning Level Entering Volume Capacity	Up to 45,000 for two lane approaches on each leg. Roundabouts with 3+ entry legs require more planning level analysis	Varies	Up to 25,000	Up to 15,000 vpd
Advantages	Large capacity and ability to process traffic volume	Allows for adaptive and creative design where there are right-of-way constraints and has a smaller footprint and cost than a traditional multi-lane roundabout if the capacity is not needed on the minor approach	The maximum safety benefit compared to other roundabout types	Small footprint, usually able to be constructed within the existing curb lines of an intersection which relates to a lower construction cost
Disadvantages	Large footprint and will likely increase the overall frequency of crashes (still greatly reducing severity) compared to other roundabouts. There are concerns with driver entry yielding compliance that is elevated with multi-lane roundabouts. The design process can be very challenging and complex compared to smaller roundabouts.	Inconsistency of lanes in the circulatory roadway may cause additional crossing paths and confusion for motorists. The design process and for multi-lane/hybrid roundabouts can be very challenging complex compared to other roundabouts.	More expensive and larger impact compared to mini roundabouts.	Tight geometry makes navigation for large vehicles difficult. The entire center island must be fully traversable for heavy vehicles.
Applicable Contexts	Multi-lane roundabouts are typically most successful for traffic operation mitigation where a large signalized intersection would have been needed.	A Hybrid roundabout should be used in specific circumstances where traffic volumes are unbalanced but the operations are still deemed to be acceptable.	A Single lane roundabout is the most common and widely applicable roundabout in the United States.	This roundabout should be used in low speed urban areas.

Figure 10.12: Multi-Lane Roundabout – King Avenue and 40th Street, Billings, MT



Figure 10.13: Hybrid Multi-lane Roundabout (2x1) – E North Pacific Avenue and Airway Boulevard, Belgrade, MT



Figure 10.14: Single-lane Roundabout – Smelter Avenue and Division Road, Great Falls, MT



Figure 10.15: Mini Roundabout – Toole Avenue and Scott Street, Missoula, MT



PREVALENCE OF ROUNDABOUTS

Roundabouts construction emerged in the 1990s in states like California, Florida, Nevada, Colorado, Vermont, and Maryland. As public perception and safety data improved to show the safety and operational benefits of roundabouts, their implementation increase drastically in the mid to late 2000s.

Kittelson's Lee Rodegerdts played a key role in the NCHRP study and since then has kept a real-time database of roundabouts in the United States through his firm Kittelson and Associates since 1997. **FIGURE 10.16**, **FIGURE 10.17** and **FIGURE 10.18** give more perspective on the history and growth of roundabouts in the United States.

The National Cooperative Highway Research Program (NCHRP) conducted a study in 2003 that found that 73 percent of roundabouts in the United States are single lane and mini roundabouts, 25 percent are hybrid multi-lane and multi-lane with two approach lanes and circulating lanes, and 2 percent were multi-lane roundabouts with at least one approach that had three or more lanes. A comparable study has not been completed since then.

MDT began design and public engagement for roundabouts in the early 2000s and constructed their first roundabouts in the late 2000s. To date, there are approximately 56 roundabouts in operation, 10 more in construction, and 18 more in design, planning, or early consideration phases according to MDT records. These numbers are broken out in **TABLE 10.6**.

Figure 10.16: Types of Roundabouts in the U.S.

Item No.11.

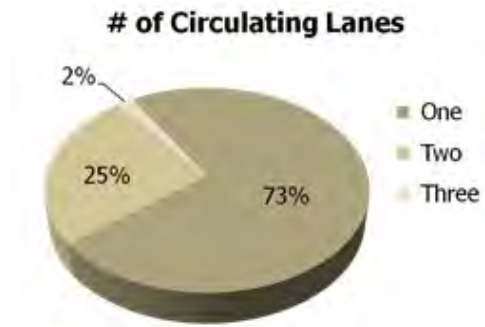


Figure 10.17: Roundabouts by State

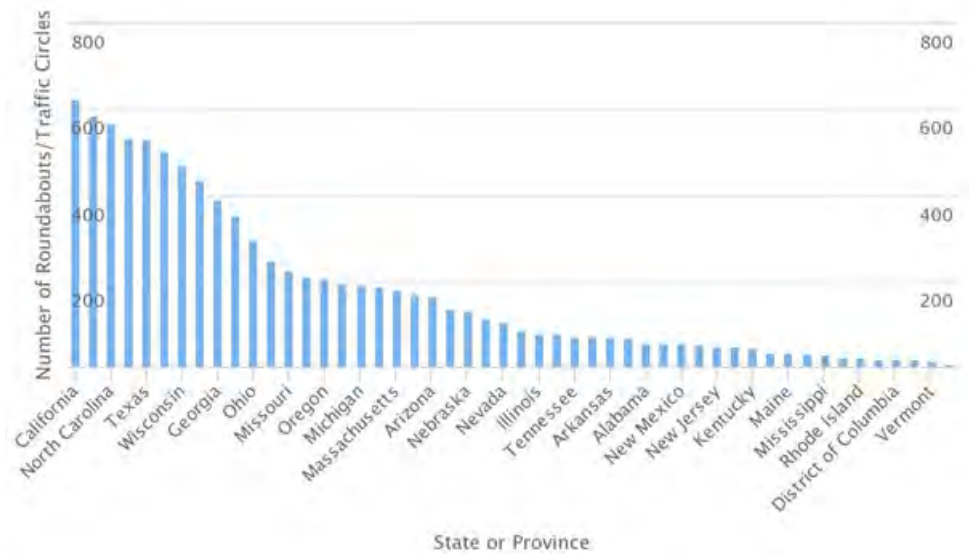
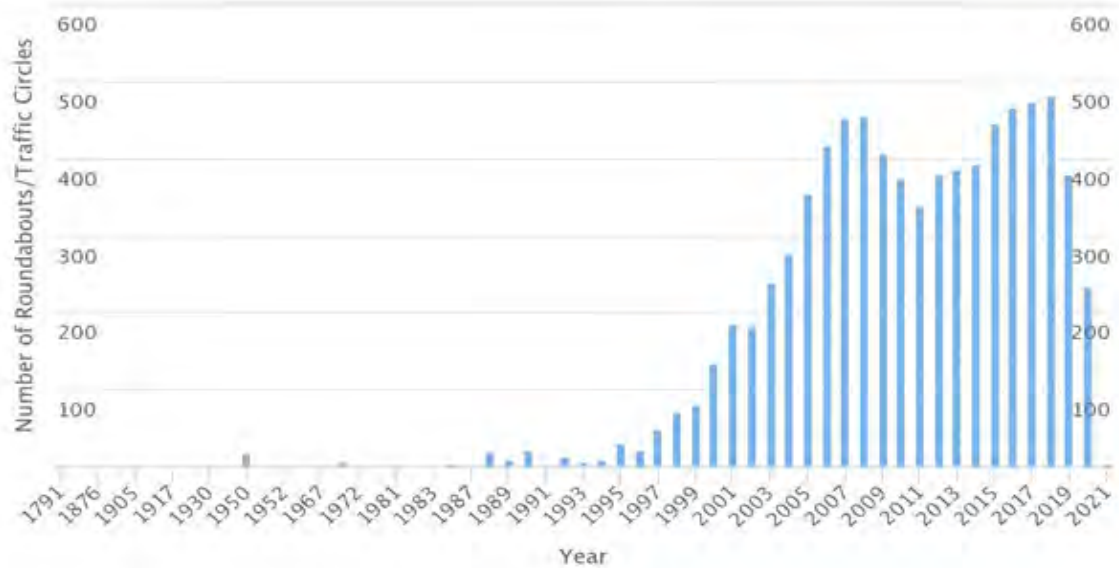


Table 10.6: Montana Roundabouts by Location¹

General Location	Roundabouts in Operation	Roundabouts under Construction ²	Roundabouts in Consideration/Planning/Design Phases
Billings	17	1	5
Bozeman & Belgrade	11	0	1
Great Falls	1	0	3
Helena	5	1	3
Butte	0	1	1
Missoula	11	2	2
Kalispell	7	2	3
Combination of Other Jurisdictions With Less than 10,000 population (Sidney, Poplar, Miles City, Lame Deer, Red Lodge, Browning)	4	3	1
TOTAL	56	10	18

¹ See: <https://www.mdt.mt.gov/visionzero/roads/roundabouts/locations.shtml>. Table numbers are current as of March 2021.

² Includes roundabouts that are let for construction



BENEFITS OF ROUNDABOUTS

Roundabouts have been shown to reduce the number of crashes that occur at an intersection, reduce crash severity, and improve bicycle and pedestrian safety. The two major components that allow the accomplishment of these safety benefits are the ability of the roundabout to reduce conflict points between facility users and reduce vehicle speed.

FIGURE 10.19 and FIGURE 10.20 help demonstrate how a roundabout physically achieves these concepts.

Roundabouts can also reduce delay and travel time, reduce operation and maintenance costs, be cheaper to construct, offer more flexibility for traffic growth and travel pattern changes, and offer opportunities for placemaking and aesthetics. TABLE 10.7 provides considerations for roundabouts in comparison to other traffic control types.

Table 10.7: Comparison of Roundabouts to Other Traffic Control Types

Consideration	Disadvantages	Advantages over Side-Street Stop Control	Advantages over All-Way Stop Control	Advantages over Signal Control
Safety	There may be an increase in low severity sideswipe crashes and rear end crashes on the major approach when converting from two way stop control. This is especially true of multi-lane and hybrid roundabouts.	Roundabouts show a 44% reduction in all crashes and up to 87% reduction in serious and fatal crashes.	While there is still expected to be a crash reduction, the comparison to all-way stop control is less drastic than other control types.	Roundabouts show a 48% reduction in all crashes and up to 78% reduction in serious injury and fatal crashes.
Delay	Roundabouts are also less consistent and capable of servicing large volume intersections or dominant movements when compared to signal actuation, signal time of day plans, or the uncontrolled approach of two-way stop control.	Roundabouts can improve the frequency and duration of gaps for minor street traffic movements when compared to two-way stop control.	Roundabouts are generally able to process traffic faster due to a yield entry condition instead of the full stop and by allowing multiple approaches to enter the intersection simultaneously.	Roundabouts in a variety of cases are able to reduce delay compared to a signal by elimination of loss time (yellow + all-red between phases).
Cost	The geometric footprint of roundabouts frequently cost more than a signal. It is important to complete a benefit/cost analysis for roundabouts when less expensive solutions may be adequate. Maintenance of the center island components should be considered in the cost.	No Cost Advantage.	No Cost Advantage.	Roundabouts of a smaller footprint, especially mini roundabouts, can cost less to construct than signals. Roundabouts also require less maintenance and no electrical equipment.

Figure 10.19: Vehicle Conflict Point Comparison

Item No.11.

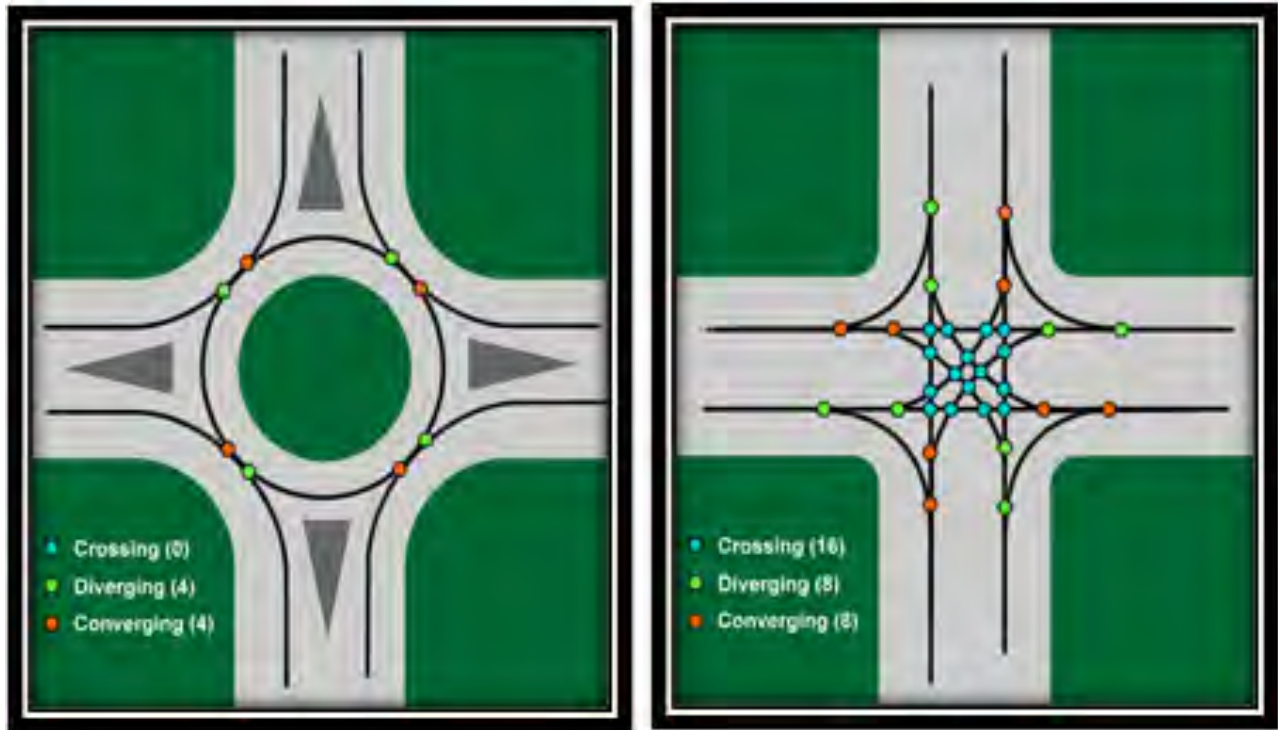
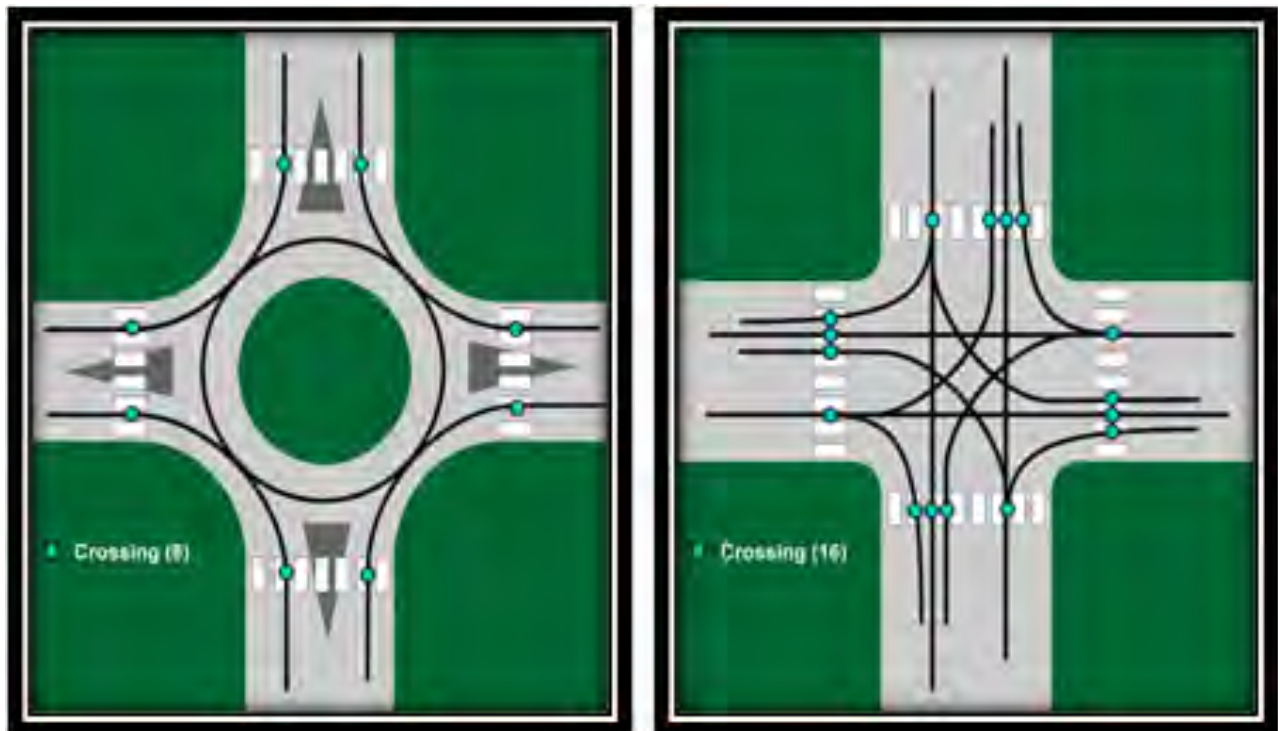


Figure 10.20: Pedestrian Conflict Point Comparison



ITS

ITS applies information, technology, and systems engineering principles to the management and operations of surface transportation facilities and systems, including freeways, arterials, and transit. ITS includes a wide range of applications that process and share information to reduce congestion, improve traffic management, minimize environmental impacts and increase the benefits of transportation to commercial users and the general public. The substantial benefits of ITS can be observed in the areas of travel time improvement, capacity management, incident management, and sustainability.

Many of the most prominent ITS technologies have already been deployed throughout the country (please see the call-out box).

MDT has employed several ITS solutions to improve the efficiency of Montana's transportation system, with the most notable examples being upgrades to traffic signal systems and implementation of traveler information systems.

MDT has also implemented the 511 system, which allows drivers to access real-time information by phone or internet. The 511 system provides updates on weather-related conditions, road work, commercial vehicle restrictions, road closures, chain requirements and other travel information. Finally, dynamic message signs have been employed at key locations on the road network to advise motorists of changing travel conditions. These technologies allow travelers to make better choices about when they travel, what transportation mode they use, and what route they take.

ITS FOR COLUMBIA FALLS

USDOT recognizes that there is a subset of ITS solutions and technologies that is most relevant for "rural environments", which it defines to include both rural areas and urban centers with populations of less than 50,000. This is because such areas have different technological infrastructure, fiscal resources, infrastructure usage, and travel patterns relative to urban areas. Considering these unique characteristics, the City may benefit from exploring ITS solutions in the following focus areas:

Traveler Safety and Security

This focus area addresses a driver's ability to operate their vehicle in a safe and responsible way and for improving driver awareness of potentially hazardous driving conditions.

POTENTIAL ITS SOLUTIONS:

- Dynamic speed warning message signs that communicate a vehicle's actual speed to the driver.
- Animal Warning Systems that warn motorists about the potential or actual presence of animals on the road. These systems utilize electronic sensors to detect

Examples of ITS in Use Today

- **Ramp Meters (RM)** on freeway ramps alternate between red and green signals to control the flow of entering vehicles. Metering rates are altered based on freeway traffic conditions.
- **Red Light Cameras (RLC)** detect when a motor vehicle runs a red light. The sensors connect to computers in high-speed cameras, which capture license plate information. Law enforcement reviews the information and mails a citation if warranted.
- **Adaptive Signal Control Technology (ASCT)** collects and evaluates traffic data in real time to adjust signal timing and improve traffic flow. ASCT can also respond to traffic incidents and special events.
- **Transit Signal Priority (TSP)** systems use sensors to detect approaching transit vehicles and give them priority at signalized intersections.

Source: USDOT ITS Research Fact Sheets –
Benefits of Intelligent Transportation Systems

animals. Once an animal is detected, signs are activated to warn drivers of the presence of an animal.

Tourism and Travel Information Services

This focus area addresses the challenges experienced by drivers unfamiliar with the area through which they are traveling.

POTENTIAL ITS SOLUTIONS:

- Dissemination of real-time information on parking availability through a cell phone application. Such an application could also provide information on construction projects, etc.
- Dissemination of real-time weather and road conditions information via cell phone applications.

Transit Services

This focus area addresses opportunities to increase the accessibility and coordination of Mountain Climber service.

POTENTIAL ITS SOLUTIONS:

- TSP technologies, which reduce dwell time at traffic signals for transit vehicles by holding green lights longer or shortening red lights. TSP may be implemented at individual intersections or across corridors or entire street systems.
- Electronic fare payment systems to automate fare collection and processing. Electric payment options

include smart phones (e-tickets), magnetic stripe cards, smart cards and credit cards.

- Automatic Vehicle Location (AVL) technology, a computer-based vehicle tracking solution that uses GPS to communicate the real-time location of buses. Transit agencies use AVL systems to improve customer service by communicating arrival times, which can be posted to variable message boards installed at transit stops, websites and smartphone applications. AVL also allows agencies to monitor transit driver performance.
- Automated voice annunciator systems that broadcast bus route and safety information.

Traffic Signals

This focus area addresses the signal system so that traffic operates at an optimal level.

POTENTIAL ITS SOLUTIONS:

- Traffic signal coordination provides the ability to synchronize multiple intersections to enhance the operation of one or more directional movements in a system. The decision to use coordination is supported by various considerations, but is typically most appropriate when intersections are in close proximity and there is a large amount of traffic on the coordinated street.



NOVEMBER 2021



ENGINEERING, REIMAGINED

Appendix A: Public Engagement Survey Comments

PUBLIC ENGAGEMENT SURVEY COMMENTS

Item No.11.

Comment locations are pinpointed on corresponding maps in **CHAPTER 2**. Please see **FIGURE 2.2: BIKE/PED-RELATED COMMENTS**, **FIGURE 2.3: TRAFFIC-RELATED COMMENTS**, and **FIGURE 2.4: TRAFFIC-RELATED COMMENTS (US HIGHWAY 2 & MT 40)**.

ID	Comment	Up Votes	Down Votes
1	Better yet and overpass like on Meadowlake Blvd would be ideal with path for people walking, biking and running.	0	0
2	Would like to see speed limit signs and deer crossing signs. People drive down this road like its a drag strip and deer are constantly crossing roadway.	0	0
3	Could you please make this yellow strip on curb to prevent parking. When people park here it's a blind turn to the north and south making it dangerous.	0	0
4	I agree that this is a hazardous blind corner. Extra hazard of the fenced lot right on the corner. Could the blind spot be replaced with a 4 foot fence? The Talbot bike path is very busy during three of the seasons. It is a main access for all of the housing South of Talbot to get downtown. Also East end kids take this to/from school.	0	0
5	I agree that this would be a fantastic restoration for our town. Similar to River's Edge Park this would be a very unique landmark for our valley. It is quite expensive to deal with it. Whether tearing down, rebuilding, or restoring. There is a group having discussions about it: saveouroldredbridge@gmail.com. With the money flooding into our valley with out of state homebuyers maybe we can get a campaign going. As well as all the extra tax money with the new building.	0	0
6	I had an experience at this crossing with two children and was nearly hit by a car but I don't think a street light is necessary. Definitely better lighting (solar? Low light pollution) is needed and a working crossing light. I also think they should position a crossing guard during start/end of school.	2	0
7	I don't think a stop sign was needed here. Unnecessary at a non-congested intersection.	0	0
8	Fully agree on a green arrow. In summer (which extends through September) you cannot turn south on 4th unless you go on the red. And only one car will make it. This leads to pushing the turning traffic to use more unsafe routes through town.	1	0
9	I agree that stops signs could be placed. Minor fix. I use this multiple times a week biking and if no cars are present I just cruise through the intersection. Is there already a stop sign for cars? If not there should be.	0	0
10	Traffic delays are caused by trains stopping for lengthy times or going extremely slow. Train traffic should be realigned for off hours and to not stop at the crossing. Has been super frustrating for decades. A lot of residents live along Talbot and deal with the stopped train.	0	0
11	I would agree with the comment. Might a 4 way stop help? I realize the cost of a light might not be warranted but some type of traffic control here would be beneficial to the safety of drivers, pedestrians, and bikers.	0	0
12	Not sure why it bothers me, but this isn't 4th Avenue East; it's an alley. 4th Avenue East doesn't exist south of the entrance to River's Edge Park. This often confuses people when trying to give directions, but maybe it's more of an issue with the mapping service.	0	0
13	Crosswalk needed - especially for events at the Coop	7	0
14	Please consider a bike path or lane on S Hilltop to Jellison	13	0
15	Reconfigure the intersection of 4th Ave East and 5th Street East as an actual 90-degree T-shaped intersection with stop signs to help with traffic flow and bicycle/pedestrian safety into River's Edge Park.	0	0
16	Totally agree! As a resident that uses that left hand turn lane to access my property, I have been very frustrated that the blinking yellow arrow has functionality to go green but never has. I too have sat through multiple cycles of this signal!	0	0
17	Bus Stop and EV Charging Station on Nuclues. Red Lodge and other towns have this.	3	1
18	The rail use during the day across Highway 2 causes significant traffic congestion, especially during summer. I have frequently observed vehicles making a u-turn in response to the rail use. It would be great to shift the rail use to late evening or night.	0	0
19	Need to have a better functioning light at this intersection. Push button activation. People really can get moving on Talbot and this one has a hedge and bushes on the West side to hinder visibility.	0	0
20	Seems that 1st street connecting to 4th may not even be necessary, perhaps dead end 1st at 4th Ave? Local traffic still has several outlets.	0	0
21	This turn lane is not long enough to support the line of cars turning left onto Nucleus at certain times of the day.	6	0
22	Left turn bay is too short.	1	2

ID	Comment	Up Votes	Votes
23	The lack of visibility due to street parking on 4th and semitrucks unloading at Smiths makes this uncontrolled intersection dangerous.	4	0
24	The city and/or county needs to start sweeping the shoulders ... they are full of debris that creates hazards for cyclists.	1	1
25	This intersection only has one yield sign even though it is a 4 way intersection. It really needs another yield sign clearly showing the N/S street has the right of way.	0	0
26	There needs to be a turning lane to this river access as well as a merging lane for drivers coming back onto the highway. Cars often go 60+ miles through here and it can be very dangerous to slow down to turn into it or merge into fast moving traffic with a trailer.	1	0
27	I don't really know what is happening here but there has been a chunk of road missing for months. Maybe it is to access pipes or something, but it is a big square of dirt/gravel on the side of a real road.	0	0
28	This intersection could be made a lot safer if the vehicles had to park farther away from it for increased visibility. It is often hard to see around them and see if any cars are coming. I know we need parking on Nucleus, but pulling out onto the street is very difficult here.	0	0
29	I think there needs to be a street light at the intersection of 12th Ave W and Talbot Rd. This intersection is very dark during the night and early mornings when kids are going to school at Ruder Elementary. Its extremely hard to see people crossing 12th Ave W on the bike path. I believe this truly is a public safety issue.	0	1
30	Agree. Did not think the city should have allowed the private landowner here to exclude the public. His extension of fence into the water was illegal.	0	0
31	I agree would be a valuable addition for bike/pedestrian traffic only. This would greatly expand the recreational opportunities for those of us in town to get to nice roads for bicycling without needing to ride on the highway. It would also improve the ability of kids to walk/bike to school.	0	0
32	I am against a full time street light here. The nearby park is one of the few dark habitats in town for pollinators and other small animals. I would support a light that operated only during the times when kids are going to school and it is dark. A crossing guard is also a good idea.	0	0
33	What about adding a mirror to help with the visibility around the corner. These are used in some places and might be a good solution here.	0	0
34	Not sure this is needed quite yet for the size of the problem. If so, suggest having green arrow based on time of day as well as time of year.	0	0
35	The nearby park is one of the few dark habitats in town and I think the darkness is a good thing. Traffic should be slow here anyway as people are exiting a residential area or going into a residential area.	0	0
36	Quiet zones for the railroad. Exempting the crossing with gates from blowing their whistles in Columbia Falls	2	0
37	Agree 4-way not needed. 2 way sufficient here.	0	0
38	This neighborhood (and all of CFalls really) would benefit from eliminating uncontrolled intersections. In this area there are a lot of new drivers (high schoolers) which makes this more dangerous. Ideally would plan out some streets and avenues to have right away- probably can use mostly two way stops in neighborhoods like this.	0	0
39	This seems like a good place for a roundabout, perhaps combined with a wildlife underpass to reduce that conflict as well.	0	0
40	This planning area is too small. I have heard there are similar efforts for Whitefish and Kalispell. It seems like planning for the full county or at least the bottom of the valley would be more efficient.	0	0
41	Would like to see this and all lights in Columbia Falls modified to be less harsh, less bright, and more efficient. This light keeps me awake at night.	0	0
42	This exit to the highway should've eliminated and only accessible from River road (not from the highway). It is extremely dangerous to motorists and bike/pedestrians to have two adjacent points where people turn onto the highway at this already dangerous intersection in need of a traffic light	0	0
43	A bike path, not a sidewalk, is needed to connect the new bike path between river road and the water slides to downtown. The bike path should be on both sides of the highway as that stretch of highway is impossible to cross safely with children .	0	0
44	River road has an extremely narrow / nonexistent shoulder and blind curves making it dangerous for bike/ pedestrians. A bike path is desperately needed. All new developments or subdivisions must be required to incorporate a public bike path.	0	0

ID	Comment	Up Votes	Votes
45	It would be great if we could put in a walking path through here to connect the upper neighborhood with the Rivers Edge park!	0	0
46	Need Stop Light	0	2
47	There would not be enough bike/pedestrian use to justify the cost, in my opinion. However, restoration for vehicle use & bike/pedestrian use of this bridge would be a great transportation strategy, especially considering the significant growth occurring in the Middle/Columbia Falls Stage roads areas.	0	1
48	A flashing "be prepared to stop" signal as you enter the Blue Moon intersection would be awesome. I find these lights useful along Highway 2.	4	0
49	Need bike/ped path connecting downtown to Gateway to Glacier.	2	0
50	Eliminate this entry onto 1st Avenue West (south side) in order to lengthen the left-turn lane for Nucleus and avoid traffic confusion/congestion. Businesses and parking in this area could instead be accessed via 2nd Avenue West and 10th Street.	4	1
51	There should be a turn signal here! Now with the addition of Murdochs and a gas station, it is treacherous trying to make a left turn coming from Halfmoon and heading into CFalls.	8	0
52	Transit service only serves commuters to Whitefish or Kalispell. There is no inter-city service at this time which promotes auto use, reduces safety, increases pollution and generally discourages a pedestrian oriented community. A looped service originating on Nucleus and running west to 12th on both sides of Hwy 2 would be a huge benefit for employees and employers.	1	0
53	This would be a great stop location for public transit.	2	1
54	It won't take much more growth for hwy 2 to be gridlocked through town. Transit/bike options need to provide affordable links between the places people live, work and play, including beyond the study area boundaries (whitefish, airport, Glacier)	2	0
55	Bike travel around town is generally very dangerous and very undesirable. You are forced to cross Hwy 2 to go almost anywhere. There are very few and very inadequate bike lanes, intersection lighting and many streets have speeds in excess of typical residential movement. It discourages me from both biking/walking but also from traveling around CFalls.	2	0
56	Left turn bay is too short.	6	1
57	This is the location where my previous comment/location relates to. The daily rail-use closures causes significant traffic delays, especially during summer. I have frequently observed people making u-turns in response to the rail use. Suggest rail use should be during evening or night, especially during summer.	3	2
58	View to the north is very limited	0	0
59	There is already a well-established social trail here. It would be nice to make an official pedestrian path, or possibly even re-connect both sides with an actual street/road.	4	0
60	Work with property owners to create an established biking/pedestrian path along the river that fully-connects Teakettle River Access down to Riverwood Drive, and possibly even up to River's Edge Park.	9	0
61	This is a blind curve and pulling out from 1st Street West is dangerous. A traffic mirror would alleviate this blind curve.	7	0
62	Need to continue to prioritize safe ped crossings on Nucleus West to East throughout urban corridor.	2	0
63	Restoration of bridge for bike/pedestrian use would provide safe connection for south side of planning area to down town.	14	0
64	Need future work to establish safe ped/bike route to the 4th St Trailhead associated with the Crystal/Cedar Trail Project.	1	0
65	Work towards connecting parks with ped/bike seperated path or sidewalk	3	0
66	There should be a sidewalk on either side of Railroad Street for pedestrian and bicycle safety.	6	0
67	During farmers Market and in the summer there is no crosswalks, people just cross anywhere along roadway to access hotel and parking.	4	0
68	This entire intersection is desperately in need of repair. The pot holes are dangerous! Looks junky right at the Welcome into town. Additionally, The light needs turn arrows that work independently. And the intersection needs to be deuces in winter. Lots of ice accidents here. Thank You	4	0
69	There needs to be additional lighting at this intersection and likely will need a stop light in the near future	13	4
70	Needs a 4 way stop like the rest of 3rd St W	3	1

ID	Comment	Up Votes	Votes
71	Number 1 issue is that HWY 2 needs traffic calming measures, all types. I know there are restrictions because it is a highway but round-a-bouts with landscaping/art, banners, pedestrian crossing lights, speed traps, lower speed limits, etc. need to be explored so travelers know they are entering a city. It is not as difficult to slow down if you have distraction, things to look at. The turn onto Nucleus needs even more highlights, the signs are a good start.	4	0
72	This intersection is a disaster. Huge potholes, pooling water, and tons of truck traffic really have destroyed the intersection as a whole.	5	0
73	Road needs major repairs and adequate width to support ped/bike	5	0
74	With the addition of the River Trail the need for a safe Pedestrian/cycling crossing of US 2 is going to become a priority. Between traffic volume width of road and the competing cars attempting to turn on to and off of Hwy 2 this is a dangerous intersection	4	1
75	I would like to see the North side of Meadow Lake Blvd to have much wider roadway with a turn bay. More like the intersection on the south side	7	0
76	The traffic speed should be decreased earlier as cars enter Columbia Falls.	15	7
77	Crossing US 2 in anything that is not a car to access downtown core. Downtown core ped. connectivity to CFalls residents south of US 2. HANDS DOWN BIGGEST ISSUE FROM A MAIN STREET CORE DEVELOPMENT PERSPECTIVE.	5	0
78	Speed limit may need to be reduced to 25 in this area.	7	1
79	Need Ped Crossing	4	0
80	This intersection is extremely busy with semi truck traffic and traffic in and out of both businesses on the North side of the highway. I would like to see a stoplight here to help with the flow of traffic.	13	1
81	I believe a right hand turn lane would be very useful, especially during summer. Most people turn left toward Columbia Falls and often a line of cars get backed up due to east/west traffic on Highway 2. However, there are enough vehicles turning east on Highway 2, that I believe a right turn lane would be justified.	6	0
82	There should be a pedestrian cross walk here connecting the south side to the bike path on the north. No safe crossings from the bridge to Nucleus Ave.	4	0
83	PLEASE PUT IN A FOUR-WAY stop here! I live a road away from this intersection and drive though this every day--this intersection is VERY dangerous and there are multiple near-misses here constantly.	3	0
84	Bike/Ped path.	3	0
85	Would love to see functional red, green and yellow turn arrows at this intersection. I've sat through 3 light cycles in mid summer without being able to make a turn northbound.	16	1
86	Bike and walking path all the down truck route and 12th.	0	0
87	Bike and walking pathway on Truck Rte from 4th to St Andrews Dr. Also down 12th to Burger King.	2	0
88	Needs a stop sign here! People drive so fast.	0	1
89	This curve is extremely dangerous. There are no shoulders and the speed is 60mph. When the shoulder is widened here it is essential to put a turn lane in by Tallent Lane. Due to the length and abruptness of the curve homeowners in this area are forced to prepare to be hit every time they turn into their driveways. Since we have owned our property we have witnessed 5 major crashes in front of our house, two deaths, and multiple noninjury accidents. This is a must not a question!	3	0
90	With large gatherings in this area, it would be nice to have a safe pedestrian crossing area. There is a 2-block gap in areas to cross safely and pedestrians cross this busy section of road on a regular basis.	6	0
91	This intersection needs an actual lane when going south. Historically, the single lane was divided into two and there is just a stop sign and no room. Additionally, when going east and turning south you can't see if someone is on the crosswalk in front of the schools.	1	0
92	A stop light at this intersection would be great. So much congestion coming in and out of post office from all directions.	2	1
93	Traffic is more often than not backed up to turn into Smith's and backed up with people waiting to turn. Along with people going south and people wanting to turn west onto 5th street or people wanting to go straight across the highway to get into Smiths. I think this intersection could benefit much from a stoplight in place.	1	1

ID	Comment	Up Votes	Votes
94	This area is very dark at night and would benefit from extra lighting. Also, the bike path should have stop signs indicating there is a road here. It is Talbott Pines Loop. There is increased traffic due to more lots being developed. Many users of the bike path-especially those on bikes-cross the intersection with no regard to other traffic.	2	3
95	This is dangerous when a train is crossing and cars back up to around the corner onto railroad street. Especially, when you have people running, walking or riding pedal bikes. I think a crosswalk would add safety.	2	0
96	Dangerous intersection. When driving south or north to cross the paint in turn lanes is not visible due to wear and tear and people always turn in front of someone going straight across the highway or someone waiting to turn left or right onto highway and person going straight goes around the turning car and causing safety issues.	0	0
97	This road is listed as trail for pedal bikes and walking. However, there is no shoulder on this road and can be quite dangerous for vehicles, bikers and walkers. I hope for a walking/bike path to help with this danger.	2	0
98	This intersection could use a four-way stop.	1	0
99	Pothole city here! The road is horrible and unsafe.	2	0
100	Or, perhaps Columbia Falls could make a master plan for through streets with controlled intersections, where some streets and avenues have the right of way with stop signs protecting those more major streets and avenues (I don't now what this is called) - rather than having a few random 4-way stops, yet largely uncontrolled intersections at around town.	1	0
101	This intersection is extremely difficult to navigate due to the misalignment of 13th St. Especially during school in/out time periods with all of the student pedestrian/ bike traffic and buses.	10	0
102	Or, perhaps Columbia Falls could make a master plan for through streets with controlled intersections, where some streets and avenues have the right of way with stop signs protecting those more major streets and avenues (I don't now what this is called) - rather than having a few random 4-way stops, yet largely uncontrolled intersections at around town.	0	0
103	I see a need for better night lighting at the front entrances of Glacier Gateway school. During a good part of the year, school and community activities are conducted after sundown where adults, children, parking and traffic all share the area. However, I find that the area is poorly lit for the high traffic that it receives after hours.	0	0
104	Increased use of this southern access to/from Columbia Falls should be looked at. Perhaps a traffic light that turns when vehicles approach from the east to allow safe entry onto the highway. A right turn lane off of the highway would likely help too.	1	0
105	With the amount of traffic on Hwy 2, making a left turn from River Road onto Hwy 2 is scary and getting dangerous during the tourist season. There needs to be a light at this intersection.	4	5
106	Trees on the NE side of intersection make it necessary to ease out well past the stop sign to look for traffic southbound. This can be very hazardous, especially when icy.	2	1
107	This spot can get crazy during the busy season ... it should really be improved with designated parking spots and a way for vehicle traffic to safely enter/exit, vs. being a free for all. Also don't like seeing the hobo/squatter types who decide they're going to set up and camp there for free ... maybe some signage to discourage that would be helpful.	1	0
108	Reconfigure the north end of the intersection of Half-Moon Road and Highway 40 with established direction lanes to assist with traffic flow at a green light (e.g. right-turn-only, left-turn only, straight only, etc.)	4	0
109	This intersection needs an left turn arrow for south bound traffic turning East from Halfmoon Road going towards Columbia Falls. It's impossible to see North bound traffic when there is a line up of cars turning west onto HWY 40.	0	0
110	Please reduce the speed limit between Hwy 206 and River Road. People are still going too fast as they come into town, particularly at the Tea Kettle access. Visibility coming out of the parking lot is always challenging and particularly dangerous in the busy summer months.	0	1
111	I disagree that there would not be enough bike/pedestrian traffic to justify the cost. There is a proposed river trail to which restoration of this bridge would provide access. https://www.gatewaytoglaciertrail.com/projects/columbia-falls-river-trail I second restoration of the bridge but only for bike and pedestrian traffic, not for vehicle traffic.	0	0
112	People blow through these intersections all the time. They don't even look or slow down. I have avoided a couple of accidents because I slow down and look for other cars. I think people this this is a through street.	0	0
113	River Road is in poor condition and seeing increased use in both traffic and cyclists ... as the area grows this will result in a lot of problems. It's also extremely difficult getting across Hwy 2 at times. Fixing the old steel bridge as a passage for pedestrians/cyclists would be helpful.	4	0

ID	Comment	Up Votes	Votes
114	The transition from road-shoulder to sidewalk is difficult to navigate for bicycle and pedestrian traffic just west of the intersection of Highway 2 and South Hilltop Road.	3	0
115	Bike/Ped path.	3	0
116	Another example of where roads and paths need to be swept more frequently ... this path is a mess of gravel and debris.	2	0
117	4-way stop needed ... this intersection lacks visibility due to vehicles parked up and down Nucleus, making it very difficult to see when it's safe to merge with traffic. Haphazard pedestrian behavior also amplifies the problem.	2	2
118	Implement green arrows for left turns onto 4th ave and 6th ave. Especially during peak season, June-September.	6	0
119	Railroad backs up traffic daily, negative impact on the efficiency of emergency vehicles as well as hindering citizens ability to be punctual with work, appointments, ect.	2	0
120	Traffic safety is generally terrible, for any non-highway trips, throughout the City. CFalls is currently designed only as an east-west throughway with very inadequate north-south travel.	2	0
121	I disagree that there would not be enough bike/pedestrian traffic to justify the cost. There is a proposed gateway to glacier river trail to which this bridge would provide access if restored. I second restoration of the bridge but only for bike and pedestrian traffic, not for vehicle traffic.	1	0
122	(Or some other kind of westbound traffic-calming measure)	0	0
123	Whether you're an eastbound cyclist or a westbound driver, it's extremely difficult to see around the corner here. A solar-powered flashing caution sign on the westbound side could help remind drivers that there may be people in a crosswalk just around the corner.	0	0



NOVEMBER 2021



ENGINEERING, REIMAGINED

Appendix B: Study Area Traffic County Locations

COMPLETE STUDY AREA TRAFFIC COUNT LOCATIONS¹

Item No.11.

Site ID	Description	AADT 2018	2040 Estimate
15-4A-028	US 2, 135+0.623, btwn Truck Rt & RR tracks	23,200	32,200
15-4A-012	US 2, 134+0.761, E of MT 40	21,300	29,500
15-4A-029	US 2, 136+0.319, btwn 5th & 6th Avs W (Col Falls)	17,600	24,400
15-4A-030	US 2, 136+0.551, btwn 1st & 2nd Avs W (Col Falls)	17,000	23,600
15-4A-031	US 2, 136+0.806, E of Nucleus Av (S-486) (Col Falls)	14,700	20,400
15-4A-014	US 2, 132+0.446, 1 mi S of MT 40	14,500	20,100
15-4A-011	MONTANA 40, 004+0.191, W of US 2	14,200	18,900
15-4A-013	US 2, 137+0.466, E of Flathead Rv bridge	12,100	16,800
15-4A-002	US 2, 139+0.793, 1.5 mi N of Col. Heights (A-60)	7,700	10,700
15-4A-032	ROUTE 486, 000+0.053, btwn 8th & 9th (Col Falls)	6,400	8,900
15-4A-033	ROUTE 486, 000+0.351, btwn 3rd & 4th (Col Falls)	5,700	7,900
15-4A-001	ROUTE 206, 008+0.700, 1 mi SW of US 2	4,400	6,100
15-4A-055	MEADOW LAKE BLVD, 000+0.205, N of US 2	3,600	4,500
15-4A-034	ROUTE 486, 000+0.600, btwn A & Railroad (Col Falls)	3,300	4,500
15-4A-063	RAILROAD ST, 000+0.097, W of Nucleus Ave	3,100	3,900
15-4A-056	MEADOW LAKE BLVD, 001+0.007, S of Tamarack Ln	2,900	3,700
15-4A-062	3RD ST W, 000+0.298, W of 4th Ave W	2,300	3,000
15-4A-061	6TH AVE W, 000+0.061, N of 5th St W	2,300	2,900
15-4A-035	ROUTE 486, 001+0.252, E of 4th Av (Col Falls)	2,100	2,900
15-4A-039	RIVER RD, 000+0.697, S of US 2	2,200	2,800
15-4A-060	BEST WY, 000+0.373, E of Truck Route	2,100	2,700
15-4A-077	HILLTOP RD, 001+0.159, N of Walsh Rd	2,000	2,600
15-4A-036	4TH AVE W, 000+0.446, btwn 8th & 9th (Col Falls)	2,000	2,500
15-4A-068	4TH AVE W, 000+0.623, S of 11th St W	1,900	2,400
15-4A-073	4TH AVE W, 000+0.802, S of 14th St W	1,600	2,100
15-4A-065	TALBOT RD, 000+0.612, E of Veteran Dr	1,600	2,000
15-4A-059	2ND AVE W, 000+0.053, N of Railroad St	1,400	1,900
15-4A-064	HILLTOP RD, 000+0.097, S of US 2	1,200	1,600
15-4A-057	TAMARACK LN, 000+0.435, W of Woodland Rd	1,200	1,500
15-4A-066	12TH AVE W, 000+0.543, S of 13th St W	1,200	1,500
15-4A-058	4TH AVE W, 000+0.702, S of Tamarack Ln	1,200	1,500
15-4A-015	ROUTE 486, 002+0.794, 0.5 mi N of Cedar Ck bridge	900	1,300

¹ Future volumes were projected based on growth rates developed in collaboration with City staff, MDT and the PAC. A rate of 1.5 percent was used to project state highway volumes. For all other corridors, volumes were projected using a growth rate of 1.1 percent.

Site ID	Description	AADT 2018	2040 Est
15-4A-081	TAMARACK LN, 002+0.436, S of Witty Ln	800	1,100
15-4A-083	COLUMBIA FALLS STAGE RD, 008+0.343, S of Hellman Ln	800	1,000
15-4A-076	TALBOT RD, 001+0.100, E of 12th Ave W	700	900
15-4A-078	HILLTOP RD, 001+0.277, S of Walsh Rd	700	900
15-4A-067	13TH ST W, 000+0.340, W of 9th Ave W	600	800
15-4A-075	12TH AVE W, 000+0.204, N of US 2	600	800
15-4A-079	3RD ST W, 000+0.233, E of 4th Ave W	600	800
15-4A-074	13TH ST W, 000+0.841, E of Veteran Dr	600	700
15-4A-080	6TH AVE W, 000+0.437, S of 10th St W	600	700
15-4A-072	2ND AVE W, 000+0.794, S of US 2	500	600
15-4A-086	TRUMBLE CR RD, 009+0.106, N of MT 40	400	500
15-4A-071	2ND AVE W, 000+0.712, N of US 2	400	500
15-4A-037	4TH ST W, 000+0.091, btwn 1st & 2nd Av W (Col Falls)	400	500
15-4A-069	4TH ST EAST N, 000+0.310, E of 2nd Ave West	300	400
15-4A-082	WITTY LN, 002+0.580, N of Tamarack Ln	300	400
15-4A-070	4TH AVE W, 000+0.813, N of Tamarack Ln	300	400
15-4A-085	TRUMBLE CR RD, 007+0.110, N of Hodgson Rd	200	200
15-4A-038	1ST AVE W, 000+0.492, btwn 2nd & 3rd (Col Falls)	200	200



NOVEMBER 2021



ENGINEERING, REIMAGINED

Appendix C: Urban Routes Pavement Summary

URBAN ROUTES PAVEMENT SUMMARY

Item No.11.

Urban Route	City / County	Street	Start	End	RSL	Inspection Date	Proposed Treatment
U-2502N							
12TH AVENUE WEST							
U-2502N	CITY	12TH AVE W	COLUMBIA DR	TALBOT RD	10	7/23/2019	No Maintenance
U-2502N	CITY	12TH AVE W	12TH ST W	13TH ST W	10	7/23/2019	No Maintenance
U-2502N	CITY	12TH AVE W	9TH ST W	10TH ST W	10	7/23/2019	No Maintenance
U-2502N	CITY	12TH AVE W	10TH ST W	11TH ST W	10	7/23/2019	Crack Seal
U-2502N	CITY	12TH AVE W	13TH ST W	GLACIER DR	10	7/23/2019	Crack Seal
U-2502N	CITY	12TH AVE W	GLACIER DR	COLUMBIA DR	10	7/23/2019	No Maintenance
U-2502N	CITY	12TH AVE W	11TH ST W	12TH ST W	10	7/23/2019	No Maintenance
U-2504N							
4TH AVENUE WEST							
U-2504N	CITY	4TH AVE W	8TH ST W	9TH ST W	6	7/23/2019	Overlay 2 inch thick
U-2504N	CITY	4TH AVE W	1ST ST W	2ND ST W	20	7/23/2019	No Maintenance
U-2504N	CITY	4TH AVE W	2ND ST W	3RD ST W	10	7/23/2019	Crack Seal
U-2504N	CITY	4TH AVE W	3RD ST W	4TH ST W	20	7/23/2019	No Maintenance
U-2504N	CITY	4TH AVE W	4TH ST W	5TH ST W	20	7/23/2019	No Maintenance
U-2504N	CITY	4TH AVE W	5TH ST W	6TH ST W	20	7/23/2019	No Maintenance
U-2504N	CITY	4TH AVE W	6TH ST W	7TH ST W	20	7/23/2019	No Maintenance
U-2504N	CITY	4TH AVE W	10TH ST W	11TH ST W	10	7/23/2019	No Maintenance
U-2504N	CITY	4TH AVE W	7TH ST W	8TH ST W	20	7/23/2019	No Maintenance
U-2504N	CITY	4TH AVE W	9TH ST W	10TH ST W	8	7/23/2019	Chip Seal
U-2504N	CITY	4TH AVE W	11TH ST W	12TH ST W	10	7/23/2019	No Maintenance
U-2504N	CITY	4TH AVE W	12TH ST W	13TH ST W	10	7/23/2019	No Maintenance
U-2505N							
4TH AVENUE WN							
U-2505N	CITY	4TH AVE WN	RAILROAD ST	1ST ST W	10	7/23/2019	Patching
U-2506N							
13TH STREET WEST							
U-2506N	CITY	13TH ST W	COLUMBIA DR	11TH AVE W	8	7/23/2019	Chip Seal
U-2506N	CITY	13TH ST W	10TH AVE W	COLUMBIA DR	8	7/23/2019	Chip Seal
U-2506N	CITY	13TH ST W	11TH AVE W	12TH AVE W	8	7/23/2019	Chip Seal
U-2506N	CITY	13TH ST W	9TH AVE W	10TH AVE W	8	7/23/2019	Chip Seal
U-2506N	CITY	13TH ST W	8TH AVE W	9TH AVE W	6	7/23/2019	Patching
U-2506N	CITY	13TH ST W	7TH AVE W	8TH AVE W	6	7/23/2019	Patching
U-2506N	CITY	13TH ST W	6TH AVE W	7TH AVE W	6	7/23/2019	Patching
U-2506N	CITY	13TH ST W	5TH AVE W	6TH AVE W	2	7/23/2019	New Street / Construction
U-2506N	CITY	13TH ST W	4TH AVE W	5TH AVE W	6	7/23/2019	Chip Seal

Urban Route	City / County	Street	Start	End	RSL	Inspection Date	Proposed Treatment
U-2507N							
TALBOT ROAD							
U-2507N	CITY	TALBOT RD	WEST WILDCAT DRIVE	RIVERWOOD LN	14	7/23/2019	No Maintenance
U-2507N	CITY	TALBOT RD	BETH RD	S HILLTOP RD	10	7/23/2019	No Maintenance
U-2507N	CITY	TALBOT RD	VETERAN DR	BETH RD	10	7/23/2019	No Maintenance
U-2507N	CITY	TALBOT RD	RIVERWOOD DR	VETERAN DR	12	7/23/2019	No Maintenance
U-2507N	CITY	TALBOT RD	EAST WILDCAT DRIVE	WEST WILDCAT DRIVE	20	7/23/2019	No Maintenance
U-2507N	CITY	TALBOT RD	RAPIDS AVE	WILDCAT DR EAST	20	7/23/2019	No Maintenance
U-2507N	CITY	TALBOT RD	12TH AVE W	RAPIDS AVE	20	7/23/2019	No Maintenance
U-2507N	CITY	TALBOT RD	RIVERWOOD LN	RIVERWOOD DR	20	7/23/2019	No Maintenance
U-2512N							
2ND AVENUE WN							
U-2512N	CITY	2ND AVE WN	A ST WN	1ST ST W	8	7/23/2019	Chip Seal



NOVEMBER 2021



ENGINEERING, REIMAGINED

Appendix D: Quiet Zone



QUIET ZONE

Since their inception, railroads have sounded locomotive horns or whistles in advance of grade crossings and under other circumstances as a universal safety precaution. During the 20th century, nearly every state in the nation enacted laws requiring railroads to do so. In 2005, the Federal Railroad Administration (FRA) issued regulations which provide local communities the option of silencing train horns by establishing quiet zones. Quiet zones include safety engineering improvements, referred to as SSMs, which effectively reduce the risk of collisions associated with silencing a train's horn.

The City of Columbia Falls has discussed a quiet zone along the BNSF mainline for several years. As part of the Urban Area Transportation Plan, a planning level layout was developed for implementation of a quiet zone along the BNSF Mainline.

Intersections included in the evaluation were 4th Avenue and 2nd Avenue. Based on previous discussions with BNSF

and the FRA it was assumed that 4th Avenue would be closed, and 2nd Avenue would be quieted. To support the elimination of train horns at 2nd Avenue, a series of SSMs were developed.

The City, in cooperation with the BSNF and FRA, is currently moving these concepts further into the quiet zone development process. Layouts and assumptions included in the Urban Area Transportation Plan are likely to change, however, they provide a baseline set of planning assumptions for beginning the development process for a quiet zone in Columbia Falls. The preliminary concepts developed for the quiet zone on 2nd Avenue (TSM 8) and road closing on 4th Avenue (TSM 9) are shown in **FIGURE D.1** and **FIGURE D.2**, respectively. A typical section concept for the quiet zone on 2nd Avenue is shown in **FIGURE D.3**.

Detailed planning-level cost estimates were prepared for the quiet zone on 2nd Avenue and road closing on 4th Avenue. The cost estimates are presented in **TABLE D.1**.

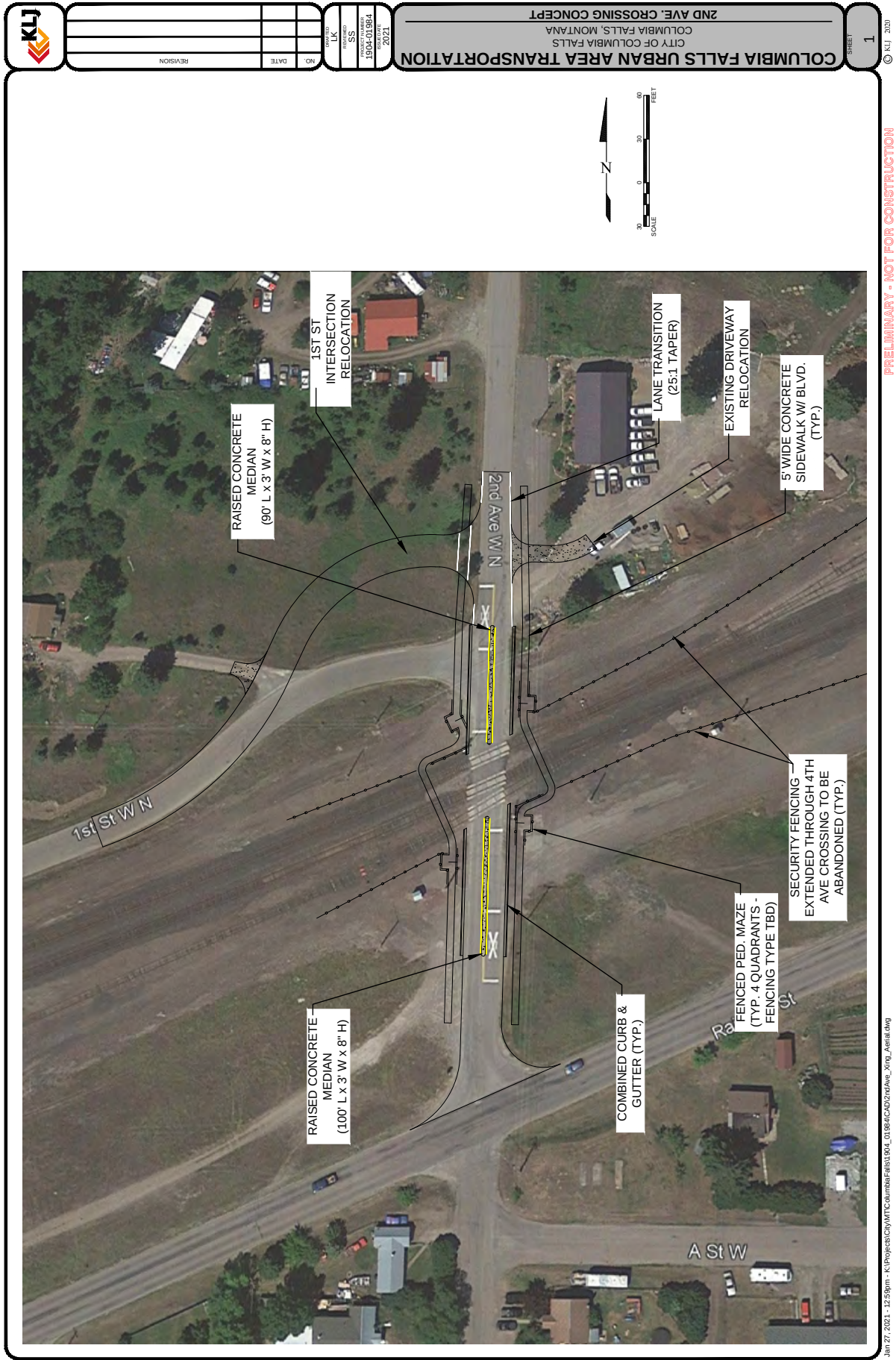


Figure D.1: BNSF Mainline at 2nd Avenue WN

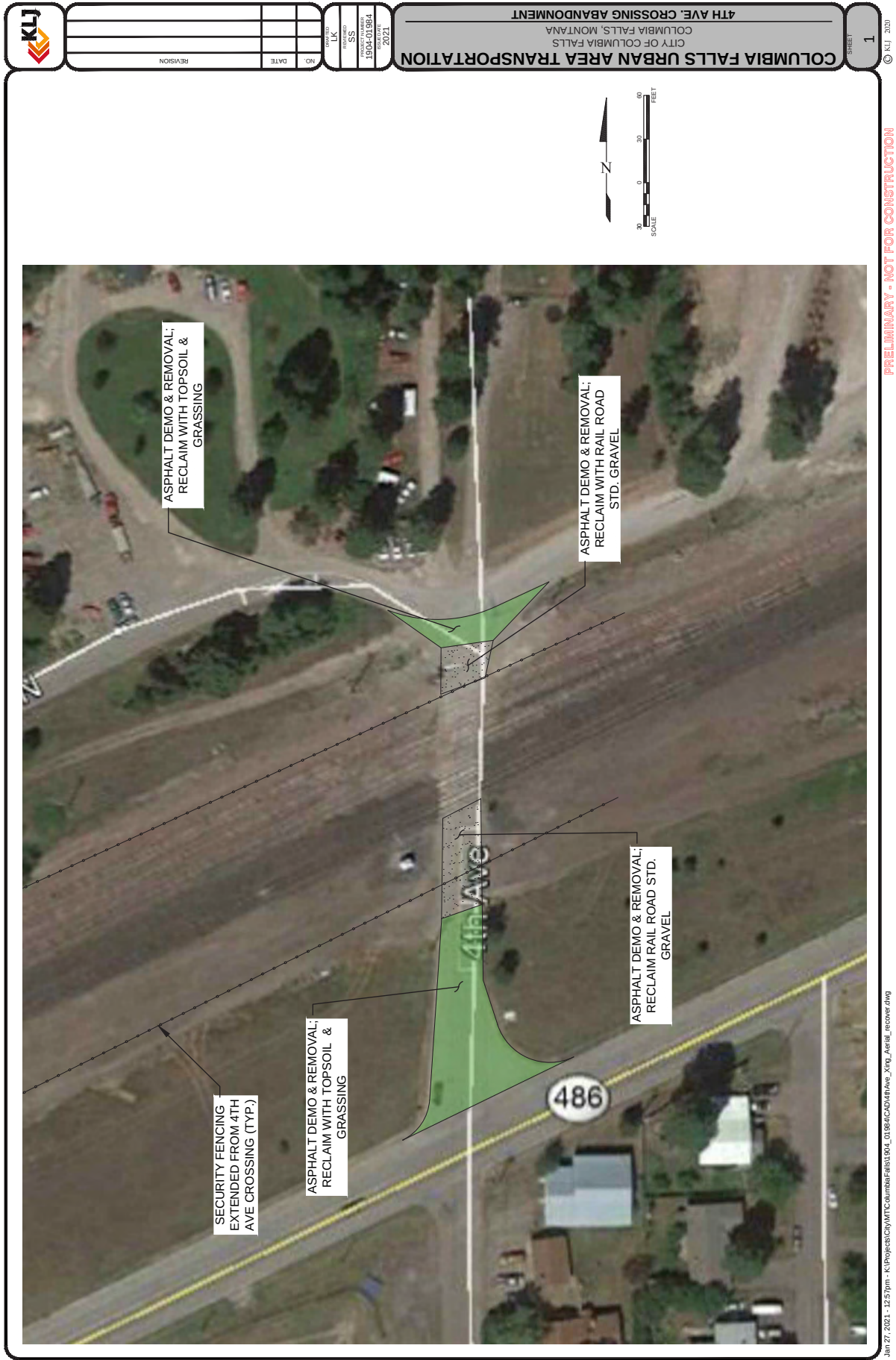
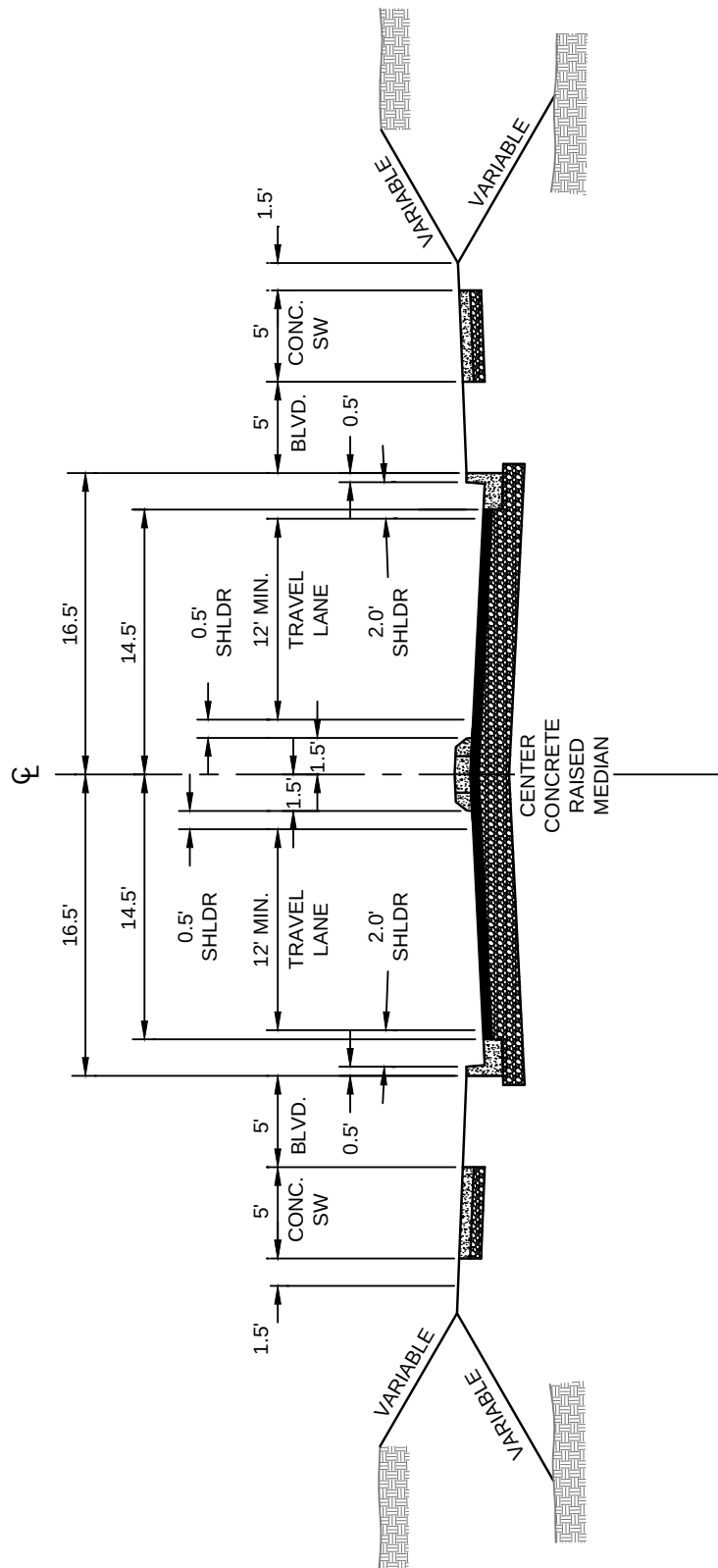


Figure D.2: BNSF Mainline at 4th Avenue



Figure D.3: 2nd Avenue Quiet Zone Typical Section



TYPICAL SECTION CONCEPT 2ND AVENUE

NOT TO SCALE

Table D.1: Quiet Zone Cost Estimates

Item No.11.

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST Rail Road Crossing Quiet Zone Improvements City of Columbia Falls, MT January 27, 2021					
2nd Ave. Improvements					
Item #	Description	Quantity	Unit	Unit Price	TOTAL COST
1	Mobilization	1	LS	\$ 34,000.00	\$34,000
2	Taxes, Bond, & Insurance	1	LS	\$ 21,000.00	\$21,000
3	Stormwater Management & Temporary Erosion Control	1	LS	\$ 13,000.00	\$13,000
4	Construction Traffic Control	1	LS	\$ 11,000.00	\$11,000
5	Asphalt Removal - Cold Milling Only - Tie In Joints	100	SY	\$ 25.00	\$2,500
6	Remove Existing Street Sign & Post	1	EA	\$ 300.00	\$300
7	Excavation Above Subgrade	1,169	CY	\$ 40.00	\$46,760
8	Subgrade Stabilization	360	SY	\$ 25.00	\$9,000
9	Non-Woven Separation Fabric	2,375	SY	\$ 2.00	\$4,750
10	3" Crushed Subbase Course	396	CY	\$ 45.00	\$17,820
11	1-1/2" Crushed Base Course	396	CY	\$ 40.00	\$15,840
12	Asphalt Concrete Surface Course Grade Type B	500	TON	\$ 135.00	\$67,500
13	Combined Curb & Gutter	370	LF	\$ 25.00	\$9,250
14	Concrete Median Curb	377	LF	\$ 19.25	\$7,257
15	Concrete Median Cap	20	SY	\$ 200.00	\$4,000
16	4-Inch Sidewalk	4,087	SF	\$ 9.00	\$36,783
17	Detectable Warning Panels	40	SF	\$ 50.00	\$2,000
18	Gravel Driveway Replacement	19	CY	\$ 40.00	\$760
19	Security Fencing	4,675	LF	\$ 25.00	\$116,875
20	Pedestrian Maze Fencing	250	LF	\$ 30.00	\$7,500
21	Precast Concrete Rail Crossing Panels	6	EA	\$ 10,000.00	\$60,000
22	Street Sign & Post	6	EA	\$ 525.00	\$3,150
23	Preformed Inlaid Plastic Pavement Marking - White (4-inch)	147	LF	\$ 7.00	\$1,029
24	Preformed Inlaid Plastic Pavement Marking - Yellow (4-inch)	358	LF	\$ 7.00	\$2,506
25	Preformed Inlaid Plastic Pavement Marking - White (8-inch)	65	LF	\$ 15.00	\$975
26	Preformed Inlaid Plastic Pavement Marking - White (24-inch)	21	LF	\$ 45.00	\$945
27	Epoxy Paint - Curb Top & Face	5.0	GAL	\$ 600.00	\$3,000
28	Hydraulic Seeding	1,575	SY	\$ 5.00	\$7,875
				Subtotal	\$507,400
				15% Contingency	\$76,100
				Crossing Total	\$583,500
4th Ave. Improvements					
Item #	Description	Quantity	Unit	Unit Price	TOTAL COST
1	Mobilization	1	LS	\$ 2,000.00	\$2,000
2	Taxes, Bond, & Insurance	1	LS	\$ 1,000.00	\$1,000
3	Stormwater Management & Temporary Erosion Control	1	LS	\$ 1,000.00	\$1,000
4	Construction Traffic Control	1	LS	\$ 1,000.00	\$1,000
5	Asphalt Removal - Cold Milling	1,288	SY	\$ 10.00	\$12,880
6	Topsoil (Obtained Off-Site)	160	CY	\$ 30.00	\$4,800
7	Non-Woven Separation Fabric	357	SY	\$ 2.00	\$714
8	Gravel Replacement "Rail Yard Area"	60	CY	\$ 40.00	\$2,400
9	Hydraulic Seeding	932	SY	\$ 5.00	\$4,660
				Subtotal	\$30,500
				15% Contingency	\$4,600
				Crossing Total	\$35,100
				Combined Total (With Contingency)	\$618,600



NOVEMBER 2021



ENGINEERING, REIMAGINED

Appendix E: Intersection Analysis



INTERSECTION EVALUATIONS

As part of the Urban Area Transportation Plan, the City expressed interest in evaluating three intersections in greater detail. Based on this analysis, geometric changes were recommended to improve efficiency and safety and increase livability for surrounding neighborhoods. The intersections evaluated are presented below. For each, the key existing issues and main design recommendations are summarized.

12th Avenue W and 13th Street W (TSM 10)

Key existing issues:

The existing intersection's east-west approaches are offset, requiring those traveling straight on 13th Street West to make two turns in order to clear the intersection. This configuration reduces the operational efficiency of the intersection and increases opportunities for vehicle crashes and pedestrian conflicts due to the awkward maneuvering required of drivers. These risks are heightened at night, and for unfamiliar drivers.

Safety and operations issues are especially concerning at the 12th Avenue W—13th Street W intersection due to the school-related vehicle and pedestrian traffic.

Main design recommendations:

- The concept proposes a compact roundabout design, which would provide more efficient, intuitive, and safe operations.
- The concept integrates previously identified bike and pedestrian facilities into the design.

The 12th Avenue W and 13th Street W concept is shown in **FIGURE E.1**.

Talbot Road and 4th Avenue W (TSM 16)

Key existing issues:

The “wishbone” form of the existing three-leg intersection results in inefficient operations and safety concerns. At present, vehicles traveling east on Talbot Road to access

Red Bridge Road, and vice versa, must make a sharp ($>90^\circ$) turn at 4th Avenue W. In addition to the awkward maneuvering that this requires, vehicles must pass through both pedestrian path crossings to travel east-west through the intersection. Finally, vehicles needing to access the properties south of the intersection must share a portion of the pedestrian path crossing to access the driveway approach.

Main design recommendations:

- The four-way intersection concept would provide more efficient, intuitive east-west travel on Talbot Road and Red Bridge Road. A single connection for the pedestrian path would be located on the north leg of the intersection, reducing the opportunity for vehicle-pedestrian conflicts. A southern leg would be added to provide access for properties to the south.
- The compact roundabout concept would provide many of the same benefits as the four-way intersection concept, with the additional operational and safety benefits of a roundabout (see **CHAPTER 10. POLICY PLAN**).

The Talbot Road and 4th Avenue W concepts are shown in **FIGURE E.2** and **FIGURE E.3**.

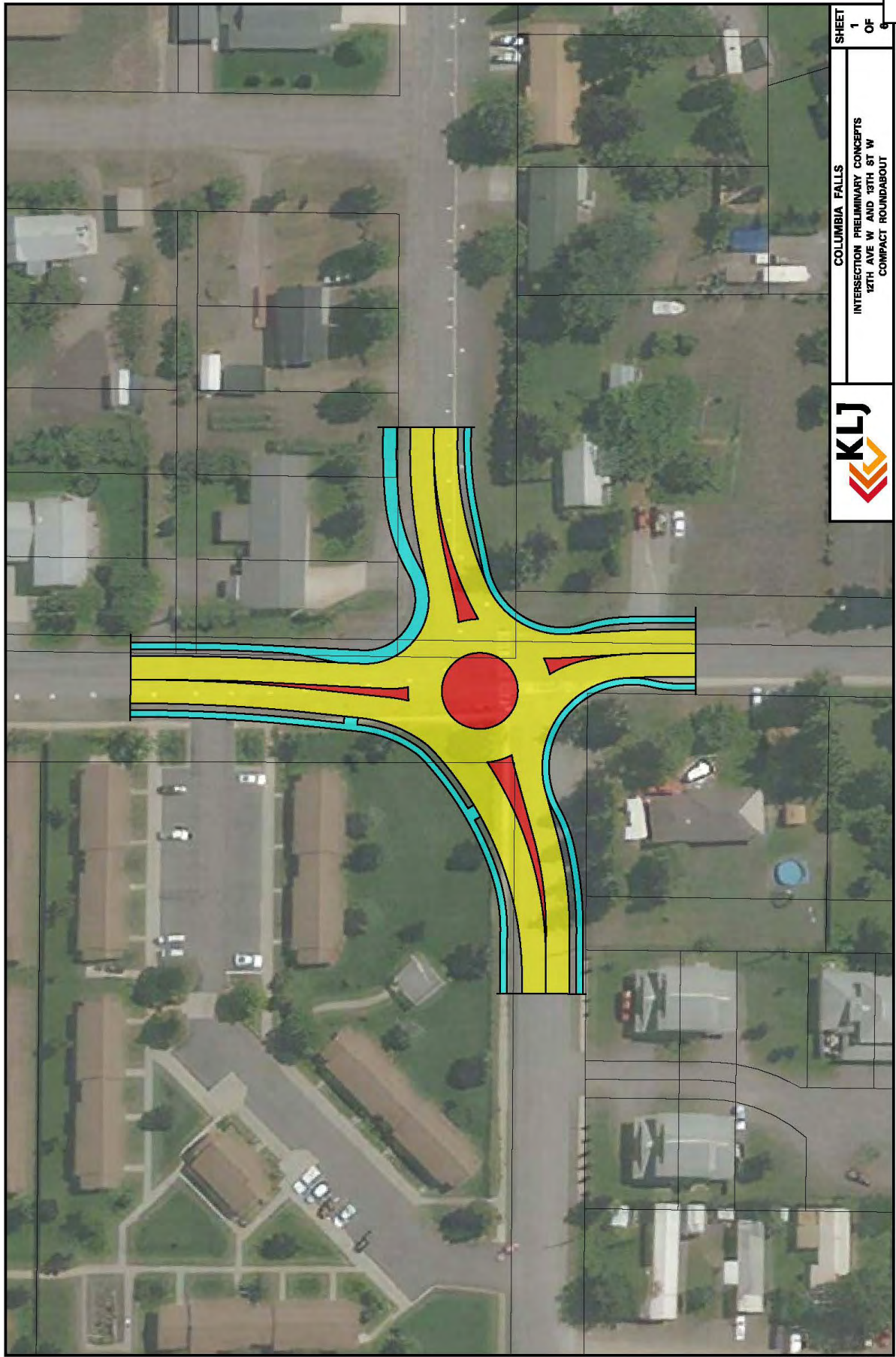
US Highway 2 and Nucleus Avenue (TSM 1)

Key existing issues:

The existing left-turn bay for the US Highway 2—Nucleus Avenue intersection has approximately 80 ft of storage. A bay of this length is able to store roughly 5 average-sized cars (16 ft each) or four average-sized trucks (20 ft each). This left-turn bay storage has proven insufficient for the US Highway 2—Nucleus Avenue intersection during peak periods.

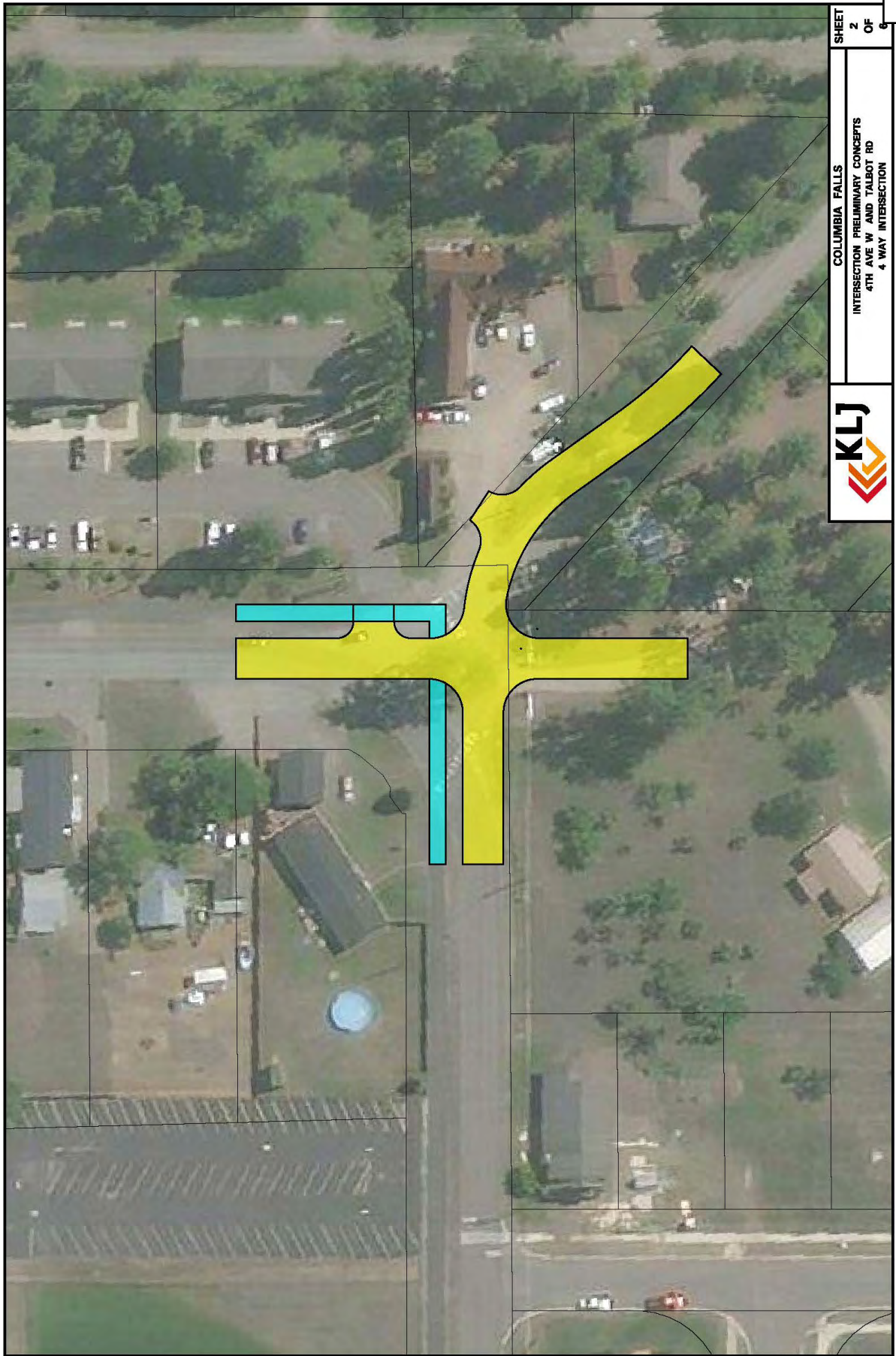
Additionally, the City has expressed the desire to provide a pedestrian crossing at US Highway 2 and 1st Avenue W. The multiple businesses at this intersection make it a natural crossing point, but no designated crossing currently exists, leaving pedestrians to navigate unprotected across five lanes of traffic.

Figure E.1: 12th Avenue W and 13th Street W



Item No.11.

Figure E.2: Talbot Road and 4th Avenue W (four-way intersection)



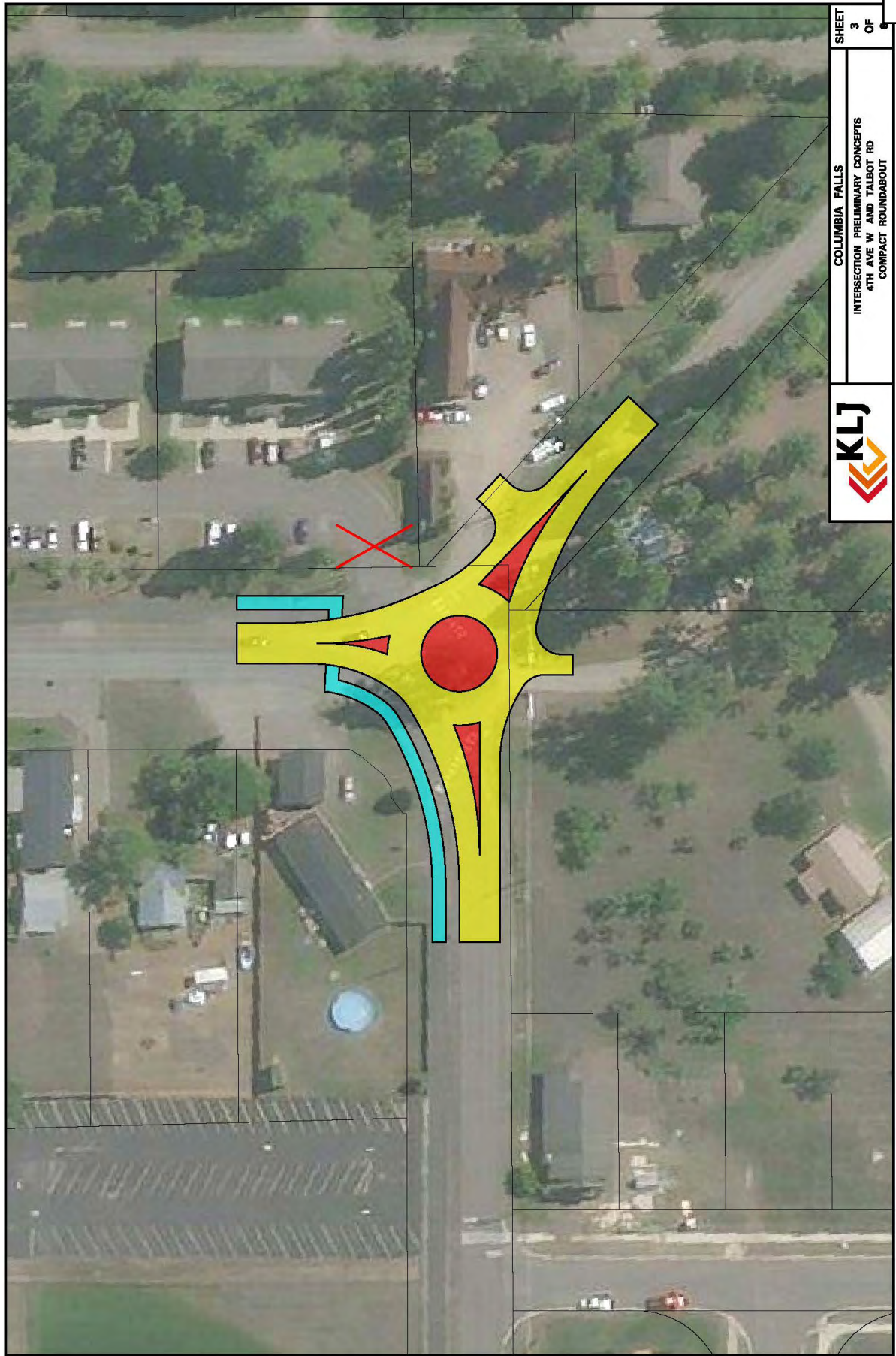
KLJ

COLUMBIA FALLS
 INTERSECTION PRELIMINARY CONCEPTS
 4TH AVE W AND TALBOT RD
 4 WAY INTERSECTION

SHEET
 2
OF
 6

Item No.11.

Figure E.3: Talbot Road and 4th Avenue W (compact roundabout)



Main design recommendations:

- The proposed concept would add a non-traversable median on US Highway 2 from 2nd Avenue W to Nucleus Avenue. The median would increase the length of the left-turn bay for access to Nucleus Avenue, with the new bay having approximately 180 ft of storage. The median would also replace the existing two-way center left-turn lane between 2nd Avenue W and 1st Avenue W with a dedicated left-turn lane for 2nd Avenue W.
- Addition of the non-traversable median would provide the opportunity to create a designated pedestrian crossing with a pedestrian refuge area at 1st Avenue W. The crossing would be located such that it would meet the median where it is widest, between the turn bay tapers.
- Addition of the non-traversable median would eliminate left turns onto 1st Avenue W, restricting turning movements for 1st Avenue W to right-in right-out.

Various factors may complicate implementation of this project recommendation. These include, but are not limited to:

- While MDT supports the concept of providing additional eastbound left-turn storage and the raised median concept, they have emphasized that implementation of this option will be difficult due to the existing width of the roadway. A raised median will likely trigger right-of-way needs from the businesses located on US Highway 2, and there may be opposition to restricted access to these businesses, especially those located within the southeast quadrant of US Highway 2 and 1st Avenue W.
- Regarding the proposed crosswalk at US Highway 2 and 1st Avenue W, an enhanced pedestrian crossing may pose safety and operational issues, particularly for conflicts between northbound pedestrians and westbound vehicles. The multiple lanes, curve, and short distance from the Nucleus Avenue intersection may make this a poor location to encourage pedestrian activity. Consideration should be given to alternative options which guide pedestrians to the traffic signal at Nucleus Avenue.

The US Highway 2 and Nucleus Avenue concept is shown in **FIGURE E.4**.

NUCLEUS AVENUE: THREE-LANE TO TWO-LANE CONVERSION

As part of the Plan, the City of Columbia Falls explored the possibility of reducing the number of lanes along Nucleus Avenue from three to two. This conversion would be completed by removing the existing dedicated left-turn lanes.

A conversion to two lanes along Nucleus Avenue could provide a variety of benefits that encourage pedestrian activity and support the downtown as a hub for tourism, shopping, and jobs. Potential benefits include:

Item No.11.

- Widened sidewalks and space for additional pedestrian amenities
- Shorter pedestrian crossing distances
- Slower vehicle speeds and increased safety
- Wider parallel parking isles for better pedestrian separation from traffic and easier parking
- Opportunities for pop-up sidewalk dining and other creative uses of the pedestrian realm
- Increased economic activity due to better, safer, and more convenient access to businesses
- A more positive overall experience for residents and tourists

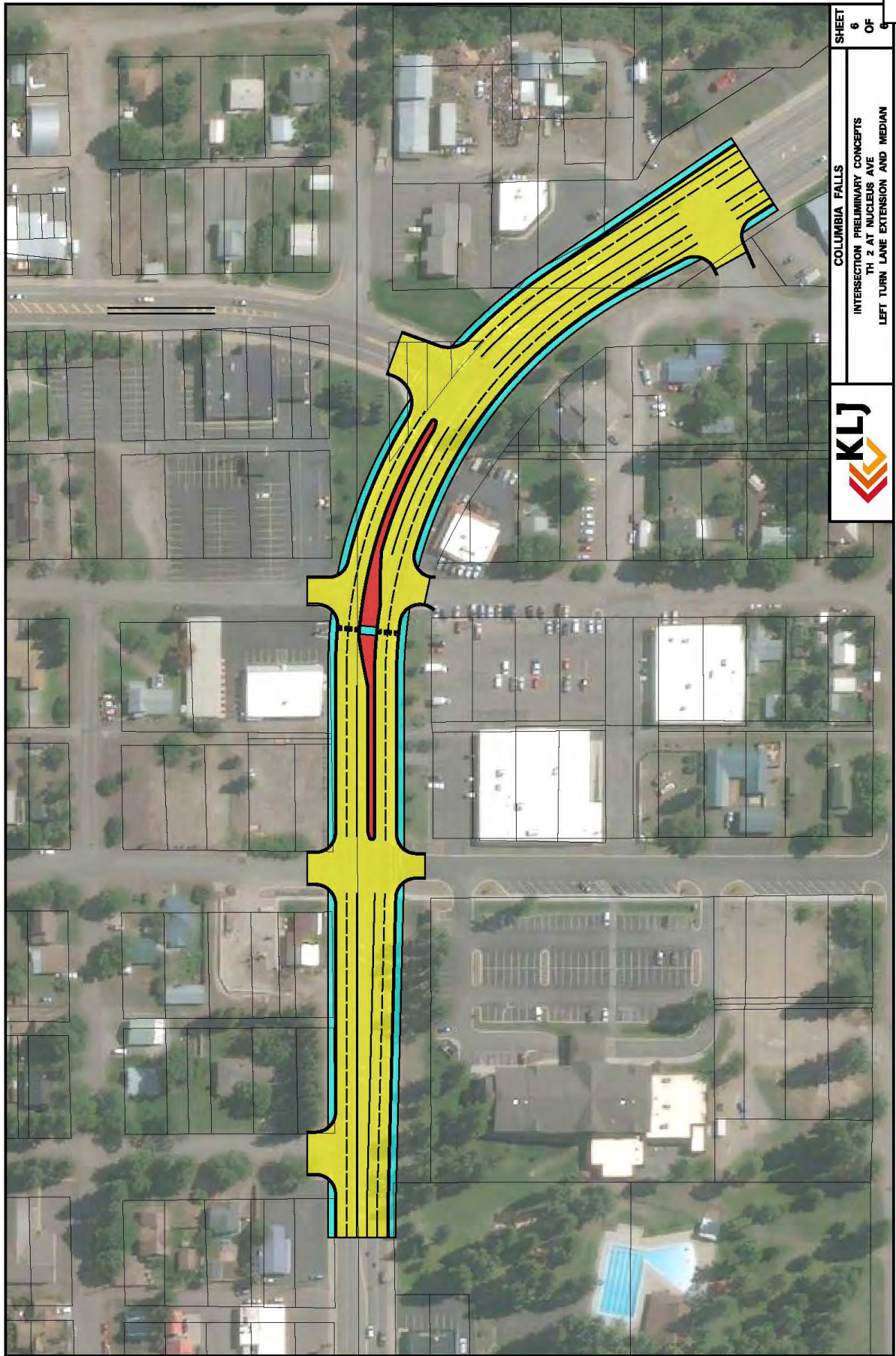
Traffic Operations Analysis

An operations analysis was conducted to assess the viability of a three-to-two lane conversion along Nucleus Avenue. In coordination with City staff, the intersections of Nucleus Avenue and 5th Street and Nucleus Avenue and 7th Street were selected as likely to see the most significant impacts from changes in the roadway section through downtown. As such, current and future turning movement volumes were assessed at these intersections to understand how a lane reduction might affect operations.

The analysis was conducted using Synchro. Vehicle counts were recorded for morning, midday, and afternoon peaks during a regular weekday for both locations. The existing volumes from 2021 were projected to 2040 using a growth rate of 1.5 percent, which coincides with the growth rate used for the Columbia Falls Long Range Transportation Plan. Operations were simulated at both intersections for build and no-build conditions, for both the base year and 2040.

Synchro software was used to estimate traffic operations for “no-build” and “build” conditions. “No-build” refers to conditions with no geometric improvement at the intersections, while “build” refers to conditions with geometric improvements that include removal of the dedicated left turn lanes on the major approaches. Turning movement counts were collected during the morning, midday, and evening peak on a weekday in March 2021. The traffic volumes were projected to 2040 using an annual growth rate of 1.5 percent, which is consistent with the growth rates used in the Columbia Falls Long Range Transportation Plan. The traffic operation analysis results indicate that the intersections operate with acceptable delay and LOS through 2040 for no-build and build conditions.

Figure E.4: US Highway 2 and Nucleus Avenue



Item No.11.



Analysis Results

The analysis indicates that a conversion to two lanes would have minimal impact on operations, with LOS on all approaches for both intersections remaining nearly identical despite the lane reduction. This is true both at present and in the future.

At Nucleus Avenue & 5th Street, operations are adequate now and in 2040, with LOS C or better for almost all approaches. The only exception is the EB approach, where LOS D is expected in 2040. However, LOS D is still considered acceptable by MDT for a major urban collector. Operations analysis results for the Nucleus Avenue & 5th Street intersection are summarized in **TABLE E.1**.

At Nucleus Avenue & 7th Street, the stop-controlled approaches have considerable delays in 2040. This is particularly pronounced for the afternoon peak, with delays reaching over 40 seconds per vehicle for the westbound

approach. This results in LOS E for this approach, which is considered unacceptable. However, this level of service is present regardless of the two intersection configurations considered in this analysis, so it cannot be attributed to removal of the dedicated left-turn lane. Operations analysis results for the Nucleus Ave & 7th St intersection are summarized in **TABLE E.2**.

Summary

Intersection LOS is D or better for all current and future peak volumes analyzed, for both build and no-build conditions. This is considered acceptable by MDT standards for urban major collector roads. In summary, the traffic operation analysis results indicate that the intersections operate with acceptable delay and LOS through 2040 for build and no-build conditions. The removal of the left-turn lanes along Nucleus Avenue would likely have a negligible effect on traffic operations.

Table E.1: Nucleus Avenue & 5th Street Intersection Operations

Year	Intersection	Peak	No Build (Left-turn NB/SB lanes)					Shared NB/SB lanes for all movements				
			Level of Service					Level of Service				
			EB	WB	NB	SB	Int	EB	WB	NB	SB	Int
2021	Nucleus Ave @ 5th St	AM	B	A	A	A	A	B	A	A	A	A
		MD	B	B	A	A	A	B	B	A	A	A
		PM	C	B	A	A	B	C	B	A	A	B
2040	Nucleus Ave @ 5th St	AM	B	B	A	A	A	B	B	A	A	A
		MD	C	C	A	A	B	C	C	A	A	B
		PM	D	C	A	A	B	D	C	A	A	B

Table E.2: Nucleus Avenue & 7th Street Intersection Operations

Year	Intersection	Peak	No Build (Left-turn NB/SB lanes)					Shared NB/SB lanes for all movements				
			Level of Service					Level of Service				
			EB	WB	NB	SB	Int	EB	WB	NB	SB	Int
2021	Nucleus Ave @ 7th St	AM	B	B	A	A	B	B	B	A	A	A
		MD	B	C	A	A	B	B	C	A	A	B
		PM	C	C	A	A	C	C	C	A	A	C
2040	Nucleus Ave @ 7th St	AM	B	C	A	A	B	B	C	A	A	B
		MD	C	D	A	A	C	C	D	A	A	C
		PM	D	E	A	A	D	D	E	A	A	D



**CITY OF COLUMBIA FALLS
CORRESPONDENCE LIST
COUNCIL MEETING
November 1, 2021**

10/26/21 Email from Mike Shepard, article on Middleboro, MA aluminum site cleanup.

10/20/21 Letter from Meadow Lake Homeowners Association on out of city limits concerns.

10/20/21 MMIA Fall Newsletter.