COMMENTS ON THE PETITION TO REZONE 2920 EXPO PARKWAY
GRANT CREEK

R.T. Cox: I live on Old Quarry adjacent to the RMEF property. I am retired from public and private service as an attorney (Montana, North Dakota and Wyoming), with experience in administrative law, zoning and variances, land use planning, public lands, easements and related issues. I graduated from U of M in 1976. As a student I frequently skied at Snowbowl and fell in love with the Grant Creek area. I bought my home here in 2008.
The principal focus of my comments is on traffic and related critical safety issues.

HISTORY

The 1980 Grant Creek plan was adopted to replace the 1975 plan. The "Land Use" portion of that plan includes the history of community participation in planning, including this: "Additional development substantially beyond what is currently proposed by the developers of Grantland Associates and Prospect was also rejected."

"A substantial increase of development within the Grant Creek area would create additional problems for air quality, transportation facities, safe access, fire protection and quality of life." "Substantial increases in development levels would destroy this rural character."

Included in the 1980 plan was a discussion of construction of schools and public parks, along with commercial development along the I-90 frontage which was proposed to serve residents. Instead most commercial development serves tourists, adding to traffic loads. Proposals to build schools and parks have not been implemented, which means that all residents must travel underneath I-90 to get to such facilities.

The 1980 land use map depicts most of the quarry as medium density multi-family housing up to 16 units per acre. The zoning for the quarry area is divided such that the northern area is zoned for single-family housing, with increasing density of construction to the south, again with some commercial zoning which would allow neighborhood shops and services.

To my knowledge there has been no involvement of the Grant Creek Neighborhood Council or any other entity to repeal the 1980 plan.

TRAFFIC ANALYSIS

Mr. Abelin, a traffic engineer from Helena, prepared a summary Traffic Information Summary (TIS) in March, 2020, for his client, the developer. I submitted a detailed three page critique of the March report and invited feedback from City Planning (email to Dave DeGrandpre on July 13 with two additional pages of related legal citations). I received no response other than an email that a new traffic study had been requested. Nothing in my critique is mentioned in Mr. DeGrandpre's report.

City Engineering asked its traffic safety consultant WGM Engineering to critique the Abelin TIS; the resulting red-line is posted on the City's website:
https://pub-missoula.escribemeetings.com/filestream.ashx?DocumentId=40418. Numerous errors and omissions were noted, some of critical import, but again, Mr. DeGrandpre's recommendations ignore that critique. The consultant pointed out that there are new measurements of traffic showing a huge increase in traffic on Grant Creek Road in 2019; Abelin

completely dismisses this information in his July Update of the TIS (as discussed in detail below).

The City requested the updated, more complete report from Abelin, but Development Services did not wait for the update before issuing its recommendation. The updated report was posted on July 29 after Mr. DeGrandpre released his recommendation and findings. https://pub-missoula.escribemeetings.com/filestream.ashx?DocumentId=40707

Everyone recognizes the obvious problems with traffic congestion on lower Grant Creek Road. The Conoco Town Pump consistently has a high volume of service with local people and tourists and the Starbucks is busy all day long. Three motels and the Cracker Barrel are served by Expo Parkway. The Conoco, Starbucks, McKenzie River and the Best Western Motel are east of Grant Creek Road. Turning across traffic during peak traffic periods is a challenge. Queues at the traffic lights are lengthy. The southbound queues will be improved by addition of two lanes but those vehicles still must wait for a high volume of traffic entering and exiting on I-90 before the southbound and northbound lights turn green. In July and August, 2020, the southbound traffic frequently lines up past Expo Parkway and often up to Stonebridge Lane.

MDT is going to build a new right-turn lane (to I-90 west) and an additional through lane for the south-bound side of Grant Creek Road. A 24-inch white stripe will be the "stop line" for traffic waiting for the green light. The two new lanes will extend about 150-165 feet from the "stop line", room for about eight to ten vehicles per lane. (The length of the new lanes is limited by the location of Grant Creek.) Motorists seeking to turn right onto the west-bound ramp may have a chance to go without waiting for the light to change, unless they are backed up behind the one lane waiting in queue north of the lane at the Starbucks. In other words, if about 20 vehicles are queued up waiting for the light, the new right-turn lane may not be available. "Bleeding off" of right-turn motorists will undoubtedly improve wait times at the light for south-bound traffic. However, these improvements will not improve bicycle and pedestrian safety.

There is no extension of Mountain Line service north of I-90. No schools or parks are within walking or biking distance. ***As noted in comments by City Public Works, City Engineering, the traffic consultant, City Parks, Missoula Urban Transportation District and the Metropolitan Planning Organization,*** (1) the TIS is incomplete and (2) residents of the new apartments will be solely depending upon private vehicles to get to work, school, shopping and recreation. Again, Mr. Degrandpre's findings generally ignore these comments, including this one:

> We in transportation think there needs to be a conversation about how this rezone fits into our broader Growth Policy and Long Range Transportation goals. Without access to transit and non-motorized facilities, and with no significant destinations nearby, **high density development will create traffic impacts but none of the benefits of density.** It may not lead towards our mode split goals, at least in the near term due to said lack of transportation facilities. Ultimately, we need to think about timing and orderly development, otherwise we will get all of the impacts but none of the benefits.
> Aaron Wilson (emphasis added)

The Updated Abelin Report is Unreliable

Anecdotally, I was driving northbound on Reserve at 4:30 p.m. one day this week. A fire truck was blocking a southbound lane underneath I-90 and three lanes of north-bound traffic were stopped at the light before we could drive under the Interstate. An ambulance was coming northbound and could not get through the traffic until the light changed. Adding hundreds of vehicles during peak traffic periods each day will make this type of problem worse. Evacuation if there is a fire will encounter bottlenecks. Unfortunately, at the same time as residents may be trying to flee southbound, fire-fighting equipment will be trying to access Grant Creek from I-90 and Reserve Street. Any collision in the road will block the road until someone takes the initiative to remove the offending vehicles, if that can be done. This is a problem which exists today; it will be made worse by any new development north of I-90.

As I stated in the critique sent to Mr. DeGrandpre on July 13:

> The authors conclude (improbably in my view) at Section H of their 9-page report, "As proposed, the Grant Creek Village would not create any new roadway capacity problems in this area." The conclusion describes only the first two limited phases (268 units) of the 950 unit development, stating that these two phases would cause a 35% increase in traffic volumes on Grant Creek Road. In other words, construction of 28% of the 950 units would cause a 35% increase in Grant Creek Road traffic, using Abelin's assumptions, and thus construction of all 950 units would increase Grant Creek Road traffic by well over 100%. That arithmetic, using Abelin's protocols, is not consistent with the statement that the development "would not create any new roadway capacity problems in this area."

My conclusion is still true; nothing in the Updated TIS provides support for Abelin's unchanged conclusion. In fact, his updated report reveals much heavier traffic loads on two streets and Grant Creek Road. And the rezoning proposal would permit construction of more than 950 units.

I also stated:

> Abelin failed to follow the required procedure for assessing year-round traffic volume by collecting annual data. Unfortunately for Abelin, no one else has performed comprehensive annual studies on Grant Creek Road (or if someone has the data, Abelin did not use it). Abelin performed one 24-hour count on Expo Parkway and Stonebridge Road on October 23 and 24, 2019 (his Appendix A). The motel and restaurant traffic will vary seasonally, but no seasonal data was obtained. Grant Creek Road serves a hugely popular ski area at Snowbowl, but no mention of Snowbowl is found in Abelin's report. ***Because Abelin could not find annual volume data for Grant Creek and he did not care to generate such data, he used data from a study of the Orange Street Bridge (see p. 3 of Abelin's summary) to determine if there are annual variations in traffic volume.*** Abelin therefore concluded that there are no significant annual variations in traffic volume on Grant Creek Road. This is plainly incorrect.

Again, this observation remains valid; seasonal variation over the Orange Street Bridge is completely unrelated to variations of traffic on Grant Creek Road. For example tourists, many pulling trailers, and local vehicles were backed up past the Expo intersection much of the day on

July 31, 2020 (personal observation). Orange Street Bridge sees little seasonal variation, whereas Grant Creek sees tremendous influx of both summer tourists and winter skiers.

I also provided comments about trip generation, that is, how many vehicles will go in and out every day:

> Abelin used the Institute of Transportation Engineers (ITE) Manual for "Trip Generation" from urban high-density housing projects to estimate the traffic volume from the proposed 950-unit development. This manual is highly regarded for studies of high-density living units in urban environments, where there are shops, bus stops, taxis, subways and other means of transportation near to the housing units. The applicability of the ITE urban-site formula to an isolated high-density subdivision is open to question. But even if Abelin's reliance on the ITE data is accepted to be relevant here, the total number of daily trips in and out of the proposed development, during the week, is over 5,100 (Abelin's Table 3). It is more likely that the isolation from schools, churches, shopping, work, service centers, etc., will lead to several motor vehicle trips per day for each unit, especially if the tenants have children.

The City's traffic consultant observed that Abelin did not use the current land-use classifications in the ITE Manual and Abelin failed to determine the effects of traffic backed up to the Expo intersection upon traffic flows. I noted that if people on Expo are blocked from getting onto Grant Creek Road, problems from road rage to collisions could occur.

The City's traffic consultant noted that Abelin completely omitted 2019 measured traffic volumes from the TIS and stated: "Include 2019 data – it shows a large jump in traffic, adjust analysis as necessary." Abelin's responses to this observation were: (1) he added a column to the table on page 6 to show the 2019 data and (2) he added a few sentences:

> "There was a significant reported traffic volume increase along Grant Creek Road from 2018 to 2019 but it is unclear why this increase occurred as no other roadways which lead into this area reported similar traffic volume increases. The reported 2019 traffic data on Grant Creek Road is similar in magnitude to the reported volumes from 2010 to 2015. It is likely the lower traffic volumes reported on Grant Creek Road from 2016-2018 were an anomaly that may have resulted from the exact placement of the MDT traffic counters**. If the traffic data anomalies on Grant Creek Road are discounted, then the overall traffic volume growth rate for the roads entering this area is near zero. Therefore, no background traffic volume growth rates were used for the short-term traffic projections for this analysis."** (emphasis added)

Abelin did not discuss traffic counts with MDT or the City, he just dismissed the inconvenient data as "anomalies" and assumed there are no increases in traffic volume on Grant Creek Road. This is not sound engineering practice; this is guessing.

The City's consultant noted at page 8 of the Abelin report red-line: "Full build shows a 185 percent increase on the 2,800 vpd reported in Figure 1." [Figure 1 is Abelin's map showing traffic volumes in vehicles per day (vpd).] Abelin updated the map in response to the consultant's comments to show 1,900 vpd on Grant Creek Road above Stonebridge Road (now) and 5,900 vpd on Grant Creek Road below Expo (after construction of the housing units), using Abelin's understated modeling (which is further criticized below). ***That is an increase of 4,000***

vehicles per day, hardly consistent with Abelin's conclusion that building Grant Creek Village "would not create any new roadway capacity problems."

ABELIN TRAFFIC COUNTS

Abelin's Appendix A contains limited traffic data. Abelin observed and counted traffic flows (through and turning) on Expo and Stonebridge on one date, October 23, 2019, for two consecutive fifteen-minute periods in the morning, from 7:30 to 7:45 to 8:00 a.m and in the evening from 4:30 to 4:45 to 5:00 p.m., plus he installed a lane counter for 24 hours on each side street. This date is not representative of high summer tourist traffic at the hotels, the Cracker Barrel, the Conoco on Grant Street and Starbucks, nor of the winter Snowbowl ski season (see quotation from the Snowbowl manager, below). The selection of thirty minutes may or may not be a typical sample of peak traffic times. The City's traffic consultant questioned the extrapolation of the 15 minute increments to calculate two-hour peak volume. **This criticism is not explained nor resolved in the Update**.

(Page numbers noted below are counted from page 1 of the Updated July Abelin report, as he did not number the pages in his Appendices. Page 12 is the last page of his text; page 16 is the fourth page in the Appendices, etc.)

p 16 Stonebridge

Abelin reported observations of traffic turning into and out of Stonebridge Road (not a through street). No westbound traffic is reported during each of the four 15 minute observation periods; this cannot be accurate. The morning hour is the time of day when people come to work at the Elk Foundation and parents are returning from delivering children to school. The omission suggests a lack of attentiveness.

p. 17 Expo

The same number of southbound vehicles on Grant Street was reported at the Expo Parkway intersection as at Stonebridge, even though vehicles were counted turning southbound from Stonebridge during the same observation period, such that there was more traffic at the Expo intersection. This is an obvious error. Almost no traffic from Expo to the Conoco and Starbucks was observed, which seems inconsistent with observed daily busy activity at those businesses during peak traffic periods.

p 18 lane counter shows total daily vehicle traffic on Expo on October 23-24 (24 hours) at 1,424 vehicles per day (without new housing units).

p 19 lane counter shows 792 vehicles per day for the same duration on Stonebridge.

Abelin's **Appendix B** displays his model of how traffic will utilize the Stonebridge and Expo intersections. The model is filled with arithmetic errors and unfounded assumptions.

p 21 During a hypothetical rush hour (one hour), he assumes there is no traffic to/from Starbucks and Conoco in the morning and only 8 vehicles during the evening rush hour. The businesses (Best Western Motel, Starbucks, Conoco, McKenzie River) would be surprised to

see this assumption. The two northbound lanes under I-90 merge into one lane as Grant Creek Road approaches the Expo Parkway intersection, requiring motorists to jockey for position as some traffic turns right to the businesses, some traffic turns left on Expo (if possible) and some proceeds north. This area is uncontrolled by traffic devices and is frequently congested. New residents of the proposed units will undoubtedly try to cross Grant Creek Road for morning coffee, gas, food and amenities, creating more pressure on this congestion. Customers leaving the Town Pump often drive north through the large parking lot to the Expo intersection to try to get into the south-bound lanes. New lanes underneath I-90 will help with this queuing problem, but will not solve the north-bound confusion. Adding 4,000 vehicles per day to this area will cause more congestion.

The model displays hypothetical northbound traffic at I-90 on Reserve but shows none of the traffic taking the eastbound ramp. The total of northbound traffic going past the west-bound off-ramp plus the traffic turning left to take the west-bound on-ramp does not match the traffic counted coming from Reserve. For example, the morning count shows 252 vehicles coming from Reserve north-bound, 132 turning left to the on-ramp west-bound, and 132 proceeding north, joined by another 56 turning north off of the west-bound exit ramp. A similar math error is shown in the evening, 440 north-bound, 292 lurn left to the on-ramp and 240 proceed north to be joined by 136 existing vehicles, then showing 308 vehicles going north past Expo. These repeated math errors indicate a rush to create the report and suggest that the hypothetical model is not useful.

p 22 This page shows additional traffic from Phase 1A of the proposed Grant Creek Village. Again the math is questionable, as noted by the City Public Works Department; 7 cars turning south from Stone Bridge plus 28 from Expo during a one hour morning rush period seems very low for 112 housing units.

p 23 Traffic from Phase 1A (112 units) and Phase 1B (156 units) is modeled on this page. A total of 39 vehicles exiting Stonebridge and Expo (southbound) from 268 units during a one-hour morning rush is incongruous with the volume now observed serving many fewer units.

p 24 Traffic from 950 housing units is modeled, showing 66 vehicles turning south from Stonebridge and 99 vehicles turning south from Expo during morning rush hour. 33 of these are shown to go west on I-90, leaving 132 to go south to Reserve. (The City's consultant and others question why 20 percent of residents would drive west but this is not addressed in the Updated Abelin TIS.) If apartment residents have jobs and children in school, and there is no mass transit available, 165 vehicles during rush hour is a very low estimate. **Further, no models depict full build-out of 1,100+ units.**

pp 25-27 Total traffic from the three stages of construction and occupancy is modeled. During morning rush hour, 298 vehicles are shown moving north-bound from Reserve, 132 turn left (west-bound) onto I-90, 195 continue north (the math is erroneous), joined by 77 exiting from I-90 north-bound for a total of 202 vehicles at Expo (the math is erroneous) , of which 83 turn left across traffic into Expo and 118 turn left onto Stonebridge, leaving 188 to continue north on Grant Creek Road. The math is full of inconsistencies. The same is true for the afternoon peak; the numbers do not work. But the model does show 233 vehicles attempting to turn left onto Expo and 114 turning left onto Stonebridge, across traffic, during rush hour. The model does not show how long the north-bound queue will be for this peak traffic volume. More importantly, we know that dozens of vehicles are presently backed up in both directions for every light cycle between 6:00 a.m. and 8:00 p.m. every day, much more traffic than Abelin takes into account.

Appendix C is a series of highly technical traffic signal timing analyses employed in an effort to determine whether traffic delays will meet certain Levels of Service. These data programs depend on the validity of the data which is entered; if the estimated traffic volumes are lower than a realistic analysis would provide, the Level of Service computations become meaningless.

Conclusions

The Updated TIS underestimates daily and peak traffic volumes, fails to address north-bound congestion, dismisses observed 2019 increases in traffic, ignores seasonal variation, employs error-filled modeling and provides rosy projections of the impacts of rezoning and high-density development in an area without mass transit.

The Updated TIS adds a statement recommending "multi-modal improvements in the area to encourage pedestrian and bicycle access to the site" without identification of any such "improvements."

As noted by several commenters on the City's report, this rezoning proposal would concentrate housing and vehicular traffic into an area with only one outlet, creating congestion and safety issues inan area isolated from parks, schools, jobs, shopping and amenities. The proposal is not consistent with requirements of applicable zoning laws:

MCA 76-2-304 **Purposes of zoning**:

(1) Zoning regulations must be made in accordance with a growth policy and designed to lessen congestion in the streets; to secure safety from fire, panic, and other dangers; to promote health and the general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; and to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirements. (emphasis added)

(2) Zoning regulations must be made with reasonable consideration, among other things, to the character of the district and its peculiar suitability for particular uses and with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout the municipality.

Missoula Ordinance §20.85.040 provides criteria for decisions on zoning amendments, *inter alia*:
Promotes public health and safety, provides safety from fire and other dangers; facilitates public services and considers effects on active and motorized transportation systems....

Footnote:

From Andy Morris, Snowbowl Ski Area Manager, email dated July 22, 2020:

“Our peak days are around 1,200-1,500 skiers which almost exclusively happen on weekends and holidays. Fridays can frequently see around 1,000 skiers during January and February. Traffic is generally limited to the mornings and end of the day on weekends but throughout the day on Fridays. However weekend crowds utilize fewer vehicles per skier than a weekday powder day. Powder days during the week attract single users coming up for a few hours at a time. However on a weekday powder day it's rare that there'd be more than 800 skiers (except for Friday). The lots, when they are full, and cars are parked down the road, can hold around 400 cars when parked correctly. Weekday powder days probably would have 250 cars max.”

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submitted by R. T. Cox August 3, 2020