ATTACHMENT B



Happy Valley Road: 67th Avenue to 35th Avenue Section from Final Technical Memorandum

Ludden Mountain

Ludden Mountain is located north of HVR across the road from GCCN between 62nd Avenue to the west and 55th Avenue to the east. The drainage areas were delineated using 2-ft contours received from the Flood Control District of Maricopa County (FCDMC). See Figure 1 below for a visual of the drainage areas and flow paths in this area.

The purple and blue shapes show the drainage areas that would impact the project limits. In the existing condition, the flow from the blue drainage area ponds up on the north side of HVR during low flow events. While the purple drainage area runoff will flow along the shoulder of HVR towards the Entrada subdivision drainage channel. During high flow events, the cross slope of HVR at this location allows for the runoff to sheet flow across the road and be collected by existing scuppers on the eastbound curb of HVR. These scuppers outfall into the GCCN retention basins that will drain to channel system south and east of the site. Any drainage areas west of the purple shape will be collected by a concrete drainage ditch running from north to south along the edge of the development and will not impact this site. Any drainage areas east of the blue shape will be collected by the existing channel that flows towards the culvert crossing underneath HVR.

Figure 1: Ludden Mountain Drainage Areas

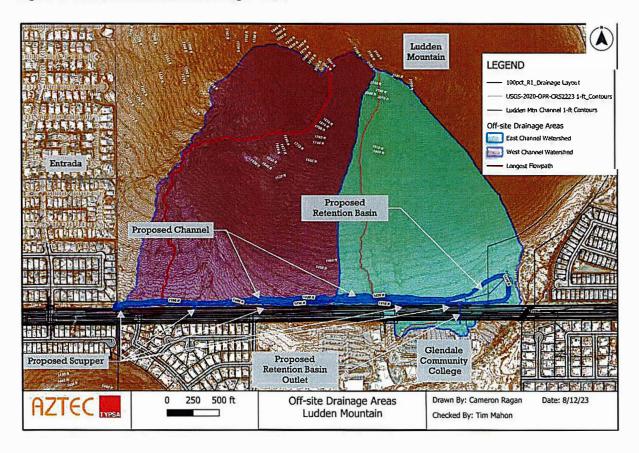
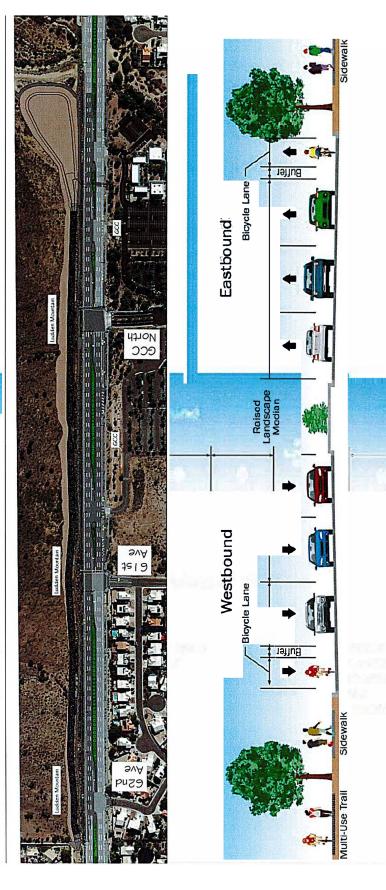


EXHIBIT C



Section: 62nd Ave. to West of 55th Ave.

LEGEND:

- EXISTING SIGNALS NEW SIGNALS
- EXISTING SIGN MULTI-USE TRAIL EXISTING TRAIL

NEW SIGN RIPRAP BUS PAD

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- WIDENING (FULL DEPTH PAVEMENT) MILL AND OVERLAY
 EXISTING SIDEWALK
 NEW SIDEWALK EXISTING STREET LIGHT NEW STREET LIGHT
- LANDSCAPE MEDIAN
- CONCRETE CHANNEL LINING

PROPOSED DRIVEWAY AND RIGHT TURN POCKET FOR FUTURE ACCESS TO THE PARK

