PADOVAN CONSULTING, LLC.

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July 18, 2019

Saddlehorn Homeowners Association
c/o Gaston Wilkerson Association Services
Attn: Valerie Hand
1675 Robb Dr., #5
Reno NV 89523

RE: COMMON AREA DRAINAGE EVALUATION
SADDLEHORN SUBDIVISION
WASHOE COUNTY, NEVADA

Dear Valerie:

Padovan Consulting, LLC. has completed the overall assessment of the Saddlehorn Homeowners Association (SHOA) private drainage infrastructure. This report is a summary of the evaluation. The purpose of the evaluation was to gain an understanding of and organize the extensive common area drainage system, assess current conditions, provide maintenance recommendations and determine estimates of probable costs for near term repairs and future repairs. The cost information may be incorporated into the reserve study in order to create more reliable funding for maintaining this important infrastructure.

The SHOA is responsible for maintaining the drainage channels and detention basins that are located in the common area parcels throughout the Saddlehorn community. There were 54 channel sections and 8 basin/pond areas identified. The existing channels consist of either constructed natural earth lined channels or rip-rap channels. These channels serve to collect and pass storm water runoff through the development. The detention basins (or ponds) serve to reduce the peak runoff flow during rain events and reduce sediment load into the storm drain system. Not all channels are equal in terms of their function, size and necessity to the storm drain system. However, in most instances a breakdown of any particular channel will likely cause damage to either privately owned property or SHOA common area. Many channels contain or are connected to inlets and/or outlet structures, culverts and storm drain pipes. From review of the plans most of the structures appear to be within defined Washoe County drainage easements and are therefore to be maintained by Washoe County. This would include replacement and/or repair of the physical structures if needed. It should also include keeping the inlet free and clear of debris but some of that maintenance could be argued to be a responsibility of the HOA since much of the debris would come from the open space channel. This would

likely be addressed on a case by case basis by reaching out to Washoe County engineering.

Each channel section and basin was given an identifier based on the subdivision unit it resides in and then lettered consecutively for that given area. The subdivision units were the final map names given for each area as they were approved by Washoe County. For example, Unit 10 along the west side of the development contains 6 channels which were named U10A-F. Thus, the identifier will indicate the general location of the channel and which civil plan it would be associated with. Saddlehorn South Phases 1-7 are referred to as P1-7. The identifiers should become the standard reference when discussing a particular channel or basin. The organized nomenclature will allow for easier communication when discussing particular channels and tracking information on each channel. The identifiers will be used for the documents discussed below.

Two important documents are included as part of this evaluation. One is an inspection spreadsheet which contains the information collected from the review of each channel and basin. The second document created in this evaluation is an overall community "Drainage Map".

The spreadsheet is probably the most important document from the evaluation as it contains the details of each channel's and basin's current condition, recommended maintenance, costs, priorities and previous maintenance. The noted condition and maintenance completed will create a base line condition and help organize and determine future maintenance and repairs. This spreadsheet should be used as a "living" document that is updated as conditions change and maintenance work is completed. Please review this document for the details on the condition assessment and work completed to date.

The drainage map should be used in conjunction with this spreadsheet. The map displays the location of each channel section and basin and is labeled with the corresponding identifier and a channel type (i.e. rip-rap or natural) was also indicated. The channels were color coded to indicate the channel type. Moving forward this should allow for easier understanding of the drainage facilities.

The civil improvement plans and final maps for each subdivision unit were obtained and reviewed as part of this assessment. The majority of the hydrology reports were also obtained. Padovan Consulting will keep these files for use as needed but an electronic file has been provided to HOA management for records. The plans and hydrology report are valuable in determining the maintenance obligations, locations and type of the infrastructure and in determining the intended function. This information will assist in making sure the channels and basins are maintained in substantial conformance with the intended design.

CONDITION AND COST DISCUSSION

Overall the channel conditions vary and the most notable observation is that over 20 channels or a sections of a channel were not constructed. Many of the constructed channels are in good condition but there are others impacted with sediment and/or

vegetation or constructed with a smaller capacity than designed impacting the ability of the channel to function properly. The details of the condition are noted in the attached condition spreadsheet.

As part of this evaluation anticipated future cost estimates for recommended work has been provided. All estimated costs are presented in present day dollars. The ability to predict costs and predict degradation on the channels is very difficult. Each channel is different in its size, shape, location, access, function, etc. This is even more challenging with many channels not constructed and some areas needing more information and input from Washoe County before an estimated cost can be provided. So some costs are as of yet unknown. With a street you can reliably predict what it costs to treat or replace due to its relative uniformity in construction and ability to access. As opposed to common area drainage channels which have a wider degree of variance in the maintenance needs, varied access, widely disparate runoff, different surrounding conditions, varying construction, etc. Regardless, the drainage facilities owned and maintained by the SHOA are an important civil infrastructure component that needs funding established for effective and consistent maintenance. These estimates should be considered a starting point for establishing funds and not a conclusion or final amount. Continuing to update costs as real costs are realized and more information is obtained is needed over many years to keep establishing accurate budgets. Now that the channels are organized and baseline conditions are known this task should be much easier.

In addition to the costs, Padovan Consulting attempted to provide input on priority and this is also noted in the spreadsheet. There were several high and moderate priority items noted for constructed channels. A separate priority category was created for the channels not constructed. These were determined to fall within the moderate category. Anecdotally it can be argued that many of these areas have functioned, in terms of drainage, for many years without channels being present. However, these areas were designed and approved with a channel to serve a drainage function, many are fed by storm drain outlets or intended to drain water to an inlet. Thus there is a moderate risk based on the design intent of this causing a future issue. The HOA needs to understand the costs and associated risk to make educated decisions. Of the over 20 channels not constructed 18 were noted to be moderate priority and progressively ranked in terms of the order to address. These priority designations and rankings are not definitive and not requirements but an attempt to give the HOA some context of where to start and associated costs. The channels with recommendations not highlighted should be considered lower priority and some will likely not be addressed but a cost may have been provided to allow the HOA to assess whether the noted issue should be addressed.

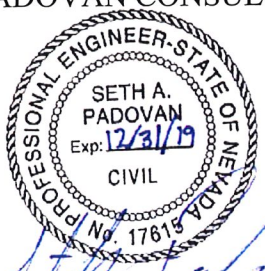
Padovan Consulting is recommending future work as budgets will allow and following general recommendations on priority. There is likely more work than the community can address immediately. This recommended work primarily consists of channel construction, vegetation removal, sediment removal and improving basin capacity.

As part of the drainage facility maintenance plan, the landscape maintenance contractor should provide annual vegetation removal and control for all the common area channels

and detention basins. The contractor should have a copy of the exhibit showing the drainages and have a programmatic vegetation control plan. This should be incorporated into their scope of work for the annual maintenance and could considered an operational expense. The cost for ongoing vegetation control should be less than letting the vegetation become overgrown.

This concludes the SHOA common area drainage facility evaluation. Please feel free to contact us with any questions or comments regarding this study.

Very truly yours,
PADOVAN CONSULTING, LLC.



Seth A. Padovan, P.E.
President

SADDLEHORN HOME OWNERS ASSOCIATION COMMON AREA DRAINAGE CHANNELS
CONDITION SUMMARY
July 2019

High Priority
Moderate Priority
Not constructed Moderate Priority (ranked 1-18)

Label	Date Inspected	Structure	Condition	Maintenance Recommended	Previous Maintenance Performed	Estimated Improvement Costs	Improvement Items Items per lf or LS
U1-A	June/July 2019	Rip-Rap Channel V-ditch 8'w x 2'd	Channel not constructed	Little flow would enter the swale from back yards. Currently flows across undeveloped area towards Arrowcreek Parkway.		$73,500.00	2100lf ditch @ $35
U1-B	June/July 2019	Rip-Rap Channel V- ditch 6'w x 1'd	Channel in good condition but doesn't terminate behind embankment, Entire area is landscaped.	Modify channel or ditch to realign channel to cooincide with improvements of Unit 1 Basins **(see below for Unit 1 basins)**		$0.00	
U1-C	June/July 2019	Rip-Rap Channel V- ditch 6'w x 1'd	Channel in good condition	No recommendations		$0.00	
U2-A 10	June/July 2019	Rip-Rap Channel V-ditch 9'w x 1.5'd	Channel not constructed	Excavate entire channel per original design drawings. Channel will need to be staked by surveyor to fit topography		$22,750.00	650lf ditch @ $35
U2-B 1	June/July 2019	Natural Channel V- ditch 9'w x 1.5'd	Channel not constructed. RCP FES inlet existing at south end of proposed channel location	Excavate entire channel per original design drawings. Channel will need to be staked by surveyor to fit topography		$13,000.00	650lf ditch @ $20
U2-C	June/July 2019	Rip-Rap Channel V- ditch 9'w x 1.5d	Channel not constructed	Little flow would enter the swale from back yards. Currently flows across undeveloped area towards Arrowcreek Parkway.		$12,250.00	350lf ditch @ $35
U2-D	June/July 2019	Natural Channel V- ditch 9'w x 1.5'd	Channel in good condition. Not constructed per plan as per length of channel. Channel does not extend beyond FES outlet.	Recommend removing minor sediment at upper most end nearer to RCP FES outlet. If U2-C is constructed may need to construct additional length		$1,000.00	
U2-E 12	June/July 2019	Natural Channel V- ditch 9'w x 1.5'd	Channel not constructed. Existing inlet at south end of channel completely filled with sediment.	Recommend constructing channel per original design drawings, verify collection area at uppermost end. Clear inlet/pipe of sediment and surrounding vegetation		$6,000.00	300lf ditch @ $20
U2-F 4	June/July 2019	Natural Channel V- ditch 9'w x 1.5'd	Channel not constructed. Existing inlet at north end of channel completely filled with sediment.	Recommend constructing channel per original design drawings, verify collection area at uppermost end. Clear inlet/pipe of sediment and surrounding vegetation		$11,500.00	575lf ditch @$20
U2-G 9	June/July 2019	Natural Channel V- ditch 6'w x 1'd	Channel not constructed	Excavate entire channel per original design drawings. Channel will need to be staked by surveyor to fit topography		$9,900.00	550lf ditch @ $18
U2-H	June/July 2019	Rip-Rap Channel	Channel in fair condition but likely not sized for 36" RCP outletting to channel	Recommend sediment removal and removal of excess rock, cut back vegetation from near channel and possible embankment increase		$3,000.00	clear and extend channel

U2-I	June/July 2019	Rip-Rap Channel Flat bottom ditch 3'w x 1.5d	Channel in overall good condition. Some locations on channel constructed with smaller cross section but overall drainage still reaches detention pond. Vegetation partially overgrown on channel.	Cut back vegetation hanging over channel and within channel, remove all dead material within 5 feet of channel.		$2,000.00	
U2-J	June/July 2019	Rip-Rap Channel @ toe of pond D embankment	No defined channel. Area drains along toe of embankment of pond.	No recommendations		$0.00	
U3-A 3	June/July 2019	Rip-Rap Channel V-ditch 4'w x 1'd	Channel not constructed, outlet structure buried	Construct channel per plan and uncover outlet.		$8,000.00	400lf ditch @$20
U3-B	June/July 2019	Rip-Rap Channel Flat bottom ditch 3'w x 2'd	Channel constructed smaller than original design through sections.	Recommend reconstructing sections not constructed per plan, cutting back vegetation hanging over and near channel		$5,000.00	
U3-C	June/July 2019	Rip-Rap Channel Flat bottom ditch 9'w x 2'd	Channel in good condition	No recommendations		$0.00	
U3-D 18	June/July 2019	Rip-Rap Channel Section not specified	Channel not constructed, area seems to drain well	locate and expose outlet, construct channel if needed		$5,000.00	
U3-E	June/July 2019	Rip-Rap Channel Overflow spillway 10'w	No channel observed. Basin outlet.	Clear area of vegetation		$2,000.00	
U4-A 13	June/July 2019	Rip-Rap Channel V-ditch 3'w x 1'd	Channel in good condition overall	Recommend cutting back vegetation hanging over and near channel including large tree in flowline of channel at uppermost end.		$4,000.00	Clearing $3000 Sed removal $1000
U4-B	June/July 2019	Rip-Rap Channel V-ditch 9'w x 2.25'd	Channel in good condition	Recommend cutting back vegetation hanging over and near channel		$1,000.00	
U4-C	June/July 2019	Rip-Rap Channel V-ditch 8'w x 2'd	Channel in good condition	Recommend cutting back vegetation hanging over and near channel		$2,000.00	
U5-A	June/July 2019	Rip-Rap Channel V-ditch 10'w x 2.5'd	Channel in good condition. Good clear ditch section	No recommendations		$0.00	
U6-A	June/July 2019	Natural Channel V-ditch 3'w x 1'd	Channel constructed but partially inaccessible. Partially to mostly filled with sediment and nearly 100% obscured by overgrown vegetation. All ditches non-functional	Remove vegetation from channel, reconstruct channel per original design drawings.		$30,000.00	750lf ditch @ $40
U6-B	June/July 2019	Rip-Rap Channel V-ditch 15'w x 1'd	RCP Culvert exists from street to outlet into P1-A, County maintained overflow swale not constructed. Extensive landscaping	Contact county about constructing overflow for inlet.		$0.00	

U8-A	June/July 2019	Natural Channel No section located	Channel not constructed. Drainage functions well in large area. 36inch culvert in place at embankments with no obstructions present	Possibly excavate small channel to provide additional protection to paved walking path.		$2,000.00	
U8-B	June/July 2019	Rip-Rap Channel V-ditch 3'w x 1'd	Entirely overgrown by willows, riprap not exposed. Outlet at upstream end 99% obstructed.	Clear obstruction from outlet and remove all vegetation within 10 feet of outlet.		$3,000.00	
U8-C	June/July 2019	Natural Channel V-ditch 3'w x 1'd	Channel mostly inaccessible private property. Small channel evident at north end, inlet not visible, channel observed overgrown with vegetation. Extensive landscaping	Expose inlet at Saddlehorn Dr. Cut back vegetation over ditch section located.		$26,000.00	650lf @ $40
U8-D	June/July 2019	Natural Channel V-ditch 3'w x 1'd	Channel constructed but partially inaccessible. Partially to mostly filled with sediment and nearly 100% obscured by overgrown vegetation. Outlet near road mostly buried. All ditches non-functional	Remove vegetation from channel, clear outlet of all obstruction, reconstruct channel per original design drawings.		$12,400.00	310lf ditch @ $40
U9-A	June/July 2019	Rip-Rap Channel V-ditch 15'w x 7.5'd	Good condition, outlet into channel partially obstructed.	Clear inlet and outlet of obstruction.		$500.00	
U9-B	June/July 2019	Grouted Rip-Rap Apron	County maintained per easement.	No recommendations		$0.00	
U10-A	June/July 2019	Rip-Rap Channel V-ditch 12'w x 2'd	Channel in good condition. Partially overgrown with weeds and shrubs, some debris.	Cut back vegetation hanging over channel and within channel, remove all dead material within 5 feet of channel. Clear debris		$500.00	
U10-B	June/July 2019	Rip-Rap Channel V-ditch 6'w x 1'd	Outlet 99% buried, channel severely overgrown and mostly full of sediment.	Clear outlet of debris and sediment, remove vegetation from channel and reconstruct channel		$6,250.00	250lf ditch @ $25
U10-C	June/July 2019	Rip-Rap Channel Flatbottom ditch w/ 2' bottom 10'w x 2'd	Channel in good condition. Entire channel overgrown by weeds and shrubs.	Remove and cut back vegetation from within channel.		$4,000.00	2800lf ditch
U10-D	June/July 2019	Rip-Rap Channel V-ditch 6'w x 1'd	Channel nearly full of sediment and rock, outlet from street to channel completely buried, flows overtopping channel and entering adjacent yard to the north	Clear obstruction from outlet and remove all vegetation within 10 feet of outlet. Clear channel of rock and sediment.		$6,000.00	200lf ditch @ $30
U10-E	June/July 2019	Rip-Rap Channel V-ditch 6'w x 1'd	Channel in good condition	Recommend extending channel to southern boundary to collect minor runoff from entering lot to the east.		$1,000.00	
U10-F	June/July 2019	Rip-Rap Channel V-ditch 6'w x 1'd	Channel in good condition	No recommendations		$0.00	
U10-G	June/July 2019	Natural Channel Section possibly shown in offsite plans - not provided	No defined channel. Drainage functions well in large area. 36inch culvert in place at embankments with no obstructions present	No recommendations.		$0.00	
U10-H 14	June/July 2019	Natural Channel V-ditch 8'w x 1'd	Channel partially constructed. RCP FES inlet existing at north end of proposed channel location	Excavate entire channel per original design drawings. Channel will need to be staked by surveyor to fit topography		$7,000.00	700lf ditch @ $10

U10-I	June/July 2019	Natural Channel V-ditch 8'w x 1'd	Channel constructed but partially inaccessible. Partially to mostly filled with sediment and nearly 100% obscured by overgrown vegetation. All ditches non-functional	Remove vegetation from channel, reconstruct channel per original design drawings.		$15,600.00	390lf ditch @ $40
U10-J	June/July 2019	Riprap Channel V-ditch 9'w x 1.5'd	Channel inaccessible but likely eliminated or filled with sediment. Extensive landscaping	Reconstruct channel		$10,000.00	250lf ditch @ $40
P1-A 11	June/July 2019	Rip-Rap Channel V-ditch 6'w x 1'd + 1' freeboard	Northern portion of channel recently constructed and in good condition. Southern portion of channel not constructed.	Construct remainder of channel per civil design.	Northern channel cleared and graded	$11,700.00	650lf ditch @ $18
P2-A 2	June/July 2019	Natural Channel V-ditch 9'w x 1.5'd + 1' freeboard	Channel not constructed. RCP FES inlet existing at south end of proposed channel location	Excavate entire channel per original design drawings. Channel will need to be staked by surveyor to fit topography		$16,000.00	800lf ditch @$20
P3-A	June/July 2019	Natural Channel V-ditch 6'w x 1'd + 1' freeboard	Channel not constructed	Construction of ditch would cause major disturbance to adjacent yards for little benefit		$0.00	
P3-B 15	June/July 2019	Natural Channel V-ditch 6'w x 1'd + 1' freeboard	Channel not constructed	Excavate entire channel per original design.		$3,060.00	170lf @ $18
P3-C	June/July 2019	Natural Channel V-ditch 6'w x 1'd + 1' freeboard	Channel in good condition.	No recommendations		$0.00	
P4-A 8	June/July 2019	Natural Channel V-ditch 6'w x 1'd + 1' freeboard	Channel not constructed. RCP FES inlet existing at north end of proposed channel location	Excavate entire channel per original design drawings. Channel will need to be staked by surveyor to fit topography. Consider extending channel to southern boundary.		$8,550.00	475lf ditch @ $18
P5-A	June/July 2019	Natural Channel V-ditch 6'w x 1'd	Inaccessible	No recommendations		$0.00	250lf ditch
P5-B	June/July 2019	Rip-Rap Channel Flat bottom ditch 20'w x 2.5'd	Channel in good condition	No recommendations		$0.00	
P6-A 7	June/July 2019	Natural Channel V-ditch 9'w x 1.5'd	Channel not constructed. RCP FES inlet existing at north end of proposed channel location	Excavate entire channel per original design drawings. Channel will need to be staked by surveyor to fit topography		$12,000.00	600lf ditch @ $20
P6-B 17	June/July 2019	Natural Channel V-ditch 6'w x 1'd	Channel not constructed.	Excavate entire channel per original design drawings.		$4,500.00	250lf @ $18
P7-A	June/July 2019	Natural Channel V-ditch 6'w x 1'd	Channel partially filled with sediment, possibly not constructed correctly originally.	Excavate entire channel per original design drawings. Channel will need to be staked by surveyor to fit topography		$6,300.00	350lf ditch @ $18
P7-B 5	June/July 2019	Natural Channel V-ditch 6'w x 1'd	Channel not constructed. RCP FES inlet existing at south end of proposed channel location	Excavate entire channel per original design drawings. Channel will need to be staked by surveyor to fit topography		$8,370.00	465lf ditch @ $18

P7-C 6	June/July 2019	Natural Channel V-ditch 9'w x 1.5'd	Channel not constructed. RCP FES inlet existing at north end of proposed channel location	Excavate entire channel per original design drawings. Channel will need to be staked by surveyor to fit topography		$13,500.00	675lf ditch @ $20
P7-D 16	June/July 2019	Natural Channel V-ditch 6'w x 1'd	Channel not constructed.	Excavate entire channel per original design drawings.		$900.00	150lf ditch @ $18
Pond A "Detention Pond"	June/July 2019		Good condition, spillway has moderate vegetation throughout	Clear Spillway of vegetation		$500.00	
Pond B	June/July 2019		North end of embankment appears low	Recommend completing topographic survey of area to determine functionallity		$10,000.00	Topo survey $2000 Clearing $2000 Earthwork $6000
Pond C	June/July 2019		North end of embankment appears low	Recommend completing topographic survey of area to determine functionallity		$5,000.00	Clearing and earthwork
Pond D	June/July 2019		Good Condition	No recommendation		$0.00	
Pond E	June/July 2019		Good Condition	No recommendation		$0.00	
Siltation Basin	June/July 2019		Good Condition, vegetation and sediment accumlating at inlet to basin	Clear vegetation and sediment from inlet		$2,000.00	
Unit 1 Basins	June/July 2019		Ditch U1-B spills over onto Thomas Creek Rd without being detained. Inlets and outlets entirely obscured and likely in operable. Lower pond does not capture all inbound flows	Discuss with Washoe County. Possible locate and expose all inlets and outlets. Perform topographic survey to determine adjustments to embankment to provide detention.		$2,000.00	Construction costs cannot be reliably determined. Topo $2000
Unit 3 Basin			Good condition, no spillway constructed	Construct spillway		$2,000.00	
					Total Estimated Improvement Costs (All Items)	$412,530.00	
					Total Estimated Improvement Costs for High Priority Items	$31,000.00	
					Total Estimated Improvement Costs for Moderate Priority Items	$102,250.00	
					Total Estimated Cost for Moderate Priority Not Constructed Channels	$165,730.00	