



# **Grayhawk HOA**

## **Hill Remediation Status / Next Steps**

Wednesday January 18<sup>th</sup> 7:00PM



# Agenda

Introductions

How We Arrived at Today

Selection Criteria

Engineering Test Results

Options Available

Open Discussion - Q&A



# Introductions

John Beck

Board President

Fadi Faraj

Board VP, Comm Chair

Chad Martin

Committee Member

Darren Scott

Committee Member

Charles Russell, P.E

CobbFendley  
Principal - Dept Manager  
Construction Management

Ibrahim Baayeh

D&S Engineering Labs  
Geotechnical Engineering  
Manager



# How We Arrived at Today

June 2019                      Hill Failure

- Board Increases Monthly Transfer to Reserves
- Investigations, not much progress

Feb 2021                      Committee Formed

- Research, Determined Needs to Move Forward
- Created RFP, Vendor Selection Criteria,
- Released RFP - October 2021
- CobbFendley Signed Contract - May 2022

June 2022                      Testing Begun

Nov - Dec 2022

- Test Results, Recommendations, Draft Renderings Received

# Site Conditions in March 2021



# Site Conditions in March 2021





## Request for Proposal (RFP)

Objective was to retain a Land Development Civil Engineering firm to provide alternative remedial solutions with probable construction cost estimates. This will include:

- Surveying the hill to determine the volume of material within the hill, and the quantity and locations of the large boulders.



## **Request for Proposal (RFP)**

- Conducting a geotechnical study to determine the subsurface stratigraphy, depth to bedrock, and stability of alternative remedial solutions.
- Providing alternative remedial solutions which may include: repairing the hill to its original condition, regrading the hill to flatter slopes, or removing the hill and replacing it with a different feature.
- Securing necessary permits from the City of Frisco and any other agencies as applicable.



## Request for Proposal (RFP)

The following land development and civil engineering consultant firms were contacted

- |                               |                           |
|-------------------------------|---------------------------|
| 1 ARS Engineers               | 13 LandDesign, Inc.       |
| 2 BGE, Inc.                   | 14 Langan                 |
| 3 Bovay Engineers Inc.        | 15 LJA Engineering        |
| 4 CEI Engineering Associates  | 16 Olsson                 |
| 5 Cobb, Fendley & Associates  | 17 Pacheco Koch           |
| 6 Foresite Group LLC          | 18 Pape-Dawson Engineers  |
| 7 Halff Associates            | 19 Peloton Land Solutions |
| 8 Huitt-Zollars               | 20 Riner Engineering Inc. |
| 9 Humphreys & Partners Arch.  | 21 Stantec                |
| 10 Jones & Carter             | 22 Teague Nall Perkins    |
| 11 Keller North America, Inc. | 23 Walter P Moore         |
| 12 Kimley-Horn and Associates |                           |



## Responses to RFP

Narrowed it down to the following 3 responsive firms:

- Cobb, Fendley & Associates
- Keller North America, Inc.
- Riner Engineering Inc.

# Consultant Selection

Hill Remediation Scope	Description	Cobb Fendley & Associates	Keller North America	Riner Eng'g
Topographic Survey	This is a survey to depict all surface features and their elevation. It will be used to determine slope cross sections of the hill, and the volume of material in the hill.	X	X	
Data research	This is to research records on the hill from the City of Frisco, and other agencies (in addition to reviewing available info from the HOA)	X		
Geotechnical Evaluation	This is to collect soil and rock samples, test them to characterize their physical properties, and perform engineering analysis to determine the stability of different slope cross-sections	X	X	X
Erosion Control Plan	This is to develop a plan to control the erosion happening on the hill. Erosion is happening on the north side of the hill.	X		
Slope Stabilization Plan	This involves analyzing different concepts of reconstructing the hill. The HOA will review the conceptual solutions, and direct the consultant on which solution to finalize	X	X	X
Bidding Services	This includes assisting the HOA in securing competitive bids, answering questions from bidders, analyzing the bids, and recommending award to best value bidder.	X		

# GRAYHAWK HOA SLOPE FAILURE

Charles W. Russell, P.E.  
January 18, 2023





Where we have been – Slope issues and remediation

What we have done – Geotech, Aerial Imagery,  
Survey

Where we are today – Potential Solutions



 CobbFendley



**\*\*BORING LOCATIONS AND APPROXIMATE EARTHWORK LIMITS ARE INTENDED FOR GRAPHICAL REFERENCE ONLY\*\***



FRISCO

Approximate Limits of Proposed Earthwork  
**GRAYHAWK SLOPE FAILURE**

**EXHIBIT A**

TEXAS

**SHEET NO.**  
**G2**

DATE DRILLED  
July 26, 2022

	Option 1 Full Removal	Option 2 Reconstruct at 4:1
Cost Estimate	\$2.52M	\$3.49M
Pros	Useable space for community use	Remove lower volume of dirt – approx. half the hill (refer to green area on Exhibit A)
	Low potential for failure in future	
	Low maintenance	
Cons	Replace retaining wall	Replace retaining wall
	Maintenance of retaining wall	Maintenance of retaining wall
	Remove substantial amount of dirt – entire hill	Limited access to remove and replace dirt on the pond side of the hill
		Minimal use for the community
		High potential for failure in future

Grayhawk HOA

Grayhawk Slope Failure

Project No. 2215-007-01



Issued for Conceptual | Preliminary - Option 1: Removal & Flatten

Prepared By: PM

Date: 11/11/2022

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
100	MOBILIZATION	1	LS	\$57,000	\$57,000
101	GENERAL SITE PREPARATION, INCLUDING TREE REMOVAL, VEGETATION REMOVAL, & TEMPORARY CONSTRUCTION FENCE	1	LS	\$35,000	\$35,000
102	EROSION CONTROL	1	LS	\$40,000	\$40,000
103	REMOVE GAZEBO, INCLUDING CONCRETE PAD (730 SF)	1	LS	\$15,000	\$15,000
104	REMOVE ROCK WALL AT TOP OF HILL	230	LF	\$1,500	\$345,000
105	REMOVE RETAINING WALL AT TOE OF HILL	190	LF	\$50	\$9,500
106	REMOVE IRRIGATION SYSTEM	1	LS	\$5,000	\$5,000
107	SAWCUT, REMOVE, AND DISPOSE EXISTING CONCRETE SIDEWALKS	520	SY	\$5	\$2,600
108	RELOCATION OF LANDSCAPING ROCKS	1	LS	\$75,000	\$75,000
109	SLOPE EXCAVATION	44000	CY	\$40	\$1,760,000
110	COMPACTED EARTH SLOPE FILL	200	CY	\$35	\$7,000
111	REPLACE RETAINING WALL AT TOE OF HILL	190	LF	\$400	\$76,000
112	SOLID SOD	16900	SY	\$8	\$135,200
				<b>SUBTOTAL</b>	<b>\$1,935,100</b>

30% Contingency \$580,530

**PROJECT TOTAL \$2,515,630**

In providing Opinions of Probable Construction Cost, the Client understands that the Consultant has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the Consultant's estimates of probable construction costs are made on the basis of the Consultant's professional judgment and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's estimate of probable construction cost.

Grayhawk HOA

Grayhawk Slope Failure

Project No. 2215-007-01



Issued for Conceptual | Preliminary - Option 2: Reconstruct at 4:1

Prepared By: PM

Date: 11/11/2022

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
100	MOBILIZATION	1	LS	\$78,000	\$78,000
101	GENERAL SITE PREPARATION, INCLUDING TREE REMOVAL, VEGETATION REMOVAL, & TEMPORARY CONSTRUCTION FENCE	1	LS	\$20,000	\$20,000
102	EROSION CONTROL	1	LS	\$30,000	\$30,000
103	REMOVE GAZEBO, INCLUDING CONCRETE PAD (730 SF)	1	LS	\$15,000	\$15,000
104	REMOVE ROCK WALL AT TOP OF HILL	230	LF	\$1,500	\$345,000
105	REMOVE RETAINING WALL AT TOE OF HILL	190	LF	\$50	\$9,500
106	REMOVE IRRIGATION SYSTEM	1	LS	\$2,500	\$2,500
107	SAWCUT, REMOVE, AND DISPOSE EXISTING CONCRETE SIDEWALKS	520	SY	\$5	\$2,600
108	RELOCATION OF LANDSCAPING ROCKS	1	LS	\$75,000	\$75,000
109	SLOPE EXCAVATION	35000	CY	\$40	\$1,400,000
110	COMPACTED EARTH SLOPE FILL	16000	CY	\$35	\$560,000
111	REPLACE RETAINING WALL AT TOE OF HILL	190	LF	\$400	\$76,000
112	SOLID SOD	8600	SY	\$8	\$68,800
				<b>SUBTOTAL</b>	<b>\$2,682,400</b>
				30% Contingency	\$804,720
				<b>PROJECT TOTAL</b>	<b>\$3,487,120</b>

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# EXISTING CONDITION RENDERINGS



GRAYHAWK DEVELOPMENT-FRISCO  
EXISTING CONDITIONS 1 OF 4





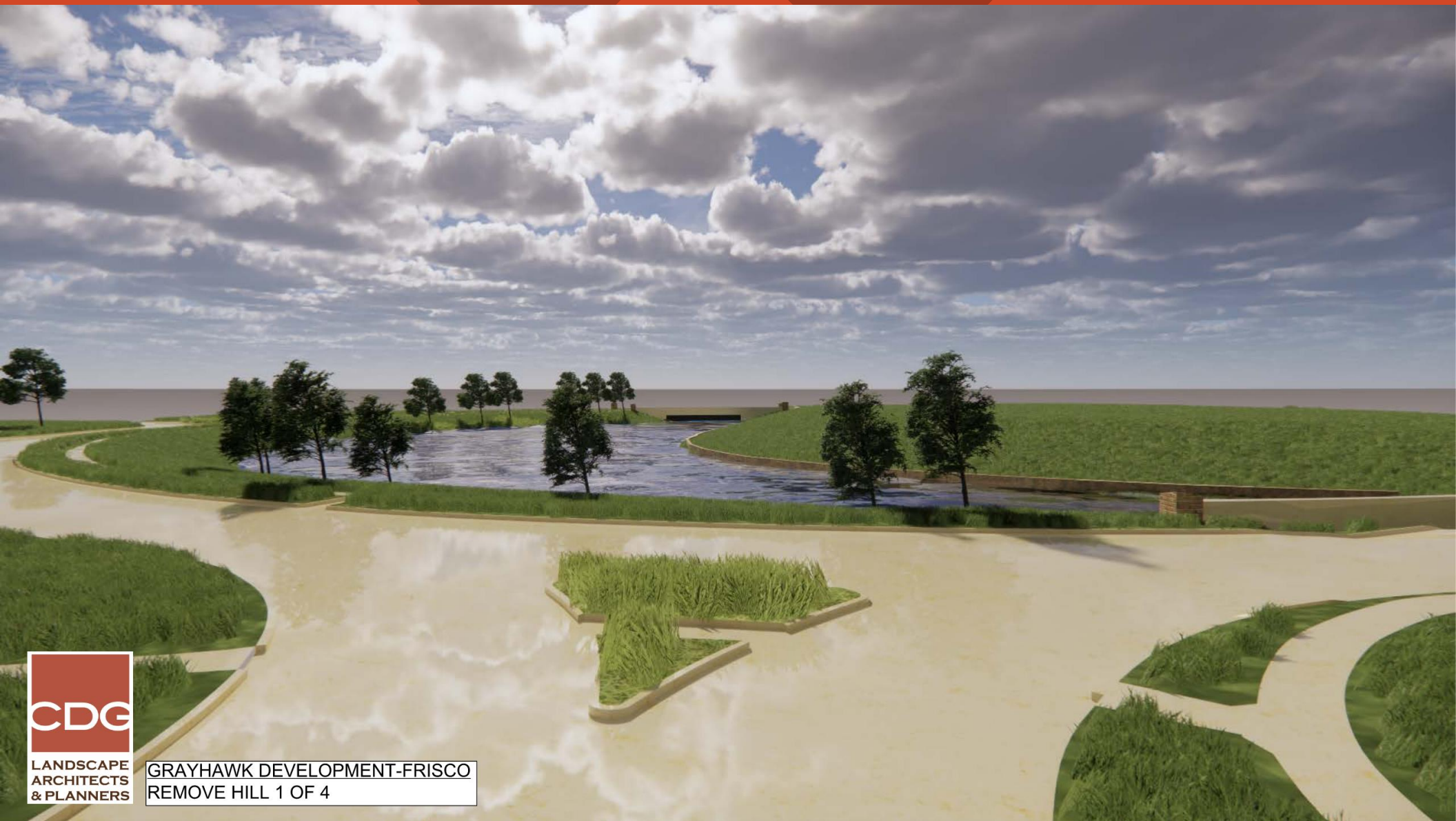


GRAYHAWK DEVELOPMENT-FRISCO  
EXISTING CONDITIONS 3 OF 4





# HILL REMOVAL RENDERINGS

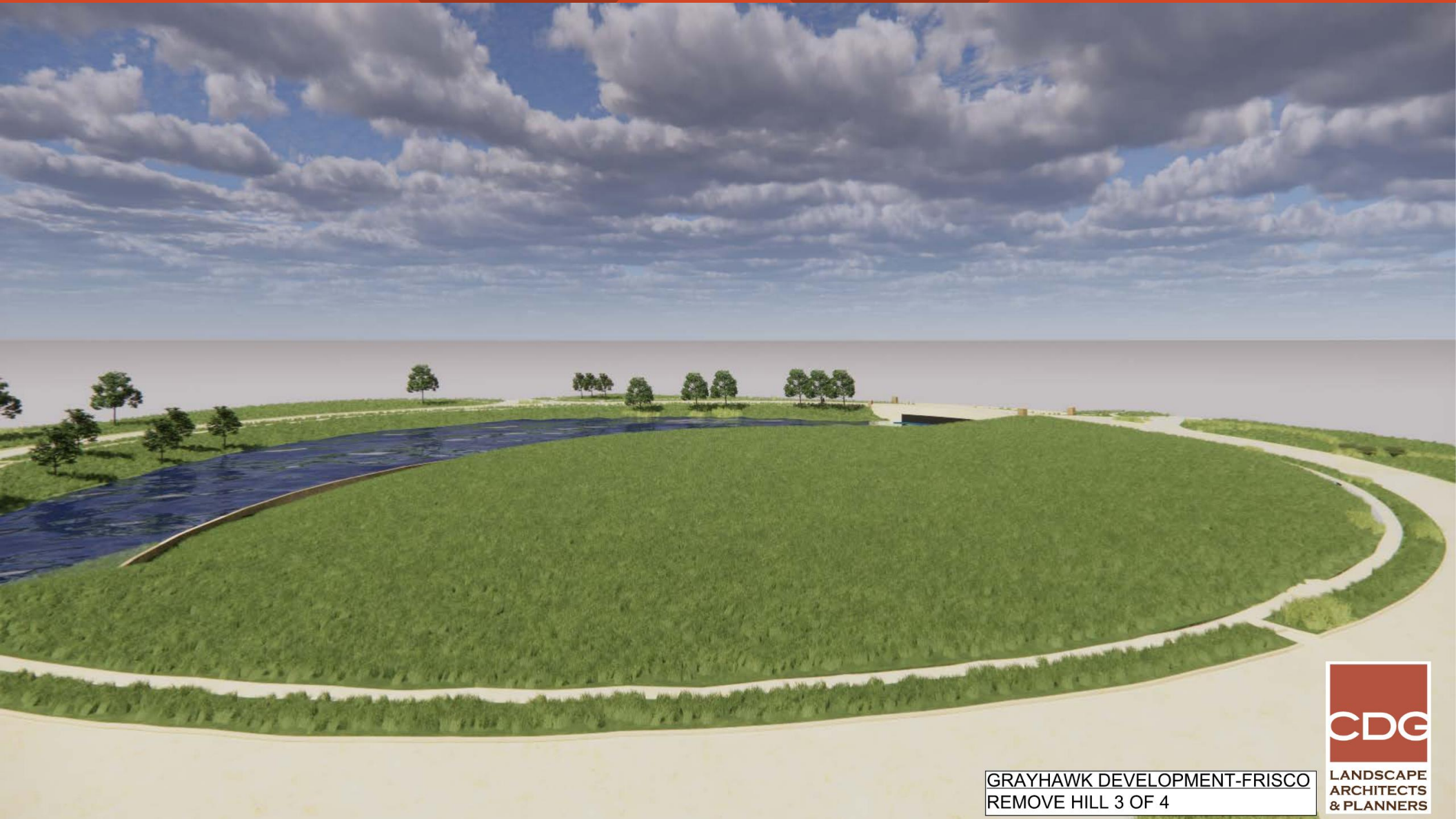


GRAYHAWK DEVELOPMENT-FRISCO  
REMOVE HILL 1 OF 4



LANDSCAPE  
ARCHITECTS  
& PLANNERS

GRAYHAWK DEVELOPMENT-FRISCO  
REMOVE HILL 2 OF 4





LANDSCAPE  
ARCHITECTS  
& PLANNERS

GRAYHAWK DEVELOPMENT-FRISCO  
REMOVE HILL 4 OF 4

# HILL REGRADE AND REBUILD RENDERINGS



LANDSCAPE  
ARCHITECTS  
& PLANNERS

GRAYHAWK DEVELOPMENT-FRISCO  
REGRADE AND REBUILD 1 OF 4



GRAYHAWK DEVELOPMENT-FRISCO  
REGRADE AND REBUILD 2 OF 4







LANDSCAPE  
ARCHITECTS  
& PLANNERS

GRAYHAWK DEVELOPMENT-FRISCO  
REGRADE AND REBUILD 4 OF 4



Questions/Discussion