Project No.
4663.002.019

June 24, 2020

Ms. Laurie Sucgang
Fallon Village Geologic Hazard Abatement District
100 Civic Plaza
Dublin, CA 94568

Subject: Jordan Ranch Development
Positano Development
Dublin, California

GEOLOGIC HAZARD ABATEMENT DISTRICT MONITORING – SPRING 2020

Dear Ms. Sucgang:

ENGEO is pleased to submit this monitoring report for the Fallon Village Geologic Hazard Abatement District (GHAD). As described in the Fallon Village Plans of Control (References 1 and 2), the purpose of this monitoring was to observe and report on the open space and associated improvements within the Jordan Ranch and Positano developments. This monitoring event was completed on May 18, 2020. The previous monitoring event was completed on October 10, 2019 (Reference 6). Recently completed scheduled GHAD maintenance included activities on the emergency vehicle access and maintenance roadways, drainage ditches, detention basins, and bioretention cells. In addition, the GHAD completed litter removal in the open-space areas.

SCOPE

Site monitoring included observation of the following.

- Open-space slopes
- Debris benches
- Asphaltic and decomposed granite trails including footbridge
- Fences
- Retaining walls
- Drainage courses
- Detention basins and water quality basins
- Bioretention cells
- Emergency vehicle access, maintenance, and access roads
- Sediment removal from concrete structures
- Subdrains and subdrain outlets
- Concrete-lined and earthen-lined surface drainage ditches
- Storm drain system improvements

OPEN-SPACE SLOPES, DEBRIS BENCHES, AND SWALES

Open-space slopes, debris benches, and swales were observed for evidence of slope instability, including landslides, mudflows, erosion, diverted drainage, or standing water. During our site visit, we observed several areas of significant distress to the slopes adjacent to the site improvements.

In the winter of 2016/17, a landslide occurred on the slope above Viento Court (Figure 2, Site Condition A). In December 2017, the Fallon Village GHAD completed a permanent slope repair (Reference 3). During our most recent monitoring event, we observed that the slope was performing well and appears to be well vegetated. This area will continue to be monitored in future monitoring events.

During the fall 2017 monitoring event, a landslide measuring approximately 15 feet in width, 35 feet in length, and up to about 2 feet in depth was observed above the earthen-lined drainage ditch, northeast of Volterra Court in the Positano Development (Figure 2, Site Condition B). The landslide material was deposited into the earthen-lined drainage ditch, which alters the profile of the ditch and could impede stormwater flow. As needed, the GHAD will remove material from the drainage ditch. During our most recent monitoring event, the area has vegetated over and has shown minor signs of movement; soil continues to block a portion of the earthen drainage ditch.

A landslide measuring approximately 20 feet in width, 15 feet in length, and up to about 2 feet in depth was located above the earthen-lined drainage ditch, north of Castello Court in the Positano Development during the winter of 2016/17 (Figure 2, Site Condition C). A minor amount of material has been deposited into the earthen-lined drainage ditch. During our most recent monitoring event, the landslide appears to be vegetated with no evidence of further movement. The GHAD will continue to observe this area during future scheduled monitoring events as landslides can enlarge during wet conditions.

To the east of the previously mentioned landslide (Site Condition C), there was a minor landslide that appears to be caused by numerous shallow animal burrows (Figure 2, Site Condition D, Photograph 1). The landslide measures approximately 15 feet in width, 10 feet in length, and has a head scarp of about 1 foot in height. The material deposited by the landslide was deposited in the earthen-lined drainage ditch located at the base of the slope. The GHAD will remove the deposited material and restore the earthen-lined drainage ditch. During our most recent monitoring event, it appears that another shallow failure has occurred as a result of the burrowing activity. This failure does not impact any nearby improvements and the GHAD will continue to monitor this slope.

A landslide occurred on an open-space slope below Montese Court in early 2017 (Figure 2, Site Condition O). The landslide does not currently affect any adjacent improvements; however, conditions should be monitored for further changes.

As previously reported, the outfall for Bioretention Cell No. 4 drains into the creek along the southern edge of the Positano Development (Figure 2, Site Condition E). Discharge from the drain has created a significant erosion gully between the outlet and the creek channel. The erosion channel measures approximately 135 feet in length, up to 18 feet in width, and up to about 7 feet in depth. Although this erosion does not affect improvements within the

development at this time, sediment discharge into the creek contributes to the overall amount of sediment build up within the mitigation pond in the Jordan Ranch Development. At the time of our most recent monitoring, the erosion gully appeared to be revegetated. The GHAD will review mitigation alternatives for this area to reduce future erosion.

An erosion gully has formed downslope of an earthen-lined drainage ditch located immediately east of Jose Maria Amador Elementary School within the Positano development. The erosion gully, located at the top of the slope, was approximately 30 feet in length, up to 5 feet in width, and up to 3 feet in depth (Figure 2, Site Condition F, Photograph 2). The erosion gully appears to have started with surface water moving through animal burrows in the earthen-lined ditch. The GHAD implemented a temporary repair in fall 2018 to prevent further erosion. The GHAD will replace the existing earthen-lined drainage ditch with a concrete-lined drainage ditch.

During our last monitoring event, we observed a shallow depression approximately 5 feet in diameter. It appears that closely spaced animal burrows have collapsed to form the depression, which was located approximately 15 feet downslope of the asphaltic-concrete surfaced trail (Figure 2, Site Condition P, Photograph 9). This depression remained at the time of our most recent monitoring, but does not appear to be impacting nearby improvements.

Within the open space north of Montese Court, we observed unauthorized homeowner improvements outside the property fence of 2101 Montese Court and 2109 Montese Court (Figure 2, Site Condition G, Photograph 3). The GHAD has notified the homeowners that these improvements are not allowed within the GHAD-owned open space and the GHAD has requested their removal. The homeowner has removed the fencing that was previously installed on the GHAD property; however, improvements to the slope between lots remains. This debris should also be removed and the GHAD with notify the homeowners.

On the slope at the north end of Volterra Court, we observed a shallow landslide measuring approximately 20 feet in length, 10 feet wide, with a headscarp of about 1 foot deep (Figure 2, Site Condition H, Photograph 4). At the time of our monitoring event, the minor landslide was not affecting any GHAD-maintained land and has remained unchanged since the previous monitoring event. The GHAD will continue to monitor this area during future monitoring events.

It should be noted that there are a number of unrepaired landslides within the ungraded portions of the GHAD-owned parcels. These landslides have moved in the past and will likely do so in the future when wet conditions occur. The landslides within the ungraded portion of the site appear to be in a similar condition to that described during development of the site.

DEBRIS BENCHES

In general, the debris benches were in good condition. Maintenance is not needed at this time.

TRAILS AND FOOTBRIDGE

In several areas on the asphaltic concrete surfaced trails, there were lineal cracks that run parallel to the edge of the trail. Most of these cracks were relatively narrow and will be sealed or resealed as part of routine site maintenance. At the northern edge of the Jordan Ranch development, we observed cracks up to 40 feet long, 3 inches wide, and 5 inches deep allowing surface water to saturate the subgrade materials (Figure 3, Site Condition I, Photograph 5). It

appears that soil creep was causing distress to the trail surface. As a short-term solution, the cracks will be backfilled. In addition, the GHAD will evaluate longer-term mitigation measures.

A decomposed granite-surfaced trail crosses through the creek in the Jordan Ranch development. The trail was in moderately good condition with the exception of erosion gullies at various locations on the trail (Figure 3, Site Condition J, Photograph 6). The GHAD will backfill the erosion gullies and continue to monitor the trail during future monitoring events.

At several points adjacent to the trail, there were unauthorized paths that deviate from the designated trail (Figure 3, Site Condition K, Photograph 7). Bare soil was exposed on the unauthorized trail segments. We have not observed erosion on the unauthorized trails, but a shallow depression was observed adjacent to the trail (Figure 3, Site Condition Q, Photograph 10). The unauthorized trail segments will be monitored during future scheduled monitoring events.

FENCES, LOCKS, AND SIGNAGE

Fences, locks, and signage within the GHAD were observed for loss or damage. Locks and signage were in good condition and will be replaced as necessary. We noted that there were some segments where the wildlife fencing along the open space boundary has been damaged (Figure 2, Site Condition T, Photograph 13). The GHAD will repair or cause to be repaired the fencing as necessary.

RETAINING WALLS

In general, the retaining walls were in good condition on the GHAD-accepted parcels. No maintenance measures are recommended at this time.

DRAINAGE COURSES

Several unnamed creek channels cross the GHAD-owned open space. In general, the creeks have slightly to moderately incised channels with a moderate to dense vegetation cover. Some segments of the creek banks were oversteepened due to previous downcutting and generally in a marginally stable condition. We expect that local creek bank failures will continue to occur in the future as the creek banks adjust to lowered creek bed levels. As stated in the Plan of Control, the GHAD shall not have responsibility to control isolated or remote slope instability that does not involve damage to or pose a significant threat to damage site improvements with the exception of mitigation areas. We did not observe areas of the creek channel with the potential to impact site improvements.

BIORETENTION CELLS AND WATER QUALITY BASIN

Four bioretention cells and one water quality basin are located within the boundaries of the Fallon Village GHAD. In the referenced Plans of Control, the basins are identified as Biorentention Cell 1, Biorentention Cell 2, Bioretention Cell 3, Bioretention Cell 4, and Water Quality Basin. Bioretenion Cell 4 is currently configured as a detention basin and monitoring and maintenance responsibilities have not yet been transferred to the Fallon Village GHAD. Monitoring of the basin and cells (Figures 2 and 3) was conducted as part of the open-space

monitoring. The observed conditions for the detention basin and bioretention cells were described in the attached monitoring reports.

An erosion gully has formed along the eastern edge of Bioretention Cell No. 2 between the upper and lower bioretention cells (Figure 3, Site Condition L, Photograph 9). The gully developed during the 2016/2017 winter and increased in size during the 2018/19 winter rainy season. The GHAD installed temporary sandbags to buttress the berm and prevent further erosion in Fall/Winter 2018. As described in the attached monitoring report, the GHAD will rebuild the berm in 2020 when drier weather allows earthwork activities.

During the fall 2017 monitoring event, standing water was observed within the water quality basin in the Jordan Ranch development (Figure 3, Site Condition M, Photograph 14). Clayey sediments deposited on top of the filter medium prevented water from infiltrating properly. In March 2018, the GHAD performed a temporary repair by pumping the standing water out of the basin, excavating clayey material adjacent to the outfall structure, exposing the existing subdrain and backfilling the excavation with riprap to allow water to drain properly. A permanent repair involving removal of the clayey materials and the upper portion of the filter medium has been scheduled in 2020. At the time of our most recent monitoring, standing water was present within the water quality basin. A permanent repair will be necessary to remove the water and restore proper function to the basin.

EMERGENCY VEHICLE, MAINTENANCE, AND ACCESS ROADWAYS

We observed the condition of the gravel-covered access roadways within the GHAD and the gravel-surfaced roadways appeared to be in good condition. Vegetation removal and ongoing vegetation management of the roadways is included in the GHAD's scheduled maintenance.

Along the maintenance road west of Avellina Drive, there was an animal burrow causing a void adjacent the storm drain inlet (Figure 2, Site Condition N). At the time of our site visit, the void appeared to have enlarged as animal activity has continued, but did not have a significant impact on the storm drain inlet structure. The GHAD will backfill the void to prevent future enlargement of the burrow from impacting the structure.

SUBDRAIN OUTLETS

The following subdrain outlets were observed and monitored during the site visit. Discharge levels flowing from the subdrain outlets are shown on Table 1. Location of the subdrain outlets labeled "Unable to Locate," has been authorized as part of the GHAD's maintenance responsibilities.

TABLE 1: Subdrains

LABEL	FLOW (GALLONS/DAY)	COMMENTS
K-1AE	0	Dry
K-1AC	0	Standing water
K-1AW	0	Standing water
K-1B	Est. 69	Pipe buried; low flow
K-1CS	--	Flow; buried under riprap; unable to monitor
K-1CN	0	Dry

LABEL	FLOW (GALLONS/DAY)	COMMENTS
K-1D	--	Unable to locate
K-12	--	Unable to monitor; pipe buried; water in outflow basin
RB-4	0	Dry
S-4	0	Outfall in storm drain inlet; damp
S-6	Est. 571	
S-7	0	Damp; no flow
S-8	Est. 114	Outfalls just outside GHAD property
S-9	Est. 228	Outfalls just outside GHAD property; pipe submerged; flowing
S-28	0	Outfalls in storm drain inlet; dry
S-29	--	Unable to monitor; storm drain covered with SWPPP covering
S-32E	0	Outfall in storm drain inlet; dry
S-32W	--	Outfalls in storm drain inlet; low flow at bottom of DI
S-33	0	Damp
S-34	--	Unable to locate
S-36	0	Outfalls in storm drain inlet; dry
S-41	0	Moist; no flow
S-44	0	Outfalls in storm drain inlet; wet
S-47	0	Wet; standing water
S-51	--	Outfalls in storm drain inlet; low flow; damp
SR-8	0	Outfalls in storm drain inlet; damp
SR-9E	0	Damp; Outfalls in Storm Drain Inlet
SR-9W	0	Outfalls in storm drain inlet; damp
SR-13E	0	Damp; outfalls in storm drain inlet
SR-13W	Est. 46	Outfalls in storm drain inlet; low flow
SR-19	0	Outfalls in storm drain inlet; damp
SRR	0	Dry
GOLF	0	Outfalls in storm drain inlet; dry
CELL	--	Outfalls in storm drain inlet; unable to monitor
BASIN	0	Dry
VIENTO	--	Unable to monitor; sandbags blocking storm drain inlet

SURFACE DRAINAGE DITCHES

Concrete-lined drainage ditches were checked for accumulation of debris/sediment and for obvious distress such as cracking or shifting of the concrete. As shown on Figures 2 and 3, there are approximately 4,650 lineal feet of concrete-lined drainage ditch within the Fallon Village GHAD. Some segments of the concrete-lined drainage ditches contained grass clippings, litter, and leaves (Figures 2 and 3, Site Conditions R and S, Photographs 11 and 12). As part of the scheduled routine site maintenance, the GHAD removes vegetation and other unwanted material from the concrete-lined ditches. We observed minor cracks in the concrete ditches. These minor cracks do not appear to compromise the integrity of the concrete-lined drainage ditches at this time, but are patched as needed.

Earthen-lined drainage ditches were checked for overall shape, accumulation of sediment and debris, and significant distress. Most of the earthen-lined drainage ditches were in relatively good condition with the exception of the earthen lined swale adjacent to the Jose Maria Amador Elementary School described above. A few sections have accumulated sediment from landslide material, as discussed, and will need to be cleared out and restored to original profile. The GHAD will inspect these sections and make necessary repairs to the drainage ditches.

STORM DRAIN INLETS

Storm drain inlets within the open space area of the GHAD appeared to be relatively clear of debris. The storm drain inlets are cleaned as part of routine vegetation maintenance.

If you have any questions concerning the observations made during this reconnaissance, please do not hesitate to contact us.

Sincerely,

ENGEO Incorporated

Mary Bromfield, GIT
Eric Harrell, CEG
mb/eh/jf

Attachments: List of Selected References
Site Photographs
Figures
Bioretention Cells and Water Quality Basin Monitoring Reports

LIST OF SELECTED REFERENCES

1. ENGEO; Plan of Control for Fallon Village Geologic Hazard Abatement District, Dublin, California, May 8, 2007, Revised July 3, 2013, Project No. 4663.101.001.

2. ENGEO; Fallon Village Geologic Hazard Abatement District, Plan of Control, Jordan Ranch Development Annexation, February 11, 2011, Latest Revision August 3, 2011, Project No. 7828.000.000.

3. ENGEO; Testing and Observation during Slope Repair, Viento Court Landslide Repair, Positano Development, January 9, 2018, Project No. 4663.002.017.

4. ENGEO; Stormwater and Hydromodification Management Plan, Jordan Ranch, Dublin, California, August 19, 2010, Latest Revision March 23, 2011, Project No. 7828.100.201.

5. ENGEO, Testing and Observation Services during Mass Grading and Improvement Installation, Jordan Ranch, Tract 8100, Unit II, Dublin, California, April 14, 2015, Project No. 7828.000.002.

6. ENGEO; Geologic Hazard Abatement District Monitoring – Fall 2019, Jordan Ranch Development, Positano Development, Fallon Village Geologic Hazard Abatement District, Dublin, California, Project No. 4663.002.019, October 14, 2019.

SITE PHOTOGRAPHS

PHOTOGRAPH 1: Site Condition D

Minor landslide above earthen-lined drainage ditch near Castello Court.

PHOTOGRAPH 2: Site Condition F

Erosion gully with temporary repair downslope of earthen-lined drainage ditch east of Jose Maria Amador Elementary School.

PHOTOGRAPH 3: Site Condition G

Unauthorized homeowner improvements within GHAD-owned open space west of Montese Court.

PHOTOGRAPH 4: Site Condition H

Minor landslide at the end of Volterra Court.

PHOTOGRAPH 5: Site Condition I

Linear cracks parallel to edge of asphaltic-concrete surfaced trail.

PHOTOGRAPH 6: Site Condition J

Erosion along decomposed granite-surfaced trail.

PHOTOGRAPH 7: Site Condition K

Unauthorized trail used to access designated trail.

PHOTOGRAPH 8: Site Condition L

Erosion gully between upper and lower bioretention basins in Bioretention Cell No. 2, yet to be repaired as of May 2020.

PHOTOGRAPH 9: Site Condition P

Depression due to animal burrowing along footpath next to school.

PHOTOGRAPH 10: Site Condition Q

Depression adjacent to foot path in Jordan Ranch development.

PHOTOGRAPHS 11 and 12: Site Conditions R and S

Grass clippings, leaves, and debris in concrete-lined drainage ditch.

PHOTOGRAPH 13: Site Condition T

Wildlife fencing damaged at the end of Castello Court.

PHOTOGRAPH 14: Site Condition M

Standing water within water quality basin.

FIGURES

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BASE MAP SOURCE: GOOGLE EARTH MAPPING SERVICE

ENGEO Expect Excellence

VICINITY MAP
FALLON VILLAGE GHAD
DUBLIN, CALIFORNIA

PROJECT NO.: 4663.002.019
SCALE: AS SHOWN
DRAWN BY: JV
CHECKED BY: EWH

FIGURE NO. 1

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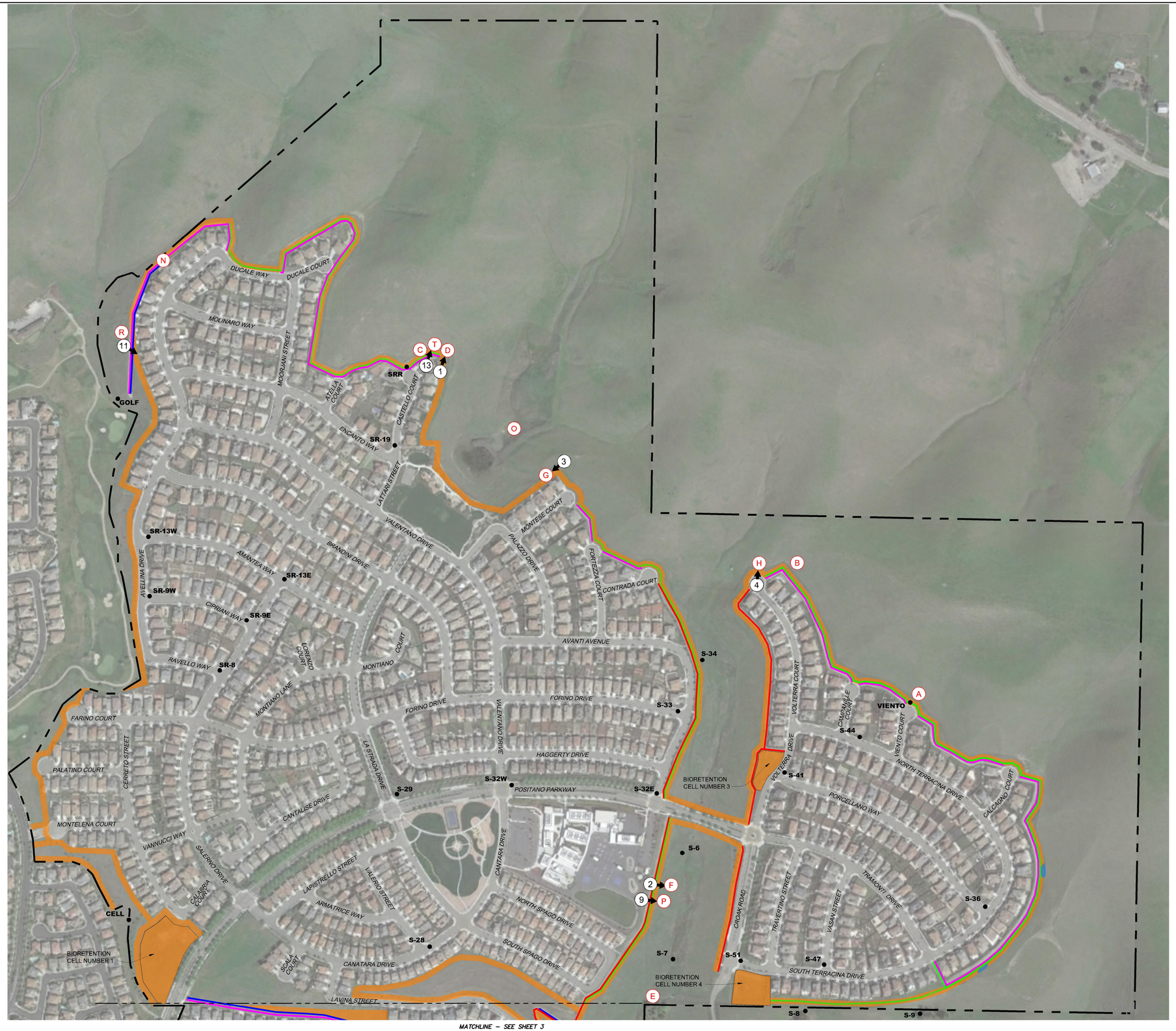
ORIGINAL FIGURE PRINTED IN COLOR



MATCHLINE – SEE SHEET 3

EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

- GHAD BOUNDARY
- CONCRETE-LINED DRAINAGE DITCH
- EARTHEN-LINED DRAINAGE DITCH
- GRAVEL-SURFACED EMERGENCY VEHICLE ACCESS/MAINTENANCE ROAD
- ASPHALT-SURFACED TRAIL
- DECOMPOSED GRANITE SURFACED TRAIL
- VEGETATION MANAGEMENT ZONE
- CONCENTRATED ANIMAL BURROWS
- S-51 SUBDRAIN OUTFALL
- 10 PHOTO LOCATION AND DIRECTION TAKEN
- N SITE CONDITION

BASE MAP SOURCE: GOOGLE EARTH MAPPING SERVICE

ENGEO Expect Excellence

SITE PLAN - POSITANO
FALLON VILLAGE GHAD
DUBLIN, CALIFORNIA

PROJECT NO: 4663.002.019
SCALE: AS SHOWN
DRAWN BY: MB
CHECKED BY: EWH
FIGURE NO: 2

ORIGINAL FIGURE PRINTED IN COLOR

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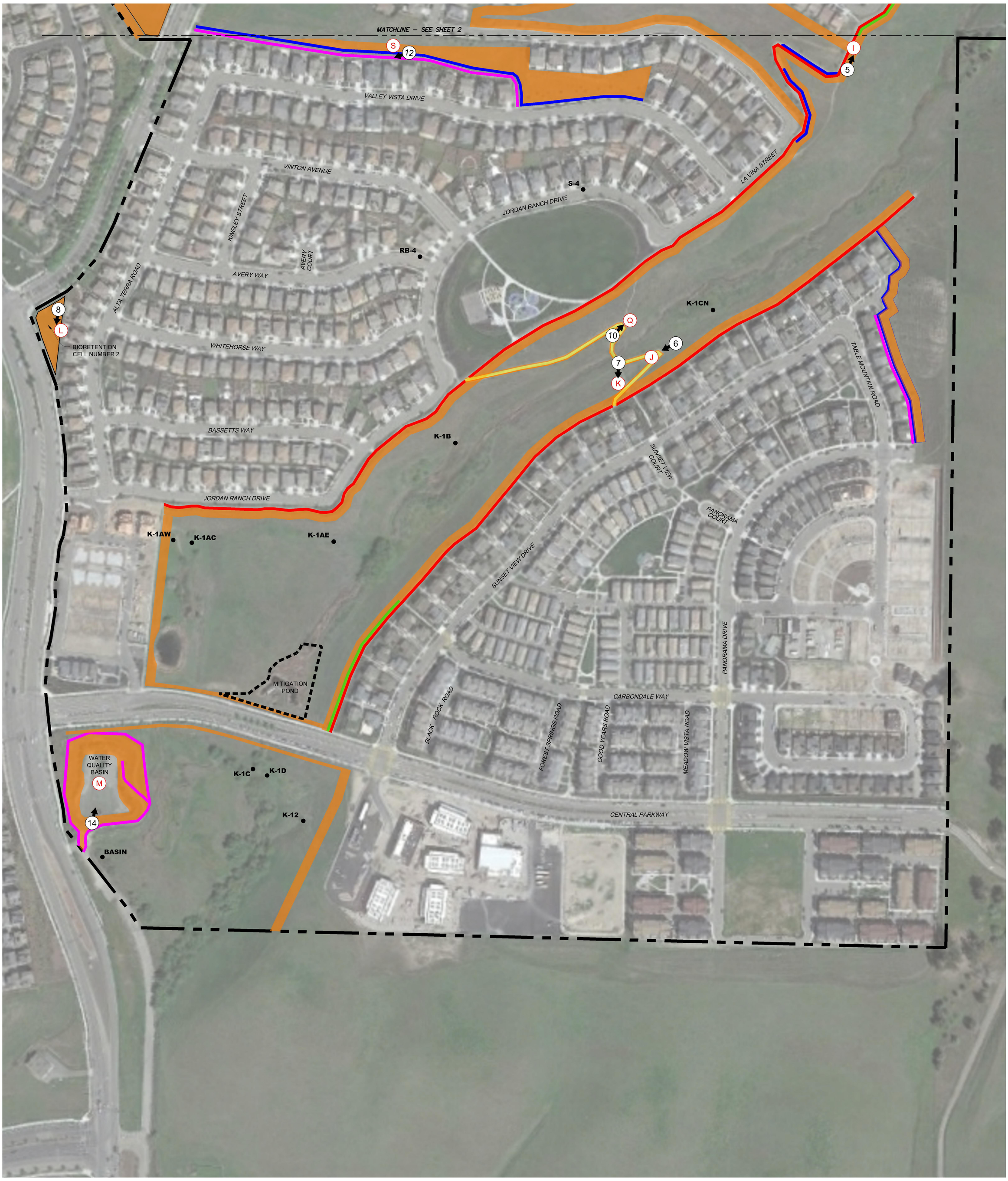

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EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

- GHAD BOUNDARY
- CONCRETE-LINED DRAINAGE DITCH
- EARTHEN-LINED DRAINAGE DITCH
- GRAVEL-SURFACED EMERGENCY VEHICLE ACCESS/MAINTENANCE ROAD
- ASPHALT-SURFACED TRAIL
- DECOMPOSED GRANITE SURFACED TRAIL
- VEGETATION MANAGEMENT ZONE
- CONCENTRATED ANIMAL BURROWS
- K-12 — SUBDRAIN OUTFALL
- 9 — PHOTO LOCATION AND DIRECTION TAKEN
- M — SITE CONDITION

BASE MAP SOURCE: GOOGLE EARTH MAPPING SERVICE

ENGEO Expect Excellence

SITE PLAN - JORDAN RANCH
FALLON VILLAGE GHAD
DUBLIN, CALIFORNIA

PROJECT NO.: 4663.002.019
SCALE: AS SHOWN
DRAWN BY: MB
CHECKED BY: EWH

FIGURE NO. 3

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ORIGINAL FIGURE PRINTED IN COLOR

BIORETENTION CELL
AND WATER QUALITY BASIN MONITORING REPORTS

4663.002.019
June 24, 2020

BIORETENTION FACILITY MONITORING PROGRAM
MONITORING REPORT FORM

Please refer to the Figure 2 for Bioretention cell No. 1 location.

This monitoring report form was completed for:
X Bioretention Cell #1 ☐ Bioretention Cell #2 ☐ Bioretention Cell #3 ☐ Bioretention Cell #4

A separate monitoring form should be completed for each bioretention facility.

Reason for inspection:
X Scheduled inspection (in May, August or November)
☐ Inspection after major rain event (greater than one inch in 24 hours)

Inspector Name:	Mary Bromfield
Company:	ENGEO Incorporated
Date of Inspection:	5/18/2020
Date of Last Inspection:	10/10/2019

Plant Health (check during every inspection):

Do plants appear to be in generally good health?	X Yes	No
Were plants over three feet in height (excluding trees)?	X Yes	No
Does it appear that the top layer of mulch needs to be replaced?	X Yes	No

Describe Conditions:
Small shrubs and trees were in good health, grasses and weeds were dead.

Corrective Actions (if needed):

Irrigation System Functioning (check during every inspection):

Does irrigation system appear to be functioning properly?	Yes	No

Describe Conditions: N/A

Corrective Actions (if needed):

Drainage and Filter Medium Monitoring (check in May, August and November, and additionally after large storm events):

Was standing water or soggy, saturated soil present in the bioretention cell?	X Yes	No
Was there a build-up of excess clayey sediment, leaves or other debris at the surface of facility at inflow locations?	Yes	X No
Was there a sediment build-up at the locations of rock apron inlet protection?	Yes	X No
Were any of the inflow or outflow structures clogged with sediment/debris?	Yes	X No
Was water draining freely from the subdrain system?	X Yes	No

Describe Conditions:
Cell was dry and free of standing water.

Corrective Actions (if needed):

Access Road Monitoring (check once per year):

Was access road suitable for vehicle access?	X Yes	No

Describe Conditions:
Maintenance road was in need of weed clearing.

Corrective Actions (if needed):
As part of scheduled maintenance, the GHAD will clear the maintenance road.

Other (check during every inspection):

Was litter/garbage present within the bioretention cells?	Yes	X No

Describe Conditions:
Cell was free of litter and debris.

Corrective Actions (if needed):

BIORETENTION FACILITY MONITORING PROGRAM
MONITORING REPORT FORM

Please refer to the Figure 3 for Bioretention Cell No. 2 location.

This monitoring report form was completed for:
☐ Bioretention Cell #1 X Bioretention Cell #2 ☐ Bioretention Cell #3 ☐ Bioretention Cell #4

A separate monitoring form should be completed for each bioretention facility.

Reason for inspection:
X Scheduled inspection (in May, August or November)
☐ Inspection after major rain event (greater than one inch in 24 hours)

Inspector Name:	Mary Bromfield
Company:	ENGEO Incorporated
Date of Inspection:	5/18/2020
Date of Last Inspection:	10/10/2019

Plant Health (check during every inspection):

Do plants appear to be in generally good health?	Yes	X No
Were plants over three feet in height (excluding trees)?	Yes	X No
Does it appear that the top layer of mulch needs to be replaced?	X Yes	No

Describe Conditions:
Few shrubs were alive, grasses and weeds were dead and have been trimmed.

Corrective Actions (if needed):

Irrigation System Functioning (check during every inspection):

Does irrigation system appear to be functioning properly?	Yes	No

Describe Conditions: N/A

Corrective Actions (if needed):

Drainage and Filter Medium Monitoring (check in May, August and November, and additionally after large storm events):

tanding water or soggy, saturated soil present in the bioretention cell?	Yes	X No
Was there a build-up of excess clayey sediment, leaves or other debris at the surface of facility at inflow locations?	Yes	X No
Was there a sediment build-up at the locations of rock apron inlet protection?	Yes	X No
Were any of the inflow or outflow structures clogged with sediment/debris?	Yes	X No
Was water draining freely from the subdrain system?	X Yes	No

Describe Conditions:
Grasses and vegetation has been cleared.

Corrective Actions (if needed):

Access Road Monitoring (check once per year):

Was access road suitable for vehicle access?	Yes	No

Describe Conditions: N/A

Corrective Actions (if needed):

Other (check during every inspection):

Was litter/garbage present within the bioretention cells?	Yes	X No

Describe Conditions:
Cell was clear of debris.

Corrective Actions (if needed):

Was the berm in good condition?	Yes	X No

Describe Conditions:
An erosion gully has formed between the upper and lower bioretention basins. The gully, located on the eastern edge of the cell has increased significantly since the previous monitoring event. More cave-ins and failures have occurred since our last monitoring. Temporary repair with sandbags were in place, but permanent berm restoration planned for 2020.

Corrective Actions (if needed):
Restore berm to original condition as drier weather allows. The GHAD contactor has been authorized to complete the berm repair in 2020.

BIORETENTION FACILITY MONITORING PROGRAM
MONITORING REPORT FORM

Please refer to the Figure 2 for Bioretention cell No. 3 location.

This monitoring report form was completed for:
☐ Bioretention Cell #1 ☐ Bioretention Cell #2 X Bioretention Cell #3 ☐ Bioretention Cell #4

A separate monitoring form should be completed for each bioretention facility.

Reason for inspection:
X Scheduled inspection (in May, August or November)
☐ Inspection after major rain event (greater than one inch in 24 hours)

Inspector Name:	Mary Bromfield
Company:	ENGEO Incorporated
Date of Inspection:	5/18/2020
Date of Last Inspection:	10/10/2019

Plant Health (check during every inspection):

Do plants appear to be in generally good health?	X Yes	No
Were plants over three feet in height (excluding trees)?	Yes	X No
Does it appear that the top layer of mulch needs to be replaced?	Yes	X No

Describe Conditions:
Grasses have been trimmed at time of inspection.

Corrective Actions (if needed):

Irrigation System Functioning (check during every inspection):

Does irrigation system appear to be functioning properly?	Yes	No

Describe Conditions: N/A

Corrective Actions (if needed):

Drainage and Filter Medium Monitoring (check in May, August and November, and additionally after large storm events):

Was standing water or soggy, saturated soil present in the bioretention cell?	Yes	X No
Was there a build-up of excess clayey sediment, leaves or other debris at the surface of facility at inflow locations?	Yes	X No
Was there a sediment build-up at the locations of rock apron inlet protection?	Yes	X No
Were any of the inflow or outflow structures clogged with sediment/debris?	Yes	X No
Was water draining freely from the subdrain system?	X Yes	No

Describe Conditions:
Drainage and filter medium were in good condition.

Corrective Actions (if needed):

Access Road Monitoring (check once per year):

Was access road suitable for vehicle access?	Yes	No

Describe Conditions: N/A

Corrective Actions (if needed):

Other (check during every inspection):

Was litter/garbage present within the bioretention cells?	Yes	X No

Describe Conditions:
Cell was clear of debris.

Corrective Actions (if needed):

STORMWATER FACILITY MONITORING REPORT FORM

Please refer to the Figure 3 for water quality basin location.

This monitoring report form was completed for:
☐ Flow-Through Planter ☐ Common Area Bioretention ☐ Vegetation Buffer Strip
X Extended Detention Basin with Biotreatment Soil

A separate monitoring form should be completed for each facility.

Reason for inspection:
X Scheduled inspection (in May or November)
☐ Inspection after major rain event (greater than one inch in 24 hours)

Inspector Name:	Mary Bromfield
Company:	ENGEO Incorporated
Date of Inspection:	5/18/2020
Date of Last Inspection:	10/10/2019

Plant Health (check during every inspection):

Do plants appear to be in generally good health?	X Yes	No
Does it appear that the top layer of mulch needs to be replaced?	X Yes	No

Describe Conditions:

Corrective Actions (if needed):

Drainage and Filter Medium Monitoring (check in May and November, and additionally after large storm events):

Was standing water or soggy, saturated soil present at the base of the pond?	X Yes	No
Was there a build-up of excess clayey sediment, leaves or other debris at the surface of facility at inflow locations?	Yes	X No
Was there a sediment build-up at the locations of rock apron inlet protection?	Yes	X No
Were any of the inflow or outflow structures clogged with sediment/debris?	Yes	X No

Was water draining freely from the subdrain system, water quality orifice and riser pipe? X Yes No

Describe Conditions:
A significant amount of standing water has accumulated in the detention basin and the likely source was sediment accumulation impeding proper drainage.

Corrective Actions (if needed):
Standing water should be removed and sediment cleared to allow proper drainage. A permanent repair involving removal of clayey sediments and replacing the filter medium has been scheduled in 2020.

Access Road Monitoring (check once per year):

Was access road suitable for vehicle access? X Yes No

Describe Conditions:
Maintenance road was in need of weed clearing.

Corrective Actions (if needed):
Clear weeds from maintenance road.

Other (check during every inspection):

Was litter/garbage present within the ponds? Yes X No

Describe Conditions:
Detention basin appeared to be free of litter.

Corrective Actions (if needed):