Appendix F

Floodplain Impact Memorandum

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS
870 Market Street, Suite 1278
San Francisco, CA 94102-2906
415-433-4848
FAX 415-433-1029

June 2, 2022

Valley Water
Attn: Benjamin Hwang, PE
Community Projects Review Unit
Watershed Stewardship and Planning Division

Subject: Monterrey 8 Development Impact on Floodplain

Dear Valley Water:

We have completed our hydraulic impact analysis for the Monterrey Rd proposed development and based on the Llagas Creek modeling results and the information below, the proposed development does not present significant impact to the existing floodplain that is shown on the FEMA effective map. Current modeling efforts show that the spills from Llagas Creek don't reach this site and that it is likely that this site could be removed entirely from the floodplain through a LOMR process. See Attachment 1 for Llagas modeling results. The property owner, City Venture, would like to proceed with a design that meets the current effective FIRM rather than waiting for a lengthy LOMR process.

Attachment 1 to this letter shows that the Project Site is not within the floodplain of the Llagas Creek watershed. So instead of using the spills from Llagas, our focus is the two sources of run-on from neighboring properties that currently flow through the open ditch on the Project Site. The first is the flow that is from the private detention basin which has pumps and a 48-inch gravity outfall. We have been instructed by the City that the pumps will not be operating and to calculated the flow from the 48-inch gravity outfall during a 100-year storm event. While this seams like it should be pretty straight forward, it is not. This area has been modeled in numerous scenarios and system configurations with plugs in some pipes and the Butterfield Channel capacity changing that it not a straight forward exercise without detailed as-builts of the detention basin and the surrounding infrastructure.

However, I believe this information and the exact flow from the gravity 48-inch pipe are irrelevant based on the way the 48-inch pipe is conveyed to existing triple 24-inch culverts (see attached as-built). What the proposed development proposes to construct is extending the existing 24-inch pipes under the site, vs into the open ditch. There is no runoff from the proposed site that enters into the proposed triple 24s that are conveying the run-on to the Project Site. The site runoff is conveyed to the detention basin. These existing 24-inch pipes are inlet controlled and will dictate the flow across the site. The proposed development includes extending these pipes which will allow equal conveyance to what is there today.

To analyze the existing triple 24s into the ditch and the proposed longer 24s to the ditch closer to the railroad, I modeled the existing and post project in HY-8 using a range of flows. The upstream head is the same when the culverts are extended to the railroad ditch and I do not anticipate the development to have any impact on the existing system. In addition, I calculated the maximum flow through the triple 24s which results in 120cfs and modeled that in HY-8 and the upstream head is the same under both existing and proposed. This high flow is unlikely to occur as the majority of the flow from the private detention basin is directed to the Butterfield Channel. The HY-8 is set up using the County's LiDAR and making some cross sections of the

existing ditch for the tailwater condition. It should be noted that the datum of the LiDAR is not the same as the as-builts.

There is also run-on from an 18-inch pipe that is also being extended without any runoff from the site entering that pipe. Finally, the slope of Monterrey Road is in the southern direction and any overland spills from the detention basin would not be directed onto the site.

Attachment 2 contains the design drawing and the existing and proposed schematics to get a better understanding of what is happening for those who don't read design drawings frequently.

Please let me know if you have any questions or would like to set up a call to discuss further.

Sincerely,
Schaaf & Wheeler

Robin J. Lee, PE
Senior Project Manager

Attachments:

1 – Updated Llagas Creek Modeling

2 – Design Drawings and Existing and Proposed Schematics

ATTACHMENT 1

LLAGAS CREEK MODELING RESULTS

Existing Condition Inundation Map

Santa Clara Valley Water District

Site

N

Legend

Flow Depths (Existing)

ft

- 0.010000 - 1.000000
- 1.000001 - 2.000000
- 2.000001 - 3.000000
- 3.000001 - 6.500000

0 2,800 5,600 11,200

Feet

Approximate Scale

GIS themes are for illustration and general analysis purposes only and are not accurate to surveying or engineering standards. Information is not guaranteed to be accurate, current, or complete and use of this information is your responsibility.

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

Upper Llagas Creek Flood Protection Project Special Flood Hazard Areas

POST-PROJECT

Panel 1 of 9

0 500 1,000 1,500 Feet

SPECIAL FLOOD HAZARD AREAS

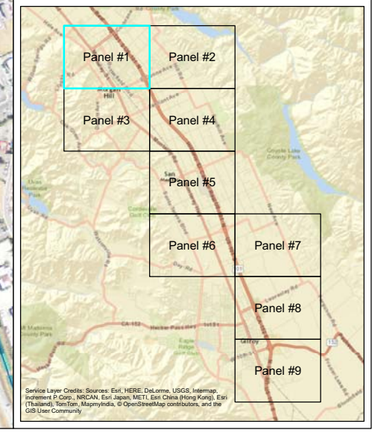
- Culvert
- Post Project Zone AE
- Post Project Floodway
- Post Project Zone X (Shaded)
- Floodway Cross Section
- BFE
- Corporate Limits

N

Certification:

This is to certify that the data on this workmap is accurate and the floodplain analyses have been completed in accordance with sound engineering practices, per NFIP regulations Part 65.2 (B).

Charles D. Anderson RCE NO. 43776



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ATTACHMENT 2

DESIGN DRAWING

EXISTING CONDITION SCHEMATIC

PROPOSED CONDITION SCHEMATIC

202.14B BUTTERFIELD/JARVIS/SUTTER-A.D. #1998-1

ALL DRAINAGE FACILITIES THIS SHEET TO BE MAINTAINED BY THE ASSOCIATION OF THE BUSINESS PARK AT MORGAN HILL RANCH.

CHAIN LINK FENCE & GATE SHALL BE INSTALLED PER CALTRANS STD. PLAN A85

16' DBL HUNG GATE

6' CHAIN LINK FENCE

FLOAT CONTROL STRUCTURE

22'

1" = 20'

Inlet controlled 24inch pipes

48-inch gravity overflow

The existing and post proejct flows will be the same and regulated by these triple 24s

Proposed development pipes

Proposed development pipe

M O N T E R E Y R O A D

S T O R M D R A I N L I N E "C"

SCALE – H: 1"=40'
V: 1"=4'

11 12 13 14 15 16 17 18 19 20 21 22 23

360 350 340

PROPOSED GRADE(SEE GRADING PLAN)

EXIST GRADE @ 48"

450 LF TWIN 14" PVC FORCE MAIN @ 0.0062

443 LF 48" SD @ 0.001

361 LF 36" RCP @ 0.0018

363 LF 36" SD @ 0.0018

333 LF 18" SD @ .001

126'-15"SD S=0.0024

266'-15"SD S=0.0024

50 LF 48" SD @ 0.001

34 LF 48" SD @ 0.001

PUMP STATION

PUMP DISCHARGE INV. 348.50

INV. 348.42

NO.	DESCRIPTION	DATE	BY
1	Added 15"SD	2-11-99	

PATH Revisions

WORK ACCEPTED: INSPECTOR:

AS-BUILT CORRECTIONS BY: TRB DATE: 3/25/00

DRAWN: DESIGN: DATE:

CHECKED: DATE:

APPROVED: DATE: 9/21/98

CITY ENGR JAMES M. ASHCRAFT RCE 28921 EXP 3-31-99

HOR: 1" =40'
VERT: 1" =4'
JOB NUMBER:

City of Morgan Hill
Public Works Department
100 Edes Ct. Morgan Hill, CA 95037 (408)776-7337, Fax (408)779-8282

RACKAY & SIMPS
1955 THE ALAMEDA (408) 985-0958 SAN JOSE CALIF.
Drawn by: A. NAVASERO
Designed by: R. BRADEN
Checked by: R. BRADEN
Job No. 11261-2 Date: 06-98

REGISTERED CIVIL ENGINEER — STATE OF CALIFORNIA — EXPIRES DECEMBER 31, 1999

ASSESSMENT DISTRICT NO. 1998-1
IMPROVEMENT PLANS FOR
LINE "C" STORM DRAIN

9-17-1998 darrell-pp4.dwg

FILE NUMBER: 202
PRINT DATE: JUNE 1998
SHEET NUMBER: 12 OF 39

EXISTING


Monterey Rd
Jarvis Dr
18"
3x24"
48"
36"
Old Monterey Rd
Project Site
3'x4'
Berkshire Dr
Drag the slider or clic
Detention Basin
Monterey Rd
Sutter Blvd

PROPOSED


Monterey Rd
Jarvis Dr
18"
18"
3x24"
36"
48"
Old Monterey Rd
Project Site
3' x4'
Berkshire Dr
Drag the slider or clic
Detention Basin
Monterey Rd
Sutter Blvd

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