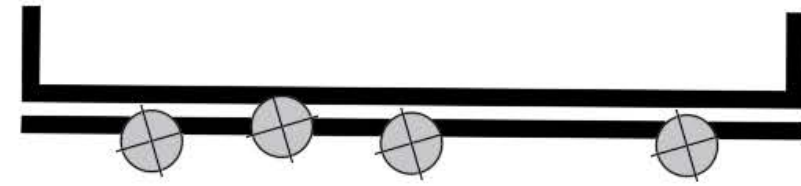


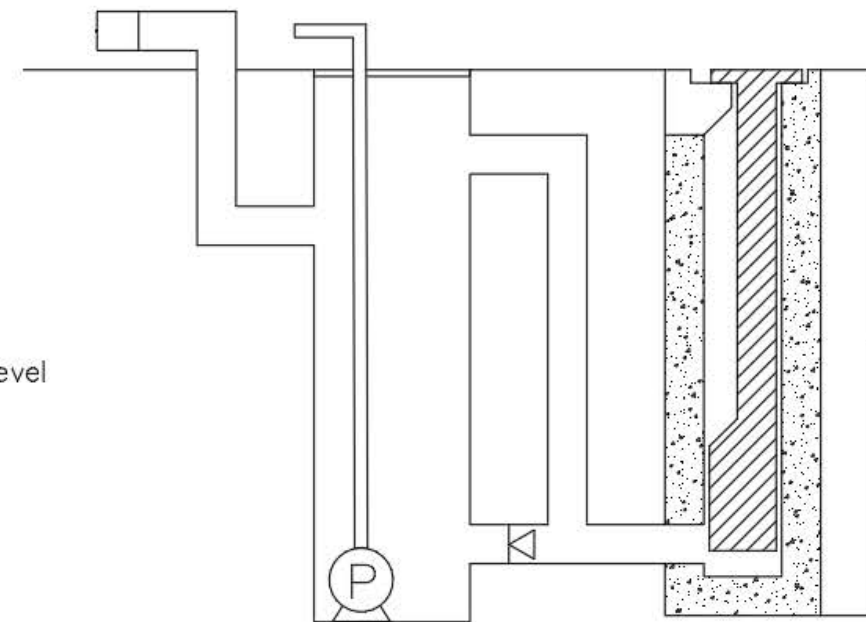
Detention Basin Plan View



Detention Basin Profile View



Self-Closing Flood Barrier Plan View



Self-Closing Flood Barrier Typical Section

Paradise Creek Flood Mitigation

Sheet: 1

Date: 4/18/20

General Plan

Scale: VARIES

Prepared by: EB

Index to Plans

Sheet No.	Title
1	General Plan
2	Index to Plans
3	Self-Closing Flood Barrier Plan
4	Self-Closing Flood Barrier Typical Section
5	Self-Closing Flood Barrier Graphic
6	Detention Basin Plan
7	Detention Basin Profile
8	Mitigation Area Plan
9	Self-Closing Flood Barrier Proposed Site
10	Self-Closing Flood Barrier Aerial View
11	Detention Basin Proposed Site
12	Detention Basin Aerial View

Legend

	Pipe
	Pump
	Check Valve
	Concrete
	Wetland
	Roadway
	Mitigation Area

Paradise Creek Flood Mitigation

Sheet: 2

Date: 4/18/20

Index to Plans

Scale: N/A

Prepared by: EB

Self-Closing Flood Barrier

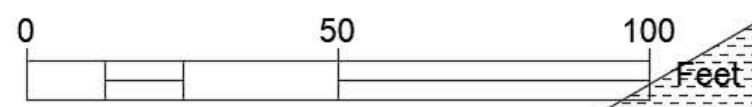
Pump Discharge Pipe

Water Inlet Pipes

Paradise Creek

Paradise Creek Wetland

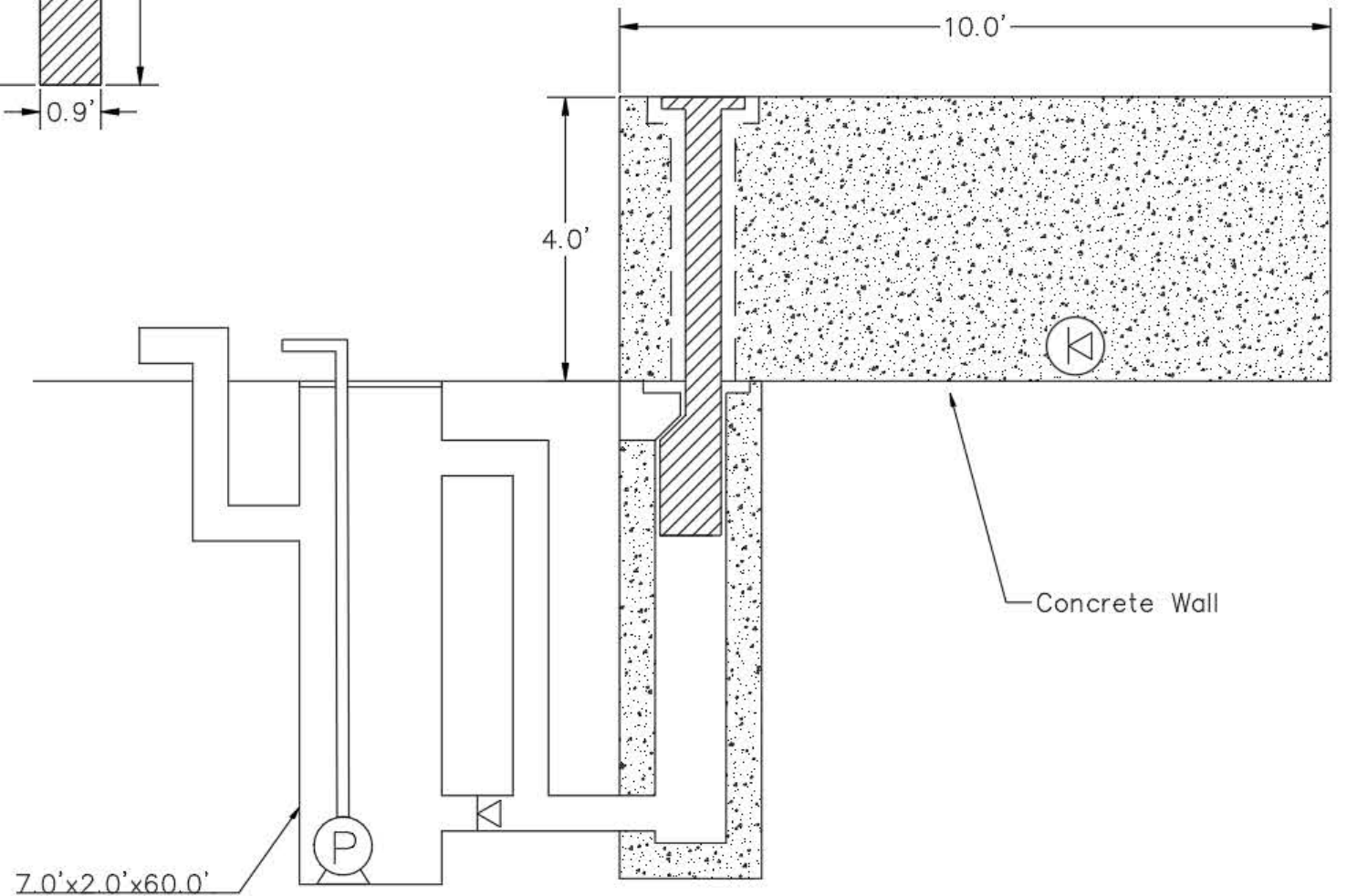
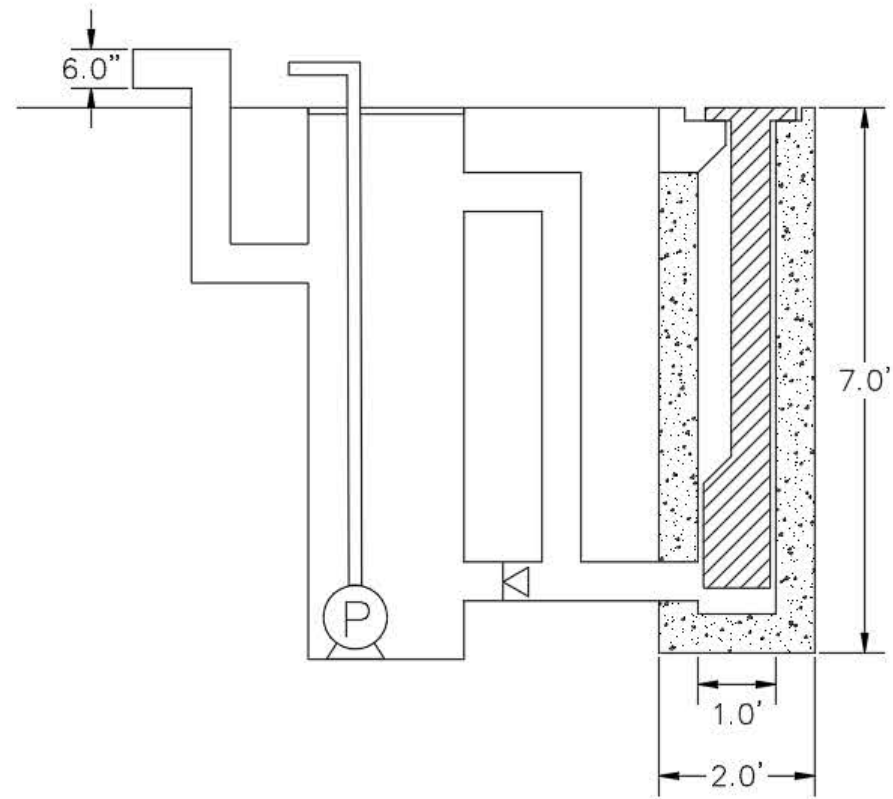
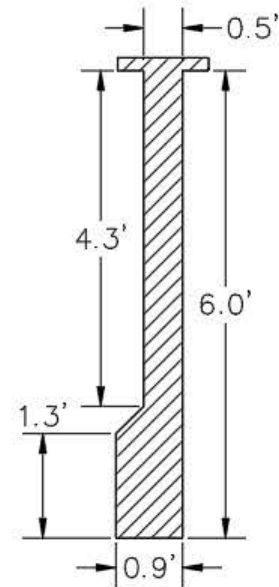
San Diego Freeway



Paradise Creek Flood Mitigation	Sheet: 3	Date: 4/15/20
Self-Closing Flood Barrier Plan	Scale: 1"=30'	Prepared by: EB

NOTES:

- Ground is at 4' elevation.
- Flood barrier is 100 ft across and made of polyurethane (PUR) foam core with a 0.125" thick C-Flex fiberglass outer layer.
- Flood barrier can contain 4' of water before it begins acting as a weir with water spilling over.
- Tank and pipes are made of high-density polyethylene (PE-HD). Pipes have a 6" inside diameter with 0.566" wall thickness.
- Tank starts filling when water reaches 4.5' elevation.
- Pump discharge pipe has 2" diameter. Sensors on the pump and the discharge pipe will control pump activation and deactivation based on water level above ground and in the tank. Pump discharges water at 4.5' elevation.
- Concrete wall on either side of the gate stabilizes the gate as it raises and helps to contain water in the wetland. The concrete wall has a flap valve, which allows runoff water to pass through the flood barrier into the wetland.



Paradise Creek Flood Mitigation

Sheet: 4

Date: 4/15/20

Self-Closing Flood Barrier Typical Section

Scale: 1"=2.5'

Prepared by: EB

1. Water Begins Filling Tank

Water Level rises to 0.5' (Elevation = 4.5').
Water starts flowing into tank through surface pipe.

2. Flood Barrier Is Partially Raised

Tank fills with water as water level continues to rise.
When water level in the tank rises to 6', water will flow into the concrete basin and begin raising the flood barrier.

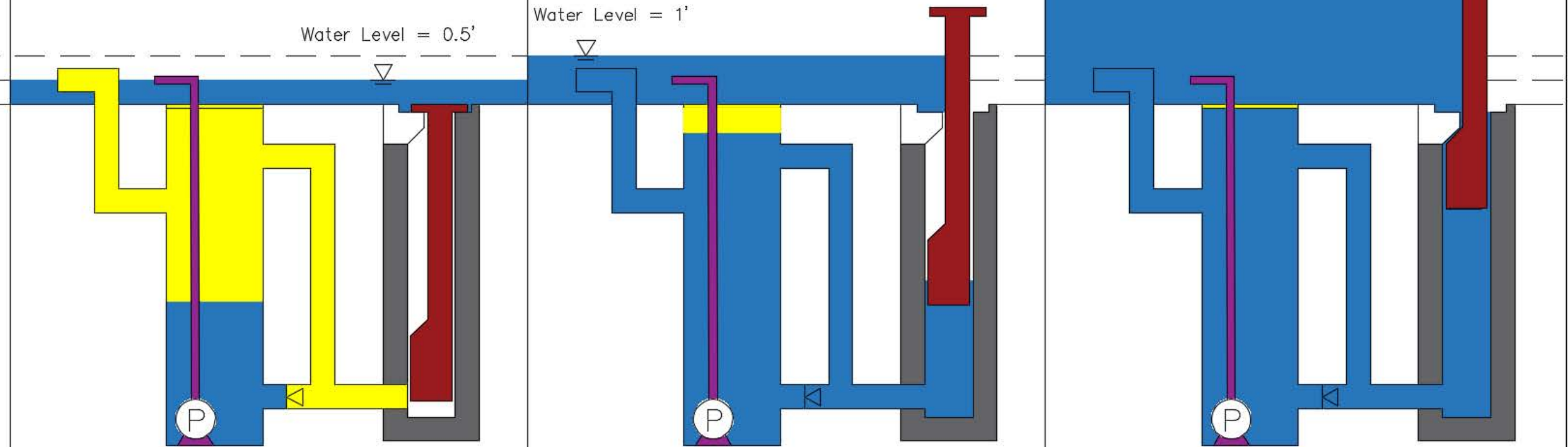
3. Flood Barrier Is Fully Raised

When flood barrier is fully raised, it will block up to 4' of water.
Water level will gradually recede. The pump will discharge water from the tank, and flood barrier will automatically lower.

Elevation = 8'

Elevation = 5'
Elevation = 4.5'

Average Ground
Elevation = 4'



Paradise Creek Flood Mitigation

Self-Closing Flood Barrier Graphic

Sheet: 5

Scale: 1"=2.5'

Date: 4/15/20

Prepared by: EB

San Diego
Freeway

Notes:

- Detention basin will contain water to reduce flooding on 18th Street and Roosevelt Avenue.
- Detention basin has a surface area of 97,365 square feet.
- Water enters detention basin through inlet pipe during heavy rain and exits through pump discharge pipe after rain event.

18th Street

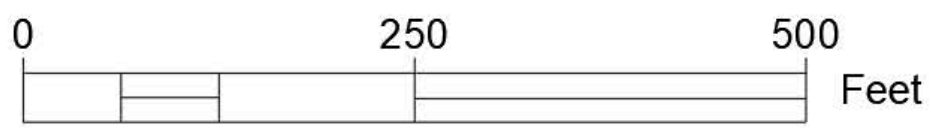
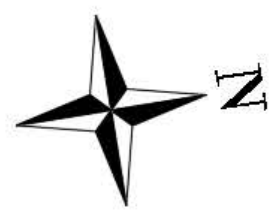
Detention Basin
Area = 97,365 sf

P

Paradise Creek

Water Inlet Pipe

Pump Discharge Pipe



Hoover Avenue

Roosevelt Avenue

Paradise Creek Flood Mitigation

Sheet: 6

Date: 4/17/20

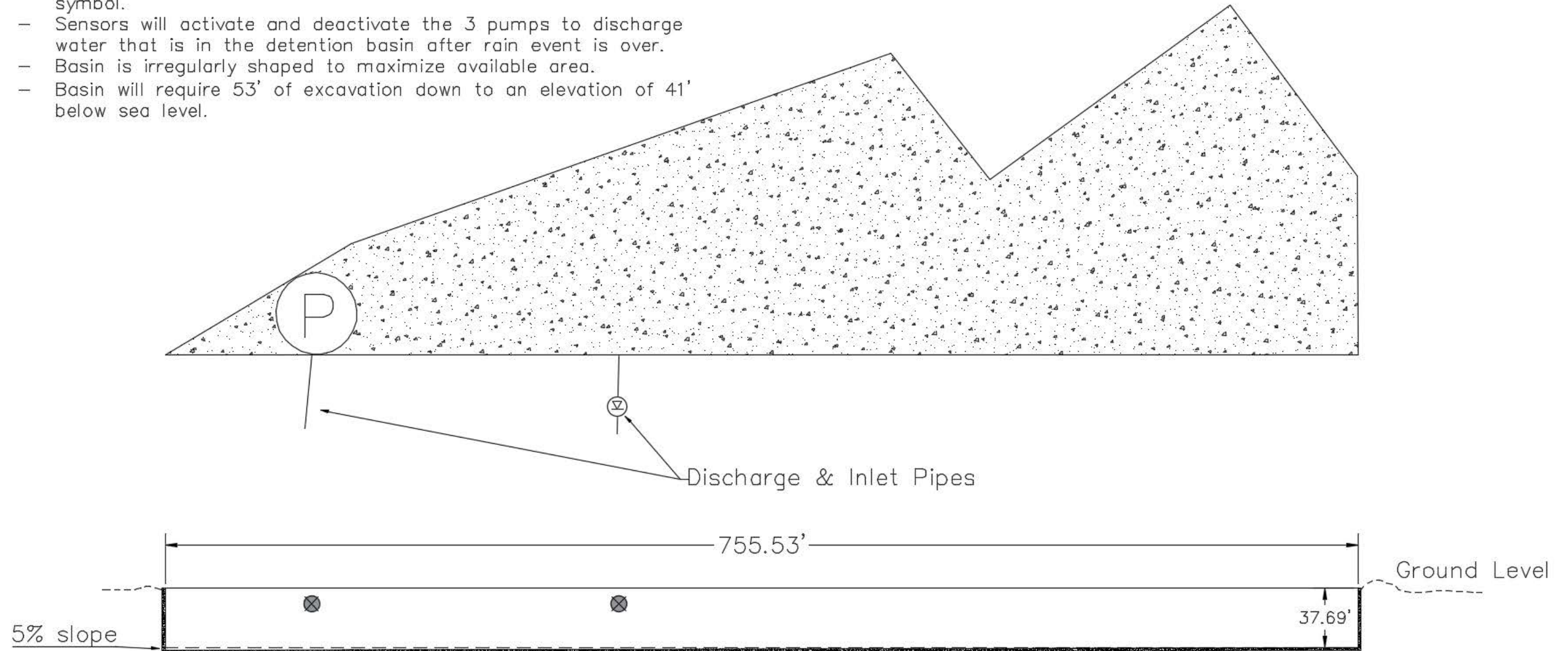
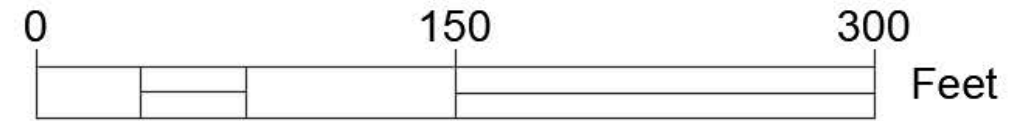
Detention Basin Plan

Scale: 1"=125'

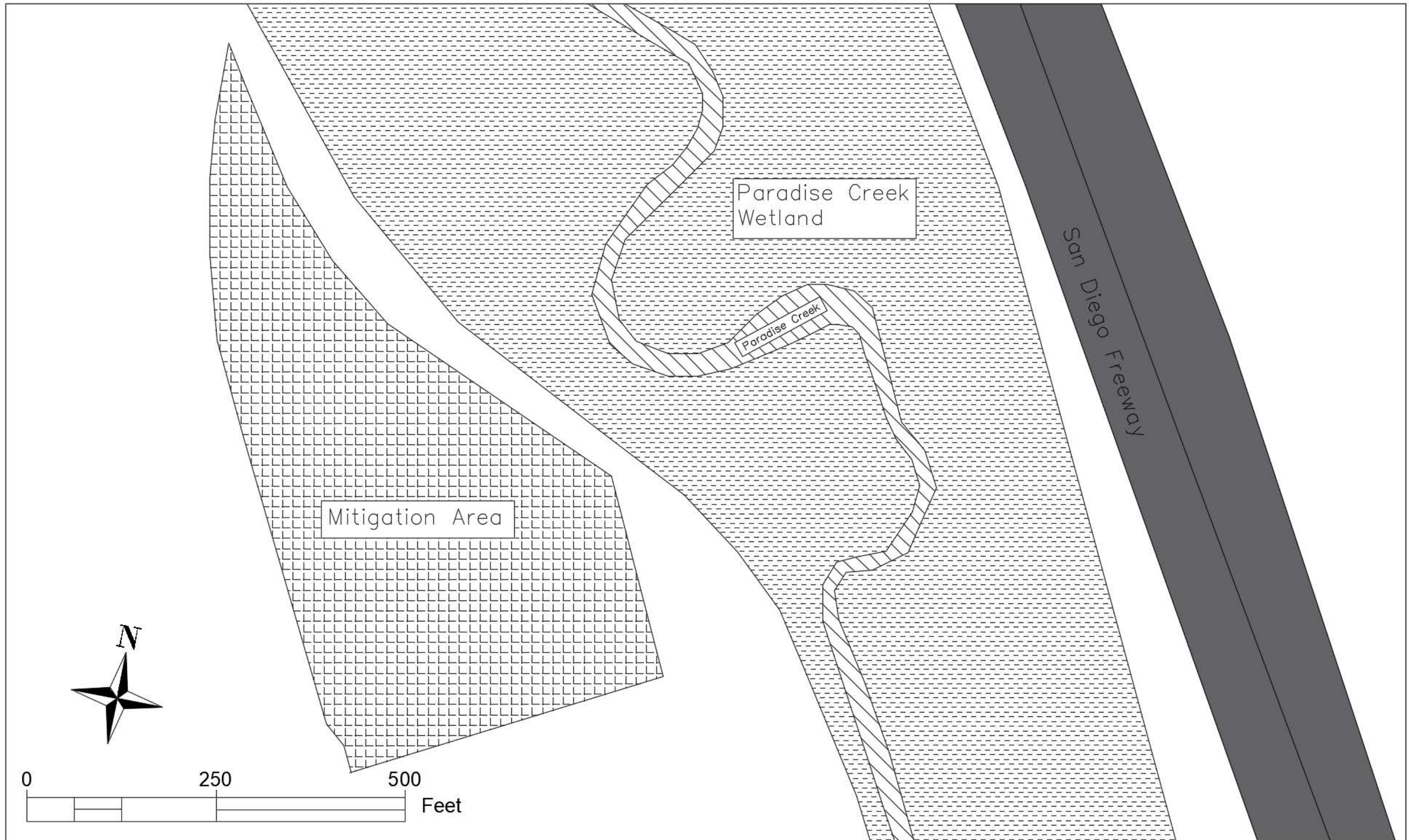
Prepared by: EB

Notes:

- Detention basin slopes down toward the pump at a 5% slope.
- Basin is made of concrete. Basin is covered by netting to ensure avian species or any other wildlife will not be able to access the standing water in the basin.
- Basin can hold up to 4.45 million cubic feet of water to account for rain events up to a 100-year flood.
- Inlet and discharge pipes are at an elevation of 3'. Ground level is at an elevation of approximately 12'.
- There are 3 pumps in the detention basin, indicated by the pump symbol.
- Sensors will activate and deactivate the 3 pumps to discharge water that is in the detention basin after rain event is over.
- Basin is irregularly shaped to maximize available area.
- Basin will require 53' of excavation down to an elevation of 41' below sea level.



Paradise Creek Flood Mitigation	Sheet: 7	Date: 4/17/20
Detention Basin Profile	Scale: 1"=70'	Prepared by: EB



Paradise Creek Flood Mitigation	Sheet: 8	Date: 4/15/20
Mitigation Area Plan	Scale: 1"=125'	Prepared by: EB

Sheet 9. Self-Closing Flood Barrier Proposed Site



Google Earth

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1000 ft

Sheet 10. Self-Closing Flood Barrier Aerial View



Sheet 11. Detention Basin Proposed Site



Sheet 12. Detention Basin Aerial View

