

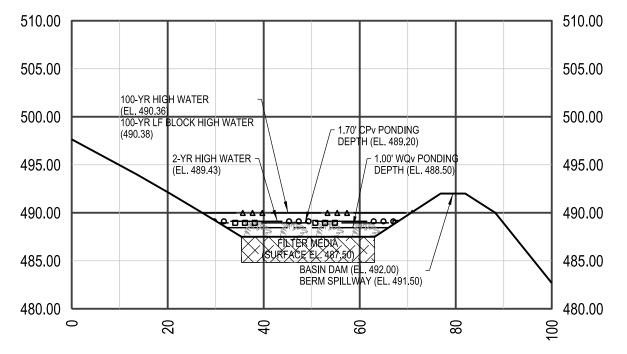
BIORETENTION (F-6) TYPICAL SECTION:

DRY DETENTION BASIN

## 510.00 505.00 505.00 FE 29 FOREBAY (EL. 488.00) 500.00 500.00 100-YR HIGH WATER DEPTH (EL. 489.20 (EL. 490.36) 100-YR LF BLOCK HIGH WATER (490.38) 2-YR HIGH WATER (EL. 489 43) .00' WQv PONDING ¬ 495.00 495.00 DEPTH (EL. 488.50) 490.00 485.00 485.00 - 4" PERF. PVC UNDERDRAIN @ 1.0% MIN. BERM SPILLWAY (EL 489.00) 480.00

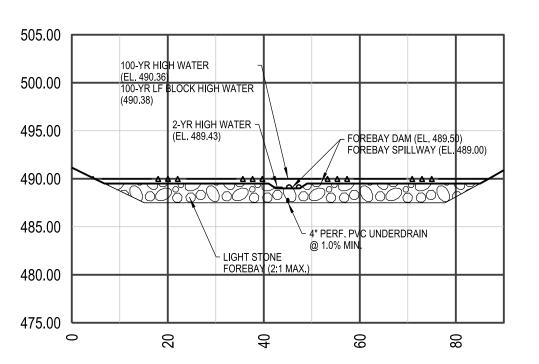
DRY BIORETENTION BASIN: SECTION 3-3

HORIZONTAL SCALE: 1" = 20' VERTICAL SCALE: 1' = 10'



DRY BIORETENTION BASIN: SECTION 4-4





DRY BIORETENTION BASIN: SECTION 5-5

HORIZONTAL SCALE: 1" = 20' VERTICAL SCALE: 1' = 10'

## F-6 Dry Detention Basin Area Maintenance Plan for The Villas at Aragon

| remov | y maintenance activities include vegetation management and debris a<br>al. Routine maintenance activities, and the frequency at which they w<br>own below                         |                                             |  |  |  |  |  |  |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--|--|--|--|--|--|
| No.   | Routine Maintenance Task                                                                                                                                                          | Routine Maintenance Task Frequency of Task  |  |  |  |  |  |  |
| 1     | If ponding water remains for longer than 3 days, clogging of the filter media and/or underdrain has occurred. Repair by removing and replacing top layer of filter or sand media. | As needed                                   |  |  |  |  |  |  |
| 2     | Trim and/or remove vegetation to give the desired "shape", to prevent establishment of woody vegetation, and for mosquito control.                                                | Twice a year<br>(February and<br>September) |  |  |  |  |  |  |
| 3     | Trim vegetation near the basin area or as directed by a Landscape Professional.                                                                                                   | November through March                      |  |  |  |  |  |  |
| 4     | Conduct vegetation management, removing weeds and harvesting vegetation. Remove all grass cuttings and other green waste.                                                         | Twice a year<br>(February and<br>September) |  |  |  |  |  |  |
| 5     | Remove accumulated trash and debris from the facilities and dispose of trash and debris properly.                                                                                 | Twice a year<br>(February and<br>September) |  |  |  |  |  |  |
| 6     | Remove sediment from the facilities and dispose of sediment properly.                                                                                                             | Twice a year<br>(February and<br>September) |  |  |  |  |  |  |
| 7     | Inspect structural components (Overflow Drains, etc.) for cracking, subsidence, erosion and deterioration.                                                                        | Twice a year, or as needed                  |  |  |  |  |  |  |

|                                           |                                        |                                          |                                                  | Dry D                                              | etention Basin Design                                         | and As-built V | erification Inf                           | ormation Ta                                 | ble                                         |                             |                                                          |                                                          |                                                |
|-------------------------------------------|----------------------------------------|------------------------------------------|--------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------|----------------|-------------------------------------------|---------------------------------------------|---------------------------------------------|-----------------------------|----------------------------------------------------------|----------------------------------------------------------|------------------------------------------------|
| Basin ID                                  | Design<br>Overflow Sill<br>Elev. (ft)* | As-built<br>Overflow Sill<br>Elev. (ft)* | Design Filter<br>Surface Area (ft <sup>2</sup> ) | As-built Filter<br>Surface Area (ft <sup>2</sup> ) | Design Filter As-built Fil<br>Surface Elev. (ft) Surface Elev |                | As-built Bypass/ Spill Point Elev. (ft)** | Required<br>WQ Volume<br>(ft <sup>3</sup> ) | Proposed<br>WQ Volume<br>(ft <sup>3</sup> ) | As-built WQ<br>Volume (ft³) | Required<br>CP <sub>v</sub> Volume<br>(ft <sup>3</sup> ) | Proposed<br>CP <sub>v</sub> Volume<br>(ft <sup>3</sup> ) | CP <sub>v</sub> Provided<br>(ft <sup>3</sup> ) |
| Dry Detention Basin<br>(F-6 Bioretention) | 489.25                                 |                                          | 1,485                                            |                                                    | 487.50                                                        | 489.00         |                                           | 5,351                                       | 5,609<br>(El. 488.50)                       |                             | 11,744                                                   | 11,832<br>(El. 489.20)                                   |                                                |

\* Overflow Sill Elevation = Maximum Water Quality Storage Elevation

\*\* Bypass/Spill Point Elevation = Lowest adjacent elevation on the basin perimeter where overland flow would be directed. As-built portion of table to be certified by a Professional Engineer or Professional Land Surveyor licensed in Missouri



THE UNDERGROUND UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, OR NON EXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE OR OTHER UTILITIES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD, SHOWN OR NOT SHOWN, PRIOR TO ANY GRADING, EXCAVATION, OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319, RSMO.

O'fallon Planning and Development Division File No.: 21-002817 | Approved: July 2, 202

RYAN L. HOLMES Professional Engineer PE-2017018988

DRY BIORETENTION BASIN PLAN & CROSS-SECTIONS

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