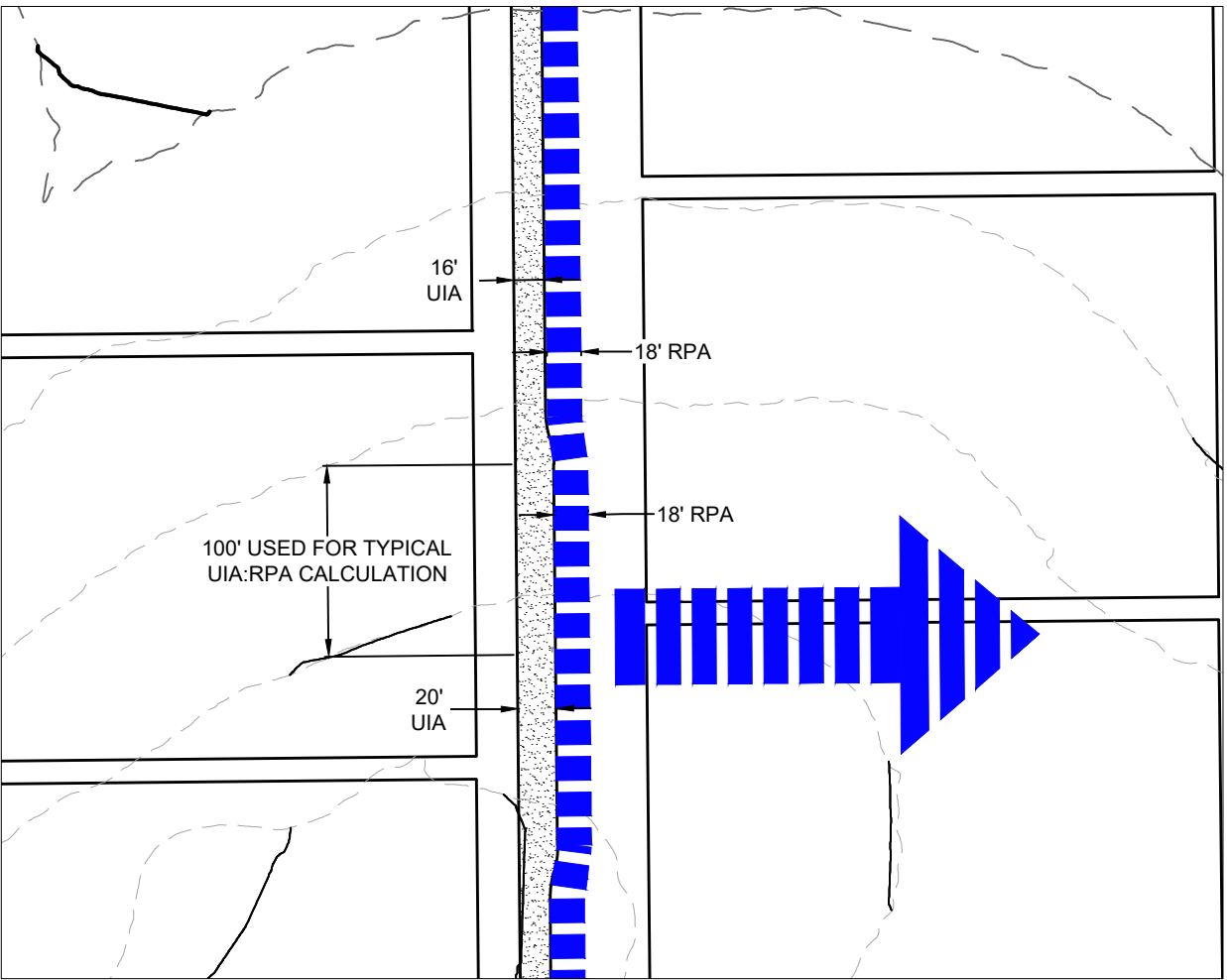


LEGEND

RECEIVING PERVIOUS  
AREA (RPA) (18FT WIDE)

FLOW DIRECTION



TYPICAL DETAIL

SCALE: 1"=100'

NOTES:

- THE IDENTIFIED RECEIVING PERVIOUS AREA (RPA) ARE TO REMAIN PERVIOUS AND VEGETATED AFTER CONSTRUCTION IS COMPLETED.
- AN 18' WIDE RECEIVING PERVIOUS AREA (RPA) WILL BE PROVIDED ADJACENT TO ALL ROADWAYS.

Design Procedure Form: Runoff Reduction

UD-BMP (Version 3.07, March 2018)

Sheet 1 of 1

Designer: Rob Hansen  
Company: CORE Consultants  
Date: July 17, 2022  
Project: Pike Solar  
Location: El Paso County

Clear Worksheet

SITE INFORMATION (User Input in Blue Cells)

WQCV Rainfall Depth 0.60 inches  
Depth of Average Runoff Producing Storm,  $d_s$  = 0.43 inches (for Watersheds Outside of the Denver Region, Figure 3-1 in USDC)

| Area Type                    | UIA/RPA | UIA/RPA | UIA/RPA      | UIA/RPA      | UIA/RPA      |  |  |  |
|------------------------------|---------|---------|--------------|--------------|--------------|--|--|--|
| Area ID                      | Typ     | O&M     | Substation 1 | Substation 2 | Substation 3 |  |  |  |
| Downstream Design Point ID   | Typ     | O&M     | SUB          | SUB          | SUB          |  |  |  |
| Downstream BMP Type          | None    | None    | None         | None         | None         |  |  |  |
| DCIA (ft <sup>2</sup> )      | --      | --      | --           | --           | --           |  |  |  |
| UIA (ft <sup>2</sup> )       | 2,000   | 4,338   | 42,000       | 9,318        | 2,202        |  |  |  |
| RPA (ft <sup>2</sup> )       | 1,800   | 4,329   | 32,809       | 8,173        | 3,470        |  |  |  |
| SPA (ft <sup>2</sup> )       | --      | --      | --           | --           | --           |  |  |  |
| HSG A (%)                    | 0%      | 0%      | 0%           | 0%           | 0%           |  |  |  |
| HSG B (%)                    | 0%      | 0%      | 0%           | 0%           | 0%           |  |  |  |
| HSG C/D (%)                  | 100%    | 100%    | 100%         | 100%         | 100%         |  |  |  |
| Average Slope of RPA (ft/ft) | 0.050   | 0.050   | 0.030        | 0.040        | 0.040        |  |  |  |
| UIA/RPA Interface Width (ft) | 100.00  | 144.00  | 298.26       | 326.90       | 138.80       |  |  |  |

CALCULATED RUNOFF RESULTS

| Area ID                             | Typ    | O&M    | Substation 1 | Substation 2 | Substation 3 |  |  |  |
|-------------------------------------|--------|--------|--------------|--------------|--------------|--|--|--|
| UIA/RPA Area (ft <sup>2</sup> )     | 3,800  | 8,667  | 74,809       | 17,491       | 5,672        |  |  |  |
| L / W Ratio                         | 0.38   | 0.42   | 0.84         | 0.16         | 0.29         |  |  |  |
| UIA / Area                          | 0.5263 | 0.5005 | 0.5614       | 0.5327       | 0.3882       |  |  |  |
| Runoff (in)                         | 0.00   | 0.00   | 0.00         | 0.00         | 0.00         |  |  |  |
| Runoff (ft <sup>3</sup> )           | 0      | 0      | 0            | 0            | 0            |  |  |  |
| Runoff Reduction (ft <sup>3</sup> ) | 83     | 181    | 1750         | 388          | 92           |  |  |  |

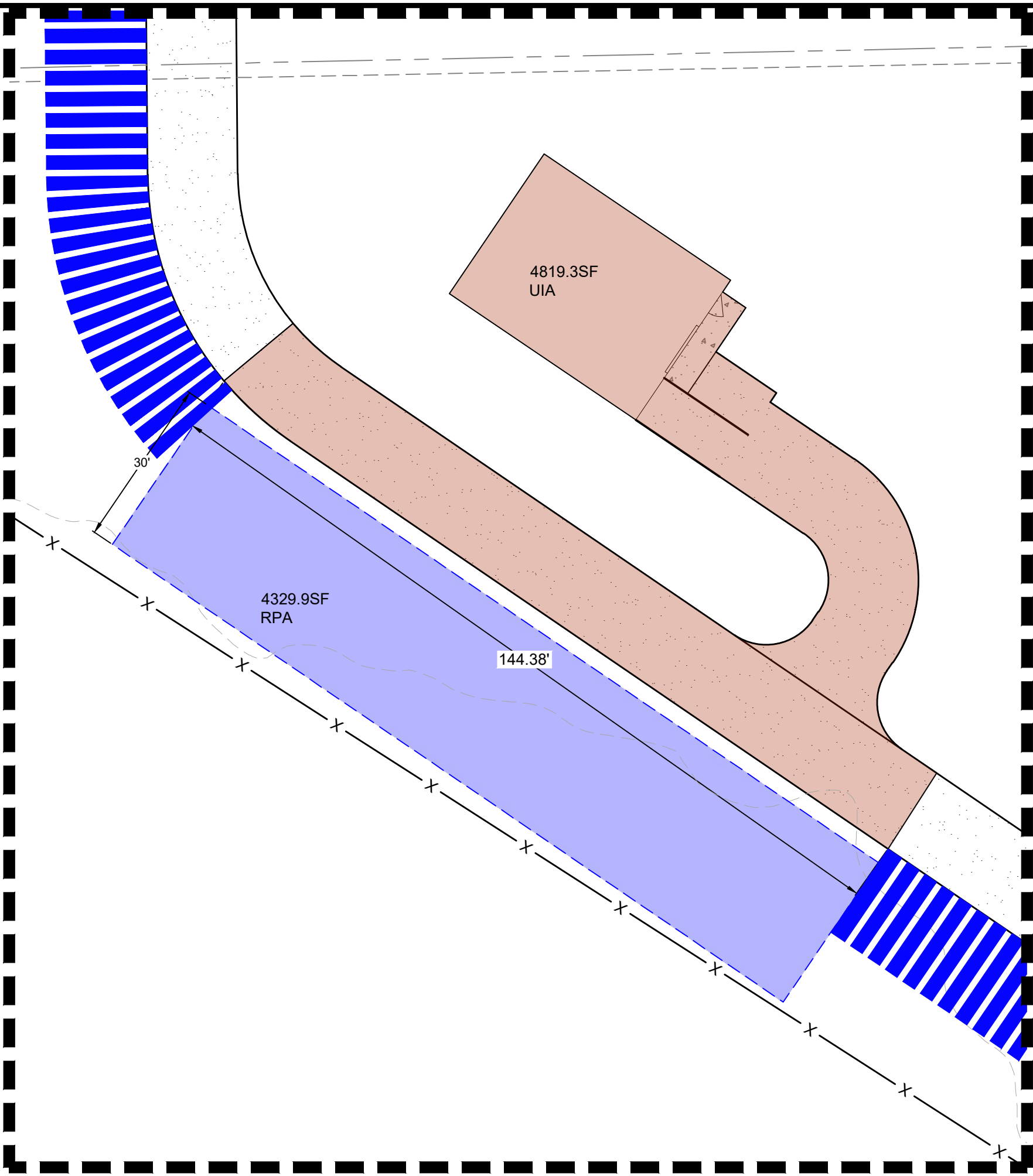
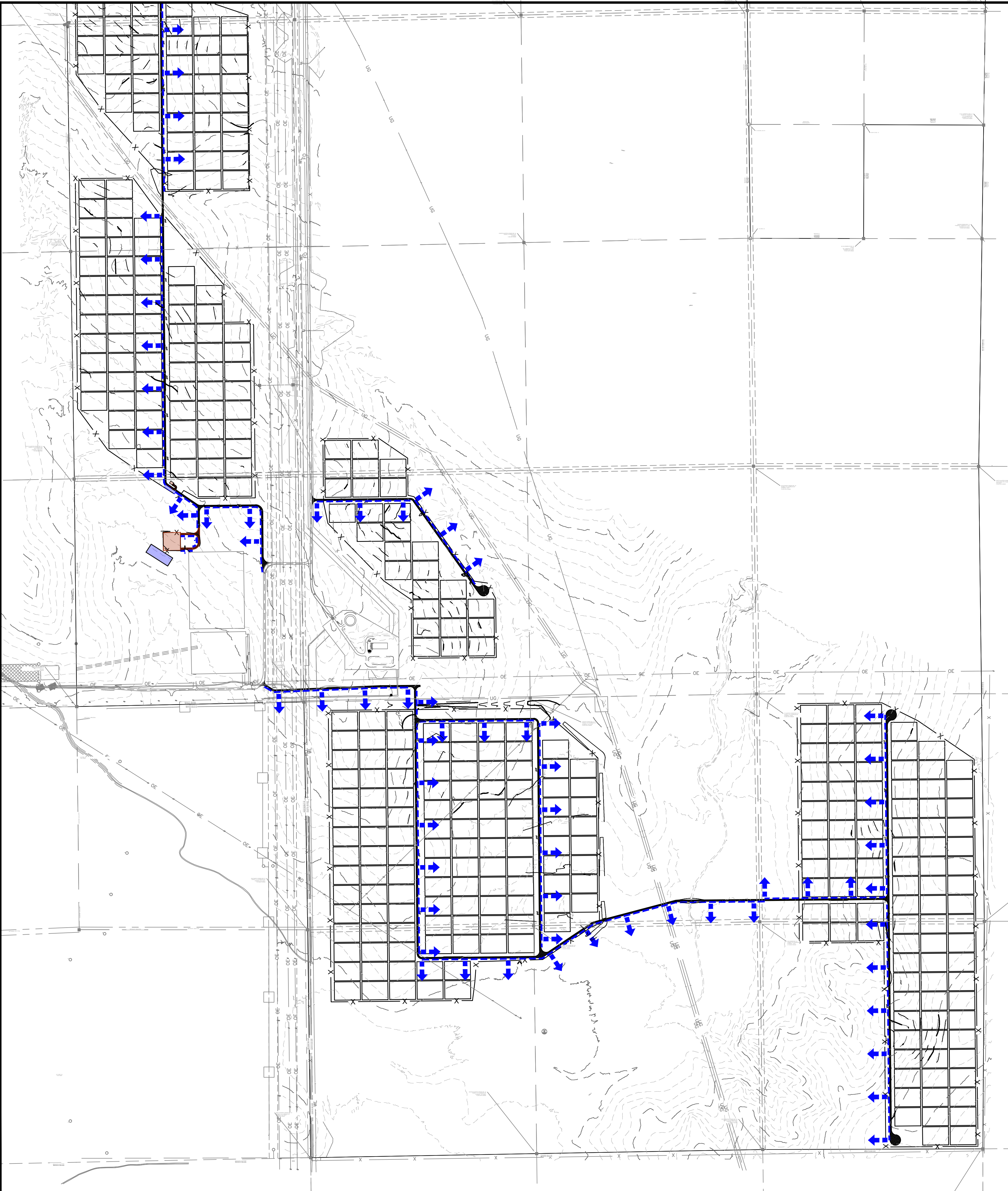
CALCULATED WQCV RESULTS

| Area ID                           | Typ  | O&M  | Substation 1 | Substation 2 | Substation 3 |  |  |  |
|-----------------------------------|------|------|--------------|--------------|--------------|--|--|--|
| WQCV (ft <sup>3</sup> )           | 83   | 181  | 1750         | 388          | 92           |  |  |  |
| WQCV Reduction (ft <sup>3</sup> ) | 83   | 181  | 1750         | 388          | 92           |  |  |  |
| WQCV Reduction (%)                | 100% | 100% | 100%         | 100%         | 100%         |  |  |  |
| Untreated WQCV (ft <sup>3</sup> ) | 0    | 0    | 0            | 0            | 0            |  |  |  |

CALCULATED DESIGN POINT RESULTS (sums results from all columns with the same Downstream Design Point ID)

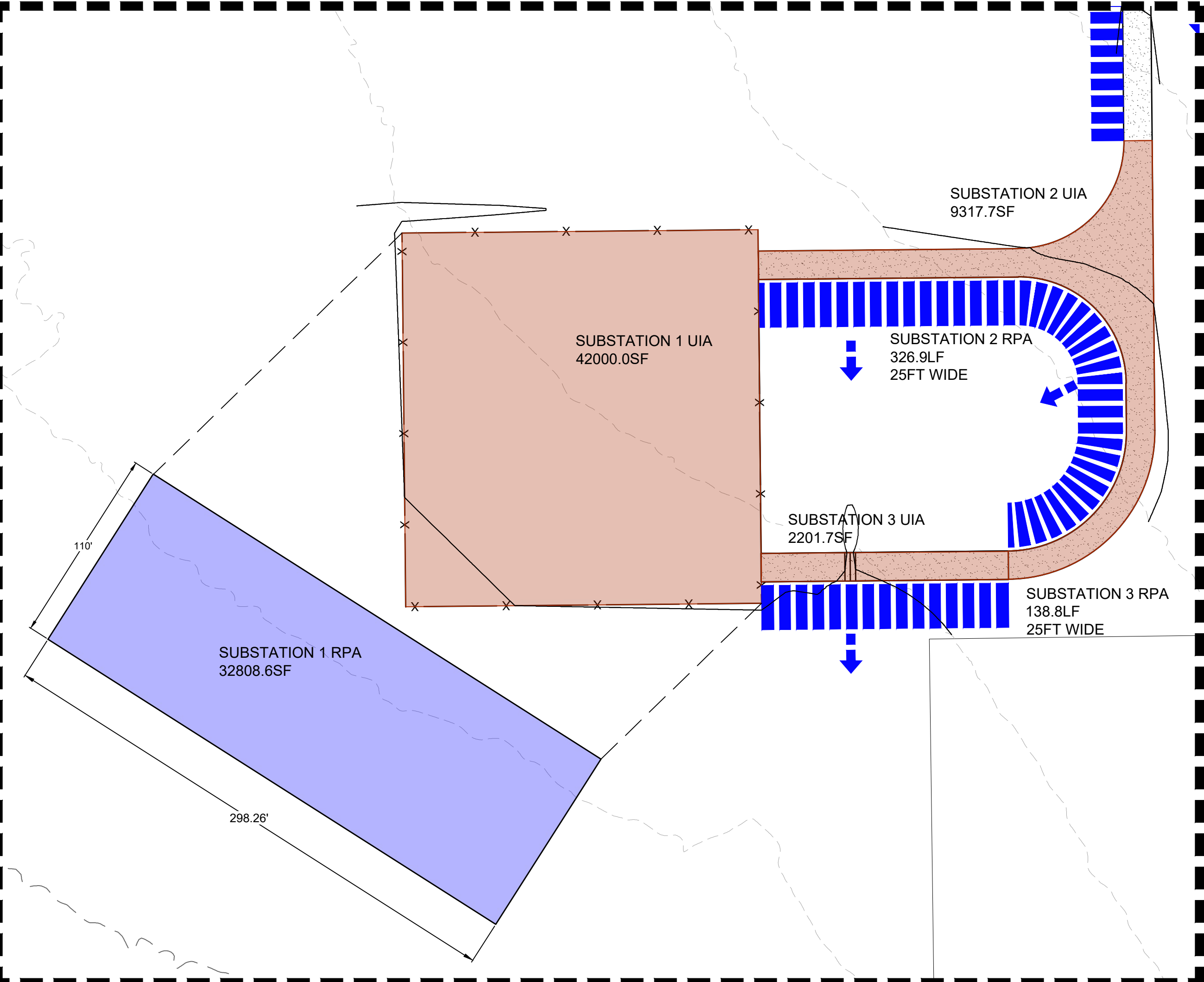
| Downstream Design Point ID               | Typ   | O&M   | SUB    |  |  |  |  |  |
|--|-------|-------|--------|--|--|--|--|--|
| DCIA (ft <sup>2</sup> )                  | 0     | 0     | 0      |  |  |  |  |  |
| UIA (ft <sup>2</sup> )                   | 2,000 | 4,338 | 53,520 |  |  |  |  |  |
| RPA (ft <sup>2</sup> )                   | 1,800 | 4,329 | 44,451 |  |  |  |  |  |
| SPA (ft <sup>2</sup> )                   | 0     | 0     | 0      |  |  |  |  |  |
| Total Area (ft <sup>2</sup> )            | 3,800 | 8,667 | 97,971 |  |  |  |  |  |
| Total Impervious Area (ft <sup>2</sup> ) | 2,000 | 4,338 | 53,520 |  |  |  |  |  |
| WQCV (ft <sup>3</sup> )                  | 83    | 181   | 2,230  |  |  |  |  |  |
| WQCV Reduction (ft <sup>3</sup> )        | 83    | 181   | 2,230  |  |  |  |  |  |
| WQCV Reduction (%)                       | 100%  | 100%  | 100%   |  |  |  |  |  |
| Untreated WQCV (ft <sup>3</sup> )        | 0     | 0     | 0      |  |  |  |  |  |





OPERATIONS AND MAINTENANCE

SCALE: 1"=20'



SUBSTATION

SCALE: 1"=60'

LEGEND

- DRAINAGE WAY
- FLOW DIRECTION

NOTES:

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- AN 18' WIDE RECEIVING PERVIOUS AREA (RPA) WILL BE PROVIDED ADJACENT TO ALL ROADWAYS.

LAND DEVELOPMENT  
ENERGY  
PUBLIC INFRASTRUCTURE

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RUNOFF REDUCTION

PIKE SOLAR

DATE: 09/11/21  
CREATED BY: TP  
JOB NO.  
20-194  
SHEET  
2