



## civilsolutionsgroup inc.

February 16, 2023

To: Albert Sung, P.E., Flood Control Project Engineer  
From: Civil Solutions Group

Subject: Review Responses to Technical Drainage Study for Stonebridge Stake Center

Albert,

The following responses are in regard to the initial Drainage Study comments. The date of review for these comments was February 13, 2023

For clarity, the comment made in the Drainage Study Review are shown below in italics. Our response follows in the standard font.

*1 Second Request: Exhibits D & E: The texts are too small and illegible. The engineer should use full size sheets (24"x36") in the next submittal.*

*The full size plans had not been provided in the last submittal.*

Full size plot of these sheets are included.

*2. Second Request: Sheet CG-01: Storm drain connecting DI#2 to SDMH#2 has 20.42ft length however the StormCAD profile shows 24.1ft. Revise accordingly.*

*The revised plan shows the length to 21.34', however, the StormCAD profile now shows 25.20'. The comment still has not been resolved satisfactorily.*

The lengths and slopes of the proposed storm drain pipe system have been mirrored in the updated StormCAD analysis and profiles.

*3. Second Request: Sheet CG-02: Storm drain connecting DI#3 to DI#4 has 10.08ft length and 20.3% slope however the StormCAD profile shows 13.44 ft and 19.90%. Revise accordingly.*

*The revised plan shows the length of 10.58', however, the StormCAD profile now shows 13.62'. the comment still has not been resolved satisfactorily.*

The lengths and slopes of the proposed storm drain pipe system have been mirrored in the updated StormCAD analysis and profiles.

*4. Second Request: On the grading plans, show and identify an existing storm drain system in Crossbridge Drive and label with pipe size and City of Las Vegas recorded plan number. Identify all pertinent existing drop inlets and with size information.*



## civilsolutionsgroup inc.

The existing storm drain elements in Crossbridge Drive adjacent to the proposed site have been labeled and identified with the City of Las Vegas plan number.

5. *Second Request: Provide BMP design calculations and BMP facilities such as landscape swales or sand/oil interceptors for the proposed site parking lot and LIDs per Section 1500 from the Clark County Regional Flood Control District's Hydrologic Criteria and Drainage Design Manual.*

*It is not clear how the BMP has been provided. Provide calculations and a sub-chapter to clearly address the provision of BMP in the next submittal.*

Site BMP design calculations are included in the updated Technical Drainage Study for Stonebridge Stake Center. The parking lot will drain through two hydrodynamic separators prior to discharging into the collecting storm drain system. Area 2 & Area 7 will contain the hydrodynamic separators. Area 3 will employ an oil/sediment "snout" on the outlet of the drop inlet within this basin to provide a physical barrier to hydrocarbon and sediment transport to the downstream storm drain system. The remainder of the site will flow into and through landscaped drainage swales prior to entering the storm drain system.

Please feel free to contact me with questions as needed.

Sincerely,

**DAYTON LAW, PE, MBA, COO**

MOBILE [435.890.4190](tel:435.890.4190)

OFFICE [801.874.1432](tel:801.874.1432) EXT 711 (UTAH VALLEY)

[dlaw@civilsolutionsgroup.net](mailto:dlaw@civilsolutionsgroup.net)