DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(Rev. 12/05)

PROJECT TITLE: Broadstone Santa Monica ZONE MAP/DRG.FILE# D-18-Z
DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: Tract 2, Santa Monica Place
CITY ADDRESS: Santa Monica Ave. & San Pedro Blvd

ENGINEERING FIRM: ISAACSON AND ARFMAN
ADDRESS: 128 MONROE N.E.
CITY, STATE: ALBUQUERQUE, NM
CONTACT: Åsa Nilsson-Weber
PHONE: 268-8828
ZIP CODE: 87108

OWNER: Titan Development
ADDRESS: 6300 Riverside Plaza Lane NW - #200
CITY, STATE: Albuquerque, NM
CONTACT: Kurt Browning
PHONE:
ZIP CODE: 87120

ARCHITECT: _____
ADDRESS: _____
CITY, STATE: _____
CONTACT: _____
PHONE: _____
ZIP CODE: _____

SURVEYOR: Surv-Tek, Inc.
ADDRESS: _____
CITY, STATE: _____
CONTACT: Russ P. Hugg,
PHONE: 897-3366
ZIP CODE: _____

CONTRACTOR: N/A
ADDRESS: _____
CITY, STATE: _____
CONTACT: _____
PHONE: _____
ZIP CODE: _____

TYPE OF SUBMITTAL:
- ☐ ___ DRAINAGE REPORT
- ☐ ___ DRAINAGE PLAN 1st SUBMITTAL
- ☒ ___ DRAINAGE PLAN RESUBMITTAL
- ☐ ___ CONCEPTUAL G & D PLAN
- ☒ ___ GRADING PLAN
- ☐ ___ EROSION CONTROL PLAN
- ☐ ___ ENGINEER'S CERT (HYDROLOGY)
- ☐ ___ CLOMR/LOMR
- ☐ ___ TRAFFIC CIRCULATION LAYOUT
- ☐ ___ ENGINEER/ARCHITECT CERT (TCL)
- ☐ ___ ENGINEER/ARCHITECT CERT (DRB S.P.)
- ☐ ___ ENGINEER/ARCHITECT CERT (AA)
- ☒ ___ OTHER (SPECIFY) Supplemental Calculations

CHECK TYPE OF APPROVAL SOUGHT:
- ☐ _____ SIA/FINANCIAL GUARANTEE RELEASE
- ☐ _____ PRELIMINARY PLAT APPROVAL
- ☐ _____ S. DEV. PLAN FOR SUB'D APPROVAL
- ☐ _____ S. DEV. FOR BLDG. PERMIT APPROVAL
- ☐ _____ SECTOR PLAN APPROVAL
- ☐ _____ FINAL PLAT APPROVAL
- ☐ _____ FOUNDATION PERMIT APPROVAL
- ☒ _____ BUILDING PERMIT APPROVAL
- ☐ _____ CERTIFICATE OF OCCUPANCY (PERM)
- ☐ _____ CERTIFICATE OF OCCUPANCY (TEMP)
- ☒ _____ GRADING PERMIT APPROVAL
- ☐ _____ PAVING PERMIT APPROVAL
- ☒ _____ WORK ORDER APPROVAL
- ☐ _____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:
- ☒ YES
- ☐ NO
- ☐ COPY PROVIDED

SUBMITTED BY: Åsa Nilsson-Weber, PE
Isaacson & Arfman, P.A.
DATE: April 10, 2012

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope to the proposed development define the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.

2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres.

3. **Drainage Report**: Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.

Isaacson & Arfman, P.A. Consulting Engineering Associates

*Thomas O. Isaacson, PE (Ret.) & LS (Ret.) * Fred C. Arfman, PE * Åsa Nilsson-Weber, PE*

April 10, 2012

Mr. Curtis Cherne, P.E.
Planning Dept. Development
and Building Services
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87102

Re: Broadstone Santa Monica—D18/D054

Dear Mr. Cherne,

This letter is in reference to your comments for the referenced project dated 4/2/12 (attached). Please see below for responses to your comments.

1. The intent of the storm drain outfall structure is to dissipate the velocity of the storm drain discharge and overflow it to the south paved drive over a 6.5-foot wide weir. Flow remaining in the lower 6 inches will pass to the north via the proposed 4-inch drainline. The peak flow in the 4-inch pipe is 0.5 cfs and the remaining flows of 21.0 cfs discharges via the weir. See Supplemental Calculations for weir overflow and 4-inch orifice calculations. Based on these calculations, the water surface elevation will be 63.0—one foot above the flowline elevation. The curb adjacent to the weir will be 12 inches high with transitions to the top of wall elevation of 64.5.

2. Off-site contours have been referenced on the plan to clearly show the grade transition to the north. This includes the area at the northwest corner of the site.

3. All units have pitched roofs which drain to all sides. A shallow swale has been added on the west side of the northwest corner unit to pass roof discharge to the north.

4. Keyed note #8 has been modified to clearly indicate that all parking islands will have depressed landscaping to harvest stormwater which falls on them. These numerous water harvesting areas will help to reduce the peak flow within San Pedro. We have not provided curb cuts in the islands for the following reasons.

    a. Landscaping would need to be depressed more than 6" below top of curb to accept and retain street flow.

    b. Openings would permit stormwater to pass from the landscaping to the pavement.

c. None of the islands have capacity to detain significant additional volume.

d. Based on the soils report for this site, we do not want to introduce additional detention/ infiltration within the building areas.

Please call or email me @ asaw@iacivil.com with any additional questions or comments. Thank you.

Sincerely,
ISAACSON & ARFMAN P.A.

Åsa Nilsson-Weber, P.E.

Attachments:
Grading Plans & Supplemental Calculations

CITY OF ALBUQUERQUE

April 2, 2012

Asa Nilsson-Weber, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. NE
Albuquerque, NM 87108

Re: Broadstone Santa Monica Place
Grading and Drainage Plan
Engineer's Stamp dated 3-7-2012 (D18/D054)

Dear Ms. Nilsson-Weber,

Based upon the information provided in your submittal received 3-8-12, the above referenced report can not be approved for Grading Permit and Building Permit until the following comments are addressed.

- Pond calculations are needed for the small pond just north of the entrance/exit on San Pedro. What is the WSE?
- How are the proposed contours tying in with the contours to the north of this site at the NW corner?
- Provide the direction of roof flows for the units in the NW corner. These flows should not drain over the sidewalk.
- Are all landscape areas being depressed as well as the areas with sidewalk culverts? Can the small islands in the parking lots contain a 1' cut in the curb to accept flows? This would assist in lowering the flows entering San Pedro for the first 6 hours and would also help with the new EPA regulations and the MS 4 permit coming in the near future.

If you have any questions, you can contact me at 924-3986, or Rudy Rael at 924-3977.

Sincerely,

Curtis Cherne, P.E.
Principal Engineer, Planning Dept.
Development and Building Services

Copy: e-mail

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

APRIL 10, 2012

SUPPLEMENTAL CALCULATIONS

FOR

BROADSTONE SANTA MONICA
San Pedro Blvd. and Santa Monica Ave. NE

BY

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates

Thomas O. Isaacson, PE (Ret.) & LS (Ret)
Fred C. Arfman, PE
Åsa Nilsson-Weber, PE

I&A Project No. 1900

ÅSA M. NILSSON-WEBER NEW MEXICO 17631 LICENSED PROFESSIONAL ENGINEER

Prepared by:

Åsa Nilsson-Weber 4-10-12

Åsa Nilsson-Weber, PE Date

- **WEIR CALCULATIONS FOR STILLING BASIN NORTH OF SAN PEDRO ENTRANCE**

- **ORIFICE CALCULATIONS FOR 4" PIPE FROM STILLING BASIN TO SIDEWALK CULVERT NORTH OF SAN PEDRO ENTRANCE**

Weir Report

OVERFLOW WEIR AT CONCRETE STILLING BASIN @ NW CORNER

Rectangular Weir

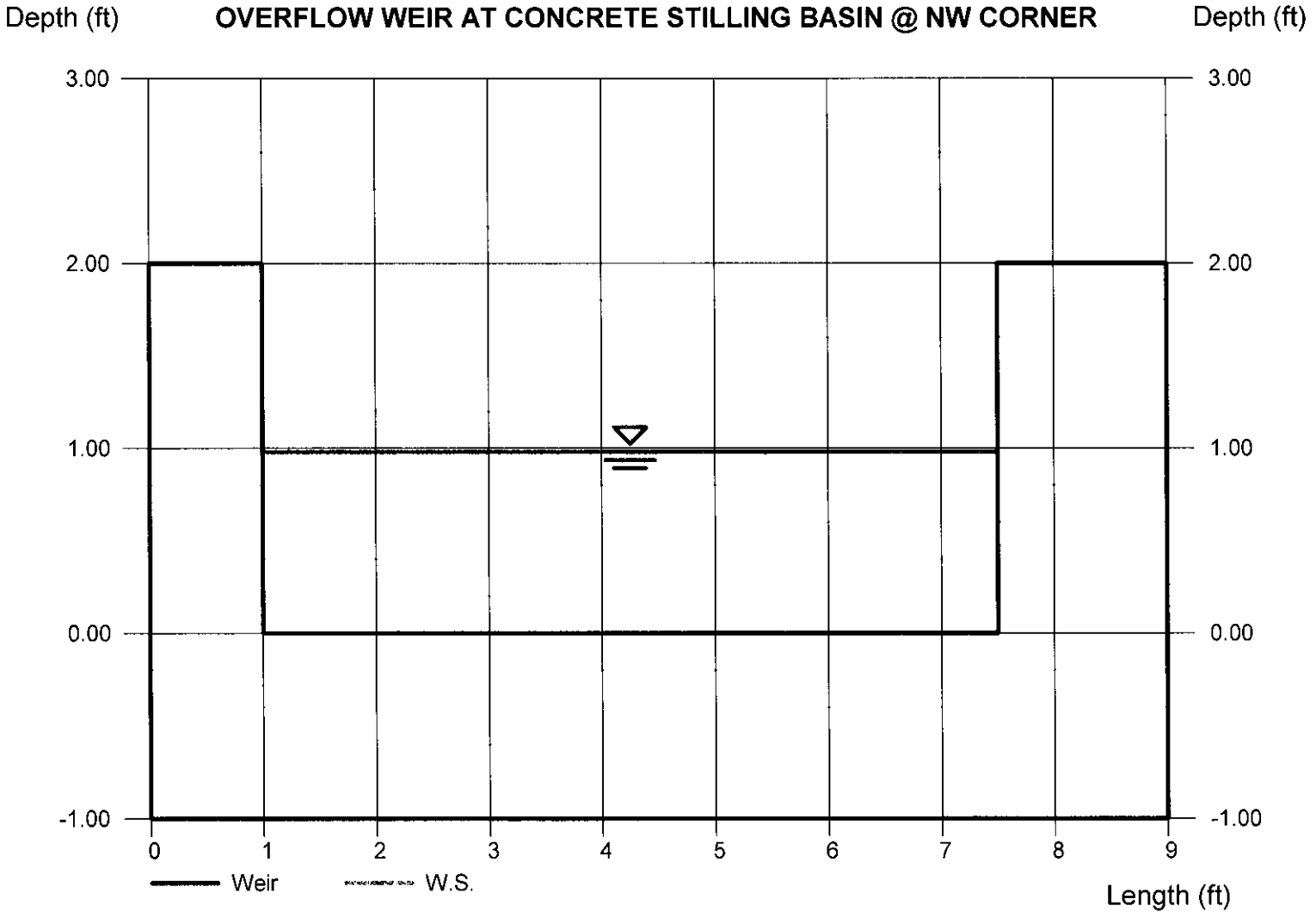
Crest	= Sharp
Bottom Length (ft)	= 6.50
Total Depth (ft)	= 2.00

Calculations

Weir Coeff. Cw	= 3.33
Compute by:	Known Q
Known Q (cfs)	= 21.00

Highlighted

Depth (ft)	= 0.98
Q (cfs)	= 21.00
Area (sqft)	= 6.37
Velocity (ft/s)	= 3.30
Top Width (ft)	= 6.50



BROADSTONE SANTA MONICA

ORIFICE EQUATION - 4" PIPE FROM STILLING BASIN TO SIDEWALK CULVERT

The Orifice Equation is used to calculate the Flow at the opening of a Channel

$Q = C*A * (2*g*h) ^ 0.5$

Where	Q	=	0.52	cfs	
	C	=	0.6		(indicating that the opening will function at 60% capacity)
	A	=	0.0872665	sq.ft.	
	g	=	32.2	ft/sec^2	
	h	=	1.55	ft	depth of flow at opening from the center of culvert

Inv 4" pipe=61.3; WSEL=63.0