

CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director



Mayor Timothy M. Keller

July 31, 2018

Shawn Biazar
SBS Construction & Engineering, LLC.
10209 Snowflake Ct. NW
Albuquerque, NM 87114

RE: **1105 Yale Blvd SE**
Grading Plan
Engineer's Stamp Date: 7/23/18
Hydrology File: L15D062

Dear Mr. Biazar:

Based on the submittal received on 7/23/18, the Grading Plan cannot be approved until the following are corrected:

PO Box 1293

Prior to Building Permit:

Albuquerque

NM 87103

www.cabq.gov

1. The site must demonstrate adequate downstream capacity per § 14-5-2-12(G) of the Albuquerque Code of Ordinances. This property has never drained to Yale and its runoff was not anticipated in sizing infrastructure on Yale. This property will likely have to retain all runoff on-site (100-yr, 10 volume) or obtain a drainage easement from a neighbor to drain south or east.
2. Provide wall sections for all cases around this property. Show property lines, walls, footers, horizontal and vertical dimensions, and existing and proposed elevations on both sides of the walls. In accordance with DPM Ch.22, section 5 part B, grading and wall construction near the property line may not endanger adjacent property or constrain its use.
3. Provide structural details for the wall on the west property line. This wall will need to be designed for saturated conditions due to its proximity to the pond. Also show the maximum water surface elevation and provide 2.0' (minimum) freeboard around the pond.
4. Consider the constructability of a channel on a 0.2% slope. This will need to be surveyed as part of the Engineer's Certification and ripped out and replaced if not able to drain per plan.
5. The concrete channels need to provide 1.0' (minimum) of freeboard and manning's n for poured concrete is 0.13. The channel is sized as an 18" wide channel, but called out in plan view as 12" wide.
6. If the sidewalk culvert is to be built, an SO-19 Permit will be required and should be included on the request. Please include the [standard SO-19](#) notes on the grading plan.

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7. Add note on the plan that “No work shall be performed in the public ROW without an approved Work Order or Excavation Permit.”
8. A [Drainage Covenant \(No Public Easement\)](#) is required for the stormwater control pond. The original notarized form, exhibit A (legible on 8.5x11 paper), and recording fee (\$25, payable to Bernalillo County) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) or Madeline Carruthers (mtafoya@cabq.gov, 924-3997) regarding the routing and recording process for covenants.
9. Provide a subbasin delineation map and define the areas of impervious cover. First flush retention ponds must capture runoff from the impervious areas and the ponds must be sized for the areas draining to them. If unable to capture the first flush runoff, quantify the first flush bypass volume and state on plans. Payment of the Fee in Lieu (Amount = BypassVolume x \$8/cf) will then be required.
10. Is this project a DRB Site (site-plan controlled)? Use the [current DTIS version](#) (6/2018) when resubmitting.
11. For Information. Hydrology and Transportation files are available online through the City’s GIS Viewer 2.0: <https://www.cabq.gov/gis/advanced-map-viewer>. Turn on the *HydroTrans* layer: *Operational Layers > Albuquerque Layers > Sites > HydroTrans*. Select the desired polygon from the map and click *Link to Project Documents*.

Prior to Certificate of Occupancy (For Information):

1. Engineer’s Certification, per the DPM Chapter 22.7: *Engineer's Certification Checklist For Non-Subdivision* is required.
2. The Drainage Covenant must be recorded with Bernalillo County and a copy included with the Engineer’s Certification.
3. The sidewalk culverts (if needed) must be inspected and approved by storm drain maintenance (Jason Rodriguez, jtrodriguez@cabq.gov or 857-8607).

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 10/2015)

Project Title: 1105 YALE BLVD., SE GRADING PLAN Building Permit #: _____ Hydrology File #: _____

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: LOTS 7-9, BLOCK 2, CLAYTON HEIGHTS

City Address: 1105 YALE BLVD., SE

Applicant: SBS CONSTRUCTION AND ENGINEERING, LLC Contact: SHAWN BIAZAR

Address: 10209 SNOWFLAKE CT., NW, ALBUQUERQUE, NM 87114

Phone#: (505) 804-5013 Fax#: (505) 897-4996 E-mail: AECLLC@AOL.COM

Other Contact: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

- ☒ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

- ☐ ENGINEER/ARCHITECT CERTIFICATION
☐ CONCEPTUAL G & D PLAN
☒ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☒ DRAINAGE REPORT
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ OTHER (SPECIFY) _____

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY
☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☒ GRADING PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR

PRE-DESIGN MEETING?

_____ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ☐ Yes ☒ No

DATE SUBMITTED: 7-23-2018 By: SHAWN BIAZAR

COA STAFF: _____ ELECTRONIC SUBMITTAL RECEIVED: _____

Location
This project is located at 1105 Yale Boulevard containing 0.5210 acre. See attached portion of Vicinity Map for exact location of the site.

Purpose
The purpose of this grading plan and drainage calculations is to present a grading and drainage solution for new buildings and improvement for this project.

Existing Drainage Conditions
This lot currently drains to the back to the adjacent property to the west. The site does not fall within a designated floodplain.

Proposed Conditions and On-Site Drainage Management Plan
A retaining wall will be built in the back to raise the site and drain the runoff to front. The runoff will be retained partially in the back and will then overflow to the front via 18" wide concretet channels to the front. Then from there the runoff will drain to Yale Blvd. via a 12" sidewalk culvert. There is an existing inlets just south side of the side where the runoff from the site will drain to. Since this site is fairly close to this inlet will not impact the drainage capacity of the inlet. The runoff from this site will be in and out of the inlet prior to upper part of the basin reaching the inlet. The rear lot pond volume is desinged to hold more than the twice of the required first flush volume.

VOLUME CALCULATIONS FOR 10 DAY STORM
(UNDER EXISTING CONDITIONS)

| BASIN | AREA (SF) | AREA (AC) | AREA (MI ²) |
|---------|-----------|-----------|-------------------------|
| ON-SITE | 22,148.25 | 0.5085 | 0.000794 |

$E = \frac{EA(AA) + EB(AB) + EC(AC) + ED(AD)}{AA + AB + AC + AD}$

$V-360 = E(AA + AB + AC + AD)$

EA = 0.53
EB = 0.78
EC = 1.13
ED = 2.12

AA = 0.00%
AB = 100.00%
AC = 0.00%
AD = 0.00%

P-60 = 2.01
P-360 = 2.35
P-1440 = 2.75
P-10 Day = 3.95

$E = \frac{0.78 \text{ IN}}{1,439.64 \text{ CF}}$

A = 1.56 CFS/AC
B = 2.28 CFS/AC
C = 3.14 CFS/AC
D = 4.70 CFS/AC

$TOTAL \text{ QP} = QPAAA + QPBAB + QPCAC + QPDAD$

$QP = 1.16 \text{ CFS}$

PONDING VOLUME REQUIREMENTS (90TH PERCENTILE/FIRST FLUSH)

$VOLUME \text{ REQUIRED} = 0.34 \text{ INCHES} \times IMPERVIOUS \text{ AREA} = (0.34/12 \times 18,604.53) = 527.13 \text{ CF}$

PONDING VOLUME CALCULATION

AREA @ ELEV. 5159.75 = 2,055.02 SF
AREA @ ELEV. 5158.25 = 662.72 SF
POND VOLUME=(2,055.02+662.72)/2*1.50=2,038.31 CF

SIDEWALK CULVERT CALCULATIONS

12" Sidewalk Culvert Flow Capacity Calculation Using Orifice Equation

Orifice Equation: $Q = CA\sqrt{2gh}$
 $h(\text{head}) = 0.67'$
 $A = 0.67 \text{ sf}$
 $g = 32.20$

$Q = 0.60 \times 0.67 \sqrt{2 \times 32.2 \times 0.67}$
 $= 2.64 \text{ cfs}$

2.64 cfs > 2.37 cfs (Entire runoff generated from site)

GENERAL NOTES:

- 1: CONTOUR INTERVAL IS HALF (1.00) FOOT.
- 2: ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE CONTROL STATION 7-L15, HAVING AN ELEVATION OF 5164.135 FEET ABOVE SEA LEVEL..
- 3: UTILITIES SHOWN HEREON ARE IN THEIR APPROXIMATE LOCATION BASED ONLY ON ABOVE GROUND EVIDENCE FOUND IN THE FIELD AND AS-BUILT INFORMATION PROVIDED BY THE CLIENT. UTILITIES SHOWN HEREON, WHETHER INDICATED AS ABANDONED OR NOT, SHALL BE VERIFIED BY OTHERS FOR EXACT LOCATION AND/ OR DEPTH PRIOR TO EXCAVATION OR DESIGN CON-SIDERATIONS.
- 4: THIS IS NOT A BOUNDARY SURVEY, BEARINGS ARE ASSUMED. DISTANCES AND FOUND PROPERTY CORNERS ARE FOR INFORMATIONAL PURPOSES ONLY.
- 5: SLOPES ARE AT 3:1 MAXIMUM.
- 6: ADD 5100 TO ALL PROPOSED SPOT ELEVATIONS.

CHANNEL FLOW DEPTH ANALYSIS

Rectangular Channel Analysis & Design

Open Channel - Uniform flow

Worksheet Name: 1105 Yale Blvd.

Description: 18" Wide, 8" Deep Concrete Channel

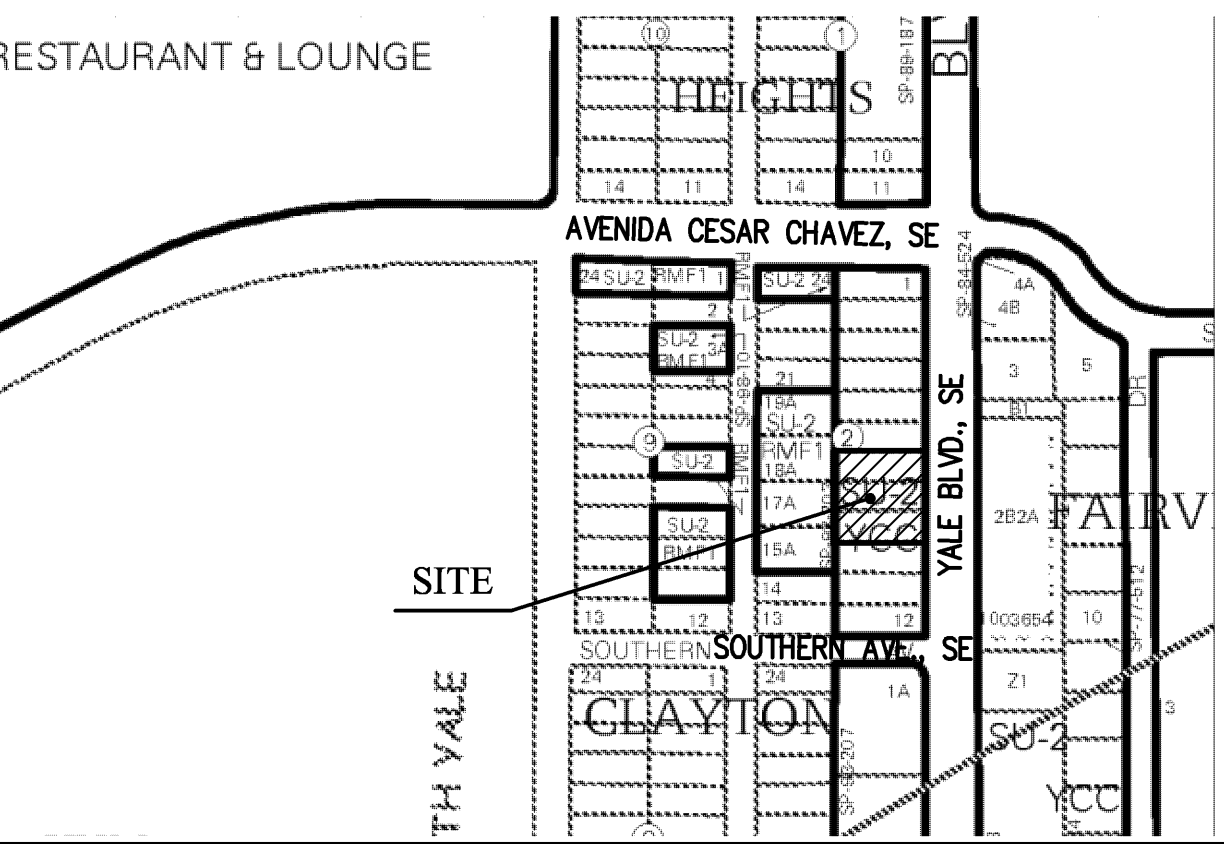
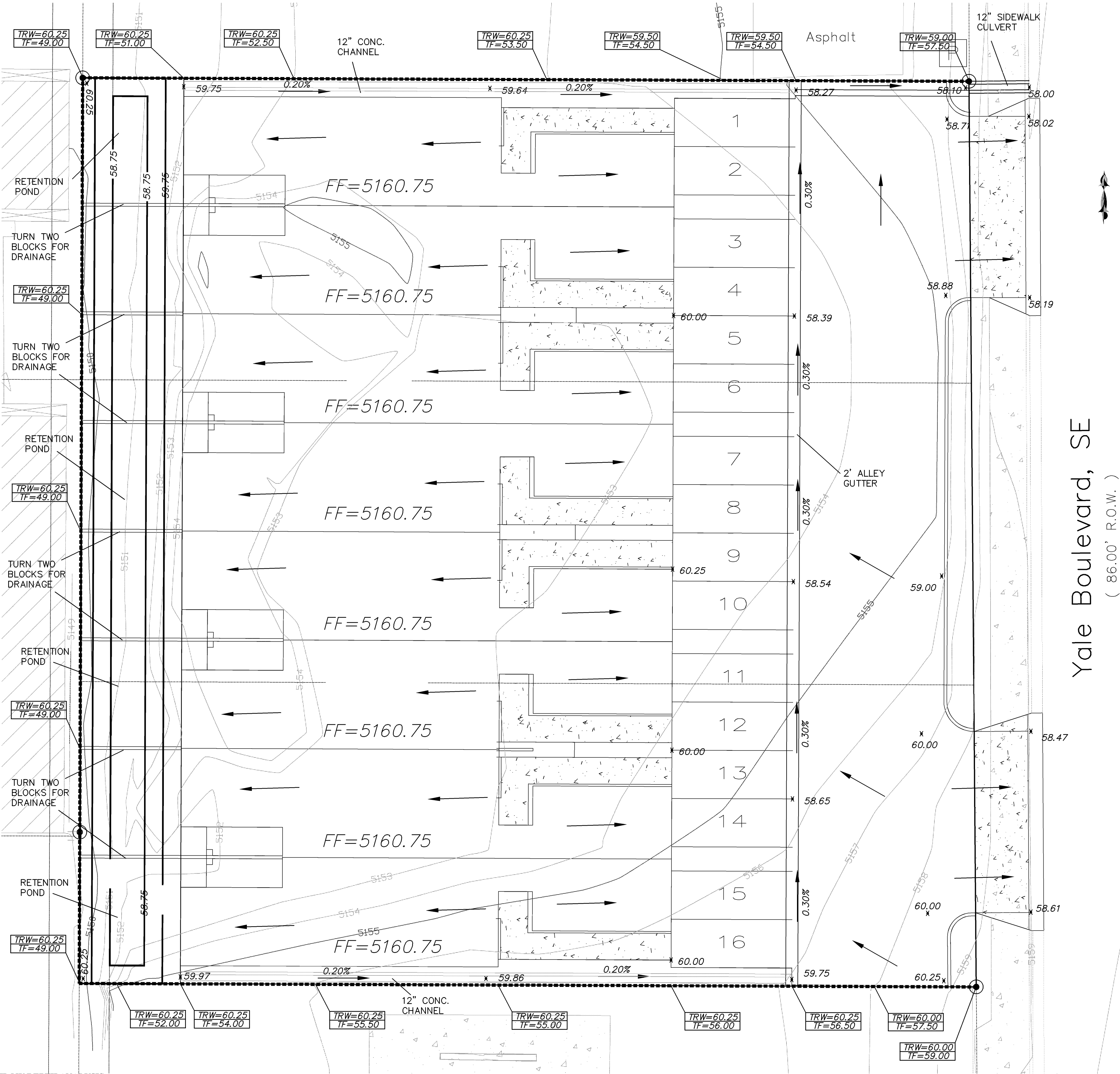
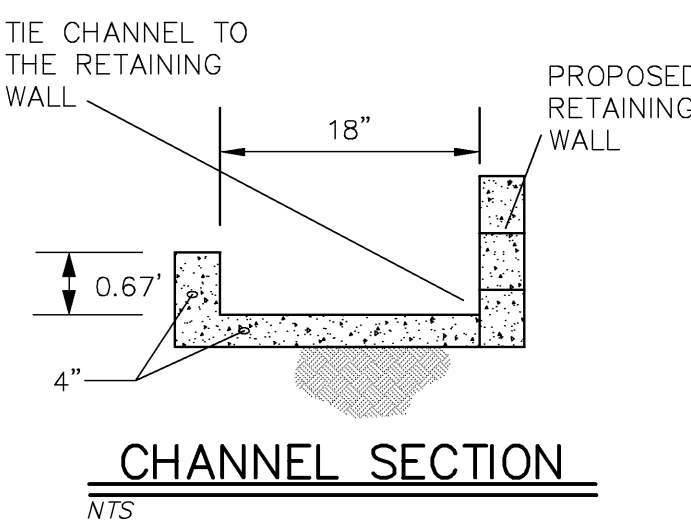
Solve ForDepth

Bottom Width... 1.50 ft
Manning's n... 0.012
Channel Slope... 0.002 ft/ft
Depth..... 0.60 ft
Discharge..... 2.37 cfs

Velocity..... 2.56 fps
Flow Area..... 0.89 sf
Flow Top Width... 1.50 ft
Wetted Perimeter 2.69 ft
Critical Depth... 0.43 ft
Critical Slope... 0.0051 ft/ft
Froude Number... 0.61

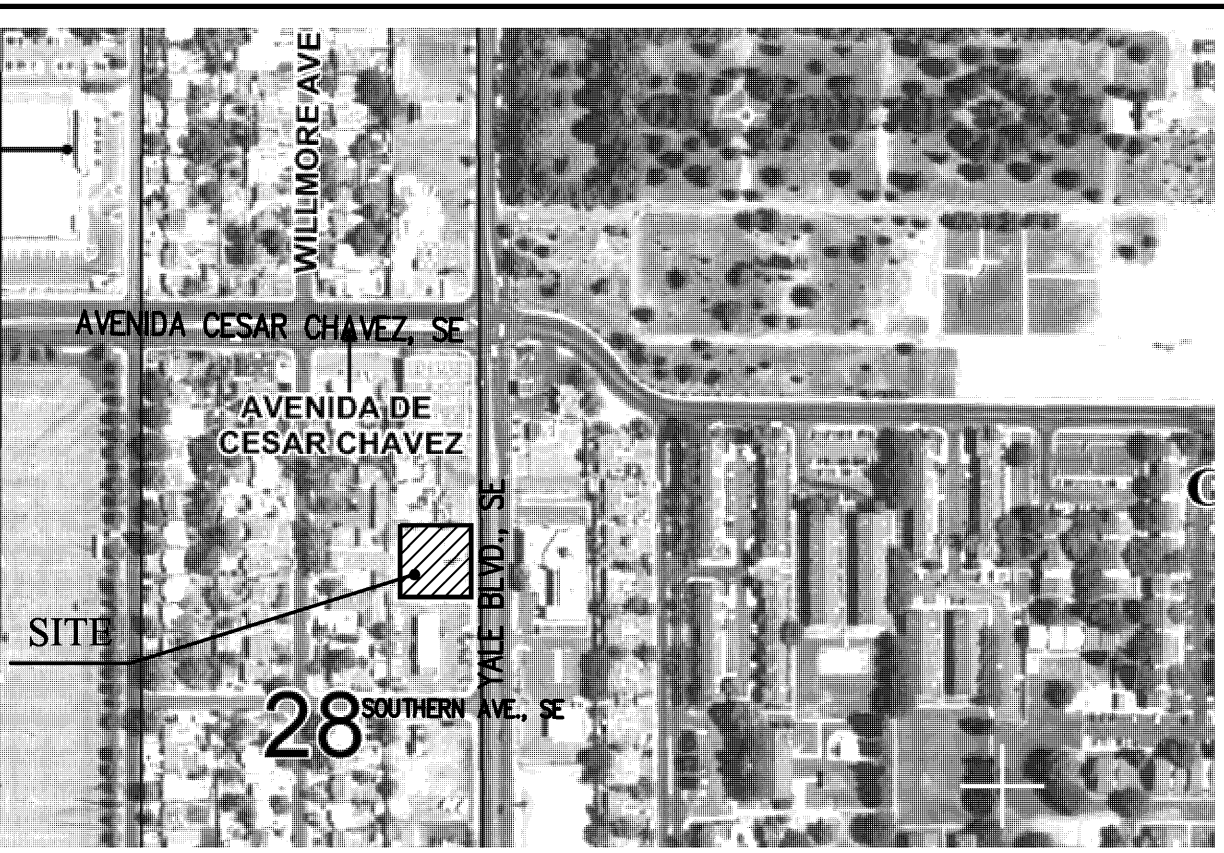
Open Channel Flow Module, Version 3.13 (c)

Haestad Methods, Inc. • 37 Brookside Rd • Waterbury, Ct 06708



VICINITY MAP:

L-15-Z



FIRM MAP:
DATED:

FM35001C0353H
08-16-2012

LEGAL DESCRIPTION:

LOT 2-B, BLOCK 10, MONKBRIDGE ADDITION

ADDRESS: 417 HEADINGLY AVE., NW

LEGEND

- 5030 EXISTING CONTOUR (MAJOR)
- 5029 EXISTING CONTOUR (MINOR)
- BOUNDARY LINE
- X 42.70 PROPOSED SPOT ELEVATION
- X 5029.16 EXISTING GRADE
- X 5075.65 EXISTING FLOWLINE ELEVATION
- PROPOSED RETAINING WALL
- BC=41.30 BOTTOM OF CHANEL
- TF=42.00 TOP OF FOOTING
- TRW=45.12 TOP OF RETAINING WALL
- HP HIGH POINT
- 42.40 AS-BUILT GRADES
- X 5141.50 AS-BUILT SPOT ELEVATIONS
- FF=5142.30
- FP=5142.25



**SBS CONSTRUCTION
AND ENGINEERING, LLC**

10209 SNOWFLAKE CT., NW
ALBUQUERQUE, NEW MEXICO 87114
(505)899-3570

GRAPHIC SCALE



LAST REVISION: 7-23-2018

**1105 YALE BLVD., SE
GRADING PLAN**

| DRAWING: | DRAWN BY: | DATE: | SHEET # |
|---------------|-----------|------------|---------|
| 201821-GD.DWG | SH-B | 07-23-2018 | 1 |