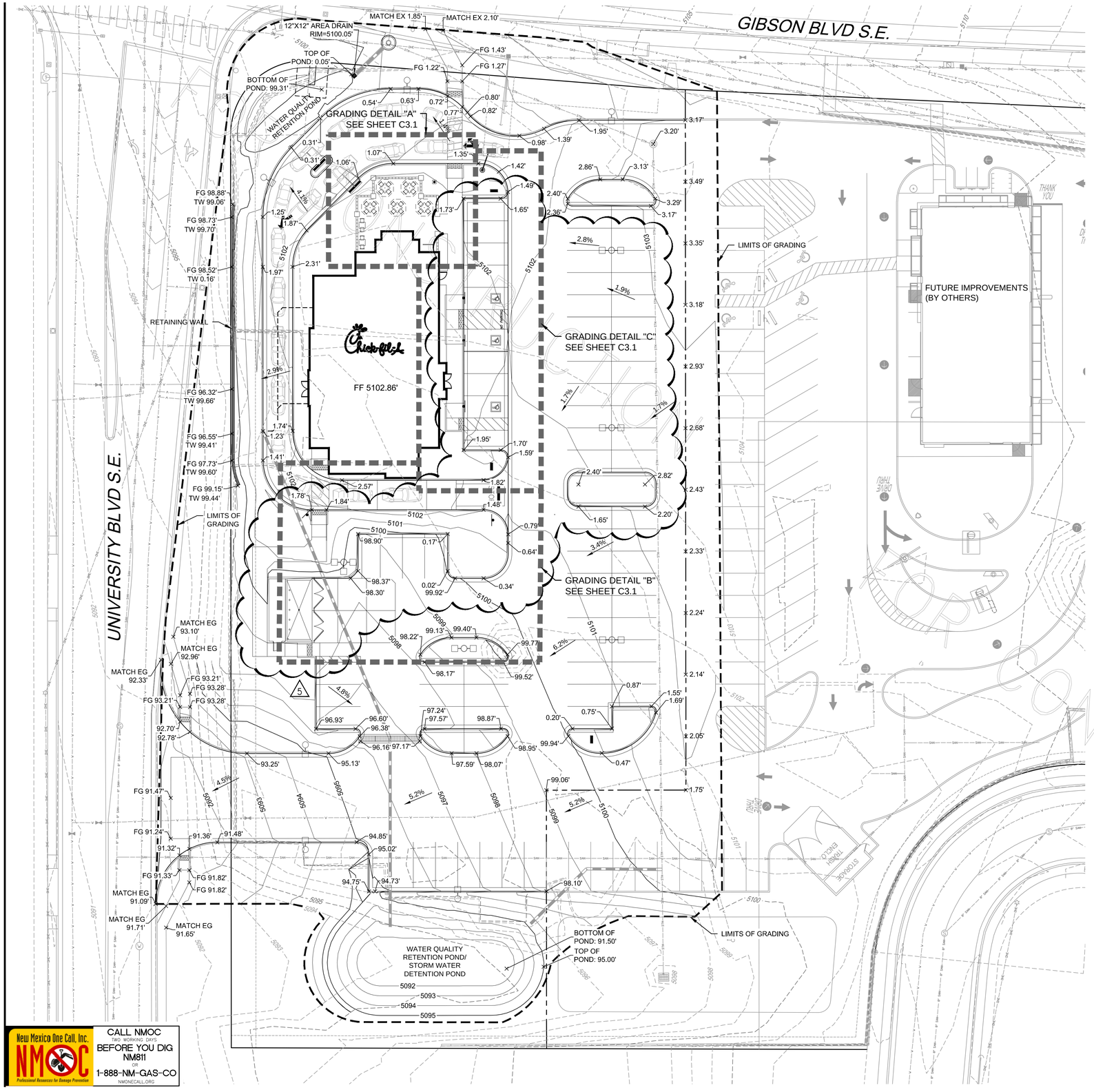
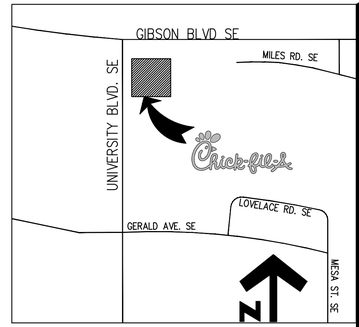


ZONE MAP M-15-Z



1 VICINITY MAP

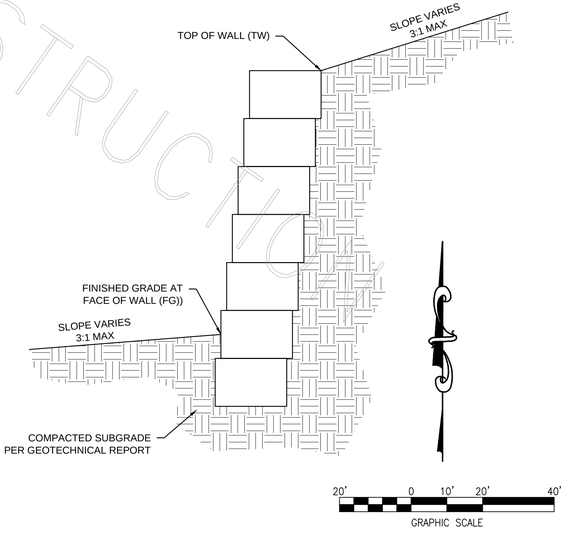
NOT TO SCALE

LEGEND:

	PROPERTY LINE
	LIMITS OF GRADING
5470	PROPOSED MAJOR CONTOUR
5469	PROPOSED MINOR CONTOUR
5470	EXISTING MAJOR CONTOUR
5469	EXISTING MINOR CONTOUR
69.41' ×	FLOWLINE SPOT ELEVATION
FF 70.50' ×	FINISHED FLOOR SPOT ELEVATION
FG 70.39' ×	FINISHED GRADE SPOT ELEVATION
TC 70.50' ×	TOP OF CURB SPOT ELEVATION
EG 69.57' ×	EXISTING GRADE SPOT ELEVATION
EX FL 70.18' ×	EXISTING FLOWLINE SPOT ELEVATION
1.1%	PROPOSED SLOPE ARROWS
EX 0.5%	EXISTING SLOPE ARROWS
	PROPOSED STORM MANHOLE
	PROPOSED STORM INLET
	PROPOSED STORM LINE

NOTES

1. ELEVATIONS SHOWN ARE FLOWLINE UNLESS SPECIFIED OTHERWISE
2. ADA PARKING STALLS SHALL HAVE A MAXIMUM OF 2.0% SLOPE IN ANY DIRECTION.
3. ELEVATIONS ARE 50XX OR 51XX



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Chick-fil-A
5200 Buffington Rd.
Atlanta, Georgia
30349-2998

Revisions:

Mark	Date	By	
5			REV. 5 TRASH ENCLOSURE & ADA PARKING STALLS

Mark Date By

Mark Date By

Seal

TROY D. KELTS NEW MEXICO 22102 PROFESSIONAL ENGINEER 7/29/15

MERRICK & COMPANY
5970 GREENWOOD PLAZA BLVD
GREENWOOD VILLAGE, CO 80111
303-751-0741

STORE
FSU SO8H-A-WC

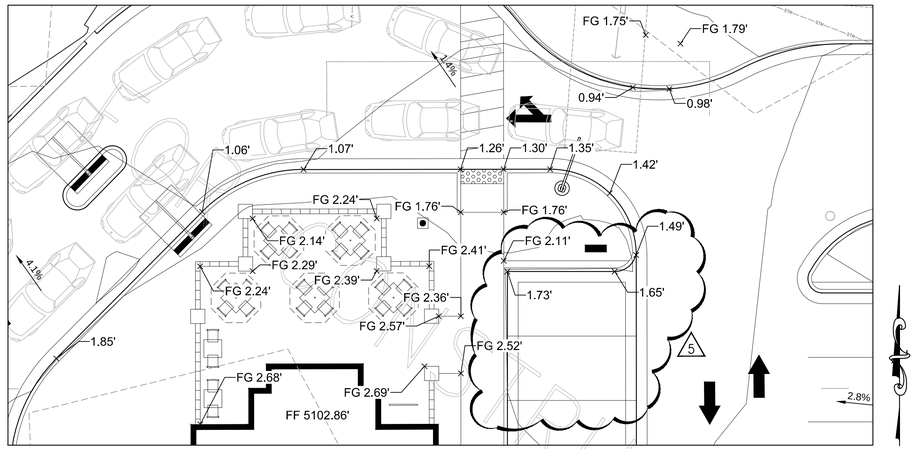
1600 GIBSON BLVD. SE
ALBUQUERQUE, NM

SHEET TITLE
GRADING PLAN

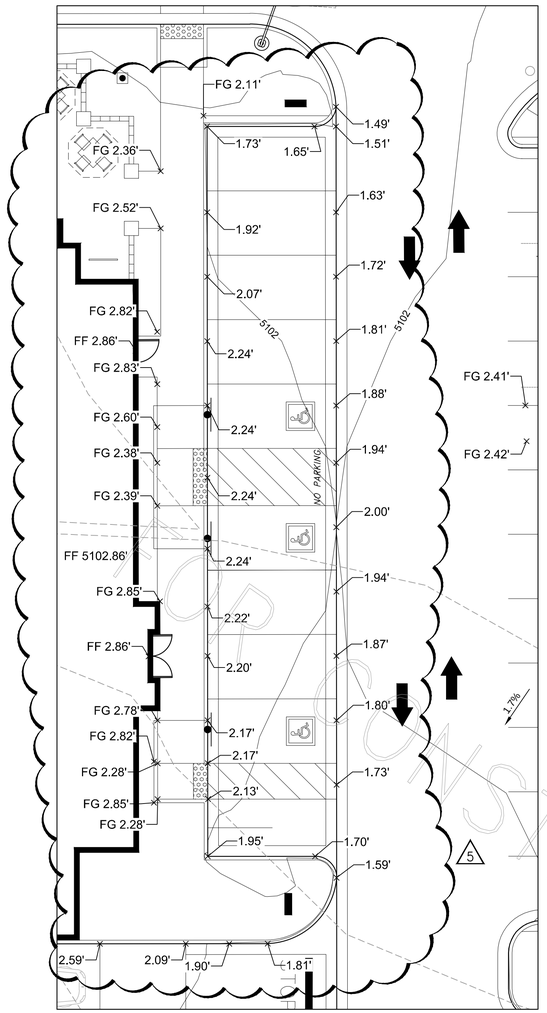
DWG EDITION ---

Job No. :65118373
Store : 03486
Date :07/01/15
Drawn By : TW
Checked By: TDK

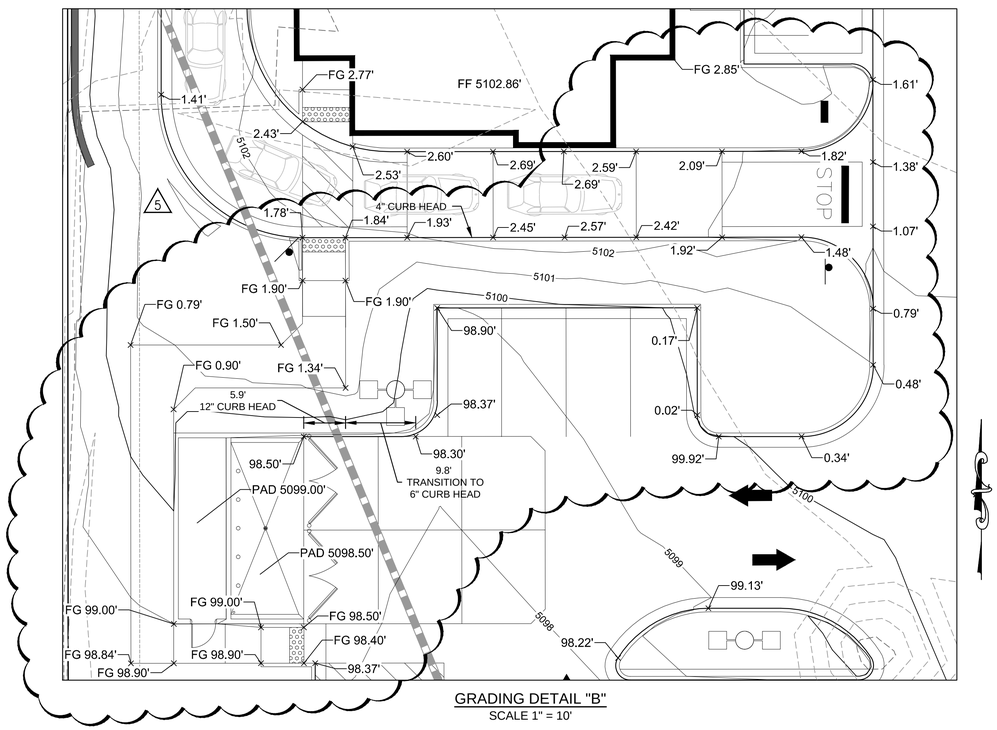
Sheet
C-3.0



GRADING DETAIL "A"
SCALE 1" = 10'



GRADING DETAIL "C"
SCALE 1" = 10'



GRADING DETAIL "B"
SCALE 1" = 10'

LEGEND:

	PROPERTY LINE
	LIMITS OF GRADING
5470	PROPOSED MAJOR CONTOUR
5469	PROPOSED MINOR CONTOUR
5470	EXISTING MAJOR CONTOUR
5469	EXISTING MINOR CONTOUR
69.41' ×	FLOWLINE SPOT ELEVATION
FF 70.50' ×	FINISHED FLOOR SPOT ELEVATION
FG 70.39' ×	FINISHED GRADE SPOT ELEVATION
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EG 69.57' ×	EXISTING GRADE SPOT ELEVATION
EX FL 70.18' ×	EXISTING FLOWLINE SPOT ELEVATION
1.1%	PROPOSED SLOPE ARROWS
EX 0.5%	EXISTING SLOPE ARROWS
ST	PROPOSED STORM MANHOLE
	PROPOSED STORM INLET
	PROPOSED STORM LINE
	EMERGENCY OVERFLOW PATHWAY

NOTES
1. ELEVATIONS SHOWN ARE FLOWLINE UNLESS SPECIFIED OTHERWISE
2. ADA PARKING STALLS SHALL HAVE A MAXIMUM OF 2.0% SLOPE IN ANY DIRECTION.
3. ELEVATIONS ARE 50XX OR 51XX

Chick-fil-A
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Revisions:

Mark	Date	By	
5			REV. 5 TRASH ENCLOSURE & ADA PARKING STALLS

Seal

TROY D. KELTS
NEW MEXICO
22102
PROFESSIONAL ENGINEER
7/28/15

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GREENWOOD VILLAGE, CO 80111
303-751-0741

STORE
FSU SO8H-A-WC

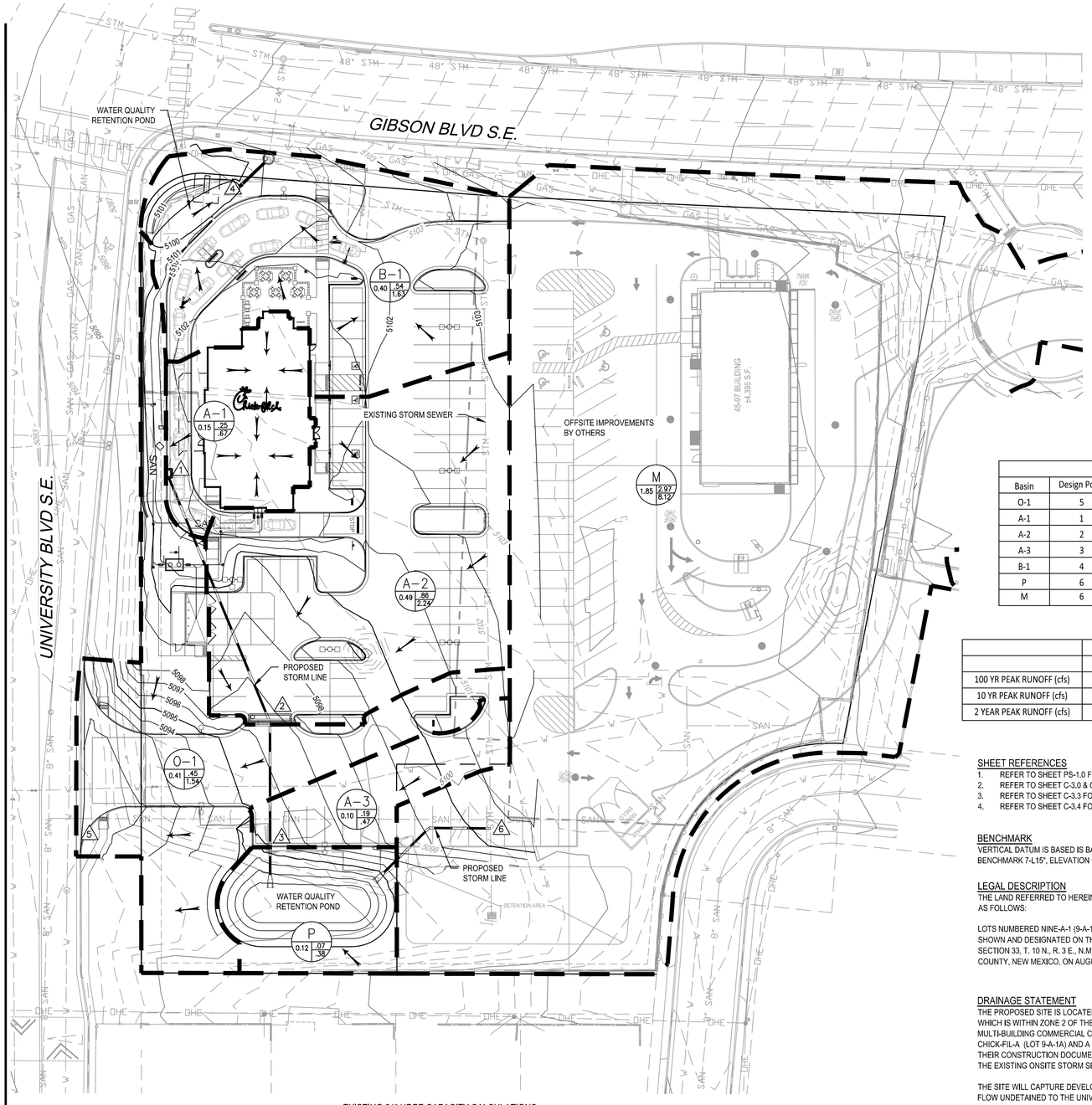
1600 GIBSON BLVD.
SE
ALBUQUERQUE, NM

SHEET TITLE
GRADING PLAN

DWG EDITION ---

Job No. : 65118373
Store : 03486
Date : 07/01/15
Drawn By : TW
Checked By: TDK

Sheet
C-3.1



LEGEND:

- PROPERTY LINE
- 6060 PROPOSED MAJOR CONTOUR
- 6060 PROPOSED MINOR CONTOUR
- 5410 EXISTING MAJOR CONTOUR
- 5406 EXISTING MINOR CONTOUR
- PROPOSED FLOW ARROW
- EXISTING FLOW ARROW
- DRAINAGE BASIN BOUNDARY LINE
- A1 DESIGN POINT
- PROPOSED STORM LINE
- PROPOSED STORM INLET
- RD PROPOSED ROOF DRAIN
- EXISTING TREE
- EXISTING STORM INLET
- ST EXISTING STORM
- XX XX EXISTING FENCE

A-1 / 0.55 / 0.47 / 1.63
- BASIN IDENTIFICATION
- 2-YEAR PEAK RUNOFF
- 100 YEAR PEAK RUNOFF
- BASIN AREA (ACRES)

Land Treatment (ac)					
Basin	Design Point	A	B	C	D
O-1	5	0	0	0.25	0.16
A-1	1	0	0	0.02	0.13
A-2	2	0	0	0.04	0.45
A-3	3	0	0	0	0.1
B-1	4	0	0	0.16	0.24
P	6	0	0	0.12	0
M	6	0	0	0.37	1.48

	BASIN						
	O-1	A-1	A-2	A-3	B-1	P	M
100 YR PEAK RUNOFF (cfs)	1.54	0.67	2.24	0.47	1.63	0.38	8.12
10 YR PEAK RUNOFF (cfs)	0.93	0.44	1.48	0.31	1.03	0.21	5.28
2 YEAR PEAK RUNOFF (cfs)	0.45	0.25	0.86	0.19	0.54	0.07	2.97

SHEET REFERENCES
1. REFER TO SHEET PS-1.0 FOR UTILITY LOCATION AND CONNECTION PLAN.
2. REFER TO SHEET C-3.0 & C-3.1 FOR SITE GRADING DETAILS.
3. REFER TO SHEET C-3.3 FOR STORM SEWER LOCATION AND CONNECTION PLAN.
4. REFER TO SHEET C-3.4 FOR EROSION CONTROL PLAN.

BENCHMARK
VERTICAL DATUM IS BASED IS BASED UPON THE ALBUQUERQUE CONTROL SURVEY
BENCHMARK 7-L15", ELEVATION = 5164.135. (NAVD 1988)

LEGAL DESCRIPTION
THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF BERNALILLO, STATE OF NEW MEXICO AND IS DESCRIBED AS FOLLOWS:

LOTS NUMBERED NINE-A-1 (9-A-1) AND NINE-B-1 (9-B-1) IN BLOCK LETTERED A OF KIRTLAND ADDITION, UNIT 2, AS THE SAME ARE SHOWN AND DESIGNATED ON THE PLAT ENTITLED "PLAT OF LOTS 9-A-1 & 9-B-1 - BLOCK A, KIRTLAND ADDITION, UNIT 2, WITHIN SECTION 33, T. 10 N., R. 3 E., N.M.P.M., ALBUQUERQUE, NEW MEXICO". FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON AUGUST 18, 2008, IN PLAT BOOK 2008C, PAGE 187.

DRAINAGE STATEMENT
THE PROPOSED SITE IS LOCATED IN THE SOUITHEAST CORNER OF THE INTERSECTION OF GIBSON BLVD SE AND UNIVERSITY BLVD SE, WHICH IS WITHIN ZONE 2 OF THE CITY OF ALBUQUERQUE'S PRECIPITATION ZONES. THE SITE WAS PREVIOUSLY DEVELOPED AS A MULTI-BUILDING COMMERCIAL CENTER (CITY DRAINAGE FILE M15D012A). THE PROPOSED DEVELOPMENT WILL CONSIST OF A CHICK-FIL-A (LOT 9-A-1A) AND A FUTURE COMMERCIAL SITE (LOT 9-B-1A). LOT 9-B-1A WILL ADDRESS DEVELOPED RUNOFF AS PART OF THEIR CONSTRUCTION DOCUMENTS. DEVELOPED RUNOFF ESTIMATED FOR LOT 9-B-1A IS SOLELY FOR THE PURPOSE OF ANALYZING THE EXISTING ONSITE STORM SEWER.

THE SITE WILL CAPTURE DEVELOPED RUNOFF ON SITE LESS BASIN O-1 WHEN POSSIBLE. DEVELOPED RUNOFF FROM BASIN 0-1 WILL FLOW UNDETAINED TO THE UNIVERSITY BLVD SE RIGHT-OF-WAY. THE GRADING AND DRAINAGE PLAN FROM THE CITY DRAINAGE FILE M15D012A ALLOWS FOR 0.79 CFS AND 0.53 CFS TO ENTER THE UNIVERSITY BLVD SE RIGHT OF WAY FROM THE SITE UNDETAINED DURING THE 100-YR AND 10-YR EVENTS RESPECTIVELY. BASIN OS-1 WILL DISCHARGE 1.53 CFS AND 0.93 CFS TO THE UNIVERSITY BLVD SE RIGHT-OF-WAY DURING THE 100-YR AND 10-YR EVENTS RESPECTIVELY. HOWEVER, ONLY 0.55 CFS AND 0.37 CFS DURING THE 100-YR AND 10-YR EVENTS RESPECTIVELY IS FROM IMPERVIOUS SURFACES. DEVELOPED RUNOFF FROM BASINS A-1, A-2, AND A-3 WILL BE CONVEYED TO A RETENTION POND THAT HAS BEEN SIZED TO RETAIN 1330 CUBIC FEET (THE INITIAL 0.34" OF RUNOFF FROM ALL IMPERVIOUS AREAS). DEVELOPED RUNOFF FROM BASIN B-1 WILL FLOW TO A RETENTION POND THAT HAS BEEN SIZED TO RETAIN 300 CUBIC FEET (THE INITIAL 0.34" OF RUNOFF FROM ALL IMPERVIOUS AREAS). DEVELOPED RUNOFF IN EXCESS OF THE INITIAL 0.34" WILL BE DETAINED IN THE RESPECTIVE PONDS AND CONVEYED BY PRIVATE STORM SEWER NORTH TO AN EXISTING STORM SEWER STUB PROVIDED WITHIN THE GIBSON BLVD SE RIGHT-OF-WAY. THIS IS IS GENERAL CONFORMANCE WITH THE PRIOR GRADING AND DRAINAGE PLAN.

THE EXISTING 21" HDPE STORM SEWER LOCATED ON SITE WAS ORIGINALLY DESIGNED TO CONVEY 12.73 CFS DURING THE 100 YR EVENT. BASED ON THE DEVELOPED RUNOFF FROM BASINS A-1 THRU A-3, B-1, P, AND M, THE 21" HDPE STORM WILL NOW CONVEY 13.51 CFS. THE INCREASE IN FLOW IS DUE TO THE ADDITIONAL WATER ENTERING THE SITE FROM THE ADJACENT DEVELOPMENT TO THE EAST. BASED ON AS-BUILT INFORMATION ON THE EXISTING 21" HDPE STORM SEWER, THE FULL FLOW CAPACITY OF THE STORM SEWER IS 13.73 CFS. CALCULATIONS FOR THE EXISTING STORM SEWER CAN BE FOUND ON THIS PLAN.

THE PROPOSED REDEVELOPMENT WILL REDUCE THE PERCENT IMPERVIOUSNESS TO 66.7%.

EXISTING 21" HDPE CAPACITY CALCULATIONS

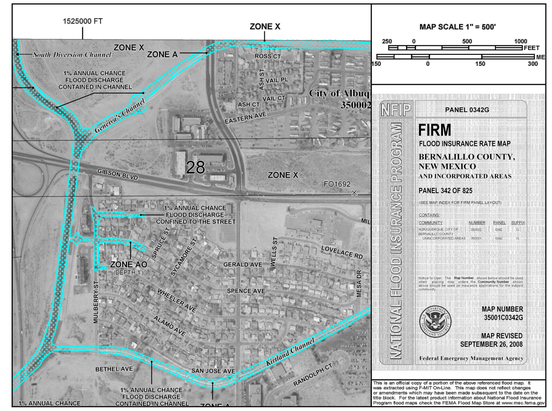
MANNING'S FORMULA (CALCULATED WITH BENTLEY FLOW MASTER V8i)

INPUT DATA

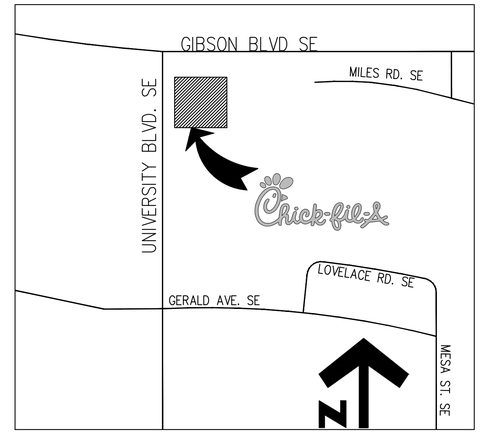
MANNING'S ROUGHNESS COEFFICIENT:	0.012
PIPE SLOPE:	0.0064 FT/FT
NORMAL DEPTH:	1.75 FT
DIAMETER:	1.75 FT
DISCHARGE:	13.73 FT³/S

RESULTS

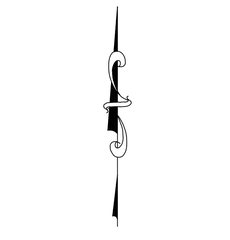
DISCHARGE:	13.73 FT³/S
NORMAL DEPTH:	1.75 FT
FLOW AREA:	2.41 FT²
WETTED PERIMETER:	5.50 FT
HYDRAULIC RADIUS:	0.44 FT
CRITICAL DEPTH:	1.38 FT
PERCENT FULL:	100%
CRITICAL SLOPE:	0.00691 FT/FT
VELOCITY:	5.71 FT/S
VELOCITY HEAD:	0.51 FT
SPECIFIC ENERGY	2.26 FT



1 FIRMETTE MAP



2 VICINITY MAP
NOT TO SCALE



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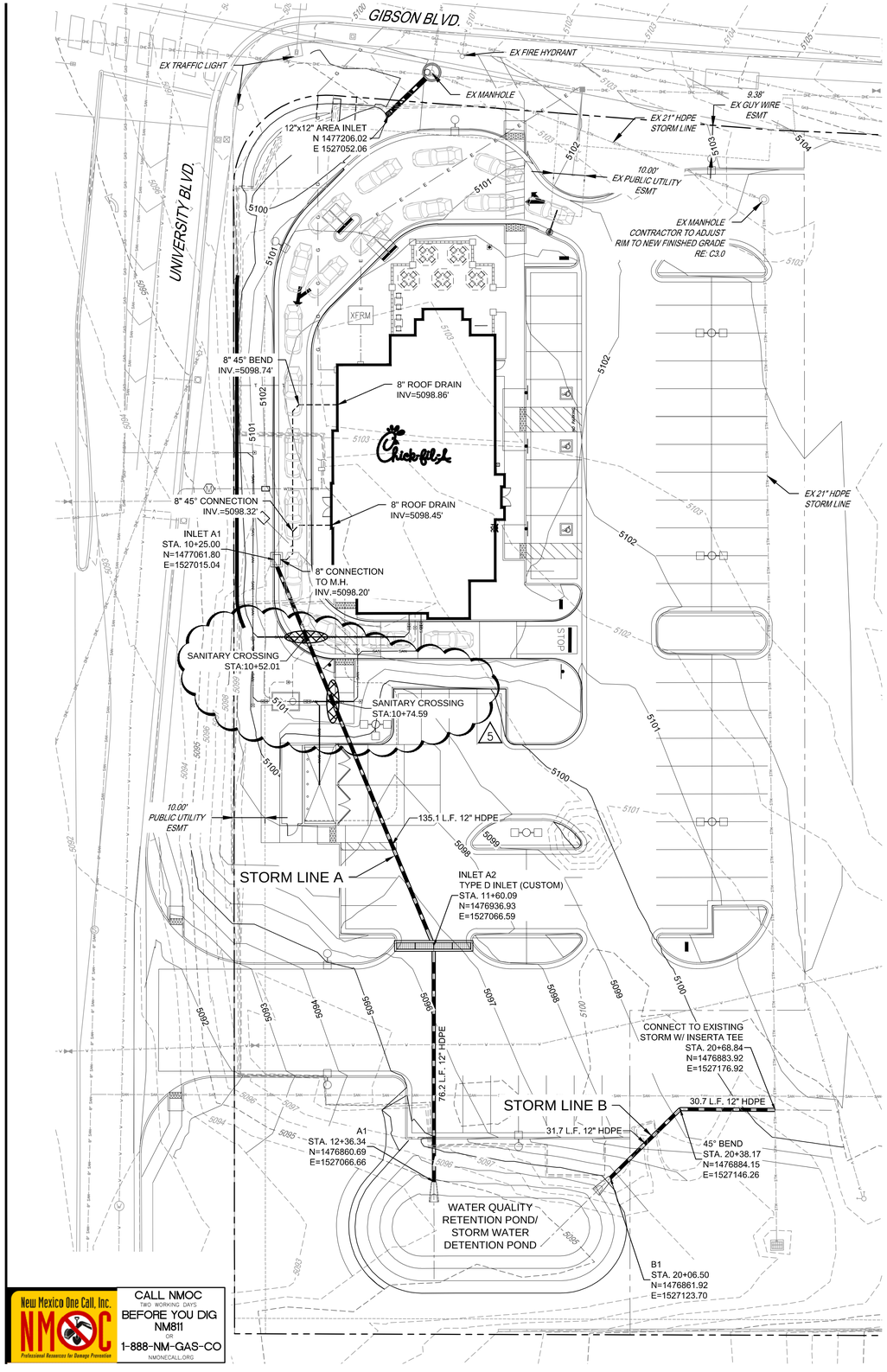
1600 GIBSON BLVD. SE
ALBUQUERQUE, NM

SHEET TITLE
DEVELOPED DRAINAGE PLAN

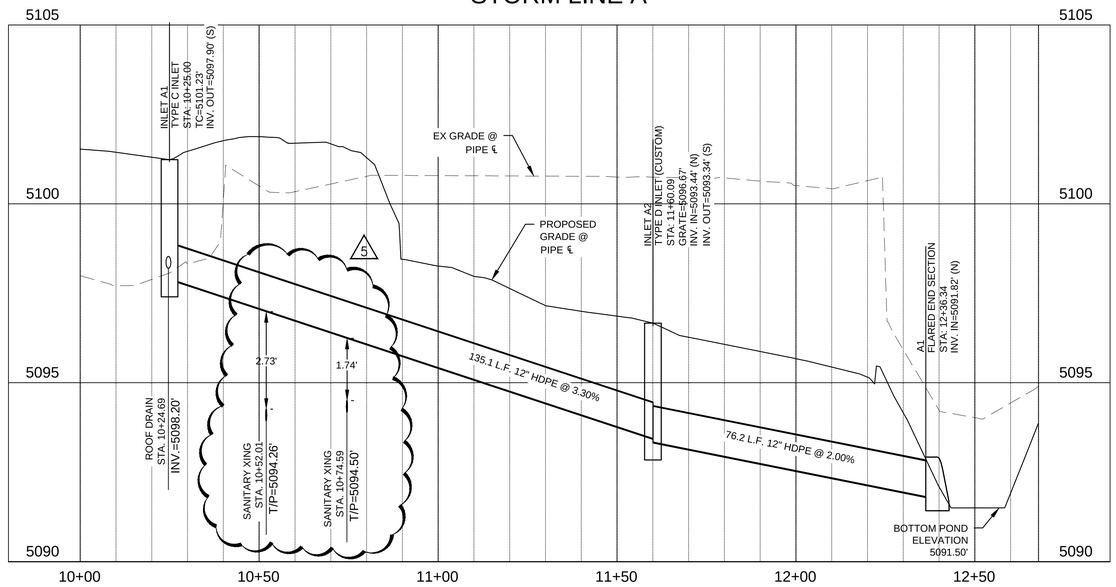
DWG EDITION ---

Job No. : 65118373
Store : 03486
Date : 07/01/15
Drawn By : TW
Checked By: TDK

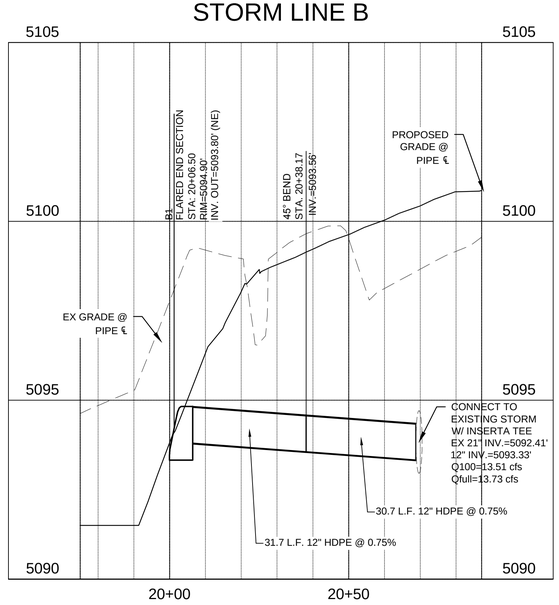
Sheet
C-3.2



STORM LINE A



STORM LINE B

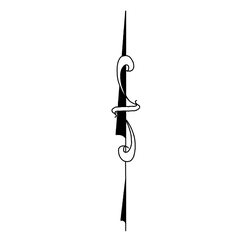


LEGEND:

- PROPOSED STORM LINE
- PROPOSED FIRE SERVICE
- PROPOSED ROOF DRAIN
- PROPOSED WATER MAIN
- PROPOSED SANITARY SEWER
- PROPOSED GAS
- PROPOSED ELECTRIC
- PROPOSED TELEPHONE
- WATER METER
- GREASE TRAP
- STORM INLET
- STORM MANHOLE
- UTILITY CROSSING
- EXISTING STORM MANHOLE
- EXISTING SANITARY MANHOLE
- EXISTING STORM INLET
- EXISTING FIRE HYDRANT
- EXISTING LIGHT POLE

NOTES:

1. CONTRACTOR TO FIELD VERIFY VERTICAL & HORIZONTAL LOCATIONS OF ALL EXISTING UTILITIES.
2. REFER TO C-5.0 - C-5.3 FOR CIVIL STANDARD DETAILS.
3. ALL STORM SEWER TO BE HDPE UNLESS SPECIFIED OTHERWISE.
4. REFER TO SHEETS C3.0 AND C3.1 FOR DETAILED GRADING PLAN.
5. REFER TO SHEET C3.2 FOR DEVELOPED DRAINAGE PLAN.
6. REFER TO SHEET C3.4 FOR EROSION CONTROL PLAN.



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SHEET TITLE

STORM PLAN & PROFILE

DWG EDITION ---

Job No.	:65118373
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Date	:07/01/15
Drawn By :	TW
Checked By:	TDK

Sheet

C-3.3

CITY OF ALBUQUERQUE

July 30, 2015

Troy Kelts, P.E.
Merrick & Company
5970 Greenwood Plaza Blvd
Greenwood Village, CO 80015

RE: **Chick-fil-A at Gibson**
1600 Gibson Blvd SE
Grading and Drainage Plan Resubmittal #4
Engineers Stamp Date 6/23/15 (H20D003C)

Dear Mr. Kelts,

Based upon the information provided in your submittal received 6/26/15, this plan is approved for Building Permit and Paving Permit.

Please attach a copy of this approved plan dated 4/27/15 to the construction sets in the permitting process prior to sign-off by Hydrology.

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions, please contact me at 924-3695 or Rudy Rael at 924-3977.

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Hydrology
Planning Department

RR/RH
C: File

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov