

# CITY OF ALBUQUERQUE



February 24, 2017

Richard J. Berry, Mayor

David Soule, P.E.  
Rio Grande Engineering.  
Po box 93924  
Albuquerque, NM, 87199

**RE:** UNM Starbucks and Freddie's  
Grading and Drainage Plan  
Engineer's Stamp Date 2-22-2017 (File: K16D075)

Dear Mr. David:

Based upon the information provided in your submittal received 2-23-2017, the above referenced Grading and Drainage Plan is approved for building permit.

Please attach a copy of this approved plan in the construction sets for Building Permit processing. Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

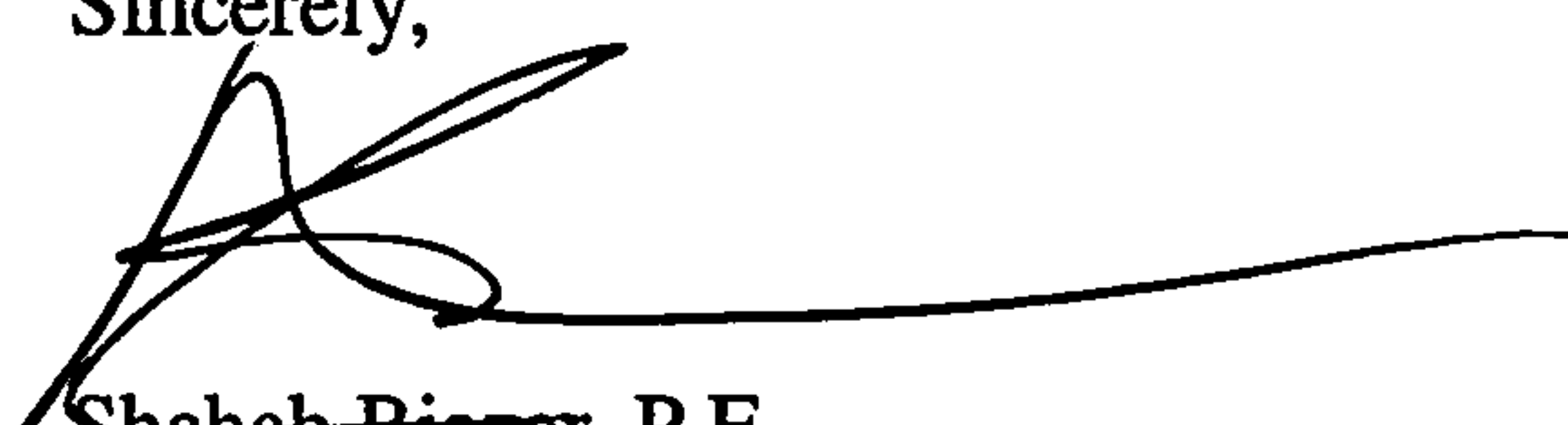
PO Box 1293

If you have any questions, you can contact me at 924-3999.

Albuquerque

Sincerely,

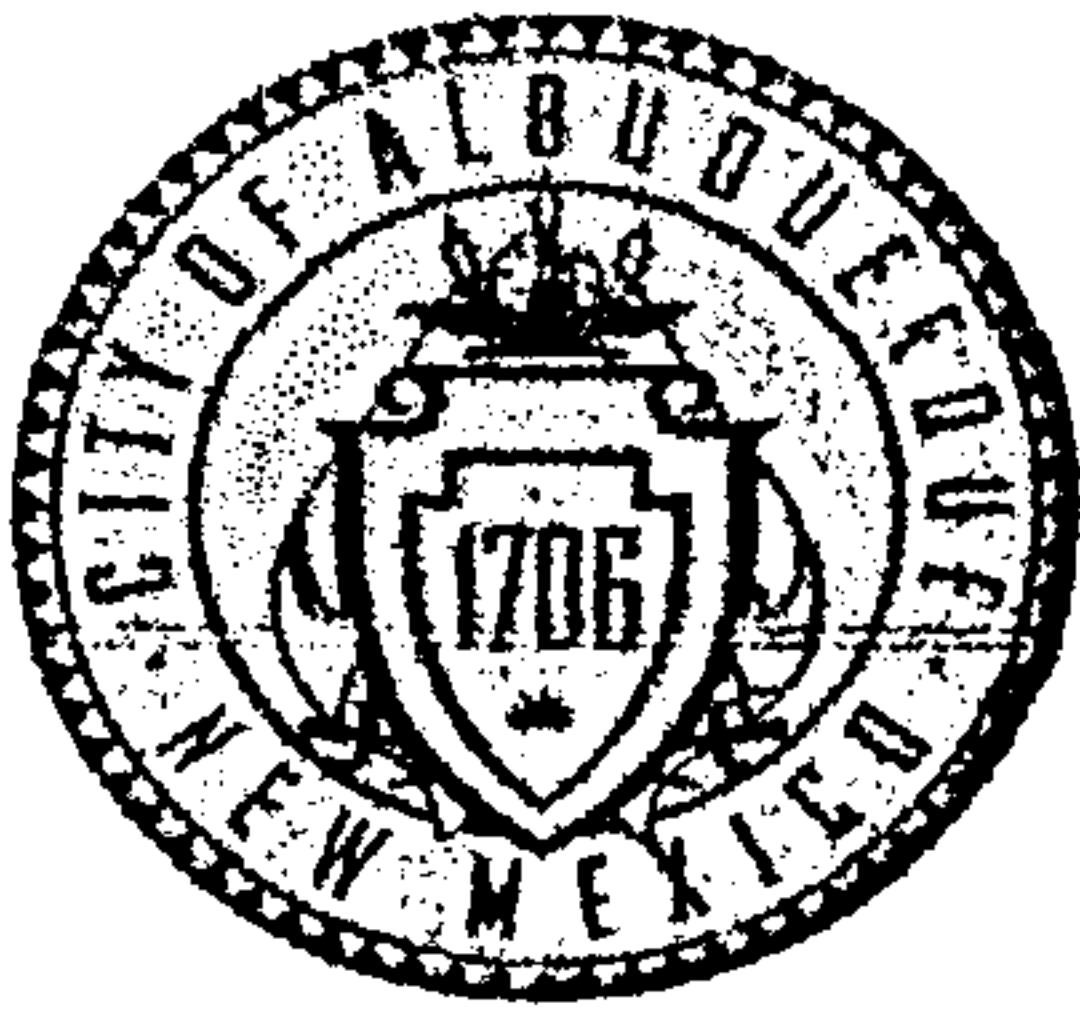
New Mexico 87103

  
~~Shahab Biazar~~, P.E.  
City Engineer, Planning Dept.  
Development Review Services

[www.cabq.gov](http://www.cabq.gov)

MA/SB





# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2016)

K160075

Project Title: UNM STARBUCK AND FREDDIES Building Permit #: \_\_\_\_\_ Hydrology File #: ~~K17D075~~  
DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ Work Order#: \_\_\_\_\_  
Legal Description: LOTS 22-24 BLOCK 18 UNIVERSITY HEIGHTS ADDITION  
City Address: 2550 CENTRAL SE

Applicant: MARK TEKIN Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Other Contact: RIO GRANDE ENGINEERING Contact: DAVID SOULE  
Address: PO BOX 93924, ALBUQUERQUE, NM 87199  
Phone#: 505.321.9099 Fax#: 505.872.0999 E-mail: DAVID@RIOGRANDEENGINEERINGCO.OM

Check all that Apply:

### DEPARTMENT:

☒ HYDROLOGY/ DRAINAGE  
☐ TRAFFIC/ TRANSPORTATION

### TYPE OF SUBMITTAL:

☐ ENGINEER/ARCHITECT CERTIFICATION

☐ CONCEPTUAL G & D PLAN

☒ GRADING PLAN

☐ DRAINAGE MASTER PLAN

☒ DRAINAGE REPORT

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☐ GRADING/ PAD CERTIFICATION

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☐ CLOMR/LOMR

☐ OTHER (SPECIFY) \_\_\_\_\_

IS THIS A RESUBMITTAL? ☒ Yes ☐ No

DATE SUBMITTED: 2/22/17 By: \_\_\_\_\_

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_

FEE PAID: \_\_\_\_\_



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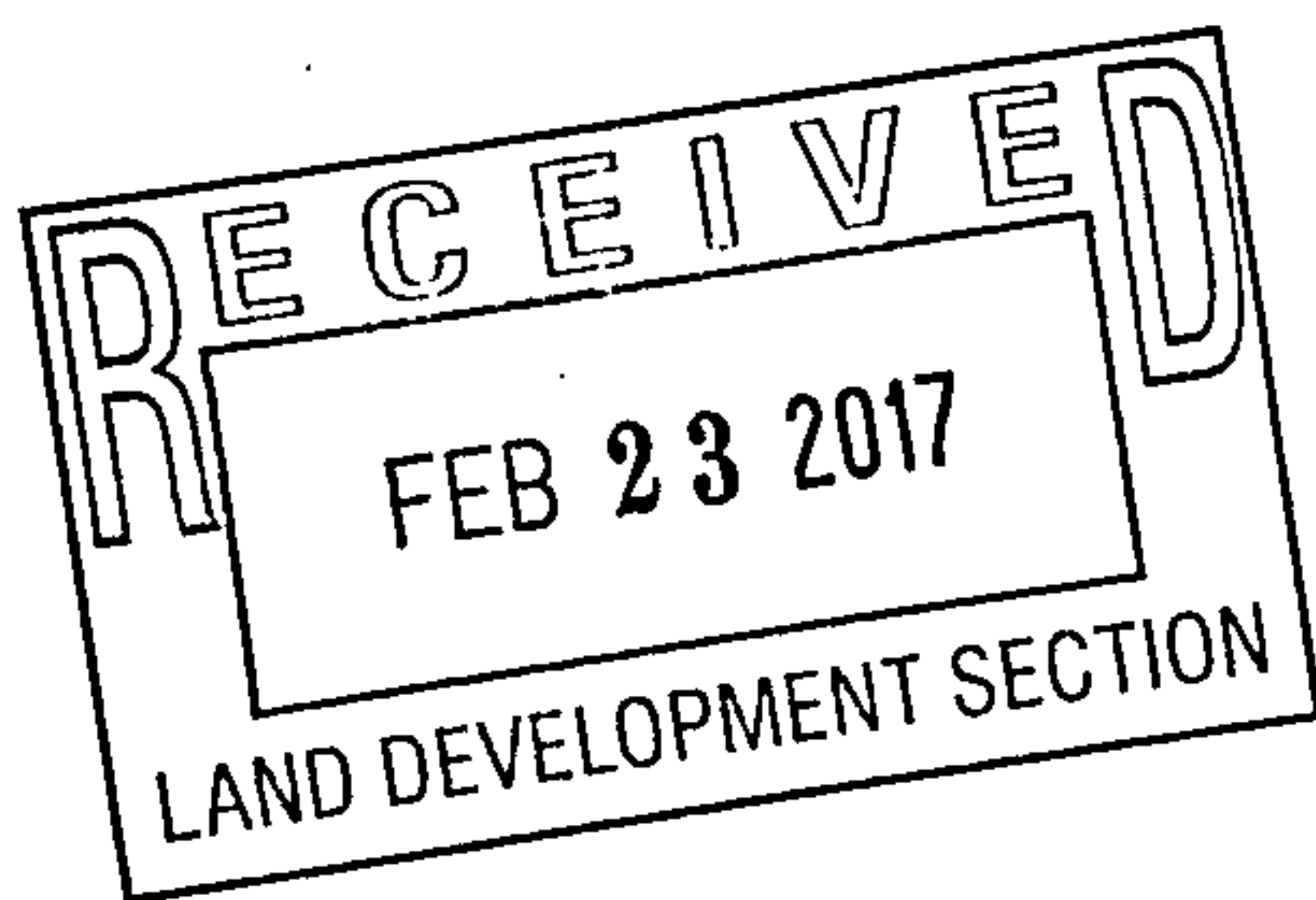
DRAINAGE REPORT

For

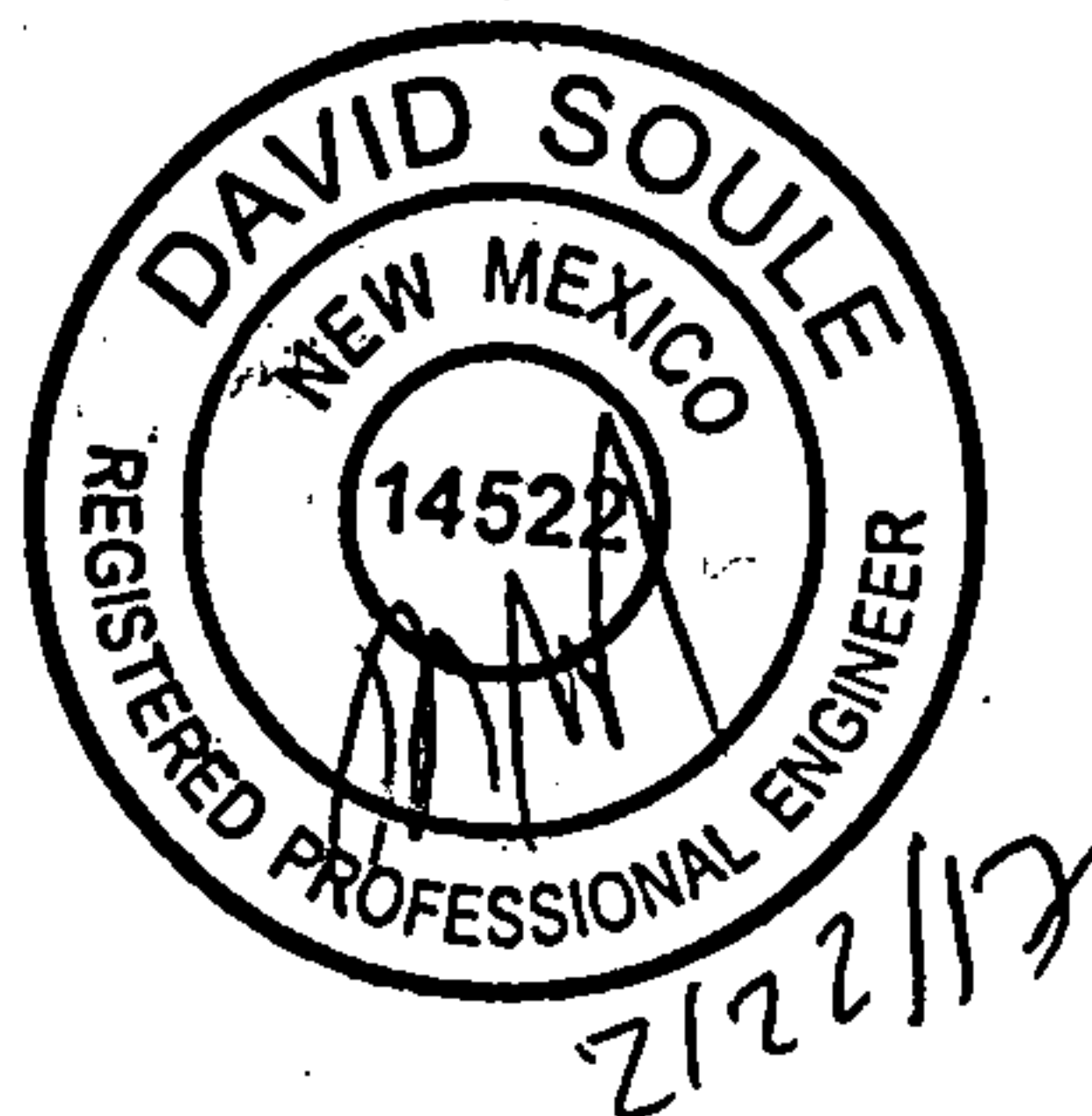
**STARBUCKS/FREDDIES**  
**2550 CENTRAL SE**  
**Albuquerque, New Mexico**

Prepared by

Rio Grande Engineering  
PO Box 93924  
Albuquerque, New Mexico 87199



JANUARY 2017



David Soule P.E. No. 14522



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**Appendix**

Site Hydrology ..... A

Infiltrator storage specifications.....B

**Map**

Site Grading and Drainage Plan



## **PURPOSE**

The purpose of this report is to provide the Drainage Management Plan for the development of a 0.48 acre restaurant redevelopment project. This plan was prepared in accordance with the City of Albuquerque design regulations, utilizing the City of Albuquerque's Development Process Manual drainage guidelines. This report will demonstrate that the grading does not adversely affect the surrounding properties, nor the upstream or downstream facilities.

## **INTRODUCTION**

The subject of this report, as shown on the Exhibit A, is a 0.48-acre parcel of land located on the southwest corner of Central Avenue and Columbia Drive Southeast. The legal description of this site is Lots 22-24, Block 18, University Heights Addition. As shown on FIRM map35001C0353H, the entire site is located within Flood Zone X. The site is currently a gas station. The entire site is paved, with very little landscaping the site is located in a fully developed watershed where the entire supporting drainage infrastructure is completed.

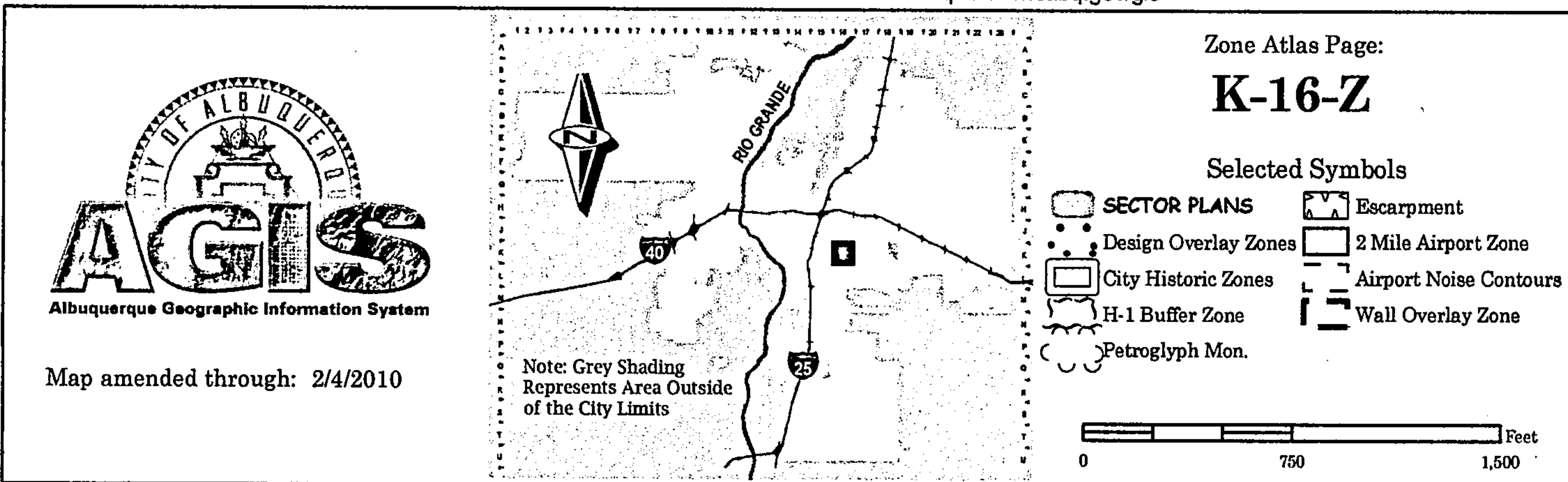
## **EXISTING CONDITIONS**

The site is currently a developed gas station. As shown in appendix A, the site is paved and has very little landscaping. The site currently discharges 2.22 cfs as sheet flow to the west. The flow enters a public alley and discharges to Central Avenue. Due to water block on Columbia and Central, and grades of the surrounding properties, no upland flows affect this site. All downstream improvements are in place and maintained by the city of Albuquerque.





For more current information and more details visit: <http://www.cabq.gov/gis>





## **PROPOSED CONDITIONS**

The proposed improvements consist of demolishing the entire site and the construction of a new 5,500 square foot building with its associated parking and landscaping. As shown in Appendix A, The site is to be graded such that there are three drainage basins. Basin A contains the building and the southerly half of the site, and discharges to the parking field and drains 1.51 cfs as concentrated flow west to the alley. Basin B contains several parking spaces and the westerly sidewalk, and drains 0.47cfs as sheet flow to the alley. Basin C contains the front patio and building overhangs and discharges 0.17 cfs as sheet flow to central. The dumpster will have an area drain that discharges to the sanitary sewer upstream of a grease interceptor. The site will capture the first flush volume of 507 cubic feet by installing an inlet and mc 3500 infiltrator system at the outfall flow line of basin A. The system specifics are found in appendix B.

## **SUMMARY AND RECOMMENDATIONS**

This project is a redevelopment of an existing fully developed site. The proposed developed conditions from this site will capture 809 cubic feet of the first flush which is greater than the required 507 cubic feet. The site will discharge 2.15 cfs during the 100-year, 6-hour design storm, which is less than the 2.22 cfs the site currently discharges. The site will discharge to the existing alley and tie to the existing grades at the edge of the ally. The development of this site will not negatively impact the upstream nor down stream facilities. Since this site does not exceed 1 acre, erosion and sediment Control Plan should not be required prior to any construction activity.



**APPENDIX A**  
**SITE HYDROLOGY**



**Weighted E Method**  
**2550 CENTRAL SE**

Existing Developed Basins

											100-Year, 6-hr.			10-day
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Volume (ac-ft)
			%	(acres)	%	(acres)	%	(acres)	%	(acres)				
EXISTING	21117	0.485	0%	0	2.0%	0.010	5.0%	0.02424	93.0%	0.451	2.044	0.083	2.22	0.143
PROPOSED BASIN A	14912.00	0.342	0%	0	5.0%	0.017	10.0%	0.03423	85.0%	0.291	1.954	0.056	1.51	0.095
PROPOSED BASIN B	4661.00	0.107	0%	0	0.0%	0.000	21.0%	0.02247	79.0%	0.085	1.912	0.017	0.47	0.028
PROPOSED BASIN C	1544.00	0.035	0%	0	0.0%	0.000	0.0%	0	100.0%	0.035	2.120	0.006	0.17	0.011
PROPOSED	21117.00	0.485	0%	0	3.5%	0.017117	11.7%	0.0567	84.8%	0.410959	1.957	0.079	2.15	0.134
COMPARISON(onsite historical to proposed)					2%	0.01	7%	0.03	-8%	-0.04		-0.076	-0.07	-0.132

**Equations:**

Weighted E = Ea\*Aa + Eb\*Ab + Ec\*Ac + Ed\*Ad / (Total Area)

Volume = Weighted D \* Total Area

Flow = Qa \* Aa + Qb \* Ab + Qc \* Ac + Qd \* Ad

Where for 100-year, 6-hour storm (zone 2)

Ea= 0.53	Qa= 1.56
Eb= 0.78	Qb= 2.28
Ec= 1.13	Qc= 3.14
Ed= 2.12	Qd= 4.7

FIRST FLUSH REQUIREMENT  
507.2061 CUBIC FEET REQUIRED  
809 CUBIC FEET PROVIDED

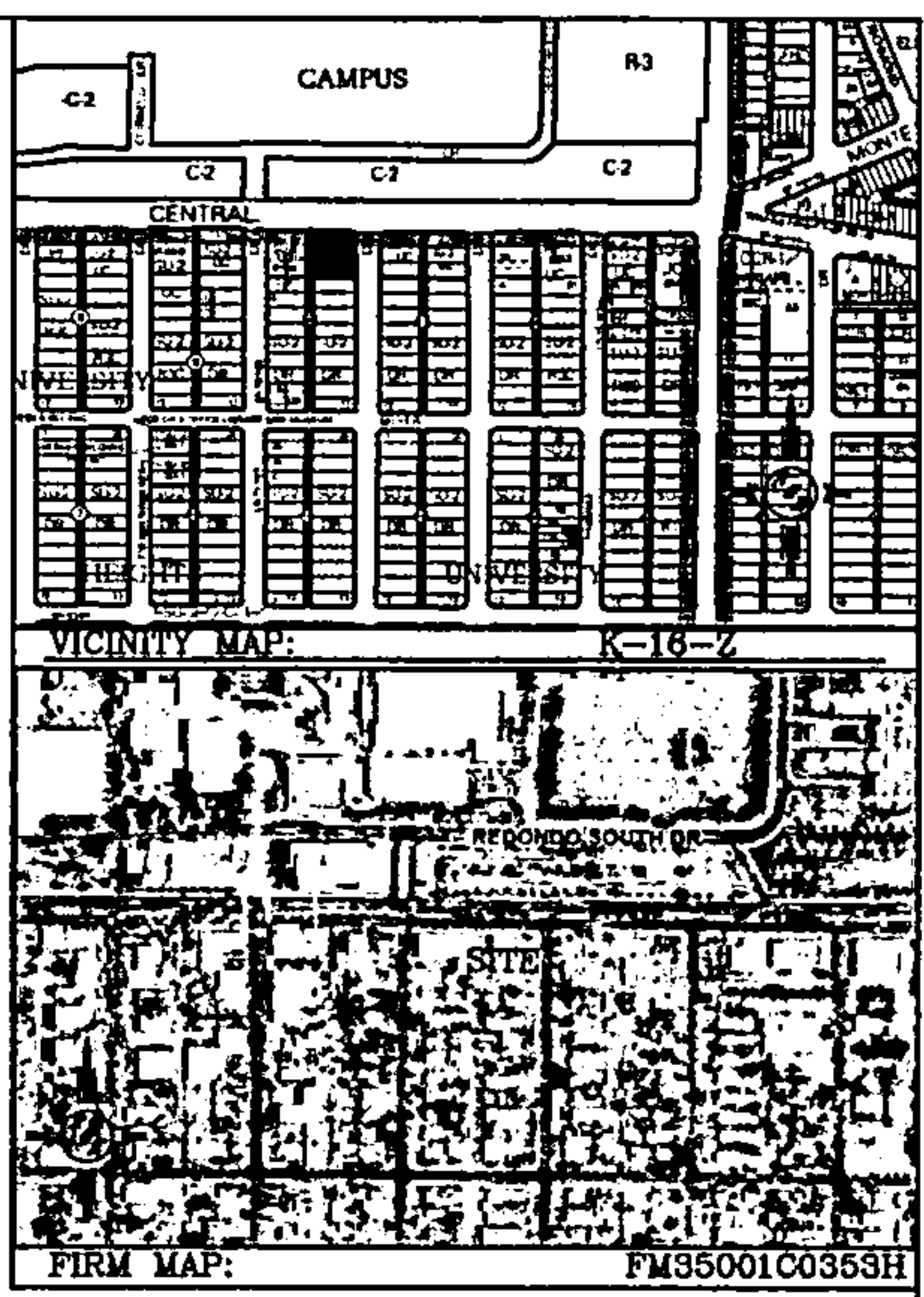
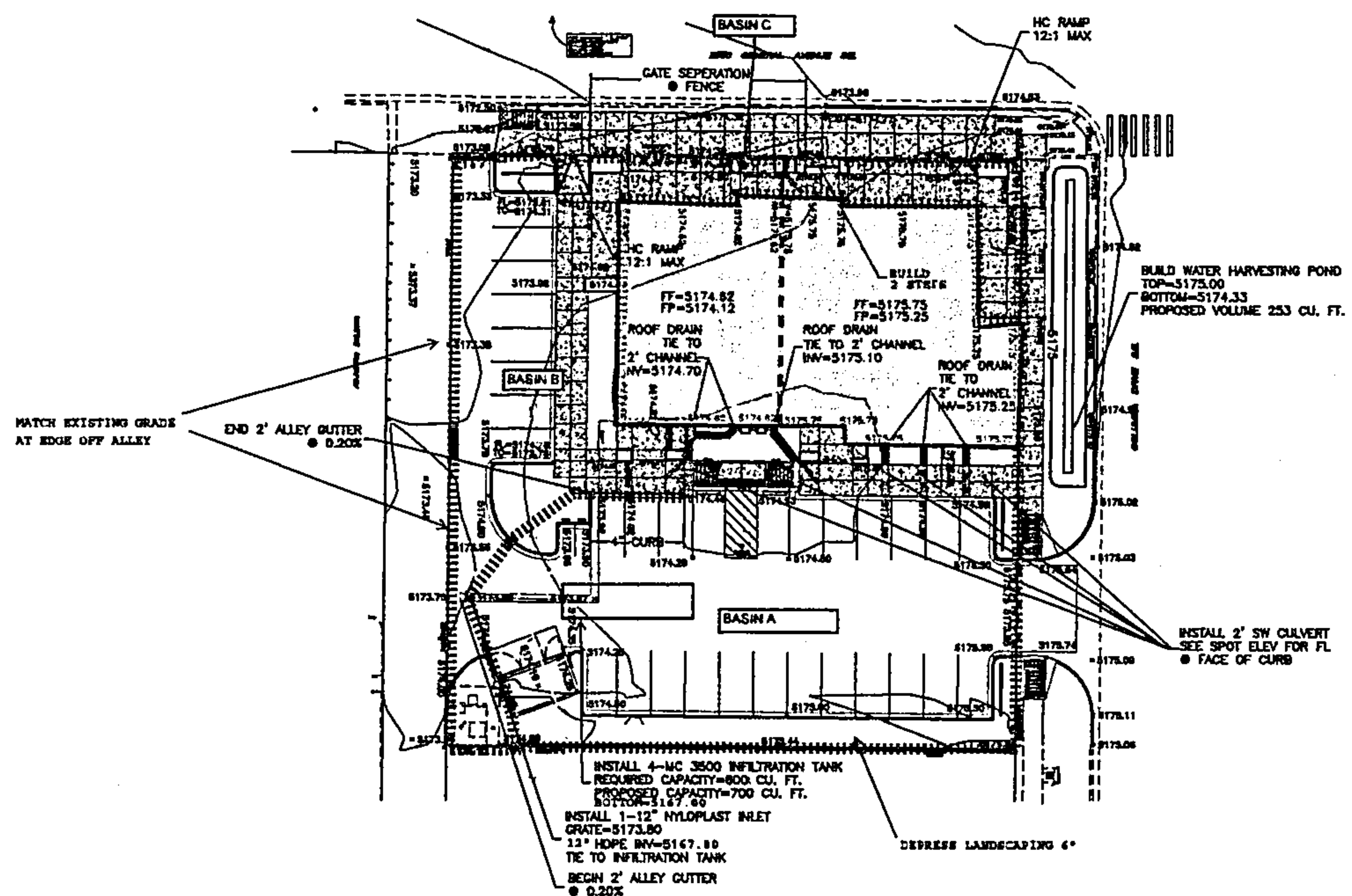
**NARRATIVE**

THIS SITE IS A REDEVELOPMENT OF AN EXISTING SITE . THE EXISTING SITE DISCAHRGES 2.22 CFS TO A PUBLIC ALLEY. THE PROPOSED DEVELOPMENT GENERATES LESS THAN EXISTING FLOW RATES. THE FIRST FLUSH VOLUME WILL BE RETAINED BY THE PLACEMENT OF A INFILTRATOR SYSTEM AT THE OUTFALL FLOW LINE. THE SITE MATCHES THE EXISTI DRAINAGE PATTERNS. AND WILL TIE TO THE EXISTING ALLE NO UPLAND FLOWS IMPACT THE PROPERTY, DUE TO WATER CURB AND GUTTER AND WATER BLOCKS AT DRIVEWAYS



EROSION CONTROL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.



LEGAL DESCRIPTION:  
LOT 22, 23, 24, BLOCK 18, UNIVERSITY HEIGHTS ADDITION

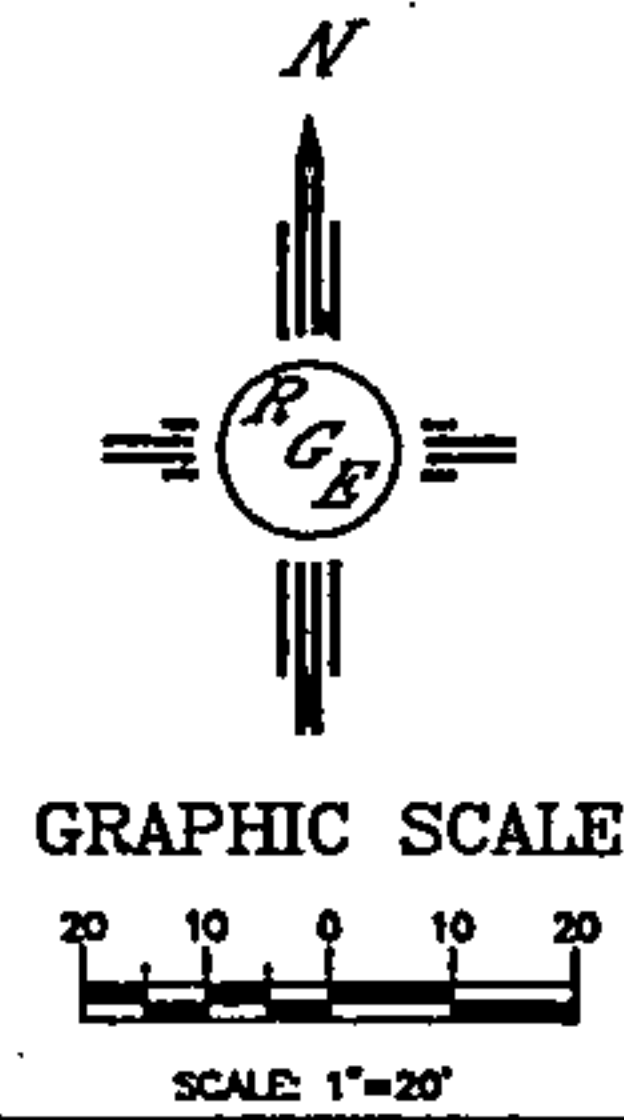
NOTES:



1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. ALL CURB AND GUTTER TO 6" HEADER UNLESS OTHERWISE NOTED.
3. ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.
4. ALL NEW PAVING SHALL BE 6" PCC OVER 8" SUBGRADE PREPARATION IN CONFORMANCE TO ACI 330R-08. UNLESS OTHERWISE NOTED.
5. ANY CURBS OR PAVEMENT NEGATIVELY IMPACTED BY CONSTRUCTION ACTIVITY SHALL BE REPLACED TO MATCH EXISTING CONDITIONS.
6. ALL SITE WORK SHALL CONFORM TO CITY OF ALBUQUERQUE STANDARDS FOR PUBLIC WORKS CONSTRUCTION EDITION 9

LEGEND

- 5115--- EXISTING CONTOUR
- 5115--- EXISTING INDEX CONTOUR
- 5114--- PROPOSED CONTOUR
- 5110--- PROPOSED INDEX CONTOUR
- SLOPE TIE
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- BOUNDARY
- CENTERLINE
- RIGHT-OF-WAY
- PROPOSED CURB
- EXISTING CURB AND GUTTER
- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- PROPOSED SCREEN WALL
- NEW CONCRETE SIDEWALK

CAUTION:  
EXISTING UTILITIES ARE NOT SHOWN.  
IT SHALL BE THE SOLE RESPONSIBILITY  
OF THE CONTRACTOR TO CONDUCT ALL  
NECESSARY FIELD INVESTIGATIONS PRIOR  
TO ANY EXCAVATION TO DETERMINE THE  
ACTUAL LOCATION OF UTILITIES & OTHER  
IMPROVEMENTS.



ENGINEER'S SEAL	STARBUCKS/FREDDY'S	DRAWN BY WCHU
	GRADING AND DRAINAGE PLAN	DATE 12-27-17
		STUDY AREA - 1-10-17
	<i>Rio Grande Engineering</i> 1808 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 875-0888	SHEET # —
DAVID SOULE P.E. #14522		JOB # 21702



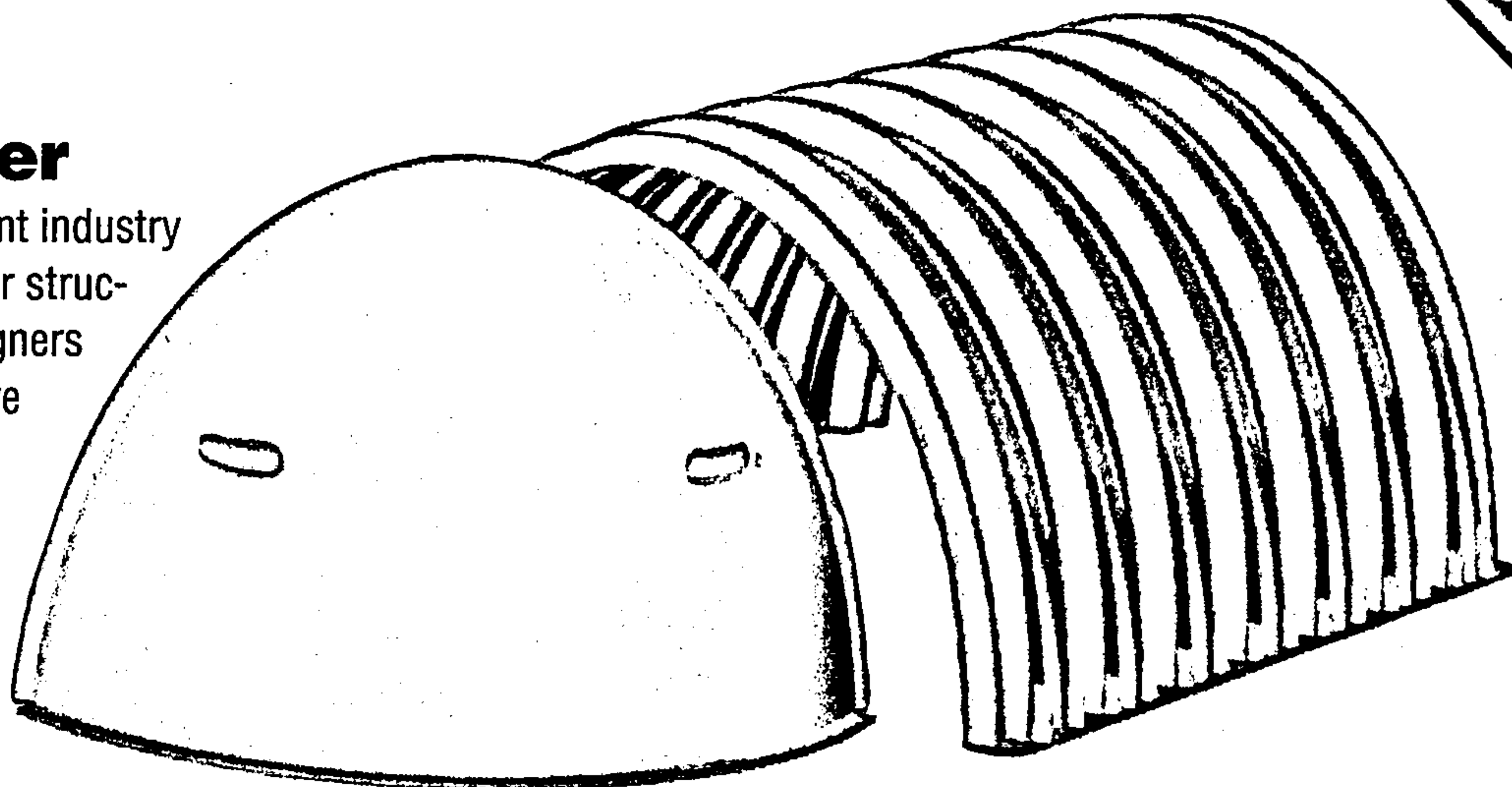
**APPENDIX B**

**INFILTRATOR TANK SPECIFICATIONS**



## StormTech MC-3500 Chamber

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots thus maximizing land usage for commercial and municipal applications.



### StormTech MC-3500 Chamber (not to scale)

#### Nominal Chamber Specifications

Size (L x W x H)	90" (2286 mm) x 77" (1956 mm) x 45" (1143 mm)
Chamber Storage	109.9 ft <sup>3</sup> (3.11 m <sup>3</sup> )
Min. Installed Storage*	178.9 ft <sup>3</sup> (5.06 m <sup>3</sup> )
Weight	134 lbs (60.8 kg)

\* This assumes a minimum of 12" (305 mm) of stone above, 9" (229 mm) of stone below chambers, 9" (229 mm) row spacing, and 40% stone porosity.

### StormTech MC-3500 End Cap (not to scale)

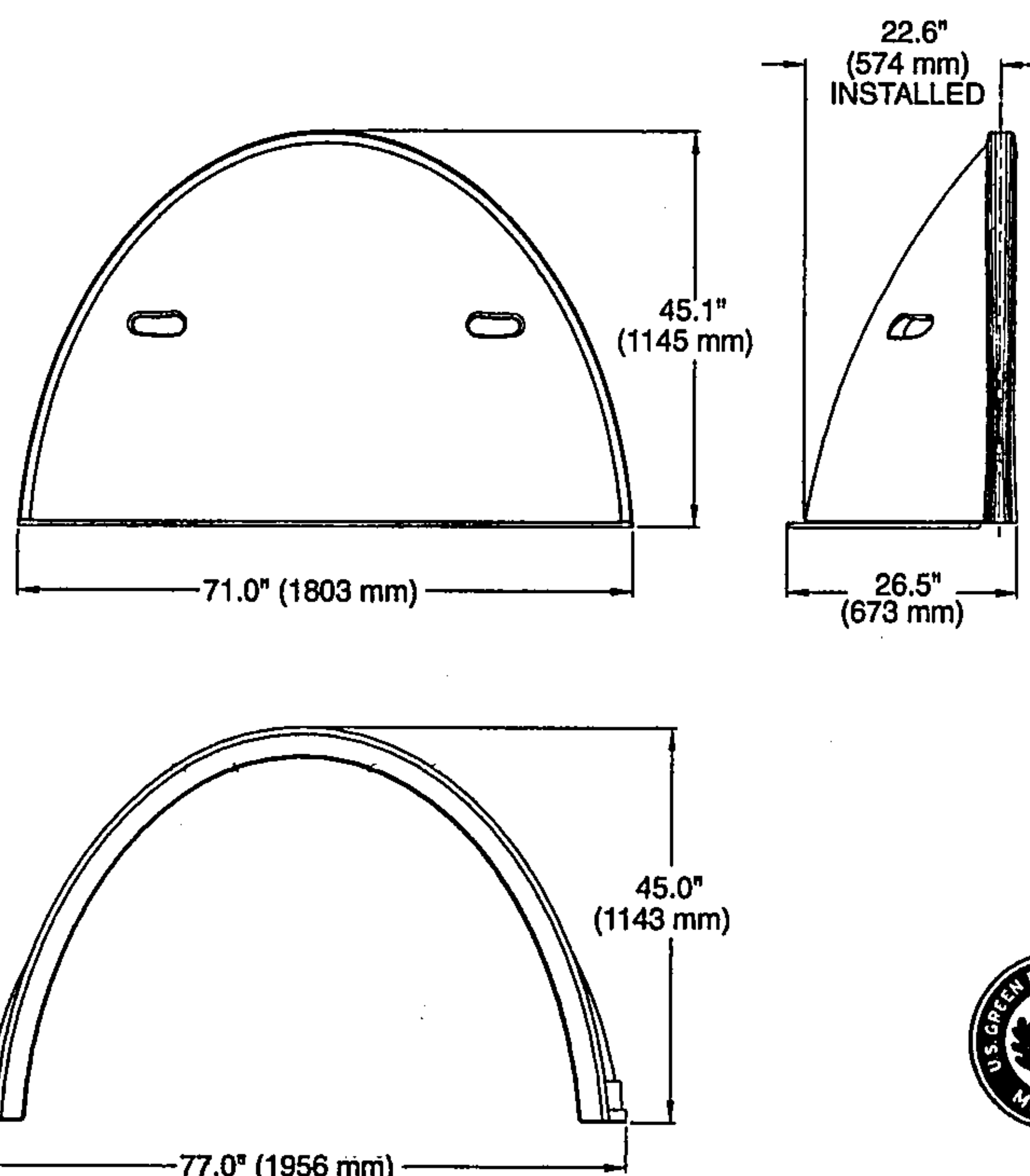
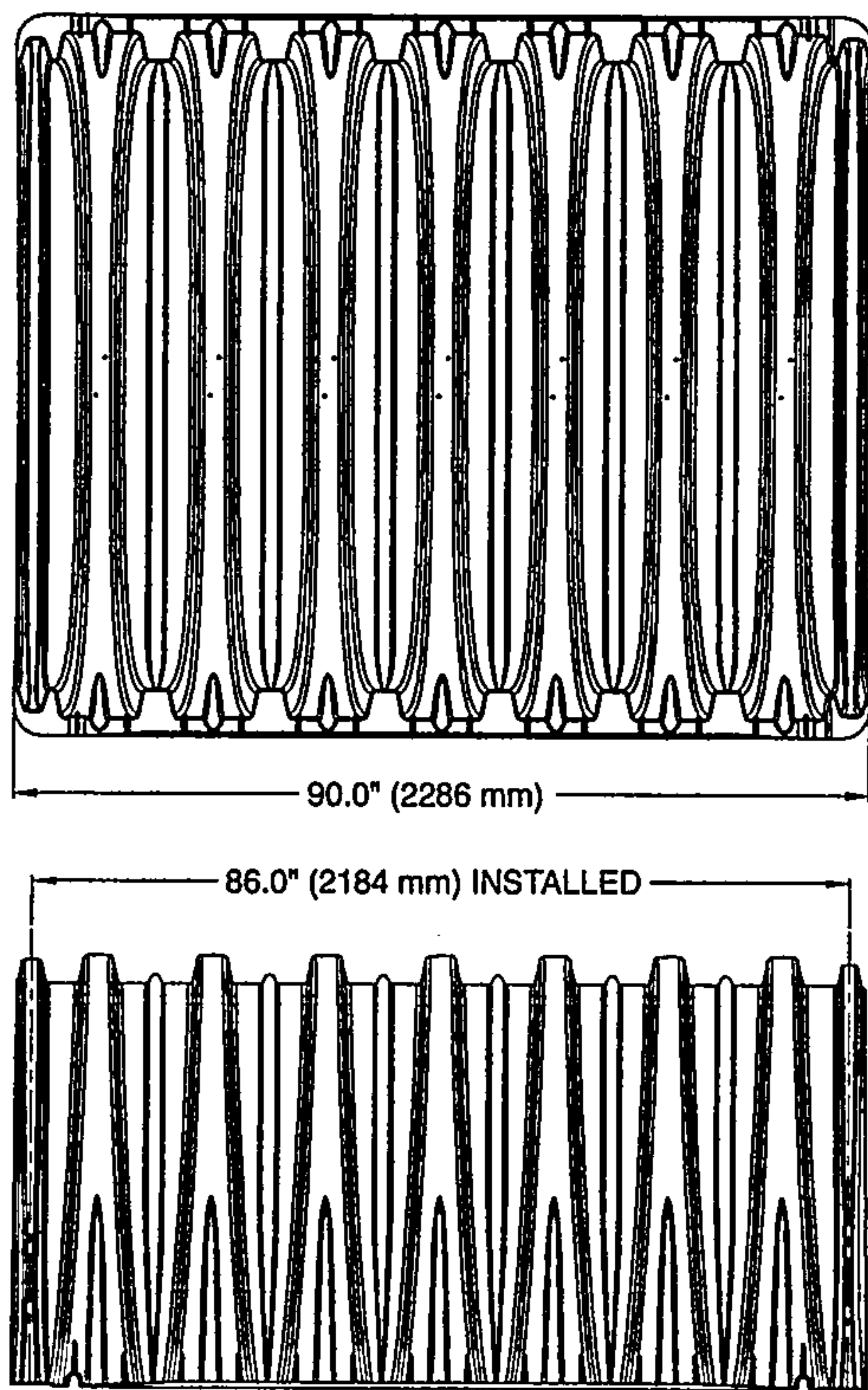
#### Nominal End Cap Specifications

Size (L x W x H)	26.5" (673 mm) x 71" (1803 mm) x 45.1" (1145 mm)
End Cap Storage	15.6 ft <sup>3</sup> (0.44 m <sup>3</sup> )
Min. Installed Storage*	46.9 ft <sup>3</sup> (1.33 m <sup>3</sup> )
Weight	43 lbs (19.5 kg)

\*This assumes a minimum of 12" (305 mm) of stone above, 9" (229 mm) of stone below, 9" (229 mm) row spacing, 6" (152 mm) of stone perimeter, and 40% stone porosity.

#### Shipping

- 15 chambers/pallet
- 16 end caps/pallet
- 7 pallets/truck





### Storage Volume Per Chamber/End Cap ft<sup>3</sup> (m<sup>3</sup>)

	Bare Unit Storage ft <sup>3</sup> (m <sup>3</sup> )	Chamber/End Cap and Stone Volume — Stone Foundation Depth in. (mm)			
		9 (229)	12 (305)	15 (381)	18 (457)
MC-3500 Chamber	109.9 (3.11)	178.9 (5.06)	184.0 (5.21)	189.2 (5.36)	194.3 (5.5)
MC-3500 End Cap	15.64 (0.44)	46.9 (1.33)	48.6 (1.38)	50.3 (1.43)	52.0 (1.47)

NOTE: Assumes 9" (229 mm) row spacing, 40% stone porosity 12" (305 mm) stone above and includes the bare chamber/end cap volume. End Cap volume assumes 6" (152 mm) stone perimeter.

### Volume of Excavation Per Chamber/End Cap in yd<sup>3</sup> (m<sup>3</sup>)

	Stone Foundation Depth in. (mm)			
	9 (229)	12 (305)	15 (381)	18 (457)
MC-3500	12.4 (9.5)	12.8 (9.8)	13.3 (10.2)	13.8 (10.5)
End Cap	4.1 (3.1)	4.3 (3.3)	4.4 (3.4)	4.6 (3.5)

NOTE: Assumes 9" (229 mm) of separation between chamber rows and 24" (610 mm) of cover. The volume of excavation will vary as the depth of cover increases.

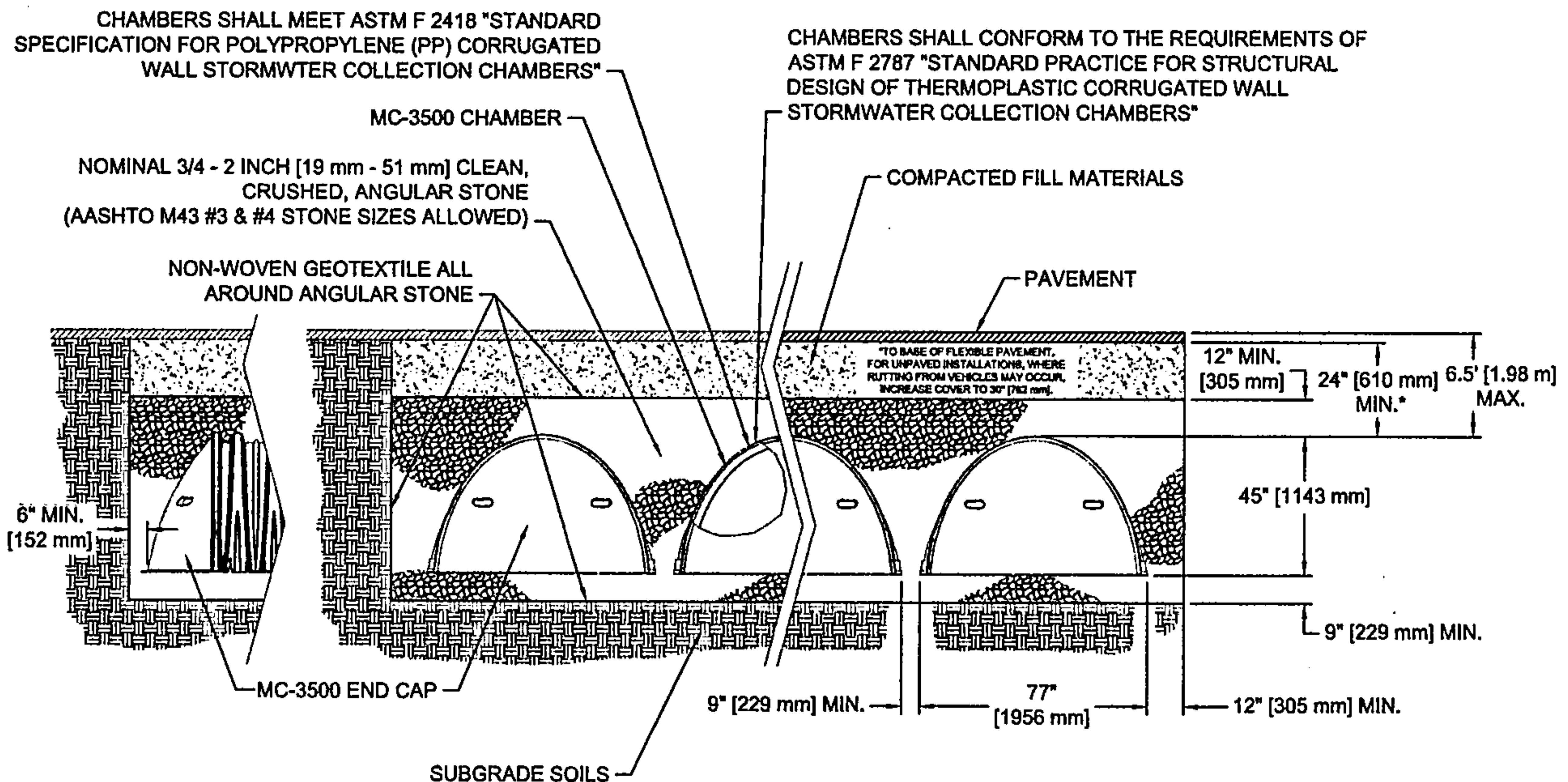
### Amount of Stone Per Chamber

ENGLISH tons (yd <sup>3</sup> )	Stone Foundation Depth			
	9 in.	12 in.	15 in.	18 in.
MC-3500	9.1 (6.4)	9.7 (6.9)	10.4 (7.3)	11.1 (7.8)
End Cap	4.1 (2.9)	4.3 (3.1)	4.6 (3.2)	4.8 (3.4)
METRIC kg (m <sup>3</sup> )	229 mm	305 mm	381 mm	457 mm
MC-3500	8220 (4.9)	8831 (5.3)	9443 (5.6)	10054 (6.0)
End Cap	3729 (2.2)	3933 (2.3)	4136 (2.5)	4339 (2.6)

NOTE: Assumes 12" (305 mm) of stone above, and 9" (229 mm) between chambers/end caps.

stone treatment

### General Cross Section



#### NOTES:

1. THIS CROSS SECTION PROVIDES GENERAL INFORMATION FOR THE MC-3500 CHAMBER. STORMTECH MC-3500 CHAMBERS MUST BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE MC-3500 DESIGN MANUAL AND MC-3500 CONSTRUCTION GUIDE.
2. PROPERLY INSTALLED MC-3500 CHAMBERS PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR EARTH AND LIVE LOADS WITH CONSIDERATION FOR IMPACT AND MULTIPLE PRESENCES.
3. PERIMETER STONE MUST ALWAYS BE BROUGHT UP EVENLY WITH BACKFILL OF BED. PERIMETER STONE MUST EXTEND HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH STRAIGHT OR SLOPED SIDEWALLS.

**StormTech**  
Detention • Retention • Water Quality

A division of **ADS**

70 Inwood Road, Suite 3 | Rocky Hill | Connecticut | 06067

860.529.8188 | 888.892.2694 | fax 866.328.8401 | fax 860-529-8040 | www.stormtech.com



ADS "Terms and Conditions of Sale" are available on the ADS website, [www.ads-pipe.com](http://www.ads-pipe.com).

Advanced Drainage Systems, the ADS logo, and the green stripe are registered trademarks of Advanced Drainage Systems.

StormTech® is a registered trademark of StormTech, Inc

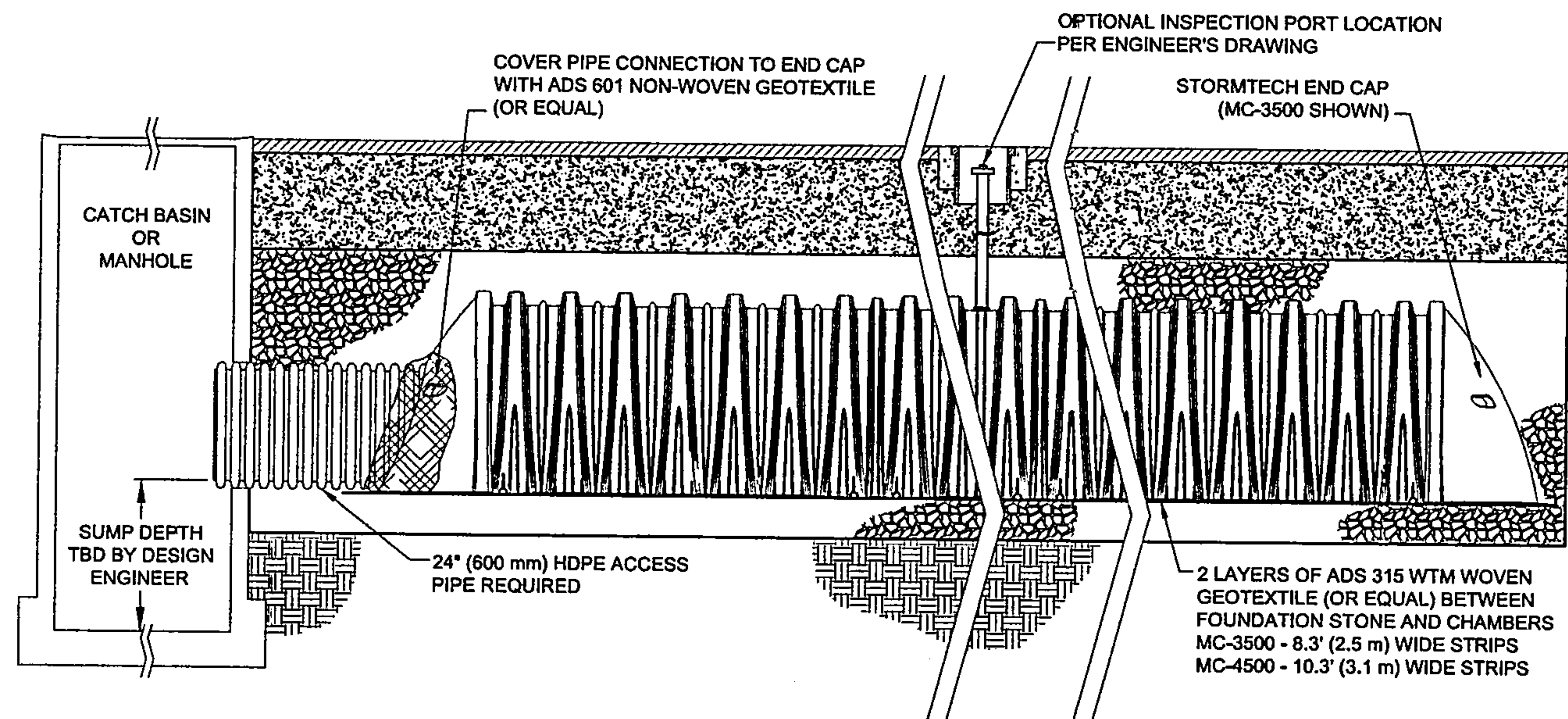
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S150909 06/12





**FIGURE 12 – StormTech Isolator Row Detail**





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Applicant: MARK TEKIN Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Other Contact: RIO GRANDE ENGINEERING Contact: DAVID SOULE

Address: PO BOX 93924, ALBUQUERQUE, NM 87199

Phone#: 505.321.9099 Fax#: 505.872.0999 E-mail: DAVID@RIOGRANDEENGINEERING.COM

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☐ GRADING/ PAD CERTIFICATION

☐ WORK ORDER APPROVAL

☐ CLOMR/LOMR

☐ OTHER (SPECIFY) \_\_\_\_\_

IS THIS A RESUBMITTAL?: ☐ Yes ☒ No

DATE SUBMITTED: 1/30/17 By: \_\_\_\_\_

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_

FEE PAID: \_\_\_\_\_



DRAINAGE REPORT

For

**STARBUCKS/FREDDIES**  
**2550 CENTRAL SE**  
**Albuquerque, New Mexico**

Prepared by

Rio Grande Engineering  
PO Box 93924  
Albuquerque, New Mexico 87199

JANUARY 2017



1/29/17

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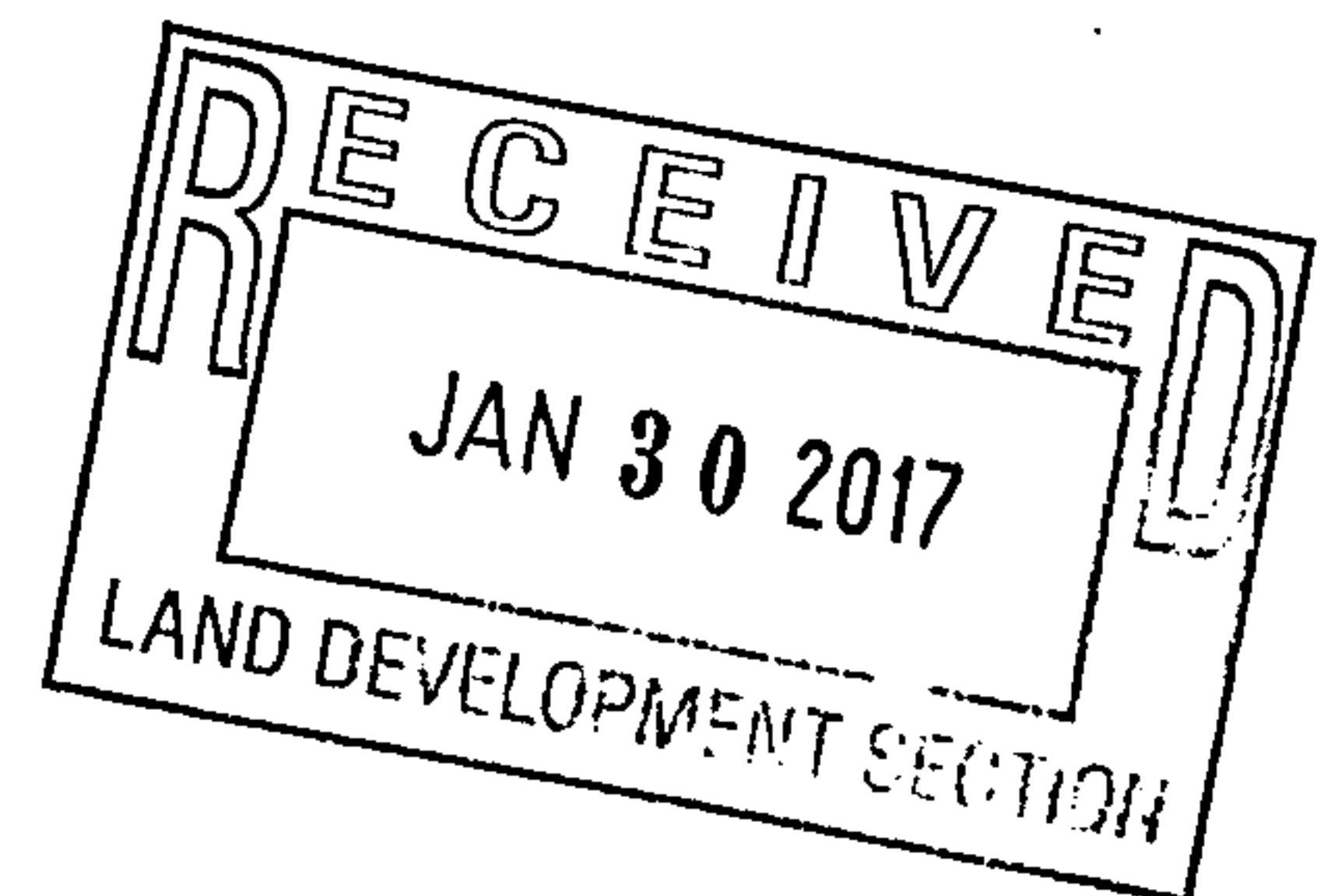




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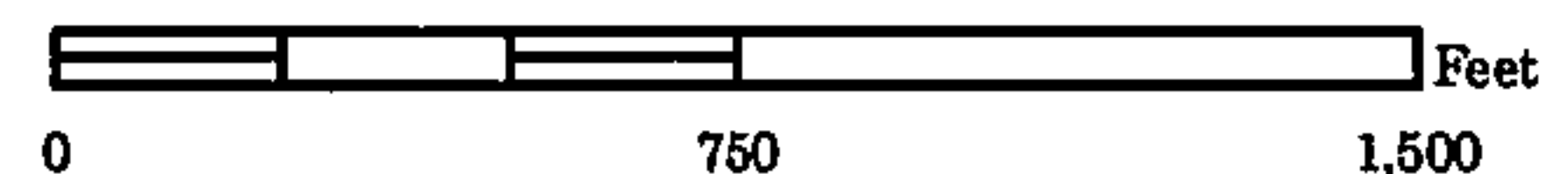
## **INTRODUCTION**

The subject of this report, as shown on the Exhibit A, is a 0.48-acre parcel of land located on the southwest corner of Central Avenue and Columbia Drive Southeast. The legal description of this site is Lots 22-24, Block 18, University Heights Addition. As shown on FIRM map35001C0353H, the entire site is located within Flood Zone X. The site is currently a gas station. The entire site is paved, with very little landscaping the site is located in a fully developed watershed where the entire supporting drainage infrastructure is completed.

## **EXISTING CONDITIONS**

The site is currently a developed gas station. As shown in appendix A, the site is paved and has very little landscaping. The site currently discharges 2.22 cfs as sheet flow to the west. The flow enters a public alley and discharges to Central Avenue. All downstream improvements are in place and maintained by the city of Albuquerque.







## **PROPOSED CONDITIONS**

The proposed improvements consist of demolishing the entire site and the construction of a new 5,500 square foot building with its associated parking and landscaping. As shown in Appendix A, The site is to be graded such that there are three drainage basins. Basin A contains the building and the southerly half of the site, and discharges to the parking field and drains 1.51 cfs as concentrated flow west to the alley. Basin B contains several parking spaces and the westerly sidewalk, and drains 0.47cfs as sheet flow to the alley. Basin C contains the front patio and building overhangs and discharges 0.17 cfs as sheet flow to central. The dumpster will have an area drain that discharges to the sanitary sewer upstream of a grease interceptor. The site will capture the first flush volume of 507 cubic feet by installing an inlet and mc 3500 infiltrator system at the outfall flow line of basin A. The system specifics are found in appendix B.

## **SUMMARY AND RECOMMENDATIONS**

This project is a redevelopment of an existing fully developed site. The proposed developed conditions from this site will capture 809 cubic feet of the first flush which is greater than the required 507 cubic feet. The site will discharge 2.15 cfs during the 100-year, 6-hour design storm, which is less than the 2.22 cfs the site currently discharges. The site will discharge to the existing alley and tie to the existing grades at the edge of the ally. The development of this site will not negatively impact the upstream nor down stream facilities. Since this site does not exceed 1 acre, erosion and sediment Control Plan should not be required prior to any construction activity.



**APPENDIX A**  
**SITE HYDROLOGY**



Weighted E Method  
2550 CENTRAL SE

Existing Developed Basins

											100-Year, 6-hr.			10-day
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Volume (ac-ft)
			%	(acres)	%	(acres)	%	(acres)	%	(acres)				
EXISTING	21117	0.485	0%	0	2.0%	0.010	5.0%	0.02424	93.0%	0.451	2.044	0.083	2.22	0.143
PROPOSED BASIN A	14912.00	0.342	0%	0	5.0%	0.017	10.0%	0.03423	85.0%	0.291	1.954	0.056	1.51	0.095
PROPOSED BASIN B	4661.00	0.107	0%	0	0.0%	0.000	21.0%	0.02247	79.0%	0.085	1.912	0.017	0.47	0.028
PROPOSED BASIN C	1544.00	0.035	0%	0	0.0%	0.000	0.0%	0	100.0%	0.035	2.120	0.006	0.17	0.011
PROPOSED	21117.00	0.485	0%	0	3.5%	0.017117	11.7%	0.0567	84.8%	0.410959	1.957	0.079	2.15	0.134
COMPARISON(onsite historical to proposed)					2%	0.01	7%	0.03	-8%	-0.04		-0.076	-0.07	-0.132

Equations:

Weighted E = Ea\*Aa + Eb\*Ab + Ec\*Ac + Ed\*Ad / (Total Area)

Volume = Weighted D \* Total Area

Flow = Qa \* Aa + Qb \* Ab + Qc \* Ac + Qd \* Ad

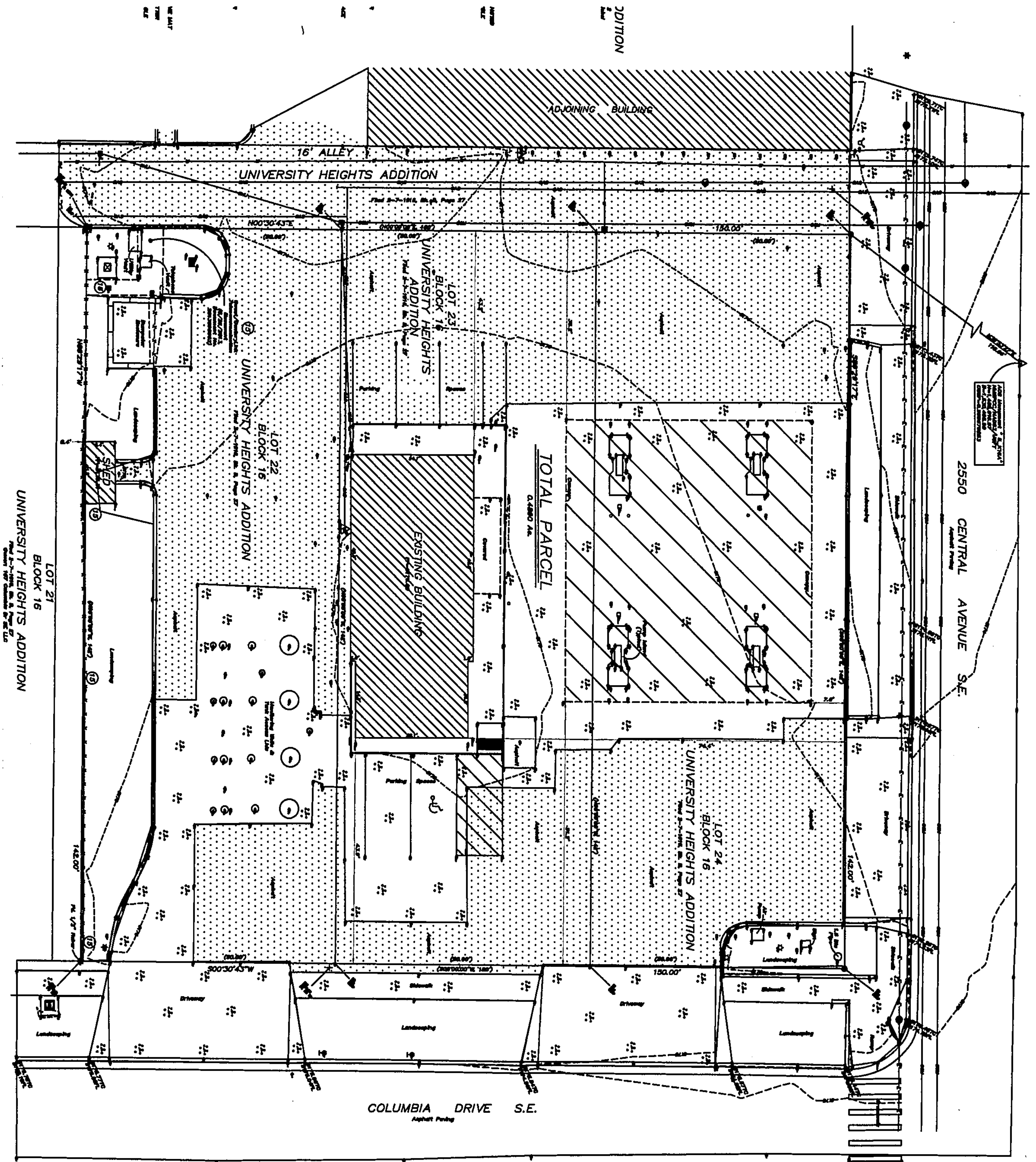
Where for 100-year, 6-hour storm (zone 2)

Ea= 0.53	Qa= 1.56
Eb= 0.78	Qb= 2.28
Ec= 1.13	Qc= 3.14
Ed= 2.12	Qd= 4.7

FIRST FLUSH REQUIREMENT  
507.2061 CUBIC FEET REQUIRED  
809 CUBIC FEET PROVIDED

NARRATIVE  
THIS SITE IS A REDEVELOPMENT OF AN EXISTING SITE . THE EXISTING SITE DISCAHRGES 2.22 CFS TO A PUBLIC ALLEY. THE PROPOSED DEVELOPMENT GENERATES LESS THAN EXISTING FLOW RATES. THE FIRST FLUSH VOLUME WILL BE RETAINED BY THE PLACEMENT OF A INFILTRATOR SYSTEM AT THE OUTFALL FLOW LINE. THE SITE MATCHES THE EXIS DRAINAGE PATTERNS. AND WILL TIE TO THE EXISTING ALLEY.



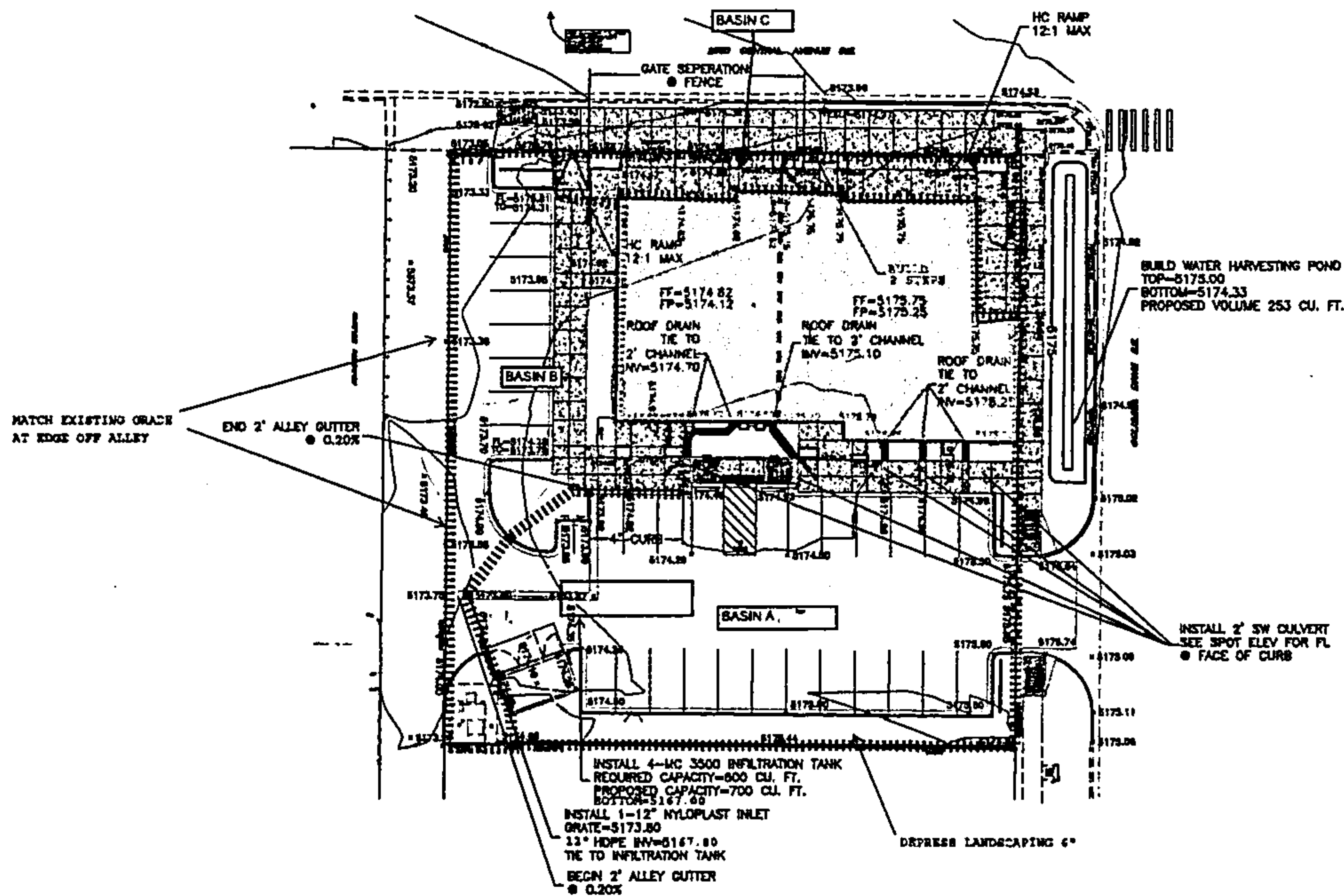


EXISTING CONDITIONS



EROSION CONTROL NOTES:

- 1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
- 2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
- 3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
- 4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.

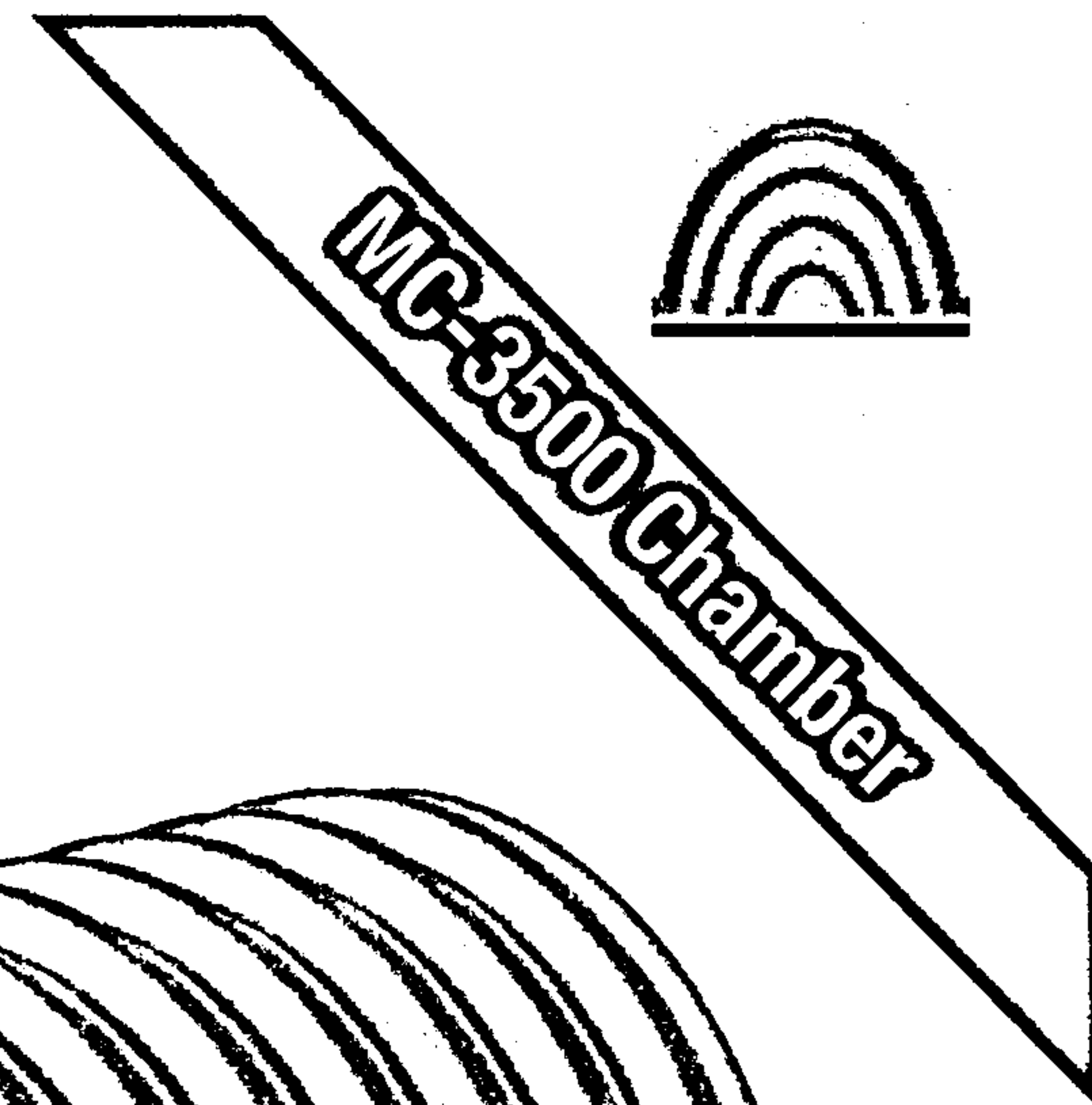




**APPENDIX B**

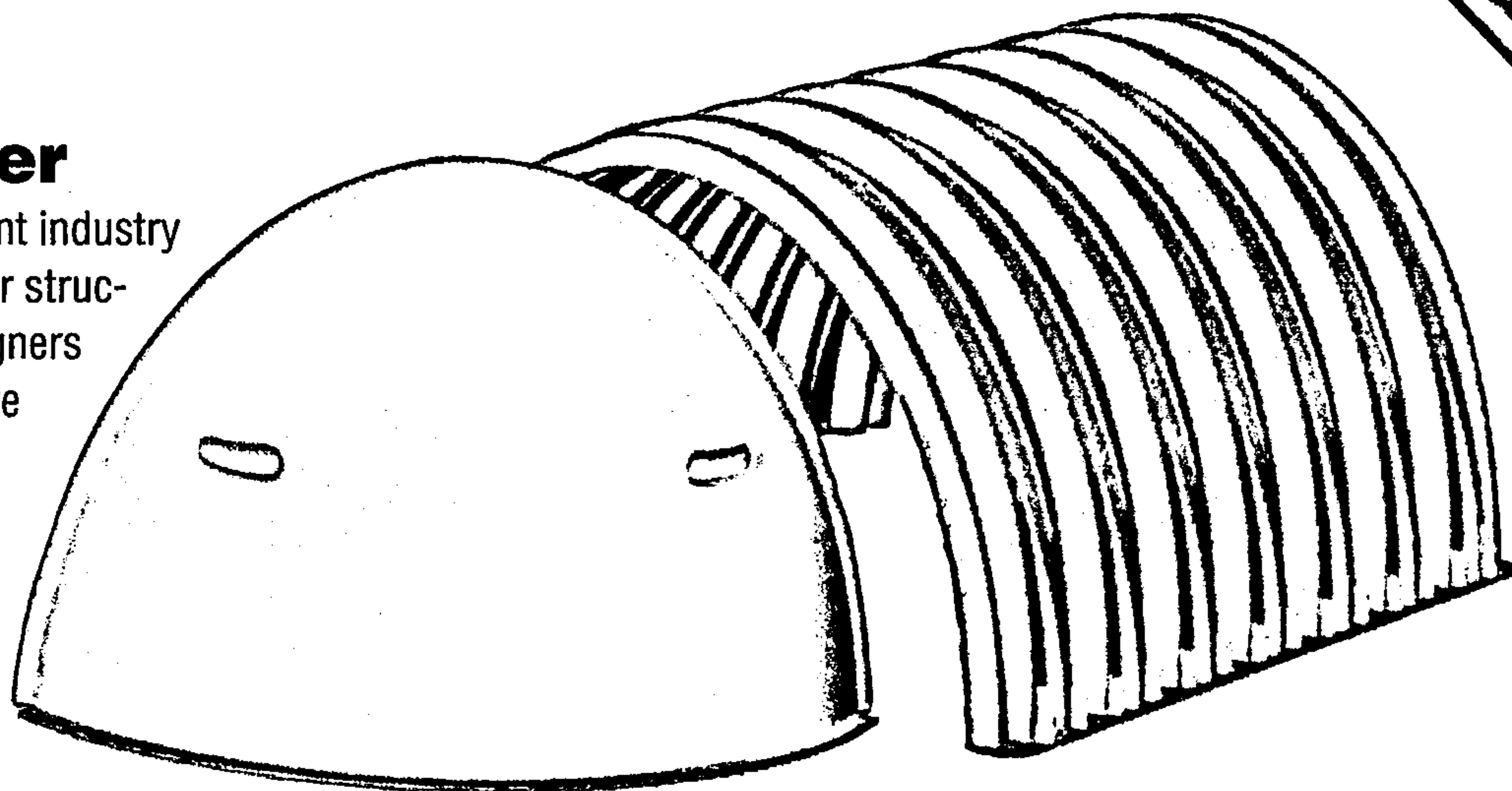
**INFILTRATOR TANK SPECIFICATIONS**





## StormTech MC-3500 Chamber

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots thus maximizing land usage for commercial and municipal applications.



### StormTech MC-3500 Chamber (not to scale)

#### Nominal Chamber Specifications

Size (L x W x H)	90' (2286 mm) x 77' (1956 mm) x 45" (1143 mm)
Chamber Storage	109.9 ft <sup>3</sup> (3.11 m <sup>3</sup> )
Min. Installed Storage*	178.9 ft <sup>3</sup> (5.06 m <sup>3</sup> )
Weight	134 lbs (60.8 kg)

\* This assumes a minimum of 12" (305 mm) of stone above, 9" (229 mm) of stone below chambers, 9" (229 mm) row spacing, and 40% stone porosity.

### StormTech MC-3500 End Cap (not to scale)

#### Nominal End Cap Specifications

Size (L x W x H)	26.5' (673 mm) x 71' (1803 mm) x 45.1" (1145 mm)
End Cap Storage	15.6 ft <sup>3</sup> (0.44 m <sup>3</sup> )
Min. Installed Storage*	46.9 ft <sup>3</sup> (1.33 m <sup>3</sup> )
Weight	43 lbs (19.5 kg)

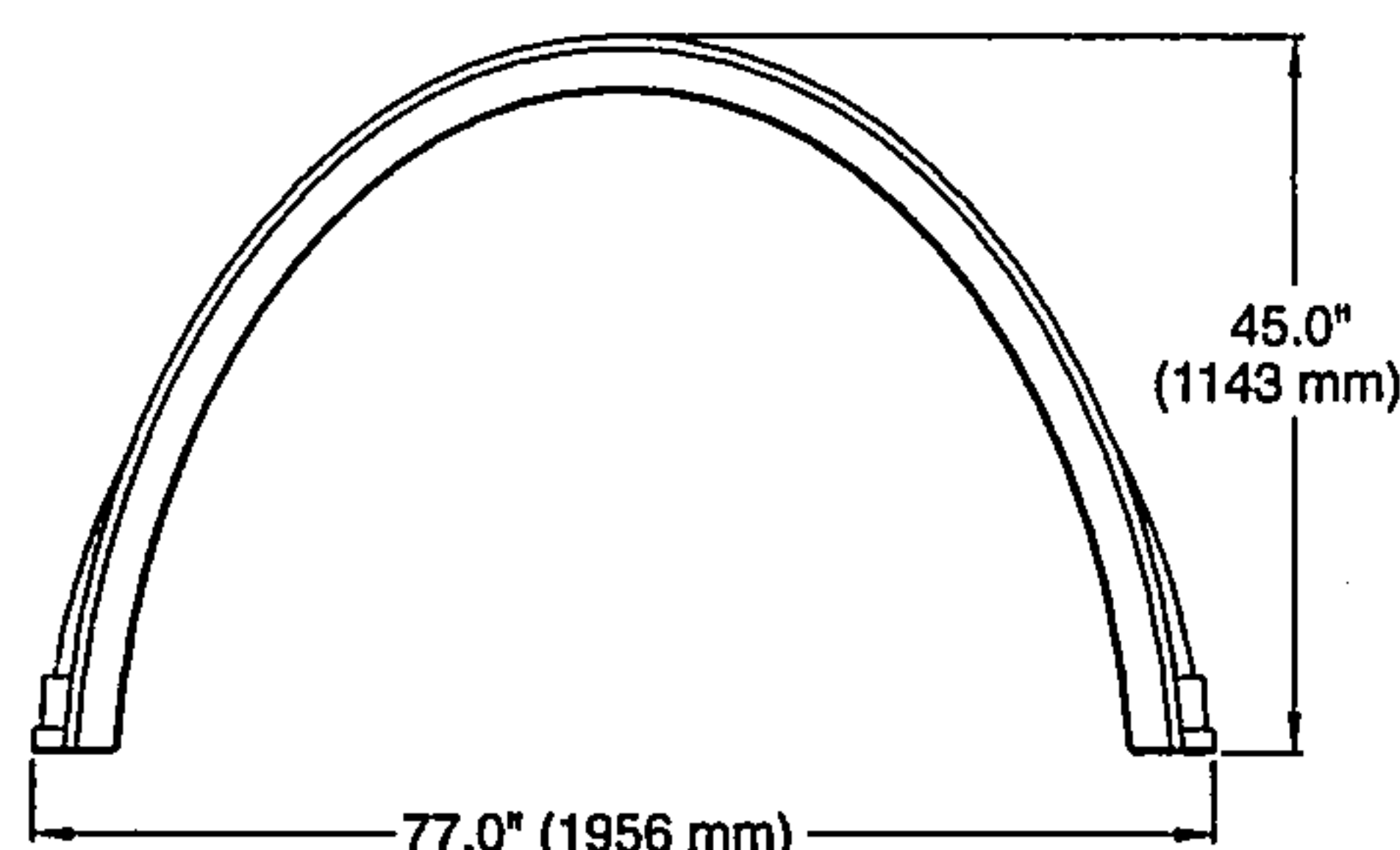
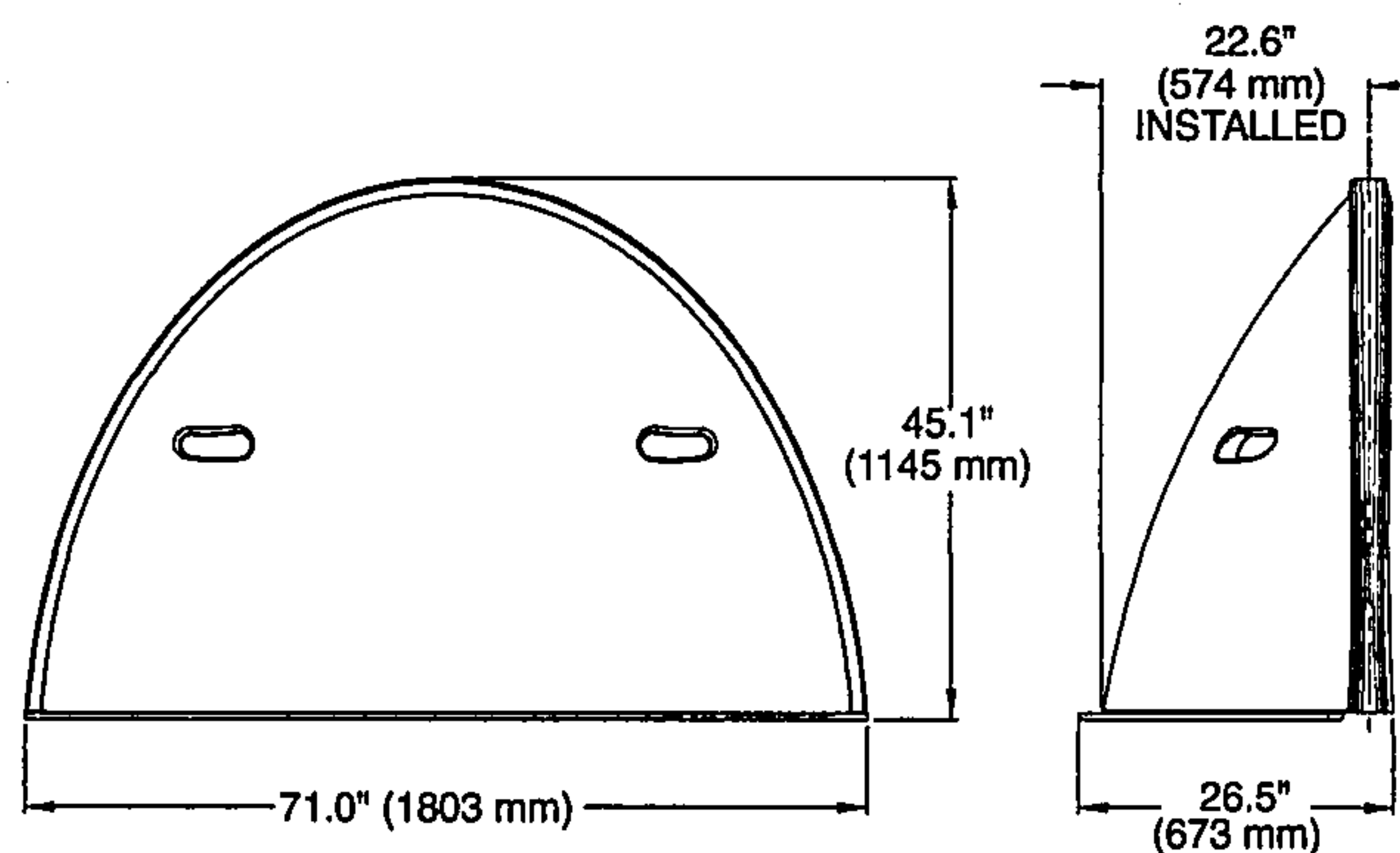
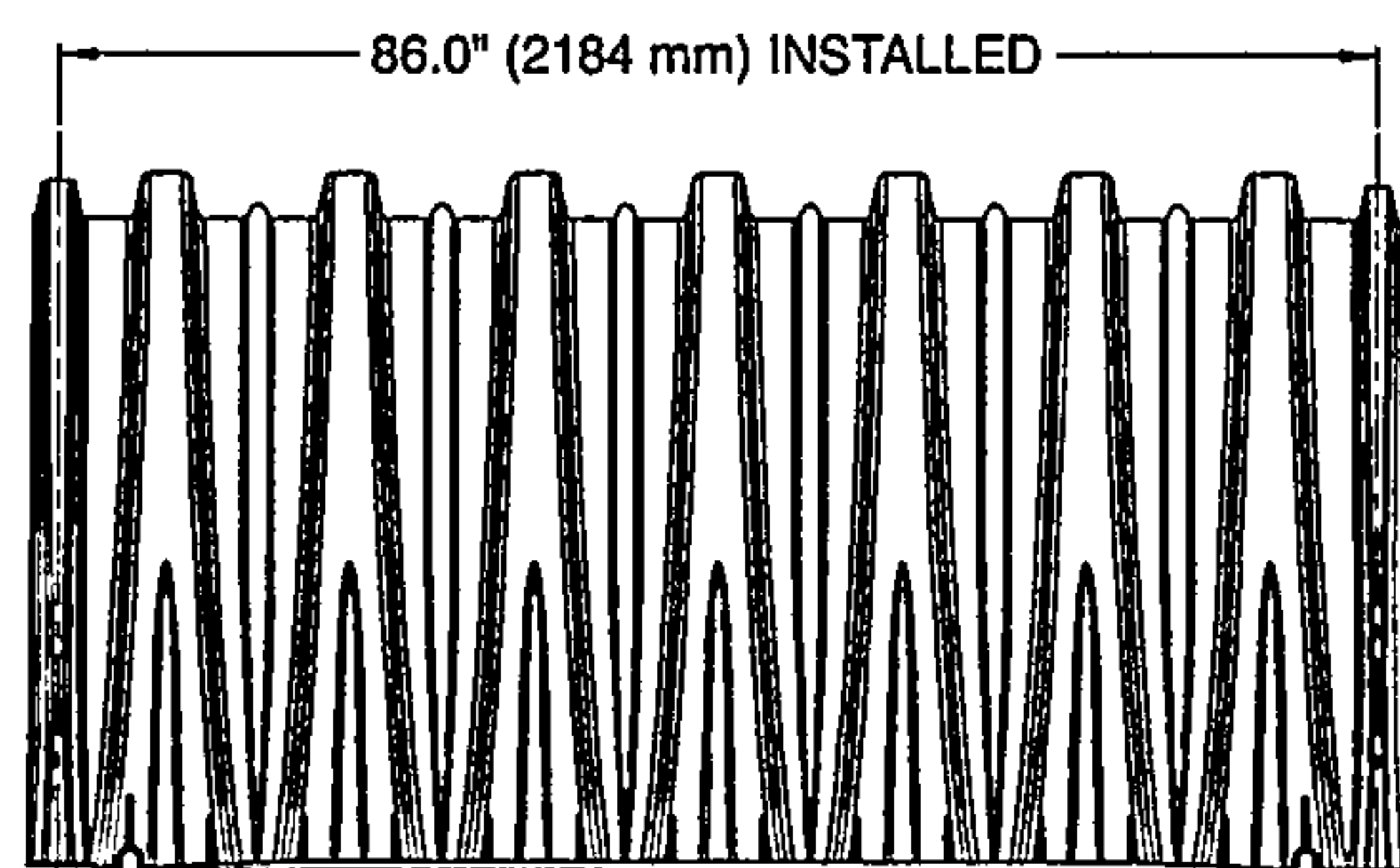
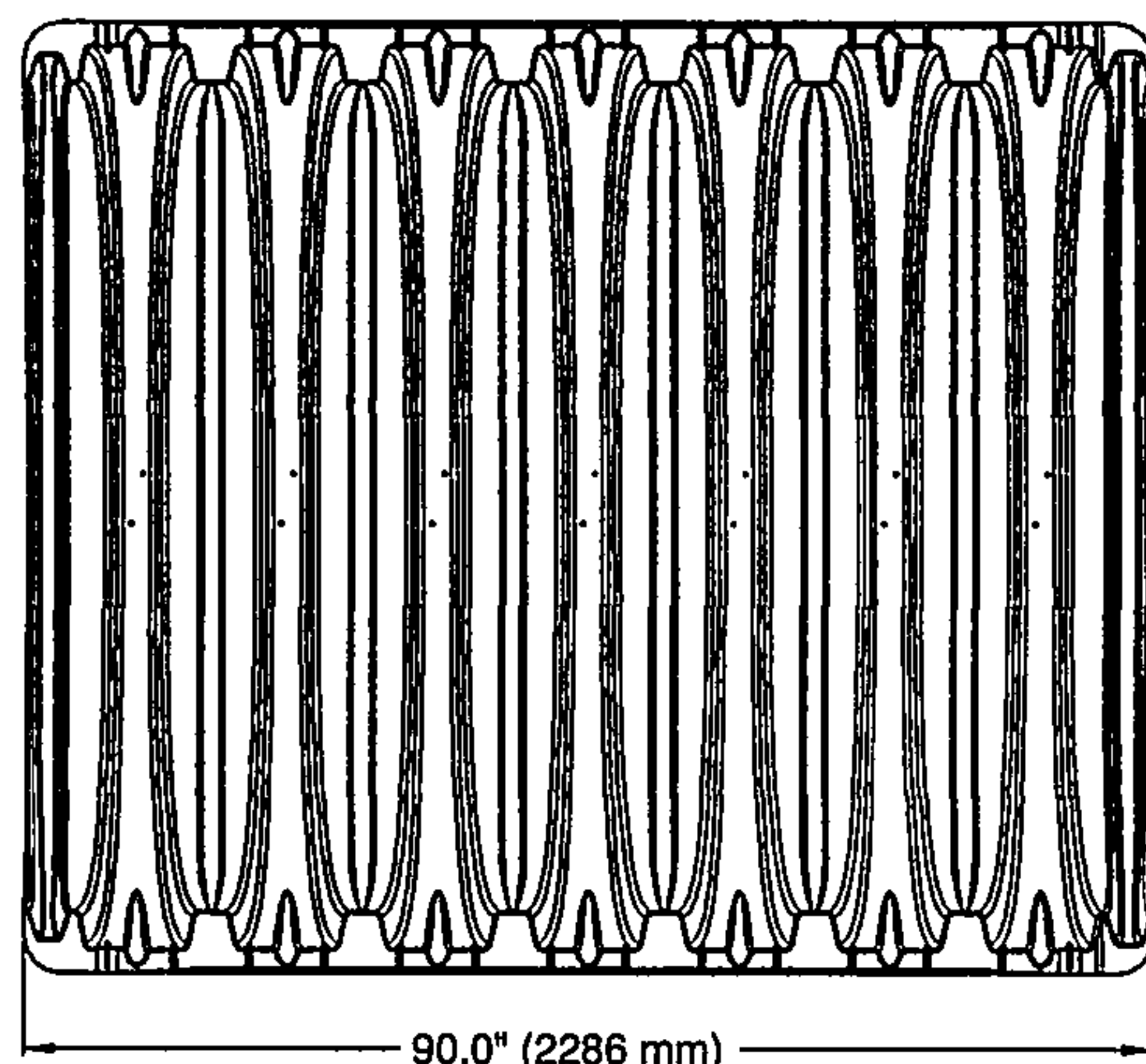
\*This assumes a minimum of 12" (305 mm) of stone above, 9" (229 mm) of stone below, 9" (229 mm) row spacing, 6" (152 mm) of stone perimeter, and 40% stone porosity.

### Shipping

15 chambers/pallet

16 end caps/pallet

7 pallets/truck





## Storage Volume Per Chamber/End Cap ft³ (m³)

	Bare Unit Storage ft³ (m³)	Chamber/End Cap and Stone Volume — Stone Foundation Depth in. (mm)			
		9 (229)	12 (305)	15 (381)	18 (457)
MC-3500 Chamber	109.9 (3.11)	178.9 (5.06)	184.0 (5.21)	189.2 (5.36)	194.3 (5.5)
MC-3500 End Cap	15.64 (0.44)	46.9 (1.33)	48.6 (1.38)	50.3 (1.43)	52.0 (1.47)

NOTE: Assumes 9" (229 mm) row spacing, 40% stone porosity 12" (305 mm) stone above and includes the bare chamber/end cap volume. End Cap volume assumes 6" (152 mm) stone perimeter.

## Volume of Excavation Per Chamber/End Cap in yd³ (m³)

	Stone Foundation Depth in. (mm)			
	9 (229)	12 (305)	15 (381)	18 (457)
MC-3500	12.4 (9.5)	12.8 (9.8)	13.3 (10.2)	13.8 (10.5)
End Cap	4.1 (3.1)	4.3 (3.3)	4.4 (3.4)	4.6 (3.5)

NOTE: Assumes 9" (229 mm) of separation between chamber rows and 24" (610 mm) of cover. The volume of excavation will vary as the depth of cover increases.

## Amount of Stone Per Chamber

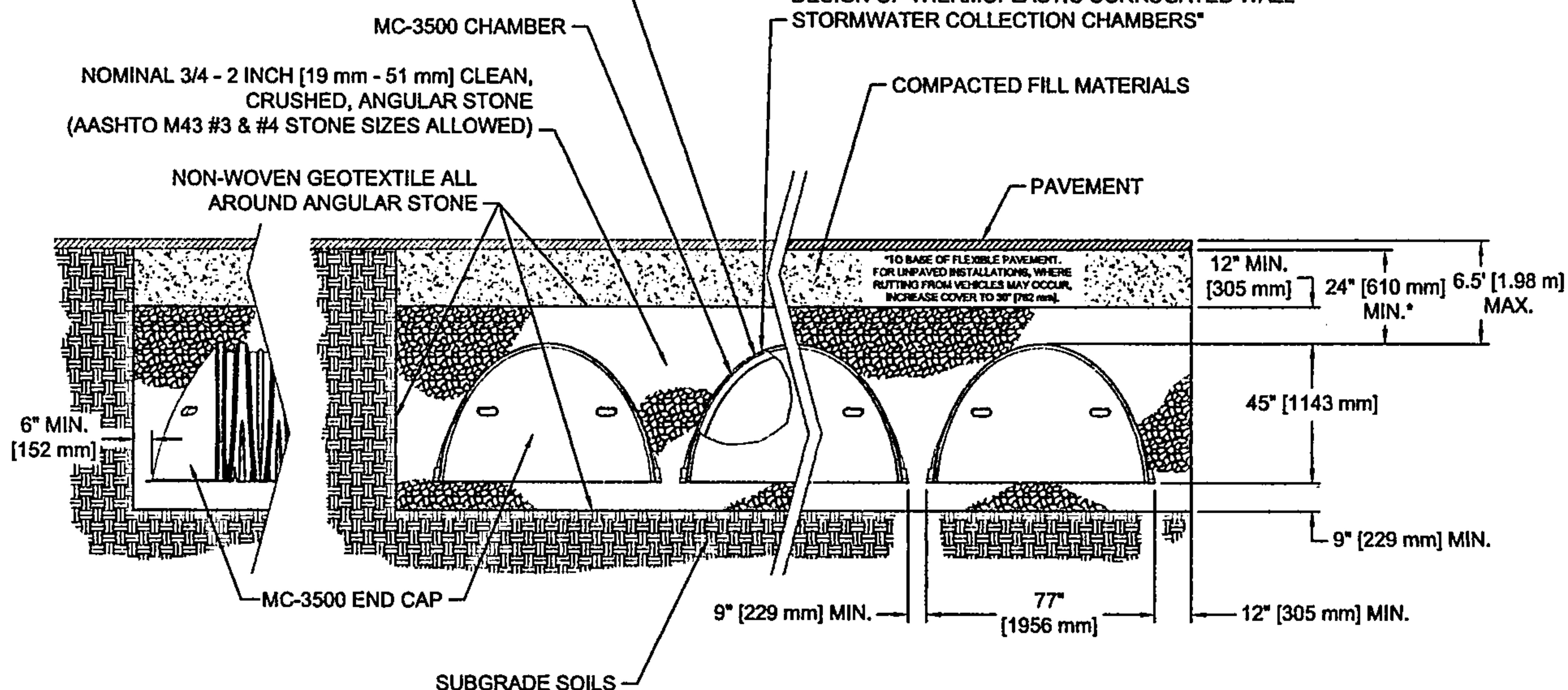
ENGLISH tons (yd³)	Stone Foundation Depth			
	9 in.	12 in.	15 in.	18 in.
MC-3500	9.1 (6.4)	9.7 (6.9)	10.4 (7.3)	11.1 (7.8)
End Cap	4.1 (2.9)	4.3 (3.1)	4.6 (3.2)	4.8 (3.4)
METRIC kg (m³)	229 mm	305 mm	381 mm	457 mm
MC-3500	8220 (4.9)	8831 (5.3)	9443 (5.6)	10054 (6.0)
End Cap	3729 (2.2)	3933 (2.3)	4136 (2.5)	4339 (2.6)

NOTE: Assumes 12" (305 mm) of stone above, and 9" (229 mm) between chambers/end caps.

stone treatment

## General Cross Section

CHAMBERS SHALL MEET ASTM F 2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"



### NOTES:

1. THIS CROSS SECTION PROVIDES GENERAL INFORMATION FOR THE MC-3500 CHAMBER. STORMTECH MC-3500 CHAMBERS MUST BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE MC-3500 DESIGN MANUAL AND MC-3500 CONSTRUCTION GUIDE.
2. PROPERLY INSTALLED MC-3500 CHAMBERS PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR EARTH AND LIVE LOADS WITH CONSIDERATION FOR IMPACT AND MULTIPLE PRESENCES.
3. PERIMETER STONE MUST ALWAYS BE BROUGHT UP EVENLY WITH BACKFILL OF BED. PERIMETER STONE MUST EXTEND HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH STRAIGHT OR SLOPED SIDEWALLS.

**StormTech**  
Detention • Retention • Water Quality

A division of **ADS**

70 Inwood Road, Suite 3 | Rocky Hill | Connecticut | 06067

860.529.8188 | 888.892.2694 | fax 866.328.8401 | fax 860-529-8040 | [www.stormtech.com](http://www.stormtech.com)



ADS "Terms and Conditions of Sale" are available on the ADS website, [www.ads-pipe.com](http://www.ads-pipe.com).

Advanced Drainage Systems, the ADS logo, and the green stripe are registered trademarks of Advanced Drainage Systems.

StormTech® is a registered trademark of StormTech, Inc

The Green Building Council Member logo is a registered trademark of the U.S. Green Building Council.

S150909 06/12

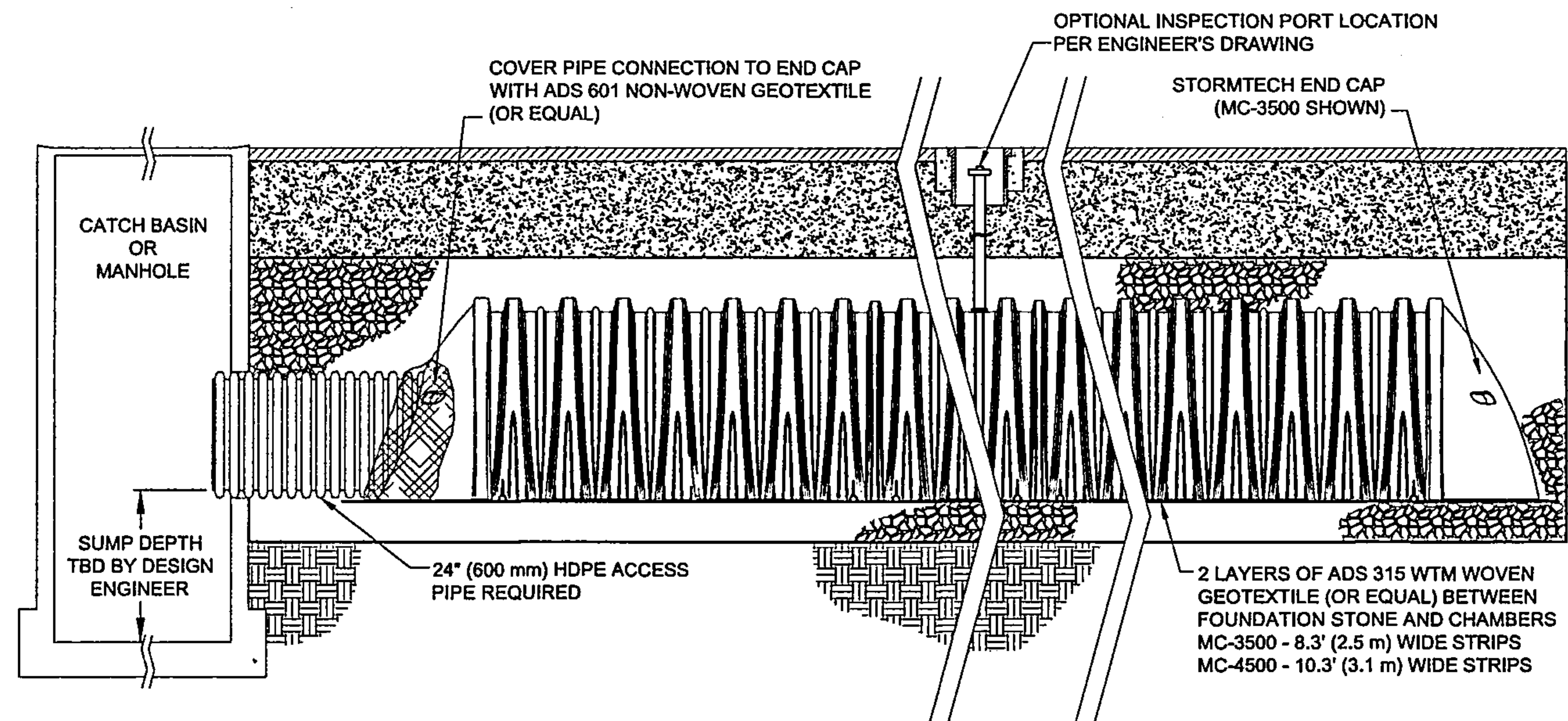
© 2012 Advanced Drainage Systems, Inc.

Printed on recycled paper



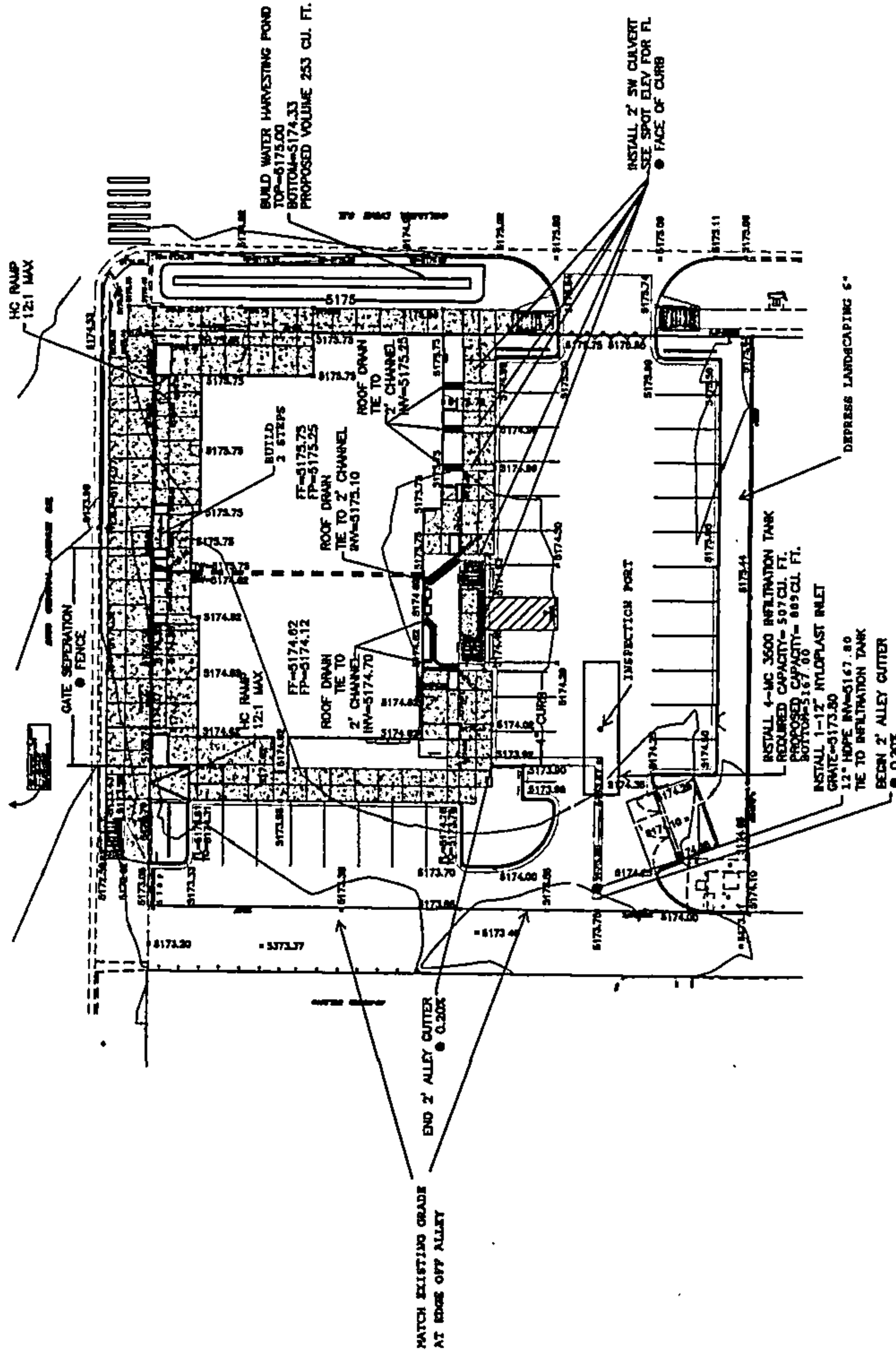


**FIGURE 12 – StormTech Isolator Row Detail**





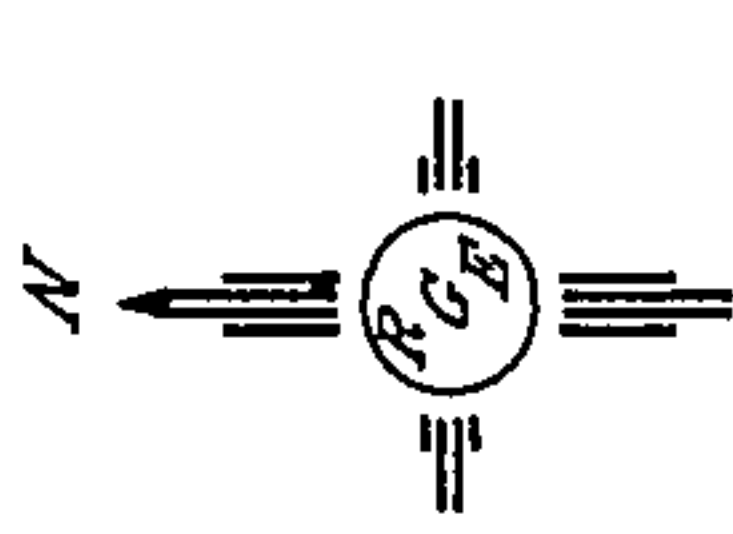
- EROSION CONTROL NOTES:**
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
  2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
  3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
  4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATED ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
  5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.



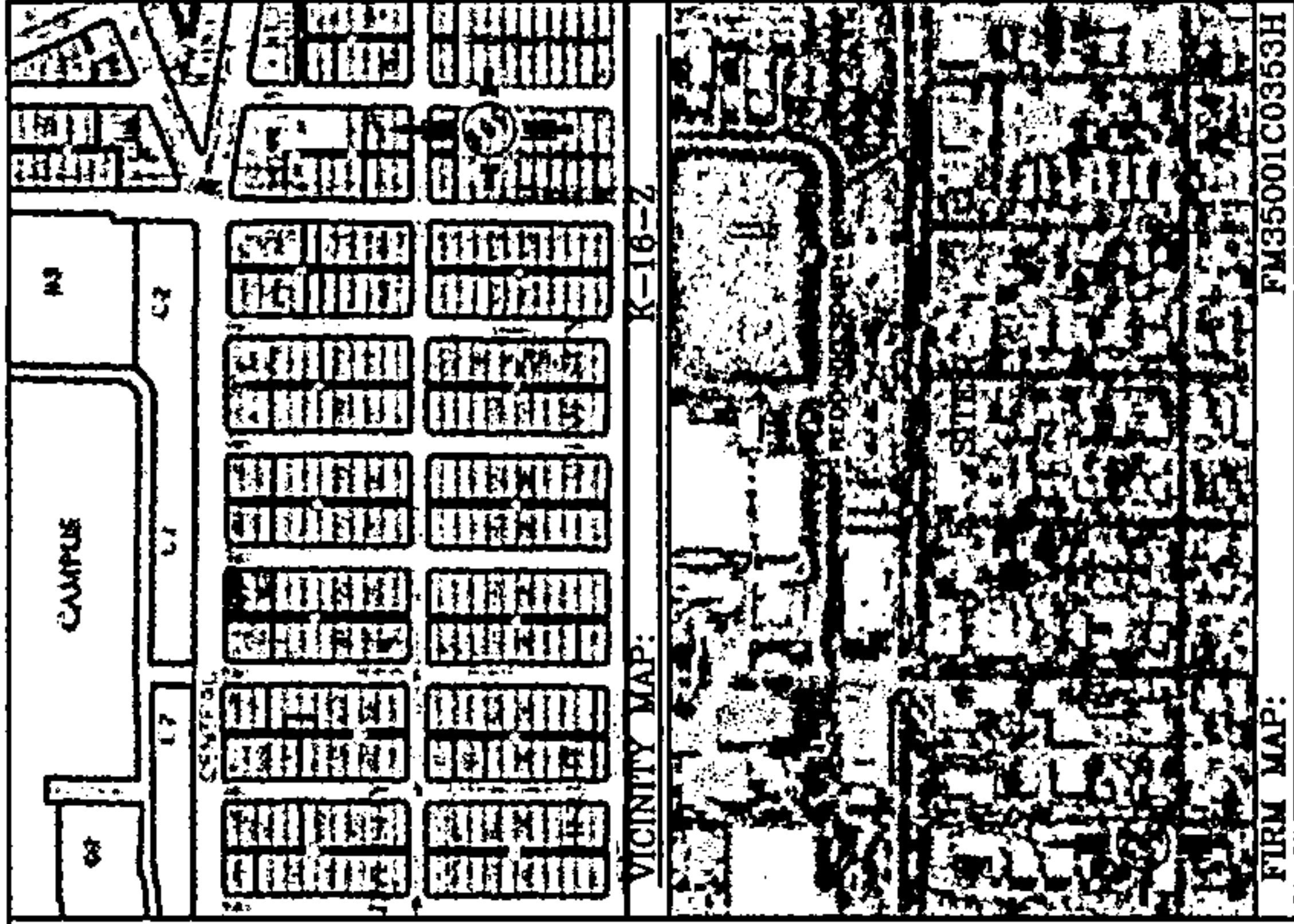
**CAUTION:**  
EXISTING UTILITIES ARE NOT SHOWN.  
IT SHALL BE THE SOLE RESPONSIBILITY  
OF THE CONTRACTOR TO CONDUCT ALL  
NECESSARY FIELD SURVEYS PRIOR TO  
ANY EXCAVATION TO DETERMINE THE  
ACTUAL LOCATION OF UTILITIES & OTHER  
IMPROVEMENTS.

**EROSION CONTROL NOTES:**

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**GRAPHIC SCALE**  
20 10 0 10 20  
SCALE: 1"=20'



**LEGAL DESCRIPTION:**

LOT 22, 23, 24, BLOCK 16, UNIVERSITY HEIGHTS ADDITION

**NOTES:**

1. ALL SPOT ELEVATIONS REPRESENT FINISHED ELEVATION UNLESS OTHERWISE NOTED.
2. ALL CURB AND GUTTER TO 6" HEADER UNLESS OTHERWISE NOTED.
3. ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.
4. ALL NEW PAVING SHALL BE 6" PCC OVER 8" SUBGRADE PREPARATION IN CONFORMANCE TO AASHTO 308-08, UNLESS OTHERWISE NOTED.
5. ANY CURBS OR PAVEMENT NEGATIVELY IMPACTED BY CONSTRUCTION ACTIVITY SHALL BE REPLACED TO MATCH EXISTING CONDITIONS.
6. ALL SITE WORK SHALL CONFORM TO CITY OF ALBUQUERQUE STANDARDS FOR PUBLIC WORKS CONSTRUCTION EDITION 9

**LEGEND**

---	EXISTING CONTOUR
---	EXISTING INDEX CONTOUR
---	PROPOSED CONTOUR
---	PROPOSED INDEX CONTOUR
---	SLOPE TIE
---	EXISTING SPOT ELEVATION
---	PROPOSED SPOT ELEVATION
---	BOUNDARY
---	CENTERLINE
---	RIGHT-OF-WAY
---	PROPOSED CURB
---	EXISTING CURB AND GUTTER
---	PROPOSED SIDEWALK
---	EXISTING SIDEWALK
---	PROPOSED SCREEN WALL
---	NEW CONCRETE SIDEWALK

<b>STARBUCKS/FREDDY'S</b>	<b>OWNER</b> BY: [Signature]
<b>GRADING AND DRAINAGE PLAN</b>	<b>DATE</b> 12-27-17
	<b>SHEET #</b> 1
<b>DAVID SOBLE</b> P.E. #14522	<b>JOB #</b> 21702



# CITY OF ALBUQUERQUE



September 20, 2016

Peter Butterfield Architect  
13013 Glenwood Hills Ct NE  
Albuquerque, NM

**Re: UNM Shell**  
**2550 Central Ave SE**  
**Traffic Circulation Layout**  
Architect's Stamp dated 09-07-16 (K16D075)

Dear Mr. Butterfield,

The TCL submittal received 09-08-16 is approved for Building Permit. A copy of the stamped and signed plan will be needed for each of the building permit plans. Please keep the original to be used for certification of the site for final C.O. for Transportation.

- Please coordinate construction details with Paula Dodge-Kwan the City of Albuquerque Project Manager for the Albuquerque Rapid Transit project. Her contact information is 505-768-3623 or email [pdodge-kwan@cabq.gov](mailto:pdodge-kwan@cabq.gov).

PO Box 1293

Albuquerque

New Mexico 87103

[www.cabq.gov](http://www.cabq.gov)

When the site construction is completed and a Certificate of Occupancy (C.O.) is requested, use the original City stamped approved TCL for certification. Redline any minor changes and adjustments that were made in the field. A NM registered architect or engineer must stamp, sign, and date the certification TCL along with indicating that the development was built in "substantial compliance" with the TCL. Submit this certification TCL with a completed Drainage and Transportation Information Sheet to front counter personnel for log in and evaluation by Transportation.

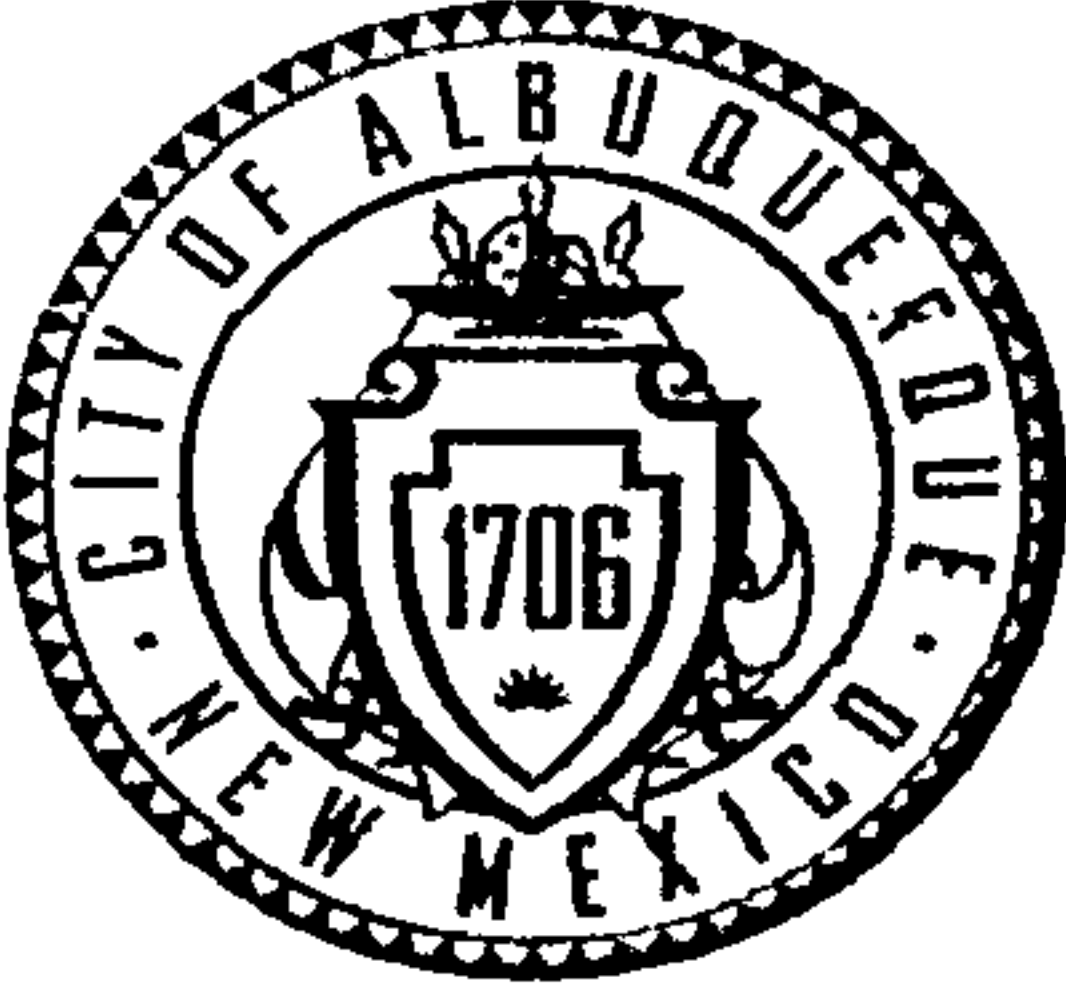
Once verification of certification is completed and approved, notification will be made to Building Safety to issue Final C.O. To confirm that a final C.O. has been issued, call Building Safety at 924-3690.

Sincerely,

Racquel M. Michel, P.E.  
Traffic Engineer, Planning Dept.  
Development Review Services

mao via: email  
C: CO Clerk, File





# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: UNM Shell Building Permit #: \_\_\_\_\_ City Drainage #: K16D075  
DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ Work Order #: \_\_\_\_\_  
Legal Description: LOTS 22 23 & 24 BLK 16 UNIVERSITY HEIGHTS ADDN  
City Address: 2550 Central Avenue SE

Engineering Firm: \_\_\_\_\_ Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Owner: TA CENTRAL UNM L.L.C., A NEVADA LIMITED LIABILITY COMPANY Contact: Mark Tekin  
Address: 8765 STOCKARD DRIVE SUITE 203 FRISCO, TEXAS 75034  
Phone#: (214) 960-9991 Fax#: \_\_\_\_\_ E-mail: marktekin@gmail.com

Architect: Peter Butterfield, Architect Contact: Peter Butterfield  
Address: 13013 Glenwood Hills Ct NE, Albuquerque NM  
Phone#: 505 332 9323 Fax#: \_\_\_\_\_ E-mail: peterbutterfield@Q.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:

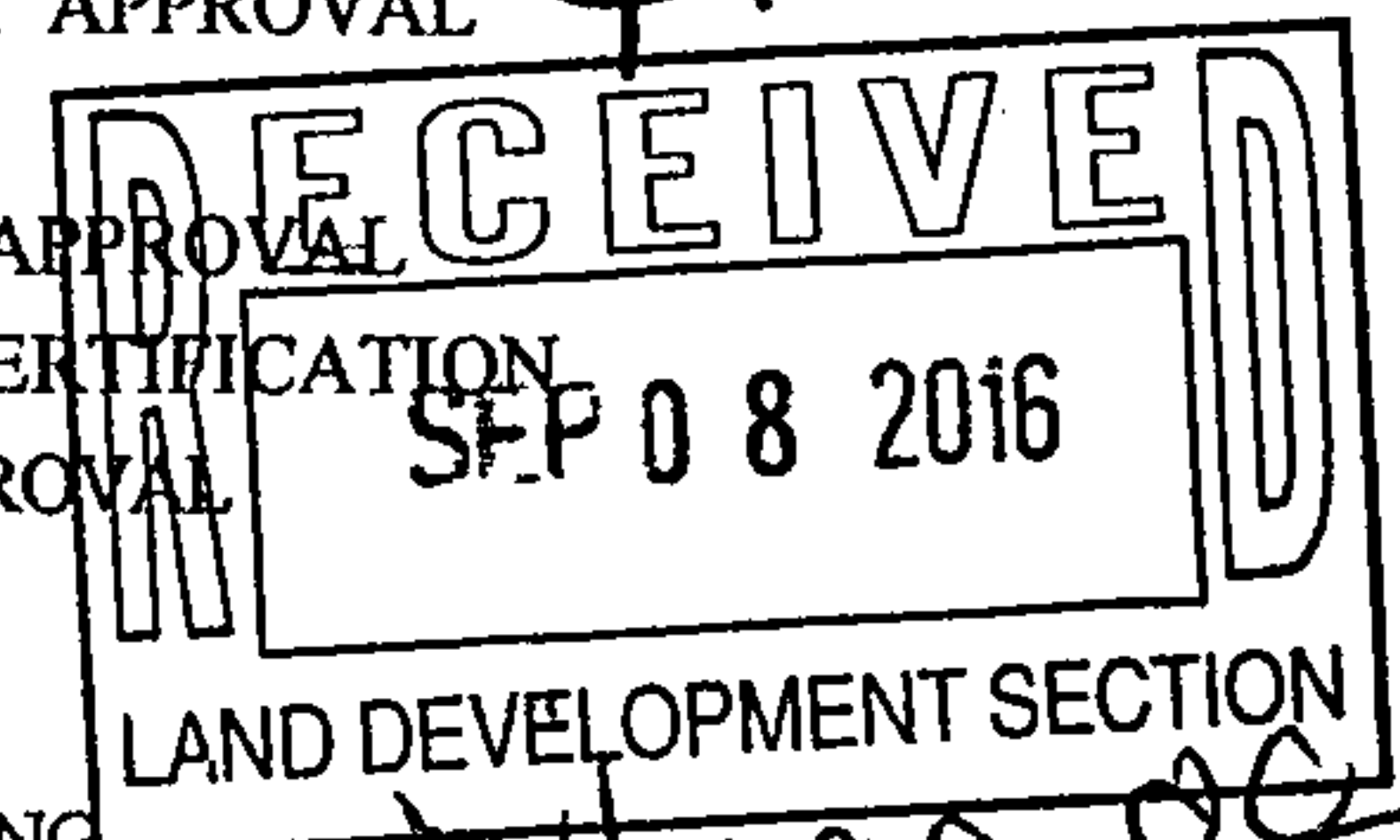
- ☐ ENGINEER/ ARCHITECT CERTIFICATION  
  
☐ CONCEPTUAL G & D PLAN  
☐ GRADING PLAN  
☐ DRAINAGE MASTER PLAN  
☐ DRAINAGE REPORT  
☐ CLOMR/LOMR  
  
☒ TRAFFIC CIRCULATION LAYOUT (TCL)  
☐ TRAFFIC IMPACT STUDY (TIS)  
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)  
  
☐ OTHER (SPECIFY) \_\_\_\_\_

IS THIS A RESUBMITTAL?: ☐ Yes ☒ No

DATE SUBMITTED: 9/8/16 By: peter butterfield

### CHECK 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) paid \$100.00



COA STAFF: \_\_\_\_\_ ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_



K16-D075

Doc# 2010014768

02/22/2010 10:16 AM Page: 1 of 2  
EASE R:\$11.00 M. Toulouse Oliver, Bernalillo County

private



**RECIPROCAL EASEMENT FOR COMMON ACCESS AND PARKING**

**Diamond Shamrock Stations, Inc.** ("Owner") is the owner of **Lots 22, 23 & 24** (each a "Lot"), **Block 16 of the University Heights Addition**, a Subdivision in the City of Albuquerque, as the same are shown and designated on the map of said Addition filed in the office of the County Clerk of the County of Bernalillo, State of New Mexico, on February 7, 1916, Volume D, folio 27 (the "Property").

Owner desires to create common access and parking easements over the Easement Areas (as defined herein) benefitting and burdening the above-described adjoining Lots that comprise the Property for the Easement Purpose (as defined herein). As used in this Reciprocal Easement for Common Access and Parking ("Easement"), "Easement Areas" means the driveways, parking areas, sidewalks and walkways, access ways, curb cuts, entrances and exits as such area shall, from time to time, be developed, altered or modified on each Lot.

Subject to any express conditions, limitations or reservations contained herein, Owner hereby declares, establishes and grants for the benefits of and as an appurtenance to each Lot, a non-exclusive and perpetual easement for reasonable access, ingress / egress, and parking over the Easement Areas for the continued use for the existing convenience store/gas station, together with any other lawful use of the Property, as to provide for the free and uninterrupted passage of motor vehicles (including any emergency vehicles and service vehicles) and pedestrians over the Easement Areas between the Lots and all abutting streets and rights-of-way furnishing access to the Lots (the "Easement Purpose").

This Easement is superior and paramount to the rights of Owner in the respective servient estates so created. Owner further agrees that this Easement is a covenant that shall run with the land.

The maintenance of the Easement Areas is the responsibility of the Owner of the Lot on which the respective Easement Areas are located. Nothing contained in this Easement shall be deemed to be a gift or dedication of any portion of the Property to the general public or for any public use or purpose whatsoever.

In witness whereof, the parties hereto have executed this agreement as follows:

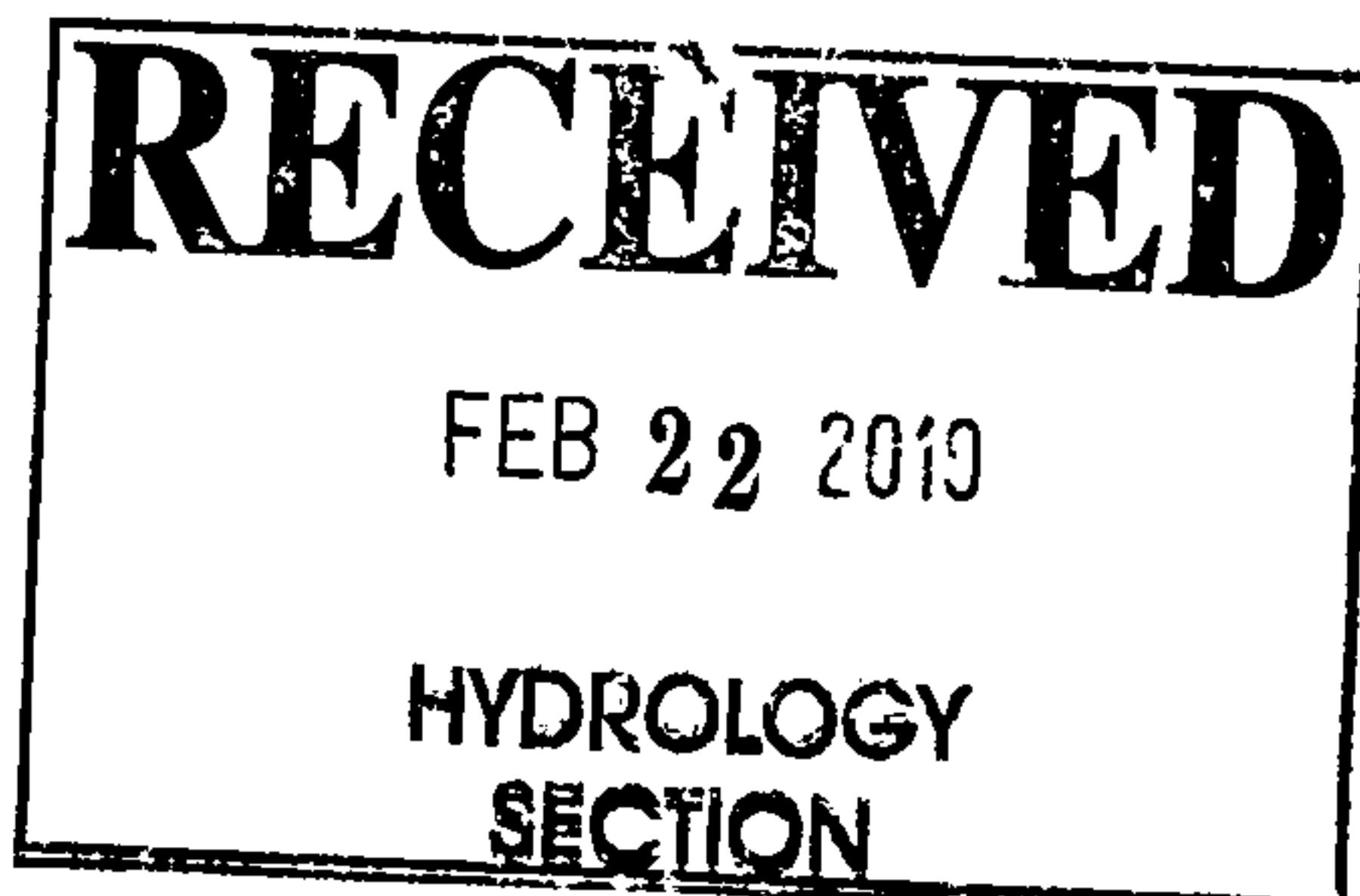
**OWNER:**

DIAMOND SHAMROCK STATIONS, INC.,  
a Delaware corporation

By: 

Name: DOUGLAS M. MILLER

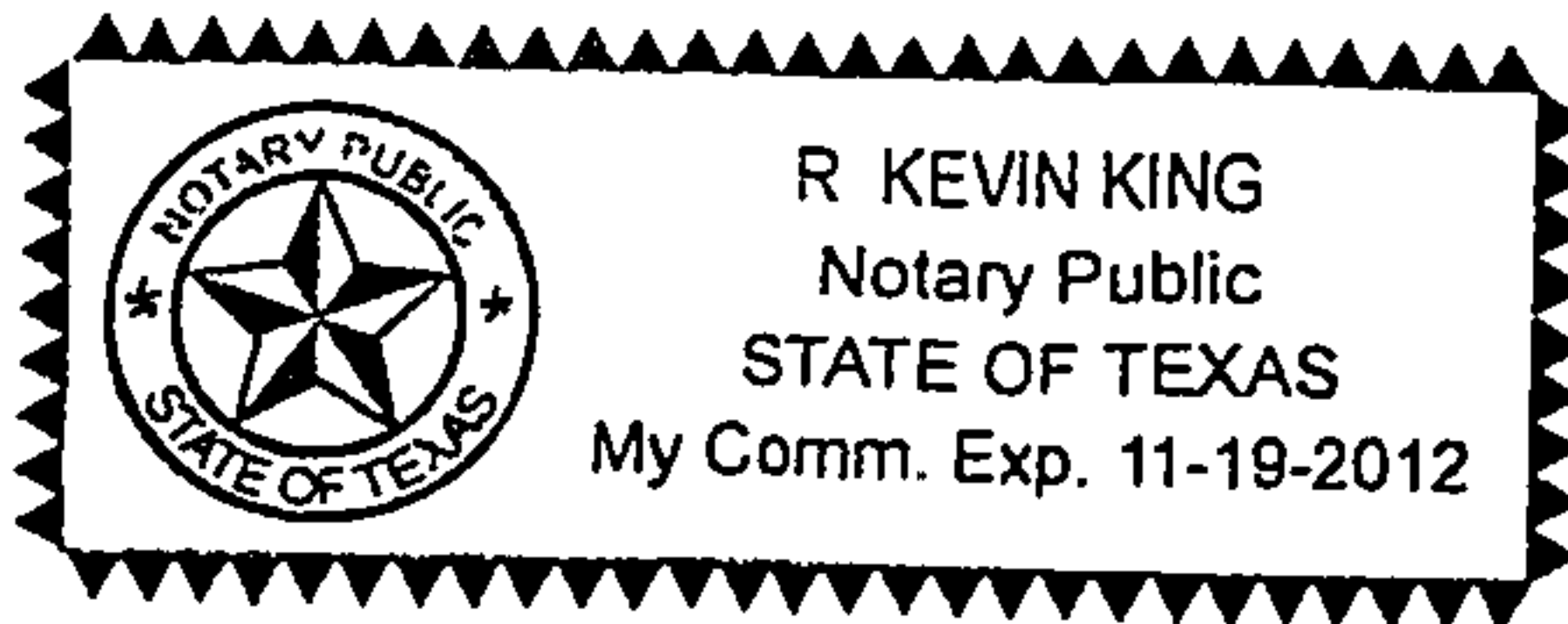
Title: Vice President



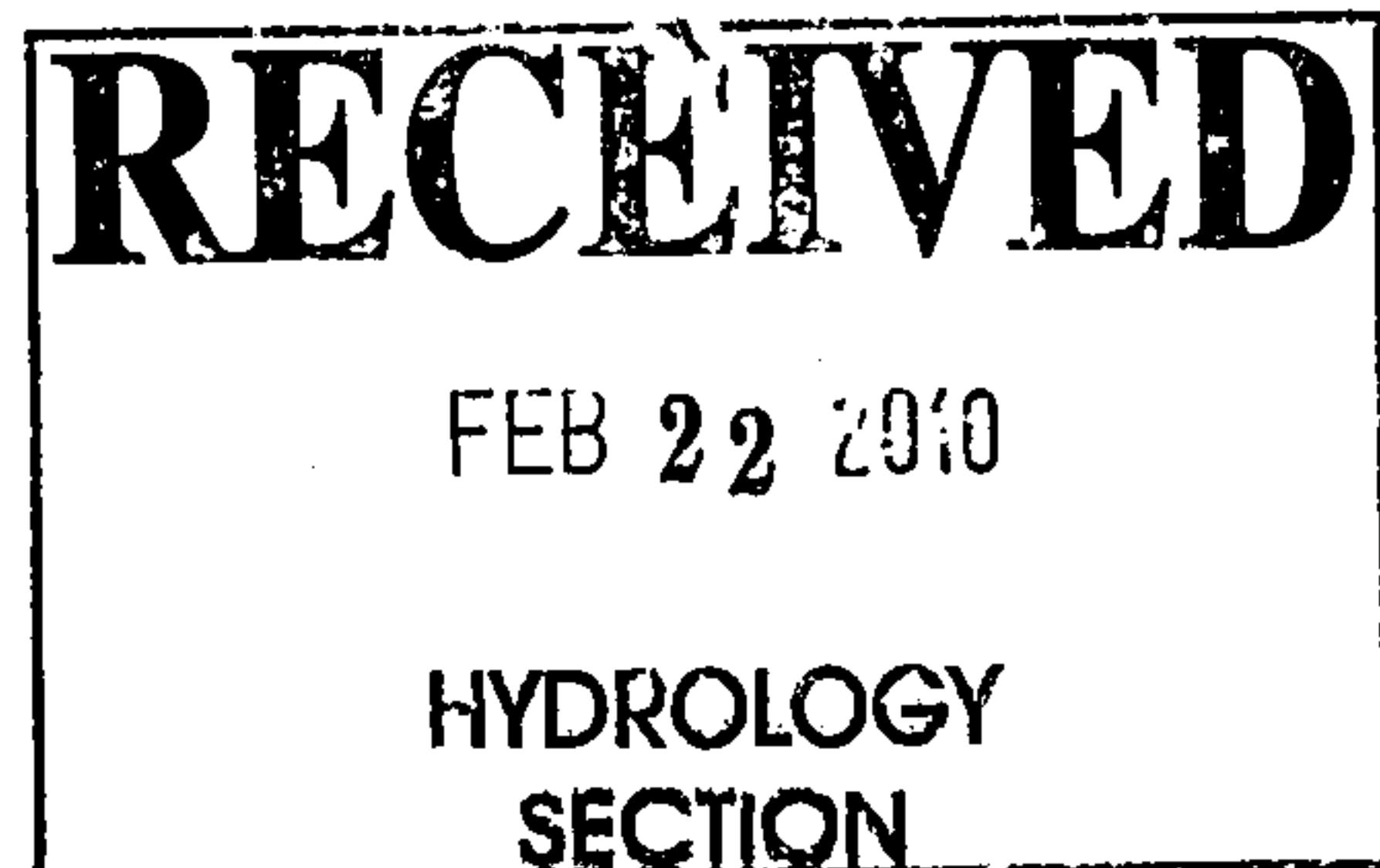


STATE OF TEXAS           §  
COUNTY OF BEXAR       §

The foregoing instrument was acknowledged before me on February 4, 2010, by Douglas M. Miller the Vice President of DIAMOND & SHAMROCK STATIONS, INC., a Delaware corporation, on behalf of said corporation.



Notary Public, State of





# CITY OF ALBUQUERQUE



February 18, 2010

Ronald Bohannon, P.E.  
Tierra West, LLC  
5571 Midway Park Place NE  
Albuquerque, NM 87109

**Re: Valero Store 1221, 2550 Central Ave SE, Traffic Circulation Layout  
Engineer's Stamp dated 02-12-10 (K16-D075)**

Dear Mr. Bohannon,

Based upon the information provided in your submittal received 02-17-10, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

1. The ramp detail as shown is not acceptable. All proposed ramps must be contained within the sidewalk, as locating a ramp outside of this area produces a tripping hazard.
2. A cross access easement is needed between lots 22, 23, and 25 (see Figure 23.6.3 of the *Development Process Manual*).

If you have any questions, you can contact me at 924-3991.

Sincerely,

Kristal D. Metro, P.E.  
Traffic Engineer, Planning Dept.  
Development and Building Services

C: File

PO Box 1293

Albuquerque

NM 87103

[www.cabq.gov](http://www.cabq.gov)



# DRAINAGE AND TRANSPORTATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: Valero, Store #1221  
DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_

ZONE MAP/DRG. FILE #: K-16 /D075  
WORK ORDER #: \_\_\_\_\_

LEGAL DESCRIPTION: Lots 22, 23, 24, Block 16, University Heights  
CITY ADDRESS: 2550 Central Ave, SE

ENGINEERING FIRM: Tierra West, LLC  
ADDRESS: 5571 Midway Park Place NE  
CITY, STATE: Albuquerque, NM

CONTACT: Vincent Carrica, P.E.  
PHONE: (505) 858-3100  
ZIP CODE: 87109

OWNER: Diamond Shamrock Stations Inc.  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

ARCHITECT: CAD Solutions, LLC  
ADDRESS: 3436 New Castle Drive  
CITY, STATE: Loveland, CO

CONTACT: Corey Stiner  
PHONE: (970) 988-6302  
ZIP CODE: 80538

SURVEYOR: Precision Surveys  
ADDRESS: 5571 Midway Park Place, NE  
CITY, STATE: Albuquerque, NM

CONTACT: Larry Medrano  
PHONE: (505) 856-5700  
ZIP CODE: 87109

CONTRACTOR: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

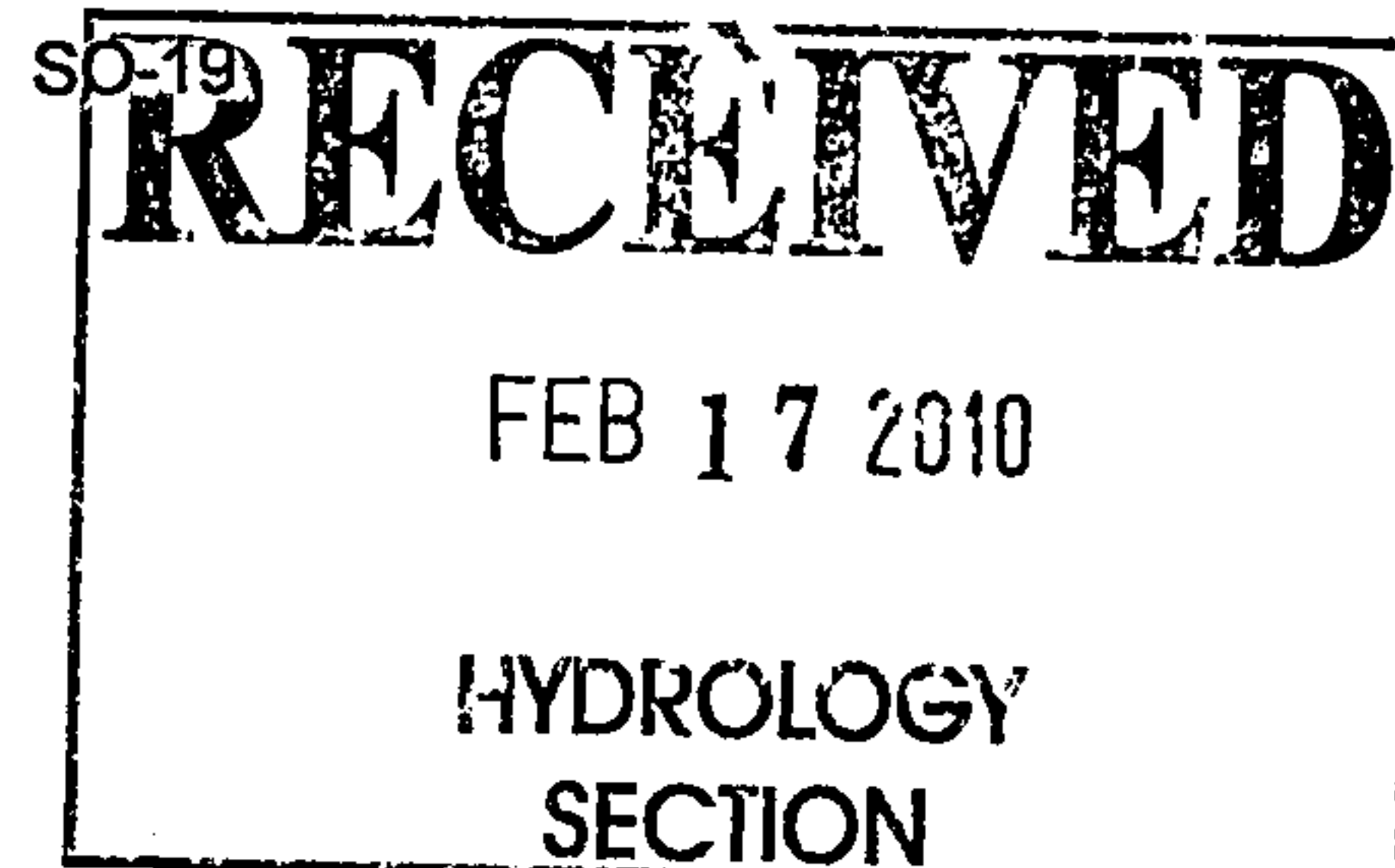
CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

## CHECK TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT  
☐ DRAINAGE PLAN 1st SUBMITTAL, **REQUIRES TCL or equal**  
☐ DRAINAGE PLAN RESUBMITTAL  
☐ CONCEPTUAL GRADING & DRAINAGE PLAN  
☐ GRADING PLAN  
☐ EROSION CONTROL PLAN  
☐ ENGINEER'S CERTIFICATION (HYDROLOGY)  
☐ CLOMR/LOMR  
☒ TRAFFIC CIRCULATION LAYOUT (TCL)  
☐ ENGINEERS CERTIFICATION (TCL)  
☐ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)  
☐ OTHER

## CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANACIAL GUARANTEE RELEASE  
☐ PRELIMINARY PLAT APPROVAL  
☐ S. DEV. PLAN FOR SUB'D. APPROVAL  
☐ S. DEV. PLAN 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



## WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES  
☐ NO  
☒ COPY PROVIDED

DATE SUBMITTED: 2/17/2010 BY: Vincent Carrica, P.E.

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines 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 Plans:** 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 subdivisions containing more than ten (10) lots or constituting five (5) acres or more.



# CITY OF ALBUQUERQUE



December 17, 2009

Ronald Ray Bohannon, P.E.  
Tierra West, LLC  
5571 Midway Park Place NE  
Albuquerque, NM 87109

**Re: Valero, Central and Colombia, Grading and Drainage Plan**  
**Engineer's Stamp dated 12-14-09 (K16/D075)**

Dear Mr. Bohannon,

Based upon the information provided in your submittal received 12-15-09, the above referenced plan cannot be approved for Grading Permit or Building Permit until the following comments are addressed:

- Provide a Finished Floor elevation for the proposed addition.
- Provide a curb or similar along the southern edge of the landscape area along the southern boundary. In addition, provide grades/a section for this landscape area to ensure flows don't enter the site to the south.

PO Box 1293

Albuquerque

NM 87103

[www.cabq.gov](http://www.cabq.gov)

Sincerely,

Curtis A. Chene, P.E.  
Senior Engineer, Planning Dept.  
Development and Building Services

C: file



# DRAINAGE AND TRANSPORTATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: Valero, Store #1221  
DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_

ZONE MAP/DRG. FILE #: K-16 10075  
WORK ORDER #: \_\_\_\_\_

LEGAL DESCRIPTION: Lots 22, 23, 24, Block 16, University Heights  
CITY ADDRESS: 2550 Central Ave, SE

ENGINEERING FIRM: Tierra West, LLC  
ADDRESS: 5571 Midway Park Place NE  
CITY, STATE: Albuquerque, NM

CONTACT: Sara Lavy, P.E.  
PHONE: (505) 858-3100  
ZIP CODE: 87109

OWNER: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

ARCHITECT: CAD Solutions, LLC  
ADDRESS: 3436 New Castle Drive  
CITY, STATE: Loveland, CO

CONTACT: Corey Stiner  
PHONE: (970) 988-6302  
ZIP CODE: 80538

SURVEYOR: Precision Surveys  
ADDRESS: 5571 Midway Park Place, NE  
CITY, STATE: Albuquerque, NM

CONTACT: Larry Medrano  
PHONE: (505) 856-5700  
ZIP CODE: 87109

CONTRACTOR: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

## CHECK TYPE OF SUBMITTAL:

- ☒ DRAINAGE REPORT  
☒ DRAINAGE PLAN 1st SUBMITTAL, **REQUIRES TCL or equal**  
☐ DRAINAGE PLAN RESUBMITTAL  
☐ CONCEPTUAL GRADING & DRAINAGE PLAN  
☐ GRADING PLAN  
☐ EROSION CONTROL PLAN  
☐ ENGINEER'S CERTIFICATION (HYDROLOGY)  
☐ CLOMR/LOMR  
☐ TRAFFIC CIRCULATION LAYOUT (TCL)  
☐ ENGINEERS CERTIFICATION (TCL)  
☐ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)  
☐ OTHER

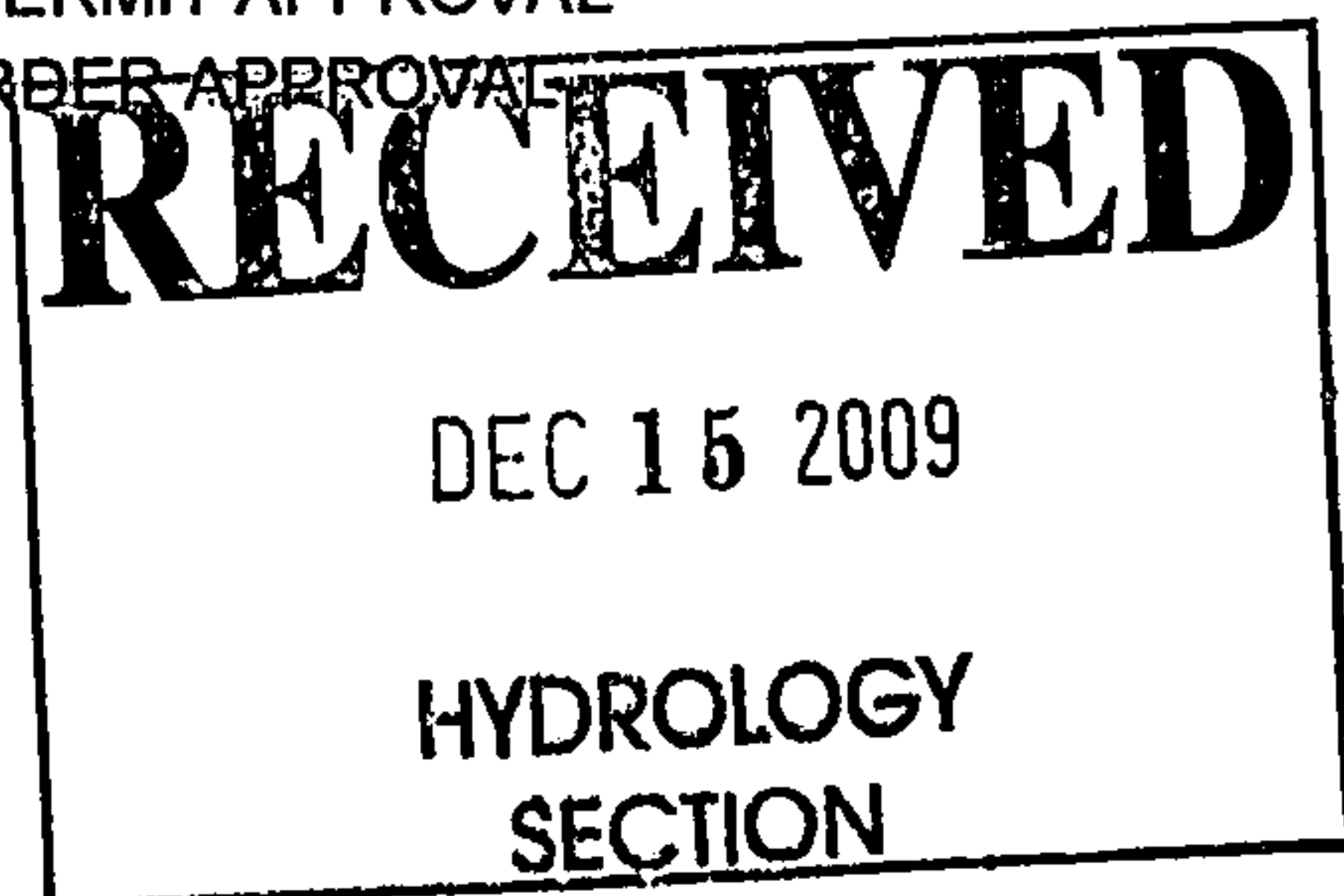
## CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANACIAL GUARANTEE RELEASE  
☐ PRELIMINARY PLAT APPROVAL  
☐ S. DEV. PLAN FOR SUB'D. APPROVAL  
☐ S. DEV. PLAN 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  
☐ SO-19

## WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES  
☐ NO  
☐ COPY PROVIDED

*Paid  
\$ 50.00*



DATE SUBMITTED: 12/15/2009 BY: Sara Lavy, P.E.

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines 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 Plans:** 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 subdivisions containing more than ten (10) lots or constituting five (5) acres or more.



# CITY OF ALBUQUERQUE



February 8, 2010

Ronald Ray Bohannon, P.E.  
Tierra West, LLC  
5571 Midway Park Place NE  
Albuquerque, NM 87109

**Re: Valero, Central and Colombia, Grading and Drainage Plan**  
**Engineer's Stamp dated 1/28/2010 (K16/D075)**

Dear Mr. Bohannon,

Based upon the information provided in your submittal received 1/28/2010, the above referenced plan is approved for building permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

PO Box 1293

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

Albuquerque

NM 87103

[www.cabq.gov](http://www.cabq.gov)

Sincerely,

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

C: file



# DRAINAGE AND TRANSPORTATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: Valero, Store #1221  
DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_

ZONE MAP/DRG. FILE # K-16/10075  
WORK ORDER #: \_\_\_\_\_

LEGAL DESCRIPTION Lots 22, 23, 24, Block 16, University Heights  
CITY ADDRESS: 2550 Central Ave, SE

ENGINEERING FIRM: Tierra West, LLC  
ADDRESS: 5571 Midway Park Place NE  
CITY, STATE: Albuquerque, NM

CONTACT: Vincent Carrica, P.E.  
PHONE: (505) 858-3100  
ZIP CODE: 87109

OWNER: Diamond Shamrock Stations Inc.  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

ARCHITECT: CAD Solutions, LLC  
ADDRESS: 3436 New Castle Drive  
CITY, STATE: Loveland, CO

CONTACT: Corey Stiner  
PHONE: (970) 988-6302  
ZIP CODE: 80538

SURVEYOR: Precision Surveys  
ADDRESS: 5571 Midway Park Place, NE  
CITY, STATE: Albuquerque, NM

CONTACT: Larry Medrano  
PHONE: (505) 856-5700  
ZIP CODE: 87109

CONTRACTOR: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

## CHECK TYPE OF SUBMITTAL:

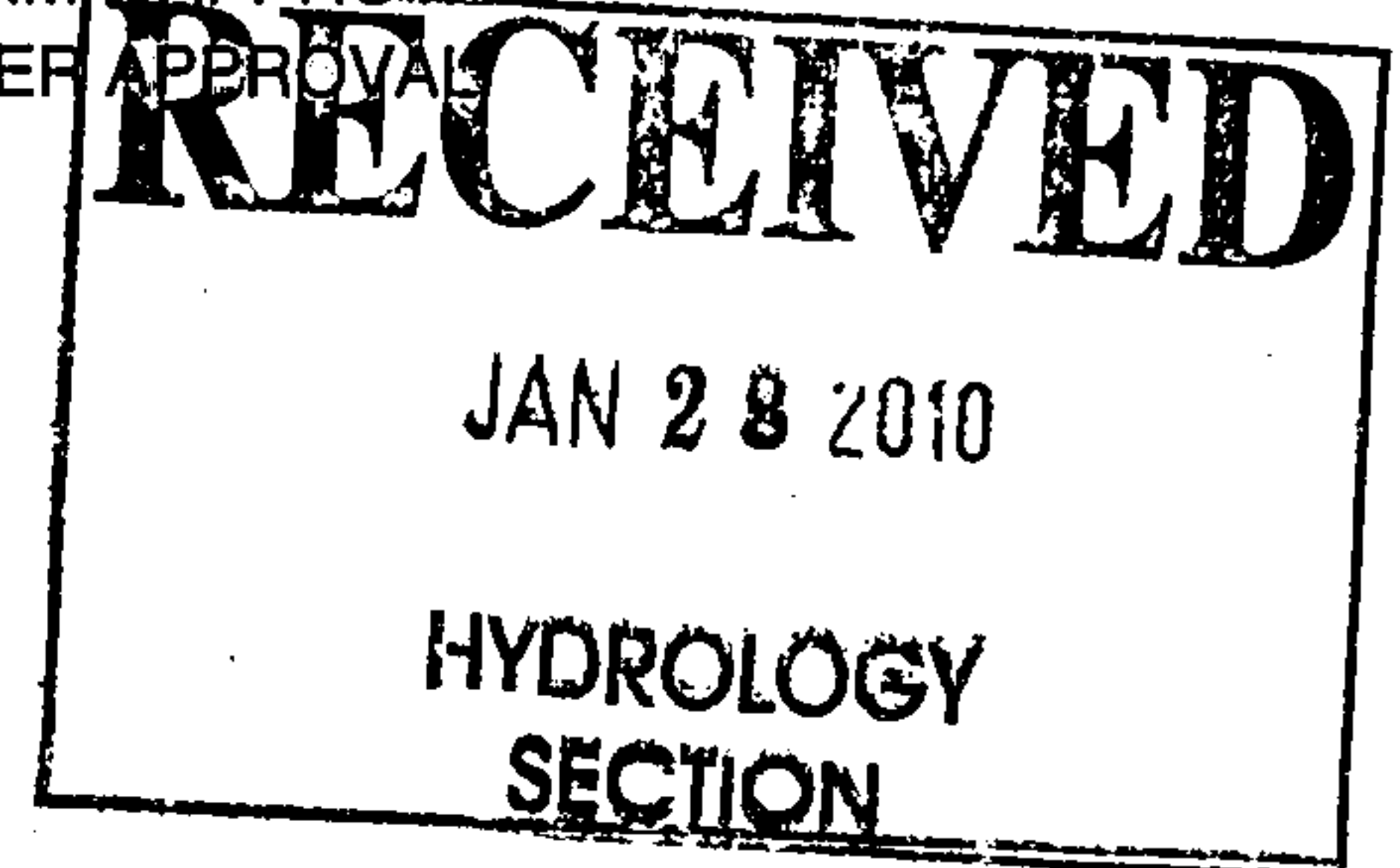
- ☐ DRAINAGE REPORT  
☐ DRAINAGE PLAN 1st SUBMITTAL, **REQUIRES TCL or equal**  
☒ DRAINAGE PLAN RESUBMITTAL  
☐ CONCEPTUAL GRADING & DRAINAGE PLAN  
☐ GRADING PLAN  
☐ EROSION CONTROL PLAN  
☐ ENGINEER'S CERTIFICATION (HYDROLOGY)  
☐ CLOMR/LOMR  
☐ TRAFFIC CIRCULATION LAYOUT (TCL)  
☐ ENGINEERS CERTIFICATION (TCL)  
☐ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)  
☐ OTHER

## CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANACIAL GUARANTEE RELEASE  
☐ PRELIMINARY PLAT APPROVAL  
☐ S. DEV. PLAN FOR SUB'D. APPROVAL  
☐ S. DEV. PLAN 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  
☐ SO-19

## WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES  
☐ NO  
☐ COPY PROVIDED



DATE SUBMITTED: 1/28/2010 BY: Vincent Carrica, P.E.

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines 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 Plans:** 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 subdivisions containing more than ten (10) lots or constituting five (5) acres or more.



5571 Midway Park Place NE  
(505) 858-3100  
Albuquerque, NM 87109  
Fax (505) 858-1118  
1-800-245-3102  
tierrawestllc.com

# TIERRA WEST, LLC

January 13, 2010

Mr. Curtis Cherne, PE  
Senior Engineer, Planning Dept.  
City of Albuquerque  
P.O. Box 1293  
Albuquerque, NM 87103

**RE: VALERO STORE #1221, 2550 CENTRAL AVE SE  
DRAINAGE RESUBMITTAL LETTER (K16/D075)**

Dear Mr. Cherne:

Please see the following responses to your comments received in a letter dated December 17, 2009.

1. Provide a Finished Floor elevation for the proposed addition.  
**The Finished Floor elevation for the addition is the same as for the original store and is now shown on the Grading Plan.**
2. Provide a curb or similar along the southern edge of the landscape area along the southern boundary. In addition, provide grades/a section for this landscape area to ensure flows don't enter the site to the north.  
**A wooden fence exists on the southern property line as well as a landscape strip between it and the existing pavement. The slope in this landscape strip is away from the property line and into the site. The existing fence and this positive drainage away from the property line will be maintained with the proposed site improvements. A typical section for the new landscaping and header curb has been added to the grading plan.**

If you have questions or need additional information regarding this project, please do not hesitate to call me.

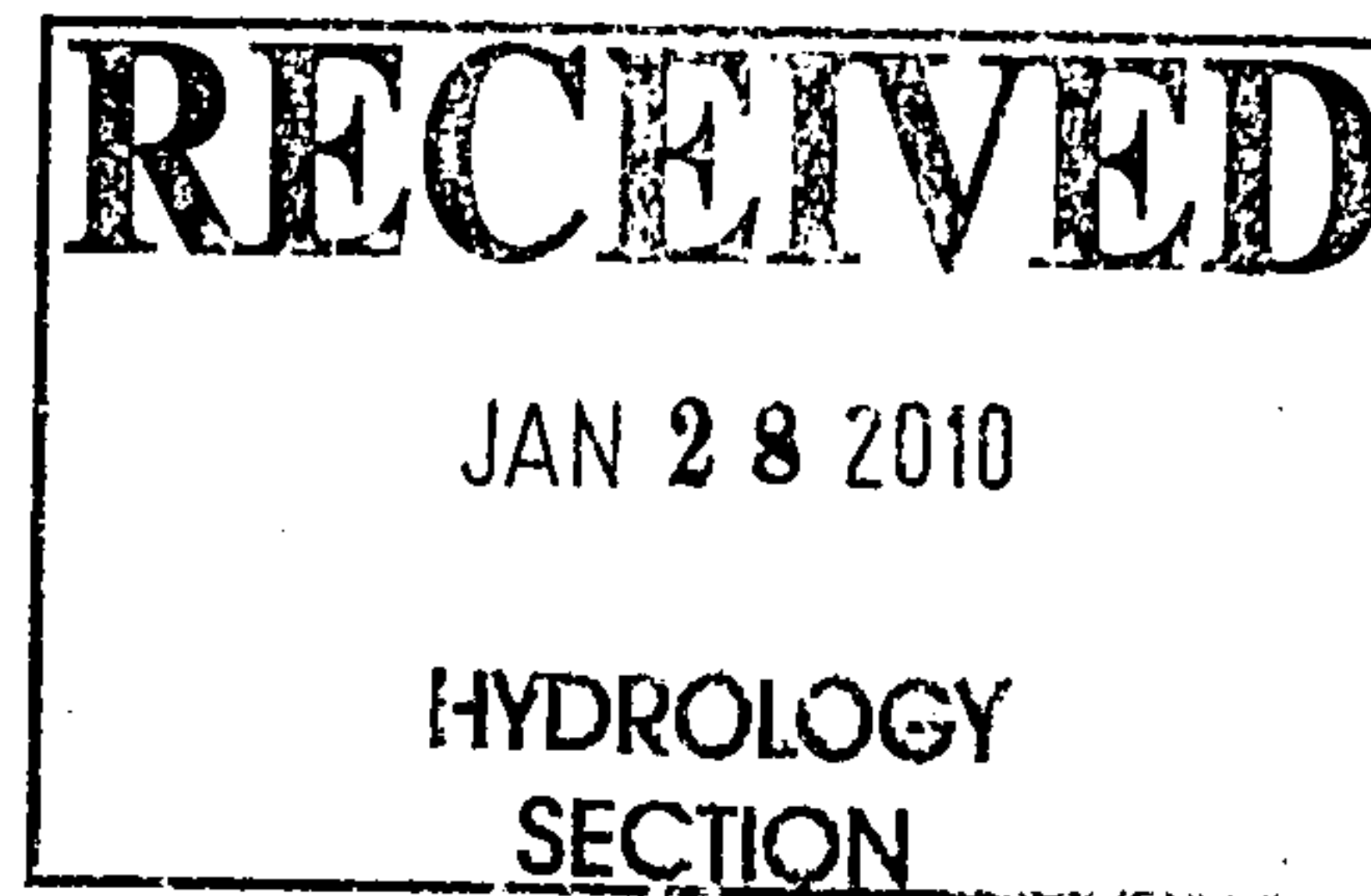
Sincerely,

  
Vincent Carrica, PE

Enclosure/s

cc: Corey Stiner

JN: 29047  
VPC/cla





# DRAINAGE AND TRANSPORTATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: Valero, Store #1221  
DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_

ZONE MAP/DRG. FILE # K-16 / D075  
WORK ORDER #: \_\_\_\_\_

LEGAL DESCRIPTION: Lots 22, 23, 24, Block 16, University Heights  
CITY ADDRESS: 2550 Central Ave, SE

ENGINEERING FIRM: Tierra West, LLC  
ADDRESS: 5571 Midway Park Place NE  
CITY, STATE: Albuquerque, NM

CONTACT: Vincent Carrica, P.E.  
PHONE: (505) 858-3100  
ZIP CODE: 87109

OWNER: Diamond Shamrock Stations Inc.  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

ARCHITECT: CAD Solutions, LLC  
ADDRESS: 3436 New Castle Drive  
CITY, STATE: Loveland, CO

CONTACT: Corey Stiner  
PHONE: (970) 988-6302  
ZIP CODE: 80538

SURVEYOR: Precision Surveys  
ADDRESS: 5571 Midway Park Place, NE  
CITY, STATE: Albuquerque, NM

CONTACT: Larry Medrano  
PHONE: (505) 856-1700  
ZIP CODE: 87109

CONTRACTOR: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

## CHECK TYPE OF SUBMITTAL:

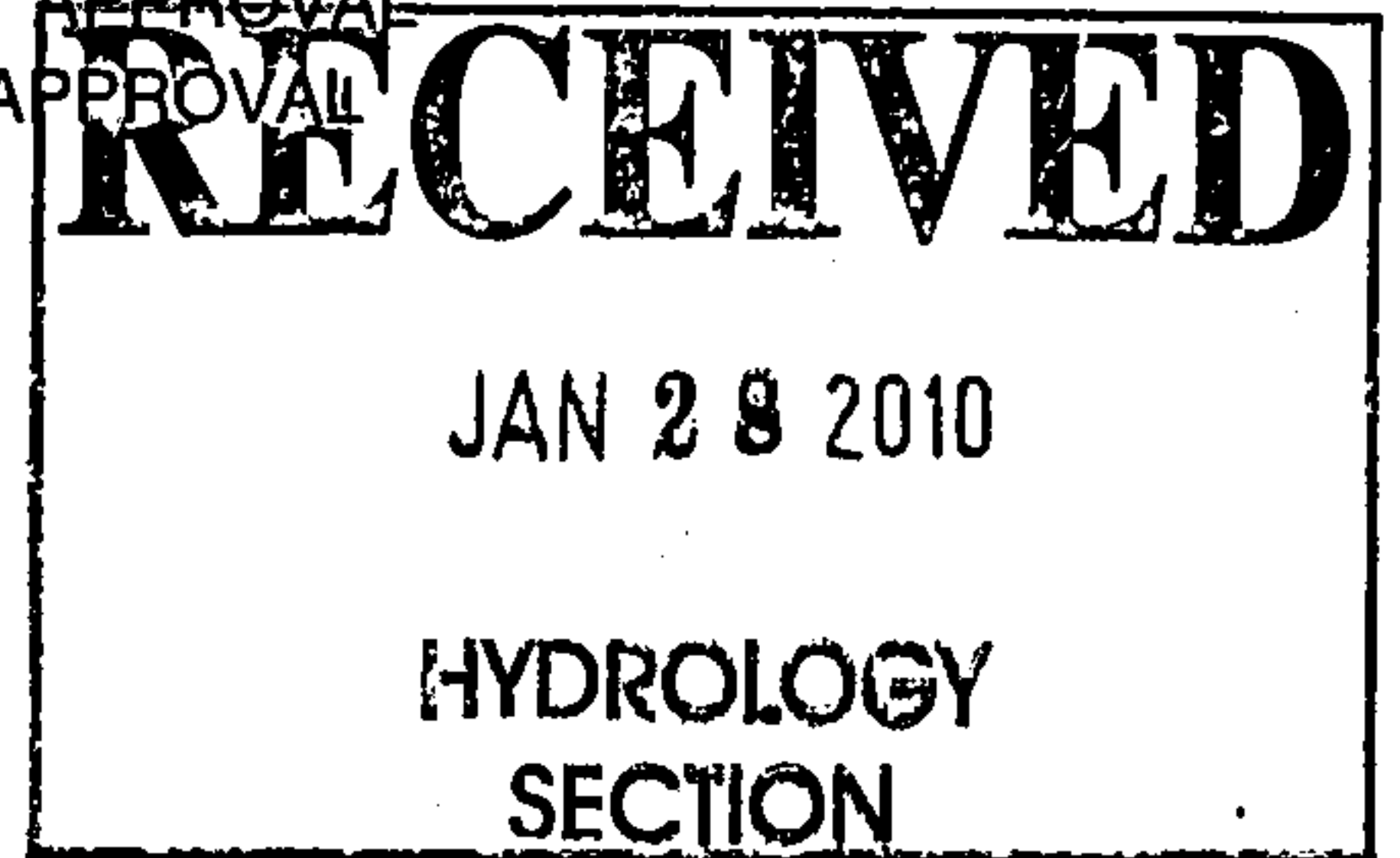
- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN (if SUBMITTAL, *REQUIRES TCL or equal*)
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ☐ CLOSURE/LOMB
- ☒ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEER'S CERTIFICATION (TCL)
- ☐ ENGINEER'S CERTIFICATION (DRB APPROVED SITE PLAN)
- ☐ OTHER

## CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANACIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D. APPROVAL
- ☐ S. DEV. PLAN 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
- ☐ SO-19

## WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES
- ☐ NO
- ☐ COPY PROVIDED



DATE SUBMITTED: 1/28/2010 BY: Vincent Carrica, P.E.

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines 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 Plans:** 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 subdivisions containing more than ten (10) lots or constituting five (5) acres or more.



gaw

# TIERRA WEST, LLC

January 13, 2010

Ms. Kristal Metro, PE  
Traffic Engineer, Planning Dept.  
City of Albuquerque  
P.O. Box 1293  
Albuquerque, NM 87103

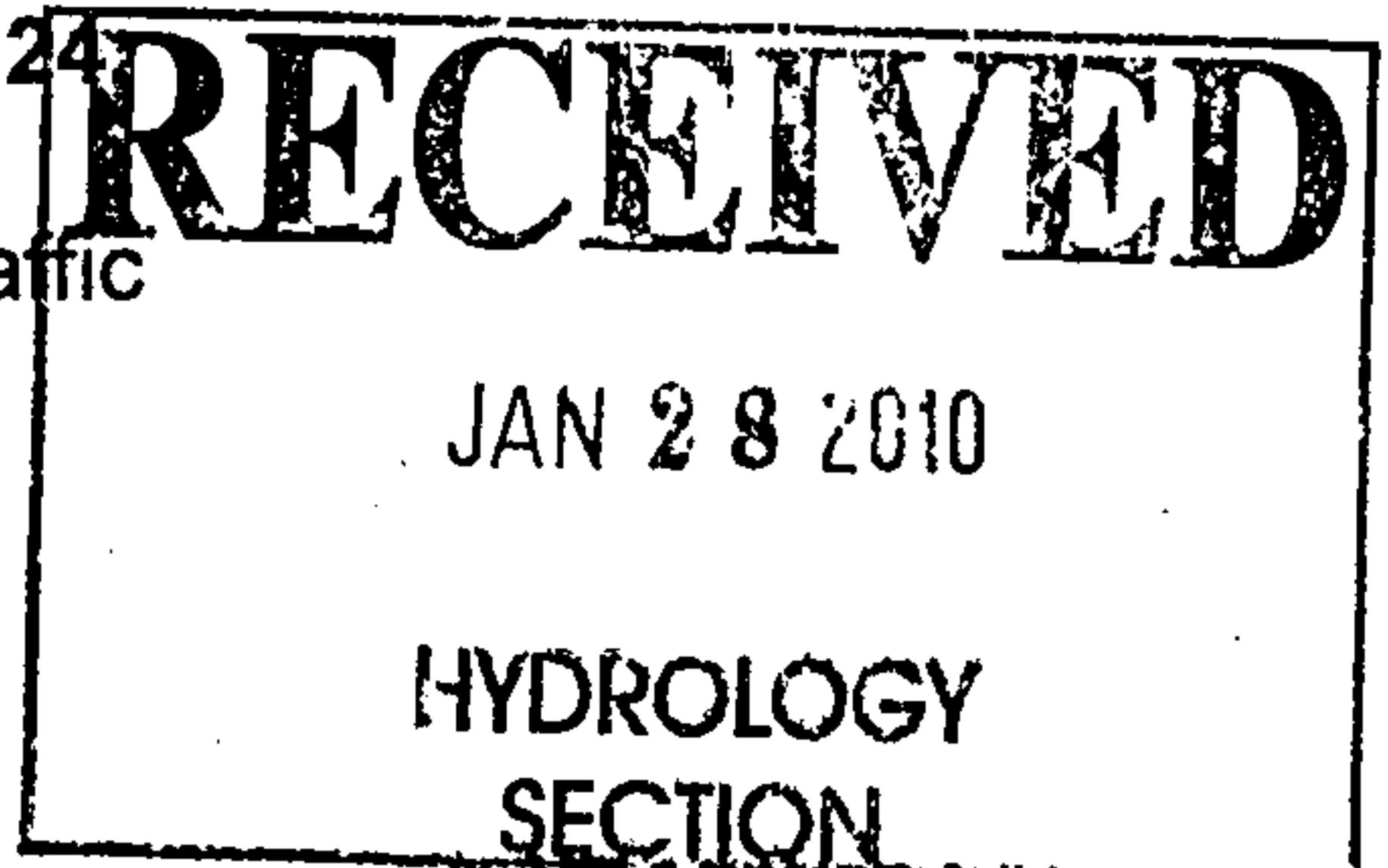
**RE: VALERO STORE #1221, 2550 CENTRAL AVE SE  
TCL RESUBMITTAL LETTER (K16/D075)**

Dear Ms. Metro:

Please see the following responses to your comments received in a letter dated December 9, 2009.

1. The number of parking spaces required by the Zoning Code is defined as 6 spaces, yet only 5 spaces are shown on the site.  
**In addition to the 5 spaces you reference, an additional 8 spaces at the pumps are allowed per our conversations with Zoning. The total parking spaces provided is 13.**
2. Please include two copies of the traffic circulation layout at the next submittal.  
**Two copies are provided per your request.**
3. A shared driveway is shown between this site and lot 1A. Provide a copy of the cross access easement between the sites.  
**The shared driveway is a 16' public alleyway, see included boundary survey. The alley has been labeled on the TCL.**
4. Show the 6-foot wide, ADA accessible pedestrian pathway from the right of way to the building.  
**This is shown on the revised TCL.**
5. Call out the width of all sidewalks, both existing and proposed.  
**All sidewalk widths are shown on the revised TCL.**
6. Provide a detail for the proposed ramp.  
**The ramp detail is shown on the revised TCL.**
7. A cross access easement is needed between lots 22, 23, and 25 (see Figure 23.6.3 of the *Development Process Manual*).  
**A cross access easement will be provided for Lots 22, 23 and 24.**
8. A 24-foot wide access aisle must be provided for two directional traffic

5571 Midway Park Place NE  
(505) 858-3100  
Albuquerque, NM 87109  
Fax (505) 858-1118  
1-800-245-3102  
tierrawestllc.com

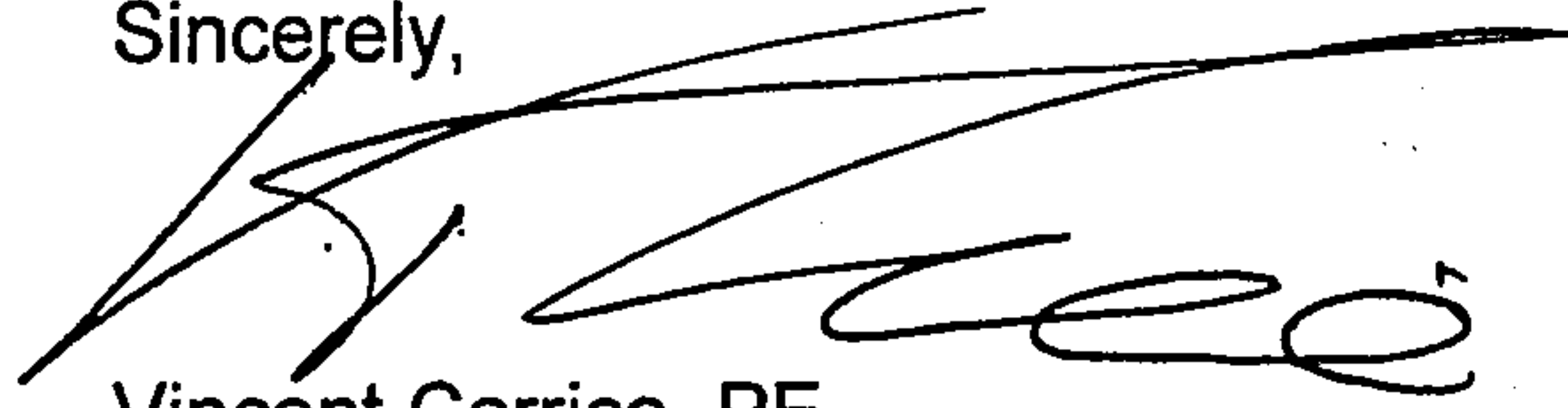




**The access aisle is 34.57 feet wide (including the public alley) and has been labeled on the TCL.**

If you have questions or need additional information regarding this project, please do not hesitate to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Vincent Carrica', with a long horizontal stroke extending to the right.

Vincent Carrica, PE

Enclosure/s

cc: Corey Stiner

JN: 29047  
VPC/cla



# CITY OF ALBUQUERQUE



December 9, 2009

Ronald Bohannon, P.E.  
Tierra West, LLC  
5571 Midway Park Place NE  
Albuquerque, NM 87109

**Re: Valero Store 1221, 2550 Central Ave SE, Traffic Circulation Layout  
Engineer's Stamp dated 12-04-09 (K16-D075)**

Dear Mr. Bohannon,

Based upon the information provided in your submittal received 12-07-09, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

1. The number of parking spaces required by the zoning code is defined as 6 spaces, yet only 5 parking spaces are shown on the site. - *Zoning ok'd counting parking @ pumps*
2. Please include two copies of the traffic circulation layout at the next submittal.
3. A shared driveway is shown between this site and lot 1A. Provide a copy of the cross access easement between these sites. - *public alley*
4. Show the 6-foot wide, ADA accessible pedestrian pathway from the right of way to the building.
5. Call out the width of all sidewalk, both existing and proposed.
6. Provide a detail for the proposed ramp.
7. A cross access easement is needed between lost 22, 23, and 25 (see Figure 23.6.3 of the *Development Process Manual*).
8. ~~A 24-foot wide access aisle must be provided for two-directional traffic.~~ *backs into public alley ~ 18' offset*

If you have any questions, you can contact me at 924-3991.

Sincerely,

Kristal D. Metro, P.E.  
Traffic Engineer, Planning Dept.  
Development and Building Services

C: File



# CITY OF ALBUQUERQUE



June 23, 2010

Ronald Bohannon, P.E.  
Tierra West, LLC  
5571 Midway Park Place NE  
Albuquerque, NM 87109

Re: Valero Store 1221, 2550 Central Ave SE, Traffic Circulation Layout  
Engineer's Stamp dated 6-18-10 (K16-D075)

Dear Mr. Bohannon,

The TCL submittal received 6-21-10 is approved for Building Permit. The plan is stamped and signed as approved. A copy of this plan will be needed for each of the building permit plans. Please keep the original to be used for certification of the site for final C.O. for Transportation. **Public infrastructure or work done within City Right-of-Way shown on these plans is for information only and is not part of approval. A separate DRC and/or other appropriate permits are required to construct these items.**

If a temporary CO is needed, a copy of the original TCL that was stamped as approved by the City will be needed. This plan must include a statement that identifies the outstanding items that need to be constructed or the items that have not been built in "substantial compliance," as well as the signed and dated stamp of a NM registered architect or engineer. Submit this TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

When the site is completed and a final C.O. is requested, use the original City stamped approved TCL for certification. A NM registered architect or engineer must stamp, sign, and date the certification TCL along with indicating that the development was built in "substantial compliance" with the TCL. Submit this certification TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

Once verification of certification is completed and approved, notification will be made to Building Safety to issue Final C.O. To confirm that a final C.O. has been issued, call Building Safety at 924-3306.

Sincerely,

Kristal D. Metro, P.E.  
Traffic Engineer, Planning Dept.  
Development and Building Services

C: File



# DRAINAGE AND TRANSPORTATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: Valero, Store #1221  
DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_

ZONE MAP/DRG. FILE # K-16 / 1075  
WORK ORDER #: \_\_\_\_\_

LEGAL DESCRIPTION Lots 22, 23, 24, Block 16, University Heights  
CITY ADDRESS: 2550 Central Ave, SE

ENGINEERING FIRM: Tierra West, LLC  
ADDRESS: 5571 Midway Park Place NE  
CITY, STATE: Albuquerque, NM

CONTACT: Vincent Carrica, P.E.  
PHONE: (505) 858-3100  
ZIP CODE: 87109

OWNER: Diamond Shamrock Stations Inc.  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

ARCHITECT: CAD Solutions, LLC  
ADDRESS: 3436 New Castle Drive  
CITY, STATE: Loveland, CO

CONTACT: Corey Stiner  
PHONE: (970) 988-6302  
ZIP CODE: 80538

SURVEYOR: Precision Surveys  
ADDRESS: 5571 Midway Park Place, NE  
CITY, STATE: Albuquerque, NM

CONTACT: Larry Medrano  
PHONE: (505) 856-5700  
ZIP CODE: 87109

CONTRACTOR: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

## CHECK TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1st SUBMITTAL, **REQUIRES TCL or equal**
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☒ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEERS CERTIFICATION (TCL)
- ☐ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ☐ OTHER

## CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANACIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D. APPROVAL
- ☐ S. DEV. PLAN 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
- ☐ SO-19

## WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES
- ☐ NO
- ☐ COPY PROVIDED

DATE SUBMITTED: 6/21/2010 BY: Vincent Carrica, P.E.

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines 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 Plans:** 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 subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

