

DRAINAGE AND GRADING PLAN

FOR
**LOTS A, BLOCK 31-B
 BRENTWOOD HILLS SUBDIVISION**
 CITY OF ALBUQUERQUE, BERNALILLO COUNTY
 NEW MEXICO

LEGAL DESCRIPTION
 Lot A, Block 31B, Brentwood Hills Subdivision, City of Albuquerque, New Mexico.

FLOOD HAZARD ZONE
 Lot A is located in Flood Hazard Zone X (i.e., Areas determined to be outside 500-year floodplain) designated on the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map Panel No. 35001C0357E (November 19, 2003).

DRAINAGE ANALYSIS
 REFERENCE: City of Albuquerque, Development Process Manual - Vol. 2, Section 22.2 - Hydrology, January, 1993.

Principal Design Storm: 100-year 6-hour event

Precipitation Zone 4 (Table A-1)

Excess Precipitation (Table A-8):
 $E_1 = 0.80$ in (Land Treatment 'A'), $E_2 = 1.08$ in (Land Treatment 'B'),
 $E_3 = 1.46$ in (Land Treatment 'C'), & $E_4 = 2.64$ in (Land Treatment 'D')

Peak Discharge (Table A-9):
 $Q_{P1} = 2.20$ ft³/sec-acre (Land Treatment 'A')
 $Q_{P2} = 2.92$ ft³/sec-acre (Land Treatment 'B')
 $Q_{P3} = 3.73$ ft³/sec-acre (Land Treatment 'C')
 $Q_{P4} = 5.25$ ft³/sec-acre (Land Treatment 'D')

On-Site 'Existing' Condition (Lot A):
 Total Site Area = 118,987 ft² x 1 acre/43,560 ft² = 2.73 acres
 7.38% Land Treatment 'C', 92.62% Land Treatment 'D' (Table A-4)

Weighted E = $((E_3 \times 0.20 \text{ acres}) + (E_4 \times 2.53 \text{ acres})) / 2.73 \text{ acres}$
 = 2.55 in

$V_{360} = 2.55 \text{ in} \times 2.73 \text{ acres} \times 1 \text{ ft} / 12 \text{ in}$
 = 0.581 acre-ft x 43,560 ft²/acre
 = 25,313 ft³

Total $Q_p = (Q_{P3} \times 0.20 \text{ acres}) + (Q_{P4} \times 2.53 \text{ acres})$
 = 14.03 ft³/sec

On-Site 'Post Development' Condition (Lot A):
 7.38% Land Treatment 'C', 92.62% Land Treatment 'D'

Weighted E = $((E_3 \times 0.20 \text{ acres}) + (E_4 \times 2.53 \text{ acres})) / 2.73 \text{ acres}$
 = 2.55 in

$V_{360} = (2.55 \text{ in} \times 2.73 \text{ acres}) \times 1 \text{ ft} / 12 \text{ in}$
 = 0.581 acre-ft x 43,560 ft²/acre
 = 25,313 ft³

Total $Q_p = (Q_{P3} \times 0.20 \text{ acres}) + (Q_{P4} \times 2.53 \text{ acres})$
 = 14.03 ft³/sec

The On-Site 'Existing' and 'Post Development' Condition runoff volume and peak flow are the same.

Off-Site 'Existing' Condition:
 Offsite Drainage Basin (Lot B, Block 31B and Lots 29C1 and 29C2, Block 29C, Brentwood Hills Addition).

Drainage Basin Area = 90,750 ft² x 1 acre/43,560 ft² = 2.08 acres
 100% Land Treatment 'D'

$E_4 = 2.64$ in

$V_{360} = (2.64 \text{ in} \times 2.08 \text{ acres}) \times 1 \text{ ft} / 12 \text{ in}$
 = 0.458 acre-ft x 43,560 ft²/acre
 = 19,965 ft³

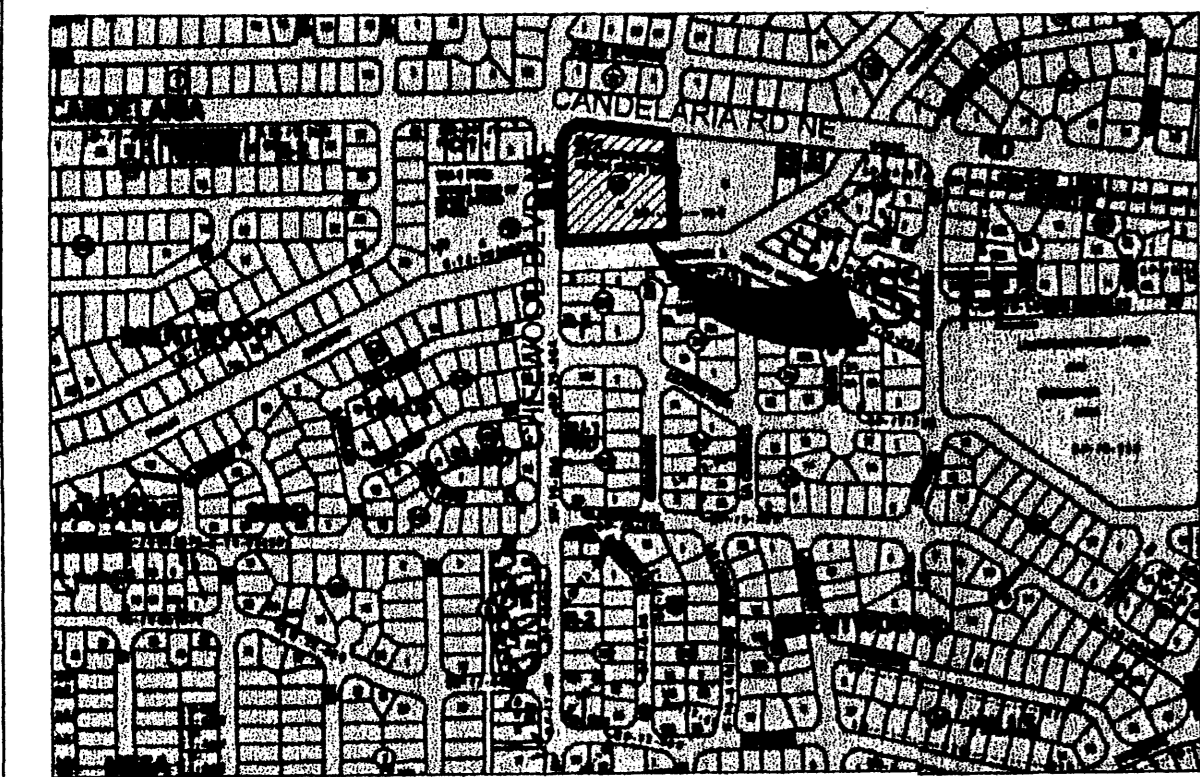
Total $Q_p = (Q_{P4} \times 2.08 \text{ acres})$
 = 10.94 ft³/sec

A recent site visit and inspection revealed that none of the runoff from the offsite drainage basin enters onto Lot A. All of the runoff from the offsite drainage basin is discharged directly to the Piedra Lisa Channel.

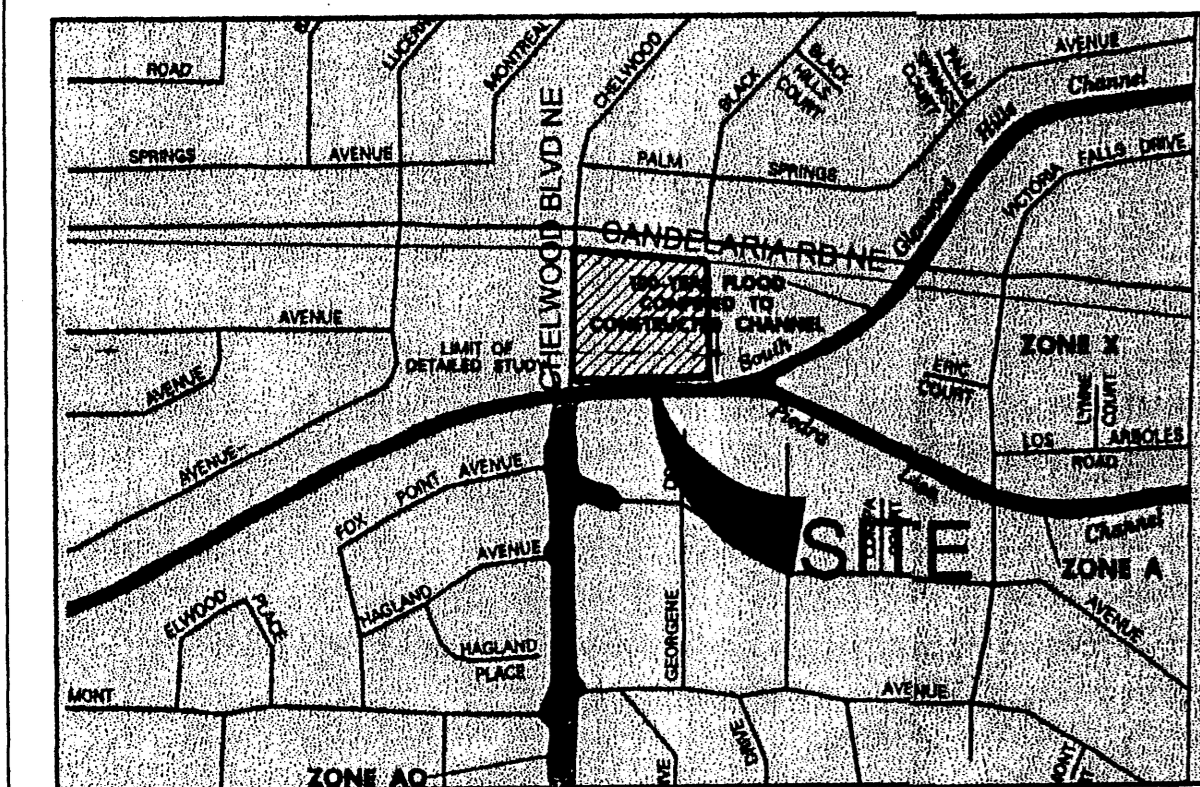
As demonstrated by the calculations presented herein, the proposed Lot A building addition will not increase the peak discharge from Lot A. The proposed building addition will not create an additional impact on the capacity of the Chelwood Park Boulevard storm drain and/or the Piedra Lisa Channel; therefore, free discharge from the subject site is recommended.

Free discharge of 'Post Development' runoff from Lot A to the Chelwood Park Boulevard storm drain and/or the Piedra Lisa Channel is acceptable for the following reasons:

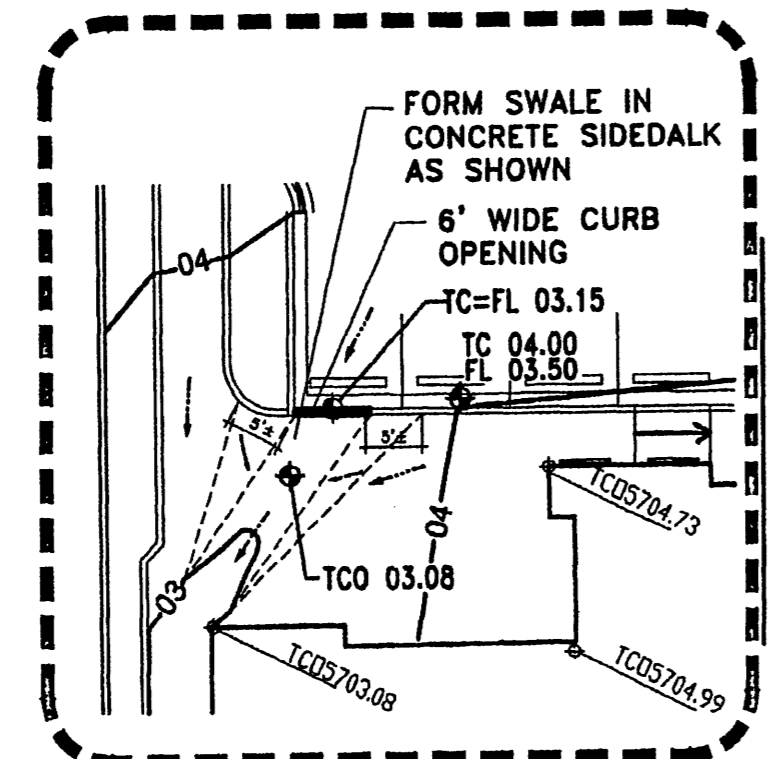
1. There are no storm water ponds on the other development parcels within the off-site drainage basin.
2. The 'Post Development' runoff from Lot A is a small percentage of the total runoff from the entire off-site drainage basin.
3. Existing curb and gutter in Candelaria Road and Chelwood Park Boulevard will intercept and convey nuisance flows to the Chelwood Park Boulevard storm drain and the Piedra Lisa Channel.



VICINITY MAP NTS H-22-Z



FIRM MAP NTS 35001C0357 D



DETAIL A NTS

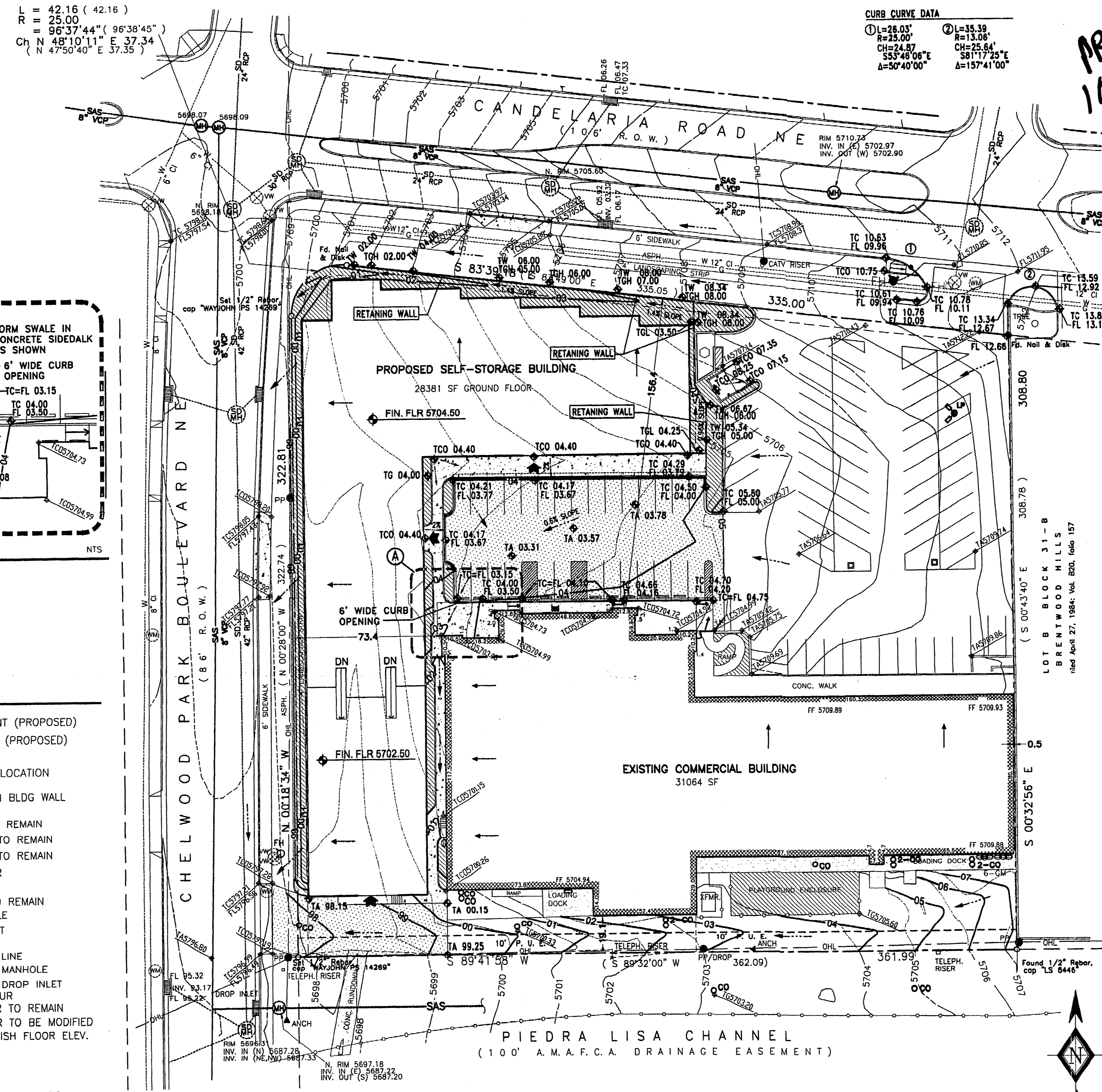
L = 42.16 (42.16)
 R = 25.00
 = 96°37'44" (96°38'45")
 CH N 48°10'11" E 37.34'
 N 47°50'40" E 37.35'

CURB CURVE DATA
 ① L=26.03' R=25.00' CH=24.87' SAS=53°48'06"E Δ=50°40'00"
 ② L=35.39' R=13.06' CH=25.81' SAS=58°17'25"E Δ=157°41'00"

APR 10 2007 40

LEGEND

- NEW CONCRETE PAVEMENT (PROPOSED)
- NEW ASPHALT PAVEMENT (PROPOSED)
- LANDSCAPING AREA
- PROPOSED BIKE RACK LOCATION
- CONCRETE WHEEL STOP
- HC ACCESSIBLE SIGN ON BLDG WALL
- BUILDING ENTRANCE
- EXISTING WATER LINE TO REMAIN
- EXISTING WATER METER TO REMAIN
- PROPOSED WATER METER
- PROPOSED WATER LINE
- EXISTING SEWER LINE TO REMAIN
- EXISTING SEWER MANHOLE
- EXISTING SEWER CLEANOUT
- PROPOSED SEWER LINE
- EXISTING STORM SEWER LINE
- EXISTING STORM SEWER MANHOLE
- EXISTING STORM SEWER DROP INLET
- PROPOSED ELEV. CONTOUR
- EXISTING ELEV. CONTOUR TO REMAIN
- PROPOSED BUILDING FINISH FLOOR ELEV.
- FLOW DIRECTION
- ROOF FLOW DIRECTION
- EXISTING TOP OF ASPHALT ELEVATION TO REMAIN
- EXISTING TOP OF GRADE ELEVATION TO REMAIN
- EXISTING TOP OF CONCRETE ELEVATION TO REMAIN
- EXISTING TOP OF CURB ELEVATION TO REMAIN
- EXISTING FLOWLINE ELEVATION TO REMAIN
- PROPOSED TOP OF ASPHALT PAVEMENT SPOT ELEVATION
- PROPOSED TOP OF WALL ELEVATION
- PROPOSED TOP OF CURB ELEVATION
- PROPOSED TOP OF GRADE ELEVATION, HIGHER SIDE OF RETAINING WALL
- PROPOSED TOP OF GRADE ELEVATION, LOWER SIDE OF RETAINING WALL



SITE PLAN

FOR GENERAL NOTES, NOTES TO CONTRACTOR AND RETAINING WALL DETAIL SEE SITE DEVELOPEMENT PLAN, SHEET C-1

NOTE: THIS IS NOT A BOUNDARY SURVEY. PROPERTY CORNERS, BEARINGS AND DISTANCES SHOWN HEREON ARE FOR ORIENTATION PURPOSES ONLY.

NOTE: ADD 5700 FEET TO PROPOSED SPOT ELEVATIONS TO GET MEAN SEA LEVEL DATUM ELEVATIONS.

BENCHMARK:
 ACS 11-G22
 ELEVATION 5697.07
 ACS BRASS TABLET STAMPED "11-G22 1979" SET FLUSH WITH THE GROUND

ENGINEERS CERTIFICATION

I HEREBY CERTIFY THAT I HAVE PERSONALLY INSPECTED THE SITE AND THAT NO GRADING, FILLING OR EXCAVATION HAS OCCURRED SINCE THE DATE OF THE TOPOGRAPHIC SURVEY (MARCH 21, 2005).

Celia S. Tomlinson
 CELIA S. TOMLINSON, PE

DATE: 4/26/07

RHOMBUS P.A., INC.
 FACILITIES ENGINEERS & ENVIRONMENTAL CONSULTANTS

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 web site: www.RHOMBUSPA.COM

2820 San Mateo NE Suite B Albuquerque, NM 87110
 TEL. (505) 881-8890 FAX (505) 881-8898

PROJECT TITLE:
 GLOBAL STORAGE
 SELF STORAGE BUILDING

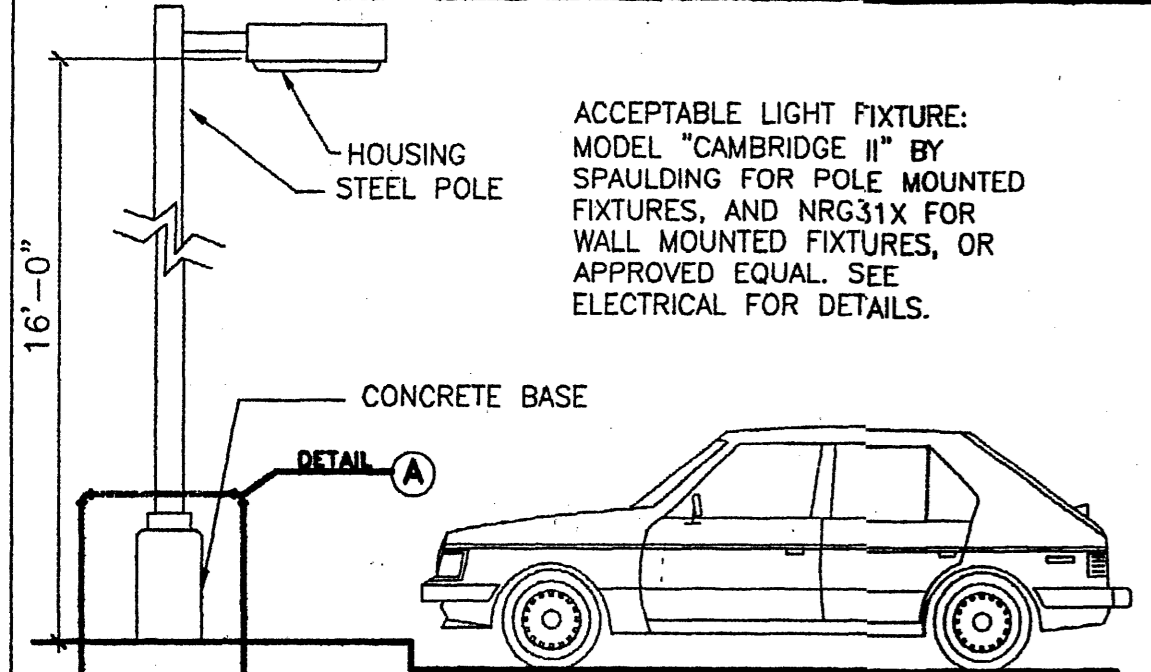
12000 CANDELARIA RD NE ALBUQUERQUE NEW MEXICO

SHEET TITLE:
 GRADING AND DRAINAGE PLAN

MAP NO: H-22-Z RHOMBUS JOB NO: 05-C2-16 SHEET C-2

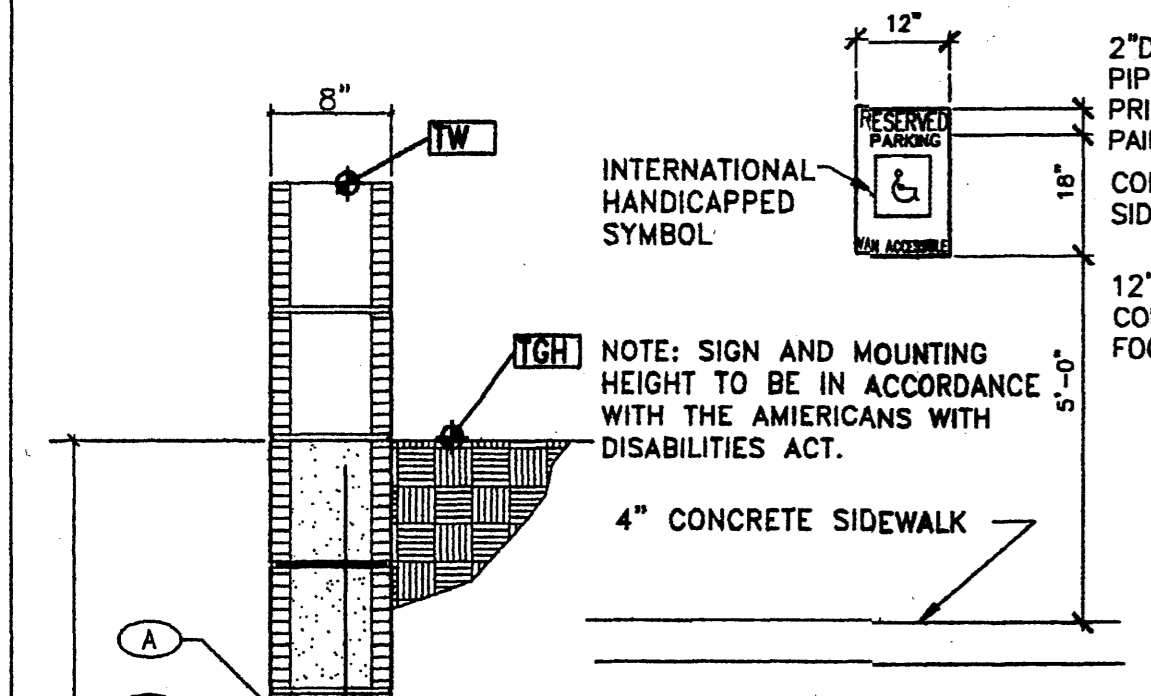


VICINITY MAP NTS H-22-Z

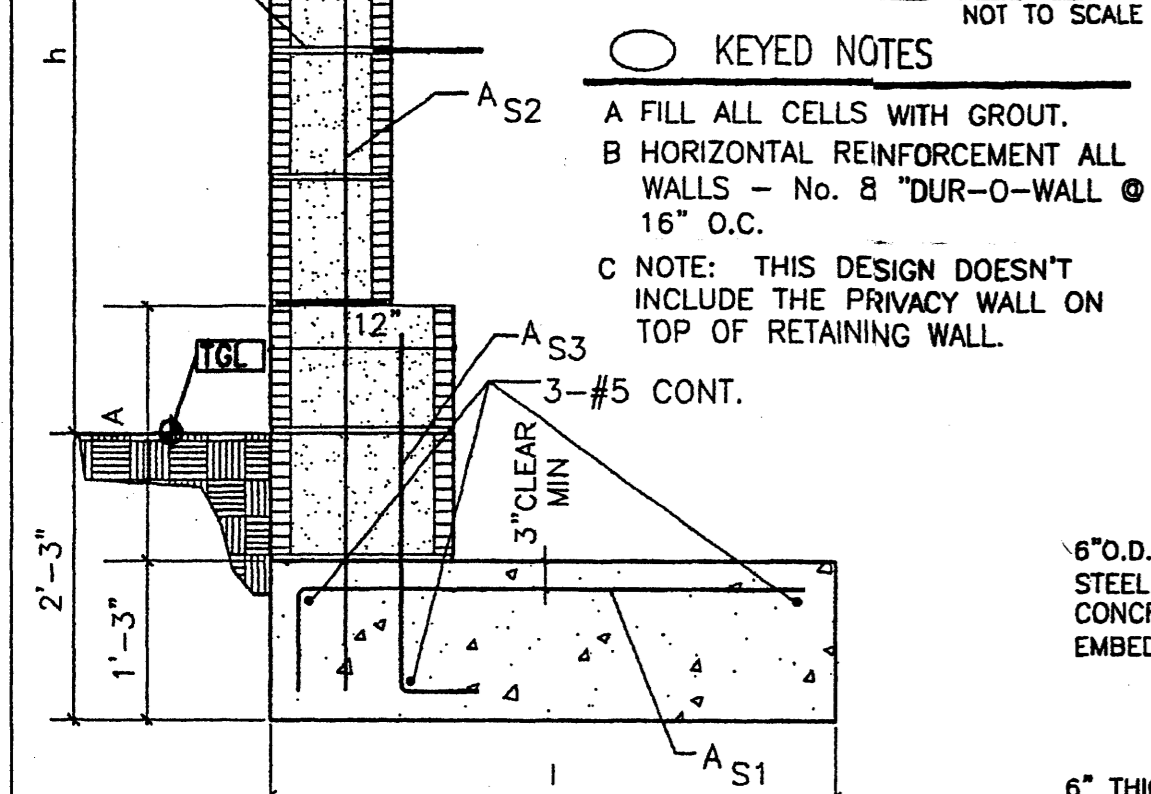


LIGHT POLE ELEVATION NOT TO SCALE

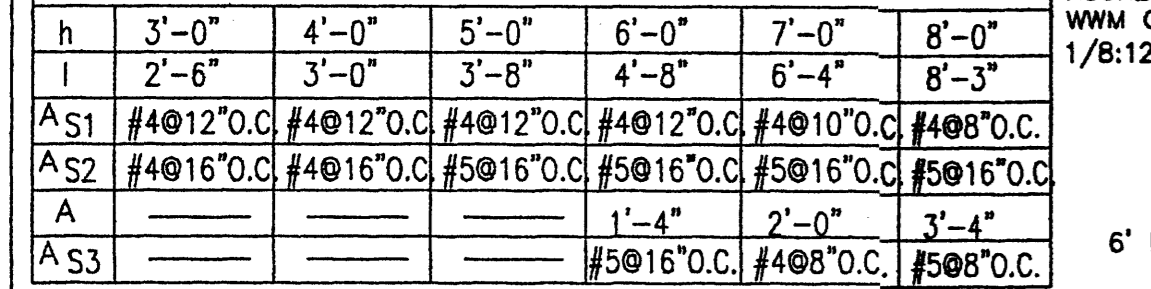
ACCEPTABLE LIGHT FIXTURE: MODEL "CAMBRIDGE II" BY SPAULDING FOR POLE MOUNTED FIXTURES, AND NRG31X FOR WALL MOUNTED FIXTURES, OR APPROVED EQUAL. SEE ELECTRICAL FOR DETAILS.



POLE BASE DETAIL NOT TO SCALE



ACCESSIBLE PARKING SIGN NOT TO SCALE



RETAINING WALL DETAIL NOT TO SCALE

REINFORCEMENT TABLE

h	3'-0"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"
l	2'-6"	3'-0"	3'-8"	4'-8"	6'-4"	8'-3"
A S1	#4@12"O.C.	#4@12"O.C.	#4@12"O.C.	#4@12"O.C.	#4@10"O.C.	#4@8"O.C.
A S2	#4@16"O.C.	#4@16"O.C.	#5@16"O.C.	#5@16"O.C.	#5@16"O.C.	#5@16"O.C.
A			1'-4"	2'-0"	3'-4"	
A S3			#5@16"O.C.	#4@8"O.C.	#5@8"O.C.	

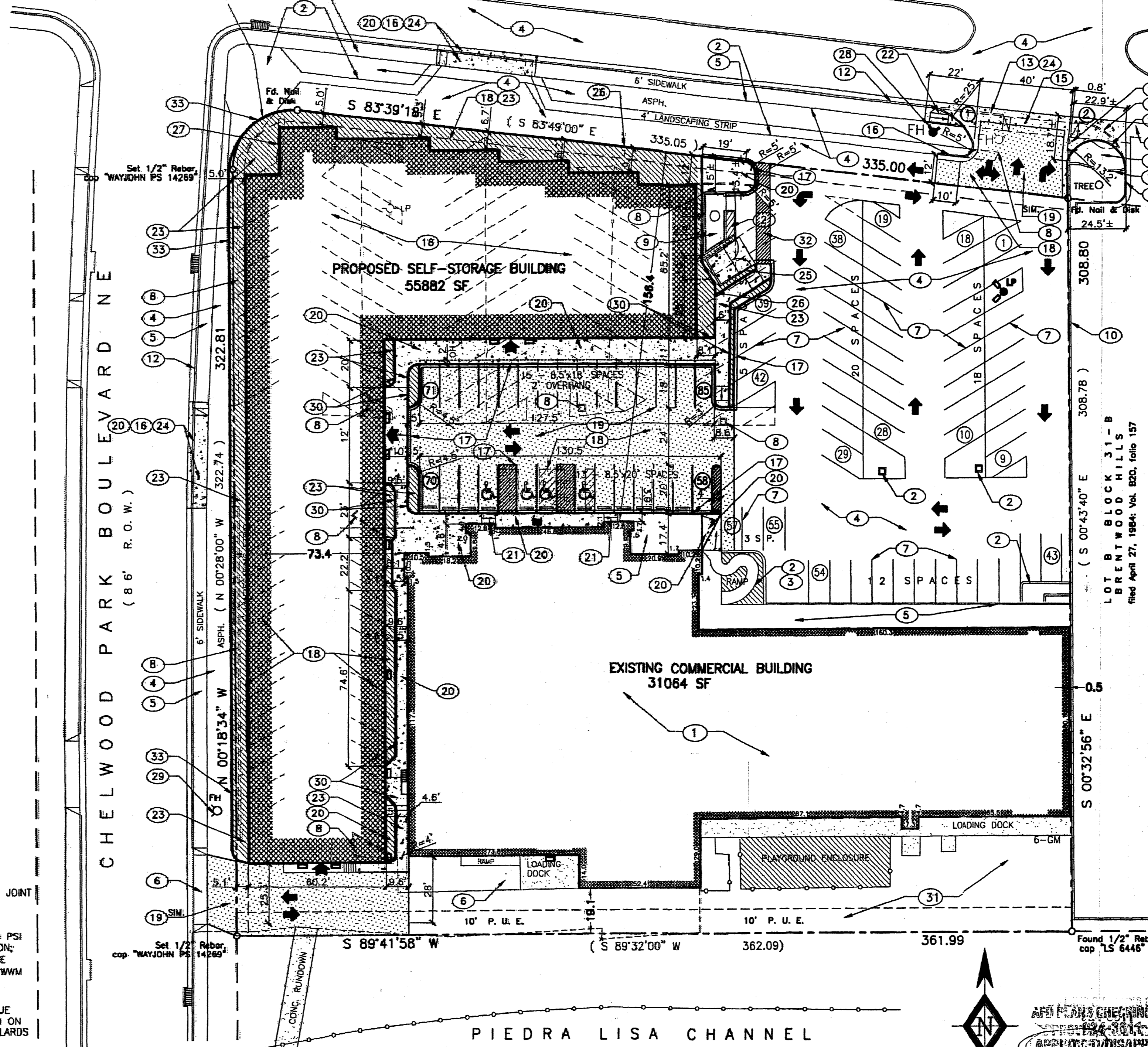
NOTICE TO CONTRACTOR

- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN STREET RIGHT-OF-WAY. AN APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1986 EDITION, AS AMENDED WITH UPDATE NO. 7.
- THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE, OR TYPES OF EXISTING UNDERGROUND UTILITY LINES, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREOF. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE IN OR NEAR THE AREA OF WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY, AND PRESERVE ANY AND ALL EXISTING UTILITIES. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES, IN PLANNING AND CONDUCTING EXCAVATION, WHETHER BY CALLING OR NOTIFYING THE UTILITIES, COMPLYING WITH "NEW MEXICO ONE CALL SYSTEM" PROCEDURES, OR OTHERWISE.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK. CONTRACTOR IS RESPONSIBLE FOR KEEPING RUNOFF ON SITE DURING CONSTRUCTION AND CLEANING UP THAT GETS INTO EXISTING RIGHT-OF-WAY AND ADJOINING PROPERTIES AFTER CONSTRUCTION.

SITE LIGHTING NOTES:

- SITE AREA LIGHTING SHALL MOUNTED ON 16' HIGH STEEL POLES, PAINTED ACCORDING WITH OVERALL COLOR SCHEME OF THE PROJECT. SEE DETAIL THIS SHEET FOR FOUNDATION DETAIL.
- SITE AREA LIGHTING SHALL NOT DIRECT LIGHT, EITHER DIRECTLY OR THROUGH REFLECTIVE DEVICE, UPON ADJACENT PROPERTY AND SHALL NOT HAVE A OFF-SITE LUMINESCENCE GREATER THAN TOTAL OF 1000 FOOT LAMBERTS, MEASURED FROM THE PROPERTY LINES.
- ALL SITE AREA LIGHTING FIXTURES SHALL USE LOW, HIGH PRESSURE SODIUM OR METAL HALIDE LAMPS. NO MERCURY VAPOR LIGHTS SHALL BE ALLOWED.
- MAXIMUM WATTAGE SHALL BE 250 WATT AND ALL LIGHTING UNITS SHALL BE HOODED OR SHIELDED AS TO DIRECT ALL LIGHTING DOWNWARDS.
- ALL SITE AREA LIGHTING FIXTURES SHALL BE DESIGNED AS A PART OF THE ARCHITECTURAL AND LANDSCAPE CHARACTER.

L = 42.16 (42.16)
R = 25.00
Δ = 96°37'44" (96°38'45")
Ch N 48°10'11" E 37.34
(N 47°50'40" E 37.35)



SITE DEVELOPMENT PLAN

LEGEND

- NEW CONCRETE PAVEMENT AREA
- NEW ASPHALT PAVEMENT AREA
- LANDSCAPING AREA
- ENTRY DOOR
- PROPOSED BIKE RACK LOCATION
- CONCRETE WHEEL STOP
- HC ACCESSIBLE SIGN ON BLDG WALL
- EXISTING PLANTER TO BE DEMOLISHED
- EXISTING PARKING SPACE TO BE REMOVED
- EXISTING PARKING SPACE TO REMAIN, 4" WIDE WHITE SPACE MARKING
- NEW PARKING SPACE; 4" WIDE WHITE STRIPE SPACE MARKING
- HC SYMBOL PAVEMENT MARKING
- EXISTING LIGHT POLE TO BE DEMOLISHED
- INSTALL NEW LIGHT POLE, SEE ELECTRICAL SITE PLAN FOR LOCATION(S)
- INSTALL NEW BLDG WALL MOUNTED LIGHT FIXTURE, SEE ELECTRICAL SITE PLAN FOR LOCATION(S)
- EXISTING FIRE HYDRANT TO BE RELOCATED
- RELOCATED FIRE HYDRANT
- EXISTING FIRE HYDRANT TO REMAIN
- TRAFFIC FLOW DIRECTION

PROJ 1001740

CURB CURVE DATA

① L=26.03' R=25.00' Ch=24.87 S55°46'00"E Δ=50°40'00"	② L=35.39' R=13.06' Ch=25.64' S61°17'25"E Δ=57°41'00"
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Stamped 10/14/06

PROJECT NUMBER _____
Application Number _____
THIS PLAN IS CONSISTENT WITH THE SPECIFIC SITE DEVELOPMENT PLAN APPROVED BY THE ENVIRONMENTAL PLANNING COMMISSION (EPC), DATED FEBRUARY 18, 2005 AND THE FINDING AND CONDITIONS IN THE OFFICIAL NOTIFICATION OF DECISION ARE SATISFIED.

DRB SITE DEVELOPMENT PLAN SIGNOFF APPROVAL

TRAFFIC ENGINEERING, TRANSPORTATION DIVISION	Date
WATER UTILITY DEPARTMENT	Date
PARKS AND RECREATION DEPARTMENT	Date
CITY ENGINEER	Date
Michael Helton	5-17-05
SOLID WASTE MANAGEMENT	Date
DRB CHAIRPERSON, PLANNING DEPARTMENT	Date

KEYED NOTES

- EXISTING BUILDING TO REMAIN
- EXISTING PLANTER/LANDSCAPING AREA TO REMAIN
- EXISTING CONCRETE HC RAMP TO REMAIN
- EXISTING ASPHALT PAVEMENT TO REMAIN
- EXISTING CONCRETE SIDEWALK/SLAB TO REMAIN
- EXISTING DRIVEPAD TO REMAIN
- EXISTING PARKING SPACES (PAINT ON ASPHALT PAVEMENT) TO REMAIN
- EXISTING PLANTER/LANDSCAPING AREA TO BE DEMOLISHED
- EXISTING CELL PHONE TOWER AND ENCLOSURE TO REMAIN
- EXISTING CMU/STUCCO RETAINING WALL TO REMAIN
- PORTION OF EXISTING CMU/STUCCO RETAINING WALL TO BE DEMOLISHED
- EXISTING CONCRETE CURB AND GUTTER TO REMAIN
- PORTION OF EXISTING CONCRETE CURB AND GUTTER TO BE REMOVED
- EXISTING CONCRETE VALLEY GUTTER TO REMAIN
- CONSTRUCT NEW VALLEY GUTTER PER COA STD DWG #2420
- CONSTRUCT NEW STANDARD CONCRETE CURB & GUTTER PER COA STD DWG #2415A. MATCH EXISTING CURB AND GUTTER ELEVATIONS, ASSURE SMOOTH TRANSITION.
- CONSTRUCT NEW MEDIAN CONCRETE CURB & GUTTER PER COA STD DWG #2415B
- EXISTING ASPHALT PAVEMENT TO BE DEMOLISHED
- INSTALL NEW ASPHALT PAVEMENT PER COA STD DWG #2405A. MATCH EXISTING TO REMAIN ASPHALT AND CONCRETE PAVEMENT; ASSURE SMOOTH TRANSITION.
- CONSTRUCT NEW CONCRETE SIDEWALK PER COA STD DWG #2430. MATCH EXISTING TO REMAIN ASPHALT AND CONCRETE PAVEMENT; ASSURE SMOOTH TRANSITION.
- CONSTRUCT NEW CONCRETE HC RAMP
- CONSTRUCT NEW UNIDIRECTIONAL CONCRETE HC RAMP PER COA STD DWG #2426
- NEW PLANTER/LANDSCAPING AREA
- EXISTING DRIVEPAD TO BE DEMOLISHED
- CONSTRUCT NEW CMU BLOCK TRASH BIN ENCLOSURE PER COA SOLID WASTE DEPARTMENT SPECIFICATIONS
- CONSTRUCT NEW CMU BLOCK RETAINING WALL, SEE DETAIL THIS SHEET
- EXISTING SIGN "CHELWOOD SQUARE" TO BE RELOCATED
- RELOCATED EXISTING FIRE HYDRANT
- EXISTING FIRE HYDRANT TO REMAIN
- CONSTRUCT NEW HEADER CURB PER COA STD DWG #2415B
- EXISTING DIRT/GRAVEL TO REMAIN
- 4" WIDE STRIPES PAINTED ON ASPHALT
- 6" CONCRETE CONTAINMENT WALL, SEE DETAIL THIS SHEET

PARKING CALCULATIONS:

ACTUAL SQ FT:	LEASABLE
55882	40000
17851	12000
13235	9400
86946	61400

PARKING REQ. RETAIL=1/200 STORAGE=1/2000 BIKE REQ=1/200 HANDICAP REQ=4/200

PROVIDED RETAIL: 47 STORAGE: 26 BIKE: 5 HANDICAP: 4 TOTAL REQUIRED: 73 SPACES PROVIDED: 85

LOT A BLOCK 31-B
AREA = 118988.67 sq. ft. = 2.7316 Acres

RHOMBUS P.A., INC.
FACILITIES ENGINEERS • ENVIRONMENTAL CONSULTANTS

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2620 San Mateo NE Suite B Albuquerque, NM 87110
TEL. (505) 881-8890 FAX (505) 881-8890

CELIA S. TOMLINSON, PE
DRAWN BY: RG CHECKED BY: CT FIELD WORK BY: WEYJOHN SURVEYING INC. DATE: 5/16/2005

PROJECT TITLE: **GLOBAL STORAGE SELF STORAGE BUILDING**

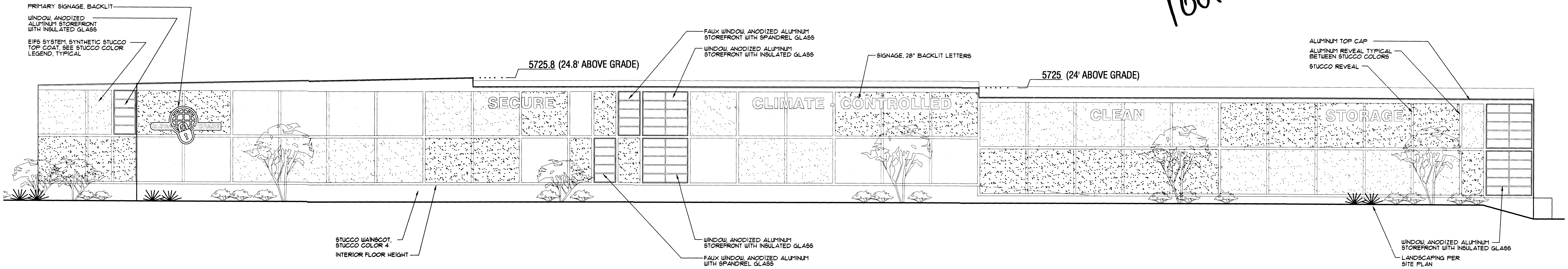
12000 CANDELARIA RD NE ALBUQUERQUE NEW MEXICO

SHEET TITLE: **SITE DEVELOPMENT PLAN FOR BUILDING PERMIT TRAFFIC CIRCULATION LAYOUT**

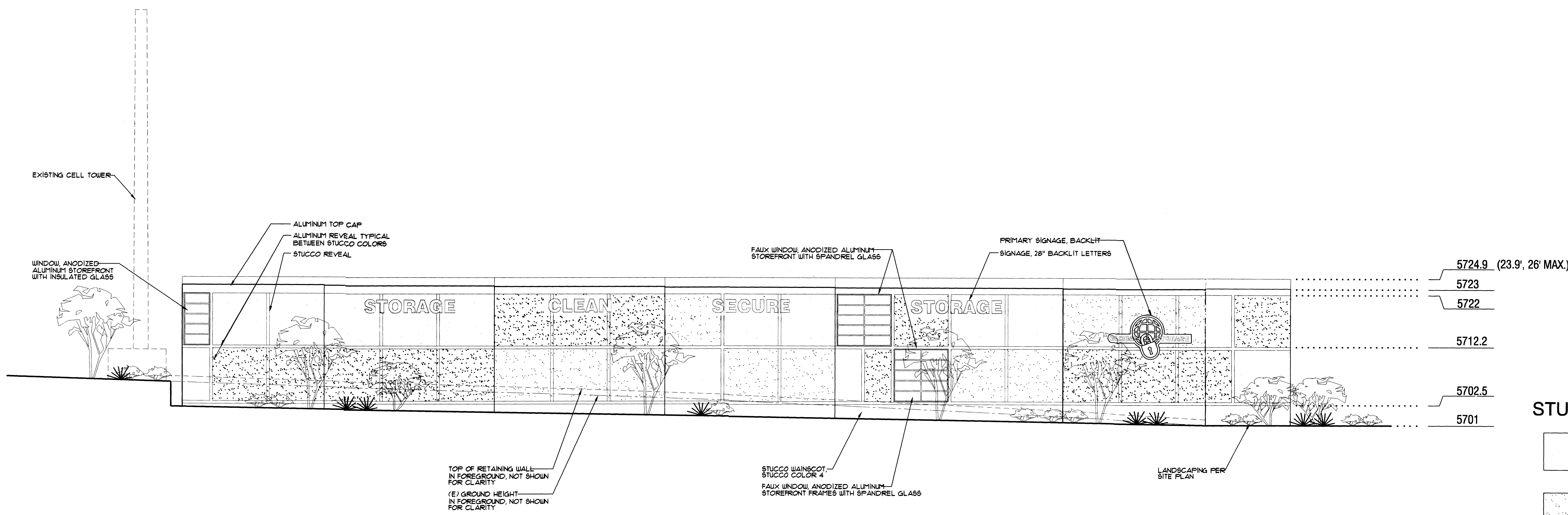
MAP NO: H-22-Z RHOMBUS JOB NO: 05-C2-15 SHEET C-1

PROJ
1001740

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10/16/06



1 WEST ELEVATION (CHELWOOD ELEVATION)
A1 SCALE: 1/8" = 1'-0"



2 NORTH ELEVATION (CANDELARIA ELEVATION)
A1 SCALE: 1/8" = 1'-0"

STUCCO LEGEND

	STUCCO COLOR 1 PUTTY (BROWNISH GREY)
	STUCCO COLOR 2 SANDSTONE (LIGHT TAN)
	STUCCO COLOR 3 NAVY BLUE

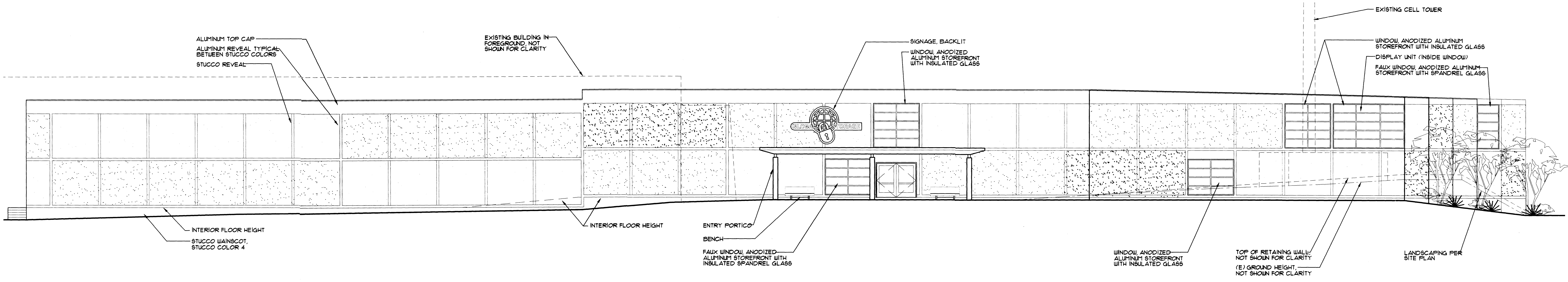
BAKER
ARCHITECTURE + DESIGN
3110 SILVER AVENUE SE
ALBUQUERQUE, NEW MEXICO 87108
T 505.254.4897
F 505.254.4890
E WWW.BAKERD.COM

GLOBAL STORAGE
12000 CANDELARIA NE
ALBUQUERQUE, NEW MEXICO

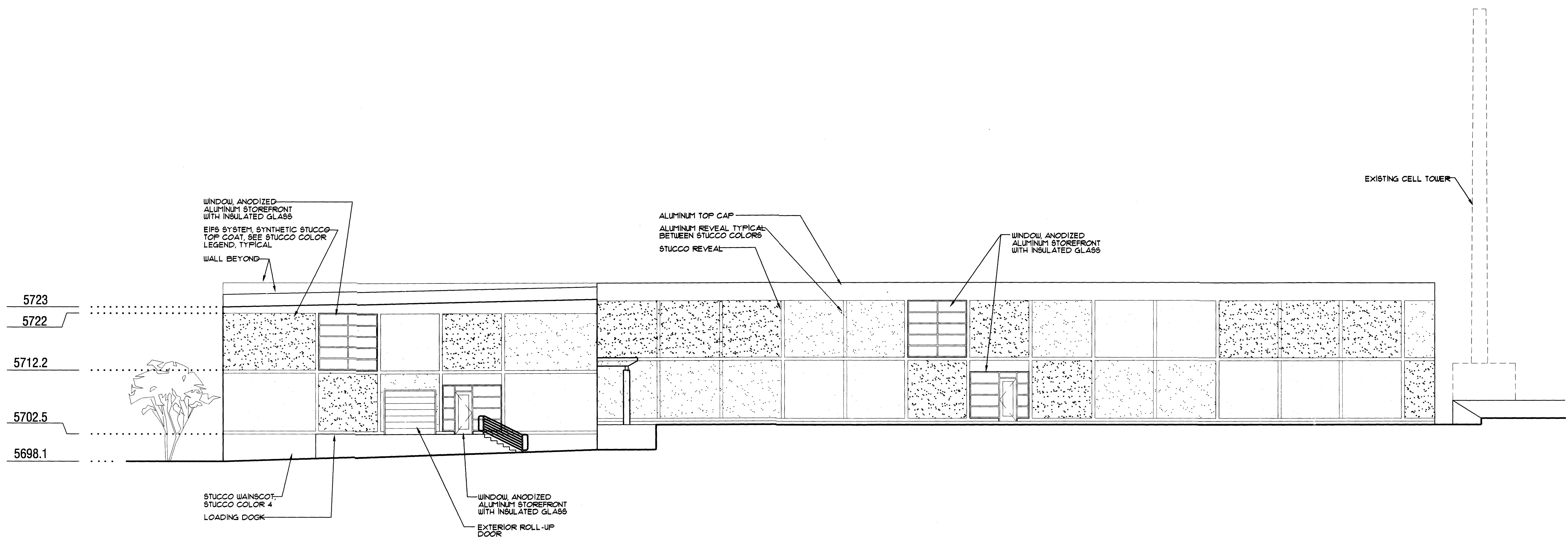
PROJECT NO. : 0505
DATE : 5.17.2005
DRAWN BY :
SCALE : AS NOTED

A1

*Revised
Drawn
10/10/06*

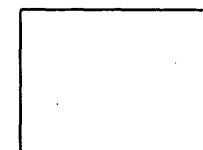
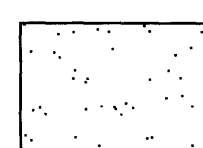
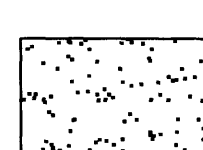


1 EAST ELEVATION
SCALE: 1/8" = 1'-0"



2 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

STUCCO LEGEND

-  STUCCO COLOR 1
PUTTY
(BROWNISH GREY)
-  STUCCO COLOR 2
SANDSTONE
(LIGHT TAN)
-  STUCCO COLOR 3
NAVY BLUE

BAKER
ARCHITECTURE + DESIGN
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T 505.254.4897
E www.bakerad.com

GLOBAL STORAGE
12000 CANDELARIA NE
ALBUQUERQUE, NEW MEXICO

PROJECT NO.: 0505
DATE: 5.17.2005
DRAWN BY:
SCALE: AS NOTED

A2