

## DRAINAGE PLAN

### EXECUTIVE SUMMARY

THIS PROJECT, LOCATED AT 3215 MATTHEW NE, IS A EXISTING 5800SF METAL BUILDING THAT IS CURRENTLY BEING REMODELED WITHIN THE PROPERTY THAT CONSISTS OF APPROXIMATELY 0.54 ACRES. THE SITE IS CURRENTLY DEVELOPED AND IS ALSO WITHIN A LARGELY DEVELOPED INFILL AREA. THE PURPOSE OF THIS DRAINAGE PLAN IS TO OBTAIN A BUILDING PERMIT.

### PROJECT DESCRIPTION

AS SHOWN ON VICINITY MAP H-16, THE SITE IS LOCATED AT THE NORTH SIDE OF MATTHEW NE. THE BOUNDARY AND TOPOGRAPHIC SURVEY WAS PREPARED BY CARTESIAN SURVEYS INC. DATED MARCH 19, 2007. THE LEGAL DESCRIPTION IS SHOWN ON THIS SHEET. AS SHOWN BY PANEL 35001C 0351D OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS, BERNALILLO COUNTY, NEW MEXICO, AND INCORPORATED AREAS, DATED NOVEMBER 29, 2003, THIS SITE LIES WITHIN DESIGNATED FLOOD HAZARD ZONE X. ZONE X IS CHARACTERIZED BY AREAS WITHIN THE 500-YR FLOOD, AREAS OF 100-YR FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE AND AREAS PROTECTED BY LEVEES FROM 100-YR FLOOD.

### EXISTING CONDITIONS AND DRAINAGE PATTERNS

THE SITE IS BASICALLY FLAT AND HAS HISTORY OF ON-SITE PONDING ON THE EXISTING PAVEMENT AND UNPAVED AREA ON ALL SIDES OF THE METAL BUILDING. THERE IS NOTICIBLE CORROSION AT THE BOTTOM OF THE METAL BUILDING AND ERODED CONCRETE AT VARIOUS LOCATIONS AROUND THE PERIMETER OF THE BUILDING. THE SITE CONSISTS OF TWO ONSITE BASIN WITH THE COMBINED AREA OF 0.54 ACRE. THERE APPEARS TO BE A SMALL AMOUNT OF OFFSITE FLOWS ENTERING THE SITE AT NEAR THE SOUTHEAST CORNER OF THE SITE. ALSO, THERE IS AN EXISTING BLOCK WALL ON THE NORTH AND WEST PROPERTY LINES THAT RESTRICT OFFSITE FLOWS FROM ENTERING THE SITE. THE TOTAL HISTORIC UNDEVELOPED ON-SITE 100YR-6HR RUNOFF FROM THE SITE IS 2.68 CFS.

### DEVELOPED CONDITIONS AND DRAINAGE PATTERNS

THE PROPOSED SITE WILL BY SLIGHTLY MODIFIED, BUT WILL CONTINUE TO HAVE TWO ON-SITE BASINS (BASINS 1 & 2) AND THE OFFSITE BASIN (BASIN A) THAT WILL CONTINUE TO DRAIN INTO THE SITE FROM THE SOUTH EAST. ON MARCH 16, 2007, GUY JACKSON & ASSOCIATES MET WITH COA HYDROLOGY OF WHICH IT IS WAS DETERMINED THAT THE SITE WAS CLOSE TO 100% IMPERVIOUS IN ITS EXISTING CONDITION AND WAS ALLOWED FREE DISCHARGE INTO THE MATTHEW AVENUE RIGHT OF WAY. HOWEVER, THE SITE HAS A HISTORY OF PONDING IN THE EXISTING DEGRADED PARKING LOT AND HAS TO REACH A DEPTH NEAR THE ELEVATION OF THE FINISH FLOOR OF THE BUILDING BEFORE IT SPILLS OUT NEAR THE SOUTH WEST CORNER OF THE SITE AND DRIVEPAD.

BASIN 1 WILL CONTINUE TO DRAIN WEST TO THE EXISTING UNPAVED AREA WEST OF THE BUILDING. A SMALL RETAINING WALL WITH THE CAPACITY FOR APPROX. 615CF WILL BE JOINED VIA AN 18" CMP TO ANOTHER POND JUST EAST OF THE EXISTING DRIVE PAD OF WHICH WILL DRAIN BASINS 2 AND BASIN A. THE REMOVAL AND REPLACEMENT OF THE EXISTING PAVEMENT EAST OF THE BUILDING WILL BE RE-INSTALLED WITH AN INVERTED CROWN COMBINED WITH A 2-WIDE RIBBON CHANNEL OF WHICH WILL COLLECT FLOWS AND DRAIN INTO A POND LOCATED AT THE SOUTH EAST CORNER OF THE SITE. THIS POND WILL HAVE A CAPACITY OF APPROXIMATELY 3950CF. THE STORAGE VOLUME FOR THE TWO DETENTION PONDS IS APPROXIMATELY 4565 CF WHICH IS APPROXIMATELY 3010CF LESS THAN THE 24HR-100YR EVENT. A 24" SIDEWALK CULVERT WILL BE INSTALLED AT THE SOUTHWEST CORNER OF THE SMALLER POND AS A SPILLWAY FOR EVENTS LARGER THAN THE CAPACITY OF THE POND. THE RETENTION PONDS WILL NOT HAVE THE CAPACITY FOR MULTIPLE 24 HOUR EVENTS AND THE SATURATION OF THE AREA WEST OF THE BUILDING WILL CONTINUE TO EFFECT THE FOUNDATION ALONG THE PERIMETER OF THE BUILDING.

HOWEVER, THE REGRADING OF PORTIONS OF THE SITE AND THE INSTALLATION OF THE PONDS SHOULD IMPROVE THE PONDING IN FRONT OF THE BAY DOORS ON THE EAST SIDE OF THE BUILDING.

### CALCULATIONS

THE CALCULATIONS, WHICH ARE ATTACHED, ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40-ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY, 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED.

### CONCLUSION

THE NET DEVELOPED FLOWS FROM THE PROPOSED THREE BASINS (0.21CFS + 0.68CFS + 1.79CFS = 2.68 CFS) FOR A TOTAL NET DECREASE DIFFERENCE FROM HISTORIC FLOWS EQUAL TO 0.11CFS, WHICH IS SLIGHTLY LESS THAN THE HISTORIC FLOWS DUE TO THE NEW RETENTION PONDS.

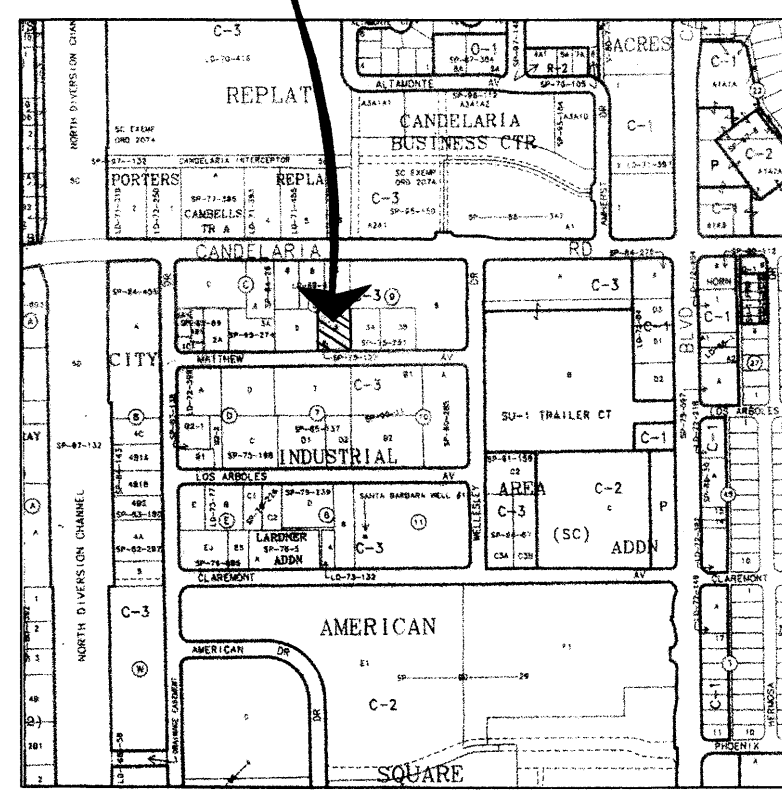
### LEGAL DESCRIPTION

PARCEL LETTERED "A" IN BLOCK LETTERED "C" OF THE SUMMARY PLAT SHOWING PARCEL "A", IN THE BLOCK "C", DUKE CITY INDUSTRIAL AREA, ALBUQUERQUE, NEW MEXICO, AS THE SAME IS SHOWN IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON JUNE 2, 1975, IN PLAT BOOK C10, PAGE 123.

### NOTICE TO CONTRACTORS

1. AN EXCAVATION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985, UPDATE 7
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO COLLECTOR STREET CLASSIFICATION USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

### PROJECT SITE



VICINITY MAP  
PANEL H-16  
N.T.S.

### KEYED NOTES:

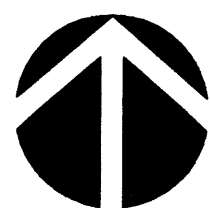
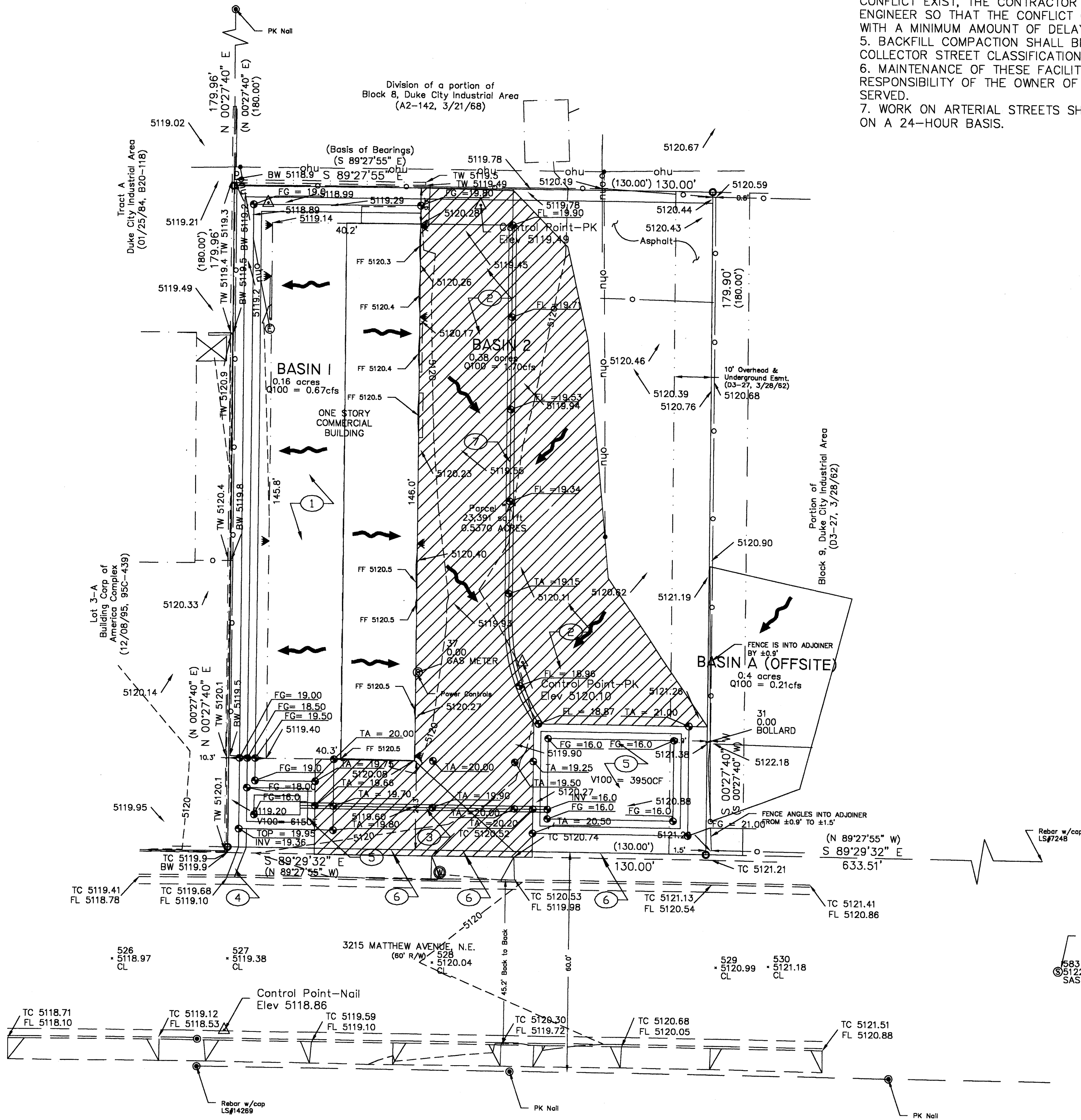
1. Protect existing building to remain.
2. New asphalt pavement by Armour Pavement.
3. New 18" corrugated metal drain pipe.
4. New 24" sidewalk culvert per CDA STD DWG. 2236.
5. New retention pond
6. New chainlink fence & gate.
7. New 2'-0" wide ribbon channel an inverted crown.

### CIVIL MASTER LEGEND:

	EXISTING:	NEW:
Property line	---	---
Building	---	---
Edge of pavement	---	---
Curb & gutter	---	---
Pavement striping	---	---
Fence	---	---
CMU or block wall	---	---
Utility easement	---	---
Underground electric line	---	---
Overhead electric line	---	---
Water line	---	---
Sanitary sewer line	---	---
Storm drain line	---	---
Index contours	---	---
Intermediate contours	---	---
Power pole	---	---
Light pole	---	---
Electrical transformer	---	---
Water valve	---	---
Fire hydrant	---	---
Water meter	---	---
Post indicator valve	---	---
Slamming connection	---	---
Post hydrant	---	---
Backflow preventer	---	---
Sanitary sewer manhole	---	---
Sanitary sewer single cleanout	---	---
Sanitary sewer double cleanout	---	---
Storm drain manhole	---	---
Single storm drain inlet	---	---
Grading spot elevations	---	---
Direction of Flow	---	---

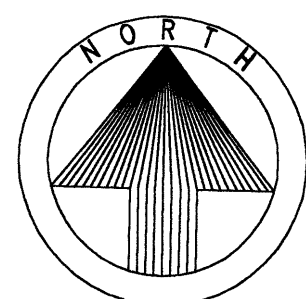
### ABBREVIATIONS:

Bottom of footing	BOF
Bottom of wall	BOV
Existing ground	EG
Finish grade	FG
Finish floor	FF
Flowline	FL
Invert	INV
Top of asphalt	TA
Top of curb	TC
Top of footing	TDF
Top of pavement	TP
Top of retaining wall	TR
Top of sidewalk	TSW
Top of wall	TOW
Rim	RIM



### GRADING PLAN

0 10' 20' 40' 80'  
SCALE: 1"=20'



SCALE: 1"=20'

### REVISIONS

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

### ARCHITECT

### DRAFTSMAN:

### CHECKED BY:

PERMIT DATE  
4/9/07  
PROTOTYPE SIZE  
65WR

C2.0