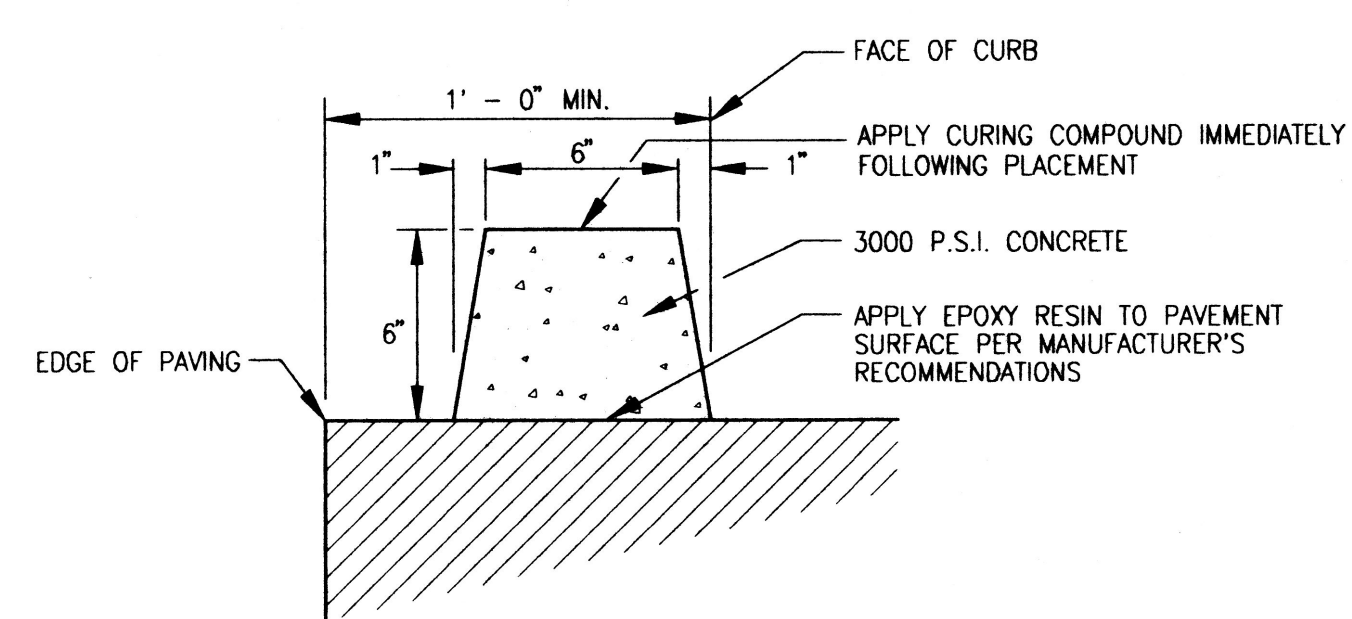
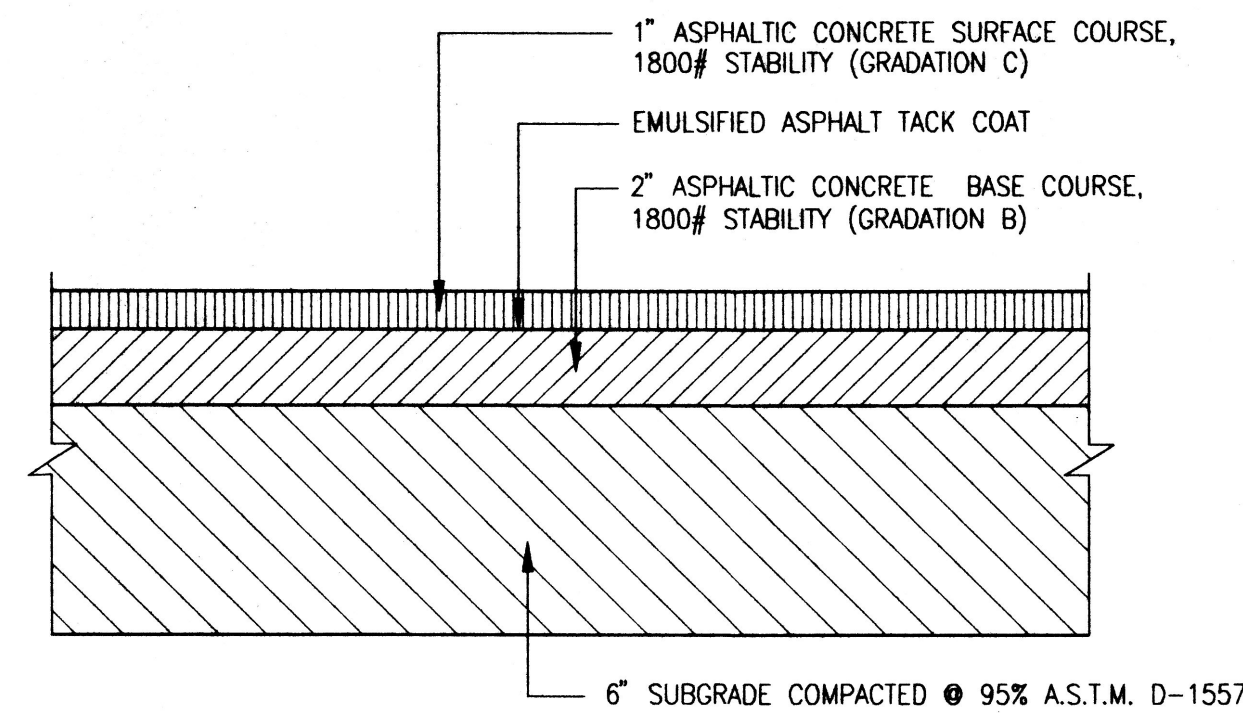


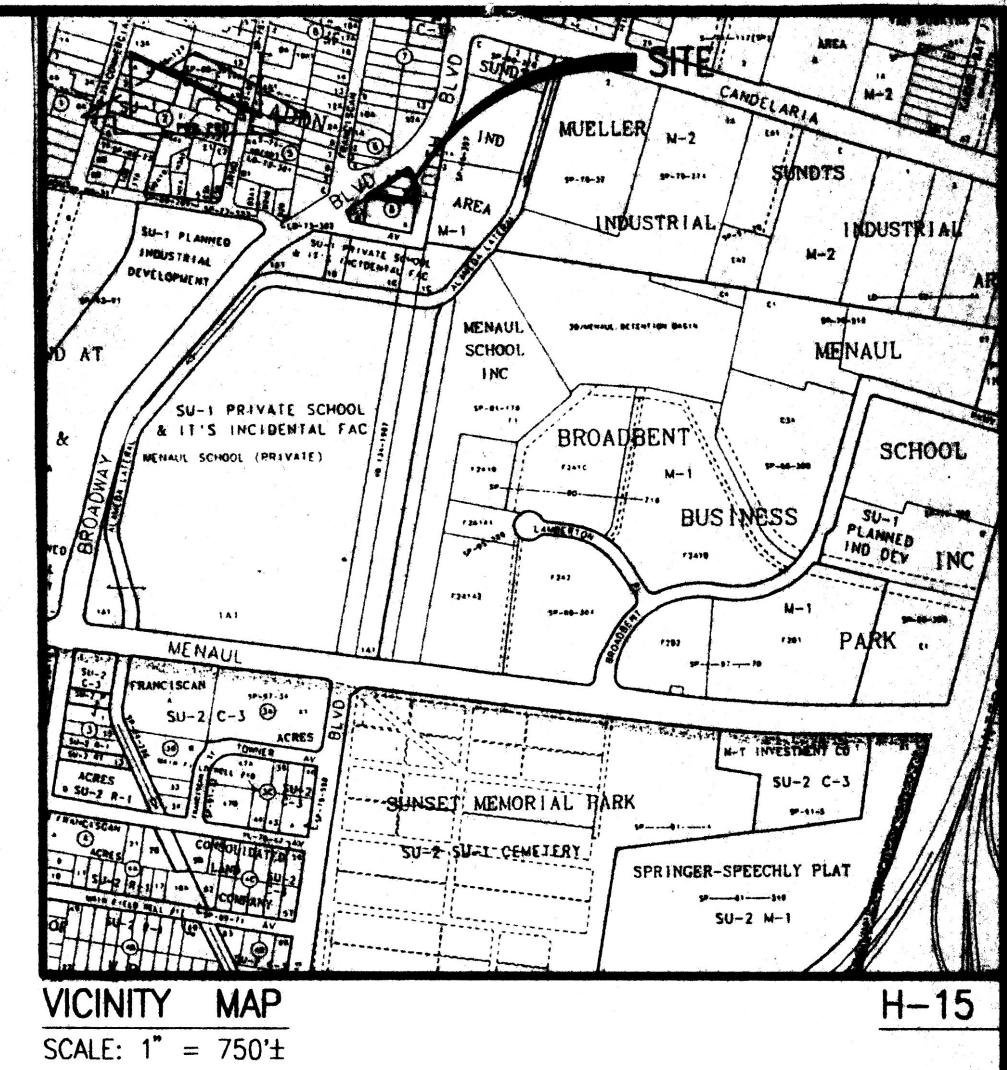
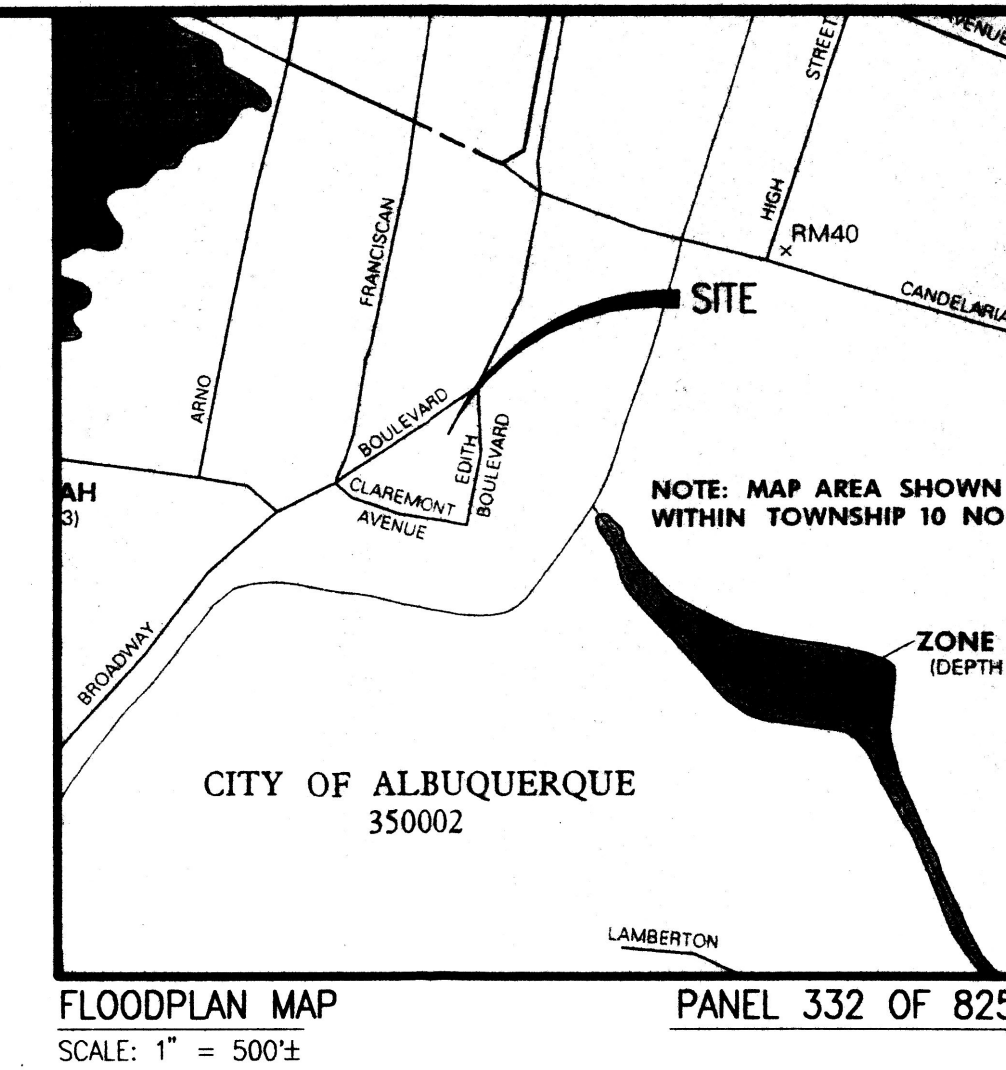
TYPICAL SIX-INCH CURB & GUTTER (OPTIONAL-ADDITIVE)  
SCALE: 1" = 0'-6"



TYPICAL EXTRUDED CONCRETE CURB SECTION (BASE BID)  
SCALE: 1" = 6"



TYPICAL PAVEMENT SECTION  
SCALE: 1" = 5"



- CONSTRUCTION NOTES:
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 (ALBUQUERQUE AREA), 1-800-321-ALERT(2537) (STATEWIDE), FOR LOCATION OF EXISTING UTILITIES.
  - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
  - 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.
  - ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
  - IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE 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, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
  - THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN. ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.

- EROSION CONTROL MEASURES:
- THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
  - THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
  - THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.

#### PROJECT BENCHMARK

A STANDARD A.C.S. BRASS TABLET, STAMPED "9-H15 1979" SET 0.1 FT. ABOVE THE GROUND IN THE MEDIAN APPROXIMATELY 200 FEET EAST OF THE INTERSECTION OF CANDELARIA ROAD N.E. AND LOCUST ST. N.E.

#### T.B.M.

CHISELED "T" IN TOP, BACK CURB AS SHOWN IN THE DRAWING. ELEVATION=4981.27 FEET (M.S.L.D.)

#### LEGAL DESCRIPTION

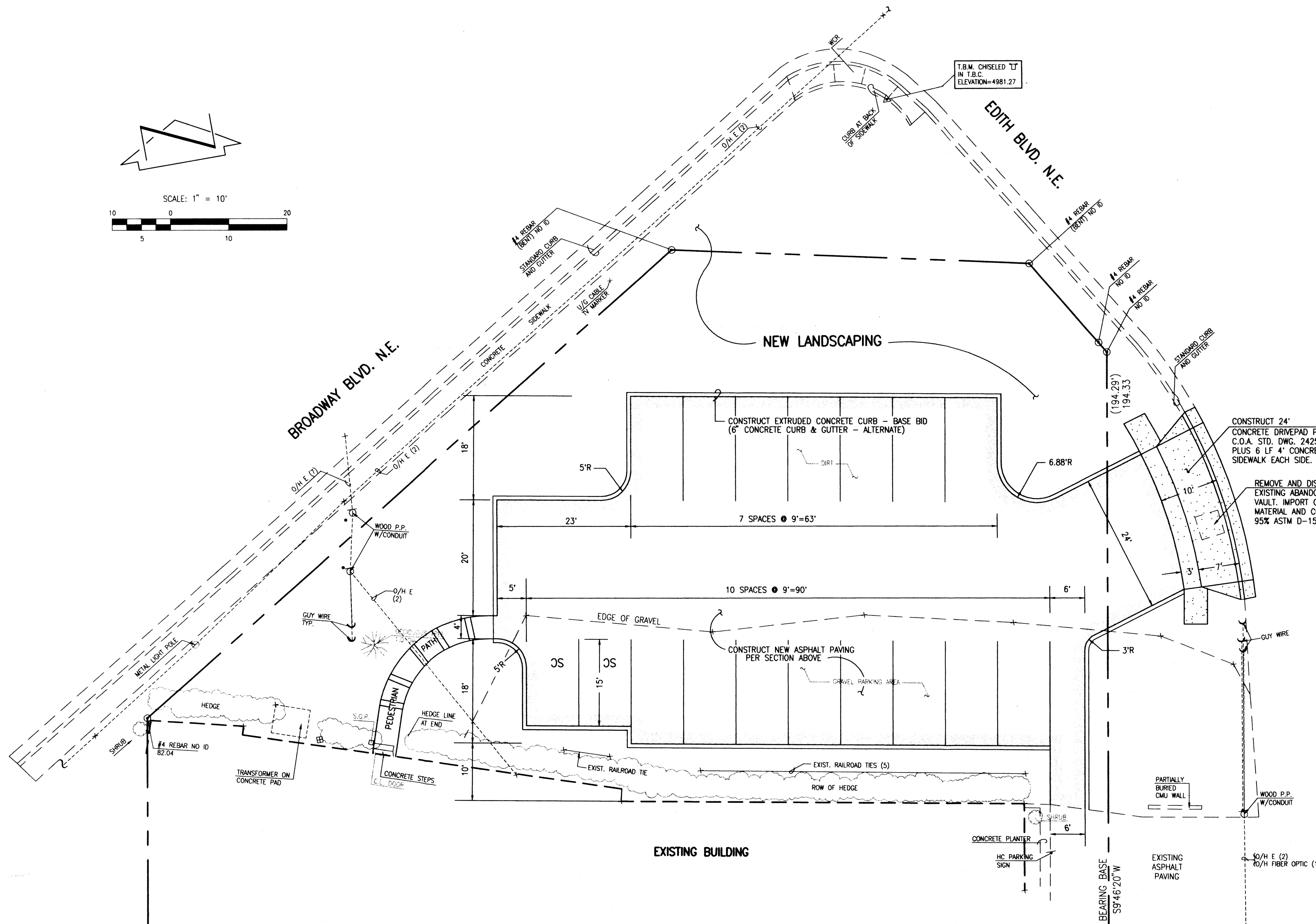
THE REMAINING PORTIONS OF LOTS 6 AND 7, BLOCK 6, STRONGHURST ADDITION.

#### LEGEND

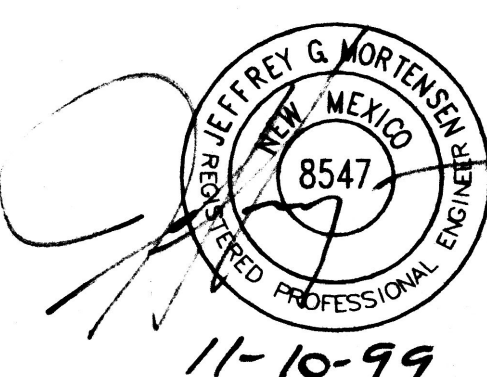
EXISTING SPOT ELEVATION	EXISTING CONTOUR
DECIDUOUS TREE WITH DIAMETER	HEDGE LINE
OVER HEAD ELECTRIC (NUMBER OF LINES)	ROOF DRAIN
STEEL GUARD POST	POWER POLE
TOP OF CURB	FLOWLINE
TOP OF CONCRETE	ELECTRIC METER
CENTERLINE	EDGE OF ASPHALT
EDGE OF ASPHALT	HANDICAPPED
TOP, BACK CURB	T.B.C.
WHEEL CHAIR RAMP	WCR
UNDERGROUND	U/G
SMALL CAR SPACE	SC
ASPHALT PAVING LIMITS	
PROPOSED CONCRETE	

#### NOTES:

- THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS ARE SHOWN FOR ORIENTATION ONLY. BOUNDARY DATA SHOWN IS BASED UPON THE UNCERTIFIED SURVEY PROVIDED TO JEFF MORTENSEN AND ASSOCIATES.



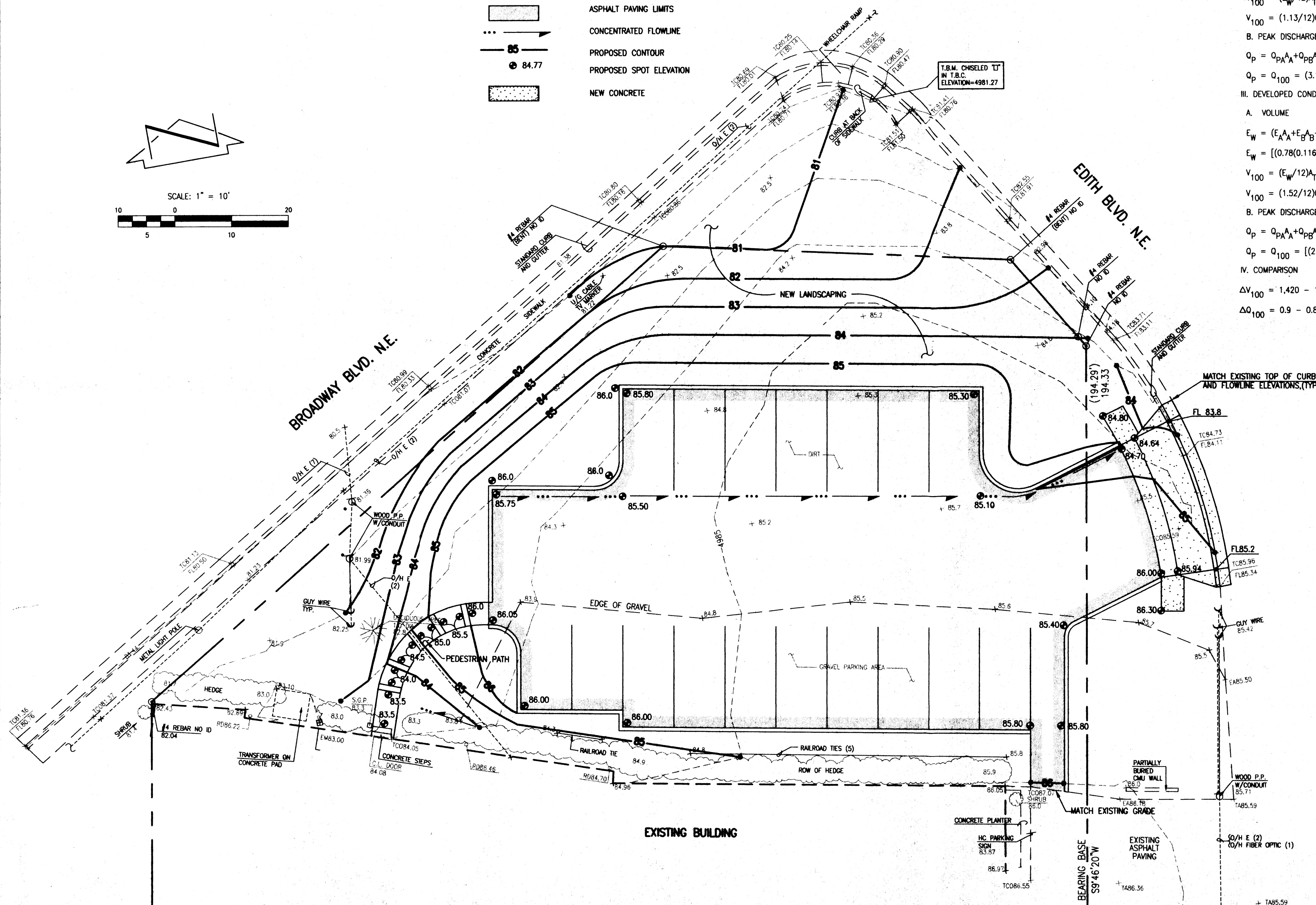
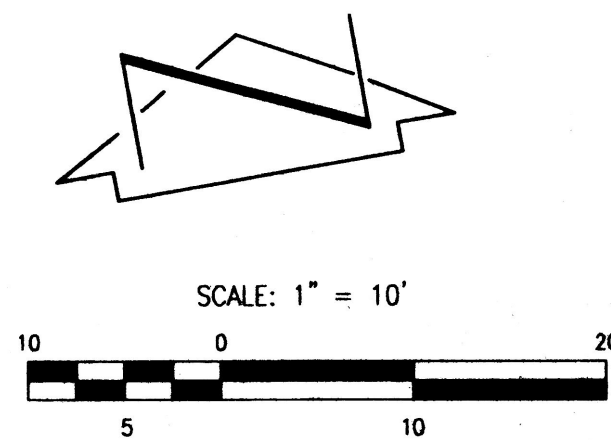
DESIGNED BY	NO.	DATE	BY	REVISIONS	JOB NO.
JAP					990872
DRAWN BY					DATE
DLM/JMC					11-1999
APPROVED BY					SHEET
JGM					1 OF 2





# LEGEND

+ 85.2	EXISTING SPOT ELEVATION
---	EXISTING CONTOUR
1.0 DIA.	DECIDUOUS TREE WITH DIAMETER
---	HEDGE LINE
O/H E (2)	OVER HEAD ELECTRIC (NUMBER OF LINES)
RD	ROOF DRAIN
S.G.P.	STEEL GUARD POST
P.P.	POWER POLE
TC	TOP OF CURB
FL	FLOWLINE
TCO	TOP OF CONCRETE
EM	ELECTRIC METER
C.L.	CENTERLINE
EA	EDGE OF ASPHALT
HC	HANDICAPPED
T.B.C.	TOP BACK CURB
WCR	WHEEL CHAIR RAMP
U/G	UNDERGROUND
---	ASPHALT PAVING LIMITS
---	CONCENTRATED FLOWLINE
85	PROPOSED CONTOUR
84.77	PROPOSED SPOT ELEVATION
---	NEW CONCRETE



## CALCULATIONS

### I. SITE CHARACTERISTICS

- A. PRECIPITATION ZONE = 2
- B.  $P_{6,100} = P_{360} = 2.35$  IN.
- C. TOTAL AREA ( $A_T$ ) = 11,240 SF; 0.2580 AC
- D. EXISTING LAND TREATMENT
- |                          |                   |
|--------------------------|-------------------|
| TREATMENT AREA (SF/AC) % |                   |
| C                        | 11,240/0.2580 100 |
- E. DEVELOPED LAND TREATMENT
- |                          |                 |
|--------------------------|-----------------|
| TREATMENT AREA (SF/AC) % |                 |
| B                        | 5,060/0.1161 45 |
| D                        | 6,180/0.1419 55 |

### II. EXISTING CONDITION

#### A. VOLUME

$$E_w = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$$

$$E_w = [(1.13)(0.2580)] / 0.2580 = 1.13$$

$$V_{100} = (E_w / 12) A_T$$

$$V_{100} = (1.13 / 12) 0.2580 = 0.0243 \text{ AC.FT.} = 1,060 \text{ CF}$$

#### B. PEAK DISCHARGE

$$Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$$

$$Q_p = Q_{100} = (3.14)(0.2580) = 0.8 \text{ CFS}$$

### III. DEVELOPED CONDITION

#### A. VOLUME

$$E_w = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$$

$$E_w = [(0.78)(0.1161) + (2.12)(0.1419)] / 0.2580 = 1.52$$

$$V_{100} = (E_w / 12) A_T$$

$$V_{100} = (1.52 / 12) 0.2580 = 0.0326 \text{ AC.FT.} = 1,420 \text{ CF}$$

#### B. PEAK DISCHARGE

$$Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$$

$$Q_p = Q_{100} = [(2.28)(0.1161) + (4.70)(0.1419)] = 0.9 \text{ CFS}$$

### IV. COMPARISON

$$\Delta V_{100} = 1,420 - 1,060 = 360 \text{ CF; } 0.0083 \text{ AC.FT. (INCREASE)}$$

$$\Delta Q_{100} = 0.9 - 0.8 = 0.1 \text{ CFS (INCREASE)}$$

## DRAINAGE PLAN

### EXECUTIVE SUMMARY

THIS PROJECT, BOUNDED BY BROADWAY BOULEVARD, EDITH BOULEVARD AND CLAREMONT AVENUE CONSISTS OF THE CONSTRUCTION OF A SMALL, 17 SPACE ASPHALTIC CONCRETE PARKING LOT, DESIGNED TO SUPPLEMENT THE EXISTING REQUIRED PARKING ALREADY CONSTRUCTED. IT IS IMPORTANT TO NOTE THAT THIS PARKING IS BEING PROVIDED ABOVE BEYOND THAT WHICH IS REQUIRED. IN ADDITION, ASSOCIATED LANDSCAPING IMPROVEMENTS ARE PROPOSED AS PART OF THIS PROJECT. THIS PROJECT REPRESENTS IMPROVEMENTS TO AN EXISTING SITE WITHIN A LARGELY DEVELOPED INFILL AREA. THE PURPOSE OF THIS DRAINAGE PLAN IS TO OBTAIN GRADING PERMIT AND PAVING PERMIT APPROVALS. THERE WILL BE AN EXCHANGE OF CURRENTLY UNDEVELOPED LAND FOR AREAS OF IMPERVIOUS PAVING AS WELL AS AREAS OF LANDSCAPING. AS A RESULT, THE HYDROLOGY OF THE SITE WILL BE IMPACTED AS DEMONSTRATED IN THE DRAINAGE CALCULATIONS CONTAINED HEREIN, WITH A MINOR INCREASE OF 0.1 CFS IN PEAK DISCHARGE.

### INTRODUCTION

A DRAINAGE INFORMATION SHEET IS INCLUDED WITH THIS SUBMITTAL. NO INFRASTRUCTURE IS ANTICIPATED, HENCE AN INFRASTRUCTURE LIST IS NOT INCLUDED WITH THIS SUBMITTAL. FURTHERMORE, NO PLATING IS PROPOSED.

### REFERENCES

RESEARCH OF EXISTING STORM DRAIN IMPROVEMENTS IN THE AREA REVEALS THAT THIS SITE IS ALLOWED FREE DISCHARGE AS PART OF THE COMMERCIAL / CANDELARIA / CLAREMONT AND BROADWAY STORM DRAIN IMPROVEMENT PROJECT, CITY PROJECT NO. 4271.92. PER A TELEPHONE INTERVIEW WITH JOHN CURTAIN WITH CITY OF ALBUQUERQUE HYDROLOGY ON 11/1/99, IT WAS CONFIRMED THAT AS-BUILT DRAWINGS ARE CURRENTLY BEING PREPARED BY AIR LARKIN, AND THAT PUBLIC STORM DRAIN AND STORM INLETS SERVING THIS SITE ARE CURRENTLY IN PLACE AND OPERATIONAL.

### PROJECT DESCRIPTION

AS SHOWN BY VICINITY MAP H-15, THE SITE IS LOCATED AT THE INTERSECTION OF EDITH BOULEVARD AND BROADWAY BOULEVARD AND IS BOUNDED BY CLAREMONT AVENUE ON THE SOUTH. THE SITE IS CURRENTLY ZONED C-3 AND IS THEREFORE NOT SUBJECT TO SITE PLAN CONTROL. THE CURRENT LEGAL DESCRIPTION IS THE REMAINING PORTIONS OF LOTS 6 AND 7, BLOCK 6, STRONGHURST ADDITION. AS SHOWN BY PANEL 332 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS, BERNALILLO COUNTY, NEW MEXICO, AND INCORPORATED AREAS, DATED SEPTEMBER 20, 1996, THIS SITE DOES NOT LIE WITHIN NOR ADVERSELY IMPACT A DESIGNATED FLOOD HAZARD ZONE. THE PROPOSED IMPROVEMENTS INCLUDE CONSTRUCTION OF AN ASPHALT PAVING PARKING LOT AND ASSOCIATED LANDSCAPING IMPROVEMENTS.

### EXISTING CONDITIONS

AT PRESENT, THE SITE IS PARTIALLY DEVELOPED AS A GRAVEL PARKING LOT. THE EXISTING RUNOFF GENERATED BY THIS SITE DRAINS TO EDITH AND BROADWAY BOULEVARDS VIA SURFACE FLOW. THIS RUNOFF CURRENTLY SHEETFLOWS ACROSS THE EXISTING SIDEWALK TO ENTER BROADWAY AND SHEETFLOWS OVER THE TOP OF THE EXISTING CURB AND GUTTER TO ENTER EDITH. THIS RUNOFF IS THEN CONVEYED TO, AND INTERCEPTED BY, THE RECENTLY COMPLETED STORM DRAIN IMPROVEMENTS SERVING THIS SITE AS PREVIOUSLY DISCUSSED.

### DEVELOPED CONDITIONS

AS DESCRIBED ABOVE, THE PROPOSED IMPROVEMENTS CONSIST OF AN ASPHALT PAVING PARKING LOT WITH 17 SPACES. AS WELL AS ASSOCIATED LANDSCAPING SURROUNDING THE LOT. THE EXISTING DRAINAGE PATTERNS WILL BE ALTERED SLIGHTLY, WHILE THE EXISTING OUTFALL WILL REMAIN UNCHANGED. THE PROPOSED PARKING LOT WILL CONVEY DEVELOPED RUNOFF FROM THE SITE, TO THE EAST, VIA CONCENTRATED FLOW AND INTO EDITH BOULEVARD. THE DEVELOPED RUNOFF WILL EXIT THE SITE VIA THE NEW DRIVEPAD. THE LANDSCAPED AREAS SURROUNDING THE PROPOSED LOT WILL DISCHARGE A MINIMAL AMOUNT OF RUNOFF, VIA SURFACE FLOW INTO BROADWAY AND EDITH BOULEVARDS. THE PROPOSED CONSTRUCTION WILL CORRECT AND IMPROVE THE MANNER IN WHICH DEVELOPED RUNOFF EXITS THE SITE AND ENTERS PUBLIC RIGHT-OF-WAY. ONCE IN THE PUBLIC RIGHTS-OF-WAY, THE RUNOFF WILL CONTINUE TO BE CONVEYED TO, AND INTERCEPTED BY, THE AFOREMENTIONED STORM DRAIN IMPROVEMENTS AND SUBSEQUENT INLETS IN PLACE DOWNSTREAM SERVING THIS SITE. NO OFFSITE FLOWS ENTER THE SITE IN THE EXISTING OR DEVELOPED SCENARIOS.

### GRADING PLAN

THE GRADING PLAN SHOWS: 1) EXISTING GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1' 0" INTERVALS AS TAKEN FROM THE TOPOGRAPHIC SURVEY PREPARED BY JEFF MORTENSEN AND ASSOCIATES, INC. OCTOBER 1999, 2) PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1' 0" INTERVALS, 3) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS, 4) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 5) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. THE GRADING PLAN APPEARS ON SHEET 2 OF 2 OF THIS SUBMITTAL. THIS PLAN ILLUSTRATES THE DRAINAGE PATTERNS DESCRIBED IN THE ABOVE SECTION.

### CALCULATIONS

THE CALCULATIONS WHICH APPEAR HEREON ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100YEAR, 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. AS DEMONSTRATED BY THESE CALCULATIONS, THERE WILL BE A SLIGHT INCREASE IN RUNOFF ASSOCIATED WITH THE PROPOSED IMPROVEMENTS.

### CONCLUSION

THE CONTINUED FREE DISCHARGE OF RUNOFF FROM THIS SITE TO EDITH AND BROADWAY BOULEVARDS IS APPROPRIATE DUE TO THE FOLLOWING FACTORS.

1. MODIFICATION TO AN EXISTING SITE WITHIN A LARGELY DEVELOPED INFILL AREA
2. NEGLIGIBLE INCREASE IN DEVELOPED RUNOFF
3. PROXIMITY TO DOWNSTREAM FACILITIES AND APPARENT DOWNSTREAM CAPACITY
4. NO IMPACT ON DOWNSTREAM FLOOD ZONES



JEFF MORTENSEN & ASSOCIATES, INC.  
8010-B MIDWAY PARK BLVD. N.E.  
ALBUQUERQUE, NEW MEXICO 87109  
ENGINEERS SURVEYORS (505) 345-4250

## GRADING AND DRAINAGE PLAN G.T. SPECIALTIES

DESIGNED BY JAP  
DRAWN BY DLN/JMC  
APPROVED BY JGM

NO.	DATE	BY	REVISIONS	JOB NO.
				990872
				DATE
				11-1999
				SHEET
				2 OF 2