HYDROLOGY

K19/D65

ONE PLAN

CHRIS VIGIL GENERAL

CONTRACTOR

GRADING + DRAINAGE

K19/D65

1 PLAN

LEGAL DESCRIPTION:

LOTS NUMBERED TWENTY-ONE (21) AND TWENTY-TWO (22) IN BLOCK NUMBERED TWENTY-FIVE (25), OF THE MESA VERDE ADDITION, AN ADDITION TO THE CITY OF ALBUQUERQUE, NEW MEXICO, AS THE SAME ARE SHOWN AND DESIGNATED ON THE PLAT OF SAID ADDITION FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON NOVEMBER 17, 1939; EXCEPTING FROM THE ABOVE DESCRIBED PROPERTY THE EASTERLY TEN FEET (10') THEREOF.

BENCH MARK:

CITY SURVEY BENCH MARK STATION "7-K20", A SQUARE CHISLED ON THE WSW TOP OF CURB RETURN LOCATED AT THE INTERSECTION OF GENERAL STILLWELL N.E. AND COPPER AVENUE N.E., IN THE SOUTHWEST QUADRANT OF THE INTERSECTION. M.S.L. ELEVATION = 5391.057 .

EROSION CONTROL MEASURES:

THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MANAGEMENT FOR STORM RUN-OFF DURING CONSTRUCTION; HE SHALL INSURE THAT THE FOLLOWING MEASURES ARE TAKEN:

1.) ADJACENT PROPERTY SHALL BE PROTECTED AT ALL TIMES BY CONSTRUCTION OF BERMS, DIKES, SWALES, PONDS, AND OTHER TEMPORARY GRADING AS REQUIRED TO PREVENT STRORM RUNOFF FROM LEAVING THE SITE AND ENTERING ADJACENT PROPERTIES.

2.) ADJACENT PUBLIC RIGHT-OF-WAYS SHALL BE PROTECTED AT ALL TIMES FROM STORM WATER RUNOFF FROM THE SITE. NO SEDIMENT BEARING WATER SHALL BE PERMITTED TO ENTER PUBLIC STREETS.

3.) THE CONTRACTOR SHALL IMMEDIATELY AND THROUGHLY REMOVE ANY AND ALL SEDIMENT WITHIN PUBLIC STREETS THAT HAS BEEN ERODED FROM THE SITE AND DEPOSITED THERE.

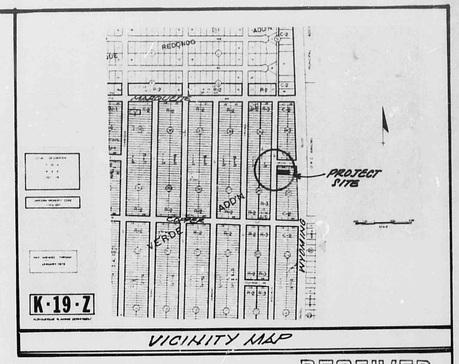
CONSTRUCTION NOTES:

1.) TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE AT 765-1234 FOR LOCATION OF EXISTING UTILITIES.

2.) 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 SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM OF DELAY.

3.) 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.

4.) ALL CONSTRUCTION WITHIN CITY RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.



VICINITY MAP

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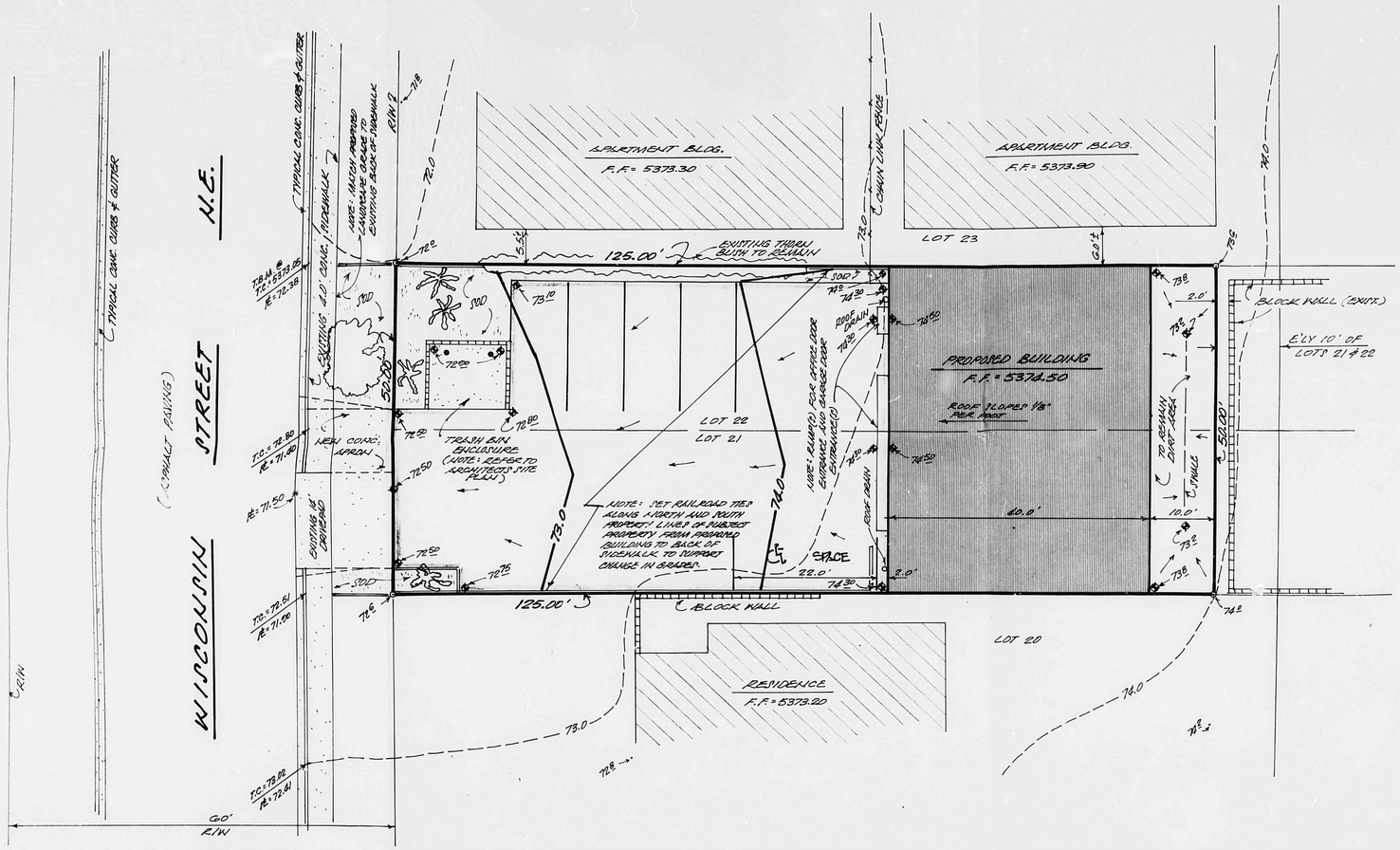

SCALE: 1" = 10'

LEGEND:

TOP OF CURB ELEVATION	=	T.C.= 72.80
CURB FLOW LINE ELEVATION	=	F.F. = 71.40
EXISTING OR PROPOSED CONCRETE	=	
EXISTING CONTOUR	=	72.0
PROPOSED CONTOUR	=	72.0
EXISTING FENCE LINE	=	
PROPOSED SPOT ELEVATION	=	72.51
PROPOSED LIMITS OF NEW ASPHALT	=	
EXISTING SPOT ELEVATION	=	72.6
DIRECTION OF SURFACE DRAINAGE FLOW	=	

DRAINAGE COMMENTS:

THE FOLLOWING ITEMS CONCERNING THE SUBJECT SITE ARE CONTAINED ON THE GRADING AND DRAINAGE PLAN HEREON:

1.) SITE GRADING AND DRAINAGE PLAN.

2.) VICINITY MAP

3.) LEGAL DESCRIPTION

4.) LIMITS AND CHARACTER OF THE EXISTING AND PROPOSED IMPROVEMENTS.

5.) DRAINAGE CALCULATIONS

AS SHOWN ON THE VICINITY MAP ON THE PLAN HEREON, THE SUBJECT SITE IS LOCATED AT THE APPROXIMATE SOUTHEAST INTERSECTION OF WISCONSIN STREET N.E. AND GRAND AVENUE N.E., (ZONE MAP "K-19"), IN THE CITY OF ALBUQUERQUE, NEW MEXICO. THE SUBJECT SITE IN IT'S PRESENT CONDITION IS TOTALLY UNDEVELOPED.

THE PROJECT SITE, (1.) DOES NOT LIE WITHIN A FLOOD PLAIN, (2.) DOES NOT LIE ADJACENT TO A NATURAL OR ARTIFICIAL WATER COURSE, (3.) HAS NO DRAINAGE EASEMENTS ON THE PROPERTY; THE SUBJECT SITE DOES NOT ACCEPT OR CONTRIBUTE TO OFF-SITE FLOWS OF ADJACENT PROPERTIES.

BASED ON A SITE INVESTIGATION, IT HAS BEEN DETERMINED THAT THE FREE DISCHARGE OF SURFACE FLOWS OF THE EXISTING AND PROPOSED QUANTITIES HAVE NO ADVERSE AFFECT ON DOWNSTREAM PROPERTIES.

DRAINAGE CALCULATIONS

I. **REFERENCES:**

A. City of Albuquerque Development Process Manual (DPM) Volume 2, Design Criteria, Chapter 22, Drainage, Flood Control and Erosion Control.

B. Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico, United States Department of Agriculture, Soil Conservation Service.

C. Floodway Map, Panel 31 of 50, Federal Emergency Management Agency, October 14, 1983.

II. **GENERAL INFORMATION:**

A. Soil Type (Ref.B., Sheet No. 31) Soil type is TgB, Tijeras gravelly fine sandy loam, Hydrologic Soil Group "B".

B. Imperviousness:

Type of Surface	Existing Area Sq.Ft.	Acres	Proposed Area Sq.Ft.	Acres
Building roof	-	-	2,000	
Concrete Surfaces	-	-	137	
Asphalt Surfaces	-	-	3,200	
Landscaping	-	-	913	
Undeveloped surface	6,250	0.143	-	
Site total	6,250	0.143	6,250	0.143
Percent impervious	0%		85%	

C. "C" Factor (See Ref. A., Plate 22.2 C-1)
1. Undeveloped "C" Factor = 0.34
2. Developed "C" Factor = 0.81

D. Rainfall, 100-year, 6-hour, R_6: (See Ref.A., Plate 22.2 D-1) R_6 = 2.33 inches.

E. Time of Concentracion, T_c: Use minimum time of concentration of 10 minutes.

F. Rainfall Intensity, I: (See Ref. A, Plate 22.2 D-2)

$I = R_6 \times 6.84 \times T_c^{-0.51} = 2.35 \times 6.84 \times (10)^{-0.51}$

$I = 4.97$ In/Hr

III. **PEAK DISCHARGE:**

A. Existing Conditions. (Use Rational Equation.)

$Q_{100} = 0.34 \times 4.97 \times 0.143 = 0.24$ cfs

$Q_{10} = 0.657 \times 0.24 = 0.16$ cfs

B. Developed Conditions.

$Q_{100} = 0.81 \times 4.97 \times 0.143 = 0.56$ cfs

$Q_{10} = 0.657 \times 0.56 = 0.37$ cfs

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ENGINEER'S SEAL

GRADING AND DRAINAGE PLAN
FOR
CHRIS VIGIL - GENERAL CONTRACTOR
(VICINITY OF WISCONSIN ST. N.E. & GRAND AVE. N.E.)
ALBUQUERQUE, NEW MEXICO
SEPTEMBER, 1985