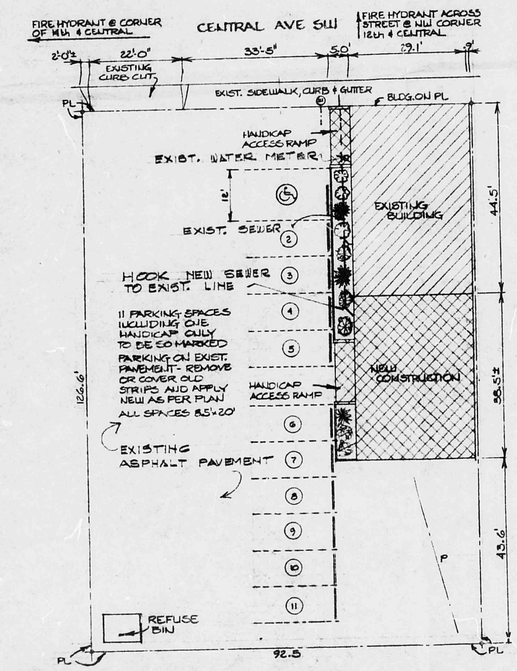
HYDROLOGY

K13/D19
ONE PLAN

OFFICE REMODEL & ADDITION

CENTRAL PODIATRY ASSOCIATES PA
1204 CENTRAL AVE. SW
ALBQUERQUE, NEW MEXICO 87102
DR. CHARLES W BOESENBERG & DR. ANTHONY M JURCA

COPY



SITE PLAN
SCALE 1/16"=1'-0"

1204 CENTRAL AVE
LEGAL DISCRIPTION: LOT BLK 50 FORMERLY LOTS 32(W.5'), 33, 34, 35, & 36 (E½) ORIGINAL TOWNSITE OF ALBUQUERQUE NM

ZONED C-2
MAP J-15 & K-15

DRAINAGE: ENTIRE SITE PREVIOUSLY EITHER PAVED OR UNDER ROOF EXCEPT FOR NEW LANDSCAPE AREA SAME CONDITION APPLIES

NOTE: CONTRACTOR TO INSPECT SITE & VERIFY LOCATION OF EXIST. UTILITYS.

LANDSCAPE NOTES
1. REMOVE EXISTING PAVING IN LANDSCAPE AREAS
2. PROVIDE ADEQUATE IRRIGATION SYSTEM
3. PLANT TYPES
- TAM JUNIPER - J. SABINA TAMARISCIFOLIA 5 GAL MIN. - 8 REQUIRED
- PALM YUCCA - YUCCA TOREYI 5 GAL. MIN. - 3 REQUIRED

NOTE:
ALL UTILITIES ARE ON SITE CONNECT NEW UTILITIES TO EXISTING

DESIGN BASE
FIRE ZONE: 2
SEISMIC ZONE: 2
CONSTRUCTION TYPE: V-N
Note: Exterior Walls to comply with Table 5-A-1 HBAS Sec.2203
; Roof Covering shall comply with 3203(e) - FIRE RETARDANT
FLOOR AREAS: Existing - 1290.5 sq.ft.
New - 1116.5 sq.ft.
Total - 2407.0 sq.ft.
OCCUPANCY GROUP: B-2
OCCUPANCY LOAD: 24 persons - based on 100 sq.ft. per occupant
SOIL BEARING: 1500 psf min.
CONCRETE STRENGTH: Footing & Stem - 2000 psi
Slab - 2500 psi
STEEL STRESS: Rebar fb=20,000 psi
LUMBER STRESS: #2 Pine fb=975 psi
#2 Hem-Fir fb=1150 psi
WIND LOAD: 25 psf
ROOF LOAD: Live - 20 psf Dead - 13.75 psf
FLOOR LOAD: Live - 100 psf - exits & corridors
Dead - Slab on grade

ENERGY CONSERVATION CALCULATIONS

A. "U" VALUE DEVELOPMENT

1. FRAME/STUCCO WALL

R FACTOR	FRAMING	CAVITY
OUTSIDE AIR FILM	0.17	0.17
1" STUCCO	0.20	0.20
½" PLY	0.06	0.06
IMPREG SHEATH	1.00	1.00
6" STUDS	6.88	-
6" FIBER GLASS BATTS	-	19.00
5/8" Gyp Bd	0.56	0.56
INSIDE AIR FILM	0.68	0.68
TOTAL R	9.55	21.67
1/R="U"	0.105	0.046

PROPORTION @ 16"o.c.
(0.105 x 1.5/16) + (0.046 x 14.5/16) = 0.052
NOTE: CEDAR SIDING VALUE VERY SAME AS STUCCO. USE SAME VALUE

2. INTERIOR Gyp WALL (WEST)

R FACTOR	FRAMING	CAVITY
OUTSIDE AIR FILM	0.17	0.17
5/8" Gyp	0.56	0.56
6" STUDS	6.88	-
6" FIBER GLASS BATTS	-	19.00
5/8" Gyp Bd	0.56	0.56
INSIDE AIR FILM	0.68	0.68
TOTAL R	8.85	20.97
1/R="U"	0.113	0.048

PROPORTION @ 16"o.c.
(0.113 x 1.5/16) + (0.048 x 14.5/16) = 0.054

3. ROOF

R FACTOR	CAVITY	FRAMING
OUTSIDE AIR FILM	0.61	0.61
12" FRAMING	14.06	-
6" BATT	-	19.00
5/8 Gyp	0.56	0.56
INSIDE AIR FILM	0.61	0.61
TOTAL R	15.84	20.78
1/R="U"	0.063	0.048

PROPORTION @ 16"o.c.
(0.63 x 1.5/16) + (0.048 x 14.5/16) = 0.044

B. AREAS, "U" VALUES, & REQUIRED VALUES

ITEM	AREA (A) - sq.ft	"U" VALUE (U)
GROSS WALL	Ao= 917	Uo = Equation 53-1
FRAME/STUCCO	Afs = 389	Ufs = 0.052
GYP EXT	Agx = 308	Ugx = 0.054
DOOR	Ad = 20	Ud = 0.48
GROSS ROOF	Aor = 1156	Uor = Equation 53-2
ROOF	Ar = 1140	Ur = 0.044
SKYLIGHT	As = 16	Us = 1.23

SLAB TO BE INSULATED WITH R3.8 x 24" = SEE DETAILS
Tmay = 44 SC = .95
Tmin = 24 T = 19°
SF = 124

C. CALCULATIONS

1. 53-1 Uo = $\frac{(Afs \times Ufs) + (Agx \times Ugx) + (Ad \times Ud)}{Ao}$

Uo = ((389x0.052)+(308x0.054)+(20x0.48))/917

Uo = (20.23+16.63+9.60)/917

Uo = 46.46/917 = 0.06

2. 53-2 Uor = $\frac{(Ar \times Ur) + (As \times Us)}{Aor}$

Uor = ((1140x0.044)+(16x1.23))/1156

Uor = (50.16+19.52)/1156

Uor = 69.68/1156 = 0.06

3. OTTV = $\frac{(Afs \times Ufs \times Tmay) + (Agx \times Ugx \times Tmay) + (Ad \times Ud \times Tmay) + (Ao \times Uo \times SC \times SF)}{Ao}$

OTTV = ((389x0.052x44)+(308x0.054x44)+(20x0.48x44))/917
OTTV= (1847.63+731.81+422.40)/917
OTTV = 2501.84/917 = 2.73

K13/D19 (1)

DATE	
REVISIONS TO DRAWING	
1 JULY 1978	
DRAWN BY JKO	
DRAWN BY RLP	
CHECKED BY	
APPROVED	

STATE OF NEW MEXICO REGISTERED ARCHITECT

TITLE SHEET w/ DESIGN DATA; ENERGY CONSER. CALCU. & SITE PLAN

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