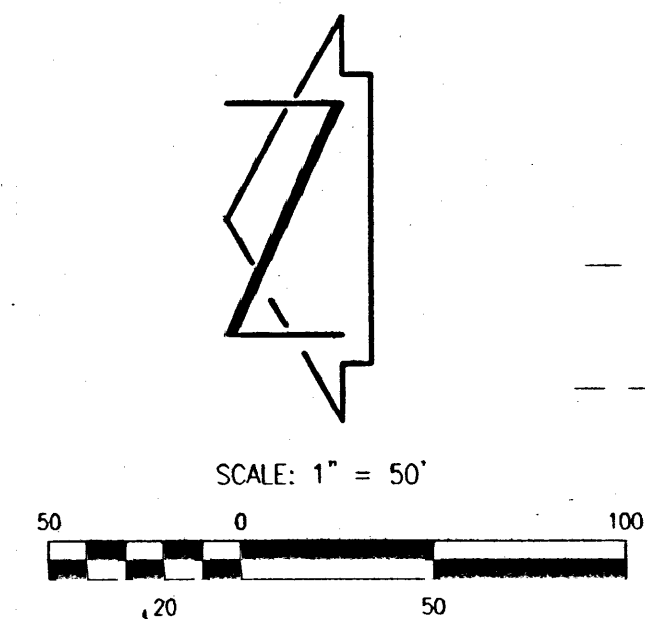




**SITE INFORMATION:**  
TOTAL TRACT AREA = 16.5 ACRES

**LEGAL DESCRIPTION**  
UNPLATTED LANDS OF UNIVERSITY OF NEW MEXICO.

**OWNER:**  
THE REGENTS OF THE  
UNIVERSITY OF NEW MEXICO

**LESSEE:**  
LYTLE ENGINEERING AND  
MFG. COMPANY

**ZONING:**  
M-2

**BUILDING NO. 1:**  
PAD AREA = 7,540 sf  
PARKING REQUIRED:  
OFFICE USE: 5,000 sf/200 = 25  
WAREHOUSE USE: 2,540 sf/2000 = 2  
TOTAL REQUIRED: 27 SPACES  
PROVIDED: 27 SPACES  
NO. OF DISABLED SPACES REQUIRED: 2

**BUILDING NO. 2:**  
PAD AREA = 51,750 sf  
PARKING REQUIRED:  
OFFICE USE: 3,200 sf/200 = 16  
WAREHOUSE USE: 48,550 sf/2000 = 24  
TOTAL REQUIRED: 40 SPACES  
PROVIDED: 41 SPACES  
NO. OF DISABLED SPACES REQUIRED: 3

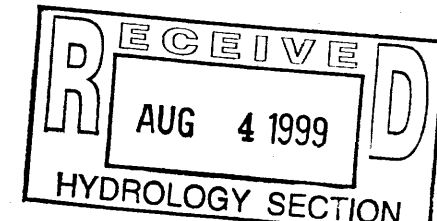
**BUILDING NO. 3:**  
PAD AREA = 55,875 sf  
PARKING REQUIRED:  
OFFICE USE: 2,800 sf/200 = 14  
WAREHOUSE USE: 53,075 sf/2000 = 27  
TOTAL REQUIRED: 41 SPACES  
PROVIDED: 41 SPACES  
NO. OF DISABLED SPACES REQUIRED: 3

**BUILDING NO. 4:**  
PAD AREA = 58,550 sf  
PARKING REQUIRED:  
OFFICE USE: 7,000 sf/200 = 35  
WAREHOUSE USE: 51,550 sf/2000 = 26  
TOTAL REQUIRED: 61 SPACES  
PROVIDED: 61 SPACES  
NO. OF DISABLED SPACES REQUIRED: 4

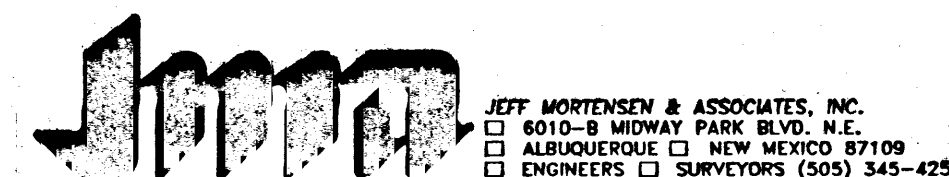
**BUILDING NO. 5:**  
PAD AREA = 53,625 sf  
PARKING REQUIRED:  
OFFICE USE: 7,200 sf/200 = 36  
WAREHOUSE USE: 46,425 sf/2000 = 23  
TOTAL REQUIRED: 59 SPACES  
PROVIDED: 60 SPACES  
NO. OF DISABLED SPACES REQUIRED: 4

**BUILDING NO. 6:**  
PAD AREA = 8,000 sf  
PARKING REQUIRED:  
OFFICE USE: 4,400 sf/200 = 22  
WAREHOUSE USE: 3,600 sf/2000 = 2  
TOTAL REQUIRED: 24 SPACES  
PROVIDED: 24 SPACES  
NO. OF DISABLED SPACES REQUIRED: 1

**LANDSCAPING REQUIREMENTS:**  
REQUIRED LANDSCAPED AREA REQUIRED:  
15 % OF NET NON-BUILDING AREA  
TOTAL LOT AREA: 718,560 sf  
- TOTAL BUILDING AREA: 235,340 sf  
NET NON-BUILDING AREA: 483,220 sf  
REQUIRED LANDSCAPE AREA = 15 % OF 483,220 sf  
= 72,483 sf  
LANDSCAPED AREA PROVIDED: 150,535 sf  
PAVED AREAS: 332,675 sf

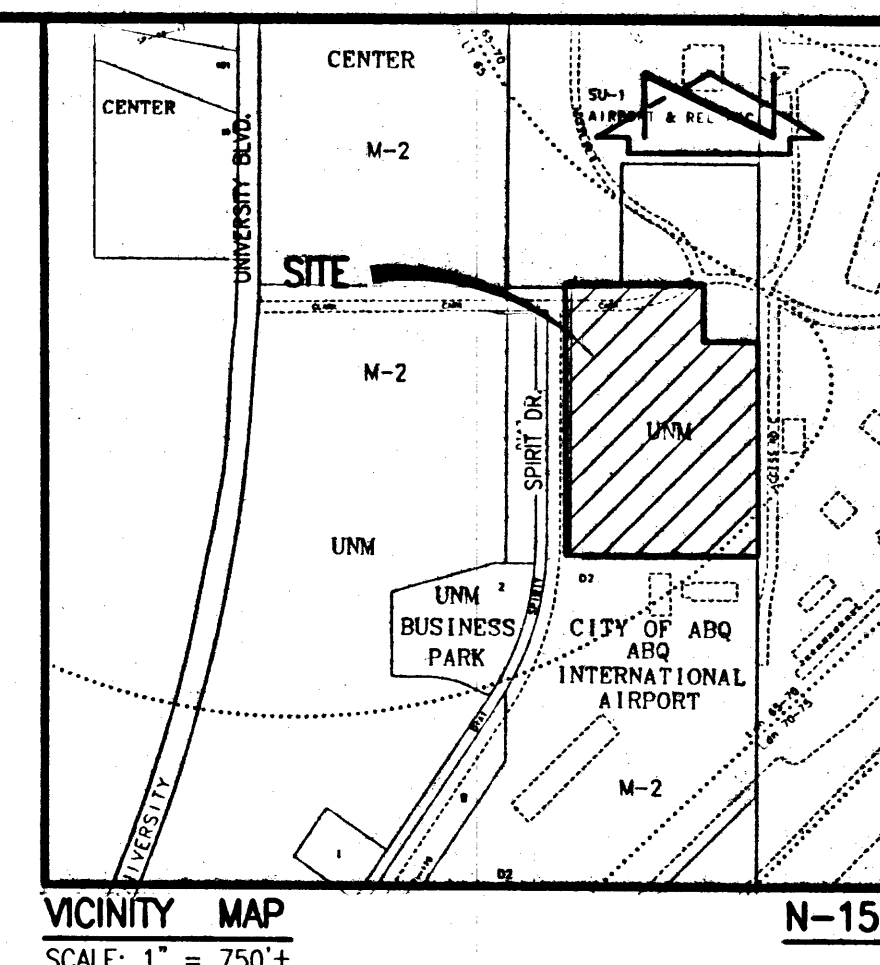


**NOTE:**  
THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS ARE SHOWN FOR ORIENTATION ONLY. BOUNDARY DATA SHOWN HEREON ARE FROM THE LEASE RETRACEMENT SURVEY AND TOPOGRAPHIC SURVEY PREPARED BY JEFF MORTENSEN AND ASSOC., INC. DATED MAY, 1998.



## CONCEPTUAL SITE PLAN U.N.M. AIRPORT LEASE PARCEL MASTER PLAN

|             |                      |                                                                                       |      |     |                            |         |         |
|-------------|----------------------|---------------------------------------------------------------------------------------|------|-----|----------------------------|---------|---------|
| DESIGNED BY | <u>G.R.B.</u>        |  | 8/99 | JGM | CLARIFY MASTER PLAN STATUS | JOB NO. | 980042  |
| DRAWN BY    | <u>D.L.M. J.Y.R.</u> |                                                                                       |      |     |                            | DATE    | 11-1998 |
| APPROVED BY | <u>J.G.M.</u>        |                                                                                       |      |     |                            | SHEET   | 1 OF 5  |



### LEGEND

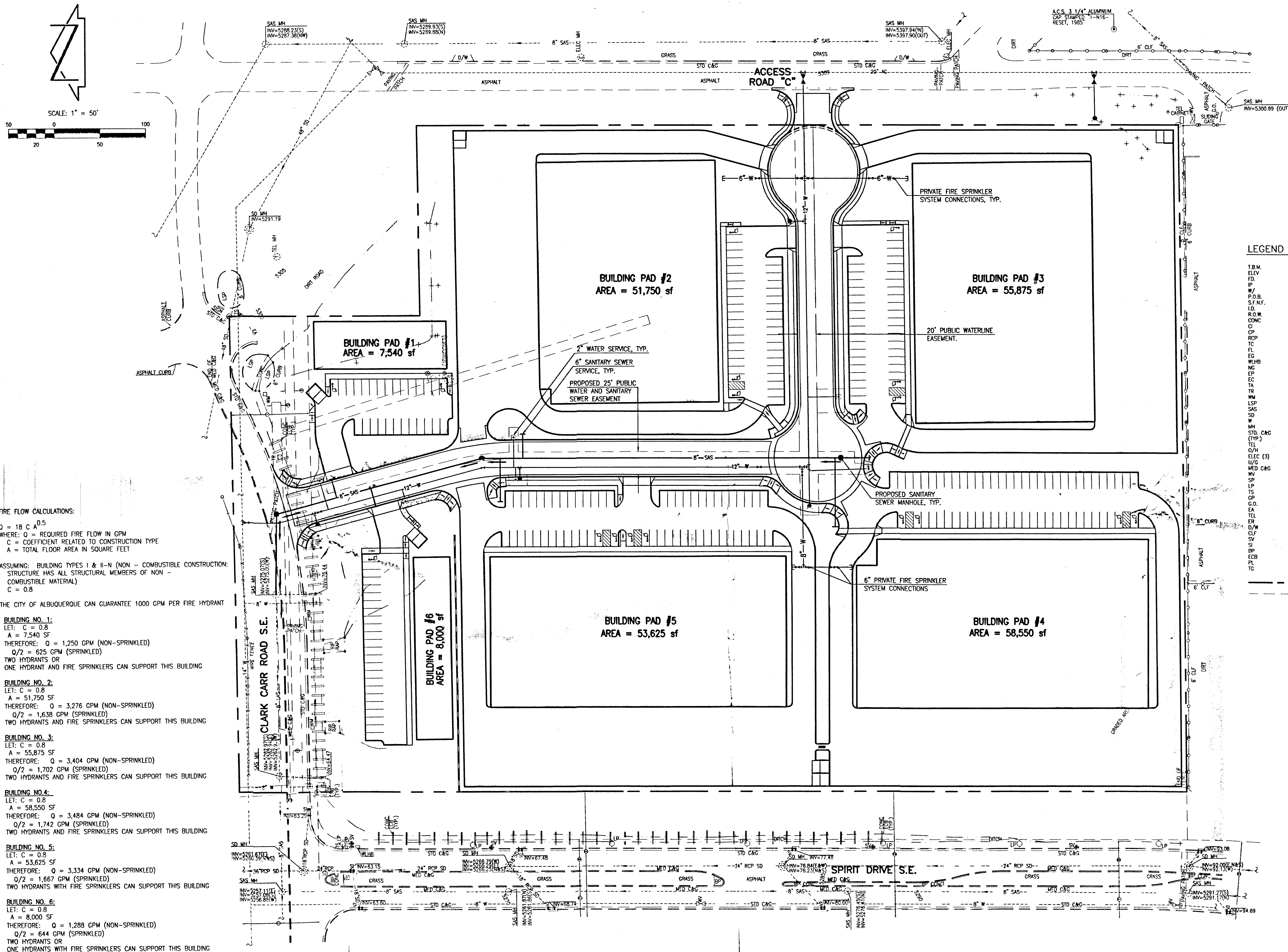
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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T.B.M.<br>ELEV.<br>FOUN.<br>IP<br>W.P.B.<br>S.F.N.F.<br>I.D.<br>R.O.W.<br>CONC.<br>CI<br>CP<br>RCP<br>TC<br>FL<br>EG<br>W.H.B.<br>NG<br>EP<br>EC<br>TA<br>TR<br>WM<br>LSP<br>SAS<br>SD<br>W<br>WH<br>STD. C&G<br>(TYP.)<br>TEL.<br>O/H<br>ELEC. (3)<br>U/G<br>MED C&G<br>WV<br>SP<br>LP<br>TS<br>G.O.<br>EA<br>TEL.<br>D/W<br>D/F<br>SV<br>SI<br>BFC<br>ECB<br>PL<br>TG | TEMPORARY BENCHMARK<br>ELEVATION<br>FOUND<br>IRON PIPE<br>WITH<br>POINT OF BEGINNING<br>SEARCH FOR NOT FOUND<br>IDENTIFICATION<br>RIGHT-OF-WAY<br>CONCRETE<br>CAST IRON<br>CONCRETE PIPE<br>REINFORCED CONCRETE PIPE<br>TOP OF CURB<br>FLOWLINE<br>EDGE OF GRAVEL<br>WATERLINE HOT BOX<br>NATURAL GROUND<br>ELECTRIC PULLBOX<br>EDGE OF CONCRETE<br>TOP OF ASPHALT<br>TELEPHONE RISER<br>WATER METER<br>LANDSCAPE PLANTER<br>SANITARY SEWER<br>STORM DRAIN<br>WATERLINE<br>MANHOLE<br>STANDARD CURB & GUTTER<br>TYPICAL<br>TELEPHONE<br>OVERHEAD<br>ELECTRIC (NO. OF LINES)<br>UNDERGROUND<br>MEDIAN CURB & GUTTER<br>WATER VALVE<br>STEEL POLE<br>LIGHT POLE<br>TRAFFIC SIGN<br>GATE POST<br>GATE OPENER<br>EDGE OF ASPHALT<br>TELEPHONE<br>EDGE OF DIRT ROAD<br>DRIVEWAY<br>CHANNEL FENCE<br>SPRINKLER VALVE<br>STORM INLET<br>BRICK PATTERN<br>EROSION CONTROL BARRIER<br>PROPERTY LINE<br>TOP OF GRATE | UTILITY LINE<br>FLOWLINE<br>CHANNEL FENCE<br>WIRE FENCE<br>PROPERTY CORNER<br>CURB SCRATCH<br>SPOT ELEVATION<br>TELEPHONE RISER<br>WATER VALVE<br>SANITARY SEWER MANHOLE<br>STORM DRAIN MANHOLE<br>ELECTRIC MANHOLE<br>TELEPHONE MANHOLE<br>TRAFFIC SIGN<br>LIGHT POLE (METAL) ON 2'<br>SQUARE CONCRETE BASE<br>GATE/FENCE POST<br>STORM INLET<br>ELECTRIC PULLBOX<br>SPRINKLER VALVE<br>WATER METER<br>CONCRETE EROSION<br>CHECK STRUCTURES<br>TELEPHONE CABINET<br>SMALL DECIDUOUS TREE<br>SMALL CONIFEROUS TREE<br>DECIDUOUS TREE |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### INDEX OF DRAWINGS

| SHEET | DESCRIPTION                                 |
|-------|---------------------------------------------|
| 1     | CONCEPTUAL SITE PLAN                        |
| 2     | CONCEPTUAL WATER & SANITARY SEWER SITE PLAN |
| 3     | CONCEPTUAL GRADING PLAN                     |
| 4     | DRAINAGE CALCULATIONS                       |
| 5     | DRAINAGE PLAN, SECTIONS & DETAILS           |



12-10-98  
08-03-99



**FIRE FLOW CALCULATIONS:**

$Q = 18 C A^{0.5}$   
 WHERE: Q = REQUIRED FIRE FLOW IN GPM  
 C = COEFFICIENT RELATED TO CONSTRUCTION TYPE  
 A = TOTAL FLOOR AREA IN SQUARE FEET

ASSUMING: BUILDING TYPES I & II-N (NON - COMBUSTIBLE CONSTRUCTION)  
 STRUCTURE HAS ALL STRUCTURAL MEMBERS OF NON - COMBUSTIBLE MATERIAL)  
 C = 0.8

THE CITY OF ALBUQUERQUE CAN GUARANTEE 1000 GPM PER FIRE HYDRANT

**BUILDING NO. 1:**  
 LET: C = 0.8  
 A = 7,540 SF  
 THEREFORE: Q = 1,250 GPM (NON-SPRINKLED)  
 Q/2 = 625 GPM (SPRINKLED)  
 TWO HYDRANTS OR ONE HYDRANT AND FIRE SPRINKLERS CAN SUPPORT THIS BUILDING

**BUILDING NO. 2:**  
 LET: C = 0.8  
 A = 51,750 SF  
 THEREFORE: Q = 3,276 GPM (NON-SPRINKLED)  
 Q/2 = 1,638 GPM (SPRINKLED)  
 TWO HYDRANTS AND FIRE SPRINKLERS CAN SUPPORT THIS BUILDING

**BUILDING NO. 3:**  
 LET: C = 0.8  
 A = 55,875 SF  
 THEREFORE: Q = 3,404 GPM (NON-SPRINKLED)  
 Q/2 = 1,702 GPM (SPRINKLED)  
 TWO HYDRANTS AND FIRE SPRINKLERS CAN SUPPORT THIS BUILDING

**BUILDING NO. 4:**  
 LET: C = 0.8  
 A = 58,550 SF  
 THEREFORE: Q = 3,484 GPM (NON-SPRINKLED)  
 Q/2 = 1,742 GPM (SPRINKLED)  
 TWO HYDRANTS AND FIRE SPRINKLERS CAN SUPPORT THIS BUILDING

**BUILDING NO. 5:**  
 LET: C = 0.8  
 A = 53,625 SF  
 THEREFORE: Q = 3,334 GPM (NON-SPRINKLED)  
 Q/2 = 1,667 GPM (SPRINKLED)  
 TWO HYDRANTS WITH FIRE SPRINKLERS CAN SUPPORT THIS BUILDING

**BUILDING NO. 6:**  
 LET: C = 0.8  
 A = 8,000 SF  
 THEREFORE: Q = 1,288 GPM (NON-SPRINKLED)  
 Q/2 = 644 GPM (SPRINKLED)  
 TWO HYDRANTS OR ONE HYDRANT WITH FIRE SPRINKLERS CAN SUPPORT THIS BUILDING

| LEGEND                      |                                               |
|-----------------------------|-----------------------------------------------|
| T.B.M. ELEV. FOUND          | TEMPORARY BENCHMARK ELEVATION FOUND           |
| IP                          | IRON PIPE                                     |
| W/                          | WITH                                          |
| P.O.B. SEARCH FOR NOT FOUND | POINT OF BEGINNING SEARCH FOR NOT FOUND       |
| I.D.                        | IDENTIFICATION                                |
| R.O.W.                      | RIGHT-OF-WAY                                  |
| CONC.                       | CONCRETE                                      |
| CI                          | CAST IRON                                     |
| CP                          | CONCRETE PIPE                                 |
| RCP                         | REINFORCED CONCRETE PIPE                      |
| TC                          | TOP OF CURB                                   |
| FL                          | FLOWLINE                                      |
| EG                          | EDGE OF GRAVEL                                |
| WUHB                        | WATERLINE HOT BOX                             |
| NG                          | NATURAL GROUND                                |
| EP                          | ELECTRIC PULLBOX                              |
| EC                          | EDGE OF CONCRETE                              |
| TA                          | TOP OF ASPHALT                                |
| TR                          | TELEPHONE RISER                               |
| WM                          | WATER METER                                   |
| LSP                         | LANDSCAPE PLANTER                             |
| SAS                         | SANITARY SEWER                                |
| SD                          | STORM DRAIN                                   |
| W                           | WATERLINE                                     |
| MH                          | MANHOLE                                       |
| STD. C&G                    | STANDARD CURB & GUTTER                        |
| TEL                         | TELEPHONE                                     |
| O/H                         | OVERHEAD                                      |
| ELEC (3)                    | ELECTRIC (NO. OF LINES)                       |
| U/G                         | UNDERGROUND                                   |
| WV                          | WATER VALVE                                   |
| SP                          | STEEL POLE                                    |
| LP                          | LIGHT POLE                                    |
| TS                          | TRAFFIC SIGN                                  |
| GP                          | GATE POST                                     |
| G.O.                        | GATE OPENER                                   |
| TEL                         | TELEPHONE                                     |
| ER                          | EDGE OF ASPHALT                               |
| D/W                         | DRIVEWAY                                      |
| CLF                         | CHAINLINK FENCE                               |
| SV                          | SPRINKLER VALVE                               |
| SI                          | STORM INLET                                   |
| BP                          | BRICK PATTERN                                 |
| ECB                         | EROSION CONTROL BARRIER                       |
| PL                          | PROPERTY LINE                                 |
| TO                          | TOP OF GRADE                                  |
| ---                         | PROPERTY LINE                                 |
| ---                         | EASEMENT LINE                                 |
| ---                         | PROPOSED WATER SERVICE                        |
| ---                         | PROPOSED FIRE HYDRANT                         |
| ---                         | UTILITY LINE                                  |
| ---                         | FLOWLINE                                      |
| ---                         | CHAINLINK FENCE                               |
| ---                         | WIRE FENCE                                    |
| +                           | PROPERTY CORNER                               |
| +                           | CURB SCRATCH                                  |
| + 16.1                      | SPOT ELEVATION                                |
| +                           | TELEPHONE RISER                               |
| +                           | WATER VALVE                                   |
| +                           | SANITARY SEWER MANHOLE                        |
| +                           | STORM DRAIN MANHOLE                           |
| +                           | ELECTRIC MANHOLE                              |
| +                           | TELEPHONE MANHOLE                             |
| +                           | TRAFFIC SIGN                                  |
| +                           | LIGHT POLE (METAL) ON 2' SQUARE CONCRETE BASE |
| +                           | GATE/FENCE POST                               |
| +                           | STORM INLET                                   |
| +                           | ELECTRIC PULLBOX                              |
| +                           | SPRINKLER VALVE                               |
| +                           | WATER METER                                   |
| +                           | CONCRETE EROSION CONTROL BARRIER              |
| +                           | TELEPHONE CABINET                             |
| ---                         | PROPOSED WATERLINE WITH SIZE                  |
| ---                         | PROPOSED SANITARY SEWERLINE WITH SIZE         |
| ---                         | PROPOSED WATERLINE VALVE                      |
| ---                         | PROPOSED DIRECTION OF GRAVITY FLOW            |
| +                           | PROPOSED MANHOLE                              |

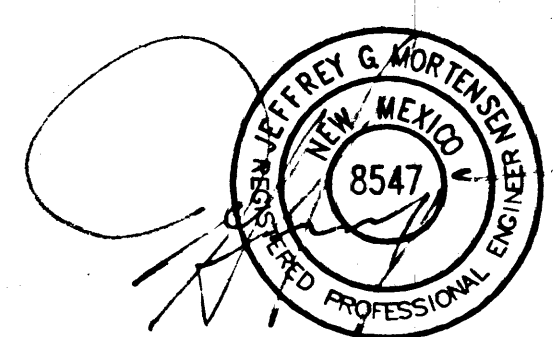
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 Plot Date: 08-02-1999  
 Plot Time: 1:55 pm



J. MORTENSEN & ASSOCIATES, INC.  
 6010-B MIDWAY PARK BLVD. N.E.  
 ALBUQUERQUE, N.M. 87109  
 ENGINEERS & SURVEYORS (SOS) 345-4250

# CONCEPTUAL WATER AND SANITARY SEWER SITE PLAN U.N.M. AIRPORT LEASE PARCEL MASTER PLAN

| DESIGNED BY   | DATE | BY  | REVISIONS                  | JOB NO. |
|---------------|------|-----|----------------------------|---------|
| G.R.B.        | 8/99 | JGM | CLARIFY MASTER PLAN STATUS | 980042  |
| DRAWN BY      | DATE | BY  | REVISIONS                  | DATE    |
| D.L.M./J.Y.R. |      |     |                            | 11-1998 |
| APPROVED BY   | DATE | BY  | REVISIONS                  | SHEET   |
| J.G.M.        |      |     |                            | 2 OF 5  |



12-10-98  
 08-02-99

File Path: E:\JMW\1000\DWG Plot Date: 08-03-1999  
File Name: 9800042.DWG Plot Time: 2:47 pm

NOTE:

THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS ARE SHOWN FOR ORIENTATION ONLY. BOUNDARY DATA SHOWN HEREON ARE FROM THE LEASE RETRACTION SURVEY AND TOPOGRAPHIC SURVEY PREPARED BY JEFF MORTENSEN AND ASSOC., INC. DATED MAY, 1998.

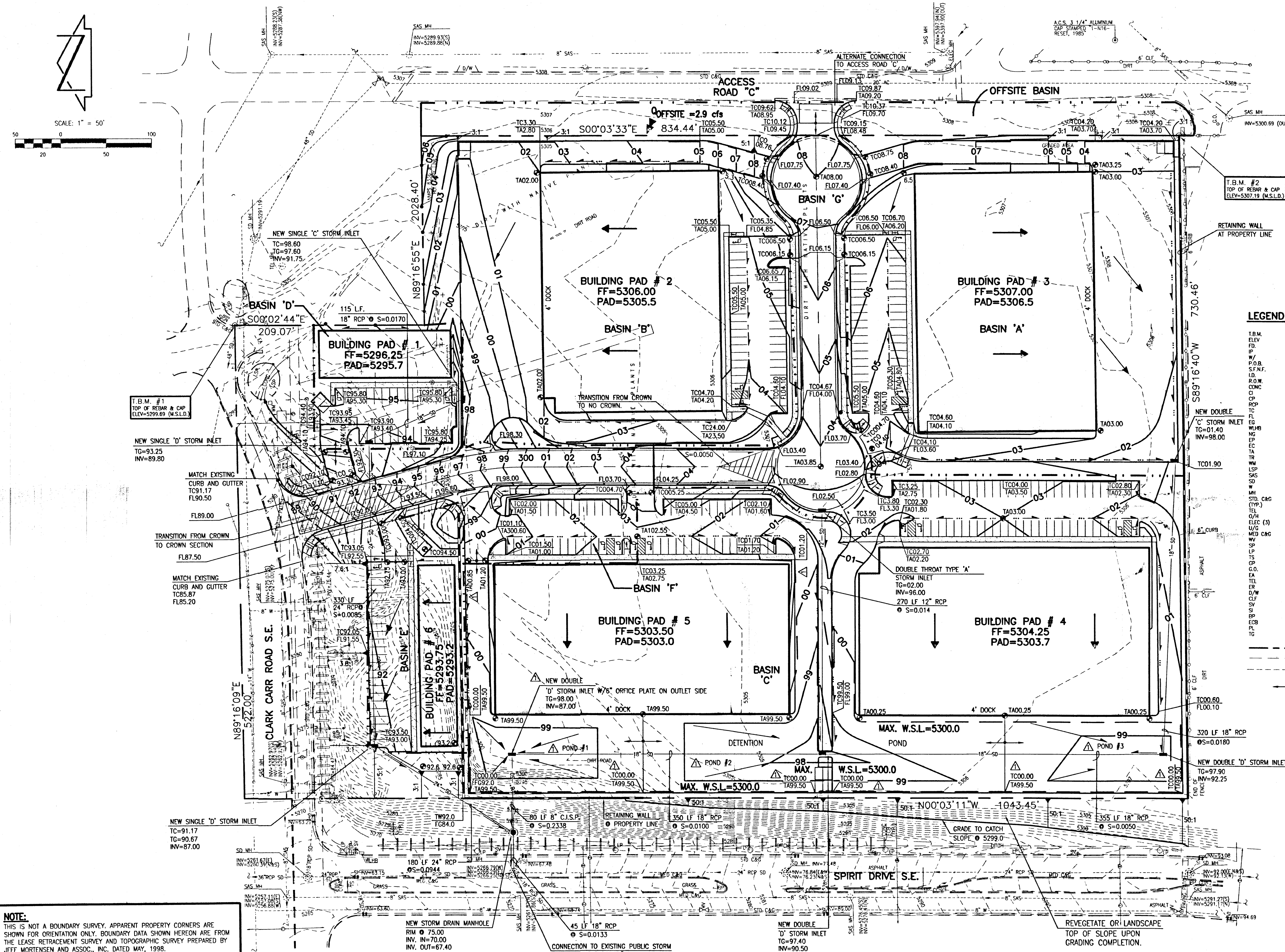


JEFF MORTENSEN & ASSOCIATES, INC.  
6010-B MIDWAY PARK BLVD. N.E.  
ALBUQUERQUE, N.M. 87109  
ENGINEERS & SURVEYORS (SOS) 345-4250

CONCEPTUAL GRADING PLAN  
U.N.M. AIRPORT LEASE PARCEL MASTER PLAN

DESIGNED BY G.R.B.  
DRAWN BY D.L.M./J.Y.R.  
APPROVED BY J.G.M.

| REVISIONS |      |     |                                                                            | JOB NO.<br>980042 |
|-----------|------|-----|----------------------------------------------------------------------------|-------------------|
| NO.       | DATE | BY  | REVISIONS                                                                  |                   |
| 1         | 8/99 | JGM | CLARIFY MASTER PLAN STATUS; ADD 6" OFFICE PLATE; CORRECT TYPO; LABEL PONDS |                   |
|           |      |     |                                                                            | DATE<br>11-1998   |
|           |      |     |                                                                            | SHEET<br>3 OF 5   |



LEGEND

|                                                                           |                                  |                                               |
|---------------------------------------------------------------------------|----------------------------------|-----------------------------------------------|
| T.B.M. #1<br>ELEV. 5299.69 (M.S.L.D.)                                     | TEMPORARY BENCHMARK              | UTILITY LINE                                  |
| T.B.M. #2<br>TOP OF REBAR & CAP<br>ELEV. 5307.19 (M.S.L.D.)               | ELEVATION                        | FLOWLINE                                      |
| NEW SINGLE 'C' STORM INLET<br>TC=98.60<br>TG=97.60<br>INV=91.75           | FOUND                            | CHAINLINK FENCE                               |
| NEW SINGLE 'D' STORM INLET<br>TC=93.25<br>TG=91.40<br>INV=89.80           | IRON PIPE                        | WIRE FENCE                                    |
| MATCH EXISTING CURB AND GUTTER<br>TC91.17<br>FL90.50                      | W/ P.O.B.<br>POINT OF BEGINNING  | PROPERTY CORNER                               |
| TRANSITION FROM CROWN TO CROWN SECTION<br>FL87.50                         | S.F.N.F.<br>SEARCH FOR NOT FOUND | CURB SCRATCH                                  |
| MATCH EXISTING CURB AND GUTTER<br>TC85.87<br>FL85.20                      | I.D.<br>IDENTIFICATION           | SPOT ELEVATION                                |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | R.O.W.<br>RIGHT-OF-WAY           | WATER RISER                                   |
| NEW STORM DRAIN MANHOLE<br>RIM = 75.00<br>INV. IN=70.00<br>INV. OUT=67.40 | CONC.<br>CONCRETE                | WATER VALVE                                   |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | CL<br>CAST IRON                  | SANITARY SEWER MANHOLE                        |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | CP<br>CONCRETE PIPE              | STORM DRAIN MANHOLE                           |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | ELECTRIC MANHOLE                              |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | TELEPHONE MANHOLE                             |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | TRAFFIC SIGN                                  |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | LIGHT POLE (METAL) ON 2' SQUARE CONCRETE BASE |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | GATE/FENCE POST                               |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | ELECTRIC PULLBOX                              |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | SPRINKLER VALVE                               |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | WATER METER                                   |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | CONCRETE EROSION CONTROL BARRIER              |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | TELEPHONE CABINET                             |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | PROPOSED RETAINING WALL                       |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | PROPOSED CONTOUR                              |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | PROPOSED SPOT ELEVATION                       |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | PROPOSED ROOF DRAINAGE                        |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | SHEET FLOW                                    |
| NEW DOUBLE 'D' STORM INLET<br>TC=97.90<br>TG=92.25<br>INV=92.25           | RC<br>REINFORCED CONCRETE        | PROPOSED FLOWLINE                             |

# SITE CHARACTERISTICS

## I. PRECIPITATION ZONE 2

II.  $P_{6,100} = P_{360} = 2.35$  IN.

III. TOTAL AREA ( $A_T$ ) = 16.5 AC

## IV. EXISTING CONDITIONS

### A. LAND TREATMENT

| TREATMENT | AREA (SF/AC)  | %    |
|-----------|---------------|------|
| A         | 542,560/12.46 | 75.5 |
| B         | 68,000/1.56   | 9.5  |
| C         | 97,900/2.25   | 13.6 |
| D         | 10,100/0.23   | 1.4  |

### B. VOLUME

$$E_w = (E_A A + E_B B + E_C C + E_D D) / A_T$$

$$E_w = [0.53(12.46) + 0.78(1.56) + 1.13(2.25) + 2.12(0.23)] / 16.5 = 0.66 \text{ IN.}$$

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

$$V_{100} = (0.66 / 12) 16.5 = 0.9042 \text{ AC.FT.}; 39,390 \text{ CF}$$

### C. PEAK DISCHARGE

$$Q_p = Q_{PA} A + Q_{PB} B + Q_{PC} C + Q_{PD} D$$

$$Q_p = 0_{100} = 1.56(12.46) + 2.28(1.56) + 3.14(2.25) + 4.70(0.33) = 31.1 \text{ CFS}$$

## V. DEVELOPED CONDITIONS

### A. BASIN A ( $A_T = 3.22$ ac)

| TREATMENT | AREA (SF/AC) | %  |
|-----------|--------------|----|
| B         | 21,100/0.48  | 59 |
| D         | 119,500/2.74 | 41 |

### 2. VOLUME

$$E_w = (E_A A + E_B B + E_C C + E_D D) / A_T$$

$$E_w = [0.78(0.48) + 2.12(2.74)] / 3.22 = 1.92 \text{ IN.}$$

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

$$V_{100} = (1.92 / 12) 3.22 = 0.5152 \text{ AC.FT.}; 22,440 \text{ CF}$$

### 3. PEAK DISCHARGE

$$Q_p = Q_{PA} A + Q_{PB} B + Q_{PC} C + Q_{PD} D$$

$$Q_p = 0_{100} = 2.28(0.48) + 4.70(2.74) = 14.0 \text{ CFS}$$

### 4. INLET GRATE CAPACITY - HALF CLOGGED

DOUBLE C INLET - SUMP CONDITION

$$Q = C A (2 g h)^{0.5}$$

$$\text{LET: } C = 0.6$$

$$A = 13.6 \text{ sf/2} = 6.8 \text{ SF}$$

$$g = 32.2 \text{ ft/s}^2$$

$$h = 0.5 \text{ ft}$$

$$\text{THEREFORE: } Q = 23.2 \text{ cfs} >> 14.0 \text{ cfs} = Q_p$$

### 5. PIPE ENTRANCE CONDITION

USING ORIFICE EQUATION

$$Q = C A (2 g h)^{0.5}$$

$$\text{LET: } C = 0.6$$

$$A = 1.77 \text{ SF (18" PIPE)}$$

$$g = 32.2 \text{ ft/s}^2$$

$$h = 2.9 \text{ ft}$$

$$\text{THEREFORE: } Q = 14.5 \text{ cfs} > 14.0 \text{ cfs} = Q_p$$

### 6. PIPE DISCHARGE CAPACITY

USING FEILD'S WHEEL FOR GRAVITY FLOW IN PIPES

$$\text{LET: } s = 0.0180$$

$$n = 0.013$$

$$d = 18"$$

$$\text{THEREFORE: } Q = 14.5 \text{ cfs} > 14.0 \text{ cfs} = Q_p$$

### B. BASIN B

#### 1. LAND TREATMENT ( $A_T = 3.03$ ac)

| TREATMENT | AREA (SF/AC) | %  |
|-----------|--------------|----|
| B         | 19,850/0.45  | 15 |
| D         | 112,000/2.58 | 85 |

#### 2. VOLUME

$$V_{100} = (1.92 / 12) 3.22 = 0.4848 \text{ AC.FT.}; 21,120 \text{ CF}$$

#### 3. PEAK DISCHARGE

$$Q_p = Q_{100} = 2.28(0.45) + 4.70(2.58) = 13.2 \text{ CFS}$$

#### 4. INLET GRATE CAPACITY - HALF CLOGGED

DOUBLE C INLET - NEGLECTING THROAT CAPACITY

$$Q = C A (2 g h)^{0.5}$$

$$\text{LET: } C = 0.6$$

$$A = 13.6 \text{ sf/2} = 6.8 \text{ SF}$$

$$g = 32.2 \text{ ft/s}^2$$

$$h = 2.5 \text{ ft}$$

$$\text{THEREFORE: } Q = 23.9 \text{ cfs} >> 13.2 \text{ cfs} = Q_p$$

#### 5. PIPE ENTRANCE CONDITION

USING ORIFICE EQUATION

$$Q = C A (2 g h)^{0.5}$$

$$\text{LET: } C = 0.6$$

$$A = 1.77 \text{ SF (18" PIPE)}$$

$$g = 32.2 \text{ ft/s}^2$$

$$h = 3.6 \text{ ft}$$

$$\text{THEREFORE: } Q = 16.2 \text{ cfs} > 13.2 \text{ cfs} = Q_p$$

## 6. PIPE DISCHARGE CAPACITY

USING FEILD'S WHEEL FOR GRAVITY FLOW IN PIPES

$$\text{LET: } s = 0.0170$$

$$n = 0.013$$

$$d = 18"$$

$$\text{THEREFORE: } Q = 14.0 \text{ cfs} > 13.2 \text{ cfs} = Q_p$$

### C. BASIN C

#### 1. LAND TREATMENT ( $A_T = 5.92$ ac)

| TREATMENT | AREA (SF/AC) | %  |
|-----------|--------------|----|
| B         | 38,775/0.89  | 15 |
| D         | 219,225/5.03 | 85 |

#### 2. VOLUME

$$E_w = [0.78(0.89) + 2.12(5.03)] / 5.92 = 1.92 \text{ IN.}$$

$$V_{100} = (1.92 / 12) 5.92 = 0.9465 \text{ AC.FT.}; 41,230 \text{ CF}$$

#### 3. PEAK DISCHARGE

$$Q_p = Q_{100} = 2.28(0.89) + 4.70(5.03) = 25.7 \text{ CFS}$$

#### 4. INLET GRATE CAPACITY - HALF CLOGGED

DOUBLE D INLET

USING ORIFICE EQUATION

$$Q = C A (2 g h)^{0.5}$$

$$\text{LET: } C = 0.6$$

$$A = 13.6 \text{ sf/2} = 6.8 \text{ SF}$$

$$g = 32.2 \text{ ft/s}^2$$

$$h = 1.5 \text{ ft}$$

$$\text{THEREFORE: } Q = 40.1 \text{ CFS/INLET}$$

$$\text{THEREFORE: } Q = 120.3 \text{ CFS} >> 25.7 \text{ CFS} = Q_p$$

#### 5. PIPE ENTRANCE CONDITION

USING ORIFICE EQUATION

$$Q = C A (2 g h)^{0.5}$$

$$\text{LET: } C = 0.6$$

$$A = 0.1963 \text{ SF (6" DIA. ORIFICE PLATE OR 6"x8" REDUCER)}$$

$$g = 32.2 \text{ ft/s}^2$$

$$h = 12.67 \text{ FT}$$

$$\text{THEREFORE: } Q = 3.4 \text{ CFS} = \text{ALLOWABLE DISCHARGE}$$

#### 6. PIPE DISCHARGE CAPACITY

USING FEILD'S WHEEL FOR GRAVITY FLOW IN PIPES

$$\text{LET: } s = 0.2338$$

$$n = 0.013$$

$$d = 8"$$

$$\text{THEREFORE: } Q = 6.1 \text{ CFS} > 3.4 \text{ CFS} = Q_{\text{ALLOW}}$$

### D. BASIN D

#### 1. LAND TREATMENT ( $A_T = 0.53$ ac)

| TREATMENT | AREA (SF/AC) | %  |
|-----------|--------------|----|
| B         | 3,475/0.08   | 15 |
| D         | 19,625/0.45  | 85 |

#### 2. VOLUME

$$E_w = [0.78(0.08) + 2.12(0.45)] / 0.53 = 1.92 \text{ IN.}$$

$$V_{100} = (1.92 / 12) 0.53 = 0.0847 \text{ AC.FT.}; 3,690 \text{ CF}$$

#### 3. PEAK DISCHARGE

$$Q_p = Q_{100} = 2.28(0.08) + 4.70(0.45) = 2.3 \text{ CFS}$$

#### 4. INLET GRATE CAPACITY - HALF CLOGGED

SINGLE D INLET - SUMP CONDITION

$$Q = C A (2 g h)^{0.5}$$

$$\text{LET: } C = 0.6$$

$$A = 13.6 \text{ sf/2} = 6.8 \text{ SF}$$

$$g = 32.2 \text{ ft/s}^2$$

$$h = 0.5 \text{ ft}$$

$$\text{THEREFORE: } Q = 11.6 >> 2.3 \text{ cfs} = Q_p$$

#### 5. PIPE ENTRANCE CONDITION

USING ORIFICE EQUATION

$$Q = C A (2 g h)^{0.5}$$

$$\text{LET: } C = 0.6$$

$$A = 3.14 \text{ SF (24" PIPE)}$$

$$g = 32.2 \text{ ft/s}^2$$

$$h = 2.5 \text{ ft}$$

$$\text{THEREFORE: } Q = 23.9 \text{ cfs} > 15.5 \text{ cfs} = Q_p$$

#### 6. PIPE DISCHARGE CAPACITY

USING FEILD'S WHEEL FOR GRAVITY FLOW IN PIPES

$$\text{LET: } s = 0.0085$$

$$n = 0.013$$

$$d = 24"$$

$$\text{THEREFORE: } Q = 21.5 \text{ cfs} > 15.5 \text{ cfs} = Q_p$$

### E. BASIN E

#### 1. LAND TREATMENT ( $A_T = 0.60$ ac)

| TREATMENT | AREA (SF/AC) | %  |
|-----------|--------------|----|
| B         | 3,925/0.09   | 15 |
| D         | 22,075/0.51  | 85 |

#### 2. VOLUME

$$E_w = [0.78(0.09) + 2.12(0.51)] / 0.60 = 1.92 \text{ IN.}$$

$$V_{100} = (1.92 / 12) 0.60 = 0.0960 \text{ AC.FT.}; 4,180 \text{ CF}$$

#### 3. PEAK DISCHARGE

$$Q_p = Q_{100} = 2.28(0.09) + 4.70(0.51) = 2.6 \text{ CFS}$$

#### 4. INLET GRATE CAPACITY - HALF CLOGGED

SINGLE D INLET - SUMP CONDITION

$$Q = C A (2 g h)^{0.5}$$

$$\text{LET: } C = 0.6$$

$$A = 6.8 \text{ sf/2} = 3.4 \text{ SF}$$

$$g = 32.2 \text{ ft/s}^2$$

$$h = 0.5 \text{ ft}$$

$$\text{THEREFORE: } Q = 11.6 >> 2.6 \text{ cfs} = Q_p$$

#### 5. PIPE ENTRANCE CONDITION

USING ORIFICE EQUATION

$$Q = C A (2 g h)^{0.5}$$

$$\text{LET: } C = 0.6$$

$$A = 3.14 \text{ SF (24" PIPE)}$$

$$g = 32.2 \text{ ft/s}^2$$

$$h = 2.5 \text{ ft}$$

$$\text{THEREFORE: } Q = 23.9 \text{ cfs} > 18.1 \text{ cfs} = Q_p \text{ (BASINS B, D \& E)}$$

## 6. PIPE DISCHARGE CAPACITY

USING FEILD'S WHEEL FOR GRAVITY FLOW IN PIPES

$$\text{LET: } s = 0.0940$$

$$n = 0.013$$

$$d = 24"$$

$$\text{THEREFORE: } Q = 70.0 \text{ cfs} > 18.1 \text{ cfs} = Q_p$$

### F. BASIN F

#### 1. LAND TREATMENT ( $A_T = 3.20$ ac)

| TREATMENT | AREA (SF/AC) | %    |
|-----------|--------------|------|
| B         | 73,400/1.68  | 52.5 |
| C         | 38,000/0.87  | 27.2 |
| D         | 28,000/0.64  | 20.3 |

#### 2. VOLUME

$$E_w = [0.78(1.68) + 1.13(0.87) + 2.12(0.64)] / 3.20 = 1.14 \text{ IN.}$$

$$V_{100} = (1.14 / 12) 3.20 = 0.3040 \text{ AC.FT.}; 13,240 \text{ CF}$$

#### 3. PEAK DISCHARGE

$$Q_p = Q_{100} = 2.28(1.68) + 3.14(0.87) + 4.70(0.64) = 9.6 \text{ CFS}$$

### G. BASIN G

#### 1. LAND TREATMENT ( $A_T = 0.84$ ac)

| TREATMENT | AREA (SF/AC) | %    |
|-----------|--------------|------|
| B         | 10,400/0.24  | 28.6 |
| D         | 26,000/0.60  | 71.4 |

#### 2. VOLUME

$$E_w = [0.78(0.24) + 2.12(0.60)] / 0.84 = 1.74 \text{ IN.}$$

$$V_{100} = (1.74 / 12) 0.84 = 0.1216 \text{ AC.FT.}; 5,300 \text{ CF}$$

#### 3. PEAK DISCHARGE

$$Q_p = Q_{100} = 2.28(0.24) + 4.70(0.60) = 3.4 \text{ CFS}$$

#### 4. INLET GRATE CAPACITY - HALF CLOGGED

TYPE A INLET - NEGLECTING THROAT CAPACITY

DRAINAGE PLAN

EXECUTIVE SUMMARY

THIS PLAN OUTLINES A PROBABLE DEVELOPMENT SCENARIO AND WILL ESTABLISH GUIDELINES AND CONCEPTS FOR FUTURE DEVELOPMENT OF THIS SITE WHICH IS LOCATED ADJACENT TO THE ALBUQUERQUE INTERNATIONAL AIRPORT. THIS CONCEPTUAL DRAINAGE PLAN IDENTIFIES THE STORM RUNOFF DRAINAGE PATTERNS AND IMPROVEMENTS NECESSARY TO MITIGATE DEVELOPED DRAINAGE. THE SCOPE OF THE ANTICIPATED DEVELOPMENT CONSISTS OF SIX OFFICE/WAREHOUSE BUILDINGS, PRIVATE ACCESS ROADS, PUBLIC WATER AND SANITARY SEWER EXTENSIONS, PARKING LOTS, AND ASSOCIATED LANDSCAPING.

INTRODUCTION

THIS PLAN IS INTENDED TO PROPOSE A PROBABLE DEVELOPMENT SCENARIO OF A PARCEL OF UNPLATTED U.N.M. PROPERTY LOCATED ADJACENT TO THE ALBUQUERQUE INTERNATIONAL AIRPORT, AND TO ESTABLISH A DRAINAGE CONCEPT AND GUIDELINES FOR DEVELOPING THE LANDS IN ACCORDANCE WITH THAT SCENARIO. THIS PLAN IS SUBMITTED AS A MASTER DRAINAGE PLAN FOR WHICH APPROVAL OF THE CONCEPTS SET FORTH HEREIN IS REQUESTED. THIS PROPERTY IS ZONED M-2 AND HENCE IS NOT SUBJECT TO SITE PLAN CONTROL. FURTHERMORE, SUBDIVISION IS NOT ANTICIPATED OR PROPOSED. INDIVIDUAL BUILDING PERMITS WILL BE REQUESTED AT A LATER DATE. THE SUBMITTAL WILL SUPPORT ALL SEPARATE FUTURE GRADING AND DRAINAGE PLAN SUBMITTALS FOR BUILDING PERMIT WITHIN THE SUBJECT PROPERTY. ALL FUTURE DEVELOPMENT SHOULD BE REQUIRED TO CONFORM WITH THE DRAINAGE PATTERNS AND MITIGATIVE MEASURES OUTLINED HEREIN.

REFERENCES

A STORM DRAINAGE MASTER PLAN FOR ALBUQUERQUE INTERNATIONAL AIRPORT WAS PREPARED BY MOLZEN-CORBIN & ASSOCIATES DATED MAY, 1995. THIS MASTER DRAINAGE PLAN IS CONSISTENT WITH THE ABOVE REFERENCED MATERIAL. THE STORM DRAINAGE MASTER PLAN IDENTIFIES ALL PROPERTIES CONTRIBUTING TO THE DRAINAGE FACILITIES CROSSING INTERSTATE 25 BETWEEN GIBSON BLVD. SE AND RIO BRAVO BLVD. NE, AND IDENTIFIES RECOMMENDATIONS FOR CONTROLLING STORM RUNOFF. THIS PROPERTY IS IDENTIFIED AS LYING WITH BASIN GA AND IS GIVEN SUB-BASIN DESIGNATIONS OF 719, 722, AND 906 IN THE MASTER PLAN. GENERALLY, DOWNSTREAM PUBLIC DRAINAGE FACILITIES DO NOT HAVE THE CAPACITY TO CONVEY RUNOFF GENERATED BY THE FULLY DEVELOPED DRAINAGE BASIN WITHOUT UPSTREAM DETENTION. THEREFORE, DEVELOPED STORM RUNOFF DISCHARGE IS LIMITED TO THE EQUIVALENT OF THE EXISTING CONDITION HYDROLOGY.

PROJECT DESCRIPTION

AS SHOWN BY THE VICINITY MAP, THIS SITE IS LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF CLARK CARR ROAD SE AND SPIRIT DRIVE SE, ALONG THE WEST SIDE OF ALBUQUERQUE INTERNATIONAL AIRPORT. THE SITE IS CURRENTLY ZONED M-2. THE CURRENT LEGAL DESCRIPTION IS UNPLATTED LANDS OF THE UNIVERSITY OF NEW MEXICO. AS SHOWN BY PANELS 342 AND 361 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP FOR BERNALILLO COUNTY, NEW MEXICO, AND INCORPORATED AREAS, DATED SEPTEMBER 20, 1996 THIS SITE DOES NOT LIE WITHIN NOR UPSTREAM OF A DESIGNATED FLOOD HAZARD ZONE.

EXISTING CONDITIONS

THE SITE IS CURRENTLY UNDEVELOPED. ACCESS ROAD C, SPIRIT DRIVE SE, CLARK CARR ROAD SE, AND THE ALBUQUERQUE INTERNATIONAL AIRPORT MAINTENANCE FACILITY BORDER THE SITE. OFFSITE FLOWS DO NOT ENTER THE SITE FROM THE NORTH AND WEST BECAUSE THE SITE IS TOPOGRAPHICALLY HIGHER. A CURB ALONG THE NORTHERN EDGE OF THE MAINTENANCE FACILITY PREVENTS RUNOFF FROM ENTERING THE SITE FROM THE SOUTH. ACCESS ROAD C IS SUPERELEVATED TO THE EAST, PREVENTING DEVELOPED FLOWS FROM ENTERING THE SITE. HOWEVER MINOR UNDEVELOPED FLOWS DO ENTER THE SITE. THIS SITE IS CHARACTERIZED AS A PLATEAU ON TOP OF THE MESA UPON WHICH THE ALBUQUERQUE INTERNATIONAL AIRPORT IS BUILT UPON. THE SITE DRAINS NORTHWESTERLY DOWN A SIGNIFICANT SLOPE TO SPIRIT DRIVE SE AND CLARK CARR ROAD SE, WHERE PERMANENT EROSION CONTROL STRUCTURES AND RIPRAP APRONS HAVE BEEN BUILT TO CONTROL THE RUNOFF. THE RUNOFF EVENTUALLY DISCHARGES INTO A PUBLIC STORM DRAIN SYSTEM WITHIN SPIRIT DRIVE SE WHICH DISCHARGES TO THE UNIVERSITY ARROYO. A MINOR AMOUNT OF OFFSITE FLOWS ENTERS THE SITE FROM THE EAST, IN THE AREA BETWEEN THE EDGE OF ACCESS ROAD C AND THE PROPERTY. ACCESS ROAD C IS SUPERELEVATED TO DRAIN EAST ALONG THE CONCRETE CURB & GUTTER.

DEVELOPED CONDITIONS

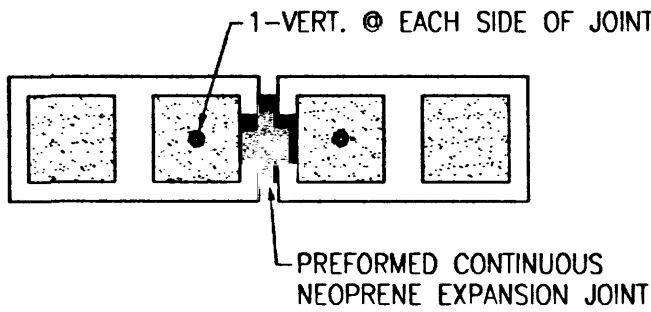
AS INDICATED ABOVE, THE PROPOSED IMPROVEMENTS CONSIST OF MULTIPLE OFFICE/WAREHOUSE BUILDINGS, PARKING LOT IMPROVEMENTS, LANDSCAPING, AND PRIVATE ACCESS ROADS. DEVELOPED RUNOFF WILL BE DIRECTED TO STORM INLETS AND A PRIVATE STORM DRAIN SYSTEM. THE PRIVATE STORM DRAIN SYSTEM DIRECTS RUNOFF TO THE NORTHWEST CORNER OF THE SITE TO A STORM DRAIN MANHOLE. RUNOFF IS CONVEYED TO THE PUBLIC STORM DRAIN SYSTEM WITHIN SPIRIT DRIVE SE. SIX DRAINAGE BASINS ARE IDENTIFIED IN THE CONCEPTUAL PLAN. BASIN A CONSISTS OF BUILDING NO. 3 AND ASSOCIATED IMPROVEMENTS AND DRAINS INTO BASIN C. BASIN B IDENTIFIES BUILDING NO. 2 AND ASSOCIATED IMPROVEMENTS AND DRAINS INTO BASIN D BY FREE DISCHARGE. BASIN C CONSISTS OF ALL OF THE IMPROVEMENTS ASSOCIATED WITH BUILDING NO. 4 AND THE MAJORITY OF THE IMPROVEMENTS AT BUILDING NO. 5 AND ACCEPTS FLOWS FROM BASINS A AND G VIA PRIVATE STORM DRAIN. BUILDING NO. 1 IMPROVEMENTS LIE WITHIN BASIN D, ACCEPTING FLOWS FROM BASIN B VIA PRIVATE STORM DRAIN FACILITIES. BASIN E RUNOFF IS GENERATED BY THE IMPROVEMENTS AROUND BUILDING NO. 6 AND IS ALLOWED TO FREELY DISCHARGE TO THE PUBLIC STORM DRAIN SYSTEM, ALONG WITH THE FLOWS ACCEPTED FROM BASINS B AND D VIA PRIVATE STORM DRAIN FACILITIES. BASIN F IDENTIFIES RUNOFF DIRECTLY DISCHARGED INTO CLARK CARR ROAD SE BY SURFACE FLOW. BASIN G CONSISTS OF RUNOFF FLOWING WITHIN THE PRIVATE ACCESS ROAD NOT DIRECTLY DISCHARGING INTO CLARK CARR ROAD SE, AND DISCHARGES TO BASIN C VIA PRIVATE STORM DRAIN. BECAUSE LIMITED DOWNSTREAM CAPACITY IS IDENTIFIED BY THE ALBUQUERQUE INTERNATIONAL AIRPORT STORM DRAINAGE MASTER PLAN, THE DEVELOPED PEAK RATE OF DISCHARGE CANNOT BE GREATER THAN THE EXISTING CONDITION. THEREFORE, DETENTION PONDING IS REQUIRED. THE RATE OF DISCHARGE (OUTFALL FROM THE SITE) WILL BE CONTROLLED BY THE ORIFICE CONDITION OF THE 8" DISCHARGE PIPE FROM BASIN C, INCLUDING RUNOFF INCORPORATED FROM BASINS A AND G. BASIN C CONTAINS THE DETENTION POND USED TO LIMIT RUNOFF DISCHARGE. BASINS B, D, E AND F WILL FREELY DISCHARGE TO CLARK CARR ROAD SE AND THE PUBLIC STORM DRAIN SYSTEM. THE AGGREGATE ALLOWABLE DISCHARGE IS LIMITED TO THE FLOWS IDENTIFIED IN THE EXISTING CONDITION. NO OFFSITE IMPROVEMENTS OR DRAINAGE EASEMENTS ARE REQUIRED.

CALCULATIONS

THE CALCULATIONS APPEARING HEREON ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR STORM EVENT. THE PROCEDURE FOR 40-ACRE AND SMALLER BASINS, AS SET FORTH IN 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 SHOWN BY THE CALCULATIONS, AN ANTICIPATED INCREASE OF PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF IS ANTICIPATED. HOWEVER, THE PEAK RATE OF DISCHARGE IS LIMITED TO THE EXISTING CONDITION WITH CONTROL EFFECTED THROUGH A DETENTION POND WITHIN BASIN C. THE PEAK RATE OF DISCHARGE IN THE EXISTING CONDITION IS 31.1 CFS. THE COMBINED DISCHARGE FROM BASINS A, C AND G WHICH ROUTE THROUGH THE DETENTION POND (3.4 CFS); BASINS B, D AND E THAT DISCHARGE DIRECTLY TO THE STORM DRAIN (18.1 CFS) AND BASIN F THAT DISCHARGES DIRECTLY TO CLARK CARR ROAD SE VIA SURFACE DRAINAGE (9.6 CFS) EQUALS 31.1 CFS, THE EXISTING CONDITION PEAK RATE OF DISCHARGE.

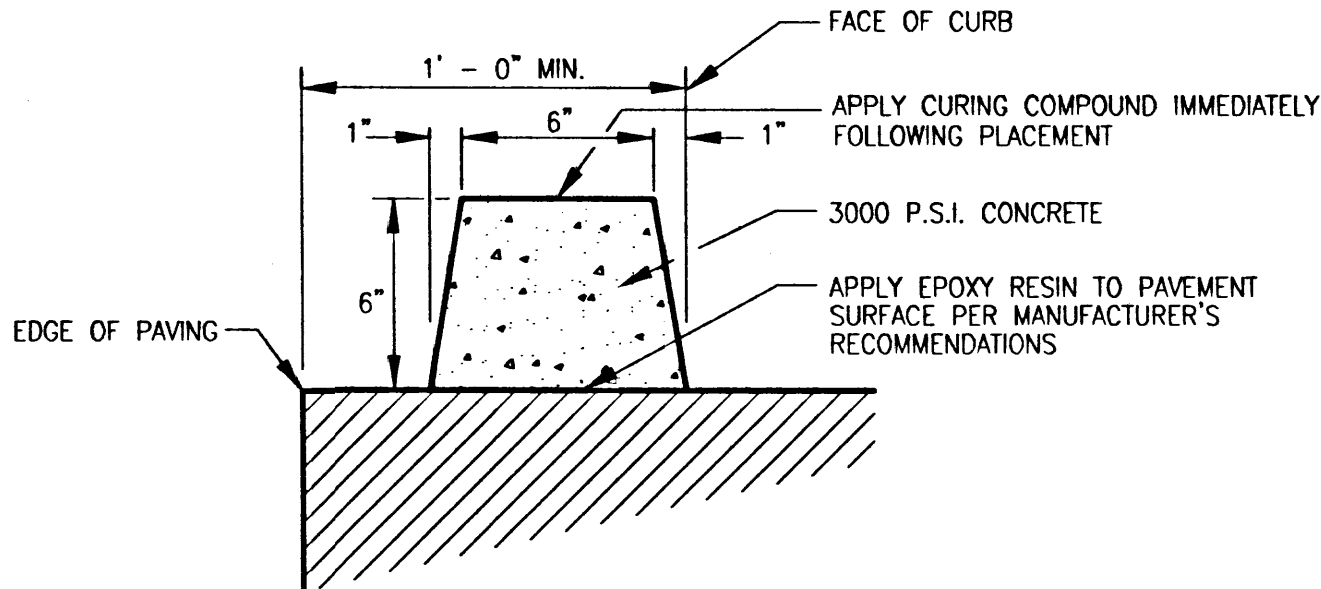
CONCLUSION

THE PROPOSED CONCEPTUAL DRAINAGE PLAN IS CONSISTENT WITH THE PREVIOUSLY APPROVED STORM DRAINAGE MASTER PLAN FOR THE ALBUQUERQUE INTERNATIONAL AIRPORT. RUNOFF WILL CONTINUE TO DISCHARGE INTO FULLY IMPROVED PUBLIC STREETS WITH PUBLIC STORM DRAIN FACILITIES, BECAUSE THE EXISTING DRAINAGE PATTERNS ARE NOT BEING ALTERED AND THE RUNOFF DISCHARGE IS LIMITED TO THE EXISTING CONDITIONS AS IDENTIFIED IN THE STORM DRAINAGE MASTER PLAN, THE CONTROLLED DISCHARGE OF RUNOFF FROM THIS SITE TO THE PUBLIC STORM DRAIN SYSTEM IS APPROPRIATE. NO DRAINAGE COVENANTS, EASEMENTS, OR VARIANCES ARE REQUESTED AS PART OF THIS PLAN. THE SITE IS NOT UNDER SITE PLAN CONTROL HENCE A SITE DEVELOPMENT PLAN IS NOT REQUIRED. SUBDIVISION OF THE LAND IS NOT PROPOSED. THIS PLAN SHALL SERVE AS A MASTER DRAINAGE PLAN FOR THIS UNPLATTED PARCEL.



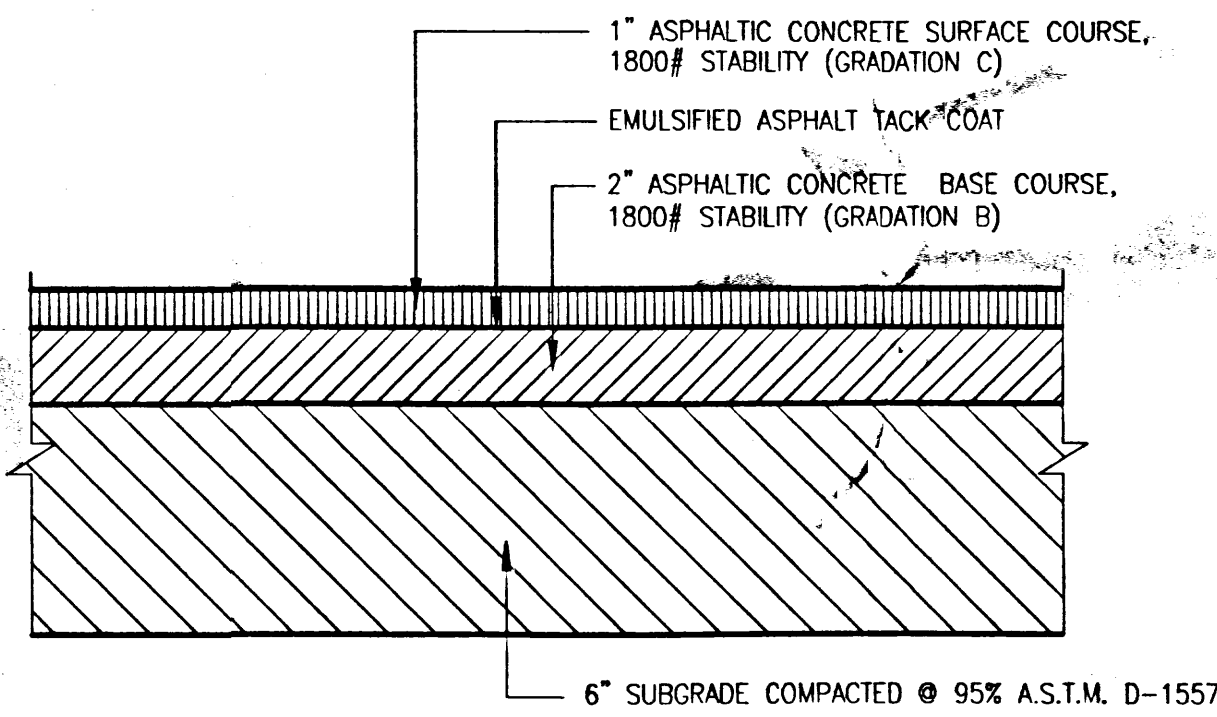
TYPICAL MASONRY CONTROL JOINT DETAIL

SCALE: 1" = 1'-0"



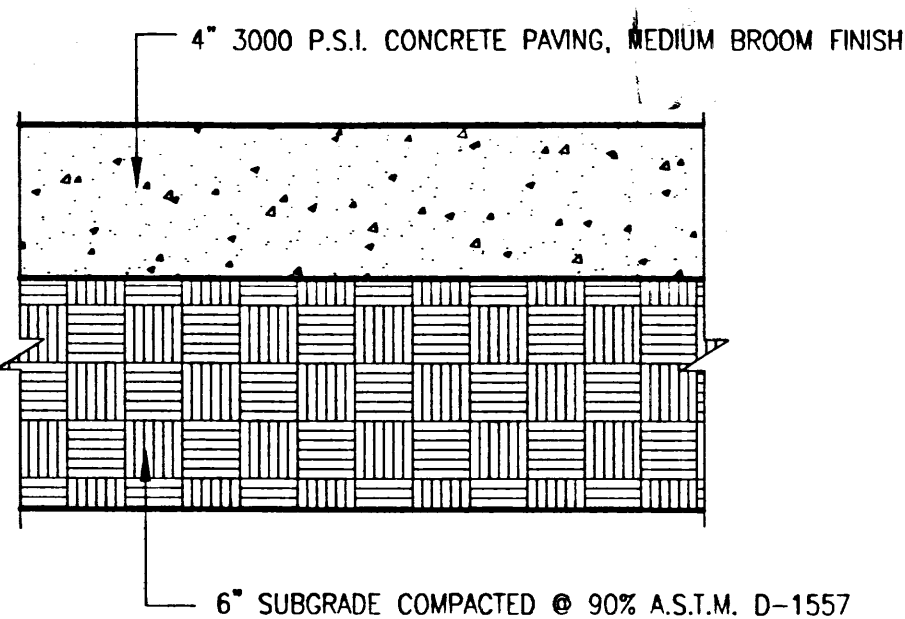
TYPICAL EXTRUDED CONCRETE CURB SECTION

SCALE: 1" = 6"



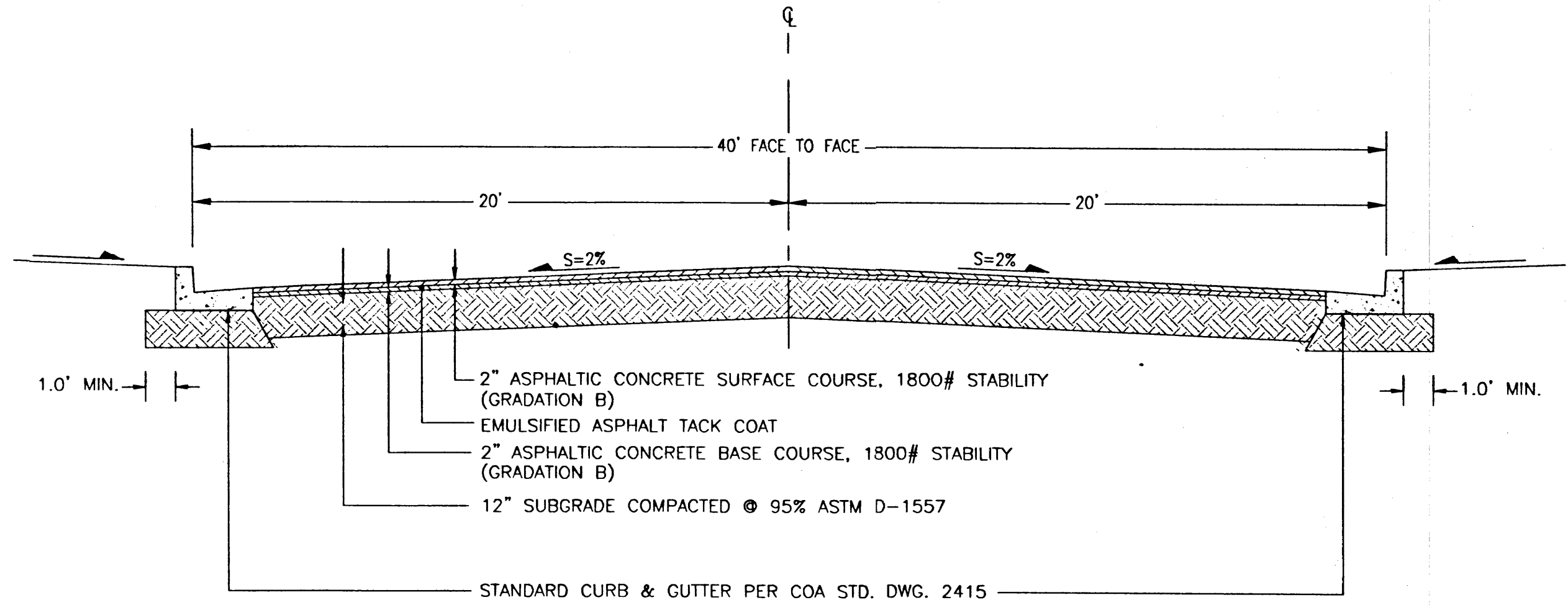
TYPICAL PARKING LOT PAVING SECTION

SCALE: 1" = 5"



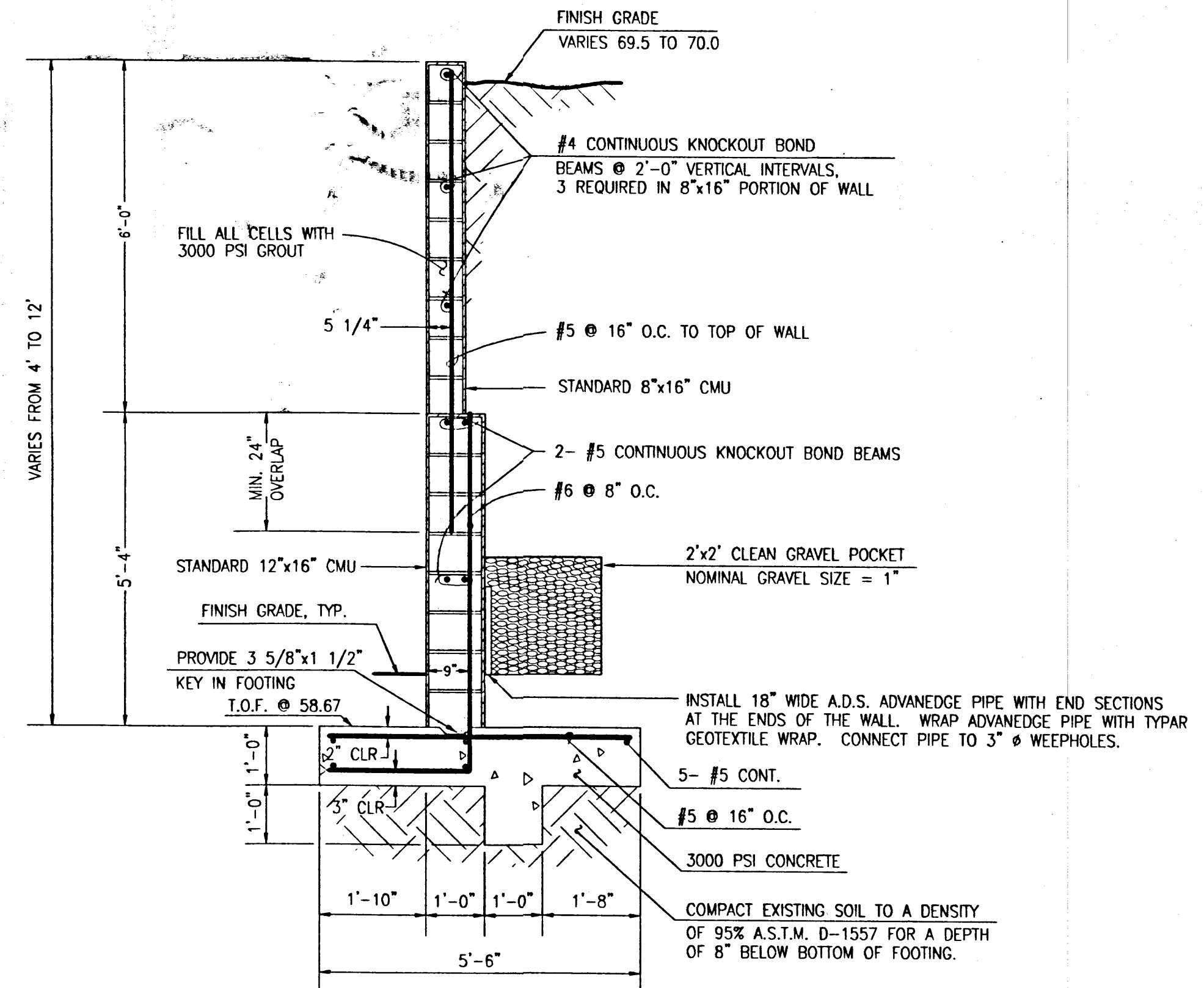
TYPICAL CONCRETE SIDEWALK SECTION

SCALE: 1" = 5"



SECTION A-A

SCALE: 1" = 4'-0"



TYPICAL RETAINING WALL SECTION

SCALE: 1" = 2'-0"

FOR INFORMATION ONLY;  
NOT FOR CONSTRUCTION

|             |        |                                                                                       |  |      |     |                            |  |         |  |
|-------------|--------|---------------------------------------------------------------------------------------|--|------|-----|----------------------------|--|---------|--|
|             |        | NCL                                                                                   |  | DATE | BY  | REVISIONS                  |  | JOB NO. |  |
| DESIGNED BY | G.R.B. |  |  | 8/99 | JGM | CLARIFY MASTER PLAN STATUS |  | 980042  |  |
| DRAWN BY    | J.R.   |                                                                                       |  |      |     |                            |  | DATE    |  |
|             |        |                                                                                       |  |      |     |                            |  | 11-1998 |  |
| APPROVED BY | J.G.M. |                                                                                       |  |      |     |                            |  | SHEET   |  |
|             |        |                                                                                       |  |      |     |                            |  | 5 OF 5  |  |



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DRAINAGE PLAN, SECTIONS AND DETAILS  
U.N.M. AIRPORT LEASE PARCEL MASTER PLAN



08-03-99 12-10-98