CERTIFICATION FOR TEMPORARY C.O. FOR BUILDING 4 IS APPROPRIATE AT THIS TIME BECAUSE THE BUILDING AND ALL ADJACENT PAVEMENT HAS BEEN CONSTRUCTED, BUT THE PERMANENT DOWNSTREAM HAS NOT YET BEEN COMPLETED AND IS NOT PART OF THIS CERTIFICATION. DRAINAGE FROM THE WEST SIDE OF THE BUILDING WILL DRAIN TO THE BUILDING WILL DRAIN TO THE NORTH TO THE AREA OF THE PROPOSED DETENTION POND LOCATED WITH THE PARKING LOT. THIS AREA IS GRADED, BUT NOT YET PAVED AND WILL CONTINUE ACT AS A TEMPORARY SEDIMENT AND RETENTION POND IN THE SAME CAPACITY THAT IS HAS BEEN SERVING THROUGHOUT CONSTRUCTION. THIS TEMPORARY PONDING CONDITIONS DOES NOT ADVERSELY IMPACT DOWNSTREAM OR ADJACENT PROPERTIES, NOR DOES IT PROPOSE A HAZARD TO ONSITE IMPROVEMENTS. DOWNSTREAM PAVEMENT AND STROM DRAIN SYSTEM WILL BE CERTIFIED AS PART OF A FUTURE CERTIFICATION AND WILL BE REQUIRED AS A CONDITION OF PERMANENT CERTIFICATE OF OCCUPANCY. THIS CERTIFICATION DOES NOT EVALUATE TRAFFIC CIRCULATION.

THIS CERTIFICATION DOES NOT INCLUDE WORK CONSTRUCTED WITHIN THE PUBLIC RIGHT-OF-WAY WHICH WAS INSPECTED BY SEPARATE PROCESS. THE RECORD INFORMATION PRESENTED HEREIN IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT AND DOES NOT ADDRESS COMPLIANCE WITH A.D.A. GUIDELINES. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ADCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

DEC

J. GRAEME MEANS, NMPE 13676

DATE W 01/2004



ENGINEER'S DRAINAGE CERTIFICATION - TEMPORARY C.O. FOR BUILDINGS 1-3

I, J. GRAEME MEANS, NMPE 13676, OF THE FIRM JEFF MORTENSEN & ASSOCIATES, INC., HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND DRAINED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 02/18/2004. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY THOMAS D. JOHNSTON, NMPS 14269, OF THE FIRM WAYJOHN SURVEYING. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON OCTOBER 28, 2004. AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR TEMPORARY CERTIFICATES OF OCCUPANCY FOR BUILDINGS 1, 2 AND 3.

THE FOLLOWING ITEMS NEED TO BE ADDRESSED PRIOR RECERTIFICATION IN SUPPORT OF PERMANENT CERTIFICATES OF OCCUPANCY:

- 1) RECORD INFORMATION MUST BE REVIEWED AND EVALUATED FOR THE STORM INLETS AND STORM DRAIN. AS DETERMINED BY VISUAL INSPECTION, THESE ITEMS HAVE BEEN CONSTRUCTED, BUT ELEVATION DATA WAS NOT PROVIDED BY THE SURVEYOR AND THEREFORE WAS NOT EVALUATED AS PART OF THIS CERTIFICATION. THE PROJECT SURVEYOR HAS INDICATED THAT THEY WILL PROVIDE THIS INFORMATION.
- 2) THE CONNECTION TO THE EXISTING PUBLIC DRAINAGE CHANNEL MUST BE INSPECTED AND APPROVED BY STORM DRAIN MAINTENANCE. ALTHOUGH THE CONNECTION WAS MADE AT THE EDGE OF THE PUBLIC DRAINAGE EASEMENT (NOT WITHIN IT) TO AN EXISTING RIBBON CHANNEL PREVIOUSLY CONSTRUCTED UNDER WORK ORDER TO SERVE THIS SITE, MR. GLEN JURGENSEN REQUESTED AT THE TIME OF PLAN APPROVAL THAT THE POINT OF CONNECTION BE INSPECTED. THE CONTRACTOR, THS CONSTRUCTION, HAS INDICATED THAT THEY WILL CONTACT STORM DRAIN MAINTENANCE FOR AN INSPECTION.
- 3) RECORD INFORMATION MUST BE EVALUATED FOR THE HEADER CURB ALONG THE NORTH PROPERTY LINE. THIS CURB MUST MAINTAIN A MINIMUM PROPERTY LINE ELEVATION TO PROVIDE THE REQUIRED DETENTION POND VOLUME. ELEVATION DATA WAS NOT PROVIDED BY THE SURVEYOR, AND BASED ON VISUAL INSPECTION, THIS CURB WAS INDEED CONSTRUCTED, BUT DOES NOT APPEAR TO HAVE THE REQUIRED HEIGHT AT SOME LOCATIONS, POTENTIALLY ALLOWING OVERFLOW TO THE NORTH. THE PROJECT SURVEYOR HAS INDICATED THAT THEY WILL PROVIDE RECORD INFORMATION, AND THE CONTRACTOR HAS INDICATED THAT HE WILL HAVE THE CURB HEIGHT. RAISED IF ANALYSIS DETERMINES THAT IT IS NECESSARY.

CERTIFICATION FOR TEMPORARY C.O. FOR BUILDINGS 1, 2 AND 3 IS APPROPRIATE AT THIS TIME BECAUSE THE BUILDINGS AND ALL SITE PAVEMENT, CURBS AND SIDEWALKS HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE INTENT OF THE APPROVED PLAN. ALTHOUGH THE GRATE ELEVATION AND PIPE INVERTS HAVE NOT BEEN VERIFIED, THE PRIVATE ON—SITE STORM DRAIN SYSTEM HAS BEEN CONSTRUCTED AND DOES APPEAR TO DRAIN PROPERLY AS EVIDENCED BY THE LACK OF STANDING WATER. ALTHOUGH THE NORTH HEADER CURB DOES NOT APPEAR TO HAVE THE REQUIRED HEIGHT TO FULLY DETAIN THE 100—YEAR STORM WATER SURFACE LEVEL, THERE IS NO SIGNIFICANT IMPACT TO DOWNSTREAM PROPERTIES AT THIS TIME BECAUSE THE POTENTIAL OVERFLOW CONDITION TO THE NORTH WILL BE TO UNDEVELOPED PROPERTY THAT WAS THE PRE—DEVELOPMENT DISCHARGE POINT FROM THIS SITE. SHOULD A SIGNIFICANT RAINFALL EVENT OCCUR THAT OVERFLOWS THIS CURB PRIOR TO ITS CORRECTION, IT WILL DRAIN HARMLESSLY TO THE UNDEVELOPED PROPERTY TO THE NORTH AND THEN TO DESERT SURF CIRCLE WHICH IS THE DEVELOPED DRAINAGE OUTFALL.

THIS CERTIFICATION DOES NOT EVALUATE TRAFFIC CIRCULATION. THIS CERTIFICATION DOES NOT INCLUDE WORK CONSTRUCTED WITHIN THE PUBLIC RIGHT-OF-WAY WHICH WAS INSPECTED BY SEPARATE PROCESS. THE RECORD INFORMATION PRESENTED HEREIN IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT AND DOES NOT ADDRESS COMPLIANCE WITH A.D.A. GUIDELINES. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

J. GRAENE MEANS, NMPE 13676

DATE WAS A 2000



MIDTOWN BUSINESS LUECKING PARK ZONE X PARK, PRD & REL USES LUECKING MEXALB TRACT HAHN PARCEL 100-YEAR FLOOD CON COMMICE VICINITY MAP G - 16PANEL 138 OF 825 F.I.R.M. SCALE: 1" = 750'± SCALE: 1" = 500'±

Engineer's Drainage Certification — Permanent C.O. For Buildings 1—4

I, J. GRAEME MEANS, NMPE 13676, OF THE FIRM JEFF MORTENSEN & ASSOCIATES, INC., HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND DRAINED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 02/18/2004. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY THOMAS D. JOHNSTON, NMPS 14269, OF THE FIRM WAYJOHN SURVEYING. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON DECEMBER 13, 2004. AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE, AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR PERMANENT CERTIFICATES OF OCCUPANCY FOR BUILDINGS 1, 2, 3 AND 4.

THE FOLLOWING ITEMS, PREVIOUSLY IDENTIFIED AS DEFICIENCIES AND REQUIRING RECERTIFICATION, HAVE BEEN ADDRESSED AS FOLLOWS:

- 1) RECORD INFORMATION HAS BEEN PROVIDED, REVIEWED AND EVALUATED FOR THE STORM INLETS AND STORM DRAIN. THEY WERE FOUND TO BE IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED DESIGN.
- 2) THE CONNECTION TO THE EXISTING PUBLIC DRAINAGE CHANNEL WAS INSPECTED AND APPROVED BY GLEN JURGENSEN FROM STORM DRAIN MAINTENANCE. HE CONFIRMED THIS IN A TELEPHONE CONVERSATION DECEMBER 9, 2004.
- 3) AS DEMONSTRATED BY THE ADDITIONAL RECORD INFORMATION PROVIDED BY THE SURVEYOR DECEMBER 10, 2004, THE CURB ALONG THE NORTH PROPERTY LINE HAS BEEN RAISED TO THE REQUIRED ELEVATION.

THE FOLLOWING DEVIATION TO THE APPROVED WAS NOTED THAT DOES NOT ADVERSELY IMPACT SITE DRAINAGE OR THE ABILITY TO RECOMMEND PERMANENT CERTIFICATE OF OCCUPANCY:

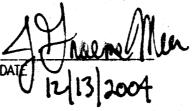
1) THE OVERFLOW CONCRETE RUNDOWN ALONG THE NORTH PROPERTY LINE NORTH OF BUILDING 2 WAS NOT CONSTRUCTED. THIS WAS A SECONDARY OVERFLOW POINT (THE MAIN OVERFLOW POINT IS IN THE PAVEMENT SOUTHEAST OF THE SE CORNER OF BUILDING 2) AND ITS DELETION WILL NOT ADVERSELY IMPACT SITE DRAIANGE.

CERTIFICATION FOR PERMANENT C.O. FOR BUILDINGS 1, 2, 3 AND 3 IS APPROPRIATE AT THIS TIME BECAUSE THE SITE HAD BEEN GRADED AND DRAINED IN SUBSTANTIAL COMPLIANCE WITH THE INTENT OF THE APPROVED PLAN.

THIS CERTIFICATION DOES NOT EVALUATE TRAFFIC CIRCULATION. THIS CERTIFICATION DOES NOT INCLUDE WORK CONSTRUCTED WITHIN THE PUBLIC RIGHT—OF—WAY WHICH WAS INSPECTED BY SEPARATE PROCESS. THE RECORD INFORMATION PRESENTED HEREIN IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT AND DOES NOT ADDRESS COMPLIANCE WITH A.D.A. GUIDELINES. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

J. GRAEME MEANS, NMPE 13676

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### CITY HYDROLOGY FILE F16/D3E2

Plot Date: 12-

E\DMIN\ACDIN\2004.003.1\ 40031CERT.DWG

JEFF MORTENSEN & ASSOCIATES, INC.

| 6010-B MIDWAY PARK BLVD. N.E.

| LABUQUERQUE | NEW MEXICO 87109

| ENGINEERS | SURVEYORS (505) 345-4250

| FAX: (505) 345-4254 | ESTABLISHED 1977

ENGINEER'S DRAINAGE CERTIFICATION
INTERSTATE COMMMERCE CENTER

		ND.	DATE	BY	REVISIONS	2004.003.1
DESIGNED BY	<u>G.M.</u>	$\Lambda$	11/04	G.M.	ENGINEER'S CERT. TEMP C.O. BLDG 4	C004'002'I
DRAWN BY	RRW	2	11/04	G.M.	ENGINEER'S CERT. TEMP C.O. BLDG 1-3	11-2004
		3	12/04	G.M.	ENGSINEER'S CERT. PERM. C.O. BLDGS 1-4	
APPROVED BY	G.M.					SHEET OF 2
in the same of the						

FOUR BUILDING OFFICE/WAREHOUSE COMPLEX TO BE LOCATED IN THE VICINITY OF INTERSTATE 25 AND MONTANO RD NE. THE IMPROVEMENTS CONSIST OF NEW CONSTRUCTION WITHIN A COMMERCIAL SUBDIVISION SUBJECT TO CONTROLLED DISCHARGE TO AN EXISTING PUBLIC DRAINAGE CHANNEL PASSING THROUGH THE SITE IN ACCORDANCE WITH AN APPROVED MASTER DRAINAGE PLAN. THE PROPOSED IMPROVEMENTS WILL CREATE AN INCREASE IN IMPERVIOUS AREA THAT WILL RESULT IN A GROSS INCREASE IN PEAK RATE AND VOLUME OF RUNOFF. THE PEAK RATE OF SITE DISCHARGE WILL BE CONTROLLED TO AN ALLOWABLE RATE BY ONSITE DETENTION. RUNOFF WILL ENTER THE PUBLIC DRAINAGE CHANNEL THOUGH AN EXISTING SIDE INLET TO BE MODIFIED BY THIS PROJECT. THE PURPOSE OF THIS SUBMITTAL IS TO OBTAIN ROUGH GRADING, FOUNDATION, BUILDING PERMIT AND SO#19 APPROVALS. PROJECT DESCRIPTION:

THIS GRADING AND DRAINAGE PLAN SUPPORTS THE PROPOSED CONSTRUCTION OF THE INTERSTATE COMMERCE CENTER, A

AS SHOWN BY THE VICINITY MAP ON SHEET G.1, THE SITE LIES IN CENTRAL ALBUQUERQUE AT 2320 MIDTOWN PLACE NE. SOUTHWEST OF THE INTERSECTION OF I-25 AND MONTANO RD NE. THE SITE LEGAL DESCRIPTION IS TRACT 3, INTERSTATE BUSINESS PARK. THE SITE IS ZONED M-2.

AS SHOWN BY PANEL 138 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS FOR BERNALILLO COUNTY, NEW MEXICO, AND INCORPORATED AREAS DATED SEPTEMBER 20, 1996, THIS SITE DOES NOT LIE WITHIN, OR DIRECTLY UPSTREAM OF, A DESIGNATED FLOOD HAZARD ZONE.

DRAINAGE PLAN

INTRODUCTION AND EXECUTIVE SUMMARY:

THE FOLLOWING IS A LIST OF PLANS, REPORTS AND CORRESPONDENCES RELATIVE TO THIS SITE AND/OR REFERENCED WITHIN THIS DRAINAGE PLAN. THIS LIST MAY NOT BE INCLUSIVE, HOWEVER, REPRESENTS A SUMMARY OF PERTINENT PLANS AND DOCUMENTS WHICH ARE KNOWN TO THIS PREPARER:

1. "DRAINAGE ANALYSIS FOR MIDTOWN BUSINESS PARK, TRACT 3A" DATED 11/04/1998 BY ANDREWS, ASBURY & ROBERT, INC. THIS MASTER DRAINAGE PLAN SUPPORTED PLAT APPROVAL FOR THIS SUBDIVISION AND ADDRESSED THE EXISTING, INTERIM AND DEVELOPED CONDITIONS FOR DEVELOPMENT WITHIN. THE PLAN IDENTIFIED A DETENTION REQUIREMENT WHEREBY THE MAXIMUM ALLOWBALE PEAK RATE OF DISCHARGE FROM TRACT 3 TO THE ONSITE PUBLIC DRAINAGE CHANNEL IS 8.46 CFS. THE GRADING PLAN INCLUDED IN THIS REPORT SHOWED AN INTERIM DETENTION POND DESIGNED FOR THE ALLOWABLE DISCHARGE. THIS GRADING PLAN WAS CERTIFIED BY THE ENGINEER OF RECORD 03/14/2000. 2. MIDTOWN BUSINESS PARK INFRASTRUCTURE IMPROVEMENTS BY AAR-THE LARKIN GROUP, CITY WORK ORDER 598481 THIS PROJECT CONSTRUCTED THE EXISTING PUBLIC DRAINAGE CHANNEL THAT SERVES AS THE OUTFALL FOR THIS

3. TELEPHONE CORRESPONDENCE WITH GLEN JURGENSEN, MANAGER, CITY OF ALBUQUERQUE STORM DRAIN MAINTENANCE DATED 02/09/2004. MR. JURGENSEN WAS CONTACTED BY THIS OFFICE TO ASK WHAT THE PREFERRED METHOD OF CONNECTION/DISCHARGE WAS TO THE EXISTING CHANNEL. MR. JURGENSEN REPLIED THAT HE PREFERRED THAT WE USE THE EXISTING SIDE INLET AND NOT DRAIN FREQUENT FLOWS OVER THE TOP VIA SHEETFLOW. OVERFLOW FROM LARGER EVENTS COULD DRAIN OVER THE TOP IF NECESSARY. MR. JURGENSEN INDICATED THAT WE WOULD BE ALLOWED TO PAVE UP TO THE EDGE OF CHANNEL, BUT WOULD NEED TO CONSTRUCT A CURB, BOLLARDS, OR PARKING BUMPERS TO PREVENT SITE VEHICLES FROM DRIVING INTO THE CHANNEL.

### EXISTING CONDITIONS:

THE SITE IS CURRENTLY UNDEVELOPED. INFRASTRUCTURE AND MASS GRADING WERE CONSTRUCTED AS PART OF THE SUBDIVISION PROCESS FOR THE INTERSTATE BUSINESS PARK. THE SOUTHEAST BOUNDARY ALONG THE 1-25 FRONTAGE ROAD IS GRADED WITH A 30 FOOT VERTICAL DROP AT AN APPROXIMATE 2:1 SLOPE AND STABILIZED WITH GRAVEL MULCH. AT THE TOP OF THE SLOPE IS A GRADED ?SHELF? WITH A GRADED DITCH AND PUBLIC CITY OF ALBUQUERUQE STORM DRAIN CONSTRUCTED TO ACCEPT RUNOFF FROM THE 1-25 SOUTHBOUND FRONTAGE ROAD. THE STORM DRAIN IS CONTAINED WITHIN SECONDARY AN EXISTING PUBLIC CITY STORM DRAIN EASEMENT. AN EXISTING PUBLIC DRAINAGE EASEMENT ALSO TRAVERSES THE SOUTHWEST AND NORTHWEST PROPERTY LINES, AND INCLUDES A 10FT WIDE, 8FT DEEP PUBLIC DRAINAGE CHANNEL. SITE GRADING FOR INTERIM CONDITIONS INCLUDED A TEMPORARY DETENTION AND SEDIMENT POND AT THE NW CORNER THAT DRAINS TO THE AFOREMENTIONED CHANNEL VIA 8 FT WIDE CONCRETE "RIBBON CHANNEL." EXISTING SITE RUNOFF DRAINS OVERLAND TO THE EXISTING POND AND INTO THE CHANNEL. OFFSITE FLOWS DO NOT IMPACT THE SITE. THE SITE IS DIVIDED VI. DEVELOPED CONDITION INTO TWO EXISTING DRAINAGE BASINS. THE TOP BASIN ALONG THE 1-25 FRONTAGE AT THE UPPER PORTION OF THE SLOPE DRAINS TO THE AFOREMENTIONED PUBLIC STORM DRAIN THAT PARALLELS THE FRONTAGE ROAD AND DRAINS TO THE SOUTHWEST. THE REMAINDER OF THE SITE DRAINS TO THE ONSITE POND THAT OUTLETS TO THE EXISTING PUBLIC DRAINAGE CHANNEL. THE CHANNEL DRAINS TO THE NORTH TO DESERT SURF CIRCLE NE. A STORM DRAIN IN DESERT SURF CIRCLE DRAINS TO THE NORTH UNDER MONTANO, AND RUNS WEST THROUGH THE RENAISSANCE STORM DRAIN SYSTEM TO AN EXSITING CITY DETENTION POND ON THE NORTH SIDE OF MONTANO. AS STATED IN THE MASTER DRAINAGE PLAN, DISCHARGE TO THIS SYSTEM IS LIMITED TO 0.1 CFS ABOVE PRE-EXISTING PEAK RATES.

## DEVELOPED CONDITIONS:

AS SHOWN BY THE GRADING PLAN ON SHEET G.2, THE PROJECT CONSISTS OF NEW BUILDING CONSTRUCTION WITH ASSOCIATED PAVING AND LANDSCAPING IMPROVEMENTS. NO PUBLIC INFRASTRUCTURE IS PROPOSED. AS SHOWN ON THE GRADING PLAN THE DEVELOPED SITE WILL BE DIMDED INTO TWO BASINS. BASIN B. LOCATED WEST OF BUILDING 1. WILL GENERATE A PEAK 100 YEAR DISCHARGE OF 4.6 CFS AND WILL DRAIN DIRECTLY TO THE EXISTING DRAINAGE CHANNEL SIDE INLET. A PAVED FLOWLINE WILL BE GRADED PARALLEL TO THE CHANNEL TO PREVENT NUISNACE AND FREQUENT FLOW EVENTS FROM SHEET DRAINING OVER THE TOP OF THE CHANNEL WALLS. BASIN A, COMPRISING THE MAJORITY OF THE SITE WILL DRAIN TO TWO INTERCONNECTED DETENTION PONDS LOCATED WITHIN PAVED PARKING AND DRIVE AISLES. AS DETERMINED BY AHYMO. THE MAXIMUM 100 YEAR POND DEPTH IS 1.3 FEET. THE NUISANCE FLOWS AND RUNOFF FROM SMALLER EVENTS WILL DISCHARGE FROM THE POND VIA 6? STORM DRAIN OUTLETTING TO THE VICINITY OF THE EXISTING SIDE INLET TO THE PUBLIC DRAINAGE CHANNEL. FLOWS IN EXCESS OF 1.63 CFS WILL OVERFLOW AT THE NORTHWEST CORNER OF BUILDING 1 IN A CONTROLLED MANNER, WITH A PEAK 100-YEAR OVERFLOW RATE OF 4,78 CFS. FOR A COMBINED TOTAL DETAINED DISCHARGE FROM BASIN A OF 6.41 CFS. WHEN ROUTED THROUGH AND ADDED TO BASIN B, THE 100 YEAR PEAK SITE DISHARGE RATE WILL BE 7.7 CFS WHICH IS LESS THAN THE ALLOWABLE RATE. THE COMBINED FLOWS WILL DRAIN TO THE CHANNEL THROUGH A RECONSTRUCTED DRAINAGE INLET AND NEW HEADWALL/LINING STRUCTURE AS DETAILED ON SHEET G.1 ALTHOUGH THIS STRUCTURE WILL BE LOCATED OUTSIDE OF THE PUBLIC DRAINAGE EASEMENT, IT WILL BE CONNECTED TO THE PUBLIC CHANNEL AND ITS JOINT AND CONNECTION POINT SHALL BE INSPECTED BY THE CITY VIA THE S.O. 19 PROCESS.

# GRADING PLAN:

THE GRADING PLAN ON SHEET 1 SHOWS: 1) EXISTING GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1' 0" INTERVALS FROM A TOPO SURVEY DATED 01/03/04 BY ALDRICH LAND SURVEYING, 2) PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1' O" INTERVALS, 3) THE LIMIT AND CHARACTER OF EXISTING IMPROVEMENTS, 4) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 5) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES.

## CALCULATIONS:

THE CALCULATIONS. WHICH APPEAR HEREON, 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. THE 6 INCH PIPE ENTRANCE CONDITION AND THE OVERFLOW WEIR CALCULATIONS WERE CALCULATED USING THE ORIFICE AND WEIR EQUATIONS, RESPECTIVELY. AS SHOWN BY THE HYDROLOGIC CALCULATIONS HEREON, ANINCREASE IN THE PEAK RATE AND VOLUME OF DISCHARGE IS ANTICIPATED AS A RESULT OF THE PROPOSED CONSTRUCTION. AS DETERMINED BY THE ATTACHED AHYMO ANALYSIS, THIS INCRÉASE WILL BE MITIGATED BY DETENTION PONDING, WITH A NET 100 YEAR DISCHARGE RATE OF 7.6 CFS THAT IS LESS THAN THE ALLOWABLE RATE OF 8.5 cfs.

## CONCLUSIONS:

THIS PROPOSED APPROACH TO MANAGING THE STORM WATER RUNOFF ASSOCIATED WITH THE PROPOSED SITE RECONSTRUCTION IS APPROPRIATE FOR THE FOLLOWING REASONS:

1) THIS PLAN PROPOSES TO DISCHARGE STORMWATER RUNOFF FROM THIS PROPERTY TO PUBLIC RIGHT-OF-WAY IN A MANNER CONSISTENT WITH EXISTING AND REQUIRED DRAINAGE PATTERNS AND RATES IDENTIFIED IN THE APPROVED MASTER DRAINAGE PLAN. 2) AS DETERMINED BY THE WASRTER DRAINAGE PLAN FOR THIS SITE, DOWNSTREAM CAPACITY EXISTS FOR DISCHARGE AS

PROPOSED HEREIN.

NO DRAINAGE COVENANTS OR VARIANCES ARE REQUESTED AS PART OF THIS PLAN.

## CALCULATIONS

I. PRECIPITATION ZONE = 2

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

III. TOTAL AREA  $(A_T) = 8.19$  AC (7.17 AC IS CONTRIBUTING)

### IV. LAND TREATMENTS

## A. EXISTING CONDITIONS

### B. DEVELOPED CONDITIONS

1. BASIN A (6.08 AC)

	(	
TREATMENT	AREA (AC)	%
B	0.43	07
C	1.16	19
D	4.50	74
2. BASIN B	(1.09 AC)	
TREATMENT	AREA (AC)	%
B	0.08	07
C	0.21	19

0.81

### V. EXISTING CONDITIONS

 $E^{\mathbf{M}} = (E^{\mathbf{A}}\mathbf{A}^{\mathbf{A}} + E^{\mathbf{B}}\mathbf{A}^{\mathbf{B}} + E^{\mathbf{C}}\mathbf{A}^{\mathbf{C}} + E^{\mathbf{D}}\mathbf{A}^{\mathbf{D}})/\mathbf{A}^{\mathbf{L}}$ 

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

 $E_{W} = (7.17)(1.13)/7.17 = 1.13 \text{ IN}.$ 

 $V_{100} = (1.13/12)7.17 = 0.675 \text{ AC-FT} = 29,410 \text{ SF}$ 

### B. PEAK DISCHARGE

 $Q_P = Q_{100} = (3.14)(7.17) = 22.5 \text{ CFS}$ 

## 1. BASIN A

2. BASIN B

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

 $E_{\mathbf{w}} = [(0.78)(0.43) + (1.13)(1.16) + (2.12)(4.50)]/6.09 = 1.84 \text{ IN}.$ 

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

 $V_{100} = (1.84/12)(6.09) = 0.934 \text{ AC-FT} = 40,680 \text{ CF}$ 

 $E_{\mathbf{W}} = (E_{\mathbf{A}}A_{\mathbf{A}} + E_{\mathbf{B}}A_{\mathbf{B}} + E_{\mathbf{C}}A_{\mathbf{C}} + E_{\mathbf{D}}A_{\mathbf{D}})/A_{\mathbf{T}}$ 

 $E_{\mathbf{w}} = [(0.78)(0.08) + (1.13)(0.21) + (2.12)(0.81)]/1.09 = 1.85 \text{ IN}.$ 

 $V_{100} = (E_{W}/12)A_{T}$ 

 $V_{100} = (1.85/12)(1.09) = 0.168 \text{ AC-FT} = 7.320 \text{ CF}$ 

# B. PEAK DISCHARGE

# 1. BASIN A

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

 $Q_{\rm p} = Q_{100} = (2.28)(0.43) + (3.14)(1.16) + (4.70)(4.50) = 25.8 \text{ CFS}$ 

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

 $Q_p = Q_{100} = (2.28)(0.08) + (3.14)(0.21) + (4.70)(0.81) = 4.6 CFS$ 

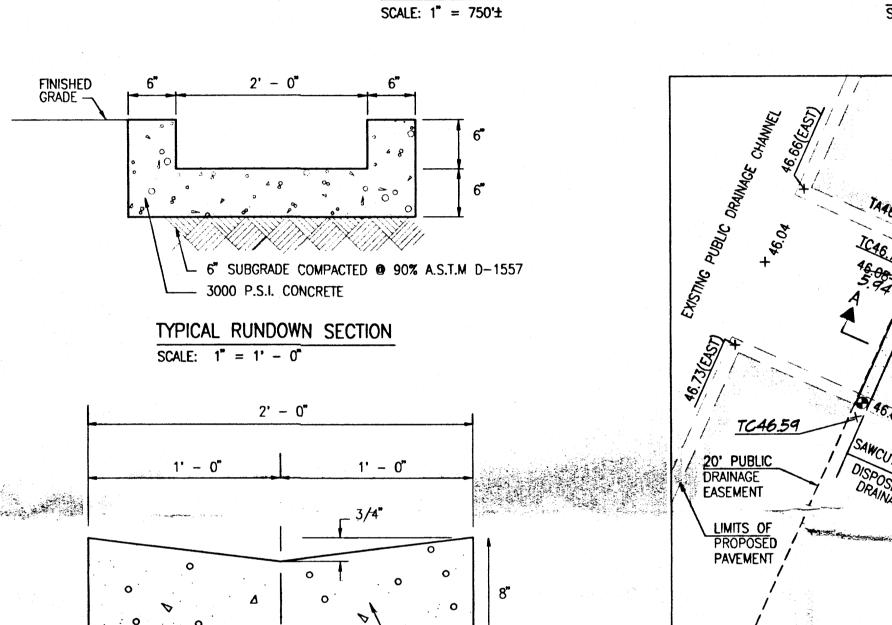
## VI. COMPARISON (OVERALL)

 $\Delta V_{100} = 48,000 - 29,410 = 18,590 \text{ CF (INCREASE)}$ 

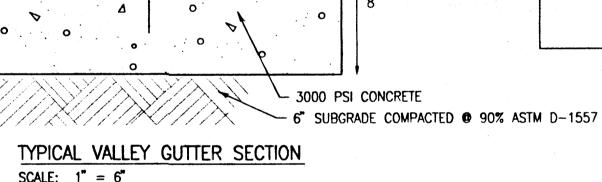
 $\Delta Q_{100} = 30.4 - 22.5 = 7.9 \text{ CFS (INCREASE)}$ 

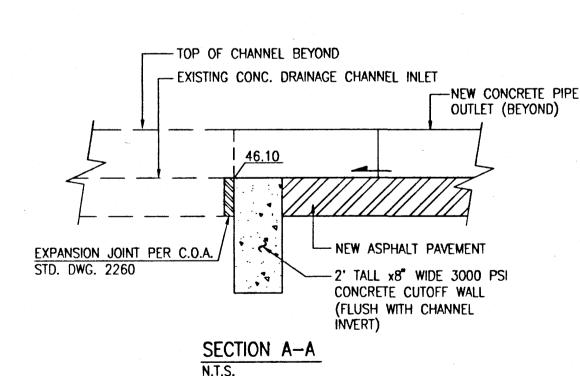
## VII. COMPARISON (NET)

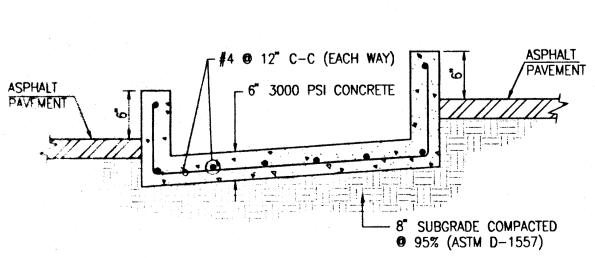
 $\Delta Q_{100} = 22.5 - 7.7 = 14.8 \text{ CFS (DECREASE THROUGH DETENTION)}$ PEAK DISCHARGE = 7.7 CFS < ALLOWABLE (8.5 CFS MAX. PER G16/D95C) SEE ATTACHED AHYMO CALCULATIONS FOR ROUTING



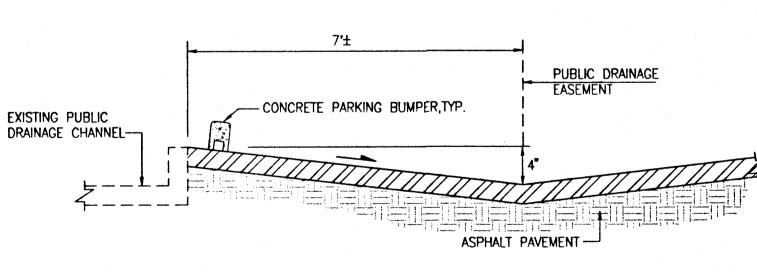
VICINITY MAP







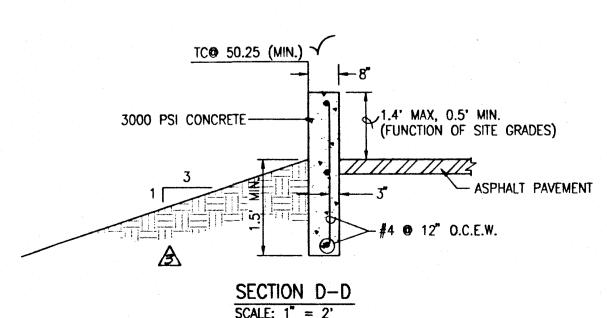
SECTION B-B



SECTION C-C SCALE:  $1^n = 2^n$ 

DRAINAGE INLET DETAIL

### 1. DIRECT DRAINAGE TO CHANNEL SHALL ONLY BE ALLOWED AS AN "OVERFLOW CONDITION" 2. CONCRETE PARKING BUMPERS SHALL BE PROVIDED TO PREVENT SITE VEHICLES FROM DRIVING INTO DRAINAGE CHANNEL



JMA JOB NO. 2004.003.1

☐ 6010—B MIDWAY PARK BLVD. N.E.
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12/13/04

**AVENUE** 

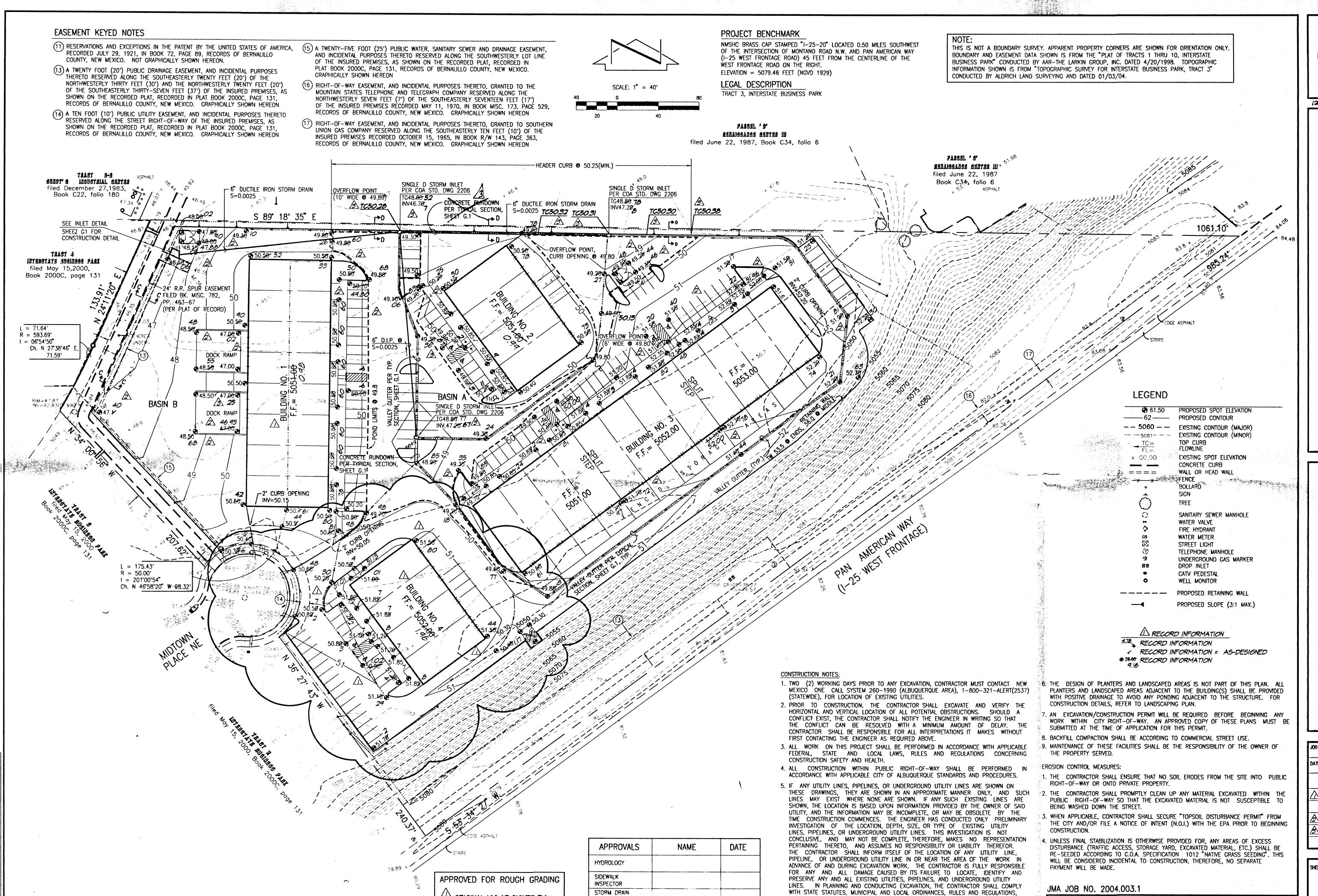
PANEL 138 OF 825

STORM DRAIN

邕 X

0325 DATE: 17 FEBRUARY 2004 REVISIONS 3 CERTIFY FOR PERM CO. BLDGS 1-4

SHEET NO.



IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.

ORIGINAL MYLAR SIGNED BY

BRADLEY L. BINGHAM

3/09/2004

MAINTENANCE

12/13/04 1104/0

0325

DATE: 17 FEBRUARY 2004

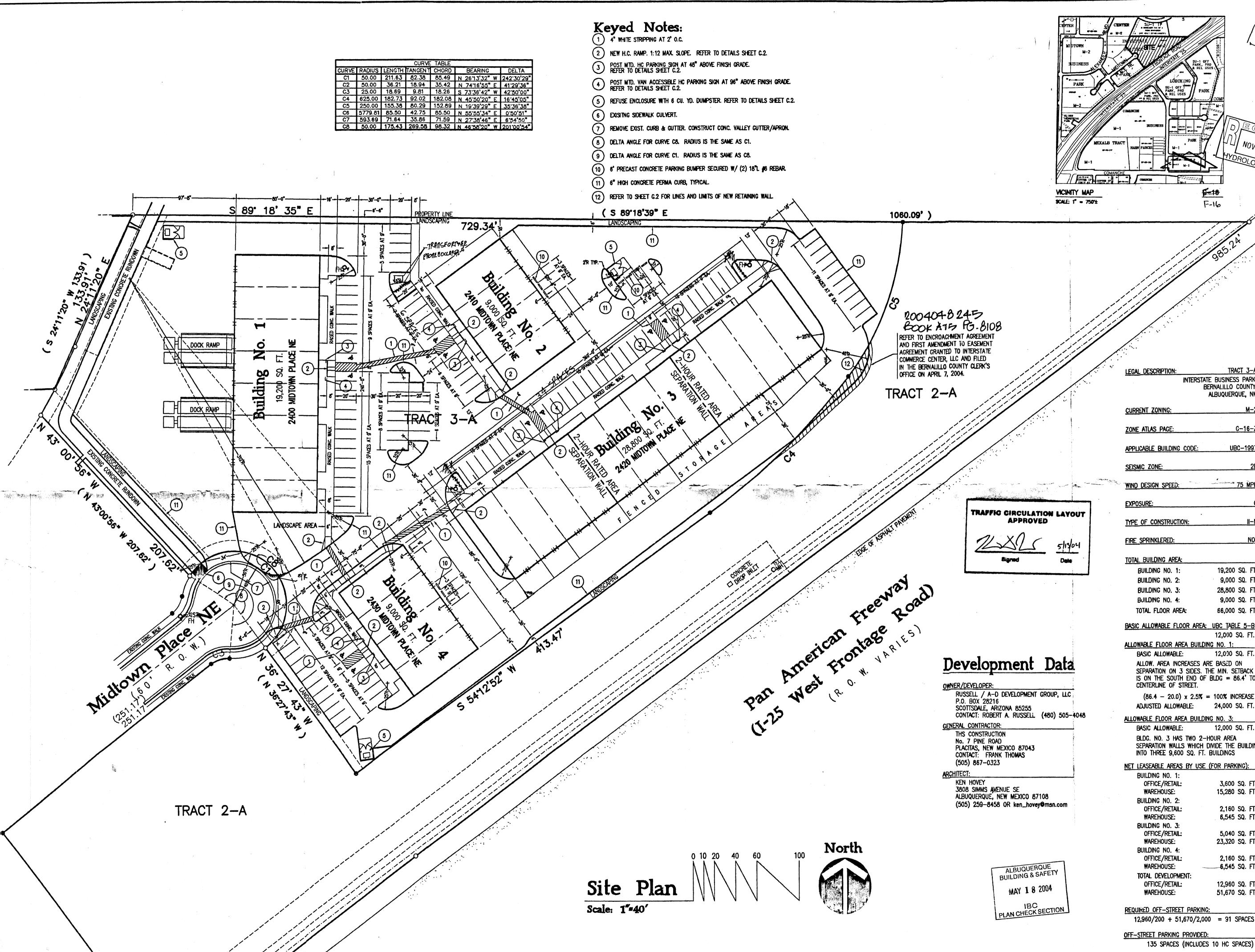
REVISIONS AS-BUILT & CERT.

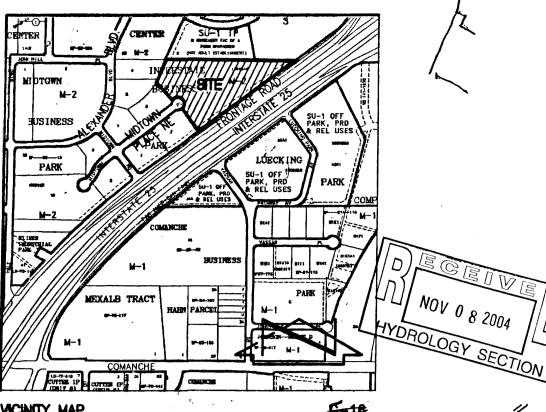
FOR TEMP C.O. BLDG TEMP C. O. BLDGS 1-3 B PERM. C. O. BLDGS 1-4

JEFF MORTENSEN & ASSOCIATES, INC.

3 6010-B MIDWAY PARK BLVD. N.E.

ALBUQUERQUE | NEW MEXICO 87109
| ENGINEERS | SURVEYORS (505) 345-4250
| FAX: 505 345-4254 | Email: jmainc@swcp.com





INTERSTATE BUSINESS PARK, BERNALILLO COUNTY, ALBUQUERQUE, NM

ZONE ATLAS PAGE: <u>G-16-Z</u> APPLICABLE BUILDING CODE:

TYPE OF CONSTRUCTION

TOTAL BUILDING AREA:

19,200 SQ. FT. 9,000 SQ. FT. BUILDING NO. 2: 28,800 SQ. FT. BUILDING NO. 3: BUILDING NO. 4: 9,000 SQ. FT. TOTAL FLOOR AREA: 66,000 SQ. FT.

BASIC ALLOWABLE FLOOR AREA: UBC TABLE 5-B 12,000 SQ. FT. ALLOWABLE FLOOR AREA BUILDING NO. 1:

BASIC ALLOWABLE: 12,000 SQ. FT. ALLOW. AREA INCREASES ARE BASED ON SEPARATION ON 3 SIDES. THE MIN. SETBACK IS ON THE SOUTH END OF BLDG = 86.4' TO CENTERLINE OF STREET.

ADJUSTED ALLOWABLE: 24,000 SQ. FT. ALLOWABLE FLOOR AREA BUILDING NO. 3:

BASIC ALLOWABLE: BLDG. NO. 3 HAS TWO 2—HOUR AREA SEPARATION WALLS WHICH DIVIDE THE BUILDING INTO THREE 9,600 SQ. FT. BUILDINGS

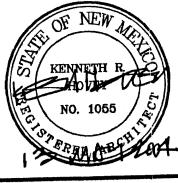
NET LEASEABLE AREAS BY USE (FOR PARKING):

BUILDING NO. 1: OFFICE/RETAIL: 3,600 SQ. FT. 15,280 SQ. FT. WAREHOUSE: BUILDING NO. 2: OFFICE/RETAIL: 2,160 SQ. FT. 6,545 SQ. FT. WAREHOUSE: BUILDING NO. 3: OFFICE/RETAIL: 5,040 SQ. FT. 23,320 SQ. FT. WAREHOUSE: BUILDING NO. 4: OFFICE/RETAIL: 2,160 SQ. FT. 6,545 SQ. FT. WAREHOUSE: TOTAL DEVELOPMENT: OFFICE/RETAIL: 12,960 SQ. FT. 51,670 SQ. FT.

REQUIRED OFF-STREET PARKING:

12,960/200 + 51,670/2,000 = 91 SPACES

135 SPACES (INCLUDES 10 HC SPACES)



enter ommer Interstate
2400 MIDTOWN PLACE NE,
DEVELOPED BY INTERS

JOB NO: 0325 DATE: 13 FEBRUARY 2004 REVISIONS 12 MAY 2004

SHEET NO.