DRAINAGE PLAN

I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS PROJECT, LOCATED IN THE INDUSTRIAL PARK AREA DIRECTLY EAST OF THE HEALTHSOUTH REHAB CENTER, REPRESENTS DEVELOPMENT OF AN EXISTING UNDEVELOPED AREA. AT PRESENT, THE SITE IS A DIRT AND NATURALLY DEVELOPED LOT USED FOR EMPLOYEE PARKING. IT IS PROPOSED TO CONSTRUCT A GATED, PAVED PARKING LOT FOR THE EMPLOYEES OF HEALTHSOUTH. THE DRAINAGE CONCEPT FOR THIS SITE WILL BE TO HAVE FREE DISCHARGE FROM THE SITE INTO THE ADJACENT STREET.

THIS SUBMITTAL IS MADE IN SUPPORT OF SITE PLAN APPROVAL FOR GRADING AND BUILDING PERMIT.

II. PROJECT DESCRIPTION

AS SHOWN BY THE VICINITY MAP, THE SITE IS LOCATED JUST WEST OF THE HEALTHSOUTH REHABILITATION CENTER, ALONG ELLISON STREET NE. THE CURRENT LEGAL DESCRIPTION IS TRACT 4B-1, INTERSTATE INDUSTRIAL TRACT, UNIT 5. AS INDICATED BY PANEL 137 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS, PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, NOVEMBER 19, 2003, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE. A DESIGNATED FLOOD HAZARD ZONE IS IDENTIFIED, TO THE SOUTH OF THE SITE. THIS FLOOD HAZARD ZONE IS THE ARROYO DEL PINO. APPROXIMATELY HALF THE EXISTING SITE DRAINS SOUTHWEST INTO THE ARROYO DEL PINO, THE OTHER HALF FLOW NORTH TO ELLISON STREET, THEN WEST TO JEFFERSON ST NE, AND SOUTH ALONG JEFFERSON ST INTO THE ARROYO DEL PINO. THE CONSTRUCTION PROPOSED FOR THIS SITE WILL NOT ADVERSELY IMPACT DOWNSTREAM FLOW OR DOWNSTREAM PROPERTIES AND WILL NOT ALTER THE EXISTING DRAINAGE PATTERNS.

III. BACKGROUND DOCUMENTS & RESEARCH

THE FOLLOWING ITEMS WERE REVIEWED IN THE PREPARATION OF THIS SUBMITTAL:

A. A TOPOGRAPHIC SURVEY OF THE EXISTING SITE PREPARED BY JMA, INC. DATED 10/2005. THE SUBJECT SURVEY SHOWS THE EXISTING IMPROVEMENTS. THE BOUNDARY DATA SHOWN IS FROM THE A.L.T.A/A.C.S.M SURVEY PERFORMED BY JMA FOR THE ADJACENT PROPERTY (TRACT 4B-2-A, INTERSTATE INDUSTRIAL TRACT, UNIT 5) IN JUNE, 1997 AND BASED UPON THE PLAT OF RECORD.

IV. EXISTING CONDITIONS

AT PRESENT, THE SITE IS LARGELY UNDEVELOPED. EXISTING CONDITIONS ARE ILLUSTRATED BY THE GRADING PLAN. THE NORTHWEST PORTION OF THE SITE IS CURRENTLY USED AS A DIRT PARKING AREA FOR HEALTHSOUTH EMPLOYEES ONLY. THE WEST EDGE OF THE SITE IS BORDERED BY A CONCRETE WALL AND CHAINLINK FENCE SEPARATING IN FROM THE HEALTHSOUTH REHAB CENTER, THIS WALL BLOCKS ONSITE FLOWS FROM FLOWING INTO THE REHAB CENTER AND DIRECTS THE RUNOFF NORTH OR SOUTH. A PAVED ROAD TRAVERSES THE ENTIRE EAST EDGE OF THE SITE, SEPARATING IT FROM THE UNIVERSITY VOLKSWAGEN BUSINESS TO THE EAST. THERE IS A CONCRETE DRIVEPAD FROM THIS PAVED ROAD THAT ALLOWS ACCESS TO THE EXISTING DIRT PARKING LOT. THE NORTHERN THIRD OF THE SITE DRAINS FROM EAST TO NORTHWEST, FLOWING INTO ELLISON STREET NE, WHERE THE RUNOFF FLOWS IN CURB AND GUTTER WEST TO JEFFERSON STREET NE, WHERE THE CITY RECENTLY CONSTRUCTED INTERSECTION IMPROVEMENTS THAT INCLUDE PUBLIC STORM DRAIN MODIFICATIONS. STREET RUNOFF IS COLLECTED IN INLETS AND TRANSFERRED SOUTH VIA NEWLY CONSTRUCTED AND UPSIZED STORM DRAINS TO THE ARROYO DEL PINO. THE CENTRAL AND SOUTHERN TWO-THIRDS OF THE SITE DRAINS FROM EAST TO SOUTHWEST AND DRAINS INTO AN EXISTING STORM INLET THAT DIRECTS THE RUNOFF VIA STORM DRAIN INTO THE ARROYO DEL PINO. OFFSITE FLOWS ARE NOT RECEIVED FROM THE ADJACENT PROPERTIES.

V. DEVELOPED CONDITIONS

THE PROPOSED CONSTRUCTION CONSISTS OF REPLACING THE EXISTING DIRT PARKING AREA WITH AN ASPHALT PAVED PARKING LOT IN THE NORTHWEST CORNER OF THE SITE THAT WILL BE FENCED AND GATED TO ALLOW ONLY EMPLOYEES OF HEALTHSOUTH REHAB CENTER TO ENTER. AN UNCURBED, ASPHALT PAVED DRIVEWAY WILL BE BUILT CONNECTING TO THE EXISTING CONCRETE DRIVE PAD ALONG THE EXISTING ROAD THAT TRAVERSES THE EASTERN EDGE OF THE SITE. THIS PARKING LOT WILL INCLUDE A PROPOSED SIDEWALK TO ACCESS THE EXISTING SIDEWALK ALONG ELLISON STREET. LANDSCAPING WILL BE REQUIRED AROUND THE EDGES OF THE NEW PARKING LOT. RUNOFF FROM THE NORTHERN THIRD OF THE SITE THAT IS CAPTURED WITHIN THE NEW LOT WILL BE DRAINED TO THE NORTHWEST CORNER WHERE A CONCRETE RUNDOWN WITH SIDEWALK CULVERTS WILL DIRECT THE FLOWS NORTH TO ELLISON STREET. FROM THIS POINT, THE DRAINAGE PATH WILL BE THE SAME AS DETAILED IN THE EXISTING CONDITIONS. RUNOFF IN THE CENTRAL AND SOUTHERN TWO-THIRDS OF THE SITE WILL NOT BE AFFECTED BY THE DEVELOPMENT. THE VOLUME AND PEAK DISCHARGE RATE FOR THE SITE WILL INCREASE SLIGHTLY, BUT THESE PROPOSED DEVELOPMENTS WILL NOT ALTER THE EXISTING AND/OR APPROVED DRAINAGE PATTERN OF THE SITE.

VI. GRADING PLAN

THE GRADING PLAN SHOWS 1.) EXISTING AND PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'-0" INTERVALS, 2.) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS, 3.) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 4.) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. AS SHOWN BY THIS PLAN, THE PROPOSED IMPROVEMENTS WILL CONSIST OF DEVELOPMENT OF A SMALL AREA OF THE TOTAL SITE. THIS DEVELOPMENT WILL CREATE A VERY SMALL INCREASE IN THE VOLUME AND PEAK DISCHARGE OF THE SITE, HOWEVER EXISTING AND/OR APPROVED DRAINAGE PATTERNS WILL NOT BE ALTERED, AND THE PROPOSED GRADING OF THE PARKING LOT WILL NOT HAVE AN ADVERSE IMPACT ON DOWNSTREAM CONDITIONS OR PROPERTIES.

VII. CALCULATIONS

CALCULATIONS ANALYZING THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT HAVE BEEN PREPARED FOR THIS PROJECT. 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 SHOWN BY THE RESULTS PRESENTED HEREON, THERE WILL BE A VERY SMALL INCREASE IN PEAK DISCHARGE AND RUNOFF VOLUME ASSOCIATED WITH THE PROPOSED DEVELOPMENT. THE CAPACITY OF THE NEW CONCRETE RUNDOWN WAS DETERMINED USING MANNING'S EQUATION.

VIII. CONCLUSION

THE FREE DISCHARGE OF RUNOFF FROM THIS PROJECT SITE TO ELLISON STREET IS APPROPRIATE DUE TO THE FOLLOWING FACTORS:

1. MODIFICATION TO AN EXISTING SITE WITHIN AN INFILL AREA
3. VERY SMALL INCREASE IN RUNOFF VOLUME AND PEAK DISCHARGE
4. NO ADVERSE IMPACT ON DOWNSTREAM CAPACITY OR DOWNSTREAM PROPERTIES
5. THE EXISTING AND APPROVED DRAINAGE PATTERNS (STATUS QUO) WILL NOT BE ALTERED AND HENCE MAINTAINED
6. PROXIMITY TO THE PINO ARROYO
7. RECENT STREET AND DRAINAGE IMPROVEMENTS AT THE INTERSECTION OF JEFFERSON AND ELLISON THAT DIVERT STREET RUNOFF SOUTH TO THE PINO ARROYO

CALCULATIONS

SITE CHARACTERISTICS

1. PRECIPITATION ZONE = 2
2. $P_{6,100} = P_{360} = 2.35$
3. TOTAL PROJECT AREA (A_T) = 193,920 SF / 4.45 AC
4. EXISTING LAND TREATMENT

A. ENTIRE SITE 193,920 SF = 4.45 AC

TREATMENT	AREA (SF/AC)	%
C	175,652 / 4.03	91
D	18,268 / 0.42	9

B. PROJECT SITE 56,435 SF = 1.30 AC

TREATMENT	AREA (SF/AC)	%
C	56,435 / 1.30	100

5. DEVELOPED LAND TREATMENT

A. ENTIRE SITE 193,920 SF = 4.45 AC

TREATMENT	AREA (SF/AC)	%
B	11,725 / 0.27	6
C	138,970 / 3.19	72
D	43,225 / 0.99	22

B. PROJECT SITE 56,435 SF = 1.30 AC

TREATMENT	AREA (SF/AC)	%
B	11,725 / 0.27	18
C	18,255 / 0.42	32
D	26,455 / 0.61	47

EXISTING CONDITION

A. ENTIRE SITE

1. VOLUME

$E_W = (E_AA_A+E_BA_B+E_CA_C+E_DA_D)/A_T$
$E_W = ((1.13*4.03)+(2.12*0.42))/4.45 = 1.22$ IN
$V_{100} = (E_W/12)A_T = (1.22/12)4.45 = 0.4538$ AC-FT 19,768 CF

2. PEAK DISCHARGE

$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$
$Q_P = Q_{100} = (3.14*4.03)+(4.70*0.42) = 14.6$ CFS ✓

B. PROJECT SITE

1. VOLUME

$E_W = (E_AA_A+E_BA_B+E_CA_C+E_DA_D)/A_T$
$E_W = (1.13*1.30))/1.30 = 1.13$ IN
~~$V_{100} = (E_W/12)A_T = (1.13/12)1.30 = 0.1220$ AC-FT 5,314 CF~~

2. PEAK DISCHARGE

$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$
$Q_P = Q_{100} = (3.14*1.30) = 4.1$ CFS ✓

DEVELOPED CONDITION

A. ENTIRE SITE

1. VOLUME

$E_W = (E_AA_A+E_BA_B+E_CA_C+E_DA_D)/A_T$
$E_W = ((0.78*0.27)+(1.13*3.19)+(2.12*0.99))/4.45 = 1.33$ IN
$V_{100} = (E_W/12)A_T = (1.33/12)4.45 = 0.4932$ AC-FT = 21,485 CF

2. PEAK DISCHARGE

$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$
$Q_P = Q_{100} = (2.28*0.27)+(3.14*3.19)+(4.70*0.99) = 15.3$ CFS ✓

B. PROJECT SITE

1. VOLUME

$E_W = (E_AA_A+E_BA_B+E_CA_C+E_DA_D)/A_T$
$E_W = ((0.78*0.27)+(1.13*0.42)+(2.12*0.61))/1.30 = 1.52$ IN
$V_{100} = (E_W/12)A_T = (1.52/12)1.30 = 0.1643$ AC-FT = 7,155 CF

2. PEAK DISCHARGE

$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$
$Q_P = Q_{100} = (2.28*0.27)+(3.14*0.42)+(4.70*0.61) = 4.8$ CFS

CONCRETE RUNDOWN CALCULATIONS FOR PROJECT SITE DRAINAGE

A. PEAK DISCHARGE CAPACITY OF RUNDOWN

$Q_{CAP} = 1.49/n\ AR^{2/3}S^{1/2}$
$n = 0.013$
$A = 0.5$ ft*2 ft $= 1.0$ ft^2
$WP = 0.5$ ft+0.5 ft+2 ft $= 3.0$ ft
$R = A/P = 0.33$ ft
$S = 0.04$ ft/ft
$Q_{CAP} = 11.00$ CFS
$Q_{CAP} = 11.00$ CFS$>Q_{100,DEV.PROJ.} = 4.8$ CFS

COMPARISON

A. ENTIRE SITE

1. VOLUME

$\triangle V_{100} = 21,485-19,768 = 1,717$ CF (INCREASE)

2. PEAK DISCHARGE

$\triangle Q_{100} = 15.30-14.63 = 0.66$ CFS (INCREASE)

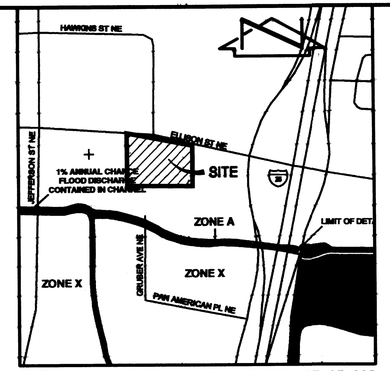
B. PROJECT SITE

1. VOLUME

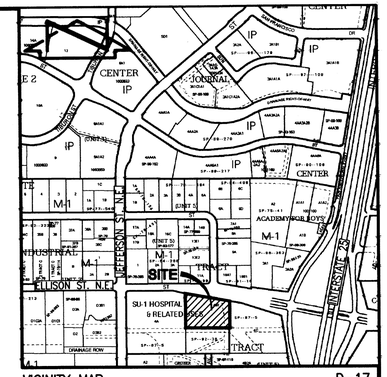
$\triangle V_{100} = 7,155-5,314 = 1,841$ CF (INCREASE)

2. PEAK DISCHARGE

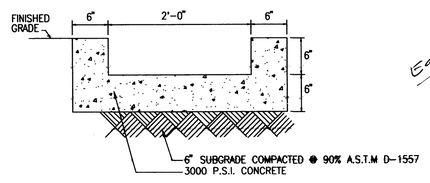
$\triangle Q_{100} = 4.78-4.07 = 0.72$ CFS (INCREASE) ✓



F.I.R.M. PANEL 137 OF 825
SCALE: 1" = 500'±

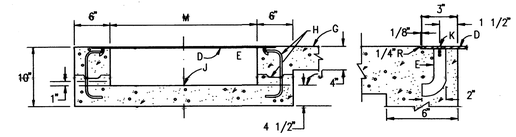


VICINITY MAP D-17
SCALE: 1" = 750'±



TYPICAL RUNDOWN SECTION (PRIVATE)
SCALE: 1" = 1'-0"

Ea Elw11



DOWEL DETAIL

CONSTRUCTION NOTES:

C. 3" RADIUS, (TYPICAL).
D. 3/8" CHECKERED STEEL PLATE.
E. ROD ANCHOR 1" x 5"
G. SIDEWALK GRADE
H. DOWEL AND JOINT, (OPTIONAL).
J. GUTTER FLOWLINE ELEV.
K. 3/8" x 1" F.H. C'SUNK STAINLESS STEEL MACHINE SCREW.
M. DRAIN WIDTH, 24" MAX. 12" MIN.

TYPICAL SIDEWALK CULVERT DETAILS (PRIVATE)
NOT TO SCALE

01-31-2006
JEFFREY G. MORTENSEN
NEW MEXICO
8547
REGISTERED PROFESSIONAL ENGINEER
12-29-2005

File Path: G:\WORK\2005\018\A
File Name: 50183DC.DWG
Plot Date: 01-31-2006
Plot Time: 11:27 am

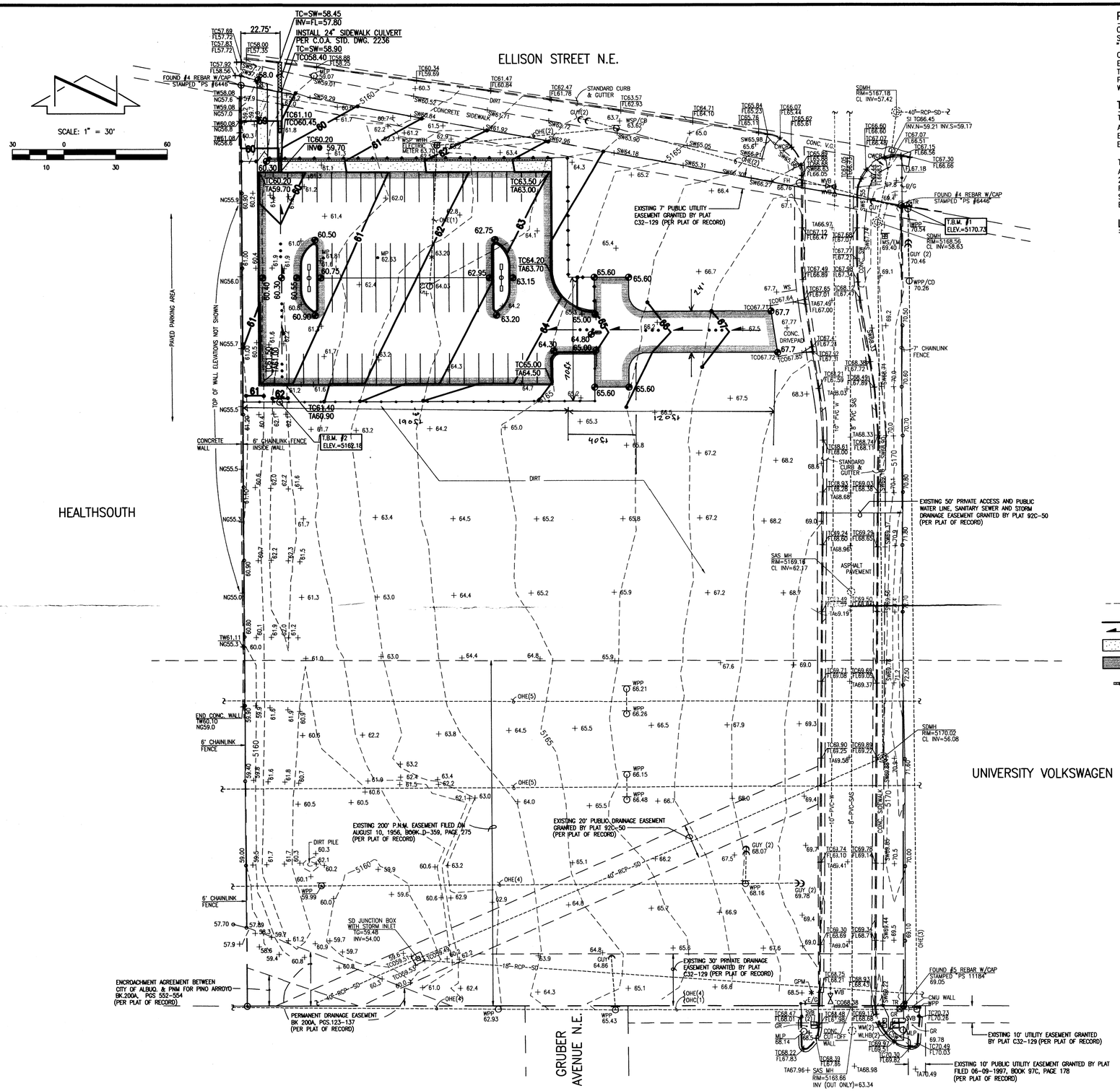
JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE NEW MEXICO 87109
ENGINEERS SURVEYORS (505) 345-4250
FAX: 505 345-4254 ESTABLISHED 1977

DRAINAGE PLAN, CALCULATIONS AND DRAINAGE SECTIONS
HEALTH SOUTH SATELLITE PARKING LOT

DESIGNED BY J.D.S.
DRAWN BY R.R.W.
APPROVED BY J.G.M.

NO.	DATE	BY	REVISIONS
1	01/06	J.G.M.	NO CHANGE

JOB NO. 2005.018.3
DATE 12-2005
SHEET 5 OF 8



PROJECT BENCHMARK – DESTROYED

CITY OF ALBUQUERQUE CONTROL MONUMENT (8-D17A). A STANDARD ACS BRASS TABLET SET IN THE TOP OF A CONCRETE POST PROJECTING 0.2' ABOVE THE GROUND AND STAMPED "8-D17A". THE STATION IS LOCATED NEAR THE SOUTHWEST CORNER OF THE INTERSECTION OF ELLISON STREET N.E. AND JEFFERSON STREET N.E.
ELEVATION = 5145.55 FEET (NGVD 1929)
THE ELEVATIONS OF T.B.M. #1 AND T.B.M. #2 ARE BASED ON THE TOPOGRAPHIC SURVEY PERFORMED BY THIS FIRM IN JUNE, 1997 AND THE PUBLISHED ELEVATION OF "8-D17A", WHICH WAS SUBSEQUENTLY DESTROYED.

T.B.M.

T.B.M. #1
A CHISELED SQUARE ON THE TOP OF CURB AT CORNER OF CURB ADJACENT TO THE NORTH EAST PROPERTY CORNER OF TRACT 4B-1, AS SHOWN ON THE DRAWING.
ELEVATION = 5170.73 FEET

T.B.M. #2
A SPIKE WITH A JMA RED CAP STAMPED "CONTROL POINT PS #11184" LOCATED APPROXIMATELY 21 FEET EAST OF THE FENCE ON THE WEST SIDE OF THE PROJECT AND APPROXIMATELY 195 FEET SOUTH OF THE BACK OF THE CURB ON THE SOUTH SIDE OF ELLISON STREET N.E. AS SHOWN ON THE DRAWING.
ELEVATION = 5162.18 FEET

LEGAL DESCRIPTION

TRACT 4B-1, INTERSTATE INDUSTRIAL TRACT, UNIT 5

LEGEND

CSW	CONCRETE SIDEWALK
CWCR	CONCRETE WHEELCHAIR RAMP
E/G	EDGE OF GRAVEL
EA	EDGE OF ASPHALT
FH	FIRE HYDRANT
FL	FLOWLINE
GPM	GAS PAINT MARK
GR	GRAVEL
INV	INVERT
MLP	METAL LIGHT POLE
MP	METAL POLE
MS/EM	METAL SIGN WITH ELECTRIC METER
NG	NATURAL GROUND
OHC(1)	OVERHEAD COMMUNICATIONS (NO. OF LINES)
OHE(2)	OVERHEAD ELECTRIC (NO. OF LINES)
RCP	REINFORCED CONCRETE PIPE
SAS MH	SANITARY SEWER MANHOLE
SDMH	STORM DRAIN MANHOLE
SI	STORM INLET
SVB	SPRINKLER VALVE BOX
SW	TOP OF SIDEWALK
TA	TOP OF ASPHALT
TC	TOP OF CURB
TCO	TOP OF CONCRETE
TG	TOP OF GRATE
TR	TELEPHONE RISER
TW	TOP OF WALL
W/	WITH
WLHB	WATER LINE HOT BOX
WM	WATER METER
WPP	WOOD POWER POLE
WPP/CD	WOOD POWER POLE WITH CONDUIT
WS	WOOD SIGN
WSP/CD	WOOD SERVICE POLE WITH CONDUIT
WVB	WATER VALVE BOX
+ 65.2	EXISTING SPOT ELEVATION
	EXISTING CONTOUR
65.3	PROPOSED SPOT ELEVATION
65	PROPOSED CONTOUR
	PROPOSED DIRECTION OF FLOW
	PROPOSED CONCRETE
	PROPOSED ASPHALT PAVEMENT
	PROPOSED WALL WITH FENCE

CONSTRUCTION NOTES:

1. 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.
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 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.
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 PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
5. 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.
6. 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.
7. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
8. BACKFILL COMPACTION SHALL BE ACCORDING TO ARTERIAL STREET USE.
9. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

EROSION CONTROL MEASURES:

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
2. 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.
3. WHEN APPLICABLE, CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.
4. UNLESS FINAL STABILIZATION IS OTHERWISE PROVIDED FOR, ANY AREAS OF EXCESS DISTURBANCE (TRAFFIC ACCESS, STORAGE YARD, EXCAVATED MATERIAL, ETC.) SHALL BE RE-SEEDED ACCORDING TO C.O.A. SPECIFICATION 1012 "NATIVE GRASS SEEDING". THIS WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.

APPROVALS	NAME	DATE
HYDROLOGY		
SIDEWALK INSPECTOR		
STORM DRAIN MAINTENANCE		

01-31-2006
NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER
JEFF MORTENSEN
12-29-2005

File Path: L:\MW\WORK\2005\018\
File Name: 50183GP.DWG
Plot Date: 01-31-2006
Plot Time: 11:25 am

JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE ☐ NEW MEXICO 87109
☐ ENGINEERS ☐ SURVEYORS (505) 345-4250
☐ FAX 505 345-4254 ☐ ESTABLISHED 1977

GRADING PLAN
HEALTH SOUTH SATELLITE PARKING LOT

DESIGNED BY J.G.M.
DRAWN BY S.G.H.
APPROVED BY J.G.M.

NO.	DATE	BY	REVISIONS
1	01/06	J.G.M.	NO CHANGE

JOB NO. 2005.018.3
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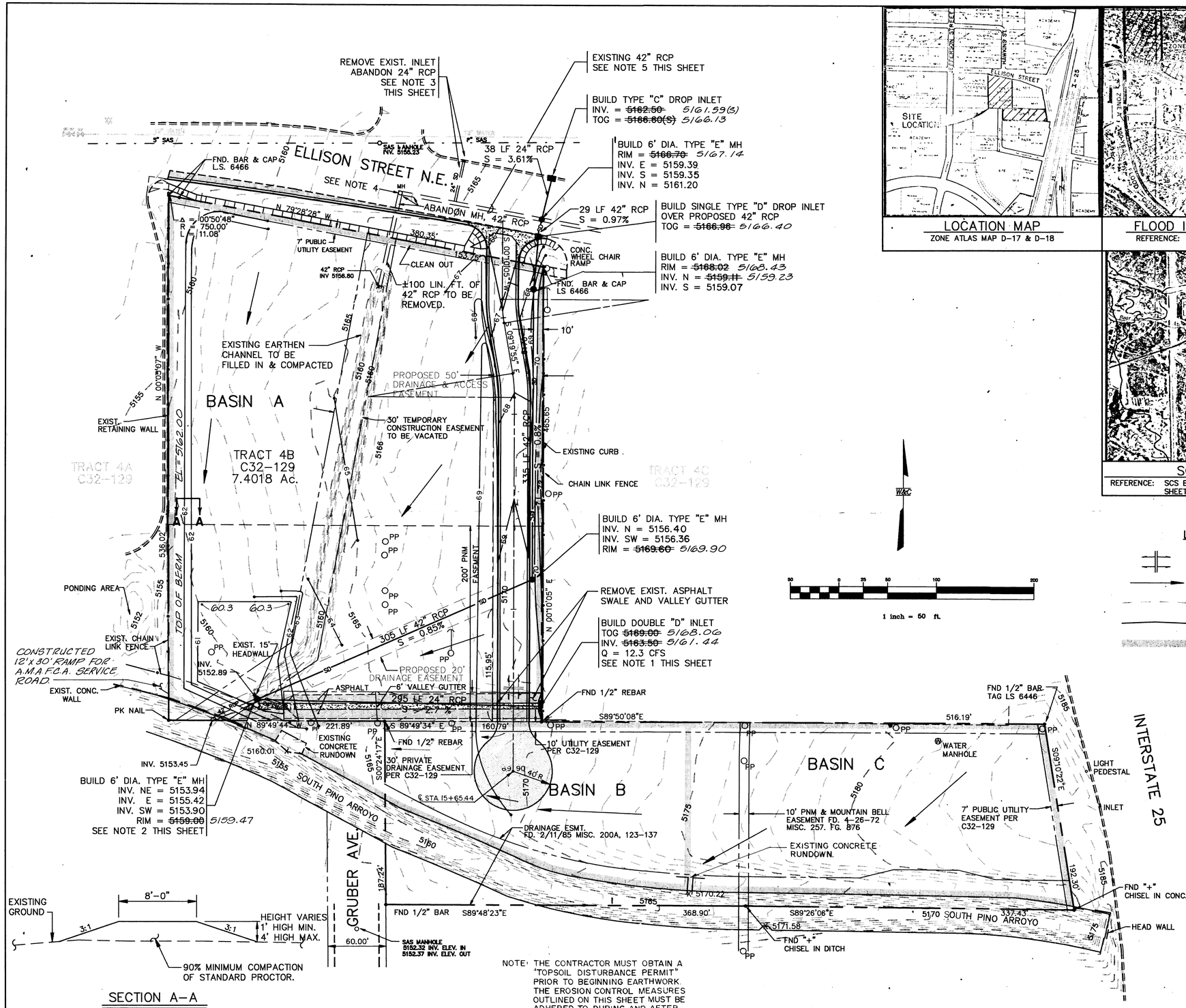
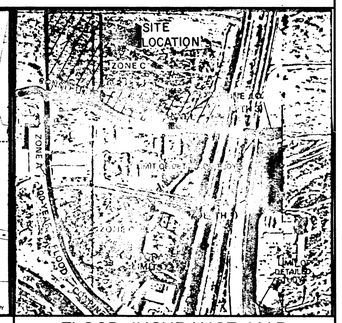
SHEET 4 OF 8



LOCATION MAP
ZONE ATLAS MAP D-17 & D-18



FLOOD INSURANCE MAP
REFERENCE: FLOOD INSURANCE STUDY PANEL 16

SOILS MAP
REFERENCE: SCS BERNALILLO COUNTY SOIL SURVEY SHEET NO. 21

NOTE:

1. CONSTRUCT A 6" WIDE CURB AROUND INLET. THE 6" WIDE CURB SHALL BE A MINIMUM OF 6" TO A MAXIMUM OF 12" HIGH. THE CONTRACTOR SHALL MATCH THE EXISTING CURB ELEVATIONS AT THE CURB TIES.
2. ON THIS CONTRACT THE CONTRACTOR SHALL INSTALL A 9" HIGH NEENAH BEEHIVE GRATE OR AN APPROVED EQUAL. THE BEEHIVE GRATE IS TO BE ADAPTED TO THE PROPOSED MANHOLE COVER.
3. THE EXISTNG GRATE SHALL BE REMOVED AND THE 24" RCP SHALL BE PLUGGED WITH SLURRY CONCRETE ALSO THE DROP INLET IS TO BE FILLED WITH SLURRY CONCRETE. THE CONCRETE CURB AND GUTTER SHALL BE RECONSTRUCTED PER THE C.O.A. STANDARD DETAIL.
4. THE EXISTING MANHOLE IS TO BE ABANDONED IN PLACE PER SECTION 920.6 OF THE C.O.A. STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
5. THE CONTRACTOR SHALL EXPOSE THE EXISTING 42" RCP STORM DRAIN PIPE. HE SHALL BREAK INTO RCP AND CONSTRUCT A 6' DIA. TYPE "E" MANHOLE. HE SHALL REMOVE ONE PIPE JOINT WEST OF NEW MANHOLE AND PLUG THE EXISTING 42" RCP THAT WILL BE ABANDONED IN PLACE. THE ABANDONED 42" RCP SHALL BE FILLED WITH CONCRETE SLURRY.

LEGEND

- WATER BLOCK
- DRAINAGE DIRECTION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- DRAINAGE BASIN

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE
1	WILSON & CO.	3/1991

AS-BUILT INFORMATION
CONTRACTOR UNIVERSAL
WORK STAKED BY WILSON CO DATE 6-92
INSPECTION'S PERFORMED BY WILSON DATE 6-92
FIELD VERIFICATION BY WILSON DATE 6-92
DRAWING CORRECTED BY WILSON DATE 6-92
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
ACS BRASS TABLET, STAMPED "8-D17A" SET IN TOP OF A CONCRETE POST PROJECTING 0.2' ABOVE GROUND. TO REACH THE STATION FROM THE INTERCHANGE AT I-25 AND OSUNA RD. N.E., GO WEST ON OSUNA 0.3 MILES TO JEFFERSON ST. TURN RIGHT, GO NORTH ON JEFFERSON ST. 0.2 MILES TO THE STATION ON THE LEFT ±45' FROM JEFFERSON ST. CENTERLINE.
EL. = 5145.55

ENGINEER'S SEAL
DAVID B. THOMPSON 9673 REGISTERED PROFESSIONAL ENGINEER
10-23-91

ENGINEER'S CERTIFICATION
I DAVID THOMPSON, DO HEREBY CERTIFY THE AS-BUILT INFORMATION HEREON IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING PLAN.

RECEIVED AUG 27 1992 HYDROLOGY DIVISION
8-25-92

NO.	DATE	REMARKS	BY
REVISIONS			
		WILSON & COMPANY, ENGINEERS & ARCHITECTS	
		DESIGNED BY	RM 8/91
		DRAWN BY	KDB 8/91
		CHECKED BY	RM 8/91

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: TRACT 4B-1 AND 4B-2
INTERSTATE INDUSTRIAL TRACT - UNIT 5
DRAINAGE AND GRADING PLAN

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC Chairman			Water		11/17/92
Transportation		10-21-91	Waste Water		"
Hydrology					

WILSON & COMPANY
WCEA #91-512B

PROJECT NO. 4334.90
MAP NO. D-17 & E-17
SHEET 3 OF 9