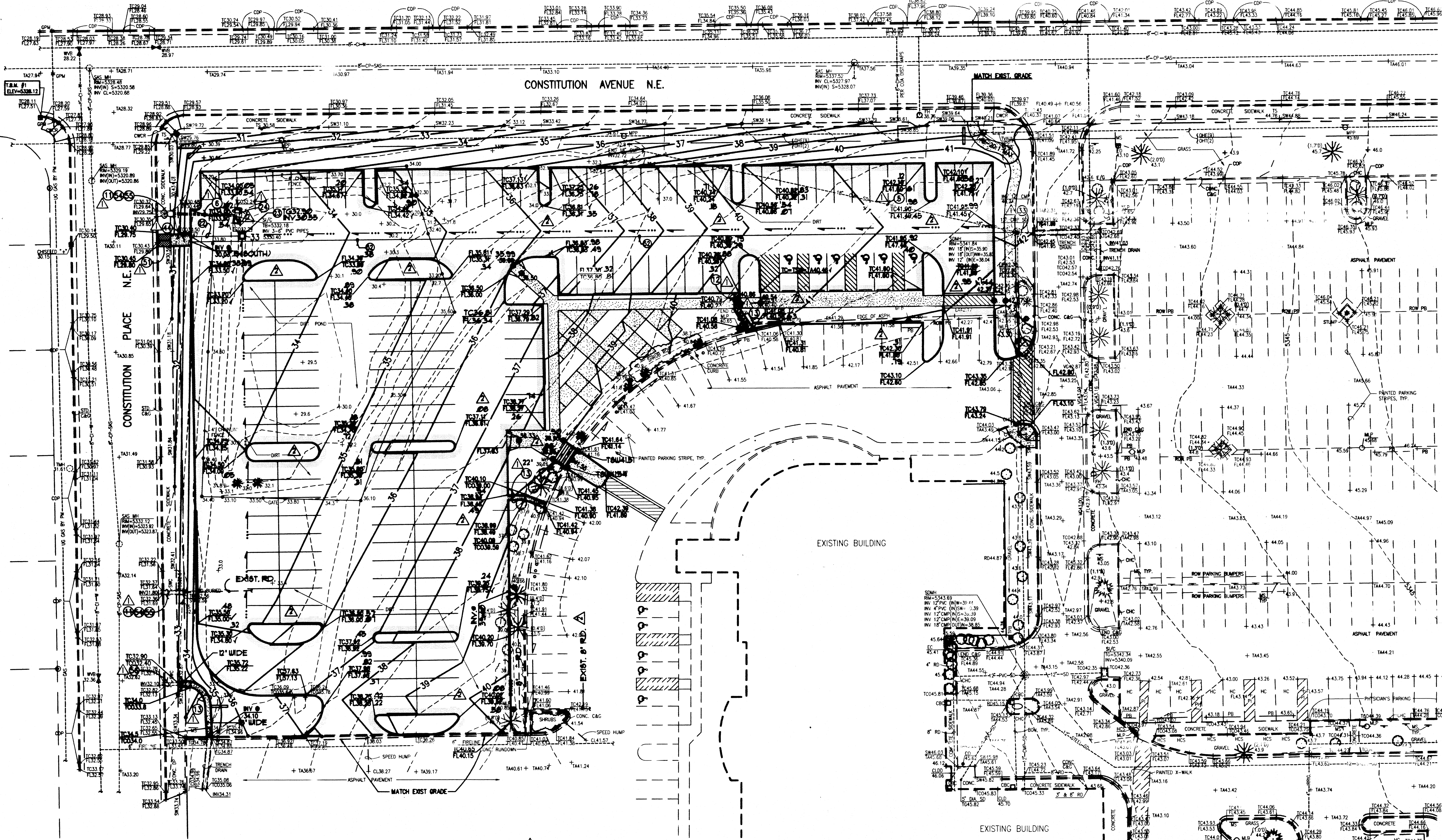




CONSTRUCTION NOTES:

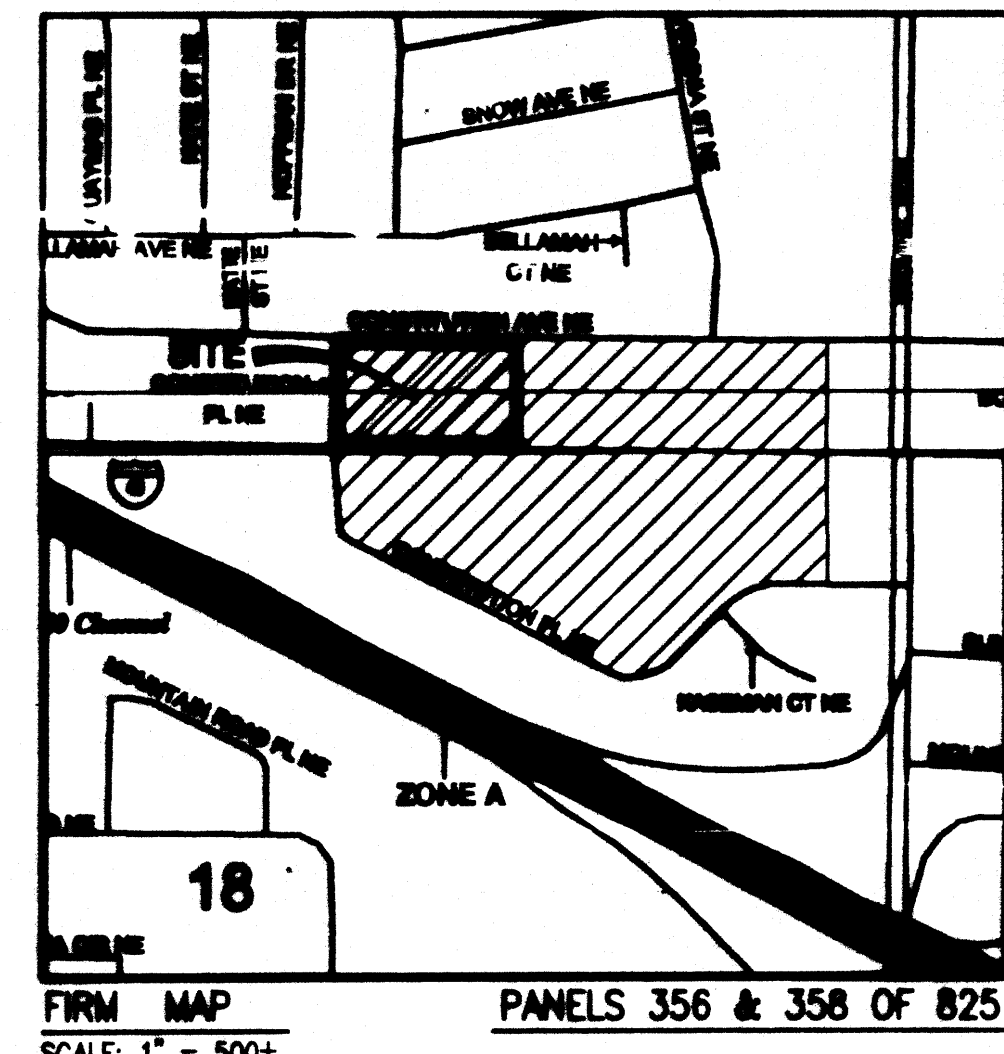
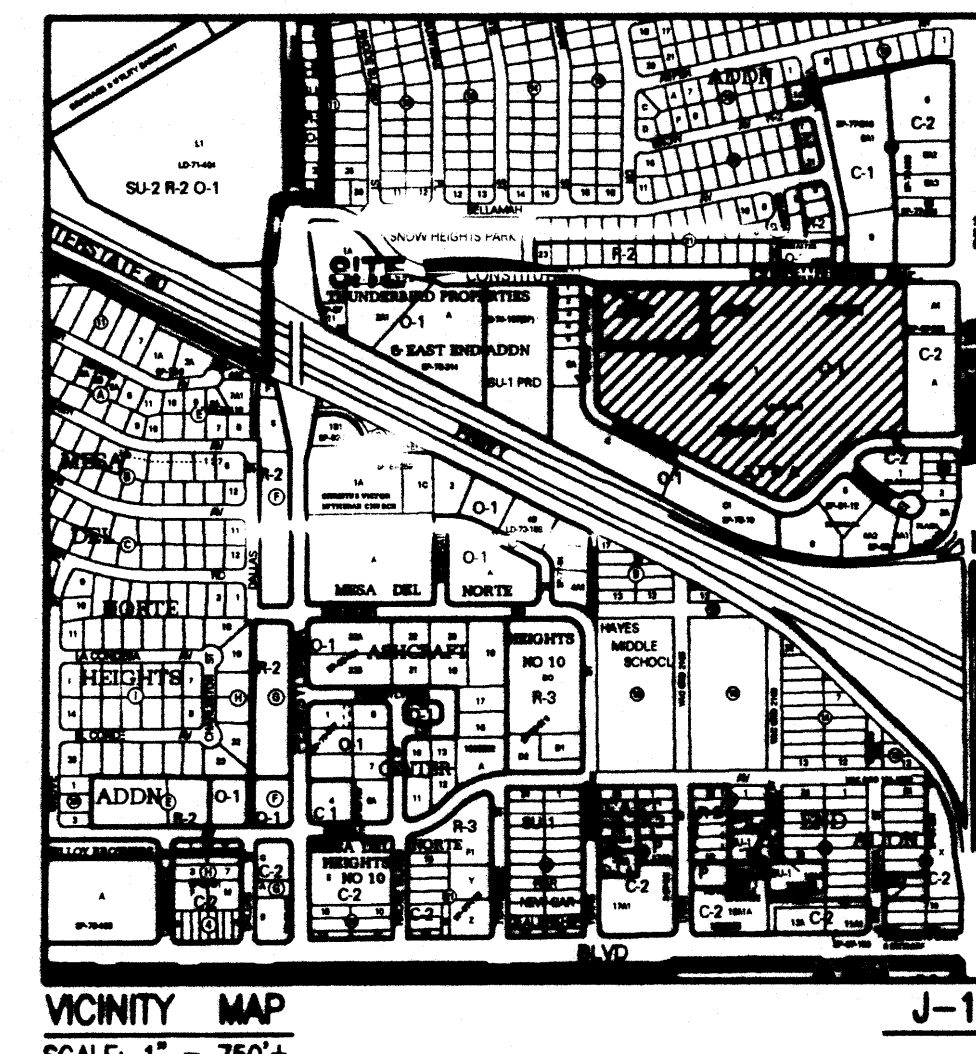
1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (800) 321-ALERT (2537) (STATEWIDE), FOR LOCATION OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. 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 OF THESE NOTES 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 HERETO. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE 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-SEEDING 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		

STORM DRAINAGE KEY NOTES:

5. REMOVE AND DISPOSE OF 18" CMP STORM DRAIN PIPE 4'
6. REMOVE AND DISPOSE OF 8" PVC PIPE 4'
11. CONSTRUCT STANDARD CURB AND GUTTER PER DETAIL, SHEET 3
12. CONSTRUCT SIDEWALK CULVERT, TYPICAL, PER DETAIL, SHEET 3
13. CONSTRUCT RUNDOWN PER DETAIL, SHEET 1
22. INSTALL 18" CMP STORM DRAIN @ S = 0.02
23. INSTALL SINGLE 12" STORM INLET PER DETAIL, SHEET 1 W/ T.O.G. @ 32.00 AND INV 18" (OUT) @ 30.00
24. REMOVE AND DISPOSE EXISTING STORM INLET 4'
33. EXISTING MANHOLE TO REMAIN; CONNECT NEW 18" CMP TO EXISTING MANHOLE W/ INV OUT @ 35.82
44. CONSTRUCT RUNDOWN FROM HEADWALL PER DETAIL, SHEET 1
51. CONSTRUCT DOUBLE 24" SIDEWALK CULVERT, TYPICAL, PER DETAIL, SHEET 3 AND C.O.A. STANDARD DWG. 2236
52. INSTALL 18" CMP STORM DRAIN @ S = 0.015
54. NEATLY REMOVE AND DISPOSE OF EXISTING SIDEWALK CULVERT
55. CONSTRUCT 6" WIDE CONCRETE SIDEWALK PER DETAIL, SHEET 1
56. EXISTING SIDEWALK CULVERT TO REMAIN



Legend:	
AL/C	AREA LIGHT
ASV	ANTI-SIPHON VALVE
BOH	BUILDING OVERHANG
BR	BRICK RACK
CAG	CURB AND GUTTER
CBN	CONCRETE BENCH
CDP	CONCRETE DRIVEPAD
CHC	CONCRETE HEADER CURB
CLD	CENTERLINE OF DOOR
CLOD	CENTERLINE OF DOUBLE DOOR
CLF	CHAIN LINK FENCE
CO	SANITARY SEWER CLEANOUT
CONC	CONCRETE
COP	CURB OPENING
CRD	CONCRETE RUNDOWN
CRW	CONCRETE RETAINING WALL
CHP	CONCRETE WHEELCHAIR RAMP
DRP	DRIVEPAD
E/G	EDGE OF GRASS
EA	EDGE OF ASPHALT
EC	ELECTRIC CONDUIT
EO	ELECTRIC OUTLET IN CONCRETE
EPB	ELECTRIC PULLBOX
FL	FLAG POLE
FP	GAS PUMP MARK
GPW	HANDICAP PARKING SIGN
HCS	INVERT
IRRG	IRRIGATION
MBC	METAL BUILDING COLUMN
MBX	METAL LIGHT POLE
MP	METAL POLE
MPP	METAL POWER POLE
MS	METAL SIGN
OE(4)	OVERHEAD ELECTRIC (NO. OF LINES)
OE(2)	OVERHEAD TELEPHONE (NO. OF LINES)
PI	PARKING BUMPER
PLB	PAINTED ISLAND
PLB	PAINT MARK
PM	PAINT MARK
SAS MH	SANITARY SEWER MANHOLE
SDT	SPRINKLER CONTROL TIMER
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SI	STORM INLET
S/C	STORM INLET IN CONCRETE
STD, CAG	STANDARD CURB AND GUTTER
ST	STEEL
SW	TOP OF SIDEWALK
SWC	SIDEWALK CULVERT
TA	TOP OF ASPHALT
TC	TOP OF CURB
TCO	TOP OF CONCRETE
TCMH	TOP OF GRADE
TMH	TELEPHONE MANHOLE
TPB	TELEPHONE PULLBOX
TPB	TELEPHONE RISER/PULLBOX
TS	TRAFFIC SIGN
TVALT	TELEPHONE VAULT
UC	UNDERGROUND
VG	VALLEY GUTTER
W/MH	WITH METAL HANDRAIL
WB	WATER VALVE BOX
X-WALK	CROSSWALK
	EXISTING CONTOUR
	EXISTING SPOT ELEVATION
	EXISTING BOUNDARY
	EXISTING SHRUB
	EXISTING DECIDUOUS TREE (CALIPER SIZE)
	EXISTING CONIFEROUS TREE (CALIPER SIZE)

LEGAL DESCRIPTION
TRACT 1, THE EAST END ADDITION

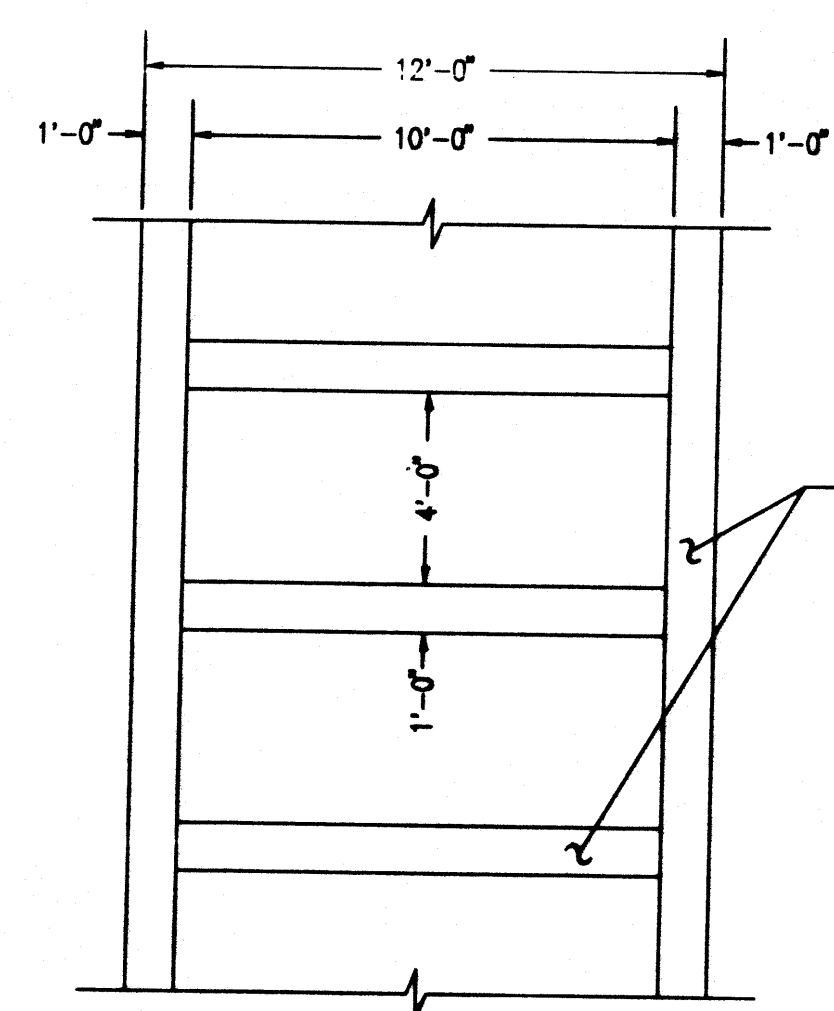
PROJECT BENCHMARK
CITY OF ALBUQUERQUE, New Mexico, shown "1"-1/4", SET IN TOP OF A CONCRETE POST WHICH SETS OUT NORTH OF THE NORTH CORNER OF A CONCRETE SIDEWALK AND FLUSH WITH THE TOP OF SIDEWALK PAVEMENT ON THE NORTH SIDE OF CONSTITUTION AVE. N.E. AND BETWEEN PENDING PLANNED BLDG. AND CONSTITUTION PLACE N.E. ON THE SOUTH SIDE OF SHOW HEIGHTS PARK.
ELEVATION = 5320.05 FEET (N.S.L.S.)

T.B.M.
TOP OF CURB ELEVATION LOCATED AT THE S.E. CORNER OF THE INTERSECTION OF CONSTITUTION AVE. N.E. AND CONSTITUTION PLACE N.E. AS SHOWN ON THE DRAWING ON SHEET 1.
ELEVATION = 5320.05 FEET (N.S.L.S.)

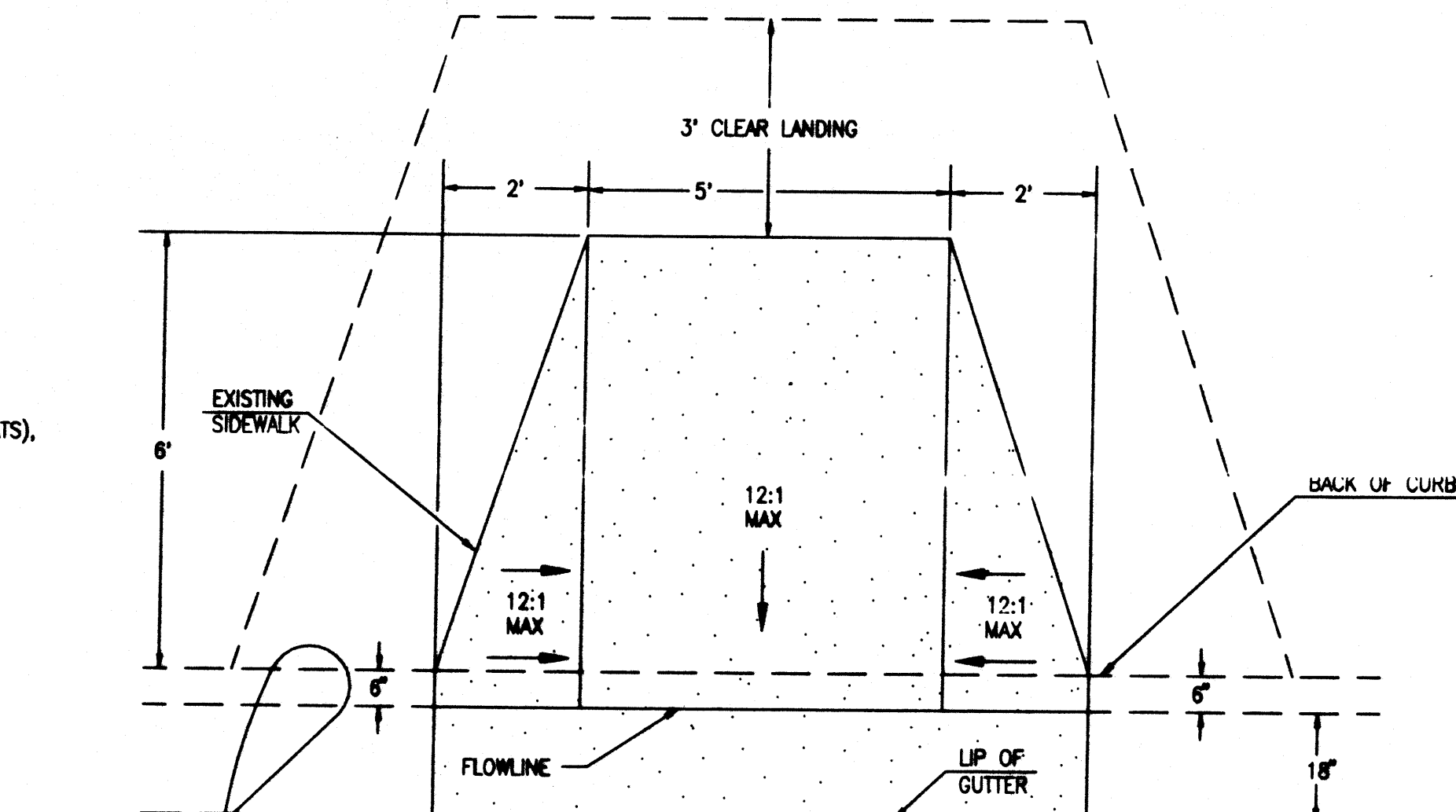
Final Construction Documents

Parking Area A
PMG Constitution
8300 Constitution Avenue N.E.
Albuquerque, New Mexico
Preliminary Project No. 1000002

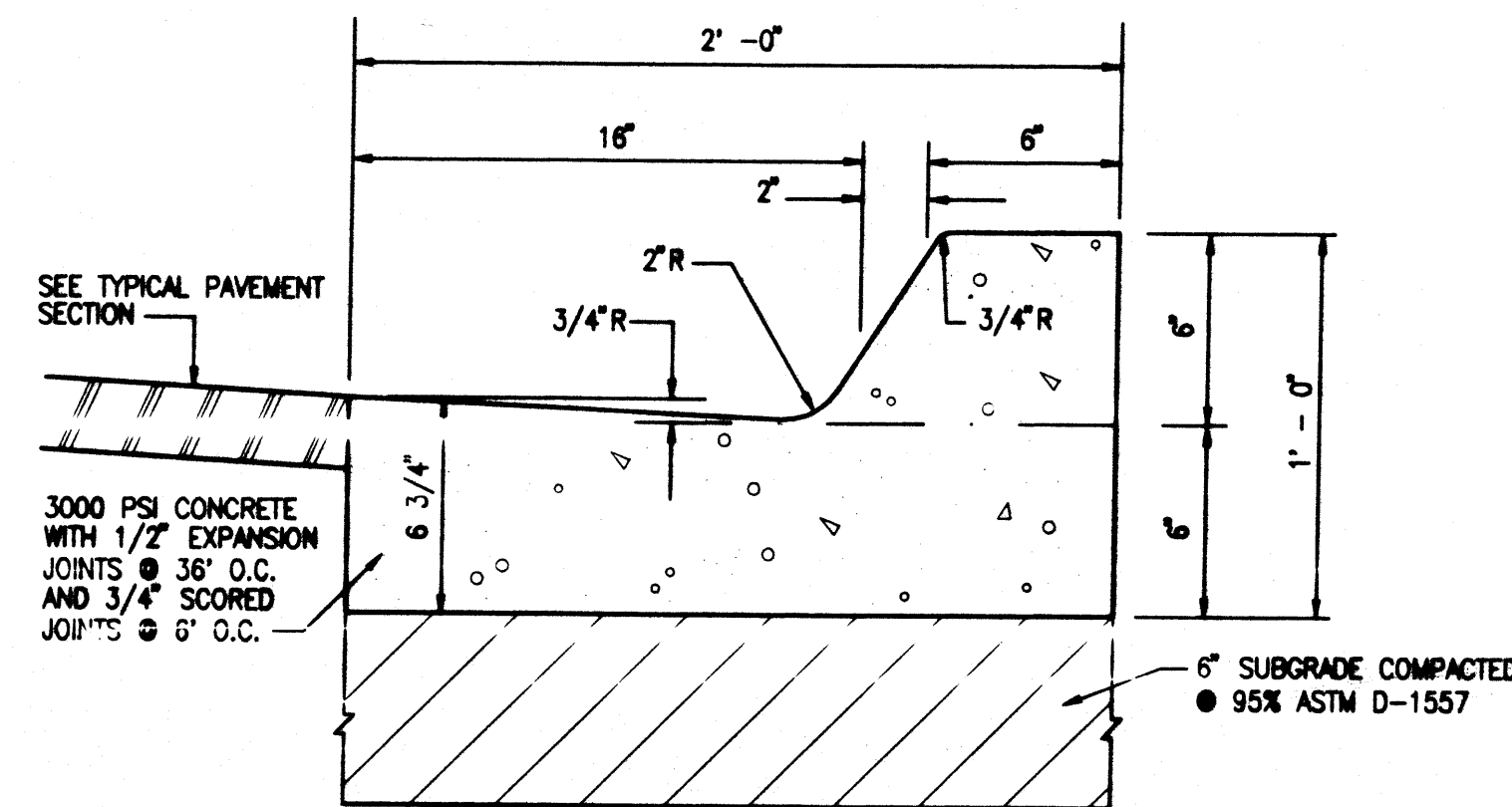
Drawn: JMA Checked: JGM
By: JGM
Proj: 200431 Date: 10/21/2005
© 2005 KEVIN GEORGES & ASSOCIATES, P.A.
DRAINAGE CERT
EXPANDED KEYED NOTES
Revisions: 02/21/2006
Architect: JGM
Engineer: JGM



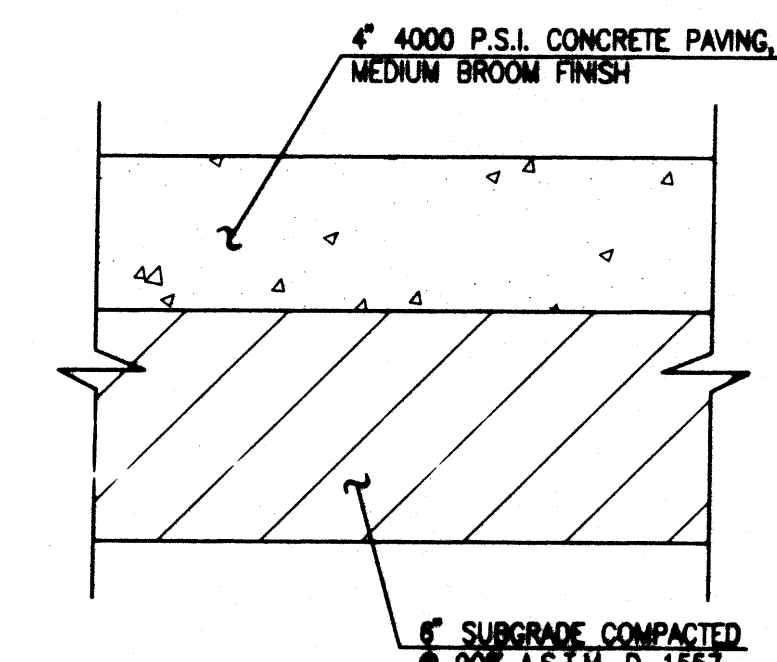
NEW CROSSWALK DETAIL
SCALE: 1" = 4'



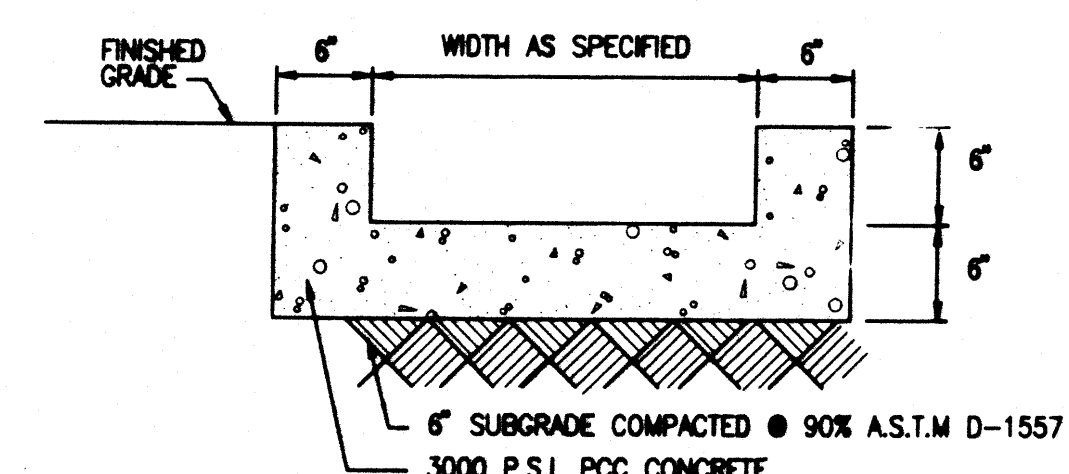
TYPICAL WHEELCHAIR ACCESS RAMP DETAIL
SCALE: 1" = 2'



TYPICAL SIX-INCH CURB & GUTTER
SCALE: 1" = 0'-6"

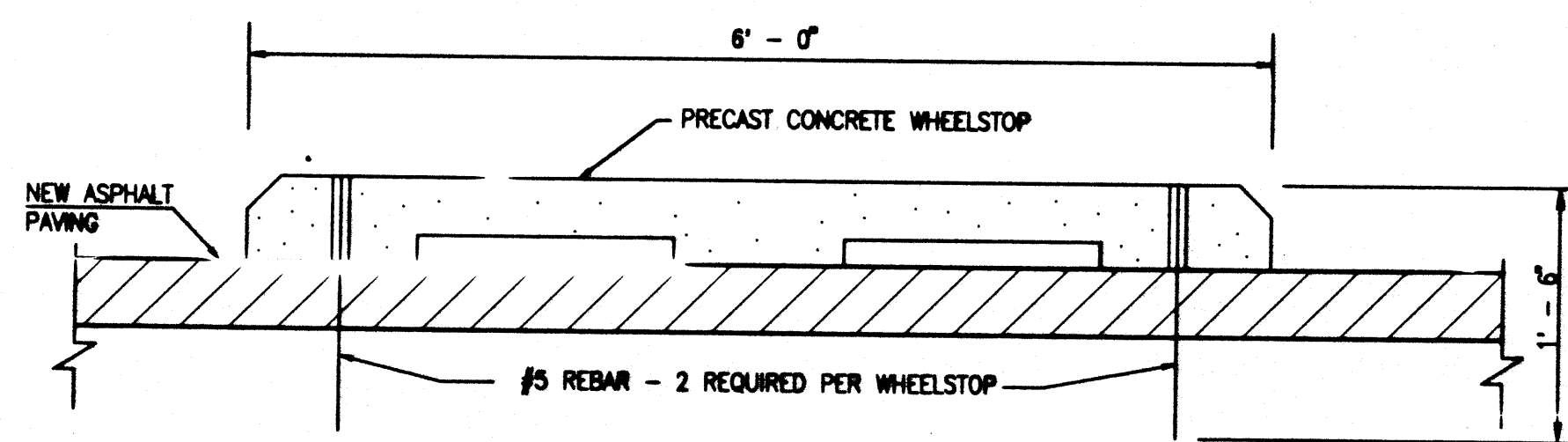


TYPICAL CONCRETE PAVEMENT/SIDEWALK SECTION
SCALE: 1" = 5'

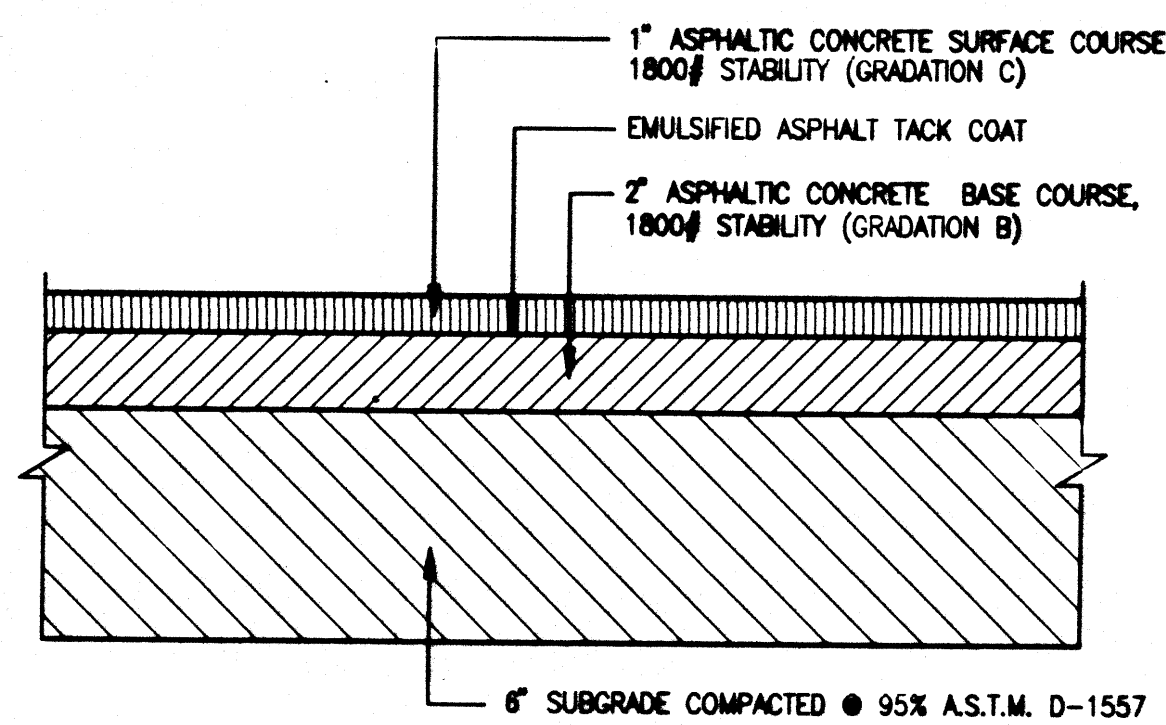


TYPICAL RUNDOWN SECTION
SCALE: 1" = 1'-0"

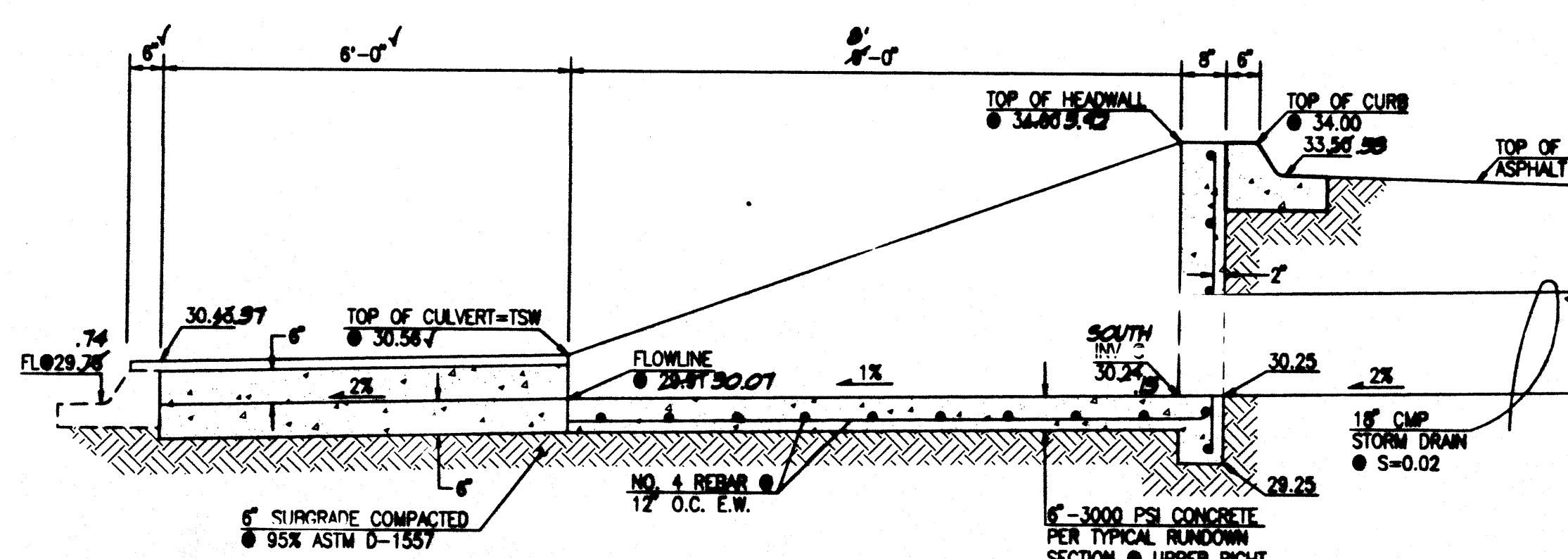
RECORD DRAWING FOR CERTIFICATION, SEE RIGHT



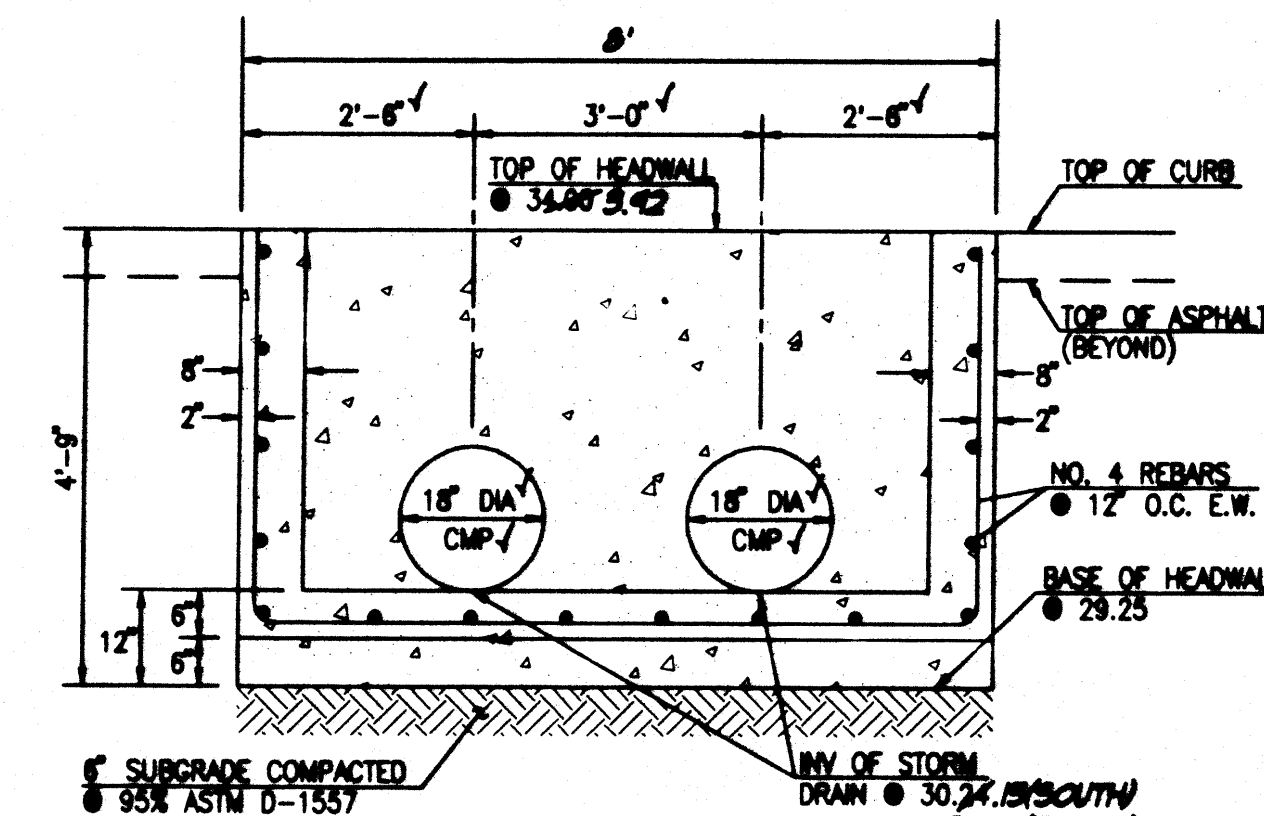
WHEEL STOP SECTION
SCALE: 1" = 1'-0"



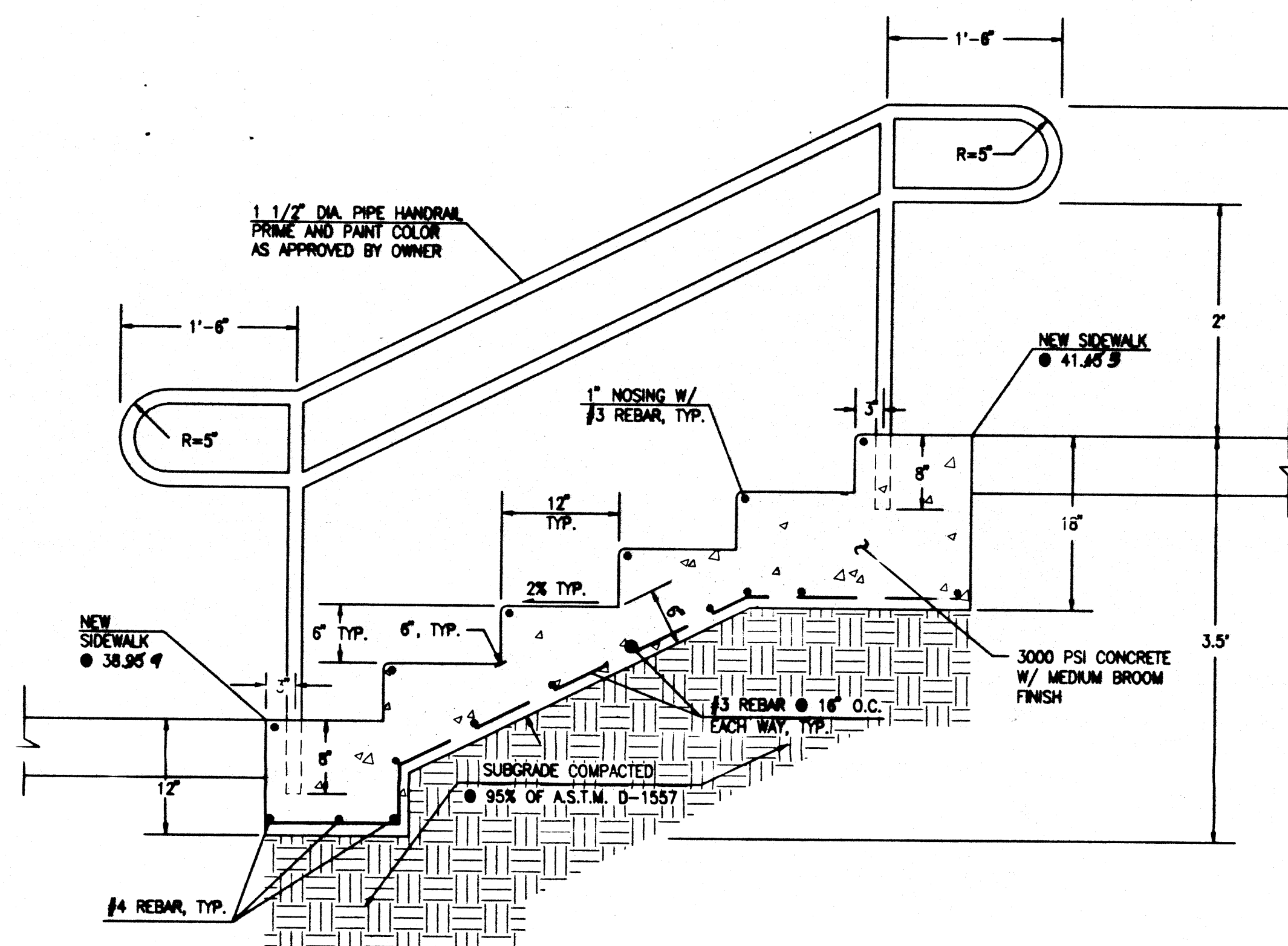
TYPICAL PARKING LOT PAVEMENT SECTION
SCALE: 1" = 5'



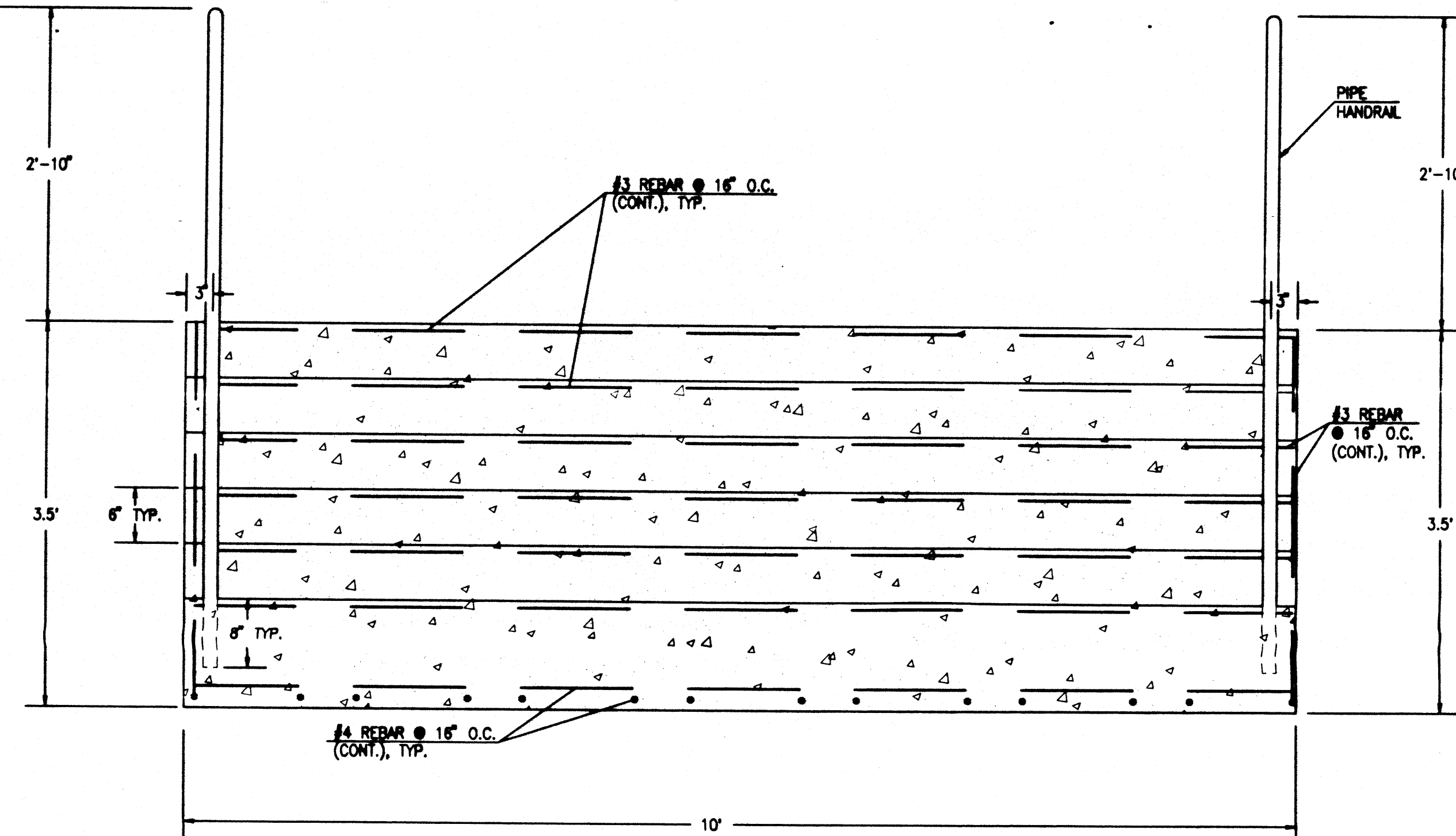
SECTION C-C
SCALE: 1" = 2'



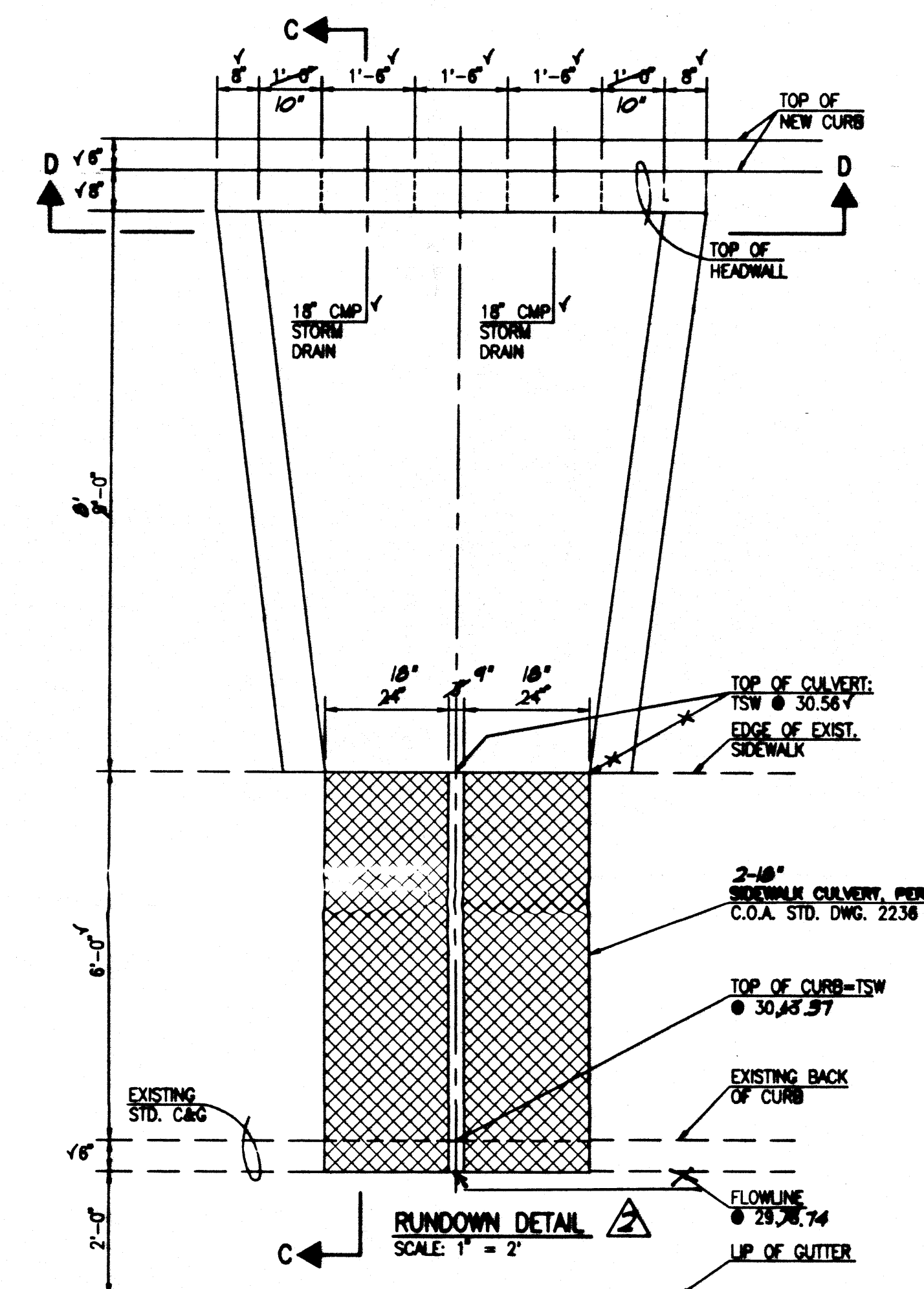
SECTION D-D
SCALE: 1" = 2'



SECTION A-A
SCALE: 1" = 1'



SECTION B-B
SCALE: 1" = 1'



PAVING SECTIONS AND DETAILS

DRAINAGE CERTIFICATION

I, JEFFREY G. MORTENSEN, N.M.P.E. 8547, 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 10-02-2005 AND 10-27-2005. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ME OR UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN RESPONSE TO A CONDITION OF APPROVAL SET FORTH IN THE CITY APPROVAL LETTER (119/020) DATED OCTOBER 31, 2005.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THIS CERTIFICATION DOES NOT EVALUATE ADA COMPLIANCE. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

JEFFREY G. MORTENSEN, N.M.P.E. 8547
DATE: 10-27-2005
Professional Seal: JEFFREY G. MORTENSEN, N.M.P.E. 8547

Final Construction Documents

Parking Area A
FMG Constitution
8300 Constitution Avenue NE
Albuquerque, New Mexico
Project No. 1199902

Drawn: JMA Checked: JGM
Proj: 200431 Date: 10/27/2005
© 2005 KEVIN GEORGES & ASSOCIATES, INC.
DRAINAGE CERT
NO CHANGES TO THIS SHEET
Revisions: _____
Architect: _____ Engineer: _____

PAVING SECTIONS AND DETAILS

Sheet Title: _____ Sheet: 2 of 10

DRAINAGE PLAN

I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS SITE IS LOCATED IN THE EAST-CENTRAL AREA OF ALBUQUERQUE. THIS PROJECT WILL CONSIST OF THE DEVELOPMENT OF A NEW PARKING LOT FOR THE KASEMAN PRESBYTERIAN HOSPITAL CANCER CENTER BUILDING. THIS DEVELOPMENT WILL ADAPT AN EXISTING PARTIALLY DEVELOPED SITE WHICH PERISTS OF THE HOSPITAL RADIOLOGY BUILDING, AN UPPER PAVED PARKING LOT, AND A LOWER NATURAL VEGETATED AREA GRADED SO AS TO CREATE A DETENTION POND FOR FLOWS FROM BOTH ONSITE AND OFFSITE FLOWS ABOVE THE SITE. THE NEW PARKING LOT WILL REPLACE THE VEGETATED AREA. THE DRAINAGE CONCEPT FOR THIS SITE WILL BE TO ELIMINATE THE EXISTING POND BY PAIVING OVER THE ENTIRE VEGETATED LOWER AREA AND DRAIN THE FLOWS INTO THE BORDERING STREET OF CONSTITUTION PLACE NE. THERE WILL BE SOME SLIGHT DETENTION PONDING WITHIN THE PARKING LOT.

THIS DRAINAGE SUBMITTAL IS MADE IN SUPPORT OF A GRADING AND PAVING PERMIT AND SO #19 APPROVAL.

II. PROJECT DESCRIPTION

THE SITE IS LOCATED ON THE SOUTHEAST CORNER OF CONSTITUTION AVE NE AND CONSTITUTION PLACE NE. THE CURRENT LEGAL DESCRIPTION OF THE SITE IS TRACT 1, EAST END ADDITION. THE SITE IS CURRENTLY LOCATED IN PANEL 356 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, NOVEMBER 19, 2003 AND IS ZONED AS ZONE X, AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THE DEVELOPMENT PROPOSED WILL INCREASE DOWNSTREAM FLOW BUT WILL NOT ADVERSELY IMPACT DOWNSTREAM FLOW OR DOWNSTREAM PROPERTIES. RUNOFF FROM THE SITE DRAINS INTO CONSTITUTION PLACE NE, AND THEN FLOWS NORTH TO CONSTITUTION AVENUE NE. AT CONSTITUTION AVENUE NE THE FLOW IS DIRECTED WEST TO THE INTERSECTION WITH PENNSYLVANIA STREET. FLOWS PROCEEDS TO ENTER THREE LARGE CURB STORM INLETS ALONG CONSTITUTION AVE JUST BEFORE THE PENNSYLVANIA INTERSECTION. THESE INLETS DRAIN INTO THE I-40 CHANNEL.

III. BACKGROUND DOCUMENTS

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

- GRADING AND DRAINAGE PLAN FOR PRESBYTERIAN KASEMAN HOSPITAL - RADIATION THERAPY CENTER ADDITION, PREPARED BY JMA AND DATED 05-08-06 FOR BUILDING PERMIT. THE 1996 PLAN RECOGNIZED THAT THE EXISTING POND REQUIRED ENLARGEMENT TO CONTAIN THE DESIGN VOLUME OF RUNOFF. THE PLAN ALSO IDENTIFIED A 100-YEAR PEAK DISCHARGE OF 10.7 CFS FROM THIS PORTION OF TRACT 1.
- DRAINAGE PLAN FOR PRESBYTERIAN KASEMAN HOSPITAL - RADIATION THERAPY CENTER WEST EXPANSION POND ANALYSIS PREPARED BY JMA AND DATED 01-11-05. THIS PLAN CONCLUDED THAT THE INMOUT I-40/PENNSYLVANIA OVERPASS PROJECT COMPLETED IN THE SPRING OF 2005 HAS ALLEVATED PREVIOUS FLOODING CONCERNS ON THE CONSTITUTION AVE/PENNSYLVANIA STREET INTERSECTION. THIS PLAN USED THE COAGULATE DEPTH EQUATION TO EVALUATE THE EFFECTS OF HYDRAULIC JUMP IN CONSTITUTION AVENUE NE. THE PLAN DETERMINED THAT THE DOWNSTREAM DRAINAGE IMPROVEMENTS THAT WERE MADE AT THE CONCLUSION OF THE I-40/PENNSYLVANIA PROJECT ALLOWED FOR SUFFICIENT FLOW IN CONSTITUTION AVENUE WITH NO HYDRAULIC JUMP ISSUES. THIS CONCLUSION RESULTED IN THE POND AT THE NORTHWEST CORNER. THE ELIMINATION OF THE DETENTION POND IN THIS PROJECT AS WELL AS FREE DISCHARGE INTO THE STREET.
- TOPOGRAPHIC SURVEY OF THE EXISTING SITE PREPARED BY JMA DATED 4/13/2005. THE SUBJECT SURVEY SHOWS THE EXISTING IMPROVEMENTS.

IV. EXISTING CONDITIONS

THE SITE IS LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF CONSTITUTION AVENUE NE AND CONSTITUTION PLACE NE. THE SITE IS PARTIALLY DEVELOPED. THE JMA TOPOGRAPHIC SURVEY DATED 4/13/2005 SHOWS THAT THE SITE CONSISTS OF AN EXISTING HOSPITAL BUILDING AND AN ASPHALT PAVED PARKING LOT, AS WELL AS AN UNDEVELOPED VEGETATED AREA AT THE NORTH AND WEST THAT IS GRADED FOR THE PURPOSE OF CREATING A DETENTION PONDING AREA FOR BOTH ON-SITE RUNOFF AND OFF-SITE FLOWS. THE SITE SLOPES FROM SOUTHEAST TO NORTHWEST AND DRAINS INTO THE POND AT THE NORTHWEST CORNER. THIS POND DRAINS VIA STORM DRAIN THROUGH AN EXISTING SIDEWALK CULVERT INTO CONSTITUTION PLACE NE. CONSTITUTION AVENUE IS A FULLY IMPROVED ROADWAY, 40 FEET WIDE WITH CURB AND GUTTER ON BOTH SIDES. CONSTITUTION PLACE FLOWS ARE CARRIED BY CURB AND GUTTER NORTH INTO CONSTITUTION AVENUE, WHERE IT FLOWS WEST TO AN INTERSECTION WITH PENNSYLVANIA STREET. JUST BEFORE THIS INTERSECTION THERE ARE THREE LARGE CURB STORM INLETS ALONG CONSTITUTION AVE NE WHERE THE FLOWS WILL DRAIN IN TO. THE INLETS DRAIN SOUTH INTO THE I-40 CHANNEL.

ONSITE CONTRIBUTING AREA FLOWS FROM A PARKING LOT ALONG THE SOUTH EDGE OF THE SITE ENTER AT THE SOUTHWEST CORNER OF THE SITE THROUGH A TRENCH DRAIN AND CURB CUT; THE FLOWS EMPTY NORTH INTO THE DETENTION POND. ONSITE CONTRIBUTING AREA FLOWS FROM AN ADJACENT PARKING LOT ALSO ENTER THE SITE THROUGH A TRENCH DRAIN INTO A 12" STORM DRAIN THAT RELEASES INTO THE MANHOLE AT THE EAST EDGE OF THE SITE; THESE FLOWS ENTER INTO A 18" CMP STORM DRAIN FROM THE ONSITE MANHOLE AND EMPTIES THESE FLOWS INTO THE SITE AT THE NORTH EDGE OF THE SITE; THESE FLOWS DRAIN WEST INTO THE DETENTION POND AS SHOWN ON THE TOL.

V. DEVELOPED CONDITIONS

THE PROJECT CONSIST OF THE CONSTRUCTION OF A NEW ASPHALT PAVED PARKING LOT THAT WILL SERVE THE EXISTING HOSPITAL BUILDINGS IN THE AREA. THIS NEW LOT WILL REPLACE THE NATURALLY VEGETATED AREA ALONG THE NORTH AND WEST OF THE SITE, AND WILL ELIMINATE THE EXISTING DETENTION POND. AS A RESULT OF THESE IMPROVEMENTS, THERE WILL BE AN INCREASE IN THE RUNOFF THE SITE GENERATES AS WELL AS A REDIRECTION OF ONSITE CONTRIBUTING AREA FLOWS AROUND THE SITE THAT CURRENTLY TRAVERSE THE SITE. A SMALL PORTION OF THE ONSITE RUNOFF WILL BE PONDING AT THE NORTHWEST CORNER OF THE DEVELOPED PARKING LOT, WHICH WILL BE DRAINED THROUGH A STORM INLET AND STORM DRAIN INTO A RUNDOWN AND SIDEWALK CULVERT INTO CONSTITUTION PLACE NE AS SHOWN ON THE DEVELOPED GRADING PLAN. THIS STORM DRAIN PIPE WILL DRAIN THE CAPTURED STORMWATER RUNOFF IN A PERIOD LESS THAN SIX HOURS. FLOWS INTO CONSTITUTION PLACE NE WILL FOLLOW THE SAME DRAINAGE PATH AS STATED IN THE EXISTING CONDITIONS.

AS THE HYDROGRAPH CALCULATIONS SHOW, THE VOLUME REQUIRING PONDING WILL BE EQUAL 220 CF. THIS VOLUME WILL REACH A HEIGHT ABOVE THE STORM INLET OF 533.2 FT. THE LOWEST POINT OF THE TOP OF CURB IN THE PONDING AREA IS AT 533.4 FT. THIS IS ALSO THE LOWEST TOP OF CURB IN THE ENTIRE PROJECT SITE. THEREFORE, THERE IS NO PROBLEM OF RUNOFF OVERFLOWING THE CURB.

ONSITE CONTRIBUTING AREA FLOWS THAT ENTER THE MANHOLE AT THE EAST CORNER OF THE SITE WILL BE DIRECTED THROUGH THE SITE VIA A NEW 18" CMP STORM DRAIN THAT WILL TRAVERSE THE SITE FROM EAST TO WEST AND DRAIN INTO CONSTITUTION PLACE NE AT THE SAME LOCATION AS THE ONSITE FLOW STORM DRAIN RELEASES ITS FLOWS AS SHOWN ON THE DEVELOPED GRADING PLAN.

THE OVERALL RESULT OF THE DEVELOPMENT WILL INCREASE THE VOLUME AND PEAK DISCHARGE RATE INTO CONSTITUTION PLACE NE. THIS INCREASE IS ALLOWED DUE TO THE COMPLETION OF DEVELOPMENT AT PENNSYLVANIA STREET AND I-40 THAT ALLEVATED PAST DOWNSTREAM FLOW ISSUES; ISSUES THAT HAD PREVIOUSLY RESULTED IN THE CREATION OF THE EXISTING ONSITE DETENTION POND. U

VI. GRADING PLAN

THE GRADING PLAN SHOWS: 1.) EXISTING GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'-0" INTERVALS BASED THE TOPOGRAPHIC SURVEY PREPARED BY JMA, DATED 4/13/2005. 2.) PROPOSED GRADES INDICATED BY CONTOURS AT 1'-0" INTERVALS. 3.) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS AS TAKEN FROM THE AFORE MENTIONED JMA SURVEY. 4.) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS. 5.) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. AS SHOWN BY THIS PLAN, THE PROPOSED DEVELOPMENT CONSISTS OF PAVED PARKING, ALONG WITH ASSOCIATED LANDSCAPING AND SIDEWALK. THESE MODIFICATIONS TO THE SITE WILL EXPAND AVAILABLE ONSITE PARKING AND VEHICLE ACCESS. AN EROSION CONTROL PLAN WILL BE PREPARED AND ATTACHED TO THE SEPARATE STORM WATER POLLUTION PREVENTION PLAN FOR THIS PROJECT.

VI. GRADING PLAN

THE GRADING PLAN SHOWS: 1.) EXISTING GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'-0" INTERVALS BASED THE TOPOGRAPHIC SURVEY PREPARED BY JMA, DATED 4/13/2005. 2.) PROPOSED GRADES INDICATED BY CONTOURS AT 1'-0" INTERVALS. 3.) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS AS TAKEN FROM THE AFORE MENTIONED JMA SURVEY. 4.) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS. 5.) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. AS SHOWN BY THIS PLAN, THE PROPOSED DEVELOPMENT CONSISTS OF PAVED PARKING, ALONG WITH ASSOCIATED LANDSCAPING AND SIDEWALK. THESE MODIFICATIONS TO THE SITE WILL EXPAND AVAILABLE ONSITE PARKING AND VEHICLE ACCESS. AN EROSION CONTROL PLAN WILL BE PREPARED AND ATTACHED TO THE SEPARATE STORM WATER POLLUTION PREVENTION PLAN FOR THIS PROJECT.

VI. CALCULATIONS

THE CALCULATIONS WHICH APPEAR HEREON ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT, AS WELL AS THE 10-YEAR, 6 HOUR RAINFALL EVENT FOR CULVERT DESIGN PURPOSES. THE PROCEDURE FOR 40-ACRE AND SMALLER BASINS, AS SET FOR THE 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 BY THIS DEVELOPMENT. THE CAPACITY OF THE DEVELOPED 18" CMP STORM DRAINS WAS ANALYZED USING THE ORFFICE AND MANNING'S EQUATIONS. THE CAPACITIES OF THE NEW STORM INLETS WERE DETERMINED USING THE ORFFICE EQUATION. THE CAPACITY OF THE NEW 24" CULVERTS ALONG CONSTITUTION PLACE NE WERE DETERMINED USING MANNING'S EQUATION. THE PERFORMANCE OF THE PRIVATE STORMWATER DETENTION SYSTEM IN THE NORTH EAST CORNER OF THE PARKING AREA HAS BEEN EVALUATED FOR CUTOFFLOW AND STORAGE CAPACITY BASED UPON THE HYDROGRAPH ANALYSIS CONTAINED ON THIS SHEET, AND PONDING IS NECESSARY ONLY DUE TO DISCHARGE PIPE SIZING CONSTRAINTS.

THE JANUARY 2005 CALCULATIONS ARE SHOWN HEREON TO SHOW THAT THE DOWNSTREAM STREET (CONSTITUTION AVENUE) IS CAPABLE OF HANDLING FLOWS FROM ONSITE AND OFFSITE. THE COAGULATE DEPTH EQUATION WAS USED TO EVALUATE THE EFFECTS OF HYDRAULIC JUMP. AS SHOWN BY THESE CALCULATIONS, THE NORMAL DEPTH OF FLOW PLUS THE EFFECTS OF A HYDRAULIC JUMP COMPLY WITH DPM CRITERIA TO FALL BELOW THE TOP-OF-CURB PLUS 0.2 FEET. THIS SUGGESTS THAT THE STREET CAN HANDLE THE FULLY DEVELOPED DESIGN FLOW AS CALCULATED AND THAT PONDING IS NO LONGER NECESSARY.

VII. CONCLUSION

THE DRAINAGE CONCEPT SHOWN BY THE PLAN ABOVE WILL ACCOMPLISH ITS PURPOSE DUE TO THE FOLLOWING FACTORS:

- MODIFICATION TO AN EXISTING SITE WITHIN AN INFILL AREA
- THE PEAK RATE OF DISCHARGE FROM THE SITE WILL BE INCREASED ABOVE THAT OF THE EXISTING CONDITION
- REMOVAL OF THE EXISTING POND AS ALLOWED BY APPROVED DRAINAGE SUBMITTAL DATED 01-11-05
- ADEQUATE STREET CAPACITY IS AVAILABLE IN CONSTITUTION PLACE NE TO ACCOMMODATE PEAK DISCHARGE UNDER FULLY DEVELOPED CONDITIONS
- DOWNSTREAM CAPACITY OF CONSTITUTION PLACE AND CONSTITUTION AVENUE AND THE STORM DRAIN STRUCTURES LOCATED WITHIN ARE ADEQUATE FOR INCREASED FLOWS DUE TO THE INMOUT I-40/PENNSYLVANIA PROJECT IMPROVEMENTS
- FREE DISCHARGE INTO CONSTITUTION PLACE AND CONSTITUTION AVENUE PER THE DRAINAGE PLAN DATED 1-11-05
- NO ADVERSE IMPACT ON DOWNSTREAM CAPACITY OR DOWNSTREAM PROPERTIES
- CULVERTS AT CONSTITUTIONS PLACE SUFFICIENT TO HANDLE PEAK DISCHARGE FROM BOTH STORM DRAINS UNDER FULLY DEVELOPED CONDITIONS
- GRADING AND CURB ABOUT STORM INLET AREA SUFFICIENT TO CONTAIN MORE THAN THE 220 CF OF PONDING REQUIRED DURING A 100-YEAR STORM
- OFFSITE FLOWS WILL CONTINUE TO BE INTERCEPTED AND CONVEYED THROUGH THE PROJECT TO DOWNSTREAM EXISTING DRAINAGE FACILITIES

CALCULATIONS

SITE CHARACTERISTICS

- PRECIPITATION ZONE = 3
- $P_{100} = P_{30} = 2.60$ $P_{10} = P_{30} = 1.73$
- TOTAL AREA (A) = 143,065 SF
3.28 AC
- EXISTING LAND TREATMENT

A. PROJECT SITE	AREA (SF/AC)	%
IMPAVEMENT		
B	16,779 / 0.39	12
C	61,626 / 1.41	43
D	64,660 / 1.48	45

B. ONSITE CONTRIBUTING AREAS	AREA (SF/AC)	%
TREATMENT		
D	70,000 / 1.61	100

5. DEVELOPED LAND TREATMENT

A. PROJECT SITE	AREA (SF/AC)	%
TREATMENT		
B	23,552 / 0.54	16
D	119,533 / 2.74	84

6. EXISTING CONDITION

A. PROJECT SITE	1. VOLUME
Ev = (Ea+Em+Eoc+Eo)/At	
Ev = ((0.92+0.39)+(1.29+1.41)+(2.36+1.48))/3.28	= 1.73 IN
V100 = (Ev/12)At = (1.73/12)3.28	= 0.2317 AC-FT 20,628 CF

2. PEAK DISCHARGE
Qp = Qm At + Qmle + Qmcl + Qmlo
Qp = Q100 = (2.60+0.39)+(3.45+1.41)+(5.02+1.48) = 13.33 CFS

B. ONSITE CONTRIBUTING AREAS (100-YEAR STORM)

1. VOLUME

$$E_w = (E_{AA} + E_{AB} + E_{AC} + E_{AD}) / A_r$$
$$E_w = (2.36 + 1.61) / 1.61 = 2.36 \text{ IN}$$
$$V_{100} = (E_w / 12) A_r = (2.36 / 12) 1.61 = 0.3160 \text{ AC-FT} = 13,767 \text{ CF}$$

2. PEAK DISCHARGE

Qp = Qm At + Qmle + Qmcl + Qmlo
Qp = Q100 = (5.02+1.61) = 6.07 CFS

C. ONSITE CONTRIBUTING AREAS (10-YEAR STORM)

1. VOLUME
$E_w = (E_{AA} + E_{AB} + E_{AC} + E_{AD}) / A_r$
$E_w = (1.50 + 1.61) / 1.61 = 1.50 \text{ IN}$
$V_{10} = (E_w / 12) A_r = (1.50 / 12) 1.61 = 0.2009 \text{ AC-FT} = 8,750 \text{ CF}$

2. PEAK DISCHARGE

Qp = Qm At + Qmle + Qmcl + Qmlo
Qp = Q10 = (3.39+1.61) = 5.45 CFS

7. DEVELOPED CONDITION

A. PROJECT SITE (100-YEAR STORM)	1. VOLUME
Ev = (Ea+Em+Eoc+Eo)/At	
Ev = ((0.92+0.54)+(2.36+2.74))/3.28	= 2.12 IN
V100 = (Ev/12)At = (2.12/12)3.28	= 0.5811 AC-FT = 25,314 CF

2. PEAK DISCHARGE

Qp = Qm At + Qmle + Qmcl + Qmlo
Qp = Q100 = (2.60+0.54)+(5.02+2.74) = 15.18 CFS

B. ONSITE CONTRIBUTING AREAS (10-YEAR STORM)

1. VOLUME

$$E_w = (E_{AA} + E_{AB} + E_{AC} + E_{AD}) / A_T$$
$$E_w = ((0.36 + 0.54) + (1.50 + 2.74)) / 3.28 = 1.31 \text{ IN}$$
$$V_{10} = (E_w / 12) A_T = (1.31 / 12) 3.28 = 0.3592 \text{ AC-FT} = 15,848 \text{ CF}$$

2. PEAK DISCHARGE

Qp = Qm At + Qmle + Qmcl + Qmlo
Qp = Q10 = (1.19+0.54)+(3.39+2.74) = 9.95 CFS

RAINSTORM PONDING CAPACITY

ELEV (FT)	AREA (SQ FT)	VOLUME (CF)	TOTAL VOL. (CF)
5333	2675	[(2675+0)/2]*0.5 = 670	670
5334	6575	[(6575+2675)/2]*0.5 = 975	1625

V100 = 240 CF
V100devd = 1,625 CF > V100 = 240 CF (SEE HYDROGRAPH)

A. HYDROGRAPH CALCULATIONS

$$T_p = 0.7+tc+(1.8-Ap)/12$$

$$T_p = 0.7+0.2+(1.6-2.74/3.28)/12$$

$$T_p = 0.2037 \text{ hr}$$

$$D_p = 0.25+Ap/At$$

$$D_p = 0.25+2.74/3.28$$

$$D_p = 0.2088 \text{ hr}$$

$$T_b = 2.017+L+K/Q_p-0.25+Ap/At$$

$$T_b = 2.017+12.3+28/15.18-0.25+2.74/3.28$$

$$T_b = 0.7563 \text{ hr}$$

$$\text{AREA OF HYDROGRAPH} = V_{100} = 26,410 \text{ CF}$$

$$\text{VOLUME REQUIRING PONDING}$$

$$V_{100} = ((15.18-14.90)/(((25.16-11.98)+(24.75-12.22))/2)+0)$$

$$V_{100} = 215.6 \text{ CF}$$

PEAK DISCHARGE CAPACITY OF ON-SITE FLOW DISCHARGE PIPE

$$Q_{op} = 1.49/n AR^{2/3} S^{1/2}$$

$$n = 0.013$$

$$A = 0.667 \text{ FT}^2 \text{ FT} = 1.33 \text{ FT}^2$$

$$P = 0.667 \text{ FT} + 0.667 \text{ FT} + 2 \text{ FT} = 3.33 \text{ FT}$$

$$R = A/P = 0.375 \text{ FT}$$

$$S = 0.02 \text{ FT/FT}$$

$$Q_{op} = 14.9 \text{ CFS}$$

$$Q_{100} = 15.2 \text{ CFS} > Q_{op} = 14.9 \text{ CFS, 215 CF OF PONDING REQ'D}$$

CULVERT CALCULATIONS FOR SITE DRAINAGE

A. PEAK DISCHARGE CAPACITY OF SINGLE CULVERT

$$Q_{op} = 1.49/n AR^{2/3} S^{1/2}$$

$$n = 0.013$$

$$A = 0.667 \text{ FT}^2 \text{ FT} = 1.33 \text{ FT}^2$$

$$P = 0.667 \text{ FT} + 0.667 \text{ FT} + 2 \text{ FT} = 3.33 \text{ FT}$$

$$R = A/P = 0.375 \text{ FT}$$

$$S = 0.02 \text{ FT/FT}$$

$$Q_{op} = 11.73 \text{ CFS}$$

B. CULVERT DESIGN TO HOLD 10-YEAR, 6-HOUR STORM

$$Q_{100, \text{site}} = 9.95 \text{ CFS}$$

$$Q_{100, \text{comm}} = 5.45 \text{ CFS}$$

$$Q_{100, \text{REQD}} = 9.95 + 5.45 = 15.4 \text{ CFS}$$

$$Q_{100, \text{REQD}} = 15.4 \text{ CFS} > Q_{op} = 11.73 \text{ CFS}$$

$$Q_{100, \text{REQD}} = 15.4 \text{ CFS} > Q_{op} = 23.46 \text{ CFS}$$

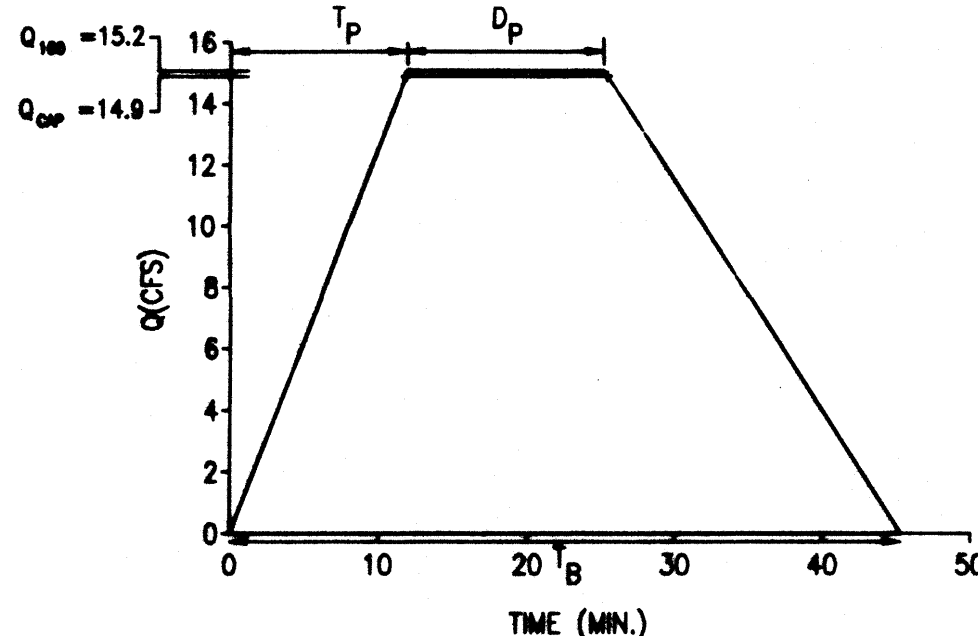
8. COMPARISON

A. VOLUME

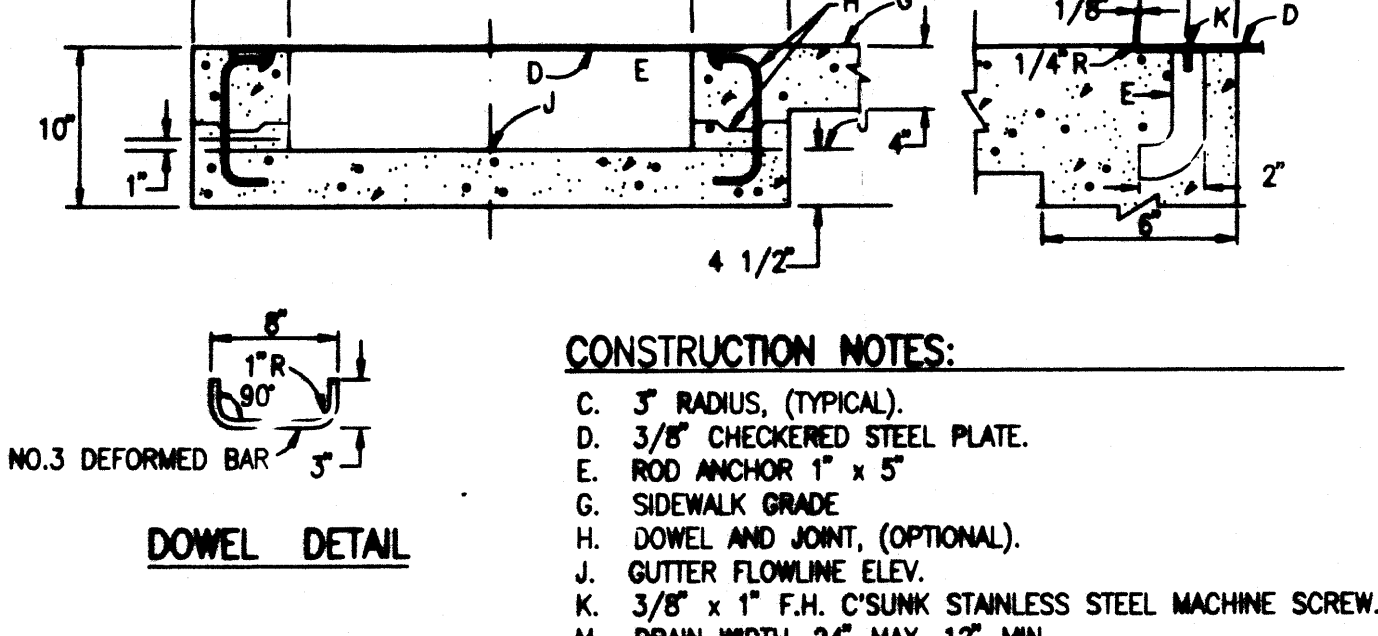
$$\Delta V_{100} = 25,315-20,628 = 4,687 \text{ CF (INCREASE)}$$

B. PEAK DISCHARGE

$$\Delta Q_{100} = 15.18-13.33 = 1.85 \text{ CFS (INCREASE)}$$



A. HYDROGRAPH



TYPICAL SIDEWALK CULVERT DETAILS

NOT TO SCALE

CALCULATIONS, DRAINAGE PLAN AND SECTIONS AND DETAILS

Final Construction Documents

Parking Area A
FMG Constitution
8300 Constitution Avenue NE
Albuquerque, New Mexico
Presbyterian Project No. 1980802

Drawn: JMA	Checked: JGM
Proj. No.: 200431	Date: 10/27/2005
© 2005 KEVIN GEORGES & ASSOCIATES, P.A.	
DRAINAGE CERT	
NO CHANGES TO THIS SHEET	
Revisions:	Architect: C. L. B. 2005

CALCULATIONS, DRAINAGE PLAN
AND SECTIONS AND DETAILS
Sheet Title Sheet 5 of 10

C4

Legend:

AL	AREA LIGHT
AL/C	AREA LIGHT ON CONCRETE
ASV	ANTI-SIPHON VALVE
BSH	BUILDING OVERHANG
BR	BIKE RACK
C&G	CURB AND GUTTER
CBN	CONCRETE BENCH
COP	CONCRETE DRIVEWAY
CHC	CONCRETE HEADER CURB
CI	CAST IRON PIPE
CLOD	CENTERLINE OF DOOR
CLF	CHAIN LINK FENCE
CO	SANITARY SEWER CLEANOUT
CONC.	CONCRETE
COP	CURB OPENING
CRD	CONCRETE RUNDOWN
CRW	CONCRETE RETAINING WALL
CWR	CONCRETE WHEELCHAIR RAMP
CP	DRIVEWAY
E/G	EDGE OF GRASS
EA	EDGE OF ASPHALT
EC	ELECTRIC CONDUIT
EO	ELECTRIC OUTLET
EO/C	ELECTRIC OUTLET IN CONCRETE
EPB	ELECTRIC PULLBOX
FP	FLAG POLE
GPW	GAS PUMP MARK
HVS	HANDICAP PARKING SIGN
INVT	INVERT
IRRG	IRRIGATION
MBC	METAL BUILDING COLUMN
MBX	MAILBOX
MPL	METAL LIGHT POLE
MP	METAL POLE
MPP	METAL POWER POLE
MS	METAL SIGN
MS(4)	OVERHEAD ELECTRIC (NO. OF LINES)
OH(2)	OVERHEAD TELEPHONE (NO. OF LINES)
PB	PARKING BUMPER
PI	PAINTED ISLAND
PB	PAINTED BENCH
PB	PAINT MARK
SAS MH	SANITARY SEWER MANHOLE
SD	SPRINKLER CONTROL TIMER
SD	STORM DRAIN MANHOLE
SDMH	STORM DRAIN MANHOLE
SI	STORM INLET
SI/C	STORM INLET IN CONCRETE
STD, C&G	STANDARD CURB AND GUTTER
STL	TOP OF SIDEWALK
SWC	SIDEWALK CULVERT
TA	TOP OF ASPHALT
TC	TOP OF CURB
TCO	TOP OF CONCRETE
TO	TOP OF GRADE
TMH	TELEPHONE MANHOLE
TPB	TELEPHONE PULLBOX
TPB	TELEPHONE RISER/PULLBOX
TS	TRAFFIC SIGN
TV	TELEPHONE VAULT
TV	TYPICAL
UG	UNDERGROUND
VG	VALLEY GUTTER
W/MH	WOOD WITH METAL HANDRAIL
WP	WOOD POLE
WB	WATER VALVE BOX
X-WALK	CROSSWALK
	EXISTING CONTOUR
	EXISTING SPOT ELEVATION
	EXISTING BOUNDARY
	EXISTING SHRUB
	EXISTING DECIDUOUS TREE (CALIPER SIZE)
	EXISTING CONIFEROUS TREE (CALIPER SIZE)

STORM DRAINAGE KEYED NOTES:

- INSTALL 18" CMP STORM DRAIN @ S = 0.02
- INSTALL SINGLE "D" STORM INLET PER DETAIL, SHEET 4 W/ T.O.G. @ 33.00 AND INV 18" (OUT) @ 30.47
- INSTALL 18" CMP STORM DRAIN @ S = 0.015

LEGAL DESCRIPTION
TRACT 1, THE EAST END ADDITION

PROJECT BENCHMARK
CITY OF ALBUQUERQUE BENCH MARK, STATIONED "1+10", SET IN TOP OF A CONCRETE POST WHICH SETS OUT THE NORTH SIDE OF A CONCRETE SIDEWALK AND FLUSH WITH THE TOP OF SIDEWALK PAVEMENT ON THE NORTH SIDE OF CONSTITUTION AVE. N.E. AND BETWEEN PONDOLUNA BLVD. N.E. AND CONSTITUTION P.L. N.E. ON THE SOUTH SIDE OF SHAW HEIGHTS PARK. ELEVATION = 5328.05 FEET (M.S.L.D.)

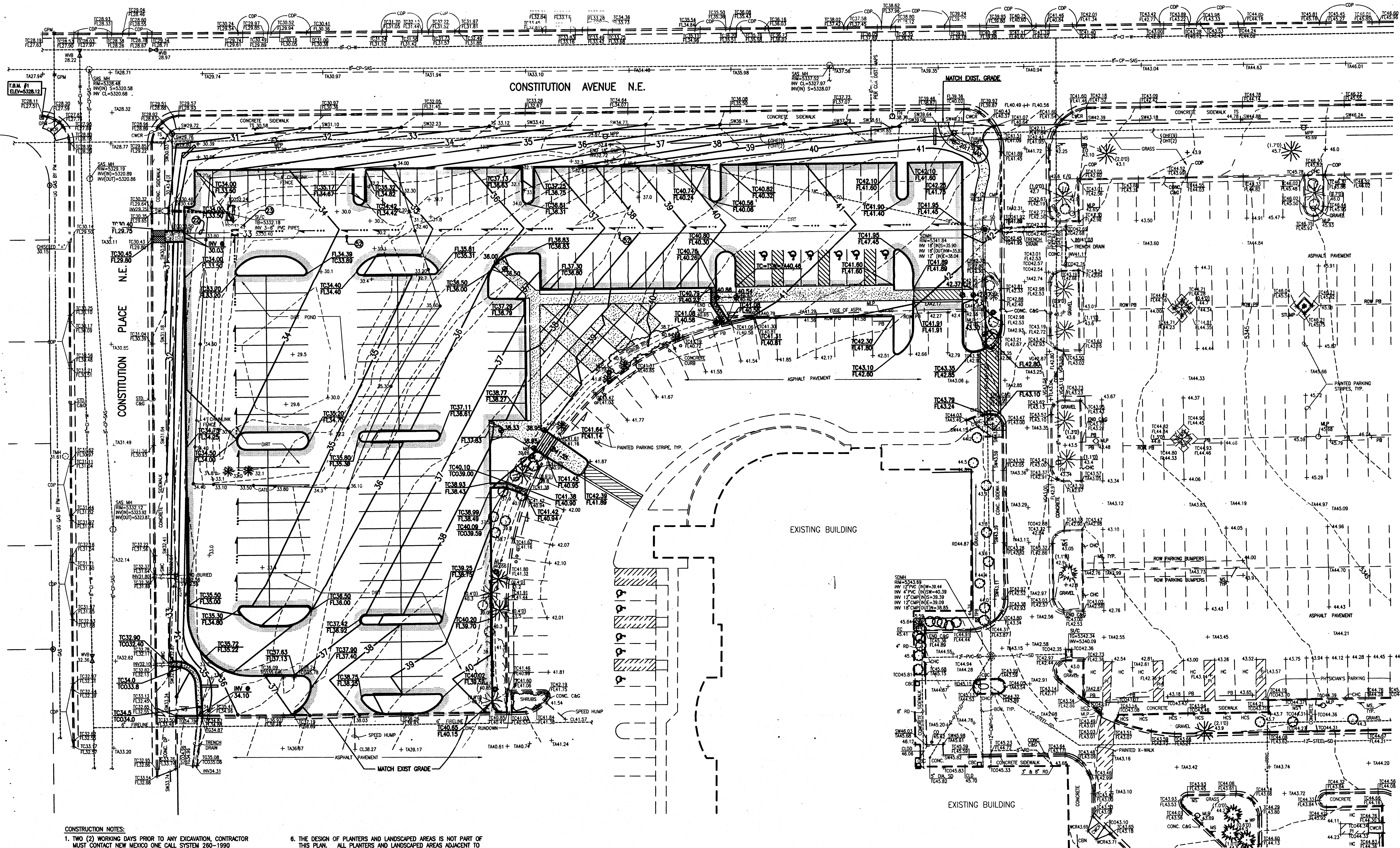
T.B.M.
TOP OF CURB ELEVATION LOCATED AT THE S.E. CORNER OF THE INTERSECTION OF CONSTITUTION AVE. N.E. AND CONSTITUTION PLACE N.E. AS SHOWN ON THE DRAWING. ELEVATION = 5328.86 FEET (M.S.L.D.)

Final Construction Documents

**Parking Area A
FMG Constitution**
8300 Constitution Avenue NE
Albuquerque, New Mexico
Project No. 1102002

Drawn: JMA Checked: JGM
By: JGM
Proj: 1102002 Date: 09/20/05
No. 1000 KEVIN GEORGES & ASSOCIATES, P.A.
Revisions: Architect: 10/05 Engineer: 10/05

Grading Plan
Sheet Title Sheet 4 of 10



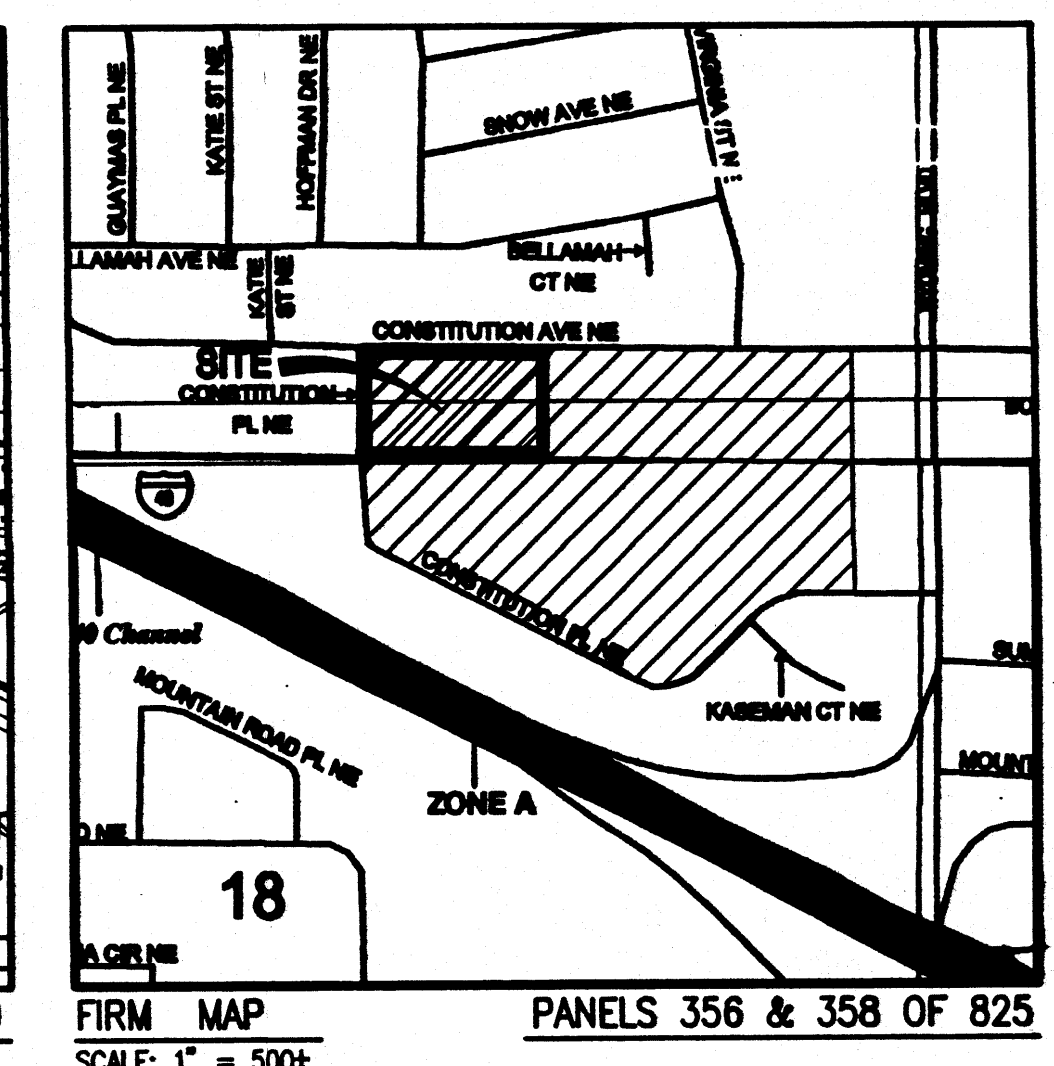
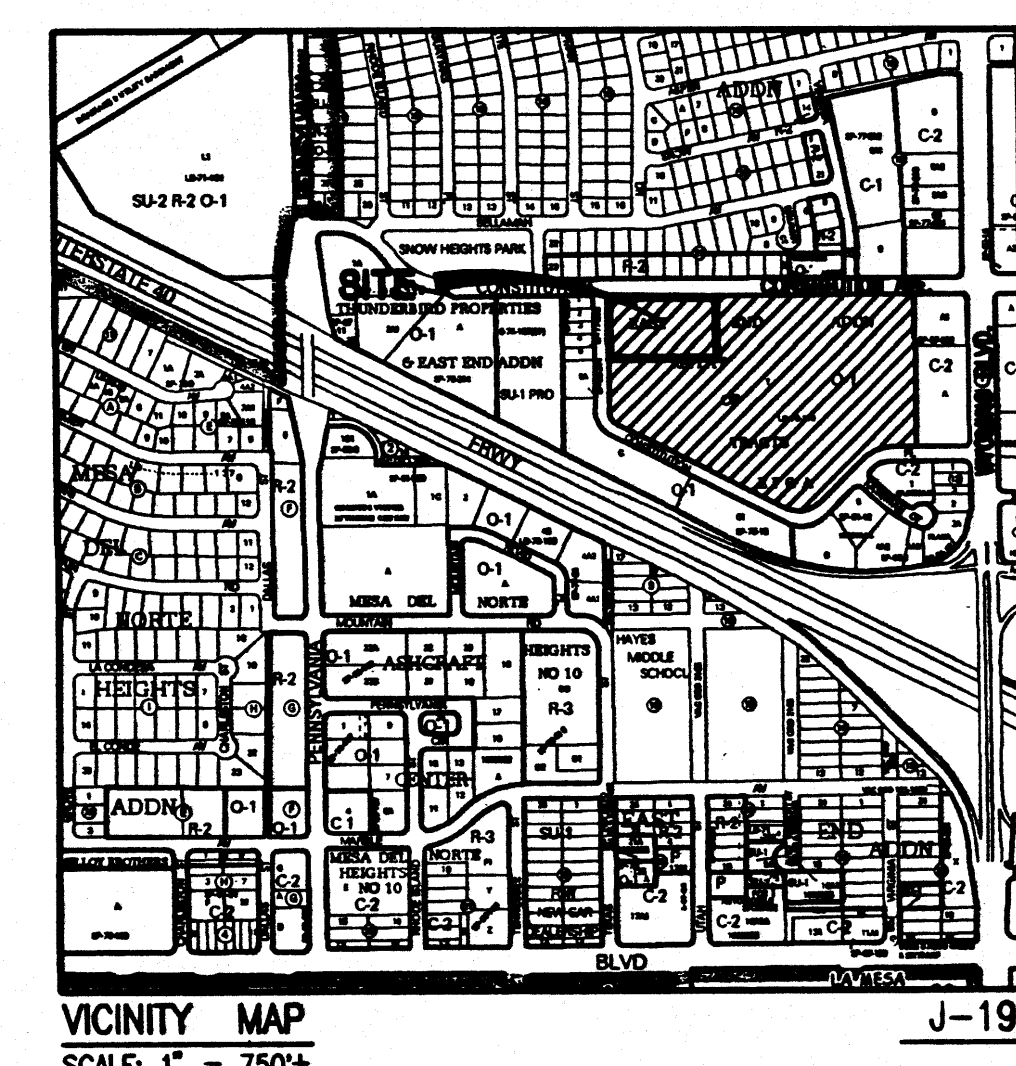
CONSTRUCTION NOTES:

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 248-1990 (ALBUQUERQUE AREA), 1-800-321-ALERT (2537) (STATEWIDE), FOR LOCATION OF EXISTING UTILITIES.
- 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.
- 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.
- ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
- 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. NO 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 LOCAL ORDINANCES, RULES AND REGULATIONS IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- 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.
- 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.
- BACKFILL COMPACTION SHALL BE ACCORDING TO ARTERIAL STREET USE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

EROSION CONTROL MEASURES:

- THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
- 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.
- WHEN APPLICABLE, CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (NOI) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.
- UNLESS FINAL STABILIZATION IS OTHERWISE PROVIDED FOR, ANY AREAS OF EXCESS DISTURBANCE (TRAFFIC ACCESS, STORAGE YARD, EXCAVATED MATERIAL, ETC.) SHALL BE RE-SEEDING 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	J.M.A.	2-9-06



Plot Date: 09-29-2005
Plot Time: 3:15 pm
File Name: 4120202.DWG

JMA
JMA JOB NO. 2004.120.3
JEFF MONTENEGRO & ASSOCIATES, INC.
600-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, NM 87109
ENGINEERS & SURVEYORS (SOS) 345-4250
FAX: 505-345-4254 © ESTABLISHED 1977

50 #19 "GREEN TAG"

C3

Plot Date: 10-27-2005
Plot Time: 10:51 am
File Path: J:\2005\DWG
File Name: 41202PS.DWG



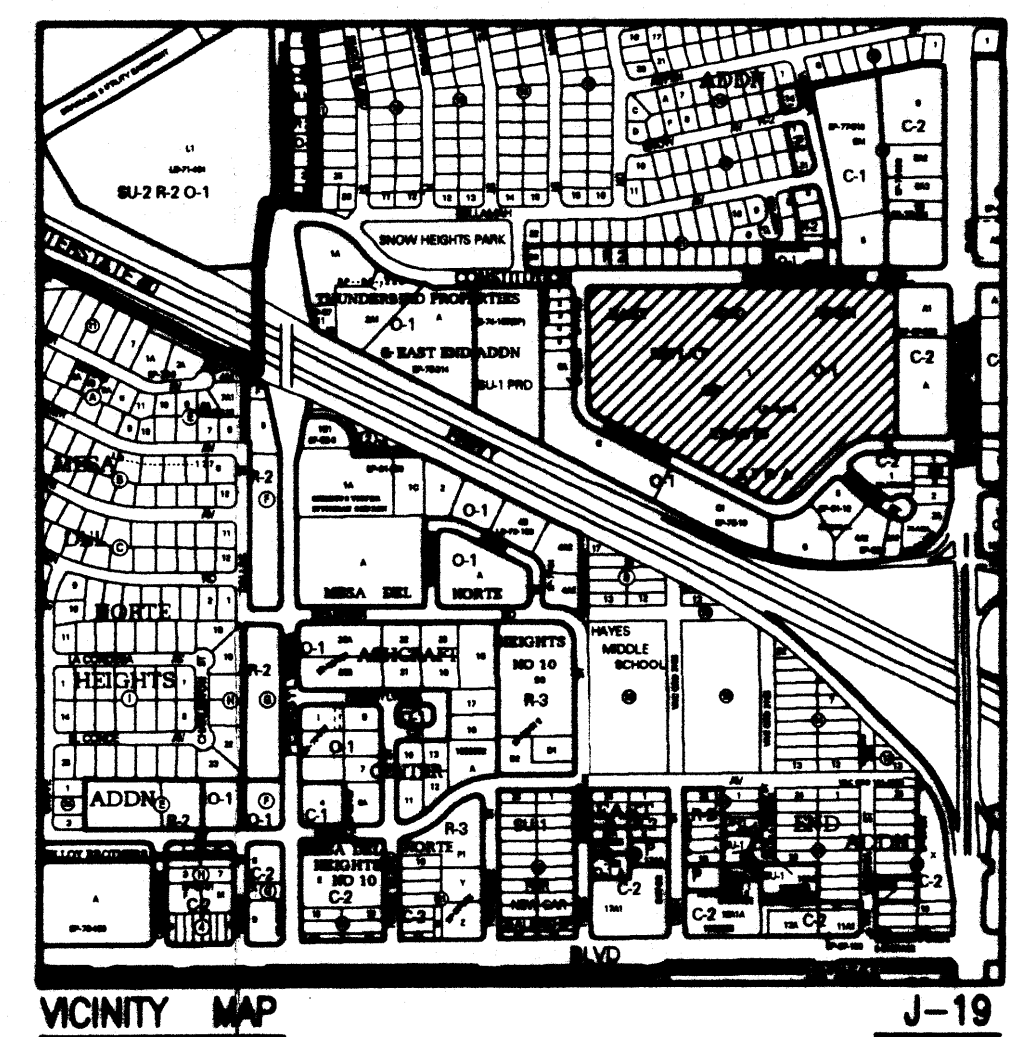
JMA JOB NO. 2004.120.2
JEFF NORTENSEN & ASSOCIATES, INC.
6010-B RIVERWAY PARK BLVD. N.E.
ALBUQUERQUE, N.M. 87109
ENGINEERS & SURVEYORS (505) 345-4250
FAX: 505 345-4254 © ESTABLISHED 1977

GENERAL NOTES

1. OBTAIN ARCHITECT'S APPROVAL OF SIDEWALK LAYOUT AND JOINTS PRIOR TO PLACEMENT OF CONCRETE

SITE PLAN KEYED NOTES:

1. NEATLY SAWCUT, REMOVE AND DISPOSE OF EXISTING CURB AND GUTTER
2. NEATLY SAWCUT, REMOVE AND DISPOSE OF EXISTING SIDEWALK
3. REMOVE AND DISPOSE OF EXISTING TREES AND SHRUBS
4. NEATLY SAWCUT, REMOVE AND DISPOSE OF EXISTING ASPHALT PAVING, 1'-0" MIN. WIDTH
5. REMOVE AND DISPOSE OF 18" CMP STORM DRAIN PIPE
6. REMOVE AND DISPOSE OF 6" PVC PIPE
7. REMOVE AND DISPOSE OF 4" CHAINLINK FENCE
8. EXISTING CONCRETE RUNDOWN TO REMAIN
9. EXISTING CURB AND GUTTER TO REMAIN
10. CONSTRUCT MULTI-DIRECTIONAL WHEELCHAIR RAMP PER DETAIL SHEET 3
11. CONSTRUCT STANDARD CURB AND GUTTER PER DETAIL SHEET 3
12. CONSTRUCT 2' SIDEWALK CULVERT, TYPICAL, PER DETAIL SHEET 5
13. CONSTRUCT RUNDOWN PER DETAIL SHEET 3
14. CONSTRUCT 5' WIDE CONCRETE SIDEWALK PER DETAIL SHEET 3
15. CONSTRUCT CONCRETE STAIRWAY PER DETAIL SHEET 3
16. CONSTRUCT CONCRETE SIDEWALK PER DETAIL SHEET 3
17. CONSTRUCT NEW ASPHALT PAVEMENT PER TYPICAL PARKING LOT PAVEMENT SECTION, SHEET 3
18. PAINT WHITE DIRECTIONAL ARROWS WITH WHITE TRAFFIC PAINT, MIN. 2 COATS PER MUTCD DEC 2000
19. PAINT 4" PAVEMENT MARKING W/ WHITE TRAFFIC PAINT, MIN. 2 COATS
20. PAINT CROSSWALK PAVEMENT MARKING PER DETAIL SHEET 3
21. NEW LANDSCAPING, SEE LANDSCAPING PLAN
22. INSTALL 18" CMP STORM DRAIN @ S = 0.02
23. INSTALL SINGLE 10" STORM INLET PER DETAIL SHEET 5 W/ T.O.G @ 33.00 AND INV. 18' (OUT) @ 30.47
24. REMOVE AND DISPOSE EXISTING STORM INLET
25. STENCIL "COMPACT" ON PARKING LOT PAVEMENT
26. PAINT TOP AND FACE OF CURB W/ YELLOW TRAFFIC PAINT, MIN. 2 COATS
27. BEGIN PAINTING TOP AND FACE OF CURB WITH YELLOW TRAFFIC PAINT
28. END PAINTING TOP AND FACE OF CURB WITH YELLOW TRAFFIC PAINT
29. STENCIL "NO PARKING" ON TOP AND FACE OF CURB AT 50' SPACING
30. BEGIN STENCILING "NO PARKING" ON TOP AND FACE OF CURB
31. END STENCILING "NO PARKING" ON TOP AND FACE OF CURB
32. REMOVE AND DISPOSE 4" DOUBLE SWING GATE
33. EXISTING MANHOLE TO REMAIN; CONNECT NEW 18" CMP TO EXISTING MANHOLE W/ INV. OUT @ 35.82
34. INSTALL SALVAGED CONCRETE PARKING BUMPERS @ EDGE OF FLUSH SIDEWALK PER DETAIL SHEET 3
35. CONSTRUCT RAMPING CONCRETE SIDEWALK PER DETAIL SHEET 3 (MAX 12:1 SLOPE)
36. NEATLY SAWCUT, REMOVE AND DISPOSE OF EXISTING CONCRETE RUNDOWN
37. EXISTING CONCRETE RUNDOWN TO REMAIN (3')
38. NEW LIGHT STANDARD AND BASE, SEE ELECTRICAL
39. CONSTRUCT CONCRETE SIDEWALK FLUSH WITH PAVING PER DETAIL SHEET 3
40. NEATLY REMOVE AND SALVAGE EXISTING PARKING BUMPERS
41. INSTALL 1 - ADA COMPLIANT HANDICAP PARKING SIGN
42. INSTALL 1 - ADA COMPLIANT HANDICAP PARKING SIGN W/ VAN ACCESSIBLE PLACARD
43. NEW GROUND MOUNTED SIGN BY OWNER, PROVIDE POWER, COORDINATE REQUIREMENTS WITH SIGN COMPANY
44. CONSTRUCT RUNDOWN FROM HEADWALL PER DETAIL SHEET 3
45. REMOVE AND DISPOSE EXISTING CONCRETE RUNDOWN
46. EXISTING TRENCH DRAIN TO REMAIN
47. INSTALL 1 - ADA COMPLIANT HANDICAP PARKING SPACE PAVEMENT MARKING, TYPICAL
48. PAINT 4" WIDE CROSS-HATCH (2" CO) PAVEMENT MARKINGS @ 45 DEG W/ WHITE TRAFFIC PAINT, MIN. 2 COATS, TYPICAL
49. EXISTING LIGHT POLE TO REMAIN
50. EXISTING TREES AND SHRUBS TO REMAIN
51. CONSTRUCT DOUBLE 24" SIDEWALK CULVERT, TYPICAL, PER DETAIL SHEET 5 AND C&G STANDARD DWG 2236
52. INSTALL 18" CMP STORM DRAIN @ S = 0.015
53. CLEAR SIGHT TRIANGLE
54. NEATLY REMOVE AND DISPOSE OF EXISTING SIDEWALK CULVERT
55. CONSTRUCT 8" WIDE CONCRETE SIDEWALK PER DETAIL SHEET 3
56. EXISTING SIDEWALK CULVERT TO REMAIN



VICINITY MAP
SCALE: 1" = 750'

PAVING SITE PLAN (TCL)

1"=20'

Legend:

- A AREA LIGHT
- A/C ANTI-SIPHON VALVE
- ASV ANTI-SIPHON VALVE
- BOH BONE HOLE
- C&G CURB AND GUTTER
- CBN CONCRETE BENCH
- COP CONCRETE DRIVEWAY
- CHC CAST IRON PIPE
- CHC CONCRETE HEADER CURB
- CLD CENTERLINE OF DOOR
- CLD CENTERLINE OF DOUBLE DOOR
- CLF CHAIN LINK FENCE
- CLF SANITARY SEWER CLEANOUT
- CONC CONCRETE
- COP CURB OPENING
- CP CONCRETE PIPE
- CRD CONCRETE RUNDOWN
- CRW CONCRETE RETAINING WALL
- CWCR CONCRETE WHEELCHAIR RAMP
- DP DRIVEWAY
- E/G EDGE OF GRASS
- EA EDGE OF ASPHALT
- EC ELECTRIC CONDUIT
- EO ELECTRIC OUTLET
- EO/C ELECTRIC OUTLET IN CONCRETE
- EPB ELECTRIC PULLBOX
- FL FLOWLINE
- FP FLAG POLE
- GPM GAS PUMP MARK
- HCS HANDICAP PARKING SIGN
- INV INVERT
- IRRG IRRIGATION
- MBC METAL BUILDING COLUMN
- MBX METAL BOX
- MLP METAL LIGHT POLE
- MP METAL POLE
- MPP METAL POWER POLE
- MS METAL SIGN
- ONE(1) OVERHEAD ELECTRIC (NO. OF LINES)
- ONE(2) OVERHEAD TELEPHONE (NO. OF LINES)
- PS PARKING BUMPER
- PIB PAINTED ISLAND
- PLB PLASTIC BENCH
- PM PAINT MARK
- SAS MH SANITARY SEWER MANHOLE
- SCS SPRINKLER CONTROL VALVE
- SD STORM DRAIN
- SDMH STORM DRAIN MANHOLE
- SI STORM INLET
- SI/C STORM INLET IN CONCRETE
- STD. C&G STANDARD CURB AND GUTTER
- STL STEEL
- SW TOP OF SIDEWALK
- SWC SIDEWALK CULVERT
- TA TOP OF ASPHALT
- TC TOP OF CURB
- TCO TOP OF CONCRETE
- YG TOP OF GRATE
- TMH TELEPHONE MANHOLE
- TPB TELEPHONE PULLBOX
- TP/PB TELEPHONE RISER/PULLBOX
- TS TRAFFIC SIGN
- TVALT TELEPHONE VAULT
- TV TYPICAL
- UG UNDERGROUND
- VG VALLEY GUTTER
- W/MH WITH METAL MANHOLE
- WP WOOD POLE
- WBW WATER VALVE BOX
- X-WALK CROSSWALK
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING BOULDER
- EXISTING SHRUB
- EXISTING DECIDUOUS TREE (CALIPER SIZE)
- EXISTING CONIFEROUS TREE (CALIPER SIZE)

LEGAL DESCRIPTION

TRACT 1, THE EAST 800 ADDITION

PROJECT BENCHMARK

CITY OF ALBUQUERQUE, FROM INITIAL, ELEVATION "1"-11", SET IN TOP OF A CONCRETE POST WHICH SETS 0.4' NORTH OF THE NORTH EDGE OF A CONCRETE SIDEWALK, AND FLUSH WITH THE TOP OF SIDEWALK PAVEMENT ON THE NORTH SIDE OF CONSTITUTION AVE. N.E. AND BETWEEN PENNSYLVANIA BLVD. N.E. AND CONSTITUTION PL. N.E. ON THE SOUTH SIDE OF SHIMHEARS PARK. ELEVATION = 5329.00 FEET (M.S.L.D.)

T.B.M.

TOP OF CURB ELEVATION LOCATED AT THE S.E. CORNER OF THE INTERSECTION OF CONSTITUTION AVE. N.E. AND CONSTITUTION PLACE N.E. AS SHOWN ON THE DRAWING ON SHEET 1. ELEVATION = 5329.86 FEET (M.S.L.D.)

Final Construction Documents

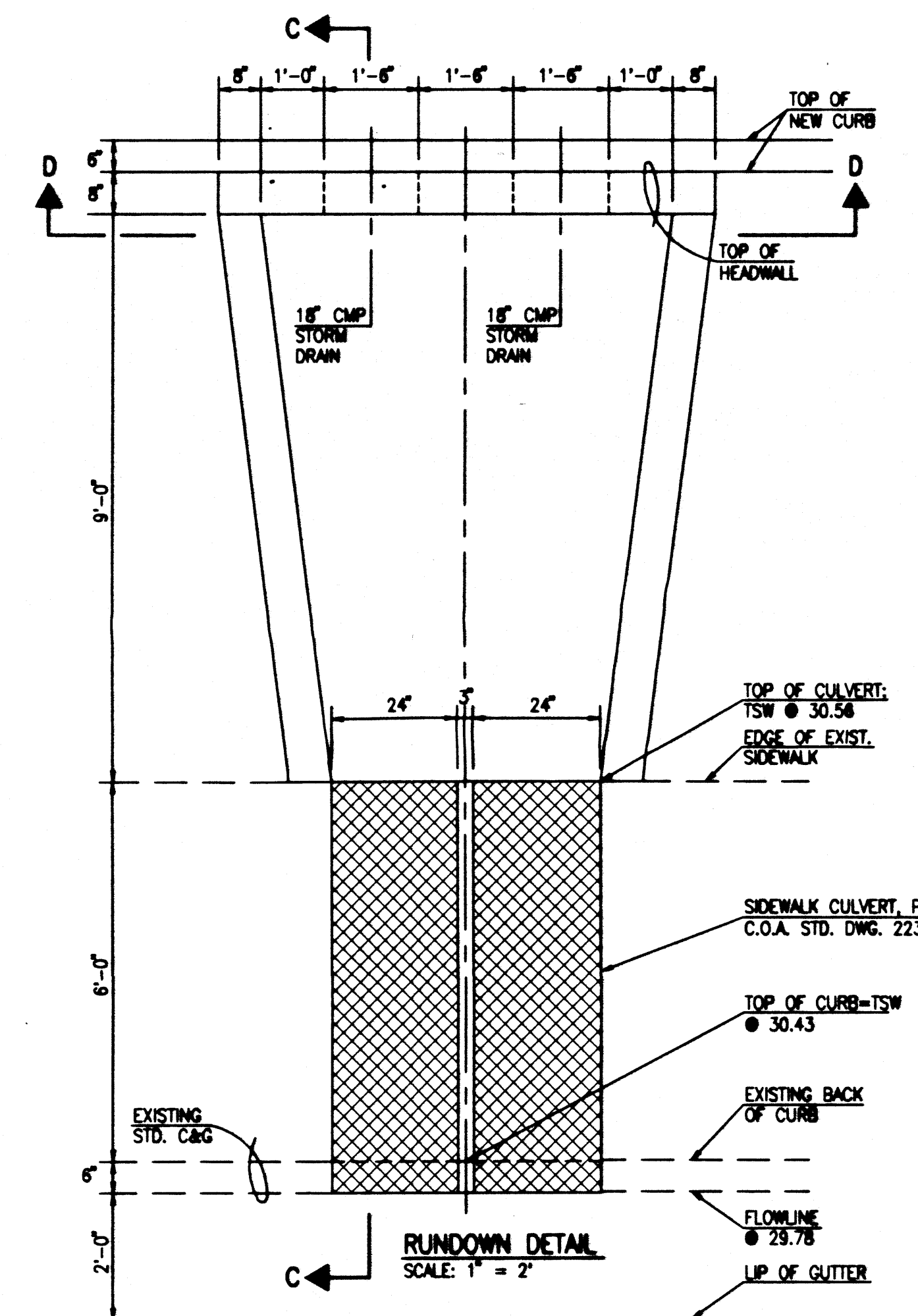
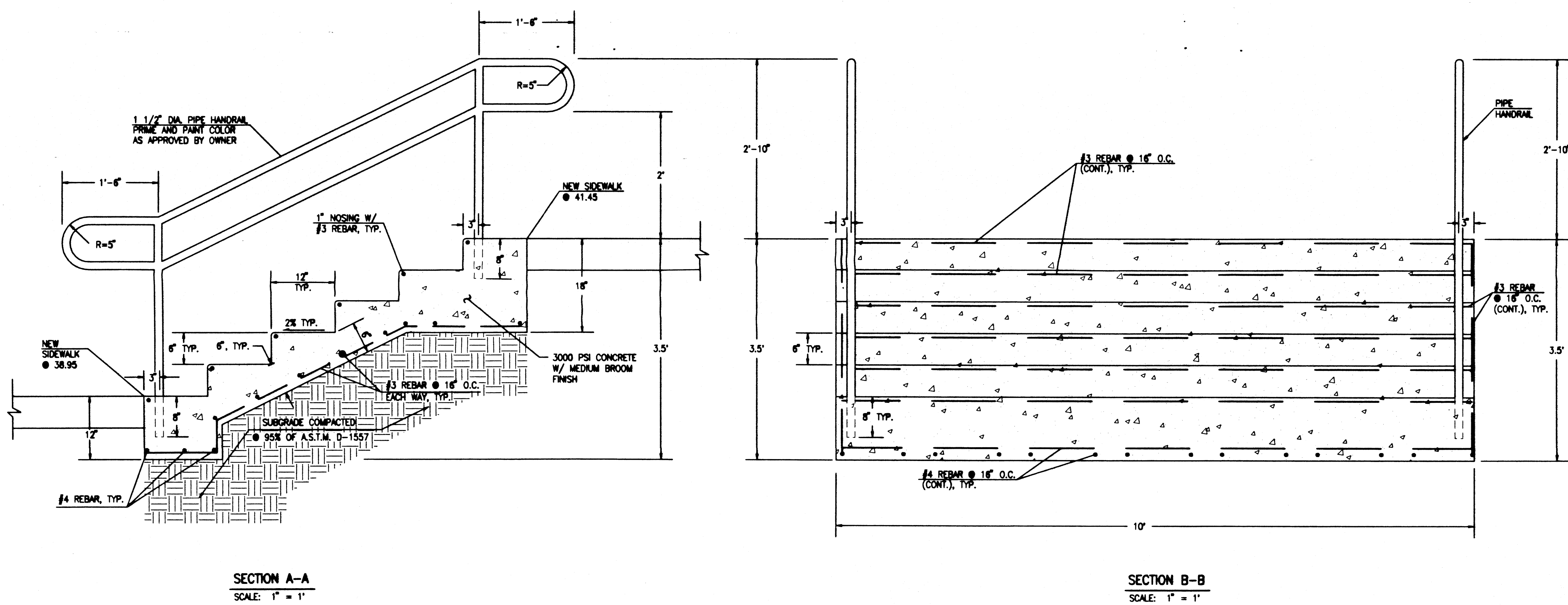
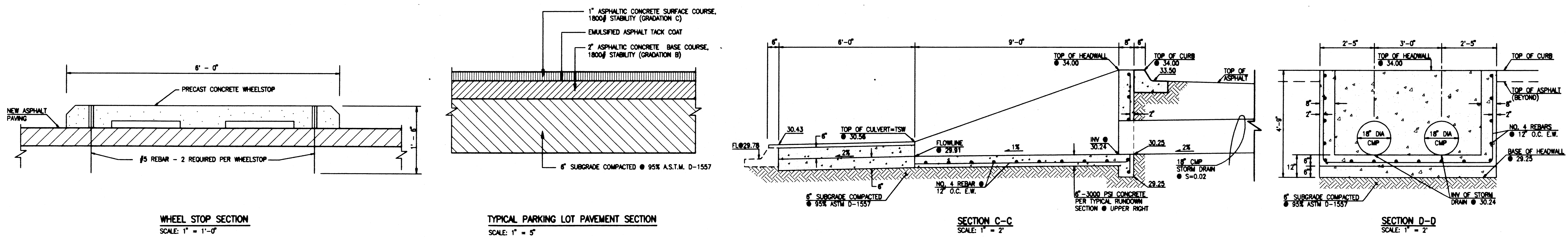
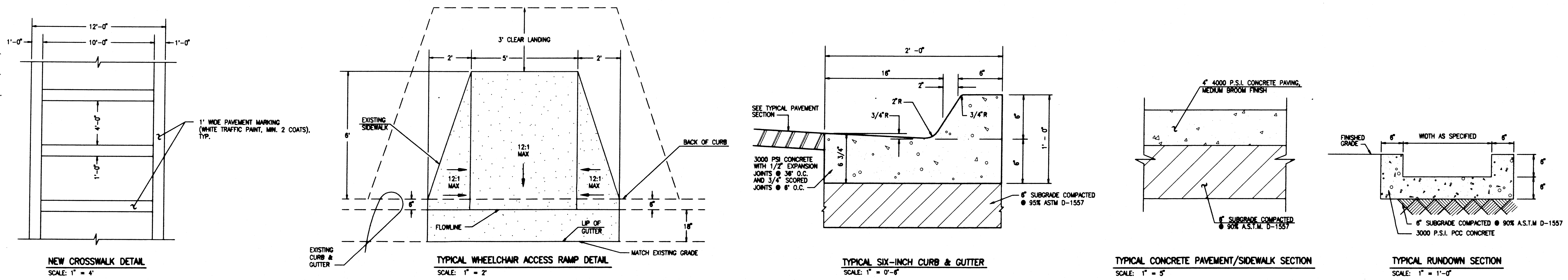
Parking Area A
FMG Constitution
8300 Constitution Avenue NE
Albuquerque, New Mexico
Preliminary Project No. 1998002

Drawn	JMA	Checked	JGM
Proj.	200431	Date	10/27/2005
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EXPANDED KEYED NOTES
Revisions
Architect
Engineer

PAVING SITE PLAN (TCL)

Sheet Title sheet 2 of 10



PAVING SECTIONS AND DETAILS

Final Construction Documents

Parking Area A
FMG Constitution
8300 Constitution Avenue NE
Albuquerque, New Mexico
Preliminary Project No. 11000002

Drawn: JMA Checked: JGM
By: Date: 10/21/2005
Proj: 200431
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NO CHANGES TO THIS SHEET
Revisions: Architect Engineer

PAVING SECTIONS AND DETAILS

Sheet Title Sheet 3 of 10

C2

File Path: \\jma\projects\2004\200431\2005\10-27-2005
Plot Date: 10-27-2005
Plot Time: 11:58 am
File Name: 41202SD.DWG

JMA

JMA JOB NO. 2004.120.2
JEFF HORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87109
ENGINEERS SURVEYORS (CDD) 245-4250
FAX: 505 345-4254 ESTABLISHED 1977

Legend:

- AL/C AREA LIGHT
- ASV ANTI-SIPHON VALVE
- BH BUILDING OVERHANG
- BU BUCK
- C&G CURB AND GUTTER
- CB CONCRETE BENCH
- CD CONCRETE DRIVEWAY
- CH CONCRETE HEAD CURB
- CI CAST IRON PIPE
- CLD CENTERLINE OF DOOR
- CLF CENTERLINE OF DOUBLE DOOR
- CLP CHAIN LINK FENCE
- CS SANITARY SEWER CLEANOUT
- CONC CONCRETE
- COP CURB OPENING
- CP CONCRETE PIPE
- CRD CONCRETE RUNDOWN
- CRR CONCRETE RETAINING WALL
- CWC CONCRETE WHEELCHAIR RAMP
- DP DRIVEWAY
- E/G EDGE OF GRASS
- EA EDGE OF ASPHALT
- EC ELECTRIC CONDUIT
- EO ELECTRIC OUTLET
- EO/C ELECTRIC OUTLET IN CONCRETE
- EPB ELECTRIC PULLBOX
- FL FLOWLINE
- FP FLAG POLE
- GPM GAS PUMP MARK
- HCS HANDICAP PARKING SIGN
- INW INVERT
- IRRC IRRIGATION
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- MBX METAL BOX
- MLP METAL LIGHT POLE
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- MS METAL SIGN
- MS(4) OVERHEAD ELECTRIC (NO. OF LINES)
- MS(2) OVERHEAD TELEPHONE (NO. OF LINES)
- PA PARKING AREA
- PAI PAINTED ISLAND
- PLB PLASTIC BENCH
- PLB PAINT MARK
- SAS SANITARY SEWER MANHOLE
- SCT SPARKER CONTROL TOWER
- SD STORM DRAIN
- SDH STORM DRAIN MANHOLE
- SI STORM INLET
- SI/C STORM INLET IN CONCRETE
- STD STANDARD CURB AND GUTTER
- STL STEEL
- SW TOP OF SIDEWALK
- SWC SIDEWALK CULVERT
- TA TOP OF ASPHALT
- TC TOP OF CURB
- TCO TOP OF CONCRETE
- TG TOP OF GRADE
- TMH TELEPHONE MANHOLE
- TPB TELEPHONE PULLBOX
- TR/PB TELEPHONE RISER/PULLBOX
- TYA TYPICAL VAULT
- UG UNDERGROUND
- UGV VALLEY GUTTER
- W/MH WITH METAL MANHOLE
- WP WOOD POLE
- WVB WATER VALVE BOX
- X-WALK CROSSWALK
- EXIST EXISTING CONTOUR
- EXIST EXISTING SPOT ELEVATION
- EXIST EXISTING BOULDER
- EXIST EXISTING SHRUB
- EXIST EXISTING DECIDUOUS TREE (CALIPER SIZE)
- EXIST EXISTING CONIFEROUS TREE (CALIPER SIZE)

LEGAL DESCRIPTION

TRACT 1, THE EAST END ADDITION

PROJECT BENCHMARK

CITY OF ALBUQUERQUE Bench Mark "1-10", SET IN TOP OF A CONCRETE POST (BENCH MARK) NORTH OF THE NORTH SIDE OF A CONCRETE SIDEWALK AND FLUSH WITH THE TOP OF SIDEWALK PAVEMENT ON THE NORTH SIDE OF CONSTITUTION AVE. N.E. AND BETWEEN PERRYMAN DRIVE, N.E. AND CONSTITUTION PL. N.E. ON THE NORTH SIDE OF ELEVATION = 5320.00 FEET (N.A.S.D.)

T.B.M.

TOP OF CURB ELEVATION LOCATED AT THE S.E. CORNER OF THE INTERSECTION OF CONSTITUTION AVE. N.E. AND CONSTITUTION PLACE N.E. AS SHOWN ON THE SHOWN ON SHEET 1. ELEVATION = 5320.00 FEET (N.A.S.D.)

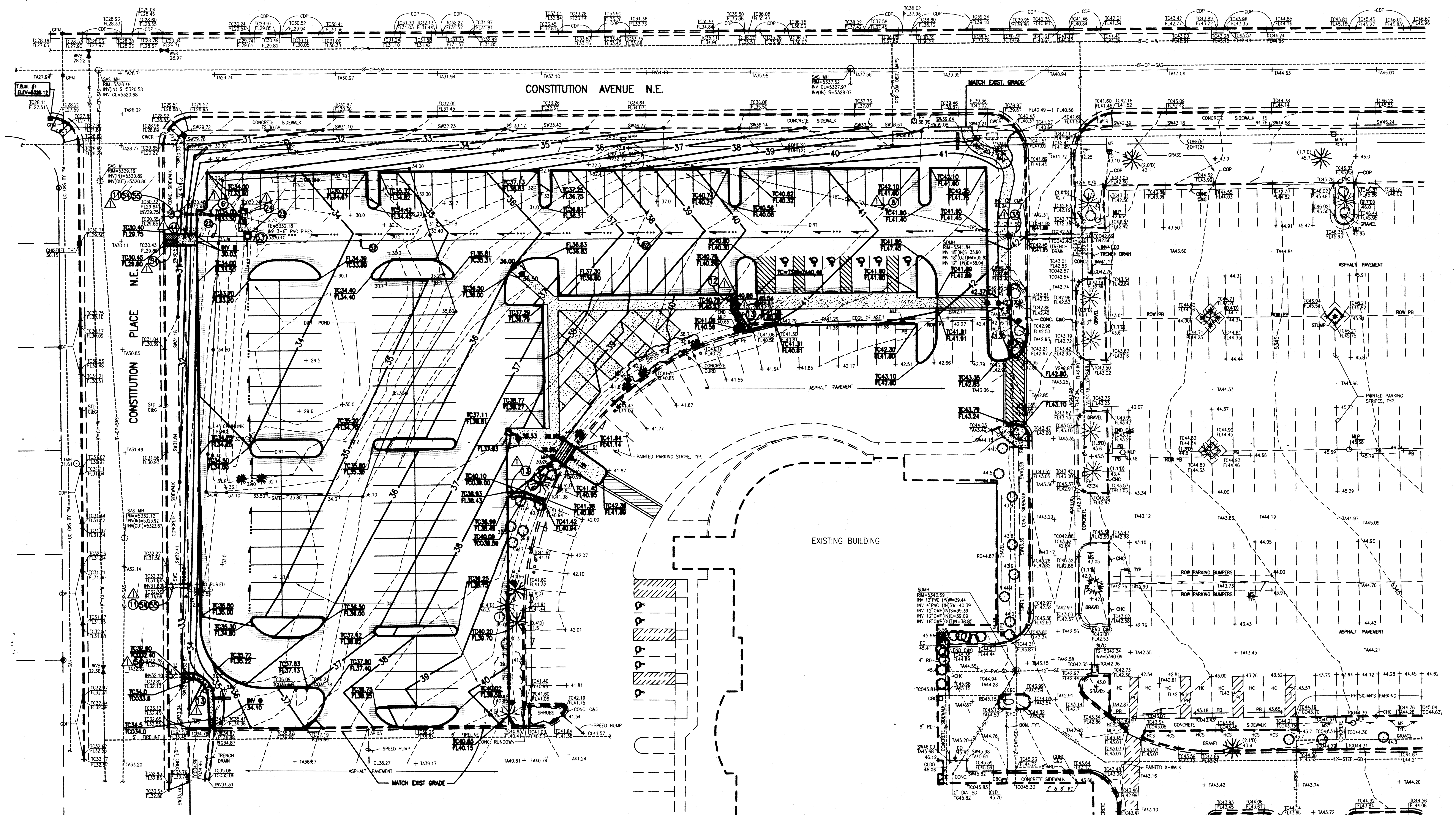
Final Construction Documents

Parking Area A
FMG Constitution
8300 Constitution Avenue NE
Albuquerque, New Mexico
Preparation Project No. 2004.120.3

Drawn: JMA
Checked: JGM
Date: 10/21/2005
Project: 2004.120.3
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Expanded Keyed Notes
Revisions
Architect: JGM
Engineer: JGM

Grading Plan

Sheet Title Sheet 4 of 10



CONSTRUCTION NOTES:

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 280-1990 (ALBUQUERQUE AREA), 1-800-321-ALERT(2537) (STATEWIDE), FOR LOCATION OF EXISTING UTILITIES.
- 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 OF THE INFORMATION PROVIDED BY THE ENGINEER AS REQUIRED ABOVE.
- 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.
- ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
- 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 UNDERNO LINES, RESPONSIBILITY OR LIABILITY THEREOF. THE CONTRACTOR SHALL INQUIRE 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 UTILITY LINES, 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.

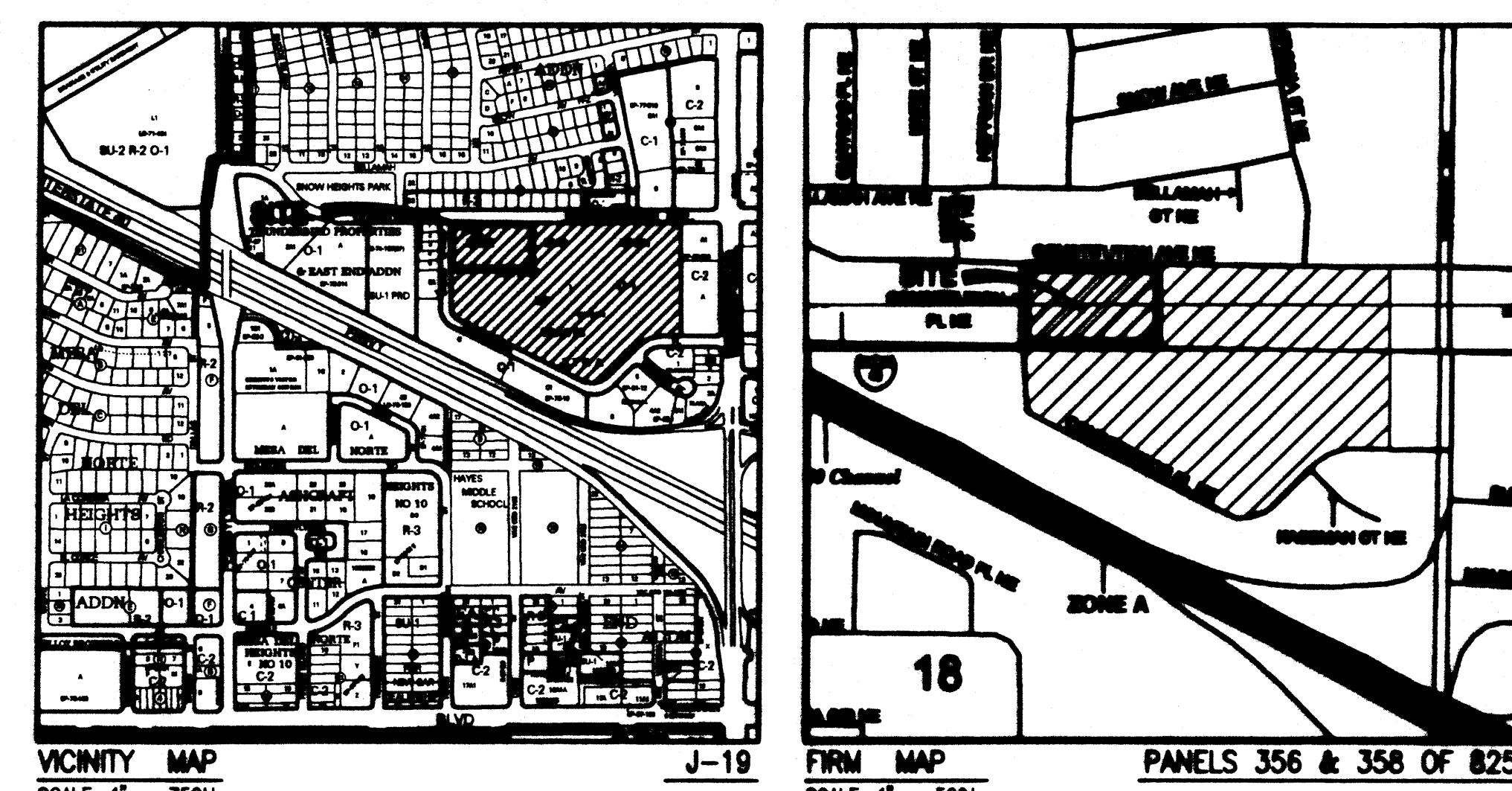
APPROVALS	NAME	DATE
HYDROLOGY		
SIDEWALK INSPECTOR		
STORM DRAIN MAINTENANCE		

STORM DRAINAGE KEYED NOTES:

- REMOVE AND DISPOSE OF 18" CMP STORM DRAIN PIPE
- REMOVE AND DISPOSE OF 8" PVC PIPE
- CONSTRUCT STANDARD CURB AND GUTTER PER DETAIL, SHEET 3
- CONSTRUCT 2" SIDEWALK CULVERT, TYPICAL, PER DETAIL, SHEET 5
- CONSTRUCT RUNDOWN PER DETAIL, SHEET 3
- INSTALL 18" CMP STORM DRAIN @ S = 0.02
- INSTALL SINGLE 10" STORM INLET PER DETAIL, SHEET 5 W/ T.O.G. @ 33.00 AND INV 18" (OUT) @ 30.47
- REMOVE AND DISPOSE EXISTING STORM INLET
- EXISTING MANHOLE TO REMAIN; CONNECT NEW 18" CMP TO EXISTING MANHOLE W/ INV OUT @ 35.82
- CONSTRUCT RUNDOWN PER DETAIL, SHEET 3
- CONSTRUCT DOUBLE 24" SIDEWALK CULVERT, TYPICAL, PER DETAIL, SHEET 5 AND COA STANDARD DWD 22.06
- INSTALL 18" CMP STORM DRAIN @ S = 0.015
- NEATLY REMOVE AND DISPOSE OF EXISTING SIDEWALK CULVERT
- CONSTRUCT 8" WIDE CONCRETE SIDEWALK PER DETAIL, SHEET 3
- EXISTING SIDEWALK CULVERT TO REMAIN

JMA JOB NO. 2004.120.3

JEFF MORTENSEN & ASSOCIATES, INC.
6000 N. MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, N.M. 87109
ENGINEERS & SURVEYORS (SOS) 245-4250
FAX: 505-345-4254 (ESTABLISHED 1971)



VICINITY MAP SCALE: 1" = 750' J-19
FIRM MAP SCALE: 1" = 500' PANELS 356 & 358 OF 825

GRADING PLAN

1"=20'



C3

DRAINAGE PLAN

I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS SITE IS LOCATED IN THE EAST-CENTRAL AREA OF ALBUQUERQUE. THIS PROJECT WILL CONSIST OF THE DEVELOPMENT OF A NEW PARKING LOT FOR THE KASEMAN PRESBYTERIAN HOSPITAL, CANCER CENTER BUILDING. THIS DEVELOPMENT WILL MODIFY AN EXISTING PARTIALLY DEVELOPED SITE WHICH PERISTS OF THE HOSPITAL RADIOLOGY BUILDING, AN UPPER PAVED PARKING LOT, AND A LOWER NATURAL VEGETATED AREA GRADED SO AS TO CREATE A DETENTION POND FOR FLOWS FROM BOTH ONSITE AND OFFSITE FLOWS ABOVE THE SITE. THE NEW PARKING LOT WILL REPLACE THE VEGETATED AREA. THE DRAINAGE CONCEPT FOR THIS SITE WILL BE TO ELIMINATE THE EXISTING POND BY PAVING OVER THE ENTIRE VEGETATED LOWER AREA AND DRAIN THE FLOWS INTO THE BORDERING STREET OF CONSTITUTION PLACE NE. THERE WILL BE SOME SLIGHT DETENTION PONDING WITHIN THE PARKING LOT.

THIS DRAINAGE SUBMITTAL IS MADE IN SUPPORT OF A GRADING AND PAVING PERMIT AND SO #19 APPROVAL.

II. PROJECT DESCRIPTION

THE SITE IS LOCATED ON THE SOUTHEAST CORNER OF CONSTITUTION AVE NE AND CONSTITUTION PLACE NE. THE CURRENT LEGAL DESCRIPTION OF THE SITE IS TRACT 1, EAST END ADDITION. THE SITE IS CURRENTLY LOCATED IN PANEL 354 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNILLO COUNTY, NEW MEXICO, NOVEMBER 19, 2003 AND IS ZONED AS ZONE X, AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THE DEVELOPMENT PROPOSED WILL INCREASE DOWNSTREAM FLOW BUT WILL NOT ADVERSELY IMPACT DOWNSTREAM FLOW OR DOWNSTREAM PROPERTIES. RUNOFF FROM THE SITE DRAINS INTO CONSTITUTION PLACE NE, AND THEN FLOWS NORTH TO CONSTITUTION AVENUE NE. AT CONSTITUTION AVENUE NE THE FLOW IS DIRECTED WEST TO THE INTERSECTION WITH PENNSYLVANIA STREET. FLOW PROCEEDS TO ENTER THREE LARGE CURB STORM INLETS ALONG CONSTITUTION AVE JUST BEFORE THE PENNSYLVANIA INTERSECTION. THESE INLETS DRAIN INTO THE I-40 CHANNEL.

III. BACKGROUND DOCUMENTS

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

- GRADING AND DRAINAGE PLAN FOR PRESBYTERIAN KASEMAN HOSPITAL - RADIATION THERAPY CENTER ADDITION, PREPARED BY JMA AND DATED 05-08-96 FOR BUILDING PERMIT. THE 1996 PLAN RECOGNIZED THAT THE EXISTING POND REQUIRED ENLARGEMENT TO CONTAIN THE DESIGN VOLUME OF RUNOFF. THE PLAN ALSO IDENTIFIED A 100-YEAR PEAK DISCHARGE OF 10.7 CFS FROM THIS PORTION OF TRACT 1.
- DRAINAGE PLAN FOR PRESBYTERIAN KASEMAN HOSPITAL - RADIATION THERAPY CENTER WEST EXPANSION POND ANALYSIS, PREPARED BY JMA AND DATED 01-11-05. THIS PLAN CONCLUDED THAT THE INDIOT I-40/PENNSYLVANIA OVERPASS PROJECT COMPLETED IN THE SPRING OF 2005 HAS ALLEVIATED PREVIOUS FLOODING CONCERNS ON THE CONSTITUTION AVE/PENNSYLVANIA STREET INTERSECTION. THIS PLAN USED THE CONJUGATE DEPTH EQUATION TO EVALUATE THE EFFECTS OF HYDRAULIC JUMP IN CONSTITUTION AVENUE NE. THE PLAN DETERMINED THAT THE DOWNSTREAM DRAINAGE IMPROVEMENTS THAT WERE MADE AT THE CONCLUSION OF THE I-40/PENNSYLVANIA PROJECT ALLOWED FOR SUFFICIENT FLOW IN CONSTITUTION AVENUE WITH NO HYDRAULIC JUMP ISSUES. THIS CONCLUSION RESULTED IN THE ALLOWANCE OF THE ELIMINATION OF THE DETENTION POND IN THIS PROJECT AS WELL AS FREE DISCHARGE INTO THE STREET.
- TOPOGRAPHIC SURVEY OF THE EXISTING SITE PREPARED BY JMA DATED 4/13/2005. THE SUBJECT SURVEY SHOWS THE EXISTING IMPROVEMENTS.

IV. EXISTING CONDITIONS

THE SITE IS LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF CONSTITUTION AVENUE NE AND CONSTITUTION PLACE NE. THE SITE IS PARTIALLY DEVELOPED. THE JMA TOPOGRAPHIC SURVEY DATED 4/13/2005 SHOWS THAT THE SITE CONSISTS OF AN EXISTING HOSPITAL BUILDING AND AN ASPHALT PAVED PARKING LOT, AS WELL AS AN UNDEVELOPED VEGETATED AREA AT THE NORTH AND WEST THAT IS GRADED FOR THE PURPOSE OF CREATING A DETENTION PONDING AREA FOR BOTH ON-SITE RUNOFF AND OFF-SITE FLOWS. THE SITE SLOPES FROM SOUTHEAST TO NORTHWEST AND DRAINS INTO THE POND AT THE NORTHWEST CORNER. THIS POND DRAINS VIA STORM DRAIN THROUGH AN EXISTING SIDEWALK CULVERT INTO CONSTITUTION PLACE NE. CONSTITUTION AVENUE IS A FULLY IMPROVED ROADWAY, 40 FEET WIDE WITH CURB AND GUTTER ON BOTH SIDES. CONSTITUTION PLACE FLOWS ARE CARRIED BY CURB AND GUTTER NORTH INTO CONSTITUTION AVENUE, WHERE IT FLOWS WEST TO AN INTERSECTION WITH PENNSYLVANIA STREET. JUST BEFORE THIS INTERSECTION THERE ARE THREE LARGE CURB STORM INLETS ALONG CONSTITUTION AVE NE WHERE THE FLOWS WILL DRAIN IN TO. THE INLETS DRAIN SOUTH INTO THE I-40 CHANNEL.

ON-SITE CONTRIBUTING AREA FLOWS FROM A PARKING LOT ALONG THE SOUTH EDGE OF THE SITE ENTER AT THE SOUTHWEST CORNER OF THE SITE THROUGH A TRENCH DRAIN AND CURB CUT; THE FLOWS EMPTY NORTH INTO THE DETENTION POND. ON-SITE CONTRIBUTING AREA FLOWS FROM AN ADJACENT PARKING LOT ALSO ENTER THE SITE THROUGH A TRENCH DRAIN INTO A 12" STORM DRAIN THAT RELEASES INTO THE MANHOLE AT THE EAST EDGE OF THE SITE; THESE FLOWS ENTER INTO A 16" CUP STORM DRAIN FROM THE ON-SITE MANHOLE AND EMPTIES THESE FLOWS INTO THE SITE AT THE NORTH EDGE OF THE SITE. THESE FLOWS DRAIN WEST INTO THE DETENTION POND AS SHOWN ON THE T.O.L.

V. DEVELOPED CONDITIONS

THE PROJECT CONSIST OF THE CONSTRUCTION OF A NEW ASPHALT PAVED PARKING LOT THAT WILL SERVE THE EXISTING HOSPITAL BUILDINGS IN THE AREA. THIS NEW LOT WILL REPLACE THE NATURALLY VEGETATED AREA ALONG THE NORTH AND WEST OF THE SITE, AND WILL ELIMINATE THE EXISTING DETENTION POND. AS A RESULT OF THESE IMPROVEMENTS, THERE WILL BE AN INCREASE IN THE RUNOFF THE SITE GENERATES AS WELL AS A REDIRECTION OF ON-SITE CONTRIBUTING AREA FLOWS AROUND THE SITE THAT CURRENTLY TRAVERSE THE SITE. A SMALL PORTION OF THE ON-SITE RUNOFF WILL BE PONDING AT THE NORTHWEST CORNER OF THE DEVELOPED PARKING LOT, WHICH WILL BE DRAINED THROUGH A STORM INLET AND STORM DRAIN INTO A RUNDOWN AND SIDEWALK CULVERT INTO CONSTITUTION PLACE NE AS SHOWN ON THE DEVELOPED GRADING PLAN. THIS STORM DRAIN PIPE WILL DRAIN THE CAPTURED STORMWATER RUNOFF IN A PERIOD LESS THAN SIX HOURS. FLOWS INTO CONSTITUTION PLACE NE WILL FOLLOW THE SAME DRAINAGE PATH AS STATED IN THE EXISTING CONDITIONS.

AS THE HYDROGRAPH CALCULATIONS SHOW, THE VOLUME REQUIRING PONDING WILL EQUAL 220 CF. THIS VOLUME WILL REACH A HEIGHT ABOVE THE STORM INLET OF 5333.2 FT. THE LOWEST POINT OF THE TOP OF CURB IN THE PONDING AREA IS AT 5334 FT. THIS IS ALSO THE LOWEST TOP OF CURB IN THE ENTIRE PROJECT SITE. THEREFORE, THERE IS NO PROBLEM OF RUNOFF OVERFLOWING THE CURB.

ON-SITE CONTRIBUTING AREA FLOWS THAT ENTER THE MANHOLE AT THE EAST CORNER OF THE SITE WILL BE DIRECTED THROUGH THE SITE VIA A NEW 16" CUP STORM DRAIN THAT WILL TRAVERSE THE SITE FROM EAST TO WEST AND DRAIN INTO CONSTITUTION PLACE NE AT THE SAME LOCATION AS THE ON-SITE FLOW STORM DRAIN RELEASES ITS FLOWS AS SHOWN ON THE DEVELOPED GRADING PLAN.

THE OVERALL RESULT OF THE DEVELOPMENT WILL INCREASE THE VOLUME AND PEAK DISCHARGE RATE INTO CONSTITUTION PLACE NE. THIS INCREASE IS ALLOWED DUE TO THE COMPLETION OF DEVELOPMENT AT PENNSYLVANIA STREET AND I-40 THAT ALLEVIATED PAST DOWNSTREAM FLOW ISSUES; ISSUES THAT HAD PREVIOUSLY RESULTED IN THE CREATION OF THE EXISTING ON-SITE DETENTION POND. U

VI. GRADING PLAN

THE GRADING PLAN SHOWS: 1.) EXISTING GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'-0" INTERVALS BASED ON THE TOPOGRAPHIC SURVEY PREPARED BY JMA, DATED 4/13/2005. 2.) PROPOSED GRADES INDICATED BY CONTOURS AT 1'-0" INTERVALS. 3.) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS AS TAKEN FROM THE AFORE MENTIONED JMA SURVEY. 4.) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS. 5.) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES, AS SHOWN BY THIS PLAN. THE PROPOSED DEVELOPMENT CONSISTS OF PAVED PARKING, ALONG WITH ASSOCIATED LANDSCAPING AND SIDEWALK. THESE MODIFICATIONS TO THE SITE WILL EXPAND AVAILABLE ON-SITE PARKING AND VEHICLE ACCESS. AN EROSION CONTROL PLAN WILL BE PREPARED AND ATTACHED TO THE SEPARATE STORM WATER POLLUTION PREVENTION PLAN FOR THIS PROJECT.

VI. GRADING PLAN

THE GRADING PLAN SHOWS: 1.) EXISTING GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'-0" INTERVALS BASED ON THE TOPOGRAPHIC SURVEY PREPARED BY JMA, DATED 4/13/2005. 2.) PROPOSED GRADES INDICATED BY CONTOURS AT 1'-0" INTERVALS. 3.) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS AS TAKEN FROM THE AFORE MENTIONED JMA SURVEY. 4.) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS. 5.) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES, AS SHOWN BY THIS PLAN. THE PROPOSED DEVELOPMENT CONSISTS OF PAVED PARKING, ALONG WITH ASSOCIATED LANDSCAPING AND SIDEWALK. THESE MODIFICATIONS TO THE SITE WILL EXPAND AVAILABLE ON-SITE PARKING AND VEHICLE ACCESS. AN EROSION CONTROL PLAN WILL BE PREPARED AND ATTACHED TO THE SEPARATE STORM WATER POLLUTION PREVENTION PLAN FOR THIS PROJECT.

VI. CALCULATIONS

THE CALCULATIONS WHICH APPEAR HEREON ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT, AS WELL AS THE 10-YEAR, 6-HOUR RAINFALL EVENT FOR CULVERT DESIGN PURPOSES. THE PROCEDURE FOR 40-ACRE AND SMALLER BASINS, AS SET FOR 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 BY THIS DEVELOPMENT. THE CAPACITY OF THE DEVELOPED 16" CUP STORM DRAIN WAS ANALYZED USING THE ORIFICE AND MANNING'S EQUATIONS. THE CAPACITIES OF THE NEW STORM INLETS WERE DETERMINED USING THE ORIFICE EQUATION. THE CAPACITY OF THE NEW 24" CULVERTS ALONG CONSTITUTION PLACE NE WERE DETERMINED USING MANNING'S EQUATION. THE PERFORMANCE OF THE PRIVATE STORMWATER DETENTION SYSTEM IN THE NORTH EAST CORNER OF THE PARKING AREA HAS BEEN EVALUATED FOR OUTFLOW AND STORAGE CAPACITY BASED UPON THE HYDROGRAPH ANALYSIS CONTAINED ON THIS SHEET, AND PONDING IS NECESSARY ONLY DUE TO DISCHARGE PIPE SIZING CONSTRAINTS.

THE JANUARY 2005 CALCULATIONS ARE SHOWN HEREON TO SHOW THAT THE DOWNSTREAM STREET (CONSTITUTION AVENUE) IS CAPABLE OF HANDLING FLOWS FROM ON-SITE AND OFF-SITE. THE CONJUGATE DEPTH EQUATION WAS USED TO EVALUATE THE EFFECTS OF HYDRAULIC JUMP, AS SHOWN BY THESE CALCULATIONS. THE NORMAL DEPTH OF FLOW PLUS THE EFFECTS OF A HYDRAULIC JUMP COMPLY WITH DPM CRITERIA TO FALL BELOW THE TOP-OF-CURB PLUS 0.2 FEET. THIS SUGGESTS THAT THE STREET CAN HANDLE THE FULLY DEVELOPED DESIGN FLOW AS CALCULATED AND THAT PONDING IS NO LONGER NECESSARY.

VI. CONCLUSION

THE DRAINAGE CONCEPT SHOWN BY THE PLAN ABOVE WILL ACCOMPLISH ITS PURPOSE DUE TO THE FOLLOWING FACTORS:

- MODIFICATION TO AN EXISTING SITE WITHIN AN INFILL AREA
- THE PEAK RATE OF DISCHARGE FROM THE SITE WILL BE INCREASED ABOVE THAT OF THE EXISTING CONDITION
- REMOVAL OF THE EXISTING POND AS ALLOWED BY APPROVED DRAINAGE SUBMITTAL DATED 01-11-05
- ADEQUATE STREET CAPACITY IS AVAILABLE IN CONSTITUTION PLACE NE TO ACCOMMODATE PEAK DISCHARGE UNDER FULLY DEVELOPED CONDITIONS
- DOWNSTREAM CAPACITY OF CONSTITUTION PLACE AND CONSTITUTION AVENUE AND THE STORM DRAIN STRUCTURES LOCATED WITHIN ARE ADEQUATE FOR INCREASED FLOWS DUE TO THE INDIOT I-40/PENNSYLVANIA PROJECT IMPROVEMENTS
- FREE DISCHARGE INTO CONSTITUTION PLACE AND CONSTITUTION AVENUE FOR THE DRAINAGE PLAN DATED 1-11-05
- NO ADVERSE IMPACT ON DOWNSTREAM CAPACITY OR DOWNSTREAM PROPERTIES
- CULVERTS AT CONSTITUTIONS PLACE SUFFICIENT TO HANDLE PEAK DISCHARGE FROM BOTH STORM DRAINS UNDER FULLY DEVELOPED CONDITIONS
- GRADING AND CURB ABOUT STORM INLET AREA SUFFICIENT TO CONTAIN MORE THAN THE 220 CF OF PONDING REQUIRED DURING A 100-YEAR STORM
- OFFSITE FLOWS WILL CONTINUE TO BE INTERCEPTED AND CONVEYED THROUGH THE PROJECT TO DOWNSTREAM EXISTING DRAINAGE FACILITIES

CALCULATIONS

SITE CHARACTERISTICS

- PRECIPITATION ZONE = 3
- $P_{100} = P_{300} = 2.80$ $P_{10} = P_{300} = 1.73$
- TOTAL AREA (A) = 143,065 SF
3.28 AC
- EXISTING LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
B	16,779 / 0.38	12
C	61,628 / 1.41	43
D	64,660 / 1.48	45

TREATMENT	AREA (SF/AC)	%
D	70,000 / 1.61	100

TREATMENT	AREA (SF/AC)	%
B	23,552 / 0.54	16
D	119,533 / 2.74	84

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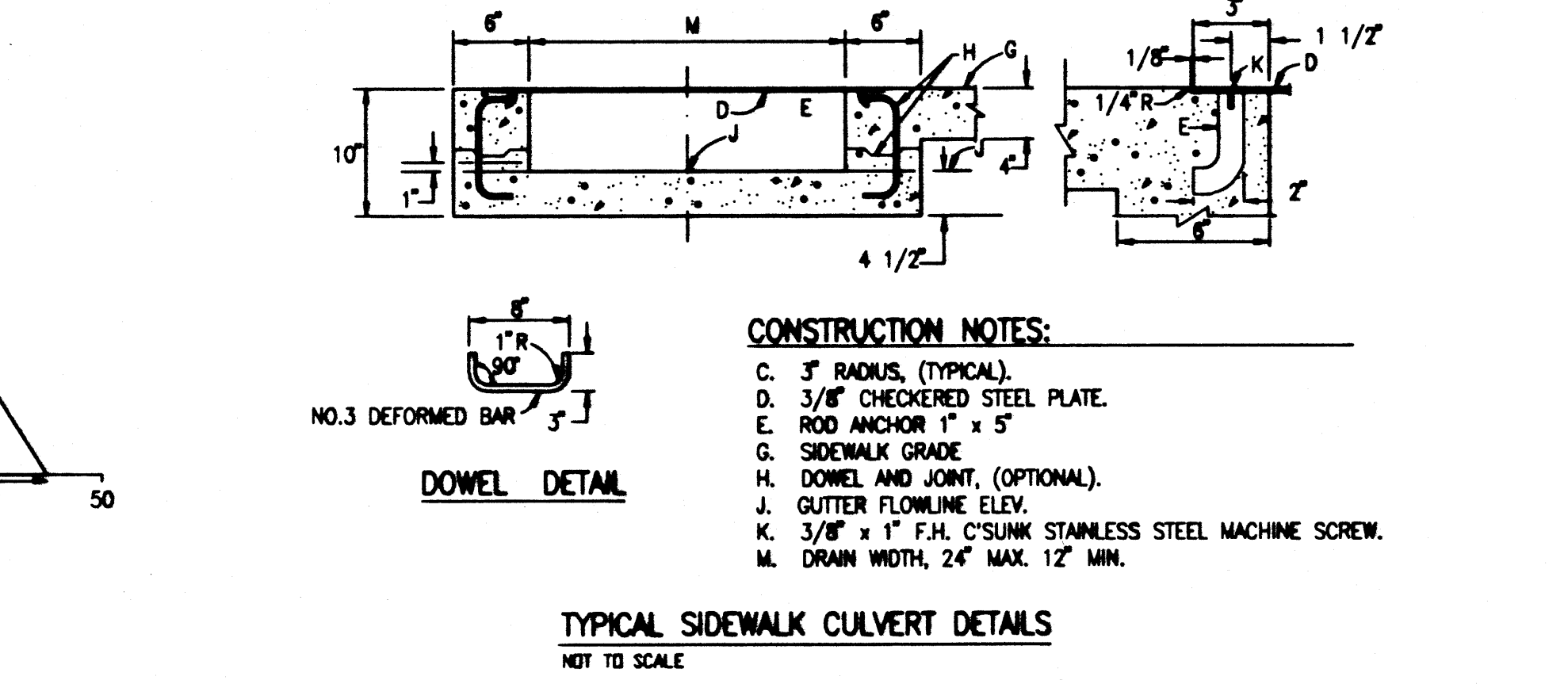
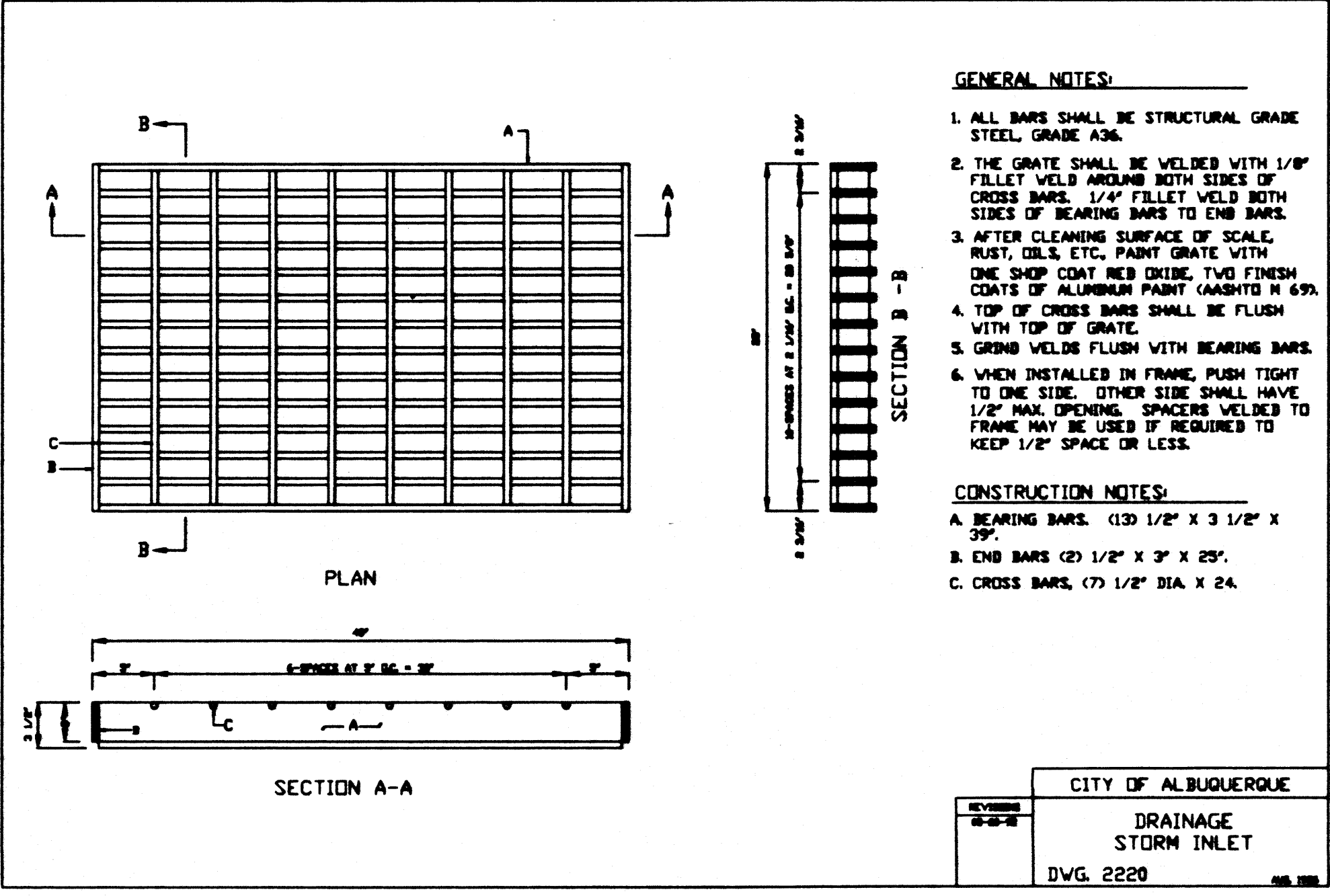
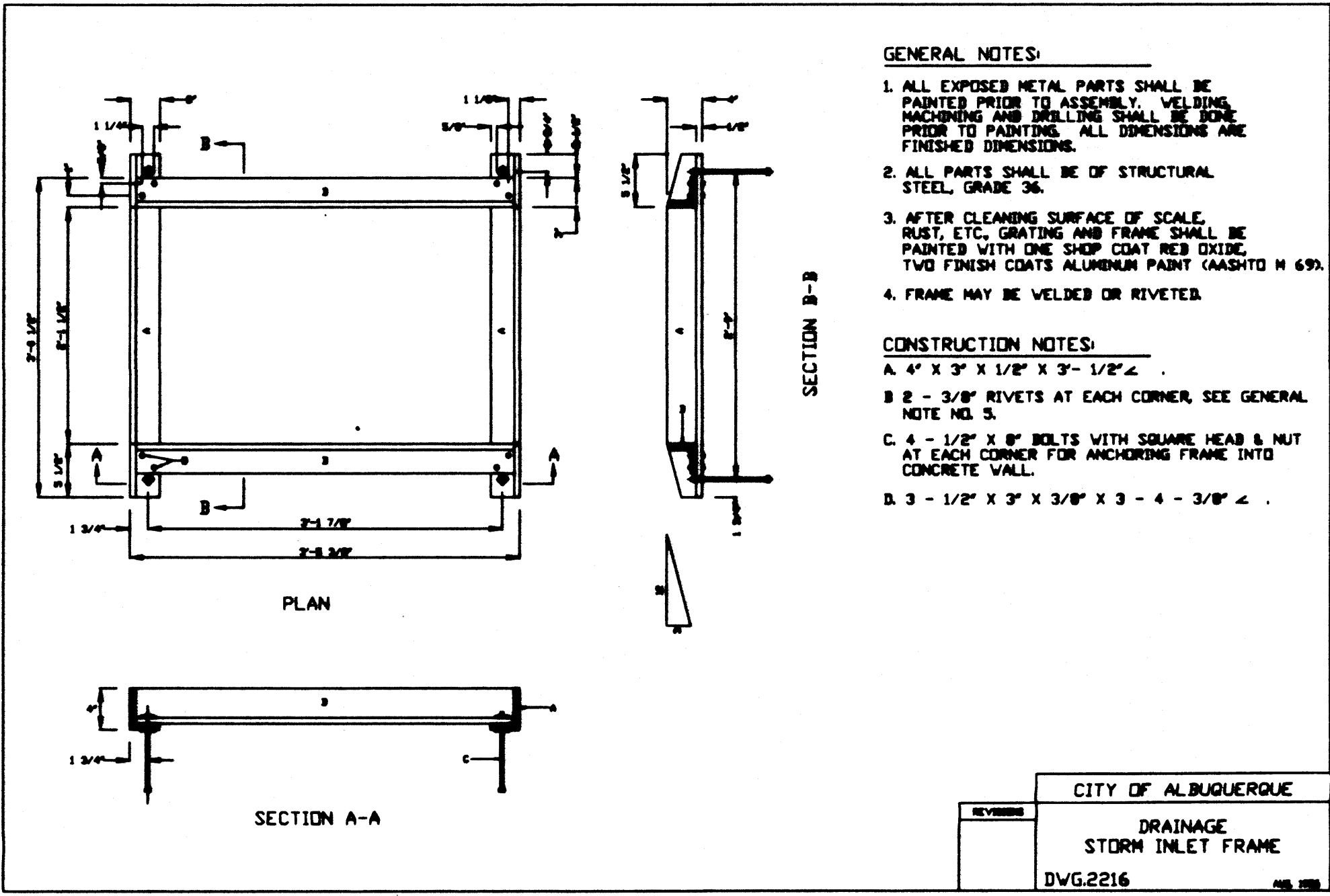
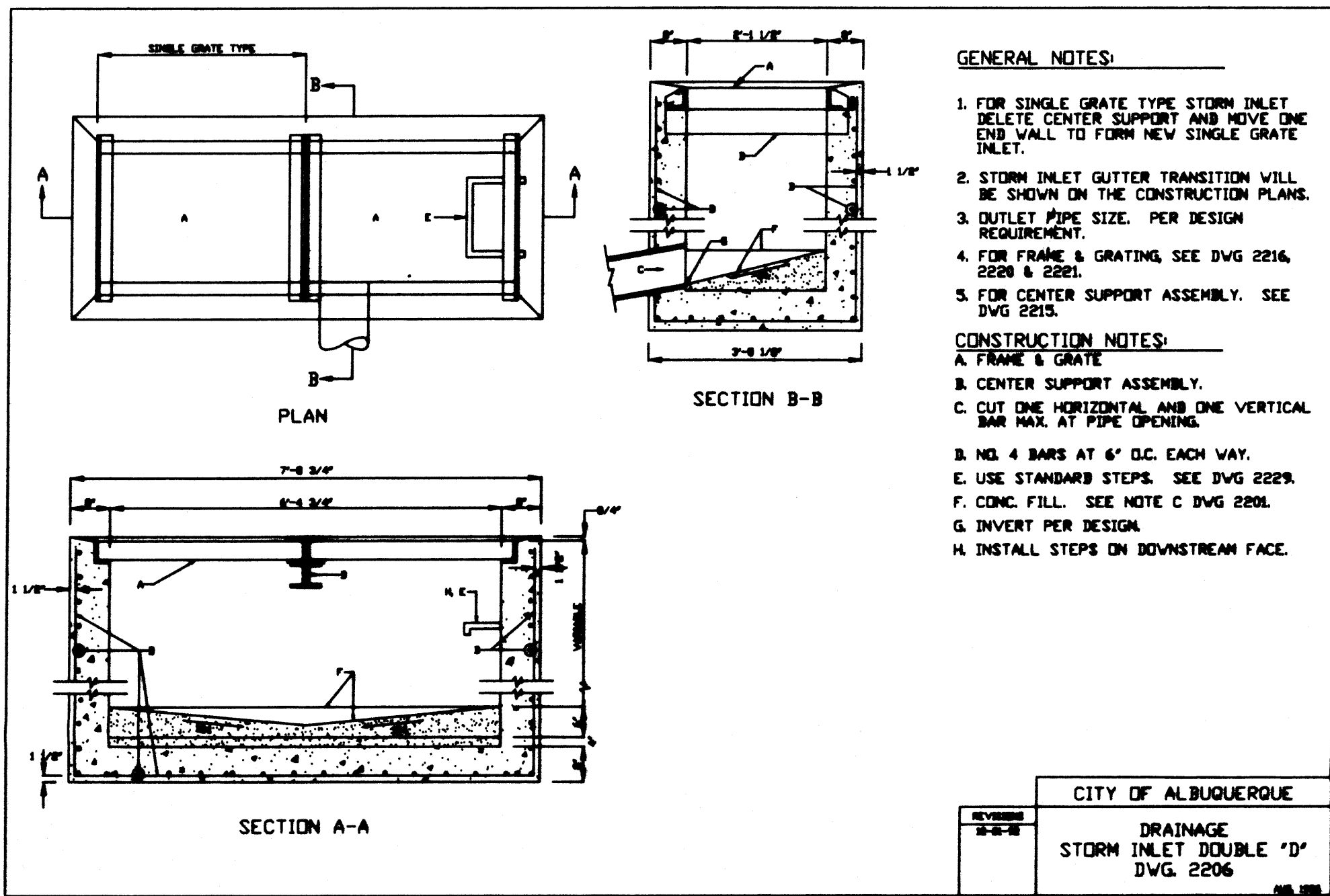
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Legend:

AL	AREA LIGHT
AL/C	AREA LIGHT ON CONCRETE
ASV	ANTI-SIPHON VALVE
BSH	BUILDING OVERHANG
BN	BING TRUCK
C&G	CURB AND GUTTER
C&N	CONCRETE BENCH
C&P	CONCRETE DRIVEWAY
C&C	CONCRETE C&G CURB
CI	CAST IRON PIPE
CLD	CENTERLINE OF DOOR
CLDD	CENTERLINE OF DOUBLE DOOR
CLF	CHAIN LINK FENCE
CLF	SANITARY FENCE CLEANOUT
CONC.	CONCRETE
COP	CURB OPENING
CP	CONCRETE PIPE
CRD	CONCRETE RUNDOWN
CRW	CONCRETE RETAINING WALL
CWCR	CONCRETE WHEELCHAIR RAMP
DP	DRIVEWAY
E/G	EDGE OF GRASS
EA	EDGE OF ASPHALT
EC	ELECTRIC CONDUIT
EO	ELECTRIC OUTLET
EO/C	ELECTRIC OUTLET IN CONCRETE
EPB	ELECTRIC PULLBOX
FL	FLOWLINE
FP	FLAG POLE
GPM	GAS PUMP MARK
HCS	HANDICAP PARKING SIGN
INV	INVERT
IRRG	IRRIGATION
MSC	METAL BUILDING COLUMN
MBX	MAILBOX
MLP	METAL LIGHT POLE
MP	METAL POLE
MPP	METAL POWER POLE
MS	METAL SIGN
ONE(4)	OVERHEAD ELECTRIC (NO. OF LINES)
ONE(2)	OVERHEAD TELEPHONE (NO. OF LINES)
PS	PARKING BUMPER
PI	PAINTED ISLAND
PLB	PLASTIC BENCH
PM	PAINT MARK
S&S MH	SANITARY SEWER MANHOLE
SCT	SPRINKLER CONTROL TIMER
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SI	STORM INLET
SI/C	STORM INLET IN CONCRETE
STD. C&G	STANDARD CURB AND GUTTER
STL	STEEL
SW	TOP OF SIDEWALK
SWC	SIDEWALK CULVERT
TA	TOP OF ASPHALT
TC	TOP OF CURB
TCO	TOP OF CONCRETE
TCG	TOP OF GRATE
TMH	TELEPHONE MANHOLE
TPB	TELEPHONE PULLBOX
TR/PS	TELEPHONE RISER/PULLBOX
TS	TRAFFIC SIGN
THAULT	TELEPHONE VAULT
TYP.	TYPICAL
UC	UNDERGROUND
VG	VALLEY GUTTER
W/MH	WITH METAL HANDRAIL
WP	WOOD POLE
WVB	WATER VALVE BOX
X-WALK	CROSSWALK
+	EXISTING CONTOUR
○	EXISTING SPOT ELEVATION
○	EXISTING BOLLARD
○	EXISTING SHRUB
○	EXISTING DECIDUOUS TREE (CALIPER SIZE)
○	EXISTING CONIFEROUS TREE (CALIPER SIZE)

LEGAL DESCRIPTION

TRACT 1, THE EAST END ADDITION

PROJECT BENCHMARK

CITY OF ALBUQUERQUE Green Label, changed "1-11", SET IN TOP OF A CONCRETE POST WHICH SETS 0.6' NORTH OF THE NORTH EDGE OF A CONCRETE SIDEWALK, AND FLUSH WITH THE TOP OF SIDEWALK PAVEMENT ON THE NORTH SIDE OF CONSTITUTION AVE. N.E. AND BETWEEN PENNYPARK BLVD. N.E. AND CONSTITUTION PL. N.E. ON THE SOUTH SIDE OF NEW HEIGHTS PARK. ELEVATION = 5320.05 FEET (M.S.L.D.)

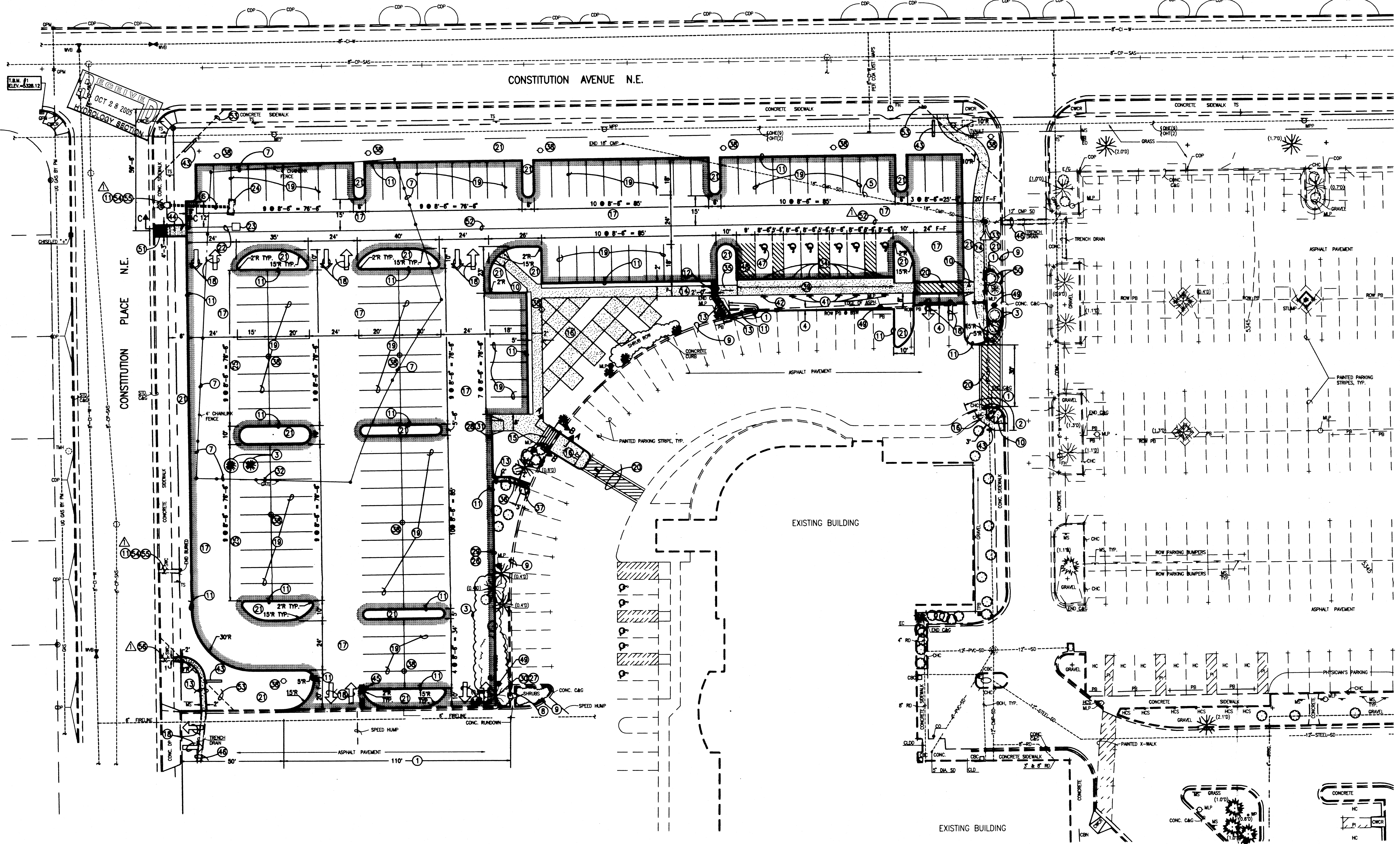
T.B.M.

TOP OF CURB ELEVATION LOCATED AT THE S.E. CORNER OF THE INTERSECTION OF CONSTITUTION AVE. N.E. AND CONSTITUTION PLACE N.E. AS SHOWN ON THE DRAWING ON SHEET 1. ELEVATION = 5320.86 FEET (M.S.L.D.)

Final Construction Documents

Parking Area A
FMG Constitution
8300 Constitution Avenue NE
Albuquerque, New Mexico
Project Number: 2004-02

Drawn: JMA Checked: JGM
No. 2004-031 Date: 10/21/2005
© 2005 KEVIN GEORGES & ASSOCIATES, P.A.
EXPANDED KEYED NOTES
Revisions: _____
Architect: _____
Engineer: _____

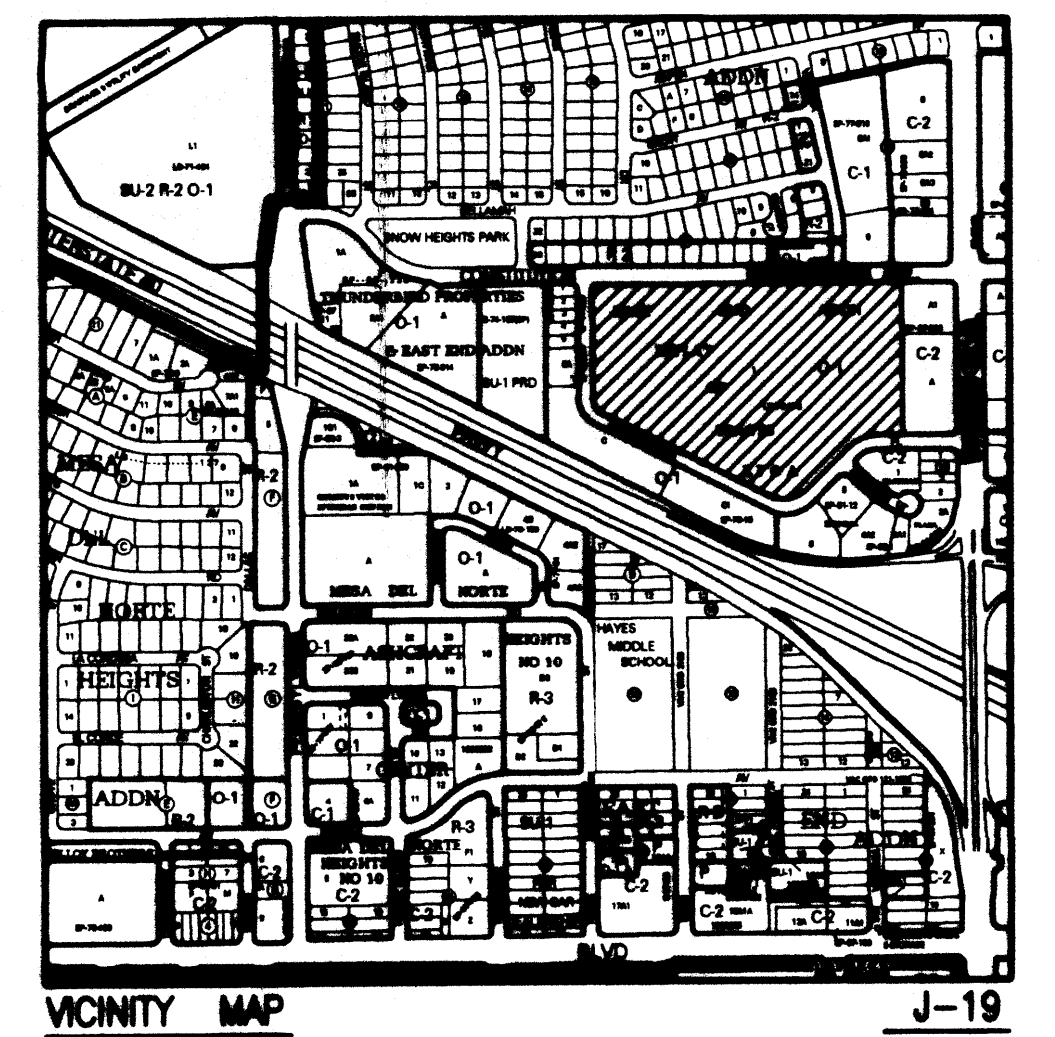


GENERAL NOTES

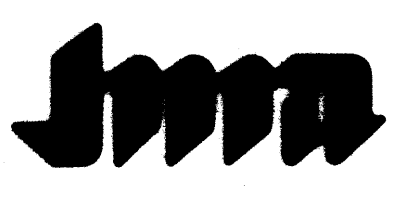
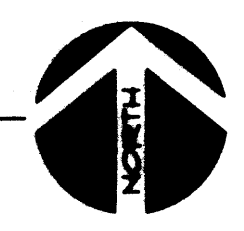
- OBTAIN ARCHITECT'S APPROVAL OF SIDEWALK LAYOUT AND JOINTS PRIOR TO PLACEMENT OF CONCRETE

SITE PLAN KEYED NOTES:

- NEATLY SAWCUT, REMOVE AND DISPOSE OF EXISTING CURB AND GUTTER
- NEATLY SAWCUT, REMOVE AND DISPOSE OF EXISTING SIDEWALK
- NEATLY SAWCUT, REMOVE AND DISPOSE OF EXISTING ASPHALT PAVING, 1'-0" MIN. WIDTH
- REMOVE AND DISPOSE OF 18" CMP STORM DRAIN PIPE RUNDOWN
- REMOVE AND DISPOSE OF 6" PVC PIPE
- REMOVE AND DISPOSE OF 4" CHAINLINK FENCE
- EXISTING CONCRETE RUNDOWN TO REMAIN
- EXISTING CURB AND GUTTER TO REMAIN
- CONSTRUCT MULTI-DIRECTIONAL WHEELCHAIR RAMP PER DETAIL SHEET 3
- CONSTRUCT STANDARD CURB AND GUTTER PER DETAIL SHEET 3
- CONSTRUCT 2" SIDEWALK CULVERT, TYPICAL, PER DETAIL SHEET 5
- CONSTRUCT 3" WIDE CONCRETE SIDEWALK PER DETAIL SHEET 3
- CONSTRUCT CONCRETE STAIRWAY PER DETAIL SHEET 3
- CONSTRUCT CONCRETE SIDEWALK PER DETAIL SHEET 3
- SEE LANDSCAPING PLAN FOR LAYOUT
- CONSTRUCT NEW ASPHALT PAVEMENT PER TYPICAL PARKING LOT PAVEMENT SECTION, SHEET 3
- PAINT WHITE DIRECTIONAL ARROWS WITH WHITE TRAFFIC PAINT, MIN. 2 COATS PER MUTCD DEC 2000
- PAINT 4" PAVEMENT MARKING W/ WHITE TRAFFIC PAINT, MIN. 2 COATS
- PAINT CROSSWALK PAVEMENT MARKING PER DETAIL SHEET 3
- NEW LANDSCAPING, SEE LANDSCAPING PLAN
- INSTALL 18" CMP STORM DRAIN @ S = 0.02
- INSTALL SINGLE 10" STORM INLET PER DETAIL SHEET 5 W/ T.O.G @ 33.00 AND INV 18" (OUT) @ 30.47
- REMOVE AND DISPOSE EXISTING STORM INLET
- STENCIL "COMPACT" ON PARKING LOT PAVEMENT
- PAINT TOP AND FACE OF CURB W/ YELLOW TRAFFIC PAINT, MIN. 2 COATS
- BEGIN PAINTING TOP AND FACE OF CURB WITH YELLOW TRAFFIC PAINT
- END PAINTING TOP AND FACE OF CURB WITH YELLOW TRAFFIC PAINT
- STENCIL "NO PARKING" ON TOP AND FACE OF CURB AT 50' SPACING
- BEGIN STENCILING "NO PARKING" ON TOP AND FACE OF CURB
- END STENCILING "NO PARKING" ON TOP AND FACE OF CURB
- REMOVE AND DISPOSE 4" DOUBLE SWING GATE
- EXISTING MANHOLE TO REMAIN, CONNECT NEW 18" CMP TO EXISTING MANHOLE W/ INV OUT @ 35.82
- INSTALL SALVAGED CONCRETE PARKING BUMPERS @ EDGE OF FLUSH SIDEWALK PER DETAIL SHEET 3
- CONSTRUCT RAMMING CONCRETE SIDEWALK PER DETAIL SHEET 3 (MAX 12:1 SLOPE)
- NEATLY SAWCUT, REMOVE AND DISPOSE OF EXISTING CONCRETE RUNDOWN
- EXISTING CONCRETE RUNDOWN TO REMAIN (3')
- NEW LIGHT STANDARD AND BASE, SEE ELECTRICAL
- CONSTRUCT CONCRETE SIDEWALK FLUSH WITH PAVING PER DETAIL SHEET 3
- NEATLY REMOVE AND SALVAGE EXISTING PARKING BUMPERS
- INSTALL 1 - ADA COMPLIANT HANDICAP PARKING SIGN W/ VAN ACCESSIBLE PLACARD
- NEW GROUND MOUNTED SIGN BY OWNER, PROVIDE POWER, COORDINATE REQUIREMENTS WITH SIGN COMPANY
- CONSTRUCT RUNDOWN FROM HEADWALL PER DETAIL SHEET 3
- REMOVE AND DISPOSE EXISTING CONCRETE RUNDOWN
- EXISTING TRENCH DRAIN TO REMAIN
- INSTALL 1 - ADA COMPLIANT HANDICAP PARKING SPACE PAVEMENT MARKING, TYPICAL
- PAINT 4" WIDE CROSS-HATCH (2' CO) PAVEMENT MARKINGS @ 45 DEG W/ WHITE TRAFFIC PAINT, MIN. 2 COATS, TYPICAL
- EXISTING LIGHT POLE TO REMAIN
- EXISTING TREES AND SHRUBS TO REMAIN
- CONSTRUCT DOUBLE 24" SIDEWALK CULVERT, TYPICAL, PER DETAIL SHEET 5 AND COA STANDARD DWG. 2236
- INSTALL 18" CMP STORM DRAIN @ S = 0.015
- CLEAR SIGHT TRIANGLE
- NEATLY REMOVE AND DISPOSE OF EXISTING SIDEWALK CULVERT
- CONSTRUCT 6" WIDE CONCRETE SIDEWALK PER DETAIL SHEET 3
- EXISTING SIDEWALK CULVERT TO REMAIN

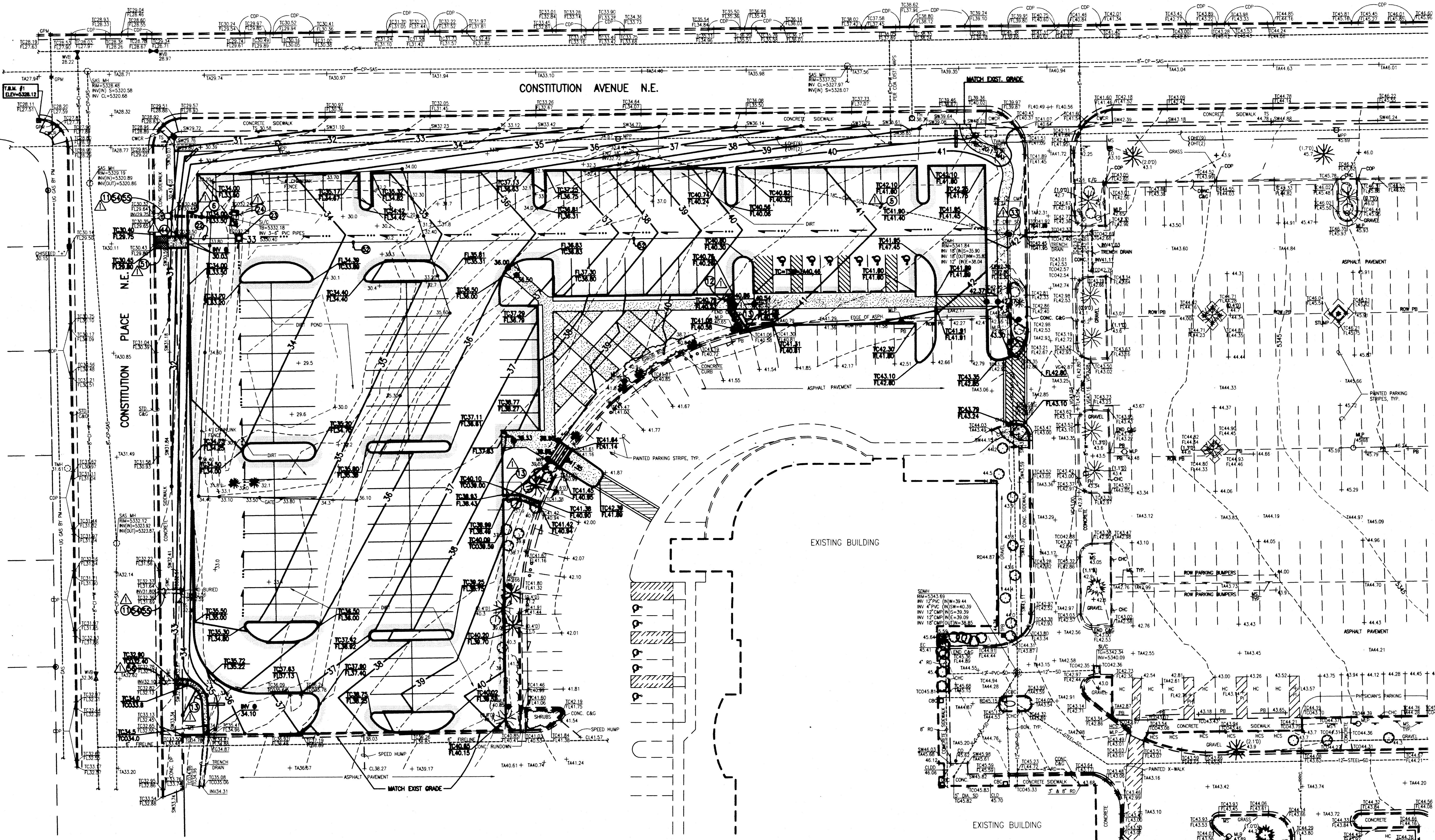


PAVING SITE PLAN (TCL)
1"=20'



JMA JOB NO. 2004.120.2
JEFF HORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87109
ENGINEERS: SURVEYORS: 345-4250
FAX: 505-345-4254 ESTABLISHED 1977





- Legend:**
- AL AREA LIGHT
 - ASV ANTI-SIPHON VALVE
 - BH BUILDING OVERHANG
 - BR BRICK BACK
 - CAG CONC. GUTTER
 - CBN CONCRETE BENCH
 - COP CONCRETE DRIVEPAD
 - CHC CONCRETE HEADER CURB
 - CLD CAST IRON PIPE
 - CLD CENTERLINE OF DOOR
 - CLD CENTERLINE OF DOUBLE DOOR
 - CLF CHAIN LINK FENCE
 - CON CONCRETE
 - COP CURB OPENING
 - CP CONCRETE PIPE
 - CRD CONCRETE RUNDOWN
 - CWR CONCRETE WHEELCHAIR RAMP
 - DR DRIVEPAD
 - E/G EDGE OF GRASS
 - EA EDGE OF ASPHALT
 - EC ELECTRIC CONDUIT
 - EO ELECTRIC OUTLET
 - EO/C ELECTRIC OUTLET IN CONCRETE
 - EPB ELECTRIC PULLBOX
 - FLP FLOW LINE
 - FP FLAG POLE
 - GP GAS PUMP MARK
 - HCS HANDICAP PARKING SIGN
 - IRV IRRIGATION
 - MBC METAL BUILDING COLUMN
 - MBX METAL BOX
 - MLP METAL POLE
 - MP METAL POWER POLE
 - MSP METAL SIGN
 - OHE(4) OVERHEAD ELECTRIC (NO. OF LINES)
 - OHE(2) OVERHEAD TELEPHONE (NO. OF LINES)
 - PB PARKING BUMPER
 - PI PAINTED ISLAND
 - PLB PLASTIC BENCH
 - PM PAINT MARK
 - SAC SANITARY SEWER MANHOLE
 - SD SPRINKLER CONTROL TIMER
 - SO STORM DRAIN
 - SDMH STORM DRAIN MANHOLE
 - SI STORM INLET
 - S/C STORM INLET IN CONCRETE
 - STD, CAG STANDARD CURB AND GUTTER
 - STL STEEL
 - SW TOP OF SIDEWALK
 - SWC SIDEWALK CULVERT
 - TA TOP OF ASPHALT
 - TC TOP OF CURB
 - TCO TOP OF CONCRETE
 - TG TOP OF GRATE
 - TMH TELEPHONE MANHOLE
 - TPB TELEPHONE PULLBOX
 - TR/PS TELEPHONE RISER/PULLBOX
 - TS TRAFFIC SIGN
 - TVALT TELEPHONE VAULT
 - TV TYPICAL
 - UG UNDERGROUND
 - VG VALLEY GUTTER
 - W/MH WITH METAL HANDRAIL
 - WP WOOD POLE
 - WB WATER VALVE BOX
 - WV CROSSWALK
 - X-EXISTING CONTOUR
 - +51.00 EXISTING SPOT ELEVATION
 - EXISTING BOUNDARY
 - EXISTING SHRUB
 - EXISTING DECIDUOUS TREE (CALIPER SIZE)
 - EXISTING CONIFEROUS TREE (CALIPER SIZE)

CONSTRUCTION NOTES:

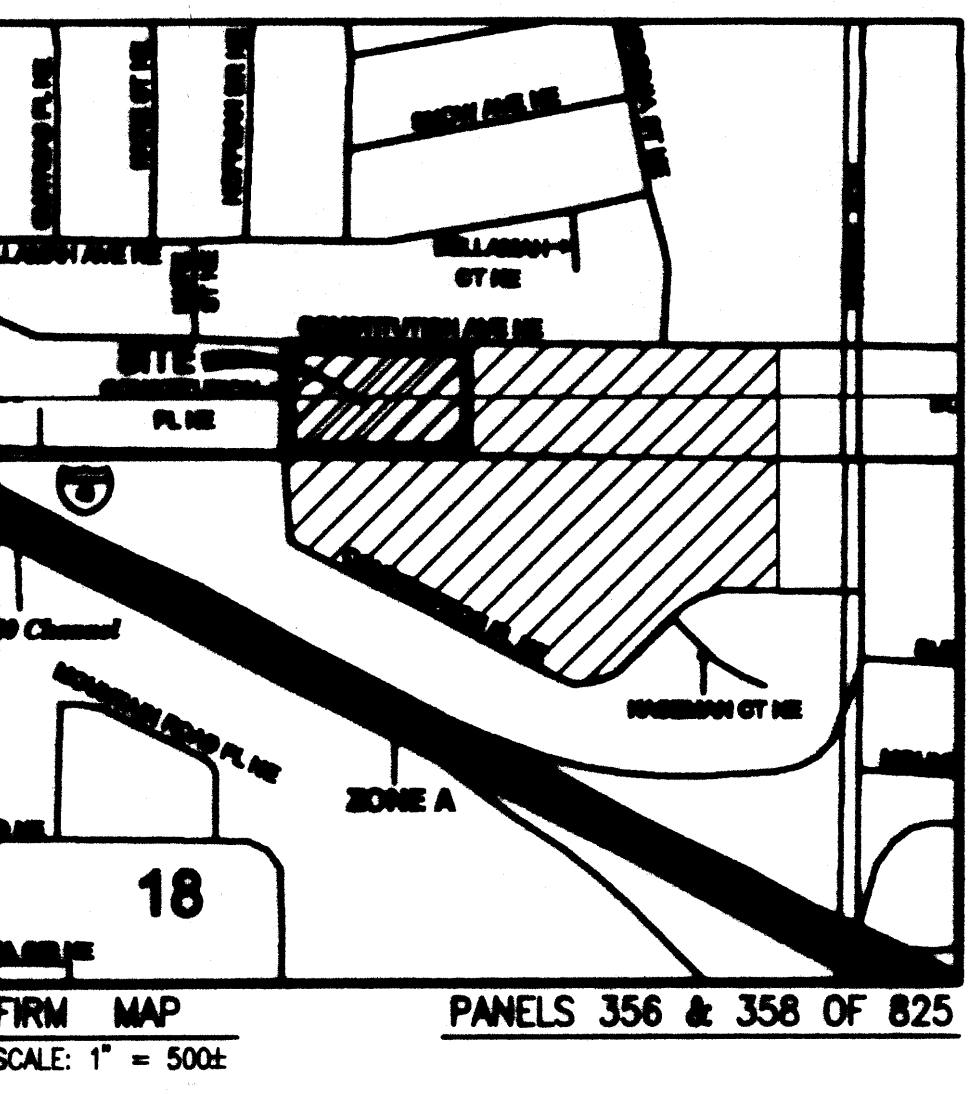
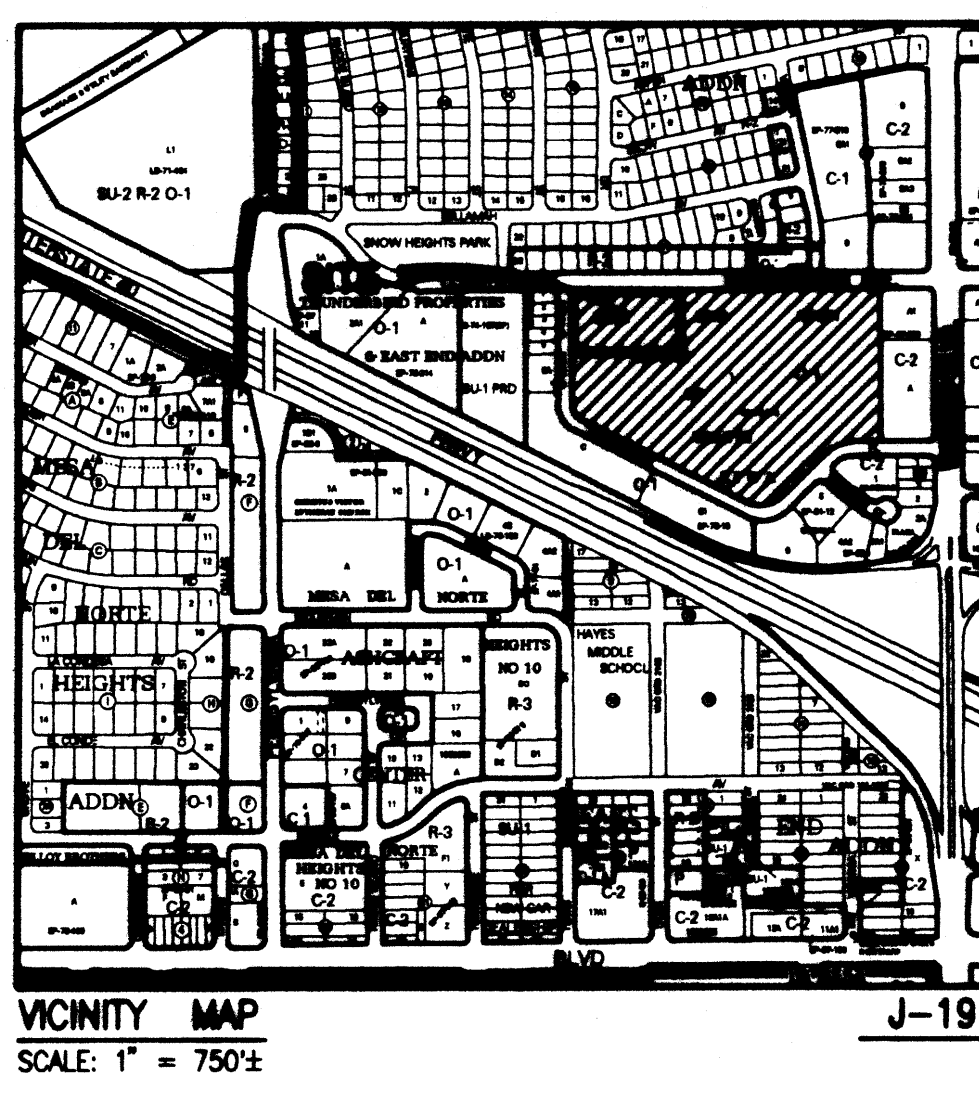
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR SHALL CONTACT NEW MEXICO ONE CALL SYSTEM 280-1990 (ALBUQUERQUE AREA) 1-800-521-ALERT(2537) (STATEWIDE), FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION 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.
- 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.
- ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
- 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/OR 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.
- 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.
- 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.
- BACKFILL COMPACTION SHALL BE ACCORDING TO ARTERIAL STREET USE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

EROSION CONTROL MEASURES:

- THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
- 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.
- 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.
- UNLESS FINAL STABILIZATION IS OTHERWISE PROVIDED FOR, ANY AREAS OF EXCESS DISTURBANCE (TRAFFIC ACCESS, STORAGE YARD, EXCAVATED MATERIAL, ETC.) SHALL BE RE-SEEDING ACCORDING TO C.O.A. SPECIFICATION 1012 "NATIVE GRASS SEEDING". THIS WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.

- STORM DRAINAGE KEYED NOTES:**
- REMOVE AND DISPOSE OF 18" CMP STORM DRAIN PIPE
 - REMOVE AND DISPOSE OF 6" PVC PIPE
 - CONSTRUCT STANDARD CURB AND GUTTER PER DETAIL, SHEET 3
 - CONSTRUCT 2" SIDEWALK CULVERT, TYPICAL, PER DETAIL, SHEET 5
 - CONSTRUCT RUNDOWN PER DETAIL, SHEET 3
 - INSTALL 18" CMP STORM DRAIN @ S = 0.02
 - INSTALL SINGLE "D" STORM INLET PER DETAIL, SHEET 5 W/ T.O.G @ 33.00 AND INV 18" (OUT) @ 30.47
 - REMOVE AND DISPOSE EXISTING STORM INLET
 - EXISTING MANHOLE TO REMAIN; CONNECT NEW 18" CMP TO EXISTING MANHOLE W/ INV OUT @ 35.82
 - CONSTRUCT RUNDOWN FROM HEADWALL PER DETAIL, SHEET 3
 - CONSTRUCT DOUBLE 24" SIDEWALK CULVERT, TYPICAL, PER DETAIL, SHEET 5 AND C.O.A. STANDARD DWG. 2236
 - INSTALL 18" CMP STORM DRAIN @ S = 0.015
 - NEATLY REMOVE AND DISPOSE EXISTING SIDEWALK CULVERT
 - CONSTRUCT 8" WIDE CONCRETE SIDEWALK PER DETAIL, SHEET 3
 - EXISTING SIDEWALK CULVERT TO REMAIN

APPROVALS	NAME	DATE
HYDROLOGY		
SIDEWALK INSPECTOR		
STORM DRAIN MAINTENANCE		



LEGAL DESCRIPTION
TRACT 1, THE EAST END ADDITION

PROJECT BENCHMARK
CITY OF ALBUQUERQUE Benchmark, established "1-1/4" SET IN TOP OF A CONCRETE POST ON THE NORTH SIDE OF THE NORTH EDGE OF A CONCRETE SIDEWALK AND FLUSH WITH THE TOP OF SIDEWALK PAVEMENT ON THE NORTH SIDE OF CONSTITUTION AVE. N.E. AND BETWEEN PENNSYLVANIA BLVD. N.E. AND CONSTITUTION PL. N.E. ON THE SOUTH SIDE OF BROWN HEIGHTS PARK. ELEVATION = 5320.05 FEET (N.A.S.D.)

T.B.M.
TOP OF CURB ELEVATION LOCATED AT THE S.E. RETURN OF THE INTERSECTION OF CONSTITUTION AVE. N.E. AND CONSTITUTION PLACE N.E. AS SHOWN ON THE BENCHMARK ON SHEET 1. ELEVATION = 5320.05 FEET (N.A.S.D.)

Final Construction Documents

Parking Area A
PMG Constitution
8300 Constitution Avenue NE
Albuquerque, New Mexico
Presbyterian Project No. H200002

Drawn: JMA Checked: JGM
No. 2000431 Date: 10/21/2005
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EXPANDED KEYED NOTES
Revisions: _____
Architect: _____
Engineer: _____

GRADING PLAN
Sheet 4 of 10

DRAINAGE PLAN

I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS SITE IS LOCATED IN THE EAST-CENTRAL AREA OF ALBUQUERQUE, NEW MEXICO. THE PROJECT WILL CONSIST OF THE DEVELOPMENT OF A NEW PARKING LOT FOR THE KASEMAN PRESBYTERIAN HOSPITAL CANCER CENTER BUILDING. THIS DEVELOPMENT WILL MODIFY AN EXISTING PARTIALLY DEVELOPED SITE WHICH PERISTS OF THE HOSPITAL RADIOLOGY BUILDING, AN UPPER PARKED PARKING LOT, AND A LOWER NATURAL VEGETATED AREA GRADED SO AS TO CREATE A DETENTION POND FOR FLOWS FROM BOTH ONSITE AND OFFSITE FLOWS ABOVE THE SITE. THE NEW PARKING LOT WILL REPLACE THE VEGETATED AREA. THE NEW CONCEPT FOR THIS SITE WILL BE TO ELIMINATE THE EXISTING POND BY PAVING OVER THE ENTIRE VEGETATED LOWER AREA AND DRAIN THE FLOWS INTO THE BORDERING STREET OF CONSTITUTION PLACE NE. THERE WILL BE SOME SLIGHT DETENTION PONDING WITHIN THE PARKING LOT.

THIS DRAINAGE SUBMITTAL IS MADE IN SUPPORT OF A GRADING AND PAVING PERMIT AND SO #119 APPROVAL.

II. PROJECT DESCRIPTION

THE SITE IS LOCATED ON THE SOUTHEAST CORNER OF CONSTITUTION AVE NE AND CONSTITUTION PLACE NE. THE CURRENT LEGAL DESCRIPTION OF THE SITE IS TRACT 1, EAST END ADDITION. THE SITE IS CURRENTLY LOCATED IN PANEL 356 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNILLO COUNTY, NEW MEXICO, NOVEMBER 19, 2003 AND IS ZONED AS ZONE X, AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THE DEVELOPMENT PROPOSED WILL INCREASE DOWNSTREAM FLOW BUT WILL NOT ADVERSELY IMPACT DOWNSTREAM FLOW OR DOWNSTREAM PROPERTIES. RUNOFF FROM THE SITE DRAINS INTO CONSTITUTION PLACE NE, AND THEN FLOWS NORTH TO CONSTITUTION AVENUE NE. AT CONSTITUTION AVENUE NE THE FLOW IS DIRECTED WEST TO THE INTERSECTION WITH PENNSYLVANIA STREET. FLOW PROCEEDS TO ENTER THREE LARGE CURB STORM INLETS ALONG CONSTITUTION AVE JUST BEFORE THE PENNSYLVANIA INTERSECTION. THESE INLETS DRAIN INTO THE I-40 CHANNEL.

III. BACKGROUND DOCUMENTS

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

- GRADING AND DRAINAGE PLAN FOR PRESBYTERIAN KASEMAN HOSPITAL - RADIATION THERAPY CENTER ADDITION, PREPARED BY JMA AND DATED 05-08-98 FOR BUILDING PERMIT. THE 1998 PLAN RECOGNIZED THAT THE EXISTING POND REQUIRED ENLARGEMENT TO CONTAIN THE DESIGN VOLUME OF RUNOFF. THE PLAN ALSO IDENTIFIED A 100-YEAR PEAK DISCHARGE OF 10.7 CFS FROM THIS PORTION OF TRACT 1.
- DRAINAGE PLAN FOR PRESBYTERIAN KASEMAN HOSPITAL - RADIATION THERAPY CENTER WEST EXPANSION POND, ANALYSIS PREPARED BY JMA AND DATED 01-11-05. THIS PLAN CONCLUDED THAT THE NADOT I-40/PENNSYLVANIA OVERPASS PROJECT COMPLETED IN THE SPRING OF 2005 HAS ALLEVIATED PREVIOUS FLOODING CONCERNS ON THE CONSTITUTION AVE/PENNSYLVANIA STREET INTERSECTION. THIS PLAN USED THE CONJUGATE DEPTH EQUATION TO EVALUATE THE EFFECTS OF HYDRAULIC JUMP IN CONSTITUTION AVENUE NE. THE PLAN DETERMINED THAT THE DOWNSTREAM DRAINAGE IMPROVEMENTS THAT WERE MADE AT THE CONCLUSION OF THE I-40/PENNSYLVANIA PROJECT ALLOWED FOR SUFFICIENT FLOW IN CONSTITUTION AVENUE WITH NO HYDRAULIC JUMP ISSUES. THIS CONCLUSION RESULTED IN THE ALLOWANCE OF THE ELIMINATION OF THE DETENTION POND IN THIS PROJECT AS WELL AS FREE DISCHARGE INTO THE STREET.
- TOPOGRAPHIC SURVEY OF THE EXISTING SITE PREPARED BY JMA DATED 4/13/2005. THE SUBJECT SURVEY SHOWS THE EXISTING IMPROVEMENTS.

IV. EXISTING CONDITIONS

THE SITE IS LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF CONSTITUTION AVENUE NE AND CONSTITUTION PLACE NE. THE SITE IS PARTIALLY DEVELOPED. THE JMA TOPOGRAPHIC SURVEY DATED 4/13/2005 SHOWS THAT THE SITE CONSISTS OF AN EXISTING HOSPITAL BUILDING AND AN ASPHALT PAVED PARKING LOT. AS WELL AS AN UNDEVELOPED VEGETATED AREA AT THE NORTH AND WEST THAT IS GRADED FOR THE PURPOSE OF CREATING A DETENTION PONDING AREA FOR BOTH ON-SITE RUNOFF AND OFF-SITE FLOWS. THE SITE SLOPES FROM SOUTHEAST TO NORTHWEST AND DRAINS INTO THE POND AT THE NORTHWEST CORNER. THIS POND DRAINS VIA STORM DRAIN THROUGH AN EXISTING SIDEWALK CULVERT INTO CONSTITUTION PLACE NE. CONSTITUTION AVENUE IS A FULLY IMPROVED ROADWAY, 40 FEET WIDE WITH CURB AND GUTTER ON BOTH SIDES. CONSTITUTION PLACE FLOWS ARE CARRIED BY CURB AND GUTTER NORTH INTO CONSTITUTION AVENUE, WHERE IT FLOWS WEST TO AN INTERSECTION WITH PENNSYLVANIA STREET. JUST BEFORE THIS INTERSECTION THERE ARE THREE LARGE CURB STORM INLETS ALONG CONSTITUTION AVE NE WHERE THE FLOWS WILL DRAIN IN TO. THE INLETS DRAIN SOUTH INTO THE I-40 CHANNEL.

ON-SITE CONTRIBUTING AREA FLOWS FROM A PARKING LOT ALONG THE SOUTH EDGE OF THE SITE ENTER AT THE SOUTHWEST CORNER OF THE SITE THROUGH A TRENCH DRAIN AND CURB CUT. THE FLOWS EMPTY NORTH INTO THE DETENTION POND. ON-SITE CONTRIBUTING AREA FLOWS FROM AN ADJACENT PARKING LOT ALSO ENTER THE SITE THROUGH A TRENCH DRAIN INTO A 12" STORM DRAIN THAT RELEASES INTO A MANHOLE AT THE EAST EDGE OF THE SITE. THESE FLOWS ENTER INTO A 16" CMP STORM DRAIN FROM THE ON-SITE MANHOLE AND EMPTIES THESE FLOWS INTO THE SITE AT THE NORTH EDGE OF THE SITE. THESE FLOWS DRAIN WEST INTO THE DETENTION POND AS SHOWN ON THE TOL.

V. DEVELOPED CONDITIONS

THE PROJECT CONSIST OF THE CONSTRUCTION OF A NEW ASPHALT PAVED PARKING LOT THAT WILL SERVE THE EXISTING HOSPITAL BUILDINGS IN THE AREA. THIS NEW LOT WILL REPLACE THE NATURALLY VEGETATED AREA ALONG THE NORTH AND WEST OF THE SITE, AND WILL ELIMINATE THE EXISTING DETENTION POND. AS A RESULT OF THESE IMPROVEMENTS, THERE WILL BE AN INCREASE IN THE RUNOFF THE SITE GENERATES AS WELL AS A REDIRECTION OF ON-SITE CONTRIBUTING AREA FLOWS AROUND THE SITE THAT CURRENTLY TRANSVERSE THE SITE. A SMALL PORTION OF THE ON-SITE RUNOFF WILL BE PONDING AT THE NORTHWEST CORNER OF THE DEVELOPED PARKING LOT, WHICH WILL BE DRAINED THROUGH A STORM INLET AND STORM DRAIN INTO A RUNOFF AREA AND SIDEWALK CULVERT INTO CONSTITUTION PLACE NE AS SHOWN ON THE DEVELOPED GRADING PLAN. THIS STORM DRAIN PIPE WILL DRAIN THE CAPTURED STORMWATER RUNOFF IN A PERIOD LESS THAN SIX HOURS. FLOWS INTO CONSTITUTION PLACE NE WILL FOLLOW THE SAME DRAINAGE PATH AS STATED IN THE EXISTING CONDITIONS.

AS THE HYDROGRAPH CALCULATIONS SHOW, THE VOLUME REQUIRING PONDING WILL EQUAL 220 CF. THIS VOLUME WILL REACH A HEIGHT ABOVE THE STORM INLET OF 5333.2 FT. THE LOWEST POINT OF THE TOP OF CURB IN THE PONDING AREA IS AT 5334 FT. THIS IS ALSO THE LOWEST TOP OF CURB IN THE ENTIRE PROJECT SITE. THEREFORE, THERE IS NO PROBLEM OF RUNOFF OVERFLOWING THE CURB.

ON-SITE CONTRIBUTING AREA FLOWS THAT ENTER THE MANHOLE AT THE EAST CORNER OF THE SITE WILL BE DIRECTED THROUGH THE SITE VIA A NEW 18" CMP STORM DRAIN THAT WILL TRAVERSE THE SITE FROM EAST TO WEST AND DRAIN INTO CONSTITUTION PLACE NE AT THE SAME LOCATION AS THE ON-SITE FLOW STORM DRAIN RELEASES ITS FLOWS AS SHOWN ON THE DEVELOPED GRADING PLAN.

THE OVERALL RESULT OF THE DEVELOPMENT WILL INCREASE THE VOLUME AND PEAK DISCHARGE RATE INTO CONSTITUTION PLACE NE. THIS INCREASE IS ALLOWED DUE TO THE COMPLETION OF DEVELOPMENT AT PENNSYLVANIA STREET AND I-40 THAT ALLEVIATED PAST DOWNSTREAM FLOW ISSUES; ISSUES THAT HAD PREVIOUSLY RESULTED IN THE CREATION OF THE EXISTING ON-SITE DETENTION POND. U

VI. GRADING PLAN

THE GRADING PLAN SHOWS: 1.) EXISTING GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'-0" INTERVALS BASED THE TOPOGRAPHIC SURVEY PREPARED BY JMA, DATED 4/13/2005, 2.) PROPOSED GRADES INDICATED BY CONTOURS AT 1'-0" INTERVALS, 3.) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS AS TAKEN FROM THE AFORE MENTIONED JMA SURVEY, 4.) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, 5.) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. AS SHOWN BY THIS PLAN, THE PROPOSED DEVELOPMENT CONSISTS OF PAVED PARKING, ALONG WITH ASSOCIATED LANDSCAPING AND SIDEWALK. THESE MODIFICATIONS TO THE SITE WILL EXPAND AVAILABLE ON-SITE PARKING AND VEHICLE ACCESS. AN EROSION CONTROL PLAN WILL BE PREPARED AND ATTACHED TO THE SEPARATE STORM WATER POLLUTION PREVENTION PLAN FOR THIS PROJECT.

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VII. CALCULATIONS

THE CALCULATIONS WHICH APPEAR HEREON ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT, AS WELL AS THE 10-YEAR, 6 HOUR RAINFALL EVENT FOR CULVERT DESIGN PURPOSES. THE PROCEDURE FOR 40-ACRE AND SMALLER BASINS, AS SET FOR THE 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 BY THIS DEVELOPMENT. THE CAPACITY OF THE DEVELOPED 18" CMP STORM DRAIN WAS ANALYZED USING THE ORFICE AND MANNING'S EQUATIONS. THE CAPACITIES OF THE NEW STORM INLETS WERE DETERMINED USING THE ORFICE EQUATION. THE CAPACITY OF THE NEW 24" CULVERTS ALONG CONSTITUTION PLACE NE WERE DETERMINED USING MANNING'S EQUATION. THE PERFORMANCE OF THE PRIVATE STORMWATER DETENTION SYSTEM IN THE NORTH EAST CORNER OF THE PARKING AREA HAS BEEN EVALUATED FOR OUTFLOW AND STORAGE CAPACITY BASED UP THE HYDROGRAPH ANALYSIS CONTAINED ON THIS SHEET, AND PONDING IS NECESSARY ONLY DUE TO DISCHARGE PIPE SIZING CONSTRAINTS.

THE JANUARY 2005 CALCULATIONS ARE SHOWN HEREON TO SHOW THAT THE DOWNSTREAM STREET (CONSTITUTION AVENUE) IS CAPABLE OF HANDLING FLOWS FROM ON-SITE AND OFF-SITE. THE CONJUGATE DEPTH EQUATION WAS USED TO EVALUATE THE EFFECTS OF HYDRAULIC JUMP, AS SHOWN BY THESE CALCULATIONS. THE NORMAL DEPTH OF FLOW PLUS THE EFFECTS OF A HYDRAULIC JUMP COMPLY WITH OPEN CRITERIA TO FALL BELOW THE TOP-OF-CURB PLUS 0.2 FEET. THIS SUGGESTS THAT THE STREET CAN HANDLE THE FULLY DEVELOPED DESIGN FLOW AS CALCULATED AND THAT PONDING IS NO LONGER NECESSARY.

VIII. CONCLUSION

THE DRAINAGE CONCEPT SHOWN BY THE PLAN ABOVE WILL ACCOMPLISH ITS PURPOSE DUE TO THE FOLLOWING FACTORS:

- MODIFICATION TO AN EXISTING SITE WITHIN AN INFILL AREA
- THE PEAK RATE OF DISCHARGE FROM THE SITE WILL BE INCREASED ABOVE THAT OF THE EXISTING CONDITION
- REMOVAL OF THE EXISTING POND AS ALLOWED BY APPROVED DRAINAGE SUBMITTAL DATED 01-11-05
- ADEQUATE STREET CAPACITY IS AVAILABLE IN CONSTITUTION PLACE NE TO ACCOMMODATE PEAK DISCHARGE UNDER FULLY DEVELOPED CONDITIONS
- DOWNSTREAM CAPACITY OF CONSTITUTION PLACE AND CONSTITUTION AVENUE AND THE STORM DRAIN STRUCTURES LOCATED WITHIN ARE ADEQUATE FOR INCREASED FLOWS DUE TO THE NADOT I-40/PENNSYLVANIA PROJECT IMPROVEMENTS
- FREE DISCHARGE INTO CONSTITUTION PLACE AND CONSTITUTION AVENUE PER THE DRAINAGE PLAN DATED 1-11-05
- NO ADVERSE IMPACT ON DOWNSTREAM CAPACITY OR DOWNSTREAM PROPERTIES
- CULVERTS AT CONSTITUTIONS PLACE SUFFICIENT TO HANDLE PEAK DISCHARGE FROM BOTH STORM DRAINS UNDER FULLY DEVELOPED CONDITIONS
- GRADING AND CURB ABOUT STORM INLET AREA SUFFICIENT TO CONTAIN MORE THAN THE 220 CF OF PONDING REQUIRED DURING A 100-YEAR STORM
- OFFSITE FLOWS WILL CONTINUE TO BE INTERCEPTED AND CONVEYED THROUGH THE PROJECT TO DOWNSTREAM EXISTING DRAINAGE FACILITIES

CALCULATIONS

SITE CHARACTERISTICS

- PRECIPITATION ZONE = 3
- $P_{100} = P_{30} = 2.80$ 2. $P_{10} = P_{30} = 1.73$

$$3. \text{TOTAL AREA (A)} = 143,065 \text{ SF} \\ 3.28 \text{ AC}$$

4. EXISTING LAND TREATMENT

A. PROJECT SITE	AREA (SF/AC)	%
TREATMENT		
B	16,779 / 0.39	12
C	61,628 / 1.41	43
D	64,660 / 1.48	45

B. ON-SITE CONTRIBUTING AREAS	AREA (SF/AC)	%
TREATMENT		
D	70,000 / 1.61	100

5. DEVELOPED LAND TREATMENT

A. PROJECT SITE	AREA (SF/AC)	%
TREATMENT		
B	23,552 / 0.54	16
D	119,533 / 2.74	84

6. EXISTING CONDITION

$$1. \text{VOLUME} \\ E_v = (E_{A1} + E_{B1} + E_{C1} + E_{D1})/h \\ E_v = ((0.92 \times 0.39) + (1.29 \times 1.41) + (2.36 \times 1.48))/3.28 = 1.73 \text{ IN} \\ V_{100} = (E_v/12)h = (1.73/12)3.28 = 0.2317 \text{ AC-FT} = 20,628 \text{ CF}$$

$$2. \text{PEAK DISCHARGE} \\ Q_p = Q_{A1} + Q_{B1} + Q_{C1} + Q_{D1} \\ Q_p = Q_{100} = (2.80 \times 0.39) + (3.45 \times 1.41) + (5.02 \times 1.48) = 13.33 \text{ CFS}$$

$$B. \text{ON-SITE CONTRIBUTING AREAS (100-YEAR STORM)} \\ 1. \text{VOLUME} \\ E_v = (E_{A1} + E_{B1} + E_{C1} + E_{D1})/h \\ E_v = (2.36 \times 1.61)/1.61 = 2.36 \text{ IN} \\ V_{100} = (E_v/12)h = (2.36/12)1.61 = 0.3180 \text{ AC-FT} = 13,767 \text{ CF}$$

$$2. \text{PEAK DISCHARGE} \\ Q_p = Q_{A1} + Q_{B1} + Q_{C1} + Q_{D1} \\ Q_p = Q_{100} = (5.02 \times 1.61) = 8.07 \text{ CFS}$$

$$C. \text{ON-SITE CONTRIBUTING AREAS (10-YEAR STORM)} \\ 1. \text{VOLUME} \\ E_v = (E_{A1} + E_{B1} + E_{C1} + E_{D1})/h \\ E_v = (1.50 \times 1.1)/1.61 = 1.50 \text{ IN} \\ V_{10} = (E_v/12)h = (1.50/12)1.61 = 0.2009 \text{ AC-FT} = 8,750 \text{ CF}$$

$$2. \text{PEAK DISCHARGE} \\ Q_p = Q_{A1} + Q_{B1} + Q_{C1} + Q_{D1} \\ Q_p = Q_{10} = (3.39 \times 1.61) = 5.45 \text{ CFS}$$

7. DEVELOPED CONDITION

$$A. \text{PROJECT SITE (100-YEAR STORM)} \\ 1. \text{VOLUME} \\ E_v = (E_{A1} + E_{B1} + E_{C1} + E_{D1})/h \\ E_v = ((0.92 \times 0.54) + (2.36 \times 2.74))/3.28 = 2.12 \text{ IN} \\ V_{100} = (E_v/12)h = (2.12/12)3.28 = 0.5811 \text{ AC-FT} = 25,314 \text{ CF}$$

$$2. \text{PEAK DISCHARGE} \\ Q_p = Q_{A1} + Q_{B1} + Q_{C1} + Q_{D1} \\ Q_p = Q_{100} = (2.60 \times 0.54) + (5.02 \times 2.74) = 15.18 \text{ CFS}$$

$$B. \text{ON-SITE CONTRIBUTING AREAS (10-YEAR STORM)} \\ 1. \text{VOLUME} \\ E_v = (E_{A1} + E_{B1} + E_{C1} + E_{D1})/h \\ E_v = ((0.36 \times 0.54) + (1.50 \times 2.74))/3.28 = 1.31 \text{ IN} \\ V_{10} = (E_v/12)h = (1.31/12)3.28 = 0.3592 \text{ AC-FT} = 15,848 \text{ CF}$$

$$2. \text{PEAK DISCHARGE} \\ Q_p = Q_{A1} + Q_{B1} + Q_{C1} + Q_{D1} \\ Q_p = Q_{10} = (1.19 \times 0.54) + (3.39 \times 2.74) = 9.95 \text{ CFS}$$

RAINSTORM PONDING CAPACITY

ELEV (FT)	AREA (SQ FT)	VOLUME (CF)	TOTAL VOL. (CF)
5333	0		
5333.5	2675	[(2675 \times 0)/2] \times 0.5 = 670	670
5334	6575	[(6575 + 2675)/2] \times 0.5 = 975	1625

$$V_{100} = 240 \text{ CF} \\ V_{100} = 1,625 \text{ CF} > V_{100} = 240 \text{ CF (SEE HYDROGRAPH)}$$

HYDROGRAPH CALCULATIONS

$$T_p = 0.74(1.6 - h_p/h)/12 \\ T_p = 0.74(0.2 + (1.6 - 2.74)/3.28)/12 \\ T_p = 0.2037 \text{ hr}$$

$$D_p = 0.25 h_p/h \\ D_p = 0.25 \times 2.74/3.28 \\ D_p = 0.2088 \text{ hr}$$

$$T_b = 2.017 \times h_p/h_p = 0.25 h_p/h_p \\ T_b = 2.017 \times 12 \times 3.28/15.18 = 0.25 \times 2.74/3.28 \\ T_b = 0.7563 \text{ hr}$$

$$\text{AREA OF HYDROGRAPH} = V_{100} = 26,410 \text{ CF}$$

$$\text{VOLUME REQUIRING PONDING} \\ V_{100} = (15.18 - 14.90) \times (((15.18 - 11.98) + (24.75 - 12.22))/2) \times 60 \\ V_{100} = 215.8 \text{ CF}$$

$$\text{PEAK DISCHARGE CAPACITY OF ON-SITE FLOW DISCHARGE PIPE} \\ Q_{cap} = 1.49/h \text{ AR}^{2/3} \text{ S}^{1/2} \\ A = \pi r^2 = \pi (0.75)^2 = 1.767 \text{ FT}^2 \\ P = 2\pi r = 2\pi (0.75) = 4.712 \text{ FT} \\ R = A/P = .375 \text{ FT} \\ S = 0.02 \text{ FT/FT} \\ Q_{cap} = 14.9 \text{ CFS} \\ Q_{100} = 15.2 \text{ CFS} > Q_{cap} = 14.9 \text{ CFS, 215 CF OF PONDING REQ'D}$$

CULVERT CALCULATIONS FOR SITE DRAINAGE

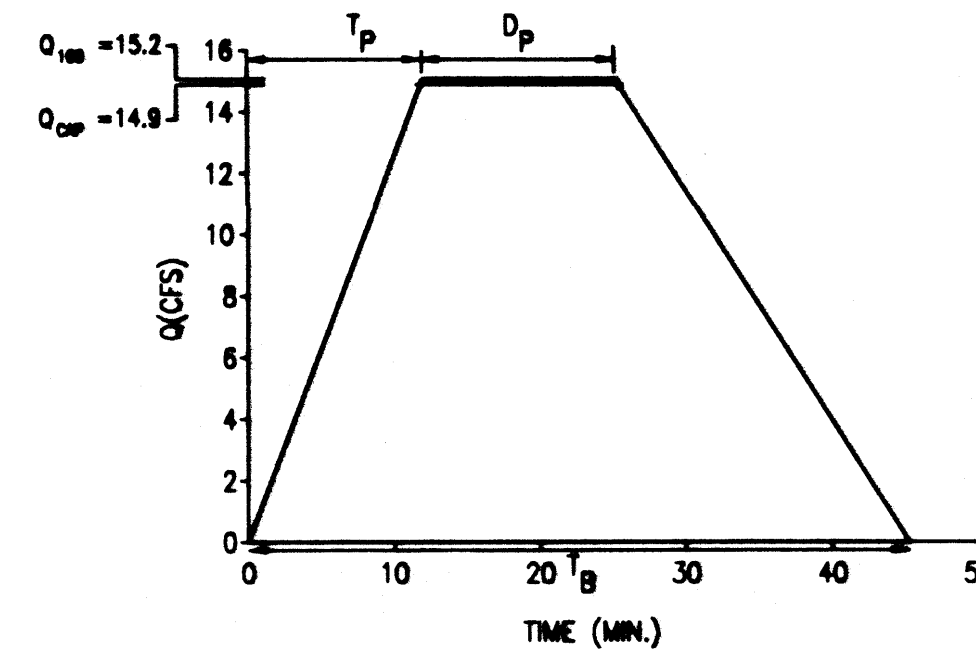
$$A. \text{PEAK DISCHARGE CAPACITY OF SINGLE CULVERT} \\ Q_{cap} = 1.49/h \text{ AR}^{2/3} \text{ S}^{1/2} \\ n = 0.013 \\ A = 0.687 \text{ FT}^2 \text{ FT} = 1.33 \text{ FT}^2 \\ P = 0.687 \text{ FT} \times 0.687 \text{ FT} + 2 \text{ FT} = 3.33 \text{ FT} \\ R = A/P = 0.4 \text{ FT} \\ S = 0.02 \text{ FT/FT} \\ Q_{cap} = 11.73 \text{ CFS}$$

$$B. \text{CULVERT DESIGN TO HOLD 10-YEAR, 6-HOUR STORM} \\ Q_{100} = 15.18 \text{ CFS} \\ Q_{100} = 9.95 + 5.45 = 15.4 \text{ CFS} \\ Q_{100} = 15.4 \text{ CFS} > Q_{cap} = 11.73 \text{ CFS} \\ Q_{100} = 15.4 \text{ CFS} > Q_{cap} = 11.73 \text{ CFS} \\ \text{DESIGN REQUIRES TWO CULVERTS}$$

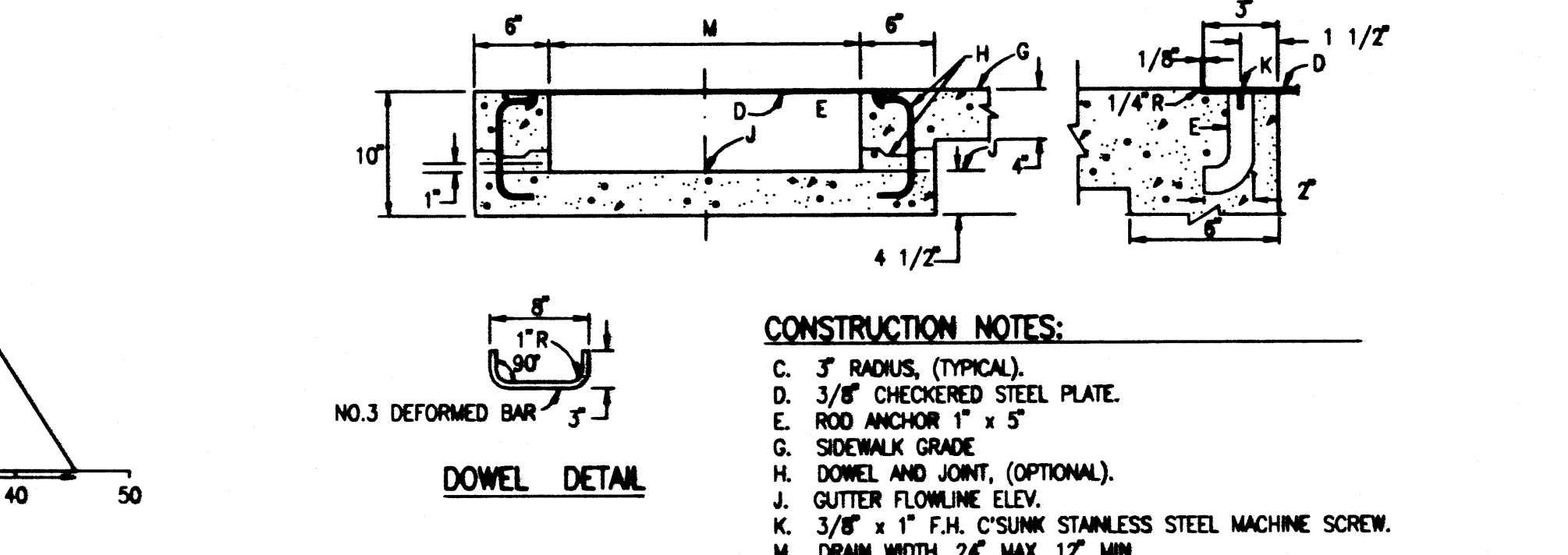
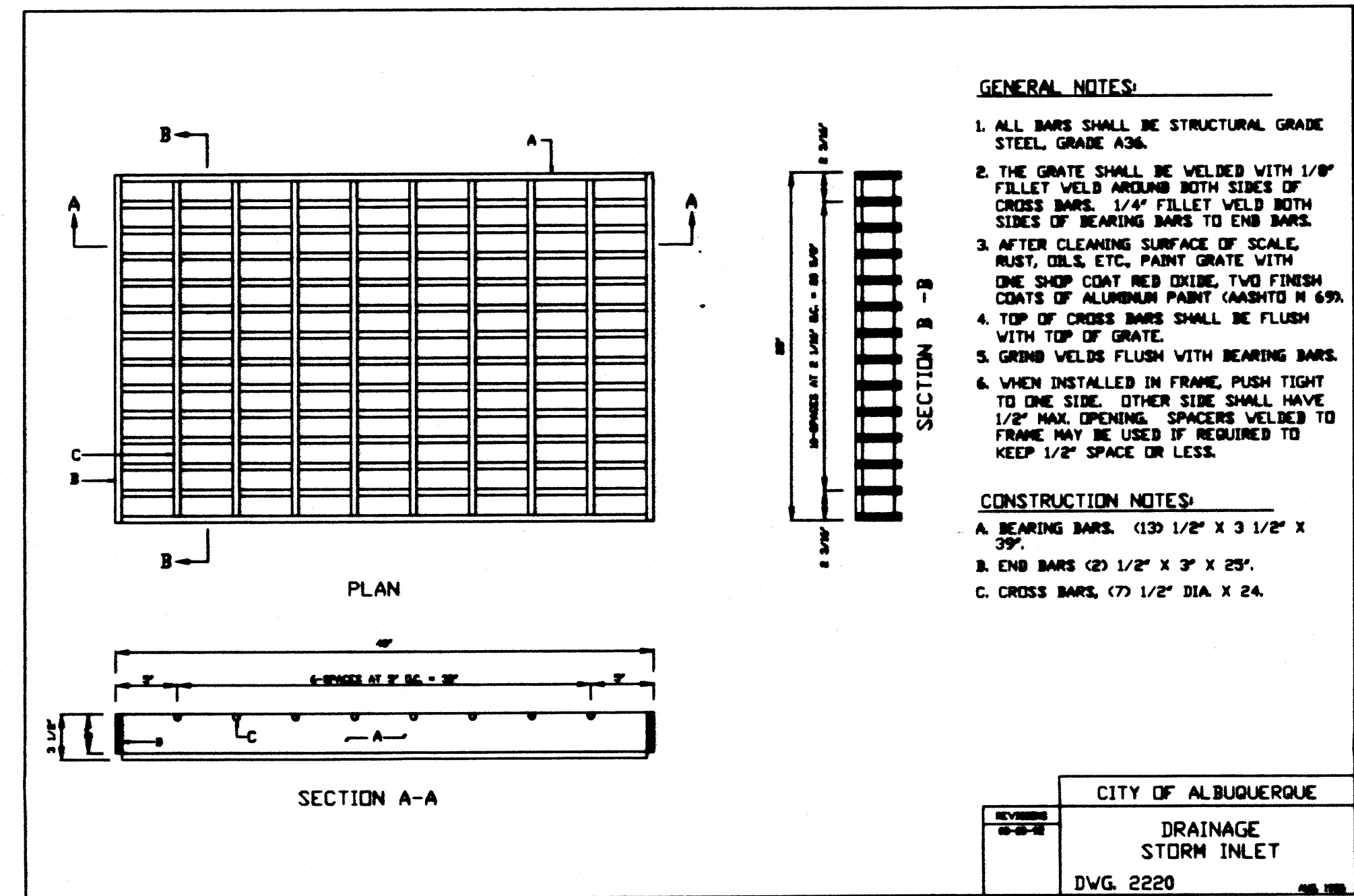
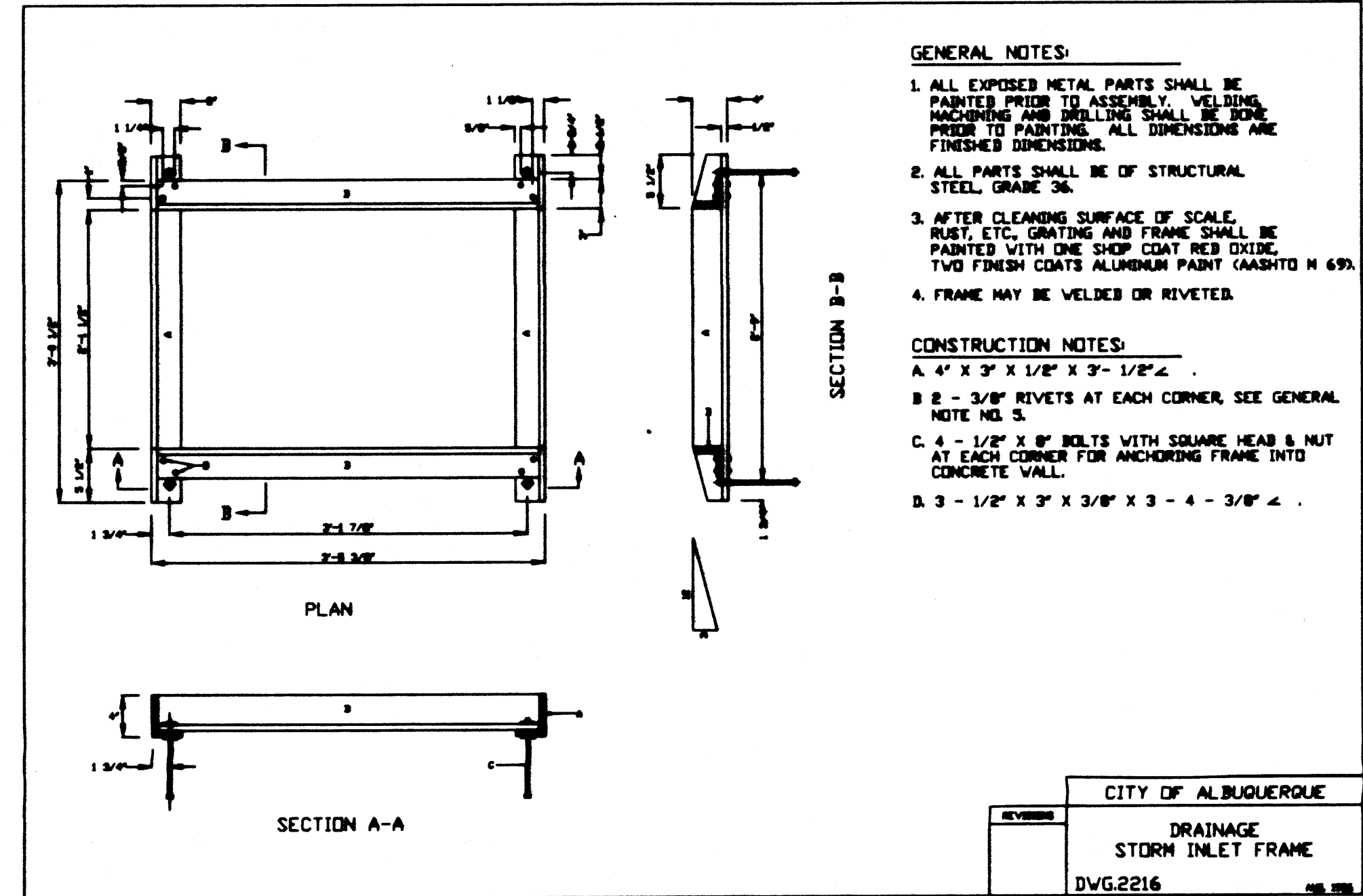
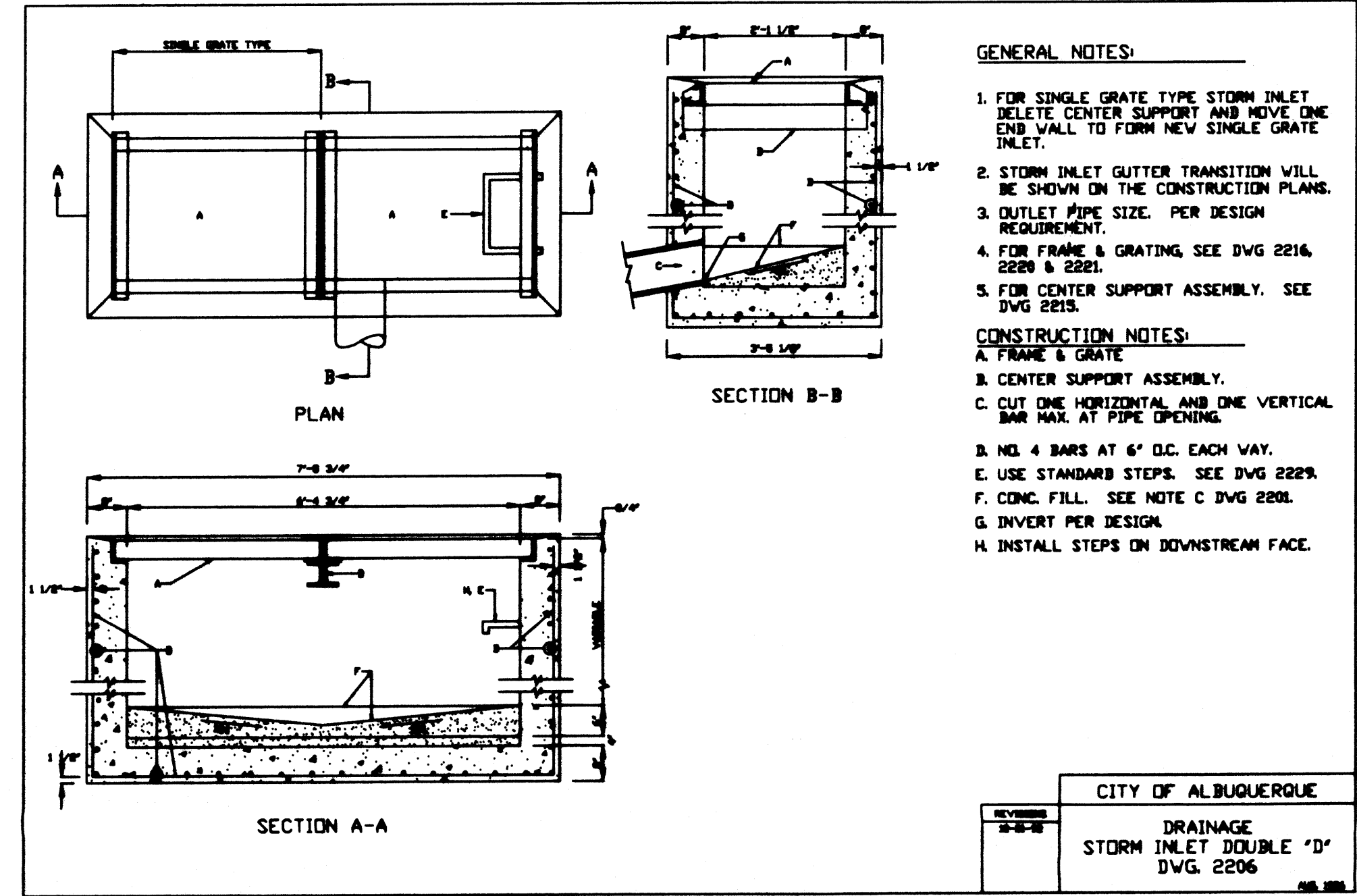
8. COMPARISON

$$A. \text{VOLUME} \\ \Delta V_{100} = 25,315 - 20,628 = 4,687 \text{ CF (INCREASE)}$$

$$B. \text{PEAK DISCHARGE} \\ \Delta Q_{100} = 15.18 - 13.33 = 1.85 \text{ CFS (INCREASE)}$$



HYDROGRAPH



TYPICAL SIDEWALK CULVERT DETAILS
NOT TO SCALE

Final Construction Documents

Parking Area A
FMG Constitution
8300 Constitution Avenue NE
Albuquerque, New Mexico
Presbyterian Project No. 1198003

Drawn	JMA	Checked	JGM
By			
Proj	200431	Date	10/27/05
No.			
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I. NO CHANGES TO THIS SHEET			
Revisions			

Legend:

AL	AREA LIGHT
AL/C	AREA LIGHT ON CONCRETE
ASV	ANTI-SIPHON VALVE
BR	BUILDING OVERHANG
BRK	BUILDING BACK
C&G	CURB AND GUTTER
CBN	CONCRETE BENCH
CDP	CONCRETE DRIVEPAD
CHC	CONCRETE HEADCURB
CI	CAST IRON PIPE
CLD	CENTERLINE OF DOOR
CLDD	CENTERLINE OF DOUBLE DOOR
CLF	CHAIN LINK FENCE
CO	SANITARY SEWER CLEANOUT
CONC.	CONCRETE
COP	CURB OPENING
CP	CONCRETE PIPE
CRD	CONCRETE RUNDOWN
CRW	CONCRETE RETAINING WALL
CWR	CONCRETE WHEELCHAIR RAMP
DP	DRIVEPAD
E/C	EDGE OF GRASS
EA	EDGE OF ASPHALT
EC	ELECTRIC CONDUIT
EO	ELECTRIC OUTLET
EO/C	ELECTRIC OUTLET IN CONCRETE
EPB	ELECTRIC PULLBOX
FL	FLOWLINE
FP	FLAG POLE
GPM	GAS PUMP MARK
HCS	HANDICAP PARKING SIGN
INV	INVERT
IRRG	IRRIGATION
MBC	METAL BUILDING COLUMN
MBX	MAILBOX
MCP	METAL LIGHT POLE
MP	METAL POLE
MPP	METAL POWER POLE
MS	METAL SIGN
OHE(4)	OVERHEAD ELECTRIC (NO. OF LINES)
OHT(2)	OVERHEAD TELEPHONE (NO. OF LINES)
PI	PARKING BUMPER
PIB	PAINTED ISLAND
PLB	PLASTIC BENCH
PM	PAINT MARK
SAS MH	SANITARY SEWER MANHOLE
SCT	SPRINKLER CONTROL TOWER
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SI	STORM INLET
SI/C	STORM INLET IN CONCRETE
STD. C&G	STANDARD CURB AND GUTTER
STL	STEEL
SW	TOP OF SIDEWALK
SWC	SIDEWALK CULVERT
TA	TOP OF ASPHALT
TC	TOP OF CURB
TCO	TOP OF CONCRETE
TCG	TOP OF GRATE
TMH	TELEPHONE MANHOLE
TPB	TELEPHONE PULLBOX
TPB/PS	TELEPHONE INSET/PULLBOX
TS	TRAFFIC SIGN
TVault	TELEPHONE VAULT
TYP.	TYPICAL
UP	UNDERGROUND
VG	VALLEY GUTTER
W/MH	WITH METAL HANDRAIL
WP	WOOD POLE
WMB	WATER METER BOX
X-WALK	CROSSWALK
	EXISTING CONTOUR
	EXISTING SPOT ELEVATION
	EXISTING SHOULDER
	EXISTING SHRUB
	EXISTING DECIDUOUS TREE (CALIPER SIZE)
	EXISTING CONIFEROUS TREE (CALIPER SIZE)

TRAFFIC CIRCULATION LAYOUT APPROVED

10/16/05
Signed Date

LEGAL DESCRIPTION

TRACT 1, THE EAST END ADDITION

PROJECT BENCHMARK

CITY OF ALBUQUERQUE, Brown Island, changed "1-11", SET IN TOP OF A CONCRETE POST WHICH SETS 6.1' NORTH OF THE NORTH EDGE OF A CONCRETE SIDEWALK, AND FLUSH WITH THE TOP OF SIDEWALK HANGING ON THE NORTH SIDE OF CONSTITUTION AVE. N.E. AND BETWEEN PENNSYLVANIA BLVD. N.E. AND CONSTITUTION PL. N.E. ON THE SOUTH SIDE OF BROADWAY PARK. ELEVATION = 5229.05 FEET (M.S.L.D.)

T.B.M.
TOP OF CURB ELEVATION LOCATED AT THE S.E. CORNER OF THE INTERSECTION OF CONSTITUTION AVE. N.E. AND CONSTITUTION PLACE N.E. AS SHOWN ON THE DRAWING ON SHEET 1. ELEVATION = 5229.05 FEET (M.S.L.D.)

Final Construction Documents

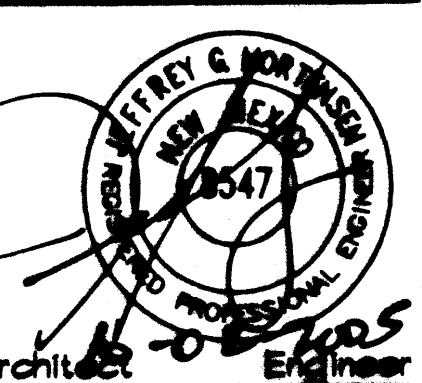
Parking Area A
FMG Constitution
8300 Constitution Avenue NE
Albuquerque, New Mexico
Presbyterian Project No. 1998002

Drawn JMA Checked JGM

No. 200431 Date 3/30/2005

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Revisions

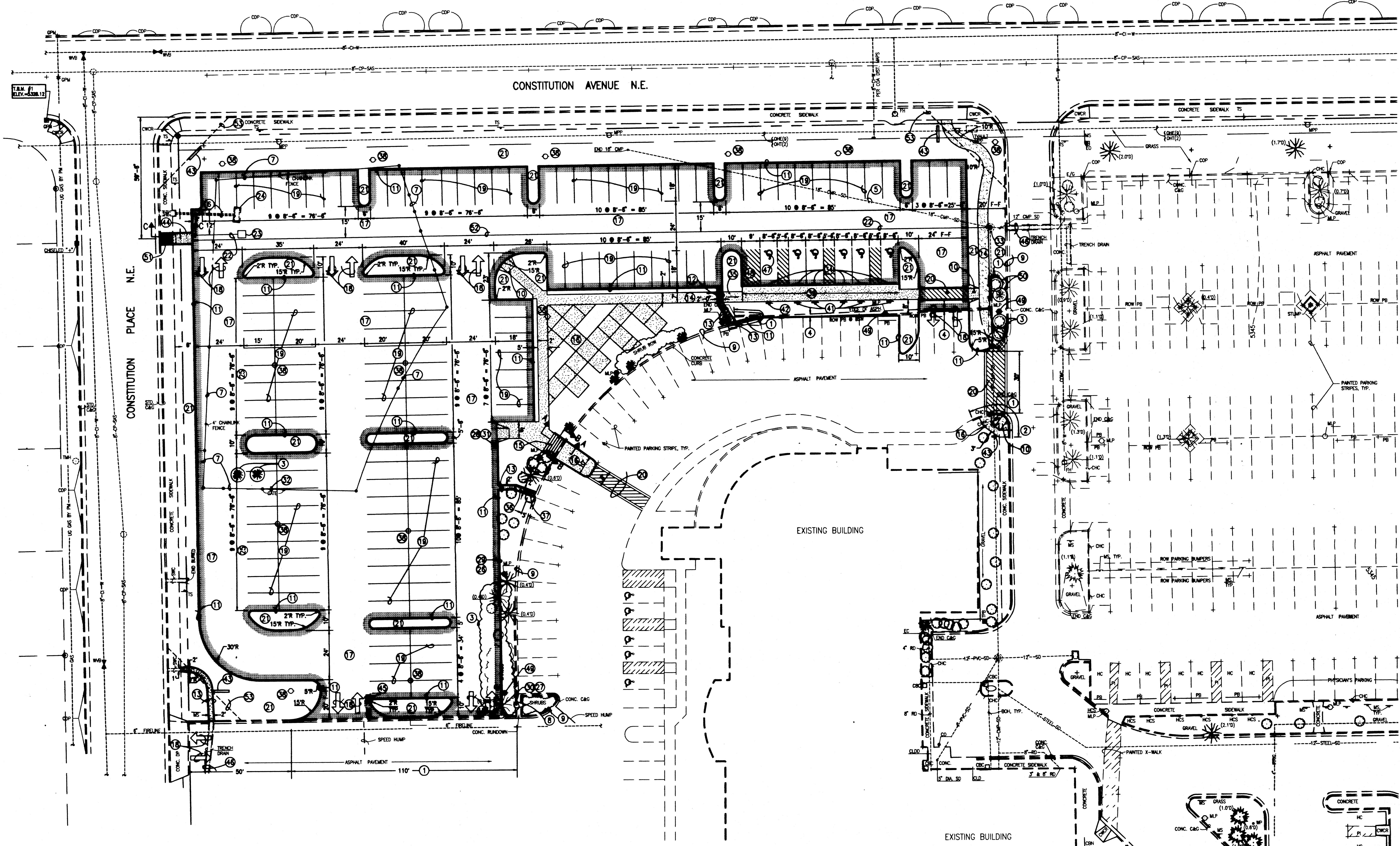


Architect

Engineer

PAVING SITE PLAN (TCL)

Sheet Title Sheet 2 of 10

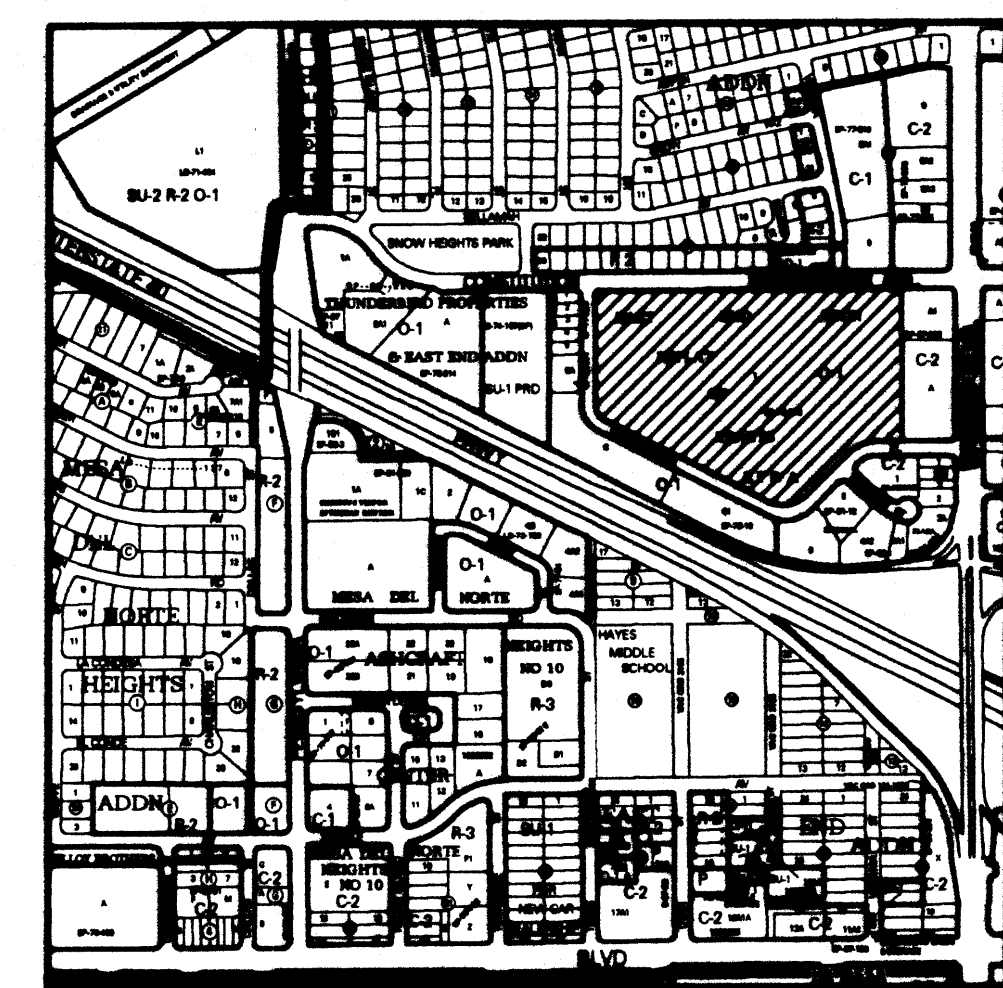


GENERAL NOTES

1. OBTAIN ARCHITECT'S APPROVAL OF SIDEWALK LAYOUT AND JOINTS PRIOR TO PLACEMENT OF CONCRETE

SITE PLAN KEYED NOTES:

1. NEATLY SAWCUT, REMOVE AND DISPOSE OF EXISTING CURB AND GUTTER.
2. NEATLY SAWCUT, REMOVE AND DISPOSE OF EXISTING SIDEWALK.
3. REMOVE AND DISPOSE OF EXISTING TREES AND SHRUBS.
4. NEATLY SAWCUT, REMOVE AND DISPOSE OF EXISTING ASPHALT PARKING, 11'-0" MIN. WIDTH.
5. REMOVE AND DISPOSE OF 18" CMP STORM DRAIN PIPE.
6. REMOVE AND DISPOSE OF 6" PVC PIPE.
7. REMOVE AND DISPOSE OF 4" CHAINLINK FENCE.
8. EXISTING CONCRETE RUNDOWN TO REMAIN.
9. EXISTING CURB AND GUTTER TO REMAIN.
10. CONSTRUCT MULTI-DIRECTIONAL WHEELCHAIR RAMP PER DETAIL SHEET 2.
11. CONSTRUCT STANDARD CURB AND GUTTER PER DETAIL SHEET 2.
12. CONSTRUCT 2" SIDEWALK CULVERT, TYPICAL, PER DETAIL SHEET 2.
13. CONSTRUCT RUNDOWN PER DETAIL SHEET 2.
14. CONSTRUCT 5' WIDE CONCRETE SIDEWALK.
15. CONSTRUCT CONCRETE STAIRWAY PER DETAIL SHEET 2.
16. CONSTRUCT CONCRETE SIDEWALK PER DETAIL SHEET 2; SEE LANDSCAPING PLAN FOR LAYOUT.
17. CONSTRUCT NEW ASPHALT PAVEMENT PER TYPICAL PARKING LOT PAVEMENT SECTION, SHEET 2.
18. PAINT WHITE DIRECTIONAL ARROWS WITH WHITE TRAFFIC PAINT, MIN. 2 COATS PER MUTCD DEC 2000.
19. PAINT 4" PAVEMENT MARKING W/ WHITE TRAFFIC PAINT, MIN. 2 COATS.
20. PAINT CROSSWALK PAVEMENT MARKING PER DETAIL SHEET 2.
21. NEW LANDSCAPING, SEE LANDSCAPING PLAN.
22. INSTALL 18" CMP STORM DRAIN @ S = 0.02.
23. INSTALL SINGLE 'D' STORM INLET PER DETAIL SHEET 4 W/ T.O.G. @ 33.00 AND INV 18" (OUT) @ 30.47.
24. REMOVE AND DISPOSE EXISTING STORM INLET.
25. STENCIL "COMPACT" ON PARKING LOT PAVEMENT.
26. PAINT TOP AND FACE OF CURB W/ YELLOW TRAFFIC PAINT, MIN. 2 COATS.
27. BEGIN PAINTING TOP AND FACE OF CURB WITH YELLOW TRAFFIC PAINT.
28. END PAINTING TOP AND FACE OF CURB WITH YELLOW TRAFFIC PAINT.
29. STENCIL "NO PARKING" ON TOP AND FACE OF CURB AT 50' SPACING.
30. BEGIN STENCILING "NO PARKING" ON TOP AND FACE OF CURB.
31. END STENCILING "NO PARKING" ON TOP AND FACE OF CURB.
32. REMOVE AND DISPOSE 4" DOUBLE SWING GATE.
33. EXISTING MANHOLE TO REMAIN.
34. INSTALL SALVAGED CONCRETE PARKING BUMPERS @ EDGE OF FLUSH SIDEWALK PER DETAIL SHEET 2.
35. CONSTRUCT RAMPPING CONCRETE SIDEWALK PER DETAIL SHEET 2 (MAX. 12:1 SLOPE).
36. NEATLY SAWCUT, REMOVE AND DISPOSE OF EXISTING CONCRETE RUNDOWN.
37. EXISTING CONCRETE RUNDOWN TO REMAIN (3').
38. NEW LIGHT STANDARD AND BASE, SEE COMPANY.
39. CONSTRUCT CONCRETE SIDEWALK FLUSH WITH PAVING PER DETAIL SHEET 2.
40. NEATLY REMOVE AND SALVAGE EXISTING PARKING BUMPERS.
41. INSTALL 1 - ADA COMPLIANT HANDICAP PARKING SIGN.
42. INSTALL 1 - ADA COMPLIANT HANDICAP PARKING SIGN W/ VAN ACCESSIBLE PLACARD.
43. NEW GROUND MOUNTED SIGN BY OWNER, PROVIDE POWER, COORDINATE REQUIREMENTS WITH SIGN COMPANY.
44. CONSTRUCT CONCRETE SIDEWALK FLUSH WITH PAVING PER DETAIL SHEET 2.
45. REMOVE AND DISPOSE EXISTING CONCRETE RUNDOWN.
46. EXISTING TRENCH DRAIN TO REMAIN.
47. INSTALL 1 - ADA COMPLIANT HANDICAP PARKING SPACE PAVEMENT MARKING, TYPICAL.
48. PAINT 4" WIDE CROSS-HATCH (2' OC) PAVEMENT MARKINGS @ 45 DEG W/ WHITE TRAFFIC PAINT, MIN. 2 COATS, TYPICAL.
49. EXISTING LIGHT POLE TO REMAIN.
50. EXISTING TREES AND SHRUBS TO REMAIN.
51. CONSTRUCT SIDEWALK CULVERT, TYPICAL, PER DETAIL SHEET 2.
52. INSTALL 18" CMP STORM DRAIN @ S = 0.015.
53. CLEAR SIGHT TRIANGLE.



VICINITY MAP

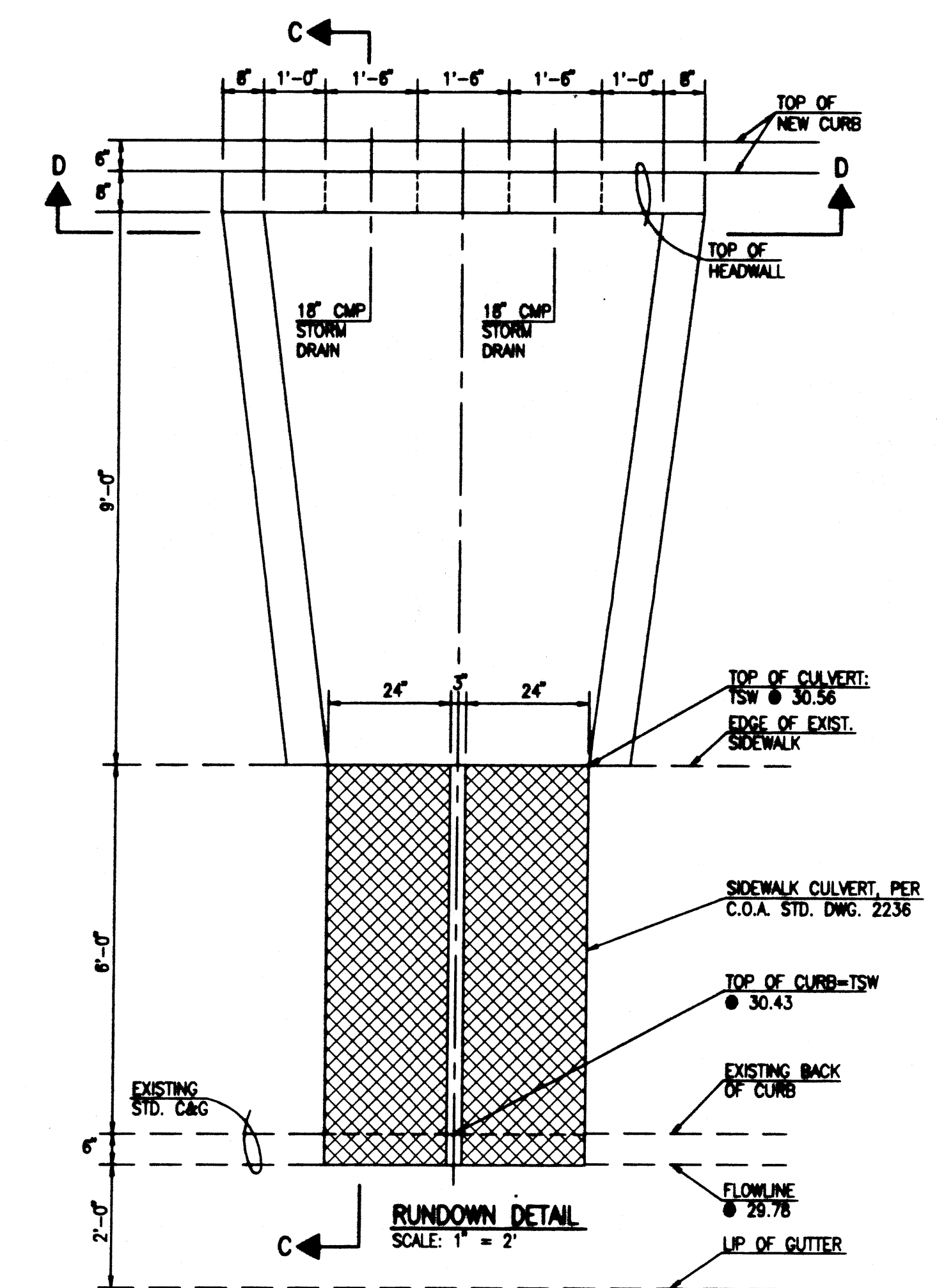
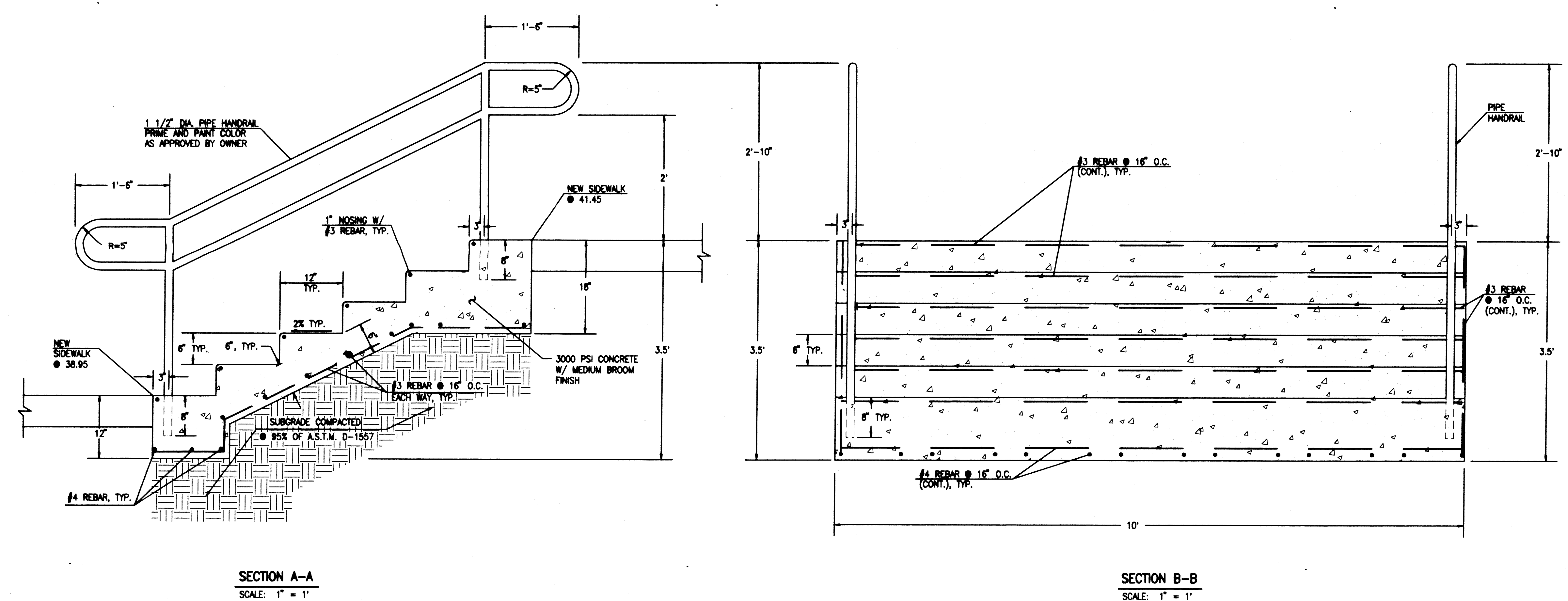
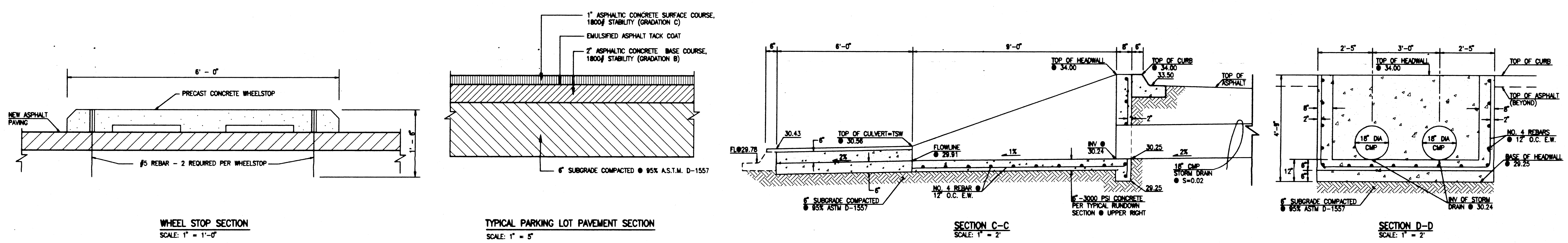
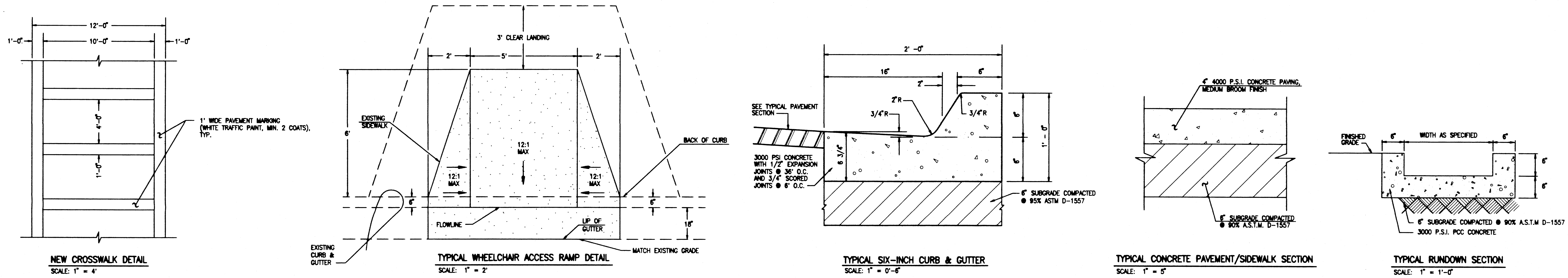
SCALE: 1" = 750'

PAVING SITE PLAN (TCL)

1"=20'



JMA JOB NO. 2004.120.2
JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, N.M. 87109
ENGINEERS & SURVEYORS (SOS) 345-4250
FAX: 505 345-4254 • ESTABLISHED 1977



PAVING SECTIONS AND DETAILS

Final Construction Documents

Parking Area A
PMG Constitution
8300 Constitution Avenue NE
Albuquerque, New Mexico
Presbyterian Project No. 199902

Drawn	JMA	Checked	JSM
Proj	2004.31	Date	9/30/2005
No.			
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Revisions	Architect		
	Engineer		

Plot Date: 09-30-2005
Plot Time: 1:41 pm
File Name: 41202SD.DWG

JMA
JMA JOB NO. 2004.120.2
JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. NE
ALBUQUERQUE, NEW MEXICO 87109
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