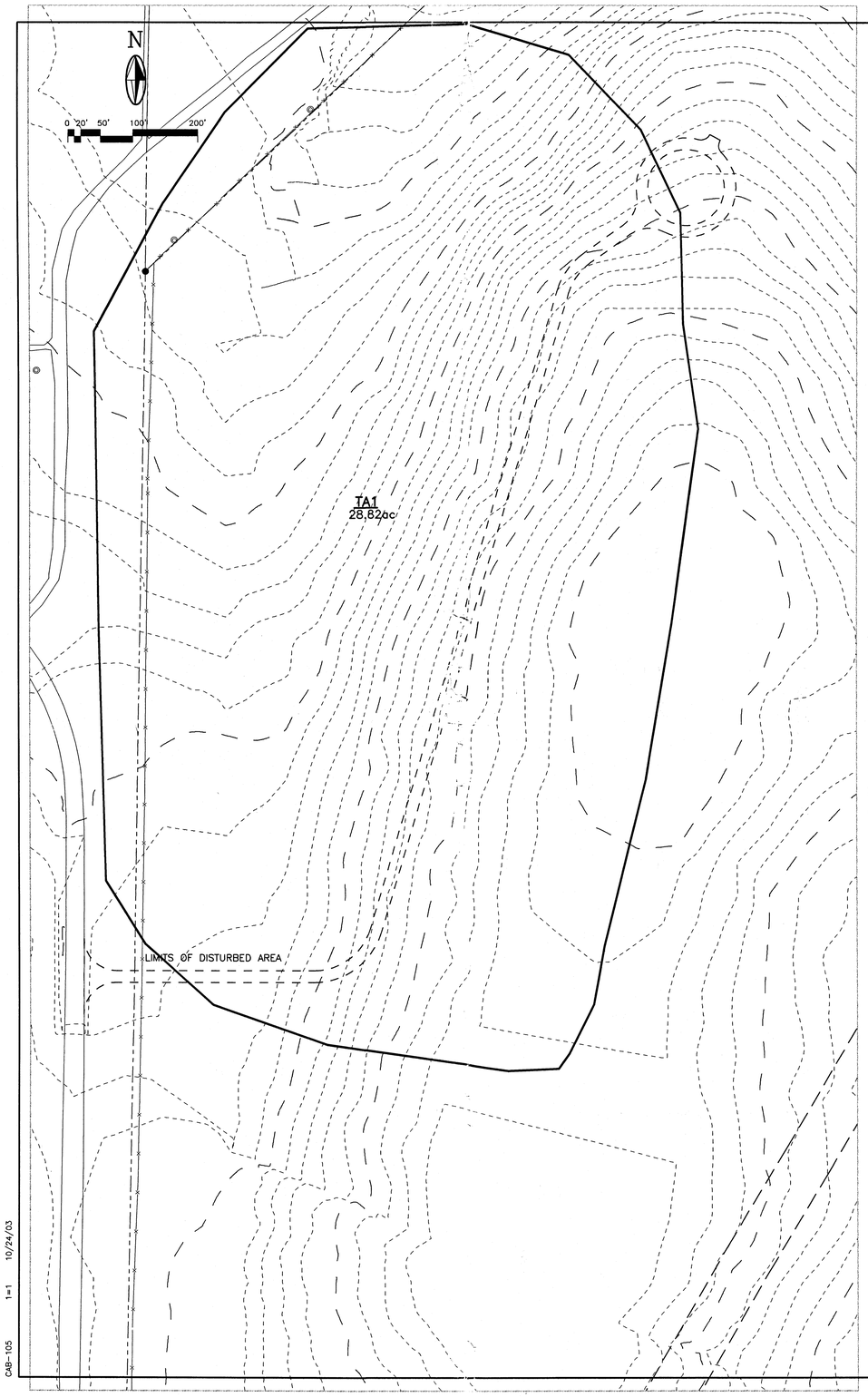
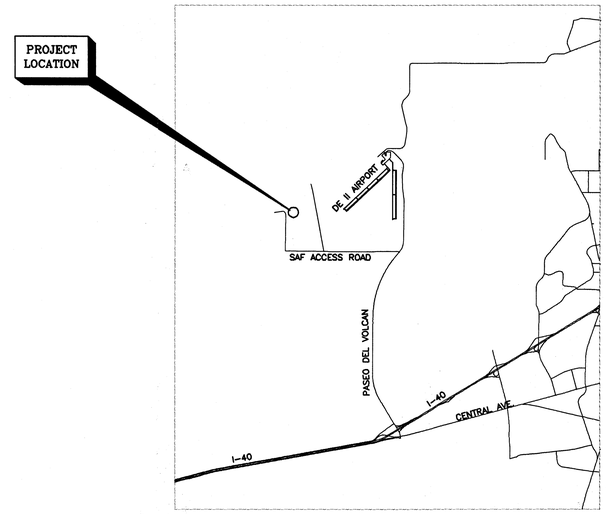


LEGEND

- 5927.60 — EXISTING CONTOUR (1' CONTOUR INTERVAL)
- LIMITS OF FUTURE DISTURBED AREA
- EXISTING SUB-BASIN BOUNDARY



VICINITY MAP

SITE CHARACTERISTICS

* 100 YEAR RAINFALL TABLE
  100yr – 1hr = 1.87in
  100yr – 6hr = 2.20in
  100yr – 24hr = 2.66in
* SUB-BASIN TA1
  AREA = 28.82ac
  LAND TREATMENT:
  A = 100.0%
  B = 0.0%
  C = 0.0%
  D = 0.0%
  REACH = 876.0ft
  HIGH EL. = 5925.0ft
  LOW EL. = 5897.0ft

CALCULATIONS

* SUB-BASIN TA1
  Q(100yr–6yr) = 38.09cfs
  Q(100yr–24yr) = 38.01cfs
  RUNOFF Vol.(100yr–6hr) = 1.054ac–ft
  RUNOFF Vol.(100yr–24hr) = 1.054ac–ft
  TP(100yr–6hr) = 1.532hr
  TP(100yr–24hr) = 1.500hr

AS SHOWN ON THE VICINITY MAP, THE SITE IS LOCATED WEST OF THE DOUBLE EAGLE II AIRPORT AND CAN BE ACCESSED BY CONTINUING ALONG THE SAF ACCESS ROAD. THE SITE IS CURRENTLY UNDEVELOPED AND ACCORDING TO THE GEOTECHNICAL ENGINEERING SERVICES REPORT, JOB NO. 1–20721 "WATER SUPPLY AND TRANSMISSION LINE WASTEWATER COLLECTION AND TRANSMISSION LINE" THE SOIL IN THE AREA IS BEST DESCRIBED AS SILTY SAND.

AS SHOWN BY PANEL 100 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY F.E.M.A. FOR BERNALILLO COUNTY, NEW MEXICO DATED SEPTEMBER 20, 1996, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE.

THE GRADING PLAN SHOWS: 1) EXISTING GRADES INDICATED BY CONTOURS AT 1.0' INTERVAL AS SHOWN FROM THE TOPOGRAPHIC SURVEY PROVIDED BY MOLZEN–CORBIN & ASSOCIATES AND THE ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY, 2) PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1.0' INTERVALS, 3) THE LIMIT AND CHARTER OF THE EXISTING IMPROVEMENTS, 4) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 5) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES.

THE PROPOSED DEVELOPMENT CONSISTS OF A 2.16 MILLION GALLON WATER RESERVOIR AND DISINFECTION BUILDING. AN ACCESS ROAD WITH A GRAVEL SURFACE WILL ALSO BE CONSTRUCTED AS PART OF THE NEW DEVELOPMENT. THE SITE IS LOCATED ON RIDGE TOP AND CURRENTLY HAS RELIEF IN ALL DIRECTIONS WITH FLOWS ALONG THE ACCESS ROAD TYPICALLY DRAINING FROM EAST TO WEST TOWARDS THE SAF ACCESS ROAD.

PROPOSED DEVELOPMENT GRADING WILL ALLOW FLOWS CONTRIBUTING TO THE SOUTHERN PORTION OF THE ACCESS ROAD TO DRAIN FROM NORTH TO SOUTH ALONG THE ACCESS ROAD TO 2–21"x15" DIAMETER PIPES. A TOTAL OF 10.0cfs WILL FLOW THROUGH THE PIPES AND BE RELEASED ON THE NORTH SIDE OF THE ACCESS ROAD. FLOW CONTRIBUTING TO THE NORTHERN PORTION OF THE ACCESS ROAD AND THE RESERVOIR AREA TOTALING 10.5cfs WILL BE DIVERTED AROUND THE RESERVOIR AND RELEASED ON THE NORTH SIDE OF THE RESERVOIR ALLOWING TOTAL FLOWS GENERATED TO CONTINUE TO DRAIN FROM SOUTH TO NORTH.

THE CALCULATIONS SHOWN FOR BOTH EXISTING AND FUTURE CONDITIONS ANALYZE BOTH THE 100yr–24hr AND THE 100yr–6hr STORM EVENT. THE PROCEDURE FOR 40–ACRE AND SMALLER BASINS, SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY, 1993, IN CONJUNCTION WITH THE ARID–LANDS HYDROLOGIC MODEL "AHYMO–97" COMPUTER PROGRAM, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND THE VOLUME OF RUNOFF GENERATED BY THIS DEVELOPMENT.

AS BUILT INFORMATION
CONTRACTOR
WORK STAKED BY — DATE
INSPECTOR'S ACCEPTANCE BY — DATE
FIELD VERIFICATION BY — DATE
DRAWINGS CORRECTED BY — DATE
MICRO–FILM INFORMATION
RECORDED BY — DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. | BY | DATE

ENGINEER'S SEAL
10/28/03

NO.	DATE	REMARKS	BY

REVISIONS

DESIGNED BY	JMP, RDG	DATE 10/24/03
DRAWN BY	RDG	DATE 10/24/03
CHECKED BY	JMP	DATE 10/24/03

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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: DOUBLE EAGLE II AIRPORT INFRASTRUCTURE DEVELOPMENT

DOUBLE EAGLE II UPPER PUMP STATION GRADING AND DRAINAGE PLAN EXISTING CONDITIONS

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No. | Zone Map No. | Sheet | Of

CAB–105 1=1 10/24/03

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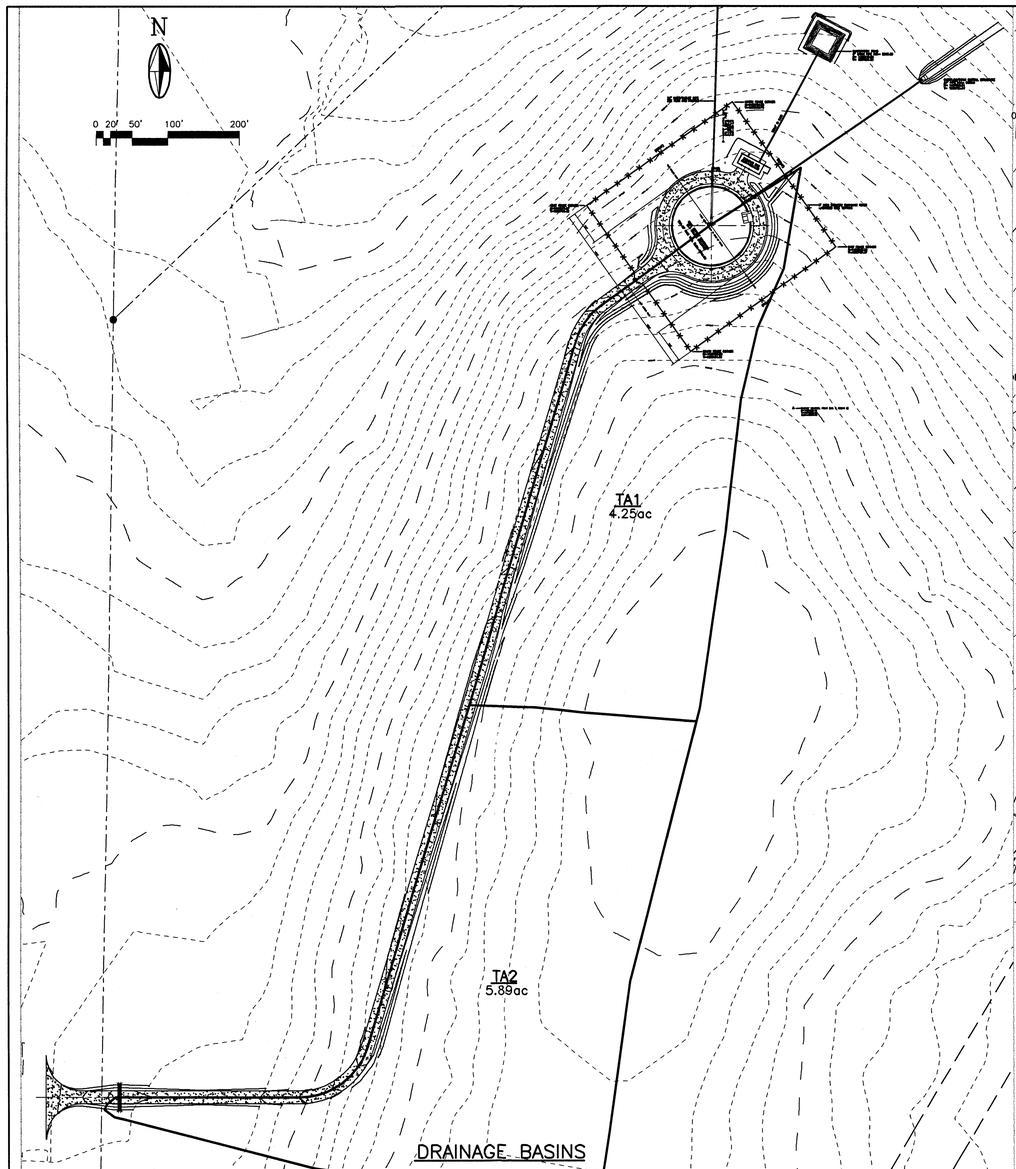
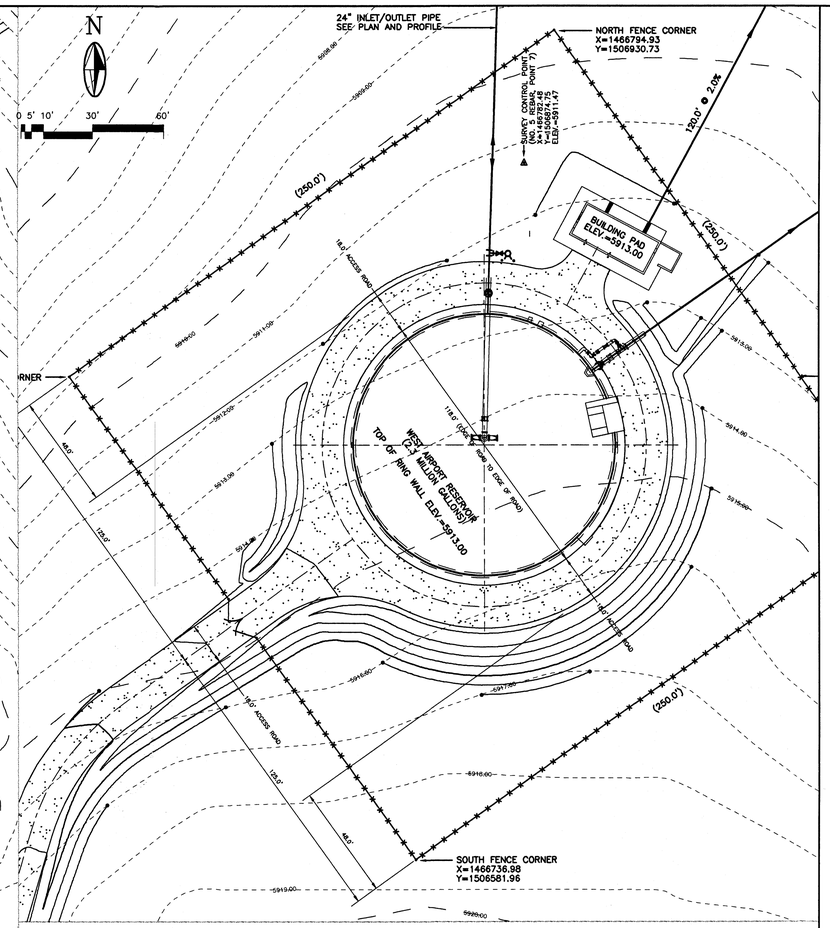
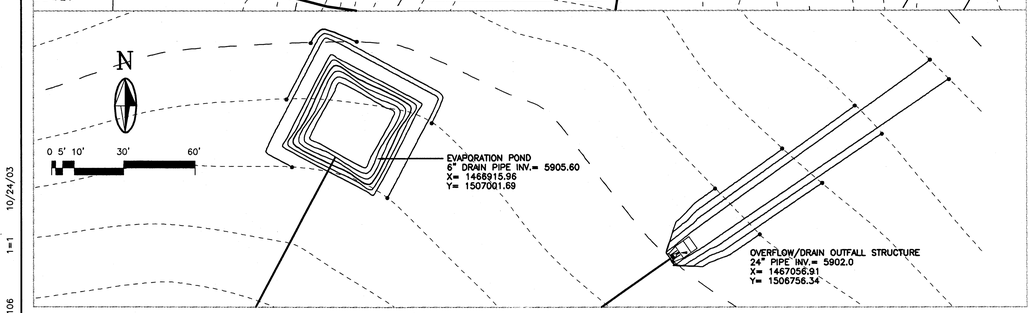


DRAINAGE BASINS



RESERVOIR GRADING PLAN



POND/OUTFALL STRUCTURE GRADING

SITE CHARACTERISTICS

* 100 YEAR RAINFALL TABLE
  - 100yr – 1hr = 1.87in
  - 100yr – 6hr = 2.20in
  - 100yr – 24hr = 2.66in
* SUB-BASIN TA1
  - AREA = 4.25ac
  - LAND TREATMENT:
  - A = 90.0%
  - B = 0.0%
  - C = 0.0%
  - D = 10.0%
  - REACH = 770.0ft
  - HIGH EL. = 5925.0ft
  - LOW EL. = 5912.0ft
* SUB-BASIN TA2
  - AREA = 5.89ac
  - LAND TREATMENT:
  - A = 90.0%
  - B = 0.0%
  - C = 0.0%
  - D = 10.0%
  - REACH = 1056.0ft
  - HIGH EL. 5925.0ft
  - LOW EL. = 5912.0ft

CALCULATIONS

* SUB-BASIN TA1
  - Q(100yr–6yr) = 5.89cfs
  - Q(100yr–24yr) = 10.52cfs
  - RUNOFF Vol.(100yr–6hr) = 0.208ac–ft
  - RUNOFF Vol.(100yr–24hr) = 0.505ac–ft
  - TP(100yr–6hr) = 1.532hr
  - TP(100yr–24hr) = 1.550hr
* SUB-BASIN TA2
  - Q(100yr–6hr) = 9.52cfs
  - Q(100yr–24hr) = 9.56cfs
  - RUNOFF Vol.(100yr–6hr) = 0.209ac–ft
  - RUNOFF Vol.(100yr–24hr) = 0.313ac–ft
  - TP(100yr–6hr) = 1.499hr
  - TP(100yr–24hr) = 1.500hr

PIPE CALCULATIONS

TYPE = 21"x15" CMP ARCH PIPE
FLOWRATE = 15.22cfs
LENGTH = 40.0'
SLOPE = 0.70%

LEGEND

5927.00	EXISTING CONTOUR (1' CONTOUR INTERVAL)
5927.00	NEW CONTOUR
EL.=5927.14	NEW TOPO SPOT ELEVATION
X X X X	NEW CHAINLINK FENCE
△	SURVEY CONTROL POINT
	ACCESS ROAD GRAVEL SURFACE
	SUB-BASIN BOUNDARIES

KEYED NOTES

1. DISINFECTION FACILITY BUILDING PAD ELEV.=5913.00
2. 18' WIDE ACCESS ROAD, 6" THICK GRAVEL SURFACE COURSE OVER 12" COMPACTED SUBGRADE
3. RESERVOIR CENTER POINT X=1466765.96, Y=1506756.34
4. 2–21"x15" ARCH CMP PIPES, L=40.0' INV IN=5911.86, INV OUT=5911.60, SLOPE=0.70%

AS BUILT INFORMATION
CONTRACTOR
WORK STAKED BY — DATE
INSPECTOR'S ACCEPTANCE BY — DATE
FIELD VERIFICATION BY — DATE
DRAWINGS CORRECTED BY — DATE

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. | BY | DATE

ENGINEER'S SEAL
10/28/03

MICRO-FILM INFORMATION
RECORDED BY — DATE
NO.

REVISIONS

NO.	DATE	REMARKS	BY

DESIGN

DESIGNED BY	JMP, RDG	DATE	10/24/03
DRAWN BY	RDG	DATE	10/24/03
CHECKED BY	JMP	DATE	10/24/03

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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: DOUBLE EAGLE II AIRPORT INFRASTRUCTURE DEVELOPMENT

DOUBLE EAGLE II UPPER PUMP STATION GRADING AND DRAINAGE PLAN FUTURE CONDITIONS

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No. | Zone Map No. | Sheet | Of

CAB-106 1=1 10/24/03

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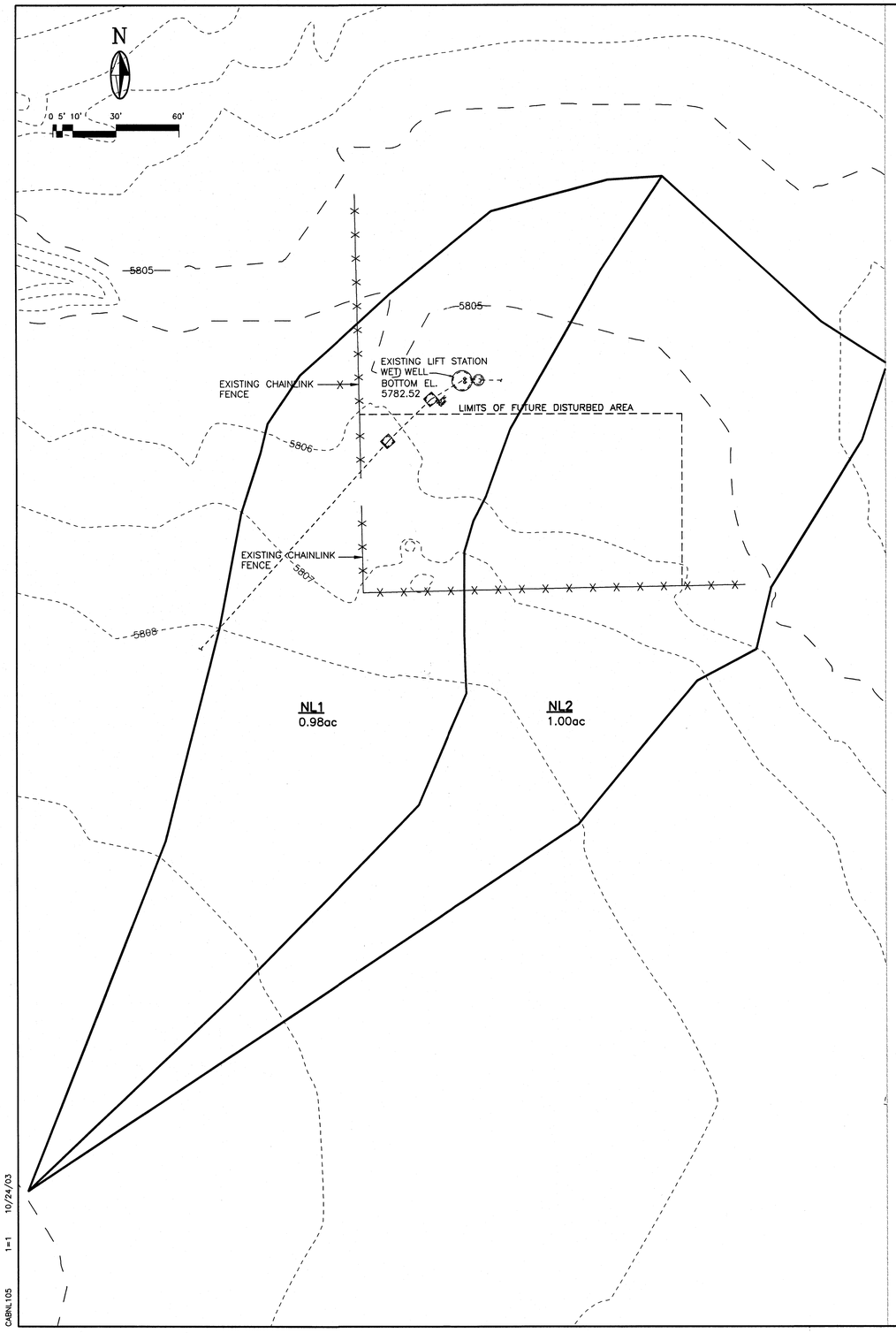
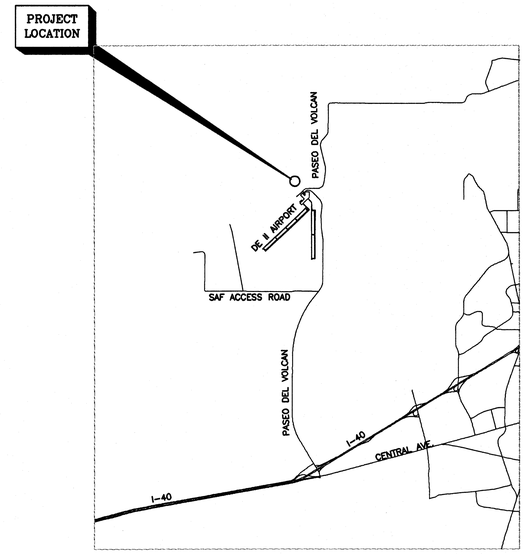


LEGEND

- 5927.00 — EXISTING CONTOUR (1' CONTOUR INTERVAL)
- LIMITS OF FUTURE DISTURBED AREA
- EXISTING SUB-BASIN BOUNDARY



VICINITY MAP

SITE CHARACTERISTICS

- 100 YEAR RAINFALL TABLE
  - 100yr – 1hr = 1.87in
  - 100yr – 6hr = 2.20in
  - 100yr – 24hr = 2.66in
- SUB-BASIN NL1
  - AREA = 0.98ac
  - LAND TREATMENTS:
  - A = 95.0%
  - B = 0.0%
  - C = 5.0%
  - D = 0.0%
  - REACH = 596.0ft
  - HIGH EL. = 5810.00ft
  - LOW EL. = 5805.00ft
- SUB-BASIN NL2
  - AREA = 1.00ac
  - LAND TREATMENT:
  - A = 95.0%
  - B = 0.0%
  - C = 5.0%
  - D = 0.0%
  - REACH = 577.0ft
  - HIGH EL. = 5810.00ft
  - LOW EL. = 5804.00ft

CALCULATIONS

- SUB-BASIN NL1
  - Q(100yr–6hr) = 1.07cfs
  - Q(100yr–24hr) = 1.07cfs
  - RUNOFF Vol.(100yr–6hr) = 0.037ac–ft
  - RUNOFF Vol.(100yr–24hr) = 0.037ac–ft
  - TP(100yr–6hr) = 1.565hr
  - TP(100yr–24hr) = 1.550hr
- SUB-BASIN NL2
  - Q(100yr–6hr) = 1.27cfs
  - Q(100yr–24hr) = 1.26cfs
  - RUNOFF Vol.(100yr–6hr) = 0.039ac–ft
  - RUNOFF Vol.(100yr–24hr) = 0.039ac–ft
  - TP(100yr–6hr) = 1.532hr
  - TP(100yr–24hr) = 1.550hr

NOTES

AS SHOWN ON THE VICINITY MAP, THE SITE IS LOCATED DIRECTLY NORTH OF THE DOUBLE EAGLE II AIRPORT. THERE IS CURRENTLY AN EXISTING LIFT STATION AND WET WELL JUST NORTH OF THE FUTURE UNDEVELOPED SITE. ACCORDING TO THE GEOTECHNICAL ENGINEERING SERVICES REPORT, JOB NO. 1–20721 "WATER SUPPLY AND TRANSMISSION LINE WASTEWATER COLLECTION AND TRANSMISSION LINE" THE SOIL IN THE AREA IS BEST DESCRIBED AS SILTY SAND.

AS SHOWN BY PANEL 94 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY F.E.M.A. FOR BERNALILLO COUNTY, NEW MEXICO DATED SEPTEMBER 20, 1996, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE.

THE GRADING PLAN SHOWS: 1) EXISTING GRADES INDICATED BY CONTOURS AT 1.0' INTERVAL AS SHOWN FROM THE TOPOGRAPHIC SURVEY PROVIDED BY MOLZEN–CORBIN & ASSOCIATES AND THE ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY, 2) PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1.0' INTERVALS, 3) THE LIMIT AND CHARACTER OF EXISTING IMPROVEMENTS, 4) THE LIMIT AND CHARACTER OF PROPOSED IMPROVEMENTS, AND 5) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES.

THE PROPOSED DEVELOPMENT CONSISTS OF THE CONSTRUCTION OF A FUTURE WASTE WATER LIFT STATION TO PROVIDE SERVICE FOR THE EXISTING AND FUTURE DEVELOPMENT OF THE HANGAR AREA. CURRENTLY THE SITE IS FAIRLY FLAT WITH NATURAL VEGETATION AND GENERALLY DRAINS FROM SOUTHWEST TO NORTHEAST IN A EXISTING ARROYO. FLOWS ARE COLLECTED IN A NATURAL PLAYA LOCATED DIRECTLY SOUTH OF PASEO DEL VOLCAN. REFER TO THE DOUBLE EAGLE II DRAINAGE MASTER PLAN, EXISTING CONDITIONS, FOR CONTRIBUTING FLOWS TO THE NATURAL PLAYA, LABELED "SBP1".

PROPOSED DEVELOPMENT GRADING WILL CONTINUE TO ALLOW ON SITE FLOWS TO DRAIN IN A NORTHEASTERLY DIRECTION. A TEMPORARY RETENTION POND WILL BE BUILT AT THE EAST END OF THE SITE, CAPTURING ALL ON SITE FLOWS, AS WELL AS SOME OFF SITE FLOWS FROM THE SOUTHWEST AS SHOWN ON SHEET C–4. THIS POND IS GRADED WITH 3:1 SIDE SLOPES AND HAS A CAPACITY OF 0.12ac–ft. FLOWS CONTRIBUTING TO THE POND TOTAL 0.09ac–ft FOR THE 100yr–24hr STORM EVENT, FLOWING FROM SUB–BASINS NB1, NB2, NB3 & NB4.

THE CALCULATIONS SHOWN FOR BOTH EXISTING AND FUTURE CONDITIONS ANALYZE BOTH THE 100yr–24hr AND THE 100yr–6hr STORM EVENT. THE PROCEDURE FOR 40–ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY, 1993 IN CONJUNCTION WITH ARID–LANDS HYDROLOGIC MODEL "AHYMO–97" COMPUTER PROGRAM, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND THE VOLUME OF RUNOFF GENERATED BY THIS DEVELOPMENT.

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AS BUILT INFORMATION

CONTRACTOR	
WORK STAKED BY	DATE
INSPECTOR'S ACCEPTANCE BY	DATE
FIELD VERIFICATION BY	DATE
DRAWINGS CORRECTED BY	DATE

MICRO-FILM INFORMATION

RECORDED BY	DATE
NO.	

BENCH MARKS

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

NO.	DATE	REMARKS	BY

REVISIONS

DESIGN

DESIGNED BY	JMP, RDG	DATE 10/24/03
DRAWN BY	RDG	DATE 10/24/03
CHECKED BY	JMP	DATE 10/24/03

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: DOUBLE EAGLE II AIRPORT INFRASTRUCTURE DEVELOPMENT

NORTH LIFT STATION
GRADING AND DRAINAGE PLAN
EXISTING CONDITIONS

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet	Of

CABNL105 1=1 10/24/03

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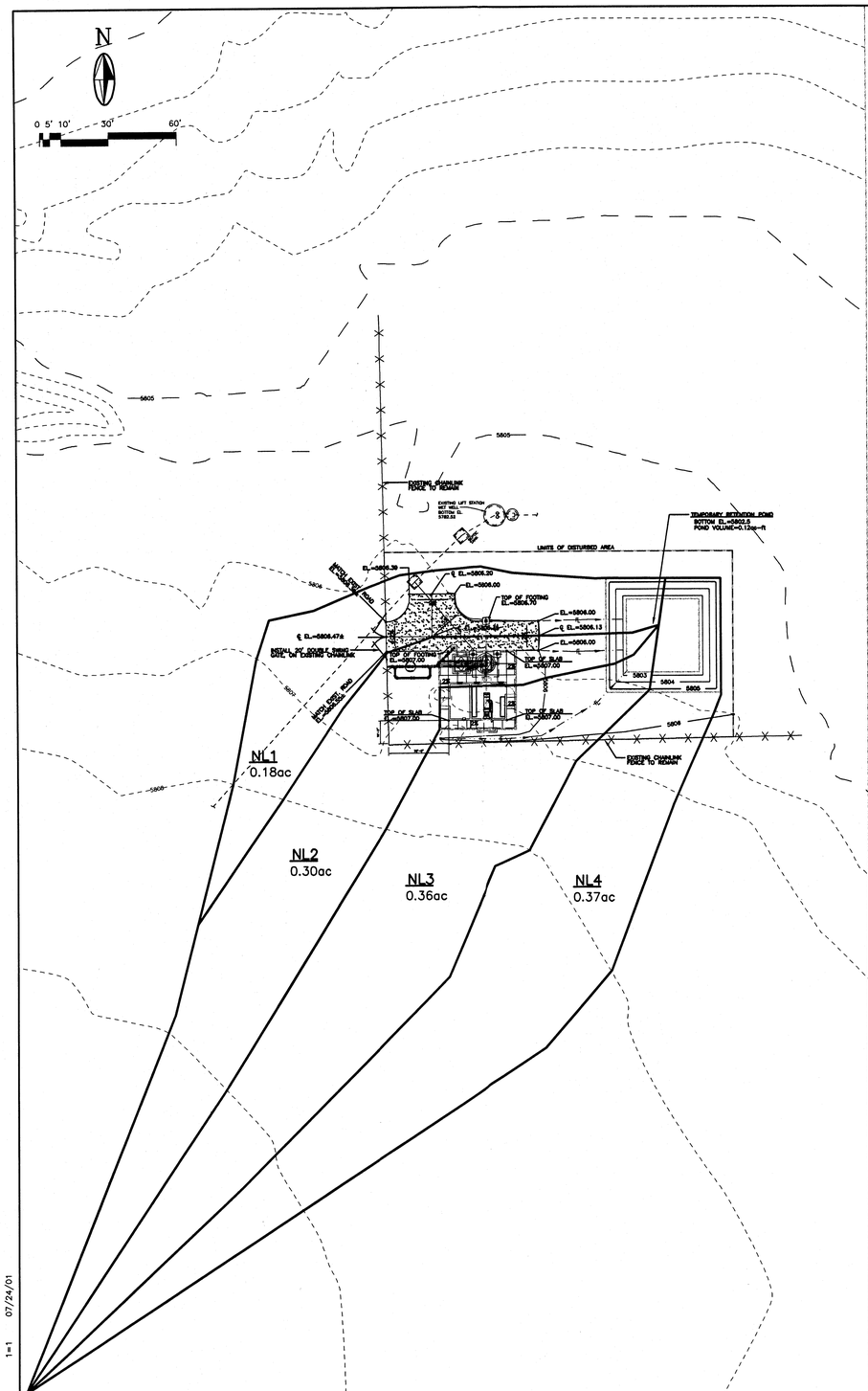


DRAINAGE BASINS

LEGEND

- EXISTING CONTOUR (1' CONTOUR INTERVAL) (5927.00)
- NEW CONTOUR (5927.00)
- NEW TOPO SPOT ELEVATION (EL.=5927.14)
- ACCESS ROAD GRAVEL SURFACE
- LIMITS OF DISTURBED AREA
- SUB-BASIN BOUNDARY
- DRAINAGE CHANNEL FLOW DIRECTION

SITE CHARACTERISTICS

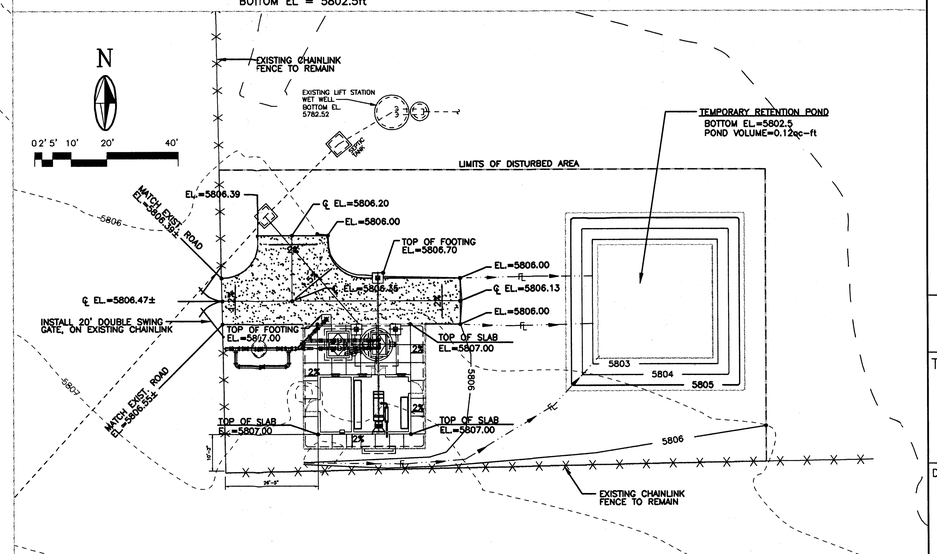
* 100 YEAR RAINFALL TABLE
  100yr – 1hr = 1.87in
  100yr – 6hr = 2.20in
  100yr – 24hr = 2.66in
* SUB-BASIN NL1
  AREA = 0.18ac
  LAND TREATMENT:
  A = 0.0%
  B = 50.0%
  C = 0.0%
  D = 50.0%
  REACH = 275.0ft
  HIGH EL. = 5808.53ft
  LOW EL. = 5802.50ft
* SUB-BASIN NL2
  AREA = 0.30ac
  LAND TREATMENT:
  A = 70.0%
  B = 10.0%
  C = 0.0%
  D = 20.0%
  REACH = 464.0ft
  HIGH EL. 5810.00ft
  LOW EL. = 5802.50ft
* SUB-BASIN NL3
  AREA = 0.36ac
  LAND TREATMENT:
  A = 80.0%
  B = 0.0%
  C = 0.0%
  D = 20.0%
  REACH = 449.0ft
  HIGH EL. = 5810.00ft
  LOW EL. = 5802.50ft
* SUB-BASIN NL4
  AREA = 0.37ac
  LAND TREATMENT:
  A = 90.0%
  B = 0.0%
  C = 0.0%
  D = 10.0%
  REACH = 453.0ft
  HIGH EL. = 5810.00ft
  LOW EL. = 5802.50ft

CALCULATIONS

* SUB-BASIN NL1
  Q(100yr–6yr) = 0.64cfs
  Q(100yr–24yr) = 0.63cfs
  RUNOFF Vol.(100yr–6hr) = 0.02ac–ft
  RUNOFF Vol.(100yr–24hr) = 0.025ac–ft
  TP(100yr–6hr) = 1.499hr
  TP(100yr–24hr) = 1.500hr
* SUB-BASIN NL2
  Q(100yr–6hr) = 0.65cfs
  Q(100yr–24hr) = 0.65cfs
  RUNOFF Vol.(100yr–6hr) = 0.020ac–ft
  RUNOFF Vol.(100yr–24hr) = 0.023ac–ft
  TP(100yr–6hr) = 1.499hr
  TP(100yr–24hr) = 1.500hr
* SUB-BASIN NL3
  Q(100yr–6hr) = 0.75 cfs
  Q(100yr–24hr) = 0.75 cfs
  RUNOFF Vol.(100yr–6hr) = 0.024ac–ft
  RUNOFF Vol.(100yr–24hr) = 0.027ac–ft
  TP(100yr–6hr) = 1.499hr
  TP(100yr–24hr) = 1.500hr
* SUB-BASIN NL4
  Q(100yr–6hr) = 0.63cfs
  Q(100yr–24hr) = 0.64cfs
  RUNOFF Vol.(100yr–6hr) = 0.019ac–ft
  RUNOFF Vol.(100yr–24hr) = 0.020ac–ft
  TP(100yr–6hr) = 1.499hr
  TP(100yr–24hr) = 1.500hr
* COMBINED FLOWS TO POND
  Q(100yr–6hr) = 2.68cfs
  Q(100yr–24hr) = 2.66cfs
  RUNOFF Vol.(100yr–6hr) = 0.084ac–ft
  RUNOFF Vol.(100yr–24hr) = 0.094ac–ft
  TP(100yr–6hr) = 1.499hr
  TP(100yr–24hr) = 1.500hr

POND CALCULATIONS

VOLUME = 5142.0 CF>0.118ac–ft
LENGTH = 50.0ft
WIDTH = 50.0ft
DEPTH = 3.0ft
BOTTOM EL = 5802.5ft



GRADING PLAN

AS BUILT INFORMATION
CONTRACTOR
WORK STAKED BY DATE
INSPECTOR'S ACCEPTANCE BY DATE
INSPECTOR'S VERIFICATION BY DATE
DRAWINGS CORRECTED BY DATE
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL
JOHN M. PROVINE NEW MEXICO 10697 REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REMARKS	BY

REVISIONS

DESIGNED BY	JMP, RDG	DATE 10/24/03
DRAWN BY	RDG	DATE 10/24/03
CHECKED BY	RDG	DATE 10/24/03

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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: DOUBLE EAGLE II AIRPORT INFRASTRUCTURE DEVELOPMENT

NORTH LIFT STATION
GRADING AND DRAINAGE PLAN
FUTURE CONDITIONS

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet	Of

1=1 07/24/01
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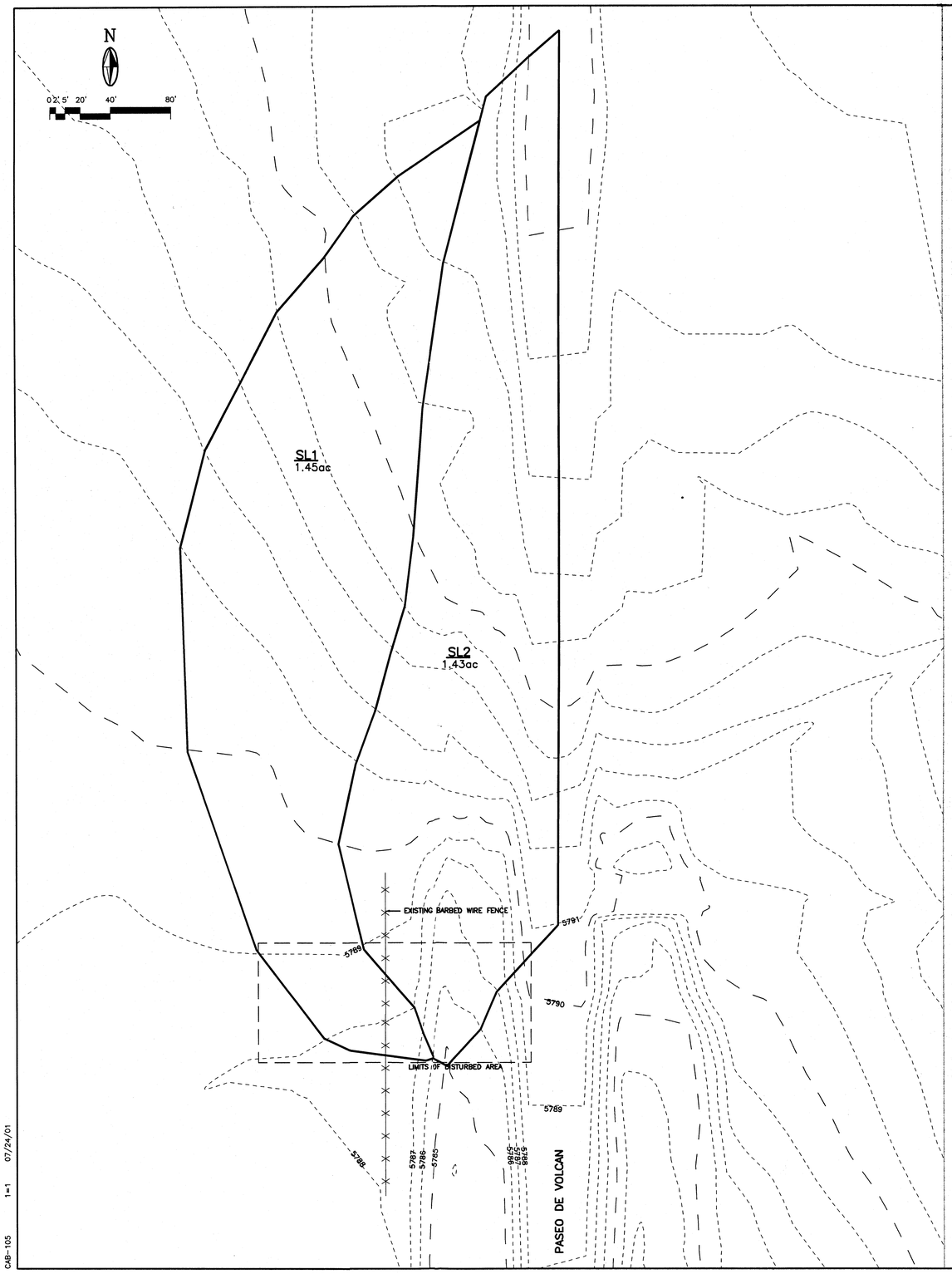


LEGEND

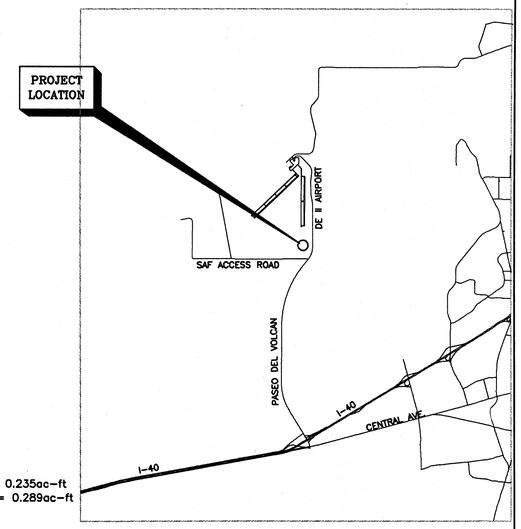
- 5929.00 — EXISTING CONTOUR (1' CONTOUR INTERVAL)
- LIMITS OF FUTURE DISTURBED AREA
- EXISTING SUB-BASIN BOUNDARIES

SITE CHARACTERISTICS

* 100 YEAR RAINFALL TABLE
  - 100yr – 1hr = 1.87in
  - 100yr – 6hr = 2.20in
  - 100yr – 24hr = 2.66in
* SUB-BASIN SL1
  - AREA = 1.45ac
  - LAND TREATMENT:
  - A = 0.0%
  - B = 2.0%
  - C = 5.0%
  - D = 95.0%
  - REACH = 655.0ft
  - HIGH EL. = 5797.00ft
  - LOW EL. = 5787.00ft
* SUB-BASIN SL2
  - AREA = 1.43ac
  - LAND TREATMENT:
  - A = 0.0%
  - B = 0.0%
  - C = 10.0%
  - D = 90.0%
  - REACH = 667.0ft
  - HIGH EL. = 5801.00ft
  - LOW EL. = 5785.00ft

CALCULATIONS

* SUB-BASIN SL1
  - Q(100yr–6hr) = 6.17cfs
  - Q(100yr–24hr) = 6.12cfs
  - RUNOFF Vol.(100yr–6hr) = 0.235ac–ft
  - RUNOFF Vol.(100yr–24hr) = 0.289ac–ft
  - TP(100yr–6hr) = 1.499hr
  - TP(100yr–24hr) = 1.500hr
* SUB-BASIN SL2
  - Q(100yr–6hr) = 6.03cfs
  - Q(100yr–24hr) = 5.91cfs
  - RUNOFF Vol.(100yr–6hr) = 0.219ac–ft
  - RUNOFF Vol.(100yr–24hr) = 0.268ac–ft
  - TP(100yr–6hr) = 1.499hr
  - TP(100yr–24hr) = 1.500hr
* TOTAL EXISTING FLOWS
  - Q(100yr–6hr) = 12.20cfs
  - Q(100yr–24hr) = 12.03cfs
  - RUNOFF Vol.(100yr–6hr) = 0.454ac–ft
  - RUNOFF Vol.(100yr–24hr) = 0.557ac–ft
  - TP(100yr–6hr) = 1.499hr
  - TP(100yr–24hr) = 1.500hr



VICINITY MAP

NOTES

AS SHOWN ON THE VICINITY MAP, THE SITE IS LOCATED NORTH OF THE SAF ACCESS ROAD ON PASEO DEL VOLCAN. THE SITE IS CURRENTLY UNDEVELOPED AND ACCORDING TO THE GEOTECHNICAL ENGINEERING SERVICES REPORT, JOB NO. 1–20721 "WATER SUPPLY AND TRANSMISSION LINE WASTEWATER COLLECTION AND TRANSMISSION LINE" THE SOIL IN THE AREA IS BEST DESCRIBED AS SILTY SAND.

AS SHOWN BY PANEL 94 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLSHED BY F.E.M.A. FOR BERNALILLO COUNTY, NEW MEXICO DATED SEPTEMBER 20, 1996, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE.

THE GRADING PLAN SHOWS: 1) EXISTING GRADES INDICATED BY CONTOURS AT 1.0' INTERVAL AS SHOWN FROM THE TOPOGRAPHIC SURVEY PROVIDED BY MOLZEN–CORBIN & ASSOCIATES AND THE ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY, 2) PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1.0' INTERVALS, 3) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS, 4) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 5) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES.

THE PROPOSED DEVELOPMENT CONSISTS OF THE CONSTRUCTION OF A FUTURE WASTE WATER LIFT STATION TO PROVIDE SERVCE FOR THE FUTURE DEVELOPMENT OF ECLIPSE AVIATION AND THE AEROSPACE TECHNOLOGY PARK. CURRENTLY THE SITE IS FAIRLY FLAT WITH NATURAL VEGETATION AND GENERALLY DRAINS FROM NORTH TO SOUTH. THERE IS A NATURAL FLOW PATH LOCATED BETWEEN PASEO DEL VOLCAN AND THE PROPOSED LIFT STATION THAT ALLOWS FLOWS FROM THE EXISTING UPSTREAM SUB–BASINS SL1 & SL2 TO DRAIN SOUTH TO THE EXISTING MIREHAVEN "A" ARROYO. REFER TO THE DOUBLE EAGLE II DRAINAGE MASTER PLAN, EXISTING CONDITIONS, FOR EXISTING FLOWS CONTRIBUTING TO THE MIREHAVEN "A" ARROYO.

PROPOSED DEVELOPMENT GRADING WILL CONTINUE TO ALLOW EXISTING FLOWS FROM SUB–BASIN SL1 TO DRAIN FROM NORTH TO SOUTH UNDER THE LIFT STATION ACCESS ROAD THRU TWO 18" DIAMETER CULVERTS TO A TEMPORARY RETENTION POND LOCATED SOUTH OF THE FUTURE LIFT STATION. THIS POND WILL CAPTURE ALL ON SITE FLOWS AS WELL AS ALL EXISTING FLOWS DIRECTLY NORTH OF THE SITE. IN THE FUTURE THIS POND CAN BE CONVERTED FROM RETENTION TO DETENTION, OR MAY TOTALLY BE ELIMINATED TO ALLOW FLOWS TO ENTER THE DRAINAGE SYSTEM AS SHOWN IN THE DOUBLE EAGLE II DRAINAGE MASTER PLAN, ULTIMATE CONDITIONS. THIS POND IS GRADED WITH 3:1 SIDE SLOPES AND HAS A CAPACITY OF 0.84ac–ft. FLOWS CONTRIBUTING TO THE POND TOTAL 0.20ac–ft FOR THE 100yr–24hr STORM EVENT, FLOWING FROM SUB–BASINS SL1, SL2 & SL3. A SMALL CHANNEL WITH A 5.0' BOTTOM WIDTH, 3:1 SIDE SLOPES, 3.0ft DEEP, SHOULD BE GRADED TO HELP DIVERT EXISTING FLOWS FROM SUB–BASINS SL4, SL5 & SL6, THESE SUB–BASINS ARE LOCATED NORTHWEST OF THE SITE AND CONTRIBUTE A TOTAL FLOW OF 11cfs.

CALCULATIONS SHOWN FOR BOTH EXISTING AND FUTURE CONDITIONS ANALYZE BOTH THE 100yr–24hr AND THE 100yr–6hr STORM EVENT. THE PROCEDURE FOR 40–ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY, 1993 IN CONJUNCTION WITH ARID–LANDS HYDROLOGIC MODEL "AHYMO–97" COMPUTER PROGRAM, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND THE VOLUME OF RUNOFF GENERATED BY THIS DEVELOPMENT.

AS BUILT INFORMATION

CONTRACTOR		
WORK STAKED BY		DATE
INSPECTOR'S ACCEPTANCE BY		DATE
FIELD VERIFICATION BY		DATE
DRAWINGS CORRECTED BY		DATE

MICRO–FILM INFORMATION

RECORDED BY	DATE
NO.	

BENCH MARKS

SURVEY INFORMATION

NO.	FIELD NOTES BY	DATE

ENGINEER'S SEAL

JOHN M. PROVINE — NEW MEXICO — LICENSED PROFESSIONAL ENGINEER — 12683 — REGISTERED PROFESSIONAL ENGINEER — 10/24/03

NO.	DATE	REMARKS	BY

REVISIONS

DESIGN		
DESIGNED BY	JMP, RDG	DATE 10/24/03
DRAWN BY	RDG	DATE 10/24/03
CHECKED BY	JMP	DATE 10/24/03

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MOLZEN-CORBIN & Associates
ENGINEERS/ARCHITECTS/PLANNERS

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: DOUBLE EAGLE II AIRPORT INFRASTRUCTURE DEVELOPMENT

SOUTH LIFT STATION
GRADING AND DRAINAGE PLAN
EXISTING CONDITIONS

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet	Of

CAB–105 1=1 07/24/01

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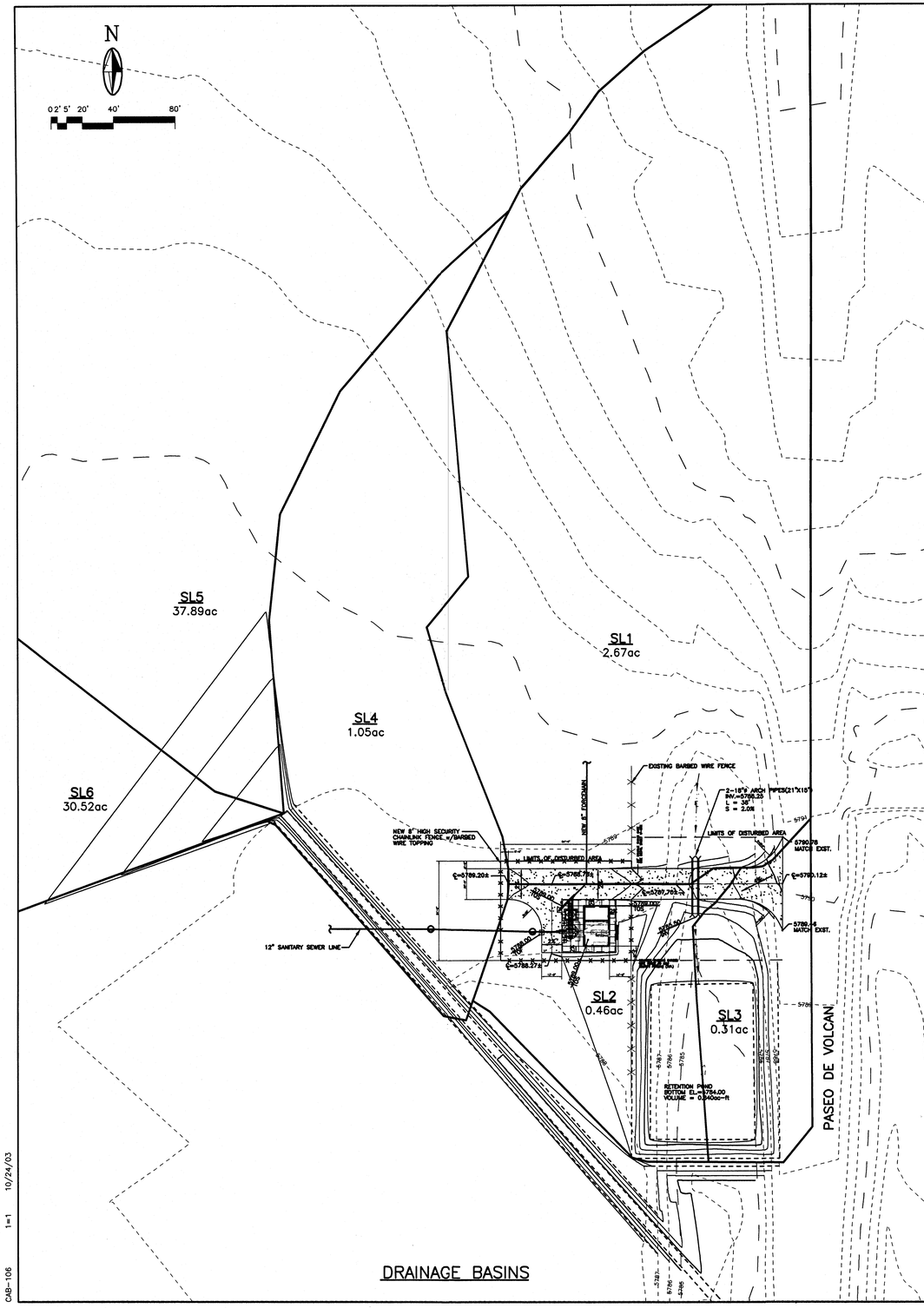
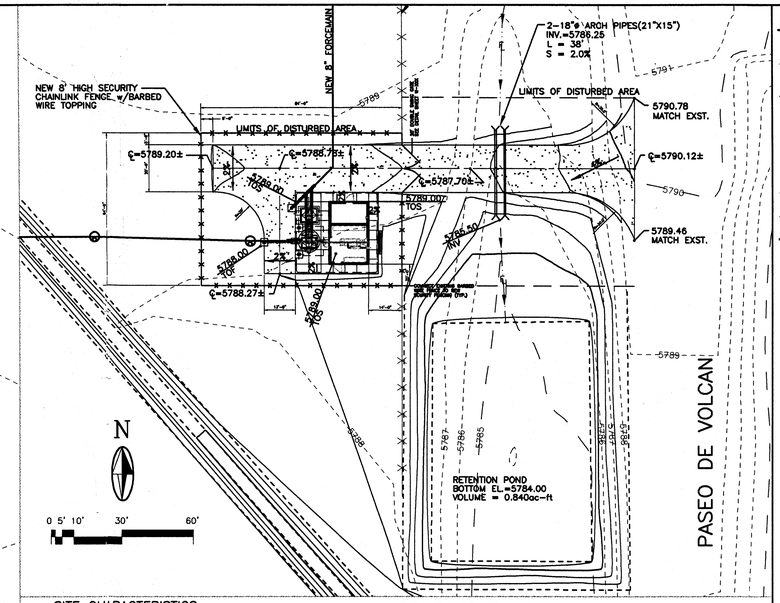


DRAINAGE BASINS



GRADING PLAN

LEGEND

- EXISTING CONTOUR (1' CONTOUR INTERVAL)
- NEW CONTOUR
- NEW TOPO SPOT ELEVATION
- ACCESS ROAD GRAVEL SURFACE
- LIMITS OF DISTURBED AREA
- NEW CHAINLINK FENCE
- SUB-BASIN BOUNDARIES

SITE CHARACTERISTICS

* 100 YEAR RAINFALL TABLE
  - 100yr – 1hr = 1.87in
  - 100yr – 6hr = 2.20in
  - 100yr – 24hr = 2.66in
* SUB-BASIN SL1
  - AREA = 2.67ac
  - LAND TREATMENT:
  - A = 90.0%
  - B = 0.0%
  - C = 10.0%
  - D = 0.0%
  - REACH = 621.0ft
  - HIGH EL. = 5801.00ft
  - LOW EL. = 5787.00ft
* SUB-BASIN SL2
  - AREA = 0.46ac
  - LAND TREATMENT:
  - A = 0.0%
  - B = 50.0%
  - C = 0.0%
  - D = 50.0%
  - REACH = 130.0ft
  - HIGH EL. 5789.00ft
  - LOW EL. = 5784.00ft
* SUB-BASIN SL3
  - AREA = 0.31ac
  - LAND TREATMENT:
  - A = 0.0%
  - B = 20.0%
  - C = 50.0%
  - D = 30.0%
  - REACH = 160.0ft
  - HIGH EL. = 5791.00ft
  - LOW EL. = 5784.00ft
* SUB-BASIN SL4
  - AREA = 1.05ac
  - LAND TREATMENT:
  - A = 90.0%
  - B = 10.0%
  - C = 0.0%
  - D = 0.0%
  - REACH = 540.0ft
  - HIGH EL. = 5793.00ft
  - LOW EL. = 5788.00ft
* SUB-BASIN SL5
  - AREA = 37.87ac
  - LAND TREATMENT:
  - A = 100.0%
  - B = 0.0%
  - C = 0.0%
  - D = 0.0%
  - REACH = 2163.0ft
  - HIGH EL. = 5793.00ft
  - LOW EL. = 5789.00ft
* SUB-BASIN SL6
  - AREA = 30.52ac
  - LAND TREATMENT:
  - A = 100.0%
  - B = 0.0%
  - C = 0.0%
  - D = 0.0%
  - REACH = 2652.0ft
  - HIGH EL. = 5796.00ft
  - LOW EL. = 5789.00ft

CALCULATIONS

* SUB-BASIN SL1
  - Q(100yr–6yr) = 3.92cfs
  - Q(100yr–24yr) = 3.88cfs
  - RUNOFF Vol.(100yr–6hr) = 0.107ac–ft
  - RUNOFF Vol.(100yr–24hr) = 0.107ac–ft
  - TP(100yr–6hr) = 1.532hr
  - TP(100yr–24hr) = 1.500hr
* SUB-BASIN SL2
  - Q(100yr–6hr) = 1.47cfs
  - Q(100yr–24hr) = 1.44cfs
  - RUNOFF Vol.(100yr–6hr) = 0.049ac–ft
  - RUNOFF Vol.(100yr–24hr) = 0.058ac–ft
  - TP(100yr–6hr) = 1.499hr
  - TP(100yr–24hr) = 1.500hr
* SUB-BASIN SL3
  - Q(100yr–6hr) = 1.04cfs
  - Q(100yr–24hr) = 1.02cfs
  - RUNOFF Vol.(100yr–6hr) = 0.032ac–ft
  - RUNOFF Vol.(100yr–24hr) = 0.036ac–ft
  - TP(100yr–6hr) = 1.499hr
  - TP(100yr–24hr) = 1.500hr
* SUB-BASIN SL4
  - Q(100yr–6hr) = 1.33cfs
  - Q(100yr–24hr) = 1.31cfs
  - RUNOFF Vol.(100yr–6hr) = 0.041ac–ft
  - RUNOFF Vol.(100yr–24hr) = 0.041ac–ft
  - TP(100yr–6hr) = 1.532hr
  - TP(100yr–24hr) = 1.550hr
* SUB-BASIN SL5
  - Q(100yr–6hr) = 5.39cfs
  - Q(100yr–24hr) = 5.35cfs
  - RUNOFF Vol.(100yr–6hr) = 1.38ac–ft
  - RUNOFF Vol.(100yr–24hr) = 1.39ac–ft
  - TP(100yr–6hr) = 2.731hr
  - TP(100yr–24hr) = 2.700hr
* SUB-BASIN SL6
  - Q(100yr–6hr) = 4.22cfs
  - Q(100yr–24hr) = 4.19cfs
  - RUNOFF Vol.(100yr–6hr) = 1.11ac–ft
  - RUNOFF Vol.(100yr–24hr) = 1.12ac–ft
  - TP(100yr–6hr) = 2.764hr
  - TP(100yr–24hr) = 2.750hr
* COMBINED FLOWS TO POND
  - Q(100yr–6hr) = 6.37cfs
  - Q(100yr–24hr) = 6.35cfs
  - RUNOFF Vol.(100yr–6hr) = 0.189ac–ft
  - RUNOFF Vol.(100yr–24hr) = 0.201ac–ft
  - TP(100yr–6hr) = 1.499hr
  - TP(100yr–24hr) = 1.500hr

POND CALCULATIONS

VOLUME = 36590.55 CF>0.840ac–ft
LENGTH = 120.0ft
WIDTH = 95.0ft
DEPTH = 4.0ft
BOTTOM EL = 5784.0ft

PIPE CALCULATIONS (1 PIPE)

TYPE = 21"x15" CMP ARCH PIPE
FLOWRATE = 9.66cfs
LENGTH = 38ft
SLOPE = 2.0%
MANNING'S N = 0.0200

AS BUILT INFORMATION
CONTRACTOR
WORK STAKED BY — DATE
INSPECTOR'S ACCEPTANCE BY — DATE
FIELD VERIFICATION BY — DATE
DRAWINGS CORRECTED BY — DATE
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RECORDED BY — DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL
JOHN M. PROVINE — NEW MEXICO — 15007 — REGISTERED PROFESSIONAL ENGINEER
10/24/03

NO.	DATE	REMARKS	BY

REVISIONS

DESIGN			
DESIGNED BY	JMP, RDG	DATE	10/24/03
DRAWN BY	RDG	DATE	10/24/03
CHECKED BY	JMP	DATE	10/24/03

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TITLE: DOUBLE EAGLE II AIRPORT INFRASTRUCTURE DEVELOPMENT

SOUTH LIFT STATION
GRADING AND DRAINAGE PLAN
FUTURE CONDITIONS

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet	Of

CAB-106 1=1 10/24/03

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