Double Eagle II Municipal Airport

Storm Drainage Masterplan

Update 2009

605001

Basin Summary
May 2010

Prepared For:
City of Albuquerque Aviation Department
2200 Sunport Blvd. SE
Albuquerque, NM 87106
&
City of Albuquerque Planning Department
c/o Hydrology
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Mirehaven Basin

The Mirehaven Basin is located on the south end of the Double Eagle II Airport property. This basin encompasses approximately 2,445 acres and consists of 15 smaller sub-basins. The Mirehaven Basin is mostly undeveloped land with the exception of developments made to the Aerospace Technology Parkway located in Sub-Basin MH-1A and to Runways and Taxiways. The characteristics of these sub-basins in their existing conditions are as follows:

Sub-Basin MH-1

Sub-Basin MH-1 consists of 657 acres of undeveloped land and produces 235cfs of run-off and 25 ac-ft of volume. Run-off flows from west to east of the basin, as shown on Sheet 2 of the DEII Drainage Master Plan. On the high side of the basin, flows run overland until they encounter SAF Road. Flows then continue under SAF Rd via a group of three 30 inch corrugated metal pipes (CMP) and one 24 inch CMP which, combined, carry a total of 42cfs. Once past SAF Rd, flows continue overland where they then encounter the east end of the basin. At this point, all flows encounter a Dirt Berm. This berm was built as part of the Aerospace Technology Parkway improvements and is used to re-direct flows around site to be used for development. All flows from Sub-Basin MH-1 will be redirected south, along the berm to the sub-basin's outfall, and deposited into Channel 6 (CH6). These flows then utilize CH6 to Analysis Point 7 (AP7).

Sub-Basin MH-1A

Sub-Basin MH-1A consists of 99 acres of partially developed land and produces 60cfs of run-off and 5 ac-ft of volume. This sub-basin was the result of the Aerospace Technology Parkway improvements done in 2007 by the City of Albuquerque Aviation Department. These improvements consisted of a new roadway and utilities built to service future development. Most runoff is directed overland toward the new roadway. The roadway has four curb inlets that direct runoff into two sets of storm culverts. Each of these culverts varies in size, beginning upstream with 24 inch diameter RCP and ending with 54 inch RCP at the outfall. Each set of culverts combines to hold approximately 1080cfs of flow and are sized for fully developed conditions. All run-offs from Sub-Basin MH-1A are conveyed through these culverts or overland to Channel 4 (CH4) and to Analysis Point 7 (AP7).

Sub-Basin MH-2

Sub-Basin MH-2 consists of 415 acres of mostly undeveloped land and produces 155cfs of run-off and 16 ac-ft of volume. This sub-basin flows from west to east overland, until it reaches its downstream end where Eclipse Aviation developed a parcel of land in 2007. This development includes a 42,000sf building, parking lot and access roadway. Run-off coming from the west/upstream side of the development is collected in ditches and re-directed around the development to the sub-basin's outfall, into Channel 4 (CH4) and to AP7.

Sub-Basin MH-3

Sub-Basin MH-3 consists of 149 acres of undeveloped land and produces 43cfs of run-off and 6 ac-ft of volume. This sub-basin flows from east to west, where it encounters a natural high ridge and a ridge created by Runway 4-22 of the Double Eagle II Airport. A 30 inch diameter RCP is located at this point and has been placed under the taxiway connected to Runway 4-22. This culvert is then discharged into Channel 1 (CH1) and onto Analysis Point 1 (AP1).

Sub-Basin MH-4

Sub-Basin MH-4 consists of 180 acres of undeveloped land and produces 38cfs of run-off and 7 ac-ft of volume. This sub-basin flows from east to west, where it encounters Channel 3 (CH3) which runs along Taxiway A. All run-off flows overland into this channel and into a 36 inch diameter RCP culvert, with a capacity of 40cfs, which has been placed under Taxiway A. Flow from this outfall of the culvert is Analysis Point 1 (AP1).

Sub-Basin MH-5

Sub-Basin MH-5 consists of 315 acres of undeveloped land and produces 75cfs of run-off and 13 ac-ft of volume. This basin is located between the two runways of the airport. Runway 4-22 is on the west end of the sub-basin, and Channel 4 (CH4) is located on the downstream end of the sub-basin. All flow is overland and sheet flows into CH4 to Analysis Point 5 (AP5).

Sub-Basin MH-6

Sub-Basin MH-6 consists of 147 acres of undeveloped land and produces 34cfs of run-off and 6 ac-ft of volume. The sub-basin flows overland from west to east where it encounters Channel 7 (CH7) on the downstream end. From CH7, run-off then enters two 42 inch diameter RCP with a capacity of 76cfs. These culverts then run under Taxiway A to Analysis point 2 (AP2).

Sub-Basin MH-7

Sub-Basin MH-7 consists of 18 acres of land which has been disturbed and compacted by human activity. This sub-basin is surrounded by the pavements of Taxiway A and Runway 4-22 on all sides and is considered an "infield area". This sub-basin produces 21 cfs or run-off and 1.5 ac-ft of volume. This sub-basin flows overland into Channel 1 (CH1) to Analysis Point 1 (AP1). From AP1, the combined flows of sub-basins MH-3, 4 and 7 then enter two 36 inch RCP culverts with a capacity of 90cfs.

Sub-Basin MH-8

Sub-Basin MH-8 consists of 16 acres of land which has been disturbed and compacted by human activity. This sub-basin is surrounded by the pavements of Taxiway A and Runway 4-22 on all sides and is considered an "infield area". This sub-basin produces 26 cfs of run-off and 1.5 ac-ft of volume. This sub-basin flows overland into Channel 8 (CH8) to Analysis Point 2 (AP2). From AP2, the combined flows of sub-basins MH-6 and 8 then enter two 48 inch RCP culverts with a capacity of 150cfs. The outfall of these culverts is discharged into Channel 9 (CH9) and onto Analysis Point 3 (AP3).

Sub-Basin MH-9

Sub-Basin MH-9 consists of 100 acres of land partially disturbed by development and human activity. This sub-basin is located between the two runways of the airport, Runway 4-22 on the west end and Runway 17-35 on the east end, and Taxiway C on the north border of the basin. This sub-basin produces 19 cfs of run-off and 4 ac-ft of volume. Run-off flows overland from east to west where it encounters Channel 9 (CH9) to Analysis Point 3 (AP3).

Sub-Basin MH-10

Sub-Basin MH-10 consists of 130 acres of land disturbed by development and human activity. This sub-basin is located between the two runways of the airport, Runway 4-22 on the west and Runway 17-35 on the east, as well as Taxiway C on the south. This sub-basin produces 61cfs of run-off and 6 ac-ft of volume. Sub-Basin MH-10 flows overland from east to west to Channel 4 (CH4). These flows are then conveyed under Taxiway C through a 36 inch diameter RCP culvert, with a capacity of 36cfs, to Analysis Point 3 (AP3).

Sub-Basin MH-11

Sub-Basin MH-11 consists of 27 acres of land that has been developed and disturbed by human activity. This area is surrounded by the pavements of Runway 17-35 and Taxiway B and is considered an "infield area" of the airport. This sub-basin produces 10cfs of run-off and 2 ac-ft of volume. Run-off flows overland into Channel 5 (CH5) to a 36 inch diameter RCP culvert located under the connector taxiway to the runway. The outfall of this culvert is Analysis Point 3 (AP3).

Sub- Basin MH-12

Sub-Basin MH-12 consists of 27 acres of land that has been developed and disturbed by human activity. This area is surrounded by the pavements of Runway 17-35 and Taxiway B and is considered an "infield area" of the airport. This sub-basin produces 8cfs of run-off and 2 ac-ft of volume. Run-off flows overland to Analysis Point 4 (AP4). This flow is then directed under Taxiway B through a 36 inch culvert with a capacity of 36cfs to AP5.

Sub-Basin MH-13

Sub-Basin MH-13 consists of 123 acres of land partially disturbed by human activity. This sub-basin is bordered by Channel 4 (CH4) on the west and Paseo Del Volcan roadway on the east. This sub-basin flows from east to southwest to Analysis Point 8 (AP8). Flows at AP8 then enter three 42 inch culverts, with a capacity of 165cfs, under Paseo Del Volcan to Analysis Point 9 (AP9).

Sub-Basin MH-14

Sub-Basin MH-14 consists of 41 acres of undeveloped land located east of Paseo Del Volcan and in the southeast corner of the Double Eagle II Airport property. It is bordered by Paseo Del Volcan on the west and flows east. This sub-basin produces 11 cfs of run-off and 1.5 ac-ft of volume. This basin currently flows to natural channels not within the Double Eagle II Airport property.

South Boca Negra Basin

The South Boca Negra Drainage Basin is in the center of Double Eagle II Airport Property, between the Mirehaven and North Boca Negra drainage basins, and encompasses approximately 2,083 acres of both developed and virgin lands. Within the boundaries of this basin lay the main developments of Double Eagle II Airport. The South Boca Negra basin is comprised of 23 smaller sub-basins. The characteristics of these sub-basins are as follows:

Sub-Basin SB-1

Sub-Basin SB-1 consists of 170 acres of mostly undeveloped land on airport property. The east end of the basin is bordered by Runway 4-22 and the Midfield Development area of the airport. This sub-basin produces 36 cfs of run-off and 7 ac-ft of volume. All runoff flows overland where it is then collected and diverted in Channel 4 (CH4) to Analysis Point 1B (AP1B).

Sub-Basin SB-1A

Sub-Basin SB-1A consists of 41 acres of mostly developed land and is considered the "Midfield Development" of Double Eagle II Airport. This sub-basin contains approximately 40% of impervious area and has undergone drainage improvements, i.e., storm culverts and inlets. There are currently two buildings/hangars in this sub-basin. This sub-basin produces 71 cfs of run-off and 5 ac-ft of volume. Runoff varies in direction of flow due to the developed areas and how paved areas were designed to channel flow to inlets and swales. Once run-off enters the numerous inlets, they flow if then conveyed through 24 inch RCP culverts toward the east border of the basin, which is Taxiway A. Once at Taxiway A, three 36 inch RCP culverts and one 24 inch culvert have been placed under the taxiway to convey flow. The outfall of all of these culverts is in Channel 7 (CH7) and onto Analysis Point 2A (AP2A).

Sub-Basin SB-2

Sub-Basin SB-2 consists of 106 acres of undeveloped land west of the Midfield Development area of Double Eagle II Airport. This sub-basin produces 23 cfs of run-off and 4 ac-ft of volume. All run-off runs west to east overland until it encounters Channel 8 (CH8). Channel 8 runs along the west edge of the Midfield Development area and onto Analysis Point 9 (AP9). Sub-Basin SB-2 is the upstream basin that contributes to South Boca Negra Pond 1 (SBP1).

Sub-Basin SB-3

Sub-Basin SB-3 consists of 127 acres of undeveloped land west of the Midfield Development area of Double Eagle II Airport. This sub-basin produces 40 cfs of run-off and 5 ac-ft of volume. All run-off runs west to east overland until it encounters Channel 8 (CH8). Channel 8 runs along the west edge of the Midfield Development and onto Analysis Point 9 (AP9).

Sub-Basin SB-3A

Sub-Basin SB-3A consists of 22 acres of developed land or land that has been disturbed by human activity. This sub-basin has approximately 40% of impervious area along side of the basin where three rows of T-Hangars and pavement have been placed. Flows within this basin vary in their direction due to development, but all flows eventually are conveyed to the eastern corner of the sub-basin, where they are deposited into Channel 8 (CH8) and onto Analysis Point 2B (AP2B).

Sub-Basin SB-4

Sub-Basin SB-4 consists of 15 acres of land that has been developed and disturbed by human activity. This area is surrounded by the pavements of Runway 4-22 and Taxiway A and is considered an "infield area" of the airport. This sub-basin produces 19 cfs of run-off and 1 ac-ft of volume. Run-off flows overland to one 24 inch RCP culvert. The outfall of this culvert is into Channel 6 (CH6) and onto Analysis Point 1A (AP1A).

Sub-Basin SB-5

Sub-Basin SB-5 consists of 17 acres of land that has been developed and disturbed by human activity. This area is surrounded by the pavements of Runway 4-22 and Taxiway A and is considered an "infield area" of the airport. This sub-basin produces 42 cfs of run-off and 1 ac-ft of volume. Run-off flows overland to Channel 6 (Ch6) and onto Analysis Point 1A (AP1A).

Sub-Basin SB-6

Sub-Basin SB-6 consists of 30 acres of land that has been developed and disturbed by human activity. This area is surrounded by the pavements of Taxiway A and the Midfield Development aprons and is considered an "infield area" of the airport. All run-off flows east toward Channel 4 (CH4) along Taxiway A. Channel 4 conveys flows to the taxiway intersection and onto Analysis Point 2 (AP2).

Sub-Basin SB-7

Sub-Basin SB-7 consists of 2 acres of land that has been developed and disturbed by human activity. This area is surrounded by the pavements of Taxiway A and the Midfield Development aprons and is considered an "infield area" of the airport. This sub-basin produces 5 cfs of run-off and 0.2 ac-ft of volume. Outfall from Channel 6 and one 24 inch RCP culvert are conveyed through Sub-Basin SB-7 and on to another 24 inch RCP culvert downstream. Run-off from this sub-basin flows overland from east to west and into this single 24 inch culvert under the taxiway and onto Channel 6 (CH6).

Sub-Basin SB-8

Sub-Basin SB-8 consists of 7 acres of land that has been developed and disturbed by human activity. This area is bordered by the pavements of Taxiway A, Taxiway B and the safety areas of Runway 4-22. This sub-basin produces 20 cfs of run-off and 0.5 ac-ft of volume. Outfall from Channel 6 and the single 24 RCP culvert is conveyed through Sub-Basin 8. All run-off from the sub-basin flow overland from east to west, where it is collected by Channel 6 (CH6) and onto Analysis Point 4 (AP4).

Sub-Basin SB-9

Sub-Basin SB-9 consists of 16 acres of land that has been developed and disturbed by human activity. This area is bordered by the pavements of Taxiway A and Taxiway B, includes areas of the airport parking aprons, and possesses approximately 40% of impervious lands. This sub-basin produces 46 cfs of run-off and 1.5 ac-ft of volume. All runoff flows from west to east of the sub-basin, where it is collected in Channel 4 (CH4), which runs along Taxiway A. Run-off is then conveyed to Analysis Point 3 (AP3).

Sub-Basin SB-10

Sub-Basin SB-10 consists of 33 acres of land that has been developed and disturbed by human activity. This area of the airport possesses approximately 70% of impervious areas and has numerous building and T-hangar structures surrounded by pavement. This sub-basin produces 64 cfs of run-off and 4 ac-ft of volume. Run-off varies in directions of flow due to the area being fully developed, but flow eventually conveys its way overland to a slotted drain placed in the center of the paved areas. This slotted drain runs the length of the apron from the south end to the northeast end, where it then discharges the run-off into a natural channel overland to Analysis Point 5 (AP5).

Sub-Basin SB-11

Sub-Basin SB-11 consists of 55 acres of land that has been disturbed by human activity. This sub-basin is located north of the parking apron and north of the two runways on the airport. Two channels (CH5 & Ch6) converged in this sub-basin at Analysis Point 7 (AP7). From AP7, the combined flows are then conveyed in Channel 1 (CH1) to Analysis Point 6 (AP6).

This sub-basin produces 145 cfs of run-off and 5 ac-ft of volume. All run-off flows from east to west of the sub-basin, where it encounters the old roadway that was Paseo Del Volcan on its eastern border. Flows are then conveyed to Analysis Point 6 (AP6).

Sub-Basin SB-11A

Sub-Basin SB-11A consists of 5 acres of land that has been disturbed by human activity. The sub-basin was the result of the recent Paseo Del Volcan (PdV) Re-Alignment project in 2008. This sub-basin is bordered by the old PdV roadway berm to the east, a MALSR service road to the north and the new Paseo Del Volcan roadway on the east. This sub-basin produces 16 cfs of run-off and 0.5 ac-ft of volume. The outfall of AP6 flows overland along with Sub-Basin SB-11A run-off to two 24 inch culverts under the Paseo Del Volcan roadway. The outfall of these two 24 inch culverts is deposited in Channel 1 (CH1) to the South Boca Negra Pond 3 (SBP3).

Sub-Basin SB-12

Sub-Basin SB-12 consists of 12 acres of land that has been disturbed by human activity. This sub-basin is located north of the airport parking aprons and is bordered by the berm that was the old Paseo Del Volcan roadway on the sub-basin's north border. Outfall from Sub-Basin SB-10 is conveyed overland through this sub-basin to Analysis Point 5 (AP5). Sub-Basin SB-12 produces 23 cfs and 1 ac-ft of volume. All run-off flows overland from east to west, where it is diverted to Analysis Point 5 (AP5) and conveyed through a single 24 inch culvert to SB-12A.

Sub-Basin SB-12A

Sub-Basin12A consists of 39 acres of mostly undeveloped land. The sub-basin was the result of the recent Paseo Del Volcan (PdV) Re-Alignment project in 2008. This sub-basin is bordered by the pavements of the new Paseo Del Volcan roadway on the east, the new Airport Roadway on the north and the old PdV roadway berm on the south. Outfall from Sub-Basin SB-12 is conveyed from a single 24 inch culvert overland in a natural swale through this sub-basin. Sub-Basin SB-12A produces 27 cfs of run-off and 3 ac-ft of volume. All run-off flows overland in a natural swale to two 24 inch culverts located under the roadway on the east border of the sub-basin. Outfall from these culverts is then deposited into Channel 2 (CH2) where it is conveyed though SB-17 to the South Boca Negra Pond 3 (SBP3).

Sub-Basin SB-13

Sub-Basin SB-13 consists of 595 acres of undeveloped land located north of the Midfield Development and Parking Aprons of the airport. The sub-basin produces 207 cfs of run-off and 24 ac-ft of volume. All run-off flows west to east overland where it then converges into Detention Pond "A". Detention Pond "A" has a capacity of 24 ac-ft and also possesses an outfall structure the deposits run-off into Channel 3 and onto Analysis Point 8 (AP8).

Sub-Basin SB-14

Sub-Basin SB-14 consists of 104 acres of mostly undeveloped land located north of the Midfield Development and Parking Aprons of the airport. This sub-basin produces 71 cfs of run-off and 8 ac-ft of volume. This area is bordered by Airport Road and Paseo Del Volcan on the east and subsequently Channel 8 (CH8), which runs parallel to the road. All run-off flows overland to Channel 8 which is conveyed to two 36 inch culverts located under the Paseo Del Volcan roadway. Outfall from these culverts is deposited into the South Boca Negra Pond 1 (SBP1).

Sub-Basin SB-15

Sub-Basin SB-15 consists of 50 acres of undeveloped land located north of the airport and north of Airport Road. This sub-basin conveys the outfall from Detention Pond "A" overland to three 36 inch culverts placed under Paseo Del Volcan. Sub-Basin SB-15 produces 35 cfs of run-off and 2 ac-ft of volume. All run-offs flow overland and are diverted to the same 36 inch culverts beneath Paseo Del Volcan and onto Analysis Point 8, which is also the South Boca Negra Pond 1 (SBP1).

Sub-Basin SB-16

Sub-Basin SB-16 consists of 163 acres of undeveloped land north of the airport. This sub-basin produces 39 cfs of run-off and 7 ac-ft of volume. All run-off flows west to east overland towards Paseo Del Volcan. All flow is channeled naturally to two sets of culverts. Flow is either diverted north where four 35 inch culverts have been placed underneath the roadway, or flow is diverted to two 24 inch culverts underneath the roadway. The outfall of both sets of culverts is deposited onto Sub-Basin SB-18, where it then flows overland to South Boca Pond "Natural Playa" (Natural Playa).

Sub-Basin SB-17

Sub-Basin SB-17 consists of 386 acres of undeveloped land east of Paseo Del Volcan. This sub-basin is the converging point for many of the basins and channels upstream. Both Channels 1 and 2 converge in this sub-basin, and flows are conveyed through to Pond SBP3. This basin produces 87 cfs of run-off and 15 ac-ft of volume. All run-off flows overland from west to east and then overland to the South Boca Negra Pond 3 (SBP3).

Sub-Basin SB-18

Sub- Basin SB-18 consists of 79 acres of undeveloped land located east of Paseo Del Volcan and north of the airport. This sub-basin produces 34 cfs of run-off and 3 ac-ft of volume. All run-off flows overland to the South Boca Negra Pond "Natural Playa" (Natural Playa).

North Boca Negra Basin

The North Boca Negra drainage basin is located at the north border of the property of Double Eagle II Airport. This drainage basin encompasses approximately 1,200 acres mostly of undeveloped and undisturbed lands and is made up of four smaller sub-basins. These basins flow overland from west to east and do not encounter any development until reaching the drainage structures on Paseo Del Volcan. The characteristics of each of these sub-basins are as follows:

Sub-Basin NB-1

Sub-Basin NB-1 consists of 856 acres of undeveloped land on the north side of the airport property. The west half of this sub-basin lies outside the boundary of airport property, but flows will be addressed in the interim development period. The east (downstream) end is bordered by Paseo Del Volcan. Sub-Basin NB-1 produces 481 cfs of run-off and 44 ac-ft of volume. This runoff flows overland until it reaches Paseo Del Volcan, where all flows are then diverted in culverts placed beneath the roadway. Run-off is mainly diverted into a set of five 42 inch culverts. There is also a set of two 24 inch culverts south of the five 42inch culverts that handle any rogue run-off, as well as a single 24 inch culvert to the north of the five 42inch culverts. The outfall of these culverts is to Sub-Basin NB-4, where natural channels (Channel 1 (CH1)) convey flow to Analysis Point 1 (AP1).

Sub-Basin NB-2

Sub-Basin NB-2 consists of 118 acres of undeveloped land located at the north end of airport property and north of Sub-Basin NB-1. This sub-basin produces 48 cfs of run-off and 6 ac-ft of volume. Run-off from this basin flows overland until reaches its east boundary, which is that of Paseo Del Volcan. Once flows reach the roadway, they are then diverted into a set of four 36 inch culverts located under the roadway and at the northeast corner of the sub-basin. Outfalls from this set of culverts are then conveyed in natural channels (Channel 2 (CH2)), through Sub-Basin NB-4 and to Analysis Point 1 (AP1).

Sub-Basin NB-3

Sub-Basin NB-3 consists of 147 acres of undeveloped land on the north end of the airport property. This sub-basin produces 106 cfs of run-off and 12 ac-ft of volume. All run-off flows overland until it reaches its downstream border of Paseo Del Volcan. Once flow reaches the roadway, it is then diverted to a set of two 48 inch culverts under the roadway. The outfall of these culverts is then conveyed into a natural channel (Channel 3 (CH3)), through Sub-Basin NB-4 and to Analysis Point 1 (AP1).

Sub-Basin NB-4

Sub-Basin NB-4 consists of 81 acres of undeveloped land located in the northeast corner of airport property. This sub-basin produces 30 cfs of run-off and 4 ac-ft of volume. This sub-basin is bordered by Paseo De Volcan on the west and natural ridges on the east. All run-off flows northeast to the edge of airport property, which is Analysis Point 1 (AP1).

Ladera Playa Basin

The Ladera Playa currently consists of 539 acres of land and is located east of Runway 17-35 at the Double Eagle Airport. This basin is currently "land-locked" and does not have an outfall. If this entire basin were to overflow, run-off would be conveyed to the south and enter the Mirehaven A Arroyo via channels constructed south of Runway 17-35 on Double Eagle II Airport property. Currently the DEII Access Road (aka Paseo Del Volcan) crosses this basin and bisects the low spot or run-off collections area of the basin. Culverts under the DEII Access Rd. allow run-off to flow under the road.

Ladera Playa Basin consists of 2 sub-basins, LP-1 and LP-2, whose characteristics are as follows:

Sub-Basin LP-1

Sub-Basin LP-1 consists of 97 acres of land partially developed and disturbed by human activity. This sub-basin is located just east of Runway 17-35 and just west of Paseo Del Volcan. Sub-Basin LP-1 produces 21 cfs of run-off and 4.4 ac-ft of volume. This run-off flows west to east, overland to the Ladera Playa (AP Ladera Playa).

Sub-Basin LP-2

Sub-Basin LP-2 consists of 423 acres of undeveloped land located east of Paseo Del Volcan. This sub-basin produces 182 cfs of run-off and 16 ac-ft of volume. All run-off flows east to west, overland to the Ladera Playa pond (AP Ladera Playa).

CITY OF ALBUQUERQUE

August 26, 2010

John M. Provine, P.E.
Molzen-Corbin & Associates
2701 Miles Rd. SE
Albuquerque, NM 87106

Re: Double Eagle II Airport Electrical Vault Relocation, 7401 Paseo del Volcan NW, Traffic Circulation Layout
Engineer's Stamp dated 08-10-10 (E05-SB1AD001)

Dear Mr. Provine,

The TCL submittal received 08-19-10 is approved for Building Permit. The plan is stamped and signed as approved. A copy of this plan will be needed for each of the building permit plans. Please keep the original to be used for certification of the site for final C.O. for Transportation. **Public infrastructure or work done within City Right-of-Way shown on these plans is for information only and is not part of approval. A separate DRC and/or other appropriate permits are required to construct these items.**

If a temporary CO is needed, a copy of the original TCL that was stamped as approved by the City will be needed. This plan must include a statement that identifies the outstanding items that need to be constructed or the items that have not been built in "substantial compliance," as well as the signed and dated stamp of a NM registered architect or engineer. Submit this TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

When the site is completed and a final C.O. is requested, use the original City stamped approved TCL for certification. A NM registered architect or engineer must stamp, sign, and date the certification TCL along with indicating that the development was built in "substantial compliance" with the TCL. Submit this certification TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

Once verification of certification is completed and approved, notification will be made to Building Safety to issue Final C.O. To confirm that a final C.O. has been issued, call Building Safety at 924-3306.

Sincerely,

Kristal D. Metro, P.E.
Traffic Engineer, Planning Dept.
Development and Building Services

C: File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

E-05381A/D001

PROJECT TITLE: DE II Airport Electrical Vault Relocation ZONE MAP/DRG. FILE #: ~~D-6~~
DRB #: Administrative Appr EPC#: WORK ORDER#:

LEGAL DESCRIPTION: Double Eagle II Airport
CITY ADDRESS: 7401 Paseo del Volcan, NW. Albuquerque, NM 87120

ENGINEERING FIRM: Molzen-Corbin & Associates CONTACT: Mike Provine
ADDRESS: 2701 Miles Rd, SE PHONE: 242-5700
CITY, STATE: Albuquerque, NM ZIP CODE: 87106

OWNER: COA/Aviation Department CONTACT: Jim Hinde
ADDRESS: 2200 Sunport Blvd PHONE: 244-7805
CITY, STATE: Albuquerque, NM ZIP CODE: 87119

ARCHITECT: CONTACT:
ADDRESS: PHONE:
CITY, STATE: ZIP CODE:

SURVEYOR: CONTACT:
ADDRESS PHONE:
CITY, STATE: ZIP CODE:

CONTRACTOR: CONTACT:
ADDRESS: PHONE:
CITY, STATE: ZIP CODE:

CHECK TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- ____ DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN
- ____ EROSION CONTROL PLAN
- ____ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- ✓ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEERS CERTIFICATION (TCL)
- ____ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ____ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ____ SIA / FINANCIAL GUARANTEE RELEASE
- ____ PRELIMINARY PLAT APPROVAL
- ____ S. DEV. PLAN FOR SUB'D. APPROVAL
- ____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- ✓ BUILDING PERMIT APPROVAL
- ____ CERTIFICATE OF OCCUPANCY (PERM.)
- ____ CERTIFICATE OF OCCUPANCY (TEMP.)
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ~~____~~ WORK ORDER APPROVAL
- ____ OTHER (SPECIFY)

RECEIVED
AUG 19 2010
HYDROLOGY SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- ✓ NO
- ____ COPY PROVIDED

DATE SUBMITTED: 8-19-10 BY: LLL-R

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature , location and scope ot the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report**: Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

CITY OF ALBUQUERQUE

February 21, 2007

John M. Provine, P.E.
Molzen-Corbin & Associates
2701 Miles Rd SE
Albuquerque, NM 87106

Re: Double Eagle II Airport Air Traffic Control Tower
7401 Paseo del Volcan NW
Approval of Permanent Certificate of Occupancy (C.O.)
Engineer's Stamp dated 11/15/05 ~~(D-5/D001)~~
Certification dated 2/20/07 E-5/SB2ND001

Mr. Provine,

Based upon the information provided in your submittal received 2/20/07, the above referenced certification is approved for release of Permanent Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne
Engineering Associate - Hydrology
Development and Building Services

C: Katrina Sigala
File

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

CITY OF ALBUQUERQUE

December 1, 2005

Mike Provine, P.E.
Molzen-Corbin & Associates
2701 Miles Rd. SE
Albuquerque, NM 87106

Re: DE II Airport Air Traffic Control Tower, 7401 Paseo Del Volcon
Grading & Drainage Plan-Engineer's Stamp dated 11-15-05 (D5-D1)

Dear Mr. Provine,

Based upon the information provided in your submittal dated 11-16-05, the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. Prior to release of the Certificate of Occupancy an Engineer's Certification of the grading plan per the DPM checklist will be required.

If you have any questions, you can contact me at 924-3990.

Sincerely,

Phillip J. Lovato, E.I., C.F.M.
Engineering Associate, Hydrology,
Development and Building Services,
Planning Department

cc: file

P.O. Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

CITY OF ALBUQUERQUE

Planning Department
Transportation Development Services Section

February 21, 2007

John M. Provine, P.E.
2701 Miles Rd SE
Albuquerque, NM 87106

Re: Certification Submittal for Final Building Certificate of Occupancy for Double Eagle II Airport Traffic Control Tower, ~~[D-5 / D1]~~
7401 Paseo del Volcan NW
Engineer's Stamp Dated 02/20/07

E5/SB2A Dog

Dear Mr. Provine:

The TCL / Letter of Certification submitted on February 20, 2007 is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to the Building and Safety Section.

Sincerely,

Nilo E. Salgado-Fernandez, P.E.
Senior Traffic Engineer
Development and Building Services
Planning Department

c: Engineer
Hydrology file
CO Clerk

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

2701 MILES RD SE
ALBUQUERQUE, NM 87106
TEL: 505.242.5700
FAX: 505.242.0673

MOLZEN-CORBIN & Associates
ENGINEERS/ARCHITECTS/PLANNERS

February 20, 2007

City of Albuquerque
Planning Department
Development and Building Services
P.O. Box 1293
Albuquerque, New Mexico 87103

RE: Double Eagle II Airport Air Traffic Control Tower ABQ11F-11.D20
Traffic Circulation Layout (TCL) Certification

To Whom It May Concern:

I, John M. Provine, NMPE 10997, of the firm Molzen-Corbin & Associates, hereby certify that this project is in substantial compliance with and in accordance with the design intent of the TCL approved and building permit issued for the project (Building Permit No. 0419214 dated 12/14/2005). The record information edited onto the original design document has been obtained by Jaynes Corp. I further certify that I have personally visited the project site on January 16, 2007 and have determined by visual inspection that the record drawing information provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for a Certificate of Occupancy.

There are no known deficiencies or corrections that have not been addressed by the Contractor, Jaynes Corp, concerning the TCL.

The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the traffic aspects of this project. Those relying on the record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

Sincerely,

MOLZEN-CORBIN & ASSOCIATES

John M. Provine, P.E.

JOHN M. PROVINE NEW MEXICO 10997 REGISTERED PROFESSIONAL ENGINEER

JMP:jgo
Enclosures

RECEIVED
FEB 2 0 2007
HYDROLOGY SECTION