# Airport Layout Plan
## for the
# Cameron Memorial Airport (EZZ)
## City of Cameron, Missouri

MoDOT Project No. 07-013A-1

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JUN 28 2010
MULTIMODAL OPERATIONS


MoDOT Approval Stamp

**CONDITIONAL ALP APPROVAL**

The approval indicated by my signature is given subject to the condition that the items identified in our approval letter dated 7-1-10 may not be undertaken without prior written environmental approval by the Missouri Department of Transportation. This approval action does not imply any commitment for State or Federal funding, or approval of future structures requiring notice under FAR Part 77.

Joe Peska, Administrator of Aviation — Date 7-1-10
Missouri Department of Transportation

MoDOT Disclaimer

The preparation of this layout plan update was financed in part through a State Block Grant from the Missouri Department of Transportation (MoDOT), Aviation Section. The development depicted herein does not necessarily reflect the official views or policy of MoDOT or the U.S. Department of Transportation, Federal Aviation Administration (FAA). Acceptance of this plan by MoDOT does not in any way constitute a commitment on the part of the State of Missouri to participate in any development depicted herein nor does it indicate that the proposed development is environmentally acceptable in accordance with applicable public laws.


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CAMERON MEMORIAL AIRPORT (EZZ)
City of Cameron, Missouri

TITLE SHEET

| | |
|---|---|
| BWR PROJECT NO. | 2007-0975.01 |
| MoDOT PROJECT NO. | 07-013A-1 |
| DRAWN BY | MAW |
| CHECKED BY | MAW |
| DESIGNED BY | MAW |
| REVISIONS | DATE |
| SUBMITTAL DATE | 06/22/2010 |

1

SHEET 1 OF 11


Drawing Name: R:\2007-0975_Cameron Municipal ALP\ALP Update\ACAD\ALP Update\EZZ ALP_Change 13.dwg Sep 02,2010 - 2:18pm

## Obstacle Free Zone (OFZ) Object Penetrations

There are no existing OFZ object penetrations.

## Threshold Siting Surface Object Penetrations

There are no existing TSS object penetrations.

## Modifications to Airport Design Standards

None Required

## Legend

| EXISTING | ULTIMATE | DESCRIPTION |
|---|---|---|
| | | Airport Pavement Areas |
| | | Structures |
| | | Airport Property Line |
| BRL(E&U) | Same | Building Restriction Line (BRL) |
| RSA | RSA(U) | Runway Safety Area (RSA) |
| OFA | OFA(U) | Object Free Area (OFA) |
| RPZ | RPZ(U) | Runway Protection Zone (RPZ) |
| OFZ | OFZ(U) | Obstacle Free Zone (OFZ) |
| DEP | DEP(U) | 40:1 Departure Surface |
| AS | AS(U) | Part 77 Approach Slope Surface |
| | Same | Rotating Beacon |
| | | Precision Approach Path Indicators (PAPI-4L) |
| | | Lighted Wind Cone/Segmented Circle |
| | | Runway Threshold Lighting |
| | | Runway End Indicator Lights (REIL) |
| | | Fenceline |
| | | AWOS-III Station |
| | | Ultimate Property Acquisition |
| | | Easement |

## General Notes

1. See the inner portion of the approach surface drawings (IPASD) and airspace drawing for obstruction/significant object location and clearance information for the FAR Part 77 airspace, approach and threshold siting surfaces (TSS).

2. According to the NOAA Aeronautical Survey Program (http://www.ngs.noaa.gov/AERO/aero.html) there are no National Geodetic Survey (NGS) Primary Airport Control Station (PACS) or Secondary Airport Control Station (SACS) survey monuments located at EZZ.

3. NE 355th St. is anticipated to be closed from the Sukup Manufacturing entrance road to NE O'Connell Rd. (CR-54) located to the NW of the airport property boundary.

4. The proposed alternative airfield development option involves acquisition of approximately 25.6 acres in fee simple and easement interest which includes the relocation of one structure located to the immediate east of MO Highway A and situated south of EZZ.

5. Due to limited property to the south of the terminal area complex coupled with steep terrain south of the existing T-hangar area, proposed terminal area expansion is recommended to occur to the north of the existing terminal complex.

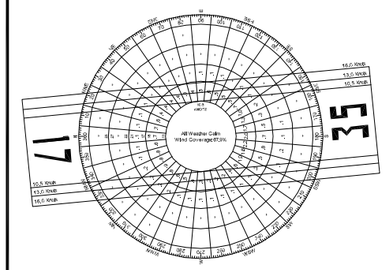
6. The proposed T-hangar and clear span hangar development takes into account projected demand throughout the planning period and considers demand beyond projected levels as well.

7. Projected T-hangar demand is for two 10-unit T-hangars while clear span hangar demand is for two additional 4,700 sq. ft. structures. Additional hangar facilities that are depicted reflect the city's goals and objectives with respect to future hangar storage capabilities and configuration.

8. The U.S. Army Corp of Engineers (USACE) identified a wetland area (Palustine emergent) totaling approximately 0.16 acres and located at N 39.73661511, W -94.27632664.

9. The USACE identified a second wetland area totaling approximately 0.15 acres and located at N 39.72104526, W -94.27728763.

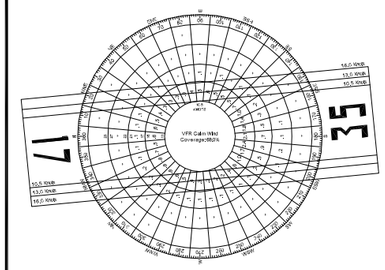
## All Weather Wind Rose




| Runway | Crosswind Component/ Corresponding ARC | | |
|---|---|---|---|
| | 10.5 Knots (A-I & B-I) | 13.0 Knots (A-II & B-II) | 16.0 Knots (A-III, B-III, C-I to D-III) |
| Runway 17-35 | 91.7% | 95.8% | 98.8% |

Source: National Oceanic and Atmospheric Administration (NOAA), National Climatic Data Center (NCDC), Asheville, NC; Kansas City International Airport (MCI), Kansas City, Missouri (1998-2007).

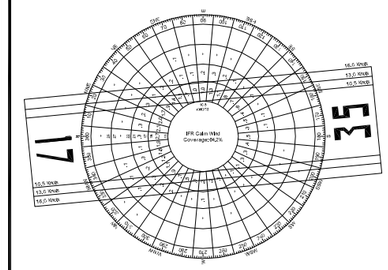
## VFR Wind Rose




| Runway | Crosswind Component/ Corresponding ARC | | |
|---|---|---|---|
| | 10.5 Knots (A-I & B-I) | 13.0 Knots (A-II & B-II) | 16.0 Knots (A-III, B-III, C-I to D-III) |
| Runway 17-35 | 92.0% | 96.0% | 98.9% |

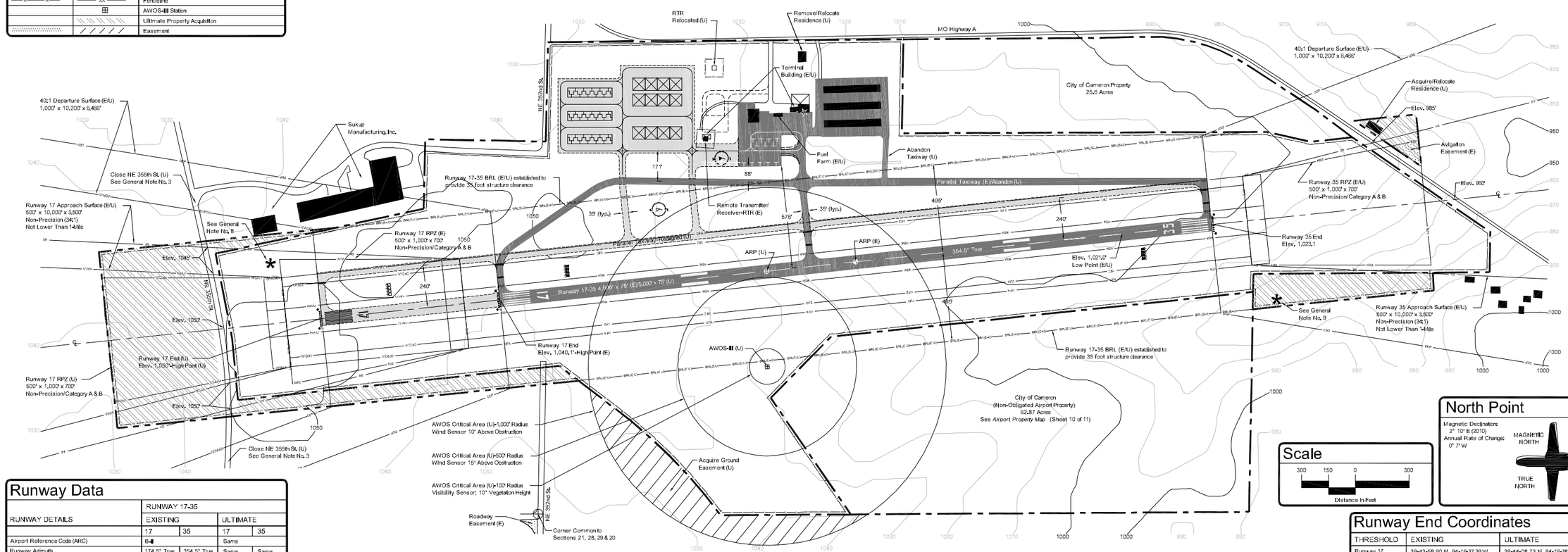
Source: National Oceanic and Atmospheric Administration (NOAA), National Climatic Data Center (NCDC), Asheville, NC; Kansas City International Airport (MCI), Kansas City, Missouri (1998-2007).

## IFR Wind Rose




| Runway | Crosswind Component/ Corresponding ARC | | |
|---|---|---|---|
| | 10.5 Knots (A-I & B-I) | 13.0 Knots (A-II & B-II) | 16.0 Knots (A-III, B-III, C-I to D-III) |
| Runway 17-35 | 87.4% | 93.3% | 98.0% |

Source: National Oceanic and Atmospheric Administration (NOAA), National Climatic Data Center (NCDC), Asheville, NC; Kansas City International Airport (MCI), Kansas City, Missouri (1998-2007).




## North Point

Magnetic Declination: 2° 10' E (2010) Annual Rate of Change: 0° 7' W

MAGNETIC NORTH

TRUE NORTH

## Scale

300 150 0 300

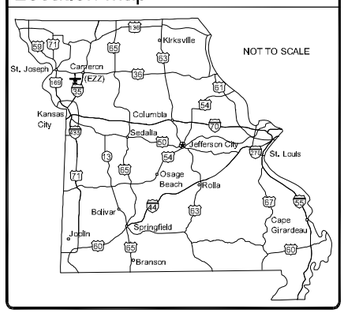
Distance In Feet

## Runway Data

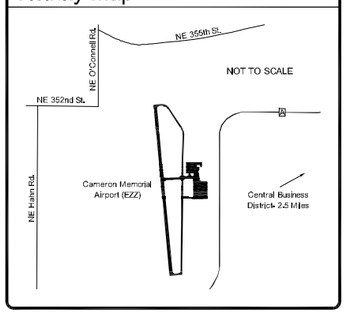
| RUNWAY DETAILS | RUNWAY 17-35 | | | |
|---|---|---|---|---|
| | EXISTING | | ULTIMATE | |
| | 17 | 35 | 17 | 35 |
| Airport Reference Code (ARC) | B-I | | Same | |
| Runway Azimuth | 174.5° True | 354.5° True | Same | Same |
| Runway Dimensions | 4,000' x 75' | | 5,000' x 75' | |
| FAR Part 77 Approach Use Type | NP | NP | Same | Same |
| Aeronautical Survey Required for Approach | NVG | NVG | VG | VG |
| Approach Visibility Minimums | 1-Mile | 1-Mile | Same | Same |
| Approach Slope | 34:1 | 34:1 | Same | Same |
| Runway Safety Area (RSA) | 4,600' x 150' | | 5,600' x 150' | |
| Runway Object Free Area (OFA) | 4,600' x 500' | | 5,600' x 500' | |
| Runway Obstacle Free Zone (OFZ) | 4,400' x 400' | | 5,400' x 400' | |
| Runway Pavement Strength (Thousands of lbs.) | 30,000 (SW) | | Same | |
| Runway Pavement Material | Concrete (PCC) | | Same | |
| Runway Markings | NP | NP | Same | Same |
| Runway Gradient | -0.5% | 0.5% | Same | Same |
| Runway Lighting | MIRL/REIL | | Same | |
| Taxiway Lighting | MITL | | Same | |
| Taxiway Width | 35' | | Same | |
| NAVAIDS | GPS | GPS/DME | Same | GPS/LPV |
| Approach Visual Aids | PAPI-4L | PAPI-4L | Same | Same |
| Touchdown Zone Elevation (TDZE) | 1,040.1' | 1034.2' | 1,050.0' | Same |
| Takeoff Run Available (TORA) | n/a | n/a | Same | Same |
| Accelerate-Stop Distance Available (ASDA) | n/a | n/a | Same | Same |
| Landing Distance Available (LDA) | n/a | n/a | Same | Same |
| Takeoff Distance Available (TODA) | n/a | n/a | Same | Same |

SW- Single Wheel Gear; NP- Non Precision; NVG- Non Vertical Guidance; VG- Vertical Guidance

## Location Map




## Vicinity Map




## Airport Data

| AIRPORT INFORMATION | EXISTING | ULTIMATE |
|---|---|---|
| Airport Elevation- Mean Sea Level (MSL) | 1,040.1' | 1,050' |
| Airport Reference Code (ARC) | B-I | Same |
| Critical Aircraft | Beechcraft King Air 200 | Cessna Citation Encore (Model 560) |
| Airport Reference Point (ARP) | 39-43-39.22 N, 94-15-34.95 W | 39-43-44.14 N, 94-15-35.57 W |
| Instrument Approach Procedures | (RNAV)GPS/NDB | (RNAV)GPS/LPV |
| Mean Maximum Air Temperature | 89° F | Same |
| Weather Reporting System | None | AWOS-III |
| Airport Electronic Aids | Rotating Beacon | Same |
| NPIAS Category | General Aviation | Same |
| Range and Township/ Sections | T57N, R30W/ 21 and 28 | T57N, R30W/ 21, 28 and 29 |
| FAA Site Number | 11587.*A | Same |
| County | Clinton (MO) | Same |
| Total Acreage- Fee Simple & Easements | 215.75 (See Sheet 10 of 11) | 244.36 (See Sheet 10 of 11) |

1. Datum Coordinate System-FIPS MO049 (Clinton Co.); NAD83 State Plane Zone=2403 (Transverse Mercator | Western Zone); FIPS State Code=MO 29; NAVD88.

## Runway End Coordinates

| THRESHOLD | EXISTING | ULTIMATE |
|---|---|---|
| Runway 17 | 39-43-58.30 N, 94-15-37.39 W | 39-44-08.73 N, 94-15-35.52 W |
| Runway 35 | 39-43-19.54 N, 94-15-32.51 W | Same |

Source: http://avnwww.jccbi.gov ; FAA Aviation Systems Standards Branch (AVN)

## Sponsor Approval Stamp

For Approval by:

The City of Cameron, Missouri

Signed by: Dated: 06/25/2010

The Honorable Dennis Clark
Mayor

## ALP Revisions

| NO. | DESCRIPTION | DATE | REVISED BY | APPROVED BY |
|---|---|---|---|---|
| | | | | |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# CAMERON MEMORIAL AIRPORT (EZZ)

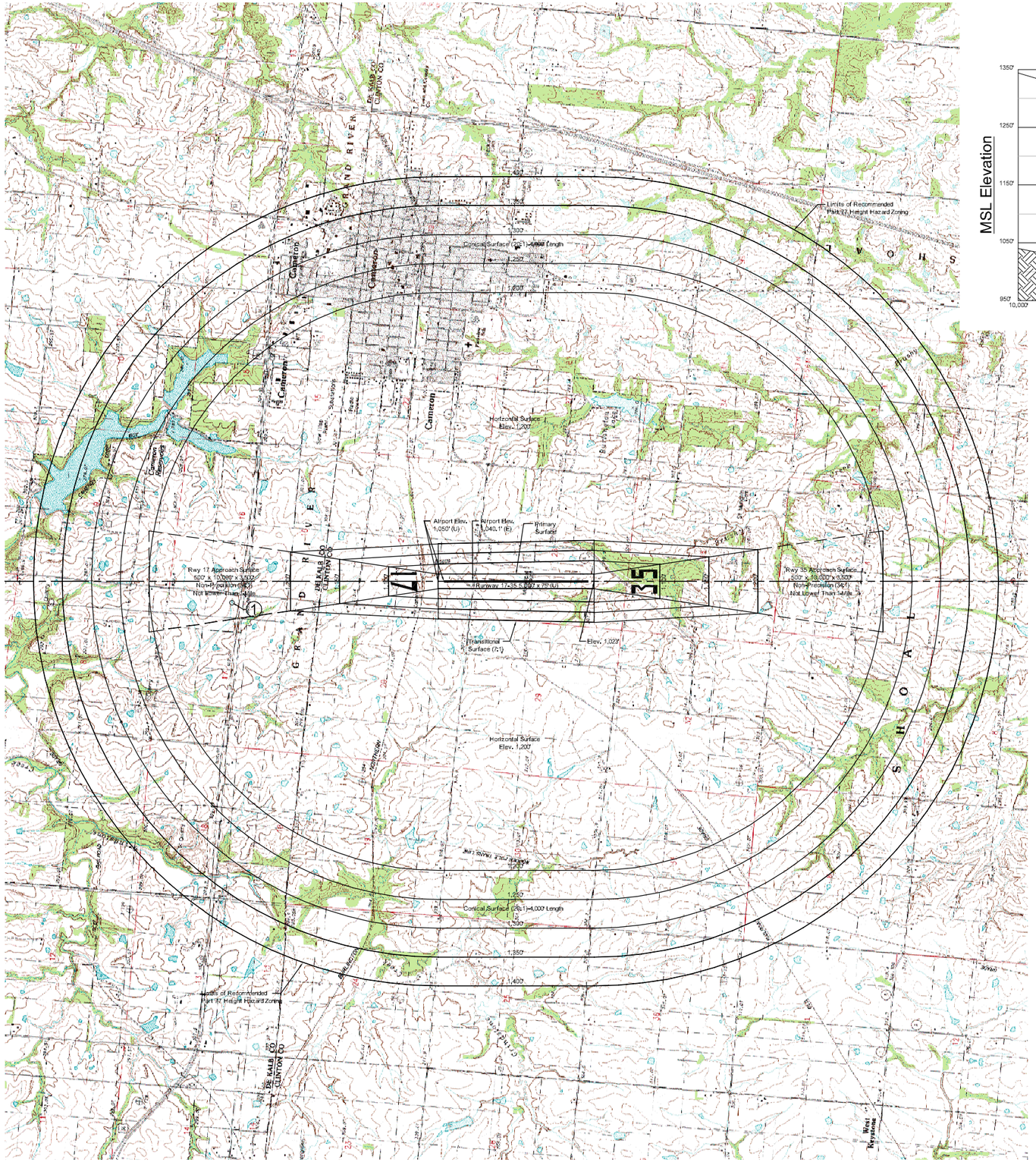
City of Cameron, Missouri

# AIRPORT LAYOUT DRAWING

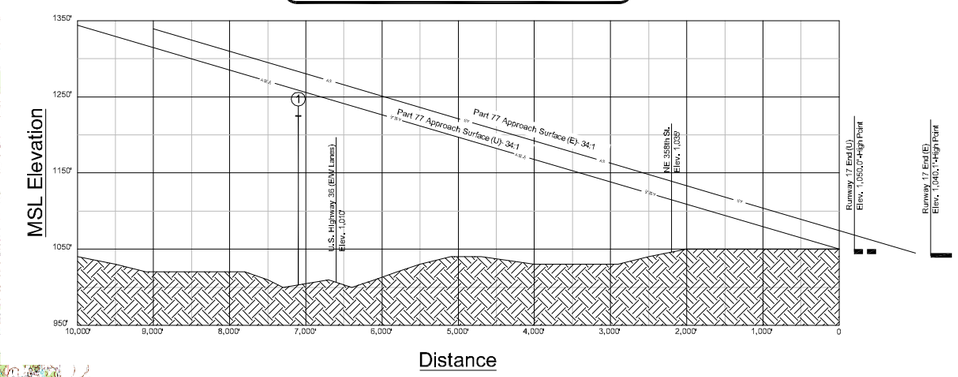
| | |
|---|---|
| BWR PROJECT NO. | 2007-0975.01 |
| MoDOT PROJECT NO. | 07-013A-1 |
| DRAWN BY | MAW |
| CHECKED BY | MAW |
| DESIGNED BY | MAW |
| REVISIONS | DATE |
| SUBMITTAL DATE | 06/22/2010 |

SHEET 2 OF 11

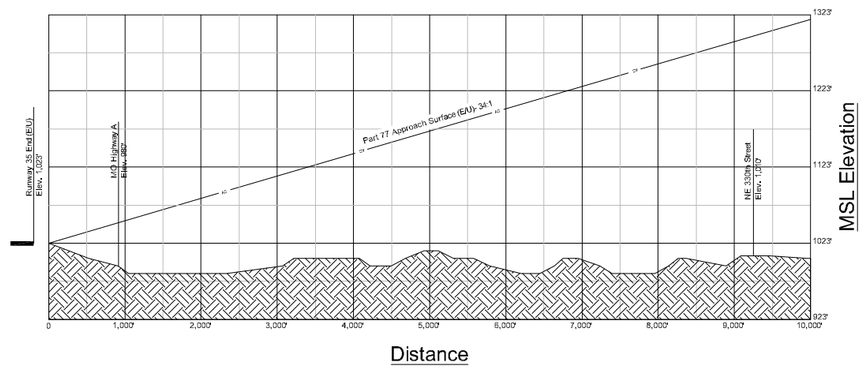
Drawing Name: R:\2007-0975_Cameron Municipal ALP\ALP Update\ACAD\ALP Update\EZZ ALP_Change 13.dwg Sep 02,2010 - 2:17pm




## Runway 17 Approach Profile View

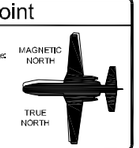



## Runway 35 Approach Profile View




## North Point

Magnetic Declination:
2° 10' E (2010)
Annual Rate of Change:
0° 7' W




## Scale

2,000 1,000 0 2,000

Distance In Feet
Horizontal Scale: 1" = 1,000'
Vertical Scale: 1" = 100'

## General Notes

1. Contour elevation information derived from the following Missouri USGS 7.5 minute topographic quadrangle maps: Cameron East, Cameron West, Winston and Fordham.

2. In April 2010, the City of Cameron, Clinton County and the Grand River Township of DeKalb County enacted height and hazard regulations (Cameron Zoning Ordinance, *Article 34, Airport Height and Hazards* ) to preserve the airport's airspace infrastructure by electing to regulate and control the height of objects within the immediate vicinity of Cameron Memorial.

3. Refer to the Inner Portion of the Approach Surface Drawings for obstruction information located within the inner 3,400 feet of the inner approach surface and beyond the RPZs for Runway 17-35.

## Obstruction Data Table

| ITEM | DESCRIPTION | LATITUDE | LONGITUDE | DEND | DCL | TOP ELEV. | PENETRATION | SURFACE | FAA STUDY NO. | DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Tower | 39-45-18.00 N | 94-16-54.70 W | 7,328 feet | 731 feet R | 1,225' MSL | 25 feet | Horizontal | 2002-ACE-519-OE | TBD |

DEND- Distance from Runway End; DCL- Distance from Runway Centerline.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# CAMERON MEMORIAL AIRPORT (EZZ)

City of Cameron, Missouri

## AIRSPACE DRAWING

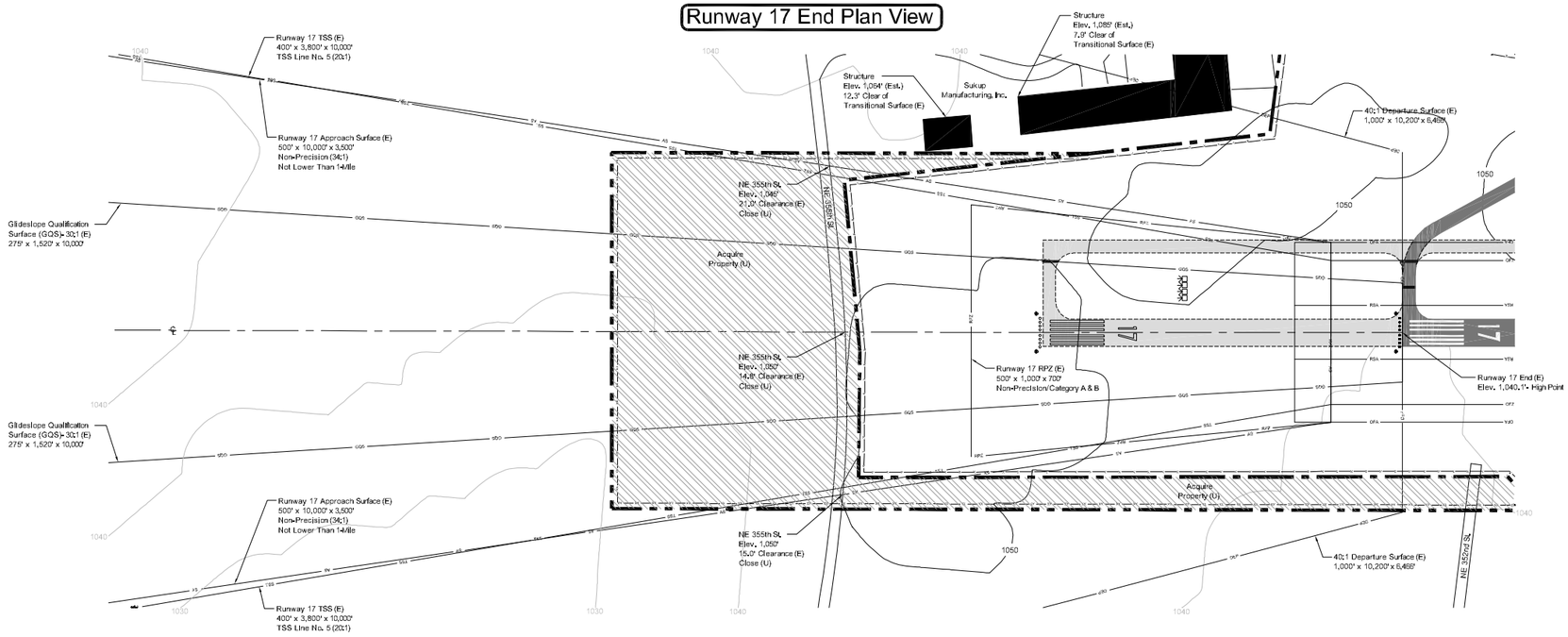
| | |
|---|---|
| BWR PROJECT NO. | 2007-0975.01 |
| MoDOT PROJECT NO. | 07-013A-1 |
| DRAWN BY | MAW |
| CHECKED BY | MAW |
| DESIGNED BY | MAW |
| REVISIONS | DATE |
| SUBMITTAL DATE | 06/22/2010 |

3

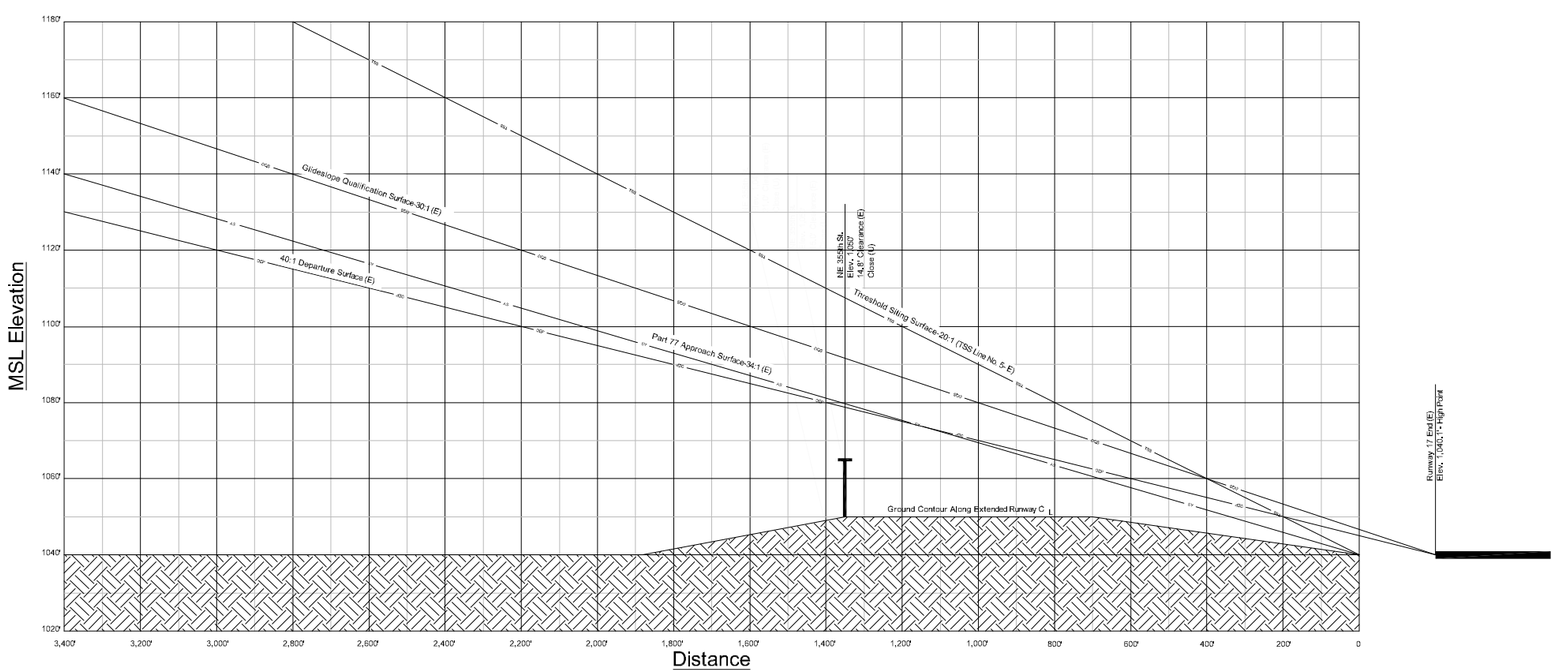
SHEET 3 OF 11

Drawing Name: R:\2007-0975_Cameron Municipal ALP\ALP Update\ACAD\ALP Update\EZZ ALP_Change 13.dwg Sep 02,2010 - 2:03pm

## Runway 17 End Plan View




## Runway 17 End Profile View




## North Point

Magnetic Declination:
2° 10' E (2010)
Annual Rate of Change:
0° 7' W

MAGNETIC NORTH

TRUE NORTH

## Scale

200 100 0 200

Distance in Feet
Horizontal Scale 1"= 200'
Vertical Scale 1"= 20'

## General Notes

1. Refer to sheet 11 of 11 for obstruction information and penetrations to the 40:1 Departure Surface.

2. The recommended FAR Part 77 minimum adjusted approach surface clearance over a public roadway is 15 feet. The existing calculated clearances over NE 355th St. reflect the clearance over the approximate centerline of the road at groundlevel plus the 15 foot penalty height.

3. The IPASD is a general representation of existing runway conditions within the inner portion of the approach slope surface pertaining to traverse ways, safety area dimensions, terrain relief and structure location. Any deviations from existing conditions compared to conditions detailed in this drawing are unintentional.

## Obstruction Data Table

Based on existing conditions and considering future runway development, obstructions to the FAR Part 77 approach surface are not expected to be present. However, an FAR Part 77 obstruction survey is recommended to be completed to identify and mitigate potential obstructions that might exist.

## Legend

| EXISTING | ULTIMATE | DESCRIPTION |
|---|---|---|
| | | Pavement Areas |
| | Same | Structures |
| | | Airport Property Line |
| RSA | | Runway Safety Area (RSA) |
| OFA | | Object Free Area (OFA) |
| RPZ | | Runway Protection Zone (RPZ) |
| OFZ | | Obstacle Free Zone (OFZ) |
| AS | | Approach Slope Surface |
| GQS | | Glideslope Qualification Surface |
| TSS | | Threshold Siting Surface |
| DEP | | 40:1 Departure Surface |
| | | Runway Threshold Lighting |
| | | Runway End Indicator Lights (REIL) |
| | | Fenceline |
| | | Significant Object |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**CAMERON MEMORIAL AIRPORT (EZZ)**
City of Cameron, Missouri

**RUNWAY 17 INNER PORTION OF THE APPROACH SURFACE DRAWING_EXISTING**

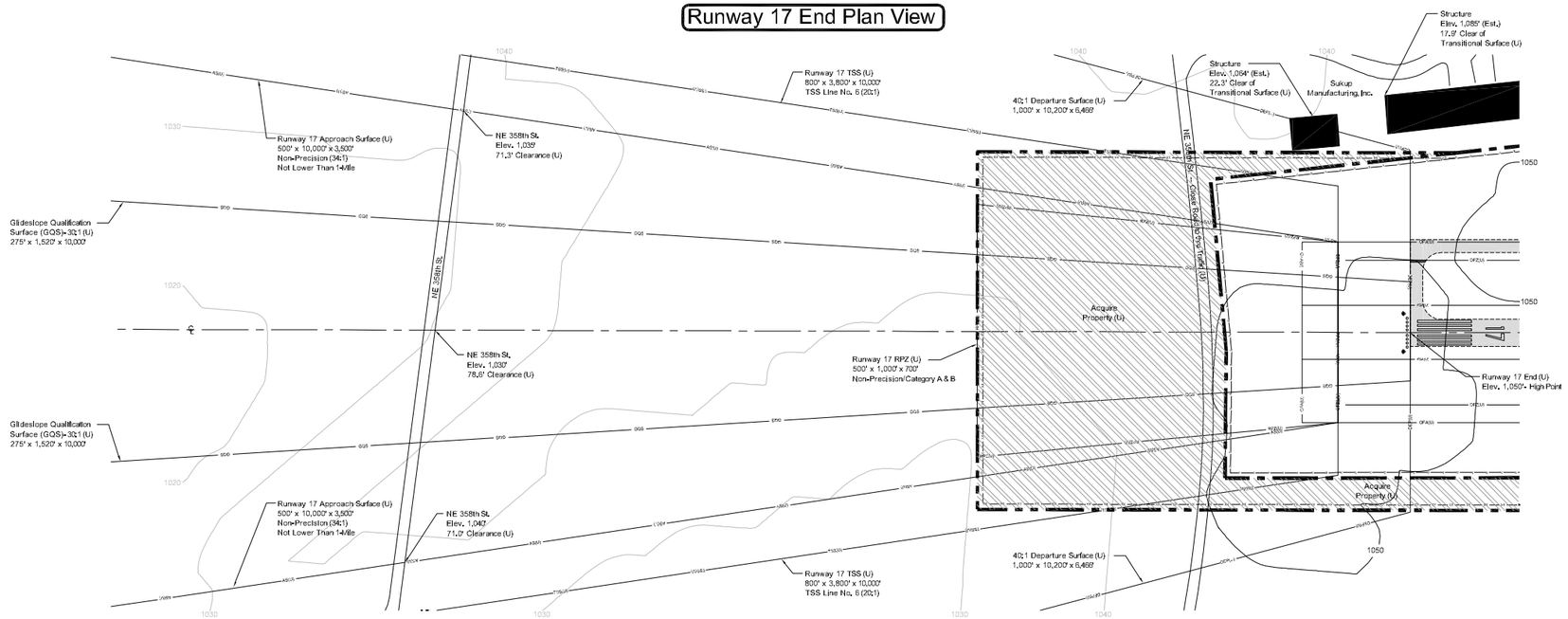
BWR PROJECT NO. 2007-0975.01
MoDOT PROJECT NO. 07-013A-1
DRAWN BY MAW
CHECKED BY MAW
DESIGNED BY MAW
REVISIONS DATE
SUBMITTAL DATE 06/22/2010

4

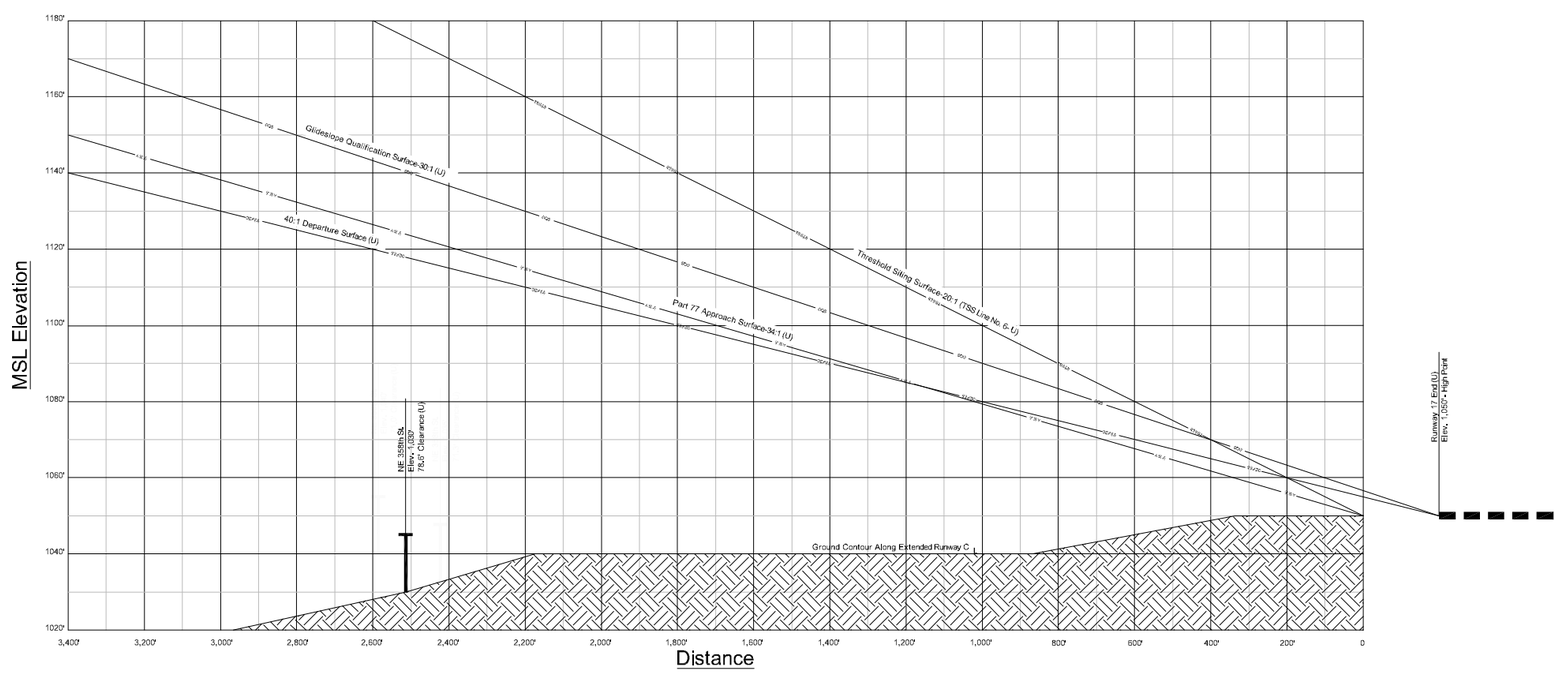
SHEET 4 OF 11

Drawing Name: R:\2007-0975_Cameron Municipal ALP\ALP Update\ACAD\ALP Update\EZZ ALP_Change 13.dwg Sep 03,2010 - 1:47pm

## Runway 17 End Plan View




## Runway 17 End Profile View




## North Point

Magnetic Declination:
2° 10' E (2010)
Annual Rate of Change:
0° 7' W

MAGNETIC NORTH

TRUE NORTH

## Scale

200 100 0 200

Distance in Feet
Horizontal Scale 1" = 200'
Vertical Scale 1" = 20'

## General Notes

1. Refer to sheet 11 of 11 for obstruction information and penetrations to the 40:1 Departure Surface.

2. The recommended FAR Part 77 minimum adjusted approach surface clearance over a public roadway is 15 feet. The existing calculated clearances over NE 358th St. reflect the clearance over the approximate centerline of the road at groundlevel plus the 15 foot penalty height.

3. The IPASD is a general representation of existing runway conditions within the inner portion of the approach slope surface pertaining to traverse ways, safety area dimensions, terrain relief and structure location. Any deviations from existing conditions compared to conditions detailed in this drawing are unintentional.

## Obstruction Data Table

Based on existing conditions and considering future runway development, obstructions to the FAR Part 77 approach surface are not expected to be present. However, an FAR Part 77 obstruction survey is recommended to be completed to identify and mitigate potential obstructions that might exist.

## Legend

| EXISTING | ULTIMATE | DESCRIPTION |
|---|---|---|
| | | Pavement Areas |
| | Same | Structures |
| | | Airport Property Line |
| | RSA(U) | Runway Safety Area (RSA) |
| | OFA(U) | Object Free Area (OFA) |
| | RPZ(U) | Runway Protection Zone (RPZ) |
| | OFZ(U) | Obstacle Free Zone (OFZ) |
| | AS(U) | Approach Slope Surface |
| | GQS | Glideslope Qualification Surface |
| | TSS(U) | Threshold Siting Surface |
| | DEP(U) | 40:1 Departure Surface |
| | | Runway Threshold Lighting |
| | | Runway End Indicator Lights (REIL) |
| | | Fenceline |
| | | Significant Object |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**CAMERON MEMORIAL AIRPORT (EZZ)**
City of Cameron, Missouri

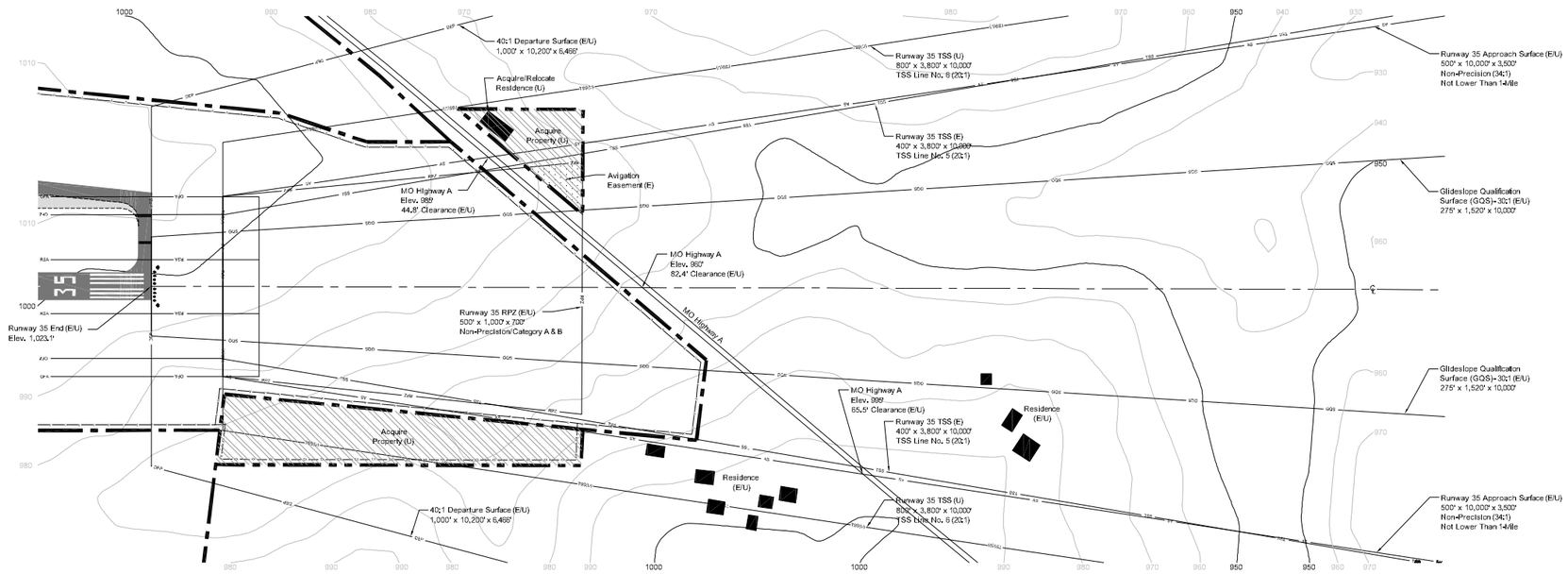
**RUNWAY 17 INNER PORTION OF THE APPROACH SURFACE DRAWING_ULTIMATE**

| | |
|---|---|
| BWR PROJECT NO. | 2007-0975.01 |
| MoDOT PROJECT NO. | 07-013A-1 |
| DRAWN BY | MAW |
| CHECKED BY | MAW |
| DESIGNED BY | MAW |
| REVISIONS | DATE |
| SUBMITTAL DATE | 06/22/2010 |

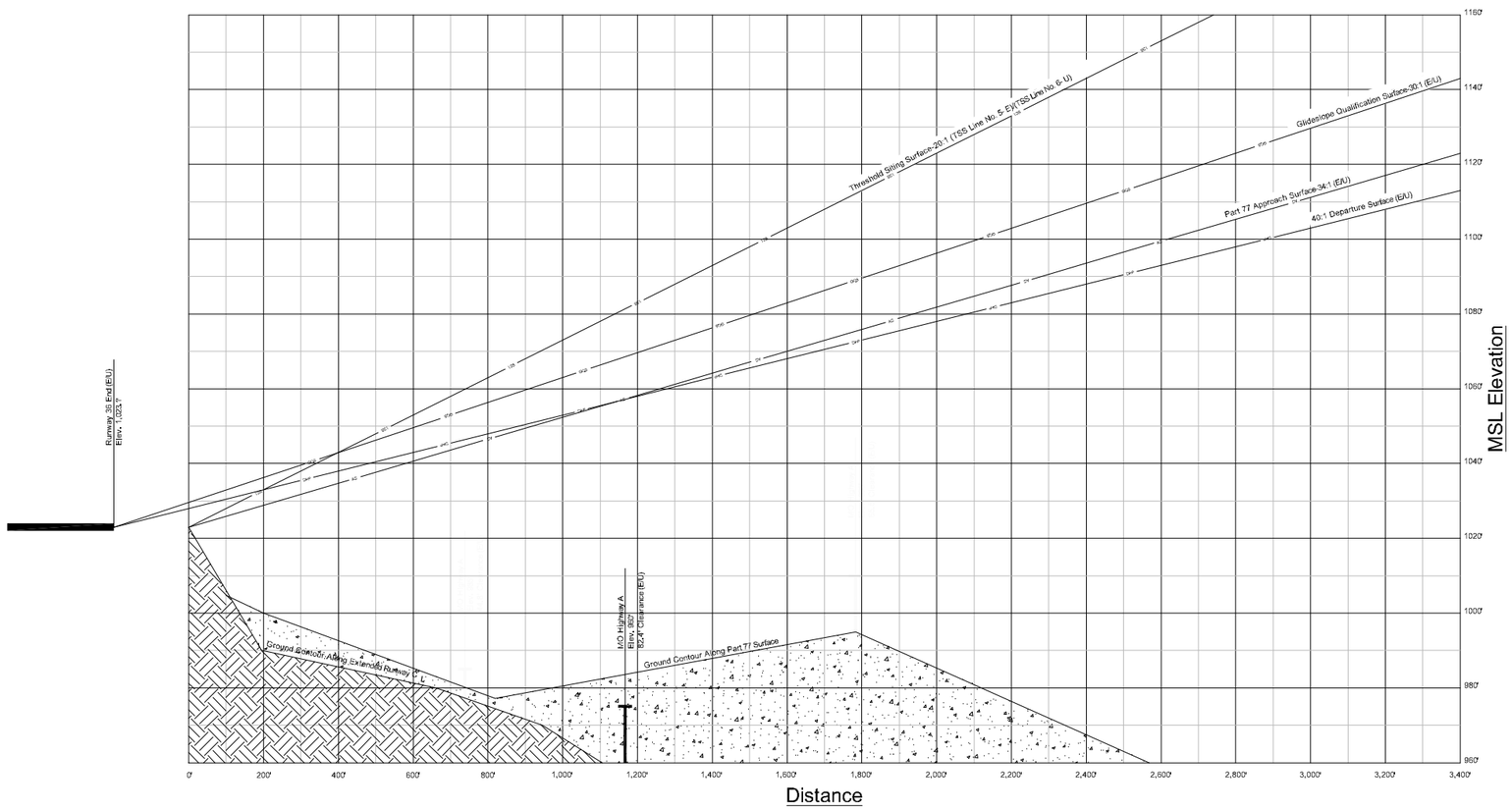
SHEET 5 OF 11

Drawing Name: R:\2007-0975_Cameron Municipal ALP\ALP Update\ACAD\ALP Update\EZZ ALP_Change 13.dwg Sep 03,2010 - 1:59pm

## Runway 35 End Plan View

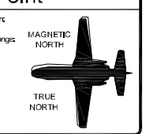



## Runway 35 End Profile View




### North Point

Magnetic Declination: 2° 10' E (2010)
Annual Rate of Change: 0° 7' W




### Scale

200 100 0 200

Distance in Feet
Horizontal Scale 1"= 200'
Vertical Scale 1"= 20'

### General Notes

1. Refer to sheet 11 of 11 for obstruction information and penetrations to the 40:1 Departure Surface.

2. The recommended FAR Part 77 minimum adjusted approach surface clearance over a public roadway is 15 feet. The existing calculated clearances over MO Highway A reflect the clearance over the approximate centerline of the road at groundlevel plus the 15 foot penalty height.

3. The IPASD is a general representation of existing runway conditions within the inner portion of the approach slope surface pertaining to traverse ways, safety area dimensions, terrain relief and structure location. Any deviations from existing conditions compared to conditions detailed in this drawing are unintentional.

### Obstruction Data Table

Based on existing conditions and considering future runway development, obstructions to the FAR Part 77 approach surface are not expected to be present. However, an FAR Part 77 obstruction survey is recommended to be completed to identify and mitigate potential obstructions that might exist.

### Legend

| EXISTING | ULTIMATE | DESCRIPTION |
|---|---|---|
| | | Pavement Areas |
| | Same | Structures |
| | | Airport Property Line |
| RSA | Same | Runway Safety Area (RSA) |
| OFA | Same | Object Free Area (OFA) |
| RPZ | Same | Runway Protection Zone (RPZ) |
| OFZ | Same | Obstacle Free Zone (OFZ) |
| AS | Same | Approach Slope Surface |
| GQS | Same | Glideslope Qualification Surface |
| TSS | Same | Threshold Siting Surface |
| DEP | Same | 40:1 Departure Surface |
| | Same | Runway Threshold Lighting |
| | Same | Runway End Indicator Lights (REIL) |
| | | Fenceline |
| | Same | Significant Object |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**CAMERON MEMORIAL AIRPORT (EZZ)**
City of Cameron, Missouri

**RUNWAY 35 INNER PORTION OF THE APPROACH SURFACE DRAWING**

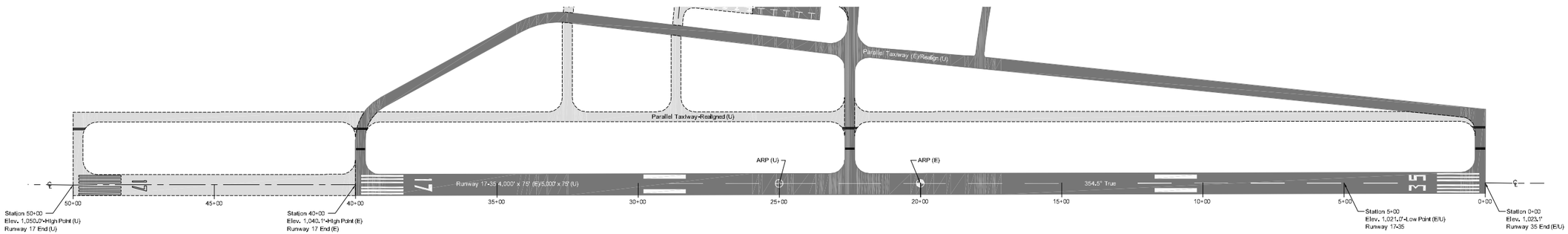
| | |
|---|---|
| BWR PROJECT NO. | 2007-0975.01 |
| MoDOT PROJECT NO. | 07-013A-1 |
| DRAWN BY | MAW |
| CHECKED BY | MAW |
| DESIGNED BY | MAW |
| REVISIONS | DATE |
| SUBMITTAL DATE | 06/22/2010 |

6

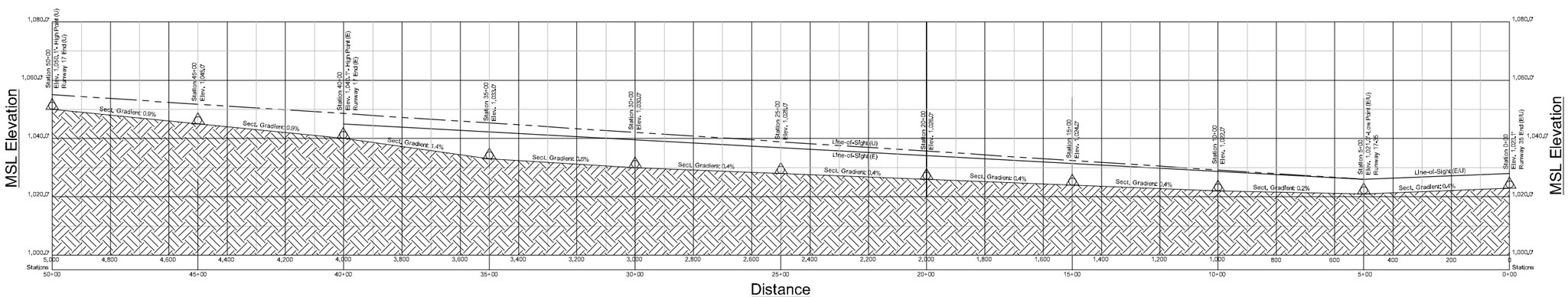
SHEET 6 OF 11


Drawing Name: R:\2007-0975_Cameron Municipal ALP\ALP Update\ACAD\ALP Update\EZZ ALP_Change 13.dwg Sep 03,2010 - 1:50pm

## Runway 17-35 Plan View




## Runway 17-35 Profile View

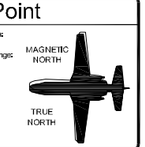



### Effective Gradient

Existing Grade: 0.4%
Ultimate Grade: 0.5%

### North Point

Magnetic Declination:
2° 10' E (2010)
Annual Rate of Change:
0° 7' W




### General Notes

1. Runway centerline elevations derived from the Runway 17-35 design and construction documents produced by BWR (1995-96) in North American Datum (NAD 83) and North American Vertical Datum (NAVD 88).

2. The centerline profile is a general representation of existing runway conditions pertaining to grade changes, elevations and terrain contours. Any deviations from existing conditions compared to conditions detailed in this drawing are unintentional.

### Scale

200 100 0 200

Distance in Feet
Horizontal Scale 1"= 200'
Vertical Scale 1"= 20'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**CAMERON MEMORIAL AIRPORT (EZZ)**
City of Cameron, Missouri

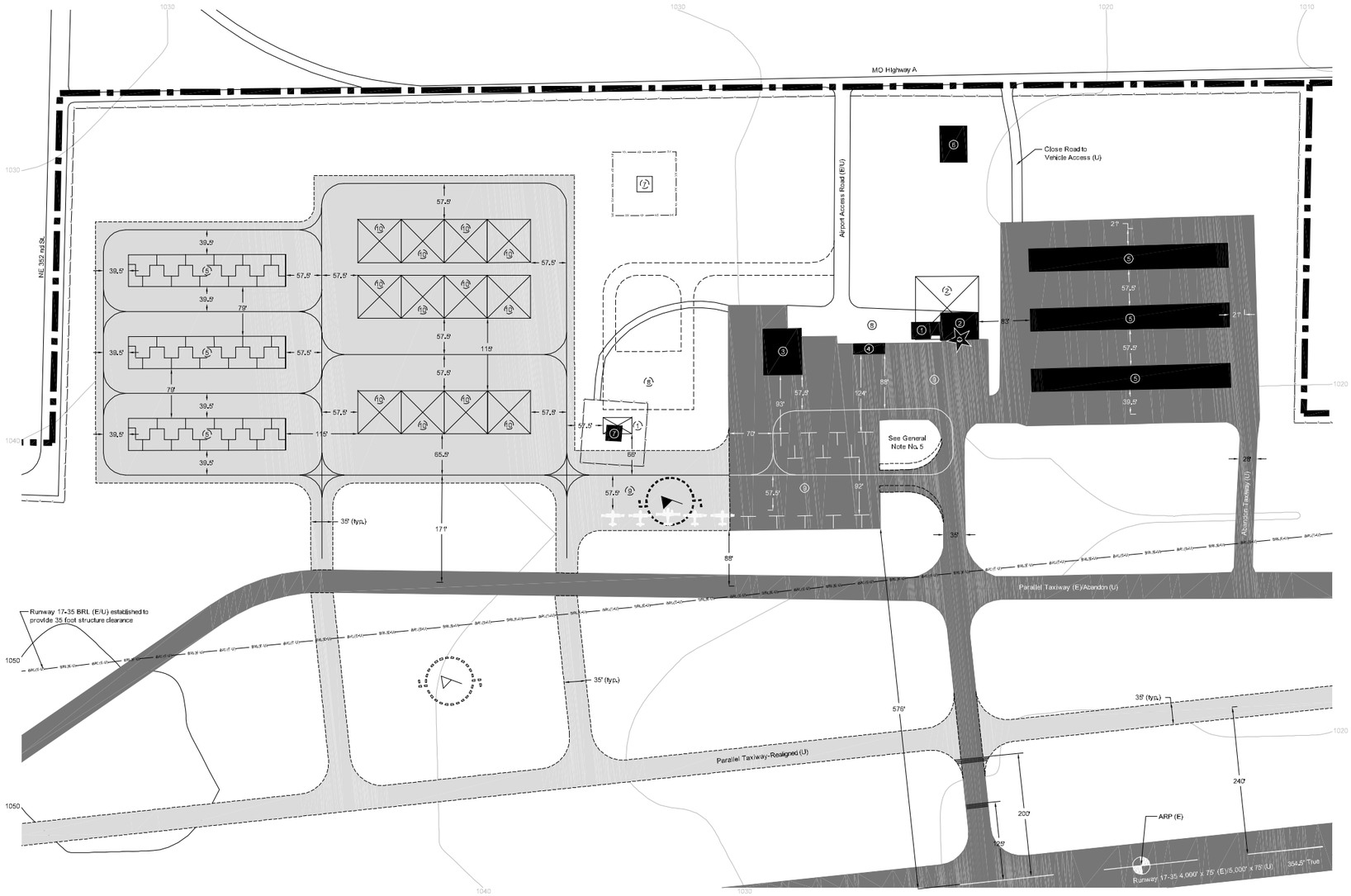
**RUNWAY 17-35 CENTERLINE PROFILE DRAWING**

| | |
|---|---|
| BWR PROJECT NO. | 2007-0975.01 |
| MoDOT PROJECT NO. | 07-013A-1 |
| DRAWN BY | MAW |
| CHECKED BY | MAW |
| DESIGNED BY | MAW |
| REVISIONS | DATE |
| SUBMITTAL DATE | 06/22/2010 |

7

SHEET 7 OF 11


Drawing Name: R:\2007-0975_Cameron Municipal ALP\ALP Update\ACAD\ALP Update\EZZ ALP_Change 13.dwg Sep 03,2010 - 1:51pm




## Legend

| EXISTING | ULTIMATE | DESCRIPTION |
|---|---|---|
| | | Pavement Areas |
| | | Structures |
| | | Property Line |
| | | Same | Paved Roadways |
| BRL(E/U) | BRL(U) | Building Restriction Line (BRL) |
| | | Same | Rotating Beacon |
| | | Lighted Wind Cone/Segmented Circle |
| | | Same | Fenceline |

## General Notes

1. Due to limited property to the south of the terminal area complex coupled with steep terrain south of the existing T-hangar area, proposed terminal area expansion is recommended to occur to the north of the existing terminal complex.

2. The proposed T-hangar and clear span hangar development takes into account projected demand throughout the planning period and considers demand beyond projected levels as well.

3. Projected T-hangar demand is for two 10-unit T-hangars while clear span hangar demand is for two additional 4,700 sq. ft. structures. Additional hangar facilities that are depicted reflect the city's goals and objectives with respect to future hangar storage capabilities and configuration.

4. Should the opportunity and/or demand arise, the existing 3,000 square foot maintenance hangar is recommended to be replaced with a 10,000 square foot structure to accommodate major and minor maintenance on piston and turbine aircraft.

5. The existing apron area is designed primarily to accommodate small ADG I (wingspan less than 49 feet) aircraft. Ultimately, it is recommended that the aircraft parking be reconfigured to allow maneuvering by large ADG II (wingspan 49 to 78 feet). Existing tiedowns are recommended to be relocated adjacent to the proposed terminal building and apron.

## Buildings/Facilities

| EXISTING | ULTIMATE | DESCRIPTION | FUTURE ACTION | TOP ELEV. (MSL) |
|---|---|---|---|---|
| 1 | 1 | Terminal Building | Retain/Relocate | TBD |
| 2 | 2 | Maintenance Hangar | Retain/Develop | TBD |
| 3 | 3 | Clear Span Hangar(s) | Retain/Develop | TBD |
| 4 | - | Fuel Storage Tank | Retain/Expand | TBD |
| 5 | - | T-Hangar(s) | Retain/Develop | TBD |
| 6 | - | Residence | Remove/Relocate | TBD |
| 7 | 7 | RTR Facility | Retain/Relocate | TBD |
| 8 | 8 | Auto Parking | Retain/Expand | TBD |
| 9 | 9 | Aircraft Apron | Retain/Expand | TBD |

## Terminal Area Design Criteria

| TERMINAL AREA STANDARD | AIRPLANE DESIGN GROUP (ADG) GROUP I | GROUP II |
|---|---|---|
| Runway ℄ to Parallel Taxiway ℄ Separation | 225' | 240' |
| Taxiway ℄ to Fixed or Movable Object | 44.5' | 65.5' |
| Taxiway ℄ to Parallel Taxiway ℄ Separation | 69' | 105' |
| Taxiway Object Free Area Width | 89' | 131' |
| Taxiway Safety Area Width | 49' | 79' |
| Taxiway Wingtip Clearance | 10' | 26' |
| Taxiway Width | 25' | 35' |
| Taxilane Object Free Area Width | 79' | 115' |
| Taxilane ℄ to Parallel Taxilane ℄ Separation | 64' | 97' |
| Taxilane ℄ to Fixed or Movable Object | 39.5' | 57.5' |

## North Point

Magnetic Declination:
2° 10' E (2010)
Annual Rate of Change:
0° 7' W

MAGNETIC NORTH

TRUE NORTH

## Scale

100 50 0 100

Distance In Feet

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# CAMERON MEMORIAL AIRPORT (EZZ)
City of Cameron, Missouri

# TERMINAL AREA DRAWING

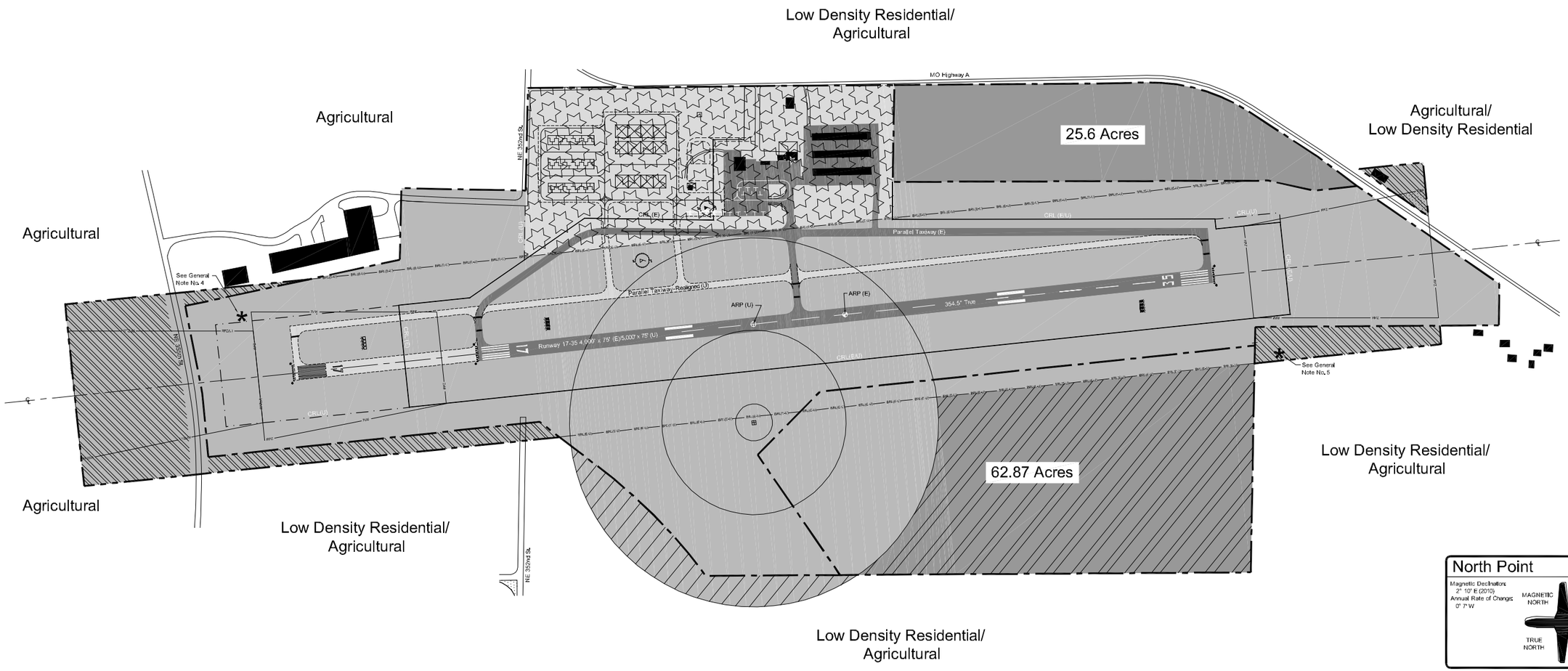
BWR PROJECT NO. 2007-0975.01
MoDOT PROJECT NO. 07-013A-1
DRAWN BY MAW
CHECKED BY MAW
DESIGNED BY MAW
REVISIONS DATE

SUBMITTAL DATE 06/22/2010

8



Drawing Name: R:\2007-0975_Cameron Municipal ALP\ALP Update\ACAD\ALP Update\EZZ ALP_Change 13.dwg Sep 03,2010 - 1:51pm




## North Point

Magnetic Declination:
2° 10' E (2010)
Annual Rate of Change:
0° 7' W

MAGNETIC NORTH

TRUE NORTH

## Scale

300 150 0 300

Distance in Feet

## Land Use Legend

| HATCH TYPE | LAND USE DESCRIPTION |
|---|---|
| | Existing Aviation Operations Area |
| | Existing/Ultimate Landside & Terminal Area |
| | City Owned Non-Obligated Airport Property |
| | City Owned Property |
| | Ultimate Aviation Operations Area |

## General Notes

1. Given that there are no land use controls and/or zoning within Clinton County, land use information in the vicinity of EZZ was based on visual observations.

2. According to the city's comprehensive plan, the future land use for the airport will be designated public/institutional. Future land use to the east of EZZ will be designated low density residential.

3. Existing and future aviation operational activity does not rise to the threshold required to complete an ultimate noise exposure map (NEM) as recommended by the FAA. Accordingly, no significant airport/aircraft noise impacts are anticipated.

4. The U.S. Army Corp of Engineers (USACE) identified a wetland area (Palustrine emergent) totaling approximately 0.16 acres and located at N 39.73661511, W -94.27632664.

5. The USACE identified a second wetland area totaling approximately 0.15 acres and located at N 39.72104526, W -94.27728753.

## Crop Restriction Line Criteria

| CRL STANDARD | AIRCRAFT APPROACH CATEGORY and AIRPLANE DESIGN GROUP: CATEGORY A & B AIRCRAFT | |
|---|---|---|
| | GROUP I | GROUP II |
| Distance In Feet from Runway ℄ to Crop (Visual & >3/4-mile) | 200' | 250' |
| Distance in Feet from Runway End to Crop (Visual & >3/4-mile) | 300' | 400' |
| Distance in Feet from Runway ℄ to Crop (<3/4-mile) | 400' | 400' |
| Distance In Feet from Runway End to Crop (<3/4-mile) | 600' | 600' |
| Distance in Feet from ℄ of Taxiway to Crop | 45' | 68' |
| Distance in Feet from Edge of Apron to Crop | 40' | 58' |

Note: Due to the limited space available to conduct agricultural activities on-airport and/or lack of agricultural leases, the CRL is not depicted in the plan view of this drawing.

## Legend

| EXISTING | ULTIMATE | DESCRIPTION |
|---|---|---|
| | | Pavement Areas |
| | | Structures |
| | | Airport Property Line |
| BRL(E-U) | Same | Building Restriction Line (BRL) |
| RPZ | Same | Runway Protection Zone (RPZ) |
| CRL(E) | CRL(U) | Crop Restriction Line (CRL) |
| | Same | Rotating Beacon |
| | | Precision Approach Path Indicators (PAPI) |
| | | Lighted Wind Cone/Segmented Circle |
| | | Runway Threshold Lighting |
| | | Runway End Indicator Lights (REIL) |
| | | Easement |
| | | Ultimate Property Acquisition |

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# CAMERON MEMORIAL AIRPORT (EZZ)

City of Cameron, Missouri

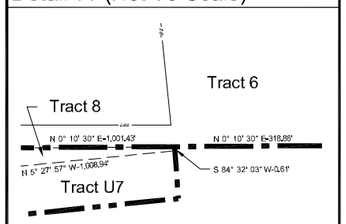
# LAND USE DRAWING

| | |
|---|---|
| BWR PROJECT NO. | 2007-0975.01 |
| MoDOT PROJECT NO. | 07-013A-1 |
| DRAWN BY | MAW |
| CHECKED BY | MAW |
| DESIGNED BY | MAW |
| REVISIONS | DATE |
| SUBMITTAL DATE | 06/22/2010 |

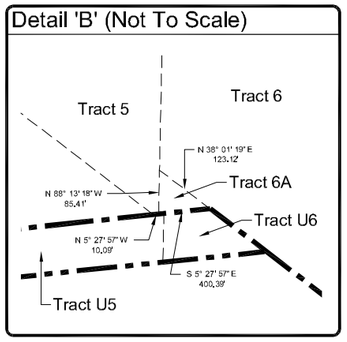


Drawing Name: R:\2007-0975_Cameron Municipal ALP\ALP Update\ACAD\ALP Update\EZZ ALP_Change 13.dwg Sep 03,2010 - 1:52pm

## Detail 'A' (Not To Scale)

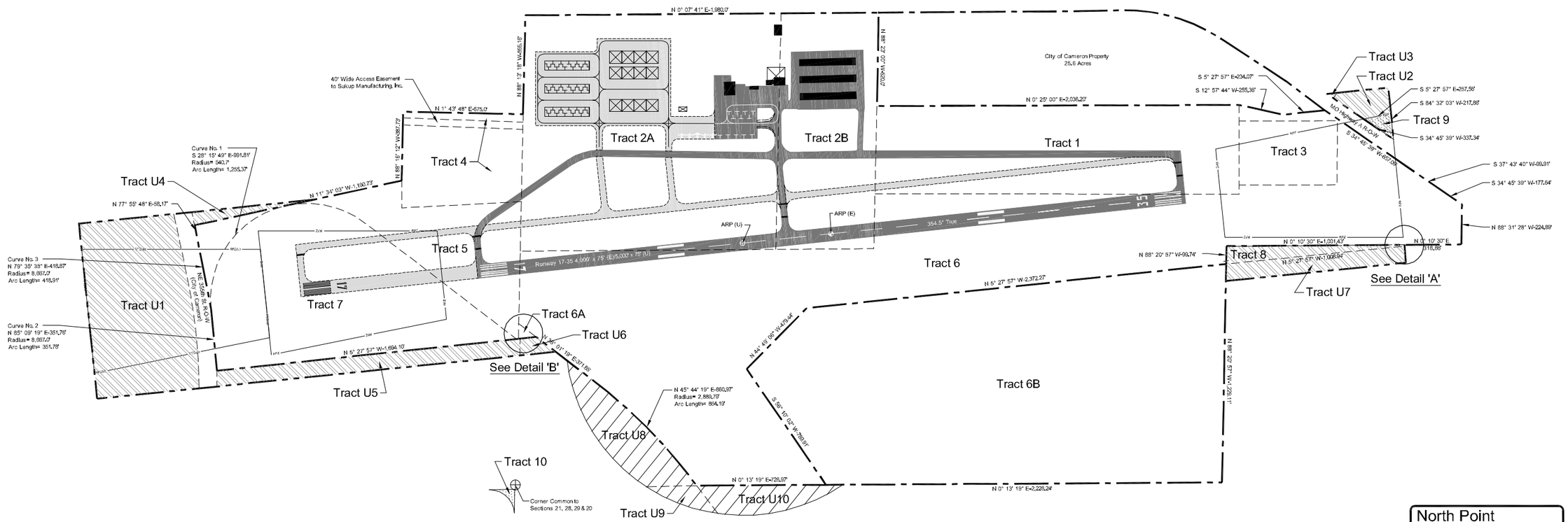



## Detail 'B' (Not To Scale)



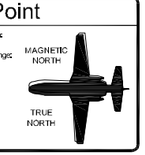

## Legend

| EXISTING | ULTIMATE | DESCRIPTION |
|---|---|---|
| | | Pavement Areas |
| | | Airport Property Line |
| | Same | Tract Boundaries |
| | | Land Acquisition-Ultimate |
| | | Easement Acquisition-Ultimate |
| RPZ | RPZ(U) | Runway Protection Zone (RPZ) |
| | Same | On-Airport Structures |




## North Point

Magnetic Declination:
2° 10' E (2010)
Annual Rate of Change:
0° 7' W




## Scale

300 150 0 300

Distance in Feet

## Ultimate Property Data

| PARCEL | ACREAGE | PROPERTY INTEREST | CURRENT OWNER | BOOK & PAGE NO. | PARCEL ID NUMBER |
|---|---|---|---|---|---|
| U1 | 13.05 | Fee-Simple | WADE, Gregory A., et al | Book 2008, p. 2,828 | 01 05.2 21 000000 004.000 |
| U2 | 1.15 | Fee-Simple | MOORE, Michael S., et al | Book 2007, p. 2,523 | 01 08.2 28 000000 003.002 |
| U3 | 0.02 | Fee-Simple | HEIN, Phillip H., et al Trust | Book 2005, p. 2,414 | 01 08.2 28 000000 003.001 |
| U4 | 0.59 | Fee-Simple | Sukup Manufacturing, Inc. | Book 2006, p. 5,257 | 01 05.2 21 000000 006.001 |
| U5 | 3.57 | Fee-Simple | HAHN, Harry Jr., et al | Book 380, p. 326 | 01 05.2 21 000000 005.000 |
| U6 | 0.31 | Fee-Simple | FRIDLEY, Norris, et al | Book 2008, p. 3,491 | 01 08.2 28 000000 004.000 |
| U7 | 3.42 | Fee-Simple | SCOTT, Chad A., et al | Book 2007, p. 2,397 | 01 08.2 28 000000 005.000 |
| U8 | 4.18 | Clear Zone Easement | FRIDLEY, Norris, et al | Book 2008, p. 3,491 | 01 08.2 28 000000 004.000 |
| U9 | 0.68 | Clear Zone Easement | FRIDLEY, Norris, et al | Book 1998, p. 2,239 | 01 09.0 29 000000 001.000 |
| U10 | 2.25 | Clear Zone Easement | GROEBE, Elmer L., et al | Book 328, p. 590 | 01 09.0 29 000000 005.000 |
| Total | 29.22 | | | | |

1. EZZ ultimate property acquisition information derived from the Clinton County, MO Assessor's Office, Plattsburg, MO.

## Existing Property Data

| TRACT | ACREAGE | PROPERTY INTEREST | INTEREST | ACQUISITION DATE | FEDERAL AID PROJECT NUMBER |
|---|---|---|---|---|---|
| 1 | 23.42 | Fee-Simple | City of Cameron | 1969 | AIP 3-29-0103-01 |
| 2A | 43.35 | Fee-Simple | City of Cameron | 1969 | ADAP 5-29-0103-1 |
| 2B | 15.42 | Fee-Simple | City of Cameron | 1969 | AIP 3-29-0103-01 |
| 3 | 4.55 | Fee-Simple | City of Cameron | 1969 | n/a |
| 4 | 8.17 | Fee-Simple | City of Cameron | 1969 | AIP 3-29-0103-01 |
| 5 | 19.19 | Fee-Simple | City of Cameron | 1990 | AIP 3-29-0103-01 |
| 6 | 77.56 | Fee-Simple | City of Cameron | 1995 | AIP 3-29-0103-01 |
| 6A | 0.10 | Fee-Simple | City of Cameron | 1995 | n/a |
| 6B | 62.87 | Fee-Simple | City of Cameron | 1995 | n/a |
| 7 | 23.32 | Fee-Simple | City of Cameron | 1995 | AIP 3-29-0103-01 |
| 8 | See General Note No. 5 | | | | |
| 9 | 0.64 | Avigation Easement | City of Cameron | 1995 | AIP 3-29-0103-01 |
| 10 | .03 | Roadway Easement | City of Cameron | 1996 | AIP 3-29-0103-01 |
| Total | 215.75* | | | | |

1. Existing EZZ property information and descriptions derived from the Cameron Memorial Airport Exhibit 'A' Property Map dated 12/16/96 and completed by Bucher, Willis & Ratliff Corporation (BWR), Kansas City, MO, as well as the Clinton County, MO Assessor's Office.

(*) Includes total FAA obligated airport acreage. Non-obligated airport property consists of 62.87 acres (Tract 6B). Total airport property consists of approximately 278.62 acres.

## General Notes

1. According to the NOAA Aeronautical Survey Program (http://www.ngs.noaa.gov/AERO/aero.html) there are no National Geodetic Survey (NGS) Primary Airport Control Station (PACS) or Secondary Airport Control Station (SACS) survey monuments located at EZZ.

2. Tract 3, an avigation easement, was obviated with the fee simple acquisition of Tract 6 in 1995.

3. Tract 4, an avigation easement, was obviated with the fee simple acquisition of Tract 5 in 1990.

4. Tract 6B is non-obligated airport property acquired in 1995 with city funds as a damaged remnant from the acquisition of Tract 6.

5. Acquisition of Tract 8 was waived by the city under AIP 3-29-0103-01 and is not eligible for federal reimbursement. However, Tract 8 is still recommended to be acquired in fee simple as part of the short-term capital improvement program for EZZ.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**CAMERON MEMORIAL AIRPORT (EZZ)**
City of Cameron, Missouri

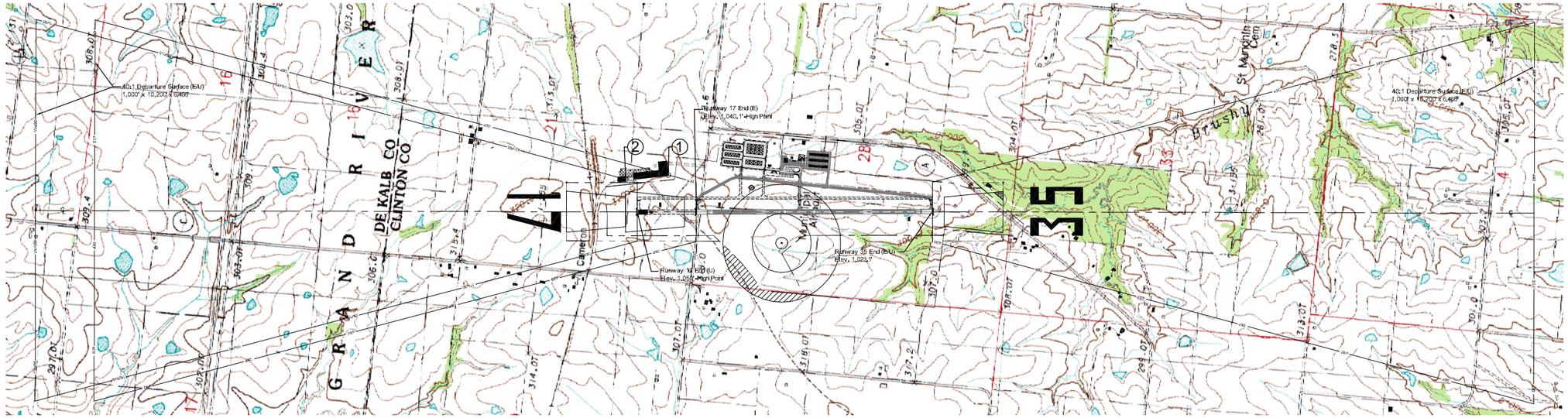
**AIRPORT PROPERTY MAP**

| | |
|---|---|
| BWR PROJECT NO. | 2007-0975.01 |
| MoDOT PROJECT NO. | 07-013A-1 |
| DRAWN BY | MAW |
| CHECKED BY | MAW |
| DESIGNED BY | MAW |
| REVISIONS | DATE |
| SUBMITTAL DATE | 06/22/2010 |

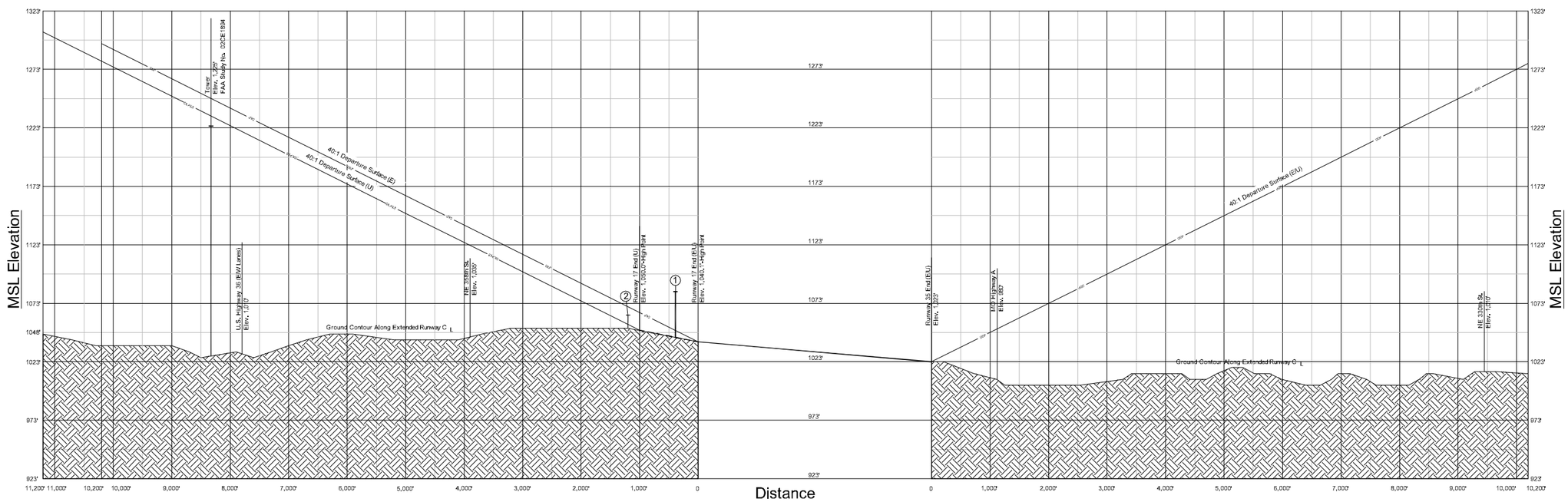



Drawing Name: R:\2007-0975_Cameron Municipal ALP\ALP Update\ACAD\ALP Update\EZZ ALP_Change 13.dwg Sep 03,2010 - 1:52pm

## 40:1 Departure Surface Plan View




## 40:1 Departure Surface Profile View




## Departure Surface Obstruction Data Table

| ITEM | DESCRIPTION | LATITUDE | LONGITUDE | DEND | DCL | TOP ELEV. | PENETRATION | MITIGATION |
|---|---|---|---|---|---|---|---|---|
| 1 | Structure | 39-44-04 N | 94-16-30 W | 476 feet | 629 feet L | 1,085' MSL | 33 feet | Aero. Eval. |
| 2 | Structure | 39-44-11 N | 94-16-31 W | 200 feet | 556 feet L | 1,064' MSL | 9 feet | Aero. Eval. |

DEND- Distance from Runway End; DCL- Distance from Runway Centerline.

## Scale

1,000 500 0 1,000

Distance in Feet
Horizontal Scale 1" = 1,000'
Vertical Scale 1" = 50'

## North Point

Magnetic Declination:
2° 12' E (2010)
Annual Rate of Change:
0° 7' W

MAGNETIC NORTH

TRUE NORTH

## General Notes

1. Departure Surface penetrations which will require one of two actions and/or mitigations including removal or lowering of the obstruction(s) or raising instrument departure minimums.

## Legend

| EXISTING | ULTIMATE | DESCRIPTION |
|---|---|---|
| | | Airport Pavement Areas |
| | Same | Structures |
| | | Airport Property Line |
| | Same | Significant Object |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**CAMERON MEMORIAL AIRPORT (EZZ)**
City of Cameron, Missouri

**40:1 DEPARTURE SURFACE DRAWING**

| | |
|---|---|
| BWR PROJECT NO. | 2007-0975.01 |
| MoDOT PROJECT NO. | 07-013A-1 |
| DRAWN BY | MAW |
| CHECKED BY | MAW |
| DESIGNED BY | MAW |
| REVISIONS | DATE |
| SUBMITTAL DATE | 06/22/2010 |




Drawing Name: R:\2007-0975_Cameron Municipal ALP\ALP Update\ACAD\ALP Update\EZZ ALP_Change 13.dwg Sep 03,2010 - 1:53pm