# Formula Sheets

**Helpful Hints for Use**

This report shows the formula information presented in Part 2 of the Department of the Air Force Analysis and Recommendations BRAC 2005, Volume V, plus the individual scores for each formula for the selected base.

Each page covers one formula for one MCI for one base. The pages are in alphabetical order, by MCI. Within each set of pages for a base, each formula is presented in formula number order.

To quickly find the pages for any MCI, use the Edit-> Find menu option and enter the MCI name. All the pages for that MCI will be together. To then quickly find the pages for any Formula for that base, use the Edit-> Find menu option again to search for that formula's number.

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1.00 |
| **Title** | Fuel Hydrant Systems Support Mission Growth |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the current fuel hydrant system capability.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>20% of the score is based upon the best type of fuel hydrant available. 80% of the score is based upon the number of qualified refueling points/outlets.<br><br>Type of Fuel Hydrant:<br><br>Check each Fuel System. See OSD question 1 for this data.<br><br>Ignore those that are not aircraft fueling hydrants. See OSD Question 1, column 2 for this data, where the value is not an 'A'.<br><br>If any one of them is a Type III, get 100 points. See OSD Question 1, column 3 for this data.<br>Otherwise, If any one of them is a Type I or II, get 75 points.<br>Otherwise, If any one of them is a Type IV or V, get 25 points.<br>Otherwise, get 0 points.<br><br>Number of Qualified Refueling Points/Outlets:<br><br>Sum the number of qualified refueling points/outlets. See OSD Question 1, column 6 for this data, but ignore those that are not aircraft fueling hydrants. See OSD Question 1, column 2 for this data, where the value is not an 'A'. Also ignore those that are not Type I, II, III, IV or V. See OSD Question 1, column 3 for this data.<br><br>If the sum of qualified refueling points/outlets >= 24, get 100 points.<br>Otherwise, if the sum of qualified refueling points/outlets = 0, get 0 points.<br>Otherwise, pro-rate the sum between 0 and 24 on a 0 to 100 scale.<br><br>Example:<br><br>There are three refueling facilities. One is a Type I, one a Type IV, and one is a Truck Fill Stand. There are no Type III facilities, so we check for Type I or II. Since there is a Type I, the score for the type of fuel hydrant is 75.<br><br>There are 3 Type 1 refueling points/outlets, 9 Type IV refueling points/outlets, and 22 Truck Fill Stand refueling points/outlets. The Type 1 and Type IV refueling points/outlets sum to 12, the 22 Truck Fill Stand refueling points/outlets do not count. 12 is halfway between 0 and 24, for a number of qualified refueling points score of 50.<br><br>(20% of 75) plus (80% of 50) = an overall score of 55. |
| **Source** | ACES-RP; existing record drawings or physically verification; |

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|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 4.32 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 4.32 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| **Formula** | 1.00 |
|---|---|
| **Title** | Fuel Hydrant Systems Support Mission Growth |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 15 | Fuel | 1 | . | Fuel Systems |
| 15 | Fuel | 1 | .2 | Vehicle or Aircraft ("V" or "A") |
| 15 | Fuel | 1 | .3 | System Type |
| 15 | Fuel | 1 | .6 | Number of Refueling Points/Outlets |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

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|---|---|
| **Formula** | 8.00 |
| **Title** | Ramp Area and Serviceability |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the square yardage of every serviceable ramp at the installation. See OSD Question 8, column 9 to determine serviceability. (N/A means not serviceable.) See OSD Question 8, column 2 for the square yardage of that ramp.<br><br>If the total square yards of serviceable ramp is >= 1,040,000, get 100 points.<br><br>Otherwise, if the total square yards of serviceable ramp is >= 416,000, get 75 points.<br><br>Otherwise, if the total square yards of serviceable ramp is >= 137,000, get 25 points.<br><br>Otherwise, get 0 points.<br><br>Example:<br><br>The installation has three ramps, Alpha, Bravo and Charlie.<br>Alpha and Bravo are both fully serviceable and active; Charlie is not serviceable because of major sinkholes that have developed. Alpha has 50,000 square yards, Bravo has 20,000 square yards, and Charlie has 200,000 square yards, for a total of 70,000 serviceable square yards of ramps. This number is between 0 and 137,000, so it falls into the 0 point range. |
| **Source** | FLIP; AFCESA Pavement Evaluation/Condition Report/Survey; Existing Record Drawings or Physical Verification; Base Real Property Records |

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|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 5.98 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 5.98 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 28 | Real Property | 8 | . | Ramp/Apron Space |
| 28 | Real Property | 8 | .2 | Area |
| 28 | Real Property | 8 | .9 | Serviceable (2) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

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|---|---|
| **Formula** | 9.00 |
| **Title** | Runway Dimension and Serviceability |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the dimension of all serviceable runways that support the installation.<br><br>Calculate a score for each runway at the installation as follows:<br><br>If the runway is not serviceable, get 0 points. See OSD Question 9, column 15 for this data. (N/A means not serviceable.)<br><br>Otherwise, if the runway is < 150' wide, get 0 points. See OSD Question 9, column 8 for this data. (N/A means 0.)<br><br>Otherwise, if the runway is < 7,000' long, get 0 points. See OSD Question 9, column 7 for this data. (N/A means 0.)<br><br>Otherwise, if the runway is >= 11,000' long, get 100 points.<br><br>Otherwise, pro-rate the runway length from 7,000' to 11,000' on a 50 to 100 scale to get the points.<br><br>The overall score is the highest score received by any one runway.<br><br>Example:<br><br>An installation has two runways, Alpha and Bravo. Alpha is 12,000' long, 160' wide, and full of huge holes because it has partially been demolished, so it is not serviceable. Bravo is 9,000' long and 152' wide, plus it is fully serviceable. Runway Alpha scores 0 points because it isn't serviceable. Runway Bravo meets all the specified criteria so it gets some points. 9,000' is halfway between 7,000' and 11,000', so Runway Bravo gets 75 points. Runway Bravo has the highest score for any runway at the installation, so its score of 75 is used for the installation's score. |
| **Source** | FLIP; AFCESA Pavement Evaluation/Condition Report/Survey; Existing Record Drawings or Physical Verification; Base Real Property Records |

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|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 5.98 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 5.98 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | |
|---|---|---|---|
| 1 | Air/Space Operations | 9 . | Runways |
| 1 | Air/Space Operations | 9 .7 | Length |
| 1 | Air/Space Operations | 9 .8 | Width |
| 1 | Air/Space Operations | 9 .15 | Serviceable (5) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 19.00 |
| **Title** | Hangar Capability - Large Aircraft |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the facilities to hangar large aircraft.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the gross square feet for hangars for each installation. See OSD Question 19, column 5 for this data, but ignore all hangars whose Service Facility Code is not a 1, 2, or 3. See OSD Question 19, column 4 for this data. Also ignore all hangars whose door opening size < 131'. See OSD Question 19, column 6 for this data. Also ignore all hangars whose gross square feet < 6000. See OSD Question 19, column 5 for this data.<br><br>If the sum above is < 6000 square feet, get 0 points.<br>Otherwise, if the sum above is = the highest score received by any installation, get 100 points.<br>Otherwise, pro-rate the sum above between 6000 and the highest score received by any installation on a 25 to 100 point scale.<br><br>Example:<br><br>There are three hangars on the facility that have a Service Facility Code of 1, 2, or 3, and which have door openings >= 131' in width, and which are at least 6,000 gross square feet in size. Those three hangars have a gross square footage of 6,000, 14,000 and 10,000 respectively, for a total of 30,000 gross square feet at that installation. The highest number of gross square feet at any installation using the above formula is 50,000.<br><br>30,000 is 65.91% of the way between 6,000 and 50,000, so the score is 65.91. |
| **Source** | ACES-RP, Record Drawings, Base Real Property Records; pre-populated from ACES-RP; "Service Facility Condition Code" rated 1 through 6 in accordance with OSD BRAC library |

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|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.32 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 3.32 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 28 | Real Property | 19 | . | Hangars, Maintenance Facilities, and Nose Docks |
| 28 | Real Property | 19 | .4 | Service Facility Condition Code |
| 28 | Real Property | 19 | .5 | Facility Size (GSF) |
| 28 | Real Property | 19 | .6 | Largest Door Opening Width |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 19.00 |
| **Title** | Hangar Capability - Large Aircraft |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

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|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Check the attainment designation classifications of the installation's NAAQS (National Ambient Air Quality Standard) for the following applicable criteria: Attainment, Nonattainment, Nonattainment (Deferred), Maintenance, and Unclassifiable. Identify the amount of the SIP emissions budget for non-attainment and maintenance criteria pollutants, if any, allocated to the installation.<br><br>Use the following formula to compute this score:<br><br>Multiply the Attainment / Emission Budget Growth Allowance MinA by the Attainment / Emission Budget Growth Allowance *B* for the base score. Add the SIP Score to the base score. If the base score is now over 100, reduce it to 100.<br><br>SIP Score:<br><br>Sum the Installation SIP Growth Allowance (Tons/Year)" for the following constituents: '001. VOC' and '002. Nox'.<br>See OSD question 221, column 3 for the Installation SIP Growth Allowance (Tons/Year). See OSD Question 221, column 1 for the constituent.<br>If the total is > 0, then SIP Score = 20, otherwise it is 0.<br><br>Attainment / Emission Budget Growth Allowance MinA and *B*:<br><br>Perform the following calculation for each of the specified criteria pollutants and pick the lowest value from them all.<br><br>The criteria pollutants are '002. PM10', '004. S02', '005. CO', 007. O3 (8hr)*'. See OSD Question 213, column 1 for this data.<br><br>Attainment / Emission Budget Growth Allowance MinA:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 100. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get 77.778.<br><br>Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get 66.667. See OSD Question 213, column 3 for this data.<br><br>Otherwise, if the NAAQS Classification is Serious, get 43.5.<br><br>Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get 25.714.<br><br>Otherwise, if the NAAQS Classification is Extreme, get 7.<br><br>Otherwise, get 0.<br><br>Attainment / Emission Budget Growth Allowance *B*:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 1. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get .9. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |

Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get .9. See OSD Question 213, column 3 for this data.

Otherwise, if the NAAQS Classification is Serious, get .8.

Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get .7.

Otherwise, if the NAAQS Classification is Extreme, get 1.

Otherwise, get 0.

Example:

The NAAQS Designation for 002. PM10 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.
The NAAQS Designation for 004. S02 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9
The NAAQS Designation for 005. CO is Nonattainment and the NAAQS Classification is Severe, which means 25.714 * .8.
The NAAQS Designation for 007. O3 (8hr)* is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.

25.714 * .8, which equals 20.5712, is the lowest value, so it becomes the base score.

The Installation SIP Growth Allowance (Tons/Year) for 001. VOC is 0, for 002. Nox it is 1. As the total of these two values is > 0, the SIP Score = 20, which needs to be added to the base score of 20.5712, for a new base score of 40.5712. This is less than 100, so it does not need to be reduced to 100, which makes the final score = 40.5712.

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| **Source** | DoD#213: Current Edition of 40 CFR 81; or Federal Register; or Federal Register Citation to EPA's "final rule" approving the area's "maintenance plan" and "redesignation" of the area to "attainment status" DoD#221: State Implementation Plan |

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|---|---|---|
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.68 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 1.68 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| **Formula** | 213.00 |
|---|---|
| **Title** | Attainment / Emission Budget Growth Allowance |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 12 | Environment | 213 . | Air Quality Attainment |
| 12 | Environment | 213 . 2 | NAAQS Designation |
| 12 | Environment | 213 . 3 | NAAQS Classification |
| 12 | Environment | 221 . | SIP Emissions Budget |
| 12 | Environment | 221 . 1 | Criteria Pollutant |
| 12 | Environment | 221 . 3 | (b) Installation SIP Growth Allowance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1205.10 |
| **Title** | Buildable Acres for Industrial Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Identify the number of "buildable," unconstrained, development acres available for industrial operations.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 3 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

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|---|---|---|
| **Formula Score** | 54.14 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.96 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 1.06 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.90 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 4 | CE Programming | 1205 . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 .3 | Total Unconstrained, Buildable Industrial Operations |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1205.20 |
| **Title** | Buildable Acres for Air Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Buildable acres for air operations growth.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 5 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.96 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 1.96 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 4 | CE Programming | 1205 | . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 | .5 | Total Unconstrained, Buildable Airfield Operations/ Maintenance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1207.00 |
| **Title** | Level of Mission Encroachment |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Characterize the level of encroachment for the area in which the installation is located.<br><br>There are four categories of acres for this purpose: 65-69, 70-74, 75-79, and 80+. See OSD Question 1208, column 1 for this data.<br><br>For each category, compute a category total as follows:<br><br>If the total acres in that category = 0, get 0 points. See OSD question 1208, column 5. (N/A means 0.)<br>Otherwise, compute the ratio of residential acres to the respective total acres. See OSD question 1208, columns 4 for residential acres. (N/A means 0.)<br><br>Subtract the 65-69 category total from 1, then multiply the result by 0.13.<br>Subtract the 70-74 category total from 1, then multiply the result by 0.19.<br>Subtract the 75-79 category total from 1, then multiply the result by 0.28.<br>Subtract the 80+ category total from 1, then multiply the result by 0.4.<br><br>Add the above 4 amounts together and multiply the result by 100 for the raw total.<br><br>Add these points to the raw total as follows:<br><br>If the installation purchased "Restrictive Easements" on undeveloped or developed land, add 7 points. See OSD Question 1209, columns 2 and 3 for this data, where a Yes in either qualifies for the 7 points. (N/A means no.)<br><br>If the installation confirms "Land Use Controls that Correlate w/ AICUZ-JLUS Recommendation.", add 5 points. See OSD Question 1209, column 5 for this data, where a Yes qualifies for the 5 points. (N/A means no.)<br><br>If the installation is in a state that has Mandatory Coordination of Development Proposals or there is a Local Joint Land Use Coordinating Board, add 1 point. See OSD Question 1209, columns 6 or 8 for this data, where a Yes in either qualifies for the 1 point.<br><br>The above process can compute a score from 0 to 113.<br>If the computed score is > 100, it is dropped to 100.<br><br>Example:<br><br>60-65 Residential acres: 50<br>60-65 Total acres: 100<br>70-74 Residential acres: 50<br>70-74 Total acres: 100<br>75-79 Residential acres: 50<br>75-79 Total acres: 100<br>80+ Residential acres: 50<br>80+ Total acres: 100<br><br>Restrictive Easements = Yes (column 2) and No (column 3)<br>Land Use Controls ... = N/A<br>Mandatory Coordination ... = No and No.<br><br>((1 - ( 50 / 100)) * 0.13)<br>+ ((1 - ( 50 / 100)) * 0.19)<br>+ ((1 - ( 50 / 100)) * 0.28) |

## Formula Sheet for Francis E. Warren AFB

## MCI: Airlift

| | | |
|---|---|---|
| **Formula** | 1207.00 | |
| **Title** | Level of Mission Encroachment | |
| | + ((1 - ( 50 / 100)) * 0.4)<br>+ 7<br>+ 0<br>+ 0 for a score of 7.5 points. | |
| **Source** | 1207: AFI 32-7063, AFH 32-7084, AICUZ Report, Base Comprehensive Plan F Series maps or D Series as noted in AFI 32-7062 Atch7, local governmental zoning or land use planning authorities; 1208: AFI 32-7063, AICUZ Report, MAJCOM Approved Noise Study; 1209: State legislation, local referendums to purchase lands, zoning ordinance, noise exposure maps, noise control plans, documentation of state purchases of land | |
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.66 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 1.66 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 4 | CE Programming | 1208 | . | Installation - Encroachment (2 of 3) |
| 4 | CE Programming | 1208 | .4 | Residential |
| 4 | CE Programming | 1208 | .5 | Total Acres |
| 4 | CE Programming | 1209 | . | Installation - Encroachment (3 of 3) |
| 4 | CE Programming | 1209 | .2 | Purchased Restrictive Easements On Undeveloped Land (1) |
| 4 | CE Programming | 1209 | .3 | Purchased Restrictive Easements On Currently Developed Land (2) |
| 4 | CE Programming | 1209 | .5 | Land Use Controls that Correlate w/ AICUZ-JLUS Recommendation (4) |
| 4 | CE Programming | 1209 | .6 | Mandatory Coordination of Development Proposals (5) |
| 4 | CE Programming | 1209 | .8 | Local Joint Land Use Coordination Board (7) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1214.00 |
| **Title** | Fuel Dispensing Rate to Support Mobility and Surge |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Mobility/Surge |
| **Formula** | Check the installation's sustained jet fuel dispensing rate capability.<br><br>Sum the JP5 and JP8 figures for jet fuel dispensing. See OSD Question 1214, column 4, for both JP5 and JP8. (N/A equals 0.)<br><br>If the sum is >= 2,500,000 gallons, get 100 points. If the sum is = 0 gallons, get 0 points.<br><br>Otherwise, pro-rate the sum of gallons between 0 and 2,500,000 on a 0 to 100 point scale.<br><br>Example:<br><br>JP5 can handle 500,000 gallons. JP8 can handle 750,000 gallons, for a total of 1,250,000 gallons. 1,250,000 is halfway between 0 and 2,500,000 gallons, for a score of 50. |
| **Source** | Base Support Plan as required by AFI 10-404, Attachment 20 |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.20 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.20 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 15 | Fuel | 1214 | . | POL - Maximum Dispensing Rate |
| 15 | Fuel | 1214 | .1 | Jet Fuel Dispensing Rate |
| 15 | Fuel | 1214 | .4 | Sustained Jet Fuel Dispensing Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1235.00 |
| **Title** | Installation Pavements Quality |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Identify if the installation pavement for the primary runway can support Airlift aircraft operations. |

If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.

Compute the runway pavement suitability score and the apron pavement suitability score. Each of these is worth 50% of the overall score.

Runway Pavement Suitability:

Find the highest PCN among all the runways. See OSD Question 1235, column 3 for this data. (N/A means 0.) Compute a score for every runway with that PCN and use the highest scoring runway.

Score the runway for runway pavement suitability as follows:

Get the C-17 ACN. See OSD Question 1236, column 4 for the C-17 ACN. (N/A means 0.)
Get the C-5B ACN. See OSD Question 1236, column 6 for the C-5B ACN. (N/A means 0.)

If the PCN is N/A or 0, get 0 points.
Otherwise, if the C-17 ACN divided by the PCN > 0 and <= 1.0, then get 100 points.
Otherwise, if the C-5B ACN divided by the PCN > 0 and <= 1.0, then get 75 points.
Otherwise, if the C-5B ACN divided by the PCN > 0 and <= 1.1, then get 50 points.
Otherwise, get 0 points.

Apron pavement suitability:

Score each apron for pavement quality and choose the highest scoring apron.

Get the C-17 ACN. See OSD Question 1240, column 6 for this data. (N/A means 0.)
Get the C-5B ACN. See OSD Question 1240, column 8 for this data. (N/A means 0.)
If the PCN is 0 or N/A, get 0 points. See OSD Question 1239, column 4 for this data.
Sum the apron pavement square yardage (see OSD Question 1239, column 2, N/A means 0) where the C-17 ACN divided by the PCN > 0 and <= 1.0.
Sum the apron pavement square yardage (see OSD Question 1239, column 2, N/A means 0) where the C-5B ACN divided by the PCN > 0 and <= 1.0.

If the C-17 square yardage >= 1,040,000, get 100 points.
Otherwise, if the C-5B square yardage >= 416,000, get 75 points.
Otherwise, if the C-5B square yardage >= 137,000, get 50 points.
Otherwise, get 0 points.

Example:

There are 2 runways on the base, but one has the highest runway pavement PCN value, which is 60. The ACN for an C-17 on that runway is 40, 40 divided by 60 is <= 1.0, so the base gets 100 pts for runway pavement suitability. In this case, the C-5B ACN/PCN ratio was a moot point.

There are 2 apron pavements on the base. Apron Alpha has a PCN of 50 and 100,000 square yards of surface. Apron Bravo has a PCN of 30 and 150,000 square yards. The ACN for C-17s on both aprons is 43, and for C-5Bs it is 45.

Apron Alpha's ACN/PCN ratio for C-17s is 43/50, which is less that 1.0. This counts as 100,000 square yards for the C-17. Apron Bravo's ACN/PCN ratio for C-17s is 43/30, which is more than 1.0, so it's square yards aren't counted towards C-17 square yardage. This gives us a total of 100,000 C-17 square yards, which is not greater than 1,040,000 square yards.

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1235.00 |
| **Title** | Installation Pavements Quality |

Apron Alpha's ACN/PCN ratio for C-5Bs is 45/50, which is less that 1.0. This counts as 100,000 square yards for the C-5B. Apron Bravo's ACN/PCN ratio for C-5Bs is 45/30, which is more than 1.0, so it's square yards aren't counted towards C-5B square yardage. This gives us a total of 100,000 C-5B square yards, which is not greater than 137,000 square yards, which gives us a score of 25 points for apron pavement suitability.

50% of the Runway pavement suitability score of 100 equals 50. 50% of the apron pavement score of 0 equals 0. 50 plus 0 equals a score of 50.

| | | |
|---|---|---|
| **Source** | AFCESA Pavement Evaluation Report and Base General Plan; Existing Record Drawings or Physical Verification; Base Real Property Records; FLIP; ASSR | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 11.95 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 11.95 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 37 | Airfield Pavements | 1235 | . | Airfield Pavements - Runway (1 of 2) |
| 37 | Airfield Pavements | 1235 | .3 | Controlling Feature PCN |
| 37 | Airfield Pavements | 1236 | . | Airfield Pavements - Runway (2 of 2) |
| 37 | Airfield Pavements | 1236 | .3 | ACN for B-52 at 488 Kips |
| 37 | Airfield Pavements | 1239 | . | Airfield Pavements - Aprons (1 of 2) |
| 37 | Airfield Pavements | 1239 | .2 | Total Size of Primary Facility (2) |
| 37 | Airfield Pavements | 1239 | .4 | Predominant Feature PCN (4) |
| 37 | Airfield Pavements | 1240 | . | Airfield Pavements - Aprons (2 of 2) |
| 37 | Airfield Pavements | 1240 | .6 | ACN for C-17 at 585 Kips |
| 37 | Airfield Pavements | 1240 | .8 | ACN for C-5B at 840 Kips |

## Formula Sheet for Francis E. Warren AFB

## MCI: Airlift

| | |
|---|---|
| **Formula** | 1241.00 |
| **Title** | Ability to Support Large-Scale Mobility Deployment |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Mobility/Surge |
| **Formula** | State installation's parking MOG for C-17 equivalents using surveyed/approved transient parking ramps.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Find the total number of C-17 MOGs. See OSD Question 1241, column 1 for this data.<br><br>If the total is >= 6, get 100 points.<br>Otherwise, if the total is >= 4, get 75 points.<br>Otherwise, if the total is >= 2, get 25 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are a total of 3 C-17 MOGs. 3 is between 2 and 4, so the score is 25 points. |
| **Source** | ASR (Airfield Suitability Report) |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.20 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.20 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1241 | . | Ramp - Transient Capability |
| 39 | Airfield Management | 1241 | .1 | C-17 MOG |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1242.00 |
| **Title** | ATC Restrictions to Operations |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | List the percentage of installation departures delayed by Air Traffic Control.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Check the Delayed Departures Percentage. See OSD question 1242, column 5 for this data.<br><br>If the percentage delayed = 0, get 100 points.<br>Otherwise, if the percentage delayed is >= 3%, get 0 points.<br>Otherwise, pro-rate the percentage delayed between 0 to 3% on a 100 to 0 point scale.<br><br>Example:<br><br>The departure percentage delayed is 1%. 1% is one third of the way between 0 and 3%, so the score is 66.67 points. |
| **Source** | CAMS (Computerized Aircraft Maintenance System)/ G081 |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 5.98 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 5.98 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1242 | . | Air Operations - Departure Delays |
| 39 | Airfield Management | 1242 | .5 | Precentage Delayed for ATC |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1246.00 |
| **Title** | Proximity to Low Level Routes Supporting Mission |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | Check the distance to all Airspace for Special Use (IR/VR routes) within 150NM radius of the installation.<br><br>If installation has no runway or active runway, or no serviceable, suitable runway then score 0 pts.<br><br>For a list of routes, see OSD Question 1246. The type of route can be found in column 1. Entry point distances are found in column 2. Exit point distances are found in column 3. For distances, N/A means 0 points.<br><br>IR Entry points, IR Exit points, VR Entry points and VR Exit points are each worth 25% of the score.<br><br>( .25 * "IR Entry") + ( .25 * "IR Exit") + ( .25 * "VR Entry") + ( .25 * "VR Exit")<br><br>Entry and Exit Point:<br><br>Within each of the above four categories, award each route points as follows:<br><br>If the distance = N/A, get 0 points.<br>Otherwise, the distance is <= 50 Nautical Miles (NM), get 100 points.<br>Otherwise, if the distance is = 150 NM, get 10 points.<br>Otherwise, pro-rate the distance between 50 NM and 150 NM on a 100 to 10 point scale.<br><br>Total the number of points received above for each base for each of the above four categories.<br><br>Get the highest base score in each of the above four categories.<br>Get the lowest, non-zero score in each of the above four categories.<br><br>If the installation's score for one of the above categories = 0, it remains 0.<br>Otherwise, if the installation's score for one of the above categories = the highest score in its respective category, get 100 points.<br>Otherwise, if the installation's score for one of the above categories = the lowest non-zero score in its respective category, get 10 points.<br>Otherwise, pro-rate the installation's score between the lowest non-zero and highest score in its respective category on a 10 to 100 point scale.<br><br>Example:<br><br>Two IR routes and 1 VR route.<br><br>IR Route Alpha has an entry point 35 miles away and an exit point 100 miles away.<br>IR Route Bravo has an entry point 150 miles away and an exit point 160 miles away.<br><br>Alpha's entry point is within 50 miles, so its IR Entry amount is 100 points. The exit point 100 miles distant is 50 percent of the way between 50 and 150 miles, so its IR Exit point amount is 55 points.<br><br>Bravo's entry point is 150 miles away, so its IR Entry amount is 10 points. The exit point is 160 miles away, so its amount is 0 points.<br><br>The IR Entry total for these two routes is 100 + 10 for 110 points. The total IR Exit total for these two routes is 55 + 0 for 55 points.<br><br>The highest IR Entry total for any base is 165 and the lowest non-zero IR Entry total for any base is 30.<br>The highest IR Exit total for any base is 105 and the lowest non-zero IR Exit total for any base is 5. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1246.00 |
| **Title** | Proximity to Low Level Routes Supporting Mission |

So, this base's IR Entry score is 100, because 165 is equal to the highest score of any base.
Pro-rating the IR Exit total of 55 between 5 and 105 on a 10 to 100 point scale gives this base an IR Exit score of 55.

VR Route Charlie has an entry point 40 miles away and an exit point 45 miles away.

Both the entry and exit point are within 50 miles, so both the VR Entry and VR Exit category amounts get 100 points.
As there is only one VR route, that makes the VR route totals the same, 100 points each.

The highest VR Entry total for any base is 300 and the lowest non-zero VR Entry total for any base is 50 points.
Ditto for the VR Exit totals.

So, this base's VR Entry score of 100 is pro-rated between 50 and 300 on a 10 to 100 scale. Since 100 is 20% of the way from 50 to 300, the VR Entry score is 28 points.
Ditto for the VR Exit totals.

By applying the 25% weighting to each of the four category scores, in IR Entry, IR Exit, VR Entry and VR Exit order, we get the overall score:

(.25 * 100) + (.25 * 55) + (.25 * 28) + (.25 * 28), for an overall score of 52.75 points.

| | | |
|---|---|---|
| **Source** | FLIP AP-1B; IFR Supp; Falcon View or other certified flight planning software | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 13.98 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 13.98 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1246 | . | Airspace - Distance to Routes |
| 1 | Air/Space Operations | 1246 | .1 | Route Designator |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1248.00 |
| **Title** | Proximity to DZ/LZ |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | Check the distance to all USAF-certified Landing Zones/Drop Zones within 150NM radius of the installation that meet zone requirements.<br><br>OSD Question 1249 is assigned to a notional base unit (Widget Unit #216) for technical reasons since the data is identical for all bases. So, regardless of the organization being checked, all references to OSD Question 1249 will find their data under Widget Unit # 216, which was a technical way to avoid having to enter the exact same data once per base. Widget Unit # 216 does not exist in real life.<br><br>If installation has no runway or active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Drop Zones (DZ) count for 50% of the overall score, Landing Zones (LZ) count for the remaining 50%.<br><br>The data on the DZs and LZs is split across two OSD questions, 1249 and 1248. This means that the data in one question has to be matched with its respective data in the other question. This is done by matching the ZAR code, which is found in column 1 of both OSD Questions 1248 and 1249.<br><br>Compute the points received for each LZ as follows, then total them into an LZ total:<br><br>If the LZ is < 3500' by 90', and < 3000' by 60', get 0 points. See OSD Question 1249, columns 3 and 4 for this data. (N/A means no.)<br>Otherwise, if the distance to the LZ > 150 miles, get 0 points. See OSD Question 1248, column 3 for this data. (N/A or no matching LZ in OSD question 1249 means > 150 miles.)<br>Otherwise, if the distance to the LZ = 150 miles, get 10 points.<br>Otherwise, if the distance to the LZ <= 50 miles, get 100 points.<br>Otherwise, get 0 points.<br><br>Compute the points received for each DZ as follows, then total them into a DZ total:<br><br>If the DZ is < 1000 yds by 1500 yds, and < 700 yds by 1000 yds, get 0 points. See OSD Question 1249, columns 6 and 7 for this data. (N/A means no.)<br>Otherwise, if the distance to the DZ > 150 miles, get 0 points. See OSD Question 1248, column 3 for this data. (N/A or no matching DZ in OSD question 1249 means > 150 miles.)<br>Otherwise, if the distance to the DZ = 150 miles, get 10 points.<br>Otherwise, if the distance to the DZ <= 50 miles, get 100 points.<br>Otherwise, get 0 points.<br><br>After the above LZ and DZ totals have been computed for each base, determine the score for each as follows:<br><br>Get the Highest LZ total of any base and the Lowest non-Zero LZ total of any base.<br>Get the Highest DZ total of any base and the Lowest non-Zero DZ total of any base.<br><br>If the total = 0, then the respective points for that total = 0.<br>Otherwise, pro-rate the total from the respective lowest non-zero total to the respective highest score on a 10 to 100 scale.<br><br>Take 50% of the LZ score just calculated and add to it 50% of the DZ score just calculated for the overall score.<br><br>Example:<br><br>There are two drop zones within 150 miles, Alpha and Bravo. Alpha is 3100' by 65' and Bravo is |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1248.00 |
| **Title** | Proximity to DZ/LZ |

2000' by 100'.
Alpha is 50 miles away and Bravo is 100 miles away.
Alpha is bigger than 3000' by 60', so it qualifies for points. Since it is 50 miles away, it gets 100 points. Bravo is smaller than 3000' by 60', so it is too small and gets 0 points.
The DZ total is 100 points.

The highest DZ total across all bases is 500 and the lowest non-zero DZ total across all bases is 100. The DZ score is 10 points, since it equals the lowest overall DZ total.

There are two landing zones within 150 miles, Charlie and Delta. Charlie is 1000 yds by 1500 yds and so is Delta. Charlie and Delta are both 10 miles away. Both are >= the 1000 yds by 1500 yds size, so both qualify for points. Since both are 10 miles away, they both get 100 points. The LZ total is 200 points.

The highest LZ total across all bases is 200 and the lowest non-zero LZ total across all bases is 50. The LZ score is 100 points, since it equals the highest overall LZ total.

Now, take 50% of each of the two totals to make the overall score:

(.50 * 10) + (.50 * 100) gives an overall score of 55.

| | | |
|---|---|---|
| **Source** | IFR Supp; ZAR (AMC Zone Availability Report): AF Form 3822 (Landing Zone Survey) or AF Form 3823 (Drop Zone Survey); Falcon View or other certified flight planning software | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 14.72 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 14.72 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1248 | . | Airspace - Distance to Zones |
| 1 | Air/Space Operations | 1248 | .2 | ZAR Doc / Index Number |
| 1 | Air/Space Operations | 1249 | . | Airspace Attributes - Zones |
| 1 | Air/Space Operations | 1249 | .2 | ZAR Doc/Index Number |
| 1 | Air/Space Operations | 1249 | .3 | Landing Zone: >=3000' x 60' |
| 1 | Air/Space Operations | 1249 | .4 | Landing Zone: >=3500' x 90' |
| 1 | Air/Space Operations | 1249 | .6 | Drop Zone: >=700 yds x 1000yds |
| 1 | Air/Space Operations | 1249 | .7 | Drop Zone: >=1000 yds x 1500 yds |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1249.00 |
| **Title** | Airspace Attributes of DZ/LZ |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Operating Areas |
| **Formula** | Check the attributes of USAF-certified Landing Zones / Drop Zones which have current AMC surveys.<br><br>OSD Question 1249 is assigned to a notional base unit (Widget Unit #216) for technical reasons since the data is identical for all bases. So, regardless of the organization being checked, all references to OSD Question 1249 will find their data under Widget Unit # 216, which was a technical way to avoid having to enter the exact same data once per base. Widget Unit # 216 does not exist in real life.<br><br>If installation has no runway or active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Drop Zones (DZ) count for 50% of the overall score, Landing Zones (LZ) count for the remaining 50%.<br><br>The data on the DZs and LZs is split across two OSD questions, 1249 and 1248. This means that the data in one question has to be matched with its respective data in the other question. This is done by matching the ZAR code, which is found in column 1 of both OSD Questions 1248 and 1249.<br><br>Compute the points received for each LZ as follows, then total them into an LZ total:<br><br>If the distance to the LZ > 150 miles, get 0 points. See OSD Question 1248, column 3 for this data. (N/A or no matching LZ in OSD question 1249 means > 50 miles.)<br>Otherwise, if the LZ is >= 3500' by 90', get 100 points. See OSD Question 1249, column 4 for this data. (N/A means no.)<br>Otherwise, if the LZ is >= 3000' by 60', get 50 points. See OSD Question 1249, column 3 for this data. (N/A means no.)<br>Otherwise, get 0 points.<br><br>Compute the points received for each DZ as follows, then total them into a DZ total:<br><br>If the distance to the DZ > 150 miles, get 0 points. See OSD Question 1248, column 3 for this data. (N/A or no matching DZ in OSD question 1249 means > 50 miles.)<br>Otherwise, if the DZ is >= 1000 yds by 1500 yds, get 100 points. See OSD Question 1249, column 7 for this data. (N/A means no.)<br>Otherwise, if the DZ is >= 700 yds by 1000 yds, get 50 points. See OSD Question 1249, column 6 for this data. (N/A means no.)<br>Otherwise, get 0 points.<br><br>After the above LZ and DZ totals have been computed for each base, determine the score for each as follows:<br><br>Get the Highest LZ total of any base and the Lowest non-Zero LZ total of any base.<br>Get the Highest DZ total of any base and the Lowest non-Zero DZ total of any base.<br><br>If the total = 0, then the respective points for that total = 0.<br>Otherwise, pro-rate the total from the respective lowest non-zero total to the respective highest score on a 10 to 100 scale.<br><br>Take 50% of the LZ score just calculated and add to it 50% of the DZ score just calculated for the overall score.<br><br>Example:<br><br>There are two drop zones within 50 miles, Alpha and Bravo. Alpha is 3100' by 65' and Bravo is 2000' |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1249.00 |
| **Title** | Airspace Attributes of DZ/LZ |

by 100'.
Alpha is between 3000' by 60' and 3500' by 90' in size, so it gets 50 points. Bravo is too small, so it gets 0 points.
The DZ total is 50 points.

The highest DZ total across all bases is 500 and the lowest non-zero DZ total across all bases is 50.
The DZ score is 10 points, since it equals the lowest overall DZ total.

There are two landing zones within 50 miles, Charlie and Delta. Charlie is 1000 yds by 1500 yds and so is Delta.
Both are >= the 1000 yds by 1500 yds size, so both get 100 points. The LZ total is 200 points.

The highest LZ total across all bases is 200 and the lowest non-zero LZ total across all bases is 50.
The LZ score is 100 points, since it equals the highest overall LZ total.

Now, take 50% of each of the two totals to make the overall score:

(.50 * 10) + (.50 * 100) gives an overall score of 55.

| | | |
|---|---|---|
| **Source** | IFR Supp; ZAR (AMC Zone Availability Report): AF Form 3822 (Landing Zone Survey) or AF Form 3823 (Drop Zone Survey); Falcon View or other certified flight planning software | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 8.30 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 8.30 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1248 | . | Airspace - Distance to Zones |
| 1 | Air/Space Operations | 1248 | .2 | ZAR Doc / Index Number |
| 1 | Air/Space Operations | 1249 | . | Airspace Attributes - Zones |
| 1 | Air/Space Operations | 1249 | .2 | ZAR Doc/Index Number |
| 1 | Air/Space Operations | 1249 | .3 | Landing Zone: >=3000' x 60' |
| 1 | Air/Space Operations | 1249 | .4 | Landing Zone: >=3500' x 90' |
| 1 | Air/Space Operations | 1249 | .6 | Drop Zone: >=700 yds x 1000yds |
| 1 | Air/Space Operations | 1249 | .7 | Drop Zone: >=1000 yds x 1500 yds |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1250.00 |
| **Title** | Area Cost Factor |
| **Criterion** | Cost of Ops / Manpower |
| **Attribute** | Cost Factors |
| **Formula** | Evaluate the Area Cost Factor for each installation.<br><br>Find the lowest area cost factor listed for that installation. See OSD question 1250, column 2 for this data.<br><br>If the area cost factor <= 0.78, get 100 points.<br>Otherwise, if the area cost factor >= 1.42, get 0 points.<br>Otherwise, pro-rate the area cost factor between 0.78 and 1.42, on a 100 to 0 point scale.<br><br>Example:<br><br>The lowest area cost factor for the base is 1.3. 1.3 is 81.25% of the way between 0.78 and 1.42, so the score is 18.75 points. |
| **Source** | DoD Facilities Pricing Guide, Table B, March 2004 |

| | | |
|---|---|---|
| **Formula Score** | 65.63 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.82 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.43 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 4 | CE Programming | 1250 | . | Area Cost Factor |
| 4 | CE Programming | 1250 | .2 | Area Cost Factor |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | | |
|---|---|---|
| **Formula** | 1269.00 | |
| **Title** | Utilities cost rating (U3C) | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the Utilities Costs and Climatic Consideration (U3C) Rating for the installation.<br><br>If the U3C rating is <= .59, get 100 points. See OSD Question 1269, column 1 for this data.<br>Otherwise, if the U3C rating is >= 2.29, get 0 points.<br>Otherwise, pro-rate the U3C rating between .59 and 2.29 on a 100 to 0 scale.<br><br>Example:<br><br>The U3C rating is 1.6. 1.6 is 59.41% of the way between .59 and 2.29, so the score is 40.59. | |
| **Source** | ASHRAE Standards; DoD 5126.46-M-2, Defense Utility Energy Reporting System; UFC 3-400-02,<br>DOE Website: Buildings Energy Databook: Table 7.4 Typical Commercial Buildings | |
| **Formula Score** | 82.94 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.13 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.10 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.02 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 35 | Utilities | 1269 | . | Utilities Cost Rating (U3C) |
| 35 | Utilities | 1269 | .1 | Answer |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1271.00 |
| **Title** | Prevailing Installation Weather Conditions |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | Check the average number of days annually the prevailing weather is better than 3000'/3 Nautical Miles (NM).<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>If the average number of days >= 300, get 100 points.<br>Otherwise, if the average number of days <= 250, get 0 points.<br>Otherwise, pro-rate the average number of days between 250 and 300 on a 0 to 100 scale.<br><br>Example:<br><br>The average number of days annually where the prevailing weather is better than 3000'/3 NM is 275.<br>275 is halfway between 250 and 300, for a score of 50. |
| **Source** | AFCCC Climatological tables |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.22 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 3.22 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1271 | . | Air Operations - Prevailing Weather |
| 39 | Airfield Management | 1271 | .3 | Weather > 3000'/3NM |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | |
|---|---|
| **Formula** | 1273.00 |
| **Title** | Aerial Port Proximity |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | For installations with active runways, identify distance in NM to RAF Mildenhall, Rota Naval Station, Lajes Field, Hickam AFB and Elmendorf AFB.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>50% of the score is based upon proximity to the East coast locations of Mildenhall, Rota or Lajes. The other 50% of the score is based upon proximity to the West coast locations of Elmendorf and Hickam. See OSD Question 1273, columns 1,2,3,4 and 5 respectively, for the distance to these locations.<br><br>East Coast Locations:<br>If both Mildenhall and Rota are within 3200 NM, get 100 points.<br>Otherwise, if either Mildenhall or Rota are within 3200 NM, get 75 points.<br>Otherwise, if only Lajes is within 3200 NM, get 25 points.<br>Otherwise, get 0 points.<br><br>West Coast Locations:<br>If both Elmendorf and Hickam are within 3200 NM, get 100 points.<br>Otherwise, if only Elmendorf is within 3200 NM, get 75 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>The base is 4525 NM from Mildenhall, 4913 NM from Rota, 4022 NM from Lajes, 1995 NM from Elmendorf and 2409 NM from Hickam.<br><br>All three East coast locations are more than 3200 NM away, so 0 points for the East coast aerial port proximity. Elmendorf and Hickam are within 3200 NM, so 100 points for West coast aerial port proximity.<br><br>(50% * 0) + (50% * 100) equals a score of 50. |
| **Source** | Distances between all BRAC bases with runways taken from IVT; Guard, AFRC and specific overseas locations derived from DAFIF and measured using IVT. Aerial Ports identified in Defense Travel Regulation (DTR), DoD Regulation 4500.9-R-Part II (Mobility), Appendix M. The measurements are taken from the center of mass of the runway complex for the bases and the center of mass of the IVT polygon for the ranges. The distances are the great circle arcs over the surface of the Earth at sea level elevation. |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 8.10 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 8.10 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| **Formula** | 1273.00 |
|---|---|
| **Title** | Aerial Port Proximity |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1273 | . | Aerial Port Proximity |
| 1 | Air/Space Operations | 1273 | .1 | RAF Mildenhall, UK |
| 1 | Air/Space Operations | 1273 | .2 | Naval Station Rota, Spain |
| 1 | Air/Space Operations | 1273 | .3 | Lajes Field, The Azores |
| 1 | Air/Space Operations | 1273 | .4 | Elmendorf AFB, AK |
| 1 | Air/Space Operations | 1273 | .5 | Hickam AFB, HI |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | | |
|---|---|---|
| **Formula** | 1402.00 | |
| **Title** | BAH Rate | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the 2004 monthly BAH rate for an O-3 with dependents. See OSD question 1402, column 1 for this data.<br><br>If the BAH rate <= 746, get 100 points.<br>Otherwise, if the BAH rate >= 2013, get 0 points.<br>Otherwise, pro-rate the BAH rate between 746 and 2013 on a 100 to 0 scale.<br><br>Example:<br><br>The BAH rate is 974. 974 is 18% between 746 and 2013, which results in a score of 82.00. | |
| **Source** | www.dtic.mil/perdiem/bah.html | |
| **Formula Score** | 67.32 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.88 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.59 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.29 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 13 | Finance | 1402 | . | BAH Rate |
| 13 | Finance | 1402 | .1 | BAH Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Airlift**

| | | |
|---|---|---|
| **Formula** | 1403.00 | |
| **Title** | GS Locality Pay Rate | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the 2004 locality pay rate for the GS pay schedule. See OSD question 1403, column 1 for this data. (N/A equals 0.)<br><br>If the pay rate <= 10.90, get 100 points.<br>Otherwise, if the pay rate >= 20.37, get 0 points.<br>Otherwise, pro-rate the pay rate between 10.90 and 20.37 on a 100 to 0 scale.<br><br>Example:<br><br>The pay rate is 14.31, which is 36.01% of the way between 10.90 and 20.37, which results in a score of 63.99. | |
| **Source** | Office of Personnel Management Web page | |
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.25 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 13 | Finance | 1403 | . | GS Locality Pay Rate |
| 13 | Finance | 1403 | .1 | GS Locality Pay Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1.00 |
| **Title** | Fuel Hydrant Systems Support Mission Growth |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the current fuel hydrant system capability.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>20% of the score is based upon the best type of fuel hydrant available. 80% of the score is based upon the number of qualified refueling points/outlets.<br><br>Type of Fuel Hydrant:<br><br>Check each Fuel System. See OSD question 1 for this data.<br><br>Ignore those that are not aircraft fueling hydrants. See OSD Question 1, column 2 for this data, where the value is not an 'A'.<br><br>If any one of them is a Type III, get 100 points. See OSD Question 1, column 3 for this data.<br>Otherwise, If any one of them is a Type I or II, get 75 points.<br>Otherwise, If any one of them is a Type IV or V, get 25 points.<br>Otherwise, get 0 points.<br><br>Number of Qualified Refueling Points/Outlets:<br><br>Sum the number of qualified refueling points/outlets. See OSD Question 1, column 6 for this data, but ignore those that are not aircraft fueling hydrants. See OSD Question 1, column 2 for this data, where the value is not an 'A'. Also ignore those that are not Type I, II, III, IV or V. See OSD Question 1, column 3 for this data.<br><br>If the sum of qualified refueling points/outlets >= 24, get 100 points.<br>Otherwise, if the sum of qualified refueling points/outlets = 0, get 0 points.<br>Otherwise, pro-rate the sum between 0 and 24 on a 0 to 100 scale.<br><br>Example:<br><br>There are three refueling facilities. One is a Type I, one a Type IV, and one is a Truck Fill Stand. There are no Type III facilities, so we check for Type I or II. Since there is a Type I, the score for the type of fuel hydrant is 75.<br><br>There are 3 Type 1 refueling points/outlets, 9 Type IV refueling points/outlets, and 22 Truck Fill Stand refueling points/outlets. The Type 1 and Type IV refueling points/outlets sum to 12, the 22 Truck Fill Stand refueling points/outlets do not count. 12 is halfway between 0 and 24, for a number of qualified refueling points score of 50.<br><br>(20% of 75) plus (80% of 50) = an overall score of 55. |
| **Source** | ACES-RP; existing record drawings or physically verification; |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.03 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.03 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| **Formula** | 1.00 |
|---|---|
| **Title** | Fuel Hydrant Systems Support Mission Growth |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 15 | Fuel | 1 | . | Fuel Systems |
| 15 | Fuel | 1 | .2 | Vehicle or Aircraft ("V" or "A") |
| 15 | Fuel | 1 | .3 | System Type |
| 15 | Fuel | 1 | .6 | Number of Refueling Points/Outlets |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 8.00 |
| **Title** | Ramp Area and Serviceability |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the square yardage of every serviceable ramp at the installation. See OSD Question 8, column 9 to determine serviceability. (N/A means not serviceable.) See OSD Question 8, column 2 for the square yardage of that ramp.<br><br>If the total square yards of serviceable ramp is >= 614,000, get 100 points.<br><br>Otherwise, if the total square yards of serviceable ramp is >= 423,000, get 75 points.<br><br>Otherwise, if the total square yards of serviceable ramp is >= 141,000, get 25 points.<br><br>Otherwise, get 0 points.<br><br>Example:<br><br>The installation has three ramps, Alpha, Bravo and Charlie.<br>Alpha and Bravo are both fully serviceable and active; Charlie is not serviceable because of major sinkholes that have developed. Alpha has 50,000 square yards, Bravo has 20,000 square yards, and Charlie has 200,000 square yards, for a total of 70,000 serviceable square yards of ramps. This number is between 0 and 141,000, so it falls into the 0 point range. |
| **Source** | FLIP; AFCESA Pavement Evaluation/Condition Report/Survey; Existing Record Drawings or Physical Verification; Base Real Property Records |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.49 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 3.49 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 28 | Real Property | 8 | . | Ramp/Apron Space |
| 28 | Real Property | 8 | .2 | Area |
| 28 | Real Property | 8 | .9 | Serviceable (2) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 9.00 |
| **Title** | Runway Dimension and Serviceability |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the dimension of all serviceable runways that support the installation.<br><br>Calculate a score for each runway at the installation as follows:<br><br>If the runway is not serviceable, get 0 points. See OSD Question 9, column 15 for this data. (N/A means not serviceable.)<br><br>Otherwise, if the runway is < 200' wide, get 0 points. See OSD Question 9, column 8 for this data. (N/A means 0.)<br><br>Otherwise, if the runway is < 10,000' long, get 0 points. See OSD Question 9, column 7 for this data. (N/A means 0.)<br><br>Otherwise, if the runway is >= 12,000' long, get 100 points.<br><br>Otherwise, pro-rate the runway length from 10,000' to 12,000' on a 50 to 100 scale to get the points.<br><br>The overall score is the highest score received by any one runway.<br><br>Example:<br><br>An installation has two runways, Alpha and Bravo. Alpha is 12,000' long, 203' wide, and full of huge holes because it has partially been demolished, so it is not serviceable. Bravo is 11,000' long and 202' wide, plus it is fully serviceable. Runway Alpha scores 0 points because it isn't serviceable. Runway Bravo meets all the specified criteria so it gets some points. 11,000' is halfway between 10,000' and 12,000', so Runway Bravo gets 75 points. Runway Bravo has the highest score for any runway at the installation, so its score of 75 is used for the installation's score. |
| **Source** | FLIP; AFCESA Pavement Evaluation/Condition Report/Survey; Existing Record Drawings or Physical Verification; Base Real Property Records |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 5.52 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 5.52 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | |
|---|---|---|---|
| 1 | Air/Space Operations | 9 . | Runways |
| 1 | Air/Space Operations | 9 .7 | Length |
| 1 | Air/Space Operations | 9 .8 | Width |
| 1 | Air/Space Operations | 9 .15 | Serviceable (5) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 19.00 |
| **Title** | Hangar Capability - Large Aircraft |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the facilities to hangar large aircraft.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the gross square feet for hangars for each installation. See OSD Question 19, column 5 for this data, but ignore all hangars whose Service Facility Code is not a 1, 2, or 3. See OSD Question 19, column 4 for this data. Also ignore all hangars whose door opening size < 131'. See OSD Question 19, column 6 for this data.<br>Also ignore all hangars whose gross square feet < 6000. See OSD Question 19, column 5 for this data.<br><br>If the sum above is < 6000 square feet, get 0 points.<br>Otherwise, if the sum above is = the highest score received by any installation, get 100 points.<br>Otherwise, pro-rate the sum above between 6000 and the highest score received by any installation on a 25 to 100 point scale.<br><br>Example:<br><br>There are three hangars on the facility that have a Service Facility Code of 1, 2, or 3, and which have door openings >= 131' in width, and which are at least 6,000 gross square feet in size. Those three hangars have a gross square footage of 6,000, 14,000 and 10,000 respectively, for a total of 30,000 gross square feet at that installation. The highest number of gross square feet at any installation using the above formula is 50,000.<br><br>30,000 is 65.91% of the way between 6,000 and 50,000, so the score is 65.91. |
| **Source** | ACES-RP, Record Drawings, Base Real Property Records; pre-populated from ACES-RP; "Service Facility Condition Code" rated 1 through 6 in accordance with OSD BRAC library |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.91 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.91 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 28 | Real Property | 19 | . | Hangars, Maintenance Facilities, and Nose Docks |
| 28 | Real Property | 19 | .4 | Service Facility Condition Code |
| 28 | Real Property | 19 | .5 | Facility Size (GSF) |
| 28 | Real Property | 19 | .6 | Largest Door Opening Width |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 19.00 |
| **Title** | Hangar Capability - Large Aircraft |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Check the attainment designation classifications of the installation's NAAQS (National Ambient Air Quality Standard) for the following applicable criteria: Attainment, Nonattainment, Nonattainment (Deferred), Maintenance, and Unclassifiable. Identify the amount of the SIP emissions budget for non-attainment and maintenance criteria pollutants, if any, allocated to the installation.<br><br>Use the following formula to compute this score:<br><br>Multiply the Attainment / Emission Budget Growth Allowance MinA by the Attainment / Emission Budget Growth Allowance *B* for the base score. Add the SIP Score to the base score. If the base score is now over 100, reduce it to 100.<br><br>SIP Score:<br><br>Sum the Installation SIP Growth Allowance (Tons/Year)" for the following constituents: '001. VOC' and '002. Nox'.<br>See OSD question 221, column 3 for the Installation SIP Growth Allowance (Tons/Year). See OSD Question 221, column 1 for the constituent.<br>If the total is > 0, then SIP Score = 20, otherwise it is 0.<br><br>Attainment / Emission Budget Growth Allowance MinA and *B*:<br><br>Perform the following calculation for each of the specified criteria pollutants and pick the lowest value from them all.<br><br>The criteria pollutants are '002. PM10', '004. S02', '005. CO', 007. O3 (8hr)*'. See OSD Question 213, column 1 for this data.<br><br>Attainment / Emission Budget Growth Allowance MinA:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 100. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get 77.778.<br><br>Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get 66.667. See OSD Question 213, column 3 for this data.<br><br>Otherwise, if the NAAQS Classification is Serious, get 43.5.<br><br>Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get 25.714.<br><br>Otherwise, if the NAAQS Classification is Extreme, get 7.<br><br>Otherwise, get 0.<br><br>Attainment / Emission Budget Growth Allowance *B*:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 1. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get .9. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |

Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get .9. See OSD Question 213, column 3 for this data.

Otherwise, if the NAAQS Classification is Serious, get .8.

Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get .7.

Otherwise, if the NAAQS Classification is Extreme, get 1.

Otherwise, get 0.

Example:

The NAAQS Designation for 002. PM10 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.
The NAAQS Designation for 004. S02 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9
The NAAQS Designation for 005. CO is Nonattainment and the NAAQS Classification is Severe, which means 25.714 * .8.
The NAAQS Designation for 007. O3 (8hr)* is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.

25.714 * .8, which equals 20.5712, is the lowest value, so it becomes the base score.

The Installation SIP Growth Allowance (Tons/Year) for 001. VOC is 0, for 002. Nox it is 1. As the total of these two values is > 0, the SIP Score = 20, which needs to be added to the base score of 20.5712, for a new base score of 40.5712. This is less than 100, so it does not need to be reduced to 100, which makes the final score = 40.5712.

| | |
|---|---|
| **Source** | DoD#213: Current Edition of 40 CFR 81; or Federal Register; or Federal Register Citation to EPA's "final rule" approving the area's "maintenance plan" and "redesignation" of the area to "attainment status" DoD#221: State Implementation Plan |

| | | |
|---|---|---|
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.68 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 1.68 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| **Formula** | 213.00 |
|---|---|
| **Title** | Attainment / Emission Budget Growth Allowance |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 12 | Environment | 213 . | Air Quality Attainment |
| 12 | Environment | 213 . 2 | NAAQS Designation |
| 12 | Environment | 213 . 3 | NAAQS Classification |
| 12 | Environment | 221 . | SIP Emissions Budget |
| 12 | Environment | 221 . 1 | Criteria Pollutant |
| 12 | Environment | 221 . 3 | (b) Installation SIP Growth Allowance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1205.10 |
| **Title** | Buildable Acres for Industrial Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Identify the number of "buildable," unconstrained, development acres available for industrial operations.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 3 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

| | | |
|---|---|---|
| **Formula Score** | 54.14 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.96 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 1.06 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.90 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 4 | CE Programming | 1205 . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 .3 | Total Unconstrained, Buildable Industrial Operations |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1205.20 |
| **Title** | Buildable Acres for Air Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Buildable acres for air operations growth.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 5 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.96 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 1.96 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 4 | CE Programming | 1205 | . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 | .5 | Total Unconstrained, Buildable Airfield Operations/ Maintenance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1207.00 |
| **Title** | Level of Mission Encroachment |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Characterize the level of encroachment for the area in which the installation is located.<br><br>There are four categories of acres for this purpose: 65-69, 70-74, 75-79, and 80+. See OSD Question 1208, column 1 for this data.<br><br>For each category, compute a category total as follows:<br><br>If the total acres in that category = 0, get 0 points. See OSD question 1208, column 5. (N/A means 0.)<br>Otherwise, compute the ratio of residential acres to the respective total acres. See OSD question 1208, columns 4 for residential acres. (N/A means 0.)<br><br>Subtract the 65-69 category total from 1, then multiply the result by 0.13.<br>Subtract the 70-74 category total from 1, then multiply the result by 0.19.<br>Subtract the 75-79 category total from 1, then multiply the result by 0.28.<br>Subtract the 80+ category total from 1, then multiply the result by 0.4.<br><br>Add the above 4 amounts together and multiply the result by 100 for the raw total.<br><br>Add these points to the raw total as follows:<br><br>If the installation purchased "Restrictive Easements" on undeveloped or developed land, add 7 points. See OSD Question 1209, columns 2 and 3 for this data, where a Yes in either qualifies for the 7 points. (N/A means no.)<br><br>If the installation confirms "Land Use Controls that Correlate w/ AICUZ-JLUS Recommendation.", add 5 points. See OSD Question 1209, column 5 for this data, where a Yes qualifies for the 5 points. (N/A means no.)<br><br>If the installation is in a state that has Mandatory Coordination of Development Proposals or there is a Local Joint Land Use Coordinating Board, add 1 point. See OSD Question 1209, columns 6 or 8 for this data, where a Yes in either qualifies for the 1 point.<br><br>The above process can compute a score from 0 to 113.<br>If the computed score is > 100, it is dropped to 100.<br><br>Example:<br><br>60-65 Residential acres: 50<br>60-65 Total acres: 100<br>70-74 Residential acres: 50<br>70-74 Total acres: 100<br>75-79 Residential acres: 50<br>75-79 Total acres: 100<br>80+ Residential acres: 50<br>80+ Total acres: 100<br><br>Restrictive Easements = Yes (column 2) and No (column 3)<br>Land Use Controls ... = N/A<br>Mandatory Coordination ... = No and No.<br><br>((1 - ( 50 / 100)) * 0.13)<br>+ ((1 - ( 50 / 100)) * 0.19)<br>+ ((1 - ( 50 / 100)) * 0.28) |

## Formula Sheet for Francis E. Warren AFB

## MCI: Bomber

| | | |
|---|---|---|
| **Formula** | 1207.00 | |
| **Title** | Level of Mission Encroachment | |
| | + ((1 - ( 50 / 100)) * 0.4)<br>+ 7<br>+ 0<br>+ 0 for a score of 7.5 points. | |
| **Source** | 1207: AFI 32-7063, AFH 32-7084, AICUZ Report, Base Comprehensive Plan F Series maps or D Series as noted in AFI 32-7062 Atch7, local governmental zoning or land use planning authorities; 1208: AFI 32-7063, AICUZ Report, MAJCOM Approved Noise Study; 1209: State legislation, local referendums to purchase lands, zoning ordinance, noise exposure maps, noise control plans, documentation of state purchases of land | |
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.03 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 2.03 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 4 | CE Programming | 1208 | . | Installation - Encroachment (2 of 3) |
| 4 | CE Programming | 1208 | .4 | Residential |
| 4 | CE Programming | 1208 | .5 | Total Acres |
| 4 | CE Programming | 1209 | . | Installation - Encroachment (3 of 3) |
| 4 | CE Programming | 1209 | .2 | Purchased Restrictive Easements On Undeveloped Land (1) |
| 4 | CE Programming | 1209 | .3 | Purchased Restrictive Easements On Currently Developed Land (2) |
| 4 | CE Programming | 1209 | .5 | Land Use Controls that Correlate w/ AICUZ-JLUS Recommendation (4) |
| 4 | CE Programming | 1209 | .6 | Mandatory Coordination of Development Proposals (5) |
| 4 | CE Programming | 1209 | .8 | Local Joint Land Use Coordination Board (7) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1214.00 |
| **Title** | Fuel Dispensing Rate to Support Mobility and Surge |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Mobility/Surge |
| **Formula** | Check the installation's sustained jet fuel dispensing rate capability.<br><br>Sum the JP5 and JP8 figures for jet fuel dispensing. See OSD Question 1214, column 4, for both JP5 and JP8. (N/A equals 0.)<br><br>If the sum is >= 2,500,000 gallons, get 100 points. If the sum is = 0 gallons, get 0 points.<br><br>Otherwise, pro-rate the sum of gallons between 0 and 2,500,000 on a 0 to 100 point scale.<br><br>Example:<br><br>JP5 can handle 500,000 gallons. JP8 can handle 750,000 gallons, for a total of 1,250,000 gallons. 1,250,000 is halfway between 0 and 2,500,000 gallons, for a score of 50. |
| **Source** | Base Support Plan as required by AFI 10-404, Attachment 20 |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.64 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.64 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 15 | Fuel | 1214 | . | POL - Maximum Dispensing Rate |
| 15 | Fuel | 1214 | .1 | Jet Fuel Dispensing Rate |
| 15 | Fuel | 1214 | .4 | Sustained Jet Fuel Dispensing Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | | |
|---|---|---|
| **Formula** | 1231.00 | |
| **Title** | Certified Weapons Storage Area | |
| **Criterion** | Condition of Infrastructure | |
| **Attribute** | Key Mission Infrastructure | |
| **Formula** | Identify if installation has a currently certified Weapons Storage Area.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>If the installation has a currently certified weapons storage area (wsa), get 100 points. See OSD Question 1231, column 1 for this data. (N/A means 0 points.)<br>Otherwise, get 0 points.<br><br>Example:<br><br>The base answered 'Yes' to whether they had a currently certified WSA, so the score is 100. | |
| **Source** | AFMAN 91-201, Explosives Safety Standards; Installation Explosives Site Plan | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.03 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.03 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 36 | Safety | 1231 | . | Munitions - Weapons Storage Area |
| 36 | Safety | 1231 | .1 | Answer |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1232.00 |
| **Title** | Sufficient Explosives-sited Parking |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | List the number of explosives-sited parking spots by MDS (Mission Design Series).<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the number of explosives sited parking spots. See OSD Question 1232, column 2 for this data. (N/A equals 0.)<br><br>If the total >= 23, get 100 points.<br>Otherwise, if the total >= 12, get 66 points.<br>Otherwise, if the total >= 6, get 33 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>The installation has two listings for explosive sited parking spots, with 5 and 10 respectively, which totals to 15.<br>15 is between 12 and 23, so the score is 66 points. |
| **Source** | AFMAN 91-201, Explosives Safety Standards; Installation Explosives Site Plan |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.20 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 3.20 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 36 | Safety | 1232 | . | Munitions - Live Load Area |
| 36 | Safety | 1232 | .2 | Number of Sited Parking Spots |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1233.00 |
| **Title** | Sufficient Munitions Storage |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | List maximum explosive capacity for the installation's hazard classification Class 1.1 munitions storage areas, in pounds. Maximum assumes 12 PAA squadrons (JDAM & MK 82). NEW figures determined from NCAA (nuclear consumables annual analysis) fly away requirement considering only 2 squadrons.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Otherwise, total the capacity. See OSD question 1233, column 1 for this data. (N/A means 0.)<br><br>If the total >= 544,320, get 100 points.<br>Otherwise, if the total >= 396,576, get 75 points.<br>Otherwise, if the total >= 198,288, get 25 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are two storage areas, with a capacity of 200,000 each, for a total of 400,000. 400,000 is between 396,576 and 544,320, so the score is 75 points. |
| **Source** | AFMAN 91-201, Explosives Safety Standards; Installation Explosives Site Plan. |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.91 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.91 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 36 | Safety | 1233 | . | Munitions - Explosive Capacity w/o Waivers |
| 36 | Safety | 1233 | .1 | Hazard Class 1.1 |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1235.00 |
| **Title** | Installation Pavements Quality |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |

**Formula**

Identify if the installation pavement for the primary runway can support Bomber aircraft operations.

If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.

Compute the runway pavement suitability score and the apron pavement suitability score. Each of these is worth 50% of the overall score.

Runway Pavement Suitability:

Find the highest PCN among all the runways. See OSD Question 1235, column 3 for this data. (N/A means 0.) Compute a score for every runway with that PCN and use the highest scoring runway.

Score the runway for runway pavement suitability as follows:

Get the B-52 ACN. See OSD Question 1236, column 3 for the B-52 ACN. (N/A means 0.)
Get the B-1B ACN. See OSD Question 1235, column 8 for the B-1B ACN. (N/A means 0.)

If the PCN is N/A or 0, get 0 points.
Otherwise, if the B-52 ACN divided by the PCN > 0 and <= 1.0, then get 100 points.
Otherwise, if the B-1B ACN divided by the PCN > 0 and <= 1.0, then get 75 points.
Otherwise, if the B-1B ACN divided by the PCN > 0 and <= 1.1, then get 50 points.
Otherwise, get 0 points.

Apron pavement suitability:

Score each apron for pavement quality and choose the highest scoring apron.

Get the B-52 ACN. See OSD Question 1240, column 5 for this data. (N/A means 0.)
Get the B-1B ACN. See OSD Question 1240, column 4 for this data. (N/A means 0.)
If the PCN is 0 or N/A, get 0 points. See OSD Question 1239, column 4 for this data.
Sum the apron pavement square yardage (see OSD Question 1239, column 2, N/A means 0) where the B-52 ACN divided by the PCN > 0 and <= 1.0.
Sum the apron pavement square yardage (see OSD Question 1239, column 2, N/A means 0) where the B-1B ACN divided by the PCN > 0 and <= 1.0.

If the B-52 square yardage >= 409,000, get 100 points.
Otherwise, if the B-1B square yardage >= 283,000, get 75 points.
Otherwise, if the B-1B square yardage >= 141,000, get 50 points.
Otherwise, get 0 points.

Example:

There are 2 runways on the base, but one has the highest runway pavement PCN value, which is 120. The ACN for an B-52 on that runway is 111, 111 divided by 120 is <= 1.0, so the base gets 100 pts for runway pavement suitability. In this case, the B-1B ACN/PCN ratio was a moot point.

There are 2 apron pavements on the base. Apron Alpha has a PCN of 120 and 200,000 square yards of surface. Apron Bravo has a PCN of 85 and 150,000 square yards. The ACN for B-52s on both aprons is 111, and for B-1Bs it is 80.

Apron Alpha's ACN/PCN ratio for B-52s is 111/120, which is less that 1.0. This counts as 200,000 square yards for the B-52. Apron Bravo's ACN/PCN ratio for B-52s is 111/85, which is more than 1.0, so it's square yards aren't counted towards B-52 square yardage. This gives us a total of 200,000 B-52 square yards, which is not greater than 409,000 square yards.

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | | |
|---|---|---|
| **Formula** | 1235.00 | |
| **Title** | Installation Pavements Quality | |
| | Apron Alpha's ACN/PCN ratio for B-1Bs is 80/120, which is less that 1.0. This counts as 200,000 square yards for the B-1B. Apron Bravo's ACN/PCN ratio for B-1Bs is 80/85, which is less than 1.0, so it's 150,000 square yards are also counted towards B-1B square yardage. This gives us a total of 350,000 B-1B square yards, which is greater than 283,000 square yards, which gives us a score of 75 points for apron pavement suitability.<br><br>50% of the Runway pavement suitability score of 100 equals 50. 50% of the apron pavement score of 75 equals 37.5. 50 plus 37.5 equals a score of 87.5. | |
| **Source** | AFCESA Pavement Evaluation Report and Base General Plan; Existing Record Drawings or Physical Verification; Base Real Property Records; FLIP; ASSR | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 4.94 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 4.94 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 37 | Airfield Pavements | 1235 | . | Airfield Pavements - Runway (1 of 2) |
| 37 | Airfield Pavements | 1235 | .3 | Controlling Feature PCN |
| 37 | Airfield Pavements | 1236 | . | Airfield Pavements - Runway (2 of 2) |
| 37 | Airfield Pavements | 1236 | .3 | ACN for B-52 at 488 Kips |
| 37 | Airfield Pavements | 1239 | . | Airfield Pavements - Aprons (1 of 2) |
| 37 | Airfield Pavements | 1239 | .2 | Total Size of Primary Facility (2) |
| 37 | Airfield Pavements | 1239 | .4 | Predominant Feature PCN (4) |
| 37 | Airfield Pavements | 1240 | . | Airfield Pavements - Aprons (2 of 2) |
| 37 | Airfield Pavements | 1240 | .4 | ACN for B-1B at 477 Kips |
| 37 | Airfield Pavements | 1240 | .5 | ACN for B-52 at 488 Kips |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1241.00 |
| **Title** | Ability to Support Large-Scale Mobility Deployment |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Mobility/Surge |
| **Formula** | State installation's parking MOG for C-17 equivalents using surveyed/approved transient parking ramps.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Find the total number of C-17 MOGs. See OSD Question 1241, column 1 for this data.<br><br>If the total is >= 6, get 100 points.<br>Otherwise, if the total is >= 4, get 75 points.<br>Otherwise, if the total is >= 2, get 25 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are a total of 3 C-17 MOGs. 3 is between 2 and 4, so the score is 25 points. |
| **Source** | ASR (Airfield Suitability Report) |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.76 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 1.76 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1241 | . | Ramp - Transient Capability |
| 39 | Airfield Management | 1241 | .1 | C-17 MOG |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1242.00 |
| **Title** | ATC Restrictions to Operations |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | List the percentage of installation departures delayed by Air Traffic Control.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Check the Delayed Departures Percentage. See OSD question 1242, column 5 for this data.<br><br>If the percentage delayed = 0, get 100 points.<br>Otherwise, if the percentage delayed is >= 3%, get 0 points.<br>Otherwise, pro-rate the percentage delayed between 0 to 3% on a 100 to 0 point scale.<br><br>Example:<br><br>The departure percentage delayed is 1%. 1% is one third of the way between 0 and 3%, so the score is 66.67 points. |
| **Source** | CAMS (Computerized Aircraft Maintenance System)/ G081 |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 5.52 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 5.52 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1242 | . | Air Operations - Departure Delays |
| 39 | Airfield Management | 1242 | .5 | Precentage Delayed for ATC |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1245.00 |
| **Title** | Proximity to Airspace Supporting Mission (ASM) |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>All airspace over 300 Nautical Miles (NM) away will be ignored. See OSD # 1245, column 2. (N/A means more than 300 NM.) Data is in OSD #s 1266, 1245 and 1274 must be matched via column 1 in each question.<br><br>Calculate each of the subcategories scores listed below, and weight as listed.<br>15% Airspace Volume (AV)<br>15% Operating Hours (OH)<br>10% Scoreable Range (SR)<br>11.25% Air to Ground Weapons Delivery (AGWD)<br>3.75% Live Ordnance (LO)<br>5% IMC Weapon Release (IW)<br>10% Electronic Combat (EC)<br>10% Laser Use Auth. (LU)<br>10% Lights Out Capable (LC)<br>5% Flare Auth. (FA)<br>5% Chaff Auth. (CA)<br><br>Each of the subcategories use the following general pattern for calculating them:<br><br>Check the corresponding subcategory in formula #1266. If it would get 0 points for that subcategory, get 0 points here also.<br>Otherwise, Compute a raw total for the subcategory for the base according to this formula:<br>For each airspace:<br>If the distance to the airspace is > 300 miles, get 0 points.<br>Otherwise, if the distance to the airspace = 300 miles, get 10 points.<br>Otherwise, if the distance to the airspace = 100 miles, get 100 points.<br>Otherwise, pro-rate the distance to the airspace from 100 miles to 300 miles on a 100 to 10 point scale.<br><br>Once you have a base raw subcategory total, find the highest, and the lowest, non-zero raw total for the subcategory across all bases.<br>If the raw total = 0, that subcategory score = 0.<br>Else, if the raw total = the highest raw total, the subcategory score = 100.<br>Else, if the raw total = the lowest, non-zero raw total, the subcategory score = 10.<br>Else, pro-rate the raw total between the lowest non-zero raw total and the highest raw total on a 10 to 100 scale.<br><br>Once each score for each subcategory is known, multiply them by their respective weighting percentage and total the results for the overall score. The overall mechanism is very similar to that of formula #1266. |
| **Source** | FLIP AP-1A; IFR Supp; Falcon View or other certified flight planning software |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 20.24 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 20.24 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| **Formula** | 1245.00 |
|---|---|
| **Title** | Proximity to Airspace Supporting Mission (ASM) |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1245 | . | Airspace - Distance to Airspace |
| 1 | Air/Space Operations | 1245 | .1 | Airspace/Route Designator |
| 1 | Air/Space Operations | 1245 | .2 | Distance to Airspace/Route |
| 2 | Army Operations | 1274 | . | Airspace Attributes - Ranges (2 of 2) |
| 2 | Army Operations | 1274 | .2 | Airspace Volume: at least 2,100NM cubed; altitude block >=20,000' |
| 2 | Army Operations | 1274 | .3 | Flare |
| 2 | Army Operations | 1274 | .4 | Chaff |
| 2 | Army Operations | 1274 | .5 | Live Ordnance |
| 27 | Ranges | 1266 | . | Airspace Attributes - Ranges (1 of 2) |
| 27 | Ranges | 1266 | .3 | Scoreable range complexes/target array |
| 27 | Ranges | 1266 | .4 | Air to Ground Weapons Delivery |
| 27 | Ranges | 1266 | .5 | Low Angle Strafe Authorized |
| 27 | Ranges | 1266 | .6 | IMC weapons release |
| 27 | Ranges | 1266 | .7 | Electronic Combat |
| 27 | Ranges | 1266 | .8 | Laser Use Authorized |
| 27 | Ranges | 1266 | .9 | Lights-Out Capable |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1246.00 |
| **Title** | Proximity to Low Level Routes Supporting Mission |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | Check the distance to all Airspace for Special Use (IR/VR routes) within 300NM radius of the installation.<br><br>If installation has no runway or active runway, or no serviceable, suitable runway then score 0 pts.<br><br>For a list of routes, see OSD Question 1246. The type of route can be found in column 1. Entry point distances are found in column 2. Exit point distances are found in column 3. For distances, N/A means 0 points.<br><br>IR Entry points, IR Exit points, VR Entry points and VR Exit points are each worth 25% of the score.<br><br>( .25 * "IR Entry") + ( .25 * "IR Exit") + ( .25 * "VR Entry") + ( .25 * "VR Exit")<br><br>Entry and Exit Point:<br><br>Within each of the above four categories, award each route points as follows:<br><br>If the distance = N/A, get 0 points.<br>Otherwise, the distance is <= 100 Nautical Miles (NM), get 100 points.<br>Otherwise, if the distance is = 300 NM, get 10 points.<br>Otherwise, pro-rate the distance between 100 NM and 300 NM on a 100 to 10 point scale.<br><br>Total the number of points received above for each base for each of the above four categories.<br><br>Get the highest base score in each of the above four categories.<br>Get the lowest, non-zero score in each of the above four categories.<br><br>If the installation's score for one of the above categories = 0, it remains 0.<br>Otherwise, if the installation's score for one of the above categories = the highest score in its respective category, get 100 points.<br>Otherwise, if the installation's score for one of the above categories = the lowest non-zero score in its respective category, get 10 points.<br>Otherwise, pro-rate the installation's score between the lowest non-zero and highest score in its respective category on a 10 to 100 point scale.<br><br>Example:<br><br>Two IR routes and 1 VR route.<br><br>IR Route Alpha has an entry point 35 miles away and an exit point 200 miles away.<br>IR Route Bravo has an entry point 300 miles away and an exit point 310 miles away.<br><br>Alpha's entry point is within 100 miles, so its IR Entry amount is 100 points. The exit point 200 miles distant is 50 percent of the way between 100 and 300 miles, so its IR Exit point amount is 55 points.<br><br>Bravo's entry point is 300 miles away, so its IR Entry amount is 10 points. The exit point is 310 miles away, so its amount is 0 points.<br><br>The IR Entry total for these two routes is 100 + 10 for 110 points. The total IR Exit total for these two routes is 55 + 0 for 55 points.<br><br>The highest IR Entry total for any base is 165 and the lowest non-zero IR Entry total for any base is 30.<br>The highest IR Exit total for any base is 105 and the lowest non-zero IR Exit total for any base is 5. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1246.00 |
| **Title** | Proximity to Low Level Routes Supporting Mission |

So, this base's IR Entry score is 100, because 165 is equal to the highest score of any base.
Pro-rating the IR Exit total of 55 between 5 and 105 on a 10 to 100 point scale gives this base an IR Exit score of 55.

VR Route Charlie has an entry point 40 miles away and an exit point 45 miles away.

Both the entry and exit point are within 100 miles, so both the VR Entry and VR Exit category amounts get 100 points.
As there is only one VR route, that makes the VR route totals the same, 100 points each.

The highest VR Entry total for any base is 300 and the lowest non-zero VR Entry total for any base is 50 points.
Ditto for the VR Exit totals.

So, this base's VR Entry score of 100 is pro-rated between 50 and 300 on a 10 to 100 scale. Since 100 is 20% of the way from 50 to 300, the VR Entry score is 28 points.
Ditto for the VR Exit totals.

By applying the 25% weighting to each of the four category scores, in IR Entry, IR Exit, VR Entry and VR Exit order, we get the overall score:

(.25 * 100) + (.25 * 55) + (.25 * 28) + (.25 * 28), for an overall score of 52.75 points.

| | | |
|---|---|---|
| **Source** | FLIP AP-1B; IFR Supp; Falcon View or other certified flight planning software | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 16.56 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 16.56 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1246 | . | Airspace - Distance to Routes |
| 1 | Air/Space Operations | 1246 | .1 | Route Designator |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1250.00 |
| **Title** | Area Cost Factor |
| **Criterion** | Cost of Ops / Manpower |
| **Attribute** | Cost Factors |
| **Formula** | Evaluate the Area Cost Factor for each installation.<br><br>Find the lowest area cost factor listed for that installation. See OSD question 1250, column 2 for this data.<br><br>If the area cost factor <= 0.78, get 100 points.<br>Otherwise, if the area cost factor >= 1.42, get 0 points.<br>Otherwise, pro-rate the area cost factor between 0.78 and 1.42, on a 100 to 0 point scale.<br><br>Example:<br><br>The lowest area cost factor for the base is 1.3. 1.3 is 81.25% of the way between 0.78 and 1.42, so the score is 18.75 points. |
| **Source** | DoD Facilities Pricing Guide, Table B, March 2004 |

| | | |
|---|---|---|
| **Formula Score** | 65.63 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.82 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.43 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 4 | CE Programming | 1250 | . | Area Cost Factor |
| 4 | CE Programming | 1250 | .2 | Area Cost Factor |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1266.00 |
| **Title** | Range Complex (RC) Supports Mission |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Operating Areas |

**Formula**

If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.

All airspace over 300 Nautical Miles (NM) away will be ignored. See OSD # 1245, column 2. (N/A means more than 300 NM.) Data is in OSD #s 1266, 1245 and 1274 must be matched via column 1 in each question.

Calculate each of the subcategories scores listed below, and weight as listed.
15% Airspace Volume (AV)
15% Operating Hours (OH)
10% Scoreable Range (SR)
11.25% Air to Ground Weapons Delivery (AGWD)
3.75% Live Ordnance (LO)
5% IMC Weapon Release (IW)
10% Electronic Combat (EC)
10% Laser Use Auth. (LU)
10% Lights Out Capable (LC)
5% Flare Auth. (FA)
5% Chaff Auth. (CA)

Each of the subcategories use the following general pattern for calculating them:

Compute a raw total for the base by following the instructions for the respective subcategory total.
Find the highest, and the lowest, non-zero raw total for the subcategory across all bases.
If the raw total = 0, that subcategory score = 0.
Else, if the raw total = the highest raw total, the subcategory score = 100.
Else, if the raw total = the lowest, non-zero raw total, the subcategory score = 10.
Else, pro-rate the raw total between the lowest non-zero score and the highest score on a 10 to 100 scale.

Once each score for each subcategory is known, multiply them by their respective weighting percentage and total the results for the overall score.

AV Raw Total:

Get AV for the pts. See OSD # 1277, column 1. (N/A means 0.)

OH Raw Total:

Sum the pts for each airspace:
If the OH < 1 or = N/A, get 0 pts. See OSD # 1266, column 2.
Else, if the OH = 1 or IMTMT or INTMT, get 10 pts.
Else, if the OH = 24 or NOTAM, get 100 pts.
Else, pro-rate the OH between 0 and 24 on a 10 to 100 point scale.

SR Raw Total:

Sum the pts for each airspace:
If the SR = Yes, get 100 pts. See OSD # 1266, column.3.
Else, get 0 pts.

AGWD Raw Total:

Sum the pts for each airspace:
If the AGWD = Yes, get 100 pts. See OSD # 1266 column 4.

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1266.00 |
| **Title** | Range Complex (RC) Supports Mission |

Else, get 0 pts.

LO Raw Total:

Sum the pts for each airspace:
If LO = Yes, get 100 pts. See OSD # 1274, column 5.
Else, get 0 pts.

IW Raw Total:

Sum the pts for each airspace:
If IW = Yes, get 100 pts. See OSD # 1266, column 6.
Else, get 0 pts.

EC Raw Total:

Sum the pts for each airspace:
If EC = Yes, get 100 pts. See OSD # 1266, column.7.
Else, get 0 pts.

LU Raw Total:

Sum the pts for each airspace:
If LU = Yes, get 100 pts. See OSD # 1266, column 8.
Else, get 0 pts.

LC Raw Total

Sum the pts for each airspace:
If LC = Yes, get 100 pts. See OSD # 1266, column 9.
Else, get 0 pts.

FA Raw Total

Sum the pts for each airspace:
If FA = Yes, get 100 pts. See OSD # 1274, column 3.
Else, get 0 pts.

CA Raw Total

Sum the pts for each airspace:
If CA = Yes, get 100 pts. See OSD # 1274, column 4.
Else, get 0 pts.

Example:

AV = 20,000, get 20,000 pts, 10 pts.

There are two airspaces within 300 NM, and they both have these characteristics (which means their raw totals will be double the number of pts listed) followed by the lowest non-zero and highest raw totals across all bases and subcategory scores.

OH = NOTAM, get 100 pts; 20,000 to 150,000 pts; 10
SR = Yes, get 100 pts; 200 to 500 pts; 10.

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | | |
|---|---|---|
| **Formula** | 1266.00 | |
| **Title** | Range Complex (RC) Supports Mission | |
| | AGWD = No, get 0 pts; 200 to 1000 pts; 10.<br>LO = Yes, get 100 pts; 500 to 1000 pts; 10.<br>IW = N/A, get 0 pts; 200 to 2000 pts; 0.<br>EC = N/A, get 0 pts; 200 to 1000 pts; 0.<br>LU = Yes, get 100 pts; 100 to 1000 pts; 20.<br>LC = Yes, get 100 pts; 200 to 1000 pts; 10.<br>FA = No, get 0 pts; 100 to 1000 pts; 0.<br>CA = No, get 0 pts; 100 to 1000 pts; 0.<br><br>Weighted, the overall score = 8.5 pts. | |
| **Source** | FLIP AP-1A; Falcon View or other certified flight planning software | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 12.45 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 12.45 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1245 | . | Airspace - Distance to Airspace |
| 1 | Air/Space Operations | 1245 | .2 | Distance to Airspace/Route |
| 1 | Air/Space Operations | 1277 | . | Airspace Attributes - Volume |
| 1 | Air/Space Operations | 1277 | .4 | 300NM radius |
| 2 | Army Operations | 1274 | . | Airspace Attributes - Ranges (2 of 2) |
| 2 | Army Operations | 1274 | .3 | Flare |
| 2 | Army Operations | 1274 | .4 | Chaff |
| 2 | Army Operations | 1274 | .5 | Live Ordnance |
| 27 | Ranges | 1266 | . | Airspace Attributes - Ranges (1 of 2) |
| 27 | Ranges | 1266 | .1 | Airspace Designator |
| 27 | Ranges | 1266 | .2 | Operating Hours |
| 27 | Ranges | 1266 | .3 | Scoreable range complexes/target array |
| 27 | Ranges | 1266 | .4 | Air to Ground Weapons Delivery |
| 27 | Ranges | 1266 | .6 | IMC weapons release |
| 27 | Ranges | 1266 | .7 | Electronic Combat |
| 27 | Ranges | 1266 | .8 | Laser Use Authorized |
| 27 | Ranges | 1266 | .9 | Lights-Out Capable |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | | |
|---|---|---|
| **Formula** | 1269.00 | |
| **Title** | Utilities cost rating (U3C) | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the Utilities Costs and Climatic Consideration (U3C) Rating for the installation.<br><br>If the U3C rating is <= .59, get 100 points. See OSD Question 1269, column 1 for this data.<br>Otherwise, if the U3C rating is >= 2.29, get 0 points.<br>Otherwise, pro-rate the U3C rating between .59 and 2.29 on a 100 to 0 scale.<br><br>Example:<br><br>The U3C rating is 1.6. 1.6 is 59.41% of the way between .59 and 2.29, so the score is 40.59. | |
| **Source** | ASHRAE Standards; DoD 5126.46-M-2, Defense Utility Energy Reporting System; UFC 3-400-02,<br>DOE Website: Buildings Energy Databook: Table 7.4 Typical Commercial Buildings | |
| **Formula Score** | 82.94 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.13 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.10 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.02 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 35 | Utilities | 1269 | . | Utilities Cost Rating (U3C) |
| 35 | Utilities | 1269 | .1 | Answer |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | |
|---|---|
| **Formula** | 1271.00 |
| **Title** | Prevailing Installation Weather Conditions |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | Check the average number of days annually the prevailing weather is better than 3000'/3 Nautical Miles (NM).<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>If the average number of days >= 300, get 100 points. See OSD Question 1271, column 3 for this data.<br>Otherwise, if the average number of days <= 250, get 0 points.<br>Otherwise, pro-rate the average number of days between 250 and 300 on a 0 to 100 scale.<br><br>Example:<br><br>The average number of days annually where the prevailing weather is better than 3000'/3 NM is 275.<br>275 is halfway between 250 and 300, for a score of 50. |
| **Source** | AFCCC Climatological tables |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.68 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 3.68 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1271 | . | Air Operations - Prevailing Weather |
| 39 | Airfield Management | 1271 | .3 | Weather > 3000'/3NM |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | | |
|---|---|---|
| **Formula** | 1402.00 | |
| **Title** | BAH Rate | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the 2004 monthly BAH rate for an O-3 with dependents. See OSD question 1402, column 1 for this data.<br><br>If the BAH rate <= 746, get 100 points.<br>Otherwise, if the BAH rate >= 2013, get 0 points.<br>Otherwise, pro-rate the BAH rate between 746 and 2013 on a 100 to 0 scale.<br><br>Example:<br><br>The BAH rate is 974. 974 is 18% between 746 and 2013, which results in a score of 82.00. | |
| **Source** | www.dtic.mil/perdiem/bah.html | |
| **Formula Score** | 67.32 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.88 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.59 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.29 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 13 | Finance | 1402 | . | BAH Rate |
| 13 | Finance | 1402 | .1 | BAH Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Bomber**

| | | |
|---|---|---|
| **Formula** | 1403.00 | |
| **Title** | GS Locality Pay Rate | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the 2004 locality pay rate for the GS pay schedule. See OSD question 1403, column 1 for this data. (N/A equals 0.)<br><br>If the pay rate <= 10.90, get 100 points.<br>Otherwise, if the pay rate >= 20.37, get 0 points.<br>Otherwise, pro-rate the pay rate between 10.90 and 20.37 on a 100 to 0 scale.<br><br>Example:<br><br>The pay rate is 14.31, which is 36.01% of the way between 10.90 and 20.37, which results in a score of 63.99. | |
| **Source** | Office of Personnel Management Web page | |
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.25 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 13 | Finance | 1403 | . | GS Locality Pay Rate |
| 13 | Finance | 1403 | .1 | GS Locality Pay Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 1.00 |
| **Title** | Fuel Hydrant Systems Support Mission Growth |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the current fuel hydrant system capability.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>20% of the score is based upon the best type of fuel hydrant available. 80% of the score is based upon the number of qualified refueling points/outlets.<br><br>Type of Fuel Hydrant:<br><br>Check each Fuel System. See OSD question 1 for this data.<br><br>Ignore those that are not aircraft fueling hydrants. See OSD Question 1, column 2 for this data, where the value is not an 'A'.<br><br>If any one of them is a Type III, get 100 points. See OSD Question 1, column 3 for this data.<br>Otherwise, If any one of them is a Type I or II, get 75 points.<br>Otherwise, If any one of them is a Type IV or V, get 25 points.<br>Otherwise, get 0 points.<br><br>Number of Qualified Refueling Points/Outlets:<br><br>Sum the number of qualified refueling points/outlets. See OSD Question 1, column 6 for this data, but ignore those that are not aircraft fueling hydrants. See OSD Question 1, column 2 for this data, where the value is not an 'A'. Also ignore those that are not Type I, II, III, IV or V. See OSD Question 1, column 3 for this data.<br><br>If the sum of qualified refueling points/outlets >= 24, get 100 points.<br>Otherwise, if the sum of qualified refueling points/outlets = 0, get 0 points.<br>Otherwise, pro-rate the sum between 0 and 24 on a 0 to 100 scale.<br><br>Example:<br><br>There are three refueling facilities. One is a Type I, one a Type IV, and one is a Truck Fill Stand. There are no Type III facilities, so we check for Type I or II. Since there is a Type I, the score for the type of fuel hydrant is 75.<br><br>There are 3 Type 1 refueling points/outlets, 9 Type IV refueling points/outlets, and 22 Truck Fill Stand refueling points/outlets. The Type 1 and Type IV refueling points/outlets sum to 12, the 22 Truck Fill Stand refueling points/outlets do not count. 12 is halfway between 0 and 24, for a number of qualified refueling points score of 50.<br><br>(20% of 75) plus (80% of 50) = an overall score of 55. |
| **Source** | ACES-RP; existing record drawings or physically verification; |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.08 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.08 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| **Formula** | 1.00 |
|---|---|
| **Title** | Fuel Hydrant Systems Support Mission Growth |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 1 | Air/Space Operations | 9 . | Runways |
| 1 | Air/Space Operations | 9 .7 | Length |
| 1 | Air/Space Operations | 9 .8 | Width |
| 1 | Air/Space Operations | 9 .15 | Serviceable (5) |
| 15 | Fuel | 1 . | Fuel Systems |
| 15 | Fuel | 1 .2 | Vehicle or Aircraft ("V" or "A") |
| 15 | Fuel | 1 .3 | System Type |
| 15 | Fuel | 1 .6 | Number of Refueling Points/Outlets |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 8.00 |
| **Title** | Ramp Area and Serviceability |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the square yardage of every serviceable ramp at the installation. See OSD Question 8, column 9 to determine serviceability. (N/A means not serviceable.) See OSD Question 8, column 2 for the square yardage of that ramp.<br><br>If the total square yards of serviceable ramp is >= 427,000, get 100 points.<br><br>Otherwise, if the total square yards of serviceable ramp is >= 315,000, get 75 points.<br><br>Otherwise, if the total square yards of serviceable ramp is >= 105,000, get 25 points.<br><br>Otherwise, get 0 points.<br><br>Example:<br><br>The installation has three ramps, Alpha, Bravo and Charlie.<br>Alpha and Bravo are both fully serviceable and active; Charlie is not serviceable because of major sinkholes that have developed. Alpha has 50,000 square yards, Bravo has 20,000 square yards, and Charlie has 200,000 square yards, for a total of 70,000 serviceable square yards of ramps. This number is between 0 and 105,000, so it falls into the 0 point range. |
| **Source** | FLIP; AFCESA Pavement Evaluation/Condition Report/Survey; Existing Record Drawings or Physical Verification; Base Real Property Records |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 9.13 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 9.13 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | |
|---|---|---|---|
| 1 | Air/Space Operations | 9 . | Runways |
| 1 | Air/Space Operations | 9 .7 | Length |
| 1 | Air/Space Operations | 9 .8 | Width |
| 1 | Air/Space Operations | 9 .15 | Serviceable (5) |
| 28 | Real Property | 8 . | Ramp/Apron Space |
| 28 | Real Property | 8 .2 | Area |
| 28 | Real Property | 8 .9 | Serviceable (2) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 9.00 |
| **Title** | Runway Dimension and Serviceability |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the dimension of all serviceable runways that support the installation.<br><br>Calculate a score for each runway at the installation as follows:<br><br>If the runway is not serviceable, get 0 points. See OSD Question 9, column 15 for this data. (N/A means not serviceable.)<br><br>Otherwise, if the runway is < 150' wide, get 0 points. See OSD Question 9, column 8 for this data. (N/A means 0.)<br><br>Otherwise, if the runway is < 8,000' long, get 0 points. See OSD Question 9, column 7 for this data. (N/A means 0.)<br><br>Otherwise, if the runway is >= 11,000' long, get 100 points.<br><br>Otherwise, pro-rate the runway length from 8,000' to 11,000' on a 50 to 100 scale to get the points.<br><br>The overall score is the highest score received by any one runway.<br><br>Example:<br><br>An installation has two runways, Alpha and Bravo. Alpha is 12,000' long, 160' wide, and full of huge holes because it has partially been demolished, so it is not serviceable. Bravo is 9,500' long and 152' wide, plus it is fully serviceable. Runway Alpha scores 0 points because it isn't serviceable. Runway Bravo meets all the specified criteria so it gets some points. 9,500' is halfway between 8,000' and 11,000', so Runway Bravo gets 75 points. Runway Bravo has the highest score for any runway at the installation, so its score of 75 is used for the installation's score. |
| **Source** | FLIP; AFCESA Pavement Evaluation/Condition Report/Survey; Existing Record Drawings or Physical Verification; Base Real Property Records |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 9.13 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 9.13 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | |
|---|---|---|---|
| 1 | Air/Space Operations | 9 . | Runways |
| 1 | Air/Space Operations | 9 .7 | Length |
| 1 | Air/Space Operations | 9 .8 | Width |
| 1 | Air/Space Operations | 9 .15 | Serviceable (5) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 19.00 |
| **Title** | Hangar Capability - Large Aircraft |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the facilities to hangar large aircraft.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the gross square feet for hangars for each installation. See OSD Question 19, column 5 for this data, but ignore all hangars whose Service Facility Code is not a 1, 2, or 3. See OSD Question 19, column 4 for this data. Also ignore all hangars whose door opening size < 131'. See OSD Question 19, column 6 for this data. Also ignore all hangars whose gross square feet < 6000. See OSD Question 19, column 5 for this data.<br><br>If the sum above is < 6000 square feet, get 0 points.<br>Otherwise, if the sum above is = the highest score received by any installation, get 100 points.<br>Otherwise, pro-rate the sum above between 6000 and the highest score received by any installation on a 25 to 100 point scale.<br><br>Example:<br><br>There are three hangars on the facility that have a Service Facility Code of 1, 2, or 3, and which have door openings >= 131' in width, and which are at least 6,000 gross square feet in size. Those three hangars have a gross square footage of 6,000, 14,000 and 10,000 respectively, for a total of 30,000 gross square feet at that installation. The highest number of gross square feet at any installation using the above formula is 50,000.<br><br>30,000 is 65.91% of the way between 6,000 and 50,000, so the score is 65.91. |
| **Source** | ACES-RP, Record Drawings, Base Real Property Records; pre-populated from ACES-RP; "Service Facility Condition Code" rated 1 through 6 in accordance with OSD BRAC library |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.91 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.91 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 28 | Real Property | 19 | . | Hangars, Maintenance Facilities, and Nose Docks |
| 28 | Real Property | 19 | .4 | Service Facility Condition Code |
| 28 | Real Property | 19 | .5 | Facility Size (GSF) |
| 28 | Real Property | 19 | .6 | Largest Door Opening Width |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 19.00 |
| **Title** | Hangar Capability - Large Aircraft |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Check the attainment designation classifications of the installation's NAAQS (National Ambient Air Quality Standard) for the following applicable criteria: Attainment, Nonattainment, Nonattainment (Deferred), Maintenance, and Unclassifiable. Identify the amount of the SIP emissions budget for non-attainment and maintenance criteria pollutants, if any, allocated to the installation.<br><br>Use the following formula to compute this score:<br><br>Multiply the Attainment / Emission Budget Growth Allowance MinA by the Attainment / Emission Budget Growth Allowance *B* for the base score. Add the SIP Score to the base score. If the base score is now over 100, reduce it to 100.<br><br>SIP Score:<br><br>Sum the Installation SIP Growth Allowance (Tons/Year)" for the following constituents: '001. VOC' and '002. Nox'.<br>See OSD question 221, column 3 for the Installation SIP Growth Allowance (Tons/Year). See OSD Question 221, column 1 for the constituent.<br>If the total is > 0, then SIP Score = 20, otherwise it is 0.<br><br>Attainment / Emission Budget Growth Allowance MinA and *B*:<br><br>Perform the following calculation for each of the specified criteria pollutants and pick the lowest value from them all.<br><br>The criteria pollutants are '002. PM10', '004. S02', '005. CO', 007. O3 (8hr)*'. See OSD Question 213, column 1 for this data.<br><br>Attainment / Emission Budget Growth Allowance MinA:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 100. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get 77.778.<br><br>Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get 66.667. See OSD Question 213, column 3 for this data.<br><br>Otherwise, if the NAAQS Classification is Serious, get 43.5.<br><br>Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get 25.714.<br><br>Otherwise, if the NAAQS Classification is Extreme, get 7.<br><br>Otherwise, get 0.<br><br>Attainment / Emission Budget Growth Allowance *B*:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 1. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get .9. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |

Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get .9. See OSD Question 213, column 3 for this data.

Otherwise, if the NAAQS Classification is Serious, get .8.

Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get .7.

Otherwise, if the NAAQS Classification is Extreme, get 1.

Otherwise, get 0.

Example:

The NAAQS Designation for 002. PM10 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.
The NAAQS Designation for 004. S02 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9
The NAAQS Designation for 005. CO is Nonattainment and the NAAQS Classification is Severe, which means 25.714 * .8.
The NAAQS Designation for 007. O3 (8hr)* is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.

25.714 * .8, which equals 20.5712, is the lowest value, so it becomes the base score.

The Installation SIP Growth Allowance (Tons/Year) for 001. VOC is 0, for 002. Nox it is 1. As the total of these two values is > 0, the SIP Score = 20, which needs to be added to the base score of 20.5712, for a new base score of 40.5712. This is less than 100, so it does not need to be reduced to 100, which makes the final score = 40.5712.

| | |
|---|---|
| **Source** | DoD#213: Current Edition of 40 CFR 81; or Federal Register; or Federal Register Citation to EPA's "final rule" approving the area's "maintenance plan" and "redesignation" of the area to "attainment status" DoD#221: State Implementation Plan |

| | | |
|---|---|---|
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.40 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 2.40 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| **Formula** | 213.00 |
|---|---|
| **Title** | Attainment / Emission Budget Growth Allowance |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 12 | Environment | 213 . | Air Quality Attainment |
| 12 | Environment | 213 . 2 | NAAQS Designation |
| 12 | Environment | 213 . 3 | NAAQS Classification |
| 12 | Environment | 221 . | SIP Emissions Budget |
| 12 | Environment | 221 . 1 | Criteria Pollutant |
| 12 | Environment | 221 . 3 | (b) Installation SIP Growth Allowance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI: C2ISR**

| | |
|---|---|
| **Formula** | 1205.10 |
| **Title** | Buildable Acres for Industrial Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Identify the number of "buildable," unconstrained, development acres available for industrial operations.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 3 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

| | | |
|---|---|---|
| **Formula Score** | 54.14 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.80 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.97 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.83 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 4 | CE Programming | 1205 . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 .3 | Total Unconstrained, Buildable Industrial Operations |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 1205.20 |
| **Title** | Buildable Acres for Air Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Buildable acres for air operations growth.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 5 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.80 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 1.80 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 4 | CE Programming | 1205 | . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 | .5 | Total Unconstrained, Buildable Airfield Operations/ Maintenance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 1207.00 |
| **Title** | Level of Mission Encroachment |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Characterize the level of encroachment for the area in which the installation is located.<br><br>There are four categories of acres for this purpose: 65-69, 70-74, 75-79, and 80+. See OSD Question 1208, column 1 for this data.<br><br>For each category, compute a category total as follows:<br><br>If the total acres in that category = 0, get 0 points. See OSD question 1208, column 5. (N/A means 0.)<br>Otherwise, compute the ratio of residential acres to the respective total acres. See OSD question 1208, columns 4 for residential acres. (N/A means 0.)<br><br>Subtract the 65-69 category total from 1, then multiply the result by 0.13.<br>Subtract the 70-74 category total from 1, then multiply the result by 0.19.<br>Subtract the 75-79 category total from 1, then multiply the result by 0.28.<br>Subtract the 80+ category total from 1, then multiply the result by 0.4.<br><br>Add the above 4 amounts together and multiply the result by 100 for the raw total.<br><br>Add these points to the raw total as follows:<br><br>If the installation purchased "Restrictive Easements" on undeveloped or developed land, add 7 points. See OSD Question 1209, columns 2 and 3 for this data, where a Yes in either qualifies for the 7 points. (N/A means no.)<br><br>If the installation confirms "Land Use Controls that Correlate w/ AICUZ-JLUS Recommendation.", add 5 points. See OSD Question 1209, column 5 for this data, where a Yes qualifies for the 5 points. (N/A means no.)<br><br>If the installation is in a state that has Mandatory Coordination of Development Proposals or there is a Local Joint Land Use Coordinating Board, add 1 point. See OSD Question 1209, columns 6 or 8 for this data, where a Yes in either qualifies for the 1 point.<br><br>The above process can compute a score from 0 to 113.<br>If the computed score is > 100, it is dropped to 100.<br><br>Example:<br><br>60-65 Residential acres: 50<br>60-65 Total acres: 100<br>70-74 Residential acres: 50<br>70-74 Total acres: 100<br>75-79 Residential acres: 50<br>75-79 Total acres: 100<br>80+ Residential acres: 50<br>80+ Total acres: 100<br><br>Restrictive Easements = Yes (column 2) and No (column 3)<br>Land Use Controls ... = N/A<br>Mandatory Coordination ... = No and No.<br><br>((1 - ( 50 / 100)) * 0.13)<br>+ ((1 - ( 50 / 100)) * 0.19)<br>+ ((1 - ( 50 / 100)) * 0.28) |

## Formula Sheet for Francis E. Warren AFB

## MCI: C2ISR

| | | |
|---|---|---|
| **Formula** | 1207.00 | |
| **Title** | Level of Mission Encroachment | |
| | + ((1 - ( 50 / 100)) * 0.4)<br>+ 7<br>+ 0<br>+ 0 for a score of 7.5 points. | |
| **Source** | 1207: AFI 32-7063, AFH 32-7084, AICUZ Report, Base Comprehensive Plan F Series maps or D Series as noted in AFI 32-7062 Atch7, local governmental zoning or land use planning authorities; 1208: AFI 32-7063, AICUZ Report, MAJCOM Approved Noise Study; 1209: State legislation, local referendums to purchase lands, zoning ordinance, noise exposure maps, noise control plans, documentation of state purchases of land | |
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.08 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 2.08 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 4 | CE Programming | 1208 | . | Installation - Encroachment (2 of 3) |
| 4 | CE Programming | 1208 | .4 | Residential |
| 4 | CE Programming | 1208 | .5 | Total Acres |
| 4 | CE Programming | 1209 | . | Installation - Encroachment (3 of 3) |
| 4 | CE Programming | 1209 | .2 | Purchased Restrictive Easements On Undeveloped Land (1) |
| 4 | CE Programming | 1209 | .3 | Purchased Restrictive Easements On Currently Developed Land (2) |
| 4 | CE Programming | 1209 | .5 | Land Use Controls that Correlate w/ AICUZ-JLUS Recommendation (4) |
| 4 | CE Programming | 1209 | .6 | Mandatory Coordination of Development Proposals (5) |
| 4 | CE Programming | 1209 | .8 | Local Joint Land Use Coordination Board (7) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 1214.00 |
| **Title** | Fuel Dispensing Rate to Support Mobility and Surge |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Mobility/Surge |
| **Formula** | Check the installation's sustained jet fuel dispensing rate capability.<br><br>Sum the JP5 and JP8 figures for jet fuel dispensing. See OSD Question 1214, column 4, for both JP5 and JP8. (N/A equals 0.)<br><br>If the sum is >= 2,500,000 gallons, get 100 points. If the sum is = 0 gallons, get 0 points.<br><br>Otherwise, pro-rate the sum of gallons between 0 and 2,500,000 on a 0 to 100 point scale.<br><br>Example:<br><br>JP5 can handle 500,000 gallons. JP8 can handle 750,000 gallons, for a total of 1,250,000 gallons. 1,250,000 is halfway between 0 and 2,500,000 gallons, for a score of 50. |
| **Source** | Base Support Plan as required by AFI 10-404, Attachment 20 |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.80 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.80 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 15 | Fuel | 1214 | . | POL - Maximum Dispensing Rate |
| 15 | Fuel | 1214 | .1 | Jet Fuel Dispensing Rate |
| 15 | Fuel | 1214 | .4 | Sustained Jet Fuel Dispensing Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 1235.00 |
| **Title** | Installation Pavements Quality |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Identify if the installation pavement for the primary runway can support C2ISR aircraft operations.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Compute the runway pavement suitability score and the apron pavement suitability score. Each of these is worth 50% of the overall score.<br><br>Runway Pavement Suitability:<br><br>Find the highest PCN among all the runways. See OSD Question 1235, column 3 for this data. (N/A means 0.) Compute a score for every runway with that PCN and use the highest scoring runway.<br><br>Score the runway for runway pavement suitability as follows:<br><br>Get the KC-135 ACN. See OSD Question 1235, column 7 for the KC-135 ACN. (N/A means 0.)<br><br>If the PCN is N/A or 0, get 0 points.<br>Otherwise, if the KC-135 ACN divided by the PCN > 0 and <= 1.0, then get 100 points.<br>Otherwise, if the KC-135 ACN divided by the PCN > 0 and <= 1.1, then get 75 points.<br>Otherwise, get 0 points.<br><br>Apron pavement suitability:<br><br>Score each apron for pavement quality and choose the highest scoring apron.<br><br>Get the KC-135 ACN. See OSD Question 1240, column 3 for this data. (N/A means 0.)<br>If the PCN is 0 or N/A, get 0 points. See OSD Question 1239, column 4 for this data.<br>Sum the apron pavement square yardage (see OSD Question 1239, column 2, N/A means 0) where the KC-135 ACN divided by the PCN > 0 and <= 1.0.<br><br>If the KC-10 square yardage >= 427,000, get 100 points.<br>Otherwise, if the KC-135 square yardage >= 315,000, get 75 points.<br>Otherwise, if the KC-135 square yardage >= 105,000, get 50 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are 2 runways on the base, but one has the highest runway pavement PCN value, which is 120. The ACN for an KC-135 on that runway is 43, 43 divided by 120 is <= 1.0, so the base gets 100 pts for runway pavement suitability.<br><br>There are 2 apron pavements on the base. Apron Alpha has a PCN of 120 and 200,000 square yards of surface. Apron Bravo has a PCN of 50 and 150,000 square yards. The ACN for KC-135s is 43.<br><br>Apron Alpha's ACN/PCN ratio for KC-135s is 43/120, which is less that 1.0. This counts as 200,000 square yards for the KC-135. Apron Bravo's ACN/PCN ratio for KC-135s is 43/50, which is less than 1.0, so it's 150,000 square yards are also counted towards KC-135 square yardage. This gives us a total of 350,000 KC-135 square yards, which is between 315,000 and 427,000 square yards, which gives us a score of 75 points for apron pavement suitability.<br><br>50% of the Runway pavement suitability score of 100 equals 50. 50% of the apron pavement score of 75 equals 37.5. 50 plus 37.5 equals a score of 87.5. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | | |
|---|---|---|
| **Formula** | 1235.00 | |
| **Title** | Installation Pavements Quality | |
| **Source** | AFCESA Pavement Evaluation Report and Base General Plan; Existing Record Drawings or Physical Verification; Base Real Property Records; FLIP; ASSR | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 16.19 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 16.19 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 37 | Airfield Pavements | 1235 | . | Airfield Pavements - Runway (1 of 2) |
| 37 | Airfield Pavements | 1235 | .3 | Controlling Feature PCN |
| 37 | Airfield Pavements | 1239 | . | Airfield Pavements - Aprons (1 of 2) |
| 37 | Airfield Pavements | 1239 | .2 | Total Size of Primary Facility (2) |
| 37 | Airfield Pavements | 1239 | .4 | Predominant Feature PCN (4) |
| 37 | Airfield Pavements | 1240 | . | Airfield Pavements - Aprons (2 of 2) |
| 37 | Airfield Pavements | 1240 | .3 | ACN for KC-135R at 323 Kips |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 1241.00 |
| **Title** | Ability to Support Large-Scale Mobility Deployment |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Mobility/Surge |
| **Formula** | State installation's parking MOG for C-17 equivalents using surveyed/approved transient parking ramps.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Find the total number of C-17 MOGs. See OSD Question 1241, column 1 for this data.<br><br>If the total is >= 6, get 100 points.<br>Otherwise, if the total is >= 4, get 75 points.<br>Otherwise, if the total is >= 2, get 25 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are a total of 3 C-17 MOGs. 3 is between 2 and 4, so the score is 25 points. |
| **Source** | ASR (Airfield Suitability Report) |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.20 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 1.20 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1241 | . | Ramp - Transient Capability |
| 39 | Airfield Management | 1241 | .1 | C-17 MOG |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 1242.00 |
| **Title** | ATC Restrictions to Operations |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | List the percentage of installation departures delayed by Air Traffic Control.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Check the Delayed Departures Percentage. See OSD question 1242, column 5 for this data.<br><br>If the percentage delayed = 0, get 100 points.<br>Otherwise, if the percentage delayed is >= 3%, get 0 points.<br>Otherwise, pro-rate the percentage delayed between 0 to 3% on a 100 to 0 point scale.<br><br>Example:<br><br>The departure percentage delayed is 1%. 1% is one third of the way between 0 and 3%, so the score is 66.67 points. |
| **Source** | CAMS (Computerized Aircraft Maintenance System)/ G081 |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 8.05 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 8.05 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1242 | . | Air Operations - Departure Delays |
| 39 | Airfield Management | 1242 | .5 | Precentage Delayed for ATC |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 1245.00 |
| **Title** | Proximity to Airspace Supporting Mission (ASM) |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>For each airspace:<br>If the Airspace/Route Designator does not start with AR, get 0 points. See OSD # 1245, column 1 for this data.<br>Otherwise, if the distance to the airspace is > 850 miles, get 0 points. See OSD # 1245, column 2. (N/A means more than 850 NM.)<br>Otherwise, if the distance to the airspace = 850 miles, get 10 points.<br>Otherwise, if the distance to the airspace = 250 miles, get 100 points.<br>Otherwise, pro-rate the distance to the airspace from 250 miles to 850 miles on a 100 to 10 point scale.<br>This is the base raw total.<br><br>Once you have a base raw total, find the highest, and the lowest, non-zero raw total across all bases.<br>If the raw total = 0, the score = 0.<br>Else, if the raw total = the highest raw total, the score = 100.<br>Else, if the raw total = the lowest, non-zero raw total, the score = 10.<br>Else, pro-rate the raw total between the lowest non-zero raw total and the highest raw total on a 10 to 100 scale. |
| **Source** | X |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 29.90 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 29.90 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1245 | . | Airspace - Distance to Airspace |
| 1 | Air/Space Operations | 1245 | .1 | Airspace/Route Designator |
| 1 | Air/Space Operations | 1245 | .2 | Distance to Airspace/Route |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI: C2ISR**

| | |
|---|---|
| **Formula** | 1250.00 |
| **Title** | Area Cost Factor |
| **Criterion** | Cost of Ops / Manpower |
| **Attribute** | Cost Factors |
| **Formula** | Evaluate the Area Cost Factor for each installation.<br><br>Find the lowest area cost factor listed for that installation. See OSD question 1250, column 2 for this data.<br><br>If the area cost factor <= 0.78, get 100 points.<br>Otherwise, if the area cost factor >= 1.42, get 0 points.<br>Otherwise, pro-rate the area cost factor between 0.78 and 1.42, on a 100 to 0 point scale.<br><br>Example:<br><br>The lowest area cost factor for the base is 1.3. 1.3 is 81.25% of the way between 0.78 and 1.42, so the score is 18.75 points. |
| **Source** | DoD Facilities Pricing Guide, Table B, March 2004 |

| | | |
|---|---|---|
| **Formula Score** | 65.63 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.82 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.43 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 4 | CE Programming | 1250 | . | Area Cost Factor |
| 4 | CE Programming | 1250 | .2 | Area Cost Factor |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 1251.00 |
| **Title** | Frequency Spectrum Limitations (FSL) |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | State if operating frequency limitations exist for these systems:<br>RC-135V/W (Rivet Joint), RC-135S (Cobra Ball), RC-135U (Cobra Sent), E-3 (AWACS), E-8 (JSTARS), E-10 (MC2A) in the following frequency bands: C, Ku, L, S, and X.<br><br>If installation has no runway or active runway, or no serviceable, suitable runway then score 0 pts.<br><br>The RC-135V/W component of the score represents 14% of the score.<br>The RC-135S component of the score also represents 14% of the score.<br>The RC-135U component of the score represents 14% of the score.<br>The E-3 component of the score represents 14.5% of the score.<br>The E-8 component of the score represents 14.5% of the score.<br>The E-10 component of the score represents 14.5% of the score.<br>The U2S component of the score represents 14.5% of the score.<br><br>Within each of the system components, each of the 5 frequency bands represents 20% of that component's score.<br><br>For operating frequency limitations for the Predator A, Predator B and Global Hawk systems, see OSD Question 1251, columns 3,4, and 5 respectively. (N/A means No.)<br><br>This has to be done for each system and frequency band combination.<br>If the answer for the frequency band for the system = No or N/A, get 20 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>RC-135V/W<br>C Yes 0<br>Ku No 20<br>L No 20<br>S No 20<br>X No 20<br>---<br>80<br><br>Each of the other 6 systems<br>C No 20<br>Ku No 20<br>L No 20<br>S No 20<br>X No 20<br>---<br>100<br><br>Taking the relevant percentages for the RC-135V/W and the other six systems respectively, we get<br><br>(.14 * 80) + (.14 * 100) + (.14 * 100) + (.145 * 100) + (.145 * 100) + (.145 * 100) + (.145 * 100) for a score of 97.2. |
| **Source** | Spectrum 21 Database |

## Formula Sheet for Francis E. Warren AFB

## MCI: C2ISR

| | | |
|---|---|---|
| **Formula** | 1251.00 | |
| **Title** | Frequency Spectrum Limitations (FSL) | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 8.05 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 8.05 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 6 | Communications | 1251 | . | C4ISR -Frequency Spectrum Limitations (1 of 2) |
| 6 | Communications | 1251 | .6 | RC-135V/W (Rivet Joint) |
| 6 | Communications | 1251 | .7 | RC-135S (Cobra Ball) |
| 6 | Communications | 1251 | .8 | RC-135U (Cobra Sent) |
| 6 | Communications | 1251 | .9 | E-3 (AWACS) |
| 6 | Communications | 1251 | .10 | E-8 (JSTARS) |
| 6 | Communications | 1251 | .11 | E-10 (MC2A) |
| 6 | Communications | 1252 | . | C4ISR - Frequency Spectrum Limitations (2 of 2) |
| 6 | Communications | 1252 | .3 | U-2S |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | | |
|---|---|---|
| **Formula** | 1269.00 | |
| **Title** | Utilities cost rating (U3C) | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the Utilities Costs and Climatic Consideration (U3C) Rating for the installation.<br><br>If the U3C rating is <= .59, get 100 points. See OSD Question 1269, column 1 for this data.<br>Otherwise, if the U3C rating is >= 2.29, get 0 points.<br>Otherwise, pro-rate the U3C rating between .59 and 2.29 on a 100 to 0 scale.<br><br>Example:<br><br>The U3C rating is 1.6. 1.6 is 59.41% of the way between .59 and 2.29, so the score is 40.59. | |
| **Source** | ASHRAE Standards; DoD 5126.46-M-2, Defense Utility Energy Reporting System; UFC 3-400-02,<br>DOE Website: Buildings Energy Databook: Table 7.4 Typical Commercial Buildings | |
| **Formula Score** | 82.94 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.13 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.10 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.02 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 35 | Utilities | 1269 | . | Utilities Cost Rating (U3C) |
| 35 | Utilities | 1269 | .1 | Answer |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 1402.00 |
| **Title** | BAH Rate |
| **Criterion** | Cost of Ops / Manpower |
| **Attribute** | Cost Factors |
| **Formula** | Check the 2004 monthly BAH rate for an O-3 with dependents. See OSD question 1402, column 1 for this data.<br><br>If the BAH rate <= 746, get 100 points.<br>Otherwise, if the BAH rate >= 2013, get 0 points.<br>Otherwise, pro-rate the BAH rate between 746 and 2013 on a 100 to 0 scale.<br><br>Example:<br><br>The BAH rate is 974. 974 is 18% between 746 and 2013, which results in a score of 82.00.<br><br>. |
| **Source** | www.dtic.mil/perdiem/bah.html |

| | | |
|---|---|---|
| **Formula Score** | 67.32 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.88 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.59 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.29 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 13 | Finance | 1402 | . | BAH Rate |
| 13 | Finance | 1402 | .1 | BAH Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **C2ISR**

| | |
|---|---|
| **Formula** | 1403.00 |
| **Title** | GS Locality Pay Rate |
| **Criterion** | Cost of Ops / Manpower |
| **Attribute** | Cost Factors |
| **Formula** | Check the 2004 locality pay rate for the GS pay schedule. See OSD question 1403, column 1 for this data. (N/A equals 0.)<br><br>If the pay rate <= 10.90, get 100 points.<br>Otherwise, if the pay rate >= 20.37, get 0 points.<br>Otherwise, pro-rate the pay rate between 10.90 and 20.37 on a 100 to 0 scale.<br><br>Example:<br><br>The pay rate is 14.31, which is 36.01% of the way between 10.90 and 20.37, which results in a score of 63.99. |
| **Source** | Office of Personnel Management Web page |

| | | |
|---|---|---|
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.25 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | Question.Field | |
|---|---|---|
| 13 Finance | 1403 . | GS Locality Pay Rate |
| 13 Finance | 1403 . 1 | GS Locality Pay Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 8.00 |
| **Title** | Ramp Area and Serviceability |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the square yardage of every serviceable ramp at the installation. See OSD Question 8, column 9 to determine serviceability. (N/A means not serviceable.) See OSD Question 8, column 2 for the square yardage of that ramp.<br><br>If the total square yards of serviceable ramp is >= 241,000, get 100 points.<br><br>Otherwise, if the total square yards of serviceable ramp is >= 198,000, get 75 points.<br><br>Otherwise, if the total square yards of serviceable ramp is >= 66,000, get 25 points.<br><br>Otherwise, get 0 points.<br><br>Example:<br><br>The installation has three ramps, Alpha, Bravo and Charlie.<br>Alpha and Bravo are both fully serviceable and active; Charlie is not serviceable because of major sinkholes that have developed. Alpha has 50,000 square yards, Bravo has 20,000 square yards, and Charlie has 200,000 square yards, for a total of 70,000 serviceable square yards of ramps. This number is between 66,000 and 198,000, so it falls into the 25 point range. |
| **Source** | FLIP; AFCESA Pavement Evaluation/Condition Report/Survey; Existing Record Drawings or Physical Verification; Base Real Property Records |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.97 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.97 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | |
|---|---|---|---|
| 1 | Air/Space Operations | 9 . | Runways |
| 1 | Air/Space Operations | 9 .7 | Length |
| 1 | Air/Space Operations | 9 .8 | Width |
| 1 | Air/Space Operations | 9 .15 | Serviceable (5) |
| 28 | Real Property | 8 . | Ramp/Apron Space |
| 28 | Real Property | 8 .2 | Area |
| 28 | Real Property | 8 .9 | Serviceable (2) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 9.00 |
| **Title** | Runway Dimension and Serviceability |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the dimension of all serviceable runways that support the installation.<br><br>Calculate a score for each runway at the installation as follows:<br><br>If the runway is not serviceable, get 0 points. See OSD Question 9, column 15 for this data. (N/A means no.)<br><br>Otherwise, if the runway is < 150' wide, get 0 points. See OSD Question 9, column 8 for this data. (N/A means no.)<br><br>Otherwise, if the runway is < 8000' long, get 0 points. See OSD Question 9, column 7 for this data. (N/A means no.)<br><br>Otherwise, get 100 points.<br><br>The overall score is the highest score received by any one runway.<br><br>Example:<br><br>An installation has two runways, Alpha and Bravo. Alpha is 12,000' long, 160' wide, and full of huge holes because<br>it has partially been demolished, so it is not serviceable. Bravo is 8,300' long and 152' wide, plus it is fully serviceable. Runway Alpha scores 0 points because it isn't serviceable. Runway Bravo meets all the specified criteria so it gets 100 points. Runway Bravo has the highest score for any runway at the installation, so its score of 100 is used for the installation's score. |
| **Source** | FLIP; AFCESA Pavement Evaluation/Condition Report/Survey; Existing Record Drawings or Physical Verification; Base Real Property Records |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.28 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.28 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | |
|---|---|---|---|
| 1 | Air/Space Operations | 9 . | Runways |
| 1 | Air/Space Operations | 9 .1 | Airfield Identifier (ICAO 4 character identifier) |
| 1 | Air/Space Operations | 9 .7 | Length |
| 1 | Air/Space Operations | 9 .8 | Width |
| 1 | Air/Space Operations | 9 .15 | Serviceable (5) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Check the attainment designation classifications of the installation's NAAQS (National Ambient Air Quality Standard) for the following applicable criteria: Attainment, Nonattainment, Nonattainment (Deferred), Maintenance, and Unclassifiable. Identify the amount of the SIP emissions budget for non-attainment and maintenance criteria pollutants, if any, allocated to the installation.<br><br>Use the following formula to compute this score:<br><br>Multiply the Attainment / Emission Budget Growth Allowance MinA by the Attainment / Emission Budget Growth Allowance *B* for the base score. Add the SIP Score to the base score. If the base score is now over 100, reduce it to 100.<br><br>SIP Score:<br><br>Sum the Installation SIP Growth Allowance (Tons/Year)" for the following constituents: '001. VOC' and '002. Nox'.<br>See OSD question 221, column 3 for the Installation SIP Growth Allowance (Tons/Year). See OSD Question 221, column 1 for the constituent.<br>If the total is > 0, then SIP Score = 20, otherwise it is 0.<br><br>Attainment / Emission Budget Growth Allowance MinA and *B*:<br><br>Perform the following calculation for each of the specified criteria pollutants and pick the lowest value from them all.<br><br>The criteria pollutants are '002. PM10', '004. S02', '005. CO', 007. O3 (8hr)*'. See OSD Question 213, column 1 for this data.<br><br>Attainment / Emission Budget Growth Allowance MinA:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 100. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get 77.778.<br><br>Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get 66.667. See OSD Question 213, column 3 for this data.<br><br>Otherwise, if the NAAQS Classification is Serious, get 43.5.<br><br>Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get 25.714.<br><br>Otherwise, if the NAAQS Classification is Extreme, get 7.<br><br>Otherwise, get 0.<br><br>Attainment / Emission Budget Growth Allowance *B*:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 1. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get .9. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |

Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get .9. See OSD Question 213, column 3 for this data.

Otherwise, if the NAAQS Classification is Serious, get .8.

Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get .7.

Otherwise, if the NAAQS Classification is Extreme, get 1.

Otherwise, get 0.

Example:

The NAAQS Designation for 002. PM10 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.
The NAAQS Designation for 004. S02 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9
The NAAQS Designation for 005. CO is Nonattainment and the NAAQS Classification is Severe, which means 25.714 * .8.
The NAAQS Designation for 007. O3 (8hr)* is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.

25.714 * .8, which equals 20.5712, is the lowest value, so it becomes the base score.

The Installation SIP Growth Allowance (Tons/Year) for 001. VOC is 0, for 002. Nox it is 1. As the total of these two values is > 0, the SIP Score = 20, which needs to be added to the base score of 20.5712, for a new base score of 40.5712. This is less than 100, so it does not need to be reduced to 100, which makes the final score = 40.5712.

| | |
|---|---|
| **Source** | DoD#213: Current Edition of 40 CFR 81; or Federal Register; or Federal Register Citation to EPA's "final rule" approving the area's "maintenance plan" and "redesignation" of the area to "attainment status" DoD#221: State Implementation Plan |

| | | |
|---|---|---|
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.68 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 1.68 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| **Formula** | 213.00 |
|---|---|
| **Title** | Attainment / Emission Budget Growth Allowance |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 12 | Environment | 213 . | Air Quality Attainment |
| 12 | Environment | 213 . 2 | NAAQS Designation |
| 12 | Environment | 213 . 3 | NAAQS Classification |
| 12 | Environment | 221 . | SIP Emissions Budget |
| 12 | Environment | 221 . 1 | Criteria Pollutant |
| 12 | Environment | 221 . 3 | (b) Installation SIP Growth Allowance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1203.00 |
| **Title** | Access to Adequate Supersonic Airspace |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Operating Areas |
| **Formula** | Identify special use airspace that is suitable for supersonic training.<br><br>If installation has no runway or active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Otherwise, score each special use airspace suitable for supersonic training according to the following formula and return the single highest score.<br><br>% of Score Category<br>50 Operating Hours<br>50 Size<br><br>For Operating Hours:<br><br>A supersonic special use airspace gets 100 points if it is available for use 24 hours a day and 0 points if it is unavailable for use. (N/A means unavailable for use.) For operating hours between those two boundaries, pro-rate the score linearly. See OSD question 1276, column 2 for this data.<br><br>For Size:<br><br>If the supersonic special use airspace is at least 150 nautical miles (NM) by 80 NM in size, and has an altitude block >= 30,000, get 100 points. See OSD question 1276, column 7 for this data. (N/A means no.)<br><br>Otherwise, if it is at least 100 NM by 60NM and has an altitude block >= 30,000', get 80 points. See OSD question 1276, column 6 for this data. (N/A means no.)<br><br>Otherwise, if it is at least 100 NM by 50 NM and has an altitude block >= 30,000', get 60 points. See OSD question 1276, column 5 for this data. (N/A means no.)<br><br>Otherwise, if it is at least 80 NM by 40 NM and has an altitude block >= 30,000', get 40 points. See OSD question 1276, column 4 for this data. (N/A means no.)<br><br>Otherwise, if it has an airspace volume >= 2,100 NM squared and an altitude block >= 20,000', get 20 points. See OSD question 1276, column 3 for this data. (N/A means no.)<br><br>Otherwise, get 0 points.<br><br>Example:<br><br>A supersonic special use airspace is listed under OSD question 1276. It has an airspace of 105 NM by 61 NM in size, with an altitude block of 32,000?. That airspace is available for use 18 hours a day.<br><br>(80 points for 100 NM by 60 NM, 30,000? altitude block airspace * 50%)<br>+( (75 points for 18 hours of use / (difference between 24 hours and 0 hours)) * 50%),<br><br>This equates to 40 size points + 37.5 operating hours points = 77.5 points for this special use airspace. The overall score is the highest score received by any one special use airspace at the installation. |
| **Source** | DoD #1203; Digital Aeronautical Flight Information Files (DAFIF), 30 Sep 04; FAA ATCAA Database |

## Formula Sheet for Francis E. Warren AFB

## MCI: Fighter

| | | |
|---|---|---|
| **Formula** | 1203.00 | |
| **Title** | Access to Adequate Supersonic Airspace | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 6.72 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 6.72 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1276 | . | Airspace Attributes - Supersonic |
| 1 | Air/Space Operations | 1276 | .2 | Operating Hours |
| 1 | Air/Space Operations | 1276 | .3 | Airspace Volume >=2,100NM squared and 20,000' altitude block |
| 1 | Air/Space Operations | 1276 | .4 | At least 80NM x 40NM and altitude block >=30,000' |
| 1 | Air/Space Operations | 1276 | .5 | At least 100NM x 50NM and altitude block >=30,000' |
| 1 | Air/Space Operations | 1276 | .6 | At least 100NM x 60NM and altitude block >=30,000' |
| 1 | Air/Space Operations | 1276 | .7 | At least 150NM x 80NM and altitude block >=30,000' |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1205.10 |
| **Title** | Buildable Acres for Industrial Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Identify the number of "buildable," unconstrained, development acres available for industrial operations.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 3 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

| | | |
|---|---|---|
| **Formula Score** | 54.14 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.96 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 1.06 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.90 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 4 | CE Programming | 1205 . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 .3 | Total Unconstrained, Buildable Industrial Operations |

## Formula Sheet for Francis E. Warren AFB

## MCI: Fighter

| | |
|---|---|
| **Formula** | 1205.20 |
| **Title** | Buildable Acres for Air Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Buildable acres for air operations growth.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 5 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.96 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 1.96 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 4 | CE Programming | 1205 | . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 | .5 | Total Unconstrained, Buildable Airfield Operations/ Maintenance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1207.00 |
| **Title** | Level of Mission Encroachment |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Characterize the level of encroachment for the area in which the installation is located.<br><br>There are four categories of acres for this purpose: 65-69, 70-74, 75-79, and 80+. See OSD Question 1208, column 1 for this data.<br><br>For each category, compute a category total as follows:<br><br>If the total acres in that category = 0, get 0 points. See OSD question 1208, column 5. (N/A means 0.)<br>Otherwise, compute the ratio of residential acres to the respective total acres. See OSD question 1208, columns 4 for residential acres. (N/A means 0.)<br><br>Subtract the 65-69 category total from 1, then multiply the result by 0.13.<br>Subtract the 70-74 category total from 1, then multiply the result by 0.19.<br>Subtract the 75-79 category total from 1, then multiply the result by 0.28.<br>Subtract the 80+ category total from 1, then multiply the result by 0.4.<br><br>Add the above 4 amounts together and multiply the result by 100 for the raw total.<br><br>Add these points to the raw total as follows:<br><br>If the installation purchased "Restrictive Easements" on undeveloped or developed land, add 7 points. See OSD Question 1209, columns 2 and 3 for this data, where a Yes in either qualifies for the 7 points. (N/A means no.)<br><br>If the installation confirms "Land Use Controls that Correlate w/ AICUZ-JLUS Recommendation.", add 5 points. See OSD Question 1209, column 5 for this data, where a Yes qualifies for the 5 points. (N/A means no.)<br><br>If the installation is in a state that has Mandatory Coordination of Development Proposals or there is a Local Joint Land Use Coordinating Board, add 1 point. See OSD Question 1209, columns 6 or 8 for this data, where a Yes in either qualifies for the 1 point.<br><br>The above process can compute a score from 0 to 113.<br>If the computed score is > 100, it is dropped to 100.<br><br>Example:<br><br>60-65 Residential acres: 50<br>60-65 Total acres: 100<br>70-74 Residential acres: 50<br>70-74 Total acres: 100<br>75-79 Residential acres: 50<br>75-79 Total acres: 100<br>80+ Residential acres: 50<br>80+ Total acres: 100<br><br>Restrictive Easements = Yes (column 2) and No (column 3)<br>Land Use Controls ... = N/A<br>Mandatory Coordination ... = No and No.<br><br>((1 - ( 50 / 100)) * 0.13)<br>+ ((1 - ( 50 / 100)) * 0.19)<br>+ ((1 - ( 50 / 100)) * 0.28) |

## Formula Sheet for Francis E. Warren AFB

## MCI: Fighter

| | |
|---|---|
| **Formula** | 1207.00 |
| **Title** | Level of Mission Encroachment |
| | + ((1 - ( 50 / 100)) * 0.4)<br>+ 7<br>+ 0<br>+ 0 for a score of 7.5 points. |
| **Source** | 1207: AFI 32-7063, AFH 32-7084, AICUZ Report, Base Comprehensive Plan F Series maps or D Series as noted in AFI 32-7062 Atch7, local governmental zoning or land use planning authorities; 1208: AFI 32-7063, AICUZ Report, MAJCOM Approved Noise Study; 1209: State legislation, local referendums to purchase lands, zoning ordinance, noise exposure maps, noise control plans, documentation of state purchases of land |

| | | |
|---|---|---|
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.28 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 2.28 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 4 | CE Programming | 1208 | . | Installation - Encroachment (2 of 3) |
| 4 | CE Programming | 1208 | .4 | Residential |
| 4 | CE Programming | 1208 | .5 | Total Acres |
| 4 | CE Programming | 1209 | . | Installation - Encroachment (3 of 3) |
| 4 | CE Programming | 1209 | .2 | Purchased Restrictive Easements On Undeveloped Land (1) |
| 4 | CE Programming | 1209 | .3 | Purchased Restrictive Easements On Currently Developed Land (2) |
| 4 | CE Programming | 1209 | .5 | Land Use Controls that Correlate w/ AICUZ-JLUS Recommendation (4) |
| 4 | CE Programming | 1209 | .6 | Mandatory Coordination of Development Proposals (5) |
| 4 | CE Programming | 1209 | .8 | Local Joint Land Use Coordination Board (7) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1214.00 |
| **Title** | Fuel Dispensing Rate to Support Mobility and Surge |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Mobility/Surge |
| **Formula** | Check the installation's sustained jet fuel dispensing rate capability.<br><br>Sum the JP5 and JP8 figures for jet fuel dispensing. See OSD Question 1214, column 4, for both JP5 and JP8. (N/A equals 0.)<br><br>If the sum is >= 2,500,000 gallons, get 100 points. If the sum is = 0 gallons, get 0 points.<br><br>Otherwise, pro-rate the sum of gallons between 0 and 2,500,000 on a 0 to 100 point scale.<br><br>Example:<br><br>JP5 can handle 500,000 gallons. JP8 can handle 750,000 gallons, for a total of 1,250,000 gallons. 1,250,000 is halfway between 0 and 2,500,000 gallons, for a score of 50. |
| **Source** | Base Support Plan as required by AFI 10-404, Attachment 20 |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.64 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.64 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 15 | Fuel | 1214 | . | POL - Maximum Dispensing Rate |
| 15 | Fuel | 1214 | .1 | Jet Fuel Dispensing Rate |
| 15 | Fuel | 1214 | .4 | Sustained Jet Fuel Dispensing Rate |

# Formula Sheet for Francis E. Warren AFB

## MCI: Fighter

| | |
|---|---|
| **Formula** | 1221.00 |
| **Title** | Hangar Capability - Small Aircraft |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check to see if the installation has Aircraft Hangar Facilities that will accommodate F-15 sized aircraft: state the number of F-15-sized acft (61ft long x 45ft wingspan x 19ft high) that can fit in the installation's maintenance hangars without modification.<br><br>If the installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Otherwise, sum the number of aircraft the hangars can hold. See OSD Question 1221, column 2 for this data. (N/A equals 0.)<br><br>If the sum is >= 24 aircraft, get 100 points.<br>If the sum = 6 aircraft, get 25 points.<br>If the sum is < 6 aircraft, get 0 points.<br>Otherwise, pro-rate the number of aircraft between 6 and 24 on a 25 to 100 point scale.<br><br>Example:<br><br>1) There are 7 hangars at the installation, with the following capacities: 0, 0, 1, 2, 2, 0, and 0, for a sum of 5 aircraft. That is less than 6 aircraft, so the score is 0.<br><br>2) There are 7 hangars at the installation, with the following capacities: 1, 2, 3, 2, 2, 3, and 2, for a sum of 15 aircraft. 15 is halfway between 6 and 24, for a score of 50. |
| **Source** | Real Property Records, Record Drawings, UFC 3-260-01 |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.88 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 3.88 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 19 | Maintenance | 1221 | . | Hangar - Dimension |
| 19 | Maintenance | 1221 | .2 | F-15-sized Aircraft to Fit In Hangar |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1232.00 |
| **Title** | Sufficient Explosives-sited Parking |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | List the number of explosives-sited parking spots by MDS (Mission Design Series).<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the number of explosives sited parking spots. See OSD Question 1232, column 2 for this data. (N/A equals 0.)<br><br>If the total >= 47, get 100 points.<br>Otherwise, if the total >= 24, get 66 points.<br>Otherwise, if the total >= 12, get 33 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>The installation has two listings for explosive sited parking spots, with 5 and 20 respectively, which totals to 25.<br>25 is between 24 and 47, so the score is 66 points. |
| **Source** | AFMAN 91-201, Explosives Safety Standards; Installation Explosives Site Plan |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.65 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 3.65 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 36 | Safety | 1232 | . | Munitions - Live Load Area |
| 36 | Safety | 1232 | .2 | Number of Sited Parking Spots |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1233.00 |
| **Title** | Sufficient Munitions Storage |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | List maximum explosive capacity for the installation's hazard classification Class 1.1 munitions storage areas, in pounds. Maximum assumes F-117 18 PAA (GBU-27) and F/A-22 24 PAA (GBU-32 & AIM 120).<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Otherwise, total the capacity. See OSD question 1233, column 1 for this data. (N/A means 0.)<br><br>If the total >= 45312, get 100 points.<br>Otherwise, if the total >= 38520, get 75 points.<br>Otherwise, if the total >= 19260, get 25 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are two storage areas, with a capacity of 10,000 each, for a total of 20,000. 20,000 is between 19,260 and 38,250, so the score is 25 points. |
| **Source** | AFMAN 91-201, Explosives Safety Standards; Installation Explosives Site Plan |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 4.79 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 4.79 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 36 | Safety | 1233 | . | Munitions - Explosive Capacity w/o Waivers |
| 36 | Safety | 1233 | .1 | Hazard Class 1.1 |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1235.00 |
| **Title** | Installation Pavements Quality |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Identify if the installation pavement for the primary runway can support fighter aircraft operations.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Compute the runway pavement suitability score and the apron pavement suitability score. Each of these is worth 50% of the overall score.<br><br>Runway Pavement Suitability:<br><br>Find the highest PCN among all the runways. See OSD Question 1235, column 3 for this data. (N/A means 0.) Compute a score for every runway with that PCN and use the highest scoring runway.<br><br>Score the runway for runway pavement suitability as follows:<br><br>If the PCN is N/A or 0, get 0 points.<br>Otherwise, if the F-15E ACN divided by the PCN = 0, get 0 points. See OSD Question 1235, column 6 for the F-15E ACN. (N/A means 0.)<br>Otherwise, if the F-15E ACN divided by the PCN <= 1.0, then get 100 points.<br>Otherwise, if the F-16 ACN divided by the PCN = 0, get 0 points. See OSD Question 1235, column 9 for the F-16 ACN. (N/A means 0.)<br>Otherwise, if the F-16 ACN divided by the PCN <= 1.0, then get 75 points.<br>Otherwise, if the F-16 ACN divided by the PCN <= 1.1, then get 50 points.<br>Otherwise, get 0 points.<br><br>Apron pavement suitability:<br><br>Score each apron for pavement quality and choose the highest scoring apron.<br><br>Get the F-15E ACN. See OSD Question 1239, column 9 for this data. (N/A means 0.)<br>Get the F-16 ACN. See OSD Question 1239, column 8 for this data. (N/A means 0.)<br>Sum the apron pavement square yardage (see OSD Question 1239, column 2) where the F-15E ACN divided by the PCN > 0 and <= 1.0.<br>Sum the apron pavement square yardage where the F-16 ACN divided by the PCN > 0 and <= 1.0.<br><br>If the PCN is 0 or N/A, get 0 points. See OSD Question 1239, column 4 for this data.<br><br>Otherwise, if the F-15E square yardage >= 241,000, get 100 points.<br>Otherwise, if the F-16 square yardage >= 198,000, get 75 points.<br>Otherwise, if the F-16 square yardage >= 66,000, get 50 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are 2 runways on the base, but one has the highest runway pavement PCN value, which is 60. The ACN for an F-15E on that runway is 37, for an F-16 it is 18. 37 divided by 60 is <= 1.0, so the base gets 100 pts for runway pavement suitability.<br><br>There are 2 apron pavements on the base. Apron Alpha has a PCN of 50 and 100,000 square yards of surface. Apron Bravo has a PCN of 30 and 150,000 square yards. The ACNs for F-15Es and F-16s on both aprons are 37 and 18, respectively.<br><br>Apron Alpha's ACN/PCN ratio for F-15Es is 37/50, which is less that 1.0. This counts as 100,000 square yards for the F-15E. Apron Bravo's ACN/PCN ratio for F-15Es is 37/30, which is not less than 1.0, so it's square yards aren't counted towards F-15E square yardage. This gives us a total of |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1235.00 |
| **Title** | Installation Pavements Quality |

100,000 F-15E square yards, which is less than the 241,000 F-15E square yards needed for a runway pavement suitability score of 100 points.

Apron Alpha's ACN/PCN ratio for F-16s is 18/50, which is less that 1.0. This counts as 100,000 square yards for the F-16 Apron Bravo's ACN/PCN ratio for F-16s is 18/30, which is also less than 1.0, so it's square yards are also counted towards F-16 square yardage. This gives us a total of 250,000 F-16 square yards, which is more than the 198,000 F16 square yards needed for an apron pavement suitability score of 75 points.

50% of the Runway pavement suitability score of 100 equals 50. 50% of the apron pavement score of 75 equals 37.5. 50 plus 37.5 equals a score of 87.5

| | | |
|---|---|---|
| **Source** | AFCESA Pavement Evaluation Report and Base General Plan; Existing Record Drawings or Physical Verification; Base Real Property Records; FLIP; ASSR | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.97 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.97 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 37 | Airfield Pavements | 1235 | . | Airfield Pavements - Runway (1 of 2) |
| 37 | Airfield Pavements | 1235 | .3 | Controlling Feature PCN |
| 37 | Airfield Pavements | 1239 | . | Airfield Pavements - Aprons (1 of 2) |
| 37 | Airfield Pavements | 1239 | .2 | Total Size of Primary Facility (2) |
| 37 | Airfield Pavements | 1239 | .4 | Predominant Feature PCN (4) |
| 37 | Airfield Pavements | 1239 | .9 | ACN for F-15E at 81 Kips |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1241.00 |
| **Title** | Ability to Support Large-Scale Mobility Deployment |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Mobility/Surge |
| **Formula** | State installation's parking MOG for C-17 equivalents using surveyed/approved transient parking ramps.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Otherwise, total the number of C-17 equivalents the installation transient ramp can hold. See OSD question 1241, column 1 for this data. (N/A equals 0.)<br><br>If the total >= 6, get 100 points.<br>Otherwise, if the total >= 4, get 75 points.<br>Otherwise, if the total >= 2, get 25 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>The installation transient ramp can hold 5 C-17 equivalents. 5 is between 4 and 6, so the score is 75 points. |
| **Source** | ASR (Airfield Suitability Report) |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.76 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 1.76 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1241 | . | Ramp - Transient Capability |
| 39 | Airfield Management | 1241 | .1 | C-17 MOG |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1242.00 |
| **Title** | ATC Restrictions to Operations |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | List the percentage of installation departures delayed by Air Traffic Control.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Check the Delayed Departures Percentage. See OSD question 1242, column 5 for this data.<br><br>If the percentage delayed = 0, get 100 points.<br>Otherwise, if the percentage delayed is >= 3%, get 0 points.<br>Otherwise, pro-rate the percentage delayed between 0 to 3% on a 100 to 0 point scale.<br><br>Example:<br><br>The departure percentage delayed is 1%. 1% is one third of the way between 0 and 3%, so the score is 66.67 points. |
| **Source** | CAMS (Computerized Aircraft Maintenance System)/ G081 |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 5.98 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 5.98 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1242 | . | Air Operations - Departure Delays |
| 39 | Airfield Management | 1242 | .5 | Precentage Delayed for ATC |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1245.00 |
| **Title** | Proximity to Airspace Supporting Mission (ASM) |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>All airspace over 150 Nautical Miles (NM) away will be ignored. See OSD # 1245, column 2. (N/A means more than 250 NM.) Data is in OSD #s 1266, 1245 and 1274 must be matched via column 1 in each question.<br><br>Calculate each of the subcategories scores listed below, and weight as listed.<br>15% Airspace Volume (AV)<br>15% Operating Hours (OH)<br>10% Scoreable Range (SR)<br>11.25% Air to Ground Weapons Delivery (AGWD)<br>.75% Low Angle Strafe (LA)<br>3% Live Ordnance (LO)<br>5% IMC Weapon Release (IW)<br>5% Electronic Combat (EC)<br>10% Laser Use Auth. (LU)<br>10% Lights Out Capable (LC)<br>5% Flare Auth. (FA)<br>5% Chaff Auth. (CA)<br><br>Each of the subcategories use the following general pattern for calculating them:<br><br>Check the corresponding subcategory in formula #1266. If it would get 0 points for that subcategory, get 0 points here also.<br>Otherwise, Compute a raw total for the subcategory for the base according to this formula:<br>For each airspace:<br>If the distance to the airspace is > 150 miles, get 0 points.<br>Otherwise, if the distance to the airspace = 150 miles, get 10 points.<br>Otherwise, if the distance to the airspace = 50 miles, get 100 points.<br>Otherwise, pro-rate the distance to the airspace from 50 miles to 150 miles on a 100 to 10 point scale.<br><br>Once you have a base raw subcategory total, find the highest, and the lowest, non-zero raw total for the subcategory across all bases.<br>If the raw total = 0, that subcategory score = 0.<br>Else, if the raw total = the highest raw total, the subcategory score = 100.<br>Else, if the raw total = the lowest, non-zero raw total, the subcategory score = 10.<br>Else, pro-rate the raw total between the lowest non-zero raw total and the highest raw total on a 10 to 100 scale.<br><br>Once each score for each subcategory is known, multiply them by their respective weighting percentage and total the results for the overall score. The overall mechanism is very similar to that of formula #1266. |
| **Source** | FLIP AP-1A; IFR Supp; Falcon View or other certified flight planning software |

## Formula Sheet for Francis E. Warren AFB

## MCI: Fighter

| | | |
|---|---|---|
| **Formula** | 1245.00 | |
| **Title** | Proximity to Airspace Supporting Mission (ASM) | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 22.08 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 22.08 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1245 | . | Airspace - Distance to Airspace |
| 1 | Air/Space Operations | 1245 | .1 | Airspace/Route Designator |
| 1 | Air/Space Operations | 1245 | .2 | Distance to Airspace/Route |
| 2 | Army Operations | 1274 | . | Airspace Attributes - Ranges (2 of 2) |
| 2 | Army Operations | 1274 | .2 | Airspace Volume: at least 2,100NM cubed; altitude block >=20,000' |
| 2 | Army Operations | 1274 | .3 | Flare |
| 2 | Army Operations | 1274 | .4 | Chaff |
| 2 | Army Operations | 1274 | .5 | Live Ordnance |
| 27 | Ranges | 1266 | . | Airspace Attributes - Ranges (1 of 2) |
| 27 | Ranges | 1266 | .3 | Scoreable range complexes/target array |
| 27 | Ranges | 1266 | .4 | Air to Ground Weapons Delivery |
| 27 | Ranges | 1266 | .5 | Low Angle Strafe Authorized |
| 27 | Ranges | 1266 | .6 | IMC weapons release |
| 27 | Ranges | 1266 | .7 | Electronic Combat |
| 27 | Ranges | 1266 | .8 | Laser Use Authorized |
| 27 | Ranges | 1266 | .9 | Lights-Out Capable |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1246.00 |
| **Title** | Proximity to Low Level Routes Supporting Mission |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | Check the distance to all Airspace for Special Use (IR/VR routes) within 150NM radius of the installation.<br><br>If installation has no runway or active runway, or no serviceable, suitable runway then score 0 pts.<br><br>For a list of routes, see OSD Question 1246. The type of route can be found in column 1. Entry point distances are found in column 2. Exit point distances are found in column 3. For distances, N/A means 0 points.<br><br>IR Entry points, IR Exit points, VR Entry points and VR Exit points are each worth 25% of the score.<br><br>( .25 * "IR Entry") + ( .25 * "IR Exit") + ( .25 * "VR Entry") + ( .25 * "VR Exit")<br><br>Entry and Exit Point:<br><br>Within each of the above four categories, award each route points as follows:<br><br>If the distance = N/A, get 0 points.<br>Otherwise, the distance is <= 50 Nautical Miles (NM), get 100 points.<br>Otherwise, if the distance is = 150 NM, get 10 points.<br>Otherwise, pro-rate the distance between 50 NM and 150 NM on a 100 to 10 point scale.<br><br>Total the number of points received above for each base for each of the above four categories.<br><br>Get the highest base score in each of the above four categories.<br>Get the lowest, non-zero score in each of the above four categories.<br><br>If the installation's score for one of the above categories = 0, it remains 0.<br>Otherwise, if the installation's score for one of the above categories = the highest score in its respective category, get 100 points.<br>Otherwise, if the installation's score for one of the above categories = the lowest non-zero score in its respective category, get 10 points.<br>Otherwise, pro-rate the installation's score between the lowest non-zero and highest score in its respective category on a 10 to 100 point scale.<br><br>Example:<br><br>Two IR routes and 1 VR route.<br><br>IR Route Alpha has an entry point 35 miles away and an exit point 100 miles away.<br>IR Route Bravo has an entry point 150 miles away and an exit point 160 miles away.<br><br>Alpha's entry point is within 50 miles, so its IR Entry amount is 100 points. The exit point 100 miles distant is 50 percent of the way between 50 and 150 miles, so its IR Exit point amount is 55 points.<br><br>Bravo's entry point is 150 miles away, so its IR Entry amount is 10 points. The exit point is 160 miles away, so its amount is 0 points.<br><br>The IR Entry total for these two routes is 100 + 10 for 110 points. The total IR Exit total for these two routes is 55 + 0 for 55 points.<br><br>The highest IR Entry total for any base is 165 and the lowest non-zero IR Entry total for any base is 30.<br>The highest IR Exit total for any base is 105 and the lowest non-zero IR Exit total for any base is 5. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1246.00 |
| **Title** | Proximity to Low Level Routes Supporting Mission |

So, this base's IR Entry score is 100, because 165 is equal to the highest score of any base.
Pro-rating the IR Exit total of 55 between 5 and 105 on a 10 to 100 point scale gives this base an IR Exit score of 55.

VR Route Charlie has an entry point 40 miles away and an exit point 45 miles away.

Both the entry and exit point are within 50 miles, so both the VR Entry and VR Exit category amounts get 100 points.
As there is only one VR route, that makes the VR route totals the same, 100 points each.

The highest VR Entry total for any base is 300 and the lowest non-zero VR Entry total for any base is 50 points.
Ditto for the VR Exit totals.

So, this base's VR Entry score of 100 is pro-rated between 50 and 300 on a 10 to 100 scale. Since 100 is 20% of the way from 50 to 300, the VR Entry score is 28 points.
Ditto for the VR Exit totals.

By applying the 25% weighting to each of the four category scores, in IR Entry, IR Exit, VR Entry and VR Exit order, we get the overall score:

(.25 * 100) + (.25 * 55) + (.25 * 28) + (.25 * 28), for an overall score of 52.75 points.

| | | |
|---|---|---|
| **Source** | FLIP AP-1B; IFR Supp; Falcon View or other certified flight planning software | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 7.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 7.25 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1246 | . | Airspace - Distance to Routes |
| 1 | Air/Space Operations | 1246 | .1 | Route Designator |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1250.00 |
| **Title** | Area Cost Factor |
| **Criterion** | Cost of Ops / Manpower |
| **Attribute** | Cost Factors |
| **Formula** | Evaluate the Area Cost Factor for each installation.<br><br>Find the lowest area cost factor listed for that installation. See OSD question 1250, column 2 for this data.<br><br>If the area cost factor <= 0.78, get 100 points.<br>Otherwise, if the area cost factor >= 1.42, get 0 points.<br>Otherwise, pro-rate the area cost factor between 0.78 and 1.42, on a 100 to 0 point scale.<br><br>Example:<br><br>The lowest area cost factor for the base is 1.3. 1.3 is 81.25% of the way between 0.78 and 1.42, so the score is 18.75 points. |
| **Source** | DoD Facilities Pricing Guide, Table B, March 2004 |

| | | |
|---|---|---|
| **Formula Score** | 65.63 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.82 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.43 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 4 | CE Programming | 1250 | . | Area Cost Factor |
| 4 | CE Programming | 1250 | .2 | Area Cost Factor |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1266.00 |
| **Title** | Range Complex (RC) Supports Mission |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Operating Areas |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>All airspace over 150 Nautical Miles (NM) away will be ignored. See OSD # 1245, column 2. (N/A means more than 250 NM.) Data is in OSD #s 1266, 1245 and 1274 must be matched via column 1 in each question.<br><br>Calculate each of the subcategories scores listed below, and weight as listed.<br>15% Airspace Volume (AV)<br>15% Operating Hours (OH)<br>10% Scoreable Range (SR)<br>11.25% Air to Ground Weapons Delivery (AGWD)<br>.75% Low Angle Strafe (LA)<br>3% Live Ordnance (LO)<br>5% IMC Weapon Release (IW)<br>10% Electronic Combat (EC)<br>10% Laser Use Auth. (LU)<br>10% Lights Out Capable (LC)<br>5% Flare Auth. (FA)<br>5% Chaff Auth. (CA)<br><br>Each of the subcategories use the following general pattern for calculating them:<br><br>Compute a raw total for the base by following the instructions for the respective subcategory total.<br>Find the highest, and the lowest, non-zero raw total for the subcategory across all bases.<br>If the raw total = 0, that subcategory score = 0.<br>Else, if the raw total = the highest raw total, the subcategory score = 100.<br>Else, if the raw total = the lowest, non-zero raw total, the subcategory score = 10.<br>Else, pro-rate the raw total between the lowest non-zero score and the highest score on a 10 to 100 scale.<br><br>Once each score for each subcategory is known, multiply them by their respective weighting percentage and total the results for the overall score.<br><br>AV Raw Total:<br><br>Get AV for the pts. See OSD # 1277, column 1. (N/A means 0.)<br><br>OH Raw Total:<br><br>Sum the pts for each airspace:<br>If the OH < 1 or = N/A, get 0 pts. See OSD # 1266, column 2.<br>Else, if the OH = 1 or IMTMT or INTMT, get 10 pts.<br>Else, if the OH = 24 or NOTAM, get 100 pts.<br>Else, pro-rate the OH between 0 and 24 on a 10 to 100 point scale.<br><br>SR Raw Total:<br><br>Sum the pts for each airspace:<br>If the SR = Yes, get 100 pts. See OSD # 1266, column.3.<br>Else, get 0 pts.<br><br>AGWD Raw Total:<br><br>Sum the pts for each airspace: |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1266.00 |
| **Title** | Range Complex (RC) Supports Mission |

If the AGWD = Yes, get 100 pts. See OSD # 1266 column 4.
Else, get 0 pts.

LA Raw Total:

Sum the pts for each airspace:
If the LA = Yes, get 100 pts. See OSD # 1266 column 5.
Else, get 0 pts.

LO Raw Total:

Sum the pts for each airspace:
If LO = Yes, get 100 pts. See OSD # 1274, column 5.
Else, get 0 pts.

IW Raw Total:

Sum the pts for each airspace:
If IW = Yes, get 100 pts. See OSD # 1266, column 6.
Else, get 0 pts.

EC Raw Total:

Sum the pts for each airspace:
If EC = Yes, get 100 pts. See OSD # 1266, column.7.
Else, get 0 pts.

LU Raw Total:

Sum the pts for each airspace:
If LU = Yes, get 100 pts. See OSD # 1266, column 8.
Else, get 0 pts.

LC Raw Total

Sum the pts for each airspace:
If LC = Yes, get 100 pts. See OSD # 1266, column 9.
Else, get 0 pts.

FA Raw Total

Sum the pts for each airspace:
If FA = Yes, get 100 pts. See OSD # 1274, column 3.
Else, get 0 pts.

CA Raw Total

Sum the pts for each airspace:
If CA = Yes, get 100 pts. See OSD # 1274, column 4.
Else, get 0 pts.

Example:

AV = 20,000, get 20,000 pts; 10.

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | | |
|---|---|---|
| **Formula** | 1266.00 | |
| **Title** | Range Complex (RC) Supports Mission | |
| | There are two airspaces within 150 NM, and they both have these characteristics (which means their raw totals will be double the number of pts listed) followed by the lowest non-zero and highest raw totals across all bases and subcategory scores.<br><br>OH = NOTAM, get 100 pts; 20,000 to 150,000 pts; 10.<br>SR = Yes, get 100 pts; 200 to 500 pts; 10.<br>AGWD = No, get 0 pts; 200 to 1000 pts; 10.<br>LA = No, get 0 pts; 200 to 1000 pts; 0.<br>LO = Yes, get 100 pts; 500 to 1000 pts; 10.<br>IW = N/A, get 0 pts; 200 to 2000 pts; 0.<br>EC = N/A, get 0 pts; 200 to 1000 pts; 0.<br>LU = Yes, get 100 pts; 100 to 1000 pts; 20.<br>LC = Yes, get 100 pts; 200 to 1000 pts; 10.<br>FA = No, get 0 pts; 100 to 1000 pts; 0.<br>CA = No, get 0 pts; 100 to 1000 pts; 0.<br><br>Weighted, the overall score = 8.425 pts. | |
| **Source** | FLIP AP-1A; Falcon View or other certified flight planning software | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 11.95 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 11.95 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| **Formula** | 1266.00 |
|---|---|
| **Title** | Range Complex (RC) Supports Mission |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1245 | . | Airspace - Distance to Airspace |
| 1 | Air/Space Operations | 1245 | .2 | Distance to Airspace/Route |
| 1 | Air/Space Operations | 1277 | . | Airspace Attributes - Volume |
| 1 | Air/Space Operations | 1277 | .1 | 150NM radius |
| 2 | Army Operations | 1274 | . | Airspace Attributes - Ranges (2 of 2) |
| 2 | Army Operations | 1274 | .3 | Flare |
| 2 | Army Operations | 1274 | .4 | Chaff |
| 2 | Army Operations | 1274 | .5 | Live Ordnance |
| 27 | Ranges | 1266 | . | Airspace Attributes - Ranges (1 of 2) |
| 27 | Ranges | 1266 | .1 | Airspace Designator |
| 27 | Ranges | 1266 | .2 | Operating Hours |
| 27 | Ranges | 1266 | .3 | Scoreable range complexes/target array |
| 27 | Ranges | 1266 | .4 | Air to Ground Weapons Delivery |
| 27 | Ranges | 1266 | .5 | Low Angle Strafe Authorized |
| 27 | Ranges | 1266 | .6 | IMC weapons release |
| 27 | Ranges | 1266 | .7 | Electronic Combat |
| 27 | Ranges | 1266 | .8 | Laser Use Authorized |
| 27 | Ranges | 1266 | .9 | Lights-Out Capable |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1269.00 |
| **Title** | Utilities cost rating (U3C) |
| **Criterion** | Cost of Ops / Manpower |
| **Attribute** | Cost Factors |
| **Formula** | Check the Utilities Costs and Climatic Consideration (U3C) Rating for the installation.<br><br>If the U3C rating is <= .59, get 100 points. See OSD Question 1269, column 1 for this data.<br>Otherwise, if the U3C rating is >= 2.29, get 0 points.<br>Otherwise, pro-rate the U3C rating between .59 and 2.29 on a 100 to 0 scale.<br><br>Example:<br><br>The U3C rating is 1.6. 1.6 is 59.41% of the way between .59 and 2.29, so the score is 40.59. |
| **Source** | ASHRAE Standards; DoD 5126.46-M-2, Defense Utility Energy Reporting System; UFC 3-400-02,<br>DOE Website: Buildings Energy Databook: Table 7.4 Typical Commercial Buildings |

| | | |
|---|---|---|
| **Formula Score** | 82.94 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.13 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.10 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.02 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 35 | Utilities | 1269 | . | Utilities Cost Rating (U3C) |
| 35 | Utilities | 1269 | .1 | Answer |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | |
|---|---|
| **Formula** | 1270.00 |
| **Title** | Suitable Auxiliary Airfields Within 50NM |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | Identify runways within 50 NM of the installation that are 8,000ft x 150ft or greater and are suitable for use as an auxiliary runway.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>For each airfield listed in OSD Question 1270, if it is > 50 nautical miles (NM) away, it is not qualified to be counted. See OSD Question 1270, column 2 for this data. (N/A equals not qualified.)<br><br>If the count >= 3, get 100 points.<br>Otherwise, if the count = 2, get 75 points.<br>Otherwise, if the count = 1, get 50 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are three airfields listed, Alpha, Bravo and Charlie, at distances away of 20, 40, and 200 NM away respectively. Alpha and Bravo are both within the 50 NM limit, so they are qualified. Charlie is 200 NM away, which is > 50 NM, so it is not qualified. The number of qualified airfields for auxiliary use = 2, which results in a score of 75 points. |
| **Source** | FLIP and Falcon View (or any other certified flight planning software) |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 5.18 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 5.18 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1270 | . | Air Operations - Auxiliary Airfield |
| 39 | Airfield Management | 1270 | .1 | Airfield Name |
| 39 | Airfield Management | 1270 | .2 | Distance Main Runway to Aux field |

## Formula Sheet for Francis E. Warren AFB

## MCI: Fighter

| | |
|---|---|
| **Formula** | 1271.00 |
| **Title** | Prevailing Installation Weather Conditions |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | Check the average number of days annually the prevailing weather is better than 3000'/3 Nautical Miles (NM).<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>If the average number of days >= 300, get 100 points. See OSD question 1271, column 3 for this data.<br>Otherwise, if the average number of days <= 250, get 0 points.<br>Otherwise, pro-rate the average number of days between 250 and 300 on a 0 to 100 scale.<br><br>Example:<br><br>The average number of days annually where the prevailing weather is better than 3000'/3 NM is 275.<br>275 is halfway between 250 and 300, for a score of 50. |
| **Source** | AFCCC Climatological tables |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 5.52 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 5.52 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1271 | . | Air Operations - Prevailing Weather |
| 39 | Airfield Management | 1271 | .3 | Weather > 3000'/3NM |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | | |
|---|---|---|
| **Formula** | 1402.00 | |
| **Title** | BAH Rate | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the 2004 monthly BAH rate for an O-3 with dependents. See OSD question 1402, column 1 for this data.<br><br>If the BAH rate <= 746, get 100 points.<br>Otherwise, if the BAH rate >= 2013, get 0 points.<br>Otherwise, pro-rate the BAH rate between 746 and 2013 on a 100 to 0 scale.<br><br>Example:<br><br>The BAH rate is 974. 974 is 18% between 746 and 2013, which results in a score of 82.00. | |
| **Source** | www.dtic.mil/perdiem/bah.html | |
| **Formula Score** | 67.32 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.88 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.59 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.29 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 13 | Finance | 1402 | . | BAH Rate |
| 13 | Finance | 1402 | .1 | BAH Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Fighter**

| | | |
|---|---|---|
| **Formula** | 1403.00 | |
| **Title** | GS Locality Pay Rate | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the 2004 locality pay rate for the GS pay schedule. See OSD question 1403, column 1 for this data. (N/A equals 0.)<br><br>If the pay rate <= 10.90, get 100 points.<br>Otherwise, if the pay rate >= 20.37, get 0 points.<br>Otherwise, pro-rate the pay rate between 10.90 and 20.37 on a 100 to 0 scale.<br><br>Example:<br><br>The pay rate is 14.31, which is 36.01% of the way between 10.90 and 20.37, which results in a score of 63.99. | |
| **Source** | Office of Personnel Management Web page | |
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.25 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | Question.Field | |
|---|---|---|
| 13 Finance | 1403 . | GS Locality Pay Rate |
| 13 Finance | 1403 . 1 | GS Locality Pay Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 8.00 |
| **Title** | Ramp Area and Serviceability |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the square yardage of every serviceable ramp at the installation. See OSD Question 8, column 9 to determine serviceability. (N/A means not serviceable.) See OSD Question 8, column 2 for the square yardage of that ramp.<br><br>If the total square yards of serviceable ramp is >= 240,000, get 100 points.<br><br>Otherwise, if the total square yards of serviceable ramp is >= 139,000, get 75 points.<br><br>Otherwise, if the total square yards of serviceable ramp is >= 60,000, get 25 points.<br><br>Otherwise, get 0 points.<br><br>Example:<br><br>The installation has three ramps, Alpha, Bravo and Charlie.<br>Alpha and Bravo are both fully serviceable and active; Charlie is not serviceable because of major sinkholes that have developed. Alpha has 50,000 square yards, Bravo has 20,000 square yards, and Charlie has 200,000 square yards, for a total of 70,000 serviceable square yards of ramps. This number is between 60,000 and 139,000, so it falls into the 25 point range. |
| **Source** | FLIP; AFCESA Pavement Evaluation/Condition Report/Survey; Existing Record Drawings or Physical Verification; Base Real Property Records |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 4.67 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 4.67 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 28 | Real Property | 8 | . | Ramp/Apron Space |
| 28 | Real Property | 8 | .2 | Area |
| 28 | Real Property | 8 | .9 | Serviceable (2) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 9.00 |
| **Title** | Runway Dimension and Serviceability |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the dimension of all serviceable runways that support the installation.<br><br>Calculate a score for each runway at the installation as follows:<br><br>If the runway is not serviceable, get 0 points. See OSD Question 9, column 15 for this data. (N/A means no.)<br><br>Otherwise, if the runway is < 150' wide, get 0 points. See OSD Question 9, column 8 for this data. (N/A means no.)<br><br>Otherwise, if the runway is < 8,000' long, get 0 points. See OSD Question 9, column 7 for this data. (N/A means 0.)<br>Otherwise, if the runway is >= 10,000' long, get 100 points.<br><br>Otherwise, pro-rate the runway length from 8,000' to 10,000' on a 50 to 100 scale to get the points.<br><br>The overall score is the highest score received by any one runway.<br><br>Example:<br><br>An installation has two runways, Alpha and Bravo. Alpha is 12,000' long, 160' wide, and full of huge holes because<br>it has partially been demolished, so it is not serviceable. Bravo is 9,000' long and 152' wide, plus it is fully serviceable. Runway Alpha scores 0 points because it isn't serviceable. Runway Bravo meets all the specified criteria so it gets some points. 9,000' is halfway between 8,000' and 10,000', so Runway Bravo gets 75 points. Runway Bravo has the highest score for any runway at the installation, so its score of 75 is used for the installation's score. |
| **Source** | FLIP; AFCESA Pavement Evaluation/Condition Report/Survey; Existing Record Drawings or Physical Verification; Base Real Property Records |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.80 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.80 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Check the attainment designation classifications of the installation's NAAQS (National Ambient Air Quality Standard) for the following applicable criteria: Attainment, Nonattainment, Nonattainment (Deferred), Maintenance, and Unclassifiable. Identify the amount of the SIP emissions budget for non-attainment and maintenance criteria pollutants, if any, allocated to the installation.<br><br>Use the following formula to compute this score:<br><br>Multiply the Attainment / Emission Budget Growth Allowance MinA by the Attainment / Emission Budget Growth Allowance *B* for the base score. Add the SIP Score to the base score. If the base score is now over 100, reduce it to 100.<br><br>SIP Score:<br><br>Sum the Installation SIP Growth Allowance (Tons/Year)" for the following constituents: '001. VOC' and '002. Nox'.<br>See OSD question 221, column 3 for the Installation SIP Growth Allowance (Tons/Year). See OSD Question 221, column 1 for the constituent.<br>If the total is > 0, then SIP Score = 20, otherwise it is 0.<br><br>Attainment / Emission Budget Growth Allowance MinA and *B*:<br><br>Perform the following calculation for each of the specified criteria pollutants and pick the lowest value from them all.<br><br>The criteria pollutants are '002. PM10', '004. S02', '005. CO', 007. O3 (8hr)*'. See OSD Question 213, column 1 for this data.<br><br>Attainment / Emission Budget Growth Allowance MinA:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 100. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get 77.778.<br><br>Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get 66.667. See OSD Question 213, column 3 for this data.<br><br>Otherwise, if the NAAQS Classification is Serious, get 43.5.<br><br>Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get 25.714.<br><br>Otherwise, if the NAAQS Classification is Extreme, get 7.<br><br>Otherwise, get 0.<br><br>Attainment / Emission Budget Growth Allowance *B*:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 1. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get .9. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |

Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get .9. See OSD Question 213, column 3 for this data.

Otherwise, if the NAAQS Classification is Serious, get .8.

Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get .7.

Otherwise, if the NAAQS Classification is Extreme, get 1.

Otherwise, get 0.

Example:

The NAAQS Designation for 002. PM10 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.
The NAAQS Designation for 004. S02 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9
The NAAQS Designation for 005. CO is Nonattainment and the NAAQS Classification is Severe, which means 25.714 * .8.
The NAAQS Designation for 007. O3 (8hr)* is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.

25.714 * .8, which equals 20.5712, is the lowest value, so it becomes the base score.

The Installation SIP Growth Allowance (Tons/Year) for 001. VOC is 0, for 002. Nox it is 1. As the total of these two values is > 0, the SIP Score = 20, which needs to be added to the base score of 20.5712, for a new base score of 40.5712. This is less than 100, so it does not need to be reduced to 100, which makes the final score = 40.5712.

| | |
|---|---|
| **Source** | DoD#213: Current Edition of 40 CFR 81; or Federal Register; or Federal Register Citation to EPA's "final rule" approving the area's "maintenance plan" and "redesignation" of the area to "attainment status" DoD#221: State Implementation Plan |

| | | |
|---|---|---|
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.68 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 1.68 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| **Formula** | 213.00 |
|---|---|
| **Title** | Attainment / Emission Budget Growth Allowance |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 12 | Environment | 213 . | Air Quality Attainment |
| 12 | Environment | 213 . 2 | NAAQS Designation |
| 12 | Environment | 213 . 3 | NAAQS Classification |
| 12 | Environment | 221 . | SIP Emissions Budget |
| 12 | Environment | 221 . 1 | Criteria Pollutant |
| 12 | Environment | 221 . 3 | (b) Installation SIP Growth Allowance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1205.10 |
| **Title** | Buildable Acres for Industrial Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Identify the number of "buildable," unconstrained,development acres available for industrial operations.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 3 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

| | | |
|---|---|---|
| **Formula Score** | 54.14 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.96 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 1.06 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.90 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 4 | CE Programming | 1205 . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 .3 | Total Unconstrained, Buildable Industrial Operations |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1205.20 |
| **Title** | Buildable Acres for Air Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Buildable acres for air operations growth.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 5 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.96 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 1.96 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 4 | CE Programming | 1205 | . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 | .5 | Total Unconstrained, Buildable Airfield Operations/ Maintenance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1207.00 |
| **Title** | Level of Mission Encroachment |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Characterize the level of encroachment for the area in which the installation is located.<br><br>There are four categories of acres for this purpose: 65-69, 70-74, 75-79, and 80+. See OSD Question 1208, column 1 for this data.<br><br>For each category, compute a category total as follows:<br><br>If the total acres in that category = 0, get 0 points. See OSD question 1208, column 5. (N/A means 0.)<br>Otherwise, compute the ratio of residential acres to the respective total acres. See OSD question 1208, columns 4 for residential acres. (N/A means 0.)<br><br>Subtract the 65-69 category total from 1, then multiply the result by 0.13.<br>Subtract the 70-74 category total from 1, then multiply the result by 0.19.<br>Subtract the 75-79 category total from 1, then multiply the result by 0.28.<br>Subtract the 80+ category total from 1, then multiply the result by 0.4.<br><br>Add the above 4 amounts together and multiply the result by 100 for the raw total.<br><br>Add these points to the raw total as follows:<br><br>If the installation purchased "Restrictive Easements" on undeveloped or developed land, add 7 points. See OSD Question 1209, columns 2 and 3 for this data, where a Yes in either qualifies for the 7 points. (N/A means no.)<br><br>If the installation confirms "Land Use Controls that Correlate w/ AICUZ-JLUS Recommendation.", add 5 points. See OSD Question 1209, column 5 for this data, where a Yes qualifies for the 5 points. (N/A means no.)<br><br>If the installation is in a state that has Mandatory Coordination of Development Proposals or there is a Local Joint Land Use Coordinating Board, add 1 point. See OSD Question 1209, columns 6 or 8 for this data, where a Yes in either qualifies for the 1 point.<br><br>The above process can compute a score from 0 to 113.<br>If the computed score is > 100, it is dropped to 100.<br><br>Example:<br><br>60-65 Residential acres: 50<br>60-65 Total acres: 100<br>70-74 Residential acres: 50<br>70-74 Total acres: 100<br>75-79 Residential acres: 50<br>75-79 Total acres: 100<br>80+ Residential acres: 50<br>80+ Total acres: 100<br><br>Restrictive Easements = Yes (column 2) and No (column 3)<br>Land Use Controls ... = N/A<br>Mandatory Coordination ... = No and No.<br><br>((1 - ( 50 / 100)) * 0.13)<br>+ ((1 - ( 50 / 100)) * 0.19)<br>+ ((1 - ( 50 / 100)) * 0.28) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | | |
|---|---|---|
| **Formula** | 1207.00 | |
| **Title** | Level of Mission Encroachment | |
| | + ((1 - ( 50 / 100)) * 0.4)<br>+ 7<br>+ 0<br>+ 0 for a score of 7.5 points. | |
| **Source** | 1207: AFI 32-7063, AFH 32-7084, AICUZ Report, Base Comprehensive Plan F Series maps or D Series as noted in AFI 32-7062 Atch7, local governmental zoning or land use planning authorities; 1208: AFI 32-7063, AICUZ Report, MAJCOM Approved Noise Study; 1209: State legislation, local referendums to purchase lands, zoning ordinance, noise exposure maps, noise control plans, documentation of state purchases of land | |
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.49 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 1.49 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 4 | CE Programming | 1208 | . | Installation - Encroachment (2 of 3) |
| 4 | CE Programming | 1208 | .4 | Residential |
| 4 | CE Programming | 1208 | .5 | Total Acres |
| 4 | CE Programming | 1209 | . | Installation - Encroachment (3 of 3) |
| 4 | CE Programming | 1209 | .2 | Purchased Restrictive Easements On Undeveloped Land (1) |
| 4 | CE Programming | 1209 | .3 | Purchased Restrictive Easements On Currently Developed Land (2) |
| 4 | CE Programming | 1209 | .5 | Land Use Controls that Correlate w/ AICUZ-JLUS Recommendation (4) |
| 4 | CE Programming | 1209 | .6 | Mandatory Coordination of Development Proposals (5) |
| 4 | CE Programming | 1209 | .8 | Local Joint Land Use Coordination Board (7) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1214.00 |
| **Title** | Fuel Dispensing Rate to Support Mobility and Surge |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Mobility/Surge |
| **Formula** | Check the installation's sustained jet fuel dispensing rate capability.<br><br>Sum the JP5 and JP8 figures for jet fuel dispensing. See OSD Question 1214, column 4, for both JP5 and JP8. (N/A equals 0.)<br><br>If the sum is >= 2,500,000 gallons, get 100 points. If the sum is = 0 gallons, get 0 points.<br><br>Otherwise, pro-rate the sum of gallons between 0 and 2,500,000 on a 0 to 100 point scale.<br><br>Example:<br><br>JP5 can handle 500,000 gallons. JP8 can handle 750,000 gallons, for a total of 1,250,000 gallons. 1,250,000 is halfway between 0 and 2,500,000 gallons, for a score of 50. |
| **Source** | Base Support Plan as required by AFI 10-404, Attachment 20 |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.76 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 1.76 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 15 | Fuel | 1214 | . | POL - Maximum Dispensing Rate |
| 15 | Fuel | 1214 | .1 | Jet Fuel Dispensing Rate |
| 15 | Fuel | 1214 | .4 | Sustained Jet Fuel Dispensing Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1232.00 |
| **Title** | Sufficient Explosives-sited Parking |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | List the number of explosives-sited parking spots by MDS (Mission Design Series).<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the number of explosives sited parking spots. See OSD Question 1232, column 2 for this data. (N/A equals 0.)<br><br>If the total >= 10, get 100 points.<br>Otherwise, if the total >= 9, get 66 points.<br>Otherwise, if the total >= 8, get 33 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>The installation has two listings for explosive sited parking spots, with 5 and 4 respectively, which totals to 9.<br>9 is between 9 and 10, so the score is 66 points. |
| **Source** | AFMAN 91-201, Explosives Safety Standards; Installation Explosives Site Plan |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.24 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.24 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 36 | Safety | 1232 | . | Munitions - Live Load Area |
| 36 | Safety | 1232 | .2 | Number of Sited Parking Spots |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1233.00 |
| **Title** | Sufficient Munitions Storage |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | List maximum explosive capacity for the installation's hazard classification Class 1.1 munitions storage areas, in pounds. Maximum assumes one AC-130 squadron of 12 PAA and minimum of 8 PAA and 3 PAA HH-60 (HH-60 storage requirement absorbed by AC-130 capacity with no lost capability).<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Otherwise, total the capacity. See OSD question 1233, column 1 for this data. (N/A means 0.)<br><br>If the total >= 564460, get 100 points.<br>Otherwise, if the total >= 376380, get 75 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are two storage areas, with a capacity of 200,000 each, for a total of 400,000. 400,000 is between 376,380 and 564,660, so the score is 75 points. |
| **Source** | AFMAN 91-201, Explosives Safety Standards; Installation Explosives Site Plan. |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.80 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.80 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 36 | Safety | 1233 | . | Munitions - Explosive Capacity w/o Waivers |
| 36 | Safety | 1233 | .1 | Hazard Class 1.1 |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1235.00 |
| **Title** | Installation Pavements Quality |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Identify if the installation pavement for the primary runway can support SOF / CSAR aircraft operations.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Compute the runway pavement suitability score and the apron pavement suitability score. Each of these is worth 50% of the overall score.<br><br>Runway Pavement Suitability:<br><br>Find the highest PCN among all the runways. See OSD Question 1235, column 3 for this data. (N/A means 0.) Compute a score for every runway with that PCN and use the highest scoring runway.<br><br>Score the runway for runway pavement suitability as follows:<br><br>If the PCN is N/A or 0, get 0 points.<br>Otherwise, if the C-5B ACN divided by the PCN = 0, get 0 points. See OSD Question 1236, column 6 for the C-5B ACN. (N/A means 0.)<br>Otherwise, if the C-5B ACN divided by the PCN <= 1.0, then get 100 points.<br>Otherwise, if the C-5B ACN divided by the PCN <= 1.1, then get 75 points.<br>Otherwise, get 0 points.<br><br>Apron pavement suitability:<br><br>Score each apron for pavement quality and choose the highest scoring apron.<br><br>Get the C-5B ACN. See OSD Question 1240, column 8 for this data. (N/A means 0.)<br>If the PCN is 0 or N/A, get 0 points. See OSD Question 1239, column 4 for this data.<br>Otherwise, sum the apron pavement square yardage (see OSD Question 1239, column 2) where the C-5B ACN divided by the PCN > 0 and <= 1.0.<br><br>If the C-5B square yardage >= 240,000, get 100 points.<br>Otherwise, if the C-5B square yardage >= 120,000, get 50 points.<br>Otherwise, if the C-5B square yardage >= 60,000, get 25 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are 2 runways on the base, but one has the highest runway pavement PCN value, which is 60. The ACN for a C-5B on that runway is 40, 40 divided by 60 is <= 1.0, so the base gets 100 pts for runway pavement suitability.<br><br>There are 2 apron pavements on the base. Apron Alpha has a PCN of 50 and 100,000 square yards of surface. Apron Bravo has a PCN of 30 and 150,000 square yards. The ACN for C-5Bs on both aprons is 45.<br><br>Apron Alpha's ACN/PCN ratio for C-5Bs is 45/50, which is less that 1.0. This counts as 100,000 square yards for the C-5B Apron Bravo's ACN/PCN ratio for C-5Bs is 45/30, which is more than 1.0, so it's square yards aren't counted towards C-5B square yardage. This gives us a total of 100,000 C-5B square yards, which is between the 60,000 and 120,000 C-5B square yards needed for a score of 25 points.<br><br>50% of the Runway pavement suitability score of 100 equals 50. 50% of the apron pavement score of 25 equals 12.5. 50 plus 12.5 equals a score of 62.5 |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | | |
|---|---|---|
| **Formula** | 1235.00 | |
| **Title** | Installation Pavements Quality | |
| **Source** | AFCESA Pavement Evaluation Report and Base General Plan; Existing Record Drawings or Physical Verification; Base Real Property Records; FLIP; ASSR | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 4.67 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 4.67 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 37 | Airfield Pavements | 1235 | . | Airfield Pavements - Runway (1 of 2) |
| 37 | Airfield Pavements | 1235 | .3 | Controlling Feature PCN |
| 37 | Airfield Pavements | 1236 | . | Airfield Pavements - Runway (2 of 2) |
| 37 | Airfield Pavements | 1236 | .6 | ACN for C-5B at 840 Kips |
| 37 | Airfield Pavements | 1239 | . | Airfield Pavements - Aprons (1 of 2) |
| 37 | Airfield Pavements | 1239 | .2 | Total Size of Primary Facility (2) |
| 37 | Airfield Pavements | 1239 | .4 | Predominant Feature PCN (4) |
| 37 | Airfield Pavements | 1240 | . | Airfield Pavements - Aprons (2 of 2) |
| 37 | Airfield Pavements | 1240 | .8 | ACN for C-5B at 840 Kips |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1241.00 |
| **Title** | Ability to Support Large-Scale Mobility Deployment |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Mobility/Surge |
| **Formula** | Check installation's parking MOG for C-17 equivalents using surveyed/approved transient parking ramps.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Find the total number of C-17 MOGs. See OSD Question 1241, column 1 for this data.<br><br>If the total is >= 10, get 100 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are a total of 3 C-17 MOGs. 3 is between 0 and 10, so the score is 0 points. |
| **Source** | ASR (Airfield Suitability Report) |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.64 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.64 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1241 | . | Ramp - Transient Capability |
| 39 | Airfield Management | 1241 | .1 | C-17 MOG |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1242.00 |
| **Title** | ATC Restrictions to Operations |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | List the percentage of installation departures delayed by Air Traffic Control.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Check the Delayed Departures Percentage. See OSD question 1242, column 5 for this data.<br><br>If the percentage delayed = 0, get 100 points.<br>Otherwise, if the percentage delayed is >= 3%, get 0 points.<br>Otherwise, pro-rate the percentage delayed between 0 to 3% on a 100 to 0 point scale.<br><br>Example:<br><br>The departure percentage delayed is 1%. 1% is one third of the way between 0 and 3%, so the score is 66.67 points. |
| **Source** | CAMS (Computerized Aircraft Maintenance System)/ G081 |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 4.14 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 4.14 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1242 | . | Air Operations - Departure Delays |
| 39 | Airfield Management | 1242 | .5 | Precentage Delayed for ATC |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1243.00 |
| **Title** | Airfield Elevation |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | Check the installation's airfield elevation.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>If the elevation <= 0', get 100 points. See OSD Question 1243, column 1,<br>Otherwise, if the elevation is >= 2800', get 0 points.<br>Otherwise, pro-rate the elevation between 0' and 2800' on a 100 to 0 scale.<br><br>Example:<br><br>The elevation is 2100'. 2100' is 75% of the way between 0' and 2800', so the score is 25%. |
| **Source** | IFR Supplement |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.68 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 3.68 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1243 | . | Air Operations - Airfield Elevation |
| 39 | Airfield Management | 1243 | .1 | Answer |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1245.00 |
| **Title** | Proximity to Airspace Supporting Mission (ASM) |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>All airspace over 200 Nautical Miles (NM) away will be ignored. See OSD # 1245, column 2. (N/A means more than 200 NM.) Data is in OSD #s 1266, 1245 and 1274 must be matched via column 1 in each question.<br><br>Calculate each of the subcategories scores listed below, and weight as listed.<br>20% Airspace Volume (AV)<br>15% Operating Hours (OH)<br>15% Scoreable Range (SR)<br>15% Air to Ground Weapons Delivery (AGWD)<br>5% Live Ordnance (LO)<br>10% Electronic Combat (EC)<br>10% Laser Use Authorized (LU)<br>5% Flare Authorized (FA)<br>5% Chaff Authorized (CA)<br><br>Each of the subcategories use the following general pattern for calculating them:<br><br>Check the corresponding subcategory in formula #1266. If it would get 0 points for that subcategory, get 0 points here also.<br>Otherwise, Compute a raw total for the subcategory for the base according to this formula:<br>For each airspace:<br>If the distance to the airspace is > 200 miles, get 0 points.<br>Otherwise, if the distance to the airspace = 200 miles, get 10 points.<br>Otherwise, if the distance to the airspace = 10 miles, get 100 points.<br>Otherwise, pro-rate the distance to the airspace from 10 miles to 200 miles on a 100 to 10 point scale.<br><br>Once you have a base raw subcategory total, find the highest, and the lowest, non-zero raw total for the subcategory across all bases.<br>If the raw total = 0, that subcategory score = 0.<br>Else, if the raw total = the highest raw total, the subcategory score = 100.<br>Else, if the raw total = the lowest, non-zero raw total, the subcategory score = 10.<br>Else, pro-rate the raw total between the lowest non-zero raw total and the highest raw total on a 10 to 100 scale.<br><br>Once each score for each subcategory is known, multiply them by their respective weighting percentage and total the results for the overall score. The overall mechanism is very similar to that of formula #1266. |
| **Source** | FLIP AP-1A; IFR Supp; Falcon View or other certified flight planning software |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 14.72 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 14.72 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| **Formula** | 1245.00 |
|---|---|
| **Title** | Proximity to Airspace Supporting Mission (ASM) |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1245 | . | Airspace - Distance to Airspace |
| 1 | Air/Space Operations | 1245 | .1 | Airspace/Route Designator |
| 1 | Air/Space Operations | 1245 | .2 | Distance to Airspace/Route |
| 2 | Army Operations | 1274 | . | Airspace Attributes - Ranges (2 of 2) |
| 2 | Army Operations | 1274 | .2 | Airspace Volume: at least 2,100NM cubed; altitude block >=20,000' |
| 2 | Army Operations | 1274 | .3 | Flare |
| 2 | Army Operations | 1274 | .4 | Chaff |
| 2 | Army Operations | 1274 | .5 | Live Ordnance |
| 27 | Ranges | 1266 | . | Airspace Attributes - Ranges (1 of 2) |
| 27 | Ranges | 1266 | .3 | Scoreable range complexes/target array |
| 27 | Ranges | 1266 | .4 | Air to Ground Weapons Delivery |
| 27 | Ranges | 1266 | .6 | IMC weapons release |
| 27 | Ranges | 1266 | .7 | Electronic Combat |
| 27 | Ranges | 1266 | .8 | Laser Use Authorized |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1246.00 |
| **Title** | Proximity to Low Level Routes Supporting Mission |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | Check the distance to all Airspace for Special Use (IR/VR routes) within 50 Nautical Mile (NM) radius of the installation.<br><br>If installation has no runway or active runway, or no serviceable, suitable runway then score 0 pts.<br><br>For a list of routes, see OSD Question 1246. The type of route can be found in column 1. Entry point distances are found in column 2. Exit point distances are found in column 3. For distances, N/A means 0 points.<br><br>IR Entry points, IR Exit points, VR Entry points and VR Exit points are each worth 25% of the score.<br><br>( .25 * "IR Entry") + ( .25 * "IR Exit") + ( .25 * "VR Entry") + ( .25 * "VR Exit")<br><br>Entry and Exit Point:<br><br>Within each of the above four categories, award each route points as follows:<br><br>If the distance = N/A, get 0 points.<br>Otherwise, the distance is <= 10 Nautical Miles (NM), get 100 points.<br>Otherwise, if the distance is = 50 NM, get 10 points.<br>Otherwise, pro-rate the distance between 10 NM and 50 NM on a 100 to 10 point scale.<br><br>Total the number of points received above for each base for each of the above four categories.<br><br>Get the highest base score in each of the above four categories.<br>Get the lowest, non-zero score in each of the above four categories.<br><br>If the installation's score for one of the above categories = 0, it remains 0.<br>Otherwise, if the installation's score for one of the above categories = the highest score in its respective category, get 100 points.<br>Otherwise, if the installation's score for one of the above categories = the lowest non-zero score in its respective category, get 10 points.<br>Otherwise, pro-rate the installation's score between the lowest non-zero and highest score in its respective category on a 10 to 100 point scale.<br><br>Example:<br><br>Two IR routes and 1 VR route.<br><br>IR Route Alpha has an entry point 5 miles away and an exit point 30 miles away.<br>IR Route Bravo has an entry point 50 miles away and an exit point 60 miles away.<br><br>Alpha's entry point is within 5 miles, so its IR Entry amount is 100 points. The exit point 30 miles distant is 50 percent of the way between 10 and 50 miles, so its IR Exit point amount is 55 points.<br><br>Bravo's entry point is 50 miles away, so its IR Entry amount is 10 points. The exit point is 60 miles away, so its amount is 0 points.<br><br>The IR Entry total for these two routes is 100 + 10 for 110 points. The total IR Exit total for these two routes is 55 + 0 for 55 points.<br><br>The highest IR Entry total for any base is 165 and the lowest non-zero IR Entry total for any base is 30.<br>The highest IR Exit total for any base is 105 and the lowest non-zero IR Exit total for any base is 5. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1246.00 |
| **Title** | Proximity to Low Level Routes Supporting Mission |

So, this base's IR Entry score is 100, because 165 is equal to the highest score of any base.
Pro-rating the IR Exit total of 55 between 5 and 105 on a 10 to 100 point scale gives this base an IR Exit score of 55.

VR Route Charlie has an entry point 3 miles away and an exit point 4 miles away.

Both the entry and exit point are within 5 miles, so both the VR Entry and VR Exit category amounts get 100 points.
As there is only one VR route, that makes the VR route totals the same, 100 points each.

The highest VR Entry total for any base is 300 and the lowest non-zero VR Entry total for any base is 50 points.
Ditto for the VR Exit totals.

So, this base's VR Entry score of 100 is pro-rated between 50 and 300 on a 10 to 100 scale. Since 100 is 20% of the way from 50 to 300, the VR Entry score is 28 points.
Ditto for the VR Exit totals.

By applying the 25% weighting to each of the four category scores, in IR Entry, IR Exit, VR Entry and VR Exit order, we get the overall score:

(.25 * 100) + (.25 * 55) + (.25 * 28) + (.25 * 28), for an overall score of 52.75 points.

| | | |
|---|---|---|
| **Source** | FLIP AP-1B; IFR Supp; Falcon View or other certified flight planning software | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.68 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 3.68 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1246 | . | Airspace - Distance to Routes |
| 1 | Air/Space Operations | 1246 | .1 | Route Designator |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1248.00 |
| **Title** | Proximity to DZ/LZ |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | Check the distance to all USAF-certified Landing Zones/Drop Zones within 50NM radius of the installation that meet zone requirements.<br><br>OSD Question 1249 is assigned to a notional base unit (Widget Unit #216) for technical reasons since the data is identical for all bases. So, regardless of the organization being checked, all references to OSD Question 1249 will find their data under Widget Unit # 216, which was a technical way to avoid having to enter the exact same data once per base. Widget Unit # 216 does not exist in real life.<br><br>If installation has no runway or active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Drop Zones (DZ) count for 50% of the overall score, Landing Zones (LZ) count for the remaining 50%.<br><br>The data on the DZs and LZs is split across two OSD questions, 1249 and 1248. This means that the data in one question has to be matched with its respective data in the other question. This is done by matching the ZAR code, which is found in column 1 of both OSD Questions 1248 and 1249.<br><br>Compute the points received for each LZ as follows, then total them into an LZ total:<br><br>If the LZ is < 3500' by 90', and < 3000' by 60', get 0 points. See OSD Question 1249, columns 3 and 4 for this data. (N/A means no.)<br>Otherwise, if the distance to the LZ > 50 miles, get 0 points. See OSD Question 1248, column 3 for this data. (N/A or no matching LZ in OSD question 1249 means > 50 miles.)<br>Otherwise, if the distance to the LZ = 50 miles, get 10 points.<br>Otherwise, if the distance to the LZ <= 10 miles, get 100 points.<br>Otherwise, get 0 points.<br><br>Compute the points received for each DZ as follows, then total them into a DZ total:<br><br>If the DZ is < 1000 yds by 1500 yds, and < 700 yds by 1000 yds, get 0 points. See OSD Question 1249, columns 6 and 7 for this data. (N/A means no.)<br>Otherwise, if the distance to the DZ > 50 miles, get 0 points. See OSD Question 1248, column 3 for this data. (N/A or no matching DZ in OSD question 1249 means > 50 miles.)<br>Otherwise, if the distance to the DZ = 50 miles, get 10 points.<br>Otherwise, if the distance to the DZ <= 10 miles, get 100 points.<br>Otherwise, get 0 points.<br><br>After the above LZ and DZ totals have been computed for each base, determine the score for each as follows:<br><br>Get the Highest LZ total of any base and the Lowest non-Zero LZ total of any base.<br>Get the Highest DZ total of any base and the Lowest non-Zero DZ total of any base.<br><br>If the total = 0, then the respective points for that total = 0.<br>Otherwise, pro-rate the total from the respective lowest non-zero total to the respective highest score on a 10 to 100 scale.<br><br>Take 50% of the LZ score just calculated and add to it 50% of the DZ score just calculated for the overall score.<br><br>Example:<br><br>There are two drop zones within 50 miles, Alpha and Bravo. Alpha is 3100' by 65' and Bravo is 2000' |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1248.00 |
| **Title** | Proximity to DZ/LZ |

by 100'.
Alpha is 10 miles away and Bravo is 30 miles away.
Alpha is bigger than 3000' by 60', so it qualifies for points. Since it is 10 miles away, it gets 100 points. Bravo is smaller than 3000' by 60', so it is too small and gets 0 points.
The DZ total is 100 points.

The highest DZ total across all bases is 500 and the lowest non-zero DZ total across all bases is 100. The DZ score is 10 points, since it equals the lowest overall DZ total.

There are two landing zones within 50 miles, Charlie and Delta. Charlie is 1000 yds by 1500 yds and so is Delta. Charlie and Delta are both 10 miles away. Both are >= the 1000 yds by 1500 yds size, so both qualify for points. Since both are 10 miles away, they both get 100 points. The LZ total is 200 points.

The highest LZ total across all bases is 200 and the lowest non-zero LZ total across all bases is 50. The LZ score is 100 points, since it equals the highest overall LZ total.

Now, take 50% of each of the two totals to make the overall score:

(.50 * 10) + (.50 * 100) gives an overall score of 55.

| | | |
|---|---|---|
| **Source** | IFR Supp; ZAR (AMC Zone Availability Report): AF Form 3822 (Landing Zone Survey) or AF Form 3823 (Drop Zone Survey); Falcon View or other certified flight planning software | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 14.72 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 14.72 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1248 | . | Airspace - Distance to Zones |
| 1 | Air/Space Operations | 1248 | .2 | ZAR Doc / Index Number |
| 1 | Air/Space Operations | 1249 | . | Airspace Attributes - Zones |
| 1 | Air/Space Operations | 1249 | .2 | ZAR Doc/Index Number |
| 1 | Air/Space Operations | 1249 | .3 | Landing Zone: >=3000' x 60' |
| 1 | Air/Space Operations | 1249 | .4 | Landing Zone: >=3500' x 90' |
| 1 | Air/Space Operations | 1249 | .6 | Drop Zone: >=700 yds x 1000yds |
| 1 | Air/Space Operations | 1249 | .7 | Drop Zone: >=1000 yds x 1500 yds |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1249.00 |
| **Title** | Airspace Attributes of DZ/LZ |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Operating Areas |
| **Formula** | Check the attributes of USAF-certified Landing Zones / Drop Zones which have current AMC surveys. |

OSD Question 1249 is assigned to a notional base unit (Widget Unit #216) for technical reasons since the data is identical for all bases. So, regardless of the organization being checked, all references to OSD Question 1249 will find their data under Widget Unit # 216, which was a technical way to avoid having to enter the exact same data once per base. Widget Unit # 216 does not exist in real life.

If installation has no runway or active runway, or no serviceable, suitable runway then score 0 pts.

Drop Zones (DZ) count for 50% of the overall score, Landing Zones (LZ) count for the remaining 50%.

The data on the DZs and LZs is split across two OSD questions, 1249 and 1248. This means that the data in one question has to be matched with its respective data in the other question. This is done by matching the ZAR code, which is found in column 1 of both OSD Questions 1248 and 1249.

Compute the points received for each LZ as follows, then total them into an LZ total:

If the distance to the LZ > 50 miles, get 0 points. See OSD Question 1248, column 3 for this data. (N/A or no matching LZ in OSD question 1249 means > 50 miles.)
Otherwise, if the LZ is >= 3500' by 90', get 100 points. See OSD Question 1249, column 4 for this data. (N/A means no.)
Otherwise, if the LZ is >= 3000' by 60', get 50 points. See OSD Question 1249, column 3 for this data. (N/A means no.)
Otherwise, get 0 points.

Compute the points received for each DZ as follows, then total them into a DZ total:

If the distance to the DZ > 50 miles, get 0 points. See OSD Question 1248, column 3 for this data. (N/A or no matching DZ in OSD question 1249 means > 50 miles.)
Otherwise, if the DZ is >= 1000 yds by 1500 yds, get 100 points. See OSD Question 1249, column 7 for this data. (N/A means no.)
Otherwise, if the DZ is >= 700 yds by 1000 yds, get 50 points. See OSD Question 1249, column 6 for this data. (N/A means no.)
Otherwise, get 0 points.

After the above LZ and DZ totals have been computed for each base, determine the score for each as follows:

Get the Highest LZ total of any base and the Lowest non-Zero LZ total of any base.
Get the Highest DZ total of any base and the Lowest non-Zero DZ total of any base.

If the total = 0, then the respective points for that total = 0.
Otherwise, pro-rate the total from the respective lowest non-zero total to the respective highest score on a 10 to 100 scale.

Take 50% of the LZ score just calculated and add to it 50% of the DZ score just calculated for the overall score.

Example:

There are two drop zones within 50 miles, Alpha and Bravo. Alpha is 3100' by 65' and Bravo is 2000'

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1249.00 |
| **Title** | Airspace Attributes of DZ/LZ |

by 100'.
Alpha is between 3000' by 60' and 3500' by 90' in size, so it gets 50 points. Bravo is too small, so it gets 0 points.
The DZ total is 50 points.

The highest DZ total across all bases is 500 and the lowest non-zero DZ total across all bases is 50.
The DZ score is 10 points, since it equals the lowest overall DZ total.

There are two landing zones within 50 miles, Charlie and Delta. Charlie is 1000 yds by 1500 yds and so is Delta.
Both are >= the 1000 yds by 1500 yds size, so both get 100 points. The LZ total is 200 points.

The highest LZ total across all bases is 200 and the lowest non-zero LZ total across all bases is 50.
The LZ score is 100 points, since it equals the highest overall LZ total.

Now, take 50% of each of the two totals to make the overall score:

(.50 * 10) + (.50 * 100) gives an overall score of 55.

| | | |
|---|---|---|
| **Source** | IFR Supp; ZAR (AMC Zone Availability Report): AF Form 3822 (Landing Zone Survey) or AF Form 3823 (Drop Zone Survey); Falcon View or other certified flight planning software | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 7.99 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 7.99 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1248 | . | Airspace - Distance to Zones |
| 1 | Air/Space Operations | 1248 | .2 | ZAR Doc / Index Number |
| 1 | Air/Space Operations | 1249 | . | Airspace Attributes - Zones |
| 1 | Air/Space Operations | 1249 | .2 | ZAR Doc/Index Number |
| 1 | Air/Space Operations | 1249 | .3 | Landing Zone: >=3000' x 60' |
| 1 | Air/Space Operations | 1249 | .4 | Landing Zone: >=3500' x 90' |
| 1 | Air/Space Operations | 1249 | .6 | Drop Zone: >=700 yds x 1000yds |
| 1 | Air/Space Operations | 1249 | .7 | Drop Zone: >=1000 yds x 1500 yds |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1250.00 |
| **Title** | Area Cost Factor |
| **Criterion** | Cost of Ops / Manpower |
| **Attribute** | Cost Factors |
| **Formula** | Evaluate the Area Cost Factor for each installation.<br><br>Find the lowest area cost factor listed for that installation. See OSD question 1250, column 2 for this data.<br><br>If the area cost factor <= 0.78, get 100 points.<br>Otherwise, if the area cost factor >= 1.42, get 0 points.<br>Otherwise, pro-rate the area cost factor between 0.78 and 1.42, on a 100 to 0 point scale.<br><br>Example:<br><br>The lowest area cost factor for the base is 1.3. 1.3 is 81.25% of the way between 0.78 and 1.42, so the score is 18.75 points. |
| **Source** | DoD Facilities Pricing Guide, Table B, March 2004 |

| | | |
|---|---|---|
| **Formula Score** | 65.63 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.82 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.43 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 4 | CE Programming | 1250 | . | Area Cost Factor |
| 4 | CE Programming | 1250 | .2 | Area Cost Factor |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1266.00 |
| **Title** | Range Complex (RC) Supports Mission |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Operating Areas |

**Formula**

If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.

Only airspace within 200 Nautical Miles (NM) will be considered in the calculations. All others will be ignored. See OSD Question 1245, column 2. (N/A means more than 200 NM.)

Data is in OSD Questions 1266, 1245 and 1274 must be matched via column 1 in each question.

Calculate each of the subcategories scores listed below, and weight as listed.
20% Airspace Volume (AV)
15% Operating Hours (OH)
15% Scoreable Range (SR)
15% Air to Ground Weapons Delivery (AGWD)
5% Live Ordnance (LO)
10% Electronic Combat (EC)
10% Laser Use Authorized (LU)
5% Flare Authorized (FA)
5% Chaff Authorized (CA)

Each of the subcategories use the following general pattern for calculating them:

Compute a raw total for the base by following the instructions for the respective subcategory total.
Find the highest, and the lowest, non-zero raw total for the subcategory across all bases.
If the raw total = 0, that subcategory score = 0.
Else, if the raw total = the highest raw total, the subcategory score = 100.
Else, if the raw total = the lowest, non-zero raw total, the subcategory score = 10.
Else, pro-rate the raw total between the lowest non-zero score and the highest score on a 10 to 100 scale.

Once each score for each subcategory is known, multiply them by their respective weighting percentage and total the results for the overall score.

Airspace Volume Raw Total:

Get AV for the pts. See OSD Question 1277, column 2. (N/A means 0.)

Flare Authorized Raw Total:

Sum the pts for each airspace:
If FA = Yes, get 100 pts. See OSD Question 1274, column 3. (N/A means No.)
Else, get 0 pts.

Operating Hours Raw Total:

Sum the pts for each airspace:
If the OH < 1 or = N/A, get 0 pts. See OSD Question 1266, column 2.
Else, if the OH = 1 or IMTMT or INTMT, get 10 pts.
Else, if the OH = 24 or NOTAM, get 100 pts.
Else, if the OH = NOTAM, get 100 pts.
Else, pro-rate the OH between 0 and 24 on a 10 to 100 point scale.

Scoreable Range Raw Total:

Sum the pts for each airspace:
If the SR = Yes, get 100 pts. See OSD Question 1266, column.3. (N/A means No.)

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| **Formula** | 1266.00 |
|---|---|
| **Title** | Range Complex (RC) Supports Mission |

Else, get 0 pts.

Air to Ground Weapons Delivery Raw Total:

Sum the pts for each airspace:
If the AGWD = Yes, get 100 pts. See OSD Question 1266 column 4. (N/A means No.)
Else, get 0 pts.

Live Ordnance Raw Total:

Sum the pts for each airspace:
If LO = Yes, get 100 pts. See OSD Question 1274, column 5. (N/A means No.)
Else, get 0 pts.

Electronic Combat Raw Total:

Sum the pts for each airspace:
If EC = Yes, get 100 pts. See OSD Question 1266, column.7. (N/A means No.)
Else, get 0 pts.

Laser Use Authorized Raw Total:

Sum the pts for each airspace:
If LU = Yes, get 100 pts. See OSD Question 1266, column.8. (N/A means No.)
Else, get 0 pts.

Chaff Authorized Raw Total

Sum the pts for each airspace:
If CA = Yes, get 100 pts. See OSD Question 1274, column 4. (N/A means No.)
Else, get 0 pts.

Example:

AV = 20,000, get 20,000 pts

There are two airspaces within the distance specified above, and they both have these characteristics (which means their raw totals will be double the number of pts listed) followed by the lowest non-zero and highest raw totals across all bases

OH = NOTAM, get 100 pts; 20,000 to 150,000 pts
SR = Yes, get 100 pts; 200 to 500 pts.
AGWD = No, get 0 pts; 200 to 1000 pts.
LO = Yes, get 100 pts; 500 to 1000 pts.
EC = N/A, get 0 pts; 200 to 2000 pts.
LU = Yes, get 100 pts; 100 to 1000 pts.
FA = Yes, get 100 pts; 200 to 1000 pts.
CA = Yes, get 100 pts; 200 to 1000 pts.

Subcategory scores
AV = 10 pts.
OH = 10 pts.
SR = 10 pts
AGWD = 0 pts.

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | | |
|---|---|---|
| **Formula** | 1266.00 | |
| **Title** | Range Complex (RC) Supports Mission | |
| | LO = 10 pts.<br>EC = 0 pts.<br>LU = 20 pts.<br>FA = 10 pts.<br>CA = 10 pts.<br>Weighted, the overall score = 8.5 pts. | |
| **Source** | FLIP AP-1A; Falcon View or other certified flight planning software | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 14.84 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 14.84 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1245 | . | Airspace - Distance to Airspace |
| 1 | Air/Space Operations | 1245 | .2 | Distance to Airspace/Route |
| 1 | Air/Space Operations | 1277 | . | Airspace Attributes - Volume |
| 1 | Air/Space Operations | 1277 | .2 | 200NM radius |
| 2 | Army Operations | 1274 | . | Airspace Attributes - Ranges (2 of 2) |
| 2 | Army Operations | 1274 | .3 | Flare |
| 2 | Army Operations | 1274 | .4 | Chaff |
| 2 | Army Operations | 1274 | .5 | Live Ordnance |
| 27 | Ranges | 1266 | . | Airspace Attributes - Ranges (1 of 2) |
| 27 | Ranges | 1266 | .1 | Airspace Designator |
| 27 | Ranges | 1266 | .2 | Operating Hours |
| 27 | Ranges | 1266 | .3 | Scoreable range complexes/target array |
| 27 | Ranges | 1266 | .4 | Air to Ground Weapons Delivery |
| 27 | Ranges | 1266 | .7 | Electronic Combat |
| 27 | Ranges | 1266 | .8 | Laser Use Authorized |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1269.00 |
| **Title** | Utilities cost rating (U3C) |
| **Criterion** | Cost of Ops / Manpower |
| **Attribute** | Cost Factors |
| **Formula** | Check the Utilities Costs and Climatic Consideration (U3C) Rating for the installation.<br><br>If the U3C rating is <= .59, get 100 points. See OSD Question 1269, column 1 for this data.<br>Otherwise, if the U3C rating is >= 2.29, get 0 points.<br>Otherwise, pro-rate the U3C rating between .59 and 2.29 on a 100 to 0 scale.<br><br>Example:<br><br>The U3C rating is 1.6. 1.6 is 59.41% of the way between .59 and 2.29, so the score is 40.59. |
| **Source** | ASHRAE Standards; DoD 5126.46-M-2, Defense Utility Energy Reporting System; UFC 3-400-02,<br>DOE Website: Buildings Energy Databook: Table 7.4 Typical Commercial Buildings |

| | | |
|---|---|---|
| **Formula Score** | 82.94 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.13 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.10 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.02 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 35 | Utilities | 1269 | . | Utilities Cost Rating (U3C) |
| 35 | Utilities | 1269 | .1 | Answer |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | |
|---|---|
| **Formula** | 1271.00 |
| **Title** | Prevailing Installation Weather Conditions |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | Check the average number of days annually the prevailing weather is better than 3000'/3 Nautical Miles (NM).<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>If the average number of days >= 300, get 100 points.<br>Otherwise, if the average number of days <= 250, get 0 points.<br>Otherwise, pro-rate the average number of days between 250 and 300 on a 0 to 100 scale.<br><br>Example:<br><br>The average number of days annually where the prevailing weather is better than 3000'/3 NM is 275.<br>275 is halfway between 250 and 300, for a score of 50. |
| **Source** | AFCCC Climatological tables |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 5.06 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 5.06 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1271 | . | Air Operations - Prevailing Weather |
| 39 | Airfield Management | 1271 | .3 | Weather > 3000'/3NM |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | | |
|---|---|---|
| **Formula** | 1402.00 | |
| **Title** | BAH Rate | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the 2004 monthly BAH rate for an O-3 with dependents. See OSD question 1402, column 1 for this data.<br><br>If the BAH rate <= 746, get 100 points.<br>Otherwise, if the BAH rate >= 2013, get 0 points.<br>Otherwise, pro-rate the BAH rate between 746 and 2013 on a 100 to 0 scale.<br><br>Example:<br><br>The BAH rate is 974. 974 is 18% between 746 and 2013, which results in a score of 82.00. | |
| **Source** | www.dtic.mil/perdiem/bah.html | |
| **Formula Score** | 67.32 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.88 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.59 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.29 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 13 | Finance | 1402 | . | BAH Rate |
| 13 | Finance | 1402 | .1 | BAH Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **SOF / CSAR**

| | | |
|---|---|---|
| **Formula** | 1403.00 | |
| **Title** | GS Locality Pay Rate | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the 2004 locality pay rate for the GS pay schedule. See OSD question 1403, column 1 for this data. (N/A equals 0.)<br><br>If the pay rate <= 10.90, get 100 points.<br>Otherwise, if the pay rate >= 20.37, get 0 points.<br>Otherwise, pro-rate the pay rate between 10.90 and 20.37 on a 100 to 0 scale.<br><br>Example:<br><br>The pay rate is 14.31, which is 36.01% of the way between 10.90 and 20.37, which results in a score of 63.99. | |
| **Source** | Office of Personnel Management Web page | |
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.25 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | Question.Field | |
|---|---|---|
| 13 Finance | 1403 . | GS Locality Pay Rate |
| 13 Finance | 1403 . 1 | GS Locality Pay Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Space Ops**

| | |
|---|---|
| **Formula** | 30.00 |
| **Title** | Buildable Acres (Space Mission Bed Down Area) |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Identify the number of buildable acres available for administrative, industrial, and undetermined use for locating a space squadron.<br><br>Total the following for the installation:<br>Administrative Total Buildable Acres<br>+ Industrial Total Buildable Acres<br>+ Undetermined Use Total Buildable Acres.<br>See OSD Question 30, columns 3, 8 and 13 respectively.<br><br>If the total >= 250, get 100 points.<br>Otherwise, if the total = 0, get 0 points.<br>Otherwise, pro-rate the total between 0 and 250 on a 0 to 100 scale.<br><br>Example:<br><br>There are 30 Administrative Total Buildable Acres, 70 Industrial Total Buildable Acres and 25 Undetermined Use Total Buildable Acres, for a total of 125 acres.<br><br>125 is halfway between 0 and 250, for a score of 50. |
| **Source** | AFI 32-7062, Air Force Comprehensive Planning, dated 1 Oct. 1997, Real Property Records, Base General Plan |

| | | |
|---|---|---|
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 41.50 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 41.50 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 4 | CE Programming | 30 | . | Buildable Acres |
| 4 | CE Programming | 30 | .3 | Administrative Total Buildable Acres |
| 4 | CE Programming | 30 | .8 | Industrial Total Buildable Acres |
| 4 | CE Programming | 30 | .13 | Undetermined Use Total Buildable Acres |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Space Ops**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Check the attainment designation classifications of the installation's NAAQS (National Ambient Air Quality Standard) for the following applicable criteria: Attainment, Nonattainment, Nonattainment (Deferred), Maintenance, and Unclassifiable. Identify the amount of the SIP emissions budget for non-attainment and maintenance criteria pollutants, if any, allocated to the installation.<br><br>Use the following formula to compute this score:<br><br>Multiply the Attainment / Emission Budget Growth Allowance MinA by the Attainment / Emission Budget Growth Allowance *B* for the base score. Add the SIP Score to the base score. If the base score is now over 100, reduce it to 100.<br><br>SIP Score:<br><br>Sum the Installation SIP Growth Allowance (Tons/Year)" for the following constituents: '001. VOC' and '002. Nox'.<br>See OSD question 221, column 3 for the Installation SIP Growth Allowance (Tons/Year). See OSD Question 221, column 1 for the constituent.<br>If the total is > 0, then SIP Score = 20, otherwise it is 0.<br><br>Attainment / Emission Budget Growth Allowance MinA and *B*:<br><br>Perform the following calculation for each of the specified criteria pollutants and pick the lowest value from them all.<br><br>The criteria pollutants are '002. PM10', '004. S02', '005. CO', 007. O3 (8hr)*'. See OSD Question 213, column 1 for this data.<br><br>Attainment / Emission Budget Growth Allowance MinA:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 100. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get 77.778.<br><br>Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get 66.667. See OSD Question 213, column 3 for this data.<br><br>Otherwise, if the NAAQS Classification is Serious, get 43.5.<br><br>Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get 25.714.<br><br>Otherwise, if the NAAQS Classification is Extreme, get 7.<br><br>Otherwise, get 0.<br><br>Attainment / Emission Budget Growth Allowance *B*:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 1. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get .9. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Space Ops**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |

Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get .9. See OSD Question 213, column 3 for this data.

Otherwise, if the NAAQS Classification is Serious, get .8.

Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get .7.

Otherwise, if the NAAQS Classification is Extreme, get 1.

Otherwise, get 0.

Example:

The NAAQS Designation for 002. PM10 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.
The NAAQS Designation for 004. S02 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9
The NAAQS Designation for 005. CO is Nonattainment and the NAAQS Classification is Severe, which means 25.714 * .8.
The NAAQS Designation for 007. O3 (8hr)* is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.

25.714 * .8, which equals 20.5712, is the lowest value, so it becomes the base score.

The Installation SIP Growth Allowance (Tons/Year) for 001. VOC is 0, for 002. Nox it is 1. As the total of these two values is > 0, the SIP Score = 20, which needs to be added to the base score of 20.5712, for a new base score of 40.5712. This is less than 100, so it does not need to be reduced to 100, which makes the final score = 40.5712.

| | |
|---|---|
| **Source** | DoD#213: Current Edition of 40 CFR 81; or Federal Register; or Federal Register Citation to EPA's "final rule" approving the area's "maintenance plan" and "redesignation" of the area to "attainment status" DoD#221: State Implementation Plan |

| | | |
|---|---|---|
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.00 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 3.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Space Ops**

| **Formula** | 213.00 |
|---|---|
| **Title** | Attainment / Emission Budget Growth Allowance |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 12 | Environment | 213 . | Air Quality Attainment |
| 12 | Environment | 213 . 2 | NAAQS Designation |
| 12 | Environment | 213 . 3 | NAAQS Classification |
| 12 | Environment | 221 . | SIP Emissions Budget |
| 12 | Environment | 221 . 1 | Criteria Pollutant |
| 12 | Environment | 221 . 3 | (b) Installation SIP Growth Allowance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Space Ops**

| | |
|---|---|
| **Formula** | 1205.10 |
| **Title** | Buildable Acres for Industrial Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Identify the number of "buildable," unconstrained, development acres available for industrial operations.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 3 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

| | | |
|---|---|---|
| **Formula Score** | 54.14 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 7.00 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 3.79 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 3.21 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 4 | CE Programming | 1205 . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 .3 | Total Unconstrained, Buildable Industrial Operations |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Space Ops**

| | |
|---|---|
| **Formula** | 1210.00 |
| **Title** | Line-of-Sight Encroachment |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |

**Formula**

Identify any operational antenna limitations (back lobes, obscura azimuth and obscura elevation, or frequency emission restrictions).

Azimuth issues get 33% of the score. Elevation issues get 33% of the score, and Transmission issues get the remaining 34% of the score.

Azimuth Issues:

For each installation with more than one antenna, use the best Azimuth issues score for any antenna, as follows:

If the Useable Azimuth in degrees = 360, get 100 points. See OSD Question 1275, column 4 for this data. (N/A means 0 points.)
Otherwise, if the Useable Azimuth in degrees = 0, get 0 points.
Otherwise, pro-rate the Useable Azimuth in degrees from 0 to 360 on a 0 to 100 scale.

Elevation Issues:

For each installation with more than one antenna, use the best Elevation score for any antenna, as follows:

If the Elevation restrictions are = 0 degrees, get 100 points. See OSD Question 1275, column 6 for this data. (N/A means 0 points.)
Otherwise, if the Elevation restrictions are > 3 degrees, get 0 points.
Otherwise, pro-rate the Elevation restrictions from 0 to 3 degrees on a 100 to 50 scale.

Transmission Issues:

For each installation with more than one antenna, use the worst Transmission score for any antenna, as follows:

If the Transmission restriction = No, get 100 points. See OSD Question 1275, column 8 for this data.
Otherwise, get 0 points.

Example:

There are two antennas, with the following characteristics:

Alpha:
Useable Azimuth in degrees: 360
Elevation restrictions in degrees: 03
Transmission restrictions: Yes

Bravo:
Useable Azimuth in degrees: 300
Elevation restrictions in degrees: 0
Transmission restrictions: No

Alpha has a higher useable azimuth in degrees, so it will be used to calculate the Azimuth issues component of the score. 360 degrees equals 100 points.

Bravo has the lowest elevation restrictions in degrees, so it will be used to calculate the Elevation issues component of the score. 0 degrees equals 100 points.

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Space Ops**

| | | |
|---|---|---|
| **Formula** | 1210.00 | |
| **Title** | Line-of-Sight Encroachment | |
| | Alpha is the first non-No response for transmission restrictions we found, so it will be used to calculate the Transmission issues component of the score, which is 0 points.<br><br>So, taking the relevant percentages for the Azimuth, Elevation and Transmission issues component scores respectively, (.33 * 100) + (.33 * 100) + (.34 * 0) equals a score of 66. | |
| **Source** | Installation Frequency Management Plan | |
| **Formula Score** | 33.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 23.00 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 7.59 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 15.41 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | |
|---|---|---|---|
| 1 | Air/Space Operations | 1275 . | C4 - Line-of-Sight Encroachment |
| 1 | Air/Space Operations | 1275 .4 | Useable Azimuth (in degrees) |
| 1 | Air/Space Operations | 1275 .6 | Elevation Restriction: To (in degrees) |
| 1 | Air/Space Operations | 1275 .8 | Transmission Restriction Cause |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Space Ops**

| | | |
|---|---|---|
| **Formula** | 1226.00 | |
| **Title** | Population Density Impact on USAF Mission | |
| **Criterion** | Current / Future Mission | |
| **Attribute** | Geo-locational Factors | |
| **Formula** | State the average population density (population per square mile) for counties contiguous to the installation's physical boundary as reported in the 2000 Census.<br><br>Choose the most densely populated of the reported counties. See OSD Question 1226, column 3 for this data.<br><br>If the most densely populated <= 500, get 100 points.<br>If the most densely populated >= 1000, get 0 points.<br>Otherwise, pro-rate the most densely populated between 500 and 1000 on a scale of 100 to 0.<br><br>Example.<br><br>There are three contiguous counties reported, with population densities of 600, 300, and 200 respectively.<br>600 is the most densely populated value.<br><br>600 is 20% of the way between 500 and 1000, so the score is 80. | |
| **Source** | U.S. Census Bureau data; www.census.gov | |
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 23.00 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 23.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 26 | Public Affairs | 1226 | . | Demographics - Population Density |
| 26 | Public Affairs | 1226 | .3 | 2000 Population Density |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Space Ops**

| | |
|---|---|
| **Formula** | 1250.00 |
| **Title** | Area Cost Factor |
| **Criterion** | Cost of Ops / Manpower |
| **Attribute** | Cost Factors |
| **Formula** | Evaluate the Area Cost Factor for each installation.<br><br>Find the lowest area cost factor listed for that installation. See OSD question 1250, column 2 for this data.<br><br>If the area cost factor <= 0.78, get 100 points.<br>Otherwise, if the area cost factor >= 1.42, get 0 points.<br>Otherwise, pro-rate the area cost factor between 0.78 and 1.42, on a 100 to 0 point scale.<br><br>Example:<br><br>The lowest area cost factor for the base is 1.3. 1.3 is 81.25% of the way between 0.78 and 1.42, so the score is 18.75 points. |
| **Source** | DoD Facilities Pricing Guide, Table B, March 2004 |

| | | |
|---|---|---|
| **Formula Score** | 65.63 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.82 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.43 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 4 | CE Programming | 1250 | . | Area Cost Factor |
| 4 | CE Programming | 1250 | .2 | Area Cost Factor |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Space Ops**

| | | |
|---|---|---|
| **Formula** | 1269.00 | |
| **Title** | Utilities cost rating (U3C) | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the Utilities Costs and Climatic Consideration (U3C) Rating for the installation.<br><br>If the U3C rating is <= .59, get 100 points. See OSD Question 1269, column 1 for this data.<br>Otherwise, if the U3C rating is >= 2.29, get 0 points.<br>Otherwise, pro-rate the U3C rating between .59 and 2.29 on a 100 to 0 scale.<br><br>Example:<br><br>The U3C rating is 1.6. 1.6 is 59.41% of the way between .59 and 2.29, so the score is 40.59. | |
| **Source** | ASHRAE Standards; DoD 5126.46-M-2, Defense Utility Energy Reporting System; UFC 3-400-02,<br>DOE Website: Buildings Energy Databook: Table 7.4 Typical Commercial Buildings | |
| **Formula Score** | 82.94 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.13 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.10 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.02 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 35 | Utilities | 1269 | . | Utilities Cost Rating (U3C) |
| 35 | Utilities | 1269 | .1 | Answer |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Space Ops**

| | | |
|---|---|---|
| **Formula** | 1402.00 | |
| **Title** | BAH Rate | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the 2004 monthly BAH rate for an O-3 with dependents. See OSD question 1402, column 1 for this data.<br><br>If the BAH rate <= 746, get 100 points.<br>Otherwise, if the BAH rate >= 2013, get 0 points.<br>Otherwise, pro-rate the BAH rate between 746 and 2013 on a 100 to 0 scale.<br><br>Example:<br><br>The BAH rate is 974. 974 is 18% between 746 and 2013, which results in a score of 82.00. | |
| **Source** | www.dtic.mil/perdiem/bah.html | |
| **Formula Score** | 67.32 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.88 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.59 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.29 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 13 | Finance | 1402 | . | BAH Rate |
| 13 | Finance | 1402 | .1 | BAH Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Space Ops**

| | | |
|---|---|---|
| **Formula** | 1403.00 | |
| **Title** | GS Locality Pay Rate | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the 2004 locality pay rate for the GS pay schedule. See OSD question 1403, column 1 for this data. (N/A equals 0.)<br><br>If the pay rate <= 10.90, get 100 points.<br>Otherwise, if the pay rate >= 20.37, get 0 points.<br>Otherwise, pro-rate the pay rate between 10.90 and 20.37 on a 100 to 0 scale.<br><br>Example:<br><br>The pay rate is 14.31, which is 36.01% of the way between 10.90 and 20.37, which results in a score of 63.99. | |
| **Source** | Office of Personnel Management Web page | |
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.25 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 13 | Finance | 1403 | . | GS Locality Pay Rate |
| 13 | Finance | 1403 | .1 | GS Locality Pay Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | |
|---|---|
| **Formula** | 1.00 |
| **Title** | Fuel Hydrant Systems Support Mission Growth |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the current fuel hydrant system capability.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>20% of the score is based upon the best type of fuel hydrant available. 80% of the score is based upon the number of qualified refueling points/outlets.<br><br>Type of Fuel Hydrant:<br><br>Check each Fuel System. See OSD question 1 for this data.<br><br>Ignore those that are not aircraft fueling hydrants. See OSD Question 1, column 2 for this data, where the value is not an 'A'.<br><br>If any one of them is a Type III, get 100 points. See OSD Question 1, column 3 for this data.<br>Otherwise, If any one of them is a Type I or II, get 75 points.<br>Otherwise, If any one of them is a Type IV or V, get 25 points.<br>Otherwise, get 0 points.<br><br>Number of Qualified Refueling Points/Outlets:<br><br>Sum the number of qualified refueling points/outlets. See OSD Question 1, column 6 for this data, but ignore those that are not aircraft fueling hydrants. See OSD Question 1, column 2 for this data, where the value is not an 'A'. Also ignore those that are not Type I, II, III, IV or V. See OSD Question 1, column 3 for this data.<br><br>If the sum of qualified refueling points/outlets >= 24, get 100 points.<br>Otherwise, if the sum of qualified refueling points/outlets = 0, get 0 points.<br>Otherwise, pro-rate the sum between 0 and 24 on a 0 to 100 scale.<br><br>Example:<br><br>There are three refueling facilities. One is a Type I, one a Type IV, and one is a Truck Fill Stand. There are no Type III facilities, so we check for Type I or II. Since there is a Type I, the score for the type of fuel hydrant is 75.<br><br>There are 3 Type 1 refueling points/outlets, 9 Type IV refueling points/outlets, and 22 Truck Fill Stand refueling points/outlets. The Type 1 and Type IV refueling points/outlets sum to 12, the 22 Truck Fill Stand refueling points/outlets do not count. 12 is halfway between 0 and 24, for a number of qualified refueling points score of 50.<br><br>(20% of 75) plus (80% of 50) = an overall score of 55. |
| **Source** | ACES-RP; existing record drawings or physically verification; |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 4.15 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 4.15 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| **Formula** | 1.00 |
|---|---|
| **Title** | Fuel Hydrant Systems Support Mission Growth |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 15 | Fuel | 1 | . | Fuel Systems |
| 15 | Fuel | 1 | .2 | Vehicle or Aircraft ("V" or "A") |
| 15 | Fuel | 1 | .3 | System Type |
| 15 | Fuel | 1 | .6 | Number of Refueling Points/Outlets |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | |
|---|---|
| **Formula** | 8.00 |
| **Title** | Ramp Area and Serviceability |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the square yardage of every serviceable ramp at the installation. See OSD Question 8, column 9 to determine serviceability. (N/A means not serviceable.) See OSD Question 8, column 2 for the square yardage of that ramp.<br><br>If the total square yards of serviceable ramp is >= 851,000, get 100 points.<br><br>Otherwise, if the total square yards of serviceable ramp is >= 504,000, get 75 points.<br><br>Otherwise, if the total square yards of serviceable ramp is >= 168,000, get 25 points.<br><br>Otherwise, get 0 points.<br><br>Example:<br><br>The installation has three ramps, Alpha, Bravo and Charlie.<br>Alpha and Bravo are both fully serviceable and active; Charlie is not serviceable because of major sinkholes that have developed. Alpha has 50,000 square yards, Bravo has 20,000 square yards, and Charlie has 200,000 square yards, for a total of 70,000 serviceable square yards of ramps. This number is between 0 and 168,000 so it falls into the 0 point range. |
| **Source** | FLIP; AFCESA Pavement Evaluation/Condition Report/Survey; Existing Record Drawings or Physical Verification; Base Real Property Records |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 7.89 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 7.89 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | |
|---|---|---|---|
| 1 | Air/Space Operations | 9 . | Runways |
| 1 | Air/Space Operations | 9 .7 | Length |
| 1 | Air/Space Operations | 9 .8 | Width |
| 1 | Air/Space Operations | 9 .15 | Serviceable (5) |
| 28 | Real Property | 8 . | Ramp/Apron Space |
| 28 | Real Property | 8 .2 | Area |
| 28 | Real Property | 8 .9 | Serviceable (2) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | |
|---|---|
| **Formula** | 9.00 |
| **Title** | Runway Dimension and Serviceability |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the dimension of all serviceable runways that support the installation.<br><br>Calculate a score for each runway at the installation as follows:<br><br>If the runway is not serviceable, get 0 points. See OSD Question 9, column 15 for this data. (N/A means not serviceable.)<br><br>Otherwise, if the runway is < 150' wide, get 0 points. See OSD Question 9, column 8 for this data. (N/A means 0.)<br><br>Otherwise, if the runway is < 7,000' long, get 0 points. See OSD Question 9, column 7 for this data. (N/A means 0.)<br><br>Otherwise, if the runway is >= 12,000' long, get 100 points.<br><br>Otherwise, pro-rate the runway length from 7,000' to 12,000' on a 50 to 100 scale to get the points.<br><br>The overall score is the highest score received by any one runway.<br><br>Example:<br><br>An installation has two runways, Alpha and Bravo. Alpha is 12,000' long, 160' wide, and full of huge holes because it has partially been demolished, so it is not serviceable. Bravo is 9,500' long and 152' wide, plus it is fully serviceable. Runway Alpha scores 0 points because it isn't serviceable. Runway Bravo meets all the specified criteria so it gets some points. 9,500' is halfway between 7,000' and 12,000', so Runway Bravo gets 75 points. Runway Bravo has the highest score for any runway at the installation, so its score of 75 is used for the installation's score. |
| **Source** | FLIP; AFCESA Pavement Evaluation/Condition Report/Survey; Existing Record Drawings or Physical Verification; Base Real Property Records |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 9.55 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 9.55 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | |
|---|---|---|---|
| 1 | Air/Space Operations | 9 . | Runways |
| 1 | Air/Space Operations | 9 .7 | Length |
| 1 | Air/Space Operations | 9 .8 | Width |
| 1 | Air/Space Operations | 9 .15 | Serviceable (5) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | |
|---|---|
| **Formula** | 19.00 |
| **Title** | Hangar Capability - Large Aircraft |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the facilities to hangar large aircraft.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the gross square feet for hangars for each installation. See OSD Question 19, column 5 for this data, but ignore all hangars whose Service Facility Code is not a 1, 2, or 3. See OSD Question 19, column 4 for this data. Also ignore all hangars whose door opening size < 131'. See OSD Question 19, column 6 for this data.<br>Also ignore all hangars whose gross square feet < 6000. See OSD Question 19, column 5 for this data.<br><br>If the sum above is < 6000 square feet, get 0 points.<br>Otherwise, if the sum above is = the highest score received by any installation, get 100 points.<br>Otherwise, pro-rate the sum above between 6000 and the highest score received by any installation on a 25 to 100 point scale.<br><br>Example:<br><br>There are three hangars on the facility that have a Service Facility Code of 1, 2, or 3, and which have door openings >= 131' in width, and which are at least 6,000 gross square feet in size. Those three hangars have a gross square footage of 6,000, 14,000 and 10,000 respectively, for a total of 30,000 gross square feet at that installation. The highest number of gross square feet at any installation using the above formula is 50,000.<br><br>30,000 is 65.91% of the way between 6,000 and 50,000, so the score is 65.91. |
| **Source** | ACES-RP, Record Drawings, Base Real Property Records; pre-populated from ACES-RP; "Service Facility Condition Code" rated 1 through 6 in accordance with OSD BRAC library |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.32 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 3.32 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 28 | Real Property | 19 | . | Hangars, Maintenance Facilities, and Nose Docks |
| 28 | Real Property | 19 | .4 | Service Facility Condition Code |
| 28 | Real Property | 19 | .5 | Facility Size (GSF) |
| 28 | Real Property | 19 | .6 | Largest Door Opening Width |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | |
|---|---|
| **Formula** | 19.00 |
| **Title** | Hangar Capability - Large Aircraft |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Check the attainment designation classifications of the installation's NAAQS (National Ambient Air Quality Standard) for the following applicable criteria: Attainment, Nonattainment, Nonattainment (Deferred), Maintenance, and Unclassifiable. Identify the amount of the SIP emissions budget for non-attainment and maintenance criteria pollutants, if any, allocated to the installation.<br><br>Use the following formula to compute this score:<br><br>Multiply the Attainment / Emission Budget Growth Allowance MinA by the Attainment / Emission Budget Growth Allowance *B* for the base score. Add the SIP Score to the base score. If the base score is now over 100, reduce it to 100.<br><br>SIP Score:<br><br>Sum the Installation SIP Growth Allowance (Tons/Year)" for the following constituents: '001. VOC' and '002. Nox'.<br>See OSD question 221, column 3 for the Installation SIP Growth Allowance (Tons/Year). See OSD Question 221, column 1 for the constituent.<br>If the total is > 0, then SIP Score = 20, otherwise it is 0.<br><br>Attainment / Emission Budget Growth Allowance MinA and *B*:<br><br>Perform the following calculation for each of the specified criteria pollutants and pick the lowest value from them all.<br><br>The criteria pollutants are '002. PM10', '004. S02', '005. CO', 007. O3 (8hr)*'. See OSD Question 213, column 1 for this data.<br><br>Attainment / Emission Budget Growth Allowance MinA:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 100. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get 77.778.<br><br>Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get 66.667. See OSD Question 213, column 3 for this data.<br><br>Otherwise, if the NAAQS Classification is Serious, get 43.5.<br><br>Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get 25.714.<br><br>Otherwise, if the NAAQS Classification is Extreme, get 7.<br><br>Otherwise, get 0.<br><br>Attainment / Emission Budget Growth Allowance *B*:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 1. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get .9. |

**Formula Sheet for MCI: Tanker** **Francis E. Warren AFB**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |

Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get .9. See OSD Question 213, column 3 for this data.

Otherwise, if the NAAQS Classification is Serious, get .8.

Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get .7.

Otherwise, if the NAAQS Classification is Extreme, get 1.

Otherwise, get 0.

Example:

The NAAQS Designation for 002. PM10 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.
The NAAQS Designation for 004. S02 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9
The NAAQS Designation for 005. CO is Nonattainment and the NAAQS Classification is Severe, which means 25.714 * .8.
The NAAQS Designation for 007. O3 (8hr)* is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.

25.714 * .8, which equals 20.5712, is the lowest value, so it becomes the base score.

The Installation SIP Growth Allowance (Tons/Year) for 001. VOC is 0, for 002. Nox it is 1. As the total of these two values is > 0, the SIP Score = 20, which needs to be added to the base score of 20.5712, for a new base score of 40.5712. This is less than 100, so it does not need to be reduced to 100, which makes the final score = 40.5712.

| | |
|---|---|
| **Source** | DoD#213: Current Edition of 40 CFR 81; or Federal Register; or Federal Register Citation to EPA's "final rule" approving the area's "maintenance plan" and "redesignation" of the area to "attainment status" DoD#221: State Implementation Plan |

| | | |
|---|---|---|
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.35 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 1.35 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| **Formula** | 213.00 |
|---|---|
| **Title** | Attainment / Emission Budget Growth Allowance |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 12 | Environment | 213 . | Air Quality Attainment |
| 12 | Environment | 213 . 2 | NAAQS Designation |
| 12 | Environment | 213 . 3 | NAAQS Classification |
| 12 | Environment | 221 . | SIP Emissions Budget |
| 12 | Environment | 221 . 1 | Criteria Pollutant |
| 12 | Environment | 221 . 3 | (b) Installation SIP Growth Allowance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | |
|---|---|
| **Formula** | 1205.10 |
| **Title** | Buildable Acres for Industrial Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Identify the number of "buildable," unconstrained, development acres available for industrial operations.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 3 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

| | | |
|---|---|---|
| **Formula Score** | 54.14 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.58 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.85 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.72 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 4 | CE Programming | 1205 . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 .3 | Total Unconstrained, Buildable Industrial Operations |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | |
|---|---|
| **Formula** | 1205.20 |
| **Title** | Buildable Acres for Air Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Buildable acres for air operations growth.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 5 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.58 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 1.58 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 4 | CE Programming | 1205 | . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 | .5 | Total Unconstrained, Buildable Airfield Operations/ Maintenance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | |
|---|---|
| **Formula** | 1207.00 |
| **Title** | Level of Mission Encroachment |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Characterize the level of encroachment for the area in which the installation is located.<br><br>There are four categories of acres for this purpose: 65-69, 70-74, 75-79, and 80+. See OSD Question 1208, column 1 for this data.<br><br>For each category, compute a category total as follows:<br><br>If the total acres in that category = 0, get 0 points. See OSD question 1208, column 5. (N/A means 0.)<br>Otherwise, compute the ratio of residential acres to the respective total acres. See OSD question 1208, columns 4 for residential acres. (N/A means 0.)<br><br>Subtract the 65-69 category total from 1, then multiply the result by 0.13.<br>Subtract the 70-74 category total from 1, then multiply the result by 0.19.<br>Subtract the 75-79 category total from 1, then multiply the result by 0.28.<br>Subtract the 80+ category total from 1, then multiply the result by 0.4.<br><br>Add the above 4 amounts together and multiply the result by 100 for the raw total.<br><br>Add these points to the raw total as follows:<br><br>If the installation purchased "Restrictive Easements" on undeveloped or developed land, add 7 points. See OSD Question 1209, columns 2 and 3 for this data, where a Yes in either qualifies for the 7 points. (N/A means no.)<br><br>If the installation confirms "Land Use Controls that Correlate w/ AICUZ-JLUS Recommendation.", add 5 points. See OSD Question 1209, column 5 for this data, where a Yes qualifies for the 5 points. (N/A means no.)<br><br>If the installation is in a state that has Mandatory Coordination of Development Proposals or there is a Local Joint Land Use Coordinating Board, add 1 point. See OSD Question 1209, columns 6 or 8 for this data, where a Yes in either qualifies for the 1 point.<br><br>The above process can compute a score from 0 to 113.<br>If the computed score is > 100, it is dropped to 100.<br><br>Example:<br><br>60-65 Residential acres: 50<br>60-65 Total acres: 100<br>70-74 Residential acres: 50<br>70-74 Total acres: 100<br>75-79 Residential acres: 50<br>75-79 Total acres: 100<br>80+ Residential acres: 50<br>80+ Total acres: 100<br><br>Restrictive Easements = Yes (column 2) and No (column 3)<br>Land Use Controls ... = N/A<br>Mandatory Coordination ... = No and No.<br><br>((1 - ( 50 / 100)) * 0.13)<br>+ ((1 - ( 50 / 100)) * 0.19)<br>+ ((1 - ( 50 / 100)) * 0.28) |

## Formula Sheet for Francis E. Warren AFB

## MCI: Tanker

| | | |
|---|---|---|
| **Formula** | 1207.00 | |
| **Title** | Level of Mission Encroachment | |
| | + ((1 - ( 50 / 100)) * 0.4)<br>+ 7<br>+ 0<br>+ 0 for a score of 7.5 points. | |
| **Source** | 1207: AFI 32-7063, AFH 32-7084, AICUZ Report, Base Comprehensive Plan F Series maps or D Series as noted in AFI 32-7062 Atch7, local governmental zoning or land use planning authorities; 1208: AFI 32-7063, AICUZ Report, MAJCOM Approved Noise Study; 1209: State legislation, local referendums to purchase lands, zoning ordinance, noise exposure maps, noise control plans, documentation of state purchases of land | |
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.08 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 2.08 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 4 | CE Programming | 1208 | . | Installation - Encroachment (2 of 3) |
| 4 | CE Programming | 1208 | .4 | Residential |
| 4 | CE Programming | 1208 | .5 | Total Acres |
| 4 | CE Programming | 1209 | . | Installation - Encroachment (3 of 3) |
| 4 | CE Programming | 1209 | .2 | Purchased Restrictive Easements On Undeveloped Land (1) |
| 4 | CE Programming | 1209 | .3 | Purchased Restrictive Easements On Currently Developed Land (2) |
| 4 | CE Programming | 1209 | .5 | Land Use Controls that Correlate w/ AICUZ-JLUS Recommendation (4) |
| 4 | CE Programming | 1209 | .6 | Mandatory Coordination of Development Proposals (5) |
| 4 | CE Programming | 1209 | .8 | Local Joint Land Use Coordination Board (7) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | |
|---|---|
| **Formula** | 1214.00 |
| **Title** | Fuel Dispensing Rate to Support Mobility and Surge |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Mobility/Surge |
| **Formula** | Check the installation's sustained jet fuel dispensing rate capability.<br><br>Sum the JP5 and JP8 figures for jet fuel dispensing. See OSD Question 1214, column 4, for both JP5 and JP8. (N/A equals 0.)<br><br>If the sum is >= 2,500,000 gallons, get 100 points. If the sum is = 0 gallons, get 0 points.<br><br>Otherwise, pro-rate the sum of gallons between 0 and 2,500,000 on a 0 to 100 point scale.<br><br>Example:<br><br>JP5 can handle 500,000 gallons. JP8 can handle 750,000 gallons, for a total of 1,250,000 gallons. 1,250,000 is halfway between 0 and 2,500,000 gallons, for a score of 50. |
| **Source** | Base Support Plan as required by AFI 10-404, Attachment 20 |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.85 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 3.85 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 15 | Fuel | 1214 | . | POL - Maximum Dispensing Rate |
| 15 | Fuel | 1214 | .1 | Jet Fuel Dispensing Rate |
| 15 | Fuel | 1214 | .4 | Sustained Jet Fuel Dispensing Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | |
|---|---|
| **Formula** | 1235.00 |
| **Title** | Installation Pavements Quality |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Identify if the installation pavement for the primary runway can support Tanker aircraft operations.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Compute the runway pavement suitability score and the apron pavement suitability score. Each of these is worth 50% of the overall score.<br><br>Runway Pavement Suitability:<br><br>Find the highest PCN among all the runways. See OSD Question 1235, column 3 for this data. (N/A means 0.) Compute a score for every runway with that PCN and use the highest scoring runway.<br><br>Score the runway for runway pavement suitability as follows:<br><br>Get the KC-10 ACN. See OSD Question 1236, column 5 for the KC-10 ACN. (N/A means 0.)<br>Get the KC-135 ACN. See OSD Question 1235, column 7 for the KC-135 ACN. (N/A means 0.)<br><br>If the PCN is N/A or 0, get 0 points.<br>Otherwise, if the KC-10 ACN divided by the PCN > 0 and <= 1.0, then get 100 points.<br>Otherwise, if the KC-135 ACN divided by the PCN > 0 and <= 1.0, then get 75 points.<br>Otherwise, if the KC-135 ACN divided by the PCN > 0 and <= 1.1, then get 50 points.<br>Otherwise, get 0 points.<br><br>Apron pavement suitability:<br><br>Score each apron for pavement quality and choose the highest scoring apron.<br><br>Get the KC-10 ACN. See OSD Question 1240, column 7 for this data. (N/A means 0.)<br>Get the KC-135 ACN. See OSD Question 1240, column 3 for this data. (N/A means 0.)<br>If the PCN is 0 or N/A, get 0 points. See OSD Question 1239, column 4 for this data.<br>Sum the apron pavement square yardage (see OSD Question 1239, column 2, N/A means 0) where the KC-10 ACN divided by the PCN > 0 and <= 1.0.<br>Sum the apron pavement square yardage (see OSD Question 1239, column 2, N/A means 0) where the KC-135 ACN divided by the PCN > 0 and <= 1.0.<br><br>If the KC-10 square yardage >= 532,000, get 100 points.<br>Otherwise, if the KC-135 square yardage >= 336,000, get 75 points.<br>Otherwise, if the KC-135 square yardage >= 168,000, get 50 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are 2 runways on the base, but one has the highest runway pavement PCN value, which is 120. The ACN for an KC-10 on that runway is 55, 55 divided by 120 is <= 1.0, so the base gets 100 pts for runway pavement suitability. In this case, the KC-135 ACN/PCN ratio was a moot point.<br><br>There are 2 apron pavements on the base. Apron Alpha has a PCN of 120 and 200,000 square yards of surface. Apron Bravo has a PCN of 50 and 150,000 square yards. The ACN for KC-10s on both aprons is 55, and for KC-135s it is 43.<br><br>Apron Alpha's ACN/PCN ratio for KC-10s is 55/120, which is less that 1.0. This counts as 200,000 square yards for the KC-10. Apron Bravo's ACN/PCN ratio for KC-10s is 55/50, which is more than 1.0, so it's square yards aren't counted towards KC-10 square yardage. This gives us a total of 200,000 KC-10 square yards, which is not greater than 532,000 square yards. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | | |
|---|---|---|
| **Formula** | 1235.00 | |
| **Title** | Installation Pavements Quality | |
| | Apron Alpha's ACN/PCN ratio for KC-135s is 43/120, which is less that 1.0. This counts as 200,000 square yards for the KC-135. Apron Bravo's ACN/PCN ratio for KC-135s is 43/50, which is less than 1.0, so it's 150,000 square yards are also counted towards KC-135 square yardage. This gives us a total of 350,000 KC-135 square yards, which is greater than 336,000 square yards, which gives us a score of 75 points for apron pavement suitability.<br><br>50% of the Runway pavement suitability score of 100 equals 50. 50% of the apron pavement score of 75 equals 37.5. 50 plus 37.5 equals a score of 87.5. | |
| **Source** | AFCESA Pavement Evaluation Report and Base General Plan; Existing Record Drawings or Physical Verification; Base Real Property Records; FLIP; ASSR | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 14.53 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 14.53 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 37 | Airfield Pavements | 1235 | . | Airfield Pavements - Runway (1 of 2) |
| 37 | Airfield Pavements | 1235 | .3 | Controlling Feature PCN |
| 37 | Airfield Pavements | 1236 | . | Airfield Pavements - Runway (2 of 2) |
| 37 | Airfield Pavements | 1236 | .5 | ACN for KC-10 at 590 Kips |
| 37 | Airfield Pavements | 1239 | . | Airfield Pavements - Aprons (1 of 2) |
| 37 | Airfield Pavements | 1239 | .2 | Total Size of Primary Facility (2) |
| 37 | Airfield Pavements | 1239 | .4 | Predominant Feature PCN (4) |
| 37 | Airfield Pavements | 1240 | . | Airfield Pavements - Aprons (2 of 2) |
| 37 | Airfield Pavements | 1240 | .3 | ACN for KC-135R at 323 Kips |
| 37 | Airfield Pavements | 1240 | .7 | ACN for KC-10 at 590 Kips |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | | |
|---|---|---|
| **Formula** | 1241.00 | |
| **Title** | Ability to Support Large-Scale Mobility Deployment | |
| **Criterion** | Contingency, Mobilization, Future Forces | |
| **Attribute** | Mobility/Surge | |
| **Formula** | State installation's parking MOG for C-17 equivalents using surveyed/approved transient parking ramps.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Find the total number of C-17 MOGs. See OSD Question 1241, column 1 for this data.<br><br>If the total is >= 6, get 100 points.<br>Otherwise, if the total is >= 4, get 75 points.<br>Otherwise, if the total is >= 2, get 25 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are a total of 3 C-17 MOGs. 3 is between 2 and 4, so the score is 25 points. | |
| **Source** | ASR (Airfield Suitability Report) | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.65 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 1.65 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 39 | Airfield Management | 1241 | . | Ramp - Transient Capability |
| 39 | Airfield Management | 1241 | .1 | C-17 MOG |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | |
|---|---|
| **Formula** | 1242.00 |
| **Title** | ATC Restrictions to Operations |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | List the percentage of installation departures delayed by Air Traffic Control.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Check the Delayed Departures Percentage. See OSD question 1242, column 5 for this data.<br><br>If the percentage delayed = 0, get 100 points.<br>Otherwise, if the percentage delayed is >= 3%, get 0 points.<br>Otherwise, pro-rate the percentage delayed between 0 to 3% on a 100 to 0 point scale.<br><br>Example:<br><br>The departure percentage delayed is 1%. 1% is one third of the way between 0 and 3%, so the score is 66.67 points. |
| **Source** | CAMS (Computerized Aircraft Maintenance System)/ G081 |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 6.90 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 6.90 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1242 | . | Air Operations - Departure Delays |
| 39 | Airfield Management | 1242 | .5 | Precentage Delayed for ATC |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | |
|---|---|
| **Formula** | 1245.00 |
| **Title** | Proximity to Airspace Supporting Mission (ASM) |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>For each airspace:<br>If the Airspace/Route Designator does not start with AR, get 0 points. See OSD # 1245, column 1 for this data.<br>Otherwise, if the distance to the airspace is > 850 miles, get 0 points. See OSD # 1245, column 2. (N/A means more than 850 NM.)<br>Otherwise, if the distance to the airspace = 850 miles, get 10 points.<br>Otherwise, if the distance to the airspace = 250 miles, get 100 points.<br>Otherwise, pro-rate the distance to the airspace from 250 miles to 850 miles on a 100 to 10 point scale.<br>This is the base raw total.<br><br>Once you have a base raw total, find the highest, and the lowest, non-zero raw total across all bases.<br>If the raw total = 0, the score = 0.<br>Else, if the raw total = the highest raw total, the score = 100.<br>Else, if the raw total = the lowest, non-zero raw total, the score = 10.<br>Else, pro-rate the raw total between the lowest non-zero raw total and the highest raw total on a 10 to 100 scale. |
| **Source** | FLIP AP-1A; FLIP AP-1B; IFR Supp; Falcon View or other certified flight planning software |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 39.10 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 39.10 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1245 | . | Airspace - Distance to Airspace |
| 1 | Air/Space Operations | 1245 | .1 | Airspace/Route Designator |
| 1 | Air/Space Operations | 1245 | .2 | Distance to Airspace/Route |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI: Tanker**

| | |
|---|---|
| **Formula** | 1250.00 |
| **Title** | Area Cost Factor |
| **Criterion** | Cost of Ops / Manpower |
| **Attribute** | Cost Factors |
| **Formula** | Evaluate the Area Cost Factor for each installation.<br><br>Find the lowest area cost factor listed for that installation. See OSD question 1250, column 2 for this data.<br><br>If the area cost factor <= 0.78, get 100 points.<br>Otherwise, if the area cost factor >= 1.42, get 0 points.<br>Otherwise, pro-rate the area cost factor between 0.78 and 1.42, on a 100 to 0 point scale.<br><br>Example:<br><br>The lowest area cost factor for the base is 1.3. 1.3 is 81.25% of the way between 0.78 and 1.42, so the score is 18.75 points. |
| **Source** | DoD Facilities Pricing Guide, Table B, March 2004 |

| | | |
|---|---|---|
| **Formula Score** | 65.63 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.82 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.43 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 4 | CE Programming | 1250 | . | Area Cost Factor |
| 4 | CE Programming | 1250 | .2 | Area Cost Factor |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | | |
|---|---|---|
| **Formula** | 1269.00 | |
| **Title** | Utilities cost rating (U3C) | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the Utilities Costs and Climatic Consideration (U3C) Rating for the installation.<br><br>If the U3C rating is <= .59, get 100 points. See OSD Question 1269, column 1 for this data.<br>Otherwise, if the U3C rating is >= 2.29, get 0 points.<br>Otherwise, pro-rate the U3C rating between .59 and 2.29 on a 100 to 0 scale.<br><br>Example:<br><br>The U3C rating is 1.6. 1.6 is 59.41% of the way between .59 and 2.29, so the score is 40.59. | |
| **Source** | ASHRAE Standards; DoD 5126.46-M-2, Defense Utility Energy Reporting System; UFC 3-400-02,<br>DOE Website: Buildings Energy Databook: Table 7.4 Typical Commercial Buildings | |
| **Formula Score** | 82.94 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.13 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.10 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.02 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 35 | Utilities | 1269 | . | Utilities Cost Rating (U3C) |
| 35 | Utilities | 1269 | .1 | Answer |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | | |
|---|---|---|
| **Formula** | 1402.00 | |
| **Title** | BAH Rate | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the 2004 monthly BAH rate for an O-3 with dependents. See OSD question 1402, column 1 for this data.<br><br>If the BAH rate <= 746, get 100 points.<br>Otherwise, if the BAH rate >= 2013, get 0 points.<br>Otherwise, pro-rate the BAH rate between 746 and 2013 on a 100 to 0 scale.<br><br>Example:<br><br>The BAH rate is 974. 974 is 18% between 746 and 2013, which results in a score of 82.00. | |
| **Source** | www.dtic.mil/perdiem/bah.html | |
| **Formula Score** | 67.32 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.88 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.59 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.29 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 13 | Finance | 1402 | . | BAH Rate |
| 13 | Finance | 1402 | .1 | BAH Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **Tanker**

| | | |
|---|---|---|
| **Formula** | 1403.00 | |
| **Title** | GS Locality Pay Rate | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the 2004 locality pay rate for the GS pay schedule. See OSD question 1403, column 1 for this data. (N/A equals 0.)<br><br>If the pay rate <= 10.90, get 100 points.<br>Otherwise, if the pay rate >= 20.37, get 0 points.<br>Otherwise, pro-rate the pay rate between 10.90 and 20.37 on a 100 to 0 scale.<br><br>Example:<br><br>The pay rate is 14.31, which is 36.01% of the way between 10.90 and 20.37, which results in a score of 63.99. | |
| **Source** | Office of Personnel Management Web page | |
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.25 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 13 | Finance | 1403 | . | GS Locality Pay Rate |
| 13 | Finance | 1403 | .1 | GS Locality Pay Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 8.00 |
| **Title** | Ramp Area and Serviceability |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the square yardage of every serviceable ramp at the installation. See OSD Question 8, column 9 to determine serviceability. (N/A means not serviceable.) See OSD Question 8, column 2 for the square yardage of that ramp.<br><br>If the total square yards of serviceable ramp is >= 186,000, get 100 points.<br><br>Otherwise, if the total square yards of serviceable ramp is >= 126,000, get 75 points.<br><br>Otherwise, if the total square yards of serviceable ramp is >= 36,000, get 25 points.<br><br>Otherwise, get 0 points.<br><br>Example:<br><br>The installation has three ramps, Alpha, Bravo and Charlie.<br>Alpha and Bravo are both fully serviceable and active; Charlie is not serviceable because of major sinkholes that have developed. Alpha has 50,000 square yards, Bravo has 20,000 square yards, and Charlie has 200,000 square yards, for a total of 70,000 serviceable square yards of ramps. This number is between 36,000 and 126,000, so it falls into the 25 point range. |
| **Source** | FLIP; AFCESA Pavement Evaluation/Condition Report/Survey; Existing Record Drawings or Physical Verification; Base Real Property Records |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 5.23 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 5.23 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | |
|---|---|---|---|
| 1 | Air/Space Operations | 9 . | Runways |
| 1 | Air/Space Operations | 9 .7 | Length |
| 1 | Air/Space Operations | 9 .8 | Width |
| 1 | Air/Space Operations | 9 .15 | Serviceable (5) |
| 28 | Real Property | 8 . | Ramp/Apron Space |
| 28 | Real Property | 8 .2 | Area |
| 28 | Real Property | 8 .9 | Serviceable (2) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 9.00 |
| **Title** | Runway Dimension and Serviceability |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Check the dimension of all serviceable runways that support the installation.<br><br>Calculate a score for each runway at the installation as follows:<br><br>If the runway is not serviceable, get 0 points. See OSD Question 9, column 15 for this data. (N/A means not serviceable.)<br><br>Otherwise, if the runway is < 150' wide, get 0 points. See OSD Question 9, column 8 for this data. (N/A means 0.)<br><br>Otherwise, if the runway is < 5,000' long, get 0 points. See OSD Question 9, column 7 for this data. (N/A means 0.)<br><br>Otherwise, if the runway is >= 8,000' long, get 100 points.<br><br>Otherwise, pro-rate the runway length from 5,000' to 8,000' on a 50 to 100 scale to get the points.<br><br>The overall score is the highest score received by any one runway.<br><br>Example:<br><br>An installation has two runways, Alpha and Bravo. Alpha is 12,000' long, 160' wide, and full of huge holes because it has partially been demolished, so it is not serviceable. Bravo is 6,500' long and 152' wide, plus it is fully serviceable. Runway Alpha scores 0 points because it isn't serviceable. Runway Bravo meets all the specified criteria so it gets some points. 6,500' is halfway between 5,000' and 8,000', so Runway Bravo gets 75 points. Runway Bravo has the highest score for any runway at the installation, so its score of 75 is used for the installation's score. |
| **Source** | FLIP; AFCESA Pavement Evaluation/Condition Report/Survey; Existing Record Drawings or Physical Verification; Base Real Property Records |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 5.23 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 5.23 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | |
|---|---|---|---|
| 1 | Air/Space Operations | 9 . | Runways |
| 1 | Air/Space Operations | 9 .7 | Length |
| 1 | Air/Space Operations | 9 .8 | Width |
| 1 | Air/Space Operations | 9 .15 | Serviceable (5) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Check the attainment designation classifications of the installation's NAAQS (National Ambient Air Quality Standard) for the following applicable criteria: Attainment, Nonattainment, Nonattainment (Deferred), Maintenance, and Unclassifiable. Identify the amount of the SIP emissions budget for non-attainment and maintenance criteria pollutants, if any, allocated to the installation.<br><br>Use the following formula to compute this score:<br><br>Multiply the Attainment / Emission Budget Growth Allowance MinA by the Attainment / Emission Budget Growth Allowance *B* for the base score. Add the SIP Score to the base score. If the base score is now over 100, reduce it to 100.<br><br>SIP Score:<br><br>Sum the Installation SIP Growth Allowance (Tons/Year)" for the following constituents: '001. VOC' and '002. Nox'.<br>See OSD question 221, column 3 for the Installation SIP Growth Allowance (Tons/Year). See OSD Question 221, column 1 for the constituent.<br>If the total is > 0, then SIP Score = 20, otherwise it is 0.<br><br>Attainment / Emission Budget Growth Allowance MinA and *B*:<br><br>Perform the following calculation for each of the specified criteria pollutants and pick the lowest value from them all.<br><br>The criteria pollutants are '002. PM10', '004. S02', '005. CO', 007. O3 (8hr)*'. See OSD Question 213, column 1 for this data.<br><br>Attainment / Emission Budget Growth Allowance MinA:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 100. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get 77.778.<br><br>Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get 66.667. See OSD Question 213, column 3 for this data.<br><br>Otherwise, if the NAAQS Classification is Serious, get 43.5.<br><br>Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get 25.714.<br><br>Otherwise, if the NAAQS Classification is Extreme, get 7.<br><br>Otherwise, get 0.<br><br>Attainment / Emission Budget Growth Allowance *B*:<br><br>If the NAAQS Designation is Attainment, Unclassifiable, Nonattainment (Deferred), Unclassifiable/Attainment, Unclassifiable/Attainment (EAC), Nonattainment-deferred (EAC), Attainment (EAC) or N/A, get 1. See OSD Question 213, column 2 for this data.<br><br>Otherwise, if the NAAQS Designation is Maintenance, get .9. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 213.00 |
| **Title** | Attainment / Emission Budget Growth Allowance |

Otherwise, if the NAAQS Classification is Marginal, Subpart 1, Moderate, Primary, or Secondary, get .9. See OSD Question 213, column 3 for this data.

Otherwise, if the NAAQS Classification is Serious, get .8.

Otherwise, if the NAAQS Classification is Severe, Severe-15, or Severe-17, get .7.

Otherwise, if the NAAQS Classification is Extreme, get 1.

Otherwise, get 0.

Example:

The NAAQS Designation for 002. PM10 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.
The NAAQS Designation for 004. S02 is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9
The NAAQS Designation for 005. CO is Nonattainment and the NAAQS Classification is Severe, which means 25.714 * .8.
The NAAQS Designation for 007. O3 (8hr)* is Maintenance and the NAAQS Classification is N/A, which means 77.778 * .9.

25.714 * .8, which equals 20.5712, is the lowest value, so it becomes the base score.

The Installation SIP Growth Allowance (Tons/Year) for 001. VOC is 0, for 002. Nox it is 1. As the total of these two values is > 0, the SIP Score = 20, which needs to be added to the base score of 20.5712, for a new base score of 40.5712. This is less than 100, so it does not need to be reduced to 100, which makes the final score = 40.5712.

| | |
|---|---|
| **Source** | DoD#213: Current Edition of 40 CFR 81; or Federal Register; or Federal Register Citation to EPA's "final rule" approving the area's "maintenance plan" and "redesignation" of the area to "attainment status" DoD#221: State Implementation Plan |

| | | |
|---|---|---|
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.70 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.70 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| **Formula** | 213.00 |
|---|---|
| **Title** | Attainment / Emission Budget Growth Allowance |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 12 | Environment | 213 . | Air Quality Attainment |
| 12 | Environment | 213 . 2 | NAAQS Designation |
| 12 | Environment | 213 . 3 | NAAQS Classification |
| 12 | Environment | 221 . | SIP Emissions Budget |
| 12 | Environment | 221 . 1 | Criteria Pollutant |
| 12 | Environment | 221 . 3 | (b) Installation SIP Growth Allowance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI: UAV / UCAS**

| | |
|---|---|
| **Formula** | 1205.10 |
| **Title** | Buildable Acres for Industrial Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Identify the number of "buildable," unconstrained,development acres available for industrial operations.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 3 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

| | | |
|---|---|---|
| **Formula Score** | 54.14 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.50 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 1.89 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 1.61 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 4 | CE Programming | 1205 . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 . 3 | Total Unconstrained, Buildable Industrial Operations |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI: UAV / UCAS**

| | |
|---|---|
| **Formula** | 1205.20 |
| **Title** | Buildable Acres for Air Operations Growth |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Growth Potential |
| **Formula** | Buildable acres for air operations growth.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Sum the number of suitable acres at the installation. See OSD Question 1205, column 5 for the data. (N/A means 0.)<br><br>If the number of acres is >= 150, get 100 points. If < 5 acres, get 0 points. Otherwise, pro-rate the number of acres between 5 and 150 on a 0 to 100 point scale.<br><br>Example:<br><br>There are three separate tracts of land that are suitable, comprised of 10, 22.5, and 45 acres respectively, for a total of 77.5 acres. 72.5 is halfway between 5 and 150 acres, so the score is 50. |
| **Source** | AFI 32-7062, AICUZ Study Base Comprehensive Plan component plans such as Cultural Resource Management Plans, Natural Resource Management Plans and special studies, Base comprehensive plan maps |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 2.80 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 2.80 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 4 | CE Programming | 1205 | . | Installation - Unconstrained Development Acreage |
| 4 | CE Programming | 1205 | .5 | Total Unconstrained, Buildable Airfield Operations/ Maintenance |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1207.00 |
| **Title** | Level of Mission Encroachment |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Characterize the level of encroachment for the area in which the installation is located.<br><br>There are four categories of acres for this purpose: 65-69, 70-74, 75-79, and 80+. See OSD Question 1208, column 1 for this data.<br><br>For each category, compute a category total as follows:<br><br>If the total acres in that category = 0, get 0 points. See OSD question 1208, column 5. (N/A means 0.)<br>Otherwise, compute the ratio of residential acres to the respective total acres. See OSD question 1208, columns 4 for residential acres. (N/A means 0.)<br><br>Subtract the 65-69 category total from 1, then multiply the result by 0.13.<br>Subtract the 70-74 category total from 1, then multiply the result by 0.19.<br>Subtract the 75-79 category total from 1, then multiply the result by 0.28.<br>Subtract the 80+ category total from 1, then multiply the result by 0.4.<br><br>Add the above 4 amounts together and multiply the result by 100 for the raw total.<br><br>Add these points to the raw total as follows:<br><br>If the installation purchased "Restrictive Easements" on undeveloped or developed land, add 7 points. See OSD Question 1209, columns 2 and 3 for this data, where a Yes in either qualifies for the 7 points. (N/A means no.)<br><br>If the installation confirms "Land Use Controls that Correlate w/ AICUZ-JLUS Recommendation.", add 5 points. See OSD Question 1209, column 5 for this data, where a Yes qualifies for the 5 points. (N/A means no.)<br><br>If the installation is in a state that has Mandatory Coordination of Development Proposals or there is a Local Joint Land Use Coordinating Board, add 1 point. See OSD Question 1209, columns 6 or 8 for this data, where a Yes in either qualifies for the 1 point.<br><br>The above process can compute a score from 0 to 113.<br>If the computed score is > 100, it is dropped to 100.<br><br>Example:<br><br>60-65 Residential acres: 50<br>60-65 Total acres: 100<br>70-74 Residential acres: 50<br>70-74 Total acres: 100<br>75-79 Residential acres: 50<br>75-79 Total acres: 100<br>80+ Residential acres: 50<br>80+ Total acres: 100<br><br>Restrictive Easements = Yes (column 2) and No (column 3)<br>Land Use Controls ... = N/A<br>Mandatory Coordination ... = No and No.<br><br>((1 - ( 50 / 100)) * 0.13)<br>+ ((1 - ( 50 / 100)) * 0.19)<br>+ ((1 - ( 50 / 100)) * 0.28) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1207.00 |
| **Title** | Level of Mission Encroachment |
| | + ((1 - ( 50 / 100)) * 0.4)<br>+ 7<br>+ 0<br>+ 0 for a score of 7.5 points. |
| **Source** | 1207: AFI 32-7063, AFH 32-7084, AICUZ Report, Base Comprehensive Plan F Series maps or D Series as noted in AFI 32-7062 Atch7, local governmental zoning or land use planning authorities; 1208: AFI 32-7063, AICUZ Report, MAJCOM Approved Noise Study; 1209: State legislation, local referendums to purchase lands, zoning ordinance, noise exposure maps, noise control plans, documentation of state purchases of land |

| | | |
|---|---|---|
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.45 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 1.45 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 4 | CE Programming | 1208 | . | Installation - Encroachment (2 of 3) |
| 4 | CE Programming | 1208 | .4 | Residential |
| 4 | CE Programming | 1208 | .5 | Total Acres |
| 4 | CE Programming | 1209 | . | Installation - Encroachment (3 of 3) |
| 4 | CE Programming | 1209 | .2 | Purchased Restrictive Easements On Undeveloped Land (1) |
| 4 | CE Programming | 1209 | .3 | Purchased Restrictive Easements On Currently Developed Land (2) |
| 4 | CE Programming | 1209 | .5 | Land Use Controls that Correlate w/ AICUZ-JLUS Recommendation (4) |
| 4 | CE Programming | 1209 | .6 | Mandatory Coordination of Development Proposals (5) |
| 4 | CE Programming | 1209 | .8 | Local Joint Land Use Coordination Board (7) |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1232.00 |
| **Title** | Sufficient Explosives-sited Parking |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | List the number of explosives-sited parking spots by MDS (Mission Design Series).<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Total the number of explosives sited parking spots. See OSD Question 1232, column 2 for this data. (N/A equals 0.)<br><br>If the total >= 4, get 100 points.<br>Otherwise, if the total >= 3, get 66 points.<br>Otherwise, if the total >= 2, get 33 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>The installation has two listings for explosive sited parking spots, with 1 and 2 respectively, which totals to 3.<br>3 is between 3 and 4, so the score is 66 points. |
| **Source** | AFMAN 91-201, Explosives Safety Standards; Installation Explosives Site Plan |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 5.81 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 5.81 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | |
|---|---|---|---|
| 36 | Safety | 1232 . | Munitions - Live Load Area |
| 36 | Safety | 1232 . 2 | Number of Sited Parking Spots |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1233.00 |
| **Title** | Sufficient Munitions Storage |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | List maximum explosive capacity for the installation's hazard classification Class 1.1 munitions storage areas, in pounds.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Otherwise, total the capacity. See OSD question 1233, column 1 for this data. (N/A means 0.)<br><br>If the total >= 11520, get 100 points.<br>Otherwise, if the total >= 768, get 75 points.<br>Otherwise, if the total >= 80, get 25 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are two storage areas, with a capacity of 5,000 each, for a total of 10,000. 10,000 is between 768 and 11520, so the score is 75 points. |
| **Source** | AFMAN 91-201, Explosives Safety Standards; Installation Explosives Site Plan. Maximum assumes F-117 18 PAA (GBU-27) and F/A-22 24 PAA (GBU-32 & AIM 120) |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 5.81 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 5.81 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 36 | Safety | 1233 | . | Munitions - Explosive Capacity w/o Waivers |
| 36 | Safety | 1233 | .1 | Hazard Class 1.1 |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1235.00 |
| **Title** | Installation Pavements Quality |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Key Mission Infrastructure |
| **Formula** | Identify if the installation pavement for the primary runway can support UAV / UCAS aircraft operations. |

If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.

Compute the runway pavement suitability score and the apron pavement suitability score. Each of these is worth 50% of the overall score.

Runway Pavement Suitability:

Find the highest PCN among all the runways. See OSD Question 1235, column 3 for this data. (N/A means 0.) Compute a score for every runway with that PCN and use the highest scoring runway.

Score the runway for runway pavement suitability as follows:

If the PCN is N/A or 0, get 0 points.
Otherwise, if the C-5B ACN divided by the PCN = 0, get 0 points. See OSD Question 1236, column 6 for the C-5B ACN. (N/A means 0.)
Otherwise, if the C-5B ACN divided by the PCN <= 1.0, then get 100 points.
Otherwise, if the C-5B ACN divided by the PCN <= 1.1, then get 75 points.
Otherwise, get 0 points.

Apron pavement suitability:

Score each apron for pavement quality and choose the highest scoring apron.

Get the KC-135 ACN. See OSD Question 1240, column 3 for this data. (N/A means 0.)
If the PCN is 0 or N/A, get 0 points. See OSD Question 1239, column 4 for this data.
Otherwise, sum the apron pavement square yardage (see OSD Question 1239, column 2, N/A means 0) where the KC-135 ACN divided by the PCN > 0 and <= 1.0.

If the KC-135 square yardage >= 186,000, get 100 points.
Otherwise, if the KC-135 square yardage >= 126,000, get 50 points.
Otherwise, if the KC-135 square yardage >= 36,000, get 25 points.
Otherwise, get 0 points.

Example:

There are 2 runways on the base, but one has the highest runway pavement PCN value, which is 60. The ACN for an C-5B on that runway is 40, 40 divided by 60 is <= 1.0, so the base gets 100 pts for runway pavement suitability.

There are 2 apron pavements on the base. Apron Alpha has a PCN of 50 and 100,000 square yards of surface. Apron Bravo has a PCN of 30 and 150,000 square yards. The ACN for KC-135s on both aprons is 43.

Apron Alpha's ACN/PCN ratio for KC-135s is 43/50, which is less that 1.0. This counts as 100,000 square yards for the KC-135B Apron Bravo's ACN/PCN ratio for KC-135s is 43/30, which is more than 1.0, so it's square yards aren't counted towards KC-135 square yardage. This gives us a total of 100,000 KC-135 square yards, which is between the 60,000 and 120,000 KC-135 square yards needed for a score of 25 points.

50% of the Runway pavement suitability score of 100 equals 50. 50% of the apron pavement score of 25 equals 12.5. 50 plus 12.5 equals a score of 62.5.

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | | |
|---|---|---|
| **Formula** | 1235.00 | |
| **Title** | Installation Pavements Quality | |
| **Source** | AFCESA Pavement Evaluation Report and Base General Plan; Existing Record Drawings or Physical Verification; Base Real Property Records; FLIP; ASSR | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 5.52 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 5.52 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 37 | Airfield Pavements | 1235 | . | Airfield Pavements - Runway (1 of 2) |
| 37 | Airfield Pavements | 1235 | .3 | Controlling Feature PCN |
| 37 | Airfield Pavements | 1236 | . | Airfield Pavements - Runway (2 of 2) |
| 37 | Airfield Pavements | 1236 | .6 | ACN for C-5B at 840 Kips |
| 37 | Airfield Pavements | 1239 | . | Airfield Pavements - Aprons (1 of 2) |
| 37 | Airfield Pavements | 1239 | .2 | Total Size of Primary Facility (2) |
| 37 | Airfield Pavements | 1239 | .4 | Predominant Feature PCN (4) |
| 37 | Airfield Pavements | 1240 | . | Airfield Pavements - Aprons (2 of 2) |
| 37 | Airfield Pavements | 1240 | .8 | ACN for C-5B at 840 Kips |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1241.00 |
| **Title** | Ability to Support Large-Scale Mobility Deployment |
| **Criterion** | Contingency, Mobilization, Future Forces |
| **Attribute** | Mobility/Surge |
| **Formula** | Check installation's parking MOG for C-17 equivalents using surveyed/approved transient parking ramps.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Find the total number of C-17 MOGs. See OSD Question 1241, column 1 for this data.<br><br>If the total is >= 6, get 100 points.<br>Otherwise, if the total is >= 4, get 75 points.<br>Otherwise, if the total is >= 2, get 25 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>There are a total of 3 C-17 MOGs. 3 is between 2 and 4, so the score is 25 points. |
| **Source** | ASR (Airfield Suitability Report) |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.00 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 3.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1241 | . | Ramp - Transient Capability |
| 39 | Airfield Management | 1241 | .1 | C-17 MOG |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1242.00 |
| **Title** | ATC Restrictions to Operations |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | List the percentage of installation departures delayed by Air Traffic Control.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Check the Delayed Departures Percentage. See OSD question 1242, column 5 for this data.<br><br>If the percentage delayed = 0, get 100 points.<br>Otherwise, if the percentage delayed is >= 3%, get 0 points.<br>Otherwise, pro-rate the percentage delayed between 0 to 3% on a 100 to 0 point scale.<br><br>Example:<br><br>The departure percentage delayed is 1%. 1% is one third of the way between 0 and 3%, so the score is 66.67 points. |
| **Source** | CAMS (Computerized Aircraft Maintenance System)/ G081 |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 6.33 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 6.33 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1242 | . | Air Operations - Departure Delays |
| 39 | Airfield Management | 1242 | .5 | Precentage Delayed for ATC |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1245.00 |
| **Title** | Proximity to Airspace Supporting Mission (ASM) |
| **Criterion** | Current / Future Mission |
| **Attribute** | Geo-locational Factors |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>All airspace over 250 Nautical Miles (NM) away will be ignored. See OSD # 1245, column 2. (N/A means more than 250 NM.) Data is in OSD #s 1266, 1245 and 1274 must be matched via column 1 in each question.<br><br>Calculate each of the subcategories scores listed below, and weight as listed.<br>20% Airspace Volume (AV)<br>20% Operating Hours (OH)<br>10% Scoreable Range (SR)<br>15% Air to Ground Weapons Delivery (AGWD)<br>5% Live Ordnance (LO)<br>10% IMC Weapon Release (IW)<br>10% Laser Use Authorized (LU)<br>10% Lights Out Capable (LC)<br><br>Each of the subcategories use the following general pattern for calculating them:<br><br>Check the corresponding subcategory in formula #1266. If it would get 0 points for that subcategory, get 0 points here also.<br>Otherwise, Compute a raw total for the subcategory for the base according to this formula:<br>For each airspace:<br>If the distance to the airspace is > 250 miles, get 0 points.<br>Otherwise, if the distance to the airspace = 250 miles, get 10 points.<br>Otherwise, if the distance to the airspace = 5 miles, get 100 points.<br>Otherwise, pro-rate the distance to the airspace from 5 miles to 250 miles on a 100 to 10 point scale.<br><br>Once you have a base raw subcategory total, find the highest, and the lowest, non-zero raw total for the subcategory across all bases.<br>If the raw total = 0, that subcategory score = 0.<br>Else, if the raw total = the highest raw total, the subcategory score = 100.<br>Else, if the raw total = the lowest, non-zero raw total, the subcategory score = 10.<br>Else, pro-rate the raw total between the lowest non-zero raw total and the highest raw total on a 10 to 100 scale.<br><br>Once each score for each subcategory is known, multiply them by their respective weighting percentage and total the results for the overall score. The overall mechanism is very similar to that of formula #1266. |
| **Source** | FLIP AP-1A; IFR Supp; Falcon View or other certified flight planning software |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 20.70 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 20.70 | The difference between Max Points and Earned Points. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| **Formula** | 1245.00 |
|---|---|
| **Title** | Proximity to Airspace Supporting Mission (ASM) |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1245 | . | Airspace - Distance to Airspace |
| 1 | Air/Space Operations | 1245 | .1 | Airspace/Route Designator |
| 1 | Air/Space Operations | 1245 | .2 | Distance to Airspace/Route |
| 2 | Army Operations | 1274 | . | Airspace Attributes - Ranges (2 of 2) |
| 2 | Army Operations | 1274 | .2 | Airspace Volume: at least 2,100NM cubed; altitude block >=20,000' |
| 2 | Army Operations | 1274 | .5 | Live Ordnance |
| 27 | Ranges | 1266 | . | Airspace Attributes - Ranges (1 of 2) |
| 27 | Ranges | 1266 | .3 | Scoreable range complexes/target array |
| 27 | Ranges | 1266 | .4 | Air to Ground Weapons Delivery |
| 27 | Ranges | 1266 | .6 | IMC weapons release |
| 27 | Ranges | 1266 | .8 | Laser Use Authorized |
| 27 | Ranges | 1266 | .9 | Lights-Out Capable |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1250.00 |
| **Title** | Area Cost Factor |
| **Criterion** | Cost of Ops / Manpower |
| **Attribute** | Cost Factors |
| **Formula** | Evaluate the Area Cost Factor for each installation.<br><br>Find the lowest area cost factor listed for that installation. See OSD question 1250, column 2 for this data.<br><br>If the area cost factor <= 0.78, get 100 points.<br>Otherwise, if the area cost factor >= 1.42, get 0 points.<br>Otherwise, pro-rate the area cost factor between 0.78 and 1.42, on a 100 to 0 point scale.<br><br>Example:<br><br>The lowest area cost factor for the base is 1.3. 1.3 is 81.25% of the way between 0.78 and 1.42, so the score is 18.75 points. |
| **Source** | DoD Facilities Pricing Guide, Table B, March 2004 |

| | | |
|---|---|---|
| **Formula Score** | 65.63 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 1.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.82 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.43 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 4 | CE Programming | 1250 | . | Area Cost Factor |
| 4 | CE Programming | 1250 | .2 | Area Cost Factor |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1251.00 |
| **Title** | Frequency Spectrum Limitations (FSL) |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | State if operating frequency limitations exist for these systems: Predator A, Predator B, Global Hawk in the following frequency bands: C, Ku, L, S, and X.<br><br>If installation has no runway or active runway, or no serviceable, suitable runway then score 0 pts.<br><br>The Predator A component of the score represents 33% of the score.<br>The Predator B component of the score also represents 33% of the score.<br>The Global Hawk component of the score represents 34% of the score.<br><br>Within each of the system components, each of the 5 frequency bands represents 20% of that component's score.<br><br>For operating frequency limitations for the Predator A, Predator B and Global Hawk systems, see OSD Question 1251, columns 3,4, and 5 respectively. (N/A means No.)<br><br>This has to be done for each system and frequency band combination.<br>If the answer for the frequency band for the system = No or N/A, get 20 points.<br>Otherwise, get 0 points.<br><br>Example:<br><br>Predator A<br>C Yes 0<br>Ku No 20<br>L No 20<br>S No 20<br>X No 20<br>---<br>80<br><br>Predator B<br>C No 20<br>Ku Yes 0<br>L No 20<br>S No 20<br>X No 20<br>---<br>80<br><br>Global Hawk<br>C No 20<br>Ku No 20<br>L No 20<br>S No 20<br>X No 20<br>---<br>100<br><br>Taking the relevant percentages for the Predator A, Predator B and Global Hawk systems respectively, we get<br><br>(.33 * 80) + (.33 * 80) + (.34 * 100) for a score of 86.8 |
| **Source** | Spectrum 21 Database |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | | |
|---|---|---|
| **Formula** | 1251.00 | |
| **Title** | Frequency Spectrum Limitations (FSL) | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 6.58 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 6.58 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 6 | Communications | 1251 | . | C4ISR -Frequency Spectrum Limitations (1 of 2) |
| 6 | Communications | 1251 | .3 | Predator A |
| 6 | Communications | 1251 | .4 | Predator B |
| 6 | Communications | 1251 | .5 | Global Hawk |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1266.00 |
| **Title** | Range Complex (RC) Supports Mission |
| **Criterion** | Condition of Infrastructure |
| **Attribute** | Operating Areas |
| **Formula** | If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Only airspace within 250 Nautical Miles (NM) will be considered in the calculations. All others will be ignored. See OSD Question 1245, column 2. (N/A means more than 250 NM.)<br><br>Data is in OSD Questions 1266, 1245 and 1274 must be matched via column 1 in each question.<br><br>Calculate each of the subcategories scores listed below, and weight as listed.<br>20% Airspace Volume (AV)<br>20% Operating Hours (OH)<br>10% Scoreable Range (SR)<br>15% Air to Ground Weapons Delivery (AGWD)<br>5% Live Ordnance (LO)<br>10% IMC Weapon Release (IW)<br>10% Laser Use Authorized (LU)<br>10% Lights Out Capable (LC)<br><br>Each of the subcategories use the following general pattern for calculating them:<br><br>Compute a raw total for the base by following the instructions for the respective subcategory total.<br>Find the highest, and the lowest, non-zero raw total for the subcategory across all bases.<br>If the raw total = 0, that subcategory score = 0.<br>Else, if the raw total = the highest raw total, the subcategory score = 100.<br>Else, if the raw total = the lowest, non-zero raw total, the subcategory score = 10.<br>Else, pro-rate the raw total between the lowest non-zero score and the highest score on a 10 to 100 scale.<br><br>Once each score for each subcategory is known, multiply them by their respective weighting percentage and total the results for the overall score.<br><br>Airspace Volume Raw Total:<br><br>Get AV for the pts. See OSD Question 1277, column 3. (N/A means 0.)<br><br>Operating Hours Raw Total:<br><br>Sum the pts for each airspace:<br>If the OH < 1 or = N/A, get 0 pts. See OSD Question 1266, column 2.<br>Else, if the OH = 1 or IMTMT or INTMT, get 10 pts.<br>Else, if the OH = 24 or NOTAM, get 100 pts.<br>Else, if the OH = NOTAM, get 100 pts.<br>Else, pro-rate the OH between 0 and 24 on a 10 to 100 point scale.<br><br>Scoreable Range Raw Total:<br><br>Sum the pts for each airspace:<br>If the SR = Yes, get 100 pts. See OSD Question 1266, column.3. (N/A means No.)<br>Else, get 0 pts.<br><br>Air to Ground Weapons Delivery Raw Total:<br><br>Sum the pts for each airspace:<br>If the AGWD = Yes, get 100 pts. See OSD Question 1266 column 4. (N/A means No.)<br>Else, get 0 pts. |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1266.00 |
| **Title** | Range Complex (RC) Supports Mission |

Live Ordnance Raw Total:

Sum the pts for each airspace:
If LO = Yes, get 100 pts. See OSD Question 1274, column 5. (N/A means No.)
Else, get 0 pts.

IMC Weapon Release Raw Total:

Sum the pts for each airspace:
If IW = Yes, get 100 pts. See OSD Question 1266, column 6. (N/A means No.)
Else, get 0 pts.

Laser Use Authorized Raw Total:

Sum the pts for each airspace:
If LU = Yes, get 100 pts. See OSD Question 1266, column 8. (N/A means No.)
Else, get 0 pts.

Lights Out Capable Raw Total

Sum the pts for each airspace:
If LC = Yes, get 100 pts. See OSD Question 1266, column 9. (N/A means No.)
Else, get 0 pts.

Example:

AV = 20,000, get 20,000 pts

There are two airspaces within the distance specified above, and they both have these characteristics (which means their raw totals will be double the number of pts listed) followed by the lowest non-zero and highest raw totals across all bases

OH = NOTAM, get 100 pts; 20,000 to 150,000 pts
SR = Yes, get 100 pts; 200 to 500 pts.
AGWD = No, get 0 pts; 200 to 1000 pts.
LO = Yes, get 100 pts; 500 to 1000 pts.
IW = N/A, get 0 pts; 200 to 2000 pts.
LU = Yes, get 100 pts; 100 to 1000 pts.
LC = Yes, get 100 pts; 200 to 1000 pts.

Subcategory scores
AV = 10 pts.
OH = 10 pts.
SR = 10 pts
AGWD = 0 pts.
LO = 10 pts.
IW = 0 pts.
LU = 20 pts.
LC = 10 pts.
Weighted, the overall score = 8.5 pts.

| | |
|---|---|
| **Source** | FLIP AP-1A; Falcon View or other certified flight planning software |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | | |
|---|---|---|
| **Formula** | 1266.00 | |
| **Title** | Range Complex (RC) Supports Mission | |
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 12.45 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 12.45 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 1 | Air/Space Operations | 1245 | . | Airspace - Distance to Airspace |
| 1 | Air/Space Operations | 1245 | .2 | Distance to Airspace/Route |
| 1 | Air/Space Operations | 1277 | . | Airspace Attributes - Volume |
| 1 | Air/Space Operations | 1277 | .3 | 250NM radius |
| 2 | Army Operations | 1274 | . | Airspace Attributes - Ranges (2 of 2) |
| 2 | Army Operations | 1274 | .5 | Live Ordnance |
| 27 | Ranges | 1266 | . | Airspace Attributes - Ranges (1 of 2) |
| 27 | Ranges | 1266 | .1 | Airspace Designator |
| 27 | Ranges | 1266 | .2 | Operating Hours |
| 27 | Ranges | 1266 | .3 | Scoreable range complexes/target array |
| 27 | Ranges | 1266 | .4 | Air to Ground Weapons Delivery |
| 27 | Ranges | 1266 | .6 | IMC weapons release |
| 27 | Ranges | 1266 | .8 | Laser Use Authorized |
| 27 | Ranges | 1266 | .9 | Lights-Out Capable |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1269.00 |
| **Title** | Utilities cost rating (U3C) |
| **Criterion** | Cost of Ops / Manpower |
| **Attribute** | Cost Factors |
| **Formula** | Check the Utilities Costs and Climatic Consideration (U3C) Rating for the installation.<br><br>If the U3C rating is <= .59, get 100 points. See OSD Question 1269, column 1 for this data.<br>Otherwise, if the U3C rating is >= 2.29, get 0 points.<br>Otherwise, pro-rate the U3C rating between .59 and 2.29 on a 100 to 0 scale.<br><br>Example:<br><br>The U3C rating is 1.6. 1.6 is 59.41% of the way between .59 and 2.29, so the score is 40.59. |
| **Source** | ASHRAE Standards; DoD 5126.46-M-2, Defense Utility Energy Reporting System; UFC 3-400-02,<br>DOE Website: Buildings Energy Databook: Table 7.4 Typical Commercial Buildings |

| | | |
|---|---|---|
| **Formula Score** | 82.94 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.13 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.10 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.02 | The difference between Max Points and Earned Points. |

**Supporting Data**

| **Section** | | **Question.Field** | | |
|---|---|---|---|---|
| 35 | Utilities | 1269 | . | Utilities Cost Rating (U3C) |
| 35 | Utilities | 1269 | .1 | Answer |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1271.00 |
| **Title** | Prevailing Installation Weather Conditions |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | Check the average number of days annually the prevailing weather is better than 3000'/3 Nautical Miles (NM).<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>If the average number of days >= 300, get 100 points.<br>Otherwise, if the average number of days <= 250, get 0 points.<br>Otherwise, pro-rate the average number of days between 250 and 300 on a 0 to 100 scale.<br><br>Example:<br><br>The average number of days annually where the prevailing weather is better than 3000'/3 NM is 275.<br>275 is halfway between 250 and 300, for a score of 50. |
| **Source** | AFCCC Climatological tables |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 3.29 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 3.29 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1271 | . | Air Operations - Prevailing Weather |
| 39 | Airfield Management | 1271 | .3 | Weather > 3000'/3NM |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1272.00 |
| **Title** | Installation Crosswind Conditions |
| **Criterion** | Current / Future Mission |
| **Attribute** | Operating Environment |
| **Formula** | Check the average number of days per year; averaged over the past 10 years, that crosswinds exceeded 15 knots.<br><br>If installation has no runway or no active runway, or no serviceable, suitable runway then score 0 pts.<br><br>Get the average number of days the crosswinds exceed 15 Knots per year. See OSD Question 1272, column 3 for this data.<br><br>If the Average is <= 24, get 100 points.<br>Otherwise, if the Average is >= 72, get 0 points.<br>Otherwise, pro-rate the Average between 24 and 72 on a 100 to 0 scale.<br><br>Example:<br><br>The Average is 36. 36 is 25% of the way between 24 and 72, so the score is 75. |
| **Source** | Operational Climatic Data Summary |

| | | |
|---|---|---|
| **Formula Score** | 0.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 9.11 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.00 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 9.11 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 1 | Air/Space Operations | 9 | . | Runways |
| 1 | Air/Space Operations | 9 | .7 | Length |
| 1 | Air/Space Operations | 9 | .8 | Width |
| 1 | Air/Space Operations | 9 | .15 | Serviceable (5) |
| 39 | Airfield Management | 1272 | . | Air Operations - Crosswind Component |
| 39 | Airfield Management | 1272 | .3 | Crosswinds >15 Knots |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | | |
|---|---|---|
| **Formula** | 1402.00 | |
| **Title** | BAH Rate | |
| **Criterion** | Cost of Ops / Manpower | |
| **Attribute** | Cost Factors | |
| **Formula** | Check the 2004 monthly BAH rate for an O-3 with dependents. See OSD question 1402, column 1 for this data.<br><br>If the BAH rate <= 746, get 100 points.<br>Otherwise, if the BAH rate >= 2013, get 0 points.<br>Otherwise, pro-rate the BAH rate between 746 and 2013 on a 100 to 0 scale.<br><br>Example:<br><br>The BAH rate is 974. 974 is 18% between 746 and 2013, which results in a score of 82.00. | |
| **Source** | www.dtic.mil/perdiem/bah.html | |
| **Formula Score** | 67.32 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.88 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.59 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.29 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | | Question.Field | | |
|---|---|---|---|---|
| 13 | Finance | 1402 | . | BAH Rate |
| 13 | Finance | 1402 | .1 | BAH Rate |

**Formula Sheet for** **Francis E. Warren AFB**

**MCI:** **UAV / UCAS**

| | |
|---|---|
| **Formula** | 1403.00 |
| **Title** | GS Locality Pay Rate |
| **Criterion** | Cost of Ops / Manpower |
| **Attribute** | Cost Factors |
| **Formula** | Check the 2004 locality pay rate for the GS pay schedule. See OSD question 1403, column 1 for this data. (N/A equals 0.)<br><br>If the pay rate <= 10.90, get 100 points.<br>Otherwise, if the pay rate >= 20.37, get 0 points.<br>Otherwise, pro-rate the pay rate between 10.90 and 20.37 on a 100 to 0 scale.<br><br>Example:<br><br>The pay rate is 14.31, which is 36.01% of the way between 10.90 and 20.37, which results in a score of 63.99. |
| **Source** | Office of Personnel Management Web page |

| | | |
|---|---|---|
| **Formula Score** | 100.00 | This is the unweighted formula's score for this base on a 0 to 100 scale. A score of 100 equals the Max Points once the weighting for this formula is applied. |
| **Max Points** | 0.25 | This is the maximum number of points this formula can contribute to the overall MCI score. |
| **Earned Points** | 0.25 | This is the number of points this formula did contribute to the overall MCI score for this base. |
| **Lost Points** | 0.00 | The difference between Max Points and Earned Points. |

**Supporting Data**

| Section | Question.Field | |
|---|---|---|
| 13 Finance | 1403 . | GS Locality Pay Rate |
| 13 Finance | 1403 . 1 | GS Locality Pay Rate |