

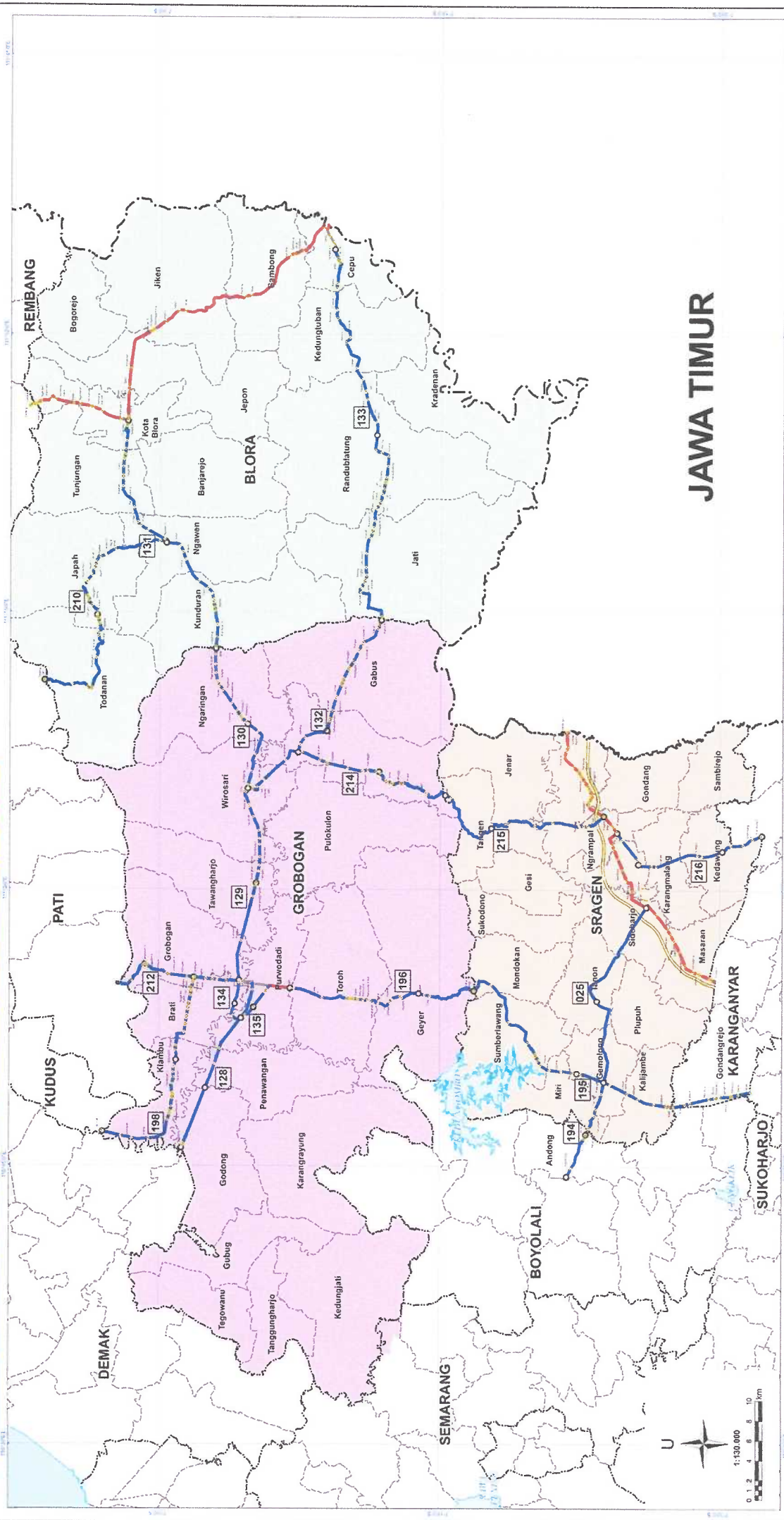
# LAMPIRAN

| NO   |              | NAMA              |        | Panjang | Lebar | TIPE | KOORDINAT |          | TAHUN  |          | KONDISI | KET |
|------|--------------|-------------------|--------|---------|-------|------|-----------|----------|--------|----------|---------|-----|
| Urut | Registrasi   | Bangunan          | Sungai |         |       |      | X         | Y        | Dibuat | Disurvai |         |     |
| 1    | 2            | 3                 | 4      | 5       | 6     | 7    | 8         | 9        | 10     | 11       | 12      | 13  |
|      | 24.129.001.0 | LUSI PURWODADI    |        | 83,5    | 6     |      | -7.07416  | 110.9169 |        |          |         |     |
|      | 24.129.002.0 | LUMPANG KULON     |        | 15,6    | 6,2   |      | -7.07309  | 110.9538 |        |          |         |     |
|      | 24.129.003.0 | POJOK             |        | 4,7     | 6,3   |      | -7.08319  | 110.9937 |        |          |         |     |
|      | 24.129.004.0 | TAWANGHARJO KULON |        | 15      | 5     |      | -7.08566  | 111.0034 |        |          |         |     |
|      | 24.129.005.0 | TAWANGHARJO WETAN |        | 4,3     | 5,5   |      | -7.08624  | 111.0062 |        |          |         |     |
|      | 24.129.005.1 | DALINGAN          |        | 13      | 8     |      | -7.08812  | 111.0166 |        |          |         |     |
|      | 24.129.006.0 | GROGOLAN          |        | 12,6    | 6     |      | -7.0894   | 111.0235 |        |          |         |     |
|      | 24.129.007.0 | SAMBIREJO I       |        | 6,9     | 6     |      | -7.08922  | 111.041  |        |          |         |     |
|      | 24.129.008.0 | SAMBIREJO II      |        | 4,2     | 9,6   |      | -7.0892   | 111.0462 |        |          |         |     |
|      | 24.129.009.0 | TANJUNGSARI       |        | 2,8     | 7     |      | -7.0887   | 111.0435 |        |          |         |     |
|      | 24.129.010.0 | GEMBLAK           |        | 8,2     | 6,4   |      | -7.08339  | 111.0657 |        |          |         |     |
|      | 24.129.011.0 | KALOMAN           |        | 16      | 6,2   |      | -7.07949  | 111.0768 |        |          |         |     |
|      | 24.129.012.0 | TIRTO             |        | 28      | 6     |      | -7.07658  | 111.0878 |        |          |         |     |

| TAHUN | RODA DUA |                | RODA EMPAT                    |                                   |                               | RODA EMPAT LEBIH |           |                      |                      |               |                 |                    |
|-------|----------|----------------|-------------------------------|-----------------------------------|-------------------------------|------------------|-----------|----------------------|----------------------|---------------|-----------------|--------------------|
|       | Bermotor | Tidak Bermotor | Sedan, Jeep dan Station Wagon | Oplet, Pick-Up, Combi dan Minibus | Micro Truk dan Mobil Hantaran | Bus Kecil        | Bus Besar | Truck Ringan 2 Sumbu | Truck Sedang 2 Sumbu | Truck 3 Sumbu | Truck Gandengan | Truck Semi Trailer |
| 1     | 2        | 3              | 4                             | 5                                 | 6                             | 7                | 8         | 9                    | 10                   | 11            | 12              | 13                 |
| 2013  | 11532    | 4652           | 6401                          | 6695                              | 8961                          | 1836             | 2003      | 3524                 | 3448                 | 2988          | 0               | 256                |

PURWODADI - WIROSARI

| TAHUN<br>1 | NAMA PAKET<br>2                                             | PENANGANAN<br>3                      | ANGGARAN<br>4  | KONTRAKTOR<br>5                               |
|------------|-------------------------------------------------------------|--------------------------------------|----------------|-----------------------------------------------|
|            |                                                             |                                      |                |                                               |
| 2014       | PENINGKATAN JALAN PURWODADI - WIROSARI                      | perkerasan beton                     | 4.742.428.000  | PT. CITRA CIPTA ADIGUNA                       |
| 2015       | Peningkatan Jalan Purwodadi-Wirosari                        | Perkerasan Beton Lbr. 6 m            | 17.706.152.000 | PT. GALA TAMA - PT. NURCAHYA JAYA MANDIRI KSO |
| 2015       | Rehabilitasi Jbt. Dalingan No. 24.129.005.0 Km.Smng. 75+358 | Pelebaran Jembatan                   | 724.614.000    | CV. KRISNA                                    |
| 2016       | Peningkatan Jalan Purwodadi - Wirosari ( Kab. Grobogan )    | Perkerasan Jalan Beton Lebar 6 Meter | 15.894.600.000 | PT. BANGUN MAKHMUR UTAMA                      |
| 2016       | Peningkatan Jalan Purwodadi - Wirosari ( Kab. Grobogan )    | Perkerasan Jalan Beton Lebar 6 Meter | 15.894.600.000 | PT. BANGUN MAKHMUR UTAMA                      |
| 2016       | Jbt. Tawangharjo Kulon No. 24.129.004.0 Km.Smng. 73+883     | Pelebaran Jembatan                   | 663.576.000    | CV. CAKRA BANGUN PERSADA                      |
| 2017       | Peningkatan Jalan Purwodadi - Wirosari (Kab. Grobogan)      | Perkerasan Beton                     | 7.913.108.000  | PT. BANGUN NKAKHMUR UTAMA                     |



# JAWA TIMUR

**Legenda**

**Jalan**

- Pangkal/ujung
- Jembatan
- Jalan Nasional
- Jalan Provinsi
- Jalan Tol
- Jalan Lingkar
- Jalan Kabupaten
- Jalan Kota
- Batas Administrasi
- Batas Provinsi
- Batas Kabupaten
- Batas Kecamatan
- Garis Pantai

**Kabupaten**

- Kabupaten Blora
- Kabupaten Grobogan
- Kabupaten Sragen

**NO RUMAH**

| NO RUMAH | MAMA RUMAH                | PANJANG (MM) |
|----------|---------------------------|--------------|
| 125 P    | BOGOROJO KAWASAN GAYATONG | 715          |
| 126 P    | BOGOROJO KAWASAN GAYATONG | 687          |
| 127 P    | BOGOROJO KAWASAN GAYATONG | 2078         |
| 128 P    | BOGOROJO KAWASAN GAYATONG | 7537         |
| 129 P    | BOGOROJO KAWASAN GAYATONG | 1984         |
| 130 P    | BOGOROJO KAWASAN GAYATONG | 46           |
| 131 P    | BOGOROJO KAWASAN GAYATONG | 399          |
| 132 P    | BOGOROJO KAWASAN GAYATONG | 2779         |
| 133 P    | BOGOROJO KAWASAN GAYATONG | 2886         |
| 134 P    | BOGOROJO KAWASAN GAYATONG | 7165         |
| 135 P    | BOGOROJO KAWASAN GAYATONG | 1937         |
| 136 P    | BOGOROJO KAWASAN GAYATONG | 1583         |

**RUAS JALAN PROVINSI BPT PURWODADI**

| NO RUMAH | MAMA RUMAH                | PANJANG (MM) |
|----------|---------------------------|--------------|
| 125 P    | BOGOROJO KAWASAN GAYATONG | 715          |
| 126 P    | BOGOROJO KAWASAN GAYATONG | 687          |
| 127 P    | BOGOROJO KAWASAN GAYATONG | 2078         |
| 128 P    | BOGOROJO KAWASAN GAYATONG | 7537         |
| 129 P    | BOGOROJO KAWASAN GAYATONG | 1984         |
| 130 P    | BOGOROJO KAWASAN GAYATONG | 46           |
| 131 P    | BOGOROJO KAWASAN GAYATONG | 399          |
| 132 P    | BOGOROJO KAWASAN GAYATONG | 2779         |
| 133 P    | BOGOROJO KAWASAN GAYATONG | 2886         |
| 134 P    | BOGOROJO KAWASAN GAYATONG | 7165         |
| 135 P    | BOGOROJO KAWASAN GAYATONG | 1937         |
| 136 P    | BOGOROJO KAWASAN GAYATONG | 1583         |

**PETUNJUK LETAK PETA**

**SUMBER**

1. Peta Rujukan Indonesia skala 1:25.000 BAKOSURTANAL

2. Peta Administrasi

**KUISIONER PENELITIAN  
METODE PENANGANAN KERUSAKAN RUAS JALAN  
PURWODADI - WIROSARI**

**I. DATA RESPONDEN**

Isilah dengan memberi tanda silang ( X ) pada jawaban yang telah tersedia

1. Apa jabatan Anda saat ini ?

.....

2. Apa jenjang pendidikan terakhir yang anda tempuh ?

☐ SMK/STM

☐ S1

☐ D3

☐ S2/S3

3. Berapa tahun pengalaman Anda dalam menekuni bidang jalan ?

☐ < 5 th.

☐ 5 – 10 th

☐ > 10 th.

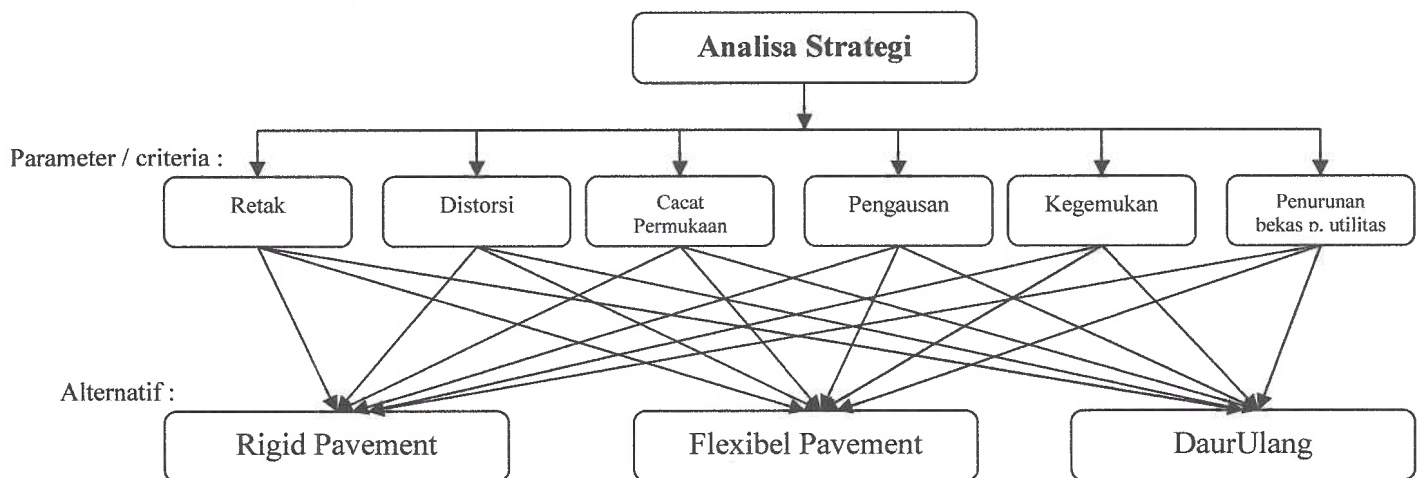
4. Apakah Anda pernah terlibat dalam proyek pembangunan Jalan Nasional di Propinsi Jawa Tengah ?

☐ Pernah

☐ Tidak pernah

## KUISIONER PENELITIAN METODE PENANGANAN KERUSAKAN RUAS JALAN PURWODADI - WIROSARI

### Struktur Hierarki Strategi Penanganan :



Pada kuesioner ini, responden akan diminta untuk memberikan perbandingan berpasangan diantara kriteria *Strategi Penanganan*, yang anda perlukan. Perbandingan ini diperlukan untuk mengetahui jenis *Strategi Penanganan* yang paling sesuai terhadap jenis – jenis kerusakan jalan tersebut.

### **PETUNJUK PENGISIAN KUESIONER**

Berilah nilai perbandingan berpasangan dengan berdasar pada tingkat kepentingannya pada beberapa jenis *Strategi penanganan*. Responden diminta untuk memberikan tanda silang (X) pada skor terpilih. Penjelasan dari skor tersebut adalah sebagai berikut :

skor 1 bila kedua strategi sama penting

skor 3 bila strategi yang satu sedikit lebih penting daripada yang lain

skor 5 bila strategi yang satu lebih penting daripada yang lain

skor 7 bila strategi yang satu jauh lebih penting daripada yang lain

skor 9 bila strategi yang satu mutlak lebih penting daripada yang lain

2, 4, 6, 8 nilai-nilai antara dua pertimbangan yang berdekatan

Berilah tanda silang (X) pada skor terpilih !

## STRATEGI PENANGANAN KERUSAKAN JALAN

### Kriteria : Retak (Cracking)

1

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                   |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------------|
| Rigid Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Flexibel Pavement |
|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                   |

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|
| Rigid Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Recycling / daur ulang |
|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |

2

|                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|
| Flexibel Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Recycling / daur ulang |
|                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |

### Kriteria : Distorsi (Distortion)

1

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                   |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------------|
| Rigid Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Flexibel Pavement |
|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                   |

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|
| Rigid Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Recycling / daur ulang |
|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |

2

|                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|
| Flexibel Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Recycling / daur ulang |
|                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |

### Kriteria : Cacat Permukaan (Disintegration)

1

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                   |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------------|
| Rigid Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Flexibel Pavement |
|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                   |

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|
| Rigid Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Recycling / daur ulang |
|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |

|                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|
| Flexibel Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Recycling / daur ulang |
|                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |

**Kriteria : Pengausan (*Polished Agregate*)**

**1**

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|
| Rigid Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Flexibel Pavement      |
|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
| Rigid Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Recycling / daur ulang |
|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |

**2**

|                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|
| Flexibel Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Recycling / daur ulang |
|                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |

**Kriteria : Kegemukan (*Bleeding*)**

**1**

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|
| Rigid Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Flexibel Pavement      |
|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
| Rigid Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Recycling / daur ulang |
|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |

**2**

|                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|
| Flexibel Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Recycling / daur ulang |
|                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |

**Kriteria : Penurunan Pada Bekas Penanaman Utilitas**

**1**

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|
| Rigid Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Flexibel Pavement      |
|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
| Rigid Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Recycling / daur ulang |
|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |

**2**

|                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|
| Flexibel Pavement | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Recycling / daur ulang |
|                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |

## FOTO KONDISI LAPANGAN









PENILAIAN KRITERIA DAN ALTERNATIF STRATEGY PENANGANAN

| NO    | RETAK  |          |           | DISTORSI |          |           | CACAT PERMUKAAN |          |           | PENGSAUSAN |          |           | KEGEMUKAN |          |           | PENURUNAN |          |           |
|-------|--------|----------|-----------|----------|----------|-----------|-----------------|----------|-----------|------------|----------|-----------|-----------|----------|-----------|-----------|----------|-----------|
|       | Rigid  | Flexibel | Recycling | Rigid    | Flexibel | Recycling | Rigid           | Flexibel | Recycling | Rigid      | Flexibel | Recycling | Rigid     | Flexibel | Recycling | Rigid     | Flexibel | Recycling |
| 1     | 0,018  | 0,028    | 0,194     | 0,009    | 0,101    | 0,170     | 0,016           | 0,025    | 0,170     | 0,012      | 0,012    | 0,106     | 0,019     | 0,030    | 0,071     | 0,027     | 0,043    | 0,100     |
| 2     | 0,021  | 0,058    | 0,160     | 0,033    | 0,077    | 0,145     | 0,016           | 0,048    | 0,145     | 0,022      | 0,050    | 0,058     | 0,019     | 0,030    | 0,071     | 0,014     | 0,043    | 0,108     |
| 3     | 0,018  | 0,055    | 0,166     | 0,014    | 0,034    | 0,082     | 0,019           | 0,051    | 0,140     | 0,007      | 0,038    | 0,084     | 0,028     | 0,009    | 0,083     | 0,034     | 0,013    | 0,102     |
| 4     | 0,021  | 0,058    | 0,160     | 0,032    | 0,011    | 0,067     | 0,016           | 0,048    | 0,145     | 0,007      | 0,038    | 0,084     | 0,011     | 0,017    | 0,092     | 0,019     | 0,024    | 0,132     |
| 5     | 0,038  | 0,060    | 0,141     | 0,018    | 0,043    | 0,068     | 0,019           | 0,061    | 0,129     | 0,028      | 0,038    | 0,089     | 0,009     | 0,009    | 0,090     | 0,034     | 0,012    | 0,102     |
| 6     | 0,018  | 0,055    | 0,166     | 0,026    | 0,026    | 0,078     | 0,017           | 0,059    | 0,134     | 0,030      | 0,010    | 0,090     | 0,015     | 0,028    | 0,078     | 0,017     | 0,039    | 0,116     |
| 7     | 0,034  | 0,080    | 0,126     | 0,033    | 0,065    | 0,101     | 0,016           | 0,025    | 0,170     | 0,007      | 0,038    | 0,084     | 0,010     | 0,023    | 0,087     | 0,089     | 0,033    | 0,057     |
| 8     | 0,028  | 0,097    | 0,115     | 0,020    | 0,009    | 0,101     | 0,019           | 0,043    | 0,148     | 0,010      | 0,090    | 0,030     | 0,028     | 0,009    | 0,083     | 0,013     | 0,013    | 0,137     |
| 9     | 0,048  | 0,144    | 0,048     | 0,034    | 0,014    | 0,082     | 0,019           | 0,043    | 0,148     | 0,012      | 0,027    | 0,091     | 0,031     | 0,013    | 0,076     | 0,073     | 0,018    | 0,073     |
| 10    | 0,034  | 0,080    | 0,126     | 0,018    | 0,037    | 0,075     | 0,020           | 0,035    | 0,155     | 0,021      | 0,033    | 0,077     | 0,031     | 0,008    | 0,080     | 0,073     | 0,011    | 0,073     |
| 11    | 0,029  | 0,055    | 0,156     | 0,014    | 0,040    | 0,076     | 0,033           | 0,014    | 0,163     | 0,009      | 0,045    | 0,075     | 0,019     | 0,008    | 0,093     | 0,027     | 0,012    | 0,100     |
| 12    | 0,034  | 0,171    | 0,034     | 0,016    | 0,030    | 0,084     | 0,016           | 0,025    | 0,170     | 0,021      | 0,065    | 0,024     | 0,015     | 0,033    | 0,071     | 0,069     | 0,047    | 0,082     |
| 13    | 0,038  | 0,060    | 0,141     | 0,023    | 0,009    | 0,097     | 0,026           | 0,048    | 0,136     | 0,031      | 0,071    | 0,027     | 0,031     | 0,013    | 0,076     | 0,073     | 0,018    | 0,073     |
| 14    | 0,038  | 0,060    | 0,141     | 0,034    | 0,014    | 0,082     | 0,039           | 0,033    | 0,138     | 0,014      | 0,082    | 0,034     | 0,010     | 0,034    | 0,077     | 0,073     | 0,048    | 0,073     |
| 15    | 0,034  | 0,080    | 0,126     | 0,034    | 0,014    | 0,082     | 0,016           | 0,025    | 0,170     | 0,011      | 0,036    | 0,083     | 0,010     | 0,015    | 0,094     | 0,015     | 0,022    | 0,139     |
| 16    | 0,038  | 0,060    | 0,141     | 0,011    | 0,020    | 0,099     | 0,038           | 0,015    | 0,157     | 0,014      | 0,101    | 0,014     | 0,010     | 0,015    | 0,094     | 0,027     | 0,022    | 0,100     |
| 17    | 0,034  | 0,171    | 0,034     | 0,021    | 0,033    | 0,077     | 0,034           | 0,062    | 0,113     | 0,016      | 0,030    | 0,084     | 0,009     | 0,014    | 0,097     | 0,032     | 0,020    | 0,111     |
| 18    | 0,034  | 0,080    | 0,126     | 0,010    | 0,015    | 0,105     | 0,016           | 0,025    | 0,170     | 0,009      | 0,097    | 0,023     | 0,015     | 0,033    | 0,071     | 0,027     | 0,047    | 0,100     |
| 19    | 0,045  | 0,157    | 0,038     | 0,012    | 0,019    | 0,100     | 0,042           | 0,066    | 0,103     | 0,018      | 0,043    | 0,068     | 0,090     | 0,022    | 0,090     | 0,018     | 0,031    | 0,113     |
| 20    | 0,045  | 0,157    | 0,038     | 0,012    | 0,038    | 0,080     | 0,033           | 0,033    | 0,124     | 0,021      | 0,039    | 0,070     | 0,028     | 0,009    | 0,083     | 0,027     | 0,013    | 0,100     |
| 21    | 0,031  | 0,184    | 0,025     | 0,034    | 0,014    | 0,082     | 0,017           | 0,033    | 0,160     | 0,012      | 0,027    | 0,091     | 0,009     | 0,028    | 0,083     | 0,013     | 0,039    | 0,137     |
| 22    | 0,036  | 0,072    | 0,132     | 0,056    | 0,019    | 0,056     | 0,042           | 0,042    | 0,126     | 0,021      | 0,033    | 0,077     | 0,028     | 0,009    | 0,083     | 0,027     | 0,013    | 0,100     |
| 23    | 0,034  | 0,080    | 0,126     | 0,010    | 0,015    | 0,105     | 0,019           | 0,043    | 0,148     | 0,011      | 0,036    | 0,083     | 0,009     | 0,014    | 0,097     | 0,041     | 0,020    | 0,036     |
| 24    | 0,045  | 0,157    | 0,038     | 0,015    | 0,053    | 0,062     | 0,030           | 0,070    | 0,110     | 0,012      | 0,106    | 0,012     | 0,020     | 0,036    | 0,085     | 0,034     | 0,051    | 0,083     |
| 25    | 0,022  | 0,196    | 0,022     | 0,020    | 0,009    | 0,101     | 0,016           | 0,025    | 0,170     | 0,031      | 0,071    | 0,027     | 0,009     | 0,014    | 0,097     | 0,034     | 0,020    | 0,083     |
| 26    | 0,034  | 0,080    | 0,126     | 0,025    | 0,011    | 0,094     | 0,082           | 0,021    | 0,107     | 0,007      | 0,048    | 0,075     | 0,009     | 0,014    | 0,097     | 0,027     | 0,020    | 0,100     |
| 27    | 0,047  | 0,075    | 0,118     | 0,020    | 0,009    | 0,101     | 0,016           | 0,028    | 0,166     | 0,012      | 0,106    | 0,012     | 0,009     | 0,014    | 0,097     | 0,028     | 0,020    | 0,092     |
| 28    | 0,046  | 0,152    | 0,042     | 0,058    | 0,022    | 0,050     | 0,034           | 0,062    | 0,113     | 0,021      | 0,039    | 0,070     | 0,024     | 0,037    | 0,059     | 0,089     | 0,053    | 0,057     |
| 29    | 0,045  | 0,038    | 0,038     | 0,021    | 0,033    | 0,077     | 0,016           | 0,025    | 0,170     | 0,013      | 0,033    | 0,084     | 0,009     | 0,014    | 0,097     | 0,081     | 0,020    | 0,081     |
| 30    | 0,048  | 0,144    | 0,048     | 0,026    | 0,041    | 0,064     | 0,042           | 0,066    | 0,103     | 0,013      | 0,033    | 0,084     | 0,024     | 0,037    | 0,059     | 0,073     | 0,053    | 0,073     |
| 31    | 0,048  | 0,144    | 0,048     | 0,026    | 0,041    | 0,064     | 0,042           | 0,066    | 0,103     | 0,013      | 0,033    | 0,084     | 0,024     | 0,037    | 0,059     | 0,073     | 0,053    | 0,073     |
| 32    | 0,048  | 0,144    | 0,048     | 0,026    | 0,041    | 0,064     | 0,042           | 0,066    | 0,103     | 0,013      | 0,033    | 0,084     | 0,024     | 0,037    | 0,059     | 0,073     | 0,053    | 0,073     |
| 33    | 0,048  | 0,144    | 0,048     | 0,026    | 0,041    | 0,064     | 0,042           | 0,066    | 0,103     | 0,013      | 0,033    | 0,084     | 0,024     | 0,037    | 0,059     | 0,073     | 0,053    | 0,073     |
| 34    | 0,048  | 0,144    | 0,048     | 0,026    | 0,041    | 0,064     | 0,042           | 0,066    | 0,103     | 0,013      | 0,033    | 0,084     | 0,024     | 0,037    | 0,059     | 0,073     | 0,053    | 0,073     |
| 35    | 0,048  | 0,144    | 0,048     | 0,026    | 0,041    | 0,064     | 0,042           | 0,066    | 0,103     | 0,013      | 0,033    | 0,084     | 0,024     | 0,037    | 0,059     | 0,073     | 0,053    | 0,073     |
| TOTAL | 0,036  | 0,105    | 0,095     | 0,024    | 0,080    | 0,138     | 0,028           | 0,044    | 0,138     | 0,015      | 0,048    | 0,067     | 0,020     | 0,022    | 0,080     | 0,045     | 0,031    | 0,091     |
| RANK  | Rank 3 | Rank 1   | Rank 2    | Rank 3   | Rank 2   | Rank 1    | Rank 3          | Rank 2   | Rank 1    | Rank 3     | Rank 2   | Rank 1    | Rank 3    | Rank 2   | Rank 1    | Rank 2    | Rank 3   | Rank 1    |



## **SURAT TUGAS**

Nomor : 057/B.1/PMTS/VI/2016  
Lampiran : -  
Hal : Bimbingan Tesis

Kepada, 1. Yth. Prof. Ir. H. Pratikso, MST., Ph.D.  
2. Yth. Ir. Nina Anindyawati, MT

*Assalamualaikum Wr. Wb.*

Bersama ini kami menghadapkan mahasiswa Magister Teknik Sipil Unissula yang telah memenuhi syarat untuk mengerjakan Tesis dan Karya Ilmiah :

Nama : Agung Setyo Nugroho  
NIM : 'MTS153230767

Dengan ini kami mohon kepada :

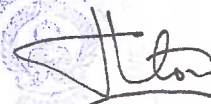
1. Prof. Ir. H. Pratikso, MST., Ph.D. sebagai pembimbing I
2. Ir. Nina Anindyawati, MT sebagai pembimbing II

Untuk memberikan Bimbingan Tesis dan Karya Ilmiah kepada mahasiswa tersebut di atas.

*Wassalamu'alaikum Wr. Wb.*

Semarang / 07 Juni 2016

Ketua Program  
Magister Teknik Sipil



**Dr. Ir. Antonius, MT**  
**NIDN. 0605046703**

Tembusan :

1. Mahasiswa an. Agung Setyo Nugroho - 'MTS153230767



YAYASAN BADAN WAKAF SULTAN AGUNG  
UNIVERSITAS ISLAM SULTAN AGUNG ( UNISSULA )  
FAKULTAS TEKNIK

Jl. Raya Kaligawe Km.4 Semarang. Telp.(024) 6583584 Psw. 581 Fax.(024) 6582455  
Email : [mts@unissula.ac.id](mailto:mts@unissula.ac.id) web : [unissula.ac.id](http://unissula.ac.id)



MAGISTER TEKNIK SIPIL

*Bismillah Membangun Generasi Khaira Ummah*

Nomor : 012/B.1/PMTS/II/2018  
Lampiran : -  
Hal : Permohonan Fasilitas Penelitian

Kepada Yth. : Dinas Pekerjaan Umum, Bina Marga dan Cipta Karya  
Provinsi Jawa Tengah

Di – tempat

*Assalamu'alaikum Wr. Wb.*

Dengan ini kami menerangkan bahwa mahasiswa Program Magister Teknik Sipil Universitas Islam Sultan Agung Semarang dengan data - data sebagai berikut :

Nama : Agung Setyo Nugroho  
NIM : Grobogan / 10 November 1990  
Tempat & Tgl Lahir : MTS153230767  
Konsentrasi : Manajemen Rekayasa Transportasi

Dalam rangka menyelesaikan studinya pada Program Magister Teknik Sipil Universitas Islam Sultan Agung Semarang, diwajibkan memenuhi salah satu persyaratan yang berupa Pembuatan Tesis.

Untuk keperluan tersebut kami mohon sudilah kiranya Bapak/Ibu memberikan bantuan yang berupa :

1. Ijin dan keleluasaan guna mengadakan orientasi sehubungan dengan Tesis mahasiswa tersebut.
2. Fasilitasi kepada mahasiswa tersebut untuk memperoleh data / keterangan bahan - bahan yang diperlukan.

Demikian atas bantuan yang Bapak/Ibu berikan kepada mahasiswa kami, diucapkan terima kasih.

*Wassalamu'alaikum Wr. Wb.*

Semarang / 23 Februari 2018  
Ketua Program  
Magister Teknik Sipil



**Prof. Ir. Antonius, MT**  
NIDN. 0605046703

Mengetahui,  
Dosen Pembimbing Tesis

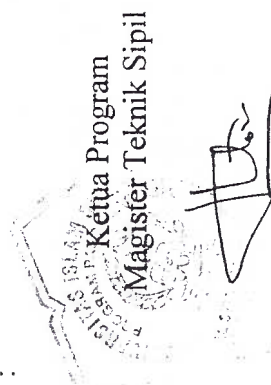
**Prof. Ir. H. Pratikso, MST., Ph.D**  
NIDN. 0607046802



**KARTU BIMBINGAN TESIS**  
**PROGRAM PASCASARJANA**  
**MAGISTER TEKNIK SIPIL**  
**UNIVERSITAS ISLAM SULTAN AGUNG SEMARANG**

Nama : Agung Setyo Nugroho  
NIM : MTS153230767  
Program :  
Angkatan :  
Pembimbing : I. Prof. Ir. H. Pratikso, MST., Ph.D.  
: II. Ir. Nina Anindyawati, MT

Berlaku sampai :



Dr. Ir. Antonius, MT.

\*) Coret yang tidak sesuai

**RANGKUMAN KEMAJUAN TESIS**

| Materi                                                         | Disetujui    |      |       |
|----------------------------------------------------------------|--------------|------|-------|
|                                                                | Pembimbing I | Tgl. | Paraf |
| 1. Proposal                                                    |              |      |       |
| 2. Pengumpulan Data                                            |              |      |       |
| 3. Pengolahan Data                                             |              |      |       |
| Penulisan *)                                                   |              |      |       |
| 4. Bab I                                                       |              |      |       |
| 5. Bab II                                                      |              |      |       |
| 6. Bab III                                                     |              |      |       |
| 7. Bab IV                                                      |              |      |       |
| 8.                                                             |              |      |       |
| 9.                                                             |              |      |       |
| 10. Kesimpulan dan Saran                                       |              |      |       |
| 11. Intisari                                                   |              |      |       |
| 12. Pelengkap (Daftar Isi, Daftar Tabel, Daftar Pustaka, dsb.) |              |      |       |

\*) Jumlah Bab tidak mengikat

Tesis secara keseluruhan disetujui :

| Pembimbing                            | Tgl | Tanda Tangan |
|---------------------------------------|-----|--------------|
| I. Prof. Ir. H. Pratikso, MST., Ph.D. |     |              |
| II. Ir. Nina Anindyawati, MT          |     |              |



KARTU KONSULTASI TESIS  
PROGRAM PASCASARJANA  
UNIVERSITAS ISLAM SULTAN AGUNG SEMARANG

| No | Tgl      | Keterangan                                                                                                                                                       | Paraf Dosen |
|----|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 1  | 09/03/17 | - Acc judul                                                                                                                                                      |             |
| 2. | 31/07/17 | - Pergeles masalah<br>- Buat gambar -<br>kewasahan jalan<br>- Buat penelitian<br>terdahulu<br>- Disalaku Bab II<br>Populasi, sampel<br>pergeles.<br>→ ke Bu Nina |             |
|    | 06/09/17 | - Buat jurnal<br>penelitian.<br>- Perbaiki populasi<br>dan sampel.<br>- Perbaiki pra.<br>kuesioner                                                               |             |
|    | 20/09/17 | - Bisa nyia<br>proposal                                                                                                                                          |             |



KARTU KONSULTASI TESIS  
PROGRAM PASCASARJANA  
UNIVERSITAS ISLAM SULTAN AGUNG SEMARANG

| No | Tgl         | Keterangan                                                                                                                    | Paraf Dosen | No | Tgl | Keterangan | Paraf Dosen |
|----|-------------|-------------------------------------------------------------------------------------------------------------------------------|-------------|----|-----|------------|-------------|
| 1  | 23/17.<br>8 | Gunakan format standard lap Tesu<br>→ Ikuti kembali penulisan Karya Ilmiah<br>→ termanik penulisan nomor halaman<br>Lampirkan |             |    |     |            |             |
| 2. | 20-17.<br>9 | Lanjutkan                                                                                                                     |             |    |     |            |             |



PROGRAM STUDI MAGISTER TEKNIK SIPIL  
FAKULTAS TEKNIK  
UNIVERSITAS ISLAM SULTAN AGUNG  
SEMARANG

LEMBAR PENILAIAN PROPOSAL TESIS

Nama mahasiswa : Agung Setyo Nugroho  
N I M : MTS153230767  
Hari/Tanggal : Senin, 2 Oktober 2017  
Judul Proposal Tesis : Strategi Penanganan Kerusakan Ruas Jalan Purwodadi - Wirosari  
ditinjau dari Segi Pemeliharaan

| No | Bagian                                                                                                                                                                                                               | Masukan                                                    |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| 1  | <b>Judul dan Substansi Penelitian :</b> <ul style="list-style-type: none"><li>▪ Kesesuaian antara judul dan substansi penelitian</li><li>▪ Maksud, tujuan dan manfaat</li><li>▪ Originalitas</li></ul>               |                                                            |
| 2  | <b>Telaah Pustaka :</b> <ul style="list-style-type: none"><li>▪ Kekinian pustaka yang dipakai</li><li>▪ Kesesuaian kajian pustaka dan topik</li><li>▪ Kelengkapan pustaka</li><li>▪ Cara penulisan</li></ul>         | Semua rujukan dituliskan sumbernya.                        |
| 3  | <b>Metodologi :</b> <ul style="list-style-type: none"><li>▪ Kesesuaian metodologi</li><li>▪ Kejelasan metodologi</li><li>▪ Perincian data yang diperlukan</li><li>▪ Metode pengumpulan dan pengolahan data</li></ul> | Dipertimbangkan lagi penggunaan analisa dg metoda yg lain. |
| 4  | <b>Organisasi Penulisan :</b> <ul style="list-style-type: none"><li>▪ Susunan, sistematika penulisan</li><li>▪ Pemakaian bahasa</li><li>▪ Kelengkapan</li></ul>                                                      | Daftar pustaka tuliskan saja yg memang direview            |
| 5  | <b>Presentasi :</b> <ul style="list-style-type: none"><li>▪ Penyampaian materi</li><li>▪ Penguasaan materi</li><li>▪ Tanya jawab</li></ul>                                                                           | Ubih dikuasai materinya                                    |

Dosen Penguji

(.....)

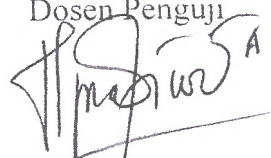


PROGRAM STUDI MAGISTER TEKNIK SIPIL  
FAKULTAS TEKNIK  
UNIVERSITAS ISLAM SULTAN AGUNG  
SEMARANG

LEMBAR PENILAIAN PROPOSAL TESIS

Nama mahasiswa : Agung Setyo Nugroho  
N I M : MTS153230767  
Hari/Tanggal : Senin, 2 Oktober 2017  
Judul Proposal Tesis : Strategi Penanganan Kerusakan Ruas Jalan Purwodadi - Wirosari ditinjau dari Segi Pemeliharaan

| No | Bagian                                                                                                                                                                                                               | Masukan                                                  |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 1  | <b>Judul dan Substansi Penelitian :</b> <ul style="list-style-type: none"><li>▪ Kesesuaian antara judul dan substansi penelitian</li><li>▪ Maksud, tujuan dan manfaat</li><li>▪ Originalitas</li></ul>               | Perlu pemahaman lbh baik antara strategi dg metode       |
| 2  | <b>Telaah Pustaka :</b> <ul style="list-style-type: none"><li>▪ Kekinian pustaka yang dipakai</li><li>▪ Kesesuaian kajian pustaka dan topik</li><li>▪ Kelengkapan pustaka</li><li>▪ Cara penulisan</li></ul>         | Banyak yg tidak dicantumkan sumber pustaka               |
| 3  | <b>Metodologi :</b> <ul style="list-style-type: none"><li>▪ Kesesuaian metodologi</li><li>▪ Kejelasan metodologi</li><li>▪ Perincian data yang diperlukan</li><li>▪ Metode pengumpulan dan pengolahan data</li></ul> | Prakuisioner dg kuesioner tdk nyambung, beda perantukan. |
| 4  | <b>Organisasi Penulisan :</b> <ul style="list-style-type: none"><li>▪ Susunan, sistematika penulisan</li><li>▪ Pemakaian bahasa</li><li>▪ Kelengkapan</li></ul>                                                      | Perlu diperbaiki.                                        |
| 5  | <b>Presentasi :</b> <ul style="list-style-type: none"><li>▪ Penyampaian materi</li><li>▪ Penguasaan materi</li><li>▪ Tanya jawab</li></ul>                                                                           | Baik                                                     |

Dosen Penguji  
  
(.....Dr. Henny P. A.....)



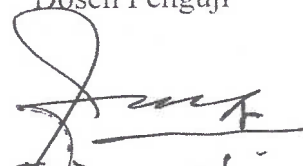
PROGRAM STUDI MAGISTER TEKNIK SIPIL  
FAKULTAS TEKNIK  
UNIVERSITAS ISLAM SULTAN AGUNG  
SEMARANG

LEMBAR PENILAIAN PROPOSAL TESIS

Nama mahasiswa : Agung Setyo Nugroho  
N I M : MTS153230767  
Hari/Tanggal : Senin, 2 Oktober 2017  
Judul Proposal Tesis : Strategi Penanganan Kerusakan Ruas Jalan Purwodadi - Wirosari ditinjau dari Segi Pemeliharaan

| No | Bagian                                                                                                                                                                                                               | Masukan                                                                    |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| 1  | <b>Judul dan Substansi Penelitian :</b> <ul style="list-style-type: none"><li>▪ Kesesuaian antara judul dan substansi penelitian</li><li>▪ Maksud, tujuan dan manfaat</li><li>▪ Originalitas</li></ul>               |                                                                            |
| 2  | <b>Telaah Pustaka :</b> <ul style="list-style-type: none"><li>▪ Kekinian pustaka yang dipakai</li><li>▪ Kesesuaian kajian pustaka dan topik</li><li>▪ Kelengkapan pustaka</li><li>▪ Cara penulisan</li></ul>         |                                                                            |
| 3  | <b>Metodologi :</b> <ul style="list-style-type: none"><li>▪ Kesesuaian metodologi</li><li>▪ Kejelasan metodologi</li><li>▪ Perincian data yang diperlukan</li><li>▪ Metode pengumpulan dan pengolahan data</li></ul> | Perbaiki flowchart penelitian<br>(Pengumpulan data primer,<br>sekunder) ?? |
| 4  | <b>Organisasi Penulisan :</b> <ul style="list-style-type: none"><li>▪ Susunan, sistematika penulisan</li><li>▪ Pemakaian bahasa</li><li>▪ Kelengkapan</li></ul>                                                      |                                                                            |
| 5  | <b>Presentasi :</b> <ul style="list-style-type: none"><li>▪ Penyampaian materi</li><li>▪ Penguasaan materi</li><li>▪ Tanya jawab</li></ul>                                                                           |                                                                            |

Dosen Penguji

  
(M. Fauzan Alian.)

PENILAIAN KRITERIA DAN ALTERNATIF STRATEGY PENANGANAN

| NO    | RETAK  |          |           | DISTORSI |          |           | CACAT PERMUKAAN |          |           | PENGSAUAN |          |           | KEGEMUKAN |          |           | PENURUNAN |          |           |
|-------|--------|----------|-----------|----------|----------|-----------|-----------------|----------|-----------|-----------|----------|-----------|-----------|----------|-----------|-----------|----------|-----------|
|       | Rigid  | Flexibel | Recycling | Rigid    | Flexibel | Recycling | Rigid           | Flexibel | Recycling | Rigid     | Flexibel | Recycling | Rigid     | Flexibel | Recycling | Rigid     | Flexibel | Recycling |
| 1     | 0,018  | 0,028    | 0,194     | 0,020    | 0,009    | 0,101     | 0,016           | 0,025    | 0,170     | 0,012     | 0,012    | 0,106     | 0,019     | 0,030    | 0,071     | 0,027     | 0,043    | 0,100     |
| 2     | 0,021  | 0,058    | 0,160     | 0,021    | 0,033    | 0,077     | 0,016           | 0,048    | 0,145     | 0,022     | 0,050    | 0,058     | 0,019     | 0,030    | 0,071     | 0,014     | 0,043    | 0,108     |
| 3     | 0,018  | 0,055    | 0,166     | 0,014    | 0,034    | 0,082     | 0,019           | 0,051    | 0,140     | 0,007     | 0,038    | 0,084     | 0,028     | 0,009    | 0,083     | 0,034     | 0,013    | 0,102     |
| 4     | 0,021  | 0,058    | 0,160     | 0,032    | 0,011    | 0,087     | 0,016           | 0,048    | 0,145     | 0,007     | 0,038    | 0,084     | 0,011     | 0,017    | 0,092     | 0,019     | 0,024    | 0,132     |
| 5     | 0,038  | 0,060    | 0,141     | 0,018    | 0,043    | 0,068     | 0,019           | 0,061    | 0,129     | 0,013     | 0,028    | 0,089     | 0,009     | 0,009    | 0,090     | 0,034     | 0,012    | 0,102     |
| 6     | 0,018  | 0,055    | 0,166     | 0,026    | 0,026    | 0,078     | 0,017           | 0,059    | 0,134     | 0,030     | 0,010    | 0,090     | 0,015     | 0,028    | 0,078     | 0,017     | 0,039    | 0,116     |
| 7     | 0,034  | 0,080    | 0,126     | 0,033    | 0,033    | 0,065     | 0,016           | 0,025    | 0,170     | 0,007     | 0,038    | 0,084     | 0,010     | 0,023    | 0,087     | 0,089     | 0,033    | 0,057     |
| 8     | 0,028  | 0,097    | 0,115     | 0,020    | 0,009    | 0,101     | 0,019           | 0,043    | 0,148     | 0,010     | 0,030    | 0,090     | 0,028     | 0,009    | 0,083     | 0,013     | 0,013    | 0,137     |
| 9     | 0,048  | 0,144    | 0,048     | 0,034    | 0,014    | 0,082     | 0,019           | 0,043    | 0,148     | 0,012     | 0,038    | 0,091     | 0,031     | 0,013    | 0,076     | 0,073     | 0,018    | 0,073     |
| 10    | 0,034  | 0,080    | 0,126     | 0,018    | 0,037    | 0,075     | 0,020           | 0,035    | 0,155     | 0,021     | 0,033    | 0,077     | 0,032     | 0,008    | 0,080     | 0,073     | 0,011    | 0,073     |
| 11    | 0,029  | 0,055    | 0,156     | 0,014    | 0,040    | 0,076     | 0,033           | 0,014    | 0,163     | 0,009     | 0,045    | 0,075     | 0,019     | 0,008    | 0,093     | 0,027     | 0,012    | 0,100     |
| 12    | 0,034  | 0,171    | 0,034     | 0,016    | 0,030    | 0,084     | 0,016           | 0,025    | 0,170     | 0,021     | 0,065    | 0,024     | 0,015     | 0,033    | 0,071     | 0,069     | 0,047    | 0,082     |
| 13    | 0,038  | 0,060    | 0,141     | 0,023    | 0,009    | 0,097     | 0,026           | 0,048    | 0,136     | 0,031     | 0,071    | 0,027     | 0,031     | 0,013    | 0,076     | 0,073     | 0,018    | 0,073     |
| 14    | 0,038  | 0,060    | 0,141     | 0,034    | 0,014    | 0,082     | 0,039           | 0,033    | 0,138     | 0,014     | 0,062    | 0,083     | 0,010     | 0,034    | 0,077     | 0,073     | 0,048    | 0,073     |
| 15    | 0,034  | 0,080    | 0,126     | 0,034    | 0,014    | 0,082     | 0,016           | 0,025    | 0,170     | 0,011     | 0,036    | 0,083     | 0,010     | 0,015    | 0,094     | 0,015     | 0,022    | 0,139     |
| 16    | 0,038  | 0,060    | 0,141     | 0,011    | 0,020    | 0,099     | 0,038           | 0,015    | 0,157     | 0,014     | 0,101    | 0,014     | 0,010     | 0,015    | 0,094     | 0,027     | 0,022    | 0,100     |
| 17    | 0,034  | 0,171    | 0,034     | 0,021    | 0,033    | 0,077     | 0,034           | 0,062    | 0,113     | 0,016     | 0,030    | 0,084     | 0,009     | 0,014    | 0,097     | 0,032     | 0,020    | 0,111     |
| 18    | 0,034  | 0,080    | 0,126     | 0,010    | 0,015    | 0,105     | 0,016           | 0,025    | 0,170     | 0,009     | 0,097    | 0,023     | 0,015     | 0,033    | 0,071     | 0,027     | 0,047    | 0,100     |
| 19    | 0,045  | 0,157    | 0,038     | 0,012    | 0,019    | 0,100     | 0,042           | 0,066    | 0,103     | 0,018     | 0,043    | 0,068     | 0,090     | 0,022    | 0,090     | 0,018     | 0,031    | 0,113     |
| 20    | 0,045  | 0,157    | 0,038     | 0,012    | 0,038    | 0,080     | 0,033           | 0,053    | 0,124     | 0,021     | 0,039    | 0,070     | 0,028     | 0,009    | 0,083     | 0,027     | 0,013    | 0,100     |
| 21    | 0,031  | 0,184    | 0,025     | 0,034    | 0,014    | 0,082     | 0,017           | 0,033    | 0,160     | 0,012     | 0,027    | 0,091     | 0,009     | 0,028    | 0,083     | 0,013     | 0,039    | 0,137     |
| 22    | 0,036  | 0,072    | 0,132     | 0,056    | 0,019    | 0,056     | 0,042           | 0,042    | 0,126     | 0,021     | 0,033    | 0,077     | 0,028     | 0,009    | 0,083     | 0,027     | 0,013    | 0,100     |
| 23    | 0,034  | 0,080    | 0,126     | 0,010    | 0,015    | 0,105     | 0,019           | 0,043    | 0,148     | 0,011     | 0,036    | 0,083     | 0,009     | 0,014    | 0,097     | 0,041     | 0,020    | 0,036     |
| 24    | 0,045  | 0,157    | 0,038     | 0,015    | 0,053    | 0,062     | 0,030           | 0,070    | 0,110     | 0,012     | 0,106    | 0,012     | 0,020     | 0,036    | 0,065     | 0,034     | 0,051    | 0,083     |
| 25    | 0,022  | 0,196    | 0,022     | 0,020    | 0,009    | 0,101     | 0,016           | 0,025    | 0,170     | 0,031     | 0,071    | 0,027     | 0,009     | 0,014    | 0,097     | 0,027     | 0,020    | 0,083     |
| 26    | 0,034  | 0,080    | 0,126     | 0,025    | 0,011    | 0,094     | 0,082           | 0,021    | 0,107     | 0,007     | 0,048    | 0,075     | 0,009     | 0,014    | 0,097     | 0,027     | 0,020    | 0,100     |
| 27    | 0,047  | 0,075    | 0,118     | 0,020    | 0,009    | 0,101     | 0,016           | 0,028    | 0,166     | 0,012     | 0,106    | 0,012     | 0,009     | 0,014    | 0,097     | 0,027     | 0,020    | 0,092     |
| 28    | 0,046  | 0,152    | 0,042     | 0,058    | 0,022    | 0,050     | 0,034           | 0,062    | 0,113     | 0,021     | 0,039    | 0,070     | 0,024     | 0,037    | 0,059     | 0,028     | 0,020    | 0,081     |
| 29    | 0,045  | 0,038    | 0,038     | 0,021    | 0,033    | 0,077     | 0,016           | 0,025    | 0,170     | 0,013     | 0,033    | 0,084     | 0,009     | 0,014    | 0,097     | 0,081     | 0,020    | 0,081     |
| 30    | 0,048  | 0,144    | 0,048     | 0,026    | 0,041    | 0,064     | 0,042           | 0,066    | 0,103     | 0,013     | 0,033    | 0,084     | 0,024     | 0,037    | 0,059     | 0,073     | 0,053    | 0,073     |
| 31    | 0,048  | 0,144    | 0,048     | 0,026    | 0,041    | 0,064     | 0,042           | 0,066    | 0,103     | 0,013     | 0,033    | 0,084     | 0,024     | 0,037    | 0,059     | 0,073     | 0,053    | 0,073     |
| 32    | 0,048  | 0,144    | 0,048     | 0,026    | 0,041    | 0,064     | 0,042           | 0,066    | 0,103     | 0,013     | 0,033    | 0,084     | 0,024     | 0,037    | 0,059     | 0,073     | 0,053    | 0,073     |
| 33    | 0,048  | 0,144    | 0,048     | 0,026    | 0,041    | 0,064     | 0,042           | 0,066    | 0,103     | 0,013     | 0,033    | 0,084     | 0,024     | 0,037    | 0,059     | 0,073     | 0,053    | 0,073     |
| 34    | 0,048  | 0,144    | 0,048     | 0,026    | 0,041    | 0,064     | 0,042           | 0,066    | 0,103     | 0,013     | 0,033    | 0,084     | 0,024     | 0,037    | 0,059     | 0,073     | 0,053    | 0,073     |
| 35    | 0,048  | 0,144    | 0,048     | 0,026    | 0,041    | 0,064     | 0,042           | 0,066    | 0,103     | 0,013     | 0,033    | 0,084     | 0,024     | 0,037    | 0,059     | 0,073     | 0,053    | 0,073     |
| TOTAL | 0,036  | 0,105    | 0,095     | 0,024    | 0,026    | 0,080     | 0,028           | 0,044    | 0,138     | 0,015     | 0,048    | 0,067     | 0,020     | 0,022    | 0,080     | 0,045     | 0,031    | 0,091     |
| RANK  | Rank 3 | Rank 1   | Rank 2    | Rank 3   | Rank 2   | Rank 1    | Rank 3          | Rank 2   | Rank 1    | Rank 3    | Rank 2   | Rank 1    | Rank 3    | Rank 2   | Rank 1    | Rank 2    | Rank 3   | Rank 1    |

# NILAI KONSISTENSI ANGKET

| NO    | RATA 2 NILAI CR | KETERANGAN (CR<0.1 = konsisten) |
|-------|-----------------|---------------------------------|
| 1     | 0,042           | Konsisten                       |
| 2     | 0,021           | Konsisten                       |
| 3     | 0,018           | Konsisten                       |
| 4     | 0,021           | Konsisten                       |
| 5     | 0,020           | Konsisten                       |
| 6     | 0,003           | Konsisten                       |
| 7     | 0,044           | Konsisten                       |
| 8     | 0,026           | Konsisten                       |
| 9     | 0,016           | Konsisten                       |
| 10    | 0,041           | Konsisten                       |
| 11    | 0,037           | Konsisten                       |
| 12    | 0,017           | Konsisten                       |
| 13    | 0,020           | Konsisten                       |
| 14    | 0,025           | Konsisten                       |
| 15    | 0,038           | Konsisten                       |
| 16    | 0,034           | Konsisten                       |
| 17    | 0,021           | Konsisten                       |
| 18    | 0,036           | Konsisten                       |
| 19    | 0,044           | Konsisten                       |
| 20    | 0,021           | Konsisten                       |
| 21    | 0,021           | Konsisten                       |
| 22    | 0,001           | Konsisten                       |
| 23    | 0,031           | Konsisten                       |
| 24    | 0,025           | Konsisten                       |
| 25    | 0,037           | Konsisten                       |
| 26    | 0,052           | Konsisten                       |
| 27    | 0,032           | Konsisten                       |
| 28    | 0,022           | Konsisten                       |
| 29    | 0,038           | Konsisten                       |
| 30    | 0,034           | Konsisten                       |
| 31    | 0,034           | Konsisten                       |
| 32    | 0,034           | Konsisten                       |
| 33    | 0,034           | Konsisten                       |
| 34    | 0,034           | Konsisten                       |
| 35    | 0,034           | Konsisten                       |
| Rata2 | 0,029           | Konsisten                       |

# 1 LANGKAH PERHITUNGAN MATRIK PERBANDINGAN BERPASANGAN (PAIRWAIS COMPARISM)

## Retak / Cracking

### 1. Menentukan Parwise Comparism

| Retak     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |       |
|-----------|-------|-------|-------|-------|
| Rigid     | 0,074 | 0,059 | 0,090 | 0,222 |
| Flexibel  | 0,148 | 0,118 | 0,090 | 0,355 |
| Recycling | 0,665 | 1,058 | 0,808 | 2,532 |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |          |           |
|----------|-------|----------|-----------|
| Lambda   | 3,054 | RI       | 0,58      |
|          |       | CR       | 0,046     |
| Index K. | 0,027 | CR < 0,1 | Konsisten |

## Distorsi

### 1. Menentukan Parwise Comparism

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,143     |
| Flexibel  | 0,333 | 1,000    | 0,111     |
| Recycling | 7,000 | 9,000    | 1,000     |
| Jumlah    | 8,333 | 13,000   | 1,254     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,120 | 0,231    | 0,114     |
| Flexibel  | 0,040 | 0,077    | 0,089     |
| Recycling | 0,840 | 0,692    | 0,797     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,155             |
| Flexibel  | 0,068             |
| Recycling | 0,777             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |       |
|-----------|-------|-------|-------|-------|
| Rigid     | 0,155 | 0,205 | 0,111 | 0,471 |
| Flexibel  | 0,052 | 0,068 | 0,086 | 0,206 |
| Recycling | 1,085 | 0,616 | 0,777 | 2,477 |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,042 |
| Flexibel  | 3,013 |
| Recycling | 3,190 |

#### c. Lambda dan index konsistensi

|          |       |          |           |
|----------|-------|----------|-----------|
| Lambda   | 3,082 | RI       | 0,58      |
|          |       | CR       | 0,070     |
| Index K. | 0,041 | CR < 0,1 | Konsisten |

### Penentuan Ranking Tiap Angket

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,074 | 0,118    | 0,808     | 0,018     | 0,028        | 0,194         |
| Distorsi                 | 0,130 | 0,155 | 0,068    | 0,777     | 0,020     | 0,009        | 0,101         |
| Cacat Permukaan          | 0,210 | 0,074 | 0,118    | 0,808     | 0,016     | 0,025        | 0,170         |
| Pengausan                | 0,130 | 0,091 | 0,091    | 0,818     | 0,012     | 0,012        | 0,106         |
| Kegemukan                | 0,120 | 0,159 | 0,252    | 0,589     | 0,019     | 0,030        | 0,071         |
| Bekas Penanaman Utilitas | 0,170 | 0,159 | 0,252    | 0,589     | 0,027     | 0,043        | 0,100         |
|                          | 1,000 |       |          |           | 0,111     | 0,147        | 0,742         |
|                          |       |       |          |           | Rank 3    | Rank 2       | Rank 1        |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

#### c. Lambda dan index konsistensi

|          |       |          |           |
|----------|-------|----------|-----------|
| Lambda   | 3,053 | RI       | 0,58      |
|          |       | CR       | 0,046     |
| Index K. | 0,027 | CR < 0,1 | Konsisten |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

#### c. Lambda dan index konsistensi

|          |       |          |           |
|----------|-------|----------|-----------|
| Lambda   | 3,053 | RI       | 0,58      |
|          |       | CR       | 0,046     |
| Index K. | 0,027 | CR < 0,1 | Konsisten |

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |          |           |
|----------|-------|----------|-----------|
| Lambda   | 3,054 | RI       | 0,58      |
|          |       | CR       | 0,046     |
| Index K. | 0,027 | CR < 0,1 | Konsisten |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 1,000    | 0,111     |
| Flexibel  | 1,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 11,000 | 11,000   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,091 | 0,091    | 0,091     |
| Flexibel  | 0,091 | 0,091    | 0,091     |
| Recycling | 0,818 | 0,818    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,091             |
| Flexibel  | 0,091             |
| Recycling | 0,818             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,091 | 0,091 | 0,091 | <b>0,273</b> |
| Flexibel  | 0,091 | 0,091 | 0,091 | <b>0,273</b> |
| Recycling | 0,818 | 0,818 | 0,818 | <b>2,454</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |          |           |
|----------|-------|----------|-----------|
| Lambda   | 2,999 | RI       | 0,58      |
|          |       | CR       | -0,001    |
| Index K. | 0,000 | CR < 0,1 | Konsisten |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,143     |
| Flexibel  | 3,000  | 1,000    | 0,333     |
| Recycling | 7,000  | 3,000    | 1,000     |
| Jumlah    | 11,000 | 4,333    | 1,476     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,091 | 0,077    | 0,097     |
| Flexibel  | 0,273 | 0,231    | 0,226     |
| Recycling | 0,636 | 0,692    | 0,678     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,088             |
| Flexibel  | 0,243             |
| Recycling | 0,669             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,088 | 0,081 | 0,096 | <b>0,265</b> |
| Flexibel  | 0,265 | 0,243 | 0,223 | <b>0,730</b> |
| Recycling | 0,618 | 0,729 | 0,669 | <b>2,015</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,002 |
| Flexibel  | 3,005 |
| Recycling | 3,014 |

**c. Lambda dan index konsistensi**

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,007 | RI                 | 0,58      |
|          |       | CR                 | 0,006     |
| Index K. | 0,003 | <b>CR &lt; 0,1</b> | Konsisten |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

**c. Lambda dan index konsistensi**

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,053 | RI                 | 0,58      |
|          |       | CR                 | 0,046     |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | Konsisten |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,088 | 0,243    | 0,669     | 0,021     | <b>0,058</b> | 0,160         |
| Distorsi                 | 0,130 | 0,159 | 0,252    | 0,589     | 0,021     | 0,033        | <b>0,077</b>  |
| Cacat Permukaan          | 0,210 | 0,077 | 0,231    | 0,692     | 0,016     | 0,048        | <b>0,145</b>  |
| Pengausan                | 0,130 | 0,170 | 0,387    | 0,443     | 0,022     | 0,050        | <b>0,058</b>  |
| Kegemukan                | 0,120 | 0,159 | 0,252    | 0,589     | 0,019     | 0,030        | <b>0,071</b>  |
| Bekas Penanaman Utilitas | 0,170 | 0,082 | 0,252    | 0,638     | 0,014     | 0,043        | <b>0,108</b>  |
|                          | 1,000 |       |          |           | 0,113     | 0,263        | <b>0,619</b>  |

Rank 3      Rank 2      Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,111     |
| Flexibel  | 3,000  | 1,000    | 0,333     |
| Recycling | 9,000  | 3,000    | 1,000     |
| Jumlah    | 13,000 | 4,333    | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,077 | 0,077    | 0,077     |
| Flexibel  | 0,231 | 0,231    | 0,231     |
| Recycling | 0,692 | 0,692    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,077             |
| Flexibel  | 0,231             |
| Recycling | 0,692             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,077 | 0,077 | 0,077 | <b>0,231</b> |
| Flexibel  | 0,231 | 0,231 | 0,231 | <b>0,692</b> |
| Recycling | 0,692 | 0,692 | 0,692 | <b>2,076</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |        |                    |                  |
|----------|--------|--------------------|------------------|
| Lambda   | 2,999  | RI                 | 0,58             |
|          |        | CR                 | -0,001           |
| Index K. | -0,001 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 1,000     |
| Recycling | 3,000 | 1,000    | 1,000     |
| Jumlah    | 6,000 | 2,500    | 2,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,200    | 0,143     |
| Flexibel  | 0,333 | 0,400    | 0,429     |
| Recycling | 0,500 | 0,400    | 0,429     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,170             |
| Flexibel  | 0,387             |
| Recycling | 0,443             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,170 | 0,194 | 0,147 | <b>0,511</b> |
| Flexibel  | 0,340 | 0,387 | 0,443 | <b>1,170</b> |
| Recycling | 0,509 | 0,387 | 0,443 | <b>1,340</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,020 |
| Recycling | 3,025 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,018 | RI                 | 0,58             |
|          |       | CR                 | 0,016            |
| Index K. | 0,009 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,053 | RI                 | 0,58      |
|          |       | CR                 | 0,046     |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | Konsisten |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,111     |
| Flexibel  | 3,000  | 1,000    | 0,500     |
| Recycling | 9,000  | 2,000    | 1,000     |
| Jumlah    | 13,000 | 3,333    | 1,611     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,077 | 0,100    | 0,069     |
| Flexibel  | 0,231 | 0,300    | 0,310     |
| Recycling | 0,692 | 0,600    | 0,621     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,082             |
| Flexibel  | 0,280             |
| Recycling | 0,638             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,082 | 0,093 | 0,071 | <b>0,246</b> |
| Flexibel  | 0,246 | 0,280 | 0,319 | <b>0,845</b> |
| Recycling | 0,737 | 0,561 | 0,638 | <b>1,936</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,004 |
| Flexibel  | 3,014 |
| Recycling | 3,035 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,018 | RI                 | 0,58      |
|          |       | CR                 | 0,015     |
| Index K. | 0,009 | <b>CR &lt; 0,1</b> | Konsisten |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,111     |
| Flexibel  | 3,000  | 1,000    | 0,333     |
| Recycling | 9,000  | 3,000    | 1,000     |
| Jumlah    | 13,000 | 4,333    | 1,444     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,077 | 0,077    | 0,077     |
| Flexibel  | 0,231 | 0,231    | 0,231     |
| Recycling | 0,692 | 0,692    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,077             |
| Flexibel  | 0,231             |
| Recycling | 0,692             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,077 | 0,077 | 0,077 | <b>0,231</b> |
| Flexibel  | 0,231 | 0,231 | 0,231 | <b>0,692</b> |
| Recycling | 0,692 | 0,692 | 0,692 | <b>2,076</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

**c. Lambda dan index konsistensi**

|          |        |                    |                  |
|----------|--------|--------------------|------------------|
| Lambda   | 2,999  | RI                 | 0,58             |
|          |        | CR                 | -0,001           |
| Index K. | -0,001 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,200     |
| Flexibel  | 3,000 | 1,000    | 0,333     |
| Recycling | 5,000 | 3,000    | 1,000     |
| Jumlah    | 9,000 | 4,333    | 1,533     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,111 | 0,077    | 0,130     |
| Flexibel  | 0,333 | 0,231    | 0,217     |
| Recycling | 0,556 | 0,692    | 0,652     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,106             |
| Flexibel  | 0,260             |
| Recycling | 0,633             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,106 | 0,087 | 0,127 | <b>0,320</b> |
| Flexibel  | 0,318 | 0,260 | 0,211 | <b>0,790</b> |
| Recycling | 0,531 | 0,781 | 0,633 | <b>1,945</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,011 |
| Flexibel  | 3,032 |
| Recycling | 3,071 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,038 | RI                 | 0,58             |
|          |       | CR                 | 0,033            |
| Index K. | 0,019 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,077 | 0,231    | 0,692     | 0,018     | 0,055        | 0,166         |
| Distorsi                 | 0,130 | 0,106 | 0,260    | 0,633     | 0,014     | 0,034        | 0,082         |
| Cacat Permukaan          | 0,210 | 0,088 | 0,243    | 0,669     | 0,019     | 0,051        | 0,140         |
| Pengausan                | 0,130 | 0,057 | 0,295    | 0,649     | 0,007     | 0,038        | 0,084         |
| Kegemukan                | 0,120 | 0,231 | 0,077    | 0,692     | 0,028     | 0,009        | 0,083         |
| Bekas Penanaman Utilitas | 0,170 | 0,200 | 0,077    | 0,600     | 0,034     | 0,013        | 0,102         |
|                          | 1,000 |       |          |           | 0,120     | 0,201        | 0,658         |

Rank 3      Rank 2      Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,143     |
| Flexibel  | 3,000  | 1,000    | 0,333     |
| Recycling | 7,000  | 3,000    | 1,000     |
| Jumlah    | 11,000 | 4,333    | 1,476     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,091 | 0,077    | 0,097     |
| Flexibel  | 0,273 | 0,231    | 0,226     |
| Recycling | 0,636 | 0,692    | 0,678     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,088             |
| Flexibel  | 0,243             |
| Recycling | 0,669             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,088 | 0,081 | 0,096 | <b>0,265</b> |
| Flexibel  | 0,265 | 0,243 | 0,223 | <b>0,730</b> |
| Recycling | 0,618 | 0,729 | 0,669 | <b>2,015</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,002 |
| Flexibel  | 3,005 |
| Recycling | 3,014 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,007 | RI                 | 0,58             |
|          |       | CR                 | 0,006            |
| Index K. | 0,003 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,143    | 0,111     |
| Flexibel  | 7,000  | 1,000    | 0,333     |
| Recycling | 9,000  | 3,000    | 1,000     |
| Jumlah    | 17,000 | 4,143    | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,059 | 0,035    | 0,077     |
| Flexibel  | 0,412 | 0,241    | 0,231     |
| Recycling | 0,529 | 0,724    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,057             |
| Flexibel  | 0,295             |
| Recycling | 0,649             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,057 | 0,042 | 0,072 | <b>0,171</b> |
| Flexibel  | 0,397 | 0,295 | 0,216 | <b>0,908</b> |
| Recycling | 0,511 | 0,884 | 0,649 | <b>2,043</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,012 |
| Flexibel  | 3,081 |
| Recycling | 3,150 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,081 | RI                 | 0,58             |
|          |       | CR                 | 0,070            |
| Index K. | 0,040 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,333     |
| Flexibel  | 0,333 | 1,000    | 0,111     |
| Recycling | 3,000 | 9,000    | 1,000     |
| Jumlah    | 4,333 | 13,000   | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,231 | 0,231    | 0,231     |
| Flexibel  | 0,077 | 0,077    | 0,077     |
| Recycling | 0,692 | 0,692    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,231             |
| Flexibel  | 0,077             |
| Recycling | 0,692             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,231 | 0,231 | 0,231 | <b>0,692</b> |
| Flexibel  | 0,077 | 0,077 | 0,077 | <b>0,231</b> |
| Recycling | 0,692 | 0,692 | 0,692 | <b>2,076</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |        |                    |                  |
|----------|--------|--------------------|------------------|
| Lambda   | 2,999  | RI                 | 0,58             |
|          |        | CR                 | -0,001           |
| Index K. | -0,001 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 1,000    | 0,333     |
| Flexibel  | 1,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 5,000 | 5,000    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,200    | 0,200     |
| Flexibel  | 0,200 | 0,200    | 0,200     |
| Recycling | 0,600 | 0,600    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,200             |
| Flexibel  | 0,200             |
| Recycling | 0,600             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Flexibel  | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Recycling | 0,600 | 0,600 | 0,600 | <b>1,800</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,143     |
| Flexibel  | 3,000  | 1,000    | 0,333     |
| Recycling | 7,000  | 3,000    | 1,000     |
| Jumlah    | 11,000 | 4,333    | 1,476     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,091 | 0,077    | 0,097     |
| Flexibel  | 0,273 | 0,231    | 0,226     |
| Recycling | 0,636 | 0,692    | 0,678     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,088             |
| Flexibel  | 0,243             |
| Recycling | 0,669             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,088 | 0,081 | 0,096 | <b>0,265</b> |
| Flexibel  | 0,265 | 0,243 | 0,223 | <b>0,730</b> |
| Recycling | 0,618 | 0,729 | 0,669 | <b>2,015</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,002 |
| Flexibel  | 3,005 |
| Recycling | 3,014 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,007 | RI                 | 0,58             |
|          |       | CR                 | 0,006            |
| Index K. | 0,003 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,333     |
| Flexibel  | 0,333 | 1,000    | 0,143     |
| Recycling | 3,000 | 7,000    | 1,000     |
| Jumlah    | 4,333 | 11,000   | 1,476     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,231 | 0,273    | 0,226     |
| Flexibel  | 0,077 | 0,091    | 0,097     |
| Recycling | 0,692 | 0,636    | 0,678     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,243             |
| Flexibel  | 0,088             |
| Recycling | 0,669             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,243 | 0,265 | 0,223 | <b>0,730</b> |
| Flexibel  | 0,081 | 0,088 | 0,096 | <b>0,265</b> |
| Recycling | 0,729 | 0,618 | 0,669 | <b>2,015</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,005 |
| Flexibel  | 3,002 |
| Recycling | 3,014 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,007 | RI                 | 0,58             |
|          |       | CR                 | 0,006            |
| Index K. | 0,003 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid    | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|--------------|--------------|---------------|
| Retak                    | 0,240 | 0,088 | 0,243    | 0,669     | 0,021        | 0,058        | 0,160         |
| Distorsi                 | 0,130 | 0,243 | 0,088    | 0,669     | 0,032        | 0,011        | 0,087         |
| Cacat Permukaan          | 0,210 | 0,077 | 0,231    | 0,692     | 0,016        | 0,048        | 0,145         |
| Pengausan                | 0,130 | 0,057 | 0,295    | 0,649     | 0,007        | 0,038        | 0,084         |
| Kegemukan                | 0,120 | 0,090 | 0,143    | 0,767     | 0,011        | 0,017        | 0,092         |
| Bekas Penanaman Utilitas | 0,170 | 0,111 | 0,143    | 0,778     | 0,019        | 0,024        | 0,132         |
|                          | 1,000 |       |          |           | <b>0,106</b> | <b>0,198</b> | <b>0,701</b>  |

Rank 3      Rank 2      Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,111     |
| Flexibel  | 3,000  | 1,000    | 0,333     |
| Recycling | 9,000  | 3,000    | 1,000     |
| Jumlah    | 13,000 | 4,333    | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,077 | 0,077    | 0,077     |
| Flexibel  | 0,231 | 0,231    | 0,231     |
| Recycling | 0,692 | 0,692    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,077             |
| Flexibel  | 0,231             |
| Recycling | 0,692             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,077 | 0,077 | 0,077 | <b>0,231</b> |
| Flexibel  | 0,231 | 0,231 | 0,231 | <b>0,692</b> |
| Recycling | 0,692 | 0,692 | 0,692 | <b>2,076</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |        |                    |                  |
|----------|--------|--------------------|------------------|
| Lambda   | 2,999  | RI                 | 0,58             |
|          |        | CR                 | -0,001           |
| Index K. | -0,001 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,143    | 0,111     |
| Flexibel  | 7,000  | 1,000    | 0,333     |
| Recycling | 9,000  | 3,000    | 1,000     |
| Jumlah    | 17,000 | 4,143    | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,059 | 0,035    | 0,077     |
| Flexibel  | 0,412 | 0,241    | 0,231     |
| Recycling | 0,529 | 0,724    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,057             |
| Flexibel  | 0,295             |
| Recycling | 0,649             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,057 | 0,042 | 0,072 | <b>0,171</b> |
| Flexibel  | 0,397 | 0,295 | 0,216 | <b>0,908</b> |
| Recycling | 0,511 | 0,884 | 0,649 | <b>2,043</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,012 |
| Flexibel  | 3,081 |
| Recycling | 3,150 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,081 | RI                 | 0,58             |
|          |       | CR                 | 0,070            |
| Index K. | 0,040 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,143     |
| Flexibel  | 2,000  | 1,000    | 0,143     |
| Recycling | 7,000  | 7,000    | 1,000     |
| Jumlah    | 10,000 | 8,500    | 1,286     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,100 | 0,059    | 0,111     |
| Flexibel  | 0,200 | 0,118    | 0,111     |
| Recycling | 0,700 | 0,824    | 0,778     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,090             |
| Flexibel  | 0,143             |
| Recycling | 0,767             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,090 | 0,071 | 0,110 | <b>0,271</b> |
| Flexibel  | 0,180 | 0,143 | 0,110 | <b>0,433</b> |
| Recycling | 0,630 | 1,001 | 0,767 | <b>2,398</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,013 |
| Flexibel  | 3,027 |
| Recycling | 3,126 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,055 | RI                 | 0,58      |
|          |       | CR                 | 0,048     |
| Index K. | 0,028 | <b>CR &lt; 0,1</b> | Konsisten |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 1,000    | 0,143     |
| Flexibel  | 1,000 | 1,000    | 0,143     |
| Recycling | 7,000 | 7,000    | 1,000     |
| Jumlah    | 9,000 | 9,000    | 1,286     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,111 | 0,111    | 0,111     |
| Flexibel  | 0,111 | 0,111    | 0,111     |
| Recycling | 0,778 | 0,778    | 0,778     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,111             |
| Flexibel  | 0,111             |
| Recycling | 0,778             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,111 | 0,111 | 0,111 | <b>0,333</b> |
| Flexibel  | 0,111 | 0,111 | 0,111 | <b>0,333</b> |
| Recycling | 0,778 | 0,778 | 0,778 | <b>2,334</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,001 |
| Flexibel  | 3,001 |
| Recycling | 3,001 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,001 | RI                 | 0,58      |
|          |       | CR                 | 0,001     |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | Konsisten |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,333     |
| Flexibel  | 3,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 7,000 | 3,333    | 1,833     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,143 | 0,100    | 0,182     |
| Flexibel  | 0,429 | 0,300    | 0,273     |
| Recycling | 0,429 | 0,600    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,141             |
| Flexibel  | 0,334             |
| Recycling | 0,525             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,141 | 0,111 | 0,175 | <b>0,427</b> |
| Flexibel  | 0,424 | 0,334 | 0,262 | <b>1,021</b> |
| Recycling | 0,424 | 0,668 | 0,525 | <b>1,617</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,021 |
| Flexibel  | 3,058 |
| Recycling | 3,081 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Riigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|------------|--------------|---------------|
| Retak                    | 0,240 | 0,159 | 0,252    | 0,589     | 0,038      | 0,060        | 0,141         |
| Distorsi                 | 0,130 | 0,141 | 0,334    | 0,525     | 0,018      | 0,043        | 0,068         |
| Cacat Permukaan          | 0,210 | 0,093 | 0,292    | 0,615     | 0,019      | 0,061        | 0,129         |
| Pengausan                | 0,130 | 0,103 | 0,216    | 0,681     | 0,013      | 0,028        | 0,089         |
| Kegemukan                | 0,120 | 0,180 | 0,071    | 0,748     | 0,022      | 0,009        | 0,090         |
| Bekas Penanaman Utilitas | 0,170 | 0,200 | 0,071    | 0,600     | 0,034      | 0,012        | 0,102         |
|                          | 1,000 |       |          |           | 0,145      | 0,214        | 0,619         |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,143     |
| Flexibel  | 3,000  | 1,000    | 0,500     |
| Recycling | 7,000  | 2,000    | 1,000     |
| Jumlah    | 11,000 | 3,333    | 1,643     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,091 | 0,100    | 0,087     |
| Flexibel  | 0,273 | 0,300    | 0,304     |
| Recycling | 0,636 | 0,600    | 0,609     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,093             |
| Flexibel  | 0,292             |
| Recycling | 0,615             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,093 | 0,097 | 0,088 | <b>0,278</b> |
| Flexibel  | 0,278 | 0,292 | 0,308 | <b>0,878</b> |
| Recycling | 0,648 | 0,585 | 0,615 | <b>1,848</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,001 |
| Flexibel  | 3,002 |
| Recycling | 3,005 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,003 | RI                 | 0,58             |
|          |       | CR                 | 0,002            |
| Index K. | 0,001 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,143     |
| Flexibel  | 2,000  | 1,000    | 0,333     |
| Recycling | 7,000  | 3,000    | 1,000     |
| Jumlah    | 10,000 | 4,500    | 1,476     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,100 | 0,111    | 0,097     |
| Flexibel  | 0,200 | 0,222    | 0,226     |
| Recycling | 0,700 | 0,667    | 0,678     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,103             |
| Flexibel  | 0,216             |
| Recycling | 0,681             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,103 | 0,108 | 0,097 | <b>0,308</b> |
| Flexibel  | 0,205 | 0,216 | 0,227 | <b>0,648</b> |
| Recycling | 0,719 | 0,648 | 0,681 | <b>2,048</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,001 |
| Flexibel  | 3,002 |
| Recycling | 3,005 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,003 | RI                 | 0,58             |
|          |       | CR                 | 0,002            |
| Index K. | 0,001 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,200     |
| Flexibel  | 0,333 | 1,000    | 0,111     |
| Recycling | 5,000 | 9,000    | 1,000     |
| Jumlah    | 6,333 | 13,000   | 1,311     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,158 | 0,231    | 0,153     |
| Flexibel  | 0,053 | 0,077    | 0,085     |
| Recycling | 0,790 | 0,692    | 0,763     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,180             |
| Flexibel  | 0,071             |
| Recycling | 0,748             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,180 | 0,214 | 0,150 | <b>0,544</b> |
| Flexibel  | 0,060 | 0,071 | 0,083 | <b>0,215</b> |
| Recycling | 0,902 | 0,643 | 0,748 | <b>2,293</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,017 |
| Flexibel  | 3,005 |
| Recycling | 3,064 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 1,000    | 0,333     |
| Flexibel  | 1,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 5,000 | 5,000    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,200    | 0,200     |
| Flexibel  | 0,200 | 0,200    | 0,200     |
| Recycling | 0,600 | 0,600    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,200             |
| Flexibel  | 0,200             |
| Recycling | 0,600             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Flexibel  | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Recycling | 0,600 | 0,600 | 0,600 | <b>1,800</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Retak / Cracking

### 1. Menentukan Parwise Comparism

| Retak     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,111     |
| Flexibel  | 3,000  | 1,000    | 0,333     |
| Recycling | 9,000  | 3,000    | 1,000     |
| Jumlah    | 13,000 | 4,333    | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,077 | 0,077    | 0,077     |
| Flexibel  | 0,231 | 0,231    | 0,231     |
| Recycling | 0,692 | 0,692    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,077             |
| Flexibel  | 0,231             |
| Recycling | 0,692             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,077 | 0,077 | 0,077 | <b>0,231</b> |
| Flexibel  | 0,231 | 0,231 | 0,231 | <b>0,692</b> |
| Recycling | 0,692 | 0,692 | 0,692 | <b>2,076</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |        |                    |                  |
|----------|--------|--------------------|------------------|
| Lambda   | 2,999  | RI                 | 0,58             |
|          |        | CR                 | -0,001           |
| Index K. | -0,001 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Distorsi

### 1. Menentukan Parwise Comparism

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 1,000    | 0,333     |
| Flexibel  | 1,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 5,000 | 5,000    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,200    | 0,200     |
| Flexibel  | 0,200 | 0,200    | 0,200     |
| Recycling | 0,600 | 0,600    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,200             |
| Flexibel  | 0,200             |
| Recycling | 0,600             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Flexibel  | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Recycling | 0,600 | 0,600 | 0,600 | <b>1,800</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

### BOBOT FAKTOR

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Riigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|------------|--------------|---------------|
| Retak                    | 0,240 | 0,077 | 0,231    | 0,692     | 0,018      | 0,055        | 0,166         |
| Distorsi                 | 0,130 | 0,200 | 0,200    | 0,600     | 0,026      | 0,026        | 0,078         |
| Cacat Permukaan          | 0,210 | 0,082 | 0,280    | 0,638     | 0,017      | 0,059        | 0,134         |
| Pengausan                | 0,130 | 0,231 | 0,077    | 0,692     | 0,030      | 0,010        | 0,090         |
| Kegemukan                | 0,120 | 0,122 | 0,230    | 0,648     | 0,015      | 0,028        | 0,078         |
| Bekas Penanaman Utilitas | 0,170 | 0,103 | 0,230    | 0,681     | 0,017      | 0,039        | 0,116         |
|                          | 1,000 |       |          |           | 0,124      | 0,217        | <b>0,662</b>  |

3

2

1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,111     |
| Flexibel  | 3,000  | 1,000    | 0,5       |
| Recycling | 9,000  | 2,000    | 1,000     |
| Jumlah    | 13,000 | 3,333    | 1,611     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,077 | 0,100    | 0,069     |
| Flexibel  | 0,231 | 0,300    | 0,310     |
| Recycling | 0,692 | 0,600    | 0,621     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,082             |
| Flexibel  | 0,280             |
| Recycling | 0,638             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,082 | 0,093 | 0,071 | <b>0,246</b> |
| Flexibel  | 0,246 | 0,280 | 0,319 | <b>0,845</b> |
| Recycling | 0,737 | 0,561 | 0,638 | <b>1,936</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,004 |
| Flexibel  | 3,014 |
| Recycling | 3,035 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,018 | RI                 | 0,58      |
|          |       | CR                 | 0,015     |
| Index K. | 0,009 | <b>CR &lt; 0,1</b> | Konsisten |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,333     |
| Flexibel  | 0,333 | 1,000    | 0,111     |
| Recycling | 3,000 | 9,000    | 1,000     |
| Jumlah    | 4,333 | 13,000   | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,231 | 0,231    | 0,231     |
| Flexibel  | 0,077 | 0,077    | 0,077     |
| Recycling | 0,692 | 0,692    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,231             |
| Flexibel  | 0,077             |
| Recycling | 0,692             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,231 | 0,231 | 0,231 | <b>0,692</b> |
| Flexibel  | 0,077 | 0,077 | 0,077 | <b>0,231</b> |
| Recycling | 0,692 | 0,692 | 0,692 | <b>2,076</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |        |                    |           |
|----------|--------|--------------------|-----------|
| Lambda   | 2,999  | RI                 | 0,58      |
|          |        | CR                 | -0,001    |
| Index K. | -0,001 | <b>CR &lt; 0,1</b> | Konsisten |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,200     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 5,000 | 3,000    | 1,000     |
| Jumlah    | 8,000 | 4,500    | 1,533     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,125 | 0,111    | 0,130     |
| Flexibel  | 0,250 | 0,222    | 0,217     |
| Recycling | 0,625 | 0,667    | 0,652     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,122             |
| Flexibel  | 0,230             |
| Recycling | 0,648             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,122 | 0,115 | 0,130 | <b>0,367</b> |
| Flexibel  | 0,244 | 0,230 | 0,216 | <b>0,690</b> |
| Recycling | 0,611 | 0,689 | 0,648 | <b>1,948</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,001 |
| Flexibel  | 3,002 |
| Recycling | 3,007 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,003 | RI                 | 0,58             |
|          |       | CR                 | 0,003            |
| Index K. | 0,002 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,143     |
| Flexibel  | 2,000  | 1,000    | 0,333     |
| Recycling | 7,000  | 3,000    | 1,000     |
| Jumlah    | 10,000 | 4,500    | 1,476     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,100 | 0,111    | 0,097     |
| Flexibel  | 0,200 | 0,222    | 0,226     |
| Recycling | 0,700 | 0,667    | 0,678     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,103             |
| Flexibel  | 0,216             |
| Recycling | 0,681             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,103 | 0,108 | 0,097 | <b>0,308</b> |
| Flexibel  | 0,205 | 0,216 | 0,227 | <b>0,648</b> |
| Recycling | 0,719 | 0,648 | 0,681 | <b>2,048</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,001 |
| Flexibel  | 3,002 |
| Recycling | 3,005 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,003 | RI                 | 0,58             |
|          |       | CR                 | 0,002            |
| Index K. | 0,001 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,333     |
| Flexibel  | 3,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 7,000 | 3,333    | 1,833     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,143 | 0,100    | 0,182     |
| Flexibel  | 0,429 | 0,300    | 0,273     |
| Recycling | 0,429 | 0,600    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,141             |
| Flexibel  | 0,334             |
| Recycling | 0,525             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,141 | 0,111 | 0,175 | <b>0,427</b> |
| Flexibel  | 0,424 | 0,334 | 0,262 | <b>1,021</b> |
| Recycling | 0,424 | 0,668 | 0,525 | <b>1,617</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,021 |
| Flexibel  | 3,058 |
| Recycling | 3,081 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 1,000    | 0,500     |
| Flexibel  | 1,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 4,000 | 4,000    | 2,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,250 | 0,250    | 0,250     |
| Flexibel  | 0,250 | 0,250    | 0,250     |
| Recycling | 0,500 | 0,500    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,250             |
| Flexibel  | 0,250             |
| Recycling | 0,500             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,250 | 0,250 | 0,250 | <b>0,750</b> |
| Flexibel  | 0,250 | 0,250 | 0,250 | <b>0,750</b> |
| Recycling | 0,500 | 0,500 | 0,500 | <b>1,500</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,000 |
| Flexibel  | 3,000 |
| Recycling | 3,000 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,000 | RI                 | 0,58             |
|          |       | CR                 | 0,000            |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,141 | 0,334    | 0,525     | 0,034     | 0,080        | 0,126         |
| Distorsi                 | 0,130 | 0,250 | 0,250    | 0,500     | 0,033     | 0,033        | 0,065         |
| Cacat Permukaan          | 0,210 | 0,074 | 0,118    | 0,808     | 0,016     | 0,025        | 0,170         |
| Pengausan                | 0,130 | 0,057 | 0,295    | 0,649     | 0,007     | 0,038        | 0,084         |
| Kegemukan                | 0,120 | 0,083 | 0,193    | 0,723     | 0,010     | 0,023        | 0,087         |
| Bekas Penanaman Utilitas | 0,170 | 0,525 | 0,193    | 0,334     | 0,089     | 0,033        | 0,057         |
|                          | 1,000 |       |          |           | 0,189     | 0,232        | <b>0,589</b>  |

**Rank 3****Rank 2****Rank 1**

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,143    | 0,111     |
| Flexibel  | 7,000  | 1,000    | 0,333     |
| Recycling | 9,000  | 3,000    | 1,000     |
| Jumlah    | 17,000 | 4,143    | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,059 | 0,035    | 0,077     |
| Flexibel  | 0,412 | 0,241    | 0,231     |
| Recycling | 0,529 | 0,724    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,057             |
| Flexibel  | 0,295             |
| Recycling | 0,649             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,057 | 0,042 | 0,072 | <b>0,171</b> |
| Flexibel  | 0,397 | 0,295 | 0,216 | <b>0,908</b> |
| Recycling | 0,511 | 0,884 | 0,649 | <b>2,043</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,012 |
| Flexibel  | 3,081 |
| Recycling | 3,150 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,081 | RI                 | 0,58             |
|          |       | CR                 | 0,070            |
| Index K. | 0,040 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,143     |
| Flexibel  | 3,000  | 1,000    | 0,200     |
| Recycling | 7,000  | 5,000    | 1,000     |
| Jumlah    | 11,000 | 6,333    | 1,343     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,091 | 0,053    | 0,106     |
| Flexibel  | 0,273 | 0,158    | 0,149     |
| Recycling | 0,636 | 0,790    | 0,745     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,083             |
| Flexibel  | 0,193             |
| Recycling | 0,723             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,083 | 0,064 | 0,103 | <b>0,251</b> |
| Flexibel  | 0,250 | 0,193 | 0,145 | <b>0,588</b> |
| Recycling | 0,583 | 0,966 | 0,723 | <b>2,273</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,014 |
| Flexibel  | 3,043 |
| Recycling | 3,141 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,066 | RI                 | 0,58      |
|          |       | CR                 | 0,057     |
| Index K. | 0,033 | <b>CR &lt; 0,1</b> | Konsisten |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 2,000     |
| Flexibel  | 0,333 | 1,000    | 0,333     |
| Recycling | 0,500 | 3,000    | 1,000     |
| Jumlah    | 1,833 | 7,000    | 3,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,546 | 0,429    | 0,600     |
| Flexibel  | 0,182 | 0,143    | 0,100     |
| Recycling | 0,273 | 0,429    | 0,300     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,525             |
| Flexibel  | 0,141             |
| Recycling | 0,334             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,525 | 0,424 | 0,668 | <b>1,617</b> |
| Flexibel  | 0,175 | 0,141 | 0,111 | <b>0,427</b> |
| Recycling | 0,262 | 0,424 | 0,334 | <b>1,021</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,081 |
| Flexibel  | 3,021 |
| Recycling | 3,058 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,053 | RI                 | 0,58      |
|          |       | CR                 | 0,046     |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | Konsisten |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,200     |
| Flexibel  | 3,000 | 1,000    | 1,000     |
| Recycling | 5,000 | 1,000    | 1,000     |
| Jumlah    | 9,000 | 2,333    | 2,200     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,111 | 0,143    | 0,091     |
| Flexibel  | 0,333 | 0,429    | 0,455     |
| Recycling | 0,556 | 0,429    | 0,455     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,115             |
| Flexibel  | 0,406             |
| Recycling | 0,480             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,115 | 0,135 | 0,096 | <b>0,346</b> |
| Flexibel  | 0,345 | 0,406 | 0,480 | <b>1,230</b> |
| Recycling | 0,575 | 0,406 | 0,480 | <b>1,460</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,010 |
| Flexibel  | 3,033 |
| Recycling | 3,044 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,143     |
| Flexibel  | 0,333 | 1,000    | 0,111     |
| Recycling | 7,000 | 9,000    | 1,000     |
| Jumlah    | 8,333 | 13,000   | 1,254     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,120 | 0,231    | 0,114     |
| Flexibel  | 0,040 | 0,077    | 0,089     |
| Recycling | 0,840 | 0,692    | 0,797     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,155             |
| Flexibel  | 0,068             |
| Recycling | 0,777             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,155 | 0,205 | 0,111 | <b>0,471</b> |
| Flexibel  | 0,052 | 0,068 | 0,086 | <b>0,206</b> |
| Recycling | 1,085 | 0,616 | 0,777 | <b>2,477</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,042 |
| Flexibel  | 3,013 |
| Recycling | 3,190 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,082 | RI                 | 0,58             |
|          |       | CR                 | 0,070            |
| Index K. | 0,041 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,115 | 0,406    | 0,480     | 0,028     | 0,097        | 0,115         |
| Distorsi                 | 0,130 | 0,155 | 0,068    | 0,777     | 0,020     | 0,009        | 0,101         |
| Cacat Permukaan          | 0,210 | 0,090 | 0,206    | 0,703     | 0,019     | 0,043        | 0,148         |
| Pengausan                | 0,130 | 0,077 | 0,692    | 0,231     | 0,010     | 0,090        | 0,030         |
| Kegemukan                | 0,120 | 0,231 | 0,077    | 0,692     | 0,028     | 0,009        | 0,083         |
| Bekas Penanaman Utilitas | 0,170 | 0,074 | 0,077    | 0,808     | 0,013     | 0,013        | 0,137         |
|                          | 1,000 |       |          |           | 0,117     | 0,262        | <b>0,614</b>  |

Rank 3      Rank 2      Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,333     |
| Recycling | 9,000  | 3,000    | 1,000     |
| Jumlah    | 12,000 | 4,500    | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,111    | 0,077     |
| Flexibel  | 0,167 | 0,222    | 0,231     |
| Recycling | 0,750 | 0,667    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,090             |
| Flexibel  | 0,206             |
| Recycling | 0,703             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,090 | 0,103 | 0,078 | <b>0,272</b> |
| Flexibel  | 0,181 | 0,206 | 0,234 | <b>0,621</b> |
| Recycling | 0,814 | 0,619 | 0,703 | <b>2,137</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,005 |
| Flexibel  | 3,010 |
| Recycling | 3,039 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,018 | RI                 | 0,58      |
|          |       | CR                 | 0,015     |
| Index K. | 0,009 | <b>CR &lt; 0,1</b> | Konsisten |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,111    | 0,333     |
| Flexibel  | 9,000  | 1,000    | 3,000     |
| Recycling | 3,000  | 0,333    | 1,000     |
| Jumlah    | 13,000 | 1,444    | 4,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,077 | 0,077    | 0,077     |
| Flexibel  | 0,692 | 0,693    | 0,692     |
| Recycling | 0,231 | 0,231    | 0,231     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,077             |
| Flexibel  | 0,692             |
| Recycling | 0,231             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,077 | 0,077 | 0,077 | <b>0,231</b> |
| Flexibel  | 0,692 | 0,692 | 0,692 | <b>2,076</b> |
| Recycling | 0,231 | 0,231 | 0,231 | <b>0,692</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |        |                    |           |
|----------|--------|--------------------|-----------|
| Lambda   | 2,999  | RI                 | 0,58      |
|          |        | CR                 | -0,001    |
| Index K. | -0,001 | <b>CR &lt; 0,1</b> | Konsisten |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,333     |
| Flexibel  | 0,333 | 1,000    | 0,111     |
| Recycling | 3,000 | 9,000    | 1,000     |
| Jumlah    | 4,333 | 13,000   | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,231 | 0,231    | 0,231     |
| Flexibel  | 0,077 | 0,077    | 0,077     |
| Recycling | 0,692 | 0,692    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,231             |
| Flexibel  | 0,077             |
| Recycling | 0,692             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,231 | 0,231 | 0,231 | <b>0,692</b> |
| Flexibel  | 0,077 | 0,077 | 0,077 | <b>0,231</b> |
| Recycling | 0,692 | 0,692 | 0,692 | <b>2,076</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |        |          |           |
|----------|--------|----------|-----------|
| Lambda   | 2,999  | RI       | 0,58      |
|          |        | CR       | -0,001    |
| Index K. | -0,001 | CR < 0,1 | Konsisten |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |          |           |
|----------|-------|----------|-----------|
| Lambda   | 3,054 | RI       | 0,58      |
|          |       | CR       | 0,046     |
| Index K. | 0,027 | CR < 0,1 | Konsisten |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 1,000     |
| Flexibel  | 3,000 | 1,000    | 3,000     |
| Recycling | 1,000 | 0,333    | 1,000     |
| Jumlah    | 5,000 | 1,666    | 5,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,200    | 0,200     |
| Flexibel  | 0,600 | 0,600    | 0,600     |
| Recycling | 0,200 | 0,200    | 0,200     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,200             |
| Flexibel  | 0,600             |
| Recycling | 0,200             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Flexibel  | 0,600 | 0,600 | 0,600 | <b>1,800</b> |
| Recycling | 0,200 | 0,200 | 0,200 | <b>0,600</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,333     |
| Flexibel  | 0,333 | 1,000    | 0,200     |
| Recycling | 3,000 | 5,000    | 1,000     |
| Jumlah    | 4,333 | 9,000    | 1,533     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,231 | 0,333    | 0,217     |
| Flexibel  | 0,077 | 0,111    | 0,130     |
| Recycling | 0,692 | 0,556    | 0,652     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,260             |
| Flexibel  | 0,106             |
| Recycling | 0,633             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,260 | 0,318 | 0,211 | <b>0,790</b> |
| Flexibel  | 0,087 | 0,106 | 0,127 | <b>0,320</b> |
| Recycling | 0,781 | 0,531 | 0,633 | <b>1,945</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,032 |
| Flexibel  | 3,011 |
| Recycling | 3,071 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,038 | RI                 | 0,58             |
|          |       | CR                 | 0,033            |
| Index K. | 0,019 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Riigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|------------|--------------|---------------|
| Retak                    | 0,240 | 0,200 | 0,600    | 0,200     | 0,048      | 0,144        | 0,048         |
| Distorsi                 | 0,130 | 0,260 | 0,106    | 0,633     | 0,034      | 0,014        | 0,082         |
| Cacat Permukaan          | 0,210 | 0,090 | 0,206    | 0,703     | 0,019      | 0,043        | 0,148         |
| Pengausan                | 0,130 | 0,090 | 0,206    | 0,703     | 0,012      | 0,027        | 0,091         |
| Kegemukan                | 0,120 | 0,260 | 0,106    | 0,633     | 0,031      | 0,013        | 0,076         |
| Bekas Penanaman Utilitas | 0,170 | 0,429 | 0,106    | 0,429     | 0,073      | 0,018        | 0,073         |
|                          | 1,000 |       |          |           | 0,217      | 0,259        | <b>0,518</b>  |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,333     |
| Recycling | 9,000  | 3,000    | 1,000     |
| Jumlah    | 12,000 | 4,500    | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,111    | 0,077     |
| Flexibel  | 0,167 | 0,222    | 0,231     |
| Recycling | 0,750 | 0,667    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,090             |
| Flexibel  | 0,206             |
| Recycling | 0,703             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,090 | 0,103 | 0,078 | <b>0,272</b> |
| Flexibel  | 0,181 | 0,206 | 0,234 | <b>0,621</b> |
| Recycling | 0,814 | 0,619 | 0,703 | <b>2,137</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,005 |
| Flexibel  | 3,010 |
| Recycling | 3,039 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,018 | RI                 | 0,58             |
|          |       | CR                 | 0,015            |
| Index K. | 0,009 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,333     |
| Recycling | 9,000  | 3,000    | 1,000     |
| Jumlah    | 12,000 | 4,500    | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,111    | 0,077     |
| Flexibel  | 0,167 | 0,222    | 0,231     |
| Recycling | 0,750 | 0,667    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,090             |
| Flexibel  | 0,206             |
| Recycling | 0,703             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,090 | 0,103 | 0,078 | <b>0,272</b> |
| Flexibel  | 0,181 | 0,206 | 0,234 | <b>0,621</b> |
| Recycling | 0,814 | 0,619 | 0,703 | <b>2,137</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,005 |
| Flexibel  | 3,010 |
| Recycling | 3,039 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,018 | RI                 | 0,58             |
|          |       | CR                 | 0,015            |
| Index K. | 0,009 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,333     |
| Flexibel  | 0,333 | 1,000    | 0,200     |
| Recycling | 3,000 | 5,000    | 1,000     |
| Jumlah    | 4,333 | 9,000    | 1,533     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,231 | 0,333    | 0,217     |
| Flexibel  | 0,077 | 0,111    | 0,130     |
| Recycling | 0,692 | 0,556    | 0,652     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,260             |
| Flexibel  | 0,106             |
| Recycling | 0,633             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,260 | 0,318 | 0,211 | <b>0,790</b> |
| Flexibel  | 0,087 | 0,106 | 0,127 | <b>0,320</b> |
| Recycling | 0,781 | 0,531 | 0,633 | <b>1,945</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,032 |
| Flexibel  | 3,011 |
| Recycling | 3,071 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,038 | RI                 | 0,58             |
|          |       | CR                 | 0,033            |
| Index K. | 0,019 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 1,000     |
| Flexibel  | 0,333 | 1,000    | 0,333     |
| Recycling | 1,000 | 3,000    | 1,000     |
| Jumlah    | 2,333 | 7,000    | 2,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,429 | 0,429    | 0,429     |
| Flexibel  | 0,143 | 0,143    | 0,143     |
| Recycling | 0,429 | 0,429    | 0,429     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,429             |
| Flexibel  | 0,143             |
| Recycling | 0,429             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,429 | 0,428 | 0,429 | <b>1,286</b> |
| Flexibel  | 0,143 | 0,143 | 0,143 | <b>0,428</b> |
| Recycling | 0,429 | 0,428 | 0,429 | <b>1,286</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,333     |
| Flexibel  | 3,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 7,000 | 3,333    | 1,833     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,143 | 0,100    | 0,182     |
| Flexibel  | 0,429 | 0,300    | 0,273     |
| Recycling | 0,429 | 0,600    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,141             |
| Flexibel  | 0,334             |
| Recycling | 0,525             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,141 | 0,111 | 0,175 | <b>0,427</b> |
| Flexibel  | 0,424 | 0,334 | 0,262 | <b>1,021</b> |
| Recycling | 0,424 | 0,668 | 0,525 | <b>1,617</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,021 |
| Flexibel  | 3,058 |
| Recycling | 3,081 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,333     |
| Flexibel  | 3,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 7,000 | 4,333    | 1,666     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,143 | 0,077    | 0,200     |
| Flexibel  | 0,429 | 0,231    | 0,200     |
| Recycling | 0,429 | 0,692    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,140             |
| Flexibel  | 0,286             |
| Recycling | 0,574             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,140 | 0,095 | 0,191 | <b>0,426</b> |
| Flexibel  | 0,420 | 0,286 | 0,191 | <b>0,897</b> |
| Recycling | 0,420 | 0,859 | 0,574 | <b>1,853</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,048 |
| Flexibel  | 3,132 |
| Recycling | 3,229 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,136 | RI                 | 0,58             |
|          |       | CR                 | 0,118            |
| Index K. | 0,068 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Riigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|------------|--------------|---------------|
| Retak                    | 0,240 | 0,141 | 0,334    | 0,525     | 0,034      | 0,080        | 0,126         |
| Distorsi                 | 0,130 | 0,140 | 0,286    | 0,574     | 0,018      | 0,037        | 0,075         |
| Cacat Permukaan          | 0,210 | 0,094 | 0,168    | 0,738     | 0,020      | 0,035        | 0,155         |
| Pengausan                | 0,130 | 0,159 | 0,252    | 0,589     | 0,021      | 0,033        | 0,077         |
| Kegemukan                | 0,120 | 0,267 | 0,064    | 0,669     | 0,032      | 0,008        | 0,080         |
| Bekas Penanaman Utilitas | 0,170 | 0,429 | 0,064    | 0,429     | 0,073      | 0,011        | 0,073         |
|                          | 1,000 |       |          |           | 0,198      | 0,204        | <b>0,585</b>  |

**Rank 3****Rank 2****Rank 1**

## Cacat Permukaan

### 1. Menentukan Parwaise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,143     |
| Flexibel  | 2,000  | 1,000    | 0,200     |
| Recycling | 7,000  | 5,000    | 1,000     |
| Jumlah    | 10,000 | 6,500    | 1,343     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,100 | 0,077    | 0,106     |
| Flexibel  | 0,200 | 0,154    | 0,149     |
| Recycling | 0,700 | 0,769    | 0,745     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,094             |
| Flexibel  | 0,168             |
| Recycling | 0,738             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,094 | 0,084 | 0,106 | <b>0,284</b> |
| Flexibel  | 0,189 | 0,168 | 0,148 | <b>0,504</b> |
| Recycling | 0,661 | 0,838 | 0,738 | <b>2,237</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,004 |
| Flexibel  | 3,008 |
| Recycling | 3,032 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,015 | RI                 | 0,58             |
|          |       | CR                 | 0,013            |
| Index K. | 0,007 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwaise Comparism

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 5,000    | 0,333     |
| Flexibel  | 0,200 | 1,000    | 0,111     |
| Recycling | 3,000 | 9,000    | 1,000     |
| Jumlah    | 4,200 | 15,000   | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,238 | 0,333    | 0,231     |
| Flexibel  | 0,048 | 0,067    | 0,077     |
| Recycling | 0,714 | 0,600    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,267             |
| Flexibel  | 0,064             |
| Recycling | 0,669             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,267 | 0,319 | 0,223 | <b>0,809</b> |
| Flexibel  | 0,053 | 0,064 | 0,074 | <b>0,191</b> |
| Recycling | 0,802 | 0,573 | 0,669 | <b>2,044</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,025 |
| Flexibel  | 3,004 |
| Recycling | 3,056 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,029 | RI                 | 0,58      |
|          |       | CR                 | 0,025     |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | Konsisten |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 1,000     |
| Flexibel  | 0,333 | 1,000    | 0,333     |
| Recycling | 1,000 | 3,000    | 1,000     |
| Jumlah    | 2,333 | 7,000    | 2,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,429 | 0,429    | 0,429     |
| Flexibel  | 0,143 | 0,143    | 0,143     |
| Recycling | 0,429 | 0,429    | 0,429     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,429             |
| Flexibel  | 0,143             |
| Recycling | 0,429             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,429 | 0,428 | 0,429 | <b>1,286</b> |
| Flexibel  | 0,143 | 0,143 | 0,143 | <b>0,428</b> |
| Recycling | 0,429 | 0,428 | 0,429 | <b>1,286</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 2,999 | RI                 | 0,58      |
|          |       | CR                 | -0,001    |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | Konsisten |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,200     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 5,000 | 3,000    | 1,000     |
| Jumlah    | 8,000 | 4,500    | 1,533     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,125 | 0,111    | 0,130     |
| Flexibel  | 0,250 | 0,222    | 0,217     |
| Recycling | 0,625 | 0,667    | 0,652     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,122             |
| Flexibel  | 0,230             |
| Recycling | 0,648             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,122 | 0,115 | 0,130 | <b>0,367</b> |
| Flexibel  | 0,244 | 0,230 | 0,216 | <b>0,690</b> |
| Recycling | 0,611 | 0,689 | 0,648 | <b>1,948</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,001 |
| Flexibel  | 3,002 |
| Recycling | 3,007 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,003 | RI                 | 0,58             |
|          |       | CR                 | 0,003            |
| Index K. | 0,002 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,200     |
| Flexibel  | 3,000 | 1,000    | 0,500     |
| Recycling | 5,000 | 2,000    | 1,000     |
| Jumlah    | 9,000 | 3,333    | 1,700     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,111 | 0,100    | 0,118     |
| Flexibel  | 0,333 | 0,300    | 0,294     |
| Recycling | 0,556 | 0,600    | 0,588     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,110             |
| Flexibel  | 0,309             |
| Recycling | 0,581             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,110 | 0,103 | 0,116 | <b>0,329</b> |
| Flexibel  | 0,329 | 0,309 | 0,291 | <b>0,928</b> |
| Recycling | 0,548 | 0,618 | 0,581 | <b>1,747</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,001 |
| Flexibel  | 3,003 |
| Recycling | 3,006 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,003 | RI                 | 0,58             |
|          |       | CR                 | 0,003            |
| Index K. | 0,002 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,122 | 0,230    | 0,648     | 0,029     | 0,055        | 0,156         |
| Distorsi                 | 0,130 | 0,110 | 0,309    | 0,581     | 0,014     | 0,040        | 0,076         |
| Cacat Permukaan          | 0,210 | 0,155 | 0,068    | 0,777     | 0,033     | 0,014        | 0,163         |
| Pengausan                | 0,130 | 0,070 | 0,350    | 0,580     | 0,009     | 0,045        | 0,075         |
| Kegemukan                | 0,120 | 0,155 | 0,068    | 0,777     | 0,019     | 0,008        | 0,093         |
| Bekas Penanaman Utilitas | 0,170 | 0,159 | 0,068    | 0,589     | 0,027     | 0,012        | 0,100         |
|                          | 1,000 |       |          |           | 0,131     | 0,175        | 0,663         |

Rank 3      Rank 2      Rank 1

## Cacat Permukaan

### 1. Menentukan Parwaise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,143     |
| Flexibel  | 0,333 | 1,000    | 0,111     |
| Recycling | 7,000 | 9,000    | 1,000     |
| Jumlah    | 8,333 | 13,000   | 1,254     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,120 | 0,231    | 0,114     |
| Flexibel  | 0,040 | 0,077    | 0,089     |
| Recycling | 0,840 | 0,692    | 0,797     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,155             |
| Flexibel  | 0,068             |
| Recycling | 0,777             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,155 | 0,205 | 0,111 | <b>0,471</b> |
| Flexibel  | 0,052 | 0,068 | 0,086 | <b>0,206</b> |
| Recycling | 1,085 | 0,616 | 0,777 | <b>2,477</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,042 |
| Flexibel  | 3,013 |
| Recycling | 3,190 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,082 | RI                 | 0,58             |
|          |       | CR                 | 0,070            |
| Index K. | 0,041 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwaise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,167    | 0,143     |
| Flexibel  | 6,000  | 1,000    | 0,500     |
| Recycling | 7,000  | 2,000    | 1,000     |
| Jumlah    | 14,000 | 3,167    | 1,643     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,071 | 0,053    | 0,087     |
| Flexibel  | 0,429 | 0,316    | 0,304     |
| Recycling | 0,500 | 0,632    | 0,609     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,070             |
| Flexibel  | 0,350             |
| Recycling | 0,580             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,070 | 0,058 | 0,083 | <b>0,212</b> |
| Flexibel  | 0,422 | 0,350 | 0,290 | <b>1,062</b> |
| Recycling | 0,493 | 0,699 | 0,580 | <b>1,772</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,007 |
| Flexibel  | 3,038 |
| Recycling | 3,055 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,033 | RI                 | 0,58             |
|          |       | CR                 | 0,029            |
| Index K. | 0,017 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,143     |
| Flexibel  | 0,333 | 1,000    | 0,111     |
| Recycling | 7,000 | 9,000    | 1,000     |
| Jumlah    | 8,333 | 13,000   | 1,254     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,120 | 0,231    | 0,114     |
| Flexibel  | 0,040 | 0,077    | 0,089     |
| Recycling | 0,840 | 0,692    | 0,797     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,155             |
| Flexibel  | 0,068             |
| Recycling | 0,777             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,155 | 0,205 | 0,111 | <b>0,471</b> |
| Flexibel  | 0,052 | 0,068 | 0,086 | <b>0,206</b> |
| Recycling | 1,085 | 0,616 | 0,777 | <b>2,477</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,042 |
| Flexibel  | 3,013 |
| Recycling | 3,190 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,082 | RI                 | 0,58             |
|          |       | CR                 | 0,070            |
| Index K. | 0,041 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,200    | 1,000     |
| Flexibel  | 5,000 | 1,000    | 5,000     |
| Recycling | 1,000 | 0,200    | 1,000     |
| Jumlah    | 7,000 | 1,400    | 7,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,143 | 0,143    | 0,143     |
| Flexibel  | 0,714 | 0,714    | 0,714     |
| Recycling | 0,143 | 0,143    | 0,143     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,143             |
| Flexibel  | 0,714             |
| Recycling | 0,143             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,143 | 0,143 | 0,143 | <b>0,429</b> |
| Flexibel  | 0,714 | 0,714 | 0,714 | <b>2,143</b> |
| Recycling | 0,143 | 0,143 | 0,143 | <b>0,429</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,000 |
| Flexibel  | 3,000 |
| Recycling | 3,000 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,000 | RI                 | 0,58             |
| Index K. | 0,000 | CR                 | 0,000            |
|          |       | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,200     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 5,000 | 3,000    | 1,000     |
| Jumlah    | 8,000 | 4,500    | 1,533     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,125 | 0,111    | 0,130     |
| Flexibel  | 0,250 | 0,222    | 0,217     |
| Recycling | 0,625 | 0,667    | 0,652     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,122             |
| Flexibel  | 0,230             |
| Recycling | 0,648             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,122 | 0,115 | 0,130 | <b>0,367</b> |
| Flexibel  | 0,244 | 0,230 | 0,216 | <b>0,690</b> |
| Recycling | 0,611 | 0,689 | 0,648 | <b>1,948</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,001 |
| Flexibel  | 3,002 |
| Recycling | 3,007 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,003 | RI                 | 0,58             |
| Index K. | 0,002 | CR                 | 0,003            |
|          |       | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Riigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|------------|--------------|---------------|
| Retak                    | 0,240 | 0,143 | 0,714    | 0,143     | 0,034      | 0,171        | 0,034         |
| Distorsi                 | 0,130 | 0,122 | 0,230    | 0,648     | 0,016      | 0,030        | 0,084         |
| Cacat Permukaan          | 0,210 | 0,074 | 0,118    | 0,808     | 0,016      | 0,025        | 0,170         |
| Pengausan                | 0,130 | 0,158 | 0,656    | 0,187     | 0,021      | 0,085        | 0,024         |
| Kegemukan                | 0,120 | 0,129 | 0,277    | 0,595     | 0,015      | 0,033        | 0,071         |
| Bekas Penanaman Utilitas | 0,170 | 0,406 | 0,277    | 0,480     | 0,069      | 0,047        | 0,082         |
|                          | 1,000 |       |          |           | 0,171      | 0,391        | <b>0,465</b>  |

Rank 3      Rank 2      Rank 1

## Cacat Permukaan

### 1. Menentukan Parwaise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwaise Comparism

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,200    | 1,000     |
| Flexibel  | 5,000 | 1,000    | 3,000     |
| Recycling | 1,000 | 0,333    | 1,000     |
| Jumlah    | 7,000 | 1,533    | 5,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,143 | 0,130    | 0,200     |
| Flexibel  | 0,714 | 0,652    | 0,600     |
| Recycling | 0,143 | 0,217    | 0,200     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,158             |
| Flexibel  | 0,656             |
| Recycling | 0,187             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,158 | 0,131 | 0,187 | <b>0,476</b> |
| Flexibel  | 0,789 | 0,656 | 0,560 | <b>2,004</b> |
| Recycling | 0,158 | 0,218 | 0,187 | <b>0,563</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,014 |
| Flexibel  | 3,058 |
| Recycling | 3,014 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,200     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 5,000 | 2,000    | 1,000     |
| Jumlah    | 8,000 | 3,500    | 1,700     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,125 | 0,143    | 0,118     |
| Flexibel  | 0,250 | 0,286    | 0,294     |
| Recycling | 0,625 | 0,571    | 0,588     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,129             |
| Flexibel  | 0,277             |
| Recycling | 0,595             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,129 | 0,138 | 0,119 | <b>0,386</b> |
| Flexibel  | 0,257 | 0,277 | 0,297 | <b>0,831</b> |
| Recycling | 0,643 | 0,553 | 0,595 | <b>1,791</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,002 |
| Flexibel  | 3,004 |
| Recycling | 3,010 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,006 | RI                 | 0,58             |
|          |       | CR                 | 0,005            |
| Index K. | 0,003 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 1,000     |
| Flexibel  | 0,333 | 1,000    | 0,200     |
| Recycling | 1,000 | 5,000    | 1,000     |
| Jumlah    | 2,333 | 9,000    | 2,200     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,429 | 0,333    | 0,455     |
| Flexibel  | 0,143 | 0,111    | 0,091     |
| Recycling | 0,429 | 0,556    | 0,455     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,406             |
| Flexibel  | 0,115             |
| Recycling | 0,480             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,406 | 0,345 | 0,480 | <b>1,230</b> |
| Flexibel  | 0,135 | 0,115 | 0,096 | <b>0,346</b> |
| Recycling | 0,406 | 0,575 | 0,480 | <b>1,460</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,033 |
| Flexibel  | 3,010 |
| Recycling | 3,044 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,200     |
| Flexibel  | 0,333 | 1,000    | 0,111     |
| Recycling | 5,000 | 9,000    | 1,000     |
| Jumlah    | 6,333 | 13,000   | 1,311     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,158 | 0,231    | 0,153     |
| Flexibel  | 0,053 | 0,077    | 0,085     |
| Recycling | 0,790 | 0,692    | 0,763     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,180             |
| Flexibel  | 0,071             |
| Recycling | 0,748             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,180 | 0,214 | 0,150 | <b>0,544</b> |
| Flexibel  | 0,060 | 0,071 | 0,083 | <b>0,215</b> |
| Recycling | 0,902 | 0,643 | 0,748 | <b>2,293</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,017 |
| Flexibel  | 3,005 |
| Recycling | 3,064 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,159 | 0,252    | 0,589     | 0,038     | 0,060        | 0,141         |
| Distorsi                 | 0,130 | 0,180 | 0,071    | 0,748     | 0,023     | 0,009        | 0,097         |
| Cacat Permukaan          | 0,210 | 0,122 | 0,230    | 0,648     | 0,026     | 0,048        | 0,136         |
| Pengausan                | 0,130 | 0,241 | 0,549    | 0,211     | 0,031     | 0,071        | 0,027         |
| Kegemukan                | 0,120 | 0,260 | 0,106    | 0,633     | 0,031     | 0,013        | 0,076         |
| Bekas Penanaman Utilitas | 0,170 | 0,429 | 0,106    | 0,429     | 0,073     | 0,018        | 0,073         |
|                          | 1,000 |       |          |           | 0,223     | 0,220        | 0,551         |

Rank 2      Rank 3      Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,200     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 5,000 | 3,000    | 1,000     |
| Jumlah    | 8,000 | 4,500    | 1,533     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,125 | 0,111    | 0,130     |
| Flexibel  | 0,250 | 0,222    | 0,217     |
| Recycling | 0,625 | 0,667    | 0,652     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,122             |
| Flexibel  | 0,230             |
| Recycling | 0,648             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,122 | 0,115 | 0,130 | <b>0,367</b> |
| Flexibel  | 0,244 | 0,230 | 0,216 | <b>0,690</b> |
| Recycling | 0,611 | 0,689 | 0,648 | <b>1,948</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,001 |
| Flexibel  | 3,002 |
| Recycling | 3,007 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,003 | RI                 | 0,58             |
|          |       | CR                 | 0,003            |
| Index K. | 0,002 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 1,000     |
| Flexibel  | 2,000 | 1,000    | 3,000     |
| Recycling | 1,000 | 0,333    | 1,000     |
| Jumlah    | 4,000 | 1,833    | 5,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,250 | 0,273    | 0,200     |
| Flexibel  | 0,500 | 0,546    | 0,600     |
| Recycling | 0,250 | 0,182    | 0,200     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,241             |
| Flexibel  | 0,549             |
| Recycling | 0,211             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,241 | 0,274 | 0,211 | <b>0,726</b> |
| Flexibel  | 0,482 | 0,549 | 0,632 | <b>1,662</b> |
| Recycling | 0,241 | 0,183 | 0,211 | <b>0,634</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,012 |
| Flexibel  | 3,030 |
| Recycling | 3,012 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,018 | RI                 | 0,58             |
|          |       | CR                 | 0,016            |
| Index K. | 0,009 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,333     |
| Flexibel  | 0,333 | 1,000    | 0,200     |
| Recycling | 3,000 | 5,000    | 1,000     |
| Jumlah    | 4,333 | 9,000    | 1,533     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,231 | 0,333    | 0,217     |
| Flexibel  | 0,077 | 0,111    | 0,130     |
| Recycling | 0,692 | 0,556    | 0,652     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,260             |
| Flexibel  | 0,106             |
| Recycling | 0,633             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,260 | 0,318 | 0,211 | <b>0,790</b> |
| Flexibel  | 0,087 | 0,106 | 0,127 | <b>0,320</b> |
| Recycling | 0,781 | 0,531 | 0,633 | <b>1,945</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,032 |
| Flexibel  | 3,011 |
| Recycling | 3,071 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,038 | RI                 | 0,58             |
|          |       | CR                 | 0,033            |
| Index K. | 0,019 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 1,000     |
| Flexibel  | 0,333 | 1,000    | 0,333     |
| Recycling | 1,000 | 3,000    | 1,000     |
| Jumlah    | 2,333 | 7,000    | 2,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,429 | 0,429    | 0,429     |
| Flexibel  | 0,143 | 0,143    | 0,143     |
| Recycling | 0,429 | 0,429    | 0,429     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,429             |
| Flexibel  | 0,143             |
| Recycling | 0,429             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,429 | 0,428 | 0,429 | <b>1,286</b> |
| Flexibel  | 0,143 | 0,143 | 0,143 | <b>0,428</b> |
| Recycling | 0,429 | 0,428 | 0,429 | <b>1,286</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,333     |
| Flexibel  | 0,333 | 1,000    | 0,200     |
| Recycling | 3,000 | 5,000    | 1,000     |
| Jumlah    | 4,333 | 9,000    | 1,533     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,231 | 0,333    | 0,217     |
| Flexibel  | 0,077 | 0,111    | 0,130     |
| Recycling | 0,692 | 0,556    | 0,652     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,260             |
| Flexibel  | 0,106             |
| Recycling | 0,633             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,260 | 0,318 | 0,211 | <b>0,790</b> |
| Flexibel  | 0,087 | 0,106 | 0,127 | <b>0,320</b> |
| Recycling | 0,781 | 0,531 | 0,633 | <b>1,945</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,032 |
| Flexibel  | 3,011 |
| Recycling | 3,071 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,038 | RI                 | 0,58             |
|          |       | CR                 | 0,033            |
| Index K. | 0,019 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Riigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|------------|--------------|---------------|
| Retak                    | 0,240 | 0,159 | 0,252    | 0,589     | 0,038      | 0,060        | 0,141         |
| Distorsi                 | 0,130 | 0,260 | 0,106    | 0,633     | 0,034      | 0,014        | 0,082         |
| Cacat Permukaan          | 0,210 | 0,187 | 0,158    | 0,656     | 0,039      | 0,033        | 0,138         |
| Pengausan                | 0,130 | 0,106 | 0,633    | 0,260     | 0,014      | 0,082        | 0,034         |
| Kegemukan                | 0,120 | 0,082 | 0,280    | 0,638     | 0,010      | 0,034        | 0,077         |
| Bekas Penanaman Utilitas | 0,170 | 0,429 | 0,280    | 0,429     | 0,073      | 0,048        | 0,073         |
|                          | 1,000 |       |          |           | 0,208      | 0,271        | <b>0,545</b>  |

Rank 3      Rank 2      Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 1,000    | 0,333     |
| Flexibel  | 1,000 | 1,000    | 0,200     |
| Recycling | 3,000 | 5,000    | 1,000     |
| Jumlah    | 5,000 | 7,000    | 1,533     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,217     |
| Flexibel  | 0,200 | 0,143    | 0,130     |
| Recycling | 0,600 | 0,714    | 0,652     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,187             |
| Flexibel  | 0,158             |
| Recycling | 0,656             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,187 | 0,158 | 0,218 | <b>0,563</b> |
| Flexibel  | 0,187 | 0,158 | 0,131 | <b>0,476</b> |
| Recycling | 0,560 | 0,789 | 0,656 | <b>2,004</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,014 |
| Flexibel  | 3,014 |
| Recycling | 3,058 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,200    | 0,333     |
| Flexibel  | 5,000 | 1,000    | 3,000     |
| Recycling | 3,000 | 0,333    | 1,000     |
| Jumlah    | 9,000 | 1,533    | 4,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,111 | 0,130    | 0,077     |
| Flexibel  | 0,556 | 0,652    | 0,692     |
| Recycling | 0,333 | 0,217    | 0,231     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,106             |
| Flexibel  | 0,633             |
| Recycling | 0,260             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,106 | 0,127 | 0,087 | <b>0,320</b> |
| Flexibel  | 0,531 | 0,633 | 0,781 | <b>1,945</b> |
| Recycling | 0,318 | 0,211 | 0,260 | <b>0,790</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,011 |
| Flexibel  | 3,071 |
| Recycling | 3,032 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,038 | RI                 | 0,58             |
|          |       | CR                 | 0,033            |
| Index K. | 0,019 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,111     |
| Flexibel  | 3,000  | 1,000    | 0,5       |
| Recycling | 9,000  | 2,000    | 1,000     |
| Jumlah    | 13,000 | 3,333    | 1,611     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,077 | 0,100    | 0,069     |
| Flexibel  | 0,231 | 0,300    | 0,310     |
| Recycling | 0,692 | 0,600    | 0,621     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,082             |
| Flexibel  | 0,280             |
| Recycling | 0,638             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,082 | 0,093 | 0,071 | <b>0,246</b> |
| Flexibel  | 0,246 | 0,280 | 0,319 | <b>0,845</b> |
| Recycling | 0,737 | 0,561 | 0,638 | <b>1,936</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,004 |
| Flexibel  | 3,014 |
| Recycling | 3,035 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,018 | RI                 | 0,58             |
|          |       | CR                 | 0,015            |
| Index K. | 0,009 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 1,000     |
| Flexibel  | 0,333 | 1,000    | 0,333     |
| Recycling | 1,000 | 3,000    | 1,000     |
| Jumlah    | 2,333 | 7,000    | 2,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,429 | 0,429    | 0,429     |
| Flexibel  | 0,143 | 0,143    | 0,143     |
| Recycling | 0,429 | 0,429    | 0,429     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,429             |
| Flexibel  | 0,143             |
| Recycling | 0,429             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,429 | 0,428 | 0,429 | <b>1,286</b> |
| Flexibel  | 0,143 | 0,143 | 0,143 | <b>0,428</b> |
| Recycling | 0,429 | 0,428 | 0,429 | <b>1,286</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,333     |
| Flexibel  | 3,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 7,000 | 3,333    | 1,833     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,143 | 0,100    | 0,182     |
| Flexibel  | 0,429 | 0,300    | 0,273     |
| Recycling | 0,429 | 0,600    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,141             |
| Flexibel  | 0,334             |
| Recycling | 0,525             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,141 | 0,111 | 0,175 | <b>0,427</b> |
| Flexibel  | 0,424 | 0,334 | 0,262 | <b>1,021</b> |
| Recycling | 0,424 | 0,668 | 0,525 | <b>1,617</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,021 |
| Flexibel  | 3,058 |
| Recycling | 3,081 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,333     |
| Flexibel  | 0,333 | 1,000    | 0,200     |
| Recycling | 3,000 | 5,000    | 1,000     |
| Jumlah    | 4,333 | 9,000    | 1,533     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,231 | 0,333    | 0,217     |
| Flexibel  | 0,077 | 0,111    | 0,130     |
| Recycling | 0,692 | 0,556    | 0,652     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,260             |
| Flexibel  | 0,106             |
| Recycling | 0,633             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,260 | 0,318 | 0,211 | <b>0,790</b> |
| Flexibel  | 0,087 | 0,106 | 0,127 | <b>0,320</b> |
| Recycling | 0,781 | 0,531 | 0,633 | <b>1,945</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,032 |
| Flexibel  | 3,011 |
| Recycling | 3,071 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,038 | RI                 | 0,58             |
|          |       | CR                 | 0,033            |
| Index K. | 0,019 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Riigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|------------|--------------|---------------|
| Retak                    | 0,240 | 0,141 | 0,334    | 0,525     | 0,034      | 0,080        | 0,126         |
| Distorsi                 | 0,130 | 0,260 | 0,106    | 0,633     | 0,034      | 0,014        | 0,082         |
| Cacat Permukaan          | 0,210 | 0,074 | 0,118    | 0,808     | 0,016      | 0,025        | 0,170         |
| Pengausan                | 0,130 | 0,082 | 0,280    | 0,638     | 0,011      | 0,036        | 0,083         |
| Kegemukan                | 0,120 | 0,087 | 0,128    | 0,785     | 0,010      | 0,015        | 0,094         |
| Bekas Penanaman Utilitas | 0,170 | 0,091 | 0,128    | 0,818     | 0,015      | 0,022        | 0,139         |
|                          | 1,000 |       |          |           | 0,120      | 0,192        | 0,694         |

Rank 3      Rank 2      Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,111     |
| Flexibel  | 3,000  | 1,000    | 0,500     |
| Recycling | 9,000  | 2,000    | 1,000     |
| Jumlah    | 13,000 | 3,333    | 1,611     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,077 | 0,100    | 0,069     |
| Flexibel  | 0,231 | 0,300    | 0,310     |
| Recycling | 0,692 | 0,600    | 0,621     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,082             |
| Flexibel  | 0,280             |
| Recycling | 0,638             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,082 | 0,093 | 0,071 | <b>0,246</b> |
| Flexibel  | 0,246 | 0,280 | 0,319 | <b>0,845</b> |
| Recycling | 0,737 | 0,561 | 0,638 | <b>1,936</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,004 |
| Flexibel  | 3,014 |
| Recycling | 3,035 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,018 | RI                 | 0,58             |
|          |       | CR                 | 0,015            |
| Index K. | 0,009 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,143     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 7,000  | 9,000    | 1,000     |
| Jumlah    | 10,000 | 10,500   | 1,254     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,100 | 0,048    | 0,114     |
| Flexibel  | 0,200 | 0,095    | 0,089     |
| Recycling | 0,700 | 0,857    | 0,797     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,087             |
| Flexibel  | 0,128             |
| Recycling | 0,785             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,087 | 0,064 | 0,112 | <b>0,263</b> |
| Flexibel  | 0,174 | 0,128 | 0,087 | <b>0,389</b> |
| Recycling | 0,611 | 1,151 | 0,785 | <b>2,547</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,020 |
| Flexibel  | 3,045 |
| Recycling | 3,245 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,103 | RI                 | 0,58             |
|          |       | CR                 | 0,089            |
| Index K. | 0,052 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 1,000    | 0,111     |
| Flexibel  | 1,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 11,000 | 11,000   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,091 | 0,091    | 0,091     |
| Flexibel  | 0,091 | 0,091    | 0,091     |
| Recycling | 0,818 | 0,818    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,091             |
| Flexibel  | 0,091             |
| Recycling | 0,818             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,091 | 0,091 | 0,091 | <b>0,273</b> |
| Flexibel  | 0,091 | 0,091 | 0,091 | <b>0,273</b> |
| Recycling | 0,818 | 0,818 | 0,818 | <b>2,454</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,200     |
| Recycling | 9,000  | 5,000    | 1,000     |
| Jumlah    | 12,000 | 6,500    | 1,311     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,077    | 0,085     |
| Flexibel  | 0,167 | 0,154    | 0,153     |
| Recycling | 0,750 | 0,769    | 0,763     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,082             |
| Flexibel  | 0,158             |
| Recycling | 0,761             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,082 | 0,079 | 0,084 | <b>0,245</b> |
| Flexibel  | 0,163 | 0,158 | 0,152 | <b>0,473</b> |
| Recycling | 0,735 | 0,788 | 0,761 | <b>2,284</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,000 |
| Flexibel  | 3,000 |
| Recycling | 3,002 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,001 | RI                 | 0,58             |
|          |       | CR                 | 0,001            |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,159 | 0,252    | 0,589     | 0,038     | 0,060        | 0,141         |
| Distorsi                 | 0,130 | 0,082 | 0,158    | 0,761     | 0,011     | 0,020        | 0,099         |
| Cacat Permukaan          | 0,210 | 0,180 | 0,071    | 0,748     | 0,038     | 0,015        | 0,157         |
| Pengausan                | 0,130 | 0,111 | 0,778    | 0,111     | 0,014     | 0,101        | 0,014         |
| Kegemukan                | 0,120 | 0,087 | 0,128    | 0,785     | 0,010     | 0,015        | 0,094         |
| Bekas Penanaman Utilitas | 0,170 | 0,159 | 0,128    | 0,589     | 0,027     | 0,022        | 0,100         |
|                          | 1,000 |       |          |           | 0,139     | 0,234        | <b>0,606</b>  |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,200     |
| Flexibel  | 0,333 | 1,000    | 0,111     |
| Recycling | 5,000 | 9,000    | 1,000     |
| Jumlah    | 6,333 | 13,000   | 1,311     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,158 | 0,231    | 0,153     |
| Flexibel  | 0,053 | 0,077    | 0,085     |
| Recycling | 0,790 | 0,692    | 0,763     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,180             |
| Flexibel  | 0,071             |
| Recycling | 0,748             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,180 | 0,214 | 0,150 | <b>0,544</b> |
| Flexibel  | 0,060 | 0,071 | 0,083 | <b>0,215</b> |
| Recycling | 0,902 | 0,643 | 0,748 | <b>2,293</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,017 |
| Flexibel  | 3,005 |
| Recycling | 3,064 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,143    | 1,000     |
| Flexibel  | 7,000 | 1,000    | 7,000     |
| Recycling | 1,000 | 0,143    | 1,000     |
| Jumlah    | 9,000 | 1,286    | 9,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,111 | 0,111    | 0,111     |
| Flexibel  | 0,778 | 0,778    | 0,778     |
| Recycling | 0,111 | 0,111    | 0,111     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,111             |
| Flexibel  | 0,778             |
| Recycling | 0,111             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,111 | 0,111 | 0,111 | <b>0,333</b> |
| Flexibel  | 0,778 | 0,778 | 0,778 | <b>2,334</b> |
| Recycling | 0,111 | 0,111 | 0,111 | <b>0,333</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,001 |
| Flexibel  | 3,001 |
| Recycling | 3,001 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,001 | RI                 | 0,58             |
|          |       | CR                 | 0,001            |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,143     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 7,000  | 9,000    | 1,000     |
| Jumlah    | 10,000 | 10,500   | 1,254     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,100 | 0,048    | 0,114     |
| Flexibel  | 0,200 | 0,095    | 0,089     |
| Recycling | 0,700 | 0,857    | 0,797     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,087             |
| Flexibel  | 0,128             |
| Recycling | 0,785             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,087 | 0,064 | 0,112 | <b>0,263</b> |
| Flexibel  | 0,174 | 0,128 | 0,087 | <b>0,389</b> |
| Recycling | 0,611 | 1,151 | 0,785 | <b>2,547</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,020 |
| Flexibel  | 3,045 |
| Recycling | 3,245 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,103 | RI                 | 0,58             |
|          |       | CR                 | 0,089            |
| Index K. | 0,052 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,200    | 1,000     |
| Flexibel  | 5,000 | 1,000    | 5,000     |
| Recycling | 1,000 | 0,200    | 1,000     |
| Jumlah    | 7,000 | 1,400    | 7,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,143 | 0,143    | 0,143     |
| Flexibel  | 0,714 | 0,714    | 0,714     |
| Recycling | 0,143 | 0,143    | 0,143     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,143             |
| Flexibel  | 0,714             |
| Recycling | 0,143             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,143 | 0,143 | 0,143 | <b>0,429</b> |
| Flexibel  | 0,714 | 0,714 | 0,714 | <b>2,143</b> |
| Recycling | 0,143 | 0,143 | 0,143 | <b>0,429</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,000 |
| Flexibel  | 3,000 |
| Recycling | 3,000 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,000 | RI                 | 0,58             |
|          |       | CR                 | 0,000            |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,143 | 0,714    | 0,143     | 0,034     | 0,171        | 0,034         |
| Distorsi                 | 0,130 | 0,159 | 0,252    | 0,589     | 0,021     | 0,033        | 0,077         |
| Cacat Permukaan          | 0,210 | 0,164 | 0,297    | 0,539     | 0,034     | 0,062        | 0,113         |
| Pengausan                | 0,130 | 0,122 | 0,230    | 0,648     | 0,016     | 0,030        | 0,084         |
| Kegemukan                | 0,120 | 0,074 | 0,118    | 0,808     | 0,009     | 0,014        | 0,097         |
| Bekas Penanaman Utilitas | 0,170 | 0,187 | 0,118    | 0,656     | 0,032     | 0,020        | 0,111         |
|                          | 1,000 |       |          |           | 0,146     | 0,331        | 0,517         |

**Rank 3****Rank 2****Rank 1**

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 6,000 | 3,500    | 1,833     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,143    | 0,182     |
| Flexibel  | 0,333 | 0,286    | 0,273     |
| Recycling | 0,500 | 0,571    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,164             |
| Flexibel  | 0,297             |
| Recycling | 0,539             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,164 | 0,149 | 0,179 | <b>0,492</b> |
| Flexibel  | 0,327 | 0,297 | 0,269 | <b>0,894</b> |
| Recycling | 0,491 | 0,595 | 0,539 | <b>1,625</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,004 |
| Flexibel  | 3,008 |
| Recycling | 3,014 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,009 | RI                 | 0,58             |
|          |       | CR                 | 0,008            |
| Index K. | 0,004 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,200     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 5,000 | 3,000    | 1,000     |
| Jumlah    | 8,000 | 4,500    | 1,533     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,125 | 0,111    | 0,130     |
| Flexibel  | 0,250 | 0,222    | 0,217     |
| Recycling | 0,625 | 0,667    | 0,652     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,122             |
| Flexibel  | 0,230             |
| Recycling | 0,648             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,122 | 0,115 | 0,130 | <b>0,367</b> |
| Flexibel  | 0,244 | 0,230 | 0,216 | <b>0,690</b> |
| Recycling | 0,611 | 0,689 | 0,648 | <b>1,948</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,001 |
| Flexibel  | 3,002 |
| Recycling | 3,007 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,003 | RI                 | 0,58             |
|          |       | CR                 | 0,003            |
| Index K. | 0,002 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 1,000    | 0,333     |
| Flexibel  | 1,000 | 1,000    | 0,200     |
| Recycling | 3,000 | 5,000    | 1,000     |
| Jumlah    | 5,000 | 7,000    | 1,533     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,217     |
| Flexibel  | 0,200 | 0,143    | 0,130     |
| Recycling | 0,600 | 0,714    | 0,652     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,187             |
| Flexibel  | 0,158             |
| Recycling | 0,656             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,187 | 0,158 | 0,218 | <b>0,563</b> |
| Flexibel  | 0,187 | 0,158 | 0,131 | <b>0,476</b> |
| Recycling | 0,560 | 0,789 | 0,656 | <b>2,004</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,014 |
| Flexibel  | 3,014 |
| Recycling | 3,058 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,333     |
| Flexibel  | 3,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 7,000 | 3,333    | 1,833     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,143 | 0,100    | 0,182     |
| Flexibel  | 0,429 | 0,300    | 0,273     |
| Recycling | 0,429 | 0,600    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,141             |
| Flexibel  | 0,334             |
| Recycling | 0,525             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,141 | 0,111 | 0,175 | <b>0,427</b> |
| Flexibel  | 0,424 | 0,334 | 0,262 | <b>1,021</b> |
| Recycling | 0,424 | 0,668 | 0,525 | <b>1,617</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,021 |
| Flexibel  | 3,058 |
| Recycling | 3,081 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,141 | 0,334    | 0,525     | 0,034     | 0,080        | 0,126         |
| Distorsi                 | 0,130 | 0,074 | 0,118    | 0,808     | 0,010     | 0,015        | 0,105         |
| Cacat Permukaan          | 0,210 | 0,074 | 0,118    | 0,808     | 0,016     | 0,025        | 0,170         |
| Pengausan                | 0,130 | 0,071 | 0,748    | 0,180     | 0,009     | 0,097        | 0,023         |
| Kegemukan                | 0,120 | 0,129 | 0,277    | 0,595     | 0,015     | 0,033        | 0,071         |
| Bekas Penanaman Utilitas | 0,170 | 0,159 | 0,277    | 0,589     | 0,027     | 0,047        | 0,100         |
|                          | 1,000 |       |          |           | 0,111     | 0,298        | 0,596         |

**Rank 3****Rank 2****Rank 1**

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,111    | 0,333     |
| Flexibel  | 9,000  | 1,000    | 5,000     |
| Recycling | 3,000  | 0,200    | 1,000     |
| Jumlah    | 13,000 | 1,311    | 6,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,077 | 0,085    | 0,053     |
| Flexibel  | 0,692 | 0,763    | 0,790     |
| Recycling | 0,231 | 0,153    | 0,158     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,071             |
| Flexibel  | 0,748             |
| Recycling | 0,180             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,071 | 0,083 | 0,060 | <b>0,215</b> |
| Flexibel  | 0,643 | 0,748 | 0,902 | <b>2,293</b> |
| Recycling | 0,214 | 0,150 | 0,180 | <b>0,544</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,005 |
| Flexibel  | 3,064 |
| Recycling | 3,017 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,200     |
| Flexibel  | 2,000 | 1,000    | 0,5       |
| Recycling | 5,000 | 2,000    | 1,000     |
| Jumlah    | 8,000 | 3,500    | 1,700     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,125 | 0,143    | 0,118     |
| Flexibel  | 0,250 | 0,286    | 0,294     |
| Recycling | 0,625 | 0,571    | 0,588     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,129             |
| Flexibel  | 0,277             |
| Recycling | 0,595             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,129 | 0,138 | 0,119 | <b>0,386</b> |
| Flexibel  | 0,257 | 0,277 | 0,297 | <b>0,831</b> |
| Recycling | 0,643 | 0,553 | 0,595 | <b>1,791</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,002 |
| Flexibel  | 3,004 |
| Recycling | 3,010 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,006 | RI                 | 0,58             |
|          |       | CR                 | 0,005            |
| Index K. | 0,003 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 1,000     |
| Flexibel  | 3,000 | 1,000    | 5,000     |
| Recycling | 1,000 | 0,200    | 1,000     |
| Jumlah    | 5,000 | 1,533    | 7,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,217    | 0,143     |
| Flexibel  | 0,600 | 0,652    | 0,714     |
| Recycling | 0,200 | 0,130    | 0,143     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,187             |
| Flexibel  | 0,656             |
| Recycling | 0,158             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,187 | 0,218 | 0,158 | <b>0,563</b> |
| Flexibel  | 0,560 | 0,656 | 0,789 | <b>2,004</b> |
| Recycling | 0,187 | 0,131 | 0,158 | <b>0,476</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,014 |
| Flexibel  | 3,058 |
| Recycling | 3,014 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,143     |
| Flexibel  | 2,000  | 1,000    | 0,143     |
| Recycling | 7,000  | 7,000    | 1,000     |
| Jumlah    | 10,000 | 8,500    | 1,286     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,100 | 0,059    | 0,111     |
| Flexibel  | 0,200 | 0,118    | 0,111     |
| Recycling | 0,700 | 0,824    | 0,778     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,090             |
| Flexibel  | 0,143             |
| Recycling | 0,767             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,090 | 0,071 | 0,110 | <b>0,271</b> |
| Flexibel  | 0,180 | 0,143 | 0,110 | <b>0,433</b> |
| Recycling | 0,630 | 1,001 | 0,767 | <b>2,398</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,013 |
| Flexibel  | 3,027 |
| Recycling | 3,126 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,055 | RI                 | 0,58             |
|          |       | CR                 | 0,048            |
| Index K. | 0,028 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,187 | 0,656    | 0,158     | 0,045     | 0,157        | 0,038         |
| Distorsi                 | 0,130 | 0,090 | 0,143    | 0,767     | 0,012     | 0,019        | 0,100         |
| Cacat Permukaan          | 0,210 | 0,198 | 0,312    | 0,490     | 0,042     | 0,066        | 0,103         |
| Pengausan                | 0,130 | 0,141 | 0,334    | 0,525     | 0,018     | 0,043        | 0,068         |
| Kegemukan                | 0,120 | 0,071 | 0,180    | 0,748     | 0,009     | 0,022        | 0,090         |
| Bekas Penanaman Utilitas | 0,170 | 0,104 | 0,180    | 0,665     | 0,018     | 0,031        | 0,113         |
|                          | 1,000 |       |          |           | 0,143     | 0,337        | <b>0,512</b>  |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,333     |
| Flexibel  | 3,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 7,000 | 3,333    | 1,833     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,143 | 0,100    | 0,182     |
| Flexibel  | 0,429 | 0,300    | 0,273     |
| Recycling | 0,429 | 0,600    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,141             |
| Flexibel  | 0,334             |
| Recycling | 0,525             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,141 | 0,111 | 0,175 | <b>0,427</b> |
| Flexibel  | 0,424 | 0,334 | 0,262 | <b>1,021</b> |
| Recycling | 0,424 | 0,668 | 0,525 | <b>1,617</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,021 |
| Flexibel  | 3,058 |
| Recycling | 3,081 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,111     |
| Flexibel  | 3,000  | 1,000    | 0,200     |
| Recycling | 9,000  | 5,000    | 1,000     |
| Jumlah    | 13,000 | 6,333    | 1,311     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,077 | 0,053    | 0,085     |
| Flexibel  | 0,231 | 0,158    | 0,153     |
| Recycling | 0,692 | 0,790    | 0,763     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,071             |
| Flexibel  | 0,180             |
| Recycling | 0,748             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,071 | 0,060 | 0,083 | <b>0,215</b> |
| Flexibel  | 0,214 | 0,180 | 0,150 | <b>0,544</b> |
| Recycling | 0,643 | 0,902 | 0,748 | <b>2,293</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,005 |
| Flexibel  | 3,017 |
| Recycling | 3,064 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,200     |
| Flexibel  | 3,000 | 1,000    | 0,250     |
| Recycling | 5,000 | 4,000    | 1,000     |
| Jumlah    | 9,000 | 5,333    | 1,450     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,111 | 0,062    | 0,138     |
| Flexibel  | 0,333 | 0,188    | 0,172     |
| Recycling | 0,556 | 0,750    | 0,690     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,104             |
| Flexibel  | 0,231             |
| Recycling | 0,665             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,104 | 0,077 | 0,133 | <b>0,314</b> |
| Flexibel  | 0,311 | 0,231 | 0,166 | <b>0,709</b> |
| Recycling | 0,519 | 0,924 | 0,665 | <b>2,109</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,022 |
| Flexibel  | 3,067 |
| Recycling | 3,170 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,087 | RI                 | 0,58             |
|          |       | CR                 | 0,075            |
| Index K. | 0,043 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 1,000     |
| Flexibel  | 3,000 | 1,000    | 5,000     |
| Recycling | 1,000 | 0,200    | 1,000     |
| Jumlah    | 5,000 | 1,533    | 7,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,217    | 0,143     |
| Flexibel  | 0,600 | 0,652    | 0,714     |
| Recycling | 0,200 | 0,130    | 0,143     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,187             |
| Flexibel  | 0,656             |
| Recycling | 0,158             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,187 | 0,218 | 0,158 | <b>0,563</b> |
| Flexibel  | 0,560 | 0,656 | 0,789 | <b>2,004</b> |
| Recycling | 0,187 | 0,131 | 0,158 | <b>0,476</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,014 |
| Flexibel  | 3,058 |
| Recycling | 3,014 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,143     |
| Flexibel  | 3,000  | 1,000    | 0,500     |
| Recycling | 7,000  | 2,000    | 1,000     |
| Jumlah    | 11,000 | 3,333    | 1,643     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,091 | 0,100    | 0,087     |
| Flexibel  | 0,273 | 0,300    | 0,304     |
| Recycling | 0,636 | 0,600    | 0,609     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,093             |
| Flexibel  | 0,292             |
| Recycling | 0,615             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,093 | 0,097 | 0,088 | <b>0,278</b> |
| Flexibel  | 0,278 | 0,292 | 0,308 | <b>0,878</b> |
| Recycling | 0,648 | 0,585 | 0,615 | <b>1,848</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,001 |
| Flexibel  | 3,002 |
| Recycling | 3,005 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,003 | RI                 | 0,58             |
|          |       | CR                 | 0,002            |
| Index K. | 0,001 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid     | B X Flexibel  | B x Recycling |
|--------------------------|-------|-------|----------|-----------|---------------|---------------|---------------|
| Retak                    | 0,240 | 0,187 | 0,656    | 0,158     | 0,045         | 0,157         | 0,038         |
| Distorsi                 | 0,130 | 0,093 | 0,292    | 0,615     | 0,012         | 0,038         | 0,080         |
| Cacat Permukaan          | 0,210 | 0,159 | 0,252    | 0,589     | 0,033         | 0,053         | 0,124         |
| Pengausan                | 0,130 | 0,164 | 0,297    | 0,539     | 0,021         | 0,039         | 0,070         |
| Kegemukan                | 0,120 | 0,231 | 0,077    | 0,692     | 0,028         | 0,009         | 0,083         |
| Bekas Penanaman Utilitas | 0,170 | 0,159 | 0,077    | 0,589     | 0,027         | 0,013         | 0,100         |
|                          | 1,000 |       |          |           | 0,166         | 0,309         | 0,495         |
|                          |       |       |          |           | <b>Rank 3</b> | <b>Rank 2</b> | <b>Rank 1</b> |

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 6,000 | 3,500    | 1,833     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,143    | 0,182     |
| Flexibel  | 0,333 | 0,286    | 0,273     |
| Recycling | 0,500 | 0,571    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,164             |
| Flexibel  | 0,297             |
| Recycling | 0,539             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,164 | 0,149 | 0,179 | <b>0,492</b> |
| Flexibel  | 0,327 | 0,297 | 0,269 | <b>0,894</b> |
| Recycling | 0,491 | 0,595 | 0,539 | <b>1,625</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,004 |
| Flexibel  | 3,008 |
| Recycling | 3,014 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,009 | RI                 | 0,58             |
|          |       | CR                 | 0,008            |
| Index K. | 0,004 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,333     |
| Flexibel  | 0,333 | 1,000    | 0,111     |
| Recycling | 3,000 | 9,000    | 1,000     |
| Jumlah    | 4,333 | 13,000   | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,231 | 0,231    | 0,231     |
| Flexibel  | 0,077 | 0,077    | 0,077     |
| Recycling | 0,692 | 0,692    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,231             |
| Flexibel  | 0,077             |
| Recycling | 0,692             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,231 | 0,231 | 0,231 | <b>0,692</b> |
| Flexibel  | 0,077 | 0,077 | 0,077 | <b>0,231</b> |
| Recycling | 0,692 | 0,692 | 0,692 | <b>2,076</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |        |                    |                  |
|----------|--------|--------------------|------------------|
| Lambda   | 2,999  | RI                 | 0,58             |
|          |        | CR                 | -0,001           |
| Index K. | -0,001 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,200    | 1,000     |
| Flexibel  | 5,000 | 1,000    | 9,000     |
| Recycling | 1,000 | 0,111    | 1,000     |
| Jumlah    | 7,000 | 1,311    | 11,000    |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,143 | 0,153    | 0,091     |
| Flexibel  | 0,714 | 0,763    | 0,818     |
| Recycling | 0,143 | 0,085    | 0,091     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,129             |
| Flexibel  | 0,765             |
| Recycling | 0,106             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,129 | 0,153 | 0,106 | <b>0,388</b> |
| Flexibel  | 0,644 | 0,765 | 0,955 | <b>2,364</b> |
| Recycling | 0,129 | 0,085 | 0,106 | <b>0,320</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,013 |
| Flexibel  | 3,090 |
| Recycling | 3,013 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,039 | RI                 | 0,58             |
|          |       | CR                 | 0,033            |
| Index K. | 0,019 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,333     |
| Flexibel  | 0,333 | 1,000    | 0,200     |
| Recycling | 3,000 | 5,000    | 1,000     |
| Jumlah    | 4,333 | 9,000    | 1,533     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,231 | 0,333    | 0,217     |
| Flexibel  | 0,077 | 0,111    | 0,130     |
| Recycling | 0,692 | 0,556    | 0,652     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,260             |
| Flexibel  | 0,106             |
| Recycling | 0,633             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,260 | 0,318 | 0,211 | <b>0,790</b> |
| Flexibel  | 0,087 | 0,106 | 0,127 | <b>0,320</b> |
| Recycling | 0,781 | 0,531 | 0,633 | <b>1,945</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,032 |
| Flexibel  | 3,011 |
| Recycling | 3,071 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,038 | RI                 | 0,58             |
|          |       | CR                 | 0,033            |
| Index K. | 0,019 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,129 | 0,765    | 0,106     | 0,031     | 0,184        | 0,025         |
| Distorsi                 | 0,130 | 0,260 | 0,106    | 0,633     | 0,034     | 0,014        | 0,082         |
| Cacat Permukaan          | 0,210 | 0,082 | 0,158    | 0,761     | 0,017     | 0,033        | 0,160         |
| Pengausan                | 0,130 | 0,090 | 0,206    | 0,703     | 0,012     | 0,027        | 0,091         |
| Kegemukan                | 0,120 | 0,077 | 0,231    | 0,692     | 0,009     | 0,028        | 0,083         |
| Bekas Penanaman Utilitas | 0,170 | 0,074 | 0,231    | 0,808     | 0,013     | 0,039        | 0,137         |
|                          | 1,000 |       |          |           | 0,115     | 0,324        | <b>0,579</b>  |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,200     |
| Recycling | 9,000  | 5,000    | 1,000     |
| Jumlah    | 12,000 | 6,500    | 1,311     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,077    | 0,085     |
| Flexibel  | 0,167 | 0,154    | 0,153     |
| Recycling | 0,750 | 0,769    | 0,763     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,082             |
| Flexibel  | 0,158             |
| Recycling | 0,761             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,082 | 0,079 | 0,084 | <b>0,245</b> |
| Flexibel  | 0,163 | 0,158 | 0,152 | <b>0,473</b> |
| Recycling | 0,735 | 0,788 | 0,761 | <b>2,284</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,000 |
| Flexibel  | 3,000 |
| Recycling | 3,002 |

#### c. Lambda dan index konsistensi

|          |       |          |           |
|----------|-------|----------|-----------|
| Lambda   | 3,001 | RI       | 0,58      |
|          |       | CR       | 0,001     |
| Index K. | 0,000 | CR < 0,1 | Konsisten |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,333     |
| Recycling | 9,000  | 3,000    | 1,000     |
| Jumlah    | 12,000 | 4,500    | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,111    | 0,077     |
| Flexibel  | 0,167 | 0,222    | 0,231     |
| Recycling | 0,750 | 0,667    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,090             |
| Flexibel  | 0,206             |
| Recycling | 0,703             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,090 | 0,103 | 0,078 | <b>0,272</b> |
| Flexibel  | 0,181 | 0,206 | 0,234 | <b>0,621</b> |
| Recycling | 0,814 | 0,619 | 0,703 | <b>2,137</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,005 |
| Flexibel  | 3,010 |
| Recycling | 3,039 |

#### c. Lambda dan index konsistensi

|          |       |          |           |
|----------|-------|----------|-----------|
| Lambda   | 3,018 | RI       | 0,58      |
|          |       | CR       | 0,015     |
| Index K. | 0,009 | CR < 0,1 | Konsisten |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,111     |
| Flexibel  | 3,000  | 1,000    | 0,333     |
| Recycling | 9,000  | 3,000    | 1,000     |
| Jumlah    | 13,000 | 4,333    | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,077 | 0,077    | 0,077     |
| Flexibel  | 0,231 | 0,231    | 0,231     |
| Recycling | 0,692 | 0,692    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,077             |
| Flexibel  | 0,231             |
| Recycling | 0,692             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,077 | 0,077 | 0,077 | <b>0,231</b> |
| Flexibel  | 0,231 | 0,231 | 0,231 | <b>0,692</b> |
| Recycling | 0,692 | 0,692 | 0,692 | <b>2,076</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |        |                    |                  |
|----------|--------|--------------------|------------------|
| Lambda   | 2,999  | RI                 | 0,58             |
|          |        | CR                 | -0,001           |
| Index K. | -0,001 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 6,000 | 3,333    | 1,833     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,100    | 0,182     |
| Flexibel  | 0,333 | 0,300    | 0,273     |
| Recycling | 0,500 | 0,600    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,149             |
| Flexibel  | 0,302             |
| Recycling | 0,549             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,149 | 0,101 | 0,183 | <b>0,433</b> |
| Flexibel  | 0,299 | 0,302 | 0,274 | <b>0,875</b> |
| Recycling | 0,448 | 0,604 | 0,549 | <b>1,601</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 2,896 |
| Flexibel  | 2,897 |
| Recycling | 2,918 |

**c. Lambda dan index konsistensi**

|          |        |                    |           |
|----------|--------|--------------------|-----------|
| Lambda   | 2,904  | RI                 | 0,58      |
|          |        | CR                 | -0,083    |
| Index K. | -0,048 | <b>CR &lt; 0,1</b> | Konsisten |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 1,000     |
| Flexibel  | 0,333 | 1,000    | 0,333     |
| Recycling | 1,000 | 3,000    | 1,000     |
| Jumlah    | 2,333 | 7,000    | 2,333     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,429 | 0,429    | 0,429     |
| Flexibel  | 0,143 | 0,143    | 0,143     |
| Recycling | 0,429 | 0,429    | 0,429     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,429             |
| Flexibel  | 0,143             |
| Recycling | 0,429             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,429 | 0,428 | 0,429 | <b>1,286</b> |
| Flexibel  | 0,143 | 0,143 | 0,143 | <b>0,428</b> |
| Recycling | 0,429 | 0,428 | 0,429 | <b>1,286</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

**c. Lambda dan index konsistensi**

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 2,999 | RI                 | 0,58      |
|          |       | CR                 | -0,001    |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | Konsisten |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,149 | 0,302    | 0,549     | 0,036     | 0,072        | 0,132         |
| Distorsi                 | 0,130 | 0,429 | 0,143    | 0,429     | 0,056     | 0,019        | 0,056         |
| Cacat Permukaan          | 0,210 | 0,200 | 0,200    | 0,600     | 0,042     | 0,042        | 0,126         |
| Pengausan                | 0,130 | 0,159 | 0,252    | 0,589     | 0,021     | 0,033        | 0,077         |
| Kegemukan                | 0,120 | 0,231 | 0,077    | 0,692     | 0,028     | 0,009        | 0,083         |
| Bekas Penanaman Utilitas | 0,170 | 0,159 | 0,077    | 0,589     | 0,027     | 0,013        | 0,100         |
|                          | 1,000 |       |          |           | 0,209     | 0,188        | 0,573         |

Rank 2

Rank 3

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 1,000    | 0,333     |
| Flexibel  | 1,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 5,000 | 5,000    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,200    | 0,200     |
| Flexibel  | 0,200 | 0,200    | 0,200     |
| Recycling | 0,600 | 0,600    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,200             |
| Flexibel  | 0,200             |
| Recycling | 0,600             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Flexibel  | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Recycling | 0,600 | 0,600 | 0,600 | <b>1,800</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,333     |
| Flexibel  | 0,333 | 1,000    | 0,111     |
| Recycling | 3,000 | 9,000    | 1,000     |
| Jumlah    | 4,333 | 13,000   | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,231 | 0,231    | 0,231     |
| Flexibel  | 0,077 | 0,077    | 0,077     |
| Recycling | 0,692 | 0,692    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,231             |
| Flexibel  | 0,077             |
| Recycling | 0,692             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,231 | 0,231 | 0,231 | <b>0,692</b> |
| Flexibel  | 0,077 | 0,077 | 0,077 | <b>0,231</b> |
| Recycling | 0,692 | 0,692 | 0,692 | <b>2,076</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |        |                    |                  |
|----------|--------|--------------------|------------------|
| Lambda   | 2,999  | RI                 | 0,58             |
|          |        | CR                 | -0,001           |
| Index K. | -0,001 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,333     |
| Flexibel  | 3,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 7,000 | 3,333    | 1,833     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,143 | 0,100    | 0,182     |
| Flexibel  | 0,429 | 0,300    | 0,273     |
| Recycling | 0,429 | 0,600    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,141             |
| Flexibel  | 0,334             |
| Recycling | 0,525             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,141 | 0,111 | 0,175 | <b>0,427</b> |
| Flexibel  | 0,424 | 0,334 | 0,262 | <b>1,021</b> |
| Recycling | 0,424 | 0,668 | 0,525 | <b>1,617</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,021 |
| Flexibel  | 3,058 |
| Recycling | 3,081 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,141 | 0,334    | 0,525     | 0,034     | 0,080        | 0,126         |
| Distorsi                 | 0,130 | 0,074 | 0,118    | 0,808     | 0,010     | 0,015        | 0,105         |
| Cacat Permukaan          | 0,210 | 0,090 | 0,206    | 0,703     | 0,019     | 0,043        | 0,148         |
| Pengausan                | 0,130 | 0,082 | 0,280    | 0,638     | 0,011     | 0,036        | 0,083         |
| Kegemukan                | 0,120 | 0,074 | 0,118    | 0,808     | 0,009     | 0,014        | 0,097         |
| Bekas Penanaman Utilitas | 0,170 | 0,241 | 0,118    | 0,211     | 0,041     | 0,020        | 0,036         |
|                          | 1,000 |       |          |           | 0,123     | 0,209        | 0,594         |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,333     |
| Recycling | 9,000  | 3,000    | 1,000     |
| Jumlah    | 12,000 | 4,500    | 1,444     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,111    | 0,077     |
| Flexibel  | 0,167 | 0,222    | 0,231     |
| Recycling | 0,750 | 0,667    | 0,693     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,090             |
| Flexibel  | 0,206             |
| Recycling | 0,703             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,090 | 0,103 | 0,078 | <b>0,272</b> |
| Flexibel  | 0,181 | 0,206 | 0,234 | <b>0,621</b> |
| Recycling | 0,814 | 0,619 | 0,703 | <b>2,137</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,005 |
| Flexibel  | 3,010 |
| Recycling | 3,039 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,018 | RI                 | 0,58             |
|          |       | CR                 | 0,015            |
| Index K. | 0,009 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,333    | 0,111     |
| Flexibel  | 3,000  | 1,000    | 0,500     |
| Recycling | 9,000  | 2,000    | 1,000     |
| Jumlah    | 13,000 | 3,333    | 1,611     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,077 | 0,100    | 0,069     |
| Flexibel  | 0,231 | 0,300    | 0,310     |
| Recycling | 0,692 | 0,600    | 0,621     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,082             |
| Flexibel  | 0,280             |
| Recycling | 0,638             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,082 | 0,093 | 0,071 | <b>0,246</b> |
| Flexibel  | 0,246 | 0,280 | 0,319 | <b>0,845</b> |
| Recycling | 0,737 | 0,561 | 0,638 | <b>1,936</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,004 |
| Flexibel  | 3,014 |
| Recycling | 3,035 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,018 | RI                 | 0,58             |
|          |       | CR                 | 0,015            |
| Index K. | 0,009 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,054 | RI                 | 0,58      |
|          |       | CR                 | 0,046     |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | Konsisten |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 1,000     |
| Flexibel  | 2,000 | 1,000    | 3,000     |
| Recycling | 1,000 | 0,333    | 1,000     |
| Jumlah    | 4,000 | 1,833    | 5,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,250 | 0,273    | 0,200     |
| Flexibel  | 0,500 | 0,546    | 0,600     |
| Recycling | 0,250 | 0,182    | 0,200     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,241             |
| Flexibel  | 0,549             |
| Recycling | 0,211             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,241 | 0,274 | 0,211 | <b>0,726</b> |
| Flexibel  | 0,482 | 0,549 | 0,632 | <b>1,662</b> |
| Recycling | 0,241 | 0,183 | 0,211 | <b>0,634</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,012 |
| Flexibel  | 3,030 |
| Recycling | 3,012 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,018 | RI                 | 0,58      |
|          |       | CR                 | 0,016     |
| Index K. | 0,009 | <b>CR &lt; 0,1</b> | Konsisten |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 1,000     |
| Flexibel  | 3,000 | 1,000    | 5,000     |
| Recycling | 1,000 | 0,200    | 1,000     |
| Jumlah    | 5,000 | 1,533    | 7,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,217    | 0,143     |
| Flexibel  | 0,600 | 0,652    | 0,714     |
| Recycling | 0,200 | 0,130    | 0,143     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,187             |
| Flexibel  | 0,656             |
| Recycling | 0,158             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,187 | 0,218 | 0,158 | <b>0,563</b> |
| Flexibel  | 0,560 | 0,656 | 0,789 | <b>2,004</b> |
| Recycling | 0,187 | 0,131 | 0,158 | <b>0,476</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,014 |
| Flexibel  | 3,058 |
| Recycling | 3,014 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,200     |
| Flexibel  | 3,000 | 1,000    | 1,000     |
| Recycling | 5,000 | 1,000    | 1,000     |
| Jumlah    | 9,000 | 2,333    | 2,200     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,111 | 0,143    | 0,091     |
| Flexibel  | 0,333 | 0,429    | 0,455     |
| Recycling | 0,556 | 0,429    | 0,455     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,115             |
| Flexibel  | 0,406             |
| Recycling | 0,480             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,115 | 0,135 | 0,096 | <b>0,346</b> |
| Flexibel  | 0,345 | 0,406 | 0,480 | <b>1,230</b> |
| Recycling | 0,575 | 0,406 | 0,480 | <b>1,460</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,010 |
| Flexibel  | 3,033 |
| Recycling | 3,044 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,187 | 0,656    | 0,158     | 0,045     | 0,157        | 0,038         |
| Distorsi                 | 0,130 | 0,115 | 0,406    | 0,480     | 0,015     | 0,053        | 0,062         |
| Cacat Permukaan          | 0,210 | 0,141 | 0,334    | 0,525     | 0,030     | 0,070        | 0,110         |
| Pengausan                | 0,130 | 0,091 | 0,818    | 0,091     | 0,012     | 0,106        | 0,012         |
| Kegemukan                | 0,120 | 0,164 | 0,297    | 0,539     | 0,020     | 0,036        | 0,065         |
| Bekas Penanaman Utilitas | 0,170 | 0,198 | 0,297    | 0,490     | 0,034     | 0,051        | 0,083         |
|                          | 1,000 |       |          |           | 0,155     | 0,473        | 0,370         |

Rank 3

Rank 1

Rank 2

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,333     |
| Flexibel  | 3,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 7,000 | 3,333    | 1,833     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,143 | 0,100    | 0,182     |
| Flexibel  | 0,429 | 0,300    | 0,273     |
| Recycling | 0,429 | 0,600    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,141             |
| Flexibel  | 0,334             |
| Recycling | 0,525             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,141 | 0,111 | 0,175 | <b>0,427</b> |
| Flexibel  | 0,424 | 0,334 | 0,262 | <b>1,021</b> |
| Recycling | 0,424 | 0,668 | 0,525 | <b>1,617</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,021 |
| Flexibel  | 3,058 |
| Recycling | 3,081 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,111    | 1,000     |
| Flexibel  | 9,000  | 1,000    | 9,000     |
| Recycling | 1,000  | 0,111    | 1,000     |
| Jumlah    | 11,000 | 1,222    | 11,000    |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,091 | 0,091    | 0,091     |
| Flexibel  | 0,818 | 0,818    | 0,818     |
| Recycling | 0,091 | 0,091    | 0,091     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,091             |
| Flexibel  | 0,818             |
| Recycling | 0,091             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,091 | 0,091 | 0,091 | <b>0,273</b> |
| Flexibel  | 0,818 | 0,818 | 0,818 | <b>2,454</b> |
| Recycling | 0,091 | 0,091 | 0,091 | <b>0,273</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,5       |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 6,000 | 3,500    | 1,833     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,143    | 0,182     |
| Flexibel  | 0,333 | 0,286    | 0,273     |
| Recycling | 0,500 | 0,571    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,164             |
| Flexibel  | 0,297             |
| Recycling | 0,539             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,164 | 0,149 | 0,179 | <b>0,492</b> |
| Flexibel  | 0,327 | 0,297 | 0,269 | <b>0,894</b> |
| Recycling | 0,491 | 0,595 | 0,539 | <b>1,625</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,004 |
| Flexibel  | 3,008 |
| Recycling | 3,014 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,009 | RI                 | 0,58      |
|          |       | CR                 | 0,008     |
| Index K. | 0,004 | <b>CR &lt; 0,1</b> | Konsisten |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,054 | RI                 | 0,58      |
|          |       | CR                 | 0,046     |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | Konsisten |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,111    | 1,000     |
| Flexibel  | 9,000  | 1,000    | 9,000     |
| Recycling | 1,000  | 0,111    | 1,000     |
| Jumlah    | 11,000 | 1,222    | 11,000    |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,091 | 0,091    | 0,091     |
| Flexibel  | 0,818 | 0,818    | 0,818     |
| Recycling | 0,091 | 0,091    | 0,091     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,091             |
| Flexibel  | 0,818             |
| Recycling | 0,091             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,091 | 0,091 | 0,091 | <b>0,273</b> |
| Flexibel  | 0,818 | 0,818 | 0,818 | <b>2,454</b> |
| Recycling | 0,091 | 0,091 | 0,091 | <b>0,273</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,143     |
| Flexibel  | 0,333 | 1,000    | 0,111     |
| Recycling | 7,000 | 9,000    | 1,000     |
| Jumlah    | 8,333 | 13,000   | 1,254     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,120 | 0,231    | 0,114     |
| Flexibel  | 0,040 | 0,077    | 0,089     |
| Recycling | 0,840 | 0,692    | 0,797     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,155             |
| Flexibel  | 0,068             |
| Recycling | 0,777             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,155 | 0,205 | 0,111 | <b>0,471</b> |
| Flexibel  | 0,052 | 0,068 | 0,086 | <b>0,206</b> |
| Recycling | 1,085 | 0,616 | 0,777 | <b>2,477</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,042 |
| Flexibel  | 3,013 |
| Recycling | 3,190 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,082 | RI                 | 0,58             |
|          |       | CR                 | 0,070            |
| Index K. | 0,041 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Riigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|------------|--------------|---------------|
| Retak                    | 0,240 | 0,091 | 0,818    | 0,091     | 0,022      | 0,196        | 0,022         |
| Distorsi                 | 0,130 | 0,155 | 0,068    | 0,777     | 0,020      | 0,009        | 0,101         |
| Cacat Permukaan          | 0,210 | 0,074 | 0,118    | 0,808     | 0,016      | 0,025        | 0,170         |
| Pengausan                | 0,130 | 0,241 | 0,549    | 0,211     | 0,031      | 0,071        | 0,027         |
| Kegemukan                | 0,120 | 0,074 | 0,118    | 0,808     | 0,009      | 0,014        | 0,097         |
| Bekas Penanaman Utilitas | 0,170 | 0,198 | 0,118    | 0,490     | 0,034      | 0,020        | 0,083         |
|                          | 1,000 |       |          |           | 0,131      | 0,335        | 0,500         |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,054 | RI                 | 0,58      |
|          |       | CR                 | 0,046     |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | Konsisten |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 1,000     |
| Flexibel  | 2,000 | 1,000    | 3,000     |
| Recycling | 1,000 | 0,333    | 1,000     |
| Jumlah    | 4,000 | 1,833    | 5,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,250 | 0,273    | 0,200     |
| Flexibel  | 0,500 | 0,546    | 0,600     |
| Recycling | 0,250 | 0,182    | 0,200     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,241             |
| Flexibel  | 0,549             |
| Recycling | 0,211             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,241 | 0,274 | 0,211 | <b>0,726</b> |
| Flexibel  | 0,482 | 0,549 | 0,632 | <b>1,662</b> |
| Recycling | 0,241 | 0,183 | 0,211 | <b>0,634</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,012 |
| Flexibel  | 3,030 |
| Recycling | 3,012 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,018 | RI                 | 0,58      |
|          |       | CR                 | 0,016     |
| Index K. | 0,009 | <b>CR &lt; 0,1</b> | Konsisten |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 0,333     |
| Flexibel  | 3,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 7,000 | 3,333    | 1,833     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,143 | 0,100    | 0,182     |
| Flexibel  | 0,429 | 0,300    | 0,273     |
| Recycling | 0,429 | 0,600    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,141             |
| Flexibel  | 0,334             |
| Recycling | 0,525             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,141 | 0,111 | 0,175 | <b>0,427</b> |
| Flexibel  | 0,424 | 0,334 | 0,262 | <b>1,021</b> |
| Recycling | 0,424 | 0,668 | 0,525 | <b>1,617</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,021 |
| Flexibel  | 3,058 |
| Recycling | 3,081 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,200     |
| Flexibel  | 0,333 | 1,000    | 0,143     |
| Recycling | 5,000 | 7,000    | 1,000     |
| Jumlah    | 6,333 | 11,000   | 1,343     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,158 | 0,273    | 0,149     |
| Flexibel  | 0,053 | 0,091    | 0,106     |
| Recycling | 0,790 | 0,636    | 0,745     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,193             |
| Flexibel  | 0,083             |
| Recycling | 0,723             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,193 | 0,250 | 0,145 | <b>0,588</b> |
| Flexibel  | 0,064 | 0,083 | 0,103 | <b>0,251</b> |
| Recycling | 0,966 | 0,583 | 0,723 | <b>2,273</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,043 |
| Flexibel  | 3,014 |
| Recycling | 3,141 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,066 | RI                 | 0,58             |
|          |       | CR                 | 0,057            |
| Index K. | 0,033 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,141 | 0,334    | 0,525     | 0,034     | 0,080        | 0,126         |
| Distorsi                 | 0,130 | 0,193 | 0,083    | 0,723     | 0,025     | 0,011        | 0,094         |
| Cacat Permukaan          | 0,210 | 0,389 | 0,100    | 0,511     | 0,082     | 0,021        | 0,107         |
| Pengausan                | 0,130 | 0,052 | 0,368    | 0,579     | 0,007     | 0,048        | 0,075         |
| Kegemukan                | 0,120 | 0,074 | 0,118    | 0,808     | 0,009     | 0,014        | 0,097         |
| Bekas Penanaman Utilitas | 0,170 | 0,159 | 0,118    | 0,589     | 0,027     | 0,020        | 0,100         |
|                          | 1,000 |       |          |           | 0,184     | 0,194        | 0,600         |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwaise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 1         |
| Flexibel  | 0,333 | 1,000    | 0,143     |
| Recycling | 1,000 | 7,000    | 1,000     |
| Jumlah    | 2,333 | 11,000   | 2,143     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,429 | 0,273    | 0,467     |
| Flexibel  | 0,143 | 0,091    | 0,067     |
| Recycling | 0,429 | 0,636    | 0,467     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,389             |
| Flexibel  | 0,100             |
| Recycling | 0,511             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,389 | 0,300 | 0,511 | <b>1,200</b> |
| Flexibel  | 0,130 | 0,100 | 0,073 | <b>0,303</b> |
| Recycling | 0,389 | 0,701 | 0,511 | <b>1,601</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,083 |
| Flexibel  | 3,024 |
| Recycling | 3,135 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,081 | RI                 | 0,58             |
|          |       | CR                 | 0,070            |
| Index K. | 0,040 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwaise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,111    | 0,111     |
| Flexibel  | 9,000  | 1,000    | 0,500     |
| Recycling | 9,000  | 2,000    | 1,000     |
| Jumlah    | 19,000 | 3,111    | 1,611     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,053 | 0,036    | 0,069     |
| Flexibel  | 0,474 | 0,321    | 0,310     |
| Recycling | 0,474 | 0,643    | 0,621     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,052             |
| Flexibel  | 0,368             |
| Recycling | 0,579             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,052 | 0,041 | 0,064 | <b>0,158</b> |
| Flexibel  | 0,472 | 0,368 | 0,290 | <b>1,130</b> |
| Recycling | 0,472 | 0,737 | 0,579 | <b>1,788</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,007 |
| Flexibel  | 3,066 |
| Recycling | 3,087 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 0,143     |
| Flexibel  | 0,333 | 1,000    | 0,111     |
| Recycling | 7,000 | 9,000    | 1,000     |
| Jumlah    | 8,333 | 13,000   | 1,254     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,120 | 0,231    | 0,114     |
| Flexibel  | 0,040 | 0,077    | 0,089     |
| Recycling | 0,840 | 0,692    | 0,797     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,155             |
| Flexibel  | 0,068             |
| Recycling | 0,777             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,155 | 0,205 | 0,111 | <b>0,471</b> |
| Flexibel  | 0,052 | 0,068 | 0,086 | <b>0,206</b> |
| Recycling | 1,085 | 0,616 | 0,777 | <b>2,477</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,042 |
| Flexibel  | 3,013 |
| Recycling | 3,190 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,082 | RI                 | 0,58             |
|          |       | CR                 | 0,070            |
| Index K. | 0,041 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,198 | 0,312    | 0,490     | 0,047     | 0,075        | 0,118         |
| Distorsi                 | 0,130 | 0,155 | 0,068    | 0,777     | 0,020     | 0,009        | 0,101         |
| Cacat Permukaan          | 0,210 | 0,077 | 0,133    | 0,790     | 0,016     | 0,028        | 0,166         |
| Pengausan                | 0,130 | 0,091 | 0,818    | 0,091     | 0,012     | 0,106        | 0,012         |
| Kegemukan                | 0,120 | 0,074 | 0,118    | 0,808     | 0,009     | 0,014        | 0,097         |
| Bekas Penanaman Utilitas | 0,170 | 0,164 | 0,118    | 0,539     | 0,028     | 0,020        | 0,092         |
|                          | 1,000 |       |          |           | 0,132     | 0,252        | 0,585         |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,143     |
| Recycling | 9,000  | 7,000    | 1,000     |
| Jumlah    | 12,000 | 8,500    | 1,254     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,059    | 0,089     |
| Flexibel  | 0,167 | 0,118    | 0,114     |
| Recycling | 0,750 | 0,824    | 0,797     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,077             |
| Flexibel  | 0,133             |
| Recycling | 0,790             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,077 | 0,066 | 0,088 | <b>0,231</b> |
| Flexibel  | 0,154 | 0,133 | 0,113 | <b>0,400</b> |
| Recycling | 0,692 | 0,929 | 0,790 | <b>2,412</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,004 |
| Flexibel  | 3,009 |
| Recycling | 3,052 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,022 | RI                 | 0,58      |
|          |       | CR                 | 0,019     |
| Index K. | 0,011 | <b>CR &lt; 0,1</b> | Konsisten |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,111    | 1,000     |
| Flexibel  | 9,000  | 1,000    | 9,000     |
| Recycling | 1,000  | 0,111    | 1,000     |
| Jumlah    | 11,000 | 1,222    | 11,000    |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,091 | 0,091    | 0,091     |
| Flexibel  | 0,818 | 0,818    | 0,818     |
| Recycling | 0,091 | 0,091    | 0,091     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,091             |
| Flexibel  | 0,818             |
| Recycling | 0,091             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,091 | 0,091 | 0,091 | <b>0,273</b> |
| Flexibel  | 0,818 | 0,818 | 0,818 | <b>2,454</b> |
| Recycling | 0,091 | 0,091 | 0,091 | <b>0,273</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 2,999 | RI                 | 0,58      |
|          |       | CR                 | -0,001    |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | Konsisten |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 6,000 | 3,500    | 1,833     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,143    | 0,182     |
| Flexibel  | 0,333 | 0,286    | 0,273     |
| Recycling | 0,500 | 0,571    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,164             |
| Flexibel  | 0,297             |
| Recycling | 0,539             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,164 | 0,149 | 0,179 | <b>0,492</b> |
| Flexibel  | 0,327 | 0,297 | 0,269 | <b>0,894</b> |
| Recycling | 0,491 | 0,595 | 0,539 | <b>1,625</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,004 |
| Flexibel  | 3,008 |
| Recycling | 3,014 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,009 | RI                 | 0,58             |
|          |       | CR                 | 0,008            |
| Index K. | 0,004 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 1,000     |
| Flexibel  | 3,000 | 1,000    | 4,000     |
| Recycling | 1,000 | 0,250    | 1,000     |
| Jumlah    | 5,000 | 1,583    | 6,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,210    | 0,167     |
| Flexibel  | 0,600 | 0,632    | 0,667     |
| Recycling | 0,200 | 0,158    | 0,167     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,192             |
| Flexibel  | 0,633             |
| Recycling | 0,175             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,192 | 0,211 | 0,175 | <b>0,578</b> |
| Flexibel  | 0,577 | 0,633 | 0,699 | <b>1,909</b> |
| Recycling | 0,192 | 0,158 | 0,175 | <b>0,525</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,005 |
| Flexibel  | 3,017 |
| Recycling | 3,005 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,009 | RI                 | 0,58             |
|          |       | CR                 | 0,008            |
| Index K. | 0,004 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 1,000     |
| Flexibel  | 0,333 | 1,000    | 0,500     |
| Recycling | 1,000 | 2,000    | 1,000     |
| Jumlah    | 2,333 | 6,000    | 2,500     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,429 | 0,500    | 0,400     |
| Flexibel  | 0,143 | 0,167    | 0,200     |
| Recycling | 0,429 | 0,333    | 0,400     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,443             |
| Flexibel  | 0,170             |
| Recycling | 0,387             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,443 | 0,509 | 0,387 | <b>1,340</b> |
| Flexibel  | 0,147 | 0,170 | 0,194 | <b>0,511</b> |
| Recycling | 0,443 | 0,340 | 0,387 | <b>1,170</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,025 |
| Flexibel  | 3,009 |
| Recycling | 3,020 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,018 | RI                 | 0,58             |
|          |       | CR                 | 0,016            |
| Index K. | 0,009 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Riigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|------------|--------------|---------------|
| Retak                    | 0,240 | 0,192 | 0,633    | 0,175     | 0,046      | 0,152        | 0,042         |
| Distorsi                 | 0,130 | 0,443 | 0,170    | 0,387     | 0,058      | 0,022        | 0,050         |
| Cacat Permukaan          | 0,210 | 0,164 | 0,297    | 0,539     | 0,034      | 0,062        | 0,113         |
| Pengausan                | 0,130 | 0,164 | 0,297    | 0,539     | 0,021      | 0,039        | 0,070         |
| Kegemukan                | 0,120 | 0,198 | 0,312    | 0,490     | 0,024      | 0,037        | 0,059         |
| Bekas Penanaman Utilitas | 0,170 | 0,525 | 0,312    | 0,334     | 0,089      | 0,053        | 0,057         |
|                          | 1,000 |       |          |           | 0,272      | 0,365        | 0,391         |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 6,000 | 3,500    | 1,833     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,143    | 0,182     |
| Flexibel  | 0,333 | 0,286    | 0,273     |
| Recycling | 0,500 | 0,571    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,164             |
| Flexibel  | 0,297             |
| Recycling | 0,539             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,164 | 0,149 | 0,179 | <b>0,492</b> |
| Flexibel  | 0,327 | 0,297 | 0,269 | <b>0,894</b> |
| Recycling | 0,491 | 0,595 | 0,539 | <b>1,625</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,004 |
| Flexibel  | 3,008 |
| Recycling | 3,014 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,009 | RI                 | 0,58             |
|          |       | CR                 | 0,008            |
| Index K. | 0,004 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 3,000 | 2,000    | 1,000     |
| Jumlah    | 6,000 | 3,500    | 1,833     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,143    | 0,182     |
| Flexibel  | 0,333 | 0,286    | 0,273     |
| Recycling | 0,500 | 0,571    | 0,546     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,164             |
| Flexibel  | 0,297             |
| Recycling | 0,539             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,164 | 0,149 | 0,179 | <b>0,492</b> |
| Flexibel  | 0,327 | 0,297 | 0,269 | <b>0,894</b> |
| Recycling | 0,491 | 0,595 | 0,539 | <b>1,625</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,004 |
| Flexibel  | 3,008 |
| Recycling | 3,014 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,009 | RI                 | 0,58             |
|          |       | CR                 | 0,008            |
| Index K. | 0,004 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,5       |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 2,000     |
| Flexibel  | 0,333 | 1,000    | 0,333     |
| Recycling | 0,500 | 3,000    | 1,000     |
| Jumlah    | 1,833 | 7,000    | 3,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,546 | 0,429    | 0,600     |
| Flexibel  | 0,182 | 0,143    | 0,100     |
| Recycling | 0,273 | 0,429    | 0,300     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,525             |
| Flexibel  | 0,141             |
| Recycling | 0,334             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,525 | 0,424 | 0,668 | <b>1,617</b> |
| Flexibel  | 0,175 | 0,141 | 0,111 | <b>0,427</b> |
| Recycling | 0,262 | 0,424 | 0,334 | <b>1,021</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,081 |
| Flexibel  | 3,021 |
| Recycling | 3,058 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 1,000     |
| Flexibel  | 3,000 | 1,000    | 5,000     |
| Recycling | 1,000 | 0,200    | 1,000     |
| Jumlah    | 5,000 | 1,533    | 7,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,217    | 0,143     |
| Flexibel  | 0,600 | 0,652    | 0,714     |
| Recycling | 0,200 | 0,130    | 0,143     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,187             |
| Flexibel  | 0,656             |
| Recycling | 0,158             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,187 | 0,218 | 0,158 | <b>0,563</b> |
| Flexibel  | 0,560 | 0,656 | 0,789 | <b>2,004</b> |
| Recycling | 0,187 | 0,131 | 0,158 | <b>0,476</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,014 |
| Flexibel  | 3,058 |
| Recycling | 3,014 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,029 | RI                 | 0,58             |
|          |       | CR                 | 0,025            |
| Index K. | 0,014 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,333     |
| Flexibel  | 2,000 | 1,000    | 0,333     |
| Recycling | 3,000 | 3,000    | 1,000     |
| Jumlah    | 6,000 | 4,500    | 1,666     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,167 | 0,111    | 0,200     |
| Flexibel  | 0,333 | 0,222    | 0,200     |
| Recycling | 0,500 | 0,667    | 0,600     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,159             |
| Flexibel  | 0,252             |
| Recycling | 0,589             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,159 | 0,126 | 0,196 | <b>0,481</b> |
| Flexibel  | 0,318 | 0,252 | 0,196 | <b>0,766</b> |
| Recycling | 0,478 | 0,755 | 0,589 | <b>1,822</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,043 |
| Recycling | 3,094 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,053 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,187 | 0,656    | 0,158     | 0,045     | 0,157        | 0,038         |
| Distorsi                 | 0,130 | 0,159 | 0,252    | 0,589     | 0,021     | 0,033        | 0,077         |
| Cacat Permukaan          | 0,210 | 0,074 | 0,118    | 0,808     | 0,016     | 0,025        | 0,170         |
| Pengausan                | 0,130 | 0,098 | 0,254    | 0,647     | 0,013     | 0,033        | 0,084         |
| Kegemukan                | 0,120 | 0,074 | 0,118    | 0,808     | 0,009     | 0,014        | 0,097         |
| Bekas Penanaman Utilitas | 0,170 | 0,474 | 0,118    | 0,474     | 0,081     | 0,020        | 0,081         |
|                          | 1,000 |       |          |           | 0,183     | 0,282        | 0,546         |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,500     |
| Recycling | 9,000  | 2,000    | 1,000     |
| Jumlah    | 12,000 | 3,500    | 1,611     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,143    | 0,069     |
| Flexibel  | 0,167 | 0,286    | 0,310     |
| Recycling | 0,750 | 0,571    | 0,621     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,098             |
| Flexibel  | 0,254             |
| Recycling | 0,647             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,098 | 0,127 | 0,072 | <b>0,297</b> |
| Flexibel  | 0,197 | 0,254 | 0,324 | <b>0,775</b> |
| Recycling | 0,885 | 0,508 | 0,647 | <b>2,041</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,047 |
| Recycling | 3,153 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,074 | RI                 | 0,58             |
|          |       | CR                 | 0,064            |
| Index K. | 0,037 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,111     |
| Recycling | 9,000  | 9,000    | 1,000     |
| Jumlah    | 12,000 | 10,500   | 1,222     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,048    | 0,091     |
| Flexibel  | 0,167 | 0,095    | 0,091     |
| Recycling | 0,750 | 0,857    | 0,818     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,074             |
| Flexibel  | 0,118             |
| Recycling | 0,808             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,074 | 0,059 | 0,090 | <b>0,222</b> |
| Flexibel  | 0,148 | 0,118 | 0,090 | <b>0,355</b> |
| Recycling | 0,665 | 1,058 | 0,808 | <b>2,532</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,009 |
| Flexibel  | 3,021 |
| Recycling | 3,132 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,054 | RI                 | 0,58      |
|          |       | CR                 | 0,046     |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | Konsisten |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 9,000    | 1,000     |
| Flexibel  | 0,111 | 1,000    | 0,111     |
| Recycling | 1,000 | 9,000    | 1,000     |
| Jumlah    | 2,111 | 19,000   | 2,111     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,474 | 0,474    | 0,474     |
| Flexibel  | 0,053 | 0,053    | 0,053     |
| Recycling | 0,474 | 0,474    | 0,474     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,474             |
| Flexibel  | 0,053             |
| Recycling | 0,474             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,474 | 0,473 | 0,474 | <b>1,421</b> |
| Flexibel  | 0,053 | 0,053 | 0,053 | <b>0,158</b> |
| Recycling | 0,474 | 0,473 | 0,474 | <b>1,421</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 2,999 | RI                 | 0,58      |
|          |       | CR                 | -0,001    |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | Konsisten |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 1,000     |
| Flexibel  | 3,000 | 1,000    | 3,000     |
| Recycling | 1,000 | 0,333    | 1,000     |
| Jumlah    | 5,000 | 1,666    | 5,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,200    | 0,200     |
| Flexibel  | 0,600 | 0,600    | 0,600     |
| Recycling | 0,200 | 0,200    | 0,200     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,200             |
| Flexibel  | 0,600             |
| Recycling | 0,200             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Flexibel  | 0,600 | 0,600 | 0,600 | <b>1,800</b> |
| Recycling | 0,200 | 0,200 | 0,200 | <b>0,600</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,200 | 0,600    | 0,200     | 0,048     | 0,144        | 0,048         |
| Distorsi                 | 0,130 | 0,198 | 0,312    | 0,490     | 0,026     | 0,041        | 0,064         |
| Cacat Permukaan          | 0,210 | 0,198 | 0,312    | 0,490     | 0,042     | 0,066        | 0,103         |
| Pengausan                | 0,130 | 0,098 | 0,254    | 0,647     | 0,013     | 0,033        | 0,084         |
| Kegemukan                | 0,120 | 0,198 | 0,312    | 0,490     | 0,024     | 0,037        | 0,059         |
| Bekas Penanaman Utilitas | 0,170 | 0,429 | 0,312    | 0,429     | 0,073     | 0,053        | 0,073         |
|                          | 1,000 |       |          |           | 0,225     | 0,374        | 0,431         |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwaise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwaise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,500     |
| Recycling | 9,000  | 2,000    | 1,000     |
| Jumlah    | 12,000 | 3,500    | 1,611     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,143    | 0,069     |
| Flexibel  | 0,167 | 0,286    | 0,310     |
| Recycling | 0,750 | 0,571    | 0,621     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,098             |
| Flexibel  | 0,254             |
| Recycling | 0,647             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,098 | 0,127 | 0,072 | <b>0,297</b> |
| Flexibel  | 0,197 | 0,254 | 0,324 | <b>0,775</b> |
| Recycling | 0,885 | 0,508 | 0,647 | <b>2,041</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,047 |
| Recycling | 3,153 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,074 | RI                 | 0,58             |
|          |       | CR                 | 0,064            |
| Index K. | 0,037 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,054 | RI                 | 0,58      |
|          |       | CR                 | 0,046     |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | Konsisten |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 1,000     |
| Flexibel  | 0,333 | 1,000    | 0,333     |
| Recycling | 1,000 | 3,000    | 1,000     |
| Jumlah    | 2,333 | 7,000    | 2,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,429 | 0,429    | 0,429     |
| Flexibel  | 0,143 | 0,143    | 0,143     |
| Recycling | 0,429 | 0,429    | 0,429     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,429             |
| Flexibel  | 0,143             |
| Recycling | 0,429             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,429 | 0,428 | 0,429 | <b>1,286</b> |
| Flexibel  | 0,143 | 0,143 | 0,143 | <b>0,428</b> |
| Recycling | 0,429 | 0,428 | 0,429 | <b>1,286</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 2,999 | RI                 | 0,58      |
|          |       | CR                 | -0,001    |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | Konsisten |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 1,000     |
| Flexibel  | 3,000 | 1,000    | 3,000     |
| Recycling | 1,000 | 0,333    | 1,000     |
| Jumlah    | 5,000 | 1,666    | 5,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,200    | 0,200     |
| Flexibel  | 0,600 | 0,600    | 0,600     |
| Recycling | 0,200 | 0,200    | 0,200     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,200             |
| Flexibel  | 0,600             |
| Recycling | 0,200             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Flexibel  | 0,600 | 0,600 | 0,600 | <b>1,800</b> |
| Recycling | 0,200 | 0,200 | 0,200 | <b>0,600</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,200 | 0,600    | 0,200     | 0,048     | 0,144        | 0,048         |
| Distorsi                 | 0,130 | 0,198 | 0,312    | 0,490     | 0,026     | 0,041        | 0,064         |
| Cacat Permukaan          | 0,210 | 0,198 | 0,312    | 0,490     | 0,042     | 0,066        | 0,103         |
| Pengausan                | 0,130 | 0,098 | 0,254    | 0,647     | 0,013     | 0,033        | 0,084         |
| Kegemukan                | 0,120 | 0,198 | 0,312    | 0,490     | 0,024     | 0,037        | 0,059         |
| Bekas Penanaman Utilitas | 0,170 | 0,429 | 0,312    | 0,429     | 0,073     | 0,053        | 0,073         |
|                          | 1,000 |       |          |           | 0,225     | 0,374        | 0,431         |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,054 | RI                 | 0,58      |
|          |       | CR                 | 0,046     |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | Konsisten |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,500     |
| Recycling | 9,000  | 2,000    | 1,000     |
| Jumlah    | 12,000 | 3,500    | 1,611     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,143    | 0,069     |
| Flexibel  | 0,167 | 0,286    | 0,310     |
| Recycling | 0,750 | 0,571    | 0,621     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,098             |
| Flexibel  | 0,254             |
| Recycling | 0,647             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,098 | 0,127 | 0,072 | <b>0,297</b> |
| Flexibel  | 0,197 | 0,254 | 0,324 | <b>0,775</b> |
| Recycling | 0,885 | 0,508 | 0,647 | <b>2,041</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,047 |
| Recycling | 3,153 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,074 | RI                 | 0,58      |
|          |       | CR                 | 0,064     |
| Index K. | 0,037 | <b>CR &lt; 0,1</b> | Konsisten |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,054 | RI                 | 0,58      |
|          |       | CR                 | 0,046     |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | Konsisten |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 1,000     |
| Flexibel  | 0,333 | 1,000    | 0,333     |
| Recycling | 1,000 | 3,000    | 1,000     |
| Jumlah    | 2,333 | 7,000    | 2,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,429 | 0,429    | 0,429     |
| Flexibel  | 0,143 | 0,143    | 0,143     |
| Recycling | 0,429 | 0,429    | 0,429     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,429             |
| Flexibel  | 0,143             |
| Recycling | 0,429             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,429 | 0,428 | 0,429 | <b>1,286</b> |
| Flexibel  | 0,143 | 0,143 | 0,143 | <b>0,428</b> |
| Recycling | 0,429 | 0,428 | 0,429 | <b>1,286</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 2,999 | RI                 | 0,58      |
|          |       | CR                 | -0,001    |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | Konsisten |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 1,000     |
| Flexibel  | 3,000 | 1,000    | 3,000     |
| Recycling | 1,000 | 0,333    | 1,000     |
| Jumlah    | 5,000 | 1,666    | 5,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,200    | 0,200     |
| Flexibel  | 0,600 | 0,600    | 0,600     |
| Recycling | 0,200 | 0,200    | 0,200     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,200             |
| Flexibel  | 0,600             |
| Recycling | 0,200             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Flexibel  | 0,600 | 0,600 | 0,600 | <b>1,800</b> |
| Recycling | 0,200 | 0,200 | 0,200 | <b>0,600</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Riigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|------------|--------------|---------------|
| Retak                    | 0,240 | 0,200 | 0,600    | 0,200     | 0,048      | 0,144        | 0,048         |
| Distorsi                 | 0,130 | 0,198 | 0,312    | 0,490     | 0,026      | 0,041        | 0,064         |
| Cacat Permukaan          | 0,210 | 0,198 | 0,312    | 0,490     | 0,042      | 0,066        | 0,103         |
| Pengausan                | 0,130 | 0,098 | 0,254    | 0,647     | 0,013      | 0,033        | 0,084         |
| Kegemukan                | 0,120 | 0,198 | 0,312    | 0,490     | 0,024      | 0,037        | 0,059         |
| Bekas Penanaman Utilitas | 0,170 | 0,429 | 0,312    | 0,429     | 0,073      | 0,053        | 0,073         |
|                          | 1,000 |       |          |           | 0,225      | 0,374        | 0,431         |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwaise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwaise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,500     |
| Recycling | 9,000  | 2,000    | 1,000     |
| Jumlah    | 12,000 | 3,500    | 1,611     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,143    | 0,069     |
| Flexibel  | 0,167 | 0,286    | 0,310     |
| Recycling | 0,750 | 0,571    | 0,621     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,098             |
| Flexibel  | 0,254             |
| Recycling | 0,647             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,098 | 0,127 | 0,072 | <b>0,297</b> |
| Flexibel  | 0,197 | 0,254 | 0,324 | <b>0,775</b> |
| Recycling | 0,885 | 0,508 | 0,647 | <b>2,041</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,047 |
| Recycling | 3,153 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,074 | RI                 | 0,58             |
|          |       | CR                 | 0,064            |
| Index K. | 0,037 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |    |       |
|----------|-------|----|-------|
| Lambda   | 3,054 | RI | 0,58  |
| Index K. | 0,027 | CR | 0,046 |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 1,000     |
| Flexibel  | 0,333 | 1,000    | 0,333     |
| Recycling | 1,000 | 3,000    | 1,000     |
| Jumlah    | 2,333 | 7,000    | 2,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,429 | 0,429    | 0,429     |
| Flexibel  | 0,143 | 0,143    | 0,143     |
| Recycling | 0,429 | 0,429    | 0,429     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,429             |
| Flexibel  | 0,143             |
| Recycling | 0,429             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,429 | 0,428 | 0,429 | <b>1,286</b> |
| Flexibel  | 0,143 | 0,143 | 0,143 | <b>0,428</b> |
| Recycling | 0,429 | 0,428 | 0,429 | <b>1,286</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |    |        |
|----------|-------|----|--------|
| Lambda   | 2,999 | RI | 0,58   |
| Index K. | 0,000 | CR | -0,001 |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 1,000     |
| Flexibel  | 3,000 | 1,000    | 3,000     |
| Recycling | 1,000 | 0,333    | 1,000     |
| Jumlah    | 5,000 | 1,666    | 5,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,200    | 0,200     |
| Flexibel  | 0,600 | 0,600    | 0,600     |
| Recycling | 0,200 | 0,200    | 0,200     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,200             |
| Flexibel  | 0,600             |
| Recycling | 0,200             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Flexibel  | 0,600 | 0,600 | 0,600 | <b>1,800</b> |
| Recycling | 0,200 | 0,200 | 0,200 | <b>0,600</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,200 | 0,600    | 0,200     | 0,048     | 0,144        | 0,048         |
| Distorsi                 | 0,130 | 0,198 | 0,312    | 0,490     | 0,026     | 0,041        | 0,064         |
| Cacat Permukaan          | 0,210 | 0,198 | 0,312    | 0,490     | 0,042     | 0,066        | 0,103         |
| Pengausan                | 0,130 | 0,098 | 0,254    | 0,647     | 0,013     | 0,033        | 0,084         |
| Kegemukan                | 0,120 | 0,198 | 0,312    | 0,490     | 0,024     | 0,037        | 0,059         |
| Bekas Penanaman Utilitas | 0,170 | 0,429 | 0,312    | 0,429     | 0,073     | 0,053        | 0,073         |
|                          | 1,000 |       |          |           | 0,225     | 0,374        | 0,431         |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwaise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwaise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,500     |
| Recycling | 9,000  | 2,000    | 1,000     |
| Jumlah    | 12,000 | 3,500    | 1,611     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,143    | 0,069     |
| Flexibel  | 0,167 | 0,286    | 0,310     |
| Recycling | 0,750 | 0,571    | 0,621     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,098             |
| Flexibel  | 0,254             |
| Recycling | 0,647             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,098 | 0,127 | 0,072 | <b>0,297</b> |
| Flexibel  | 0,197 | 0,254 | 0,324 | <b>0,775</b> |
| Recycling | 0,885 | 0,508 | 0,647 | <b>2,041</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,047 |
| Recycling | 3,153 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,074 | RI                 | 0,58             |
|          |       | CR                 | 0,064            |
| Index K. | 0,037 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 3,054 | RI                 | 0,58      |
|          |       | CR                 | 0,046     |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | Konsisten |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 1,000     |
| Flexibel  | 0,333 | 1,000    | 0,333     |
| Recycling | 1,000 | 3,000    | 1,000     |
| Jumlah    | 2,333 | 7,000    | 2,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,429 | 0,429    | 0,429     |
| Flexibel  | 0,143 | 0,143    | 0,143     |
| Recycling | 0,429 | 0,429    | 0,429     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,429             |
| Flexibel  | 0,143             |
| Recycling | 0,429             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,429 | 0,428 | 0,429 | <b>1,286</b> |
| Flexibel  | 0,143 | 0,143 | 0,143 | <b>0,428</b> |
| Recycling | 0,429 | 0,428 | 0,429 | <b>1,286</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |           |
|----------|-------|--------------------|-----------|
| Lambda   | 2,999 | RI                 | 0,58      |
|          |       | CR                 | -0,001    |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | Konsisten |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 1,000     |
| Flexibel  | 3,000 | 1,000    | 3,000     |
| Recycling | 1,000 | 0,333    | 1,000     |
| Jumlah    | 5,000 | 1,666    | 5,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,200    | 0,200     |
| Flexibel  | 0,600 | 0,600    | 0,600     |
| Recycling | 0,200 | 0,200    | 0,200     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,200             |
| Flexibel  | 0,600             |
| Recycling | 0,200             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Flexibel  | 0,600 | 0,600 | 0,600 | <b>1,800</b> |
| Recycling | 0,200 | 0,200 | 0,200 | <b>0,600</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Rigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|-----------|--------------|---------------|
| Retak                    | 0,240 | 0,200 | 0,600    | 0,200     | 0,048     | 0,144        | 0,048         |
| Distorsi                 | 0,130 | 0,198 | 0,312    | 0,490     | 0,026     | 0,041        | 0,064         |
| Cacat Permukaan          | 0,210 | 0,198 | 0,312    | 0,490     | 0,042     | 0,066        | 0,103         |
| Pengausan                | 0,130 | 0,098 | 0,254    | 0,647     | 0,013     | 0,033        | 0,084         |
| Kegemukan                | 0,120 | 0,198 | 0,312    | 0,490     | 0,024     | 0,037        | 0,059         |
| Bekas Penanaman Utilitas | 0,170 | 0,429 | 0,312    | 0,429     | 0,073     | 0,053        | 0,073         |
|                          | 1,000 |       |          |           | 0,225     | 0,374        | 0,431         |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,500     |
| Recycling | 9,000  | 2,000    | 1,000     |
| Jumlah    | 12,000 | 3,500    | 1,611     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,143    | 0,069     |
| Flexibel  | 0,167 | 0,286    | 0,310     |
| Recycling | 0,750 | 0,571    | 0,621     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,098             |
| Flexibel  | 0,254             |
| Recycling | 0,647             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,098 | 0,127 | 0,072 | <b>0,297</b> |
| Flexibel  | 0,197 | 0,254 | 0,324 | <b>0,775</b> |
| Recycling | 0,885 | 0,508 | 0,647 | <b>2,041</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,047 |
| Recycling | 3,153 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,074 | RI                 | 0,58             |
|          |       | CR                 | 0,064            |
| Index K. | 0,037 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 1,000     |
| Flexibel  | 0,333 | 1,000    | 0,333     |
| Recycling | 1,000 | 3,000    | 1,000     |
| Jumlah    | 2,333 | 7,000    | 2,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,429 | 0,429    | 0,429     |
| Flexibel  | 0,143 | 0,143    | 0,143     |
| Recycling | 0,429 | 0,429    | 0,429     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,429             |
| Flexibel  | 0,143             |
| Recycling | 0,429             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,429 | 0,428 | 0,429 | <b>1,286</b> |
| Flexibel  | 0,143 | 0,143 | 0,143 | <b>0,428</b> |
| Recycling | 0,429 | 0,428 | 0,429 | <b>1,286</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

**Retak / Cracking****1. Menentukan Parwise Comparism**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,333    | 1,000     |
| Flexibel  | 3,000 | 1,000    | 3,000     |
| Recycling | 1,000 | 0,333    | 1,000     |
| Jumlah    | 5,000 | 1,666    | 5,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Retak     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,200    | 0,200     |
| Flexibel  | 0,600 | 0,600    | 0,600     |
| Recycling | 0,200 | 0,200    | 0,200     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Retak     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,200             |
| Flexibel  | 0,600             |
| Recycling | 0,200             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,200 | 0,200 | 0,200 | <b>0,600</b> |
| Flexibel  | 0,600 | 0,600 | 0,600 | <b>1,800</b> |
| Recycling | 0,200 | 0,200 | 0,200 | <b>0,600</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

**c. Lambda dan index konsistensi**

|          |       |    |        |
|----------|-------|----|--------|
| Lambda   | 2,999 | RI | 0,58   |
|          |       | CR | -0,001 |
| Index K. | 0,000 |    |        |

**Distorsi****1. Menentukan Parwise Comparism**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

**2. Evaluasi Faktor****a. Menghitung Proporsi**

| Distorsi  | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

**b. Rata - rata Baris**

| Distorsi  | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

**3. Rasio Konsistensi****a. Vektor Penjumlahan Tertimbang**

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

**b. Vektor Konsistensi**

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

**c. Lambda dan index konsistensi**

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <b>Konsisten</b> |

**BOBOT FAKTOR**

| Faktor                   | Bobot | Rigid | Flexibel | Recycling | B X Riigid | B X Flexibel | B x Recycling |
|--------------------------|-------|-------|----------|-----------|------------|--------------|---------------|
| Retak                    | 0,240 | 0,200 | 0,600    | 0,200     | 0,048      | 0,144        | 0,048         |
| Distorsi                 | 0,130 | 0,198 | 0,312    | 0,490     | 0,026      | 0,041        | 0,064         |
| Cacat Permukaan          | 0,210 | 0,198 | 0,312    | 0,490     | 0,042      | 0,066        | 0,103         |
| Pengausan                | 0,130 | 0,098 | 0,254    | 0,647     | 0,013      | 0,033        | 0,084         |
| Kegemukan                | 0,120 | 0,198 | 0,312    | 0,490     | 0,024      | 0,037        | 0,059         |
| Bekas Penanaman Utilitas | 0,170 | 0,429 | 0,312    | 0,429     | 0,073      | 0,053        | 0,073         |
|                          | 1,000 |       |          |           | 0,225      | 0,374        | 0,431         |

Rank 3

Rank 2

Rank 1

## Cacat Permukaan

### 1. Menentukan Parwise Comparism

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Cacat     | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Cacat     | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Pengausan

### 1. Menentukan Parwise Comparism

| Pengausan | Rigid  | Flexibel | Recycling |
|-----------|--------|----------|-----------|
| Rigid     | 1,000  | 0,500    | 0,111     |
| Flexibel  | 2,000  | 1,000    | 0,500     |
| Recycling | 9,000  | 2,000    | 1,000     |
| Jumlah    | 12,000 | 3,500    | 1,611     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Pengausan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,083 | 0,143    | 0,069     |
| Flexibel  | 0,167 | 0,286    | 0,310     |
| Recycling | 0,750 | 0,571    | 0,621     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Pengausan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,098             |
| Flexibel  | 0,254             |
| Recycling | 0,647             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,098 | 0,127 | 0,072 | <b>0,297</b> |
| Flexibel  | 0,197 | 0,254 | 0,324 | <b>0,775</b> |
| Recycling | 0,885 | 0,508 | 0,647 | <b>2,041</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,023 |
| Flexibel  | 3,047 |
| Recycling | 3,153 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,074 | RI                 | 0,58             |
|          |       | CR                 | 0,064            |
| Index K. | 0,037 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Kegemukan

### 1. Menentukan Parwise Comparism

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 0,500    | 0,500     |
| Flexibel  | 2,000 | 1,000    | 0,500     |
| Recycling | 2,000 | 2,000    | 1,000     |
| Jumlah    | 5,000 | 3,500    | 2,000     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Kegemukan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,200 | 0,143    | 0,250     |
| Flexibel  | 0,400 | 0,286    | 0,250     |
| Recycling | 0,400 | 0,571    | 0,500     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Kegemukan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,198             |
| Flexibel  | 0,312             |
| Recycling | 0,490             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,198 | 0,156 | 0,245 | <b>0,599</b> |
| Flexibel  | 0,395 | 0,312 | 0,245 | <b>0,952</b> |
| Recycling | 0,395 | 0,624 | 0,490 | <b>1,510</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 3,030 |
| Flexibel  | 3,053 |
| Recycling | 3,078 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 3,054 | RI                 | 0,58             |
|          |       | CR                 | 0,046            |
| Index K. | 0,027 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |

## Penurunan Pada Bekas Utilitas

### 1. Menentukan Parwise Comparism

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 1,000 | 3,000    | 1,000     |
| Flexibel  | 0,333 | 1,000    | 0,333     |
| Recycling | 1,000 | 3,000    | 1,000     |
| Jumlah    | 2,333 | 7,000    | 2,333     |

### 2. Evaluasi Faktor

#### a. Menghitung Proporsi

| Penurunan | Rigid | Flexibel | Recycling |
|-----------|-------|----------|-----------|
| Rigid     | 0,429 | 0,429    | 0,429     |
| Flexibel  | 0,143 | 0,143    | 0,143     |
| Recycling | 0,429 | 0,429    | 0,429     |
| Jumlah    | 1,000 | 1,000    | 1,000     |

#### b. Rata - rata Baris

| Penurunan | Rata - rata Baris |
|-----------|-------------------|
| Rigid     | 0,429             |
| Flexibel  | 0,143             |
| Recycling | 0,429             |

### 3. Rasio Konsistensi

#### a. Vektor Penjumlahan Tertimbang

|           |       |       |       |              |
|-----------|-------|-------|-------|--------------|
| Rigid     | 0,429 | 0,428 | 0,429 | <b>1,286</b> |
| Flexibel  | 0,143 | 0,143 | 0,143 | <b>0,428</b> |
| Recycling | 0,429 | 0,428 | 0,429 | <b>1,286</b> |

#### b. Vektor Konsistensi

|           |       |
|-----------|-------|
| Rigid     | 2,999 |
| Flexibel  | 2,999 |
| Recycling | 2,999 |

#### c. Lambda dan index konsistensi

|          |       |                    |                  |
|----------|-------|--------------------|------------------|
| Lambda   | 2,999 | RI                 | 0,58             |
|          |       | CR                 | -0,001           |
| Index K. | 0,000 | <b>CR &lt; 0,1</b> | <i>Konsisten</i> |