

**CASE STUDY**  
**TURNER CONSTRUCTION FOR BRITISH PETROLEUM**  
**OFFICE BUILDING TENANT IMPROVEMENT BENEFITS**  
**GREEN ZIP TAPE PARTITION<sup>1</sup>**

**Design Basis:**

Typical 9' wall on typical office floor. Head-track 2.5" metal studs, 5/8" drywall on both sides to a ceiling height of 9' with sound insulation. Deck-high walls (13' ±) increase value 50%. Green Zip Tape Partition fee at \$12.00 / linear foot of wall (for 9' tall) based on 2,900 linear feet per floor will be used as cost of investment. Typical floors of 22,166 sq. ft. each.

The following "Savings Gains" are per linear foot (LF) of Green Zip Tape Partition (GZTP).

**G1: Savings Gain #1 – Savings from Re-Use of Wall:**

**Materials Only**

| <b>Installer's Expertise Level</b>                                                                   | <b>1<sup>st</sup> Time</b> | <b>Moderate</b> | <b>Experienced</b> |
|------------------------------------------------------------------------------------------------------|----------------------------|-----------------|--------------------|
| Head-track aluminum                                                                                  | \$3.00/LF                  |                 |                    |
| 5/8" drywall @ \$0.232 sq. ft. x 18/LF (2 sides @9') = \$4.19 one panel each side; 2 panels ea. side | \$8.38/LF                  |                 |                    |
| 2 1/2" metal studs @ \$0.49 sq. ft. x 9/LF = \$4.41LF (add thick gauge for deck high =               | \$7.41/LF                  |                 |                    |
| Sound Batts @ \$0.60 sq. ft. x 9/LF                                                                  | \$5.40/LF                  |                 |                    |
| <b>Reuse cost savings</b>                                                                            | <b>\$23.19/LF</b>          |                 |                    |
| Subcontractor markup (10% overhead, 10% profit                                                       | \$28.05/LF                 |                 |                    |
| General Contractor fees (3% GC's, 3% profit                                                          | \$29.75/LF                 |                 |                    |
| Sales Tax @ 8.25%                                                                                    | \$32.20/LF                 |                 |                    |
| Percentage of Reuse                                                                                  | x .75                      | x.85            | x.95               |
| <b>Value for G1</b>                                                                                  | <b>\$24.15</b>             | <b>\$27.37</b>  | <b>\$30.59</b>     |

<sup>1</sup> **Note:** For presentation purposes, this document was created from information contained in the original Turner Construction Case Study. No data was changed or altered from the original. All "Savings Gains" reported in the original study are reproduced herein accurately and unchanged.

**G2: Savings Gain #2 – Savings from Re-Use of Wall:****Reduced Labor Only**

|                                                                                                                                                                  |                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Net Labor to saw cut & sledge hammer normal wall into cart vs. deconstructing Green Zip Tape Partition for re-use on floor                                       | “net zero”        |
| Labor carting waste via construction freight elevator                                                                                                            | \$0.72/LF         |
| Labor saved not hauling to dumpster (1LF of wall has 18sq.ft. @ \$0.12 sq. ft.                                                                                   | \$2.16/LF         |
| Labor saved not stocking new material: elevator dimensions require gypsum panels to be hand loaded into elevator two sheets at a time (18sf/LF @ \$0.12 sq. ft.) | \$2.16/LF         |
|                                                                                                                                                                  |                   |
| Labor saved not segregating trash materials for demo (9' tall wall @ \$0.30 sq. ft.)                                                                             | \$2.70/LF         |
| <b>Subtotal</b>                                                                                                                                                  | <b>\$7.74/LF</b>  |
| Labor must be overtime due to noise (1.5)                                                                                                                        | \$11.61/LF        |
| Subcontractor markups (10% overhead, 10% profit)                                                                                                                 | \$14.05/LF        |
| General contractor fees (10% overhead, 10% profit)                                                                                                               | \$14.90/LF        |
| Sales Tax @ 8.25%                                                                                                                                                | \$16.13/LF        |
| <b>Value for G2</b>                                                                                                                                              | <b>\$16.13/LF</b> |

**G3: Savings Gain #3 – Savings from Re-Use of Wall:****Landfill Diversion Only**

|                                                                                                             |                             |
|-------------------------------------------------------------------------------------------------------------|-----------------------------|
| 40-yard dumpster pull fee \$650 each. If LF of wall in dumpster for demo is 150 LF, \$650 divided by 150 LF | <b>Texas</b><br>\$4.33 / LF |
| As of 2/10/19, environment fee (\$12.50 per pull / 100 LF)                                                  | \$0.12 / LF                 |
| Last 3 years, Fuel surcharge fee average (\$65 per pull / 100 LF)                                           | \$0.65 / LF                 |
| <b>Subtotal</b>                                                                                             | <b>\$5.10 / LF</b>          |
| General contractor fees (3% overhead, 3% profit)                                                            | \$5.41 / LF                 |
| Sales Tax @ 8.25%                                                                                           | \$5.86 / LF                 |
| <b>Value for G3</b>                                                                                         | <b>\$5.86 / LF</b>          |

**G4: Savings Gain #4 – Savings from Re-Use of Wall:****Materials Accessory to Wall**

Deconstruction methods of GZTP allow greater reuse than normal. During normal demolition the wall is saw cut in half at mid-level and sledged hammered into small enough parts to load into cart and transported to the freight elevator and reloaded into a truck and transported to dump; and new materials purchased, transported to the building, re-loaded onto carts, transported to the freight elevator and delivered to the floor. The following % of each item is normally damaged beyond reuse during this demolition process

unless they are in or adjacent to a demountable Green Zip Tape Drywall Partition. Plus, due to noise most office re-configuration of walls must occur after hours @ overtime rates.

| Installer's Expertise Level                                                                                                                | 1 <sup>st</sup> Time | Moderate       | Experienced    |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------|----------------|
| Net Labor to saw cut & sledge hammer normal wall into cart vs. deconstructing Green Zip Tape Partition and Accessories for re-use on floor | "net zero"           |                |                |
| Electrical (92 offices w/4 outlets ea.=368 ea. Per floor @ ½ of \$125 ea. / 2900 LF                                                        | \$7.93/LF            |                |                |
| Electrical light manual switch and motion detector switch (92 offices w/2 switches ea. = 184 ea. Per floor @ ½ of \$125 ea./by 2900 LF)    | \$3.96/LF            |                |                |
| Millwork (100 LF @ \$100 LF / 2900 LF = \$3.44/LF half =                                                                                   | \$1.72/LF            |                |                |
| Base (4400 LF @ \$1.25 LF / 2900 LF                                                                                                        | \$0/LF               |                |                |
| Doors/Frame/Hardware [92 ea @ (\$900 - \$100) / 2900 LF] = \$25.37; or half =                                                              | \$12.68 LF           |                |                |
| Int. Glazing & Frame material \$31,436 / 2900 LF = \$10.84 LF; or half =                                                                   | \$5.43 / LF          |                |                |
| Subcontractor costs for G4                                                                                                                 | \$31.71/LF           |                |                |
| General Contractor fees (3% GC's, 3% profit                                                                                                | \$33.63/LF           |                |                |
| Sales Tax @ 8.25% (if materials were not reused than they would have been new)                                                             | \$36.40/LF           |                |                |
| Percentage of Reuse more than normal (some already reduced by half above then reduced again here)                                          | x .75                | x.85           | x.95           |
| <b>Value for G4</b>                                                                                                                        | <b>\$27.30</b>       | <b>\$30.94</b> | <b>\$34.58</b> |

### 1<sup>st</sup> Time Installer Experience:

#### Summary

G1 —Wall only: \$24.15 (materials) + \$16.13 (labor) + \$5.86 (landfill diversion) = \$46.14

G2 — Accessories only: \$27.30

G3 — Wall + Accessories = \$73.44, if only 9' tall

G4 —Wall + Accessories of deck high walls = \$27.30

Total — \$73.44 if only 9' tall | Multiply by 1.5 for deck high walls = \$110.16

#### CONCLUSION

**Green Zip Tape Partition will save \$110.16 LF every time a wall is relocated.**

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