

# LUMBER RECLAMATION & THE CIRCULAR ECONOMY

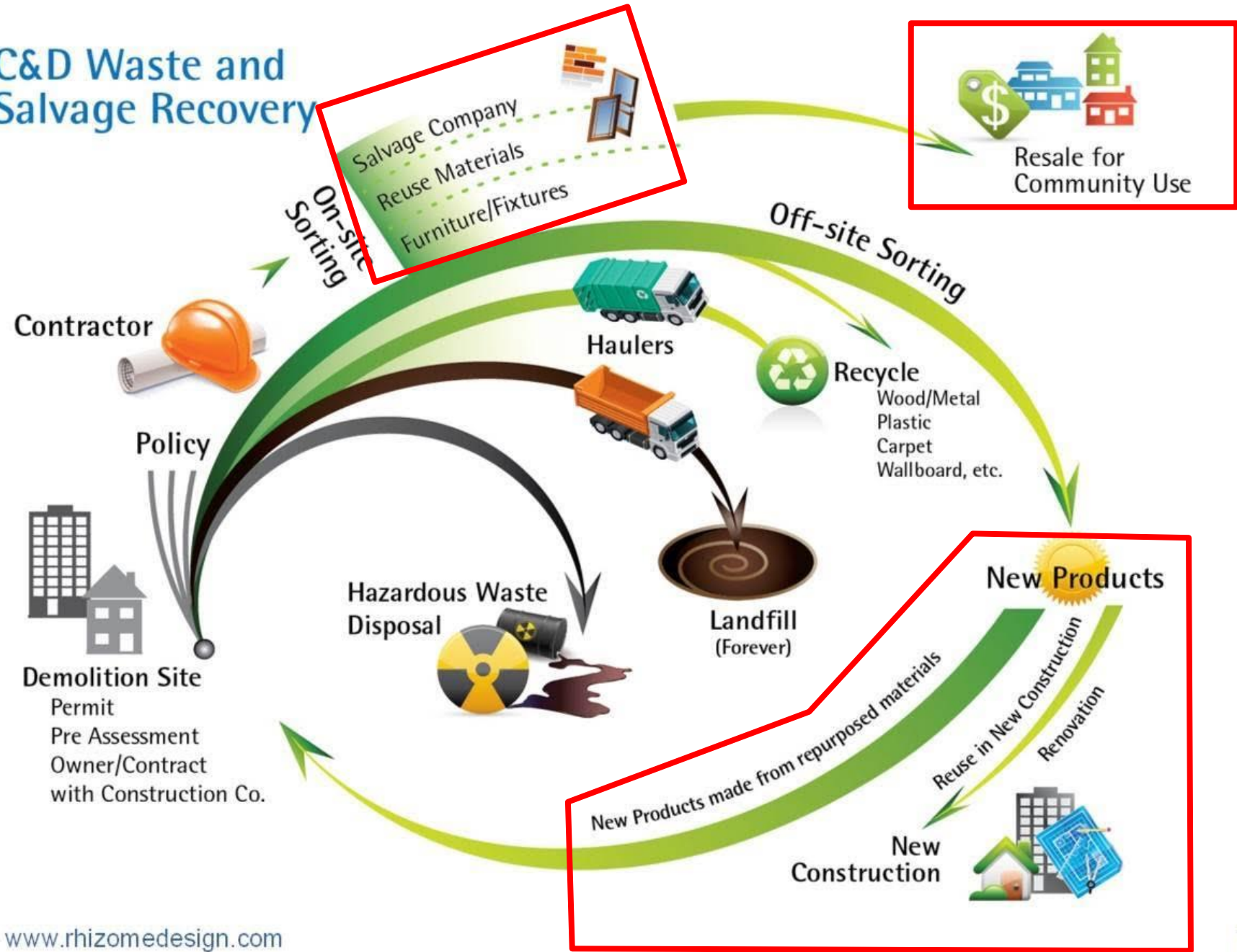
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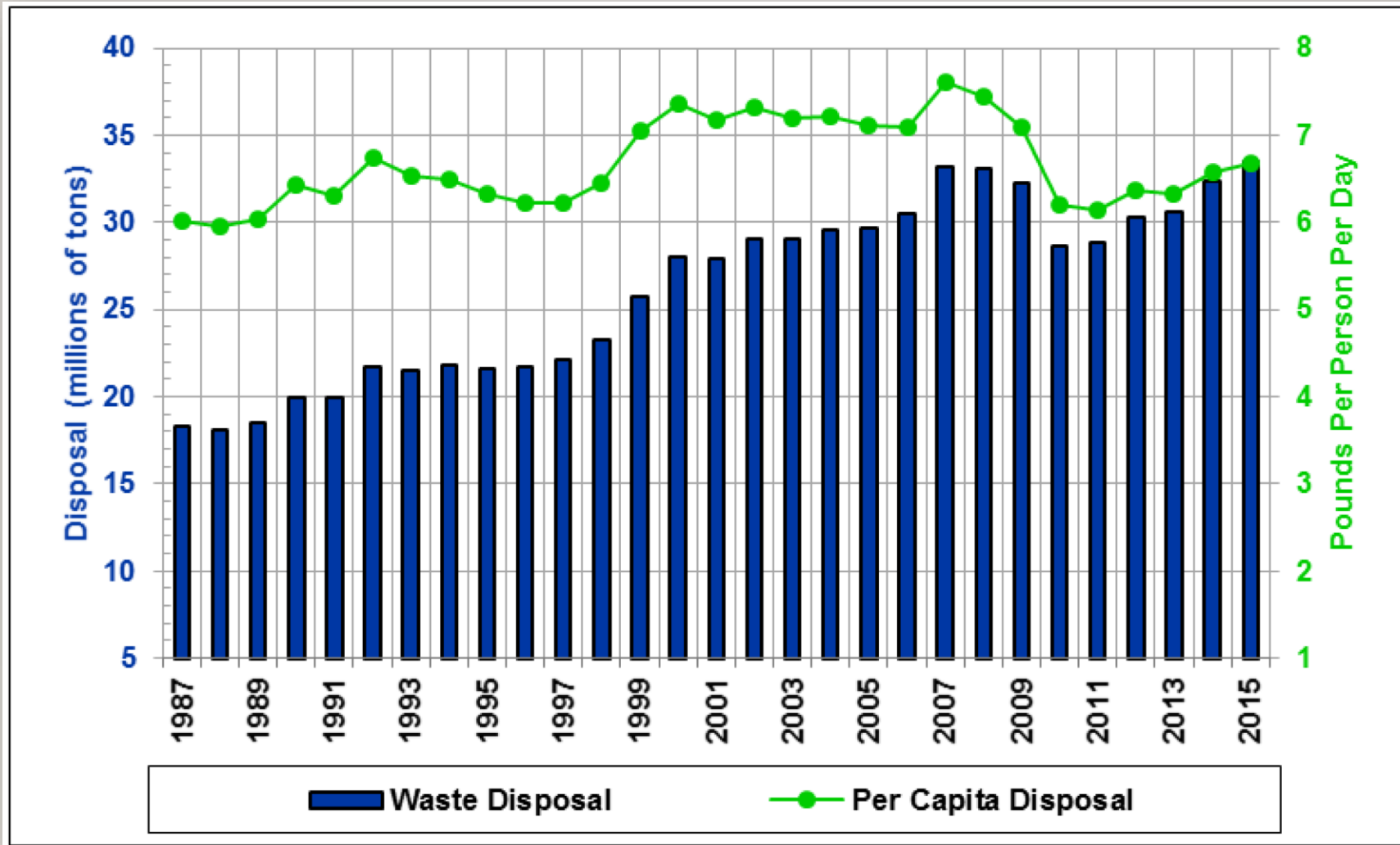
CAROLINE KOSTAK

REPURPOSE DEPOT & THE REUSE PEOPLE

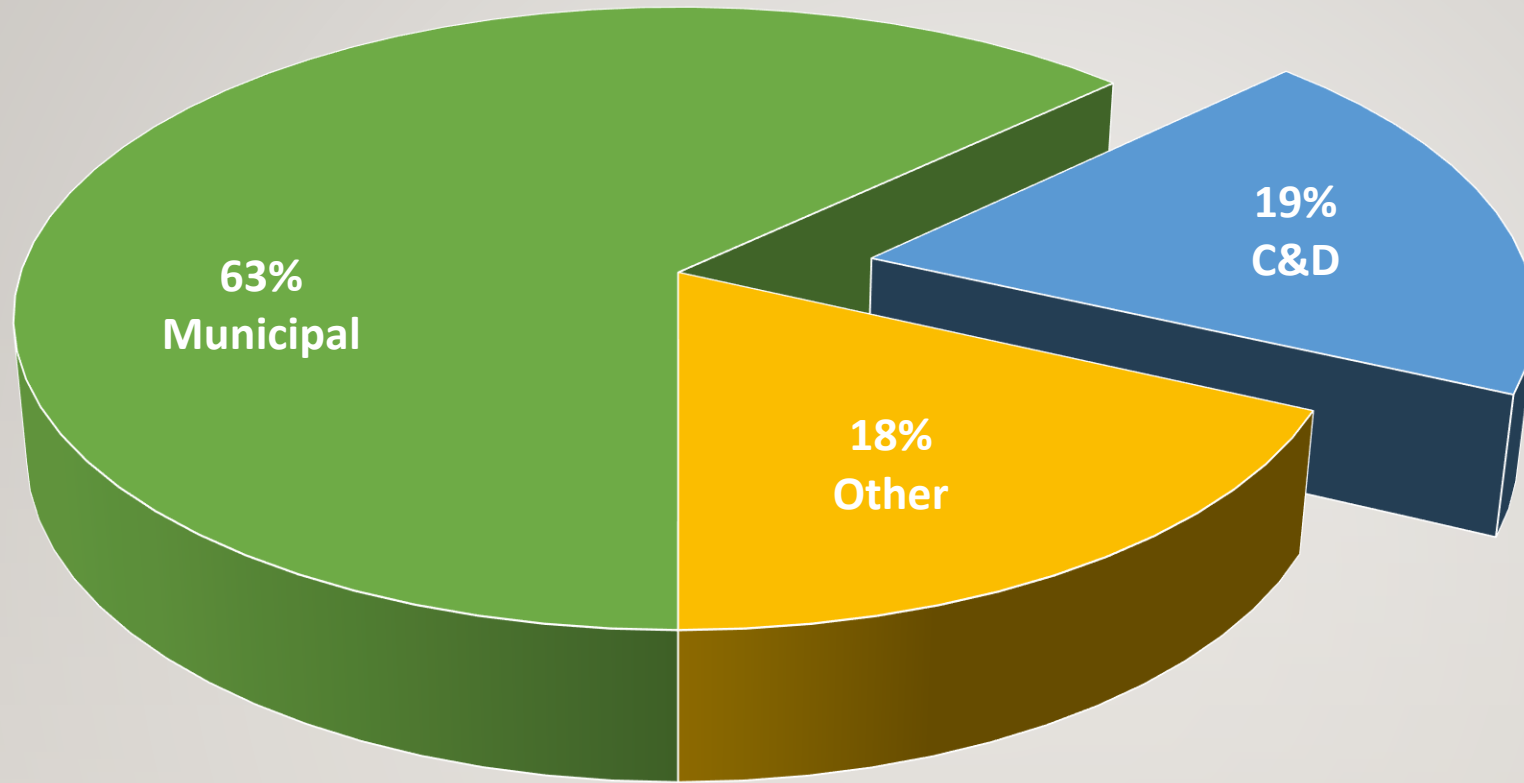


# C&D Waste and Salvage Recovery





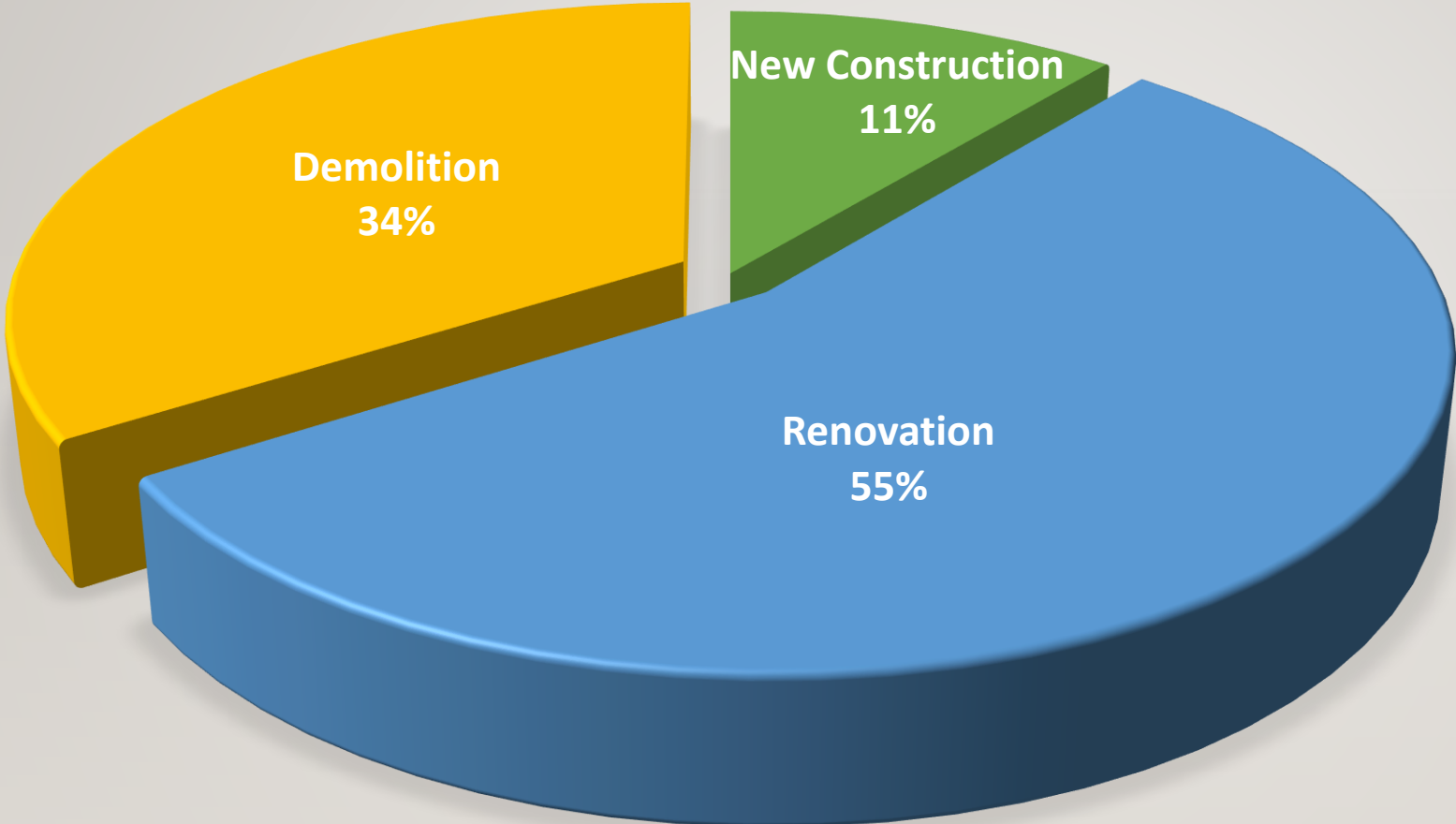
**Total Tons & Per Capita Rate for Texas Municipal Solid Waste, 2015**



## Breakdown of Waste Types Landfilled in Texas for 2015%



# Construction & Demolition Waste Composition



Franklin Associates,  
*Characterization of Building-Related Construction and  
Demolition Debris in the United States*



TCEQ estimates that local MSW Landfills (Type I) have **60 years** of remaining capacity in the H-GAC region%



Table 3. Disposal Amounts and Remaining Capacity by Facility Type in 2015

| Facility Type | Number of Landfills | Disposal (Tons)   | Remaining Capacity (Tons) | Remaining Capacity (Years)* |
|---------------|---------------------|-------------------|---------------------------|-----------------------------|
| I             | 98                  | 29,892,217        | 1,779,762,464             | <b>60</b>                   |
| IV            | 22                  | 3,217,075         | 66,408,231                | <b>21</b>                   |
| IAE           | 32                  | 167,441           | 8,417,471                 | 50                          |
| IVAE          | 21                  | 36,599            | 2,778,277                 | 76                          |
| IAE and IVAE  | 18                  | 130,897           | 8,242,498                 | 63                          |
| Monofill      | 8                   | 5,331             | 175,433                   | N/A                         |
| <b>Totals</b> | <b>199</b>          | <b>33,449,560</b> | <b>1,865,784,374</b>      | <b>56</b>                   |

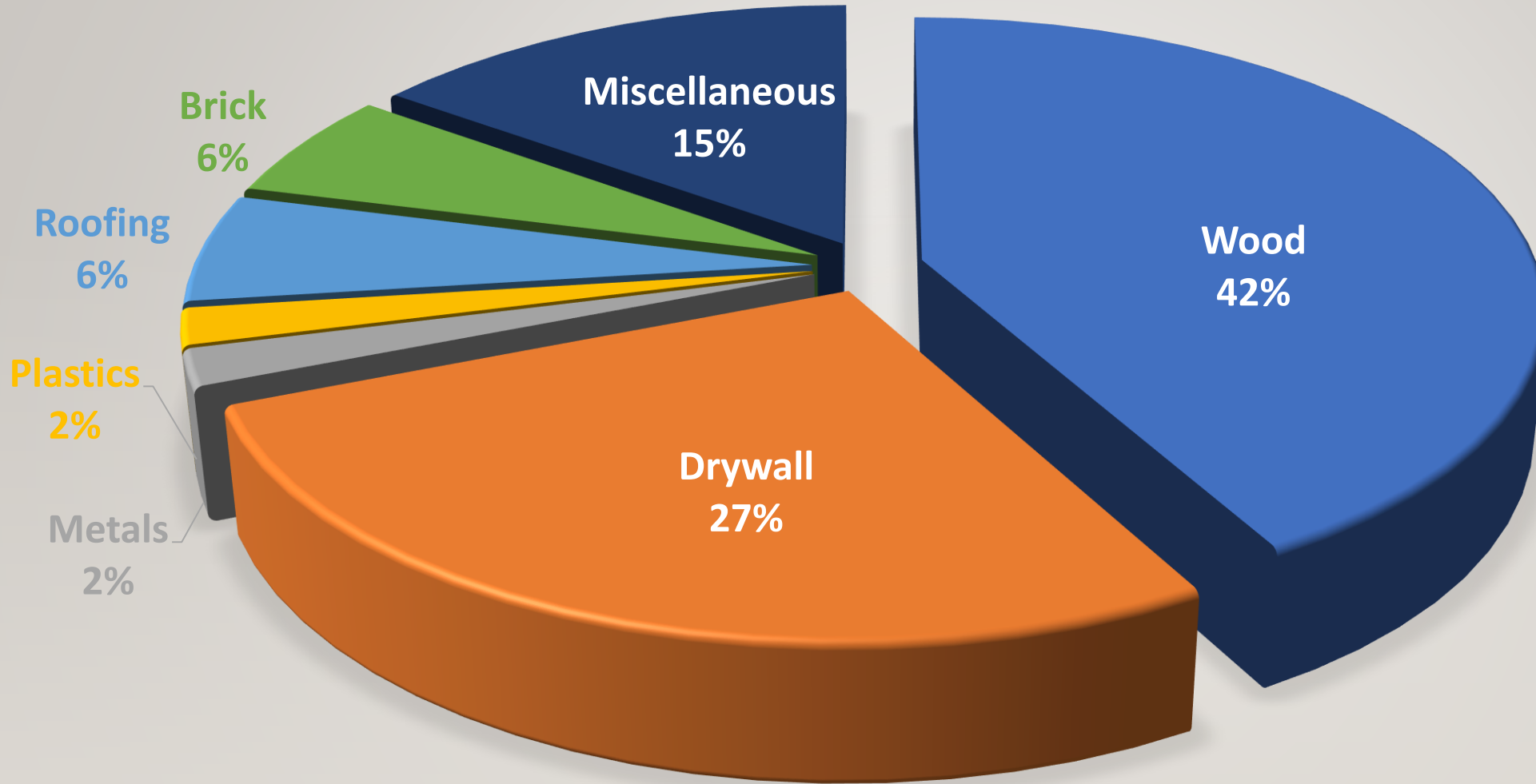




And  
21 years  
in C&D  
landfills  
(Type IV)  
in all of  
the state  
of Texas%

% TCEQ Municipal Solid Waste in Texas: A Year in Review, 2015

# Construction Waste by Weight



Franklin Associates,  
*Characterization of Building-Related Construction and  
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# OPTIONS FOR WOOD WASTE

- Demolition → Landfill
- Recycle → Wood chips, particle board, mulch
- Deconstruction → Resale







In 2016, **1,750** Residential Demolition Permits were issued in Houston





A typical  
2000 ft<sup>2</sup>  
house sends  
3,360 lbs  
(~1.5 tons)  
of wood to  
landfill when  
demolished%





Totalling **5,880,000 pounds (~3,000 tons)** of reusable lumber thrown in the landfill in a typical year





Typical homes in Houston consist of  
1x4, 2x4, 2x6, 4x4, 6x6, plywood, shiplap, structural beams

# CHALLENGES WITH RECLAIMING LUMBER

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- **Time Consuming** – remove stick by stick, denail
- **Requires trained crews** – “Un-building” a house can be dangerous if not done with proper equipment and training
- **Contamination** – Difficult to separate wood from other materials (i.e. foam insulation)
- **Requires storage** –storing reclaimed lumber until it sells requires a lot of space





# CHALLENGES WITH RE-USING LUMBER

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- **Can't use for structural purposes** – can not re-grade lumber (**check with Amanda Tullos**)
- **Harder and dryer** – sometimes challenging for carpenters to work with
- **Sourcing** - Quantities and qualities are not always easy to find



BUT...

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It CAN be done...





# THINGS TO DO WITH RECLAIMED LUMBER

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# THINGS TO DO WITH RECLAIMED LUMBER

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# THINGS TO DO WITH RECLAIMED LUMBER

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# SUMMARY

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- We, as a society, have a responsibility to think coherently about how we want to manage our waste
- We choose to make houses with a lifespan of 50-75 years
- We are nearing the end of that lifespan for many houses in Houston
- How do we want to responsibly manage that waste?





# REFERENCES

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- [Characterization of Building-Related Construction and Demolition Debris in the United States \(PDF\)](#)
- TCEQ Annual Solid Waste Reports:  
[https://www.tceq.texas.gov/permitting/waste\\_permits/waste\\_planning/wp\\_swasteplan.html](https://www.tceq.texas.gov/permitting/waste_permits/waste_planning/wp_swasteplan.html)
- Network for Business Innovation and Sustainability: <http://nbis.org/>