



Under 1 Roof

Residential Roof Repair Program

Under 1 Roof Program

Housing Committee

August 25, 2016

Presented by: Bridgett White, AICP, Interim Director

Program Objectives



Maintain home integrity by addressing roofing needs



Improve energy efficiency and reduce utility bills



Demonstrate benefits of cool roofs to builders and residents



\$200,000 included in FY2016 Budget for Pilot Program

Program Benefits



SAN ANTONIO UNDER 1 ROOF

A RESIDENTIAL ROOF REPAIR PROGRAM

The sun's radiation hits the roof surface.

White roofs, also known as high-reflectance roofs, can reflect 75% of solar energy away.

Dark roofs hold more than 80% of solar energy, due to lower thermal emittance--the material's ability to release the heat it has absorbed.

White roofs lose the energy they do absorb more quickly.

Buildings with high-reflectance roofs are cooler and cheaper to air-condition.

Dark roofs lose the energy they absorb more slowly.

Buildings with dark colored-roofs are hotter and more expensive to air-condition.

- **Maintain home structure and stability**
- **Improve Indoor Comfort**
- **Reduce Overall Attic Temperature**
- **Decrease Roof Maintenance**
- **Energy Savings**

Timeline



1st & 2nd Qtrs

3rd Qtr

4th Qtr & FY 2017

**Cluster
Selection**

**Qualify
Applicants**

**Construction
Complete
(11 homes)**

**Monitoring
&
Evaluation***

***UTSA will perform
before/after
monitoring to gauge
success of pilot
initiative.**

Program Results



- June 14, 2016 – Construction began
- July 15, 2016 - Construction completed for ten (10) homes
- August 2, 2016- Construction began for an additional roof (surplus funds) and completed on August 4, 2016
- A total of eleven (11) homes completed

Before & After Pictures



522 El Monte



Before



After

Before & After Pictures



615 Lovera



Before



After



Under 1 Roof

Residential Roof Repair Program

Monitoring and Evaluation



UTSA Scope of Work

- Impact of new high reflectance roofs will be monitored for a 1-year period
- Conduct pre- and post-onsite visit and confirm eligibility of each home
- Document existing conditions of each home using a Home Energy Checklist form and obtain 12-month utility for pre- and post-retrofit (electricity and gas) from CPS Energy
- Collect attic and roof temperatures pre- and post-retrofit for each home (will utilize HOBO temperature loggers)

Monitoring and Evaluation (cont'd)



UTSA Deliverables

- Energy analysis pre- and post-retrofit with estimated energy and costs savings
- Copies of data collection and analysis (pre- and post-conditions)
- Portfolio Manager database
 - Utility and home energy data will be inputted into EPA's ENERGY STAR Portfolio Manager