

**SPAR APPLICATION**  
**PROJECT DESCRIPTION**  
**FOR**  
**REDEVELOPEMNT OF PLAZA NORTH SHOPPING CENTER**

**SITE DESCRIPTION**

The proposed Home Depot project is located in the Pacific North Shopping Center at 261 N McDowell Blvd Petaluma, CA. This location is zoned as Commercial – 2 (C2). The project description prescribes specific standards for the proposed project's permitted uses allowed under the existing C2 Zoning. The 19.29-acre site proposed for the Home Depot is an existing shopping center. The Home Depot will be replacing the 90,454 SF Kmart.

**PROJECT DESCRIPTION**

**Site Improvements**

The total Home Depot project square footage is comprised of a 107,891-square foot main building and a 28,216-square foot Garden Center. The proposed building would be one story and approximately 25 feet in height to the roof and 34 feet to the top of parapet at the main entrance. The Home Depot project site plan will utilize the 2 existing driveways from the proposed access road connection at North McDowell Blvd and 1 at the Shared Drive. The project shopping center parking lot will provide a total of 850 shared stalls, within the 850 stalls, 454 stalls will be dedicated to the Home Depot.

**Signage**

Signage for the proposed Home Depot building will consist of a main wall identification sign, “The Home Depot”, which will be 6 feet high by 73 feet wide. Secondary directional signs are also proposed that will consist of “Tool Rental”, “Lumber”, and “Garden Center” signs along the front of the building. As part of the Master Sign Program for the Shopping Center, there will be “freestanding” monument signs at the corner of N McDowell Blvd. A separate submittal for a Sign Package will be provided by Home Depot’s signage vendor during the construction document phase.

**Project Operation**

Once site development and construction is completed, the proposed Home Depot store will employ approximately 145 to 175 full and part time employees during 3 daily shifts. The store is proposed to be open Monday through Saturday 6 AM to 10 PM and on Sunday 7 AM to 9 PM.

The company proposes to receive off hour deliveries at an on-site location near the truck dock boundary over 500 feet from the residential use, which typically includes One (1) to six (6) flatbed trucks delivering to the front lumber canopy, which will occur after store closing hours. The truck dock is recessed and has an additional sound wall adjacent to it, to reduce any noise and sound.

Also, approximately one (1) to four (4) flatbed trucks delivering to the garden center located at the rear of the store on a weekly basis. Approximately eight (8) to ten (10) light duty or semi-trucks for delivery of other building materials and home improvement products will be delivered to the loading dock located at the rear of the store behind the garden center on a weekly basis. These deliveries occur with the truck backing up to the loading dock seal, which all deliveries occur internal to the building. Two (2) "Load-n-Go" trucks parked in the spaces delineated on the submitted Site Plan will be available to customers wishing to rent a small flatbed truck (18 feet +/- ) to transport materials on their own, in addition one (1) van will be provided to customers to rent for transporting materials. An area for rental trucks (26 feet +/-) have been designated on the Site Plan for customers to transport materials purchased at the store or for other uses. There will be miscellaneous daily deliveries to the store from UPS, Federal Express, U.S. Post Office, and etc. that typically occur at the front entrance.

The Home Depot store proposes to display and sell various seasonal items from an area outside the garden center that will be screened from public views, the store will include a special events area in the parking lot. Certain events require tents or awnings in order to protect both merchandise and customers from weather conditions. Included among these items are expected to be trees, plants, nursery materials and Christmas trees. This seasonal area will not be used to store building materials or home improvement items. The Home Depot store also proposes to permanently display several items such as barbeques, patio furniture, material displays, fencing displays, sheds, and compact power rental equipment within areas located along the front of the store, and within the parking area, as depicted on the submitted Site Plan.

Per Federal Law, propane cannot be stored inside the building; therefore, propane cylinders are stored in front of the store to a depth of approximately 3 feet. Each propane stand, which is 16 feet in length and 4 feet high, will be located to the side of the main entry, approximately 40 feet from the door opening.

Refuse will be processed in a compactor unit located within the dock area at the rear of the building where any refuse will be fully contained and accessed internally. A typical satellite dish for business transaction communications and programming will be installed on the roof/parapet system.

A zero curb is proposed along the entire front of the proposed store, as a convenience to customers, and to facilitate the safe loading and unloading of purchases. A Tool Rental Center (TRC) is proposed for this location, which will consist of the rental of small power tools, as well as larger power/gas driven equipment, located within the building and the designated area on the Site Plan.

## **Energy-Efficient Project Components**

Home Depot incorporates many energy saving measures when constructing a new facility. Listed below are the energy-saving practices that Home Depot currently incorporates into its new buildings that help to conserve energy and other natural resources:

### Energy Conservation:

1. Many building materials or products which have been extracted or harvested or recovered, as well as manufactured materials within 500 miles of the project site, will be used.
2. Roofing materials having a Solar Reflectance Index (SRI) of 78 or greater will be used for the roof surface.
3. Exterior lighting will meet allowable levels, thus reducing energy power consumption.
4. Parking area lighting will be designed to provide the minimum number of fixtures per local security code and will be LED lighting.
5. LED lighting is used for all signage.
6. LED lighting will be utilized throughout the interior of the store.
7. Automatic infra-red flow valves are utilized for plumbing fixtures.
8. Home Depot utilizes a Master Energy Management system which monitors lighting and HVAC power consumption.

## **Home Depot has Performed an Energy Analysis**

### **Energy Analysis**

- Using cove.tool the team conducted a preliminary energy analysis for the proposed building.
- Baseline model projected a Whole Building EUI (Energy Use Intensity) of 33.69 kBtu/ft<sup>2</sup>/yr.
  - The baseline model is a metal building with standard insulation, no skylights, no photovoltaic panels, and packaged electric/gas roof top units.
  - Results are shown on sheet EA-1 of this submittal.
  - Breakdown of the baseline EUI showed that equipment and lighting were the largest contributors to energy use, followed by cooling.
    - Equipment load reductions were not considered as a part of this preliminary analysis but will be investigated when the project moves forward.
    - Lighting levels in the building are already minimized and high efficiency LED fixtures are specified.
    - Cooling and heating loads are lesser contributors to overall operating energy thanks to the lovely, mild climate of Petaluma.
- The team explored multiple options to reduce the whole building EUI. Home Depot analyzed their impact at first individually on the whole building and in category breakdowns. Findings are tabulated on sheet EA-1 of this submittal. These included:

- Variations in wall and roof insulation values
  - Increases in roof and wall insulation values resulted in a higher EUI, as cooling loads increased more than heating loads were reduced. The standard insulation values were more appropriate for this climate.
  - Give the above findings, a decrease in roof insulation value was considered in order to reduce materials used. This resulted in a reduced cooling load but increased heating load and an overall higher EUI.
- Heat pump HVAC units
  - To eliminate fossil fuel-based energy sources, all electric heat pump units were considered. This resulted in a slight increase in whole building EUI, with cooling loads reduced and heating loads increased due to efficiency differences.
- Roof top solar panels
  - Photovoltaic energy production levels were considered based on the available roof area. If there are no skylights on the building, approximately 60% of the roof area could be covered in PV panels. If there are skylights, only 30% of the roof area would be available for PV install.
  - At 60% roof coverage, the baseline building would operate beyond net zero.
  - At 30% roof coverage, the PV could offset ~57% of operating energy.
- Skylights and daylight sensor-controlled lighting
  - With lighting being the second highest contributor to operating energy use, highly efficient fixtures already specified, and lighting levels minimized, we considering introducing skylights and daylight sensor-control to reduce the lighting load.
  - With 117 skylights evenly distributed, lighting load was reduced by ~23%.
  - Cooling and heating loads were impacted due to overall reduction in roof insulation value.

- With the above information, the team then analyzed the impact of bundled options based on three strategies. Findings are tabulated on sheet EA-1 of this submittal and breakdowns of each bundle are provided for comparison with the baseline.

- Bundle A was focused on reducing operating energy.
  - Adding skylights and daylight sensor-controls reduced lighting loads.
  - Introducing skylights reduced the overall insulation of the roof assembly, reducing cooling loads.
  - Heat pump HVAC units reduced the heating loads based on their efficiency.
  - Whole building EUI was reduced by 3.6 kBtu/ft<sup>2</sup>/yr or 10.7% of baseline EUI.
- Bundle B was focused on maximizing solar power generation.
  - No skylights were added, which allows for more roof area to be covered with photovoltaic panels.
  - Heat pump HVAC units coupled with reduced roof insulation lowered cooling loads and increased heating loads; however, the net heating and cooling loads are lower than those of the baseline.
  - More than enough solar power is generated with the PV panels to offset the operating energy of the building for the year; resulting in a net positive building.

- Whole building EUI was reduced by 38.51 kBtu/ft<sup>2</sup>/yr or 114.3% of baseline EUI.
- Bundle C was a combination of operating energy reductions with solar power.
  - Skylights and daylight sensors are added to reduce lighting loads.
  - Skylights lower the overall roof assembly insulation value and coupled with heat pump HVAC units the heating and cooling loads are reduced from the baseline.
  - Photovoltaic panels are distributed throughout the roof but cover a reduced area due to the skylights.
  - Whole building EUI was reduced by 22.6 kBtu/ft<sup>2</sup>/yr or 67% of baseline EUI.
- Based on the above analysis, the team is proposing Bundle B be implemented at this building to achieve an all-electric and net positive energy building. The Bird's-Eye View rendering on sheet PR-6 shows the solar array proposed on the roof. More detailed energy calculations are to be performed by the engineering team and solar panel provider to determine the exact number of panels needed to achieve this.

### **Other Sustainability Highlights**

-Pre-engineered metal building with metal roof and walls

- Structure is optimized based on specific site criteria and code requirements.
- Structural elements, wall panels, and roof panel are comprised of high recycled content and are highly recyclable.
- Material reductions reduce the weight of the building, resulting in smaller foundations as compared to conventional steel building with tilt-up concrete wall panels.
- Overall reduction in materials lowers the embodied carbon of the building.

### **Recycling Program**

Home Depot is committed to recycling in its operations, as well as making it easier for customers to recycle in their communities.

Home Depot recognizes that recycling is a lifetime commitment that requires efforts every day of the year, and it will continue to recycle and support companies that use recycled content.

Home Depot recycles "OCC" (old corrugated containers) materials such as cardboard, paper bags, Kraft paper, corrugated cores, boxboard and mixed paper including magazines, ads, books and newspapers. These items are combined and baled in 30 lb. bales. This operation takes place within the building, and the bales are picked up by independent contractors.

Plastic floral pots and buckets are also recycled and processed separately from all other materials. The Home Depot has a Recycling Program for environmentally sensitive materials such as rechargeable batteries (RBRC), compact fluorescent light bulbs (CFL), paint, and white goods, as follows:

- Rechargeable Batteries: All Home Depot stores have units for collection of rechargeable batteries and works in partnership with RBRC on collection and recycling of these batteries. Customers bring in their old rechargeable batteries (and cell phones), place them in a plastic bag available on the unit, and deposit in the unit for recycle. The store then ships the full box of batteries for recycling to RBRC.

- Fluorescent Bulbs: At all Home Depot stores, customers can bring in any expired CFL bulbs and deposit them into a collection unit located at the front end of the store. The bulbs will then be managed responsibly by an environmental management company who will coordinate CFL packaging, transportation and recycling to maximize safety and ensure environmental compliance.
- Oops Paint Program: Mis-mixed paint is sold at a reduced cost. This removes the mis-mixed paint from the store's hazardous waste stream and allows for it to still be used.
- White Goods Program: This involves products that are not able to be resold at the store at a reduced price, such as returned or damaged goods.

This includes the following categories of items: air conditioners, freezers, clothes dryers, garbage disposals, cook tops, dishwashers, range hoods, gas grills, lawnmowers, microwave ovens, stoves, refrigerators, washing machines, water heaters, weed eaters, and outdoor power equipment.

These items are hauled away by a local vendor and are either broken down and recycled or repaired and resold at a reduced cost by a small appliance business. All oils, gasoline, etc. are removed by the store prior to pick up.

In addition, stores have a partnership with lead acid battery vendors who take back spent, non-leaking batteries for recycling.

## **Outside Sales**

The Home Depot store proposes to sale various seasonal items in a designated seasonal sales area in the parking lot that will be enclosed with a 6' fence. Included among these items are expected to be trees, plants, nursery materials, and Christmas trees. This seasonal area will not be used to store building materials or home improvement items. The seasonal display area in the parking lot will take place from March 1st to July 31st and November 15th to December 31st.

The Home Depot store also permanently sells a number of items such as barbeques, patio furniture, and material and fencing displays within areas located along the front of the store, which are to be designated with green striping.

Also, included on the Site Plan are Outdoor Sales and staging areas and these areas are limited to the designated locations, which must be clearly striped in yellow for areas in the parking field. The purpose for the staging area is to allow for product to be brought in and taken off the flat-bed trucks to be brought into the store or garden center within 72 hours. This is to allow for available merchandise during heavy sale periods to keep product on-site and avoid additional trucking, which helps on the carbon footprint. The height is typically 3 stacked pallets.

## **THD Equipment Rental**

The Site Plan includes display of THD rental equipment that can be rented through the TRC. It should be noted that this operation is owned and operated by Home Depot and Home Depot Associates are the designated staff for transactions. There are no third-party vendors for this operation. Home Depot does not maintain or repair this equipment on-site, as they are sent to a designated repair location off-site. It should be noted that the off-site repair centers are also owned and operated by Home Depot. Such equipment are items like small trailers, see the attached file for a list of example compact power equipment, see attached sample rental equipment document.