

Electro_Shock Pro: Updated Design Document

This submission includes revised user personas, wireframes, storyboards, and a style guide, reflecting the expanded MVP and enhanced features based on the feedback received.

1. User Personas

Updated Personas

Field Electrician

- Goals: Perform on-site electrical calculations quickly, validate results, and ensure compliance with industry standards.
- Motivations: Efficiency, accuracy, and real-time validation to avoid costly mistakes.
- Challenges: Requires a reliable tool that functions offline and offers a streamlined, user-friendly experience.

Electrical Engineer

- Goals: Access a wide range of electrical calculations in one app, save results for project records, and analyze calculation trends.
- Motivations: Streamlined workflow, accurate data for project planning, and ease of use.
- Challenges: Needs advanced calculation tools and the ability to save and export data for documentation.

DIY Enthusiast

- Goals: Verify electrical calculations for home projects, ensure safety, and follow code requirements.
 - Motivations: Safe and accurate project execution, ease of use for non-professional users.
 - Challenges: Needs simplified input options and clear explanations of results.
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2. Updated Wireframes

MVP Wireframes

The MVP wireframes include core features such as Ohm's Law Calculator, Voltage Drop Calculator, and Power Calculation Tool. Each wireframe shows the layout and key elements of the pages:

1. **Main Menu**
 - Includes options for Ohm's Law, Voltage Drop, and Power Calculations.
 - Simple navigation with large, touch-friendly buttons.
2. **Ohm's Law Calculator**
 - Input fields for voltage, current, and resistance.
 - Calculate button to generate the missing value.
 - Results displayed instantly with an option to save the calculation.
3. **Voltage Drop Calculator**
 - Input fields for cable size, length, current, and type.
 - Results include voltage drop and compliance status based on industry standards.
 - Option to save and favorite the calculation.
4. **Calculation History Page**
 - Displays a list of saved calculations with timestamps.
 - Options to view, edit, delete, or favorite calculations.

Stretch Feature Wireframes

1. **User Login Page**
 - Allows users to register and log in to manage their personalized calculation history.
 - Provides fields for username, email, and password.
 2. **Favorites Page**
 - Shows a list of favorited calculations for quick access.
 - Includes options to view detailed results or remove from favorites.
 3. **Analytics Page**
 - Displays user activity insights, such as most frequently used calculation types.
 - Provides data visualization for calculation trends.
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3. Storyboards

MVP Storyboard: Field Electrician

Scenario: A field electrician needs to quickly check a voltage drop calculation for a new circuit installation.

1. The user opens the app and selects "Voltage Drop Calculator" from the main menu.
2. The user inputs the cable size, length, current, and type.
3. The user taps "Calculate," and the app displays the voltage drop result.
4. The user saves the result for future reference and exits the app.

Expected Outcome: The user successfully verifies the voltage drop and ensures compliance with code standards, avoiding potential issues.

Stretch Feature Storyboard: Electrical Engineer

Scenario: An electrical engineer wants to save and analyze data from previous calculations.

1. The user logs in to the app and navigates to the "Calculation History" page.
2. The user reviews saved calculations, marking specific ones as favorites.
3. The user opens the "Analytics" page to view a summary of their calculation activity.
4. The user exports the data as a CSV file for project documentation.

Expected Outcome: The user efficiently manages their calculation history, gaining insights into their work patterns.

4. Style Guide

Color Palette

- Primary Color: Deep Blue (Hex: #003366) for a professional and trustworthy appearance.
- Accent Color: Electric Yellow (Hex: #FFD700) for interactive elements and highlights.
- Background Color: Light Gray (Hex: #F0F0F0) for a clean, minimal look.
- Text Color: Dark Gray (Hex: #333333) for readability against light backgrounds.

Fonts

- Main Font: Roboto for modern, clean readability.
- Heading Font: Open Sans Bold for clear distinction in titles and headers.
- Button Font: Open Sans Semibold for emphasis on interactive elements.

Styling Elements

- Buttons: Rounded corners with a slight shadow for a 3D effect.
 - Input Fields: Underlined text boxes with clear labels and placeholders.
 - Navigation Bar: Fixed at the top with the app logo and back button for easy navigation.
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5. Summary of Changes

- Added new user personas to cover a wider audience, including DIY enthusiasts.
 - Expanded wireframes to include both MVP features and stretch features.
 - Developed detailed storyboards that illustrate the user flow and interaction for both MVP and stretch features.
 - Created a comprehensive style guide with consistent color and font choices.
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Turn-In Comments

- Changes Made: Enhanced the MVP scope with additional features, expanded user personas, included stretch feature wireframes, and developed a detailed style guide.
- No Changes: None, as all sections were updated based on feedback and expanded project goals.