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# 01_PROJECT_OVERVIEW.md
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**BAT Migration Project - Complete Overview**  
**Consolidated Project Reference**
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**Consolidates:** START_HERE.md, BAT_MIGRATION_PROJECT_BRIEF.md,  
BAT_NAVIGATION_GUIDE.md, ANALYSIS_SUMMARY.md, BAT_INTEGRATION_COMPLETE_SUMMARY.md  
**Created:** November 10, 2025  
**Last Updated:** November 10, 2025  
**Version:** 2.0  
**Status:** Active - Primary Reference
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⚡ EXECUTIVE SUMMARY

What We're Building

A unified SQL database and Excel toolset that consolidates **Richmond American** and **Holt Homes** Builder Acceleration Tools (BATS) into a single, maintainable system ready for their **March 2026 merger**.

Why It Matters

- **65,000+ material line items** need proper database structure
- **Two incompatible systems** must work together
- **March 2026 merger deadline** creates urgency
- **\$170,000+ annual value** in time savings
- **Zero pricing errors** through database validation

Project Scope

- **Timeline:** 12 weeks (November 11 - February 28, 2026)
- **Investment:** 148 hours (12.3 hours/week)
- **Team:** Corey (lead), William (Richmond), Alicia (Holt)
- **Technology:** SQLite database + Python tools + Excel interface
- **Outcome:** Merger-ready unified system with 8 weeks production testing

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📊 CURRENT STATE (Ground Truth)

Richmond BAT Status

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Plans Active: 9 of 44 (20%)
Plans to Import: 35 (80%)
Material Line Items: 55,604 total
Unique SKUs: 581
Status: Ready for automated import
Source: RAH_MaterialDatabase.xlsx (confirmed)
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****Critical Issues:****

- Triple-encoded elevation data (|10.82BCD appears 3 places)
- No standardized coding system
- Manual price updates (tool needs enhancement)
- Can't query across plans easily
- Excel file size approaching limits

Holt BAT Status

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Plans Active: 47 of 50 (94%)  
Plans to Import: 3 remaining  
Material Line Items: 9,373 total  
Communities: 5 (CR, GG, HA, HH, WR)  
Status: Nearly complete  
Python Updater: Production ready  
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****Advantages:****

- Pricing updater working (holt_updater.py)
- Most plans already documented
- Community structure clear
- Clean data structure

Combined Reality

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Total Plans: 44 Richmond + 50 Holt = 94 plans  
Total Materials: 55,604 + 9,373 = 64,977 line items  
Database Size: Needs proper SQL database  
Systems: Incompatible (need translation layer)  
Merger Deadline: March 2026 (4 months)  
```

⚡ TARGET STATE (Vision)

March 2026: Unified System

****Database Layer:****

- SQLite database with 10 core tables
- 65,000+ materials properly normalized
- Single source of truth for all data
- Translation layer for Richmond ↔ Holt codes
- Fast queries (milliseconds vs minutes)
- Proper relationships and constraints

****Excel Interface:****

- Material order generator (15 min → 2 min)
- Price lookup tool (instant results)

- Plan comparison tool
- Automated price update workflow
- Familiar interface for team

****Operational Benefits:****

- Zero pricing errors (database validation)
- Consistent data (single source)
- Fast decision-making (instant queries)
- Better customer service (faster quotes)
- Merger-ready (unified system)
- Scalable (Manor Homes future integration)

📈 12-WEEK ROADMAP

PHASE 1: Foundation (Weeks 1-4) - 52 hours

Week 1 (Nov 11-15): Coding Standards & Architecture * CURRENT WEEK

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Monday (4 hours): Analysis Complete

- |- Item numbering audit
- |- Richmond structure audit
- |- 45 pages documentation created

Tuesday (6 hours): Architecture Decisions  CRITICAL

- |- Decision 1: Plan-Pack Relationship
- |- Decision 2: Plan-Elevation Model
- |- Decision 3: Internal Option Codes
- |- Database schema design (10 tables)

Wednesday-Thursday (8 hours): Documentation

- |- Coding standards document
- |- Import mapping rules
- |- Team review preparation

Friday (2 hours): Team Validation

- |- William review (Richmond perspective)
- |- Alicia review (Holt perspective)
- |- Finalize Week 1 deliverables

Deliverables:

- item\_numbering\_patterns.txt (Monday)
- richmond\_structure.txt (Monday)
- 3 architecture decision documents (Tuesday)
- schema\_design\_v1.sql (Tuesday)
- BAT\_Coding\_Standards.docx (Wed-Thu)
- Team validation complete (Friday)

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Week 2 (Nov 18-22): Pricing Tools - 10 hours

-
- |- Enhance Holt updater (logging, preview)
- |- Build Richmond updater (full functionality)
- |- Create price schedule
- |- Test both systems

Deliverables:

- Enhanced holt_updater.py
- richmond_updater.py
- RUN_RICHMOND_UPDATE.bat
- Price schedule documentation

Week 3 (Nov 25-29): Standardization - 14 hours

- |- Table inventory (both BATs)
- |- Define naming convention
- |- Batch rename all tables
- |- Create cross-reference sheets

Deliverables:

- Table_Inventory_Complete.xlsx
- All tables renamed per convention
- Holt community cross-reference
- Validation complete

Week 4 (Dec 2-6): Plan Details - 8 hours

- |- Add Arch/Eng date columns
- |- Populate dates for all plans
- |- Foundation checkpoint
- |- Ready for content phase

Deliverables:

- Complete Plan Index with dates
- Foundation Phase complete

PHASE 2: Content Import (Weeks 5-8) - 32 hours

Week 5 (Dec 9-13): Small Plans - 8 hours

Import: 8 small Richmond plans (<500 materials each)

Plans: G18L, G19E, G21D, G31H, G33H, G44H, G48H, G148

Method: Python automated import

Source: RAH_MaterialDatabase.xlsx

Week 6 (Dec 16-20): Medium Plans - 8 hours

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Import: 12 medium Richmond plans (500-1500 materials)

Plans: G01H, G17E, G17F, G22M, G23H, G29A, G44C, G56H, G591, G592, G593, G601

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Week 7 (Dec 23-27): Large Plans - 8 hours

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Import: 8 large Richmond plans (1500-3000 materials)

Plans: G250, G260, G639, G654, G698, G712, G730, G760

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Week 8 (Dec 30-Jan 3): Final Plans - 8 hours

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Import: 7 largest Richmond plans (3000+ materials)

Plans: G603, G914, LE01, LE91, LE92, LE93, LE95

Validation: Complete dataset verification

Status: 100% plan coverage achieved

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PHASE 3: Infrastructure & Testing (Weeks 9-12) - 64 hours

Week 9-10 (Jan 6-17): Database & Tools - 40 hours

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- Database strategy decision (SQLite vs SharePoint)
- Create database and populate
- Build Excel tools (Material Order, Price Lookup)
- Apply consistent formatting
- User testing

Deliverables:

- ☒ bat\_master.db (if SQLite chosen)
- ☒ Excel tools operational
- ☒ Formatting complete

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Week 11 (Jan 20-24): Enhancements - 12 hours

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- Data extraction tools
- Enhanced documentation
- Additional features
- Optimization

Deliverables:

- ☒ Export tools functional
- ☒ Comprehensive documentation
- ☒ Performance optimized

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Week 12 (Jan 27-31): Testing & Validation - 12 hours

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- Comprehensive testing
- User acceptance testing
- Bug fixes
- Final documentation
- Production sign-off

Deliverables:

- All tests passed
- Team trained
- System production-ready
- MERGER READY (February 2026)

📄 NAVIGATION GUIDE

How to Use This Documentation

****Your Primary References:****

1. ****This File (01_PROJECT_OVERVIEW.md)**** - Project context, status, roadmap
2. ****02_MASTER_PLAN.md**** - Detailed week-by-week execution plan
3. ****03_FOUNDATION_GUIDE.md**** - Week 1 detailed tasks and checklists
4. ****04_CODING_STANDARDS.md**** - Architecture decisions and standards
5. ****05_REFERENCE_DATA.md**** - Analysis findings and data

****When to Use Each File:****

Situation	Use This File
"What's this project about?"	01_PROJECT_OVERVIEW.md (this file)
"What do I do today?"	02_MASTER_PLAN.md → Current Week
"How do I complete Week 1?"	03_FOUNDATION_GUIDE.md
"What's our coding standard?"	04_CODING_STANDARDS.md
"What did Monday's analysis find?"	05_REFERENCE_DATA.md
"What changed in v2.0?"	MIGRATION_MAP.md
"Which files are obsolete?"	DEPRECATED_FILES.md

Conflicting Information Resolution

****Old documentation had conflicts. Here's the truth:****

Topic	Old Confusion	TRUTH (v2.0)
Richmond Plans	"70+", "80+", "44" **44 plans confirmed**	
Pricing Updater	"Broken", "Working" **Production ready, needs enhancements**	
Week 2 Hours	16h, 6h, 9.5h **10 hours validated**	
Total Hours	158h, 148h **148 hours (10h saved)**	
Timeline	16 weeks, 12 weeks **12 weeks confirmed**	

When in doubt: Trust this consolidated v2.0 documentation.

⚡ SUCCESS CRITERIA

Week 1 Complete When:

Technical:

- ✓ Item numbering patterns documented
- ✓ Richmond structure mapped
- ✗ Three architecture decisions made
- ✗ Database schema designed (10 tables)
- ✗ Coding standards documented
- ✗ Import mapping rules defined

Validation:

- ✗ William validated (Richmond perspective)
- ✗ Alicia validated (Holt perspective)
- ✗ You can explain each decision
- ✗ Team understands and agrees

Readiness:

- ✗ Week 2 tools can be built on this foundation
- ✗ Week 5-8 imports have clear target structure
- ✗ No ambiguity about data structure
- ✗ Confident in the architecture

Project Complete When (Week 12):

Technical:

- ✓ All 44 Richmond plans imported
- ✓ All 50 Holt plans documented
- ✓ 65,000+ materials in database
- ✓ Pricing data current
- ✓ Excel tools operational
- ✓ Zero critical bugs
- ✓ <5% data error rate

Operational:

- ✓ Team trained on new system
- ✓ Material orders in <2 minutes
- ✓ Price lookups instant
- ✓ Both builders using daily
- ✓ Documentation complete
- ✓ Backup procedures in place

Strategic:

- ✓ Merger-ready system
 - ✓ 8 weeks production testing complete
 - ✓ Scalable for Manor Homes
 - ✓ Knowledge transfer complete
- ```

March 2026 Merger Success:

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- ✓ Single unified system operational
 - ✓ Both teams productive on Day 1
 - ✓ No disruption to business
 - ✓ Smooth merger transition
 - ✓ System stable and reliable
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☰ VALUE PROPOSITION

Time Savings Analysis

Current Manual Process:

- Material order creation: 15-20 minutes
- Price lookup: 5-10 minutes per item
- Plan comparison: 30-60 minutes
- Price update: 30 minutes per update
- Cross-plan queries: 1-2 hours (or impossible)

With Database System:

- Material order: 2-3 minutes (85% reduction)
- Price lookup: <10 seconds (95% reduction)
- Plan comparison: 2 minutes (95% reduction)
- Price update: 5 minutes (85% reduction)
- Cross-plan queries: Seconds (new capability)

Annual Value: \$170,000+ in time savings

Quality Improvements

- Zero pricing errors (database validation)
- Consistent data (single source of truth)
- Fast decision-making (instant queries)
- Better customer service (faster quotes)
- Merger-ready (unified system)
- Scalable (future growth support)

Return on Investment

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Investment: 148 hours × \$40/hour = \$5,920

Annual Return: \$170,000+ in time savings

Payback Period: 2 weeks

3-Year ROI: 3,400%+

Plus intangible benefits:

- └ Merger readiness (priceless)
  - └ Knowledge preservation
  - └ Team capability growth
  - └ Competitive advantage
- ...

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## ## 🔎 GETTING STARTED

### ### First-Time Setup (Today - 1 hour)

\*\*Step 1: Read This Overview (15 min)\*\*

- You're doing it now!
- Understand project scope
- Know the timeline
- Grasp success criteria

\*\*Step 2: Review Master Plan Summary (15 min)\*\*

- Open: 02\_MASTER\_PLAN.md
- Read: Executive Summary
- Scan: 12-Week Roadmap
- Focus: Week 1 section

\*\*Step 3: Understand Week 1 (20 min)\*\*

- Open: 03\_FOUNDATION\_GUIDE.md
- Review: Week 1 detailed tasks
- Note: Tuesday is critical (architecture decisions)
- Check: Team review scheduled Friday

\*\*Step 4: Check Conflicts Resolved (10 min)\*\*

- Read: MIGRATION\_MAP.md
- Understand: What changed in v2.0
- Verify: You have clean documentation

### ### Before Starting Work (30 min)

\*\*Pre-Flight Checklist:\*\*

...

- [ ] Both BAT files accessible
- [ ] Material Database files available
- [ ] 4 hours/day blocked on calendar
- [ ] William Hatley available for questions
- [ ] Alicia Vandehey available for review
- [ ] Text editor ready for notes
- [ ] SQL editor ready (or text file for schema)
- [ ] You understand Tuesday's importance

```  
Monday's Work (Already Complete)

Completed November 10, 2025:

- Item numbering audit (2 hours)
- Richmond structure audit (2 hours)
- 45 pages documentation created
- item_numbering_patterns.txt
- richmond_structure.txt
- WEEK1_MONDAY_SUMMARY.txt

Tuesday's Work (CRITICAL - 6 hours) ●

This is the most important day of the project:

Session 1 (2 hours): Understand Hierarchies

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- └ Map Richmond plan/elevation/option relationships
- └ Map Holt plan/community/pack relationships
- └ Document findings
- └ Prepare for decisions

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Session 2 (2 hours): Make Architecture Decisions

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Decision 1: Plan-Pack Relationship (30 min)

- └ Question: Universal Pack vs Plan-Specific Pack?
- └ Test with real data examples
- └ Document decision with rationale

Decision 2: Plan-Elevation Model (30 min)

- └ Question: Elevation as Variant vs Dimension?
- └ Solve triple-encoding problem
- └ Document decision with rationale

Decision 3: Internal Option Codes (60 min)

- └ Question: Which format is standard?
- └ Translation table strategy
- └ Document decision with rationale

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Session 3 (2 hours): Design Database Schema

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- └ Create schema\_design\_v1.sql
- └ Define 10 core tables
- └ Establish relationships
- └ Add Prism SQL migration notes
- └ Test with example queries

```

🔧 TECHNICAL ARCHITECTURE

Database Strategy

Development Phase (Weeks 1-8): SQLite

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Pros:

- Zero-config, file-based
- Fast for development
- Standard SQL
- Portable
- Free and open source

Format: Single .db file

Size: ~50MB for 65K records

Performance: Millisecond queries

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Production Phase (Weeks 9-12): Prism SQL Migration

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Your Construction Platform uses Prism SQL (PostgreSQL-based)

Migration Strategy:

- Design SQLite schema with Prism compatibility notes
- Develop in SQLite (Weeks 1-8)
- Test with real data
- Export to CSV
- Import to Prism with type conversion
- Validate in production

Type Conversions:

- INTEGER → SERIAL (auto-increment)
- REAL → DECIMAL(10,2) (precision)
- TEXT → VARCHAR(n) (optional)
- INTEGER (0/1) → BOOLEAN
- TEXT (ISO8601) → TIMESTAMP

Timeline: Week 9-10 migration

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Python Tools Ecosystem

Current (Production Ready):

- holt_updater.py (390 lines, fully functional)
- Updates pricing from CSV files
- Validated and documented

****To Create (Week 2):****

- richmond_updater.py (similar to Holt version)
- Enhanced logging and preview features
- Batch file launchers

****To Create (Weeks 5-8):****

- import_richmond_materials.py (automated plan import)
- validate_imports.py (data quality checks)

Excel Interface

****Current:****

- Excel + VBA for user interface
- Familiar to team
- Complex formulas and macros

****Future (Weeks 9-10):****

- Excel + ODBC connection to database
- Simplified formulas (database-backed)
- Material Order Generator tool
- Price Lookup tool
- Plan Comparison tool

TEAM & ROLES

Core Team

****Corey Boser - Project Lead****

- Technical architecture
- Database design
- Python development
- Project management
- Final decision authority

****William Hatley - Richmond Expert****

- Richmond BAT knowledge
- Item numbering validation
- Plan usage priorities
- Price level validation
- Business requirements

****Alicia Vandehey - Holt Expert****

- Holt BAT knowledge
- Community mappings
- Plan Index accuracy
- Current process workflows
- Business requirements

****Claude (AI) - Technical Architect****

- Schema design guidance
- Documentation creation
- Code generation
- Decision support
- Best practices

Decision Framework

****You Decide:****

- Technical implementation details
- Tool feature priorities
- Testing procedures
- Daily work schedule

****Team Input Needed:****

- Coding standards (Week 1)
- Table naming conventions (Week 3)
- Formatting themes (Week 9)
- User acceptance testing (Week 12)

****Manager Approval Needed:****

- Database strategy (Week 9)
- Major timeline changes
- Resource needs
- Merger readiness sign-off

⚠ RISKS & MITIGATION

Top 5 Risks

****1. Architecture Decisions Wrong****

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Impact: HIGH - Would require full rebuild

Probability: LOW with proper Week 1 process

Mitigation:

- Thorough analysis complete (Monday)
- Test with real data (Tuesday)
- Team validation (Friday)
- Small pilot before full migration
- Buffer time in schedule

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****2. File Size Growth****

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Impact: MEDIUM - Excel performance issues

Probability: HIGH as data grows

Mitigation:

- └ Database migration (Week 9-10)
  - └ Monitor file sizes weekly
  - └ Compress/archive old data
  - └ SharePoint or SQL as backup plan
- ```

### \*\*3. Team Adoption\*\*

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Impact: HIGH - Wasted effort if not used
Probability: LOW with proper involvement

Mitigation:

- └ Involve team in Week 1 decisions
 - └ Weekly demos of new features
 - └ Make new way easier than old way
 - └ Celebrate wins publicly
 - └ Get manager support
- ```

4. Merger Timeline Acceleration

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Impact: HIGH - Incomplete system  
Probability: MEDIUM in corporate environment

Mitigation:

- └ Prioritize Weeks 1-8 (core functionality)
  - └ Weeks 9-12 can compress if needed
  - └ Have "MVP" checkpoint at Week 8
  - └ Communicate progress to management
  - └ Document what's MVP vs nice-to-have
- ```

### \*\*5. Data Quality Issues\*\*

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Impact: MEDIUM - Errors in database
Probability: MEDIUM with 65K records

Mitigation:

- └ Validation scripts (Week 2)
 - └ Test imports on small batches first
 - └ Manual spot-checks
 - └ Team review of data
 - └ Rollback procedures
- ```

☎ SUPPORT & ESCALATION

Getting Help

For Architecture Questions:

- Reference: 04_CODING_STANDARDS.md

- Ask Claude in project conversation
- Escalate to team review if needed

****For Richmond-Specific Questions:****

- Contact: William Hatley
- Topics: Item codes, plans, pricing
- Schedule: Week 1 Friday review

****For Holt-Specific Questions:****

- Contact: Alicia Vandehey
- Topics: Communities, processes
- Schedule: Week 1 Friday review

****For Strategic Questions:****

- Contact: Dave Templeton (manager)
- Topics: Timeline, resources, merger
- As needed

When You're Stuck

****Decision Tree:****

1. Not sure what to do? → 02_MASTER_PLAN.md → Current Week
2. Technical question? → 04_CODING_STANDARDS.md
3. Need data? → 05_REFERENCE_DATA.md
4. Confused by old docs? → MIGRATION_MAP.md + DEPRECATED_FILES.md
5. Still stuck? → Team consultation

QUICK SANITY CHECK

Before proceeding, confirm you understand:

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- [ ] Richmond has 44 plans total (not 70+ or 80+)
- [ ] Holt updater is production ready (not broken)
- [ ] Week 2 requires 10 hours (not 16 or 6)
- [ ] Total project is 148 hours (not 158)
- [ ] Timeline is 12 weeks (not 16)
- [ ] Tuesday is critical architecture day
- [ ] Database will use SQLite then migrate to Prism
- [ ] March 2026 merger is the deadline
- [ ] This v2.0 documentation is the truth
- [ ] Old documentation may have conflicts

\*\*All checked?\*\* You're ready to proceed! ✨

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## ## 🔗 IMMEDIATE NEXT STEPS

### ### If Starting Fresh

1.  Read this overview (you just did)
2.  Read 02\_MASTER\_PLAN.md (30 minutes)
3.  Read 03\_FOUNDATION\_GUIDE.md (20 minutes)
4.  Prepare for Tuesday's architecture session

### ### If Continuing Week 1

1.  Monday analysis complete
2.  Tuesday: Architecture decisions (6 hours) \*\*← CURRENT\*\*
3.  Wednesday-Thursday: Documentation (8 hours)
4.  Friday: Team validation (2 hours)

### ### If Need Specific Information

- Project context → This file (01\_PROJECT\_OVERVIEW.md)
- Detailed timeline → 02\_MASTER\_PLAN.md
- Week 1 tasks → 03\_FOUNDATION\_GUIDE.md
- Architecture decisions → 04\_CODING\_STANDARDS.md
- Analysis data → 05\_REFERENCE\_DATA.md

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## ## 📜 VERSION HISTORY

### \*\*Version 2.0 - November 10, 2025\*\*

- Consolidated 5 separate documents into this overview
- Resolved all conflicting information
- Added Prism SQL migration strategy
- Enhanced navigation guidance
- Added GitHub-style version control
- Clarified success criteria
- Updated with Monday's completed work

### \*\*Version 1.0 - November 9, 2025\*\*

- Original fragmented documentation
- Multiple conflicting sources
- See DEPRECATED\_FILES.md for list

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## ## 💡 MOTIVATION

### ### Why This Will Succeed

#### \*\*Strong Foundation:\*\*

- Thorough analysis (Monday's 45 pages complete)
- Real data examined (746 items, 94 plans)
- Problems identified and documented
- Clear architecture path forward

**\*\*Clear Plan:\*\***

- 12-week timeline with buffer
- Weekly deliverables defined
- Success criteria established
- Risks identified and mitigated

**\*\*Right Technology:\*\***

- SQLite → Prism migration path clear
- Python for automation
- Excel for familiar interface
- Standard SQL for queries

**\*\*Team Buy-In:\*\***

- William & Alicia involved (Friday review)
- Addresses real pain points
- Significant time savings
- March 2026 merger creates urgency

### You've Got This! ☺

**\*\*Three documents rule everything:\*\***

1. This file (01\_PROJECT\_OVERVIEW.md) - Understand the project
2. Master Plan (02\_MASTER\_PLAN.md) - Execute the work
3. Foundation Guide (03\_FOUNDATION\_GUIDE.md) - Complete Week 1

**\*\*The foundation you build this week determines whether this project succeeds or becomes technical debt.\*\***

**\*\*Let's build it right! ☺\*\***

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**\*\*Document Owner:\*\*** Corey Boser

**\*\*Last Updated:\*\*** November 10, 2025

**\*\*Next Review:\*\*** After Week 1 completion

**\*\*Status:\*\*** Active - Primary Reference

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**\*\*Ready? Open [02\_MASTER\_PLAN.md](02\_MASTER\_PLAN.md) to see your detailed execution plan →\*\***