

SUBMISSION REQUIREMENT POST MASTER PLAN AND PROJECT CLOSE-OUT

35% (Schematic) Submission:

1 Copy of draft EA (Environmental Assessment) – for new cemeteries or older cemeteries that do not have an EA on file provide a draft letter to regulatory offices on NHPA, wetlands, flood plain, endangered/threatened species....

2 Copies of full size Schematic Drawings

- Boundary and Topographic Survey
- Demolition Plan
- Site Plan
- Grading Plan
- Utility Plan
- Site Details
- Floor Plans
- Typical Sections
- Typical Elevations

1 Copy of Aggregate Grant Cost (424C) w/construction cost estimate

1 Copy of Draft Geotechnical Report

1 Copy of Title to the Property (*new cemeteries only*)

1 Copy of Draft Design Narrative and Program Information (*see attached "Design Deliverables, Content and Format Requirements"*)

1 Copy of Building Space Program (*see attached "Building Space Program Analysis"*)

1 Copy of Project Schedule

1 Copy of Draft Exterior & Interior finishes with color samples and materials (*new buildings only*)

1 Copy of Draft Equipment and Furnishing list with cost breakout per item (*new buildings only*)

50-65% (Design) Submission (Design Development-DD's)

1 Copy of the Final EA (response to regulatory letters on NHPA, wetlands, flood plain, endangered/threatened species...)

2 Copies of Design Development Drawings (*see attached "Design Deliverables, Content and Format Requirements"*)

1 Copy of Updated Aggregate Grant Cost (424C) w/ construction cost estimate

1 Copy of Final Geotechnical Report

1 Copy of Draft Project Manual (Specifications) listing all necessary sections in Table of Contents

1 Copy of Updated Project Schedule

1 Copy of Final Exterior & Interior finishes with color samples and materials

1 Copy of Draft Equipment and Furnishing list (with cost breakout per item)

90-95% Construction Document Submission (CD's)

- 1 Copy of the NOA and FONSSI with proof of public notice in newspaper with wide distribution
(*new cemeteries only*)
- 2 Copies of Full Size Construction Documents (*see attached "Design Deliverables, Content and Format Requirements"*)
- 1 Copy of Updated Aggregate Grant Cost (424C) w/ construction cost estimate
- 1 Copy of the Geotechnical Report
- 1 Copy of Boundary & Topographic Survey w/surveyor certification (*new cemeteries only*)
- 1 Copy of Title to the Property
- 1 Copy of Design Narrative and Program Information
- 1 Copy of the Project Manual with Front End (Boiler Plate) - Specifications
- 1 Copy of Updated Project Schedule
- 1 Copy of Final Equipment and Furnishing list (with cost breakout per item)

Bid Set Documents Submission

Once the submission has been approved by the State Cemetery Grant Program the following shall be transmitted to this office:

- 1 Copy of Full Size Bid Documents
- 1 Copy of Half Size Bid Documents
- 1 Copy of Project Manual - Complete (Specifications)

As-Built Drawings (ABD)

"As-Built Drawings" are the final set of drawings for a project. They show the final constructed project with all revisions, amendments, and modifications incorporated. These drawings are also known as "As-Built Drawings". The "As-Built Drawings" are the most important set of drawings in the design and construction process because they represent a graphic record of the finished product. After construction is complete, all revisions and changes that reflect the facility as constructed must be duly noted and recorded on the appropriate drawings. The completed "As-Built Drawing" set is the legal record copy of the project. This set of drawings is used for maintenance and minor modification work; therefore, these drawings should be kept current after the facility is in operation. If new work is required, new drawings should be created and a new number assigned. As these records are vital to the maintenance and rehabilitation of the facility, a full-size set of prints and one electronic copy in most current version of AutoCAD and PDF format should be produced for these record documents. Provide one bound set of As-Built Drawings to the State and one bound set to the State Cemetery Grant Service.

Design Deliverables, Content and Format Requirements

Design Narrative and Program Information

- Landscape Architecture
 - Functional analysis of site program
 - Accessible Route
 - Roadway and parking siting and analysis
 - Vegetation and planting
 - Irrigation type and water source
 - Materials analysis
 - Character defining features listing (cultural landscape)

- Civil Engineering
 - Storm water management
 - Utility corridor or routing

- Water/Wastewater Systems
 - Code analysis and verification
 - Descriptions of water/wastewater systems and alternatives
 - Design flow calculations
 - Fire flow requirements
 - Results of soils testing, e.g. percolation test results
 - Results of sampling and testing of wastewater
 - Utility corridor or routing
 - Calculations for utility system sizing
 - Modeling
 - Special studies, e.g. hazmat

- Architecture and Preservation Architecture
 - Code analysis
 - Functional analysis of building program
 - Accessible Route
 - Materials analysis (interior and exterior materials and finishes)
 - Character defining features listing (historic structures)

- Structural Systems
 - Analysis of code and loading requirements
 - Foundation system description
 - Roof and floor framing systems description
 - Lateral load-resisting elements description

- Mechanical Systems
 - Descriptions of alternative mechanical systems
 - Mechanical code review, listing special code requirements
 - Adequacy of site utilities for mechanical systems, based on actual measurements of flow and pressure available or based on information from local utility companies

- Justifications for and descriptions of preferred alternative mechanical systems
- Electrical Systems
 - Descriptions of electrical systems and alternatives
 - Load summary and calculations (if applicable)
 - Adequacy of site utilities for electrical systems based on information from local utility companies; verification of phase and voltage available
 - Electrical code review, listing special code requirements
 - Discussion of telecommunication, fire, and intrusion
- Energy Analysis
 - Comparison of energy source alternatives, including renewable energy
 - Life cycle costing for value analysis of mechanical system alternatives
 - Preliminary mechanical system sizing
 - Energy analysis for US Green Building Council's (USGBC) LEED™ certification
 - Energy budgeting for proposed facilities
- Fire Protection
 - Fire Safety Plan (Code Analysis). develop a Fire Safety Plan to address the unique fire and life safety issues. The Fire Safety Plan consists of the following elements:
 - Applicable codes
 - Fire protection/life safety approach
 - General Description
 - General Fire Resistive
 - Construction Aspects
 - Occupancy Classifications
 - Fire Resistive Separations
 - Doors and Windows
 - Interior Wall, Ceiling and Floor Finishes
 - Decorative Structures within Buildings
 - Egress
 - Special Design
 - Emergency Signage
 - Suppression Systems
 - Fire Department Access
 - Fire Detection and Alarm System
 - Emergency Communication Systems
 - Smoke Management Description
 - Central Control Station
 - Emergency and Standby Power
 - Elevators
 - Acceptance testing
 - Periodic operation and maintenance
 - Conclusion

- Fully Developed Schematic Design Documents may also include the following:
 - Renderings and illustrative plans
 - Color hand-drawn perspective and oblique drawings
 - Computer-generated three dimensional model
 - Physical study model
 - Photographs or digital images
 - Microsoft PowerPoint presentation

Design Deliverables, Content and Format Requirements

Schematic Design Drawings (35% Design)

- **General sheets**
 - Cover Sheet
 - Set Title including:
 - Submittal type
 - Cemetery Name
 - Phase Number and descriptive title of work
 - FAI Project Number
 - Client's Name
 - Governor's Name
 - State Agency Director's Name
 - Sheet Index
 - Consultant List
 - Location Map (Regional)
 - Vicinity Map (Local)
 - Utility Provider List
 - Project Information including:
 - Overall Site Area
 - Phase Site Area
 - Phase Disturbed Area
 - Building Square Footages
 - Parking Space Summary
 - Interment Summary including:
 - Interment Type
 - Number by Phase
 - Total
 - Set Date
 - Boundary and Topographic Survey:
 - Existing Contours and spot elevations
 - Existing Buildings and other structures
 - Existing Site Features: roads, parking, structures, walks, steps, walls, etc.
 - Existing Utilities, above and below ground, shown to scale (transformers, inlets, lift stations, propane tanks, septic tanks, culverts, etc.) include spot elevations for each, invert elevations for all below ground structures. Use appropriate symbols for small utility items (i.e. lighting, transformers, pull boxes, manholes, inlets, etc.)
 - Existing land features and vegetation
 - Overall site plan showing total project
 - Existing conditions (as base)
 - Construction limits
 - Construction access

- Survey control information, monuments and benchmarks with coordinates and elevations
 - Property lines with bearings, easements, utility corridors and setbacks
 - Proposed construction (i.e. outline of new structures, utilities, roadways, walks)
 - Overall symbol legend and abbreviations list
 - Burial sections, numbered and illustrating limits of gravesites and yield.
- Demolition Plan (if required)
 - Existing conditions (as base)
 - Structures
 - Plant material (tree protection, plants to be removed or salvaged)
 - Utilities (identified for removal or abandonment)
 - Site furnishings
 - Clearing and grubbing
 - Construction Limits
- **Landscape Architecture Sheets**
 - Site Plan
 - Existing conditions (as base)
 - Major site features: roads, parking, structures, site drainage, walks, steps, walls, etc.
 - Accessible Route Plan
 - Utilities shown to scale. Use appropriate symbols for small utility items (i.e. lighting, transformers, pull boxes, manholes, inlets, etc.)
 - Discipline specific notes, legends, symbols and abbreviations.
 - Sections and elevations identified
 - Major site elements and details identified
 - Construction Limits
 - Burial sections, numbered and illustrating limits of gravesites and yield.
 - Show the location of proposed structures, interment areas, and design elements.
 - Site Layout Plan
 - Existing conditions (as base)
 - Roads, parking, walks and service areas locating:
 - Dimensioned traffic markings
 - Dimensioned walks, steps, terraces, and site elements
 - Buildings and structures
 - Finish floor elevations noted
 - Roof overhangs
 - Outdoor lighting
 - Above and below ground utilities
 - Interment Sections – label type, area and number of interments
 - Construction Limits
 - Burial sections, numbered and illustrating limits of gravesites.

- Show the location of proposed structures, interment areas, and design elements.
- Grading Plan
 - Existing conditions (as base)
 - Existing contours and spot elevations
 - Proposed grading
 - Proposed contours (maximum 2' contour interval with each 10' interval in heavier pen weight and labeled)
 - Building Finished Floor Elevation
 - Spot elevations of key walks, ADA accessible routes, walls, parking, drainages and site elements
 - Spot elevations at top and bottom of walls, steps and ramps
 - High points, low points, swale centerlines
 - Finish floor elevations at each access point of structures
 - Tree and vegetation protection
 - Utility systems
 - Construction Limits
 - Burial sections, numbered and illustrating limits of gravesites.
 - Show the location of proposed structures, interment areas, and design elements.
- Enlarged Detail Plan of Key areas
 - Cemetery Entrance including sign and structures
 - Administration Building PIC Area
 - Maintenance Facility Area
 - Columbarium Area
 - Committal Shelter Area
 - Public Gathering Area
 - Memorial Area
 - Interment Sections for current phase
- Erosion and Sediment Control Plan
 - Existing conditions (as base)
 - Existing contours and spot elevations
 - Proposed grading
 - Building Finished Floor Elevation
 - Utility systems
 - Construction Limits
 - Storm Water Systems
 - Erosion Control BMPs
 - Erosion Control Details
- Planting / Revegetation Plan
 - Existing conditions
 - Existing contours
 - Proposed contours
 - Buildings, roads, parking and structures

- Utility systems
 - Storm Water Systems
 - Plant List
- Irrigation Plan
 - Existing conditions
 - Existing contours
 - Proposed contours
 - Buildings, roads, parking and structures
 - Utility systems
 - Storm Water Systems
 - Planting / Revegetation Plan
 - Equipment Legend
- Site Elevations:
 - Entrances
 - Exterior materials with major site elements
 - Dimensions
 - Building Finished Floor Elevation
- Site Sections (One longitudinal and one transverse)
 - Typical section through site
 - Stairs
 - Site Walls
- **Civil Engineering Sheets**
 - Site Plans
 - Existing conditions
 - Discipline specific notes, legends, code references, symbols and abbreviations.
 - Site features: roads, parking, structures, walks, steps, walls, etc.
 - Utilities shown to scale (lighting, transformers, pull boxes, manholes, inlets, lift stations, propane tanks, septic tanks, culverts, etc.) Use appropriate symbols for small utility items (i.e. lighting, transformers, pull boxes, manholes, inlets, etc.
 - Geotechnical testing areas, boring locations, percolation test holes
 - Storm water protection measures
 - Construction limits
 - Burial sections, numbered and illustrating limits of gravesites.
 - Show the location of proposed structures, interment areas, and design elements.
 - Road and Parking
 - Existing conditions (as base) with plan and profile sheet outlines, as appropriate.
 - Plan and profile sheets
 - Typical cross-sections

- Road and parking centerline stations, bearings, distances, and curve data (layout tables, as appropriate)
 - Intersections and other site radii identified with radius and coordinates
 - Construction limits
 - Storm Water
 - Existing conditions (as base)
 - Collection, treatment (i.e. settlement ponds), and layouts (plan and profile sheets, as appropriate)
 - Structures plans, elevations and details
 - Construction limits
 - Utilities
 - Existing conditions (as base)
 - Water systems and components: collection, treatment, and distribution layouts (plan and profile sheets, as appropriate)
 - Wastewater disposal systems and components: location, size, and layouts (plan and profile sheets, as appropriate)
 - System processes and flow diagrams
 - Utilities (identified for removal or abandonment, as appropriate)
 - Construction limits
 - Details Sheets
 - Details (i.e. trenching details, thrust blocks, water/sewer line crossings, silt fence, sewer cleanouts, manholes, valves and boxes, curb stops, fire hydrants, air release valves, sewage air release valves, irrigation details, pressure relief valves, meters and boxes, pressure regulators, check valves and boxes, backflow preventors, septic tanks, absorption trenches, distribution boxes, piping connections, water well details, lift station details, storm water details, storage tank details)
- **Architecture Sheets**
 - General Sheet(s)
 - Notes, legends, code references, fire safety plan, symbols and abbreviations legends. (This information may alternately be included on the beginning “G” sheets – see General Sheets)
 - Demolition Drawings (typically historic structures)
 - Floor Plans
 - Spaces individually delineated and labeled
 - Section cut references
 - General notes and annotations on the same sheet
 - Dimensions
 - Clearly Identify demo items
 - Roof Plans
 - Section cut references

- Plan dimensions
 - General notes and annotations
 - Identify roof assembly, substrate, and drainage items
 - Clearly Identify demo items
- Elevations
 - Entrances, window arrangements, doors
 - Exterior materials with major vertical and horizontal joints
 - Vertical dimensions/floor levels
 - General notes and annotations on the same sheet
 - Clearly Identify demo items
- Building Sections
 - Floor levels
 - Vertical dimensions/floor levels
 - Spaces labeled
 - General notes and annotations on the same sheet
 - Clearly identify demo items
- New or Building Addition Drawings
 - Building Floor Plans
 - Spaces individually delineated and labeled
 - Section cut references
 - Enlarged layouts of special spaces
 - Accessible Route Plan
 - Fire Egress Plan
 - Door swings and marks
 - Window openings and marks
 - General notes and annotations on the same sheet
 - Plan dimensions (verified with structural)
 - Clearly Identify new work
 - Building Roof Plans
 - General notes and annotations on the same sheet
 - Section cut references
 - Plan dimensions
 - Indicate roof pitch/taper and drainage arrows
 - Gutters and downspouts
 - Primary and secondary roof drains and scuppers
 - Label roof assembly and deck materials
 - Clearly Identify new work
 - Building Elevations
 - Entrances, window arrangements, doors
 - Exterior materials with major vertical and horizontal joints
 - Roof levels and overhangs
 - Vertical dimensions and finish floor elevations

- General notes and annotations on the same sheet
- Clearly Identify new work
- Building Sections (Minimum one longitudinal and one transverse)
 - Vertical floor to floor dimensions/elevations (verified with structural)
 - Stairs and elevator shafts
 - Typical ceiling heights
 - Room labels
 - General notes and annotations on the same sheet
 - Clearly Identify new work
- General roof construction details (roughed out)
- Door and Window details (roughed out)
- Typical and special construction details (roughed out)
- Interior elevations
- Reflected ceiling plans
- Room finish, hardware, door and window schedules (roughed out)
- Equipment layout (roughed out)
- Keynotes shall contain complete note, not specification number
- Keynote Legend shall be on the same sheet as keynote reference
- All accessibility dimensions shall be located directly on accessibility layout sheets, not referenced remotely to a standards sheet.
- **Structural Sheets**
 - No drawings required for this submittal
- **Mechanical**
 - No drawings required for this submittal
- **Electrical**
 - No drawings required for this submittal

Design Deliverables, Content and Format Requirements

Design Development Drawings (50-65% Design)

- **General sheets**
 - Cover Sheet
 - Set Title including:
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 - Existing land features and vegetation
 - Overall site plan showing total project
 - Existing conditions (as base)
 - Construction limits
 - Construction access

- Survey control information, monuments and benchmarks with coordinates and elevations
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 - Burial sections, numbered and illustrating limits of gravesites.
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 - Show the location of proposed structures, interment areas, and design elements.
- Demolition Plan (if required)
 - Existing conditions (as base)
 - Structures
 - Plant material (tree protection, plants to be removed or salvaged)
 - Utilities (identified for removal or abandonment)
 - Site furnishings
 - Clearing and grubbing
 - Construction Limits
- **Landscape Architecture Sheets**
 - Site Plan
 - Existing conditions (as base)
 - Major site features: roads, parking, structures, site drainage, walks, steps, walls, etc.
 - Accessible Route Plan
 - Utilities shown to scale. Use appropriate symbols for small utility items (i.e. lighting, transformers, pull boxes, manholes, inlets, etc.)
 - Discipline specific notes, legends, symbols and abbreviations.
 - Sections and elevations identified
 - Major site elements and details identified
 - Construction Limits
 - Burial sections, numbered and illustrating limits of gravesites and yield.
 - Show the location of proposed structures, interment areas, and design elements.
 - Site Layout Plan
 - Existing conditions (as base)
 - Roads, parking, walks and service areas locating:
 - Dimensioned traffic markings
 - Dimensioned walks, steps, terraces, and site elements
 - Buildings and structures
 - Finish floor elevations noted
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 - Existing contours and spot elevations
 - Proposed grading
 - Proposed contours (maximum 2' contour interval with each 10' interval in heavier pen weight and labeled)
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 - Utility systems
 - Construction Limits
 - Storm Water Systems
 - Erosion Control BMPs
 - Erosion Control Details
- Planting / Revegetation Plan
 - Existing conditions
 - Existing contours

- Proposed contours
 - Buildings, roads, parking and structures
 - Utility systems
 - Storm Water Systems
 - Plant List
- Irrigation Plan
 - Existing conditions
 - Existing contours
 - Proposed contours
 - Buildings, roads, parking and structures
 - Utility systems
 - Storm Water Systems
 - Planting / Revegetation Plan
 - Equipment Legend
- Site Elevations:
 - Entrances
 - Exterior materials with major site elements
 - Dimensions
 - Building Finished Floor Elevation
- Site Sections (One longitudinal and one transverse)
 - Typical section through site
 - Stairs
 - Site Walls
- **Civil Engineering Sheets**
 - Site Plans
 - Existing conditions
 - Discipline specific notes, legends, code references, symbols and abbreviations.
 - Site features: roads, parking, structures, walks, steps, walls, etc.
 - Utilities shown to scale (lighting, transformers, pull boxes, manholes, inlets, lift stations, propane tanks, septic tanks, culverts, etc.) Use appropriate symbols for small utility items (i.e. lighting, transformers, pull boxes, manholes, inlets, etc.
 - Geotechnical testing areas, boring locations, percolation test holes
 - Storm water protection measures
 - Construction limits
 - Burial sections, numbered and illustrating limits of gravesites.
 - Show the location of proposed structures, interment areas, and design elements.
 - Road and Parking
 - Existing conditions (as base) with plan and profile sheet outlines, as appropriate.

- Plan and profile sheets
 - Typical cross-sections
 - Road and parking centerline stations, bearings, distances, and curve data (layout tables, as appropriate)
 - Intersections and other site radii identified with radius and coordinates
 - Construction limits
- Storm Water
 - Existing conditions (as base)
 - Collection, treatment (i.e. settlement ponds), and layouts (plan and profile sheets, as appropriate)
 - Structures plans, elevations and details
 - Construction limits
- Utilities
 - Existing conditions (as base)
 - Water systems and components: collection, treatment, and distribution layouts (plan and profile sheets, as appropriate)
 - Wastewater disposal systems and components: location, size, and layouts (plan and profile sheets, as appropriate)
 - System processes and flow diagrams
 - Utilities (identified for removal or abandonment, as appropriate)
 - Construction limits
- Details Sheets
 - Details (i.e. trenching details, thrust blocks, water/sewer line crossings, silt fence, sewer cleanouts, manholes, valves and boxes, curb stops, fire hydrants, air release valves, sewage air release valves, irrigation details, pressure relief valves, meters and boxes, pressure regulators, check valves and boxes, backflow preventors, septic tanks, absorption trenches, distribution boxes, piping connections, water well details, lift station details, storm water details, storage tank details)
- **Architecture Sheets**
 - General Sheet(s)
 - Notes, legends, code references, fire safety plan, symbols and abbreviations legends. (This information may alternately be included on the beginning “G” sheets – see General Sheets)
 - Demolition Drawings (typically historic structures)
 - Floor Plans
 - Spaces individually delineated and labeled
 - Section cut references
 - General notes and annotations on the same sheet
 - Dimensions
 - Clearly Identify demo items

- Roof Plans
 - Section cut references
 - Plan dimensions
 - General notes and annotations
 - Identify roof assembly, substrate, and drainage items
 - Clearly Identify demo items

- Elevations
 - Entrances, window arrangements, doors
 - Exterior materials with major vertical and horizontal joints
 - Vertical dimensions/floor levels
 - General notes and annotations on the same sheet
 - Clearly Identify demo items

- Building Sections
 - Floor levels
 - Vertical dimensions/floor levels
 - Spaces labeled
 - General notes and annotations on the same sheet
 - Clearly identify demo items

- New or Building Addition Drawings
 - Building Floor Plans
 - Spaces individually delineated and labeled
 - Section cut references
 - Enlarged layouts of special spaces
 - Accessible Route Plan
 - Fire Egress Plan
 - Door swings and marks
 - Window openings and marks
 - General notes and annotations on the same sheet
 - Plan dimensions (verified with structural)
 - Clearly Identify new work

 - Building Roof Plans
 - General notes and annotations on the same sheet
 - Section cut references
 - Plan dimensions
 - Indicate roof pitch/taper and drainage arrows
 - Gutters and downspouts
 - Primary and secondary roof drains and scuppers
 - Label roof assembly and deck materials
 - Clearly Identify new work

 - Building Elevations
 - Entrances, window arrangements, doors
 - Exterior materials with major vertical and horizontal joints

- Roof levels and overhangs
 - Vertical dimensions and finish floor elevations
 - General notes and annotations on the same sheet
 - Clearly Identify new work
- Building Sections (Minimum one longitudinal and one transverse)
 - Vertical floor to floor dimensions/elevations (verified with structural)
 - Stairs and elevator shafts
 - Typical ceiling heights
 - Room labels
 - General notes and annotations on the same sheet
 - Clearly Identify new work
- General roof construction details (roughed out)
 - Door and Window details (roughed out)
 - Typical and special construction details (roughed out)
 - Interior elevations
 - Reflected ceiling plans
 - Room finish, hardware, door and window schedules (roughed out)
 - Equipment layout (roughed out)
 - Keynotes shall contain complete note, not specification number
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 - All accessibility dimensions shall be located directly on accessibility layout sheets, not referenced remotely to a standards sheet.

- **Structural Sheets**

- General
 - Applicable Codes and Standards
 - Listing of design loads in accordance with IBC 2003, Section 1603
 - Listing of all structural materials used, including material strengths
 - Diaphragm fastening requirements
 - Requirements for special inspection IBC 2003, Chapter 17
 - List of abbreviations
 - Symbol legend
- Standard Details
 - Standard details applicable to the project
 - Control joint details
 - Reinforcing steel splice length schedule
 - Lintel schedule(s)
- Foundation Plan
 - Fully dimensioned foundation plan (references to the architectural drawings for foundation dimensions are unacceptable) including:
 - Overall building dimensions
 - Column gridlines

- Location of foundation elements with respect to column gridlines
 - Size of all foundation elements
 - Foundation wall thickness
 - Floor Framing Plan
 - Fully dimensioned floor framing plan (references to the architectural drawings for framing dimensions are unacceptable) including:
 - Overall building dimensions
 - Column gridlines
 - Location of framing elements with respect to column gridlines
 - Size and spacing of framing members
 - Size and direction of span of roof sheathing or decking
 - Roof Framing Plan
 - Fully dimensioned roof framing plan (references to the architectural drawings for framing dimensions are unacceptable) including:
 - Overall building dimensions
 - Column gridlines
 - Location of framing elements with respect to column gridlines
 - Size and spacing of framing members
 - Size and direction of span of floor sheathing or decking
 - Details
 - Foundation Details
 - Floor Framing Details
 - Loading diagrams for special load cases for steel bar joists
 - Column schedules for steel buildings
 - Column and beam schedules for concrete buildings
 - Roof Framing Details
 - Loading diagrams for special load cases for steel bar joists
 - Column schedules for steel buildings
 - Column and beam schedules for concrete buildings
 - Prefab wood truss profiles with loading diagrams for all load cases
- **Mechanical**
 - Discipline specific notes, legends, code references, symbols and abbreviations.
 - Preliminary equipment sizes, locations, and capacities
 - Preliminary equipment layout plans for mechanical rooms
 - Floor plans for: HVAC, plumbing, and fire protection systems
 - Preliminary HVAC system schematics and flow diagrams
 - Acoustical and vibration control measures
 - Energy conservation measures
- **Electrical**
 - Discipline specific notes, legends, code references, symbols and abbreviations
 - Power, telephone, and telecommunication distribution to project: plan and details
 - Site electrical plan showing routing with transformers, generators and vaults drawn to scale

- Approximate sizes, locations and capacities of major components
- Preliminary equipment layouts plan for electrical rooms
- Roof plan for lightning protection
- Floor plans for: lighting, power, telephone, security, fire detection systems
- Light fixture schedule
- Single line diagrams for: power distribution, fire alarm and security systems

Design Deliverables, Content and Format Requirements

Construction Document Drawings (90-95% Design)

- **General Sheets**
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 - Set Title including:
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 - Set Date
 - Boundary and Topographic Survey:
 - Existing contours and spot elevations
 - Existing buildings and other structures
 - Existing site features: roads, parking, structures, walks, steps, walls, etc.
 - Existing utilities, above and below ground, shown to scale (inlets, lift stations, propane tanks, septic tanks, culverts, etc.) include spot elevations for each, invert elevations for all below ground structures. Use appropriate symbols for small utility items (i.e. lighting, transformers, pull boxes, manholes, inlets, etc.)
 - Existing land features and vegetation
 - Finalized Overall site plan showing total project
 - Existing conditions (as base)
 - Construction limits
 - Construction access

- Survey control, monuments and benchmarks with coordinates and elevations
 - Property lines with bearings, easements, utility corridors and setbacks
 - Proposed construction (i.e. outline of new structures, utilities, roadways, walks)
 - Unique construction requirements
 - Overall symbol legend and abbreviations list, if applicable.
 - Burial sections, numbered and illustrating limits of gravesites and yield.
 - Show the location of proposed structures, interment areas, and design elements.
- Finalized Demolition Plan (if required)
 - Existing conditions (as base)
 - Structures
 - Plant material (tree protection, plants to be removed or salvaged)
 - Utilities (identified for removal or abandonment)
 - Site furnishings
 - Clearing and grubbing
 - Construction Limits
- **Landscape Architecture Sheets**
 - Finalized Site Plan
 - Existing conditions (as base)
 - Discipline specific notes, legends, symbols and abbreviations.
 - Site features: roads, parking, structures, walks, steps, walls, etc.
 - Accessible Route Plan
 - Utilities shown, as appropriate, to scale (lighting, transformers, pull boxes, manholes, inlets, lift stations, propane tanks, septic tanks, culverts, etc.)
Use appropriate symbols for small utility items (i.e. lighting, transformers, pull boxes, manholes, inlets, etc.)
 - Sections and elevations identified
 - Site elements and details identified
 - Construction limits
 - Burial sections, numbered and illustrating limits of gravesites.
 - Show the location of proposed structures, interment areas, and design elements.
 - Finalized Site Layout Plan
 - Existing conditions (as base)
 - Roads, parking, walks and service areas:
 - Coordinates for building and site layout (identify location of point – foundation, finish wall. . .)
 - Coordinates for all corner points of walks, parking, walls, and site features (identify location of point – foundation, face of curb. . .)
 - Control point, corner point, and radius point tables
 - Dimensioned traffic markings

- Dimensioned walks, steps, walls with footings, terraces, drainage and utility structures, and site elements
 - Buildings and structures
 - Finish floor elevations noted
 - Roof overhangs, footings
 - Outdoor lighting
 - Above and below ground utilities, as appropriate
 - Construction limits
 - Burial sections, numbered and illustrating limits of gravesites.
 - Show the location of proposed structures, interment areas, and design elements.
- Finalized Grading Plan
 - Existing conditions (as base)
 - Existing contours and spot elevations
 - Proposed grading
 - Proposed contours (maximum 2' contour interval with each 10' interval in heavier pen weight and labeled)
 - Spot elevations at all change in gradient, at all corners of walks, walls, parking, drainage inlets and outlets, and all site elements
 - Spot elevations at top and bottom of walls, steps and ramps
 - High points, low points, swale centerlines
 - Finish floor elevations at each access point of structures
 - Tree and vegetation protection
 - Utility systems
 - Construction limits
 - Burial sections, numbered and illustrating limits of gravesites.
 - Show the location of proposed structures, interment areas, and design elements.
- Finalized Enlarged Layout, Finishes and Grading Plans for Key areas
 - Cemetery Entrance including sign and structures
 - Administration Building PIC Area
 - Maintenance Facility Area
 - Columbarium Area
 - Committal Shelter Area
 - Public Gathering Area
 - Memorial Area
 - Interment Sections for current phase
- Finalized Erosion and Sediment Control Plan
 - Existing conditions (as base)
 - Existing contours and spot elevations
 - Proposed grading
 - Building Finished Floor Elevation
 - Utility systems
 - Construction Limits
 - Storm Water Systems

- Erosion Control BMPs
- Erosion Control Details
- Finalized Planting / Revegetation Plan
 - Existing conditions
 - Existing contours
 - Proposed contours
 - Buildings, roads, parking and structures
 - Utility systems
 - Storm Water Systems
 - Plant list with quantities and symbols
 - Details and cross-sections
- Finalized Irrigation Plan
 - Existing conditions
 - Existing contours
 - Proposed contours
 - Buildings, roads, parking and structures
 - Utility systems
 - Storm Water Systems
 - Planting / Revegetation Plan
 - Equipment list with quantities and symbols
 - Construction Details
- Finalized Site Details
 - Paving, finishes
 - Erosion control (storm water protection)
 - Accessibility
 - Stairs, handrails, ramps
 - Site furnishings
 - Typical and special construction details
- Finalized Site Elevations
 - Entrances
 - Exterior materials with major site elements
 - Dimensions
- Finalized Site Sections
 - Typical sections
 - Stairs
 - Site Walls
 - Material changes/connections, paving (curb/walk)
 - Key site elements
- Finalized Sign Plan
 - Traffic signs (park way finding and MUTCD)
 - Accessible signs
 - Interpretive signs and waysides

- Pedestrian and trail signs
 - Unique construction signs
- **Civil Engineering Sheets**
 - Finalized Site Plan
 - Existing conditions (as base)
 - Discipline specific notes, legends, code references, symbols and abbreviations.
 - Monuments and benchmarks identified with coordinates and elevations.
 - Site features: roads, parking, structures, walks, steps, walls, etc.
 - Utilities shown to scale (lighting, transformers, pull boxes, manholes, inlets, lift stations, propane tanks, septic tanks, culverts, etc.) Use appropriate symbols for small utility items (i.e. lighting, transformers, pull boxes, manholes, inlets, etc.
 - Geotechnical testing areas, boring locations, percolation test holes
 - Construction limits
 - Burial sections, numbered and illustrating limits of gravesites.
 - Show the location of proposed structures, interment areas, and design elements.
 - Finalized Road and Parking
 - Existing conditions (as base) with plan and profile sheet outlines, as appropriate.
 - Plan and profile sheets
 - Typical cross-sections
 - Road and parking cross-sections
 - Road and parking centerline stations, bearings, distances, and curve data (layout tables, as appropriate)
 - Intersections and other site radii identified with radius and coordinates
 - Construction limits
 - Finalized Storm Water
 - Existing conditions (as base)
 - Collection, treatment (i.e. settlement ponds), and layouts (plan and profile sheets, as appropriate)
 - Structures plans, elevations and details
 - Construction limits
 - Finalized Utilities Plans
 - Existing conditions (as base)
 - Water pumping, treatment, storage, and distribution system layout and profile (plan and profile sheets, as appropriate), component sizes, material callouts
 - Wastewater collection, treatment, and disposal system layout and profile, component sizes, material callouts
 - System processes and flow diagrams
 - Utilities (identified for removal or abandonment, as appropriate)

- Construction limits
- Finalized Project Details
 - Details (i.e. trenching details, thrust blocks, water/sewer line crossings, silt fence, sewer cleanouts, manholes, valves and boxes, curb stops, fire hydrants, air release valves, sewage air release valves, irrigation details, pressure relief valves, meters and boxes, pressure regulators, check valves and boxes, backflow preventors, septic tanks, absorption trenches, distribution boxes, piping connections, water well details, lift station details, storm water details, storage tank details)
- **Architecture Sheets**
 - Finalized General Sheet(s)
 - Notes, legends, code references, fire safety plan, symbols and abbreviations legends.
 - Wall types
 - Finalized Demolition Drawings with Legends
 - Floor Plans
 - Spaces individually delineated and labeled
 - Section cut references
 - General notes and annotations on the same sheet
 - Dimensions
 - Clearly Identify demo work
 - Roof Plans
 - Section cut references
 - Plan dimensions
 - General notes and annotations
 - Clearly Identify demo work
 - Building Sections
 - Floor levels
 - Vertical dimensions/floor levels
 - Spaces labeled
 - General notes and annotations on the same sheet
 - Clearly Identify demo work
 - Building Elevations
 - Entrances, window arrangements, doors
 - Exterior materials with major vertical and horizontal joints
 - Roof levels and overhangs
 - Vertical Dimensions
 - General notes and annotations on the same sheet
 - Clearly Identify demo work
 - Finalized New or Building Addition Drawings
 - All Building Floor Plans
 - Spaces individually delineated and labeled

- Section cuts and detail references
 - Enlarged layouts of special spaces (dimensioned)
 - Plan Dimensions (verified with structural)
 - Accessible Route Plan
 - Fire Egress Plan
 - Finish floor elevations
 - Door swings and marks
 - Window openings and marks
 - Stairs and elevators
 - Overhead openings dashed
 - General notes and annotations on the same sheet
 - Material legends
 - Clearly distinguish new work from existing
- All Building Roof Plans
 - General notes and annotations on the same sheet
 - Section cut references
 - Plan dimensions
 - Indicate roof pitch/taper and drainage arrows
 - Gutters and downspouts
 - Primary and secondary roof drains and scuppers
 - Label roof assembly and deck materials
 - Clearly distinguish new work from existing
 - Identify plumbing, HVAC and electrical roof penetrations, equipment, and architectural features
- All Building Elevations
 - Entrances, window arrangements, doors
 - Exterior materials with major vertical and horizontal joints
 - Roof levels and overhangs dimensioned
 - Vertical dimensions and elevations
 - General notes and annotations on the same sheet
 - Clearly distinguish new work from existing
- Building Sections (minimum one longitudinal and one transverse)
 - Floor to floor dimensions (verified with structural)
 - Vertical dimensions with elevation targets
 - Stairs and elevator shafts
 - Typical ceiling heights
 - Room labels
 - General notes and annotations on the same sheet
 - Building and wall section references
 - Detail References
 - Clearly distinguish new work from existing
- Interior Elevations
 - Floor to floor dimensions with elevation targets
 - Doors and windows

- Wall finishes
 - Ceiling heights and finishes
 - Materials legends
 - Clearly distinguish new work from existing
 - Floor finishes
 - Accessories with legends
 - All Reflected Ceiling Plans
 - Ceiling configuration and materials legends
 - Lighting fixture layout
 - Clearly distinguish new work from existing
 - All roof construction details
 - All wall sections referenced to building plans and sections
 - All roof, door, and window details referenced to plans and schedules
 - All special construction details
 - All Room finish, hardware, door and window schedules
 - All millwork plans, sections, elevations, and details
 - All Equipment layouts dimensioned
 - Keynotes shall contain complete note, not specification number
 - Keynote Legend shall be on the same sheet as keynote reference
 - All accessibility dimensions shall be located directly on accessibility layout sheets, not referenced remotely to a standards sheet.
- **Structural Sheets**
 - General
 - Applicable Codes and Standards
 - Listing of design loads in accordance with IBC 2006, Section 1603
 - Listing of all structural materials used, including material strengths
 - Diaphragm fastening requirements
 - Requirements for special inspection IBC 2006, Chapter 17
 - List of abbreviations
 - Symbols legend
 - Finalized Details
 - Standard details applicable to the project
 - Control joint details
 - Reinforcing steel splice length schedule
 - Lintel schedule(s)
 - Finalized Foundation Plan
 - Fully dimensioned foundation plan (references to the architectural drawings for foundation dimensions are unacceptable) including:
 - Overall building dimensions
 - Column gridlines
 - Location of foundation elements with respect to column gridlines
 - Location of slab edges

- Location of control joints
 - Location of slab recesses
 - Location of elevator pits
 - Location of footing and foundation wall steps
 - Location of foundation wall masonry ledges
 - Size of all foundation elements
 - Foundation wall thickness
 - Top of footing elevations (locating top of footing with respect to finished grade is not acceptable)
 - Masonry ledge elevations
 - Top of wall elevations
 - All required section cuts
- Finalized Floor Framing Plan
 - Fully dimensioned floor framing plan (references to the architectural drawings for framing dimensions are unacceptable) including:
 - Overall building dimensions
 - Column gridlines
 - Location of framing elements with respect to column gridlines
 - Top of beam elevations
 - Size and spacing of framing members
 - Locations of openings for floor penetrations
 - Size and direction of span of floor sheathing or decking
 - Camber requirements
 - All required section cuts
- Finalized Roof Framing Plan
 - Fully dimensioned roof framing plan (references to the architectural drawings for framing dimensions are unacceptable) including:
 - Overall building dimensions
 - Column gridlines
 - Location of framing elements with respect to column gridlines
 - Top of beam elevations
 - Size and spacing of framing members
 - Locations of openings for roof penetrations
 - Size and direction of span of roof sheathing or decking
 - Camber requirements
 - All required section cuts
- Finalized Details
 - Foundation Details
 - Footing/foundation wall details showing relationship to floor structural system
 - Piling/pile cap details showing relationship to floor structural system
 - Floor Framing Details
 - Connection Details
 - Loading diagrams for special load cases for steel bar joists

- Column and base plate schedules for steel buildings
 - Column and beam schedules for concrete buildings
 - Roof Framing Details
 -
 - Connection Details
 - Loading diagrams for special load cases for steel bar joists
 - Column and base plate schedules for steel buildings
 - Column and beam schedules for concrete buildings
 - Prefab wood truss profiles with loading diagrams for all load cases
- **Mechanical Sheets**
 - Finalized Site Mechanical Plan (if applicable, with all features drawn to scale)
 - Detail drawings showing major mechanical details and sections, including all piping and ductwork connections to mechanical equipment.
 - Finalized Mechanical Floor Plans (HVAC, plumbing, and fire protection), with all cross-references between sheets.
 - Enlarged scale mechanical plans for mechanical rooms where all necessary plan information cannot be conveyed at a smaller drawing scale.
 - Discipline specific notes, legends, code references, symbols and abbreviations.
 - HVAC system schematics and flow diagrams
 - Finalized Mechanical equipment schedules
 - Finalized Plumbing fixture connection schedule
 - Plumbing isometrics or riser diagrams for water systems and drain, waste, and vent (DWV) systems for each restroom, plumbing stack, or other groups of plumbing fixtures where all information cannot be shown on plan sheets
 - HVAC control schematics and sequences of operation
- **Electrical Sheets**
 - Finalized Electrical floor plans, with all cross-references between sheets
 - Enlarged scale electrical plans for critical spaces where all necessary plan information cannot be conveyed at a smaller drawing scale
 - Finalized Site electrical plan showing routing with transformers, generators and vaults drawn to scale
 - Finalized Detail drawings showing major electrical details and sections, including conduit routing to major electrical equipment
 - Finalized Branch circuiting for all electrical devices
 - Finalized Discipline specific notes, legends, code references, symbols and abbreviations.
 - Finalized Panel board and light fixture schedules
 - Finalized Fire alarm matrix, riser and device location plans
 - Lightning protection plans
 - Finalized Telecommunication plans
 - Finalized Security system plans
 - Finalized Control wiring diagrams