

PROJECT INTRODUCTION

Our integrated approach allows us to effectively showcase specific BIM related strategies and how they are beneficial to the project at hand.

- **3D/Phasing**
- Scheduling
- Coordination
- **Constructability Analysis**

- Ease of exchange between the 3D model to plan view
- **Greater awareness of detail** relationships with other elements







OBJECTIVES

Articulate vital project information better and more accessible to project stakeholders **Create improved project outcomes** Become a more valued player in this process **Construction project would progress throughout the** various stages until completion.

BIM Project – School Team #2 Members: Erik, Frank, Kelly and Joe **ARCH-2413** Supervisor: Dr. Zaki Mallasi, Spring 2023

METHODOLOGY

- Design thru Construction integrate a whole array of design and construction data related to cost, schedule, materials, assembly, maintenance
- Technology: Software programs are available to assist with almost every management function in construction
- Quality control defining the LOD for all elements in the model and monitoring them throughout the project

4D SCHEDULING





Week 4





Week 7

Week 2



Week 8



Week 12

Completion

4D BIM Scheduling improves communication as well as the planning and construction processes in an understandable way

- Improved time and cost savings
- Focused activity lists
- **Promotes project milestones in a realistic timeline**
- **Decreases unexpected timeline errors**

Week 6

Week 10



COORDINATION

Coordination is crucial to BIM and is the backbone of a successful BIM project

- Ensures a common goal
- Optimizes the building process

• Minimizes conflicts and errors • Enhances project efficiency

BIM COORDINATION

Coordination in BIM is crucial for project success. BIM allows stakeholders to collaborate more effectively, improving communication and reducing the risk of errors or delays. Through BIM, stakeholders like yourself can identify and resolve issues early on. Which reduces costs and improving efficiency considering staff/students are on school grounds year-round. BIM also leads to better project outcomes for schools as improved energy efficiency and lower maintenance costs. Overall, coordination in BIM ensures that all projects are completed on time, within budget, and to the standards of stakeholders, equaling a greater return on investment.

BENEFITS OF ANALYSIS

by:

- Assuring increased ROI and profitability.
- Timely detection of clashes, better \bullet scheduling, planning and cost
- estimation. **Project Managers can see which** subcontractors are working on which parts of the project and track

- progress.
- Enables us to manage, create, and update our construction project efficiently.
- Can better call attention to errors.



BIM can help your construction managers better manage their project

3D PHASING 2023 2024 February - August Beptembel Uctober NovemberDecember, Janu April DESIGN & CONSTRUCTION DOCUMENTS CONSTRUCTION PHASE DD CD Project Specific Generic Activity Attributes Activity Categories Activity Types • Level of Detail • "Construct" "Movement of tenants" • "Temporary" • Cost "Construction "Demolish" • Space 3. Activity" members SCHEDULE THE 4D WAY Friday 11:58:05 PM 10/2/2015 Day=270 Week=39 3D BIM MODEL H(-6)-14(25) : FIRST FLOOR (6) TimeLiner Tasks Data Sources Configure Simulate 09:00 1/6/2015 15 Settings... 10/2/2015 September 2015 Status Planned Start Planned End Actual Start Act 111 W38 W37 W39 3/1/2016 N/A 22.45% 3/15/2016 N/A 7/8/2015 11/10/2015 6/10/201 N/A 74.75% 3/15/2016 7/8/2015 HVAC - Misc N/A N/A 34.47%



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General Conditions	
Long Lead Procurement	
Mobilize on Site	Į.
Site Grading and Utilities	
Foundations	
Steel Erection	
Form and Pour Concrete	
Carpentry Work	
Masonry Work	
Roofing	
Window & Wall Closures	
Building Finishes	
Elevators	
Plumbing	
Electrical	
Heating and Ventilating	
Final Clean up and Occupancy	
Complete Final Inspection	
Complete Punch List	
Obtain Certificate	
Issue final completion documents including	
warranties	
Issue final request for payment	



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Utilizing 3D capabilities helped highlight different phases of our project. BIM software is important to accurately display how we present our project.

- 1. Enables different viewpoints
- 2. Reduces design errors that can be costly
 - Allows for more cooperation amongst project
- 4. Enhanced view/scope of the project



COLLABORATION OF SCHEDULE WITH 3D MODEL

- **Promotes project** milestones in a realistic timeline
- Updated weekly, real time visual schedule





