

Aider Haiti

Ecole communautaire de Pendus



Aider Haiti

**Ecole Communautaire de Pendus
Phase I**

Submittal Date – November 14, 2015

Preliminary Estimate

TABLE OF CONTENTS

Section 1 – Basic Information

1.1	Executive Summary	3
-----	-------------------------	---

Section 2 – Engineering Design

2.1	Building Design & Layout	4
2.2	Roadway/ParkingLot Design	8

Section 3 – Quantitative Calculations

3.1	Design Quantity Take-offs.....	10
3.2	Detailed Cost Estimate	16
3.3	Project Schedule	17

SECTION 1

BASIC INFORMATION

EXECUTIVE SUMMARY

This document includes a complete engineering estimate of the Civil, Environmental and Construction components of the proposed project, design quantity takeoffs, detailed estimate, and project schedule.

The proposed project will be separated into two Sub-Phases. Sub-Phase 1 include 20 classrooms, 6 ADA compliant restrooms, a library, an administration building, a cafeteria and an outdoor playground. Sub-Phase II includes the widening and construction of Route Pendus to allow trucks, construction equipments, eventually students and school personnel easement to the facility.

The widening and construction of the roadway is of utmost importance. Sub-Phase II of the project has the prospect of reducing construction cost in regards to the school and further helps accomplish the overall goal of the organization which is to help create a vibrant community by generating economic growth and development for the surrounding communities. It is estimated that the each classroom will be able to accommodate 30 students and the library will have a maximum occupancy of 350 people. The library will be able to accommodate 70 computers, an extensive amount of books, 12 study rooms and several open areas with toys.

The roadway improvements will include drainage, sidewalk, curb and asphalt. Due to the severity of the deforestation and lack of drainage, flooding has been a revolving issue in the area. Therefore we are proposing the use of reinforced concrete pipes, Retention Ponds and Bahia Sod for the disturbed area. In terms of Asphalt, SP 12.5 Traffic Level C will be applied on the final surface.

The detailed cost estimate of the improvements listed above is \$ 214,070.71 USD. This estimate includes all materials, equipment, labor, tax, and associated fees. The estimated time required to complete construction of the improvements listed above is 268 working days, or approximately 13.4 calendar months. The remainder of this document supports and expands on the above information.

BUILDING DESIGN & LAYOUT

Introduction

As part of the Project, a one-story administration building is to be constructed. The purpose of this building will be to provide a lunch room for the faculty, a storage room, a maintenance closet, and five (5) offices for the school faculty, a waiting area and a conference room that can accommodate a minimum of 30 people.

Identification Data

As defined in the Specifications, the office building will be constructed from standard-size CMU's resting on a twelve (24) inch building pad composed of concrete with a compressive strength of four-thousand (4,000) psi and reinforced with standard number five (#5) steel reinforced bars at twelve (12) inches on center, each face, each way (#5, 12", OCEFWE). The shingled roof of the building will have a three (3) foot overhang, will be gabled and feature gutters with downspouts and splash pads. The office building will feature an open reception area with the five (5) offices and the conference room located down the hallway behind the reception desk. The one (1) storage closet will be to the left of the reception desk with two (2) bathrooms meeting all of the Americans with Disabilities Act (ADA) requirements located to the right of the closet. The one (1) break room is to the right of the ADA bathroom. A suspended architectural ceiling grid composed of fiberglass on wood with integrated lighting will cover the interior. The interior walls shall not exceed a height of sixteen (16) feet. Interior floors in the office building will be finished with tile with the conference room being the only one with high-quality carpet. Interior doors will be three feet wide and six feet, eight inches tall (3'0" x 6'8"), will be made of oak wood and will include all applicable hardware. The reception area of the office building and the conference room will feature two (2) aluminum-framed exterior windows each. The break room and each office will have one (1) aluminum-framed exterior window. The office building will feature a HVAC system complete with an air handling unit and air conditioner. With the exception of the bathroom, each room will feature one (1) emergency fire extinguisher. The three (5) offices will be furnished with the following items: one (1) executive desk; chair; one (1) book case; one (1) reference table; one (1) trash can; one (1) Dell Studio computer with flat panel twenty-four (24) inch LCD display; and one (1) filing cabinet. The bathroom will be furnished with the following items: one (1) toilet; one (1) ADA-approved shower; one (1) toilet paper dispenser; grab bars; one (1) soap dispenser; a countertop with sink and mirror; one (1) paper

towel dispenser; and one (1) trash can. Appropriate floor space will be provided for wheelchair access.

Assumptions

- Total interior wall thickness will be five (5) inches
- Total exterior wall thickness will be nine and one-half (9.5) inches.
- Waste produced during construction by building materials will be negligible.
- Complete roofing system referred to in the Term Project Additional Cost Data document includes all components of the roofing system on a per horizontal square foot basis.

Design Calculations

Design calculations for the main office build were minimal and pertained primarily to geometric calculations for area and volume. All measurements made for this section are labeled on the design drawings.

Design Conclusions

There are no significant design conclusions that apply to the office building. The list of materials to be used in the construction of the office building is listed below:

- Normal weight concrete, Ready Mix, 4000psi strength
- Concrete block, Exterior, Reinforced, normal weight, 8" x 16" x 8" thick
- Reinforcing Bar, standard #5 Steel
- Polyethylene Vapor Barrier, standard, 0.006" thick
- Downspouts, Aluminum, 2" x 3", 0.020" thick, embossed
- Elbows, Aluminum, 2" x 3", embossed
- Gutters, Aluminum, Stock units, 5" K type, 0.027" thick, plain
- Splash pads
- Drip Edge, Aluminum, 0.016" thick, 5" wide, white finish
- Aluminum Door and Frame, Standard Hardware, clear finish
- Flush Wood Doors, Oak face, 3'-0" x 6'-8"
- Aluminum Windows, incl. frame and glazing, commercial grade, Projected, with screen, 4'-5" x 5'-3" opening + for Storms
- Door Hardware, Entrance Lock, Push and pull plate, dead bolt, + Handicapped lever
- Cylinder, grip handle deadlocking latch
- Deadbolt

- Hinges, full mortise, high frequency, steel base, 3-1/2" x 3-1/2", US26D
- Threshold, Rubber, 1/2" thick, 2-3/4" wide
- Lock set, Standard Duty + Privacy
- Soft-fit, Polyvinyl Chloride, white, perforated
- Suspended architectural ceiling grid (fiberglass on plywood) system & lighting
- High-Performance Wall Coatings, Epoxy Coating, Maximum, 2 Coats, Exterior
- Paint, Exterior, Spray, Latex, Paint, First Coat
- Paint, Interior, 2 Coats, smooth finish
- Ceramic Tile, Floors, glazed, thin set, 16"x16" tile
- Gypsum Board, 5/8" thick, on walls, With compound skim coat (level 5 finish)
- Fire Extinguishers
- Grab Bar, Stainless Steel, 1-1/2" diameter, 42" long
- Touch Free Automatic Towel Dispensers, surface mounted, Stainless Steel
- Surface Mounted Soap Dispenser, Chrome, with mirror and shelf, flush mounted
- Towel Dispenser and waste receptacle, 18 gallon capacity
- American Standard Brands Diplomat ADA Toilet Bowl, White
- Sterling 62052113-0 ADA Shower back Wall Only Left Grab Bar
- Alsons ADA 36in Wall Grab Bar and Shower System
- Delta Commercial Single-Handle Mixing Faucet
- Franke USA Single-Basin Stainless Steel Kitchen Sink
- Bush Milano Executive Desking Solution, Right Configuration, Harvest Cherry, Premium Installation Service
- Aeron Chair Exclusive True Black, Fully Loaded, Graphite, Posture-fit, Size B, Black Leather Arms, Hard Floor Casters, Fully Assembled
- Mayline Group Corsica 5-Shelf Bookcase, 68"H x 36"W x 16"D, Mahogany
- Studio Designs Glass Top Vision Rolling Drafting Table
- United Receptacle 30% Recycled Metallic Rectangle Waste Can, 22.5 Gallons, 30" 12 1/2" x 24", Silver Metal
- Realspace Premium Wood File, 4 Drawers, 55 2/5"H x 21"W x 18 9/10"D, Dark Cherry
- Dell Studio XPS 9100 Computer and flat panel 24-inch LCD Display (fully loaded)
- Roofing System, Complete

- Formwork – Building Pad
- Formwork – Building Pad Footer
- Office Building Plumbing System and Connection to existing sewer
- Water Supply, Ductile Iron Pipe [Wastewater] Pipe, Class 50 water piping, 18' lengths, Mechanical joint, 4" diameter
- Water Supply, Ductile Iron Pipe [Wastewater] Pipe, Class 50 water piping, Fittings, mechanical joint, 90°bend, 4" diameter
- Water Supply, Ductile Iron Pipe [Wastewater] Pipe, Class 50 water piping, Fittings, mechanical joint, Wye or tee, 4" diameter
- Water Supply, Polyvinyl Chloride Pipe, Pressure pipe, class 200, SDR 21, Including Trenching to 3' deep, 1"
- Water Supply, Polyvinyl Chloride Pipe, Pressure pipe, class 200, SDR 21, Fittings, Elbow, 90°, 1"
- Water Supply, Polyvinyl Chloride Pipe, Pressure pipe, class 200, SDR 21, Fittings, Tee, 1"
- Electrical Controls/Instrumentation/Lighting Systems/HVAC .

ROADWAY / PARKING DESIGN

Introduction

In addition to the office building and the school, a parking area and several sidewalks are required to efficiently accommodate employees and deliveries to the storage room. The parking area is located directly in front of the office building and is connected by a short driveway to the main, existing road. As mentioned previously, the widening of the roadway will be a major part of this project.

Identification Data

All widening areas of the roadway will use Optional Base Group 01 with 12” Stabilization. The parking lot area will have BT 12.5 as a sub-base and SP 12.5 Traffic Level C on the final surface. All sidewalks must be five (5) feet wide; four (4) inches thick and use 2500psi concrete with a flat, welded wire fabric base.

Assumptions

Though the design is simple, a number of assumptions must be made in order to allow for proper parking lot design:

- The parking ratio must be one (1) parking stall per 600 square feet (ft²) of office building.
- There must be additional parking to accommodate additional personnel or visitors, if any.
- Since no zoning requirements were stated in the project documents, assume all parking stalls must be properly marked and striped.
- A minimum of one (1) handicap-parking stall is required.
- The driveway will need to accommodate two (2) lanes of traffic.

Design Conclusions

According to the design parameters, the following materials will be required for the construction of the parking lot:

- Concrete, 4000psi, welded wire fabric for parking lot
 - Parking Area: 9344 square feet (ft²)
- Concrete, 2500psi, welded wire fabric for sidewalks
 - Sidewalk Area: 432 square feet (ft²)
- 6” x 18” Curb, wood form
- ADA Ramp

- Optional Base Group 01
- SP 12.5 Traffic Level C
- Parking Area Striping & Signage
 - Striping for ten (10) stalls
 - Striping for two (2) Handicap stalls
 - Two (2) signs for Handicap stall
 - Two (2) stop signs for out-going traffic, one at each parking lot entrance

SECTION 3

QUANTITATIVE CALCULATION & ESTIMATE



DETAILED COST ESTIMATE

SUMMARY Worksheet						
Sheet Number	Description	Labor Total	Material Total	Sub Total	Equip Total	TOTAL
DIRECT COSTS						
01	GENERAL CONDITIONS	\$0.00	\$0.00	\$0.00	\$0.00	\$1,500.00
02	SITWORK	\$0.00	\$0.00	\$1,500.00	\$0.00	\$1,500.00
03	CONCRETE	\$442.40	\$38058.40	\$0.00	\$0.00	\$38,058.40
04	MASONRY	\$5,119.50	\$3,071.70	\$0.00	\$0.00	\$8,191.20
05	METALS	\$0.00	\$0.00	\$0.00	\$0.00	\$26,775.00
06	WOODS AND PLASTICS	\$1,200.00	\$1,200.00	\$0.00	\$0.00	\$2,400.00
07	THERMAL AND MOISTURE PROTECTION	\$204.78	\$0.00	\$0.00	\$0.00	\$5,017.11
08	DOORS & WINDOWS	\$2,767.00	\$19,632.00	\$0.00	\$0.00	\$22,399.00
09	FINISHES	\$16,384.00	\$0.00	\$0.00	\$0.00	\$16,384.00
10	SPECIALTIES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
11	EQUIPMENT	\$0.00	\$0.00	\$0.00	\$0.00	\$4,096.00
12	FURNISHINGS	\$0.00	\$0.00	\$0.00	\$0.00	\$32,375.00
14	CONVEYING SYSTEMS	\$0.00	\$0.00	\$32,375.00	\$0.00	\$32,375.00
15	MECHANICAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
16	ELECTRICAL	\$0.00	\$0.00	\$5,000.00	\$0.00	\$5,000.00
Total	DIRECT COSTS	\$26,117.68	\$79,519.70	\$38,875.00	\$0.00	\$196,070.71
	Tax (7%)					\$0.00
	Overhead (16%)					\$0.00
	Profit (10%)					\$0.00
	Sub-Total					\$214,070.71
	Bond		0-100	\$0.00		\$0.00
			101-500	\$0.00		\$0.00
			501-1000	\$0.00		\$0.00
			10001-more	\$0.00		\$0.00
					Sub	\$0.00
	Insurance(8%)					\$0.00
Total		\$0.00	\$0.00	\$0.00		\$214,070.71

Total	TOTAL COST	\$196,070.71
Total	TOTAL COST PER SF	\$2.45



General Conditions

					Labor	Labor	Material	Materials	Subtrade	Subtrade	Equipment	Equipment	Total
		Description	Quantity	Units	Unit Costs	Total	Unit Costs	Total	Unit Costs	Total	Rate	Total	Cost
		Clearing & Grubbing	1.0	LS	\$0.00	\$0.00			\$1,500.00	\$1,500.00			\$1,500.00
													\$1,500.00



SITEWORK													
					Labor	Labor	Material	Materials	Subtrade	Subtrade	Equipment	Equipment	Total
		Description	Quantity	Units	Unit Costs	Total	Unit Costs	Total	Unit Costs	Total	Rate	Total	Cost
		Grading	1.0	LS		\$0.00		\$0.00	\$1,500.00	\$1,500.00		\$0.00	\$1,500.00
				LS									
PAGE Total		SITEWORK		LS		\$0.00	SUB	\$0.00		\$1,500.00	SUB	\$0.00	\$1,500.00



CONCRETE

CONCRETE													
					Labor	Labor	Material	Materials	Subtrade	Subtrade	Equipment	Equipment	Total
		Description	Quantity	Units	Unit Costs	Total	Unit Costs	Total	Unit Costs	Total	Rate	Total	Cost
		Slab	300.0	CY	\$0.75	\$225.00	\$40.00	\$12,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12,225.00
		Beams	120.0	CY	\$0.75	\$90.00	\$100.00	\$12,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12,090.00
		Columns	85.6	CY	\$0.75	\$64.20	\$100.00	\$8,560.00	\$0.00	\$0.00	\$0.00	\$0.00	\$8,624.20
		<u>Labor</u>			\$5.00					\$0.00		\$0.00	\$0.00
		Waste (10%)	50.6	CY	\$1.25	\$63.20	\$100.00	\$5,056.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,119.20
PAGE Total	CONCRETE		556	CY	\$8.50	\$442.40	\$340.00	\$37,616.00		\$0.00	\$0.00	\$0.00	\$38058.4



MASONRY

				Labor	Labor	Material	Materials	Subtrade	Subtrade	Equipment	Equipment	Total
	Description	Quantity	Units	Unit Costs	Total	Unit Costs	Total	Unit Costs	Total	Rate	Total	Cost
	NEW BUILDING											
	CMU	20,478.0	SF	\$0.25	\$5,119.50	\$0.15	\$3,071.70		\$0.00		\$0.00	\$8,191.20
PAGE Total	MASONRY	\$20,478.00	SF	\$0.42	\$5,119.50	\$0.25	\$3,071.70		\$0.00		\$0.00	\$8,191.20



METALS													
					Labor	Labor	Material	Materials	Subtrade	Subtrade	Equipment	Equipment	Total
		Description	Quantity	Units	Unit Costs	Total	Unit Costs	Total	Unit Costs	Total	Rate	Total	Cost
		#5 Rebar	17,850.0	EA	\$1.50		\$13.00		\$0.00	\$0.00			\$26,775.00
PAGETotal		METALS	\$17,850.00	EA	\$1.50	\$0.00	\$13.00	\$0.00	\$0.00	\$0.00		\$0.00	\$26,775.00



WOODS AND PLASTICS													
					Labor	Labor	Material	Materials	Subtrade	Subtrade	Equipment	Equipment	Total
		Description	Quantity	Units	Unit Costs	Total	Unit Costs	Total	Unit Costs	Total	Rate	Total	Cost
		Interior Wall Décor	1,200.0	SF	\$1.00	\$1,200.00	\$1.00	\$1,200.00	\$3.22	\$0.00		\$0.00	\$2,400.00
PAGE Total		WOODS AND PLASTICS	\$1,200.00	SF	\$1.00	\$1,200.00	\$1.00	\$1,200.00	\$3.22	\$0.00		\$0.00	\$2,400.00



Thermal Moisture

Thermal Moisture													
				Labor	Labor	Material	Materials	Subtrade	Subtrade	Equipment	Equipment	Total	
		Description	Quantity	Units	Unit Costs	Total	Unit Costs	Total	Unit Costs	Total	Rate	Total	Cost
													\$0.00
		Roofing System - Complete	20,478.0	SF	\$0.01	\$204.78	\$ 0.24	\$4,812.33	\$0.00	\$0.00			\$5,017.11
				SF	\$0.00	\$0.00	\$ 0.35	\$0.00	\$0.00	\$0.00			\$0.00
PAGE Total		Thermal Moisture	\$20,478.00	SF	\$0.01	\$204.78	\$0.24	\$0.00	\$0.00	\$0.00		\$0.00	\$5,017.11



DOORS & WINDOWS

DOORS & WINDOWS													
					Labor	Labor	Material	Materials	Subtrade	Subtrade	Equipment	Equipment	Total
		Description	Quantity	Units	Unit Costs	Total	Unit Costs	Total	Unit Costs	Total	Rate	Total	Cost
		Windows (6X6)	150.0	EA	\$10.00	\$1,500.00	\$78.00	\$11,700.00		\$0.00		\$0.00	\$13,200.00
		Doors 6x8	41.0	EA	\$8.50	\$348.50	\$50.00	\$2,050.00					\$2,398.50
		Doors 6x7	40.0	EA	\$6.50	\$260.00	\$47.00	\$1,880.00					\$2,140.00
		Doors 3x7	69.0	EA	\$6.50	\$448.50	\$38.00	\$2,622.00					\$3,070.50
		Doors 5x7	30.0	EA	\$7.00	\$210.00	\$46.00	\$1,380.00					\$1,590.00
PAGETotal		DOORS & WINDOWS		EA		\$2,767.00		\$19,632.00		\$0.00		\$0.00	\$22,399.00



FINISHES													
				Labor	Labor	Material	Materials	Subtrade	Subtrade	Equipment	Equipment	Total	
		Description	Quantity	Units	Unit Costs	Total	Unit Costs	Total	Unit Costs	Total	Rate	Total	Cost
		Finishes	20,480.0	SF	\$0.80	\$16,384.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$16,384.00
				SF		\$0.00		\$0.00		\$0.00		\$0.00	\$0.00
				SF		\$0.00		\$0.00		\$0.00		\$0.00	\$0.00
PAGE Total		FINISHES		SF		\$16,384.00		\$0.00		\$0.00		\$0.00	\$16,384.00

EQUIPMENT													
					Labor	Labor	Material	Materials	Subtrade	Subtrade	Equipment	Equipment	Total
		Description	Quantity	Units	Unit Costs	Total	Unit Costs	Total	Unit Costs	Total	Rate	Total	Cost
		Equipment	20480	SF					\$0.20	\$4,096.00			\$4,096.00
PAGE Total		EQUIPMENT		LS		\$0.00		\$0.00		\$0.00		\$0.00	\$4,096.00



FURNISHINGS													
					Labor	Labor	Material	Materials	Subtrade	Subtrade	Equipment	Equipment	Total
		Description	Quantity	Units	Unit Costs	Total	Unit Costs	Total	Unit Costs	Total	Rate	Total	Cost
		SCHOOL DESK	1,000.0	EA		\$0.00			\$15.00	\$15,000.00		\$0.00	\$15,000.00
		DRY ERASE BOARDS	35.0	EA					\$25.00	\$875.00			\$875.00
		BOOK SHELVES	150.0	EA					\$110.00	\$16,500.00			\$16,500.00
PAGE Total		FURNISHINGS		LS		\$0.00		\$0.00		\$32,375.00		\$0.00	\$32,375.00

Conveying Systems													
					Labor	Labor	Material	Materials	Subtrade	Subtrade	Equipment	Equipment	Total
		Description	Quantity	Units	Unit Costs	Total	Unit Costs	Total	Unit Costs	Total	Rate	Total	Cost
		COMPUTERS	100	EA			350		\$0.00	\$0.00			\$35,000.00
		PROJECTORS	25	EA			150						\$3,750.00
PAGE Total		Conveying Systems		LS		\$0.00		\$0.00		\$0.00		\$0.00	\$38,750.00



ELECTRICAL													
					Labor	Labor	Material	Materials	Subtrade	Subtrade	Equipment	Equipment	Total
		Description	Quantity	Units	Unit Costs	Total	Unit Costs	Total	Unit Costs	Total	Rate	Total	Cost
		ELECTRICAL	1.0	LS		\$0.00		\$0.00	\$0.00	\$5,000.00		\$0.00	\$5,000.00
						\$0.00		\$0.00		\$0.00		\$0.00	\$0.00
						\$0.00		\$0.00		\$0.00		\$0.00	\$0.00
						\$0.00		\$0.00					\$0.00
PAGE Total		ELECTRICAL		LS		\$0.00		\$0.00		\$5,000.00		\$0.00	\$5,000.00

PROJECT SCHEDULE

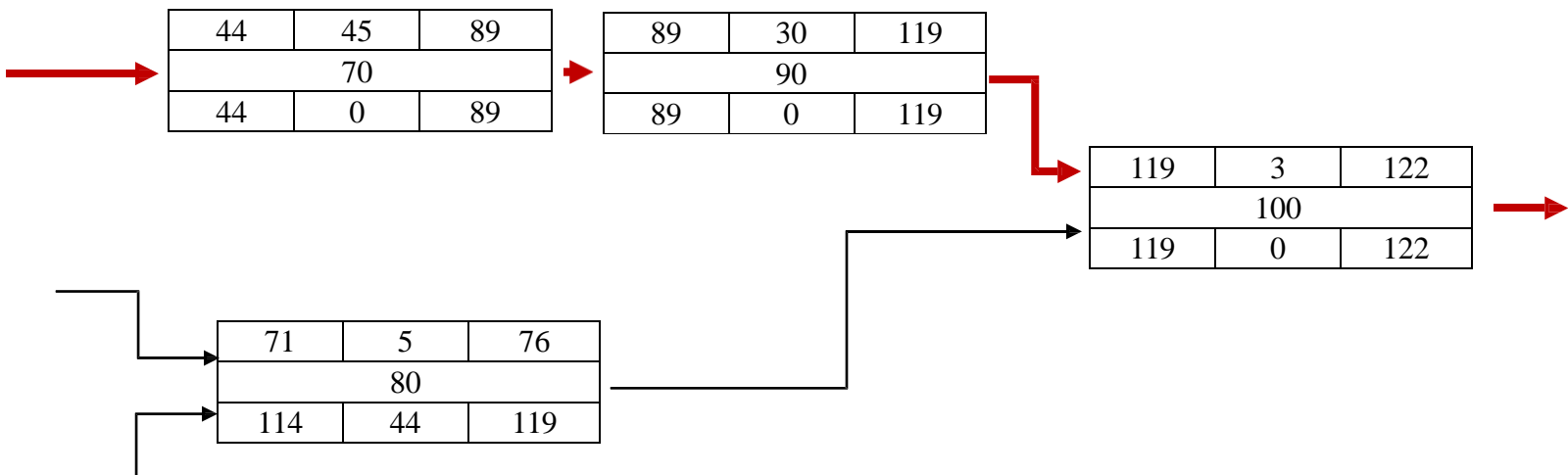
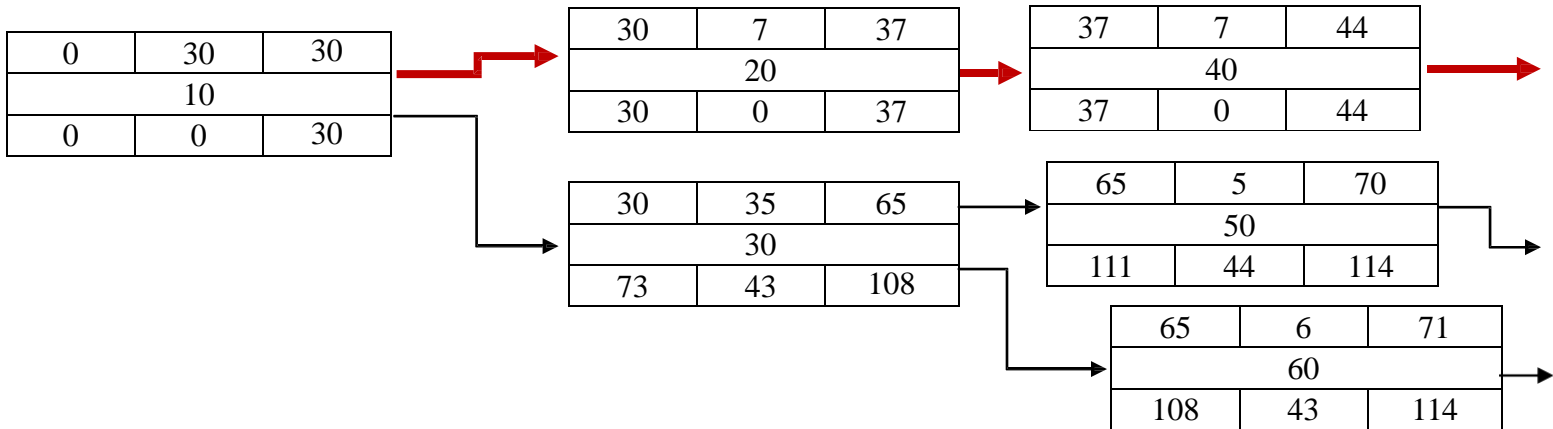
ACTIVITY REFERENCE TABLE

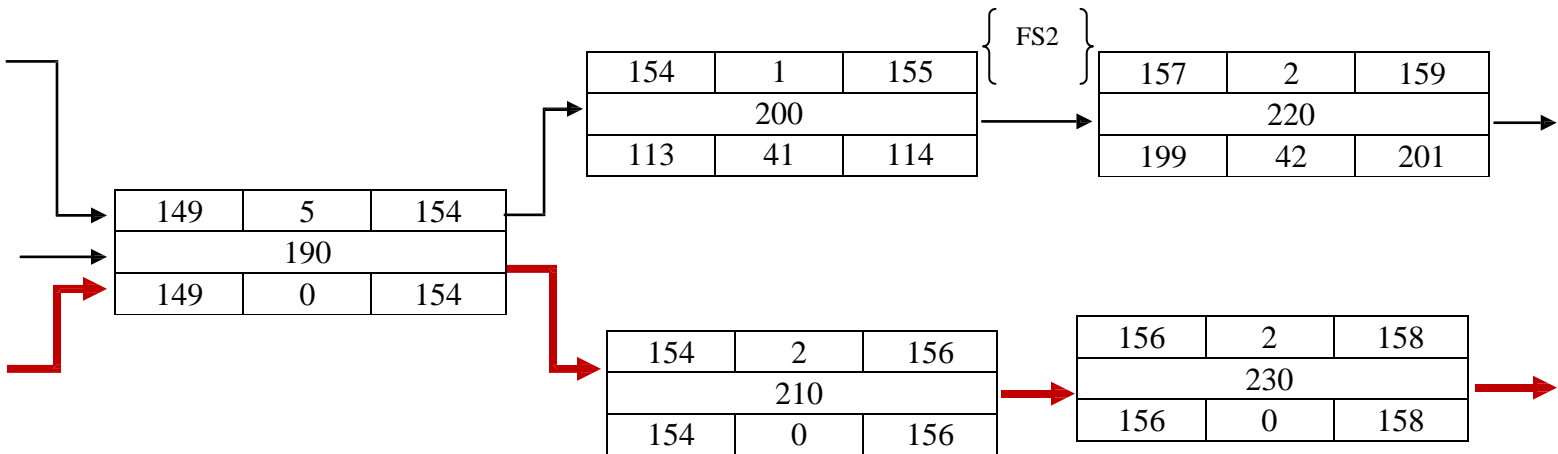
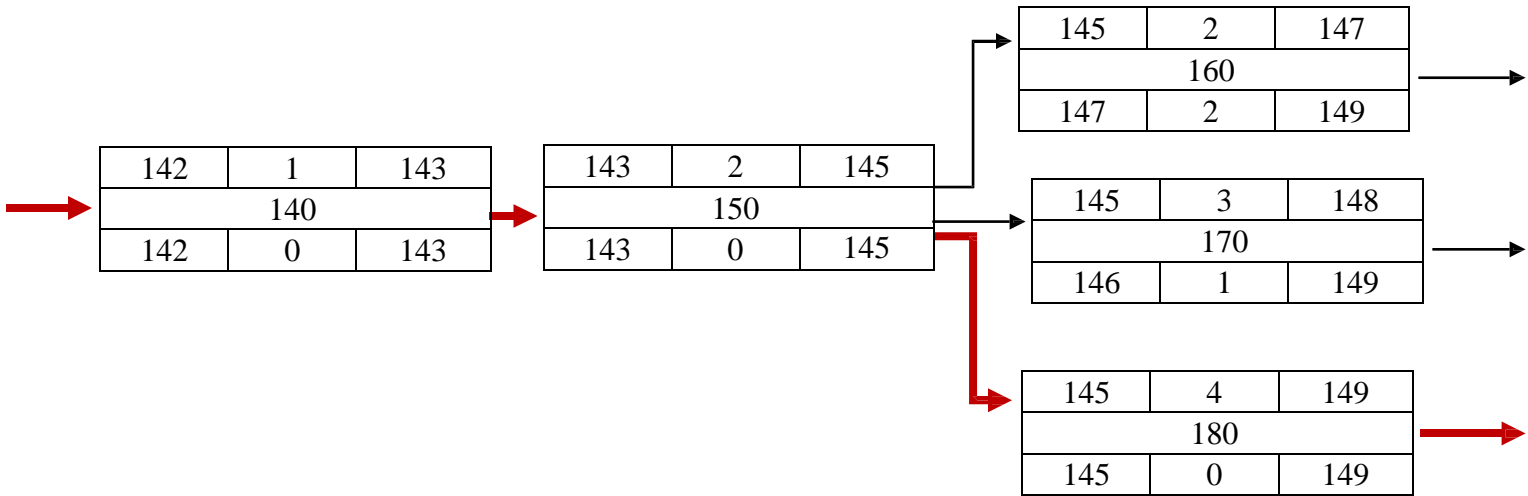
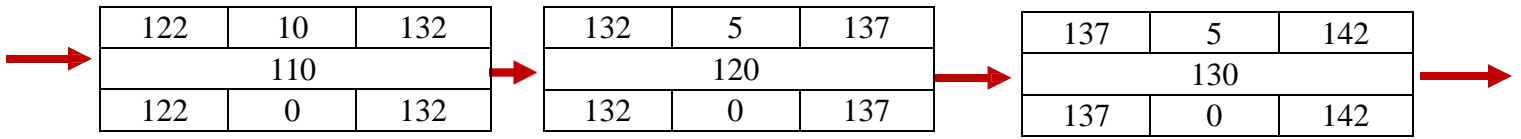
Activity No.	Activity Description	Duration (days)
10	Contract Documents	30
20	Notice to Proceed	7
30	Permitting	35
40	Site Analysis	7
50	Geotechnical Report	5
60	Evaluation of the Environment	6
70	Shop Drawings	45
80	Mobilization	5
90	Shop Drawings approval	30
100	Obtained Long Leap Items and equipment	3
110	Clearing	10
120	Site Excavation (including retention pond)	5
130	Site Grading	5
140	Remove Existing Fencing	1
150	Install Permanent Fence	2
160	Install Potable Water Line	2
170	Install Wastewater Line	3
180	Install drainage line	4
190	Install Chemical Line	5
200	Pour Concrete Around Wastewater Pipe	1
210	Clarifier Foundation Formwork,	2
220	Building Foundation Formwork	2
230	Clarifier Foundation Rebar	2
240	Building Foundation Rebar	2
250	Pour Clarifier Foundation Concrete	2
260	Pour Building Foundation Concrete	2
270	Install Parking Lot / Sidewalk Formwork	2
280	Install Clarifier Wall Formwork	4
290	Rebar for the Parking Lot and Sidewalk	2
300	Install Clarifier Wall Rebar	2
310	Pour Parking Lot / Sidewalk Concrete	2
320	Pour Clarifier Wall Concrete	1
330	Install Gravel Sidewalk	1
340	Rebar for Masonry Walls	2
350	Rake Mechanism	2
360	Masonry Blocks	5
370	Pour Concrete Inside Clarifier & Allow Rake to Set Slope	1

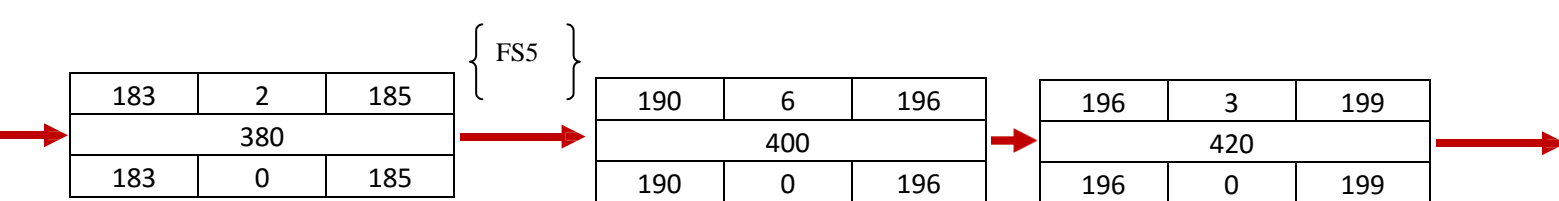
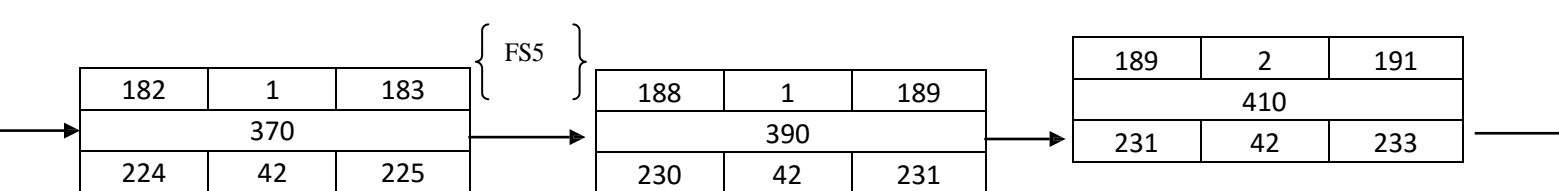
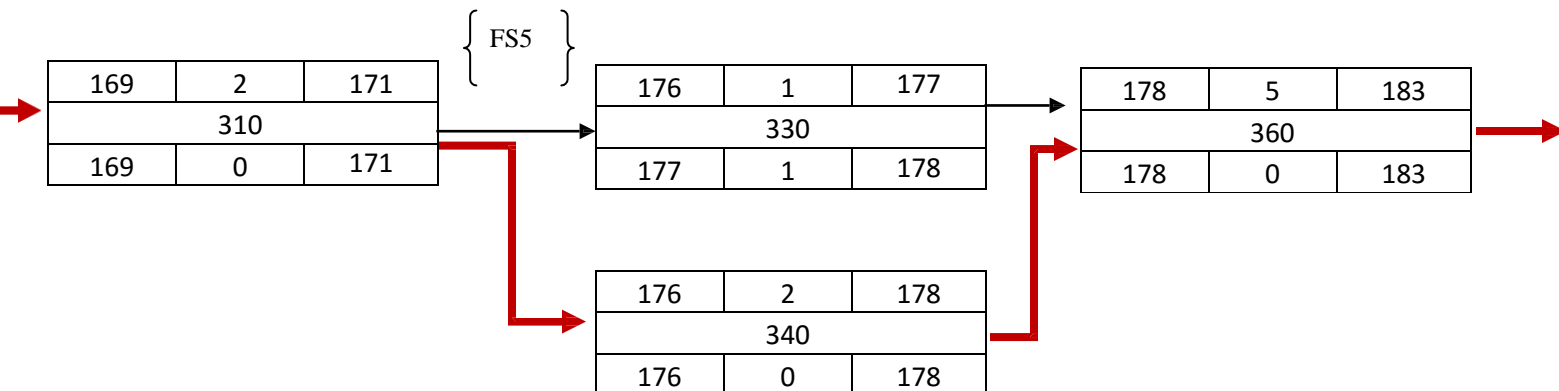
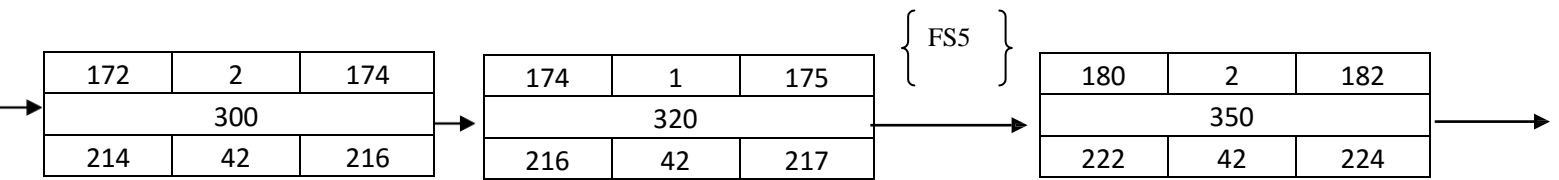
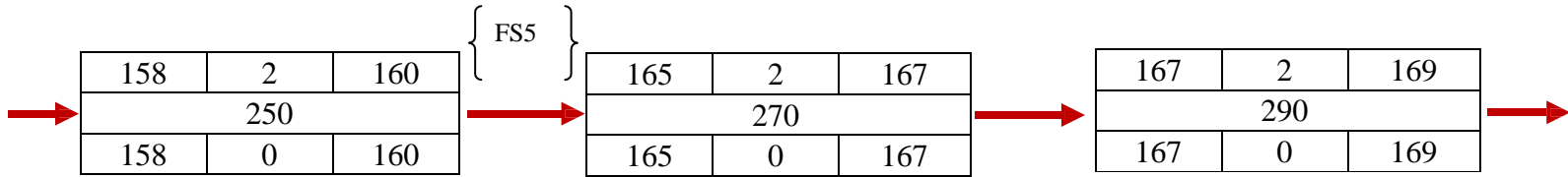
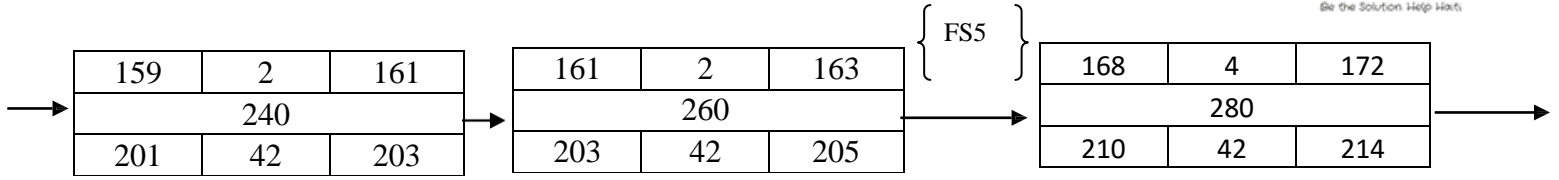
380	Masonry Block Concrete	2
390	Install Weir	1
400	Install Roof	6
410	All Piping link	2
420	Roofing	3
430	Ceiling	2
440	Interior Partitions	2
450	Chemical Storage Tanks and Feed Skids	10
460	Plumbing	3
470	Electrical	5
480	Complete installation of the HVAC System	5
490	Ventilator installment	3
500	Drywall installation	3
510	Mount Interior Doors	5
520	Interior Paint	2
530	Exterior Paint	4
540	Flooring in Office Building	3
550	Chemical Storage Room epoxy	2
560	Electrical final Work	3
570	Plumbing final touch	3
580	Carpentry final touch	4
590	Gutters, Downspouts, and Splash Pads	1
600	Supplies and office furnishings	3
610	Bumpers for the parking	1
620	Signage and Striping for Parking Lot	3
630	Test Irrigation System	4
640	Landscaping and Place Sod	7
650	Test All Equipment	7
660	Project Close-out	3

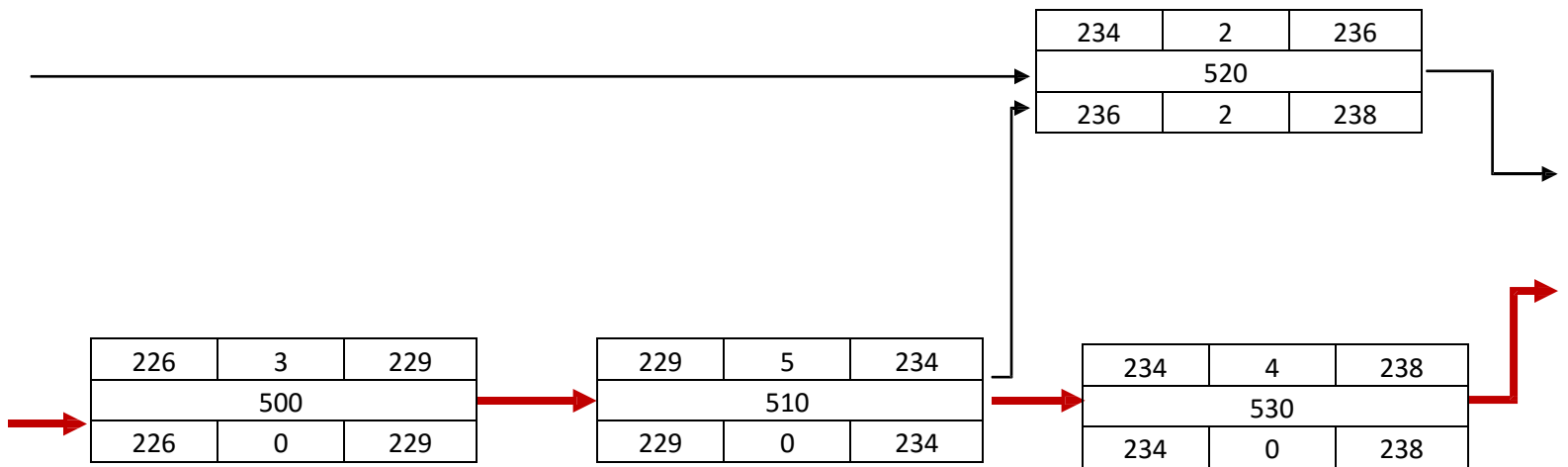
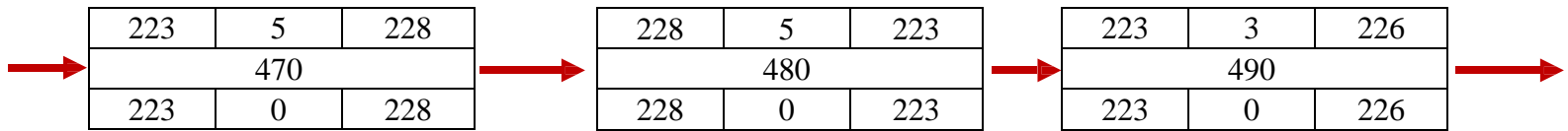
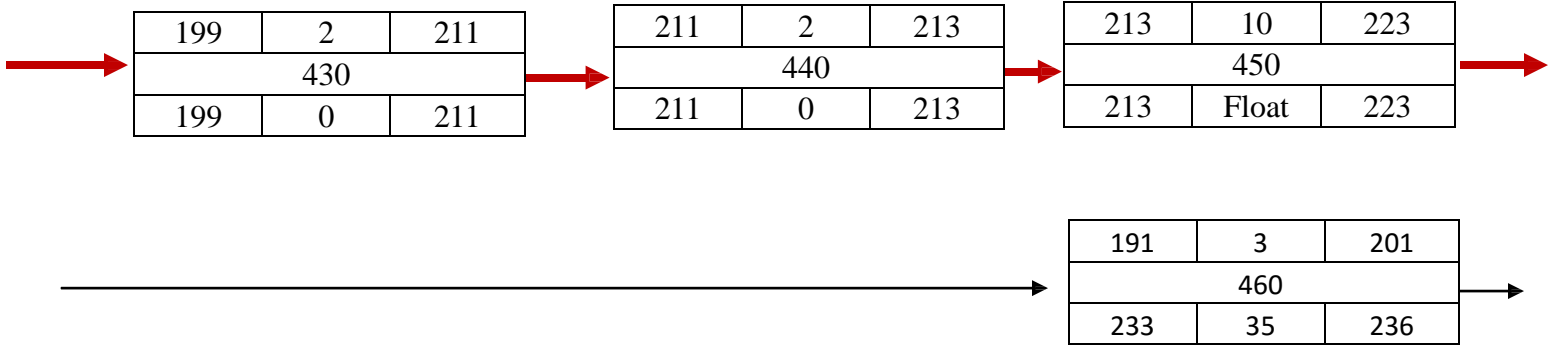
CRITICAL PATH METHOD (CPM) PROJECT SCHEDULE

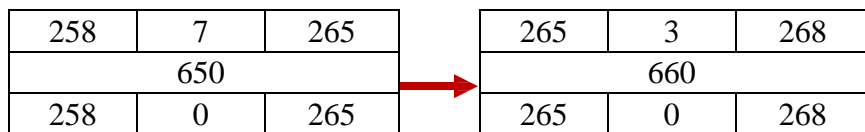
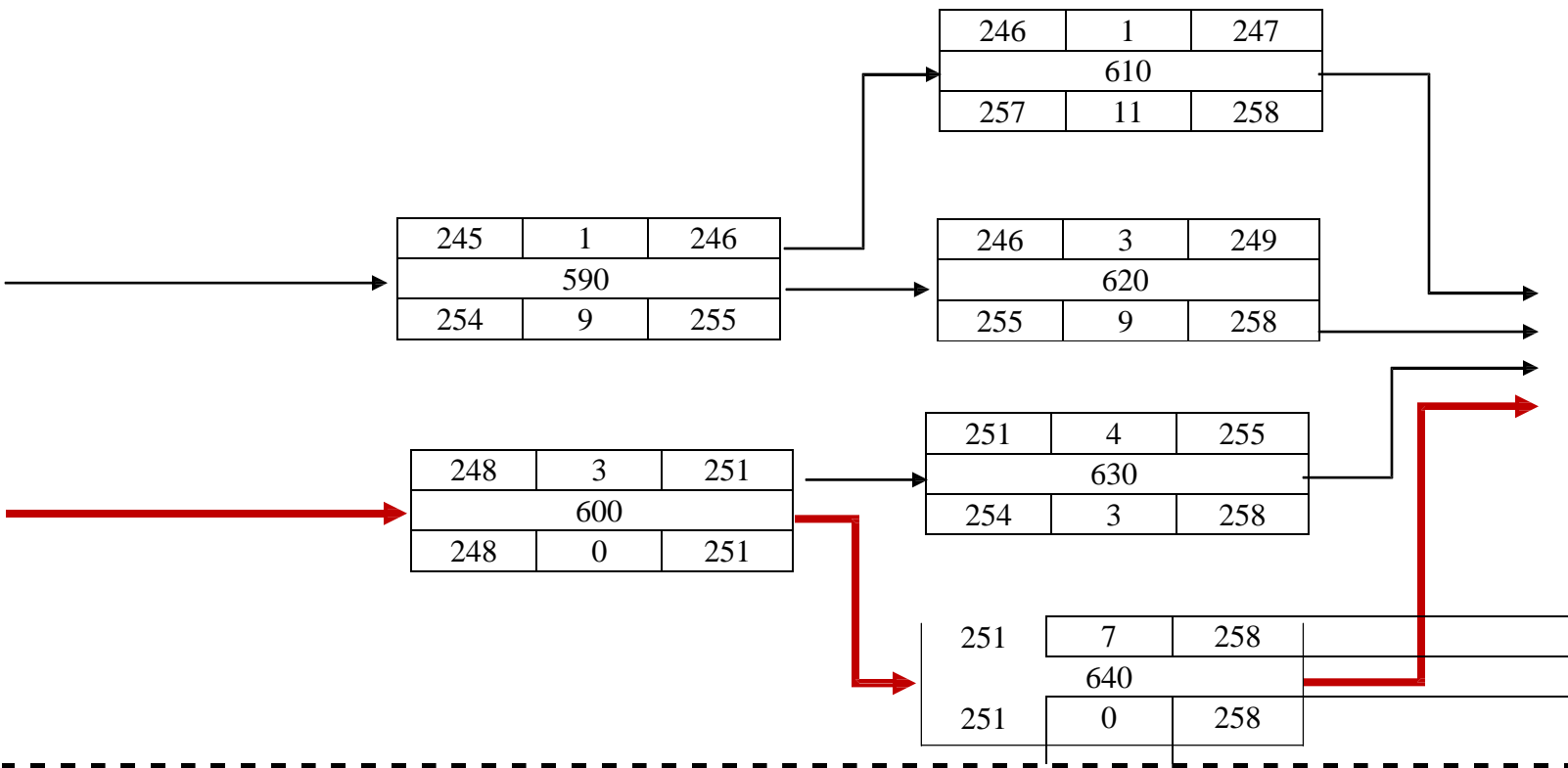
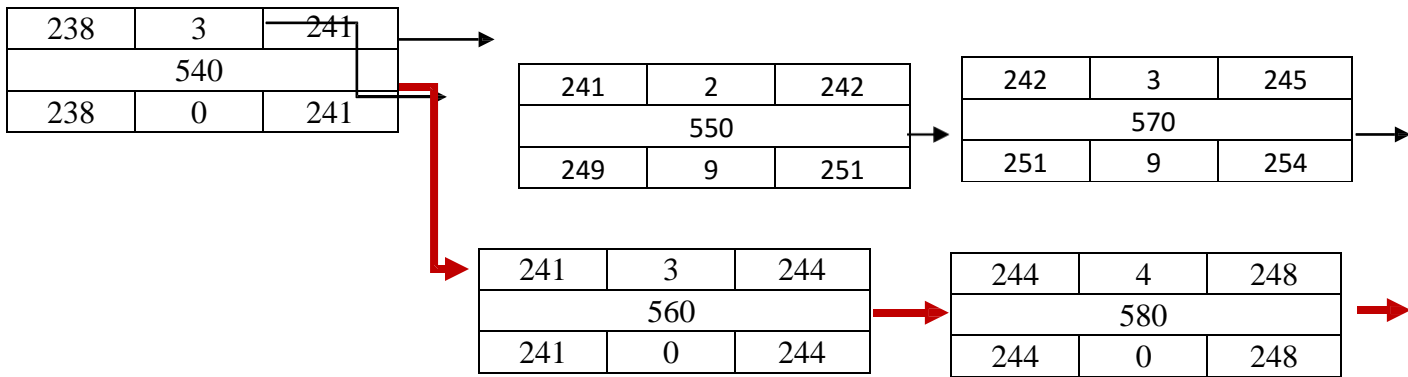
ES	Duration	EF
Activity No.		
LS	Float	LF













Critical Path: 10-20-40-70-90-100-110-120-130-140-150-180-190-210-230-250-270-290-310-340-360-380-400-420-430-440-450-470-480-490-500-510-530-540-560-580-600-640-650-660



