

CHANGE ORDER(s)

AND /OR

LETTER(s) OF EXTENSION

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**CONTRACT CHANGE ORDER NO. 002
DATED May 12, 2020**

FILED WITH CONTRACT #35208

(KLASSIC ENGINEERING & CONSTRUCTION, INC)



Date: May 12, 2020
To: Ruby Carrillo-Quincey, Acting City Controller, Department of Financial Management
From: Anne Takii, Administrative Analyst, Public Works
Subject: **CONTRACT CHANGE ORDER NO. 2 TRANSMITTAL MEMO**

PROJECT:	Contract No. 35208; R-7106 Alamitos Beach Concession Building Project
CONTRACTOR:	Klassic Engineering.
CCO#:	No. 02
ORIGINATED FROM:	Project Management Bureau
SOURCE OF FUNDING:	CIP/Tidelands
REASON:	See Attached
COST (CCO #2):	\$234,600
ORIGINAL CONTRACT:	\$5,681,000
APPROVED CONTINGENCY (15%)	\$852,150
TOTAL CONTRACT PLUS CONTINGENCY (Not to Exceed):	\$ 6,533,150
TOTAL AMOUNT OF CCO'S TO DATE (INCLUDING PROPOSED CCO'S):	\$509,600
PERCENT (%) OF CONTINGENCY USED IN CHANGE ORDERS TO DATE (INCLUDING PROPOSED):	59.80%
CITY COUNCIL ACTION DATE:	MARCH 5, 2019 (ITEM R-36)

OFFICE OF THE CITY MANAGER
CITY OF LONG BEACH
LONG BEACH, CA 90802

KLASSIC ENGINEERING & CONSTRUCTION, INC.
250 S. TUSTIN STREET
ORANGE, CA 92866

DATE: 04/06/2020
PROJECT #: R-7106
CONTRACT NO: 35208
PROGRAM NO: PW8230-19

PROJECT: ALAMITOS BEACH CONCESSION BUILDING PROJECT

CONTRACT: **UNILATERAL** CHANGE ORDER AUTHORIZATION NO. 02

PART 1 REASON FOR CHANGE

- 1.1 Change order to confirm price for extended overhead compensation for compensable delays to the critical path
- 1.2 Change order to account for delays to the critical path of the project by extending the project contract time.

PART 2 DESCRIPTION OF CHANGE

- 2.1 After construction began the City deemed that there were necessary design changes that need to be made to the project, potentially causing delay that could impact the project critical path. Prior to coming to an agreement on compensable and non-compensable delays, the construction team negotiated a price on extended overhead cost per working day to be utilized once such an agreement was made.
- 2.2 The contractor was instructed to provide a Time Impact Analysis (TIA) utilizing the Critical Path Method (CPM) schedule to determine if the changes in design impacted the project critical path and apportion the delay appropriately to the responsible party and identify any concurrency, as necessary. The TIA analysis and supporting documentation the contractor provided was grossly deficient and did not conform to the project specifications. The analysis failed in supporting the contractor's claim that the Owner was only responsible party for the entire delay period as compensable. In good faith, and partnering with the contractor, the CM team met with the contractor's scheduler, to negotiate a fair and reasonable apportion for the delay days and an offer was made to add compensable days to the contract time. After this meeting, the contractor refuted the offer and has re-submitted their TIA to support their refusal. Without a complete and accurate time impact analysis from the contractor, the City was forced to hire a third party to review the project records and assemble a complete and comprehensive time impact analysis. The third party TIA was constructed after a thorough examination of all project data and it clearly and succinctly outlines City delays and contractor delays. The contractor was provided a copy of the third-party TIA and associated CPM files to be utilized as the new project schedule and updated monthly. The contractor has expressed concerns with the TIA but all questions and items of concern have been clarified.
- 2.3 The Contractor does not agree with the City's settlement offer of fair and reasonable compensation for the Owner caused delays and refuses to execute this Change Order. To date, the Contractor has not provided a TIA analysis to support their claim for compensable delays, that complies with the Specifications. The Contractor has not provided reasonable and complete documentation to support their claim and what was provided failed to refute the City's CPM schedule and TIA. For these reasons, this Change Order is executed unilaterally by the City in order to adjust the Contract for the time and amount deemed reasonable by the City. The City reserves their right to seek compensation from the Contractor for the costs incurred by the City for third party scheduling and claims services on this matter caused by the Contractor failing to provide a TIA and supporting documentation that meets the project specifications.

PART 3 CHANGE IN CONTRACT AMOUNT

A. EXTRA WORK AT FORCE ACCOUNT

In accordance with Section 3-3, Extra Work, of the Standard Specifications for Public Works Construction, under the direction of the Project Manager you are authorized to provide all labor, materials, equipment, and installation of the following:

NO EXTRA WORK AT FORCE ACCOUNT

Payment for the above items shall only be through Extra Work Bills submitted with monthly progress payment applications and shall only be accepted if accompanied by Time and Material tickets signed by the City Inspector on the day the work was performed and noting the appropriate contract change order item.

B. EXTRA WORK AT AGREED LUMP SUM OR UNIT PRICE

In accordance with procedures for changes in the work established in the specifications, you are authorized to do the following:

- 3.1 Establish new unit price bid item necessary to reimburse the contractor for extended overhead (\$2,550.00 per day) for compensable delay days (92 days) \$234,600.00

The total of all Extra Work and Agreed Prices described above totals \$234,600.00 and includes all contractor markups.

- Net Extra Work at Force Account	= \$	0.00
- Net Extra Work at New Unit Price	= \$	234,600.00
- Net Extra Work at Agreed Lump Sum	= \$	0.00
- Net to Contract Cost	= \$	234,600.00

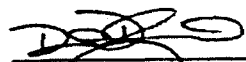

PART 4 CHANGE IN CONTRACT TIME



- 4.1 92 Calendar days have been added to the contract time, resulting in a new Final Completion date of July 25, 2020.

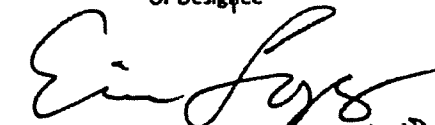
The compensation (time and cost) set forth in this Unilateral Change Order comprises the City's total determination of fair and reasonable compensation and additional Contract Time due the Contractor, all Subcontractors and all suppliers, for the work or changes defined in this Unilateral Change Order, including all impact on any unchanged work. The City reserves its right to adjust the costs for the work or change identified herein, if deemed appropriate.

The Prices set forth herein above shall be considered full compensation for all obligations of the Contractor associated with this change order, and the City will not be liable for any claim of the Contractor for delays or extra compensation resulting from performance of the requirements of this change order, except as noted above.

Recommended By:

 Construction Manager/ Construction Services Office	4/22/2020 (Date)	 Project Manager	4/29/20 (Date)
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 Deputy Director/City Engineer Or Designee	(Date)	 Financial Management	7/14/21 (Date)
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Project Management Bureau Manager

Project Information:

1. Project Identification: Alamitos Beach Concession Building.
2. Project Location: 780 East Shoreline Drive, Long Beach, California 90802.
3. Owner: City of Long Beach.
4. Owner's Representative: Tony Resendez, City of Long Beach, 333 West Ocean Boulevard, Fifth Floor, Long Beach, CA 90802, (562) 570-6258
5. Architect: RA-DA, 7523 Norton Avenue, West Hollywood, CA 90046, (323) 751-4040
6. Contractor; Klassic Engineering and Construction Inc., 250 S Tustin Ave, Orange. CA 92866
7. Construction Manager; Ardurra, 1960 E. Grand Avenue Suite 300, Segundo, CA 90245

DESCRIPTION OF WORK:

The Work to be done consists of the demolition of approximately 2,200 sq.ft. of existing concession/restroom building and replaced with two new buildings 4,240 sq.ft. and 1,322 sq.ft., respectively. Building A is a two-story core and shell café/concession building with roof deck. Building B includes public restrooms, rinse station, and recreational rental facility. Scope also includes an outdoor play area, public promenade, shade structures, wayfinding signage, improvements to the public beach parking lot, and site improvements. Bids are required for the entire Work.

Contractor Bid Amount:

1. Original Contract Sum = \$ 5,681,000.00
2. Per Invoice #10 for period 01-Feb-20 to 29-Feb-20 (February 2020 Invoice)

PERIOD:	2/1/2020	TO	2/29/2020	
Description	Contract Amount	Previous Invoices	Paid To Date	Balance Remaining
TOTAL THIS REPORT	\$ 5,956,000.00	\$ 2,425,708.76	\$ 2,425,708.76	\$ 3,530,291.24
5% RETENTION	\$ 297,800.00	\$ 121,285.44	\$ 121,285.44	\$ 176,514.56
TOTAL INVOICE AMOUNT	\$ 5,658,200.00	\$ 2,304,423.32	\$ 2,304,423.32	\$ 3,353,776.68

Contractual and Interim Milestones:

1. Limited Notice to Proceed (LNTP 1) Issued on; March 12, 2019
2. Notice to Proceed (NTP) Issued on; June 12, 2019
3. Time for Completion; 300 Calendar days from the NTP
4. Contract Completion date = NTP + 300 Calendar days = April 7, 2020

Contractor's Milestone in their Accepted Baseline Schedule

Change Directive 001 - CCO-01 ASI 5.R2 –

Change in Design for Mat foundation for both Buildings A and B

- Foundation revisions for Building A and B
- The City requested the addition for Epoxy Coated Rebar, please submit a proposal per the City's direction
- Issued on; July 31, 2019 and released to Contractor on August 27, 2019
- Delayed the submittal, approval and procurement process for Structural Steel and Rebar for Building A and B

Schedule Delay Fragnet and Unimpacted:

The following Delay Fragnets were created for this delay analysis

- Unimpacted: Copy of the 0719U June 2019 Schedule Update (Data date of 01-Jul-19)
- Delay Fragnet: TIA#1 - Building A Foundation Design
- Delay Fragnet: TIA#2 - Building A Shade Structure Summary
- Delay Fragnet: TIA#3 - Building B Foundation Design Delay

Apportion the delay appropriately to the responsible party:

Owner Delay to the CPM Schedule:

Activity ID	Activity Name	OD	Start	Finish	Total Float
R7106_ABC-TIA_June 2019 Update - Owner Impact:		338	12-Mar-19 A	25-Jul-20	-70
MILESTONES		502	12-Mar-19 A	25-Jul-20	-109
TIA#1 - Building A Foundation Design Summary		361	31-Jul-19	25-Jul-20	-109
TIA#1 - Owner Delay		361	31-Jul-19	25-Jul-20	-109
TIA#1_SUM2	CLB_Delay: TIA#1 Foundation Design	64	31-Jul-19	02-Oct-19	-100
TIA#1_SUM1	CLB_Delay: TIA#1 Structural Steel (SS)	78	31-Jul-19	16-Oct-19	-144
TIA#1_SUM13	CLB_Delay: TIA#1 Bldg A Field Work	253	17-Oct-19	25-Jun-20	-109
TIA#1-Impact	CLB_Delay: TIA#1 - BLDGADelay to Final Completion	110	07-Apr-20	25-Jul-20	-109
MILE.TIA	REVISED FINAL COMPLETION PER OWNER DELAY	0		25-Jul-20	-109

Contractor Delay to CPM schedule and Apportioning the delay Responsibility:

Activity ID	Activity Name	OD	Start	Finish	Total Float
R7106_ABC-TIA_June 2019 Update - Contractor Imp:		373	12-Mar-19 A	11-Sep-20	-105
MILESTONES		550	12-Mar-19 A	11-Sep-20	-157
TIA#1+TIA#2 Delay Fragnet Summary		409	31-Jul-19	11-Sep-20	-157
TIA#2_KEC50	Concurrent Compensable Delay (Owner BLDGA Design delay)	92	31-Jul-19	30-Oct-19	-44
TIA#2_KEC50	Concurrent Non-Compensable Delay (KEC Rebar and Steel Delay)	269	31-Oct-19	25-Jul-20	-109
TIA#2_KEC40	Recovery Subject to LD's	48	26-Jul-20	11-Sep-20	-157

Cost Impacts Delay Summary: (using above tables)

1. **Compensable Delay** = 92 Calendar Days x \$2,550/day = \$234,600.00
2. Concurrent Non-Compensable Delay = 269 calendar days
3. Contractor Recovery subject to LD's = 48 calendar days
 - a. 48 calendar days x \$3,750/day = \$180,000.00

- submittals were not included, or logic ties suppressed float/delays, and other technical issues.
2. These issues are not in compliance with the Contract and Scheduling Best Management Practices guidance published by AACE.
 3. The Contractor used the “Windows Analysis Method” for their delay analysis, however, they did not provide the contemporaneous analysis used for each period in their table and show the changes made to create the analysis and resulting apportion of the delays. This method does not comply with the Contract Division J- Section 2.7 TIME IMPACT ANALYSIS.
 4. The “Windows Analysis Method” is not an acceptable schedule delay analysis method and does not comply with Contract or in the most prevalent delay analysis guidance published by:
 - a. AACE International Recommended Practice No. 52R-06 TIME IMPACT ANALYSIS dated October 19, 2006, excerpts:

The TIA is typically associated with the modeling of the effects of a single change or delay event. It requires a Critical Path Method (CPM) schedule that is able to show the pure CPM calculation differences between a schedule that does not include a delay and one that does include an activity modeling the delay event. The difference for project completion, between the non-impacted schedule and that of the schedule with the impact, is considered to be the impact of the delay for time duration considerations.

Non-contractual constraints should be removed and contractual constraints reduced to the least restrictive, before proceeding to the next step. The resultant original schedule update should not be used for any purpose other than the TIA in question. Any constraint that is to be retained for the TIA should be the least restrictive constraint that still describes the contract requirement.

Independent TIA Analysis:

29R-03: Forensic Schedule Analysis, April 25, 2011

Various approaches to analyzing construction schedule delays have evolved over the years, but no standard method has emerged. AACE International (formerly the Association for the Advancement of Cost Engineering) in its Recommended Practice 29R-03 Forensic Schedule Analysis (2011), sets out basic technical principles and guidelines for CPM scheduling in forensic schedule analysis. The following are the most comment analysis methods used:

1. As-Planned Vs. As-Built Method:

The analyst compares the dates and durations of selected activities shown on the as-planned schedule with the actual dates and durations on an as-built schedule and considers the difference to be the delay on the job.

2. Impacted As-Planned Method

In this method the analyst lists the excusable delays (or delays where time extension is owed to the contractor) and inserts the extended duration to the relevant activities. The analyst reads the revised completion date and calculated the days between this date and the as-planned completion date and determines that these are the number of days owed

3. Collapsed As-Built Or “But For” Method

In this method the analyst takes the actual as-built schedule and takes out the duration of all the excusable delays (delays rightfully owed to the contractor). This revision forms the collapsed as-built schedule. The analyst

This is usually the preferred method of analyzing delays. In this method, the analyst takes a look at the schedule and actual site progress on the starting date of each delay, and then inserts the delays in the schedule. The new completion date is compared to the original completion date to determine the delay days. This way the impact of concurrent delays is incorporated, the new critical path reflects reality on site and effect of the delaying causes.

6. **Retrospective Time Impact Analysis (RTIA)**

measures projected delays at the start of an evaluation period as reflected in CPM schedule updates and calculates additional delay at the end of the project by inserting a fragnet (a network fragment, or a portion of the project schedule that relates to the specific delay) into the evaluation period.

TIA Analysis Section

Unimpacted Schedule:

- A. Unimpacted Schedule for this TIA was created using the approved June 2019 Update (0719U), with a data date of 07.01.19 and renamed to "ABC_0719U_Unimpacted" for clarity.
- B. The Contractor's schedule update included constraints, lags, inconsistent work hours between project calendar, inherited global calendar, opens ends, float suppression techniques, re-submittals were not included, or logic ties suppressed float/delays, and other technical issues.

Modifications made to create Unimpacted Schedule:

- A. Schedule Analyzer was used to show changes made to create the tables below:
 Target Project: ALAMITOS BEACH 0719U
 Update Project: ABC_0719U_Unimpacted

1. Replacing Lags that potentially suppress float with an Activity:

IN-PROGRESS ACTIVITIES THAT HAVE BEEN ADDED SINCE LAST UPDATE

ACT	TYPE	FLOAT	TITLE
S1730-LAG	Task	66	SUBMITTAL SPEC 12 ELEVATOR (30 day lag with MILE
S2430-LAG	Task	131	SUBMITTAL SPEC 26 FIRE ALARM (50 day lag with MI

2 In-Progress Activities were added.

AS-BUILT ACTIVITIES THAT HAVE BEEN ADDED SINCE LAST UPDATE

ACT	TYPE	FLOAT	TITLE
MILE.2-LAG	Task	-10	NOTICE TO PROCEED 2 (93 day lag with MILE)
S2400-LAG	Task	114	SUBMITTAL SPEC 26 ELECTRICAL EQUIPMENT (50 day I

2 As-Built Activities were added.

PLANNED ACTIVITIES THAT HAVE BEEN ADDED SINCE LAST UPDATE

ACT	TYPE	FLOAT	TITLE
SW1210-LA	Task	0	PAVEMENT MARKING (20 day lag with SW1205)

2. Restore Original Duration changes back to Baseline:

MILE.2 TARGET NOTICE TO PROCEED
 UPDATE NOTICE TO PROCEED 2 (NTP2), June 13, 2019 First Day

MILE.27 TARGET FINAL COMPLETION
 UPDATE FINAL COMPLETION, NTP2+300 CD, April 7, 2020

5. Modify/add actuals dates to lag activities to identify and float suppression:

ACT	START	FINISH	TITLE
MILE.2-LAG	12-Mar-19	12-Jun-19	NOTICE TO PROCEED 2 (93 day lag with MILE)
S1730-LAG	12-Jun-19		SUBMITTAL SPEC 12 ELEVATOR (30 day lag with MIL
S2400-LAG	12-Jun-19	12-Jun-19	SUBMITTAL SPEC 26 ELECTRICAL EQUIPMENT (50 day
S2430-LAG	12-Jun-19		SUBMITTAL SPEC 26 FIRE ALARM (50 day lag with M

6. Correct Duplicate relationships causing gap in work or float suppression:
DELETED RELATIONSHIPS (ACTIVITIES EXIST) (Rel Key: Relationship/Lag)

PRED	SUCC	FLOAT	TITLE
A1340	Rel=FF/2	4	STOREFRONT WINDOWS (2 OF 2)
	A1165	19	HANGING DOOR FRAME, DOOR, HARDWARE INSTALLATIO
A1345	Rel=FF/2	-5	TILE INSTALLATION (2 OF 2)
	A1190	-5	PAINT

ADDED RELATIONSHIPS (ACTIVITIES EXISTED) (Rel Key: Relationship/Lag)

PRED	SUCC	FLOAT	TITLE
A1340	Rel=SS/2	4	STOREFRONT WINDOWS (2 OF 2)
	A1165	19	HANGING DOOR FRAME, DOOR, HARDWARE INSTALLATIO

7. Relationship changes to replace lag with activity and remove lag:

RELATIONSHIP ADDED WHEN ACTIVITY ADDED (Rel Key: Relationship/Lag)

PRED	SUCC	FLOAT	TITLE
SW1205	Rel=FS/0	0	AC PAVING
	SW1210-LAG	0	PAVEMENT MARKING (20 day lag with SW1205)
SW1210-LAG	Rel=FS/0	0	PAVEMENT MARKING (20 day lag with SW1205)
	SW1210	0	PAVEMENT MARKING

8. Open ended activity in Contractor's schedule not corrected and out of sequence:

ACTIVE ACTIVITIES WITHOUT A FINISH RELATIONSHIP

ACT	TYPE	FLOAT	%-CMP	TITLE
A1165	Task	19	0	HANGING DOOR FRAME, DOOR, HARDWARE INSTALL
A1345	Task	-5	0	TILE INSTALLATION (2 OF 2)

9. Remove constraints per contract TIA specifications:

Results to create Unimpacted Schedule:

Activity ID	Activity Name	OD	Start	Finish	Total Float
R7106 ABC-TIA_June 2019 Update - Unimpacted Schedule					
MILESTONES					
CONTRACTURAL MILESTONES (NEW)					
MILE	LIMITED NOTICE TO PROCEED (LNTP 1) March 12, 2019	0	12-Mar-19 A		
MILE.2-LAG	NOTICE TO PROCEED 2 (93 day lag with MILE)	253	12-Mar-19 A	12-Jun-19 A	
MILE.2	NOTICE TO PROCEED 2 (NTP2), June 13, 2019 First Day	0	12-Jun-19 A		
MILE.23	SUBSTANTIAL COMPLETION	0	06-Mar-20		2
RAIN	RAIN DAY IMPACT ALLOWANCE	30	18-Mar-20	17-Apr-20	-10
MILE.27	FINAL COMPLETION, NTP2+300 CD, April 7, 2020	0		17-Apr-20	-10

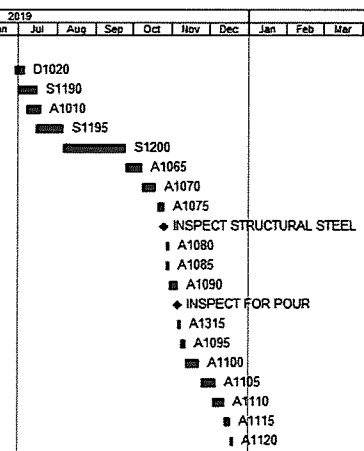
Table comparing the dates to Baseline:

Milestone Activities			Baseline	0719U	Unimpact	Variance
Type	Activity ID	Activity Name	Finish	Finish	Finish	to Base
Interim Milestone	MILE	LIMITED NOTICE TO PROCEED (LNTP 1) March 12, 2019	12-Mar-19	12-Mar-19	12-Mar-19	0
Contract Milestone	MILE.2	NOTICE TO PROCEED 2 (NTP2), June 13, 2019 First Day	12-Jun-19	12-Jun-19	12-Jun-19	0
Interim Milestone	MILE.23	SUBSTANTIAL COMPLETION	5-Mar-20	6-Mar-20	5-Mar-20	1
Interim Milestone	RAIN	RAIN DAY IMPACT ALLOWANCE	7-Apr-20	20-Apr-20	17-Apr-20	3
Contract Milestone	MILE.27	FINAL COMPLETION, NTP2+300 CD, April 7, 2020	7-Apr-20	20-Apr-20	17-Apr-20	3

The minor differences in dates are attributes to the lag changes and duplicate relationships that suppressed 3 days of total float:

Partial Critical Path:

Activity ID	Activity Name	OD	Start	Finish	Total Float
R7106 ABC-TIA_June 2019 Update - Unimpacted Sche					
D1020	REMOVE BRICK AC SIDEWALK C&G	5	28-Jun-19 A	05-Jul-19	2
S1190	SUBMITTAL SPEC 05 SS FRAMING	10	01-Jul-19	15-Jul-19	-6
A1010	OVER EXCAVATION (1 OF 2)	9	08-Jul-19	18-Jul-19	2
S1195	APPROVE SUBMITTAL SPEC 05 SS FRAMING	21	15-Jul-19	05-Aug-19	-7
S1200	PROCURE SPEC 05 SS FRAMING	35	06-Aug-19	24-Sep-19	-6
A1065	SET STEEL COLUMNS	9	25-Sep-19	07-Oct-19	-6
A1070	SET STEEL BEAMS	9	08-Oct-19	18-Oct-19	-6
A1075	PLUMB AND BOLT UP	5	21-Oct-19	25-Oct-19	-6
A1400	INSPECT STRUCTURAL STEEL	0		25-Oct-19	-6
A1080	FINE GRADE SLAB	2	28-Oct-19	29-Oct-19	-6
A1085	SET STAIRS	2	28-Oct-19	29-Oct-19	-6
A1090	REBAR/FORMWORK SLAB	5	30-Oct-19	05-Nov-19	-6
A1405	INSPECT FOR POUR	0		05-Nov-19	-6
A1315	WATER BARRIER	2	06-Nov-19	07-Nov-19	-6
A1095	PLACE CONCRETE SLAB	2	08-Nov-19	11-Nov-19	-6
A1100	FRAME WALLS - FIRST FLOOR	9	12-Nov-19	22-Nov-19	-6
A1105	FRAME CEILING - FIRST FLOOR OR FLOOR - SECOND FLOOR	7	25-Nov-19	05-Dec-19	-6
A1110	FRAME WALLS - SECOND FLOOR	7	04-Dec-19	12-Dec-19	-6
A1115	FRAME ROOF	3	13-Dec-19	17-Dec-19	-6
A1120	ROOF SHEATHING	2	18-Dec-19	19-Dec-19	-6



The critical path runs through the Demolition of the brick sidewalk followed by the approval and fabrication of Spec 05 Framing and the remainder goes through Building A.

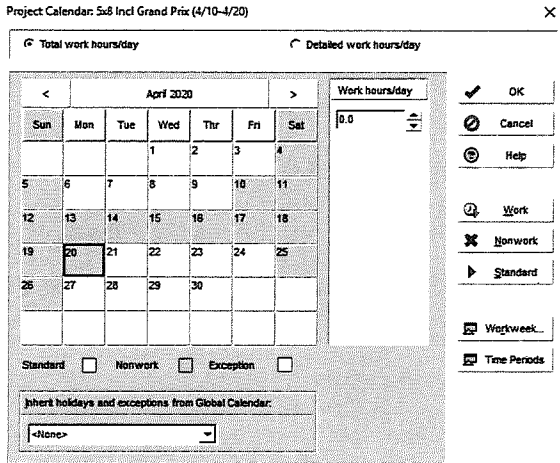
- A. A copy of the Unimpacted Schedule was used for the TIA fragnets insertion and analysis. The schedule was renamed to "ABC_TIA1+2_CLB-Impact" for clarity.

Delay Period:

- The Owner design delay period for the Design changes for the mat foundation for Bldg. A +B below
 - Bldg. A +B Delay Period; 31-Jul-19 to 27-Aug-19 - Design changes released to Contractor
- The Owner delay period from the releasing the revised design to the contractor and baseline logic and durations for the submittal and procurement process below:
 - TIA#1 and TIA#2 - Bldg. A Delay Period; 27-Aug-19 to 16-Oct-19 - Mat Foundation Rebar
 - TIA#1 - Bldg. B Delay Period; 27-Aug-19 to 16-Oct-19 - Mat Foundation Rebar
 - TIA#1 - Bldg. A Delay Period; 27-Aug-19 to 16-Oct-19 - Structural Steel
 - TIA#2 - Bldg. A Delay Period; 27-Aug-19 to 30-Oct-19 - Shade Structure

Modifications made to create TIA#1 and TIA#2 Impacted Schedule:

- The 5-day calendar was modified to show the Grand Prix Event as non-working days from April 10 thru April 20, 2020.



- The following activities had reverse logic ties and causing gaps to the completion milestone. Their names were changed for clarity and logic removed.

3. Activities added to create the fragmet schedule:

ACTIVITIES THAT HAVE BEEN ADDED FOR TIA'S

ACT	TYPE	FLOAT	TITLE
	Finish		
MILE.TIA	MS	-109	REVISED FINAL COMPLETION PER OWNER DELAY
SW1105.1	Task	-66	NEW - Gas Line Installation
SW1155.1	Task	15	NEW - Remove Silk Tree (2/11/20)
SW1205.1	Task	15	NEW - SCE Electrical pad and vault installation
TIA#1-10	Task	-99	CCO-ASI-05 R2 - Redesign of Mat foundation Bui
TIA#1-20	Task	-30	CCO-ASI-05 R2 Building A Structural Steel (SS)
TIA#1-30	Task	-92	CCO-005-RFQ - Add Epoxy Coated Rebar in Mat Fo
TIA#1-IMPACT	LOE	-109	CLB_Delay: TIA#1 - BLDGA Delay to Final Comple
TIA#1-START	Task	-99	TIA#1 - Start of Delay
	Finish		
TIA#1_END	MS	-100	TIA#1 - End of Delay
TIA#1_FW-10	Task	-70	Over Excavation and Formwork for Rev Fnd Desig
TIA#1_FW-11	Task	-70	Finish Rebar placement at Elevator pit
TIA#1_FW-12	Task	-70	Concrete placed for elevator pit mat foundatio
TIA#1_FW-13	Task	-70	Finish rebar placement at elevator pit stem wa
TIA#1_FW-14	Task	-70	Concrete placement at Elevator pit stem walls
TIA#1_FW-15	Task	-70	Finish Rebar placement for kitchen mat foundat
TIA#1_FW-16	Task	-70	Concrete placement for kitchen mat foundation
TIA#1_FW-17	Task	-70	Finish placement of rebar for kitchen stem wal
TIA#1_FW-18	Task	-70	Concrete placement for kitchen stem walls
TIA#1_FW-19	Task	-70	Finish placing rebar & column base plates for
TIA#1_FW-20	Task	-70	Place concrete at column bases
TIA#1_FW-21	Task	-70	Place rebar for remaining mat foundation (proj
TIA#1_FW-22	Task	-100	Place concrete for remaining mat foundation (p
TIA#1_SUM1	LOE	144	CLB_Delay: TIA#1 Structural Steel (SS)
TIA#1_SUM13	LOE	-109	CLB_Delay: TIA#1 Bldg A Field Work
TIA#1_SUM2	LOE	-100	CLB_Delay: TIA#1 Foundation Design
TIA#2-10	Task	-7	P&S (Architect)Rebar Shop Drawings & Calcs
TIA#2-11	Task	-9	R&A (Architect) Rebar Shop Drawings & Calcs
TIA#2-12	Task	-7	P&S First Submittal for City Plan check
TIA#2-13	Task	-9	R&A First Submittal to City Plan check
TIA#2-14	Task	-9	Procure Shade Structure

TIA#3-13	Task	-24	CCO-005-RFQ - Provide Epoxy Coated Rebar in Ma
TIA#3-14	Task	9	RFI 49 - Planter Design for Mat Footing refer
TIA#3-15	Task	-29	CCO-ASI-05 R2 - Released to the contractor inc
TIA#3-16	Task	-29	RFI 72 - Thickened Edge for Mat Fnd DELAY
TIA#3-17	Task	-18	CCO-007-ASI 8.R1 - Added Sand Trap in Building
TIA#3-18	Task	-18	CCO-008-ASI 10.R2 - Fnd for Sand Trap in the p
TIA#3-19	Task	-29	RFI 72 - Thickened Edge for Mat Fnd not requir
	Finish		
TIA#3-END	MS	138	TIA#3 - FND End of Delay
TIA#3-START	Start MS	-29	TIA#3 - FND Delay Starts
TIA#3_FW1	Task	-21	Finish rebar placement for mat foundation
TIA#3_FW2	Task	-21	Mat Foundation concrete placed

4. The activity below original duration was reduced to zero since this work is included in the TIA fragnets assumed durations for the revised foundation field work.

MODIFIED ORIGINAL DURATIONS

ACT	TYPE	OLD-O	NEW-O	OLD-F	NEW-F	TITLE
A1020	Task	3	0	-5	5	ELEVATOR SLAB REBAR/FORMWORK

5. A new calendar, R1706_7 day, was created to have the correct work hours and applied to the milestones.

6. The activities below had their description changed for clarity.

CHANGED DESCRIPTIONS

ACT	SCHED.	TITLE
A1020	TARGET	ELEVATOR SLAB REBAR/FORMWORK
	UPDATE	ELEVATOR SLAB REBAR/FORMWORK (OD included in TIA fragn
MILE.27	TARGET	FINAL COMPLETION, NTP2+300 CD, April 7, 2020
	UPDATE	ORIGINAL - FINAL COMPLETION, NTP2+300 CD, April 7, 202

Relationship changes were made to insert the delay fragnets for:

- 7. TIA#1 - Building A Foundation Design

S1190	SUBMITTAL SPEC 05 SS FRAMING	10	01-Jul-19	15-Jul-19	0	15-Jul-19	-6
S1195	APPROVE SUBMITTAL SPEC 05 SS FRAMING	21	15-Jul-19	05-Aug-19	0	05-Aug-19	-7
S1200	PROCURE SPEC 05 SS FRAMING	35	28-Aug-19	16-Oct-19	0	16-Oct-19	-22

8. TIA#2 - Building A Shade Structure

TIA#2 - Building A Shade Structure: Delay Fragnet		73	28-Aug-19	11-Dec-19	0	11-Dec-19	53
TIA#2-START	TIA#2 - Start of Delay (8/27/19 CCO-ASI-05 R2 re-design released)	0	28-Aug-19		0		-9
TIA#2-END	TIA#2 - End of Delay	0		11-Dec-19	0	11-Dec-19	88
TIA#2 - Owner Delays		65	28-Aug-19	29-Nov-19	0	29-Nov-19	5
TIA#2-10	P&S (Architect) Rebar Shop Drawings & Calcs	15	28-Aug-19	18-Sep-19	0	18-Sep-19	-7
TIA#2-11	R&A (Architect) Rebar Shop Drawings & Calcs	21	19-Sep-19	09-Oct-19	0	09-Oct-19	-9
TIA#2-12	P&S First Submittal for City Plan check	5	10-Oct-19	16-Oct-19	0	16-Oct-19	-7
TIA#2-13	R&A First Submittal to City Plan check	14	17-Oct-19	30-Oct-19	0	30-Oct-19	-9
TIA#2-14	Procure Shade Structure	30	31-Oct-19	29-Nov-19	0	29-Nov-19	-9

9. TIA#3 - Building B Foundation Design

TIA#3 - Building B Foundation Design Delay		84	31-Jul-19	22-Oct-19	0	22-Oct-19	138
TIA#3 - Design Delay (NOT ON CRITICAL PATH)		84	31-Jul-19	22-Oct-19	0	22-Oct-19	138
TIA#3-START	TIA#3 - FND Delay Starts	0	31-Jul-19		0		-29
TIA#3-END	TIA#3 - FND End of Delay	0		22-Oct-19	0	22-Oct-19	138
Owner Delays		80	31-Jul-19	18-Oct-19	0	18-Oct-19	29
TIA#3-10	CCO-01 ASI 5.R2 - changing Mat foundation for both Buildings A and B	28	31-Jul-19	27-Aug-19	0	27-Aug-19	-29
TIA#3-11	RFI 32 - Mat Fnd does not need to be depressed at the plumbing chase	5	03-Aug-19	07-Aug-19	0	07-Aug-19	37
TIA#3-12	RFI 35 - new detail for steel reinforcement at CMU Wall (Detail 9/S3.02)	10	04-Aug-19	13-Aug-19	0	13-Aug-19	37
TIA#3-13	CCO-005-RFO - Provide Epoxy Coated Rebar in Mat Foundations	1	20-Aug-19	20-Aug-19	0	20-Aug-19	-24
TIA#3-14	RFI 49 - Planter Design for Mat Footing refer to sketch ASK-12	17	25-Aug-19	10-Sep-19	0	10-Sep-19	9
TIA#3-15	CCO-ASI-05 R2 - Released to the contractor including Mat Fnd chang	1	26-Aug-19	26-Aug-19	0	26-Aug-19	-29
TIA#3-16	RFI 72 - Thickened Edge for Mat Fnd DELAY	44	27-Aug-19	09-Oct-19	0	09-Oct-19	-29
TIA#3-17	CCO-007-ASI 8.R1 - Added Sand Trap in Building B (P1.2 for Detail)	14	28-Aug-19	10-Sep-19	0	10-Sep-19	-18
TIA#3-18	CCO-008-ASI 10.R2 - Fnd for Sand Trap in the plumbing chase (Sketch)	19	10-Sep-19	29-Sep-19	0	29-Sep-19	-18
TIA#3-19	RFI 72 - Thickened Edge for Mat Fnd not required at Building B (Detail)	9	10-Oct-19	18-Oct-19	0	18-Oct-19	-29

10. TIA#1 Fragnet inserted into the Building A work:

Activity ID	Activity Name	OO	Start	Finish	Total Float
A1030	INSTALL BASE PLATE	5	22-Aug-19	28-Aug-19	5
A1040	ELEVATOR WALLS REBAR/FORMWORK	5	22-Aug-19	28-Aug-19	37
A1395	INSPECT FOR POUR	0		28-Aug-19	5
TIA#1_FW-10	Over Excavation and Formwork for Rev Fnd Design	10	03-Oct-19	16-Oct-19	-70
TIA#1_FW-11	Finish Rebar placement at Elevator pit	1	17-Oct-19	17-Oct-19	-70
TIA#1_FW-12	Concrete placed for elevator pit mat foundation	1	18-Oct-19	18-Oct-19	-70
TIA#1_FW-13	Finish rebar placement at elevator pit stem walls	4	21-Oct-19	24-Oct-19	-70
TIA#1_FW-14	Concrete placement at Elevator pit stem walls	1	25-Oct-19	25-Oct-19	-70
TIA#1_FW-15	Finish Rebar placement for kitchen mat foundation	4	28-Oct-19	31-Oct-19	-70
TIA#1_FW-16	Concrete placement for kitchen mat foundation	2	01-Nov-19	04-Nov-19	-70
TIA#1_FW-17	Finish placement of rebar for kitchen stem walls	9	05-Nov-19	15-Nov-19	-70
TIA#1_FW-18	Concrete placement for kitchen stem walls	1	18-Nov-19	18-Nov-19	-70
TIA#1_FW-19	Finish placing rebar & column base plates for steel columns	13	19-Nov-19	09-Dec-19	-70
TIA#1_FW-20	Place concrete at column bases	1	10-Dec-19	10-Dec-19	-70
TIA#1_FW-21	Place rebar for remaining mat foundation (projected)	3	11-Dec-19	13-Dec-19	-70
TIA#1_FW-22	Place concrete for remaining mat foundation (projected)	1	13-Dec-19	14-Dec-19	-100

TIA#1											
Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb				
A1030											
A1040											
INSPECT FOR POUR											
TIA#1_FW-10											
TIA#1_FW-11											
TIA#1_FW-12											
TIA#1_FW-13											
TIA#1_FW-14											
TIA#1_FW-15											
TIA#1_FW-16											
TIA#1_FW-17											
TIA#1_FW-18											
TIA#1_FW-19											
TIA#1_FW-20											
TIA#1_FW-21											
TIA#1_FW-22											

CLB Impacted Delay Fragnet Summary:

Activity ID	Activity Name	OD	Start	Finish	Total Float
R7106_ABC-TIA_June 2019 Update - Owner Impacte		338	12-Mar-19 A	25-Jul-20	-70
MILESTONES		502	12-Mar-19 A	25-Jul-20	-109
CONTRACTURAL MILESTONES		502	12-Mar-19 A	25-Jul-20	-109
MILE	LIMITED NOTICE TO PROCEED (LNTP 1) March 12, 2019	0	12-Mar-19 A		
MILE.2	NOTICE TO PROCEED 2 (NTP2), June 13, 2019 First Day	0	12-Jun-19 A		
MILE.27	ORIGINAL - FINAL COMPLETION, NTP2+300 CD, April 7, 2020	0	07-Apr-20	07-Apr-20*	0
MILE.23	SUBSTANTIAL COMPLETION	0		25-Jun-20	-109
RAIN	RAIN DAY IMPACT ALLOWANCE	30	26-Jun-20	25-Jul-20	-109
TIA#1 - Building A Foundation Design Summary		361	31-Jul-19	25-Jul-20	-109
TIA#1 - Owner Delay		361	31-Jul-19	25-Jul-20	-109
TIA#1_SUM2	CLB_Delay: TIA#1 Foundation Design	64	31-Jul-19	02-Oct-19	-100
TIA#1_SUM1	CLB_Delay: TIA#1 Structural Steel (SS)	78	31-Jul-19	16-Oct-19	144
TIA#1_SUM13	CLB_Delay: TIA#1 Bldg A Field Work	253	17-Oct-19	25-Jun-20	-109
MILE.TIA	REVISED FINAL COMPLETION PER OWNER DELAY	0		25-Jul-20	-109
TIA#1-Impact	CLB_Delay: TIA#1 - BLDGA Delay to Final Completion	110	07-Apr-20	25-Jul-20	-109
TIA#2 - Building A Shade Structure Summary		324	31-Jul-19	19-Jun-20	-72
TIA#2 - Owner Delay		324	31-Jul-19	19-Jun-20	-72
TIA#2_SUM1	CLB_Delay: TIA#2 Shade Structure Design	122	31-Jul-19	29-Nov-19	-9
TIA#2_SUM2	CLB_Delay: TIA#2 Shade Structure Site Work Phase 2	200	02-Dec-19	18-Jun-20	-72
TIA#2_SUM13	CLB_Delay: TIA#2 (NOT ON CRITICAL PATH)	0	19-Jun-20	19-Jun-20	-72

1. By inserting the delay fragnets into the Unimpacted schedules with assumption made for duration and logic ties results, TIA#1 impacts the contract completion date from:

Milestone Activities			Baseline	0719U	Unimpact	Variance	CLB Impact
Type	Activity ID	Activity Name	Finish	Finish	Finish	to Base	Finish
Interim Milestone	MILE	LIMITED NOTICE TO PROCEED (LNTP 1) March 12, 2019	12-Mar-19	12-Mar-19	12-Mar-19	0	12-Mar-19
Contract Milestone	MILE.2	NOTICE TO PROCEED 2 (NTP2), June 13, 2019 First Day	12-Jun-19	12-Jun-19	12-Jun-19	0	12-Jun-19
Interim Milestone	MILE.23	SUBSTANTIAL COMPLETION	5-Mar-20	6-Mar-20	5-Mar-20	1	25-Jun-20
Interim Milestone	RAIN	RAIN DAY IMPACT ALLOWANCE	7-Apr-20	20-Apr-20	7-Apr-20	13	25-Jul-20
Contract Milestone	MILE.27	FINAL COMPLETION, NTP2+300 CD, April 7, 2020	7-Apr-20	20-Apr-20	7-Apr-20	13	25-Jul-20



1. The following activities were added to illustrate the Contractor delays in the submittal and fabrication process for Building A and B foundation Rebar and Bldg A Shade structure.

PLANNED ACTIVITIES THAT HAVE BEEN ADDED SINCE LAST UPDATE

ACT	TYPE	FLOAT	TITLE
TIA#1-CLB.1	LOE	-109	CLB_Delay: Delay to Final Completion
TIA#1_KEC-11	Task	-158	KEC_Delay - Structural Steel (SS) Contractor/S
TIA#1_KEC-12	Task	-147	KEC_Delay - Rebar Shop Drawing
TIA#1_KEC-13	Task	-147	KEC_Delay - Rebar Fabrication and Delivery
TIA#1_KEC-14	Task	-158	KEC_Delay - Contractor/Subcontractor PROCURE S
TIA#1_KEC10	LOE	-147	KEC_Delay: TIA#1 - Structural Steel (SS) Drawi
TIA#1_KEC20	LOE	-147	KEC_Delay: TIA#1 - Rebar Drawings and Fabricat
TIA#1_KEC30	LOE	-157	KEC_Delay: TIA#1 - Bldg A Field Work
TIA#1_TASK1	Task	-109	CLB_Delay: TIA#1 Bldg A Field Work
TIA#1_TASK11	Task	-109	CLB_Delay: TIA#1 Revised Completion date
TIA#2_KEC-10	Task	-77	P&S REV01 (Architect)Rebar Shop Drawings & Cal
TIA#2_KEC-11	Task	-121	R&A REV01 (Architect) Rebar Shop Drawings & Ca
TIA#2_KEC-12	Task	-76	REV01 P&S First Submittal for City Plan check
TIA#2_KEC-13	Task	-121	REV01 R&A First Submittal to City Plan check
TIA#2_KEC-14	Task	-121	Procure Shade Structure (Est date)
TIA#2_KEC-24	Task	2	Bid Docs Soils Report Addendum sent to the con
TIA#2_KEC10	LOE	-102	KEC_Delay: TIA#2 - Shade Structure Design
TIA#2_KEC20	LOE	-121	KEC_Delay: TIA#2 - Shade Structure Fabrication
TIA#2_KEC30	LOE	-150	KEC_Delay: TIA#2 - Shade Structure Site Work P
TIA#2_KEC40	LOE	-157	Recovery Subject to LD's
TIA#2_KEC50	LOE	-109	Concurrent Non-Compensable Delay (KEC Rebar an
TIA#2_KEC60	LOE	-44	Concurrent Compensable Delay (Owner BLDGA Desi
TIA#3_KEC-10	Task	281	KEC_Delay - Soils Report sent to the contracto

UPDATE REVISED FINAL COMPLETION PER CONTRACTOR DELAY

3. Relationship changes to maintain the Owner delay fragnet and the Contractor delay fragnet.

RELATIONSHIP DELETED WHEN ACTIVITY DELETED (Rel Key: Relationship/Lag)			
PRED	SUCC	FLOAT	TITLE
MILE.27	Rel=FS/0 TIA#1-IMPACT	0	ORIGINAL - FINAL COMPLETION, NTP2+300 CD, -109 CLB_Delay: TIA#1 - BLDGA Delay to Final Co
TIA#1-IMPACT	Rel=FF/0 MILE.TIA	-109	CLB_Delay: TIA#1 - BLDGA Delay to Final Co -157 REVISED FINAL COMPLETION PER CONTRACTOR DE
TIA#1_SUM1	Rel=FS/0 TIA#1_SUM13	-30	CLB_Delay: TIA#1 Structural Steel (SS) -109 CLB_Delay: TIA#1 Bldg A Field Work
TIA#1_SUM13	Rel=FF/0 A1245	-109	CLB_Delay: TIA#1 Bldg A Field Work -157 BUILDING COMMISSIONING

4. Changes to insert the Contractor delay fragnet.

RELATIONSHIP ADDED WHEN ACTIVITY ADDED (Rel Key: Relationship/Lag)			
PRED	SUCC	FLOAT	TITLE
MILE.27	Rel=SS/0	0	ORIGINAL - FINAL COMPLETION, NTP2+300 CD,
LP	TIA#1-CLB.1	-109	CLB_Delay: Delay to Final Completion
S1190	Rel=SS/6	-111	SUBMITTAL SPEC 05 SS FRAMING
	TIA#2_KEC-24	2	Bid Docs Soils Report Addendum sent to the
S1195	Rel=FS/0	-157	APPROVE SUBMITTAL SPEC 05 SS FRAMING
LP	TIA#1_KEC-11	-158	KEC_Delay - Structural Steel (SS) Contract
S1200	Rel=FS/0	-22	PROCURE SPEC 05 SS FRAMING
LP	TIA#1_KEC10	-147	KEC_Delay: TIA#1 - Structural Steel (SS) D
S2470	Rel=FS/0	-146	APPROVE SUBMITTAL SPEC 03 REBAR
LP	TIA#1_KEC-12	-147	KEC_Delay - Rebar Shop Drawing
S2480	Rel=FS/0	-76	PROCURE SPEC 03 REBAR
LP	TIA#1_KEC30	-157	KEC_Delay: TIA#1 - Bldg A Field Work
S2480	Rel=FS/0	-76	PROCURE SPEC 03 REBAR

TIA#1_KEC-11	Rel=FS/0	-158	KEC_Delay - Structural Steel (SS) Contract
LP	TIA#1_KEC-14	-158	KEC_Delay - Contractor/Subcontractor PROCU
TIA#1_KEC-11	Rel=SS/0	-158	KEC_Delay - Structural Steel (SS) Contract
	TIA#2_KEC10	-102	KEC_Delay: TIA#2 - Shade Structure Design
TIA#1_KEC-12	Rel=FS/0	-147	KEC_Delay - Rebar Shop Drawing
LP	TIA#1_KEC-13	-147	KEC_Delay - Rebar Fabrication and Delivery
TIA#1_KEC-12	Rel=SS/0	-147	KEC_Delay - Rebar Shop Drawing
	TIA#1_KEC20	-147	KEC_Delay: TIA#1 - Rebar Drawings and Fabr
TIA#1_KEC-13	Rel=FS/0	-147	KEC_Delay - Rebar Fabrication and Delivery
	B1030	-46	REBAR
TIA#1_KEC-13	Rel=FS/0	-147	KEC_Delay - Rebar Fabrication and Delivery
LP	TIA#1_FW-10	-103	Over Excavation and Formwork for Rev Fnd D
TIA#1_KEC-13	Rel=FS/0	-147	KEC_Delay - Rebar Fabrication and Delivery
LP	TIA#1_KEC30	-157	KEC_Delay: TIA#1 - Bldg A Field Work
TIA#1_KEC-13	Rel=FS/0	-147	KEC_Delay - Rebar Fabrication and Delivery
	TIA#3_FW1	-42	Finish rebar placement for mat foundation
TIA#1_KEC-14	Rel=FS/0	-158	KEC_Delay - Contractor/Subcontractor PROCU
LP	A1065	-103	SET STEEL COLUMNS
TIA#1_KEC-14	Rel=FS/0	-158	KEC_Delay - Contractor/Subcontractor PROCU
LP	A1070	-103	SET STEEL BEAMS
TIA#1_KEC-14	Rel=FS/0	-158	KEC_Delay - Contractor/Subcontractor PROCU
	SW1140	-32	PLACE CONCRETE AT FOOTING
TIA#1_KEC10	Rel=FS/0	-147	KEC_Delay: TIA#1 - Structural Steel (SS) D

TIA#1_SUM2	Rel=SS/0	-108	CLB_Delay: TIA#1 Foundation Design
LP	TIA#2_KEC60	-44	Concurrent Compensable Delay (Owner BLDGA
TIA#1_TASK1	Rel=FS/0	-109	CLB_Delay: TIA#1 Bldg A Field Work
	TIA#1_TASK11	-109	CLB_Delay: TIA#1 Revised Completion date
TIA#2-13	Rel=FS/0	-108	R&A First Submittal to City Plan check
	TIA#2_KEC-10	-77	P&S REV01 (Architect)Rebar Shop Drawings &
TIA#2-13	Rel=FS/0	-108	R&A First Submittal to City Plan check
	TIA#2_KEC50	-109	Concurrent Non-Compensable Delay (KEC Reba
TIA#2_KEC-10	Rel=FS/0	-77	P&S REV01 (Architect)Rebar Shop Drawings &
	TIA#2_KEC-11	-121	R&A REV01 (Architect) Rebar Shop Drawings
TIA#2_KEC-11	Rel=FS/0	-121	R&A REV01 (Architect) Rebar Shop Drawings
	TIA#2_KEC-12	-76	REV01 P&S First Submittal for City Plan ch
TIA#2_KEC-12	Rel=FS/0	-76	REV01 P&S First Submittal for City Plan ch
	TIA#2_KEC-13	-121	REV01 R&A First Submittal to City Plan che
TIA#2_KEC-13	Rel=FS/0	-121	REV01 R&A First Submittal to City Plan che
	TIA#2_KEC-14	-121	Procure Shade Structure (Est date)
TIA#2_KEC-14	Rel=FS/0	-121	Procure Shade Structure (Est date)
	SW1135	-76	SHADE STRUCTURE FOOTING EXCAVATION
TIA#2_KEC-14	Rel=FS/0	-121	Procure Shade Structure (Est date)
	TIA#2_SW-1	-76	Shade Structure Foundation Rebar Placement
TIA#2_KEC-24	Rel=FS/0	2	Bid Docs Soils Report Addendum sent to the
	TIA#2_KEC-10	-77	P&S REV01 (Architect)Rebar Shop Drawings &
TIA#2_KEC10	Rel=FF/0	-102	KEC_Delay: TIA#2 - Shade Structure Design

TIA#2_KEC40	Rel=FS/0	-157	Recovery Subject to LD's
LP	MILE.TIA	-157	REVISED FINAL COMPLETION PER CONTRACTOR DE
TIA#2_KEC50	Rel=FF/0	-109	Concurrent Non-Compensable Delay (KEC Reba
	TIA#1_TASK11	-109	CLB_Delay: TIA#1 Revised Completion date
TIA#2_KEC60	Rel=FF/0	-44	Concurrent Compensable Delay (Owner BLDGA
LP	S1200	-22	PROCURE SPEC 05 SS FRAMING
TIA#2_KEC60	Rel=FF/0	-44	Concurrent Compensable Delay (Owner BLDGA
LP	S2480	-76	PROCURE SPEC 03 REBAR
TIA#2_KEC60	Rel=FF/0	-44	Concurrent Compensable Delay (Owner BLDGA
	TIA#2-13	-108	R&A First Submittal to City Plan check
TIA#3_KEC-11	Rel=FS/0	142	KEC_Delay - CMU 8x8x8 Lag to start date
	TIA#3_KEC-12	142	KEC_Delay - CMU 8x8x8 Subcontractor fabric
TIA#3_KEC-12	Rel=FS/0	142	KEC_Delay - CMU 8x8x8 Subcontractor fabric
	TIA#3_KEC-13	142	KEC_Delay -[DPD] Building B Steel lag to s
TIA#3_KEC-13	Rel=FS/0	142	KEC_Delay -[DPD] Building B Steel lag to s
	TIA#3_KEC-14	142	KEC_Delay - Building B Steel Fabrication D

5. Expected dates added to show the re-submittal and other delays in the Rebar and Structural steel by the Contractor and projected finish dates.

CLB Impacted Delay Fragnet Summary:

TIA#1+TIA#2 Delay Fragnet Summary		409	31-Jul-19	11-Sep-20	-157
TIA#2_KEC60	Concurrent Compensable Delay (Owner BLDGA Design delay)	92	31-Jul-19	30-Oct-19	-44
TIA#2_KEC50	Concurrent Non-Compensable Delay (KEC Rebar and Steel Dela	269	31-Oct-19	25-Jul-20	-109
TIA#2_KEC40	Recovery Subject to LD's	48	26-Jul-20	11-Sep-20	-157
TIA#1 - Owner Delay		361	31-Jul-19	25-Jul-20	-109
TIA#1_SUM2	CLB_Delay: TIA#1 Foundation Design	64	31-Jul-19	02-Oct-19	-108
TIA#1_SUM1	CLB_Delay: TIA#1 Structural Steel (SS)	78	31-Jul-19	16-Oct-19	-30
TIA#1_TASK1	CLB_Delay: TIA#1 Bldg A Field Work	253	17-Oct-19	25-Jun-20	-109
TIA#1_TASK11	CLB_Delay: TIA#1 Revised Completion date	30	26-Jun-20	25-Jul-20	-109
TIA#1 - Contractor Delay		315	03-Oct-19	12-Aug-20	-157
TIA#1_KEC10	KEC_Delay: TIA#1 - Structural Steel (SS) Drawing and Procure	28	17-Oct-19	13-Nov-19	-147
TIA#1_KEC20	KEC_Delay: TIA#1 - Rebar Drawings and Fabrication	47	03-Oct-19	18-Nov-19	-147
TIA#1_KEC30	KEC_Delay: TIA#1 - Bldg A Field Work	301	17-Oct-19	12-Aug-20	-157

TIA#2 - Building A Shade Structure Summary		402	01-Jul-19	06-Aug-20	-120
TIA#2 - Owner Delay		372	31-Jul-19	06-Aug-20	-120
TIA#2_SUM1	CLB_Delay: TIA#2 Shade Structure Design	122	31-Jul-19	29-Nov-19	-9
TIA#2_SUM2	CLB_Delay: TIA#2 Shade Structure Site Work Phase 2	136	23-Mar-20	05-Aug-20	-120
TIA#2_SUM13	CLB_Delay: TIA#2 (NOT ON CRITICAL PATH)	0	06-Aug-20	06-Aug-20	-120
TIA#2 - Contractor Delay		388	01-Jul-19	22-Jul-20	-150
TIA#2_KEC10	KEC_Delay: TIA#2 - Shade Structure Design	200	06-Aug-19	21-Feb-20	-102
TIA#2_KEC20	KEC_Delay: TIA#2 - Shade Structure Fabrication issues	255	01-Jul-19	11-Mar-20	-121
TIA#2_KEC30	KEC_Delay: TIA#2 - Shade Structure Site Work Phase 2	117	28-Mar-20	22-Jul-20	-150

Resulting Impact to the milestones:

Activity ID	Activity Name	DD	Start	Finish	Total Float
R7106_ABC-TIA_June 2019 Update - Contractor Imp		373	12-Mar-19 A	11-Sep-20	-105
MILESTONES		550	12-Mar-19 A	11-Sep-20	-157
CONTRACTURAL MILESTONES (NEW)		550	12-Mar-19 A	11-Sep-20	-157
MILE	LIMITED NOTICE TO PROCEED (LNTP 1) March 12, 2019	0	12-Mar-19 A		
MILE 2	NOTICE TO PROCEED 2 (NTP2), June 13, 2019 First Day	0	12-Jun-19 A		
MILE 27	ORIGINAL - FINAL COMPLETION, NTP2+300 CD, April 7, 2020	0	07-Apr-20	07-Apr-20*	0
TIA#1-CLB.1	CLB_Delay: Delay to Final Completion	110	07-Apr-20	25-Jul-20	-109
MILE 23	SUBSTANTIAL COMPLETION	0		12-Aug-20	-157
MILE.TIA	REVISED FINAL COMPLETION PER CONTRACTOR DELAY	0		11-Sep-20	-157
RAIN	RAIN DAY IMPACT ALLOWANCE	30	13-Aug-20	11-Sep-20	-157

R7106_ABC-TIA_June 2019 Update - Owner Impact		338	12-Mar-19 A	25-Jul-20	-70
+ MILESTONES		502	12-Mar-19 A	25-Jul-20	-109
- TIA#1 - Building A Foundation Design Summary		361	31-Jul-19	25-Jul-20	-109
E TIA#1 - Owner Delay		361	31-Jul-19	25-Jul-20	-109
TIA#1_SUM2	CLB_Delay: TIA#1 Foundation Design	64	31-Jul-19	02-Oct-19	-100
TIA#1_SUM1	CLB_Delay: TIA#1 Structural Steel (SS)	78	31-Jul-19	16-Oct-19	144
TIA#1_SUM13	CLB_Delay: TIA#1 Bldg A Field Work	253	17-Oct-19	25-Jun-20	-109
TIA#1-impact	CLB_Delay: TIA#1 - BLDGA Delay to Final Completion	110	07-Apr-20	25-Jul-20	-109
MILE.TIA	REVISED FINAL COMPLETION PER OWNER DELAY	0		25-Jul-20	-109

Contractor Delay to CPM schedule and Apportioning the delay Responsibility:

Activity ID	Activity Name	OD	Start	Finish	Total Float
R7106_ABC-TIA_June 2019 Update - Contractor Imp		373	12-Mar-19 A	11-Sep-20	-105
+ MILESTONES		550	12-Mar-19 A	11-Sep-20	-157
- TIA#1+TIA#2 Delay Fragnet Summary		409	31-Jul-19	11-Sep-20	-157
TIA#2_KEC50	Concurrent Compensable Delay (Owner BLDGA Design delay)	92	31-Jul-19	30-Oct-19	-44
TIA#2_KEC50	Concurrent Non-Compensable Delay (KEC Rebar and Steel Delay)	269	31-Oct-19	25-Jul-20	-109
TIA#2_KEC40	Recovery Subject to LD's	48	26-Jul-20	11-Sep-20	-157

that: 1) were the responsibility of the owner, and 2) delayed the completion date of the project, and 3) were not concurrent with delays which were the responsibility of the contractor or *force majeure* events.

2. Excusable and Non-Compensable Delay (END)

Each incremental delay along the as-built critical path should be independently quantified and the cause of the delay identified. The net Excusable & Non-compensable Delay (END) is the sum of the individual owner-caused or relevant third-party caused delays that: 1) were *force majeure* events or were concurrent with contractor-responsible delays or *force majeure* events, and 2) delayed the completion date of the project, and 3) were not the responsibility of the contractor.

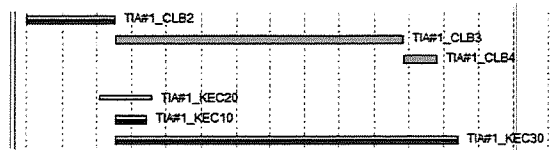
3. Contractor Pacing the delay:

Pacing occurs when one of the independent delays is the result of a conscious, voluntary and contemporaneous decision to pace progress against the other delay. The quality that distinguishes pacing from concurrent delay is the fact that pacing is a conscious choice by the performing party to proceed at a slower rate of work with the knowledge of the other contemporaneous delay, while concurrent delays occur independently of each other without a conscious decision to slow the work.

AACE 29R-03 Apportioning the Delay:

Delay Event	Concurrent with	Net Effect
Owner Delay	Another Owner Delay or Nothing	Compensable to Contractor, Non-Excusable to Owner
Owner Delay	Contractor Delay	Excusable but Not Compensable to both Parties
Owner Delay	Force Majeure Delay	Excusable but Not Compensable to both Parties
Contractor Delay	Another Contractor Delay or Nothing	Non-Excusable to Contractor, Compensable to Owner
Contractor Delay	Force Majeure Delay	Excusable but Not Compensable to both Parties
Force Majeure Delay	Another Force Majeure Delay or Nothing	Excusable but Not Compensable to Contractor

TIA#1_CLB2	CLB_Delay; TIA#1 Structural Steel (SS)	78	31-Jul-19	16-Oct-19	-30
TIA#1_CLB3	CLB_Delay; TIA#1 Bldg A Field Work	253	17-Oct-19	25-Jun-20	-109
TIA#1_CLB4	CLB_Delay; TIA#1 Revised Completion date	30	26-Jun-20	25-Jul-20	-109
TIA#1 - Contractor Delay					
TIA#1_KEC20	KEC_Delay; TIA#1 - Rebar Drawings and Fabrication	47	03-Oct-19	18-Nov-19	-147
TIA#1_KEC10	KEC_Delay; TIA#1 - Structural Steel (SS) Drawing and Procure	28	17-Oct-19	13-Nov-19	-147
TIA#1_KEC30	KEC_Delay; TIA#1 - Bldg A Field Work	301	17-Oct-19	12-Aug-20	-157



Utilizing the schedule analysis and the ACE recommended practices for determining delay responsibility referenced above the following are the results;

1. The Owner impact to the Rebar and Structural steel shop drawings and fabrication delayed the Contractor from start the Building A critical path foundation work per ACE guidance.
 - a. Compensable Delay period: 31-July-19 to 30-Oct-19 = 92 Calendar days
 - i. Design delay begins 31-July-19 and end 27-Aug-19.
 - ii. Submittal and Fabrication delay; from 28-Aug-19 to 30-Oct-19, using baseline logic and duration to determine planned date to complete the process for Rebar and Structural Steel.
2. The concurrent delay period would be the Owner delay fragnet and compared to the Contractor delay fragnet per ACE guidance. To determine this concurrency, you compare the critical path from the Owner fragnet Analysis to the Contractor fragnet analysis as shown in the table above starting on 30-Oct-19 when the compensable delay period ends.
 - a. Concurrent Delay Period: 30-Oct-19 to 25-Jul-20
 - b. Compare the WBS TIA#1 Owner delay above to TIA#1 Contractor delay shows these as concurrent delays as non-compensable.
3. The recovery portion of the Contractor delay period starts on 25-Jul-20, end of Owner delay, to 11-Sep-20, end of Contractor delay. This results in 48 calendar days subject to liquidated damages if the Contractor does not achieve contract completion by 25-Jul-20. This assume a time extension by the Owner to 25-Jul-20 for their portion of the delay and impacts to the schedule.

Cost Impacts Delay Summary: (using above tables)

- 1) **Compensable Delay** = 92 Calendar Days x \$2,550/day = \$234,600.00
- 2) **Concurrent Non-Compensable Delay** = 269 calendar days
- 3) **Contractor Recovery subject to LD's** = 48 calendar days
 - a. 48 calendar days x \$3,750/day = \$180,000.00

Attachments:

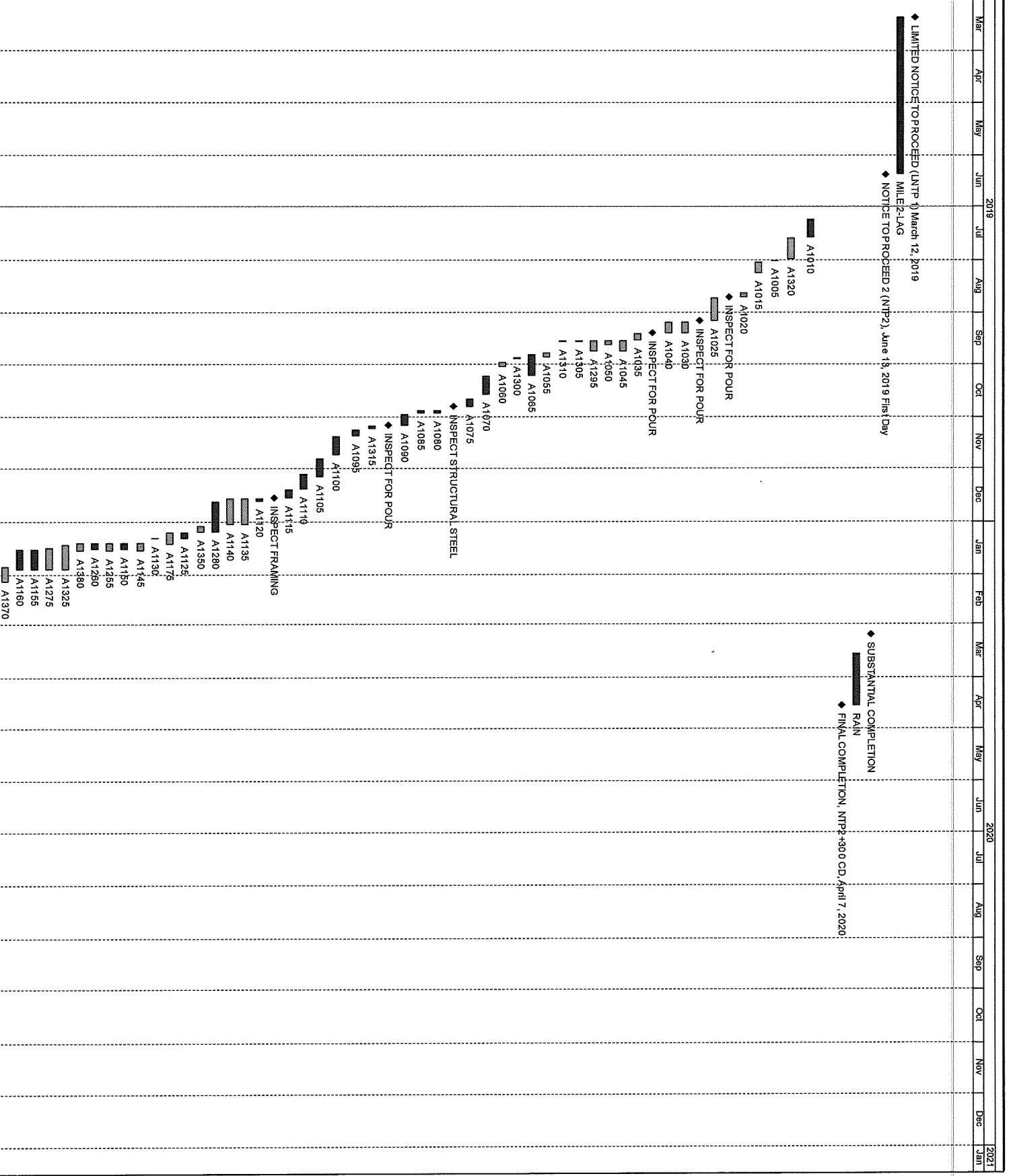
Exhibit showing the Unimpacted vs Owner Delay Fragnet vs Contractor delay fragnet

- ABC_TIA1+TIA2 Delay Fragnet Exhibit RO_03.04.20.PDF

Copy of relevant section from the Contract and reference material

- ABC_TIA Analysis contract Sections Attach-A RO_03.04.20.PDF

OD	Start	Finish	Total Float
275	12-Mar-19 A	17-Apr-20	-7
275	12-Mar-19 A	17-Apr-20	-7
0	12-Mar-19 A		
253	12-Mar-19 A	12-Jun-19 A	
0	12-Jun-19 A		
0	06-Mar-20		2
30	18-Mar-20	17-Apr-20	-10
0	17-Apr-20		-10
020	08-Jul-19	18-Mar-20	-7
9	08-Jul-19	18-Jul-19	2
9	19-Jul-19	31-Jul-19	2
1	01-Aug-19	01-Aug-19	2
5	02-Aug-19	08-Aug-19	2
3	20-Aug-19	22-Aug-19	-5
0	23-Aug-19	22-Aug-19	4
9	23-Aug-19	05-Sep-19	-5
0	06-Sep-19	05-Sep-19	-5
5	06-Sep-19	12-Sep-19	-5
5	06-Sep-19	12-Sep-19	27
0	12-Sep-19	12-Sep-19	-5
2	13-Sep-19	16-Sep-19	-5
5	17-Sep-19	23-Sep-19	-5
3	17-Sep-19	19-Sep-19	22
5	17-Sep-19	23-Sep-19	-5
1	17-Sep-19	17-Sep-19	27
1	17-Sep-19	17-Sep-19	27
3	24-Sep-19	26-Sep-19	20
9	25-Sep-19	07-Oct-19	-6
1	27-Sep-19	27-Sep-19	20
3	30-Sep-19	02-Oct-19	20
9	08-Oct-19	18-Oct-19	-6
5	21-Oct-19	25-Oct-19	-6
0	28-Oct-19	25-Oct-19	-6
2	28-Oct-19	29-Oct-19	-6
2	28-Oct-19	29-Oct-19	-6
5	30-Oct-19	05-Nov-19	-6
0	06-Nov-19	05-Nov-19	-6
2	06-Nov-19	07-Nov-19	-6
2	08-Nov-19	11-Nov-19	-6
9	12-Nov-19	22-Nov-19	-6
7	25-Nov-19	05-Dec-19	-6
7	04-Dec-19	12-Dec-19	-6
3	13-Dec-19	17-Dec-19	-6
0	18-Dec-19	19-Dec-19	-3
2	18-Dec-19	19-Dec-19	-6
5	18-Dec-19	02-Jan-20	-3
5	18-Dec-19	02-Jan-20	-3
5	20-Dec-19	06-Jan-20	-6
2	03-Jan-20	06-Jan-20	32
4	07-Jan-20	10-Jan-20	6
5	07-Jan-20	13-Jan-20	-5
1	10-Jan-20	10-Jan-20	-6
5	13-Jan-20	17-Jan-20	14
4	13-Jan-20	16-Jan-20	-6
5	13-Jan-20	17-Jan-20	14
4	13-Jan-20	17-Jan-20	-6
5	13-Jan-20	17-Jan-20	14
4	13-Jan-20	17-Jan-20	-6
5	13-Jan-20	17-Jan-20	23
10	14-Jan-20	28-Jan-20	-5
8	16-Jan-20	28-Jan-20	4
7	17-Jan-20	28-Jan-20	-6
7	17-Jan-20	28-Jan-20	-6
7	27-Jan-20	04-Feb-20	12



Activity	OD	Start	Finish	Total Float
1	5	31-Jan-20	06-Feb-20	19
2	1	07-Feb-20	07-Feb-20	19
3	7	07-Feb-20	18-Feb-20	5
4	5	10-Feb-20	14-Feb-20	4
5	6	10-Feb-20	18-Feb-20	-6
6	4	11-Feb-20	14-Feb-20	-5
7	2	18-Feb-20	19-Feb-20	-3
8	1	18-Feb-20	18-Feb-20	3
9	2	18-Feb-20	19-Feb-20	2
10	4	18-Feb-20	21-Feb-20	0
11	4	18-Feb-20	21-Feb-20	-5
12	5	19-Feb-20	25-Feb-20	-6
13	5	20-Feb-20	26-Feb-20	-3
14	1	24-Feb-20	24-Feb-20	-3
15	3	24-Feb-20	26-Feb-20	-5
16	2	25-Feb-20	26-Feb-20	-3
17	4	26-Feb-20	02-Mar-20	-6
18	2	27-Feb-20	28-Feb-20	-5
19	10	03-Mar-20	16-Mar-20	-6
20	15	02-Mar-20	17-Mar-20	-10
21	10	03-Mar-20	16-Mar-20	-10
22	1	12-Mar-19	25-Jul-20	-70
23	502	12-Mar-19	25-Jul-20	-109
24	502	12-Mar-19	25-Jul-20	-109
25	0	12-Mar-19		
26	0	12-Jun-19		
27	0	07-Apr-20		
28	0	26-Jun-20		
29	30	26-Jun-20		
30	361	31-Jul-19		
31	361	31-Jul-19		
32	64	31-Jul-19		
33	78	31-Jul-19		
34	253	17-Oct-19		
35	110	07-Apr-20		
36	0	31-Jul-19		
37	324	31-Jul-19		
38	324	31-Jul-19		
39	122	31-Jul-19		
40	200	02-Dec-19		
41	0	19-Jun-20		
42	116	01-Jul-19		
43	116	01-Jul-19		
44	0	31-Jul-19		
45	0	31-Jul-19		
46	0	31-Jul-19		
47	28	31-Jul-19		
48	28	31-Jul-19		
49	1	20-Aug-19		
50	35	28-Aug-19		
51	10	28-Aug-19		
52	21	11-Sep-19		
53	10	03-Oct-19		
54	76	01-Jul-19		
55	10	01-Jul-19		
56	21	15-Jul-19		
57	35	28-Aug-19		
58	73	28-Aug-19		
59	0	28-Aug-19		
60	0	28-Aug-19		
61	65	28-Aug-19		
62	16	28-Aug-19		
63	21	19-Sep-19		
64	5	10-Oct-19		
65	14	17-Oct-19		



CD	Start	Finish	Total Floor	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2021
	14	17-Oct-19	30-Oct-19											
	30	31-Oct-19	29-Nov-19											
	171	10-Jul-19	20-Mar-20											
	1	10-Jul-19	10-Jul-19											
	59	31-Oct-19	04-Feb-20											
	14	05-Feb-20	18-Feb-20											
	10	19-Feb-20	03-Mar-20											
	8	04-Mar-20	11-Mar-20											
	9	12-Mar-20	20-Mar-20											
	268	08-Jul-19	12-Aug-20											
	9	08-Jul-19	18-Jul-19											
	9	19-Jul-19	31-Jul-19											
	1	01-Aug-19	01-Aug-19											
	5	02-Aug-19	08-Aug-19											
	0	09-Aug-19	09-Aug-19											
	0	09-Aug-19	21-Aug-19											
	0	21-Aug-19	21-Aug-19											
	5	22-Aug-19	28-Aug-19											
	5	22-Aug-19	28-Aug-19											
	0	28-Aug-19	28-Aug-19											
	10	19-Nov-19	04-Dec-19											
	1	05-Dec-19	05-Dec-19											
	1	06-Dec-19	06-Dec-19											
	4	09-Dec-19	12-Dec-19											
	1	13-Dec-19	13-Dec-19											
	4	16-Dec-19	19-Dec-19											
	2	20-Dec-19	23-Dec-19											
	9	02-Jan-20	14-Jan-20											
	1	15-Jan-20	15-Jan-20											
	13	16-Jan-20	04-Feb-20											
	1	05-Feb-20	05-Feb-20											
	3	06-Feb-20	10-Feb-20											
	1	10-Feb-20	11-Feb-20											
	2	12-Feb-20	13-Feb-20											
	5	14-Feb-20	21-Feb-20											
	3	14-Feb-20	19-Feb-20											
	5	14-Feb-20	21-Feb-20											
	1	14-Feb-20	14-Feb-20											
	3	14-Feb-20	14-Feb-20											
	9	24-Feb-20	26-Feb-20											
	1	27-Feb-20	27-Feb-20											
	3	28-Feb-20	03-Mar-20											
	9	06-Mar-20	18-Mar-20											
	5	19-Mar-20	25-Mar-20											
	0	26-Mar-20	27-Mar-20											
	2	26-Mar-20	27-Mar-20											
	5	30-Mar-20	03-Apr-20											
	0	06-Apr-20	07-Apr-20											
	2	06-Apr-20	09-Apr-20											
	9	21-Apr-20	01-May-20											
	7	04-May-20	12-May-20											
	7	11-May-20	19-May-20											
	3	20-May-20	22-May-20											
	0	26-May-20	27-May-20											
	2	26-May-20	01-Jun-20											
	5	28-May-20	03-Jun-20											
	2	02-Jun-20	03-Jun-20											
	4	04-Jun-20	09-Jun-20											
	5	04-Jun-20	10-Jun-20											
	1	09-Jun-20	09-Jun-20											



OD	Start	Finish	Total	Mar	Apr	May	Jun	2019	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	2020	Jul	Aug	Sep	Oct	Nov	Dec	2021
7	16-Jun-20	24-Jun-20	-103																									
7	16-Jun-20	24-Jun-20	-103																									
7	23-Jun-20	01-Jul-20	-85																									
7	25-Jun-20	03-Jul-20	-102																									
8	25-Jun-20	06-Jul-20	-103																									
7	25-Jun-20	03-Jul-20	-92																									
8	25-Jun-20	06-Jul-20	-93																									
5	25-Jun-20	01-Jul-20	-78																									
5	29-Jun-20	03-Jul-20	-78																									
5	29-Jun-20	03-Jul-20	-78																									
1	06-Jul-20	06-Jul-20	-102																									
7	06-Jul-20	14-Jul-20	-102																									
5	07-Jul-20	13-Jul-20	-93																									
6	07-Jul-20	14-Jul-20	-103																									
4	08-Jul-20	13-Jul-20	-102																									
2	14-Jul-20	15-Jul-20	-100																									
1	14-Jul-20	14-Jul-20	-94																									
4	14-Jul-20	17-Jul-20	-97																									
4	14-Jul-20	17-Jul-20	-102																									
5	15-Jul-20	21-Jul-20	-103																									
5	16-Jul-20	22-Jul-20	-100																									
1	20-Jul-20	20-Jul-20	-100																									
3	20-Jul-20	22-Jul-20	-102																									
2	21-Jul-20	22-Jul-20	-100																									
4	22-Jul-20	27-Jul-20	-103																									
2	23-Jul-20	24-Jul-20	-102																									
15	27-Jul-20	11-Aug-20	-187																									
10	28-Jul-20	10-Aug-20	-103																									
1	11-Aug-20	12-Aug-20	-157																									
143	01-Jul-19	20-Nov-19	139																									
143	01-Jul-19	20-Nov-19	139																									
143	01-Jul-19	20-Nov-19	139																									
0	31-Jul-19	20-Nov-19	-29																									
0	31-Jul-19	20-Nov-19	-109																									
80	31-Jul-19	18-Oct-19	-29																									
28	31-Jul-19	27-Aug-19	-37																									
5	03-Aug-19	07-Aug-19	-29																									
10	04-Aug-19	13-Aug-19	37																									
1	20-Aug-19	20-Aug-19	-24																									
17	25-Aug-19	10-Sep-19	9																									
1	26-Aug-19	26-Aug-19	-29																									
44	27-Aug-19	09-Oct-19	-29																									
14	28-Aug-19	10-Sep-19	-18																									
19	10-Sep-19	29-Sep-19	-18																									
9	10-Oct-19	18-Oct-19	-29																									
140	01-Jul-19	17-Nov-19	142																									
1	01-Jul-19	01-Jul-19	281																									
14	01-Jul-19	14-Jul-19	142																									
8	15-Jul-19	22-Jul-19	142																									
103	23-Jul-19	02-Nov-19	142																									
15	03-Nov-19	17-Nov-19	142																									
98	25-Jul-19	12-Dec-19	42																									
10	25-Jul-19	07-Aug-19	0																									
10	08-Aug-19	21-Aug-19	0																									
6	22-Aug-19	29-Aug-19	0																									
10	22-Aug-19	05-Sep-19	10																									
6	30-Aug-19	09-Sep-19	0																									
6	06-Sep-19	17-Sep-19	10																									
5	10-Sep-19	16-Sep-19	6																									
5	17-Sep-19	23-Sep-19	0																									
5	17-Sep-19	23-Sep-19	0																									
1	24-Sep-19	24-Sep-19	0																									
5	25-Sep-19	01-Oct-19	0																									
10	02-Oct-19	15-Oct-19	0																									
10	16-Oct-19	29-Oct-19	0																									

