



Golden Pass LNG Project Update – Q221

Project Owners: Qatar Petroleum & ExxonMobil (XOM)
EPC Contractor: Chiyoda, Zachry, & McDermott
LNG Technology: Air Products (APD)

Michael Webber, CFA
Managing Partner
michael.webber@webberresearch.com
W: (646) 993-0693 M: (434) 409-8909

Greg Wasikowski, CFA
Associate Partner
greg.wasikowski@webberresearch.com
W: (646) 993-0694 M: (717) 919-3367

Chris Tsung, CFA
Associate
chris.tsung@webberresearch.com
W: (646) 998-8290 M: (646) 515-9957

Eric Smith
Managing Partner, EPC Risks
eric.smith@webberresearch.com
W: (346) 337-7788

Robert Meaney
Managing Director, EPC Risks
robert.meaney@webberresearch.com
W: (832) 368-8456

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1. New Forecasted EPC Costs (~\$11.6B) – ~\$2.4B Higher Than The Original EPC Contract Value (~\$9.2B)

- On May 19, 2021, Golden Pass LNG (**GPX**) requested approval to increase the construction workhours & on-site peak labor until the end of the project (Dec 2025). The new forecasted construction peak (7,700) is ~165% higher than GPX's pre-FID forecast (2,900). (pages 3 & 4)
- **Cost Impact:** The increased labor costs alone could add ~\$3.8B to the EPC costs. (page 5)
- **Project Schedule:** GPX is currently maintaining their completion date of late 2025. Our experience & recent project comps (i.e., Cameron LNG) suggest this strategy (drastic increase in construction labor/cost to chase the original schedule) may not be successful and put balance sheets in harms way. (page 6)
- **Progress Has Stalled:** Adding ~42MM construction hours to the project schedule, primarily from 2022 to 2025, dilutes previously achieved progress. (page 7)

2. Engineering Delays & Changes Continue

- In the last ~45-days, GPX has submitted at least (7) variances &/or engineering design changes to FERC. FERC needs to approve the revised engineering drawings before GPX is authorized to proceed with the requested construction activity. (page 8)
- **What It Means:** Engineering changes always delay construction activities & increase risks on higher-cost, more skilled construction labor.
- **Construction Change Orders:** Zachry & McDermott (MDR), Chiyoda's EPC partners, are likely impacted by Chiyoda's engineering progress & could result in internal change orders.

3. Chiyoda (6366-JP), ExxonMobil (XOM), & McDermott (MCDIF) – Questions You Should Be Asking

- Bigger picture analysis – **XOM** & Qatar Petroleum (**QP**) needs Chiyoda to stay in business (Chiyoda is partnered with Technip Energies to build QP's North Field Expansion Project). To better understand the dynamics of the changes & who might be responsible for billions in cost increases, we suggest asking **Chiyoda**, **XOM**, & **MCDIF** the following questions:
 - **Increased Capacity:** What was the impact to Chiyoda's engineering efforts, if any, when the GPX facility increased its capacity in June 2020? Did Chiyoda receive change orders?
 - **COVID-19:** Has COVID-19 impacted the project's on-site construction activities? Has Chiyoda's late engineering impacted potential Force Majeure claims?
 - **Geotechnical Data:** The piling design keeps changing; Is the geotechnical report rely-upon or is the EPC consortium assuming full responsibility for any changes?

On-Site Head Count Increase

- **Peak Workforce Increased:** GPX has increased their peak forecasted workforce from 2,900 to 7,700 – ~165% increase.
- **FERC Authorization Needed:** On May 19, 2021, GPX requested FERC approve (by July 2, 2021) the extra work-hours and new peak labor forecast for the remainder of the project (end of 2025).
- **Project Schedule:** Public filings indicated GPX has maintained their baseline project schedule completion date (Dec 2025).
- **Significant Challenges Ahead:** Based on our experience & recent examples (i.e., Cameron LNG), GPX could spend billions chasing a baseline schedule that realistically isn't achievable in the first place. (page 6).

Construction Peak Labor Forecast¹

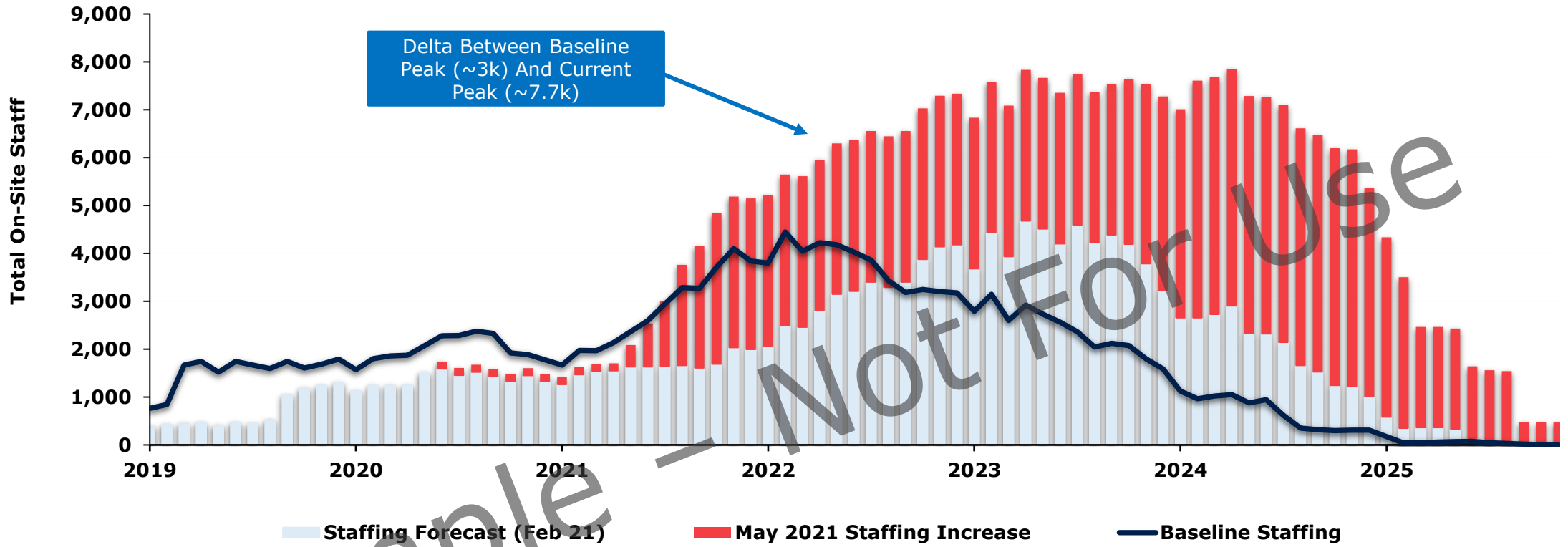
Year	WEPC Feb 2021 Estimates	GPX May 2021 Forecast	% Increase
2021	~3,000	4,800	60%
2022	~3,700	6,500	75%
2023	~3,800	7,500	97%
2024	~3,800	7,700	102%
2025	~1,250	2,900	132%

1) W|EPC Analysis of Company & Regulatory Filings

GPX's Revised Peak Labor Forecast Is 165% Higher Than Their Pre-FID Forecasts.

Sample - Not For Use

Golden Pass May 2021 – W|EPC Forecasted Labor Curve¹

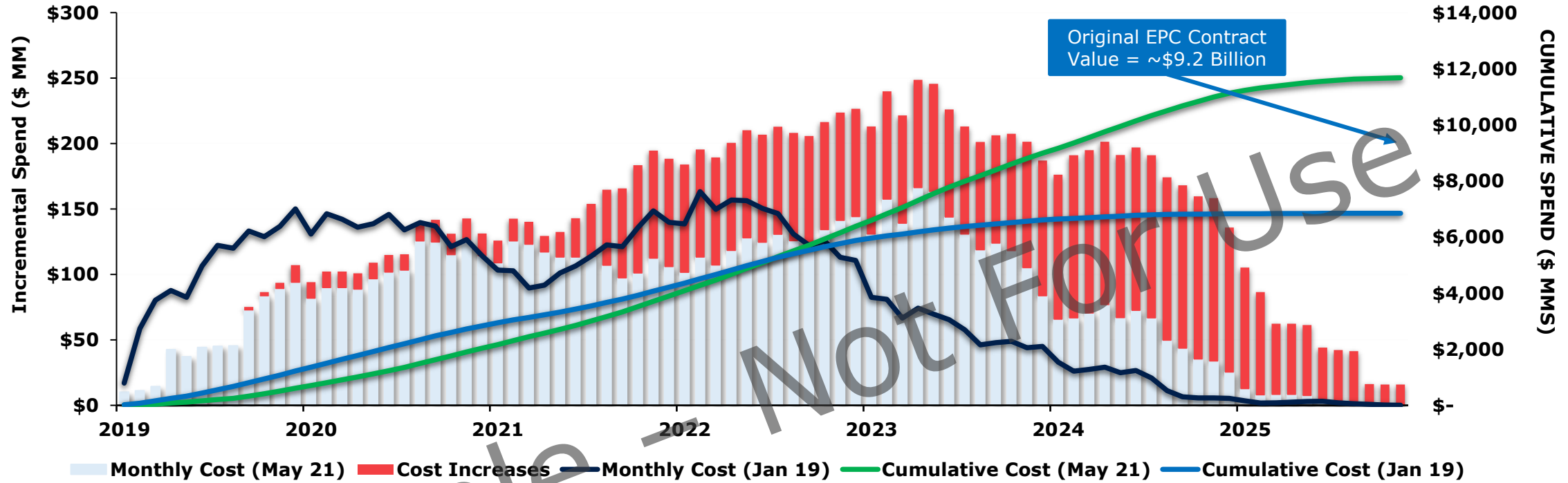


- On May 19th, 2021, GPX filed a request for FERC to approve their new construction labor forecast.
- GPX’s FERC request included multiple references & comparisons to the new peak forecast (7,700) vs. their baseline (pre-FID) forecast (~2,900).
- The GPX staffing model is based on holding the original schedule completion date of Dec 2025.

GPX Has Requested FERC To Approve ~42MM Additional Construction Hours.

1) WEPC Analysis OF Company & Regulatory Filings

Forecasted Cost Increase¹

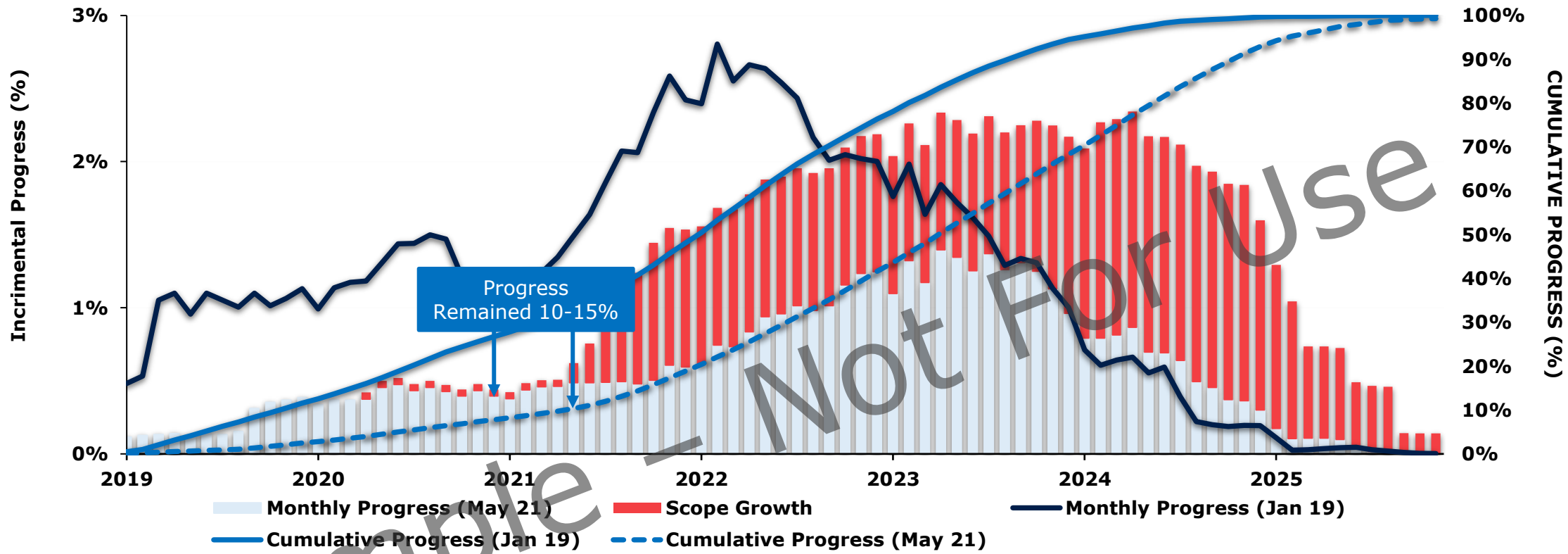


- The peak craft labor increase from ~3,000 to ~7,700 could cost as much as \$3.8B with ~85% of the project remaining. Note: we are also forecasting increases to material quantities, in-directs, etc.
- Change Orders & EPC contract details (i.e., COVID-19, Rely-Upon information, & Engineering Changes) will play a large role in which companies are left standing after this project is over & who picks up the bill on the cost increases.

Forecasted Craft Labor Costs Have Increased ~\$3.8B With ~85% Of The Project Activities Remaining.

1) WEPC Analysis OF Company & Regulatory Filings

Golden Pass August 2020 - Estimated Progress¹

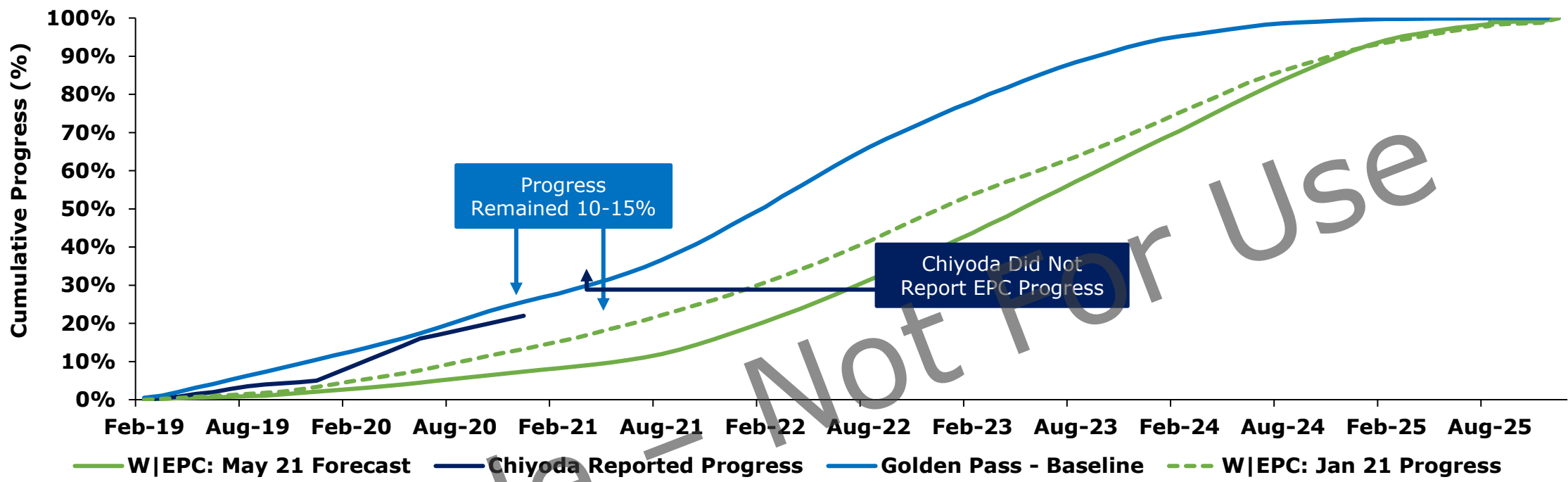


- As labor hours are added to a project (via Change Orders), the previously achieved progress has been diluted.
 - In December 2020, W|EPC forecasted the project was 10-15% complete.
 - 5 Months Later, W|EPC is still forecasting the project is 10-15% complete due to the increased labor hours added.

~42MM Labor Hours Were Added To the Project, Which Dilutes Previously Completed Progress Claims.

1) WEPC Analysis OF Company & Regulatory Filings

GPX Estimated Monthly Progress Analysis



- To help visualize how progress is impacted based on increased hours, we overlaid our Dec 20 vs. May 21 progress forecasts.
 - The period between May 21 and May 22 shows limited progress due to most of the increased hours occurring between June 22 and early 2025.
- Note: Chiyoda did not report a % complete for the GPX project in their May 7th financial results. In fact, they removed their progress reporting for all projects. Over the last several quarters, Chiyoda included a % complete for key projects (including GPX).

Chiyoda Stopped Reporting GPX Progress In Their Most Recent Investor Presentation (May 7th).

1) WEPC Analysis OF Company & Regulatory Filings

Possible Reasons For Labor Increases

- Engineering Change Analysis:** In the last ~45-days, GPX has issued (~7) variance &/or engineering design changes requesting FERC approval before they proceed with construction. Some of these requests were changes to previously approved engineering drawings.
- Possible Causes:** Public data indicates the facility’s capacity was increased in/around FID & significant changes occurred as a result of new/revised geotechnical data.
- Impact:** The engineering changes are primarily related to piling, & foundations, which were supposed to be completed in Dec-20. Based on actual progress, we believe piling & foundations will be completed in mid-2023 (train 3).
- Chiyoda’s Role:** As a reminder, Chiyoda is leading the engineering & procurement efforts & could be significantly impacting Zachry & McDermott's ability to progress construction activities.

Recent Project Engineering Changes¹

Date	Subject
May 7, 2021	Piling In Trains 2 & 3
May 7, 2021	Piling In Train 1
Apr 28, 2021	Pipeline Crossing Under New Levee
Apr 26, 2021	Piling Changes In Multiple Areas
Apr 9, 2021	Multiple Foundations In Train 1
Apr 9, 2021	Steel Piperack Foundations
Apr 8, 2021	Materials To Meet ASTM Specifications

¹⁾ W|EPC Analysis of Company & Regulatory Filings

In the Last 45-Days, Multiple Civil Construction Engineering Changes Have Been Identified.

Aerial Image Analysis

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Project Overview

- **Visual Status:** Train 1's current work is isolated to the main Piperack area with ongoing piling and some foundations.
- **Train 1 Schedule:** With current delays, we are forecasting a 6-month delay on Train #1.
- **The Impact:** Work stalling in Train 1 will waterfall to Trains 2 & 3. This is reflected in the increased staffing and costs.
- **Key Thoughts:** Progress is progress. The fact that foundations and piles are going in means that designs are being finalized, drawings are being issued, and progress should accelerate going forward.

Train 1 & Utilities Piling & Foundations



1) W|EPC Analysis of Company & Regulatory Filings

Site Progress Is Late But It Is Starting To Move Forward.

Contact Information & Disclosures

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Michael Webber, CFA
Managing Partner
Energy Infrastructure
michael.webber@webberresearch.com
W: (646) 993-0693
M: (434) 409-8909



Eric Smith
Managing Partner
EPC Risks
eric.smith@webberresearch.com
W: (346) 337-7788



Greg Wasikowski, CFA
Associate Partner
Energy Infrastructure
greg.wasikowski@webberresearch.com
W: (646) 993-0694
M: (717) 919-3367



Chris Tsung, CFA
Associate
Energy Infrastructure
hris.tsung@webberresearch.com
W: (646) 998-8290
M: (646) 515-9957



Robert Meaney
Managing Director
EPC Risks
robert.meaney@webberresearch.com
W: (832) 368-8456



Qamer Iqbal
Engineering Manager
Carbon Capture
Qamer.Iqbal@sentinelcorellc.com
W: (713) 499-9159



Toni Su
Engineering Manager
H2 Midstream & Emissions
Toni.Su@sentinelcorellc.com
W: (713) 499-9159



Walter Lobo
Institutional Sales
walter.lobo@webberresearch.com
W: (646) 767-6425



Tim Biggins
Operational Partner
tim@nephronresearch.com
W: (646) 876-0109
M: (917) 502-1714

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