

**CITY OF EL PASO, TEXAS
AGENDA ITEM
DEPARTMENT HEAD'S SUMMARY FORM**

AGENDA DATE: October 24, 2023
PUBLIC HEARING DATE: Not Applicable

CONTACT PERSON(S) NAME AND PHONE NUMBER:
Yvette Hernandez, City Engineer, (915) 212-1860
Samuel Rodriguez, Aviation Director, (915) 212-7301
K. Nicole Cote, Managing Director, (915) 212-1092

DISTRICT(S) AFFECTED: ALL

STRATEGIC GOAL: No. 1. Create an Environment Conducive to Strong, Sustainable, Economic Development

SUBGOAL: 1.4: Grow the core business of air transportation

SUBJECT:

That the City Council approves a Change Order in the amount of \$321,487.00 to Hensel Phelps Construction Co. (Contractor) for the furnishing and installation of Class A fire rated felt panel above the new linear plank ceiling to meet NFPA 13 code requirements for the EPIA Terminal Ceiling and Lighting Improvements Project, Contract No. 2023-0199. There is no change in the contract time resulting from this Change Order. The new contract sum, including this Change Order notice and any previous change order notices, is \$10,145,074.00. The City Manager, or designee, is authorized to execute any documents and contract amendments needed to carry out the intent of this Resolution.

BACKGROUND / DISCUSSION:

The Architect of Record issued an Architect's Supplemental Instruction which provides an architectural detail that includes a fire-rated felt panel to be placed over an estimated 28,000 SF of the new linear plank ceiling system. The addition is a result of a NFPA 13 code requirement which allows for a maximum 20% opening in ceilings. The logic for the 20% ceiling opening is that the 20% will limit the heat transfer into the ceiling plenum so as to allow activation of the heat detectors and sprinkler system in the ceiling plane. The addition of the felt panel will bring the percentage within the requirement.

CONTRACT VARIANCE:

N/A

PROTEST

N/A

PRIOR COUNCIL ACTION:

On January 18, 2023, City Council approved the award of Solicitation 2023-0199 EPIA Terminal Ceiling and Lighting Improvements to Hensel Phelps Construction Co.

AMOUNT AND SOURCE OF FUNDING:

Amount: \$321,487.00

Funding Source: Airport Enterprise / Airport Terminal Program Grant / PFC

Account: 562-3010/3080-62335-580270-G62A224801

2023-0199 EPIA Ceiling & Lighting improvements

Revised 2/23/2022-V2 – Previous Versions Obsolete

HAVE ALL AFFECTED DEPARTMENTS BEEN NOTIFIED? YES NO

PRIMARY DEPARTMENT: Capital Improvement

SECONDARY DEPARTMENT: Purchasing & Strategic Sourcing

*****REQUIRED AUTHORIZATION*****

DEPARTMENT HEAD:

Yvette Hernandez

Yvette Hernandez, City Engineer

RESOLUTION

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF EL PASO:

That the City Council approves a Change Order in the amount of \$321,487.00 to Hensel Phelps Construction Co. (Contractor) for the furnishing and installation of a Class A fire rated felt panel above the new linear plank ceiling to meet NFPA 13 code requirements for the EPIA Terminal Ceiling and Lighting Improvements Project, Contract No. 2023-0199. There is no change in contract time resulting from this Change Order. The new contract sum, including this Change Order notice and any previous change order notices, is \$10,145,074.00. The City Manager, or designee, is authorized to execute any documents and contract amendments needed to carry out the intent of this Resolution.

APPROVED THIS ___ DAY OF _____ 2023.


CITY OF EL PASO:

OSCAR LEESER
MAYOR


ATTEST:

Laura D. Prine
City Clerk

APPROVED AS TO FORM:


Roberta Brito
Assistant City Attorney

APPROVED AS TO CONTENT:


Yvette Hernandez, P.E., City Engineer
Capital Improvement Department

Contract Change Order Coversheet /Checklist City of El Paso Capital Improvements Department

Project Name: EPIA Terminal Ceiling & Lighting Improvements Date Received: 9/21/2023
 Solicitation Number: 2023-0199 Contractor: Hensel Phelps Construction
 Change Order Number: 03 Date CO was identified: 9/01/2023
 Funding Type: QOL General Fund TX DOT CDBG FTA Airport X
 Contingency: \$ 2,434,250 Original Budget: \$9,737,000 Current Remaining Budget: \$ 2,347,663 PO No.(s): CEP32-2300000295
 Identified by: DOR X Contractor User Dept. CID Other (identify :)
 Impacts: Cost X Time* (Check all that Apply) * Identify Schedule activity impacted, **attach** frag-net justifying time.

No change order shall be approved unless work is ordered in writing by the Owner Designated Rep

If Written Order provided prior to formal execution of CO **attach** copy of the written directive, and justification, as why the direction was necessary prior to a formal agreement. Attach concurrence of representative having authority to execute change order(s) for the city of El Paso, Contract Specific by Resolution. If formal RFP was provided to contractor **attach** copy. If E-mail was direction provided to contractor attach Copy.

Change order Type Check One: Mandatory X Discretionary (Mandatory Violets Written code/standard, or will not function for intended purpose)

If mandatory **attach** justification, Direction from DOR and /or code/ standards references that the CO corrects, or Documentation from User Department Head explaining why the change is required

Differing site condition	<u> </u>	Engineering Change/Construction Deficiency	<u> </u>
User requested Change **	<u> </u>	Substitution Contractor initiated	<u> </u>
Designer Directive (ASI)	<u>X</u>	Error and omission	<u> </u>
Value Engineering Change	<u> </u>	Quantity Adjustment	<u> </u>

** Identify Funding source Airport Enterprise Grant Funded Projects **attach** Concurrence of Grant Funded program Director

Justification: The Architect's Supplemental Instruction (ASI) No.4 provides an architectural detail that includes a fire-rated felt panel to be placed above an est. 28,000 SF of the Type No. 1 linear plank ceiling system. This addition is a result of an NFPA code requirement for an open ceiling system that states that the open air return cannot exceed 20%. Per the Engineer's calculations, it is currently greater than 20%. Cost classification for this PCO is a Designer Directive (ASI). EPIA concurs with the classification.

The Project Manager determined that the Contractor's cost proposal, which is inclusive of a premium cost for expediting the production timeline of the material in an effort to meet the General Contractor's schedule as time is of the essence, is considered reasonable in comparison between the ROM estimate and the submitted cost proposal by the General Contractor.

Method Utilized for implementing change

(Reference general conditions 2.5.2) Check all that apply

- . 1 Unit Bid Prices Previously Approved (attach Copy of supporting documents)
- . 2 An Agreed upon Lump Sum X (Attach record of Negotiations, and Cost Analysis)
- . 3 Actual Cost (Force Account Change) (Attach Detailed record as per 2.2.5.2.3)

Cost/Price/Time Analysis

Attach Copy of analyst justifying cost and quantities

Contractors proposed cost: \$321,487.00
 Final Negotiated amount: \$321,487.00
 Time: Requested N/A, justified N/A

Independent Cost Estimate prepared Yes X, No , Validated, Vender Quotes, Published Data, Previously agreed Costs, Other (attach documentation of cost analysis).

Contract Change Reference: Reference Plan /Spec change, Describe Change (Attach additional sheets if necessary)

Narrative Description of Change SOW: As per the Architect's Supplemental Instruction No.4, the scope of work shall include furnishing an estimated 28,000 SF of an approved class A fire rated felt panel, installing the panel above all of the new linear plank ceiling system; quality control, equipment, labor, tools and other incidentals as needed to complete the scope of work.

Existing Drawing Reference: N/A

Existing Specification Reference: N/A

New Drawings/Specifications Reference: Architectural Detail 1: Linear Plank Ceiling w/ Felt Panel dated 9/8/2023

User Department Concurrence (if required):	<u> </u>	Print Name <u> </u>
Requested by Project /Construction Manager:	<u>Victoria Ruiz</u>	Print Name: <u>Victoria Ruiz</u>
Division Manager:	<u>Shane Brooks</u>	Print Name: <u>Shane Brooks</u>
Recommended for Approval by City Engineer:	<u>Michael J. Vonasek</u> Michael J. Vonasek, P.E. Assistant Director Construction	Date: <u>10/04/2023</u>

CITY OF EL PASO CONSTRUCTION CHANGE ORDER

CONSTRUCTION CHANGE ORDER NO.:	<u>3</u>	DATE:	<u>September 21, 2023</u>	<input type="checkbox"/>	SCOPE CHANGE
PROJECT:	<u>EPIA Ceiling & Lighting Replacement Project</u>	SOLICITATION NO.	<u>2023-0199</u>	<input checked="" type="checkbox"/>	CONSTRUCTION CHANGE
	<u>0</u>				
Original Contract Amount:	\$ <u>9,737,000.00</u>	Contract Time to Substantial Completion	<u>480</u>		
Net Change by previous Change Orders:	\$ <u>86,587.00</u>	Total days added due to Change Orders and CQN's	<u>0</u>		
Net Change by previous Construction Quantity Notices:		Total days added for this Change Order	<u>0</u>		
Amount of this Construction Change Order:	\$ <u>321,487.00</u>	New Contract Time to Substantial Completion:	<u>480</u>		
New Amended Contract Amount:	\$ <u>10,145,074.00</u>	Current Substantial Completion Due Date	<u>8/16/2024</u>		
Change Order Percentage:	<u>4.19%</u>				

CONTRACTOR NAME: Hensel Phelps Construction Airport

Please provide a detailed scope of work of the change order (see back for reason/justification):

Change Item #1: Furnish and install a fire rated felt panel above all Type No. 1 linear plank ceiling system. Estimated quantity is 28,000 SF.

Scope of Work: As per the Architect's Supplemental Information (ASI) No. 4, the scope of work shall include furnishing an approved class A fire rated felt panel, installing the panel above all of the new linear plank ceiling system; quality control, equipment, labor, tools and other incidentals as needed to complete the scope of work.

The change item totals an amount of \$321,487.00.

Time: The critical path is not affected by this change; therefore, no additional time was justified/granted.

Unless specifically noted this change order addresses all compensation of time and money, including direct and indirect cost associated with the above described scope of work

CONSECUTIVE CALENDAR DAYS ADDED TO COMPLETION TIME: 0 TOTAL CHANGE ORDER AMOUNT: \$ 321,487.00

CONTRACTOR: Hensel Phelps Construction

I, Adam McDavitt, of Hensel Phelps agree and accept the terms and conditions of this change order.

Signature: 

Date: 10/09/2023

CITY OF EL PASO (OWNER)

I, Yvette Hernandez, P.E. of the City of El Paso hereby authorize and direct the Contractor to proceed with additional work as described in this form.

Signature: Yvette Hernandez, P.E.

Date: _____

CITY OF EL PASO CONSTRUCTION CHANGE ORDER- Pg. 2

CONSTRUCTION CHANGE ORDER NO.: 3 DATE: September 21, 2023 SCOPE CHANGE
PROJECT: EPIA Ceiling & Lighting Replacement Project SOLICITATION NO. 2023-0199 CONSTRUCTION CHANGE

Project Number	<u>G62A224801</u>	Project Number	<u>0</u>	PURCHASE ORDER #	<u>2300000395</u>
Class	<u>62335</u>	Class	<u>0</u>		
Department	<u>562</u>	Department	<u>0</u>		
Fund	<u>3010</u>	Fund	<u>0</u>		
Account	<u>580270</u>	Account	<u>0</u>		

CONTRACTOR NAME: Hensel Phelps Construction

PROVIDE REASON/JUSTIFICATION FOR CHANGE ORDER:

The Architect's Supplemental Instruction No. 4 provides an architectural detail that includes a fire-rated felt panel to be placed above an estimated 28,000 SF of the Type No. 1 linear plank ceiling system. This addition is a result of an NFPA code requirement for an open ceiling system that states that the open air return cannot exceed 20%. Per the Engineer's calculations, it is currently greater than 20%. Cost classification for this PCO is a Designer Directive (ASI). EPIA concurs with the classification.

The Project Manager determined that the Contractor's cost proposal, which is inclusive of a premium cost for expediting the production timeline of the material in an effort to meet the General Contractor's schedule, is considered reasonable in comparison between the ROM estimate and the submitted cost proposal by the General Contractor.

CONSECUTIVE CALENDAR DAYS ADDED TO COMPLETION TIME: 0 TOTAL CHANGE ORDER AMOUNT: \$ 321,487.00

Project Manager recommends approval: *Victoria Ruiz*

Assistant Director of Aviation recommends approval: *R. Lane Brooks*

REQUEST FOR PO INCREASE/DECREASE FOR CHANGE ORDER

CONSTRUCTION CHANGE ORDER NO.: 3 DATE: September 21, 2023 INCREASE
 PROJECT: EPIA Ceiling & Lighting Replacement Project SOLICITATION NO. 2023-0199 DECREASE

Project Number G62A224801 PURCHASE ORDER # 2300000395
 Class 62335
 Department 562
 Fund 3010
 Account 580270

CONTRACTOR NAME: Hensel Phelps Construction

AS A RESULT OF THIS CHANGE ORDER, PLEASE MAKE THE FOLLOWING ADJUSTMENT TO THE PURCHASE ORDER:

LINE	ADDED AMOUNT
5	\$ 321,487.00

TOTAL NET CHANGE TO PURCHASE ORDER

\$ 321,487.00
 (should match cost below)

Additional funding/direction:
 Please add line 5-1: CO #3 - PCO #09

TOTAL CHANGE ORDER AMOUNT: \$321,487.00

Project Manager: Victoria Ruiz

Assistant Director of Aviation recommends approval: R. Shane Brooks

Contract Compliance: _____

Contract Change Order Documentation Summary and Determination of Cost Reasonableness:

Contract Name: EPIA Terminal Ceiling & Lighting Improvements

Solicitation /Project Number: 2023-0199

Change Order Number: 3

Prepared By: Victoria Ruiz

RFP:

In response to an (Select one and entry number and date) RFP number #4 and Field Directive number _____ dated 9/8/23 (Attach Copy). Or In response to _____ an unsolicited proposal was provided.

Initial Cost Estimate:

Check all that apply:

____ No initial estimate of the change order costs was attempted. (Attach Justification countersigned by assigned DM)

____ A ROM Estimate in the amount of _____ was prepared on Date _____ attach copy

X A Detailed Estimate in the amount of \$ 257,646 was prepared on Date 09/27/2023 attach copy.

____ The Design Consultant provided a detailed estimate in the amount of \$ _____ was prepared on Date _____ attach copy.

Contractors Proposal:

The contractor provided a proposal dated 9/11/2023 (attach copy) in the amount of \$321,487 and requesting 0 Calendar/Working days .

The proposal was reviewed as to the required Scope of work and found to accurately reflect the Scope of Work **Yes X No ____**. If No a formal revision was requested on this date _____ (attach Copy(s) of request) and received date _____, in the amount of \$ _____ and requesting _____ Calendar/Working days **Or Check if applicable** ____ after review with assigned DM the city elected to proceed with negotiations and address the scope inconsistencies in Negotiations without a proposal revision (list inconsistencies to be addressed in negotiations). _____

Attach continuation sheet if necessary

Cost evaluation: Cost reasonableness was determined using the following methods check all that apply.

Utilizing existing Bid Item

Price Analysis

Cost Analysis

(Provide narrative description for each method utilized and how reasonableness was determined)

Attach mark up a proposal with negotiation objectives, including accepted cost, Dated and initialed by the Preparer and Assigned Division Manager. Label Marked UP Proposal:

Narrative description of determination of reasonableness: (Attach Continuation sheets as necessary, include detailed table showing Proposed/Objective /and Negotiated when appropriate. (Sample included)

Narrative:

The 3rd Party Project Manager (Broaddus & Associates) reviewed the cost proposal for ASI #4 and developed a cost estimate (see attached). The trade partner unit pricing is inclusive of a premium cost for expediting the production timeline of the material in an effort to meet the General Contractor's schedule as time is of the essence. The project manager determined that the contractor's proposed cost is reasonable and acceptable based on the comparison between the ROM estimate and their cost proposal.



Department of Aviation

MAYOR

Oscar Leeser

September 12th, 2023

CITY COUNCIL

District 1

Brian Kennedy

District 2

Alexsandra Anello

District 3

Cassandra Hernandez

District 4

Joe Molinar

District 5

Isabel Salcido

District 6

Art Fierro

District 7

Henry Rivera

District 8

Chris Canales

CITY MANAGER

Tommy Gonzalez

Hensel Phelps Construction Co.

Adam McDavitt

4141 Pinnacle Street

El Paso, Texas 79902

Subject: Terminal Ceiling and Lighting Replacement – RFP #5

Dear Mr. McDavitt,

The following is a request to submit a proposal by Tuesday, September 19th, 2023 for completing the following work:

Scope of Work:

Please refer to the attached file *EPIA C&L_ASI 04_230908* dated September 8th, 2023 by Carl Daniel Architects. The file includes a design clarification to add a felt panel above all linear panel ceiling systems as required by the local AHJ to achieve code compliance.

Drawing Changes: Architectural Detail 1 – Armstrong 9mm Felt Panel with TURF Product Data

Specification Changes: N/A

Your proposal shall contain a complete itemized breakdown in sufficient detail to permit an analysis of all material, labor, equipment, subcontractor cost (if applicable), and mark-ups. State additional time required, if necessary. Support your position with a marked-up progress chart depicting the impact of this proposed change to the original contract work.

Sincerely,

Victoria Ruiz

Victoria Ruiz

Cc: Gabe Gonzalez, Broaddus & Associates

Attachments: EPIA C&L_ASI 04_230908.pdf



EL PASO
INTERNATIONAL AIRPORT

Sam Rodriguez, PE, CM, cfm, cnu-a
Aviation Director

El Paso International Airport | 6701 Convair Road | El Paso, TX 79925

O: (915) 212-0330 | FlyEIPaso.com



DELIVERING EXCEPTIONAL SERVICES



AIA[®] Document G710[™] – 1992

Architect's Supplemental Instructions

PROJECT *(Name and address):* Ceiling & lighting replacement El Paso International Airport.
6701 Convair Rd. El Paso, Texas 79925

OWNER *(Name and address):* EL Paso International Airport
6701 Convair Rd. El Paso, Texas 79925

FROM ARCHITECT *(Name and address):* Carl Daniel Architects
305 Leon Street
El Paso, Texas 79901

TO CONTRACTOR *(Name and address):* HENSEL PHELPS
4141 Pinnacle Street. Suite 215
El Paso, Texas 79902

ARCHITECT'S SUPPLEMENTAL INSTRUCTION NO: FOUR (4)

DATE OF ISSUANCE: 8 September 2023.

CONTRACT FOR: Tenant Improvement

CONTRACT DATE: 8 November 2022.

ARCHITECT'S PROJECT NUMBER: 2018-32

OWNER:

ARCHITECT:

CONSULTANT:

CONTRACTOR:

FIELD:

OTHER:


The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates your acknowledgment that there will be no change in the Contract Sum or Contract Time.

DESCRIPTION: The attached architectural details and Armstrong drawings shows option 1 for the Metal works IMMIX Linear plank panel with 9mm felt panel by Armstrong.

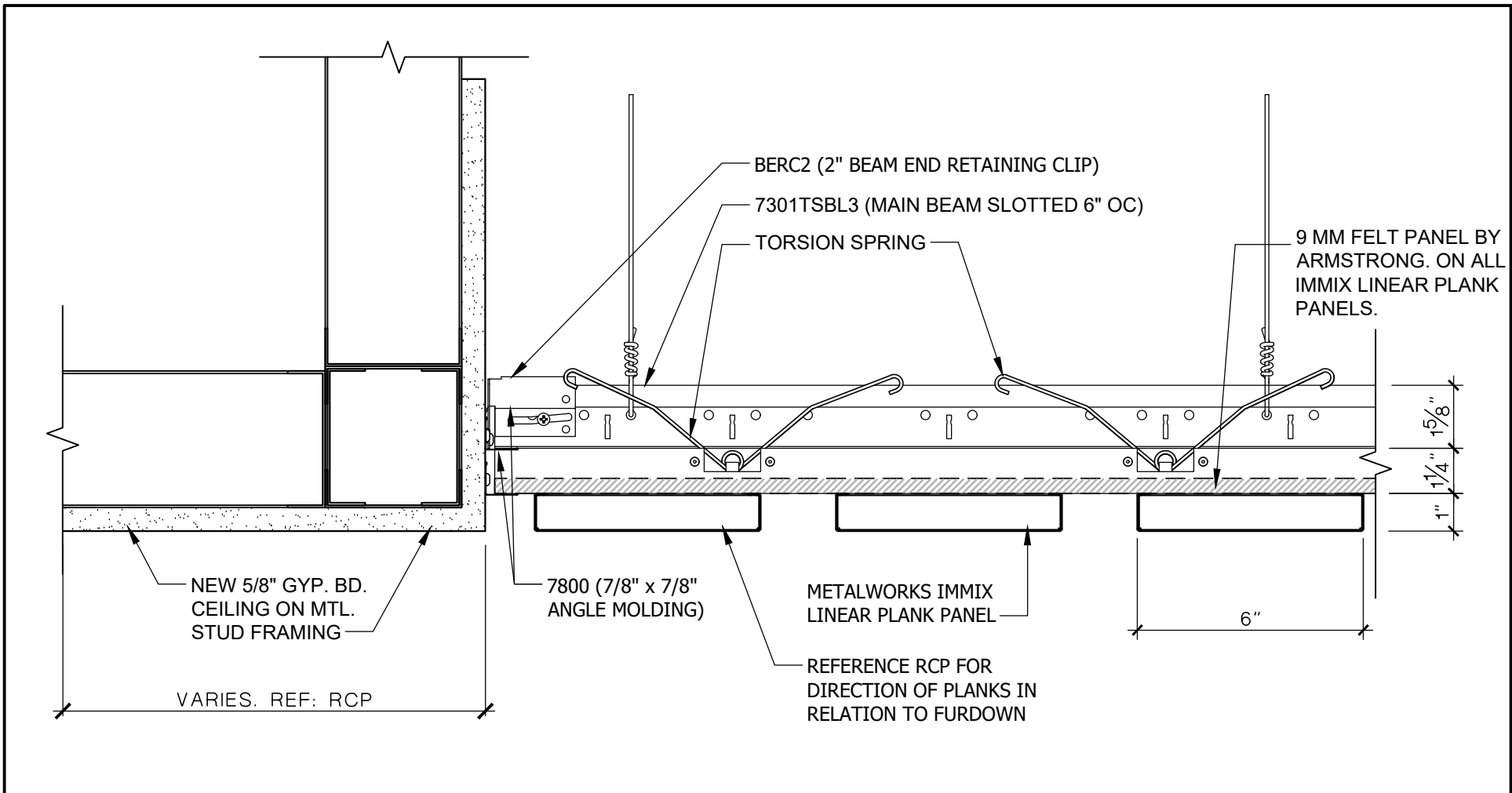
ATTACHMENTS:
(Here insert listing of documents that support description.)

Architectural Details Option 1 and the Armstrong drawings.

ISSUED BY THE ARCHITECT:


(Signature)

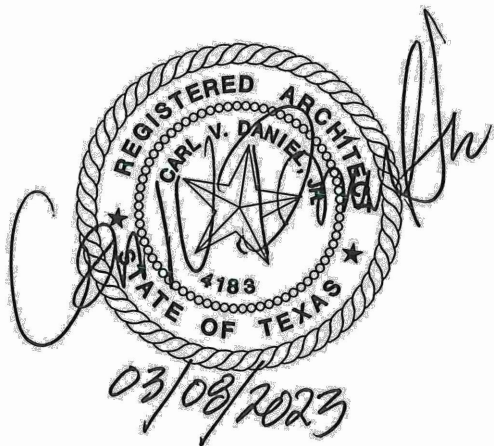
Carl V. Daniel Jr. - President
(Printed name and title)



OPTION No. 1 - 1" LINEAR PLANK PANELW/ FELT PANEL

SCALE: 3" = 1'-0"

1



CEILING AND LIGHTS REPLACEMENT

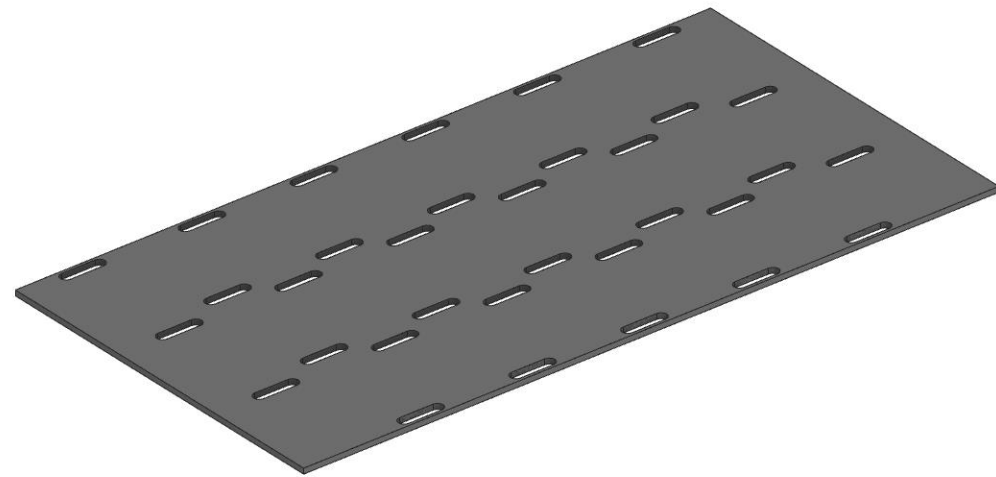
EL PASO INTERNATIONAL AIRPORT

SEPTEMBER , 8 2023

2018-32

DESIGN PROPOSAL

231624 - EL PASO AIRPORT



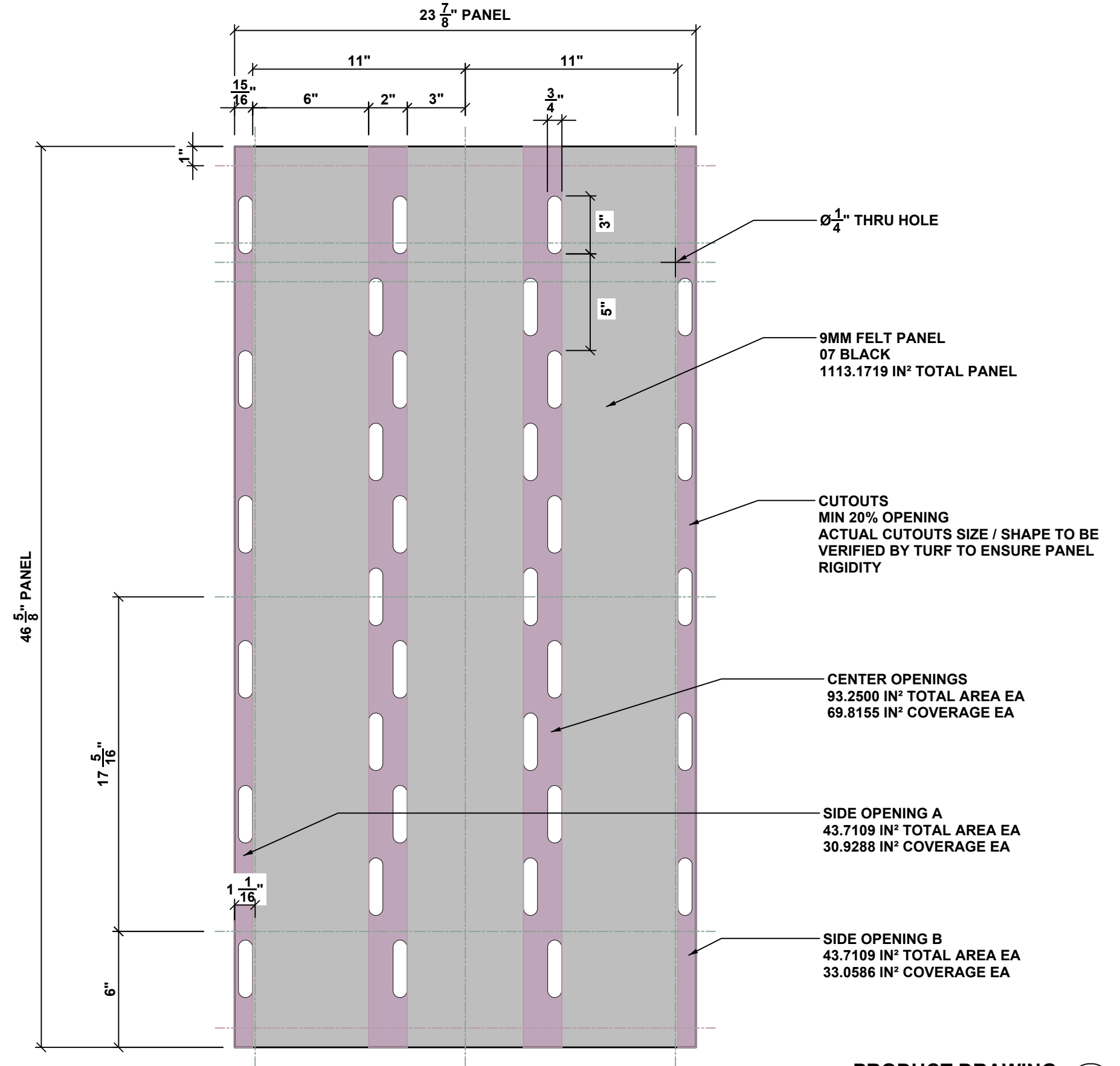
AXON
NTS (02)

PLEASE NOTE, THIS PROPOSAL IS TO CONFIRM DESIGN INTENT ONLY. NOT FOR CONSTRUCTION.
ALL DETAILS WILL BE DEVELOPED AND FINALIZED DURING OUR SHOP DRAWING PROCESS.

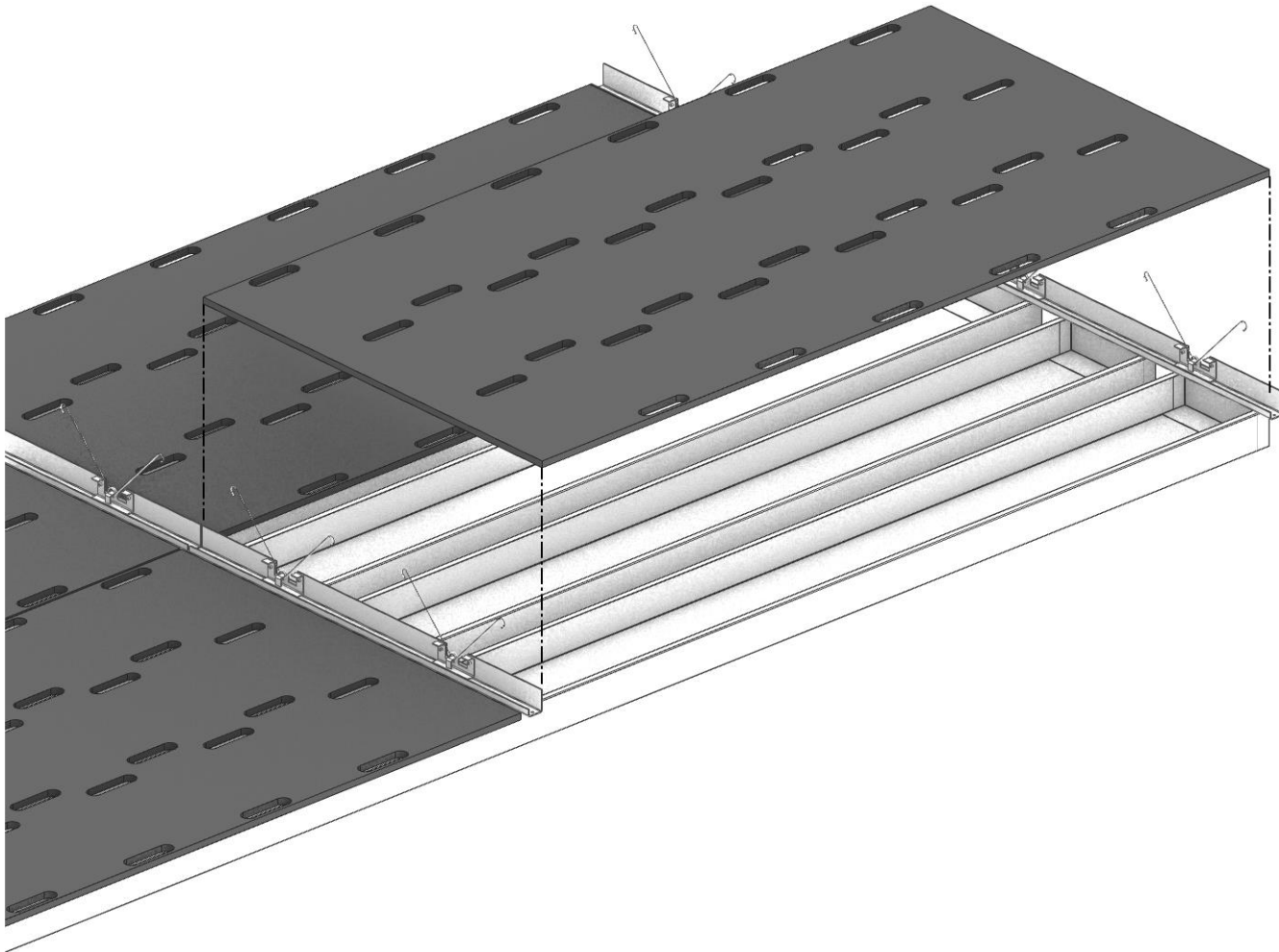
TURF DESIGN OWNS THE RIGHTS, TITLE, AND INTERESTS TO ALL PROPOSALS AND TO ALL PRODUCT
DESIGNS PROVIDED THROUGHOUT THE DESIGN PROCESS.



23 7/8" PANEL



PRODUCT DRAWING
NTS (01)



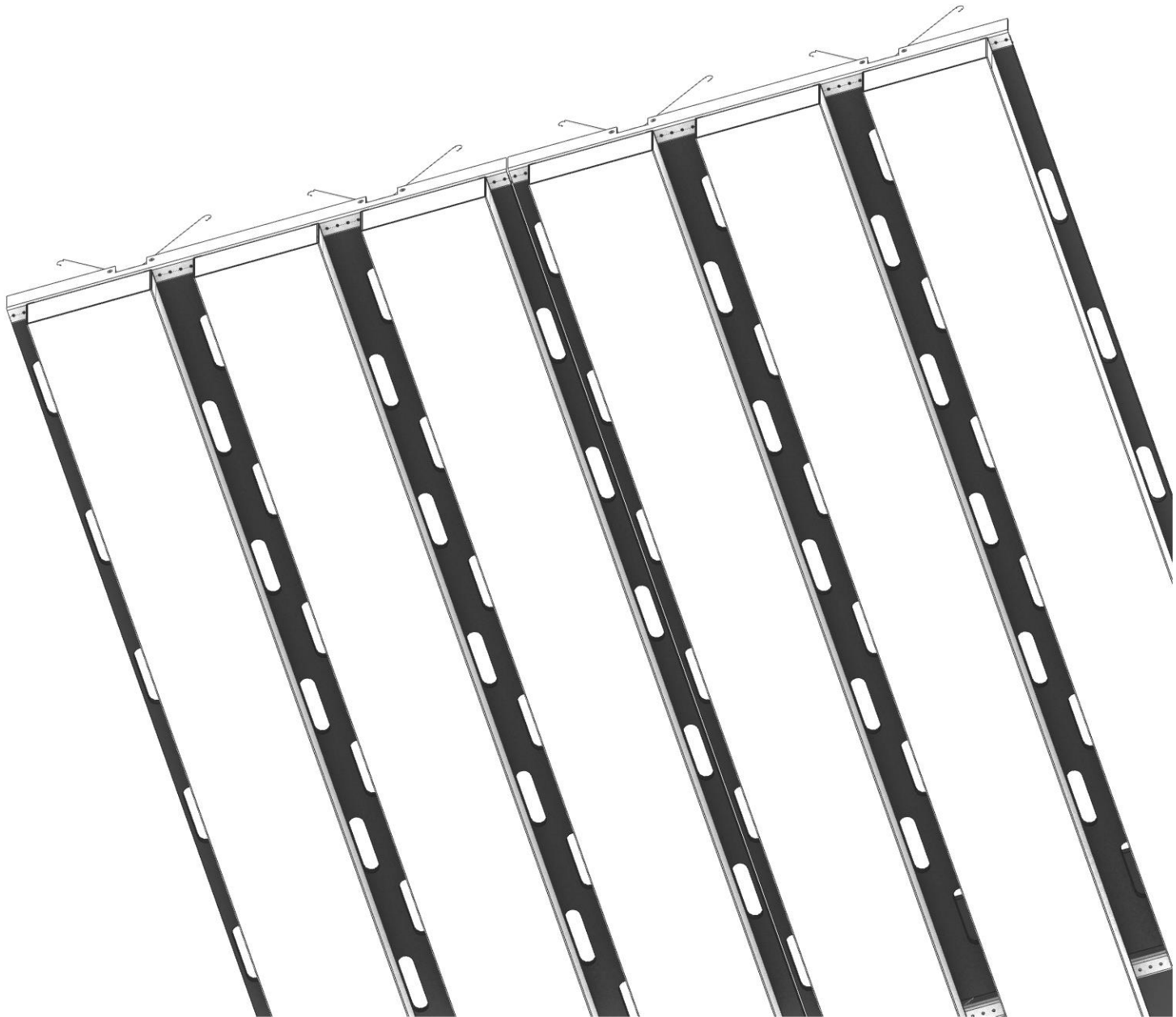
AXON, PANEL COORD

02

NTS

PLEASE NOTE, THIS PROPOSAL IS TO CONFIRM DESIGN INTENT ONLY. NOT FOR CONSTRUCTION. ALL DETAILS WILL BE DEVELOPED AND FINALIZED DURING OUR SHOP DRAWING PROCESS.

TURF DESIGN OWNS THE RIGHTS, TITLE, AND INTERESTS TO ALL PROPOSALS AND TO ALL PRODUCT DESIGNS PROVIDED THROUGHOUT THE DESIGN PROCESS.



AXON, FROM BOTTOM, WITH COORDINATING PANELS

01

NTS



September 27th, 2023 (Rev. 2)

Ms. Victoria Ruiz, EIT, ACE
Capital Improvement Program Administrator
El Paso International Airport
ruizvm@elpasotexas.gov

Re: EPIA Ceiling & Lighting Replacement Projected ASI #04 dated 09/08/2023 – ROM Cost Estimate

Dear Vikki,

Below is a ROM cost summary of the scope associated with ASI #04 dated 09/08/23 as prepared by CDA Architects. This cost summary was developed based on an analysis of the base bid documents and subsequent design revisions. The values are estimated and may not align with the actual costs submitted by the Contractor and their trade partners.

ASI #04 ROM Pricing Estimate

Item	Description	Est. Cost (\$)	Notes
1	Addition of Felt Panel at Type No. 1 Ceilings	144,501	Material Cost: \$4.99/SF @ 28,958
		14,190	Labor Cost: \$0.50/SF @ 28,958
2	Production Acceleration Premium	36,126	25% Premium on Material Cost
3	Subtotal	194,817	
4	Subcontractor OH&P	29,223	15%
5	General Contractor OH&P	33,606	15%
	Total	\$257,646	

Thank you,

Gabe Gonzalez, CCM
Project Manager
Broaddus & Associates
ggonzalez@broaddususa.com

Cc: Raul Rodriguez, Broaddus & Associates



HENSEL PHELPS
Plan. Build. Manage.

Jobsite Address:
6701 Convair Rd, El Paso TX
El Paso, TX. 79902

9/11/2023

Victoria M. Ruiz, EIT
Project Manager
El Paso International Airport
6701 Convair Rd, El Paso TX
El Paso, TX. 79902

Subject: **PCO 009 ASI 004 - Linear Metal Ceiling Felt Panel**
EPIA - Ceiling and Lighting Replacement

Dear Victoria,

Please find attached for your review and approval the pricing proposal associated with PCO 009. This includes the additional cost for the material and installation of air flow suppression felt panels over all the linear metal ceiling system, per ASI 04

Total Value of Change: **\$ 321,487**

Should there be any questions or comments regarding the above items, please contact the undersigned.

Sincerely,

HENSEL PHELPS CONSTRUCTION CO.

Carlos Chavez
Project Engineer

World-Class Innovators. Landmark Buildings. Inspiring Performance.



Corporate Office:

4750 Ripley - El Paso, Texas 79922
P.O. Box 220307 - El Paso, Texas 79913
(915) 585-0030 - Fax (915) 585-0050

**EPIA Ceiling and Lighting Replacement
Felt Panel for Air Suppression
9.11.2023**

Scope of Work:

- Add felt panel for airflow suppression over Armstrong IMMX linear metal ceiling panels

Labor Add:	\$33,263.00
Material Add:	\$246,291.00
Total Add:	\$279,554.00


Andrew Hawley
President
Diversified Interiors

DIVERSIFIED INTERIORS
 4750 Ripley, El Paso, TX 79922
 Phone: 585-0030 Fax: 585-0050

Bid Summary

EPIA Terminal Ceiling and Lighting Improvements-1" Panel (For Construction)

Air Flow Suppression over IMMx panels

Bid No. 13

Selected Sections: 09501 Acoustical wall panels

Selected Typical Areas:

Selected Areas: (unassigned)

Estimator:

Job Class:

Wage Type: **Open**

Job Status: **Sold**

Bid Date/Time: **11/23/2022 10:20:57 AM**

Plans Date: **11/23/2022**

(unassigned)

No.	Condition	Height	Quantity	Unit Price			Total Price	Man Days
				Mat.	Lab.	Total		
1	Air Flow Suppression over IMMx panels		28,958.40 SF	8.51	1.15	9.65 / SF	279,554.14	113.12
Material & Labor Total:							279,554.14	113.12
(unassigned) Total:							279,554.14	113.12
Grand without additional markups Total:							279,554.14	113.12
Additional Markups Total:							0.00	
Grand Total:							279,554.14	



February 26, 2019

Turf Design
Mr. Dustin Headley
2000 Fox Ln.
Elgin, IL 60123

Our Reference: SV30854 / 4788546841

Subject: Report Of Surface Burning Characteristics Tests On Ceiling Panels As Submitted By Turf Design.

Dear Mr. Headley:

This is a Report summarizing the results of a test conducted under the Commercial Inspection and Testing Services (CITS) program of UL LLC (UL) identified as Assignment No. 4788546841.

GENERAL:

The results relate only to items tested.

METHOD:

Each test was conducted in accordance with Standard ANSI/UL723, Eleventh Edition, dated April 19, 2018, "Test for Surface Burning Characteristics of Building Materials", (ASTM E84).

The test determines the Surface Burning Characteristics of the material, specifically the flame spread and smoke developed indices when exposed to fire.

The maximum distance the flame travels along the length of the sample from the end of the igniting flame is determined by observation. The Flame Spread Index of the material is derived by plotting the progression of the flame front on a time-distance basis, ignoring any flame front recession, and using the equations described below:

- A. $CFS = 0.515 A_T$ when A_T is less than or equal to 97.5 minute-foot.
- B. $CFS = 4900/(195-A_T)$ when A_T is greater than 97.5 minute-foot.

Where A_T = total area under the time distance curve expressed in minute-foot.

The Smoke Developed Index (SDI) is determined by rounding the Calculated Smoke Developed (CSD) as described in UL 723. The CSD is determined by the output of photoelectric equipment operating across the furnace flue pipe. A curve is developed by plotting the values of light absorption (decrease in cell output) against time. The CSD is derived by expressing the net area under the curve for the material tested as a percentage of the area under the curve for untreated red oak.

The CSD is expressed as:

$$CSD = (A_m/A_{ro}) \times 100$$

Where:

- CSD = Calculated Smoke Developed
- A_m = The area under the curve for the test material.
- A_{ro} = The area under the curve for untreated red oak.

SAMPLES:

The samples utilized in this investigation were neither prepared nor selected by a Laboratories' representative such that no verification of composition can be provided.

Sample Description

Test No.	System
5	Ceiling Panels 9mm Black Material test

Each test sample consisted of three 8 by 2 ft wide boards butted end-to-end to form the required 24 ft. long surface.

Due to the rigidity of the test samples, supplementary means of support was not required.

RESULTS:

The results are tabulated below are considered applicable only to the specific samples tested.

Data sheets and graphical plots of flame travel versus time and smoke developed versus time are also enclosed.

Table 1: Flame Spread Summary

Test No.	Test Code	Sample Description	CFS Calculated Flame Spread (Ceiling)	FSI Flame Spread Index (Ceiling)+	CFS Calculated Flame Spread (Floor)	FSI Flame Spread Index (Floor)++
5	08211813	Ceiling Panels	14.74	15	244.95	245

+ - Flame Spread Index while material remained in the original test position.

++ - Ignition of molted residue on the furnace floor resulted in flame travel equivalent to calculated Flame Spread Index indicated.

Table 2: Smoke Developed Summary

Test No.	Test Code	Sample Description	CSD Calculated Smoke Developed (Prior to Floor Ignition)	SDI Smoke Developed Index (Prior to Floor Ignition)	CSD Calculated Smoke Developed (Entire Test Duration)	SDI Smoke Developed Index (Entire Test Duration)
5	08211813	Ceiling Panels	0.4	0	292.3	300

The Classification Marking of UL on the product is the only method provided by UL to identify products which have been produced under its Classification and Follow-Up Service. No use of a Classification Marking has been authorized as a result of this investigation.

Should you have any questions, please contact the undersigned.

Very truly yours



Robert S. Kiefer (ext. 42014)
Senior Engineering Associate
Fire Protection Division

Reviewed by:



James F. Smith (ext. 42666)
Staff Engineering Associate
Fire Protection Division

Project: 4788546841
Tested by: ABRAN GARCIA

File: SV30854
Engineer: JOHN WIESNER

TestCode: 08211813
Date: 2018-08-21

TEST METHOD: The test was conducted in accordance with UL 723, Eleventh Edition (2018/04/19).

Client Name: Turf Design	Test No.: 5	Hot Test: Yes
Test Duration: 10 minutes	Test Type: Developmental	Burn-Out Required: Yes
Mounting: Rods & Wire		

Test Sample: Ceiling Panels
9mm Black Material test

FLAME SPREAD RESULTS

Ceiling Flame Spread Data

Distance (Feet)	Time (Sec)
Ignition	18
1	26
2	30
3	35

Floor Flame Spread Data

Distance (Feet)	Time (Sec)	Distance (Feet)	Time (Sec)
Ignition	36	11	59
1	45	12	61
2	46	13	62
3	47	14	67
4	48	15	68
5	50	16	80
6	51	17	84
7	52	18	87
8	53	19	110
9	55	19.5	111
10	57		

Calculated Flame Spread (CFS): 14.74
Flame Spread Index (FSI): 15
Time to Ignition (sec): 18
Maximum Flame Spread (ft): 3.0
Area Under the Flame Spread Curve (ft.-min.): 28.6
Time to Floor Ignition (sec): 36
Maximum Floor Flame Spread (ft): 19.5
Calculated Floor Flame Spread: 244.95

SMOKE RESULTS

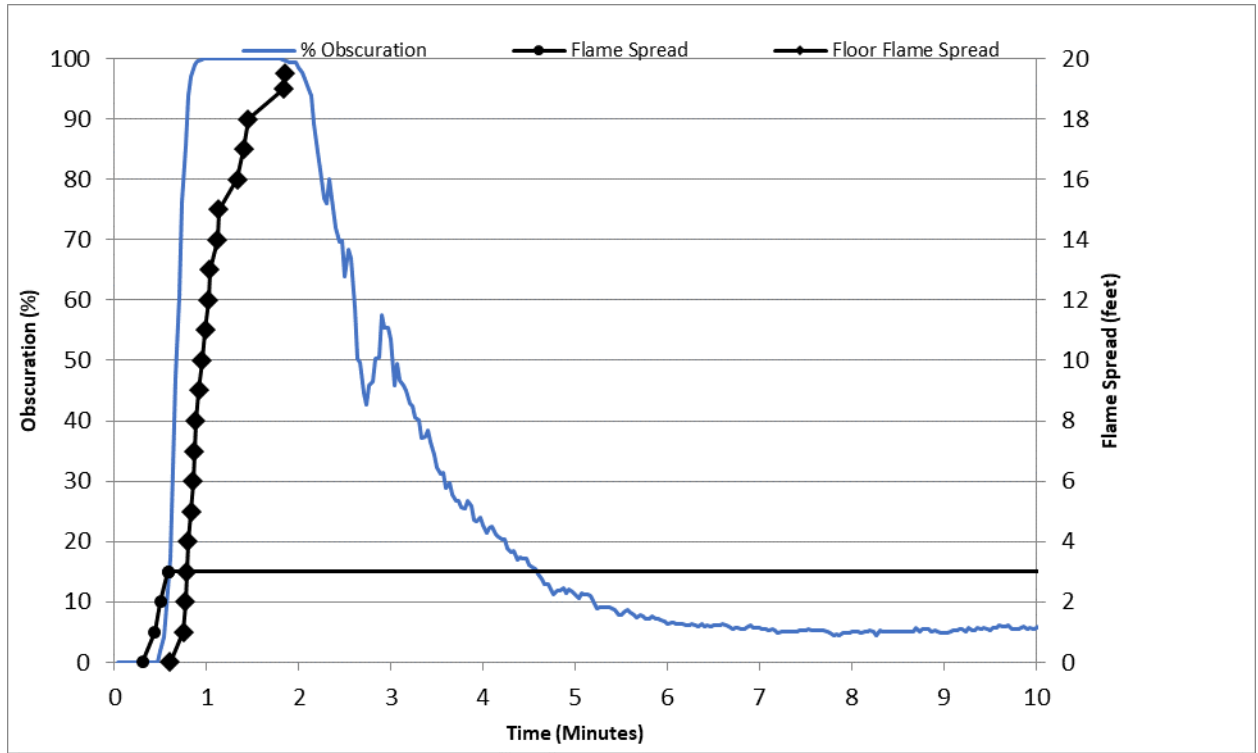
Calculated Smoke Developed (CSD): 292.3
Smoke Developed Index (SDI): 300
Area Under the Smoke Curve (Obs.-min.): 281.16
Area Under Heptane (Obs.-min.): 96.18
Area Under the Smoke Curve Before Floor Ignition (Obs.-min.): 0.36
Smoke Developed Prior to Floor Ignition: 0.4

Post-Test Observations

Char (Feet From Burner): 24

Flame Spread / Smoke Results

Turf Design Ceiling Panels



Test Num.: 5
SV30854 / 4788546841
08211813

Flame Spread Index: 15
Smoke Developed Index: 300
Max. Flame Spread (ft.): 3.0



CITY OF EL PASO

EPIA Terminal Ceiling and Lighting

Change Order

Project Details

Location:	El Paso International Airport
District(s):	All
Total Budget:	\$14,500,000.00
Construction Contract:	\$9,737,000.00 Hensel Phelps
Change Order Amount:	\$321,487.00 PFC Funds / Airport Funds

Scope of Work

- NFPA requirements for an open ceiling system state that open air return cannot exceed 20%. To meet this requirements felt must be installed above the ceiling panels.



MISSION



Deliver exceptional services to support a high quality of life and place for our community.

VISION



Develop a vibrant regional economy, safe and beautiful neighborhoods and exceptional recreational, cultural and educational opportunities powered by a high performing government.

VALUES



Integrity, Respect, Excellence,
Accountability, People

MISIÓN



Brindar servicios excepcionales para respaldar una vida y un lugar de alta calidad para nuestra comunidad

VISIÓN



Desarrollar una economía regional vibrante, vecindarios seguros y hermosos y oportunidades recreativas, culturales y educativas excepcionales impulsadas por un gobierno de alto desempeño



VALORES

Integridad, Respeto, Excelencia, Responsabilidad, Personas