CLACKAMAS COUNTY

OFFICE OF THE COUNTY ADMINISTRATOR
PUBLIC SERVICES BUILDING
2051 KAEN ROAD | OREGON CITY, OR 97045

January 4, 2024 BCC Agenda Date/Item: _____

Board of County Commissioners
Clackamas County

Approval of a Change Order with Clackamas Progress Partners, LLC for Change Order 015 for the Replacement County Courthouse. Change Order value is $329,027.05, leaving a balance of $193,928.40 credits. Funding through credits from previous Change Orders, which includes budgeted County General Funds.

Previous Board Action/Review	**Change Order #**	**Date**	**Value**	**Funding Source***
	CHO003	May 30, 2023	$771,773	Credited to County
	CHO007	Oct 5, 2023	-$35,134.20	DHS Funds
	CHO008	Nov 22, 2023	-$72,858.45	Credits
	CHO009	Dec 14, 2023	-$41,599.00	Credits
	CHO012	Dec 14, 2023	-$134,360.10	Credits
	CHO013	Dec 14, 2023	TBD	TBD
	CHO014	Jan 4, 2024	-$272,200.25	Security Funding
Performance Clackamas	1. Ensure Safe, Health and Secure Communities			
Counsel Review	Yes	**Procurement Review**	No	
Contact Person	Nancy Bush	**Contact Phone**	503-655-8581	

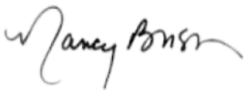
*See detail in Table Below

EXECUTIVE SUMMARY: Change Order 015 totals $329,027.05 for electrical work, equipment, and installation of a stand-alone PA system in the courthouse that is required for safety in the courthouse for employees and the public. The system was missing from the original contract but is necessary for the project.

These changes will be paid for by county credits leaving a balance of $193,928.40. See table below.

RECOMMENDATION: Staff recommends BCC approve Change Order No. 015 for security items.

Respectfully submitted,



Nancy Bush
Clackamas County Operating Officer

For Filing Use Only

SUMMARY OF COURTHOUSE CHANGE ORDERS

Change Order #	County Credits	Security Funds Expended	DHS Funds Expended	General Funds Expended
CHO 001	-	-	-	-
CHO 002	-	-	-	-
CHO 003	$771,773.00 (Credit)	-	-	-
CHO 004	-	-	-	-
CHO 005	-	-	-	-
CHO 006	-	-	-	-
CHO 007	-	-	-$35,134.20	-
CHO 008	-$72,858.45	-	-	-
CHO 009	-$41,599.00	-	-	-
CHO 010	-	-	-	-
CHO 011	-	-	-	-
CHO 012	-$134,360.10	-	-	-
CHO 013 (Hiefield Court)	-	-	-	TBD
CHO 014	-	-$272,200.35	-	-
CHO 015	-$329,027.05	-	-	-
		-$272,200.35	**-$35,134.20**	**$0.00**
Total Balance	**$193,928.40 (Credits)**			

(- = No Cost Change Orders)

CLACKAMAS COUNTY
2051 KAEN ROAD
OREGON CITY, OR 97045
(503) 655-8893

CHANGE ORDER NO. [015]

DATE ISSUED: January 4, 2024.

PROJECT: Clackamas County Circuit Courthouse Project.

PROJECT COMPANY: Clackamas Progress Partners, LLC.

THIS CHANGE ORDER IS ISSUED PURSUANT TO: Section [7.12] of the Project Agreement.

TITLE: CCP 005, 007.1, 013, 015, 016.

This change order, including all exhibits and attachments referenced herein (collectively, the "Change Order") is entered into and effective as of the last date of execution by a party hereto, by and between the CLACKAMAS COUNTY, OREGON AND CLACKAMAS PROGRESS PARTNERS, LLC, acting by order of and through its Board of County Commissioners and supplements and amends the DESIGN, CONSTRUCTION, FINANCE, OPERATION, AND MAINTENANCE AGREEMENT OF THE CLACKAMAS COUNTRY CIRCUIT COURTHOUSE together with all exhibits thereto dated August 30, 2022 (as amended prior to the date hereof, collectively, the "Project Agreement"). All capitalized terms not otherwise defined herein shall have the meanings ascribed to them in the Project Agreement.

KEY TERMS:

A. This Change Order contains the entire understanding of the parties with respect to the subject matter of this Change Order and supersedes all prior agreements, understandings, statements, representations, and negotiations whether written or oral, between the parties with respect to the subject matter of this Change Order.
B. This Change Order shall be binding upon and inure to the benefit of Project Company and the County.
C. The Project Agreement remains in full force and effect, except to the extent this Change Order expressly amends the terms of the Project Agreement.
D. This Change Order shall not be construed in favor of either party, regardless of who was more responsible for its preparation.
E. The amount of the payment bond and letters of credit are fixed amounts and shall not be changed.
F. This Change Order may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same written instrument.
G. Estimated impacts, if any, to the operation, maintenance, repair and replacement, liabilities or obligations arising out of or related to the changes effectuated by this Change Order, are itemized below, provided however, any costs related to operation, maintenance, repair and replacement changes shall be borne by the County through an adjustment of the Service Fee payable following the Occupancy Readiness Date in Accordance with Article 16.
H. For Change Orders issued prior to Occupancy Readiness, O&M and Renewal pricing, as shown in the backup documents within this Change Order, are not indexed or escalated for inflation nor LABI/MRMI and will be escalated annually, starting the month prior to Occupancy Readiness, in accordance with Article 16.
I. The above said indexation/escalation will be made to the applicable Monthly Availability Payment with the following conditions:

a. Change Order O&M costs: for O&M Changes during D&C, these will be effective at Occupancy Readiness. For O&M Changes after Occupancy Readiness, the effective adjustments to the Monthly Availability Payment will be effective the month following completion acknowledgement by County for the subject scope of work.
b. Change Order Renewal costs: will be added to and billed on a monthly basis in the years indicated in the payment schedule attached.

J. The Parties agree that this Change Order is a final and equitable adjustment of the Contract time and Contract amount caused by the facts and circumstances surrounding this Change Order. Except as otherwise specified in this Change Order, the parties agree that this Change Order fully covers any and all costs arising from or related to the proposed extension of time, adjustment to any contract deadline, adjustment to any design and construction costs, or other time or cost-related issues caused by this Change Order.

K. All work described within this Change Order shall be performed in accordance with the Project Agreement including, but not limited to, the Quality Management Systems (QMS).

NOW, THEREFORE, as it relates to this Change Order, but subject any reservations made by Project Company within this Change Order, the following are the changes made relating to compensation and extensions in time, if any:

METHOD OF PAYMENT:

☐ Paid Directly by County
☒ Financed by Project Company
☐ No Additional Cost Impact
☐ Reduction in Project Agreement Amount

PROJECT AGREEMENT AMOUNT:

Original Project Agreement Value	$619,996,000.00
Previous Value of Project Agreement Change Orders	$72,563.15
Value of this Project Agreement Change Order	$329,027.05
Total Value of Project Agreement Change Orders	$401,590.20
Total Revised Project Agreement Value	$620,397,590.20

DESIGN-BUILD (DB) CONTRACT AMOUNT:

Original DB Contract Value	$229,972,140.00
Previous Value of DB Contract Change Orders	$24,818.00
Value of this DB Contract Change Order	$306,206
Total Value of DB Contract Change Orders	$331,024.00
Total Revised DB Contract Value	$230,303,164.00

FACILITIES MANAGEMENT SERVICES AGREEMENT (FMSA) AMOUNT:

Original FMSA Value	$112,190,230.45
Previous Value of FMSA Change Orders	$0.00
Value of this FMSA Change Order	$0.00
Total Value of FMSA Change Orders	$0.00
Total Revised FMSA Value	$112,190,230.45

☒ The parties agree that there are no costs related to operation, maintenance, repair and replacement changes as a result of this Change Order.
☐ The parties agree that there are additional costs and associated annual escalation accompanying this Change order outlined within Attachment B.

EXTENSION OF CONTRACT DEADLINES:

Calendar Days Added to Occupancy Readiness Date	0
Calendar Days Added to Final Completion Date	0
Calendar Days Added to Longstop Date	0

EXHIBITS AND ATTACHMENTS:

1. Exhibit 1 – CCP 005 – Infrastructure Changes;
2. Exhibit 2 – Project Company Time and Cost Analysis of CCP 005;
3. Exhibit 3 – CCP 007.1 – Security Requirement Changes;
4. Exhibit 4 – Project Company Cost and Time Analysis of CCP 007.1;
5. Exhibit 5 – CCP 013 – VE – Ceiling Grid, Impact Wall, U-Bolt;
6. Exhibit 6 – Project Company Cost and Time Analysis of CCP 013;
7. Exhibit 7 – CCP 015 – Jury Check-in Kiosk Removal;
8. Exhibit 8 – Project Company Cost and Time Analysis of CCP 015;
9. Exhibit 9 – CCP016 – Cable TV;
10. Exhibit 10 – Project Company Cost and Time Analysis of CCP 016; and
11. Exhibit 11 - Project Agreement Attachment 06 – Design and Construction Standards.

APPROVED AS TO FORM

12/20/2023

County Counsel
Andrew Naylor

AUTHORIZED SIGNATURES

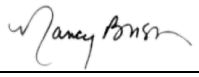
Clackamas County, Oregon Name: Tootie Smith, Chair	Date
	12/27/2023
Clackamas County, Oregon Name: Nancy Bush	Date
Clackamas Progress Partners, LLC Name: Andrea McLean	Date
Clackamas Progress Partners, LLC Name: Lee Clayton	Date

EXHIBIT 1

CCP005 – Infrastructure Changes

CLACKAMAS COUNTY
2051 KAEN ROAD
OREGON CITY, OR 97045
(503) 655-8893

COUNTY CHANGE PROPOSAL NO. [005]

DATE ISSUED: June 7, 2023

PROJECT: Clackamas County Circuit Courthouse Project

PROJECT COMPANY: Clackamas Progress Partners, LLC

THIS CHANGE PROPOSAL IS ISSUED PURSUANT TO: Section [7.12] of the Project Agreement.

DESCRIPTION OF PROPOSED CHANGE: Electrical and IT Changes.

The County is requesting various changes to electrical and IT within Appendix 6 to the Project Agreement. The scope of the changes is as captured within Attachment A.

KEY TERMS:

1. Refer to Attachment A for proposed modifications to the Project Agreement.
2. The Project Company is hereby requested to provide a proposal, with anticipated costs, to implement the changes to the Design-Build Contract Amount as well as any changes to the Facilities Services Contract Amount, along with any impacts to the Scheduled Occupancy Readiness Date, for the proposed modifications in Attachment A. Authorization to begin implementing the proposed modifications in Attachment A is contingent upon the parties executing a formal change order in accordance with Section 7.12 of the Project Agreement.

EXHIBITS AND ATTACHMENTS:

1. Attachment A - Appendix 6 of the PA (Design and Construction Standards).

AUTHORIZED SIGNATURE

Nancy Bonsa

County Authorized Representative

6/7/23

Date

ATTACHMENT A

Appendix 6 of the PA (Design and Construction Standards)

See Exhibit 11

EXHIBIT 2

Project Company Cost and Time Analysis of CCP005

Clackamas Progress Partners, LLC.
609 Main Street, Suite 3525
Houston, TX 77002

December 10, 2023

Office of the County Administrator
Attn: Nancy Bush, Clackamas Courthouse Project Manager
Public Services Building
2051 Kaen Road
Oregon City, OR, 97045
nbush@clackamas.us

Subject: Clackamas County Circuit Courthouse, Project Company Response to County Change Proposal 005 (dated 5/18/23)

Dear Ms. Bush,

Pursuant to Section 7.12 of the Project Agreement (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT COUNTY'S DIRECTON], Project Company provides this **updated and corrected** response **(005R2)** to County CCP #005 enclosed. The information provided herein has been supplied by the Design-Builder and Facilities Manager to the Project Company, and is hereby submitted to the County on a back-to-back basis. The design and construction costs resulting from any such Design and Construction Requirement Change made at the County's direction under this Section shall be paid directly by the County during the Design-Build Period, unless otherwise financed by the Project Company pursuant to subsection 6.6(B) (Project Company Financing). Any related operation, maintenance, repair and replacement costs shall be borne by the County through an adjustment to the Service Fee. Any such Design and Construction Requirement Change and any related change in the terms and conditions of this Project Agreement shall be reflected in a Change Order. The Project Company's obligation to perform the work related to a Design and Construction Requirement Change is subject to the conditions set forth in Section 7.11 (Design and Construction Requirement Changes, Repairs and Replacements Required Due to Relief Events Occurring Prior to the Occupancy Readiness Date).

Cost and schedule impacts are evaluated pursuant to Article 16, Section 16.11 of the Project Agreement (Negotiated Lump Sum Pricing of Additional Work) enclosed within Appendix A and B. The proposal value of the cost is $416,029.50 and the scheduled time has been calculated as a 0 calendar day(s) extension to the Occupancy Readiness Date.

Project Company has verified the proposed changes with the Design and Construction Standards pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation). Although the Facilities Manager has provided a proposal for the scope of work contained within CCP 005, which is an exhibit to the Design Builder documents attached as Appendix B, the County has elected to retain full responsibility for any and all ongoing maintenance (OPEX) and life cycle renewal/replacement (CAPEX) for these items within the facility. Project Company and Design-Builder will honor the contractually required warranties on equipment and materials, however beyond those warranties and their terms Project Company, Design-Builder or Facilities Manager will not be held responsible.

Best regards,

Karl E. Schaefer, CCM, DBIA, LEED
Clackamas Progress Partners, LLC
Project Company Representative

cc: Stephen Hadanich, WTP Associate Vice President
Vikas Gurram, WTP Senior Advisor
Jon Kindrachuk, PCL Project Director
Cathy France, PCL Document Control

Enclosure: Appendix A: Cost Summary
Appendix B: Design Builder CCP 005R2 response package dated 12/1/23

CCP 005R2 - Electrical and IT Changes

Construction Phase Cost Impact Summary

	Cost	Total
Developer *	$ 1,560.00	$ 1,560.00
Design Builder	$ 394,510.00	$ 394,510.00
Subtotal	**$ 396,070.00**	**$ 396,070.00**
DBFOM Permitted Markup		
(a) for Developer, 15% of the cost of that portion of the Extra Work to be performed by Developer with its own forces	$ 234.00	$ 234.00
(b) for Developer, 5% of the cost of that portion of the Extra Work to be performed by Contractors directly under contract to Developer	$ 19,725.50	$ 19,725.50
Subtotal	**$ 19,959.50**	**$ 19,959.50**
Design Build Phase Compensation Amount	**$ 416,029.50**	**$ 416,029.50**

Operations Phase Cost Impact Summary

	Cost	Total
Developer	$ -	$ -
Facilities Manager	$ -	$ -
Subtotal	**$ -**	**$ -**
DBFOM Permitted Markup		
(a) for Developer, 15% of the cost of that portion of the Extra Work to be performed by Developer with its own forces	$ -	$ -
(b) for Developer, 5% of the cost of that portion of the Extra Work to be performed by Contractors directly under contract to Developer	$ -	$ -
Subtotal	**$ -**	**$ -**
Facilities Management Phase Compensation Amount	**$ -**	**$ -**

Total Cost Impact	**$ 416,029.50**	**$ 416,029.50**

* 8 hours @ 195/hour

CONSTRUCTION

TOGETHER WE BUILD SUCCESS

December 1, 2023

Karl E. Schaefer, CCM, DBIA, LEED
Project Executive
Fengate PCL Progress Partners
TD North Tower
77 King Street West, Suite 3410
Toronto, ON M5K 1H1
karl.schaefer@fengate.com

Subject: Clackamas County Circuit Courthouse

Reference: CCP [#005R2] - Section 7.12 (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT COUNTY DIRECTION**) – [Electrical IT Changes Request Response]**

File: Project No. 5701126: 1J.5

Dear Mr. Schaefer,

Pursuant to Section 7.12 of the Design Build Agreement (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT THE COUNTY DIRECTION], Design-Builder provides Project Company CCP [**#005R2**] enclosed as Attachment A. Design Builder is to provide notice of, and reasonable opportunity to review and comment upon, any Design and Construction Requirement Changes proposed to be made at the County's direction. The notice shall contain sufficient information for the Project Company to determine that the Design and Construction Requirement Change:

The design and construction costs resulting from any such Design and Construction Requirement Change made at the County's direction under this Section shall be paid directly by the County during the Design-Build Period, unless otherwise financed by the Project Company pursuant to subsection 6.6(B) (Project Company Financing). Any related operation, maintenance, repair and replacement costs shall be borne by the County through an adjustment to the Service Fee. Any such Design and Construction Requirement Change and any related change in the terms and conditions of this Project Agreement shall be reflected in a Change Order. The Project Company's obligation to perform the work related to a Design and Construction Requirement Change is subject to the conditions set forth in Section 7.11 (Design and Construction Requirement Changes, Repairs and Replacements Required Due to Relief Events Occurring Prior to the Occupancy Readiness Date).

Cost and schedule impacts are evaluated pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work) enclosed as Exhibit 1. The proposal value of the cost is **[$394,510.00]** and the scheduled time has been calculated as a **[0]** calendar day(s) extension to the Occupancy Readiness Date.

Design Builder has verified the proposed changes with the Design and Construction Standards pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation). These verifications are memorialized within the enclosed Exhibit 2.

Please advise if Project Company should require anything additional, as it relates to the subject matter contained herein.

If you have any further questions relating to this matter, promptly contact Contractor at GAYourechuk@pcl.com.

Kind Regards,

PCL Construction Services, Inc.

Greg Yourechuk

Greg Yourechuk
Authorized Representative

GY/cgf

cc: Matt Glassman, Design Manager
Jennifer Canning, Quality Assurance Manager
Jon Kindrachuk, Design Build Project Manager
W.T. Sermeus, Lead Project Manager

See Enclosed Documents:

Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

Exhibit 2 – Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation)

Attachment A – County Change Proposal #005R2

Date:	December 1, 2023
Pursuant to:	Article 7, Section 7.12 of the DBFOM Agreement, Project Company shall give the County written notice of, and reasonable opportunity to review and comment upon, any Design and Construction Requirement Changes proposed to be made at the County's Direction.
Changes:	Electrical IT Changes Request Response

Enclosed is Change response, as it pertains to Article 7, Section 7.12 of the Project Agreement and Design and Construction Standards. Capitalized terms used and not otherwise defined in this proposal shall have the meanings given to such terms in the DBFOM Agreement.

The Contractor is pleased to provide the following information in accordance with Article 7, Section 7.12 of the DBFOM Agreement:

1. a detailed description of the Requirement Change proposed of the D&C Work:

a) Identify and label the proposed DBFOM language:

See CCP#005 - Electrical IT Changes Request Response dated June 7, 2023

b) Identify specific DBFOM language to which a Requirement Change is requested**:**

See CCP#005 - Electrical IT Changes Request Response dated June 7, 2023

c) Identify specific changes to the DBFOM language to which a Requirement Change is requested**:**

See CCP#005 - Electrical IT Changes Request Response dated June 7, 2023

d) Identify how the change sought constitutes good practice, maintains safety and performance

a. Project Company has communicated and reviewed this change with the DLR Group and has confirmed that this deviation will have no impact on the projects ability to meet the LEED Gold standard that is required per the Project Agreement.

b. Does not diminish the capacity of the Project to be operated so as to meet the Contract Standards

c. Does not impair the quality, integrity, durability and reliability of the Project;

d. Is reasonably necessary or is advantageous for the Project Company to fulfill its obligations under this Project Agreement; and

e. Is feasible.

2. a detailed description of the impact of the Requirement Change proposed on the D&C Work

   See Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

3. a detailed description of the impact of the Requirement Change proposed the O&M Work;

   Facilities Manager (Honeywell) has provided an evaluation of the proposed change Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation), enclosed as Exhibit 2.

4. if the Requirement Change is issued before the Operational Readiness Date, a detailed description of any proposed adjustments to the Project Schedule, including to any Contract Deadline, required as a result of any delay that would be caused by the implementation of the Change proposed:

   Any work or tasks associated with, or arising from the Change request shall be considered a condition to achieving a Contract Deadline. No change in schedule

5. where adjustments to Contract Deadlines are proposed:

   (i) a time impact analysis that identifies Critical Path impacts (with activity numbers, durations, predecessor and successor activities, resources, costs and reasons why Float is not available), illustrates the effect of schedule changes or disruptions on the Contract Deadlines and complies with the requirements of (Time Impact Analysis for Proposed Extensions of Time) of the Design and Construction Standards

   N/A

   (ii) an assessment of the feasibility of accelerating the Work to meet the original deadline or to reduce the total delay period; and

   N/A

   (iii) if acceleration is feasible, an estimate of the cost to accelerate;

   N/A

6. an estimate of any compensation amount claimed;

   See Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement

(Negotiated Lump Sum Pricing of Additional Work)

7. an estimate of the cost savings, if any, resulting from the Requirement Change proposed;

   N/A

8. the effect (if any) of the Requirement Change request on Developers ability to perform the O&M Work stated by Contract Year;

   N/A

9. where relief from obligations under the Contract Documents is sought, the effect of the Change proposed on Project Company's ability to perform any of its obligations under the Contract Documents that if not performed would result in the accrual ofNoncompliance, the assessment of Deductions or the occurrence of a Developer Default, in each case including details of the relevant obligations, the effect on each such obligation, the likely duration of that effect and the specific relief sought;

   N/A

10. a description of any additional consents or approvals required, including amendments, if any, of any Governmental Approvals required to implement the contemplated Requirement Change request;

    N/A

11. a detailed description of the steps Project Company will take to implement the Change Request, including measures that Project Company will take to mitigate the costs, delay and other consequences of the Requirement Change request;

    N/A

12. any other relevant information related to the Requirement Change request;

    N/A

Exhibit 1

Attachment A – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

The proposal value of the cost is **[$394,510.00]** and the scheduled time has been calculated as a **[0]** calendar day(s) extension to the Occupancy Readiness Date.

Project #: 5701126

CRX Detail Report - CCP-005

PCL Construction Services, Inc.

Project Name: Clackamas County Circuit Court
Location: 2125 Kaen Road
Oregon City, OR

CRX description: Electrical and IT Changes

Header Summary	
Type	CCP
CRX status	Quoted
Schedule days quoted	0
Quoted date	11/29/2023
Initiated date	6/7/2023

Summary	
Labor	15,489.08
Material	0.00
Equipment	0.00
Subtrade	344,481.00
Direct Cost	14,992.51
Fee	19,547.41
Total Quote:	$394,510.00

Subtrade	Quote $
DLR Group Architecture & Engineering Inc., an	0.00
OEG, Inc. DBA: Pride Electric, Friberg Electric,	344,481.00

Cost Code	Description	Quantity	UoM	Labor Hours Prod	Labor Hours Total	Labor Rate	Labor Total	Material Rate	Material Total	Equipment Rate	Equipment Total	Subtrade Rate	Subtrade Total	Total Rate	Total Total
	DIRECT FORCES WORK														
010100	DB Project Manager	0.00	MO	1.000	4.000	152.04	608	---	---	---	---	---	---	---	608.16
010100	Lead Project Manager	0.00	MO	1.000	4.000	139.39	558	---	---	---	---	---	---	---	557.56
010100	Project Managers	0.00	MO	---	24.00	122.56	2,941	---	---	---	---	---	---	---	2,941.44
010520	Design Manager	0.00	MO	---	24.00	132.18	3,172	---	---	---	---	---	---	---	3,172.32
010200	General Superintendent	0.00	MO	---	8.000	163.98	1,312	---	---	---	---	---	---	---	1,311.84
010200	Superintendents	0.00	MO	---	24.00	153.57	3,686	---	---	---	---	---	---	---	3,685.68
010400	Project Engineers	0.00	MO	---	32.00	85.29	2,729	---	---	---	---	---	---	---	2,729.28
010510	Estimator	0.00	MO	---	---	146.41	---	---	---	---	---	---	---	---	---
010560	Accountant	0.00	MO	---	2.000	82.88	166	---	---	---	---	---	---	---	165.76
010540	Scheduler	0.00	MO	---	2.000	86.39	173	---	---	---	---	---	---	---	172.78
010530	HSE Manager	0.00	MO	---	---	78.52	---	---	---	---	---	---	---	---	---
010550	ADMIN ASSIST	0.00	MO	---	2.000	72.13	144	---	---	---	---	---	---	---	144.26
TOTAL	**DIRECT FORCES WORK**				126.0		15,489.08		---		---				15,489.08
	MARKUP ON DIRECT FORCES														
990100	OH&P on Direct Forces		LS	----	---	15.00%	2,323	15.00%	---	15.00%	---	---	---	---	2,323.36
TOTAL	**MARKUP ON DIRECT FORCES**						2,323.36		---		---				2,323.36
	SUBTRADE WORK														
160100	OEG Sub ISG - Paging	1.00	LS	---	---	---	---	---	---	---	---	---	688,358	---	688,358.00
160100	OEG: Corporate Activity Tax	1.00	LS	---	---	---	---	---	---	---	---	---	1,338	---	1,338.00
160100	OEG Estimating	1.00	LS	---	---	---	---	---	---	---	---	---	127	---	127.00
160100	OEG Sub ISG: Sound Masking Credit-OEG	-1.00	LS	---	---	---	---	---	---	---	---	---	-129,552	---	-129,552.00
160100	OEG: Alertus Credit-Original Scope-Convergent	-1.00	LS	---	---	---	---	---	---	---	---	---	-478,593	---	-478,593.00
160100	OEG: Alertus Add-Updated Scope-Convergent	1.00	LS	---	---	---	---	---	---	---	---	---	311,304	---	311,304.00
160100	OEG Sub ISG: CAT5E reduction-OEG	-1.00	LS	---	---	---	---	---	---	---	---	---	-48,501	---	-48,501.00
013920	DLR -Architect	1.00	LS	---	---	---	---	---	---	---	---	---	---	---	---
	DLR confirmed no cost 7/12/23														
TOTAL	**SUBTRADE WORK**												344,481.00		344,481.00
	SUBTRADE MARKUP														
990100	OH&P on Subcontract Costs		LS	---	---	---	---	---	---	---	---	5.000%	17,224	---	17,224.05

PCL CONSTRUCTION

CRX Detail Report - CCP-005

PCL Construction Services, Inc.

Project #: 5701126

Project Name: Clackamas County Circuit Court
Location: 2125 Kaen Road
Oregon City, OR

CRX description: Electrical and IT Changes

TOTAL	**SUBTRADE MARKUP**											17,224.05		17,224.05
TOTAL	**DIRECT FORCES & SUBTRADES**			126.0		17,812.44		---		---		361,705.05		379,517.49
	DIRECT COST SUMMARY													
014120	Security	LS	---	---	---	---	---	---	---	---		---	.222%	849.53
014100	Bonds	LS	---	---	---	---	---	---	---	---		---	.500%	1,917.61
014200	Subtrade Default Insurance (SDI)	LS	---	---	---	---	---	---	---	---	.916%	3,155	---	3,155.45
014300	Insurance	LS	---	---	---	---	---	---	---	---		---	1.773%	6,833.85
014850	CAT Tax	LS	---	---	---	---	---	---	---	---		---	.570%	2,235.96
014300	Rounding	LS	---	---	---	---	---	---	---	---		---	---	0.11
TOTAL	**DIRECT COST SUMMARY**													14,992.51
TOTAL	**CRX #: CCP-005**			126.0		17,812.44		---		---		361,705.05		394,510.00

CCN # 180830-009
Date: 11/27/2023
Page Number: 1

PCL Construction
W.T. Sermeus
13920 SE Eastgate Way
Suite 400
Bellevue, WA 98005
(425) 691-0281

Clackamas Counth Courthouse
PCL Construction
Attn: W.T. Sermeus

Subject: CCP005 - Electrical & IT Changes

Mr. Sermeus,

OEG is pleased to submit this change proposal for your consideration.

We have not proceeded with this work and need a written notification to proceed along with approval of the costs contained herein prior to starting work.

Included in this Proposal is:

- Addition of stand alone PA system
- Credit for sound masking original budget
- Credit for revised Alertus requirements
- Credit for CAT5e reduction

	$344,481.00
Total	~~$344,482.00~~

Qualifications:
Wiring is to be in accordance with the National Electrical Code.
All work is to be done during normal working hours (unless noted above).
Permit included in price.
This proposal is valid for 30 days from date received.
We reserve the right to claim impacts on cost and/or schedule at a later date.
Sound masking for court rooms included in AV FFE package and sound masking for public help space included in PA system pricing; therefore, original budget credited 100%
Pricing is based on the changes identified in CCP005

Exclusions:

Sheetrock/plaster/wood cutting, patching, and painting.
Landscape replacement /repairs.
Overtime and premium time.

Please review this proposal, and give me a call if you have any questions.

Respectfully,

Don MacDonald
Senior Project Manager
206.450.2339

Itemized Breakdown

Summary

LABOR		
ESTIMATOR	(1.00 Hrs @ $110.47)	110.47
Total Labor Markups		**16.57**
Total Labor		**127.04**

SUBCONTRACTORS		
SOUND MASKING ORIGINAL BUDGET	($-129,551.53 + 0.000 % + 0.000 % + 0.000 %)	-129,551.53
ALERTUS ORIGINAL BUDGET	($-455,803.00 + 0.000 % + 0.000 % + 5.000 %)	-478,593.15
ALERTUS REVISED BUDGET	($296,480.00 + 0.000 % + 0.000 % + 5.000 %)	311,304.00
PAGING SYSTEM TURNKEY	($655,579.40 + 0.000 % + 0.000 % + 5.000 %)	688,358.37
CAT5e REDUCTION	($-48,501.38 + 0.000 % + 0.000 % + 0.000 %)	-48,501.38
Total Subcontractors		**343,016.31**
CAT Tax		1,338.26
Rounding Adjustment		~~0.39~~
Final Amount		~~**$344,482.00**~~ ~$344,481.00

CHANGE NOTICE

CCN #	**CREDIT - Sound Masking**
Date:	11/22/2023
Project Name:	Clackamas County Courthouse
Project Number:	180879
Contract #:	180830-1DT
Page Number:	1

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave
Portland, OR 97210
Telephone: 503.349.9885
Contact: Beau Collins
E-mail: Beau.Collins@isg-group.com

Client Address:

Contact: Darin Miller
1000 Courthouse RD
Oregon City, Oregon 97045
Telephone: 760.473.1394
Contact: Darin Miller
E-mail: dmiller@pcl.com

Work Description

SCOPE OF WORK

Credit based off of a $1.30 a square foot price.

We reserve the right to correct this quote for errors and omissions.

This quote covers direct costs only and we reserve the right to claim for impact and consequential costs.
This price is good for acceptance within **10** days from the date of receipt.
We request a time extension of **3** days.
We will supply and install all materials, labor, and equipment as per your instructions on **CCN # CREDIT - Sound Masking.**

Itemized Breakdown

Description	Qty	Trade Price	U	Total Mat.	Total Hrs.
Sound Masking - square foot pricing	-86,450	1.30	E	-112,385.00	-0.00
Totals	**-86,450**			**-112,385.00**	**0.00**

ORIGINAL

CHANGE NOTICE

CCN # **CREDIT - Sound Masking**
Date: 11/22/2023
Project Name: Clackamas County Courthouse
Project Number: 180879
Contract #: 180830-1DT
Page Number: 2

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave
Portland, OR 97210

Client Address:

1000 Courthouse RD
Oregon City, Oregon 97045

Summary

MATERIAL			
General Materials		-112,385.00	
Total Material			**-112,385.00**
Equipment			
Fluke Versiv2 main/Remote (per Month)	(1.00 @ -0.10 @ $855.00 + 0.000 % + 0.000 % + 0.000		-85.50
Fluke DSX-5000 (x2) - Cu Testing Module (per Mon	(1.00 @ -0.10 @ $880.00 + 0.000 % + 0.000 % + 0.000		-88.00
Fluke/Calibration (per Each) (Annually)	(1.00 @ -0.10 @ $950.00 + 0.000 % + 0.000 % + 0.000		-95.00
Total Equipment			**-268.50**
Markup	(@ 15.000 %)		-16,898.03
Subtotal			**-129,551.53**
Final Amount			**$-129,551.53**

CLIENT ACCEPTANCE

CCN # **CREDIT - Sound Masking**
Final Amount: **$-129,551.53**

Name: _____

Date: _____

Signature: _____

Change Order #: _____

I hereby accept this quotation and authorize the contractor to complete the above described work.

ORIGINAL

Convergint
7678 SW Mohawk St, Bldg K,
Tualatin, Oregon 97062
Phone (503) 228-8522
Fax (503) 228-8521
www.convergint.com

Mass Notification VE Proposal (ALERTUS)

Date: March 22, 2022

Quotation #: LT02432764P

From:
Lindsay Tycer
Account Executive
Life Safety Systems
Lindsay.tycer@convergint.com
971-281-1864

Project: Clackamas County Courthouse

Reference: Clackamas County Courthouse Mass Notification System – Provision of the Mass Notification headend equipment, beacons, duress buttons, exterior high-power speaker array and interior speakers.

On behalf of Convergint's global network of colleagues, I would like to personally thank you for providing Convergint with the opportunity to present this proposal addressing your mass notification needs. We are confident that this proven solution is both comprehensive and customized to meet your needs today, and in the future.

Convergint's reputation for service excellence is backed by a foundational commitment to our core value of service, and we have been recognized as the #1 Systems Integrator by SDM Magazine. This recognition reflects the strong relationships Convergint has developed with the industry's top technology manufacturers, and our history of success with providing exceptional service to our customers.

Our guiding principle has always been to be our customers' best service provider. Our dedicated and certified team of professionals strives to uphold our customer-focused, service-based mission to make a daily difference for our customers. After achieving a successful on-time and on-budget project installation, Convergint will provide you with the industry's best ongoing service, including our 24/7 customer portal iCare, designed to track service work orders, project progress, and provide you with detailed metric reporting for continuous improvement.

The following mass notification proposal is specifically designed to meet your needs. As your single point of contact, please feel free to contact me with any additional questions you may have. Thank you again for trusting Convergint as your partner.

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Scope of Work

Mass Notification System

- This proposal is based on a value engineered design and scope derived from the Clackamas County design and construction standards (DCS) for the New Courthouse Replacement Project. The current project documents (project drawings and specifications) do not reference the ALERTUS system summarized in the DCS. Convergint Technologies has reviewed the DCS and prepared a draft system layout illustrating our interpretation of the DCS requirements applied to this project. Additionally, to eliminate duplication of speakers throughout the building, we propose to integrate the fire alarm system emergency voice notification system with the ALERTUS platform. Alertus messages will broadcast over the fire alarm system speakers. This solution is, therefore, dependent on Convergint Technologies performing both the fire alarm and ALERTUS scopes of work. Please see the attached proposed layout at the end of this proposal. Convergint will furnish equipment specified, start-up, program, test and certify the following:

    - **Alertus Beacons** - The Alert Beacon® is an innovative audible-visual notification device that attracts attention with sounder and flashing strobes, while a large text display informs building occupants of the emergency and instructs them how to respond. The units are typically wall-mounted in high visibility areas, such as lobbies, front offices, prominent spaces, and by elevators and stairways. Alert Beacons are zone-able to enable safety officials to notify specific areas, buildings, and corridors.

    - **Alertus Hardwired Duress Buttons** - Immediate, easy, single-point activation for emergency notification.

    - **Emergency Panic Button – USB Connected -** Flexible one-touch, immediate incident reporting or system activation. Computer desktop connected.

    - **High Power Speaker Array 2400 Watt** - Providing intelligible and effective notification to widespread, outdoor areas.

    - **Alertus Desktop Notification License**

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Performance Matrix

The following checklist is intended to describe the major performance items being provided by Convergint for this project. This checklist is not intended to be a comprehensive list of all performance items.

YES	NO	PERFORMANCE ITEM	YES	NO	PERFORMANCE ITEM
☒	☐	Material (listed in the BOM)	☐	☒	Wire
☒	☐	Freight (prepaid)	☐	☒	Installation of Wire
☐	☒	Applicable Taxes	☐	☒	Installation of Conduit, Boxes and Fittings
☐	☒	FA Permit and Plan Review Fees	☐	☒	Installation of Bridal Rings
☐	☒	Electrical Installation Permit	☐	☒	Mounting/ Termination of Proposed Devices
☒	☐	System Engineering	☐	☒	Terminal Cabinets
☒	☐	Drawings	☐	☒	Installation of Terminal Cabinets
☒	☐	System Programming	☐	☒	Specialty Backboxes
☒	☐	Testing of all Proposed Devices	☐	☒	Installation of Specialty Backboxes
☒	☐	One Year Warranty on Parts	☐	☒	Installation of Control Equipment Enclosures
☒	☐	One Year Warranty on Labor	☐	☒	Termination of Control Equipment Enclosures
☐	☒	Owner Training	☐	☒	Patch and Paint
☒	☐	Record (as- built) Documentation	☐	☒	Firestopping (excluding existing penetrations)
☒	☐	O&M Manuals	☐	☒	120VAC Power and Fused Disconnect Switch
☐	☒	System Meets Plans/ Drawings	☐	☒	Correction of Wiring Faults Caused by Others
☒	☐	System is Design- Build	☐	☒	Fire Watch

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Bill of Material

The following bill of materials in intended to describe the scope of work/equipment provided by Convergint for this project by identifying major device and panel quantities. This bill of material is not intended to be a comprehensive list of all system parts, components or accessories.

Line#	Quantity	Part Number	Description	Manufacturer
1	57.00	AAB-E-YL	Alert Beacon, Ethernet/PoE, yellow Includes wall mounting bracket. Backup batteries and power supplies, if needed, are sold separately.	ALERTUS
2	1.00	ADN-X	Alertus Desktop Notification License	ALERTUS
3	57.00	ALR-B-YL-EMER	Alertus Hardwired Duress Button; Yellow -EMERGENCY - Standard yellow in color displaying text EMERGENCY top and ALERTUS bottom	ALERTUS
4	180.00	ALR-USB	Emergency Panic Button - USB Connected - USB Panic Button - standard compact desk model (black w/red button)	ALERTUS
5	1.00	HPSA-2400w	High Power Speaker Array 2400 Watts. Includes a quantity of 16 150 Watt Speakers, 100 feet of speaker cable, electronics cabinet, controller board, audio amplifier, battery charger and Local Operation Control with microphone. Batteries available separately.	ALERTUS
6	1.00	IMP-C	Custom Implementation Support	ALERTUS
7	1.00	AUD-IPAVA	IP-AVA TTS Paging interface	ALERTUS
8	1.00	MNS-IPR	IP Relay	ALERTUS
9	1.00	3-ZA20B	20 Watt Rail Amplifier, Class B	Edwards

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Bid Qualification

This proposal is based upon the information provided to Convergint. Please carefully review this "Bid Qualification" section and verify any additional service and/ or equipment related to this proposal and the provision of a complete and operating system.

Value Engineered Proposal – as no project specifications or drawings are available to define the scope of work, this proposal is based on a value engineered interpretation of the general provisions identified in the Clackamas County Design and Construction Standards issued for this project. The scope of provisions included are defined herein.

Spec Section:	NA	**Section Name(s):**	NA
Drawing Date:	Jan 10, 2022	**Drawing Sheets:**	Cost Estimate Set #2
Addendums:	NA	**Schedule:**	NA
Other/ General:	Clackamas County Design and Construction Standards		

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Clarifications:

1. Electronic ACAD files shall be provided to Convergint for use in creating submittal drawings at no additional cost.
2. Proposal is provided in accordance with the attached Terms & Conditions. Project specific Terms & Conditions are subject to mutually agreeable negotiations.
3. Customer acknowledges that supply-chain and shipping difficulties may result in unavoidable delays in deliveries of materials despite timely placement of orders and efforts by Convergint and its suppliers to avoid such delays. Customer agrees to provide Convergint with reasonable extensions of time to the extent of any such delays and Convergint agrees to make reasonable efforts to avoid or minimize such delays. Customer further acknowledges that the above-referenced supply-chain and shipping difficulties may result in unanticipated increases to Convergint's proposal pricing on products covered by this quote or any resulting agreement and that such increases may occur between the time this quote is provided, or any resulting contract is executed and the time when Convergint actually purchases the products covered by this quote or a resulting agreement. Customer agrees that it will pay any such increase in Convergint's initial pricing of obtaining the products above the proposal pricing upon which the quote or agreement was based, by change order or otherwise, and Convergint agrees that it shall make commercially reasonable efforts to minimize any such increase.
4. Proposal pricing is based on continuous progression of the scope of work in a single phase estimated to be complete by 12/31/2022 No project schedule has been published for the project. Schedule extension, compression or fragmentation will result in a change order request to modify contract price.
5. All work proposed herein, shall be performed during normal business hoursMonday through Friday 8:00 am - 5:00 pm.
6. The lead electrician performing the installation shall attend and assist with system testing.
7. Customer to provide static IP addresses and network connections and network infrastructure.
8. Customer to provide a secured staging & storage area for project related materials.
9. Twenty-five percent (25%) of the proposed sell price shall be payable to Convergint for project mobilization. Mobilization shall be invoiced and due upon customer acceptance of this proposal.
10. This proposal may be modified as project documents are further developed, and system design is refined (including shop drawings from other trades).
11. Anything in in the Contract Documents notwithstanding, in no event shall either Contractor or Subcontractor be liable for special, indirect, incidental, or consequential damages, including commercial loss, loss of use, or lost profits, even if either party has been advised of the possibility of such damages.

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Excludes:

1. Scope of work excludes provision and/or installation of cable, wire, conduit, raceways, electrical hardware, proposed equipment assembly, mounting and termination.
2. Electrical installation permits / fees are excluded.
3. Provision or installation of network or network switches, network connectivity and associated infrastructure are excluded.
4. Correction of wiring faults (opens, shorts, grounds or polarity) or other improper installation are excluded. Convergint will identify any installation issues upon discovery and provide direction to facilitate efficient resolution
5. Excludes labor that may be required due to delays experienced from supporting trades.
6. Cost for Payment & Performance bond are not included. If necessary, actual cost will apply. Proof of bonding capacity available upon request.
7. Any provision for OCIP or CCIP-type insurance programs are excluded. Convergint does not pay per project insurance premiums, and we cannot provide any cost credit for these types of insurance programs.
8. Excludes provision of any scope not described above.

CONVERGINT TOTAL PROJECT PRICE: $363,145.00
*pricing is valid for 30 days from the date on this proposal

Material and Labor Escalation Budget Adder through 2025: ***$92,658.00***

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Thank you for considering our proposal. If you have any questions or would like additional information, please don't hesitate to contact me immediately. If you would like us to proceed with the scope of work as outlined in this proposal, please sign below to fax to (503) 228-8521.

Sincerely,

Lindsay Tycer

Lindsay Tycer

Fire Alarm & Life Safety

By signing below, I accept this proposal and agree to the Terms and Conditions V1.12 dated June 2020 contained herein.

CUSTOMER NAME	**DATE**
AUTHORIZED SIGNATURE	**PRINTED NAME / TITLE**

Throughout this Installation Proposal, the term, "Convergint" refers to the Convergint Technologies affiliate operating in the state/province in which the work is being performed.

SECTION 1. THE WORK

This Installation Proposal takes precedence over and supersedes any and all prior proposals, correspondence, and oral agreements or representations relating to the work set forth in the attached scope of work ("Work"). This Installation Proposal commences on the Start Date as specified in the attached scope of work and represents the entire agreement between Convergint and Customer (the "Agreement"). In the event any provision of this Agreement is held to be invalid or unenforceable, the remaining provisions of this Agreement shall remain in full force.

Convergint agrees in accordance with the mutually agreed project schedule:

a. To submit shop drawings, product data, samples and similar submittals if required in performing the Work;
b. To pay for all labor, materials, equipment, tools, supervision, programming, testing, startup and documentation required to perform the Work in accordance with the Agreement;
c. Secure and pay for permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work, unless local regulations provide otherwise; and
d. Hire subcontractors and order material to perform part of the Work, if necessary, while remaining responsible for the completion of theWork.

Customer agrees in accordance with the mutually agreed project schedule, and at no cost to Convergint:

a. To promptly approve submittals provided by Convergint;
b. To provide access to all areas of the facility which are necessary to complete the Work;
c. To supply suitable electrical service as required by Convergint;and
d. That in the event of any emergency or systems failure, reasonable safety precautions will be taken by Customer to protect life and property during the period of time from when Convergint is first notified of the emergency or failure and until such time that Convergint notifies the Customer that the systems are operational or that the emergency has cleared.

No monitoring services are included in the Work. Any such services shall be governed by a separate agreement.

Title to the Work, including any materials comprising the Work, shall pass to Customer as the Work is completed and the materials are incorporated into the Work at Customer's site. If materials are earlier stored on Customer's site pursuant to agreement between Customer and Convergint, title with respect to such materials shall pass to Customer upon delivery to Customer site.

SECTION 2. PRICING

Pricing and amounts proposed shall remain valid for 30 days unless otherwise specified. Price includes only the material listed based on Convergint's interpretation of plans and specifications unless noted otherwise. Additional equipment, unless negotiated prior to order placement, will be billed accordingly. Sales taxes, (and in Canada GST/PST) and any other taxes assessed on Customer shall be added to the price upon invoice to Customer.

SECTION 3. INVOICE REMITTANCE AND PAYMENT

If the Work is performed over more than a month, Convergint will invoice Customer each month for the Work performed during the previous month. Customer agrees to pay the amount due to Convergint as invoiced, within thirty (30) days of the date of such invoice. If the Work is completed in less than one month, Customer agrees to pay Convergint in full after the Work has been performed within thirty (30) days of the date of being invoiced. Invoices shall not include or be subject to a project retention percentage. If Customer is overdue in any payment to Convergint, Convergint shall be entitled to suspend the Work until paid, and charge Customer an interest rate 1 and 1/2% percent per month, (or the maximum rate permitted by law, whichever is less), and may avail itself of any other legal or equitable remedy. Customer shall reimburse Convergint costs incurred in collecting any amounts that become overdue, including attorney fees, court costs and any other reasonable expenditure.

SECTION 4. WARRANTY

Convergint provides the following SOLE AND EXCLUSIVE warranty to the Customer:

For the period of one (1) year, commencing at the earlier of substantial completion of the Work, or first beneficial use, ("Warranty Period"):

a. That Work performed under this Agreement will be ofgood quality;
b. That all equipment will be new unless otherwise required or permitted by this Agreement;
c. That the Work will be free from defects not inherent in the quality required or permitted; and
d. That the Work will conform to the requirements ofthis Agreement.

The Customer's sole remedy for any breach of this warranty is that Convergint shall remove, replace and/or repair at its own expense any defective or improper Work, discovered within the Warranty Period, provided Convergint is notified in writing of any defect within the Warranty Period.

Any equipment or products installed by Convergint in the course of performing the Work hereunder shall only carry such warranty as is provided by the manufacturer thereof, which Convergint hereby assigns to Customer without recourse to Convergint. Upon request of Customer, Convergint will use commercially reasonable efforts to assist Customer in enforcing any such third-party warranties. This warranty excludes remedy for damage or defect caused by abuse, modifications not executed by Convergint, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage. NO FURTHER WARRANTIES OR GUARANTIES, EXPRESS OR IMPLIED, ARE MADE WITH RESPECT TO ANY GOODS OR SERVICES PROVIDED UNDER THIS AGREEMENT, AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED.

SECTION 5. CHANGES

Without invalidating this Agreement or any bond given hereunder, Customer or Convergint may request changes in the Work. Any changes to the Agreement shall be in writing signed by both Customer and Convergint. If Customer orders any additional work or causes any material interference with Convergint's performance of the Work, Convergint shall be entitled to an equitable adjustment in the time for performance and in the Agreement Price, including a reasonable allowance for overhead and profit.

SECTION 6. FORCE MAJEURE

Neither Customer nor Convergint shall be responsible or liable for, shall incur expense for, or be deemed to be in breach of this Agreement because of any delay in the performance of their respective obligations pursuant to this Agreement due solely to circumstances beyond their reasonable control ("Force Majeure") and without the fault or negligence of the party experiencing such delay. A Force Majeure event shall include, but not be limited to: accident, fire, storm, water, flooding, negligence, vandalism, power failure, installation of incompatible equipment, improper operating procedures, source current fluctuations or lighting. If performance by either party is delayed due to Force Majeure, the time for that performance shall be extended for a period of time reasonably necessary to overcome the effect of the delay. Any Services required by Convergint due to reasons set forth in this Force Majeure Section shall be charged to Customer in addition to any amounts due under this Agreement.

SECTION 7. INSURANCE

Convergint shall have the following insurance coverage during the term of this Agreement, and shall provide certificates of insurance to the Customer prior to beginning work hereunder:

Worker's Compensation	Statutory Limits
Employer's Liability	$1,000,000 per occurrence /aggregate
Commercial General Liability	$1,000,000 per occurrence/aggregate
	$2,000,000 general aggregate
Automobile Liability	$1,000,000 per occurrence/aggregate
Excess/Umbrella Liability	$10,000,000 per occurrence/aggregate

All insurance policies carried by Convergint shall be primary to and noncontributory with the insurance afforded to Customer and shall name the Customer as "additional insured", with respect to liability arising out of work performed by Convergint, as applicable, but only to the extent of liabilities falling within the indemnity obligations of Convergint, pursuant to the terms of this Agreement. Convergint shall provide to the Customer no less than thirty (30) days' notice prior to the termination or cancellation of any such insurance policy.

SECTION 8. INDEMNIFICATION

Convergint shall indemnify and hold Customer harmless from and against claims, damages, losses and expenses, attributable to bodily injury, sickness, disease or death, or to destruction of tangible property, but only to the extent caused by: a) the negligent or willful acts or omissions of Convergint or Convergint's employees or subcontractors while on Customer's site, or b) the malfunction of the equipment supplied by Convergint, or c) Convergint's breach of this Agreement.

IN NO EVENT SHALL EITHER CONVERGINT OR CUSTOMER BE LIABLE TO THE OTHER PARTY HERETO FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING COMMERCIAL LOSS, LOSS OF USE OR LOST PROFITS, EVEN IF THAT PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL CONVERGINT BE LIABLE TO CUSTOMER FOR ANY AMOUNTS IN EXCESS OF THE AMOUNTS PAID BY CUSTOMER TO CONVERGINT.

It is understood and agreed by the parties hereto that Convergint is or may be providing intrusion products which are designed to provide notification of certain events but are not intended to be guarantees or insurers against any acts for which they are supposed to monitor or inform. Convergint's indemnification obligation pursuant to Section 8 herein, does not apply to the extent the loss indemnified against is caused by any intrusion product or software provided by but not manufactured by Convergint. Convergint shall have **no** liability to Customer for any losses to the extent such losses are caused by the intrusion product or software. Customer shall indemnify, defend, and hold harmless Convergint, from and against all claims, lawsuits, damages, losses and expenses by persons not a party to this Agreement, but only to the extent caused by such intrusion product or software provided by but not manufactured by Convergint.

SECTION 9. COMPLIANCE WITH LAW, SAFETY, & HAZARDOUS MATERIALS

This Agreement shall be governed and construed in accordance with the laws of the state/province in which the Work is being performed. Convergint agrees to comply with all laws and regulations relating to or governing its provision of the Work. Convergint shall comply with all safety related laws and regulations and with the safety program of the Customer, provided such program is supplied to Convergint prior to beginning work.

In the event that Convergint discovers or suspects the presence of hazardous materials, or unsafe working conditions at Customer's facility where the Work is to be performed, Convergint is entitled to stop the Work at that facility if such hazardous materials, or unsafe working conditions were not provided by or caused by Convergint. Convergint in its sole discretion shall determine when it is "safe" to return to perform the Work at Customer's facility. Convergint shall have no responsibility for the discovery, presence, handling, removing or disposal of or exposure of persons to hazardous materials in any form at the Customer's facility. Customer shall indemnify and hold harmless Convergint from and against claims, damages, losses and expenses, including but not limited to, reasonable attorney's fees, arising out of or resulting from undisclosed hazardous materials, or unsafe working conditions at Customer's facility.

Customer acknowledges that applicable law or regulation may limit Customer's rights and impose obligations with respect to information or data obtained using software capable of obtaining what may in certain circumstances be characterized as biometric information (individually and collectively, the "Software") and agrees that Customer is solely responsible to ensure its own compliance with such laws or regulations. Customer shall completely indemnify, defend (including pay attorneys' fees and disbursements), and hold harmless Convergint, its affiliates, and any employees, agents, contractors or representatives of any of the foregoing from and against any and all losses, liability, damages, penalties, expenses, claims, demands, actions, or causes of action, judgments (finally awarded) or settlements (individually and collectively, "Liabilities") arising from or related to any intentional or negligent acts or omissions of Customer or any of its agents, affiliates, employees, or representatives arising from or related to the Software, any hardware, software, or other services associated with the Software, or the use of any of the foregoing by or on behalf of Customer, including but not limited to those arising from or related to Customer's failure to comply with applicable laws or regulations related to its use of the Software or any hardware, software, or other services associated with the Software, including but not limited to the Customer's failure to obtain any necessary consents from affected individuals or provide any necessary disclosures or protections with respect to the information of such individuals under any applicable privacy or data security law, but excluding matters for which Convergint has agreed to indemnify Customer from and against third party claims for copyright and trade secret infringement under the terms of the End User License Agreement for the Software between Convergint and Customer. Notwithstanding the foregoing, Customer and Convergint agree that Liabilities suffered by a third party (other than an affiliate of Convergint) which are an element of loss subject to indemnification under this paragraph shall be deemed direct damages.

SECTION 10. DISPUTES

In the event of any dispute between Convergint and Customer, Convergint and Customer shall first attempt to resolve the dispute in the field, but if that is not successful, then in a meeting between authorized officers of each company. If settlement attempts are not successful, then the dispute shall be decided exclusively by arbitration. Such arbitration shall be conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect and shall be a final binding resolution of the issues presented between the parties. The prevailing party shall be entitled to recover its reasonable attorneys' fees and costs.

SECTION 11. MISCELLANEOUS

Neither party to this Agreement shall assign this Agreement without the prior written consent of the other party hereto. Convergint may assign this Agreement to any of its parents, subsidiaries or affiliated companies or any entity majority owned by Convergint.

Notices shall be in writing and addressed to the other party, in accordance with the names and addresses of the parties as shown above. All notices shall be effective upon receipt by the party to whom the notice was sent.

A waiver of the terms hereunder by one party to the other party shall not be effective unless in writing and signed by a person with authority to commit the Customer or Convergint and delivered to the non-waiving party according to the notice provision herein. No waiver by Customer or Convergint shall operate as a continuous waiver, unless the written waiver specifically states that it is a continuous waiver of the terms stated in that waiver.

The Sections regarding invoicing, warranty, and indemnity, and disputes shall survive the termination of this Agreement.

Convergint
7678 SW Mohawk St, Bldg K,
Tualatin, Oregon 97062
Phone (503) 228-8522
Fax (503) 228-8521
www.convergint.com

Mass Notification VE Proposal (ALERTUS)

Date: April 10, 2023

Quotation #: JM03518648P

From:
Jon Mandoli
Business Development
Life Safety Systems
jon.mandoli@convergint.com
503-980-8706

Project: Clackamas County Courthouse

Reference: Clackamas County Courthouse Mass Notification System – Provision of the Mass Notification beacons, duress, panic, emergency assistance and shelter in place buttons, IP input/output relays and integration with the existing ALERTUS system.

On behalf of Convergint's global network of colleagues, I would like to personally thank you for providing Convergint with the opportunity to present this proposal addressing your mass notification needs. We are confident that this proven solution is both comprehensive and customized to meet your needs today, and in the future.

Convergint's reputation for service excellence is backed by a foundational commitment to our core value of service, and we have been recognized as the #1 Systems Integrator by SDM Magazine. This recognition reflects the strong relationships Convergint has developed with the industry's top technology manufacturers, and our history of success with providing exceptional service to our customers.

Our guiding principle has always been to be our customers' best service provider. Our dedicated and certified team of professionals strives to uphold our customer-focused, service-based mission to make a daily difference for our customers. After achieving a successful on-time and on-budget project installation, Convergint will provide you with the industry's best ongoing service, including our 24/7 customer portal iCare, designed to track service work orders, project progress, and provide you with detailed metric reporting for continuous improvement.

The following mass notification proposal is specifically designed to meet your needs. As your single point of contact, please feel free to contact me with any additional questions you may have. Thank you again for trusting Convergint as your partner.

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Scope of Work

Mass Notification System

- This proposal is based on a value engineered design and scope derived from the Clackamas County design and construction standards (DCS) for the New Courthouse Replacement Project. Convergint Technologies has reviewed the DCS and prepared a system layout illustrating our interpretation of the DCS requirements applied to this project. To eliminate duplication of speakers throughout the building, we propose to integrate the employee notification paging system with the mass notification (ALERTUS) platform. Alertus messages will broadcast over the paging system speakers. This solution is, therefore, dependent on Convergint Technologies performing both the paging system and ALERTUS scopes of work. Please see the attached proposed layout at the end of this proposal. Convergint will furnish equipment specified, start-up, test and certify the following:

    - **Alertus Beacons** – The Alert Beacon® is an innovative audible-visual notification device that attracts attention with sounder and flashing strobes, while a large text display informs building occupants of the emergency and instructs them how to respond. The units are typically wall-mounted in high visibility areas, such as lobbies, front offices, prominent spaces, and by elevators and stairways. Alert Beacons are zone-able to enable safety officials to notify specific areas, buildings, and corridors.
    - **Alertus Hardwired Assistance Needed Under Desk Buttons –** Immediate, easy, single-point activation for emergency notification.
    - **Alertus Hardwired Assistance Needed Wall Buttons –** Immediate, easy, single-point activation for emergency notification.
    - **Alertus Hardwired Shelter in Place Buttons –** Immediate, easy, single-point activation for emergency notification.
    - **Alertus Hardwired Evacuate Buttons –** Immediate, easy, single-point activation for emergency notification.
    - **Alertus IP Relay Input Module –** Means of connecting up to 16 dry contact input devices such as Hardwired Buttons.
    - **Alertus IP Relay Output Module –** Means of generating up to 16 dry contact outputs for integrating to external equipment such as paging system.

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Performance Matrix

The following checklist is intended to describe the major performance items being provided by Convergint for this project. This checklist is not intended to be a comprehensive list of all performance items.

YES	NO	PERFORMANCE ITEM	YES	NO	PERFORMANCE ITEM
☒	☐	Material (listed in the BOM)	☐	☒	Wire
☒	☐	Freight (prepaid)	☐	☒	Installation of Wire
☐	☒	Applicable Taxes	☐	☒	Installation of Conduit, Boxes and Fittings
☐	☒	FA Permit and Plan Review Fees	☐	☒	Installation of Bridal Rings
☐	☒	Electrical Installation Permit	☐	☒	Mounting/ Termination of Proposed Devices
☒	☐	System Engineering	☐	☒	Terminal Cabinets
☒	☐	Drawings	☐	☒	Installation of Terminal Cabinets
☐	☒	System Programming	☐	☒	Specialty Backboxes
☒	☐	Testing of all Proposed Devices	☐	☒	Installation of Specialty Backboxes
☒	☐	One Year Warranty on Parts	☐	☒	Installation of Control Equipment Enclosures
☒	☐	One Year Warranty on Labor	☐	☒	Termination of Control Equipment Enclosures
☐	☒	Owner Training	☐	☒	Patch and Paint
☒	☐	Record (as- built) Documentation	☐	☒	System Software & Licenses (existing)
☒	☐	O&M Manuals	☐	☒	120VAC Power and Fused Disconnect Switch
☐	☒	System Meets Plans/ Drawings	☐	☒	Correction of Wiring Faults Caused by Others
☒	☐	System is Design- Build	☐	☒	Managed POE Switches

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Bill of Material

The following bill of materials in intended to describe the scope of work/equipment provided by Convergint for this project by identifying major device and panel quantities. This bill of material is not intended to be a comprehensive list of all system parts, components or accessories.

Line#	Quantity	Part Number	Description	Manufacturer
1	105.00	AAB-E-YL	Hardware, Alert Beacon w/PoE - Yellow	Alertus Technologies
2	52.00	AAB-N-C	Panic Button, Emergency Button - Hardwired (Custom) - Color and Wording	Alertus Technologies
3	118.00	270R	HOLD UP SEL.LTCH/MOM DPDT PLST	Honeywell
4	15.00	ALR-IPR16-I	Panic Button, IP Relay - 16 Port Input	Alertus Technologies
5	22.00	MNS-IPR	Hardware, IP Relay	Alertus Technologies
6	1.00	AUD-IPAVA	Text To Speech, Integration Module to interface w/third-party devices - PA/Fire Evac/Giant Voice Interface (Includes Alert Beacon)	Alertus Technologies
7	1.00	PRO-IMP-3MO	Professional Services, Implementation Period: [3] months following receipt of order; Proposed Implementation Meetings: [2] hours per week; After the Implementation Period has elapsed, you may purchase additional months of implementation services as ne	Alertus Technologies

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Bid Qualification

This proposal is based upon the information provided to Convergint. Please carefully review this "Bid Qualification" section and verify any additional service and/ or equipment related to this proposal and the provision of a complete and operating system.

Value Engineered Proposal – as no project specifications or drawings are available to define the scope of work, this proposal is based on a value engineered interpretation of the general provisions identified in the Clackamas County Design and Construction Standards issued for this project. The scope of provisions included are defined herein.

Spec Section:	NA	**Section Name(s):**	NA
Drawing Date:	Jan 10, 2022	**Drawing Sheets:**	Cost Estimate Set #2
Addendums:	NA	**Schedule:**	NA
Other/ General:	Clackamas County Design and Construction Standards		

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Clarifications:

1. Electronic ACAD files shall be provided to Convergint for use in creating submittal drawings at no additional cost.
2. Proposal is provided in accordance with the attached Terms & Conditions. Project specific Terms & Conditions are subject to mutually agreeable negotiations.
3. Customer acknowledges that supply-chain and shipping difficulties may result in unavoidable delays in deliveries of materials despite timely placement of orders and efforts by Convergint and its suppliers to avoid such delays. Customer agrees to provide Convergint with reasonable extensions of time to the extent of any such delays and Convergint agrees to make reasonable efforts to avoid or minimize such delays. Customer further acknowledges that the above-referenced supply-chain and shipping difficulties may result in unanticipated increases to Convergint's proposal pricing on products covered by this quote or any resulting agreement and that such increases may occur between the time this quote is provided, or any resulting contract is executed and the time when Convergint actually purchases the products covered by this quote or a resulting agreement. Customer agrees that it will pay any such increase in Convergint's initial pricing of obtaining the products above the proposal pricing upon which the quote or agreement was based, by change order or otherwise, and Convergint agrees that it shall make commercially reasonable efforts to minimize any such increase.
4. Proposal pricing is based on continuous progression of the scope of work in a single phase estimated to be complete by 12/31/2024. No project schedule has been published for the project. Schedule extension, compression or fragmentation will result in a change order request to modify contract price.
5. All work proposed herein, shall be performed during normal business hours Monday through Friday 8:00 am - 5:00 pm.
6. The lead electrician performing the installation shall attend and assist with system testing.
7. Customer to provide suitable managed ethernet POE switches and network infrastructure.
8. Customer to provide a secured staging & storage area for project related materials.
9. Twenty-five percent (25%) of the proposed sell price shall be payable to Convergint for project mobilization. Mobilization shall be invoiced and due upon customer acceptance of this proposal.
10. This proposal may be modified as project documents are further developed, and system design is refined (including shop drawings from other trades).
11. Anything in in the Contract Documents notwithstanding, in no event shall either Contractor or Subcontractor be liable for special, indirect, incidental, or consequential damages, including commercial loss, loss of use, or lost profits, even if either party has been advised of the possibility of such damages.

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Excludes:

1. Scope of work excludes provision and/or installation of cable, wire, conduit, raceways, and associated electrical hardware.
2. Excludes proposed equipment assembly, mounting and termination.
3. Electrical installation permits / fees are excluded.
4. Provision or installation of network or network managed POE switches, network connectivity and associated infrastructure are excluded.
5. Correction of wiring faults (opens, shorts, grounds or polarity) or other improper installation are excluded. Convergint will identify any installation issues upon discovery and provide direction to facilitate efficient resolution.
6. Excludes labor that may be required due to delays experienced from supporting trades.
7. Cost for Payment & Performance bond are not included. If necessary, actual cost will apply. Proof of bonding capacity available upon request.
8. Any provision for OCIP or CCIP-type insurance programs are excluded. Convergint does not pay per project insurance premiums, and we cannot provide any cost credit for these types of insurance programs.
9. Excludes provision of any scope not described above.

CONVERGINT TOTAL PROJECT PRICE: $296,480.00

*Price is valid for 30 days from the date on this proposal

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Thank you for considering our proposal. If you have any questions or would like additional information, please don't hesitate to contact me immediately. If you would like us to proceed with the scope of work as outlined in this proposal, please sign below and return to me at jon.mandoli@convergint.com.

Sincerely,

Jonathan Mandoli
Business Development Manager
Fire Alarm & Life Safety System

By signing below, I accept this proposal and agree to the Terms and Conditions V1.12 dated June 2020 contained herein.

CUSTOMER NAME	**DATE**
AUTHORIZED SIGNATURE	**PRINTED NAME / TITLE**

Throughout this Installation Proposal, the term, "Convergint" refers to the Convergint Technologies affiliate operating in the state/province in which the work is being performed.

SECTION 1. THE WORK

This Installation Proposal takes precedence over and supersedes any and all prior proposals, correspondence, and oral agreements or representations relating to the work set forth in the attached scope of work ("Work"). This Installation Proposal commences on the Start Date as specified in the attached scope of work and represents the entire agreement between Convergint and Customer (the "Agreement"). In the event any provision of this Agreement is held to be invalid or unenforceable, the remaining provisions of this Agreement shall remain in full force.

Convergint agrees in accordance with the mutually agreed project schedule:

a. To submit shop drawings, product data, samples and similar submittals if required in performing the Work;
b. To pay for all labor, materials, equipment, tools, supervision, programming, testing, startup and documentation required to perform the Work in accordance with the Agreement;
c. Secure and pay for permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work, unless local regulations provide otherwise; and
d. Hire subcontractors and order material to perform part of the Work, if necessary, while remaining responsible for the completion of theWork.

Customer agrees in accordance with the mutually agreed project schedule, and at no cost to Convergint:

a. To promptly approve submittals provided by Convergint;
b. To provide access to all areas of the facility which are necessary to complete the Work;
c. To supply suitable electrical service as required by Convergint;and
d. That in the event of any emergency or systems failure, reasonable safety precautions will be taken by Customer to protect life and property during the period of time from when Convergint is first notified of the emergency or failure and until such time that Convergint notifies the Customer that the systems are operational or that the emergency has cleared.

No monitoring services are included in the Work. Any such services shall be governed by a separate agreement.

Title to the Work, including any materials comprising the Work, shall pass to Customer as the Work is completed and the materials are incorporated into the Work at Customer's site. If materials are earlier stored on Customer's site pursuant to agreement between Customer and Convergint, title with respect to such materials shall pass to Customer upon delivery to Customer site.

SECTION 2. PRICING

Pricing and amounts proposed shall remain valid for 30 days unless otherwise specified. Price includes only the material listed based on Convergint's interpretation of plans and specifications unless noted otherwise. Additional equipment, unless negotiated prior to order placement, will be billed accordingly. Sales taxes, (and in Canada GST/PST) and any other taxes assessed on Customer shall be added to the price upon invoice to Customer.

SECTION 3. INVOICE REMITTANCE AND PAYMENT

If the Work is performed over more than a month, Convergint will invoice Customer each month for the Work performed during the previous month. Customer agrees to pay the amount due to Convergint as invoiced, within thirty (30) days of the date of such invoice. If the Work is completed in less than one month, Customer agrees to pay Convergint in full after the Work has been performed within thirty (30) days of the date of being invoiced. Invoices shall not include or be subject to a project retention percentage. If Customer is overdue in any payment to Convergint, Convergint shall be entitled to suspend the Work until paid, and charge Customer an interest rate 1 and 1/2% percent per month, (or the maximum rate permitted by law, whichever is less), and may avail itself of any other legal or equitable remedy. Customer shall reimburse Convergint costs incurred in collecting any amounts that become overdue, including attorney fees, court costs and any other reasonable expenditure.

SECTION 4. WARRANTY

Convergint provides the following SOLE AND EXCLUSIVE warranty to the Customer:

For the period of one (1) year, commencing at the earlier of substantial completion of the Work, or first beneficial use, ("Warranty Period"):

a. That Work performed under this Agreement will be ofgood quality;
b. That all equipment will be new unless otherwise required or permitted by this Agreement;
c. That the Work will be free from defects not inherent in the quality required or permitted; and
d. That the Work will conform to the requirements ofthis Agreement.

The Customer's sole remedy for any breach of this warranty is that Convergint shall remove, replace and/or repair at its own expense any defective or improper Work, discovered within the Warranty Period, provided Convergint is notified in writing of any defect within the Warranty Period.

Any equipment or products installed by Convergint in the course of performing the Work hereunder shall only carry such warranty as is provided by the manufacturer thereof, which Convergint hereby assigns to Customer without recourse to Convergint. Upon request of Customer, Convergint will use commercially reasonable efforts to assist Customer in enforcing any such third-party warranties. This warranty excludes remedy for damage or defect caused by abuse, modifications not executed by Convergint, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage. NO FURTHER WARRANTIES OR GUARANTIES, EXPRESS OR IMPLIED, ARE MADE WITH RESPECT TO ANY GOODS OR SERVICES PROVIDED UNDER THIS AGREEMENT, AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED.

SECTION 5. CHANGES

Without invalidating this Agreement or any bond given hereunder, Customer or Convergint may request changes in the Work. Any changes to the Agreement shall be in writing signed by both Customer and Convergint. If Customer orders any additional work or causes any material interference with Convergint's performance of the Work, Convergint shall be entitled to an equitable adjustment in the time for performance and in the Agreement Price, including a reasonable allowance for overhead and profit.

SECTION 6. FORCE MAJEURE

Neither Customer nor Convergint shall be responsible or liable for, shall incur expense for, or be deemed to be in breach of this Agreement because of any delay in the performance of their respective obligations pursuant to this Agreement due solely to circumstances beyond their reasonable control ("Force Majeure") and without the fault or negligence of the party experiencing such delay. A Force Majeure event shall include, but not be limited to: accident, fire, storm, water, flooding, negligence, vandalism, power failure, installation of incompatible equipment, improper operating procedures, source current fluctuations or lighting. If performance by either party is delayed due to Force Majeure, the time for that performance shall be extended for a period of time reasonably necessary to overcome the effect of the delay. Any Services required by Convergint due to reasons set forth in this Force Majeure Section shall be charged to Customer in addition to any amounts due under this Agreement.

SECTION 7. INSURANCE

Convergint shall have the following insurance coverage during the term of this Agreement, and shall provide certificates of insurance to the Customer prior to beginning work hereunder:

Worker's Compensation	Statutory Limits
Employer's Liability	$1,000,000 per occurrence /aggregate
Commercial General Liability	$1,000,000 per occurrence/aggregate
	$2,000,000 general aggregate
Automobile Liability	$1,000,000 per occurrence/aggregate
Excess/Umbrella Liability	$10,000,000 per occurrence/aggregate

All insurance policies carried by Convergint shall be primary to and noncontributory with the insurance afforded to Customer and shall name the Customer as "additional insured", with respect to liability arising out of work performed by Convergint, as applicable, but only to the extent of liabilities falling within the indemnity obligations of Convergint, pursuant to the terms of this Agreement. Convergint shall provide to the Customer no less than thirty (30) days' notice prior to the termination or cancellation of any such insurance policy.

SECTION 8. INDEMNIFICATION

Convergint shall indemnify and hold Customer harmless from and against claims, damages, losses and expenses, attributable to bodily injury, sickness, disease or death, or to destruction of tangible property, but only to the extent caused by: a) the negligent or willful acts or omissions of Convergint or Convergint's employees or subcontractors while on Customer's site, or b) the malfunction of the equipment supplied by Convergint, or c) Convergint's breach of this Agreement.

IN NO EVENT SHALL EITHER CONVERGINT OR CUSTOMER BE LIABLE TO THE OTHER PARTY HERETO FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING COMMERCIAL LOSS, LOSS OF USE OR LOST PROFITS, EVEN IF THAT PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL CONVERGINT BE LIABLE TO CUSTOMER FOR ANY AMOUNTS IN EXCESS OF THE AMOUNTS PAID BY CUSTOMER TO CONVERGINT.

It is understood and agreed by the parties hereto that Convergint is or may be providing intrusion products which are designed to provide notification of certain events but are not intended to be guarantees or insurers against any acts for which they are supposed to monitor or inform. Convergint's indemnification obligation pursuant to Section 8 herein, does not apply to the extent the loss indemnified against is caused by any intrusion product or software provided by but not manufactured by Convergint. Convergint shall have **no** liability to Customer for any losses to the extent such losses are caused by the intrusion product or software. Customer shall indemnify, defend, and hold harmless Convergint, from and against all claims, lawsuits, damages, losses and expenses by persons not a party to this Agreement, but only to the extent caused by such intrusion product or software provided by but not manufactured by Convergint.

SECTION 9. COMPLIANCE WITH LAW, SAFETY, & HAZARDOUS MATERIALS

This Agreement shall be governed and construed in accordance with the laws of the state/province in which the Work is being performed. Convergint agrees to comply with all laws and regulations relating to or governing its provision of the Work. Convergint shall comply with all safety related laws and regulations and with the safety program of the Customer, provided such program is supplied to Convergint prior to beginning work.

In the event that Convergint discovers or suspects the presence of hazardous materials, or unsafe working conditions at Customer's facility where the Work is to be performed, Convergint is entitled to stop the Work at that facility if such hazardous materials, or unsafe working conditions were not provided by or caused by Convergint. Convergint in its sole discretion shall determine when it is "safe" to return to perform the Work at Customer's facility. Convergint shall have no responsibility for the discovery, presence, handling, removing or disposal of or exposure of persons to hazardous materials in any form at the Customer's facility. Customer shall indemnify and hold harmless Convergint from and against claims, damages, losses and expenses, including but not limited to, reasonable attorney's fees, arising out of or resulting from undisclosed hazardous materials, or unsafe working conditions at Customer's facility.

Customer acknowledges that applicable law or regulation may limit Customer's rights and impose obligations with respect to information or data obtained using software capable of obtaining what may in certain circumstances be characterized as biometric information (individually and collectively, the "Software") and agrees that Customer is solely responsible to ensure its own compliance with such laws or regulations. Customer shall completely indemnify, defend (including pay attorneys' fees and disbursements), and hold harmless Convergint, its affiliates, and any employees, agents, contractors or representatives of any of the foregoing from and against any and all losses, liability, damages, penalties, expenses, claims, demands, actions, or causes of action, judgments (finally awarded) or settlements (individually and collectively, "Liabilities") arising from or related to any intentional or negligent acts or omissions of Customer or any of its agents, affiliates, employees, or representatives arising from or related to the Software, any hardware, software, or other services associated with the Software, or the use of any of the foregoing by or on behalf of Customer, including but not limited to those arising from or related to Customer's failure to comply with applicable laws or regulations related to its use of the Software or any hardware, software, or other services associated with the Software, including but not limited to the Customer's failure to obtain any necessary consents from affected individuals or provide any necessary disclosures or protections with respect to the information of such individuals under any applicable privacy or data security law, but excluding matters for which Convergint has agreed to indemnify Customer from and against third party claims for copyright and trade secret infringement under the terms of the End User License Agreement for the Software between Convergint and Customer. Notwithstanding the foregoing, Customer and Convergint agree that Liabilities suffered by a third party (other than an affiliate of Convergint) which are an element of loss subject to indemnification under this paragraph shall be deemed direct damages.

SECTION 10. DISPUTES

In the event of any dispute between Convergint and Customer, Convergint and Customer shall first attempt to resolve the dispute in the field, but if that is not successful, then in a meeting between authorized officers of each company. If settlement attempts are not successful, then the dispute shall be decided exclusively by arbitration. Such arbitration shall be conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect and shall be a final binding resolution of the issues presented between the parties. The prevailing party shall be entitled to recover its reasonable attorneys' fees and costs.

SECTION 11. MISCELLANEOUS

Neither party to this Agreement shall assign this Agreement without the prior written consent of the other party hereto. Convergint may assign this Agreement to any of its parents, subsidiaries or affiliated companies or any entity majority owned by Convergint.

Notices shall be in writing and addressed to the other party, in accordance with the names and addresses of the parties as shown above. All notices shall be effective upon receipt by the party to whom the notice was sent.

A waiver of the terms hereunder by one party to the other party shall not be effective unless in writing and signed by a person with authority to commit the Customer or Convergint and delivered to the non-waiving party according to the notice provision herein. No waiver by Customer or Convergint shall operate as a continuous waiver, unless the written waiver specifically states that it is a continuous waiver of the terms stated in that waiver.

The Sections regarding invoicing, warranty, and indemnity, and disputes shall survive the termination of this Agreement.

CHANGE NOTICE

CCN #	**CCC Paging rev 5**
Date:	11/21/2023
Project Name:	Clackamas County Courthouse
Project Number:	180879
Contract #:	180830-1DT
Page Number:	1

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave
Portland, OR 97210
Telephone: 503.349.9885
Contact: Beau Collins
E-mail: Beau.Collins@isg-group.com

Client Address:

Contact: Darin Miller
1000 Courthouse RD
Oregon City, Oregon 97045
Telephone: 760.473.1394
Contact: Darin Miller
E-mail: dmiller@pcl.com

Work Description

SCOPE OF WORK

1. We will install a total of (74) 1-cable pendant speakers, each consisting of (1) 16/AWG 2-conductor cable, (1) provided pendant speaker.
2. We will install a total of (487) 1-cable ceiling speakers, each consisting of (1) 16/AWG 2-conductor cable, (1) provided ceiling speaker.
3. We will install a total of (25) 1-cable IP wall speakers, each consisting of (1) Category 6 cable, (1) Category 6 insert cable, (1) provided IP wall speaker.
4. We will install a total of (4) 1-cable sound masking emitter speakers, each consisting of (1) 16/AWG 2-conductor cable, (1) provided speaker.
5. We will install a total of (1) desktop microphone Controller consisting of (1) 16/AWG 2-conductor cable, (1) provided desktop microphone.
6. We will install the following provided equipment into the headend location:

- Controller with rack mount kit - QT-X300 and QT-X-RMT0KT
- General Purpose I/O Interface - GPIO-10
- Telephone Interface Module - POTS1-4
- 8-line Audio Input Module - VI-8
- Amplifier 4-channel 300w - VA4300-CV

Price includes system design, programming, commisioning, and training.
We reserve the right to correct this quote for errors and omissions.

This quote covers direct costs only and we reserve the right to claim for impact and consequential costs.
This price is good for acceptance within **10** days from the date of receipt.
We request a time extension of **3** days.
We will supply and install all materials, labor, and equipment as per your instructions on **CCN # CCC Paging rev 5.**

ORIGINAL

CHANGE NOTICE

CCN # **CCC Paging rev 5**
Date: 11/21/2023
Project Name: Clackamas County Courthouse
Project Number: 180879
Contract #: 180830-1DT
Page Number: 2

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave
Portland, OR 97210

Client Address:

1000 Courthouse RD
Oregon City, Oregon 97045

Itemized Breakdown

Description	Qty	Trade Price	U	Total Mat.	Total Hrs.
HDWE 3/8" THREADED ROD - PLTD	1,770	178.88	C	3,166.18	212.22
HDWE 3/8" - 16 HEX NUT (PLATED)	1,180	13.77	C	162.49	12.86
HDWE 3/8" - 16 MACHINE SCREW ANCHOR	590	78.79	C	464.86	141.48
HDWE 3/8" FLAT WASHER - PLTD STL	1,180	3.66	C	43.19	22.51
CABLE 2" LOOP SUPPORT - SIDE MNT TO 3/8" ROD OR 9/16" FLN	590	389.23	C	2,296.46	115.76
Cable Label Horizontal	1,182	8.38	C	99.05	5.15
Faceplate Label	26	0.12	E	3.12	0.85
Biamp - controller - Qt-X300	1	2,800.00	E	2,800.00	1.09
Biamp - rack mount kit Qt-X - Qt-X RMT-KT	1	74.00	E	74.00	1.09
Biamp - general purpose IO interface - GPIO-10	3	1,982.00	E	5,946.00	3.27
Biamp - telephome Interface module - POTS1-4	1	3,632.00	E	3,632.00	1.09
Biamp - 8-line Audio input module - VI-8	4	3,742.00	E	14,968.00	4.36
Biamp - amplifier 4-channel 300w - VA4300-CV	10	7,262.00	E	72,620.00	10.90
Biamp - desktop station, microphone, controller - DS-10	1	2,200.00	E	2,200.00	1.09
CommScope - Cat6 blue - CS34 BLUE	7,000	276.32	M	1,934.24	38.15
CommScope - Cat6 Jack, blue - UNJ600-BL	60	6.67	E	400.20	5.89
CommScope - 4-port faceplate, white - M14L-262	26	1.62	E	42.12	1.13
CommScope - blank, white - M20AP-262	78	0.17	C	0.13	1.70
Dress Cables In Closet (per 100)	30	0.00	E	0.00	3.27
Level IV Test (LINK)	30	0.00	E	0.00	2.62
CommScope - 10' Cat6 patch cord - UC1BBB2-09F010	52	10.26	E	533.52	8.50
Biamp - speaker 6.5 pendant, white - DP6-W	74	496.00	E	36,704.00	80.66
Belden - 16/2 - 6200UE	89,000	282.40	M	25,133.60	485.05
Continuity Test	561	0.00	E	0.00	91.72
Biamp - speaker 6.5 ceiling, white - DX-IC6-W	487	290.00	E	141,230.00	530.83
Biamp - sound masking emitter - EAW16-4	4	550.00	E	2,200.00	2.18
Biamp - speaker 6.5 IP64 wall, black - MASK6CT-BL	25	190.00	E	4,750.00	27.25
Totals	**103,966**			**321,403.15**	**1,812.68**

ORIGINAL

CHANGE NOTICE

CCN # **CCC Paging rev 5**
Date: 11/21/2023
Project Name: Clackamas County Courthouse
Project Number: 180879
Contract #: 180830-1DT
Page Number: 3

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave
Portland, OR 97210

Client Address:

1000 Courthouse RD
Oregon City, Oregon 97045

Summary

MATERIAL			
General Materials		321,403.15	
Total Material			**321,403.15**
LABOR			
WORKING FOREMAN - LEA	(906.34 Hrs @ $99.66)	90,325.84	
JOURNEYMAN TECH	(906.34 Hrs @ $92.26)	83,618.93	
Indirect Labor		60,175.87	
Total Labor			**234,120.64**
Total Material & Labor			**555,523.79**
Service Truck (per Month)	(1,812.68 @ 0.00 @ $2.50 + 0.000 % + 0.000 % + 0.000		4,531.70
Fuel (per Month)	(1,812.68 @ 0.00 @ $1.25 + 0.000 % + 0.000 % + 0.000		2,265.85
Equipment			
Fluke Versiv2 main/Remote (per Month)	(1.00 @ 1.00 @ $855.00 + 0.000 % + 0.000 % + 0.000 %		855.00
Fluke DSX-5000 (x2) - Cu Testing Module (per Mon	(1.00 @ 1.00 @ $880.00 + 0.000 % + 0.000 % + 0.000 %		880.00
Fluke/Calibration (per Each) (Annually)	(1.00 @ 1.00 @ $950.00 + 0.000 % + 0.000 % + 0.000 %		950.00
Electric Scissor Lift 19' (per month) - GR20	(2.00 @ 3.00 @ $785.00 + 0.000 % + 0.000 % + 0.000 %		4,710.00
Pickup and Dropoff	(1.00 @ 0.00 @ $337.00 + 0.000 % + 0.000 % + 0.000 %		337.00
Equipment tax	(1.00 @ 0.00 @ $15.70 + 0.000 % + 0.000 % + 0.000 %)		15.70
Total Equipment			**7,747.70**
Markup	(@ 15.000 %)		85,510.36
Subtotal			**655,579.40**
Final Amount			**$655,579.40**

CLIENT ACCEPTANCE

CCN # **CCC Paging rev 5**
Final Amount: **$655,579.40**

Name: _____

Date: _____

Signature: _____

Change Order #: _____

I hereby accept this quotation and authorize the contractor to complete the above described work.

ORIGINAL

CHANGE NOTICE

CCN #	**CREDIT - CAT5e**
Date:	6/13/2023
Project Name:	Clackamas County Courthouse
Project Number:	180879
Contract #:	180830-1DT
Page Number:	1

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave
Portland, OR 97210
Telephone: 503.349.9885
Contact: Beau Collins
E-mail: Beau.Collins@isg-group.com

Client Address:

Contact: Darin Miller
1000 Courthouse RD
Oregon City, Oregon 97045
Telephone: 760.473.1394
Contact: Darin Miller
E-mail: dmiller@pcl.com

Work Description

SCOPE OF WORK

CREDIT
(234) Cat5e from 2 data outlets
(47) Cat5e from 2 data floor outlets

We reserve the right to correct this quote for errors and omissions.

This quote covers direct costs only and we reserve the right to claim for impact and consequential costs.
This price is good for acceptance within **10** days from the date of receipt.
We request a time extension of **3** days.
We will supply and install all materials, labor, and equipment as per your instructions on **CCN # CREDIT - CAT5e.**

Itemized Breakdown

Description	Qty	Trade Price	U	Total Mat.	Total Hrs.
Cable Label Horizontal	-562	8.38	C	-47.10	-2.25
4 Pair Closet Termination	-281	0.00	E	-0.00	-25.29
CommScope - Cat5e plenum, blue - CS24P BLU	-59,010	239.55	M	-14,135.85	-236.04
CommScope - Cat5e Jack, blue - UNJ500-BL	-281	4.77	E	-1,340.37	-25.29
Dress Cables In Closet (per 100)	-281	0.00	E	-0.00	-28.10
Level IV Test (LINK)	-281	0.00	E	-0.00	-47.77
Totals	**-60,696**			**-15,523.31**	**-364.74**

ORIGINAL

CHANGE NOTICE

CCN # **CREDIT - CAT5e**
Date: 6/13/2023
Project Name: Clackamas County Courthouse
Project Number: 180879
Contract #: 180830-1DT
Page Number: 2

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave
Portland, OR 97210

Client Address:

1000 Courthouse RD
Oregon City, Oregon 97045

Summary

MATERIAL			
General Materials		-15,523.31	
Total Material			**-15,523.31**
LABOR			
WORKING FOREMAN - LEA	(-72.95 Hrs @ $99.66)	-7,270.20	
JOURNEYMAN TECH	(-145.90 Hrs @ $92.26)	-13,460.73	
APPRENTICE - LEA (4TH)	(-145.90 Hrs @ $85.20)	-12,430.68	
Indirect Labor		183.54	
Total Labor			**-32,978.07**
Total Material & Labor			**-48,501.38**
Subtotal			**-48,501.38**
Final Amount			**$-48,501.38**

CLIENT ACCEPTANCE

CCN # **CREDIT - CAT5e**
Final Amount: **$-48,501.38**

Name: _____

Date: _____

Signature: _____

Change Order #: _____

I hereby accept this quotation and authorize the contractor to complete the above described work.

ORIGINAL

FOR REFERENCE ONLY:

PREVIOUS CCP-005 SUBMISSIONS/RESPONSES BETWEEN OWNER AND PROJECT CO AND DESIGN BUILD CONTRACTOR

11/10/23: PCL response to 11/7/23 comments

Clackamas Progress Partners, LLC.
609 Main Street, Suite 3525
Houston, TX 77002

November 2, 2023

Office of the County Administrator
Attn: Nancy Bush, Clackamas Courthouse Project Manager
Public Services Building
2051 Kaen Road
Oregon City, OR, 97045
nbush@clackamas.us

Subject: Clackamas County Circuit Courthouse, Project Company Response to County Change Proposal 005 (dated 5/18/23)

Dear Ms. Bush,

Pursuant to Section 7.12 of the Project Agreement (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT COUNTY'S DIRECTON], Project Company provides this **updated** response to County CCP #005 enclosed. The information provided herein has been supplied by the Design-Builder and Facilities Manager to the Project Company, and is hereby submitted to the County on a back-to-back basis. The design and construction costs resulting from any such Design and Construction Requirement Change made at the County's direction under this Section shall be paid directly by the County during the Design-Build Period, unless otherwise financed by the Project Company pursuant to subsection 6.6(B) (Project Company Financing). Any related operation, maintenance, repair and replacement costs shall be borne by the County through an adjustment to the Service Fee. Any such Design and Construction Requirement Change and any related change in the terms and conditions of this Project Agreement shall be reflected in a Change Order. The Project Company's obligation to perform the work related to a Design and Construction Requirement Change is subject to the conditions set forth in Section 7.11 (Design and Construction Requirement Changes, Repairs and Replacements Required Due to Relief Events Occurring Prior to the Occupancy Readiness Date).

Cost and schedule impacts are evaluated pursuant to Article 16, Section 16.11 of the Project Agreement (Negotiated Lump Sum Pricing of Additional Work) enclosed within Appendix A and B. The proposal value of the cost is $1,176,012.00 and the scheduled time has been calculated as a 0 calendar day(s) extension to the Occupancy Readiness Date.

Project Company has verified the proposed changes with the Design and Construction Standards pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation). These verifications are memorialized within the enclosed documentation.

Best regards,

Karl E. Schaefer, CCM, DBIA, LEED
Clackamas Progress Partners, LLC
Project Company Representative

cc: Stephen Hadanich, WTP Associate Vice President
Vikas Gurram, WTP Senior Advisor
Jon Kindrachuk, PCL Project Director
Cathy France, PCL Document Control

Enclosure

PCL Response to County CCP-005 comments:

OEG Comments in Green

County Comments in Yellow

PCL Comments is Blue

August 22, 2023

Clackamas Progress Partners, LLC.
609 Main Street, Suite 3525
Houston, TX 77002

Office of the County Administrator
Attn: Nancy Bush, Clackamas Courthouse Project Manager
Public Services Building
2051 Kaen Road
Oregon City, OR, 97045
nbush@clackamas.us

Subject: Clackamas County Circuit Courthouse, Project Company Response to County Change Proposal 005 (dated 5/18/23)

Dear Ms. Bush,

Pursuant to Section 7.12 of the Project Agreement (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT COUNTY'S DIRECTON], Project Company provides the County their response to CCP #005 enclosed as Appendix A and B. The information provided herein has been supplied by the Design-Builder and Facilities Manager to the Project Company, and is hereby submitted to the County on a back-to-back basis. The design and construction costs resulting from any such Design and Construction Requirement Change made at the County's direction under this Section shall be paid directly by the County during the Design-Build Period, unless otherwise financed by the Project Company pursuant to subsection 6.6(B) (Project Company Financing). Any related operation, maintenance, repair and replacement costs shall be borne by the County through an adjustment to the Service Fee. Any such Design and Construction Requirement Change and any related change in the terms and conditions of this Project Agreement shall be reflected in a Change Order. The Project Company's obligation to perform the work related to a Design and Construction Requirement Change is subject to the conditions set forth in Section 7.11 (Design and Construction Requirement Changes, Repairs and Replacements Required Due to Relief Events Occurring Prior to the Occupancy Readiness Date).

Cost and schedule impacts are evaluated pursuant to Article 16, Section 16.11 of the Project Agreement (Negotiated Lump Sum Pricing of Additional Work) enclosed within Appendix A and B. The proposal value of the cost is $1,176,012.00 and the scheduled time has been calculated as a 0 calendar day(s) extension to the Occupancy Readiness Date.

Project Company has verified the proposed changes with the Design and Construction Standards pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation). These verifications are memorialized within the enclosed Appendix B.

Best regards,

Karl E. Schaefer, CCM, DBIA, LEED
Clackamas Progress Partners, LLC
Project Company Representative

cc: Nahomi Plaza, WT Partnership, Senior Program Manager
Stephen Hadanich, WT Partnership, Vice President
Jon Kindrachuk, PCL Construction Services Inc., Project Director
Cathy France, PCL Construction Services Inc., Document Control

Enclosure: Appendix A: Cost Summary
Appendix B: Design Builder CCP 005 response package dated 7/17/23

APPENDIX A

11/10/23: update to be provided

CCP 005 - Electrical and IT Changes

Construction Phase Cost Impact Summary

update cost

		Cost
Developer *	$	1,560.00
Design Builder	$	403,054.00
Subtotal	**$**	**404,614.00**
DBFOM Permitted Markup		
(a) for Developer, 15% of the cost of that portion of the Extra Work to be performed by Developer with its own forces	$	234.00
(b) for Developer, 5% of the cost of that portion of the Extra Work to be performed by Contractors directly under contract to Developer	$	20,152.70
Subtotal	**$**	**20,386.70**
Design Build Phase Compensation Amount	**$**	**425,000.70**

11/10/23: update to be provided

Operations Phase Cost Impact Summary

County has elected to self perform. please remove from estimate.

		Cost
Developer **	$	35,100.00
Facilities Manager	$	676,806.00
Subtotal	**$**	**711,906.00**
DBFOM Permitted Markup		
(a) for Developer, 15% of the cost of that portion of the Extra Work to be performed by Developer with its own forces	$	5,265.00
(b) for Developer, 5% of the cost of that portion of the Extra Work to be performed by Contractors directly under contract to Developer	$	33,840.30
Subtotal	**$**	**39,105.30**
Facilities Management Phase Compensation Amount	**$**	**751,011.30**

Total Cost Impact	**$**	**1,176,012.00**

* 8 hours @ 195/hour

** 6 hours / year x 30 year operations term @ 195/hour

APPENDIX B

PCL CONSTRUCTION

TOGETHER WE BUILD SUCCESS

July 17, 2023

Karl E. Schaefer, CCM, DBIA, LEED
Project Executive
Fengate PCL Progress Partners
TD North Tower
77 King Street West, Suite 3410
Toronto, ON M5K 1H1
karl.schaefer@fengate.com

Subject: **Clackamas County Circuit Courthouse**

Reference: CCP [#005] - Section 7.12 (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT COUNTY DIRECTION**) – [Electrical IT Changes Request Response]**

File: **Project No. 5701126: 1J.5**

Dear Mr. Schaefer,

Pursuant to Section 7.12 of the Design Build Agreement (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT THE COUNTY DIRECTION], Design-Builder provides Project Company CCP [**#005**] enclosed as Attachment A. Design Builder is to provide notice of, and reasonable opportunity to review and comment upon, any Design and Construction Requirement Changes proposed to be made at the County's direction. The notice shall contain sufficient information for the Project Company to determine that the Design and Construction Requirement Change:

The design and construction costs resulting from any such Design and Construction Requirement Change made at the County's direction under this Section shall be paid directly by the County during the Design-Build Period, unless otherwise financed by the Project Company pursuant to subsection 6.6(B) (Project Company Financing). Any related operation, maintenance, repair and replacement costs shall be borne by the County through an adjustment to the Service Fee. Any such Design and Construction Requirement Change and any related change in the terms and conditions of this Project Agreement shall be reflected in a Change Order. The Project Company's obligation to perform the work related to a Design and Construction Requirement Change is subject to the conditions set forth in Section 7.11 (Design and Construction Requirement Changes, Repairs and Replacements Required Due to Relief Events Occurring Prior to the Occupancy Readiness Date).

Cost and schedule impacts are evaluated pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work) enclosed as Exhibit 1. The proposal value of the cost is **[$403,054,000.00]** and the scheduled time has been calculated as a **[0]** calendar day(s) extension to the Occupancy Readiness Date.

Design Builder has verified the proposed changes with the Design and Construction Standards pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation). These verifications are memorialized within the enclosed Exhibit 2.

please fix amount and update to new cost. also too many 0's

11/10/23: update to be provided

Please advise if Project Company should require anything additional, as it relates to the subject matter contained herein.

If you have any further questions relating to this matter, promptly contact Contractor at GAYourechuk@pcl.com.

Kind Regards,

PCL Construction Services, Inc.

Greg Yourechuk

Greg Yourechuk
Authorized Representative

GY/cgf

cc: Matt Glassman, Design Manager
Jennifer Canning, Quality Assurance Manager
Jon Kindrachuk, Design Build Project Manager
W.T. Sermeus, Lead Project Manager

See Enclosed Documents:

Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

Exhibit 2 – Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation)

CONSTRUCTION

TOGETHER WE BUILD SUCCESS

Attachment A – County Change Proposal #005

Date:	July 17, 2023
Pursuant to:	Article 7, Section 7.12 of the DBFOM Agreement, Project Company shall give the County written notice of, and reasonable opportunity to review and comment upon, any Design and Construction Requirement Changes proposed to be made at the County's Direction.
Changes:	Electrical IT Changes Request Response

Enclosed is Change response, as it pertains to Article 7, Section 7.12 of the Project Agreement and Design and Construction Standards. Capitalized terms used and not otherwise defined in this proposal shall have the meanings given to such terms in the DBFOM Agreement.

The Contractor is pleased to provide the following information in accordance with Article 7, Section 7.12 of the DBFOM Agreement:

1. a detailed description of the Requirement Change proposed of the D&C Work:

a) Identify and label the proposed DBFOM language:

See CCP#005 - Electrical IT Changes Request Response dated June 7, 2023

b) Identify specific DBFOM language to which a Requirement Change is requested**:**

See CCP#005 - Electrical IT Changes Request Response dated June 7, 2023

c) Identify specific changes to the DBFOM language to which a Requirement Change is requested**:**

See CCP#005 - Electrical IT Changes Request Response dated June 7, 2023

d) Identify how the change sought constitutes good practice, maintains safety and performance

a. Project Company has communicated and reviewed this change with the DLR Group and has confirmed that this deviation will have no impact on the projects ability to meet the LEED Gold standard that is required per the Project Agreement.

b. Does not diminish the capacity of the Project to be operated so as to meet the Contract Standards

c. Does not impair the quality, integrity, durability and reliability of the Project;

d. Is reasonably necessary or is advantageous for the Project Company to fulfill its obligations under this Project Agreement; and

e. Is feasible.

2. a detailed description of the impact of the Requirement Change proposed on the D&C Work

   See Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

3. a detailed description of the impact of the Requirement Change proposed the O&M Work;

   Facilities Manager (Honeywell) has provided an evaluation of the proposed change Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation), enclosed as Exhibit 2.

4. if the Requirement Change is issued before the Operational Readiness Date, a detailed description of any proposed adjustments to the Project Schedule, including to any Contract Deadline, required as a result of any delay that would be caused by the implementation of the Change proposed:

   Any work or tasks associated with, or arising from the Change request shall be considered a condition to achieving a Contract Deadline. No change in schedule

5. where adjustments to Contract Deadlines are proposed:

   (i) a time impact analysis that identifies Critical Path impacts (with activity numbers, durations, predecessor and successor activities, resources, costs and reasons why Float is not available), illustrates the effect of schedule changes or disruptions on the Contract Deadlines and complies with the requirements of (Time Impact Analysis for Proposed Extensions of Time) of the Design and Construction Standards

   N/A

   (ii) an assessment of the feasibility of accelerating the Work to meet the original deadline or to reduce the total delay period; and

   N/A

   (iii) if acceleration is feasible, an estimate of the cost to accelerate;

   N/A

6. an estimate of any compensation amount claimed;

   See Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement

(Negotiated Lump Sum Pricing of Additional Work)

7. an estimate of the cost savings, if any, resulting from the Requirement Change proposed;

   N/A

8. the effect (if any) of the Requirement Change request on Developers ability to perform the O&M Work stated by Contract Year;

   N/A

9. where relief from obligations under the Contract Documents is sought, the effect of the Change proposed on Project Company's ability to perform any of its obligations under the Contract Documents that if not performed would result in the accrual ofNoncompliance, the assessment of Deductions or the occurrence of a Developer Default, in each case including details of the relevant obligations, the effect on each such obligation, the likely duration of that effect and the specific relief sought;

   N/A

10. a description of any additional consents or approvals required, including amendments, if any, of any Governmental Approvals required to implement the contemplated Requirement Change request;

    N/A

11. a detailed description of the steps Project Company will take to implement the Change Request, including measures that Project Company will take to mitigate the costs, delay and other consequences of the Requirement Change request;

    N/A

12. any other relevant information related to the Requirement Change request;

    N/A

Exhibit 1

Attachment A – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

update cost

11/10/23: update to be provided

The proposal value of the cost is **[$403,054.00]** and the scheduled time has been calculated as a **[0]** calendar day(s) extension to the Occupancy Readiness Date.

Project #: 5701126

CRX Detail Report - CCP-005

PCL Construction Services, Inc.

Project Name: Clackamas County Circuit Court
Location: 2125 Kaen Road
Oregon City, OR

11/10/23: Item closed → ok

DM PM/Lead PM - Owner coordination/meetings/discussions.

Project Managers: Implementation of the CCP scope, including Owner/Subcontractor reviews, project coordination, meetings and correspondence.

Design Manager: Implementation of the CCP scope, including designer, owner and sub designer coordination, meetings, reviews and correspondence.

General Superintendents/Superintendents: Management/field implementation of the CCP. Including Subcontractor field coordination, inspections, meetings, reviews and scheduling.

Project Engineers: office and field implementation of the CCP changes. including submittal, RFI's, quality inspections and construction document updates.

CRX description: Electrical and IT Changes

Header Summary	
Type	CCP
CRX status	Quoted to Project Company
Schedule days quoted	0
Quoted date	7/18/2023
Initiated date	6/7/2023

Summary	
Labor	15,489.08
Material	0.00
Equipment	0.00
Subtrade	352,306.00
Direct Cost	15,320.26
Fee	19,938.66
Total Quote:	$403,054.00

Cost Code	Description	Quantity	UoM	Labor Hours Prod	Labor Hours Total	Labor Rate	Labor Total	Material Rate	Material Total							
	DIRECT FORCES WORK															
010100	DB Project Manager	0.00	MO	1.000	4.000	152.04	608	---	---	---	---	---	---	---	---	608.16
010100	Lead Project Manager	0.00	MO	1.000	4.000	139.39	558	---	---	---	---	---	---	---	---	557.56
010100	Project Managers	0.00	MO	---	24.00	122.56	2,941	---	---	---	---	---	---	---	---	2,941.44
010520	Design Manager	0.00	MO	---	24.00	132.18	3,172	---	---	---	---	---	---	---	---	3,172.32
010200	General Superintendent	0.00	MO	---	8.000	163.98	1,312	---	---	---	---	---	---	---	---	1,311.84
010200	Superintendents	0.00	MO	---	24.00	153.57	3,686	---	---	---	---	---	---	---	---	3,685.68
010400	Project Engineers	0.00	MO	---	32.00	85.29	2,729	---	---	---	---	---	---	---	---	2,729.28
010510	Estimator	0.00	MO	---	---	146.41	---	---	---	---	---	---	---	---	---	---
010560	Accountant	0.00	MO	---	2.000	82.88	166	---	---	---	---	---	---	---	---	165.76
010540	Scheduler	0.00	MO	---	2.000	86.39	173	---	---	---	---	---	---	---	---	172.78
010530	HSE Manager	0.00	MO	---	---	78.52	---	---	---	---	---	---	---	---	---	---
010550	ADMIN ASSIST	0.00	MO	---	2.000	72.13	144	---	---	---	---	---	---	---	---	144.26
TOTAL	**DIRECT FORCES WORK**				126.0		15,489.08		---		---					15,489.08
	MARKUP ON DIRECT FORCES															
990100	OH&P on Direct Forces		LS	----	---	15.00%	2,323	15.00%	---	15.00%	---	---	---	---	---	2,323.36
TOTAL	**MARKUP ON DIRECT FORCES**						2,323.36		---		---					2,323.36
	SUBTRADE WORK															
160100	OEG Sub ISG - Paging	1.00	LS	---	---	---	---	---	---	---	---	---	695,535	---		695,535.00
160100	OEG: Corporate Activity Tax	1.00	LS	---	---	---	---	---	---	---	---	---	1,368	---		1,368.00
160100	OEG Estimating	1.00	LS	---	---	---	---	---	---	---	---	---	127	---		127.00
160100	OEG Sub ISG: Sound Masking	-1.00	LS	---	---	---	---	---	---	---	---	---	128,934	---		-128,934.00
160100	OEG: Alertus Credit-Original	-1.00	LS	---	---	---	---	---	---	---	---	---	-478,593	---		-478,593.00
160100	OEG: Alertus Add-Updated Scope-	1.00	LS	---	---	---	---	---	---	---	---	---	311,304	---		311,304.00

Provide a narrative for each of these line items and what they doing in this time.

11/10/23: PCL updated CRX detail provided → -$129,551

Project #: 5701126

CRX Detail Report - CCP-005

PCL Construction Services, Inc.

Project Name: Clackamas County Circuit Court
Location: 2125 Kaen Road
Oregon City, OR

CRX description: Electrical and IT Changes

160100	OEG Sub ISG: CAT5E reduction-	-1.00	LS	---	---	---	---	---	---	---	---	---	-48,501	---	-48,501.00
013920	DLR -Architect	1.00	LS	---	---	---	---	---	---	---	---	---	---	---	---
	DLR confirmed no cost 7/12/23														
TOTAL	**SUBTRADE WORK**												352,306.00		352,306.00
	SUBTRADE MARKUP														
990100	OH&P on Subcontract Costs		LS	---	---	---	---	---	---	---	---	5.000%	17,615	---	17,615.30
TOTAL	**SUBTRADE MARKUP**												17,615.30		17,615.30
TOTAL	**DIRECT FORCES & SUBTRADES**				126.0		17,812.44		---		---		369,921.30		387,733.74
	DIRECT COST SUMMARY														
014200	Subtrade Default Insurance (SDI)		LS	---	---	---	---	---	---	---	---			.916%	3,227.12
014120	Security		LS	---	---	---	---	---	---	---	---	---	---	.222%	867.93
014100	Bonds		LS	---	---	---	---	---	---	---	---	---	---	.500%	1,959.14
014300	Insurance		LS	---	---	---	---	---	---	---	---	---	---	1.773%	6,981.86
014850	CAT Tax		LS	---	---	---	---	---	---	---	---	---	---	.570%	2,284.39
014300	Rounding		LS	---	---	---	---	---	---	---	---	---	---	---	-0.18
TOTAL	**DIRECT COST SUMMARY**														15,320.26
TOTAL	**CRX #: CCP-005**				126.0		17,812.44		---		---		369,921.30		403,054.00

CAT tax is already included in OEG's work. There should not be another CAT tax percentage on the $387k subtrade work

Oregon CAT is imposed on taxable commercial activity in excess of $1 million at the rate of 0.57 percent. CAT tax is imposed on every level of cost/pricing.

ok - further review of CAT taxation verifies this.

11/10/23: Item closed

update

11/10/23: PCL updated CRX detail provided

CCN # 180830-009
Date: 7/14/2023
Page Number: 1

PCL Construction
W.T. Sermeus
13920 SE Eastgate Way
Suite 400
Bellevue, WA 98005
(425) 691-0281

Clackamas Counth Courthouse
PCL Construction
Attn: W.T. Sermeus

Subject: CCP005 - Electrical & IT Change

Mr. Sermeus,

Updated Cost Breakdown

SUB: ISG	PAGING SYSTEM INSTALL	$ 695,535.05	$ 697,030.75	Paging Total
OEG	CAT TAX PAGING	$ 1,368.66		
OEG	ESTIMATOR PAGING	$ 127.04		
SUB: ISG	SOUND MASKING ORIGINAL BUDGET	$ (129,551.53)	$ (129,551.53)	Sound Maskiing Total
SUB: Covergent	ALERTUS ORIGINAL BUDGET	$ (478,593.15)	$ (167,289.15)	Alertus Total
SUB: Covergent	ALERTUS REVISED BUDGET	$ 311,304.00		
SUB: ISG	CAT5e REDUCTION	$ (48,501.38)	$ (48,501.38)	CAT5e Total
			$ 351,688.69	Grand Total

OEG is pleased to submit this change proposal for your consideration.

We have not proceeded with this work and need a written notification to proceed along with approval of the costs contained herein prior to starting work.

PCL: Cost breakdown review

SUB: ISG	PAGING SYSTEM INSTALL	$ 695,535.05	$ 697,030.75	Paging Total
OEG	CAT TAX PAGING	$ 1,368.66		
OEG	ESTIMATOR PAGING	$ 127.04		
SUB: ISG	SOUND MASKING ORIGINAL BUDGET	$ (128,933.98)	$ (128,933.98)	Sound Maskiing Total
SUB: Covergent	ALERTUS ORIGINAL BUDGET	$ (478,593.15)	$ (167,289.15)	Alertus Total
SUB: Covergent	ALERTUS REVISED BUDGET	$ 311,304.00		
SUB: ISG	CAT5e REDUCTION	$ (48,501.38)	$ (48,501.38)	CAT5e Total
			$ 352,306.24	Grand Total

Included in this Proposal is:

- Addition of stand alone PA system
- Credit for sound masking original budget
- Credit for revised Alertus requirements
- Credit for CAT5e reduction

Paging System	$697,030.00
Sound Masking	-~~$128,934.00~~ -$129,551
Alertus System	-$167,289.00
CAT5e	-$48,501.00
Total	~~$352,306.00~~ $351,689

Qualifications:

Wiring is to be in accordance with the National Electrical Code.
All work is to be done during normal working hours (unless noted above).
Permit included in price.
This proposal is valid for 30 days from date received.
We reserve the right to claim impacts on cost and/or schedule at a later date.
Sound masking for court rooms included in AV FFE package and sound masking for public help space included in PA system pricing; therefore, original budget credited 100%

Pricing is based on the changes identified in CCP005

Exclusions:
Sheetrock/plaster/wood cutting, patching, and painting.
Landscape replacement /repairs.
Overtime and premium time.

Please review this proposal, and give me a call if you have any questions.

Respectfully,

Don MacDonald
Senior Project Manager
206.450.2339

Itemized Breakdown

Summary

LABOR			
ESTIMATOR	(1.00 Hrs @ $110.47)		110.47
Total Labor Markups			**16.57**
Total Labor		Paging cost component →	**127.04**
SUBCONTRACTORS			
SOUND MASKING ORIGINAL BUDGET	($-128,933.98 + 0.000 % + 0.000 % + 0.000 %)		-128,933.98 A
ALERTUS ORIGINAL BUDGET	($-455,803.00 + 0.000 % + 0.000 % + 5.000 %)		-478,593.15 B
ALERTUS REVISED BUDGET	($296,480.00 + 0.000 % + 0.000 % + 5.000 %)		311,304.00 C
PAGING SYSTEM TURNKEY	($662,414.33 + 0.000 % + 0.000 % + 5.000 %)		695,535.05 D
CAT5e REDUCTION	($-48,501.38 + 0.000 % + 0.000 % + 0.000 %)		-48,501.38 E
Total Subcontractors			**350,810.54**
CAT Tax		Paging cost component →	1,368.66
Mark up 10%		→	-0.24
Final Amount		Rounding →	**$352,306.00**

D

CHANGE NOTICE

CCN #	**CCC Paging rev 4**
Date:	7/14/2023
Project Name:	Clackamas County Courthouse
Project Number:	180879
Contract #:	180830-1DT
Page Number:	1

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave
Portland, OR 97210
Telephone: 503.349.9885
Contact: Beau Collins
E-mail: Beau.Collins@isg-group.com

Client Address:

Contact: Darin Miller
1000 Courthouse RD
Oregon City, Oregon 97045
Telephone: 760.473.1394
Contact: Darin Miller
E-mail: dmiller@pcl.com

Work Description

SCOPE OF WORK

1. We will install a total of (74) 1-cable pendant speakers, each consisting of (1) 16/AWG 2-conductor cable, (1) provided pendant speaker.
2. We will install a total of (487) 1-cable ceiling speakers, each consisting of (1) 16/AWG 2-conductor cable, (1) provided ceiling speaker.
3. We will install a total of (25) 1-cable IP wall speakers, each consisting of (1) Category 6 cable, (1) Category 6 insert cable, (1) provided IP wall speaker.
4. We will install a total of (4) 1-cable sound masking emitter speakers, each consisting of (1) 16/AWG 2-conductor cable, (1) provided speaker.
5. We will install a total of (1) desktop microphone Controller consisting of (1) 16/AWG 2-conductor cable, (1) provided desktop microphone.
6. We will install the following provided equipment into the headend location:

- Controller with rack mount kit - QT-X300 and QT-X-RMT0KT
- General Purpose I/O Interface - GPIO-10
- Telephone Interface Module - POTS1-4
- 8-line Audio Input Module - VI-8
- Amplifier 4-channel 300w - VA4300-CV

Price includes system design, programming, commisioning, and training.
We reserve the right to correct this quote for errors and omissions.

This quote covers direct costs only and we reserve the right to claim for impact and consequential costs.
This price is good for acceptance within **10** days from the date of receipt.
We request a time extension of **3** days.
We will supply and install all materials, labor, and equipment as per your instructions on **CCN # CCC Paging rev 4.**

ORIGINAL

D

CHANGE NOTICE

CCN # **CCC Paging rev 4**
Date: 7/14/2023
Project Name: Clackamas County Courthouse
Project Number: 180879
Contract #: 180830-1DT
Page Number: 2

Client Address:

1000 Courthouse RD
Oregon City, Oregon 97045

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave

Copper Cable - UTP - PVC/Plenum Indoor without Conduit						
Notes: Includes CAT 3, 5, 5E and 6						
- Add 25% for CAT 6E, CAT 6A, CAT 9						
4 Pair	14.00	17.50	21.00		M	1
25 Pair	16.00	20.00	24.00		M	1
50 Pair	20.00	25.00	30.00		M	1
100 Pair	24.00	30.00	36.00		M	1
200 Pair	32.00	40.00	48.00		M	1
300 Pair	48.00	60.00	72.00		M	1
Copper Cable - STP - PVC/Plenum Indoor in Conduit						
IBM Type 1, 2 and 9	10.00	12.50	15.00		M	1
2 Conductor Shielded 18 Gauge	7.00	8.75	10.50		M	1
2 Pair Individually Shield (T-1)	10.00	12.50	15.00		M	1
4 Pair Shielded 24 Gauge	8.00	10.00	12.00		M	1
25 Conductor (RS232)	12.00	15.00	18.00		M	1
Copper Cable - STP - PVC/Plenum Indoors without Conduit						
IBM Type 1, 2 and 9	20.00	25.00	30.00		M	1
2 Conductor Shielded 18 Gauge	14.00	17.50	21.00		M	1
2 Pair Individually Shield (T-1)	20.00	25.00	30.00		M	1
4 Pair Shielded 24 Gauge	16.00	20.00	24.00		M	1
25 Conductor (RS232)	24.00	30.00	36.00		M	1

Itemized Breakdown

BUILDING A

Description	Qty	Trade Price	U	Total Mat.	Total Hrs.
HDWE 3/8" THREADED ROD - PLTD	1,770	178.88	C	3,166.18	212.22
HDWE 3/8" - 16 HEX NUT (PLATED)	1,180	13.77	C	162.49	12.86
HDWE 3/8" - 16 MACHINE SCREW ANCHOR	590	78.79	C	464.86	141.48
HDWE 3/8" FLAT WASHER - PLTD STL	1,180	3.66	C	43.19	22.51
CABLE 2" LOOP SUPPORT - SIDE MNT TO 3/8" ROD OR 9/16" FLN	590	389.23	C	2,296.46	115.76
Cable Label Horizontal	1,182	8.38	C	99.05	5.15
Faceplate Label	26	0.12	E	3.12	0.85
Biamp - desktop station, microphone, controller - DS-10	1	2,200.00	E	2,200.00	1.09
CommScope - Cat6 blue - CS34 BLUE estimated at 5.45 hrs/1000' NECA1 is 14hrs/1000'	7,000	276.32	M	1,934.24	38.15
CommScope - Cat6 Jack, blue - UNJ600-BL	60	6.67	E	400.20	5.89
CommScope - 4-port faceplate, white - M14L-262	26	1.62	E	42.12	1.13
CommScope - blank, white - M20AP-262	78	0.17	C	0.13	1.70
Dress Cables In Closet (per 100)	30	0.00	E	0.00	3.27
Level IV Test (LINK)	30	0.00	E	0.00	2.62
CommScope - 10' Cat6 patch cord - UC1BBB2-09F010	52	10.26	E	533.52	8.50
Biamp - speaker 6.5 pendant, white - DP6-W	74	496.00	E	36,704.00	80.66
Belden - 16/2 - 6200UE estimated at 5.45 hrs/1000' NECA1 is 14hrs/1000'	89,000	282.40	M	25,133.60	485.05
Continuity Test	561	0.00	E	0.00	91.72
Biamp - speaker 6.5 ceiling, white - DX-IC6-W	487	290.00	E	141,230.00	530.83
Biamp - sound masking emitter - EAW16-4	4	550.00	E	2,200.00	2.18
Biamp - speaker 6.5 IP64 wall, black - MASK6CT-BL	25	190.00	E	4,750.00	27.25
Totals	**103,946**			**221,363.15**	**1,790.88**

HEADEND

Description	Qty	Trade Price	U	Total Mat.	Total Hrs.
Biamp - controller - Qt-X300	1	2,800.00	E	2,800.00	1.09
Biamp - rack mount kit Qt-X - Qt-X RMT-KT	1	74.00	E	74.00	1.09
Biamp - general purpose IO interface - GPIO-10	3	1,982.00	E	5,946.00	3.27
Biamp - telephome Interface module - POTS1-4	1	3,632.00	E	3,632.00	1.09
Biamp - 8-line Audio input module - VI-8	4	3,742.00	E	14,968.00	4.36
Biamp - amplifier 4-channel 300w - VA4300-CV	10	7,262.00	E	72,620.00	10.90
Totals	**20**			**100,040.00**	**21.80**

ORIGINAL

11/10/23: OEG "As stated before, these labor productivity rates need to remain as is due to the fact that the installations are not the same. One is for pulling a grouping of cables at the same time and one is for pulling a single cable. NECA1 productivity for this cable is 14 hours per thousand feet and both installations are less than half of that value. I would understand if we were trying to charge NECA1 values for the add and way less for the deduct, but the fact that even the paging labor productivity is so low implies that we are using historical data to establish these rates. We cannot change this."

productivity of Cat6 at 5.45/1000' is acceptable for this work so long as the rate is consistent with the "Cat5e Reduction" scope. NECA has the same rate for Cat6 and Cat5e

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unty Courthouse

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave
Portland, OR 97210

Client

1000
Orego

Rates are reflective of local sound and comm agreement and 2024 escalation. Estimated productivity is well below NECA1 labor units. Cable installation alone is 820.8hrs less than NECA1 units (14hrs/1k feet). See above.

Summary

Labor productivity rates are too high compared with NECA1

MATERIAL		
General Materials		321,403.15
Total Material		**321,403.15**
LABOR		
WORKING FOREMAN - LEA	(906.34 Hrs @ $99.66)	90,325.84
JOURNEYMAN TECH	(906.34 Hrs @ $92.26)	83,618.93
Indirect Labor		60,175.87
Total Labor		**234,120.64**
Total Material & Labor		**555,523.79**
iPad (per month)	(1,812.68 @ 0.00 @ $0.25 + 0.000 % + 0.000 % + 0.000 %	453.17
IT charges (per month)	(1,812.68 @ 0.00 @ $0.15 + 0.000 % + 0.000 % + 0.000 %	271.90
Service Truck (per Month)	(1,812.68 @ 0.00 @ $2.50 + 0.000 % + 0.000 % + 0.000 %	4,531.70
Small Tools (per hour)	(173,944.77 @ 0.00 @ $0.02 + 0.000 % + 0.000 % + 0.00(	3,478.90
Fuel (per Month)	(1,812.68 @ 0.00 @ $1.25 + 0.000 % + 0.000 % + 0.000 %	2,265.85
Safety Supplies	(173,944.77 @ 0.00 @ $0.01 + 0.000 % + 0.000 % + 0.00(	1,739.45
Equipment		
Fluke Versiv2 main/Remote (per Month)	(1.00 @ 1.00 @ $855.00 + 0.000 % + 0.000 % + 0.000 %)	855.00
Fluke DSX-5000 (x2) - Cu Testing Module (per Mo	(1.00 @ 1.00 @ $880.00 + 0.000 % + 0.000 % + 0.000 %)	880.00
Fluke/Calibration (per Each) (Annually)	(1.00 @ 1.00 @ $950.00 + 0.000 % + 0.000 % + 0.000 %)	950.00
Electric Scissor Lift 19' (per month) - GR20	(2.00 @ 3.00 @ $785.00 + 0.000 % + 0.000 % + 0.000 %)	4,710.00
Pickup and Dropoff	(1.00 @ 0.00 @ $337.00 + 0.000 % + 0.000 % + 0.000 %)	337.00
Equipment tax	(1.00 @ 0.00 @ $15.70 + 0.000 % + 0.000 % + 0.000 %)	15.70
Total Equipment		**7,747.70**
Markup	(@ 15.000 %)	86,401.87
Subtota		**662,414.33**
Final Amount		**$662,414.33**

Please justify what this indirect labor is for

estimating, engineering, programming, commissioning and training

ok

These are general conditions and should form part of 15% markup

$662,414,33 x 5% M/Up = $$695,535.05

These are direct costs associated with the work

CLIENT ACCEPTANCE

Large equipment noted here is acceptable. Ipad, IT, service trucks, smalls tools, fuel, safety supplies are not. These are overhead and the Project agreement allows for overhead within the markup. Please remove from the estimate

for who and what is this additional markup for, over and above the 15%?

ISG is under a subcontractor to OEG. Per the Project Agreement, we are allowed a 5% markup on subcontractors. ISG is a separate profit and loss division of OEG, with its own overhead, management and staffing. ISG performs and subcontracts work independently of OEG in a different labor/ craft category. As a limited energy technology division, ISG technicians work under a separate bargaining agreement within the IBEW and perform work outside that of OEG. With this division, OEG and ISG subcontract to each other on a project by project basis as with any other prime/ sub relationship

ok

11/10/23: Item Closed

11/10/23: OEG "After a thorough review of the contract and project agreement, I could not find anywhere that defined what is and is not considered overhead. The charges indicated on the proposal are all direct, on the job costs and need to remain."

A

CHANGE NOTICE

CCN #	**CREDIT - Sound Masking**
Date:	6/20/2023
Project Name:	Clackamas County Courthouse
Project Number:	180879
Contract #:	180830-1DT
Page Number:	1

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave
Portland, OR 97210
Telephone: 503.349.9885
Contact: Beau Collins
E-mail: Beau.Collins@isg-group.com

Client Address:

Contact: Darin Miller
1000 Courthouse RD
Oregon City, Oregon 97045
Telephone: 760.473.1394
Contact: Darin Miller
E-mail: dmiller@pcl.com

Work Description

SCOPE OF WORK

Credit based off of a $1.30 a square foot price.

We reserve the right to correct this quote for errors and omissions.

This quote covers direct costs only and we reserve the right to claim for impact and consequential costs.
This price is good for acceptance within **10** days from the date of receipt.
We request a time extension of **3** days.
We will supply and install all materials, labor, and equipment as per your instructions on **CCN # CREDIT - Sound Masking.**

Itemized Breakdown

Description	Qty	Trade Price	U	Total Mat.	Total Hrs.
Sound Masking - square foot pricing	-86,450	1.30	E	-112,385.00	-0.00
Totals	**-86,450**			**-112,385.00**	**0.00**

$1.30 is low for sound masking in PNW. Market rate is $1.50

The scope was estimated at $1.30 for this project based on prior OEG projects. We cannot give back more than what we had originally budgeted for this scope

Can you provide the bid info to substantiate this? an excerpt or screenshot that clearly shows this bid item.

11/10/23: OEG lump sum bid proposal, OEG provided the credit carried in their internal estimate for this work. Per OEG, this amount is based on OEG's internal past experience rather than a market study. At the time of bid, there was no information as to what this scope entailed, and as such difficult to define a standard price per sq ft. that captures vague requirements.

A

CHANGE NOTICE

CCN #	**CREDIT - Sound Masking**
Date:	6/20/2023
Project Name:	Clackamas County Courthouse
Project Number:	180879
Contract #:	180830-1DT
Page Number:	2

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave
Portland, OR 97210

Client Address:

1000 Courthouse RD
Oregon City, Oregon 97045

Summary

11/10/23: Corrected

Shouldn't this be negative?

Yes, please adjust value to $129,202.48

MATERIAL		
General Materials		-112,385.00
Total Material		**-112,385.00**
Equipment		
Fluke Versiv2 main/Remote (per Month)	(1.00 @ 0.10 @ $855.00 + 0.000 % + 0.000 % + 0.000	85.50
Fluke DSX-5000 (x2) - Cu Testing Module (per Mon	(1.00 @ 0.10 @ $880.00 + 0.000 % + 0.000 % + 0.000	88.00
Fluke/Calibration (per Each) (Annually)	(1.00 @ 0.10 @ $950.00 + 0.000 % + 0.000 % + 0.000	95.00
Total Equipment		**268.50**
Markup	(@ 15.000 %)	-16,817.48
Subtotal		**-128,933.98**
Final Amount		**$-128,933.98**

PCL note: Revised value appears to actually be-$129,551.53 after markup credit is adjusted.

$129,202.48

CLIENT ACCEPTANCE

CCN # **CREDIT - Sound Masking**
Final Amount: **$-128,933.98**

Name: _____

Date: _____

Signature: _____

Change Order #: _____

I hereby accept this quotation and authorize the contractor to complete the above described work.

ORIGINAL

B

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Convergint
7678 SW Mohawk St, Bldg K,
Tualatin, Oregon 97062
Phone (503) 228-8522
Fax (503) 228-8521
www.convergint.com

Mass Notification VE Proposal (ALERTUS)

Date: March 22, 2022

Quotation #: LT02432764P

From:
Lindsay Tycer
Account Executive
Life Safety Systems
Lindsay.tycer@convergint.com
971-281-1864

Project: Clackamas County Courthouse

Reference: Clackamas County Courthouse Mass Notification System – Provision of the Mass Notification headend equipment, beacons, duress buttons, exterior high-power speaker array and interior speakers.

On behalf of Convergint's global network of colleagues, I would like to personally thank you for providing Convergint with the opportunity to present this proposal addressing your mass notification needs. We are confident that this proven solution is both comprehensive and customized to meet your needs today, and in the future.

Convergint's reputation for service excellence is backed by a foundational commitment to our core value of service, and we have been recognized as the #1 Systems Integrator by SDM Magazine. This recognition reflects the strong relationships Convergint has developed with the industry's top technology manufacturers, and our history of success with providing exceptional service to our customers.

Our guiding principle has always been to be our customers' best service provider. Our dedicated and certified team of professionals strives to uphold our customer-focused, service-based mission to make a daily difference for our customers. After achieving a successful on-time and on-budget project installation, Convergint will provide you with the industry's best ongoing service, including our 24/7 customer portal iCare, designed to track service work orders, project progress, and provide you with detailed metric reporting for continuous improvement.

The following mass notification proposal is specifically designed to meet your needs. As your single point of contact, please feel free to contact me with any additional questions you may have. Thank you again for trusting Convergint as your partner.

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Scope of Work

Mass Notification System

- This proposal is based on a value engineered design and scope derived from the Clackamas County design and construction standards (DCS) for the New Courthouse Replacement Project. The current project documents (project drawings and specifications) do not reference the ALERTUS system summarized in the DCS. Convergint Technologies has reviewed the DCS and prepared a draft system layout illustrating our interpretation of the DCS requirements applied to this project. Additionally, to eliminate duplication of speakers throughout the building, we propose to integrate the fire alarm system emergency voice notification system with the ALERTUS platform. Alertus messages will broadcast over the fire alarm system speakers. This solution is, therefore, dependent on Convergint Technologies performing both the fire alarm and ALERTUS scopes of work. Please see the attached proposed layout at the end of this proposal. Convergint will furnish equipment specified, start-up, program, test and certify the following:

    - **Alertus Beacons** - The Alert Beacon® is an innovative audible-visual notification device that attracts attention with sounder and flashing strobes, while a large text display informs building occupants of the emergency and instructs them how to respond. The units are typically wall-mounted in high visibility areas, such as lobbies, front offices, prominent spaces, and by elevators and stairways. Alert Beacons are zone-able to enable safety officials to notify specific areas, buildings, and corridors.

    - **Alertus Hardwired Duress Buttons** - Immediate, easy, single-point activation for emergency notification.

    - **Emergency Panic Button – USB Connected -** Flexible one-touch, immediate incident reporting or system activation. Computer desktop connected.

    - **High Power Speaker Array 2400 Watt** - Providing intelligible and effective notification to widespread, outdoor areas.

    - **Alertus Desktop Notification License**

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Performance Matrix

The following checklist is intended to describe the major performance items being provided by Convergint for this project. This checklist is not intended to be a comprehensive list of all performance items.

YES	NO	PERFORMANCE ITEM	YES	NO	PERFORMANCE ITEM
☒	☐	Material (listed in the BOM)	☐	☒	Wire
☒	☐	Freight (prepaid)	☐	☒	Installation of Wire
☐	☒	Applicable Taxes	☐	☒	Installation of Conduit, Boxes and Fittings
☐	☒	FA Permit and Plan Review Fees	☐	☒	Installation of Bridal Rings
☐	☒	Electrical Installation Permit	☐	☒	Mounting/ Termination of Proposed Devices
☒	☐	System Engineering	☐	☒	Terminal Cabinets
☒	☐	Drawings	☐	☒	Installation of Terminal Cabinets
☒	☐	System Programming	☐	☒	Specialty Backboxes
☒	☐	Testing of all Proposed Devices	☐	☒	Installation of Specialty Backboxes
☒	☐	One Year Warranty on Parts	☐	☒	Installation of Control Equipment Enclosures
☒	☐	One Year Warranty on Labor	☐	☒	Termination of Control Equipment Enclosures
☐	☒	Owner Training	☐	☒	Patch and Paint
☒	☐	Record (as- built) Documentation	☐	☒	Firestopping (excluding existing penetrations)
☒	☐	O&M Manuals	☐	☒	120VAC Power and Fused Disconnect Switch
☐	☒	System Meets Plans/ Drawings	☐	☒	Correction of Wiring Faults Caused by Others
☒	☐	System is Design- Build	☐	☒	Fire Watch

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Bill of Material

The following bill of materials in intended to describe the scope of work/equipment provided by Convergint for this project by identifying major device and panel quantities. This bill of material is not intended to be a comprehensive list of all system parts, components or accessories.

Line#	Quantity	Part Number	Description	Manufacturer
1	57.00	AAB-E-YL	Alert Beacon, Ethernet/PoE, yellow Includes wall mounting bracket. Backup batteries and power supplies, if needed, are sold separately.	ALERTUS
2	1.00	ADN-X	Alertus Desktop Notification License	ALERTUS
3	57.00	ALR-B-YL-EMER	Alertus Hardwired Duress Button; Yellow -EMERGENCY - Standard yellow in color displaying text EMERGENCY top and ALERTUS bottom	ALERTUS
4	180.00	ALR-USB	Emergency Panic Button - USB Connected - USB Panic Button - standard compact desk model (black w/red button)	ALERTUS
5	1.00	HPSA-2400w	High Power Speaker Array 2400 Watts. Includes a quantity of 16 150 Watt Speakers, 100 feet of speaker cable, electronics cabinet, controller board, audio amplifier, battery charger and Local Operation Control with microphone. Batteries available separately.	ALERTUS
6	1.00	IMP-C	Custom Implementation Support	ALERTUS
7	1.00	AUD-IPAVA	IP-AVA TTS Paging interface	ALERTUS
8	1.00	MNS-IPR	IP Relay	ALERTUS
9	1.00	3-ZA20B	20 Watt Rail Amplifier, Class B	Edwards

convergint

Bid Qualification

This proposal is based upon the information provided to Convergint. Please carefully review this "Bid Qualification" section and verify any additional service and/ or equipment related to this proposal and the provision of a complete and operating system.

Value Engineered Proposal – as no project specifications or drawings are available to define the scope of work, this proposal is based on a value engineered interpretation of the general provisions identified in the Clackamas County Design and Construction Standards issued for this project. The scope of provisions included are defined herein.

Spec Section:	NA	**Section Name(s):**	NA
Drawing Date:	Jan 10, 2022	**Drawing Sheets:**	Cost Estimate Set #2
Addendums:	NA	**Schedule:**	NA
Other/ General:	Clackamas County Design and Construction Standards		

convergint

Clarifications:

1. Electronic ACAD files shall be provided to Convergint for use in creating submittal drawings at no additional cost.
2. Proposal is provided in accordance with the attached Terms & Conditions. Project specific Terms & Conditions are subject to mutually agreeable negotiations.
3. Customer acknowledges that supply-chain and shipping difficulties may result in unavoidable delays in deliveries of materials despite timely placement of orders and efforts by Convergint and its suppliers to avoid such delays. Customer agrees to provide Convergint with reasonable extensions of time to the extent of any such delays and Convergint agrees to make reasonable efforts to avoid or minimize such delays. Customer further acknowledges that the above-referenced supply-chain and shipping difficulties may result in unanticipated increases to Convergint's proposal pricing on products covered by this quote or any resulting agreement and that such increases may occur between the time this quote is provided, or any resulting contract is executed and the time when Convergint actually purchases the products covered by this quote or a resulting agreement. Customer agrees that it will pay any such increase in Convergint's initial pricing of obtaining the products above the proposal pricing upon which the quote or agreement was based, by change order or otherwise, and Convergint agrees that it shall make commercially reasonable efforts to minimize any such increase.
4. Proposal pricing is based on continuous progression of the scope of work in a single phase estimated to be complete by 12/31/2022 No project schedule has been published for the project. Schedule extension, compression or fragmentation will result in a change order request to modify contract price.
5. All work proposed herein, shall be performed during normal business hoursMonday through Friday 8:00 am - 5:00 pm.
6. The lead electrician performing the installation shall attend and assist with system testing.
7. Customer to provide static IP addresses and network connections and network infrastructure.
8. Customer to provide a secured staging & storage area for project related materials.
9. Twenty-five percent (25%) of the proposed sell price shall be payable to Convergint for project mobilization. Mobilization shall be invoiced and due upon customer acceptance of this proposal.
10. This proposal may be modified as project documents are further developed, and system design is refined (including shop drawings from other trades).
11. Anything in in the Contract Documents notwithstanding, in no event shall either Contractor or Subcontractor be liable for special, indirect, incidental, or consequential damages, including commercial loss, loss of use, or lost profits, even if either party has been advised of the possibility of such damages.

B

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Excludes:

1. Scope of work excludes provision and/or installation of cable, wire, conduit, raceways, electrical hardware, proposed equipment assembly, mounting and termination.
2. Electrical installation permits / fees are excluded.
3. Provision or installation of network or network switches, network connectivity and associated infrastructure are excluded.
4. Correction of wiring faults (opens, shorts, grounds or polarity) or other improper installation are excluded. Convergint will identify any installation issues upon discovery and provide direction to facilitate efficient resolution
5. Excludes labor that may be required due to delays experienced from supporting trades.
6. Cost for Payment & Performance bond are not included. If necessary, actual cost will apply. Proof of bonding capacity available upon request.
7. Any provision for OCIP or CCIP-type insurance programs are excluded. Convergint does not pay per project insurance premiums, and we cannot provide any cost credit for these types of insurance programs.
8. Excludes provision of any scope not described above.

CONVERGINT TOTAL PROJECT PRICE: $363,145.00

*pricing is valid for 30 days from the date on this proposal

Material and Labor Escalation Budget Adder through 2025: ***$92,658.00***

B

$363,568 + $92,658 = $455,803 x 1.05 Mark-up = ($478,593.15)

convergint

Thank you for considering our proposal. If you have any questions or would like additional information, please don't hesitate to contact me immediately. If you would like us to proceed with the scope of work as outlined in this proposal, please sign below to fax to (503) 228-8521.

Sincerely,

Lindsay Tycer

Lindsay Tycer

Fire Alarm & Life Safety

By signing below, I accept this proposal and agree to the Terms and Conditions V1.12 dated June 2020 contained herein.

CUSTOMER NAME	**DATE**
AUTHORIZED SIGNATURE	**PRINTED NAME / TITLE**

Throughout this Installation Proposal, the term, "Convergint" refers to the Convergint Technologies affiliate operating in the state/province in which the work is being performed.

SECTION 1. THE WORK

This Installation Proposal takes precedence over and supersedes any and all prior proposals, correspondence, and oral agreements or representations relating to the work set forth in the attached scope of work ("Work"). This Installation Proposal commences on the Start Date as specified in the attached scope of work and represents the entire agreement between Convergint and Customer (the "Agreement"). In the event any provision of this Agreement is held to be invalid or unenforceable, the remaining provisions of this Agreement shall remain in full force.

Convergint agrees in accordance with the mutually agreed project schedule:

a. To submit shop drawings, product data, samples and similar submittals if required in performing the Work;
b. To pay for all labor, materials, equipment, tools, supervision, programming, testing, startup and documentation required to perform the Work in accordance with the Agreement;
c. Secure and pay for permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work, unless local regulations provide otherwise; and
d. Hire subcontractors and order material to perform part of the Work, if necessary, while remaining responsible for the completion of theWork.

Customer agrees in accordance with the mutually agreed project schedule, and at no cost to Convergint:

a. To promptly approve submittals provided by Convergint;
b. To provide access to all areas of the facility which are necessary to complete the Work;
c. To supply suitable electrical service as required by Convergint;and
d. That in the event of any emergency or systems failure, reasonable safety precautions will be taken by Customer to protect life and property during the period of time from when Convergint is first notified of the emergency or failure and until such time that Convergint notifies the Customer that the systems are operational or that the emergency has cleared.

No monitoring services are included in the Work. Any such services shall be governed by a separate agreement.

Title to the Work, including any materials comprising the Work, shall pass to Customer as the Work is completed and the materials are incorporated into the Work at Customer's site. If materials are earlier stored on Customer's site pursuant to agreement between Customer and Convergint, title with respect to such materials shall pass to Customer upon delivery to Customer site.

SECTION 2. PRICING

Pricing and amounts proposed shall remain valid for 30 days unless otherwise specified. Price includes only the material listed based on Convergint's interpretation of plans and specifications unless noted otherwise. Additional equipment, unless negotiated prior to order placement, will be billed accordingly. Sales taxes, (and in Canada GST/PST) and any other taxes assessed on Customer shall be added to the price upon invoice to Customer.

SECTION 3. INVOICE REMITTANCE AND PAYMENT

If the Work is performed over more than a month, Convergint will invoice Customer each month for the Work performed during the previous month. Customer agrees to pay the amount due to Convergint as invoiced, within thirty (30) days of the date of such invoice. If the Work is completed in less than one month, Customer agrees to pay Convergint in full after the Work has been performed within thirty (30) days of the date of being invoiced. Invoices shall not include or be subject to a project retention percentage. If Customer is overdue in any payment to Convergint, Convergint shall be entitled to suspend the Work until paid, and charge Customer an interest rate 1 and 1/2% percent per month, (or the maximum rate permitted by law, whichever is less), and may avail itself of any other legal or equitable remedy. Customer shall reimburse Convergint costs incurred in collecting any amounts that become overdue, including attorney fees, court costs and any other reasonable expenditure.

SECTION 4. WARRANTY

Convergint provides the following SOLE AND EXCLUSIVE warranty to the Customer:

For the period of one (1) year, commencing at the earlier of substantial completion of the Work, or first beneficial use, ("Warranty Period"):

a. That Work performed under this Agreement will be ofgood quality;
b. That all equipment will be new unless otherwise required or permitted by this Agreement;
c. That the Work will be free from defects not inherent in the quality required or permitted; and
d. That the Work will conform to the requirements ofthis Agreement.

The Customer's sole remedy for any breach of this warranty is that Convergint shall remove, replace and/or repair at its own expense any defective or improper Work, discovered within the Warranty Period, provided Convergint is notified in writing of any defect within the Warranty Period.

Any equipment or products installed by Convergint in the course of performing the Work hereunder shall only carry such warranty as is provided by the manufacturer thereof, which Convergint hereby assigns to Customer without recourse to Convergint. Upon request of Customer, Convergint will use commercially reasonable efforts to assist Customer in enforcing any such third-party warranties. This warranty excludes remedy for damage or defect caused by abuse, modifications not executed by Convergint, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage. NO FURTHER WARRANTIES OR GUARANTIES, EXPRESS OR IMPLIED, ARE MADE WITH RESPECT TO ANY GOODS OR SERVICES PROVIDED UNDER THIS AGREEMENT, AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED.

SECTION 5. CHANGES

Without invalidating this Agreement or any bond given hereunder, Customer or Convergint may request changes in the Work. Any changes to the Agreement shall be in writing signed by both Customer and Convergint. If Customer orders any additional work or causes any material interference with Convergint's performance of the Work, Convergint shall be entitled to an equitable adjustment in the time for performance and in the Agreement Price, including a reasonable allowance for overhead and profit.

SECTION 6. FORCE MAJEURE

Neither Customer nor Convergint shall be responsible or liable for, shall incur expense for, or be deemed to be in breach of this Agreement because of any delay in the performance of their respective obligations pursuant to this Agreement due solely to circumstances beyond their reasonable control ("Force Majeure") and without the fault or negligence of the party experiencing such delay. A Force Majeure event shall include, but not be limited to: accident, fire, storm, water, flooding, negligence, vandalism, power failure, installation of incompatible equipment, improper operating procedures, source current fluctuations or lighting. If performance by either party is delayed due to Force Majeure, the time for that performance shall be extended for a period of time reasonably necessary to overcome the effect of the delay. Any Services required by Convergint due to reasons set forth in this Force Majeure Section shall be charged to Customer in addition to any amounts due under this Agreement.

SECTION 7. INSURANCE

Convergint shall have the following insurance coverage during the term of this Agreement, and shall provide certificates of insurance to the Customer prior to beginning work hereunder:

Worker's Compensation	Statutory Limits
Employer's Liability	$1,000,000 per occurrence /aggregate
Commercial General Liability	$1,000,000 per occurrence/aggregate
	$2,000,000 general aggregate
Automobile Liability	$1,000,000 per occurrence/aggregate
Excess/Umbrella Liability	$10,000,000 per occurrence/aggregate

All insurance policies carried by Convergint shall be primary to and noncontributory with the insurance afforded to Customer and shall name the Customer as "additional insured", with respect to liability arising out of work performed by Convergint, as applicable, but only to the extent of liabilities falling within the indemnity obligations of Convergint, pursuant to the terms of this Agreement. Convergint shall provide to the Customer no less than thirty (30) days' notice prior to the termination or cancellation of any such insurance policy.

SECTION 8. INDEMNIFICATION

Convergint shall indemnify and hold Customer harmless from and against claims, damages, losses and expenses, attributable to bodily injury, sickness, disease or death, or to destruction of tangible property, but only to the extent caused by: a) the negligent or willful acts or omissions of Convergint or Convergint's employees or subcontractors while on Customer's site, or b) the malfunction of the equipment supplied by Convergint, or c) Convergint's breach of this Agreement.

IN NO EVENT SHALL EITHER CONVERGINT OR CUSTOMER BE LIABLE TO THE OTHER PARTY HERETO FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING COMMERCIAL LOSS, LOSS OF USE OR LOST PROFITS, EVEN IF THAT PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL CONVERGINT BE LIABLE TO CUSTOMER FOR ANY AMOUNTS IN EXCESS OF THE AMOUNTS PAID BY CUSTOMER TO CONVERGINT.

It is understood and agreed by the parties hereto that Convergint is or may be providing intrusion products which are designed to provide notification of certain events but are not intended to be guarantees or insurers against any acts for which they are supposed to monitor or inform. Convergint's indemnification obligation pursuant to Section 8 herein, does not apply to the extent the loss indemnified against is caused by any intrusion product or software provided by but not manufactured by Convergint. Convergint shall have **no** liability to Customer for any losses to the extent such losses are caused by the intrusion product or software. Customer shall indemnify, defend, and hold harmless Convergint, from and against all claims, lawsuits, damages, losses and expenses by persons not a party to this Agreement, but only to the extent caused by such intrusion product or software provided by but not manufactured by Convergint.

SECTION 9. COMPLIANCE WITH LAW, SAFETY, & HAZARDOUS MATERIALS

This Agreement shall be governed and construed in accordance with the laws of the state/province in which the Work is being performed. Convergint agrees to comply with all laws and regulations relating to or governing its provision of the Work. Convergint shall comply with all safety related laws and regulations and with the safety program of the Customer, provided such program is supplied to Convergint prior to beginning work.

In the event that Convergint discovers or suspects the presence of hazardous materials, or unsafe working conditions at Customer's facility where the Work is to be performed, Convergint is entitled to stop the Work at that facility if such hazardous materials, or unsafe working conditions were not provided by or caused by Convergint. Convergint in its sole discretion shall determine when it is "safe" to return to perform the Work at Customer's facility. Convergint shall have no responsibility for the discovery, presence, handling, removing or disposal of or exposure of persons to hazardous materials in any form at the Customer's facility. Customer shall indemnify and hold harmless Convergint from and against claims, damages, losses and expenses, including but not limited to, reasonable attorney's fees, arising out of or resulting from undisclosed hazardous materials, or unsafe working conditions at Customer's facility.

Customer acknowledges that applicable law or regulation may limit Customer's rights and impose obligations with respect to information or data obtained using software capable of obtaining what may in certain circumstances be characterized as biometric information (individually and collectively, the "Software") and agrees that Customer is solely responsible to ensure its own compliance with such laws or regulations. Customer shall completely indemnify, defend (including pay attorneys' fees and disbursements), and hold harmless Convergint, its affiliates, and any employees, agents, contractors or representatives of any of the foregoing from and against any and all losses, liability, damages, penalties, expenses, claims, demands, actions, or causes of action, judgments (finally awarded) or settlements (individually and collectively, "Liabilities") arising from or related to any intentional or negligent acts or omissions of Customer or any of its agents, affiliates, employees, or representatives arising from or related to the Software, any hardware, software, or other services associated with the Software, or the use of any of the foregoing by or on behalf of Customer, including but not limited to those arising from or related to Customer's failure to comply with applicable laws or regulations related to its use of the Software or any hardware, software, or other services associated with the Software, including but not limited to the Customer's failure to obtain any necessary consents from affected individuals or provide any necessary disclosures or protections with respect to the information of such individuals under any applicable privacy or data security law, but excluding matters for which Convergint has agreed to indemnify Customer from and against third party claims for copyright and trade secret infringement under the terms of the End User License Agreement for the Software between Convergint and Customer. Notwithstanding the foregoing, Customer and Convergint agree that Liabilities suffered by a third party (other than an affiliate of Convergint) which are an element of loss subject to indemnification under this paragraph shall be deemed direct damages.

SECTION 10. DISPUTES

In the event of any dispute between Convergint and Customer, Convergint and Customer shall first attempt to resolve the dispute in the field, but if that is not successful, then in a meeting between authorized officers of each company. If settlement attempts are not successful, then the dispute shall be decided exclusively by arbitration. Such arbitration shall be conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect and shall be a final binding resolution of the issues presented between the parties. The prevailing party shall be entitled to recover its reasonable attorneys' fees and costs.

SECTION 11. MISCELLANEOUS

Neither party to this Agreement shall assign this Agreement without the prior written consent of the other party hereto. Convergint may assign this Agreement to any of its parents, subsidiaries or affiliated companies or any entity majority owned by Convergint.

Notices shall be in writing and addressed to the other party, in accordance with the names and addresses of the parties as shown above. All notices shall be effective upon receipt by the party to whom the notice was sent.

A waiver of the terms hereunder by one party to the other party shall not be effective unless in writing and signed by a person with authority to commit the Customer or Convergint and delivered to the non-waiving party according to the notice provision herein. No waiver by Customer or Convergint shall operate as a continuous waiver, unless the written waiver specifically states that it is a continuous waiver of the terms stated in that waiver.

The Sections regarding invoicing, warranty, and indemnity, and disputes shall survive the termination of this Agreement.

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Convergint
7678 SW Mohawk St, Bldg K,
Tualatin, Oregon 97062
Phone (503) 228-8522
Fax (503) 228-8521
www.convergint.com

Mass Notification VE Proposal (ALERTUS)

Date: April 10, 2023

Quotation #: JM03518648P

From:
Jon Mandoli
Business Development
Life Safety Systems
jon.mandoli@convergint.com
503-980-8706

Project: Clackamas County Courthouse

Reference: Clackamas County Courthouse Mass Notification System – Provision of the Mass Notification beacons, duress, panic, emergency assistance and shelter in place buttons, IP input/output relays and integration with the existing ALERTUS system.

On behalf of Convergint's global network of colleagues, I would like to personally thank you for providing Convergint with the opportunity to present this proposal addressing your mass notification needs. We are confident that this proven solution is both comprehensive and customized to meet your needs today, and in the future.

Convergint's reputation for service excellence is backed by a foundational commitment to our core value of service, and we have been recognized as the #1 Systems Integrator by SDM Magazine. This recognition reflects the strong relationships Convergint has developed with the industry's top technology manufacturers, and our history of success with providing exceptional service to our customers.

Our guiding principle has always been to be our customers' best service provider. Our dedicated and certified team of professionals strives to uphold our customer-focused, service-based mission to make a daily difference for our customers. After achieving a successful on-time and on-budget project installation, Convergint will provide you with the industry's best ongoing service, including our 24/7 customer portal iCare, designed to track service work orders, project progress, and provide you with detailed metric reporting for continuous improvement.

The following mass notification proposal is specifically designed to meet your needs. As your single point of contact, please feel free to contact me with any additional questions you may have. Thank you again for trusting Convergint as your partner.

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Scope of Work

Mass Notification System

- This proposal is based on a value engineered design and scope derived from the Clackamas County design and construction standards (DCS) for the New Courthouse Replacement Project. Convergint Technologies has reviewed the DCS and prepared a system layout illustrating our interpretation of the DCS requirements applied to this project. To eliminate duplication of speakers throughout the building, we propose to integrate the employee notification paging system with the mass notification (ALERTUS) platform. Alertus messages will broadcast over the paging system speakers. This solution is, therefore, dependent on Convergint Technologies performing both the paging system and ALERTUS scopes of work. Please see the attached proposed layout at the end of this proposal. Convergint will furnish equipment specified, start-up, test and certify the following:

    - **Alertus Beacons** – The Alert Beacon® is an innovative audible-visual notification device that attracts attention with sounder and flashing strobes, while a large text display informs building occupants of the emergency and instructs them how to respond. The units are typically wall-mounted in high visibility areas, such as lobbies, front offices, prominent spaces, and by elevators and stairways. Alert Beacons are zone-able to enable safety officials to notify specific areas, buildings, and corridors.
    - **Alertus Hardwired Assistance Needed Under Desk Buttons –** Immediate, easy, single-point activation for emergency notification.
    - **Alertus Hardwired Assistance Needed Wall Buttons –** Immediate, easy, single-point activation for emergency notification.
    - **Alertus Hardwired Shelter in Place Buttons –** Immediate, easy, single-point activation for emergency notification.
    - **Alertus Hardwired Evacuate Buttons –** Immediate, easy, single-point activation for emergency notification.
    - **Alertus IP Relay Input Module –** Means of connecting up to 16 dry contact input devices such as Hardwired Buttons.
    - **Alertus IP Relay Output Module –** Means of generating up to 16 dry contact outputs for integrating to external equipment such as paging system.

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Performance Matrix

The following checklist is intended to describe the major performance items being provided by Convergint for this project. This checklist is not intended to be a comprehensive list of all performance items.

YES	NO	PERFORMANCE ITEM	YES	NO	PERFORMANCE ITEM
☒	☐	Material (listed in the BOM)	☐	☒	Wire
☒	☐	Freight (prepaid)	☐	☒	Installation of Wire
☐	☒	Applicable Taxes	☐	☒	Installation of Conduit, Boxes and Fittings
☐	☒	FA Permit and Plan Review Fees	☐	☒	Installation of Bridal Rings
☐	☒	Electrical Installation Permit	☐	☒	Mounting/ Termination of Proposed Devices
☒	☐	System Engineering	☐	☒	Terminal Cabinets
☒	☐	Drawings	☐	☒	Installation of Terminal Cabinets
☐	☒	System Programming	☐	☒	Specialty Backboxes
☒	☐	Testing of all Proposed Devices	☐	☒	Installation of Specialty Backboxes
☒	☐	One Year Warranty on Parts	☐	☒	Installation of Control Equipment Enclosures
☒	☐	One Year Warranty on Labor	☐	☒	Termination of Control Equipment Enclosures
☐	☒	Owner Training	☐	☒	Patch and Paint
☒	☐	Record (as- built) Documentation	☐	☒	System Software & Licenses (existing)
☒	☐	O&M Manuals	☐	☒	120VAC Power and Fused Disconnect Switch
☐	☒	System Meets Plans/ Drawings	☐	☒	Correction of Wiring Faults Caused by Others
☒	☐	System is Design- Build	☐	☒	Managed POE Switches

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Bill of Material

The following bill of materials in intended to describe the scope of work/equipment provided by Convergint for this project by identifying major device and panel quantities. This bill of material is not intended to be a comprehensive list of all system parts, components or accessories.

Line#	Quantity	Part Number	Description	Manufacturer
1	105.00	AAB-E-YL	Hardware, Alert Beacon w/PoE - Yellow	Alertus Technologies
2	52.00	AAB-N-C	Panic Button, Emergency Button - Hardwired (Custom) - Color and Wording	Alertus Technologies
3	118.00	270R	HOLD UP SEL.LTCH/MOM DPDT PLST	Honeywell
4	15.00	ALR-IPR16-I	Panic Button, IP Relay - 16 Port Input	Alertus Technologies
5	22.00	MNS-IPR	Hardware, IP Relay	Alertus Technologies
6	1.00	AUD-IPAVA	Text To Speech, Integration Module to interface w/third-party devices - PA/Fire Evac/Giant Voice Interface (Includes Alert Beacon)	Alertus Technologies
7	1.00	PRO-IMP-3MO	Professional Services, Implementation Period: [3] months following receipt of order; Proposed Implementation Meetings: [2] hours per week; After the Implementation Period has elapsed, you may purchase additional months of implementation services as ne	Alertus Technologies

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Bid Qualification

This proposal is based upon the information provided to Convergint. Please carefully review this "Bid Qualification" section and verify any additional service and/ or equipment related to this proposal and the provision of a complete and operating system.

Value Engineered Proposal – as no project specifications or drawings are available to define the scope of work, this proposal is based on a value engineered interpretation of the general provisions identified in the Clackamas County Design and Construction Standards issued for this project. The scope of provisions included are defined herein.

Spec Section:	NA	**Section Name(s):**	NA
Drawing Date:	Jan 10, 2022	**Drawing Sheets:**	Cost Estimate Set #2
Addendums:	NA	**Schedule:**	NA
Other/ General:	Clackamas County Design and Construction Standards		

Clarifications:

1. Electronic ACAD files shall be provided to Convergint for use in creating submittal drawings at no additional cost.
2. Proposal is provided in accordance with the attached Terms & Conditions. Project specific Terms & Conditions are subject to mutually agreeable negotiations.
3. Customer acknowledges that supply-chain and shipping difficulties may result in unavoidable delays in deliveries of materials despite timely placement of orders and efforts by Convergint and its suppliers to avoid such delays. Customer agrees to provide Convergint with reasonable extensions of time to the extent of any such delays and Convergint agrees to make reasonable efforts to avoid or minimize such delays. Customer further acknowledges that the above-referenced supply-chain and shipping difficulties may result in unanticipated increases to Convergint's proposal pricing on products covered by this quote or any resulting agreement and that such increases may occur between the time this quote is provided, or any resulting contract is executed and the time when Convergint actually purchases the products covered by this quote or a resulting agreement. Customer agrees that it will pay any such increase in Convergint's initial pricing of obtaining the products above the proposal pricing upon which the quote or agreement was based, by change order or otherwise, and Convergint agrees that it shall make commercially reasonable efforts to minimize any such increase.
4. Proposal pricing is based on continuous progression of the scope of work in a single phase estimated to be complete by 12/31/2024. No project schedule has been published for the project. Schedule extension, compression or fragmentation will result in a change order request to modify contract price.
5. All work proposed herein, shall be performed during normal business hours Monday through Friday 8:00 am - 5:00 pm.
6. The lead electrician performing the installation shall attend and assist with system testing.
7. Customer to provide suitable managed ethernet POE switches and network infrastructure.
8. Customer to provide a secured staging & storage area for project related materials.
9. Twenty-five percent (25%) of the proposed sell price shall be payable to Convergint for project mobilization. Mobilization shall be invoiced and due upon customer acceptance of this proposal.
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11. Anything in in the Contract Documents notwithstanding, in no event shall either Contractor or Subcontractor be liable for special, indirect, incidental, or consequential damages, including commercial loss, loss of use, or lost profits, even if either party has been advised of the possibility of such damages.

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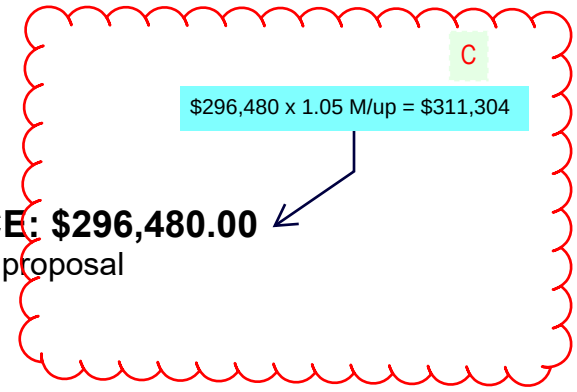
Excludes:

1. Scope of work excludes provision and/or installation of cable, wire, conduit, raceways, and associated electrical hardware.
2. Excludes proposed equipment assembly, mounting and termination.
3. Electrical installation permits / fees are excluded.
4. Provision or installation of network or network managed POE switches, network connectivity and associated infrastructure are excluded.
5. Correction of wiring faults (opens, shorts, grounds or polarity) or other improper installation are excluded. Convergint will identify any installation issues upon discovery and provide direction to facilitate efficient resolution.
6. Excludes labor that may be required due to delays experienced from supporting trades.
7. Cost for Payment & Performance bond are not included. If necessary, actual cost will apply. Proof of bonding capacity available upon request.
8. Any provision for OCIP or CCIP-type insurance programs are excluded. Convergint does not pay per project insurance premiums, and we cannot provide any cost credit for these types of insurance programs.
9. Excludes provision of any scope not described above.



CONVERGINT TOTAL PROJECT PRICE: $296,480.00

*Price is valid for 30 days from the date on this proposal

Thank you for considering our proposal. If you have any questions or would like additional information, please don't hesitate to contact me immediately. If you would like us to proceed with the scope of work as outlined in this proposal, please sign below and return to me at jon.mandoli@convergint.com.

Sincerely,

Jonathan Mandoli
Business Development Manager
Fire Alarm & Life Safety System

By signing below, I accept this proposal and agree to the Terms and Conditions V1.12 dated June 2020 contained herein.

CUSTOMER NAME	**DATE**
AUTHORIZED SIGNATURE	**PRINTED NAME / TITLE**

C

Throughout this Installation Proposal, the term, "Convergint" refers to the Convergint Technologies affiliate operating in the state/province in which the work is being performed.

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Convergint agrees in accordance with the mutually agreed project schedule:

a. To submit shop drawings, product data, samples and similar submittals if required in performing the Work;
b. To pay for all labor, materials, equipment, tools, supervision, programming, testing, startup and documentation required to perform the Work in accordance with the Agreement;
c. Secure and pay for permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work, unless local regulations provide otherwise; and
d. Hire subcontractors and order material to perform part of the Work, if necessary, while remaining responsible for the completion of theWork.

Customer agrees in accordance with the mutually agreed project schedule, and at no cost to Convergint:

a. To promptly approve submittals provided by Convergint;
b. To provide access to all areas of the facility which are necessary to complete the Work;
c. To supply suitable electrical service as required by Convergint;and
d. That in the event of any emergency or systems failure, reasonable safety precautions will be taken by Customer to protect life and property during the period of time from when Convergint is first notified of the emergency or failure and until such time that Convergint notifies the Customer that the systems are operational or that the emergency has cleared.

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Pricing and amounts proposed shall remain valid for 30 days unless otherwise specified. Price includes only the material listed based on Convergint's interpretation of plans and specifications unless noted otherwise. Additional equipment, unless negotiated prior to order placement, will be billed accordingly. Sales taxes, (and in Canada GST/PST) and any other taxes assessed on Customer shall be added to the price upon invoice to Customer.

SECTION 3. INVOICE REMITTANCE AND PAYMENT

If the Work is performed over more than a month, Convergint will invoice Customer each month for the Work performed during the previous month. Customer agrees to pay the amount due to Convergint as invoiced, within thirty (30) days of the date of such invoice. If the Work is completed in less than one month, Customer agrees to pay Convergint in full after the Work has been performed within thirty (30) days of the date of being invoiced. Invoices shall not include or be subject to a project retention percentage. If Customer is overdue in any payment to Convergint, Convergint shall be entitled to suspend the Work until paid, and charge Customer an interest rate 1 and 1/2% percent per month, (or the maximum rate permitted by law, whichever is less), and may avail itself of any other legal or equitable remedy. Customer shall reimburse Convergint costs incurred in collecting any amounts that become overdue, including attorney fees, court costs and any other reasonable expenditure.

SECTION 4. WARRANTY

Convergint provides the following SOLE AND EXCLUSIVE warranty to the Customer:

For the period of one (1) year, commencing at the earlier of substantial completion of the Work, or first beneficial use, ("Warranty Period"):

a. That Work performed under this Agreement will be ofgood quality;
b. That all equipment will be new unless otherwise required or permitted by this Agreement;
c. That the Work will be free from defects not inherent in the quality required or permitted; and
d. That the Work will conform to the requirements ofthis Agreement.

The Customer's sole remedy for any breach of this warranty is that Convergint shall remove, replace and/or repair at its own expense any defective or improper Work, discovered within the Warranty Period, provided Convergint is notified in writing of any defect within the Warranty Period.

Any equipment or products installed by Convergint in the course of performing the Work hereunder shall only carry such warranty as is provided by the manufacturer thereof, which Convergint hereby assigns to Customer without recourse to Convergint. Upon request of Customer, Convergint will use commercially reasonable efforts to assist Customer in enforcing any such third-party warranties. This warranty excludes remedy for damage or defect caused by abuse, modifications not executed by Convergint, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage. NO FURTHER WARRANTIES OR GUARANTIES, EXPRESS OR IMPLIED, ARE MADE WITH RESPECT TO ANY GOODS OR SERVICES PROVIDED UNDER THIS AGREEMENT, AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED.

SECTION 5. CHANGES

Without invalidating this Agreement or any bond given hereunder, Customer or Convergint may request changes in the Work. Any changes to the Agreement shall be in writing signed by both Customer and Convergint. If Customer orders any additional work or causes any material interference with Convergint's performance of the Work, Convergint shall be entitled to an equitable adjustment in the time for performance and in the Agreement Price, including a reasonable allowance for overhead and profit.

SECTION 6. FORCE MAJEURE

Neither Customer nor Convergint shall be responsible or liable for, shall incur expense for, or be deemed to be in breach of this Agreement because of any delay in the performance of their respective obligations pursuant to this Agreement due solely to circumstances beyond their reasonable control ("Force Majeure") and without the fault or negligence of the party experiencing such delay. A Force Majeure event shall include, but not be limited to: accident, fire, storm, water, flooding, negligence, vandalism, power failure, installation of incompatible equipment, improper operating procedures, source current fluctuations or lighting. If performance by either party is delayed due to Force Majeure, the time for that performance shall be extended for a period of time reasonably necessary to overcome the effect of the delay. Any Services required by Convergint due to reasons set forth in this Force Majeure Section shall be charged to Customer in addition to any amounts due under this Agreement.

SECTION 7. INSURANCE

Convergint shall have the following insurance coverage during the term of this Agreement, and shall provide certificates of insurance to the Customer prior to beginning work hereunder:

Worker's Compensation	Statutory Limits
Employer's Liability	$1,000,000 per occurrence /aggregate
Commercial General Liability	$1,000,000 per occurrence/aggregate
	$2,000,000 general aggregate
Automobile Liability	$1,000,000 per occurrence/aggregate
Excess/Umbrella Liability	$10,000,000 per occurrence/aggregate

All insurance policies carried by Convergint shall be primary to and noncontributory with the insurance afforded to Customer and shall name the Customer as "additional insured", with respect to liability arising out of work performed by Convergint, as applicable, but only to the extent of liabilities falling within the indemnity obligations of Convergint, pursuant to the terms of this Agreement. Convergint shall provide to the Customer no less than thirty (30) days' notice prior to the termination or cancellation of any such insurance policy.

SECTION 8. INDEMNIFICATION

Convergint shall indemnify and hold Customer harmless from and against claims, damages, losses and expenses, attributable to bodily injury, sickness, disease or death, or to destruction of tangible property, but only to the extent caused by: a) the negligent or willful acts or omissions of Convergint or Convergint's employees or subcontractors while on Customer's site, or b) the malfunction of the equipment supplied by Convergint, or c) Convergint's breach of this Agreement.

IN NO EVENT SHALL EITHER CONVERGINT OR CUSTOMER BE LIABLE TO THE OTHER PARTY HERETO FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING COMMERCIAL LOSS, LOSS OF USE OR LOST PROFITS, EVEN IF THAT PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL CONVERGINT BE LIABLE TO CUSTOMER FOR ANY AMOUNTS IN EXCESS OF THE AMOUNTS PAID BY CUSTOMER TO CONVERGINT.

It is understood and agreed by the parties hereto that Convergint is or may be providing intrusion products which are designed to provide notification of certain events but are not intended to be guarantees or insurers against any acts for which they are supposed to monitor or inform. Convergint's indemnification obligation pursuant to Section 8 herein, does not apply to the extent the loss indemnified against is caused by any intrusion product or software provided by but not manufactured by Convergint. Convergint shall have **no** liability to Customer for any losses to the extent such losses are caused by the intrusion product or software. Customer shall indemnify, defend, and hold harmless Convergint, from and against all claims, lawsuits, damages, losses and expenses by persons not a party to this Agreement, but only to the extent caused by such intrusion product or software provided by but not manufactured by Convergint.

SECTION 9. COMPLIANCE WITH LAW, SAFETY, & HAZARDOUS MATERIALS

This Agreement shall be governed and construed in accordance with the laws of the state/province in which the Work is being performed. Convergint agrees to comply with all laws and regulations relating to or governing its provision of the Work. Convergint shall comply with all safety related laws and regulations and with the safety program of the Customer, provided such program is supplied to Convergint prior to beginning work.

In the event that Convergint discovers or suspects the presence of hazardous materials, or unsafe working conditions at Customer's facility where the Work is to be performed, Convergint is entitled to stop the Work at that facility if such hazardous materials, or unsafe working conditions were not provided by or caused by Convergint. Convergint in its sole discretion shall determine when it is "safe" to return to perform the Work at Customer's facility. Convergint shall have no responsibility for the discovery, presence, handling, removing or disposal of or exposure of persons to hazardous materials in any form at the Customer's facility. Customer shall indemnify and hold harmless Convergint from and against claims, damages, losses and expenses, including but not limited to, reasonable attorney's fees, arising out of or resulting from undisclosed hazardous materials, or unsafe working conditions at Customer's facility.

Customer acknowledges that applicable law or regulation may limit Customer's rights and impose obligations with respect to information or data obtained using software capable of obtaining what may in certain circumstances be characterized as biometric information (individually and collectively, the "Software") and agrees that Customer is solely responsible to ensure its own compliance with such laws or regulations. Customer shall completely indemnify, defend (including pay attorneys' fees and disbursements), and hold harmless Convergint, its affiliates, and any employees, agents, contractors or representatives of any of the foregoing from and against any and all losses, liability, damages, penalties, expenses, claims, demands, actions, or causes of action, judgments (finally awarded) or settlements (individually and collectively, "Liabilities") arising from or related to any intentional or negligent acts or omissions of Customer or any of its agents, affiliates, employees, or representatives arising from or related to the Software, any hardware, software, or other services associated with the Software, or the use of any of the foregoing by or on behalf of Customer, including but not limited to those arising from or related to Customer's failure to comply with applicable laws or regulations related to its use of the Software or any hardware, software, or other services associated with the Software, including but not limited to the Customer's failure to obtain any necessary consents from affected individuals or provide any necessary disclosures or protections with respect to the information of such individuals under any applicable privacy or data security law, but excluding matters for which Convergint has agreed to indemnify Customer from and against third party claims for copyright and trade secret infringement under the terms of the End User License Agreement for the Software between Convergint and Customer. Notwithstanding the foregoing, Customer and Convergint agree that Liabilities suffered by a third party (other than an affiliate of Convergint) which are an element of loss subject to indemnification under this paragraph shall be deemed direct damages.

SECTION 10. DISPUTES

In the event of any dispute between Convergint and Customer, Convergint and Customer shall first attempt to resolve the dispute in the field, but if that is not successful, then in a meeting between authorized officers of each company. If settlement attempts are not successful, then the dispute shall be decided exclusively by arbitration. Such arbitration shall be conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect and shall be a final binding resolution of the issues presented between the parties. The prevailing party shall be entitled to recover its reasonable attorneys' fees and costs.

SECTION 11. MISCELLANEOUS

Neither party to this Agreement shall assign this Agreement without the prior written consent of the other party hereto. Convergint may assign this Agreement to any of its parents, subsidiaries or affiliated companies or any entity majority owned by Convergint.

Notices shall be in writing and addressed to the other party, in accordance with the names and addresses of the parties as shown above. All notices shall be effective upon receipt by the party to whom the notice was sent.

A waiver of the terms hereunder by one party to the other party shall not be effective unless in writing and signed by a person with authority to commit the Customer or Convergint and delivered to the non-waiving party according to the notice provision herein. No waiver by Customer or Convergint shall operate as a continuous waiver, unless the written waiver specifically states that it is a continuous waiver of the terms stated in that waiver.

The Sections regarding invoicing, warranty, and indemnity, and disputes shall survive the termination of this Agreement.

E

CHANGE NOTICE

CCN #	**CREDIT - CAT5e**
Date:	6/13/2023
Project Name:	Clackamas County Courthouse
Project Number:	180879
Contract #:	180830-1DT
Page Number:	1

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave
Portland, OR 97210
Telephone: 503.349.9885
Contact: Beau Collins
E-mail: Beau.Collins@isg-group.com

Client Address:

Contact: Darin Miller
1000 Courthouse RD
Oregon City, Oregon 97045
Telephone: 760.473.1394
Contact: Darin Miller
E-mail: dmiller@pcl.com

Work Description

SCOPE OF WORK

CREDIT
(234) Cat5e from 2 data outlets
(47) Cat5e from 2 data floor outlets

We reserve the right to correct this quote for errors and omissions.

This quote covers direct costs only and we reserve the right to claim for impact and consequential costs.
This price is good for acceptance within **10** days from the date of receipt.
We request a time extension of **3** days.
We will supply and install all materials, labor, and equipment as per your instructions on **CCN # CREDIT - CAT5e.**

Itemized Breakdown

Description	Qty	Trade Price	U	Total Mat.	Total Hrs.
Cable Label Horizontal	-562	8.38	C	-47.10	-2.25
4 Pair Closet Termination	-281	0.00	E	-0.00	-25.29
CommScope - Cat5e plenum, blue - CS24P BLU	-59,010	239.55	M	-14,135.85	-236.04
CommScope - Cat5e Jack, blue - UNJ500-BL	-281	4.77	E	-1,340.37	-25.29
Dress Cables In Closet (per 100)	-281	0.00	E	-0.00	-28.10
Level IV Test (LINK)	-281	0.00	E	-0.00	-47.77
Totals	**-60,696**			**-15,523.31**	**-364.74**

ORIGINAL

work so long as the rate is consistent with the "Cat5e Reduction" scope. NECA has the same rate for Cat6 and Cat5e

11/10/23: OEG "As stated before, these labor productivity rates need to remain as is due to the fact that the installations are not the same. One is for pulling a grouping of cables at the same time and one is for pulling a single cable. NECA1 productivity for this cable is 14 hours per thousand feet and both installations are less than half of that value. I would understand if we were trying to charge NECA1 values for the add and way less for the deduct, but the fact that even the paging labor productivity is so low implies that we are using historical data to establish these rates. We cannot change this." E

CHANGE NOTICE

CCN #	**CREDIT - CAT5e**
Date:	6/13/2023
Project Name:	Clackamas County Courthouse
Project Number:	180879
Contract #:	180830-1DT
Page Number:	2

Client Address:

1000 Courthouse RD
Oregon City, Oregon 97045

Portland, OR 97210

ok

Labor rates differ due to different scopes. Paging cabling is 1 cable to speakers whereas CAT5e credit is multiple cables pulled at the same time.

estimating time for the deduct

Labor is lower than NECA1 and not consistent with labor for additive works in other parts of this CCP

what is this indirect labor? Why is it an additive cost.

Summary

MATERIAL		
General Materials		-15,523.31
Total Material		**-15,523.31**
LABOR		
WORKING FOREMAN - LEA	(-72.95 Hrs @ $99.66)	-7,270.20
JOURNEYMAN TECH	(-145.90 Hrs @ $92.26)	-13,460.73
APPRENTICE - LEA (4TH)	(-145.90 Hrs @ $85.20)	-12,430.68
Indirect Labor		183.54
Total Labor		**-32,978.07**
Total Material & Labor		**-48,501.38**
Subtotal		**-48,501.38**

ok → Markup on this scope reduction is not required. Could also not be required for the sound masking credit either, but was provided as the sound masking credit is for the entire removal of this work scope from OEG's subcontract.

Missing Mark up (@15.000%)

Final Amount E **$-48,501.38**

CLIENT ACCEPTANCE

CCN #	**CREDIT - CAT5e**
Final Amount:	**$-48,501.38**

Name: _____

Date: _____

Signature: _____

Change Order #: _____

I hereby accept this quotation and authorize the contractor to complete the above described work.

ORIGINAL

Exhibit 2

Attachment B – Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation

THIS OPERATIONS AND MAINTENANCE SCOPE IS EXCLUDED, AT THE COUNTY'S REQUEST, FROM THIS CHANGE PROPOSAL

Honeywell

Date: July 17, 2023

Type of Change: CCP#005 – County Requirement Change Request - Pursuant to Section 7.12 – **Electrical and IT Change Request Response**

Subject: The County is requesting various changes across the Courthouse program to create departmental efficiencies and further increase operational safety.

Jon:

Pursuant to Section 3.1 Changes (a) Facilities Coordination Review and Approval Confirmation, Honeywell is acknowledging that the change **"CCP#005 – Electrical and IT Change Request Response - Pursuant to Section 7.12"** does not create an operability, reliability, or longevity issue for the Service Contractor.

This change being requested will affect the OPEX or CAPEX for Clackamas County Circuit Courthouse Project.

- OPEX = **$191,830** (all taxes included) Annual Maintenance of the asset, funding to over parts and labor to ensure the asset is operational (O&M). Annual Maintenance of the asset, funding to cover parts and labor to ensure the asset is operational (O&M)
    - For this item 1.5% per year is calculated for the term to cover off this expense as an average

- CAPEX = **$484,976** (all taxes included) Replacement or major repairs/ refreshment of the asset with a schedule is established to ensure the asset does not become obsolete and should the asset fail early a budget to replace the item. (Life Cycle).

In order to keep costs down we used 16 year for the replacement of the system. This was determined by looking at the warranty period for the system and then doubling this value and after this period the system will start to create issues that should be covered by the OPEX funding for several years. As all electronic equipment you usually with some general maintenance can keep the systems running for between 12 to 16 years before you need to do a full replacement. This system is also tying to the County and they may have a different Lifecyle schedule that we need to match to so this timing may need to be changed and or add more cycles to align with their current plan.

The total funding of both OPEX and CAPEX is to be established to ensure there is enough funding available to service and repair the asset over the life of the project (30 years)

Scope of Work

Four Systems:
1. Fire Alarm
2. Paging
3. Alertus (doesn't have its own speakers – must utilize paging or fire alarm)
4. Intercom System (detention only)

THIS OPERATIONS AND MAINTENANCE SCOPE IS EXCLUDED, AT THE COUNTY'S REQUEST, FROM THIS CHANGE PROPOSAL

Technical Submission:

1. **Fire Alarm**
2. **Paging** System, announces over fire alarm speakers (voip integration)
3. **Alertus** system, announces over fire alarm speakers
4. Intercom System (detention only)

Design Development & Discovery:

A. County wants Alertus system to be tied into campus wide Alertus system. Not at project requirement but a want.
   a. To integrate Court Alertus with Campus Alertus, code will not allow Alertus and fire alarm to be tied together.
B. County doesn't not want exterior mass notification via Alertus or any other system. Though is a requirement currently.

Proposed Development:

1. **Fire Alarm** – standalone system with dedicated speakers, no connection to County wide system
2. **Paging** – standalone system with dedicated speakers
3. **Alertus** – tied into campuswide **Alertus** system, announces over **Paging** Speakers:
   a. Remove external speaker array
   b. Remove servers and networking devices
   c. Reduce overall device count
4. Intercom System (detention only)

Regards,

Dennis Crawford

Dennis Crawford

P3 Operations Leader
Honeywell Building Solutions
4411 6 Street S.E., Suite 100
Calgary, Alberta T2G 4E8
Office – 403 -221-2184
Dennis.Crawford@honeywell.com

Honeywell

Project	Clackamas County Circuit Courthouse
Address:	2051 Kaen Road Oregon City, OR 97045
July 19, 2023	Change Order #005 - Electrical and IT Change Request Response
ProjectCo	Fengate Capital Management

Maintenance	Cost
Paging System	$313,663.50
Sound Masking	($58,020.30)
Alertus System	($75,280.05)
CAT5e	($21,825.45)
Administration/Management	$15,853.77
Mark Up	$17,439.15
Sub Total Install	**$191,830.62**

Renewal	Cost
Paging System	$745,531.00
Sound Masking	($128,934.00)
Alertus System	($167,289.00)
CAT5e	($48,501.00)
Administration/Management	$40,080.70
Mark Up	$44,088.77
Sub Total Renewal	**$484,976.47**
Grand Total	**$676,807.09**

Honeywell

July 19, 2023
ProjectCo

Change Order #005 - Electrical and IT Change Request Response
Fengate Capital Management

Life Cycle and Operation costs per school	Per Instance	Total	July 2022 - 23 Mobilization	July 2023 - 24 1	July 2024 - 25 2	July 2025 - 26 3	July 2026 - 27 4	July 2027 - 28 5	July 2028 - 29 6
Maintenance: PCL Construction Paging System	$12,651.09	$379,532.84		12,651.09	12,651.09	12,651.09	12,651.09	12,651.09	12,651.09
Maintenance: Sound Masking	($2,340.15)	($70,204.56)		(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)
Maintenance: Alertus System	($3,036.30)	($91,088.86)		(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)
Maintenance: CAT5e	($880.29)	($26,408.79)		(880.29)	(880.29)	(880.29)	(880.29)	(880.29)	(880.29)
Renewal: PCL Construction Paging System	$902,092.51	$902,092.51							
Renewal: Sound Masking	($156,010.14)	($156,010.14)							
Renewal: Alertus System	($202,419.69)	($202,419.69)							
Renewal: CAT5e	($58,686.21)	($58,686.21)							
Total		**$676,807.09**	$0.00	$6,394.35	$6,394.35	$6,394.35	$6,394.35	$6,394.35	$6,394.35

July 2029 - 30 7	July 2030 - 31 8	July 2031 - 32 9	July 2032 - 33 10	July 2033 - 34 11	July 2034 - 35 12	July 2035 - 36 13	July 2036 - 37 14
12,651.09	12,651.09	12,651.09	12,651.09	12,651.09	12,651.09	12,651.09	12,651.09
(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)
(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)
(880.29)	(880.29)	(880.29)	(880.29)	(880.29)	(880.29)	(880.29)	(880.29)
$6,394.35	$6,394.35	$6,394.35	$6,394.35	$6,394.35	$6,394.35	$6,394.35	$6,394.35

July 2037 - 38 15	July 2038 - 39 16	July 2039 - 40 17	July 2040 - 41 18	July 2041 - 42 19	July 2042 - 43 20	July 2043 - 44 21	July 2044 - 45 22
12,651.09	12,651.09	12,651.09	12,651.09	12,651.09	12,651.09	12,651.09	12,651.09
(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)
(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)
(880.29)	(880.29)	(880.29)	(880.29)	(880.29)	(880.29)	(880.29)	(880.29)
	902,092.51						
	(156,010.14)						
	(202,419.69)						
	(58,686.21)						
$6,394.35	$491,370.82	$6,394.35	$6,394.35	$6,394.35	$6,394.35	$6,394.35	$6,394.35

July 2045 - 46 23	July 2046 - 47 24	July 2047 - 48 25	July 2048 - 49 26	July 2049 - 50 27	July 2050 - 51 28	July 2051 - 52 29	July 2052 - 53 30
12,651.09	12,651.09	12,651.09	12,651.09	12,651.09	12,651.09	12,651.09	12,651.09
(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)	(2,340.15)
(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)	(3,036.30)
(880.29)	(880.29)	(880.29)	(880.29)	(880.29)	(880.29)	(880.29)	(880.29)
$6,394.35	$6,394.35	$6,394.35	$6,394.35	$6,394.35	$6,394.35	$6,394.35	$6,394.35

Honeywell

Project	**Clackamas County Circuit Courthouse**
Address:	2051 Kaen Road Oregon City, OR 97045
Contact	Dennis Crawford
Contact email	Dennis.Crawford @honeywell.com
July 19, 2023	Change Order #005 - Electrical and IT Change Request Response
ProjectCo	Fengate Capital Management

Description-1	Description-2	QTY	Install	Opex	Capex	Frequency
PCL Construction	Paging System	1	$ 697,030.00	379,532.84	902,092.51	1
	Sound Masking	1	$ (128,934.00)	(70,204.56)	(156,010.14)	1
	Alertus System	1	$ (167,289.00)	(91,088.86)	(202,419.69)	1
	CAT5e	1	$ (48,501.00)	(26,408.79)	(58,686.21)	1
Sub-Total			**$ 352,306.00**	**$ 191,830.62**	**$ 484,976.47**	

		Install	Renewal
PCL Construction	Paging System	$313,663.50	$745,531.00
	Sound Masking	($58,020.30)	($128,934.00)
	Alertus System	($75,280.05)	($167,289.00)
	CAT5e	($21,825.45)	($48,501.00)
Sub Total		$158,537.70	$400,807.00
Administration/Management		$15,853.77	$40,080.70
Mark Up		$17,439.15	$44,088.77
Estimate Total		**$191,830.62**	**$484,976.47**

Total
$676,807.09

Honeywell

CHANGE ORDER ESTIMATE (OPEX)

PROJECT:	**Change Order #005 - Electrical and IT Change Request Response**
Contractor:	**Fengate Capital Management**
DATE:	**July 19, 2023**

Maintenance Payment

Month	this change add to HWL payments (2023)	Contract Period
Jul 1-31, 2025	$532.86	Year 1
Aug 1-31, 2025	$532.86	
Sep 1-30, 2025	$532.86	
Oct 1-31, 2025	$532.86	
Nov 1-30, 2025	$532.86	
Dec 1-31, 2025	$532.86	
Jan 1-31, 2026	$532.86	
Feb 1-28, 2026	$532.86	
Mar 1-31, 2026	$532.86	
Apr 1-30, 2026	$532.86	
May 1-31, 2026	$532.86	
Jun 1-30, 2026	$532.86	
Jul 1-31, 2026	$532.86	Year 2
Aug 1-31, 2026	$532.86	
Sep 1-30, 2026	$532.86	
Oct 1-31, 2026	$532.86	
Nov 1-30, 2026	$532.86	
Dec 1-31, 2026	$532.86	
Jan 1-31, 2027	$532.86	
Feb 1-28, 2027	$532.86	
Mar 1-31, 2027	$532.86	
Apr 1-30, 2027	$532.86	
May 1-31, 2027	$532.86	
Jun 1-30, 2027	$532.86	
Jul 1-31, 2027	$532.86	Year 3
Aug 1-31, 2027	$532.86	
Sep 1-30, 2027	$532.86	
Oct 1-31, 2027	$532.86	
Nov 1-30, 2027	$532.86	
Dec 1-31, 2027	$532.86	
Jan 1-31, 2028	$532.86	
Feb 1-29, 2028	$532.86	

Honeywell

Mar 1-31, 2028	$532.86	
Apr 1-30, 2028	$532.86	
May 1-31, 2028	$532.86	
Jun 1-30, 2028	$532.86	
Jul 1-31, 2028	$532.86	Year 4
Aug 1-31, 2028	$532.86	
Sep 1-30, 2028	$532.86	
Oct 1-31, 2028	$532.86	
Nov 1-30, 2028	$532.86	
Dec 1-31, 2028	$532.86	
Jan 1-31, 2029	$532.86	
Feb 1-28, 2029	$532.86	
Mar 1-31, 2029	$532.86	
Apr 1-30, 2029	$532.86	
May 1-31, 2029	$532.86	
Jun 1-30, 2029	$532.86	
Jul 1-31, 2029	$532.86	Year 5
Aug 1-31, 2029	$532.86	
Sep 1-30, 2029	$532.86	
Oct 1-31, 2029	$532.86	
Nov 1-30, 2029	$532.86	
Dec 1-31, 2029	$532.86	
Jan 1-31, 2030	$532.86	
Feb 1-28, 2030	$532.86	
Mar 1-31, 2030	$532.86	
Apr 1-30, 2030	$532.86	
May 1-31, 2030	$532.86	
Jun 1-30, 2030	$532.86	
Jul 1-31, 2030	$532.86	Year 6
Aug 1-31, 2030	$532.86	
Sep 1-30, 2030	$532.86	
Oct 1-31, 2030	$532.86	
Nov 1-30, 2030	$532.86	
Dec 1-31, 2030	$532.86	
Jan 1-31, 2031	$532.86	
Feb 1-28, 2031	$532.86	
Mar 1-31, 2031	$532.86	
Apr 1-30, 2031	$532.86	
May 1-31, 2031	$532.86	
Jun 1-30, 2031	$532.86	
Jul 1-31, 2031	$532.86	Year 7
Aug 1-31, 2031	$532.86	
Sep 1-30, 2031	$532.86	
Oct 1-31, 2031	$532.86	
Nov 1-30, 2031	$532.86	

Honeywell

Dec 1-31, 2031	$532.86	
Jan 1-31, 2032	$532.86	
Feb 1-29, 2032	$532.86	
Mar 1-31, 2032	$532.86	
Apr 1-30, 2032	$532.86	
May 1-31, 2032	$532.86	
Jun 1-30, 2032	$532.86	
Jul 1-31, 2032	$532.86	Year 8
Aug 1-31, 2032	$532.86	
Sep 1-30, 2032	$532.86	
Oct 1-31, 2032	$532.86	
Nov 1-30, 2032	$532.86	
Dec 1-31, 2032	$532.86	
Jan 1-31, 2033	$532.86	
Feb 1-28, 2033	$532.86	
Mar 1-31, 2033	$532.86	
Apr 1-30, 2033	$532.86	
May 1-31, 2033	$532.86	
Jun 1-30, 2033	$532.86	
Jul 1-31, 2033	$532.86	Year 9
Aug 1-31, 2033	$532.86	
Sep 1-30, 2033	$532.86	
Oct 1-31, 2033	$532.86	
Nov 1-30, 2033	$532.86	
Dec 1-31, 2033	$532.86	
Jan 1-31, 2034	$532.86	
Feb 1-28, 2034	$532.86	
Mar 1-31, 2034	$532.86	
Apr 1-30, 2034	$532.86	
May 1-31, 2034	$532.86	
Jun 1-30, 2034	$532.86	
Jul 1-31, 2034	$532.86	Year 10
Aug 1-31, 2034	$532.86	
Sep 1-30, 2034	$532.86	
Oct 1-31, 2034	$532.86	
Nov 1-30, 2034	$532.86	
Dec 1-31, 2034	$532.86	
Jan 1-31, 2035	$532.86	
Feb 1-28, 2035	$532.86	
Mar 1-31, 2035	$532.86	
Apr 1-30, 2035	$532.86	
May 1-31, 2035	$532.86	
Jun 1-30, 2035	$532.86	
Jul 1-31, 2035	$532.86	Year 11
Aug 1-31, 2035	$532.86	

Sep 1-30, 2035	$532.86	
Oct 1-31, 2035	$532.86	
Nov 1-30, 2035	$532.86	
Dec 1-31, 2035	$532.86	
Jan 1-31, 2036	$532.86	
Feb 1-29, 2036	$532.86	
Mar 1-31, 2036	$532.86	
Apr 1-30, 2036	$532.86	
May 1-31, 2036	$532.86	
Jun 1-30, 2036	$532.86	
Jul 1-31, 2036	$532.86	Year 12
Aug 1-31, 2036	$532.86	
Sep 1-30, 2036	$532.86	
Oct 1-31, 2036	$532.86	
Nov 1-30, 2036	$532.86	
Dec 1-31, 2036	$532.86	
Jan 1-31, 2037	$532.86	
Feb 1-28, 2037	$532.86	
Mar 1-31, 2037	$532.86	
Apr 1-30, 2037	$532.86	
May 1-31, 2037	$532.86	
Jun 1-30, 2037	$532.86	
Jul 1-31, 2037	$532.86	Year 13
Aug 1-31, 2037	$532.86	
Sep 1-30, 2037	$532.86	
Oct 1-31, 2037	$532.86	
Nov 1-30, 2037	$532.86	
Dec 1-31, 2037	$532.86	
Jan 1-31, 2038	$532.86	
Feb 1-28, 2038	$532.86	
Mar 1-31, 2038	$532.86	
Apr 1-30, 2038	$532.86	
May 1-31, 2038	$532.86	
Jun 1-30, 2038	$532.86	
Jul 1-31, 2038	$532.86	Year 14
Aug 1-31, 2038	$532.86	
Sep 1-30, 2038	$532.86	
Oct 1-31, 2038	$532.86	
Nov 1-30, 2038	$532.86	
Dec 1-31, 2038	$532.86	
Jan 1-31, 2039	$532.86	
Feb 1-28, 2039	$532.86	
Mar 1-31, 2039	$532.86	
Apr 1-30, 2039	$532.86	
May 1-31, 2039	$532.86	

Jun 1-30, 2039	$532.86	
Jul 1-31, 2039	$532.86	Year 15
Aug 1-31, 2039	$532.86	
Sep 1-30, 2039	$532.86	
Oct 1-31, 2039	$532.86	
Nov 1-30, 2039	$532.86	
Dec 1-31, 2039	$532.86	
Jan 1-31, 2040	$532.86	
Feb 1-29, 2040	$532.86	
Mar 1-31, 2040	$532.86	
Apr 1-30, 2040	$532.86	
May 1-31, 2040	$532.86	
Jun 1-30, 2040	$532.86	
Jul 1-31, 2040	$532.86	Year 16
Aug 1-31, 2040	$532.86	
Sep 1-30, 2040	$532.86	
Oct 1-31, 2040	$532.86	
Nov 1-30, 2040	$532.86	
Dec 1-31, 2040	$532.86	
Jan 1-31, 2041	$532.86	
Feb 1-29, 2041	$532.86	
Mar 1-31, 2041	$532.86	
Apr 1-30, 2041	$532.86	
May 1-31, 2041	$532.86	
Jun 1-30, 2041	$532.86	
Jul 1-31, 2041	$532.86	Year 17
Aug 1-31, 2041	$532.86	
Sep 1-30, 2041	$532.86	
Oct 1-31, 2041	$532.86	
Nov 1-30, 2041	$532.86	
Dec 1-31, 2041	$532.86	
Jan 1-31, 2042	$532.86	
Feb 1-29, 2042	$532.86	
Mar 1-31, 2042	$532.86	
Apr 1-30, 2042	$532.86	
May 1-31, 2042	$532.86	
Jun 1-30, 2042	$532.86	
Jul 1-31, 2042	$532.86	Year 18
Aug 1-31, 2042	$532.86	
Sep 1-30, 2042	$532.86	
Oct 1-31, 2042	$532.86	
Nov 1-30, 2042	$532.86	
Dec 1-31, 2042	$532.86	
Jan 1-31, 2043	$532.86	
Feb 1-29, 2043	$532.86	

Mar 1-31, 2043	$532.86	
Apr 1-30, 2043	$532.86	
May 1-31, 2043	$532.86	
Jun 1-30, 2043	$532.86	
Jul 1-31, 2043	$532.86	Year 19
Aug 1-31, 2043	$532.86	
Sep 1-30, 2043	$532.86	
Oct 1-31, 2043	$532.86	
Nov 1-30, 2043	$532.86	
Dec 1-31, 2043	$532.86	
Jan 1-31, 2044	$532.86	
Feb 1-29, 2044	$532.86	
Mar 1-31, 2044	$532.86	
Apr 1-30, 2044	$532.86	
May 1-31, 2044	$532.86	
Jun 1-30, 2044	$532.86	
Jul 1-31, 2044	$532.86	Year 20
Aug 1-31, 2044	$532.86	
Sep 1-30, 2044	$532.86	
Oct 1-31, 2044	$532.86	
Nov 1-30, 2044	$532.86	
Dec 1-31, 2044	$532.86	
Jan 1-31, 2045	$532.86	
Feb 1-29, 2045	$532.86	
Mar 1-31, 2045	$532.86	
Apr 1-30, 2045	$532.86	
May 1-31, 2045	$532.86	
Jun 1-30, 2045	$532.86	
Jul 1-31, 2045	$532.86	Year 21
Aug 1-31, 2045	$532.86	
Sep 1-30, 2045	$532.86	
Oct 1-31, 2045	$532.86	
Nov 1-30, 2045	$532.86	
Dec 1-31, 2045	$532.86	
Jan 1-31, 2046	$532.86	
Feb 1-29, 2046	$532.86	
Mar 1-31, 2046	$532.86	
Apr 1-30, 2046	$532.86	
May 1-31, 2046	$532.86	
Jun 1-30, 2046	$532.86	
Jul 1-31, 2046	$532.86	Year 22
Aug 1-31, 2046	$532.86	
Sep 1-30, 2046	$532.86	
Oct 1-31, 2046	$532.86	
Nov 1-30, 2046	$532.86	

Dec 1-31, 2046	$532.86	
Jan 1-31, 2047	$532.86	
Feb 1-29, 2047	$532.86	
Mar 1-31, 2047	$532.86	
Apr 1-30, 2047	$532.86	
May 1-31, 2047	$532.86	
Jun 1-30, 2047	$532.86	
Jul 1-31, 2047	$532.86	Year 23
Aug 1-31, 2047	$532.86	
Sep 1-30, 2047	$532.86	
Oct 1-31, 2047	$532.86	
Nov 1-30, 2047	$532.86	
Dec 1-31, 2047	$532.86	
Jan 1-31, 2048	$532.86	
Feb 1-29, 2048	$532.86	
Mar 1-31, 2048	$532.86	
Apr 1-30, 2048	$532.86	
May 1-31, 2048	$532.86	
Jun 1-30, 2048	$532.86	
Jul 1-31, 2048	$532.86	Year 24
Aug 1-31, 2048	$532.86	
Sep 1-30, 2048	$532.86	
Oct 1-31, 2048	$532.86	
Nov 1-30, 2048	$532.86	
Dec 1-31, 2048	$532.86	
Jan 1-31, 2049	$532.86	
Feb 1-29, 2049	$532.86	
Mar 1-31, 2049	$532.86	
Apr 1-30, 2049	$532.86	
May 1-31, 2049	$532.86	
Jun 1-30, 2049	$532.86	
Jul 1-31, 2049	$532.86	Year 25
Aug 1-31, 2049	$532.86	
Sep 1-30, 2049	$532.86	
Oct 1-31, 2049	$532.86	
Nov 1-30, 2049	$532.86	
Dec 1-31, 2049	$532.86	
Jan 1-31, 2050	$532.86	
Feb 1-29, 2050	$532.86	
Mar 1-31, 2050	$532.86	
Apr 1-30, 2050	$532.86	
May 1-31, 2050	$532.86	
Jun 1-30, 2050	$532.86	
Jul 1-31, 2050	$532.86	Year 26
Aug 1-31, 2050	$532.86	

Honeywell

Sep 1-30, 2050	$532.86	
Oct 1-31, 2050	$532.86	
Nov 1-30, 2050	$532.86	
Dec 1-31, 2050	$532.86	
Jan 1-31, 2051	$532.86	
Feb 1-29, 2051	$532.86	
Mar 1-31, 2051	$532.86	
Apr 1-30, 2051	$532.86	
May 1-31, 2051	$532.86	
Jun 1-30, 2051	$532.86	
Jul 1-31, 2051	$532.86	Year 27
Aug 1-31, 2051	$532.86	
Sep 1-30, 2051	$532.86	
Oct 1-31, 2051	$532.86	
Nov 1-30, 2051	$532.86	
Dec 1-31, 2051	$532.86	
Jan 1-31, 2052	$532.86	
Feb 1-29, 2052	$532.86	
Mar 1-31, 2052	$532.86	
Apr 1-30, 2052	$532.86	
May 1-31, 2052	$532.86	
Jun 1-30, 2052	$532.86	
Jul 1-31, 2052	$532.86	Year 28
Aug 1-31, 2052	$532.86	
Sep 1-30, 2052	$532.86	
Oct 1-31, 2052	$532.86	
Nov 1-30, 2052	$532.86	
Dec 1-31, 2052	$532.86	
Jan 1-31, 2053	$532.86	
Feb 1-29, 2053	$532.86	
Mar 1-31, 2053	$532.86	
Apr 1-30, 2053	$532.86	
May 1-31, 2053	$532.86	
Jun 1-30, 2053	$532.86	
Jul 1-31, 2053	$532.86	Year 29
Aug 1-31, 2053	$532.86	
Sep 1-30, 2053	$532.86	
Oct 1-31, 2053	$532.86	
Nov 1-30, 2053	$532.86	
Dec 1-31, 2053	$532.86	
Jan 1-31, 2054	$532.86	
Feb 1-29, 2054	$532.86	
Mar 1-31, 2054	$532.86	
Apr 1-30, 2054	$532.86	
May 1-31, 2054	$532.86	

Honeywell

Jun 1-30, 2054	$532.86	
Jul 1-31, 2054	$532.86	Year 30
Aug 1-31, 2054	$532.86	
Sep 1-30, 2054	$532.86	
Oct 1-31, 2054	$532.86	
Nov 1-30, 2054	$532.86	
Dec 1-31, 2054	$532.86	
Jan 1-31, 2055	$532.86	
Feb 1-29, 2055	$532.86	
Mar 1-31, 2055	$532.86	
Apr 1-30, 2055	$532.86	
May 1-31, 2055	$532.86	
Jun 1-30, 2055	$532.86	
Total	$191,830.62	

Honeywell

CHANGE ORDER ESTIMATE (CAPEX)

PROJECT:	**Change Order #005 - Electrical and IT Change Request Response**
Contractor:	**Fengate Capital Management**
DATE:	**July 19, 2023**

DBFM Agreement, Schedule 14 (Payment Schedule), Appendix 1, Column D

Renewal Payment

Month	this change add to HWL payments (2023)	Contract Period
Jul 1-31, 2040	$40,414.71	Year 16
Aug 1-31, 2040	$40,414.71	
Sep 1-30, 2040	$40,414.71	
Oct 1-31, 2040	$40,414.71	
Nov 1-30, 2040	$40,414.71	
Dec 1-31, 2040	$40,414.71	
Jan 1-31, 2041	$40,414.71	
Feb 1-29, 2041	$40,414.71	
Mar 1-31, 2041	$40,414.71	
Apr 1-30, 2041	$40,414.71	
May 1-31, 2041	$40,414.71	
Jun 1-30, 2041	$40,414.71	
Total	$484,976.47	

EXHIBIT 3

CCP007.1 – Security Requirement Changes

CLACKAMAS COUNTY
2051 KAEN ROAD
OREGON CITY, OR 97045
(503) 655-8893

COUNTY CHANGE PROPOSAL NO. [007.1]

DATE ISSUED: September 14, 2023

PROJECT: Clackamas County Circuit Courthouse Project

PROJECT COMPANY: Clackamas Progress Partners, LLC

THIS CHANGE PROPOSAL IS ISSUED PURSUANT TO: Section [7.12] of the Project Agreement.

DESCRIPTION OF PROPOSED CHANGE: Security Requirement Changes.

The County is requesting various changes to security systems within Section 21 of Appendix 6 to the Project Agreement. The scope of the changes are as captured within Attachment A.

KEY TERMS:

1. Refer to Attachment A for proposed modifications to the Project Agreement.
2. The Project Company is hereby requested to provide a proposal, with anticipated costs, to implement the changes to the Design-Build Contract Amount as well as any changes to the Facilities Services Contract Amount, along with any impacts to the Scheduled Occupancy Readiness Date, for the proposed modifications in Attachment A. Authorization to begin implementing the proposed modifications in Attachment A is contingent upon the parties executing a formal change order in accordance with Section 7.12 of the Project Agreement.

EXHIBITS AND ATTACHMENTS:

1. Attachment A - Appendix 6 of the PA (Design and Construction Standards).

AUTHORIZED SIGNATURE

Nancy Bonser — 9/14/23

County Authorized Representative — Date

ATTACHMENT A

Appendix 6 of the PA (Design and Construction Standards)

See Exhibit 11

EXHIBIT 4

Project Company Cost and Time Analysis of CCP007.1

Clackamas Progress Partners, LLC.
609 Main Street, Suite 3525
Houston, TX 77002

November 29, 2023

Office of the County Administrator
Attn: Nancy Bush, Clackamas Courthouse Project Manager
Public Services Building
2051 Kaen Road
Oregon City, OR, 97045
nbush@clackamas.us

Subject: Clackamas County Circuit Courthouse, Project Company Response to County Change Proposal 007.1 (dated 9/14/23) – Security Requirements

Dear Ms. Bush,

Pursuant to Section 7.12 of the Project Agreement (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT COUNTY'S DIRECTON], Project Company provides this **revised response (007R2)** to County CCP #007.1. The information provided herein has been supplied by the Design-Builder and Facilities Manager to the Project Company, and is hereby submitted to the County on a back-to-back basis. The design and construction costs resulting from any such Design and Construction Requirement Change made at the County's direction under this Section shall be paid directly by the County during the Design-Build Period, unless otherwise financed by the Project Company pursuant to subsection 6.6(B) (Project Company Financing). Any related operation, maintenance, repair and replacement costs shall be borne by the County through an adjustment to the Service Fee. Any such Design and Construction Requirement Change and any related change in the terms and conditions of this Project Agreement shall be reflected in a Change Order. The Project Company's obligation to perform the work related to a Design and Construction Requirement Change is subject to the conditions set forth in Section 7.11 (Design and Construction Requirement Changes, Repairs and Replacements Required Due to Relief Events Occurring Prior to the Occupancy Readiness Date).

Cost and schedule impacts are evaluated pursuant to Article 16, Section 16.11 of the Project Agreement (Negotiated Lump Sum Pricing of Additional Work) enclosed within Appendix A, with additional detail provided in Appendix B. The proposal value is a cost of $18,362.55 and the scheduled time has been calculated as a 0 calendar day(s) extension to the Occupancy Readiness Date.

Project Company has verified the proposed changes with the Design and Construction Standards pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation). These verifications are memorialized within the enclosed Appendix B.

Best regards,

Karl E. Schaefer, CCM, DBIA, LEED
Clackamas Progress Partners, LLC
Project Company Representative

cc: Stephen Hadanich, WTP Associate Vice President
Vikas Gurram, WTP Senior Advisor
Jon Kindrachuk, PCL Project Director
Cathy France, PCL Document Control

Enclosure: Appendix A: Cost Summary
Appendix B: Design Builder CCP 007R2 response package dated 11/19/23

APPENDIX A

CCP 007.1 - Security Requirements

Construction Phase Cost Impact Summary

	Cost	Total
Developer *	$ 390.00	$ 390.00
Design Builder	$ 17,061.00	$ 17,061.00
Subtotal	**$ 17,451.00**	**$ 17,451.00**
DBFOM Permitted Markup		
(a) for Developer, 15% of the cost of that portion of the Extra Work to be performed by Developer with its own forces	$ 58.50	$ 58.50
(b) for Developer, 5% of the cost of that portion of the Extra Work to be performed by Contractors directly under contract to Developer	$ 853.05	$ 853.05
Subtotal	**$ 911.55**	**$ 911.55**
Design Build Phase Compensation Amount	**$ 18,362.55**	**$ 18,362.55**

Operations Phase Cost Impact Summary

	Cost	Total
Developer	$ -	$ -
Facilities Manager	$ -	$ -
Subtotal	**$ -**	**$ -**
DBFOM Permitted Markup		
(a) for Developer, 15% of the cost of that portion of the Extra Work to be performed by Developer with its own forces	$ -	$ -
(b) for Developer, 5% of the cost of that portion of the Extra Work to be performed by Contractors directly under contract to Developer	$ -	$ -
Subtotal	**$ -**	**$ -**
Facilities Management Phase Compensation Amount	**$ -**	**$ -**

Total Cost Impact	**$ 18,362.55**	**$ 18,362.55**

* 2 hrs@195/hr

CONSTRUCTION

TOGETHER WE BUILD SUCCESS

November 19, 2023

Karl E. Schaefer, CCM, DBIA, LEED
Project Executive
Fengate PCL Progress Partners
TD North Tower
77 King Street West, Suite 3410
Toronto, ON M5K 1H1
karl.schaefer@fengate.com

Subject: Clackamas County Circuit Courthouse

Reference: CCP [#007R2] - Section 7.12 (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT COUNTY DIRECTION**) – [Security Requirement Change Request Response]**

File: Project No. 5701126: 1J.5

Dear Mr. Schaefer,

Pursuant to Section 7.12 of the Design Build Agreement (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT THE COUNTY DIRECTION], Design-Builder provides Project Company CCP [**#007R2**] enclosed as Attachment A. Design Builder is to provide notice of, and reasonable opportunity to review and comment upon, any Design and Construction Requirement Changes proposed to be made at the County's direction. The notice shall contain sufficient information for the Project Company to determine that the Design and Construction Requirement Change:

The design and construction costs resulting from any such Design and Construction Requirement Change made at the County's direction under this Section shall be paid directly by the County during the Design-Build Period, unless otherwise financed by the Project Company pursuant to subsection 6.6(B) (Project Company Financing). Any related operation, maintenance, repair and replacement costs shall be borne by the County through an adjustment to the Service Fee. Any such Design and Construction Requirement Change and any related change in the terms and conditions of this Project Agreement shall be reflected in a Change Order. The Project Company's obligation to perform the work related to a Design and Construction Requirement Change is subject to the conditions set forth in Section 7.11 (Design and Construction Requirement Changes, Repairs and Replacements Required Due to Relief Events Occurring Prior to the Occupancy Readiness Date).

Cost and schedule impacts are evaluated pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work) enclosed as Exhibit 1. The proposal value of the cost is **[$17,061.00]** and the scheduled time has been calculated as a **[0]** calendar day(s) extension to the Occupancy Readiness Date.

Design Builder has verified the proposed changes with the Design and Construction Standards pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation). These verifications are memorialized within the enclosed Exhibit 2.

Please advise if Project Company should require anything additional, as it relates to the subject matter contained herein.

If you have any further questions relating to this matter, promptly contact Contractor at GAYourechuk@pcl.com.

Kind Regards,

PCL Construction Services, Inc.

Greg Yourechuk

Greg Yourechuk
Authorized Representative

GY/cgf

cc: Matt Glassman, Design Manager
Jennifer Canning, Quality Assurance Manager
Jon Kindrachuk, Design Build Project Manager
W.T. Sermeus, Lead Project Manager

See Enclosed Documents:

Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

Exhibit 2 – Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation)

TOGETHER WE BUILD SUCCESS

Attachment A – County Change Proposal #007R2

Date:	November 19, 2023
Pursuant to:	Article 7, Section 7.12 of the DBFOM Agreement, Project Company shall give the County written notice of, and reasonable opportunity to review and comment upon, any Design and Construction Requirement Changes proposed to be made at the County's Direction.
Changes:	Security Requirement Change Request Response

Enclosed is Change response, as it pertains to Article 7, Section 7.12 of the Project Agreement and Design and Construction Standards. Capitalized terms used and not otherwise defined in this proposal shall have the meanings given to such terms in the DBFOM Agreement.

The Contractor is pleased to provide the following information in accordance with Article 7, Section 7.12 of the DBFOM Agreement:

1. a detailed description of the Requirement Change proposed of the D&C Work:

a) Identify and label the proposed DBFOM language:

See CCP#007.1 – Security Requirement Change Request Response dated September 14, 2023

b) Identify specific DBFOM language to which a Requirement Change is requested**:**

See CCP#007.1 – Security Requirement Change Request Response dated September 14, 2023

c) Identify specific changes to the DBFOM language to which a Requirement Change is requested**:**

See CCP#007.1 – Security Requirement Change Request Response dated September 14, 2023

d) Identify how the change sought constitutes good practice, maintains safety and performance

a. Project Company has communicated and reviewed this change with the DLR Group and has confirmed that this deviation will have no impact on the projects ability to meet the LEED Gold standard that is required per the Project Agreement.

b. Does not diminish the capacity of the Project to be operated so as to meet the Contract Standards

c. Does not impair the quality, integrity, durability and reliability of the Project;

d. Is reasonably necessary or is advantageous for the Project Company to fulfill its obligations under this Project Agreement; and

e. Is feasible.

2. a detailed description of the impact of the Requirement Change proposed on the D&C Work

   See Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

3. a detailed description of the impact of the Requirement Change proposed the O&M Work;

   Facilities Manager (Honeywell) has provided an evaluation of the proposed change Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation), enclosed as Exhibit 2.

4. if the Requirement Change is issued before the Operational Readiness Date, a detailed description of any proposed adjustments to the Project Schedule, including to any Contract Deadline, required as a result of any delay that would be caused by the implementation of the Change proposed:

   Any work or tasks associated with, or arising from the Change request shall be considered a condition to achieving a Contract Deadline. No change in schedule

5. where adjustments to Contract Deadlines are proposed:

   (i) a time impact analysis that identifies Critical Path impacts (with activity numbers, durations, predecessor and successor activities, resources, costs and reasons why Float is not available), illustrates the effect of schedule changes or disruptions on the Contract Deadlines and complies with the requirements of (Time Impact Analysis for Proposed Extensions of Time) of the Design and Construction Standards

   N/A

   (ii) an assessment of the feasibility of accelerating the Work to meet the original deadline or to reduce the total delay period; and

   N/A

   (iii) if acceleration is feasible, an estimate of the cost to accelerate;

   N/A

6. an estimate of any compensation amount claimed;

   See Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement

(Negotiated Lump Sum Pricing of Additional Work)

7. an estimate of the cost savings, if any, resulting from the Requirement Change proposed;

   N/A

8. the effect (if any) of the Requirement Change request on Developers ability to perform the O&M Work stated by Contract Year;

   N/A

9. where relief from obligations under the Contract Documents is sought, the effect of the Change proposed on Project Company's ability to perform any of its obligations under the Contract Documents that if not performed would result in the accrual of Noncompliance, the assessment of Deductions or the occurrence of a Developer Default, in each case including details of the relevant obligations, the effect on each such obligation, the likely duration of that effect and the specific relief sought;

   N/A

10. a description of any additional consents or approvals required, including amendments, if any, of any Governmental Approvals required to implement the contemplated Requirement Change request;

    N/A

11. a detailed description of the steps Project Company will take to implement the Change Request, including measures that Project Company will take to mitigate the costs, delay and other consequences of the Requirement Change request;

    N/A

12. any other relevant information related to the Requirement Change request;

    N/A

Exhibit 1

Attachment A – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

The proposal value of the cost is **[$17,061.00]** and the scheduled time has been calculated as a **[0]** calendar day(s) extension to the Occupancy Readiness Date.

Project #: 5701126

CRX Detail Report - CCP-007.1

PCL Construction Services, Inc.

Project Name: Clackamas County Circuit Court
Location: 2125 Kaen Road
Oregon City, OR

CRX description: Security Requirement Changes

Header Summary	
Type	CCP
CRX status	Quoted to Project Company
Schedule days quoted	0
Quoted date	11/18/2023
Initiated date	9/14/2023

Summary	
Labor	2,786.54
Material	0.00
Equipment	0.00
Subtrade	12,500.00
Direct Costs & SDI	731.48
Fee	1,042.98
Total Quote:	$17,061.00

Subtrade	Quote $
DLR Group Architecture & Engineering Inc., an	12,500.00

Cost Code	Description	Quantity	UoM	Labor Hours Prod	Labor Hours Total	Labor Rate	Labor Total	Material Rate	Material Total	Equipment Rate	Equipment Total	Subtrade Rate	Subtrade Total	Total Rate	Total Total
	DIRECT FORCES WORK														
010100	DB Project Manager	1.00	MO	2.000	2.000	152.04	304	---	---	---	---	---	---	---	304.08
010100	Lead Project Manager	1.00	MO	2.000	2.000	139.39	279	---	---	---	---	---	---	---	278.78
010100	Project Managers	1.00	MO	8.000	8.000	122.56	980	---	---	---	---	---	---	---	980.48
010505	Design Manager	1.00	MO	8.000	8.000	132.18	1,057	---	---	---	---	---	---	---	1,057.44
010560	Accountant	1.00	MO	2.000	2.000	82.88	166	---	---	---	---	---	---	---	165.76
TOTAL	**DIRECT FORCES WORK**				22.0		2,786.54		---		---				2,786.54
	MARKUP ON DIRECT FORCES														
990100	OH&P on Direct Forces		LS	----	---	15.00%	418	15.00%	---	15.00%	---	---	---	---	417.98
TOTAL	**MARKUP ON DIRECT FORCES**						417.98		---		---				417.98
	SUBTRADE WORK														
013920	DLR - Consultant Services	1.00	LS	---	---	---	---	---	---	---	---	---	12,500	---	12,500.00
TOTAL	**SUBTRADE WORK**												12,500.00		12,500.00
	SUBTRADE MARKUP														
990100	OH&P on Subcontract Costs		LS	---	---	---	---	---	---	---	---	5.000%	625	---	625.00
TOTAL	**SUBTRADE MARKUP**												844.50		625.00
TOTAL	**DIRECT FORCES & SUBTRADES**				22.0		3,204.52		---		---		13,344.50		16,549.02
	DIRECT COST SUMMARY														
014120	Security		LS	---	---	---	---	---	---	---	---	---	---	.222%	36.74
014100	Bond		LS	---	---	---	---	---	---	---	---	---	---	.500%	82.93
014200	Subtrade Default Insurance (SDI)		LS	---	---	---	---	---	---	---	---	---	---	.916%	114.50
014300	Professional Insurance 0.84% (DLR) DLR Total = $12,500 x .84% = $105		LS	---	---	---	---	---	---	---	---	---	---	.840%	105.00
014300	Insurance		LS	---	---	---	---	---	---	---	---	---	---	1.773%	295.54
014850	CAT Tax		LS	---	---	---	---	---	---	---	---	---	---	.570%	96.70

CRX Detail Report - CCP-007.1

PCL Construction Services, Inc.

Project Name: Clackamas County Circuit Court
Location: 2125 Kaen Road
Oregon City, OR

CRX description: Security Requirement Changes

014300	Rounding	LS	---	---	---	---	---	---	---	---	---	---	.000%	0.07
TOTAL	**DIRECT COST SUMMARY**													731.48
TOTAL	**CRX #: CCP-007.1**			22.0		3,204.52		---		---		13,344.50		17,061.00

DLRGROUP

110 SW Yamhill St. Suite 105
Portland, OR 97204

July 10, 2023

Matt Glassman
PCL Construction Services Inc.
13920 SE Eastgate Way, Suite 400
Bellevue, A 98005

Project Name: Clackamas County Courthouse
DLR Group Project No.: 74-22101-00

Dear Matt:

Thank you for the opportunity to review my service request to the New Clackamas County Courthouse to provide the scope of work related to owner requested changes per CCP 007. This scope is provided for Security system updates that were coordinated with the owner including the Sheriff. These modifications are essential to ensuring the building operates safely and effectively for the security. Much of this work is already completed through the detailed meetings with the user groups and Sheriff. Most of the additional service is directly to R&N Systems Design, however there are coordination items and meetings that DLR Group supported to ensure the scope was fully executed.

The breakdown of additional fees for this scope of work are the following:

Scope	**Fee**
R&N Systems Design	$10,000.00
DLR Group	$ 2,500.00
Total fee:	**$12,500.00**

Note, this fee does not include any modifications to engineering by the design build contractors because it is understood the cost of construction will be amended to include contractors engineering.

The total fee for this additional service is **twelve thousand five hundred dollars and zero cents ($12,500.00)**.

Sincerely,
DLR Group

Erica Loynd
Principal
EL:el

Attachments: CCP 007, Consultant proposal

CLACKAMAS COUNTY
2051 KAEN ROAD
OREGON CITY, OR 97045
(503) 655-8893

COUNTY CHANGE PROPOSAL NO. [007]

DATE ISSUED: June 23, 2023

PROJECT: Clackamas County Circuit Courthouse Project

PROJECT COMPANY: Clackamas Progress Partners, LLC

THIS CHANGE PROPOSAL IS ISSUED PURSUANT TO: Section [7.12] of the Project Agreement.

DESCRIPTION OF PROPOSED CHANGE: Security Requirement Changes.

The County is requesting various changes to security systems within Section 21 of Appendix 6 to the Project Agreement. The scope of the changes are as captured within Attachment A.

KEY TERMS:

1. Refer to Attachment A for proposed modifications to the Project Agreement.
2. The Project Company is hereby requested to provide a proposal, with anticipated costs, to implement the changes to the Design-Build Contract Amount as well as any changes to the Facilities Services Contract Amount, along with any impacts to the Scheduled Occupancy Readiness Date, for the proposed modifications in Attachment A. Authorization to begin implementing the proposed modifications in Attachment A is contingent upon the parties executing a formal change order in accordance with Section 7.12 of the Project Agreement.

EXHIBITS AND ATTACHMENTS:

1. Attachment A - Appendix 6 of the PA (Design and Construction Standards).

AUTHORIZED SIGNATURE

Nancy Bush

County Authorized Representative

6/23/23

Date

R&N SYSTEMS DESIGN L.L.C.

July 7, 2023

Erica Loynd
DLR Group
51 University Street, Suite 600
Seattle, WA 98101

Re: Clackamas County Courthouse
Subject: R&N's Add Service CCP005 and CCP007

Erica,

In response to your email, I am submitting the following for additional services provided on the Clackamas County project. These add services are depicted in CCP005 and CCP007. These add services are a direct result of red lining the initial Design Criteria Package (DCP), reviewing the Owner's redlines on the DCP, meeting in person with the Owner to determine the desired systems, reviewing the contract changes to the DCP, and implementing these changes in the design. The total fee for these changes is $10,000. This includes expenses and over 40 hours of my time to perform the work. I will happily provide time sheets for these hours if desired.

Thank you,

Chris Nielsen, Principal
Oregon PE License # 92095PE
R&N Systems Design

Exhibit 2

Attachment B – Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation

Honeywell

Date: Oct 5, 2023

Type of Change: CCP#007.1 – County Requirement Change Request - Pursuant to Section 7.12 – **Security Requirement Change Request Response**

Subject: The County is requesting various changes across the Courthouse program to create departmental efficiencies and further increase operational safety.

Jon:

Pursuant to Section 3.1 Changes (a) Facilities Coordination Review and Approval Confirmation, Honeywell is acknowledging that the change **"CCP#007.1 – Security Requirement Change Request Response - Pursuant to Section 7.12"** does not create an operability, reliability, or longevity issue for the Service Contractor.

This change being requested will not affect the OPEX or CAPEX for Clackamas County Circuit Courthouse Project.

Regards,

Dennis Crawford

Dennis Crawford

P3 Operations Leader
Honeywell Building Solutions
4411 6 Street S.E., Suite 100
Calgary, Alberta T2G 4E8
Office – 403 -221-2184
Dennis.Crawford@honeywell.com

EXHIBIT 5

CCP013 – Value Engineering – Ceiling Grid, Impact Wall, U-Bolt

CLACKAMAS COUNTY
2051 KAEN ROAD
OREGON CITY, OR 97045
(503) 655-8893

COUNTY CHANGE PROPOSAL NO. [013]

DATE ISSUED: August 31, 2023

PROJECT: Clackamas County Circuit Courthouse Project

PROJECT COMPANY: Clackamas Progress Partners, LLC

THIS CHANGE PROPOSAL IS ISSUED PURSUANT TO: Section [7.12] of the Project Agreement.

DESCRIPTION OF PROPOSED CHANGE: Value Engineering.

The County is requesting the following changes within the new Clackamas Courthouse:
1. Provide impact resistant GWB in public areas up to four (4) feet, with eight (8) feet in stairways;
2. Allow exposed tee grid system;
3. Remove floor attached U-bolt from defendant tables in courtrooms.

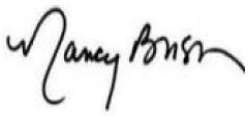
KEY TERMS:

1. The Project Company is hereby requested to provide a proposal, with anticipated costs, to implement the changes to the Design-Build Contract Amount as well as any changes to the Facilities Services Contract Amount, along with any impacts to the Scheduled Occupancy Readiness Date, for the proposed change. Authorization to begin implementing the change is contingent upon the parties executing a formal change order in accordance with Section 7.12 of the Project Agreement.

EXHIBITS AND ATTACHMENTS:

1. Attachment A: Appendix 6 of the PA (Design and Construction Standards)

AUTHORIZED SIGNATURE



8/31/23

County Authorized Representative

Date

ATTACHMENT A

Appendix 6 of the PA (Design and Construction Standards)

See Exhibit 11

EXHIBIT 6

Project Company Cost and Time Analysis of CCP013

November 20, 2023

Clackamas Progress Partners, LLC.
609 Main Street, Suite 3525
Houston, TX 77002

Office of the County Administrator
Attn: Nancy Bush, Clackamas Courthouse Project Manager
Public Services Building
2051 Kaen Road
Oregon City, OR, 97045
nbush@clackamas.us

Subject: Clackamas County Circuit Courthouse, Project Company Response to County Change Proposal 013 (dated 8/31/23) – Value Engineering

Dear Ms. Bush,

Pursuant to Section 7.12 of the Project Agreement (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT COUNTY'S DIRECTON], Project Company provides this **revised response (013R2)** to County CCP #013. The information provided herein has been supplied by the Design-Builder and Facilities Manager to the Project Company, and is hereby submitted to the County on a back-to-back basis. The design and construction costs resulting from any such Design and Construction Requirement Change made at the County's direction under this Section shall be paid directly by the County during the Design-Build Period, unless otherwise financed by the Project Company pursuant to subsection 6.6(B) (Project Company Financing). Any related operation, maintenance, repair and replacement costs shall be borne by the County through an adjustment to the Service Fee. Any such Design and Construction Requirement Change and any related change in the terms and conditions of this Project Agreement shall be reflected in a Change Order. The Project Company's obligation to perform the work related to a Design and Construction Requirement Change is subject to the conditions set forth in Section 7.11 (Design and Construction Requirement Changes, Repairs and Replacements Required Due to Relief Events Occurring Prior to the Occupancy Readiness Date).

Cost and schedule impacts are evaluated pursuant to Article 16, Section 16.11 of the Project Agreement (Negotiated Lump Sum Pricing of Additional Work) enclosed within Appendix A, with additional detail provided in Appendix B. The proposal value is a credit of $(83,357.00) and the scheduled time has been calculated as a 0 calendar day(s) extension to the Occupancy Readiness Date.

Project Company has verified the proposed changes with the Design and Construction Standards pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation). These verifications are memorialized within the enclosed Appendix B.

Best regards,

Karl E. Schaefer, CCM, DBIA, LEED
Clackamas Progress Partners, LLC
Project Company Representative

cc: Stephen Hadanich, WTP Associate Vice President
Vikas Gurram, WTP Senior Advisor
Jon Kindrachuk, PCL Project Director
Cathy France, PCL Document Control

Enclosure: Appendix A: Cost Summary
Appendix B: Design Builder CCP 013R2 response package dated 11/17/23

APPENDIX A

CCP 013R2 - Value Engineering

Construction Phase Cost Impact Summary

	Cost	Total
Developer	$ -	$ -
Design Builder	$ (83,357.00)	$ (83,357.00)
Subtotal	**$ (83,357.00)**	**$ (83,357.00)**
DBFOM Permitted Markup		
(a) for Developer, 15% of the cost of that portion of the Extra Work to be performed by Developer with its own forces	$ -	$ -
(b) for Developer, 5% of the cost of that portion of the Extra Work to be performed by Contractors directly under contract to Developer	$ -	$ -
Subtotal	**$ -**	**$ -**
Design Build Phase Compensation Amount	**$ (83,357.00)**	**$ (83,357.00)**

Operations Phase Cost Impact Summary

	Cost	Total
Developer	$ -	$ -
Facilities Manager	$ -	$ -
Subtotal	**$ -**	**$ -**
DBFOM Permitted Markup		
(a) for Developer, 15% of the cost of that portion of the Extra Work to be performed by Developer with its own forces	$ -	$ -
(b) for Developer, 5% of the cost of that portion of the Extra Work to be performed by Contractors directly under contract to Developer	$ -	$ -
Subtotal	**$ -**	**$ -**
Facilities Management Phase Compensation Amount	**$ -**	**$ -**

Total Cost Impact	**$ (83,357.00)**	**$ (83,357.00)**

CONSTRUCTION

TOGETHER WE BUILD SUCCESS

November 17, 2023

Karl E. Schaefer, CCM, DBIA, LEED
Project Executive
Fengate PCL Progress Partners
TD North Tower
77 King Street West, Suite 3410
Toronto, ON M5K 1H1
karl.schaefer@fengate.com

Subject: Clackamas County Circuit Courthouse

Reference: CCP [#013R2] - Section 7.12 (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT COUNTY DIRECTION**) – [Value Engineering Changes]**

File: Project No. 5701126: 1J.5

Dear Mr. Schaefer,

Pursuant to Section 7.12 of the Design Build Agreement (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT THE COUNTY DIRECTION], Design-Builder provides Project Company CCP [**#013R2**] enclosed as Attachment A. Design Builder is to provide notice of, and reasonable opportunity to review and comment upon, any Design and Construction Requirement Changes proposed to be made at the County's direction. The notice shall contain sufficient information for the Project Company to determine that the Design and Construction Requirement Change:

The design and construction costs resulting from any such Design and Construction Requirement Change made at the County's direction under this Section shall be paid directly by the County during the Design-Build Period, unless otherwise financed by the Project Company pursuant to subsection 6.6(B) (Project Company Financing). Any related operation, maintenance, repair and replacement costs shall be borne by the County through an adjustment to the Service Fee. Any such Design and Construction Requirement Change and any related change in the terms and conditions of this Project Agreement shall be reflected in a Change Order. The Project Company's obligation to perform the work related to a Design and Construction Requirement Change is subject to the conditions set forth in Section 7.11 (Design and Construction Requirement Changes, Repairs and Replacements Required Due to Relief Events Occurring Prior to the Occupancy Readiness Date).

Cost and schedule impacts are evaluated pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work) enclosed as Exhibit 1. The proposal value of the cost is **[-$83,357.00]** and the scheduled time has been calculated as a **[0]** calendar day(s) extension to the Occupancy Readiness Date.

Design Builder has verified the proposed changes with the Design and Construction Standards pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation). These verifications are memorialized within the enclosed Exhibit 2.

Please advise if Project Company should require anything additional, as it relates to the subject matter contained herein.

If you have any further questions relating to this matter, promptly contact Contractor at GAYourechuk@pcl.com.

Kind Regards,

PCL Construction Services, Inc.

Greg Yourechuk

Greg Yourechuk
Authorized Representative

GY/cgf

cc: Matt Glassman, Design Manager
Jennifer Canning, Quality Assurance Manager
Jon Kindrachuk, Design Build Project Manager
W.T. Sermeus, Lead Project Manager

See Enclosed Documents:

Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

Exhibit 2 – Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation)

PCL CONSTRUCTION

TOGETHER WE BUILD SUCCESS

Attachment A – County Change Proposal #013R2

Date:	November 17, 2023
Pursuant to:	Article 7, Section 7.12 of the DBFOM Agreement, Project Company shall give the County written notice of, and reasonable opportunity to review and comment upon, any Design and Construction Requirement Changes proposed to be made at the County's Direction.
Changes:	Value Engineering Changes

Enclosed is Change response, as it pertains to Article 7, Section 7.12 of the Project Agreement and Design and Construction Standards. Capitalized terms used and not otherwise defined in this proposal shall have the meanings given to such terms in the DBFOM Agreement.

The Contractor is pleased to provide the following information in accordance with Article 7, Section 7.12 of the DBFOM Agreement:

1. a detailed description of the Requirement Change proposed of the D&C Work:

a) Identify and label the proposed DBFOM language:

See CCP#013 - Security Changes dated August 31, 2023

b) Identify specific DBFOM language to which a Requirement Change is requested**:**

See CCP#013 - Security Changes dated August 31, 2023

c) Identify specific changes to the DBFOM language to which a Requirement Change is requested**:**

See CCP#013 - Security Changes dated August 31, 2023

d) Identify how the change sought constitutes good practice, maintains safety and performance

a. Project Company has communicated and reviewed this change with the DLR Group and has confirmed that this deviation will have no impact on the projects ability to meet the LEED Gold standard that is required per the Project Agreement.

b. Does not diminish the capacity of the Project to be operated so as to meet the Contract Standards

c. Does not impair the quality, integrity, durability and reliability of the Project;

d. Is reasonably necessary or is advantageous for the Project Company to fulfill its obligations under this Project Agreement; and

e. Is feasible.

2. a detailed description of the impact of the Requirement Change proposed on the D&C Work

   See Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

3. a detailed description of the impact of the Requirement Change proposed the O&M Work;

   Facilities Manager (Honeywell) has provided an evaluation of the proposed change Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation), enclosed as Exhibit 2.

4. if the Requirement Change is issued before the Operational Readiness Date, a detailed description of any proposed adjustments to the Project Schedule, including to any Contract Deadline, required as a result of any delay that would be caused by the implementation of the Change proposed:

   Any work or tasks associated with, or arising from the Change request shall be considered a condition to achieving a Contract Deadline. No change in schedule

5. where adjustments to Contract Deadlines are proposed:

   (i) a time impact analysis that identifies Critical Path impacts (with activity numbers, durations, predecessor and successor activities, resources, costs and reasons why Float is not available), illustrates the effect of schedule changes or disruptions on the Contract Deadlines and complies with the requirements of (Time Impact Analysis for Proposed Extensions of Time) of the Design and Construction Standards

   N/A

   (ii) an assessment of the feasibility of accelerating the Work to meet the original deadline or to reduce the total delay period; and

   N/A

   (iii) if acceleration is feasible, an estimate of the cost to accelerate;

   N/A

6. an estimate of any compensation amount claimed;

   See Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement

(Negotiated Lump Sum Pricing of Additional Work)

7. an estimate of the cost savings, if any, resulting from the Requirement Change proposed;

   N/A

8. the effect (if any) of the Requirement Change request on Developers ability to perform the O&M Work stated by Contract Year;

   N/A

9. where relief from obligations under the Contract Documents is sought, the effect of the Change proposed on Project Company's ability to perform any of its obligations under the Contract Documents that if not performed would result in the accrual of Noncompliance, the assessment of Deductions or the occurrence of a Developer Default, in each case including details of the relevant obligations, the effect on each such obligation, the likely duration of that effect and the specific relief sought;

   N/A

10. a description of any additional consents or approvals required, including amendments, if any, of any Governmental Approvals required to implement the contemplated Requirement Change request;

    N/A

11. a detailed description of the steps Project Company will take to implement the Change Request, including measures that Project Company will take to mitigate the costs, delay and other consequences of the Requirement Change request;

    N/A

12. any other relevant information related to the Requirement Change request;

    N/A

Exhibit 1

Attachment A – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

The proposal value of the cost is **[-$83,357.00]** and the scheduled time has been calculated as a **[0]** calendar day(s) extension to the Occupancy Readiness Date.

Project #: 5701126

CRX Detail Report - CCP-013

PCL Construction Services, Inc.

Project Name: Clackamas County Circuit Court
Location: 2125 Kaen Road
Oregon City, OR

CRX description: Value Engineering - GWB & Ceiling Grid

Header Summary	
Type	CCP
CRX status	Quoted to Project Company
Schedule days quoted	0
Quoted date	10/3/2023
Initiated date	9/1/2023

Summary	
Labor	2,327.58
Material	0.00
Equipment	0.00
Subtrade	-83,136.00
Direct Costs & SDI	-3,210.22
Fee	661.64
Total Quote:	-83,357.00

Subtrade	Quote $
Cascade Acoustics, Inc.	-88,161.00
DLR Group Architecture & Engineering Inc., an	6,250.00

Cost Code	Description	Quantity	UoM	Labor Hours Prod	Labor Hours Total	Labor Rate	Labor Total	Material Rate	Material Total	Equipment Rate	Equipment Total	Subtrade Rate	Subtrade Total	Total Rate	Total Total
	DIRECT FORCES WORK														
010100	DB Project Manager	1.00	MO	2.000	2.000	152.04	304	---	---	---	---	---	---	---	304.08
010100	Lead Project Manager	1.00	MO	2.000	2.000	139.39	279	---	---	---	---	---	---	---	278.78
010100	Project Managers	1.00	MO	4.000	4.000	122.56	490	---	---	---	---	---	---	---	490.24
010505	Design Manager	1.00	MO	1.000	1.000	132.18	132	---	---	---	---	---	---	---	132.18
010200	General Superintendent	1.00	MO	1.000	1.000	163.98	164	---	---	---	---	---	---	---	163.98
010200	Superintendents	1.00	MO	2.000	2.000	153.57	307	---	---	---	---	---	---	---	307.14
010400	Project Engineers	1.00	MO	4.000	4.000	85.29	341	---	---	---	---	---	---	---	341.16
010560	Accountant	1.00	MO	2.000	2.000	82.88	166	---	---	---	---	---	---	---	165.76
010550	Admin Assistant	1.00	MO	2.000	2.000	72.13	144	---	---	---	---	---	---	---	144.26
TOTAL	**DIRECT FORCES WORK**				20.0		2,327.58		---		---				2,327.58
	MARKUP ON DIRECT FORCES														
990100	OH&P on Direct Forces		LS	----	---	15.00%	349	15.00%	---	15.00%	---	---	---	---	349.14
TOTAL	**MARKUP ON DIRECT FORCES**						349.14		---		---				349.14
	SUBTRADE WORK														
013920	DLR - Consultant Services	1.00	LS	---	---	---	---	---	---	---	---	---	6,250	---	6,250.00
092500	1. Impact Resistant GWB	-1.00	LS	---	---	---	---	---	---	---	---	---	-27,549	---	-27,549.00
092500	2. Exposed Tee Grid System	-1.00	LS	---	---	---	---	---	---	---	---	---	-60,612	---	-60,612.00
	3. Remove Floor Attached U-Bolts	-14.00		---	---	---	---	---	---	---	---	87.50	-1,225	---	-1,225.00
TOTAL	**SUBTRADE WORK**												-83,136.00		-83,136.00
	SUBTRADE MARKUP														
990100	OH&P on Subcontract Costs OH&P on DLR = $6,250 x 5% = $312.50		LS	---	---	---	---	---	---	---	---	---	---	5.000%	312.50
TOTAL	**SUBTRADE MARKUP**												0.00		312.50
TOTAL	**DIRECT FORCES & SUBTRADES**				20.0		2,676.72		---		---		-83,136.00		-80,146.78
	DIRECT COST SUMMARY														
014200	Subtrade Default Insurance (SDI)		LS	---	---	---	---	---	---	---	---	---	---	.916%	-761.53

CRX Detail Report - CCP-013

PCL Construction Services, Inc.

Project Name: Clackamas County Circuit Court
Location: 2125 Kaen Road
Oregon City, OR

CRX description: Value Engineering - GWB & Ceiling Grid

014300	Professional Insurance 0.84% (DLR) DLR = $6,250 x .84% = $52.46	LS	---	---	---	---	---	---	---	---	---	---	-.063%	52.46
014120	Security	LS	---	---	---	---	---	---	---	---	---	---	.222%	-179.50
014100	Bond	LS	---	---	---	---	---	---	---	---	---	---	.500%	-405.18
014300	Insurance	LS	---	---	---	---	---	---	---	---	---	---	1.773%	-1,443.94
014850	CAT Tax	LS	---	---	---	---	---	---	---	---	---	---	.570%	-472.44
014300	Rounding	LS	---	---	---	---	---	---	---	---	---	---	-.001%	-0.09
TOTAL	**DIRECT COST SUMMARY**													-3,210.22
TOTAL	**CRX #: CCP-013**			20.0	2,676.72		---		---		-83,136.00			-83,357.00

110 SW Yamhill St. Suite 105
Portland, OR 97204

September 29, 2023

Matt Glassman
PCL Construction Services Inc.
13920 SE Eastgate Way, Suite 400
Bellevue, A 98005

Project Name: Clackamas County Courthouse
DLR Group Project No.: 74-22101-00

Dear Matt:

Thank you for the opportunity to review my service request to the New Clackamas County Courthouse to provide the scope of work related to owner requested changes per CCP 013. This scope is provided for architectural wall type and ceiling design.

The breakdown of additional fees for this scope of work are the following:

Scope	**Fee**
DLR Group	**$6,250.00**
Total fee:	**$6,250.00**

Note, this fee does not include any modifications to engineering by the design build contractors because it is understood the cost of construction will be amended to include contractors engineering.

The total fee for this additional service is **six thousand two hundred fifty dollars and zero cents ($6,250.00)**.

Sincerely,
DLR Group

Erica Loynd
Principal
EL:el

Attachments: CCP 013

	Labor Amount	Material Amount	Total Amount

CCCC COR#021

This credit removes abuse board above 4' aff.

Please see the attached PDF mark-up indicating areas that will receive abuse board.

Abuse Board			
Credit			
1.390 Interior Gyp Board		(27,549)	(27,549)
Credit		*(27,549)*	*(27,549)*
Abuse Board	**0**	**(27,549)**	**(27,549)**
CCCC COR#021	***0***	***(27,549)***	***(27,549)***

Estimate Totals

Description	Amount	Totals	Rate
Labor			
Material	(27,549)		
Subcontract			
Equipment			
Other			
	(27,549)	**(27,549)**	
Labor Markup			
Material Markup			
Equipment Markup			
Subcontractor Markup			
Total		***(27,549)***	

Please provide additional information of how you got this credit number. Provide square footage and rates of both gyp board types to show the delta.

Abuse Board 4' AFF	7,561	LF

7561 Lf x 6 ft tall = 45,366 sf given back.

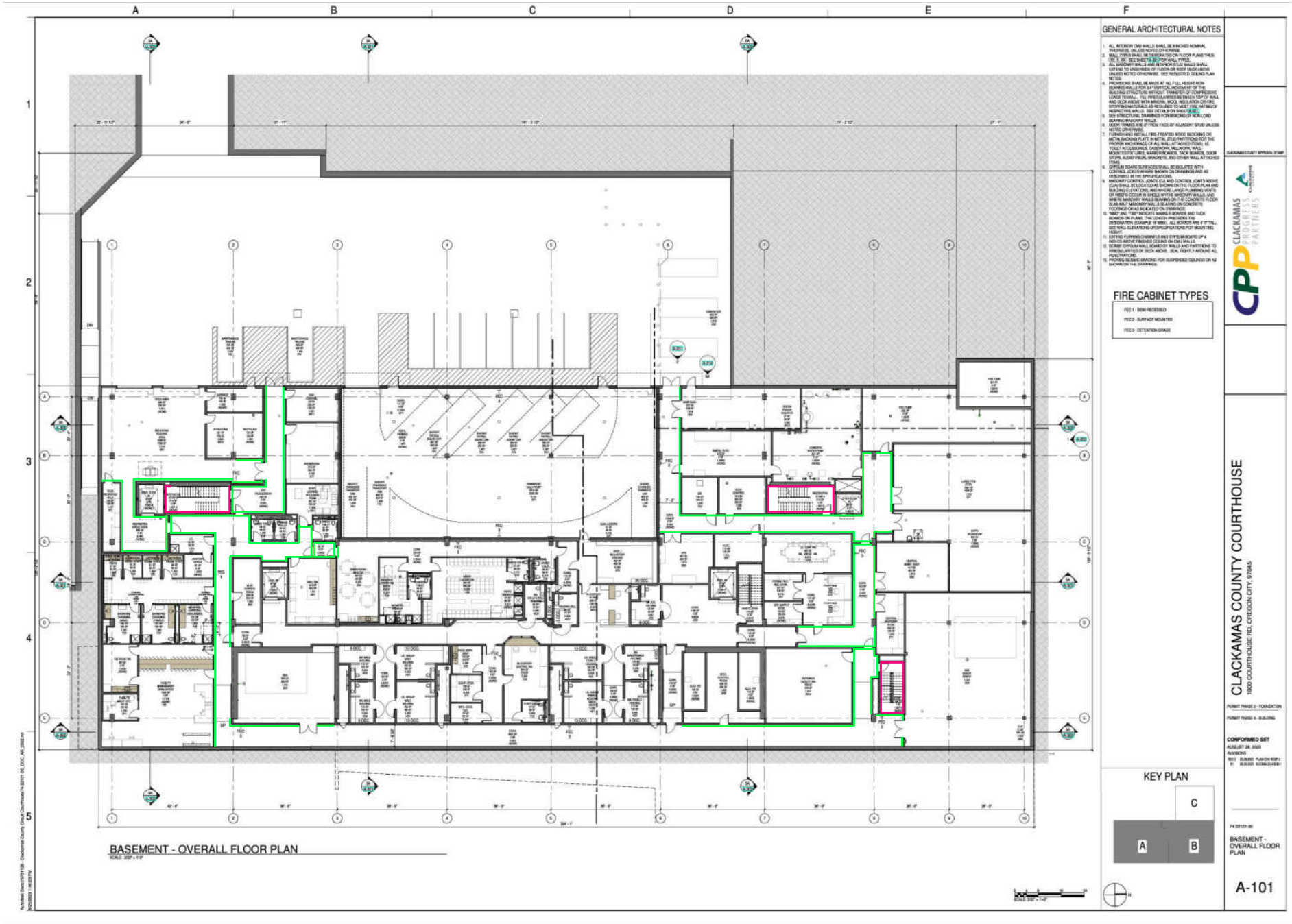
27,549 / 45,366 = .60 per sf

Type X is .44 per sf
Abuse is 1.04 per sf

Cascade Acoustics, Inc. requires written Notice to Proceed within 10 days for this pricing to remain valid
If no notice is received within the time listed above, Cascade Acoustics, Inc. reserves the right to add cost.
based on changing material prices and/or jobsite conditions

Signature: _____ Date:_____

Print Name:_____



d (36% of Scale); Takeoff in Active Area: Abuse Board; CCCC Conformed Set for OST 9-8-2023; CA_DB-Main; 9/21/2023 03:10 PM

LEVEL 01 - OVERALL FLOOR PLAN

SCALE: 3/32" = 1'-0"

GENERAL ARCHITECTURAL NOTES

1. ALL INTERIOR CMU WALLS SHALL BE 8 INCHES NOMINAL THICKNESS, UNLESS NOTED OTHERWISE.
2. WALL TYPES SHALL BE DESIGNATED ON FLOOR PLANS (1HR, 2HR, SEE SHEET A-501 FOR WALL TYPES.
3. ALL MASONRY WALLS AND INTERIOR STUD WALLS SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE, UNLESS NOTED OTHERWISE. SEE REFLECTED CEILING PLAN NOTES.
4. PARTITIONS SHALL BE MADE AT ALL FULL HEIGHT NON-BEARING WALLS FOR 3/4" VERTICAL MOVEMENT OF THE BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOAD TO WALL. FILL SPACE/JOINT BETWEEN TOP OF WALL AND DECK ABOVE WITH MINERAL WOOL INSULATION OR FIRE STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF WALL ASSEMBLY. SEE DETAILS ON SHEET A-501.
5. SEE STRUCTURAL DRAWINGS FOR BRACING OF MASONRY BEARING MASONRY WALLS.
6. DOOR FRAMES ARE 6" FROM FACE OF ADJACENT STUD UNLESS NOTED OTHERWISE.
7. FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS. I.E. TOILET ACCESSORIES, CASEWORK, MILLWORK, WALL MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS.
8. GYPSUM BOARD SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE SHOWN ON DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS.
9. MASONRY CONTROL JOINTS (CJ) AND CONTROL JOINTS ABOVE (CJA) SHALL BE LOCATED AS SHOWN ON THE FLOOR PLAN AND BUILDING ELEVATIONS, AND WHERE LARGE PLUMBING VENTS OR RISERS OCCUR IN SINGLE WYTHE MASONRY WALLS, AND WHERE MASONRY WALLS BEARING ON THE CONCRETE FLOOR SLAB ABUT MASONRY WALLS BEARING ON CONCRETE FOOTINGS OR AS INDICATED ON DRAWINGS.
10. "MBO" AND "TBO" INDICATE MARKER BOARDS AND TACK BOARDS ON PLANS. TWO LENGTH PRECEDES THE DESIGNATION (EXAMPLE 10' MBO). ALL BOARDS ARE 4' 0" TALL. SEE WALL ELEVATIONS OR SPECIFICATIONS FOR MOUNTING HEIGHT.
11. EXTEND FURRING CHANNELS AND GYPSUM BOARD UP 4 INCHES ABOVE FINISHED CEILING ON CMU WALLS.
12. SCRIBE GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO PRESS SURFACES OF BRICK ABOVE, SEAL TIGHTLY AROUND ALL PENETRATIONS.
13. PROVIDE SLOPED BRACING FOR SUSPENDED CEILINGS ON AS SHOWN ON THE DRAWINGS.

FIRE CABINET TYPES

FEC-1 - SEMI-RECESSED
FEC-2 - SURFACE MOUNTED
FEC-3 - DETENTION GRADE

KEY PLAN

CLACKAMAS COUNTY APPROVAL STAMP

CPP PROPERTIES PARTNERS

CLACKAMAS COUNTY COURTHOUSE

1000 COURTHOUSE RD., OREGON CITY, 97045

PERMIT PHASE 4 - BUILDING

CONFORMED SET

AUGUST 28, 2023

REVISIONS

74-22101-00

LEVEL 01 - OVERALL FLOOR PLAN

A-111

Autodesk Docs://19106 - Clackamas County Circuit Courthouse/19106 66_CCC_AR_2022.rvt
8/25/2023 1:48:23 PM

LEVEL 02 - OVERALL FLOOR PLAN

SCALE: 3/32" = 1'-0"

GENERAL ARCHITECTURAL NOTES

FIRE CABINET TYPES

FEC 1 - SEMI RECESSED
FEC 2 - SURFACE MOUNTED
FEC 3 - DETENTION GRADE

CLACKAMAS PROGRESS PARTNERS

CLACKAMAS COUNTY COURTHOUSE

1000 COURTHOUSE RD, OREGON CITY, 97045

CONFORMED SET
AUGUST 28, 2023

KEY PLAN

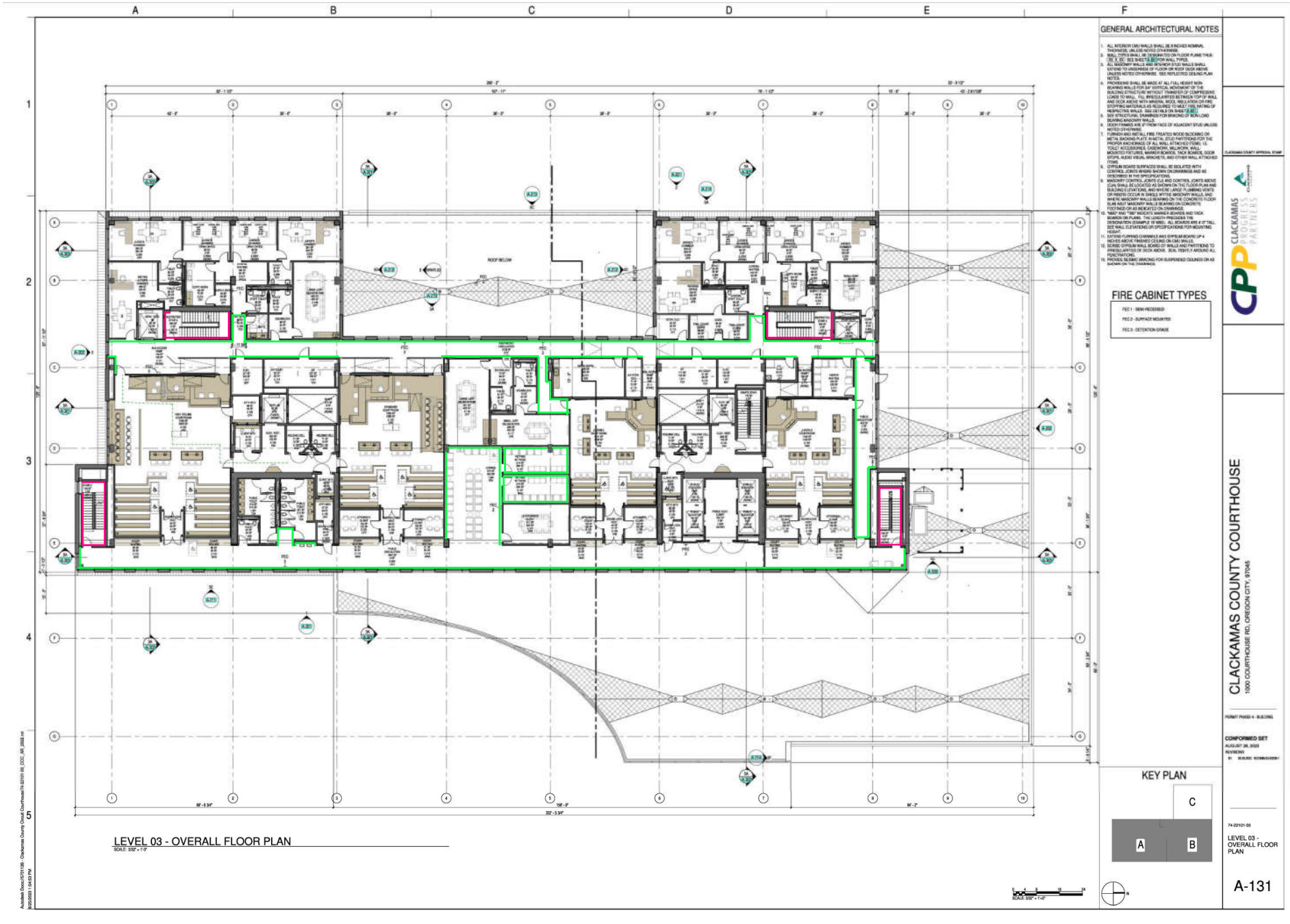
C
A
B

74-22101-00

LEVEL 02 - OVERALL FLOOR PLAN

A-121

D (36% of Scale); Takeoff in Active Area: Abuse Board; CCCC Conformed Set for OST 9-8-2023; CA_DB-Main; 9/21/2023 03:10 PM


GENERAL ARCHITECTURAL NOTES
FIRE CABINET TYPES
KEY PLAN
LEVEL 03 - OVERALL FLOOR PLAN
SCALE: 3/32" = 1'-0"
CLACKAMAS COUNTY COURTHOUSE
1000 COURTHOUSE RD, OREGON CITY, 97045
CONFORMED SET
74-22101-00
LEVEL 03 - OVERALL FLOOR PLAN
A-131

LEVEL 04 - OVERALL FLOOR PLAN

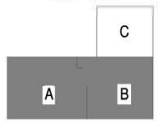
GENERAL ARCHITECTURAL NOTES

1. ALL INTERIOR CMU WALLS SHALL BE 8 INCHES NOMINAL THICKNESS, UNLESS NOTED OTHERWISE.
2. WALL TYPES SHALL BE DESIGNATED ON FLOOR PLANS THUS: W1, W, W2. SEE SHEETS A-601 FOR WALL TYPES.
3. ALL MASONRY WALLS AND INTERIOR STUD WALLS SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE, UNLESS NOTED OTHERWISE. SEE REFLECTED CEILING PLAN NOTES.
4. PROVISIONS SHALL BE MADE AT ALL FULL HEIGHT NON-BEARING WALLS FOR 3/4" VERTICAL MOVEMENT OF THE BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOAD TO WALL. FILL BRIC/SLANTED BETWEEN TOP OF WALL AND DECK ABOVE WITH MINERAL WOOL INSULATION OR FIRE STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF WALL ASSEMBLY. SEE DETAILS ON SHEET A-601.
5. SEE STRUCTURAL DRAWINGS FOR BRACING OF NON-LOAD BEARING MASONRY WALLS.
6. DOOR FRAMES ARE 4" FROM FACE OF ADJACENT STUD UNLESS NOTED OTHERWISE.
7. FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS; I.E. TOILET ACCESSORIES, CASEWORK, MILLWORK, WALL MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS.
8. GYPSUM BOARD SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE SHOWN ON DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS.
9. MASONRY CONTROL JOINTS (CJ) AND CONTROL JOINTS ABOVE (CJA) SHALL BE LOCATED AS SHOWN ON THE FLOOR PLAN AND BUILDING ELEVATIONS, AND WHERE LARGE PLUMBING VENTS OR RISERS OCCUR IN SINGLE WYTHE MASONRY WALLS, AND WHERE MASONRY WALLS BEARING ON THE CONCRETE FLOOR SLAB ABUT MASONRY WALLS BEARING ON CONCRETE FOOTINGS OR AS INDICATED ON DRAWINGS.
10. "MJD" AND "TBD" INDICATE MINERAL BOARDS AND TACK BOARDS ON PLANS. TWO LENGTH PRECEDES THE DESIGNATION (EXAMPLE 16' MJD). ALL BOARDS ARE 4' 0" TALL. SEE WALL ELEVATIONS OR SPECIFICATIONS FOR MOUNTING HEIGHT.
11. EXTEND FURRING CHANNELS AND GYPSUM BOARD UP 4 INCHES ABOVE FINISHED CEILING ON CMU WALLS.
12. SCRIBE GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO FINISH SURFACES OF BRICK ABOVE. SEAL TIGHTLY AROUND ALL PENETRATIONS.
13. PROVIDE SLOTTED BRACING FOR SUSPENDED CEILINGS ON AS SHOWN ON THE DRAWINGS.

FIRE CABINET TYPES

FEC 1 - SEMI-RECESSED
FEC 2 - SURFACE MOUNTED
FEC 3 - DETENTION GRADE

KEY PLAN



CLACKAMAS COUNTY APPROVAL STAMP

CPP CLACKAMAS PROPERTIES PARTNERS

CLACKAMAS COUNTY COURTHOUSE
1000 COURTHOUSE RD, OREGON CITY, 97045

PERMIT PHASE 4 - BUILDING

CONFORMED SET
AUGUST 28, 2023
REVISIONS
NO. DESCRIPTION DATE

74-22101-00

LEVEL 04 - OVERALL FLOOR PLAN

A-141

LEVEL 05 - OVERALL FLOOR PLAN

SCALE: 3/32" = 1'-0"

GENERAL ARCHITECTURAL NOTES

1. ALL INTERIOR CMU WALLS SHALL BE 8 INCHES NOMINAL THICKNESS, UNLESS NOTED OTHERWISE.
2. WALL TYPES SHALL BE DESIGNATED ON FLOOR PLANS THUS: W1, W, W2 - SEE SHEET A-501 FOR WALL TYPES.
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6. DOOR FRAMES ARE 6" FROM FACE OF ADJACENT STUD UNLESS NOTED OTHERWISE.
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10. "MJD" AND "TBD" INDICATE MARKER BOARDS AND TACK BOARDS ON PLANS. THE LENGTH PRECEDES THE DESIGNATION (EXAMPLE 16' MJD). ALL BOARDS ARE 4' 0" TALL. SEE WALL ELEVATIONS OR SPECIFICATIONS FOR MOUNTING HEIGHT.
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13. PROVIDE SLOPING BRACING FOR SUSPENDED CEILINGS ON AS SHOWN ON THE DRAWINGS.

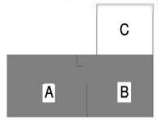
FIRE CABINET TYPES

FEC 1 - SEMI-RECESSED

FEC 2 - SURFACE MOUNTED

FEC 3 - DETENTION GRADE

KEY PLAN



CLACKAMAS COUNTY APPROVAL STAMP

CPP CLACKAMAS PROPERTIES PARTNERS

CLACKAMAS COUNTY COURTHOUSE

1000 COURTHOUSE RD., OREGON CITY, 97045

PERMIT PHASE 1 - BUILDING

CONFORMED SET

AUGUST 28, 2023

REVISIONS

#	DESCRIPTION	BY

74-22101-00

LEVEL 05 - OVERALL FLOOR PLAN

A-151

LEVEL 06 - OVERALL FLOOR PLAN

SCALE: 3/32" = 1'-0"

GENERAL ARCHITECTURAL NOTES

1. ALL INTERIOR CMU WALLS SHALL BE 8 INCHES NOMINAL THICKNESS, UNLESS NOTED OTHERWISE.
2. WALL TYPES SHALL BE DESIGNATED ON FLOOR PLANS THUS: W1, W2, ETC. SEE SHEET A-601 FOR WALL TYPES.
3. ALL MASONRY WALLS AND INTERIOR STUD WALLS SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE, UNLESS NOTED OTHERWISE. SEE REFLECTED CEILING PLAN NOTES.
4. PROVISIONS SHALL BE MADE AT ALL FULL HEIGHT NON-BEARING WALLS FOR 3/4" VERTICAL MOVEMENT OF THE BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOAD TO WALL. FILL BRIDGE/JOISTS BETWEEN TOP OF WALL AND DECK ABOVE WITH MINERAL WOOL INSULATION OR FIRE STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF WALL ASSEMBLY. SEE DETAILS ON SHEET A-601.
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10. "NBD" AND "TBD" INDICATE MARKER BOARDS AND TACK BOARDS ON PLANS. THE LENGTH PRECEDES THE DESIGNATION (EXAMPLE 16' NBD). ALL BOARDS ARE 4' 0" TALL. SEE WALL ELEVATIONS OR SPECIFICATIONS FOR MOUNTING HEIGHT.
11. EXTEND FURRING CHANNELS AND GYPSUM BOARD UP 4 INCHES ABOVE FINISHED CEILING ON CMU WALLS.
12. SCRIBE GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO FINISH SURFACES OF BRICK ARCHES, SILL TIGHT AT AROUND ALL PENETRATIONS.
13. PROVIDE SLOPED BRACING FOR SUSPENDED CEILINGS ON AS SHOWN ON THE DRAWINGS.

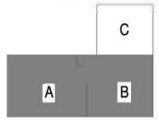
FIRE CABINET TYPES

FEC 1 - SEMI-RECESSED

FEC 2 - SURFACE MOUNTED

FEC 3 - DETENTION GRADE

KEY PLAN



CLACKAMAS COUNTY APPROVAL STAMP

CPP CLACKAMAS PROPERTIES PARTNERS

CLACKAMAS COUNTY COURTHOUSE

1000 COURTHOUSE RD., OREGON CITY, 97045

PERMIT PHASE 1 - BUILDING

CONFORMED SET

AUGUST 28, 2023

REVISIONS

NO. DESCRIPTION DATE

74-22101-00

LEVEL 06 - OVERALL FLOOR PLAN

A-161

Please provide sufficient back up of how you got this number. Provide square footage and rates for both grid systems to show the delta. Provide a plan markup similar to the impact wall board plans above to show the extend of the areas being changed.

11/17/2023 - DBC (PCL) Comment: See following pages highlighting ACT locations included in change, for clarity.

	Labor Amount	Material Amount	Total Amount
CCCC COR#(			
This credit is fo *fine grid at all acoustical grid ceilings.*			
Silhouette Grid			
Credit			
1.480 Grid		(60,612)	(60,612)
Credit		*(60,612)*	*(60,612)*
Silhouette Grid	**0**	**(60,612)**	**(60,612)**
CCCC COR#022	***0***	***(60,612)***	***(60,612)***

Estimate Totals

Description	Amount	Totals	Rate
Labor			
Material	(60,612)		
Subcontract			
Equipment			
Other			
	(60,612)	**(60,612)**	
Labor Markup			
Material Markup			
Equipment Markup			
Subcontractor Markup			
Total		***(60,612)***	

Can project co provide drawings of their quantity takeoff so that the County can provide an apples to apples comparison, just like you've done for impact resistant locations.

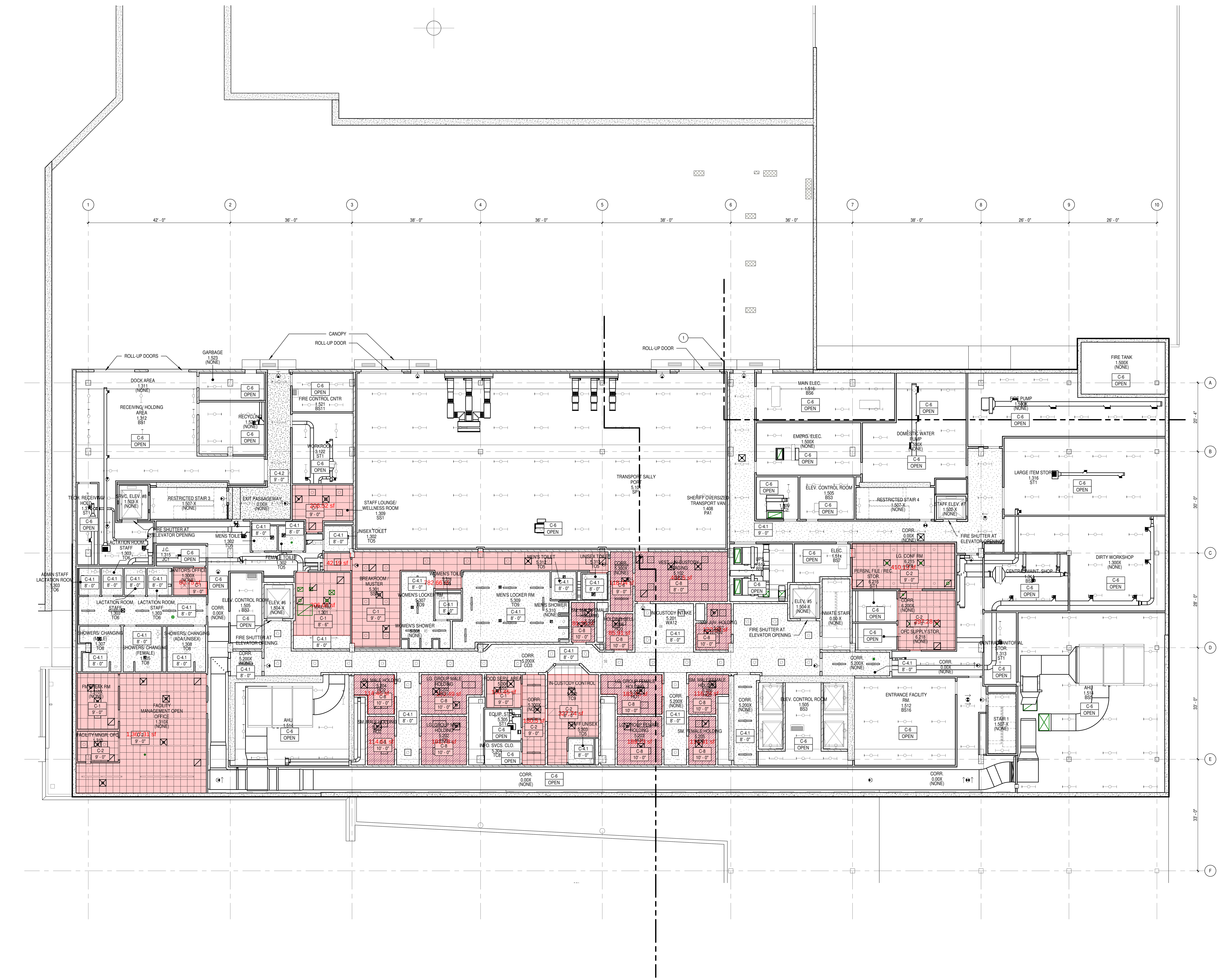
All ACT installations indicated on the Reflected Ceiling Plans will receive the Suprafine grid system in lieu of the Silhouette grid system.

Silhouette Credit			
2' X-T	-27,681.00	lf	-$41,771.00
4' X-T	-51,736.00	lf	-$78,070.00
12' Main	-39,159.00	lf	-$52,081.00
6 Foot Tee	-26,583.00	lf	-$49,657.00
			-$221,579.00
9/16 Grid Add			
2' X-T	27,681.00	lf	$27,681.00
4' X-T	51,736.00	lf	$51,736.00
12' Main	39,159.00	lf	$41,117.00
6 Foot Tee	26,583.00	lf	$40,433.00
			$160,967.00
ACOUSTICAL TREATMENT			***-$60,612.00***

Cascade Acoustics, Inc. requires written Notice to Proceed within 10 days for this pricing to remain valid
If no notice is received within the time listed above, Cascade Acoustics, Inc. reserves the right to add cost.
based on changing material prices and/or jobsite conditions

Signature: _____ Date:_____

Print Name:_____



REFLECTED CEILING PLAN - BASEMENT

SCALE: 3/32" = 1'-0"

0 4 8 16 24
SCALE: 3/32" = 1'=0"

REFLECTED CEILING PLAN GENERAL NOTES

A. REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS.
B. ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE.
C. CEILING HEIGHTS ARE NOTED ON THE REFLECTED CEILING PLANS ARE MEASURED FROM THE FINISH FLOOR OF THE ROOM.
D. ALL ELECTRICAL FIXTURES, SPEAKERS, SMOKE AND THERMAL DETECTORS, MECHANICAL GRILLES, SPRINKLER HEADS, AND OTHER CEILING MOUNTED DEVICES, SHALL BE CENTERED BETWEEN CEILING GRIDS UNLESS NOTED OTHERWISE. SPRINKLER HEADS SHALL BE WITHIN A 3-INCH RADIUS CENTERED BETWEEN CEILING GRIDS.
E. IN ACOUSTICAL CEILING PANELS WITH SCORE IN THE CENTER, CENTER DEVICES REFERENCE IN NOTE D IN ONE HALF OF THE TILE. DO NOT LOCATE ON THE SCORE. FOR APC WITH MULTIPLE SCORED PATTERNS, COORDINATE LOCATION WITH THE ARCHITECT.
F. PROVIDE SUSPENSION SYSTEM AROUND ELECTRICAL FIXTURES, MECHANICAL GRILLES, DIFFUSERS, AND OTHER CEILING MOUNTED DEVICES. AT ACOUSTICAL PANEL CEILINGS.
G. ALL DIMENSIONS ON REFLECTED CEILING PLANS ARE ACTUAL AND ARE TO THE FOLLOWING UNLESS NOTED OTHERWISE:
   a. FACE OF FINISHED WALL
   b. FACE OF FINISHED BULKHEADS
   c. CENTERLINE OF COLUMNS
   d. CENTERLINE OF TEES
H. IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.
I. ALL WALLS EXTEND TO UNDERSIDE OF DECK EXCEPT THOSE SHOWN SHADED IN WHICH GYPSUM BOARD OR MASONRY EXTENDS MIN 6 INCHES ABOVE FINISHED CEILING. ALL METAL STUDS EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK.
J. FOR ALL LIGHT FIXTURES NOT DIMESNIONED AND LOCATED IN HARD LID GWB CEILINGS CENTER IN ROOM, CORRIDOR, SOFFIT, OR CENTER ABOVE SHOWERS, UNO
K. FOR ALL WALL MOUNTED LIGHT FIXTURES LOCATED ABOVE SINKS AND MIRRORS, CENTER FIXTURE ON SINK, UNO

SHEET NOTES

1. EXTERIOR CANOPY-GALVANIZED STEEL, THREE COAT FLUOROPOLYMER FINISH
2. RCP SHEET NOTE 2
3. RCP SHEET NOTE 3
4. R-15 BATT FIBERGLASS INSULATION STICK PINNED TO BOT. OF DECK IN HATCHED AREA
5. HORIZONTAL SHAFT EXTENSION ABOVE

CEILING LEGEND

CEILING TYPES

- C-1 2'X4' APC CEILING GRID
- C-2 2'X2' APC CEILING GRID
- C-4.1 GWB, GYPSUM BOARD CEILING
- C-4.2 GWB, GYPSUM BOARD CEILING, 2 LAYERS
- C-6 OPEN, UTILITY
- C-7.1 SPECIAL CEILING, WOOD SLAT CEILING
- C-7.2 SPECIAL CEILING, BAFFLES
- C-7.3 2'x6' ACT CEILING GRID
- C-7.4 ACOUSTIC PANEL CEILING
- C-8 2'X2" DETENTION ACT CEILING GRID

X-X — CEILING TYPE
X'-X" — CEILING HEIGHT

LIGHTING FIXTURES

- LIGHTING FIXTURE
- LIGHTING FIXTURE ON EMERGENCY SYSTEM
- CEILING FIXTURE, SURFACE, RECESSED OR PENDANT
- LIGHTING FIXTURE ON EMERGENCY SYSTEM
- LIGHTING TRACK, TRACK MOUNTED LIGHT FIXTURES
- LIGHTING FIXTURE
- WALL MOUNTED LIGHTING FIXTURE
- WALL WASHER
- HIGH BAY LIGHTING FIXTURE
- WALL MOUNTED LIGHTING FIXTURE
- SELF CONTAINED EMERGENCY LIGHTING UNIT MOUNT 94-INCHES AFF, UNO
- EXIT SIGN, CEILING MOUNTED, DIRECTIONAL ARROW(S) AS INDICATED
- EXIT SIGN, WALL MOUNTED, DIRECTIONAL ARROW(S) AS INDICATED. MOUNT 94-INCHES AFF, UNO

SECURITY DEVICES

- XXX VIDEO CAMERA - CEILING
- XXX VIDEO CAMERA - WALL
- GB GLASS BREAK SENSOR

KEY PLAN

C
A
B

N

CLACKAMAS COUNTY APPROVAL STAMP

CLACKAMAS COUNTY

CPP CLACKAMAS PROGRESS PARTNERS

CLACKAMAS COUNTY COURTHOUSE

1000 COURTHOUSE RD, OREGON CITY, 97045

PERMIT PHASE 4 - BUILDING

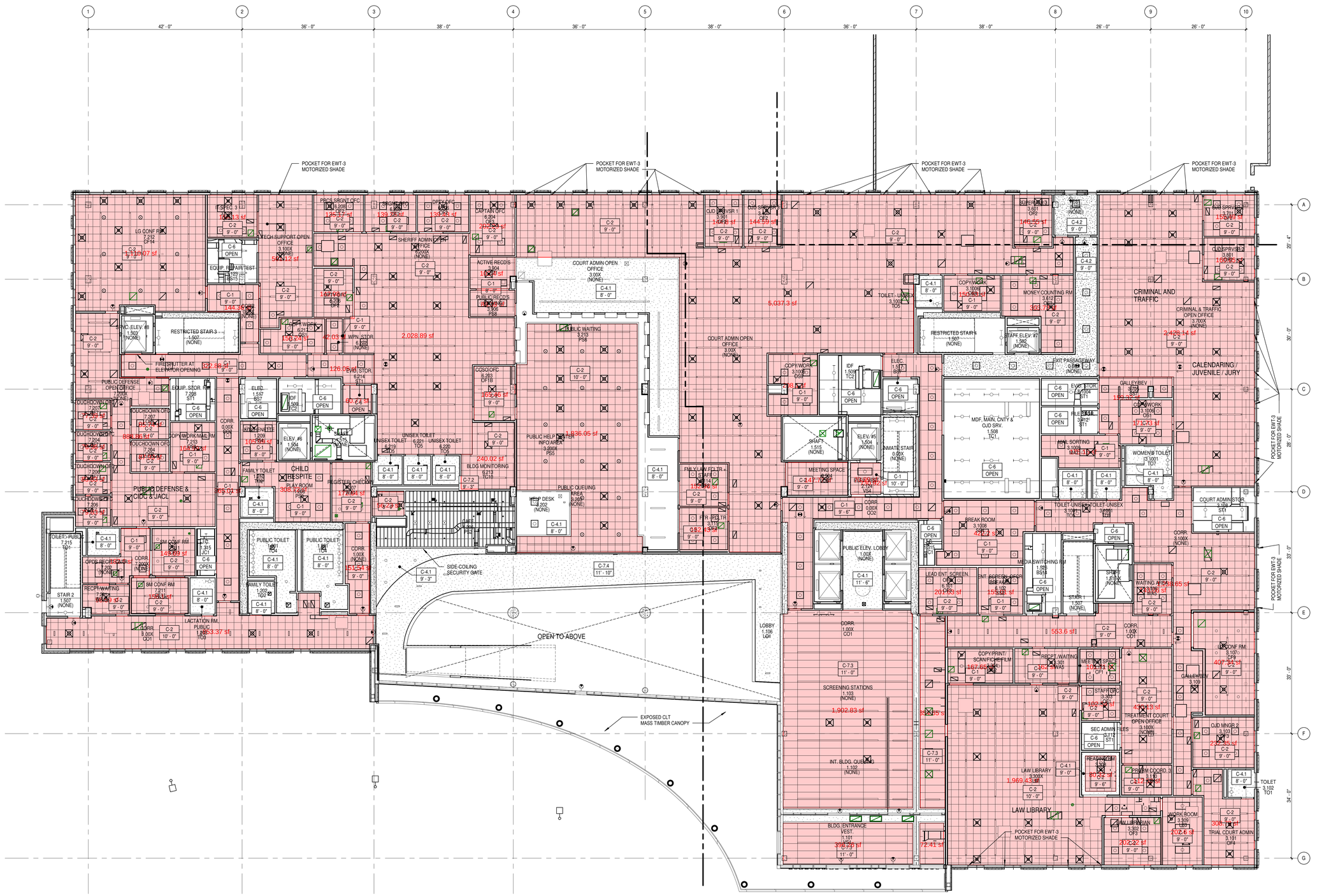
CONFORMED SET
AUGUST 28, 2023
REVISIONS

MX	TBD	BMECH-22-00649 -X
B1	08.29.2023	BCOMM-23-00039-1

74-22101-00

BASEMENT - OVERALL REFLECTED CEILING PLAN

AC101



REFLECTED CEILING PLAN - LEVEL 01

SCALE: 3/32" = 1'-0"

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REFLECTED CEILING PLAN GENERAL NOTES

A. REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS.
B. ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE.
C. CEILING HEIGHTS ARE NOTED ON THE REFLECTED CEILING PLANS ARE MEASURED FROM THE FINISH FLOOR OF THE ROOM.
D. ALL ELECTRICAL FIXTURES, SPEAKERS, SMOKE AND THERMAL DETECTORS, MECHANICAL GRILLES, SPRINKLER HEADS, AND OTHER CEILING MOUNTED DEVICES, SHALL BE CENTERED BETWEEN CEILING GRIDS UNLESS NOTED OTHERWISE. SPRINKLER HEADS SHALL BE WITHIN A 3-INCH RADIUS CENTERED BETWEEN CEILING GRIDS.
E. IN ACOUSTICAL CEILING PANELS WITH SCORE IN THE CENTER, CENTER DEVICES REFERENCE IN NOTE D IN ONE HALF OF THE TILE. DO NOT LOCATE ON THE SCORE. FOR APC WITH MULTIPLE SCORED PATTERNS, COORDINATE LOCATION WITH THE ARCHITECT.
F. PROVIDE SUSPENSION SYSTEM AROUND ELECTRICAL FIXTURES, MECHANICAL GRILLES, DIFFUSERS, AND OTHER CEILING MOUNTED DEVICES. AT ACOUSTICAL PANEL CEILINGS.
G. ALL DIMENSIONS ON REFLECTED CEILING PLANS ARE ACTUAL AND ARE TO THE FOLLOWING UNLESS NOTED OTHERWISE:
   a. FACE OF FINISHED WALL
   b. FACE OF FINISHED BULKHEADS
   c. CENTERLINE OF COLUMNS
   d. CENTERLINE OF TEES
H. IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.
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J. FOR ALL LIGHT FIXTURES NOT DIMENSIONED AND LOCATED IN HARD LID GWB CEILINGS CENTER IN ROOM, CORRIDOR, SOFFIT, OR CENTER ABOVE SHOWERS, UNO
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SHEET NOTES

1 EXTERIOR CANOPY-GALVANIZED STEEL, THREE COAT FLUOROPOLYMER FINISH
2 RCP SHEET NOTE 2
3 RCP SHEET NOTE 3
4 R-15 BATT FIBERGLASS INSULATION STICK PINNED TO BOT. OF DECK IN HATCHED AREA
5 HORIZONTAL SHAFT EXTENSION ABOVE

CEILING LEGEND

CEILING TYPES

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- X-X CEILING TYPE
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LIGHTING FIXTURES

- LIGHTING FIXTURE
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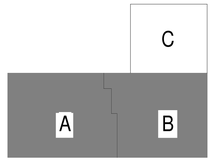
SECURITY DEVICES

- VIDEO CAMERA - CEILING
- VIDEO CAMERA - WALL
- GLASS BREAK SENSOR

KEY PLAN



CLACKAMAS COUNTY APPROVAL STAMP

CLACKAMAS COUNTY COURTHOUSE
1000 COURTHOUSE RD, OREGON CITY, 97045

PERMIT PHASE 4 - BUILDING

CONFORMED SET
AUGUST 28, 2023
REVISIONS
B1 08.29.2023 BCOMM-23-00039-1

74-22101-00

LEVEL 01 - OVERALL REFLECTED CEILING PLAN

AC111

REFLECTED CEILING PLAN - LEVEL 02

SCALE: 3/32" = 1'-0"

SCALE: 3/32" = 1'-0"

REFLECTED CEILING PLAN GENERAL NOTES

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SHEET NOTES

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3 RCP SHEET NOTE 3
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5 HORIZONTAL SHAFT EXTENSION ABOVE

CEILING LEGEND

CEILING TYPES

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- C-7.4 ACOUSTIC PANEL CEILING
- C-8 2'X2' DETENTION ACT CEILING GRID
- X-X / X'-X" CEILING TYPE / CEILING HEIGHT

LIGHTING FIXTURES

- LIGHTING FIXTURE
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- CEILING FIXTURE, SURFACE, RECESSED OR PENDANT
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SECURITY DEVICES

- VIDEO CAMERA - CEILING
- VIDEO CAMERA - WALL
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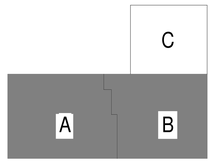
KEY PLAN



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CLACKAMAS COUNTY APPROVAL STAMP

CLACKAMAS PROGRESS PARTNERS

CLACKAMAS COUNTY COURTHOUSE

1000 COURTHOUSE RD, OREGON CITY, 97045

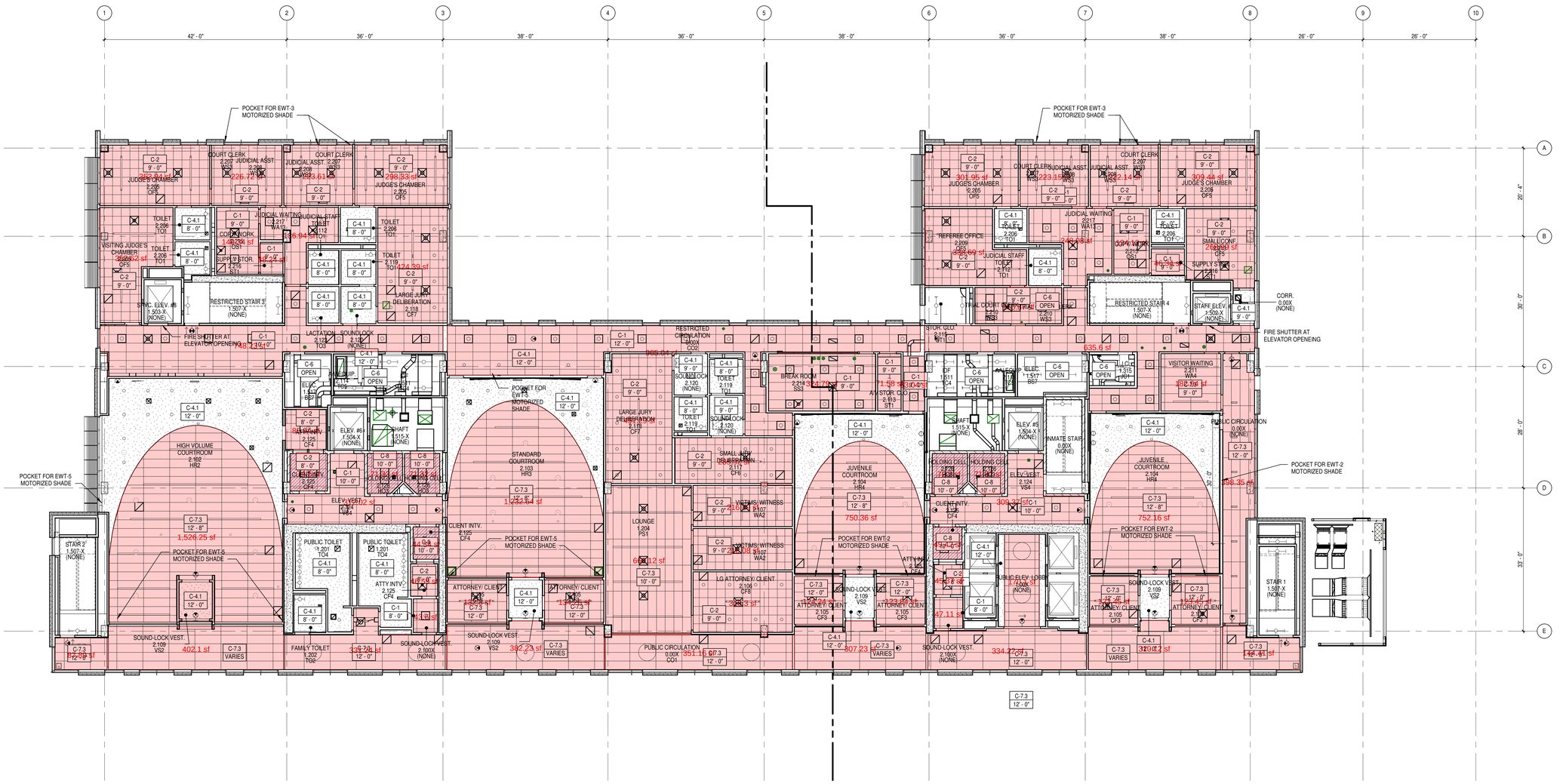
PERMIT PHASE 4 - BUILDING

CONFORMED SET
AUGUST 28, 2023
REVISIONS
B1 08.29.2023 BCOMM-23-00039-1

74-22101-00

LEVEL 02 - OVERALL REFLECTED CEILING PLAN

AC121



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SHEET NOTES

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3 RCP SHEET NOTE 3
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5 HORIZONTAL SHAFT EXTENSION ABOVE

CEILING LEGEND

CEILING TYPES

- C-1 2'X4' APC CEILING GRID
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- C-7.1 SPECIAL CEILING, WOOD SLAT CEILING
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- X-X CEILING TYPE
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- LIGHTING FIXTURE
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- SELF CONTAINED EMERGENCY LIGHTING UNIT MOUNT 94-INCHES AFF, UNO
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SECURITY DEVICES

- VIDEO CAMERA - CEILING
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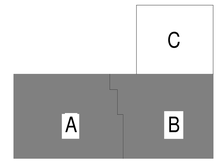
KEY PLAN



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CLACKAMAS COUNTY APPROVAL STAMP

CLACKAMAS COUNTY COURTHOUSE
1000 COURTHOUSE RD, OREGON CITY, 97045

PERMIT PHASE 4 - BUILDING

CONFORMED SET
AUGUST 28, 2023
REVISIONS
B1 08.29.2023 BCOMM-23-00039-1

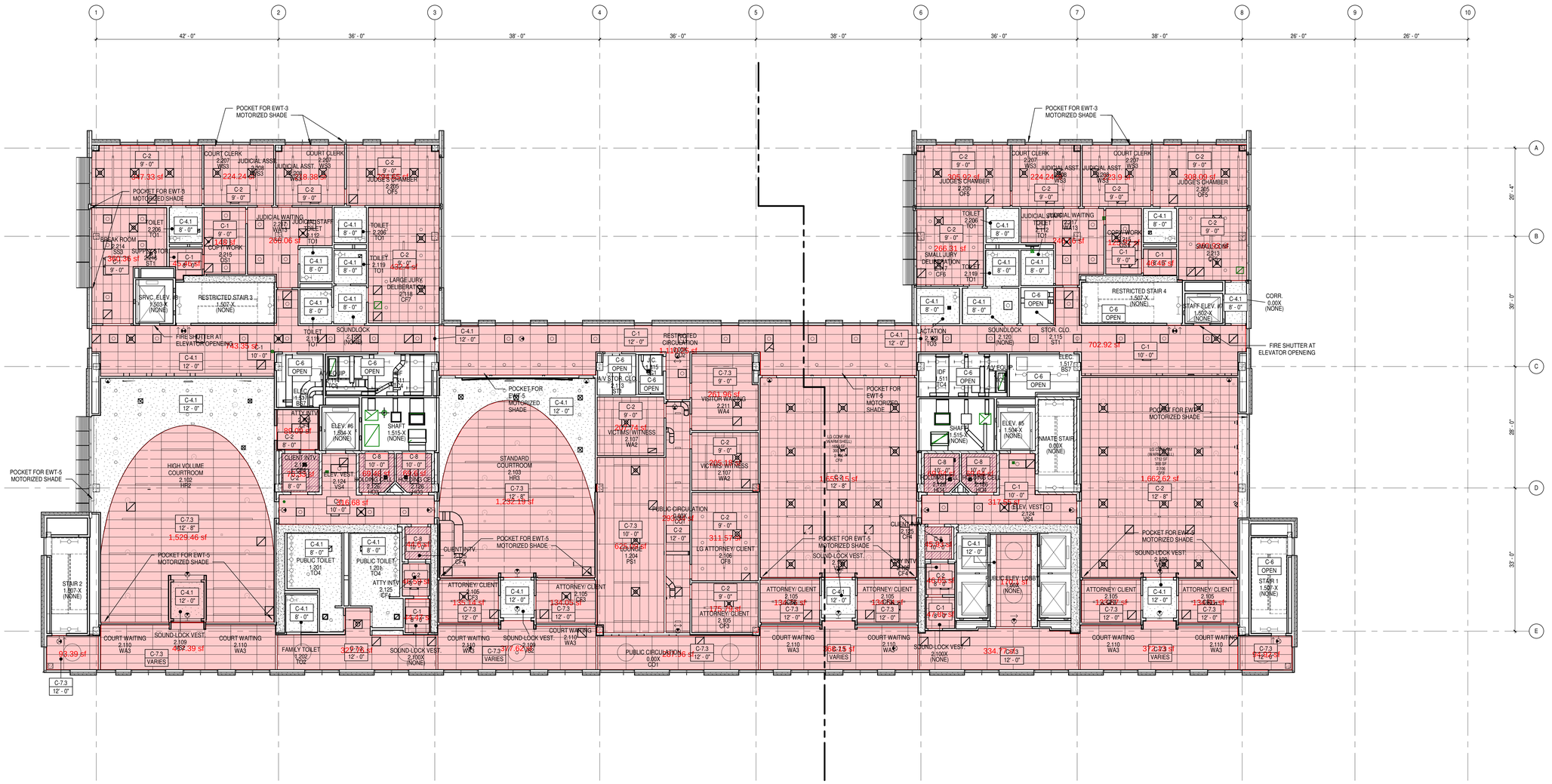
74-22101-00

LEVEL 03 - OVERALL REFLECTED CEILING PLAN

AC131

REFLECTED CEILING PLAN - LEVEL 03
SCALE: 3/32" = 1'-0"

0 4 8 16 24
SCALE: 3/32" = 1'-0"



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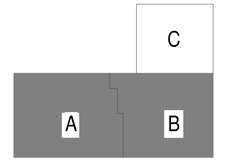
KEY PLAN



CLACKAMAS COUNTY APPROVAL STAMP

CLACKAMAS COUNTY PROGRESS PARTNERS

CLACKAMAS COUNTY COURTHOUSE

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PERMIT PHASE 4 - BUILDING

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LEVEL 04 - OVERALL REFLECTED CEILING PLAN

AC141

REFLECTED CEILING PLAN - LEVEL 04

SCALE: 3/32" = 1'-0"

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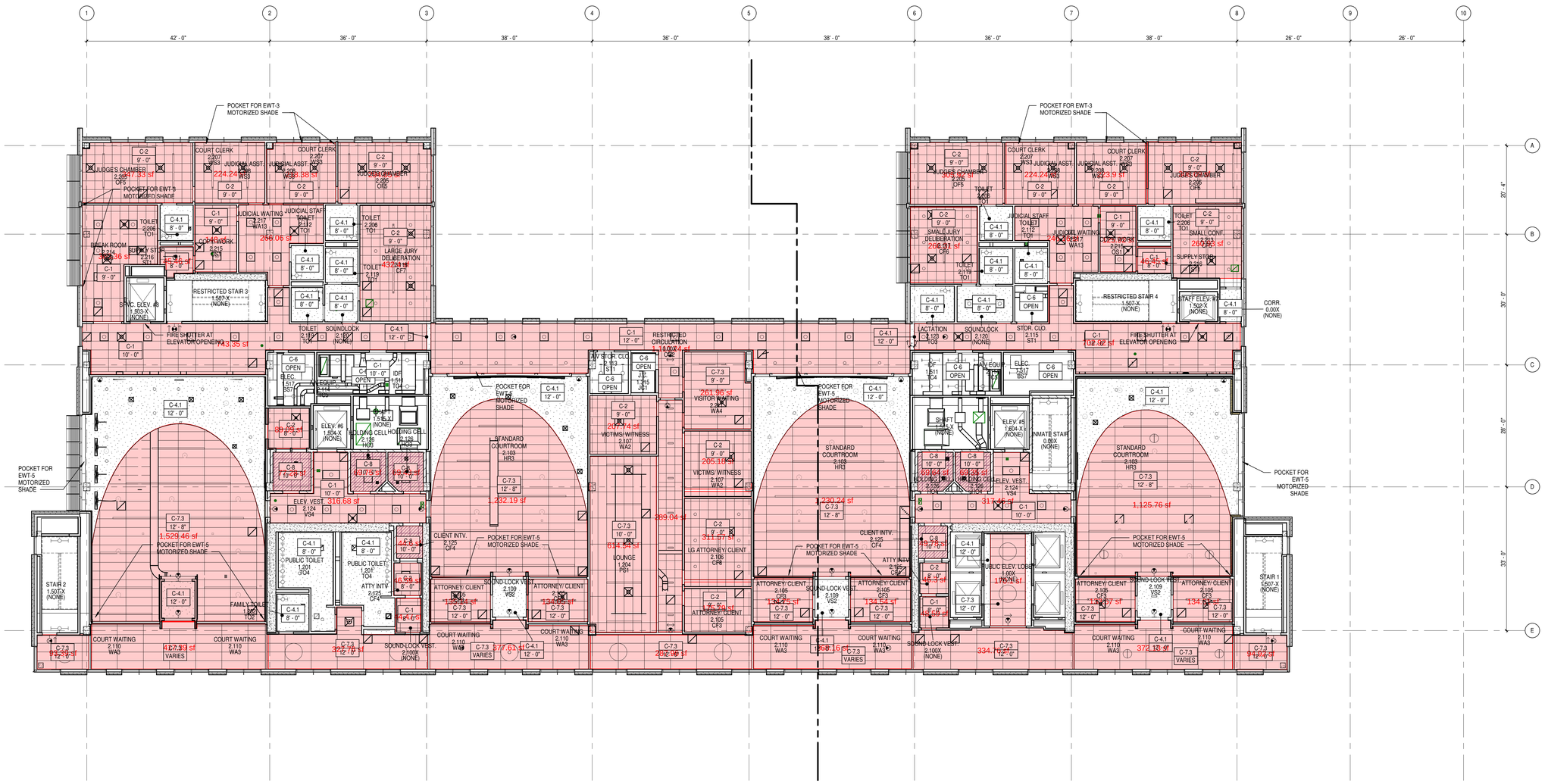

REFLECTED CEILING PLAN - LEVEL 05

SCALE: 3/32" = 1'-0"

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REFLECTED CEILING PLAN GENERAL NOTES

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   c. CENTERLINE OF COLUMNS
   d. CENTERLINE OF TEES
H. IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.
I. ALL WALLS EXTEND TO UNDERSIDE OF DECK EXCEPT THOSE SHOWN SHADED IN WHICH GYPSUM BOARD OR MASONRY EXTENDS MIN 6 INCHES ABOVE FINISHED CEILING. ALL METAL STUDS EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK.
J. FOR ALL LIGHT FIXTURES NOT DIMESNIONED AND LOCATED IN HARD LID GWB CEILINGS CENTER IN ROOM, CORRIDOR, SOFFIT, OR CENTER ABOVE SHOWERS, UNO
K. FOR ALL WALL MOUNTED LIGHT FIXTURES LOCATED ABOVE SINKS AND MIRRORS, CENTER FIXTURE ON SINK, UNO

SHEET NOTES

1 EXTERIOR CANOPY-GALVANIZED STEEL, THREE COAT FLUOROPOLYMER FINISH
2 RCP SHEET NOTE 2
3 RCP SHEET NOTE 3
4 R-15 BATT FIBERGLASS INSULATION STICK PINNED TO BOT. OF DECK IN HATCHED AREA
5 HORIZONTAL SHAFT EXTENSION ABOVE

CEILING LEGEND

CEILING TYPES

- C-1 2'X4' APC CEILING GRID
- C-2 2'X2' APC CEILING GRID
- C-4.1 GWB, GYPSUM BOARD CEILING
- C-4.2 GWB, GYPSUM BOARD CEILING, 2 LAYERS
- C-6 OPEN, UTILITY
- C-7.1 SPECIAL CEILING, WOOD SLAT CEILING
- C-7.2 SPECIAL CEILING, BAFFLES
- C-7.3 2'x8' ACT CEILING GRID
- C-7.4 ACOUSTIC PANEL CEILING
- C-8 2'X2' DETENTION ACT CEILING GRID
- X-X — CEILING TYPE
- X'-X" — CEILING HEIGHT

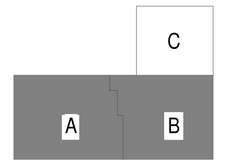
LIGHTING FIXTURES

- LIGHTING FIXTURE
- LIGHTING FIXTURE ON EMERGENCY SYSTEM
- CEILING FIXTURE, SURFACE, RECESSED OR PENDANT
- LIGHTING FIXTURE ON EMERGENCY SYSTEM
- LIGHTING TRACK, TRACK MOUNTED LIGHT FIXTURES
- LIGHTING FIXTURE
- WALL MOUNTED LIGHTING FIXTURE
- WALL WASHER
- HIGH BAY LIGHTING FIXTURE
- WALL MOUNTED LIGHTING FIXTURE
- SELF CONTAINED EMERGENCY LIGHTING UNIT MOUNT 94-INCHES AFF, UNO
- EXIT SIGN, CEILING MOUNTED, DIRECTIONAL ARROW(S) AS INDICATED
- EXIT SIGN, WALL MOUNTED, DIRECTIONAL ARROW(S) AS INDICATED. MOUNT 94-INCHES AFF, UNO

SECURITY DEVICES

- VIDEO CAMERA - CEILING
- VIDEO CAMERA - WALL
- GLASS BREAK SENSOR

KEY PLAN



CLACKAMAS COUNTY APPROVAL STAMP

CLACKAMAS PROGRESS PARTNERS

CLACKAMAS COUNTY COURTHOUSE

1000 COURTHOUSE RD, OREGON CITY, 97045

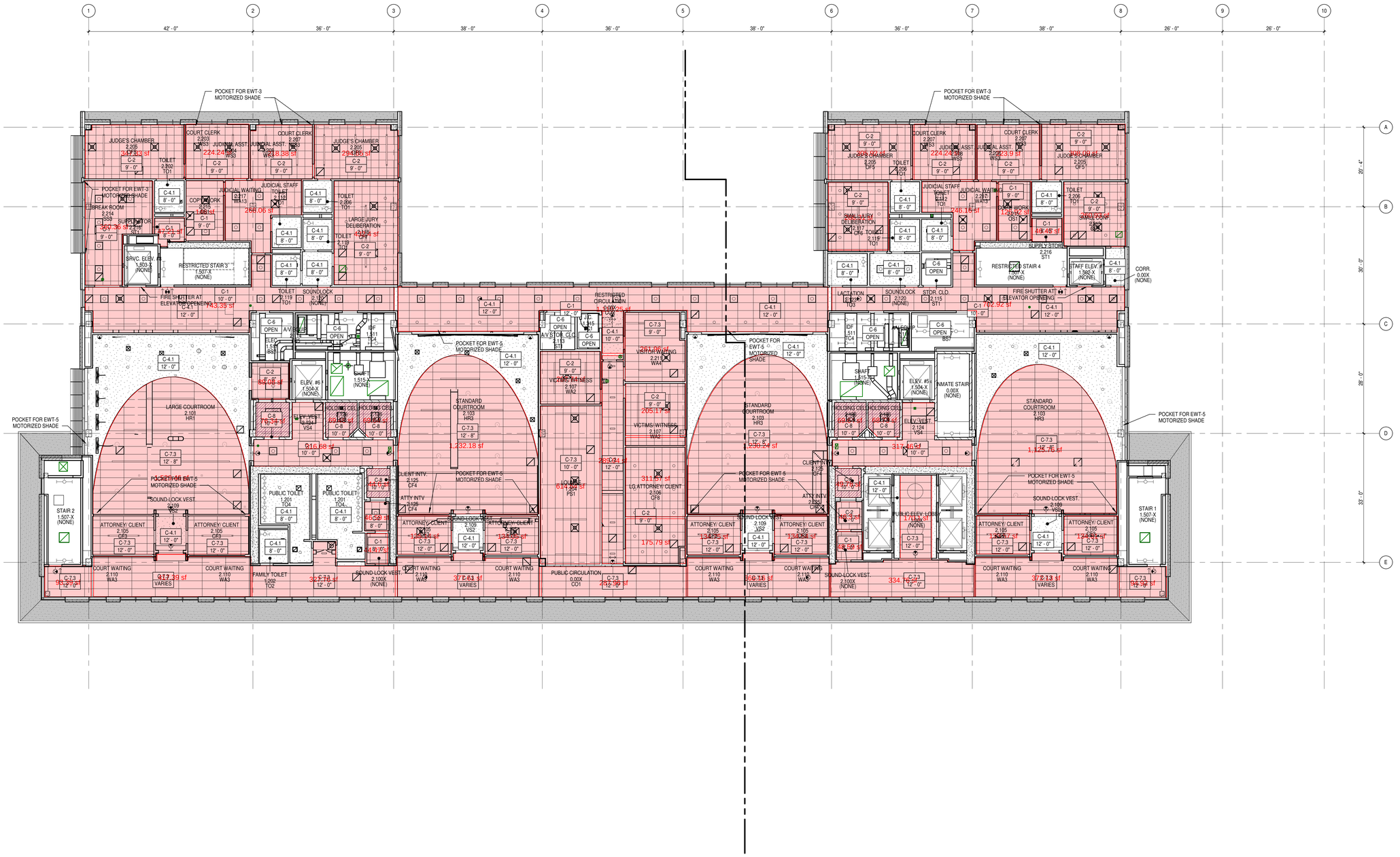
PERMIT PHASE 4 - BUILDING

CONFORMED SET
AUGUST 28, 2023
REVISIONS
B1 08.29.2023 BCOMM-23-00039-1

74-22101-00

LEVEL 05 - OVERALL REFLECTED CEILING PLAN

AC151



REFLECTED CEILING PLAN GENERAL NOTES

A. REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS.
B. ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE.
C. CEILING HEIGHTS ARE NOTED ON THE REFLECTED CEILING PLANS ARE MEASURED FROM THE FINISH FLOOR OF THE ROOM.
D. ALL ELECTRICAL FIXTURES, SPEAKERS, SMOKE AND THERMAL DETECTORS, MECHANICAL GRILLES, SPRINKLER HEADS, AND OTHER CEILING MOUNTED DEVICES, SHALL BE CENTERED BETWEEN CEILING GRIDS UNLESS NOTED OTHERWISE. SPRINKLER HEADS SHALL BE WITHIN A 3-INCH RADIUS CENTERED BETWEEN CEILING GRIDS.
E. IN ACOUSTICAL CEILING PANELS WITH SCORE IN THE CENTER, CENTER DEVICES REFERENCE IN NOTE D IN ONE HALF OF THE TILE. DO NOT LOCATE ON THE SCORE. FOR APC WITH MULTIPLE SCORED PATTERNS, COORDINATE LOCATION WITH THE ARCHITECT.
F. PROVIDE SUSPENSION SYSTEM AROUND ELECTRICAL FIXTURES, MECHANICAL GRILLES, DIFFUSERS, AND OTHER CEILING MOUNTED DEVICES. AT ACOUSTICAL PANEL CEILINGS.
G. ALL DIMENSIONS ON REFLECTED CEILING PLANS ARE ACTUAL AND ARE TO THE FOLLOWING UNLESS NOTED OTHERWISE:
   a. FACE OF FINISHED WALL
   b. FACE OF FINISHED BULKHEADS
   c. CENTERLINE OF COLUMNS
   d. CENTERLINE OF TEES
H. IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.
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- C-7.4 ACOUSTIC PANEL CEILING
- C-8 2'X2' DETENTION ACT CEILING GRID
- X-X CEILING TYPE
- X'-X" CEILING HEIGHT

LIGHTING FIXTURES

- LIGHTING FIXTURE
- LIGHTING FIXTURE ON EMERGENCY SYSTEM
- CEILING FIXTURE, SURFACE, RECESSED OR PENDANT
- LIGHTING FIXTURE ON EMERGENCY SYSTEM
- LIGHTING TRACK, TRACK MOUNTED LIGHT FIXTURES
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- SELF CONTAINED EMERGENCY LIGHTING UNIT MOUNT 94-INCHES AFF, UNO
- EXIT SIGN, CEILING MOUNTED, DIRECTIONAL ARROW(S) AS INDICATED
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SECURITY DEVICES

- VIDEO CAMERA - CEILING
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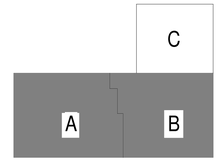
KEY PLAN



CLACKAMAS COUNTY APPROVAL STAMP

CLACKAMAS COUNTY COURTHOUSE
1000 COURTHOUSE RD, OREGON CITY, 97045

PERMIT PHASE 4 - BUILDING

CONFORMED SET
AUGUST 28, 2023
REVISIONS
B1 08.29.2023 BCOMM-23-00039-1

74-22101-00

LEVEL 06 - OVERALL REFLECTED CEILING PLAN

AC161

CLACKAMAS COUNTY
2051 KAEN ROAD
OREGON CITY, OR 97045
(503) 655-8893

COUNTY CHANGE PROPOSAL NO. [013]

DATE ISSUED: August 31, 2023

PROJECT: Clackamas County Circuit Courthouse Project

PROJECT COMPANY: Clackamas Progress Partners, LLC

THIS CHANGE PROPOSAL IS ISSUED PURSUANT TO: Section [7.12] of the Project Agreement.

DESCRIPTION OF PROPOSED CHANGE: Value Engineering.

The County is requesting the following changes within the new Clackamas Courthouse:
1. Provide impact resistant GWB in public areas up to four (4) feet, with eight (8) feet in stairways;
2. Allow exposed tee grid system;
3. Remove floor attached U-bolt from defendant tables in courtrooms.

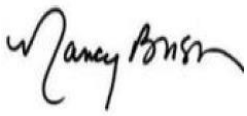
KEY TERMS:

1. The Project Company is hereby requested to provide a proposal, with anticipated costs, to implement the changes to the Design-Build Contract Amount as well as any changes to the Facilities Services Contract Amount, along with any impacts to the Scheduled Occupancy Readiness Date, for the proposed change. Authorization to begin implementing the change is contingent upon the parties executing a formal change order in accordance with Section 7.12 of the Project Agreement.

EXHIBITS AND ATTACHMENTS:

1. Attachment A: Appendix 6 of the PA (Design and Construction Standards)

AUTHORIZED SIGNATURE



8/31/23

County Authorized Representative | Date

ATTACHMENT A

Appendix 6 of the PA (Design and Construction Standards)

(d) Provide a work surface for reference material that is minimum sixty (60) inches wide by twenty-four (24) inches deep. Include power and data outlets for use by an expert witness may use a computer during testimony. Line the wall behind the paneling of the witness box with bullet-resistant material that meets the criteria of UL 752 Level 3.

9.7.2.4 Jury Box

(a) Provide clear sightlines from each juror to the witness, attorneys, judge, courtroom clerk, and evidence displays. The jury box shall extend past either the witness box or the attorneys' tables. Provide direct access into the jury box from the private corridor to the deliberation room so that the jury does not have to pass in front of the bench or litigant tables.

(b) The jury box shall be two-tiered, accommodate people with disabilities, and sized to accommodate fourteen (14) people. The dimensions shall be approximately 8′-0" by 18′-0". The first row of jurors may be at floor level. When locating accessible seating space, provide sightlines equivalent to sightlines for other jury seating, and integrate the accessible position into the overall seating layout so that it is equal in its location and opportunity to the other seats.

(c) Design the jury box to prevent communication between jurors and the spectators and to guard against juror harassment. Provide a minimum distance of 6′-0" between jurors and the spectator area railing.

(d) Provide comfortable, ergonomic, fixed jury chairs to accommodate people of all sizes. The height shall be adjustable from sixteen (16) inches to twenty (20) inches. Chairs shall swivel and tilt and be spaced so that the arms do not collide, and the chairs do not strike the rear wall. Provide sufficient aisle space in front of each row of seats for juror legroom. Provide a front modesty panel between twenty-six (26) inches and thirty-three (33) inches in height separating the jury box from the litigation area. The rear row of seating shall be far enough away from the back wall to avoid scuff marks from chair backs or jurors' heads on the back wall. Provide a durable wall material behind the jury box that is resistant to scuff marks from chair backs and head prints from jurors leaning back.

9.7.2.5 Litigation Area

(a) The litigation area provides space for primary participants in activities of the judicial proceeding. Size varies, depending on courtroom type, and components within the well vary by the type of proceeding—see Room Data Sheets room configuration diagrams in Attachment 6A (Courthouse Program and Room Data Sheets) to these Design and Construction Standards.

(b) Counsel tables: locate two (2) counsel tables in the courtroom so that attorneys can be seen and heard by other attorneys, the judge, the witness, the courtroom clerk, and the jury. Provide at least two (2) movable, accessible counsel tables with space for comfortable, ergonomic, movable chairs. The counsel tables shall have a table box for data, video, and power. Separate grommets in the tables shall be provided for the two (2) microphones. Provide space for a third counsel table if possible. Tables shall include a modesty panel to conceal defendant restraint devices. ~~Provide a floor-attached U-bolt for~~

~~the defense table.~~ Provide an area behind the counsel tables and between the spectator area for a row of chairs along the railing for staff, paralegals, or other involved parties. Tables shall be large enough to accommodate the presence of an interpreter, in compliance with OCCCIF requirements.

(c) Digital evidence presentation system placed between the two counsel tables: the system can be a cart shared between courtrooms or installed as a fixed shelf. It can contain a document camera and/or a Blu-ray player. Provide a recessed floor box with outlets for data, video, and power.

9.7.2.6 Exhibit Display Area

Provide space for exhibit display and a large ceiling-mounted projection screen or large monitors located to be clearly visible to all court participants.

9.7.2.7 Court Security Officer

The CSO is located within the litigation area to the rear of the well and in front of the spectators' barrier. The CSO is typically located near the door to the in-custody holding area and requires easy and quick access to the defendant's table. The CSO station is intended to be an open floor space to accommodate the CSO in a chair.

9.7.2.8 Spectator Area

(a) A multipurpose courtroom has seating in the spectator area for the majority of the jury panel. The number of seats shall be planned to accommodate voir dire panels for jury selection through a combination of seats behind the rail, movable chairs inside the litigation area, and the jury box seating.

(b) Bench seating is to be provided in lieu of individual theater-style seats. Benches shall be contoured and proportioned to provide comfortable seating; hardwood veneer and solid wood construction shall be provided. Benches shall be anchored to the floor but removable for relocation.

(c) Provide wheelchair spaces, companion seating, and semi-ambulatory seating in ratios required by law. Temporary seating, or a fold-down seat, may be placed in wheelchair spaces when not occupied. A companion seat shall be located adjacent to the wheelchair space. The wheelchair space shall align with the companion seat.

(d) Provide space in front of and behind the wheelchair space such that the spectator using a wheelchair or mobility device can roll forward or backward to allow other spectators to exit a row. The wheelchair or mobility device cannot permanently block exit from an aisle.

9.7.2.9 Sound Lock/Entry Vestibule

Provide a vestibule between the courtroom and the public circulation that will be a transition space and control noise. The doors from the vestibule into the courtroom shall have visions panels. The doors from the public corridor into the vestibule shall be solid. The outside doors from the corridor to the courtroom shall be lockable, whereas the doors from the courtroom shall not have exit devices, latches, or astragals due to noise considerations.

RDS Code	Description
IC-1	High Aesthetic Importance
IC-2	Moderate Aesthetic Importance
IC-3	Low Aesthetic Importance

Table 6. 10.3 (Interior Aesthetic Requirements)

10.2 INTERIOR CONSTRUCTION

10.2.1 Partitions

(a) Gypsum board partitions:

(i) Gypsum board shall comply with C1396, Standard Specification for Gypsum Board. Provide gypsum board as follows:

(1) type X 5/8-inch gypsum board is typical installation;

(2) Mold Resistant for locations subject to moisture or high humidity;

(3) provide impact resistant up to 4 feet above floor level for Public areas, corridors, and up to 8 feet above floor level for stairways;~~with a level 5 finish for Public areas, corridors and stairways;~~

(ii) partitions shall have loading capacity identified in Room Data Sheets, with a maximum deflection of L/240. Provide metal studs with a minimum base-metal thickness of 0.0329 inch;

(iii) provide a system of concealed, permanent, secure, and appropriately designed backing, supports, and anchorages for all handrails, wall-hung cabinets, court seals, and other surface-mounted fixtures, equipment, systems, and building specialties;

(iv) provide Bullet Resistant Fiberglass Panels where required by security requirement. Panels shall be “non-ricochet type” to permit the en-capture and retention of an attacking projectile lessening the potential of a random injury or lateral penetration;

(v) interior finish levels shall conform to the standards set forth by ASTM C 840 with the following exceptions which shall override:

(1) Level 1 shall be used in plenum areas and areas concealed to public view;

(2) Level 2 shall not be permitted;

(3) Level 3 shall be used for substrates for tile or other applied material;

(4) Level 4 shall be the typical finish level; and

(l) Acoustic underlayment

10.3.5 Stair Finishes

Stair finishes shall be in compliance with Section 9.5.3 (Stairs) of these Design and Construction Standards.

10.3.6 Ceiling Finishes

(a) In Rooms and Spaces where the overhead slab is constructed from mass timber, the mass timber may be exposed and the designated applied Ceiling Finish omitted provided all other room provisions as outlined in the Room Data Sheet are met, including Acoustic Criteria. When mass timber slabs are exposed to view, overhead utilities and conduit routing shall be hidden from view or neatly organized, and exposed duct lagging/insulation shall not permitted.

(b) Ceiling Finishes

RDS Code	Description
C-1	Acoustical Ceiling Tile
C-2	Acoustical Ceiling Tile, High NRC
C-3	Acoustical Ceiling Tile, Mylar Faced
C-4	Gypsum Board, Painted
C-5	Open, Architecturally Finished
C-6	Open, Utility
C-7	Special Ceiling
C-8	Perforated Metal Security Ceiling with Acoustical Treatment

Table 6. 10.14 (Ceiling Finishes)

(c) Acoustic panel ceilings:

(i) All manufacturers shall have a post-consumer recycling program.

(ii) Acoustical panel ceilings shall be sag resistant manufactured of mineral fiber, or fiberglass or wood-faced acoustical ceilings.

(iii) All acoustical panels shall have Reveal sized to fit flange of exposed suspension-system members.

(iv) All acoustical panels shall be treated with manufacturer's standard broad spectrum antimicrobial fungicide and bactericide treatment.

(v) In the case of sag-resistant manufactured of mineral fiber or fiberglass acoustical panel ceilings, the following provisions shall apply:

(1) Acoustical panel ceilings shall have a minimum recycled content of 70%, with postconsumer recycled content plus one-half pre-consumer recycled content.

(2) Directional or non-directional fissured texture.

(3) Minimum light reflectance shall be 0.80 for all ceiling finishes.

(4) NRC value shall be 0.60 minimum for Enclosed Offices, Judicial Chambers, Conference Rooms, Training Spaces, Jury Deliberation, and Clerks Office. NRC value shall be 0.65 minimum for open office space.

(5) CAC value shall be 35.

(6) Minimum light reflectance shall be 0.80.

(7) Flame spread shall conform to the requirements of Class A, ASTM E84.

(8) Thickness shall be three-quarter (¾) inch.

(9) Scrubbable Mylar facing where identified in Room Data Sheets as washable.

(10) ~~Exposed tee grid systems shall not be permitted.~~ Provide a 9/16" narrow exposed, silhouette or dimensional tee grid system.

(11) All acoustic panel ceiling products shall have documented a publicly available material ingredient inventory (Declare Label, Health Product Declaration, or Cradle to Cradle Certification).

(d) Wood Ceiling Panels

(e) Stretched fabric and acoustic baffle ceilings: framework shall be PVC free.

(f) Acoustical ceiling treatment:

(i) Ceilings: open, architecturally finished:

(1) Architecturally exposed ceiling areas are those areas intentionally open to structure above and may contain suspended acoustical or other opaque panels and lighting fixtures. Mechanical and electrical equipment including ductwork, conduit, fire sprinkler piping, etc. exposed to view shall be coordinated and orthogonally laid out for neat and workmanlike appearance. The underside of slabs and all exposed elements and building systems shall be painted.

(ii) Ceilings: open, utility:

Exhibit 2

Attachment B – Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation

Honeywell

Date: October 10, 2023

Type of Change: **CCP#013** – County Requirement Change Request - Pursuant to Section 7.12

Subject: **CCP#013 – Value Engineering**

Jon:

Pursuant to Section 3.1 Changes (a) Facilities Coordination Review and Approval Confirmation, Honeywell is acknowledging that the change **"CCP#013 – Value Engineering Change Request Response - Pursuant to Section 7.12"** does not create an operability, reliability, or longevity issue for the Service Contractor.

This change being requested will not affect the OPEX or CAPEX for Clackamas County Circuit Courthouse Project.

Regards,

Dennis Crawford

Dennis Crawford

P3 Operations Leader
Honeywell Building Solutions
4411 6 Street S.E., Suite 100
Calgary, Alberta T2G 4E8
Office – 403 -221-2184
Dennis.Crawford@honeywell.com

EXHIBIT 7

CCP015 – Jury Check-in Kiosk Removal

CLACKAMAS COUNTY
2051 KAEN ROAD
OREGON CITY, OR 97045
(503) 655-8893

COUNTY CHANGE PROPOSAL NO. [015]

DATE ISSUED: September 19, 2023

PROJECT: Clackamas County Circuit Courthouse Project

PROJECT COMPANY: Clackamas Progress Partners, LLC

THIS CHANGE PROPOSAL IS ISSUED PURSUANT TO: Section [7.12] of the Project Agreement.

DESCRIPTION OF PROPOSED CHANGE: Removal of the Jury Self Check-In Kiosks.

County is requesting the removal of Self-Check-In kiosks described in 9.10.3 (b) of Appendix 6 of the Project Agreement (Design and Construction Standards). Infrastructure to remain for future installation.

KEY TERMS:

1. The Project Company is hereby requested to provide a proposal, with anticipated costs, to implement the changes to the Design-Build Contract Amount as well as any changes to the Facilities Services Contract Amount, along with any impacts to the Scheduled Occupancy Readiness Date, for the proposed change. Authorization to begin implementing the change is contingent upon the parties executing a formal change order in accordance with Section 7.12 of the Project Agreement.

EXHIBITS AND ATTACHMENTS:

1. Attachment A: Appendix 6 of the PA (Design and Construction Standards).

AUTHORIZED SIGNATURE

Nancy Bonn — 9/19/23

County Authorized Representative — Date

ATTACHMENT A

Appendix 6 of the PA (Design and Construction Standards)

See Exhibit 11

EXHIBIT 8

Project Company Cost and Time Analysis of CCP015

November 2, 2023

Clackamas Progress Partners, LLC.
609 Main Street, Suite 3525
Houston, TX 77002

Office of the County Administrator
Attn: Nancy Bush, Clackamas Courthouse Project Manager
Public Services Building
2051 Kaen Road
Oregon City, OR, 97045
nbush@clackamas.us

Subject: Clackamas County Circuit Courthouse, Project Company Response to County Change Proposal 015 (dated 9/19/23) – Jury Self Check-in Kiosk removal

Dear Ms. Bush,

Pursuant to Section 7.12 of the Project Agreement (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT COUNTY'S DIRECTON], Project Company provides this **revised response (CPP 015R1)** to County CCP #015. The information provided herein has been supplied by the Design-Builder and Facilities Manager to the Project Company, and is hereby submitted to the County on a back-to-back basis. The design and construction costs resulting from any such Design and Construction Requirement Change made at the County's direction under this Section shall be paid directly by the County during the Design-Build Period, unless otherwise financed by the Project Company pursuant to subsection 6.6(B) (Project Company Financing). Any related operation, maintenance, repair and replacement costs shall be borne by the County through an adjustment to the Service Fee. Any such Design and Construction Requirement Change and any related change in the terms and conditions of this Project Agreement shall be reflected in a Change Order. The Project Company's obligation to perform the work related to a Design and Construction Requirement Change is subject to the conditions set forth in Section 7.11 (Design and Construction Requirement Changes, Repairs and Replacements Required Due to Relief Events Occurring Prior to the Occupancy Readiness Date).

Cost and schedule impacts are evaluated pursuant to Article 16, Section 16.11 of the Project Agreement (Negotiated Lump Sum Pricing of Additional Work) enclosed within Appendix A, with additional detail provided in Appendix B. The proposal value is a credit of $(3,255.00) and the scheduled time has been calculated as a 0 calendar day(s) extension to the Occupancy Readiness Date.

Project Company has verified the proposed changes with the Design and Construction Standards pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation). These verifications are memorialized within the enclosed Appendix B.

Best regards,

Karl E. Schaefer, CCM, DBIA, LEED
Clackamas Progress Partners, LLC
Project Company Representative

cc: Stephen Hadanich, WTP Associate Vice President
Vikas Gurram, Senior Advisor
Jon Kindrachuk, PCL Project Director
Cathy France, PCL Document Control

Enclosure: Appendix A: Cost Summary
Appendix B: Design Builder CCP 015R1 response package dated 10/31/23

APPENDIX A

CCP 015R1 - Jury Self Check-in Kiosk Removal

Construction Phase Cost Impact Summary

	Cost	Total
Developer	$ -	$ -
Design Builder	$ (3,255.00)	$ (3,255.00)
Subtotal	**$ (3,255.00)**	**$ (3,255.00)**
DBFOM Permitted Markup		
(a) for Developer, 15% of the cost of that portion of the Extra Work to be performed by Developer with its own forces	$ -	$ -
(b) for Developer, 5% of the cost of that portion of the Extra Work to be performed by Contractors directly under contract to Developer	$ -	$ -
Subtotal	**$ -**	**$ -**
Design Build Phase Compensation Amount	**$ (3,255.00)**	**$ (3,255.00)**

Operations Phase Cost Impact Summary

	Cost	Total
Developer	$ -	$ -
Facilities Manager	$ -	$ -
Subtotal	**$ -**	**$ -**
DBFOM Permitted Markup		
(a) for Developer, 15% of the cost of that portion of the Extra Work to be performed by Developer with its own forces	$ -	$ -
(b) for Developer, 5% of the cost of that portion of the Extra Work to be performed by Contractors directly under contract to Developer	$ -	$ -
Subtotal	**$ -**	**$ -**
Facilities Management Phase Compensation Amount	**$ -**	**$ -**

Total Cost Impact	**$ (3,255.00)**	**$ (3,255.00)**

CONSTRUCTION

TOGETHER WE BUILD SUCCESS

October 31, 2023

Karl E. Schaefer, CCM, DBIA, LEED
Project Executive
Fengate PCL Progress Partners
TD North Tower
77 King Street West, Suite 3410
Toronto, ON M5K 1H1
karl.schaefer@fengate.com

Subject: Clackamas County Circuit Courthouse

Reference: CCP [#015R1] - Section 7.12 (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT COUNTY DIRECTION**) – [Jury Self Check-In Kiosks]**

File: Project No. 5701126: 1J.5

Dear Mr. Schaefer,

Pursuant to Section 7.12 of the Design Build Agreement (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT THE COUNTY DIRECTION], Design-Builder provides Project Company CCP [**#015R1**] enclosed as Attachment A. Design Builder is to provide notice of, and reasonable opportunity to review and comment upon, any Design and Construction Requirement Changes proposed to be made at the County's direction. The notice shall contain sufficient information for the Project Company to determine that the Design and Construction Requirement Change:

The design and construction costs resulting from any such Design and Construction Requirement Change made at the County's direction under this Section shall be paid directly by the County during the Design-Build Period, unless otherwise financed by the Project Company pursuant to subsection 6.6(B) (Project Company Financing). Any related operation, maintenance, repair and replacement costs shall be borne by the County through an adjustment to the Service Fee. Any such Design and Construction Requirement Change and any related change in the terms and conditions of this Project Agreement shall be reflected in a Change Order. The Project Company's obligation to perform the work related to a Design and Construction Requirement Change is subject to the conditions set forth in Section 7.11 (Design and Construction Requirement Changes, Repairs and Replacements Required Due to Relief Events Occurring Prior to the Occupancy Readiness Date).

Cost and schedule impacts are evaluated pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work) enclosed as Exhibit 1. The proposal value of the cost is **[-$3,255.00]** and the scheduled time has been calculated as a **[0]** calendar day(s) extension to the Occupancy Readiness Date.

Design Builder has verified the proposed changes with the Design and Construction Standards pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation). These verifications are memorialized within the enclosed Exhibit 2.

Please advise if Project Company should require anything additional, as it relates to the subject matter contained herein.

If you have any further questions relating to this matter, promptly contact Contractor at GAYourechuk@pcl.com.

Kind Regards,

PCL Construction Services, Inc.

Greg Yourechuk

Greg Yourechuk
Authorized Representative

GY/cgf

cc: Matt Glassman, Design Manager
Jennifer Canning, Quality Assurance Manager
Jon Kindrachuk, Design Build Project Manager
W.T. Sermeus, Lead Project Manager

See Enclosed Documents:

Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

Exhibit 2 – Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation)

TOGETHER WE BUILD SUCCESS

Attachment A – County Change Proposal #015R1

Date:	October 31, 2023
Pursuant to:	Article 7, Section 7.12 of the DBFOM Agreement, Project Company shall give the County written notice of, and reasonable opportunity to review and comment upon, any Design and Construction Requirement Changes proposed to be made at the County's Direction.
Changes:	Jury Self Check-In Kiosks

Enclosed is Change response, as it pertains to Article 7, Section 7.12 of the Project Agreement and Design and Construction Standards. Capitalized terms used and not otherwise defined in this proposal shall have the meanings given to such terms in the DBFOM Agreement.

The Contractor is pleased to provide the following information in accordance with Article 7, Section 7.12 of the DBFOM Agreement:

1. a detailed description of the Requirement Change proposed of the D&C Work:

a) Identify and label the proposed DBFOM language:

See CCP#015 - Security Changes dated September 19, 2023

b) Identify specific DBFOM language to which a Requirement Change is requested**:**

See CCP#015 - Security Changes dated September 19, 2023

c) Identify specific changes to the DBFOM language to which a Requirement Change is requested**:**

See CCP#015 - Security Changes dated September 19, 2023

d) Identify how the change sought constitutes good practice, maintains safety and performance

a. Project Company has communicated and reviewed this change with the DLR Group and has confirmed that this deviation will have no impact on the projects ability to meet the LEED Gold standard that is required per the Project Agreement.

b. Does not diminish the capacity of the Project to be operated so as to meet the Contract Standards

c. Does not impair the quality, integrity, durability and reliability of the Project;

d. Is reasonably necessary or is advantageous for the Project Company to fulfill its obligations under this Project Agreement; and

e. Is feasible.

2. a detailed description of the impact of the Requirement Change proposed on the D&C Work

   See Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

3. a detailed description of the impact of the Requirement Change proposed the O&M Work;

   Facilities Manager (Honeywell) has provided an evaluation of the proposed change Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation), enclosed as Exhibit 2.

4. if the Requirement Change is issued before the Operational Readiness Date, a detailed description of any proposed adjustments to the Project Schedule, including to any Contract Deadline, required as a result of any delay that would be caused by the implementation of the Change proposed:

   Any work or tasks associated with, or arising from the Change request shall be considered a condition to achieving a Contract Deadline. No change in schedule

5. where adjustments to Contract Deadlines are proposed:

   (i) a time impact analysis that identifies Critical Path impacts (with activity numbers, durations, predecessor and successor activities, resources, costs and reasons why Float is not available), illustrates the effect of schedule changes or disruptions on the Contract Deadlines and complies with the requirements of (Time Impact Analysis for Proposed Extensions of Time) of the Design and Construction Standards

   N/A

   (ii) an assessment of the feasibility of accelerating the Work to meet the original deadline or to reduce the total delay period; and

   N/A

   (iii) if acceleration is feasible, an estimate of the cost to accelerate;

   N/A

6. an estimate of any compensation amount claimed;

   See Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement

(Negotiated Lump Sum Pricing of Additional Work)

7. an estimate of the cost savings, if any, resulting from the Requirement Change proposed;

   N/A

8. the effect (if any) of the Requirement Change request on Developers ability to perform the O&M Work stated by Contract Year;

   N/A

9. where relief from obligations under the Contract Documents is sought, the effect of the Change proposed on Project Company's ability to perform any of its obligations under the Contract Documents that if not performed would result in the accrual of Noncompliance, the assessment of Deductions or the occurrence of a Developer Default, in each case including details of the relevant obligations, the effect on each such obligation, the likely duration of that effect and the specific relief sought;

   N/A

10. a description of any additional consents or approvals required, including amendments, if any, of any Governmental Approvals required to implement the contemplated Requirement Change request;

    N/A

11. a detailed description of the steps Project Company will take to implement the Change Request, including measures that Project Company will take to mitigate the costs, delay and other consequences of the Requirement Change request;

    N/A

12. any other relevant information related to the Requirement Change request;

    N/A

Exhibit 1

Attachment A – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

The proposal value of the cost is **[-$3.255.00]** and the scheduled time has been calculated as a **[0]** calendar day(s) extension to the Occupancy Readiness Date.

Project #: 5701126

CRX Detail Report - CCP-015

PCL Construction Services. Inc.

Project Name: Clackamas County Circuit Court
Location: 2125 Kaen Road
Oregon City, OR

CRX description: Removal of the Jury Self Check-In Kiosks

Header Summary	
Type	CCP
CRX status	Quoted to Project Company
Schedule days quoted	0
Quoted date	10/3/2023
Initiated date	9/19/2023

Summa	uote $
Labor	0.00
Material	-5,200.00
Equipment	
Subtrade	
Direct Costs & SDI	
Fee	
Total Quote:	

Please outline what all of these hours are for and what each person is doing.

DM PM/Lead PM - Owner coordination/meetings/discussions.

Project Managers: Implementation of the CCP scope, including Owner/Subcontractor reviews, project coordination, meetings and correspondence.

Design Manager: Implementation of the CCP scope, including designer, owner and sub designer coordination, meetings, reviews and correspondence.

General Superintendents/Superintendents: Management/field implementation of the CCP. Including Subcontractor field coordination, inspections, meetings, reviews and scheduling.

Project Engineers: office and field implementation of the CCP changes. including submittal, RFI's, quality inspections and construction document updates.

Accountant/ Admin Assistant: Textura billing/ PM4 document coordination internally and with trades.

Please outline budgeted unit cost, labor install and commissioning.

$1,450 unit cost for each kiosk
$200 delivery
$570 labor (6 hours @ $95 per hour)
$380 commissioning (4 hours @ 95 per hour)

Cost Code	Description	Quantity	UoM	Labor Hours Prod	Labor Hours Total	Labor Rate	Labor Total								Total Total
	DIRECT FORCES WORK														
010100	DB Project Manager	1.00	MO	2.000	2.000	152.04	304								304.08
010100	Lead Project Manager	1.00	MO	2.000	2.000	139.39	279								278.78
010100	Project Managers	1.00	MO	4.000	4.000	122.56	490								490.24
010505	Design Manager	1.00	MO	2.000	2.000	132.18	264								264.36
010400	Project Engineers	1.00	MO	2.000	2.000	85.29	171								170.58
010560	Accountant	1.00	MO	2.000	2.000	82.88	166								165.76
010550	Admin Assistant	1.00	MO	2.000	2.000	72.13	144								144.26
TOTAL	**DIRECT FORCES WORK**				16.0		1,818.06								1,818.06
	MARKUP ON DIRECT FORCES														
990100	OH&P on Direct Forces		LS	----	---	15.00%	273	15.00%	---	15.00%	---	---	---	---	272.71
TOTAL	**MARKUP ON DIRECT FORCES**						272.71		---		---				272.71
	SUBTRADE WORK														
160100	ELECTRICAL-Floor box installed and to remain	1.00	LS	---	---				---		---	---	---	---	---
	Delete (2) Two Informational Kiosks (Budget)	-2.00		---	---				---		---	2,600.0	-5,200	---	-5,200.00
TOTAL	**SUBTRADE WORK**												-5,200.00		-5,200.00
	SUBTRADE MARKUP														
990100	OH&P on Subcontract Costs		LS	---	---		---		---		---	---	---	---	---
TOTAL	**SUBTRADE MARKUP**														
TOTAL	**DIRECT COST SUMMARY**				16.0		2,090.77		---		---		-5,247.63		-3,109.23
	MARKUP ON TOTAL CRX														
014200	Subtrade Default Insurance (SDI)						---		---		---		.916%	-48	-47.63
014120	Security						---		---		---		---	.222%	-7.01
014100	Bond						---		---		---		---	.500%	-15.82
014300	Insurance						---		---		---		---	1.773%	-56.38
014850	CAT Tax						---		---		---		---	.570%	-18.45
014300	Rounding		LS				---		---		---		---	.015%	-0.48
TOTAL	**DIRECT COST SUMMARY**														-145.77
TOTAL	**CRX #: CCP-015**				16.0		2,090.77		---		---		-5,247.63		-3,255.00

Exhibit 2

Attachment B – Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation

Honeywell

Date: October 10, 2023

Type of Change: **CCP#015** – County Requirement Change Request - Pursuant to Section 7.12

Subject: **CCP#015 – Jury Self Check-In Kiosks**

Jon:

Pursuant to Section 3.1 Changes (a) Facilities Coordination Review and Approval Confirmation, Honeywell is acknowledging that the change **"CCP#015 – Jury Self Check-In Kiosks - Change Request Response - Pursuant to Section 7.12"** does not create an operability, reliability, or longevity issue for the Service Contractor.

This change being requested will not affect the OPEX or CAPEX for Clackamas County Circuit Courthouse Project.

Regards,

Dennis Crawford

Dennis Crawford

P3 Operations Leader
Honeywell Building Solutions
4411 6 Street S.E., Suite 100
Calgary, Alberta T2G 4E8
Office – 403 -221-2184
Dennis.Crawford@honeywell.com

EXHIBIT 9

CCP016 – Cable TV

CLACKAMAS COUNTY
2051 KAEN ROAD
OREGON CITY, OR 97045
(503) 655-8893

COUNTY CHANGE PROPOSAL NO. [016]

DATE ISSUED: October 10, 2023

PROJECT: Clackamas County Circuit Courthouse Project

PROJECT COMPANY: Clackamas Progress Partners, LLC

THIS CHANGE PROPOSAL IS ISSUED PURSUANT TO: Section [7.12] of the Project Agreement.

DESCRIPTION OF PROPOSED CHANGE: Modification of Cable TV Infrastructure

County is requesting adjustments to the locations of Cable TV infrastructure across the Courthouse as follows, also refer Attachment A:

Modify Section 19.7 as follows:
The following locations shall be provided with cable television. Channel, volume, and power controls shall be provided locally through standard television remote controllers. Additionally, the monitors shall be connected to an IP based digital signage system for the transmission of messages and the docket display. The existing CATV service is provided by Comcast.

~~(a) Break Rooms;~~

~~(b) Jury Assembly Rooms;~~

~~(c) Waiting Areas;~~

~~(d) Judge's Chambers;~~

~~(e) Child Respite Areas and any other childcare areas; and~~

~~(f) Staff Lounge / Wellness Room.~~

(a) JA1 – Jury Room Main Assembly Area

(b) JA2 – Jury Room Lounge Area

(c) PS3 – Play Room

(d) SS4 – Break Room

(e) The single instance of CF8 - Large Conference Room within the Sheriff Administration

(f) The single instance of OF5 - Judge / District Attorney Office within the District Attorney Office

(g) OF4 – Trial Court Administrator

The above list will supersede the BUILDING SYSTEMS: CATV/MATV: Yes/No designations within Project Agreement Appendix 06A – Program and Room Data Sheets.

KEY TERMS:

1. The Project Company is hereby requested to provide a proposal, with anticipated costs, to implement the changes to the Design-Build Contract Amount as well as any changes to the Facilities Services Contract Amount, along with any impacts to the Scheduled Occupancy Readiness Date, for the proposed change. Authorization to begin implementing the change is contingent upon the parties executing a formal change order in accordance with Section 7.12 of the Project Agreement.

EXHIBITS AND ATTACHMENTS:

1. Appendix 6 of the PA (Design and Construction Standards)

AUTHORIZED SIGNATURE

County Authorized Representative	Date

ATTACHMENT A

Appendix 6 of the PA (Design and Construction Standards)

See Exhibit 11

EXHIBIT 10

Project Company Cost and Time Analysis of CCP016

November 22, 2023

Clackamas Progress Partners, LLC.
609 Main Street, Suite 3525
Houston, TX 77002

Office of the County Administrator
Attn: Nancy Bush, Clackamas Courthouse Project Manager
Public Services Building
2051 Kaen Road
Oregon City, OR, 97045
nbush@clackamas.us

Subject: Clackamas County Circuit Courthouse, Project Company Response to County Change Proposal 016 (dated 10/10/23) – Cable TV

Dear Ms. Bush,

Pursuant to Section 7.12 of the Project Agreement (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT COUNTY'S DIRECTON], Project Company provides this **response** to County CCP #016. The information provided herein has been supplied by the Design-Builder and Facilities Manager to the Project Company, and is hereby submitted to the County on a back-to-back basis. The design and construction costs resulting from any such Design and Construction Requirement Change made at the County's direction under this Section shall be paid directly by the County during the Design-Build Period, unless otherwise financed by the Project Company pursuant to subsection 6.6(B) (Project Company Financing). Any related operation, maintenance, repair and replacement costs shall be borne by the County through an adjustment to the Service Fee. Any such Design and Construction Requirement Change and any related change in the terms and conditions of this Project Agreement shall be reflected in a Change Order. The Project Company's obligation to perform the work related to a Design and Construction Requirement Change is subject to the conditions set forth in Section 7.11 (Design and Construction Requirement Changes, Repairs and Replacements Required Due to Relief Events Occurring Prior to the Occupancy Readiness Date).

Cost and schedule impacts are evaluated pursuant to Article 16, Section 16.11 of the Project Agreement (Negotiated Lump Sum Pricing of Additional Work) enclosed within Appendix A, with additional detail provided in Appendix B. The proposal value is a credit of $(18,753.00) and the scheduled time has been calculated as a 0 calendar day(s) extension to the Occupancy Readiness Date.

Project Company has verified the proposed changes with the Design and Construction Standards pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation). These verifications are memorialized within the enclosed Appendix B.

Best regards,

Karl E. Schaefer, CCM, DBIA, LEED
Clackamas Progress Partners, LLC
Project Company Representative

cc: Stephen Hadanich, WTP Associate Vice President
Vikas Gurram, Senior Advisor
Jon Kindrachuk, PCL Project Director
Cathy France, PCL Document Control

Enclosure: Appendix A: Cost Summary
Appendix B: Design Builder CCP 016 response package dated 11/14/23

APPENDIX A

CCP 016 - Cable TV

Construction Phase Cost Impact Summary

	Cost	Total
Developer	$ -	$ -
Design Builder	$ (18,753.00)	$ (18,753.00)
Subtotal	**$ (18,753.00)**	**$ (18,753.00)**
DBFOM Permitted Markup		
(a) for Developer, 15% of the cost of that portion of the Extra Work to be performed by Developer with its own forces	$ -	$ -
(b) for Developer, 5% of the cost of that portion of the Extra Work to be performed by Contractors directly under contract to Developer	$ -	$ -
Subtotal	**$ -**	**$ -**
Design Build Phase Compensation Amount	**$ (18,753.00)**	**$ (18,753.00)**

Operations Phase Cost Impact Summary

	Cost	Total
Developer	$ -	$ -
Facilities Manager	$ -	$ -
Subtotal	**$ -**	**$ -**
DBFOM Permitted Markup		
(a) for Developer, 15% of the cost of that portion of the Extra Work to be performed by Developer with its own forces	$ -	$ -
(b) for Developer, 5% of the cost of that portion of the Extra Work to be performed by Contractors directly under contract to Developer	$ -	$ -
Subtotal	**$ -**	**$ -**
Facilities Management Phase Compensation Amount	**$ -**	**$ -**

Total Cost Impact	**$ (18,753.00)**	**$ (18,753.00)**

CONSTRUCTION

TOGETHER WE BUILD SUCCESS

November 14, 2023

Karl E. Schaefer, CCM, DBIA, LEED
Project Executive
Fengate PCL Progress Partners
TD North Tower
77 King Street West, Suite 3410
Toronto, ON M5K 1H1
karl.schaefer@fengate.com

Subject: Clackamas County Circuit Courthouse

Reference: CCP [#016] - Section 7.12 (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT COUNTY DIRECTION**) – [Cable TV]**

File: Project No. 5701126: 1J.5

Dear Mr. Schaefer,

Pursuant to Section 7.12 of the Design Build Agreement (DESIGN AND CONSTRUCTION REQUIREMENT CHANGES MADE AT THE COUNTY DIRECTION], Design-Builder provides Project Company CCP [**#016**] enclosed as Attachment A. Design Builder is to provide notice of, and reasonable opportunity to review and comment upon, any Design and Construction Requirement Changes proposed to be made at the County's direction. The notice shall contain sufficient information for the Project Company to determine that the Design and Construction Requirement Change:

The design and construction costs resulting from any such Design and Construction Requirement Change made at the County's direction under this Section shall be paid directly by the County during the Design-Build Period, unless otherwise financed by the Project Company pursuant to subsection 6.6(B) (Project Company Financing). Any related operation, maintenance, repair and replacement costs shall be borne by the County through an adjustment to the Service Fee. Any such Design and Construction Requirement Change and any related change in the terms and conditions of this Project Agreement shall be reflected in a Change Order. The Project Company's obligation to perform the work related to a Design and Construction Requirement Change is subject to the conditions set forth in Section 7.11 (Design and Construction Requirement Changes, Repairs and Replacements Required Due to Relief Events Occurring Prior to the Occupancy Readiness Date).

Cost and schedule impacts are evaluated pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work) enclosed as Exhibit 1. The proposal value of the cost is **[-$18,753.00]** and the scheduled time has been calculated as a **[0]** calendar day(s) extension to the Occupancy Readiness Date.

Design Builder has verified the proposed changes with the Design and Construction Standards pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation). These verifications are memorialized within the enclosed Exhibit 2.

Please advise if Project Company should require anything additional, as it relates to the subject matter contained herein.

If you have any further questions relating to this matter, promptly contact Contractor at GAYourechuk@pcl.com.

Kind Regards,

PCL Construction Services, Inc.

Greg Yourechuk

Greg Yourechuk
Authorized Representative

GY/cgf

cc: Matt Glassman, Design Manager
Jennifer Canning, Quality Assurance Manager
Jon Kindrachuk, Design Build Project Manager
W.T. Sermeus, Lead Project Manager

See Enclosed Documents:

Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

Exhibit 2 – Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation)

TOGETHER WE BUILD SUCCESS

Attachment A – County Change Proposal #016

Date:	November 14, 2023
Pursuant to:	Article 7, Section 7.12 of the DBFOM Agreement, Project Company shall give the County written notice of, and reasonable opportunity to review and comment upon, any Design and Construction Requirement Changes proposed to be made at the County's Direction.
Changes:	Cable TV

Enclosed is Change response, as it pertains to Article 7, Section 7.12 of the Project Agreement and Design and Construction Standards. Capitalized terms used and not otherwise defined in this proposal shall have the meanings given to such terms in the DBFOM Agreement.

The Contractor is pleased to provide the following information in accordance with Article 7, Section 7.12 of the DBFOM Agreement:

1. a detailed description of the Requirement Change proposed of the D&C Work:

a) Identify and label the proposed DBFOM language:

See CCP#016 – Cable TV dated October 10, 2023

b) Identify specific DBFOM language to which a Requirement Change is requested**:**

See CCP#016 – Cable TV dated October 10, 2023

c) Identify specific changes to the DBFOM language to which a Requirement Change is requested**:**

See CCP#016 – Cable TV dated October 10, 2023

d) Identify how the change sought constitutes good practice, maintains safety and performance

a. Project Company has communicated and reviewed this change with the DLR Group and has confirmed that this deviation will have no impact on the projects ability to meet the LEED Gold standard that is required per the Project Agreement.

b. Does not diminish the capacity of the Project to be operated so as to meet the Contract Standards

c. Does not impair the quality, integrity, durability and reliability of the Project;

d. Is reasonably necessary or is advantageous for the Project Company to fulfill its obligations under this Project Agreement; and

e. Is feasible.

2. a detailed description of the impact of the Requirement Change proposed on the D&C Work

   See Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

3. a detailed description of the impact of the Requirement Change proposed the O&M Work;

   Facilities Manager (Honeywell) has provided an evaluation of the proposed change Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation), enclosed as Exhibit 2.

4. if the Requirement Change is issued before the Operational Readiness Date, a detailed description of any proposed adjustments to the Project Schedule, including to any Contract Deadline, required as a result of any delay that would be caused by the implementation of the Change proposed:

   Any work or tasks associated with, or arising from the Change request shall be considered a condition to achieving a Contract Deadline. No change in schedule

5. where adjustments to Contract Deadlines are proposed:

   (i) a time impact analysis that identifies Critical Path impacts (with activity numbers, durations, predecessor and successor activities, resources, costs and reasons why Float is not available), illustrates the effect of schedule changes or disruptions on the Contract Deadlines and complies with the requirements of (Time Impact Analysis for Proposed Extensions of Time) of the Design and Construction Standards

   N/A

   (ii) an assessment of the feasibility of accelerating the Work to meet the original deadline or to reduce the total delay period; and

   N/A

   (iii) if acceleration is feasible, an estimate of the cost to accelerate;

   N/A

6. an estimate of any compensation amount claimed;

   See Exhibit 1 – Pursuant to Article 16, Section 16.11 of the Design Build Agreement

(Negotiated Lump Sum Pricing of Additional Work)

7. an estimate of the cost savings, if any, resulting from the Requirement Change proposed;

   N/A

8. the effect (if any) of the Requirement Change request on Developers ability to perform the O&M Work stated by Contract Year;

   N/A

9. where relief from obligations under the Contract Documents is sought, the effect of the Change proposed on Project Company's ability to perform any of its obligations under the Contract Documents that if not performed would result in the accrual of Noncompliance, the assessment of Deductions or the occurrence of a Developer Default, in each case including details of the relevant obligations, the effect on each such obligation, the likely duration of that effect and the specific relief sought;

   N/A

10. a description of any additional consents or approvals required, including amendments, if any, of any Governmental Approvals required to implement the contemplated Requirement Change request;

    N/A

11. a detailed description of the steps Project Company will take to implement the Change Request, including measures that Project Company will take to mitigate the costs, delay and other consequences of the Requirement Change request;

    N/A

12. any other relevant information related to the Requirement Change request;

    N/A

Exhibit 1

Attachment A – Pursuant to Article 16, Section 16.11 of the Design Build Agreement (Negotiated Lump Sum Pricing of Additional Work)

The proposal value of the cost is **[-$18,753.00]** and the scheduled time has been calculated as a **[0]** calendar day(s) extension to the Occupancy Readiness Date.

Project #: 5701126

CRX Detail Report - CCP-016

PCL Construction Services, Inc.

Project Name: Clackamas County Circuit Court

Location: 2125 Kaen Road
Oregon City, OR

CRX description: Modification of Cable TV Infrastructure

Header Summary	
Type	CCP
CRX status	Quoted
Schedule days quoted	0
Quoted date	11/13/2023
Initiated date	10/24/2023
Comments	

Summary	
Labor	1,501.45
Material	0.00
Equipment	0.00
Subtrade	-19,774.00
Direct Cost & SDI	-705.67
Fee	225.22
Total Quote:	$-18,753.00

Subtrade	Quote $
DLR Group Architecture & Engineering Inc., an	4,485.00
MacDonald-Miller Facility Solutions LLC	0.00
OEG, Inc. DBA: Pride Electric, Fribera Electric,	-24,259.00

Cost Code	Description	Quantity	UoM	Labor Hours Prod	Labor Hours Total	Labor Rate	Labor Total	Material Rate	Material Total	Equipment Rate	Equipment Total	Subtrade Rate	Subtrade Total	Total Rate	Total Total
	DIRECT FORCES WORK														
010100	DB Project Manager	0.00	MO	---	1.000	152.04	152	---	---	---	---	---	---	---	152.04
010100	Lead Project Manager	0.00	MO	---	1.000	139.39	139	---	---	---	---	---	---	---	139.39
010100	Project Managers	0.00	MO	---	1.000	122.56	123	---	---	---	---	---	---	---	122.56
010505	Design Manager	0.00	MO	---	4.000	132.18	529	---	---	---	---	---	---	---	528.72
010200	General Superintendent	0.00	MO	---	.500	163.98	82	---	---	---	---	---	---	---	81.99
010200	Superintendents	0.00	MO	---	1.000	153.57	154	---	---	---	---	---	---	---	153.57
010400	Project Engineers	0.00	MO	---	1.000	85.29	85	---	---	---	---	---	---	---	85.29
010510	Estimator	0.00	MO	---	---	146.41	---	---	---	---	---	---	---	---	---
010560	Accountant	0.00	MO	---	2.000	82.88	166	---	---	---	---	---	---	---	165.76
010540	Scheduler	0.00	MO	---	---	86.39	---	---	---	---	---	---	---	---	---
010530	HSE Manager	0.00	MO	---	---	78.52	---	---	---	---	---	---	---	---	---
010550	Admin Assistant	0.00	MO	---	1.000	72.13	72	---	---	---	---	---	---	---	72.13
TOTAL	**DIRECT FORCES WORK**				12.5		1,501.45		---		---				1,501.45
	MARKUP ON DIRECT FORCES														
990100	OH&P on Direct Forces		LS	----	---	15.00%	225	15.00%	---	15.00%	---	---	---	---	225.22
TOTAL	**MARKUP ON DIRECT FORCES**						225.22		---		---				225.22
	SUBTRADE WORK														
013920	CONSULTANTS SERVICES	1.00	LS	---	---	---	---	---	---	---	---	---	4,485	---	4,485.00
160100	ELECTRICAL	-1.00	LS	---	---	---	---	---	---	---	---	---	-24,259	---	-24,259.00
150100	MECHANICAL (HVAC/PLUMB)	0.00	LS	---	---	---	---	---	---	---	---	---	---	---	---
	Mac Miller no cost confirmation 11/9/2023														
TOTAL	**SUBTRADE WORK**												-19,774.00		-19,774.00
	SUBTRADE MARKUP														
990100	OH&P on Subcontract Costs		LS	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	**SUBTRADE MARKUP**												0.00		0.00
TOTAL	**DIRECT FORCES & SUBTRADES**				12.5		1,726.67		---		---		-19,774.00		-18,047.33
	DIRECT COST SUMMARY														
014200	Subtrade Default Insurance (SDI)		LS	---	---	---	---	---	---	---	---	.916%	-181	---	-181.13

CRX Detail Report - CCP-016

PCL Construction Services, Inc.

Project Name: Clackamas County Circuit Court
Location: 2125 Kaen Road
Oregon City, OR

CRX description: Modification of Cable TV Infrastructure

014300	Professional Insurance 0.84% (DLR)	LS	---	---	---	---	---	---	---	---	---	---	---	37.67
	DLR Total - $4,485 x 0.84% = $37.67	LS	---	---	---	---	---	---	---	---	---	---	---	
014120	Security	LS	---	---	---	---	---	---	---	---	---	---	.222%	-40.38
014100	Bond	LS	---	---	---	---	---	---	---	---	---	---	.500%	-91.16
014300	Insurance	LS	---	---	---	---	---	---	---	---	---	---	1.773%	-324.85
014850	CAT Tax	LS	---	---	---	---	---	---	---	---	---	---	.570%	-106.29
014300	Rounding	LS	---	---	---	---	---	---	---	---	---	---	-.003%	0.47
TOTAL	**DIRECT COST SUMMARY**													-705.67
TOTAL	**CRX #: CCP-016**			12.5		1,726.67		---		---		-19,774.00		-18,753.00

CCN # 180830-19
Date: 11/12/2023
Page Number: 1

PCL Construction
W.T. Sermeus
13920 SE Eastgate Way
Suite 400
Bellevue, WA 98005
(425) 691-0281

Clackamas Counth Courthouse
PCL Construction
Attn: W.T. Sermeus

Subject: CCP-016 - Coaxial Cable Reduction

Mr. Sermeus,

OEG is pleased to submit this change proposal for your consideration.

We have not proceeded with this work and need a written notification to proceed along with approval of the costs contained herein prior to starting work.

Included in this Proposal is:

·Reducton of coaxial cable per CCP-016 documents.

Total $-24,259.00

Qualifications:
Wiring is to be in accordance with the National Electrical Code.
All work is to be done during normal working hours (unless noted above).
Permit included in price.
This proposal is valid for 30 days from date received.
We reserve the right to claim impacts on cost and/or schedule at a later date.

Exclusions:
Sheetrock/plaster/wood cutting, patching, and painting.
Landscape replacement /repairs.
Overtime and premium time.

Please review this proposal, and give me a call if you have any questions.

Respectfully,

Don MacDonald
Senior Project Manager
206.450.2339

Itemized Breakdown

Summary

LABOR

ESTIMATOR	(1.00 Hrs @ $110.47)	110.47
Total Labor Markups		**16.57**
Total Labor		**127.04**

SUBCONTRACTORS

TELEDATA	($-24,291.99 + 0.000 % + 0.000 % + 0.000 %)	-24,291.99
Total Subcontractors		**-24,291.99**
CAT Tax		-94.24
Rounding Adjustment		0.19
Final Amount		**$-24,259.00**

CHANGE NOTICE

CCN #	**CCP 016 - Coaxial Cable Reduction**
Date:	11/9/2023
Project Name:	Clackamas County Courthouse
Project Number:	180879
Contract #:	180830-1DT
Page Number:	1

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave
Portland, OR 97210
Telephone: 503.349.9885
Contact: Beau Collins
E-mail: Beau.Collins@isg-group.com

Client Address:

Contact: Darin Miller
1000 Courthouse RD
Oregon City, Oregon 97045
Telephone: 760.473.1394
Contact: Darin Miller
E-mail: dmiller@pcl.com

Work Description

SCOPE OF WORK

(71) TV Outlets

We reserve the right to correct this quote for errors and omissions.

This quote covers direct costs only and we reserve the right to claim for impact and consequential costs.
This price is good for acceptance within **10** days from the date of receipt.
We request a time extension of **3** days.
We will supply and install all materials, labor, and equipment as per your instructions on **CCN # CCP 016 - Coaxial Cable Reduction.**

Itemized Breakdown

Description	Qty	Trade Price	U	Total Mat.	Total Hrs.
Cable Label Horizontal	-142	8.38	C	-11.90	-0.57
Belden - RG6 quad-shield, riser - B1694A	-14,910	820.53	M	-12,234.10	-74.55
Belden - RG6 compression connector - FSNS6U-25	-142	0.84	E	-119.28	-21.30
Leviton - F Insert - 41084-FWF	-71	1.98	E	-140.58	-7.10
Dress Cables In Closet (per 100)	-71	0.00	E	-0.00	-7.10
Continuity Test	-71	0.00	E	-0.00	-10.65
CommScope - blank, white - M20AP-262	-71	16.68	C	-11.84	-1.42
Totals	**-15,478**			**-12,517.70**	**-122.69**

ORIGINAL

CHANGE NOTICE

CCN # **CCP 016 - Coaxial Cable Reduction**
Date: 11/9/2023
Project Name: Clackamas County Courthouse
Project Number: 180879
Contract #: 180830-1DT
Page Number: 2

OEG, Inc. dba Integrated Systems Group
3200 NW Yeon Ave
Portland, OR 97210

Client Address:

1000 Courthouse RD
Oregon City, Oregon 97045

Summary

MATERIAL			
General Materials		-12,517.70	
Total Material			**-12,517.70**
LABOR			
WORKING FOREMAN - LEA	(-61.35 Hrs @ $99.66)	-6,114.14	
JOURNEYMAN TECH	(-61.35 Hrs @ $92.26)	-5,660.15	
Total Labor			**-11,774.29**
Total Material & Labor			**-24,291.99**
Subtotal			**-24,291.99**
Final Amount			**$-24,291.99**

CLIENT ACCEPTANCE

CCN # **CCP 016 - Coaxial Cable Reduction**
Final Amount: **$-24,291.99**

Name: _____

Date: _____

Signature: _____

Change Order #: _____

I hereby accept this quotation and authorize the contractor to complete the above described work.

ORIGINAL

DLRGROUP

110 SW Yamhill St. Suite 105
Portland, OR 97204

November 8, 2023

Matt Glassman
PCL Construction Services Inc.
13920 SE Eastgate Way, Suite 400
Bellevue, A 98005

Project Name: Clackamas County Courthouse
DLR Group Project No.: 74-22101-00

Dear Matt:

Thank you for the opportunity to review my service request to the New Clackamas County Courthouse to provide the scope of work related to owner requested changes per CCP 016. This scope is provided for locations of cable tv infrastructure.

The breakdown of additional fees for this scope of work are the following:

CCP 016 - CATV Design	Supervisor Consult	Consult	Totals
MCH - Design mods of CATV system	1 hour	6 hours	$ 785.00
Syska Hennessey AV	6 hour	14 hours	$ 2,300.00
DLR Group Administration of modifications	3 hour	6 hour	$ 1,400.00
TOTALS			**$ 4,485.00**

Note, this fee does not include any modifications to engineering by the design build contractors because it is understood the cost of construction will be amended to include contractors engineering.

The total fee for this additional service is **four thousand four hundred eighty-five dollars and zero cents ($4,485.00)**.

Sincerely,
DLR Group

Erica Loynd
Principal
EL:el
Attachments: CCP 016

CLACKAMAS COUNTY
2051 KAEN ROAD
OREGON CITY, OR 97045
(503) 655-8893

COUNTY CHANGE PROPOSAL NO. [016]

DATE ISSUED: October 10, 2023

PROJECT: Clackamas County Circuit Courthouse Project

PROJECT COMPANY: Clackamas Progress Partners, LLC

THIS CHANGE PROPOSAL IS ISSUED PURSUANT TO: Section [7.12] of the Project Agreement.

DESCRIPTION OF PROPOSED CHANGE: Modification of Cable TV Infrastructure

County is requesting adjustments to the locations of Cable TV infrastructure across the Courthouse as follows, also refer Attachment A:

Modify Section 19.7 as follows:
The following locations shall be provided with cable television. Channel, volume, and power controls shall be provided locally through standard television remote controllers. Additionally, the monitors shall be connected to an IP based digital signage system for the transmission of messages and the docket display. The existing CATV service is provided by Comcast.

~~(a) Break Rooms;~~

~~(b) Jury Assembly Rooms;~~

~~(c) Waiting Areas;~~

~~(d) Judge's Chambers;~~

~~(e) Child Respite Areas and any other childcare areas; and~~

~~(f) Staff Lounge / Wellness Room.~~

(a) JA1 – Jury Room Main Assembly Area

(b) JA2 – Jury Room Lounge Area

(c) PS3 – Play Room

(d) SS4 – Break Room

(e) The single instance of CF8 - Large Conference Room within the Sheriff Administration

(f) The single instance of OF5 - Judge / District Attorney Office within the District Attorney Office

(g) OF4 – Trial Court Administrator

The above list will supersede the BUILDING SYSTEMS: CATV/MATV: Yes/No designations within Project Agreement Appendix 06A – Program and Room Data Sheets.

KEY TERMS:

1. The Project Company is hereby requested to provide a proposal, with anticipated costs, to implement the changes to the Design-Build Contract Amount as well as any changes to the Facilities Services Contract Amount, along with any impacts to the Scheduled Occupancy Readiness Date, for the proposed change. Authorization to begin implementing the change is contingent upon the parties executing a formal change order in accordance with Section 7.12 of the Project Agreement.

EXHIBITS AND ATTACHMENTS:

1. Appendix 6 of the PA (Design and Construction Standards)

AUTHORIZED SIGNATURE

County Authorized Representative	Date

ATTACHMENT A

Appendix 6 of the PA (Design and Construction Standards)

19.5 AV SYSTEM CABLING

Provide all conduits and cabling to support the functions listed above. All media content over twisted pair shall be provided with shielded twisted pair cabling. Isolated data circuits shall be provided in each Courtroom and Conference Room dedicated for video streaming and video conferencing with voice.

19.6 EVIDENCE VIEWING ROOM

The Evidence Storage & Viewing (ST1) Room shall be equipped to display evidence and case information. Provide OJD Data Network drops at local workstations where members of the media have access to select files and documents. The files and documents shall be capable of being viewed locally and saved via USB drives or upload to online file transfer services.

19.7 CABLE TV

The following locations shall be provided with cable television. Channel, volume, and power controls shall be provided locally through standard television remote controllers. Additionally, the monitors shall be connected to an IP based digital signage system for the transmission of messages and the docket display. The existing CATV service is provided by Comcast.

~~(a) Break Rooms;~~

~~(b) Jury Assembly Rooms;~~

~~(c) Waiting Areas;~~

~~(d) Judge's Chambers;~~

~~(e) Child Respite Areas and any other childcare areas; and~~

~~(f) Staff Lounge / Wellness Room.~~

(a) JA1 – Jury Room Main Assembly Area

(b) JA2 – Jury Room Lounge Area

(c) PS3 – Play Room

(d) SS4 – Break Room

(e) The single instance of CF8 - Large Conference Room within the Sheriff Administration

(f) The single instance of OF5 - Judge / District Attorney Office within the District Attorney Office

(g) OF4 – Trial Court Administrator Office

The above locations shall supersede the BUILDING SYSTEMS: CATV/MATV: Yes/No designations within Appendix 06A – Program and Room Data Sheets.

Exhibit 2

Attachment B – Pursuant to Section 3.1(a) of the Facilities Coordination Agreement, (Changes during Design Build Period), and Section 10.8 Facilities Management Services (Changes Facilities Coordination Review and Approval Confirmation

Honeywell

Date: November 14, 2023

Type of Change: County Requirement Change Request - Pursuant to Section 7.12

Subject: **CCP#016 – Cable TV**

Jon:

Pursuant to Section 3.1 Changes (a) Facilities Coordination Review and Approval Confirmation, Honeywell is acknowledging that the change does not create an operability, reliability, or longevity issue for the Service Contractor.

This change being requested will not affect the OPEX or CAPEX for Clackamas County Circuit Courthouse Project.

Regards,

Dennis Crawford

Dennis Crawford

P3 Operations Leader
Honeywell Building Solutions
4411 6 Street S.E., Suite 100
Calgary, Alberta T2G 4E8
Office – 403 -221-2184
Dennis.Crawford@honeywell.com

EXHIBIT 11

Project Agreement Attachment 06 – Design and Construction Standards

Appendix 6 of the Project Agreement

Design and Construction Standards

Clackamas County
New Courthouse Replacement Project

Execution Version

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1 GENERAL REQUIREMENTS

1.1 SCOPE OF APPLICATION

(a) These Design and Construction Standards set forth certain minimum technical requirements for the Project. Nothing in these Design and Construction Standards shall relieve the Project Company of its obligation to achieve Occupancy Readiness in accordance with Article 7 (Design and Construction) and Article 8 (Occupancy Readiness) of this Project Agreement.

(b) Except as otherwise provided in this Project Agreement, the Project Company shall comply with the requirements of these Design and Construction Standards in the performance of the Design-Build Work. The Project Company acknowledges that, within the broad scope and intent of these Design and Construction Standards, there may be work that is (i) not herein described, and (ii) not required by the Contract Standards and/or Applicable Law, but that are otherwise necessary for the performance of the work described in this Project Agreement. In such circumstances, the Project Company shall perform such work.

1.2 ACCESSIBILITY REQUIREMENTS

(a) All rooms and areas within the Project that are open to the public shall be designed and constructed so that such rooms and areas are accessible to people with disabilities in compliance with the Contract Standards.

(b) The New Courthouse shall be accessible to persons regardless of their physical and mental abilities. The United States Access Board, a federal agency promoting equality for people with disabilities through the development of accessibility guidelines and standards, has published a report providing standards for courthouse accessibility: *Justice for All: Designing Accessible New Courthouses*, November 2006. This shall be used as criteria for accessibility design of exterior spaces, security, assembly spaces, and courtrooms.

(c) In addition to the sustainability requirements set forth in Section 6 (Sustainability Requirements) of these Design and Construction Standards, the Project Company shall design and construct the Project to comply with LEED v4.1 BD+C Sustainable Sites: Open Space Credit (SSc3).

(d) Without limitation, public users with disabilities, as defined per Applicable Law, shall be able to approach and utilize the following rooms and areas in the same way that non-disable public users would be able to:

(i) all main entrances into the New Courthouse without having to take a circuitous route;

(ii) all clerical and information counters serving public users;

(iii) all Jury Assembly areas;

(iv) all Jury Deliberation areas;

(v) all Toilet Rooms available to public users;

(vi) all Toilet Rooms available to In-Custody Persons;

(vii) all paths of egress from all public areas in the Project;

(viii) all Courtrooms and all public user stations within Courtrooms;

(ix) all vending areas;

(x) all signage required for wayfinding and information as required by the Contract Standards; and

(xi) all areas under Central Holding Area, as defined in the Courthouse Program.

(e) Without limitation, all areas within the Project that are restricted to New Courthouse and Project Company employees shall be designed and constructed to be universally accessible or adaptable to universal accessibility. The following Functional Areas shall be fully accessible by the Occupancy Readiness date:

(i) all Toilet Rooms available and/or restricted to New Courthouse and Project Company employees;

(ii) all ramps required for changes in elevation;

(iii) all signage required by the Contract Standards; and

(f) all kitchenettes available to New Courthouse and Project Company employees (provide knee space and clearance at sink, easily convertible to access).

1.3 DESIGN LIFE

The Project shall be designed and constructed to meet the minimum requirements for remaining useful life set forth in Section 6.2.3 (Project Condition and Remaining Useful Life) of the Facilities Management Standards.

1.4 NEW COURTHOUSE OPERATIONAL SCHEDULE

The New Courthouse shall be designed, constructed, operated, and maintained in consideration of the following operational schedules:

(a) the Operating Hours for the Project shall be as defined in the Project Agreement;

(b) Judicial Chambers and Circuit Court Administration Management Offices are routinely used after-hours;

(c) Courtrooms may be used beyond Operating Hours for extended court sessions;

(d) the Server Room and other critical Functional Units as described in the Room Data Sheets shall be operational twenty-four (24) hours per day, seven (7) days per week; and

(e) Mechanical Systems shall include a convenient method to override the unoccupied mode.

2 MANAGEMENT OF THE DESIGN-BUILD WORK

2.1 PROJECT MEETINGS

2.1.1 Progress Meetings

(a) During the Design-Build Period, the Project Company shall conduct meetings with the County and representatives of the Oregon Judicial Department, as designated by the County Representative, to discuss the progress of the Design-Build Work as described in this Section 2.1.1 (each, a "**Progress Meeting**").

(b) Such Progress Meetings shall be held, at a minimum, on a weekly basis, unless otherwise agreed upon in writing by the County Representative and the Project Company Representative.

(c) At each Progress Meeting held during the performance of the design work throughout the Design-Build Period, the Project Company shall provide a plan of design activities to be performed during the upcoming four (4) weeks and discuss any issues with the design work in the preceding week.

(d) At each Progress Meeting held during the performance of the construction work throughout the Design-Build Period, the Project Company shall provide a plan of construction activities to be performed during the upcoming six (6) weeks and discuss any issues with the construction work in the preceding week.

(e) The Project Company shall be responsible for the coordination and management of each Progress Meeting, including calendars, notifications, and invitations, electronic or otherwise.

(f) Individual Progress Meetings may be cancelled by the County without prior notification. The County reserves the right to designate an Oregon Judicial Department representative to attend any meeting in such cases, in lieu of cancelling any meeting.

(g) The Project Company shall not cancel any Progress Meetings unless approved by the County Representative.

(h) Progress Meetings shall be held and conducted at the Construction Office, a Governmental Body office as designated by the County Representative, or at any other place as mutually agreed upon in writing by the County Representative and the Project Company Representative. The Project Company Representative shall be responsible for securing such Progress Meeting location, with the exception of a County office, where the County Representative shall bear the responsibility of securing a Progress Meeting location.

(i) The Project Company Representative shall be responsible for providing Progress Meeting agendas, materials, and exhibits three (3) Business Days prior to each Progress Meeting to all Progress Meeting participants and any other County or Oregon Judicial Department employee as designated by the County Representative.

(j) No later than three (3) Business Days after each Progress Meeting, the Project Company Representative shall provide the County Representative and the Oregon Judicial Department representatives who attended such Progress Meeting with meeting minutes for review and comment. After obtaining the comments from the County Representative and the Oregon Judicial Department who attended such Progress Meeting on such Progress Meeting minutes, if any, the Project Company shall incorporate such comments into the Progress Meeting minutes and then save an electronic copy of such Progress Meeting minutes on the Data Management System.

(k) Shall portions of the design and construction work, or the Design-Build Work and Facilities Management Services be concurrent, a single Progress Meeting may be held, in which case Project Company shall ensure a representative from each workstream or phase attends such Progress Meeting.

2.1.2 Design Review Meetings

(a) During the performance of the Design-Build Work, the County and the Project Company shall conduct joint meetings to discuss the progress of the design work (each, a "**Design Review Meeting**"). The Design Review Meetings shall:

(i) involve all relevant decisionmakers, including representatives of the Oregon Judicial Department;

(ii) begin within thirty (30) days from the Effective Date and continue on a bi-weekly basis for the performance of the Design-Build Work, unless the parties mutually agree upon a different timeframe for such Design Review Meetings; and

(iii) be in addition to the Progress Meetings set forth in Section 2.1.1 (Progress Meetings) of these Design and Construction Standards.

(b) In connection with the Design Review Meetings, the Project Company shall:

(i) develop meeting agendas and submit to the County within a reasonable timeframe prior to each Design Review Meeting;

(ii) record and distribute Design Review Meeting minutes;

(iii) provide early drafts of related Work Submittals to the County to facilitate the County's formal review; and

(iv) ensure that relevant key Project Company Persons from the appropriate design disciplines are present to accommodate timely discussion and collaboration.

(c) The Design Review Meeting process shall:

(i) not constitute a formal review process;

(ii) include a representative of the Oregon Judicial Department as designated by the County Representative;

(iii) only be considered by the Project Company as informal, non-binding input from the County; and

(iv) not affect the Project Company's compliance with the Project Schedule and the Submittal Review Procedure.

(d) Regardless of any input provided by the County or any representative of the Oregon Judicial Department during each Design Review Meeting, the Project Company shall be responsible for complying with the requirements set forth in the Contract Standards.

2.1.3 Utility and Third-Party Coordination Meetings

(a) The Project Company shall be responsible for holding meetings with Utility Owners, Governmental Bodies, Authorities Having Jurisdiction, and other stakeholders as required, in connection with the performance of the work (each, a "**Third-Party Coordination Meeting**"), in accordance with the requirements of this Section 2.1.3.

(b) The Project Company shall be responsible for the coordination and management of each Third-Party Coordination Meeting, including calendars, notifications, and invitations, electronic or otherwise, securing a location for each Third-Party Coordination Meeting, providing agendas to each of the attendees, and producing materials or exhibits, as required, for each Third-Party Coordination Meeting. Electronic copies of such agendas, materials and exhibits shall be saved to the Data Management System.

(c) Third-Party Coordination Meetings coordinated by the Project Company do not require the approval or attendance of the County, but the Project Company shall notify the County of each Third-Party Coordination Meeting at least three (3) Business Days in advance. The County reserves the right to attend any Third-Party Coordination Meeting.

(d) No later than three (3) Business Days after each Third-Party Coordination Meeting, the Project Company shall produce meeting minutes for such meetings, and save such meeting minutes to the Data Management System. Meeting minutes for each Third-Party Coordination Meeting shall include the name of each attendee and the entity they represent, topics discussed and corresponding resolution, action items and persons or parties responsible for each action item.

2.1.4 Other Meetings

The Project Company shall be available to meet with the County and other stakeholders when requested by the County. In such cases, the Project Company shall (as reasonably requested by the County):

(a) coordinate and manage the calendars, notifications, and invitations for such meetings, electronic or otherwise;

(b) secure a location for such meetings;

(c) provide an agenda and/or meeting materials or exhibits for such meetings; and

(d) produce meeting minutes of such meetings, to be saved to the Data Management System no later than three (3) Business Days after the occurrence of such meeting.

2.2 PROGRESS REPORTING AND DOCUMENTATION

2.2.1 Progress Report

(a) Each month for the duration of the Design-Build Period, after five (5) Business Days after the end of each month, the Project Company shall submit to the County a report that describes the progress of the Design-Build Work in accordance with the requirements of this Section 2.2 (each, a "**Progress Report**").

(b) Each Progress Report shall be provided to the County Representative with one (1) electronic copy (PDF format) of the Progress Report, and place one (1) electronic copy on the Data Management System.

(c) Each Progress Report shall:

(i) describe the progress for the ongoing phases of the Design-Build Work;

(ii) include any Project Schedule Reports, as required by Section 2.4.7 (Project Schedule Monthly Update) of these Design and Construction Standards;

(iii) identify Schedule Activities planned for the upcoming period;

(iv) identify Critical Path issues and proposed resolution;

(v) identify problems and issues that arose during the period from the submission of the previous month's Progress Report and the submission of the current month Progress Report, including their status;

(vi) summarize resolution or mitigation raised in previous Progress Reports and their status;

(vii) include a Monthly Quality Report, as required by Section 4 (Quality Management) of the General Design, Construction and Facilities Management Technical Requirements;

(viii) include any environmental noncompliance and remediating or mitigating actions;

(ix) identify any unexpected environmental occurrences during the period from the submission of the previous month's Progress Report and the submission of the current Progress Report, including a summary of their resolution, mitigation and/or status;

(x) include a list of Change Orders identified or executed during the period from the submission of the previous month's Progress Report and the submission of the current Progress Report, including their status;

(xi) identify any Relief Events that have resulted in an amendment to the Project Agreement in accordance with Section 13.1 (Relief Events Generally) of the Project Agreement during the period from the submission of the previous month's Progress Report and the submission of the current month's Progress Report, and describe status;

(xii) identify requested and/or required actions by the County for the next month; and

(xiii) include a diversity and C2P2 implementation progress dashboard as further described in Section 2.8 (C2P2 and D/M/W/ESB/SDVBE Reporting Requirements) of these Design and Construction Standards.

2.2.2 Project Website

The Project Company shall establish and maintain throughout the Design-Build Period a public Project website which shall contain, at a minimum, a description of the Project, general updates on the progress of the Design-Build Work, a section for frequently asked questions, and the diversity and C2P2 implementation progress dashboard described in Section 2.8 (C2P2 and D/M/W/ESB/SDVBE Reporting Requirements) below.

2.3 BUILDING INFORMATION MODELING ("BIM") AND DIGITAL DATA

2.3.1 General Requirements

(a) As part of the Project Company's submittals during the performance of the Design-Build Work, the Project Company shall develop a three-dimensional digital model of the Project in accordance with this Section 2.3 (the "**BIM Record Model**").

(b) The BIM Record Model to be submitted to the County for review and acceptance in accordance with the Work Submittal Review Procedure are specified in Section 28 (Design-Build Period Submittals).

2.4 DESIGN-BUILD WORK PROJECT SCHEDULE

2.4.1 Scope of Application

(a) During the performance of the Design-Build Work, the Project Company shall develop and maintain a Design-Build Work schedule that shows all major aspects of the Design-Build Work, including the design work, the construction work, the Demolition Work, and testing and commissioning of the Project, in accordance with the requirements of this Section 2.4.

(b) Several Forms of the Project Schedule shall be required, as further defined below:

(i) Project Schedule;

(ii) Preliminary Project Baseline Schedule;

(iii) Project Baseline Schedule;

(iv) Revised Project Baseline Schedule;

(v) Project Schedule Monthly Update;

(vi) As-Built Project Schedule; and

(vii) Recovery Schedule.

(c) The most recent version of such Project schedule as submitted to the County in accordance with the Submittal Review Procedure, whether the Project Baseline Schedule or the Project Schedule Monthly Updates, shall be the considered the most recent "**Project Schedule**".

2.4.2 Project Schedule Contents

(a) The Project Schedule shall include the elements set forth in this Section 2.4.2.

(b) The Project Schedule shall:

(i) be based on Business Days; and

(ii) be developed using the latest edition of Primavera P6 software, or the latest edition of other suitable software as approved by the County in writing.

(c) The Project Schedule shall provide details of construction logistics, sequencing, and resourcing for the County to monitor and track the Project Company's performance of the Work, and for the Project Company no monitor its own planning and monitoring of the Critical Path.

(d) The Project Schedule shall be broken down into phases or elements of the Design-Build Work that reflect the construction phasing. For each major activity, the Project Company shall indicate the duration (in Business Days or calendar days as applicable) required to perform the activity and the anticipated beginning and completion date for each activity.

(e) The Project Schedule shall divide the Design-Build Work into activities of reasonable duration with appropriate logic ties to show the Project Company's overall approach to the planning, scheduling, and execution of the Design-Build Work (the "**Schedule Activities**").

(f) Each Schedule Activity shall be clearly and logically linked to other Schedule Activities in a manner that represents the Project Company's intended performance of the Work, including the sequence of performing each major activity and the logical dependencies and inter-relationships among the Schedule Activities.

(g) At a minimum, the Project Schedule shall clearly identify the Critical Path and the following activities:

(i) all Schedule Activities for the design work, including milestones in respect of such design work;

(ii) all Schedule Activities for the construction work, including milestones in respect of such construction work;

(iii) all Schedule Activities for the coordination and interfacing activities with the County, Governmental Bodies, including all Third-Party Coordination Meetings, and other Project meetings as required;

(iv) all applicable Governmental Approvals; and

(v) any other details reasonably requested by the County.

(h) The Project Schedule shall include a separate narrative that describes the Project Company's proposed methods of operation for delivering the Design-Build Work. The narrative shall describe the general sequence of design and construction activities, the proposed Critical Path of the Design-Build Work, all construction milestone deadlines and how these relate to the initial year of the performance of the Facilities Management Services.

(i) Unless otherwise specified, the Project Schedule shall be based on a Work Breakdown Structure ("**WBS**"), which shall contain as many levels as necessary to clearly illustrate components and deliverables of the Design-Build Work.

2.4.3 Preliminary Project Baseline Schedule

(a) No later than thirty (30) days after the Effective Date, the Project Company shall develop and submit to the County an initial Work schedule that complies with the requirements set forth in this Section 2.4.3 (the "**Preliminary Project Baseline Schedule**").

(b) Such Preliminary Baseline Schedule shall be consistent with the logic-based Project schedule included in Appendix 7 (Design and Construction Proposal Commitments) of the Project Agreement.

(c) The Preliminary Project Baseline Schedule shall include all the elements set forth in the preceding Section 2.4.2 (Project Schedule Contents). The Preliminary Project Baseline Schedule shall also include all aspects of the Design-Build Work, including the design work, the construction work, and the Demolition Work required for the Project, and the following elements:

(i) all Schedule Activities for the testing and commissioning of the Project;

(ii) all Schedule Activities related to County FF&E and State FF&E;

(iii) all Schedule Activities related to the planning, milestones, and phasing of the Demolition Work;

(iv) all Schedule Activities for all Utility Work, including all Third-Party Coordination Meetings with Utility Owners; and

(v) all Schedule Activity for the Project Company's mobilization and preparation of the Services.

(d) The Preliminary Project Baseline Schedule shall be submitted to the County for review and acceptance in accordance with the Work Submittal Review Procedure.

(e) Once accepted by the County, the Preliminary Project Baseline Schedule shall become the Project Baseline Schedule.

2.4.4 Work Breakdown Structure

The Preliminary Project Baseline Schedule developed for the Design-Build Period shall be organized consistent with the WBS levels show in Table 6. 2.1 (WBS Level of Detail).

Level	Description	Intent
1	Master Project Summary	Level 1 shall 'roll up' all level 2 key milestones and identify all Project milestones.
2	Project Phases	Level 2 elements shall set out key deliverable milestones for phases of each program element. Examples include design, permitting, Work Submittals and approvals, procurement / prefabrication, construction, commissioning, FF&E and Final Completion.
3	Sub-Phase or Component	Level 3 elements shall set out activities by sub-phase or component. Examples include design sub-phases like DDs, permit sets and CDs or construction elements like structure, exterior envelope, MEP, etc.
4	Detailed Tasks	Level 4 shall set out each measurable Schedule Activity within each of the trades or disciplines and provide the basis for detailed monitoring of progress.

Table 6. 2.1 (WBS Level of Detail)

2.4.5 Project Baseline Schedule

(a) Once accepted by the County in accordance with the Submittal Review Procedure, the Preliminary Project Baseline Schedule shall become the "**Project Baseline Schedule**". The Project Baseline Schedule shall also be the Project Schedule in accordance with item 2.4.1(b) of these Design and Construction Standards, until that time when the Project Baseline Schedule is updated in accordance with Section 2.4.6 (Revised Project Baseline Schedule) of these Design and Construction Standards.

(b) The Project Company shall keep the Project Baseline Schedule in its original form as accepted by the County, without any further revisions, for the remainder of the performance of the Work. The Project Baseline Schedule will serve as the basis of comparison between such Project Baseline Schedule and the then current Project Schedule.

(c) The Project Baseline Schedule developed for the Design-Build Period shall cover the time from Financial Close until Final Completion.

2.4.6 Revised Project Baseline Schedule

(a) The Project Company shall update the current Project Schedule after the occurrence of any Change Orders, and/or any Relief Event that causes a revision to the Scheduled Occupancy Readiness Date in accordance with this Project Agreement, whether caused by the Project Company or the County, or any other event (each, a "**Revised Project Baseline Schedule**").

(b) Each Revised Project Baseline Schedule shall identify and contain the elements set forth in Section 2.2 (Project Schedule Contents) of the Design and Construction Standards.

(c) Each Revised Project Baseline Schedule shall be submitted to the County for review and acceptance in accordance with the Work Submittal Review Procedure, and once accepted by the County, such most recent Project Schedule Update shall become the Project Schedule.

(d) Each Revised Project Baseline Schedule shall include a narrative providing an explanation for the aforementioned revisions to the Project Schedule.

(e) Changes to the Project Schedule shall be made in accordance with the Project Documents. Any change or delay to dates to achieve the Project milestones shall not alter the Project Company's obligations to achieve those dates in accordance with the Project Agreement.

2.4.7 Project Schedule Monthly Update

(a) The Project Company shall submit the most recent Project Schedule Monthly Update reflecting actual progress and defining future activities to accurately reflect the Project Company's plan for completing the remaining Work in each monthly Progress Report until the D&C Work is completed in accordance with the requirements of this Section 2.4.7 (each, a "**Project Schedule Monthly Update**"). The last day of each monthly reporting period shall be the date used to calculate the schedule. It is understood that this is a design-build project and the Project Schedule will be updated within the Project Schedule Monthly Update in a rolling wave format to mimic the evolution of the design development.

(b) The Project Schedule Report shall include a snapshot beginning on the first day of the following month and covering the Schedule Activities shown in the most recent Project Schedule as accepted by the County to be performed during the next thirty (30) days, unless otherwise specified in the Contract Documents.

(c) Each Project Schedule Report shall:

(i) identify the Critical Path;

(ii) accurately reflect the Project's progress as of the commencement of the Project Schedule Report timeframe;

(iii) forecast finish for in-progress Schedule Activities;

(iv) reforecast early dates and late dates for remaining Schedule Activities;

(v) indicate the overall physically complete percent of the Design-Build Work; and

(vi) modify activity relationships in the currently established Project Schedule only as necessary to correct out-of-sequence progress for on-going activities or to accurately reflect Developer's plan for completing remaining Work.

(d) The County shall use the Project Schedule Report to manage its activities in order to be responsive to the Project Schedule and to monitor the Project Company's performance in accomplishing the Design-Build Work. Once submitted, the Project Schedule Monthly Update shall become the latest Project Schedule.

2.4.8 As-Built Schedule

At Final Completion, the Project Company shall submit the final Project Schedule Monthly Update identified as the "**As-Built Schedule**". The As-Built Schedule shall reflect the manner in which the Design-Build Work up to Final Completion was actually performed (including start and completion dates, Schedule Activities, actual durations, sequences and logic).

2.4.9 Recovery Schedule

If the Design-Build Work is delayed on any Critical Path item for a period which exceeds the greater of either:

(a) thirty (30) days in the aggregate; or

(b) a number of days in the aggregate equal or greater to 5% of the days remaining until Final Completion;

then the next Project Schedule Update and Project Schedule Report shall include a recovery schedule demonstrating the proposed plan to put the Design-Build Work back on schedule (the "**Recovery Schedule**").

2.5 STAFFING MANAGEMENT DURING THE DESIGN-BUILD PERIOD

2.5.1 General Staffing Requirements

The Project Company shall implement and adhere to the Staffing Management Plan, applicable to the Design-Build Period, in conformance with the requirements of Section 26.3.2.2 (Staffing Management Plan) of these Design and Construction Standards throughout the Design-Build Period, and as applicable to each phase of the Project.

2.5.2 Project Company's Staff Background Checks

(a) Throughout the Design-Build Period, all Project Company staff, including the staff of all Project Contractors and Subcontractors, shall undergo a background check conducted by the County, as set forth in Section 2.5.3 (County Responsibilities) below. The Project Company shall be responsible for scheduling, or causing all Project Company staff assigned to the New Courthouse to schedule, such background checks through the County's Facilities Management Division, or any other County department as indicated by the County Representative.

(b) If and when requested by the County, the Project Company shall be able to provide without delay, and in any case, no later than twenty-four (24) hours after requested, the results and records of any background check conducted in accordance with this Section 2.5.2.

2.5.3 County Responsibilities

Throughout the Design-Build Period, the County shall be responsible for performing all background checks for all Project Company staff, including all Project Contractors and Subcontractors, and shall provide the results of such background checks to the Project Company no later than twenty (21) days after the initial request, or as otherwise mutually agreed upon by the parties, provided that the Project Company staff complies with all required appointments as mandated by the County for such background checks.

2.5.4 Workforce Training

(a) The Project Company shall provide all training and orientation to Project Company staff as required by Applicable Law and the Project Agreement, including training for emergency management as set forth in the Project Company's Design-Build Period Emergency Management Plan.

(b) From time to time, either party may request that the Project Company provides training and orientation to Governmental Body staff or Project Company staff. In such case, both parties shall cooperate within reason to accommodate such request as necessary.

2.6 OCCUPATIONAL HEALTH AND SAFETY DURING THE DESIGN-BUILD PERIOD

2.6.1 General Requirements

(a) Throughout the Design-Build Period, the Project Company shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Design-Build Work and shall be responsible for the safety of its Project Company Persons affected by the Design-Build Work.

(b) Without limiting the foregoing and throughout the Design-Build Period, the Project Company shall comply with all Applicable Law, guidelines, and recommendations issued in respect of occupational health and safety within the Project Site, including those issued by Oregon OSHA and the Occupational Safety and Health Administration under the United States Department of Labor, as applicable

2.6.2 Design-Build Safety Officer

The Project Company shall designate a Project Company Person who will be responsible for developing and implementing the Project Company's Period Health and Safety Plan and safety related activities (the "**Safety Officer**") to be conducted during the performance of the Design-Build Work. The Safety Officer shall report directly to the Project Executive, shall have authority to stop work when the requirements of the Health and Safety Plan are not being met, and shall be available to review Design Documents, and suggest modifications to the designs, means and methods, and to work collaboratively with appropriate parties (whether other Project Company Persons, Project Company Person employees, County staff, or other Governmental Bodies staff)

for any necessary modifications based on Project Site conditions or the performance of the Design-Build Work. The Safety Officer shall be a Key Individual.

2.6.3 Personal Protective Equipment

Throughout the Design-Build Period, the Project Company shall require all persons entering an area under the Project Company's control to wear appropriate personal protective equipment ("**PPE**"), as required by Applicable Law and Contract Standards.

2.6.4 Pandemic Provisions

The Project Company shall ensure all Applicable Law and Contract Standards issued by the County, or any other local, State and/or federal Governmental Body in respect of COVID-19 or any other pandemic as determined by any Governmental Body including, but not limited to the utilization of face masks, face shields or any other PPE required to limit the spread of COVID-19 or any other pandemic, are fully implemented and observed at all times by all Project Company employees, until such time when the Governmental Body determines, in their sole discretion, that such pandemic is no longer a threat to the health and safety of Project Users and that such PPE is no longer required.

2.7 ENVIRONMENTAL MANAGEMENT

2.7.1 General Requirements

Throughout the Term, the Project Company shall be solely responsible for managing and tracking all environmental matters associated with the Design-Build Work, in accordance with this Section 2.7.

2.7.2 Project Company Environmental Compliance Manager

(a) The Project Company shall assign a Project Company Person to develop and implement policies designed to protect potentially sensitive areas, wildlife, and other environmental resources within the Project Site (the "**Environmental Compliance Manager**"). The Environmental Compliance Manager shall ensure compliance with environmental laws and regulations governing construction, the management of Hazardous Substances and the disposal of Hazardous Substances. The Environmental Compliance Manager shall be the single, identified entity or person responsible for, at a minimum, the following duties:

(i) planning of environmentally sensitive construction methods;

(ii) oversight of construction methods for environmental soundness;

(iii) ensuring that all training has been conducted, and flagging and barriers to potentially sensitive areas have been installed;

(iv) ensuring compliance with the Oregon Department of Environmental Quality Stormwater Discharge Permit, Grading Permit, and any other applicable Governmental Approval;

(v) coordination with the County;

(vi) coordination with Governmental Bodies;

(vii) compliance with environmental Governmental Approvals; and

(viii) conducting meetings with necessary Governmental Bodies.

(b) All environmental monitoring duties conducted by the Environmental Compliance Manager shall be recorded in the form of a standard report and photographic log (as required by Applicable Law). The photographic log shall be kept in both electronic and hardcopy form. All reports shall be submitted to the County in summary form on a weekly basis. Copies of all daily monitoring records shall be maintained at the Project Site by the Environmental Compliance Manager.

2.7.3 Wildlife and Protected Species Surveys and Protection

If required by the Clackamas County Department of Planning and Zoning or the City of Oregon City in the site development plan process, the Project Company shall develop and comply with a plan to avoid disturbing protected species that may be affected during the performance of the Design-Build Work.

2.7.4 Hazardous Substances

2.7.4.1 Project Company Hazardous Substances

Any Project Company Hazardous Substances shall be the responsibility of the Project Company. The Project Company shall obtain an EPA identification number for all Project Company Hazardous Substances, listing the Project Company's name and construction site address as the generator of the Project Company Hazardous Substance. The Project Company shall be responsible for the identification, analysis, profiling, documentation, reporting, transport and disposal of Project Company Hazardous Substances.

2.7.4.2 Hazardous Substances Management Program

The Project Company shall develop and maintain written Hazardous Substances management program that includes as a minimum, but is not limited to, the requirements specified in this Section 2.7.4. A copy of the Hazardous Substance Management Program shall be submitted to the County. The interests of the County are that accidental spill, site contamination, and injury of personnel on the site are avoided. The County shall notify the Project Company of suspected violations. If in the opinion of the County, the Project Company fails to address the suspected violations in a timely and appropriate manner, the County shall notify all appropriate Governmental Bodies, report the suspected violations to them, and request that they inspect the Project Company's operations. Any fines that may be levied against the County for violations relating to Project Company Hazardous Substances shall be reimbursed immediately by the Project Company. All documents required by the Hazardous Substances Management Program shall be made available to the County immediately upon request.

2.7.5 Noise Mitigation

Prior to initiation of disruptive work, the Project Company shall provide a construction noise mitigation program to the County for review and acceptance in accordance with the Submittal Review Procedure. In connection with such disruptive work, the Project Company shall

implement and comply with the construction noise mitigation program as accepted by the County. In addition to complying with any and all requirements set forth by the Oregon City Municipal Code, the construction noise mitigation program shall include to the following requirements:

(a) construction activities within five hundred (500) feet of any occupied residences shall be restricted to between the hours of 7:00 AM and 6:00 PM on weekdays and Saturdays with no construction on Sundays and holidays;

(b) all noise-producing equipment and vehicles using internal combustion engines shall be equipped where appropriate with exhaust mufflers and air-inlet silencers in good operating condition that meet or exceed original factory specifications;

(c) mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment;

(d) mobile or fixed noise-producing equipment that is regulated for noise output by local, state or federal agency shall comply with such regulation;

(e) electrically powered equipment shall be used instead of pneumatic or internal combustion powered equipment, when such equipment is available at commercially reasonable rates the Oregon City area;

(f) material stockpiles, mobile equipment staging, construction vehicle parking, and maintenance areas shall be located as far as practicable from noise-sensitive land use;

(g) stationary noise sources such as generators or pumps shall be located as far as practicable away from noise-sensitive land uses;

(h) noise-producing signals, including horns, whistles, alarms, and bells, shall be used for safety warning purposes only. No Project Company public address loudspeaker, two-way radio, or music systems shall be audible at any adjacent noise-sensitive receptor except for emergency use;

(i) temporary noise barriers shall be installed where Design-Build Work is unavoidably close to noise-sensitive receptors;

(j) the noisiest construction operations shall be scheduled to occur together to avoid continuing periods of the greatest annoyance, to the extent doing so would align with Good Design-Build Practice;

(k) construction vehicle trips shall be routed as far as practical from existing residential uses; and

(l) the loudest construction activities, such as demolition, blasting, and pile driving, shall be scheduled in accordance with item 2.7.5(a).

2.7.6 Archeological and Paleontological Resources

(a) In the event that evidence of deposits of historical or archaeological interest, including human remains, is found during the performance of the Design-Build Work, the Project Company shall cease the Design-Build Work affecting the find and immediately notify the County Representative. The Project Company shall not disturb deposits until written notice from the County Representative is given to proceed.

(b) In the event that evidence of deposits of paleontological interest is found during the performance of ground-disturbing Design-Build Work, the Project Company shall cease such Design-Build Work affecting the find and immediately notify the County Representative. Such deposits shall not be disturbed until written notice from County Representative is obtained.

2.7.7 Recycling

(a) The Project Company shall obtain one credit related to LEED v4.1 Construction and Demolition Waste Management Credit and pursue option 1 (50% Diversion) of such credit.

(b) The Project Company shall keep the area where the construction waste recycling and waste containers are located neat and clean.

(c) The Project Company shall keep materials to be recycled free of Hazardous Substances and other substances deleterious to the recycling process.

(d) The Project Company shall arrange for collection or delivery of construction waste to appropriate recycling centers or transfer stations.

(e) The Project Company shall provide the County with the opportunity to select demolition waste for reuse. The Project Company shall provide to the County documentation demonstrating that demolition waste not selected for reuse by the County has been recycled.

2.8 C2P2 AND D/M/W/ESB/SDVBE REPORTING REQUIREMENTS

(a) Throughout the performance of the Design-Build Work, the Project Company shall implement and adhere to its C2P2 Implementation Plan and D/M/W/ESB/SDVBE Subcontracting Plan as included in Appendix 7 (Design and Construction Proposal Extracts). The Project Company shall report to the County on the implementation progress of both plans at each Progress Meeting.

(b) The Project Company shall prepare and include in each monthly Progress Report a diversity and C2P2 implementation progress dashboard that summarizes by way of graphics, based on contract amounts (a) the percentage of participation for each D/M/W/ESB/SDVBE category (based on subcontract dollar amounts against the total capital cost of the Project); (b) the total dollars contractually assigned to each D/M/W/ESB/SDVBE category; (c) the percentage of apprenticeship by trade for the each month; (d) the percentage of minority male journey and apprenticeship by trade hours; and the percentage of minority female journey and apprenticeship by trade hours.

(c) The Project Company shall make the diversity and C2P2 implementation progress dashboard available to the public via the Project website described in Section 2.2.2 (Project Website) of these Design and Construction Requirements.

3 PROJECT SITE PREPARATION

3.1 RED SOILS CAMPUS MASTER PLAN

Unless otherwise specified in this Project Agreement, the Project's design and construction shall not preclude the County from implementing the elements provided in the *Red Soils Master Plan, August 2017 Update* or most recent version (the "**Red Soils Campus Master Plan**") developed by SERA Architects.

3.2 ZONING REQUIREMENTS

The design and construction of the Project and the Project Site shall comply with all Applicable Law, including the *Clackamas County Zoning and Development Ordinance 1005: Site and Building Design* and the Oregon City Municipal Code.

3.3 PROJECT SITE FENCING AND SECURITY

(a) During the performance of the construction work, the Project Company:

(i) shall, prior to commencement of construction work in any area of the Project Site, install 6-foot-high (or higher) chain link site security fencing and gates. Fencing shall include dark, solid-colored shade screen (including black, blue, brown or green) to shield construction activities from view. The Project Company shall maintain fencing around active construction areas within the Project Site and shall remove fencing only with County's prior acceptance;

(ii) shall be responsible, during the performance of the construction work, for locking the Project Site and all storage areas during non-working hours. County shall have no responsibility for missing or stolen equipment, tools, materials or any other items within the Project Site;

(iii) may, at its own expense, employ a third party to provide security and access control at the Project Site during working and/or non-working hours. In the event the Project Company employs a third party to provide certain security and access services, the Project Company shall:

(1) notify the County that the Project Company has engaged a third party to provide security and access control, including identification of the third party and a description of the services that such third party will provide;

(2) submit a list of such third-party security personnel to the County Representative and cause each such person to comply with the requirements set forth in Section 4.2 (Project Company's Staff Background Checks) of the General Design, Construction and Facilities Management Technical Requirements;

(3) ensure that security personnel adhere at all times to all Applicable Law, and any other policies in regards to fire arms, during the performance of the Work; and

(4) provide the County with access to the Project Site as requested.

(b) Throughout the performance of the construction work, the Project Company, Project Contractors and Subcontractors shall not place any signs, advertisements, notices or graphic materials anywhere on the Project Site without the County's written consent, with the exception of those signs, advertisements, notices or graphic materials required by Applicable Law.

3.4 LAND SURVEYING REQUIREMENTS

During the performance of the construction work, the Project Company shall:

(a) locate and protect control points prior to the commencement of the construction work;

(b) protect all permanent reference points throughout the performance of the construction work;

(c) not change reference points without prior written consent of the County;

(d) report the loss or destruction of any reference point, or the need to relocate a reference point in connection with the performance of the construction work to the County; and

(e) repair or replace any reference point that is lost, destroyed, or requires relocation in connection with the performance of the construction work.

3.5 TEMPORARY PROJECT FACILITIES

(a) Temporary Project facilities or elements necessary for the performance of the construction work shall be provided, installed, maintained and removed by the Project Company, including, but not limited to:

(i) scaffolding, staging, runways, and similar equipment necessary to complete the construction work;

(ii) temporary rigging, trash chutes, ladders between floors and similar equipment;

(iii) barricades, lights and similar safety precautions;

(iv) OSHA- and Oregon OSHA-compliant guardrails at floor openings and building perimeter, as well as toe guards upon placement of concrete slabs; and

(v) temporary OSHA- and Oregon OSHA-compliant guardrail system around the storm drain and sanitary sewer excavations.

(b) All temporary facilities and elements of the construction work shall conform to all requirements that pertain to operation, safety and fire hazard as set forth in the Technical Requirements and Applicable Law.

(c) Upon completion of an aspect of the Work, the Project Company shall remove all temporary facilities and elements of the construction work.

3.6 TRAFFIC AND PEDESTRIAN CONTROL

Throughout the performance of the construction work, the Project Company shall:

(a) perform the Work in a manner that minimizes disruption to traffic around the Project Site;

(b) maintain pedestrian and bicycle access around and adjacent to the Project Site as required by Contract Standards and Applicable Law;

(c) furnish, at the Project Company's expense, all barricades and any other devices and means necessary, including staff utilized for flagging and traffic control operations during the performance of the construction work, to control traffic; and

(d) before the commencement of any construction work that impacts vehicular traffic, pedestrian or bicycle circulation around the Project Site:

(i) provide the County for review and comment a schedule of activities that will impact such vehicular, pedestrian and bicycle traffic, and corresponding traffic control measures; and

(ii) obtain all approvals required by Authorities Having Jurisdiction and Applicable Law.

3.7 DEMOLITION WORK

(a) The performance of the Design-Build Work shall include:

(i) the complete decommissioning, demolition, and removal of the following buildings:

(1) the OC Hilltop Building, located at 998 Library Court, Oregon City, OR;

(2) the Stewart Community Center, located at 1002 Library Court, Oregon City, OR; and

(3) the removal and replacement of Parking Lot "J";

(ii) the removal of all infrastructure, Utilities, Hazardous Materials and any other elements associated with the facilities described in items 3.7(a)(i), deemed not necessary for the Project;

(iii) the proper disposal of any and all debris resulting from such demolition and removal Work; and

(iv) the restoration, re-grading, and landscaping in accordance with the Technical Requirements for unpaved surfaces impacted by such demolition and removal Work; or

(v) the design and construction of the Project, in accordance with this Project Agreement,

(the "**Demolition Work**").

(b) The Project Company shall include the Demolition Work in the Project Schedule prepared for the Design-Build Work.

(c) The Demolition Work shall not commence without prior written approval by the County Representative. The Project Company shall request such approval thirty (30) days prior to the commencement of such Demolition Work, except as otherwise provided in this Project Agreement.

(d) The County shall have first right of refusal for all material and equipment removed as part of the performance of the Demolition Work. All material and/or equipment refused by the County shall be the property of the Project Company and shall be removed and disposed of in accordance with Section 3.11 (Project Site Cleanup and Salvage) of the Design and Construction Standards.

3.8 PROJECT SITE CLEARING

(a) The Project Company shall take all necessary measures to protect existing trees within the Project Site not impacted by the design and construction of the Project from construction damage and keep them in a healthy condition throughout the Design-Build Period.

(b) The Project Company may stockpile and reuse for landscape work any topsoil found during the performance of the Design-Build Work.

(c) Depressions caused by clearing and grubbing operations shall be filled and graded in accordance with Section 3.10 (Project Site Grading) of the Design and Construction Standards.

3.9 PROJECT SITE EROSION AND SEDIMENTATION CONTROL

All Project Site erosion prevention and sedimentation control shall be in accordance with the requirements set forth in the *Erosion Prevention Planning and Design Manual* by the Clackamas Water Environment Services Department, and all Contract Standards and Applicable Law.

3.10 PROJECT SITE GRADING

(a) Project Site grading shall be designed and constructed in conformance with all Contract Standards and Applicable Law, with consideration of adjacent properties, buildings and

roadways so that landforms and grade transitions are smooth and coordinated between the Project Site and such abutting properties, buildings and roadways.

(b) Maximum slopes shall not exceed 3:1 (horizontal : vertical).

(c) Minimum slopes on grass / vegetated areas shall be no less than 2.5%, except that defined swales shall be no less than 2%.

(d) Minimum asphalt pavement slope shall be no less than 1.5%, and no more than 5% for parking areas, and 8% for driveways that do not have parking immediately adjacent.

(e) Minimum slope on concrete pavement shall be 1%.

3.11 PROJECT SITE CLEANUP AND SALVAGE

To the extent practicable during the Design-Build Period, the Project Company shall keep the Project Site free of debris and Project waste resulting from the Design-Build Work. Such debris and Project waste shall be disposed of in accordance with all Applicable Law.

3.12 CONSTRUCTION OFFICE

3.12.1 General Construction Office Requirements

(a) During the Design-Build Phase and within the Project Site, the Project Company shall provide a fully functional, fully outfitted, and ADA-compliant temporary office space from which to manage the Design-Build Work for all Project Company Persons, and County staff (the "**Construction Office**").

(b) The Project Company shall ensure parking spaces serving the Construction Office:

(i) are provided for the Project Company Persons;

(ii) are provided for County Staff, whether such staff is working on permanent or temporary capacity, or working on a full-time or part-time basis;

(iii) include ADA-compliant spaces as required by Applicable Law and Contract Standards;

(iv) include an additional 50% capacity to be designated as "Visitor Parking"; and

(v) are paved with all-weather material.

(c) The County shall allow the Project Company and all associated contractors to use other parking areas outside of the Project Site, but within the Red Soils Campus. Such approval shall be coordinated with the County and shall include the estimated number of Project Company Persons that will be utilizing such parking.

(d) The Project Company shall ensure that all common deliveries are delivered to the Project Company's Construction Office (or that a Project Company Persons is always available to receive such deliveries in the event the Project Company Persons and County staff are collocated within the same Construction Office), or some other location under the Project

Company's control, as appropriate. The County shall not accept deliveries on behalf of the Project Company.

(e) The Construction Office's systems, infrastructure and FF&E, including those utilized by the County, shall be acquired, owned and maintained at all times, and replace as required, by the Project Company. The Project Company shall take all necessary measures to find a temporary solution for any systems or equipment not operating as intended within one (1) hour from being notified, and a permanent solution within twenty (24) hours.

(f) Within the Construction Office, the Project Company shall provide a minimum number of restrooms and associated fixtures in accordance with ADA requirements, Contract Standards, and Applicable Law. The Project Company shall ensure each restroom/sanitary facility within the Construction Office is fully stocked with all necessary appurtenances including, but not limited to toilet paper and appropriate toilet paper dispenser, paper towels and appropriate paper towel dispenser, liquid soap and appropriate liquid soap dispenser, waste baskets at each workstation and within each enclosed space, including private offices, conference rooms, each kitchen/breakroom areas, and first-aid kit, as required. Each restroom/sanitary facility shall be cleaned and inspected on a daily basis.

(g) The Project Company shall equip the kitchen/breakroom area with a microwave, refrigerator with freezer, coffee maker machine, and hot and cold-water dispenser. The Project Company shall ensure a steady supply of coffee, tea, biodegradable disposable cups and stirrers, sugar, and creamer.

(h) The Construction Office and supporting FF&E shall remain the Project Company's property at all times. The Project Company shall decommission and remove the Construction Office no later than thirty (30) days from obtaining an occupancy permit and moving Project Company and County staff into their corresponding office spaces within the New Courthouse, unless otherwise agreed upon in writing by the Project Company Representative and the County Representative. No less than thirty (30) days prior to moving Project Company and County personnel their corresponding office spaces within the New Courthouse, the Project Company shall provide notification of such activity to the County Representative and County staff at the Construction Office.

(i) The Project Company shall provide keys to County staff as required by the County Representative.

(j) The Project Company shall submit the Construction Office's site plan and floor plans for review and acceptance in accordance with the requirements set forth in the Submittal Review Procedure.

3.12.2 Construction Office Minimum Space Requirements

In addition to the spaces required for Project Company Persons, the Construction Office shall include the following spaces for County staff:

(a) two (2) private offices, each with a minimum area of one hundred (100) net square feet;

(b) six (6) workstations within an open office area, each with a minimum area of eighty (80) net square feet;

(c) one (1) large conference room to accommodate private meetings of ten (10) personnel with a minimum area of three hundred (300) net square feet;

(d) one (1) small conference room (shared space) to accommodate private meetings of six (6) personnel with a minimum area of two hundred (200) net square feet;

(e) one (1) file/storage room with a minimum area of two hundred (200) net square feet;

(f) one (1) copy/reproduction room (shared) with a minimum area of two hundred (200) net square feet; and

(g) one (1) kitchen/breakroom area (shared) with a minimum area of one hundred seventy-five (175) net square feet.

3.12.3 Construction Office Information Technology and Communications Requirements

The Project Company shall provide the following equipment for all County staff in the Construction Office:

(a) telephone system for each office, desk, cubicle and conference room, including remotely accessible voicemail;

(b) two (2) network connected, high-capacity printer/copier/scanner/fax to be placed in the copy/reproduction room and capable of handling double-sided printing and 11" x 17" paper size;

(c) high-speed internet access, business-grade internet connection;

(d) local area network connections at each office, desk, cubicle and conference room; and

(e) a wireless area network, with a guest account in addition to the County's account, separate from Project Company's wireless area network.

3.12.4 OC Hilltop Building as Construction Office

(a) In lieu of providing a temporary structure for the Construction Office, the Project Company may elect to use the OC Hilltop Building prior to its demolition as required in Section 3.7 (Demolition Work) of these Design and Construction Standards. The utilization of the OC Hilltop Building as the Project's Construction Office shall:

(i) not delay or impede the Demolition Work related to the Stewart Building;

(ii) not delay or impede the Design-Build Work of the New Courthouse and the Project;

(iii) comply with all the requirements set forth in this Section 3.12; and

(iv) allow for the performance of the Demolition Work of the OC Hilltop Building prior to achieving Occupancy Readiness.

4 UTILITY WORK DURING THE DESIGN-BUILD PERIOD

4.1 UTILITY MANAGEMENT SERVICES

(a) Throughout the Design-Build Period, the Project Company shall:

(i) verify the location of all Utilities directly with Utility Owners during the performance of any Work that may impact or damage such Utilities;

(ii) coordinate directly with Utility Owners in respect of any Utility Work required to be performed within the Project Site, and in connection with any Work that will require the shutdown of any Utility services to any facility within the Red Soils Campus and adjacent properties; and

(iii) at least sixty (60) days prior to any Utility shutdown required by the Design-Build Work, notify the County, and any Governmental Body and members of the general public that may be impacted by such Utility shutdown.

(b) In the event of an incident that requires an immediate Utility shutdown in order to safeguard the health and safety of County staff, Project Company Persons, and members of the general public, the requirement set forth in the preceding item 4.1(a)(iii) shall not apply and the Project Company shall notify the County as soon as practicable.

(c) All Utility shutdowns shall be scheduled to take place outside of Operational Hours.

(d) When coordinating meetings with Utility Owners, the Project Company shall comply with the requirements set forth in Section 2.1.3 (Utility and Third-Party Coordination Meetings) of these Design and Construction Standards.

4.2 TEMPORARY UTILITIES

(a) The Project Company shall obtain temporary Utilities for all Design-Build Work either from the County or directly from Utility Owners and be responsible for the cost of such temporary Utilities. The Project Company shall provide and maintain any necessary temporary structures required in connection with temporary Utilities.

(b) The Project Company shall submit to the County for review and acceptance in accordance with the Submittal Review Procedure drawings and plans for temporary Utilities during the performance of the Design-Build Work.

(c) All temporary Utilities and associated temporary structures shall be promptly removed at the completion of the construction work for which such temporary Utilities and associated temporary structures were required.

(d) During the Design-Build Period, the Project Company shall conform to all Contract Standards and Applicable Law for all temporary fire protection and:

(i) ensure that no burning is performed on the Project Site;

(ii) provide and maintain fire protection equipment including extinguishers, fire hoses, and other equipment as necessary for proper fire protection during the Design-Build Period; and

(iii) locate fire extinguishers in field offices, storage sheds, tool houses, other temporary buildings, and throughout the Project Site, as required by Applicable Law.

4.3 PERMANENT UTILITIES

4.3.1 General Requirements

(a) All underground and above-ground permanent Utilities shall be shown on design development site plans in accordance with Contract Standards and Applicable Law, and submitted to the County for review and acceptance in accordance with the Submittal Review Procedure.

(b) All above-ground Utility devices including but not limited to backflow preventers, transformers, fire hydrants, meters, and pressure reducing stations shall:

(i) be placed on appropriately sized concrete pads as applicable;

(ii) be located no less than three (3) feet behind the back of curb if adjacent to a vehicular travel way or parking area, so as to avoid vehicle impact;

(iii) not create safety impacts or impede pedestrian circulation or vehicular maneuvering within the Project Site; and

(iv) not be located near the New Courthouse main entrance.

(c) Vaults shall not be located on primary walking paths and shall be shown on design development site plans.

(d) All above-grade Utility devices shall be painted or coated to protect them from corrosion and to minimize their visual presence, and consistent with existing Utility devices within the Red Soils Campus. Specific paint or coating shall be subject to the County's review and shall be consistent with current County's practices.

(e) Where applicable, Utilities alignments shall be generally oriented to align with roadways (Loop Road, Relocated Kaen Road, and Library Court Extension) so as not to create conflicts or impediments to future construction.

(f) Separation between water lines and other Utilities shall never be less than one (1) foot for Utilities not covered by Applicable Law.

(g) All non-metallic underground water piping two (2) inches and larger, and all fiber optic cable piping shall be accompanied by a solid core #10 insulated copper tracer wire. The wire shall be fastened to the top of the pipe so that it is not displaced or broken during

backfilling, such as by affixing the wire to the pipe with duct tape at approximately 10 feet intervals. Both ends of the tracer wire shall be accessible at all Utility valve boxes, manholes or vaults and shall terminate on the top of the valve box.

(h) Provide detectable warning tape for all underground Utilities. Such detectable warning tape shall be permanent, brightly colored, and intended for direct burial service. Provide color coding appropriate to the Utility with black printing denoting such Utility. The tape shall be installed directly over the pipe, eighteen (18) inches to twenty-four (24) inches above the top of pipe. For concrete-encased high voltage electrical duct banks, provide one (1) warning tape for each twelve (12) inches width of concrete duct bank or fraction thereof. Utilities supplied via Utilidor are exempt from this requirement.

(i) All water pipes shall be tested and inspected in accordance with AWWA standards. Piping for fire protection shall be tested in accordance with NFPA 24 and NFPA 13. All piping utilized for the potable water system shall be disinfected and tested for bacteriological contamination prior to being put into service.

(j) All underground piping and fitting materials shall take into consideration the acidity of the local soil conditions.

(k) Backfill materials shall generally be granular in the vicinity of the pipe and non-expansive soils for the balance of backfill. Pea gravel is not an acceptable trench backfill material.

(l) Trench excavation and backfill shall be such that water will not be allowed to follow the excavation to beneath the New Courthouse.

4.3.2 Water Mains

The Project Company shall design and construct all water mains in accordance with all the requirements set forth by the Clackamas Public Health Department, including all applicable requirements set forth in Division 61 (Drinking Water) of Chapter 333 of the *Oregon Administrative Rules*, by the Public Health Division of the Oregon Health Authority, and all Contract Standards and Applicable Law.

4.3.3 Wastewater Management

The Project Company shall design and construct all sewer mains and wastewater systems in accordance with the requirements set forth in the *Water Environment Services Rules and Regulations* (July 2018) or the most recent version by the Clackamas Water Environment Services Department, and all Contract Standards and Applicable Law.

4.3.4 Stormwater Management

The Project Company shall design and construct all stormwater management systems in accordance with the Clackamas Water Environment Services Stormwater Standards and all Contract Standards and Applicable Law.

4.3.5 Electric, and Communications

The Project Company shall design and construct electric and communications Utilities for the Project in accordance with corresponding Utility Owners, all Contract Standards, and Applicable Law.

4.4 UTILIDOR AND CENTRAL UTILITY PLANT

Refer to Appendix 4 (Central Utility Plant Description and Assumed Operating Performance Parameters) for information on the County's Utilidor and Central Utility Plant, corresponding parameters, and Project connection requirements.

5 SITE PLANNING AND IMPROVEMENTS

5.1 GENERAL REQUIREMENTS

Vehicular and pedestrian circulation systems shall be designed and constructed to minimize vehicular and pedestrian traffic conflicts throughout Project Site.

5.2 BUILDING HEIGHT AND LOCATION

(a) The New Courthouse's building height shall not exceed one hundred five (105) feet. Oregon City has approved a deviation from the requirements set forth in Subsection C.1 of Section 17.31.060 (Dimensional Standards) of the *Oregon City Municipal Code*.

(b) For the purposes of interpretation of Section 5.2(a), building height shall be defined in accordance with Subsection 17.04.550 (Height of Building) of the Oregon City Municipal Code.

(c) There are not restrictions on the location or orientation of the New Courthouse within the Project Site provided that its location and orientation meet all the architectural requirements set forth in these Design and Construction Standards, and that the New Courthouse's main entrance into the Main Lobby is facing the west end of the Red Soils Campus Circle of Honor (located between the DSB and the PSB) and perpendicular to the Circle of Honor's centerline. There are no minimum distance requirements from the New Courthouse's main entrance and the west end of the Circle of Honor.

5.3 EXTERIOR FEATURES

5.3.1 Exterior Lighting

(a) The Project Company shall design and install exterior lighting to adequately light the Project Site. Such exterior lighting shall consist, without limitation, of pedestrian level pole lights, bollard lights, building up lighting, and parking lot lights.

(b) The style of exterior light fixtures and poles shall generally match the style, color and material of existing lighting devices within the Red Soils Campus or as set forth by the 2017 *Red Soils Campus Master Plan*. Standard roadway lighting shall not be acceptable.

(c) All exterior lighting shall be LED.

(d) The exterior lighting design shall meet or exceed IESNA recommendations of one (1) foot candle average. The exterior lighting design shall also be compliant with IDA recommendations.

5.3.2 Sidewalks and Pedestrian Pathways

(a) All sidewalks and pedestrian pathways designed and constructed by the Project Company shall:

(i) be designed and constructed as concrete in accordance with the applicable Oregon City Municipal Code, Contract Standards and Applicable Law;

(ii) be ADA-compliant; and

(iii) have a minimum sidewalk width of five (5) feet.

(b) Exterior Areas shall clearly, effectively and safely link all key pedestrian connections from the New Courthouse to parking facilities, other buildings within the Red Soils Campus, and the Circle of Honor.

5.3.3 Fencing

In the event fences are required, such fences shall be high quality ornamental metal fence, and shall comply with Project's security requirements. Chain-link fence is not acceptable, except when matching existing fence along the Red Soils Campus property line. Fence architectural design and style shall generally match the style, color and material of existing features and retaining walls within the Red Soils Campus or as set forth in the 2017 *Red Soils Campus Master Plan*.

5.3.4 Retaining Walls

In the event retaining walls are required, design and construction of such retaining walls shall be segmental block or cast in place concrete, and generally match the architectural intent of the Red Soils Campus. Fencing on the top of the walls shall be in accordance with Section 5.3.3 (Fencing) of Appendix.

5.3.5 Exterior Furniture and Amenities

(a) Exterior furniture and amenities including, but not limited to flagpoles, benches, bollards, planters, bike racks, tables, chairs, and handrails shall match and integrate with the architectural intent of the New Courthouse and the style of existing features in the Red Soils Campus. Such exterior furniture shall be universally accessible and provide for and enhance the public realm.

(b) Permanent bollards shall comply with the security requirements set forth in Section 5.5.1 (Vehicular Deterrence and Security Barriers) of these Design and Construction Standards.

(c) Exterior furniture and amenities shall be made of metal and have metal finishes (such as stainless steel, galvanized steel, or powder coating) and generally be low maintenance and high quality (wood, plastic or composite materials are not acceptable). Exterior furniture

or amenities with long, continuous surfaces, such as long continuous benches, shall include breaks so as not to permit damage from skateboarding.

(d) The Project Company shall provide two (2) aluminum flagpoles near the New Courthouse's entrance into the Main Lobby to accommodate one flag of the United States and one flag of the State of Oregon.

(e) The Project Company shall provide a dedication plaque and/or cornerstone, with relevant project information and dates, that is permanently placed in a prominent exterior location (in the case of a cornerstone), or a prominent exterior or interior location (in the case of a plaque). Prior to installation, submit the plaque and/or cornerstone and its featured text to the County in accordance with the Submittal Review Procedure for review and acceptance by the County.

(f) The Project Company shall provide outside bicycle racks and bicycle lockers as required by the LEED Gold Certification.

5.3.6 Exterior Waste Receptacles

The Project Company shall install exterior waste receptacles throughout the exterior areas of the Project Site where the presence or circulation of pedestrians can be reasonably expected. Such exterior waste receptacles shall integrate within the architectural style and finishes of the Red Soils Campus. Each receptacle shall include clearly labeled bins for "trash" and "recycling".

5.3.7 Integrated Pest Management

The Project Company shall design and construct all aspects of the Project and the Project:

(a) to inhibit bird roosting and nesting on exterior façades and roof overhangs, provide means of preventing bird roosting or nesting on horizontal surfaces greater than six (6) inches deep, especially in protected or covered areas;

(b) to exclude pests, ensure that the Project do not provide potential attraction or habitat for pests, and prevent damage or soiling to the Project;

(c) to protect the environmental quality, appearance and cleanliness of the Project Site and the Project; and

(d) to facilitate inspection and monitoring of pest activities.

5.4 LANDSCAPING

All landscaping within the Project Site shall be designed and constructed in accordance with the Oregon City Municipal Code. Federal Unified Facilities Criteria for anti-terrorism and building security shall be considered when designing landscaping.

5.5 EXTERIOR SECURITY

5.5.1 Vehicular Deterrence and Security Barriers

(a) All vehicular security barriers, used in areas where vehicles associated with the function of the New Courthouse require access to the Project Site shall be rated to stop a 15,000-

pound vehicle traveling at the maximum attainable speed based on distance and the design of the vehicular route approaching the security barriers. All fencing used in conjunction with security barriers shall be rated to the same protection level as the vehicular security barrier. Vehicular security gates shall not be manned by the Sheriff's department and shall be controlled by the Security Control Room. Vehicular security barriers shall enhance perceived protection and create a perception of the New Courthouse as a hard target. This requirement does not apply to vehicle gates for at-grade secure parking areas.

(b) Vehicular security barrier systems may consist of landscaping elements, fixed outdoor furniture, grade changes, planters, walls, bollards, or other anti-ram designs that comply with the requirements of Section 5.5.1(a) and that are integrated into the Project Site design or New Courthouse architecture in accordance with Section 5.3.5 (Exterior Furniture and Amenities). Such security barriers, however, shall not be an impediment to visual surveillance by law enforcement.

5.5.2 Vehicle Standoff Distance

The New Courthouse shall have a 70-foot vehicle standoff distance, except for Secure Parking. All vehicular security barriers installed or constructed to maintain such vehicle standoff distance shall comply with the requirements of the preceding Section 5.5.1 (Vehicular Deterrence and Security Barriers).

5.5.3 ~~Mass~~Building Notification System

The Project Company shall install an ~~Project Site-wide~~ interior ~~and exterior mass~~ building notification system in accordance with the following minimum requirements:

(a) all equipment for the interior ~~and exterior mass~~ building notification system shall be provided by Alertus Technologies, LLC ("**Alertus**");

(b) the ~~exterior mass~~ building notification system shall include ~~exterior~~ speakers with sufficient volume and clarity to ensure fully audible notification with a high level of speech intelligibility at all points of the building ~~Project Site~~; and

(c) the ~~mass~~ building notification system shall be integrated with the existing campus Alertus system and ~~connected~~, at a minimum, to the workstations in the Building Monitoring Room, Captain Office, Sergeant Office, and Lead Entrance Screening Officer Room.

(d) Building notification events will be broadcast and distributed through integration with the paging system.

(e) The system shall also be capable of sending alert messages to end users (recipients) via multiple delivery methods, including but not limited to the following: audio-visual network alerts to computers via desktop pop-up, text alerts to mobile phones and pagers, text alerts to email clients, text alerts to textual visible appliances, alerts to visible appliances, audio alerts to phones, audio alerts to speakers, audio alerts to existing wide-area or building voice and/or other building notification systems, network alerts to any other IP-connected devices via standard XML and CAP protocols. The system is required

to be capable of one hundred (100) separate/unique messages to notification appliances. The building notification messaging system shall be capable of the following:

(i) automatically distribute at least one hundred (100) simultaneous and unique messages to the appropriate notification appliances;

(ii) allow multiple operators to send messages simultaneously;

(iii) grant access for control to another control station if the location in control becomes inoperable and/or the authorized operator at that control station can no longer operate the control station;

(iv) send voice messages and text messages with an indication of the source of the message that can only be sent from the message source;

(v) send alert messages to end users (recipients) via multiple delivery methods;

(vi) live announcements or prerecorded messages. Live messages shall take precedence over prerecorded messages;

(vii) voice messages shall be distributed via the paging system and shall consist of speakers located to provide intelligible instructions throughout the building. Specific zones, such as courtrooms, shall be separated as necessary;

(viii) give priority to building notification system announcements over other audible announcements of the system including fire alarm system in a normal or alarm state. When an announcement is activated during a fire alarm, fire alarm system functions shall continue in an alarm state, except for the output signals of the fire alarm audible and visual notification appliances;

(ix) capable of overriding local control of speaker volume levels for emergency communications. Local controls shall be permitted to adjust volume levels of non-emergency signals only, such as, but not limited to, background music and convenience paging; and

~~(i)~~(x) through integration with the existing Alertus system shall be capable of providing separate messages to one individual building or to multiple buildings at any given time if the MNS serves more than one building. Capable of monitoring emergency notifications from multiple data sources (National Weather Service, Emergency Managers Weather Information Network, Naval Meteorology and Oceanography, and others as determined locally) and automatically send out notifications to designated facilities and personnel based on pre-defined rules.

5.5.4 New Courthouse Perimeter Security

The Project Company shall:

(a) design, construct and install exterior lighting so that the Project Site, New Courthouse perimeters, walkways, and drives are illuminated, in accordance with Section 5.3.1 (Exterior Lighting);

(b) ensure that trees at partial or full projected growth do not impede lighting and restrict the line of sight of exterior security cameras throughout the Project Site;

(c) restrict heights of landscaping to maintain natural surveillance and avoid landscaping that will allow for the concealment of packages twelve (12) inches tall within the building setback distance;

(d) protect utilities at entrance to the Project Site through burial or concrete encasement; and

(e) comply with the secure perimeter requirements for the Sally Port Area set forth in Sections 9.11.2.1 (Secure Perimeter) and 9.11.2.2 (Vehicle Sally Port) of these Design and Construction Standards.

5.5.5 Vehicular Movement and Access / Egress

(a) The Project Company shall design vehicular circulation so that each of the following: (i) Loading Dock Sub-Area, (ii) the Secure Parking Area, and (iii) the Sally Port Area have separate vehicular access.

(b) Vehicles entering or exiting the Loading Dock Sub-Area and the Sally Port Area shall not obstruct ingress into and egress out of the Secure Parking Area.

(c) Security measures for vehicular entry shall involve intercoms, access-card readers, sheriff's radio communication, vehicle barriers, overhead doors, and security cameras. Refer to Section 21 (New Courthouse Security Requirements) of these Design and Construction Standards for specific secure access requirements into each Functional Area.

(d) Vehicular routes shall be planned to prevent unauthorized vehicles traveling or parking near or around the secured area.

(e) The queueing length for ingress into (and outside of) the Sally Port Area shall be able to hold one in-custody person van and two patrol cars.

5.6 CIRCULATION ROADWAYS

5.6.1 General Requirements

(a) The Project Company shall design and construct a Loop Road segment and extend Library Court to serve the Project, as shown in Attachment 1D (Site Plan of Existing Facilities and Developable Area) to Appendix 1 (Site-Related Information) of the Project Agreement, and as further described in this Section 5.6.

(b) The Project Company shall design and construct all features in accordance with the requirements set forth by the current versions of the *Roadway Standards* (Transportation

Engineering Division of the County's Department of Transportation and Development), the *Oregon City Municipal Code*, all Contract Standards, and Applicable Law.

(c) Such roadway segments shall:

(i) be designed for a vehicular design speed of twenty (20) miles per hour and a posted speed of fifteen (15) miles per hour;

(ii) to the extent practicable, be able to accommodate pedestrian traffic through the implementation of sidewalks, in accordance with the Red Soils Campus Master Plan, the Contract Standards and Applicable Law; and

(iii) be in compliance with Section 3.1 (Red Soils Campus Master Plan) of these Design and Construction Standards, except as otherwise expressly specified in this Project Agreement.

(d) All plans and drawings for such new roadway segments serving the Project shall be submitted to the County for review and acceptance in accordance with the Submittal Review Procedure.

5.6.2 Roadway Design Performance Requirements

The Project Company shall design and construct the Loop Road segment and an extension to Library Court in accordance with the requirements set forth in this Section 5.6.2.

(a) The alignment for Loop Road shall generally follow the alignment shown in Attachment 1D (Site Plan of Existing Facilities and Developable Area) to Appendix 1 (Site-Related Information) of the Project Agreement.

(b) The alignment for Library Court's extension to the west into Loop Road shall follow exactly the alignment of existing Library Court and form a "T" intersection to be stop-controlled.

(c) The minimum cross section for Loop Road shall, at a minimum:

(i) match the cross sections indicated in Section 4.5 (Systems) of the Red Soils Campus Master Plan (street types B and E) for the prescribed length shown on the "Street Plan" figure on page 50 of the Red Soils Campus Master Plan; and

(ii) for the segment of Loop Road connecting to existing Kaen Road, match Kaen Road's existing cross section.

(d) All roadway design features including, without limitation, curb and gutter size and height, crown, cross slopes, pavement structure and composition, and intersection approaches shall be designed and constructed in accordance with the County's Roadway Standards, applicable sections of the Oregon City Municipal Code, all Contract Standards, and Applicable Law.

(e) The minimum design vehicles for all roadways within the campus shall be a single unit truck ("**SU**") per the most recent version of *A Policy on Geometric Design of Highways and*

Streets (or "AASHTO Green Book" by the American Association of State Highway and Transportation Officials ("**AASHTO**").

(f) The design and construction of each roadway shall not encroach into wetland or wetland buffer zones adjacent to the Project Site. The Project Company shall conduct its own wetland delineation within the Project Site.

(g) All roadway signage shall be in accordance with the County's *Roadway Standards*, the *Manual on Uniform Traffic Control Devices* ("**MUTCD**") and any other Contract Standards, and Applicable Law.

5.7 PUBLIC PARKING PERFORMANCE REQUIREMENTS

(a) As part of the Project, the Project Company shall design and construct a surface parking facility in close proximity to the New Courthouse within the Project Site which shall serve the New Courthouse and the Development Services Building ("**Project Site Surface Parking Lot**"), which shall replace Parking Lot "J" shown in Attachment 1B (Site Plan of Existing Facilities and Developable Area) to Appendix 1 (Site-Related Information) of the Project Agreement.

(b) Such parking facility shall be designed and constructed in accordance with section 17.52 (Off-Street Parking and Loading) of the Oregon City Municipal Code.

(c) The Project Company shall design and construct a minimum of two hundred twenty-one (221) parking stalls, including the one-to-one replacement of the existing one hundred eighty-nine (189) parking spaces serving the Development Services Building.

(d) The minimum number of ADA-compliant parking spaces shall be twice the amount of the minimum required by the Contract Standards and Applicable Law.

(e) The new Project Site Surface Parking shall include the minimum number of electric vehicle charging stations as required by the USGBC LEED v4.1 BD+C Location and Transportation Credit – Electric Vehicles Option 1, Electric Vehicle Charging.

(f) Vehicular access into the public parking facilities shall be designed and constructed so as not to preclude future access control and the collection of fees.

(g) Parking facilities shall be planned and laid out to facilitate anticipated vehicular, pedestrian, and bicycle usage patterns.

(h) The Project Company shall design and construct proper pedestrian connections to the pedestrian circulation network within the Red Soils Campus, the New Courthouse and the Development Services Building from the parking facilities.

(i) Parking facilities shall be designed and constructed to operate without excessive vehicle queues, internal to such parking facility, that impede or restrict vehicle parking maneuvering.

(j) Parking facilities shall be designed and constructed to provide a minimum of one (1) entry lane and one (1) exit lane for every five hundred (500) parking stalls or fraction thereof for a total of two (2) entry lanes and two (2) exit lanes.

(k) The new Project Site Surface Parking Lot shall be paved with asphalt or concrete, and shall be structurally designed and constructed to accommodate the design vehicle and maximum anticipated load in accordance with Section 5.6 (Circulation Roadways) of these Design and Construction Standards. Such parking area shall be striped in accordance with all Contract Standards and Applicable Law.

(l) All wayfinding signage for such parking facility shall match existing wayfinding signage within the Red Soils Campus.

6 SUSTAINABILITY REQUIREMENTS

6.1 GENERAL REQUIREMENTS

(a) The Project Company shall design and construct the Project in compliance with the requirements set forth in this Section 6, Contract Standards and Applicable Law.

(b) The Project Company's design and construction of the Project shall not preclude the County from achieving its aspirational goal of achieving carbon neutrality by the year 2050 (*Performance Clackamas*, adopted March 2021) as outlined in the County's Climate Action Plan, and Governor Brown's Executive Order on Climate Change (EO 20-04) and on Accelerating Efficiency in Oregon's Built Environment (EO 17-20) directing state agencies to take actions to reduce and regulate greenhouse gas emissions.

(c) The Project Company shall design and construct the Project in compliance with the *Oregon Administrative Rules*, Chapter 330 Division 135 (1.5 Percent for Green Energy Technology in Public Building Construction Contracts), including all necessary documentation and procedures.

(d) The Project Company shall not compromise the County's LEED status or credits in respect of the any existing Red Soils Campus buildings, or any County-owned facilities, and shall ensure that the Project facilitates the County's continued compliance with LEED on any County-owned or operated facilities.

6.2 USGBC LEED GOLD CERTIFICATION

(a) The Project Company shall obtain, at a minimum, the United States Green Building Council's ("**USGBC**") Leadership in Energy and Environmental Design ("**LEED**") Building Design and Construction ("**BD+C**") v4.1 Green Building Rating System (the "**LEED Rating System**") Gold certification ("**LEED Gold Certification**") for the Project.

6.3 USGBC REGISTRATION REQUIREMENTS

(a) Within sixty (60) days of the Effective Date, the Project Company shall register the Project with the USGBC under the LEED Rating System.

(b) If, at any time after the Project Company obtains registration with the USGBC in accordance with Section 6.3(a), the requirements to achieve LEED Gold Certification under the LEED Rating System change, and the Project Company is required to comply with such change in order to achieve LEED Gold Certification of the Buildings, then the Project Company shall forthwith notify the County of such change and such change will be implemented as an Owner Change in accordance with Article 10 (Capital Modifications and Facilities Management Services Changes) of the Project Agreement.

(c) The Project Company shall be responsible for all costs and fees associated with obtaining and maintaining LEED Gold Certification for the Project.

6.4 MANDATORY PREREQUISITES AND CREDITS

(a) To obtain LEED Gold Certification for the Project, the Project Company shall:

(i) obtain the full credit for each credit marked as "Mandatory Credit" under the *Mandatory Credit Points* column in Table 6. 6.1 (Mandatory LEED Gold Prerequisites and Credit Points); and

(ii) obtain the minimum number of points for each credit, as indicated in Table 6. 6.1 (Mandatory LEED Gold Prerequisites and Credit Points).

(b) The Project Company may, in its discretion, determine which additional LEED credits and points to pursue for those credits marked as "Optional" in Table 6. 6.1 (Mandatory LEED Gold Prerequisites and Credit Points), except that the Project Company shall not pursue, or rely on, for purposes of achieving LEED Gold Certification for the Project, any Innovation & Design credits that require investment by the County in future equipment or procurement processes that may increase County's costs of operation.

Tag	Category	Title	Mandatory Credits and Minimum Mandatory Points per Credit
IPc1	Integrative Process	Integrative Process	1 point minimum
LTc1	Location and Transportation	LEED for Neighborhood Development Location	Optional
LTc2	Location and Transportation	Sensitive Land Protection	Optional
LTc3	Location and Transportation	High Priority Site and Equitable Development	Optional
LTc4	Location and Transportation	Surrounding Density and Diverse Uses	Optional
LTc5	Location and Transportation	Access to Quality Transit	Optional
LTc6	Location and Transportation	Bicycle Facilities	1 point minimum
LTc7	Location and Transportation	Reduced Parking Footprint	Optional
LTc8	Location and Transportation	Electric Vehicles	1 point minimum (*shall pursue option*

Tag	Category	Title	Mandatory Credits and Minimum Mandatory Points per Credit
			1), as set forth in Section 5.7(e) of these Design and Construction Standards.
SSp1	Sustainable Sites	Construction Activity Pollution Prevention	Required Credit
SSc1	Sustainable Sites	Site Assessment	Optional
SSc2	Sustainable Sites	Protect or Restore Habitat	Optional
SSc3	Sustainable Sites	Open Space	1 point (as set forth in Section 1.2(c) of these Design and Construction Standards.
SSc4	Sustainable Sites	Rainwater Management	Optional
SSc5	Sustainable Sites	Heat Island Reduction	Optional
SSc6	Sustainable Sites	Light Pollution Reduction	Optional
WEp1	Water Efficiency	Outdoor Water Use Reduction	Required Credit
WEp2	Water Efficiency	Indoor Water Use Reduction	Required Credit
WEp3	Water Efficiency	Building-Level Water Metering	Required Credit
WEc1	Water Efficiency	Outdoor Water Use Reduction	1 point minimum
WEc2	Water Efficiency	Indoor Water Use Reduction	Optional
WEc3	Water Efficiency	Optimize Process Water Use	Optional
WEc4	Water Efficiency	Water Metering	Optional
EAp1	Energy and Atmosphere	Fundamental Commissioning and Verification	Required Credit
EAp2	Energy and Atmosphere	Minimum Energy Performance	Required Credit
EAp3	Energy and Atmosphere	Building-Level Energy Metering	Required Credit
EAp4	Energy and Atmosphere	Fundamental Refrigerant Management	Required Credit
EAc1	Energy and Atmosphere	Enhanced Commissioning	3 points minimum
EAc2	Energy and Atmosphere	Optimize Energy Performance	9 points minimum (shall pursue option 1)
EAc3	Energy and Atmosphere	Advanced Energy Metering	Optional

Tag	Category	Title	Mandatory Credits and Minimum Mandatory Points per Credit
EAc4	Energy and Atmosphere	Grid Harmonization	Optional
EAc5	Energy and Atmosphere	Renewable Energy	3 points minimum (*Shall pursue onsite renewables option*)
EAc6	Energy and Atmosphere	Enhanced Refrigerant Management	Optional
MRp1	Materials and Resources	Storage and Collection of Recyclables	Required Credit
MRc1	Materials and Resources	Building Life-Cycle Impact Reduction	Optional
MRc2	Materials and Resources	Environmental Product Declarations	Optional
MRc3	Materials and Resources	Sourcing of Raw Materials	Optional
MRc4	Materials and Resources	Material Ingredients	Optional
MRc5	Materials and Resources	Construction and Demolition Waste Management	Required credit (see Section 2.7(d) of this Appendix).
IEQp1	Indoor Environmental Quality	Minimum Indoor Air Quality Performance	Required Credit
IEQp2	Indoor Environmental Quality	Environmental Tobacco Smoke Control	Required Credit
IEQc1	Indoor Environmental Quality	Enhanced Indoor Air Quality Strategies	Optional
IEQc2	Indoor Environmental Quality	Low-Emitting Materials	Optional
IEQc3	Indoor Environmental Quality	Construction Indoor Air Quality Management Plan	Optional
IEQc4	Indoor Environmental Quality	Indoor Air Quality Assessment	Optional
IEQc5	Indoor Environmental Quality	Thermal Comfort	Optional
IEQc6	Indoor Environmental Quality	Interior Lighting	Optional
IEQc7	Indoor Environmental Quality	Daylight	Optional
IEQc8	Indoor Environmental Quality	Quality Views	Optional
IEQc9	Indoor Environmental Quality	Acoustic Performance	Optional
Ic1	Innovation	Innovation	Optional
Ic2	Innovation	LEED Accredited Professional	1 point minimum

Tag	Category	Title	Mandatory Credits and Minimum Mandatory Points per Credit
Rc1	Regional Priority	Regional Priority: Specific Credit	Optional
Rc1	Regional Priority	Regional Priority: Specific Credit	Optional
Rc1	Regional Priority	Regional Priority: Specific Credit	Optional
Rc1	Regional Priority	Regional Priority: Specific Credit	Optional
* The eighteen (18) points required to obtain credit EAc2 (Energy and Atmosphere, Optimize Energy Performance) shall be achieved within the New Courthouse and its building envelope.			

Table 6. 6.1 (Mandatory LEED Gold Prerequisites and Credit Points)

6.5 CONNECTION TO THE CENTRAL UTILITY PLANT

The Project Company shall connect the New Courthouse to the CUP in accordance with the requirements set forth in Appendix 4 (Central Utility Plant Description and Assumed Operating Performance Parameters) of the Project Agreement. The Project Company may elect to exclude the CUP from all of its energy modeling developed in connection with this Section 6.

6.6 SUSTAINABILITY MANAGER

6.6.1 General Requirements

(a) For the duration of the Term, the Project Company shall appoint an individual who shall, irrespective of such person's responsibilities:

(i) have a defined authority for ensuring the incorporation of sustainability requirements during the performance of the Design-Build Work;

(ii) be responsible for the coordination, management and collection of required occupancy data during any Certification Period;

(iii) be responsible for the coordination, management, and the provision of all information required by the USGBC to obtain LEED Gold Certification;

(iv) ensure the New Courthouse obtains LEED Gold Certification; and

(v) ensure the New Courthouse maintains such LEED Gold Certification throughout the Term; and

(vi) have experience in managing the sustainability aspects of projects of similar scope, complexity, and sustainability aspirations,

(the "**Sustainability Manager**").

(b) The identity of the Sustainability Manager (and any replacement thereof) and the Sustainability Manager's job specification and responsibilities shall be subject to the County's acceptance (such acceptance not to be unreasonably withheld or delayed), and the Sustainability Manager shall be considered a Key Individual.

6.6.2 Sustainability Manager's Specific Responsibilities

Without limiting the generality of the foregoing, the job specification and responsibilities of the Sustainability Manager shall include the following:

(a) developing, implementing, and maintaining an effective system of tracking progress toward LEED Gold Certification;

(b) initiating design and construction reviews, not less frequently than monthly, and taking other actions necessary to ensure the New Courthouse's LEED Gold Certification;

(c) developing and implementing training and orientation related to the New Courthouse's LEED Gold Certification;

(d) coordinating and managing, and preparing and submitting to the County and all LEED Gold required documentation to fulfil USGBC's requirements necessary for the LEED Gold Certification;

(e) developing, implementing, and managing a plan for LEED Gold Certification, including corrective actions, and a plan to communicate with USGBC and maintain the County informed of all progress related to sustainability and the New Courthouse's LEED Gold Certification;

(f) liaising with an USGBC representative and acting as the primary representative for the Project Company on all matters relating to the New Courthouse's LEED Gold Certification process and achievement; and

(g) providing Project in regards to sustainability and respond to data requests from the County Representative at key design and construction milestones, and throughout the Term of the Project.

7 STRUCTURAL SYSTEMS REQUIREMENTS

7.1 GENERAL REQUIREMENTS

(a) The Project Company shall design and construct the Project's structural systems in accordance with the requirements of this Section 7, and the Oregon Structural Specialty Code ("**OSSC**"), all Contract Standards, and Applicable Law.

(b) The Project Company shall conduct all evaluations of various structural systems and shall be responsible for the selection of such structural systems for the Project that meets the specific requirements of the Project.

7.2 STRUCTURAL FRAME

(a) The New Courthouse's structural frame shall be designed to minimize impact on the New Courthouse Program and visual appearance of the interior of the New Courthouse. Columns and braces shall not be placed in a manner that limits interior functional floor area or usable wall area.

(b) The following Functional Areas within the New Courthouse shall be designed and constructed with the longest practical clear span of the horizontal framing members between columns:

(i) Main Entrance & Lobby Area;

(ii) Courtrooms Sub-Area; and

(iii) Main Jury Assembly Sub-Area.

(c) Structural framing systems for the Secure Parking Area, Sally Port Area, and the Loading Dock Sub-Area shall provide enough height and width clearance for the vehicles specified.

7.3 FOUNDATIONS

(a) After the Effective Date, the Project Company shall provide their own geotechnical engineer to evaluate the site conditions and make recommendations for foundation design.

(b) The foundations for the New Courthouse shall be designed and constructed in conformance with the Project Company's own geotechnical investigation report and in compliance with Contract Standards and Applicable Law.

(c) If required by the Project Company's design, any perimeter walls shall be designed and constructed for lateral soil, hydrostatic and seismic soil pressure, as designated by the site soil conditions referenced in the Project Company's geotechnical investigation report.

(d) As required, and as recommended by the Project Company's geotechnical investigation report, the Project Company shall provide subdrainage systems for below-grade elements to relieve hydrostatic pressure.

(e) The Project Company shall provide waterproof face of below-grade walls and/or other elements as required by the Project Company's geotechnical investigation report, Contract Standards, and Applicable Law.

(f) The Project Company shall provide waterstops at pipe penetrations and at construction joints below design water table as required by the Project Company's geotechnical investigation report, Contract Standards, and Applicable Law.

(g) The Project Company shall design and construct basement walls of reinforced concrete to safely sustain all vertical loads, earthquake-induced loads and loads due to unbalanced lateral earth pressure.

7.4 GRAVITY LOADS

The structural frame of the New Courthouse shall conform to the design live loads set forth in the most recent version of the OSSC, Contract Standards, and Applicable Law.

7.5 VIBRATION PERFORMANCE REQUIREMENTS

In addition to complying with Contract Standards and Applicable Law, the design and construction of the New Courthouse shall comply with the following requirements in respect of vibration:

(a) In all cases, vibration causing equipment shall be isolated with the provision of isolating mounts or motion arresting pads to eliminate perceptible vibration in adjacent paces.

(b) The Project Company shall also design an appropriate floor framing and slab system to address floor vibrations caused by human activity, such as walking, in accordance with the applicable requirements of the AISC Steel Design Guide #11 (Vibrations of Steel – Framed Structural Systems to Human Activity) per the table below:

Occupancy	Acceleration Limit ao/gx 100%
Circulation corridors, assembly areas, public spaces	1.5%
All other occupied areas	0.5%

7.6 SEISMIC PERFORMANCE REQUIREMENTS

In addition to complying with Contract Standards and Applicable Law, the design and construction of the New Courthouse shall comply with the following requirements in respect of seismic performance:

(a) Non-structural components, including building elements such as supports, frames, backing, restraints for built in equipment, FF&E and User building contents shall be designed and constructed to comply with Applicable Law relating to seismic requirements at the time of submittal of the Final Design Documents.

(b) Seismic resisting systems shall be designed and constructed in accordance with Contract Standards and Applicable Law. Preferably, such systems shall be designed for easy access and repair following a design level earthquake.

(c) The design of all structural and non-structural seismic systems shall undergo reviews in accordance with Applicable Law.

(d) The New Courthouse shall be designed and constructed in accordance with Section 1613 (Earthquake Loads) of the OSSC, and to meet the design criteria required for a Seismic Design Category “D” and a minimum Seismic Design Risk Category III.

8 BUILDING EXTERIOR

8.1 BUILDING ENVELOPE

8.1.1 General

(a) Provide an exterior envelope system, including roofing, that is a complete weather and moisture proof assembly that will prevent infiltration into the building's occupied or unoccupied areas. Design the building to prevent the introduction or long-term growth of mold or other pathogens that could adversely affect the indoor environmental quality or work environment. Provide a complete moisture and damp-proofing system at all concrete slabs on grade, retaining walls, and other below-grade structures.

(b) Water testing and inspection of the roof and exterior wall construction is required during installation:

(i) Roof testing: survey entire roof area for potential leaks using electric field vector mapping ("**EFVM**").

(ii) Exterior wall testing:

(1) Water-spray test: system shall be tested according to AAMA 501.2 and shall not evidence water penetration.

(2) Air Infiltration: Exterior windows and doors shall be field tested according to ASTM E 783.

(3) Water Penetration: system shall be tested according to ASTM E 1105 and shall not evidence water penetration.

(c) System testing:

(i) air infiltration: exterior windows, curtain walls and doors shall have air leakage of no more than 0.06 cfm/sq. ft. when factory tested according to ASTM E 283 at test-pressure difference or 6.24 lbf/sq. ft.

(ii) water penetration under static pressure: no water penetration when tested according to ASTM E 331 at test-pressure difference of 10 lbf/sq. ft.

(iii) water penetration under dynamic pressure: no water penetration through when tested at dynamic pressure of 10 lbf/sq. ft.

(d) Detailing:

(i) Construction documents shall clearly depict all drainage and air passages.

(ii) Detail in three dimensions where practical, indicating elements including critical corner terminations, interface of all differing systems, or proper sealant methodologies.

(iii) Contractor shall obtain an independent peer review of the building waterproofing design.

(e) Source Limitations: obtain each product from a single manufacturer.

8.1.2 Exterior Walls

(a) Unit Masonry, installations shall comply with the following provisions:

(i) Brick: General Specifications

(1) Clay brick is acceptable as a material for building exteriors. Brick walls shall be of modular brick with a nominal size equivalent to the existing Red Soils campus buildings laid in a running, common, Flemish or English bond pattern.

(ii) Mortar: provide pigmented mortar as approved by the County.

(iii) Provide metal flashing throughout:

(1) Stainless steel flashing where concealed or exposed.

(2) Galvanized steel flashing with fluoropolymer coating to match cladding systems where exposed.

(iv) Provide weep and drainage system:

(1) weep/vent product: aluminum weep hole/vent: units made from sheet aluminum, designed to fit into a head joint preferred. Manufactured plastic weep vents color matched with adjoining grout are acceptable.

(2) drainage system: strips, full depth of cavity and ten (10) inches high, with dovetail shaped notches seven (7) inches deep that prevent clogging with mortar droppings.

(b) Cast-in-Place Concrete:

(i) Where formed concrete is exposed to view on surfaces of completed building provide special concrete materials, formwork, placement, and finishes to obtain high quality architectural appearance.

(ii) Finish to be smooth rubbed or formed finish.

(c) Architectural Precast Concrete:

(i) Architectural Precast Concrete is an acceptable exterior finish product.

(ii) The use of Architectural Precast Concrete is strongly encouraged for use in articulating the building's base.

(iii) Use of stainless-steel connection materials are strongly encouraged.

(d) Panelized systems:

(i) Wood siding:

(1) Wood is an acceptable exterior finish product in select prominent locations. Wood shall be sealed to maintain longevity, finish and ease of maintenance.

(2) Wood shall be locally sourced. Twenty percent (20%) or more of the materials construction budget shall come from within five hundred (500) kilometers of construction site.

(3) Attach with stainless steel or hot-dip galvanized fasteners.

(ii) Metal Panel Rain Screen:

(1) Metals can be Aluminum, Galvanized Steel, or copper.

(2) Galvanized steel shall have factory finished "three coat fluoropolymer" finish complying with AAMA 621, that contains not less than seventy (70) percent PVDF resin by weight in color coat.

(3) Aluminum shall have either a "color anodic finish" complying with AAMA 611, a fluoropolymer finish complying with AAMA 2605, that contains not less than seventy (70) percent PVDF resin by weight in color coat, or a powder coating complying with AAMA 2604 or 2605.

(4) Color for exterior metal panels shall be approved by the County.

(5) Finish Warranty: twenty (20) years.

(iii) Metal Composite Panel systems can be used when utilizing fire retardant cores.

(iv) Fiber cement:

(1) Fiber Cement is an acceptable exterior finish product.

(2) Warranty Requirement: twenty (25) years.

(e) Equipment screens and Canopies:

(i) Equipment screening is required to conceal mechanical equipment.

(1) Mechanical equipment located on the roof shall be placed in the middle 1/3 of the roof to the extent possible and shall avoid placement at the perimeter of the roof.

(2) Mechanical equipment located on grade shall be placed in discreet locations away from public view.

(3) The County will, in its discretion, allow minor deviations from mechanical equipment location. Any minor deviation shall be determined during the design review process and submitted to the County for approval. The County reserves the right to approve or deny any minor deviation.

(ii) Equipment screens shall be constructed of perforated metal wall panels with a "coat fluoropolymer" finish complying with AAMA 2605, that contains not less than seventy (70) percent PVDF resin by weight in color coat.

(iii) Canopies can be made of stainless steel, glass, CLT and/or galvanized steel. Exposed non-galvanized steel shall have "three coat fluoropolymer" finish complying with AAMA 621, that contains not less than seventy (70) percent PVDF resin by weight in color coat.

(f) Insulation:

(i) Methylene chloride and perchloroethylene shall not be intentionally added in insulation products.

(ii) Cavity wall insulation shall be mineral wool semi-rigid board insulation.

(iii) Insulation within the weatherproofing barrier shall formaldehyde free and be one of the following:

(1) Glass-fiber blanket insulation.

(2) Mineral wool blanket insulation

(3) Cellulosic-fiber or glass fiber loose-fill insulation.

(iv) Exposed acoustic insulation shall be Spray-Applied Cellulosic Insulation.

(v) Foam insulation:

(1) Provide fire retardants that contain no hexabromocyclododecane ("**HBCD**") flame retardants. Use Polymeric flame retardants in lieu of these products.

(2) Extruded-Polystyrene Board insulation shall only be used for perimeter insulation.

(3) Polyisocyanurate Board insulation shall only be used for roof insulation.

(4) The use of spray polyurethane foam insulation is strongly discouraged.

(g) Air Barriers will be required:

(i) Products will be fluid applied or non-bituminous self-adhering air barriers.

(ii) Air barriers will have a minimum vapor permeance of fifteen (15) perms.

(h) Joint Sealants:

(i) The volatile organic compound ("**VOC**") content of all field-applied adhesives, adhesive bonding primers, sealant primers and sealants used on the interior of this Project shall not exceed the limits defined in Rule 1168 (Adhesive and Sealant Applications) of the South Coast Air Quality Management District (SCAQMD), of the State of California, with a rule amendment date of October 6, 2017.

(ii) Provide preconstruction sealant compatibility and adhesion testing. Field test all joint sealants prior to installation to assure compatibility with all system sealants interact with.

(iii) Joint sealants will be as follows:

(1) For exterior joints in vertical surfaces and horizontal nontraffic surfaces joints shall be Silicone Type S, Grade NS, Class 100/50.

(2) For Exterior joints in horizontal traffic surfaces joints shall be Urethane, M, NS, 50, T, NT.

(i) Flashing and Trim:

(i) The design of metal flashing trim shall follow the recommendations of the *Architectural Sheet Metal Manual*, by the Sheet Metal and Air Conditioning Contractors' National Association.

(ii) Sheet metal flashing and trim shall be stainless steel or galvanized sheet metal with G90 coating.

(iii) Ledges, sills, and caps on the façade shall have drip edges when they meet the vertical plane.

(iv) All sheet metal flashing and trim specifications shall comply with the following provisions:

(1) Stainless steel or copper flashing where concealed.

(2) Galvanized steel flashing with fluoropolymer coating to match cladding systems, stainless steel, or copper where exposed.

(3) Warranty: all flashing adjoining roofs shall be warranted with the roofing. All other flashing shall be warranted for five (5) years, and any damage to building resulting from failure will be repaired to satisfaction of the County at no additional cost.

(j) Waterproofing:

(i) The exterior envelope shall be designed to be weather resistant as defined by the Oregon State Building Code.

(ii) Fluid applied or self-adhering sheet waterproofing membrane are acceptable systems.

(iii) Provide blindside sheet waterproofing for vertical and horizontal applications where required. Use a uniform, flexible, multilayered-composite sheet membrane that forms a permanent bond with fresh concrete placed against it, complete with accessories and preformed shapes for an unbroken waterproofing assembly.

(iv) Warranty Requirements: fifteen (15) years.

(k) Under-slab Vapor Retarders:

(i) Unless otherwise advised by geotechnical reports, provide vapor barriers underneath all slabs-on-grade that maintain a permeance of less than 0.1.

8.1.3 Exterior Glazing

(a) General:

(i) Design shall include a decreased glazing hazard consistent with 4/1,000 probability of breakage at design load. No permanent framing deformation at overload (150% design load) is allowed. Center of glass deflection relative to glass edges shall not exceed one (1) inch, with no impacts to serviceability or occupant comfort.

(ii) Aluminum-framed door and window systems shall meet the requirements of AAMA Standard 101/I.S. 2/A440. Only optimal performance classes may be used.

(iii) Provide a framing assembly U Value of 0.30 Maximum, in accordance with NFRC 100.

(iv) Window system installers shall be experienced in completing successful similar assemblies.

(v) Vinyl window systems shall not be permitted.

(vi) Mullions:

(1) Window mullions, to the extent possible, shall be located on the floor-planning grid to permit the abutment of interior partitions. Partitions shall not jog to meet mullions at exterior wall.

(b) Curtainwall:

(i) Curtain wall glazing is preferred over storefront glazing.

(ii) Where structural-sealant glazing is used, comply with ASTM C 1401.

(iii) Warranty: ten (10) years.

(iv) Finish:

(1) Opaque Finish: three coat fluoropolymer finish complying with AAMA 2605, that contains not less than seventy (70) percent PVDF resin by weight in color coat, with a 20-year finish warranty.

(2) Color Anodic Finish complying with AAMA 611, with a 10-year finish warranty.

(3) Powder Coated Finish complying with AAMA 2604 or 2605, with a 20-year warranty.

(c) Storefront:

(i) Aluminum-framed door and window systems shall meet the requirements of AAMA Standard 101/I.S. 2/A440.

(ii) Exterior storefront framing will be thermally broken.

(iii) Warranty: ten (10) years.

(iv) Finish:

(1) Opaque finish: three coat fluoropolymer finish complying with AAMA 621, that contains not less than seventy (70) percent PVDF resin by weight in color coat, with a 20-year finish warranty.

(2) Color Anodic Finish complying with AAMA 611, with a 10-year finish warranty.

(d) Windows:

(i) For all spaces the minimum performance class is AW 40 Minimum Performance Class, defined in AAMA/WDMA/CSA 101/I.S.2/A440.

(ii) Operable windows shall comply with the following provisions:

(1) Where operable windows are used, windows shall be casement or awning type.

(2) Casement or awning windows shall have a four (4) inch limiting device. The hardware for casement or awning windows shall consist of crank handles for window operation. Sensor/interlocks tied to the mechanical systems shall be installed. All operable windows shall be provided with aluminum wire fabric insect screens.

(e) Shading and glare control: control glare and heat gain at all work areas and public spaces. The glazing in the public lobby shall be mitigated for temperature and glare control so that security screeners and any other staff can work and see monitors in comfort, and security cameras can produce quality photographs.

(f) Glass shall comply with the following provisions:

(i) The facility shall have provisions for cleaning the interior and exterior surfaces of all windows, skylights, and other glazed openings. Demonstrate that cleaning and maintenance of interior glazing surfaces can be achieved without extraordinary means and methods. Submit this information with the construction documents.

(ii) Standard Glazing: one (1) inch insulating units with solar control low emissivity (low-E) coating.

(iii) Minimum thickness exterior lites ¼ inch (6 mm).

(iv) Use heat treated glass as required by thermal stress analysis.

(v) Safety glazing shall comply with 16 CFR 1201, Category II.

(vi) Insulating Glass:

(1) Seals: polyisobutylene primary seal and silicone secondary seals.

(2) Low-E coating shall be used on the #2 surface of the IGUs.

(3) Visible Transmittance: 60% Minimum.

(4) Solar Heat Gain Coefficient ("**SHGC**"): 0.40, in accordance with NFRC 200.

(vii) Spandrel Glass:

(1) Use heat treated glass as required.

(2) Space immediately behind Spandrel glass shall be adequately vented.

(viii) Laminated glass:

(1) Shall be used at the innermost pane of all exterior glazing per Security and Harding requirements of Section 8.1.3(g).

(2) Use for obscure or translucent glazing.

(3) Minimum 0.030-inch (0.76 mm) PVB interlayer.

(4) Minimum thickness of each pane of glass ¼ inch (6 mm).

(g) Security/Hardening:

(i) Glass: The innermost pane of all exterior glass shall be laminated. From inside to outside, the typical glazing system shall consist of: ¼" laminated annealed glass, with 30-mil inner layer, ½" air gap, and ¼" monolithic annealed glass. Ideally, the glass pane shall be as weak as possible, so as not to transmit additional load to the frames, mullions, and anchorage. Structural silicone sealant shall be used along the exterior perimeter of the pane to adhere the glass to the frame. Monitor with an intrusion alarm system.

(ii) At a minimum, provide Level 2 bullet-resistant glazing at judicial chambers. Bullet-resistant glazing is not required at support or auxiliary spaces adjacent to judicial chambers. In addition, where glazing assemblies at judicial chambers are located on an inset face of the building and/or don't allow a perpendicular line of fire to the glazing assembly, bullet-resistant glazing is not required.

(iii) Mullions, Frames, and Anchorage: Frames and anchorage shall be designed to resist the maximum capacity of the glass. This approach creates a balanced design in which the weakest element, the glass, fails first and creates a controlled, instead of catastrophic, failure of the system. Aluminum or steel mullions are preferred. Typically, curtain wall systems, including unitized systems, can be modified with deeper or thicker sections than generally used.

8.1.4 Exterior Doors

8.1.4.1 Exterior Door Types

RDS Code	Description
ED-1	Single Aluminum & Glass Door
ED-2	Double Aluminum & Glass Door
ED-3	Single Hollow Metal Door
ED-4	Double Hollow Metal Door
ED-5	Coiling Overhead Door

Table 6. 8.1 (Exterior Door Types)

8.1.4.2 Aluminum and glass storefront doors

(a) The exterior entrance and window system shall be an aluminum storefront system. Balanced swinging doors, power-assisted swinging doors, or power-activated sliding doors are appropriate for courthouse public entries.

(b) All doors and frames shall accommodate insulated glazing.

(c) Double doors shall not have central mullions in the path of travel.

(d) Warranty: ten (10) years.

(e) Door hardware shall match make and style as specified, submitted, and approved for all doors in Project scope.

(f) Finish:

(i) Opaque Finish: Three Coat Fluoropolymer finish complying with AAMA 2605, that contains not less than seventy (70) percent PVDF resin by weight in color coat, with a 20-year finish warranty.

(ii) Color Anodic Finish complying with AAMA 611, with a ten-year finish warranty.

8.1.4.3 Hollow Metal Doors and Frames

(a) Exterior doors will comply with SDI A250.8, Level 4 maximum heavy duty.

(b) All exterior doors and frames shall be galvanized.

(c) Doors will be Model 2, seamless.

(d) Frame fire and acoustic ratings shall be suitable for the door type, function, and frequency of use to ensure no loss of performance or integrity during the design life of the building.

(e) All frames set in concrete block walls, which are to be grout-filled, shall be coated with asphaltic paint on the inside of the frames and on all frame anchors.

(f) Hollow metal door frames and hollow metal doors shall have a semi-gloss finish, which shall be coordinated with the paint schedule.

8.1.4.4 Sectional Overhead Doors

Provide overhead door components and operators capable of operating for not less than fifty thousand (50,000) operation cycles.

8.1.4.5 Door Hardware

Hardware on exterior doors shall be stainless steel.

8.1.5 Exterior Louvers

(a) Louvers shall be a minimum of five inches deep and constructed from aluminum extrusions.

(b) Louvers shall be wind driven rain resistant.

(c) Fasteners shall be the same material as items fastened or 300-series stainless steel. Do not use metals that are corrosive or incompatible with joined materials.

8.1.6 Exterior Stairs and Railings

(a) Utility stairways:

(i) Provide poured concrete stairs with abrasive tread surface.

(ii) Provide galvanized steel railings with a painted finish.

(b) Roof top and mechanical platform stairways:

(i) Provide aluminum grated stairs, mill finish.

(ii) Provide aluminum railing, mill finish.

8.1.7 Exterior Fabrications

8.1.7.1 Metal Fabrications

(a) Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

(b) Products constructed of carbon steel are not permitted in exterior construction, which includes exterior walls, soffits, or roofs, except where protected by a galvanic coating. Sheet metal products (such as studs, channels and items fabricated form cold rolled sheet steel) must comply with a minimum ASTM A 653/A 653M, G90 coating designation. All other carbon steel non-sheet metal products must comply with ASTM A 153/ A 153M, coating designation described by material class.

(c) Shelf angles and lintels shall be carefully selected and considered with regard to material, sizing, and fasteners.

(d) Anchors in concrete shall be fabricated from corrosion resistant materials. Anchors in wet areas, areas subject to wetting and moisture, and anchors in soil to be stainless steel.

(e) Thermal Movements: Allow for thermal movements from 120°F ambient and 180°F for material surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

(f) Galvanized steel shall have factory finished Three Coat Fluoropolymer finish complying with AAMA 621, that contains not less than 70% PVDF resin by weight in color coat.

8.1.7.2 Emergency Key Cabinets

(a) Shall be monitored through the Security System.

(b) Shall be surface mounted recessed with side hinged doors, large enough to hold all necessary keys.

(c) Finish: Black or aluminum.

8.1.7.3 Expansion Joint Covers

(a) Where required, design expansion joints to be minimally visible and watertight. Joint cover assemblies shall meet all code requirements for impact, loading, and fire protection.

(b) Provide expansion joint covers at all building expansion joints.

(c) Provide matching covers from a single manufacturer, that interconnect across all exterior expansion joints.

8.1.7.4 Protection of Building Entrances

Protect building entries from exposure to weather. Provide exterior canopies, building recesses, or overhangs at all exterior entrances to protect doorways from exposure to rain and snow.

8.2 ROOFING

8.2.1 General

(a) The roof shall be weather-tight and provided with a positive drainage that will effectively dispose of rainwater. The roof shall be insulated. Low-sloped roofs shall provide a minimum of ¼" per foot slope along straight lines and minimum 1/8" per foot slope along valleys.

(b) Clerestories, penthouses, ventilation louvers, mechanical screening and other appurtenances, shall be designed as integral elements of the overall composition of the New Courthouse.

(c) Membrane waterproofing and roofing design shall follow the recommendations of the National Roofing Contractors Association ("**NRCA**") in the NRCA Waterproofing Manual.

(d) Roofing shall follow the recommendations of the *Architectural Sheet Metal Manual* by the Sheet Metal and Air Conditioning Contractors' National Association.

(e) Required clearances for access and maintenance of rooftop equipment shall be considered during the performance of the design work to avoid the need of excessive climbing, stooping or bending.

(f) Roof design shall be coordinated to avoid water run-off from adjacent systems.

(g) All roof detailing shall be completed in consultation with the selected roofing manufacturer.

(h) Roofing color shall not be white. Gray is acceptable.

(i) Chosen system shall be suitable for a roof top condition with multiple penetrations.

(j) Roof 'wells' are prohibited.

(k) Roof drains shall be recessed below the roof level to form a collection basin; roof drain bodies shall be a two-part cast iron type that allows the waterproof membrane to be clamped between drain body parts, so that water infiltrating the roofing layers can drain into the system.

(l) Warranty requirements: 20-year warranty, no dollar limit.

(m) ENERGY STAR Listing: Roofing system shall be listed on the DOE's ENERGY STAR "Roof Products Qualified Product List" for low-slope roof products.

8.2.2 Steep-Slope Roofing

Solar Reflectance Index (SRI) – steep slope: three-year-aged SRI not less than thirty-two (32) or initial SRI not less than thirty-nine (39) when calculated according to ASTM E 1980, based on testing identical products by a qualified testing agency.

8.2.3 Low-Slope Roofing

(a) Solar Reflectance Index (SRI) – low slope: Three-year-aged SRI not less than sixty-four (64) or initial SRI not less than eighty-two (82) when calculated according to ASTM E 1980, based on testing identical products by a qualified testing agency.

(b) Low-slope roofing shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roofing and base flashings shall remain watertight.

(i) Accelerated Weathering: roofing system shall withstand two thousand (2000) hours of exposure when tested according to ASTM G 152, ASTM G 154, or ASTM G 155.

(ii) Impact Resistance: roofing system shall resist impact damage when tested according to ASTM D 3746 or ASTM D 4272.

(c) Insulation shall be mechanically fastened. Coverboards shall be installed on top of roof insulation.

(d) Fluid applied roofing directly installed onto roof decks is the preferred system. This roofing system would ideally be covered by a green roof installation.

(e) Built-up roofing is also approved for use.

(i) Built-up Asphalt roofing consists of multiple layers of hot-applied asphalt alternating with several ply sheets that combine to produce a weatherproof roofing membrane.

(ii) Modified bitumen sheet roofing SBS (styrene-butadiene-styrene) with mineral granular surface sheet, applied with hot asphalt, and reflective coating.

(f) Single-ply membrane roofing systems, which include PVC and KEE systems, shall be avoided. TPO systems are acceptable.

8.2.4 Roof Accessories

(a) Locate equipment in rooftop penthouses or behind visual screens. Integrate the location, size, and finish of rooftop penthouses and visual screens with the architectural design. Install critical roof-top equipment to permit roof system replacement without unreasonable disruption of equipment operation.

(b) All roof mounted equipment shall be mounted on platforms. All platforms (curbs or pads) shall be a minimum of eight (8) inches in height from the finished roof surface.

(c) The minimum distance allowed by roofing manufacturer to allow adequate installation clearances and turn up shall set the distance between all platforms.

(d) Fall protection shall be an integral part of the roof design. Incorporate a permanent fall protection system to allow maintenance and access to all areas of the roof without restrictions.

(e) Roof drainage:

(i) Provide internal roof and emergency overflow drains.

(f) Walk-pads:

(i) Walk-pads shall be provided from roof access points to and around all rooftop equipment with a clear path of travel marked on roof plans with a minimum clearance of six (6) feet.

(g) Curbs and Equipment Supports:

(i) Provide internally reinforced roof-curb units capable of supporting superimposed live and dead loads, including equipment loads and other construction.

(h) Roofs shall comply with the following requirements:

(i) The roof shall be provided with elevator or stair access. Roof access via ladder or ship stair is not permitted.

(ii) Stairways shall be designed to limit access to authorized personnel only.

(iii) A clear path shall be provided for replacement of equipment from any elevator or other access points, as the case may be.

(iv) All rooftop access doors shall be integrated with the overall design of the rooftop screening system.

8.2.5 Roof Openings

Skylights and Sloped Glazing:

(a) Skylights are defined as prefabricated assemblies shipped ready for installation, while sloped glazing is defined as field assembled. Skylight design shall follow the guidelines of AAMA Standard 1600. For the design of sloped glazing, two (2) AAMA publications are available: Glass Design for Sloped Glazing and Structural Design Guidelines for Aluminum Framed Skylights.

(b) Skylights and sloped glazing shall use low emissivity glass. Plastic is not permitted. Placement shall be calculated to prevent glare or overheating in the building interior. Condensation gutters and a path for the condensation away from the framing shall be included.

(c) Consideration shall be given to cleaning of all sloped glazing and skylights, including access and equipment required for both exterior and interior faces. Skylights shall be guarded for fall protection or meet OSHA structural requirements.

8.2.6 Traffic Bearing Horizontal Waterproofing

Fluid applied roofing directly installed onto roof decks is the preferred system. Provide pedestal support pavers or decking system.

(a) The roofs are anticipated to incorporate a combination of low slope built up roofs, and the potential for occupied roof terraces and/or vegetated roofs. The majority of the low roof area is anticipated to be either vegetated or occupied terraces. Occupied terraces will have floors recessed for waterproofing membranes and elevated pavers.

9 ARCHITECTURAL PRINCIPLES AND FUNCTIONAL NARRATIVES

9.1 NEW COURTHOUSE PROGRAM

(a) The New Courthouse Program is included as Attachment 6A (Courthouse Program and Room Data Sheets) to these Design and Construction Standards.

(b) Rooms and spaces shall meet all net square footage requirements as a minimum. Column protrusions and associated furring may be subtracted from the net square footage requirements, where column protrusions into rooms are permitted by the Contract Documents and this Project Agreement.

9.2 ROOM DATA SHEETS AND ADJACENCY DIAGRAMS

(a) The Room Data Sheets for the New Courthouse are included as Attachment 6A (Courthouse Program and Room Data Sheets) to these Design and Construction Standards.

(b) Adjacency Diagrams are included as Attachment 6D (Adjacency Diagrams) to these Design and Construction Standards. The Departmental Adjacency diagrams outline required connections between spaces. The stack diagram is included for reference only.

9.3 GENERAL ARCHITECTURAL DESIGN

9.3.1 General

These Sections 9.3.2 (Achieving Contemporary Aspirations) and 9.3.3 (Historical New Courthouse Design) are intended to provide the Project Company with aspirational guidance in the design development of the New Courthouse and the Project.

9.3.2 Achieving Contemporary Aspirations

(a) The architecture of the Clackamas County New Courthouse shall reflect the highest aspirations of our society, especially those that join citizens to the legal process. Our democratic system is dependent upon the law, and courthouse architecture shall embody

its value. To accomplish this, the New Courthouse shall represent a strong, welcoming presence in its community and represent a responsible use of tax-payer funding.

(b) The New Courthouse shall combine and balance many competing forces that shape contemporary society. Activities in the New Courthouse shall be transparent to the public without compromising security and confidentiality. Its design shall combine stability with vitality, drawing from the best of past architectural examples while advancing ambitions for the future. The resources available shall match program need, internal program organization shall complement exterior appearance, and institutional identity shall recognize the character and disposition of neighboring buildings and specifics of the Red Soils Campus, Oregon City, and Clackamas County.

9.3.3 Historical New Courthouse Design

(a) Historically, courthouses have been given architectural prominence through important siting and references to the neoclassical style. This approach has served America well for nearly two hundred years. Structures built for the judiciary have maintained a position of importance and authority and are instantly recognized as important presences in the built landscape; these earlier designs both command attention and generate affection.

(b) New Courthouses of the future shall do the same while also exploring an architectural language consistent with contemporary program goals. Any new architectural language shall balance recognition of past forms with our ideals for the future. The buildings of earlier centuries conveyed a sense of monumentality and stability while also creating a pedestrian scale and feeling of accessibility, embodying the principle that the courts are open to all. Although it may be useful to look back into history, it is equally important to develop architecture that reflects contemporary needs. As Judge Susie L. Norby phrased it, “Modernization shall not make a courthouse unrecognizable—people shall still be able to feel that their time in the courthouse connects them to the traditions of justice that have stood the test of time.”

9.3.4 Overall New Courthouse Design Requirements

9.3.4.1 General Requirements

(a) First, the design of the New Courthouse shall both meet community objectives and adopt the JCF *General Facilities Design Assessment Criteria*, included as a Contract Standard. Creation of a building that houses the activities of multiple groups, each with its own operational needs, requires a design process informed by its users.

(b) The Project shall reflect the County’s commitment to addressing climate change and building a carbon neutral future. To minimize energy use and carbon emissions, the New Courthouse design shall leverage passive architectural strategies, efficiency in engineering systems, and on-site renewable energy. Conservation of land, sourcing of local materials, indoor air quality, low-toxin recycled materials, and the enhancement of human health and well-being are also key considerations in the early stages of the design process.

(c) The Project shall be flexible. The anticipation of building expansion, with minimal disruption to judicial operations, shall influence the design of all building systems in the

initial phase of the project. Additionally, the design shall be flexible to incorporate future programmatic changes and technology innovations. The New Courthouse shall meet the technological needs of the courts. Courtrooms and their support areas require infrastructure systems and a telecommunications backbone that can accommodate technological change in a cost-efficient manner.

(d) The New Courthouse shall convey permanence, stability, and a sense of purpose. Its distinctive architecture shall simultaneously reflect the fabric of the community and symbolize the importance of the United States justice system. Though monumental in significance, the New Courthouse shall also offer a human scale that evokes the democratic nature of our judicial process.

9.3.4.2 Trauma-Informed Design Principles

(a) The Project Company shall incorporate trauma-informed design principles into the design of the New Courthouse and the Project. Trauma-informed design principles can work to lessen stress and reinforce a feeling of safety. Sensory stimuli connected with a person's trauma can trigger unwanted memories and feelings. The design of the New Courthouse shall incorporate design solutions to mitigate anxiety such as tranquil settings with low sensory stimulation, visual/aural privacy, views of nature, access to daylight, calming color palettes, and displays of art. In the planning of the Project, clear wayfinding eliminates confusion and wide corridors reduce crowded conditions giving people space to regroup and gain composure.

9.3.5 Overall New Courthouse Security Requirements

(a) The New Courthouse shall be designed and constructed to accommodate three (3) distinct circulation patterns:

(i) a circulation for the general public from the Main Lobby to Courtrooms and other public spaces to which the general public will have access and that restricts access to the circulation patterns areas described in items 9.3.5(a)(ii) and 9.3.5(a)(iii);

(ii) a circulation pattern for the judges and New Courthouse employees accessing the New Courthouse from the restricted employee entrance in the Secure Parking Area of the Program that restricts access from the circulation patterns areas described in items 9.3.5(a)(i) and 9.3.5(a)(iii); and

(iii) a circulation pattern for in-custody persons and Sheriff's deputies escorts from the Sally Port Area to the Central Holding Area, Courtroom Holding Sub-Area, and other Areas or Rooms within the New Courthouse into which in-custody persons may need access while escorted by deputies. This circulation patterns shall restrict access into the circulation pattern areas described in items 9.3.5(a)(i) and 9.3.5(a)(ii).

(b) Refer to Section 21 (New Courthouse Security Requirements) for additional details on circulation patterns and levels of security within the New Courthouse.

(c) Perimeter and interior security systems shall provide an appropriate level of security, in accordance with Section 21 (New Courthouse Security Requirements). Security shall also be enhanced by an architectural approach that considers sight lines. Visual obstructions and blind spots shall be avoided.

(d) Many of the individuals coming to the New Courthouse, in some form and degree, have experienced trauma. Approaching design with this understanding, and implementing trauma-informed design principles can work to lessen stress and reinforce a feeling of safety. Sensory stimuli connected with a person's trauma can trigger unwanted memories and feelings. Studies have shown that the environment can influence our behavior and our physical and psychological well-being. While appearing in court can be highly stressful, there are a number of design solutions shown to mitigate anxiety such as tranquil settings with low sensory stimulation, visual/aural privacy, views of nature, access to daylight, calming color palettes, and displays of art. In the planning of the Project, clear wayfinding eliminates confusion and wide corridors reduce crowded conditions giving people space to regroup and gain composure.

9.4 DESIGN PRINCIPLES AND GOALS

9.4.1 General Requirements

(a) The following goals have been taken from the 2019 *New Court Facility Needs Assessment Report* by the National Center for State Courts ("**NCSC**") outlining planning requirements and goals that remain valid today. These goals have been updated and augmented where necessary to provide direction on the desired design of the Project.

(b) With each Schematic design work Submittal, the Project Company shall submit a narrative addressing how each subsection under this Section 9.4 is incorporated into the design of the Project.

9.4.2 Image of Dignity and Solemnity

(a) The Project shall be designed to convey an image of dignity and solemnity and a sense that the New Courthouse is one in which justice is done.

(b) The architecture throughout the interior and exterior of the New Courthouse shall convey the image of the judicial system: dignity, strength, respect, and a sense of importance of the judicial system in the community.

(c) The appearance and ambiance of the Courtrooms shall be dignified and business-like. Consideration shall be given to proper sight lines, acoustics, lighting, properly functioning Mechanical Systems.

(d) The selection of finishes shall be made with a view to the future. The materials selected shall be functional and durable for use over time and shall contribute to the overall image of dignity and institutional permanence.

(e) The architecture shall represent an expression that is responsive to positioning within the Red Soils Campus. The New Courthouse shall improve and enrich the site and civic context in which it is located.

9.4.3 Spatial Needs

(a) The Project shall maintain flexibility to accommodate both short- and long-term space needs and contribute to the effective administration of justice.

(b) Judicial Chambers shall not be immediately attached to the Courtrooms to allow adjudication space to be utilized by multiple judges if necessary. However, in order to promote easy movement between offices and Courtrooms, Chambers and Courtrooms shall be located in close proximity.

(c) Maximum flexibility of Courtroom space is valued. Courtroom floors shall be designed so that multiple types of Courtroom and adjudication spaces are available to all judges housed on that floor.

(d) The design shall provide for flexibility to anticipate future changes and enhance building longevity.

(e) Courtrooms and Courtroom Ancillary Spaces shall be constructed to accommodate a broad range of growth or policy changes in order to enhance the Project' flexibility and long-term usefulness.

(f) The County will, in its discretion, allow minor deviations from minimum room dimensions provided the minimum square footage is met. Any minor deviation shall be determined during the design review process and submitted to the County for approval. The County reserves the right to approve or deny any minor deviation.

9.4.4 User-Friendly and Accessible Environment

(a) The Project shall offer an environment that is user-friendly and easily accessible to the Project Users.

(b) The Project shall be provided with adequate parking provisions or a plan for parking for Project Users, including judges, employees, jurors, and court visitors.

(c) The Project shall be a barrier-free, accessible facility in compliance with the American with Disabilities Act Title II requirements for governmental facilities.

(d) The Project Company shall provide a simple and clearly displayed public directory and signage system so Project Users are able to find their way around the New Courthouse easily. The layout of spaces shall be designed for simplicity so that wayfinding throughout the Project is readily apparent. The use of architectural wayfinding features to serve as landmarks and the provision of exterior views shall also be implemented to improve user orientation within the building.

(e) High public traffic areas shall be located on the lower floors of the New Courthouse so that the Project Users visiting these offices can be served quickly.

(f) An easily accessible public self-service area equipped with public access computer terminals and kiosks shall be provided. Clear and easy access to New Courthouse staff

shall be provided for the public to seek assistance in answering questions or preparing forms or other documents.

9.4.5 Safe and Secure Environment

The Project shall offer a safe and secure environment for all Project Users and shall generally comply with the requirements set forth in this Section 9.4.5.

(a) provide an integrated solution for security. The Project security planning shall incorporate structural elements, architectural barriers, traffic patterns and access controls, weapons detection and screening, security surveillance devices, and properly trained security personnel and effective security operations planning in a balanced way. Security provisions shall be cost-effective and developed with an understanding of the impact on operational costs and security staffing needs;

(b) separate circulation systems are to be provided for New Courthouse employees and the general public in the Project to maintain proper security and work privacy. The Project shall be organized into zones that are similar in function, operational needs, physical characteristics, and access requirements. Proper circulation and access control shall be designed and provided at individual space zones to maintain an efficient and safe court environment; and

(c) security in the Project shall be visible but not obtrusive. The image of the New Courthouse shall convey an open and transparent judicial process while simultaneously promoting a sense of safety for all building occupants. Project Users shall be made aware of security features and the presence of uniformed security personnel. The presence of security equipment and systems in the Project shall not unduly conflict with the efficient operation of the New Courthouse or compromise the Project Users' perception of a fair and open judicial process;

(d) An additional entry point shall be provided for inconspicuous access for judges.

(e) Adequate space shall be provided at the Main Entrance & Lobby for queuing of Project Users with special attention to problems caused by extreme weather. The design shall allow fast and efficient processing of those entering the New Courthouse through a Main Entrance & Lobby where security staff, using a magnetometer and an x-ray scanner, are able to screen for weapons and contraband. After clearing the Screening Stations, Project Users shall enter the Main Lobby allowing people to become oriented for wayfinding purposes.

(f) Facility Systems shall be designed and maintained to protect public health and life safety, as well as provide direct egress routes for rapid and safe evacuation of building occupants to the outside in cases of an emergency.

(g) Accommodations shall be made for the installation of security surveillance and monitoring systems throughout the Project. Such systems shall be controlled through a central security command station and shall be connected at all times to a law enforcement remote dispatch function.

9.4.6 Advanced Technology

(a) The Project, including all Courtrooms, offices, and other functional space, shall be equipped with advanced technologies to facilitate the efficient administration of justice and improve the quality of service to the public.

(b) The Project shall be designed with provisions for the extensive use of computerized, advanced technologies at all functional areas for efficient operations and a secure work environment.

(c) Public access services shall be enhanced through the use of digital information displays and self-help areas equipped with public access computer terminals or kiosks.

(d) Provisions for voice-activated digital recording technologies shall be planned and pre-wired in all Courtrooms and other hearing rooms to provide a convenient, accurate record of proceedings, requiring a minimum of human intervention. The system currently in use is ForTheRecord (FTR).

(e) The New Courthouse shall be planned for video communications technology to provide for remote defendant appearances.

(f) Computerized evidence display capabilities shall be provided and integrated in the Courtroom audiovisual system.

(g) Security surveillance cameras, intrusion detections systems, access control systems and duress alarm systems shall be planned and installed for the courthouse in a comprehensive manner. Project security systems shall be monitored and managed onsite in a dedicated control and command center.

(h) Document imaging technology shall be available throughout the facility to reduce paper circulation and storage requirements, improve record dissemination, and facilitate effective information sharing.

(i) Project Users shall be able to access New Courthouse services through the use of telecommunications and self-service information display technology. Public information and public access terminals shall be provided in the Main Lobby or as required in the Technical Requirements for the Project Users to access pertinent information. The New Courthouse shall be designed with provisions to allow Project Users access to information and services remotely through web portals.

9.4.7 Sustainable Design

The Project shall embody Clackamas's commitment to a safe, healthy future by minimizing its environmental impact and enhancing occupant's experience. Sustainable building strategies include the following:

9.4.7.1 Energy and Emissions

Building envelope, massing, fenestration, Facility Systems, and renewable energy systems shall be designed through an integrative process in order to achieve the most efficient and cost-

effective path to net zero energy performance. Energy efficiency strategies and energy generation shall be considered with initial and long-term cost implications considered.

9.4.7.2 Sustainable site development

Special attention shall be paid to the Project' impact on its surroundings and integration within the Red Soils Campus. Strategies shall include reducing heat island impacts, reduced use of water resources, bicycle parking and e-bike chargers, electric vehicle supple equipment, stormwater management, and responsible landscape and site maintenance strategies.

9.4.7.3 Water efficiency

Efficient water usage through the utilization of water efficient fixtures and the design of efficient wastewater conveyance systems shall be integrated into the New Courthouse design.

9.4.7.4 Materials and resources

The design and construction shall include a selection of products that are produced regionally and/or made of recycled or sustainable materials. Embodied carbon shall be considered for during material selection, especially for materials that will be replaced over the lifespan of the Project.

9.4.7.5 Indoor environmental quality

Air quality, ventilation, thermal and visual comfort, and biophilia shall drive the design of the indoor environment. Healthy indoor air quality shall be maintained through direct outdoor air supply possible, CO2 sensors, and increased ventilation. Mechanical systems shall also be designed to maintain healthy indoor air quality, even during natural events that may cause poor air quality such as wildfires, per ASHRAE's "Planning Framework for Protecting Commercial Building Occupants from Smoke During Wildfire Events". Daylight shall be utilized as much as possible to reduce energy demand for artificial lighting and to provide a more pleasant work environment. Operable shading, electric light quality and brightness, and lighting and thermal controls shall be designed to prioritize occupant comfort throughout the year.

9.5 CIRCULATION REQUIREMENTS

9.5.1 New Courthouse Circulation Zones

The Project Company shall design and construct the New Courthouse to have three (3) restricted circulation patterns as described in this Section 21.3.3 (New Courthouse Circulation Zones) of these Design and Construction Standards.

9.5.2 Corridors

(a) All circulation corridors shall provide clear and direct access to the principal program areas of each level. Public and restricted circulation corridors shall afford views to the exterior, and maximize daylight into the interior of the building, through use of interior glazing, interconnecting stairs, or other means.

(b) Public Circulation Zone corridors shall be a minimum width of 8'-0" wide; Restricted Circulation Zone corridors shall be a minimum of 6'-0" wide; and Secure-Maximum Circulation Zone corridors for in-custody persons shall be a minimum of 6'-8" wide.

(c) Refer to Attachment 6A (Courthouse Program and Room Data Sheets) of these Design and Construction Standards for corridor finishes and building system requirements.

9.5.3 Stairs

(a) A public ceremonial stair shall be provided in the Lobby connecting to the second level of the New Courthouse. The ceremonial stair shall have a high aesthetic importance with a gradual slope, no greater than a six (6) inch rise and no less than a twelve (12) inch tread. The stair finish shall be made of a durable and easily cleaned materials such as stone or terrazzo. The guardrails and handrails shall be stainless steel. An escalator may be used in lieu of a ceremonial stair at the Main Lobby.

(b) All other stairs shall be exposed painted steel structure with concrete filled metal pans. Resilient material covering shall be used at all landings, treads, and risers. Utility, egress and access stairs may omit resilient material covering. Guardrails and handrails for public stairs shall be stainless steel. Guardrails and handrails for utility, egress, access, restricted and secure stairs shall be painted steel. Provide CCTV coverage in all stairs with public access.

(c) Where permissible, interconnecting visible and open stairs may be provided within public and restricted circulation areas to encourage user health and well-being. Interconnecting stairs may be used as egress stairs only if permitted by code. Provide natural lighting to stairs where possible.

9.6 LOBBY AND PUBLIC SPACES

Public spaces shall provide simple and clear movement of visitors and staff into and throughout the New Courthouse, while limiting access beyond public zones. Public spaces shall also provide an open and spacious experience for users and convey the importance and authority of the courts. Strategically placed, clear, and legible graphics and signage, visible on entry, will provide first-time visitors with information about where to find various functions and how to get there. Wayfinding techniques shall provide visual cues about the location of important public spaces and services.

9.6.1 Primary Building Entrance

The New Courthouse's main entrance (Area: Entry and Security Screening Areas) shall be in accordance with the requirements of this Section 9.6.1.

(a) Provide a single primary entry with an attractive and a user-friendly environment that provides a positive first impression to court visitors.

(b) Design such main entrance and the Entry and Security Screening Areas to accommodate peak-hour lines of prospective jurors and courthouse visitors through the entrance and entrance doors.

(c) Provide exterior protection from inclement weather directly outside from the Main Entrance & Lobby Area.

(d) Such main entrance shall accommodate persons with disabilities in the same manner as the general public. Entry doors shall meet the closer requirements of applicable codes and accommodate pressures of interior space and exterior wind loads. Utilize power-assist doors where necessary.

9.6.2 Security Screening Station

(a) public users shall enter the New Courthouse through a public entry screening station located in the Main Entrance & Lobby Area. Provide no less than two (2) security Screening Stations lanes for public users.

(b) Screening Stations shall include space for:

(i) an interior or covered area for queuing of the projected peak volume of people entering the New Courthouse. Distance between the Screening Stations and the New Courthouse main entrance shall be no less than twenty (20) linear feet;

(ii) a magnetometer, or metal detector, through which visitors pass for detection of metal objects. The opening shall be thirty-two (32) inches clear to accommodate wheelchairs or mobility devices;

(iii) an x-ray scanner for screening contents of visitor briefcases, handbags, and personal possessions, paired with sufficient project-specific roller-table assemblies for the input and output of packages;

(iv) a table or counter for secondary inspection of scanned items; and

(v) a magnetic-wand inspection area.

(c) Design the screening area to be consistent with the court public spaces and project a positive first impression to court visitors. Do not make screening equipment the main focus of the space. Provide a casework screen for the scanning position, constructed of durable materials to withstand the stress of a high-traffic area, and lined with non-ricochet, bullet-resistant material that will absorb multiple firings of a large-caliber handgun.

(d) The accessible path of travel shall include the lobby security screening area. Wheelchair users shall not travel a separate and nonequivalent path through the screening process area. Persons with disabilities shall pass through a magnetometer, along with the general population. Space shall be provided to allow bypass of the magnetometer for people with implanted medical devices that may be affected by magnetic fields.

(e) Design each security screening area to allow visual observation by security staff of all public exits to ensure that individuals entering the building do not circumvent the screening process. Directionally sensitive motion-detection systems with audiovisual alarms or electronic turnstiles may be used to deter entry of individuals through the exit lanes.

(f) A separate staff by-pass lane with turnstiles shall be located within the same screening area.

9.6.3 Main Lobby

(a) The public lobby (Main Lobby) shall be a 2-story space that serves as the focal point for the building and provides visual orientation to the other areas through visual cues and signage.

(b) Provide a public lobby sized for a queuing area sufficient to accommodate the volume of people entering the courthouse and weapons Screening Stations. Give attention to integrating the security Screening Stations into the lobby design to avoid the appearance of an intrusion or afterthought.

(c) Provide security cameras throughout public areas, with special emphasis on weapons screening to record the public entering the facility and receiving their belongings once they have gone through weapons screening.

(d) Provide clear signage and graphics immediately upon arrival in the courthouse public Main Lobby.

(e) Provide large, easily readable court calendar monitors. Areas where Courtroom assignments are posted shall be accessible without impeding the security screening process or blocking public circulation paths.

(f) Information display screens above a built-in casework information counter shall provide direction and basic information to individuals unfamiliar with the New Courthouse or court system. The information screen shall be located in a highly visible place in the Main Lobby, beyond the screening area. Design the information area consistent with the public spaces. The screen shall display the courthouse map and court calendar.

(g) The information area shall be used in conjunction with directional signage to provide public users information about location of services.

(h) Make use of exposed mass timber structure in the Main Entrance & Lobby as a primary architectural design element.

(i) Provide adequate built-in and free-standing furniture in the Main Entrance & Lobby for public users waiting and Café overflow.

(j) Provide direct and secured access from the Lobby to a secured elevator that leads directly to the Central Holding Area. This will be used by the Sheriff to take persons into custody.

(k) The Project Company shall relocate the “Lady Justice” exhibit currently located at the Existing Courthouse to the New Courthouse. Such exhibit shall be placed in a prominent location of the Main Lobby Area of the New Courthouse and shall be protected by a glass casing. The glass surrounding the Lady Justice exhibit shall be lined with anti-shatter film or with some other method to avoid glass shattering.

9.6.4 Child Respite

The Child Respite area shall provide a safe place for children to play while their parents conduct their court business

(a) Provide a check-in workstation with a duress alarm (Alertus) and a view of the entire room, to allow supervision by one staff person; design shall facilitate safe check-in and checkout of children. Include file storage for administrative records, forms, and brochures.

(b) Do not allow outside visual access or windows; the public shall not be able to look in to the room. Access doors shall be locked with a remote buzzer operated from the check-in workstation.

(c) Single occupancy toilet shall include a changing table.

(d) Provide a second door into a restricted corridor.

(e) Within the play area provide child-sized tables, chairs, couch, and floor games, and storage space for toys and games.

9.6.5 Café

The café shall be accessible directly from the Main Lobby and shall be a "grab-and-go" type operation.

(a) The public side of the café service area shall have a transaction counter and two "grab-and-go" refrigerated display cases.

(b) The service side of the café service area shall consist of stainless-steel lower counter with storage, handwashing sink, and microwave and other appliances.

(c) Provide a small separate room large enough to accommodate storage and an ice machine.

(d) Provide a minimum 10'-0" wide opening at the café entrance with a coiling grille to limit access afterhours.

(e) Provide limited built-in seating. Overflow seating can be accommodated in the Main Lobby.

(f) Appliances and moveable equipment to be used in the café will be provided by the County. The Project Company shall only provide all fixed furniture, POS devices, and connections in accordance with the Technical Requirements.

9.6.6 Public Help Center

(a) The Public Help Center shall be provided as a service to the public users to encourage access to the judicial system. The Public Help Center shall be located in close proximity to the Main Lobby and be accessible to the public users during Operating Hours.

(b) Provide public counter windows for New Courthouse and Sheriff operations in the New Courthouse Program set forth in Attachment 6A (Courthouse Program and Room Data Sheets) to these Design and Construction Standards. The design of the public counter window shall include:

(i) counters allow sufficient work area to transact case filing activities, and separate private staff office areas from public areas. Design spaces to ensure efficient and secure acceptance, exchange, review, and reproduction of high volumes of public documents;

(ii) each counter position will include the counter, staff workspace on the private side, and a standing area on the public side. The staff workspace on the private side shall be designed such that ergonomic options are provided to the user to utilize either a sitting or standing position;

(iii) provide code required accessible counter window such that the staff workstations are elevated above the public floor that allows for seated, eye-level interaction with customers standing at the counter;

(iv) provide monitors at each counter window that is adjustable such that the customer can view case information;

(v) provide security cameras at each clerk station that continuously monitors the each work surface of each station

(vi) staff workstations shall be sized to accommodate all required communication and electronic equipment as well as sufficient storage space;

(vii) provide a silent duress alarm at each clerk counter position;

(viii) providing security with glass barriers is the preferred method to create a layer of separation between staff and the public. Provide a pass-through tray and pull-down shade at each window;

(ix) provide voice transmission through vertical slots or grills on either side of the window;

(x) amplified acoustic systems shall be avoided;

(xi) a credit card swipe machine shall be attached to the public side of each public counter;

(xii) a drop box for convenient public use. Locate drop boxes within adjacent to the public counter windows. The receiving side of the drop box shall be on the secure staff side;

(xiii) provide physical screening between windows and sound masking technologies to ensure privacy.

(c) The design of the Public Help Center shall also include:

(i) a two-person staffed help desk that includes queuing space for a minimum of ten (10) persons;

(ii) "Take-a-number" system with notification board and adequate seating ten (10) persons;

(iii) public computer terminals for accessing public records. Provide a minimum of eight (8) stand-up workstations with space to fill out paperwork at each;

(iv) public e-filing stations. Provide a minimum of two (2) seated workstations and space for an additional two (2) stations; and

(v) public worktables. Provide one (1) no. 8-person standing height table and one (1) no. 8-person seated table.

(d) An automated information kiosk system with touch-screen technology shall provide New Courthouse information to public users.

9.6.7 Courtroom Public Waiting Areas

(a) Corridors may be used as public waiting areas if they are wide enough to accommodate bench seating.

(b) Public waiting areas shall include sufficient comfortable seating and be located near areas of highest public use, with easy access to restrooms and water fountains. Provide natural light in all waiting areas.

(c) Waiting areas shall be proportional to the population served by each adjacent Courtroom.

(d) Provide information display screen at each Courtroom floor indicating docket information for that floor.

9.7 HEARING ROOMS

9.7.1 Courtroom Design Objectives

9.7.1.1 General Requirements

(a) The Courtroom accommodates the judicial officer (judge, commissioner, or hearing officer), court clerks, court security officer ("**CSO**"), attorneys, witnesses, jury, and spectators.

(b) The design of each Courtroom shall:

(i) ensure that the participants in any proceeding are able to see and hear the witness, jury, judicial officer, court clerk, and attorneys;

(ii) protect witnesses and jurors from intimidation;

(iii) provide reasonable confidentiality for attorneys, defendants, litigants, and judicial officers;

(iv) provide full accessibility for persons with disabilities to the witness stand, jury box, spectator areas, judge's bench, and clerk's station;

(v) provide security and safe emergency egress; and

(vi) provide ease of assistance in emergency situations.

9.7.1.2 Level of Finish

(a) The level of finish in the sixteen (16) Courtrooms shall be as follows:

(i) Large Courtrooms: all Large Courtrooms and associated spaces shall be fully built-out and finished per the Design and Construction Requirements.

(ii) High Volume Courtrooms: all High-Volume Courtrooms and associated spaces shall be fully built-out and finished per the Design and Construction Requirements.

(iii) Standard Courtrooms: no less than eight (8) Standard Courtrooms and associated spaces shall be fully built-out and finished per the Design and Construction Requirements. Two (2) Standard Courtrooms and their associated public-facing Attorney / Client Conference Rooms shall be built-out and finished to a warm shell, as defined in Section 9.7.1.2(c) below.

(iv) Juvenile / Motion Courtrooms: all Juvenile / Motion Courtrooms and associated spaces shall be fully built-out and finished per the Design and Construction Requirements.

(b) The level of finish in all Grand Jury hearing rooms shall be as follows:

(i) All Grand Jury hearing rooms shall be built-out and finished to match a CF8 Rev 1 (Large Conference Room) with the exception of AV Systems.

(c) Warm shell requirements:

(i) Provide Interior Finishes, Ceiling Heights, and Acoustic Provisions to match CF8 Rev 1 (Large Conference Room) such that the room can be utilized as meeting space prior to future build-out.

(ii) Building Systems shall be provided per the assigned Room Data Sheet (end-use). When final build out elements such as millwork and feature ceilings are not included in warm shell construction but are required to host "building systems" elements, then only conduits, pathways and cables shall be provided in nearby ceilings and walls for future completion of systems.

(iii) No casework or specialty wall finishes shall be provided.

(iv) Ensure that the warm shell build-out does not prevent the room from functioning in the future. For example, overhead equipment must be designed and installed such that ceilings can be installed at the correct height per the intended Room Data Sheet (end-use).

(d) Cold shell requirements: No insulation, interior finishes, ceilings, electrical wiring, lighting, HVAC or plumbing shall be provided.

9.7.1.3 Courtroom Entries

All Courtrooms, regardless of whether in-custody proceedings occur there, require three (3) distinct points of entry:

(a) public Courtroom entry: for spectators, attorneys, parties, witnesses, press and the public users through a vestibule from the public corridor. Provide information display screen at each entry door indicating docket information;

(b) private Courtroom entry: for judicial officers, jurors, court personnel, and designated court participants—through two (2) doorways from a private court staff corridor; and

(c) detention Courtroom entry: for in-custody defendants, detention officers, and CSO through a controlled, secure entry near the CSO's location and defense attorney table.

9.7.1.4 Courtroom Adjacencies

(a) Locate Courtrooms adjacent to court floor holding area. Every two (2) Courtrooms are to share a common holding area.

(b) Locate Courtrooms for easy access from Judicial Chambers. Judicial Chambers and related support spaces shall be adjacent to the private corridor, providing judges and staff quick Courtroom access.

9.7.1.5 Corner Bench or Center Bench Layouts

Courtrooms may use either a corner bench or a center bench configuration. Each offers different design and operational opportunities. Selection of either shall be based on the following design and operational criteria:

(a) optimization of sightlines among the judge, jury, attorneys, and witness;

(b) ability to move paper documents between clerk and judge;

(c) sightlines of projected images;

(d) full accessibility to the bench and other raised areas of the Courtroom;

(e) dignity and formality;

(f) accommodation of Courtroom technology equipment;

(g) space efficiency; and

(h) flexibility to use the courtroom for various types of court proceedings.

9.7.1.6 Courtroom Accessibility

(a) Floor levels of Courtroom components vary, therefore maintaining sightlines among all components while also providing full accessibility shall be a priority.

(b) The accessible path of travel to the judge's bench, clerk's station, witness box, and jury box shall address the recommended height above floor recommendations.

(c) Separate paths of travel for persons with disabilities shall be avoided.

(d) Judge's circulation path shall not be in front of the bench.

(e) Level changes of floors shall be provided with ramps that include handrails as required by code requirements.

9.7.2 Courtroom Components

9.7.2.1 Judge's Bench

The size, location, height, area, and design of the bench reinforce the role of the judge as the administrator of justice and as the principal controller of order in the Courtroom. Design the bench to be the focal point of the courtroom without favoring any one party.

(a) Design the bench size and height to be proportionate to the courtroom and to ensure an unobstructed view of and from the entire courtroom. Raise the bench so that the judge's eye level when the judge is seated is higher than that of any standing participant or spectator. The height of the barrier between the judge's bench and the well depends on the actual height of the judge's platform above the well.

(b) Provide a work surface minimum seventy-two (72) inches wide by twenty-four (24) inches deep with a three (3) inch high privacy screen in front. This area shall be of sufficient size to keep paperwork and reference materials within reach and accommodate two (2) monitors. Conceal the back of the monitors from view by the litigation area by lowering a portion of the work surface or other means. Provide adequate bookshelves behind or under the bench. Provide an area for conferences between the judge and attorneys at the sidebar.

(c) Between the judge's area and the witness box, a fixed barrier of sufficient width and height to prevent a witness from reaching the judge while maintaining sightlines is required. The judge's exit route shall be away from the witness.

(d) Design the front and sides of the bench to facilitate transfer of documents and verbal communication between the judge and courtroom clerk.

(e) Design the bench with a custom casework wall compatible with the courtroom design. Line the wall with bullet-resistant material that meets the criteria of Underwriters Laboratories (UL) 752 Level 3. Provide accessible under-desktop cable raceways to accommodate voice, data, video, power, and courtroom technology cabling.

(f) Consider an ergonomic adjustable desk system behind the casework shell in lieu of custom millwork. This component can be made from modular furniture, providing adjustable heights and angles of desktop.

(g) Provide areas for computer equipment, a printer, storage, a telephone, and outlets for data transmission. The bench requires a microphone with a mute button and may include the Courtroom audio controls. Section 19 (Audiovisual Systems).

9.7.2.2 Clerk's Station

(a) The Courtroom clerk is responsible for maintaining a record of case actions and files and for receiving and labeling exhibits. The Courtroom clerk shall be close to the judge—to transfer exhibit papers and files by hand and to communicate privately—and shall be accessible to counsel for marking and introducing documents. The height difference between the clerk's station floor and the judge's bench floor shall not exceed eighteen (18) inches. Consider "pass-throughs" or other millwork solutions to assist in paper passing. Access may be provided directly from clerk's station to litigation area. Court recordings will be initiated from the clerk's workstation.

(b) The clerk's workstation requires a work surface that is one hundred twenty (120) inches wide by twenty-four (24) inches deep and shall accommodate two (2) clerks. The clerks, when seated, shall ideally face toward the litigation area. An optional eight (8) inches to twelve (12) inches deep shelf in front of the workstation may be added to provide a writing surface and additional screening of documents on the clerk's desk. The clerk's workstation requires substantial area for placement of files, forms, supplies, and other material. A telephone equipped with a flashing light rather than a ringer shall be provided.

(c) Because the clerk's station is the primary work area, design the clerk's station like the judge's bench, compatible with the Courtroom design. Provide a custom casework low front wall lined with bullet-resistant material that meets the criteria of UL 752 Level 3. Locate a hardwired duress alarm button in a discreet location under the work surface.

(d) The clerk's workstation shall be cable ready for electronic equipment and requires multiple telephone, data, and electrical outlets and audio controls. Provide concealed, accessible raceways to incorporate voice, data, video, power, and audiovisual cabling.

(e) Provide undercounter file drawers for files and forms, and provide file storage within the clerk's station area.

9.7.2.3 Witness Box

(a) The witness box shall be located between the judge and the jury and in such a way that the witness's face is clearly visible to the judge, jury, court clerks, and counsel tables. Design the witness box to maximize visibility between the jury and the witness.

(b) Design the witness box to comfortably seat the witness and to accommodate a wheelchair. Provide additional space for an interpreter.

(c) Ramps and a wheelchair turning circle are required to provide wheelchair access to the witness box.

(d) Provide a work surface for reference material that is minimum sixty (60) inches wide by twenty-four (24) inches deep. Include power and data outlets for use by an expert witness may use a computer during testimony. Line the wall behind the paneling of the witness box with bullet-resistant material that meets the criteria of UL 752 Level 3.

9.7.2.4 Jury Box

(a) Provide clear sightlines from each juror to the witness, attorneys, judge, courtroom clerk, and evidence displays. The jury box shall extend past either the witness box or the attorneys' tables. Provide direct access into the jury box from the private corridor to the deliberation room so that the jury does not have to pass in front of the bench or litigant tables.

(b) The jury box shall be two-tiered, accommodate people with disabilities, and sized to accommodate fourteen (14) people. The dimensions shall be approximately 8′-0" by 18′-0". The first row of jurors may be at floor level. When locating accessible seating space, provide sightlines equivalent to sightlines for other jury seating, and integrate the accessible position into the overall seating layout so that it is equal in its location and opportunity to the other seats.

(c) Design the jury box to prevent communication between jurors and the spectators and to guard against juror harassment. Provide a minimum distance of 6′-0" between jurors and the spectator area railing.

(d) Provide comfortable, ergonomic, fixed jury chairs to accommodate people of all sizes. The height shall be adjustable from sixteen (16) inches to twenty (20) inches. Chairs shall swivel and tilt and be spaced so that the arms do not collide, and the chairs do not strike the rear wall. Provide sufficient aisle space in front of each row of seats for juror legroom. Provide a front modesty panel between twenty-six (26) inches and thirty-three (33) inches in height separating the jury box from the litigation area. The rear row of seating shall be far enough away from the back wall to avoid scuff marks from chair backs or jurors' heads on the back wall. Provide a durable wall material behind the jury box that is resistant to scuff marks from chair backs and head prints from jurors leaning back.

9.7.2.5 Litigation Area

(a) The litigation area provides space for primary participants in activities of the judicial proceeding. Size varies, depending on courtroom type, and components within the well vary by the type of proceeding—see Room Data Sheets room configuration diagrams in Attachment 6A (Courthouse Program and Room Data Sheets) to these Design and Construction Standards.

(b) Counsel tables: locate two (2) counsel tables in the courtroom so that attorneys can be seen and heard by other attorneys, the judge, the witness, the courtroom clerk, and the jury. Provide at least two (2) movable, accessible counsel tables with space for comfortable, ergonomic, movable chairs. The counsel tables shall have a table box for data, video, and power. Separate grommets in the tables shall be provided for the two (2) microphones. Provide space for a third counsel table if possible. Tables shall include a modesty panel to conceal defendant restraint devices. ~~Provide a floor-attached U-bolt for~~

~~the defense table.~~ Provide an area behind the counsel tables and between the spectator area for a row of chairs along the railing for staff, paralegals, or other involved parties. Tables shall be large enough to accommodate the presence of an interpreter, in compliance with OCCCIF requirements.

(c) Digital evidence presentation system placed between the two counsel tables: the system can be a cart shared between courtrooms or installed as a fixed shelf. It can contain a document camera and/or a Blu-ray player. Provide a recessed floor box with outlets for data, video, and power.

9.7.2.6 Exhibit Display Area

Provide space for exhibit display and a large ceiling-mounted projection screen or large monitors located to be clearly visible to all court participants.

9.7.2.7 Court Security Officer

The CSO is located within the litigation area to the rear of the well and in front of the spectators' barrier. The CSO is typically located near the door to the in-custody holding area and requires easy and quick access to the defendant's table. The CSO station is intended to be an open floor space to accommodate the CSO in a chair.

9.7.2.8 Spectator Area

(a) A multipurpose courtroom has seating in the spectator area for the majority of the jury panel. The number of seats shall be planned to accommodate voir dire panels for jury selection through a combination of seats behind the rail, movable chairs inside the litigation area, and the jury box seating.

(b) Bench seating is to be provided in lieu of individual theater-style seats. Benches shall be contoured and proportioned to provide comfortable seating; hardwood veneer and solid wood construction shall be provided. Benches shall be anchored to the floor but removable for relocation.

(c) Provide wheelchair spaces, companion seating, and semi-ambulatory seating in ratios required by law. Temporary seating, or a fold-down seat, may be placed in wheelchair spaces when not occupied. A companion seat shall be located adjacent to the wheelchair space. The wheelchair space shall align with the companion seat.

(d) Provide space in front of and behind the wheelchair space such that the spectator using a wheelchair or mobility device can roll forward or backward to allow other spectators to exit a row. The wheelchair or mobility device cannot permanently block exit from an aisle.

9.7.2.9 Sound Lock/Entry Vestibule

Provide a vestibule between the courtroom and the public circulation that will be a transition space and control noise. The doors from the vestibule into the courtroom shall have visions panels. The doors from the public corridor into the vestibule shall be solid. The outside doors from the corridor to the courtroom shall be lockable, whereas the doors from the courtroom shall not have exit devices, latches, or astragals due to noise considerations.

9.8 COURTROOM SUPPORT SPACES

Courtroom support spaces include Judicial Chambers, jury deliberation rooms, restricted corridors, and staff support areas. The restricted corridor and Courtroom support spaces may be at a higher floor elevation than the courtroom well in order to reduce ramping requirements within the Courtroom.

9.8.1 Judicial Chambers

(a) Judicial Chambers are the personal office and conference areas in which the judges conduct legal research and case study, and hold meetings with attorneys or judicial personnel.

(b) Separate chambers shall be provided for each judge and include a private restroom.

(c) Provide adequate sound control between the chambers and the staff and reception areas to reduce sound transmission during sensitive conference sessions.

(d) Provide natural lighting to the chambers.

(e) Provide silent duress alarm (Alertus) at each chamber.

(f) Judicial clerk and assistant workstations shall be located in an open shared office space directly adjacent to each judge's office.

(g) Judicial Chambers shall be clustered for improved collaboration and to share support functions.

9.8.2 Jury Deliberation Rooms

(a) Provide jurors a private deliberation room that is free from distractions and outside interference, accessible from the restricted corridor.

(b) The Small Jury Deliberation Room shall comfortably accommodate eight (8) jurors, and the Large Jury Deliberation Room shall comfortably accommodate fourteen (14) jurors and allow use of charts, mounted exhibits, and video monitors for evidence.

(c) The Jury Deliberation Rooms shall have natural light; ensure that windows do not allow jurors to communicate with people outside the New Courthouse.

(d) Jury Deliberation Rooms shall be designed in a flexible manner so that they can easily be used by judiciary as an additional judicial conference room.

9.9 LAW LIBRARY

9.9.1 General

(a) The Law Library is a resource center that provides access to legal reference materials for judges, staff, attorneys and the public. The Law Library shall be located in close proximity to the Public Help Center. Provide a waiting area and public counter window for library staff to control public access into the library. Law Library support spaces include a Law Librarian Director Office, Staff Office, and staff Work Room.

(b) The design of the Law Library shall include:

(i) a staffed Circulation Desk;

(ii) a Legal Reference Desk;

(iii) Public Computer terminals – provide a minimum of four (4) stations;

(iv) public Work Tables – provide two (2) six-person tables;

(v) Study carrels – provide twelve (12) study carrels;

(vi) a compact shelving system; and

(vii) a microfilm reading area with printing services (Copy / Print / Scan / Fiche / Film Room Area).

9.9.2 Reading Room

Provide Law Library patrons with a private reading room to read, interpret, or analyze materials.

9.10 JURY ASSEMBLY

9.10.1 General

(a) The Jury Assembly Area is a high-volume public access function and shall be located on the New Courthouse's entry floor.

(b) The entrance to the Jury Assembly Area shall be easy to locate upon entering the New Courthouse and easily accessible from the Main Lobby.

(c) Jury staff shall be able to control the entry into the Jury Assembly Area at the Juror Assembly Entrance/Check-In.

(d) Ensure that traffic to the Jury Room Main Assembly Area does not interfere with public circulation in the lobby, stairs, or elevators. Plan movement of jurors to minimize juror contact with attorneys and litigants and to preclude intimidation by and contact with the public.

(e) Protect the Jury Assembly Area from exterior viewing.

9.10.2 Entry Vestibule

(a) Prominently placed signage shall provide clear directions to the Jury Assembly Area. Jurors arrive simultaneously, so queuing areas will be required within the vestibule for prospective jurors waiting to sign in.

(b) The vestibule shall be within the Jury Room Main Assembly Area to prevent contact with defendants, family members of defendants, and witnesses.

(c) Provide four (4) public counter windows similar those described in Public Help Center.

9.10.3 Juror Assembly Entrance / Check-In

(a) The Juror Assembly Entrance / Check-In with built-in casework counter shall be immediately visible at the entry of the Jury Assembly Area.

(b) Power and data outlets shall be provided in this area for future Self Check In Kiosks. ~~Self-Check-In Kiosks shall be provided in this area.~~

(c) Jury coordinator workstation shall be located directly adjacent to the Juror Assembly Entrance / Check-In. Include silent duress alarm (Alertus).

9.10.4 Main Jury Assembly Sub-Area and Rooms

(a) Sufficient seating shall be provided for approximately two hundred thirty (230) prospective jurors. Provide movable grouped seating and lounge seating with power supply. Provide wheelchair spaces, companion seating, and semi-ambulatory seating in ratios required by Applicable Law.

(b) The Jury Room Main Assembly Area shall be designed and constructed to the same standards as a training room to enable the room to be used for training and other collaborative activities with full multimedia capabilities. This design shall include the use of non-fixed, easily removable seating to allow for flexible room setups. Include an operable partition to divide the assembly room into two separate spaces.

(c) Provide Juror Lounge Seating area for reading, studying, and working. The Juror Lounge Seating area shall include study carrels, comfortable furniture, and power connections for personal electronic devices. The Juror Lounge Seating area shall be designed such that its area may be incorporated into the overall assembly space if needed.

(d) Provide two (2) movable lecterns for juror orientation and infrastructure for wireless access.

(e) At the information presentation area, provide for use of audiovisual equipment, computer data lines, and telecommunications systems to accommodate programs such as video orientation, automated jury management systems, and juror call-in programs.

(f) Outdoor areas may be provided if they are within the building's secure perimeter and jurors are prevented from public contact.

9.10.5 Juror Support Area

(a) In the juror break area (Juror Support Areas : Break Area / Galley and Break Area – Seating Tables) provide space and infrastructure for a minimum of four (4) vending machines, tables, chairs, and a counter for water and coffee.

(b) Locate juror toilet and lactation facilities close to the Jury Room Main Assembly Area.

(c) Provide additional space for Phone Charging Area, Locker Area / Alcove and Reading Material Display.

9.11 SHERIFF OPERATIONS

9.11.1 Design & Functional Overview

9.11.1.1 General

(a) The design objectives for the Clackamas County Sheriff's Department operations are to provide a safe and secure environment for the transport and accommodation of in-custody defendants while in the New Courthouse as well as to maintain the safety and welfare of the judiciary, staff, and public users in the Project.

(b) The Sheriff manages all in-custody holding and transport areas and operates the electronic security systems relating to the in-custody holding, detention, transport, and detention circulation areas within the New Courthouse.

(c) From a physical security standpoint, several basic rules apply to the design of secure holding and circulation areas:

(i) maximize the direct line of sight allowing the CSO to supervise in-custody defendants and to minimize reliance on video surveillance cameras;

(ii) minimize protrusions into detention circulation areas and corridors that create blind spots; and

(iii) organize functional components to avoid circulation "eddies." The Central Holding Areas shall be process driven. Designs shall achieve a logical flow for managing the process, movement, and separation of in-custody defendants.

(d) The New Courthouse shall provide safe and secure accommodations for receiving individuals coming from the Central Holding Areas; for holding them before their Courtroom appearances; and for moving them to and from the Courtroom itself. The New Courthouse detention facilities do not house in-custody defendants overnight; they are present in the New Courthouse only during the normal hours of operation for the court.

(e) Detention functions within the building include holding cells, both centrally located in the basement and on the courtroom floors, and a system of dedicated elevators and corridors contained within the secure perimeter of the in-custody holding and transport areas. Secure pathway for in-custody movement shall be provided. Utilize dedicated circulation that to avoid cross-circulation with judges, staff, and the public users.

9.11.1.2 Adult and Juvenile In-custody Sight and Sound Separation

(a) Provisions shall be made in the design of holding areas to maintain "sight and sound separation" between in-custody juveniles and in-custody adults. In-custody juveniles shall not come into contact with in-custody adults as they enter, are held in, and circulate to and from the Courtrooms during the course of normal operations.

(b) Central Holding Areas shall have separate areas for juveniles and adults. Such areas for juveniles and adults shall not be accessed through the same corridor.

(c) Access to adult and juvenile holding areas from the vehicular Sally Port shall be separate. A single, centrally controlled pedestrian sally port is acceptable as long as neither juveniles nor adults circulate through the other's holding area to reach their own.

(d) Detention control coordinates use of in-custody elevators and shared detention corridors such that either group can be reliably cleared before use by the other.

9.11.1.3 In-custody Defendant Arrival

Transport vehicles deliver in-custody defendants to the New Courthouse through a secure vehicle Sally Port Area. Individuals are escorted from the Sally Port Area into the New Courthouse through a pedestrian Sally Port. In-custody defendants then proceed to the Central Holding Area.

9.11.1.4 Secure Holding

(a) Provide both individual and group holding cells as called for in the New Courthouse Program. The area shall be configured to provide for required sight and sound separations of cells and related circulation paths.

(b) In-custody defendants are moved from the Central Holding Area to the Courtroom Holding Sub-Areas located immediately adjacent to the Courtrooms. Movement shall be via secure, dedicated elevators.

(c) The Courtroom Holding Sub-Areas may be shared by two (2) adjacent Courtrooms, and shall include two (2) Individual Holding cells, In-Custody / Attorney Interview Booths, Sound-Lock Vestibules into each Courtroom, and a dedicated secure Elevator Vestibule. High volume Courtrooms shall also include a group holding area.

(d) At the conclusion of the Courtroom proceeding, in-custody defendants are returned to the Central Holding Area to await transport back to the detention center.

9.11.2 Program Components

9.11.2.1 Secure Perimeter

The secure perimeter is a physical barrier between in-custody holding and transport areas and the building exterior and/or other non-detention departmental areas within the courthouse. The secure perimeter prevents the unauthorized and uncontrolled movement of persons, contraband, and weapons into and out of in-custody areas. An access control point (Sally Port) facilitates the movement of authorized persons between the secure and non-secure sides of the secure perimeter barrier. The secure perimeter barrier comprises maximum- security construction for partitions (full-height, slab-to-slab), windows, doors, and floors; security bars at any vertical and/or horizontal penetrations five (5) inches or larger in any direction; and with the exception of In-Custody Elevator Vestibules, sally ports at all access points.

9.11.2.2 Vehicle Sally Port

(a) Vehicular access to the New Courthouse proper is via an enclosed vehicle Sally Port. A "drive-through" vehicle Sally Port is preferred.

(b) In all cases, the Sally Port shall be of secure construction and shall minimize views into and out of the Sally Port area.

(c) The Sally Port shall be designed with careful consideration of traffic flow and vehicle turning radii; backing maneuvers are acceptable. Three-point turns for large custody vehicles are to be avoided.

(d) Provide a secure access gate at the entry point, a second egress gate, and a personnel gate. The vehicle Sally Port gates shall be interlocking and able to be electronically monitored and controlled at the In-Custody Control Room. The primary means of communication and coordination between an arriving in-custody transport vehicle and the In-Custody Control Room is via radio. However, provide an audio call station/pedestal for outside agency use. Include video monitoring at access and egress points. Access and egress gates and doors shall be detention grade and shall be sized to accommodate a single-unit (SU) vehicle as define by the most recent version of *A Policy on Geometric Design of Highways and Streets*" by the America Association of State Highway and Transportation Officials.

(e) The Sally Port shall provide adequate space for the temporary parking of transport vehicles for the loading and unloading of in-custody defendants. Provide parking and maneuvering clearances for three (3) in-custody transport vans.

(f) Provide wall-mounted gun lockers outside the secure perimeter. Such weapons lockers shall be equipped with individual compartments, each with an individual locker device. Provide a weapons storage vault in the Sheriff Administration Area.

9.11.2.3 Sally Port Vestibule/In-Custody Staging

(a) In-custody defendants are off-loaded from the transport vehicle in the Sally Port and escorted into the secure area of the New Courthouse via a pedestrian sally port. A pedestrian sally port is also required at all points of entry or egress into and out of the secure perimeter of the In-Custody Intake and transport areas. The pedestrian sally port provides control of movement to and from adjoining areas and prevents infiltration to these areas by unauthorized persons, or escape of in-custody defendants.

(b) The pedestrian sally port shall have a minimum width of 8′-0".

(c) The doors at each end of the pedestrian sally port are interlocked. Pedestrian sally port doors are monitored and controlled by the In-Custody Control Room staff. Provide a voice and video connection. Provide glazing to facilitate visual observation of the pedestrian sally port entry and within by the security staff.

(d) Pedestrian sally ports shall meet secure perimeter construction requirements.

(e) Within the staging area provide counters for completing paperwork and benches for in-custody defendants awaiting processing.

9.11.2.4 In-Custody Control Room

(a) The In-Custody Control Room is responsible for all circulation in and out of the secure perimeter of the secure transport and holding areas, detention circulation corridors for moving in-custody defendants to and from courtroom holding areas, and elevators dedicated to in-custody movement. The In-custody Control Room will control and monitor doors and locking devices, video surveillance systems, ~~the duress alarm system,~~ intercom ~~and paging systems, lighting,~~ and other functions dedicated to all in-custody secure holding and transport areas throughout the courthouse. The In-Custody Control Room shall have monitoring capabilities within the Central Holding Areas and transport areas for doors that are equipped with card access devices.

(b) The control workstation within the In-Custody Control Room shall be located within central holding area so that the detention control officer has direct line of sight into holding areas and the main circulation areas within central holding. The line of sight shall work from a seated position and be unobstructed by security equipment configurations. Access to the In-Custody Control Room shall be limited and controlled by the In-Custody Control Room itself. The In-Custody Control Room shall be inaccessible to in-custody defendants at all times.

(c) The In-Custody Control Room shall be constructed with security-grade partitions extending to the underside of the structure above.

(d) The In-Custody Control Room environment shall reduce stress and fatigue, as well as enhance the staff member's efficiency. Sound-absorbing material shall be used to reduce sound reverberation and harshness of noise inside the room. Lighting design shall reduce glare and reflection, with provision of a dimmer switch to control the lighting levels.

(e) The In-Custody Control Room shall be equipped with workstations that accommodate all equipment associated with monitor, control, and surveillance functions. Control workstations shall be flexible to accommodate the integration of future technologies and shall integrate wires and cabling within an enclosed, accessible housing. The use of modular or systems furniture is preferred. An ergonomic layout is very important. Monitors for video, productivity applications, and detention control shall be uniform in size and mounted on articulating arms.

(f) Only electronic devices related to the user interface layout are accommodated at control workstations.

(g) Provide a toilet room directly accessible from the control room for use by control room staff.

9.11.2.5 Central Holding Area

(a) In-custody defendants are detained in a secure Central Holding Area pending transport to the Courtroom floor. Both individual and group holding cells shall be provided in this area, allowing for separation of juveniles and separation by gender.

(b) The Central Holding Area shall be operational during Operating Hours only, with no overnight use of the holding cells.

(c) Cells shall be of secure construction including tamper proof fasteners. Fixtures and furnishings shall be anti-ligature. Accessible holding cells shall be available in the Central Holding Area.

(d) Access to the Central Holding Area shall be controlled by detention control room staff. Cell doors shall be controlled remotely by In-Custody Control Room staff, with manual (key) fail override. If swinging doors are used instead of sliders, they shall swing out to prevent the occupant's ability to barricade the door. Cells shall be positioned to avoid blind spots and provide optimal sightlines for staff working in the area. Provide glazed cell fronts to maximize visibility.

(e) Toilets shall be positioned in cells to allow for surveillance by staff while still providing modesty for the occupants.

9.11.2.6 In-Custody Circulation and In-Custody Elevators

(a) All Central Holding Areas and circulation shall be separated from public and private circulation paths and spaces. The areas associated with in-custody holding and circulation shall be contained within the secure perimeter. With the exception of In-Custody Elevator Vestibules, a sally port shall be required at any penetration allowing access in or out of the secure perimeter and shall be controlled by the In-Custody Control Room.

(b) A dedicated detention circulation path is required to transport in-custody defendants from the Central Holding Area to In-Custody Elevators serving the Courtroom Holding Areas. In-Custody corridors shall be 6′–8" wide and shall minimize turns to facilitate direct line of sight and avoid blind spots created by protrusions. All secure circulation corridors on Courtroom floors between Courtrooms shall be built to detention-grade standards. The secure corridors in the Central Holding Area shall have detention-grade floors and walls. Gypsum board ceilings is an acceptable ceiling finish.

(c) The In-Custody Control Room monitors and controls access and movement of In-Custody Elevators. In-Custody Elevators shall include video and intercom capabilities and be able to accommodate a gurney. Each In-Custody Elevator shall be appropriately sized to accommodate a minimum of sixteen (16) in-custody adults.

9.11.2.7 In-Custody / Attorney Interview Booth

(a) In-Custody / Attorney Interview Booth provide the opportunity for counsel to consult privately with their in-custody clients. A "noncontact" visitation arrangement shall be required to prevent the exchange of contraband. In-custody defendants enter the In-Custody / Attorney Interview Booth from the secure side (within the secure perimeter), and attorneys enter from the public circulation (or Courtroom).

(b) Both entries shall be separated and enclosed from adjacent spaces to promote confidentiality. The entry on the in-custody side shall have glazing to facilitate visual observation by the Courtroom holding officer. The wall and glazing between the in-custody defendant and the attorney shall meet secure perimeter construction requirements.

(c) Communication shall be facilitated by using handsets. Provide fixed writing surfaces at each side of the In-Custody / Attorney Interview Booth. In-Custody / Attorney Interview Booths shall be sized for wheelchair movement on both the attorney and in-custody sides and have a detention-grade movable plastic chair for the in-custody defendant.

9.11.2.8 Courtroom Holding

(a) Each Courtroom shall have direct access to a Courtroom Holding core that includes a Sound-Lock Vestibule, two (2) Individual Holding Cells, and an In-Custody / Attorney Interview Booth, and all other rooms under the Courtrooms Holding Sub-Area. The Courtroom Holding Sub-Area shall serve no more than two (2) Courtrooms. The Sound-Lock Vestibule in Courtroom Holding Areas is not required as long as proper noise isolation (noise rated doors to prevent sound infiltration from Courtroom Holding Areas into Courtrooms) is provided. The main circulation area within such Courtroom Holding Areas may be utilized as the main movement staging area for in-custody defendants into the Courtrooms and secure elevators.

(b) If a Sound-Lock Vestibule is included in the Courtroom Holding Area, then such Sound Lock Vestibule shall comply with the following requirements. The Sound-Lock Vestibule shall act as a sound buffer between the Courtroom and the Courtroom Holding Sub-Area and shall screen views from the Courtroom into the Courtroom Holding Area. In addition, the Sound-Lock Vestibule shall serve as a sally port for managing controlled movement between the Courtroom and the Courtroom Holding Sub-Area. The door inside the Courtroom leading to the Courtroom Holding Sub-Area shall be designed to match the courtroom décor. The inner door leading to the Courtroom Holding Sub-Area shall be detention grade and shall be operated from the In-Custody Control Room.

(c) Individual Holding Cells shall have glazed cell fronts to manage sound from within the Individual Holding Cells and to maximize supervision of in-custody defendants by staff. The In-Custody Control Room shall control Individual Holding Cell doors remotely. Cell doors are equipped with a manual key override. Provide a minimum of one accessible cell per courtroom holding area. All holding cells shall have penal-grade plumbing fixtures.

(d) In-custody defendants access the noncontact In-custody/Attorney Interview Booth from within the Courtroom Holding circulation area. The design and arrangement of the Individual Holding Cells and circulation areas shall facilitate supervision and shall avoid blind spots. Alternatively, the In-Custody/Attorney Interview Booth may be located in the Central Holding Area.

9.12 TOILET, SHOWER AND LACTATION ROOMS

9.12.1 Toilet Rooms

Public restrooms shall be provided on each occupied level and as indicated in the New Courthouse Program. The final quantity of fixtures shall comply in with all Contract Standards and Applicable Law. Restrooms shall be designed for durability and ease of maintenance. Floor drains sloped to drain shall be provided at all multi-accommodation toilet rooms and showers. Toilet partitions shall be provided at all multi-accommodation toilets. Provide waterproofing membrane full extent of all toilet and shower rooms floors and wrap the membrane minimum six (6) inches up the wall. Provide waterproofing membrane full height at the walls of all showers.

9.12.2 Lactation Rooms

Lactation Rooms shall be centrally located and provide a sanitary, private, and lockable space with a table, electrical outlets, sink, small refrigerator and comfortable chair. Lactation Rooms shall comply with all Contract Standards and Applicable Law.

9.13 BUILDING SUPPORT SPACES

Building Support Spaces include back-of-house spaces required for the efficient and safe operation and maintenance of the New Courthouse. These spaces include: deliveries, collection and removal of trash or recycled materials, storage rooms, mail rooms, utility spaces, operation and maintenance area, and mechanical, electrical/technology rooms.

9.13.1 Loading Dock

(a) Provide a two-bay Loading Dock to accommodate delivery, trash, and recycling trucks.

(b) Provide space for pallet delivery and storage near the Loading Dock. Provide a covered staging area so that all deliveries can be scanned or examined before entering the building.

(c) Dedicate one (1) truck bay within a secure loading area to trash and recycling. This area shall include collection and compaction bins and locked, covered roll-off containers. Provide a file shredding area near the Loading Dock.

9.13.2 Janitor Floor Closet

Provide Janitor Floor Closets on each floor of the New Courthouse. In each Janitor Floor Closet, include a service sink, mop rack, water-tight wall covering with high-impact resistance, and wall-mounted shelving. All Janitor Floor Closets shall be ventilated/exhausted to maintain a negative pressure differential to adjacent spaces.

9.13.3 Mail Room

The Mail Room shall be a dedicated room that receives daily mail and packages and sorts them before delivering them to New Courthouse occupants. Provide an x-ray machine to scan packages. Locate the Mail Room near the Loading Dock and Freight Elevator to allow staff to readily transport mail to other parts of the New Courthouse. The Mail Room shall be separately ventilated / exhausted and negatively pressurized to adjacent spaces.

9.13.4 Media Areas

The New Courthouse shall accommodate inside and outside media facilities ("**Media Areas**") in compliance with the following requirements.

(a) The Media Central Switching Room shall provide an interior space for use by news media personnel with appropriate power, data, and telecommunications support systems, including audio, video, or other feeds to the main distribution frame.

(b) The media exterior area ("**Exterior Access Equipment Control**") shall be a designated exterior space with parking for satellite trucks. If possible, the area should face south for satellite exposure. The location should be beyond building security zone.

9.13.5 Central Maintenance Shop

Locate a Central Maintenance Shop on the ground floor or basement, near the Freight Elevator and Central Mechanical Areas. Provide floor, wall and ceiling construction that minimizes noise transmission. Provide maintenance work surfaces, repair equipment, storage, and furnishings for storing and reviewing building plans and reference materials. Locate the Facility Manager Office in a nearby non-public area.

9.13.6 Storage Rooms

Storage rooms shall be located as required throughout the New Courthouse to meet their intended function. Below is a table identifying the storage requirements for type of storage room in the building:

Department	Room Name	Storage Equipment
1.3 Building and General Staff Support	Central Janitorial Storage	Wire rack shelving, adjustable, fixed
1.3 Building and General Staff Support	Large Item Storage	Open space, no shelving / racks
1.3 Building and General Staff Support	Technology Receiving / Holding	Wire rack shelving, adjustable, fixed
2.1 Courtrooms & Ancillary Support Spaces	Storage Closet	Shelving – wall standard & bracket
2.2 Judicial Chambers	Storage Closet	Shelving – wall standard & bracket
3.1 Court Admin Management Offices	Court Admin Storage	Wire rack shelving, adjustable, fixed. Provide 36" deep by 120" long work counter with power strip. Four-door lateral storage cabinets, two drawer filing cabinets, one four-drawer lateral filing cabinet, closed overhead shelving with tackboards underneath in cubicles.
3.4 Civil Case Unit	File Cabinet Storage	Locking vertical file cabinet
3.9 Records	Active Records	Locking lateral file cabinet – located in Evidence Storage
3.10 Shared Admin Staff Support Spaces	Evidence Storage	Wire rack shelving, adjustable, fixed. Open space for larger items.
3.10 Shared Admin Staff Support Spaces	Exhibit Storage	Wire rack shelving, adjustable, fixed This room combine into Evidence Storage.
4.1 DA Criminal Division	Budget / Payroll / Personnel & Active Case Files	Locking Vertical File Cabinet.

Department	Room Name	Storage Equipment
		Wire rack shelving, adjustable, fixed.
4.2 DA Shared Spaces & Amenities	Supplies Storage	Wire rack shelving, adjustable, fixed.
4.2 DA Shared Spaces & Amenities	Evidence Storage & Viewing	Wire rack shelving, adjustable, fixed. Provide small table and chair for viewing.
4.2 DA Shared Spaces & Amenities	Equipment Storage	Wire rack shelving, adjustable, fixed. Provide open storage area as well for larger items.
5.3 Transport Operations Support	Equipment Storage	Wire rack shelving, adjustable, fixed.
6.2 Sheriff Administration	Evidence Storage Closet	Wire rack shelving, adjustable, fixed.
6.2 Sheriff Administration	Personnel File Room / Record Storage	Locking Vertical File Cabinet. Wire rack shelving, adjustable, fixed.
6.2 Sheriff Administration	Firearm Storage	Wall-mounted gun lockers.
7.2 Public Defense & CIDC	Secure Storage	Locking Vertical File Cabinet. Wire rack shelving, adjustable, fixed.

Table 6. 9.1 (Storage Shelving Requirements)

9.13.7 Mechanical, Electrical and Equipment Rooms

(a) Mechanical and electrical equipment, outside of the nominal building envelope, shall be protected from weather and environmental elements within an architectural equipment enclosure that allows suitable access for maintenance personnel. Equipment enclosure on the New Courthouse's roof shall be integrated with the overall building design and comply with other sections of these standards. Penthouses are preferred, but not required, depending on the size and type of equipment. If a penthouse is not provided, exterior-grade equipment and visual screens shall be provided.

(b) Equipment enclosures on the New Courthouse roof shall be accessible via a permanent dedicated industrial stair from the top occupied building floor to the roof. It is preferable but not required for the stair to terminate inside the equipment enclosure. The stair shall be wide enough to afford access for maintenance personnel carrying hand tools or small parts. Ladders shall not be employed to provide access to equipment enclosures.

(c) Air-handling unit outside-air intakes, relief air, and exhaust air shall be ducted directly to the outside of the roof equipment enclosure.

9.14 STATE OFFICES

Locate the Department of Human Services on Level 1 if possible. Maintain separate entrances for Foster Parents and Biological Parents, with no direct line of sight.

10 INTERIOR DESIGN AND CONSTRUCTION REQUIREMENTS

10.1 GENERAL

10.1.1 Visual Privacy

Visual privacy requirements shall comply with the following table as set forth in the respective Room Data Sheet.

RDS Code	Description
PR-1	High Visual Privacy
PR-2	Occasional Visual Privacy
PR-3	Modular Panel
PR-4	No Visual Privacy

Table 6. 10.1 (Visual Privacy Requirements)

10.1.2 Acoustic Privacy

(a) Areas specified in a Room Data Sheet shall conform to the following requirements:

(i) NC ratings shall be as measured within the space following completion;

(ii) exterior walls shall have a minimum designed STC rating of forty-five (45) for opaque areas and twenty-eight (28) for glazing. The as-built field measured STC rating may not be more than five (5) points lower than the specified designed STC rating;

(iii) the applicable minimum designed impact insulation class ("**IIC**") rating is as specified for all perimeter elements. The as-built field measured IIC rating may not be more than five (5) points lower than the specified designed IIC rating;

(iv) the applicable maximum reverberation time (RT60) is as specified. The reverberation time shall be the time taken for a given audio signal to fall by sixty (60) dB. Sound reflection shall also be managed with appropriate acoustic absorbing material, or non-parallel surfaces regardless of the specified reverberation time to ensure speech intelligibility and elimination of echoes; and

~~(v) sound masking shall be used as required or permitted by as specified.~~

(b) Acoustic separations shall continue above the ceiling plane and shall include any penetrations or joints. For areas with an STC rating of sixty (60) or greater, doors shall be fully gasketed doors including door bottoms.

10.1.3 Daylight Views

(a) Balance the needs for security with openness, transparency, and natural light. Provide natural light to all primary public areas, the main lobby, and primary circulation.

(b) Provide daylight views for 75% of regularly occupied spaces. Develop methods to share glare-free natural light though the use of interior glazing, sidelights, borrowed light, and light wells.

(c) Daylight views requirements shall comply with the following table as set forth in the respective Room Data Sheet. Prescriptive or performance requirements may be used.

(d) The County will, in its discretion, allow minor deviations from daylight and views. Any minor deviation shall be determined during the design review process and submitted to the County for approval. The County reserves the right to approve or deny any minor deviation.

RDS Code	Functional Area	Prescriptive Requirement	Performance Requirement
DV-1	Functional Areas with Workstations	Access to at least one (1) window wall to the exterior. Window head shall meet the ceiling.	Average sDA300, 50% is achieved for >75% of occupied floor area.
DV-2A	Conference Rooms	Areas shall have access to a window wall with at least 40% glazing. Total glazing area shall comprise at least 40% of the perimeter wall(s).	Average sDA300, 50% is achieved for >40% of occupied floor area.
DV-2B	Courtrooms	Areas shall have access to a window wall with at least 20% glazing. Total glazing area shall comprise at least 20% of the perimeter wall(s). "Borrowed light" is acceptable.	Average sDA300, 50% is achieved for >20% of occupied floor area.
DV-3	Circulation Area	Access to at least one (1) window wall to the exterior. Windows shall be divided into a daylight zone and vision zone. Window head shall meet the ceiling.	Average sDA300, 50% is achieved for >75% of occupied floor area.
DV-4	Occupied Rooms with no windows	Color tuneable electric lighting (circadian lighting).	N/A

Table 6. 10.2 (Daylight and Views Requirements)

10.1.4 Interior Aesthetics

Interior aesthetics requirements shall comply with the following table as set forth in the respective Room Data Sheet.

RDS Code	Description
IC-1	High Aesthetic Importance
IC-2	Moderate Aesthetic Importance

IC-3	Low Aesthetic Importance

Table 6. 10.3 (Interior Aesthetic Requirements)

10.2 INTERIOR CONSTRUCTION

10.2.1 Partitions

(a) Gypsum board partitions:

(i) Gypsum board shall comply with C1396, Standard Specification for Gypsum Board. Provide gypsum board as follows:

(1) type X 5/8-inch gypsum board is typical installation;

(2) Mold Resistant for locations subject to moisture or high humidity;

(3) provide impact resistant up to 4 feet above floor level for Public areas, corridors and up to 8 feet above floor level for stairways;~~for Public areas, corridors and stairways;~~

(ii) partitions shall have loading capacity identified in Room Data Sheets, with a maximum deflection of L/240. Provide metal studs with a minimum base-metal thickness of 0.0329 inch, except at locations where acoustical performance criteria of a wall assembly is met in part by a lower gauge stud. In such cases, walls shall meet deflection and code requirements and provide all necessary support for wall mounted devises and assemblies;

(iii) provide a system of concealed, permanent, secure, and appropriately designed backing, supports, and anchorages for all handrails, wall-hung cabinets, court seals, and other surface-mounted fixtures, equipment, systems, and building specialties;

(iv) provide Bullet Resistant Fiberglass Panels where required by security requirement. Panels shall be “non-ricochet type” to permit the en-capture and retention of an attacking projectile lessening the potential of a random injury or lateral penetration;

(v) interior Gypsum Board finish levels must be applied in accordance with ASTM C 840 with the following exceptions which shall override:

(1) Level 1 shall be used in plenum areas and areas concealed to public view;

(2) Level 2 shall not be permitted;

(3) Level 3 shall be used for substrates for tile or other applied material;

(4) Level 4 shall be the typical finish level; and

(5) Provide higher level of finish as required to comply with fire-resistance ratings and acoustical ratings.

(vi) all gypsum board products shall have documented a publicly available material ingredient inventory (Declare Label, Health Product Declaration, or Cradle to Cradle Certification).

(b) Partition Loading Requirements:

(i) Provide metal studs with a minimum base-metal thickness of 0.0329 inch.

(c) Plenum Spaces:

(i) Provide space above all finish ceiling areas for the HVAC supply and return distribution, electrical distribution, mechanical equipment, fire sprinkler systems, voice, data, low-voltage cable, and other devices. Size plenum spaces to allow for future modification of these systems.

(ii) Coordinate the size, access, and clearance requirements of systems located in plenum spaces with the depth of structural elements to allow required clearances for all systems to all parts of the building.

(iii) Provide access to all plenum spaces for servicing all components. Provide access to plenum spaces above courtrooms for maintenance of utilities, and to allow modification to cabling and outlets, which serve the floor above.

(d) Glazed Partitions:

(i) Aluminum Framing to comply with ASTM B 221 with alloy and temper required to suit structural and finish requirements, and not less than 0.062 inch thick.

(ii) Aluminum shall have either a clear or color anodic finish complying with AAMA Standard 611.

(e) Demountable Partitions:

(i) Provide site assembled demountable partitions.

(ii) Where acoustical rating is indicated, provide demountable-partition assembly tested by a qualified testing agency for sound transmission loss performance according to ASTM E 90, calculated according to ASTM E 413, and rated for not less than the STC value indicated.

(f) Operable Partitions

(i) Provide operable panel partitions tested by a qualified testing agency for sound-transmission loss performance according to ASTM E 90, determined by ASTM E 413, and rated for not less than the STC indicated.

(ii) Provide manual or electrically operated steel framed panels, with gypsum board infill, fabric wall covering.

10.2.2 Interior Glazing

Interior glazing requirements shall comply with the following table as set forth in the respective Room Data Sheet.

RDS Code	Description
IGL-1	Minimum 20 SF Clear Glazing at Vision Height
IGL-2	Minimum 40 SF Clear Glazing at Vision Height
IGL-3	Minimum 7 SF Clear Glazing Above Door
IGL-4	Minimum 2 SF Clear Vision Panel in Door
IGL-5	Full Clear Vision Panel in Door
IGL-6	One Fully Clear Glazed Wall
IGL-7	Specialty Glazing, ASTM 1915 Grade III
IGL-8	Security Glazing

Table 6. 10.4 (Interior Glazing Requirements)

(a) Interior Glazing:

(i) Standard glazing: annealed float or laminated.

(ii) Fire ratings: interior glazing and frames shall be rated as required by wall assemblies. where fire rating is required by code, provide laminated ceramic rated glazing.

(iii) Strengthening: glazing shall be tempered, laminated or annealed as required for impact and crash protection. wired glass shall not be permitted.

(iv) Privacy glazing: use laminated glass with an inner layer for obscure or translucent glazing for spaces that require privacy. Where clerestory windows are provided to meet daylighting requirements, privacy glazing is not required.

(v) Sidelites: where possible, glazing shall be installed immediately adjacent to doors to function as a sidelight.

(vi) Frame material: interior glazing frames shall match adjacent door frames in material and appearance.

(vii) Miscellaneous: if glazing is included in a wall that also has a door in it, the top and bottom of the glazed lite should align with the top and bottom of the door.

(viii) Specialty glazing: coordinate approval of specialty glazing such as bullet resistant, acoustical, containment rated, one-way viewing, projection booths, etc. with the County to determine products that will meet specific needs.

(b) Fire-rated glazing:

(i) Due to high cost of installation and replacement, the use of fire rated glazing should be carefully considered during the design.

(ii) Consider use of:

(1) transparent ceramic (used as part of an insulating unit if exterior rated glazing is required); and/or

(2) transparent wall units designed as a barrier wall (inert material turns to foam during a fire).

(c) Transaction window: provide bullet resistant panels with secure air passage as required for voice transmission.

(d) Security Glazing: Provide laminated safety glazing.

(e) Acoustic Glazing:

(i) Provide laminated glazing where acoustic requirements exist. Thickness of glass plies will be one-quarter (¼) inch thick with a clear interlayer of 0.03 inches thick.

10.2.3 Interior Doors

(a) Door types: door type requirements shall comply with the following table as set forth in the respective Room Data Sheet.

RDS Code	Description
ID-1a	Single Wood Door, Natural Stained Finish
ID-1b	Single Wood Door, Plastic Laminate or Painted
ID-2a	Double Wood Door, Natural Stain Finish
ID-2b	Double Wood Door, Plastic Laminate or Painted
ID-3	Single Aluminum & Glass Door
ID-4	Double Aluminum & Glass Door
ID-5	Single Hollow Metal Door, Painted
ID-6a	Double Hollow Metal Door, Painted
ID-6b	Coiling Counter Door
ID-7	No Door (wall opening)
ID-8	Detention Grade Door, ASTM 1450 Grade III
ID-9	Overhead Coiling Door

Table 6. 10.5 (Interior Door Requirements)

(b) Wood doors:

(i) Door construction shall meet or exceed AWI premium grade for Courtrooms, custom grade for Judges Chambers and other chambers suite offices, department entrances, and private offices, and paint grade for all other doors. Courtroom public entrances may have stile and rail doors with vision panels.

(ii) The finish for all wood doors shall be of same species, plain sliced with a clear finish.

(iii) Assembly of Veneer Leaves on Door Faces will be Running match. Provide Pair and Set Match for doors hung in same opening or separated only by mullions. Match door faces within each separate room or area of building.

(iv) Flush Wood Doors to be used on interior doors.

(1) Warranty - life of installation.

(2) Type - solid core, either glued wood stave or structural composite lumber, 1-3/4" thick

(3) Glazing stops - rolled steel.

(c) Hollow Metal Doors and Frames:

(i) Interior doors will comply with SDI A250.8, Level 3 extra heavy duty.

(ii) Doors will be Model 2, seamless.

(iii) Provide security-grade hollow metal doors and frames and entrances to holding areas, security control rooms, and secure evidence storage rooms.

(iv) Frame fire and acoustic ratings shall be suitable for the door type, function and frequency of use to ensure no loss of performance or integrity during the design life of the building.

(v) All frames set in concrete block walls, which are to be grout-filled, shall be coated with asphaltic paint on the inside of the frames and on all frame anchors.

(vi) Hollow Metal door frames and Hollow Metal doors shall have a semi-gloss finish, which shall be coordinated with the paint schedule.

(d) Folding Doors:

(i) Provide fire rated folding doors where required.

(e) Coiling Doors:

(i) Provide coiling counter doors where required, either manual or motorized operation.

(ii) Doors shall be aluminum or stainless steel.

(f) Access doors:

(i) Access doors and panels shall be recessed five-eights (5/8) of an inch for gypsum board infill; with concealed flange and concealed hinge.

(ii) Sound rated STC access panels shall be incorporated into acoustically sensitive partitions where access is required. Provide lockable door to provide access to crawl spaces. Furnish key cores to Security Services representative.

(iii) Provide a 24-inch x 24-inch access door for communication cabling access above hard ceilings.

(iv) Door spacing will depend on distance of hard ceiling/non-accessible ceiling run but shall not exceed twenty-five (25) feet.

(g) Door Hardware:

(i) All hardware provided shall be institutional grade.

(ii) Pins and hinges on all doors located on corridors, lobbies, atriums, and other public spaces shall be installed on the secure side of the door or shall be fixed.

(iii) Latch and locksets shall be full mortised type; locks shall have removable key cylinders. Locks shall be grand-mastered, and master-keyed.

(iv) Provide multiple keys for every lock type. Certain locks off master shall be specified.

(v) Hardware specified for courtroom use shall be of the highest quality and shall be selected for quiet, acoustically optimal operation. Selected doors require electric lock sets or strikes and proximity reader card key locking systems.

(vi) Hardware on Detention Grade Doors (ID-8) shall be detention rated hardware as defined by ASTM 1577 and ASTM F1758 and require certified impact test Grade 1 maximum security wide jamb locks and impact test Grade 1 hinges at all areas of confinement to meet typical detention standards.

(vii) Intelligent keying is preferred.

RDS Code	Description
HW-1	Card Key Access
HW-2a	Privacy Lockset
HW-2b	Privacy Lockset with Indicator
HW-3	Passage Lockset

RDS Code	Description
HW-4	Push / Pull (No Lockset)
HW-5	Office Lockset
HW-6a	Classroom Lockset
HW-6b	Classroom Security Lockset
HW-7	Storeroom Lockset
HW-8	Keypad Entrance Lockset
HW-9	Secure Sally Port Hardware
HW-10	Overhead Coiling Door
HW-11	Remote Control with Manual Key Override

Table 6. 10.6 (Door Hardware Requirements)

10.2.4 Interior Stairs and Railing

(a) Provide monumental front stair with stone, precast concrete, precast terrazzo, or wood treads.

(b) Provide interior railings made of stainless steel, aluminum, or steel. Where stainless steel railings are used, provide dull satin, No. 6 finish. Aluminum can be anodized, or fluoropolymer painted. Steel can be powder coated or painted.

(c) Glass railings should incorporate laminated fully tempered (LT) glazing, either post supported or structural glass panels. Plastic glazing shall not be used.

(d) For back of house stairs, utility and egress stairs, provide concrete filled steel pan stairs with abrasive strips or nosings to comply with code requirements. Tread and riser covers should be avoided.

10.2.5 Raised Access Flooring

(a) Where required, access flooring shall consist of a series of modular, removable, interchangeable panels on an elevated support system forming an accessible underfloor cavity to accommodate electrical and mechanical services.

(b) System is to be either:

(i) bolted filled formed or cast panels on stringer-less understructure;

(ii) gravity-held panels on stringer-less understructure;

(iii) or gravity-held panels on snap-on stringer understructure; or

(iv) gravity-held panels on bolted stringer understructure.

(c) Provide access flooring systems capable of withstanding rolling loads of the following magnitude applied to non-perforated panels, with a combination of local and overall deformation not to exceed 1.02 mm.

(d) Construct panels to be uniform in face dimensions.

10.2.6 Appliances

(a) Provide appliances required. All appliances to be energy star rated where available.

(b) Finish: Stainless Steel.

10.2.7 Interior Window Shades

(a) Exterior window treatment types:

RDS Code	Description
EWT-1	Roller Shade Privacy, Manual
EWT-2	Roller Shade Privacy, Motorized
EWT-3	Roller Shade Privacy, Motorized, Automated
EWT-4	Roller Shade Privacy and Black-out, Manual
EWT-5	Roller Shade Privacy and Black-out, Motorized

Table 6. 10.7 (Exterior Window Treatment Types)

(b) Interior window treatment types:

RDS Code	Description
IWT-1	Horizontal Slat Blinds
IWT-2	Roller Shade Privacy, 5% Open
IWT-3	Roller Shade Privacy and Black-out
IWT-4	Pull-down transaction shade

Table 6. 10.8 (Interior Window Treatment Types)

(c) Provide motorized roller window shades in spaces where access to window shades is challenging or not possible.

(d) Provide manual window shades in all other spaces that require window shades per the Room Data Sheets.

(e) Provide dual function roller shades with black out function in all spaces containing projection equipment.

(f) All window shades procured as part of this project shall not contain chemical flame retardants.

10.2.8 Casework

(a) Casework Materials:

RDS Code	Description
CM-1	Wood, Natural Finish
CM-2	Plastic Laminate
CM-3	Metal, Painted or Stainless Steel

Table 6. 10.9 (Casework Materials)

(b) Work surfaces / countertops:

RDS Code	Description
WS-1	Stone
WS-2	Solid Surface
WS-3	Plastic Laminate
WS-4	Stainless Steel
WS-5	Wood, Natural Finish
WS-6	Concrete, Unpainted

Table 6. 10.10 (Work Surfaces / Countertop Materials)

(c) Casework includes custom wood fabrications such as cabinets, built-in furniture, shelving, and other items of architectural woodwork. Cabinets include base and wall cabinets. Countertops include any fabricated work surface including those in offices, kitchens, or toilet rooms. Countertops include backsplashes.

(d) Use furniture finishes with a surface reflectance greater or equal to 45% for work surfaces and 50% for movable partitions.

(e) In general, furniture is favored over fixed built-in casework, and should be utilized where possible. Where casework is provided or required, the following provisions shall apply:

(i) Wall cabinet depths are standardized at twelve and three-quarters (12¾) inches.

(ii) Countertop heights in workrooms should be thirty-four (34) inches.

(iii) Provide 4-inch backsplashes shall be provided in wet spaces.

(iv) Quality descriptions for millwork and cabinets are based on the AWI's Architectural Woodwork Quality Standards. Quality standards for hardware such as drawer slides, hinges, pulls, latches and locks, and shelf supports are based on ANSI/BMHA 156.9, Cabinet Hardware.3.7.9.1.2.

(v) Casework quality shall be as follows:

(1) Millwork quality level 1 shall be AWI Premium Grade. Particleboard core with wood veneer on exposed to view surfaces. Shop fabricated by millworker to custom sizes and configurations. Grade 1 hardware, plated finish.

(2) Countertop shall be exterior grade plywood with wood, solid surface or similar. AWI Premium Grade.

(3) Millwork quality level 2 shall be AWI Custom Grade. Particle board core with plastic laminate veneer. Factory fabricated to standard sizes. Grade 2 hardware, plated finish. Countertop shall be particleboard with plastic laminate top and edge. AWI Custom Grade.

(4) All millwork shall be millwork quality level 1.

(f) Architectural Woodwork for Courtrooms:

(i) Provide hardwood veneer panels with solid hard-wood trim and edge banding, with shop-applied stain and finish with three coats of transparent sealer per Architectural Woodwork Institute premium grade requirements.

(ii) Wood shall be FSC-certified. The use of tropical hardwoods is prohibited.

(iii) Solid wood base to match courtroom panels may be used in public spaces and chambers.

(iv) Courtroom built-in components include judge's bench; court-room clerk's; jury box; public bench seating; rails, and gates; and accessible lectern (note: bench seating, counsel tables, and lectern may be standard furniture customized to match courtroom finish).

(v) Courtroom platforms: raised platforms in courtrooms shall be of a construction method not requiring underfloor fire sprinklers. Handrails, if required, shall be discreet and integrated into courtroom design.

(g) Compact Shelving Systems: provide powered mobile storage shelving systems, touchscreen activated. Shelving to be steel framed with wood shelving.

10.2.9 Specialties

(a) Visual Display Units:

(i) Porcelain Enamel Marker-Boards shall be provided per the Room Data Sheets, and shall comply with the following provisions:

(1) 4'-0" high by 4'-0" wide (minimum).

(2) All marker boards shall be magnetic.

(3) Dry-erase porcelain with scratch and stain resistant surface, factory laminated assembly of three-ply construction consisting of backing sheet, 3/8-inch core material, and 24-gauge porcelain enamel steel. Color: Porcelain low-gloss white. Frame of 1¼- inch x 0.062 inch-thick aluminum face trim with mitered corners, mill finish, and concealed hangers; include pen trough.

(4) Warranty: Porcelain enamel face sheets shall carry manufacturer's lifetime warranty for the replacement of sheets that fail, including surfaces that lose original writing and erasing qualities and surfaces exhibiting crazing, cracking or flaking

(ii) Provide tackboards, either linoleum or cork tackable surfaces.

(b) Toilet Compartments:

(i) Toilet partitions shall be full height. Units shall be stainless steel or phenolic panels with stainless steel fittings; hardware and fastenings as necessary.

(c) Shower Compartments:

(i) Provide full height tile shower surrounds with waterproofing membranes, to be constructed in compliance with code requirements.

(ii) The dressing area shall have wall-mounted hooks and a bench.

(d) Lockers: provide lockers on continuous bases, with recessed door handles and digital keypad locks. Provide ADA-accessible fixed steel locker benches with wood bench tops.

(e) Wall Protection: provide stainless steel or PVC-free corner guards at all public area outside corners not clad in wood paneling.

(f) Toilet Accessories:

(i) Provide products manufactured by a company with a minimum of ten (10) years successful experience manufacturing similar products. To the greatest extent possible provide products from a single manufacturer.

(ii) Accessibility Requirements: Comply with requirements applicable in the jurisdiction of the Project, including but not limited to ADA and ICC/ANSI A117.1 requirement as applicable.

(iii) Accessories shall be commercial heavy duty, stainless steel, satin finish, and shall use standard sized supplies, such as toilet rolls, seat covers, etc. All accessories shall be lockable and theft/vandal resistant and shall be easily serviced and refilled without special equipment, except for key access. Provide keys to the County for service.

(iv) Toilet accessories:

(1) Toilet tissue dispenser: dispenser shall be a surface mounted double roll type with automatic drop in and shall be suited for toilet paper rolls up to 5¼-inch diameter.

(2) Seat cover dispenser: surface-mounted dispenser shall hold standard refill cartridges up to two hundred fifty (250) covers.

(3) Waste receptacle: provide a recessed or semi-recessed fixture. Size based on building occupancy loading.

(4) Paper towel dispenser: capacity 400 C-fold towels.

(5) Soap dispenser: provide a touch-free model.

(6) Soap/shampoo rack in shower stalls.

(7) High and low robe hooks.

(8) ADA-compliant grab bars, stainless steel.

(9) Provide coin free vending machines for sanitary napkins and tampons in women's toilets.

(10) Provide sanitary napkin disposal units in women's toilets.

(11) ADA-compliant electric hand dryer.

(12) Baby changing station: provide fold-out baby-changing stations in female, male, and unisex toilet facilities.

(13) Mirrors: Mirrors shall be one-quarter (¼)-inch thickness with solid backing. Frames shall be one half (½)-inch by one half (½)-inch by one half (½)-inch heavy-duty stainless-steel angle, with all corners mitered and welded. Mirror width shall match counter width and coordinate with lighting.

(14) Provide thirty-inch by forty-eight-inch (30" x 48") mirror at single occupancy toilet rooms.

(15) Provide detention grade toilet accessories in holding cells.

(g) Signage:

(i) All signage shall meet ADA requirements and the most recently adopted provisions of the Uniform Building Code regarding accessibility. Braille lettering and audio signals shall be provided at elevators and where required by codes. Provide prominent multilingual posting of public notices and informational material.

(ii) An integrated, complementary, and comprehensive signage program shall address both code-required signage (such as exit signs, exiting plans, and room numbers) and non-code-required signage (building directories, notices). The graphics and signage programs shall be developed during early design stages to integrate signage with the design concept, functional program, and building circulation zones. Attractive, legible signs showing directions and information shall be incorporated into design of all public areas.

(iii) Building Entry:

(1) Clearly mark the courthouse entrance with signs indicating that all persons and articles entering the facility are subject to search, that no weapons of any kind are allowed within the facility or on the grounds of the facility, and that violators are subject to fine and arrest.

(2) Restrict all other signage at entry to preserve a unified and attractive façade.

(iv) Building directory: locate a building directory near the main public entrance. The directory shall contain a diagram listing all major building components. This directory shall be located in an area seen by the public after they have been screened and may be integrated into an information booth or kiosk. Provide smaller directories at each elevator lobby with information about various occupancies on that floor. Post signs for children's waiting room at each directory.

(h) Storage specialties: provide metal storage shelving with wire rack shelving units and seismic anchors.

(i) Screening equipment: provide toxin and package weapons scanners at entry screening lanes.

10.2.10 Detention equipment

(a) Weapons Lockers:

(i) Detention gun lockers: provide a secure location for short-term storage of small firearms for visiting law-enforcement officers.

(ii) Weapons rack and ammunition storage: provide large weapons locker for group storage of weapons and ammunition.

(b) Holding cells:

(i) All furniture, lighting fixtures, and ventilation shafts inside holding cells shall be vandal-resistant and secured in place.

(ii) All surfaces that are accessible to defendants, except stainless steel, shall be treated with an anti-graffiti coating.

(iii) Provide structural glazed-concrete block walls with an anti-graffiti coating or standard concrete block walls with block filler and multilayer epoxy coating.

(iv) Wall mounted metal or floor mounted CMU benches with concrete seats.

(v) The sink and water closet unit may be combined and have modesty panels. Plumbing fixtures shall have antiflood devices.

(vi) Ceilings shall be an impenetrable security acoustic panel system.

10.2.11 Joint Sealants

(a) The VOC content of all field-applied adhesives, adhesive bonding primers, sealant primers and sealants used on the interior of this Project shall not exceed the limits defined in Rule 1168 (Adhesive and Sealant Applications) of the SCAQMD, of the State of California, with a rule amendment date of October 6, 2017.

(b) For adhesives and sealants used inside the weatherproofing system, indicating VOC content and laboratory test reports showing compliance with requirements for low-emitting materials

(c) Provide preconstruction sealant compatibility and adhesion testing. Field test all joint sealants prior to installation to assure compatibility with all system sealants interact with.

(d) Joint sealants will be as follows:

(i) For interior joints in horizontal traffic surfaces joints shall be Urethane, M, NS, 50, T, NT.

(ii) For Interior joints in vertical surfaces and horizontal nontraffic surfaces joints shall be Latex Type OP, Grade NF.

(iii) For Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces joints shall be STPE, Mildew Resistant, S, NS, NT.

10.2.12 Elevators

(a) The Project Company shall provide three (3) elevator systems:

(i) Public within the public circulation zone;

(ii) Restricted within the restricted circulation zone; and

(iii) Secure (in-custody defendants) within the secure circulation zone.

(b) Public and staff elevators shall have a recommended interval of forty-five (45) to fifty (50) seconds (wait time of twenty-six (26) to thirty-two (32) seconds) and a handling capacity of 15% of the building population served. All passenger elevators shall meet the design requirements of the building code for access by persons with disabilities and emergency

personnel. If high-volume areas are located at any other level than the first, provide extra capacity to move large numbers of people to and from that level.

(c) Provide a shared or dedicated elevator for staff, freight, and service for deliveries, staff vertical movement, trash transport, document transport, and building maintenance. Staff elevators can double as a freight/service elevator.

(d) Hydraulic elevators are permitted for two (2)- or three (3)-story facilities, while four (4)-story and taller facilities shall have traction elevators.

(e) Passenger elevator car interiors shall have durable and vandal-resistant finish materials consistent with the building design. Cab panels shall be replaceable.

(f) One cab in the building shall have an enclosure above the ceiling hatch to accommodate extra-long deliveries such as rolls of carpet. A typical car interior ceiling height is 9'-0" to 10'-0".

(g) Elevator equipment may be located in an elevator equipment room and shall be accessible for maintenance from a floor level.

(h) Each elevator cabinet is required to have one (1) voice outlet to serve the emergency phone, intercom or handset.

10.3 INTERIOR FINISHES

10.3.1 General

(a) Painting:

(i) VOC content requirements for all paints and coatings wet-applied on site shall meet the applicable VOC limits of the SCAQMD, Rule 1113, effective February 5, 2016.

(ii) For paints and coatings used inside the weatherproofing system, indicating VOC content and laboratory test reports showing compliance with requirements for low-emitting materials.

(iii) All interior paint products shall have documented a publicly available material ingredient inventory (Declare Label, Health Product Declaration, or Cradle to Cradle Certification).

(iv) Painting products shall be top-of-the-line products by firms with over five (5) years manufacturing experience with a full product line.

(v) Provide primers and other undercoat paint produced by same manufacturer as finish coats. Use thinners approved by paint manufacturer and use within recommended limits.

(vi) All water-based paints and their associated primers and sealers shall have zero-VOC content. This includes flat, satin, semi-gloss, and eggshell finishes (MPI gloss levels 1-5).

(vii) All paints and coatings shall meet MPI's (Master Painters Institute) approved product list.

(viii) Gloss Levels shall be as follows:

(1) Gloss Level 1 (Flat): less than 5 – to be used on ceilings.

(2) Gloss Level 2 – 3 (Eggshell): 5 to 20 – to be used on walls.

(3) Gloss Level 4 (Satin): 20 to 25 – to be used on walls.

(4) Gloss Level 5 (Semi-gloss): 35 to 65 – to be used on doors and on walls in areas requiring high levels of maintenance.

(ix) Paint in Communications/IT Rooms: Wall-mounted plywood in communications/IT rooms shall be painted with interior, low VOC, water-based flat latex, fire retardant paint on both sides.

10.3.2 Wall Finishes

(a) Wall finish types:

RDS Code	Description
W-1	Gypsum Board, Paint, Latex
W-2	Gypsum Board, Paint, Epoxy
W-3	Ceramic or Porcelain Tile
W-4	Unfinished
W-5	Specialty Wall Finish
W-6	Public Areas/Hearing Rooms: Panelized Wood Wall, Premium Acoustic Wall Panels, Painted Gypsum Board
W-7	Ceramic Tile / Gypsum Board, Paint, Epoxy
W-8	Exposed Concrete or CMU, Pain

Table 6. 10.11 (Wall Finish Types)

(b) Base types:

RDS Code	Description
B-1	Rubber
B-2	Wood, Natural Finish

RDS Code	Description
B-3	Wood, Painted
B-4	Stone
B-5	Ceramic or Porcelain Tile
B-6	Stainless Steel
B-7	No Base
B-8	Special Base
B-9	Public Areas / Hearing Rooms: Premium Metal Base

Table 6. 10.12 (Base Types)

(c) Tile:

(i) Tile walls and wainscoting are strongly encouraged for use in toilet rooms and other wet areas.

(ii) Prepackaged, dry mortar thinset mix complying with ANSI A118.4, containing dry, re-dispersible, vinyl acetate or acrylic additive to which only water shall be added at Project site is strongly encouraged for use.

(iii) Polymer-modified tile grout complying with ANSI A118.7 is preferred.

(iv) Epoxy grout mortar is strongly discouraged for use on the project.

(v) All tile products shall have documented a publicly available material ingredient inventory (Declare Label, Health Product Declaration, or Cradle to Cradle Certification).

(d) Wood Paneling:

(i) Hardwood veneer and solid wood construction is preferred.

(ii) Provide hardwood veneer panels with solid hard-wood trim and edge banding, with shop-applied stain and finish with three coats of transparent sealer per Architectural Woodwork Institute (AWI) premium grade requirements.

(iii) In all spaces other than Hearing Rooms and Courtrooms, wood paneling finishes on the walls may be omitted if there is exposed and visible mass timber on the underside of deck above, as well as exposed mass timber beams and columns in the space.

(e) Wall Coverings: vinyl wall coverings will not be used.

(f) Stone Facing: stone wall panels of uniform size and thickness, fastened with stainless steel anchors, using polymer modified grout for joints.

(g) Acoustic Wall Panels: when acoustic wall panels are provided, panels shall be full-height fabric wrapped acoustic panels with a Z-Clip mounting system. Acoustic panels shall have interior reinforced frames to provide crisp edges.

10.3.3 Interior Fabrications

(a) Decorative metal.

(b) Expansion Joint Covers:

(i) Provide expansion joint covers at all building expansion joints.

(ii) Provide matching covers from a single manufacturer.

10.3.4 Flooring

(a) Floor Types

RDS Code	Description
F-1	Carpet
F-2	Ceramic or Porcelain Tile
F-3	Resilient Flooring
F-4	Resilient Flooring – Antistatic
F-5	Stained or Polished Concrete
F-6	Sealed Concrete, Unstained
F-7	Specialty Flooring
F-8	Raised Access Flooring
F-9	Public Areas : Stone / Porcelain Tile or Terrazzo
F-10	Courtrooms / Courtroom Vestibules: Premium Carpet

Table 6. 10.13 (Floor Types)

(b) Performance Requirements:

(i) Hard surface flooring and adhesives shall comply with requirements of FloorScore Standard.

(c) Polished Concrete:

(i) Polished concrete floors are encouraged for use in high traffic public areas.

(ii) Preferred finish is Class B, Fine Aggregate (Salt and Pepper) with a polish level 2, Medium Gloss.

(iii) Products shall provide hardness, water resistance and dusting control suitable for the use of the space.

(d) Tile:

(i) Tile floors are strongly encouraged for use in toilet rooms and other wet areas.

(ii) Quarry tile is strongly encouraged for use in kitchen areas.

(iii) Waterproof and anti-fracture membranes are strongly encouraged for use under all tile floor installations.

(iv) Prepackaged, dry mortar thinset mix complying with ANSI A118.4, containing dry, re-dispersible, vinyl acetate or acrylic additive to which only water shall be added at Project site is strongly encouraged for use.

(v) Polymer-modified Tile grout complying with ANSI A118.7 is preferred.

(vi) Epoxy grout mortar is strongly discouraged for use on the project.

(e) Wood flooring:

(i) Solid wood or engineered wood is acceptable for use. Species shall be white oak.

(ii) All wood flooring shall be field finished with water-based urethane finish system. Colors to be approved by the County.

(iii) All wood flooring to be installed with a sound control underlayment.

(f) Sealed Concrete:

(i) Sealed concrete floor finishes are strongly encouraged for all back of house spaces not typically accessible to the public.

(ii) Sealer shall be zero VOC, and shall provide hardness, water resistance and dusting control suitable for the use of the space.

(g) Resilient Flooring products:

(i) Verify that surfaces to receive resilient flooring are smooth, level, and flat; are clean, and free of grease, oil, construction films, other coatings, stains, dust and other deleterious materials that might affect final appearance or adhesive bond.

(ii) Seal and wax flooring in accordance with manufacturer's recommendations. The surface shall be finished to a high-quality standard.

(iii) Linoleum Flooring:

(1) All material for linoleum sheet flooring shall be a homogeneous sheet of primarily natural materials consisting of linseed oil, wood flour, and rosin binders, mixed and calendared onto natural jute and sound impact reduction backing.

(2) Pattern and color shall extend throughout total thickness of material.

(3) The thickness for linoleum flooring shall be 0.10 inches

(4) Seams shall be heat welded. Gaps or overlaps shall not be permitted.

(5) Preferred Manufactures include Forbo, Tarkett, and Duracryl Liquid Linoleum.

(iv) Rubber Flooring:

(1) Rubber flooring products made from natural latex or synthetic styrene butadiene rubber ("**SBR**") are strongly encourage.

(2) Rubber flooring products containing tire derived recycled rubber are not permitted.

(3) Preferred products include Nora (Norment & Noraplan), American Biltrite (AB Pure & Marathon), Johnsonite/Tarkett (Rubber Tile), Mohawk (True) and Expanko (Sereniti).

(v) Polyethylene terephthalate ("**PET**") floor tiles:

(1) Floor tiles made from recycled water and soda bottles.

(2) Preferred products include Mohawk (Pivot Point).

(vi) Polyurethane sheets and tiles: preferred products include Shaw (Biobased PU Resilient).

(vii) Vinyl Flooring: vinyl tile, vinyl sheet goods and vinyl enhanced tiles of any kind are not permitted.

(h) Resilient base:

(i) Resilient Base shall be Rubber, complying with ASTM F 1861, with a thickness of 0.125 inches, and shall have field-formed inside and outside corners.

(ii) Provide non-coved base at carpet areas, provide coved base at all other areas.

(i) Carpeting:

(i) Carpet and cushion shall comply with testing and product requirements of CRI's "Green Label Plus" testing program.

(ii) Provide Gold level certification according to ANSI/NSF 140.

(iii) The selection of carpet type(s) shall be made and guided by an informed understanding of the amount of traffic a given area will experience, the anticipated

degree of spilling and staining that will occur in that area and the amount of direct sunlight exposure on the carpet(s).

(iv) Solid color carpet shall not be permitted.

(j) Entrance Floor Grilles:

(i) Entrance floor grilles are required at all public entries. Grilles are not required at secondary entrances or at functional rooms with a direct point of entrance/egress to the exterior.

(ii) Entrance floor grilles shall be recessed; surface mats are not acceptable.

(iii) Entrance floor grilles shall extend a minimum four (4) feet in the path of travel into the New Courthouse entrance area. Exterior grilles are not required.

(iv) Floor grilles shall be designed to support a minimum of two hundred (200) pounds per square foot without permanent deflection and support a three hundred (300) pound concentrated load at any point without deflecting more than one-eighth (1/8) of an inch.

(v) All grilles shall be easily removable for maintenance purposes and shall not rattle when walked on.

(vi) A drain is required underneath all recessed grilles. The substrate under the grille shall be sloped to drain.

(vii) Entrance floor grilles shall be stainless steel.

(k) Flooring Supplementary Components

(l) Acoustic underlayment

10.3.5 Stair Finishes

Stair finishes shall be in compliance with Section 9.5.3 (Stairs) of these Design and Construction Standards.

10.3.6 Ceiling Finishes

(a) In Rooms and Spaces where the overhead slab is constructed from mass timber, the mass timber may be exposed and the designated applied Ceiling Finish omitted provided all other room provisions as outlined in the Room Data Sheet are met, including Acoustic Criteria. When mass timber slabs are exposed to view, overhead utilities and conduit routing shall be hidden from view or neatly organized, and exposed duct lagging/insulation shall not permitted.

(b) Ceiling Finishes

RDS Code	Description
C-1	Acoustical Ceiling Tile
C-2	Acoustical Ceiling Tile, High NRC
C-3	Acoustical Ceiling Tile, Mylar Faced
C-4	Gypsum Board, Painted
C-5	Open, Architecturally Finished
C-6	Open, Utility
C-7	Special Ceiling
C-8	Perforated Metal Security Ceiling with Acoustical Treatment

Table 6. 10.14 (Ceiling Finishes)

(c) Acoustic panel ceilings:

(i) All manufacturers shall have a post-consumer recycling program.

(ii) Acoustical panel ceilings shall be sag resistant manufactured of mineral fiber, or fiberglass or wood-faced acoustical ceilings.

(iii) All acoustical panels shall have Reveal sized to fit flange of exposed suspension-system members.

(iv) All acoustical panels shall be treated with manufacturer's standard broad spectrum antimicrobial fungicide and bactericide treatment.

(v) In the case of sag-resistant manufactured of mineral fiber or fiberglass acoustical panel ceilings, the following provisions shall apply:

(1) Acoustical panel ceilings shall have a minimum recycled content of 70%, with postconsumer recycled content plus one-half pre-consumer recycled content.

(2) Directional or non-directional fissured texture.

(3) Minimum light reflectance shall be 0.80 for all ceiling finishes.

(4) NRC value shall be 0.60 minimum for Enclosed Offices, Judicial Chambers, Conference Rooms, Training Spaces, Jury Deliberation, and Clerks Office. NRC value shall be 0.65 minimum for open office space.

(5) CAC value shall be 35.

(6) Minimum light reflectance shall be 0.80.

(7) Flame spread shall conform to the requirements of Class A, ASTM E84.

(8) Thickness shall be minimum three-quarter (¾) inch.

(9) Scrubbable Mylar facing where identified in Room Data Sheets as washable.

(10) ~~Exposed tee grid systems shall not be permitted.~~ Provide a 9/16" narrow exposed, silhouette or dimensional tee grid system.

(11) All acoustic panel ceiling products shall have documented a publicly available material ingredient inventory (Declare Label, Health Product Declaration, or Cradle to Cradle Certification).

(d) Wood Ceiling Panels

(e) Stretched fabric and acoustic baffle ceilings: framework shall be PVC free.

(f) Acoustical ceiling treatment:

(i) Ceilings: open, architecturally finished:

(1) Architecturally exposed ceiling areas are those areas intentionally open to structure above and may contain suspended acoustical or other opaque panels and lighting fixtures. Mechanical and electrical equipment including ductwork, conduit, fire sprinkler piping, etc. exposed to view shall be coordinated and orthogonally laid out for neat and workmanlike appearance. The underside of slabs and all exposed elements and building systems shall be painted.

(ii) Ceilings: open, utility:

(1) Utility exposed ceiling areas are those areas intentionally open to structure above and may contain suspended acoustical or other opaque panels and lighting fixtures. Mechanical and electrical equipment including ductwork, conduit, fire sprinkler piping, hangers, supports, etc. exposed to view shall be laid out for neat and workmanlike appearance. Exposed elements shall be painted or unfinished, and shall be clean, free of marks, mill scale, or other fabrication residue

(iii) Ceilings: spring-isolated acoustic ceilings:

(1) Where acoustic requirements demand a higher performing ceiling than the Finish Ceiling specified is specified in the Room Data Sheet allows for, provide a spring isolated acoustic ceiling above the finish ceiling.

(g) Gypsum board ceilings:

(i) Gypsum board shall comply with C1396, Standard Specification for Gypsum Board.

(ii) Gypsum board selection will vary depending on application: use type X gypsum board for fire rated assemblies.

(iii) Ceilings shall have a maximum deflection of L/360.

(iv) Gypsum Board finish levels must be applied in accordance to ASTM C 840.

(v) Provide higher level of finish as required to comply with fire-resistance ratings and acoustical ratings:

(1) Level 1 shall be used in plenum areas and areas concealed to public view.

(2) Level 2 shall not be permitted.

(3) Level 3 shall be used for substrates for tile or other applied material.

(4) Level 4 shall be the typical finish level, unless otherwise noted.

(vi) All gypsum board products shall have documented a publicly available material ingredient inventory (Declare Label, Health Product Declaration, or Cradle to Cradle Certification).

11 OPTIONALITY AND MOCKUP PROCESS

11.1 EXTERIOR FINISHES

(a) The Project Company shall provide the County with a minimum of three (3) options for exterior material color palettes for the County's selection. Such materials, products, furniture, casework, or finishes shall include paint or staining colors for doors, door hardware colors and finishes, exterior glazing coloration, and any items that offer such optionality of color palettes, textures, or finishes.

(b) Presented options shall be supplemented with rendered visuals to supplement the materials and information needed for decision making. Research regarding cleaning and weathering of presented material options shall be presented for clarity and transparence.

11.2 INTERIOR FINISHES

(a) Requirements for interior spaces have been organized into three (3) tiers of Interior Categories (A, B, C) as set forth in this Section 11.2(a). In all cases, options for materials, products, furniture, casework or finishes include paint or staining colors for doors, door hardware colors and finishes, glazing coloration, and any items that offer such optionality of color palettes, textures or finishes. Please follow the following points to determine optionality requirements for indoor spaces:

(i) Interior Category A: Premium

(1) The Project Company shall provide the County with a minimum of three (3) options for interior material color palettes for the County's selection.

(ii) Interior Category B: Standard

(1) The Project Company shall provide the County with a minimum of three (3) options for interior material color palettes for the County's selection.

(iii) Interior Category C: Utility

(1) The Project Company shall provide the County with a minimum of one (1) option for interior material color palettes for the County's selection.

11.3 FINISH MATERIAL REVIEW PROCEDURE

All options provided by the Project Company to the County in accordance with this Section 11.3 shall be reviewed by the County in accordance with the Submittal Review Procedure.

11.4 COURTROOM DESIGN AND MOCKUP

11.4.1 Mockup Requirements

(i) An adjustable, full-scale Courtroom mockup at an indoor location on within twenty (20) miles of the Project Site prior to achieving Occupancy Readiness shall be provided. The Courtroom mockup shall be a full-scale "working model" of the typical circuit jury courtroom, and large ceremonial courtroom, which is constructed from lightwood framing and plywood, oriented strand board ("**OSB**"), corrugated cardboard, canvas or other "stage set" material. The Project Company shall build the mock-up so that it can be easily moved or modified in the field during a courtroom mockup review which shall be scheduled and facilitated by the Project Company. The mockup shall be reviewed by representatives of the County. The review shall include but not be limited to the relative locations of courtroom components to one another, furniture size, desk top heights and widths, bench cap heights and locations, sightlines, functional alignments, relative heights of workstations, ease of file and paper flow, traffic flow within the courtroom space, accommodation of computer and audio-visual system elements, accessibility and the scale, proportion and massing of all courtroom elements.

(ii) The courtroom mockup shall include enclosing walls and representation of the ceiling plane and all fixed elements and furniture within the courtroom shall be represented in the mockup. The mock-up shall provide the ability to change the size of the enclosing room to correspond to the programmed size from large courtroom (2,400 sf) to small hearing rooms (900 sf), and the ability to position the millwork stations within the room as designed for each courtroom type.

(iii) The Courtroom mockups shall apply to the Design-Build Period and are not part of the Proposal submitted in response to the RFP. The mockups shall be for the large Courtroom (2,400sf), Standard Courtroom (1,900sf), and Civil Courtroom (1,400sf).

(iv) The mockup shall remain in place for at least thirty (30) days.

11.4.2 Courtroom Mockup Review

(a) the Project Company shall provide the following presentation and review procedures during the courtroom mockup review:

(i) preliminary Courtroom design plans, elevations and reflected ceiling plans prior to designing or building the courtroom mockup shall be reviewed by the County;

(ii) the County's review comments from the preliminary plans into the courtroom mockup plans shall be incorporated;

(iii) the use of a location and fabrication of the full-scale mock-up model shall be secured and paid for by the Project Company. The Project Company shall review the mockup fabrication during the fabrication process. The Project Company shall modify the mockup per preliminary review comments, if required;

(iv) a formal mockup review shall be scheduled, and an agenda shall be prepared and followed. Each Courtroom component shall be reviewed on a piece-by-piece basis. The County's reviewers shall be allowed to "test" the mock-up components and off er comments. People shall be seated at all courtroom component locations and the quality of sightlines shall be assessed between all locations. Project Company representatives from its design team and the casework fabricator shall be in attendance. Trained workers to move or make adjustments to the mockup during the review in response to comments raised during the review shall be provided;

(v) all comments in a review summary shall be recorded;

(vi) the meeting summary shall be distributed to all participants. Assuming no exceptions to the summary are received, the mock-up design comments and revisions into the courtroom design documents shall be noted; and

(vii) should the initial mockup review require a follow-up review, the mockup shall be physically modified in response to the comments received from the County and another mockup review per the outline above shall be scheduled.

12 FACILITY MANAGEMENT SYSTEMS

12.1 BUILDING AUTOMATION SYSTEMS

The Project Company shall install a comprehensive building automation system for the New Courthouse in accordance with the requirements of this Section 12.1 (the "**Building Automation System**" or "**BAS**").

(a) The Building Automation System shall provide automated control of the following:

(i) Mechanical Systems;

(ii) Lighting Systems;

(iii) Fire Protection and Life Safety Systems; and

(iv) all meters.

(b) The BAS shall provide for datalogging (trending) and automated fault detection.

(c) Project Site lighting shall be integrated with the BAS for photocell and time schedule control via relay panels.

(d) The BAS shall provide notifications to relevant Project Company Persons, the County Representative, and other County personnel, as designated by the County Representative, that include any and all faults and alarm events that affect New Courthouse activities, New Courthouse occupant (including public users) comfort, and security. The BAS shall record and report all other alarm events.

(e) Refer to 3.3 (Asset Management System Services) of the Facilities Management Standards for information regarding how the BAS shall integrate with the CMMS to track Scheduled Maintenance, Demand Maintenance, and Demand Maintenance requests coming in through the Help Desk.

12.2 COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM

12.2.1 General Requirements

(a) Prior to the Occupancy Readiness Date, the Project Company shall provide and install a computerized maintenance management system that shall have, as its users, the Project Company Persons engaged in the Facilities Management Services, and County personnel, as designated by the County Representative (the "**Computerized Maintenance Management System**" or "**CMMS**").

(b) In addition to the number of CMMS user licenses required by the Project Company for the performance of the Facilities Management Services, the Project Company shall provide a minimum of four (4) concurrent user licenses to the County, each with full "read only" access, including continuous access to reporting at all times throughout the Term, to all nonfinancial CMMS data and other CMMS information related to the Facilities Management Services.

(c) The Project Company shall ensure that all information regarding the CMMS is at all times correct and current and shall provide updated information regarding the CMMS to the County on a timely basis. The Project Company shall ensure that all information regarding the CMMS provided to the County is sufficient and appropriate to enable the County to train designated County personnel with respect to the use and operation of the CMMS.

(d) Once the CMMS is established, the Project Company shall be required to maintain the CMMS to accurately reflect all Elements of the Project.

12.2.2 CMMS Functionality Requirements

The CMMS shall, at a minimum:

(a) be a comprehensive maintenance work management solution for planned and unplanned activities related to the Facilities Management Services including Scheduled Maintenance and Demand Maintenance, schedule management, resource optimization, inventory planning, asset management, monitoring and costing, long and short-term planning, report creation and management, warranty tracking, and Unavailability Events and Performance Failure tracking, including Unavailability Deductions and Performance Failure Deductions;

(b) use a non-proprietary, industry standard, database which:

(i) provides ease of data migration to an area enterprise computerized maintenance management system, if one becomes available to the County in the future;

(ii) at all times remains compatible with the database systems then being employed by the County;

(iii) have application functionality that does not occur at the database level;

(iv) operate on a performance-based internet browser program that is compatible with the County's operating system, as it may be updated or replaced from time to time;

(v) not require any personal computer client software;

(vi) have the capability to trace duplicate work requests and work orders;

(vii) have the capability to track and report actual Rectification Periods, as the case may be;

(viii) track work orders for the Facilities Management Services;

(ix) retain all records for the length of the Term in the database;

(x) employ appropriate security, data protection and access protocols, all in accordance with Best Management Practice; and

(xi) receive, acknowledge and track Demand Maintenance requests for the Help Desk via email.

12.2.3 CMMS Information Management Requirements

(a) The Project Company shall:

(i) load each building element, component systems and piece of equipment that will be planned, scheduled, controlled and monitored on to the CMMS with the information described in Section 3.6.1 (Master Maintenance Plan) of Appendix 8 (Facilities Management Standards) of the Project Agreement;

(ii) perform all CMMS maintenance, administration and support and provide initial and annual refresher training (or on an as needed basis, as determined by the

County) to designated Project Company Persons and County personnel with respect to the use and operation of the CMMS;

(iii) be responsible for all CMMS hardware and software, hardware and software installations, upgrades, repairs, annual maintenance service agreements, updates and for maintaining all system and associated equipment;

(iv) maintain all nameplate data for every piece of equipment in the CMMS and ensure that every piece of equipment has a unique identifier code;

(v) provide the County with customized CMMS reports on request;

(vi) affix a CMMS integrated identifier sticker with barcode on each piece of equipment, and ensure that identifier and barcode information will be printed on each service ticket and work order; and

(vii) use wireless mobile devices to read barcodes or radio frequency identification in performing routes or rounds, observations, inspections, and the Facilities Management Work. The Project Company shall provide wireless mobile devices that will record work status, materials, time and attendance, failure codes, tools, and comments at a minimum, and have the capability to create new service tickets and work orders on demand, and capture signatures for completed tasks.

(b) Data created and captured in the wireless mobile devices shall be capable of being wirelessly transmitted in a secure manner to the CMMS. The Project Company shall be responsible for all equipment and costs associated with wireless mobile devices. In addition to the number of wireless devices required by the Project Company for performance of the Facilities Management Services, the Project Company shall supply and maintain six (6) additional wireless mobile devices for designated County personnel.

12.3 ASSET INVENTORY

The Project Company shall establish, maintain, and update a register that complies with the requirements set forth in Section 4.4 (Asset Inventory Management) of the Facilities Management Standards (the "**Asset Inventory Report**"). The Project Company shall ensure that the Asset Register and related software complies with all reasonable requirements made by the State. The Asset Register shall be incorporated into the CMMS, in accordance with Section 3.7.2 (Computerized Maintenance Management System Service) of Appendix 8 (Facilities Management Standards) of the Project Agreement.

12.4 BUILDING INFORMATION MODELING SYSTEM

The Project Company shall establish, maintain, and update a BIM Record Model in accordance with Section 2.3 (Building Information Modeling ("BIM") and Digital Data) of these Design and Construction Standards, and Section 4.5 (BIM Management) of the Facilities Management Standards.

12.5 HELP DESK

The Project Company shall establish and maintain a Help Desk that complies with the requirements set forth in Section 3.2 (Help Desk Services) of the Facilities Management Standards.

13 VERTICAL CIRCULATION SYSTEMS

13.1 GENERAL REQUIREMENTS

(a) The Project Company shall design and construct a reliable vertical circulation system that accommodates the anticipated capacity and conveyance needs for the New Courthouse.

(b) The Project Company shall conduct a vertical circulation study to ensure the quantity of public, staff, and service elevators set forth in the program are adequate. Such study shall be conducted by an independent consultant not associated with any manufacturer or elevator equipment supplier. Separate vertical circulation studies shall be conducted for public and staff elevators, service elevators, and elevators for in-custody defendants. In any case, the Project Company shall design and construct, at a minimum, the number of Public Elevators, Staff Elevators, Service Elevators, and In-Custody Elevators included in the New Courthouse Program.

(c) The vertical circulation analysis and simulation studies shall be used for determining the quantity, capacity of speed of all proposed elevator systems. A report, documenting the results of the analysis shall be submitted to the County for review and acceptance in accordance with the Submittal Review Procedure. Reports shall be accompanied by all necessary supporting data to confirm and justify the proposed vertical transportation systems. Supporting information including, but not limited to, design assumptions (population estimates, etc.) analysis printouts, alternate schemes, and any other information necessary to support the report shall be provided as part of such report.

(d) The criteria used to evaluate vertical transportation are "Average Interval" and "Handling Capacity" and shall be defined as follows:

(i) Average Interval: means the average amount of time, in seconds, between elevators leaving a main terminal during 5-minute up-peak periods. Average Intervals shall be less than 45 seconds during a 5-minute peak period; and

(ii) Handling Capacity: means the number of people that the elevators can transport during a 5-minute, 2-way peak period expressed as a percentage of the population. Handling capacity shall be designed for a minimum of 15% during the 5-minute, 2-way peak period.

(e) Direct plunger or twin post hole-less hydraulic elevators shall not be permitted. Traction (geared or gear less) elevators shall be used in all instances where travel exceeds thirty (30) feet. The use of machine room-less (MRL) elevators shall be considered for capacities up to five thousand (5,000) pounds.

(f) The period normally selected for elevator design calculations and evaluation of elevators in courthouse facilities in the peak condition with 2-way traffic that is likely to occur.

(g) At least one (1) elevator shall comply with the emergency power requirements set forth in Section 15.4.2(d) of these Design and Construction Standards.

13.2 POPULATION DETERMINATION

The number of people requiring passenger elevator service in a courthouse building is a function of the number of courtrooms and their locations, the location of various support activities, and the passenger destination. It is reasonable to estimate the number of persons requiring a service based upon their attraction to these activities. The peak hour passenger elevator population densities vary by the type of facility and the projected area occupancy. Courtrooms shall be designed for a jury trial. There will be spectators from time to time, the judicial staff (about twelve (12) to sixteen (16) persons) and the jury (twelve (12) to sixteen (16) persons). By using a value of thirty (30) persons per Courtroom, plus expected spectators, a reasonable population can be established for each Courtroom. Another vertical transportation design concern is the handling of jurors. Prospective jurors gather in groups of twenty (20) to the various Courtrooms. Because jurors are usually escorted in groups, separate elevators large enough to transport the number of jurors (sixteen (16) to twenty (20) persons) may be required to move them vertically.

13.3 GENERAL SYSTEM DESCRIPTION

(a) All Public Elevators shall be four thousand (4,000)-pound elevators traveling at a speed of three hundred fifty (350) fpm and having regenerative drives.

(b) Service Elevators shall be five thousand (5,000)-pound elevators traveling at a speed of two hundred (200) fpm to three hundred fifty (350) fpm and having regenerative drives. Stainless steel (5WL pattern) cabs, entrances and vandal resistant fixtures shall be used.

(c) Elevator controls shall be group automatic for the passenger groups and typical selective collective on the prisoner and service elevators. Controls shall include independent service, card reader controls and security controls, fire operation, and standby emergency power operation.

13.4 ELEVATOR SYSTEMS

At a minimum, the following types of vertical transportation systems shall be provided:

13.4.1 Public Elevator Banks

(a) A minimum of four (4) Public Elevators shall be provided for the New Courthouse, in accordance with the New Courthouse Program. The final Public Elevator numbers shall be determined based on the Project Company's vertical circulation study required by Section 13 (Vertical Circulation Systems) and with a minimum capacity of four thousand (4,000) pounds in order to comply with gurney accommodation requirements. Door width and type shall be provided to accommodate stretcher.

(b) Four-thousand (4,000)-pound passenger elevator cab shall have an interior clearance of be 7'-5.5" wide by 5'-5" deep and 4'-0" wide by 7'-0" high, single speed, center opening doors.

(c) Public Elevators shall open to each public corridor floor.

(d) Ground floor elevator lobby shall be visible from the public lobby screening station.

(e) Controls shall be designed to allow denial of access to any floor by key, card reader, or Building Monitoring Room.

(f) If elevators serve basement level, restrict access via key, card reader or Building Monitoring Room.

(g) All passenger elevators shall be provided with CCTV to building security and show elevator position in single display in security control room. One (1) elevator shall have emergency control by security control room.

(h) Ceiling height shall be a minimum of 9'-0" for Public and Staff elevators.

(i) Provide engraved car number, signage, and vandal resistant car and hall buttons.

13.4.2 Staff Elevators

(a) Provide secured access for Staff Elevators with direct access from the Secure Parking to Judicial Chamber Areas. Staff Elevators shall be available for secure use by judges to access Courtroom floors.

(b) All Staff Elevator shafts and elevators shall serve all floors of the New Courthouse.

(c) Staff Elevators shall be separated and secured from Level 0: Unscreened-Public, Level 1: Sterile-Public, Level 2: Secure-Public, and the Public Circulation Zone.

(d) Minimum capacity for Staff Elevators shall be three thousand five hundred (3,500) pounds with single speed, side opening doors.

(e) Staff Elevator cab shall have a minimum interior clearance of 6'-5 ½" wide by 5' -5'' deep with 3'-6" wide by 7'-0" high, single speed, center opening doors.

(f) Staff Elevator shall be restricted and controlled by card reader or the Building Monitoring Room.

(g) All Staff Elevators shall be provided with standby power operation.

(h) Ceiling height shall be a minimum of 9'-0” for Public and Staff Elevators.

(i) Provide engraved car number, signage, and vandal resistant car and hall buttons.

(j) All Staff Elevators shall be provided with CCTV to Building Monitoring Room and show elevator position in single display in Building Monitoring Room. At a minimum, one (1) Staff Elevator shall have emergency control by Building Monitoring Room.

13.4.3 In-Custody Elevators

(a) A minimum of one (1) secure In-Custody Elevator shall be located adjacent to one (1) secure In-Custody stairwell and allow for the movement of in-custody defendants in a secure manner among Courtroom Holding Areas.

(b) One (1) secure detention stair is to be located adjacent to one of the secure In-Custody Elevator.

(c) For basic design purposes, all In-Custody Elevator shafts and elevators shall serve from Sally Port level to all Courtroom floors.

(d) Provide clearance inside of 5'-11" wide by 8'-4" deep with a minimum capacity of five thousand (5,000) pounds. In-Custody Elevator shall accommodate a gurney.

(e) Cab height shall be 9' -7". Provide 14-gauge rigidized stainless steel cab, returns, and transom. Provide 16 gauge rigidized stainless steel doors.

(f) Provide 4' -6" wide by 8' -0" high two-speed, side opening doors.

(g) Lobby call buttons shall be controlled by key, card reader or remote security control panel in In-Custody Control Room.

(h) Provide voice and visual communications between elevator and In-Custody Control Room.

(i) Provide vandal proof buttons. Cab interior shall consist of 14-gauge stainless steel walls and canopy. Flooring shall be aluminum diamond plate. Emergency exit shall be equipped with custody grade lock and alarm. All fasteners shall be tamper-proof type.

(j) All custody elevators shall be provided with CCTV to building security that shows inside elevator and elevator location on display and standby power operation.

(k) A minimum of one (1) In-Custody Elevator shall be capable for remote operation with car controls in In-Custody Control Room.

13.4.4 Service Elevators

(a) At least one (1) Service Elevator shall be provided for deliveries, document transport, trash removal and building maintenance. Such Service Elevator may serve as one of the Staff Elevators provided that such elevator is not used as a Service Elevator during Operating Hours unless otherwise approved in writing by the County Representative.

(b) Provide a clearance inside of 5'-11" wide by 8'-4" deep (or similar based on manufacturer's standard) with a capacity of five thousand (5,000) pounds. Service Elevator shall accommodate a gurney.

(c) Cab Height shall be 9’-7”. Provide 14-gauge rigidized stainless steel cab, returns, and transom. Provide 16 gauge rigidized stainless steel doors.

(d) Service Elevator cab shall have an interior clearance of 4'-6" wide by 8'-0" high two speed, side opening doors.

(e) Service Elevator shall service loading dock and all floors, including mechanical penthouse, but excluding roof equipment enclosures.

(f) Service Elevator shall not have direct access to Courtroom Holding Areas or Central Holding Areas.

(g) Service Elevator shall not be directly accessible from public corridors.

(h) Service Elevator shall be restricted and controlled by key, card reader or Building Monitoring Room.

(i) All service elevators shall be provided with CCTV to building security and standby power operation; show elevator position on a single display in the security control room.

(j) Provide engraved car number, signage and vandal resistant car and hall fixtures.

13.4.5 Witness Wheelchair Lift

Provide as required to meet Contract Standards and Applicable Law.

13.4.6 Escalators

(a) Where traffic demands on upper or lower levels are impacted by high-volume public areas, escalators may be provided to supplement the elevator systems.

(b) Escalators step width shall be forty-eight (48) inches with a speed of one hundred (100) fpm.

(c) If escalators area provided, they shall always be paired with a stairway system.

13.5 OBJECTIVES AND FUNCTIONAL USE

(a) All Public Elevators and Staff Elevators shall have the capability of handling the anticipated traffic loads for each area of service. Interior finishes shall be durable and easily removed and repaired. The elevator shall have durable fixtures, flooring and nickel silver sills. Elevators shall have remote monitoring and CCTV.

(b) Service Elevators shall be designed to handle all the anticipated passenger traffic as well as meeting material moving requirements. Elevator cabs shall be constructed of rigidized stainless steel wall panels, returns and doors, with nickel silver sills. Elevators shall have remote monitoring and CCTV.

(c) All vertical transportation shall be designed for maximum reliability and equipment longevity. The equipment shall be designed to handle material and equipment needs of the New Courthouse. The user experience shall be pleasant with acceptable wait times, provided for each type and use of the equipment and its location.

13.6 GENERAL QUALITY OF MATERIALS AND CONSTRUCTION

(a) Planning shall be based upon gear less traction machines, heavy duty door operators with closed-loop operation, LED lighting in car and hall and heavy-duty vandal resistant fixtures.

(b) In-Custody and Service elevators shall be designed with 14-gauge cabs, and welded entrance frames shall be constructed of stainless-steel type 304. Staff and Passenger elevators shall be designed with 16-gauge cabs, and welded entrance frames shall be constructed of stainless-steel type 304. Passenger cabs are to have ceilings at 9'-0" minimum. Service cabs and custody cabs are to have ceilings at 9'-7".

(c) Flooring is to be poured epoxy in Public, Staff, and Service elevators. In-Custody elevator flooring shall be aluminum diamond plate. Entrances shall be filled with grout up to five (5) feet high.

13.7 PERFORMANCE

The vertical transportation shall be heavy-duty equipment designed to be durable and perform reliably in a heavy use environment while minimizing long term maintenance costs. Elevators shall be designed to provide service in intervals acceptable to each area's needs. Service/freight needs of the New Courthouse need to be included in the overall project design.

13.7.1 Elevators

The effectiveness of a group of elevators is judged by comparison with established standards of performance which relate to the frequency of elevator service and the ability of the elevator system to carry passengers, wheelchairs, etc., as they require vertical service.

13.7.2 Average Interval

Type of Service	Average Interval (seconds)
Excellent	under 45
Good to Average	45 to 47
Poor	47 to 49
Unacceptable	over 50.

Table 6. 13.1 (Average Elevator Interval for Types of Services)

(a) Normal loading time for an elevator at the lower floor dispatch lobby during the two-way peak usually varies between forty (40) and forty-five (45) seconds. Therefore, this range is considered optimum for a minimum dispatching interval.

(b) However, in courthouse buildings when the two-way peak traffic interval exceeds fifty (50) seconds, passengers waiting for service shall tend to queue up in the elevator lobbies during these peak times.

(c) The evaluation table for this suggested group handling capacity performance standard (five-minute, two-way peak) is as follows:

Rating of Service	Group Handling Capacity (Percentage of the Population Moved)
Excellent	over 15%
Average to Good	13% to 15%
Poor	11% to 13%
Unacceptable	under 11%

Table 6. 13.2 (Rating of Elevator Service)

(d) Passenger traffic counts for persons utilizing elevators typically show a correlation between the type of building occupancy and use and the percent of that population which can be expected to arrive at the terminal floors during peak five-minute periods. If the elevators do not have ample capacity to carry this load, passengers begin to congregate in the lobbies. Cars may arrive with an acceptable frequency, but all the prospective passengers cannot be loaded.

(e) As a general rule, it is encouraged that the calculated passenger elevator group handling capacity be at least 15% of the estimated New Courthouse elevator population.

13.8 SYSTEM MAINTENANCE AND SERVICE

(a) The vertical transportation equipment shall be free of defective material, imperfect work and faulty operation not due to ordinary wear and tear or improper use or care, for a period of one-year from final acceptance of all vertical transportation work. Defective work shall be repaired or replaced at no additional cost during such one-year period.

(b) Regular maintenance shall include examination, adjustment, greasing, oiling, parts replacement, tests, and emergency service.

(c) The vertical transportation shall be maintained to operate at the original contract speed, keeping the original performance times, including acceleration and retardation as designated by the manufacturer. The door operation shall be adjusted as required to maintain the original door opening and door closing times, per code.

(d) Conduct safety tests as required by local jurisdiction and the State of Maryland, including test weights, instruments, and submitting documentation to the appropriate authority.

13.9 ELEVATOR BASIS OF DESIGN

(a) Machine Room Less (MRL) elevators may be specified, with control rooms, regenerative drives, heavy-duty door operators, vandal resistant fixtures, nickel silver sills, and remote monitoring.

(b) All equipment is to be designed for maximum reliability under heavy duty applications.

13.10 SECURITY

(a) Each elevator shall be equipped with card reader and CCTV provisions in order to allow future flexibility for elevator use. Installation provisions shall be coordinated to the extent that final use and needs are known in advance.

(b) Elevators shall have a monitoring panel located in the Building Monitoring Room.

14 MECHANICAL SYSTEMS

14.1 GENERAL REQUIREMENTS

(a) The Design-Build Work shall include the design, construction, installation, and commissioning of all the mechanical systems required to provide complete and functioning Facilities, and which include all heating, ventilating, and air conditioning ("**HVAC**") and associated plumbing and electrical infrastructure (collectively, the "**Mechanical Systems**").

(b) The design of the Mechanical Systems shall comply with *Appendix B (JFC Adopted Assessment Criteria)* of the *Interim Committee on Court Facilities – Final Report*, as adopted in December 2007, all Contract Standards, and Applicable Law.

(c) In concert with the design of the New Courthouse, the Mechanical Systems shall create spaces that are functional, energy efficient, and respond to the intended purpose and need of the New Courthouse.

(d) The Mechanical Systems shall be designed, constructed, and installed to allow for changes in space configuration without major modifications to such Mechanical Systems.

14.2 DESIGN CRITERIA

The Mechanical Systems shall be designed in accordance with the design criteria set forth in this Section 14.214.2.

(a) Outdoor design conditions:

(i) Heating (99.6% Heating Dry Bulb): 25.2°F DB

(ii) Cooling (0.4% Cooling DB/MCWB): 91.4°F DB / 67.1°F MCWB

(iii) Dehumidification (0.4% DP/MCDB): 63.7°F DP / 75.1°F MCDB

(b) Indoor design conditions shall comply with the performance requirements set forth in Table 6. 14.1 (Interior Temperature Requirements), and as indicated in the Room Data Sheets. Provide a high space temperature alarm to the New Courthouse's ATC system for notification of equipment failure.

RDS Code	Requirement
TR-1	70°F / 73°F (Heating / Cooling), ±5°F

TR-2	70°F / 75°F (Heating / Cooling), ±5°F
TR-3	70°F / 75°F (Heating / Cooling), ±1°F
TR-4	65°F / 80°F (Heating / Cooling)
TR-5	55°F / 80°F (Heating / Cooling)
TR-6	40°F (Heating)

Table 6. 14.1 (Interior Temperature Requirements)

(c) Temperature gradients, effects of radiant surfaces, humidity levels and air velocity within the spaces shall comply with ASHRAE Standard 55.

14.3 VENTILATION SYSTEMS

(a) Minimum ventilation rates shall comply with ASHRAE Standard 62.1, except where otherwise indicated. Submit room-by-room calculations showing compliance with ASHRAE 62.1 procedure.

(b) Demand-controlled ventilation shall be provided in multi-occupant spaces per Contract Standards and in compliance with the LEED Gold Certification requirements.

14.4 EXHAUST SYSTEMS

(a) All exhaust systems shall comply with ASHRAE Standard 62.1.

(b) Toilet room exhaust systems shall be provided for all toilet rooms.

(c) All janitorial and custodial rooms, and rooms utilized for chemical storage, shall be enclosed, and directly exhausted.

14.5 AIR FILTRATION

Air handling units shall utilize MERV-10 pre-filters and MERV-14 final filters at a minimum, for outside ventilation airflow, and ultraviolet ionizers in accordance with OSHA recommendations.

14.6 AIR BALANCE

The New Courthouse shall maintain positive building pressurization, except where otherwise specified in Section 14.14 (Room Specific Requirements) below.

14.7 SMOKE MANAGEMENT

Project Company shall provide a smoke management system where required by Contract Standards and Applicable Law.

14.8 NOISE FROM MECHANICAL SYSTEMS AND ELECTRICAL SYSTEMS

The maximum noise criterion ("**NC**") level set forth in Table 6. 14.2 (Allowable NC Levels for Mechanical Systems) shall apply to mechanical and electrical equipment in both Mechanical Rooms and Electrical Rooms.

Functional Unit	Maximum NC
Private Offices	30 – 35
Workstations (Open Floor Plan / Cubicles)	35 – 40
Circulation Corridors	40 – 45
Conference Rooms	25 – 30
Courtrooms	25 – 30
Jury Deliberation	25 – 30
Exterior Noise	In accordance with Contract Standards and Applicable Law.

Table 6. 14.2 (Allowable NC Levels for Mechanical Systems)

14.9 RELIABILITY AND REDUNDANCY

(a) Hot and chilled water will be provided to the New Courthouse from the CUP, in accordance with Section 4.4 (Utilidor and Central Utility Plant).

(b) In general, where two (2) or more devices operate in parallel, automatic backdraft dampers / check valves shall be provided to prevent backflow and each device shall have its own variable speed drive.

(c) When the number of fans is six (6) or more, backdraft devices are not required provided slots are installed at each fan inlet to allow a fan to be manually blanked off should it fail. Fan arrays shall have a minimum of two (2) variable speed drives per air handler.

(d) Air handlers utilizing FANWALL® technology or similar are preferred.

(e) Major components of mechanical systems within the New Courthouse shall be provided with N+1 redundancy so that one (1) component can be taken out of service and repaired with the system still providing 100% capacity.

14.10 ACCESSIBILITY AND MAINTENANCE

(a) The Mechanical Systems shall be designed, constructed, and installed so that they are easy to maintain and with proper access.

(b) Space shall be provided around all mechanical equipment for routine maintenance and inspection in accordance with recommendations for the manufacturer. Mechanical drawings shall show dashed maintenance access envelopes for all equipment to ensure space is provided during the design phase.

(c) Consistent with item 14.10(b), filter space shall be clearly indicated on mechanical drawings.

(d) Service aisles shall be indicated on drawings, showing the routing provided to replace the largest component into position.

(e) Adequate access shall be provided to all components of the HVAC equipment to avoid having to disassemble components or remove other equipment to gain access.

(f) Large pieces of equipment which cannot be disassembled shall be removed in one piece.

(g) Maintain minimum 6'-8" clearance to underside of pipes, ducts, conduit, and suspended equipment throughout access routes in mechanical rooms.

(h) Mechanical equipment shall not be located above the ceiling of occupied spaces, and shall be accessible to the maintenance staff for removal, repair and replacement with minimal effort. Maintenance access shall not occur in holding cell ceiling area.

(i) Air handlers, pumps and other major equipment shall be accessible without having to climb a ladder.

(j) Equipment such as terminal units located above ceilings shall be located where readily accessible for maintenance and where no furniture or equipment will be located below. Equipment shall not be located over:

(i) light fixtures;

(ii) ceiling height partitions;

(iii) large, difficult-to-move furniture such as cabinets, desks, etc.; and

(iv) inaccessible ceilings including drywall or mechanically fastened ceilings, unless there are no practical options. Where required, doors shall be provided to allow for complete and ready access to filters, valves, and all components requiring routine maintenance.

(k) Noise emanating from mechanical rooms shall be in compliance with Table 6. 14.2 (Allowable NC Levels for Mechanical Systems) of this Appendix 6. If variable air volume boxes are used, they shall be located above ceilings in non-critical areas.

(l) Mechanical rooms that allow access from the exterior into the remainder of the building shall be avoided for security purposes.

(m) It is preferred that mechanical equipment be located within the building or within a mechanical equipment penthouse. If mechanical equipment is located on the roof or on site, it shall be screened by view in a manner fully compatible with the building architecture.

14.11 HVAC ZONING

14.11.1 General HVAC Zoning Requirements

(a) The HVAC system shall be zoned to provide maximum flexibility for building usage. Temperature control zoning strategy shall follow typical ASHRAE guidelines and respond to any unique design features or room layouts of the building design. At a minimum, no

zone shall be larger than one thousand (1,000) square feet. Areas with more than one exposure shall be a separate zone.

(b) Individual temperature control shall be provided for the Presiding Judge Chambers, Judge Chambers, and Trial Court Admin Referee Chambers, and for each Courtroom.

(c) Each Courtroom shall be independently zoned from other spaces to accommodate fluctuations in the number of occupants that occur throughout the day. Acoustical treatment shall be provided in accordance with Section 14.8 (Noise from Mechanical Systems and Electrical Systems) to prevent transmission of sound from mechanical equipment into the Courtroom spaces. Mechanical equipment shall be located and isolated as required so that vibration from equipment is not noticeable.

(d) All Private Offices shall have zoned temperature controls for employee comfort.

(e) All Rooms shall be zoned as required to prevent non-uniform temperatures due to variable heat gain from factors including outdoor exposure or variation in people density. Each such zone shall have its own thermostat and terminal unit.

(f) All Rooms under Category 1.0: Public Facilities & Building Support Spaces: Main Entrance & Lobby shall be pressurized to prevent infiltration, and shall be provided with supplemental heat.

(g) Exterior walls with large areas of glass shall be provided with supplemental heat. Where overhead distribution of supply air is provided in such cases, slot diffusers shall be used to help prevent drafts.

(h) Rooms and Areas with different occupancy schedules as noted in the Room Data Sheets, including those with 24-hour occupancy shall have a dedicated HVAC system and controls.

(i) Systems that serve more than one zone, shall have adequate turn-down capacity.

(j) Special equipment Rooms (including, but not limited to server and data rooms) shall have separate, dedicated HVAC systems and temperature controls.

(k) All main distribution elements shall run in corridors where practical to facilitate maintenance and reduce disruption in the case of system alterations.

(l) For privacy and acoustical reasons, all returns shall be ducted. Return air plenums are not permitted.

14.11.2 Room-Specific Thermostat Control Requirements

The Project Company shall design and construct the New Courthouse to meet the performance requirements set forth in Table 6. 14.3 (Thermostat Control Requirements), as indicated in the Room Data Sheets.

RDS Code	Requirement
TSC-1	Zone thermostat with ±2°F control.
TSC-2	Individual room zone control (no user thermostat).
TSC-3	Zone thermostat with ±5°F control.

Table 6. 14.3 (Thermostat Control Requirements)

14.12 EMERGENCY POWER REQUIREMENTS

The Mechanical Systems shall be able to comply with the emergency power requirements set forth in Section 15.4.2 (Emergency Power System) of these Design and Construction Standards.

14.13 SECURITY REQUIREMENTS

All ductwork penetrations through the secured perimeter larger than 8"x 8" shall be designed with security bars. Supply and return air diffusers located in detention areas shall be anti-ligature, maximum security type grilles. All air intakes facing the outside of the New Courthouse shall be eleven (11) feet or higher.

14.14 ROOM SPECIFIC REQUIREMENTS

14.14.1 Holding Cells

(a) Holding Cell Areas shall be provided with 100% outside air with energy recovery at a rate in accordance with code requirements, designed for continuous operation and independently controlled and zoned. Airflow rates shall be adequate to control odors which may require rates higher than code requirements.

(b) Holding Cell Areas shall be under negative pressure to prevent odors from spreading to adjacent areas. Employee areas shall be under positive pressure.

14.14.2 Café

(a) Provide tempered ventilation air and general exhaust for the Café (PS2) as required to prevent food odors from migrating to surrounding spaces.

14.14.3 Secure Parking

Secure parking may be located in the exterior of the New Courthouse within the 70-foot standoff area, provided that it is surrounded by a six (6) foot tall wall that impedes view into the secure parking. Alternatively, secure parking may be located in the basement of the New Courthouse. Enclosed basement parking shall be ventilated according to Oregon Mechanical Specialty Code (latest edition) and ASHRAE Standards.

14.14.4 Mail Room

The Mail Room (MA1) shall have an independent HVAC system with the room having the capability of being "sealed" in case of contamination and under negative pressure.

14.15 ADDITIONAL DESIGN REQUIREMENTS

(a) All intake louvers shall be located away from pollution sources, exhaust air, idling vehicles, or other pollutants that may come from neighboring buildings.

(b) A water leak detection system shall be provided in the Main Server Room to protect the server equipment from water damage. Upon detection of water/moisture, the system shall send an alarm to notify command center of the situation.

14.16 AUTOMATIC TEMPERATURE CONTROL DESIGN CONSIDERATIONS

The BAS shall be provided for the control and monitoring of all building mechanical systems. All automatic temperature controls ("**ATC**") shall be direct digital control, with electric/electronic actuation. The ATC system shall interface with all HVAC equipment.

14.17 COMMISSIONING OF MECHANICAL SYSTEMS

Provide Commissioning Services for all Mechanical Systems including, without limitation, HVAC systems, exhaust systems, outside air systems, HVAC control systems and associated renewable energy systems.

15 ELECTRICAL SYSTEMS

15.1 OVERVIEW

(a) The Project Company shall design and construct all electrical systems to provide a complete and functioning Project. All electrical systems shall include all Work associated with electrical, power, lighting distribution control, security, telecommunications, data, and any other system within the Project.

(b) The Project's electrical systems shall be designed and constructed to create spaces that are safe, flexible, functional, and energy-efficient, and that respond to the needs of Project Users. The Project's electrical systems shall be functional and responsive to the type of facility, and shall also be simple, reliable, durable, and maintainable.

(c) The electrical systems shall be designed to exceed ASHRAE Standards 90.1 efficiencies so that the New Courthouse is able to obtain LEED Gold Certification. Sustainable design guidelines, such as ANSI, ASHRAE, LEED and IECC shall be resources used to exceed the minimum energy performance requirements of ASHRAE Standard 90.1. The systems shall be designed and constructed to meet or exceed the Contract Standards set forth in the IEEC-2015, alternative compliance path ASHRAE Standard 90.1.

15.2 DESIGN CRITERIA

(a) The courthouse shall be provided with a 480Y / 277V, 3-phase, 4-wire, solid neutral electrical service provided by the Utility Owner. The underground electrical service shall be provided through installing a pad-mounted transformer, which shall be sized through coordination with the Utility Owner, and that shall be located near the New Courthouse. All power company coordination, transformer installation, metering provisions and

ductbank work shall be done in strict accordance with the Utility Owner's requirements and standards.

(b) The size of the electrical service shall be based on NEC Calculations, including 25% future load (spare capacity).

(c) The Project Company shall provide commissioning services for all electrical equipment and systems including but not limited to the power distribution systems, lighting control systems, emergency generator systems, and uninterruptable power supply systems.

15.3 ACCESSIBILITY

(a) Electrical equipment including panelboards, disconnects, motor starters, etc. shall be located in electrical or mechanical rooms, not above the ceiling of occupied spaces, though disconnects may be adjacent to the equipment being served, and shall be accessible to the maintenance staff for removal, repair and replacement with minimal effort. Any noise emanating from electrical rooms within the New Courthouse shall meet the noise criteria set forth in Section 14.8 (Noise from Mechanical Systems and Electrical Systems) of this Appendix 6.

(b) Electrical equipment rooms that allow access from the exterior into the remainder of the building shall be avoided for security purposes.

(c) Electrical rooms shall be located on each floor. Closets shall stack directly above one another between floors. Closets shall limit branch circuits to not have a voltage drop that exceeds 3% at the furthest receptacle.

15.4 POWER SYSTEMS

15.4.1 Utility Power System

(a) The electrical service entrance conductors shall terminate in a service entrance distribution panelboard in the Mechanical/Electrical room, which shall serve the electrical requirements of the building. The current transformer cabinet and metering for the building shall be installed to the power company requirements on the exterior of the building. The emergency power service disconnects shall be located inside each generator enclosure. All distribution equipment buses shall be copper.

(b) The building power distribution system shall provide 480Y/277 Volt, three phase, four wire service to building loads as necessary. A step-down 480 Volt primary, 208Y/120-volt secondary transformers shall be installed in the Mechanical/Electrical rooms to provide low voltage power to receptacles and loads requiring the lower voltage through 208/120V, three phase panels.

(c) Three phase mechanical equipment, all building normal system panelboards and equipment outside the building shall be served from the main distribution panelboard. The main switchboard and all panelboards serving electronic equipment shall be protected by integral SPD units.

(d) Building electrical panels shall be located in the Mechanical/Electrical Rooms. Automatic control for exterior lighting shall also be provided in the Mechanical/Electrical Room. General convenience receptacles panels shall be located throughout the building.

(e) Feeder wiring shall consist of copper conductors or aluminum conductors over 100A installed in EMT, PVC or RGS conduit. Branch circuit wiring shall be copper conductors run in EMT conduit, liquid-tight flexible metal conduit (LFMC), PVC, ENT or copper conductor MC cable. When underground, PVC is acceptable for feeder and branch conduit. All panelboards shall have copper bus and contain full size neutral bar. Panelboards with 200% rated neutral buses and surge suppression devices shall be provided for telephone and IDF Room equipment. These panelboards shall be served by K-13 factor transformers.

(f) All panel boards and distribution panels include 20% spare capacity and breaker space for future growth. Exact load requirements would need to be determined with the supplied equipment.

(g) All panel boards and distribution panels include 20% spare capacity and breaker space for future growth. Exact load requirements would need to be determined with the supplied equipment.

15.4.2 Emergency Power System

(a) The Project Company shall provide a 480Y/277V, three-phase, four-wire emergency generator to serve the building emergency power needs.

(b) The emergency generator may be located, as specified in the New Courthouse Program.

(c) The emergency generator shall serve the following systems and system components:

(i) ITC Systems, including associated cooling systems, Server Room and all IDFs;

(ii) Security Systems;

(iii) fire alarms;

(iv) access control systems;

(v) radio charging stations;

(vi) egress and emergency lighting systems;

(vii) fire pumps;

(viii) sump pumps;

(ix) smoke evacuation;

(x) freeze protection; and

(xi) other critical equipment required by code.

(d) The following areas shall be fully functional under emergency power distribution, including ventilation and/or exhaust systems, electrical system, ITC Systems, AV Systems, and any other systems required by Contract Standards and Applicable Law:

(i) one (1) Public Elevator;

(ii) one (1) Staff Elevator;

(iii) one (1) In-Custody Elevator;

(iv) two (2) Standard Courtrooms, including associated Courtroom Holding Area(s). For clarity, the County will install and operate an emergency generator in the CUP which will specifically serve equipment installed in the CUP with the goal of providing chilled and hot water to the New Courthouse after an emergency event. The CUP emergency generator will not serve any equipment or facilities outside the CUP;

(v) Sally Port Areas (exhaust);

(vi) Central Holding Areas (ventilation and exhaust);

(vii) the In-Custody Control Room and adjacent toilet room;

(viii) Security Screening Areas;

(ix) the New Courthouse Security Sub-Area under the Sheriff's Administration Area; and

(x) The following programmatic areas or equivalent open workspace area to:

(1) Two (2) Public Filing Windows;

(2) Five (5) OJD SPRVSR 3 Offices;

(3) One (1) OJD MNGR 3 Office;

(4) Trail Court Admin Offices;

(5) Restricted Access Staff Restrooms.

(e) Transfer switches shall be automatic, open transition, two-position, NEMA 1 enclosed, 4-pole switched neutral, UL 1008 listed, programmable microprocessor controller with keypad and LCD display, remote communication and control interfaced with control room. The transfer switches shall have a bypass-isolation capability for manual operation during maintenance or service.

(f) A minimum of three (3) automatic transfer switches ("**ATS**") shall be required per National Fire Protection Association:

(i) One (1) serving Life Safety loads;

(ii) One (1) serving the standby/emergency loads; and

(iii) One (1) serving the fire pump, if required.

(g) Life safety equipment wiring shall not be installed in the same raceway serving non-life safety optional standby equipment.

(h) A UPS system shall be provided to serve the IDF rooms and ancillary outlets within the Server Room. The servers in the Server Room shall have standalone redundant in-row UPSs. All security and security sub-systems (CCTV, access control, intercom, etc.) shall be served by the UPS system. The UPS maybe centrally located or provide a distributed set of UPSs per room. The UPS system shall provide a minimum back-up time of five (5) minutes, or at a minimum, to provide power for the duration of the emergency generator's startup sequence. Provide maintenance by-pass for all UPS systems to allow for battery replacement maintenance. All UPS circuits shall be backed-up by emergency generator power.

(i) A generator remote annunciator panel shall be located at the Fire Control Center; additionally, the emergency generator and the UPS battery system status shall be transmitted to the building automation system. The remote annunciator shall monitor the following:

(i) the emergency generator system.

(j) The generator shall be powered by diesel fuel. In accordance with Section 3.1.3.4(b)(iv) of the Facilities Management Standards, the Project Company shall be responsible for the cost of initial fueling of the emergency generator. The generator shall have a critical sound attenuated housing and muffler. If needed, a sound attenuating wall shall be constructed to reduce level in accordance with the County Zoning Ordinance, the Oregon City Municipal Code, and all Contract Standards and Applicable Law.

15.4.3 Electrical Distribution System

15.4.3.1 Grounding

(a) The grounding system shall be designed per NEC Article 250. The grounding electrode system shall achieve a resistance of five (5) Ohms or less. A main grounding bar shall be installed inside the Mechanical/Electrical room and connected to the grounding rods, building steel and main water line.

(b) The main switchboard shall be provided with integral ground-fault protection.

(c) Circuit grounding shall comply with IEEE guidelines.

(d) Raceways shall not be used as equipment grounding conductor and shall be provided with an insulated grounding conductor in each raceway.

15.4.3.2 Receptacles and Equipment Connections

(a) In general, convenience outlets shall be provided for maximum flexibility and ease of usage. Outlets shall be located following the standard of no less than one per wall. In large areas, outlets shall be spaced a maximum of twelve (12) feet on-center unless in conflict with structural or architectural design elements and be conveniently placed for the function of the space.

(b) Floor outlet boxes as required for data, audio and video outlets shall be provided in Court Rooms.

(c) Dedicated circuits shall be provided for data racks, copiers, court recording systems, metal scanners and X-ray machines.

(d) Corridor outlets shall be provided no more than fifty (50) feet apart. Unless specifically required, outlets shall be duplex, 20A, 120V, side-wired grounding type.

(e) Ground Fault Interrupting ("**GFI**") outlets shall be located at water coolers, toilets, mechanical rooms, sinks, exteriors and at other wet locations, and as required per the NEC.

(f) At rooftop equipment: a 20-amp, 125-volt duplex receptacle shall be provided within twenty-five (25) feet of HVAC equipment.

(g) A separate neutral conductor shall be installed for each receptacle circuit in order to reduce the effects of harmonics caused by non-linear loads. Multiwire branch circuits are acceptable for FF&E items when required by manufacturer design.

(h) Provide appropriately sized conduit pathways for Electrical Vehicle Charging Stations in the surface parking lots from electrical panel to station location. Garage electrical panels shall be appropriately sized to handle charging loads for the number of stations provided.

15.4.3.3 Wiring Devices

Heavy-duty grade, 20-amp rated, side-wired, grounding type conforming to NEMA Standards. All cover plates shall be brushed finish stainless steel. Floor boxes shall be steel, leveling type, with capacity for devices and wiring.

15.4.3.4 Outlet Boxes

(a) Outlet boxes for concealed work shall be zinc-coated or cadmium plate sheet steel boxes suitable for the service and type outlet. Boxes and conduit fittings for outdoor and exposed work shall be NEMA 4 cast aluminum, cast steel or cast-iron type with threaded hubs for conduit entrance.

(b) Outlet boxes in walls serving Courtrooms, Conference Rooms, Judicial Chambers, Law Libraries, toilet rooms and Holding Cells shall have acoustic isolation to limit sound transmission.

15.4.3.5 Junction and Pull Boxes

Junction and pull boxes shall be furnished and installed where required to facilitate pulling of wires or cables. Such boxes shall be installed in accessible locations. Gasketed cover-plates shall be furnished for outdoor installation. All boxes shall be NEMA rated and appropriate for the environment they are being installed in.

15.4.3.6 Conduits

(a) Underground: Schedule 40 PVC direct-buried minimum thirty (30) inches below finished grade. Schedule 80 PVC concrete-encased with three (3) inches envelope under paved roadway and parking areas. Minimum of one (1) inch conduit for any exterior/underground circuit.

(b) Interior: exposed, not subject to physical damage: EMT. Exposed and subject to physical damage: GRC. Concealed in ceilings and interior walls and partitions: EMT. Connection to vibrating equipment liquid flexible metal conduit. Damp or wet locations: rigid (EMT with compression fittings). Minimum LV size shall be one (1) inch diameter. Minimum HV size shall be three-quarter (¾) inch diameter. ENT conduit is acceptable in concealed spaces including within structural concrete.

(c) Pull Ropes: all empty conduits.

(d) Aluminum: aluminum conduit is prohibited.

(e) Flexible connections: maximum length seventy-two (72) inches for connection of lighting fixtures, dry type transformers and vibrating equipment. Use liquid-tight metal for connection of motors. Lighting pre-manufactured whips are acceptable up to seventy-two (72) inches.

15.4.3.7 Conductors

Copper 600 Volt THHN/THWN insulated conductors for interiors and copper 600 Volt RHW or XHHW insulated conductors for exteriors, aluminum conductors are acceptable for feeders over 100A.

15.4.3.8 Over-current Protective Devices and Enclosed Safety Switches

(a) Molded case circuit breaker switches shall be specified for breakers 800A and larger unless otherwise required by equipment manufacturers.

(b) Dual Element RKl Fuses: Where required by equipment manufacturers testing lab listing.

15.4.3.9 Motors

(a) Three phase: one-half horsepower and larger: where disconnect starter is not integral with equipment, provide combination starter disconnect with fused control transformer,

hand-off-automatic selector switch, overloads in each phase, two (2) normally open plus two (2) normally closed auxiliary interlocks and pilot lights. Provide fused disconnect where required by equipment manufacturer. Provide phase failure relays for motors ten (10) horsepower and greater.

(b) Single Phase: Less than ½-HP. Where disconnect is not integral with equipment, provide fractional horsepower thermal manual motor starting switch with single overload and pilot light.

15.4.3.10 Motor Starters and Switches

(a) Motor starters shall be 3-pole, 60-Hertz, full-voltage non-reversing (FVNR) magnetic type with.

(b) Enclosures shall be rated NEMA 1 at interiors, NEMA 12 in Mechanical Rooms and NEMA 3R at exteriors, unless otherwise required.

15.5 LIGHTING SYSTEMS

15.5.1 Interior Lighting

(a) Fixtures shall be energy efficient LED type and shall have 4,000K correlated color temperature ("**CCT**") and minimum 0.85 color rendering index ("**CRI**") or higher. Average rated lamp life shall be fifty thousand (50,000) hours minimum.

(b) Drivers for LED lighting systems shall employ electronic technology for long life with frequent on-off operations. Systems shall be dimmable where indicated in Table "Illumination Levels and Controls".

(c) The interior lighting design shall meet or exceed Illuminating Engineering Society of North America ("**IESNA**") recommendations.

(d) Fixture types:

(i) Lighting in Court Rooms shall be glare free with consideration for vertical illumination, where required, for evidence displays. High CRI for Color rendering shall also be considered.

(ii) Lighting fixtures in Detention Cells and Holding Cells shall be minimum security type and shall be located out of reach of detainees.

(iii) Circulation spaces including vestibules, corridors, and other common areas, shall be provided with one or more of the following fixture types; recessed linear, 2x2, 2x4 (detention grade where required), downlight surface mount/ wall-mount/ suspended utility lighting, or a combination of ambient, accent, and decorative lighting.

(iv) Lighting in offices shall have one or more of the following LED fixture types: recessed linear, 2x2, 2x4, downlights, or suspended linear direct/indirect.

(v) Conference/training and classrooms shall have full-distribution lighting fixtures.

(vi) Lighting in Mechanical/Electrical and storage rooms shall have pendant mounted industrial fixture.

(e) Exit signs shall identify path of egress and utilize LED technology with green lamps. Emergency lighting fixtures shall provide minimum 1.0' candles along the path of egress.

15.5.2 Exterior Lighting

(a) The exterior lighting design shall meet or exceed IESNA (Illuminating Engineering Society of North America) recommendations of one (1) foot-candle average. The exterior lighting design shall also be compliant with International Dark-Sky Association ("**IDA**") recommendations.

(b) All exterior light fixtures shall utilize full cutoff style optics with no light emitting beyond ninety (90) degrees from nadir; thus, eliminating unwanted backlight, uplight and glare.

(c) Luminaries shall utilize LED lamp sources with 4,000K correlated color temperature (CCT) and minimum 80 color rendering index (CRI) for exteriors. Luminaries in Parking Structure shall have integral motion sensor to enable 50% dimming during unoccupied periods. Lighting levels shall be increase at garage entrances during daylight hours to ease transition of drivers' pupils from daylight to artificial lighting levels.

15.5.3 Lighting Control

(a) Due to the nature of the facility, and the potential threat to the public health and fire safety therefore control of interior lighting shall be controlled locally to prevent system-wide failure.

(b) The New Courthouse shall provide the ability to automatically turn off all interior lighting systems at night.

(c) Lighting switches controlling Detention and Holding Cells shall be mounted outside of the cells. Lighting in Court Rooms shall be controlled by dimming switches at the judges' bench area.

(d) Ultrasonic and infrared (dual technology) occupancy sensors shall be utilized in all spaces. Daylight harvesting sensors shall be provided where applicable to dim electric lighting as natural daylighting increases. All controls shall comply with or exceed the International Energy Conservation Code ("**IECC**").

(e) Exterior lighting shall be controlled by a 365-day programmable time clock located in the Mechanical/Electrical room.

15.5.4 Lighting Levels

(a) Interior and exterior illumination levels and associated control systems for each class of space at the Court House are listed in the table on the following page.

(b) The table includes average illumination to be provided; industry standard and user-recommendations for luminance and commentary for each space. Multiple levels of illumination or dimming shall be provided in most spaces.

Functional Unit	Recommended Average FC	Day Lighting	Motion Sensor	Other Control	Comments
Courtrooms benches, Lecterns, Tables and Judicial areas.	50	No	No	Dimmer at Bench	
Courtroom Witness Stand	30	No	No	Dimmer at Bench	
Courtroom Jury Box	30	No	No	Dimmer at Bench	
Courtroom Public Gallery	10	No	No	Control at Bench	
Hearing and Conference Rooms	10-40	Yes	No	Dimmer	Low level for video, high level for reading.
Identification and Processing	50	No	Yes		
Detention and Holding Cells	20	No	No	Remote switch	
Offices	50*	No	Yes	Local Multi-Level	Task light may be utilized to achieve space requirements.
Common / Support Areas	15-20	No	Yes		
Vestibule / Lobby	20	Yes	Yes		
Storage Room	5-10	No	Yes		
Toilets	10-30	No	Yes		Lower general lighting. Higher illumination at

Functional Unit	Recommended Average FC	Day Lighting	Motion Sensor	Other Control	Comments
					fixtures and vanities.
Janitor and Storage	20	No	Yes		
Mechanical / Electrical Rooms	30	No	Yes		
Break Rooms	30	Yes	Yes		
Vehicle Sally Port	10-20	Yes	Yes	Photocell and Timer	Low level at night, high level at daytime.
Exterior Building Entrances	5	Yes	No	Photocell and Timer	
Exterior Drives and Parking	1	Yes	No	Photocell and Timer	Minimum for personnel safety and building security.
Basement Garage Entrance	1-5	Yes	No	Photocell	Low level at night, high level at daytime.
*Includes task lighting contribution.					

Table 6. 15.1 (Illumination Levels and Controls)

15.6 FIRE ALARM SYSTEM

15.6.1 General Requirements

(a) Provide a multiplex addressable voice-evacuation type fire alarm control panel ("**FACP**") and fire alarm system throughout all Areas of the New Courthouse. The fire alarm system shall be a speaker and strobe type UL listed under Category UOJZ (control units) and SYZV (releasing- as applicable). The fire alarm system shall be a complete system as manufactured by Edwards Systems Technology, Notifier, Siemens, Simplex Grinnell, or approved equal. The fire alarm system shall comply with the ANSI A117.1 and National Fire Protection Association 72.

(b) The Fire Alarm System shall include a fire alarm control panel ("**FACP**") located in the main Mechanical/Electrical Room and a graphic fire alarm annunciator panel ("**FAAP**") in the Building Entrance Vestibule and a remote annunciator panel in the Building Monitoring Room.

(c) ~~Provide an integrated fire alarm system and mass notification system. The mass notification system shall interface with the fire alarm system to utilize the voice modules,~~

~~visual alarms, and speakers of the fire alarm system. An autonomous voice notification control unit shall monitor and control the notification appliance network and provide consoles for local operation. Authorized personnel shall be able to use a console to initiate delivery of pre-recorded voice messages, provide live voice messages and instructions, and initiate visual strobe and optional textual message notification appliances.~~ The autonomous voice notification control unit shall temporarily override audible fire alarm notification ~~while delivering mass notification messages to ensure they are intelligible~~.

(d) The intent of the fire alarm system is to deliver either the pre-recorded messages or live voice messages and instructions to the speakers within the building. ~~The system shall also be capable of sending alert messages to end users (recipients) via multiple delivery methods, including but not limited to the following: audio-visual network alerts to computers via desktop pop-up, text alerts to mobile phones and pagers, text alerts to email clients, text alerts to textual visible appliances, alerts to visible appliances, audio alerts to phones, audio alerts to speakers, audio alerts to existing wide-area or building voice and/or other mass notification systems, network alerts to any other IP-connected devices via standard XML and CAP protocols. The system is required to be capable of one hundred (100) separate/unique messages to notification appliances. The mass notification messaging system shall be capable of the following:~~

~~(i) automatically distribute at least one hundred (100) simultaneous and unique messages to the appropriate notification appliances;~~

~~(ii) allow multiple operators to send messages simultaneously;~~

~~(iii) grant access for control to another control station if the location in control becomes inoperable and/or the authorized operator at that control station can no longer operate the control station;~~

~~(iv) send voice messages and text messages with an indication of the source of the message that can only be sent from the message source;~~

~~(v) send alert messages to end users (recipients) via multiple delivery methods;~~

~~(vi) live announcements or prerecorded messages. Live messages shall take precedence over prerecorded messages;~~

~~(vii) notification appliance network shall consist of speakers and visual notification devices located to provide intelligible instructions throughout the building. Specific zones, such as courtrooms, shall be separated as necessary;~~

~~(viii) give priority to mass notification system announcements over other audible announcements of the system including fire alarm system in a normal or alarm state. When an announcement is activated during a fire alarm, fire alarm system functions shall continue in an alarm state, except for the output signals of the fire alarm audible and visual notification appliances;~~

~~(ix)~~(i) comply with speech intelligibility requirements of National Fire Protection Association 72 as measured according to ANSI/ASA S3.2;

~~(x) capable of overriding local control of speaker volume levels for emergency communications. Local controls shall be permitted to adjust volume levels of non-emergency signals only, such as, but not limited to, background music and convenience paging; and~~

~~(xi) capable of providing separate messages to one individual building or to multiple buildings at any given time if the MNS serves more than one building. Capable of monitoring emergency notifications from multiple data sources (National Weather Service, Emergency Managers Weather Information Network, Naval Meteorology and Oceanography, and others as determined locally) and automatically send out notifications to designated facilities and personnel based on pre-defined rules.~~

(e) Audible speaker/visible notification appliances shall be provided throughout the building. Audible visible notification shall be provided in all corridors, exit paths, toilets, lockers, and common areas. Horns, strobes, and combination horn/strobes shall be utilized. Utilize listed ceiling-mounted fire alarm devices to the extent possible. Wall-mounted notification devices are acceptable for locations where ceiling-mounted devices are not practical. Wall or ceiling-mounted notification devices shall be white. Provide supplemental fire alarm audible appliances in Mechanical Rooms and similar support rooms. All notification devices shall be installed in accordance with the requirements of National Fire Protection Association 72.

(f) Smoke detectors shall be provided above the FACP and NAC panels and where required by Code. Provide smoke detection for elevator recall. Detectors shall be located in each elevator lobby within twenty-one (21) feet of the door and in the Elevator Machine Room. Provide smoke detectors for the double interlock pre-action system releasing and door holder releasing service. Provide duct smoke detectors for air handling unit shutdown and smoke damper operation. Any duct smoke detector in alarm shall shut down the associated air handling unit.

(g) Provide heat detectors in the Elevator Machine Rooms for power shunt. The heat detectors shall be located within two' of each sprinkler head. Heat detectors are not required in the elevator shaft if the elevator and shaft meet the limited combustibility requirements of American Society of Mechanical Engineers A17.1 and the sidewall at the bottom of the pit is installed within two (2) feet of the pit floor. The Project Company shall be responsible for verifying the elevator and shaft construction and the location of the sprinkler head in the shaft.

(h) Provide manual pull stations within five (5) feet of all required exits. The manual pull stations shall be double action. Install the manual pull stations with the handles forty-two (42) inches above the finished floor. Provide covers over pull stations subject to damage. Single action pull stations shall be provided where covers are used.

(i) Provide monitor modules to monitor all water flow switches, tamper switches, pressure switches, and kitchen hood suppression systems. Provide monitor modules to monitor the status of the emergency generator. Provide control modules to interface smoke dampers and magnetic door holders with the fire alarm system. Provide the required control modules and relays for elevator recall and power shunt.

(j) All fire alarm wire shall be in conduit throughout. All fire alarm conduit shall be red and installed in accordance with the requirements of the NEC. All fire alarm circuits shall be 24-volt DC. Signaling Line Circuits shall be Style 4 and Notification Appliance Circuits shall be Style Y. Power wiring shall be 120-volt AC circuits.

(k) Fire alarm signals shall be transmitted via an integral automatic digital telephone dialer to approved offsite underwriter's listed central station monitoring agency who shall notify proper emergency forces personnel in the event of an alarm or trouble signal at the new courthouse.

(l) The Project Company shall install all equipment in accordance with applicable codes, manufacturer's written instructions, and recognized industry practices. Contractor and Fire Alarm Equipment Distributor personnel shall be NICET-Certified or show comparable training and experience. After all equipment is installed, it shall be tested to demonstrate proper operation of performance and compliance with the specifications. Equipment not operating correctly shall be field-corrected or replaced. Systems shall be tested in accord with National Fire Protection Association requirements.

(m) The New Courthouse shall be provided with Broadband Distribution Antenna and Distributed Antenna System. Provide adequate cellular coverage in the building and first responders' radio coverage in the building.

16 PLUMBING SYSTEMS

(a) A complete system of plumbing shall be provided throughout the building and installed in strict accordance with all applicable codes and regulations, including the American Disabilities Act (the "**Plumbing System**"). The plumbing systems shall consist of, but not be limited to:

(i) domestic cold water;

(ii) domestic hot water with recirculation;

(iii) sanitary drainage and vent;

(iv) storm water and overflow drainage; and

(v) fire protection.

(b) Floor drains shall be required in, but not limited to, all mechanical rooms, multi-occupancy restrooms, holding cells & detention corridors where prisoners may congregate. All floor drains shall have a trap primer.

(c) All public fixtures shall have hands-free faucets, either connected to the electrical system or battery-powered. All faucets shall have stainless steel finish.

(d) Plumbing fixtures located in holding cells shall be detention grade stainless steel, anti-ligature and vandal resistant. Plumbing fixtures located in all other areas shall be good commercial grade of institutional quality.

(e) All domestic water components shall be certified "lead free", NSF 61.

(f) Domestic hot water shall be stored at 140°F, shall have a master mixing valve per National Standard Plumbing Code requirements and 1070 ASSE valves at point of use.

(g) Domestic hot water return system shall be provided as required by the National Standard plumbing code.

(h) Domestic water heaters shall be tank-type. Point-of use water heaters shall not be used.

(i) Freeze proof wall hydrants shall be located at a maximum every one hundred fifty (150) feet along the New Courthouse's perimeter.

(j) Roof drains and overflow drains shall be provided and sized based on the National Standard Plumbing Code requirements.

(k) Provide commissioning services for all plumbing systems including but not limited to domestic water system (cold water, hot water and hot water return), fire protection system and domestic hot water heating system.

(l) Publicly accessible drinking fountains shall include water bottle filling features.

17 FIRE PROTECTION AND LIFE SAFETY SYSTEMS

(a) The fire protection system shall be designed in accordance with all applicable National Fire Protection Association standards, and Applicable Law.

(b) The fire protection system shall provide total protection by means of a wet pipe sprinkler system with the exception data/computer rooms, server rooms, areas where specialty electronics exist, special records, garages, loading docks or any areas subjected to freezing which shall be provided with either a dry pipe or pre-action sprinkler system.

(c) A pre-action sprinkler system shall be provided for all data/computer rooms and areas where specialty electronics or special records exist. A dry-pipe sprinkler system shall be provided for any area subjected to freezing which includes but not limited to garages and loading docks. Electrical Closets can be protected by a wet-pipe sprinkler system. For small remote telecom, security and AV closets, they can be protected by a wet pipe sprinkler system. Provide dry standpipe system for open air Parking Structure that meets requirements of National Fire Protection Association 14.

(d) The fire protection system shall be provided with a backflow preventer to prevent backflow in the potable water system.

(e) Fire department Siamese connections shall be provided and located as required by the Fire Department, with access as directed by the Fire Marshal.

(f) Determine if a fire pump or on-site water storage is required based on attached flow test and building design. If required, the fire pump shall be located in a separate fire pump room.

(g) Each sprinkler zone shall have an isolation valve, check valve, drain, test assembly and flow switch.

(h) Sprinkler zones shall match the fire alarm zones.

(i) All fire protection valves shall be supervised by the fire alarm system.

(j) Holding cells and all areas within the secure perimeter shall employ anti-ligature institutional style sprinkler heads and smoke detectors.

(k) Where required, standpipes meeting the requirements of National Fire Protection Association 14 (latest edition) shall be provided in all egress stairwells. Standpipes shall include two and a half (2½) inches hose valves.

(l) Head guards shall be provided on all sprinkler heads located in the mechanical, electrical and equipment spaces.

(m) Fire extinguishers shall be provided and located in accordance with National Fire Protection Association 10.

(n) Provide a fire alarm annunciator panel at the building entrance as directed by the Fire Marshal. In addition, provide a remote fire alarm annunciator panel in the Building Monitoring Room.

18 INFORMATION TECHNOLOGY AND COMMUNICATION SYSTEMS

18.1 GENERAL REQUIREMENTS

(a) As part of the Project, the Project Company shall provide all equipment and components described in this Section, and in collaboration with the County as defined in Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix); install, construct and commission such equipment and components for the implementation of all information technology and communication ("**ITC**") systems in accordance with these Technical Requirements to provide fully functional information technology and communication networks within the Project that respond to the needs of the Project and to the intended purpose of such networks (the "**Information Technology and Communication Systems**" or "**ITC Systems**").

(b) The Project Company shall provide ITC Systems and data networks within the Project that are purpose-built and cost-effective, and that are easily scalable as the needs of the Project Users increase in the future.

(c) Provide all vertical and horizontal distribution cabling, patch panels and power for each network.

(d) Cabling installations shall conform to BICSI standards.

(e) If not already part of the Project Company's team as approved by the County, the Project Company shall retain a BICSI-certified Registered Communications Distribution Designer.

(f) The Project Company shall provide 20% spare capacity to all conduit within the walls and ceilings to allow for future expandability of the ITC Systems.

18.2 ITC SYSTEMS PROCUREMENT, INSTALLATION AND COMMISSIONING RESPONSIBILITIES

Responsibilities for procurement, installation and commissioning of the ITC Systems are set forth in Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix) to the General Design, Construction and Facilities Management Technical Requirements.

18.3 ITC SYSTEMS SPECIFICATIONS

In addition to complying with the procurement, installation, and commissioning requirements set forth in Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix) to the General Design, Construction and Facilities Management Technical Requirements, the Project Company shall also comply with the requirements set forth in Table 6. 18.1 (ITC Systems Specifications) below. Whenever equipment or components are specified, the Project Company shall install such equipment or components.

Item	Requirements and Specifications
Audiovisual	(i) The Project Company shall install raceways, backboxes, floor boxes, and power, AV, data and coax cables as required. (ii) All other equipment shall be provided in accordance with Attachment 5A.
Backboards	Three-quarter-inch (¾-inch) fire resistant plywood backboards with fire resistant paint.
Cabinets	(i) Schneider Electric / APC Netshelter SX 42U 750mm wide x 1200mm deep enclosures 19" 42U. (ii) Vertical cable organizers, cable ladders, cable troughs, data cable partitions, InRow bridge partitions.

Item	Requirements and Specifications
	(iii) Each cabinet supplied by InRow Redundant UPS's for A / B branch circuits. (iv) Dual vertical PDU's in the cabinets with A / B branch circuit connections to redundant InRow UPSs. (v) Requirements for 120V / 208V outlets to be verified to be submitted to County for review and acceptance. (vi) All cabinets shall be anchored to each other and grounded.
Cable Trays / Ladder Racking	(i) In MDF / IDFs or AV closets size ladder racking as required and submit to County for review and acceptance. Manufacturer: Chatsworth, color: Black. (ii) Other areas: originating from MDF / IDFs, size as required, cable tray basket metal mesh above false ceiling in all primary hallways. Raised floor cable tray system in primary walkways. Access to cable trays shall be easily accessible with no HVAC, plumbing, electrical or lighting interference. Design shall be submitted to County for review and acceptance. (iii) Suspended in accordance with NEC standards. (iv) Grounded as required.
Coaxial Cabling	(i) RG6 quad shield plenum-rated: white jacket. (ii) Design shall include amplifiers and splitters as required for signal distribution. (iii) Cables labeled in accordance with TIA 606 standard and coordination with County.
Conduit	(i) Internal: Risers, 4-inch steel. (ii) Other: steel in the walls, size as required, minimum 1-inch for telecommunication outlet. (iii) External, 4-inch schedule 40 PVC or as required by Contract Standards and Applicable Law.
CRAC	(i) Schneider Electric / APC InRow RC cooling system 42U redundant, connected to redundant chilled water sources. One (1) cooling unit in each InRow. (ii) APC temperature / humidity sensors as needed designed for each cabinet. (iii) Two (2) InRow rows with hot / cold isle configuration. (iv) Heat load based on County provided BTU calculations.

Item	Requirements and Specifications
Data Cable	(i) CAT-6 Plenum rated (CMP). (ii) Blue jacket. (iii) Terminated at racks / jacks T568B. (iv) Cables labeled in accordance with TIA 606 standard. Submit labeling to County for review and acceptance. (v) All patch panels / jacks from CommScope / AMP. (vi) Supported by J-hooks when distributed from cable basket trays. (vii) All cables home run to MDF or IDFs as specified.
CCTV Data Cable	(i) CAT-6 Plenum rated (CMP). (ii) Blue jacket. (iii) Terminated at racks / jacks T568B. (iv) Cables labeled in accordance with TIA 606 standard. Submit labeling to County for review and acceptance. (v) Terminated on separate distinct patch panels in MDF or IDFs. (vi) All patch panels / jacks are from CommScope / AMP. (vii) Supported by J-hooks when distributed from cable basket trays. (viii) All cables home run to MDF or IDFs as specified.
DWS	(i) 802.11 a / b / g / n / ac or latest approved specification. (ii) Wireless access point wiring and access point installation by Project Company. Project Company shall submit design and locations to County for review and acceptance. Access Points shall be supplied and configured in accordance with Attachment 5A.
EMN	(i) Alertus Building~~Mass~~ Notification System shall be the basis of design. (ii) Alertus parts to be supplied by Project Company. (iii) Project Company to install all wiring, raceways, conduits, boxes, power supplies and attachments for Alertus devices. Many devices are POE and will require Data wiring per data wiring standard.
Entrance Terminals	(i) Porta Systems series 24, input termination-110 style.

Item	Requirements and Specifications
	(ii) Single mode. (iii) Single mode fiber jacket shall be yellow in color. (iv) LC connectors shall be used. (v) Termination panels shall be submitted to County for review and acceptance. (vi) Cables labeled in accordance with TIA 606 standard and in coordination with County.
Innerduct	(i) Innerduct for fiber cabling. (ii) corrugated tube as required, orange in color, sized as required.
Raceways	Size as required, minimum one (1) inch.
Racks	(i) Chatsworth Model 55053, 2-post, 19-inch wide by seven (7) feet high, #12-24 kits, color: black. (ii) Each supplied by minimum of two (2) quad outlet 120 VAC circuits, power plugs type NEMA L5-20P on generator power. (iii) All racks to be secured to floor, grounded. (iv) Cable management between racks, minimum of 4-inch wide. Submit to County for review and acceptance.
telecommunication outlet	(i) 4-port faceplate. (ii) Two (2) CAT-6, RJ45 8-pin data jacks, color: orange. (iii) One (1) RJ11 6-pin telephone jack, same color as faceplate. (iv) Faceplate surface color to match electrical outlet faceplate color. (v) Data jacks terminated in T568B pin configuration. (vi) Each data cable terminated in serving MDF or IDF on CAT-6, 48-port. (vii) Patch panel with all data cables from same telecommunication outlet grouped sequentially. (viii) Each voice cable terminated in serving MDF or IDF on Gigabix style (ix) Terminal blocks mounted to wall.

Item	Requirements and Specifications
	(x) Each telecommunication outlet marked with discrete label and each jack labeled. Coordinate label with County. (xi) Sequentially by service type coordinate with County. (xii) Cables and jacks labeled in accordance with TIA 606A standard and in coordination with County. (xiii) Unused port of faceplate filled with blank of same color as faceplate. (xiv) All TO hardware to be CommScope / AMP equipment.
UPS	(i) Schneider Electric / APC - InRow Symmetra PX 20kW scalable to 40kW N+1, 42U redundant units. One (1) UPS in each InRow. (ii) Schneider Electric / APC – InRow battery modules for Symmetra PX. (iii) Step down transformer as needed. (iv) All UPS units connected to generator.
Voice Cabling	(i) Gray jacket. (ii) Plenum-rated CMP CAT-5e. (iii) Terminated in MDF on Nordx Gigabix blocks mounted to wall. (iv) Cables and jacks labeled in accordance with TIA 606A standard and in coordination with County. (v) All patch panels / jacks are from CommScope / AMP. (vi) Supported by J-hooks when distributed from cable basket trays. (vii) All cables home run to MDF or IDF as specified.

Table 6. 18.1 (ITC Systems Specifications)

18.4 DATA NETWORKS

18.4.1 General Requirements

(a) The Project Company shall provide two (2) physically separate and distinct data networks:

(i) a County Data Network, as specified in Section 18.4.2 (County Data Network) of these Design and Construction Standards; and

(ii) an OJD Data Network, as specified in Section 18.4.3 (OJD Data Network) of these Design and Construction Standards.

(b) Both the County Data Network and the OJD Data Network shall provide secure wireless area networks which shall require double authentication.

18.4.2 County Data Network

(a) The Project Company shall design, construct and install a physically separate and individual County data network that will serve the needs of the County in the Areas specified in this Section 18.4.2 (the "**County Data Network**").

(b) The County Data Network shall serve the following New Courthouse Program Categories, Areas and Rooms:

(i) all Areas under Public Facilities & Building Support Spaces;

(ii) all Areas under District Attorney;

(iii) all Courtrooms (to provide access to District Attorney personnel);

(iv) all Areas under Sheriff Transport Operations and Central Holding; and

(v) all Areas under Sheriff Main Office.

18.4.3 OJD Data Network

(a) The Project Company shall design, construct, and install a physically separate and individual data network that will serve the needs of the Fifth Circuit of the Oregon Judicial District ("**OJD**") in the Areas specified in this Section 18.4.3 (the "**OJD Data Network**").

(b) The Judicial Data Network shall cover all the Rooms and Areas in the following Program Categories:

(i) Program Category 2: Courtrooms and Chambers;

(ii) Program Category 3: Court Administration; and

(iii) all Areas under State Offices.

18.5 TELECOMMUNICATION ROOMS

18.5.1 General Requirements

(a) The term "**Telecommunication Room**" shall refer to those Rooms identified in the New Courthouse Program under Building System Support Spaces, Data / Network Areas, and the Entrance Facility Room.

(b) Unless otherwise specified, all main services shall enter the New Courthouse at a demarcation / entrance facility room to be located in the basement level.

(c) Each floor within the New Courthouse shall contain one (1) or more IDF Rooms. Two (2) IDF Rooms per floor and on opposite sides of each floor are preferred to more efficiently

comply with the cabling distance requirements set forth in Section 18.8 (IDF Rooms Specific Requirements), though not required.

(d) Consolidation of Tech Distribution Room (IDF) (RDS code: TC2) and Court Floor IDF (RDS code: TC4) is allowable provided that adequate clearance and cooling is maintained.

(e) Vertical backbone cabling shall be provided for telephone, data, and CATV systems (provider: Comcast) running between each Telecommunication Room within the New Courthouse. Telephone termination frames, voice and data patch panels, and equipment racks / cabinets shall be provided and installed at each Telecommunication Room. Plenum-rated horizontal distribution cables shall be provided for telephone, data and CATV systems from each outlet for telephone, data and CATV to the nearest Telecommunication Room.

(f) IDF Rooms shall be vertically stacked wherever possible. At a minimum, one (1) vertical wall shall be common for each closet stack to facilitate the riser path.

(g) Telecommunication Rooms shall not be located below grade in any instance, with the exception of the Entrance Facility Room, which may be located in the basement level, in which case, such Functional Unit shall comply with the requirements set forth in Section 7.3 (Foundations).

(h) Telecommunication Rooms shall not be located:

(i) in spaces with limited potential for future expansion, including between stairwells, shafts, elevators, steel bracing, and exterior walls;

(ii) where they may be subject to water or steam infiltration, humidity from nearby water or steam, heat, or any other corrosive atmospheric or environmental conditions;

(iii) under a water source such as toilet rooms or janitorial closets;

(iv) directly adjacent to elevators, pump motors, generators, radio transmitters, radar transmitters, induction heating devices, sources of mechanical vibration, and other potential sources of electromagnetic interference ("**EMI**"), unless Project Co takes additional measures as needed to eliminate EMI and vibration;

(v) with or adjacent to Rooms which uses are reserved for functions including: electrical closets, except when four feet of distance to transformers in electrical rooms is maintained, boiler rooms, washrooms, janitorial closets, except when a floor drain is provided in the janitorial closet; and

(vi) with or adjacent to Rooms where the noise from servers may disrupt the intended purpose of such Area.

(i) Telecommunication Rooms shall be dedicated to the New Courthouse's telecommunications function and related supporting infrastructure only. Where possible, provide access to Telecommunication Rooms directly from common areas such as

corridors. Access into Telecommunication Rooms shall not be through offices, mechanical and electrical rooms, or other similar spaces.

(j) Telecommunication Rooms shall be rectangular in shape, contain no columns or braces where equipment is to be located, and shall have a minimum of nine (9) feet and six (6) inches from the finished floor to the ceiling.

(k) All racks/cabinets shall be bolted and isolated from excessive vibration.

(l) The arrangement of equipment shall provide a minimum clearance around server racks of four (4) feet at the front and four (4) feet at the rear.

(m) The following Rooms can be combined into one single server / MDF room with a minimum area of six hundred twenty-five (625) net square feet (the "**Server Room**"):

(i) the Main Server Room;

(ii) the County Server Room;

(iii) the OJD Server Room; and

(iv) the MDF Room.

(n) The Vendor Server Room may be utilized by the Project Company for its own ITC equipment.

18.5.2 Architectural Requirements

(a) Each Telecommunication Room wall shall be covered with 8-foot x 4-foot x 0.75-inch AC-grade fire treated plywood (A-grade side out) mounted six (6) inches above finished floor.

(b) Walls and plywood shall be painted with a low-gloss white paint. Mask around fire retardant label on plywood.

(c) Windows or skylights shall not be permitted within Telecommunication Rooms.

(d) Provide raised floors or floor drains for Telecommunication Rooms at ground level. Provide drop ceilings at all Telecommunication Rooms, with the exception of IDF Rooms.

(e) Provide vinyl composite tile ("**VCT**") with static dissipative properties in all Telecommunication Rooms.

(f) Telecommunication Rooms shall be free of water or drainpipes not directly required in support of the equipment within such rooms. Routing through Telecommunication Rooms is not permitted.

(g) All walls within Telecommunication Rooms shall be a minimum one-hour fire-rated. Four-inch sleeves shall be used for vertical pathways and shall be firestopped at each floor.

(h) Door frame size shall be sufficient to allow for easy introduction and removal of equipment. Doors shall be a minimum of 42 inches wide and nine (9) feet tall. If hinges are exterior to the room, doors shall use locking hinge pins.

(i) Concrete floors in Telecommunication Rooms shall be sloped to drain toward one corner of the room.

18.5.3 Electrical Requirements

(a) Provide an electrical panel in each Telecommunication Room. These panels shall only serve circuits within each Telecommunication Room including racks, cabinets, mechanical systems, lighting, and security equipment panels. Do not feed convenience outlets from these panels. Ensure 20% spare breaker slots are available in panel after building occupancy acceptance. The estimated electrical load of room(s) it serves shall not exceed 80% of its capacity. Such panels shall remain unlocked at all times.

(b) Base initial loads shall be as follows for network equipment:

(i) each 2-post equipment rack shall have the ability to provide or support a nominal 3 kilowatt capacity. 2-post equipment rack shall have actual 1.5 kilowatt cooling capacity with an assumed heat rejection rate of 90% (1,350 W heat load);

(ii) each equipment cabinet in the Telecommunication Room will have the ability to provide or support a nominal ten (10) kilowatt capacity. Each equipment cabinet shall have Actual 5 kilowatt cooling capacity with an assumed heat rejection rate of 80% (4,000 W heat load); and

(iii) lighting, mechanical, and security electrical loads shall be provided separately.

(c) Telecommunication Rooms shall have sufficient dedicated circuits for all equipment, plus one or more additional circuits, as needed for flexibility in the event a circuit fails.

(d) All systems shall be properly grounded.

(e) Critical systems shall be connected to uninterruptible power supplies ("**UPS**") and/or generator power as required by the Design and Construction Standards. All servers and other critical equipment required to be supplied with UPS in the Server Room shall be fed from standalone redundant in-row UPSs, which shall provide a minimum of thirty (30) minutes of backup power.

(f) Based on UPS monitoring thresholds, automatic shutdown features shall be configured when feasible to gracefully shut down and protect systems to power loss.

(g) The Server Room shall have a clearly labeled emergency power-off switch.

(h) Procedures shall be posted in the room explaining how to respond in the event of a power failure.

(i) Telecommunication Rooms shall have emergency lighting to provide for life safety in the event of a power outage.

(j) Before commencement of the construction work, the Project Company shall submit all design electrical loads to the County for usage verification.

(k) One (1) 120VAC/20 (NEMA 5-200) quad electrical circuit, one (1) 120VAC/30A (NEMA L5-30) electrical circuit, and one (1) 208VAC/30A (NEMA L6-30) electrical circuit shall be provided above each equipment rack cabinet. In the Server Room, in-row cabinets shall have A / B PDUs served by the redundant in-row UPSs. In each IDF, provide one (1) 120V quad outlet at the rear of each rack.

(l) Mount the backboxes for electrical circuits to racks / cabinets to the side of the overhead cable runway, with the plugs facing the rear circulation aisle of the room.

(m) Place 120VAC/15A (NEMA 5-15) convenience outlets every six (6) feet along the walls, with a minimum of one per wall.

18.5.4 Fire Suppression

(a) Telecommunication Rooms shall require heptafluoropropane (HFC-27) fire suppression systems to be installed as an extra layer of protection in conjunction with a dry pipe pre-action system, with the exception of IDF Rooms, which shall only require a dry pipe pre-action system. All rooms shall be sprinkled per Applicable Law.

(b) Locate sprinkler heads at least twenty-four (24) inches above the top of the overhead cable management and provide cages to protect heads from accidental activation. Do not locate heads and pipes directly over the equipment rack. Place and route these over the circulation aisles instead.

(c) Provide smoke detection in all Telecommunication Rooms.

(d) Provide one (1) portable clean agent fire extinguisher, spaced and rated per Contract Standards and Applicable Law.

18.5.5 Mechanical and Temperature Control Requirements

(a) The Server Room shall be equipped with two (2) independent cooling units in N+1 configuration. Server Room shall have redundant in-row hot/cold isle configuration. Under normal circumstances, the heat recovery chilled water system shall be used for the Telecommunication Rooms with the central utility plant providing a redundant source of chilled water. HVAC system shall operate continuously three hundred sixty-five (365) days per year and maintain a temperature in accordance with the Room Data Sheet as applicable to the specific Telecommunication Room.

(b) Overhead air vents shall not be permitted in the Telecommunication Rooms.

(c) Environmental monitoring shall be configured to alert administrators in the event of a cooling failure (e.g., a NetBotz monitoring system that sends text messages; a thermostat with only a local alarm is not sufficient).

(d) For large Telecommunication Rooms, HVAC systems and equipment shall be installed in a hot aisle / cold aisle configuration to maximize efficiency.

(e) Procedures shall be posted in the room explaining how to respond in the event of HVAC failure.

(f) IDF Rooms shall be equipped with one independent HVAC unit (assume split system unit). HVAC system shall operate continuously through the year.

(g) Humidity control is not required in the IDF Rooms. Server Room shall comply with ASHRAE Thermal Guidelines for Data Processing Environments published by the TC9.9 Committee.

(h) Maintain positive air pressure within the Telecommunication rooms.

(i) Hang all mechanical equipment from the ceiling. Wall mounting equipment is acceptable provided that such unit is located above the overhead cable runways. Mount equipment as high as possible so as not to interfere with horizontal sleeves and cable management within the room. Cooling units shall be placed over doorways. For N+1 requirements, place one unit over doorway and the other unit on the opposite side of the room.

(j) Ensure unimpeded access is available for maintenance of the units.

(k) Provide an independent thermostat control located within each Telecommunication Room, and configure it as its own dedicated zone.

(l) Do not route pipes through the Telecommunication Room that do not serve such Telecommunication Room. Ducts and conduits routing through Telecommunication Rooms serving other spaces must be run high and with a minimum clearance of 2'-0" above any cable racks.

(m) Split systems shall be provided with a manufacturer-specified auto restart function to ensure the unit comes back on fully functional automatically after a power failure. Manual restart after a power interruption is not acceptable.

(n) At ground level, where raised floors are required in accordance with Section 18.5.2(d), computer room air conditioning ("**CRAC**") units are acceptable. Such CRAC units shall comply with the minimum requirements set forth in Table 6. 18.1 (ITC Systems Specifications) of these Design and Construction Standards.

18.5.6 Physical Security Requirements

(a) Provide door hardware for each Telecommunication Room allowing the doors to be locked and keyed separately from doors of non-Telecommunication Rooms. Telecommunication Room doors shall have fail-secure electronic hardware such as electronic mortise locks to allow entry by means of card reader access.

(b) Provide a card reader and request-to-exit switch at all Telecommunication Rooms.

(c) Add fixed HD CCTV cameras within all Telecommunication Rooms to cover room entrance (ingress/egress) and between each rack row with opposing views.

18.6 ENTRANCE FACILITY ROOM SPECIFIC REQURIEMENTS

(a) Install 4-inch conduits from New Courthouse Server Room to the existing Utilidor connections at vaults outside the New Courthouse.

(b) Install 4-inch conduits and vaults as needed for redundant fiber connections to New Courthouse. The Project Company shall coordinate with the County for minimum requirements. These may follow a different path into building than utilidor connections.

(c) Install, splice, and terminate 144-count (72-pair) single mode fiber from existing Clackamas Broadband Exchange ("CBX") vaults on northwest side of Red Soils Campus to New Courthouse Entrance Facility Room and terminate in Entrance Facility Room.

(d) Install, splice, and terminate 144-count (72-pair) single mode fiber from the New Courthouse entrance facility room to the DSB building entrance facility room. Terminate fiber in each respective room.

(e) Install conduits for communication companies as needed.

(f) Install, splice, and terminate 96-count (48-pair) single mode fiber running from the New Courthouse Server Room to existing utilidor vaults and terminate at Development Services Building entrance facility room.

(g) Install, splice, and terminate 96-count (48-pair) single mode fiber to run from DSB entrance facility up and into Development Services Building Server Room / MDF. Terminate in respective rooms.

(h) Install, splice, and terminate 48-count (24-pair) single mode fiber from New Courthouse Server Room to C-COM / 911 building's (911 Center) radio room.

(i) Install, splice, and terminate 48-count (24-pair) single-mode fiber from C-COM / 911 building's radio room to C-COM's / 911 building's Server Room / MDF.

(j) Provide fiber termination panels in the entrance facilities and Server Rooms / MDFs and submit to County for review and acceptance.

(k) Install a 400-pair copper voice cable from the New Courthouse Server Room to Development Services Building Server Room / MDF through respective entrance facility rooms with outside plant.

(l) Protection units shall be as described under entrance terminals. Terminate in Server Room / MDF's on Nordx Gigabix blocks mounted to backboard.

(m) Install a 50-pair copper voice cable from New Courthouse Server Room to Telco RJ21X in the New Courthouse Entrance Facility Room. Terminate in Server Room on Nordx Gigabix panel mounted to backboard.

18.7 SERVER ROOM SPECIFIC REQUIREMENTS

(a) In addition to complying with the minimum net square footage set forth in Section 18.5.1(m) of these Design and Construction Standards, the Server Room shall provide two (2) areas as follows:

(i) one area that shall contain the servers serving the County Data Network, which shall be able to hold four (4) 48U cabinets with vertical wire management (the "**County Server Area**"); and

(ii) one area that shall contain the servers serving the OJD Data Network, which shall be able to hold four (4) 48U Cabinets with vertical wire management (the "**OJD Server Area**").

(b) The Server Room shall house the core network devices. Data service shall be distributed via single-mode fiber optic cables to each IDF Room with telephone service distributed by copper feeder cable. Racks and cable ways shall be provided with appropriate cable management accessories for organized cable routing within the Server Room and to the IDF Room locations. Additional rack space shall be provided within both, the County Server Area and the OJD Server Area.

(c) The Server Room shall be a secure room designed to accommodate the voice and data needs of all Project Users.

(d) The Server Room shall be centrally located so that all cable runs are no more than three hundred (300) feet total distance.

(e) The Server Room shall include, at a minimum:

(i) InRow cabinets, redundant InRow cooling, and redundant InRow UPSs. Designed for hot / cold aisle.

(ii) Two (2) and four (4) post racks.

(iii) Server cabinets as specified.

(iv) Minimum four (4) foot clearances on all sides of racks / cabinets/ equipment.

(v) Continuous cable tray running around room and above racks / cabinets.

(vi) Fireproof backboard on walls.

(vii) 120/208 VAC power as needed from UPS sub-panel.

(viii) UPS on backup generator.

(ix) Grounding bar and jumpers for all cabinets / racks.

(x) Cooled by redundant in-row or dedicated HVAC units.

(xi) One (1) secure, reinforced door with secure card access.

(xii) Fire suppression system as specified in these Design and Construction Standards.

(xiii) Pre-action system for UPS cutoff of power to all electronics prior to release of water. (If sprinkler)

18.8 IDF ROOMS SPECIFIC REQUIREMENTS

(a) IDF Rooms shall be no less than ten (10) feet by nine (9) feet four (4) inches.

(b) Local IDF Rooms shall be provided to address Category-6 cable distance requirements.

(c) Outlets shall not exceed three hundred (300) feet from the closest IDF Room.

(d) Fiber backbone / riser cable shall connect each IDF Room to the Server Room.

(e) All local data outlet cabling shall be terminated in the nearest IDF Room on the same floor on 48 port patch panels. All tele outlet cabling shall be terminated in the nearest IDF or MDF Room on the same floor. Terminate on Nordx Gigabix blocks mounted to backboard.

(f) Minimum four (4) foot clearance on two (2) sides of racks / equipment.

(g) Patch panels and cable management shall be provided in each equipment rack as required for organized cable routing.

(h) Additional rack space shall be provided for County and OJD equipment.

(i) Provide sufficient cooling for the system load within each IDF Room. Equipment in all IDF Rooms shall also be provided with uninterrupted power twenty-four (24) hours per day, seven (7) days per week.

(j) IDF Rooms shall utilize UPSs on circuits from backup generator.

(k) Install and terminate 200-pair copper voice cables to each IDF Room from Server Room. Terminate on Nordx Gigabix blocks mounted to backboards.

(l) Install, splice, and terminate 24-count (12-pair) single mode fiber to each IDF Room from Server Room.

18.9 TELEPHONE SYSTEM

(a) The telephone system shall be sized to support the equipment provided by the County in accordance with Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix) to the General Design, Construction and Facilities Management Technical Requirements.

(b) All phones and telephone network connected devices within the New Courthouse shall be part of the VoIP / TDM based system.

(c) Two separate VoIP / TDM networks shall be: one VoIP / TDM network for the County and one (1) VoIP / TDM network for OJD.

18.10 WIRELESS NETWORKS AND WIRELESS DATA ACCESS

(a) The Project Company shall provide all the infrastructure required for two (2) separate wireless data networks: one (1) wireless data network for the County, and one (1) wireless data network for OJD.

(b) Ceiling mounted wireless access points ("**WAPs**") shall be provided in enclosures with tele/data outlet and category-6 cabling to the nearest IDF Room. WAPs shall be provided throughout all public and non-detention staff areas with sufficient coverage and throughput to service the anticipated loads. Separate secure and public networks shall be provided to logically segregate traffic. Public network traffic shall be monitored.

(c) Two (2) data runs for WAPs shall be provided per large conference room, one (1) connected to the County Data Network, and one (1) for the OJD Data Network.

(d) Category-6 cables shall terminate with the IDF Room on rack-mounted patch panels. Allocate a separate patch panel field for wireless network outlets. These terminations may be combined in the same patch panel as cables to other Power-over-Ethernet ("**PoE**") devices. Security camera data cables shall be on their own separate and distinct patch panels.

18.11 TELEPHONE AND DATA OUTLETS

18.11.1 General Requirements

(a) Outlets provided within the Project shall include connections necessary for the function of the area plus spare for future expansion. Telecommunication and data outlets and connections shall be distributed around the building in accordance with Section 18.4 (Data Networks) of these Design and Construction Standards.

(b) Telephone and data outlets shall be provided for all locations specified in this Section 18.11 and all copiers, printers, and server or other network-attached devices not housed within the Server Room or IDF Rooms in accordance with the requirements of this Section 18.11.

(c) Where telecommunications outlets are required, floor box outlets shall be provided for all locations where the equipment or furniture is not adjacent to or within patching distance of a wall.

(d) Telephone and data outlet locations shall be coordinated with associated power outlets.

(e) All telecommunication outlets shall be provided with one (1) voice and two (2) data jacks unless otherwise specified in this Section 18.11.

(f) Coordinate telephone and data outlet locations for all furniture to be provided by the County.

18.11.2 Workstations

(a) All workstations within the New Courthouse shall be provided with one (1) telecommunications outlets, at a minimum.

(b) Workstation telecommunication outlets shall be mounted in a faceplate designed for the furniture.

(c) Telecommunication outlets shall be placed on the major furniture spine located close to the user so that standard length patch cables can be utilized.

(d) Cables shall be routed from the telecommunication outlet in the furniture cabling channel to a furniture common point.

(e) Flexible non-metallic conduit shall connect the furniture to either a wall-mounted junction box or a floor mounted box.

(f) Cabling shall be routed to the nearest cable tray via conduit or non-continuous cable supports (j-hooks) spaced per code.

18.11.3 Offices Conference Rooms

(a) Each room shall have a minimum of two (2) wall mounted telecommunication outlets on separate walls for flexibility and furniture configuration, unless otherwise specified in this Project Agreement.

(b) Telecommunication outlets shall be flush mounted in a deep 4-square box equipped with a single gang mud ring.

(c) Conference rooms shall have floor boxes with a one (1) telecommunication outlet consisting of two (2) data and one (1) voice cables. AV cables shall be provided as needed and in accordance with Section 19 (Audiovisual Systems).

18.11.4 Other Spaces

(a) Telecommunication and data outlets shall be provided as specified in the Room Data Sheets and this Appendix 6 (Design and Construction Standards).

(b) Floor boxes shall receive a minimum of one (1) telecommunication outlet consisting of two (2) data and one (1) voice cables. AV cables as needed.

(c) Back box for AV monitors shall contain (1) telecommunication outlet consisting of (1) data and (1) coax cabling, power and AV connections as required for that particular Functional Unit.

18.12 CONNECTIVITY

18.12.1 Voice Cable (other locations – ALL as required)

Category 5e, CMP rated, gray jacket for the following locations:

(a) One (1) to ~~every~~ telecommunication outlets at locations coordinated with the County;

(b) One (1) for every elevator equipment room and/or elevator panel;

(c) One (1) for every rescue / firefighter telephone;

(d) One (1) for every wall phone;

(e) One (1) for every intercom box; and

(f) One or two as needed for fire and life safety equipment call out purposes.

18.12.2 Fiber

(a) As specified in Section 18.6 (Entrance Facility Room Specific Requirements) terminated on patch panels with LC connectors;

(b) Single Mode; and

(c) Connect every IDF Room or other data network dependent spaces to Server Room.

18.12.3 Data Cable (ALL)

Category 6, CMP rated, blue jacket cable for following locations:

(a) Two (2) to every telecommunication outlet;

(b) One (1) from Telecommunication Room for every IP camera, interior and external;

(c) One (1) from Telecommunication Room to every wireless access point;

(d) One (1) from Telecommunication Room for every networked HVAC control;

(e) One (1) from Telecommunication Room for every networked ACS control;

(f) One (1) from Telecommunication Room for every networked EMN device.

18.12.4 Patch Cords and Jumpers (ALL)

(a) Category 6 patch cords to be provided by County in the following quantities:

(i) One (1) 10-foot workstation patch cords for every telecommunication outlet;

(ii) One (1) patch cord as required for IP Security cameras, Wireless Access Points and AV equipment.

(iii) Single-mode jumpers in the following quantities:

(1) One (1) 1-meter LC-to-LC jumpers of the appropriate fiber type per every fiber strand segment.

(2) One (1) 2-meter LC-to-LC jumpers of the appropriate fiber type per every fiber strand segment.

(b) Standards (ALL)

(i) All cabling will be installed per code requirements and current industry wiring practices and standards.

(ii) All cabling shall be tested to current standards. An electronic copy of the tester data shall be provided for review by the County along with a working version of the tester software.

(iii) All cabling jacket colors shall be as follows:

(1) Black / White: Coax and AV Video Cable

(2) Blue: Data / Security Cameras / WAPs

(3) Brown: HVAC

(4) Gray: Phone

(5) Red: Fire Alarm

(6) Yellow: Access Control / Single-mode fiber optics

(7) White: Security

(8) Orange: Emergency Mass Notification Devices.

18.13 IN-BUILDING RADIO

In-building radio reinforcement shall be provided to cover all areas within the New Courthouse. A distributed antenna system shall support all 800 MHz radio use for the Clackamas County Sheriff's Department, state, and local police, and first responders (Fire and EMS). Provide a donor antenna on the roof as well as distribution and amplification within the building.

18.14 CELLULAR/CELLULAR DATA ANTENNA SYSTEMS

The Project Company shall provide a cellular/cellular data distributed antenna system, bi-directional amplifiers, or small cell site to enhance the cellular service in all areas of the New Courthouse.

19 AUDIOVISUAL SYSTEMS

19.1 GENERAL REQUIREMENTS

The Project Company shall provide all the cabling, conduits, and all infrastructure required by Appendix 6 (Design and Construction Standards) and Attachments 6B and 6C for an audiovisual system within the Project that will enhance the exchange of information and the New Courthouse's day-to-day activities, and which is fit for its intended purpose throughout the Facilities Management Period (the "**Audiovisual Systems**" or the "**AV Systems**"). The elements, components and equipment of such AV Systems required by Appendix 6 (Design and

Construction Standards) and Attachments 6B and 6C shall be procured, installed, and commissioned in accordance with Section 7.16 of the Project Agreement and Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix) to the General Design, Construction and Facilities Management Technical Requirements.

19.1.1 Courtroom Technology

(a) In addition to complying with the requirements set forth in this Section 19.1.1, the AV Systems in Courtroom Areas shall comply with the requirements set forth in Attachment 5A, the specific requirements for each Room type set forth in the Room Data Sheets, and any other requirements set forth in the Contract Standards. All Courtroom technology shall integrate with the digital audio recording system and teleconferencing systems. All AV Systems and equipment in all Courtroom Areas shall be connected to the OJD Data Network.

(b) The Courtrooms shall have a complete fixed AV evidence presentation system.

(c) Touchscreen control systems:

(i) Remote control shall be provided for video projection and sound control.

(ii) Touchscreens shall be provided at each judge's bench and one other location within each Courtroom.

(d) Smartboard lectern units: LCD monitors with annotation digitizer shall be installed at the council tables and witness box to provide the attorneys and witnesses video feedback and the capability for annotation of images without using a full-sized smartboard.

(e) Eighty-five (85) inch monitor, ceiling or wall mounted for large scale display of video and general viewing, with no less than high definition (1080p) resolution, brightness 500 nit, contract ratio 3000:1, and a viewing angle of no less than 178 degrees; or video projector and ceiling mounted projector screen: a ceiling mount, four thousand five hundred (4,500) lumen, LCD type video projector and ceiling mounted projector screen shall be provided for large scale display of video and general viewing.

(f) Local LED monitors: smaller flat screen monitors and a video distribution system shall be integrated into the jury box and allow up-close viewing of video presentations to improve clarity of fine details. Provide integration between these MDEC stations within each Courtroom and the AV System in each Courtroom for fully integrated room AV Systems.

(g) Video arraignment: video arraignment capability shall be provided in each Courtroom. The video arraignment system shall be compatible with the existing systems used by the Governmental Bodies. Coordinate with the Governmental Bodies to determine the use of a fixed or cart-based system and provide equipment and infrastructure to support the chosen methods in each Courtroom.

(h) Document camera (digital overhead): shall allow for display of printed documents and thirty (30) objects on video displays. Provide power, signal, and control cabling.

(i) Media input: media input devices shall be provided in accordance with the requirements set forth in Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix). Coordinate with the County and Governmental Bodies the following connections: Blu-ray, DVD, CD, VHS, VGA, 3.5 mm TRS, HDMI, USB, and wireless media display devices and connections.

(j) Sound system: the sound system shall include ceiling-mounted speakers, and furniture mounted or free-standing microphones. Inputs and interfaces for production/conference type sound reinforcement equipment shall be provided.

(k) Digital audio recording:

(i) Software, servers, microphones, digital audio matrix mixers/processors, and other related equipment shall be provided to record all Courtroom audio.

(ii) Separate storage shall be provided by for each entity requiring audio recording.

(l) Infrastructure for communication: the Courtrooms shall be equipped with a local network with outlet at the judge's bench / stand, clerk's station, court reporters' station, witness box lectern, counsel tables and jury box.

(m) Power requirements: provide the AV devices, control system and sound system electric power in the AV equipment rack. The video projector shall receive electric power in the ceiling. Power outlets shall be provided near to both the OJD Data Network outlets and AV interface points at the judge's bench / judge's stand, clerk's station, court reporters station, witness box lectern, counsel tables and jury box. All power shall have an isolated ground.

(n) Equipment racks: AV equipment shall be installed in lockable 48U cabinets with vertical cable management mounted on casters, no more than two cabinets per AV room serving no more than two (2) Courtrooms on the same floor.

19.2 COURTROOM CONTROLS

The Project Company shall provide all infrastructure for Courtroom AV Controls. The following control functions shall be available at both touchscreen stations within each Courtroom. The Project Company shall coordinate with the Governmental Bodies all infrastructure requirements to support touchscreen or push-button controls for each function, and whether certain control functions shall only be available at certain stations.

Control	Function
System Power	Turn system on and off.
Lights	Allows adjustment of lighting levels if dimming or lighting control systems are provided.
Control System Override / Disable	Disable the other touchscreens in the Courtroom. Enabling this function shall allow only the judge's touchscreen to operate the system.

Control	Function
Blank Video Screen	Display a blank screen on all video monitors to censor inappropriate materials.
Mixer Level Controls	Allows adjustments to the individual microphone levels.
Microphone Mute	Allows the selected microphone to be muted.
Video Device / Audio Device Selection	Allows the user to select a device for playback. Once a device is selected the system shall display the device controls and automatically adjust the system as need to use the selected device.
Video / Audio Device Controls	Standard Play, Stop, Pause, Fast Forward and Rewind controls shall be provided for all devices controlled by the system.
Bench Conference Mode	mute all microphones except the judge's microphone and send sound masking to selected audio zones such as the jury box to allow a greater level of privacy for bench conferences. Sound masking shall integrate with the audio recording system.
Cough Button	Shall momentarily mute the local microphone.
Annotate Video	Shall activate the smartboard features.
Judge's Pre-Review	The judge's/judges' bench shall be equipped with local playback capabilities of all media for review prior to display to the court room.

Table 6. 19.1 (Courtroom AV Systems Controls and Functions)

19.3 CONFERENCE ROOMS AND SHALLER ROOM

The implementation of AV Systems in all conference rooms (all Rooms with RDS ID CF1 through CF15), including all Interview Rooms, and the Break Room / Shaller (SS4) Room, shall comply with the requirements set forth in this Section 19.3. The Project Company shall provide all cabling, conduits, and infrastructure necessary for the proper operation of such AV Systems. All AV equipment shall be provided in accordance with Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix) to the General Design, Construction and Facilities Management Technical Requirements.

(a) Control system: a fixed button control panel shall be provided at the presentation point for control of system power, input selection, and audio controls.

(b) LED monitor: a wall mounted LED monitor shall be provided for display of video.

(c) Coordinate with the Governmental Bodies to provide the appropriately sized monitor based on the room size. Refer to the Room Data Sheets for details.

(d) AV playback devices: AV inputs to the system shall be provided at the presentation point.

(e) Sound system: the sound system shall include ceiling mounted speakers and audio inputs at the presentation point. Coordinate with Governmental Bodies to provide sound system sized appropriately based on the room size. Refer to the Room Data Sheets for details.

(f) Video conferencing system: the video conferencing system shall include pan - tilt – zoom video conferencing camera, integration with the sound system, and integration with the existing video conferencing systems of each Governmental Body for each conference room, training room, and shaller room.

(g) Power requirements: The AV devices, control system and sound system shall be provided electric power in the AV equipment rack. The LED monitor shall be powered in the wall.

(h) All power shall have an isolated ground.

(i) Equipment mounting: AV equipment shall be installed in lockable equipment enclosures that shall be coordinated with furniture. If furniture does not allow for AV equipment mounting, the equipment shall be mounted in appropriately rated enclosures above the finished ceiling.

(j) Cable television outlets shall be provided for input to the AV Systems.

19.4 MAIN JURY ASSEMBLY AREAS

(a) The Main Jury Assembly Areas shall be equipped with an AV System with the capability to show cable television and to provide orientation and management for jurors, including playing instructional videos for viewing by all jurors and making announcements.

(b) The Project Company shall provide all cabling, conduits, and infrastructure necessary for the proper operation of such AV Systems. All AV equipment shall be provided in accordance with Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix) to the General Design, Construction and Facilities Management Technical Requirements.

(c) Large displays shall be provided in sizes and quantities as required to provide comfortable viewing from all seats within the room.

(d) Sound system shall be provided as required to provide clear and comfortable listening from all seats with the room. Provide assistive listening system.

(e) Provide microphones as required to provide audio reinforcement for a person giving instructions and/or making announcements.

(f) Provide integration with the cable television system.

(g) Provide touch screen control system for control of all room AV devices.

19.5 AV SYSTEM CABLING

Provide all conduits and cabling to support the functions listed above. All media content over twisted pair shall be provided with shielded twisted pair cabling. Isolated data circuits shall be provided in each Courtroom and Conference Room dedicated for video streaming and video conferencing with voice.

19.6 EVIDENCE VIEWING ROOM

The Evidence Storage & Viewing (ST1) Room shall be equipped to display evidence and case information. Provide OJD Data Network drops at local workstations where members of the media have access to select files and documents. The files and documents shall be capable of being viewed locally and saved via USB drives or upload to online file transfer services.

19.7 CABLE TV

The following locations shall be provided with cable television. Channel, volume, and power controls shall be provided locally through standard television remote controllers. Additionally, the monitors shall be connected to an IP based digital signage system for the transmission of messages and the docket display. The existing CATV service is provided by Comcast.

(a) JA1 – Jury Room Main Assembly Area

(b) JA2 – Jury Room Lounge Area

(c) PS3 – Play Room

(d) SS4 – Break Room

(e) The single instance of CF8 - Large Conference Room within the Sheriff Administration

(f) The single instance of OF5 - Judge / District Attorney Office within the District Attorney Office

(g) OF4 – Trial Court Administrator Office

The above locations shall supersede the BUILDING SYSTEMS: CATV/MATV: Yes/No designations within Appendix 06A – Program and Room Data Sheets.

~~(a) Break Rooms;~~

~~(b) Jury Assembly Rooms;~~

~~(c) Waiting Areas;~~

~~(d) Judge's Chambers;~~

~~(e) Child Respite Areas and any other childcare areas; and~~

~~(f) Staff Lounge / Wellness Room.~~

19.8 DOCKET DISPLAY

The following Areas shall be provided with monitors connected to the docket display system to display case names and assignments. All equipment including monitors, servers, and all connectivity shall be provided.

(a) Main Lobby;

(b) Public Elevator vestibules;

(c) all waiting areas;

(d) Jury Assembly Areas; and

(e) all Courtroom entrances.

20 POINT OF SALES SYSTEMS

(a) The Project Company shall design and install point-of-sale ("**POS**") systems at the New Courthouse in accordance with the requirements of this Section 20. The POS system for a Functional Unit shall comprise the POS Equipment identified in the applicable Room Data Sheet, together with the IT Systems infrastructure and power necessary to provide for an integrated system Point of Sale activity, as applicable.

(b) The Project Company shall design and construct the New Courthouse to accommodate the indicative IT Equipment Package for each Functional Unit identified in Attachment 6C (Preliminary List of State Moveable Furniture, Fixtures and Equipment) to these Design and Construction Standards. Location of POS equipment devices shall be coordinated with the County.

(c) The Project Company shall construct all built-in counters, transaction cabinets or other POS cabinetry as detailed in the built-in equipment portions of the Room Data Sheets to accommodate POS equipment.

(d) The Project Company shall provide any power outlets required in connection with the POS equipment, which are in addition to the outlets for convenience power specified in the Room Data Sheets.

(e) The Project Company shall procure, install, commission, and test all POS equipment detailed in the Room Data Sheets and the POS equipment packages. POS equipment shall be installed to provide a complete, functional system.

21 NEW COURTHOUSE SECURITY REQUIREMENTS

21.1 GENERAL PERFORMANCE REQUIREMENTS

(a) The Project Company shall design, construct, install, and commission the security systems components described in this Section 21, including all associated infrastructure,

which shall be fit for and respond to their intended purpose, and that are required to provide safe, fully functioning, and complete Project (the "**Security Systems**").

(b) The Project Company shall refer to Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix) to the General Design, Construction and Facilities Management Technical Requirements for the procurement, installation, and commissioning requirements for the Security Systems.

(c) The Project Company shall provide adequate training to the County on the operation of each individual system and the operation of all integrated functions of the Security Systems. In addition to live / in-person training sessions, the Project Company shall also provide the County with pre-recorded training sessions, covering the same material, on an industry standard format mutually agreed upon by the Parties.

(d) All hardware and electronic equipment to be installed in connection with the Security Systems shall be provided through a contractor ~~"**Detention Equipment Contractor**" or "**DEC**"~~, who specializes in service, engineering, and installation of security equipment.

(e) The design, construction and installation of the Security Systems shall comply with *Appendix B (JFC Adopted Assessment Criteria)* of the *Interim Committee on Court Facilities – Final Report*, as adopted in December 2007 and as updated from time to time, all Contract Standards, and Applicable Law.

(f) Alertus Duress alarms shall be provided as indicated in Section 3 (Room Data Sheets) of Attachment 6A of the Design and Construction Standards, including in the following offices, rooms and areas:

(i) Trial Court Administrator's office (OF4);

(ii) OJD Manager 2 (OF3);

(iii) Family Law Facilitator +2 Staff (2-person) (OF2);

(iv) Information Technology Specialist 3 (OF2);

(v) OJD Supervisor 3, Civil Case Unit (OF2);

(vi) OJD Supervisor 3, Accounting / Collections / Indigent Defense (OF2);

(vii) OJD Supervisor 2, Criminal and Traffic (OF2);

(viii) OJD Supervisor 2, Calendaring / Juvenile / Jury (OF2);

(ix) OJD Supervisor 1, Records (OF2);

(x) Program Coordinator 3, Treatment Court (OF1);

(xi) all public-facing windows;

(xii) all Courtrooms;

(xiii) all Judges' Chambers;

~~(xiv)~~ the District Attorney's Office; and

(xiv) any other room where the New Courthouse staff may come in contact with the general public.

(g) Detention grade intercoms and buttons shall be provided, with dome lights as necessary, to all holding cells that alerts the In-Custody Control Room.

21.2 SECURITY SYSTEMS OPERATIONAL PRINCIPLES

The Project Company shall consider the following principles for the design, construction, installation, and commissioning of the Security Systems:

21.2.1 Simple Operational Security

(a) The Security Systems shall focus on providing the best and appropriate level of security in a manner which is easy to operate. The Security Systems provided shall employ features to make user interaction simple and friendly and to streamline and automate processes in a secure and efficient manner.

~~21.2.2 Integrated Systems~~

~~(a) The Security Systems shall provide interconnection among the systems which are more traditional independent. The Security Subsystems shall be integrated into one (1) integrated Security System to allow security personnel to efficiently monitor and control all aspects of the Project security. This shall allow for higher situational awareness for better response to potential and active situations.~~

21.3 SECURITY LEVELS AND CIRCULATION PATTERNS

21.3.1 General Requirements

(a) All Areas within the New Courthouse shall be divided into five (5) security zones and three (3) circulation zones to establish requirements for construction, finishes, furnishing, hardware, and security requirements.

(b) The level of security provided shall be maintained throughout the entire Area(s) deemed to meet the requirements for that level. Portals such as doors, gates, and vestibules used to transition from one security level to another shall meet the requirements of the higher of the two (2) levels.

(c) All Areas of the New Courthouse where staff interface directly (either face-to-face or through a window) with the public shall be provided duress alarms (Alertus).

21.3.2 New Courthouse Security Zones

21.3.2.1 Level 0: Unscreened-Public

(a) The Project Company shall design and construct the Project to provide spaces that shall be unrestricted to unscreened public users during Operating Hours outside of the secure perimeter, and which shall be monitored twenty-four (24) hours per day, seven (7) days per week (the "**Level 0: Unscreened-Public**" Areas).

(b) Level 0: Unscreened-Public doors may include key locks. The main entrance may include electrified locks accessed via card reader to the Access Control and Monitoring System for after hours, weekend, and holiday entrance for selected personnel.

(c) All exterior glazing assemblies at public entrances at grade to maximum elevation of first horizontal mullion located above door header, including glazing assemblies that are enclosing pre-screening areas and adjacent main lobbies, shall be protected with ballistic assembly meeting a minimum of Level 2 as defined by UL752 and NIJ.

21.3.2.2 Level 1: Sterile-Public

(a) The Project Company shall design and construct the New Courthouse to provide spaces that shall be within the secure perimeter but accessible to screened public users during Operating Hours, and which shall be monitored twenty-four (24) hours per day, seven (7) days per week (the "**Level 1: Sterile-Public**" Areas).

(b) Level 1: Sterile-Public areas shall include all spaces within the security perimeter which are accessible to screened public during Operating Hours.

(c) Access to Level 1: Sterile-Public Areas shall be through the Screening Stations in the Entry and Security Screening Aras. Screened staff or visitors exiting from the New Courthouse shall be separated from unscreened people entering the facility through the use of either physical barriers or separate entrance/exit doors. Sterile persons shall not have physical contact with non-screened people until they are back into the Level 0: Unscreened-Public Area where they would then need to be re-screened. This prevents the possibility of a sterile individual accepting any items for pass back into the secured areas and also prevents ingress of unscreened people into secure areas.

(d) There shall be a vestibule entering the screening area which can be used as a man trap in an emergency situation.

21.3.2.3 Level 2: Secure-Public

(a) The Project Company shall design and construct the New Courthouse to provide spaces that are accessible to non-staff, escorted occupants and public users, such as conference rooms used by attorneys and clients (the "**Level 2: Secure-Public**" Areas).

(b) Access to Level 2 Areas shall be controlled utilizing key locks to restricted spaces or escorts. In specific cases, the space shall be protected with card reader controlled electric ~~strikes~~ hardware with access granted by escort personnel.

21.3.2.4 Level 3: Secure-Restricted

(a) The Project Company shall design and construct the New Courthouse to provide spaces that are restricted for the use of judicial staff, including secure corridors, Staff Elevators, and staff spaces and offices (the "Level 3: Secure-Restricted" Areas).

(b) The Access Control and Monitoring System shall control ingress into Level 3: Secure-Restricted Areas through electrified locks or strikes. Access through these doors shall be provided through the use of proximity type card readers.

(c) In specific cases, the doors shall be controlled remotely through a push button/switch or from an Access Control Monitoring Workstation. The judicial entrance shall be controlled through secured doors that shall have card access with VSS camera and intercom monitoring.

21.3.2.5 Level 4: Secure-Maximum

(a) The Project Company shall design and construct the New Courthouse to provide secure spaces that are used for detention and holding including, but not limited to, the Sheriff Transport & Holding Areas, and other Functional Areas where in-custody defendants are expected to be present, such as Courtrooms Holding Areas ~~and Courtroom Sound Lock Vestibule Areas~~ (the "**Level 4: Secure-Maximum**" Areas).

(b) These doors and gates shall be interlocked such that only one can be opened or operated at a time. All Holding Cells and movement doors in this area shall consist of electrified locks controlled by the In-Custody Control Room with both the door position and lock latch being monitored. Access through these controlled doors shall require intercom stations for communication to In-Custody Control Room and Video Surveillance System ("**VSS**") cameras to provide video identification before unlocking critical doors.

21.3.3 New Courthouse Circulation Zones

21.3.3.1 General Requirements

The Project Company shall design and construct the New Courthouse to have three (3) restricted circulation patterns as described in this Section 9.5.1.

21.3.3.2 Public Circulation Zone

(a) The Project Company shall design and construct the New Courthouse to provide a public circulation pattern that provides access from the public point of entry to the controlled access points for the restricted and secure areas of the New Courthouse, comprising Level 0: Unscreened Public and Level 1: Sterile Public (the "**Public Circulation Zone**").

(b) All areas that require access by the public users shall be accessible from the public circulation system including Courtrooms, public counter areas and court service functions, court administration, public restrooms, and Public Elevators. The public circulation system also includes the public waiting areas immediately adjacent to courtrooms and attorney conference rooms.

(c) All access into the Restricted Circulation Zone, the Secure Circulation Zone, Level 2: Secure-Public, Level 3: Secure-Restricted, ~~and Level 4: Secure-Maximum~~ shall be access controlled with key card access ~~and from the Building Monitoring Room~~.

(d) Efforts shall be made to maximize natural light and views in the public lobby, waiting areas, and circulation spaces to improve the quality of the environment and to promote an image of judicial transparency.

21.3.3.3 Restricted Circulation Zone

(a) The Project Company shall design and construct the New Courthouse to provide circulation corridors that are restricted and provide access to court staff, judges, escorted jurors, and security personnel to Courtrooms, Judges Chambers, offices, Courtroom Ancillary Spaces, Jury Deliberation Areas, Staff Elevators, and Service Elevators, comprising of Level 2: Secure-Public and Level 3: Secure-Restricted (the "**Restricted Circulation Zone**").

(b) Access into the Restricted Circulation Zone from the Public Circulation Zone and the Secure-Maximum Circulation Zone shall be restricted by use of key cards and from the ~~Building Monitoring Room and the~~ In-Custody Control Room.

21.3.3.4 Secure-Maximum Circulation Zone

(a) The Project Company shall design and construct the New Courthouse to provide a maximum security circulation pattern for in-custody defendants, the County's Sheriff's deputies, and security personnel which shall prohibit unauthorized access by the public and eliminate opportunities for escape by the in-custody defendants (the "**Secure-Maximum Circulation Zone**").

(b) The Secure-Maximum Circulation Zone shall provide appropriate accommodations for juvenile detainees appearing in court as well as those who are transported to court for civil commitment hearings.

(c) Access into the Secure-Maximum Circulation Zone shall be controlled through the use of key cards, and from the ~~Building Monitoring Room and the~~ In-Custody Control Room.

21.4 SECURITY ROOMS WITHIN THE NEW COURTHOUSE

The Project Company shall design and construct a room to monitor all security within the New Courthouse (the "**Building Monitoring Room**"), and a room to monitor and control all holding cell areas (the "**In-Custody Control Room**"), in accordance with the requirements set forth in the Courthouse Program, the Room Data Sheet, and these Design and Construction Standards (collectively, the "**Security Rooms**").

21.4.1 Building Monitoring Room

(a) The Building Monitoring Room shall serve as the communications and security center for the Project and shall be capable of monitoring ~~and controlling~~ building communications, safety, Security Systems, and all entry and exit points within the New Courthouse, to the extent specified in Appendix 6.

~~(b) The Building Monitoring Room shall be a secured, fixed post with twenty-four (24) hours a day, seven (7) days a week operations. Its location in the building layout and room equipment arrangement shall be two (2) essential criteria in the design.~~

~~(c) The area shall be within its own security envelope; this means that the floors, walls, windows and ceiling shall be secure, with the exception of the open entryway from the Sheriff Administration area.~~

~~(d)~~(b) Ergonomic design criteria shall be a major part of the control room equipment layout. The control panels and equipment shall be strategically positioned so that console operators can easily operate the controls and observe all ceiling/wall mounted VSS monitors. The Building Monitoring Room environment shall reduce stress and fatigue, as well as enhance the staff member's efficiency. Provide operator-friendly equipment component layout to improve reaction time and reduce fatigue of individuals utilizing equipment and machine.

~~(e)~~(c) This Building Monitoring Room shall be in charge of the daily security operations. Provide the control console with display, control, and recording of the electronic systems. The console shall be ergonomically designed to perform the required functions efficiently and effectively.

~~(f)~~(d) This entire system shall consist of the Access Control Monitoring Computer with Graphical User Interface ("GUI") for all areas of jurisdiction and also include CCTV monitoring~~/control, intercom~~ and paging/control and Alertus~~Duress switch~~ monitoring. ~~It shall also monitor after hour intrusion detection sensors (glass break, motion detection, etc.). The Building Monitoring Room shall be capable of acting as a backup to the In-Custody Control Room in the event that the In-Custody Control Room is overtaken.~~

21.4.2 In-Custody Control Room

(a) The In-Custody Control Room shall be capable of monitoring and controlling all communications, safety, Security Systems, and entry and exit points within the Sheriff's Office Areas, including the Sheriff Transport and Holding Areas and the Sheriff Main Office Areas, to the extent specified in this Appendix 6.

(b) The In-Custody Control Room shall have primary control of all in-custody defendants' movements, the Sally Port Areas, all Central Holding Areas, including holding cells adjacent to Courtrooms, and all Secure-Maximum Circulation Zones.

(c) The In-Custody Control Room shall be a secured, fixed post with operations during standard Operational Hours. Its location in the building layout and room equipment arrangement shall be two (2) essential criteria in the design.

(d) Access to the In-Custody Control Room shall be limited and controlled by the In-Custody Control Room itself and shall be highly secure and inaccessible to unauthorized population at all times. The area shall be within its own security envelope; meaning that the floors, walls, windows and ceiling shall be secure. The In-Custody Control Room shall provide one-way vision glazing with visibility toward the Central Holding Area.

(e) Ergonomic design criteria shall be a major part of the control room equipment layout. The control panels and equipment shall be strategically positioned so that console operators can easily operate the controls and observe all ceiling/wall mounted VSS monitors. The In-Custody Control Room environment shall reduce stress and fatigue, as well as enhance the staff member's efficiency. Provide operator-friendly equipment component layout to improve reaction time and reduce fatigue of individuals utilizing equipment and machine.

(f) All chairs in the In-Custody Control Room shall have movable armrests or wider seats to be able to accommodate duty belts.

21.5 SECURITY SUBSYSTEMS

21.5.1 General Requirements

(a) The security sub-systems which shall be interconnected for the proper operation of the overall Security System include, without limitation:

(i) the Video Surveillance System ("**VSS**"), as further described in Section 21.5.2 of these Design and Construction Standards;

(ii) the Detention Control and Monitoring System ("**DCMS**"), as further described in Section 21.5.3 of these Design and Construction Standards;

(iii) the Security Intercom ~~and Paging System~~ ("**SI~~P~~PS**"), as further described in Section 21.5.4 of these Design and Construction Standards; and

(iv) the Access Control and Monitoring System ("**ACMS**"), as further described in Section 21.5.5 of these Design and Construction Standards.

(collectively, the "**Security Subsystems**").

(b) All Security Subsystems shall be protected by UPS and emergency generator back up. Equipment rooms containing all Security Systems equipment shall be provided with dedicated cooling systems to regulate the temperature and air quality.

(c) Security Systems utilizing IP-based communications shall be provided with dedicated structured cabling and switching equipment. The security systems network shall be a separate physical network connected only to the County network for camera call up.~~The Security Systems network shall be logically and physically separated from data and communications networks.~~ Security System network cabling shall be identifiable by dedicated cable jacket colors as indicated in Section 18.12 (Connectivity) of these Design and Construction Requirements. All copper security network cabling shall be CAT-6 UTP or as required by Section 18.3 (ITC Systems Specifications) of these Design and Construction Requirements.

(d) Responsibilities for the procurement, installation, and commissioning of all the equipment for the Security Systems shall be in accordance with Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix) to the General Design, Construction and Facilities Management Technical Requirements).

(e) Where specific technology versions or specifications are provided in this section, they are meant to establish a minimum standard of quality. Updated technology is permitted to be provided in lieu.

21.5.2 Video Surveillance System

21.5.2.1 General Requirements

(a) VSS cameras shall operate on a secondary level in conjunction with visual and audio communication devices. Video surveillance shall be employed to electronically display and record areas that are particularly strategic, unobservable, or sensitive. Provide VSS cameras, placed to capture videos of specific areas with intercom and access control (building exterior, parking areas and various entry/exit points).

(b) The VSS shall be IP-based for network video recording and viewing and virtual switching.

(c) The Project Company shall provide VSS components in accordance with Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix) to the General Design, Construction and Facilities Management Technical Requirements. Only systems with proven quality of equipment and service, and which have national distribution shall be provided to ensure long-term maintainability in a cost-effective way.

21.5.2.2 Video Surveillance System Cameras, Generally

(a) VSS cameras shall be designed to use the ambient lighting provided by the New Courthouse's design, not dictate it. The VSS equipment shall integrate and operate within the New Courthouse's space, unobtrusively, without requiring special modifications to the space.

(b) The system shall be designed with a combination of fixed and multi-directional cameras. All cameras shall record in color and be enclosed in appropriate impact and/or vandal resistant dome housing. In addition to other locations directly referenced for coverage, all public areas within the new courthouse shall be provided with complete camera coverage except for privacy areas and visual obstructions. Camera view renderings shall also be submitted for County review and approval.

(c) The location of all VSS cameras shall be submitted to the County for review and acceptance in accordance with the Submittal Review Procedure.

(d) The design of the Security System shall include, at a minimum, the following camera / recording types:

(i) high quality, high rate, all times for very secure areas;

(ii) high quality, high rate, variable time / motion activated;

(iii) medium quality, med rate, variable time / motion activated; and

(iv) lower quality, lower rate, motion activated.

(e) The design of the cameras shall also include the following:

(i) external use requiring power connections; and

(ii) internal cameras, all PoE.~~;~~

~~(iii) PTZ cameras for specific areas; and~~

~~(iv) IR (Infrared) for any night/low light applications.~~

(f) All VSS cameras shall be compatible with the Genetec video management system (County standard). Cameras shall be Bosch branded.

(g) Procurement, installation, and commissioning of the VSS cameras shall be in accordance with Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix) to the General Design, Construction and Facilities Management Technical Requirements.

21.5.2.3 Camera Monitoring

(a) VSS monitoring stations shall be provided at all control and monitoring points. Video monitoring shall be provided on a permissions-based system where the operator is only allowed to view cameras within their jurisdiction.

(b) The Building Monitoring Room (TC10) shall employ a video workstation with keyboard and mouse control and multiplexed overhead displays with no less than forty (40) inches. The Building Monitoring Room shall receive VSS feeds from all VSS cameras within the New Courthouse, and from each Courtrooms. Coordinate with County requirements for quantity of overhead monitors and number of views per monitor. Sufficient workstations shall be provided to display the multiplexed video at full frame rate and resolution.

(c) The In-Custody Control Room (TC9) shall employ video workstations with keyboard and mouse and multiplexed overhead displays of no less than sixty (60) inches. The In-Custody Control Room shall receive VSS feeds from all Central Holding Areas, all Sally Port Areas, and all Transport Operations Support Areas. Coordinate with County requirements for quantity of overhead monitors and number of views per monitor. Sufficient workstations shall be provided to display the multiplexed video at full frame rate and resolution.

21.5.2.4 Site Work for VSS Cameras

21.5.2.4.1 General Requirements

Site work for the VSS cameras shall be coordinated with all trades having related work on site including general, building, structural, civil, site, landscape, mechanical, electrical, and others. ~~Careful planning shall be implemented to achieve full security at the site after construction with no lapses at any location.~~ The work shall include full certification and testing of the system prior to placement into commission.

21.5.2.4.2 Description of Required Work

(a) The Project Company shall:

(i) provide materials, labor, equipment and service necessary for a complete IP based video surveillance ~~and digital recording~~ system as described herein including cameras, housings, mounts, cables, ~~fiber optic multiplexer,~~ video detection equipment, ~~network digital video recording / storage / retrieval system,~~ network digital video monitoring system and appurtenances. Provide camera surveillance field of view to meet the requirements outlined;

~~(ii) provide transmission of the video and VSS keyboard signals to the Building Monitoring Room or In-Custody Control Room, as applicable, for interior and perimeter exterior cameras;~~

~~(iii) provide any additional VSS control keyboard control cabling from the fiber optic interface cabinet to the Building Monitoring Room or In-Custody Control Room, as applicable, required for remote control by corresponding room equipment;~~

~~(iv)~~(ii) refer to the VSS product paragraph for information on cameras, lenses, and mounting. Camera aim, adjusting and exact mounting location shall be the responsibility of the Project Company. The Project Company shall provide complete surveillance of the areas described;

~~(v)~~(iii) demonstrate camera views to the County (including the Sheriff's Office) prior to permanent mounting for all cameras ~~using nineteen (19) inch demonstration monitor and recommended camera/lens coordination~~. The Project Company shall make any needed camera focus/lens adjustments at no additional cost to the County; and

~~(vi)~~(iv) provide color video surveillance cameras at doors, gates, sally port, and corridors controlled from Building Monitoring Room or In-Custody Control Room, as applicable, and video surveillance.

(b) Lens combinations are recommendations only.

~~(c) Cameras shall be provided for remote observations of all public areas and critical points.~~

~~(d)~~(c) Provide video surveillance monitors for all video surveillance workstation locations as indicated. Provide video surveillance monitor mounting system including all mounting hardware.

~~(e)~~(d) All cameras shall be displayed for cursory review by the Building Monitoring Room operator or In-Custody Control Room operator, as applicable. Cursory review shall be defined as multiplexed/split screen display (cameras/monitor) and sequential display for all video surveillance cameras. Active scenes with entry/exit or other critical events shall be displayed on dedicated call-up monitors for the operator to focus on events which require his/her acknowledgment and decision.

~~(f)~~(e) Provide camera / lens combinations mounted so that they overlap surveillance areas with no missing locations.

~~(g)~~(f) All cameras shall be recorded by County digitally on a ~~network video recording~~ Genetec system ~~as specified in Section 21.5.2.2 of this Appendix~~. Provide review console, patch capability, and other equipment shown on Contract Documents.

~~(h)~~(g) The VSS shall display all cameras on video monitors installed at locations as indicated.

~~(i) All VSS cameras shall be recorded digitally for a minimum of thirty (30) days of First-In-First-Out (FIFO) recording/storage, at a minimum of fifteen (15) frames per second (fps).~~

~~(j) .~~

~~(k)~~(h) All cameras shall be able to be displayed on the monitors located in the Building Monitoring Room.

~~(l)~~(i) Mount interior cameras in either ceiling and/or corner mount housings as indicated. All exterior cameras shall be mounted security grade, weatherproof, heated housings.

~~(m)~~(j) Configure the network as required for proper system function.

21.5.2.5 VSS System Description

(a) An IP-based video surveillance system ("IP-VSS") shall be provided.

(b) The IP-VSS system shall be designed around the use of security grade IP-VSS cameras.

(c) All computers connected to the County Security Network shall be capable of displaying both live and recorded video from all cameras.

(d) The system shall be capable of providing both single camera and multiplexed video display on any viewing stations.

(e) The system shall record all of the IP-VSS cameras provided, recording performed by the County.

(f) The system shall be designed to permit the future expansion of the system with minimal modification to the system programming or configuration. The County shall be capable of adding cameras, viewing computers, or video recording servers by connecting these devices to the security network and performing user level device configuration.

21.5.2.6 VSS Equipment

The VSS equipment shall be provided in accordance with Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix) to the General Design, Construction and Facilities Management Technical Requirements. All equipment specifications noted below shall be the minimum requirements, updated equipment is permitted to be provided in lieu.

21.5.2.6.1 Fixed Cameras General Requirements

21.5.2.6.1.1 General

Fixed-focus VSS cameras shall be wall or ceiling mounted and aimed at locations as specified in the Project Company's design and in consultation with the County. The Project Company shall provide fixed cameras mounted at entrances/exits, screening stations, emergency doors, ~~storage areas,~~ elevators, locations of duress alarms, etc. to allow for focused monitoring of people accessing these areas.

21.5.2.6.1.2 Interior IP Fixed Cameras Specifications

Provide ~~minimum of three (3)~~ two or five (2 or 5) mega-pixel as required fixed IP vandal resistant cameras that meet the following performance reliability and operational requirements:

(a) lmager: 1/3.2" RGB CMOS;

(b) Usable Night-Mode Picture at 0.04 Lux;

(c) Usable Full Color Picture at 0.2 Lux;

(d) Default Lens: 3mm/9mm - Varifocal lens;

(e) Video Output: M-JPEG, MPEG-4 and/or H.264;

(f) Operating Voltage: 12VDC or 24VAC;

(g) Power-Over-Ethernet (PoE) IEEE 802.3af capable;

(h) 10Base-T/100Base-TX PoE; and

(i) Include backlight compensation circuitry.

21.5.2.6.1.3 Exterior IP Fixed Cameras Specifications

Provide five (5) mega-pixel fixed IP vandal resistant exterior cameras that meet the following performance reliability and operational requirements:

(a) lmager: 1/3.2" RGB CMOS;

(b) Usable Night-Mode Picture at 0.04 Lux;

(c) Usable Full Color Picture at 0.2 Lux;

(d) Default Lens: 3mm/9mm - Varifocal lens;

(e) Video Output: M-JPEG, MPEG-4, and/or H.264;

(f) Operating Voltage: 12VDC or 24VAC;

(g) Power-Over-Ethernet (PoE) IEEE 802.3af capable;

(h) 10Base-T/100Base-TX PoE;

(i) include backlight compensation circuitry; and

(j) provide all required mounting accessories for wall, pedestal, and pole mounting of cameras as required.

21.5.2.7 IP Video Surveillance Management, Recording and Viewing System

21.5.2.7.1 General Requirements

(a) The Project Company shall procure, install, and commission all the equipment specified in Attachment 5A to the General Design, Construction and Facilities Management Technical Requirements, and coordinate with the County as required, to provide a complete IP Video Surveillance Management, Recording and Viewing System in accordance with the requirements of this Section 21.5.2.7 and that is fit for its intended purpose.

(b) The IP Video Surveillance Management, Recording, and Viewing System shall be a combined software and hardware system.

~~(c) The system shall provide recording of all IP-VSS cameras on network server or storage space.~~

~~(d)~~(c) The system shall provide viewing of live and recorded video on network workstations as shown on the Design and Construction Documents.

~~(e)~~(d) The system shall be designed to meet the VSS application of the County's security system.

~~21.5.2.7.2 Specifications and Performance Requirements~~

~~21.5.2.7.2.1 IP-VSS Performance Requirements:~~

~~(a) The system shall simultaneously provide the following feature on all servers and network workstation without any video quality degradation and loss of frames:~~

~~(i) Video recording~~

~~(ii) Video Playback~~

~~(iii) Live video Display~~

~~(iv) Multi-screen (multiplexed) Live Video Display~~

~~(v) System/Camera Configuration Adjustments~~

~~(vi) Camera Selection~~

~~(vii) camera Control~~

~~(b) Image Quality:~~

(i) The system shall provide "Clear Picture" transmission and recording of all cameras.

(ii) All video for each camera shall be transmitted to video recording server without degradation of intelligence or color fidelity.

(iii) The picture shall be free of distortion, pixilation, flicker, snow, ghosting, frame loss, pixel loss, and other forms of interference.

(iv) The system shall produce live and recorded video acceptable to the County Representative and the Project Company.

(c) Video Recording:

(i) All IP VSS cameras provided under this project shall be recorded by the system.

(ii) The system shall configured to be capable of recording all cameras provided at a maximum frame rate of thirty (30) frames per second ("FPS") at maximum image resolution.

(iii) The system shall be configured to provide recording of all cameras at minimum frame rate of fifteen (15) FPS at an Image resolution of 2,048 x 1,536.

(d) Video Storage Capacity:

(i) The System shall be configured to provide a minimum of thirty (30) days of video storage of all cameras.

(ii) The storage capacity shall be configured to operate twenty-four (24) hours per day, with an expected motion during daytime operation hours of 80% and an expected motion during nighttime lock-down hours: 25%.

(e) Live Video Display:

(i) The system shall be capable of displaying all selected cameras at thirty (30) FPS at maximum resolution.

(ii) The system shall allow the user to select any camera to display on any system monitor.

(iii) The system shall be configured to display full screen live video on all system monitors simultaneously.

(iv) Expected motion during nighttime lock-down hours: 25%.

(f) Multiplex Live Video Display:

(i) The system shall be capable of displaying multiplexed video on all system monitors provided.

~~(ii) The system shall be configured to provide a 4x4 multiplexed video on all system monitors simultaneously.~~

~~(iii) The system shall support the following multiplexed views: 4x4, 3x3, and 2x2.~~

~~(iv) The system shall support custom multiplexed screens.~~

~~(v) The system shall support both programmed and user-selected multiplexed screen.~~

~~(vi) The system shall support an unlimited amount of programmed multiplexed views.~~

~~(g) Recorded Video Display:~~

~~(i) The system shall be capable of displaying recorded video on all system monitors without delay, video degradation, or loss of frames.~~

~~(ii) The system shall be capable of displaying recorded video at up to 30 FPS on alarm at maximum resolution on each system workstation simultaneously without delay, pixilation, freezing, jumping, etc.~~

~~(iii) The system shall be capable of displaying recorded video in a single camera screen or multiplexed view.~~

~~(h) Duplicate Image Display:~~

~~(i) The system shall be capable of displaying live video from any single camera on all monitors simultaneously.~~

~~(ii) The system shall be capable displaying recorded video from any single camera on all monitors simultaneously.~~

~~(iii) The system shall be capable of displaying any selected multiplexed view on all monitors simultaneously.~~

~~(iv) The system shall be capable of displaying any selected camera in a different multiplexed screen on each system monitors simultaneously.~~

~~21.5.2.7.3~~21.5.2.7.2 System Components

(a) VSS Servers: to be acquired by the County in accordance with Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix) to the General Design, Construction and Facilities Management Technical Requirements.

(b) Monitors for the Building Monitoring Office and In-Custody Control Room workstations shall be provided in accordance with the requirements set forth in Section 21.5.2.3 (Camera Monitoring) of these Design and Construction Requirements.

~~(c) Network switches shall be provided in accordance with the following specifications:~~

~~(i) the network switches shall provide wire speed switching to all ports;~~

~~(ii) the network switches shall provide a minimum of one gigabyte ethernet for network backbones and~~

~~(iii) network switches connected to indoor fixed cameras shall support IEEE 802.3af Power-over-Ethernet.~~

~~21.5.2.7.4 System Functionality~~

~~(a) Map based Graphic User Interface (GUI).~~

~~(b) Menu Based Navigation: the system shall provide pull down menus to allow quick access to camera selection, multiplexed view display, and configuration screens.~~

~~(c) Camera Selection:~~

~~(i) The user shall select a camera for display by clicking on the cameras icon or selecting the camera from a pulldown menu.~~

~~(ii) Selecting a camera shall also display any control options available.~~

~~(iii) The system shall allow the user the option of hiding the rest of the graphical user interface to view the single camera video screen full screen.~~

~~(d) Multiplexed View Selection:~~

~~(i) The User shall select multiplexed views by first selecting a monitor then selecting a pre-programmed view from a drop-down menu.~~

~~(ii) The user shall be capable of creating a custom multiplexed view by selecting a monitor, the number of camera, and the cameras to be displayed.~~

~~(iii) Selecting any single camera view in a Multiplex view shall switch that camera to a full screen view. The full screen view shall be displayed on the call-up monitor if this mode is enabled.~~

~~(iv) The system shall allow the user the option of hiding the rest of the graphical user interface to view the multiplexed video screen full screen.~~

~~21.5.2.7.5~~21.5.2.7.3 Fiber Optics

Fiber optic cables shall be provided in accordance with the specifications set forth in Section 18 (Information Technology and Communication Systems) of these Design and Construction Standards and the requirements of this Section 21.5.2.7.3~~21.5.2.7.5~~.

(a) Cables:

(i) Fiber optic cable shall be utilized to transmit video signals from outdoor cameras to either the Server Room or closest IDF Room. Fiber optic cable shall also be utilized to transmit video signals of cameras from IDF Rooms to Server Room.

(ii) Cable shall be listed suitable for direct burial and aerial applications.

(iii) Provide fiber strand quantities as required.

(b) Fiber-To-Ethernet and Ethernet-to-Fiber Media Converters: provide all fiber optic transmission equipment as required to connect exterior camera equipment with the following characteristics or features:

(i) SFP+ Ports: Minimum one 1 Gigabyte SFP+ (small form-factor pluggable plus).

(ii) Ethernet Ports: Minimum one RJ45 Ethernet port.

(iii) Unit design: Environmentally hardened.

~~21.5.2.7.6~~21.5.2.7.4 CAT-6 Distribution Cables

Fiber optic cables shall be provided in accordance with the specifications set forth in Section 18 (Information Technology and Communication Systems) of these Design and Construction Standards and the requirements of this Section 21.5.2.7.4~~21.5.2.7.6~~.

(a) Provide CAT-6 distribution cable for connecting all field devices and outlets to the nearest associated access switch.

~~(b) Cable shall be CAT-6 rated, unshielded twisted pair (UTP) cabling.~~

~~(c)~~(b) Cable shall support minimum 1,000 Mbps data communication.

~~(d)~~(c) All CAT-6 distribution cables specific to security outlets and devices shall have a blue colored jacket in accordance with County Standards.

~~(e)~~(d) Cable shall meet or exceed EIA/TIA 568-B.2-1 CAT-6 standards.

~~(f)~~(e) Cable shall be riser or plenum rated as required.

21.5.2.8 System Installation and Commissioning

(a) All equipment shall be installed in coordination with the County.

(b) All equipment shall be installed per the requirements of the manufacturers.

(c) All equipment shall be utilized for the purpose for which it was designed and manufactured.

(d) All cameras shall be installed at the locations as outlined. Field adjustments shall be made as required to provide the field of view of the area to be monitored.

(e) Electric power and power supplies shall be provided for all equipment as required and supplies shall have the performance characteristics compatible with the unique requirements of the equipment being supplied. Power supplies shall be loaded to a maximum of 60% of the rated power output.

(f) All surface mounted conduit and infrastructure shall be painted to match mounting surface as directed by the County.

(g) All equipment shall be commissioned in accordance with Attachment 5A (Courthouse Equipment and Systems Responsibility Matrix) to the General Design, Construction and Facilities Management Technical Requirements.

21.5.3 Detention Control and Monitoring System

21.5.3.1 System Description

(a) The DCMS shall control, annunciate, and monitor all security and communication special system points via Security Room operator stations as outlined and support the functions as described herein and in the Security Systems.

(b) The control system shall consist of a multi-tier design of networked PLCs with dual processors and redundant power supplies, and Touchscreen Computers ("TSC") workstations with Graphical User Interfaces ("GUI"). There shall be two (2) TSC workstations at the In-Custody Control Room~~Building Monitoring Room~~. All remote PLCs and TSC shall be networked through a fiber optic ethernet network. Provide a security server for storing all of the data and programs for each of the PLCs and TSC on the security network. The Control System shall be interfaced to the Access Control System, ~~Duress Alarm System,~~ Video Surveillance System, Gate Arms, and Intercom~~/Paging~~ System for a fully integrated Control System.

(c) Refer to all sections for additional requirements. Provide all devices including hard disks, removable backup disk driver,~~ printer,~~ necessary power supplies and batteries, interfaces, software, and miscellaneous wire, connectors, to meet all the functions and features as described, and as described in Attachment 5A to the General Design, Construction and Facilities Management Technical Requirements.

(d) Provide server grade workstation computers for Control Room workstation. The workstation computer shall include twenty-seven (27) inch LCD touchscreen monitor, wireless optical mouse and keyboard.

(e) Provide Programmable Logic Control ("PLC") system including all remote PLCs or Remote Input Output Units networked to the master PLC for control and monitoring of selected doors, intercom control and integration, gate arm control, access control, integration of VSS ~~and duress alarms~~ via the Control Center.

(f) Provide Central Processing Unit (CPU), power supplies and batteries, input and output modules, specialty interfaces, communication modules, software, and miscellaneous wire, connectors, to meet all the functions and features as described, and as described in Attachment 5A to the General Design, Construction and Facilities Management Technical Requirements.

(g) The PLC shall contain supervised type communication circuits as required to control and monitor any/all special system devices located throughout the Project Site.

(h) Provide all control networking hardware and software including all Ethernet interfaces, switches, hubs, UTP, fiber optic cables, and miscellaneous distribution hardware.

(i) Provide all necessary software and programming including operating system hardware, application, PLC and supervisory (SCADA) software.

21.5.3.2 Security and Communications: System Response Times

(a) Call-in/Call-up Response Time: The Security Systems including central processing, input/output and peripheral equipment shall provide a call-up response time of max. 1.0 second. The call-up response time shall be defined from the time an intercom station is activated to the time the control consoles display the indicating signals and video associated, and allow the operators to verify identity and local conditions in response to the call-up.

~~(b) Control Response Time: The Security Systems including central processing, input/output and peripheral equipment shall provide a control response time of max. 0.1 second. The control response time shall be defined from the time an operator activates a control switch to the time the controlled peripheral device executes the command such as unlocking of a particular door.~~

~~(c)~~(b) Supervisory/Trouble Response Time: The Security Systems shall provide a supervisory response time of max. 1.0 second defined similarly to Alarm Response Times specified above.

~~(d)~~(c) "Acknowledge" and "Authorize Interlock Override" (AIO) Response Times: The "SC" systems shall provide an "AIO" response time of max. 0.5 seconds from the time the particular switch is depressed to the time the control consoles and "SC" is ready to execute a subsequent command.

~~(e)~~(d) Reset Response Time: The "SC" systems shall provide a reset response time of max. 3 seconds. The reset response time shall be defined from the time the reset button is depressed to the time the systems restart in fail -secure mode and the consoles are ready to execute a subsequent command.

~~(f)~~(e) Disaster Recovery Time: The "SC" systems shall provide a disaster response time of 240 seconds. The disaster recovery time shall be defined from the time the systems start-up following a complete database, application program and operating system failure. When the systems are recovered all functions shall be fully operational at all control consoles.

21.5.3.3 Programmable Logic Controller: Subsystems

21.5.3.3.1 General Requirements

~~(a) Provide a Central PLC System that shall comprise of two (2) redundant CPUs and two (2) redundant power supplies. One (1) CPU and power supply shall be active while the second CPU and power supply are on standby. There shall be a duplex module that switches automatically to the standby units if any errors are detected in the active unit.~~

~~(b)~~(a) Provide all necessary expansion racks and power supplies to support all the necessary I/O, PLC modules and interposing relays for this project.

~~(c)~~(b) Provide all necessary PLC Ethernet and communication modules to network all the PLC together and communicate with all subsystems that shall be integrated into the Control System such as VSS, Access Control, and Intercom ~~and Wireless Duress~~.

21.5.3.3.2 Door / Gate Control and Monitoring Definitions

(a) The following definitions of functions or indications shall apply to the descriptions contained herein.

Term	Definition
“Secure”	The door/gate is closed and locked. This is effected by monitoring the series connection of the latch bolt monitor switch and the door position switch.
“Locked”	The status of a locking device when the latch bolt is fully extended. The device shall not be locked until the door/gate is closed.
“Open”	The door/gate is "Open"/"NOT Secure".
“Unlocked”	The status of a locking device when the latch bolt is partially or fully retracted.
“Lock”	Control power is removed from the locking device as required to effect a "locked" mode. The nature of the locking signal or sequence is determined by the specific locking device. The description above applies to "Fail-Secure" locking devices.
“Unlock”	Control power is applied to the locking device in an "unlocked" mode. Control may be by momentary or continuous application of power as dictated by the locking device.
“Reset”	Activation of the "Reset" function shall place all locks in the emergency group in the locked mode. Doors may not be secured until they are physically closed as dictated by the specific locking device.
“Interlock”	Interlocked doors shall be controlled so that only a single door in the interlocked group can be electrically opened at one time. The systems shall include controls, connections, and programming required for "controls interlock", "monitoring signals interlock", and "acknowledge/bypass interlock violation". The activation of the "acknowledge/bypass interlock violation" shall allow the control center operator to control all doors operating in a "monitoring signals interlock" mode. The control console shall include a security code protected "OVERRIDECONTROLS INTERLOCK" switch.

Term	Definition
"Manual Override"	All doors and gates shall include manual override via keys. Typically, all doors and gates shall be operable by officers assigned for operating at a particular door/gate. All signaling functions shall be enabled during manual operations.

Table 6. 21.1 (21.5.3.3.2 Door / Gate Control and Monitoring Definitions)

(b) Door Control and Monitoring System Functional Requirements:

(i) The control of all electrically operated detention doors shall be through reliable, factory tested controllers with a documented Mean Time Before/Between Failure (MTBF) of minimum 50,000 hours of operation. The controllers may be relay or programmable logic-based units.

(ii) The system shall provide supervision of equipment and wiring. System equipment and wiring tamper, trouble and alarm signals shall be annunciated at the Detention Control System Computer.

(iii) All doors shall be controlled from In-Custody Control Room~~Master Control Center~~. All equipment shall be installed in maximum-security metallic consoles and enclosures.

(iv) All power necessary for the Door Control and Monitoring System shall be connected through uninterruptible power supply and emergency generator.

(v) Provide materials, labor, equipment, and services necessary for a complete Door/Gate Control and Monitoring (DCM) System as specified in this Section. The Project Company shall provide all interfacing and integration work required for complete and functional systems.

(vi) Provide cabling through new conduits as required to connect all door/gate control and monitoring devices shown on the Contract Documents.

(vii) The following is a general diagrammatic description of work to be provided by the Installer Project Company:

(1) "CONTROL INTERLOCKING" - control and monitoring from In-Custody Control Room ~~Master Control Center~~ for: Vehicle Sally Port, Secured Vestibules, Selected Corridor Doors, and Elevator Control.

(viii) The Door/Gate Control and Intrusion Detection System functions shall be implemented by interfacing and integration of the following systems:

(1) Door hardware, control, and monitoring devices and systems.

(2) Programmable Logic Control (PLC) - Input/Output (I/O) Units for door control and monitoring required for all door devices required for this project.

(3) Networked TCS workstation computers.

(4) Intercom ~~and Paging~~ System - As required to identify the location of intercom calling stations and associated doors, through signaling symbols.

(5) Gate arms, loops, and integration to access control and PLC systems.

(6) Access Control System and miscellaneous associated devices.

(ix) Provide global/group controls for emergency unlocking of doors, separately for each sally port. Provide audible and visual adjustable time type "Reminder/Warning" signals at all times when the emergency unlocking function is enabled. Provide programming and control functions for selective group control and signaling as coordinated with County and Project Company.

~~(x) Video Surveillance System (VSS):~~

~~(xi) Systems Selection and Control through network connectivity to the VSS control computer and the video management system.~~

~~(xii) Video Surveillance System - Manual Control.~~

~~(xiii)~~(x) Video / Intercom~~/Paging~~ through Network Connectivity to Video Intercom ~~Paging~~ Headend:

~~(xiv)~~(xi) Video Station/substation selection

~~(xv) Paging zone control~~

~~(xvi) Page exterior/interior~~

~~(xvii) All Page Center Control~~

~~(xviii)~~(xii) ~~Duress Alarms: Duress Alarm~~ In-Custody intercoms displayed on TSC GUI screens

21.5.3.4 Description of the Work

(a) Provide site-wide security and control systems hardware and software and programming as required for the systems to operate as specified in this section. Provide programming, start-up, testing, debugging through the control computers, programmable logic controllers, touch control systems, Access Control System computers ~~and printers~~.

(b) Provide systems integration work for complete and functional integrated Security and Control Systems that operate in compliance with the sample generalized sequences of operation described in this section. These generalized operation sequences shall be used by the Project Company in the development of the technical proposal and systems programming for hardware and software demonstration. The Project Company shall coordinate with the County/State as required to implement requirements identified through the demonstration, and to provide final operation sequence that is acceptable.

(c) The Operation Sequences shall apply to all Touchscreen Computer Systems', GUI mouse driven screen computer systems', and Access Control System's user interface where applicable for Detention Movement Control workstation.

(d) Provide key plan display that shows a small-scale plan of the facility, indicating the associated floor from the workstation's home orientation, with the area currently being viewed highlighted in red. Touching or pointing and clicking highlighted key plan areas shall provide operator the full plan screen of the selected area.

(e) Provide easy navigational tools such as arrows, icons that change screens to adjacent view in direction indicated by arrow.

(f) All touchscreen icons and functions shall also be activated by a wireless mouse or keyboard functions.

(g) Provide system control area to TSC GUI screens as outlined in the Contract Documents.

(h) Provide status message and alarm message display areas on TSC GUI screens with scrolling control icons.

(i) Provide audible, as well as visual, indication for all alarm conditions.

(j) Provide login screen or security log-on keypad.

(k) Label all cells, controlled doors, gates, areas, elevators and devices being controlled. Coordinate all numbers and designations with the County and Project Company. Minor adjustments to GUI screens designation through startup and warranty period shall be at no cost to the County.

(l) Provide all special function pop up screens, ~~PTZ, VSS control, multiplexer monitor control, video~~ intercom, emergency release, interlock and interlock override functions, gate arm control, loop overrides, and miscellaneous control functions.

(m) Provide all report generation screens including alarm reports, incident reports, response reports and custom data logging reports with all necessary search, printout and archiving utilities.

~~(n) Provide console duress function. This shall be accomplished by either an icon or hardwire duress switch. Activating this function shall disable this local console and transfer control of its devices to the Detention Control System computer.~~

~~(o)~~(n) Provide emergency group release, selected group assign and release functions. Coordinate these functions with County security team for which control stations have these functions. Emergency group release is typically for Detention Control System computer. Highlight doors in the path of egress that emergency release shall control. A confirmation and an abort function shall be provided.

~~(p) All wired and wireless duress devices shall be displayed on the appropriate GUI screen where the activation device is located.~~

~~(c)~~(o) Touch Control Terminals - Hardware, Firmware, Software: The "TOUCH CONTROL SYSTEM (TCS)," shall be equipped with all hardware necessary to meet the following minimum performance requirements listed as follows:

(i) Monitor, display and control all systems, functions and signals as specified.

(ii) Provide a signal generation to signal display and control to execution time response better than one (1) second including associated graphic maps and control displays associated with each type of signal and action specified. Typically, the graphic maps displayed with each signal shall provide all details, labeling and control areas necessary and applicable to display and control the active system as described herein.

(iii) Provide hardware, firmware, software, and programming necessary to maintain and meet the response time, performance, reliability and operational requirements.

21.5.3.5 Touch Control Systems: System Description

(a) Provide interfacing and programming for "TOUCH CONTROL SYSTEMS (TCS)" and distributed processing equipment to meet the following minimum performance requirements:

(i) Provide for password-based control console operator access (minimum of three levels). Coordinate with County all password levels and privileges.

(ii) Activation of two or more touch control areas within one second shall have no effect to any system. Provide timed sequence type controls for critical functions.

(iii) Activation of the touch control system lockout function shall deactivate the TCS until the operator accesses the control station by using an authorized password. The time interval necessary for completely operational state of a terminal shall be three seconds maximum from the time of entering a complete system password via the appropriate text terminal.

(iv) An incoming signal shall cause the appropriate system designated symbol in the system selection and control area to flash. Flashing shall be interpreted as a change of the color brightness unless specifically stated otherwise.

(v) TCS terminal shall provide for answering incoming or active signal.

(vi) Control systems shall assist the operator in answering an incoming signal by flashing the applicable control function related areas and indicating any interconnections and relations between systems in the sequence specified and appropriate related systems.

(vii) Control systems shall display individual status related statistics such as zone or area number of alarm, supervisory, trouble, queued signals in the touch control systems status display area.

(viii) Queued signal shall be returned to the console/operator station which issued the queuing request after an adjustable time interval. If the terminal which issued the queuing request is in a lockout mode or is otherwise inaccessible to the control systems, the queued signal shall be sent along with a sequential description/tally to the other terminals or the other operator station (coordinate with the County). The description/tally shall indicate as minimum:

(1) Time, date of origination

(2) System, type of signal and device

(3) Monitoring point

(4) Operator station which originally answered the signal

(5) Operator actions related to the signal

(ix) Activation of a general alarm, systems control function such as acknowledge, test, access, queue and reset shall change a flashing colored control area to a steady control area display consistent with system specific color code.

(x) Selection and activation of system controls such as door or gate control, access control card readers, ~~duress,~~ video surveillance,~~ paging,~~ intercoms~~, inmate telephones, plumbing utilities, holding lighting control~~ and control points, zones and areas shall be via site or floor graphic maps unless specific control functions require special commands as specified and as directed by County and Project Company. All system specific control sequences shall be typed as specified for the particular system.

(xi) Activation of graphic display touch control area shall provide for the control area color to flash until the appropriate graphic display is completed at which time a steady bright color shall be displayed.

(xii) The touch control system terminal shall provide for manual access of any system through the systems selection and control menu displayed at all times when a particular terminal is active. All systems related manual access shall require two steps.

(1) First, touch control area activation - cause the respective touch control area to flash and the word "manual" to be displayed under the control area.

(2) Second, touch control area activation - cause the display of particular system related control and classification menus and site plan.

(xiii) ~~Manual access of door or gate and intercom control functions shall cause the same Video Surveillance display and control functions as described for automatic call up.~~The manual access of doors or gates shall cause breach alarm in the In-Custody Control Room. Acknowledging the alarm will display a camera covering the location.

(xiv) ~~Manual access of Video Surveillance system control functions shall be as described in this Section under the appropriate system operation part.~~Selecting a camera icon on TCS within the In-Custody Control Room shall display camera video on the adjacent monitor.

(xv) Manual activation of ~~paging~~ intercom and door/gate control keys in the system selection and control menu shall automatically engage the intercom ~~and paging~~ menu.

(xvi) Activation of the site key plan graphic control key in the system selection and control menu shall provide for the site plan to be displayed on the entire screen area above the system selection and control menu. An incoming signal shall provide for the display of the appropriate sector/quadrant map and activation of the graphic display control menu to allow the operator to perform a closer inspection of the signal origination area. Provide direct one step access to different sectors/areas of the Site and to buildings through a hyper graphic key plan. Provide direct one step access to the complete Site plan through a dedicated icon/graphic button. Identify the location of each control console on the graphic display.

(xvii) Activation of the clear screen key in the systems selection and control menu shall allow the operator to blank a terminal temporarily. Incoming signal addressed to the particular terminal shall activate necessary monitoring, display and control function associated with the particular terminal. Activation of the clear screen shall have no effect while active signals are addressed to the terminal unless a system error condition validates its action. If clear screen function is validated, all active signals shall be automatically transferred to the other operator terminal or terminals as necessary to provide for operators to respond as required.

(xviii) Activation of the touch control system test key in the systems selection and control menu shall provide for the respective touch control system to run through a complete diagnostic and provide a plain English report of the results. Activation of the system test key while active signals are addressed to the terminal shall have no effect.

(xix) Activation of the cancel command key in the system selection and control menu shall stop execution of the last command and return all systems to their status prior to issuance of the command. The system shall display and announce any potential danger associated with the cancellation of the command. For example, closing a gate while people attempt to pass through. The systems shall require the cancel command to be activated for the second time within three seconds if the cancellation of a command would place people in danger. The cancel command key shall provide the operator to cancel one command within ten seconds interval.

(xx) Activation of the touch control system reset key in the system selection and control menu shall provide for the respective touch control system to reset, run a complete diagnostic, and provide a plain English report of the results. Activation of the touch control system reset key while active systems are addressed to the terminal shall have no effect; the signals addressed to the particular terminal shall

be transferred to a different terminal for the touch control system reset key to become active.

(b) Typical Touch Control Screen Configurations: The touch control system through the PLC system shall process and display, as a minimum, the Graphical User Interface (GUI) type systems control and monitoring terminal configurations listed below:

(i) Door / Gate Control:

(1) Systems Selection and Control

(2) Door/Gate Alarm, and Video Surveillance Camera Automatic Call-up

(3) Card Reader Monitoring~~, Logging, and Reporting~~

(4) Signal Classification

(5) Door/Gate, Graphic Map Display and Control for Intercom~~, and Paging~~ Systems

(6) Report Generation with repeated updating of data regarding dispatching of incident response teams, the actions, and findings of the incident response teams and operators, and security and maintenance follow-up required. Each event update shall include date, time, operator identified – maximum security alert operating mode only.

(7) Emergency and Group Release

(8) Interlock Override

~~(ii) Video Surveillance System (VSS)~~

~~(1) Systems Selection and Control~~

~~(2) Video Surveillance - Manual Control~~

~~(iii) Video Intercom/Paging~~

~~(1) Video Station/substation selection~~

~~(2) Paging Zone Control~~

~~(3) All Page Center Control~~

~~(iv) Duress Alarms: duress alarms displayed on all GUI screens~~

~~(c) Touch Control and Graphics - Default Color Selection~~

(i) Use the following color rules for establishing color combinations that provide good contrast and visibility:

Element	Color
Overall Screen Background	Light Gray / White
Control Area Symbol Outlines / Contour / Frames, Labels / Text	Black
Label and Symbol Display Area	White
Interconnect Label Area	Yellow

Table 6. 21.2 (GUI Color Rules)

(ii) Use the following color rules for establishing systems selection and control menu touch control foreground area colors:

Element	Color
Perimeter	Pink
Door / Gate Control	Blue
VSS Surveillance	Green
Intercom and Paging / Audio Com	Magenta
Graphic Annunciator	Green / Red / Amber
Clear Screen	Blue
Touch Control System Test	Orange
Cancel Command	Red
Touch Control System Reset	Red
Touch Control System Lockout	Magenta

Table 6. 21.3 (Systems Selection and Control Menu Touch Control Foreground Area Colors)

(iii) System control standard or default foreground colors are:

Element	Color
Acknowledge	Magenta
Test	Orange
Access	Cyan
Queue	Blue
Reset	Red

Table 6. 21.4 (System Control Standard Foreground Colors)

(iv) Signal classification control standard or default foreground area colors are:

~~Element~~	~~Color~~
~~Unknown~~	~~Magenta~~
~~Accidental False~~	~~Cyan~~
~~Deliberate False~~	~~Blue~~
~~Real~~	~~Red~~

~~**Table 6. 21.5 (Signal Classification Standards Foreground Colors)**~~

~~(v) Symbol standard or default colors are:~~

~~Element~~	~~Color~~
~~Perimeter~~	~~Magenta~~
~~Motion Detection~~	~~Black~~
~~Door / Gate Control~~	~~Black~~
~~VSS Surveillance~~	~~Green~~
~~Intercom and Paging / Audio Com~~	~~Blue~~
~~Lighting / Utilities~~	~~Orange~~

~~**Table 6. 21.6 (Symbol Standard Colors)**~~

~~(vi)~~(ii) Where touch control area foreground colors are not established, the Project Company shall develop the coloring scheme based on use of alternating colors such as red, orange, green, blue, magenta and cyan.

~~(vii)~~(iii) Overall contrast, brightness shall be adjustable to provide operators with graphics which are distinctive for particular signals and can clearly be seen in the lighting conditions of the control center.

~~(viii)~~(iv) Graphics, color combinations, and systems adjustments shall be developed by the touch control systems manufacturer and confirmed with the County.

~~(ix)~~(v) Graphics and symbols developed for the touch control systems shall be to allow a color blind operator to recognize a function or control area without knowing precisely which color corresponds to which command or signal.

~~(x)~~(vi) Flashing signals shall be outside of labeling and other text areas and flashing signals shall determine variation of screen area brightness without actually blanking out an area or removing a graphics from a control area.

~~(d)~~(c) Integrated Special Systems – Priority Levels

(i) When two or more systems send signals to the operator stations, the following priority list shall be used in establishing the order in which they are displayed and controlled via GUI touch control terminals and graphic control panels.

Signal or Alarm	**Priority**

Staff intercom~~Duress~~ Signal	Priority 1 – Highest
Cell Door / Gate Control, Video Intercom	Priority 2
Perimeter, Motion Detection, VSS Alarms, Perimeter Doors	Priority 3
Other	Priority 4

Table 6. 21.2~~7~~ (Integrated Special Systems - Priority Levels)

21.5.3.6 System Operation: Standard for Touch Control Systems

(a) Provide systems that are programmable to include alarm, trouble and supervisory signal as EXCEPTION/CRITICAL EVENTS. The Touch Control System terminals shall allow the Control Center to operate in Degraded mode with no report filing requirements, MAXIMUM SECURITY/ALERT MODE where report filing is required for critical events and any mode combinations for each system (between degraded and maximum alert mode) as required by County. The SEQUENCES OF OPERATION included in this section are provided as guidelines to develop all sequences required for this Project.

(b) Movement Control - Operation Sequence: When multiple intercom calls/door, gate access requests are placed the operator shall perform the tasks listed below.

(i) Select intercom station on the touch screen - establish voice and video communication.

(ii) Unlock the door (unlock and open the gate) by touching the icon on the touch screen. Where VSS is provided, the camera displayed shall change when a new intercom or camera is selected through the touch screen or keyboards.

(iii) All card reader-controlled doors shall be monitored for status and status of door shall be displayed on GUI screens. Unauthorized access shall cause an Alarm condition at the local station as well as the Detention Control System Computer. PLC based card reader-controlled doors shall have the capability to be overridden by local control with proper password protection or Detention Control System Computer.

~~(c) Video Security Surveillance (VSS) System~~

~~(i) TCS, Computer, PLC, and VSS systems shall be integrated to provide for automatic and manual operation of the VSS system.~~

~~(ii) VSS normal default operating mode shall be automatic as described.~~

~~(iii) When operators desire to control the VSS system in a manner different than the automatic functions, they shall be provided with necessary manual control functions for the following:~~

~~(1) Selection and control of cameras~~

(2) Selection of display location for each camera and each recorded video signal

(3) Selection of display configurations for each monitor

(4) Selection of recording and replay conditions and configurations

(iv) VSS manual control functions shall allow the County to change system configuration for both automatic and manual modes and menus.

(v) Automatic and manual operation, preset, and default settings, signal sequencing, function assignments, and other operational and programming requirements shall be as described.

(vi) Manual menus shall control how video image, being received from any VSS camera installed is displayed on the monitors that are installed in the control center. Cameras that are equipped with pan, tilt and zoom features are also controlled from these menus.

(d) Door / Intercom Control Systems

(i) Traffic Control Menu: Controls traffic passing through controlled doors, and monitors their surrounding area by manipulating associated intercom and video surveillance (VSS) systems, retracting (unlocking) lock mechanisms and monitoring status (unlocking) lock mechanisms and monitoring the status (Unlocked/Locked) of doors.

(ii) Lock mechanism installed on each door and its associated intercom and VSS camera are controlled by the following:

(1) Control area next to each door labeled with a KEY symbol provides control of lock mechanism on a particular door. Visual indication of door status (Unlocked/Locked) is provided by color of the KEY and DOOR symbols respectively where KEY symbol illuminated - unlocked, door symbol dimmed - closed and locked. The word "UNSECURE" shall be displayed in the status display area whenever a door is open, unlocked or both open and unlocked.

(2) Switch labeled READY controls power to door control areas. Visual indication of power status is indicated by a steady control area color indicating Power On, a dimmed color indicating power off. This control area has no affect on the visual indication of the door status.

(3) Control area and symbol labeled with door associated intercom station number, controls associated intercom and VSS camera operations. The control area color indicates addressing via illuminated color, off via dimmed color signal receiving from the intercom station via flashing color.

(4) Single control area on the graphic map bottom right corner labeled TOUCH TO TALK controls that function for all of the intercom circuits are individually activated by intercom/VSS control areas.

(e) Door Emergency Release (at Detainee Movement Control): activating the emergency release icons shall switch the view to the primary emergency release screen which contain the Primary "Enable" switch, an Emergency Release Cancel switch and switches to view the graphic maps of the facility:

(i) Activating the "Enable" switch within 3 seconds shall arm the system for Emergency Release and shall display a confirmation prompt "Are You Sure?" After selecting "Yes" icons for the group shall appear on the facility map. An audible tone shall sound every 4 seconds while the system is armed.

(ii) While armed activating a group release icon, emergency release door switch or a normally controlled door switch shall unlock the door or doors associated with that switch and the doors shall remain unlocked until reset. A Reset icon shall appear and activating the icon shall set the associated lock/locks to the locked conditions.

(iii) Activation of the cancel function shall disarm the "Emergency Release" function cancel the audible tone, and reset and lock all doors opened by Emergency Release function.

(f) Interlock/Interlock Override: anytime an attempt is made to open a door that is interlocked with another door, an "Interlock" indication shall be displayed on the screen. "Interlock Override" allows two interlocked doors to be opened at the same time. Activating the "INTERLOCK OVERRIDE" icon and then within 4 seconds selecting the door (or doors) to be opened shall execute the function.

(g) Low Level Lighting Control: provide GUI Control icons and menus for all cell lighting and selected corridors. Coordinate local control and power requirements with Project Company.

(h) Miscellaneous:

(i) Activating the "Panel Disable" icon shall render the terminal inoperative. The screen shall be blank except for the words " PANEL DISABLED." An alarm shall be generated at Detention Control System computer and all control functions shall be transferred to Detention Control System computer. The panel shall remain inoperative until control capabilities are returned by Central Control. When control is returned by Central Control, the "LOG-IN" screen shall be displayed at the remote terminal.

(ii) Activating the “Panel Control" icon shall switch the display to the “Panel Control” screen. This screen allows the operator to see the status of all control panels, take control of panels, and restore control of panels. The screen shall list each control panel, the status of each control panel (normal, transferred, disabled, or taken over) and display the appropriate control icons based upon a panel's status.

(iii) Activating the "LOG OFF" icon shall switch control of all panel functions to the designated transfer control station and cause the "LOG IN" screen to be displayed. Control can be returned to the panel by entering a valid log-in code; no action is required by the station to which the panel was transferred.

(iv) Activating the "MAIN SCREEN" icon shall switch the display to the control consoles primary control screen, which is typically the screen that shows the control points immediately surrounding the control room or console.

(v) Activating one of the area icons shall switch the display to the control screen for that area. If the area has been taken over, control functions may be executed. If the area has not been taken over, the area may only be viewed. The area icons for any areas containing active or acknowledged alarms shall be red; the area icons for any areas containing shunted alarms shall be orange.

(vi) Each screen shall contain a field to display text messages – a MESSAGE BLOCK/MESSAGE BAR. This field shall annunciate alarms, intercom calls, and system messages associated with the control station.

(vii) Activating the "VSS" icon shall switch the display to a screen listing all of the VSS camera monitor numbers and DVR's and a description of the camera and monitor locations available to be viewed at that location. Central Control shall be able to view all VSS cameras in the facility.

(viii) Activating a VSS camera icon shall cause the video from that camera to be displayed on the designated monitor.

(ix) Activating the "HOLD UNLOCKED" icon prior to selecting a door unlock icon shall hold the door in an unlocked status. The door may be relocked by again selecting the door unlock icon.

(i) Graphical User Interface (GUI) Screen System Alarm Reporting Functions: the following alarms shall be reported on the Centra l Control GUI screen terminal:

(i) Unauthorized exit (opening) of any door monitored/controlled by the Central Control terminal or any station transferred to Central Control.

(ii) "Panel Disable" alarms from any control station.

(iii) Personal Alarms (By Area) Additional personal alarm information to be reported on the personal alarm system terminal.

21.5.3.7 Quality Assurance

(a) The Project Company shall provide all work as required for detention facilities. All equipment shall meet the highest reliability and performance standards established for the particular item of work. All equipment shall be vandal proof; provide enclosures, housings and security fasteners as shown on Contract Documents and as required by field conditions. All security electronics control equipment shall be lockable NEMA 12

~~enclosures unless they are rack mounted in secure electronic equipment rooms. The Project Company shall provide the work based on the highest standards.~~

~~21.5.3.8 Computer Systems Configuration~~

~~(a) Provide rack mountable Quad-Core RAID 5 Server grade Central Processing System (CPS) computers: Provide quad-core type servers configured with the devices listed below, at minimum for all equipment room locations.~~

~~(i) Processors: Intel current generation quad-core Xeon processors, or higher with 8MB level 3 cache.~~

~~(ii) Random Access Memory (RAM): DDR3, DRAM, or better.~~

~~(iii) Redundant Storage: Integrated SAS/SATA RAID 5 PERC 5/i controller with 16MB of cache. Provide at minimum three 2.5" SATA 80GB hard disks 10K RPM.~~

~~(iv) For Detention Control System Computer, provide Backup & Disaster Recovery. Interface with the Uninterruptible Power Supply System as required to ensure automatic orderly shutdown prior to depletion of battery power.~~

~~(v) Video: 1GB Video RAM, 2,560x1,600 dpi.~~

~~(vi) Dual Network Interface Card: Pro Gigabyte NIC PCI Ethernet.~~

~~(vii) Sufficient serial interfaces to meet design requirements as outlined.~~

~~(viii) Monitor, Keyboard KVM: 19" LCD 1,280x1,024, Keyboard, and Mouse combination rack mount KVM console unit.~~

~~(ix) Power Supply: Dual, hot redundant. Provide dual thermostatically controlled fans.~~

~~(x) Software, Configuration, Programming & Testing: Windows Server 2008 R2 or latest equivalent, Application Development Platform, Device Drivers, project specific application programming (complete and operational).~~

~~(xi) Warranty: Three (3) years, Gold, on-site, all parts, and labor by manufacturer.~~

~~(xii) Programmable co-processor~~

~~(xiii) Input/Output Bus Controller~~

~~(b) Provide single processor, rack mountable, server grade computers with Intel current generation quad core Xeon processor, 500 GB hard drive, 8 MB cache, Dual Port 1 GbE Nic, and 8 GB Memory @ 1600Mhz, for all floor local control stations. All local control computers shall be networked to the headend computers at Center Control over 1 GB fiber optic Ethernet LAN.~~

~~(i) Keyboard & Navigation: Performance pro keyboard with wireless mouse.~~

(ii) Monitor: 27" LCD touch control type terminal/monitors, 1,680x1,050 resolution.

(iii) Sufficient serial interfaces to meet design requirements as outlined.

(c) The Project Company shall base the RAM hard disk and controller (HDC) capacity calculations on specified systems response times, actual Operating System (OS), Application Programs (APS), SQL Compatible Relational Data Base (RDB), Graphic User Interface (GUI), AUTOCAD (CAD) files and operational requirements for this project.

(d) Program the "Graphical User Interface (GUI)" Touch Control Security Systems Computer using a Supervisory Control and Data Acquisition (SCADA) program. Perform all initial programming and testing off-line to ensure that the transition to the server is minimum.

21.5.3.9 Systems Software

(a) Software shall be supported by a real time, multi-user event driven operating system. The operating system shall support priority levels and shall support time-sharing for tasks of the same priority.

(b) Utilities for file management, file backup and password security shall be an integral part of the operating system.

(c) The applications shall include the following functions:

(i) Graphic User Interface (GUI) type hierarchical menu system.

(ii) Program/Ladder Logic Editor, monitor and off-line testing.

(iii) Point monitoring (minimum 10,000).

(iv) Logical addressing, Image/Physical Location Addressing, Indirect Addressing through logical functions implemented including "AND, OR, INVERT, ON/OFF, TIMER, COUNTER, SEQUENCING", Indexed Addressing/Status Addressing, Symbolic/ASCII descriptor addressing.

(v) Automatic or interactive output point control.

(vi) Memory map graphic display.

(vii) Time dependent, channel, alarm, and status reporting.

(viii) Printed journal log: Provide default programming for alarm printing only.

(ix) Magnetic media journal log: Provide default programming for alarm logging only.

(x) County generated forms.

(xi) Real time status query for maintenance, diagnostics.

(xii) Management reports from historical data.

~~(xiii) System security.~~

~~(xiv) Online or offline database update with comments, symbols and instructions. Provide global search and editing for all application program functions. Provide sequential function chart type program editor and program monitor.~~

~~(xv) System diagnostics, both locally and remotely through telephone modem, through security firewall hardware (key lockable switch) and software.~~

~~(xvi) Color Graphic - Site plan/floor plan, graphic maps.~~

~~(xvii) Offline and Online memory scanning and diagnostics in synchronous and asynchronous modes for execution of commands with special interrupt privileges.~~

~~(xviii) Supervisory/watchdog processor.~~

~~21.5.3.10~~21.5.3.7 Programmable Logic Control (PLC) System

(a) The PLC shall be the product of manufacturer of PLC System engaged in the production of controllers for security application for a minimum of twenty (20) years. Only manufacturers with national distribution, national servicing and local parts outlets shall be considered.

(b) System software shall be contained in EPROM. RAM operation database shall be battery backed up. The program shall be developed for each controller on an individual basis. Furnish one spare EPROM for each controller, loaded with all the proper software and located with the controller.

(c) The programming format shall be traditional relay ladder logic utilizing basic and advanced instruction sets for function generation.

(d) Each floor shall have a dedicated PLC. The local PLC controller shall be equipped with a processor, I/O modules, communication modules, power supplies, and accessories as required for a complete and functional unit.

(e) Controller shall be configured to operate in a distributed processor environment and equipped with communications capability as required.

(f) The I/O interface boards shall be standard printed circuit boards containing the necessary coding/decoding solid state circuits for communicating with the processor, LED indicators which display the status of each point and plug-in input/output modules.

(g) The controller shall operate on 105 to 130 VAC, 60 Hz and contain an integral circuit breaker for overload protection. The primary power for all security control equipment shall be UPS power. Coordinate with UPS power requirements with Electrical provider. The controller shall operate properly in environmental conditions of 0° to 60° Celsius in up to 95% humidity (non-condensing). The controller shall conform to electrical noise standards of IEEE-472.

(h) PLC program shall be provided to the County~ as follows:

(i) Hard copy printout

~~(ii) Program on DVD~~

~~(iii)~~(ii) All programs stored on the hard drive of the programming data terminal only accessible through appropriate level of password protection.

(i) The controllers shall provide all necessary logic functions, timing functions, memory, software, input/output points and communication capabilities for the operating features required to meet all of the requirements.

(j) The controller shall be general purpose in nature and not custom designed and built for this isolated application. The PLC shall be redundant and fault tolerant operation type. The controller shall be generally non-location specific in its construction. The controller shall be made location specific and operationally customized by installing EPROM with applicable software, and making the I/O interface board's system specific and installing the proper I/O modules.

(k) Logic functions shall include, but not be limited to, AND, OR and INVERT functions with sufficient levels to provide operating features required to perform all of the functions required.

(l) Timing functions shall include, but not be limited to, on-delay, off-delay, stepping and pulsing. Sufficient variations of programmable timing shall be available to provide all the operating features as required herein.

~~(m) The Central head PLC shall consist of redundant CPUs, redundant power supplies, hot standby simultaneous processing and function in Duplex and Simplex modes. It shall have a complete CPU, I/O, link and battery self-diagnostics function.~~

~~21.5.3.11~~21.5.3.8 Programmable Logic Control – Input / Output (PLC – I/O) Units

(a) The Central Processing PLC and PLC - Input/Output (PLC - I/O) units shall be 100% compatible and be manufactured by the same manufacturer as part of an integrated series/family of products. The PLC/PLC - I/O units shall be connected to CPS via RS-232/RS-422/RS-485 ports. PLC/PLC - I/O units shall include interfacing to Security & Communication Systems as shown and specified.

(b) The Central PLC units shall contain all hardware and software necessary for the systems specified under Division 28 to operate as an integrated system which meets the reliability and performance specifications described.

(c) Provide PLC - I/O units as required for the Security & Communication Systems.

(d) The PLC - I/O units shall be configured for:

(i) 24V DC signal threshold: The PLC's provided for this project shall operate with "high signal current/low impedance" to ensure that external RFI/EMI influences do not result in false signaling and controls. The PLC I/O's shall include time

delays to ensure that short spikes shall not result in false signals. The PLC I/O's shall be configured for RFI/EMI immunity similar to electromechanical relays operating at 24 volts.

(ii) "Watchdog" circuits and relays as required to ensure that the system fails in "fail secure" condition, 100% of times when a system malfunction or power failure occurs.

(iii) "Fail Secure" mode of operation during start-up and diagnostics.

(iv) Built-in self-diagnostics and programmable "Reminder Operator Signaling".

(v) Built-in status indicators for power supplies, memory and communication ports.

(vi) I/O drivers for connecting remote I/O devices which may be up to 10,000' from control equipment.

(vii) Multiple levels of "AND, OR, INVERT, ON/OFF, DELAY, COUNT UP/COUNT DOWN COUNTERS, ON DELAY/OFF DELAY, RETENTIVE TIMERS, SEQUENCING, COMPARE, EQUAL, GREATER THAN (OR EQUAL), LESS THAN, LIMITTEST, COMPUTER, AVERAGE, MOVE, FOR NEXT, JUMP, RETURN, ONE SHOT FALLING, ONE SHOT RISING, SEND/RECEIVE MESSAGE, STRING CONCATENATE, STRING EXTRACT, EXTEND BUFFER" functions as required for implementation of redundant, multiple station control, signaling and interlocking.

(viii) Communication ports for Ethernet 10/100/1000 Mbps, RS232, RS422, and 20MA connectors.

(ix) Supervision of all circuits - input and outputs to determine faulty wiring from open contacts.

(e) PLC input/output units shall be manufactured by the PLC CPU manufacturer.

~~21.5.3.12~~21.5.3.9 Door Control and Monitoring Equipment

(a) The Project Company shall coordinate the requirements of door hardware and control/monitoring requirements described in this section.

(b) The door hardware and control shall include:

(i) Concealed door position monitoring switches

(ii) Concealed latch monitoring switches

(iii) Fail secure locks

(iv) Manual emergency key type operation, from both sides

(v) Interlocking with other sally port doors/gates/roll-up doors in the configurations shown on the floor plans, through the Central Processing and Programmable Logic Control (PLC) systems specified in this section.

~~21.5.3.13 Vehicle Sally Port Control and Monitoring~~

~~(a) The roll-up doors at the main vehicular sally port, with associated controllers shall be provided with control and monitoring from the Central Control and Local TSC controller. The Project Company shall coordinate all control requirements with the door provider and the Project Company. Controls for electrical doors shall be as outlined and shall perform as follows:~~

~~(i) Control Functions - Central Control and Local Control console shall operate doors~~

~~(ii) The entry and exit to the gate shall be "controlled in and out"~~

~~(iii) Door opening is initiated by pressing the OPEN icon~~

~~(iv) Door is closed once vehicle clears vehicle detection hardware~~

~~(v) A STOP icon allows the doors to be stopped in any position~~

~~(vi) Resuming Movement - Door movement may be resumed in either direction by pushing the appropriate button.~~

~~(vii) Door movement may be reversed in either direction by pushing the appropriate icon. The control system automatically stops the gate, pauses, and then causes the gate to travel in the opposite direction.~~

~~(viii) All wiring shall be in underground conduit~~

~~(ix) Provide all required Open and Close Loops and related equipment required for proper operation.~~

~~(x) Coordinate all performance functions necessary, all control wiring and all conduit requirements with all appropriate trades.~~

~~(xi) Refer to operational requirements as outlined~~

~~(xii) Communications between the door location and Center control shall be provided by weatherproof intercom stations located at the entry and exit locations near the door. On initiation of the intercom stations, the local camera shall provide video by automatic call up of this entry door camera with a spot monitor located at the Center Control console. Coordinate audio and visual requirements with the County.~~

~~21.5.3.14 Vehicular Swing and Slide Gates Control and Monitoring~~

~~(a) The swing and slide gates with its associated controller are provided by another trade that is specified elsewhere. The SCC shall coordinate all control requirements with the~~

~~gate provider and the Project Company. The control of the swing and slide gates shall be as follows:~~

~~(i) The Central Control and Local Control console shall operate the gates.~~

~~(ii) The SCC shall provide an entrance and exit dual height pedestal with two (2) weatherproof intercoms and a camera at the entrance, and two (2) weatherproof intercoms only at the exit – no camera.~~

~~(iii) The TSC icons of the Central Control and Local Control console shall have operational control of the slide gate including an Open, Closed and STOP icon.~~

~~(iv) The TSC icons of the Central Control and Local Control console shall have operational control of the swing gate including an Open icon.~~

~~(v) Provide al l the open and close loops and related equipment for safe and proper operation.~~

~~(vi) All wiring shall be underground conduit.~~

~~(vii) Coordinate all performance functions necessary – all wiring, conduits, trenching, concrete requirements – with all appropriate trades.~~

~~21.5.3.15 Lighting and Utility Control~~

~~(a) Provide all necessary software and interface hardware to control from the TSC local control console GUI screens the holding Lighting for and water supplies for all cells.~~

~~(b) Project Company to provide I/O and interposing relays if necessary to interface to lighting control panels, TV power, telephone power, and plumbing control valves provided by other trades specified elsewhere.~~

~~21.5.3.16 Relays~~

~~(a) Provide UL listed relays where required to interface to high power devices and where electrical isolation is required in high power circuits.~~

~~(b) Relay coils shall be 24 VDC.~~

~~(c) Relay contacts shall be sized as required for min. 100,000 hours of operation under normal conditions of use. The contacts shall be rated for 50% greater amperage than anticipated load.~~

~~(d) Provide damping diodes and devices as required to support EMI/RFI generation.~~

~~21.5.3.17~~21.5.3.10 Touchscreen Operation Interface Terminal

(a) The touch screen shall be the product of a manufacturer engaged in the production of touch screens for industrial applications for a minimum of five (5~~S~~) years.

(b) Provide minimum 27" color LCD touch screen monitors for each operator computer station.

(c) Provide all mounting hardware and cabling for each console mounted touch screen.

(d) The touch screen monitors shall meet the following minimum requirements:

(i) Resolution: 1,920 x 1,080' (native at 60 or 75 Hz)

(ii) Colors: 16.7 million

(iii) Brightness: 300 cd/m2

(iv) Viewing Angle: Horizontal 1702 total Vertical 1602 total

(v) Response Time: 2 milliseconds

(vi) Input Video: HDMI, 15 pin D-Sub, OVID, DVl-I and VGA

(vii) Power Supply: Input (line) voltage - 100-240 VAC, 5,060 Hz, Monitor Input Voltage - 12 VDC at 3.75 amps.

(viii) Power Distribution: 40 watts (typical)

(ix) Agency Approval: UL/cUL, FCC/IC/VCCI/C

(x) Anti-glare Surface Treatment

(xi) Mounting Options: 100mm or 75mm VESA mount, rear mount monitor only, or with brackets, panel cutout.

(xii) Warranty: 3 years for monitor

~~21.5.3.18~~21.5.3.11 Alarm and Status Reporting

Alarm annunciation may be selectively steered to any combination of control consoles. Alarms may be individually prioritized for each console and alarms above a given priority shall cause an audible alarm.

~~21.5.3.19~~21.5.3.12 Journal Log

(a) The system shall have the capability to selectively log all events in the system to both a printer and to CPS disk storage system. All log entries include a time stamp, an event descriptor and, when applicable, an operator.

(b) Alarms logged shall include information presented to the consoles and the system shall create a corresponding acknowledgment message when the alarm is acknowledged.

~~(c) The printer shall support multiple fonts and expanded print to highlight alarms. The descriptor printed for each state of a point may be individually selected.~~

~~(d)~~(c) The magnetic media journal shall serve as system archival storage from which management reports may be generated or the printed journal recreated. The system shall support two journal storage devices to provide long-term removable storage and short-term fast access storage.

~~(e)~~(d) Reports shall run concurrently with, and at a lower priority than, the critical system functions and shall not affect the response time of alarm annunciation.

~~(f)~~(e) Reports shall be selected from a menu of predefined report formats which shall include:

(i) All activity between a selected start time/date to stop time/date.

(ii) Non-circuit activity between a selected start time/date to a stop time/date.

(iii) Circuit activity between a selected start time/date and a stop time/date.

(iv) Activity for a group of points between a selected start time/date and a stop time/date.

~~(v) All Watch Tour reports~~

~~(vi)~~(v) All control console activity

~~(vii)~~(vi) All supervisory circuit activity

~~(viii)~~(vii) All activity for a group of points

~~(ix)~~(viii) All Intercom~~duress~~ alarms

~~(x)~~(ix) All takeover commands

~~(xi) All fire alarms~~

~~(xii)~~(x) All general alarms

~~(xiii)~~(xi) All vehicle sally port door openings

~~(xiv)~~(xii) Other user defined groups

~~(xv)~~(xiii) All incident reports

~~21.5.3.20~~21.5.3.13 System Security

(a) The integrity of the system shall be protected by a system of operator passwords, access levels, and audit trails.

(b) Each operator is assigned a password and access levels. When an operator logs on the system, they shall be asked for his/her operator name and password. If these match, they shall be allowed to perform any function allowed to their access level. Each operation is included in the system log.

(c) In addition to the logging of an operator entry, the system shall record any transaction which shall affect the operation of the system.

~~21.5.3.21~~21.5.3.14 Self-Diagnostics

The system shall have the capability to detect and annunciate the failure of any subsystem. When a failure is detected, the system shall perform on-line diagnostics to pinpoint the failure and recommend corrective procedures. These diagnostics can also be checked through the telephone modem.

~~21.5.3.22~~21.5.3.15 Cabling Requirements

(a) Project Company shall be responsible for sizing all cables and conductors to minimize voltage drop based on anticipated loads of each circuit. Voltage drop shall not exceed the manufacturers' of the equipment being supplied recommendations or a maximum 5% voltage drop.

(b) Input cables shall be a minimum 18 AWG copper stranded cable; output cables 16 AWG and shall be shielded twisted pairs, 600 volt, 90!!C UL listed if installed in cable tray, shall be VNTC cable tray rated. If installed in conduit, Small Diameter Neoprene (SDN) 600-volt, 90°C type TC cable.

~~21.5.3.23~~21.5.3.16 Adjusting, Testing and Cleaning

(a) General

Upon completion of the work, remove excess debris, materials, equipment, apparatus, and tools, and leave premises clean, neat and orderly.

(b) Testing

(i) Component Testing - Each separate component of the Security System door/utility control and monitoring system shall be tested individually. In particular, each printed circuit board shall be tested for circuit continuity and circuit isolation. All electronic components shall be operated for the time duration required to identify product failures and the board shall be completely operationally tested. This testing shall be done at the site of the control equipment manufacturer.

(ii) Factory Testing

(1) All components of the Door Control and Monitoring System shall be operationally tested together with the exception of the end devices. At this time, all components and interconnecting wiring shall be complete and fitted with their respective plug.

(2) The Project Company and County have the option of witnessing all factory tests. Notify, Project Company and County at least 4 weeks prior to system testing.

(iii) Site Testing

(1) All security control equipment, including computer systems, PLC, locks, monitoring devices, and integration of all security equipment. All inputs and outputs to the PLC shall be fully tested by the Project Company.

(2) All communication links between PLC and workstation computers shall be fully tested. ~~as well as the redundant features of the Central PLC and CCC computers.~~

(3) All test reports shall be issued to the A&E-Project Company prior to ACCEPTANCE Occupancy Readiness.

(4) The commissioning of the lighting control, and miscellaneous electrical utility-controlled power circuits shall be a joint effort between various Project Companies.

21.5.4 Security Intercom and Paging System

21.5.4.1 General Requirements

(a) Facility communications shall be accomplished through the use of telephones, intercom and paging systems. A dedicated security intercom system shall be connected to all electronically controlled detention doors and report back to In-Custody Control Room~~monitoring Courthouse/Sheriff's Office Control center for the general building doors~~. In addition, intercom stations installed on electronically controlled doors leading into the judge's chambers secure corridors ~~are recommended to have~~ with dedicated security intercom master stations reporting back to the judge's secretary. The systems shall be designed as simple to operate due to the relatively low number of stations involved. The In-Custody Control ~~Detention/Holding Cells Control Center~~ intercom substations shall interface only with detention holding cells, sally port, intake, and processing areas. Provide a "push to talk" intercom system, installed at these controlled doors and other strategic locations.

~~(b) Video intercom stations shall be provided in select locations such as the entrance to judges' chambers. Answering shall be tied to a local computer within the controlled space, but a tie into the main system shall be provided. Provide additional VSS monitoring around video intercom substations and provide call up on the computer when the intercom is activated. Provide coverage such that the individual requesting entrance can be confirmed to be alone or that additional visitors are verified before entrance is granted.~~

~~(c)~~(b) Provide zoned paging throughout the facility to be activated through County specified telephones. The paging system shall provide intelligible voice announcements throughout all normally occupied spaces of the building. The system shall be capable of receiving external audio and routing control inputs via POTS/DTMF or SIP interface from up to four external sources (telephone systems and mass notification system). The system shall distribute audio to individual, groups or all zones as defined by the County. Each floor shall be divided into multiple zones as designated in the project documents. Amplifiers, paging microphone and control equipment shall be rack mounted. When broadcasting an emergency message the paging system shall be capable of interrupting and delaying fire

alarm system emergency messages if appropriate and approved by the AHJ.~~Paging capability shall be provided through intercom master stations with the ability to page selected zones or all-call. Coordinate paging zones and zone/all-call master station rights with the County and State.~~

~~(d) The SIPS shall be connected to all electronically controlled doors and report back to the Building Monitoring Room. In addition, intercom stations installed on electronically controlled doors leading into the Judicial Chambers secure corridors shall have dedicated security intercom master stations reporting back to the judges' secretaries.~~

~~(e) The SIPS shall be simple to operate due to the relatively low number of stations involved. The In-Custody Control Center intercom substations shall interface only with detention holding cells, sally port, intake, and processing areas. Provide a "push to talk" intercom system, installed at these controlled doors and other strategic locations.~~

~~(f) Video intercom stations shall be provided in select locations such as the entrance to judges' chambers. Answering shall be tied to a local computer within the controlled space, but a tie into the main system shall be provided. Provide additional VSS monitoring around video intercom substations and provide call up on the computer when the intercom is activated. Provide coverage such that the individual requesting entrance can be confirmed to be alone or that additional visitors are verified before entrance is granted.~~

~~(g) Provide zoned paging throughout the facility. Paging capability shall be provided through intercom master stations with the ability to page selected zones or all-call. Coordinate paging zones and zone/all-call master station rights with the County.~~

~~21.5.4.2 Description of the Work~~

~~The SIPS shall be designed and constructed in accordance with the requirements of this Section 2.2.~~

~~(a) The SIPS integration shall include video and duplex voice communication between Intercom Substations and Master Intercom Stations.~~

~~(b) The SIPS shall be an IP type system interfaced to the Security Network including ACMS, VSS, and DCMS.~~

~~(c) Acceptable systems integration shall include ACMS and VSS interfacing required for implementation of signaling and controls; and call up of any cameras associated with the Intercom Substation making the call.~~

~~(d) The SIPS shall include multiple voice/video channels/path as required for simultaneous operation of all Master Intercom Stations provided within the Courthouse Facilities, in conjunction with each locally controlled area and required site-wide security intercom communication specified.~~

~~(e) Video Intercom Stations shall be provided to control door access throughout the Courthouse Facilities and shall be controlled by the Master Intercom Stations.~~

(f) The system shall allow for Video Intercom software installed on the County's computer to provide an alternate means of answering intercom calls. The Project Company shall provide and install all soft masters requested by the County.

(g) The Project Company shall provide all work and components required to provide a fully functional SIPS that is fit for its intended purpose including, but not limited to all coordination, cabling, interfacing, connections, programming, speakers, and horns for all Intercom Stations.

(h) The headend and control system shall be expandable.

(i) Provide weatherproof Intercom Substations mounted in a dual height pedestal located at the vehicle entry gates.

(j) Provide weatherproof Intercom Substations at all exterior locations.

(k) Coordinate cabling, system components and their arrangements electrically and mechanically.

(l) Provide interface to the ACMS, DCMS and VSS.

(m) Provide line fault indication for all circuits.

(n) The SIPS shall conform to the following:

(i) Intercoms shall be interfaced with the ACMS and DCMS to allow the Building Monitoring Room operators to communicate directly through the SIPS graphical user interface ("GUI") screens and mouse control screens, to Intercom Substations located throughout the Courthouse Facilities. Intercom Stations shall be hands-free operation from the remote call-in stations, push-to-talk at control stations, stainless steel construction, and flush mounted.

(ii) The system shall include the following functions:

(1) door control intercom;

(2) reception intercom;

(3) administrative intercom;

(4) Intercom Station audio monitoring; and

(5) output and event response control.

(iii) The system shall integrate with the following other security and communication systems to form a comprehensive facility management network:

(1) ACMS;

(2) GUI/mouse mode control system;

(3) VSS; and

(4) DCMS.

(iv) The Project Company shall coordinate with the County to determine operating hours of the Building Monitoring Room.

21.5.4.321.5.4.2 System Operation

21.5.4.3.1 Master Intercom State General Operation Requirements

(a) Display shall provide alphanumeric descriptions of functions, station and device names; and current activity. Function key labeling shall change depending on the location within the menu structure or options available to the operator.

(b) Master Intercom Station(s) shall display, within a defined area, the current number of calls in the queue, number of acknowledge calls, and number of Intercom Stations removed from service, or monitor points in bypass mode.

(c) At a minimum, Master Intercom Stations, through their command functions, shall have the ability to:

(i) answer calls;

(ii) place calls;

(iii) place calls on hold;

(iv) transfer calls to another master station;

(v) place conference calls;

(vi) place group calls;

(vii) monitor Intercom Stations;

(viii) independently adjust each Intercom Station's volume level;

(ix) remove stations from service;

(x) recall the last station with a single control;

(xi) adjust display back lighting;

(xii) select 12 or 24-hour clock display; and

(xiii) adjust the step rate for switching between monitored stations.

~~(d) Provide volume adjustment of Master Intercom Station levels, which shall be controllable during communications. Each Intercom Station's level shall be software-controlled independently. Level settings shall remain in effect until modified by a future adjustment.~~

~~(e) Master Intercom Stations shall include the ability to be placed in an unmanned mode, which shall automatically route all the associated call handling functions to a predefined secondary Master Intercom Station.~~

~~21.5.4.3.2~~21.5.4.2.1 Call Placement from an Intercom Station

Call placement from an Intercom Station shall comply with the following requirements.

(a) Depressing an Intercom Station's call push-button shall place a call request in the queue of the ~~Master Intercom~~In-Custody Control Station(s) assigned to receive that Intercom Station's calls. Calls shall be queued in order of priority level associated with the Intercom Station and the time the call was placed.

(b) In-Custody Control~~Master Intercom~~ Station shall normally display the identity of the top three (3) calls in its call request queue. Call identity shall include the device ID number and an alphanumeric descriptor. Descriptor shall be up to 20 characters.

(c) The In-Custody Control~~Master Intercom~~ Station display shall indicate the total number of calls currently in its queue. Scroll keys shall enable the In-Custody Control~~Master Intercom~~ Station to view all calls in the queue.

(d) Calls not answered within a preprogrammed time shall place a secondary call request to an assigned secondary ~~Master Intercom~~ In-Custody Control Station.

~~21.5.4.3.3~~21.5.4.2.2 Call Answering at an Intercom Master Station

Call answering at a In-Custody Control~~Master Intercom~~ Station shall comply with the following requirements.

(a) In-Custody Control~~Master Intercom~~ Stations shall be able to answer the top call request in its queue by depressing the 'Next' function key. At completion of the call, the 'End' function key shall close the communication link and remove the call from the queue.

(b) Subsequent calls may be similarly handled for the remaining calls in the queue.

(c) Queued calls may be answered out of sequence by scrolling through the queue to the desired call. The selected call to flash on the display and shall be answered by depressing the 'Enter' key. 'End' key shall close the communication link, remove the call from the queue, and return the In-Custody Control~~Master Intercom~~ Station display to the top of the queue.

(d) A call that is currently connected to a In-Custody Control~~Master Intercom~~ Station shall display that the call is connected, the type of device connected, and the identity of the connected device.

~~21.5.4.3.4 Voice Communication~~

~~Voice communications through the SIPS shall provide for the following:~~

~~(a) telephone handset voice communication between Master Intercom Stations shall be full duplex;~~

~~(b) open voice communications between Master Intercom Stations shall be automatically switched to half duplex with press-to-talk override; and~~

~~(c) voice communications between Master Intercom Stations and Intercom Substations shall be full duplex.~~

~~21.5.4.3.5 Station Monitoring~~

~~Master Intercom Stations shall comply with the following requirements:~~

~~(a) Master Intercom Stations shall be able to monitor an individual Intercom Substation or a predefined group of Intercom Stations;~~

~~(b) the SIPS shall permit establishing as many Intercom Station monitor groups as there are unused Intercom Station ID numbers; and~~

~~(c) each Master Intercom Station shall individually control the rate at which Intercom Stations in the monitored group are sequenced through.~~

~~21.5.4.3.6 Video Intercoms~~

~~Video Intercom Stations shall comply with the following requirements:~~

~~(a) voice video integration;~~

~~(b) video display at Master Intercom Station;~~

~~(c) access control door release; and~~

~~(d) video from intercom cameras shall be accessible through VSS.~~

~~21.5.4.3.7 Parking Area Access Station~~

~~Parking Area access station shall meet the following requirements:~~

~~(a) provide independent two-way communication between the access control gate and the assigned security station or Master Intercom Station;~~

~~(b) provide a push button call activation and response between the access control gate and the assigned security station or Master Intercom Station; and~~

~~(c) provide an audible call signal from the access control gate to the parking attendant station.~~

~~21.5.4.4 Functional Requirements~~

~~(a) Identification number for each category of device, group, zone and/or area shall range from 1 to 65.~~

~~(b) Alphanumeric description for each device, group, zone and/or area shall contain up to 20 characters and spaces.~~

~~(c) All Intercom Station field wiring shall be supervised for short circuit and open circuit faults.~~

~~(d) All SIPS system boards shall include self-diagnostic functions for complete operational and communication testing.~~

~~(e) All SIPS system boards and devices shall be able to be inserted or removed from service while the system is fully operational. Other system activity not directly related to the board insertion or removal to not be affected.~~

~~(f) System diagnostics shall include the ability to test system communications and devices from the service, administration, and control computer.~~

~~(g) System shall include the ability to make on-line changes to the system configuration.~~

~~(h) System shall include logging functions for system activity and system maintenance.~~

~~(i) System shall include the ability to print, through an optional printer, activity, and maintenance logs.~~

~~(j) On-line factory support shall be available through a modem connection to the service, administration, and control computer.~~

~~21.5.4.5 Performance Requirements~~

~~(a) System frequency response: 300 to 3,500 Hz.~~

~~(b) Intercom Station output: 82 dB SPL at three (3) feet with 82 dB SPL input at face of transmitting station.~~

~~(c) Maximum time from call placement to annunciation at Master Intercom Station: 1.0 second.~~

~~(d) Maximum time to complete call connection upon receipt of command from Master Intercom Station: 1.0 second.~~

~~(e) All system equipment to comply with the radiation limits for Class A digital devices of FCC Rules Part 15, Subpart B.~~

~~21.5.4.6~~21.5.4.3 Electrical Power Requirements

The Project Company shall provide all power as required.

~~21.5.4.7~~21.5.4.4 Electrical Power Requirements

The Project Company shall provide all power as required. Coordinate all power and infrastructure requirements with Section 15 (Electrical Systems) of this Appendix.

~~21.5.4.8~~21.5.4.5 Qualifications

The Project Company shall be qualified and certified by the manufacturer prior to installation and programming of the SI~~PS~~.

~~21.5.4.9 Quality Control~~

~~(a) All SIPS components shall meet the requirements of all Applicable Standards and Applicable Law. All equipment shall be of maximum security correctional grade.~~

~~(b) The Project Company shall strictly adhere to the installation instructions provided by the system manufacturer and shall provide certification reports from the manufacturer's representative that all installation instructions have been satisfactorily complied with.~~

~~(c) All equipment shall be Underwriters Laboratories / CSA listed.~~

~~21.5.4.10 Reliability~~

~~The Project Company shall provide a SIPS with mean time before / between failure ("MTBF") of a minimum of 36,000 hours.~~

~~21.5.4.11 Uninterruptible Power Supply (UPS)~~

~~All UPS supplied and installed by the Project Company shall comply with the requirements of these Design and Construction Standards.~~

~~21.5.4.12 Components~~

~~21.5.4.12.1 Intercom Central Exchange~~

~~(a) As required, the Project Company shall provide facility paging exchanges, hands-free type master stations, substations SAC computer(s), and card cages as required.~~

~~(b) The Project Company shall provide all control, switching logic, signaling, and operating features listed in this Section.~~

~~(c) All circuits shall be located on printed circuit boards which slide into the central exchange mainframe and/or I/O card cages.~~

~~(d) The SIPS central exchange shall be configured to provide programming from security electronics room and central control center master stations, battery-backed protection of user program, multiple answer codes, alarm call, all call, priority call, group call, auto callback, conference call, restricted access, external speaker page, audio monitoring, stations and minimum 25 voice channels as required.~~

~~(e) The Project Company shall provide wall mounting hardware, printed circuit boards and modules as required for specified system functions.~~

~~21.5.4.12.2 Central Exchange Equipment~~

~~(a) Voltage regulation circuit board, transformers, subscriber cables, subscriber (i.e., station) circuit boards, voice channel circuit boards, processor circuit boards, optional feature circuit boards (all call, group call, alarm call, etc.), logic circuit boards, interface boards and all accessories shall be provided and installed as required to provide the capabilities described in these Technical Requirements. Provide terminal boards, wiring accessories and all appurtenances required for a fully functional and trouble-free system.~~

~~(b) The SIPS provided as part of the Design-Build Work shall include all hardware and software required for hands-free conference mode operation of selected groups of master stations and substations specified by the County.~~

~~(c) Provide a number of simultaneous talk paths/trunks/buses as required to meet project demands.~~

~~21.5.4.12.3 System Administration and Control Computer~~

~~(a) The system administration and control ("**SAC**") computer shall provide the processing for the SIPS's operation, configuration functions, and maintenance functions.~~

~~(b) Interface to the I/O card cages, master stations, and remote intelligent devices shall use ethernet port connections.~~

~~(c) Interface to the PLC door control system shall be an industry standard RS-232 or ethernet addressable connections.~~

~~(d) The SAC computer shall support the ability to be upgraded to a redundant configuration by adding a second SAC computer and interface cards. No existing equipment shall be obsolesced by redundancy upgrade.~~

~~(e) The SAC computer shall meet the following requirements:~~

~~(i) real time operating system;~~

~~(ii) communications system software;~~

~~(iii) PCLTA cards with:~~

~~(1) Lonworks direct connect ports as required; or~~

~~(2) Lonworks free topology ports as required; or~~

~~(3) ethernet IP ports; or~~

~~(4) as directed by the County.~~

~~21.5.4.12.4 Input/Output Card Cages~~

~~(a) I/O card cages shall supply power distribution network connection and digital audio bus connections for the system control and audio I/O boards. Units shall support redundant card configuration and the ability to be interconnected for system expansion.~~

~~(b) I/O card cages shall be designed to facilitate the insertion and removal of cards while the system is in operation. Units shall incorporate fused power input connections to protect cards.~~

~~(c) I/O card cages shall be designed for mounting in 9U space of standard 19-inch equipment racks and to meet EMI radiation and susceptibility standards.~~

~~(d) Card cage power supply, network and control terminals shall be screw type with positive clamping pressure plate providing locking tension.~~

~~(e) Backplane of each card cage shall have the capacity for routing 512 simultaneous audio channels for communication and program routing.~~

~~(f) Cards shall be secured in place with front panel screws. Each card rear plate shall include securing screws to eliminate stress on connectors. All card field wiring shall be made via quick-disconnect connectors on rear of card.~~

~~(g) Card cage shall provide capacity for one (1) control card and sixteen (16) I/O cards without redundancy and two (2) control cards and fifteen (15) I/O cards in a redundant configuration.~~

~~(h) All unused card slots shall be provided with front and rear blank panels.~~

~~(i) All control and I/O cards shall be supplied with factory-manufactured cables for interface to field wiring terminal blocks.~~

~~21.5.4.12.5 Power Supplies~~

~~(a) Each I/O card cage shall be provided with an associated external power supply designed for mounting in 3U space of standard 19-inch equipment racks.~~

~~(b) Input source to 100-120 VAC, 10 at maximum. Outputs shall be capable of providing up to 30A at ±12 VDC. Voltage regulation ±10%. Maximum ripple 1% peak to peak.~~

~~(c) Units shall include independent dual supplies, front panel power switch and line power indicator, and independent supply status indicators. AC line input shall be fused, and protection circuitry shall be provided for overload and overvoltage conditions.~~

~~(d) Power supplies shall incorporate rear-mounted fan and filter assembly, and ventilation slots in the front and side panels.~~

~~21.5.4.12.6 Audio Control Boards~~

~~(a) Audio Control Boards (“**ACB**”) shall mount in I/O card cages and provide the digital audio switching and processing functions for the audio I/O cards. ACBs shall also provide card~~

cage link connections for system expansion and copper digital trunk interface to remote card cages and exchanges.

(b) On board digital signal processors ("**DSP**") shall control voice channel signal processing, conference calls, station monitoring and to generate signal tones. Units shall be provided with one (1) main board DSP module and one daughter board with two (2) DSP expansion modules.

(c) Units shall include full functional test capabilities with self-test that can be operated from the SAC computer. Indicators shall be provided for network status and operating status. Front panel pushbuttons shall provide control for master reset, card reset, and service functions. Internal fuse shall protect circuitry.

(d) ACBs shall incorporate flash memory for updating of the CPU and DSP firmware over the network.

21.5.4.12.7 Station Audio Boards

(a) Station audio boards ("**SAB**") shall mount in I/O card cage, or remote receiver units, and provide the system interface for intercom stations and for Master Intercom Station audio. Units shall convert incoming audio signals to digital format and outgoing signals to analog format. Each channel shall monitor the status of up to two (2) switches associated with each Intercom Station.

(b) Station audio boards shall each incorporate 15 half-duplex channels and one (1) full duplex (master station) channel. Additional master stations shall be connected to adjacent pairs of half-duplex channels. Each channel shall include a separate audio power amplifier for non-blocking call operation and eight (8) independent software-controlled volume settings.

(c) All station audio, switch, and power functions shall be transmitted over a single shielded pair cable. Station to card cabling with 22-gauge conductors shall extend up to 2460 feet. Wiring supervision shall detect open circuit and short circuit faults.

(d) Front panel LEDs shall indicate operating status. Units shall support redundant operation.

21.5.4.12.8 Audio Input and Output Boards

(a) Audio input and output boards shall mount in I/O card cage, or remote receiver units, and provide the system interface for up to eight (8) system audio inputs or outputs. Units shall convert incoming analog audio signals to digital format and outgoing digital signals to analog format.

(b) Input or output signal compatibility shall be provided from microphone level to line level signals. Each channel shall be software selectable for level range and trim level. Each input channel shall be balanced and provided with input control and status output signal. Each output channel shall incorporate external disable control contacts and shall have floating status output contacts to maintain isolation from other equipment.

~~(c) Input and output signal range from 50 mV peak to 1 volt peak.~~

~~(d) Nominal input impedance 10k ohm nominal output impedance 200 ohm.~~

~~(e) All wiring shall be fault protected. Front panel LEDs shall indicate operating status.~~

~~(f) Units shall support redundant operation.~~

~~21.5.4.12.9 Paging Amplifier Boards~~

~~(a) Paging Amplifier Boards ("**PAB**") shall mount in I/O card cage or remote receiver units and provide eight (8) independent audio channels rated at five (5) watts RMS per channel into a 70 (25) volt loudspeaker circuit. Units shall convert system digital signals to analog output signals.~~

~~(b) Independent software audio level control shall be provided for each channel. Floating outputs to maintain isolation. Internal fuse shall protect circuitry. Front panel LEDs shall indicate operating status.~~

~~21.5.4.12.10 Switch Panel Drivers~~

~~(a) Switch panel drivers shall interface up to 128 switch contacts and led indicators to graphical or similar switch control panels. Switch function assignment and LED indicator signaling shall be software configurable.~~

~~(b) Units shall incorporate isolation diodes and fast switch scanning to ensure both single and multiple switch presses are not missed.~~

~~(c) Switch panel drivers shall be designed for wall mounting under control consoles. Communication between the switch panel driver and the SAC computer shall be through the free topology network.~~

~~21.5.4.12.11~~21.5.4.5.1 Detention Intercom Stations

(a) Detention Intercom Stations shall be tamperproof and weatherproof, ~~maximum security grade,~~ single button recessed Intercom Stations, designed for mounting on standard 2-gang outlet boxes. The Project Company shall confirm size and provide accordingly. Faceplates shall be constructed of brushed stainless steel. Internal steel offset grille shall restrict inserting objects through speaker grille.

(b) Each Detention Intercom Station shall incorporate an internal loudspeaker, microphone preamplifier and function multiplexing circuitry. One pushbutton shall be provided on each station. Pushbuttons shall be software assignable for placement of call requests.

(c) Pushbuttons shall be single piece stainless steel construction and be back stopped to prevent excessive travel. Switch shall have positive tactile action with one-million operation lifetime.

(d) Loudspeakers shall be waterproof mylar cone type.

(e) All Detention Intercom Station functions shall be transmitted over a single shielded pair cable ~~or a single voice cable (CAT 5e)~~. Intercom Stations shall be provided with insulation displacement connector that requires no wire stripping for installation.

(f) Outdoor Detention Intercom Stations shall be identical in all respects to standard intercom stations except that all metal plates and hardware to be stainless steel, and internal circuitry and components to be conformally coated.

(g) Each button shall be programmable, through the system, to call the In-Custody Control ~~Master Intercom~~ Stations or to access any specific group function, e.g., group call, alarm call, etc. The labels and buttons shall be color coded, thorough fluorescent paint fill, within the engraved labeling and graphic identifiers.

~~21.5.4.12.12 Loudspeaker Intercom Talkback Kit~~

~~(a) Intercom talkback kits shall be used to interface 8-ohm loudspeakers to system headend for two-way voice communication.~~

~~(b) Units shall include microphone preamplifier, line supervision electronics, loudspeaker transformer, and mounting hardware.~~

~~21.5.4.12.13 Exterior and Interior Paging Speakers~~

~~(a) Provide paging horns to allow intercom system paging to exterior and interior areas. The horn shall produce, as a minimum, 120 dB at four (4) feet with 20 watts of pink noise. Mount horns at 12 feet above finished grade level. Provide all required page adapter intercom system interface equipment. Provide wide angle professional paging horns with weatherproof mounting hardware. Provide with necessary corrosion proof hanging brackets and stainless steel fasteners.~~

~~(b) Provide self-contained spherical, 8-inch, surface mount speakers and enclosures in mechanical spaces and unfinished areas.~~

~~(i) The loudspeaker shall be a self-contained, wide range device with a wide coverage pattern. The frequency response shall be 55 Hz – 17 kHz, + 6db; the vertical polar coverage shall be 180 degrees within +5 decibels.~~

~~(ii) The loudspeaker shall have a minimum sensitivity of 94dB SPL at one (1) watt/one (1) meter, a continuous power handling capability of 100 watts RMS, and a rated impedance of 8 ohms.~~

~~(iii) The loudspeaker driver shall be one (1) 8-inch woofer with a 1-inch dome tweeter mounted coaxially. The driver shall be mounted in a spherical enclosure. All hardware shall be stainless or plated steel.~~

~~(iv) Provide ceiling mounted flat mounting brackets as required. Single point suspension shall not be permitted.~~

~~(v) Provide epoxy resin anchors for ceiling brackets. Provide stainless captive nylon/castellated nuts for securing unit to ceiling bracket.~~

~~(vi) Provide multi-zone paging system capable of excluding areas such as courtrooms.~~

~~(c) Provide stainless steel or aluminum baffles and backboxes for all speakers in non-ceiling corridor spaces.~~

~~21.5.4.12.14~~21.5.4.5.2 Paging Amplifiers and Distribution

(a) Provide class 2 audio distribution for all paging speakers using 25-volt or 70-volt distribution. Conform to Applicable Standards and Applicable Law for low/high voltage distribution in conduit with low voltage control and communication cabling.

(b) Provide speaker matching transformers and level control transformers with less than 1% distortion at rated power. Transformers shall be rated for full capacity of loudspeakers served.

(c) Provide amplifier matching transformers with less than 1% distortion at rated output power. Transformers shall be rated for full capacity of amplifier served.

(d) Provide minimum of 16 watts of amplifier for each exterior horn speaker in power load calculations plus 50% spare capacity.

~~21.5.4.12.15~~21.5.4.5.3 Video Master Station

(a) Product: IP desktop station:

(i) power source: supplied from PoE switch;

(ii) call tone: audible indication and LED blinking (until call timeout);

(iii) Communication:

(1) Handset; and

(2) Hands-free;

(iv) acoustic echo cancellation; and

(v) active noise filtering.

~~21.5.4.12.16~~21.5.4.5.4 Video Intercom Station

(a) Power source: supplied from UPS backed central control unit.

(b) Communication: open voice hands-free communication.

(c) Camera: 1/4" (6 mm) color CMOS.

(d) Minimum illumination: 5 Lux.

(e) Camera angle: wide, approximately 170 degrees (Horizontal).

(f) Ambient temperature: -10°C to 60°C (+14°F to +140°F).

(g) Mounting: flush mount.

~~21.5.4.13~~21.5.4.6 Wire and Cable

All Commercial Intercom wiring shall be CAT-6 cable. Refer to the Electrical Systems and ITC Systems Sections for additional CAT-6 cabling requirements. Cable jacket color shall be in accordance with County standards as set forth in Section 18.12.4(b)(iii) of this Appendix.

~~21.5.4.14~~21.5.4.7 Emergency Telephones

(a) The emergency telephones shall be an easily identifiable, vandal resistant communications device pedestal that is ADA compliant, multi-functional, freestanding, and constructed of heavy steel. The unit shall be virtually impervious to damage, and shall include a high quality, vandal resistant, hands-free communications device illuminated by a high intensity faceplate light, a powerful strobe light and a vivid blue beacon that serves to identify the unit from a great distance. The emergency phone pedestals shall comply with the following requirements:

(i) provide Code Blue CB 1-s with dual openings:
Part #: CB1S00834
Finish: Safety Blue
Graphic Text: Emergency 2 Sided
Graphic Color: White
Second Opening: Blank Stainless-Steel Plate
Speakerphone: Sold Separately
Communication: None
Power: Line Power
Incoming Voltage: 120VAC 210VA
(24VAC/12VDC Output)
Lighting: Strobe Light Blue Lens
Lighting: Area Light Blue Lens
Venting Type: Passive
IA4100 FP1 Single Button Phone Assembly
Enclosure Speakerphone
Large Bezel: EMERGENCY
Includes Hardware and Harnesses
Anchor Bolt Kit Installation Kit for CB1 and CB9 Series

(ii) Provide cabling for IP security cameras near the device. Device model to be confirmed through design review.

(iii) provide Code Blue CB 2-s:
Part #: CB2S00056
Finish: 4B Brushed Stainless Steel
Graphic Text Side: Emergency
Graphic Color: Blue
Speakerphone: Sold Separately
Power: Line Power
Incoming Voltage: 120VAC 210VA

(24VAC/12VDC Output)
Lighting: Strobe Light Blue Lens
Lighting: Area Light Blue Lens
IA4100 FP1 Single Button Phone Assembly
Enclosure Speakerphone
Large Bezel: EMERGENCY
Includes Hardware and Harnesses

(iv) Provide cabling for IP security cameras near the device. Device model to be confirmed through design review.

(b) The unit shall be mounted onto four (4) anchor bolts that are set into concrete. Standard three-quarters inch (¾") x 24-inch galvanized steel anchor bolts, nuts and washers shall be used as required. The unit shall mount half-inch (½") above the concrete to allow air flow within the unit.

~~21.5.4.15 Examination~~

~~(a) Examine areas to receive video intercom system.~~

~~(b) Conditions that would adversely affect installation or subsequent use shall be noted and rectified by the Project Company.~~

~~(c) Installation shall not commence until unacceptable conditions are corrected.~~

~~21.5.4.16 Installation~~

~~(a) The Project Company shall install all SIPS components in accordance with manufacturer's instructions at locations indicated utilizing factory trained and certified installers.~~

~~(b) Equipment shall be mounted plumb, level, square, and secure.~~

~~(c) CAT-6 Cables shall be installed in accordance with the following requirements:~~

~~(i) run cables from and home run from device location to Security Closet. Splices are not allowed.~~

~~(ii) maintain twists of cable pairs to point of termination of no more than 0.5" (13 mm) untwisted.~~

~~(iii) do not remove more than 1" (25 mm) of jacket when terminating cables.~~

~~(iv) cable bends:~~

~~(1) make gradual bends of cable, where necessary;~~

~~(2) do not make bends of cable sharper than 1" (25 mm) radius;~~

~~(3) do not allow cable to be sharply bent or kinked at any time;~~

(v) cable ties: dress cables neatly with cable ties using low to moderate pressure;

(vi) cross-connect cables, where necessary, using CAT-6 rated punch blocks and components;

(vii) do not splice or bridge cables;

(viii) cable pulling:

(1) pull cable with low to moderate force;

(2) do not use oil or other lubricants not specifically designed for cable pulling;

(3) keep cables as far away from potential sources of EMI as possible;

(ix) do not tie cables to electrical conduits or lay cables on electrical fixtures;

(x) cable supports:

(1) install proper cable supports a maximum of five (5) feet (1524 mm) apart;

(2) do not support cables by ceiling tiles;

(xi) label cable termination points: use unique number for each cable segment;

(xii) testing cables: test installed cable segments with cable tester;

(xiii) jacks: Install jacks to prevent dust and other contaminants from settling on contacts;

(xiv) cable slack:

(1) leave extra slack on cables, neatly coiled up in ceiling or nearest concealed place;

(2) leave a minimum of one foot (305 mm) of cable slack at door station side and a minimum of 10 feet (3048 mm) of cable slack at CEU side;

(3) do not install cables taught;

(xv) grommets: Protect cables with grommets where passing through metal studs or other items that could damage cables;

(xvi) do not mix TIA/EIA 568A and 568B wiring on same installation. Use TIA/EIA 568B wiring throughout installation;

(xvii) staples:

(1) do not use staples that crimp cables tightly;

~~(2) do not use T-18 and T-25 cable staples;~~

~~(3) use firestop cables that penetrate firewalls;~~

~~(xviii) use plenum-rated cables where mandated.~~

~~21.5.4.17 Adjusting~~

~~Adjust integrated security and communication system for proper operation in accordance with manufacturer's instructions.~~

~~21.5.4.18 Protection~~

~~Protect installed integrated security and communication system from damage during construction.~~

21.5.5 Access Control and Monitoring System

21.5.5.1 General Requirements

21.5.5.1.1 General

(a) Access points and security barriers shall be designed to control and provide secure access to the New Courthouse for authorized personnel in an expedient manner.

(b) Designated doors shall be operated with keycard reader devices and equipped with door position switches ("**DPS**") to indicate door position and lock status on the control screen.

(c) Secure vestibule doors shall be interlocked but capable of override for simultaneous opening during emergencies.

~~(c)~~(d) The New Courthouse access control system shall be compatible with the County's access control system.

~~(d)~~(e) The holding area shall be controlled by a PLC-based access system and shall be operated independently of the keycard access system. The Project company shall provide all components of this PLC-based access system including, but not limited to CPU, power supplies, I/O module for interfacing door control elements, ~~CCTV,~~ Intercom Stations, ~~motion detectors,~~ touchscreens, and status indicators. Ethernet communications protocol on a secure network shall be used to interface the various systems.

21.5.5.1.2 Building Access: Exterior

(a) Provide metal detectors and x-ray screening stations for security personnel to screen visitors to the Courthouse in the Main Lobby.

(b) Judges shall enter the Courthouse through a dedicated access point via keycard access. Keycard reading devices shall allow judges to enter specific, secure Areas of the Courthouse without intervention from security personnel or the Sheriff's Office. The keycard access system shall provide for computerized records of the time and user identification for each designated door.

(c) The restricted vehicle sally ports shall be monitored ~~and controlled by the Sheriff's Office~~ from the In-Custody Control Room, access to be provided from the In-Custody Control Room.

(d) ~~Touchpads and keyless~~ Keycard entry locks shall be employed.

(e) ~~Touchpads and keyless entry locks shall be employed. Biometric entry shall be utilized.~~ All exterior doors shall have Door Position Switches for monitoring. Emergency egress doors that are not to be used for normal exiting shall be equipped with door alarms. Emergency egress and delayed egress doors shall alarm locally and at the control workstations. All secured exterior doors shall alarm if propped open.

(f) All access points into Restricted Areas shall be access controlled. Staff corridors, suites and shared areas shall be accessible via keycard access. Judicial and Staff personnel shall be provided metal keys for Private Offices and other designated staff spaces within suites. Provide remote entry push-button devices and VSS/intercom identification for staff to control public access to staff suites.

21.5.5.1.3 Building Access: Interior

(a) All access points into Restricted Areas shall be access controlled. Staff corridors, suites and shared areas shall be accessible via keycard access. Judicial and Staff personnel shall be provided metal keys for Private Offices and other designated staff spaces within suites. Provide remote entry push-button devices and VSS/intercom identification for staff to control public access to staff suites.

(b) All entries into restricted areas shall be controlled. Access from the vehicular sally port through to the secure waiting/staging area shall be facilitated via interlocked doors that are controlled from the In-Custody Control Center ~~Control~~ with notification monitoring via intercom and VSS communication.

21.5.5.1.4 Secure Parking

(a) VSS coverage, emergency phone locations and access-controlled ingress and egress shall be provided at the Secure Parking area.

(b) Access control shall be provided through dual height pedestals equipped with card readers and VSS cameras.

(c) One-direction tire spikes shall be provided on all exit lanes.

21.5.5.1.5 Secure Parking Gate Control

(a) Provide electrically controlled gates at the Judge's Secure Parking area. There shall be a dual height pedestal with card access, intercom station, and ~~built in~~ CCTV camera for verification at the entrance. Exit ~~E~~egress control shall consist of loop detector and button. ~~egress pedestal with card reader/intercom.~~

(b) Provide control gates for any driveway leading to the service areas. An intercom shall be placed here along with CCTV cameras to positively verify the identity of the service personnel prior to providing access.

21.5.5.1.6 Vehicle Sally Port Gate Control

Provide electrically controlled gates at the Secure Vehicle sally port. There shall be a dual height pedestal with card access, intercom station, and built in VSS camera for verification. Egress control shall consist of egress pedestal with card reader, intercom, and VSS camera.

21.5.5.1.7 Lobby Screening

Provide space and equipment for security screening at all entrances before entering the public circulation and waiting area of the courthouse. The public circulation also provides space for courtroom waiting and access to the Clerk and other agency services. The public lobby of the courthouse shall provide a distinctive security boundary for the facility, separating public from staff and secure areas. These areas shall be provided with duress alarms and dedicated video coverage.

21.5.5.1.8 Mail Room Screening

Provide screening equipment for incoming mail including a magnetometer, and portable screening equipment for detecting dangerous contaminants - including explosives, narcotics, chemical and biological warfare agents, and toxic chemicals.

~~21.5.5.1.9 Access Control Monitoring Workstation~~

~~Access Control Monitoring Workstation(s) shall be provided through a touchscreen workstation(s). Controls shall be GUI based, displaying a graphical map of the area of jurisdiction. The GUI shall include graphical indications of the door status and control of all keycard reader controlled doors.~~

~~21.5.5.1.10~~21.5.5.1.9 Intrusion Alarm System

(a) An intrusion alarm system shall be provided for after-hours monitoring of all areas within the Courthouse that are not under operation 24 hours per day, seven (7) days per week. The intrusion alarm system shall consist of glass-break sensors for all Rooms and Areas with first-floor windows/glazing, window position monitoring for all operable first-floor windows, and motion detectors at entrances and secure storage rooms including, but not limited to the ~~armory,~~ property storage, evidence storage, etc.

(b) The intrusion alarm system shall alarm in local control rooms.

21.5.5.2 Access Control Description of the Work

(a) Provide an access control panel in each security equipment closet.

(b) Provide a main access control panel in the main security electronics room.

(c) All ~~ACS computers, servers, and~~ panels shall be connected to either the County or the security network.

(d) All security devices (PIRs, door contacts, card readers and electric strikes) shall be hard wired to the nearest access control panel.

(e) Each access control panel shall be connected to the security network by CAT-6 cables.

(f) All other devices shall be connected by cables(s) per device manufacturers' recommendation.

~~(g) One (1) ACS server shall be provided in the Building Monitoring Room.~~

~~(h) One (1) ACS workstation shall be provided in the Building Monitoring Room.~~

~~(i) The ACS shall be interfaced to the Detention Control System, Security Intercom and Paging System, and Video Surveillance System for event call-up features.~~

~~(j) The ACS shall be interfaced to the Detention Control system for release of detention door shown with card readers. Provide power supplies in each Security Equipment Room as required to support all field devices in the area serviced by that closet.~~

~~(k) Provide one (1) badging station with the following:~~

~~(i) laptop access control workstation;~~

~~(ii) digital camera;~~

~~(iii) backdrop;~~

~~(iv) photo light; and~~

~~(v) proximity card printer.~~

~~(l)~~(g) Provide ACS, including ACS network ~~computers~~, controllers, card readers, cards, duress devices, and badging station.

~~(m)~~(h) Populate the ACS database with the employee provided by the County / OJD.

~~(n)~~(i) Provide detection devices such as motion detectors.

~~(o)~~(j) Interface, monitor, and control electric locksets provided by the Project Company.

~~(p)~~(k) Provide magnetic door switches.

~~(q)~~(l) Provide request for egress PIRs and pushbuttons.

~~(r)~~(m) Provide all required power supplies.

~~(s)~~(n) Provide all cabling connections required, cable jacket colors shall be in accordance with County Standards.

~~(t)~~(o) Coordinate conduit requirements with Owner.

~~(u)~~(p) Coordinate all door hardware with door supplier.

21.5.5.3 System Description

~~(a) The Project Company shall provide a central server workstation which connects to remote control panels ("**RCPs**") within the Courthouse.~~

~~(b)~~(a) Connections to the access control panel ~~RCPs~~ shall be over a LAN connection.

~~(c)~~(b) The central system shall provide real-time display of all system events, archive all events in a history file on the system's internal drive, and serve as the instrument through which all system programming is accomplished.

~~(d)~~(c) An Access Control System Server ("ACSS"): Shall be installed in the Server Room. The ACSS shall comply with the following requirements.

(i) The ACSS shall run the system database service for interfacing with the system database, a panel service for polling system panels and communicating with the database service, a user interface for monitoring system activity and database administration.

(ii) The system server shall also have the most recent Microsoft Windows operating system supported by ACS manufacturer, installed as the operating system for the ACS software.

~~(e)~~(d) A Personal computer shall be configured for the intended system function by loading the appropriate services and operating system software.

~~(f)~~(e) Access Control Workstation ("ACWS"): Shall be desk mounted and installed in the Building Monitoring Room.

(i) The ACWS shall connect to the ACSS for local, site-specific control and monitoring of the Access Control System.

(ii) The ACSS shall have the most recent Microsoft Windows operating system supported by ACS manufacturer, installed as the operating system for the ACS software.

(iii) A Personal computer shall be configured for the intended system function by loading the appropriate services and operating system software.

(iv) This station shall be integrated through serial or network communications to the digital video recording and monitoring system and the intercom system to provide integrated control and monitoring functions.

(v) This station shall be loaded with the site map and security device icons for graphical screen control and monitoring of the security system.

~~(g)~~(f) Access Control Badging Station (ACBS): Shall be located at a location indicated by the County/State.

(i) The ACBS shall connect to the ACSS. The station shall have the most recent Microsoft Windows operating system supported by Access Control System manufacturer, installed as the operating system for the access control software.

(1) A computer shall be configured for the intended system function by loading the appropriate services and operating system software. This station shall be integrated through serial or network communications to the Access Control System for the primary function of badging.

(2) This station shall also be loaded with the site map and security device icons for graphical screen control, monitoring of the security system, and shall provide fully functional backup to the workstations.

~~(h)~~(g) ~~Remote~~ Access ~~C~~control ~~P~~panels shall be installed, communicating to the ~~Central~~ County Main Server over a local LAN connection. The access control panels ~~RCP's~~ shall connect to all initiating and alarming devices. The system shall provide:

(i) Control Access to building and selected areas using proximity cards.

(1) Selected Exterior Doors: Control access into building at locations as indicated.

(2) Selected Interior Building Areas. Control access into areas as indicated.

(ii) The System shall Restrict Access of individual cardholders by time of day, day of week and specific points of entry via system software.

(iii) Unlock Doors to building and selected areas automatically for a scheduled period of time throughout the day allowing free access and egress without the use of a card and avoiding the generation of an alarm condition on the access control system.

(iv) Monitor Points in building and selected areas which may provide unauthorized access or egress and may be a point for forced entry.

(v) The system shall report changes in status for all monitored points indicating the specific location so the operator can respond appropriately to selected Exterior Perimeter and Internal Points.

(vi) Provide four-state supervised inputs to system for monitoring the status of doors.

~~(i) Provide computer display of graphic building maps with graphic display of door status, door alarms, security panel and alarms on each computer. This shall be accomplished by loading a bit map of the architectural backgrounds.~~

~~(j) Provide network interface with the video surveillance system for video call up on the workstation computer.~~

~~(k)~~(h) Provide interfacing to local Fire Alarm System for the release/unlocking of all doors identified by the AHJ.

~~(l)~~(i) Provide centralized report generation of all alarm signals.

~~(m)~~(j) Provide centralized card access proximity card printing including digital pictures.

~~(n)~~(k) Provide UPS power backup.

21.5.5.4 Related Work

In addition to work described above, the Work shall include, but not necessarily be limited to the following:

(a) Equipment identification as specified elsewhere.

(b) Providing all cabling and connections required for complete and functional systems, cabling jacket colors to be in accordance with County Standards.

(c) Providing 120 VAC un-interruptible power as required for all equipment provided under this contract.

(d) Assemble equipment that is furnished disassembled in accordance with manufacturer's recommendations.

21.5.5.5 Qualifications

The Project Company shall be factory certified to install the purchased system by the hardware/software provider.

21.5.5.6 Database

(a) The system shall be of an open architecture design and shall support industry standard databases such as Microsoft SQL Server, Oracle Server, IBM 0B2 or MSDE database.

~~(b) The database shall reside on the system server at Central Control for district wide database services, system programming, system monitoring, administrative services, report, and proximity card generation.~~

~~(c)~~(b) The system shall be capable of utilizing a true client/server network configured to support the system database service, all services and user interfaces optimizing the users' options for system programming, event monitoring, and record keeping.

21.5.5.7 System Software

21.5.5.7.1 Software Capacities

(a) All access control system hardware shall communicate back to County Main Server.

~~(a) System software and language development software shall be existing, industry standard, and of a type widely used in institutional systems. Operating system shall be multi-user/multi-tasking capable of operating on a non-proprietary CPU. The application~~

~~software, substantially as offered, shall be written in a high level, industry standard programming language. The system shall be modular in nature, allowing the system capacities to be easily expanded without requiring major changes to the system operation and maintaining all defined system data as well as historical information.~~

~~(b) All System functions shall be accessible via point and click mouse control. Systems requiring command string control or complex syntax are not acceptable. The system software shall include the following features and be configured for a minimum:~~

~~(i) (256) readers~~

~~(ii) (250,000) active cardholder records~~

~~(iii) (30/256) simultaneous client PC licenses~~

~~(iv) (256) programmable holidays~~

~~(v) Number of assets = 40,000~~

~~(vi) Operator accounts with unlimited definable privilege levels~~

~~(vii) Audible alarm annunciation at operator workstation~~

~~(viii) Unlimited graphic maps to be displayed on the operator workstation monitor~~

~~(ix) Remote network diagnostics~~

~~(x) Event scheduling~~

~~(xi) An unlimited number of user defined card holder data fields~~

~~(xii) An unlimited number of door groups~~

~~(xiii) An unlimited number of areas~~

~~(xiv) Cardholder access privilege activation date and time~~

~~(xv) Cardholder access privilege expiration date and time~~

~~(xvi) Americans with Disabilities Act (ADA) compliance in door and access operation~~

~~(xvii) Interface and integration with Video Surveillance System~~

~~(xviii) Field panel communications through various means including hardwired Ethernet network~~

~~21.5.5.7.2 Software Operation~~

~~(a) The system shall provide a top-down configuration methodology. Top-down programming shall allow the system operator to configure the system software and hardware~~

~~configurations in a logical flowing method. The system shall allow the operator to start at the highest configuration level of the system and then move down through the lower configuration levels without having to move back and forth between a variety of menus.~~

~~(b) Where the operator may be presented with a choice of pre-defined objects, the system shall provide a pop-up pick list. The operator may choose an object in the listing by clicking on the item. If the object has not been pre-defined, the operator may define the new object from the pop-up pick list.~~

~~(c) The system shall utilize dynamic icons. The dynamic icons shall change appearance, in both color and icon display based upon the status of the associated object. This appearance change shall occur in real time and shall not require the system operator to perform a screen refresh or exit the current screen.~~

~~(d) Dynamic icons shall be provided to represent:~~

~~(i) Intelligent field panels~~

~~(ii) Door lock control~~

~~(iii) Cameras and domes~~

~~(iv) Alarm input~~

~~(v) Output control relay~~

~~(vi) System/alarm event~~

~~(vii) Manual operator actions~~

~~(e) For intelligent field panels hard wired to the host computer, the dynamic icons shall reflect the true state of the device represented by the icon. For example, if an operator issues a command to unlock a door, and the field panel which controls that door is not in communication with the host computer, the icon shall not change state or appearance.~~

~~(f) Where certain data fields within data screens may contain the same information, the system shall provide the ability to define default settings for these data entry fields. The operator shall be able to change the default setting without impacting objects that have already been defined.~~

~~(g) Database Connectivity: The Security Management Control System shall be constructed to be database independent and shall support at a minimum Microsoft SQL Server 2008 (Express, Standard, or Enterprise), for data protection, redundancy and manageability. The system shall allow the ability to perform writes to the system database to import personnel data directly into that database. This data shall then be automatically downloaded to field devices in the same way as manually entered information.~~

~~(h) The software manuals for the Security Management Control System shall provide complete documentation outlining the database schema used within the system. This~~

~~documentation shall be sufficient to allow a person, moderately skilled in databases, to extract information from the Security Management Control System's databases. The database schema information shall include information on the personnel tables, history and configuration tables.~~

~~(i) It shall be possible to use third party report tools, such as Crystal Reports, to generate reports not already provided by the Security Management Control Systems, such as statistical or graphical reports of system activity.~~

~~(j) Database password protection: Database level Username and Password protection shall be provided for users. Users shall be required to supply a Username and Password when they connect to the monitoring system database. Usernames and passwords shall be configured via the user configuration functionality currently available in the Administration utility.~~

~~(k) Date format: The system shall support the date being formatted in DD/MM/YY or MM/DD/YY, depending upon local date formatting.~~

~~(l) Card reader LCD panels: The system administrator shall be able to define the language and date format that shall be used for display of messages on reader LCD panels.~~

~~21.5.5.7.3 Web Client~~

~~(a) The system shall support a Thin Client to provide remote access to the Access Control System Server Workstation via a web browser. The Thin Client shall support at a minimum Microsoft® Internet Explorer 8, 9, and 10 and Mozilla Firefox® (32- and 64-bit), Google™ Chrome (32- and 64-bit). The Thin Client shall support 128-bitencryption using SSL for secure communication between server and clients.~~

~~(b) The Thin Client shall support Single Sign -on utilizing Windows Authentication. The privileges of the Access Control System operator shall be propagated to the Thin Client User allowing only access to Security Objects for which the Access Control System Operator is authorized. The Thin Client shall provide support for Partitioning of the system and utilize the Partitions assigned to the Operator.~~

~~(c) The Thin Client shall support an Activity Monitor to provide a scrolling display of system activity. Activity shall be restricted based upon the Operator's Privilege and Partition assignments. Display controls shall include page up, page down, and a freeze function.~~

~~(d) The Thin Client shall support the ability to display a door activity report from the web client cardholder record configuration view. In addition, it shall provide the ability to display the Activation/Expiration Date and Time for each credential assigned to a cardholder. The thin client shall display all user-defined personnel fields and the details of each assigned access clearance in a separate window.~~

21.5.5.8 Card Reader

(a) Provide for all doors as outlined, high-security vandal-proof proximity card readers around the exterior of the Courthouse, proximity card readers on the interior. It shall meet the following requirements:

(i) It shall be compatible with proximity card technology.

~~(ii) It shall support 8 or 26-bit Wiegand keypad output or 8-bit smart output.~~

~~(iii)~~(ii) It shall feature indelible graphics and labeling.

~~(iv)~~(iii) It shall mount to standard electrical backboxes (single gang).

~~(v) All mounting hardware shall be tamper-proof, center-pin torx head hardware (sixlobe).~~

~~(vi)~~(iv) A Lifetime warranty shall be provided.

(b) Provide proximity card readers shall comply with UL294 standards.

(c) The reader shall work with passive proximity cards. A red LED shall indicate power to the reader. When a proximity card is presented to the reader, the red LED shall flash green, and the beeper shall sound briefly indicating to the cardholder that the card was read. A longer duration flash and beep shall follow for an authorized card. On reader powerup, an internal self-test routine shall check and verify the setup configuration, determine the internal or external control of the LED and beeper and initialize the reader operation.

~~21.5.5.9 Access Card Requirements~~

~~(a) Access cards shall be PVC proximity type.~~

~~(b) The Vendor shall be responsible for providing a cross-reference list showing the serial number and the embedded number for each card.~~

~~(c) Each card shall have a return address if found.~~

~~(d) Each card shall have, preprinted by the factory, one side of the card. The preprinted information could contain company logo, building facade, return address, or any color graphic as directed by the County/State. The manufacturer shall display different designs to assist the County/State with choice.~~

~~(e) Cards shall be prefabricated, credit-card size, generic 26-bit proximity card constructed of molded plastic. A punched slot shall be provided for a strap or clip. The card shall be capable of having multi-color custom graphics and permanently marked numbers printed directly onto both sides. The card shall be made of robust ABS plastic to provide maximum protection for the circuitry inside and provide minimal flexing which could cause damage to the card. The user may specify codes or numbers and exact replacement of cards that maybe have been lost, damaged or stolen shall be available upon request. All cards shall be passive devices with no internal battery but shall contain a semiconductor element that is energized when brought within the operating range of the reader causing transmission of the code from the card to the reader.~~

~~21.5.5.10~~21.5.5.9 Allowable Card Access Time Limits

(a) Under all conditions, maximum access time shall be 0.75 seconds.

(b) Maximum allowable access time is defined as the time period starting with presentation of card to reader (completed read cycle) and ending with complete actuation of door release module (or relay as applicable). It does not include the mechanical time inherent to the unlocking mechanism.

~~21.5.5.11 Access Control System Server Workstation~~

~~The following are the server grade Access Control System Server Workstation requirements:~~

~~(a) CPU: Intel current generation Xeon quad core processor.~~

~~(b) Graphics: Radeon or nVidia 2GB (minimum).~~

~~(c) 10/100/1000 Mbps Ethernet interface card.~~

~~(d) System Software: Microsoft Windows 7 Professional or Microsoft Server 2008 R2.~~

~~(e) Program Software: Client component. Access Control System software as recommended by the Access Control System manufacturer.~~

~~(f) Memory: 8GB (minimum)~~

~~(g) Hard Drive: 500GB (minimum)~~

~~(h) Monitor Mounting: Desk~~

~~21.5.5.12~~21.5.5.10 Door Position Switches

(a) The door hardware supplier shall provide concealed, biased, door position sensors for all doors that require monitoring.

(b) Recessed magnetic door contacts shall be installed by the door and hatch hardware supplier on all doors as defined.

(c) Each magnetic door contact shall be configured by the Project Company as a separated alarm point. Double doors and banks up to six single contiguous or three contiguous double doors shall be configured as a single alarm point.

(d) All magnetic door switches shall be wired, connected, and tested by the Project Company.

(e) If in a unique or difficult situation and a recessed magnetic door contact is not feasible, then a surface mount contact may be substituted if it meets the requirements of a high security biased switch configuration with concealed terminals, aluminum housing, and armored cable.

(f) Any doors found not already prepped to receive the recessed door contact shall be so fitted on site.

~~21.5.5.13~~21.5.5.11 Request-to-Exit (REX) PIR

REX devices shall be UL listed and approved for egress application with the following features:

(a) Single or double door use.

(b) Wall or ceiling mountable.

(c) Internal vertical pointable with wrap-around coverage pattern.

(d) Adjustable latch time.

(e) Selectable fail-safe/fail secure mode.

~~21.5.5.14~~21.5.5.12 Door Release Pushbutton

(a) Provide stainless steel door release pushbutton.

(b) Door release pushbutton shall be engraved "PUSH TO EXIT".

~~21.5.5.15~~21.5.5.13 Security Door Hardware

As outlined in the Door Hardware requirements, the door hardware supplier shall provide electric strikes and electrified panic devices to be installed and connected by the Project Company. Provide all door power supplies required.

~~21.5.5.16~~21.5.5.14 Door Management Alarms (DMA)

(a) Project Company shall provide ~~d~~Door ~~m~~Management ~~a~~Alarm ("DMA") devices as outlined, interfaced to the card access control panel.

(b) Provide door management alarms for local and remote monitoring annunciation of the status of doors (door prop/door held, door intrusion/door forced or secure).

(c) DMA shall be capable of operating in a "~~"~~stand alone"~~"~~ configuration or with an access control system, utilizing all reader technologies: i.e., proximity, weigand, mag stripe, bar code or biometrics.

(d) Local sounder (field selectable volume 96 or 103 dB @ 3~~'~~) shall be used to indicate both door prop/door held and intrusion/door forced conditions after a user selectable quiet, or access, time (0 seconds to 90 minutes) has expired. Sounder shall be incorporated into the faceplate of the DMA.

(e) Form C (N/O and N/C) contacts shall be available for the following outputs: Door Contact Status, Door Prop Alarm, Intrusion/Tamper Alarm and Bypass/Key Switch Status.

(f) The alarm (intrusion) contact shall change state upon the recognition of an alarm or tamper condition to alert remote monitoring equipment.

(g) The unit shall remain in alarm until reset by integral key switch, remotely through a dry contact or automatically through an on-board timer (user settable from 0 seconds to 5 minutes or MANUAL).

(h) An integral key switch shall be available for alarm shunt or alarm reset ~~and be incorporated into the faceplate of the DMA~~.

(i) A Bi-Color status LED shall be incorporated into the faceplate of the DMA.

(j) A remote LED output shall be provided to control a bi-color LED that follows the actions of the faceplate mounted LED.

(k) Inputs shall include a N/C Dry Contact for the door, Voltage Sense (12-24 VAC/DC) to monitor electric lock voltages and a N/O or N/C Dry Contact Shunt Input.

(l) The following timers shall be user settable: Auto-reset, Alarm delay, Silent time and Shunt Delay.

(m) The DMA shall be mounted to the wall adjacent to the monitored door at 42" above finished floor. The unit shall be mounted in a standard 2 gang ~~(3 gang for rim cylinder key switch mode)~~ electrical box with a minimum depth of 2 ½".

~~21.5.5.17~~21.5.5.15 Installation

(a) Install materials and equipment in accordance with manufacturer's printed instructions to comply with governing regulations and industry standards applicable to the work.

(b) Arrange and mount all equipment and materials in a manner acceptable to the County.

(c) Coordinate with the County all programming for access control privileges, control restriction, normal operations, off hours and holiday schedules, report generation, badging configuration and information and pin number generation before Final Acceptance. Make minor adjustments at no cost to the County.

(d) Installation shall conform to the basic guidelines:

(i) Use of approved wire, cable, raceways, wiring, devices, hangers, support, and fastening devices.

(ii) Separation of high and low voltage wiring is required throughout the installation.

(iii) All wiring shall be thoroughly tested for grounds and opens before final connection.

(e) Conduit shall be provided for risers. Horizontal wiring shall run without conduit unless required by code, see - QUALITY ASSURANCE. All power wiring shall be in metallic conduit. The maximum conduit fill shall not exceed 40% of rated capacity. Refer to National Fire Protection Association 70-NEC for additional requirements.

(f) Cabling and Wire Requirements:

(i) Refer to Electrical requirements for all raceway, surge, and wiring requirements.

(ii) The individual systems low voltage cabling shall use separate conduit/raceway junction boxes and enclosures, then electric power cabling, cabling jacket colors to be in accordance with County standards.

(iii) The minimum low voltage input/output cabling for Access Control System shall be #18 AWG unless specifically specified. Provide minimum 3 pair, twisted, individually shielded pair type cabling for card readers and keypads. All cabling shall be jacketed, cabling jacket colors to be in accordance with County standards. The systems cabling shall meet the requirements of National Fire Protection Association 70/N EC Articles 725, 760 and 800 as applicable for each type of system specified.

(iv) The minimum bend radius of all conduits provided by others is 6 inches. Provide and maintain pull strings/tapes/ropes in all conduits for future installation of additional cabling.

(v) All pull strings installed or placed in conduits that already contain, or that shall contain system cabling, shall be able to be removed from the conduit without causing any damage to the cabling already contained with same conduit(s).

(g) Junction Boxes, Enclosures/Cabinets, Equipment Racks

(i) The equipment enclosures shall be installed at approved locations and be typically ventilated as required to maintain the environmental conditions specified by the electronic equipment manufacturers.

(ii) All junction boxes and pull boxes shall be labeled. The box label shall state the system and use of cabling. The labeling shall be made with markers which are indelible when and after in contact with water and oil.

(iii) Each box and enclosure shall contain a cabling and wiring log identifying all cabling accessible whether it is connected or is passing by.

(iv) Refer to other sections of this Appendix for additional requirements.

(h) Grounding and Surge Protection

(i) Provide single point grounding of the individual systems as recommended by IEEE and system manufacturers. Provide all cabling, bonding and insulation materials as required. Provide surge protection and clamping for all circuits. Coordinate all grounding, surge protection, and manufacturers.

(ii) Coordinate grounding requirements to preclude closing of ground loops via peripheral equipment supplied from different electrical power sources. Provide isolation transformers and other equipment as required.

~~21.5.5.18~~21.5.5.16 Adjusting, Testing and Cleaning

Project Company shall be required to perform complete testing and verification of the following: Card reader maximum access time shall be 0.75 seconds under all system loads.

22 NEW COURTHOUSE SIGNAGE

22.1 GENERAL REQUIREMENTS

(a) The Project Company shall install interior non-illuminated directional, control, and information surface-mounted signage as a complete integrated modular system.

22.2 DEFINITIONS

(a) Braille: Grade 2 Braille including 189 part-word or whole word contractions in addition to Grade 1 Braille 63 characters. Tactile is required whenever braille is required; see SYSTEM DESCRIPTION Article below.

(b) Non-tactile: Letters and numbers on signs with width-to-height ratio between 3:5 and 1:1 and stroke width ratio between 1:5 and 1:10 using upper case "X" to calculate ratios. Use typestyles with medium weight; upper- and lower-case lettering is permitted; serif typestyles are permitted. See SYSTEM DESCRIPTION Article below.

(c) Symbols: Symbol itself is not required to be tactile but equivalent verbal description is required both in tactile letters and braille.

(d) Tactile: 1/32" raised capital letters without serifs at least 5/8" height and not more than 2" height based on upper case "X". Braille is required whenever tactile is required; see SYSTEM DESCRIPTION Article below.

22.3 SYSTEM DESCRIPTION

(a) Signage under this section is intended to include items for identification, direction, control, and information of building where installed as complete integrated system from a single manufacturer.

(b) ADA design requirements:

(i) Signage requiring tactile graphics:

(1) Wall mounted signs designating permanent rooms and spaces such as, room numbers and restroom, department, office, and fire exit identifications.

(2) Individually applied characters are prohibited.

(ii) Signage not requiring tactile graphics but require compliance to other ADA requirements: All other signs providing direction to or information about function of space such as, directional signs (signs with arrow), informational signs

(operating hours, policies, etc.), regulatory signs (no smoking, do not enter), and ceiling and projected wall mount signs.

(iii) The Project Company shall provide and install all necessary wayfinding signage including, without limitation:

(1) Exterior signs;

(2) Building directories;

(3) Menus; and

(4) Temporary signs, including personnel signs and tenant identification; suite numbers are not considered temporary.

(c) ADA performance requirements:

(i) Tactile graphics signs mounting requirements:

(1) Single doors: Mount 60" to sign centerline above finish floor and on wall adjacent to latch side of door;

(2) Openings: Mount 60" to sign centerline above finish floor adjacent opening; and

(3) No wall space adjacent latch side of door, opening, or double doors: Mount 60" to sign centerline above finish floor on nearest adjacent wall.

22.4 PLACEMENT AND PRESENTATION

22.4.1 Sign Placement

Signs shall be located to present the necessary information at the point of first exposure to the viewer and meet code requirements. In selecting the placement of an exterior building sign, consideration shall be given to the surrounding terrain, viewing angle, line of sight, traffic flow, speed and power source if it is required.

22.4.2 Sign Size

The main consideration in determining sign size shall be the distance from which it shall be read, the relative importance of the message, and the length of the message.

22.4.3 Sign Materials

Specific weights, thickness, materials, and construction shall be both durable and of good quality. Edges shall be finished and seams and joints well executed and acceptable to the County in sample form during the performance of the design work.

22.4.4 Interior Sign Color and Finishes

Interior sign colors and finishes shall be submitted to the County for review and acceptance in accordance with the Submittal Review Procedure.

22.4.5 Sign Selection Considerations

The Project Company shall be responsible for signage conformance with all Applicable Law and ADA Requirements. In the event of conflict between the requirements of Section 22.4.1 (Sign Placement) and Applicable Law, all Applicable Law shall govern. All signs shall be in alignment with the County's policies.

23 FURNITURE, FIXTURES AND EQUIPMENT

23.1 GENERAL REQUIREMENTS

(a) The Project Company shall provide all framing, supports, restraints, gasketing, and sealants, and all connections to building systems for FF&E. FF&E shall be placed or installed, as applicable, to allow for easy access for maintenance, repair, cleaning, and replacement.

(b) The Project Company shall place or install, as applicable, the FF&E listed in Attachment 6B (Preliminary List of County Moveable Furniture, Fixtures and Equipment) and Attachment 6C (Preliminary List of State Moveable Furniture, Fixtures and Equipment) to these Design and Construction Standards in the Areas in accordance with the applicable FF&E package as specified in Attachment 6A (Courthouse Program and Room Data Sheets) to these Design and Construction Standards. The Project Company shall place and install the FF&E in such Areas in consultation with the County.

(c) Except where the applicable FF&E package specifies "No Substitution" for FF&E, the Project Company may install FF&E of equal or better quality and specifications than the FF&E described in Attachments 6B and 6C.

(d) The Project Company shall keep an inventory and a record of all FF&E placed or installed within the Project. The FF&E records shall include an item number and location. The FF&E records and related information shall be included in the Data Management System, in Microsoft Excel format, and provided to the County prior to the Occupancy Readiness Date.

(e) For all FF&E, the Project Company shall:

(i) ensure that each Area of the New Courthouse is designed with suitable space and allowance to accommodate the required FF&E in locations that are fit for purpose to house and operate (as applicable) the FF&E as intended such that the New Courthouse will be fit for its intended purpose; and

(ii) ensure that the Facility Systems requirements for all FF&E are incorporated into the design of each Area of the New Courthouse, such that the designed locations are fit for purpose to house and operate (as applicable) the FF&E as intended, such that the New Courthouse will be fit for its intended purpose.

(f) The storage requirements for FF&E are not defined in these Design Specifications and shall be determined by The Project Company.

23.2 FF&E MANAGER

No less than ninety (90) days prior to the commencement of the procurement and acquisition of all FF&E, the Project Company shall nominate and submit to the County for review and acceptance a Project Company Persons whose responsibility will be to coordinate the procurement, provision and/or delivery, and installation and/or commissioning of all FF&E with the County (the "**FF&E Manager**"). The FF&E Manager shall:

(a) manage and ensure that all FF&E-related activities including, but not limited to the procurement, provision, delivery, installation and commissioning of all FF&E are conducted within the specified timeframes indicated in the most recent version of the Project Schedule as approved by the County;

(b) work with a County employee, as designated by the County Representative, to update the FF&E list(s) included in Attachments 6B and 6C to these Design and Construction Standards prior to the procurement and provision of all FF&E; and

(c) work with the designated County employee to procure and acquire all FF&E through any pre-existing County purchasing/procurement contracts with prospective providers, or through purchasing/procurement agreements negotiated by the Project Company. The designated County employee, in consultation with the County Representative, shall determine which purchasing/procurement contract to utilize for the acquisition of the FF&E.

24 OCCUPANCY READINESS

24.1 GENERAL REQUIREMENTS

(a) Upon Occupancy Readiness of the Project and upon Substantial Completion, the Project Company shall promptly remove from the Project Site, as applicable:

(i) all of the Project Company's equipment utilized during the performance of the construction work;

(ii) all temporary structures;

(iii) all surplus material; and

(iv) all waste and rubbish.

(b) The Project Site and Project shall be left in a neat and clean condition to the satisfaction of the County Representative.

(c) The Project Company shall:

(i) clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances, polish glass and glossy surfaces, vacuum carpeted and soft surfaces, broom clean other interior spaces;

(ii) clean equipment and fixtures to a sanitary condition, clean permanent filters and replace disposable filters of mechanical equipment operated during the performance of the construction work;

(iii) clean ducts, blowers and coils of systems operated without filters during the performance of the construction work;

(iv) vacuum and wipe sides of electrical panels and cabinet work;

(v) comply with manufacturer's instructions for cleaning of the various systems, materials or installations;

(vi) clean Project Site, sweep paved areas, and rake clean ground surfaces;

(vii) remove stains and dirt from wall and ceiling surfaces and trim;

(viii) disinfect, clean and polish all plumbing fixtures;

(ix) use cleaning materials and methods that will not create hazards to health or property or cause damage to installed systems, products or materials;

(x) remove temporary tapes, wrapping, coatings, paper labels, and similar items; and

(xi) dust, mop, wash or wipe exposed and semi-exposed surfaces as necessary.

24.2 RESTRICTED AREAS

(a) After the Occupancy Readiness Date, no Project Company Persons shall access the following Functional Units without being escorted at all times by a County employee, as designated by the County Representative:

(i) the MDF, Main, County & OJD Server Room;

(ii) all evidence storage rooms;

(iii) all Weapons Storage Rooms;

(iv) the In-Custody Control Room; and

(v) the Building Monitoring Room,

(collectively, the "**Restricted Areas**").

(b) For those instances in which Project Company Persons are required to access Restricted Areas to perform the Project Company's obligations under this Project Agreement, the Facilities Management Representative and the County Representative shall agree upon specific schedules, Project Company Persons, and County staff to carry out the duties set forth under this Section 24.2. Such agreement shall be in writing and duly executed by both the Facilities Management Representative and the County Representative. Any such agreements between the Project Company and the County to fulfill the requirements if

this item (b) shall not invalidate the requirements set forth in item 24.2(a) and, in the absence of escorting County staff, Project Company Persons shall not be allowed to enter the Restricted Areas, unless and until such escorting County staff are present.

(c) If County staff designated to escort Project Company Persons under the requirements of this Section 24.2 is absent or otherwise unavailable to comply with the requirements of this Section, then the County shall make every effort to designate a replacement within a timeframe mutually agreed upon by the Facilities Management Representative and the County Representative.

(d) The requirements of this Section 24.2 shall not exempt the Project Company from fulfilling its obligations under this Project Agreement.

25 COMMISSIONING

25.1 GENERAL REQUIREMENTS

(a) The Project Company shall provide commissioning services in respect of all Facility Systems prior to Occupancy Readiness in accordance with this Section 25 and Section 7.20 (Commissioning) of the Project Agreement.

(b) The purpose of the commissioning services is to provide a systematic process of assuring by verification and documentation, from the design phase and throughout the Term, that all Facility Systems perform interactively in accordance with the Contract Standards. The Project Company acknowledges that because all Facility Systems are integrated, a deficiency in one or more components can result in sub-optimal operation and performance among other components. Remedying these deficiencies can result in a variety of benefits including:

(i) improved productivity of New Courthouse occupants;

(ii) lower utility bills through energy savings;

(iii) increased satisfaction of New Courthouse occupants;

(iv) enhanced environmental conditions, health conditions and comfort of New Courthouse occupants;

(v) improved Facility Systems and Project equipment function;

(vi) improved Project operation and maintenance;

(vii) increased safety for New Courthouse occupants;

(viii) better Project documentation;

(ix) shortened occupancy transition period; and

(x) significant extension of Project equipment and Facility Systems life cycles.

25.2 COMMISSIONING AGENT

(a) The Project Company shall retain the services of a commissioning professional with the technical background with and expertise on the commissioning process including, but not limited to, verification techniques, functional performance testing, system equipment, and operation and maintenance knowledge (the "**Commissioning Agent**").

(b) In the event that the Project Company proposes a Commissioning Agent that the County reasonably believes cannot meet the requirements stated in this Appendix, the Project Company shall propose an alternative Commissioning Agent that is acceptable to the County. If the parties are unable to agree with the Commissioning Agent, the Commissioning Agent shall be selected in accordance with the procedures set forth in Article 18 (Dispute Resolution) of this Project Agreement.

(c) At a minimum, the Commissioning Agent shall be a person that specializes in the commissioning of building systems, including building envelope, and infrastructure and meets the following criteria, at a minimum:

(i) a minimum of eight (8) cumulative years of experience in one or more of the following for projects of similar size, complexity and is an accredited qualified commissioning process provider;

(ii) registration as a professional engineer with the Oregon State Board of Examiners for Engineering and Land Surveying;

(iii) certification from the Building Commissioning Association;

(iv) certified commissioning professional and/or certification from Building Systems Commissioning;

(v) documented experience in commissioning authority in at least two (2) building projects;

(vi) documented experience in one (1) LEED-certified project; and

(vii) knowledge of ASHRAE standards 90.1 and 62.1.

(d) The Project Company shall ensure that the Commissioning Agent takes the lead role on behalf of the Project Company for coordinating the commissioning process.

(e) The Commissioning Agent may be a Project Company Person.

(f) The Commissioning Agent shall be engaged sufficiently early in the design process to ensure that the Project Company is eligible for all LEED credits associated with the Commissioning Tests of the Project, including enhanced commissioning of the mechanical systems as specified by the LEED requirements. The Commissioning Agent shall work closely with the LEED Specialist to inform the design process, ensure Commissioning Tests requirements are considered in design selections and appropriate Commissioning Tests instructions are included in the construction specifications for each

aspect of the Design-Build Work. The Commissioning Agent shall work with the Project Company for the inclusion of Commissioning activities in the Project Schedule.

25.3 COMMISSIONING PLAN

25.3.1 General Requirements

The Project Company shall prepare and submit to the County for review and approval a detailed plan that provides details for the performance of the Commissioning Tests that will ensure:

(a) the planning, design, construction and operational processes have achieved their intended outcome;

(b) the continued efficient operation of the Project during the Facilities Management Period through implementation of Re-Commissioning Plans;

(c) all participants follow an approved plan to ensure the completed Project will realize its intended level of comfort for Project Users and operational efficiency by the Occupancy Readiness Date and throughout the Facilities Management Period;

(d) all stakeholders in the Project understand their responsibilities for Commissioning Tests prior to the Occupancy Readiness Date and during the Commissioning Fine Tuning Period;

(e) all Project Users will be fully familiar with the Project and will understand their continuous role in its efficient operation;

(f) the completed Project allows the Project Users to carry out court activities in a secure and efficient manner and achieves a balance between the circulation, proximity, appropriate room adjacencies and the security requirements of a court building in accordance with the Contract Standards; and

(g) the intended LEED Gold Certification for the Project can be achieved and can also be maintained through the Facilities Management Period.

(the "**Commissioning Plan**").

25.3.2 Commissioning Plan Preparation and Contents

(a) The preparation of the Commissioning Plan shall begin as early as practicable in the design process and shall be submitted to the County in accordance with Section 7.20 (Commissioning) of this Project Agreement and these Design and Construction Standards. The Commissioning Plan shall include HVAC, Security Systems, IT Systems, AV Systems, lighting systems and controls, emergency generator and UPS, plumbing systems and other Facility Systems. Table 6. 25.1 (Minimum Commissioning Plan Requirements) below provides a minimum framework for the types of requirements that shall be considered by the Commissioning Agent and the Project Company when preparing the Commissioning Plan.

Category	Requirement
Acoustics	Control of internal and external noise and intelligibility of sound.
Comfort	Identify and document those comfort problems that have caused complaints in the past and which will be avoided in the Project (i.e., glare, uneven air distribution, etc.).
Communications	Capacity to provide inter-telecommunications and intra-telecommunications throughout the Project, including audio/visual courtroom systems, courtroom recording and docket system.
Constructability	Constructability of commissioned systems.
Durability	Retention of performance over required service life.
Energy	Goals for energy efficiency.
Flexibility	For future Project changes and expansions.
Green Building Concepts	Sustainability concepts, including LEED certification goals.
Health and Hygiene	Protection from contamination from wastewater, garbage and other wastes, emissions and toxic materials.
Indoor Environment	Including hygrothermal, air temperature, humidity, condensation, indoor air quality and weather resistance.
Maintenance Requirements	Varied level of knowledge of maintenance staff and the expected complexity of the proposed systems.
Security	Protection against intrusion (physical, thermal, sound, etc.) and vandalism and chemical/biological/radiological threats.
Standards Integration	Integration of approved federal, State, local and County standards and requirements.
Structural Safety	Resistance to static and dynamic forces and impact per the Contract Standards.

Table 6. 25.1 (Minimum Commissioning Plan Requirements)

(b) The Commissioning Plan shall also provide for Commissioning Tests to be conducted with respect to major equipment and building systems relating to the following:

(i) installation verification and quality checks (pre-functional checklists);

(ii) start-up;

(iii) functional testing;

(iv) representative sampling, where appropriate;

(v) acceptance reports;

(vi) deficiency documentation and correction process;

(vii) user instruction, where appropriate;

(viii) orientation, classroom and field training to be provided by the Project Company for other Project Company Persons, New Courthouse employees, or County staff, as applicable, prior to the Occupancy Readiness Date, such training to be acceptable to the County, in its reasonable discretion. Such training and orientation shall include, among other things: security systems, audio-visual systems, communications systems and Project Equipment installed by the Project Company. Additional orientation, classroom and field training on other specific requirements regarding building orientation and security and communications systems for the Clackamas County Sheriff's Department's personnel shall also be provided by the Project Company, as requested by the County in its reasonable discretion;

(ix) recorded media for demonstration and training for the County and New Courthouse employees, where appropriate;

(x) recorded media for demonstration and training in form acceptable to the County and Clackamas County Sheriff's Department (and based upon requirements of the Clackamas County Sheriff's Department), where appropriate; and

(xi) preparation of operating and maintenance manuals for each component of the Project and Project Equipment and each complete system to be tested in the Project, notwithstanding the fact that the Project Company shall be responsible for such operation and maintenance during the Term.

25.3.3 Commissioning Standards

The Project Company shall prepare the Commissioning Plan by taking into account the Contract Standards, including the items in Table 6. 25.1 (Minimum Commissioning Plan Requirements), and the Commissioning Plan shall set forth how Commissioning Tests will be handled and managed for the Project. In general, the Commissioning Plan shall include a discussion of the commissioning process, schedule, team and team member responsibilities, communication structures and a general description of the systems to be tested.

25.3.4 Monthly Reports

Prior to the commencement of the Commissioning Tests, the Commissioning Agent shall prepare monthly reports to record the progress made on commissioning decisions and procedures. The Project Company shall provide the County with at least thirty (30) days' prior written notice of the expected initiation of the Commissioning Tests.

25.4 COMMISSIONING FOR LEED GOLD CERTIFICATION

25.4.1 LEED Requirements Preparation

Pursuant to this Project Agreement and as set forth in Appendix 6 (Design and Construction Standards), the Project shall achieve a LEED Gold Certification. The Project Company shall

ensure that the commissioning process activities comply with the prerequisite criteria for fundamental building commissioning to achieve such LEED Gold Certification.

25.4.2 LEED Requirements and the Commissioning Plan

In accordance with all applicable LEED Commissioning Tests requirements, the following items shall be addressed in the Commissioning Plan:

(a) independent review of schematic design documents;

(b) independent review of construction documents;

(c) focused review of contractor submittals to verify compliance with requirements;

(d) an indexed systems manual; and

(e) post-Occupancy Readiness Date review of the Project and Seasonal Fine Tuning Report.

25.4.3 Exclusions from the Commissioning Plan

The following items shall not be included in the Commissioning Plan:

(a) County and other Project Users telephone equipment that is not installed by the Project Company;

(b) County and other Project Users active electronic information technology equipment that is not installed by the Project Company;

(c) any other County or other Project User provided equipment without the Project Company's contractual involvement and not installed by the Project Company;

(d) County or other Project User leased equipment such as copiers, fax machines, printers provided without the Project Company's involvement; and

(e) County Furnished Equipment.

25.5 COMMISSIONING ACTIVITIES DURING DESIGN

25.5.1 Design Responsibilities

The Commissioning Agent shall be familiar with all Contract Standards and shall review the Project Company's proposed design as it is developed to assure such design complies with the Contract Standards. The Commissioning Agent may recommend changes to ensure compliance with the Contract Standards or to improve energy efficiency, operation and maintenance and equipment reliability to the Project Company so that any necessary changes may be made by the Project Company prior to, rather than after, installation. Notwithstanding the foregoing, the Commissioning Agent is responsible for reviewing the design from a Commissioning perspective and shall not be responsible for design concepts and criteria that do not comply with the Contract Standards as such are the responsibility of the Project Company pursuant to this Project Agreement.

25.5.2 Scope of Review

The general scope of the Commissioning Agent's review during the design phase shall be as set forth in Table 6. 25.2 (Commissioning Agent Design Review Scope). The design review scope set forth in Table 6. 25.2 (Commissioning Agent Design Review Scope) shall demonstrate the minimum scope to be set forth in the Commissioning Plan and shall not preclude additional review responsibilities of the Commissioning Agent agreed upon by the parties in the approved Commissioning Plan.

Design Aspect	Review Scope
Certification Facilitation	Review Design Documents to facilitate project certification goals (i.e., does design meet LEED criteria)
Commissioning Facilitation	Review Design Documents to facilitate effective Commissioning Tests
Commissioning Specifications	Verify that Design Documents adequately specify Commissioning, including testing requirements by equipment type
Constructability	Review Design Documents for constructability of all building systems
County Design Guidelines and Standards	Verify that the Design Documents comply with the Contract Standards
County's Project Requirements	Verify that the Design Documents and the facilities management protocol comply with the County's Project requirements set forth in this Project Agreement
Electrical	Review the electrical concepts and systems for possible enhancements
Energy Efficiency	Review of adequacy of the effectiveness of building layout and efficiency of system types and components for building shell, HVAC systems and lighting systems
Envelope	Review envelope design and assemblies for thermal and water integrity, moisture vapor control and assembly life, including impacts of interior surface finishes and impacts and interaction with HVAC systems
Indoor Environmental Quality	Review to ensure that system relating to thermal, visual, acoustical, air quality, comfort, and air distribution maximize comfort and are in compliance with the Contract Standards
Life Cycle Costs	Review a life cycle assessment of the primary competing mechanical systems relative to energy efficiency, operation and maintenance, indoor environmental quality, functionality, and sustainability

Design Aspect	Review Scope
Mechanical	Review Design Documents to ensure flexible and efficient operation as required by the Contract Standards, including off-peak heating/cooling, air handling unit operations, size and zoning of air handling units, and thermostated areas
Operations and Maintenance	Review for effects of specified systems and layout toward facilitating operations and maintenance (equipment accessibility, system control, etc.)
Operations and Maintenance Documentation	Verify adequate Project operations and maintenance documentation requirements, including review of operating and maintenance manuals for each component of the Project and Project Equipment and each complete system to be tested in the Project
Sustainability	Review to ensure that the building materials, landscaping, water and waste management create less of an impact on the environment, contribute to creating a healthful and productive workspace, and are in compliance with this Project Agreement
Training	Verify adequate operator training requirements

Table 6. 25.2 (Commissioning Agent Design Review Scope)

25.6 COMMISSIONING ACTIVITIES DURING CONSTRUCTION

25.6.1 Construction Responsibilities

During the course of construction activities throughout the Design-Build Period, the commissioning goal shall be to assure the levels of quality required by the Contract Standards are satisfied. The commissioning activities during construction shall be a well-orchestrated quality assurance process and shall be set forth in the Commissioning Plan, and shall include:

(a) installation and submittal review (pre-functional checklists);

(b) start-up;

(c) functional performance testing, and

(d) training.

25.6.2 Construction Compliance with Contract Standards

The Commissioning Agent shall review those items that are critical to the focus of the commissioning process. This review shall allow the Commissioning Agent to review the construction process for compliance with the Contract Standards. The Commissioning Agent shall only comment to the extent that there is a perceived deviation from the Contract Standards, and all such comments shall be reviewed by the Project Company, the County, and the

Independent Building Expert who shall all cooperate with each other and the Commissioning Agent to ensure compliance with the Contract Standards.

25.6.3 Functional Performance Tests

Functional performance testing shall be conducted after the components have been installed and the construction checklists have been completed. The functional performance tests and system troubleshooting based upon such tests shall be a critical function of the Commissioning Agent. If the Commissioning Agent discovers equipment or systems that are not performing in accordance with the Contract Standards prior to Occupancy Readiness, the Project Company shall correct and re-test such equipment or systems.

25.6.4 Sheriff's Operation of Security Systems

The parties acknowledge and agree as to the importance to the Clackamas County Sheriff's Department of assuring the operability and functionality of the security systems installed in the New Courthouse in accordance with the Contract Documents. Accordingly, the Project Company shall notify the Clackamas County Sheriff's Department, in writing, when the commissioning of security systems relating to courthouse security and holding cell functionality is complete and the systems are fully functional. Following such notice, the Project Company shall provide the Clackamas County Sheriff's Department staff a minimum of two (2) weeks to become familiar with and to operate the security systems prior to the Occupancy Readiness Date. The Project Company shall cooperate with the Clackamas County Sheriff's Department in training and scheduling for such two-week period.

25.7 PERFORMANCE OF COMMISSIONING TESTS

25.7.1 Notice and Execution of Tests

(a) Under the direction of the Commissioning Agent, appropriately qualified personnel of the Project Company shall implement all Commissioning Tests as set forth in the Commissioning Plan.

(b) The Project Company shall give a minimum of thirty (30) days' notice to, and shall invite the County and the Independent Building Expert to witness and to comment on each aspect of the Commissioning Tests up until all Commissioning Tests are fully complete (which includes all Commissioning Tests up until the end of the Commissioning Fine Tuning Period).

(c) The Project Company shall, together with such notice to the County and the Independent Building Expert, provide them with all information they may reasonably require in relation thereto, including, without limitation:

(i) tests proposed;

(ii) test methodology; and

(iii) expected test results.

(d) In addition, the County and the Independent Building Expert shall be provided with full and reasonable access to all Commissioning activities to ensure they remain fully informed of the process.

25.7.2 Test Results

Within fifteen (15) Business Days following the last day of the Commissioning Tests performed pursuant to this Section, the Project Company shall provide the County and the Independent Building Expert with ten (10) copies of a written Commissioning Test report setting forth the results of such Commissioning Tests, certified as true, complete and correct by the Project Company and the Project Company's lead engineer.

25.7.3 Commissioning Agent Not to Perform Tests

The Commissioning Agent shall not perform any of the Commissioning Tests and the Commissioning Agent's actions shall not exempt the Project Company from any of the Project Company's obligations under this Project Agreement.

25.8 COMMISSIONING TESTS DURING THE COMMISSIONING FINE-TUNING PERIOD

(a) The Commissioning Plan shall also provide for Commissioning Tests to demonstrate in the two (2) heating and cooling seasons (or such earlier time as the County may agree, in its reasonable discretion) following the Occupancy Readiness Date:

(i) full integration and automated control of all Project systems through the Project automation system, under a full range of Project population and seasonal loadings, including emergency conditions; and

(ii) that Seasonal Fine Tuning will be carried out during the Commissioning Fine Tuning Period.

(b) At the end of each of the heating and cooling seasons after Final Completion, the Project Company shall prepare a Seasonal Fine-Tuning Report for review and acceptance by the Independent Building Expert.

(c) The Project Company shall engage in Commissioning Tests during the Commissioning Fine Tuning Period and resubmit Seasonal Fine-Tuning Reports if any Seasonal Fine-Tuning Report does not demonstrate, to the satisfaction of the Independent Building Expert, that the Project and any of its systems meet the Contract Standards. Such Commissioning Tests and reports shall be repeated and re-submitted, respectively, until the Independent Building Expert confirms that the Project and its systems meet the Contract Standards applicable for such season, and in respect of the final Seasonal Fine-Tuning Report, for all seasons during the Commissioning Fine Tuning Period.

25.8.2 Seasonal Fine-Tuning Report

The final Seasonal Fine-Tuning Report shall be certified as true, complete and correct by the Project Company and the Project Company's lead engineer and include at a minimum:

(a) a statement that all systems have been completed and are performing in accordance with the Contract Standards;

(b) a description of components and systems that exceed the Contract Standards;

(c) a description of any components and systems that do not meet the Contract Standards and an explanation of why they do not;

(d) a summary of all issues that have been resolved and that are unresolved and any recommendations for resolution;

(e) post-Occupancy Readiness Date activities and results including all deferred and seasonal testing results, test data reports and additional training documentation; and

(f) lessons learned for future Project re-commissioning efforts.

25.9 RE-COMMISSIONING REQUIREMENTS

Throughout the Term, the Project company shall comply with the recommissioning requirements set forth in Section 2.4.3 (Recommissioning Requirements) of Appendix 8 (Facilities Management Standards) of the Project Agreement.

25.10 OTHER COMMISSIONING ACTIVITIES

Other Commissioning activities to be performed by the Project Company shall include but not be limited to:

(a) the implementation of building orientation and information sessions for Project Users after the Occupancy Readiness Date;

(b) the initiation of the facilities management help desk operation and orientation of Project Users, as described in Appendix 8 (Facilities Management Standards) of this Project Agreement, after the Occupancy Readiness Date;

(c) the review of the Project Company's emergency procedure and Health and Safety Plan prior to the Occupancy Readiness Date;

(d) prior to the Occupancy Readiness Date, submit to the County and Independent Building Expert for review relevant Project records including, but not limited to:

  (i) copies of all Governmental Approvals prior to the Occupancy Readiness Date;

  (ii) a certified schedule of final Project areas calculated in accordance with the Contract Standards;

  (iii) final Commissioning Test acceptance reports relating to Commissioning Tests conducted prior to the Occupancy Readiness Date; and

  (iv) record drawings relating to security systems at the Project (including, without limitation, perimeter security, locking systems, camera and television security systems and related security systems);

(e) as soon as practicable after the completion of the Commissioning Fine-Tuning Period, but no later than one hundred (100) days after the Commissioning Fine-Tuning Period, the Project Company shall submit to the County and the Independent Building Expert for review relevant Project records including, but not limited to:

(i) acoustical performance test reports with normal occupant loads and Project system operation, including emergency generator under load;

(ii) vibration test reports and air balancing reports for the operating Project;

(iii) final Commissioning acceptance reports relating to the Commissioning Tests conducted during the Commissioning Fine Tuning Period; and

(iv) all record drawings relating to the Project.

26 DESIGN-BUILD MANAGEMENT PLAN

26.1 GENERAL

(a) The Project Company shall prepare and submit to the County a project management plan for the performance of the Design-Build Work that includes the subplans in Table 6. 26.1 (Design-Build Management Plan Contents), each a "**Management Plan**," and collectively the "**Design-Build Management Plan**."

Management Plan	Section (Design and Construction Standards)
Design-Build Management Plan	Section 26.3
Design-Build Administration Plan	Section 26.3.2
Staffing Management Plan	Section 26.3.2.2
Risk Management Plan	Section 26.3.2.3
Data Management Plan	Section 26.3.2.4
Communications Management Plan	Section 26.3.2.5
Health and Safety Plan	Section 26.3.2.6
Emergency Management Plan	Section 26.3.2.7
Design-Build Quality Management Plan	Section 26.3.3
Environmental Management Plan	Section 26.3.4
Design and Construction Management Plan	Section 26.3.5
Utility Management Plan	Section 26.3.5.2
Design management Plan	Section 26.3.5.3
Construction Management Plan	Section 26.3.5.4
Demolition Management Plan	Section 26.3.5.5
Commissioning Plan	Section 26.3.5.6

Transition Management Plan	Section 26.3.6

Table 6. 26.1 (Design-Build Management Plan Contents)

(b) The Design-Build management Plan shall not:

(i) override, supersede, or derogate from the Project Company's obligations with respect to this Project Agreement; and

(ii) place any obligations on the County or any Governmental Body over and above what is contemplated by this Project Agreement.

(c) If the County identifies any part of the Design-Build Management Plan that, in its reasonable opinion, whether explicitly or implicitly:

(i) overrides, supersedes, or derogates from the Project Company's obligations with respect to this Project Agreement; or

(ii) places any obligation on the County or any Governmental Body over and above what is contemplated by this Project Agreement,

then, upon request of the County, the Project Company shall immediately amend the relevant Management Plan to ensure that it complies with Item 0 of these Design and Construction Standards.

(d) The Project Company acknowledges and agrees that the Design-Build Management Plan is informative and regardless of the Project Company's compliance with such Design-Build Management Plan, it shall, at all times, comply and satisfy its obligations under this Project Agreement.

(e) References to the "Project Management Plan" in the Contract Standards, include the Design-Build Management Plan, and all of the Management Plan, sub-plans, exhibits, appendices and attachments, therein included.

26.2 PROJECT MANAGEMENT PLAN SUBMITTAL

26.2.1 Format

(a) The Design-Build Management Plan, including all its Management Plans, sub-plans, appendices and attachments shall be prepared on letter-size (8½" x 11") paper, unless otherwise accepted by the County. For drawings, illustrations, and Project schedule representations, 11" x 17" paper is acceptable.

(b) The Project Company shall ensure a professional standard of presentation and consistent formatting and language for the Design-Build Management Plan. All figures, diagrams, and tables, including written content therein, shall be clearly legible and of consistent formatting. 'Screen grabs' or 'screen shots' of various system interfaces are not acceptable in the Design-Build Management Plan.

(c) The Project Company shall submit the Design-Build Management Plan to the County Representative and County staff as designated by the County Representative in the following format:

(i) one (1) electronic version in PDF;

(ii) one (1) electronic version in native format; and

(iii) one (1) hard copy for the County Representative, and each designated Government Associate, unless otherwise agree upon by the Project Company Representative and the County Representative.

(d) The electronic version in native format of any Design-Build Management Plan shall be an electronic version of that document in the format of the software in which the document was originally created, that has been configured to allow the person to whom the electronic version is provided access and amend the information contained therein in the same manner as could the original creator(s) of that document.

Copies of the electronic versions of the Design-Build Management Plan described in items 26.2.1(c) above shall also be placed in the DMS.

26.2.2 Preparation and Submission

(a) The Project Company shall prepare and submit each Management Plan to the County for review and acceptance in accordance with the Submittal Review Procedure by the due dates specified in Section 28 (Design-Build Period Submittals) of these Design and Construction Standards.

(b) The Project Company shall review and revise (as required) and submit to the County for review and acceptance each Management Plan at the frequencies specified in Section 28 (Design-Build Period Submittals) of these Design and Construction Standards.

(c) In addition to the preparation and submission requirements set forth in the preceding items 26.2.2(a) and 26.2.2(b), the Project Company shall prepare and submit to the County an updated Design-Build Management Plan, which may include new sections or elements, as otherwise required by these Design-Build Management Standards or reasonably requested by the County.

(d) The Design-Build Management Plan shall be clear, concise, and practical. It shall detail the actual systems, methodologies, processes, and procedures the Project Company plans on deploying to execute the Design-Build Work. Any updates to the Design-Build Management Plan, shall reflect any new or evolving systems, methodologies, process and procedures proposed to be deployed by the Project Company. The Design-Build Management Plan shall not contain any marketing or promotional material.

26.3 DESIGN-BUILD MANAGEMENT PLAN CONTENTS

26.3.1 General Requirements

(a) The first section of the Design-Build Management Plan shall provide:

(i) an executive summary of no more than three (3) pages that provides an overarching description of the Project Company's approach to deliver the Project; and

(ii) an organizational chart showing the Project Company's reporting structure of all Key Individuals during both the Design-Build Period.

(b) The Design-Build Management Plan shall include the Management Plans listed in Table 6. 26.1 (Design-Build Management Plan Contents).

(c) All Management Plans that form part of the Design-Build Management Plan shall be submitted by the Project Company to the County for review and acceptance in accordance with the Submittal Review Procedure.

(d) The Design-Build Management Plan shall be prepared, and shall be consistent with, Good Design-Build Practice.

26.3.2 Design-Build Administration Plan

26.3.2.1 General Requirements

(a) As part of the Design-Build Management Plan, the Project Company shall develop, submit to the Cunty for review and acceptance in accordance with the Submittal Review Procedure, and update as required by this Project Agreement, an administration plan that complies with the requirements set forth in this Section 26.3.2 (the "**Design-Build Administration Plan**").

(b) The following Management Plans are integral to the Design-Build Administration Plan as indicated in Table 6. 26.1 (Design-Build Management Plan Contents):

(i) the Staffing Management Plan, as further described in Section 26.3.2.2 (Staffing Management Plan) of these Design and Construction Standards;

(ii) the Risk Management Plan, as further described in Section 26.3.2.3 (Risk Management Plan) of these Design and Construction Standards;

(iii) the Data Management Plan, as further described in Section 26.3.2.4 (Data Management Plan) of these Facilities Management Standards;

(iv) the Communications Management Plan, as further described in Section 26.3.2.5 (Communications Management Plan) of these Facilities Management Standards;

(v) the Health and Safety Plan, as further described in Section 26.3.2.6 (Health and Safety Plan) of these Facilities Management Standards; and

(vi) the Emergency Management Plan, as further described in Section 26.3.2.7 (Emergency Management Plan) of these Facilities Management Standards.

(c) The first section of the Design-Build Administration Plan shall include:

(i) an overarching description of the Project Company's administrative approach to deliver the Project;

(ii) a summary of how it interfaces with other Management Plans;

(iii) details of how Management Plans included in the Design-Build Administration Plan interface with one another to form one integrated approach to administer the Project;

(iv) a description of the Project Company's legal structure, including Project Contractors and Subcontractors;

(v) a description and graphics of the organizational hierarchy within the Project Company including all Project Contractors and Subcontractors, summarizing the work that the Project Company has charged each Project Contractor and Subcontractor with delivering;

(vi) an organization hierarchy of the Key Individuals and leads from each Project Contractor and Subcontractor;

(vii) details of the inter-consortium governance and management, decision-making authority, and day-to-day operational arrangements of the Project Company's Key Individuals;

(viii) details of the responsibilities, accountabilities among the Project Company's Key Individuals to enable the delivery of a successful Project;

(ix) details of the approach and measure to ensure business continuity and retention of Key Individuals and key resources including Project Contractors and Subcontractors;

(x) a description and graphics of the contractual framework of the Project;

(xi) a narrative and overview of the various systems the Project Company uses in delivering the Project, with a specific focus on those systems that the County will interact with; and

(xii) a description of the processes the Project Company will use to develop and submit reports, including descriptions of the DMS, the CMMS, the BAS, and BIM, and brief summary of their integration with one another.

26.3.2.2 Staffing Management Plan

(a) As part of the Design-Build Administration Plan, the Project Company shall prepare and submit a plan that describes the Project Company's approach to the management of Project Company Persons in accordance with the requirements of this Section 26.3.2.2 (the "**Staffing Management Plan**"), and which shall, at a minimum:

(i) include details of the Project Company's approach to staff the Design-Build Work;

(ii) identify key individuals that will be in charge of each aspect of the Design-Build Work Services and set forth reporting lines, responsibilities, and authority;

(iii) include details of management structures and management systems to be used for the Design-Build Work;

(iv) include details of the interface protocols and systems the Project Company, Project Contractors and Subcontractors will utilize for interaction among each other, with the County, third parties, and Project Users; and

(v) include details of the approach to ensuring compliance with the Project Company's and the relevant County policies and procedures relating to the Design-Build Work.

(b) The Staffing Management Plan shall be appended with the Project Company's policies and procedures for:

(i) approach to background checks as required by the County;

(ii) approach to certification and license checks;

(iii) drug and alcohol use;

(iv) harassment and bullying; and

(v) any other policies and procedures reasonably requested by the County from time to time.

26.3.2.3 Risk Management Plan

(a) As part of the Design-Build Administration Plan, the Project Company shall prepare and submit a plan that describes the Project Company's approach to identifying, defining, managing, and allocating risks related to the Design-Build Work in accordance with the requirements set forth in this Section 26.3.2.3 (the "**Risk Management Plan**"), and which shall include, at a minimum:

(i) a general narrative describing the Project Company's approach to risk management, including a summary of risk management policies;

(ii) details of the Project Company Persons responsible for administering the Project Company's risk management policies, practices and procedures throughout the Design-Build Period;

(iii) descriptions of key risk categories or contexts covered by the Risk Management Plan;

(iv) details of the approach to identify, define and evaluate risks, including controls and mitigation;

(v) details of the approach to allocate risk ownership responsibility to Project Company Persons;

(vi) details of the approach for ongoing monitoring, updating, escalating, and reporting of risks; and

(vii) details of the procedures to close-out risks.

(b) The Risk Management Plan shall be appended with a risk register that:

(i) identifies and assesses all reasonably foreseeable risks in relation to:

(1) the Project Company's ability to deliver the Project in accordance with this Project Agreement; and

(2) the impact of the delivering the Project on any interruption to the delivery or performance of the Courthouse Activities;

(ii) identifies the Project Company Persons with primary responsibility for managing each risk;

(iii) describes risk-mitigation strategies and specific measures to eliminate, prevent, or reduce the impact of risks in accordance with Good Design-Build Practice; and

(iv) specific procedures for responding in the event such risks occur.

(c) The Risk Management Plan shall be appended with any Project Company policies and procures regarding risk management.

(d) The Risk Management Plan, including the risk register and any policies and procedures shall be prepared and implemented in accordance with ISO 31000.

26.3.2.4 Data Management Plan

26.3.2.4.1 General Requirements

(a) As part of the Design-Build Administration Plan, the Project Company shall prepare and submit a plan that describes the Project Company's approach to establishing and maintaining the DMS and its supporting systems and applications to support the delivery of the Project in accordance with this Section 26.3.2.4 (the "**Data Management Plan**"), and which shall include, at a minimum:

(i) a general narrative describing the Project Company's approach to establishing and maintaining a Data Management System (the "**DMS**") in accordance with this Project Agreement, including a summary of DMS policies; and

(ii) details of Project Company Persons responsible for establishing and maintaining the DMS throughout the Design-Build Period.

(b) The Data Management Plan shall describe the Project Company's methods:

(i) by which all DMS data, documentation and information will be uniquely coded, stored, accessed in real-time as may be necessary and/or retrieved;

(ii) for the routing, filing, control, access, and retrieval methods for all documents;

(iii) to facilitate fast and convenient sharing of data including procedures and software for accessing all DMS data, documentation and information;

(iv) for production, checking, storage and retrieval of all documents and data that will support records required to be submitted by the Project Company to the County or any other Project-related records that the County requires;

(v) for ensuring the quality and integrity of the DMS, including with respect to document currency and naming; and

(vi) for training Project Company and County staff DMS User Instructions.

(c) The Data Management Plan shall be appended with the DMS User Instructions.

26.3.2.4.2 DMS User Instructions

(a) As part of the Data Management Plan, the Project Company shall develop, store in the DMS, and provide to the County Representative and relevant County staff with a set of user instructions in respect of the operation of the DMS (the "**DMS User Instructions**").

(b) The DMS User Instructions shall provide all relevant details for all DMS users to effectively and efficiently use the DMS, and shall include, at a minimum:

(i) an overview of the role of the DMS within the context of the Project;

(ii) an overview of the various data sources and documents stored on the DMS;

(iii) details of the DMS functionality available to DMS users;

(iv) details of the files naming convention for documents store in the DMS;

(v) detailed step by step instruction on how reports can be generated and data and files extracted from DMS, including troubleshooting guides;

(vi) details of procedures to facilitate review and audit by the County and, if applicable, the federal government and any agency thereof for the auditing of all data, information and records store on the DMS; and

(vii) any other information reasonably required to ensure DMS users are able to be appropriately informed in respect of the DMS.

(c) The Project Company shall provide the DMS User Instructions in PDF, or the native file as reasonably requested by the County Representative, in order for the County to be able to keep all DMS users appropriately informed in respect of the DMS.

26.3.2.5 Communications Management Plan

(a) As part of the Design-Build Administration Plan, the Project Company shall prepare and submit a plan that describes the Project Company's approach to collaboration, communications, and stakeholder engagement with respect to the Project in accordance with this Section (the "**Communications Management Plan**"), which shall include, at a minimum:

(i) a definition of the Project stakeholders, as mutually agreed upon by the County Representative and the Project Company Representative (the "**Project Stakeholders**");

(ii) a general narrative describing the Project Company's approach to collaboration, communications, and stakeholder engagement in its provision of the Design-Build Work;

(iii) a description of the Project Company's collaboration, communications, and stakeholder engagement responsibilities during the Design-Build Period; and

(iv) details of Project Company Persons responsible for communications and stakeholder engagement throughout the Design-Build Period.

(b) The Communications Management Plan shall describe the Project Company's approach to collaborating and communicating with the County in an efficient, clear and consistent manner, including:

(i) the Project Company's approach to ensure a 'one-team' culture with the County;

(ii) the Project Company's approach to ensure the resiliency requirements are met during the Design-Build Period;

(iii) a description of the key areas of interface between the Project Company and the County throughout the Design-Build Period, including key periods therein, such as design start, demolition start, construction start, construction completion, key meetings, etc.;

(iv) for each key areas of interface described in 26.3.2.5(b)(iii), details of the Project Company's systems and methodologies for coordination, collaboration, and communication and with the County;

(v) the Project Company's framework, processes and systems for the capture, management and resolution of issues as they arise in the provision of, or related to, the Design-Build Work, including issue resolution escalation; and

(vi) describe how the Project Company will respond to ad-hoc requests for information, including in relation to media releases or inquiries and questions from Governmental Bodies.

(c) The Communications Management Plan shall describe the Project Company's approach to public communications and messaging, including:

(i) the Project Company's objectives from public communications and messaging;

(ii) the Project Company's approach to developing, and obtaining the County's acceptance for the Project Company's public communications and messaging materials; and

(iii) a detailed schedule of the proposed Project Company's public communications and messaging activities, including detailing the method of communication, its timing, the personnel responsible for each activity and the objectives of that activity.

(d) The Communications Management Plan shall describe the Project Company's approach to stakeholder engagement for the Project, including:

(i) the Project Company's objectives from stakeholder engagement;

(ii) a schedule detailing each Project Stakeholder and its categorization, and the Project Company's approach, systems, and methods to engage with the stakeholder, the frequencies of engagement, the objectives of engagement and the Project Company Persons responsible for that Project Stakeholder;

(iii) the Project Company's strategy and hierarchical flow charts clearly articulating the process for:

(1) identifying Project Stakeholder risks and issues and the activities required to mitigate these risks and issues;

(2) managing public enquiries, enquiries, and complaints and associated response times;

(3) notifying relevant Project Stakeholders of potential impacts that may be caused by the provision of the Design-Build Work;

(4) notifying relevant Project Stakeholders of traffic impacts, including vehicular, bicycle and pedestrian impacts; and

(5) developing and approving all information.

(e) The Communications Management Plan shall include the Project Company's key performance indicators demonstrating how the Project Company's communication activities will be measured and evaluated.

26.3.2.6 Health and Safety Plan

(a) As part of the Design-Build Administration Plan, the Project Company shall prepare and submit a plan that describes the Project Company's approach to health and safety with respect to the Design-Build Work in accordance with this Section 26.3.2.6, and which

shall comply with all Contract Standards and Applicable Law, including any Oregon OSHA and OSHA regulations (the "**Health and Safety Plan**").

(b) The Health and Safety Plan shall include:

(i) a general narrative describing the Project Company's approach to health and safety in its delivery of the Design-Build Work, including how a culture of safety will be established and maintained;

(ii) a description of the Project Company's health and safety responsibilities in the Design-Build Period;

(iii) details of Project Company Persons responsible for the Project Company's health and safety management and supervision throughout the Design-Build Period;

(iv) details of the Project Company's approach for ensuring that its Project Contractors and Subcontractors understand and comply with the Health and Safety Plan, Oregon OSHA, and OSHA;

(v) a description of the Project Company's approach to interface with the health and safety policies, procedures and practices of the County during the Design-Build Period; and

(vi) the Project Company's Oregon OSHA and OSHA policy and framework.

(c) The Health and Safety Plan shall describe the Project Company's approach to manage and ensure health and safety with respect to the Design-Build Work, including its methodologies, plans, policies and procedures for:

(i) ensuring the health and safety of the Project Company Persons performing the Design-Build Work;

(ii) ensuring the health and safety of members of the general public, including all Project Users interfacing with, or impacted by the Design-Build Work;

(iii) ensuring that all plant and equipment and all dangerous, hazardous, or unsafe areas are appropriately secure and signaled, and that access is restricted to only those appropriate authorization;

(iv) ensuring that dust, smoke, debris, artificial lighting, stockpiles and noise arising from the Design-Build Work are not hazardous to the public and neighboring land users;

(v) materials handling, hot work, scaffolding, ladders, working at heights, confined spaces, lockout/tagout, work permits;

(vi) safe work method statements;

(vii) hazard reporting and management;

(viii) personnel protective equipment in relation to the Design-Build Work;

(ix) health and safety inspections in relation to the Design-Build Work;

(x) injuries, medical attentional, first aid and emergency response in relation to the Design-Build Work;

(xi) procedures for immediately notifying the County of all incidents arising out of or in connection with the performance of the Design-Build Work, whether on or adjacent to the New Courthouse;

(xii) occupational health and safety training and orientation for the Design-Build Work, which shall include, as a minimum:

(1) safety rules and policies (including rules with respect to drugs and alcohol, smoking, horseplay, materials handling and personal protective equipment);

(2) frequency of safety meetings and typical topics;

(3) amenities and welfare facilities;

(4) specific hazards in relation to the Design-Build Work and control measures;

(5) how to report safety hazards and unsafe work practices;

(6) how to report incidents, accidents and near-misses;

(7) what to do in the event of injuries; and

(8) emergency management procedures.

26.3.2.7 Emergency Management Plan

(a) As part of the Design-Build Administration Plan, the Project Company shall prepare and submit a plan that describes the Project Company's approach to emergency management with respect to the Design-Build Work in accordance with this Section 26.3.2.7, and which shall provide details of the provision of the Design-Build Work that is critical to restart the Design-Build Work and maintain the Project within budget and, as practicable, within schedule (the "**Emergency Management Plan**").

(b) The Emergency Management Plan shall include, at a minimum:

(i) details of the Project Company's role in and the process for responding to incidents and emergencies within the Project Site;

(ii) the Project Company's contingency plans for incidents and emergencies;

(iii) requirements for the maintenance of records of all testing, including checklists for all tests;

(iv) requirements for reporting any water, steam, diesel, oil, electrical breakdown to the applicable Utility Owners;

(v) procedures for the Project Company to take immediate action to protect the safety and security of Project Company and County employees; and

(vi) any other requirements of the Emergency Management Plan the County requires to ensure it complies with all Governmental Approvals, Contract Standards and Applicable Law.

26.3.3 Design-Build Quality Management Plan

As part of the Project Company's Design-Build Management Plan and Quality Management Plan, the Project Company shall prepare and submit a plan that describes the Project Company's approach to quality management with respect to the Design-Build Work during the Design-Build Period in accordance with this Section 26.3.3 (the "**Design-Build Quality Management Plan**").

26.3.3.1 Design Quality Management Plan

(a) The Project Company shall provide a comprehensive Design Quality Management Plan that describes how it intends to manage the design work for the Project in compliance with the QMS and the provisions of this Project Agreement. The Design Quality Management Plan shall apply to all design work performed throughout the Design-Build Period as well as any design work performed throughout the Facilities Management Period.

(b) The Design Quality Management Plan shall contain an organizational chart identifying Key Personnel and other key individuals responsible for design management and their relationship with the Quality Director for the Project Company's overall QMS as documented in the Project Company's Quality Management Plan. It shall also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces between those responsible for design management and other engineering and construction management disciplines.

(c) The Project Company shall appoint a Design Quality Control Manager who shall be responsible for the Design Quality Management Plan and who will:

(i) have experience in a similar role on a successful project of similar scope and have successfully completed an ISO 9001 Lead Auditor Course; and

(ii) report to the Quality Director.

(d) The Design Quality Management Plan shall, at a minimum, include or reference detailed quality system procedures and process flow charts for the following processes:

(i) design input and output review;

(ii) design verification to ensure that design input requirements have been met;

(iii) design validation to ensure that the completed project is capable of meeting its intended use;

(iv) design changes;

(v) quality assessment and procurement of Project Contractors and Subcontractors responsible for design;

(vi) External Quality Audits of Project Contractor and Subcontractors responsible for design;

(vii) Internal Quality Audits;

(viii) Corrective Actions, Preventive Actions and opportunities for improvement;

(ix) document management; and

(x) control of Quality Records.

(e) The above procedures and flow charts shall document who does the work, what they do, and what evidence is generated that they have done the work correctly.

26.3.3.2 Construction Quality Management Plan

(a) The Project Company shall provide a comprehensive Construction Quality Management Plan that describes how it intends to manage the Construction Activities in compliance with the QMS and the provisions of this Project Agreement. The Construction Quality Management Plan shall apply to all design work performed throughout the Design-Build Period as well as any design work performed throughout the Facilities Management Period.

(b) The Construction Quality Management Plan shall contain an organizational chart identifying Key Individuals and other key individuals responsible for construction management and their relationship with the Quality Director for the Project Company's overall QMS as documented in the Project Company's Quality Management Plan. It shall also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces between those responsible for construction management and other disciplines such as design management, environmental management and traffic management.

(c) The Project Company shall appoint a Construction Quality Control Manager who will be responsible for the Construction Quality Management Plan and who shall:

(i) have experience in a similar role on a successful project of similar scope and have successfully completed an ISO 9001 Lead Auditor Course; and

(ii) report to the Quality Director.

(d) The Construction Quality Management Plan shall, at a minimum, include or reference detailed quality system procedures and process flow charts for the following processes:

(i) construction safety audits;

(ii) inspection, testing and monitoring;

(iii) materials identification and traceability;

(iv) quality assessment and procurement of Project Contractors and Subcontractors responsible for construction;

(v) External Quality Audits of Project Contractors and Subcontractors responsible for construction;

(vi) Internal Quality Audits;

(vii) control of nonconforming product;

(viii) Corrective Actions, Preventive Actions and opportunities for improvement;

(ix) document management; and

(x) control of Quality Records.

(e) The above procedures and flow charts shall document who does the work, what they do, and what evidence is generated that they have done the work correctly.

(f) The Construction Quality Management Plan shall also include or reference an inspection and test plan detailing all major on and offsite inspection and test activities for Work performed by the Project Company, Project Contractors and Subcontractors (the "**Inspection and Test Plan**"). The Inspection and Test Plan shall, at a minimum, include:

(i) a description of the inspection, testing and monitoring activity;

(ii) frequency of inspections, tests and monitoring;

(iii) reference to standards, codes, specifications, and acceptance criteria;

(iv) reports and checklists required;

(v) personnel responsible for inspection, testing and monitoring activity;

(vi) quality assurance review, witness and hold points; and

(vii) description and frequency of geotechnical instrumentation monitoring and adherence to acceptance criteria.

26.3.3.3 Environmental Quality Management Plan

(a) The Project Company shall provide as part of its Design-Build Management Plan and its Quality Management Plan an Environmental Quality Management Plan that describes how it intends to manage the environmental components of the Project in compliance with the Project Company's Environmental Management Plan, the requirements of which are described in Section 26.3.4 (Environmental Management Plan) of these Design and Construction Standards, the Quality Management Plan, and the provisions of this Project Agreement. The Environmental Quality Management Plan shall apply to all Design-Build Period.

(b) The Environmental Quality Management Plan shall contain reference to the Project Company's Environmental Management Plan as described in Section 26.3.4 (Environmental Management Plan), an organizational chart identifying Key Individuals and other Project Company Persons responsible for environmental management and their relationship with the Quality Director for the Project Company's overall QMS as documented in the Project Company's Quality Management Plan. It shall also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces between those responsible for environmental management and other disciplines during the Design-Build Period.

(c) The Project Company shall appoint an "**Environmental Quality Manager**" who will be responsible for the Environmental Quality Management Plan and who shall:

(i) have experience in a similar role on a successful project of similar scope and have successfully completed an ISO 9001 Lead Auditor Course; and

(ii) report to the Quality Director.

(d) The Environmental Quality Management Plan shall include or reference detailed quality system procedures and process flow charts for the following processes:

(i) satisfying and ensuring compliance with the Project Company's environmental obligations, including compliance with any environmental Governmental Approvals required;

(ii) obtaining and maintaining applicable permits and Governmental Approvals;

(iii) environmental monitoring and reporting;

(iv) environmental incident reporting and tracking;

(v) External Quality Audits of the Project Contractors and Subcontractors responsible for environmental aspects of the Design-Build Work;

(vi) Internal Quality Audits;

(vii) control of nonconforming work;

(viii) any corrective actions, preventive actions and opportunities for improvement; and

(ix) environmental documentation management.

(e) The above procedures and flow charts shall document who does the work, what they do, and what evidence is generated that they have done the work correctly.

(f) The County, in the course of its quality documentation review, shall pay special attention to the Project Company's Environmental Quality Management Plan to verify that the Project Company has taken full responsibility for all of the environmental requirements as specified in Section 2.7 (Environmental Management) of these Design and Construction Standards and elsewhere in the Project Agreement, including obtaining approvals from relevant Authorities Having Jurisdiction.

26.3.4 Environmental Management Plan

26.3.4.1 General Requirements

(a) The Project Company shall establish and implement throughout the Design-Build Period an environmental management plan for the Design-Build Work based on Good Design-Build Practice and the requirements set forth in Section 2.7 (Environmental Management) of these Design and Construction Standards.

(b) The Environmental Management Plan shall include, at a minimum:

(i) a summary of how it interfaces with other Management Plans;

(ii) a general narrative describing the Project Company's approach to ensuring environmental compliance in the performance of the Design-Build Work;

(iii) a description of the Project Company's environmental policy;

(iv) a general description of the Project Company's environmental management responsibilities in the Design-Build Period;

(v) details of the Project Company Persons responsible for environmental management throughout the Design-Build Period;

(vi) details of training needs for all Project Company Persons to enable the purpose and content of the Environmental Management Plan to be understood and implemented by Project Company Persons;

(vii) details of the organizational interfaces between those responsible for general Project management, design work management, construction work management, and environmental management;

(viii) details of how the Environmental Management Plan interfaces with the Environmental Quality Management Plan; and

(ix) include a schedule detailing all Governmental Approvals necessary for the Design-Build Work, including issuing Governmental Body and permit and/or approval duration and conditions and environmental safeguards that shall be adhered to.

(c) The Environmental Management Plan shall provide details of the Project Company's approach to managing environmental matters impacting and during the Design-Build Period, including:

(i) a description of the Project Company's environmental objectives and key performance indicators for the Design-Build Period;

(ii) a description of the Project Company's specific activities and their timing, an assessment of the sensitive on and off-site environmental receptors and assessment of the impact that the Design-Build Work may have on the sensitive environmental receptors, including an aspects and impacts register;

(iii) specific management and monitoring procedures, including contingency measures, to ensure good environmental practice and compliance with all Governmental Approvals as applicable to environmental management;

(iv) a Project Site plan detailing locations of important features of the environmental management system, including the location of waste storage areas, spill kits, vehicle lay down areas, site access points, public access areas, vehicle or wheel wash down areas and dewatering effluent re-infiltration areas, if any;

(v) an earthworks plan and unexpected finds work procedure relevant to the excavation and management of potentially Hazardous Substances;

(vi) a description of the material tracking system to be implemented;

(vii) details of the stormwater management system to be implemented during construction activities;

(viii) descriptions of The Project Company's methods and approach to:

(1) performing a biological resources feasibility analysis, including any biological requirements included in the Project's Environmental Site Assessment;

(2) performing a noise study, developing a construction noise and vibration mitigation program and complying with the requirements of Section 2.7.5 (Noise Mitigation);

(ix) details of the Project Company's construction and demolition waste management solution, including:

(1) how it will protect the environment from Hazardous Substances by waste, debris, siltation or Hazardous Substance liquid discharges into sewers or waterways;

(2) a system for recording the actual percentage of waste recycled or reused by weight, for the purposes of demonstrating compliance with the State's 95% targets;

(3) how it will manage liquid and solid environmental contaminants, waste reduction strategies and waste sorting and recycling strategies and targets;

(4) how it will manage any asbestos found on the Project Site, including how it will protect the environment from further Hazardous Substances and ensure that those working with the asbestos are adequately protected;

(5) testing and treatment of any cut and fill material in accordance with regulatory guidelines and the environmental requirements;

(6) disposal of waste, including any cut and fill material deemed unsuitable for reuse on-site, in accordance with relevant guidelines and Contract Standards;

(7) establishes waste diversion goals for the Design-Build Work by identifying at least five (5) materials (both structural and non-structural) targeted for diversion;

(8) specified whether materials will be separated or comingled and describe the diversion strategies planned for the Project, including where the material will be taken and how the recycling facility will process the material including expected diversion rates for each material stream; and

(9) complies with the requirements of LEED v4.1 Construction Waste Management Credit within the Project Site;

(x) details of the Project Company's emergency / spill response solution for Hazardous Substances, including:

(1) provide a description of on-site equipment available to contain and respond to an emergency or spill of the Hazardous Substance;

(2) notification procedures, including notification to potentially impacted residents and businesses adjacent to the Project;

(3) response coordination procedures between the Project Company and the County;

(4) provide a Hazardous Substances Site Plan showing the location of stored Hazardous Substances and location of spill containment and response equipment; and

(5) provide a description of the Hazardous Substances handling and spill response training provided to the Project Company Persons, Project Contractors and Subcontractors.

26.3.5 Design and Construction Management Plan

26.3.5.1 General Requirements

(a) As part of the Design-Build Management Plan, the Project Company shall prepare and submit a plan that provides details of the Project Company's overall approach to the Design-Build Work, and otherwise achieve Occupancy Readiness, in accordance with this Section 26.3.5 (the "**Design and Construction Management Plan**").

(b) The following Management Plans are integral to the Design and Construction Management Plan as indicated in Table 6. 26.1 (Design-Build Management Plan Contents) of these Design and Construction Standards:

(i) Utility Management Plan, as further described in Section 26.3.5.2 (Utility Management Plan) of these Design and Construction Standards;

(ii) the Design Management Plan, as further described in Section 26.3.5.3 (Design Management Plan) of these Design and Construction Standards;

(iii) the Construction Management Plan, as further described in Section 26.3.5.4 (Construction Management Plan) of these Design and Construction Standards;

(iv) the Demolition Management Plan, as further described in Section 26.3.5.5 (Demolition Management Plan) of these Design and Construction Standards; and

(v) the Commissioning Management Plan, as further described in Section 26.3.5.6 (Commissioning Plan) of these Design and Construction Standards.

(c) The first section of the Design and Construction Management Plan shall include:

(i) a summary of how it interfaces with other Management Plans;

(ii) details of how its sub-plans interface with one another to form one integrated approach to manage quality on the Design-Build Work;

(iii) a general narrative describing the Project Company's approach to design and construct the Project;

(iv) a general description of the Project Company's design and construction responsibilities for the Design-Build Work;

(v) details of the Project Company's senior personnel responsible for the design and construction of the Design-Build Work; and

(vi) details of the organizational interfaces between those responsible for general Project management, design management, construction management, health and safety and environmental management.

26.3.5.2 Utility Management Plan

26.3.5.2.1 General Requirements

(a) As part of the Design and Construction Management Plan, the Project Company shall prepare and submit a plan that provides the specific details, procedures, work methods responsibilities, and timing of such that the Project Company will use to deliver the Utility management services described in Section 4.1 (Utility Management Services) of these Design and Construction Standards during the Design-Build Period in accordance with this Section 26.3.5.2 (the "**Utility Management Plan**").

(b) The Utility Management Plan shall include at a minimum:

(i) a description of the Project Company's overarching strategy and approach to deliver the Utility management services during the Design-Build Period; and

(ii) details of the Project Company's Associates responsible for the Utility management services during the Design-Build Period and details of the responsibilities, qualifications, time commitments and levels of authority.

(c) The Utility Management Plan for the Design-Build Period shall provide details of how the Project Company will:

(i) identify all Utilities within the Project Site, along with a description of such Utilities, corresponding Utility Owners, and Utility County's contact person, email address and phone number;

(ii) describe the review and approval process, including durations for each step required by each Utility County, with a description of responsibilities for The Project Company, the State, and the Utility County;

(iii) describe the procedures required for each Utility in relation to inspections, testing and acceptance by each Utility County;

(iv) identify all reasonably foreseeable causes for Utility shutdowns within the Project Site; and

(v) identify contingency plans in the case of failure of any of the Utilities.

(d) The Utility Management Plan for the Design-Build Period shall be updated monthly, or every time new or updated information is obtained that shall be included as part of the Monthly Progress Report.

26.3.5.2.2 Utility Shutdown Plan

As part of the Utility Management Plan for the Design-Build Period, the Project Company shall prepare a plan that provides specific details on the procedures to be utilized by the Project

Company to shutdown Utilities during the Design-Build Period (the "**Utility Shutdown Plan**"), which shall describe, at a minimum:

(a) affected Utilities by the proposed Utility shutdown;

(b) phasing of Utility work within the Project Site;

(c) Utility shutdown duration;

(d) impacts to the other buildings within the Red Soils Campus or in the vicinity;

(e) any bypass or temporary Utilities required during the performance of Utility work; and

(f) any other information the Project Company may require in advance of such Utility work or Utility shutdown.

26.3.5.3 Design Management Plan

(a) As part of the Design and Construction Management Plan, the Project Company shall prepare and submit a plan that describes the Project Company's approach to developing the design of the Design-Build Work, in accordance with this Section 26.3.5.3 (the "**Design Management Plan**"), and which shall include, at a minimum:

(i) a description of the Project Company's overarching strategy and approach to the design work;

(ii) details of the Project Company Persons responsible for design management and details of the responsibilities, qualifications, time commitments and levels of authority;

(iii) details of the Project Company's proposed methodology for delivering the design work packages described in Section 28 (Design-Build Period Submittals), including timing and level of detail;

(iv) the Project Company's proposed methodology for interfacing and working with the County and Project Stakeholders, and other user groups, as reasonably requested by the County during the design work;

(v) the Project Company's proposed methodology for engaging with and managing Project Stakeholders, including its methodology for:

(1) the name, function and composition of each Project Stakeholder group;

(2) conducting meetings with each Project Stakeholder group;

(3) managing multiple Project Stakeholder groups;

(4) ensuring that the Project Stakeholder groups, and their respective members have sufficient information and understanding of the design to meaningfully review progressive design work documentation;

(5) taking into account Project Stakeholder group feedback; and

(6) managing information flow with the Project Stakeholder groups;

(vi) the estimated number, frequency and duration of meetings to be conducted with each of the Project Stakeholder groups;

(vii) procedures for addressing the following specific design related issues:

(1) compliance with Submittal Review Procedure, quality management, etc.;

(2) systems for managing information flow and collaboration between the Project Company Persons involved in the design work; and

(3) FF&E selection and procurement;

(viii) for each of the design work packages described in Section 28 (Design-Build Period Submittals), a submittals schedule which shall, for each design work stage:

(1) identify the format of the main types of submittals (for example, specifications, reports, digital and physical models, drawings, workshop drawings, prototypes, mock-ups and flow diagrams);

(2) if appropriate given the nature of the submittals, identify the different design disciplines that relate to that submittal (for example, architectural and engineering); and

(3) otherwise assist the County in ensuring that it has sufficient and appropriate resources to review the submittal;

(ix) details of:

(1) document control, including digital models;

(2) the coordination between different design disciplines and different design teams and Project Stakeholder groups;

(3) value management; and

(4) preparing and verifying as-built documentation; and

(x) the proposed format of the following documents:

(1) design work submittals schedule;

(2) information packages to be provided to Project Stakeholder group members;

(3) minutes of Project Stakeholder group meetings;

(4) design work stage reports including key issues, innovation opportunities and for each stage and each discipline as a minimum; and

(5) any other reports to be issued to the State Representative as part of managing the design work.

26.3.5.4 Construction Management Plan

(a) As part of the Design and Construction Management Plan, the Project Company shall prepare and submit a plan that describes the Project Company's approach to the construction of the Project, in accordance with this Section 26.3.5.4 (the "**Construction Management Plan**"), and which includes, at a minimum:

(i) a description of the Project Company's overarching strategy and approach to the construction work;

(ii) details of senior the Project Company Persons responsible for construction management and the construction work and details of the responsibilities, qualifications, time commitments and levels of authority;

(iii) the Project Company's proposed methodology for interfacing and working with the County, Project Stakeholders, and other user groups, as reasonably required by the County in delivering the construction work;

(iv) the Project Company's methodology for performing the construction work so as to satisfy the County's timing and sequencing requirements and to achieve Occupancy Readiness by the target Occupancy Readiness Date, including in respect of:

(1) staging of the construction work;

(2) managing Utilities shutdowns and any other service interruptions; and

(3) drawings of the Project Site and the location of the Project Site facilities, including Project Site sheds and storage facilities, access routes and any other information reasonably requested by the County;

(v) details of how materials are delivered and moved around within the Project Site, including drawings and descriptions of covered set-down areas, fixed and mobile cranes (reach and capacity work rate), location and capacity of hoists, storage areas, roadways and pathways;

(vi) the Project Company's strategy for ensuring the State progressively inspects the construction work;

(vii) the Project Company's methodology for managing issues relating to:

(1) working hours;

(2) site access points;

(3) site traffic and parking management;

(4) keeping the Project Site and any other areas where the Project Company Persons are working or to which the Project Company Persons have access, and their surrounds, safe and clean;

(5) flora and fauna, including existing trees;

(6) water use;

(7) stockpiling of any soil or waste material within the boundaries of the Project Site;

(8) noise from the construction work and construction activities and managing its impact on the surrounding areas;

(9) dust, vibration and visual intrusion on the Project Site;

(10) industrial relations;

(11) construction interfaces;

(12) the provision of Project Site amenities sufficient to meet the needs of all the Project Company Persons on the Project Site;

(13) emergency exits and evacuation;

(14) temporary services, including managing any capacity constraints in relation to Utilities;

(15) protection of buildings, structures and other infrastructure;

(16) work force behavior standards;

(17) provision of "as constructed" information;

(18) site logistics; and

(19) temporary works;

(viii) the Project Company's access and induction policies and procedures for visitors and Project Contractors and Subcontractors;

(ix) details of all Governmental Approvals, and the Project Company's strategy for ensuring compliance with all Governmental Approvals, including in relation to:

(1) building surveys and permits;

(2) scaffolding;

(3) temporary plant and equipment (including cranes and hoists); and

(4) any other Governmental Approvals required to enable the State to achieve Occupancy Readiness;

26.3.5.5 Demolition Management Plan

(a) As part of the Design and Construction Management Plan, the Project Company shall prepare and submit a plan that describes the Project Company's approach to the performance and the phasing of the Demolition Work, in accordance with this Section 26.3.5.5 (the "**Demolition Management Plan**"), and which shall include, at a minimum:

(i) details of the Project Company personnel responsible for the management and supervision of the Demolition Work, and detail of responsibilities, qualifications, time commitments and levels of authority;

(ii) a description of the Project Company's overarching strategy for and approach to the Demolition Work;

(iii) the Project Company's proposed methodology for interfacing and working with the State, Authorities Having Jurisdiction, and other Governmental Bodies as required, prior and during the performance of the Demolition Work;

(iv) the Project Company's Project Schedule in respect of the Demolition Work which includes all the details set forth in Section 2.4 (Design-Build Work Project Schedule) of these Design and Construction Standards including, including:

(1) the commencement and completion dates, phasing, major milestones, and Critical Path for the Demolition Work;

(2) a level of detail for the Demolition Work's WBS as set forth in Section 2.4.4 (Work Breakdown Structure) of these Design and Construction Standards; and

(3) key meetings with the State, Authorities Having Jurisdiction, meetings with Utility Owners, and Third-Party Meetings with other Governmental Bodies, as applicable;

(v) a description of the Project Company's public safety strategy, including details on the Project Company's plan to prevent unauthorized access into the Project Site while the Demolition Work is ongoing;

(vi) a description of the Project Company's plan to comply with all occupational health and safety requirements;

(vii) a description of the Project Company's plan to protect areas adjacent to the Project Site from damage;

(viii) a description of the Project Company's environmental management strategy in respect of the Demolition Work in accordance with Section 2.7 (Environmental

Management) of these Design and Construction Standards, including the Project Company's strategy to:

(1) noise management and mitigation;

(2) dust control;

(3) construction waste management and recycling;

(4) dewatering and stormwater management; and

(5) Hazardous Substance management and disposal.

26.3.5.6 Commissioning Plan

(a) As part of the Design and Construction Management Plan, the Project Company shall prepare and submit a plan that describes the Project Company's approach to the testing and commissioning activities of the Project, that complies with Section 25.3 (Commissioning Plan) of these Design and Construction Standards.

26.3.6 Transition Management Plan

(a) As part of the Design-Build Management Plan, the Project Company shall prepare and submit a plan that describes the Project Company's approach to transition into the Facilities Management Period from the Design-Build Period, in accordance with this Section 26.3.6 (the "**Transition Management Plan**"), and which shall include, at a minimum:

(i) a description of the Project Company's overarching strategy and approach to the test and commission the construction work to demonstrate completion of the Project in compliance with the Project Agreement;

(ii) details of the Project Company personnel responsible for the management and supervision of transitioning from the construction work to the delivery of the Facilities Management Services and details of the responsibilities, qualifications, time commitments and levels of authority;

(iii) the Project Company's approach to transition into Services Phase from the Design-Build Period, and ensure Facilities Management Services quality from the commencement of the Facilities Management Period, including its methodology for:

(1) commencing the provision of the Facilities Management Services;

(2) ensuring that all equipment and systems used to deliver the Facilities Management Services are in place, fully commissioned and operational;

(3) ensuring that all testing, contingency and scenario planning activities in relation to the Facilities Management Services commencement have been undertaken and proven;

(4) ensuring that all consumables, spare parts and external support services are in place prior to Facilities Management Services commencement;

(5) ensuring that all subcontracts required to support the delivery of the Facilities Management Services are in place prior to Facilities Management Services commencement.

27 DESIGN AND CONSTRUCTION REPORTING

27.1 GENERAL REQUIREMENTS

(a) During the Design-Build Period, the Project Company shall prepare and submit complete and accurate monthly Progress Reports, in accordance with Section 2.2 (Progress Reporting and Documentation) of these Design and Construction Standards, for the previous month.

(b) Electronic versions of monthly Progress Reports shall be submitted through the DMS. Each submittal shall provide notification to the County Representative or the relevant County employee of that report's submission.

28 DESIGN-BUILD PERIOD SUBMITTALS

28.1 GENERAL

(a) The purpose of this document is to guide the Project Company in preparing the required documentation for all the Design-Build Work done for the Project. The Project Company is responsible for coordinating all Submittals, including the quality and contents of such Submittals, and those of its Project Contractors and Subcontractors.

(b) The requirements set forth in this Section 28 represent the minimum levels of performance, quality, and/or standardization. This is in recognition that the Project shall be cost effective over the life of the New Courthouse.

(c) The Project Company shall plan, design and construct the Project with consideration given to serviceability and maintainability of the New Courthouse.

28.2 REQUIREMENTS FOR ASSEMBLING DRAWINGS AND PROJECT MANUAL

28.2.1 Assembly Responsibility

(a) The Project Company shall be responsible for reviewing and assembling documents from all Project Contractors and Subcontractors to ensure they conform to the guidelines set forth in this Section.

(b) Submittals not in this format and in the file structure described will be rejected and the Project Company shall resubmit the proper files in such time so as to prevent delays in the Submittal Review Procedure.

28.2.2 Drawing Assembly Requirements

(a) Project drawings shall be assembled in such a manner that when they are printed full size, each set is manageable. The minimum full size is twenty-two (22) inches by thirty-four (34) inches with a maximum of thirty-six (36) inches by forty-eight (48) inches. The maximum number of sheets in a volume per binding is one hundred (100) sheets. If a set is over one hundred (100) sheets, it should be divided into two (2) or more volumes.

(b) One (1) PDF file is to be created for each volume of drawings to be printed. Pages shall be coordinated for plot orientation as landscape. All pages shall be oriented in the same direction within the file such that all pages can be read as the file is normally opened.

(c) The Project Company shall examine all sheets submitted by all Project Contractors and Subcontractors before submitting them to the County and ensure that all sheets are consistently of the same size. Printed drawings shall be printed to scale.

(d) A graphic scale shall be provided with each scaled detail, floor plan, etc.

(e) The first page of each volume shall be the cover sheet labeled "COVER". This page shall have a list of all sheets in the plan set listed in the order the plans are printed. The sheet numbering and identification format shall be in accordance with the *United States National Cad Standard, Version 6* which can be found here: www.nationalcadstandard.org/ncs6/content.php. All page numbers shall be reflected in the bookmarks within the PDF document.

(f) Drawings shall be assembled in the following order unless requested otherwise by the State:

(i) Cover Sheet

(ii) General

(iii) Site / Civil / Survey

(iv) Landscape

(v) Structural

(vi) Architectural including code sheets

(vii) Fire Protection

(viii) Plumbing

(ix) Mechanical / HVAC

(x) Electrical

28.2.3 Project Design Manual: Basic Assembly Requirements

The Project Company shall prepare and submit a manual for the Project in accordance with the requirements set forth in this Section 28.2.3 of this Appendix (the "**Project Design Manual**").

(a) The Project Design Manual shall be submitted for printing in PDF format.

(b) Only one (1) file per volume shall be submitted containing all technical data from all applicable consultants on the project.

(c) The Project Design Manual shall be assembled in such a manner that when printed, the volume (one binding) is no more than four hundred (400) physical sheets, or up to eight hundred (800) pages printed on both sides. If the project manual is over four hundred (400) physical sheets, it should be divided into two (2) or more volumes.

(d) The Project Design Manual pages shall be individually numbered with the specification division number followed by the page number.

(e) The Project Design Manual's table of contents shall be filled out completely by The Project Company and included with design submittal documents.

(f) The Project Design Manual shall be assembled such that all "slip sheets" or blank pages required to make the pagination work correctly are inserted.

(g) Blank pages in the Project Design Manual shall contain the statement, "Page Intentionally Left Blank."

(h) Every Project Design Manual section shall have the words "End of Section" printed on the last page below the final text of that section.

28.2.4 Electronic Document Format

28.2.4.1 Generally Applicable Electronic File Submittal Requirements

(a) The Project Company shall use following file naming convention:

(i) [Date]_[Project Name]_[Submittal]_[Dwg/Spec]_[Volume].pdf.

(ii) Examples:

(1) 2022.01.01_New Clackamas Courthouse_100_SD Dwg_Vol-01.pdf

(2) 2022.01.01_New Clackamas Courthouse_100_SD Specs_Vol-01.pdf

(iii) Do not use any spaces or special characters in the file name. Abbreviating long project names as appropriate.

(iv) Use the volume indicator only if there is more than one (1) volume for the plans or specifications.

(v) All electronic files shall be optimized to provide balanced image retention and minimal file size.

28.2.4.2 PDF Files

(a) PDF files are the preferred media container format unless otherwise specified (e.g., DWG, DOC, etc.). The Project Company shall provide PDFs in addition to any files that are requested in other formats.

(b) The County will utilize Bluebeam software to provide comments back to the Project Company. As such, the Project Company shall use Bluebeam Revu software to administer PDF workflow and disseminate PDFs.

28.3 BASIS OF DESIGN SUBMITTAL

28.3.1 General

(a) The Project Company shall develop and submit to the County for review and acceptance a document detailing the basis of design for all Project Components of the Project in accordance with this Section (the "**Basis of Design**" or "**BOD**").

(b) The Basis of Design shall be an electronic PDF document which shall contain the pertinent sections as listed in this Section. The Basis of Design is intended to be a repository for documentation relating to the design work; therefore, not all items may initially be covered, but shall be added as such items are executed throughout the design work.

(c) The Basis of Design, at a minimum, shall include the following sections:

(i) Description of construction work;

(ii) Project Schedule;

(iii) Project Cost;

(iv) Code Analysis;

(v) Energy and Sustainability; and

(vi) Design Calculations.

(d) Each of the sections above shall be updated, where applicable, at each submittal phase of the design documents. Changes in the Basis of Design shall be noted and dated to document the change. Reference to emails, correspondence, or meeting minutes shall be used.

28.3.2 Description of the Design-Build Work

This section of the BOD shall include:

(a) an executive summary summarizing the size and scope of the Project including general programmatic information identifying programs and activities;

(b) a design intent narrative that addresses how the Project responds to the design principles set forth in these Design and Construction Standards;

(c) a description of other parameters affecting definition of the problem, such as master planning issues, structural limitations, and site conditions;

(d) a table of assignable square footage that clearly illustrates the proposed assignments of space; and

(e) a description of the Design-Build Work, including a description of:

(i) architectural systems including interior and exterior finishes;

(ii) structural systems;

(iii) Mechanical Systems;

(iv) Electrical Systems;

(v) Plumbing Systems; and

(vi) Fire and Life Safety Systems.

28.3.3 Project Schedule

This section of the BOD shall include:

(a) the Project Schedule developed for the Project in accordance with Section 2.4 (Design-Build Work Project Schedule) of these Design and Construction Standards, showing, at a minimum:

(i) a final logic bar (Gantt) chart schedule and a narrative for the Design-Build Work;

(ii) items in the Critical Path;

(iii) long-lead building components to complete the construction work;

(iv) each phase for the design work, the construction work and the Demolition Work, including anticipated submittal dates, review dates, and Design Review Meeting dates; and

(v) any other dates of importance such as commissioning key dates and anticipated environmental approval dates.

28.3.4 Project Cost

This section of the BOD shall include progressively more detailed construction estimates as design documents are developed.

28.3.5 Code Analysis

This section of the BOD shall include a report that describes the general compliance of the Design-Build Work with all applicable codes and Applicable Law (a "**Code Compliance Report**").

28.3.6 Energy and Sustainability

This section of the BOD shall address the minimum energy conservation requirements specified in Section 6 (Sustainability Requirements) of the Design and Construction Standards. Project designs shall also include energy conservation features beyond what is required by energy conservation standards where those features can be economically justified from a lifecycle cost standpoint. Principal considerations shall include first cost, design life, maintenance cost, climatic conditions, site configuration, building orientation, building functional arrangement, building envelope, and Mechanical Systems as applicable to minimize the use of fossil fuels.

28.3.7 Design Calculations

Provide design summary documentation in an indexed report format with all assumptions and references stated, which shall include:

(a) Architectural design calculations (including occupancy classifications, type of construction, fire resistive ratings, exiting calculations, allowable building height and area, toilet fixture calculations and any unusual provisions or exceptions applicable to the project).

(b) Structural design calculations (including live load, roof load, snow load, wind load, lateral soils load and seismic load calculations. Also include any unusual provisions, special loads or exceptions applicable to the project).

(c) Civil design calculations (including storm drainage, sanitary sewer, domestic water service and any unusual provisions or exceptions applicable to the project).

(d) Mechanical design calculations (including building loadings, equipment sizing, steam pipe stress analysis, annual energy usage and any unusual provisions or exceptions applicable to the project) Building load calculations shall be done using the programs listed in the performance approach method for ASHRAE Standard 90.1 compliance.

(e) Electrical design calculations (including fault current calculations, transformer loading, circuit sizing, building energy usage and any unusual provisions or exceptions applicable to the project).

(f) Basis of design equipment and material information (e.g., catalog material, charts, tables, performance curves, etc.).

(g) Where applicable design calculations shall be cross-referenced to Code Analysis section of the Basis of Design.

28.4 DESIGN-BUILD WORK SUBMITTALS

28.4.1 Schematic Design Submittals

Schematic Design Submittal	Due Date
100% schematic design documents	As provided in the Project Schedule.
Preliminary code analysis: (a) The code analysis consists of an outline of applicable provisions of the building code which apply to the Courthouse Project. (b) The outline shall include a written report and diagrammatic drawings which delineate the design criteria (e.g., fire walls, fire areas, smoke zones, travel distances, exit paths, required exits, construction type, etc.)	
Basis of Design: The Project Company shall provide the preliminary Basis of Design report as outlined in Section 28.3 (Basis of Design Submittal) of this Section.	
Material board: The Project Company shall include an updated digital material board, as applicable, based on the material board submitted as part of its Proposal.	
Area tabulation: The area tabulation consists of a space-by-space comparison of the Schematic Design Submittal documents' net square footage with the Courthouse Program's net square footage. These tabulations shall be made by floor and program component.	
Civil: (a) Civil drawings shall include: (b) Site Demolition Plan showing existing structures and utilities to be removed or abandoned. (c) Grading Plan showing existing and proposed contours at one-foot intervals. (d) Paved Surfaces (Streets, Sidewalks, etc.) (e) Existing Buildings and/or Structures (f) Proposed New Courthouse (with spot elevations) (g) Proposed utilities showing: (i) All existing utilities and underground structures within the Project Site based on both the information provided by the State and on Project Co's field investigation;	

Schematic Design Submittal	Due Date
(ii) Required off-site utilities in the vicinity for this Project, and all points of connection; and (iii) Proposed points of connection to existing utilities including the proposed method of service and routing for electrical power, chilled water, steam, domestic water, fire water, utility water, sanitary sewer, storm drain, telephone, and fire alarm systems, as applicable. (iv) Locations of exterior pad-mounted transformers.	
Landscape: The landscape design shall show conceptual hardscape and plantings.	
Architectural drawings: (a) Demolition plan and anticipated phasing if applicable. (b) Site Plan showing vehicular access routes, pedestrian access routes, service areas, parking, easements, project limits, site access per ADA standards. (c) Project Site sections shall be provided as needed to explain changes in levels. (d) Floor plans of each level showing: (i) Room names, sizes in square feet, room numbers, and ADS ID's. (ii) Structural grid and overall dimensions of major elements. (iii) Building elements such as walls, columns, doors, windows, shafts, seating bowl, vertical transportation and major built-in equipment. (iv) Means of complying with accessibility standards. (v) Roofing Plan (indicate slope [high to low] with direction arrows, show all significant roof penetrations and structures, show roof access, and typical roofing sections identifying materials). (e) Building exterior elevations: (i) Indicate surface material for all areas. (ii) Indicate finish grades. (iii) Demonstrate building accessibility. (iv) Indicate floor elevations above and below grade.	

Schematic Design Submittal	Due Date
(v) Indicate any exterior equipment. (vi) Show all stairs, ramps, railings, etc. (f) Building sections: (i) Provide sections as needed to explain structure, seating bowl and sight lines, and unique design features. (ii) Indicate floor-to-floor dimensions. (iii) Establish floor elevations. (iv) Indicate relative thickness of floors and walls.	
Interiors: Indicate materials and finishes.	
Structural drawings: (a) Structural drawings shall provide conceptual framing plans at the same scale as that used for the architectural plans that indicate the dimensioned grid system, geometry, and superstructure. (b) Design intent of the substructure shall be provided in the Basis of Design narrative.	
Mechanical drawings: (a) Provide a conceptual single-line mechanical diagram showing major ducts and equipment. The sizes and locations of major equipment items including cooling towers, chillers, pumps, fans, air-handling units, compressors, and related items, shall be identified. (b) Indicate locations of major mechanical equipment components. (c) Indicate locations of the mechanical rooms and shafts shown on the architectural drawings.	
Plumbing drawings: (a) Layout major components. (b) Verify locations and sizes of the plumbing mechanical rooms and shafts shown on the architectural drawings. (c) Identify connections to major utilities (water, sanitary, storm, and fire services, etc.).	
Electrical drawings: Electrical drawings shall provide a conceptual single-line diagram showing permanent as well as temporary	

Schematic Design Submittal	Due Date
points of connection to high-voltage, telephone, and signal systems. Electrical drawings shall also include: (a) Method of service (New Courthouse or local Utility) showing primary service to loop switch. (b) Major transformers and transformer substations. (c) Secondary service to switchboards, motor control centers, distribution boards and panel boards for power and lighting. (d) Major components of the emergency power system.	
Cost: (a) Provide cost analysis in the Basis of Design. (b) Submit a written quantitative estimate of construction developed from the completed preliminary plans and outline specifications. (c) Break down the construction estimate into the major architectural, civil, structural, mechanical, and electrical building components by labor and material for major divisions of work. (d) Include and identify your design contingency.	
Initial BIM Record Model	

Table 6. 28.1 (Schematic Design Submittals)

28.4.2 Design Development Submittals

Design Development (DD) Submittals	Due Date
50% design development documents	As provided in the Project Schedule.
Code Analysis: The Project Company shall submit an updated code analysis based on the advancement of the Schematic Design Submittal.	
Basis of Design: The Project Company shall submit an updated Basis of Design report as outlined in Section 28.3 (Basis of Design Submittal) of this Section.	
Material board: (a) The Project Company shall submit an updated digital material board, if applicable, based on the advancement of the Schematic Design Submittal.	
Area tabulation:	

Design Development (DD) Submittals	Due Date
The area tabulation will consist of a space-by-space comparison of the Schematic Design Submittal documents' net square footage with the Courthouse Program's net square footage. These tabulations shall be made by floor and program component.	
Civil: Civil drawings Shall Include: (a) Updated drawings based on the advancement of the Schematic Design Submittal. (b) Grading plans updated to show general method of site drainage, including benchmark references and elevations of major elements including those for stairways, walls, and plazas. (c) Utility plans updated to show all utility lines, ductbanks, and equipment that are abandoned, removed, or rerouted. (d) Conceptual bicycle routing plan, roadways and parking areas. (e) Proposed temporary Utilities.	
Landscape: The landscape design shall show hardscape and plantings and other improvements.	
Architectural drawings: (a) Architectural drawings shall include updated drawings based on the advancement of the Schematic Design Submittal. (b) Floor plans of each level showing: (i) Corridors (with widths). (ii) Door swings. (iii) Locations and fire ratings of all fire separations, exit enclosures, fire doors, and similar elements, as required by applicable codes. (iv) Accessible toilets and drinking fountains. (v) Plumbing fixtures such as lavatories, floor drains, water closets, urinals, service sinks, and fire-hose cabinets. (vi) Built-in features such as fixed seats, kitchen equipment, display cases, counters, shelves, lockers, and similar items. (vii) Movable furniture, which in most cases is "not in contract" ("**NIC**"). Differentiate between movable	

Design Development (DD) Submittals	Due Date
furniture and equipment and built-in furniture and equipment. (viii) Reference all sections and elevations. (ix) Roof plans updated to show associated equipment, slopes, drains and other items. (c) Building exterior elevations: (i) Building elevations shall include updated drawings based on the advancement of the Schematic Design Submittal. (ii) Indicate entrances, doors, stairs, platforms, louvers, vents, retaining walls, proposed finished grades and similar items. (d) Building sections: (i) Building sections shall include updated drawings based on the advancement of the Schematic Design Submittal. (e) Schedules, including: (i) Preliminary interior finish schedule indicating the material texture and color of each finish material proposed for use in the Project.	
Interiors: Provide interior elevations and updated materials and finishes based on the advancement of the Schematic Design Submittal.	
Structural drawings: Structural drawings shall provide plan for each level of the structure at the same scale as that used for the architectural plans. Indicate the grid system (dimensioned), columns, load-bearing walls, shear walls, footings and related items.	
Mechanical drawings: Floor plans shall show: (a) Mechanical equipment including air handling units, chillers, cooling towers, pumps, converters, expansion tanks, boilers, fans, fan coil units, heat exchangers, and other equipment. (b) Mains for each duct system. (c) Typical supply and return air zones for each area. A typical air zone shall include the terminal unit with all applicable branch ducts and air outlets and inlets.	

Design Development (DD) Submittals	Due Date
(d) Typical exhaust air duct for each type of application (toilet rooms, janitors' closets, transformers, mechanical/electrical equipment rooms as required for satisfactory indoor environment).	
Plumbing drawings: Floor plans shall show: (a) Main waste lines and stacks and vents as well as all service mains, including those for water, air and vacuum.	
Electrical drawings: Electrical drawings shall provide a conceptual single-line diagram showing permanent as well as temporary points of connection to high-voltage, telephone, and signal systems. Electrical drawings shall also include: (a) Method of service (Project or local Utility) showing primary service to loop switch. (b) Major components of the emergency power system.	
Sole source list: The Project Company shall submit a list of each item of equipment and/or each system to be designated as sole source by the notation in the documents, "or equal (no known equal)". This list shall include: (a) A description of each item of equipment and/or each system. (b) A justification as to why each item of equipment and/or system needs to be from a sole source. Include brief performance specifications detailing those features which are unique or state-of-the-art, or preclude use of an alternative product.	
Cost: Provide updated cost analysis in the Basis of Design.	

Design Development (DD) Submittals	Due Date
100% design development documents	As provided in the Project Schedule.
Code Analysis:	

Design Development (DD) Submittals	Due Date
The Project Company shall submit an updated code analysis based on the advancement of the Schematic Design Submittal.	
Basis of Design: The Project Company shall submit an updated Basis of Design report as outlined in Section 28.3 (Basis of Design Submittal) of this Section.	
Material board: (a) The Project Company shall submit an updated digital material board, if applicable, based on the advancement of the Schematic Design Submittal. (b) The Project Company shall submit updated renderings, as applicable, based on modifications of the Schematic Design Submittal.	
Area tabulation: The area tabulation will consist of a space-by-space comparison of the Schematic Design Submittal documents' net square footage with the Courthouse Program's net square footage. These tabulations shall be made by floor and program component.	
Civil: Civil drawings Shall Include: (a) Updated drawings based on the advancement of the Schematic Design Submittal. (b) Grading plans updated to show general method of site drainage, including benchmark references and elevations of major elements including those for stairways, walls, and plazas. (c) Utility plans updated to show all utility lines, ductbanks, and equipment that are abandoned, removed, or rerouted. (d) Conceptual bicycle routing plan, roadways and parking areas. (e) Proposed temporary Utilities.	
Landscape: The landscape design shall show hardscape and plantings and other improvements.	
Architectural drawings: (a) Architectural drawings shall include updated drawings based on the advancement of the Schematic Design Submittal.	

Design Development (DD) Submittals	Due Date
(b) Floor plans of each level showing: (i) Corridors (with widths). (ii) Door swings. (iii) Locations and fire ratings of all fire separations, exit enclosures, fire doors, and similar elements, as required by applicable codes. (iv) Accessible toilets and drinking fountains. (v) Plumbing fixtures such as lavatories, floor drains, water closets, urinals, service sinks, and fire-hose cabinets. (vi) Built-in features such as fixed seats, kitchen equipment, display cases, counters, shelves, lockers, and similar items. (vii) Movable furniture, which in most cases is "not in contract" ("**NIC**"). Differentiate between movable furniture and equipment and built-in furniture and equipment. (viii) Reference all sections and elevations. (ix) Roof plans updated to show associated equipment, slopes, drains and other items. (c) Building exterior elevations: (i) Building elevations shall include updated drawings based on the advancement of the Schematic Design Submittal. (ii) Indicate entrances, doors, stairs, platforms, louvers, vents, retaining walls, proposed finished grades and similar items. (d) Building sections: (i) Building sections shall include updated drawings based on the advancement of the Schematic Design Submittal. (ii) Include longitudinal and transverse sections for each major area, indicating floor elevations, existing and proposed exterior grades, ceiling heights, unexcavated areas, basement areas, rooflines, and parapets. (e) Schedules, including: (i) Door schedule indicating each door type; size and material, hardware group and pertinent comments.	

Design Development (DD) Submittals	Due Date
(ii) Window / storefront schedule indicating each window or storefront type, size, material and pertinent comments. (iii) Preliminary interior finish schedule indicating the material texture and color of each finish material proposed for use in the Project.	
Interiors: Provide interior elevations and updated materials and finishes based on the advancement of the Schematic Design Submittal.	
Structural drawings: Structural drawings shall provide plan for each level of the structure at the same scale as that used for the architectural plans. Indicate the grid system (dimensioned), columns, load-bearing walls, shear walls, footings and related items.	
Mechanical drawings: Floor plans shall show: (a) Mechanical equipment including air handling units, chillers, cooling towers, pumps, converters, expansion tanks, boilers, fans, fan coil units, heat exchangers, and other equipment. (b) Mains for each duct system. (c) Typical supply and return air zones for each area. A typical air zone shall include the terminal unit with all applicable branch ducts and air outlets and inlets. (d) Typical exhaust air duct for each type of application (toilet rooms, janitors' closets, transformers, mechanical/electrical equipment rooms as required for satisfactory indoor environment). (e) Show layout of all equipment rooms to ensure that the proposed equipment will fit in the assigned space.	
Plumbing drawings: Floor plans shall show: (a) Plumbing fixtures and any equipment requiring plumbing service (including pumps, tanks, generators, pressure-reducing valves, etc.) showing their locations and required piping connections. (b) Main waste lines and stacks and vents as well as all service mains, including those for water, air and vacuum.	

Design Development (DD) Submittals	Due Date
(c) Plumbing chases, fire water mains, standpipes and hose racks.	
Electrical drawings: Electrical drawings shall provide a conceptual single-line diagram showing permanent as well as temporary points of connection to high-voltage, telephone, and signal systems. Electrical drawings shall also include: (a) Method of service (Project or local Utility) showing primary service to loop switch. (b) Major transformers and transformer substations. (c) Secondary service to switchboards, motor control centers, distribution boards and panel boards for power and lighting. (d) Major components of the emergency power system.	
Sole source list: The Project Company shall submit a list of each item of equipment and/or each system to be designated as sole source by the notation in the documents, “or equal (no known equal)”. This list shall include: (a) A description of each item of equipment and/or each system. (b) The estimated cost of each item of equipment and/or each system. (c) A justification as to why each item of equipment and/or system needs to be from a sole source. Include brief performance specifications detailing those features which are unique or state-of-the-art, or preclude use of an alternative product.	
Cost: Provide updated cost analysis in the Basis of Design.	
Updated BIM Record Model	

Table 6. 28.2 (Design Development Submittals)

28.4.3 50% Construction Document Submittals

50% Construction Documents Submittal	Due Date
50% Construction Documents Submittal	As provided in the Project Schedule.
Code analysis: The Project Company shall submit an updated code analysis based on the advancement of the Design Development Submittal.	
Basis of Design:	

50% Construction Documents Submittal	Due Date
The Project Company shall submit an updated Basis of Design report as outlined in Section 28.3 (Basis of Design Submittal) of this Section.	
Material board: (a) The Project Company shall submit a physical material board based on the advancement of the Design Development Submittal. (b) The Project Company shall submit updated renderings, if applicable, based on modifications of the Design Development Submittal.	
Area tabulation: The Project Company shall submit an updated area tabulation based on the advancement of the Design Development Submittal.	
Civil: Civil drawings shall include: (a) Existing civil survey. (b) Site demolition plan. (c) Composite Utility Plan: (i) Coordinate size and location for all stub outs for connection by architectural, mechanical, plumbing, electrical, etc. (ii) Indicate identification numbers on all new manholes, valve boxes, cleanouts, lift stations, etc. (iii) Completely design steam and condensate lines. (iv) Show locations, sizes and elevations of the New Courthouse Project Site sewer, street water main, and water service into the New Aloha New Courthouse. (d) Project Site plan. (e) Rough grading plan, including drainage structures. (f) Project Site profile sections. (g) Details.	
Landscape: The landscape drawings shall include: (a) Finished grading plan. (b) Hardscape (paving) plan. (c) Irrigation plan.	

50% Construction Documents Submittal	Due Date
(d) Planting plan. (e) Hardscape details (walls, walks, planters, etc.). (f) Irrigation detail. (g) Planting details. (h) Other details as appropriate.	
Architectural drawings: (a) Architectural drawings shall include updated drawings based on the advancement of the Design Development Submittal. (b) Floor plans of each level shall include: (i) Reflected ceiling plans showing all penetrations. (ii) Details. (iii) Room names and/or numbers.	
Structural drawings: Structural drawings shall include updated drawings based on the advancement of the Design Development Submittal, and: (a) Schedules (beam, column and slab). (b) Details of all connections, assemblies, expansion joints and similar items. (c) Details of the structural framing systems required to support nonstructural elements and fixed equipment.	
Mechanical drawings: (a) mechanical floor plans showing the complete HVAC systems including: (i) Heating and steam mains, including branches, with pipe sizes. (ii) Air-conditioning systems including refrigerators, water and refrigerant piping, and duct work. (iii) Exhaust and supply ventilating systems showing duct sizes for steam or water connections and piping. (iv) Air and piping systems, including all branches, on each floor plan. (b) Detailed floor plans and sections clearly indicating the work required for all mechanical equipment rooms:	

50% Construction Documents Submittal	Due Date
(i) Air balance schedule indicating the cubic feet per minute (CFM) of outside air, supply air, return air, and exhaust air for each air system. (c) Elevations of built-up fan units to ensure required airflows and access to the component parts of the units. (d) Flow diagram for each of the following types of water systems, including chilled water, condenser water, hot water and others as needed to clearly define the scope of work. (e) Riser diagram for each type of system (air, chilled water, heating hot water, and specialty systems). (f) Mounting details. (g) Sequence of operations diagram.	
Plumbing drawings: (a) Floor plans shall show: (i) Locations, sizes, and elevations of the building sewer, drains, waste, and waste vent stacks with connections to drains, fixtures, and equipment. (ii) Locations and sizes of hot, cold, and circulation water mains, branches, and risers from the service entrance and tanks. (iii) Fire-extinguishing equipment such as sprinklers and wet/dry standpipes. (iv) Locations and sizes of vacuum and similar systems. (b) Riser diagrams for each system shall show all plumbing stacks with vents, water risers, and fixture connections; materials, gauges, and sizes for all elements. (c) Sections shall show structural, HVAC, and piping systems through congested areas.	
Electrical drawings: Electrical service entrance and its service switches, the service feeds to the public service feeders, and the characteristics of the light and power currents. Transformers and their connections, whether in the building or on the New Courthouse Project Site. Main switchboard, power panels, light panels, and associated equipment. Feeder and conduit sizes.	
Sole source list:	

50% Construction Documents Submittal	Due Date
The Project Company shall submit a list of each item of equipment and/or each system to be designated as sole source by the notation in the documents, "or equal (no known equal)". This list shall include: (a) A description of each item of equipment and/or each system. (b) The estimated cost of each item of equipment and/or each system. (c) A justification as to why each item of equipment and/or system needs to be from a sole source. Include brief performance specifications detailing those features which are unique or state-of-the-art, or preclude use of an alternative product.	
Cost: Provide updated cost analysis in the Basis of the Design.	
Updated BIM Record Model.	

Table 6. 28.3 (50% Construction Document Submittals)

28.4.4 Final Design Documents Submittal

Final Design Documents	Due Date
Final Design Documents: The Project Company shall submit: (a) Final Basis of Design. (b) 100% Specifications. (c) 100% Construction Documents. (d) Final Code Analysis. (e) Final Area Tabulation. (f) Final Material Board. (g) Final BIM Record Model.	As provided in the Project Working Schedule.

Table 6. 28.4 (Final Design Documents Submittal)