跨境執業的設計協作與實踐

國家地震中心

海外職業經驗線上分享

2022.06.30

JJP

個人簡介

李大威

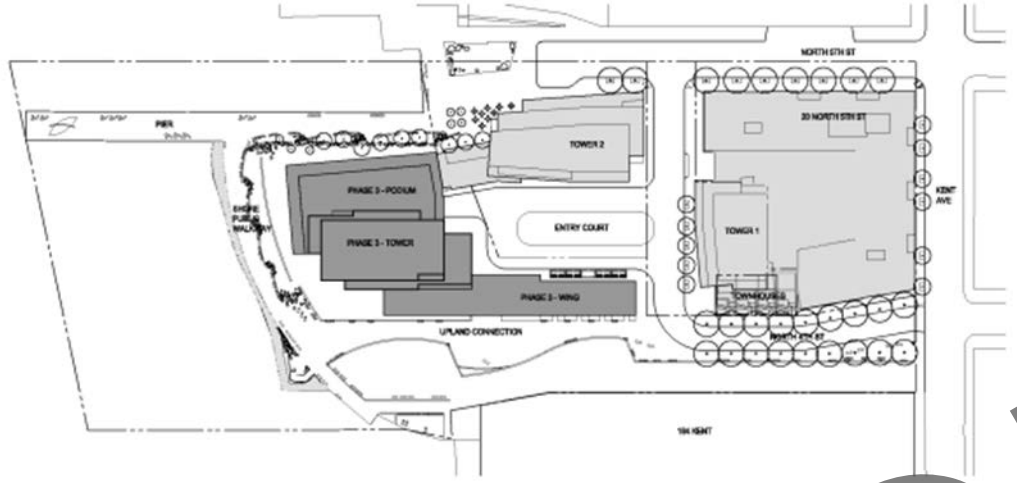
國際長 / 協理

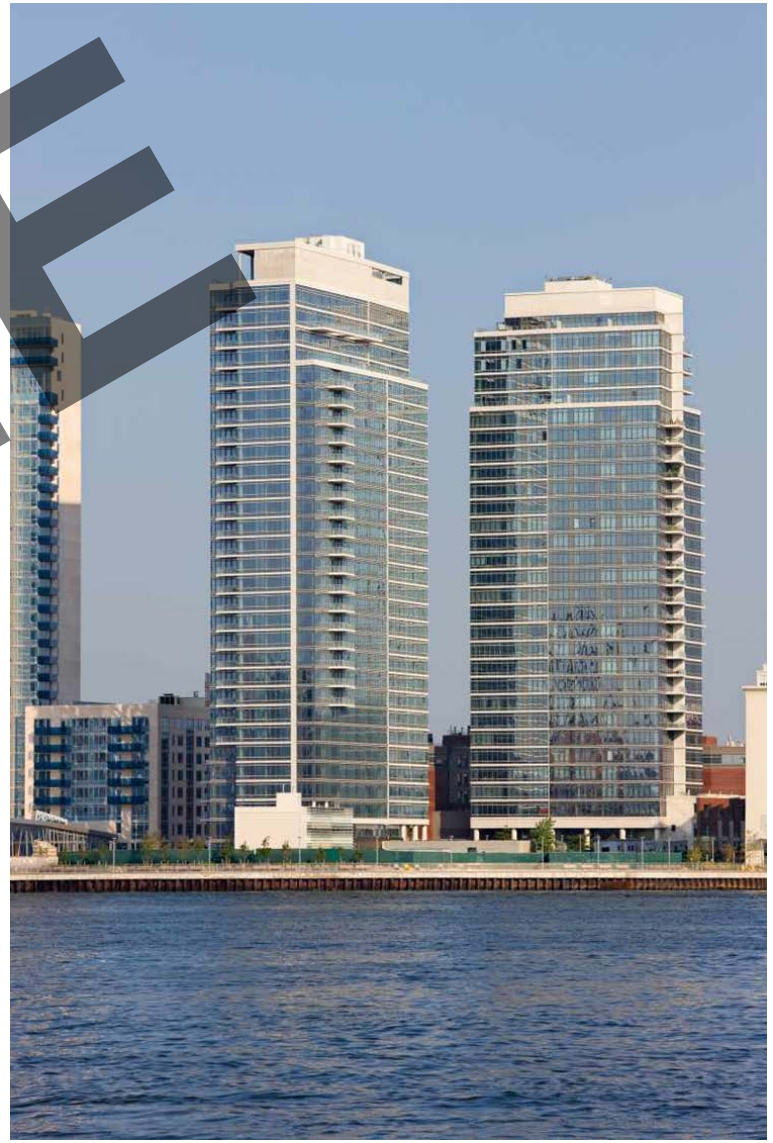
JJP
ARCHITECTS
& PLANNERS
潘冀聯合建築師

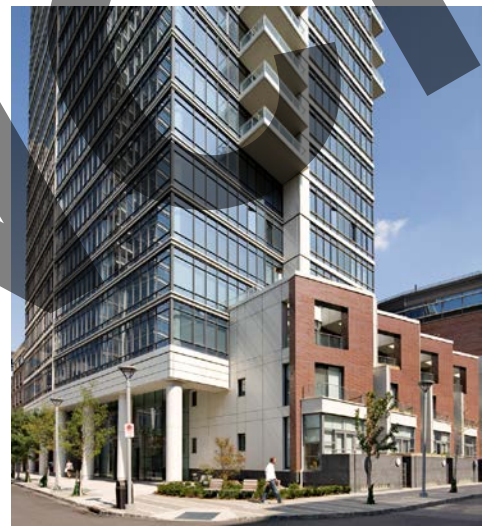
學　　歷	美國紐約哥倫比亞大學建築碩士	
	美國加州柏克萊大學建築學士	
專業註冊	美國州紐約州註冊建築師	
	美國建築師協會會員	
	美國能源與環境設計領導（LEED®）認證設計專業人員 (LEED AP)	
	美國健康建築（WELL®）專業認證人員 (WELL AP)	
主要經歷	潘冀聯合建築師事務所	2011 ~ 迄今
	美國紐約 FXFOWLE 建築師事務所	2002 ~ 2011
	美國洛杉磯 LEO A DALY 建築師事務所	1998 ~ 1999
參與項目	高鐵桃園站前車專區地上權案備標作業 / 國泰人壽保險股份有限公司	
	台北捷運劍潭站TOD大樓統包 / 根基營造股份有限公司	
	研華美國總部 / 研華股份有限公司	
	宸琚市民大道都更案前期規劃 / 宸琚股份有限公司	
	高通竹科園區廠房新建 / 台灣高通股份有限公司	
	高雄機場新航廈綜合規劃及基本設計服務案 / 交通部民用航空局	
	巨大機械總部大樓 / 巨大機械工業股份有限公司	
	富邦金控福州總部大樓 /	
	高鐵桃園站特定產業專用區二期 / 國泰人壽保險股份有限公司	
	高鐵桃園站特定產業專用區一期 / 國泰人壽保險股份有限公司	
	台達電北美總部大樓新建	
	景德製藥眼科製劑蘆竹廠新建工程 / 景德製藥股份有限公司	
	美國紐約 Northside Piers 集合住宅	
	美國紐約 Navy Green 集合住宅	
	美國紐約 Second Ave Subway 地鐵規劃設計案	
	美國洛杉磯 Cathedral of Our Lady of the Angels 大教堂	

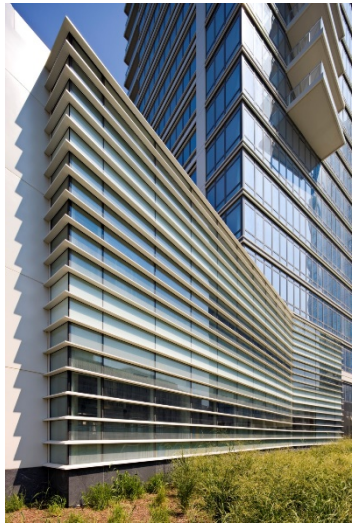
個人簡介

個人簡介









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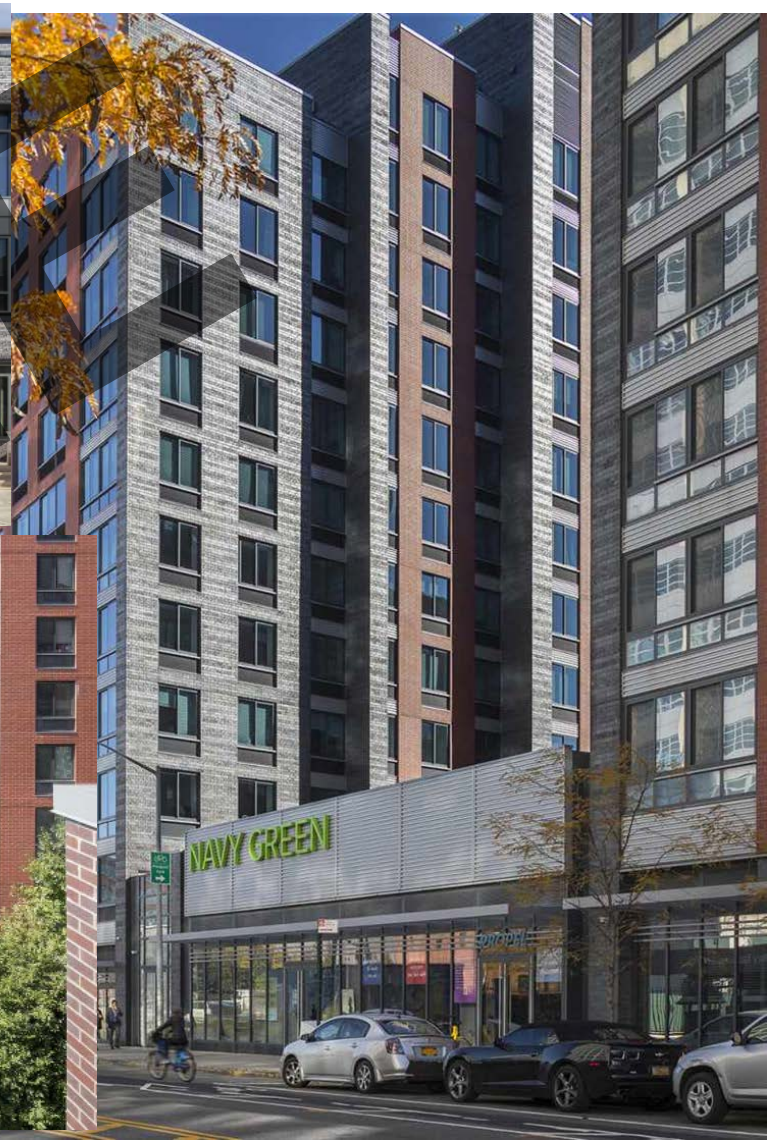
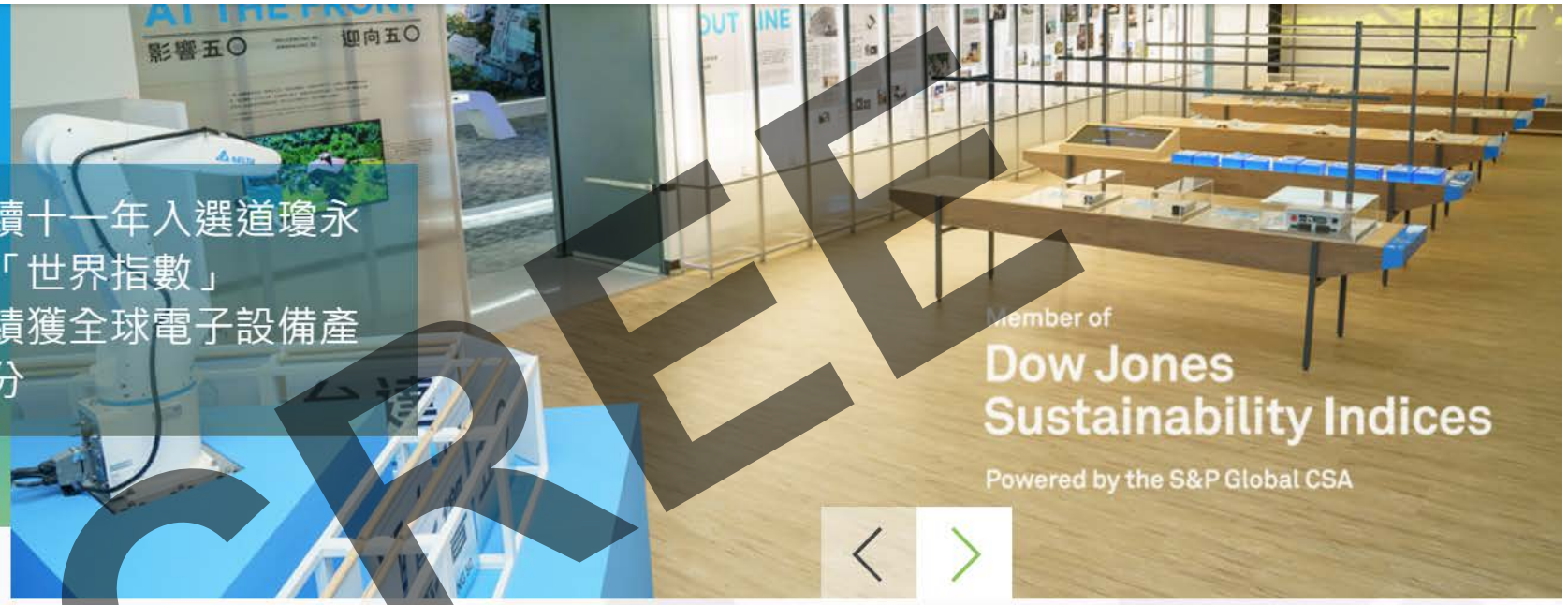


個人簡介

個人簡介

台達電

台達電



台達連續十一年入選道瓊永續指數「世界指數」整體成績獲全球電子設備產業最高分

335	22	310.3	27
億度	%	百萬度	小時
2010至2020年間高效產品協助全球客戶節電總量	2020年碳密集度(SBT) (公噸二氧化碳當量/百萬美金產值)	2020年自發自用與外購的綠色電力	全球教育訓練人均時數

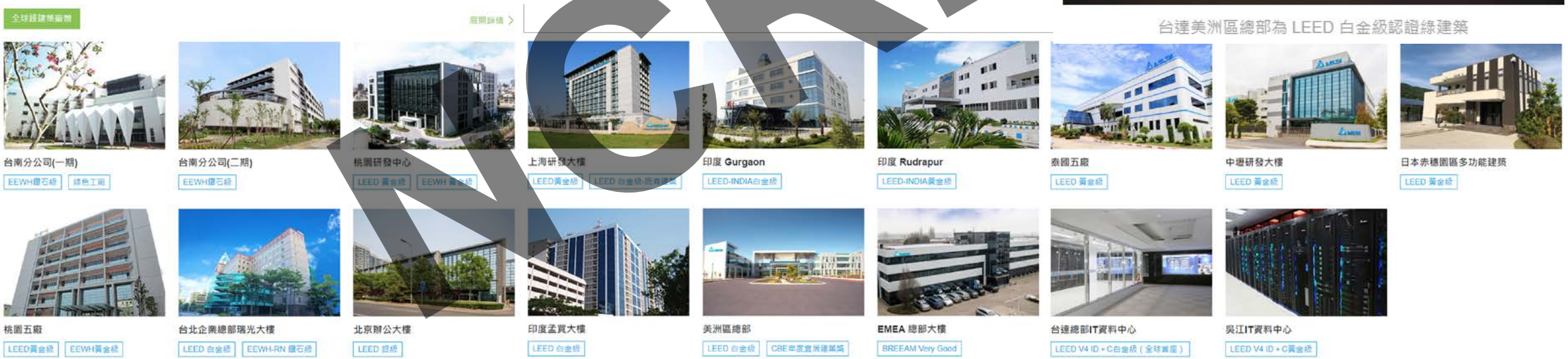
台達電

綠建築

台達在全球範圍內自建及捐建27棟綠建築，以及2座綠色資料中心，2019年，經認證的15棟廠辦及5棟捐建綠建築，共計節電2,148萬度電，約當減少13,415噸碳排。

身為綠建築倡導者，台達承諾未來新建的廠房或辦公大樓，以及對外捐建的建築物，都會是綠建築，並將持續善用核心技術能力，發展智慧節能相關解決方案，投入綠建築的應用與推廣。

台達美洲區總部為 LEED 白金級認證綠建築



台達電

CONTRACT

法網遊龍

合約

"BUILD IT, AND THEY WILL SUE."

"WERE THE BUILDING CONTRACTORS FOR THE LEANING TOWER OF PISA SUED?"

合約

AIA
Contract
Documents

合約

AIA Contract Documents

AIA Contract Documents are divided into nine families based on project type or delivery method. Documents in each family provide a consistent structure and text base to support the major relationships on a design and construction project.

1. Construction Manager as Adviser
2. Construction Manager as Constructor
3. Conventional
4. Design-Build
5. Integrated Project Delivery
6. Interiors
7. International
8. Single Family Residential
9. Small Projects

合約

AIA Contract Documents

Conventional (A201) Family
This is the most commonly used family of documents because it is suitable for the conventional delivery approach of design-bid-build.

Type of Project
When the owner's project is divided into separate contracts for design (with the architect) and construction (with one or more contractors), it may be appropriate to use the A201 family.

Size
Small to large projects

Document Numbers
A101, A101SP, A102, A103, A107, A121, A201, A201SP, A221, A401, A401SP, A503, A521, A701, B101, B101SP, B102, B103, B103SP, B104, B106, B107, B108, B109, B121, B144ARCH-CM, B201, B202, B203, B204, B205, B206, B207, B209, B210, B211, B212, B214, B221, B252, B253, B503, B509, C101, C102, C103, C201, C202, C401, C401SP, C402, C421, C422, and D503

合約

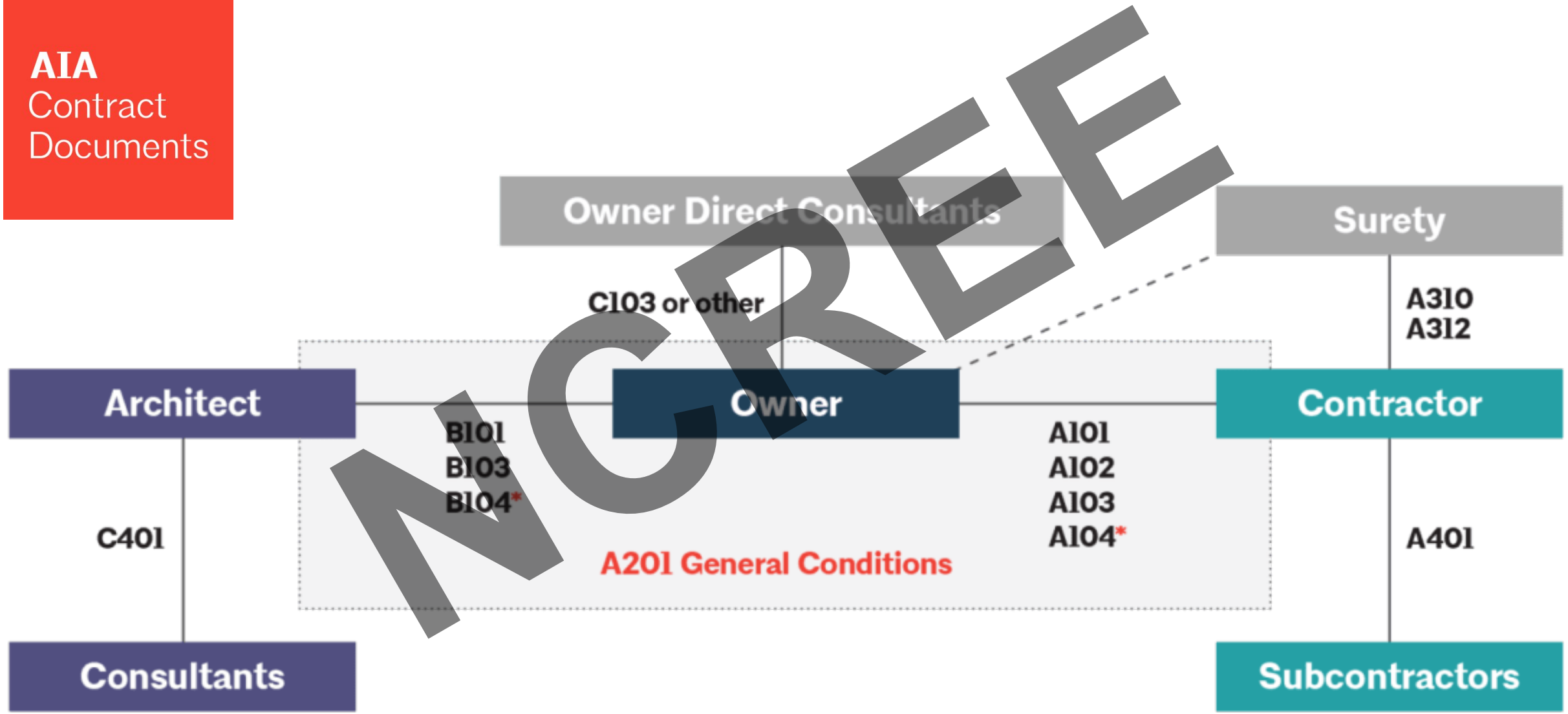
AIA Contract Documents

AIA Contract Documents are divided into six alphanumeric series by document use or purpose.

A-Series: Owner/Contractor Agreements
B-Series: Owner/Architect Agreements
C-Series: Other Agreements
D-Series: Miscellaneous Documents
E-Series: Exhibits
G-Series: Contract Administration and Project Management Forms

合約

AIA
Contract
Documents



合約

AIA Contract Documents

B-Series: Owner/Architect Agreements

B101–2017, Standard Form of Agreement Between Owner and Architect

Contract typically used with large projects in conjunction with A201-2017. Services listed are divided into basic, supplemental, and additional services. It may be used with a variety of compensation methods, including percentage of the budget for construction cost and stipulated sum.

1. A201–2017, General Conditions of the Contract for Construction

2. This contract sets the rights, responsibilities, and relationships of the owner, contractor, and architect. Various design-bid-build agreements incorporate and reference this “umbrella” document.

合約

Owner

DELTA

Design Architect

JJP ARCHITECTS & PLANNERS 潘冀聯合建築師

Architect of Record

KSH ARCHITECTS
KORTH SUNSERI HAGEY

Consultants

合約

AIA® Document B101™ – 2007

Standard Form of Agreement between Owner and Architect

AGREEMENT made as of the 7th day of [illegible] in the year 2011
(In words, indicate day, month and year.)

BETWEEN the Architect's client identified as the Owner:
(Name, address and other information)

Delta America Ltd.
4405 Cushing Parkway
Fremont, CA94538
USA (510)668-5580

and the Architect:
(Name, address and other information)
J.J.Pan and Partners
21, Alley12, Lane118, Ren Ai Road, Section 3
Taipei, Taiwan, R.O.C
Tel: 886-2-2701-2617

Korth Sunseri Hagey Architects
650 California Street, Fourth Floor
San Francisco, CA94108
Tel: (415)954-1960

Note:
J.J.Pan and Partners serves as Design Architect collaborating with Architect of Record *Korth Sunseri Hagey Architects* (KSH Architects) both of which together will provide immediate and responsible directions of architectural services to achieve project completion at the duration of the Agreement. See Attachment C for Project Responsibility Matrix

合約

TABLE OF ARTICLES

1	INITIAL INFORMATION
2	ARCHITECT'S RESPONSIBILITIES
3	SCOPE OF ARCHITECT'S BASIC SERVICES
4	ADDITIONAL SERVICES
5	OWNER'S RESPONSIBILITIES
6	COST OF THE WORK
7	COPYRIGHTS AND LICENSES
8	CLAIMS AND DISPUTES
9	TERMINATION OR SUSPENSION
10	MISCELLANEOUS PROVISIONS
11	COMPENSATION
12	SPECIAL TERMS AND CONDITIONS
13	SCOPE OF THE AGREEMENT

EXHIBIT A INITIAL INFORMATION

Attachment A Service Fee Distribution
Attachment B Schedule For Hourly Rate and Reimbursable Expenses
Attachment C Project Responsibility Matrix
Attachment D Project Milestone Schedule
Attachment E Compensation - Fee Schedule

This Agreement entered into as of the day and year first written above.

OWNER

(Signature)

MS Huang, President

(Printed name and title)

ARCHITECT

JJPAN and PARTNERS

JOSHUA JIH PAN PRINCIPAL

(Printed name and title)

(Signature) 12.6.2011

ARCHITECT

KSH Architects

JAMES SUNKERN PRINCIPAL

(Printed name and title)

(Signature) 12.5.11

合約

§ 2.5 Insurance (This Section 2.5 is applicable to Architect of Record only.)

§ 2.5.1 Architect shall, at its expense, procure and maintain insurance as defined below on all services provided by or for Architect under this Agreement, by companies reasonably acceptable to Owner as follows:

勞工賠償保險及雇主責任保險

- Workers' Compensation and Employers Liability Insurance. Workers' Compensation Insurance shall be provided as required by any applicable Laws in the state or jurisdiction where work is to be performed or Services provided. Employers Liability Insurance shall be provided in amounts not less than $1,000,000 per accident for bodily injury by accident, $1,000,000 policy limit by disease, and $1,000,000 per employee for bodily injury by disease. If there is an exposure of injury to Architect's employees under the U.S. Longshoremen and Harbor Workers' Compensation Act, the Jones Act or under Laws applicable to maritime employees, then coverage shall be included for such injuries or claims. Where permitted by Law, such policies shall allow waivers of the insurer's subrogation rights against Owner.

綜合責任保險

- General Liability Insurance. Architect shall carry either Comprehensive General Liability or Commercial General Liability insurance covering all operations by or on behalf of Architect with limits of liability and coverage as indicated below: (i) premises and operations; (ii) products and completed operations; (iii) contractual liability; (iv) broad form property damage (including completed operations); (v) explosion, collapse and underground hazards when Architect will create risk normally requiring such insurance; and (vi) personal injury liability. Comprehensive General Liability policy limits shall not be less than a combined single limit for bodily injury, and property damage and personal injury liability of $2,000,000 per occurrence. Commercial General Liability (occurrence) policy limits shall be not less than $2,000,000 per occurrence (combined single limit for bodily injury and property damage), $2,000,000 for personal injury liability; $2,000,000 aggregate for products and completed operations, and $ 2,000,000 general aggregate. Except with respect to products and completed operations coverage, the aggregate limits shall apply separately to Architect's Services under this Agreement.

- Limits of Liability. The limits of general liability insurance required above may be satisfied by a combination of Umbrella or Excess Liability policies. Architect shall not provide a Commercial General Liability (claims made) policy without the express prior written consent of Owner.

合約

汽車責任保險

- Automobile liability insurance. Architect shall carry coverage including owned, hired, and non-owned autos with a combined single limit of liability for each accident of not less than US $1,000,000.

職業責任保險(錯誤或疏漏)

- Professional Liability Insurance (errors and omissions). Architect shall maintain Professional Liability Insurance covering negligent acts, errors or omissions arising out of the rendering of or failure to render professional design or engineering services with respect to the Project, whether committed or alleged to have been committed by Architect by its employees, consultants or others for whom Architect is legally responsible. The limit of liability shall not be less than $1,000,000 each claim and in the aggregate. The policy shall include contractual liability coverage for liability assumed by Architect under this Agreement provided such liability arises out of negligent acts or omissions of Architect, its employees, consultants or subcontractors. Architect shall maintain the Professional Liability Insurance for not less than three (3) years following date of issuance of final completion of the entire Project and final acceptance by Owner.

合約

§ 3.2 SCHEMATIC DESIGN PHASE SERVICES (Design Architect)

§ 3.2.1 The Architect shall review the program and other information furnished by the Owner, and shall review laws, codes, and regulations applicable to the Architect's services.

§ 3.2.2 The Architect shall prepare a preliminary evaluation of the Owner's program, schedule, budget for the Cost of the Work, Project site, and the proposed procurement or delivery method and other Initial Information, each in terms of the other, to ascertain the requirements of the Project. The Architect shall notify the Owner of (1) any inconsistencies discovered in the information, and (2) other information or consulting services that may be reasonably needed for the Project.

§ 3.2.3 The Architect shall present its preliminary evaluation to the Owner and shall discuss with the Owner alternative approaches to design and construction of the Project, including the feasibility of incorporating environmentally responsible design approaches. The Architect shall reach an understanding with the Owner regarding the requirements of the Project.

§ 3.3 DESIGN DEVELOPMENT PHASE SERVICES (Design Architect)

§ 3.3.1 Based on the Owner's approval of the Schematic Design Documents, and on the Owner's authorization of any adjustments in the Project requirements and the budget for the Cost of the Work, the Architect shall prepare Design Development Documents for the Owner's approval. The Design Development Documents shall illustrate and describe the development of the approved Schematic Design Documents and shall consist of drawings and other documents including plans, sections, elevations, typical construction details, and diagrammatic layouts of building systems to fix and describe the size and character of the Project as to architectural, structural, mechanical and electrical systems, and such other elements as may be appropriate. The Design Development Documents shall also include outline specifications that identify major materials and systems and establish in general their quality levels.

§ 3.2.6 The Contractor shall submit to the Owner an estimate of the Cost of the Work prepared in accordance with Section 6.3.

合約

§ 3.4 CONSTRUCTION DOCUMENTS PHASE SERVICES (Architect of Record)

§ 3.4.1 Based on the Owner's approval of the Design Development Documents, and on the Owner's authorization of any adjustments in the Project requirements and the budget for the Cost of the Work, the Architect of Record shall prepare Construction Documents for the Owner's approval. The Construction Documents shall illustrate and describe the further development of the approved Design Development Documents and shall consist of Drawings and Specifications setting forth in detail the quality levels of materials and systems and other requirements for the construction of the Work. The Owner and the Architect acknowledge that in order to construct the Work the Contractor will provide additional information, including Shop Drawings, Product Data, Samples and other similar submittals, which the Architect shall review in accordance with Section 3.6.4.

§ 3.4.2 The Architect shall incorporate into the Construction Documents the design requirements of governmental authorities having jurisdiction over the Project.

§ 3.4.3 During the development of the Construction Documents, the Architect of Record shall assist the Owner in the development and preparation of (1) bidding and procurement information that describes the time, place and conditions of bidding, including bidding or proposal forms; (2) the form of agreement between the Owner and Contractor; and (3) the Conditions of the Contract for Construction (General, Supplementary and other Conditions). The Architect shall also compile a project manual that includes the Conditions of the Contract for Construction and Specifications and may include bidding requirements and sample forms.

§ 3.4.4 The Contractor shall update the estimate for the Cost of the Work.

§ 3.4.5 The Architect of Record shall submit the Construction Documents to the Owner, advise the Owner of any adjustments to the estimate of the Cost of the Work, take any action required under Section 6.5, and request the Owner's approval.

合約

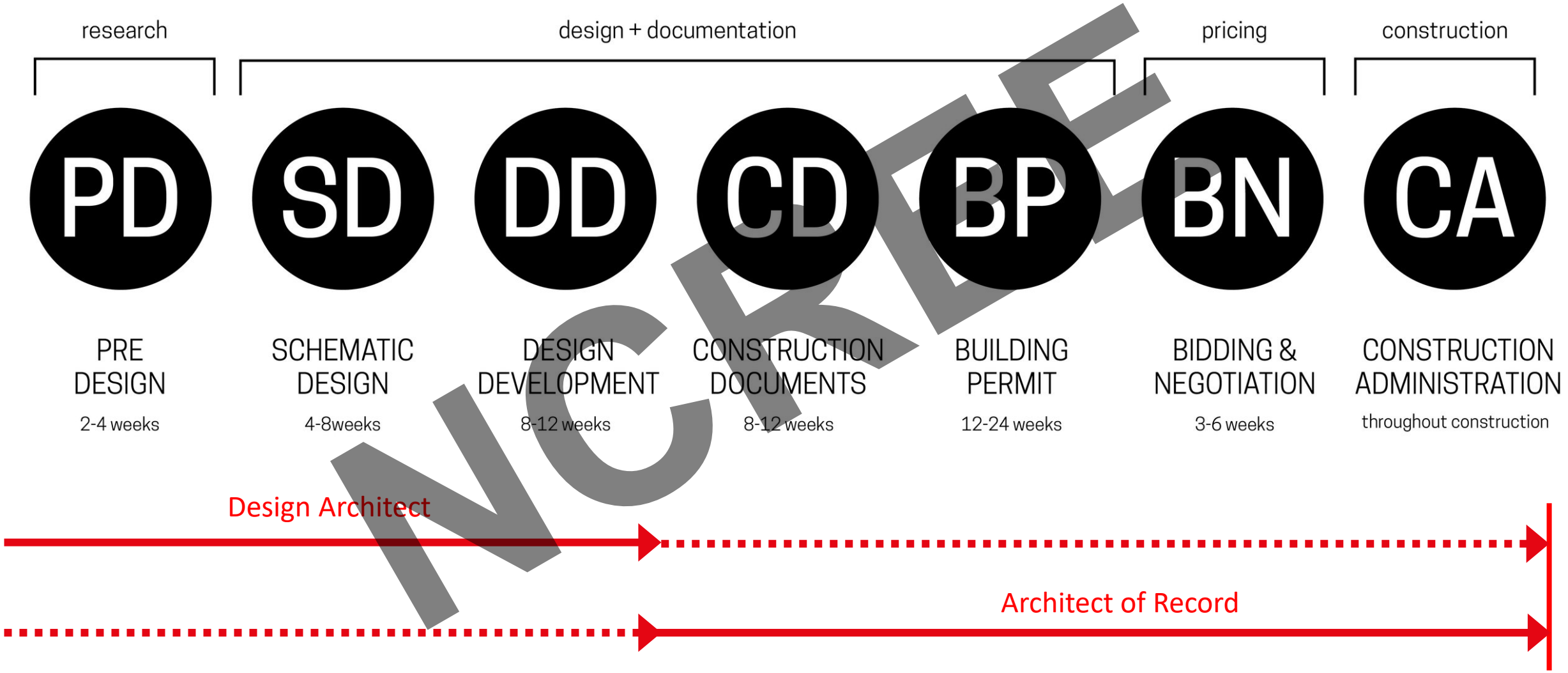
§ 3.6.2 EVALUATIONS OF THE WORK (Architect of Record)

§ 3.6.2.1 The Architect shall visit the site at intervals appropriate to the stage of construction, or as otherwise required in Section 4.3.3, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine, in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of the site visits, the Architect shall keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work.

§ 3.6.2.2 The Architect has the authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect shall have the authority to require inspection or testing of the Work in accordance with the provisions of the Contract Documents, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees or other persons or entities performing portions of the Work.

§ 3.6.2.3 The Architect shall interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests shall be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

合約



合約

	AREAS S.F. 面積
Main Office Building	92,500
Additional Office Area on Top of Warehouse	50,000
Warehouse	50,000
Total Project Gross Area	192,500

Building Area		Parking Ratio	Parking No.#
Main Office	92,500 S.F	300 S.F/ Stall	309
Additional Office	50,000 S.F.	300 S.F/ Stall	167
Warehouse	50,000 S.F	800 S.F/ Stall	63
Total Parking Required			539

3. Owner's Representative: John Hu (Project Construction Manager)
4. Architect's Consultants:

Architect of Record	Korth Sunseri Hagey Architects
Civil Engineering	Kier & Wright
Landscape Architecture	SWA Landscape Architects
Green Building Consultant	Korth Sunseri Hagey Architects
Mechanical Electrical Plumbing	Timmons Design Engineers
Structure Engineering	Nishkian Menninger

5. Owner's Budget for the Cost of Work : USD$ 50,700,000
6. Sustainability : LEED Platinum

合約

Attachment C

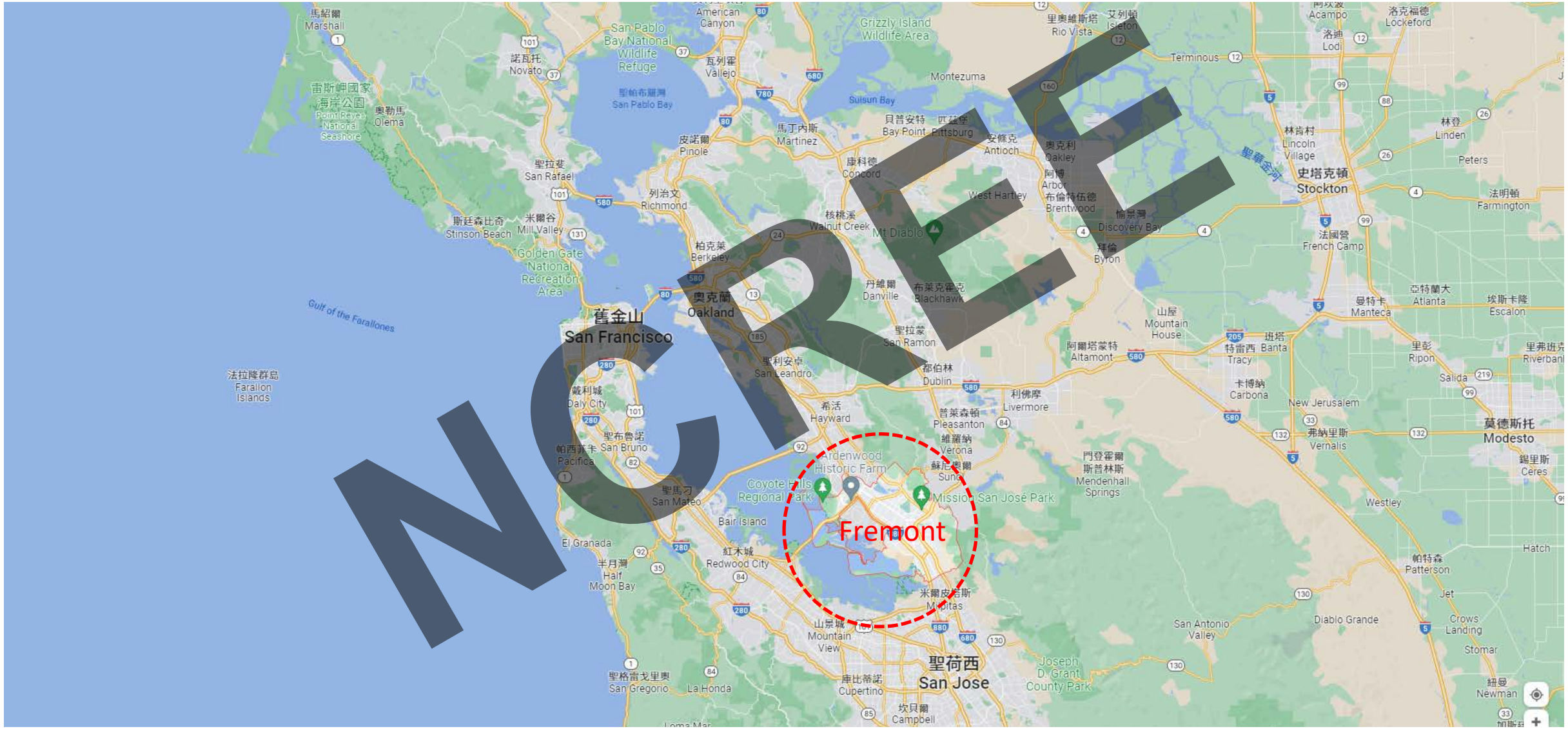
Delta Americas Headquarters Project Responsibility Matrix

6/22/2011

● Lead
○ Assist

No.	Task Descriptions	Owner	A/E Team							Contractor
			JJP	KSHA	Civil	Structure	MEP	Landscape Architect	Cost Estimating*	
1	**General**									
101	Project Schedule Development and Monitoring	●	○	○						
102	Agency Consulting and Submission	○	○	●						
103	Local Consultant Selecting		○	●						
104	Environmental Studies and Reports (Wet Land, Stream Zone, Etc.)	○	○	○	●			○		
105	Zoning Ordinance and Building Code Review for Design Compliance		○	●	○					
106	Planning Board Submission and Public Hearing	●		○	○					
107	Evaluation and Monitoring of Project Budget	●	○	○						
108	Evaluation and Monitoring of Construction Budget	○	●	○						
109	Local Engineer Coordination		●	○						
110	Design Review Comment Coordination	●		○						
111	Response to Design Review Comments		●	○						
2	**Preliminary Design & Schematic Design Phase**									
201	Site Survey	●								
202	Geotechnical Report and Boring Test	●	○				○			
203	Programming	●	○							
204	Economic Feasibility & Construction Phasing Studies	○	●	○						
205	Space Schematics/Flow Diagrams	○	●							
206	On-Site Utility Studies	○			●					
207	Off-Site Utility Studies	○			●					

基地



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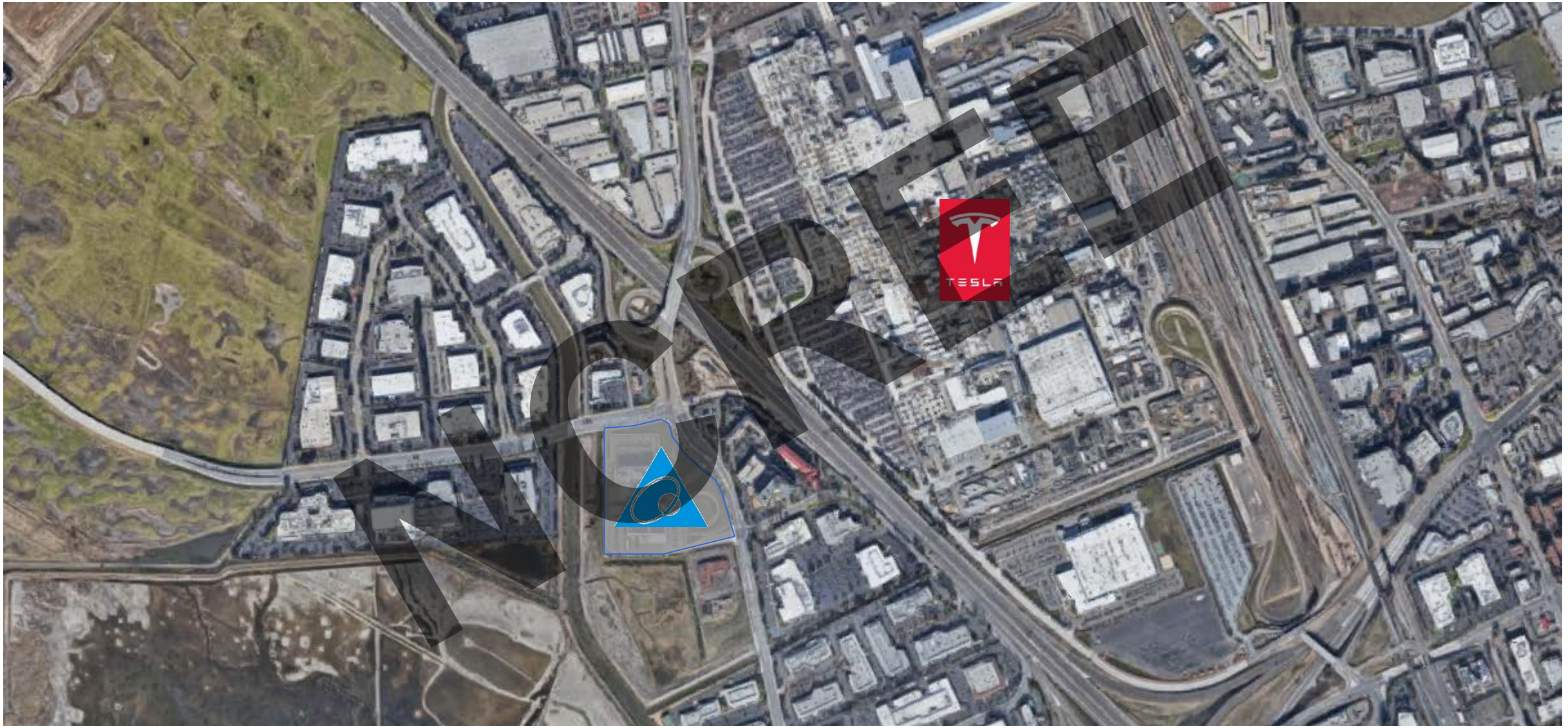


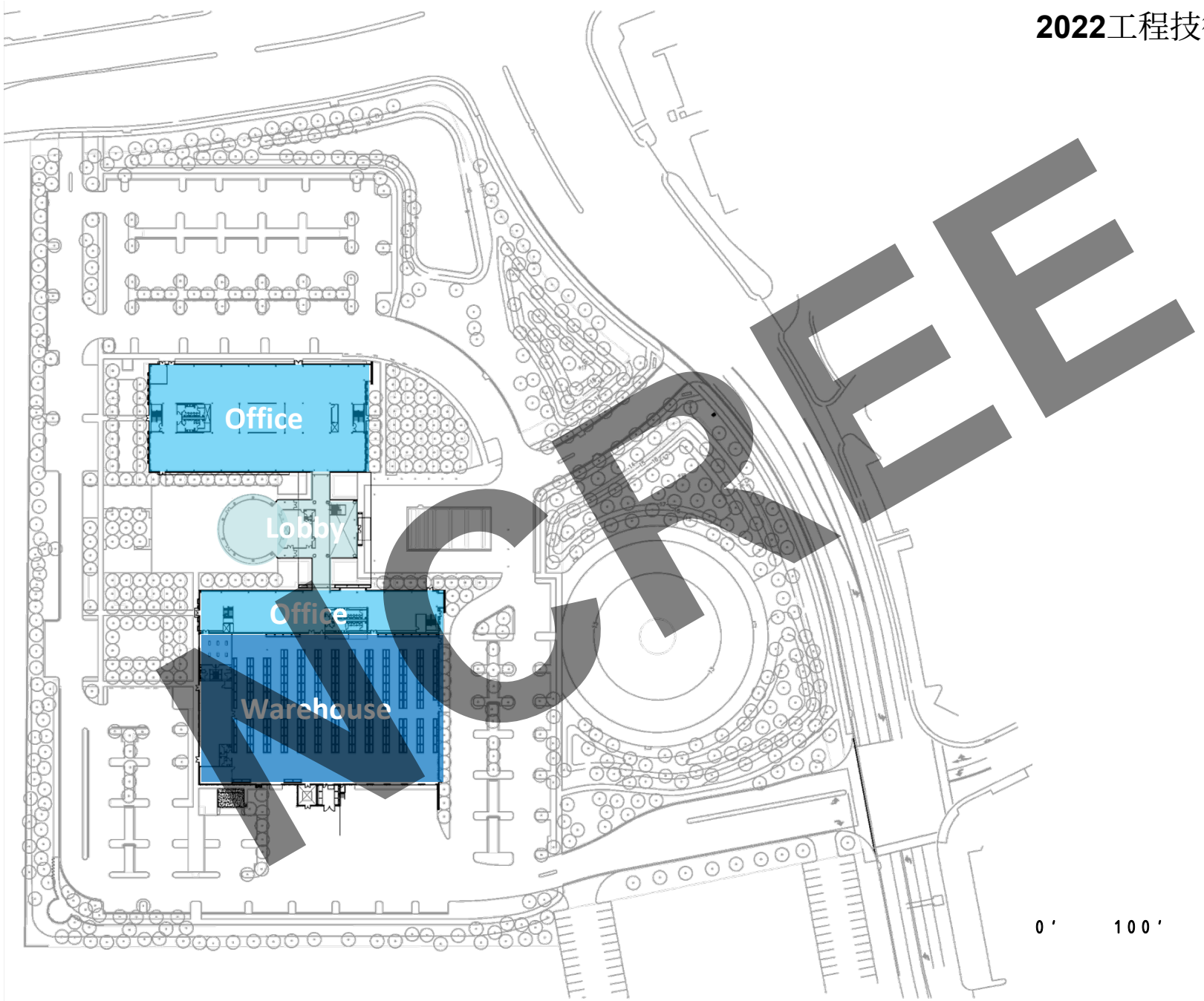
基地

Delta Americas Headquarters

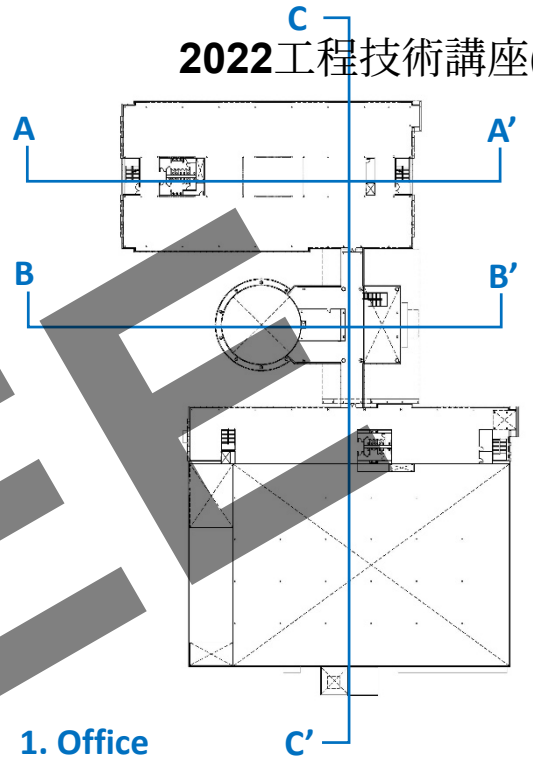
Structural system	Structural Steel Framing w/ Concrete filled Metal Decking
Site area	15.5 acres = 675,180 SF = 62,726m2
Building coverage	92,900SF
Total floor area	179,200 SF = 16,722m2 = 5,058ping
Cost	USD $50,700,000 ($380/SF v. Typ. $250/SF, or NTD400,000/ping)
Design period	2011.07 ~ 2012.08
Construction period	2012.09 ~ 2015.09

基地

配置圖



剖面圖



1. Office
2. Lobby
3. Warehouse
4. Multi-Purpose Room

1

Section A-A'

4

2

Section B-B'

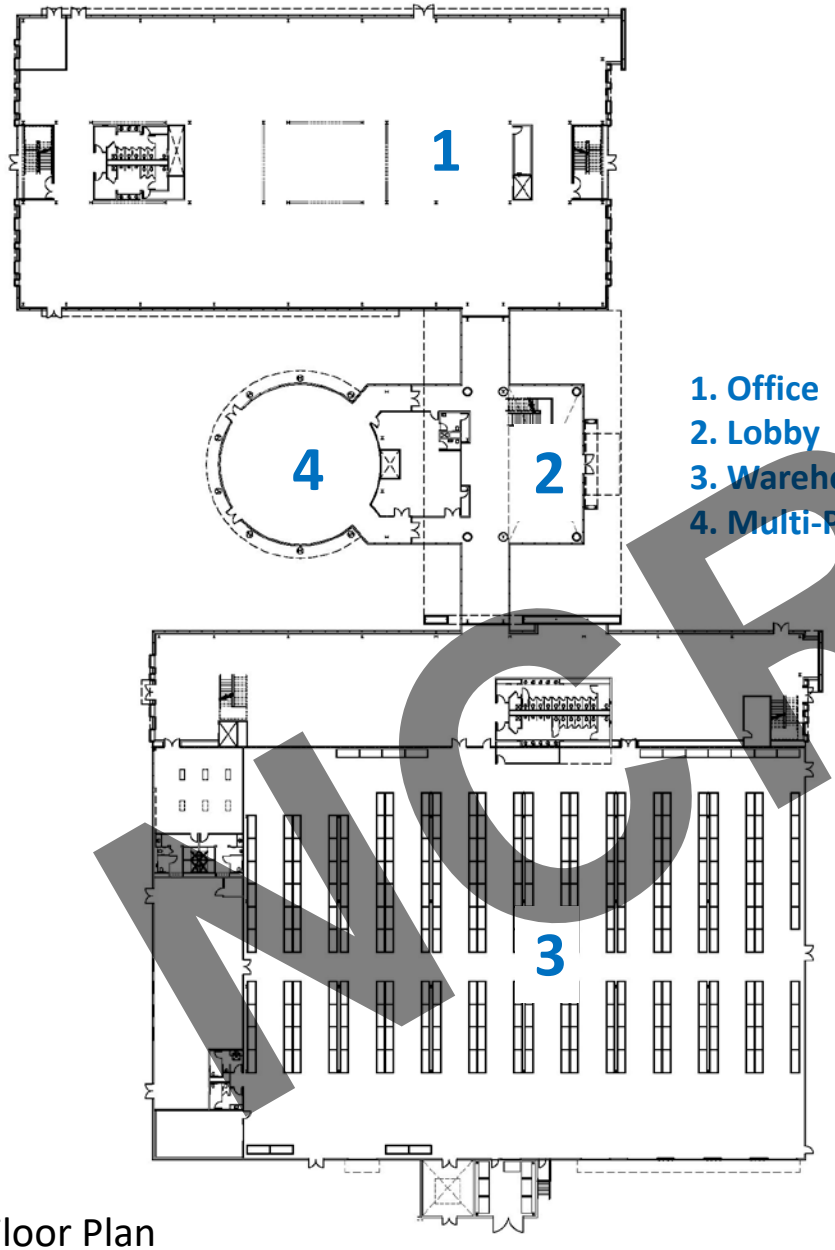
3

2

1

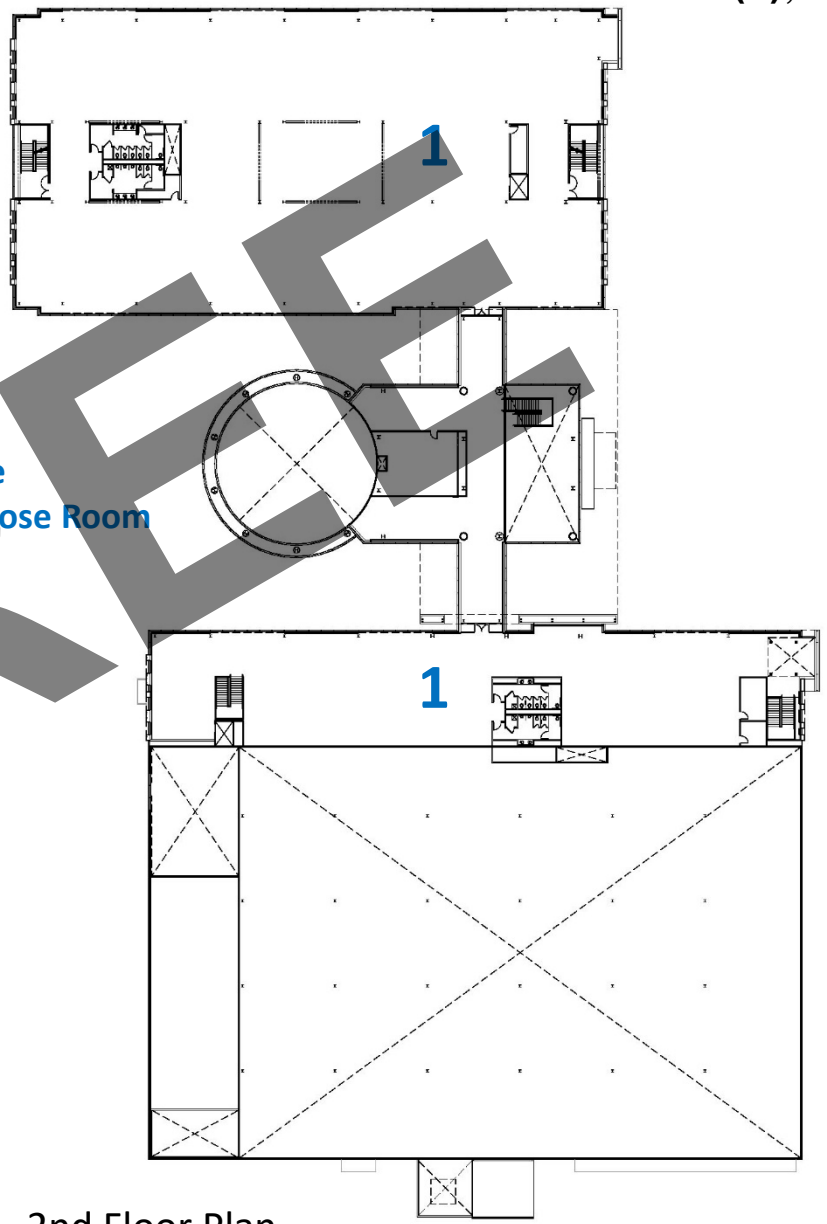
Section C-C'

平面圖



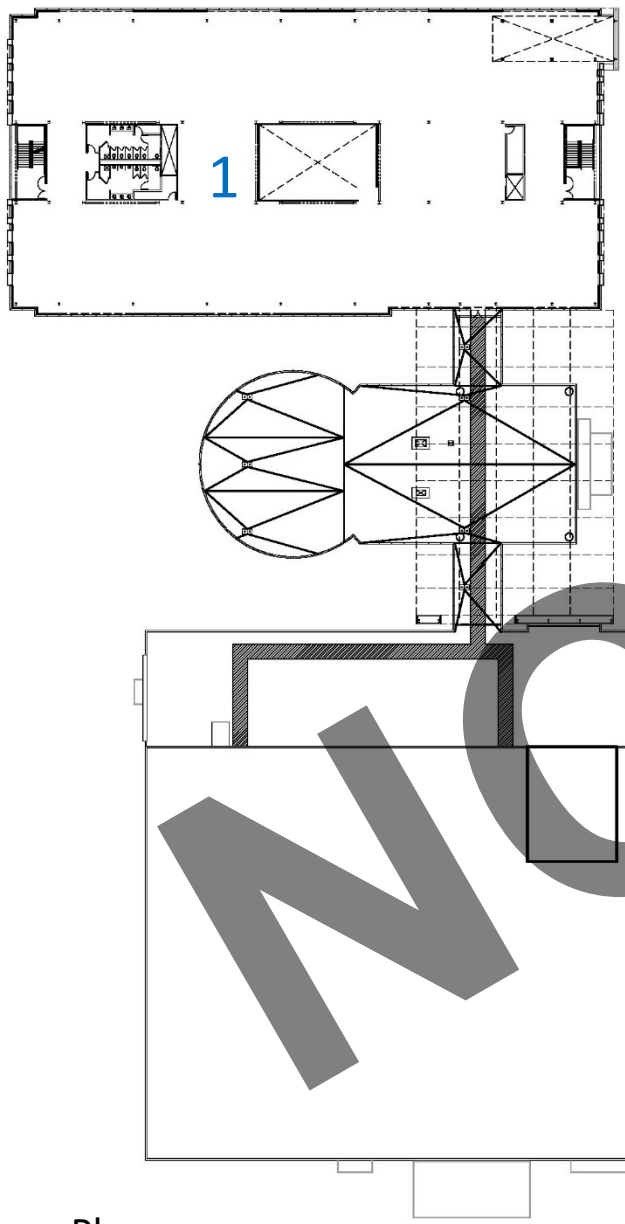
1st Floor Plan

1. Office
2. Lobby
3. Warehouse
4. Multi-Purpose Room

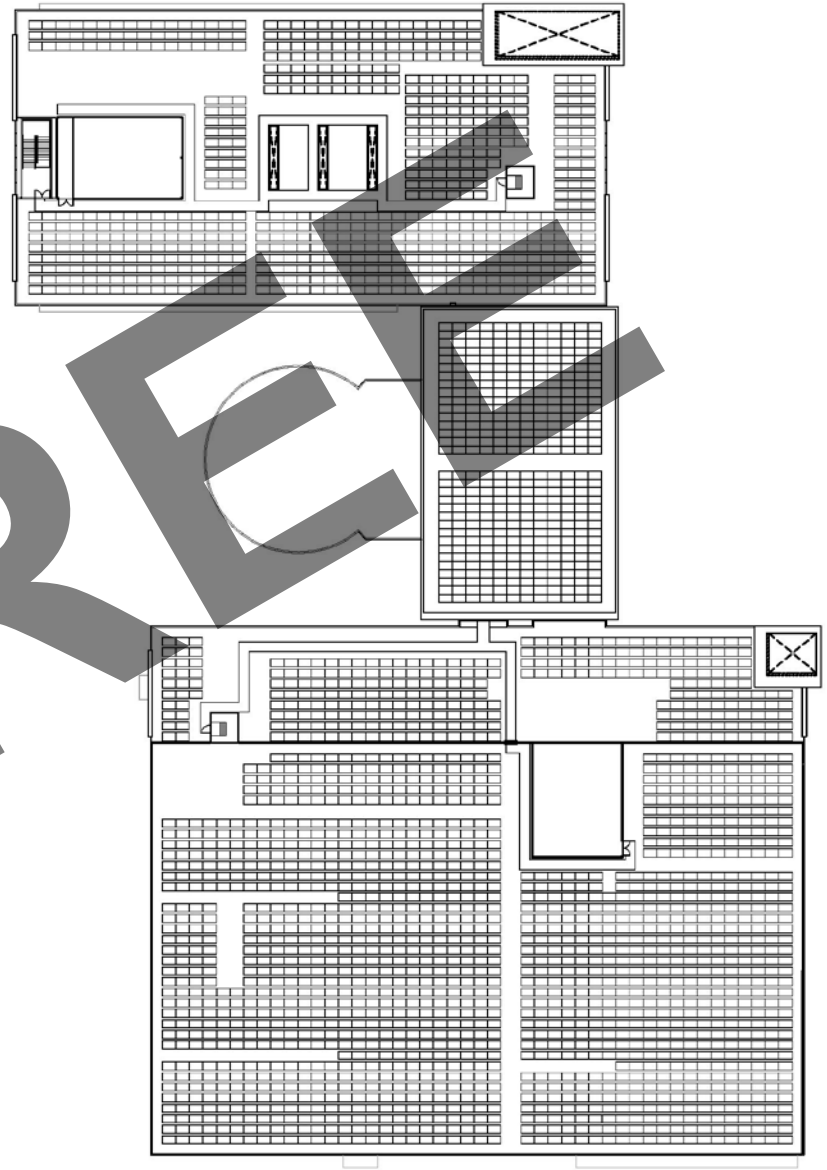


2nd Floor Plan

平面圖



3rd Floor Plan



Roof Plan

1. Office

過程

JJPan Travel Schedule (10/31 ~ 11/05) for Trip to Delta Products Corporation Fremont, California

JJPan Team: Mr. Joshua Jih, Pan (11/03~ 11/05), Principle in Charge
Mr. Steve Hsu, Project Manager
Miss. Shin-Fang Huang, Landscape Architect
Mr. Frank T.S. Yeh, Project Architect

10/31, Monday

15:30 ~ 17:30 Arrival San Francisco International Airport
Check-in Hotel

11/01, Tuesday

8:00 ~ 9:00 Site Visit

9:00 ~ 12:00 Meeting # 1 with Delta/KSHA/all Consultants
- 09/22 Conceptual Design Presentation Review
- Project Goal Initiatives
- Address Program / Design Issues

13:00~17:00 Meeting #2 with Delta/ KSHA
- Design Plan Review
- Workshop with Delta User Group, including all Department Heads and Warehouse Manager

11/02, Wednesday

9:00 ~ 12:00 Meeting #3 with Delta / KSHA / MEP
- Integration of Delta Product into Building Design including Renewable Energy Products and Building Automation System

13:00 ~ 18:00 Meeting #4 and Workshop with KSHA / MEP / Landscape
- Code Review (Title 24 Energy Code)
- Discussion of Green Features achieving LEED Platinum
- Discussion of HVAC System Integrated with Geothermal and Raised Floor Radiant System

1

11/03, Thursday

9:00 ~ 12:00 Visiting LEED Platinum Buildings
- The Public Utilities Commission Headquarters
- California Academy of Sciences

13:00 ~ 18:00 Meeting # 8 with Delta / KSHA / All Consultants
- Address Program / Design issues, if any
- Project Goal Identification
- Discussion of Project Team Collaboration
- Meeting Wrap-up

11/04, Friday

9:00 ~ 12:00 Meeting with short-listed General Contractors
- Clarification of Design Issues for Cost Estimation including Building Envelope, Structural Systems, HVAC Systems and Green Features on Site.

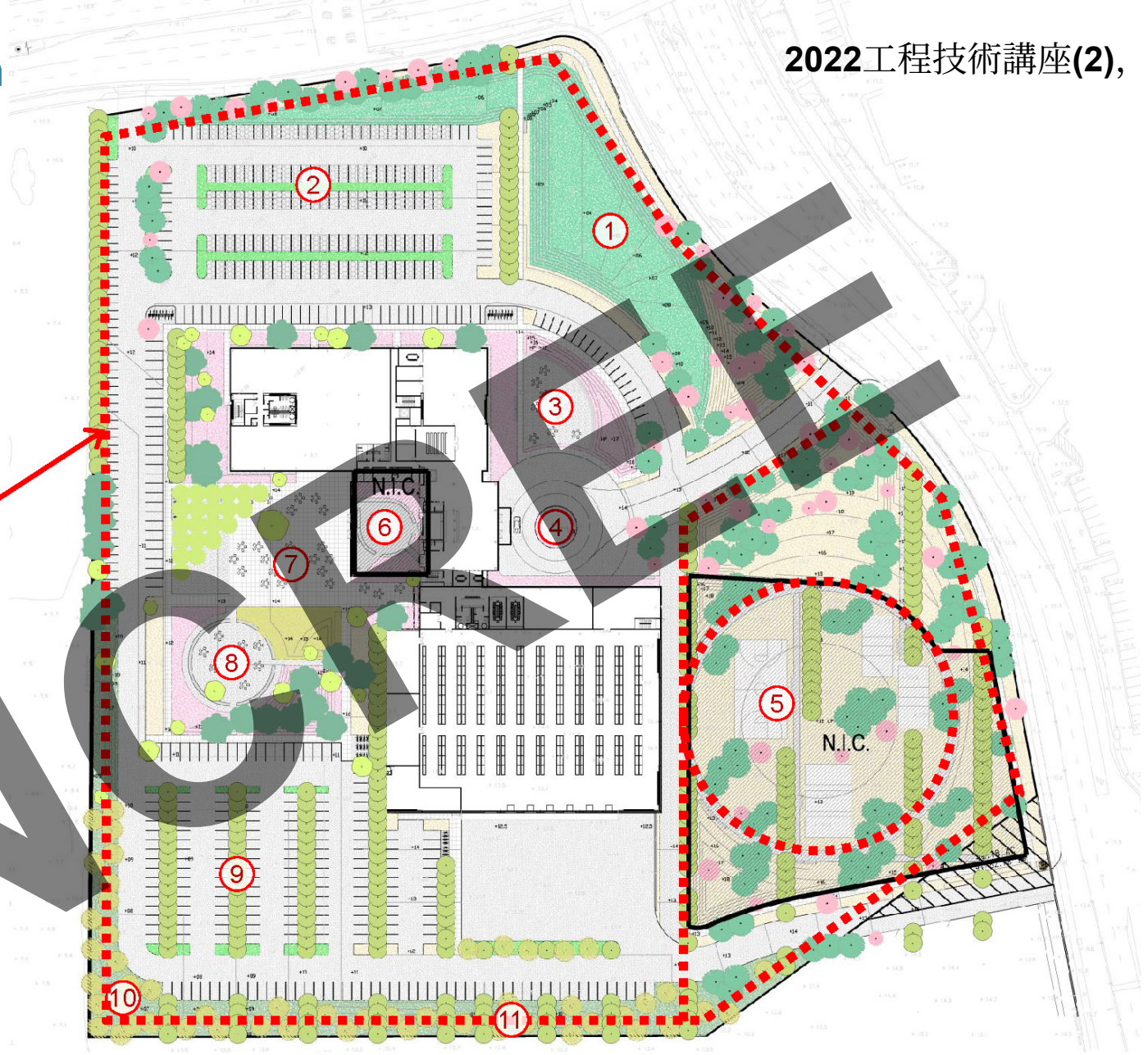
13:00~18:00 Field Trip to Ohlone College (LEED Platinum)

過程

Landscape Plan

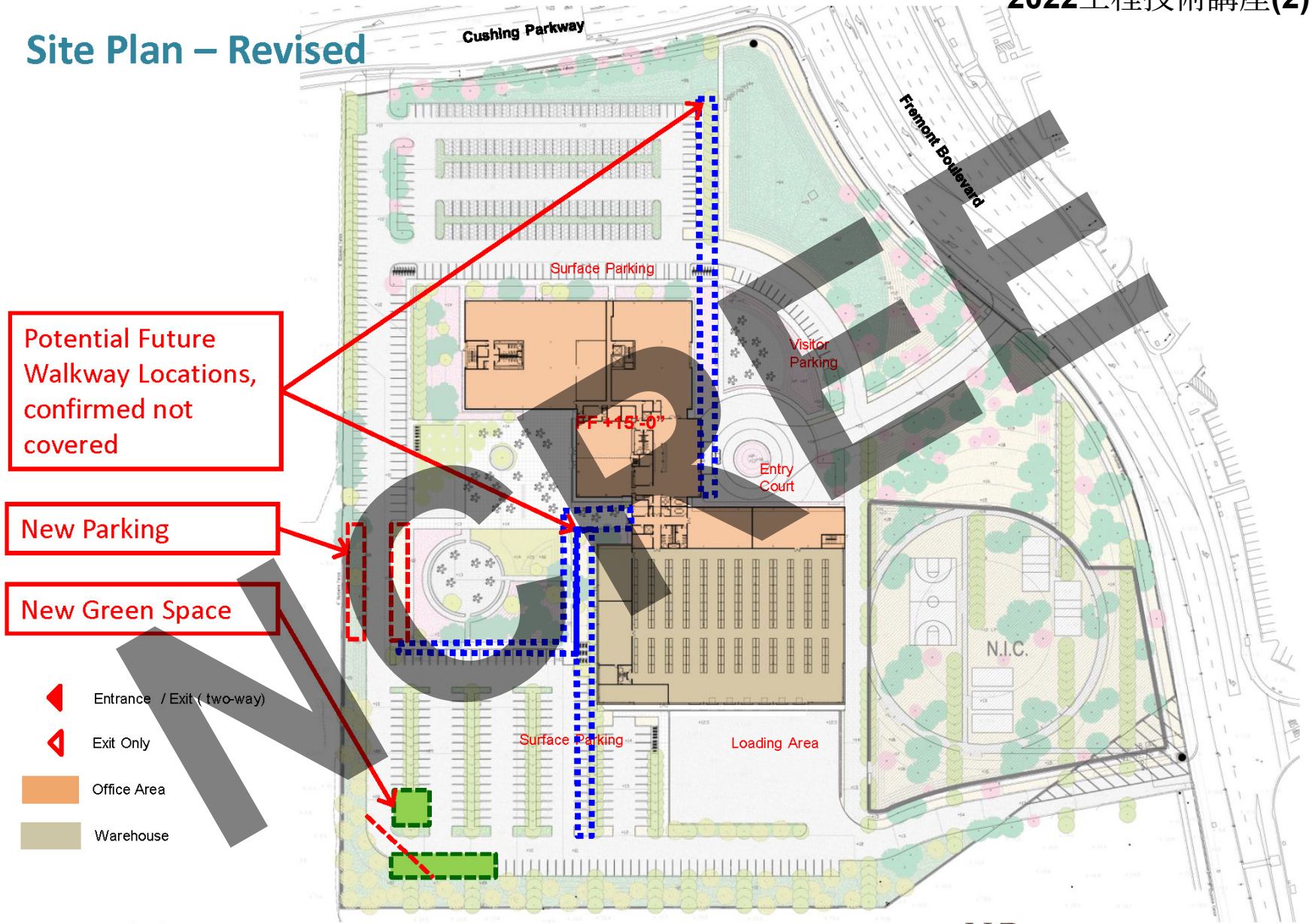
1. STORMWATER BASIN
2. SOLAR ARRAY COVERED PARKING
3. EXHIBITION GARDEN
4. ENTRY COURT
5. ATHLETIC COURTS
6. ROOFTOP TERRACE
7. DINING PATIO
8. GARDEN COURT
9. BIOSWALE @ PARKING BAYS
10. RIPARIAN HABITAT
11. PERIMETER WALKING PATH

Configuration to be finalized by SWA

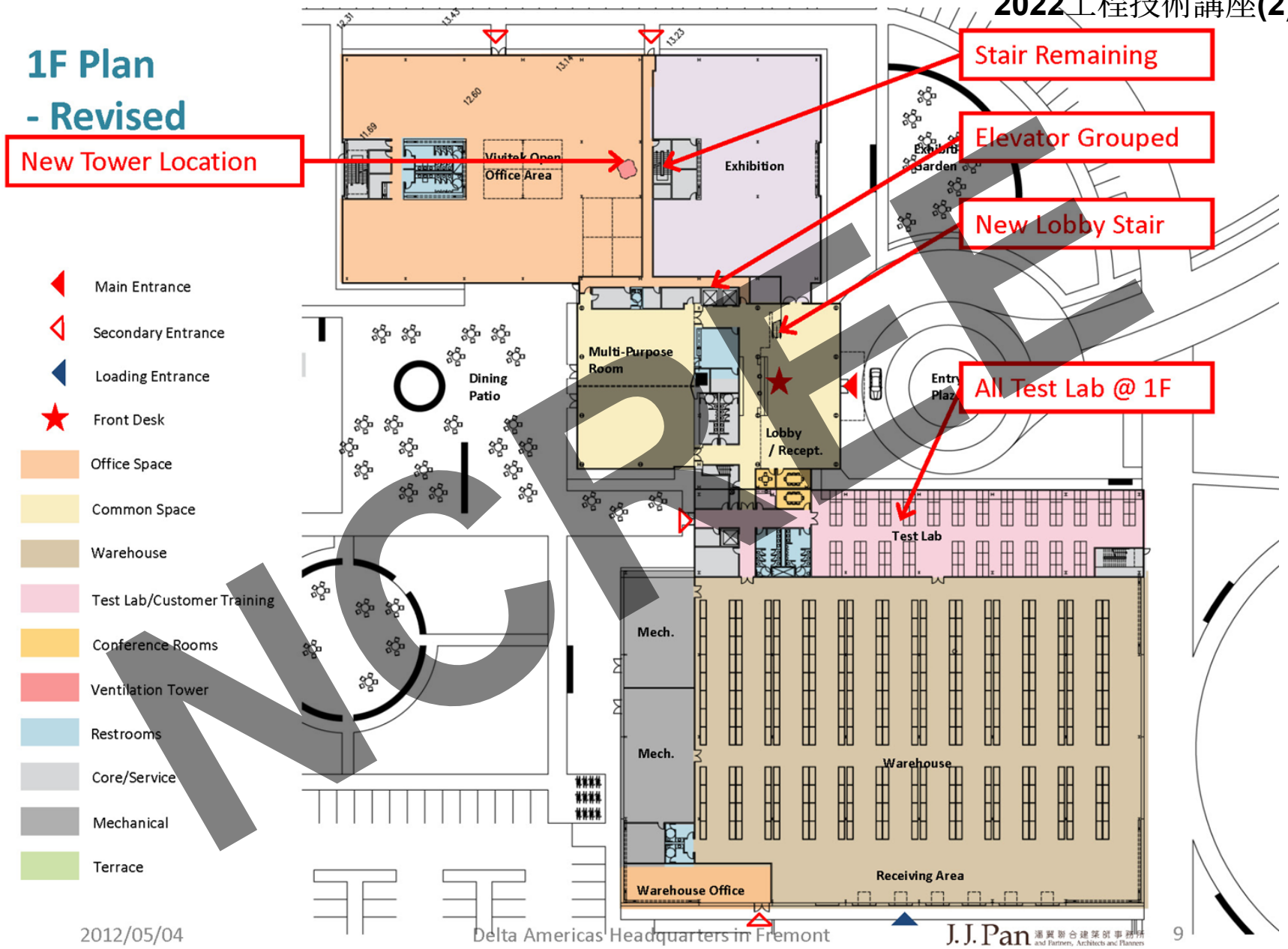


過程

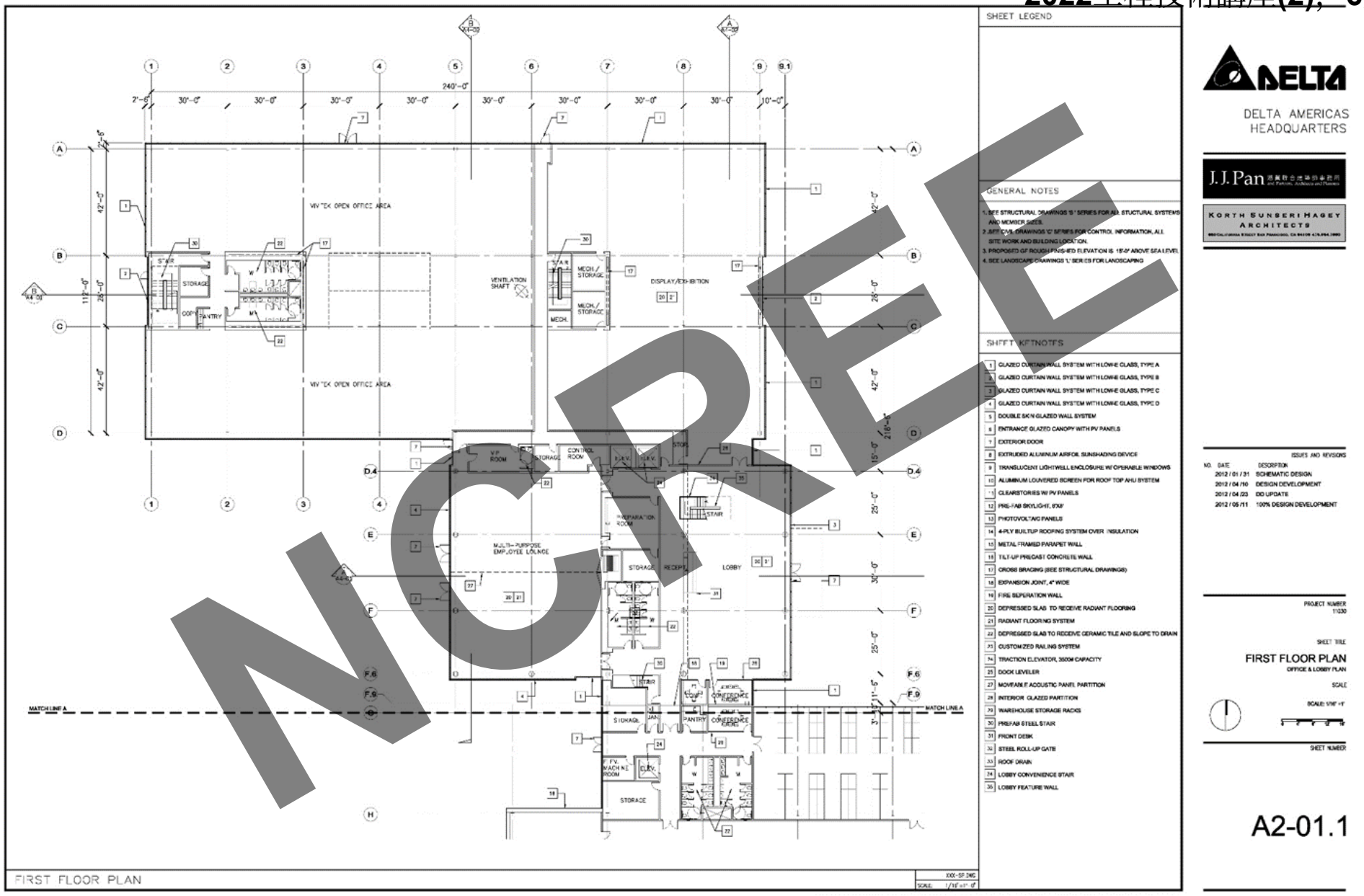
Site Plan – Revised



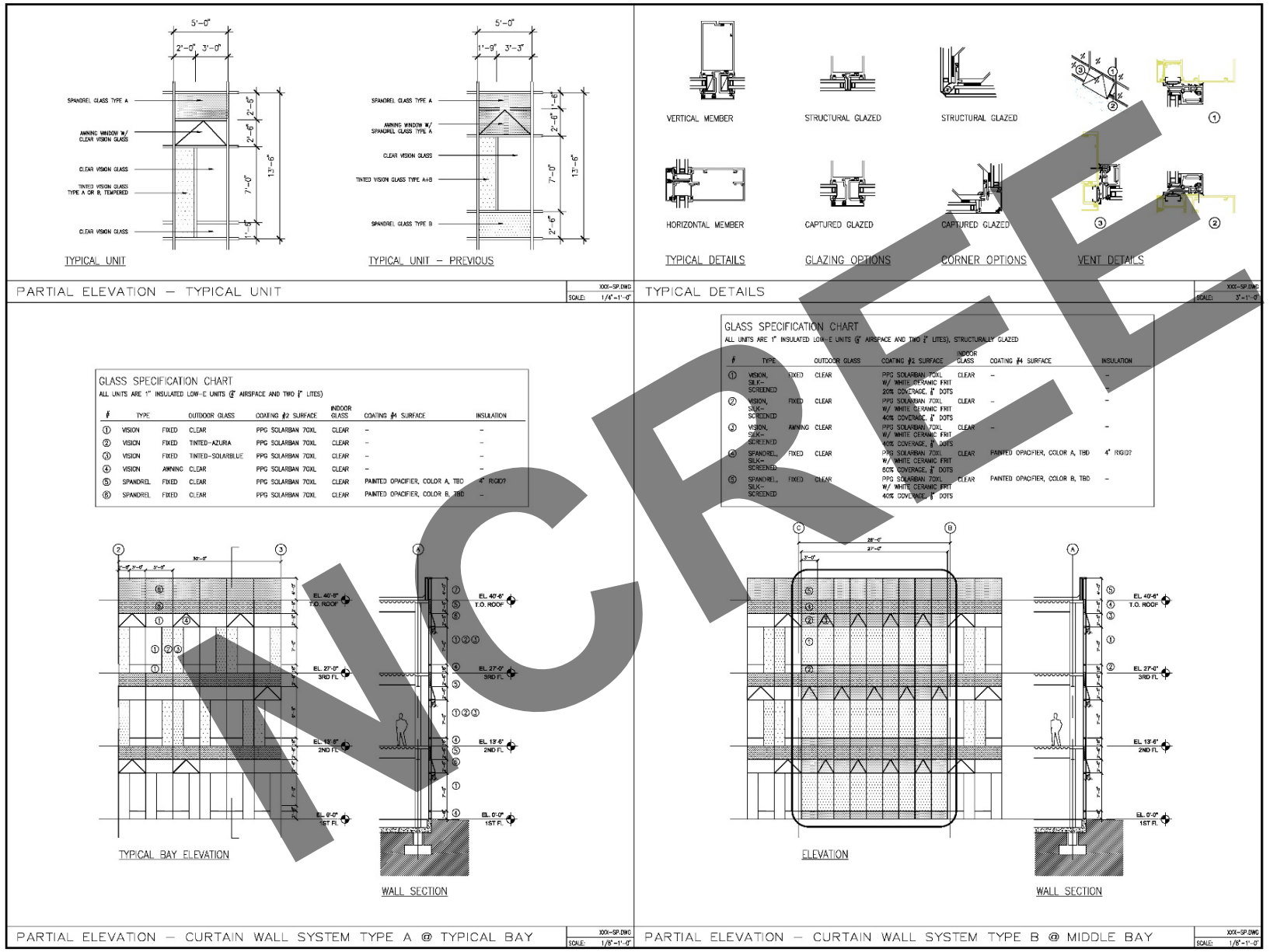
過程



圖面



圖面



GLASS SPECIFICATION CHART

ALL UNITS ARE 1" INSULATED LOW-E UNITS (6" AIRSPACE AND TWO ¼" LITES)

#	TYPE		OUTDOOR GLASS	COATING #2 SURFACE	INDOOR GLASS	COATING #4 SURFACE	INSULATION
①	VISION	FIXED	CLEAR	PPG SOLARBAN 70XL	CLEAR	–	–
②	VISION	FIXED	TINTED-AZURIA	PPG SOLARBAN 70XL	CLEAR	–	–
③	VISION	FIXED	TINTED-SOLARBLUE	PPG SOLARBAN 70XL	CLEAR	–	–
④	VISION	AWNING	CLEAR	PPG SOLARBAN 70XL	CLEAR	–	–
⑤	SPANDREL	FIXED	CLEAR	PPG SOLARBAN 70XL	CLEAR	PAINTED OPACIFIER, COLOR A, TBD	4" RIGID?
⑥	SPANDREL	FIXED	CLEAR	PPG SOLARBAN 70XL	CLEAR	PAINTED OPACIFIER, COLOR B, TBD	–

GLASS SPECIFICATION CHART

ALL UNITS ARE 1" INSULATED LOW-E UNITS (6" AIRSPACE AND TWO ¼" LITES), STRUCTURALLY GLAZED

#	TYPE		OUTDOOR GLASS	COATING #2 SURFACE	INDOOR GLASS	COATING #4 SURFACE	INSULATION
①	VISION, SILK-SCREENED	FIXED	CLEAR	PPG SOLARBAN 70XL W/ WHITE CERAMIC FRIT 20% COVERAGE, ¼" DOTS	CLEAR	–	–
②	VISION, SILK-SCREENED	FIXED	CLEAR	PPG SOLARBAN 70XL W/ WHITE CERAMIC FRIT 40% COVERAGE, ¼" DOTS	CLEAR	–	–
③	VISION, SILK-SCREENED	AWNING	CLEAR	PPG SOLARBAN 70XL W/ WHITE CERAMIC FRIT 40% COVERAGE, ¼" DOTS	CLEAR	–	–
④	SPANDREL, SILK-SCREENED	FIXED	CLEAR	PPG SOLARBAN 70XL W/ WHITE CERAMIC FRIT 80% COVERAGE, ¼" DOTS	CLEAR	PAINTED OPACIFIER, COLOR A, TBD	4" RIGID?
⑤	SPANDREL, SILK-SCREENED	FIXED	CLEAR	PPG SOLARBAN 70XL W/ WHITE CERAMIC FRIT 40% COVERAGE, ¼" DOTS	CLEAR	PAINTED OPACIFIER, COLOR B, TBD	–

DELTA AMERICAS HEADQUARTERS

J.J. Pan 潘冀聯合建築師事務所 and Partners, Architects and Planners

KORTH SUNSERI HAGEY ARCHITECTS

ISSUES AND REVISIONS

NO.	DATE	DESCRIPTION
	2012 / 01 / 31	SCHEMATIC DESIGN
	2012 / 04 / 10	DESIGN DEVELOPMENT
	2012 / 04 / 23	DD UPDATE

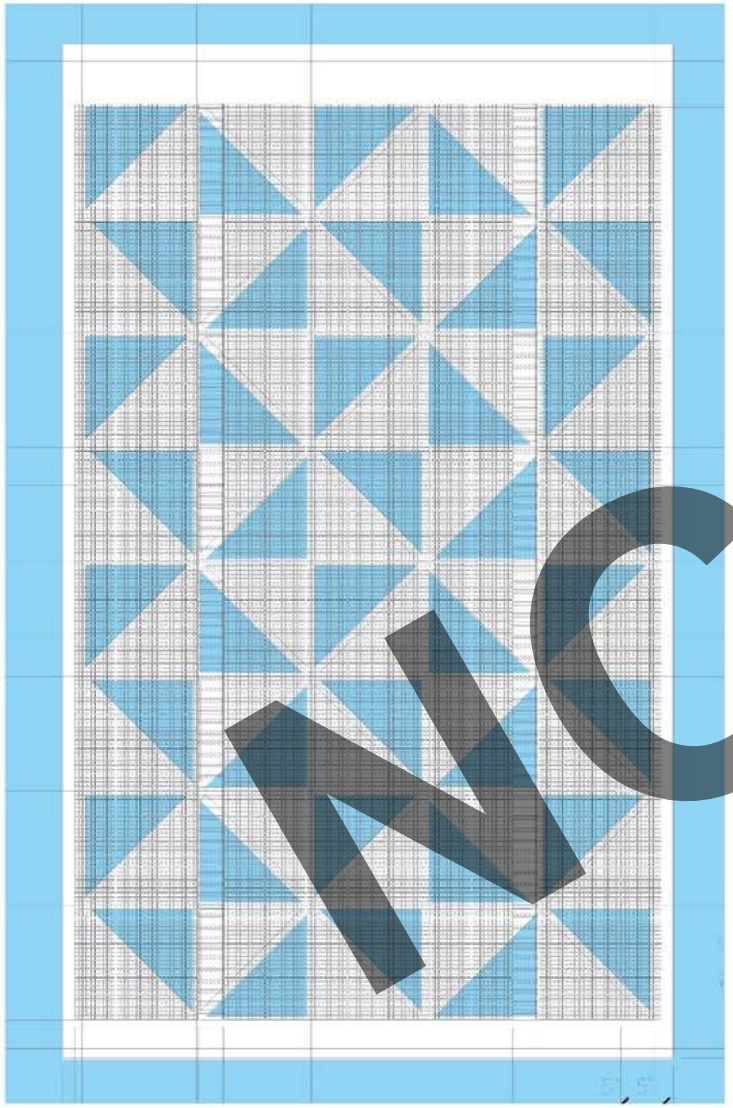
PROJECT NUMBER 11030

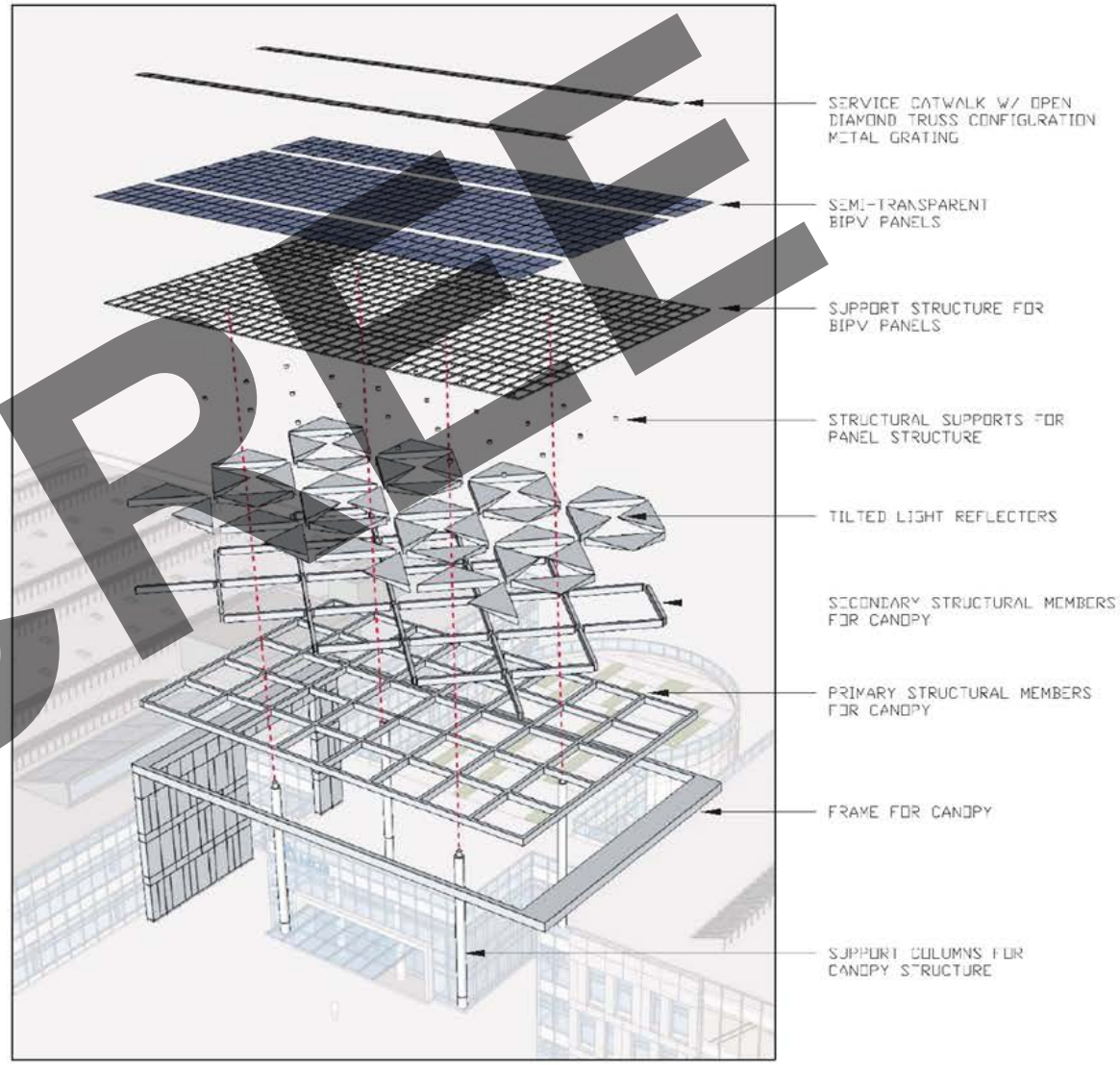
SHEET TITLE
EXTERIOR WALL PARTIAL ELEVATIONS AND SECTIONS

SCALE: 1/16" =1'

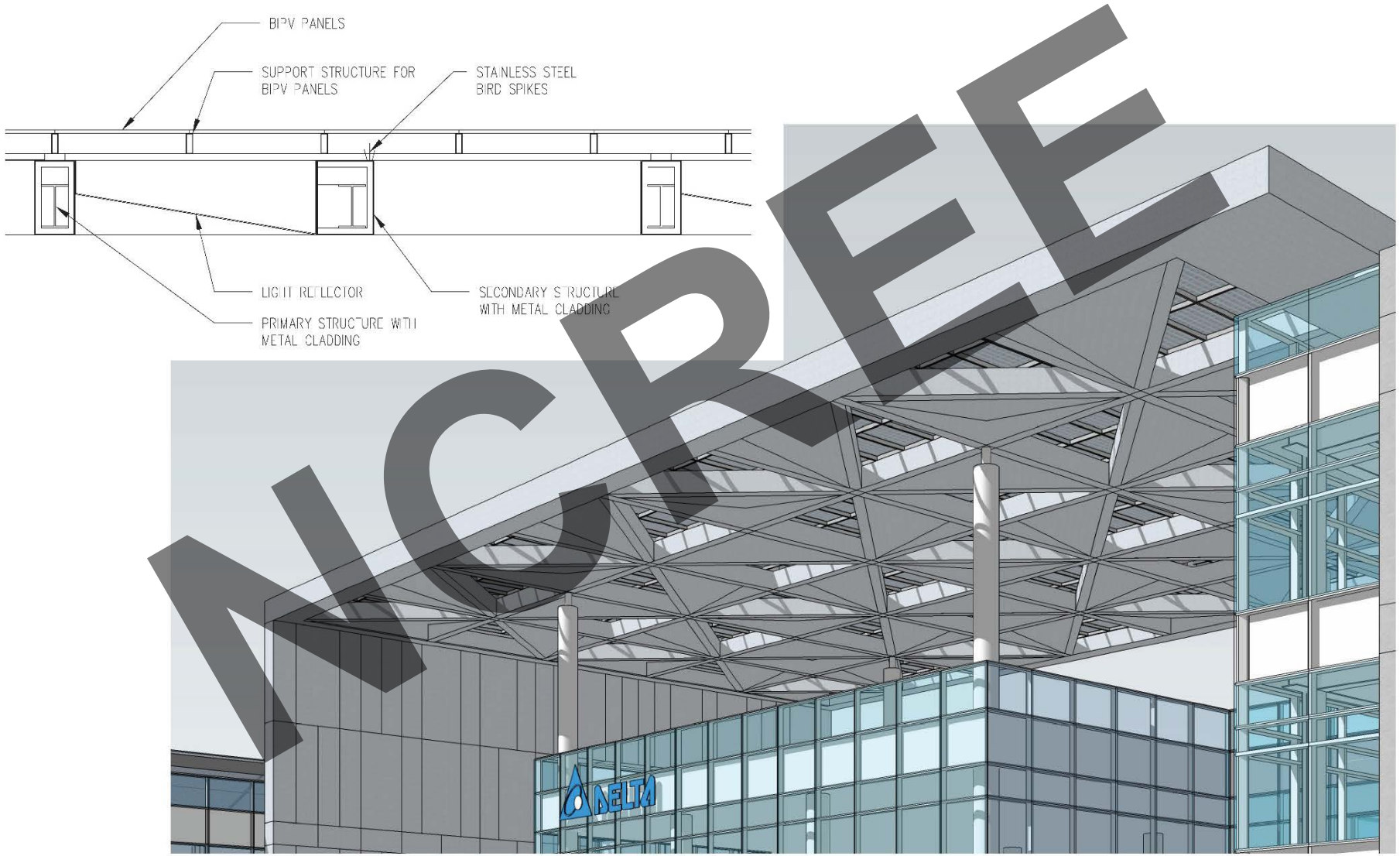
SHEET NUMBER
A4-04

設計 – 入口大棚架





設計 – 入口大棚架



設計 – 入口大棚架

設計 – 入口大棚架

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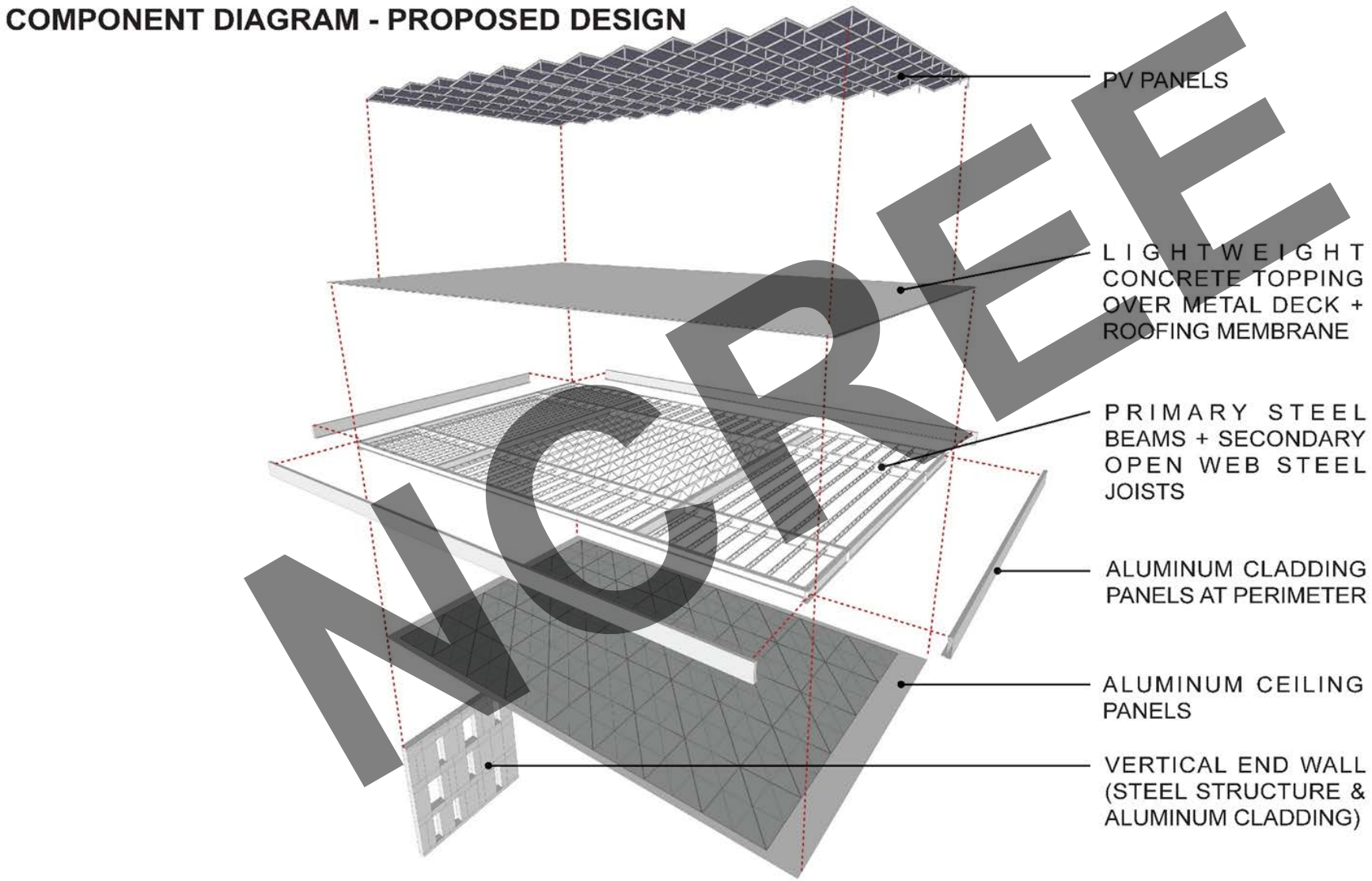

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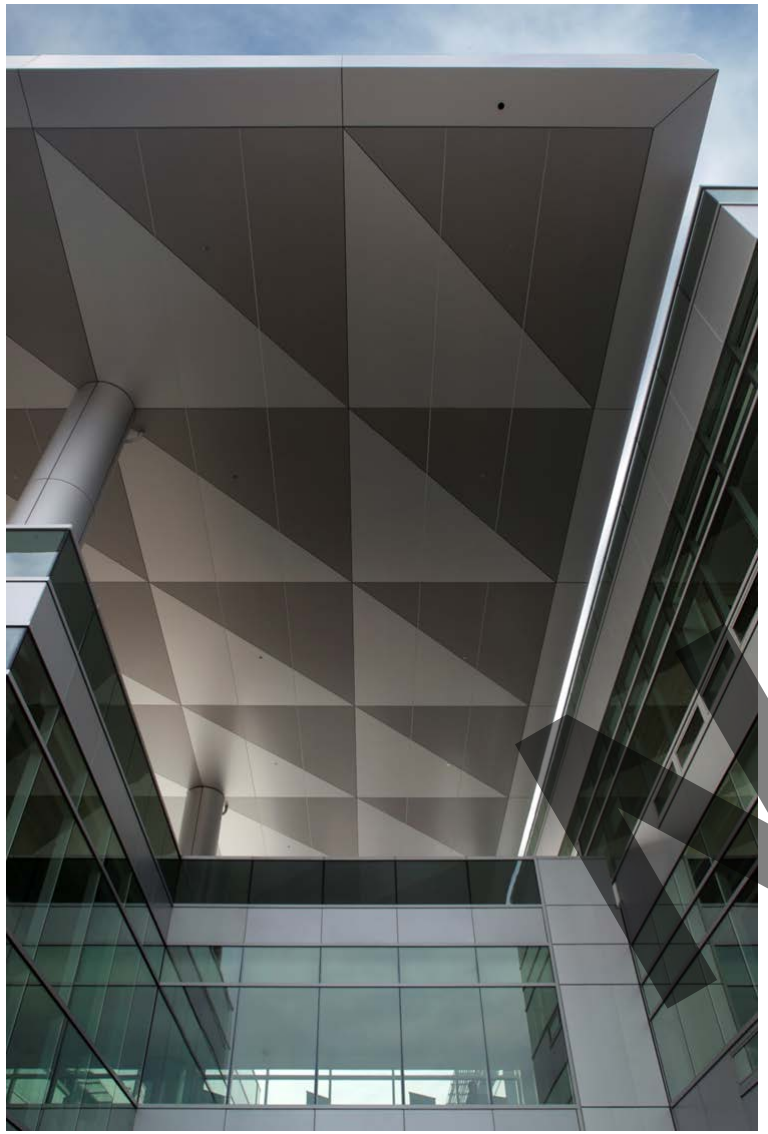

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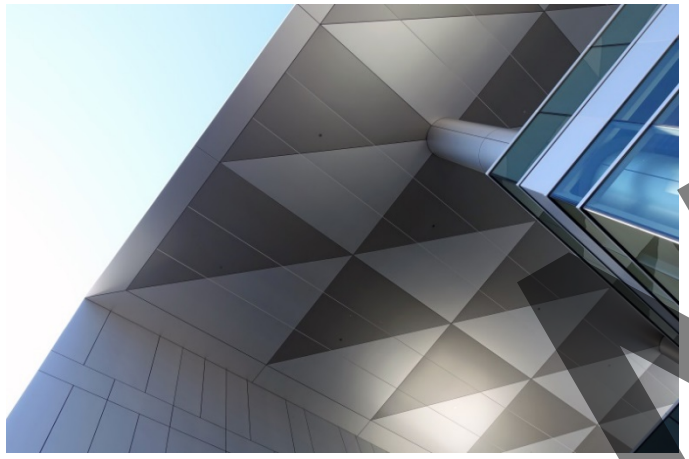
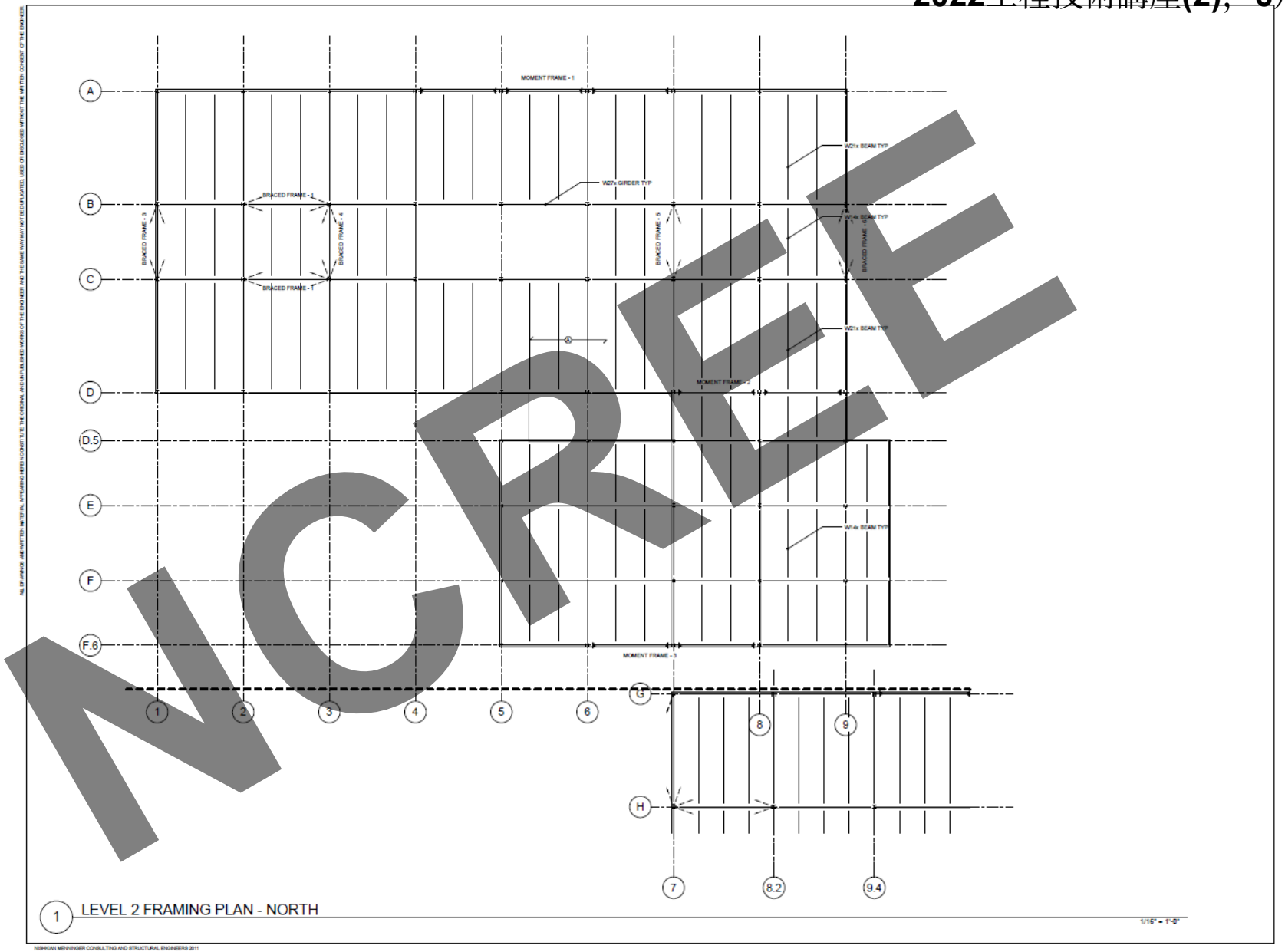


DRAWINGS

結構圖-SD



DELTA AMERICAS HEADQUARTERS

J.J. Pan

KORTH SUNSERI HAGEY ARCHITECTS

NISHKIAN MENNINGER
CONSULTING AND STRUCTURAL ENGINEERS SINCE 1919

1200 Folsom Street, San Francisco, CA 94103
Tel: (415) 541-0477 Fax: (415) 543-5071

NM JOB : #7371

ISSUES AND REVISIONS

NO.	DATE	DESCRIPTION

PROJECT NUMBER
7371

SHEET TITLE

LEVEL 2 FRAMING PLAN - NORTH

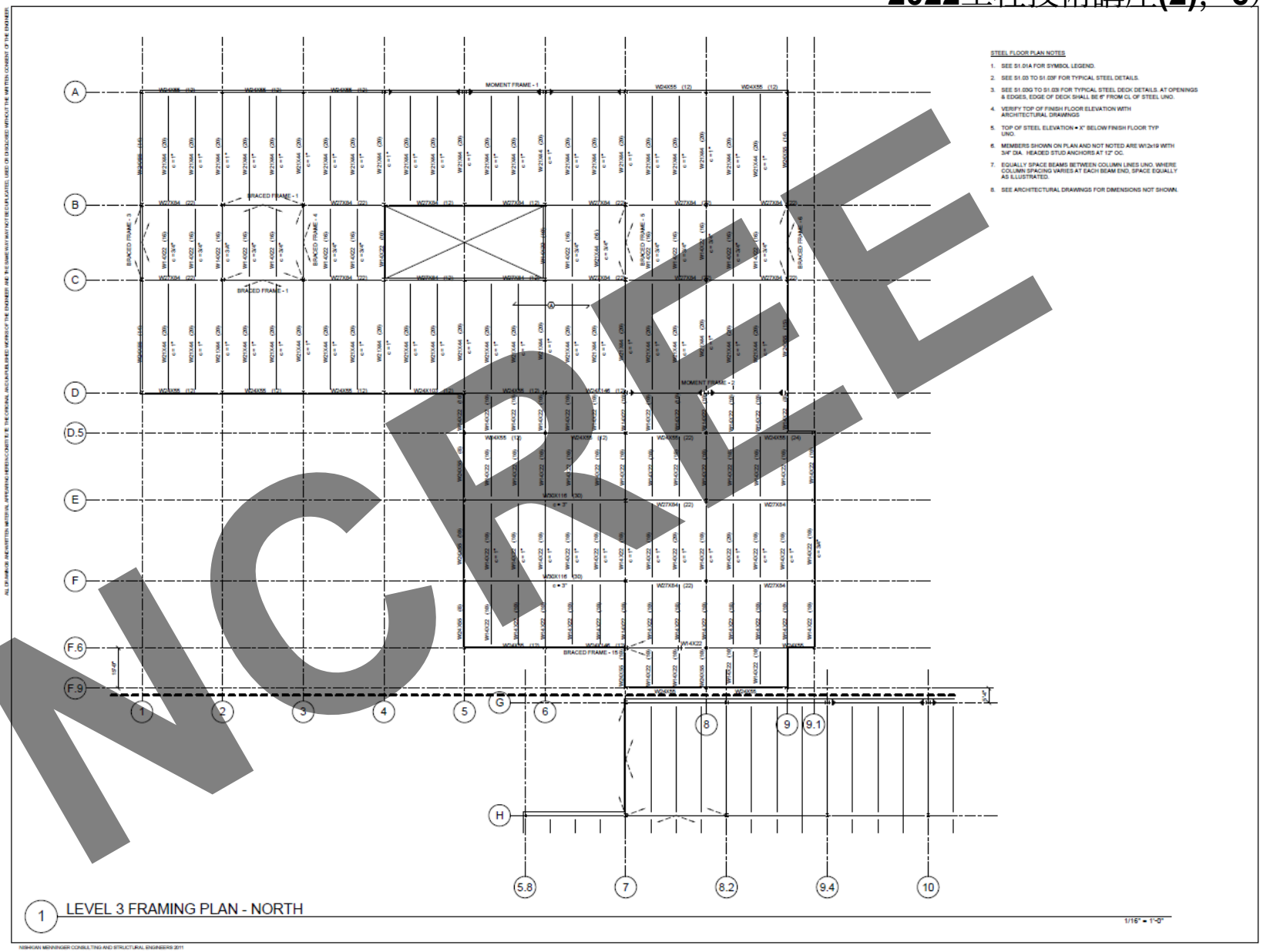
SCALE
1/16" = 1'-0"

DATE:	1.27.12
CHECK:	Checker
DRAWN BY:	Author

SHEET NUMBER

S2.03A

結構圖-DD



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J.J.Pan 嘉霖聯合建築師事務所 and Partners, Architects and Planners

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NISHKIAN MENNINGER
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1200 Folsom Street, San Francisco, CA 94103
Tel: (415) 541-9477 Fax: (415) 543-5071
NM JOB : #7371

ISSUES AND REVISIONS
NO. DATE DESCRIPTION

PROJECT NUMBER 7371

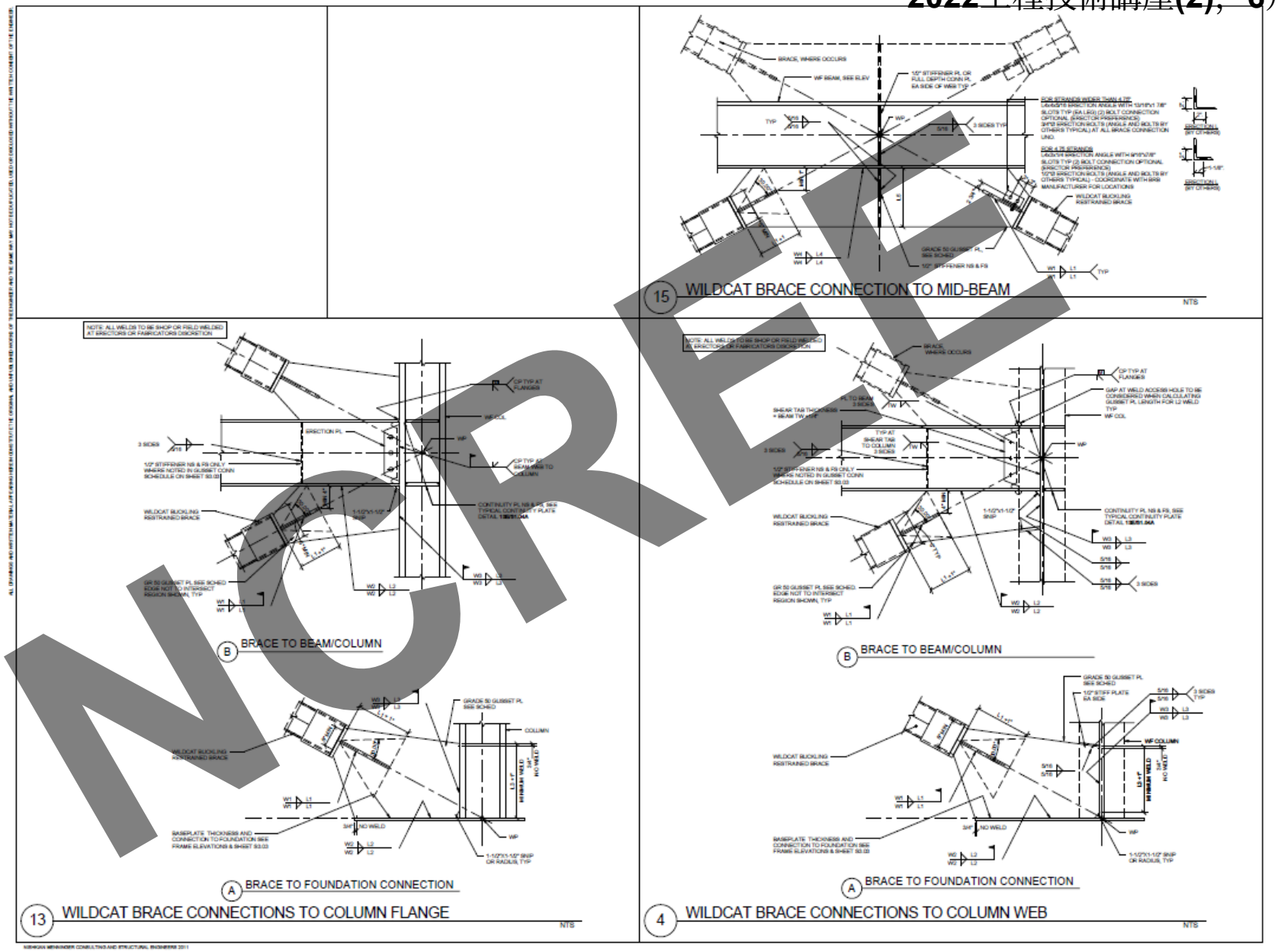
SHEET TITLE
LEVEL 3 FRAMING PLAN - NORTH

SCALE As indicated

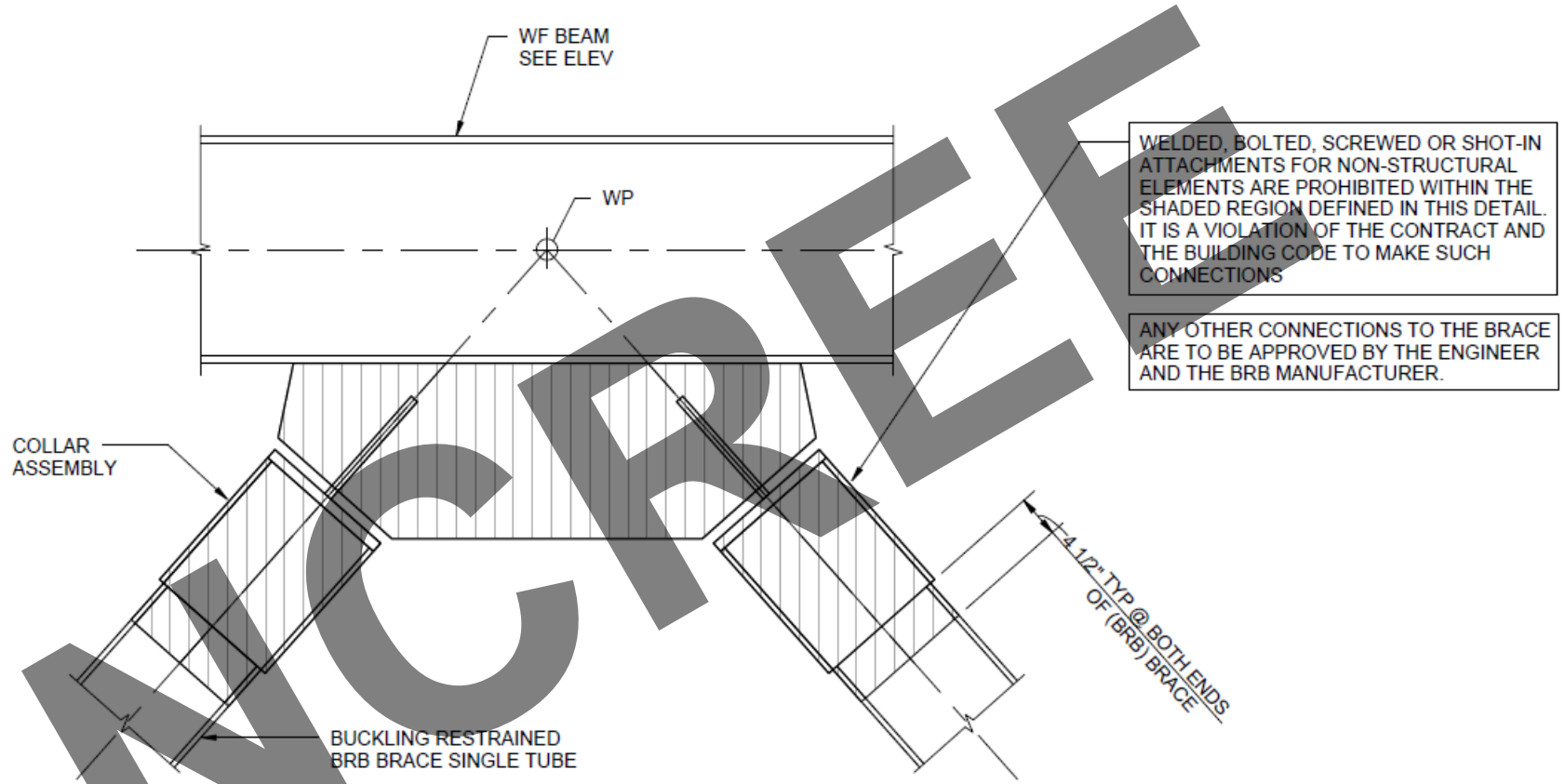
DATE:	4.10.12
CHECK:	Checker
DRAWN BY:	Author

SHEET NUMBER
S2.03A

結構圖-DD


15 WILDCAT BRACE CONNECTION TO MID-BEAM
NTS
B BRACE TO BEAM/COLUMN
A BRACE TO FOUNDATION CONNECTION
13 WILDCAT BRACE CONNECTIONS TO COLUMN FLANGE
NTS
B BRACE TO BEAM/COLUMN
A BRACE TO FOUNDATION CONNECTION
4 WILDCAT BRACE CONNECTIONS TO COLUMN WEB
NTS
DELTA AMERICAS HEADQUARTERS
J.J.Pan
KORTH SUNSERI HAGEY ARCHITECTS
NISHKIAN MENNINGER
CONSULTING AND STRUCTURAL ENGINEERS SINCE 1919
NM JOB: #7371
ISSUES AND REVISIONS
NO. DATE DESCRIPTION
BRACED FRAME DETAILS
S3.02

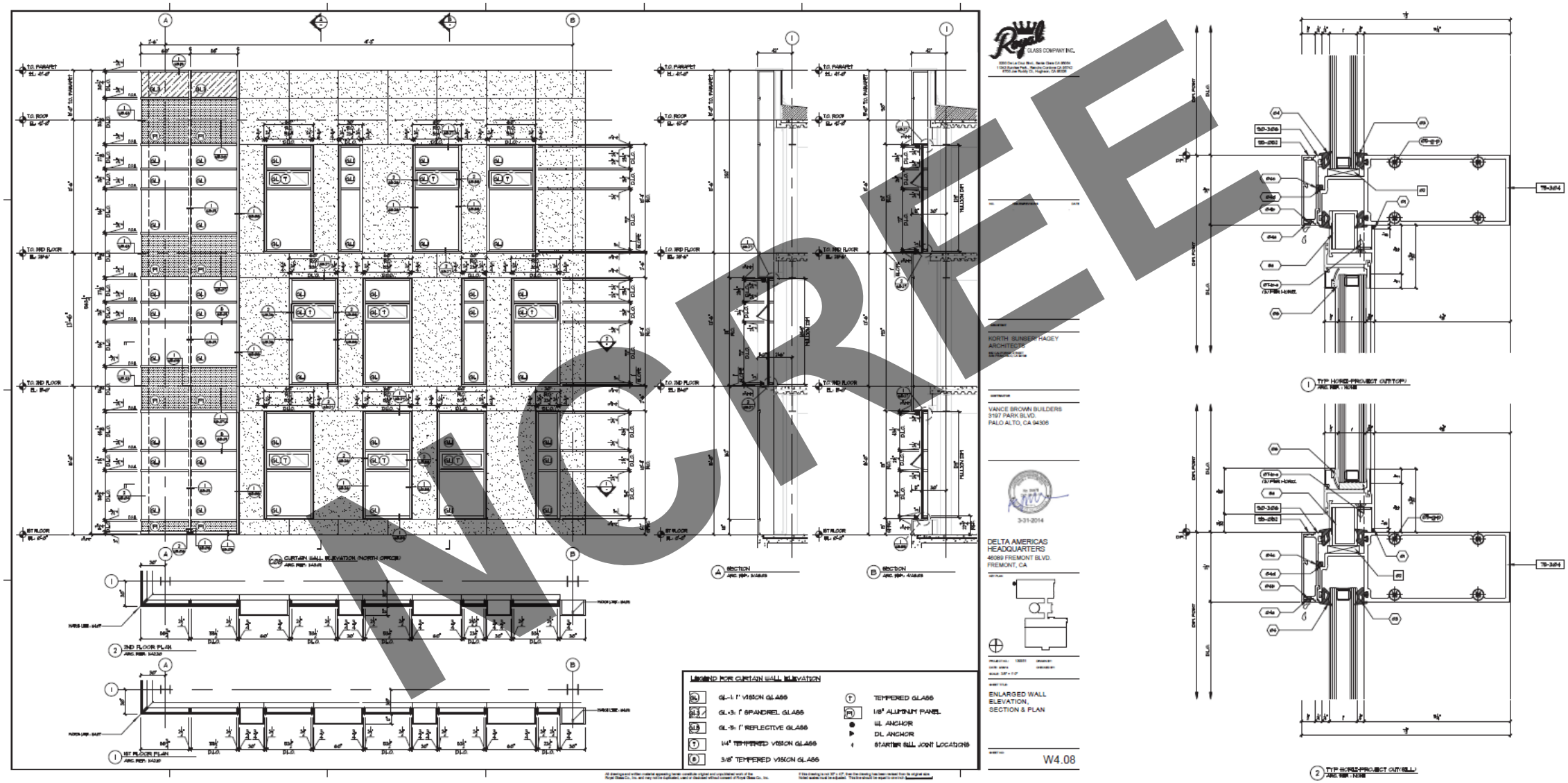
結構圖-DD



2 TYPICAL PROTECTED ZONE DETAIL

NTS

製造圖


ROYAL GLASS COMPANY INC.
KORTH SUNSER HAGEY ARCHITECTS
VANCE BROWN BUILDERS
3197 PARK BLVD.
PALO ALTO, CA 94306
3-31-2014
DELTA AMERICAS HEADQUARTERS
46089 FREMONT BLVD.
FREMONT, CA
ENLARGED WALL ELEVATION, SECTION & PLAN
W4.08
LEGEND FOR CURTAIN WALL ELEVATION
GL-1: 1" VISION GLASS
GL-3: 1" SPANDREL GLASS
GL-5: 1" REFLECTIVE GLASS
1/4" TEMPERED VISION GLASS
3/8" TEMPERED VISION GLASS
TEMPERED GLASS
1/8" ALUMINUM PANEL
GL ANCHOR
DL ANCHOR
STARTER SILL JOINT LOCATIONS
2ND FLOOR PLAN
1ST FLOOR PLAN
SECTION
SECTION

製造圖

Architectural Wall Systems, Inc.
Curtainwall Design and Consulting

Royal GLASS COMPANY, INC.
11343 Sunrise Park Dr.
Rancho Cordova, CA 95742

DELTA AMERICA HEADQUARTERS
FREMONT, CALIFORNIA

STRUCTURAL CALCULATIONS

LICENSED PROFESSIONAL ENGINEER
KEVIN J. McCLINTICK
No. 35978
EXP. 06-30-14
CIVIL
STATE OF CALIFORNIA

March 31, 2014

5118 Burnet Rd. I Suite E I Austin, TX 78756 I 512.270.6869

Architectural Wall Systems, Inc.
Curtainwall Design and Consulting

Delta HQ
Analysis 2001
Architectural Wall Systems, Inc.
Mullion Summary 6063-T6 Aluminum
1/30/2014 2:34:39 PM

Section B/W4.09 Int Mullion

SECTION PROPERTIES: 75-410, 75-411

Ixx	11.415 in.^{4}	Iyy	0.615 in.^{4}
Sxx	4.311 in.^{3}	Syy	0.410 in.^{3}
Area	2.737 in.^{2}	Ryy	0.474 in.

Windload Analysis @ 22.54 psf

Deflection Summary

Span Length [L] = 165.750 in.
Maximum Deflection = 0.635 in. [L/260]
Allowable Deflection = L/240 + 1/4 in. = 0.941 in. > 0.635 in.
Deflection O.K.

Cantilever 1
6.250 in.
0.006 in. [2L/ 2232]
0.071 in. [2L/ 175]
*** Cantilever 1 Ok***

Stress Summary

Maximum Negative Moment = 23198 in - lb
Unbraced Length [Lb] = 168.500 in.

$f_{bx} = \frac{Mmax}{Sxx} = \frac{23198 \text{ in-lb}}{4.311 \text{ in}^3} = 5.381$ ksi — 75-410, 75-411

$\frac{LbSc}{Iy} = \frac{168.500 \text{ in} \times 4.311 \text{ in}^3}{0.615 \text{ in}^4} = 1181.14$ [Specification 14]

$F_{bx} = 16.7 - .141\sqrt{\frac{L_b S_c}{I_y}} = 11.854$ ksi > 5.381 ksi

***Member Stress O.K. ***

Maximum Positive Moment = 27966 in - lb
Unbraced Length [Lb] = 165.75 in.

$f_{bx} = \frac{Mmax}{Sxx} = \frac{27966 \text{ in-lb}}{4.311 \text{ in}^3} = 6.487$ ksi — 75-410, 75-411

$\frac{LbSc}{Iy} = \frac{165.750 \text{ in} \times 4.311 \text{ in}^3}{0.615 \text{ in}^4} = 1161.86$ [Specification 14]

$F_{bx} = 16.7 - .141\sqrt{\frac{L_b S_c}{I_y}} = 11.894$ ksi > 6.487 ksi

***Member Stress O.K. ***

DELTA HQ - ROYAL GLASS 03.31.2014 39

Architectural Wall Systems, Inc.
Curtainwall Design and Consulting

Delta Americas HQ
Cbeam R2
Architectural Wall Systems
1/29/2014 16:30 File: Section A-W4.09 INT MULLIO

Section B/W4.09 Int Mullion
By: AO

Deflection Results

Max. Deflection = -0.6351" L/261 (Span 1, @ 81.45")
Cant. Deflection = -0.0056" 2L/2235 (Span 7, @ 6.25")

Stress Results

Span		M(in-lb)	fb-m(ksi)
1	@ 93.64" =	27966	6.487
4	@ 0.00" =	-23198	5.381

Member Information

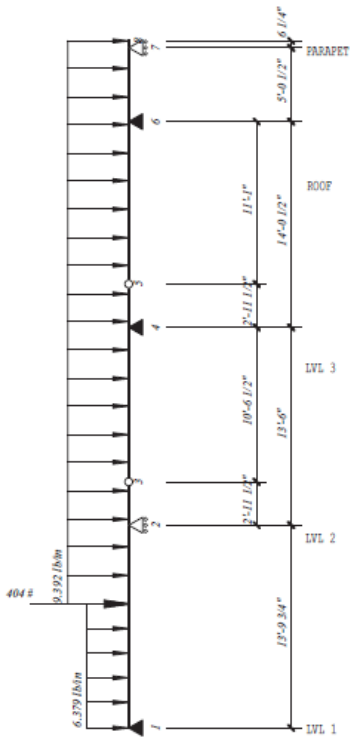
Span	Length(in)	I(in^4)	S(in^3)	E(psi)
1	165.750	11.415	4.311	1.0e+7
2	35.500	11.415	4.311	1.0e+7
Splice				
3	126.500	11.415	4.311	1.0e+7
4	35.500	11.415	4.311	1.0e+7
Splice				
5	133.000	11.415	4.311	1.0e+7
6	60.500	11.415	4.311	1.0e+7
7	6.250	11.415	4.311	1.0e+7

Distributed Load Information

Span	W1(#/in)	W2(#/in)	X1(in)	X2(in)
1	6.379	6.379	0.000	102.000
	9.392	9.392	102.000	165.750
2	9.392	9.392	0.000	35.500
3	9.392	9.392	0.000	126.500
4	9.392	9.392	0.000	35.500
5	9.392	9.392	0.000	133.000
6	9.392	9.392	0.000	60.500
7	9.392	9.392	0.000	6.250

Point Load Information

Span	P(#)	X(in)
1	404.000	102.000



PL = 404# (REF: SECTION A/W4.09 DOOR HEADER)
WL1 = 22.54PSF x 40.75IN = 6.379#/IN
WL2 = 22.54PSF x 60IN = 9.392#/IN
Driven by Cbeam © R2

1
DELTA HQ - ROYAL GLASS 03.31.2014 40

CONSTRUCTION

施工照片

施工照片

施工照片

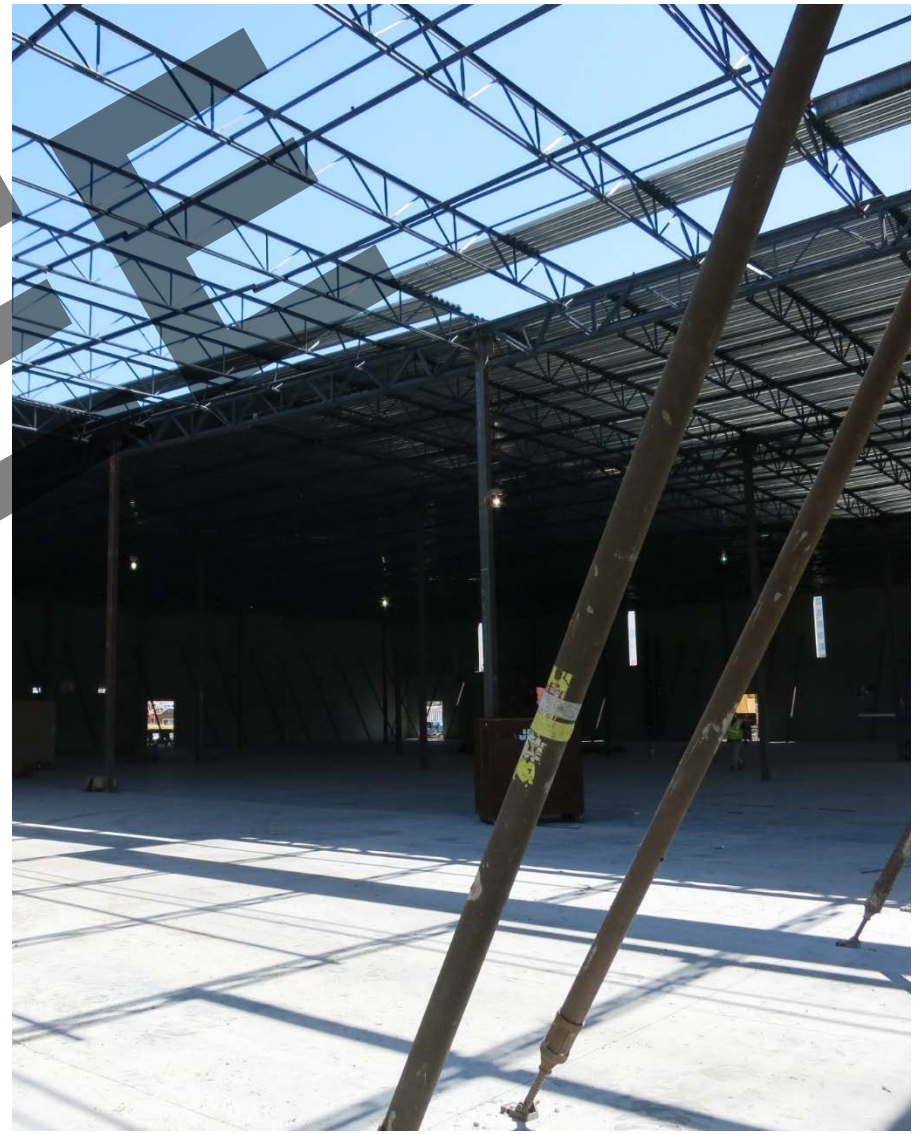
施工照片

施工照片

施工照片

施工照片

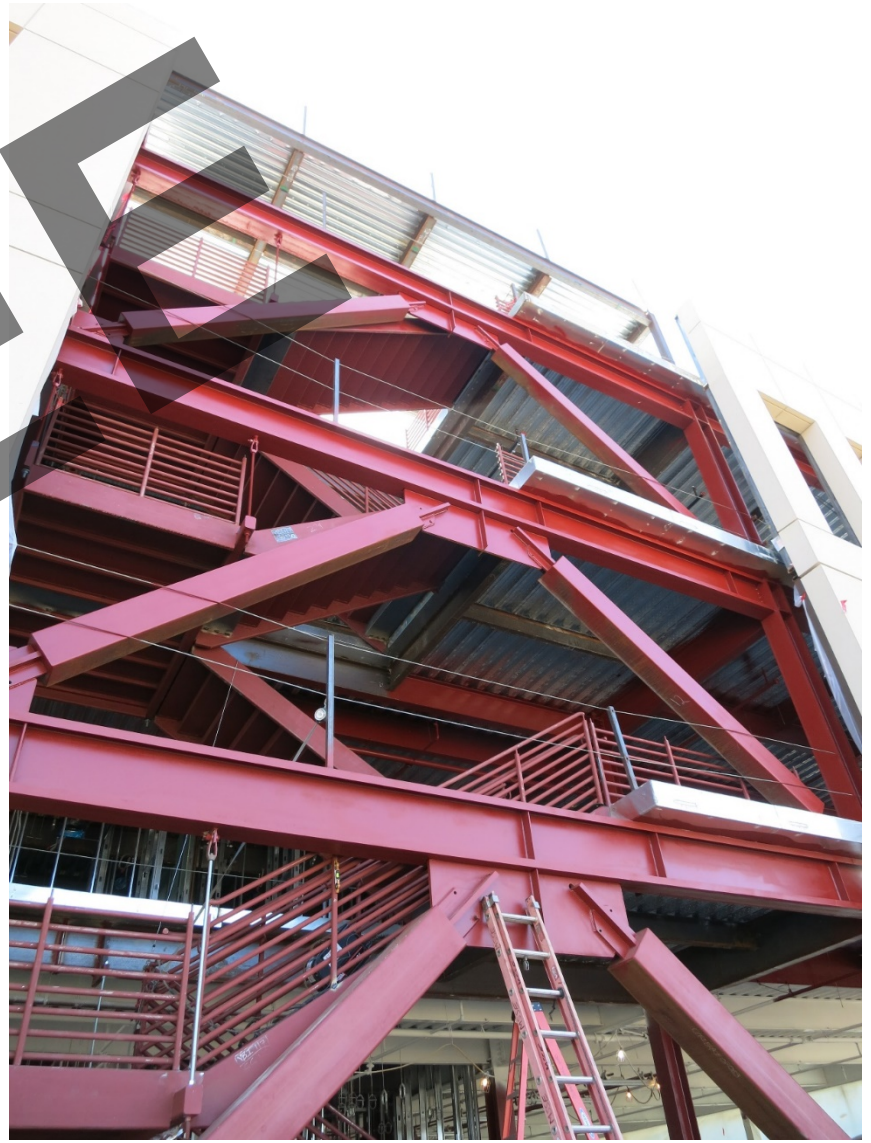
施工照片



施工照片

施工照片

施工照片



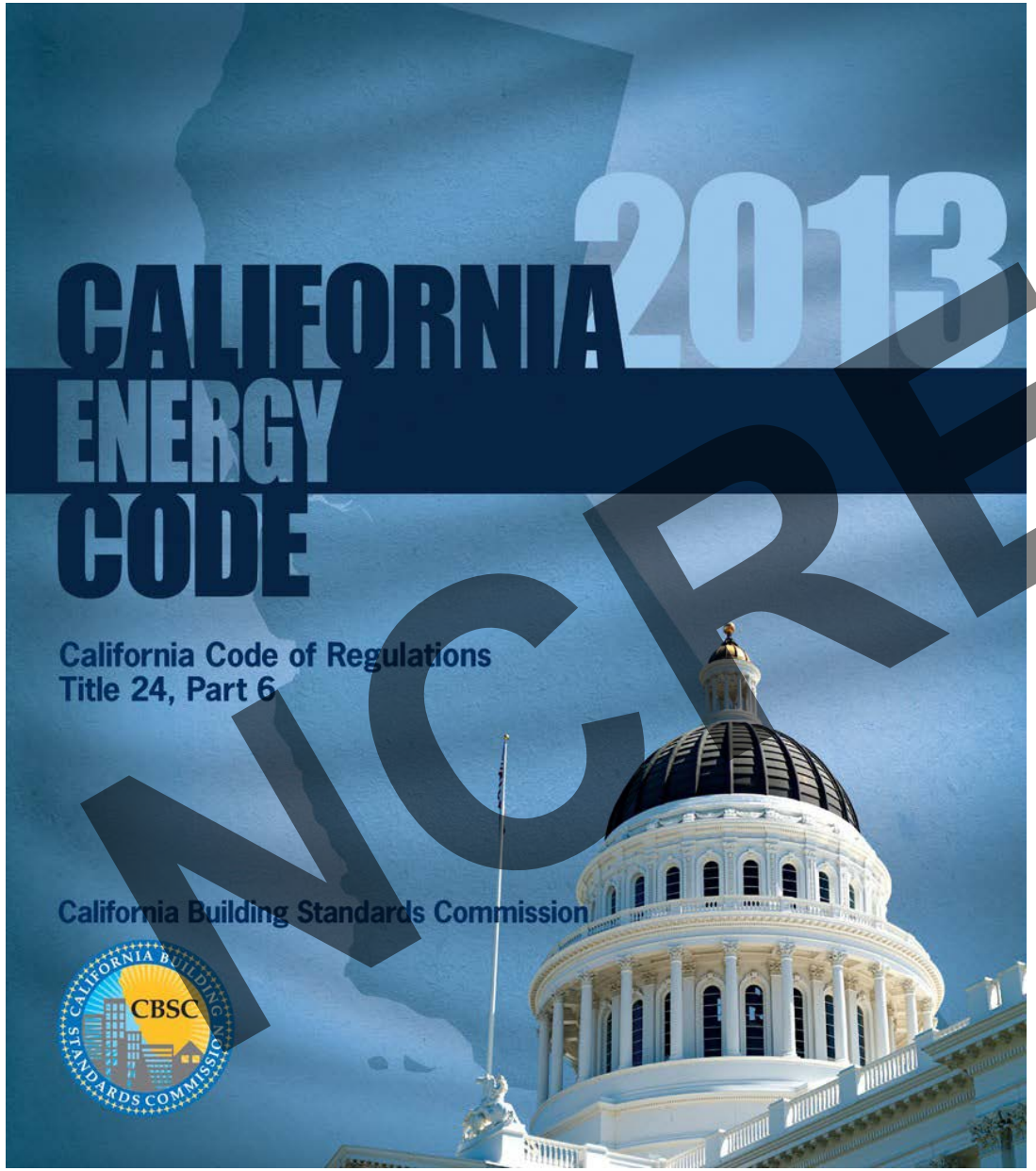
施工照片

施工照片

施工照片

施工照片

綠建築



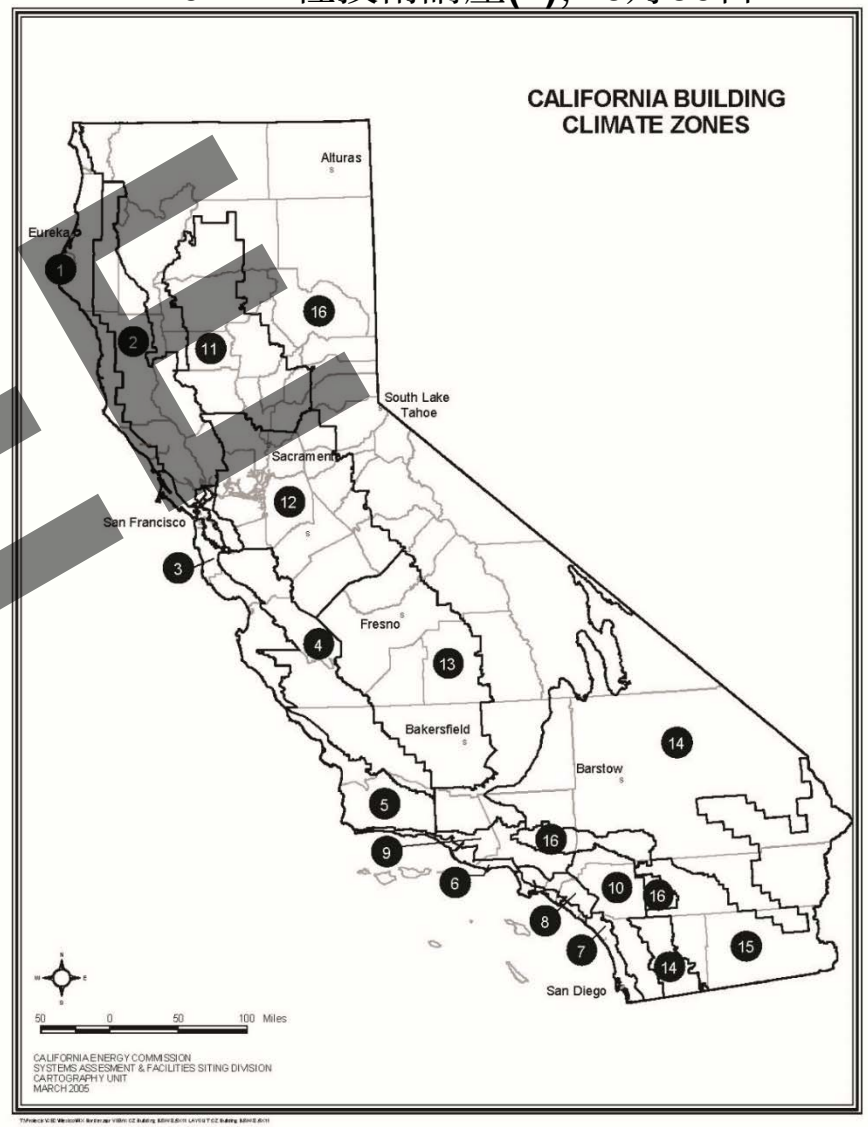
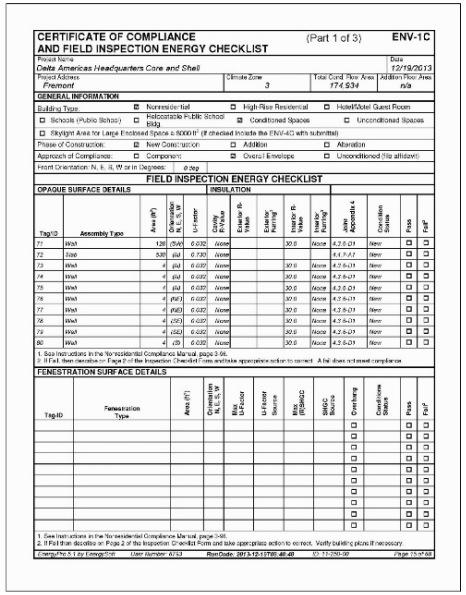


FIGURE 100.1-A—CALIFORNIA CLIMATE ZONES

Climate Zones for Residential and Nonresidential Occupancies

Compared to all other states, California ranks among the lowest in the nation for both per capita energy consumption and per capita energy spending.

綠建築


CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: Delta Americas Headquarters Core and Shell — Date: 12/19/2013
Project Address: Fremont — Climate Zone: 3 — Total Cond. Floor Area: 174,934 — Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: ☒ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☒ Conditioned Spaces ☐ Unconditioned Spaces
☐ Skylight Area for Large Enclosed Space ≥ 8000 ft² (If checked include the ENV-4G with submittal)
Phase of Construction: ☒ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☒ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 0 Deg

FIELD INSPECTION ENERGY CHECKLIST

OPAQUE SURFACE DETAILS — INSULATION

Tag/ID	Assembly Type	Area (ft²)	Orientation N, E, S, W	U-Factor	Cavity R-Value	Exterior R-Value	Exterior Furring	Interior R-Value	Interior Furring	JA4 Appendix A	Condition Status	Pass	F&F
71	Wall	126	(SW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
72	Slab	536	(u)	0.730	None					4.4.1-A1	New	☐	☐
73	Wall	4	(u)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
74	Wall	4	(u)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
75	Wall	4	(u)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
76	Wall	4	(NW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
77	Wall	4	(NE)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
78	Wall	4	(SE)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
79	Wall	4	(SE)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
80	Wall	4	(S)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐

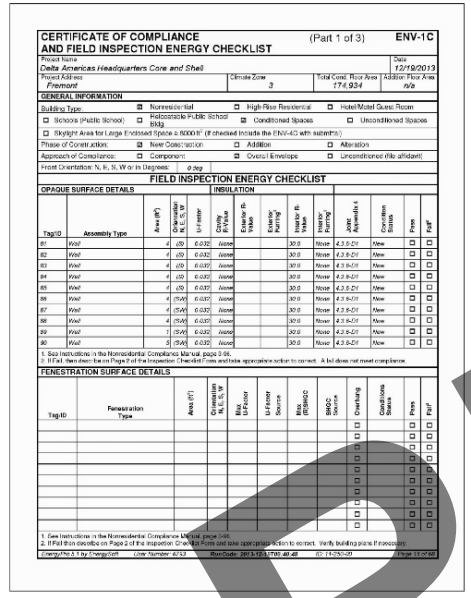
1. See instructions in the Nonresidential Compliance Manual, page 3-96.
2. If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. A fail does not meet compliance.

FENESTRATION SURFACE DETAILS

Tag/ID	Fenestration Type	Area (ft²)	Orientation N, E, S, W	Max U-Factor	U-Factor Source	Max (R)SHGC	SHGC Source	Overhang	Condition Status	Pass	F&F

1. See instructions in the Nonresidential Compliance Manual, page 3-96.
2. If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

EnergyPro 5.1 by EnergySoft — User Number: 6753 — RunDate: 2013-12-11T08:48:48 — ID: 11-250-09 — Page 15 of 68


CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: Delta Americas Headquarters Core and Shell — Date: 12/19/2013
Project Address: Fremont — Climate Zone: 3 — Total Cond. Floor Area: 174,934 — Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: ☒ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☒ Conditioned Spaces ☐ Unconditioned Spaces
☐ Skylight Area for Large Enclosed Space ≥ 8000 ft² (If checked include the ENV-4G with submittal)
Phase of Construction: ☒ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☒ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 0 Deg

FIELD INSPECTION ENERGY CHECKLIST

OPAQUE SURFACE DETAILS — INSULATION

Tag/ID	Assembly Type	Area (ft²)	Orientation N, E, S, W	U-Factor	Cavity R-Value	Exterior R-Value	Exterior Furring	Interior R-Value	Interior Furring	JA4 Appendix A	Condition Status	Pass	F&F
81	Wall	4	(S)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
82	Wall	4	(S)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
83	Wall	4	(S)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
84	Wall	4	(S)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
85	Wall	4	(S)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
86	Wall	4	(SW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
87	Wall	4	(SW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
88	Wall	4	(SW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
89	Wall	1	(SW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
90	Wall	5	(SW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐

1. See instructions in the Nonresidential Compliance Manual, page 3-96.
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FENESTRATION SURFACE DETAILS

Tag/ID	Fenestration Type	Area (ft²)	Orientation N, E, S, W	Max U-Factor	U-Factor Source	Max (R)SHGC	SHGC Source	Overhang	Condition Status	Pass	F&F

1. See instructions in the Nonresidential Compliance Manual, page 3-96.
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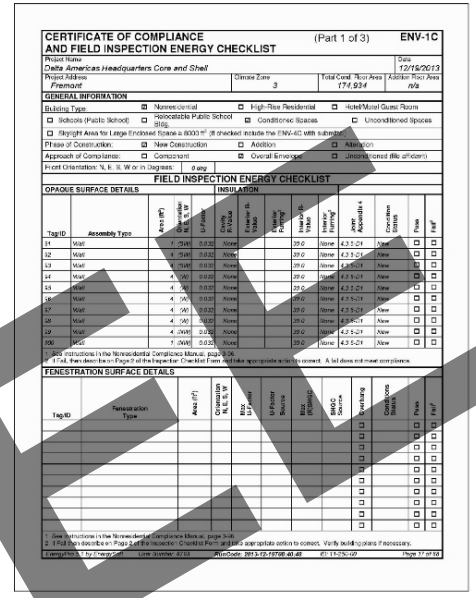
EnergyPro 5.1 by EnergySoft — User Number: 6753 — RunDate: 2013-12-11T08:48:48 — ID: 11-250-09 — Page 16 of 68


CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: Delta Americas Headquarters Core and Shell — Date: 12/19/2013
Project Address: Fremont — Climate Zone: 3 — Total Cond. Floor Area: 174,934 — Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: ☒ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☒ Conditioned Spaces ☐ Unconditioned Spaces
☐ Skylight Area for Large Enclosed Space ≥ 8000 ft² (If checked include the ENV-4G with submittal)
Phase of Construction: ☒ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☒ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 0 Deg

FIELD INSPECTION ENERGY CHECKLIST

OPAQUE SURFACE DETAILS — INSULATION

Tag/ID	Assembly Type	Area (ft²)	Orientation N, E, S, W	U-Factor	Cavity R-Value	Exterior R-Value	Exterior Furring	Interior R-Value	Interior Furring	JA4 Appendix A	Condition Status	Pass	F&F
91	Wall	1	(SW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
92	Wall	4	(SW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
93	Wall	4	(W)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
94	Wall	4	(W)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
95	Wall	4	(W)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
96	Wall	4	(W)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
97	Wall	4	(W)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
98	Wall	4	(W)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
99	Wall	4	(NW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
100	Wall	1	(NW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐

1. See instructions in the Nonresidential Compliance Manual, page 3-96.
2. If Fail, then describe on Page 2 of the Inspector Checklist Form and take appropriate action to correct. A fail does not meet compliance.

FENESTRATION SURFACE DETAILS

Tag/ID	Fenestration Type	Area (ft²)	Orientation N, E, S, W	Max U-Factor	U-Factor Source	Max (R)SHGC	SHGC Source	Overhang	Condition Status	Pass	F&F

1. See instructions in the Nonresidential Compliance Manual, page 3-96.
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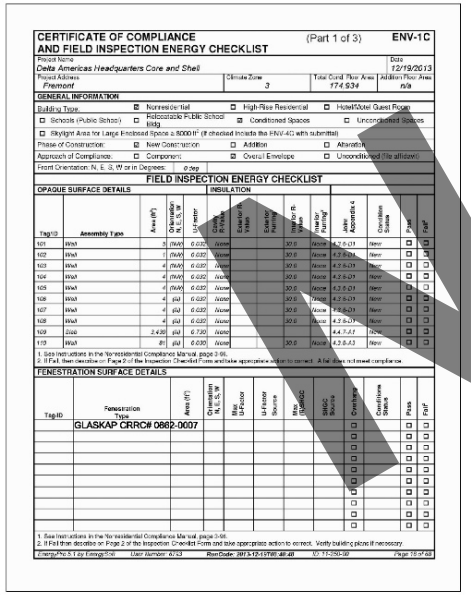
EnergyPro 5.1 by EnergySoft — User Number: 6753 — RunDate: 2013-12-11T08:48:48 — ID: 11-250-09 — Page 17 of 68


CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: Delta Americas Headquarters Core and Shell — Date: 12/19/2013
Project Address: Fremont — Climate Zone: 3 — Total Cond. Floor Area: 174,934 — Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: ☒ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☒ Conditioned Spaces ☐ Unconditioned Spaces
☐ Skylight Area for Large Enclosed Space ≥ 8000 ft² (If checked include the ENV-4G with submittal)
Phase of Construction: ☒ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☒ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 0 Deg

FIELD INSPECTION ENERGY CHECKLIST

OPAQUE SURFACE DETAILS — INSULATION

Tag/ID	Assembly Type	Area (ft²)	Orientation N, E, S, W	U-Factor	Cavity R-Value	Exterior R-Value	Exterior Furring	Interior R-Value	Interior Furring	JA4 Appendix A	Condition Status	Pass	F&F
101	Wall	1	(NW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
102	Wall	1	(NW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
103	Wall	4	(NW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
104	Wall	4	(NW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
105	Wall	4	(NW)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
106	Wall	4	(u)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
107	Wall	4	(u)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
108	Wall	4	(u)	0.032	None			30.0	None	4.3.5-D1	New	☐	☐
109	Slab	2,426	(u)	0.730	None					4.4.1-A1	New	☐	☐
110	Wall	81	(u)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐

1. See instructions in the Nonresidential Compliance Manual, page 3-96.
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FENESTRATION SURFACE DETAILS

Tag/ID	Fenestration Type	Area (ft²)	Orientation N, E, S, W	Max U-Factor	U-Factor Source	Max (R)SHGC	SHGC Source	Overhang	Condition Status	Pass	F&F
	GLASKAP CRRC# 0662-0007										

1. See instructions in the Nonresidential Compliance Manual, page 3-96.
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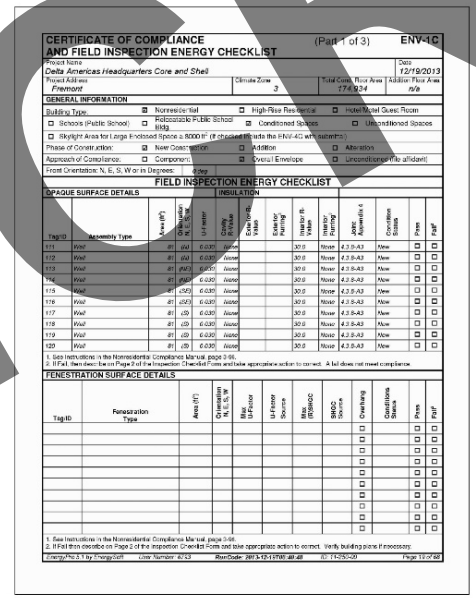
CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: Delta Americas Headquarters Core and Shell — Date: 12/19/2013
Project Address: Fremont — Climate Zone: 3 — Total Cond. Floor Area: 174,934 — Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: ☒ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
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Phase of Construction: ☒ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☒ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 0 Deg

FIELD INSPECTION ENERGY CHECKLIST

OPAQUE SURFACE DETAILS — INSULATION

Tag/ID	Assembly Type	Area (ft²)	Orientation N, E, S, W	U-Factor	Cavity R-Value	Exterior R-Value	Exterior Furring	Interior R-Value	Interior Furring	JA4 Appendix A	Condition Status	Pass	F&F
111	Wall	81	(u)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
112	Wall	81	(NW)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
113	Wall	81	(NW)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
114	Wall	81	(NW)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
115	Wall	81	(SE)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
116	Wall	81	(SE)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
117	Wall	81	(S)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
118	Wall	81	(S)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
119	Wall	81	(S)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
120	Wall	81	(S)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐

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FENESTRATION SURFACE DETAILS

Tag/ID	Fenestration Type	Area (ft²)	Orientation N, E, S, W	Max U-Factor	U-Factor Source	Max (R)SHGC	SHGC Source	Overhang	Condition Status	Pass	F&F

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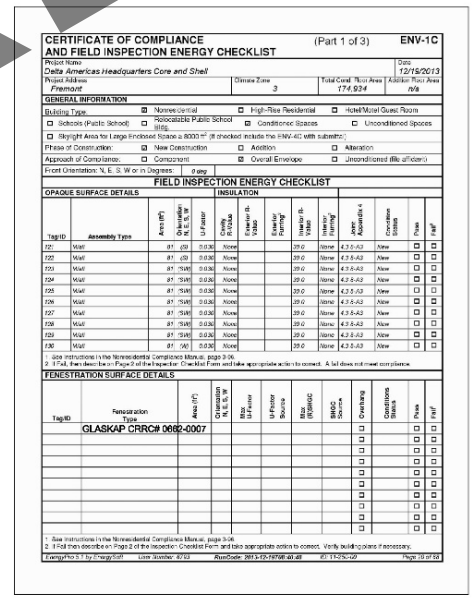
CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: Delta Americas Headquarters Core and Shell — Date: 12/19/2013
Project Address: Fremont — Climate Zone: 3 — Total Cond. Floor Area: 174,934 — Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: ☒ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☒ Conditioned Spaces ☐ Unconditioned Spaces
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FIELD INSPECTION ENERGY CHECKLIST

OPAQUE SURFACE DETAILS — INSULATION

Tag/ID	Assembly Type	Area (ft²)	Orientation N, E, S, W	U-Factor	Cavity R-Value	Exterior R-Value	Exterior Furring	Interior R-Value	Interior Furring	JA4 Appendix A	Condition Status	Pass	F&F
121	Wall	81	(S)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
122	Wall	81	(S)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
123	Wall	81	(SW)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
124	Wall	81	(SW)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
125	Wall	81	(SW)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
126	Wall	81	(SW)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
127	Wall	81	(SW)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
128	Wall	81	(SW)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
129	Wall	81	(SW)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐
130	Wall	81	(W)	0.032	None			30.0	None	4.3.5-A3	New	☐	☐

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FENESTRATION SURFACE DETAILS

Tag/ID	Fenestration Type	Area (ft²)	Orientation N, E, S, W	Max U-Factor	U-Factor Source	Max (R)SHGC	SHGC Source	Overhang	Condition Status	Pass	F&F
	GLASKAP CRRC# 0662-0007										

1. See instructions in the Nonresidential Compliance Manual, page 3-96.
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EnergyPro 5.1 by EnergySoft — User Number: 6753 — RunDate: 2013-12-11T08:48:48 — ID: 11-250-09 — Page 20 of 68

DELTA AMERICAS HEADQUARTERS
40089 FREMONT BLVD.
FREMONT, CA 94538

J.J.Pan 潘冀聯合建築師事務所 and Partners, Architects and Planners

KORTH SUNSERI HAGEY ARCHITECTS
600 CALIFORNIA STREET SAN FRANCISCO, CA 94108 415.864.1900

ISSUES AND REVISIONS

NO.	DATE	DESCRIPTION
	2012.12.05	PERMIT SUBMITTAL
1	2013.01.22	PERMIT SUBMITTAL #2
2	2013.03.11	PERMIT RESUBMITTAL
3	2013.05.14	PERMIT RESUBMITTAL
4	2013.07.18	PERMIT RESUBMITTAL
	2013.09.06	PERMIT RESUBMITTAL
	2013.12.20	PERMIT ADJUSTMENT
5	2013.12.23	BULLETIN #2
	2014.04.08	95% CONSTRUCTION DOCUMENTS

PROJECT NUMBER
11030

SHEET TITLE
TITLE 24 REPORT
13-18 OF 38

SCALE
N.T.S.

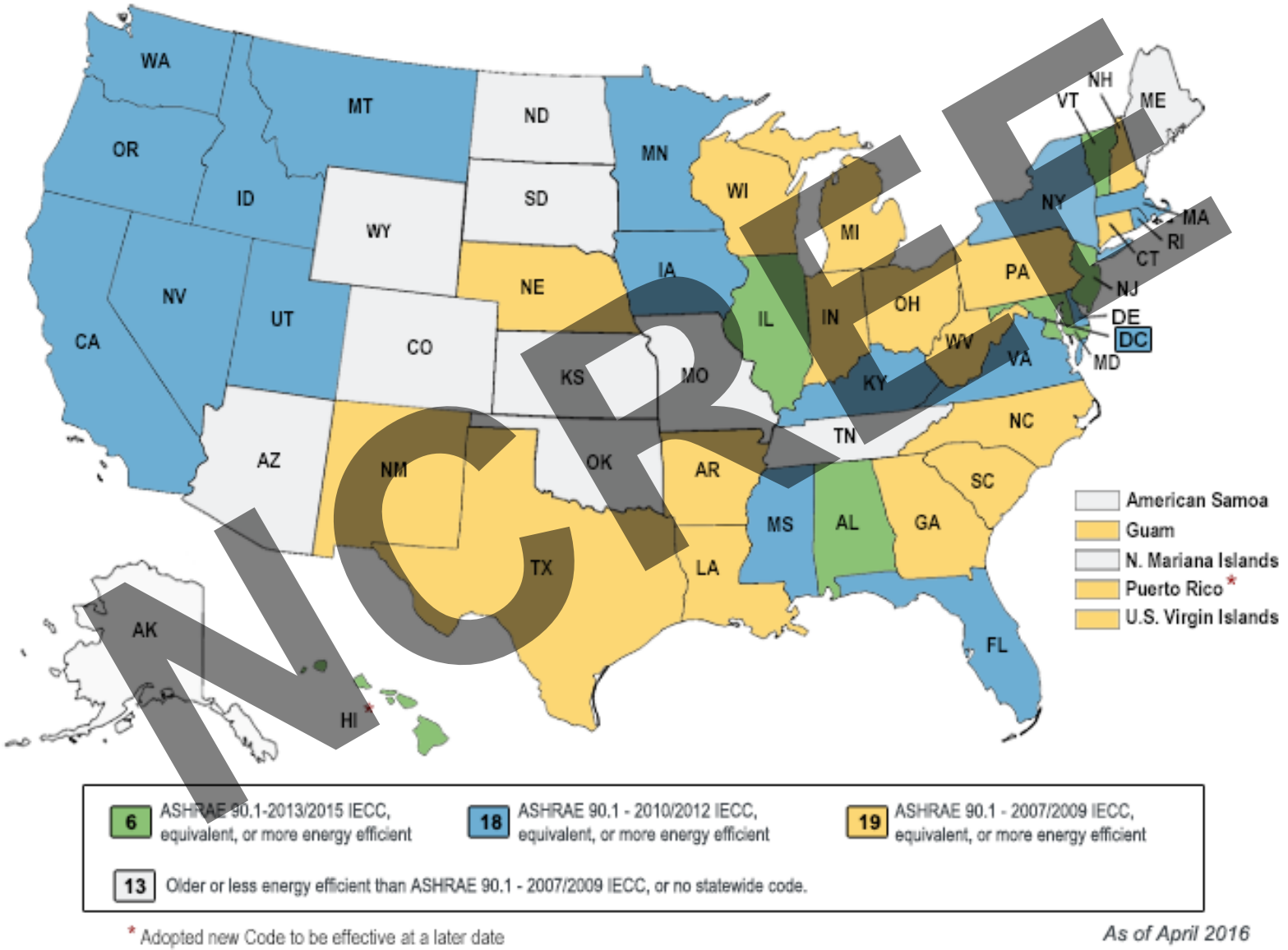
SHEET NUMBER
A0.32

綠建築

能源標準規範

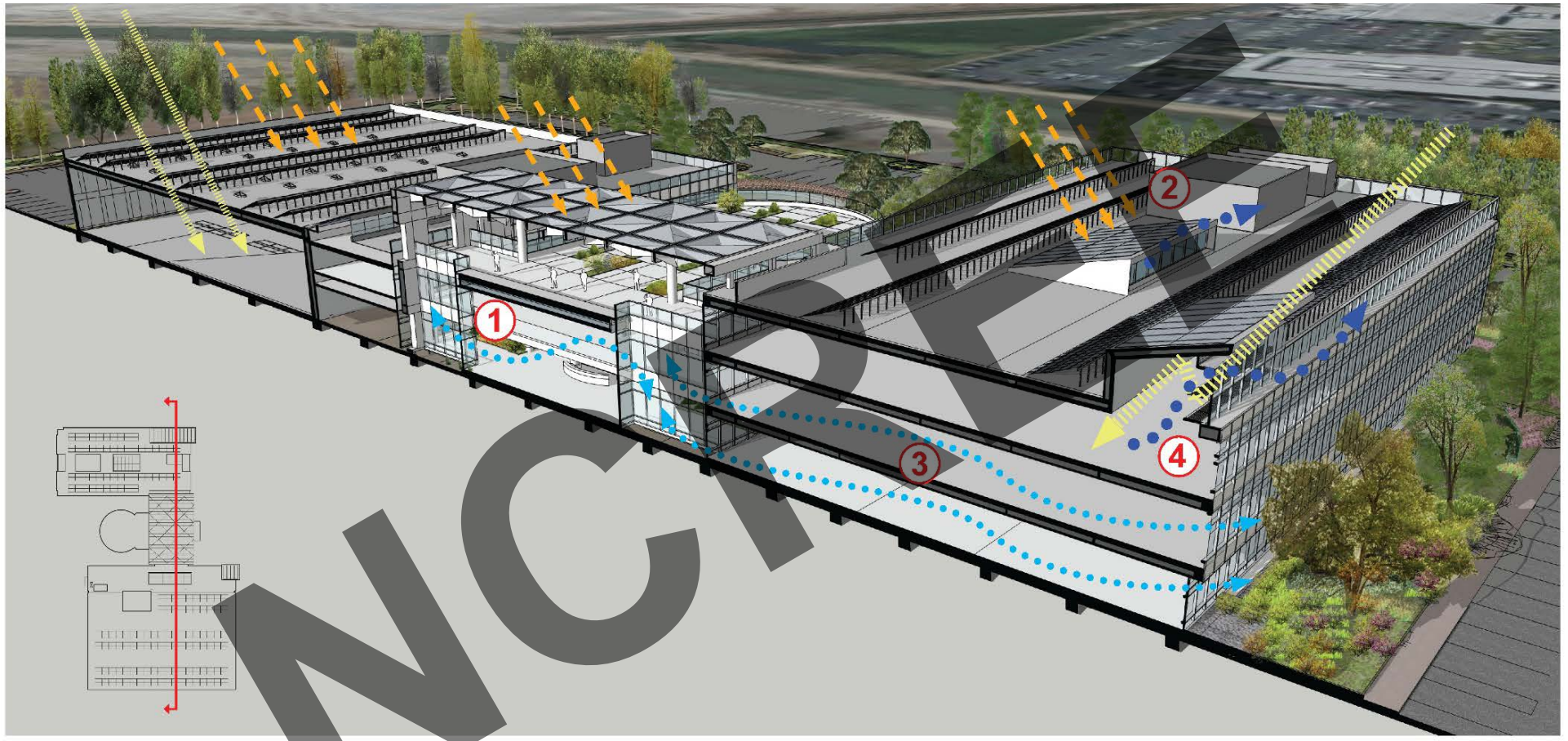
1．整體
2．外殼(有空調)
3．外殼(無空調)
4．空調
5．熱水
6．室內燈光(有空調)
7．室內燈光(無空調)
8．戶外燈光
9．用電
10．泳池+三溫暖
11．太陽能

綠建築



綠建築

綠建築 – 被動式設計



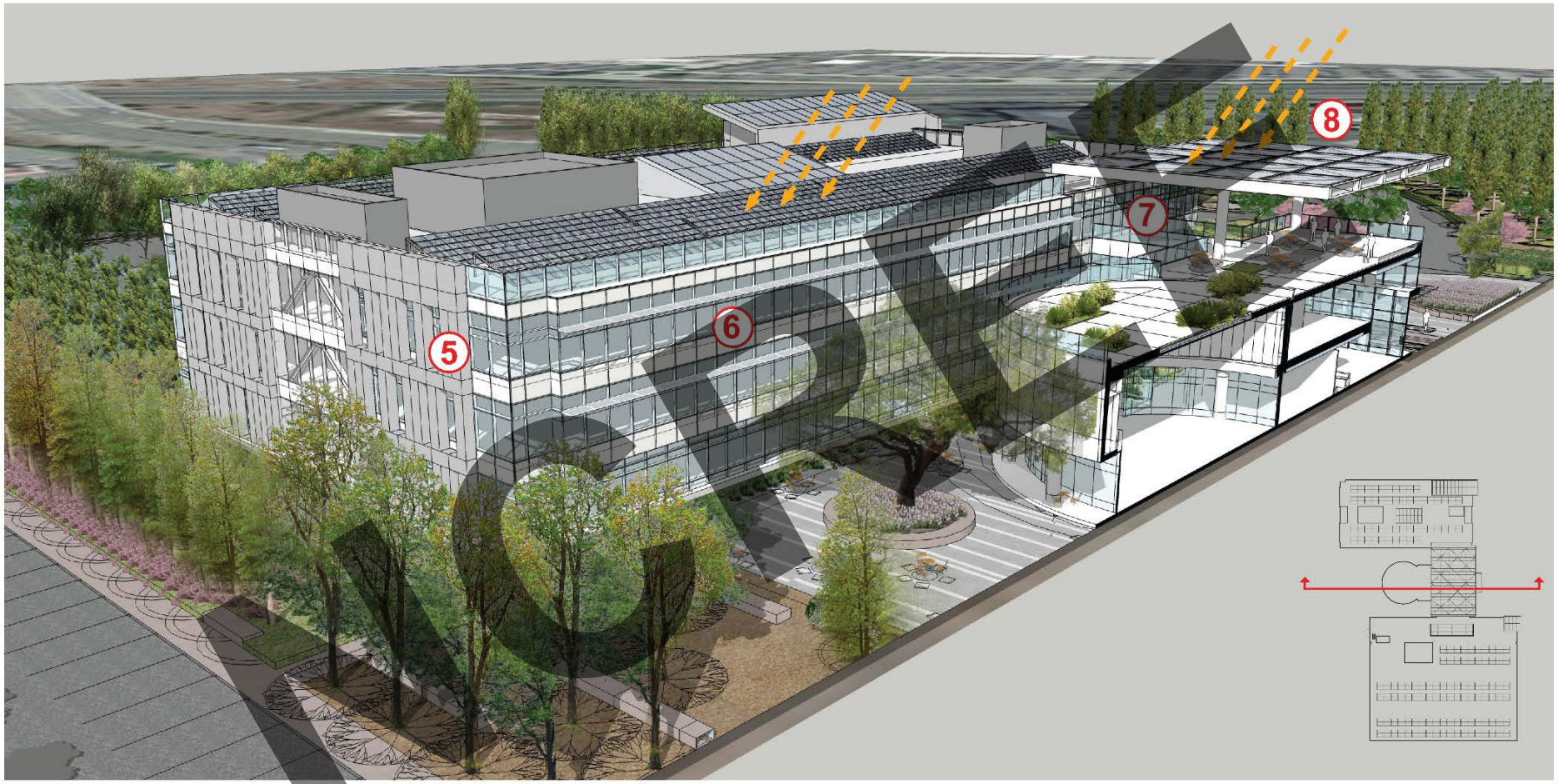
1. NATURAL COOLING:
- Wind blowing over the Bay cools down before entering the building and lobby space which is designed to be primarily naturally ventilated

2. DAYLIGHTING:
- Skylights reduce demand for artificial lighting and provide better work environment

3. NATURAL VENTILATION:
- Operable windows take advantage of ideal weather to minimize mechanical load with cross ventilation

4. VENT & LIGHT 'TOWER':
- Tower-like corner utilizes chimney effect to facilitate ventilation while light shelf bouces light further into the office space

綠建築 – 被動式設計



5. RECESSED WINDOWS:
- Recessed windows on the east and west elevations reduce amount of unwanted light and heat from entering the building

6. SUNSHADING:
- Horizontal shading on the south elevation and strategically planted trees adjacent to the building reduces glare and heat gain

7. LARGE CANOPY:
- Large canopy provides shading for pristine glass lobby and green roof while serving as ideal platform for PV panels

8. SOLAR POWER:
- Large amounts of PV arrays reduce dependence on grid and provide strong sustainable imagery

綠建築 – 主動式設計

1. EV CHARGING STATION

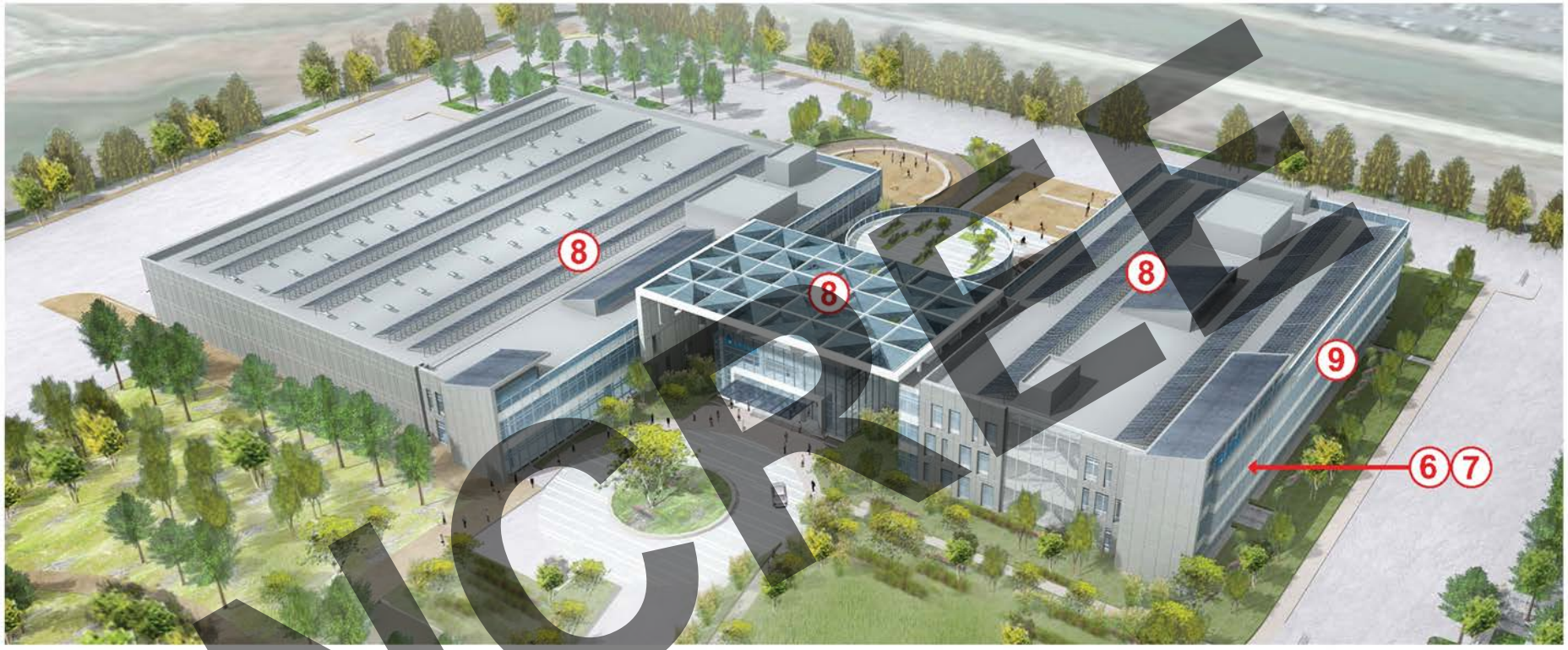
2. WIND POWER GENERATION

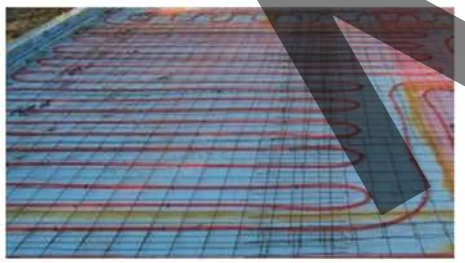
3. GROUND SOURCE HEAT PUMP

4. STORMWATER RETENTION

5. SOLAR CARPORT

綠建築 – 主動式設計





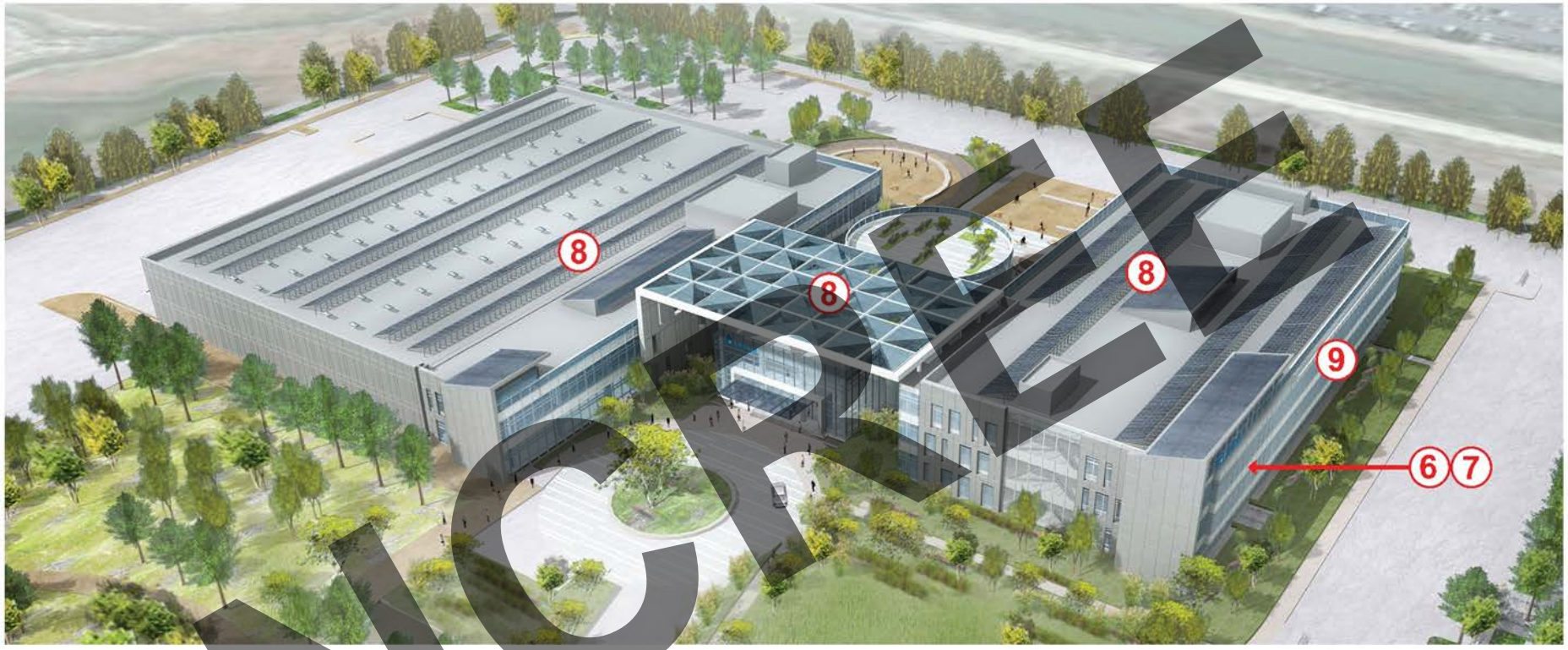
6. RADIANT FLOOR

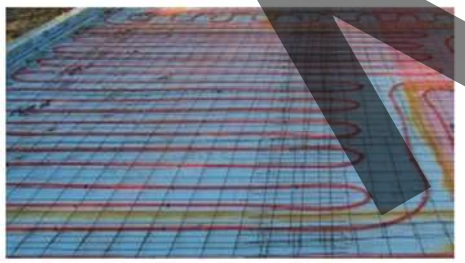
7. ACTIVE CHILLED BEAMS

8. SOLAR PANELS

9. MECHANICALLY OPERABLE WINDOW

綠建築 – 主動式設計





6. RADIANT FLOOR

7. ACTIVE CHILLED BEAMS

8. SOLAR PANELS

9. MECHANICALLY OPERABLE WINDOW

太陽能系統

地源熱泵系統

- 地源熱泵系統是在地底下30英尺處埋地下管線，運用地底恆溫的特性，透過管線中1萬2000加侖不斷循環的水，在夏天時把室內熱量排入地底以降低溫度。

- 在冬天時則從地底吸取熱量提升室內溫度，在建築物中，各樓層地板都鋪設雙向輻射空調管線，讓室內空調運作更有效率。

地源熱泵系統

地源熱泵系統

- 地源熱泵系統與雙向輻射空調的管線長度超過92英里，管線總面積超過5個足球場，這棟新落成的總部大樓，另運用台達變頻器，使能源使用效率再提升。

DELTA AMERICAS HEADQUARTERS

J.J.Pan

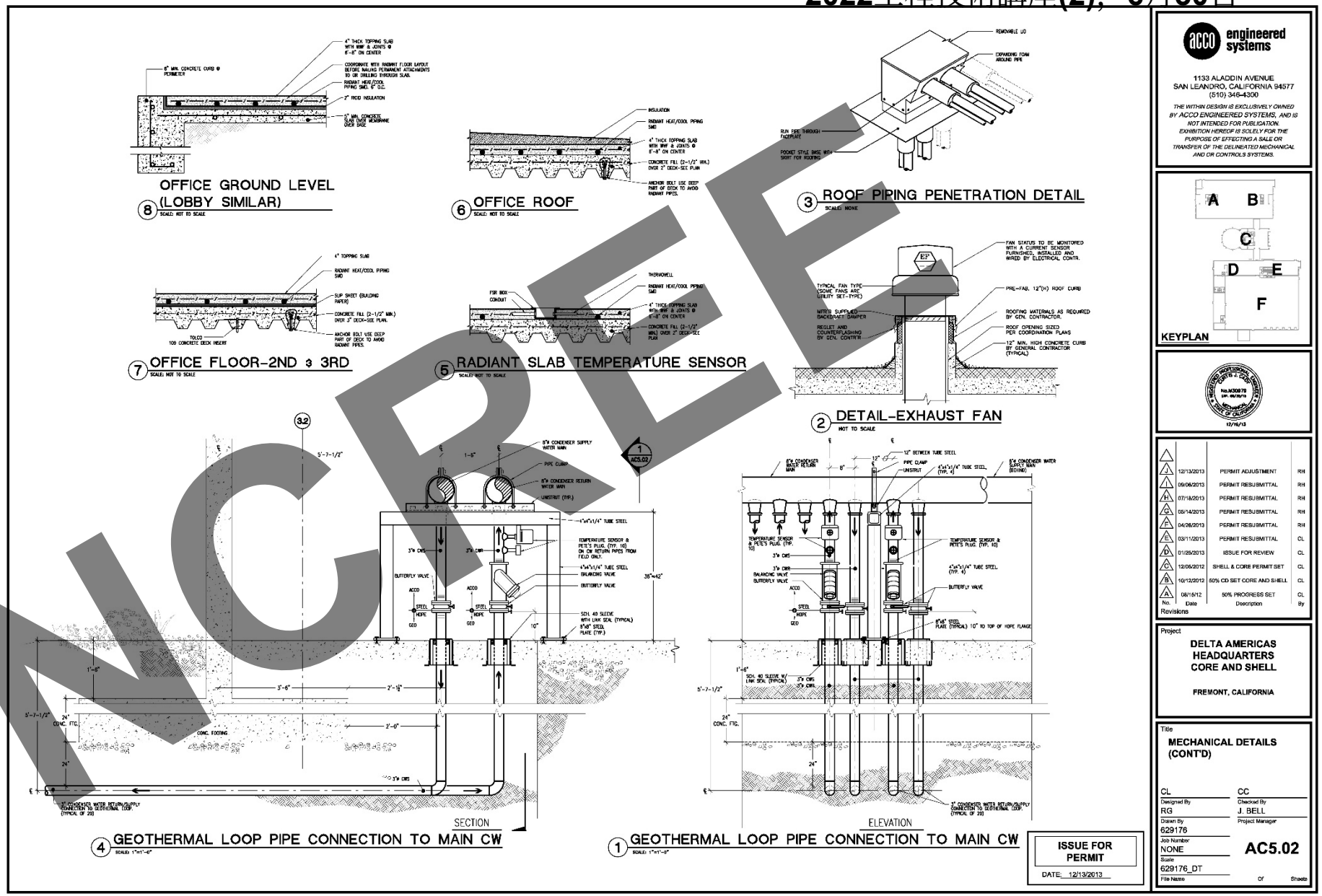
KORTH SUNGERI HAGEY ARCHITECTS

DETAILS

NOT TO SCALE

GX-2

方案比較



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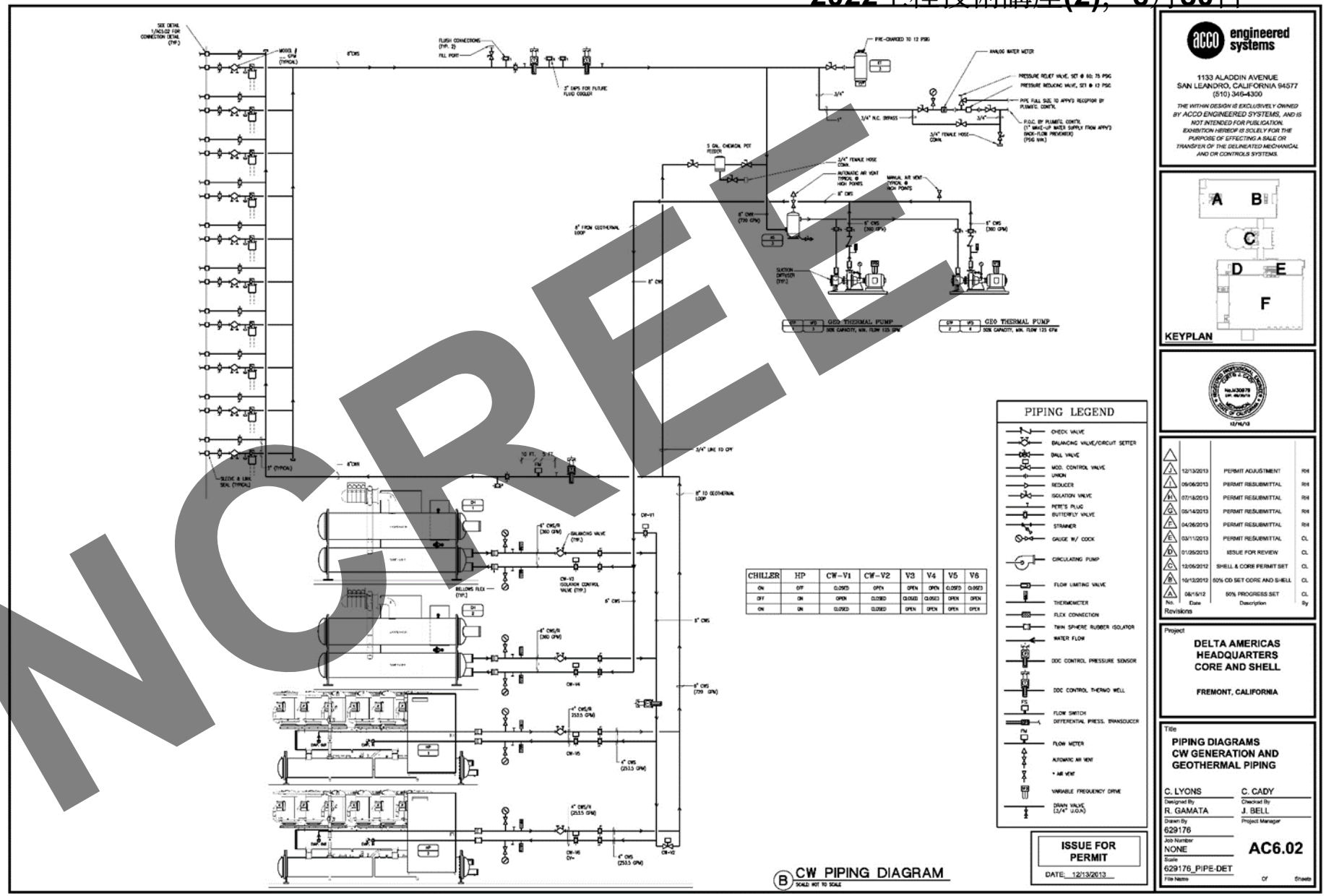
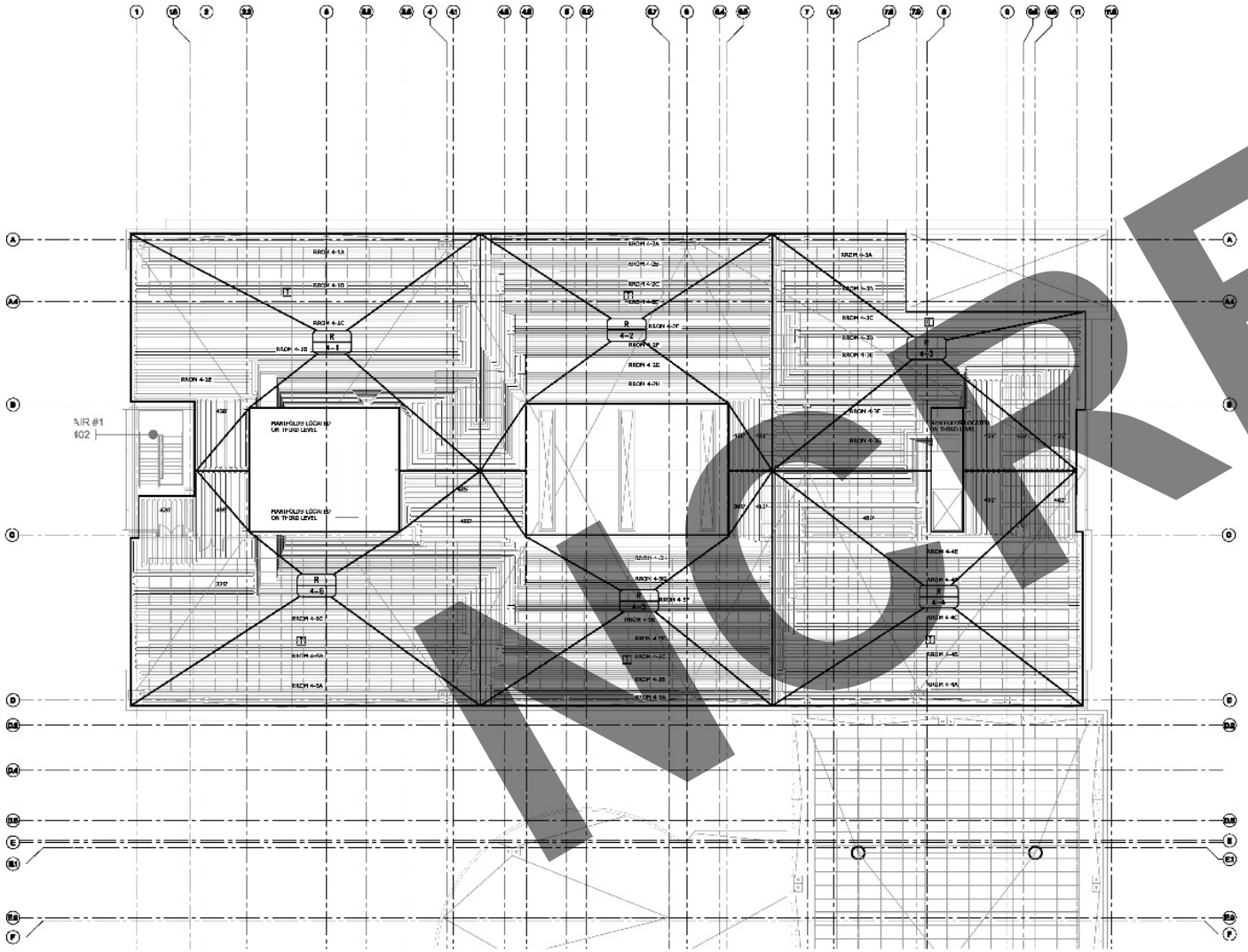
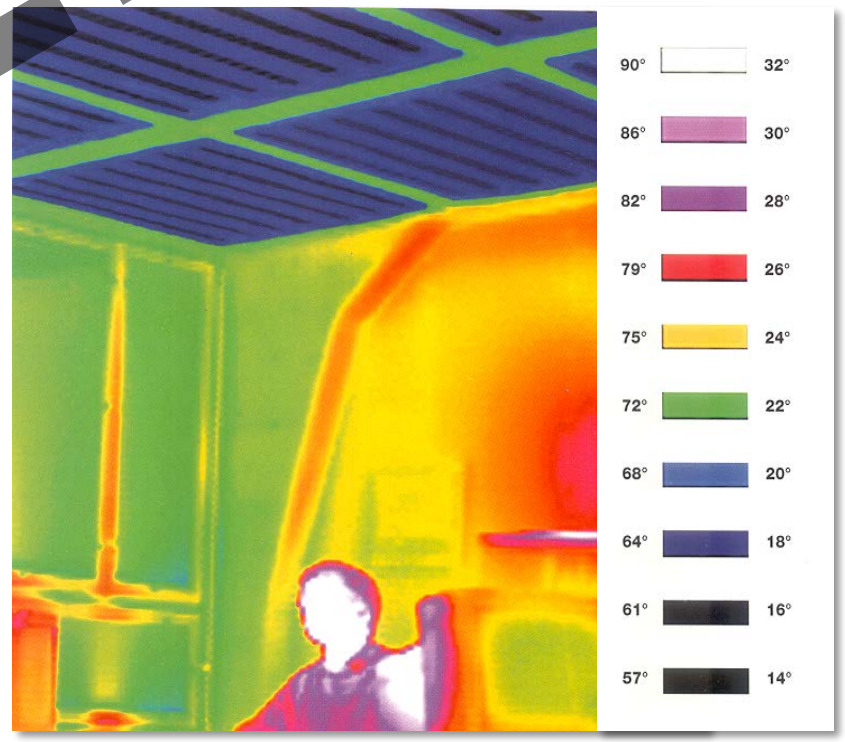


Radiant Floor & Ceiling 輻射冷卻供暖地板

- Passive cooling via radiant effect mixed with soft convection currents from the occupants
- 30% energy reduction over conventional cooling systems
- High quality ceiling finish
- 6-12 inch ceiling plenum
- 70% reduction in duct shaft area





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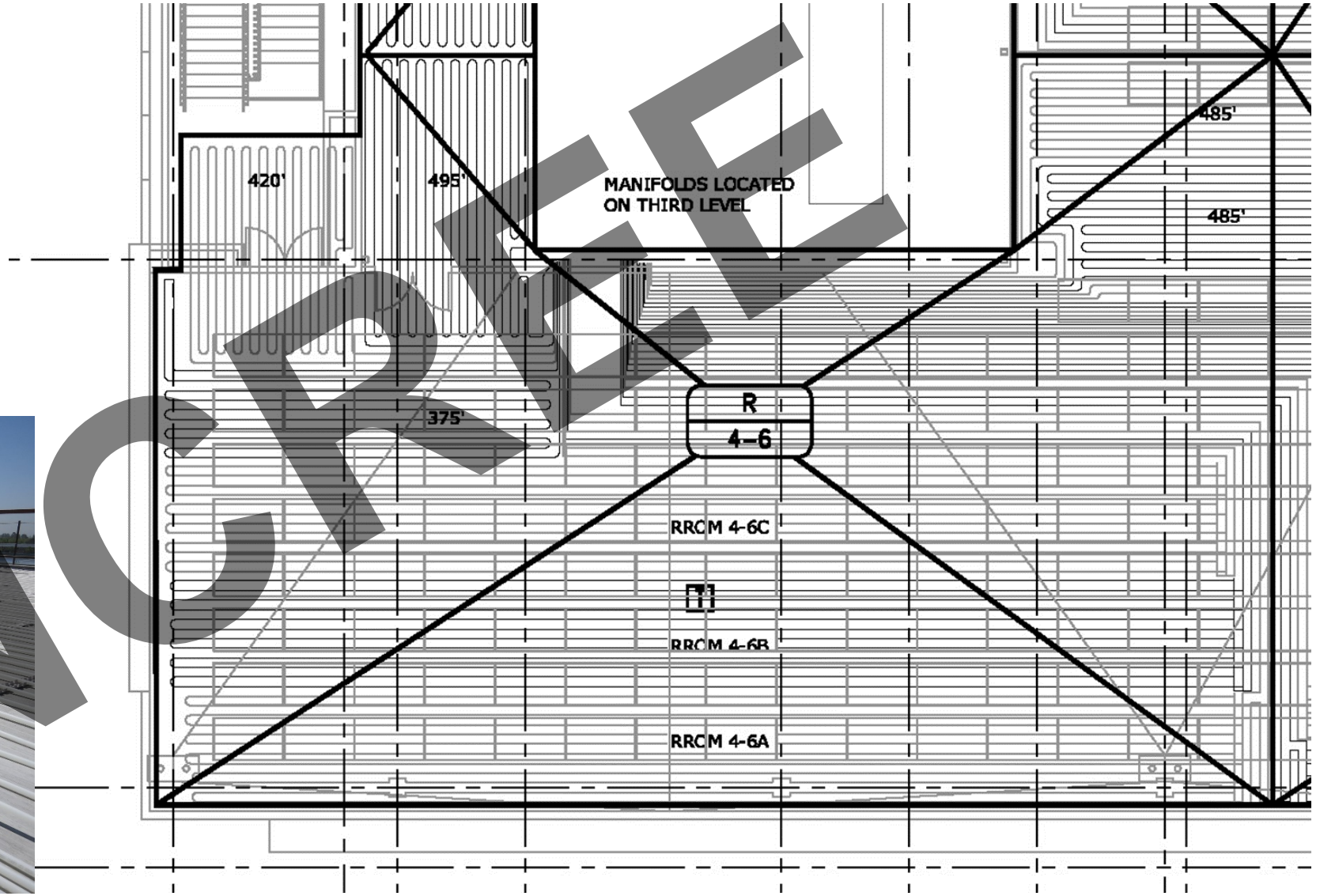

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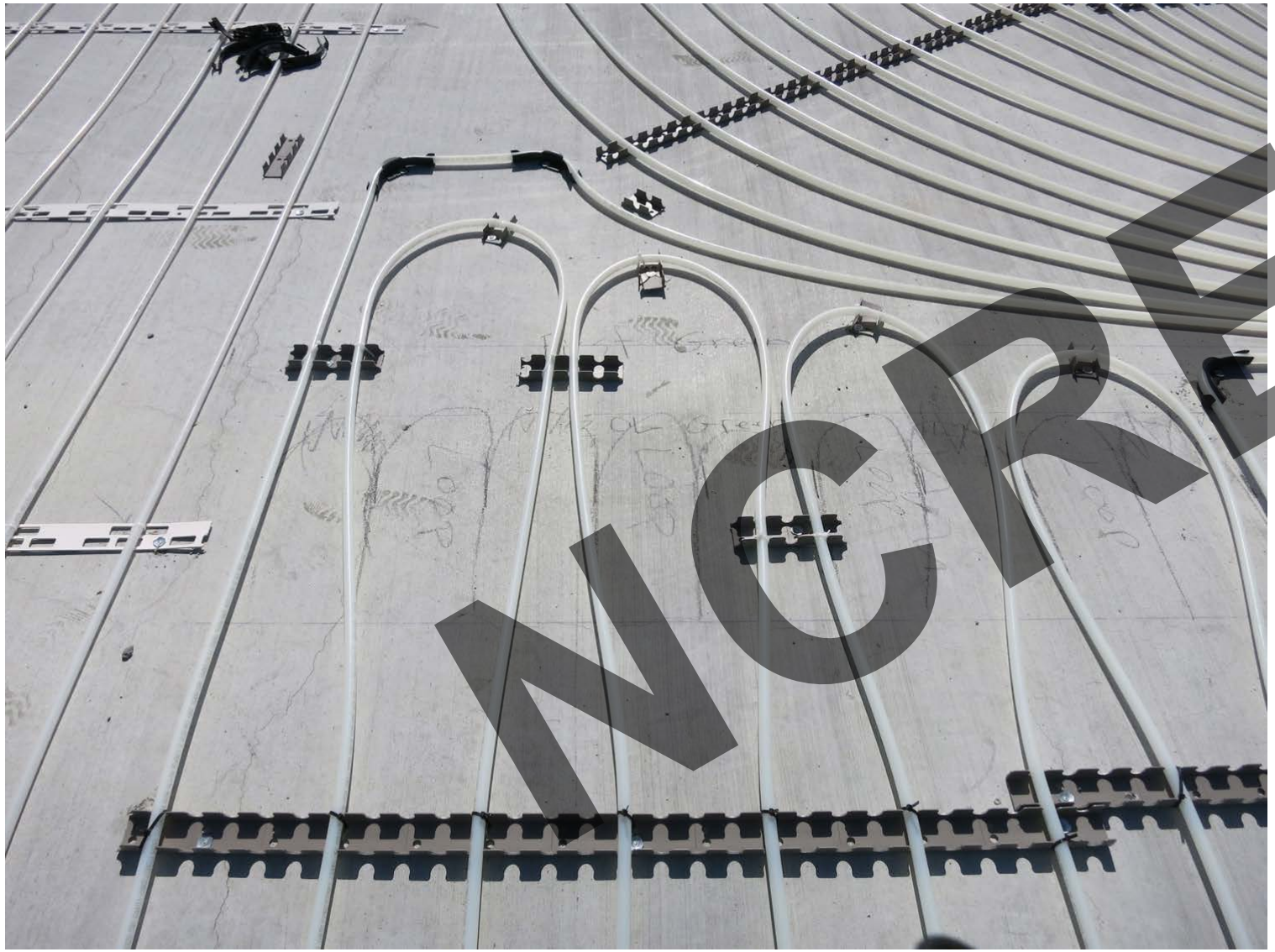
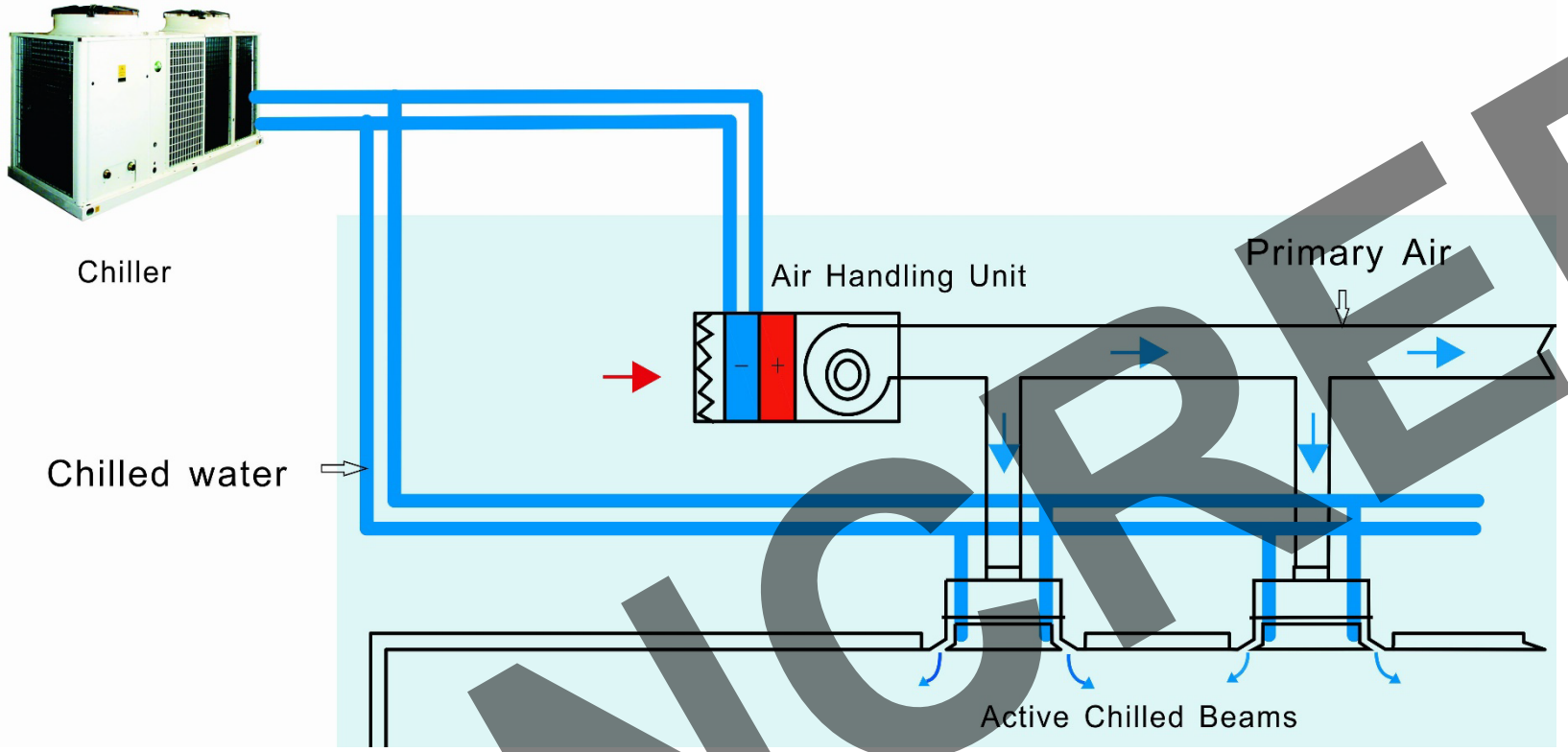
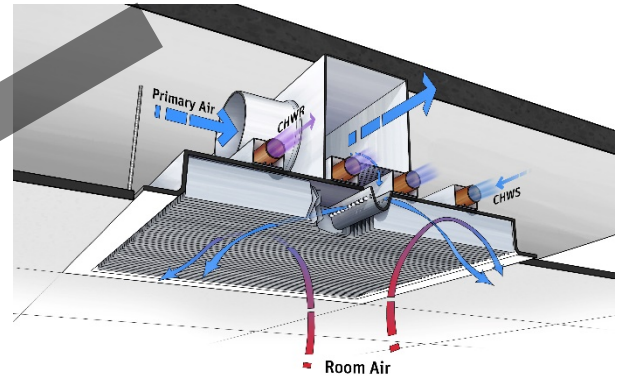
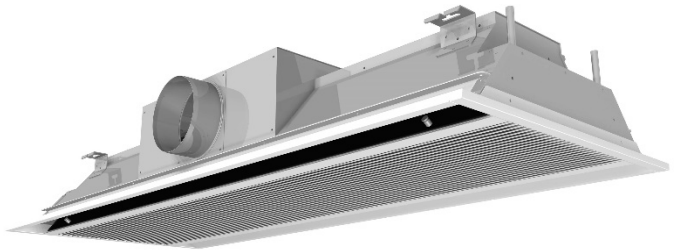


Active Chilled Beam 主動式冷樑







方案比較

CHALLENGES

時差

UTC-time	Taipei	Fremont
Thursday, 30 June 2022, 16:00:00	Fri 00:00	Thu 09:00 *
Thursday, 30 June 2022, 17:00:00	Fri 01:00	Thu 10:00 *
Thursday, 30 June 2022, 18:00:00	Fri 02:00	Thu 11:00 *
Thursday, 30 June 2022, 19:00:00	Fri 03:00	Thu 12:00 *
Thursday, 30 June 2022, 20:00:00	Fri 04:00	Thu 13:00 *
Thursday, 30 June 2022, 21:00:00	Fri 05:00	Thu 14:00 *
Thursday, 30 June 2022, 22:00:00	Fri 06:00	Thu 15:00 *
Thursday, 30 June 2022, 23:00:00	Fri 07:00	Thu 16:00 *
Friday, 1 July 2022, 00:00:00	Fri 08:00	Thu 17:00 *
Friday, 1 July 2022, 01:00:00	Fri 09:00	Thu 18:00 *
Friday, 1 July 2022, 02:00:00	Fri 10:00	Thu 19:00 *
Friday, 1 July 2022, 03:00:00	Fri 11:00	Thu 20:00 *
Friday, 1 July 2022, 04:00:00	Fri 12:00	Thu 21:00 *
Friday, 1 July 2022, 05:00:00	Fri 13:00	Thu 22:00 *
Friday, 1 July 2022, 06:00:00	Fri 14:00	Thu 23:00 *
Friday, 1 July 2022, 07:00:00	Fri 15:00	Fri 00:00 *
Friday, 1 July 2022, 08:00:00	Fri 16:00	Fri 01:00 *
Friday, 1 July 2022, 09:00:00	Fri 17:00	Fri 02:00 *
Friday, 1 July 2022, 10:00:00	Fri 18:00	Fri 03:00 *
Friday, 1 July 2022, 11:00:00	Fri 19:00	Fri 04:00 *
Friday, 1 July 2022, 12:00:00	Fri 20:00	Fri 05:00 *
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Friday, 1 July 2022, 17:00:00	Sat 01:00	Fri 10:00 *
Friday, 1 July 2022, 18:00:00	Sat 02:00	Fri 11:00 *
Friday, 1 July 2022, 19:00:00	Sat 03:00	Fri 12:00 *
Friday, 1 July 2022, 20:00:00	Sat 04:00	Fri 13:00 *
Friday, 1 July 2022, 21:00:00	Sat 05:00	Fri 14:00 *
Friday, 1 July 2022, 22:00:00	Sat 06:00	Fri 15:00 *
Friday, 1 July 2022, 23:00:00	Sat 07:00	Fri 16:00 *
Saturday, 2 July 2022, 00:00:00	Sat 08:00	Fri 17:00 *
Saturday, 2 July 2022, 01:00:00	Sat 09:00	Fri 18:00 *
Saturday, 2 July 2022, 02:00:00	Sat 10:00	Fri 19:00 *
Saturday, 2 July 2022, 03:00:00	Sat 11:00	Fri 20:00 *
Saturday, 2 July 2022, 04:00:00	Sat 12:00	Fri 21:00 *
Saturday, 2 July 2022, 05:00:00	Sat 13:00	Fri 22:00 *
Saturday, 2 July 2022, 06:00:00	Sat 14:00	Fri 23:00 *

做事方式

做事方式

做事方式

做事方式

施工照片

施工照片

施工照片

施工照片

方案比較　Color Substitution

Recommend Color Palette
(2014/11/17)

Option A

Veil
Dulux 00NN 53/000

Granite Grey
Dulux 00NN 37/000

Surreal Blue
Dulux 00NN 37/000

方案比較　Renderings Comparison

Original Color

Recommended Color(03/10)

方案比較　Simulated Photos Compare

Original Color

Recommend Color

方案比較

3/10 Recommended

Veil
Dulux 00NN 53/000

Granite Grey
Dulux 00NN 37/000

方案比較

Option A

Veil
Dulux 00NN 53/000

Seal Grey
Dulux 00NN 25/000

方案比較

Option B

Veil
Dulux 00NN 53/000

Grimmy's Grey
Dulux 00NN 20/000

方案比較

Option C

Veil
Dulux 00NN 53/000

Grey Taddy
Dulux 00NN 16/000

方案比較

Option D

Veil
Dulux 00NN 53/000

Obsidian Glass
Dulux 00NN 13/000

LANDSCAPE

奇石

Fremont

Bay-Friendly Basic Practices Checklist for Private Development

Project Name: DELTA AMERICAN HEADQUARTERS **"PLN" Number:** PLN2013-00082

Landscape Architect: SWA GROUP **CA License Number:** 3682

Phone Number: (415)836-8770

This Bay-Friendly Basic Practices Checklist is required with the submission of all development applications to the City of Fremont, excluding single family home parcels, but including subdivision common areas. Each project is required to meet the following nine (9) Practices. In addition to this requirement, each project is encouraged to meet 60 points on the Bay-Friendly Civic and Commercial Landscape Scorecard, which is available at www.BayFriendly.org and at www.fremont.gov.

Submit this form with your development application. Refer to the scorecard or the Bay-Friendly Landscape Guidelines for detail descriptions of requirements.

Complete	Not Complete	Measure & Requirement
X		1. Mulch all shrub areas with 3 inch layer of mulch.
SEE DETAILS, NOTES, AND SPECS		**Requirement:** All soil on site is protected with a minimum of 3 inches of mulch after construction. **Reference:** Bay-Friendly Scorecard item C.6.a.
X		2. Amend soil with compost before planting.
SEE NOTES AND SPECS		**Requirement:** Compost is specified as the soil amendment, at the rates indicated by a soil analysis to bring the soil organic matter content to a minimum of 3.5% by dry weight or 1 inch of compost. Option 1: Require import topsoil to meet organic matter content of a minimum 3.5% by dry weight. Option 2: submit soils report that identifies existing topsoil meets organic matter content of 3.5% by dry weight or greater. **Reference:** Bay-Friendly Scorecard item C.7.a.i.
X		3. Reduce and Recycle Landscape Construction Waste.
N/A		**Requirement:** Divert 50% of landscape construction and demolition waste by volume or weight. **Reference:** Bay-Friendly Scorecard item D.2.a.
X		4. Choose and Locate Plants that Grow to Natural Size and Avoid Shearing.
SEE NOTES AND SPECS		**Requirement:** No plant species will require shearing. Select species and spacing to allow plants to grow to natural size and shape without shearing at any point in the lifespan of the plant, excluding structural and regular maintenance pruning. Plant spacing shall not allow plants to grow into adjacent buildings, sidewalks, roadways, or adjacent landscape areas. **Reference:** Bay-Friendly Scorecard item E.1.a.

Page 1 of 2

Fremont

Yes	No	Measure & Requirement
X		5. Do not Plant Invasive Plant Species.
		Requirement: None of the plant species listed by CAL-IPC as invasive in the San Francisco, Bay Area are included in the planting design. **Reference:** Bay-Friendly Scorecard item E.2.a.
X		6. Grow Drought tolerant California native, Mediterranean or Climate Adapted Plants.
		Requirement: A minimum of 75% of the total number of plants in the non-turf areas must be species that require no or little summer watering once established. Species should be adapted to the climate in which they will be planted, as referenced by a third party source. Plants shall be rated for moderate or occasional water use for this region and climate. **Reference:** Bay-Friendly Scorecard item E.3.a.i.
X		7. Minimize Turf.
		Requirement: A maximum of 25% of total irrigated area is specified as turf, with sports or multi-use fields exempted. **Reference:** Bay-Friendly Scorecard item E.4.c.i.
X		8. Specify Automatic Weather-Based Irrigation Controller with Soil Moisture and/or Rain Sensor.
		Requirement: A Weather-based irrigation controllers, soil moisture based controllers, or other self-adjusting irrigation controllers, shall be required for entire irrigation system. **Reference:** Bay-Friendly Scorecard item F.2.a.
X		9. Sprinkler and Spray Heads are Not Specified in Areas less than 8 Feet Wide.
		Requirement: Sprinkler and spray heads are not specified in areas less than or equal to 8 feet wide to prevent overspray and runoff. Acceptable alternatives include bubbler or drip with subsurface rigid lateral pipes. Bubblers shall not exceed 1.5 gallons per minute per bubbler. **Reference:** Bay-Friendly Scorecard item F.2.b.

奇石

PLANTING LEGEND - TREE

CODE	LATIN NAME	COMMON NAME	SIZE	HEIGHT	CANOPY	REMARKS	WUCOL DESIGNATION	DETAILS
PLA RAC	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	15 GAL.	8'	3'	STANDARD MINIMUM OF 6' CLEAR TRUNK	M	
CER OCC	CERCIS OCCIDENTALIS 'STANDARD'	WESTERN REDBUD	15 GAL.	8'	3'	STANDARD MINIMUM OF 6' CLEAR TRUNK	VL	
QUE AGR	QUERCUS AGRIFOLIA	COAST LIVE OAK	15 GAL.	8'	3'	STANDARD MINIMUM OF 6' CLEAR TRUNK	VL	
SAL LAS	SALIX LASIOLEPSIS	CREEK WILLOW	15 GAL.	8'	3'	STANDARD MINIMUM OF 6' CLEAR TRUNK	H	

PLANTING LEGEND - UNDERSTORY

SYMBOL	CODE	LATIN NAME	COMMON NAME	SIZE	SPACING	REMARKS	WUCOL DESIGNATION	DETAIL
	PA-1	N/A	CALIFORNIA NATIVE GRASS MIX	HYDROSEED	N/A	SEE SPECIES LIST BELOW & SPECIFICATIONS	VL	
	PA-2	N/A	RIPARIAN/ TIDAL HABITAT	HYDROSEED	N/A	SEE SPECIES LIST BELOW & SPECIFICATIONS	M	
	PA-3	N/A	BIO-INFILTRATION ZONE	HYDROSEED	N/A	SEE SPECIES LIST BELOW & SPECIFICATIONS	L	
	ARC UVA	ARCTOSTAPHYLOS UVA-URSI	CREEPING BEARBERRY	1 GAL 5 GAL	36" O.C. TRIANGULAR	12" DIA. X 12" HT. @ 1 GAL. 24" DIA. X 18" HT. @ 5 GAL	L	
	WOO FIM	WOODWARDIA FIMBRIATA DW.	CHAIN FERN	5 GALLON	36" O.C. TRIANGULAR	24" DIA. X 24-36" HT. MIN.	M	
	RHA CAL	RHAMNUS CALIFORNICUS DW.	CALIFORNIA COFFEEBERRY	1 GAL 5 GAL	60" O.C. TRIANGULAR	12" DIA. X 12" HT. @ 1 GAL. 36" DIA. X 36" HT. @ 5 GAL	L	
	ZAU CAL	ZAUSCHNERIA CALIFORNICA 'CATALINA'	CALIFORNIA FUSCHIA	5 GALLON	36" O.C. TRIANGULAR	12" DIA. X 12" HT. MIN.	L	
	CEA JOY	CEANOTHUS'JOYCE COULTER'	CALIFORNIA LILAC	5 GALLON	48" O.C. TRIANGULAR	14" DIA. X 14" HT. MIN.	VL	

PLANTING LEGEND - HYDROSEEDING SPECIES LIST

PA-1_TEMPORARY IRRIGATED COASTAL SCRUB
LBS./ ACRE

10 Nasella pulchra – Purple Needlegrass
8 Festuca rubra 'Molate Blue' – Blue Molate grass
5 Deschampsia cespitosa x holciformis– Coastal Hairgrass
5 Koeleria macrantha – Coastal Junegrass

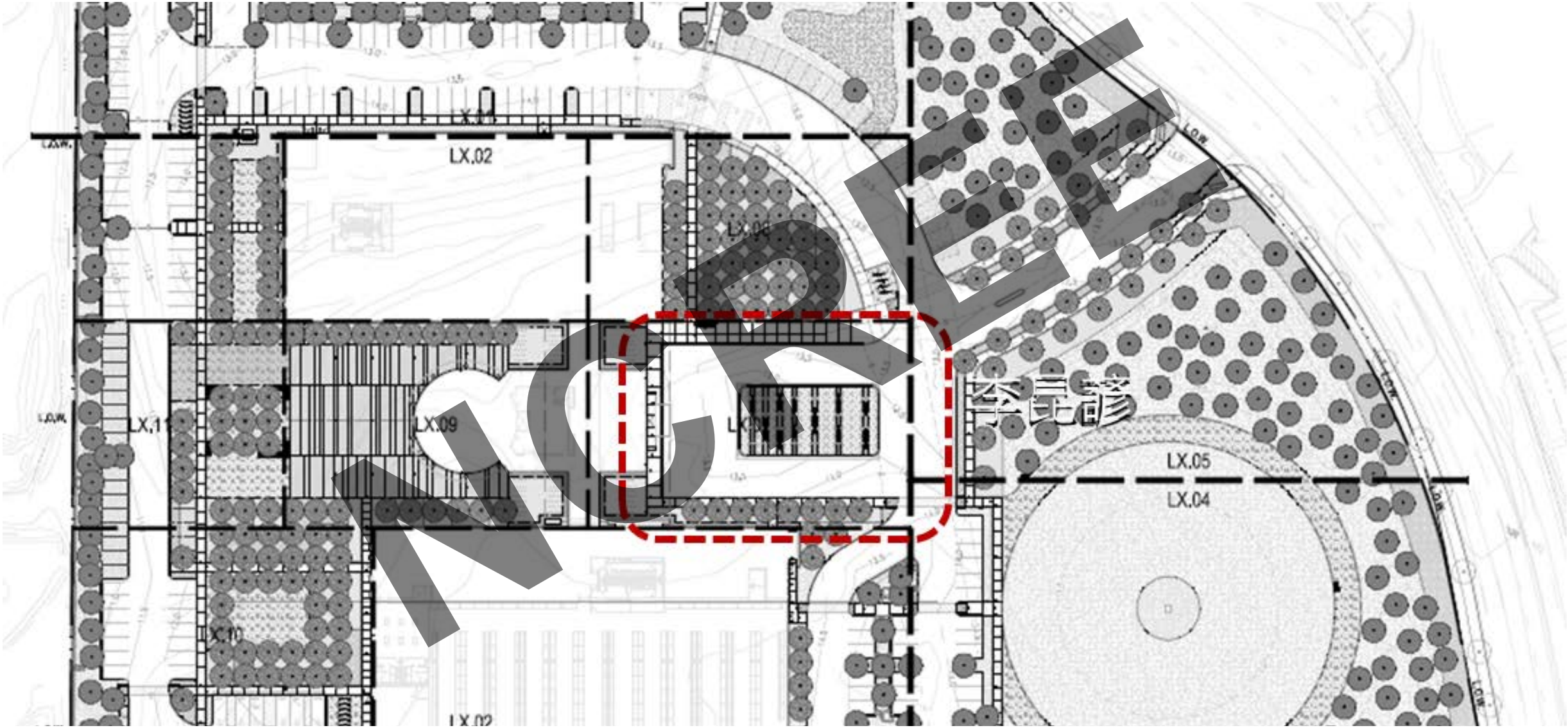
PA-3,4_BIO-INFILTRATION/STORMWATER BASIN
LBS./ACRE SPECIES

13 Hordeum brachyantherum – Meadow barley
10 Elymus glacus – Blue Wildrye
6 Leymus triticoides – Yolo creeping Wildrye
4.5 Festuca rubra – Molate fescue
1.5 Cyperus eragrostis – Umbrella Plant
1.5 Juncus effusus– Common rush
1 Carex divulsa – Berkeley sedge
0.5 Juncus occidentalis – California Rush
.25 Artemesia douglasiana – Mugwort

PA-2_RIPARIAN/ TIDAL HABITAT
LBS./ACRE SPECIES

5.0 Hordeum depressum – Alkali Barley
5.0 Hordeum brachyantherum – Meadow Barley
4.0 Distichlis spicata sp. strictus – Inland Salt Grass
2.5 Scirpus maritimus – Alkali bulrush
1.5 Atriplex triangularis – Fat Hen
1.0 Grindelia hirsutula var. hirsutula – SF Bay Gumplant
1.0 Lasthenia glabrata – California goldfield –salt
1.0 Salicornia virginica – Pickweed
.5 Baccharis douglasii – Douglas Baccharis
.5 Heliotropium curvassavicum – Heliotrope
.25 Cressa truxillensis – Alkali weed
.25 Ambrosia chamissonia – Beach Bursage
.25 Frankenia salina – Marsh Rosemary

奇石



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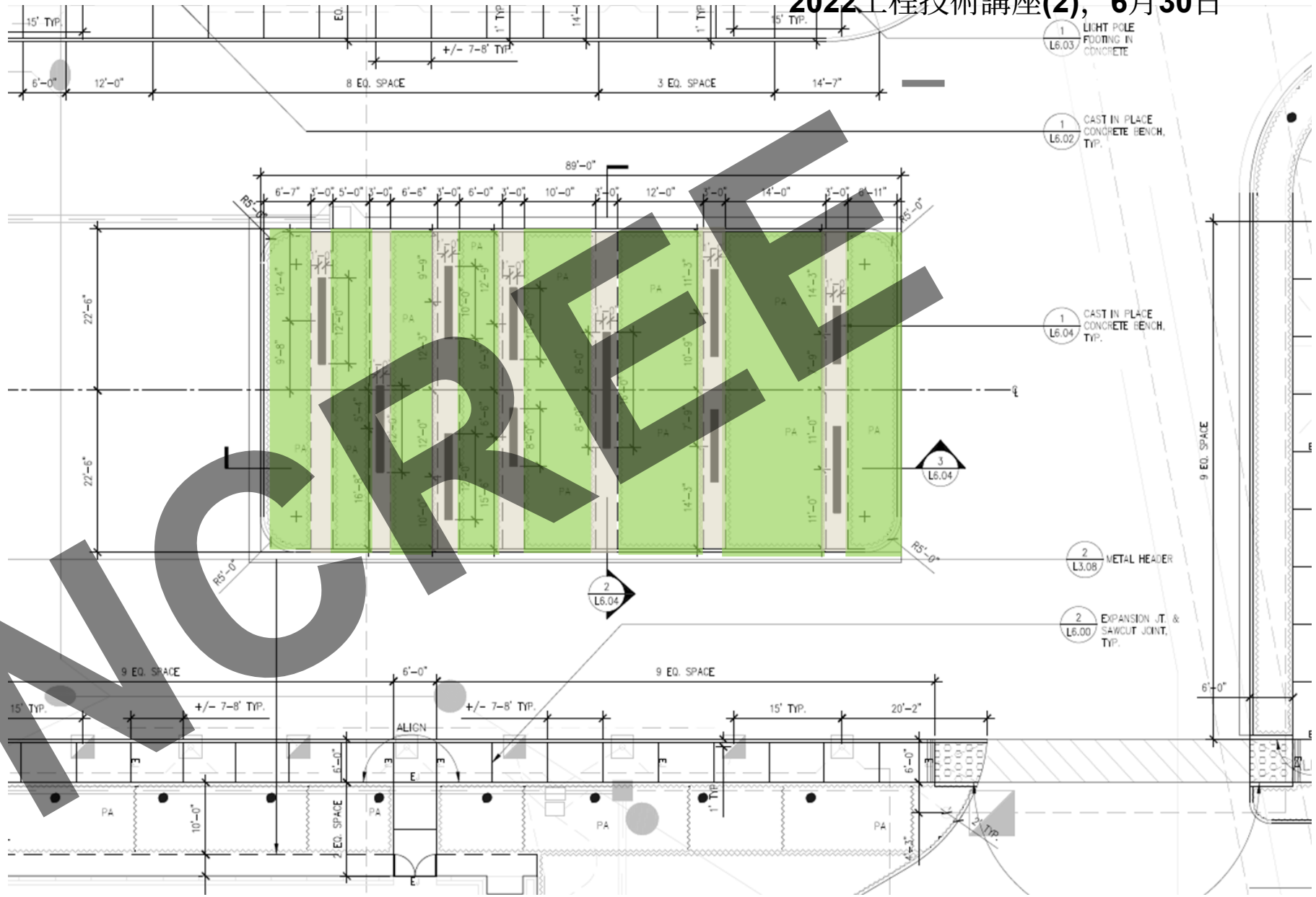

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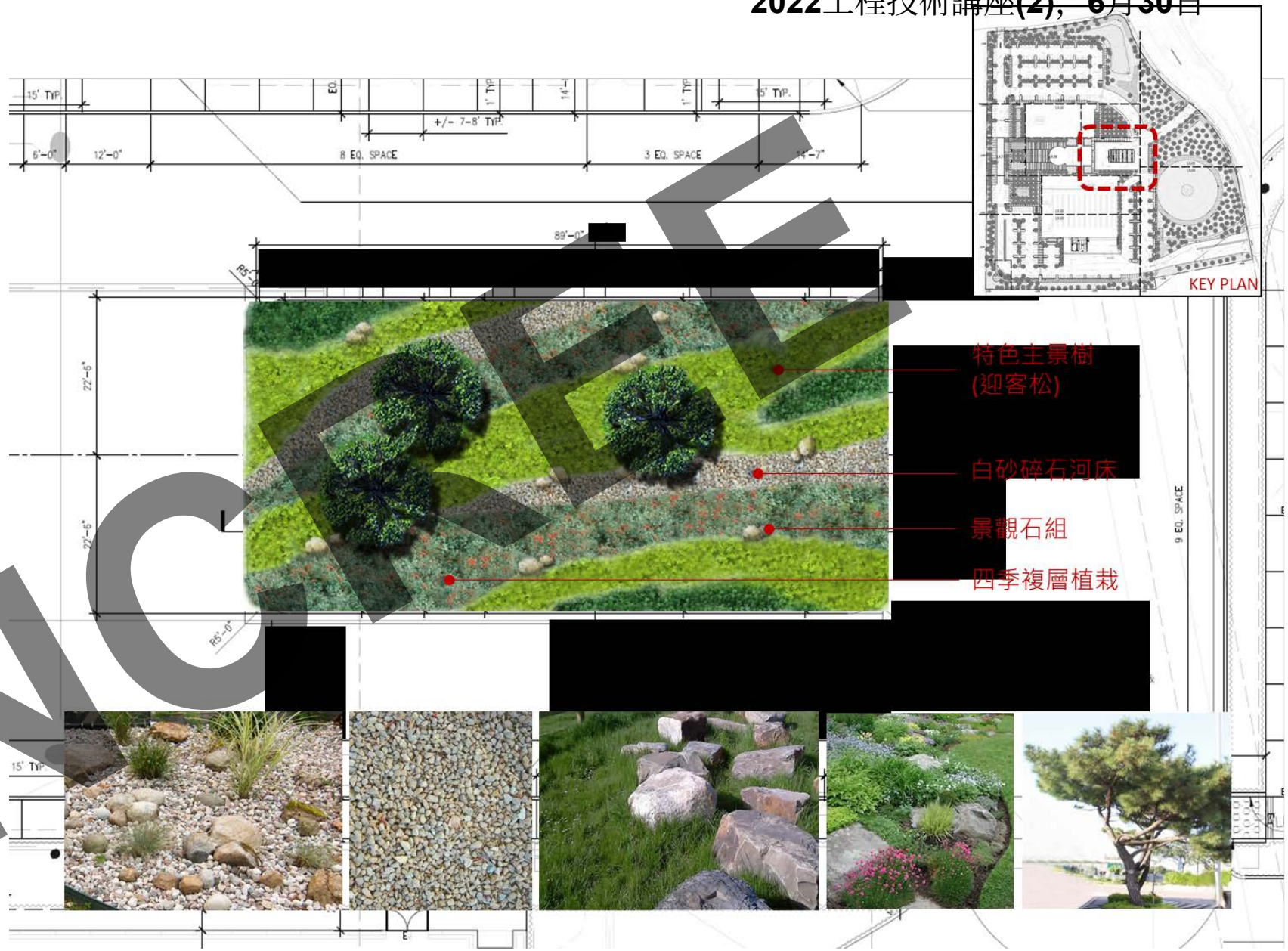

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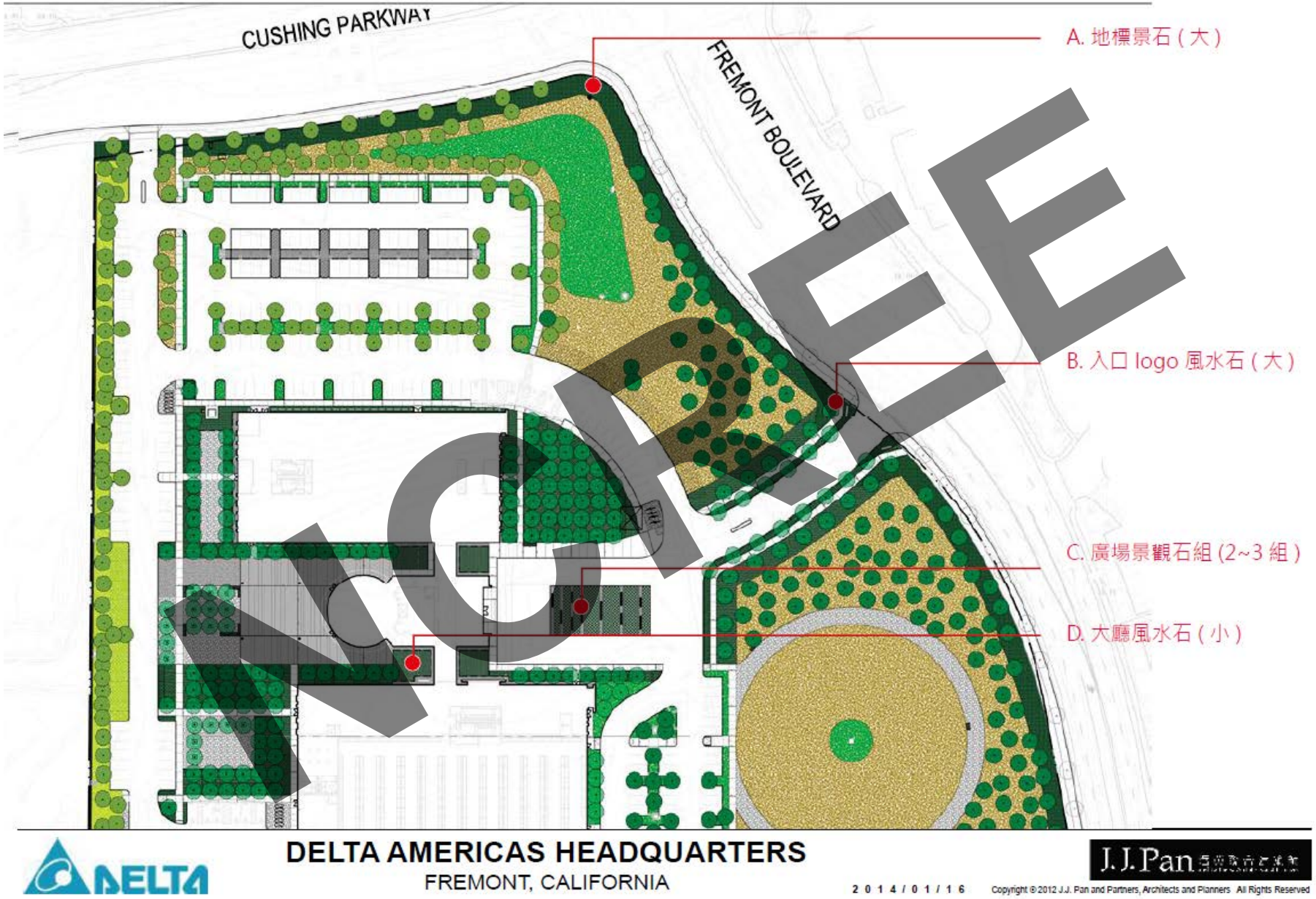

CUSHING PARKWAY
FREMONT BOULEVARD
A. 地標景石 (大)
B. 入口 logo 風水石 (大)
C. 廣場景觀石組 (2~3 組)
D. 大廳風水石 (小)
DELTA AMERICAS HEADQUARTERS
FREMONT, CALIFORNIA
2014/01/16
J.J.Pan
Copyright ©2012 J.J. Pan and Partners, Architects and Planners All Rights Reserved

奇石

Mid-Large Boulders.

NO.1, 4, 12, 13, 16, 17, 23, 24, 20, 19, 22, 26, 31, 33, 34, 36, 35, 29, 37 (19 Total)

奇石

VISION

全區

全區

全區

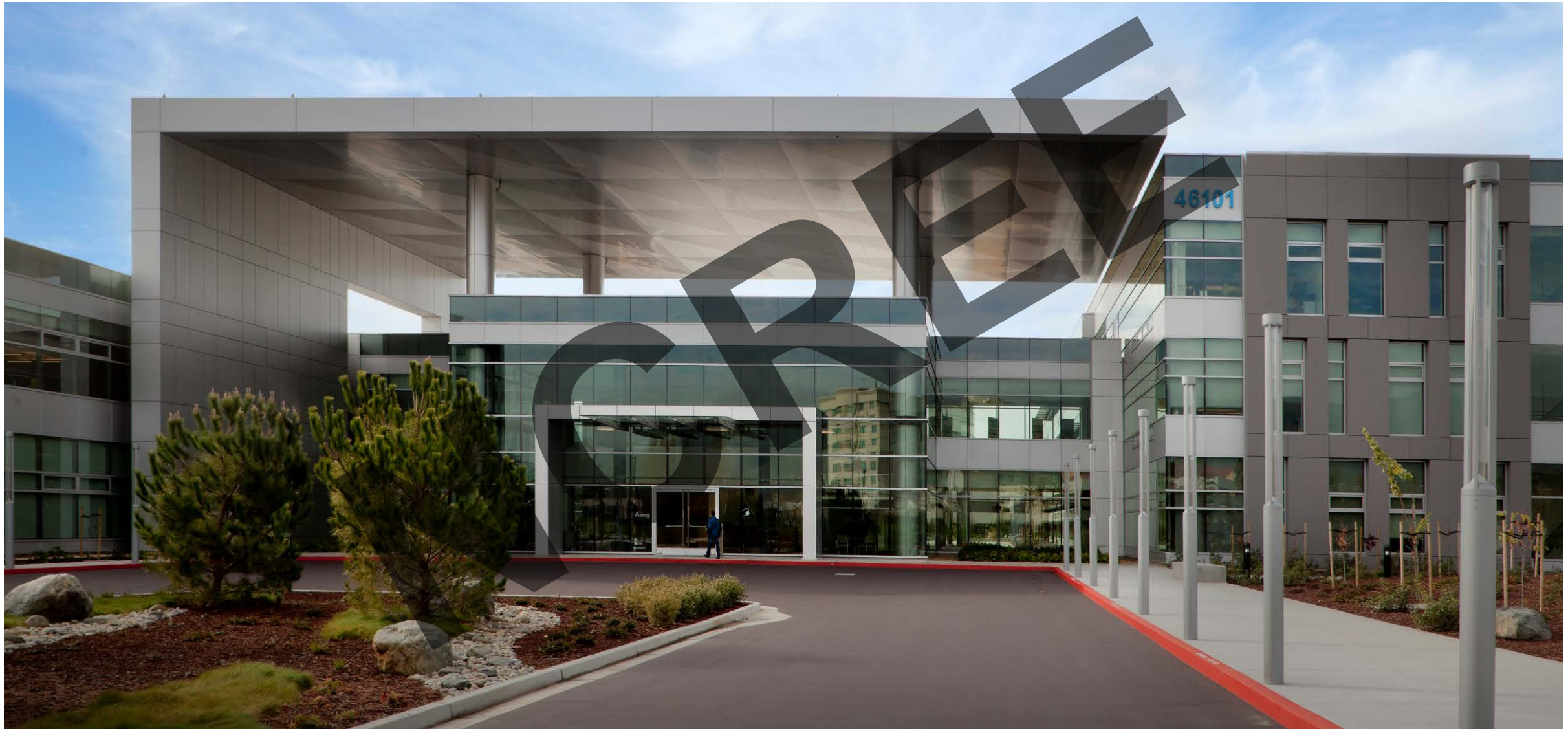
全區

全區

全區

COMPLETION

入口



入口

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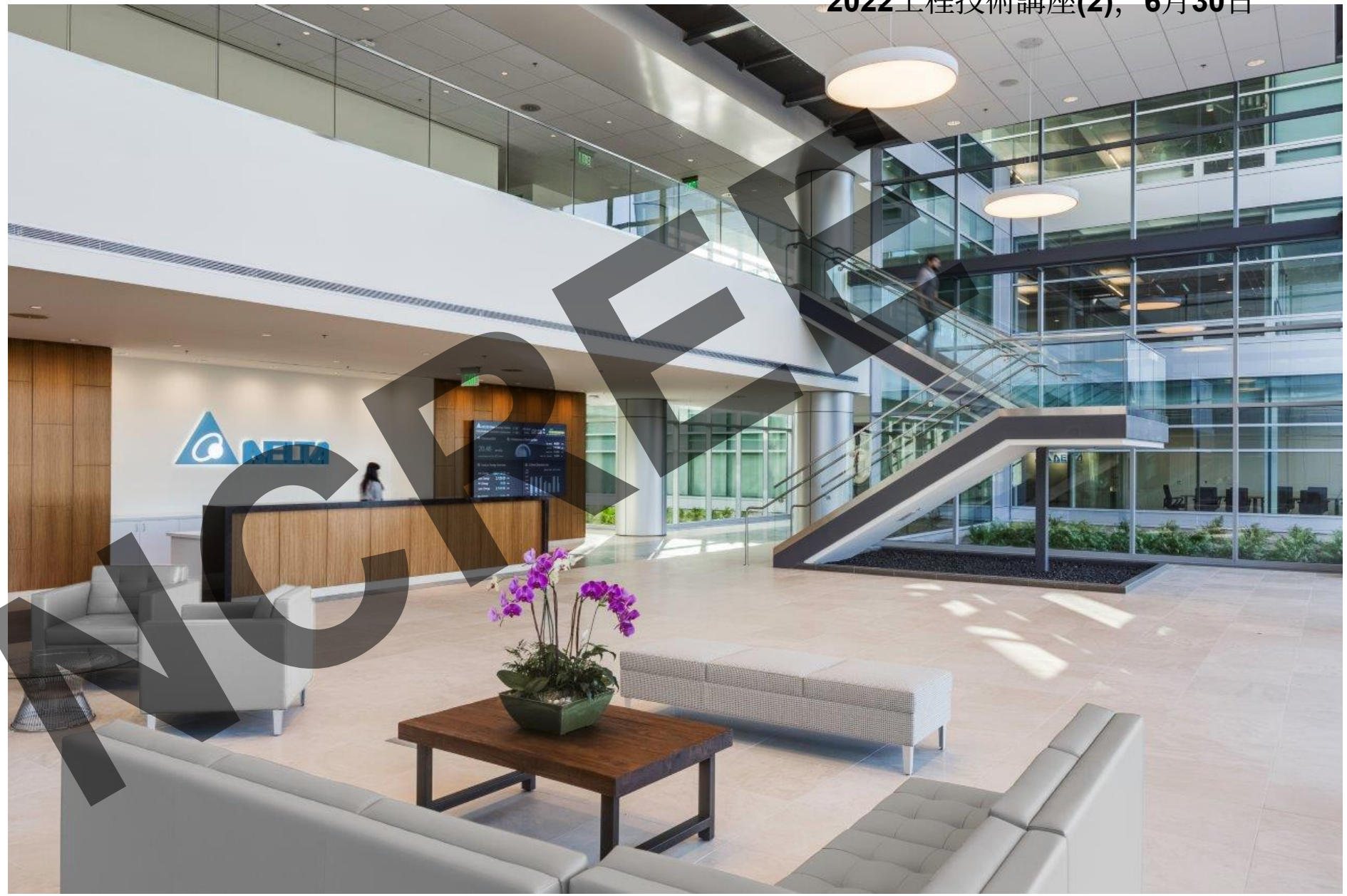
入口大廳

入口大廳



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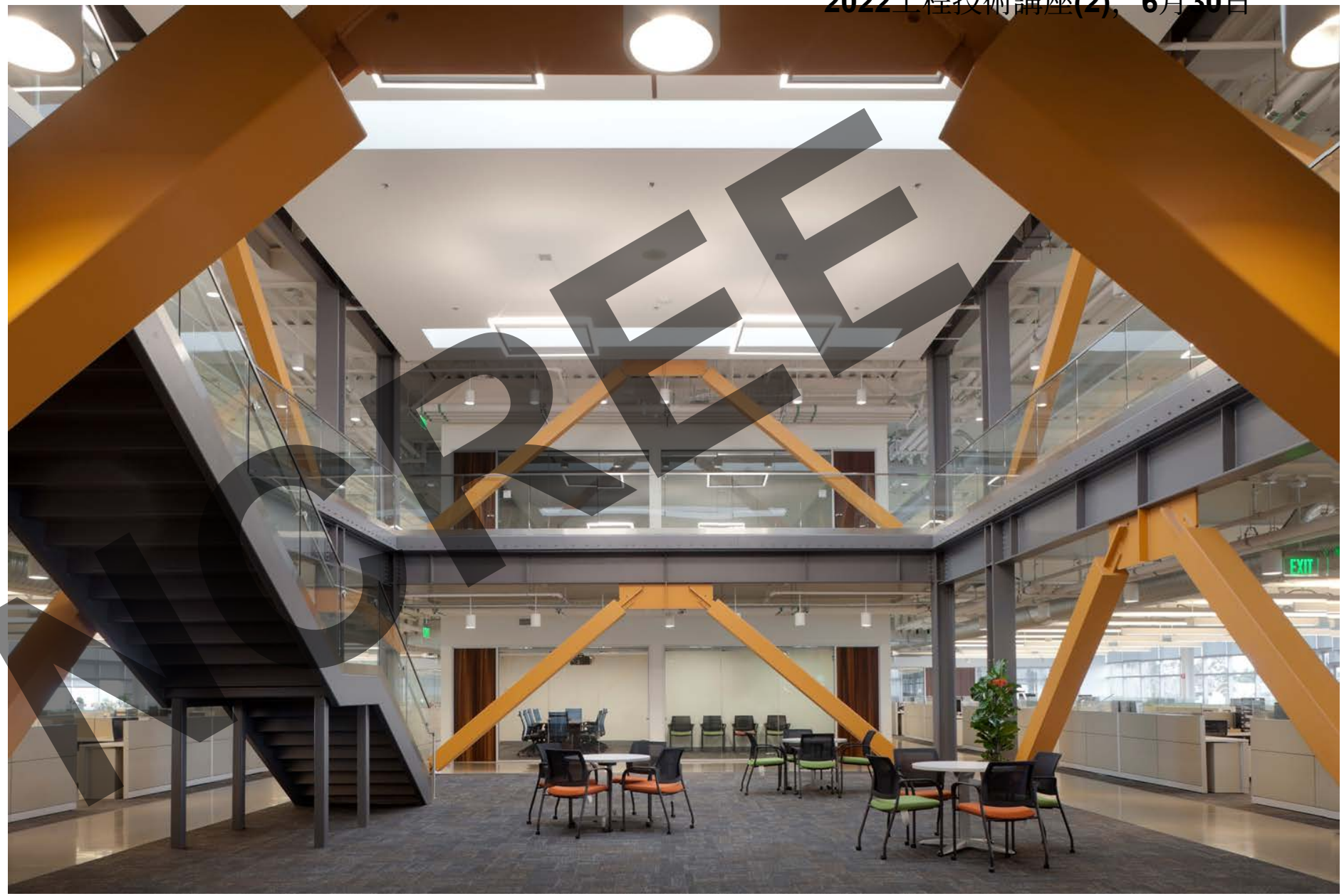

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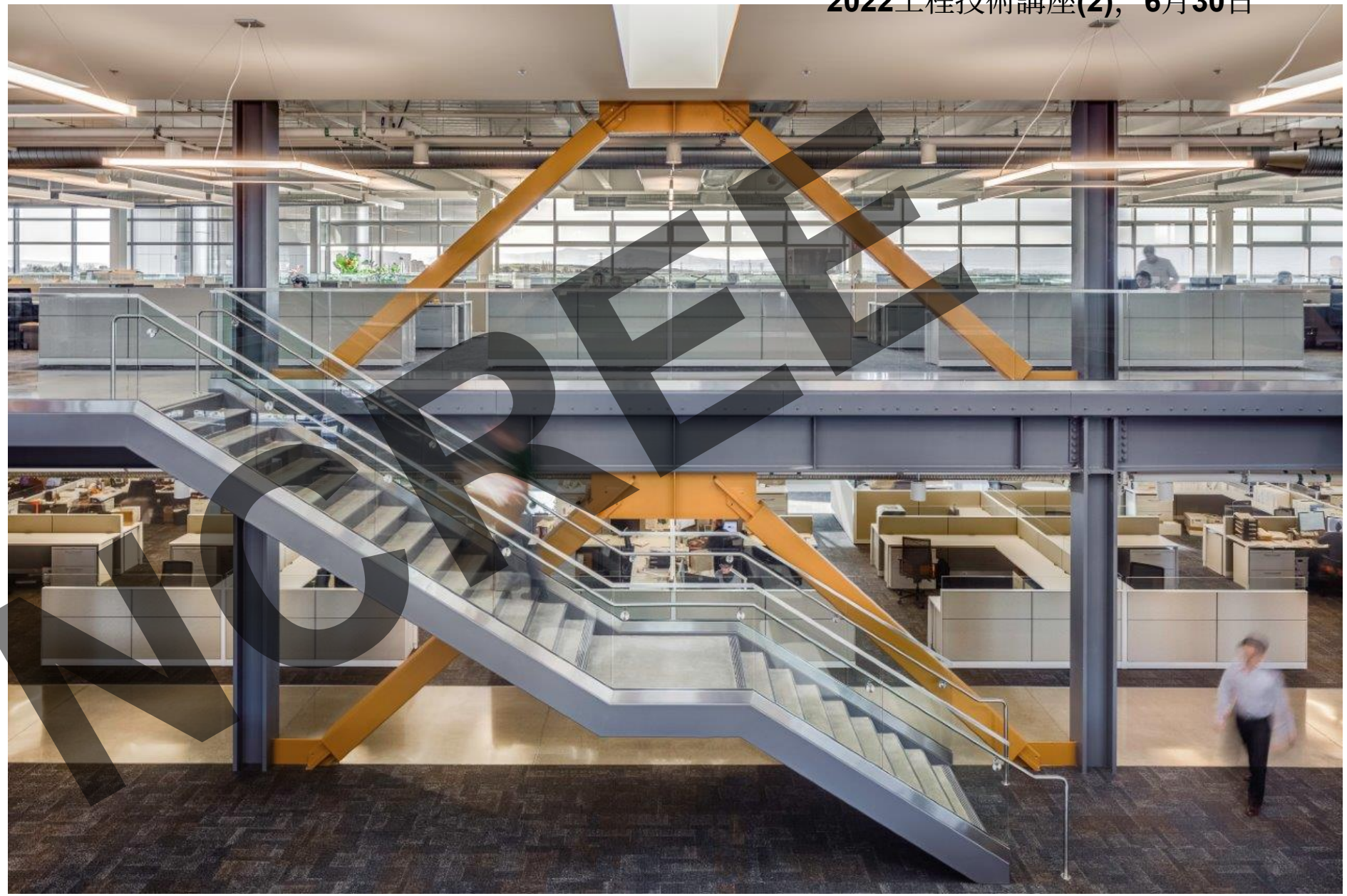

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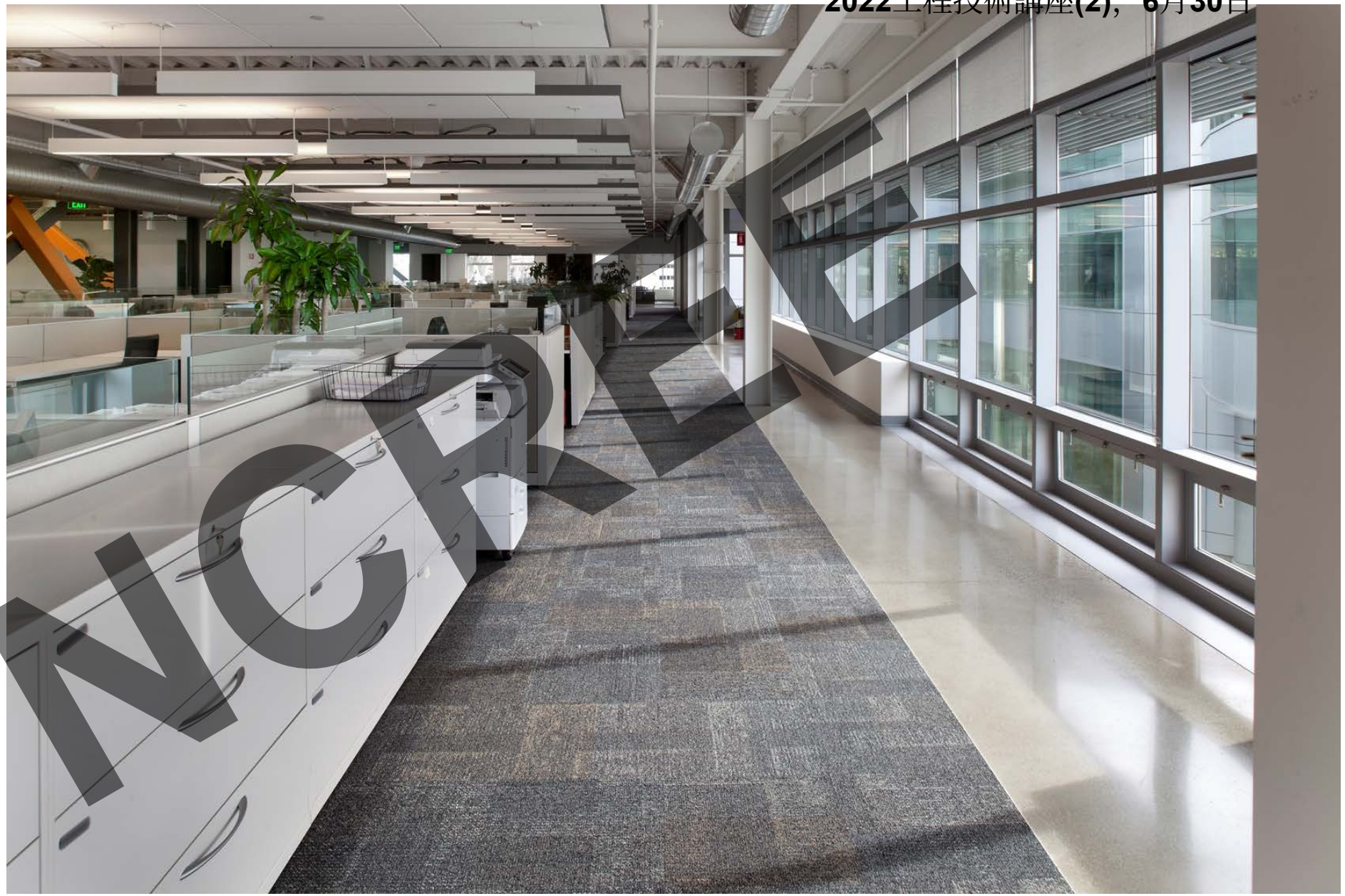

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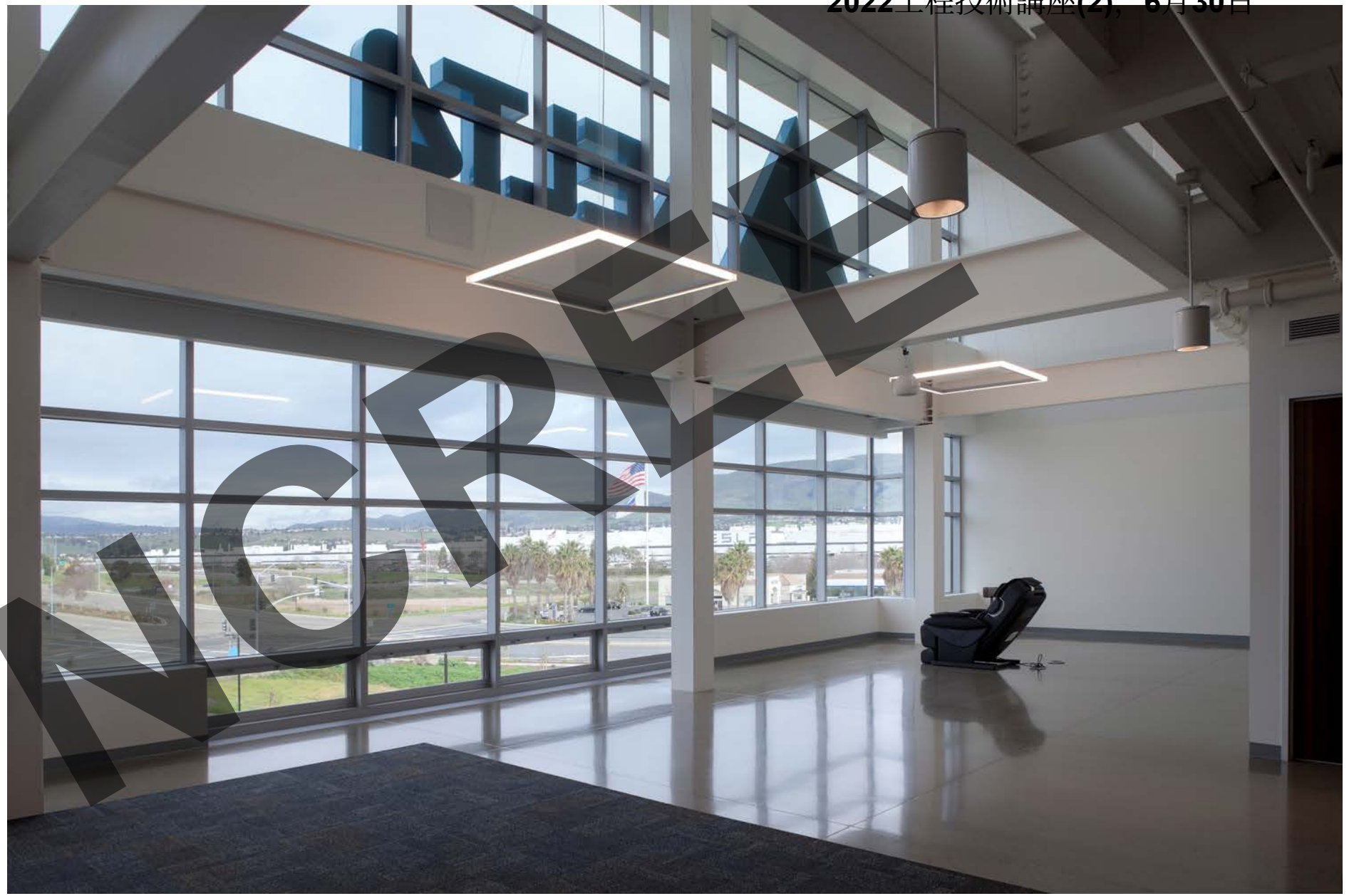

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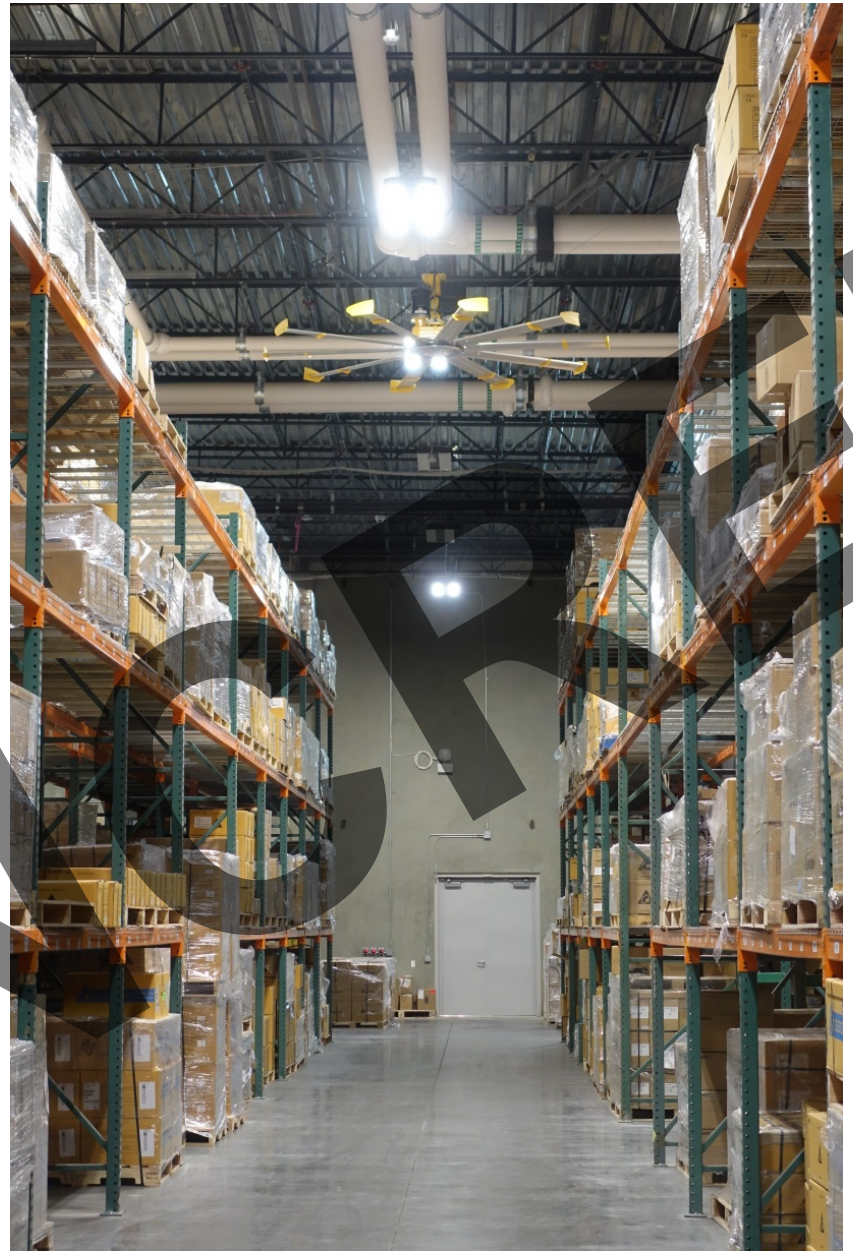

CONCLUSION

淨零耗能建築

充電車

開幕

開幕

內部報導


(pubsys.aspx?deptID=2&issueID=24&secID=0&hl=zh-TW)

24 2015年 12月

特別報導

台達美洲區的綠色新家


台達美洲區新總部綠建築

1982年，美國加州Hayward郊區住宅車庫裡的一個小小加工廠，展開了台達美洲區的業務，Delta Product Corporation(簡稱DPC)正式成立。歷經32年的耕耘，如今，DPC業務範圍已遍布全美洲，總部設立於北加州Fremont，並於L.A.、San Diego、Portland、Austin、Dallas、Houston、Raleigh、Boston以及Detroit等地設立辦公室，更於墨西哥、巴西以及南美洲其他國家設立營運據點。

幾個月前開始，Fremont的人們熱烈談論起市史上第一座將可獲得LEED最高白金級認證，並追求淨零耗能（net-zero）所設計的綠建築，期待它為加州再添一頁綠能傳奇；地方官員們以及來自各地的企業代表迫不及待地組團造訪，細細品味這座綠建築的美好。它，就是台達美洲區在十月底剛剛落成的新營運總部。


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台達創新節能科技 打造淨零耗能建築

此新大樓採用台達的解決方案包括：

- 太陽能電源轉換器
- 變頻器（應用於空調系統）
- InfraSuite 資料中心基礎設施解決方案
- 電梯電力回生解決方案
- 電動車充電解決方案及充電站管理系統（Site Management System）
- 戶外無線 LED 照明系統
- 台達能源在線（Delta Energy Online）能源管理監控系統

新總部並採用先進的地源熱泵系統（ground source heat pump system）來調節大樓內的溫度。

數字會說話

得獎

CBE
CENTER FOR THE BUILT ENVIRONMENT

台達美洲總部榮獲CBE’ s 宜居建築獎佳作

August 8, 2017

「台達美洲總部」2017獲頒CBE’ s 宜居建築獎佳作。本獎項由廣受國際專業界推崇之加州大學柏克萊分校建築環境中心Center for Built Environment(CBE)主辦，研究即時、正確的建築科技、設計工藝及維運模式以提升室內環境品質及能源效率。

「台達美洲總部」基地配置及外觀造型力求單純，量體依使用功能分為辦公、迎賓及倉儲三大區，南向之辦公、迎賓棟外牆採高性能帷幕系統及水平遮陽板減低外殼耗能、東西向以深開窗搭配辦公區之中庭天窗，提升自然採光效果；更利用加州氣候條件，大量開窗引入新鮮空氣，運用浮力通風中庭煙囪效應、鋪設冷熱輻射地板以調節室內溫度，一年四季幾乎不需使用空調。評審團對於本案設計及能源效率印象深刻。

「台達美洲總部」以「淨零耗能(Net-Zero)」為設計目標，榮獲美國綠建築協會(LEED)白金級標章，更是台達與JJP完成之最高等級綠建築實績。

thank you