

June 3, 2013

Dale Rundquist Compliance Project Manager California Energy Commission Siting, Transmission, & Environmental Protection (STEP) Division 1516 Ninth Street, MS-2000 Sacramento, CA 95814-5512

Dear Mr. Rundquist:

California Energy Commission
DOCKETED
88-AFC-1C
TN 71288
JUN 17 2013

A request for an amendment to the Conditions of Certification for SEGS VIII Harper Lake (88-AFC-1) and SEGS IX Harper Lake (89-AFC-1) located at 43880 Harper Lake Road, Hinkley, CA 92347 follows.

- 1. **Conditions of Certification affected by the proposed change:** The SEGS VIII Harper Lake and SEGS IX Harper Lake facilities operate under Conditions of Certification from the California Energy Commission (CEC). This submittal is intended to support the CEC's review and approval of the proposed modification and CEC's determination of whether any changes to our Conditions of Certification are necessary.
- 2. **Description of the proposed modification:** NextEra Energy is proposing to construct a foundation and building to be used as a combined employee break room and training/conference facility. The foundation and building will be 40' by 40' by 12' in size. The foundation and building will be constructed in compliance with existing laws, ordinances, regulations and statutes.
- 3. **Proposed modifications based on information not available prior to certification**: The modification is based on information that was not available at the time of certification. This structure will be constructed in the same area that included building of this type in the original application that was submitted to and approved by the California Energy Commission. These building were never built due to the bankruptcy of the Luz companies. Additionally, this building is proposed to be built on the site where office trailers were used for the first years of plant operation and will utilize existing water, electrical and sewer connections from those trailers.
- 4. Environmental impact:
 - a) **Summary:** The proposed project will not result in any significant adverse environmental impacts.
 - b) Air quality: minimal short-term air quality impacts are possible during construction of the foundation and building. Excavation will not be necessary to route electrical wiring. The construction of the foundation will take approximately 2 weeks to complete. The erection of the pre-fabricated building and construction of the building interior will be accomplished by skilled site personnel over a period of approximately three months, with no change expected in the normal activity or emissions from the facility. Minor dust emissions and vehicle exhaust are possible. NextEra Energy will mitigate dust emissions using standard dust control practices, including watering. Further, our practice is to ensure that minimal vehicle idling occurs, thereby minimizing vehicle exhaust. Furthermore, all equipment used on site is required to be in proper working order, including properly tuned engines. We believe these measures, coupled with the short-term nature of the foundation construction, will result in air emissions that are not significant.
 - c) Noise: No significant noise impacts will result from the proposed project. Based on our knowledge of practices for construction of this type, no activities associated with the project have the potential to generate significant noise levels at or beyond the facility boundary.
 - d) **Cultural resources:** No adverse impacts on cultural resources (archeological or paleontological) will result from the proposed project. During CEC review of the original project, a complete paleontological survey was conducted on the overall project site. The supporting documentation is available in the project files on site if necessary. No cultural resources were identified within the plant boundary and the proposed project is located within the plant boundary. Furthermore, excavation, grading and other construction activities in the vicinity

- e) of the currently proposed project were carried out during the original construction of the project. Therefore, the area has already been disturbed, and no cultural resources were discovered during construction of the existing plant. Additionally, excavation for the foundation will not exceed a depth of two feet below grade.
- Biological resources: No adverse impacts on biological resources will result from the proposed project. During CEC review of the original project a complete biological survey was conducted on the overall project. Desert tortoises are potentially present within the overall project area, but the plant boundaries are fenced to eliminate the possibility of tortoises straying into the plant. As part of our normal contractor orientation program, NextEra Energy awareness training and information on the possible presence and the proper response to a sighting, per our existing Conditions of Certification.
- Visual impacts: No significant adverse visual impacts will result from the proposed project. The proposed building will be of the same type, height, and color as existing building in the area thus minimizing incremental visual impacts and rendering the proposed project insignificant with regard to the existing project
- h) Hazardous materials: The proposed project will not result in any potential adverse environmental impacts associated with hazardous materials use.
- Water Resources: The proposed project will not result in any significant adverse impact to water resources.
- 5. Labor: The daily local work force will average 10 for the construction of the foundation for a period of approximately 2 weeks.
- Transportation: For the foundation, about 4 trucks will be used to haul concrete and rebar across a period of one week and 1 truck for the building frame during a period of one day. All additional materials will be delivered to the site by the routine deliveries that currently exist. This will have little adverse impact to traffic.
- 7. Environmental impact mitigation: No mitigation will be required since there will be no additional environmental impact.
- 8. Affect on the public: This minor amendment will not affect the public since this change does not change the operation of the facility.
- 9. Consistent with the overall intent of the Decision: The proposed modification is a minor amendment to the original Certification of Conditions and is consistent with the overall intent of the Decision.
- 10. Approval date and reason: A request is to approve this minor amendment respectfully in a timely manner to allow the building to be completed in 2013. All applicable permits and building inspections will be obtained for this project.

Should you have any questions or require additional information please contact me at (760) 762-5562 extension 395, or Glen King at (760) 762-3100 extension 231.

Sincerely,

Robert Fimbres Plant General Manager

Luz Solar Partners Ltd., VIII & IX

Attachments

Attachment 1 Proposed Location

Attachment 1

General Site Overview



Proposed Location

Detail Views



Proposed Location



Ground Level View



Proposed location shown in red.

Attachment 2 Building Plans



NextEra Energy Resources

SEGS 8-9 Solar Facility Training Room & Break Room Building

SHEET INDEX

Architectural Plans:

CVR Cover Sheet

SP1 Site Plan

Floor Plan

Exterior Elevations

Reflected Ceiling Plan

Roof Plan & Cross Section "A"

Structural Plans:

Foundation Plan

Foundation Details

Electrical Plans:

Power & Lighting Plan

Plumbing Plans:

Water Pipe Sizing & **DWV** Isometrics

All construction of this project shall

comply with the following:

2010 California Fire Code

2010 California Building Code

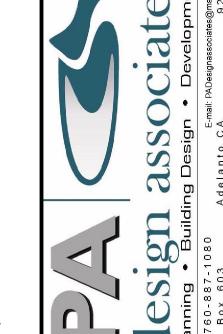
2010 California Mechanical Code

Title 24 (ADA) Calif. Admin. Code

2010 California Plumbing Code

2010 California Electrical Code

This project shall comply with all other regulations and ordinances adopted by the local governing agencies.



nergy Solar Ca o ш T \omega v NextEr SEGS 43880 Hinkley

A D T T T

OMI

1-18-13 CHECKED BY DATE JOB NO. C-1600-13 RAWING SHEET NUMBER

OF 8 DRAWINGS

DIRECTORY ABBREVIATIONS PROJECT DATA **CODE SUMMARY** Owner: PROJECT DESCRIPTION:

A.B.	ANCHOR BOLT	E.N.	EDGE NAIL
A.T.	ACOUSTICAL TILE	ENCL.	ENCLOSURE
ADJ.	ADJUSTABLE	E.M.S.	ENERGY MANAGE SYST
A.F.F.	ABOVE FINISH FLOOR	EQ.	EQUAL
AIR COND.	AIR CONDITIONING	EQUIP.	EQUIPMENT
ANOD.	ANODIZED	E.S.	EACH SIDE
ALUM/AL	ALUMINUM	EXH.	EXHAUST
APPROX.	APPROXIMATELY	EXIST.	EXISTING
BM.	BEAM	EXP.	EXPOSED, EXPANSION
BLK.	BLOCK	EXT.	EXTERIOR
BLK'G.	BLOCKING	FIN.	FINISH
ВОТ.	BOTTOM	F.R.P.	FIBERGLASS REIN, PANE
BLDG.	BUILDING	F.F.	FINISH FLOOR SLAB
B.N.	BOUNDARY NAIL	F.E.	FIRE EXTINGUISH ER
CLG.	CEILING	F.E.C.	FIRE EXTINGUISHER CA
CEM.	CEMENT	F.P.	FIRE PROOF
C.F.	CURB FACE	FLASH	FLAHING
CL	CENTERLINE	FLR.	FLOOR
C.T.	CERAMIC TILE	F.D.	FLOOR DRAIN
CLR.	CLEAR	F.T.	FOOT
COL.	COLUMN	FTG.	FOOTING
CONC.	CONRETE	FND.	FOUNDATION
C.B.	CONRETE BLOCK	GA.	GAUGE
CONST.	CONSTRUCTION	G.C.	GENERAL CONTRACTOR
CONT.	CONTINOUS	GEN.	GENERAL
C.J.	CONTROL JOINT	G.I.	GALVANIZED IRON
CORR.	CORRIDOR	GL.	GLASS, GLAZING, GLAZE
CTRD.	CENTERED	GR.	GRADE
DP.	DEEP	GYP.	GYPSUM BOARD
DET.	DETAIL	HDWR.	HARDWARE
DIAG.	DIAGONAL	H.D.	HUB DRAIN
DIA.	DIAMETER	H.D.	HOLE DOWN
DIM.	DIMENSION	HT.	HEIGHT
DR.	DOOR	H.M.	HOLLOW METAL

HORIZ

INS.

INT.

JNT.

MAT'L

MAX.

HORIZONTAL

INTERFACE

INTERIOR

LIGHTING

MATERIAL

MAXIMUM

JOINT

JOIST

INSULATION, INSULATE

LAMINATE, LAMINATED

MANUFACTURER

DBL

DN.

DT

EA.

E.S.

E.P.

E.J.

EL.

ELEV

ELEC

DWG

DOUBLE

DRAWING

EACH SIDE

ELECTRICAL

ELECTRICAL PANEL

ELEVATION (GRADE)

ELEVATION (BLDG)

EXPANSION JOINT

DRIVE -THRU

 $\square\square$

EACH

MEMB MEMBRANE METAL M.L. METAL LATH MINIMUM MISC MISCELLANEOUS MLDG MOULDING N.I.C. NOT IN CONTRACT N.T.S. NOT TO SCALE O.C. ON CENTER **OFCI** OWNER FUR. CONT'R INSTALL 0/ $\square N$ OPN'G OPENING OPP. OPPOSITE O.A.OVERALL OVERHEAD P.G. PAINT GRADE PR. PAIR **PNL** PANEL PART PARTITION PERF PERFORATION PLAS. PLASTER PTDF PRESS TREAT DOUG-FIR PLYWD. PROP. PROPERTY P.L. PROPERTY LINE P.V.C. POLY VINYL CHLORIDE RISER REFER REFRIGERATOR REMOTE SENSOR REINF REINFORCING RED'D REQUIRED

RETURN

ROOFING

RUBBER

RETURN AIR

ROOF DRAIN

ROUGH OPENING

RUBBER BASE

SATIN ENAME L

RUBBER TILE

SCHEDULE

SECTION

RET

R.A.

RCP

R.D.

R.O.

RUB.

SCHED

SECT

R.B.

ROOF'G

MECHANICAL

REFLECTED CEILING PLAN VENT.

VEST

V.B.F

V.T.

W.T.

W.C.

W.P.

W/O

W.W.F.

S/G/E/ SEMI-GLOSS ENAMEL SHT'G SHEATING SINK S.D. SOAP DISPENCER SOL. SOLID SPECS. SPECIFICATIONS SQUARE S.S. STAINLESS STEEL STD. STANDARD STL. STEEL STOR. STORAGE ST. STREET, STRAIN STRUCT. STRUCTURAL SUSP SUSPENDED, SUSPEND SW. SWITCH SYS. SYSTEM T.B. TOWEL BAR TEL. TELEPHONE THERMO. THERMOSTAT THK. THICK **THRU** THROUGH TOIL. TOILET T.P.H. TOILET PAPER HOLDER TOP OF CURB T.P. TOP OF PAVING T.R. TOP OF ROOF T.O.P. TOP OF PARAPET T.O.S. TOP OF SLAB T.O.W. TOP OF WALL T.S.B. TOP SET BASE TREAD T.S. TUBULAR STEEL TYP. TYPICAL UNFIN. UNFINISHED U.O.N. UNLESS OTHERWISE NOTED

WATERCLOSET

WELDED WIRE FABRIC

WATERPROOF

WIDE, WIDTH

WITH

WITHOUT

VENTILATE, VENTILATION VESTIBULE VENT BELOW FLOOR VINYL TILE WASHABLE LAYIN TILE

4388Ø Harper Lake Road Hinkley, CA. 92347 Project Designer: PA Design Associates, Inc. PO Box 603 Adelanto, CA. 92301 ph. (760) 887-1080 E-mail: PADesignassociates@msn.com Attn: Joe Mazariegos **Engineer of Record:** Jerry Miles, PE PO Box 1861 Apple Valley, CA. 92308 (760) 956-5201 E-mail: Jerrylm59@aol.com

NextEra Energy Resources

SEGS 8-9 Solar Facility

Harper Lake Facility

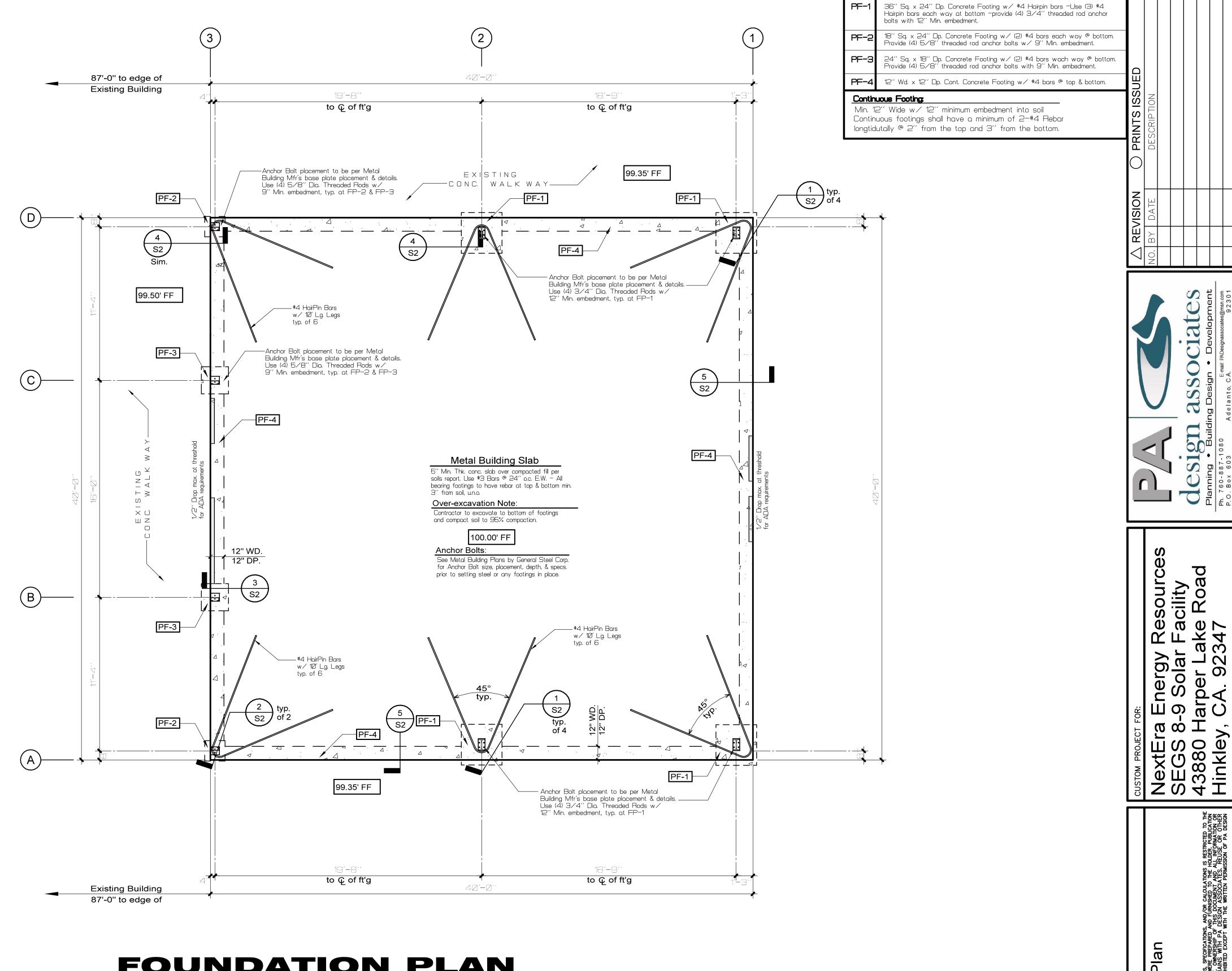
The new building is a part of NextEra's Harper Lake Facility which is for employees only. No public or customers are expected to use the proposed structure or facility. The existing facility has enough parking for the existing and the proposed use of the new building. Additional parking is proposed for the 2 HC spaces that are being provided. All driveways are existing and no changes or modifications are A new 20'x108' Metal Carport Cover is also part of the new construction to the facility. The carport will be constructed over some of the existing parking area as shown. The existing building and all flatwork & proposed parking is to be constructed per 2010 CBC, CMC, CPC, CEC,& CGC **APPLICATION TYPE** Conditional Use Permit LAND USE **ZONING DISTRICT** SPRINKLERED: OCCUPANT LOAD: Break Room: 605/100 O.L.F. = 6 Conference/ Training Room: 697/100 O.L.F. = 7 CONSTRUCTION USE II-N (Metal Building)

To construct a 40'x40' metal building to be used as a break

room area and a conference room for employees ONLY. The

building will have a restroom for employee use as well near the

BUILDING AREA Training Room/ Break Room: 1,600 Sq. Ft. **VICINITY MAP** Harper Lake



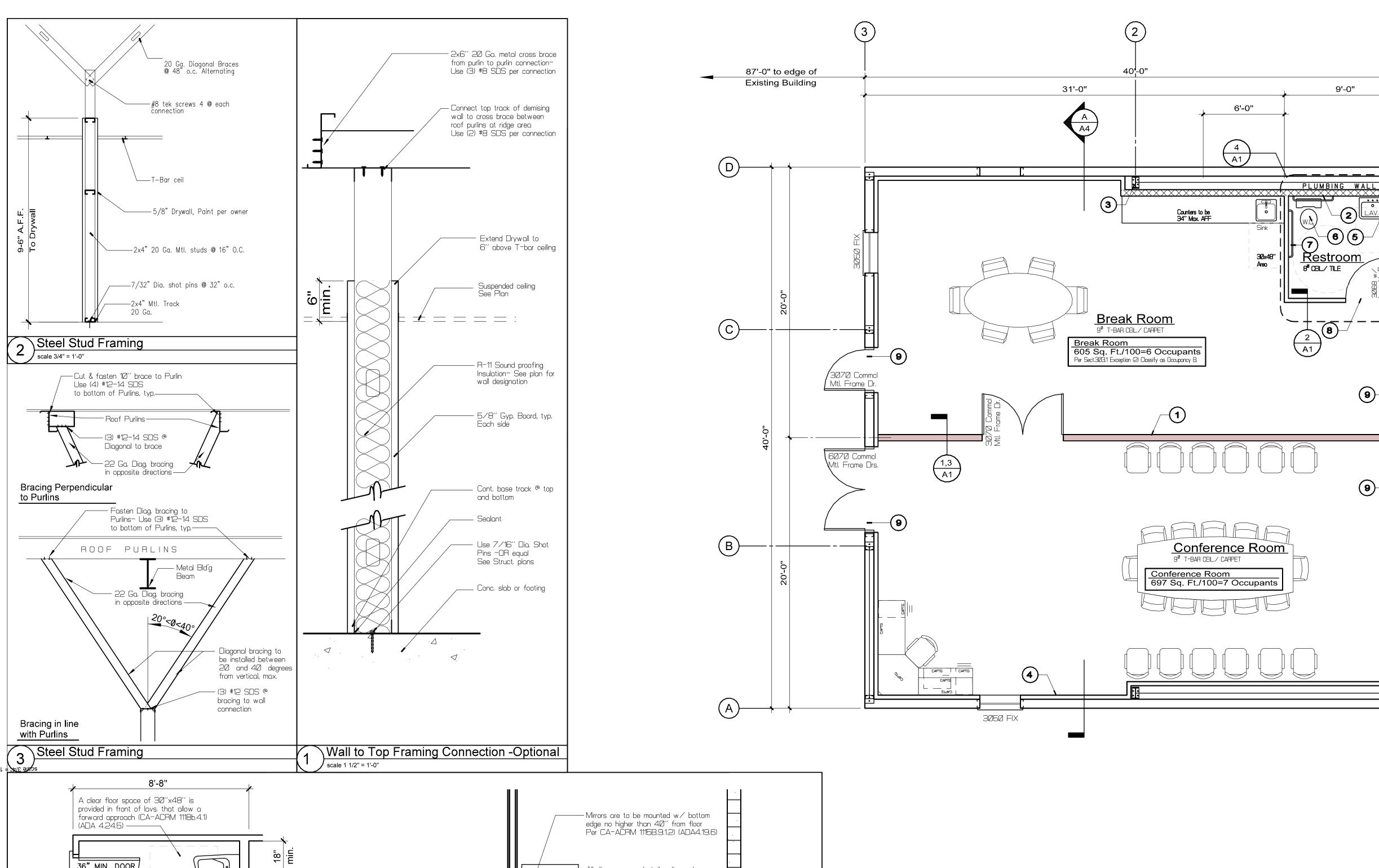
FOUNDATION PLAN

SCALE 1/4" = 1'-0"

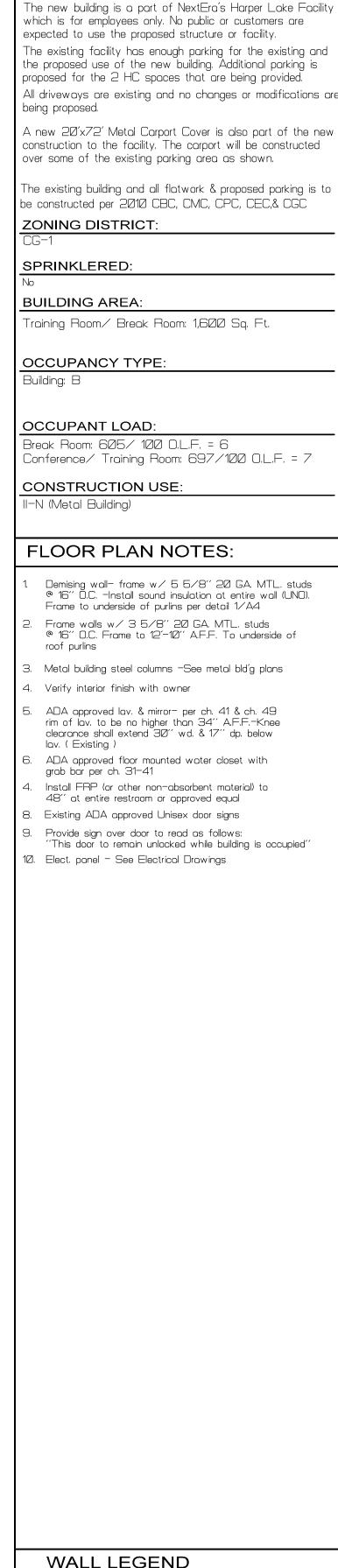
⊫ Pad Footing:

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JOB NO.
C-1600-13

of 8 drawings







DESIGN BUILD NOTE:

To construct a 40'x40' metal building to be used as a break

building will have a restroom for employee use as well near the

room area and a conference room for employees ONLY. The

PROJECT DESCRIPTION:

break room.

9'-0"

9

9

3070 Commcl

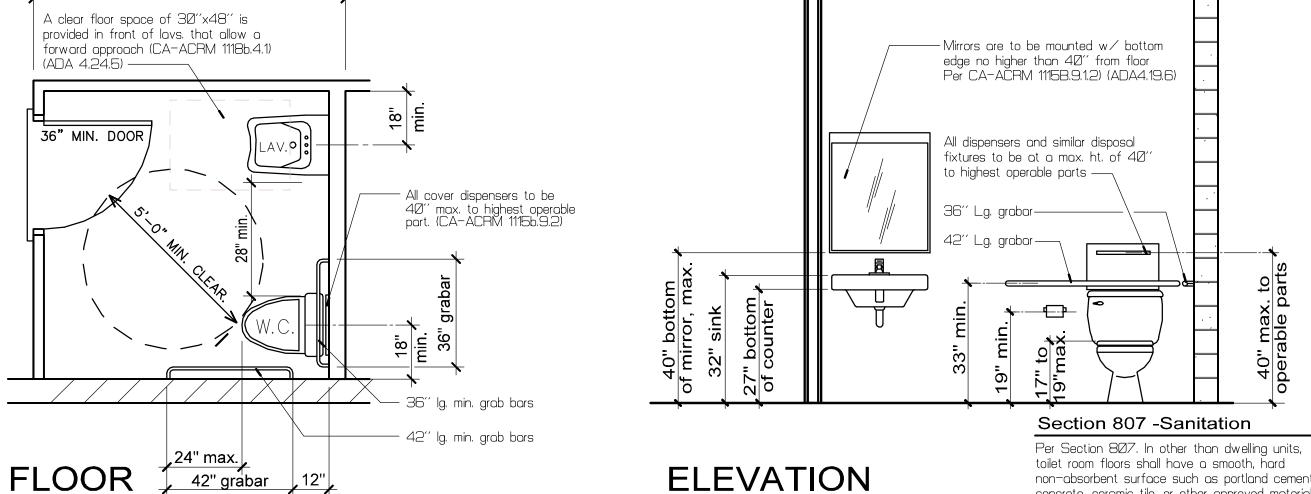
Mtl. Frame Dr.

3070 Commcl

10

Mtl. Frame Dr.

The existing facility has enough parking for the existing and the proposed use of the new building. Additional parking is proposed for the 2 HC spaces that are being provided. All driveways are existing and no changes or modifications are $| \underline{\omega} |$ A new 20'x72' Metal Carport Cover is also part of the new construction to the facility. The carport will be constructed over some of the existing parking area as shown. The existing building and all flatwork & proposed parking is to be constructed per 2010 CBC, CMC, CPC, CEC,& CGC Training Room/ Break Room: 1,600 Sq. Ft. Conference/ Training Room: 697/100 O.L.F. = 7 $\mathcal{C}^{\frac{1}{6}}$ Demising wall- frame w/5 5/8" 20 GA, MTL, studs @ 16" Ö.C. -Install sound insulation at entire wall (UNO). Frame to underside of purlins per detail 1/A4 Frame walls w/ 3 5/8" 20 GA MTL. studs © 16" O.C. Frame to 12"-10" A.F.F. To underside of . Metal building steel columns -See metal bla'g plans ADA approved lav. & mirror- per ch. 41 & ch. 49 rim of lav. to be no higher than 34" A.F.F.-Knee clearance shall extend 30" wd. & 17" dp. below ADA approved floor mounted water closet with Install FRP (or other non-absorbent material) to sources ility Road "This door to remain unlocked while building is occupied" Res Faci ake F nergy Solar rper La Ш Og b O $\mathbf{I} \stackrel{\circ}{\otimes} v$ NextEr SEGS 43880 Hinkley THE USE OF THESE DESIGNS, DRAWINGS, SPECIFICATIONS, AND/OR CALCULATIONS IS RESTRICTED TO THE ORIGINAL PURPOSE FOR WHICH THEY WERE PREPARED AND FURNISHED TO THE HOLDER, PUBLICATION IS EXPRESSLY LIMITED TO SUCH USE. OWNERSHIP OF THIS DOCUMENT AND ALL INFORMATION OR DESIGNS CONTAINED HEREIN REMAINS WITH PA DESIGN ASSOCIATES, REUSE OR OTHER PUBLICATION BY ANY METHOD IS PROHIBITED EXCEPT WITH THE WRITTEN PERMISSION OF PA DESIGN General WALL LEGEND Metal Building Frame
 Walls- See Metal DRAWN BY Building Plans & Specs. 1-18-13 CHECKED BY DATE Metal stud wall— Use 1-18-13 JOB NO. C-1600-13 2x6'' 2Ø Ga. studs @ $16^{\prime\prime}$ o.c. w/ R-13 Insulation DRAWING SHEET NUMBER • Metal stud wall- Use 2x4'' 20 Ga. studs @ 16′′ o.c. • 2x6" 20 Ga. plumbing of 8 drawings



GENERAL REQUIREMENTS

• A clear floor space of 30" by 48" is provided in front of • Mirrors are mounted with the bottom edge no higher lavatories that allow a foreward approach or a parallel

42" grabar

- approach. (CA-ACRM 1118B.4.1) (ADA 4.24.5) One full unobstructed side of the clear floor space for a wheel chair adjoins or overlaps an accessible route, or adjoins another wheelchair clear floor space. (CA-ACRM 1118B.4.1) (ADA 4.2.4.2)
- If towel, sanitary napkins, waste receptacles, and other similar dispensing and disposal fixtures are provided, at least one of each type is located with all operable parts, including coin slots, at a max, height of 40° . (CA-AČRM 1115B.9.2)
- than 40" from floor. (CA-ACRM 1115B.9.1.2) (ADA 4.19.6) • Lavatory fixture controls are operable with one hand and do not require grasping or twisting with force of greater
- than 5lbf. max. (CA-ACRM 1117B.6.4) (ADA 4.27.4) • If medicine cabinets are provided, at least one is located with a usable shelf no higher than 44" above floor space.
- Toilet tissue dispensers are located on the wall within 12" of front edge of toilet seat. (CA-ACRM 1115B.9.3)
- Toilet paper dispenser min. height from floor is 19" (ADA 4.16.6)

• Dispensers that control delivery or that do not permit continuous paper flow are not used. (CA-ACRM 1115B.9.3) (ADA 4.16.6)

 New water closets and associated flushometer valves if any, shall use nomore than 1.6 gals, per flush & shall meet performance standards established by the American National Standards Institute – Std. A112.19.2, and urinals & associated flushometer valves, if any, shall use not more than 1 gal. per flush and shall meet performance standards established by the American National Standards Institute Std. A112.19.2

H & S Code.

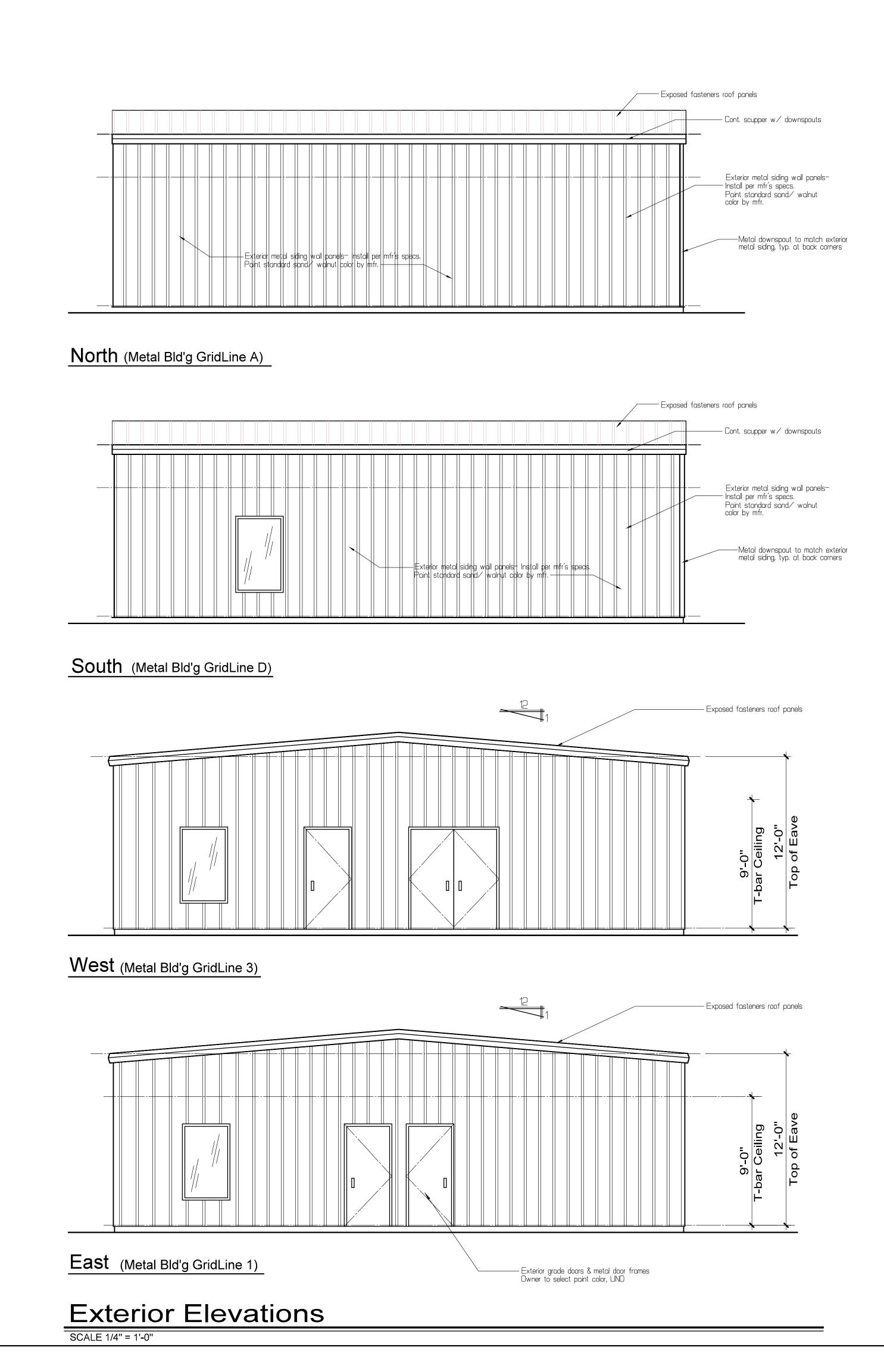
Walls within 2 feet of the front and sides of urinals and water closets shall have a smooth, non-absorbent surface of portland cement, concrete, ceramic tile, or other smoot, hard nonabsorbent surface to a height of 4 feet, and except for strucural elements the material used in such walls shall be of a type that is not adversely affected by moisture. Exceptions: Toilet rooms that are not accessible to

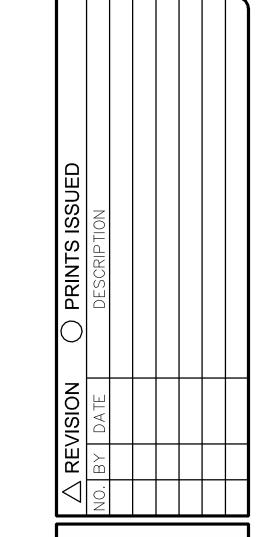
non-absorbent surface such as portland cement, concrete, ceramic tile, or other approved material that extends upward onto the walls at least 5 inches.

In all occupancies, accessories such as grab bars, towel bars, paper dispensers and soap dishes provided on or within walls, shall be installed and sealed to protect structural elements from moisture.

the public and that have not more than one water

ADA Restroom Floor scale 3/4" = 1'-0"









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NextEra Energy Resources SEGS 8-9 Solar Facility 43880 Harper Lake Road Hinkley, CA. 92347

DRAWING CONTENTS

Exterior Elevations and
Roof PLan

The use of these designs, drawings, specifications, and/or calculations is restricted to the original purpose for which they were prepared and furnished to the holder, dublication is expressly limited to such use. Ownership of this document and all information is expressly limited to such use. Ownership of this document and all information is expressly limited to such use. Ownership of this document of the president of the property of th

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FIELD TECHNICAL INFORMATION Application recommendations for work at the wall or ceiling Suspension Systems for Acoustical Lay-in Ceilings Seismic Design Categories D, E & F

This document has been revised based on current Building Code standards. In all buildings, other than structures classified as essential facilities, suspended ceilings installed in accordance with the prescriptive

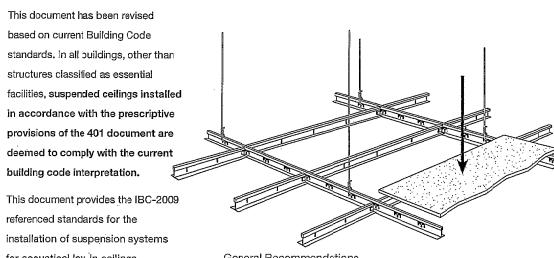
deemed to comply with the current building code interpretation. This document provides the IBC-2009

referenced standards for the installation of suspension systems for acoustical lay-in ceilings. Incorporation of this document will

provide a more uniform standard for installation and inspection. This document is designed to accomplish the intent of the International

Building Code (IEC) with regard to the requirements for seismic design category D, E and F for suspended ceilings and related items. Unless supported by engineering,

the suspension system shall be installed per these requirements. Manufacturers' recommendations should be followed where applicable.



General Recommendations • Referenced sources per hierarchy: 2009 IBC (International Building Code), American Society of Testing Materials (ASTM C 635, ASTM C 636, ASTM E 580/E 580M), American Society of Civil Engineers (ASCE 7-05) and Ceilings and Interior Systems Construction Association (CISCA).

• Partitions that are tied to the ceiling and all partitions greater than 6 feet in height shall be laterally braced to the structure. Bracing shall be independent of the ceiling splay bracing system. Source: ASCE 7-05 section 13.5.8.1 • For further information on bracing of non-load bearing partitions refer to NWCB technical document #200-501. • All main beams are to be Heavy Duty (HD). Source: ASCE 7-05 section 13.5.6.2.2 a

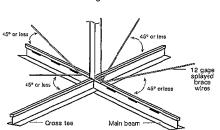
• All cross tees shall be capable of carrying the design load without exceeding deflection equal to 1/360 of its span. Source CISCA zones 3-4

 These recommendations are intended for suspended ceilings including grid, panel or tile, light fixtures and air terminals weighing no more the 4 lbs. per square foot. Source: ASCE 7-05 section

 All wire ties are to be three tight turns around itself within three inches. Twelve gage Hanger wire spaced 4 foot on cener (figure 1). Source: ASTM C 636 ilem 2.3.4 Changes in ceiling planes will require

Source: ASCE 7-05 13.5.6.2.2 f

Lateral force Bracing



Maximum Recommended L Vertical Struts	engths for
EMT CONDUIT	
½" EMT conduit	up to 41
¾" EMT conduit	up to 6'
1" EMT conduit	up to 10'
1 1/4" EMT conduit	up to 16'

• Ceilings constructed of lath and plaster or gypsum board, screw or nail attached to suspended members that support a ceiling on one level extending

Lateral Force Bracing (figures 2 and 3)

from wall to wall shall be exempt from the lateral force bracing requirements. • Lateral force bracing is the use of vertical struts (compression posts) and splay wires (see figure 2). • For ceiling areas exceeding 1,000 square feet, horizontal restraint of the ceil-

ing to the structural system (lateral force bracing) shall be provided. Source: ASCE 7-05 section 13.5.6.2.2 c • Lateral Force Bracing shall be 12 feet on center (maximum) and begin no farther than 6 feet from walls. Source: CISCA Seismic zones 3-4

 Seismic splay wires are to be four 12 gage wires attached to the main beam. Wires are arrayed 90° from each other and at an angle not exceeding 45° from the plane of the ceiling. Source: CISCA Seismic zones 3-4 Seismic splay wires shall be attached to the grid and to the structure in such a manner that they can support a design load of not less than 200 pounds or

the actual design load, with a safety factor of 2, whichever is greater (figure 6b). Source: CISCA zones 3-4 "Powder-driven shot-in-anchors" (PAF's), when used for seismic application as part of the prescriptive path in Seismic Design Categories D, E and F, shall have an ICC-ES approval for seismic applications and shall require "special inspection" irrespective of the type of occupancy category the structure is in. PAF anchors for kicker wires (splayed wires installed for purposes other than seismic restraint) are exempt from this requirement.

• Splay wires are to be within 2 inches of the connection of the vertical strut to

suspended ceiling. Source: CISCA Seismiczones 3-4 • Rigid bracing may be used in lieu of solay wires. Source: ASCEsection 13.5.6.2.2 c Ceilings with plenums less than 12 inches to structure are not required to have lateral force bracing, Source: Portland Building Department

• Vertical struts must be positively attached to the suspension systems and the structure above. Source: CISCA 3-4 • The vertical strut may be EMT conduit, metal studs or a proprietary compres-

sion post (see figure 3). Wall Molcings

• Wall moldings (perimeter closure angles) are required to have a horizontal flange 2 inches wide. One end of the ceiling grid shall be attached to the wall molding, the other end shall have a ¾ inch clearance from the wall and free to slide, Source: ASCE 7-05 section 13.5.6.2.2 b • Where substantiating documentation has been provided to the local jurisdic-

tion, perimeter clips may be used to satisfy the requirements for the 2-inch closure angle. Source: State of Oregon, Building Codes Division • The grid shall be attached at two adjacent walls (pop rivets or approved method). Soffits extending to a point at least level with the bottom plane of the grid

and independently supported and laterally braced to the structure above are deemed to be equivalent to walls. Spreader Bars (figure 4b)

 Spreader (spacer) bars shall be used to prevent the ends of the main beams and cross tees at perimeter walls from spreading open during a seismic event Perimeter wires shall not be in lieu of spreader bars. Source: CISCA Seismic zones

• Spreader bars are not required at perimeters where runners are attached directly to closure angles.

• Wire tying is an acceptable alternative to spreader bars. • Spreader bars are not required if a 90 degree intersecting cross or main is

within 8 inches of the perimeter wall.

• Where substantiating documentation has been provided to the local jurisdiction, perimeter clips may be used to satisfy the requirements for spreader bars.

Hanger (Suspension) Wires (figures 5a and 5b) Hanger and perimeter wires must be plumb within 1 in 6 unless (figure 5a)

counter sloping wires are provided (figure 5b), Source: ASTM C 636 section 2.1.4 Hanger wires shall be 12 gage and spaced 4 feet on center or 10 gage spaced 5 feet on center. Source: ASTM C 636 • Any connection device at the supporting construction shall be capable of car-

rying not less than 100 pounds, source: CISCA zones 3-4 • Powder-driven sho:-in anchors (PAFs) are an approved method of attachment for hanger wires. Scurce: State of Oregon, Building Codes Division

• Terminal ends of each main beam and cross tee must be supported within 8 inches of each wall with a perimeter wire (see figure 4 & 5 b). Source: CISCA zones 3-4 Wires shall not attach to or bend around interfering material or equipment. A trapeze or equivalent device shall be used where obstructions preclude direct suspension. Trapeze suspensions shall be a minimum of back-to-back 11/4 inch cold-rolled channels for spans exceeding 48 inches. Source: CISCA zones 3-4

• Light fixtures weighing less than 10 pounds shall have one 12 gage hanger wire connected from the fixture to the structure above. This wire may be slack.

- Light fixtures weighing more than 10 pounds and less than 56 lbs. shall have two 12 gage wires attached at opposing corners of the light fixture to the structure above. These wires may be slack, Source: CISCA Seismic zones 3-4.
- Light Fixtures weighing more than 56 lbs. shall be supported directly from the structure above. These wires must be taut, Source: CISCA Seismic zones 3-4 Pendant mounted fixtures shall be directly supported from the structure above using a 9 gage wire or an approved alternate support without using the ceiling suspension system for direct support. Source: CISCA Seismic zones 3-4

Tandem fixtures may utilize common wires.

 Terminals or services weighing 20 lbs. but not more than 56 lbs. must have two 12 gage wires connecting them to the ceiling system hangers or the structure above. These wires may be slack. Source: CISCA Seismic zones 3-4 • Terminals or services weighing more than 56 lbs. must be independently

supported directly from the structure above. These wires must be taut. Source:

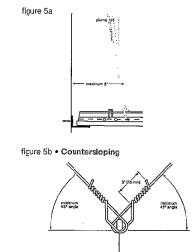
Seismic Separation Joints Figure 7) For ceiling areas exceeding 2,500 square feet, a seismic separation joint or full height wall partition that breaks the ceiling shall be provided unless analyses are performed of the ceilings bracing system, closure angles and penetrations

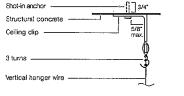
to provide sufficient clearance. Source: ASCE 7-05 section section 13.5.6.2.2 d • The layout and location of the seismic separation joint shall be per the designer of record and noted on the plans, if a seismic separation joint is required by the designer, the designer may use the generic joint detailed in this document

minimum of 34 inch. • In lieu of seismic separation joints, the ceiling may be divided into areas less than 2500 square feet by the use of partitions or soffits as follows: partitions shall extend a minimum of 6 inches above the level of the plane of the grid and shall be independently braced to the structure above. Soffits shall extend to a point at least level with the bottom plane of the grid and shall be independently supported and laterally braced to the structure above. Source: State of Oregon Building Codes Division • Other than partitions and soffits, seismic joints may not be used as part of a

For ceilings without rigid bracing, sprinkler head penetrations shall have a 2 inch oversize ring, sleeve or adapter through the ceiling tile to allow free movement of at least 1 inch in all horizontal directions. Flexible head design that can accommodate 1 inch free movement shall be permitted as an alternate. Source: ASCE 7-05 13.5.6.2.2 e

fire rated ceiling assembly unless substantiating documentation is provided.



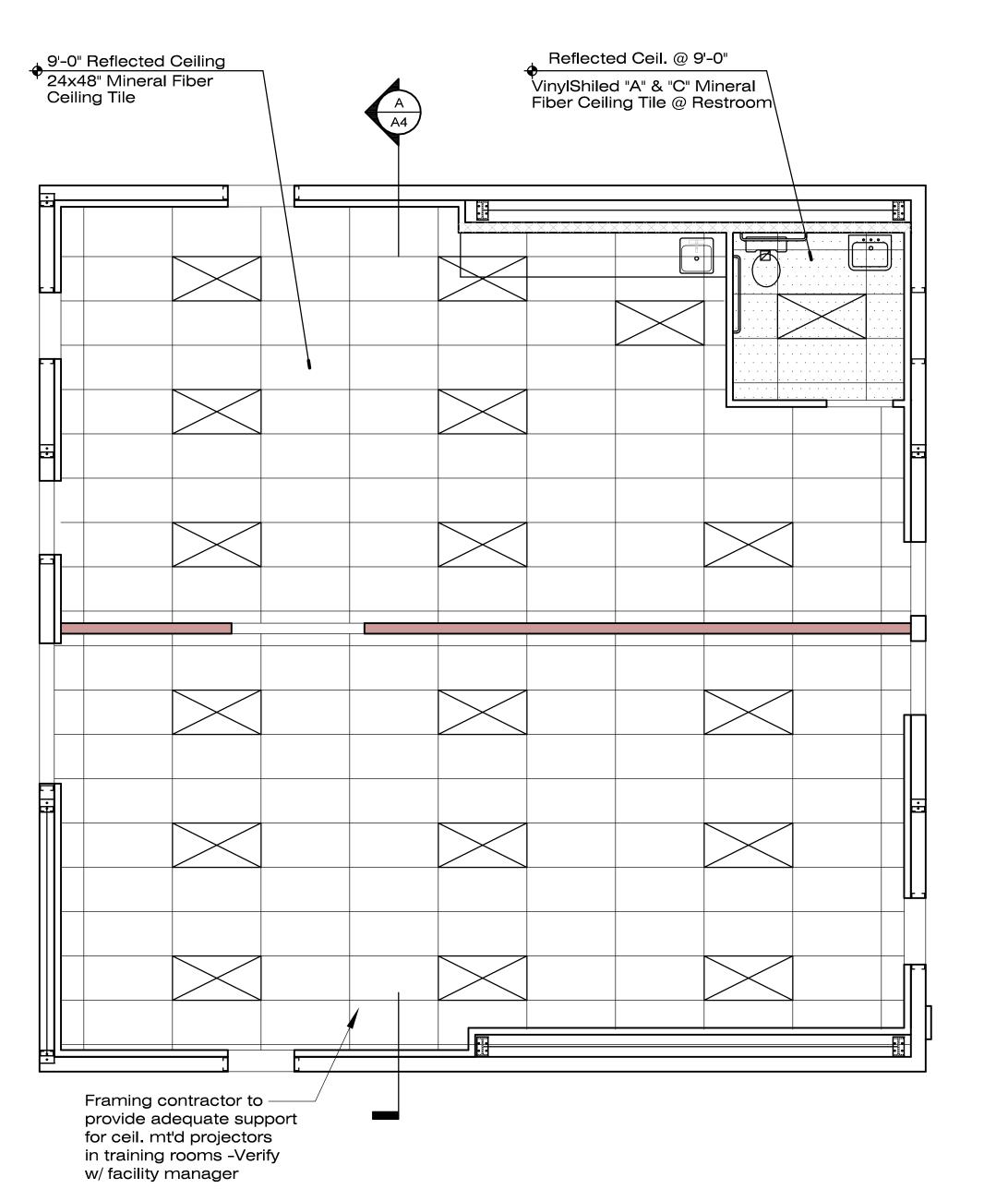


Steel strap 1" wide x 2" long x 12 gage minimum

Alternative Installation Using BERC2 Category D, E, F Seismic Applications Unattached Wall Attached Wall

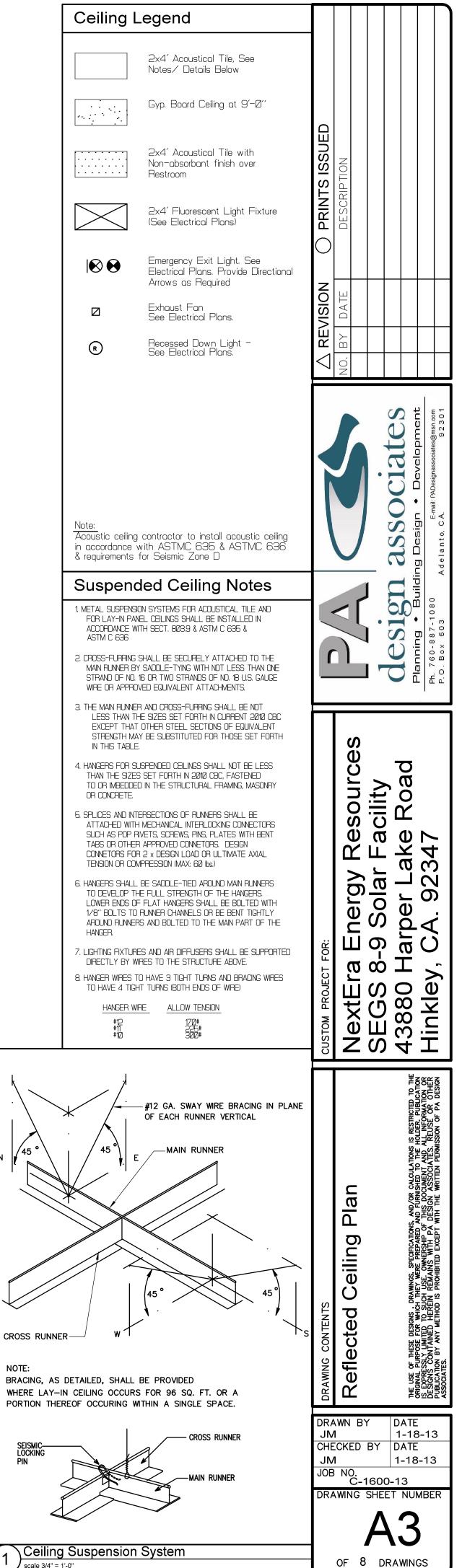
For more information call 1 877 ARMSTRONG

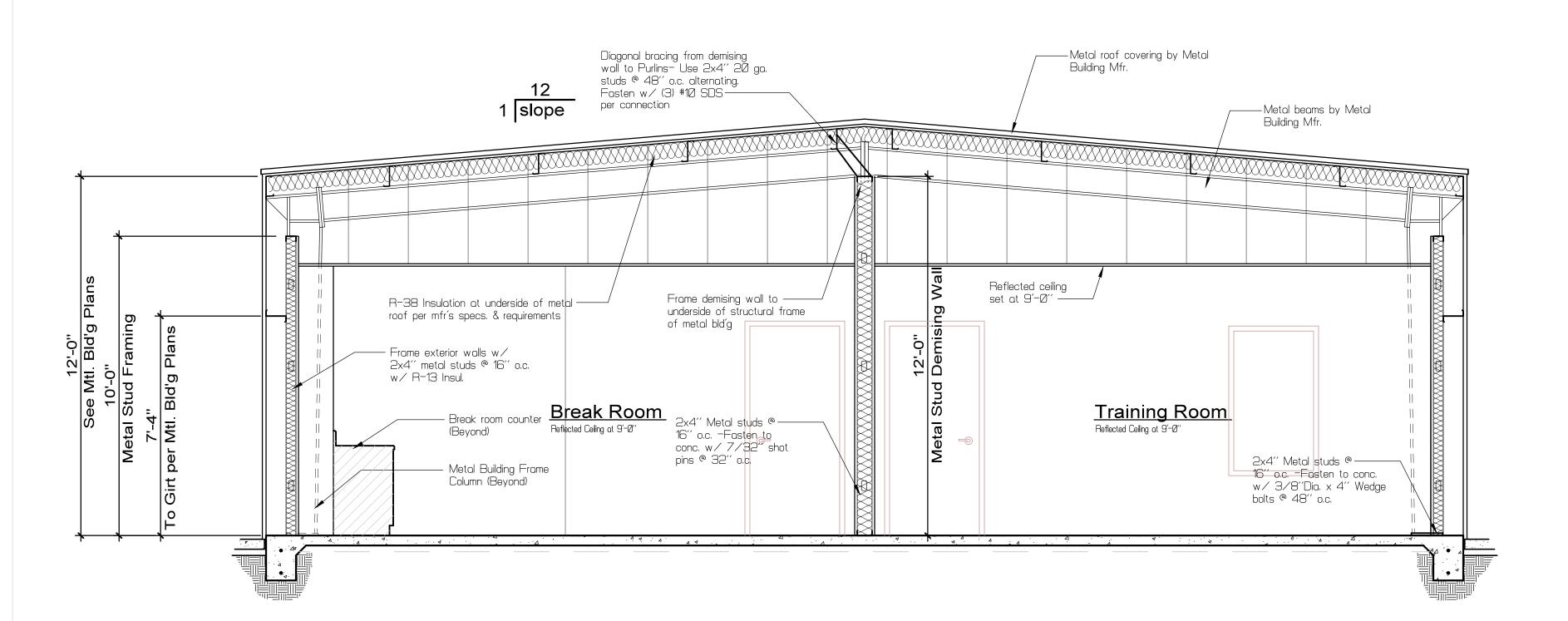
Amstrong^{*}



REFLECTED CEILING PLAN

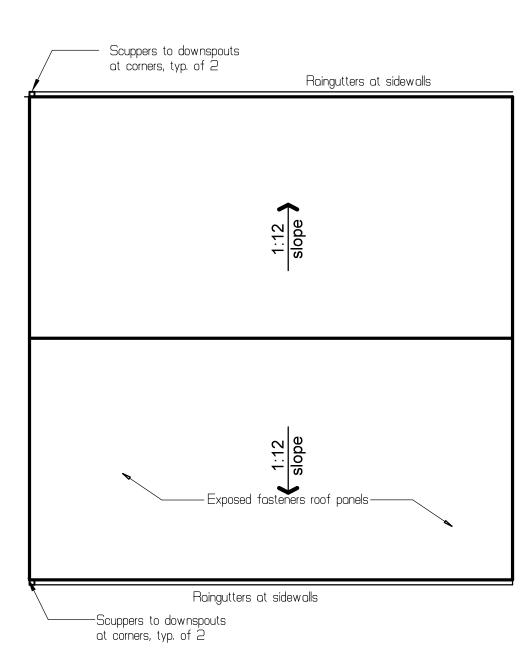
SCALE 1/4" = 1'-0"





CROSS SECTION "A"

SCALE 3/8" = 1'-0"



ROOF DRAINAGE:

Roof drainage based on using the Rainfall Index of 3" per hour w/ a Flow at 1 in./ft. Slope.
Max. Roof Area = 1,600 sq. ft. (See Table 11-1 of Chapter 11 2010 California Plumbing Code) Allowable Horizontal Projected Roof Area per Table 11–2 of 2010 CPC,

Horiz. Rainwater Piping Capacity:

3" Sq. Raingutter at 1/4"/Ft. slope has a capacity of 1,546 Sq. Ft. roof coverage area.

Downspout Piping Capacity:

3" Sq. Roof Downspout from gutters has capacity of 2,147 Sq. Ft. roof coverage area.

Use (2) 3x3" Downspouts from rain gutters shall be used for a roof area of 1,600 Sq. Ft. -See Roof Plan for placement.

	<u>'</u>		
Drain No.	Roof Coverage	Allowable R. A.	Pipe 9
1	800 sg. ft.	1546 sg. ft.	3 x
2	800 sq. ft.	1546 sq. ft.	Зх

Downspouts to be run under conc. walkway in lieu of splash block and to drain to edge of conc. walk

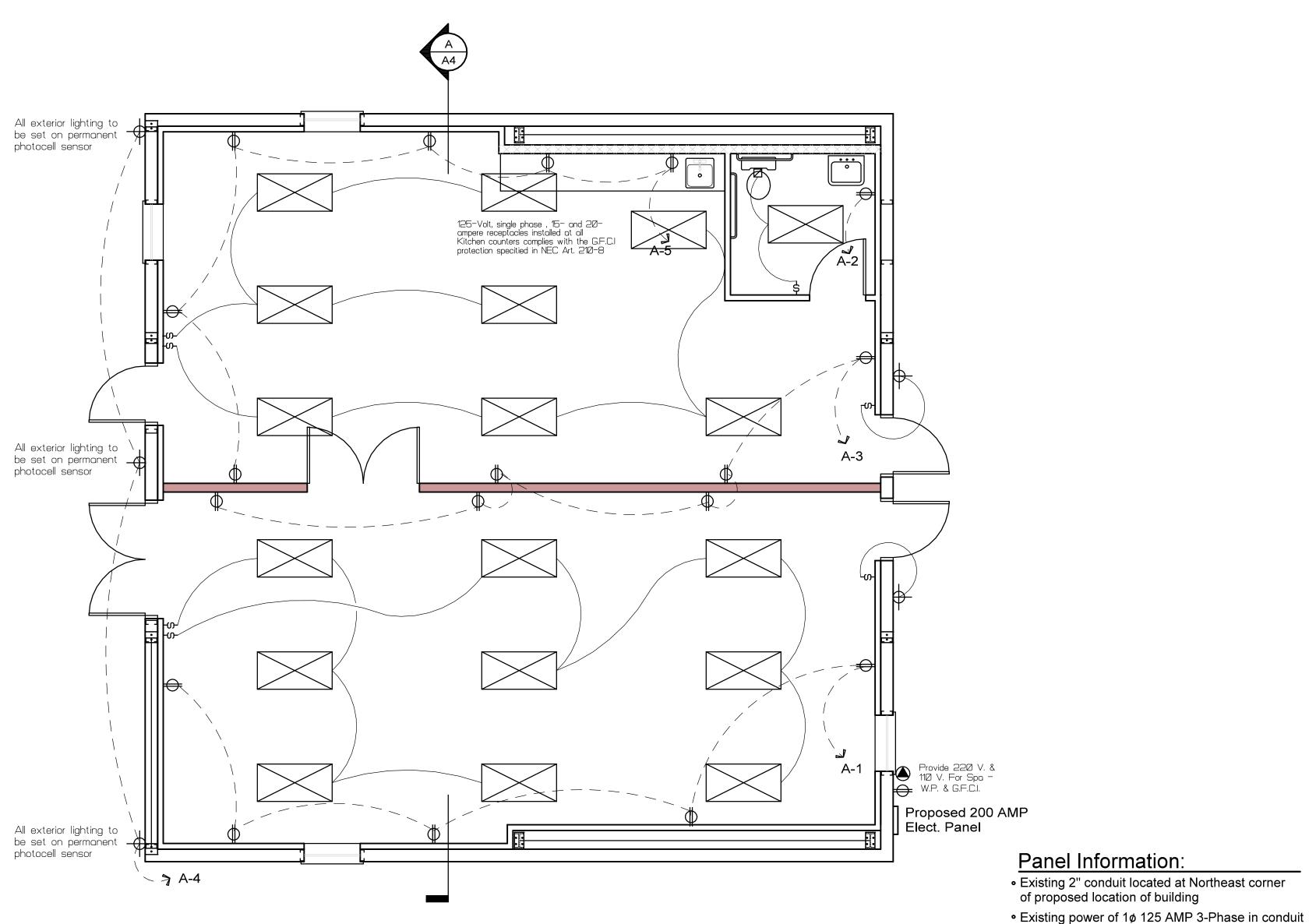
Roof Plan

SCALE 1/8" = 1'-0"

NextEra Energy Resources SEGS 8-9 Solar Facility 43880 Harper Lake Road Hinkley, CA. 92347

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DRAWN BY DATE
JM 1-18-13
CHECKED BY DATE
JM 1-18-13
JOB NO.
C-1600-13



ELECTRICAL PLAN

DIAGRAMMATIC

2010 California Energy Code Notes:

Section 150 (k)2: Permanently installed luminaries in kitchens shall be high-efficiency luminaries.

Exception: Up to 50 percent of the total rated wattage of permanently installed luminaries in kitchens may be in luminaries that are not high-efficiency luminaries, provided that these luminaries are controlled by switches separate from those controlling the high-efficiency luminaries. The wattage of high-efficiency luminaries shall be the total normal rated wattage of the installed high-efficiency lamp(s).

Section 150 (k) 3: Permanently installed luminaries in bathrooms, garages, laundry rooms and utility rooms shall be high-efficacy luminaries.

Exception: Permanently installed luminaries that are not high-efficiency shall be allowed provided that they are controlled by an occupant sensor(s) [sic] certified to comply with section 119 (d). Such motion sensors shall not have a control that allows the luminaire to be turned on automatically or that has an override allowing the luminaire to be always on.

Section 150 (k) 4: Permanently installed luminaries located other than in kitchens, bathrooms, garages, laundry rooms and utility rooms shall be high-efficacy luminaries.

Exception 1: Permanently installed luminaries that are not high-efficiency luminaries shall be allowed provided they are controlled by a dimmer switch.

Exception 2: Permanently installed luminaries that are not high-efficiency shall be allowed provided that they are controlled by an occupant sensor(s) [sic] certified to comply with section 119 (d). Such motion sensors shall not have a control that allows the luminaire to be turned on automatically or that has an override allowing the luminaire to be always on.

Exception 3: Permanently installed luminaries that are not high-efficiency luminaries shall be allowed in closets less than 70 square feet.

Section 150 (k) 6: Luminaires providing outdoor lighing and permanently mounted to a residential building or to other buildings on the same lot shall be high-efficiency luminaires.

Exception 1: Permanently installed outdoor luminaires that are not high-efficiency shall be allowed provided that they are controlled by a motion sensor(s) [sic] with integral photocontrol certified to comply with section 119 (d).

ELECTRICAL SYMBOLS LEGEND

- PHONE

 $\nabla = \nabla$

Proposed service panel:

• New 200 AMP 208/120V 3-phase Panel

) DUPLEX OUTLET

DUPLEX OUTLET - 1/2 HOT

DUPLEX OUTLET -UNDER COUNTER

A QUAD OUTLET

) 22Ø V. OUTLET

- TYPICAL LIGHT FIXTURE

RECESSED CAN
ELITE B6 PLIC-26-E

> WALL MOUNT LIGHT FIXTURE

LOW BAY LIGHTS @ 400W EACH

H FLOOD LIGHT

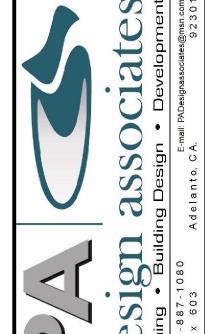
96" FLUOR, FIXT, 4-TUBE 32 WATT, T-8, 110V.

Z EXHAUST FAN

\$ SWITCH W/ MOTION SENSOR AND MANUAL OVERIDE

3-WAY SWITCHES

O PRINTS ISSUED	DESCRIPTION				
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NextEra Energy Resources SEGS 8-9 Solar Facility 43880 Harper Lake Road Hinkley, CA. 92347

Ian & General Notes

signs, prawnes, specifications, and/or calculations is restricted to the Responsible of the Holder. Publication of the Such Description of the Such Descr

DRAWING SHEET NUMBER

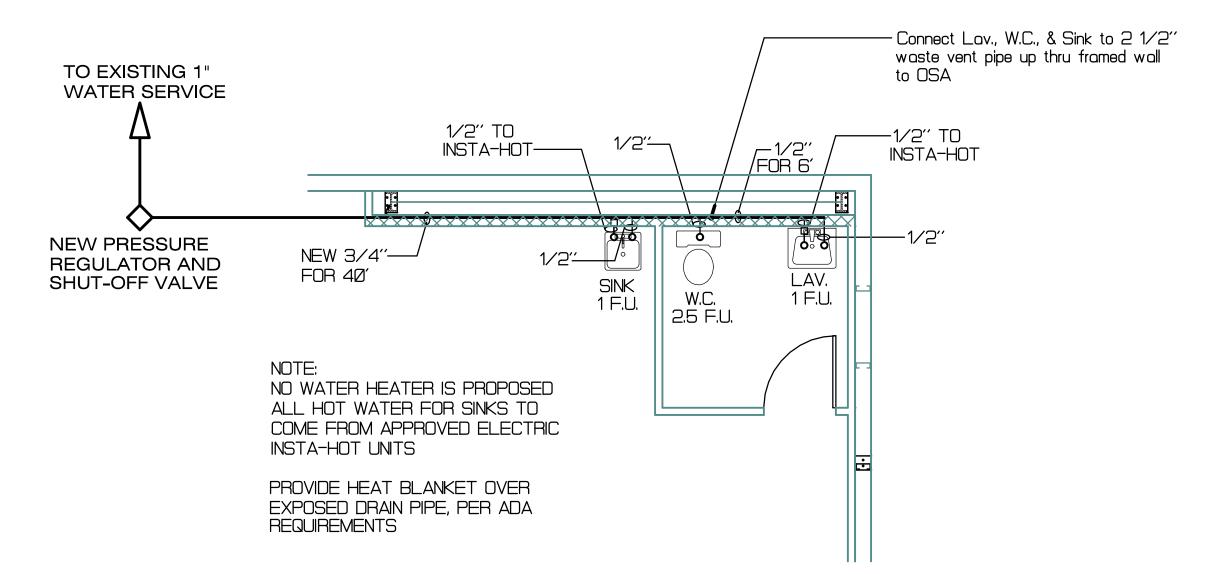
of 8 drawings

PLUMBING GENERAL NOTES

- 1. Contractors shall field verify the locations of all existing utility pipes prior to start of work. Necessary adjustments to the plumbing layout shall be done at no extra cost.
- 2. Contractor shall notify all local utility companies including but not limited to the gas company, electric company, telephone company, and the water department, about the extent of plumbing work. All excavation work shall be approved by all utility companies to assure prevention of interruption of existing services prior to the start of
- 3. All plumbing work shall meet or exceed the requirements of the 2010 California Building Code, California Plumbing Code, California Mechanical Code, C.E.C. Title 24, Americans with Disabilities Act (A.D.A), National Fire Protection Association (N.F.P.A.), the local city and county codes and all other codes having jurisdiction. In case of conflict, the more strict regulations shall govern.
- 4. All plumbing work shall be coordinated with the works of other trades prior to start of work. Necessary adjustments shall be made at no extra cost.
- 5. For the extension of work beyond 5 feet from the building, see civil drawings.
- 6. Manufacturer's names and model numbers shown for plumbing fixtures and equipment are for reference only. Other manufactures which can meet the design requirements of the plumbing system may be substituted upon approval from the architect and the owner.
- 7. Sewer, vent, and drainage pipes shall be ABS Schedule- $4\emptyset$. ABS piping shall be installed per IS-5, IS-9 per Chapter 15, CPC 2010.
- 9. Hot/cold water pipes, condensate drainage and compressed air pipes above ground shall be type "L" hard drawn copper with wrought copper fittings.
- 10. Cold water and compressed air pipes below ground shall be ASTM B88 type "K" hard drawn copper tubing factory insulated with wrought copper fittings.
- 11. Provide dielectric fittings for dissimilar metals in contact.
- 12. Provide handgers and supports for piping in accordance with the recommedations for MSS SP-69.
- 13. Provide valves at the following locations:
- A) Water main shut-off valve in valve box. B) Valve with hose connection on downstream side of the main
- shut-off valve. C) Shut-off valve on each supply to each fixture and equipment item no provided with control stop or other auxiliary shut-off valve.

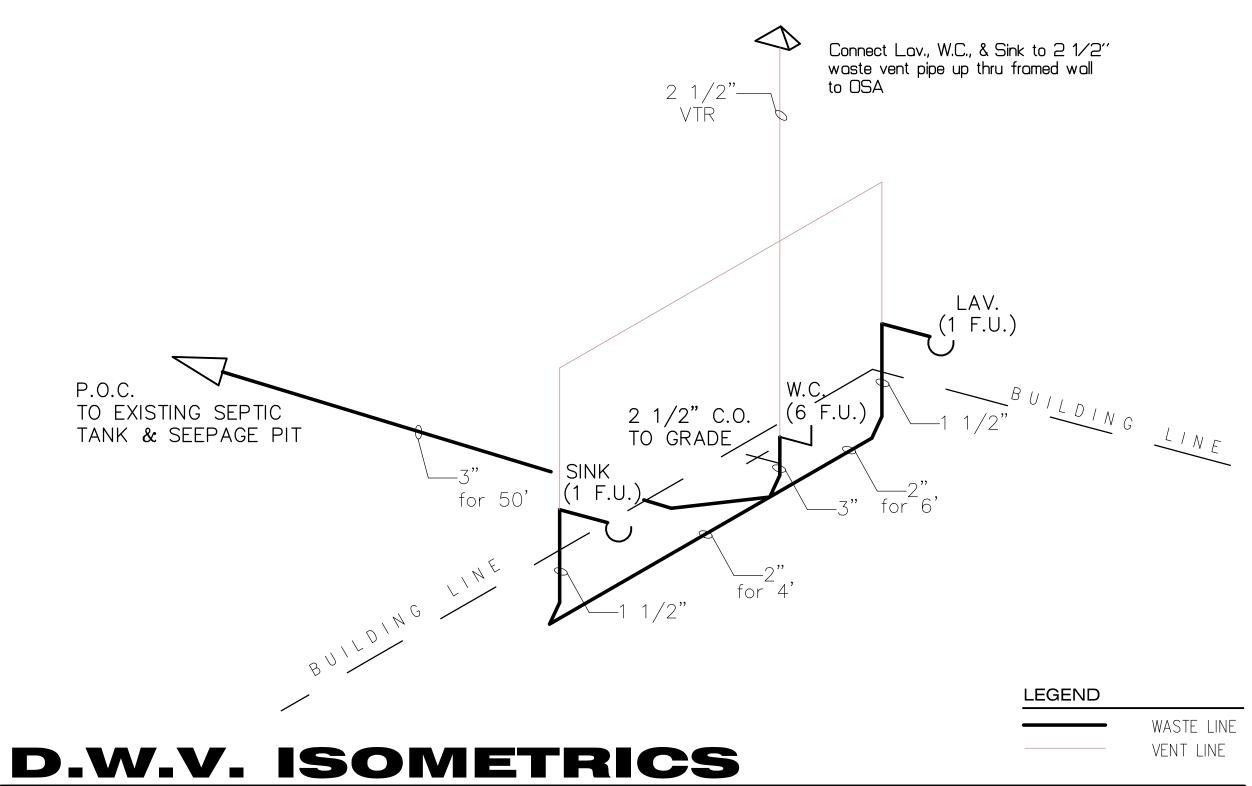
Install shut-off valves so that stems either are vertical with handwheels or operators on top or are horizontal and so that valves ae easily accessible for operation, service, removal and replacement.

- 14. Provide sleeves for all pipe and tubing passing through floors, roofs, and walls. Pack oakum into the space around the pipe or tubing. Provide flashing for all pipes extending through the roof.
- 15. All vent terminations at roof shall be at least 10 feet away from outside air intakes, operable windows, and the like.
- 16. Fill cracks between fixtures and wall/floors with silicone rubber sealant.
- 17. Locate, size, and install water hammer arresters in accordance with plumbing and drainage institute standard no. WH-201.
- 18. Install fixtures in accordance with the manufacturer's recommendations and all applicatble codes. Secure floor outlet or floor-mounted fixtures to drainage connections and floor in a rigid manner. Rigidly support wall-hung fixtures by means of metal supporting members. Use chromium-plated brass bolts, nuts, and washers where exposed. All conections shall be made gas-tight and water-tight. Use putty and plastics for gaskets with not be permitted.
- 19. Provide all fixture components as indicated on drawings. Provide additional components as per manufacturer's recommendations for proper operation of the fixtures.
- 20. Provide each plumbing fixture (including hose bibs) with an individual stop or compression valve of polished chrome-plated loose key type.
- 21. Where depths or inverts elevations are not indicated, provide minimum coverage (above top of pipes) as follows: A) Any piping under slab (top of pipe to underside of slab): 18 inches
- B) Cast iron and copper pipes in other locations: 18 inches.
- 22. Excavate to undisturbed earth: cut level and form true. Remove debris, rubbish and soft material (such as mud). Where rock is encountered, undercut trenches 6-inches and fill with well tamped neutral sand and pea gravel to proper pipe elevation. during excavation free of standing water. Undercut trench 6inches and install piping in a 6-inch neutral sand envelope.
- 23. Backfill to a point 12-inches above top of piping with earth (excavated material may be used) free of clay, debis, rubbish, rocks, or clods over 4-inches in the greatest dimension. Backfill above 12-inshes from top of pipijng may be with excavated material. Apply backfill lby hand in 6-inch deep layers the full width of the trench. Moisten each layer (do not flood or puddle), and hand tamp to a minimum 90 percent compaction before proceedign with the next layer of backfill.
- 24. Do not excavate under foundations or footings except in manner permitted by the architect. Do not backfill until installed piping has been successfully tested.
- 25. All sewer and drainage piping shall be installed as per CPC 2010. Slope shall be minimum 1/4 inch per foot drop (unless noted otherwise).
- 26. Condensate drain pipes shall be insulated with a minumum layer of approved insulation material per the 2010 CPC.



LEGEND -- COLD WATER LINE ----- HOT WATER LINE

WATER SUPPLY LINES



Plumbing Fixture Schedule

NOTE: - Owner to select exact fixtures to be in accordance to 2010 CPC & CGBC

W.C. Water closet Tank type Floor mounted Accessible 1/2" 1/2" 1/2" 2" 4" 4" 4" 4" 4" 4"	Water closet Tank type Floor mounted Accessible Wall mount accessible Water closet Tank type Floor mounted Accessible Water closet Tank type Floor mounted Accessible Water closet Tank type Floor mounted Tank type Floor mounted Accessible Water closet Tank type Floor mounted Water closet pressure assisted 1.6 GPF with Olsonite #95 open front seat-less cover. Meets ANSI 112.19 low consumption. Actuator to be located per ADA. Wall mount accessible 1/2" 1/2" 1/2" 1/2" 1/2" Wall mount Tank type Floor mounted Water closet pressure assisted 1.6 GPF with Olsonite #95 open front seat-less cover. Meets ANSI 112.19 low consumption. Actuator to be located per ADA. YAMERICAN Standard" Lucerne Single-hole model Ø356.421, 20"x18" wall mounted, vitreous china front overflow, concealed arm support. Provide Grid Drain. Faucet: "Chicago" 333-665 Self closing type faucet. Mount per ADA Regmt's	Tag	Description	n	nin. p	ipe si	zes	Remarks		Remarks			
W.C. Tank type Floor mounted Accessible Lavatory Wall mount accessible 1/2' 1/2" 11/2" 2" Water closet pressure assisted 1.6 GPF with Olsonite #95 open front seat-less cover. Meets ANSI 112.19 low consumption. Actuator to be located per ADA. "American Standard" Lucerne Single-hole model Ø356.421, 20"x18" wall mount occessible Provide Grid Drain.	W.C. Tank type Floor mounted Accessible Lavatory Wall mount accessible 1/2' 1/2" 11/2" 2" Water closet pressure assisted 1.6 GPF with Olsonite #95 open front seat-less cover. Meets ANSI 112.19 low consumption. Actuator to be located per ADA. "American Standard" Lucerne Single-hole model Ø356.421, 20"x18" wall mount occessible Provide Grid Drain.	ıug	Becompain	cw	hw	vent	sewer	rtemante					
LAV Lavatory Wall mount accessible Lavatory Wall mount accessible Lavatory Wall mount accessible ''American Standard'' Lucerne Single-hole model Ø356.421, 20"x18" wall mounted, vitreous china front overflow, concealed arm support. Provide Grid Drain.	LAV Lavatory Wall mount accessible Lavatory Wall mount accessible "American Standard" Lucerne Single-hole model Ø356.421, 20"x18" wall mounted, vitreous china front overflow, concealed arm support. Provide Grid Drain.	W.C.	Tank type Floor mounted	3/4"	n.a.	2`	4''	water closet pressure assisted 1.6 GPF with Olsonite #95 open front seat-less	SUED				
		LAV	Wall mount	1/2"	1/2"	1 1/2"	2"	mounted, vitreous china front overflow, concealed arm support. Provide Grid Drain.	TS IS	CRIPTI(





sources cility Road Re Fa 147 nergy Solar rper La Сa Oa o

C.P.C. PLUMBING NOTES

- All plumbing work and materials shall meet the requirements of the 2010 Edition of the California Plumbing Code otherwise required by the Department of Building and Safety.
- Contractor shall furnish and install all backflow prevention devices required by agencies having jurisdiction.
- Drainage system (SEPTIC) All materials shall comply with Section 701.0 Materials. Drainage piping shall be sloped per Section 708.0
- Grade of Horizontal Drainage Piping.
- A. Water pipe and fittings shall be copper per Section 604.2.
- Insulate all hot water pipes, condensate drains and drain assemblies under handicap lavatories as per Title 24.

Waste Fixture Calc.:

NITS
6 F.U.
1 F.U.
2 F.U.
9 F.U.
60 FT.

ccupant Loads:	<u> </u>
0 Sq. Ft. Offices/200 = 8 Occupants	On
Sect. 412.3 Exception (2):	On
occupancies serving ten (10) or fewer	 Fi
ple, one toilet facility, designed for no	\
re than one person at a time, shall be mitted for use by both sexes.	LA
THECOU FOR MODE BY BOTH SCAOS.	

All Occupant Loads per Table A of 2010CPC Plumbing Fixture Count from Table 4—1 of 2010 CPC - Office & Warehouse Occupancie:

Office Fix	ts. Requi	red:
One Unisex res	troom is requir	ed.
One Unisex res	troom is provid	led.
Fixture	Men	Won
W.C.	1	

Office Fixts. Provided:

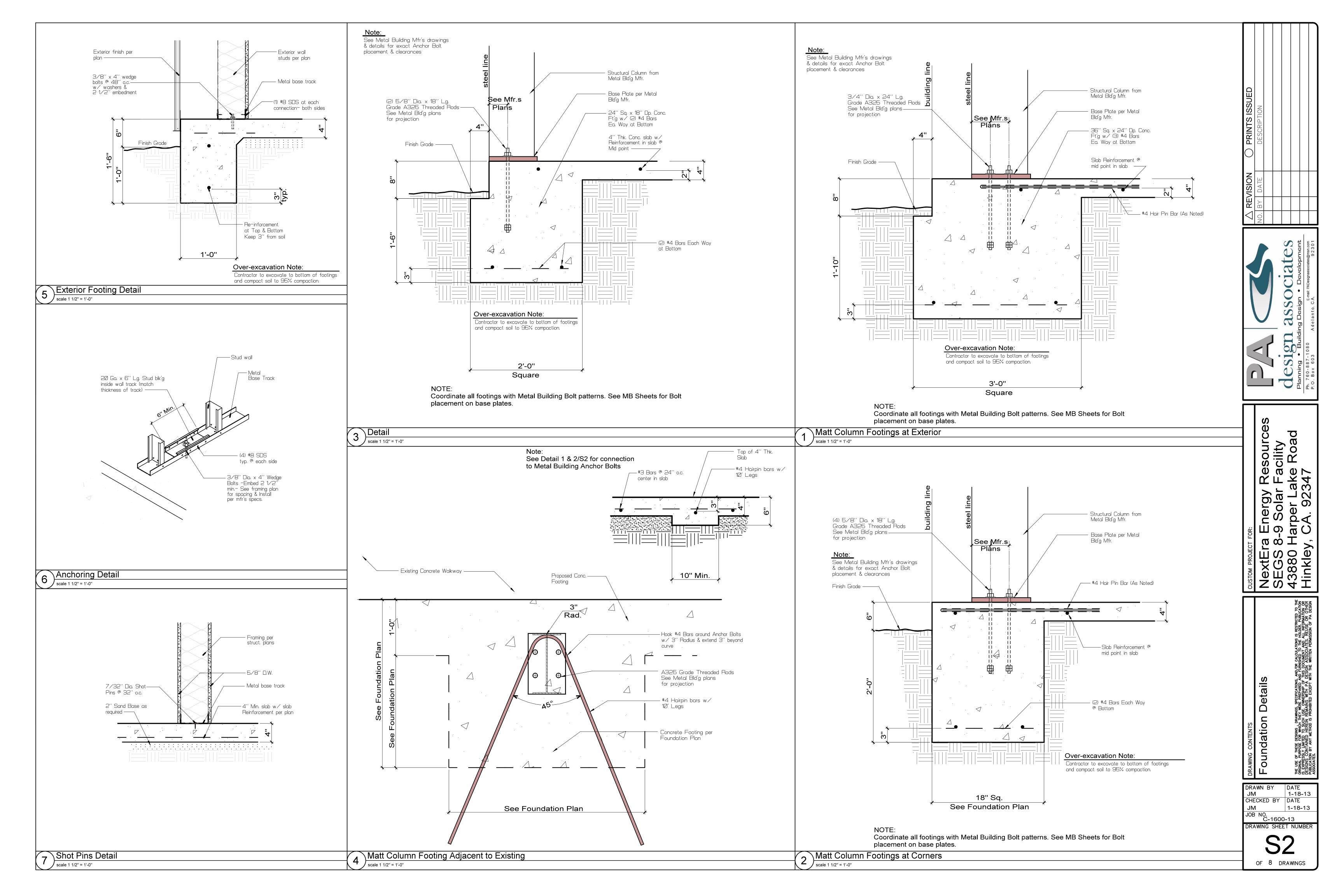
Fixture

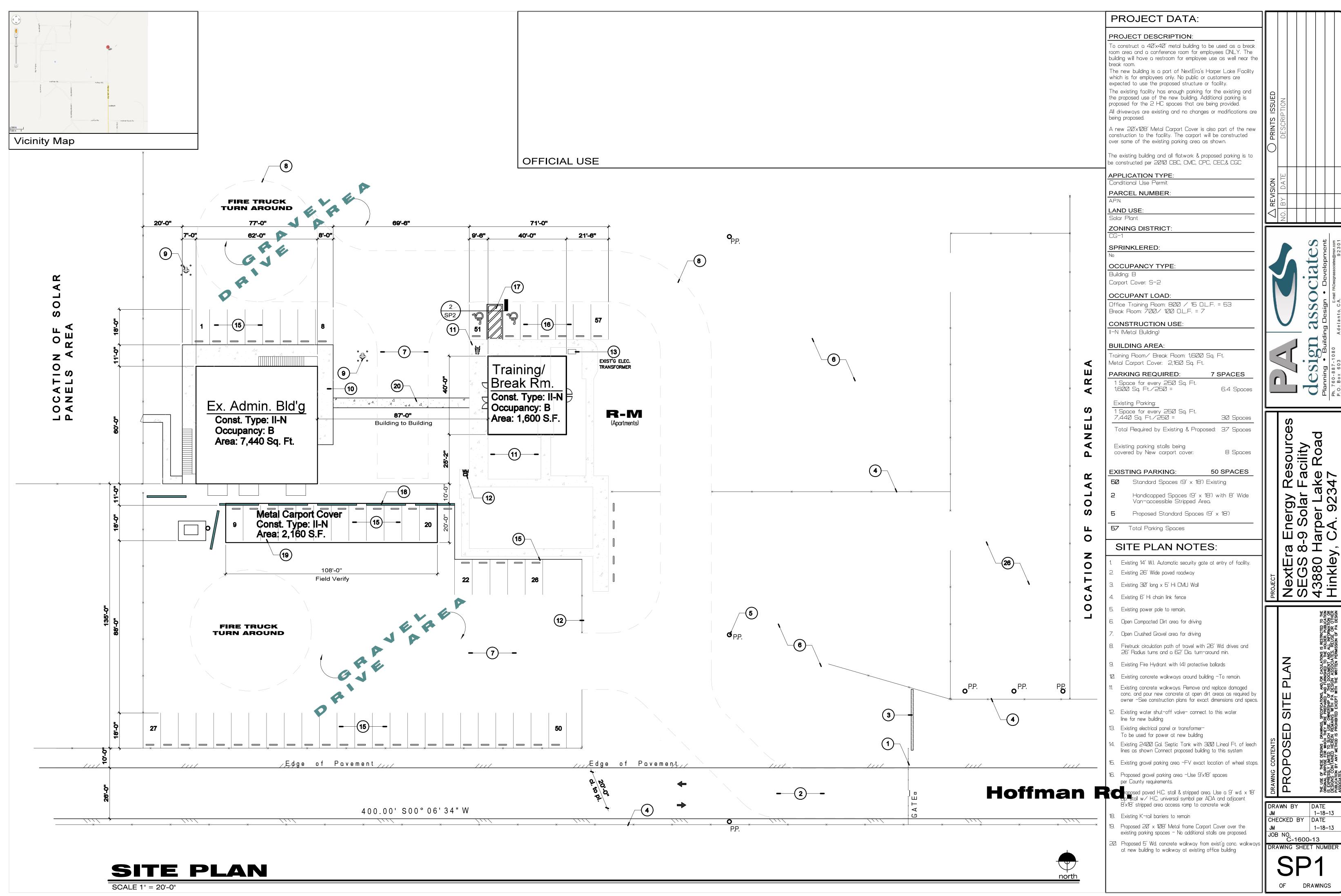
Men

Women

1-18-13 CHECKED BY DATE 1-18-13

`C-1600-13 DRAWING SHEET NUMBER





BUILDER/CONTRACTOR RESPONSIBILITIES

ISSUE

0

DATE

12/12/12

Drawing Validity - These drawings, supporting structural calculations and design certification are based on the order documents as of the date of these drawings. These documents describe the material supplied by manufacturer as of the date of these drawings. Any changes to the order documents after the date on these drawings may void these drawings, supporting structural calculations and design certification. The Builder/Contractor is responsible for notifying the building authority of all changes to the order documents which result in changes to the drawings, supporting structural calculations and design certification

Builder Acceptance of Drawings - Approval of the manufacturer's drawings and design data affirms that the manufacturer has correctly interpreted and applied the requirements of the order documents and constitutes Builder/Contractor acceptance of the manufacturer's interpretations of the order documents and standard product specifications, including its design, fabrication and quality criteria standards and tolerances. (AISC code of standard practice Sept 86 Section 4.2.1) (Mar 05 Section 4.4.1)

Code Official Approval - It is the responsibility of the Builder/Contractor to ensure that all project plans and specifications comply with the applicable requirements of any governing building authority. The Builder/Contractor is responsible for securing all required approvals and permits from the appropriate agency as required.

<u>Builder is responsible for State, Federal and OSHA safety compliance</u> — The Builder/Contractor is responsible for applying and observing all pertinent safety rules and regulations and OSHA standards as applicable.

Building Erection - The Builder/Contractor is responsible for all erection of the steel and associated work in compliance with the Metal Building Manufacturers drawings. Temporary supports, such as temporary guys, braces, false work or other elements required for erection will be determined, furnished and installed by the erector. (AISC Code of Standard Practice Sept 86 Section 7.9.1) (Mar 05 Section 7.10.3)

<u>Discrepancies</u> - Where discrepancies exist between the Metal Building plans and plans for other trades, the Metal Building plans will govern. (AISC Code of Standard Practice Sept 86 Section 3.3) (Mar 05 Section 3.3)

Materials by Others - All interface and compatibility of any materials not furnished by the manufacturer are the responsibility of and to be coordinated by the Builder/Contractor or A/E firm. Unless specific design criteria concerning any interface between materials if furnished as a part of the order documents, the manufacturers

<u>Correction of Errors</u> — Normal erection operations include the correction of minor misfits by moderate amounts of reaming, chipping, welding or cutting and the drawing of elements into line through the use of drift pins. Errors which cannot be corrected by the foregoing means or which require major changes in the member configuration should be reported immediately to the owner and fabricator by the erector, to enable whoever is responsible either to correct the error or to approve the most efficient and economical method of correction to be used by others. (AISC Code of Standard Practice Sept 86 Section 7.12)(Mar 05 Section 7.14)

Modification of the Metal Building from Plans — The Metal Building supplied by the manufacturer has been designed according to the Building Code and specifications and the loads shown on this drawing. Modification of the building configuration, such as removing wall panels or braces, from that shown on these plans could affect the structural integrity of the building. The Metal Building Manufacturer or a Licensed Structural Engineer should be consulted prior to making any changes to the building configuration shown on these drawings. The Metal Building Manufacturer will assume no responsibility for any loads applied to the building not indicated on these drawings.

<u>Safety Commitment</u> — The Metal Building Manufacturer has a commitment to manufacture quality building components that can be safely erected. However, the safety commitment and job site practices of the erector are beyond the control of the building manufacturer. It is strongly recommended that safe working conditions and accident prevention is the top priority of any job site. Local, State and Federal safety and health standards, whether standard statutory or customary, should always be followed to help ensure worker safety. Make certain all employees know the safest and most productive way to erect a building. Emergency procedures should be known to all employees. Daily meetings highlighting safety procedures are also recommended. The use of hard hats, rubber sole shoes for roof work, proper equipment for handling material, and safety nets where applicable, are recommended. For purposes of determining lift requirements, no bundles supplied by the manufacturer will exceed 4000 lbs. For further information also reference the bill of materials for individual member weights of other structural members. If additional information is required contact the customer service

Foundation Design - The Metal Building Manufacturer is not responsible for the design, materials and workmanship of the foundation. Anchor rod plans prepared by the manufacturer are intended to show only location, diameter and projection of the anchor rods required to attach the Metal Building System to the foundation. It is the responsibility of the end customer to ensure that adequate provisions are made for specifying rod embedment, bearing values, tie rods and or other associated items embedded in the concrete foundation, as well as foundation design for the loads imposed by the Metal Building System, other imposed loads, and the bearing capacity of the soil and other conditions of the building site. (MBMA 06 Sections 3.2.2

Dissimilar Materials - Never allow your roof to come in contact with, or water runoff from, any dissimilar metal including but not limited to: Copper and Arsenic Salts used in treated lumber, Calcium used in concrete, mortar

<u>Debris Removal</u> — Any foreign debris such as sawdust, dirt, animal droppings, etc. will cause corrosion of the roof, gutters, trim, etc. if left on building surfaces for a long enough time. The roof should be periodically inspected for such conditions and if found, they should be removed.

Shop Primed Steel — All structural members of the Metal Building System not fabricated of corrosion resistant material or protected by a corrosion resistant coating are painted with one coat of shop primer meeting the performance requirements of SSPC Paint Specification No. 15. All surfaces to receive shop primer are cleaned of oose rust, loose mill scale and other foreign matter by using, as a minimum, the hand tool cleaning method SSPC-SP2 (Steel Structures Painting Council) prior to painting. The coat of shop primer is intended to protect the steel framing for only a short period of exposure to ordinary atmospheric conditions. Shop Primed steel stored in the field pending erection should be kept free of the ground and so positioned as to minimize water—holding pockets, dust, mud and other contamination of the primer film. Repairs of damage to primed surfaces and/or removal of foreign material due to improper field storage or site conditions are not the responsibility of the manufacturer. The Manufacturer is not responsible for deterioration of the shop coat of primer or corrosion that may result from exposure to atmospheric and environmental conditions, nor the compatibility of the primer to any field applied coating. Minor abrasions to the shop coat (including galvanizing) caused by handling, loading, shipping unloading and erection after painting or galvanizing are unavoidable. Touch—up of these minor abrasions is the responsibility of the End Customer (MBMA 06 IV 4.2.4)

PROJECT NOTES

Material properties of steel bar, plate, and sheet used in the fabrication of built-up structural framing members conform to ASTM A529, ASTM A572, ASTM A1011 SS, or ASTM A1011 HSLAS with a minimum yield point of 50 ksi. Material properties of hot rolled structural shapes conform to ASTM A992, ASTM A529, or ASTM A572 with a minimum specified yield point of 50 ksi. Hot rolled angles, or other than flange braces, conform to ASTM 36 minimum. Hollow structural shaped conform to ASTM A500 grade b, minimum yield point is 42 ksi for round HSS and 46 ksi for rectangular HSS. Material properties of cold form light gage steel members conform to the requirements of ASTM A1011 SS Grade 55 or ASTM A1011 HSLAS Class 1 Grade 55, with a minimum yield point

All bolt joints with A325 Type 1 bolts are specified as snug-tightened joints, unless noted otherwise, in accordance with the "Specification for Structural Joints using ASTM A325 or A490 bolts, June 30, 2004". Pretensioning methods, including turn—of—nut and calibrated wrench are not required unless noted otherwise

The manufacturer does not assume any responsibility for the erection nor field supervision of the structure and or any special inspections (including inspection of the high strength bolts or field welds) as required during The coordination and the costs associated for setting up and Special Inspections are the responsibility of the Erector, Owner, Architect, or Engineer of Record.

Design is based upon the more severe loading of either the roof snow load or the roof live load.

Loads, as noted, are given within order documents and are applied in general accordance with the applicable provisions of the model code and/or specification indicated. Neither the manufacture nor the certifying engineer declares or attests that the loads as designated are proper for the local provisions that may apply or for site specific parameters. The manufacturer's Engineer's certification is limited to design loads supplied by an Architect and/or engineer of record for the overall construction project.

This project is designed using manufacture's standard serviceability standards. Generally this means that all stresses and deflections are within typical performance limits for normal occupancy and standard metal building products. If special requirements for deflections and vibrations must be adhered to, then they must be clearly

X-bracing (if applicable) is to be installed to a taut condition with all slack removed. Do not tighten beyond

The design collateral load has been uniformly applied to the design of the building. Hanging loads are to be attached to the purlin web. This may not be appropriate for heavily concentrated loads. Any attached load in excess of 150 pounds shall be accounted for by special design performed by a licensed engineer using concentrated loads and may require separate support members within the roof system.

DESIGN LOADING

THIS STRUCTURE IS DESIGNED UTILIZING THE LOADS INDICATED AND APPLIED AS REQUIRED BY:

CBC 10

THE BUILDER IS TO CONFIRM THAT THESE LOADS COMPLY WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPART

2.000 PSF

0.5 PSF

FRAME / ROOF DEAD LOAD COLLATERAL (LIGHTS)

12/15.5/20.00 PSF FRAME / ROOF LIVE LOAD

GROUND SNOW LOAD (Pg) 0.0000 PSF 1.0000 SNOW LOAD IMPORTANCE FACTOR (Is) FLAT ROOF SNOW LOAD (Pf) 0 PSF SNOW EXPOSURE FACTOR (Ce) 1.0 1.00 THERMAL FACTOR (Ct)

WIND LOAD

85 MPH BASIC WIND SPEED WIND IMPORTANCE FACTOR (Iw) 1.00 WIND EXPOSURE CATEGORY С 1.0 TOPOGRAPHICAL FACTOR

INTERNAL PRESSURE COEFFICIENT (GCpi) 0.18 /-0.18

ZONE 4. COMPONENT WIND LOAD < 10FT2

14.432 PSF PRESSURE -15.635 PSF SUCTION

ZONE 5, COMPONENT WIND LOAD $< 10FT^2$ 14.432 PSF PRESSURE -19.207 PSF SUCTION

ZONES PER ASCE 7-05; FIG. 6-11A (FOR IBC 06/09 BASE CODE) ZONES PER ASCE 7-98; FIG. 6-5A (FOR IBC 03 BASE CODE)

> RAIN INTENSITY 5-MINUTE DURATION, 5-YEAR

SEISMIC DESIGN CATEGORY

4.0000 IN/HOUR RECURRENCE (I1) 5-MINUTE DURATION, 25-YEAR 6.0000 IN/HOUR RECURRENCE (12)

SEISMIC LOAD OCCUPANCY CATEGORY II - Normal SEISMIC IMPORTANCE FACTOR (Ie) 1.00

S_s 1.5580 S_{Ds} 1.0000 S_{D1} 0.6770 S1 0.6770 SITE CLASS D

ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

LONGITUDINAL FRONT BACK BASIC FORCE RESISTING SYSTEM C4 B4 __ B4 RESPONSE MODIFICATION COEFFICIENT(R) 3.5 3.25 3.25 SYSTEM OVER-STRENGTH FACTOR(Q_0) 3.0000 2.0000 2.0000 SEISMIC RESPONSE COEFFICIENT(Ca) 0.286 0.308 0.308 BLDG DESIGN BASE SHEAR (V) 3.03 (k) 2.83 (k)

THE TRANSVERSE DIRECTION IS PARALLEL TO THE RIGID FRAMES THE LONGITUDINAL DIRECTION IS PERPENDICULAR TO THE RIGID FRAMES.

BASIC FORCE RESISTING SYSTEM

C4. STEEL ORDINARY MOMENT FRAME . STEEL ORDINARY CONCENTRIC BRACED FRAMES

STRUCTURAL STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE G3. INVERTED PENDULUM SYSTEMS

CANTILEVERED COLUMN SYSTEMS

BUILDING SIZE: 40'-0" x 40'-0" x 12'-0"

1.0:12

D

DESCRIPTION BY CK'D DSN GENERAL STEEL CORPORATION ASF SG CAD FOR ERECTOR INSTALLATION BUILDER SERVICES GROUP 10639 W BRADFORD RD LITTLETON, CO 80127-4208 800-404-6974 PROJECT: CREW CONSTRUCTION CUSTOMER. CREW CONSTRUCTION OWNER: CHUCK CREW LOCATION: HINKLEY, CA 92347 JOB NUMBER DATE SCALE PHASE BUILDING ID SHFFT NUMBER ISSUF 0816-Q118965

N.T.S.

12/12/12

	DRAW	ING INDEX
ISSUE	PAGE	DESCRIPTION
0	C1	COVER SHEET
0	F1	ANCHOR BOLT PLAN
0	F2	ANCHOR BOLT REACTIONS
0	F3	ANCHOR BOLT DETAILS
0	E1	ROOF FRAMING PLAN
0	E2	FRONT SIDEWALL
0	E3	BACK SIDEWALL
0	E4	LEFT ENDWALL
0	E5	RIGHT ENDWALL
0	E6/E7	FRAME CROSS SECTION
0	DET1-3	STANDARD DETAILS
0		WALK DOOR DETAILS
0		STANDARD WELD DETAILS
0		3 SIDED FRAMED OPENING
0		4 SIDED FRAMED OPENING

DDAWING INDEV

DRAWING STATUS

FOR APPROVAL

THESE DRAWINGS, BEING FOR APPROVAL, ARE BY DEFINITION NOT FINAL, AND ARE FOR CONCEPTUAL REPRESENTATION ONLY. THEIR PURPOSE IS TO CONFIRM PROPER INTERPRETATION OF THE PROJECT DOCUMENTS. ONLY DRAWINGS ISSUED "FOR ERECTOR INSTALLATION" CAN BE CONSIDERED AS COMPLETE.

FOR CONSTRUCTION PERMIT THESE DRAWINGS, BEING FOR PERMIT, ARE BY DEFINITION NOT FINAL, ONLY DRAWINGS ISSUED "FOR ERECTOR INSTALLATION" CAN BE CONSIDERED AS COMPLETE.

FOR ERECTOR INSTALLATION FINAL DRAWINGS FOR CONSTRUCTION.

FOR QUESTIONS OR ASSISTANCE CONCERNING ERECTION CALL:

800-404-6974

MONDAY - FRIDAY 7:30AM TO 5:00PM

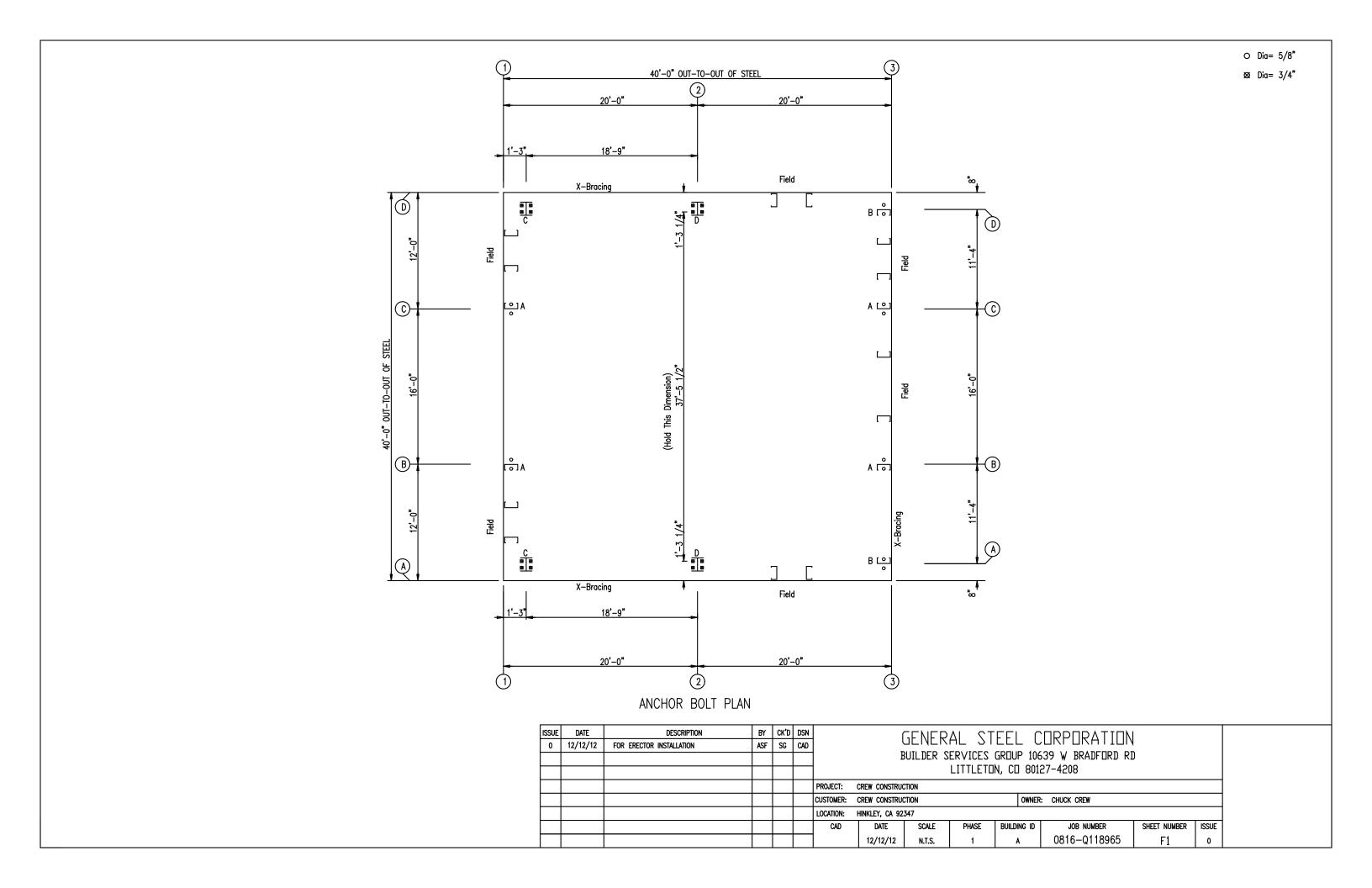
ENGINEERING SEAL

THIS CERTIFICATION COVERS PARTS MANUFACTURED AND DELIVERED BY THE MANUFACTURER ONLY,
AND EXCLUDES PARTS SUCH AS DOORS, WINDOWS,
FOUNDATION DESIGN AND ERECTION OF THE BUILDING.

THESE DRAWINGS AND THE METAL BUILDING SYSTEM THEY REPRESENT ARE THE PRODUCT OF AN AFFILIATE OF NCI GROUP, INC. - 10943 N. SAM HOUSTON PARKWAY W., HOUSTON, TX 77064. THE PROFESSIONA ENGINEER WHOSE SEAL APPEARS HEREON IS EMPLOYED BY AN AFFILIATE OF NCI GROUP, INC. AND IS NOT THE ENGINEER-OF-RECORD FOR THE OVERALL PROJECT.

CAD 12/13/12

Rev. 10/18/12



GENERAL NOTES

- 1. THE REACTIONS PROVIDED ARE BASED ON THE ORDER DOCUMENTS AT THE TIME OF MAILING, ANY CHANGES TO BUILDING LOADS OR DIMENSIONS MAY CHANGE THE REACTIONS. THE REACTIONS WILL BE SUPERSEDED AND VOIDED BY ANY FUTURE MAILING.

 2. REACTIONS ARE PROVIDED AS UN-FACTORED FOR EACH LOAD GROUP APPLIED TO THE COLUMN. THE FOUNDATION ENGINEER WILL APPLY THE APPROPRIATE LOAD FACTORS AND COMBINE THE REACTIONS IN ACCORDANCE WITH THE BUILDING CODE AND DESIGN SPECIFICATIONS TO DETERMINE BEARING PRESSURES AND CONCRETE DESIGN. THE FACTORS APPLIED TO LOAD GROUPS FOR THE STEEL COLUMN DESIGN MAY BE DIFFERENT THAN THE FACTORS USED IN THE FOUNDATION DESIGN.

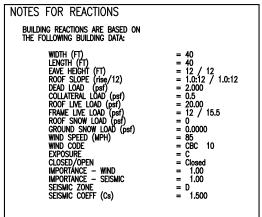
 3. THE MANUFACTURER DOES NOT PROVIDE "MAXIMUM" LOAD COMBINATION REACTIONS, HOWEVER, THE INDIVIDUAL LOAD REACTIONS PROVIDED MAY BE USED BY THE FOUNDATION ENGINEER TO DETERMINE THE APPLICABLE LOAD COMBINATIONS FOR HIS/HER DESIGN PROCEDURES AND ALLOW FOR AN ECONOMICAL FOUNDATION DESIGN THE METAL BUILDING MANUFACTURER IS RESPONSIBLE FOR THE DESIGN OF THE ANCHOR BOLT DIAMETER ONLY TO PERMIT THE TRANSFER OF FORCES BETWEEN THE BASE PLATE AND THE ANCHOR BOLT IN SHEAR, BEARING AND TENSION, BUT IS NOT RESPONSIBLE FOR THE ANCHOR BOLT DIAMETER ONLY TO PERMIT THE TRANSFER OF FORCES TO THE FOUNDATION. THE METAL BUILDING MANUFACTURER DOES NOT DESIGN AND IS NOT RESPONSIBLE FOR THE ANCHOR BOLT DIAMETER ONLY TO PERMIT THE THE DESIGN, MATERIAL AND CONSTRUCTION OF THE FOUNDATION DESIGN AND SOUS SOUS DESIGN AND SOUT RESPONSIBLE FOR THE SOULD ASSURE HIMSELF THAT ADEQUATE PROVISIONS ARE MADE IN THE FOUNDATION DESIGN FOR LOADS IMPOSED BY COLUMN REACTIONS OF THE BUILDING OTHER IMPOSED LOADS, AND BEARING CAPACITY OF THE BUILDING OTHER IMPOSED LOADS, AND BEARING CAPACITY OF THE BUILDING OTHER IMPOSED LOADS, AND BEARING CAPACITY OF THE BUILDING OTHER IMPOSED LOADS, AND BEARING CAPACITY OF THE BUILDING OTHER MIPOSED LOADS, AND BEARING CAPACITY OF THE BUILDING OTHER MIPOSED LOADS, AND BEARING CAPACITY OF THE BUILDING OTHER MIPOSED LOADS, AND BEARING CAPACITY OF THE BUILDING OTHER MOSED DADS, AND BEARING CAPACITY O

BUILDING BRACING REACTIONS

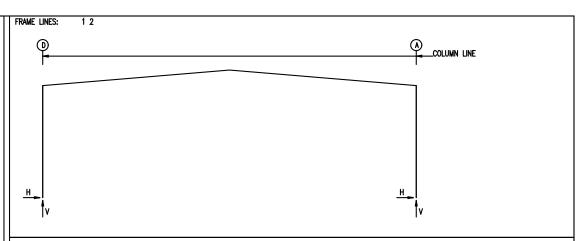
	Col Line	Horz W	Reaction lind — Vert	ns (k) Seisr Horz 	nic — Vert	Panel Shear (lb/ft)
L_EW 1 F_SW A R_EW 3 B_SW D	Rigid 1,2 A,B 2,1	Frame At 1 1.4 0.8 1.4	Endwall 0.8 0.8 0.8	1.4 0.6 1.4	0.8 0.6 0.8	

ENDV	VALL	COLUMN	:	BASIC COLU	IMN REACTIONS	(k)								
Frm Line 1 1	Col Line C B	Dead Vert 0.0 0.0	Wind_P Horz -1.0 -1.0	Wind_S Horz 1.1 1.1										
Frm Line 3 3 3 3	Col Line A B C D	Dead Vert 0.1 0.4 0.4 0.1	Collat Vert 0.0 0.1 0.1 0.0	Live Vert 0.9 3.1 3.1	Floor Horz Ve 0.8 -0. 0.0 0. 0.0 0.	rt Horz 8 0.6 8 0.0 0 0.0	Orift Vert -0.7 0.7 0.0	S Horz 0.0 0.6 0.0	lide Vert 0,7 -0,7 0,0 0,0	Rafter ——Wir Horz 0.6 0.0 0.0	vert -1.3 -1.6 -1.4 -0.4	Rafter — - Wind_I Horz 0.0 0.6 0.0	R Vert 0.2 -2.1 -2.3 -0.7	
Frm Line 3 3 3 3	Col Line A B C D	0.0 0.0	L Vert -1,3 -1,6 -1,4 -0,4	Wind_R Horz Vert 0.6 -1.0 0.0 -0.9 0.0 -2.3 0.0 -0.7	Wind_P Horz 0.6 -0.9 -0.9 0.0	Wind_S Horz 0.0 1.0 1.0 0.0	LnWir Horz 0.0 0.6 0.0 0.0	nd1- Vert 0.1 -2.4 -1.8 -0.5	LnWir Horz 0.0 0.6 0.0 0.0	nd2- Vert 0.3 -1.7 -1.1 -0.3	Seis_L Vert 0.0 0.0 0.0 0.0	Seis_R Vert 0.1 -0.1 0.0 0.0	Rain Horz Ver 0.0 0.8 0.8 -0.4 0.0 0.0	t 3
Frm Line 3 3 3 3	Col Line A B C D	-LWIND1_ Horz 0.6 0.0 0.0 0.0	L- Vert -0.8 0.4 0.0 0.0	-LWIND1_R- Horz Vert 0.0 0.6 0.6 -0.5 0.0 -0.2 0.0 -0.3	0.4 - 0.0 0.0	LL Vert Ho -0.7 0.0 0.3 0.4 0.0 0.0 0.0 0.0) 0.4 -0.4) -0.5	rt 4 4 2						

END	VALL	COLUMN	N:	ANCHOR BOLTS & BASE PLATES				
Frm Line	Col Line	Anc Qty	AncBolt Qty Dia		Base_Plate (in) Width Length		Grout (in)	
1	С	2	0.625	7.000	8.000	0.250	0.0	
1	В	2	0.625	7.000	8.000	0.250	0.0	
3	Α	2	0.625	7.000	8.000	0.250	0.0	
3	В	2	0.625	7.000	8.000	0.250	0.0	
3	С	2	0.625	7,000	8.000	0,250	0,0	
3	D	2	0.625	7.000	8.000	0.250	0.0	



ANC	HOR BOLT	SUMMARY		
Qty	Locate	Dia (in)	Туре	Proj (in)
O 12 88 16	Endwall Frame	5/8" 3/4"	F1554 F1554	2.00 2.50



Frm	Col	Anc	_Bolt	Base_	Plate (in)	Thick	Grout
Line	Line	Qty	Dia	Width	Length		(in)
1	D A	4 4	0.750 0.750	6.000 6.000	10.50 10.50	0.375 0.375	0.0 0.0

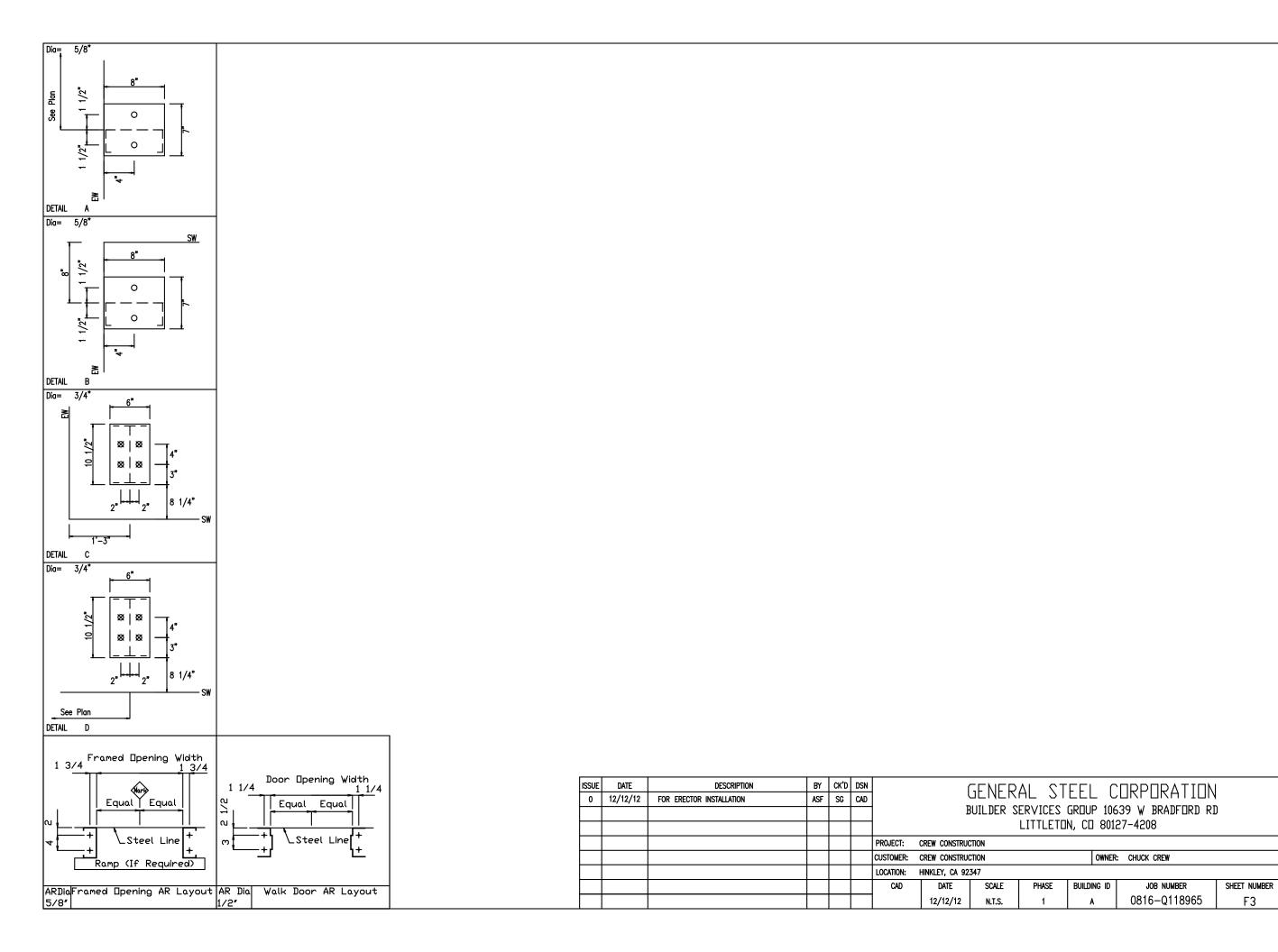
ANCHOR BOLTS & BASE PLATES

RIGID FRAME:

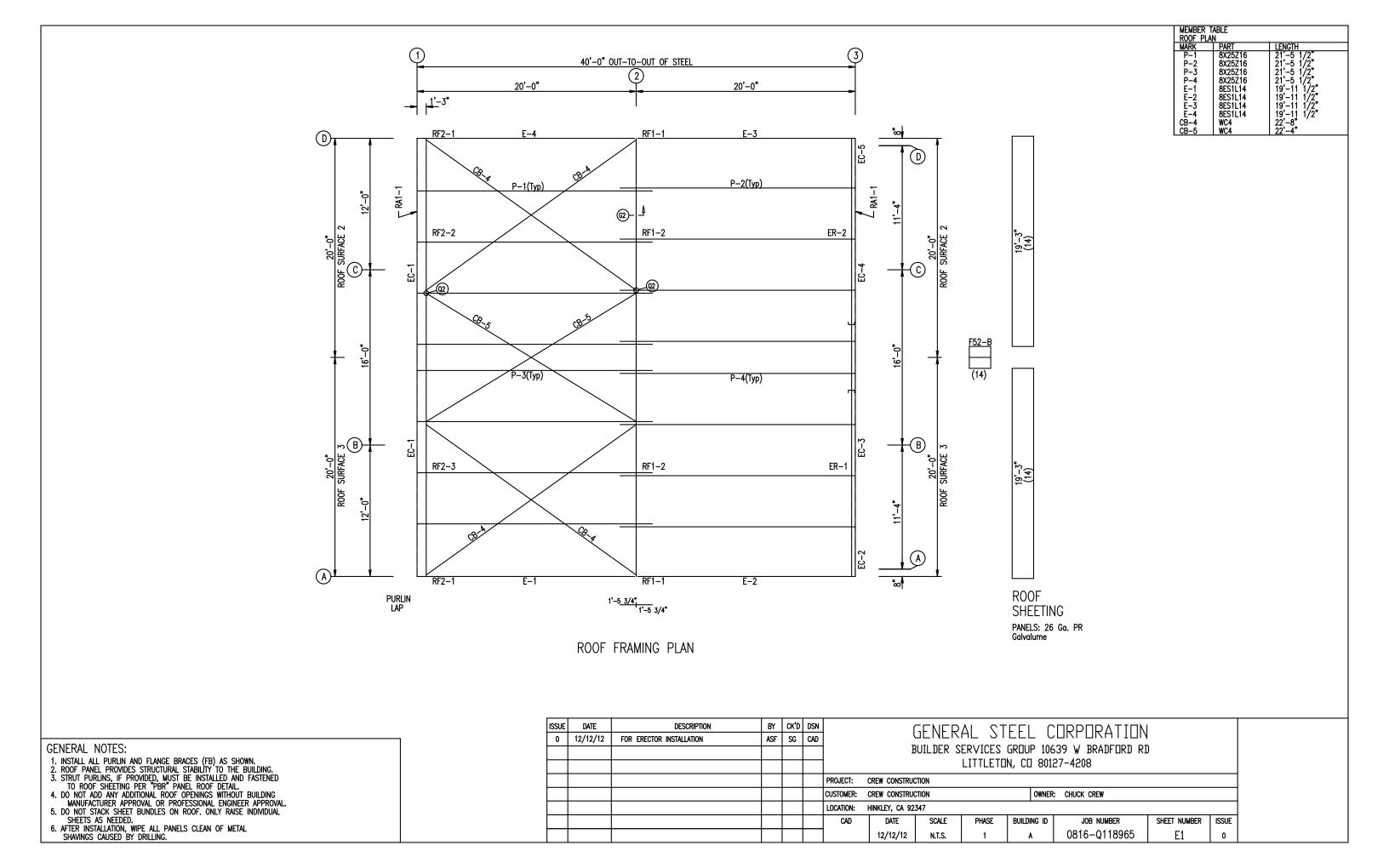
RIGID	FRAM	E:	Al	ICHOR BO	LTS & BAS	e plates	
Frm Line	Col Line	Anc Qty	_Bolt Dia	Base_ Width	Plate (in) Length	Thick	Grout (in)
2 2	D A	4	0.750 0.750	6.000 6.000	10.50 10.50	0.375 0.375	0.0

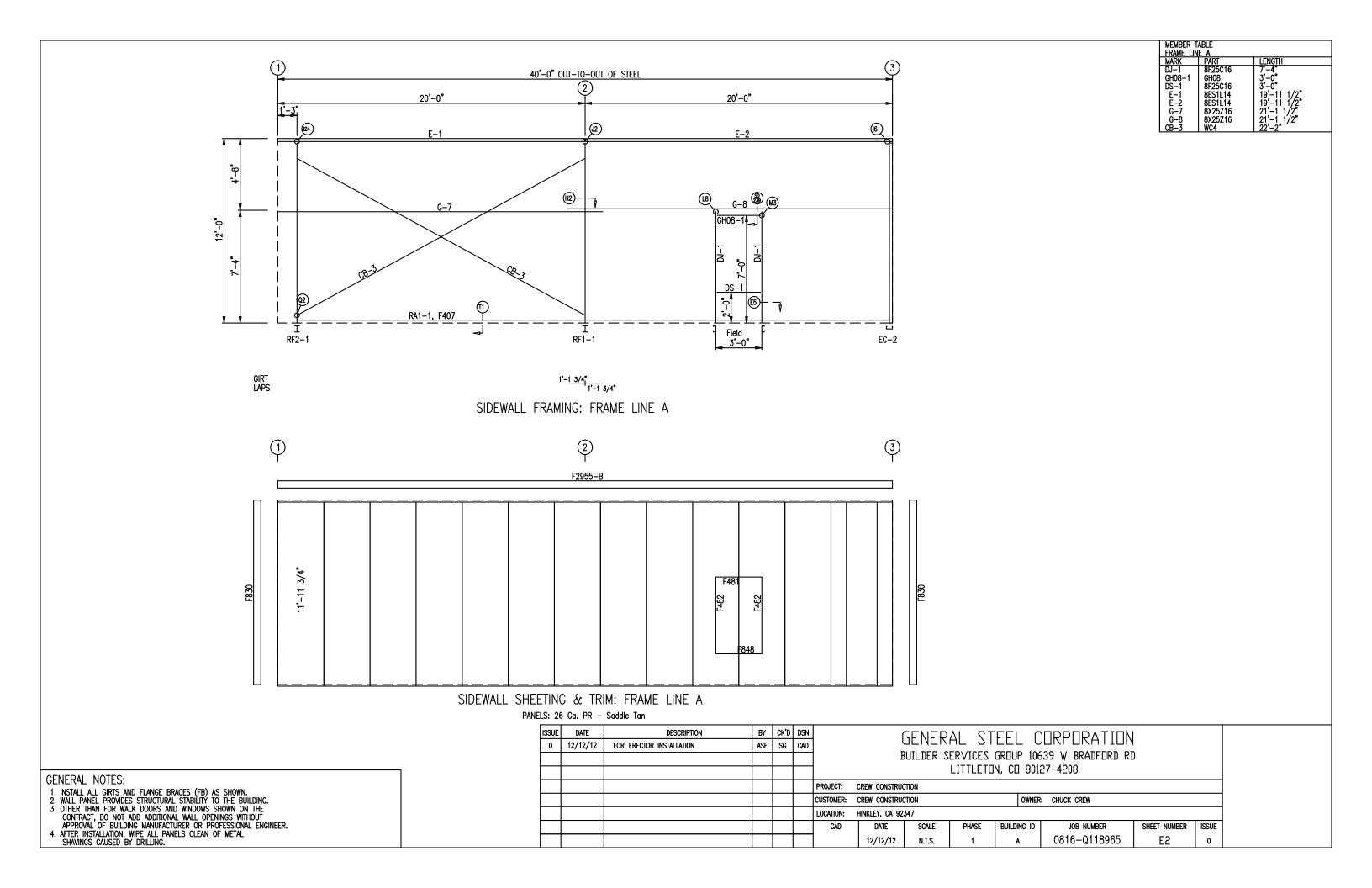
RIGID	FRAN	1E:	BA	SIC COLU	IMN REAC	TIONS (k)						
Line	Line	Horiz	Vert	Horiz	Vert	Horiz	ive Vert 6.0 6.0	Horiz	Vert	Horiz	Vert	Horiz	Vert
Line	Line	Horiz	Vert	Horiz	Vert	Horiz	Vind2 Vert -4,2 -4,2	Horiz	Vert	Horiz	Vert	Horiz	Vert
Frame Line 2 2	Column Line D A	-LWIND1 Horiz -0,1 0,1	L2E- Vert -0.9 -0.1	-LWIND Horiz -0.1 0.1	1_R2E- Vert -0.1 -0.9	-LWIND: Horiz -0.1 0.1	2_L2E- Vert -0.9 -0.1	-LWINDS Horiz -0.1 0.1	2_R2E- Vert -0.1 -0.9				
Frame Line 1	Column Line D A	Di Horiz 0.3 -0,3	ead Vert 0.8 0.8	- —Collate Horiz 0.1 —0.1	eral— Vert 0.1 0.1	L Horiz 1.6 -1.6	ive Vert 3.3 3.3	Wind Horiz -1.6 0.1	_L1 Vert -2.5 -1,6	Wind Horiz -0.1 1.6	_R1 Vert -1,6 -2,5	Wind Horiz -1,4 0,0	L2 Vert -1.4 -0,5
Line	Line	Horiz	Vert	Horiz	Vert	Horiz	Vind2 Vert -2.2 -2.2	Horiz	Vert	Horiz	Vert	Horiz	Vert
Frame Line 1	Column Line D A	-LWIND1 Horiz 0.0 0.1	L2E- Vert -0.4 0.0	-LWIND Horiz -0.1 0.0	1_R2E- Vert 0.0 -0.4	-LWIND: Horiz 0.0 0.1	2_L2E- Vert -0.4 0.0	-LWIND: Horiz -0.1 0.0	2_R2E- Vert 0.0 -0.4				

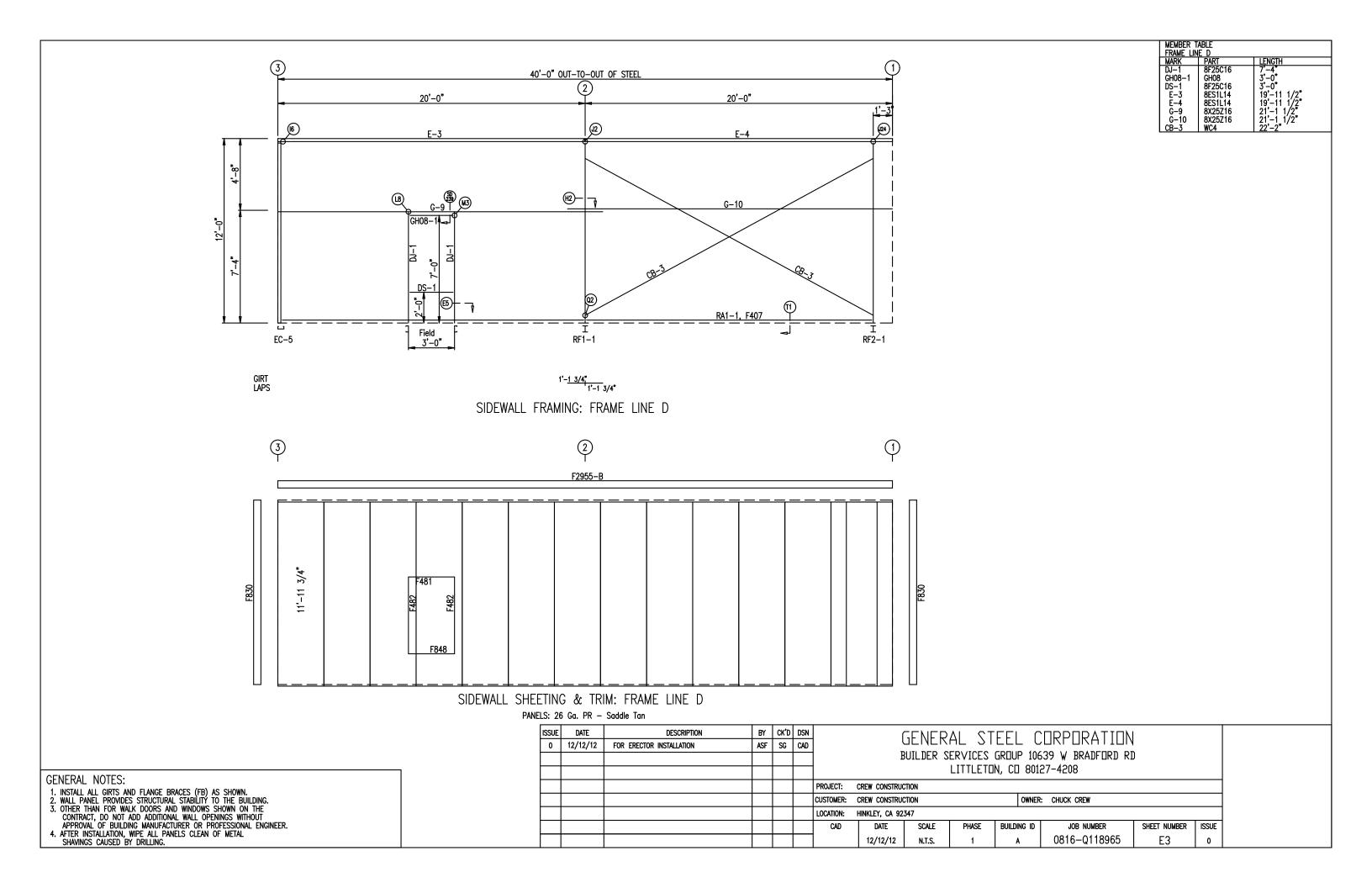
ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN		ſ	CENIED	ΤΟ ΙΛ		Γ	ORPORATION	1	
0	12/12/12	FOR ERECTOR INSTALLATION	ASF	SG	CAD									
							E					39 ₩ BRADFORD RI)	
]			LITTLETO	IN, CO	8012	7-4208		
						PROJECT:	CREW CONSTRUC	CTION						
						CUSTOMER:	CREW CONSTRUC	CTION		(OWNER:	CHUCK CREW		
						LOCATION:	HINKLEY, CA 92	347						
						CAD	DATE	SCALE	PHASE	BUILDIN	GID	JOB NUMBER	SHEET NUMBER	ISSUE
						1	12/12/12	N.T.S.	1	A		0816-Q118965	F2	o

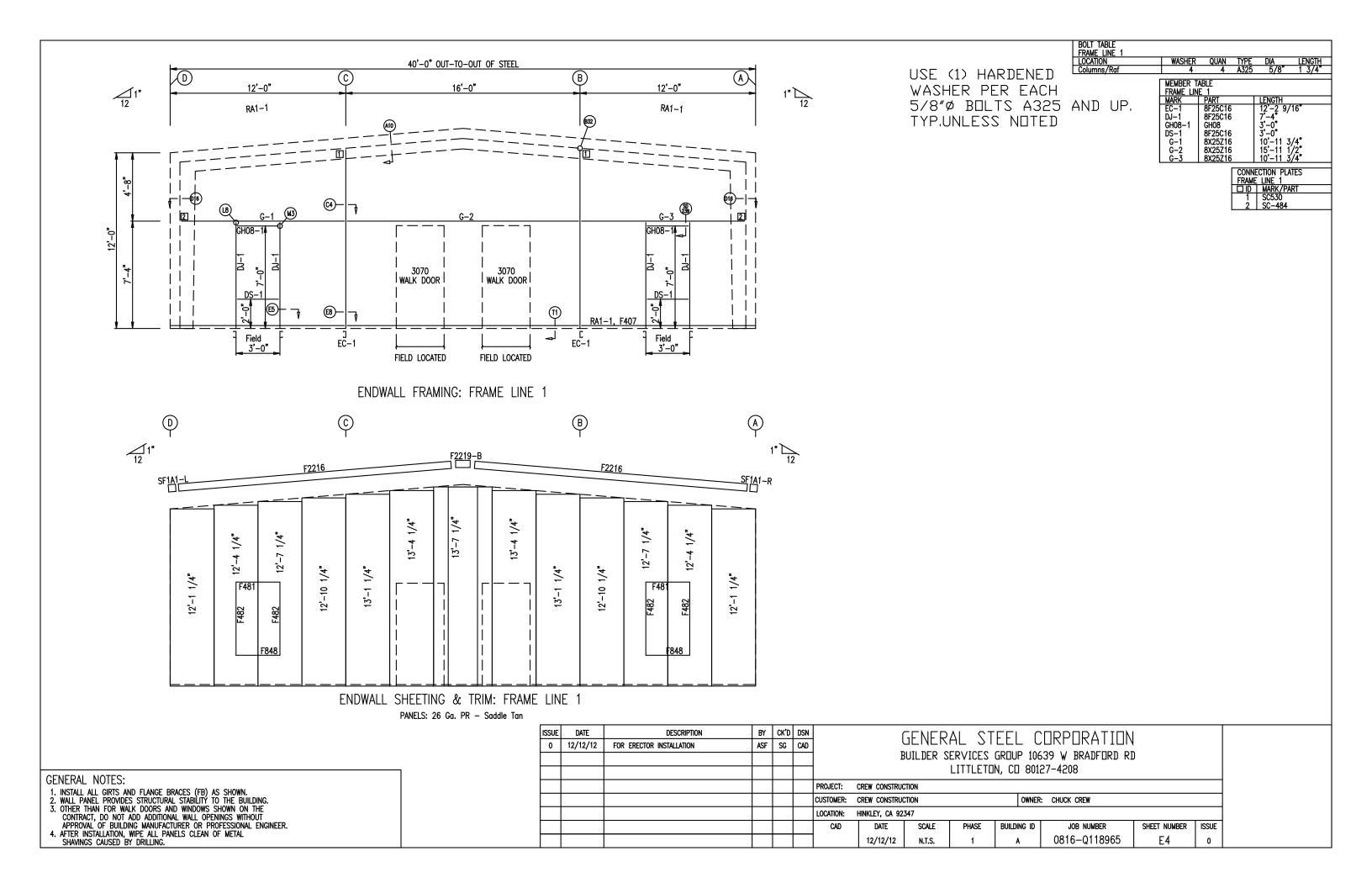


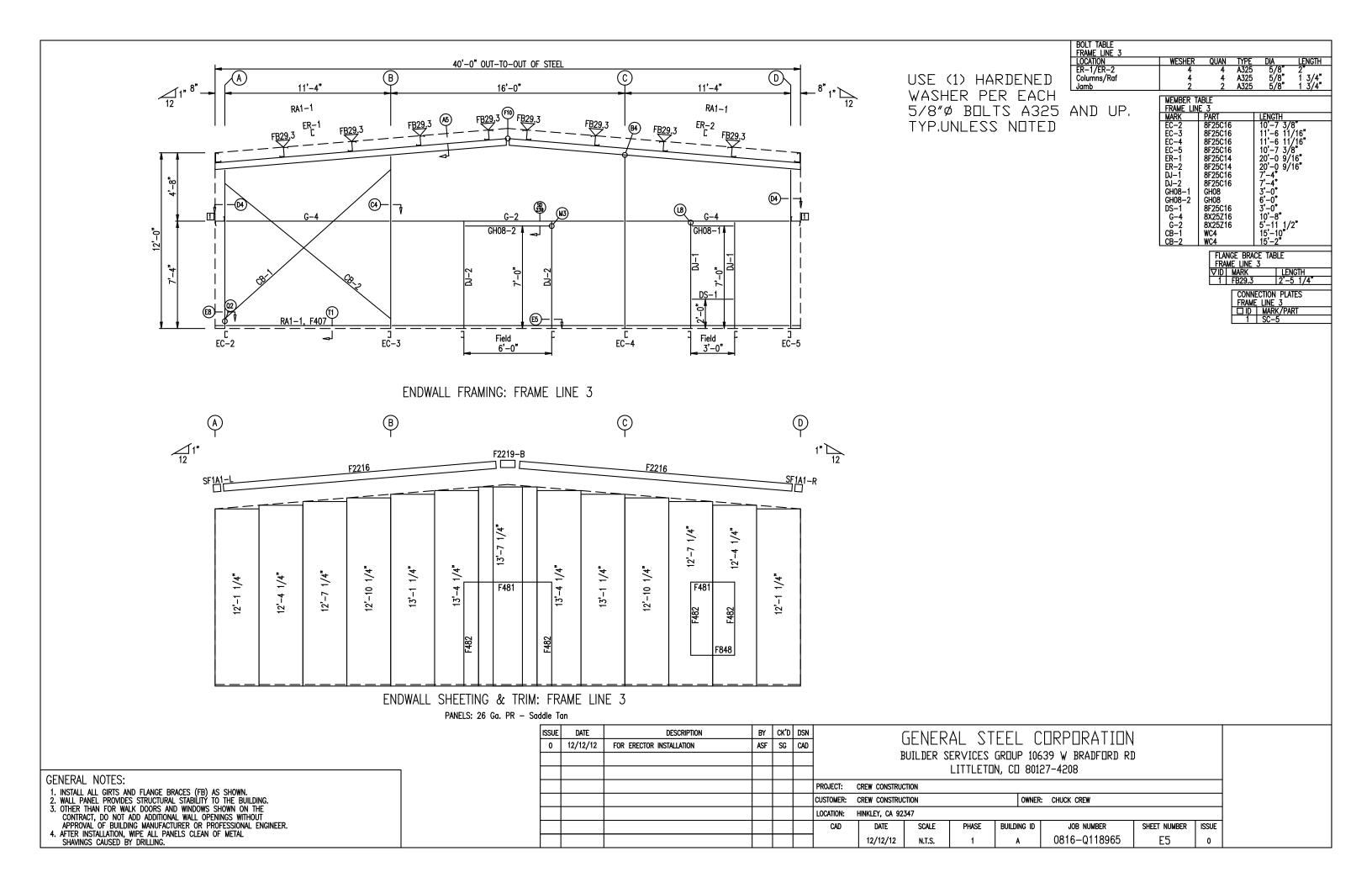
ISSUE

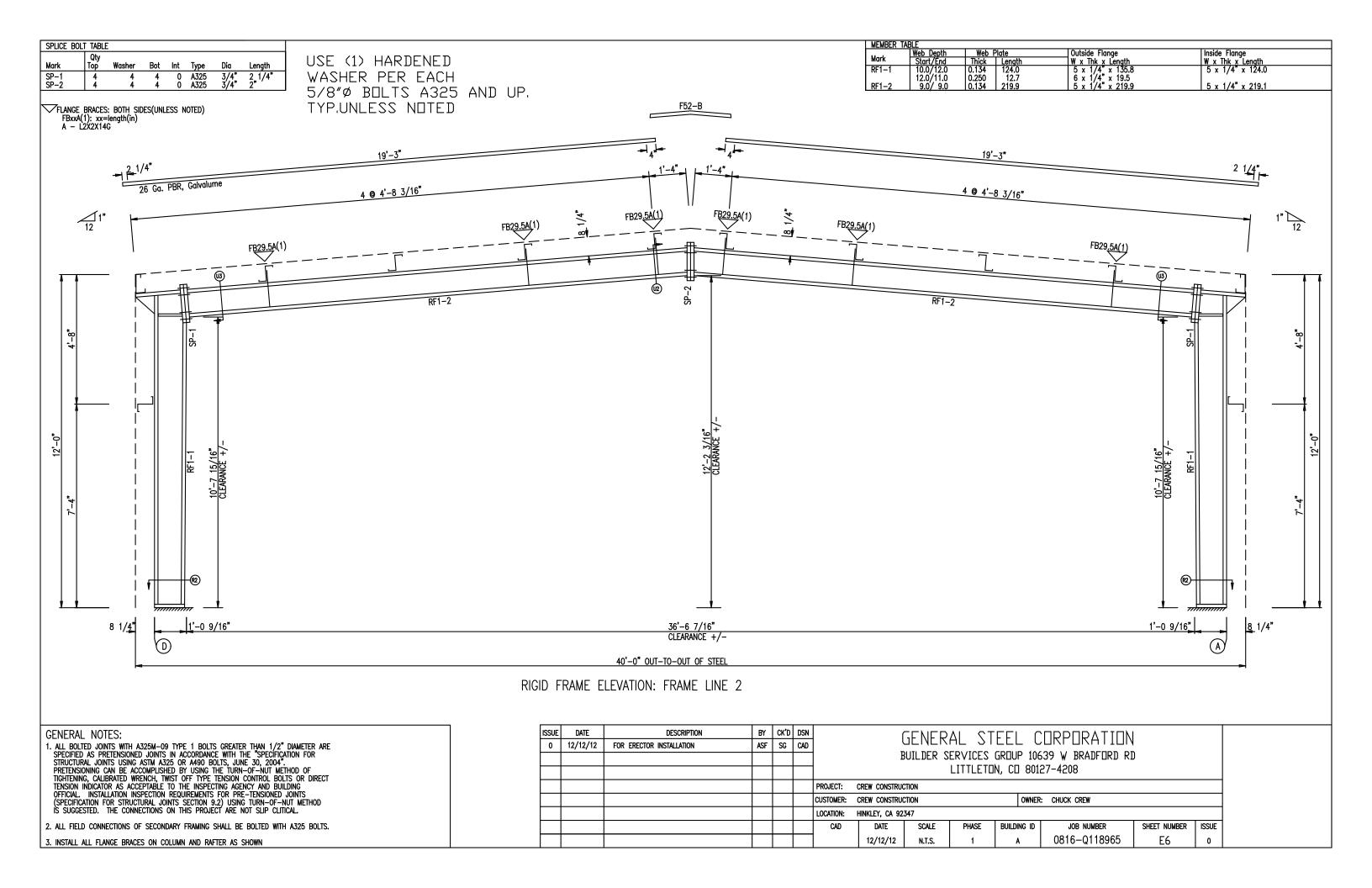


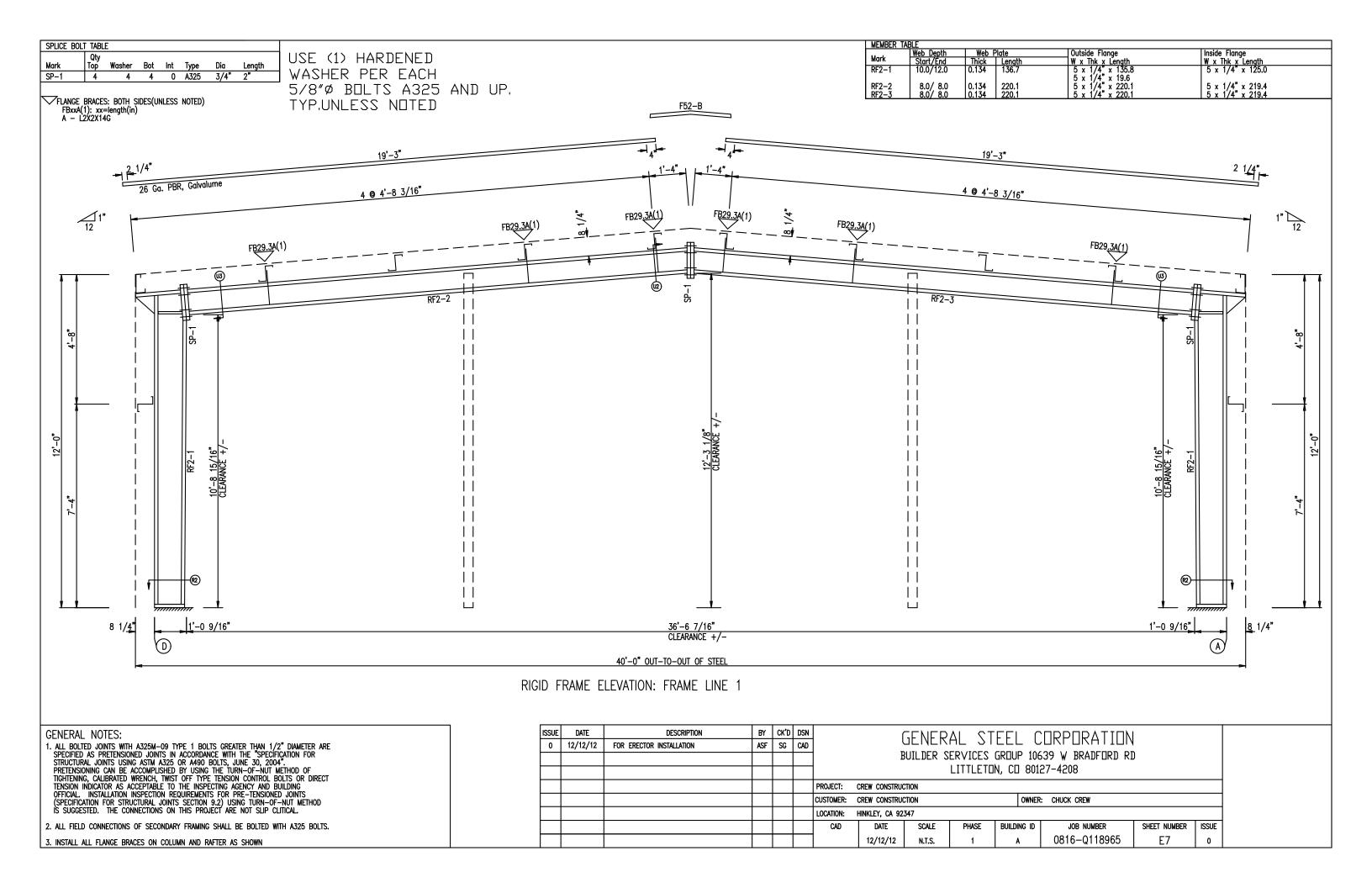


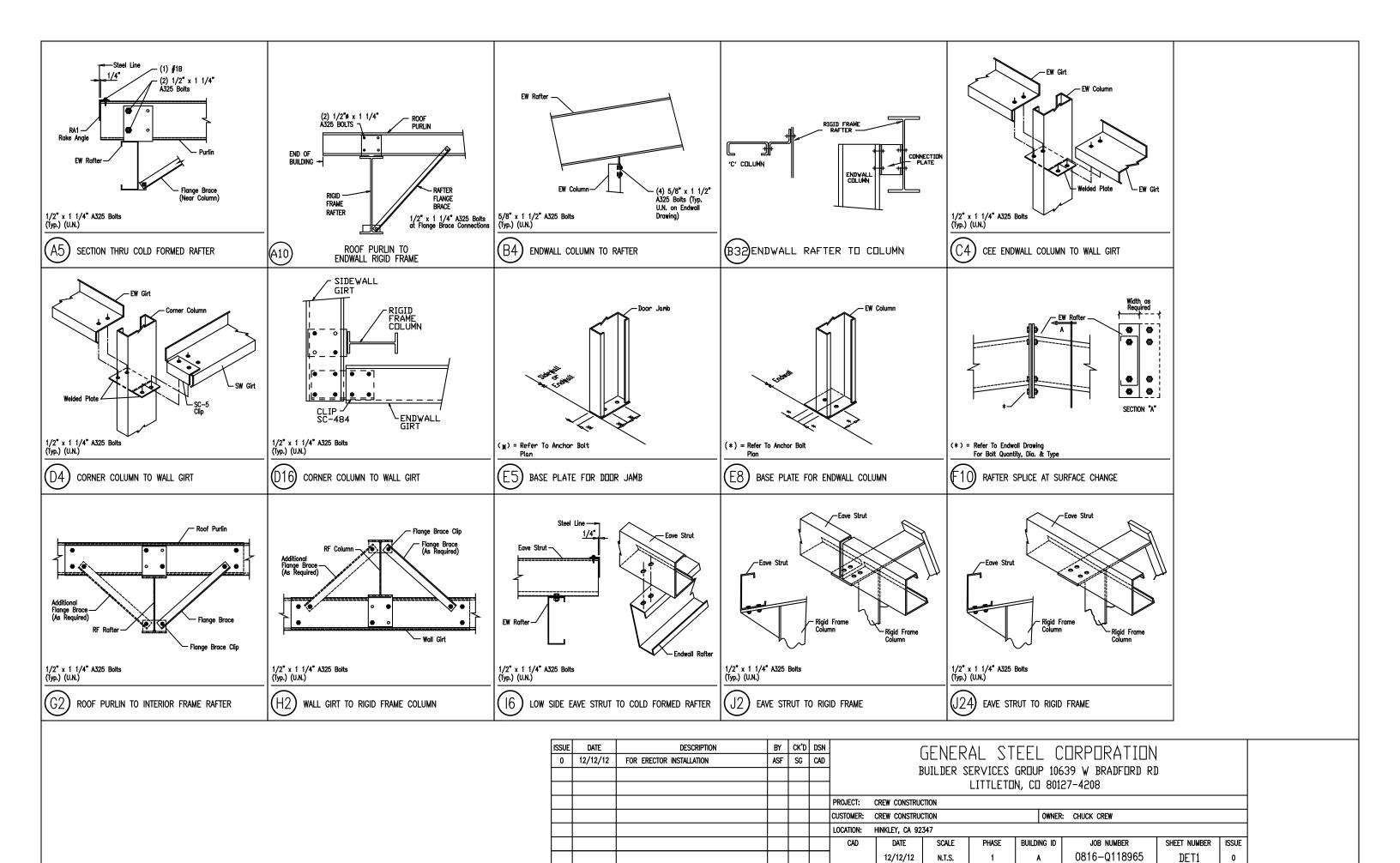


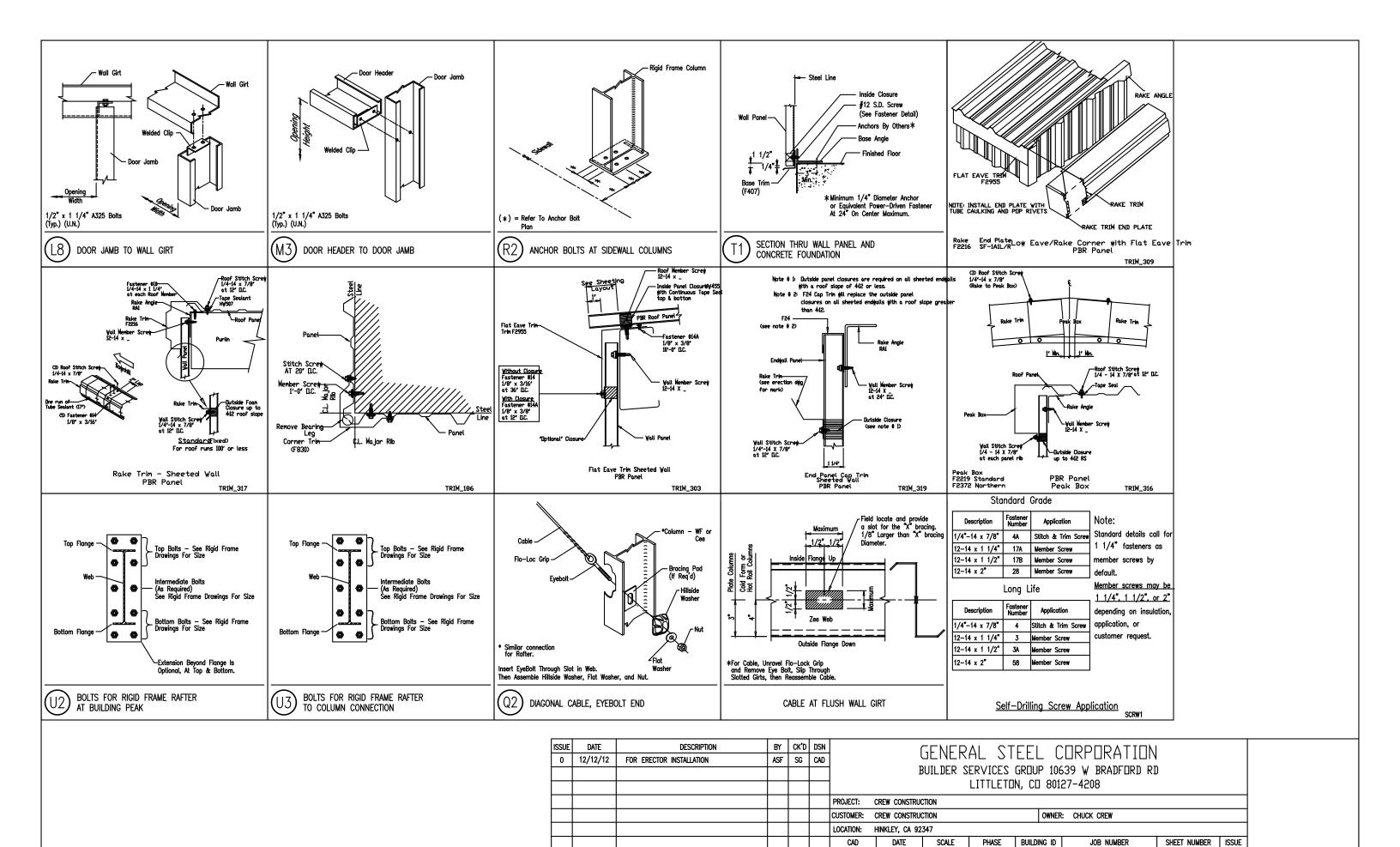










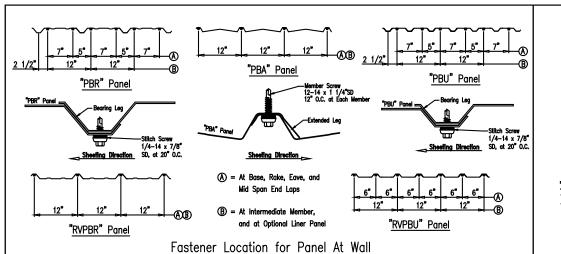


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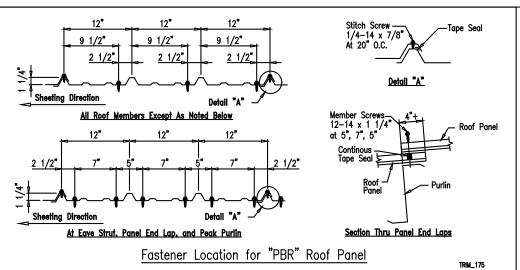
DET2

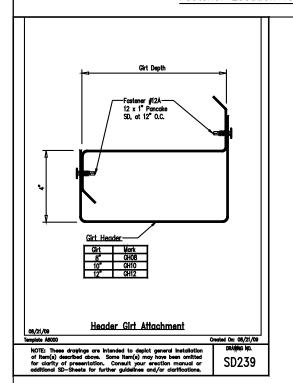
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TRIM_174





ISSUE	DATE	DESCRIPTION	BY	CK,D	DSN		GENERAL STEEL CORPORATION								
0	12/12/12	FOR ERECTOR INSTALLATION	ASF	SG	CAD		·								
							BUILDER SERVICES GROUP 10639 W BRADFORD RD								
							LITTLETON, CO 80127-4208								
						PROJECT:	ROJECT: CREW CONSTRUCTION								
						CUSTOMER:	CUSTOMER: CREW CONSTRUCTION OWNER: CHUCK CREW								
						LOCATION:	OCATION: HINKLEY, CA 92347								
						CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE		
							12/12/12	N.T.S.	1	A	0816-Q118965	DET3	0		

