



EQUIPMENT ANCHORAGE & SEISMIC ENGINEERING

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Chino Hills, CA. 91709

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Sheet 1 of 7

Office of Statewide Health Planning and Development
ANCHORAGE PRE-APPROVAL

OPA-2086-10

THIS PRE- APPROVAL CONFORMS TO THE 2010 CALIFORNIA BUILDING CODE

Equipment Manufacturer: ICW USA INC.

Equipment Type: Double Arm Titan

GENERAL NOTES

1. FORCES PER ASCE 7-05 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3, WHERE $S_{Ds} = 2.0$, $a_p = 2.5$, $I_p = 1.5$ & $R_p = 2.5$, $z/h \leq 1.0$
2. THIS PRE-APPROVAL CONFORMS TO THE 2010 CALIFORNIA BUILDING CODE.
3. THE DETAILS IN THIS PRE-APPROVAL MAY BE USED AT ANY HEIGHT AND AT ANY LOCATION IN THE STATE OF CALIFORNIA, WHERE S_{Ds} IS NOT GREATER THAN 2.0.
4. ALL ANCHOR FORCES SHOWN ON THE DRAWINGS ARE FACTORED LOADS THAT SHALL BE USED FOR STRENGTH DESIGN.
5. SHEET METAL SCREWS SHALL BE TEKS SCREWS BY ITW BUILDEX (ICC ESR-1976).
6. THIS PRE-APPROVAL COVERS ONLY THE ANCHORAGE OF THE UNIT TO THE HOSPITAL BUILDING'S STRUCTURE

RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD OF THE BUILDING

7. DESIGN BACKING BARS, STUDS, ETC. WHICH THE UNITS ARE ATTACHED TO AS NOTED ON THE DRAWINGS.
THE SEOR SHALL ALSO VERIFY THE ADEQUACY OF THE STRUCTURES (SUCH AS WALLS AND FLOORS)
WHICH SUPPORT THE UNITS FOR THE LOADS IMPOSED ON THEM BY THE UNITS AS WELL AS ALL OTHER LOADS.
8. PROVIDE SUPPORTING STRUCTURE REQUIRED TO SUPPORT WEIGHTS AND FORCES SHOWN, IN ADDITION TO ALL OTHER LOADS.
9. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2010 CBC AND WITH THE DETAILS SHOWN IN THIS PRE-APPROVAL.
VERIFY THAT THE ACTUAL EQUIPMENT'S WEIGHT, CG LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS AND THE MATERIAL AND
GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN ON THE PRE-APPROVAL DOCUMENTS.
10. VERIFY THAT THE COMBINATION OF S_{Ds} & z/h RESULT IN SEISMIC FORCES (E_h , E_v) THAT ARE NOT GREATER
THAN THE VALUES ON THE DETAILS.



A P P R O V E D	
Fixed Equipment Anchorage	
Office of Statewide Health Planning and Development	
	OPA-2086-10
Pre-approval Program Manager: Anthony R. Pike (916) 440-8478	
	
Reviewed By: BILL STAEHLIN	11/5/12

ICW USA INC.

DOUBLE ARM TITAN

DES. **J. ROBERSON**

JOB NO. **11-1178**

DATE **11/1/12**

SHEET

2

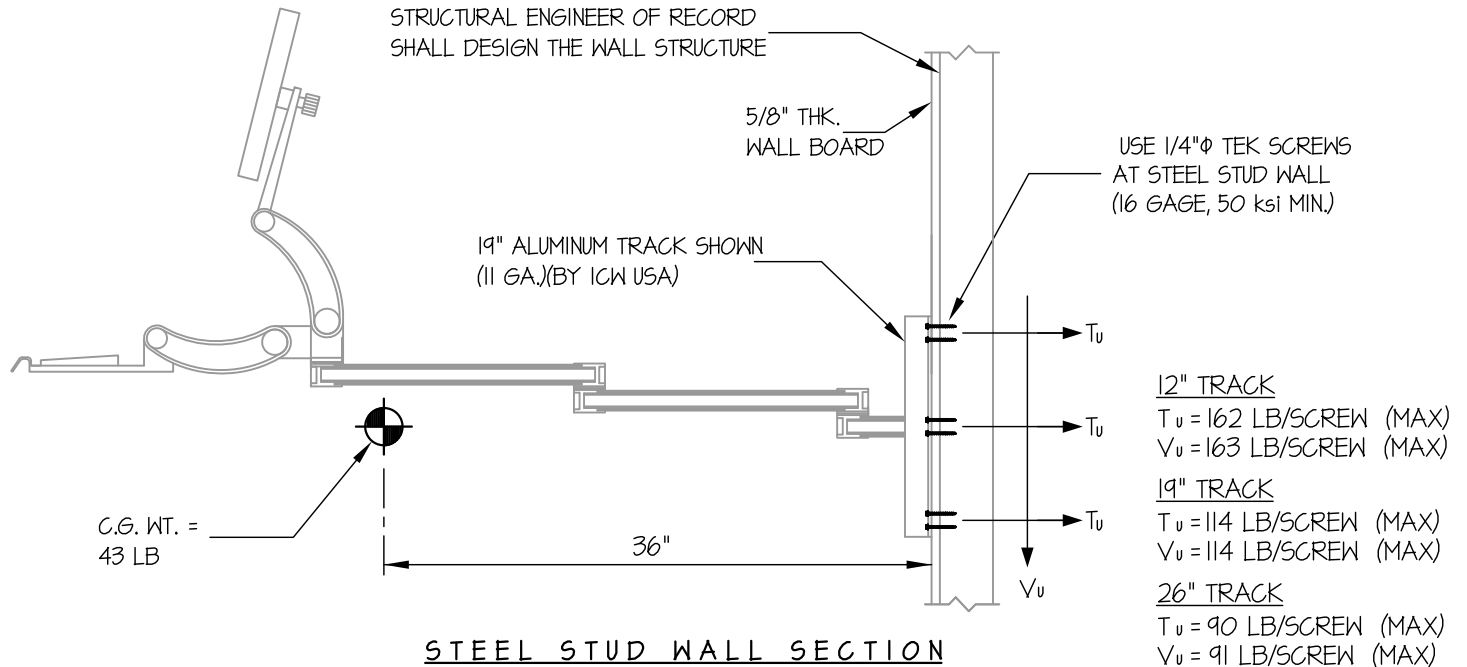
OF

7

SHEETS

SEISMIC ANCHORAGE

WALL MOUNTED



NOTES:

- ANCHORAGE DESIGN PER 2010 CALIFORNIA BUILDING CODE AND ASCE 7-05. ULTIMATE STRENGTH DESIGN IS USED.

HORIZONTAL FORCE (E_H) = $3.60 W_p$ ($S_{DS} = 2.00$, $a_p = 2.5$, $I_p = 1.5$, $R_p = 2.5$, $z/h \leq 1.0$)

VERTICAL FORCE (E_v) = $0.40 W_p$

- CENTER OF GRAVITY (C.G.) WEIGHT IS A MAXIMUM. THIS PRE-APPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
- STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING SHALL PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN, IN ADDITION TO ALL OTHER LOADS.
- SEE GENERAL NOTES: SHEET 1



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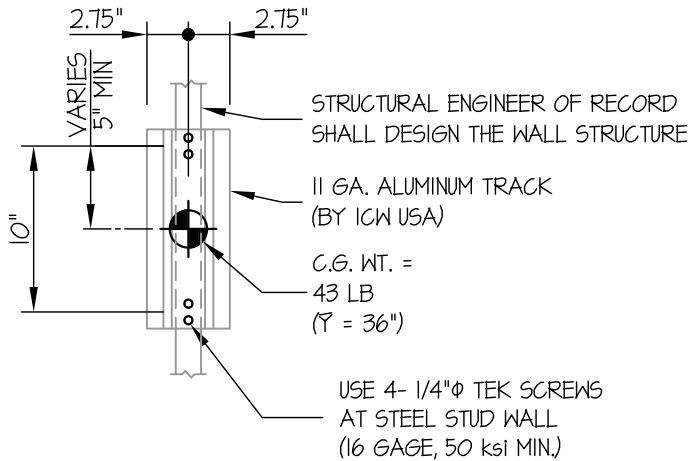
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OF **7** SHEETS

SEISMIC ANCHORAGE

12" TRACK

WALL MOUNTED



2 x STUDS OR 4 x BLKG (DOUGLAS-FIR LARCH NUMBER 2 MIN.)

(DESIGNED BY STRUCTURAL ENGINEER OF RECORD)

USE 4- 1/4" Φ X 4" LAG SCREWS TO WOOD STUD OR BLKG. (PRE-DRILL HOLES TO 70% SHANK DIAMETER)

5/8" THK. WALL BOARD

WOOD STUD WALL SECTION

ELEVATION AT WALL PLATE



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SHEET

4

OF

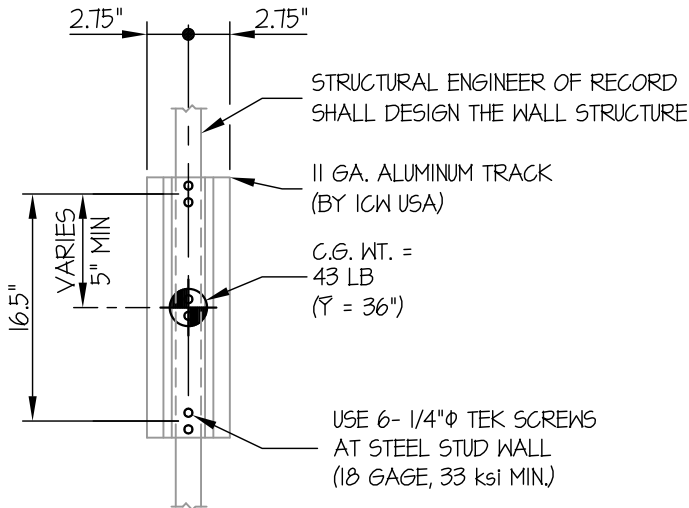
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SHEETS

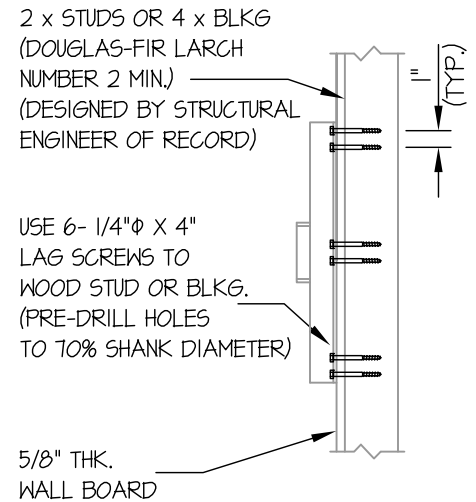
SEISMIC ANCHORAGE

19" TRACK

WALL MOUNTED



ELEVATION AT WALL PLATE



WOOD STUD WALL SECTION



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Fixed Equipment Anchorage
Office of Statewide Health Planning and Development



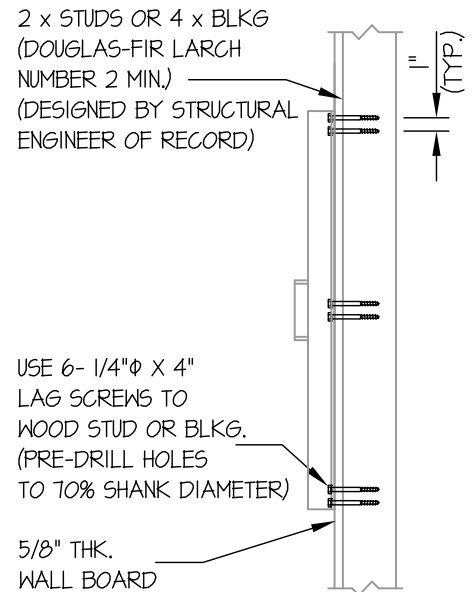
OPA-2086-10

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WALL MOUNTED



WOOD STUD WALL SECTION



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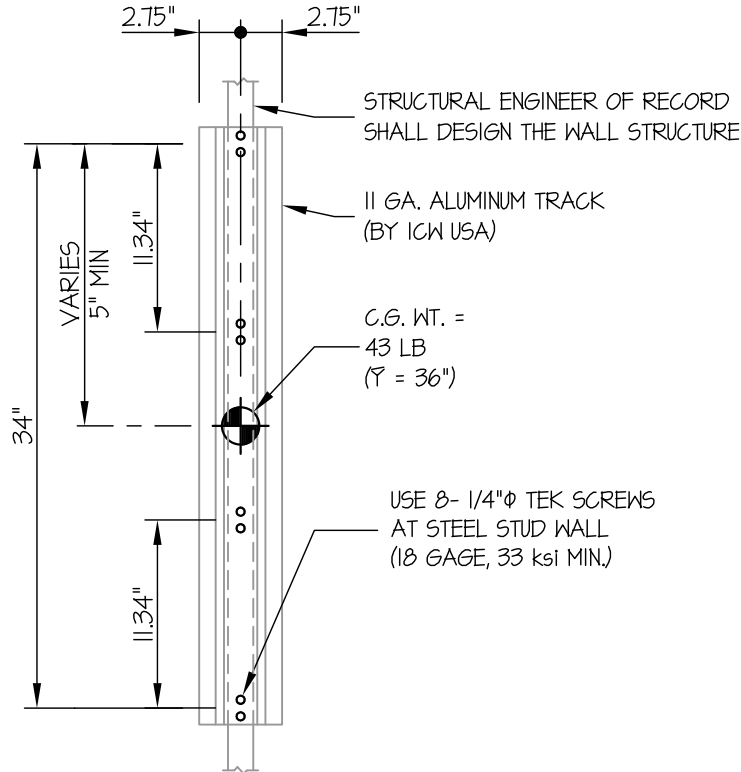
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OF **7** SHEETS

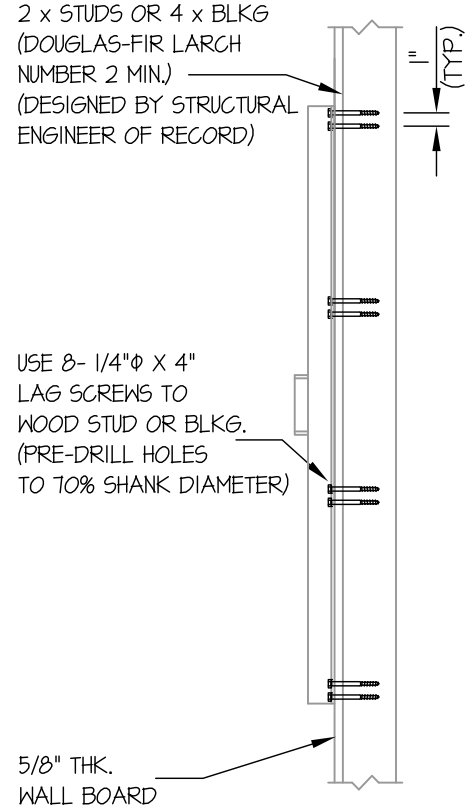
SEISMIC ANCHORAGE

36" TRACK

WALL MOUNTED



ELEVATION AT WALL PLATE



WOOD STUD WALL SECTION



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