



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD PREAPPROVAL
OF MANUFACTURER'S CERTIFICATION (OPM)

OFFICE USE ONLY
APPLICATION #: OPM-0165-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: [] New [X] Renewal [] Update to Pre-CBC 2013 OPA Number:

Manufacturer Information

Manufacturer: GCX Corporation

Manufacturer's Technical Representative: Rob Glaser

Mailing Address: 3875 Cypress Drive, Petaluma, CA. 94954-5635

Telephone: (800) 228-2555 Email: rglaser@gcx.com

Product Information

Product Name: GCX Wall Mount with M & VHM Arms

Product Type: Cantilever

Product Model Number: 13", 19", 25", 31", 37" & 49" Wall Channels w/M, VHM & VHM25 Arms

General Description: Wall Mounted Monitor and Keyboard Support

Applicant Information

Applicant Company Name: EASE Co.

Contact Person: Jonathan Roberson, S.E.

Mailing Address: 5877 Pine Ave. Suite 210, Chino Hills, CA. 91709

Telephone: (909) 606-7622 Email: J.Roberson@EASECo.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant: [Signature] Date: 5/3/16

Title: Principal Engineer Company Name: EASE Co.

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

Registered Design Professional Preparing Engineering Recommendations

Company Name: EASE Co.
Name: Jonathan Roberson, S.E. California License Number: S4197
Mailing Address: 5877 Pine Ave. Suite 210, Chino Hills, CA. 91709
Telephone: 909-606-7622 Email: J.Roberson@EASECo.com

OSHPD Special Seismic Certification Preapproval (OSP)

- Special Seismic Certification is preapproved under OSP-
(Separate application for OSP is required)
- Special Seismic Certification is not preapproved

Certification Method(s)

- Testing in accordance with: ICC-ES AC156 FM 1950-16
- Other* (Please Specify): _____

*Use of criteria other than those adopted by the California Building Standards Code, 2016 (CBSC 2016) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2016 may be used when approved by OSHPD prior to testing.

- Analysis
- Experience Data
- Combination of Testing, Analysis, and/or Experience Data (Please Specify): _____

List of Attachments Supporting the Manufacturer's Certification

- Test Report Drawings Calculations Manufacturer's Catalog
- Other(s) (Please Specify): _____

OFFICE USE ONLY – OSHPD APPROVAL VALID FOR CBC 2016 & ALL PRE-2016 CODE BASED PROJECTS

Signature: *J Enzler* Date: 01-31-2017
Print Name: Jeffrey Enzler
Title: DSE
Condition of Approval (if applicable): _____

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





**EQUIPMENT ANCHORAGE
& SEISMIC ENGINEERING**

5877 Pine Ave, Ste. 210
Chino Hills, CA. 91709
Phn: (909) 606-7622

Office of Statewide Health Planning and Development
PREAPPROVAL OF MANUFACTURER'S CERTIFICATION
OPM-0165-13

THIS PREAPPROVAL CONFORMS TO THE 2016 CALIFORNIA BUILDING CODE

MANUFACTURER: **GCX CORPORATION**
EQUIPMENT NAME: **GCX WALL MOUNT with M & VHM ARMS**

Sheet: 1 of 9
Date: 11/23/16

GENERAL NOTES

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2016 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2016 CBC
2. THIS DOCUMENT MAY ONLY BE USED WITH THE EXPRESS WRITTEN CONSENT OF THE MANUFACTURER LISTED ABOVE FOR THE SPECIFIC PROJECT SITE AND INSTALLATION LOCATION. THIS DOCUMENT IS INVALID WITHOUT SUCH CONSENT.
3. THIS PREAPPROVAL CONFORMS TO THE 2016 CALIFORNIA BUILDING CODE.
4. FORCES PER ASCE 7-10 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3, WHERE $S_{Ds} = 2.20$, $a_p = 2.5$, $I_p = 1.5$, $R_p = 2.5$, $z/h \leq 1$.
5. THE DETAILS IN THIS PREAPPROVAL MAY BE USED AT ANY LOCATION IN THE STATE OF CALIFORNIA, WHERE S_{Ds} IS NOT GREATER THAN 2.20.
6. ALL DESIGN FORCES SHOWN ON THE DRAWINGS ARE FACTORED LOADS THAT SHALL BE USED FOR STRENGTH DESIGN.
7. SHEET METAL SCREWS SHALL BE TEKS SCREWS BY ITW BUILDEX (ICC ESR-1976).
8. THIS PREAPPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.
9. RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD OF THE BUILDING
 - A. PROVIDE SUPPORTING STRUCTURE REQUIRED TO SUPPORT WEIGHTS AND FORCES SHOWN, IN ADDITION TO ALL OTHER LOADS.
 - B. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2016 CBC AND WITH THE DETAILS SHOWN IN THIS PREAPPROVAL. 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 PREAPPROVAL DOCUMENTS.
 - C. 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.
 - D. DESIGN BACKING PLATE, BLOCKING, STUDS, ETC. WHICH THE UNITS ARE ATTACHED TO AS NOTED ON THE DRAWINGS.



GCX CORPORATION

DES. **J. ROBERSON**

SHEET

2

JOB NO. **11-1441**

GCX WALL MOUNT with M & VHM ARMS

DATE **11/23/16**

OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED

MAX MONITOR WEIGHT:

- 55 LB MONITOR ON M-SERIES ARMS
- 40 LB MONITOR ON VHM, VHM-P, VHM-PL ARMS
- 20 LB MONITOR ON VHM25 ARMS

MOUNTING BRACKET
WT. = 5# (MAX)

C.G. WT. = 74 LB (MAX)
(INCLUDES ALL COMPONENTS)

KEYBOARD/MOUSE
WT. = 3# (MAX)

17.76"
M SERIES ARMS
& VHM ARMS

CHANNEL
WT. = 3# (MAX)

USE #10 S.M. SCREWS
TO STEEL STUD WALL
(16 GAGE, 50 ksi MIN.)
OR #10 WOOD SCREWS
W/ 3" EMBED. (MIN) INTO
WOOD BACKING
(SEE SHEET 4-9 OF 9)

TOTAL W.T. W/O ARTICULATING
ARMS OR EXTENSION
M SERIES ARMS 8# MAX.
VHM, VHM-P, VHM-PL ARMS 8# MAX.
VHM25 ARMS 8# MAX.

5/8" THK.
WALL BOARD

STRUCTURAL ENGINEER OF
RECORD SHALL DESIGN
THE WALL STRUCTURE

STEEL STUD WALL SECTION
(13" TRACK SHOWN)

NOTES:

1. FORCES ARE DETERMINED PER 2016 CALIFORNIA BUILDING CODE AND ASCE 7-10.

STRENGTH DESIGN IS USED. ($S_{bs} = 2.20$, $a_p = 2.5$, $l_p = 1.5$, $R_p = 2.5$, $z/h \leq 1$)

$$\text{HORIZONTAL FORCE } (E_h) = 3.96 W_p$$

$$\text{VERTICAL FORCE } (E_v) = 0.44 W_p$$

2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
3. STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING SHALL PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.
4. SEE GENERAL NOTES: SHEET 1



GCX CORPORATION

DES. **J. ROBERSON**

SHEET

3

JOB NO. **11-1441**

GCX WALL MOUNT with M & VHM ARMS

DATE **11/23/16**

OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

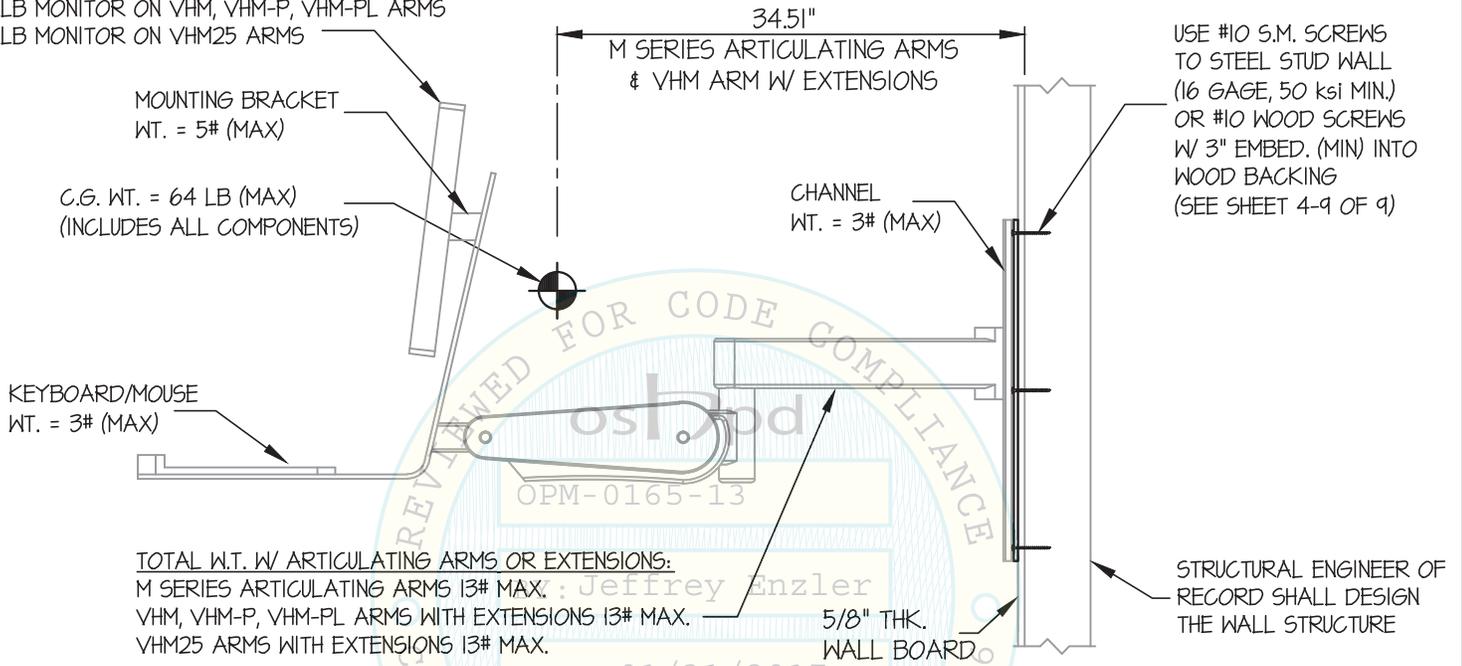
WALL MOUNTED

MAX MONITOR WEIGHT:

25 LB MONITOR ON M-SERIES ARMS

40 LB MONITOR ON VHM, VHM-P, VHM-PL ARMS

20 LB MONITOR ON VHM25 ARMS



TOTAL W.T. W/ ARTICULATING ARMS OR EXTENSIONS:

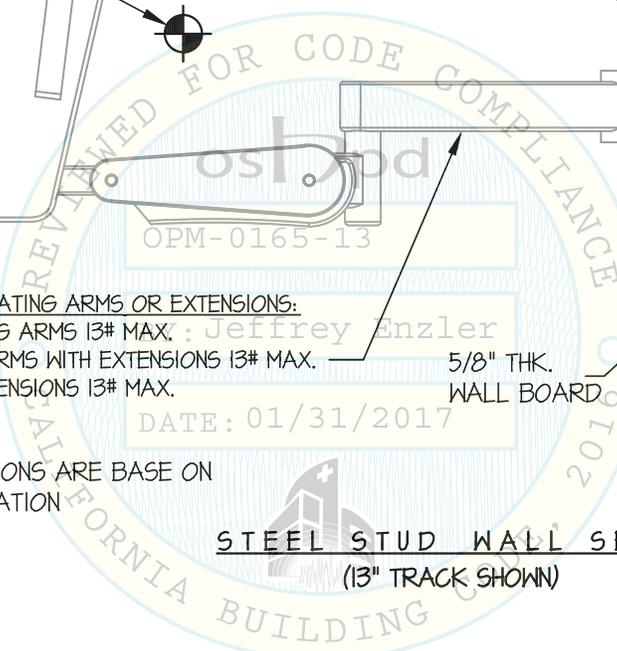
M SERIES ARTICULATING ARMS 13# MAX.

VHM, VHM-P, VHM-PL ARMS WITH EXTENSIONS 13# MAX.

VHM25 ARMS WITH EXTENSIONS 13# MAX.

NOTE: ALL CALCULATIONS ARE BASE ON THIS CONFIGURATION

STEEL STUD WALL SECTION
(13" TRACK SHOWN)



GCX CORPORATION

GCX WALL MOUNT with M & VHM ARMS

DES. **J. ROBERSON**

JOB NO. **11-1441**

DATE **11/23/16**

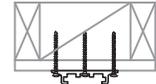
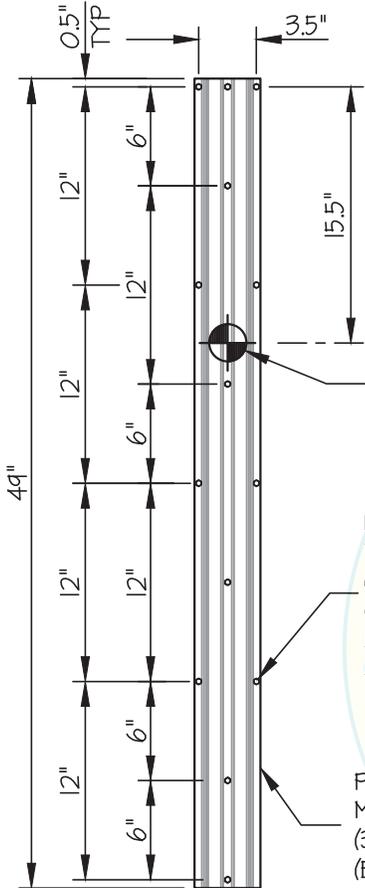
SHEET

4

OF **9** SHEETS

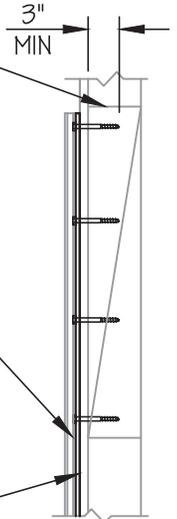
SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



BLKG SECTION

VERTICAL 4 x 6 BLKG MIN
(DOUGLAS-FIR LARCH
NUMBER 2 MIN.)
(DESIGNED BY STRUCTURAL
ENGINEER OF RECORD)



USE 14- #10 X 4" FLAT HEAD
WOOD SCREWS TO
WOOD STUD
(PRE-DRILL PILOT HOLES)

C.G. WT. = 64 LB (MAX)
(\bar{X} = 34.5")
(WEIGHT BASED ON
CHANNEL/MOUNTING BRACKET
MONITOR/ARM & KEYBOARD/MOUSE)

USE 14- #10 S.M. SCREWS
TO STEEL STUD WALL 165-13
(16 GAGE, 50 ksi MIN.)
OR 14- #10 WOOD SCREWS
W/ 3" EMBED. (MIN) INTO
WOOD BACKING

5/8" THK.
WALL BOARD

NOTE:
MIN EDGE DISTANCE = 3/4"
MIN END DISTANCE = 2"

DATE: 01/31/2017

WOOD STUD WALL SECTION

PRE-MANUFACTURED
MOUNTING BRACKET/ TRACK
(3/16" THK. 6061 ALLOY
BY GCX CORPORATION)

Tu = 57 LB/SCREW (MAX)
Vu = 21 LB/SCREW (MAX)

ELEVATION AT 49" TRACK



GCX CORPORATION

DES. J. ROBERSON

SHEET

5

JOB NO. 11-1441

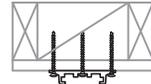
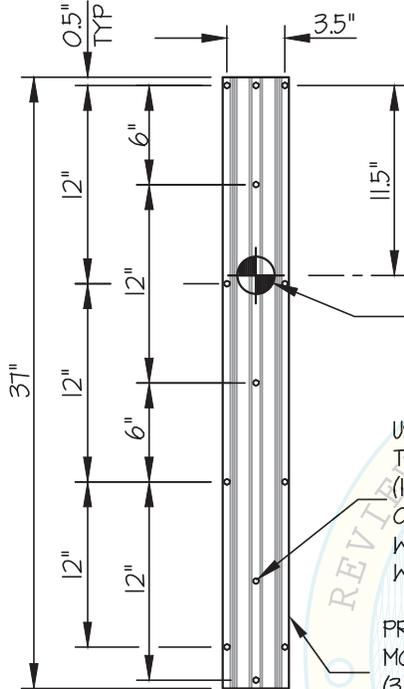
GCX WALL MOUNT with M & VHM ARMS

DATE 11/23/16

OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



BLKG SECTION

C.G. WT. = 64 LB (MAX)
(\bar{X} = 34.5")
(WEIGHT BASED ON
CHANNEL/MOUNTING BRACKET
MONITOR/ARM & KEYBOARD/MOUSE)

USE 13- #10 S.M. SCREWS
TO STEEL STUD WALL
(16 GAGE, 50 ksi MIN.)
OR 13- #10 WOOD SCREWS
W/ 3" EMBED. (MIN) INTO
WOOD BACKING

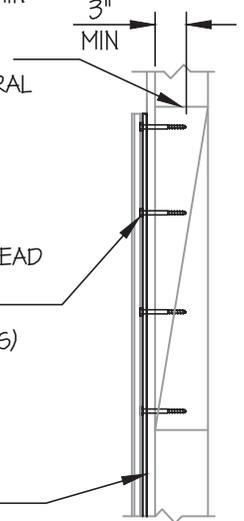
PRE-MANUFACTURED
MOUNTING BRACKET/ TRACK
(3/16" THK. 6061 ALLOY
(BY GCX CORPORATION)

VERTICAL 4 x 6 BLKG MIN
(DOUGLAS-FIR LARCH
NUMBER 2 MIN.)
(DESIGNED BY STRUCTURAL
ENGINEER OF RECORD)

USE 13- #10 X 4" FLAT HEAD
WOOD SCREWS TO
WOOD STUD
(PRE-DRILL PILOT HOLES)

5/8" THK.
WALL BOARD

NOTE:
MIN EDGE DISTANCE = 3/4"
MIN END DISTANCE = 2"



ELEVATION AT 31" TRACK

WOOD STUD WALL SECTION

$T_u = 70$ LB/SCREW (MAX)
 $V_u = 22$ LB/SCREW (MAX)



GCX CORPORATION

DES. **J. ROBERSON**

SHEET

6

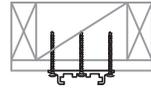
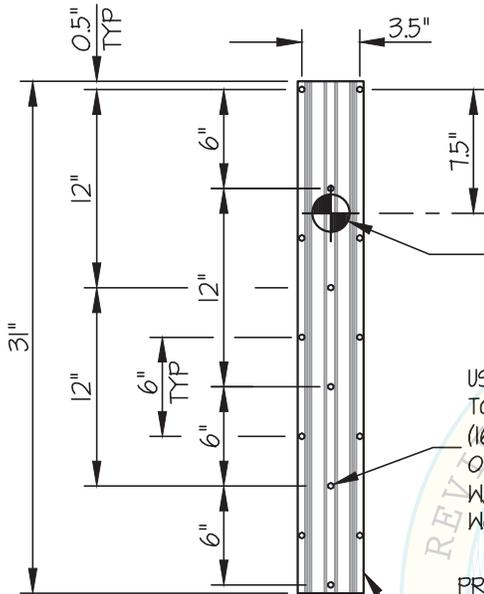
JOB NO. **11-1441**

GCX WALL MOUNT with M & VHM ARMS

DATE **11/23/16**

OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS



BLKG SECTION

C.G. WT. = 64 LB (MAX)
 (X̄ = 34.51")
 (WEIGHT BASED ON
 CHANNEL/MOUNTING BRACKET
 MONITOR/ARM & KEYBOARD/MOUSE)

USE 15- #10 S.M. SCREWS
 TO STEEL STUD WALL
 (16 GAGE, 50 ksi MIN.)
 OR 15- #10 WOOD SCREWS
 W/ 3" EMBED. (MIN) INTO
 WOOD BACKING

PRE-MANUFACTURED
 MOUNTING BRACKET/ TRACK
 (3/16" THK. 6061 ALLOY
 (BY GCX CORPORATION)

ELEVATION AT 31" TRACK

VERTICAL 4 x 6 BLKG MIN
 (DOUGLAS-FIR LARCH
 NUMBER 2 MIN.)
 (DESIGNED BY STRUCTURAL
 ENGINEER OF RECORD)

WALL MOUNTED

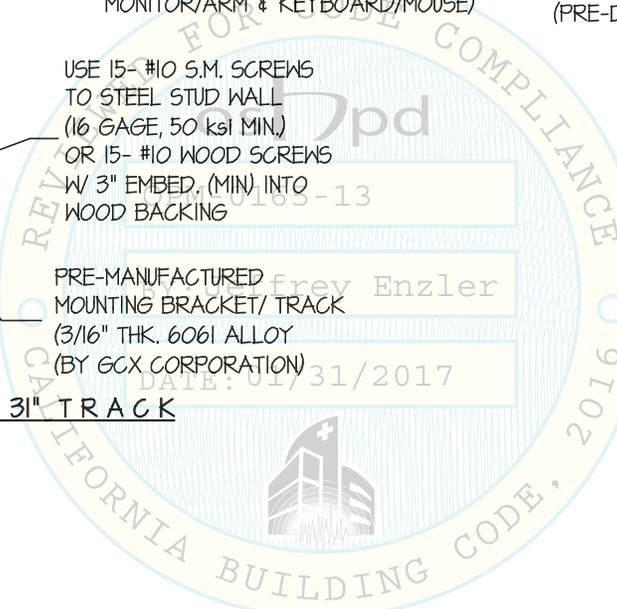
USE 15- #10 X 4" FLAT HEAD
 WOOD SCREWS TO
 WOOD STUD
 (PRE-DRILL PILOT HOLES)

5/8" THK.
 WALL BOARD

NOTE:
 MIN EDGE DISTANCE = 3/4"
 MIN END DISTANCE = 2"

WOOD STUD WALL SECTION

T_u = 77 LB/SCREW (MAX)
 V_u = 19 LB/SCREW (MAX)



GCX CORPORATION

DES. **J. ROBERSON**

SHEET

7

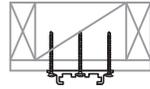
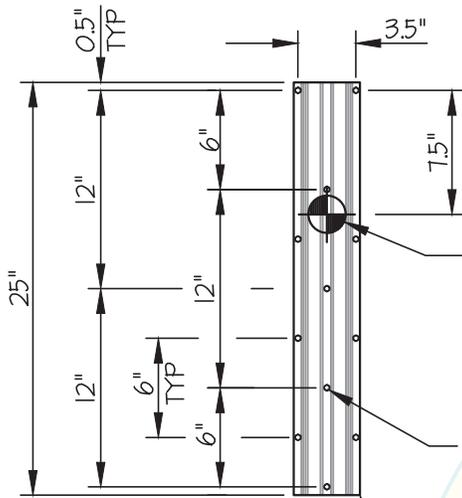
JOB NO. **11-1441**

GCX WALL MOUNT with M & VHM ARMS

DATE **11/23/16**

OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS



BLKG SECTION

C.G. WT. = 64 LB (MAX)
 (\bar{X} = 34.51")
 (WEIGHT BASED ON
 CHANNEL/MOUNTING BRACKET
 MONITOR/ARM & KEYBOARD/MOUSE)

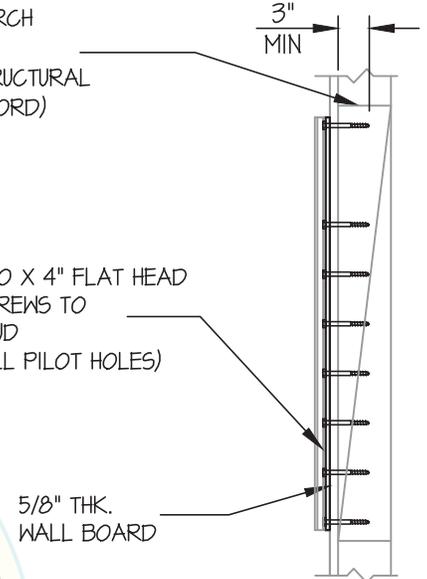
USE 12- #10 S.M. SCREWS
 TO STEEL STUD WALL
 (16 GAGE, 50 ksi MIN.)
 OR 12- #10 WOOD SCREWS
 W/ 3" EMBED. (MIN) INTO
 WOOD BACKING

PRE-MANUFACTURED
 MOUNTING BRACKET/ TRACK
 (3/16" THK. 6061 ALLOY
 (BY GCX CORPORATION)

ELEVATION AT 25" TRACK

VERTICAL 4 x 6 BLKG MIN
 (DOUGLAS-FIR LARCH
 NUMBER 2 MIN.)
 (DESIGNED BY STRUCTURAL
 ENGINEER OF RECORD)

WALL MOUNTED



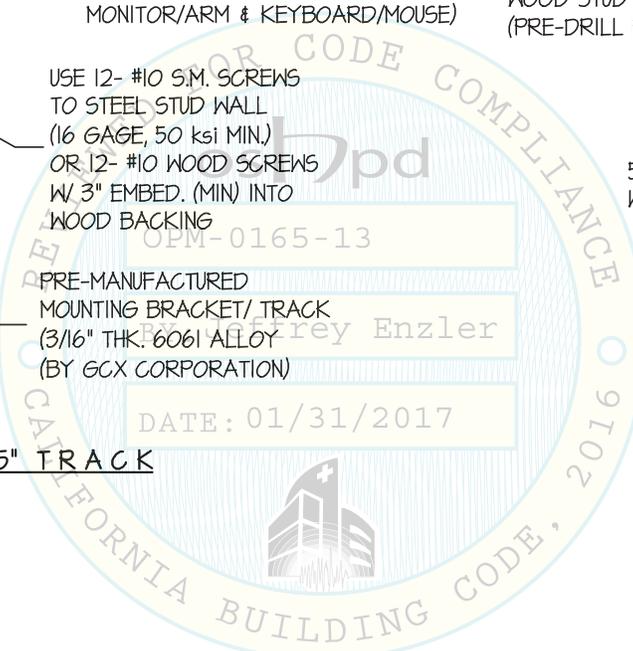
USE 12- #10 X 4" FLAT HEAD
 WOOD SCREWS TO
 WOOD STUD
 (PRE-DRILL PILOT HOLES)

5/8" THK.
 WALL BOARD

NOTE:
 MIN EDGE DISTANCE = 3/4"
 MIN END DISTANCE = 2"

WOOD STUD WALL SECTION

T_u = 96 LB/SCREW (MAX)
 V_u = 23 LB/SCREW (MAX)



GCX CORPORATION

GCX WALL MOUNT with M & VHM ARMS

DES. **J. ROBERSON**

JOB NO. **11-1441**

DATE **11/23/16**

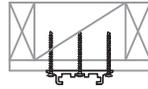
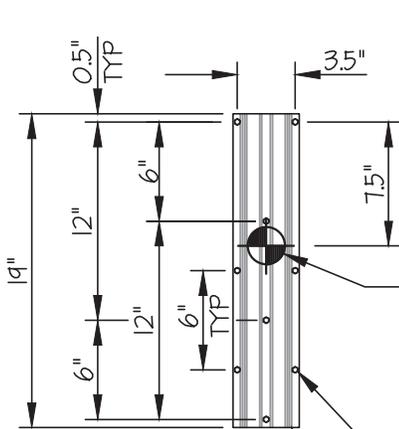
SHEET

8

OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



BLKG SECTION

C.G. WT. = 64 LB (MAX)
 $(\bar{X} = 34.51")$
 (WEIGHT BASED ON CHANNEL/MOUNTING BRACKET MONITOR/ARM & KEYBOARD/MOUSE)

USE 9- #10 S.M. SCREWS TO STEEL STUD WALL (16 GAGE, 50 ksi MIN.) OR 9- #10 WOOD SCREWS W/ 3" EMBED. (MIN) INTO WOOD BACKING

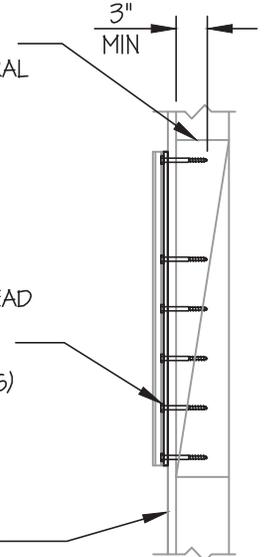
PRE-MANUFACTURED MOUNTING BRACKET/ TRACK (3/16" THK. 6061 ALLOY (BY GCX CORPORATION)

ELEVATION AT 19" TRACK

VERTICAL 4 x 6 BLKG MIN (DOUGLAS-FIR LARCH NUMBER 2 MIN.) (DESIGNED BY STRUCTURAL ENGINEER OF RECORD)

USE 9- #10 X 4" FLAT HEAD WOOD SCREWS TO WOOD STUD (PRE-DRILL PILOT HOLES)

5/8" THK. WALL BOARD



NOTE:
 MIN EDGE DISTANCE = 3/4"
 MIN END DISTANCE = 2"

WOOD STUD WALL SECTION

$T_u = 129 \text{ LB/SCREW (MAX)}$

$V_u = 31 \text{ LB/SCREW (MAX)}$



GCX CORPORATION

GCX WALL MOUNT with M & VHM ARMS

DES. **J. ROBERSON**

JOB NO. **11-1441**

DATE **11/23/16**

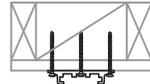
SHEET

9

OF **9** SHEETS

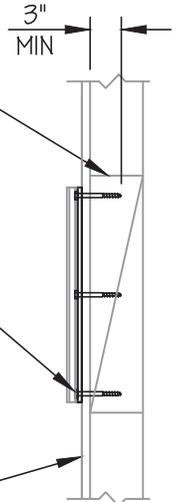
SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



BLKG SECTION

VERTICAL 4 x 6 BLKG MIN
(DOUGLAS-FIR LARCH
NUMBER 2 MIN.)
(DESIGNED BY STRUCTURAL
ENGINEER OF RECORD)

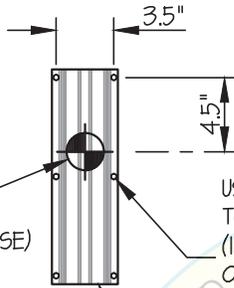


USE 6- #10 X 4" FLAT HEAD
WOOD SCREWS TO
WOOD STUD
(PRE-DRILL PILOT HOLES)

5/8" THK.
WALL BOARD

NOTE:
MIN EDGE DISTANCE = 3/4"
MIN END DISTANCE = 2"

C.G. WT. = 64 LB (MAX)
(\bar{X} = 34.51")
(WEIGHT BASED ON
CHANNEL/MOUNTING BRACKET
MONITOR/ARM & KEYBOARD/MOUSE)



USE 6- #10 S.M. SCREWS
TO STEEL STUD WALL
(16 GAGE, 50 ksi MIN.)
OR 6- #10 WOOD SCREWS
W 3" EMBED. (MIN) INTO
WOOD BACKING

PRE-MANUFACTURED
MOUNTING BRACKET/TRACK
(3/16" THK. 6061 ALLOY
(BY GCX CORPORATION)

BY: Jeffrey Enzler

ELEVATION AT 13" TRACK

DATE: 01/31/2017

WOOD STUD WALL SECTION

T_u = 193 LB/SCREW (MAX)

V_u = 46 LB/SCREW (MAX)

