EASE
EQUIPMENT ANCHORAGE
& SEISMIC ENGINEERING

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Office of Statewide Health Planning and Development

PREAPPROVAL OF MANUFACTURER'S CERTIFICATION

OPM-0164-13

THIS PREAPPROVAL CONFORMS TO THE 2013 CALIFORNIA BUILDING CODE

MANUFACTURER: **GCX CORPORATION**

EQUIPMENT NAME: **GCX VHC W/ HORIZONTAL RAILS**

Date: 12/16/14

GENERAL NOTES

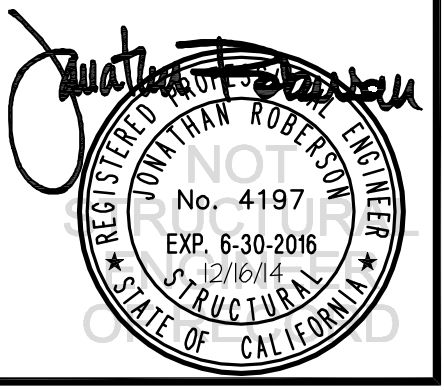
1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2013 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2013 CBC
2. THIS DOCUMENT MAY ONLY BE USED WITH THE EXPRESS WRITTEN CONSENT OF THE MANUFACTURER LISTED ABOVE FOR THE SPECIFIC PROJECT SITE AND INSTALLATION LOCATION. THIS DOCUMENT IS INVALID WITHOUT SUCH CONSENT.
3. THIS PREAPPROVAL CONFORMS TO THE 2013 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} = 2.00, 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 SDS IS NOT GREATER THAN 2.00.
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 2013 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 BARS, STUDS, ETC. WHICH THE UNITS ARE ATTACHED TO AS NOTED ON THE DRAWINGS.



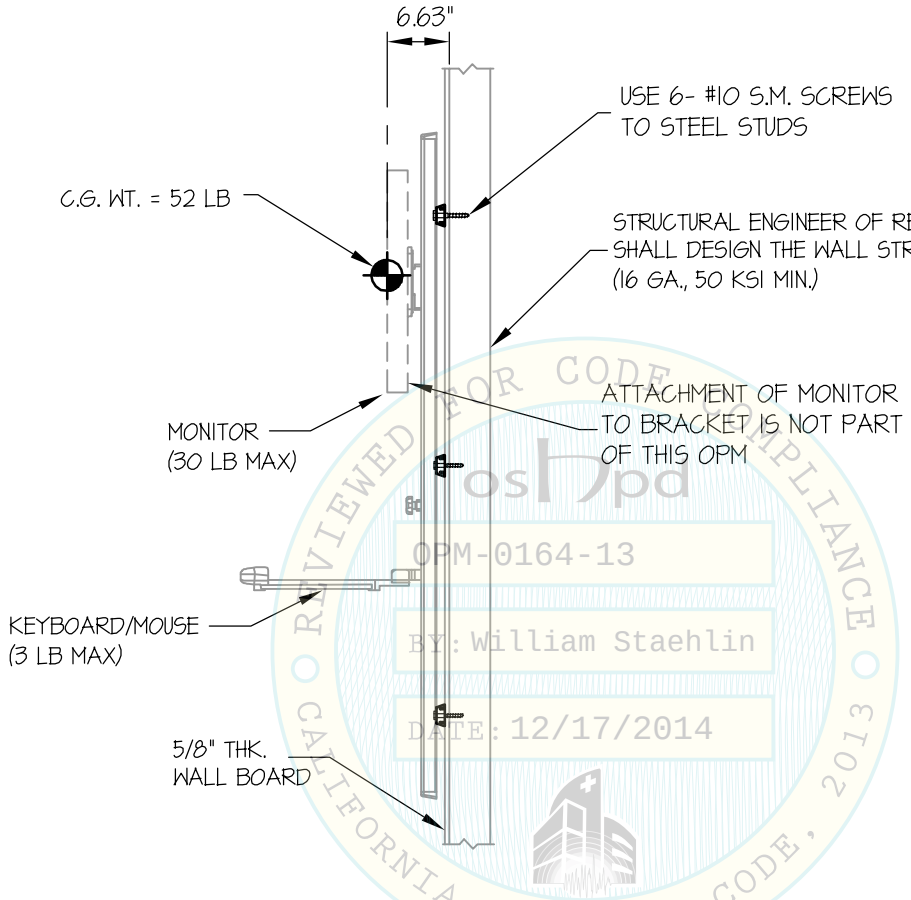
GCX CORPORATION

GCX VHC W/ HORIZONTAL RAILS

DES.	J. ROBERSON
JOB NO.	11-1441
DATE	12/16/14

SHEET 2 OF 6 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — WALL MOUNTED



NOTE: THIS DETAIL APPLIES TO METAL STUD FRAMING REFER TO SHEET 4 & 6 OF 6 FOR WOOD STUD FRAMING

STEEL STUD WALL SECTION

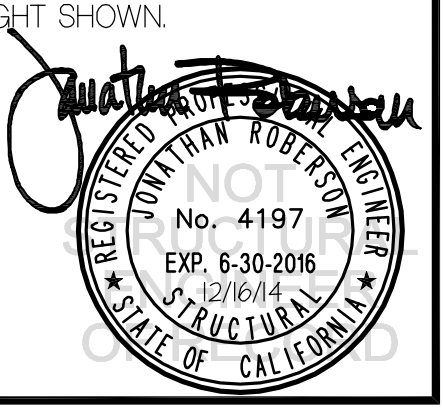
NOTES:

1. FORCES ARE DETERMINED PER 2013 CALIFORNIA BUILDING CODE AND ASCE 7-10 STRENGTH DESIGN IS USED. (S_{DS} = 2.00, a_p = 2.5, I_p = 1.5, R_p = 2.5, $z/h \leq 1$)

   HORIZONTAL FORCE (E_h) = 3.60 W_p
   VERTICAL FORCE (E_v) = 0.40 W_p

2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASS 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.



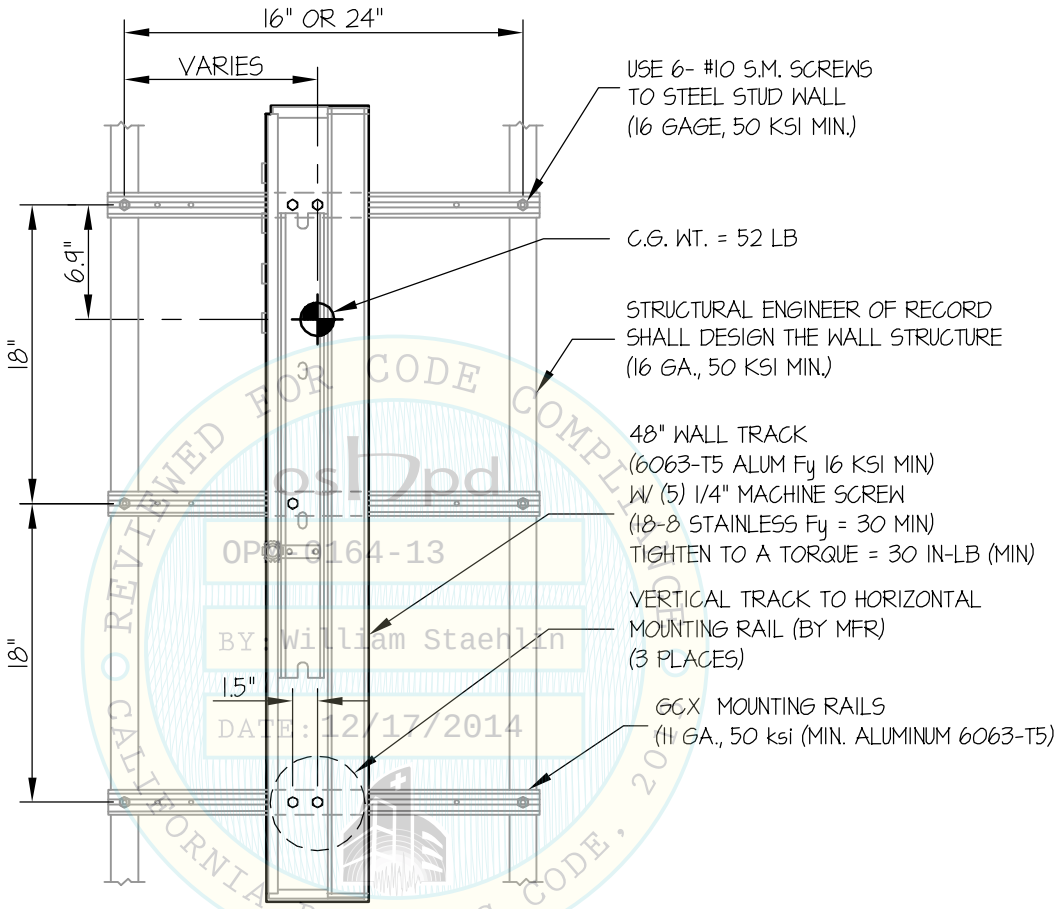
GCX CORPORATION

GCX VHC W/ HORIZONTAL RAILS

DES.	J. ROBERSON
JOB NO.	11-1441
DATE	12/16/14

SHEET 3 OF 6 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — 48" TRACK — WALL MOUNTED



ELEVATION AT WALL PLATE
(CHANNEL TO RAILS)

T_u = 379 LB/SCREW (MAX)
V_u = 95 LB/SCREW (MAX)

GCX CORPORATION

GCX VHC W/ HORIZONTAL RAILS

DES.	J. ROBERSON
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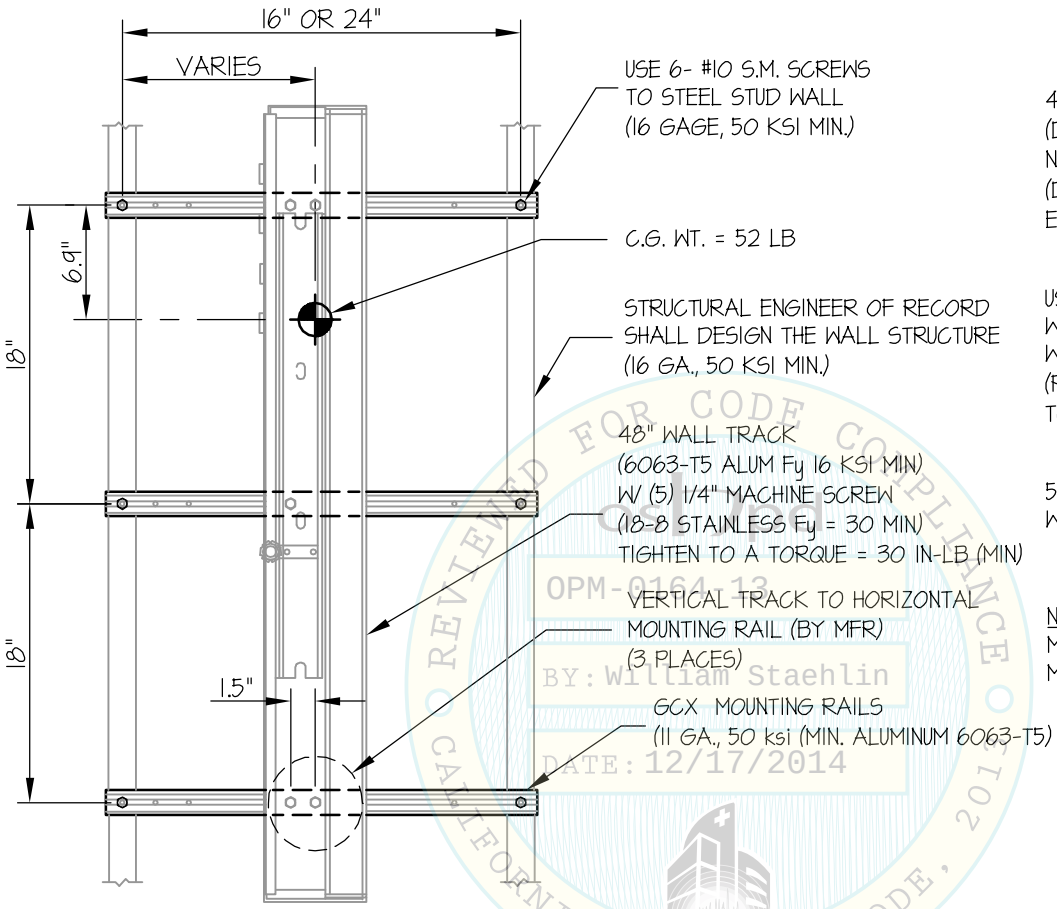
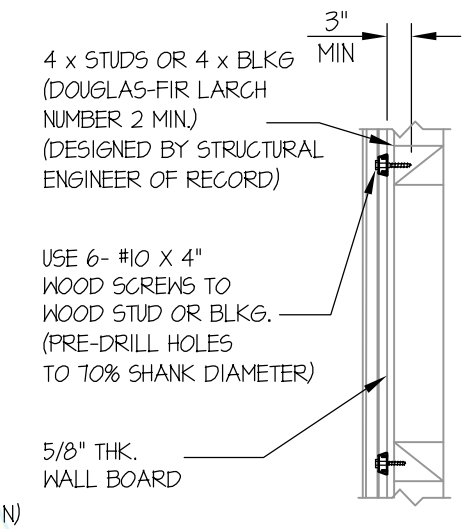
SHEET 4 OF 6 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — 48" TRACK — WALL MOUNTED



ELEVATION AT WALL PLATE
(RAILS TO WALL)



NOTE:
MIN EDGE DISTANCE = 1"
MIN END DISTANCE = 2"

WOOD STUD WALL SECTION

T_u = 134 LB/SCREW (MAX)
V_u = 98 LB/SCREW (MAX)

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2016
12/16/14
STRUCTURAL
STATE OF CALIFORNIA

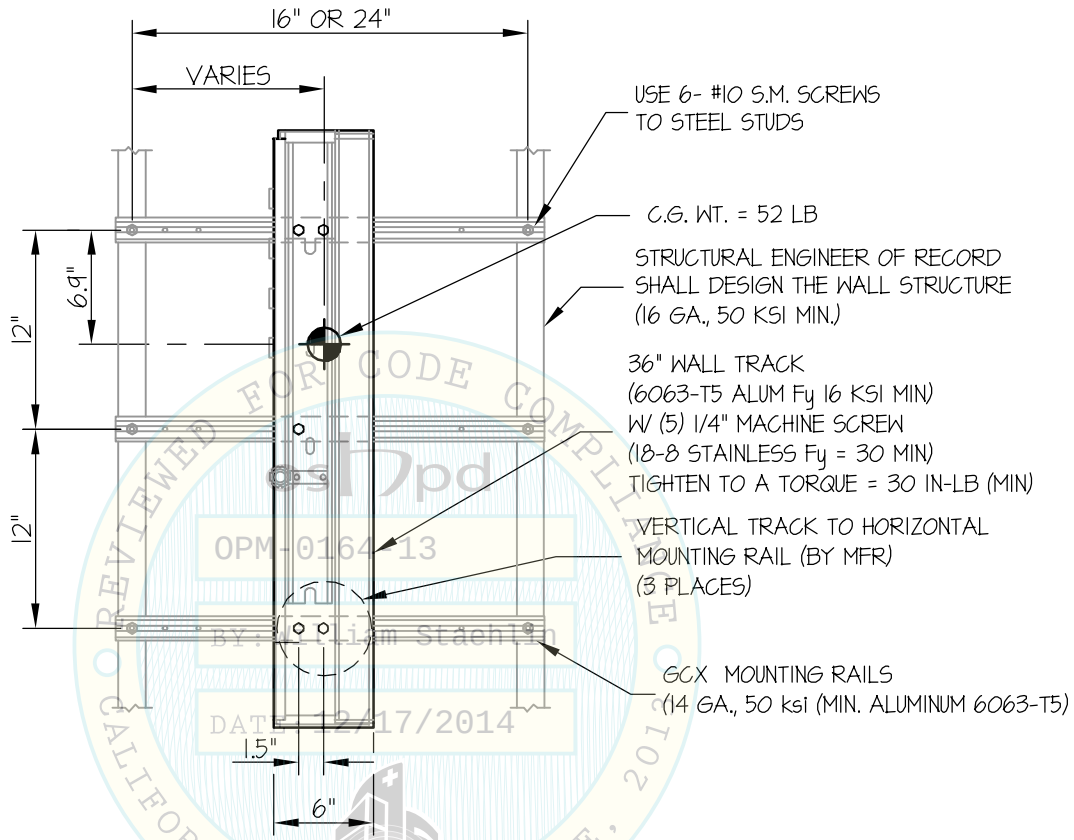
GCX CORPORATION

GCX VHC W/ HORIZONTAL RAILS

DES.	J. ROBERSON
JOB NO.	11-1441
DATE	12/16/14

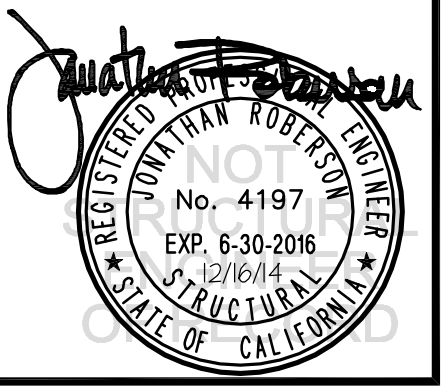
SHEET 5 OF 6 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS | 36" TRACK | WALL MOUNTED



ELEVATION AT WALL PLATE
(CHANNEL TO RAILS)

T_u = 385 LB/SCREW (MAX)
V_u = 95 LB/SCREW (MAX)



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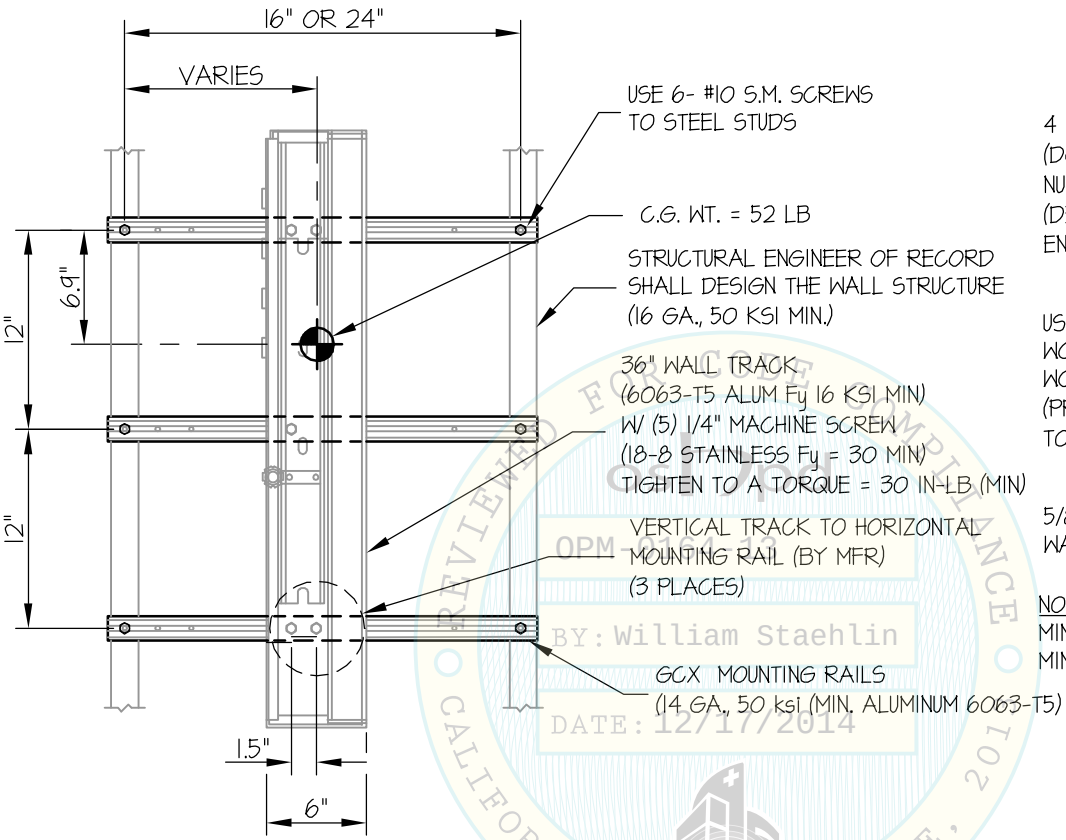
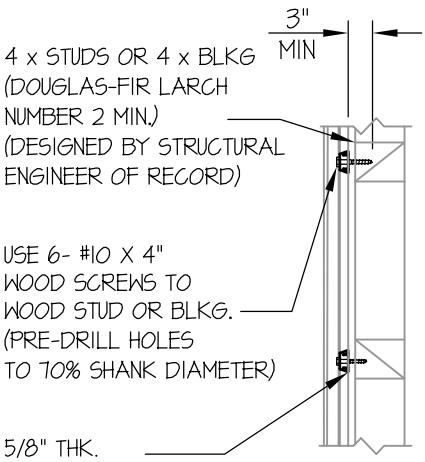
SHEET 6 OF 6 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — 36" TRACK — WALL MOUNTED



ELEVATION AT WALL PLATE
(RAILS TO WALL)



NOTE:
MIN EDGE DISTANCE = 1"
MIN END DISTANCE = 2"

WOOD STUD WALL SECTION

T_u = 141 LB/SCREW (MAX)
V_u = 98 LB/SCREW (MAX)