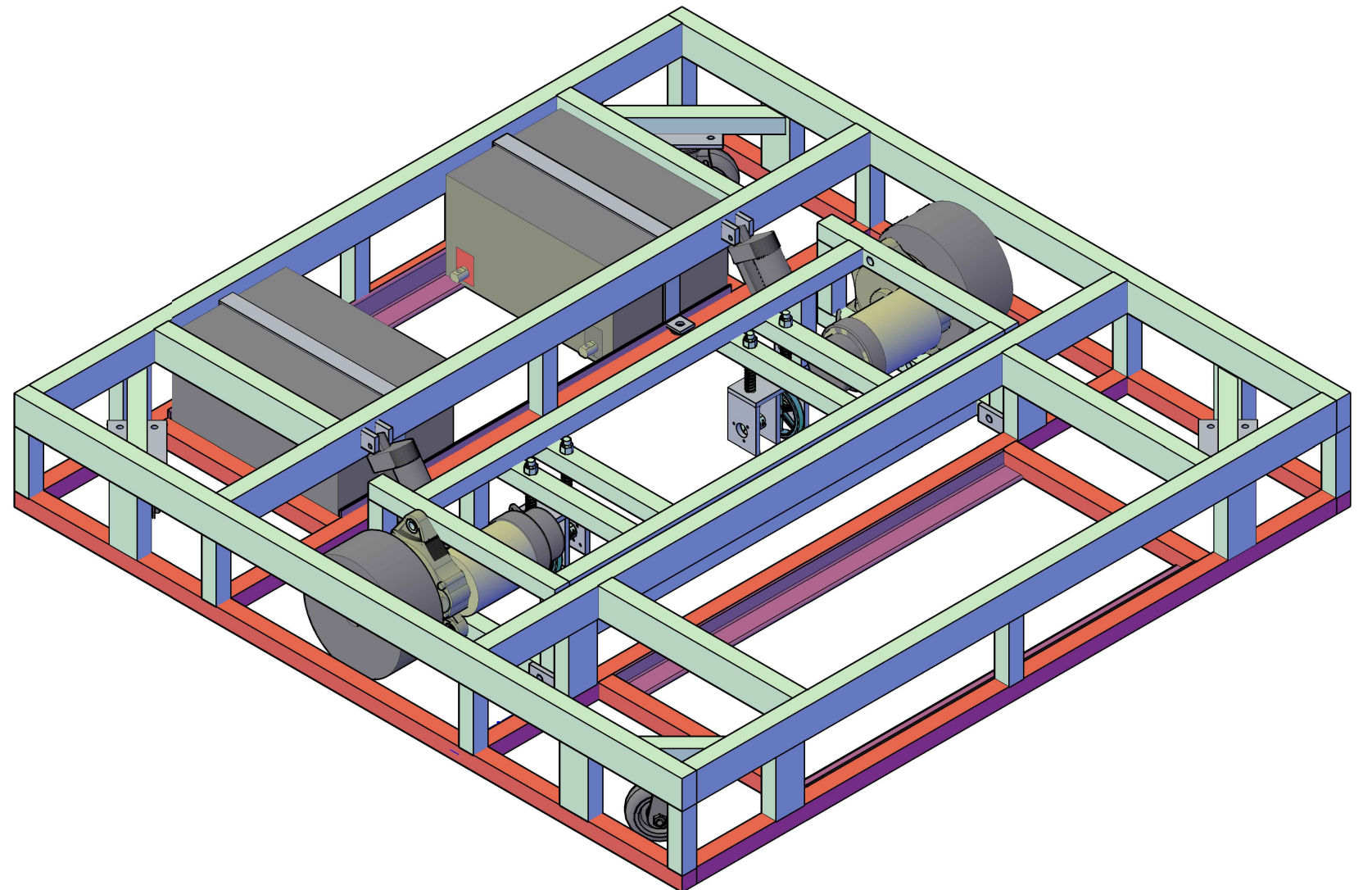


SIU SCENERY ROBOT FRAME DESIGN

DESIGN BY:
THOMAS FAGERHOLM
DANIEL BENNETT
ROBERT ANDERSON
JEFFREY RICHARDSON
NATE MOHLMAN
ROWEN HARDER
NOAH MURAKAMI
JEROME VEIT
ZACHARY ALLEY



SIU

CARBONDALE

SCENERY ROBOT

LOWER FRAME

ALTERATIONS

DIRECTOR:	N/A		
SCENE DESIGNER:	TOM FAGERHOLM		
TECH DIRECTOR:	ROBOT CLUB		
DWG BY:	TKF	INVENTORY CODE:	SCR
DATE:	1/23/19	FILE:	3D Assembly 11.25.19.dwg
REV 1:	Rev 1	REV 2:	

BUILD TIME

DAY / # OF CARPS	TIME

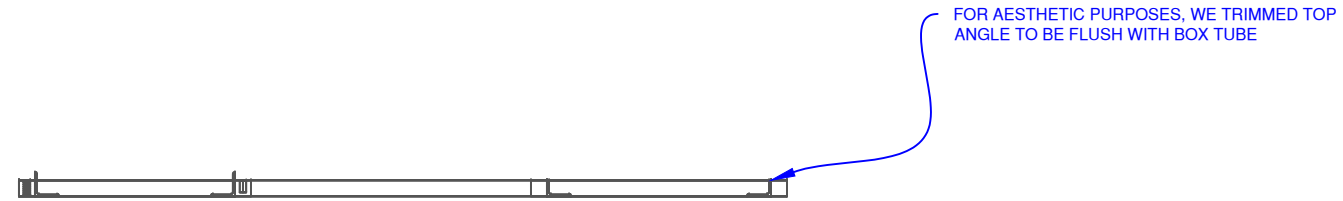
MATERIALS USED

MATERIAL	QUANTITY

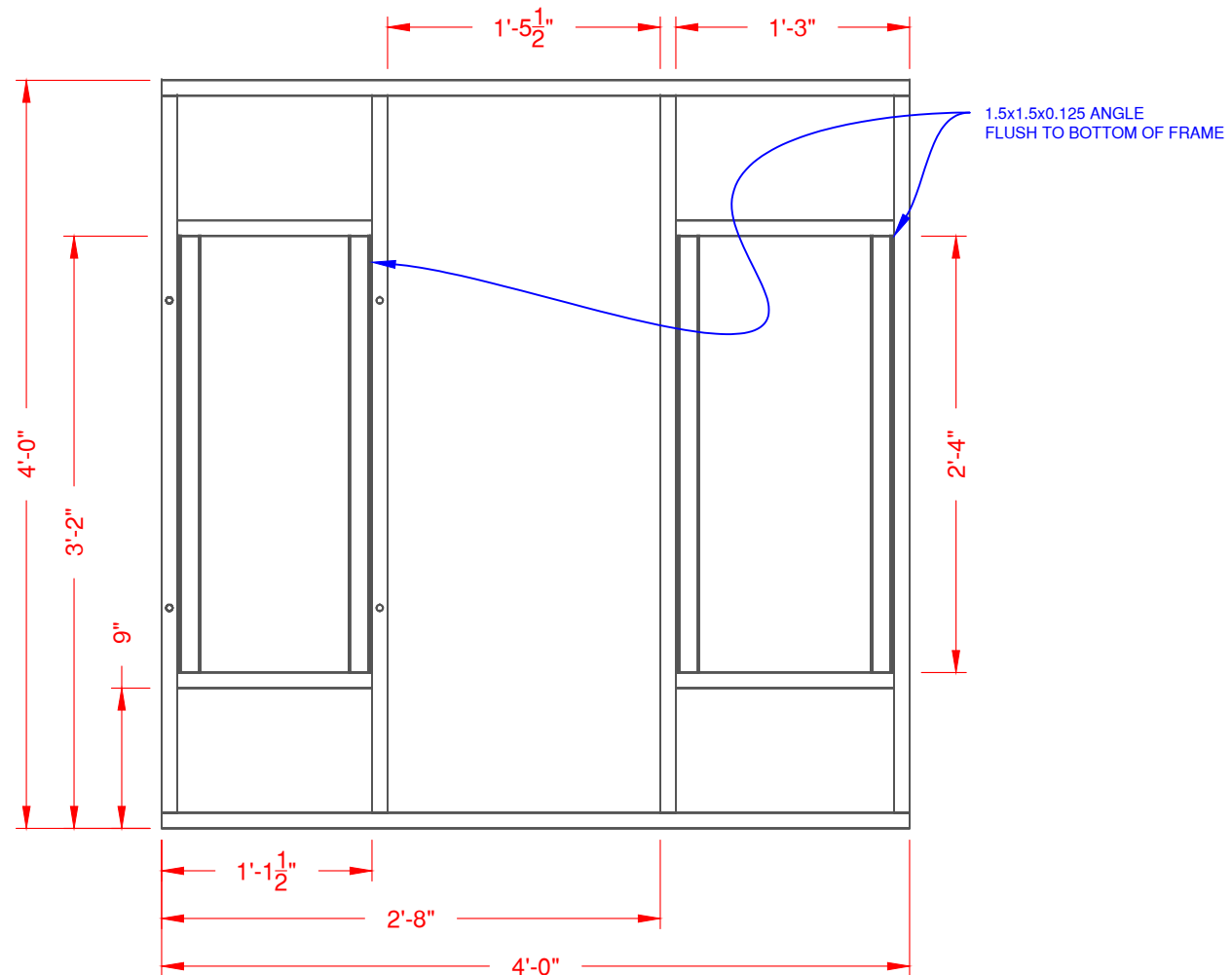
SCALE: AS NOTED

PLATE:

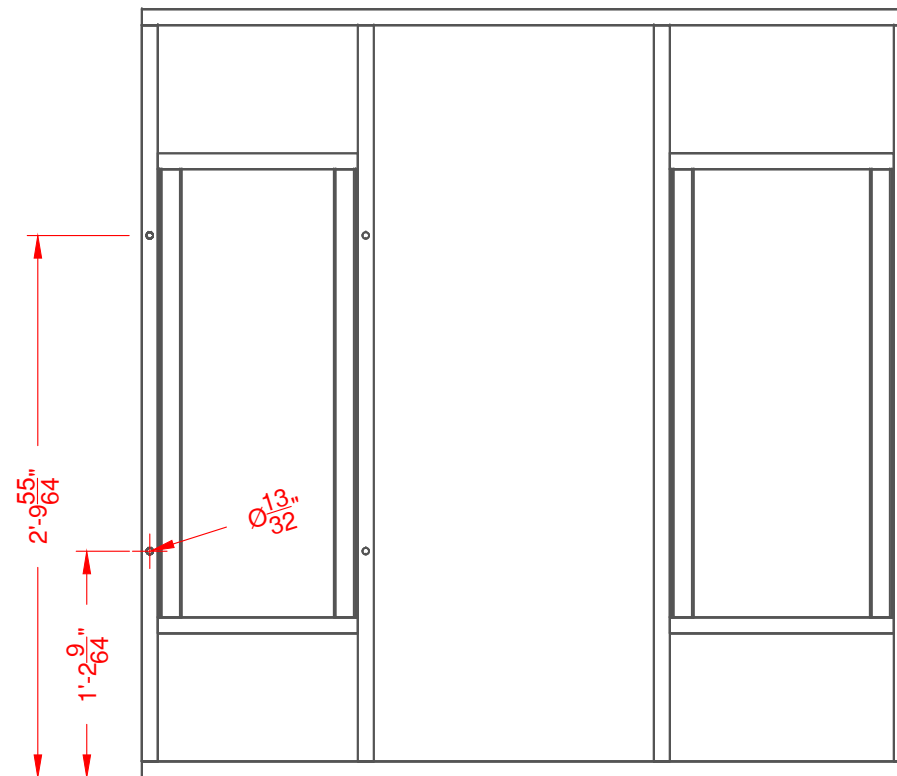
TD1



FRONT VIEW



1 TOP VIEW: LOWER FRAME
TD1 1" BOX TUBE CONSTRUCTION
ADJUST AS NECESSARY TO MATCH DRAWING
WELD ALL SIDES
GRIND FACE WELDS
TACK ANGLE ONLY
1"=1'-0"



2 TOP VIEW: LOWER FRAME
TD1 HOLE LAYOUT TYP
DRILL THROUGH TOP OF BOX ONLY
1"=1'-0"

SIU

CARBONDALE

SCENERY ROBOT

UPPER FRAME & VERTS

ALTERATIONS

DIRECTOR:	N/A		
SCENE DESIGNER:	TOM FAGERHOLM		
TECH DIRECTOR:	ROBOT CLUB		
DWG BY:	TKF	INVENTORY CODE:	SCR
DATE:	1/31/19	FILE:	3D Assembly 11.25.19.dwg
REV 1:	Rev 1	REV 2:	

BUILD TIME

DAY / # OF CARPS	TIME

MATERIALS USED

MATERIAL	QUANTITY

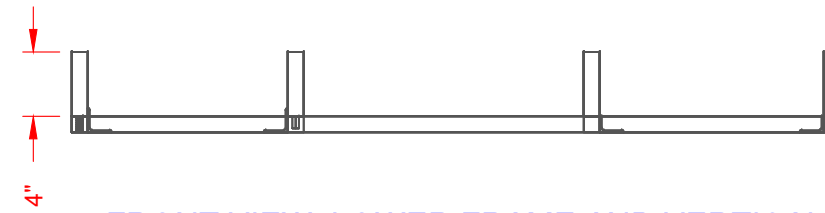
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PLATE:

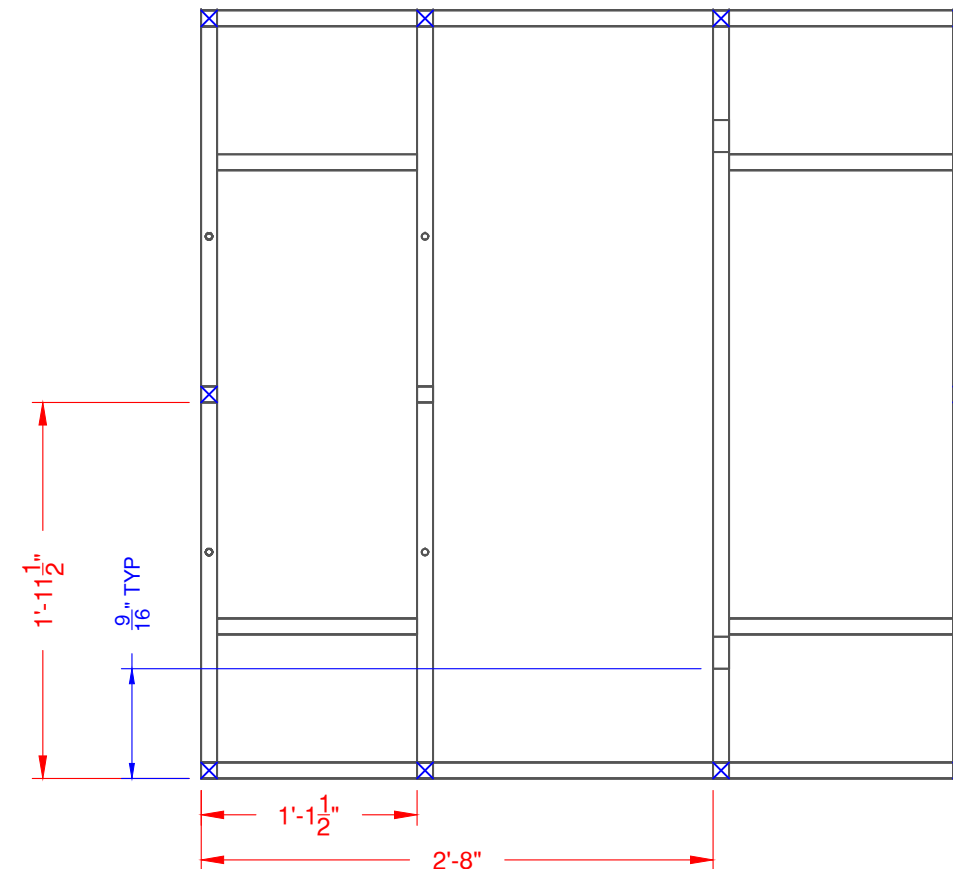
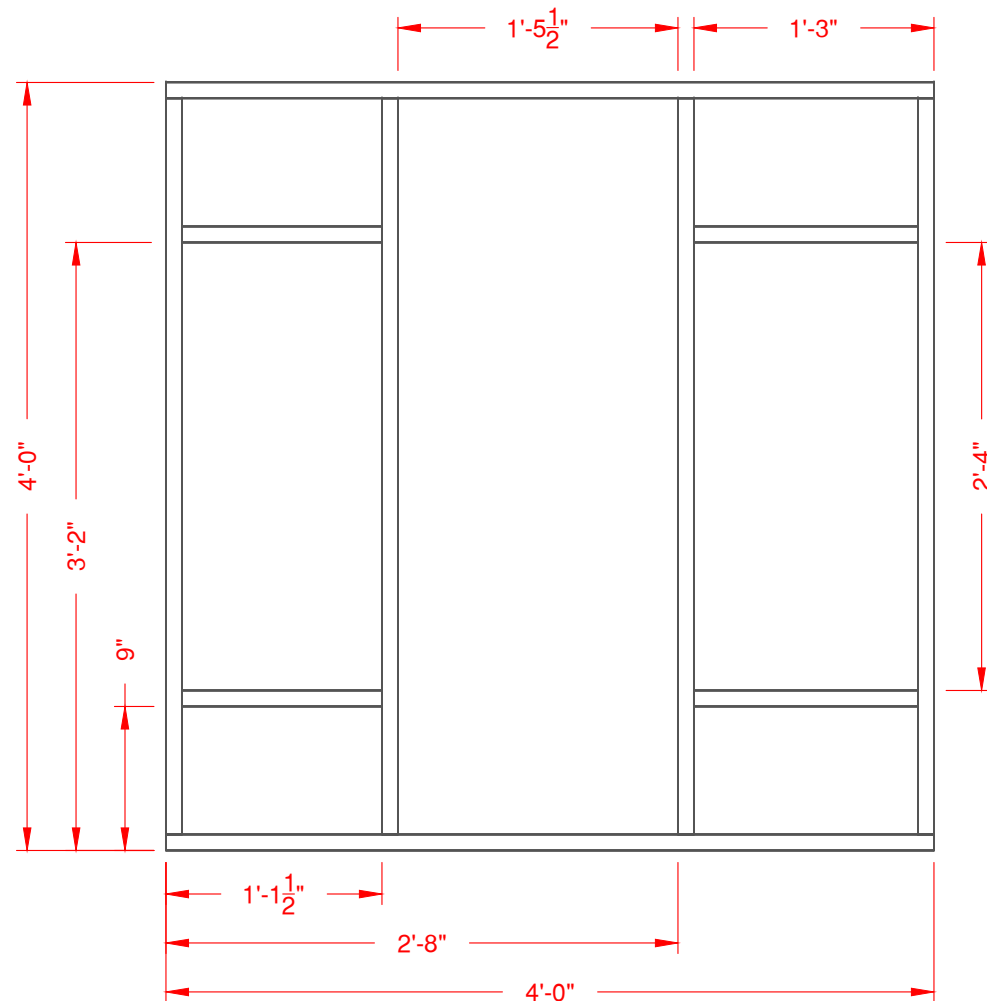
TD2



FRONT VIEW



FRONT VIEW: LOWER FRAME AND VERTICALS



- 1

TOP VIEW: UPPER FRAME
- TD2

1x2" REC TUBE CONSTRUCTION
ADJUST AS NECESSARY TO MATCH DRAWING
WELD ALL SIDES
GRIND FACE WELDS
TACK ANGLE ONLY

1"=1'-0"

- 2

TOP VIEW: VERTICAL FRAMING MEMBER LAYOUT
- TD2

CUT 10 PCS OF 1"x0.065" BOX @ 3.5"

1"=1'-0"

SCENERY ROBOT

FRAME

FRAME ASSEMBLY

DIRECTOR: N/A	
SCENE DESIGNER: TOM FAGERHOLM	
TECH DIRECTOR: ROBOT CLUB	
DWG BY: TKF	INVENTORY CODE: SCR
DATE: 2/7/19	FILE: 3D Assembly 11.25.19.dwg
REV 1: Rev 1	REV 2:

BUILD TIME

DAY / # OF CARPS	TIME

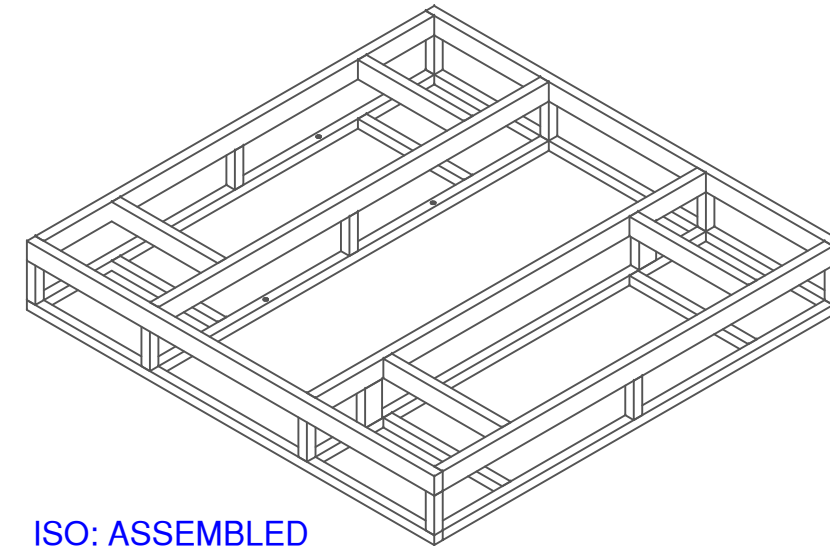
MATERIALS USED

MATERIAL	QUANTITY

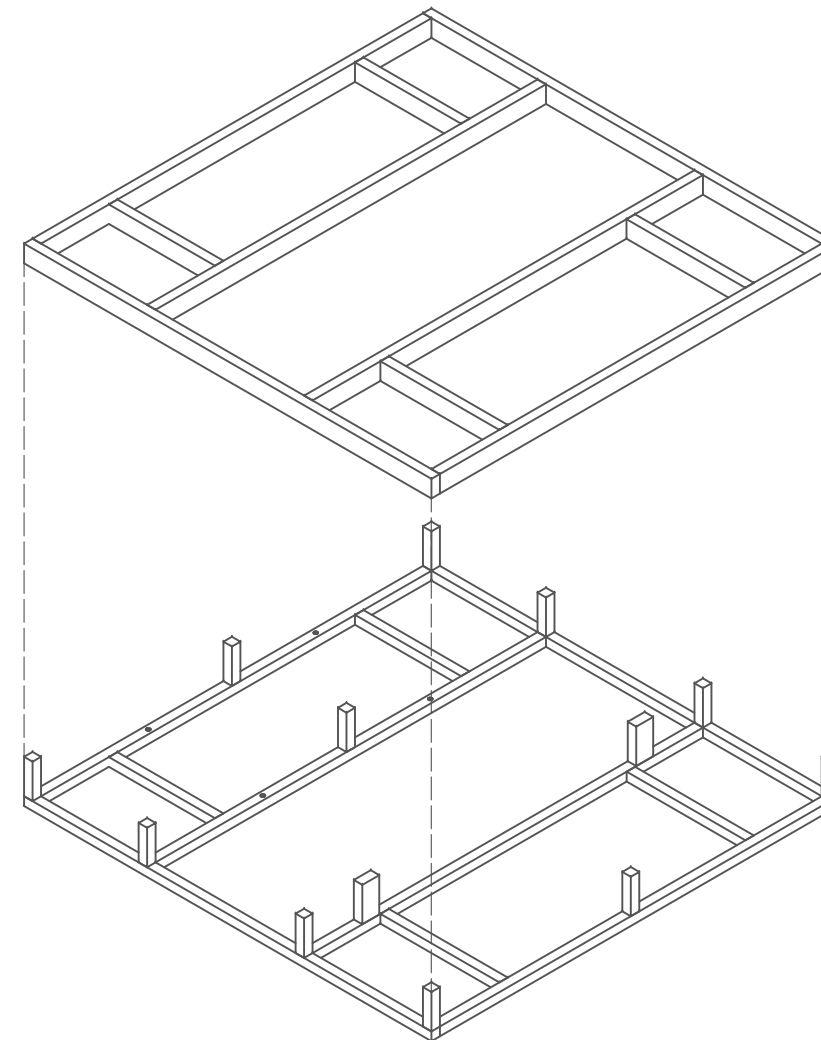
SCALE: NTS

PLATE:

TD3



ISO: ASSEMBLED



- 2

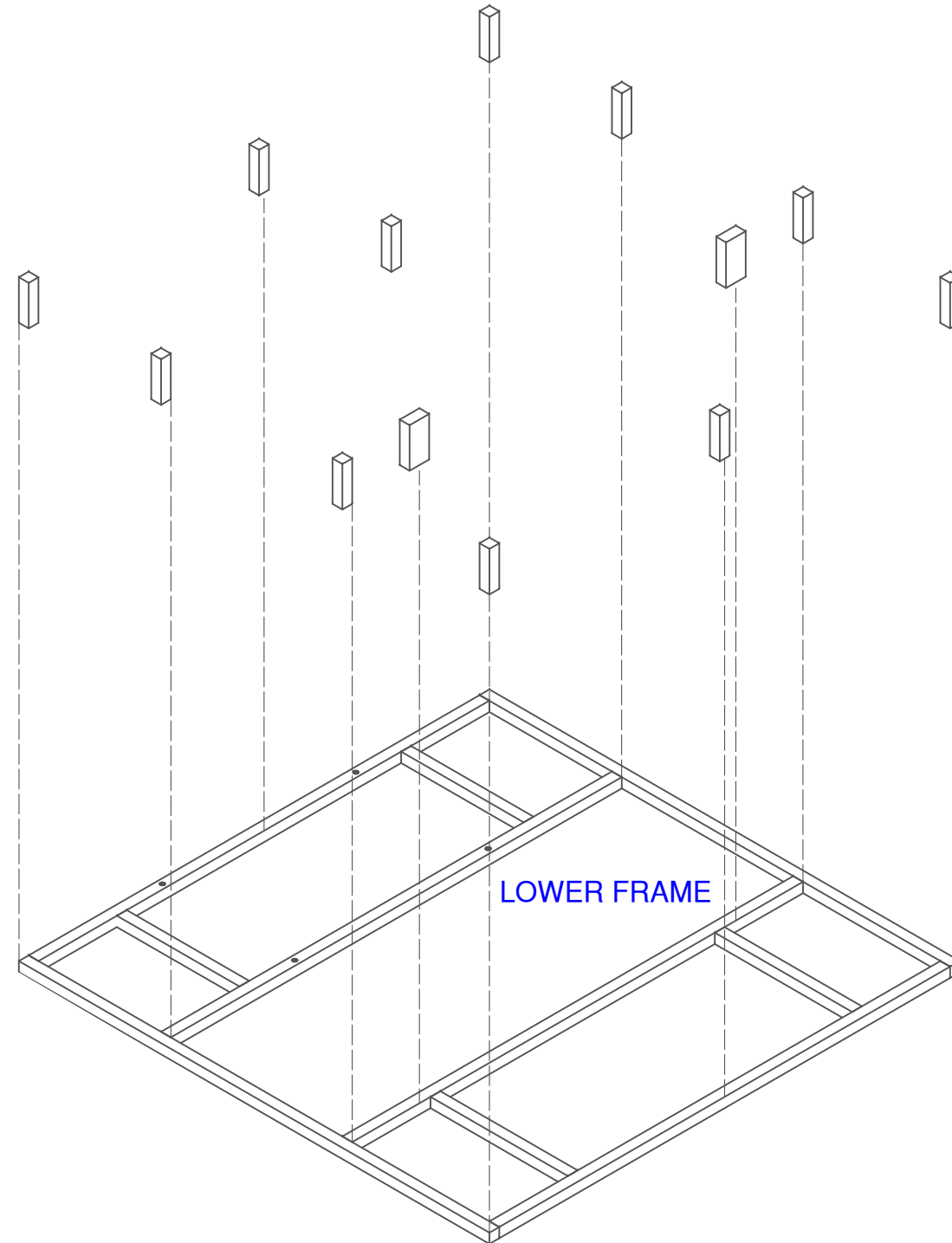
VERTICAL FRAMING ASSEMBLY TO TOP FRAME
- TD3

TACK WELD TOP FRAME TO VERTICALS

WELD ALL SIDES AFTER FITMENT

GRIND EXTERIOR WELDS

NTS



LOWER FRAME

- 1

VERTICAL FRAMING ASSEMBLY
- TD3

1"SQ TUBE

TACK WELD TO BOTTOM FRAME

WELD ALL SIDES AFTER TOP IS FITTED & TACKED

GRIND EXTERIOR WELDS

NTS

SCENERY ROBOT

FRAME

CASTER PLATES

DIRECTOR:	N/A		
SCENE DESIGNER:	TOM FAGERHOLM		
TECH DIRECTOR:	ROBOT CLUB		
DWG BY:	TKF	INVENTORY CODE:	SCR
DATE:	2/13/19	FILE:	3D Assembly 11.25.19.dwg
REV 1:	Rev 1	REV 2:	

BUILD TIME

DAY / # OF CARPS	TIME

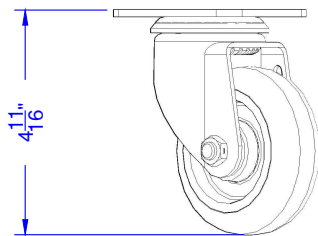
MATERIALS USED

MATERIAL	QUANTITY

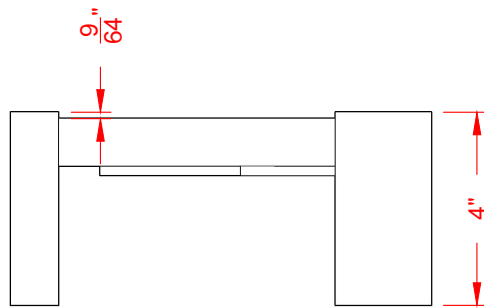
SCALE: AS NOTED

PLATE:

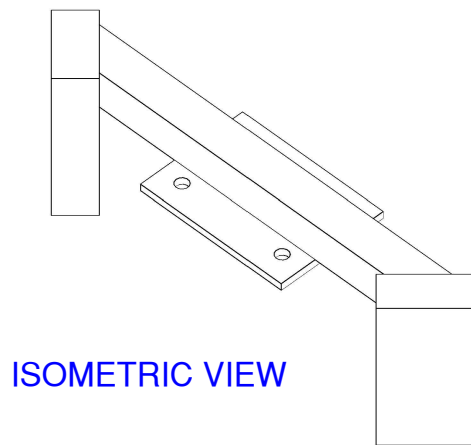
TD4



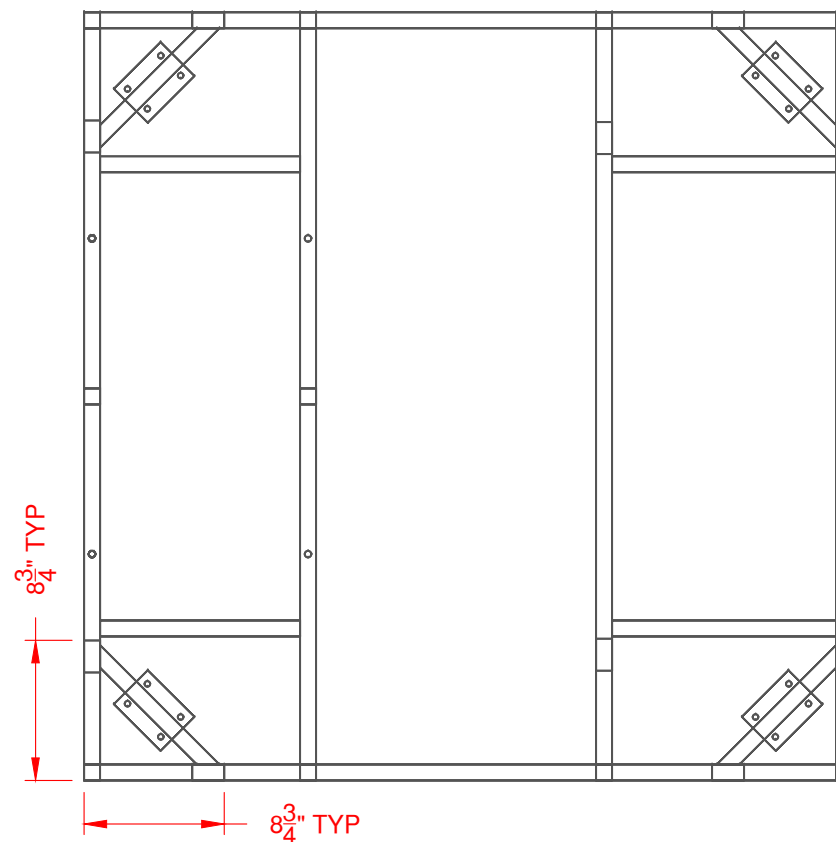
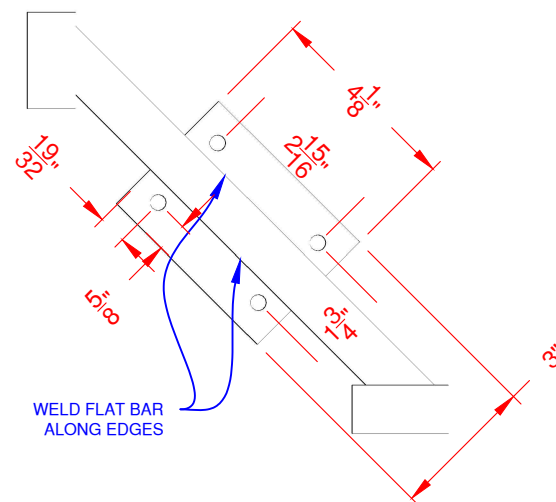
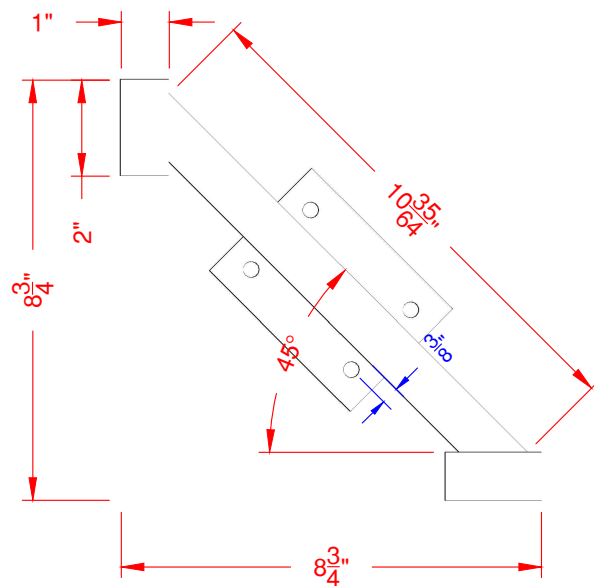
CASTER



FRONT VIEW



ISOMETRIC VIEW



- 1 TOP VIEW: CASTER PLATE
TD4 1x2" REC TUBE VERTICALS
1" BOX TUBE BEAM
3/16"x3" FLAT BAR
WELD ALL SIDES OF BEAM TO VERTICALS
BUILD 4

3"=1'-0"

- 2 TOP VIEW: CASTER PLATE LAYOUT
TD4 TACK WELD TO LOWER FRAME
TACK WELD UPPER FRAME IN PLACE
FINISH WELD

1"=1'-0"

SCENERY ROBOT

BATT STRAP

CONSTRUCTION

DIRECTOR: N/A	
SCENE DESIGNER: TOM FAGERHOLM	
TECH DIRECTOR: ROBOT CLUB	
DWG BY: TKF	INVENTORY CODE: SCR
DATE: 2/14/19	FILE: 3D Assembly 11.25.19.dwg
REV 1: Rev 1	REV 2:

BUILD TIME

DAY / # OF CARPS	TIME

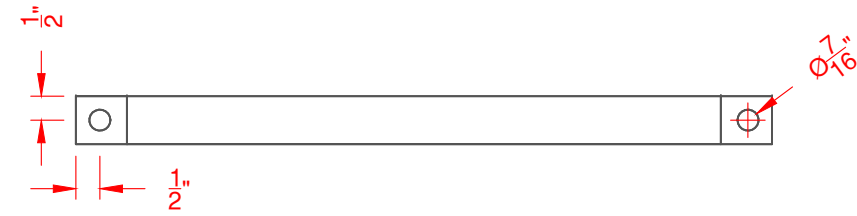
MATERIALS USED

MATERIAL	QUANTITY

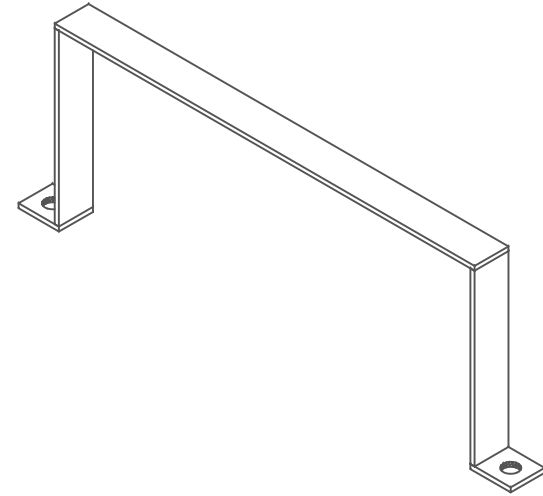
SCALE: AS NOTED

PLATE:

TD5



TOP VIEW



1

TD5

FRONT VIEW: BATTERY STRAP

1"x1/8" FLAT BAR

WELD EDGES AND OUTSIDES

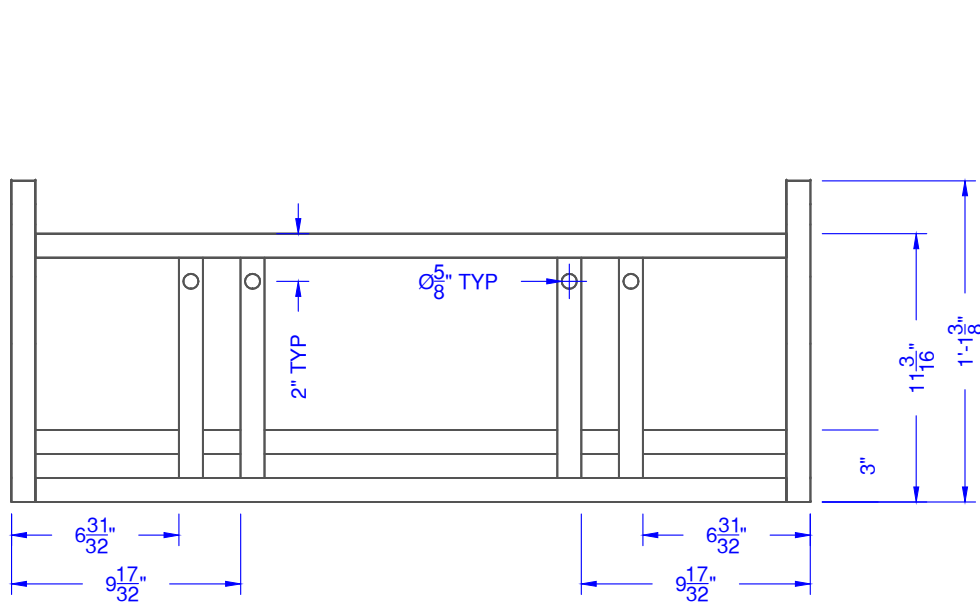
BUILD 2

3"=1'-0"

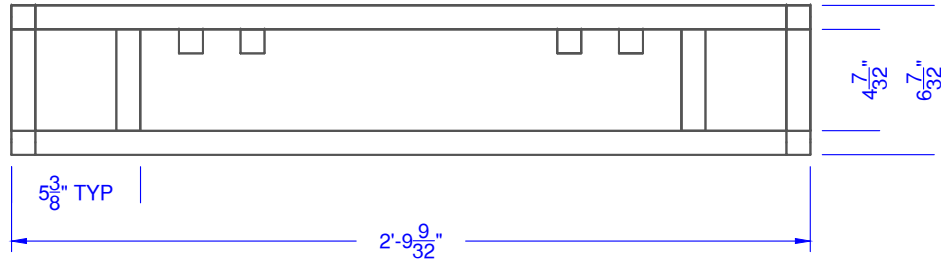
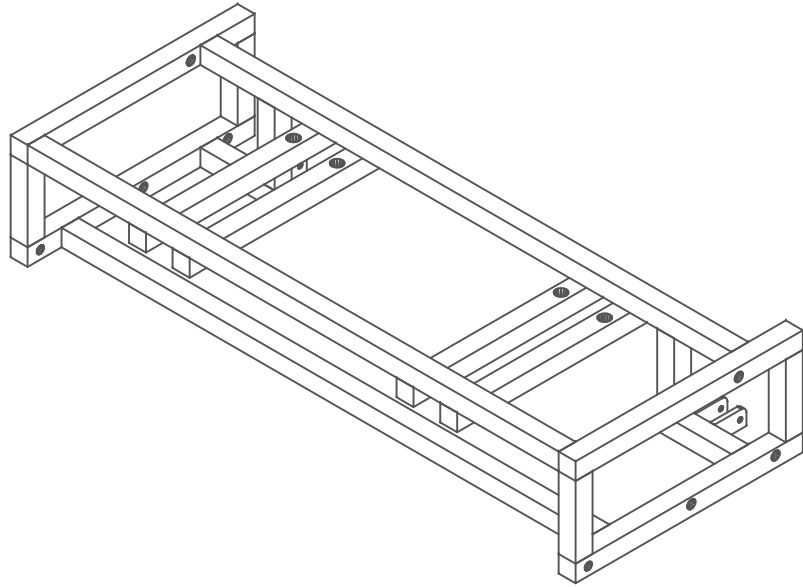
SCENERY ROBOT

MOTOR CARRIAGE

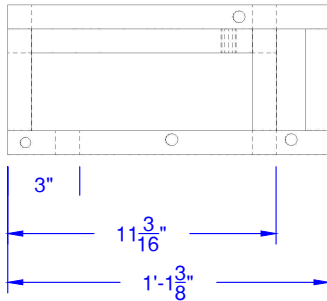
FRAME	
DIRECTOR: N/A	
SCENE DESIGNER: TOM FAGERHOLM	
TECH DIRECTOR: ROBOT CLUB	
DWG BY: TKF	INVENTORY CODE: SCR
DATE: 2/24/19	FILE: 3D Assembly 11.25.19.dwg
REV 1: Rev 1	REV 2:
BUILD TIME	
DAY / # OF CARPS	TIME
MATERIALS USED	
MATERIAL	QUANTITY
SCALE: AS NOTED	
PLATE:	
TD6	



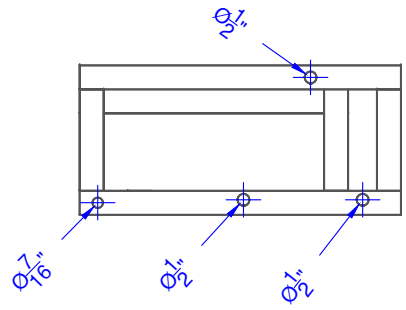
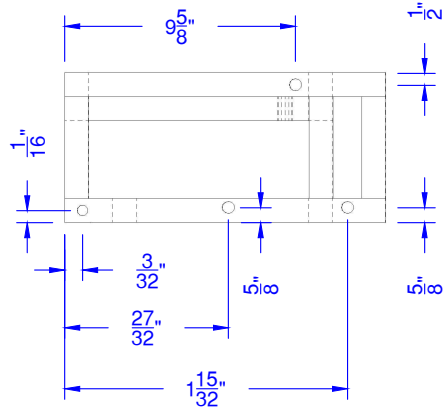
TOP VIEW



FRONT VIEW



SIDE VIEW



- 1

TD6
- ORTHOGRAPHIC: MOTOR CARRIAGE

1"x0.065 (16ga) BOX TUBE CONSTRUCTION

TACK WELD & CHECK SQUARENESS

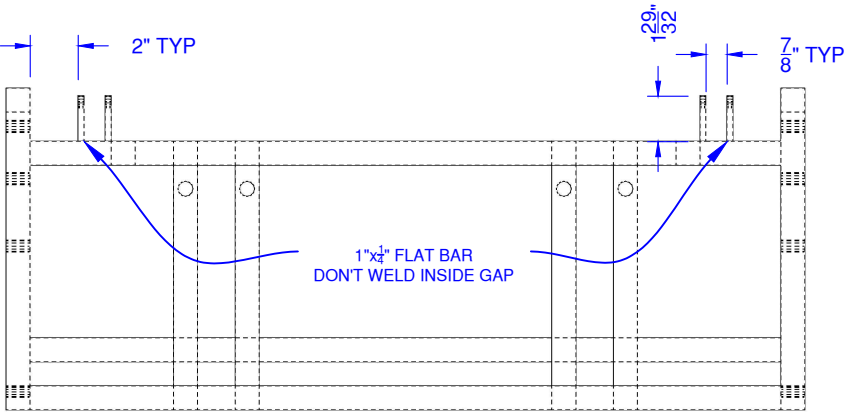
WELD ALL SIDES

1"x1/4" FLAT BAR TABS

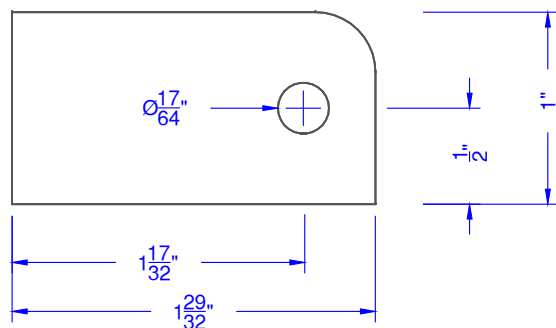
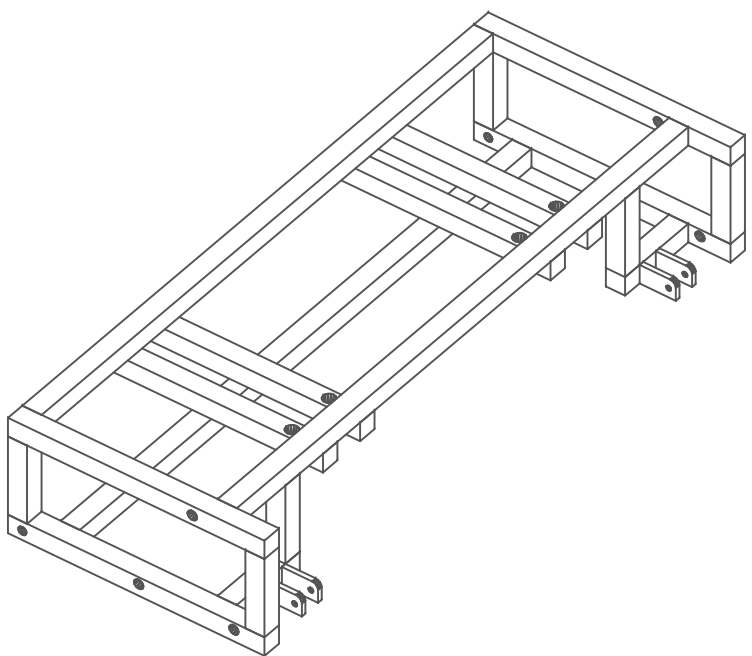
1.5"=1'-0"

PRODUCED BY AN AUTODESK STUDENT VERSION

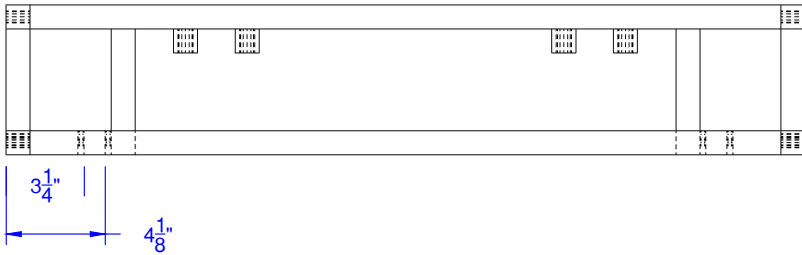
PRODUCED BY AN AUTODESK STUDENT VERSION



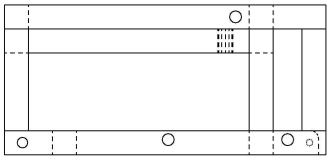
TOP VIEW



2 FRONT VIEW: FLAT BAR TABS
TD7 1"x1/4" FLAT BAR FULL SCALE
MAKE 4



FRONT VIEW



SIDE VIEW

1 ORTHOGRAPHIC: MOTOR CARRIAGE ADJUSTMENTS
TD7 1"x0.065 (16ga) BOX TUBE CONSTRUCTION
TACK WELD & CHECK SQUARENESS
WELD ALL SIDES
1"x1/4" FLAT BAR TABS
RED DIMS ARE UNCHANGED
1.5"=1'-0"

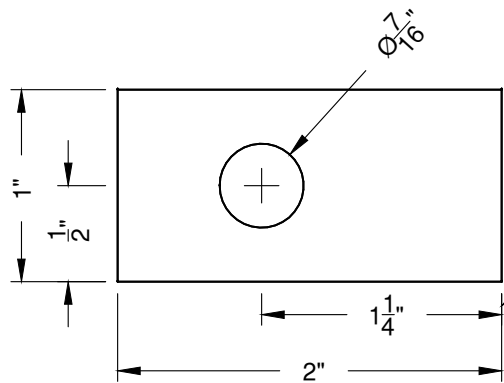


SCENERY ROBOT

MOTOR CARRIAGE	
PIVOT TABS	
DIRECTOR: N/A	
SCENE DESIGNER: TOM FAGERHOLM	
TECH DIRECTOR: ROBOT CLUB	
DWG BY: TKF	INVENTORY CODE: SCR
DATE: 11/7/19	FILE: 3D Assembly 11.25.19.dwg
REV 1: Rev 1	REV 2:
BUILD TIME	
DAY / # OF CARPS	TIME
MATERIALS USED	
MATERIAL	QUANTITY
SCALE: AS NOTED	
PLATE:	
TD7	

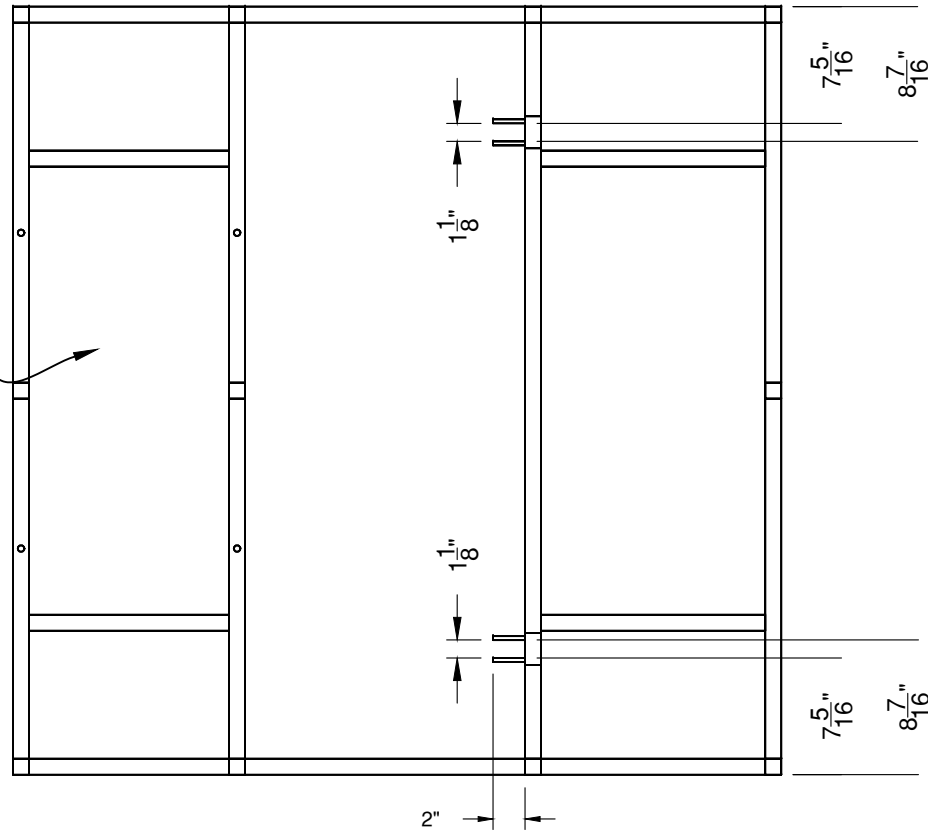
PRODUCED BY AN AUTODESK STUDENT VERSION

PRODUCED BY AN AUTODESK STUDENT VERSION



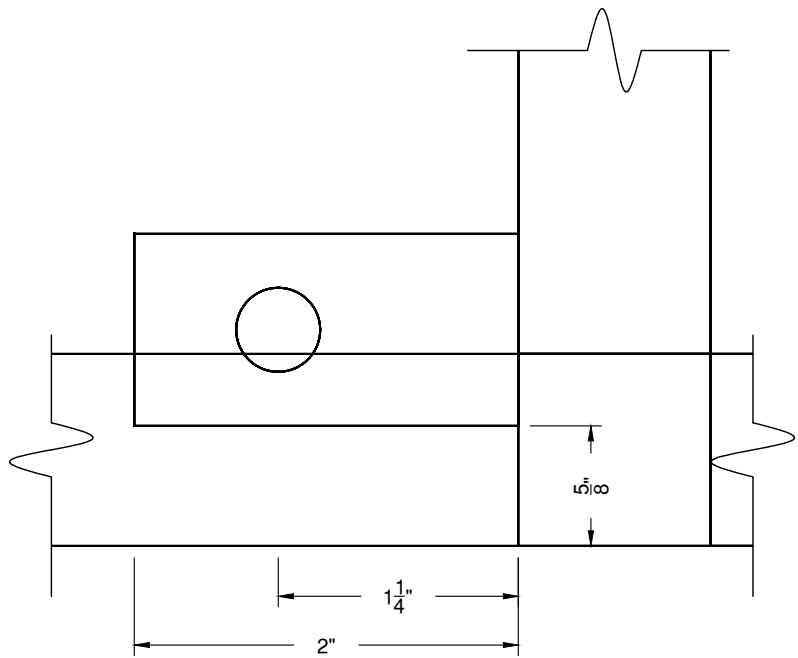
1 FRONT VIEW: LOWER FRAME FLAT BAR TABS
TD8 1"x1/4" FLAT BAR FULL SCALE
MAKE 4

BATTERY TRAY SIDE

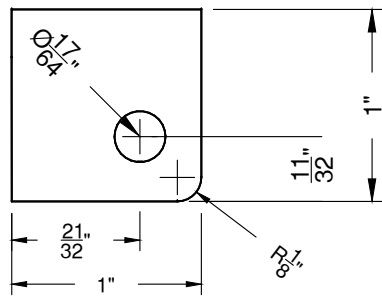


2 TOP VIEW: LOWER FRAME
TD8 TACK WELD & CHECK FITMENT
WELD OUTSIDE FILLET, TOP, & BOTTOM
INSIDE DIMENSION CRITICAL
DO NOT WELD IN-BETWEEN TABS

1"=1'-0"

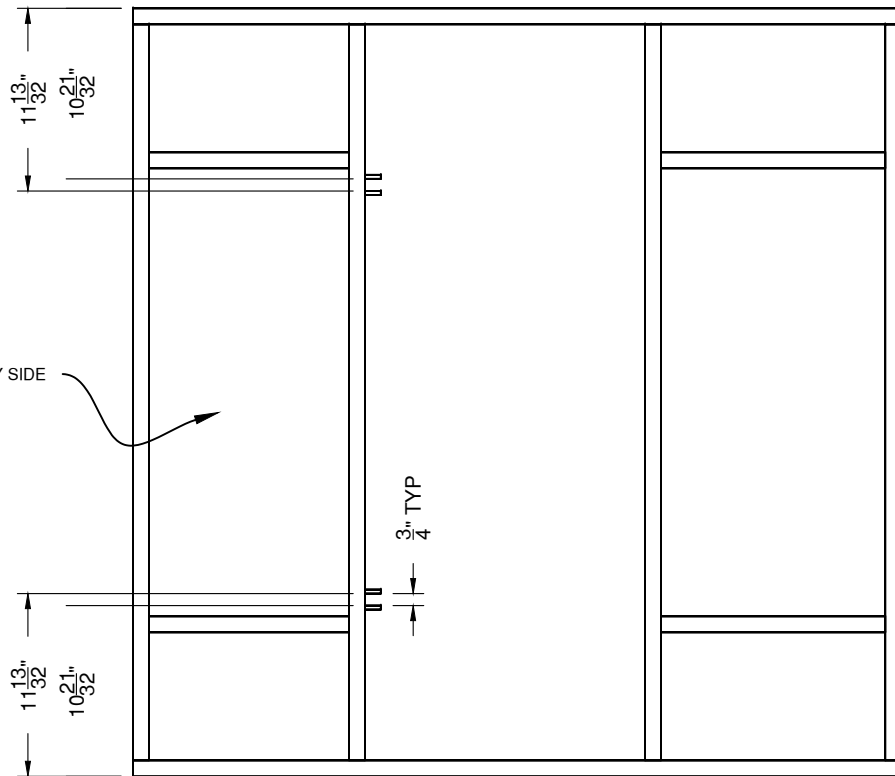


3 SIDE VIEW: LOWER TAB TO FRAME
TD8 FULL SCALE



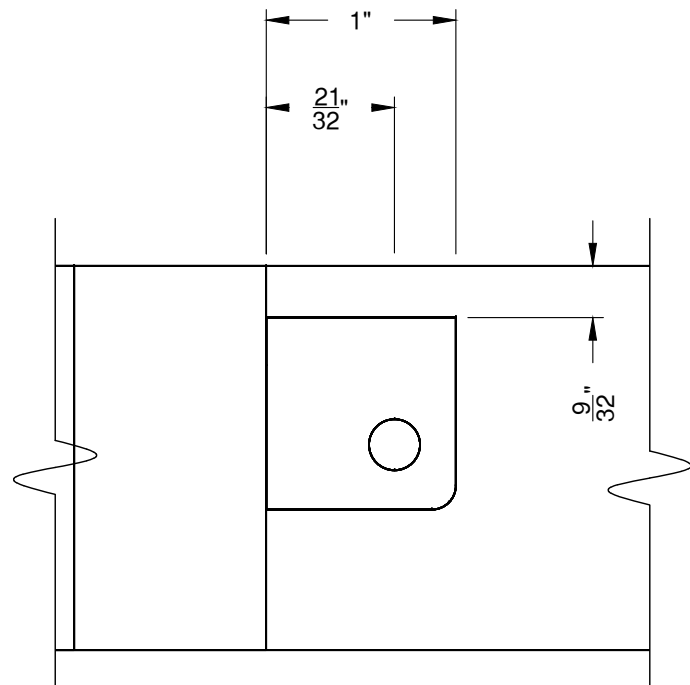
4 FRONT VIEW: UPPER FRAME FLAT BAR TABS
TD8 1"x1/4" FLAT BAR FULL SCALE
GRIND FILLET TO APPROX. DIA.
MAKE 4

BATTERY TRAY SIDE



5 TOP VIEW: UPPER FRAME
TD8 TACK WELD AND CHECK FITMENT
WELD OUTSIDE FILLET, TOP, & BOTTOM
INSIDE DIMENSION CRITICAL
DO NOT WELD IN-BETWEEN TABS

1"=1'-0"



6 SIDE VIEW: UPPER TAB
TD8 FULL SCALE



SCENERY ROBOT

COMPONENTS

FLAT BAR TABS

DIRECTOR: N/A

SCENE DESIGNER: TOM FAGERHOLM

TECH DIRECTOR: ROBOT CLUB

DWG BY: TKF INVENTORY CODE: SCR

DATE: 3/4/19 FILE: 3D Assembly 11.25.19.dwg

REV 1: 11/25/19 REV 2:

BUILD TIME

DAY / # OF CARPS TIME

SCALE: AS NOTED

PLATE:

TD8

SCENERY ROBOT

ENCODER ASSEMBLY

OVERVIEW

DIRECTOR: N/A	
SCENE DESIGNER: TOM FAGERHOLM	
TECH DIRECTOR: ROBOT CLUB	
DWG BY: TKF	INVENTORY CODE: SCR
DATE: 11/7/19	FILE: 3D Assembly 11.25.19.dwg
REV 1: Rev 2	REV 2:

BUILD TIME

DAY / # OF CARPS	TIME

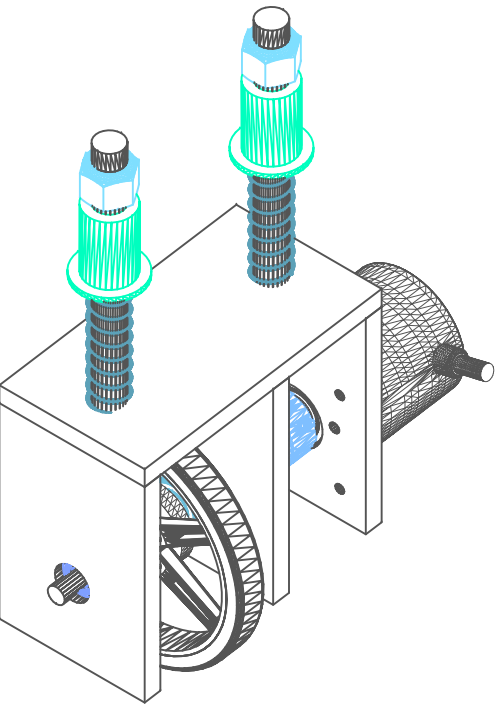
MATERIALS USED

MATERIAL	QUANTITY

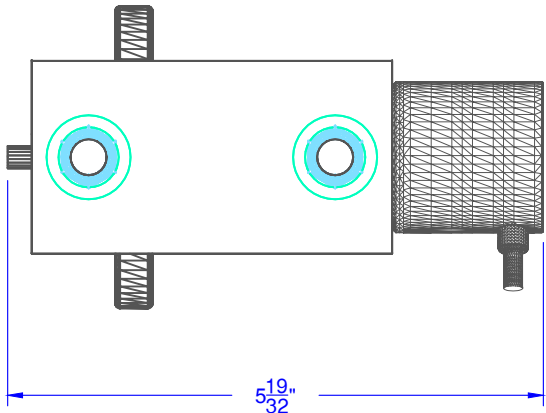
SCALE: 6"=1'-0"

PLATE:

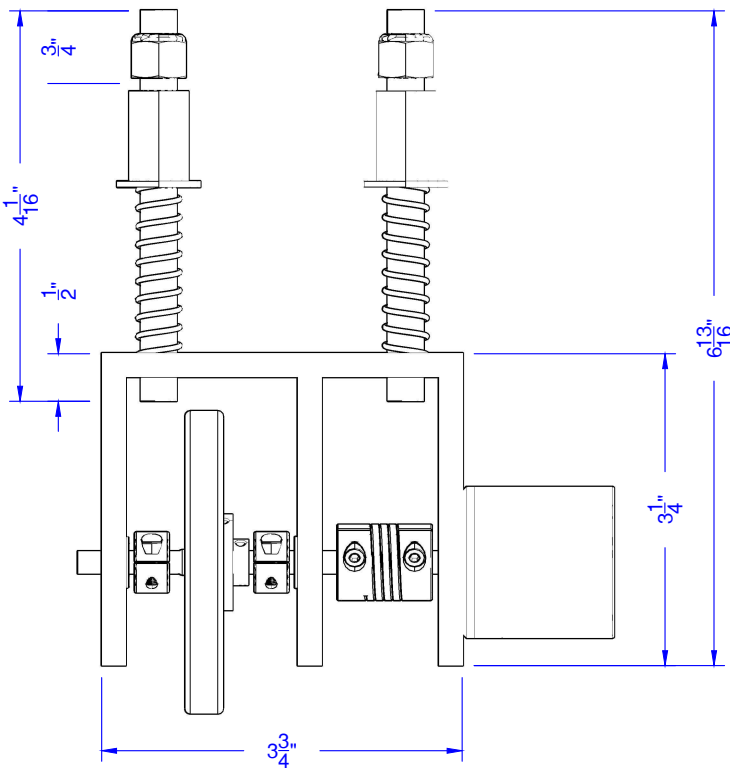
TD10



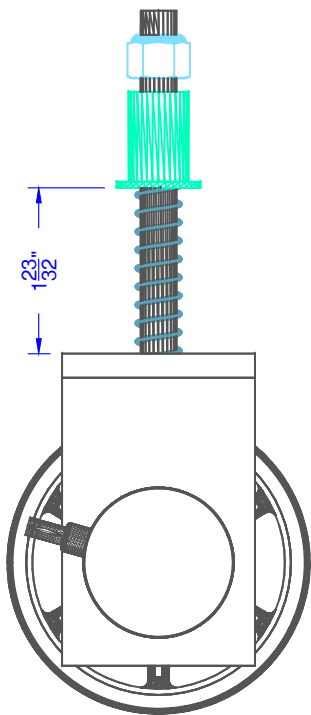
ISOMETRIC VIEW



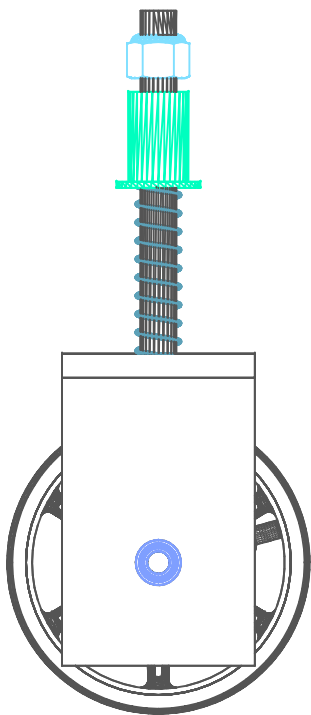
TOP VIEW



FRONT VIEW



RIGHT VIEW



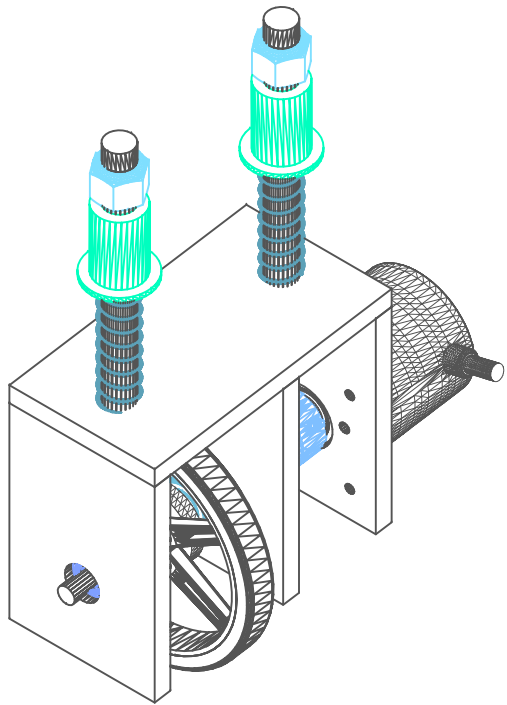
LEFT VIEW

- 1

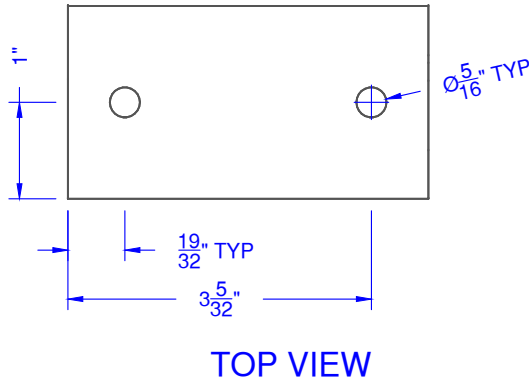
ORTHOGRAPHIC: ENCODER MOUNTS
- TD10

1/4" X 2" FLAT BAR CAONSTRUCTION
3/8" ROD THREADED TO 3/8"X16 (1/2" DEPTH BOTTOM & 3/4" TOP)
ASSEMBLE WITH SHAFT FOR ALIGNMENT
TACK WELD AND TEST FIT
FINISH WELD AFTER TESTING
BUILD 2 (R&R)
- 6"=1'-0"

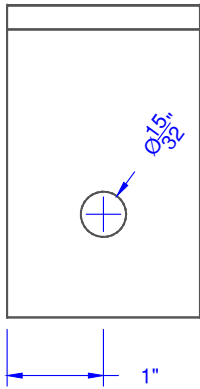
SCENERY ROBOT



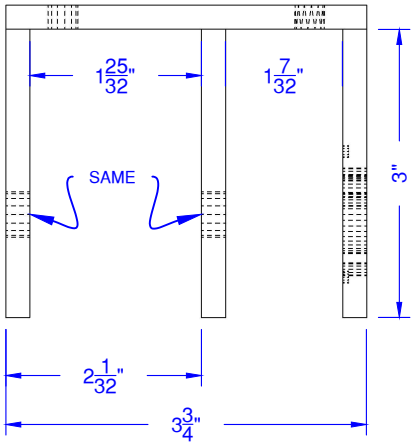
ISOMETRIC VIEW



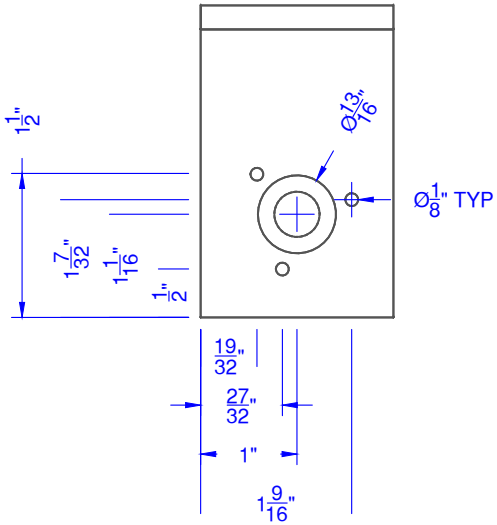
TOP VIEW



LEFT VIEW



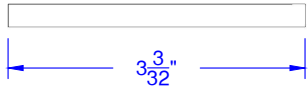
FRONT VIEW



RIGHT VIEW

- 1 ORTHOGRAPHIC: ENCODER CHASSIS
TD11 1/4" X 2" FLAT BAR CAONSTRUCTION
LEFT AND CENTER PIECE ARE THE SAME
BUILD 2 (2ND IS R&R)

6"=1'-0"



- 2 TOP VIEW: 6MM ENCODER SHAFT
TD11 6MM STAINLESS STEEL SHAFT
CUT TWO AT DIMENSION SHOWN
SLIGHTLY BEVEL ENDS OF SHAFT

6"=1'-0"

ENCODER ASSEMBLY

CHASSIS & SHAFT

DIRECTOR: N/A

SCENE DESIGNER: TOM FAGERHOLM

TECH DIRECTOR: ROBOT CLUB

DWG BY: TKF INVENTORY CODE: SCR

DATE: 11/13/19 FILE: 3D Assembly 11.25.19.dwg

REV 1: Rev 1 REV 2:

BUILD TIME

DAY / # OF CARPS TIME

MATERIALS USED

MATERIAL	QUANTITY

SCALE: 6"=1'-0"

PLATE:

TD11