



MURPHY
SINCE 1907
CONSTRUCTORS • ENGINEERS MECHANICAL • INDUSTRIAL

1233 N. Price Rd.
St. Louis, MO 63132-2303
314-997-6600 phone
BIMCAD@murphy-stl.com

DRN JMM	7/14/2021	WUSM RESEARCH BUILDING				QA/QC ACCEPT				FLANGE WEIGHT/ORIENTATION				<input type="checkbox"/>
CHK		NRB								FITTING ORIENTATION				<input type="checkbox"/>
APP		MECH RISERS								BOLTS/CPLG'S/TH'D TIGHT				<input type="checkbox"/>
JOB NO.	210140									SPOOL IDENTIFICATION				<input type="checkbox"/>
REF.DWG.		SERVICE NAME				SPEC.		ASME	X-RAY	HYDRO TEST	PWHT	COMMENTS		
						NA		NA	NA	NA	NA	MURPHY WPS#		
DRAWING NO./TRACKING NO.		QTY.		SHT/NO		REV								
210140-RISER-04		1		2 of 3		0								
						0								
						REV	DATE	DESCRIPTION				DRN	CHK	APP



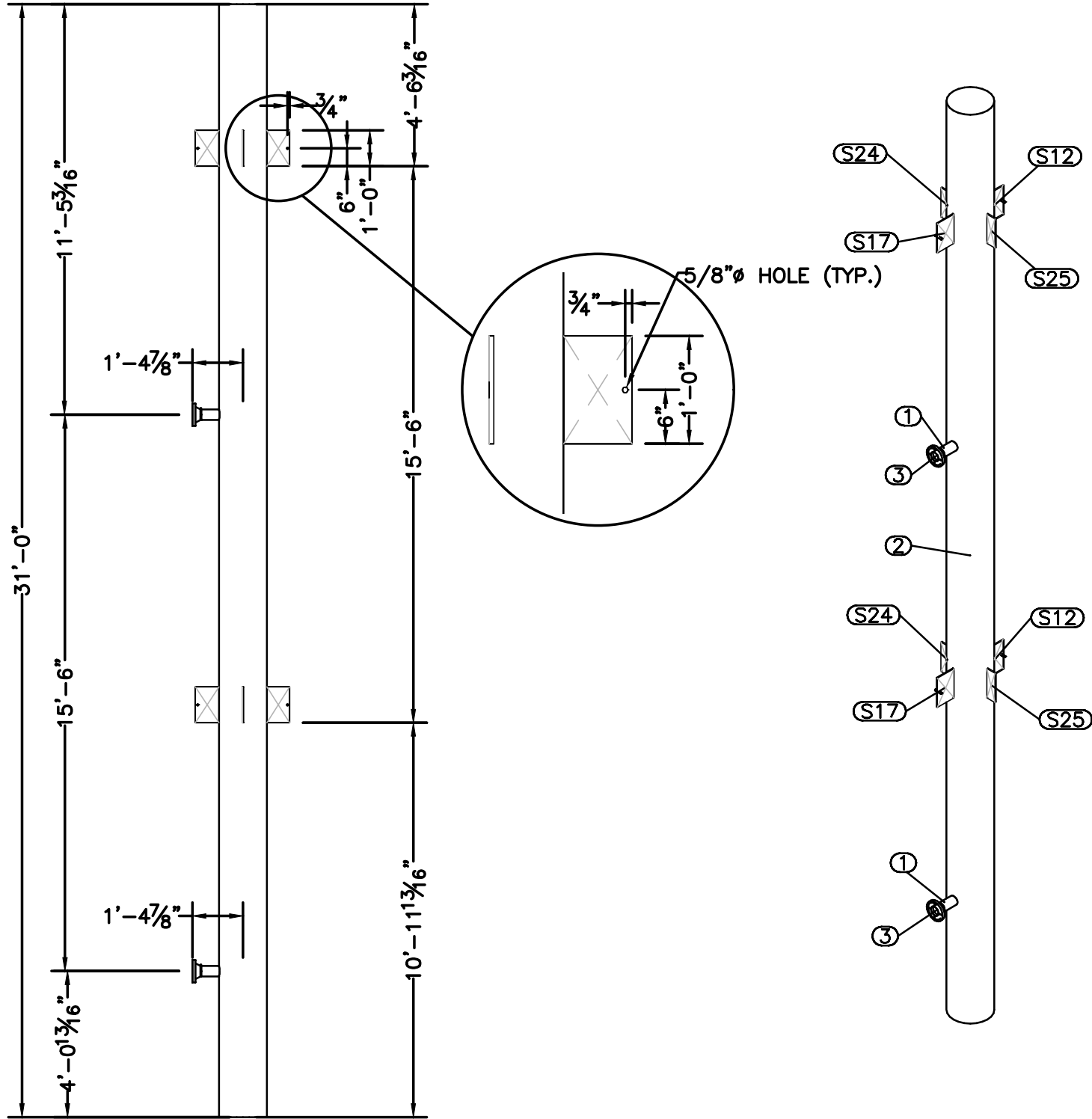
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QA/QC ACCEPT _____										<input type="checkbox"/> FLANGE WEIGHT/ORIENTATION				<input type="checkbox"/>		
										<input type="checkbox"/> FITTING ORIENTATION				<input type="checkbox"/>		
										<input type="checkbox"/> BOLTS/CPLG'S/TH'D TIGHT				<input type="checkbox"/>		
										<input type="checkbox"/> SPOOL IDENTIFICATION				<input type="checkbox"/>		
SPEC.		ASME		X-RAY		HYDRO TEST		PWHT		COMMENTS						
NA		NA		NA		NA		NA		MURPHY WPS#						
0																
REV		DATE		DESCRIPTION										DRN	CHK	APP

DRN	JMM	7/14/2021	WUSM RESEARCH BUILDING		
CHK			NRB		
APP			MECH RISERS		
JOB NO.	210140		SERVICE NAME		
REF.DWG.					
DRAWING NO./TRACKING NO.		QTY.	SHT/NO	REV	
210140-RISER-04		1	3 OF 3	0	

QTY 2



Murphy-PFFS-SPOOL-BOM

Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
1	2	Sch 40 SA-53B CS ERW Pipe Saddle			6"	6.000	16x3
3	2	150lb RF Sch 40 Bore SA105 CS WN Flg					3
2	1	Std Wt SA-53B CS ERW Pipe PE	BEV	BEV	31'-0"	372.000	16

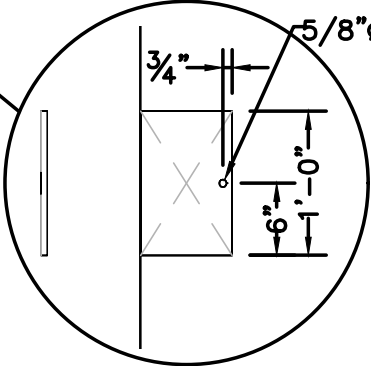
BOM-STEEL-PLATE

Item No	Size	Description	Qty	Area (sq ft)
S12	12.000 x 7.625	ASTM A36 CS Plate 1/2" Thick	2	0.816
S25	12.000 x 3.875	ASTM A36 CS Plate 1/2" Thick	2	0.450
S17	12.000 x 7.875	ASTM A36 CS Plate 1/2" Thick	2	0.840
S24	12.000 x 5.688	ASTM A36 CS Plate 1/2" Thick	2	0.627

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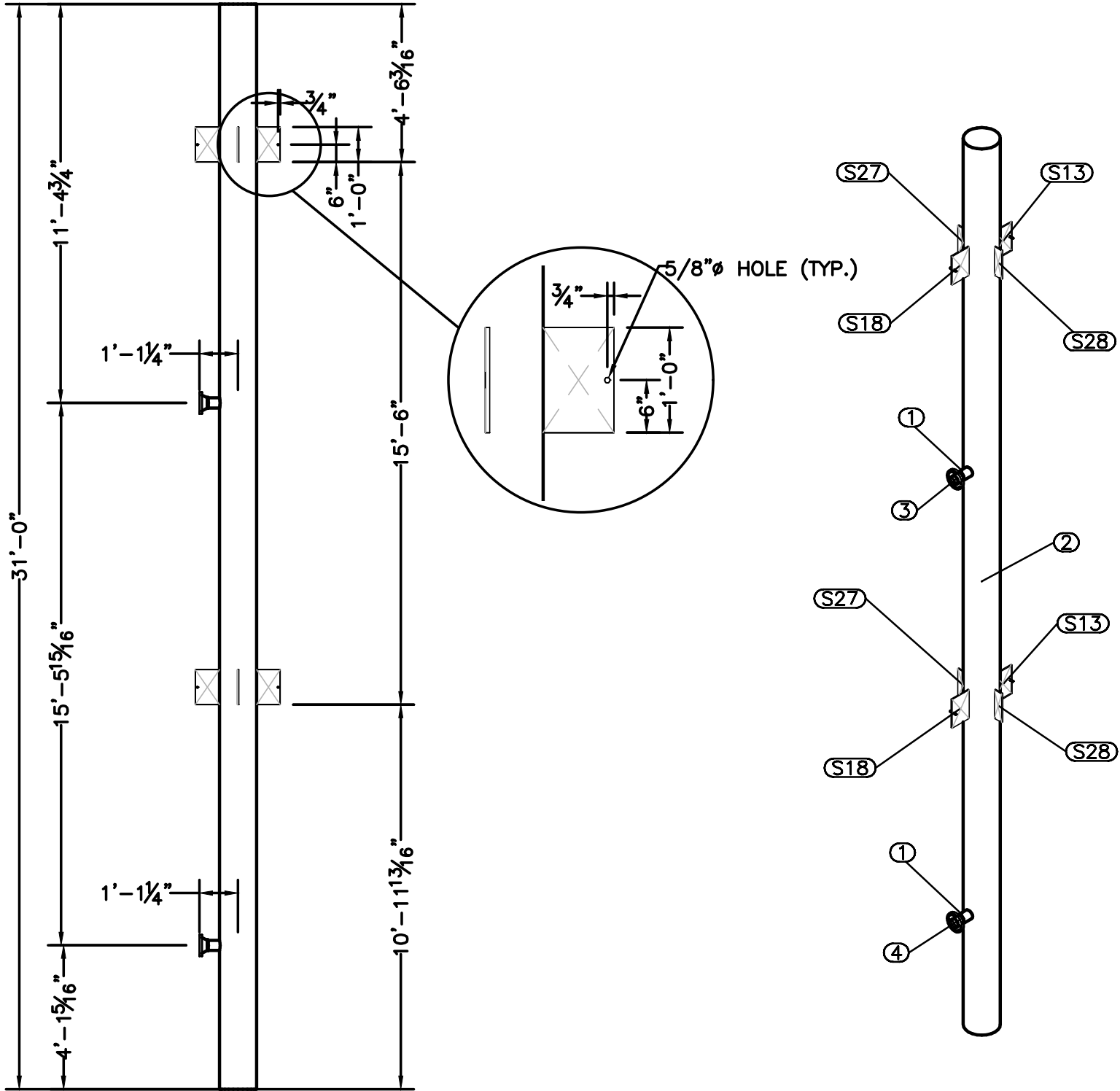
DRN JMM CHK APP JOB NO. 210140 REF.DWG. DRAWING NO./TRACKING NO. 210140-RISER-04-01	7/16/2021	WUSM RESEARCH BUILDING				QA/QC ACCEPT				FLANGE WEIGHT/ORIENTATION FITTING ORIENTATION BOLTS/CPLG'S/TH'D TIGHT SPOOL IDENTIFICATION					
		NRB				SPEC. NA				SPE. NA					
		MECH RISERS				ASME NA				X-RAY NA					
		SERVICE NAME 210140-RISER-04				HYDRO TEST NA				PWHT NA					
QTY. 1		SHT/NO 1 of 1		REV 0		MURPHY WPS#		DESCRIPTION		DRN		CHK		APP	



BOM-STEEL-PLATE				
Item No	Size	Description	Qty	Area (sq ft)
S12	12.000 x 7.625	ASTM A36 CS Plate 1/2" Thick	2	0.816
S26	12.000 x 4.875	ASTM A36 CS Plate 1/2" Thick	2	0.548
S17	12.000 x 7.875	ASTM A36 CS Plate 1/2" Thick	2	0.840
S25	12.000 x 3.875	ASTM A36 CS Plate 1/2" Thick	2	0.450

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Murphy-PFFS-SPOOL-BOM

Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
4	2	CS Sch40 Butt Weld Joint					3
1	2	Sch 40 SA-53B CS ERW Pipe Saddle			4"	4.000	12x3
3	2	150lb RF Sch 40 Bore SA105 CS WN Flg					3
2	1	Sch 40 SA-53B CS ERW Pipe PE	BEV	BEV	31'-0"	372.000	12

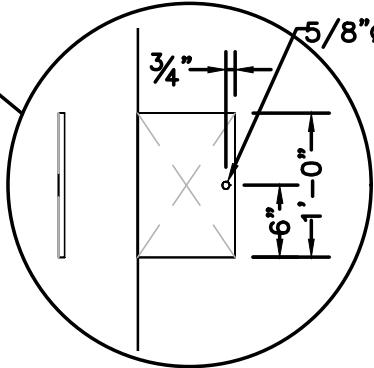
BOM-STEEL-PLATE

Item No	Size	Description	Qty	Area (sq ft)
S28	12.000 x 3.500	ASTM A36 CS Plate 1/2" Thick	2	0.414
S13	12.000 x 8.125	ASTM A36 CS Plate 1/2" Thick	2	0.864
S27	12.000 x 5.000	ASTM A36 CS Plate 1/2" Thick	2	0.560
S18	12.000 x 8.250	ASTM A36 CS Plate 1/2" Thick	2	0.877

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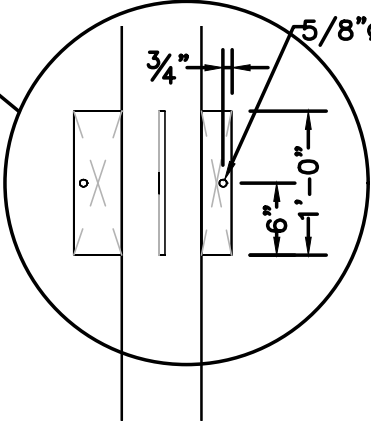
DRN	JMM	7/16/2021	WUSM RESEARCH BUILDING			QA/QC ACCEPT			FLANGE WEIGHT/ORIENTATION		
CHK			NRB			FITTING ORIENTATION			FITTING ORIENTATION		
APP			MECH RISERS			BOLTS/CPLG'S/TH'D TIGHT			BOLTS/CPLG'S/TH'D TIGHT		
JOB NO.	210140		SERVICE NAME			SPOOL IDENTIFICATION			SPOOL IDENTIFICATION		
REF.DWG.			210140-RISER-04			SPEC.			PWH		
DRAWING NO./TRACKING NO.	210140-RISER-04-03		QTY.			NA			NA		
	1		1 of 1			ASME			NA		
	1		1			X-RAY			NA		
	1		1			HYDRO TEST			NA		
	1		1			REV			DATE		
	1		1			DESCRIPTION			MURPHY WPS#		
	1		1			DRN			CHK		
	1		1			APP			APP		



BOM-STEEL-PLATE				
Item No	Size	Description	Qty	Area (sq ft)
S28	12.000 x 3.500	ASTM A36 CS Plate 1/2" Thick	2	0.414
S13	12.000 x 8.125	ASTM A36 CS Plate 1/2" Thick	2	0.864
S28	12.000 x 3.500	ASTM A36 CS Plate 1/2" Thick	2	0.414
S18	12.000 x 8.250	ASTM A36 CS Plate 1/2" Thick	2	0.877

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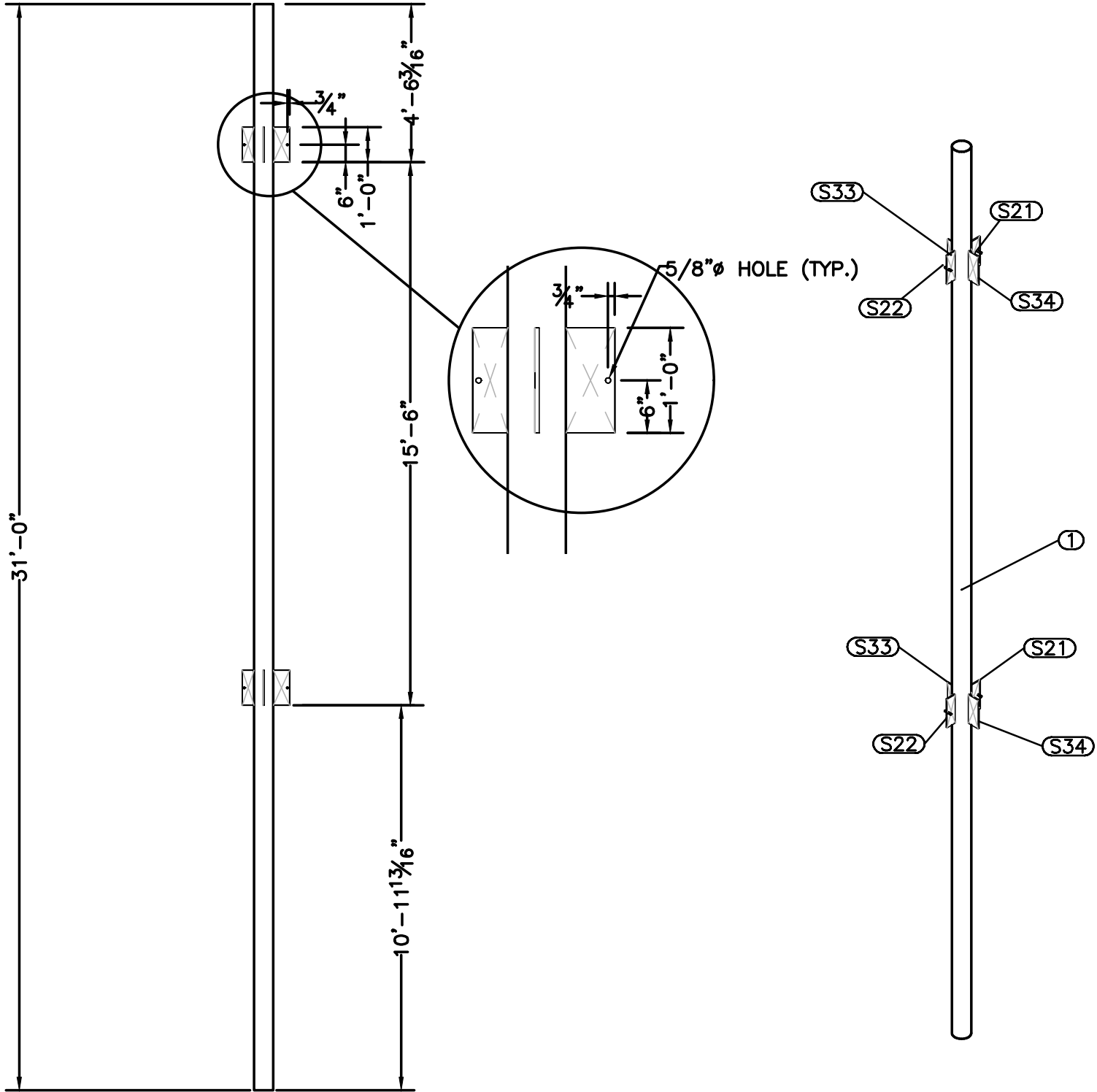
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Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
1	1	Sch 40 SA-53B CS ERW Pipe PE	BEV	BEV	31'-0"	372.000	6

BOM-STEEL-PLATE				
Item No	Size	Description	Qty	Area (sq ft)
S30	12.000 x 7.000	ASTM A36 CS Plate 1/2" Thick	2	0.755
S29	12.000 x 9.250	ASTM A36 CS Plate 1/2" Thick	2	0.974
S23	12.000 x 2.500	ASTM A36 CS Plate 1/2" Thick	2	0.317
S22	12.000 x 4.000	ASTM A36 CS Plate 1/2" Thick	2	0.463

DRN JMM		7/16/2021		WUSM RESEARCH BUILDING				QA/QC ACCEPT				FLANGE WEIGHT/ORIENTATION				<input type="checkbox"/>						
CHK				NRB								FITTING ORIENTATION				<input type="checkbox"/>						
APP				MECH RISERS								BOLTS/CPLG'S/TH'D TIGHT				<input type="checkbox"/>						
JOB NO.		210140										SPOOL IDENTIFICATION				<input type="checkbox"/>						
REF.DWG.				SERVICE NAME				210140-RISER-04				SPEC.		ASME	X-RAY	HYDRO	TEST	FWHT	COMMENTS			
												NA		NA	NA	NA	NA	NA	MURPHY WPS#			
								0														
DRAWING NO./TRACKING NO.				QTY.		SHT/NO		REV		REV				DATE		DESCRIPTION				DRN	CHK	APP
210140-RISER-04-05				1		1 OF 1		0														



Murphy-PFFS-SPOOL-BOM

Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
1	1	Sch 40 SA-53B CS ERW Pipe PE	BEV	BEV	31'-0"	372.000	6

BOM-STEEL-PLATE

Item No	Size	Description	Qty	Area (sq ft)
S22	12.000 x 4.000	ASTM A36 CS Plate 1/2" Thick	2	0.463
S33	12.000 x 3.250	ASTM A36 CS Plate 1/2" Thick	2	0.390
S21	12.000 x 5.563	ASTM A36 CS Plate 1/2" Thick	2	0.615
S34	12.000 x 4.813	ASTM A36 CS Plate 1/2" Thick	2	0.542

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☐ FLANGE WEIGHT/ORIENTATION

☐ FITTING ORIENTATION

☐ BOLTS/CPLG'S/TH'D TIGHT

☐ SPOOL IDENTIFICATION

QA/QC ACCEPT

SPEC. NA

ASME NA

X-RAY NA

HYDRO TEST NA

PWHT NA

REV 0

DATE

COMMENTS

MURPHY WPS#

WUSM RESEARCH BUILDING

NRB

MECH RISERS

SERVICE NAME

210140-RISER-04

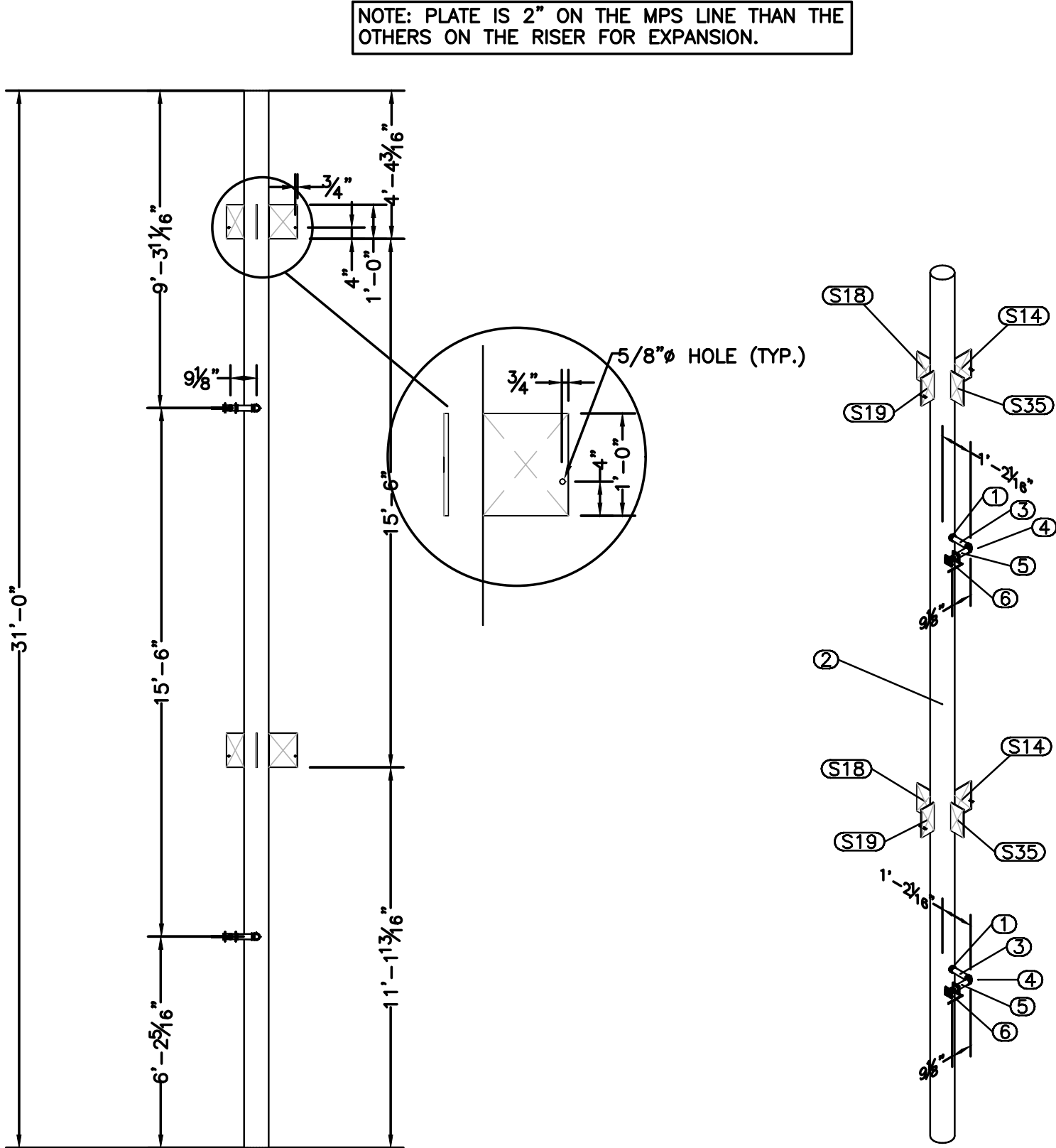
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210140-RISER-04-06

QTY. 1

SHT/NO 1 of 1

REV 0



Murphy-PFFS-SPOOL-BOM

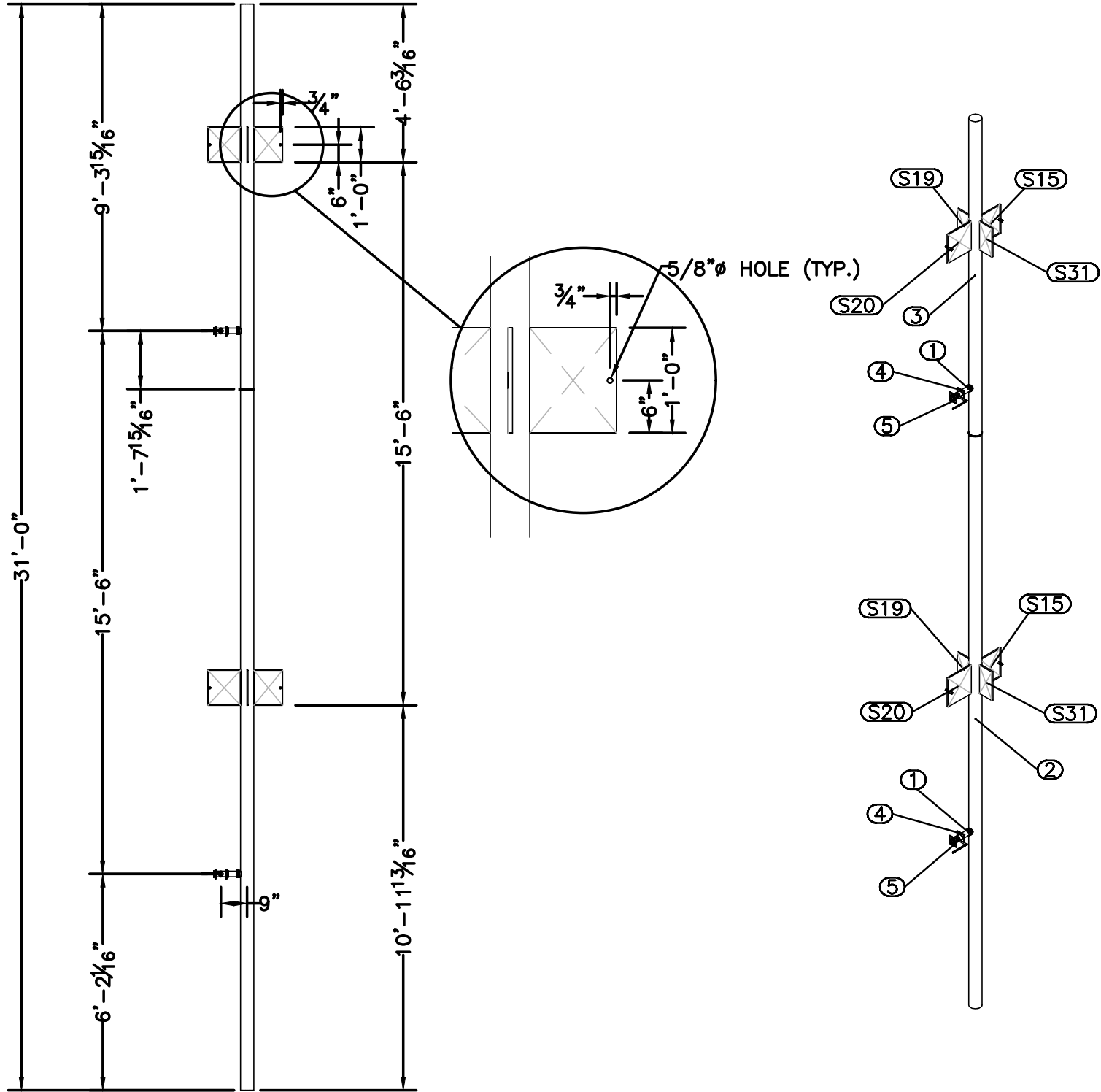
Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
6	2	83A-140 CS 1500 lb 3pc FP Ball Valve THD					1-1/2
4	2	3M A105 FS SW 90 Deg EI					1-1/2
1	2	3000# FS Soc-0-Let			1 3/8"	1.375	1-1/2x8
2	1	Sch 40 SA-53B CS Smls Pipe PE	BEV	BEV	31'-0"	372.000	8
5	2	Sch 80 A106B CS SMLS Pipe	SW	MPT	6"	6.000	1-1/2
3	2	Sch 80 A106B CS SMLS Pipe	SW	SW	7 3/8"	7.374	1-1/2

BOM-STEEL-PLATE

Item No	Size	Description	Qty	Area (sq ft)
S18	12.000 x 8.250	ASTM A36 CS Plate 1/2" Thick	2	0.877
S14	12.000 x 10.000	ASTM A36 CS Plate 1/2" Thick	2	1.047
S35	12.000 x 6.250	ASTM A36 CS Plate 1/2" Thick	2	0.682
S19	12.000 x 6.250	ASTM A36 CS Plate 1/2" Thick	2	0.682

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				FITTING ORIENTATION									
CHK		NRB	X-RAY	ASME	NA	NA	NA	HYDRO TEST	PWHT	COMMENTS	MURPHY WPS#		
APP				NA	NA	NA	NA						
JOB NO.	210140	SERVICE NAME											
REF.DWG.		210140-RISER-04											
DRAWING NO./TRACKING NO.	210140-RISER-04-07	QTY.	1	SHT/NO	1 of 1	REV	0						



Murphy-PFFS-SPOOL-BOM

Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
5	2	83A-140 CS 1500 lb 3pc FP Ball Valve THD					1-1/2
1	2	3000# FS Soc-O-Let			1 3/8"	1.375	1-1/2x4
2	1	XH SA-53B CS SMLS Pipe	BEV	BEV	20'-0"	240.000	4
3	1	XH SA-53B CS SMLS Pipe	BEV	BEV	10'-11 7/8"	131.860	4
4	2	Sch 80 A106B CS SMLS Pipe	SW	MPT	4"	4.000	1-1/2

BOM-STEEL-PLATE

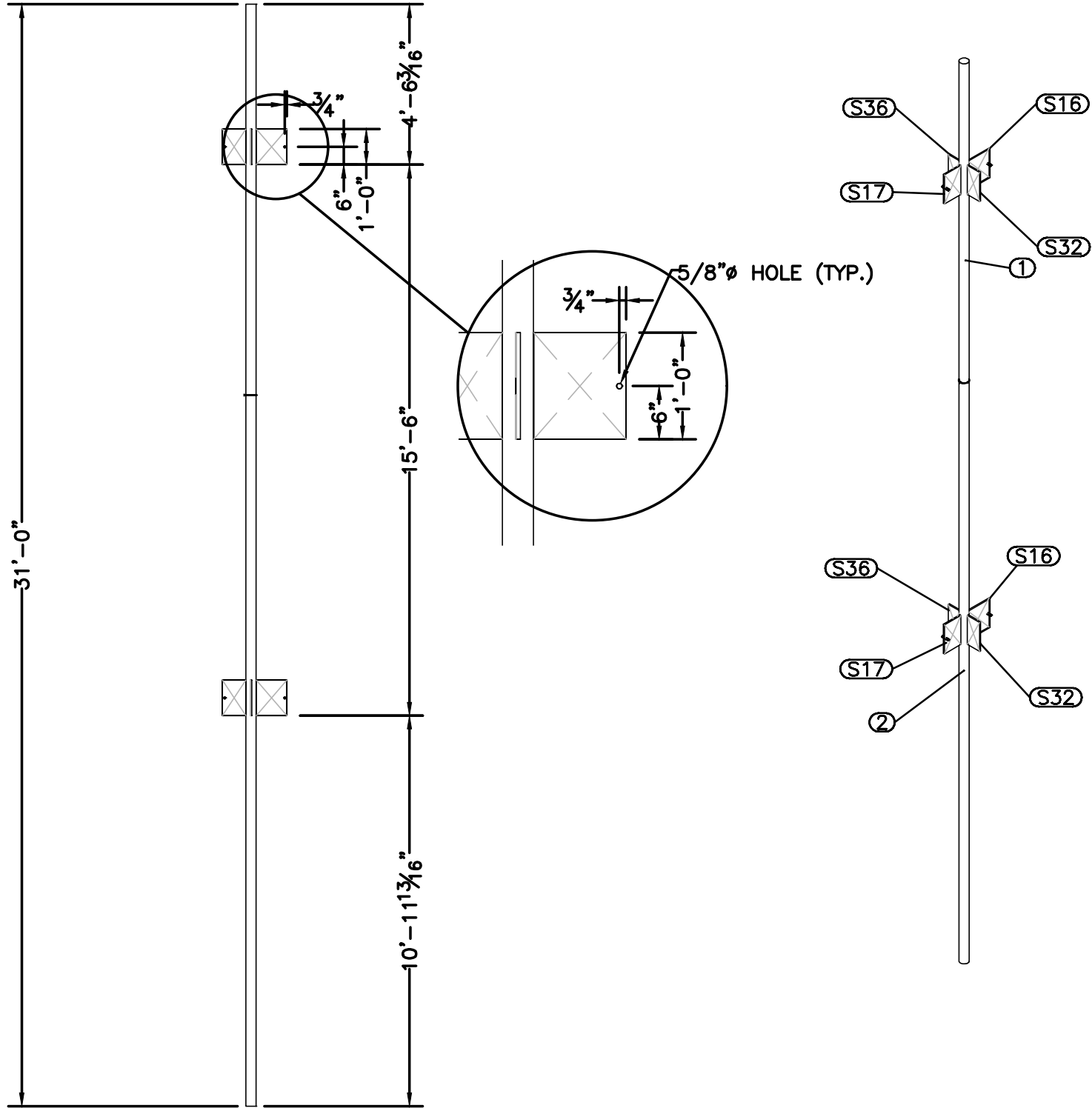
Item No	Size	Description	Qty	Area (sq ft)
S31	12.000 x 6.000	ASTM A36 CS Plate 1/2" Thick	2	0.657
S15	12.000 x 9.875	ASTM A36 CS Plate 1/2" Thick	2	1.035
S19	12.000 x 6.250	ASTM A36 CS Plate 1/2" Thick	2	0.682
S20	12.000 x 11.250	ASTM A36 CS Plate 1/2" Thick	2	1.169

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DRN JMM CHK APP JOB NO. 210140 REF.DWG. DRAWING NO./TRACKING NO. 210140-RISER-04-08	7/16/2021	WUSM RESEARCH BUILDING		QA/QC ACCEPT		FLANGE WEIGHT/ORIENTATION		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
		NRB		FITTING ORIENTATION		BOLTS/CPLG'S/TH'D TIGHT					
		MECH RISERS		SPOOL IDENTIFICATION		SPOOL IDENTIFICATION					
		SERVICE NAME 210140-RISER-04		SPEC. NA		HYDRO TEST NA			PWHT NA		COMMENTS
QTY. 1		SHT/NO 1 of 1		REV 0		DATE		MURPHY WPS#		DRN CHK APP	



Murphy-PFFS-SPOOL-BOM

Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
1	1	XH SA-53B CS SMLS Pipe	BEV	BEV	10'-11 7/8"	131.860	3
2	1	XH SA-53B CS SMLS Pipe	BEV	BEV	20'-0"	240.000	3

BOM-STEEL-PLATE

Item No	Size	Description	Qty	Area (sq ft)
S16	12.000 x 10.375	ASTM A36 CS Plate 1/2" Thick	2	1.084
S32	12.000 x 5.875	ASTM A36 CS Plate 1/2" Thick	2	0.645
S36	12.000 x 5.500	ASTM A36 CS Plate 1/2" Thick	2	0.609
S17	12.000 x 7.875	ASTM A36 CS Plate 1/2" Thick	2	0.840

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☐ FITTING ORIENTATION

☐ BOLTS/CPLG'S/TH'D TIGHT

☐ SPOOL IDENTIFICATION

QA/QC ACCEPT

SPEC.

NA

0

ASME

NA

REV

X-RAY

NA

DATE

HYDRO TEST

NA

PWHT

NA

COMMENTS

MURPHY WPS#

DRN JMM

7/16/2021

CHK

APP

JOB NO.

210140

REF.DWG.

DRAWING NO./TRACKING NO.

210140-RISER-04-09

QTY.

1

SHT/NO

1 of 1

REV

0

WUSM RESEARCH BUILDING

NRB

MECH RISERS

SERVICE NAME

210140-RISER-04

DESCRIPTION