



**ITD OVERLOAD VEHICLE
BRIDGE PERMIT**

Permit No. 14656197

BRIDGE ANALYSIS BY:

ANALYST: Shanon Murgoitio, P.E.
 DATE: 7/21/2014
 TIME: 5:00 P.M.

PERMIT REQUEST FOR:

COMPANY: Mammoet
 UNIT: Calumet Reactor T04 Rev 00
 DRAWING NO.: 15010242-P188-D-T04-1/1-00

Vehicle configuration and route are recorded on the attached sheets
 This document is not valid without these attachments.

SPECIAL BRIDGE REQUIREMENTS:

The load is traveling from Lewiston, Idaho to the Idaho/Montana border via US-95 and SH-200. There are several bridges along this route that cannot be crossed by the load. Four bridges require a detour route (10520, 18480, 33700, & 19050) and one requires a temporary bridge over (19080). In addition, there is one bridge (19065) that requires the load to alter its configuration to cross. There is a set of special bridge crossing requirements that apply to all bridges. The requirements shown for specific bridges are in addition to the requirements for all bridges.

Route BrKey	Milepost	Requirements	Traffic Control
For all Bridges on Route		For bridges without median barriers: * The load must travel down the center of the bridge. * The load must be the only vehicle on the bridge. For bridges with median barriers: * The load must travel down the center of the travelway. * The load must be the only vehicle in direction of travel. * The load must detour around the bridge.	* Shall be in accordance with the approved transportation and traffic control plans.
US 95 Ramp NBL 10520	0.168 (Lewiston)		
US 95 18480	319.064	* The load must detour around the bridge.	
US 95 18511	344.004	* Speed must not exceed 10 mph	
US 95 18520	352.855	* Speed must not exceed 10 mph	
US 95 18535	360.460	* Speed must not exceed 10 mph	
US 95 18545	361.541	* Speed must not exceed 10 mph	
US 95 18570	378.667	* Speed must not exceed 10 mph	
US 95 18575	381.084	* Speed must not exceed 10 mph	
US 95 18600	393.350	* Speed must not exceed 10 mph	
US 95 33550	411.604	* Speed must not exceed 10 mph	
US 95 18680	429.398 (Coeur d'Alene)	* Speed must not exceed 10 mph	
US 95 18690	430.592	* Speed must not exceed 10 mph	



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DRAWING NO.:	15010242-P188-D-T04-1/1-00
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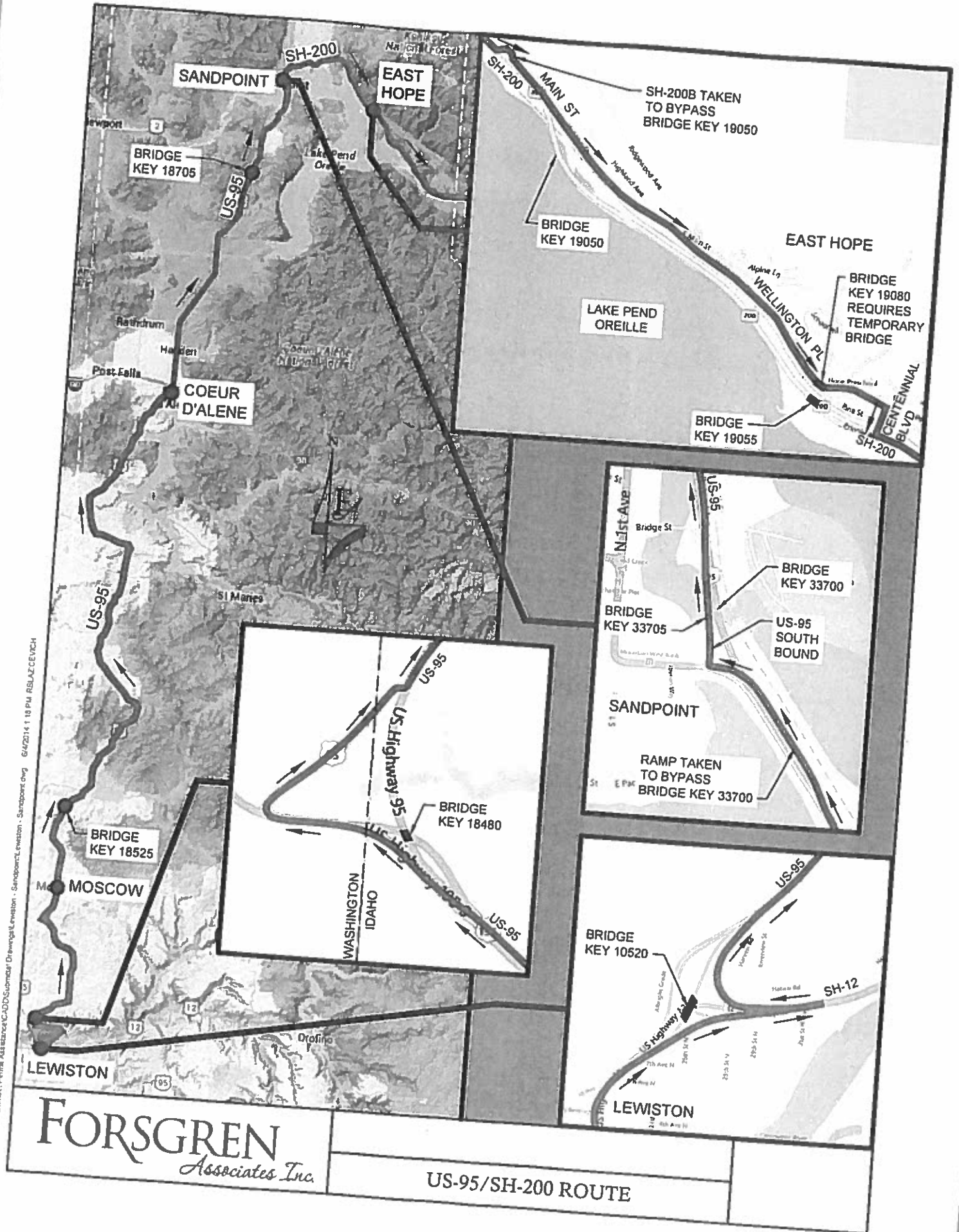
US 95 18705	461.315	* Speed must not exceed 10 mph
US 95 18715	471.743	* Speed must not exceed 10 mph
US 95 33700	473.853 (Sandpoint)	* The load must detour around the bridge.
US 95 SB off Ramp 33705	10.055	* Speed must not exceed 10 mph
SH 200 19035	38.660	* Speed must not exceed 10 mph
SH 200 19050	44.770 (Hope)	* The load must detour around the bridge.
SH 2008 19080	45.925	<ul style="list-style-type: none"> * 120' long temporary bridge must be erected in accordance with drawing no. 15010242-P188-D-G01-1/2-04 and used to bridge over structure 19080. * Speed must not exceed 5 mph while crossing temporary bridge. * No sudden stops or starts shall be made on the temporary bridge. * The load must be the only vehicle on the temporary bridge. * The distance between the bottom of the temporary bridge and top of the bridge deck of structure 19080 must be greater than zero and field verified during the move. * ITD can only authorize work on ITD property. Hauler must obtain permission(s) from adjacent property owner of agency if the temporary bridge will extend outside ITD right-of way.
SH 200 19065	51.592	<ul style="list-style-type: none"> * The load must be configured as shown in drawing no. 15010242-P188-D-T18-1/1-02 to cross this bridge. * Speed must not exceed 10 mph
SH 200 19071	54.563	* Speed must not exceed 10 mph

PERMIT EXTENSIONS: Bridge permit may be valid for extensions if there have been no changes in the bridges on the route per the most recent issue of the Bridge Factor List.

Date of Extension	Permit Writer Name	Date of Bridge Factor List Referenced

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P:131377 - Mainport Permi Assaznce\CD\GIS\mcar Drawings\LE\enston - Sandpoint\enston - Sandpoint.dwg 6/4/2014 1:10 PM RELAZGEVICH

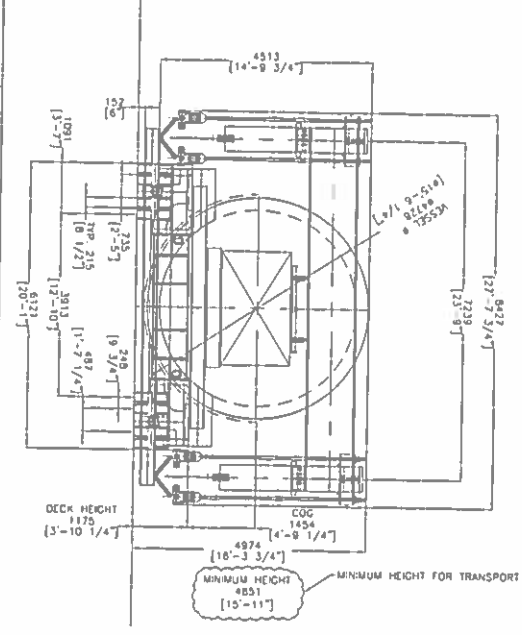
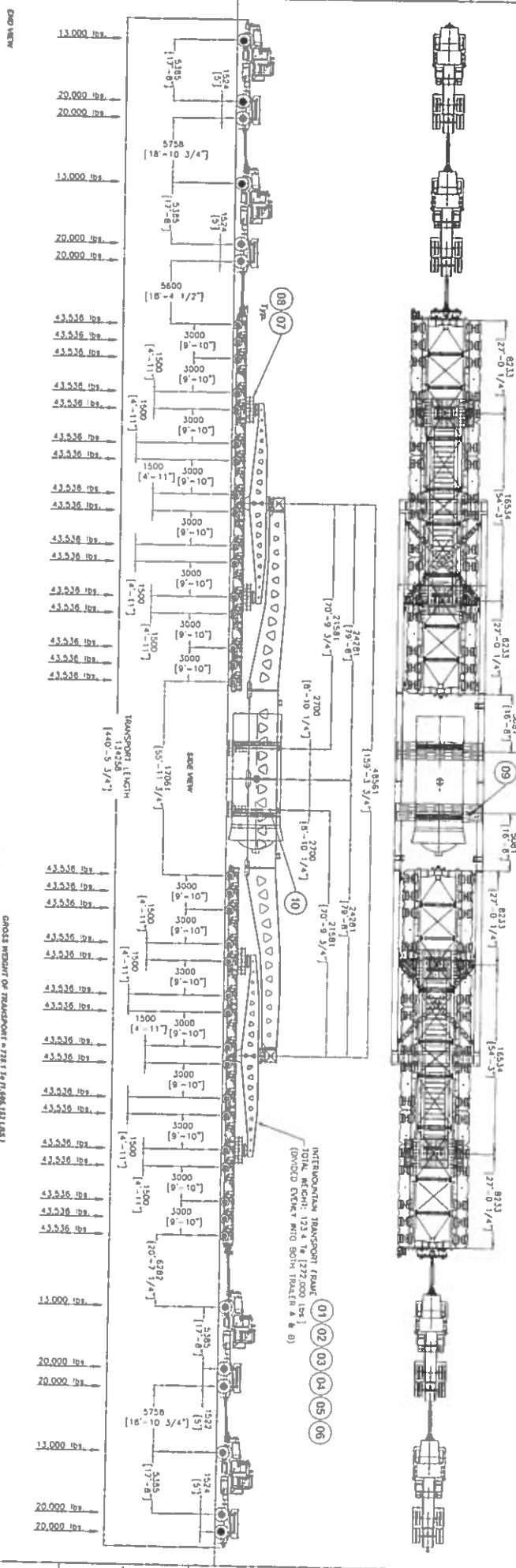


FORSGREN
Associates Inc.

US-95/SH-200 ROUTE

REACTOR
297.8 Tc (656,514 Lbs.)
(INCLUDING SADDLES)

Figure 1



MATERIALS LIST

POS	QTY	DESCRIPTION	MATERIAL	DIMENSIONS	WEIGHT
01	4	Intermediate Frame Steel	A36	159'-3 3/4"	728.1 Tc
02	4	Intermediate Axle	SAE 5140	197 Tc	43,536 lbs
03	4	Intermediate Axle Hanger	SAE 5140	99 Tc	21,768 lbs
04	2	Intermediate Axle Hanger	SAE 5140	22 Tc	5,442 lbs
05	4	Intermediate Drive Shaft	SAE 5140	640 lbs	640 lbs
06	4	Intermediate Drive Shaft Hanger	SAE 5140	640 lbs	640 lbs
07	4	Intermediate Drive Shaft Hanger	SAE 5140	640 lbs	640 lbs
08	4	Intermediate Drive Shaft Hanger	SAE 5140	640 lbs	640 lbs
09	4	Intermediate Drive Shaft Hanger	SAE 5140	640 lbs	640 lbs
10	4	Intermediate Drive Shaft Hanger	SAE 5140	640 lbs	640 lbs

LOAD DESCRIPTION: Reactor

VEHICLE DESCRIPTION: [2] 20' 16 L Road Style Goldhofer w/ Frame

UNITS:	METRIC	ENGLISH
LOAD WEIGHT:	297.8 Tc	656,514 lbs
SADDLE WEIGHT:	0.0 Tc	0.0 lbs
FRAME WEIGHT:	153.7 Tc	339,628 lbs
TURNABLE WEIGHT:	0.0 Tc	0.0 lbs
TRUCK WEIGHT:	96.2 Tc	212,000 lbs
TRAILER WEIGHT:	180.4 Tc	397,810 lbs
TOTAL WEIGHT:	728.1 Tc	1,605,152 lbs
LOAD/AXLE	19.7 Tc	43,536 lbs
LOAD/WHEEL	9.9 Tc	21,768 lbs
LOAD/AXLE RICH	2.2 Tc	5,442 lbs
LOAD/WHEEL RICH	0.3 Tc	640 lbs

GENERAL NOTES

- FIELD VERIFY ALL DIMENSIONS
- THE CLIENT IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE LOAD TO BE TRANSPORTED
- THE CLIENT IS TO DETERMINE AND CONFIRM THE STABILITY OF THE SUPPORT POINTS TO BE UTILIZED DURING THE TRANSPORT OF THE LOAD.
- SECURE CARGO ONTO THE TRAILER USING LASHING MATERIAL TO PREVENT SLIDING AND/OR TIPPING OF THE LOAD.
- ALL CHAINS SHALL BE 1/2" 11,200 LB CAPACITY (SHELLS) AND TIGHTENED WITH 3/4" PLYWOOD OR ANTI SLIP MATERIAL TO BE USED BETWEEN ALL STEEL CONTACT AREAS TO REDUCATE FRICTION.
- MAXIMUM WEIGHT AND DIMENSIONS SHOWN FOR REACTOR TRANSPORT SUBJECT TO FINAL ENGINEERING

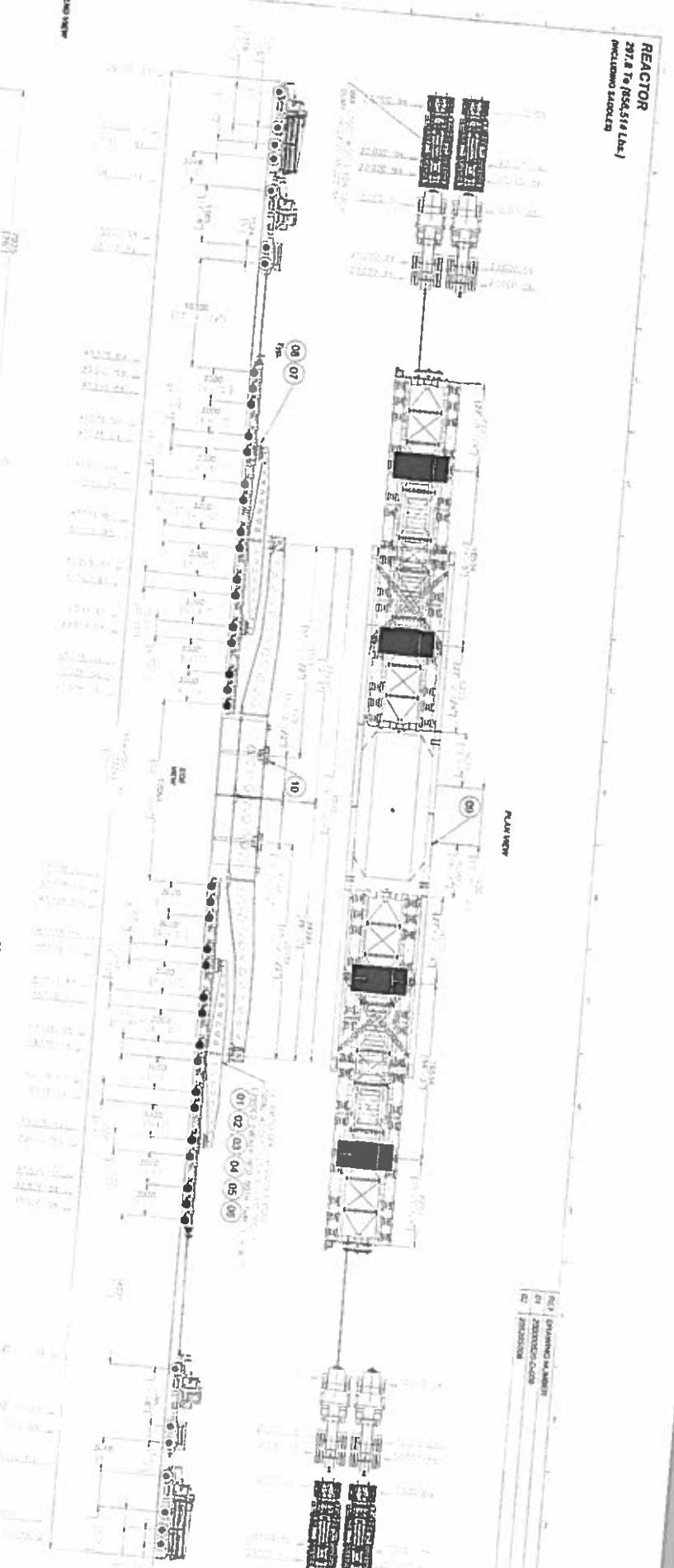
MANNOET

Permit Transport of Reactor with [2] 20' 16 L Road Style Goldhofer w/ Frame

Great Falls, Montana
Ch2M HILL / Calumet Montana Refining

PROJECT NO: 7000108105
SCALE: NTS
DATE: 1/1/00

FOR PERMIT



Configuration for crossing bridge 19065 on SH 200 at M.P. 51.592

MATERIALS LIST

NO.	QTY	DESCRIPTION	MATERIAL	REMARKS
01	4	Intermediate Long Axle's		
02	4	Intermediate Mid Axle's		
03	4	Intermediate Short Axle's		
04	4	Intermediate Trailer Axle's		
05	4	Intermediate Trailer Axle's		
06	4	Intermediate Trailer Axle's		
07	4	Intermediate Trailer Axle's		
08	4	Intermediate Trailer Axle's		
09	4	Intermediate Trailer Axle's		
10	4	Intermediate Trailer Axle's		

LOAD DESCRIPTION: Reactor
VEHICLE DESCRIPTION: [2x] 20' 16 L Road Style Goldhofer w/Frame

UNITS:	METRIC	ENGLISH
LOAD WEIGHT:	297.8 Tg	656,514 lbs
SADDLE WEIGHT:	0.0 Tg	0.0 lbs
TRUCK WEIGHT:	153.7 Tg	338,828 lbs
TRUCK WEIGHT:	0.0 Tg	0.0 lbs
TRAILER WEIGHT:	96.2 Tg	212,000 lbs
TRAILER WEIGHT:	180.4 Tg	397,610 lbs
TOTAL WEIGHT:	728.1 Tg	1,605,352 lbs
LOADLINE	18.7 Tg	43,536 lbs
LOAD/Axle	9.9 Tg	21,768 lbs
LOAD/Axle	2.5 Tg	5,442 lbs
LOAD/Axle	0.3 Tg	640 lbs

GENERAL NOTES

- FIELD VERIFY ALL DIMENSIONS
- THE CLIENT IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE LOAD TO BE TRANSPORTED
- THE CLIENT TO VERIFY AND CORRECT THE SURFACING OF THE SUPPORT POINTS TO BE UTILIZED DURING THE TRANSPORT OF THE LOAD
- SECURE AND/OR TIE THE TRAILER USING LASHING MATERIAL TO PREVENT ALL CHAINS AND/OR TIE OFF THE LOAD
- ANCHORS (NOT SHOWN) TO BE CAPACITY RATED TO BE USED WITH ALL CONTACT POINTS WITH LOAD CAPACITY RATED TO BE USED WITH CONTACT AREAS TO PROTECT PAVEMENT
- SUPPORT WEIGHT AND DIMENSIONS SHOWN ON REACTOR TRANSPORT SUBJECT TO FINAL ENGINEERING

FOR PERMIT

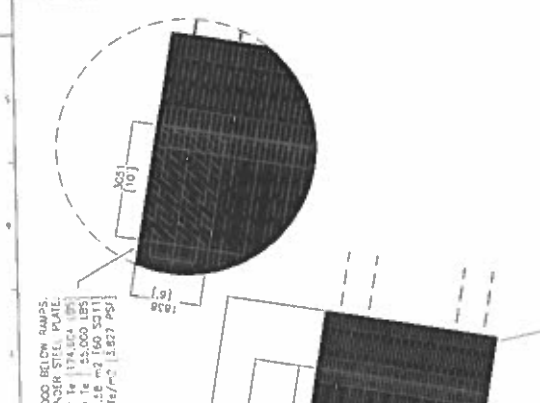
HAMMOET
15010242 - P188 - D - T18 - 7/1 - 02

PROJECT: CH2M HILL / Calumet Montana Refining
Client: Great Falls, Montana
Title: Permit Transport of Reactor over Bridge # 19065 with [2x] 20' 16 L Road Style Goldhofer w/Frame

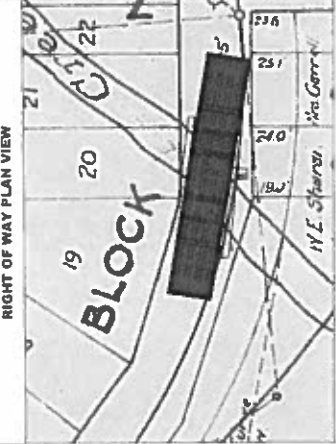
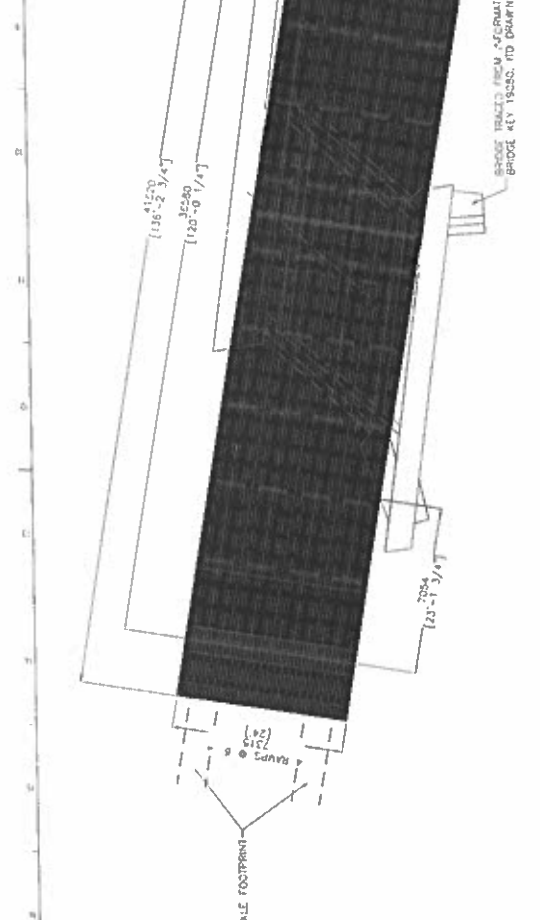
DATE: 7/1/2018
SCALE: AS SHOWN
DRAWING NUMBER: 15010242 - P188 - D - T18 - 7/1 - 02

NOTES

- THIS DRAWING IS FOR INFORMATION ONLY.
- THIS DRAWING IS BASED ON ACTUAL SITE MEASUREMENTS.
- SUPERVISOR MAY MAKE MINOR FIELD ADJUSTMENTS WHICH DO NOT AFFECT THE STRUCTURAL INTEGRITY OF THE BRIDGE.
- 3/4" PLYWOOD OR ACTI-SIP MATERIAL TO BE USED BETWEEN ALL STEEL CONTACT AREAS TO PROMOTE FRICTION.
- ALL DIMENSIONS SHOWN ARE IN FEET (1" = 2.234 8 BARS).
- REFER TO LATEST CALCULATION REVISION OF MAMMOET DOCUMENT 1501031241129-028.



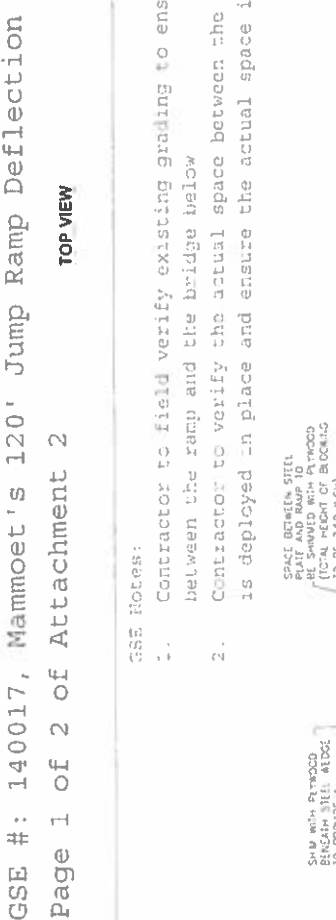
PLYWOOD BELOW RAMPS.
PRESSURE UNDER STEEL PLATE.
LAY UP REACTION RAMP 23.2 Tc (17A, 16A, 15B)
RAMP WEIGHT 24.9 Tc (55,000 LBS)
SPREADING AREA 51.6 m² (160 SQ FT)
PRESSURE 18.7 Tc/m² (1,527 PSF)



GSE # : 140017, Mammoet's 120' Jump Ramp Deflection
Page 1 of 2 of Attachment 2

GSE Notes:

- Contractor to field verify existing grading to ensure sufficient space at any point between the ramp and the bridge below
- Contractor to verify the actual space between the ramp and the bridge after the ramp is deployed in place and ensure the actual space is sufficient.



04	For Information	15/01/14	1501031241129-028
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49	For Information	15/01/14	1501031241129-028
50	For Information	15/01/14	1501031241129-028

CLIENT CH2M HILL / Calumet Montana Refining
PROJECT Great Falls, Montana
TITLE Strong Creek Bridge Crossing

SCALE NIS SIZE: D
SAP 7000116116
PROJECT 15010242-P198-D-001
DRAWING NUMBER 15010242-P198-D-001-172-04

REVISION

NO.	DATE	DESCRIPTION
1		BRIDGE KEY PLAN (DRAWING NO. 1873-A SHEET 1 OF 1)
2		DETAIL MAP SHOWING RIGHT OF WAY EAST-HOPE ROAD

Temporary bridge to be used to bridge over 19080 on SH 200B at M.P. 45.925