INSTRUMENT IDENTIFICATION LETTERS

AA	ALARM ANALYZER
AAH	ALARM ANALYZER HIGH
AC	ANALYSIS CONTROLLER
AE	ANALYSIS ELEMENT
AET	ANALYSIS ELEMENT TRANSMITTER
AI	ANALYSIS INDICATOR
AIC	ANALYSIS INDICATING CONTROLLER
AP	ANALYSIS POINT
AT	ANALYSIS TRANSMITTER
BAH	FIRE ALARM HIGH
BE	FIRE ELEMENT
BI	BTU INDICATOR
BS	FIRE DETECTOR SWITCH
BSH	FIRE DETECTOR SWITCH HIGH
DE	DENSITY (OR SPECIFIC GRAVITY) ELEMENT
DI	DENSITY (OR SPECIFIC GRAVITY) INDICATOR
DPI	DIFFERENTIAL PRESSURE INDICATOR
DR	DENSITY (OR SPECIFIC GRAVITY) RECORDER
DT	DENSITY (OR SPECIFIC GRAVITY) TRANSMITTER
ESD	EMERGENCY SHUT DOWN
FA	FLOW ALARM
FAH	FLOW ALARM HIGH
FAHH	FLOW ALARM HIGH HIGH
FC	FLOW CONTROLLER
FCV	FLOW CONTROL VALVE
FE	FLOW ELEMENT
FG	FLOW INDICATOR SIGHT GLASS
FI	FLOW INDICATOR
FIC	FLOW INDICATING CONTROLLER
FIS	FLOW INDICATING SWITCH
FIT	FLOW INDICATING TRANSMITTER
FHC	FLOW MANUAL CONTROL
FO	RESTRICTION ORIFICE
FQ	FLOW TOTALIZER
FQI	FLOW TOTALIZING INDICATOR
FQIS	FLOW QUANTITY INDICATOR SWITCH
FQR	FLOW TOTALIZING RECORDER
FR	FLOW RECORDER
FRC	FLOW RECORDING CONTROLLER
FS	FLOW SWITCH
FSH	FLOW SWITCH HIGH
FSHH	FLOW SWITCH HIGH HIGH
FT	FLOW TRANSMITTER
FV	FLOW CONTROL VALVE
FY	FLOW COMPUTER OR RELAY
HC	HAND CONTROL
HCV	HAND CONTROL VALVE
HIC	HAND INDICATING CONTROLLER
HMS	HAND MOTOR SWITCH
HS	HAND SWITCH
HSC	HAND SWITCH CLOSE
HSO	HAND SWITCH OPEN
HV	HAND VALVE
LA	LEVEL ALARM
LAL	LEVEL ALARM LOW
LAH	LEVEL ALARM HIGH
LAHH	LEVEL ALARM HIGH HIGH
LC	LEVEL CONTROLLER
LCS	LEVEL CONTROL SWITCH
LCV	LEVEL CONTROL VALVE
LG	LEVEL GAUGE GLASS
LHC	LEVEL MANUAL CONTROL
LI	LEVEL INDICATOR (OTHER THAN LG)
LIC	LEVEL INDICATING CONTROLLER
LIT	LEVEL INDICATING TRANSMITTER
LR	LEVEL RECORDER
LS	LEVEL SWITCH
LSH	LEVEL SWITCH HIGH
LSHH	LEVEL SWITCH HIGH HIGH
LT	LEVEL TRANSMITTER
LV	LEVEL CONTROL VALVE
LY	LEVEL RELAY
MA	MOISTURE ALARM
ME	MOISTURE ELEMENT
MC	MOISTURE CONTROLLER
MNT	MOISTURE ANALYZER / TRANSMITTER
MOV	MOTOR OPERATED VALVE
MR	MOISTURE RECORDER
MS	MOISTURE SWITCH
MT	MOISTURE TRANSMITTER
PA	PRESSURE ALARM
PAH	PRESSURE ALARM HIGH
PAHH	PRESSURE ALARM HIGH HIGH
PC	PRESSURE CONTROLLER
PCV	PRESSURE CONTROL VALVE
PDAH	PRESSURE DIFFERENTIAL ALARM HIGH
PDI	PRESSURE DIFFERENTIAL INDICATOR
PDIC	PRESSURE DIFFERENTIAL INDICATING CONTROLLER
PDIS	PRESSURE DIFFERENTIAL INDICATING SWITCH
PDIT	PRESSURE DIFFERENTIAL INDICATING TRANSMITTER
PDR	PRESSURE DIFFERENTIAL RECORDER
PDS	PRESSURE DIFFERENTIAL SWITCH
PDSH	PRESSURE DIFFERENTIAL SWITCH HIGH
PDSHH	PRESSURE DIFFERENTIAL SWITCH HIGH HIGH
PDT	PRESSURE DIFFERENTIAL TRANSMITTER
PHC	PRESSURE MANUAL CONTROL
PI	PRESSURE INDICATOR
PIC	PRESSURE INDICATING CONTROLLER
PIT	PRESSURE INDICATING TRANSMITTER
PR	PRESSURE RECORDER
PRC	PRESSURE RECORDING CONTROLLER
PS	PRESSURE SWITCH
PSE	RUPTURE DISK
PSH	PRESSURE SWITCH HIGH
PSHH	PRESSURE SWITCH HIGH HIGH
PSL	PRESSURE SWITCH LOW
PSLL	PRESSURE SWITCH LOW LOW
PSV	PRESSURE SAFETY / RELIEF VALVE
PT	PRESSURE TRANSMITTER
PVRV	PRESSURE VACUUM RELIEF VALVE
PY	PRESSURE RELAY
SE	TACHOMETER PICKUP
SI	TACHOMETER
SS	SPEED SWITCH
ST	SPEED TRANSMITTER
SY	SPEED RELAY
TA	TEMPERATURE ALARM
TAH	TEMPERATURE ALARM HIGH
TAHH	TEMPERATURE ALARM HIGH HIGH
TC	TEMPERATURE CONTROLLER
TCV	TEMPERATURE CONTROL VALVE (SELF-CONTAINED)
TE	TEMPERATURE ELEMENT (W / THERMOWELL)
THC	TEMPERATURE MANUAL CONTROL
TI	TEMPERATURE INDICATOR
TIC	TEMPERATURE INDICATING CONTROLLER
TIT	TEMPERATURE INDICATING TRANSMITTER
TQI	TEMPERATURE AVERAGER
TR	TEMPERATURE RECORDER
TS	TEMPERATURE SWITCH
TSH	TEMPERATURE SWITCH HIGH
TSHH	TEMPERATURE SWITCH HIGH HIGH
TT	TEMPERATURE TRANSMITTER
TV	TEMPERATURE CONTROL VALVE OR LOUVER
TW	THERMOWELL
VA	VIBRATION ALARM
VAH	VIBRATION ALARM HIGH
VAHH	VIBRATION ALARM HIGH HIGH
VI	VIBRATION INDICATOR
VS	VIBRATION SWITCH
VT	VIBRATION TRANSMITTER
XA	RECORDER MEMORY ALARM
XC	SHUTDOWN CONTROLLER
XP	ANNUNCIATOR POINT
XS	PROVER DETECTOR SWITCH
YC	SEQUENCE CONTROLLER
ZI	PIG SIGNAL
ZIS	PIG SIGNAL SWITCH
ZIC	VALVE POSITION INDICATOR (CLOSED)
ZIO	VALVE POSITION INDICATOR (OPEN)
ZL	VALVE POSITION
ZLC	VALVE POSITION INDICATOR LAMP (CLOSED)
ZLO	VALVE POSITION INDICATOR LAMP (OPEN)
ZSC	VALVE POSITION INDICATOR SWITCH (CLOSED)
ZSO	VALVE POSITION INDICATOR SWITCH (OPEN)
ZT	VALVE POSITION TRANSMITTER

ALARMS, SWITCHES, AND ANNUNCIATORS MAY HAVE SUFFIX LETTERS AS FOLLOWS:

L	LOW	DENOTES ALARM ONLY
LL	EXTRA LOW	DENOTES SHUTDOWN
H	HIGH	DENOTES ALARM ONLY
HH	EXTRA HIGH	DENOTES SHUTDOWN

INTERLOCK LOGIC

- SD — SHUTDOWN
- SD1 — SHUTDOWN (SPECIFIC SEQUENCE)
- AND — OUTPUT ONLY IF ALL INPUTS PRESENT
- OR — OUTPUT IF ANY INPUT(S) PRESENT
- I — COMPLEX OR UNDEFINED INTERLOCK

LINE SYMBOLS

- NEW PROCESS PIPING
- EXISTING PROCESS LINES
- NEW UTILITY PIPING
- EXISTING UTILITY
- INSTRUMENT/TUBING
- HEAT TRACED
- SYSTEM
- PNEUMATIC
- UNDEFINED
- ELECTRICAL
- HYDRAULIC LINE
- MECHANICAL LINK
- SONIC GUIDED
- CAPILLARY
- BINARY PNEUMATIC
- BINARY ELECTRIC
- VENDOR LIMITS

INSTRUMENT SYMBOLS

- LOCAL INSTRUMENT
- INSTRUMENT MOUNTED ON PANEL (PRIMARY FRONT)
- INSTRUMENT MOUNTED BEHIND PANEL (PRIMARY BACK)
- INSTRUMENT MOUNTED ON PANEL (AUXILIARY FRONT)
- INSTRUMENT MOUNTED BEHIND PANEL (AUXILIARY BACK)
- INSTRUMENT FOR TWO FUNCTIONS OR TWO MEASURED VARIABLES
- PROGRAMMABLE LOGIC CONTROL (LOCAL)
- STATION PROGRAMMABLE LOGIC CONTROL (PRIMARY FRONT)
- STATION PROGRAMMABLE LOGIC CONTROL (PRIMARY BACK)
- STATION PROGRAMMABLE LOGIC CONTROL (AUXILIARY FRONT)
- STATION PROGRAMMABLE LOGIC CONTROL (AUXILIARY BACK)
- SHARED DISPLAY, SHARED CONTROL (PRIMARY FRONT)
- SHARED DISPLAY, SHARED CONTROL (PRIMARY BACK)
- LIGHT (LOCAL)
- LIGHT (PRIMARY FRONT)
- LIGHT (PRIMARY BACK)
- COMPUTER FUNCTION (LOCAL)

RELAY FUNCTIONS

- TOTALIZE
- ROOT EXTRACTION
- LOW SIGNAL SELECT
- HIGH SIGNAL SELECT
- CURRENT TO PNEUMATIC TRANSDUCER
- PNEUMATIC TO CURRENT TRANSDUCER
- RESISTANCE TO CURRENT TRANSDUCER
- VOLTAGE TO CURRENT TRANSDUCER

EXAMPLE

MISCELLANEOUS SYMBOLS

- TIE POINT NUMBER (TP / XX)
- REVISION NUMBER (0)
- PROJECT LIMIT
- SPEC. BREAK.
- DRAIN, SAMPLE, VENT (D S V)
- SLOPED LINE
- SPECIALTY ITEM (SP / 1)
- INSULATION (2")

VALVE SYMBOLS

- GATE VALVE
- BALL VALVE
- PLUG VALVE
- GLOBE VALVE
- CHECK VALVE
- NEEDLE VALVE
- BUTTERFLY VALVE
- BUTTERFLY CHECK VALVE
- GATE VALVE DBB
- BALL VALVE DBB
- PLUG VALVE DBB
- GATE DIAPHRAGM CONTROL VALVE
- BALL DIAPHRAGM CONTROL VALVE
- BUTTERFLY DIAPHRAGM CONTROL VALVE
- GATE MOTOR CONTROL VALVE (M)
- GLOBE MOTOR CONTROL VALVE (M)
- BALL MOTOR CONTROL VALVE (M)
- DBB MOTOR CONTROL VALVE (M)
- SOLENOID VALVE (S)
- PRESSURE CONTROL VALVE (SELF)
- PRESSURE CONTROL VALVE WITH SINGLE SOLENOID (S)
- PRESSURE CONTROL VALVE WITH DUAL SOLENOIDS (S S)
- ELECTROHYDRAULIC GLOBE CONTROL VALVE (EH)
- PRESSURE SAFETY VALVE
- PRESSURE VACUUM RELIEF VALVE
- ANGLE VALVE
- 3-WAY VALVE
- 4-WAY VALVE
- BLEED RING W/ VALVE
- CUPON HOLDER
- ATMOSPHERE
- FOAM CHAMBER (FC)

PIPING SYMBOLS

- OLET
- QUICK CONNECT
- FIELD WELD
- WELD CAP
- BLIND FLANGE
- FLANGES
- UNION
- SPECTACLE BLIND (OPEN)
- SPECTACLE BLIND (CLOSED)
- PADDLE BLIND (OPEN)
- PADDLE BLIND (CLOSED)
- INSULATING FLANGE ASSEMBLY
- INSULATING UNION ASSEMBLY
- BLEED RING OR TEST INSERT
- RUPTURE DISC
- FLAME ARRESTOR
- Y STRAINER
- TEE STRAINER
- BASKET STRAINER
- STEAM TRAP (T)
- SIGHT GLASS
- CORIOLIS METER
- POSITIVE DISPLACEMENT METER (PD)
- ULTRASONIC METER (US)
- TURBINE METER (8)
- VORTEX METER
- ORIFICE
- STRAIGHTENING VANES
- STRAIGHTENING PLATE
- STOPPLE TEE
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER (FSD = FLAT SIDE DOWN) (FSU = FLAT SIDE UP)
- TEMPORARY STRAINER
- EXPANSION JOINT
- FLEX HOSE FLANGE WITH QUICK CONNECT
- FLEX HOSE FLANGED
- STATIC MIXER

LINE IDENTIFICATION

STJT–8"–CR–001–A–H–ET

- ET — TRACING
- H — INSULATION
- A — SPECIFICATION
- 001 — LINE NUMBER
- CR — SERVICE DESIGNATION
- 8" — NOMINAL PIPE SIZE
- STJT — FACILITY DESIGNATION OR AREA CODE (SEE DDSP-03)

MISC. ABBREVIATIONS

ATM	ATMOSPHERE
CSC	CAR SEAL CLOSED
CSO	CAR SEAL OPEN
FC	FAIL CLOSED
FL	FAIL IN LAST POSITION
FO	FAIL OPEN
LC	LOCK CLOSED
LO	LOCK OPEN
MCC	MOTOR CONTROL CENTER
PD	POSITIVE DISPLACEMENT
R	RESET
RA	REVERSE ACTING
RTD	RESISTANCE TEMPERATURE DET.
RTU	REMOTE TERMINAL UNIT
SP	SET POINT
TMS	TERMINAL MANAGEMENT SYSTEM

LINE SERVICE DESIGNATIONS

HYDROCARBONS		UTILITIES	
AH	ASPHALT	CD	CLOSED DRAIN
AVG	AVIATION GASOLINE	CN	CONDENSATE
BD	BIO DIESEL	FG	FUEL GAS
BU	BUTANE	FW	FIRE WATER
CR	CRUDE OIL	HO	HEATING OIL
CSO	SOUR CRUDE	IA	INSTRUMENT AIR
CSW	SWEET CRUDE	LM	LPG TRANS MIX
DI	DIESEL	LO	LUBE OIL
ET	ETHANOL	NI	NITROGEN
FO	FUEL OIL	OD	OPEN DRAIN
HSD	HIGH SULFUR DIESEL	OW	OILY WATER
JF	JET FUEL	PA	PLANT AIR
LPG	LIQUEFIED PETROLEUM GAS	PW	POTABLE WATER
LSD	LOW SULFUR DIESEL	SO	SEAL OIL
METH	METHANOL	ST	STEAM
MT	MTBE	SW	SEWER
NGL	NATURAL GAS LIQUIDS	TL	TOLUENE
NH3	AMMONIA	TM	TRANS MIX
PU	PREMIUM UNLEADED	UG	UTILITY GAS
PR	PREM OR REGULAR UNL	UW	UTILITY WATER
RFO	REFINED FUEL OIL	VPR	VAPOR
RP	REFINED PRODUCTS	XY	XYLENE
RL	RELIEF		
UL	REGULAR UNLEADED		
VGO	VACUUM GAS OIL		

CONTINUATION FLAGS

- FROM DRAWING NUMBER / LINE NUMBER
- TO DRAWING NUMBER / LINE NUMBER
- TO/FROM DRAWING NUMBER / LINE NUMBER
- FROM/TO DRAWING NUMBER / LINE NUMBER

PIPING SPECS

A = ANSI 150
B = ANSI 300
C = ANSI 600
D = ANSI 900
E = ANSI 1500

INSULATION DESIGNATIONS

C = COLD SERVICE
H = HOT SERVICE
P = PERSONNEL
S = SPECIAL
ST = STEAM TRACED
ET = ELECTRIC TRACED

EQUIPMENT DESIGNATIONS

A = AGITATOR
B = BLOWER
C = COMPRESSOR
D = DRUM
E = EXCHANGER
F = FILTER
M = MOTOR
P = PUMP
PM = PUMP MOTOR
PR = PROVER
T = TOWER
TK = TANK

STANDARD EQUIPMENT SYMBOLS

(NOT ALL SHOWN)

- PIG RECEIVER W/ ECC REDUCER
- PIG RECEIVER W/ CON REDUCER
- PIG LAUNCHER W/ ECC REDUCER
- PIG LAUNCHER W/ CON REDUCER
- DOMED ROOF TANK
- SLOPED ROOF TANK
- INTERNAL FLOATING ROOF TANK
- EXTERNAL FLOATING ROOF TANK
- OPEN TANK
- AGITATOR W/ MOTOR
- SUPER EXCHANGER
- VERTICAL VESSEL WITH SKIRT
- BULLET VESSEL
- SINGLE END EXCHANGER
- HORIZONTAL PUMP
- VERTICAL IN-LINE PUMP
- POSITIVE DISPLACEMENT PUMP
- SUMP PUMP
- DEEP WELL PUMP
- PRESSURE INDICATOR (PI, 0–XXX PSIG, 1")
- PRESSURE SAFETY VALVE (PSV, SET @ XX PSIG, 1"x1", 1/2")
- EYE WASH STATION
- RAILCAR
- TRUCK
- DEMO
- NEW
- RAIL
- A/G U/G

NOTES:
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

REFERENCE DRAWINGS:
STOT–64–025 REMOTE I/O CABINET RIO–1

NO.	REVISION	BY	DATE	APR	
2	ISSUED FOR CONSTRUCTION PER PROJECT CW_0001095	BEA	9/9/19	M.C.	A.D.
1	ISSUED FOR CONSTRUCTION PER PROJECT CW_00410	BLADE	9/6/18	AD	GD
0	ISSUED FOR CONSTRUCTION PER PROJECT CW_00317	BLADE	1/18/18	AD	GD

PROJECT LOCATION:		
DRAWN BY:	DATE: 1/18/18	
CHECKED:	DATE: 1/18/18	
APPROVED:	DATE: 1/18/18	
SCALE: NONE		

STOCKTON TERMINAL ELECTRICAL LEGEND AND SYMBOLS

ORIGINAL PROJECT NO. CW_00317

DRAWING NO. STOT–02–002 REV. 2

L:\Projects\2016\DD-1621 – Stockton Terminal – Bio Diesel\01_Notes-Indexes\02 – General – Notes & Symbols\ STOT–02–002.dwg May 13, 2020 – 2:40pm

TK-8801

SERVICE: DIESEL
OD: 114.5 FT
HEIGHT: 48 FT
MATERIAL: CARBON STEEL
SERIAL NO.:
IFR MAT: ALUMINUM
CAP: 52,527 BBLS

TK-4901

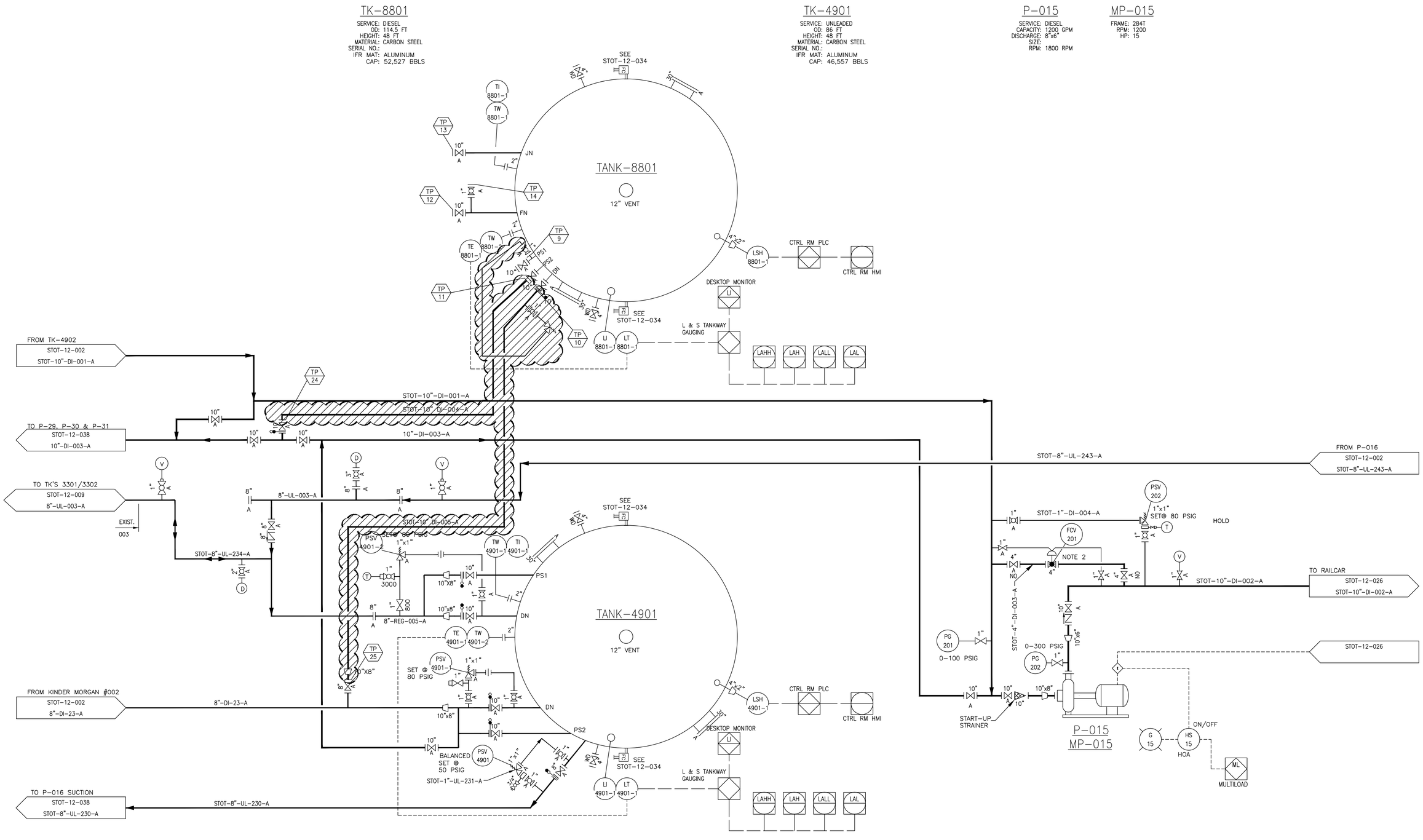
SERVICE: UNLEADED
OD: 86 FT
HEIGHT: 48 FT
MATERIAL: CARBON STEEL
SERIAL NO.:
IFR MAT: ALUMINUM
CAP: 46,557 BBLS

P-015

SERVICE: DIESEL
CAPACITY: 1200 GPM
DISCHARGE: 8"x6"
SIZE:
RPM: 1800 RPM

MP-015

FRAME: 284T
RPM: 1200
HP: 15



NOTES:
1)

REFERENCE DRAWINGS:

NO.	REVISION	BY	DATE	APR	
8A	UPDATED PER DESIGN MODIFICATIONS, ADD TIE-INS – WC_00410	KLV	12/03/18	JV	JR
7	IFR – UPDATED PER DESIGN WC_00410	KLV	10/24/18	JV	JR
6	ISSUE FOR REVIEW FOR WC_00410	KLV	6/15/18		
9	UPDATE PER WC_00247	KLV	8/05/19	JV	JR
9A	UPDATED FOR	JBF	2/21/19	JV	JR

PROJECT LOCATION:

DRAWN BY:	G. MCFARLAND	DATE:	02/05/07
CHECKED:	S. CHAPLIN	DATE:	02/05/07
APPROVED:	E. GANDANOZA	DATE:	02/05/07
SCALE:	AS SHOWN		

STOCTON TERMINAL
P&ID
TANKS 4901 & 8801

ORIGINAL PROJECT NO. WC_00247

DRAWING NO. STOT-12-001 DEMO REV. 9B

L:\Projects\2019\DD-1907 - Stockton Terminal - NESTE\03_Process\12 - Piping & Instrument Diagram\ STOT-12-001 DEMO.dwg May 13, 2020 - 1:14pm

SERVICE: RENEWABLE DIESEL
OD: 114.5 FT
HEIGHT: 48 FT
MATERIAL: CARBON STEEL
SERIAL NO.:
IFR MAT: ALUMINUM
CAP: 52,527 BBLS

SERVICE: UNLEADED
OD: 86 FT
HEIGHT: 48 FT
MATERIAL: CARBON STEEL
SERIAL NO.:
IFR MAT: ALUMINUM
CAP: 46,557 BBLS

SERVICE: DIESEL
CAPACITY: 1200 GPM
DISCHARGE: 8"x6"
SIZE:
RPM: 1800 RPM

FRAME: 284T
RPM: 1200
HP: 15

TANK-8801
12" VENT

TANK-4901
12" VENT

P-015
MP-015

NOTES:
1)

REFERENCE DRAWINGS:

NO.	REVISION	BY	DATE	APR	
8	UPDATED PER DESIGN MODIFICATIONS, ADD TIE-INS – WC_00410	KLV	12/03/18	JV	JR
7	IFR – UPDATED PER DESIGN WC_00410	KLV	10/24/18	JV	JR
6	ISSUE FOR REVIEW FOR WC_00410	KLV	6/15/18		
9	UPDATE PER WC_00247	KLV	8/05/19	JV	JR
9A	UPDATED FOR	JBF	2/21/19	JV	JR

PROJECT LOCATION:

DRAWN BY:	G. MCFARLAND	DATE:	02/05/07
CHECKED:	S. CHAPLIN	DATE:	02/05/07
APPROVED:	E. GANDANOZA	DATE:	02/05/07
SCALE:	AS SHOWN		

STOCKTON TERMINAL
PROCESS & INSTRUMENT DIAGRAM
TANKS 4901 & 8801

ORIGINAL PROJECT NO. WC_00247

DRAWING NO. STOT-12-001 REV. 9

L:\Projects\2019\DD-1907 - Stockton Terminal - NESTE\03_Process\12 - Piping & Instrument Diagram\ STOT-12-001.dwg May 13, 2020 - 1:17pm

TK-30006

SERVICE:
DIAMETER: 70'-0"
HEIGHT: 48'-0"
ROOF TYPE: INTERNAL FLOATING ROOF
MATERIAL:
WORKING CAPACITY:
SAFE FILL CAPACITY:
MANUFACTURER:
DESIGN SG: 1.0
MAX OP TEMP: 90°F

P-043

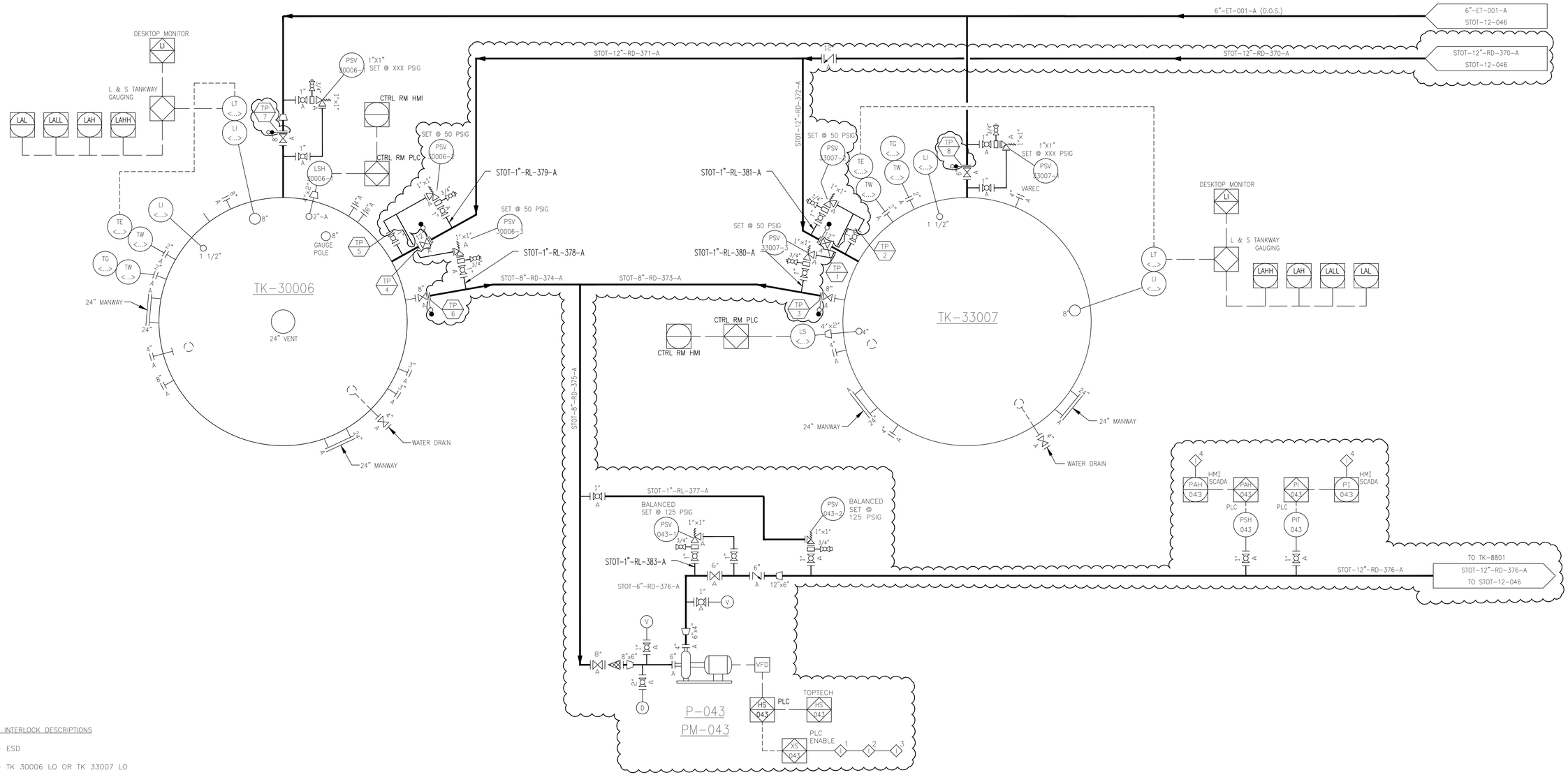
SERVICE: REN. DIESEL
FLOW RATE: 1400 GPM
SIZE: 6X4
DISCHARGE: 167 ft
MFR: GOULDS
MODEL: 3196 i-17

PM-043

TYPE:
HP: 75
RPM: 1800
VOLTS:
AMPS:
MFR:

TK-33007

SERVICE:
DIAMETER: 72'-0"
HEIGHT: 48'-0"
ROOF TYPE: INTERNAL FLOATING ROOF
MATERIAL:
WORKING CAPACITY:
SAFE FILL CAPACITY:
MANUFACTURER:
DESIGN SG:



SHUTDOWN INTERLOCK DESCRIPTIONS

◇1 – ESD
◇2 – TK 30006 LO OR TK 33007 LO
◇3 – FIRE DETECTED
◇4 – HIGH PRESSURE SHUTDOWN

NOTES:

REFERENCE DRAWINGS:

NO.	REVISION	BY	DATE	APR	
0	AS BUILT PER MARK UP	LRM	10/1/12		DJ
D	UPDATED BY NUSTAR, SHOWING EXISTING PIPE FOR DEMO	BJZ	6/05/10	RC	
2	UPDATE PER WC_00247	KLV	8/05/19	JV	JR
1A	ISSUE FOR ENGINEERING REVIEW WC_00247	REH	5/6/19	KV	JR
1	UPDATED PER	JBF	2/21/19	KV	JR

PROJECT LOCATION:

DRAWN BY:	F. FUENTES	**DATE:**	4/14/10
CHECKED:	R. FIORUCCI	**DATE:**	4/14/10
APPROVED:	G. TAI	**DATE:**	4/14/10
SCALE:	NONE		

STOCKTON TERMINAL #1
PIPING & INSTRUMENT DIAGRAM
TANKS TK-30006 & TK-33007

ORIGINAL PROJECT NO. WC_00247

DRAWING NO. STOT-12-022 **REV.** 2

L:\Projects\2019\00-1907 - Stockton Terminal - NESTE\03_Process\12 - Piping & Instrument Diagram\ STOT-12-022.dwg May 13, 2020 - 1:37pm

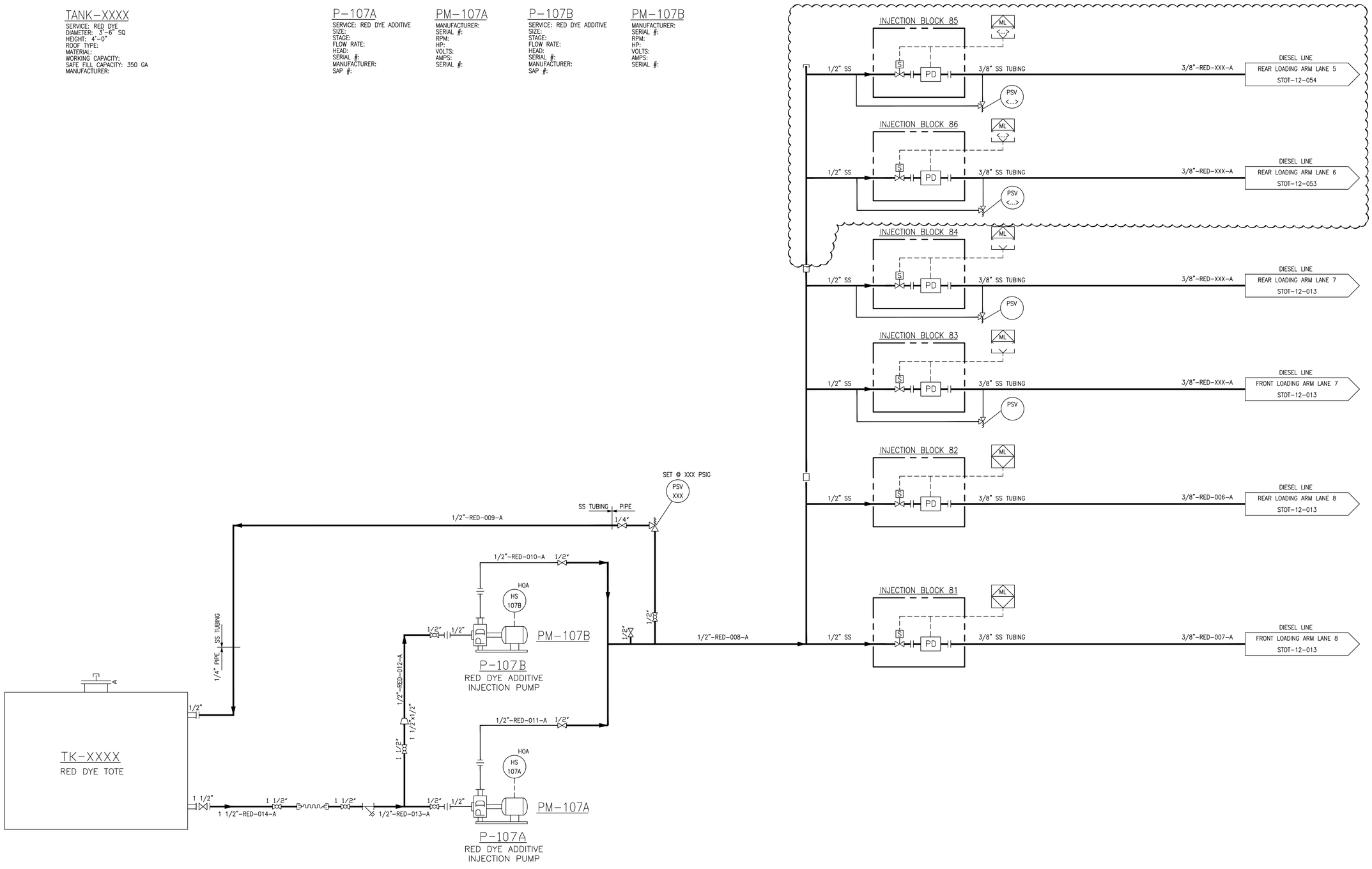
TANK–XXXX
SERVICE: RED DYE
DIAMETER: 3'–6" SQ
HEIGHT: 4'–0"
ROOF TYPE:
MATERIAL:
WORKING CAPACITY:
SAFE FILL CAPACITY: 350 GA
MANUFACTURER:

P–107A
SERVICE: RED DYE ADDITIVE
SIZE:
STAGE:
FLOW RATE:
HEAD:
SERIAL #:
MANUFACTURER:
SAP #:

PM–107A
MANUFACTURER:
SERIAL #:
RPM:
HP:
VOLTS:
AMPS:
SERIAL #:

P–107B
SERVICE: RED DYE ADDITIVE
SIZE:
STAGE:
FLOW RATE:
HEAD:
SERIAL #:
MANUFACTURER:
SAP #:

PM–107B
MANUFACTURER:
SERIAL #:
RPM:
HP:
VOLTS:
AMPS:
SERIAL #:



NOTES:

REFERENCE DRAWINGS:

NO.	REVISION	BY	DATE	APR	
3	APPROVED FOR CONSTRUCTION PER WC_00247	KLV	8/05/19	JV	JR
2	IFC PER WC_00317	KLV	7/05/18	NW	JR
1	ISSUE FOR FINAL REVIEW	KLV	3/28/18	JV	JR
0A	UPDATED PER P&ID REVIEW – WC_00317	KLV	2/7/17	JV	SK
0	AS BUILT PER MARK UP	LRM	10/1/12		DJ

PROJECT LOCATION:
DRAWN BY: LR MICHAUD — DATE: 9/10/12
CHECKED: — DATE:
APPROVED: D JOHNSON — DATE: 9/10/12
SCALE: NONE

STOCKTON TERMINAL #1
PIPING & INSTRUMENTATION DIAGRAM
RED DYE ADDITIVE

ORIGINAL PROJECT NO. CW_00247
DRAWING NO. STOT-12-035 REV. 3

L:\Projects\2019\DD-1907 - Stockton Terminal - NESTE\03_Process\12 - Piping & Instrument Diagram\ STOT-12-035.dwg May 08, 2020 - 12:08pm

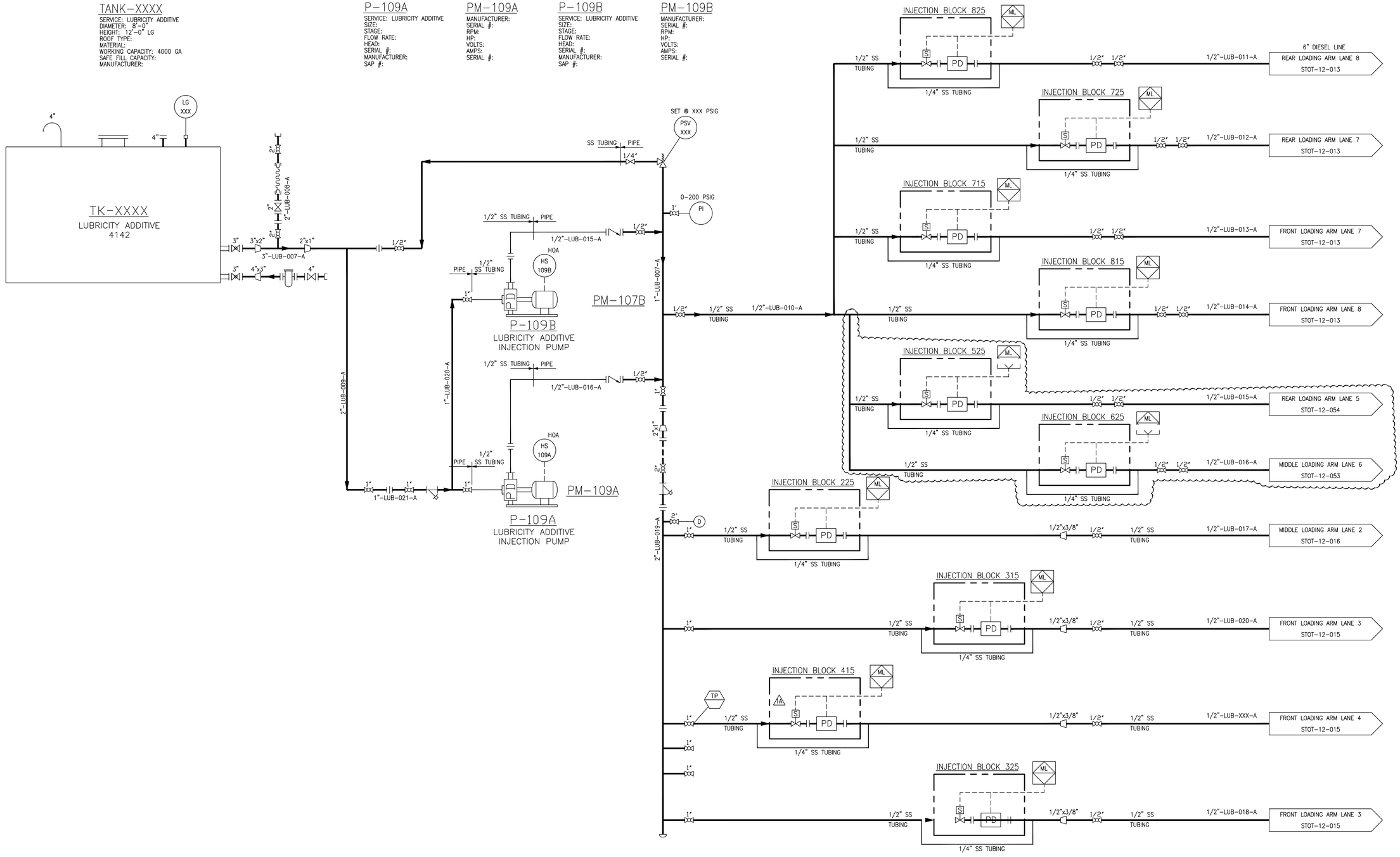
TANK–XXXX
SERVICE: LUBRICITY ADDITIVE
DIAMETER: 8'–0"
HEIGHT: 12'–0" LG
ROOF TYPE:
MATERIAL:
WORKING CAPACITY: 4000 GA
SAFE FILL CAPACITY:
MANUFACTURER:

P–109A
SERVICE: LUBRICITY ADDITIVE
SIZE:
STAGE:
FLOW RATE:
HEAD:
SERIAL #:
MANUFACTURER:
SAP #:

PM–109A
MANUFACTURER:
SERIAL #:
RPM:
HP:
VOLTS:
AMPS:
SERIAL #:

P–109B
SERVICE: LUBRICITY ADDITIVE
SIZE:
STAGE:
FLOW RATE:
HEAD:
SERIAL #:
MANUFACTURER:
SAP #:

PM–109B
MANUFACTURER:
SERIAL #:
RPM:
HP:
VOLTS:
AMPS:
SERIAL #:



NOTES:

REFERENCE DRAWINGS:

NO.	REVISION	BY	DATE	APR	
3	ADDED INJECTION BLOCKS PER WC_00247	KLV	7/11/19	JV	JR
2	ISSUED FOR BID – WC_000195	ESV	4–22–19	JV	BR
1	RENEWABLE DIESEL PROJECT	BJZ	12/6/06	BJZ	BJZ
0	AS BUILT PER MARK UP	LRM	10/1/12		DJ

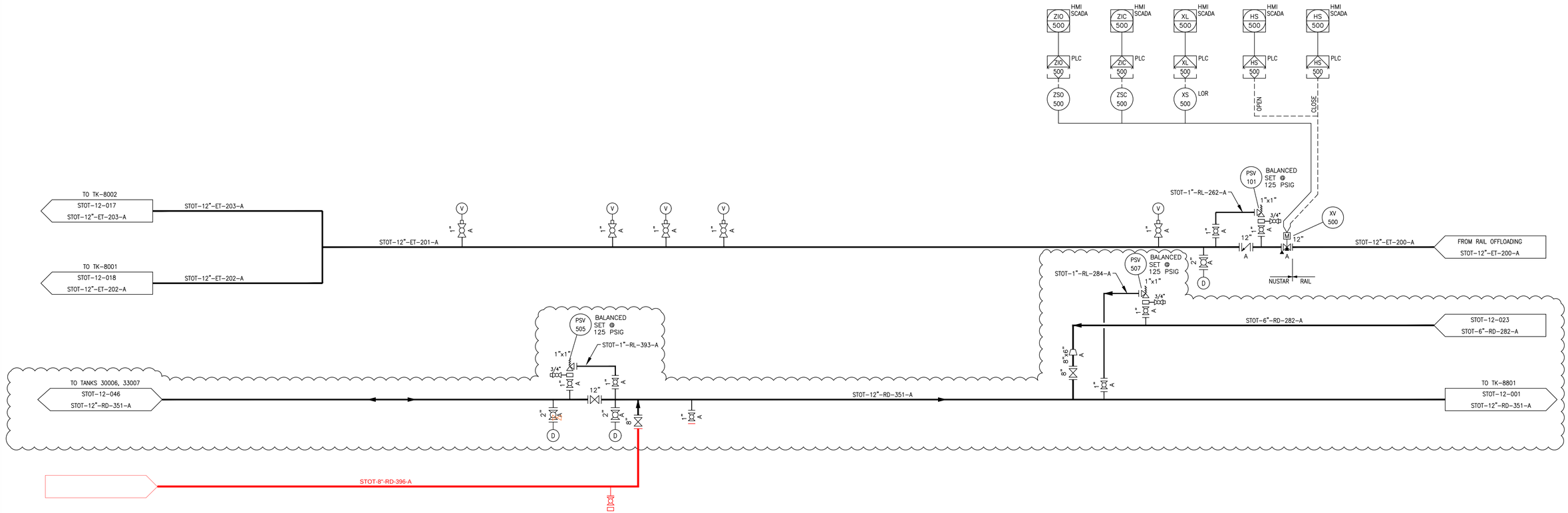
PROJECT LOCATION:

DRAWN BY: LR MICHAUD	**DATE:** 9/11/12
CHECKED:	**DATE:**
APPROVED: D JOHNSON	**DATE:** 9/11/12
SCALE: NONE	

STOCKTON TERMINAL #1
PIPING & INSTRUMENTATION DIAGRAM
LUBRICITY ADDITIVE

ORIGINAL PROJECT NO. WC_00247

DRAWING NO. STOT–12–037 **REV.** 3



NOTES:
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

REFERENCE DRAWINGS:

NO.	REVISION	BY	DATE	APR	
1B	ISSUE FOR ENGINEERING REVIEW WC_00247	REH	5/6/19	KV	JR
1A	UPDATED FOR	JBF	2/21/19	JV	JR
C	UPDATED PER DESIGN MODIFICATIONS, ADD TIE-INS – WC_00410	KLV	12/03/18	JV	JR
1	UPDATE PER WC_00247	KLV	8/05/19	JV	JR
1C	UPDATED PER DESIGN WC_00247	KLV	6/11/19	JV	JR

PROJECT LOCATION:

DRAWN BY: KLV	**DATE:** 6/27/18
CHECKED: JV	**DATE:**
APPROVED: NSD	**DATE:**
SCALE: NONE	

STOCKTON TERMINAL
PROCESS & INSTRUMENT DIAGRAM
ETHANOL RAIL OFFLOADING

ORIGINAL PROJECT NO. WC_00247

DRAWING NO. STOT-12-044 **REV.** 1

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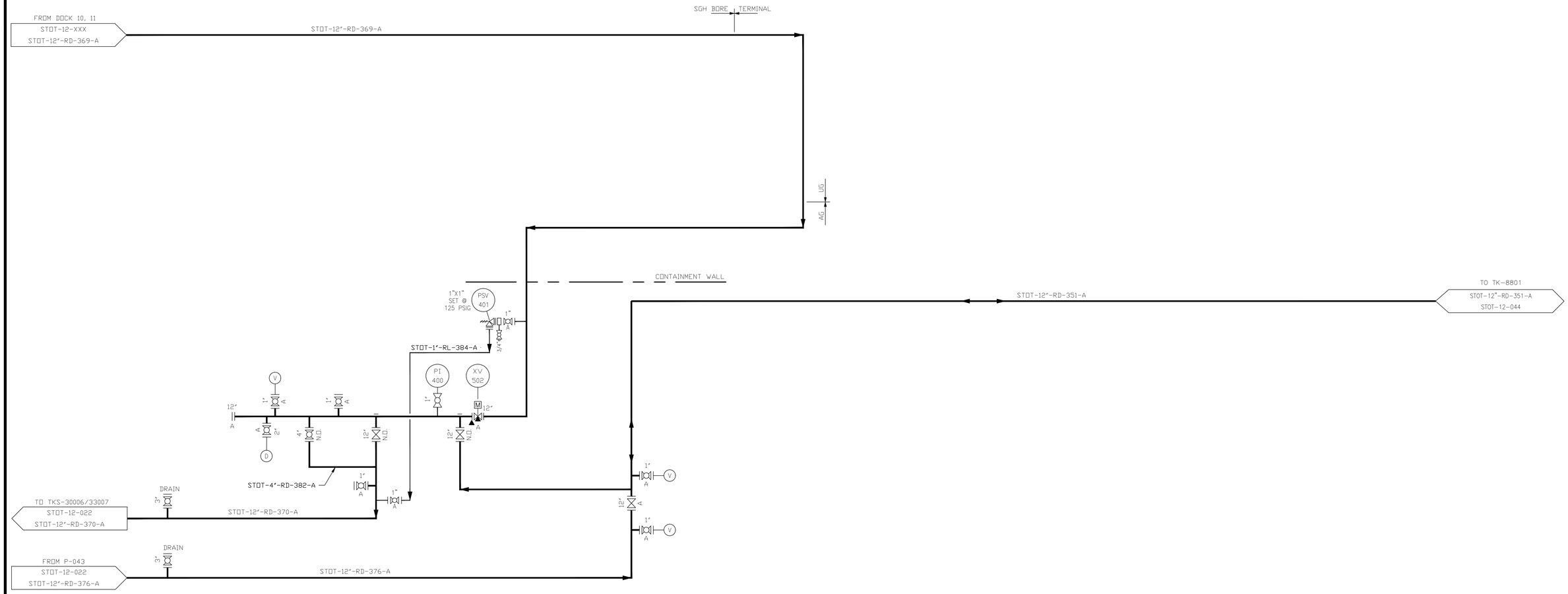

ALL NEW CONSTRUCTION
WC_00247

NOTES:	REFERENCE DRAWINGS:

NO.	REVISION	BY	DATE	APR	
1	UPDATE PER WC_00247	KLV	8/05/19	JV	JR
1A	ISSUE FOR ENGINEERING REVIEW WC_00247	REH	5/6/19	KV	JR
A	ISSUED FOR REVIEW	KV	2/22		

PROJECT LOCATION:		
DRAWN BY: REH	DATE: 2/22/19	STOCKTON TERMINAL #3 PROCESS & INSTRUMENTATION DIAGRAM R.D. INCOMING MANIFOLD
CHECKED: JV	DATE: JV	ORIGINAL PROJECT NO. WC_00247
APPROVED: NSD	DATE:	DRAWING NO. STOT-12-046 REV. 1
SCALE: NONE		

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P-046

SERVICE: REN. DIESEL
FLOW RATE: 1400 GPM
SIZE: 6X4
DISCHARGE: 167 ft
MFR: GOULDS
MODEL: 3196 i-17

PM-046

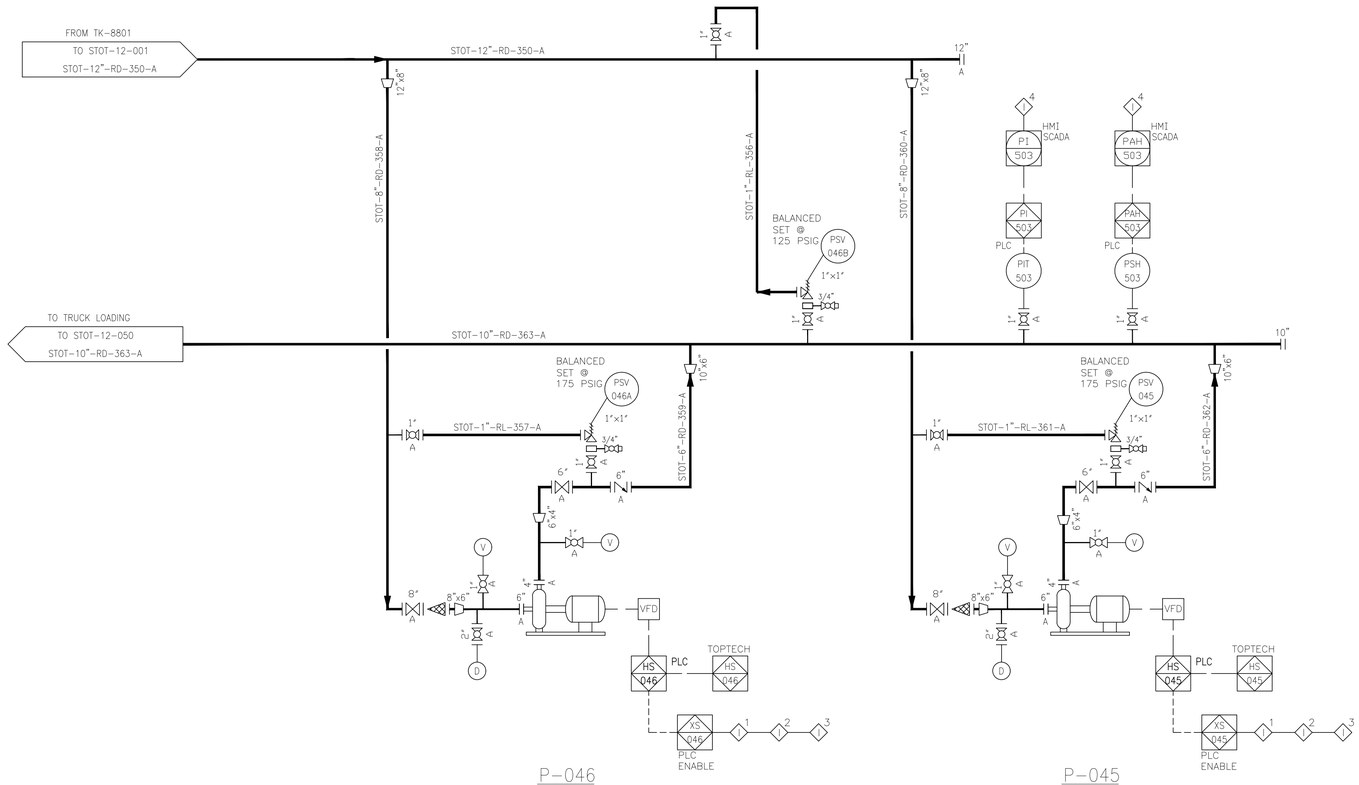
TYPE:
HP: 75
RPM: 1800
VOLTS:
AMPS:
MFR:

P-045

SERVICE: REN. DIESEL
FLOW RATE: 1400 GPM
SIZE: 6X4
DISCHARGE: 167 ft
MFR: GOULDS
MODEL: 3196 i-17

PM-045

TYPE:
HP: 75
RPM: 1800
VOLTS:
AMPS:
MFR:



SHUTDOWN INTERLOCK DESCRIPTIONS

1 – ESD
2 – TK 8801 LO
3 – FIRE DETECTED
4 – HIGH PRESSURE SHUTDOWN

ALL NEW CONSTRUCTION
WC_00247

NOTES:

REFERENCE DRAWINGS:

NO.	REVISION	BY	DATE	APR	
0	UPDATE PER WC_00247	KLV	8/05/19	JV	JR
C	ISSUE FOR ENGINEERING REVIEW – WC_00247	JBF	5/6/19	KLV	JR
B	ISSUED FOR BID	KLV	3/22/19	KLV	JR
A	ISSUED FOR REVIEW	KLV	2/21/19		

PROJECT LOCATION:

DRAWN BY:	KLV	DATE:	2/21/19
CHECKED:	JV	DATE:	
APPROVED:	NSD	DATE:	
SCALE:	NONE		

STOCKTON TERMINAL #1
PROCESS FLOW DIAGRAM
RD TRUCK LOADING PUMPS

ORIGINAL PROJECT NO. WC_00247

DRAWING NO. STOT-12-048 REV. 0

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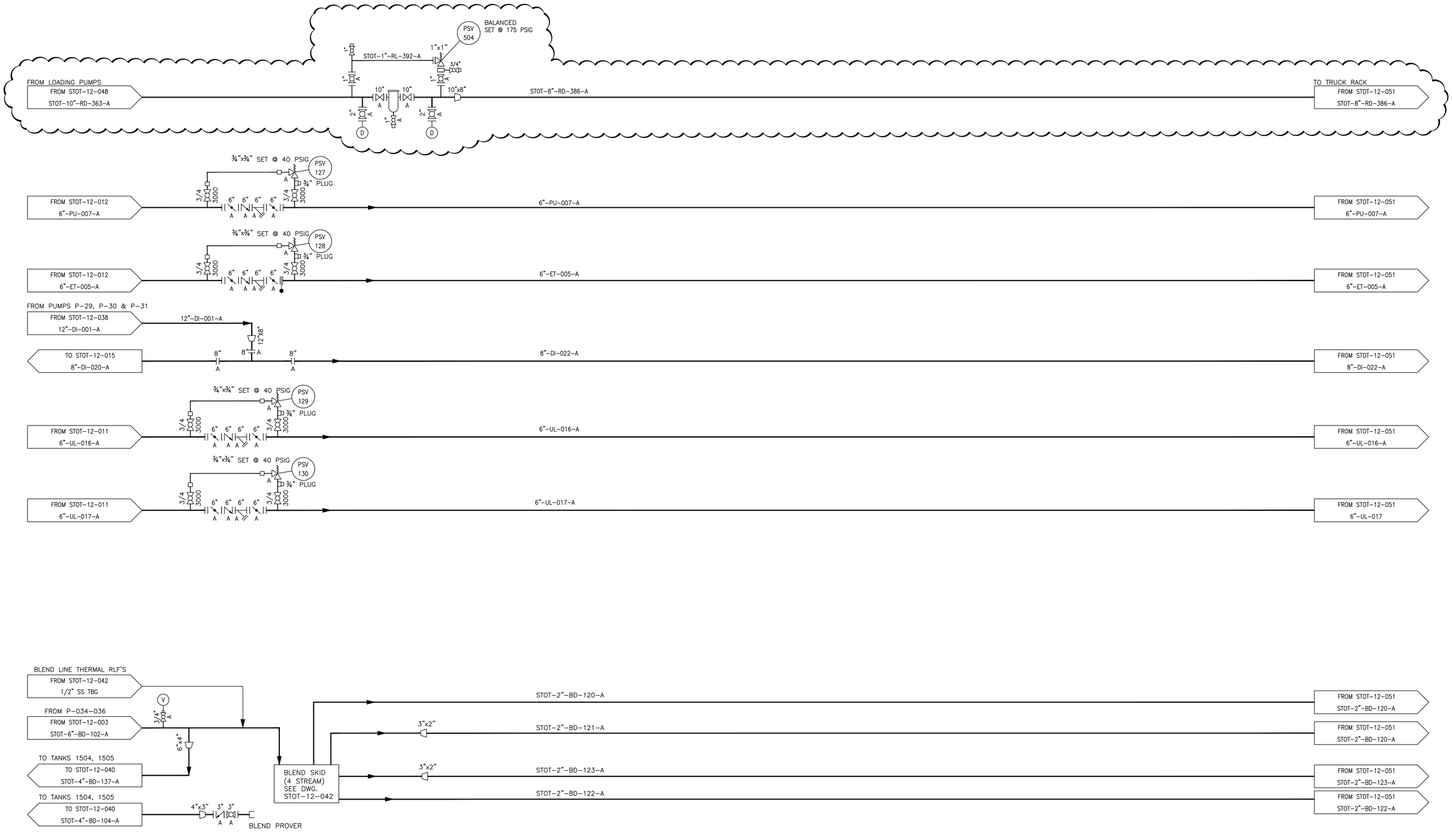

NOTES:
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

REFERENCE DRAWINGS:

NO.	REVISION	BY	DATE	APR	
1	UPDATE PER WC_00247	KLV	8/05/19	JV	JR
1A	ISSUE FOR ENGINEERING REVIEW WC_00247	KLV	5/06/19	JV	JR
A	REDRAWN FOR CLARITY, IFR PER	KLV	2/21/19	JV	JR

PROJECT LOCATION:

DRAWN BY: KLV	DATE: 2/28/19
CHECKED: JV	DATE:
APPROVED: NSD	DATE:
SCALE: NONE	

STOCKTON TERMINAL #1
PIPING & INSTRUMENTATION DIAGRAM
SOUTH TRUCK LOADING INCOMING

ORIGINAL PROJECT NO. WC_00247

DRAWING NO. STOT-12-050 REV. 1

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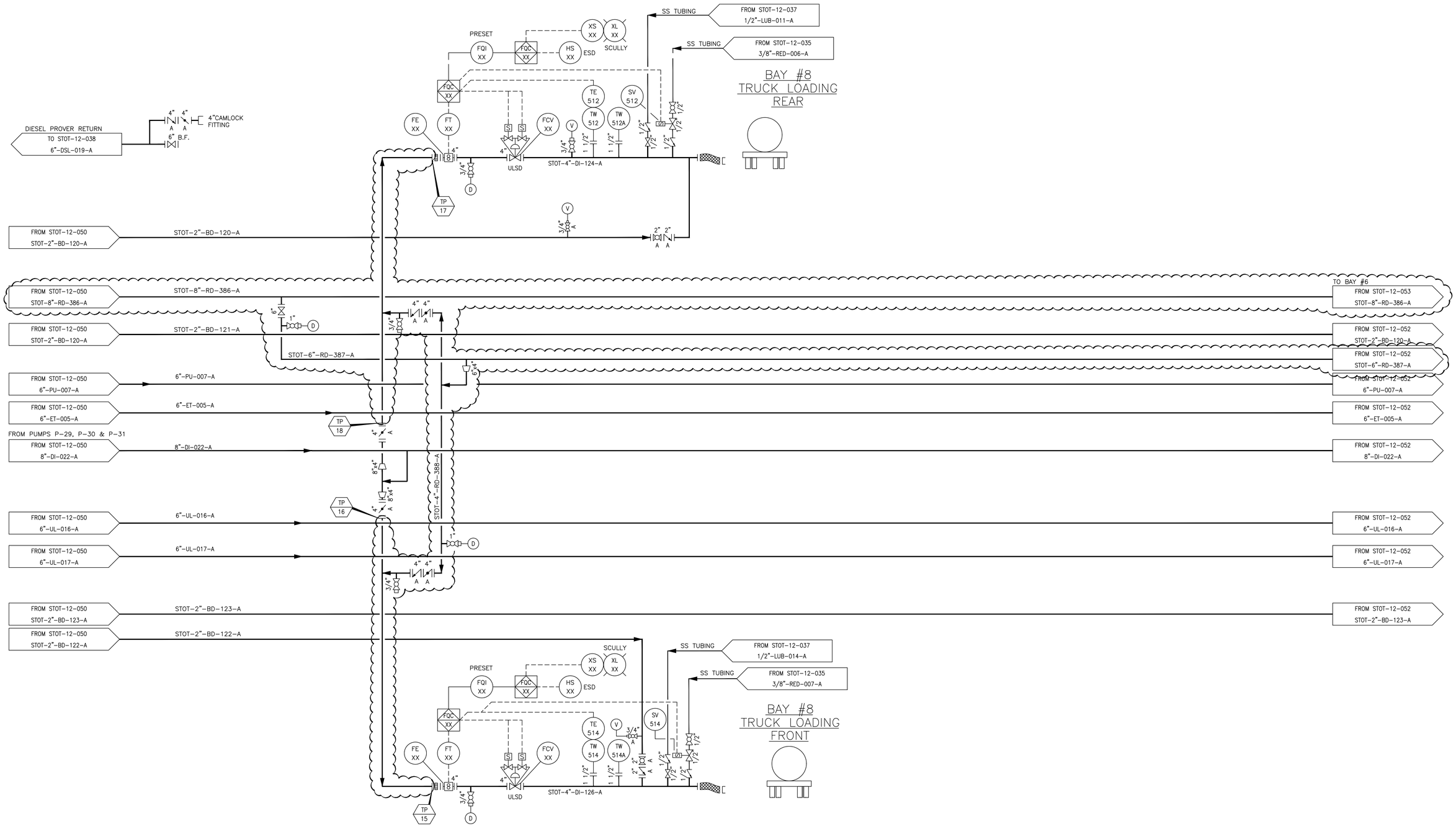

NOTES:
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

REFERENCE DRAWINGS:

NO.	REVISION	BY	DATE	APR	
1	UPDATE PER WC_00247	KLV	8/05/19	JV	JR
1A	ISSUE FOR ENGINEERING REVIEW WC_00247	KLV	5/06/19	JV	JR
A	REDRAWN FOR CLARITY,	KLV	2/21/19	JV	JR

PROJECT LOCATION:			
DRAWN BY: KLV	DATE: 2/28/19	STOCKTON TERMINAL #1 PIPING & INSTRUMENTATION DIAGRAM TRUCK LOADING BAY #8	
CHECKED: JV	DATE:	ORIGINAL PROJECT NO. WC_00247	
APPROVED: JR	DATE:	DRAWING NO. STOT-12-051	REV. 1
SCALE: NONE			

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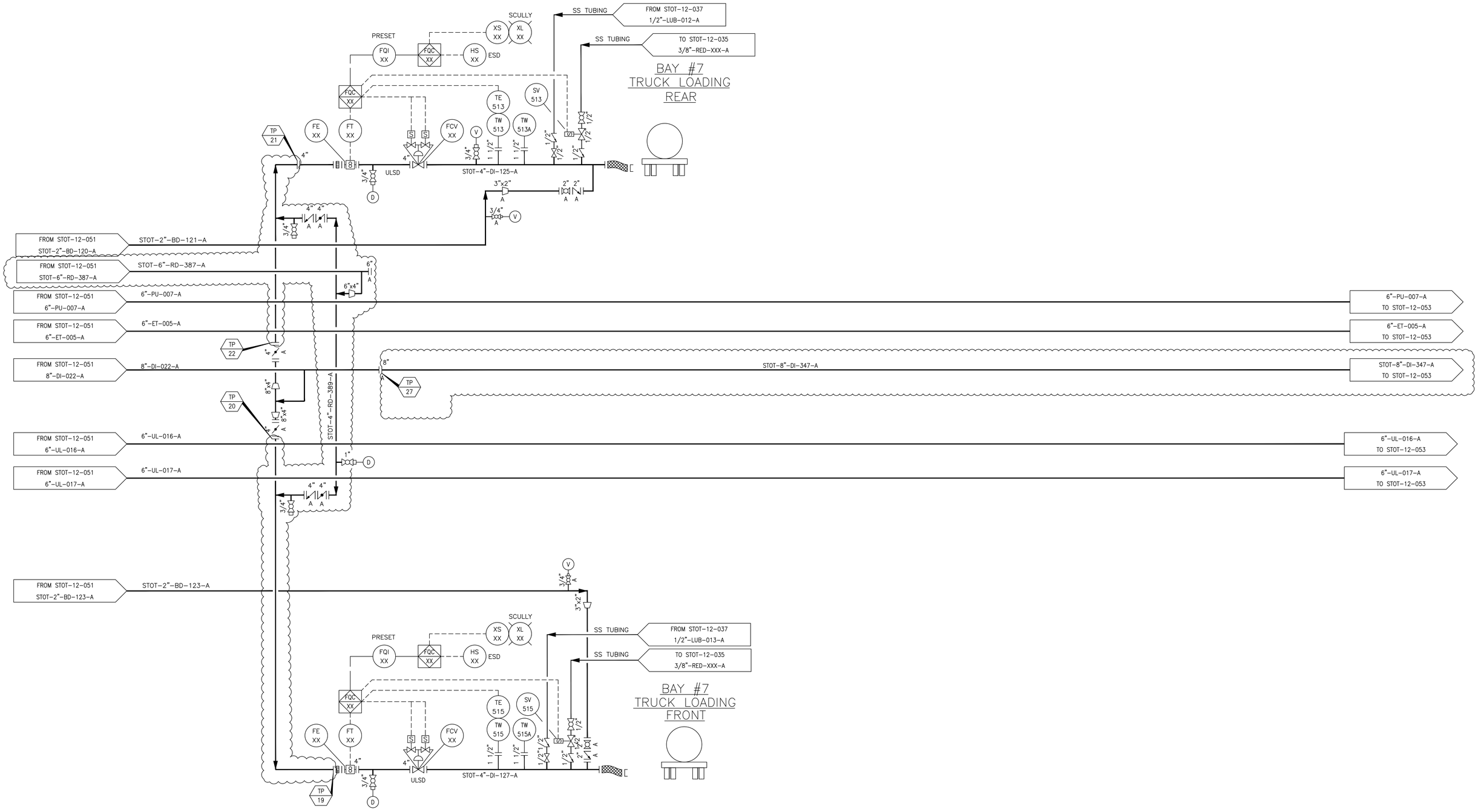

NOTES:
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

REFERENCE DRAWINGS:

NO.	REVISION	BY	DATE	APR	
1	UPDATE PER WC_00247	KLV	8/05/19	JV	JR
1A	ISSUE FOR ENGINEERING REVIEW WC_00247	KLV	5/06/19	JV	JR
A	REDRAWN FOR CLARITY,	KLV	2/21/19	JV	JR

PROJECT LOCATION:

DRAWN BY: KLV	DATE: 2/28/19
CHECKED: JV	DATE:
APPROVED: NSD	DATE:
SCALE: NONE	

STOCKTON TERMINAL #1
PIPING & INSTRUMENTATION DIAGRAM
TRUCK LOADING BAY #7

ORIGINAL PROJECT NO. **WC_00247**

DRAWING NO. STOT-12-052 REV. 1

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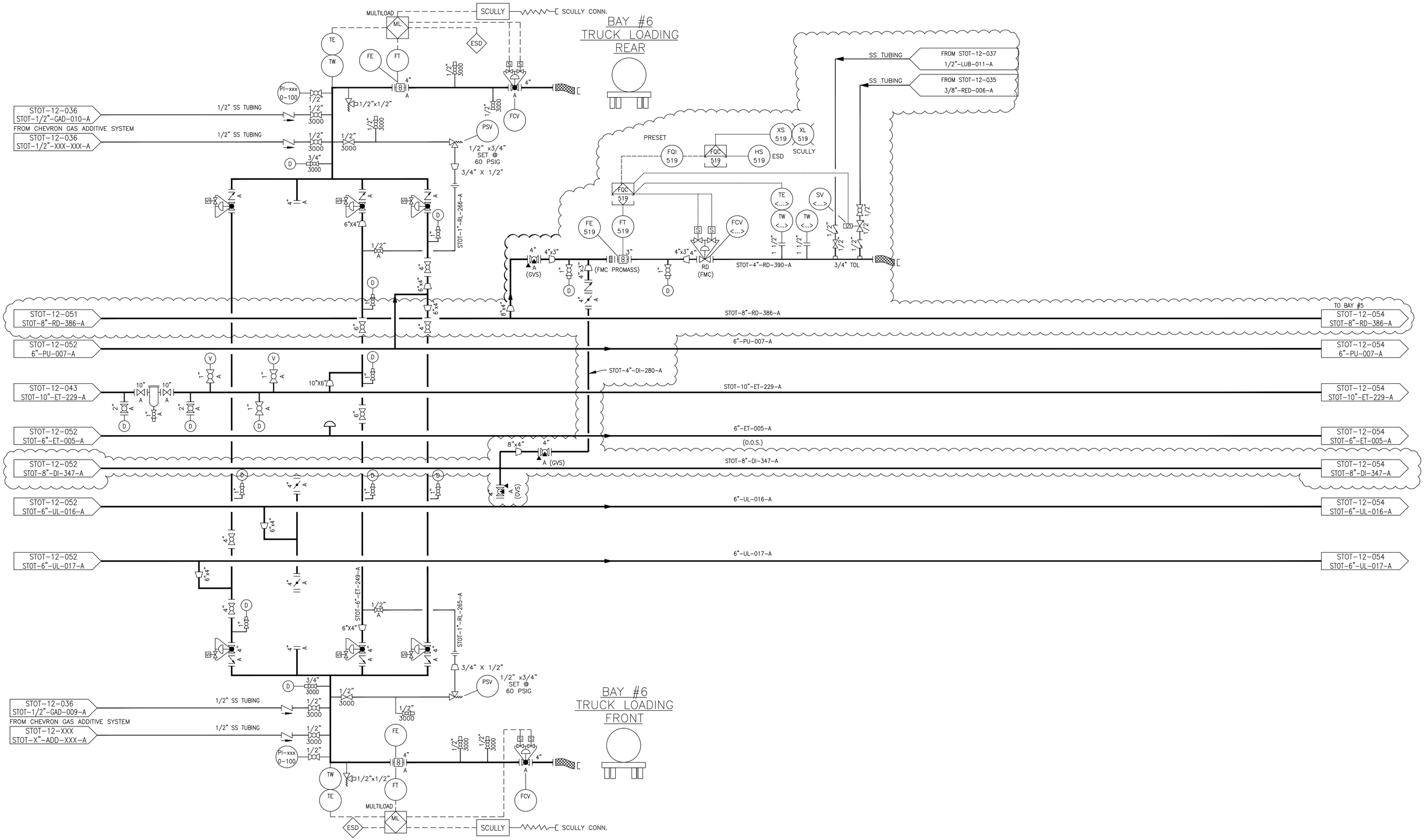


NOTES:
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

REFERENCE DRAWINGS:

NO.	REVISION	BY	DATE	APR	
1	UPDATE PER WC_00247	KLV	8/05/19	JV	JR
1A	ISSUE FOR ENGINEERING REVIEW WC_00247	KLV	5/06/19	JV	JR
A	REDRAWN FOR CLARITY	KLV	6/15/18	JV	JR

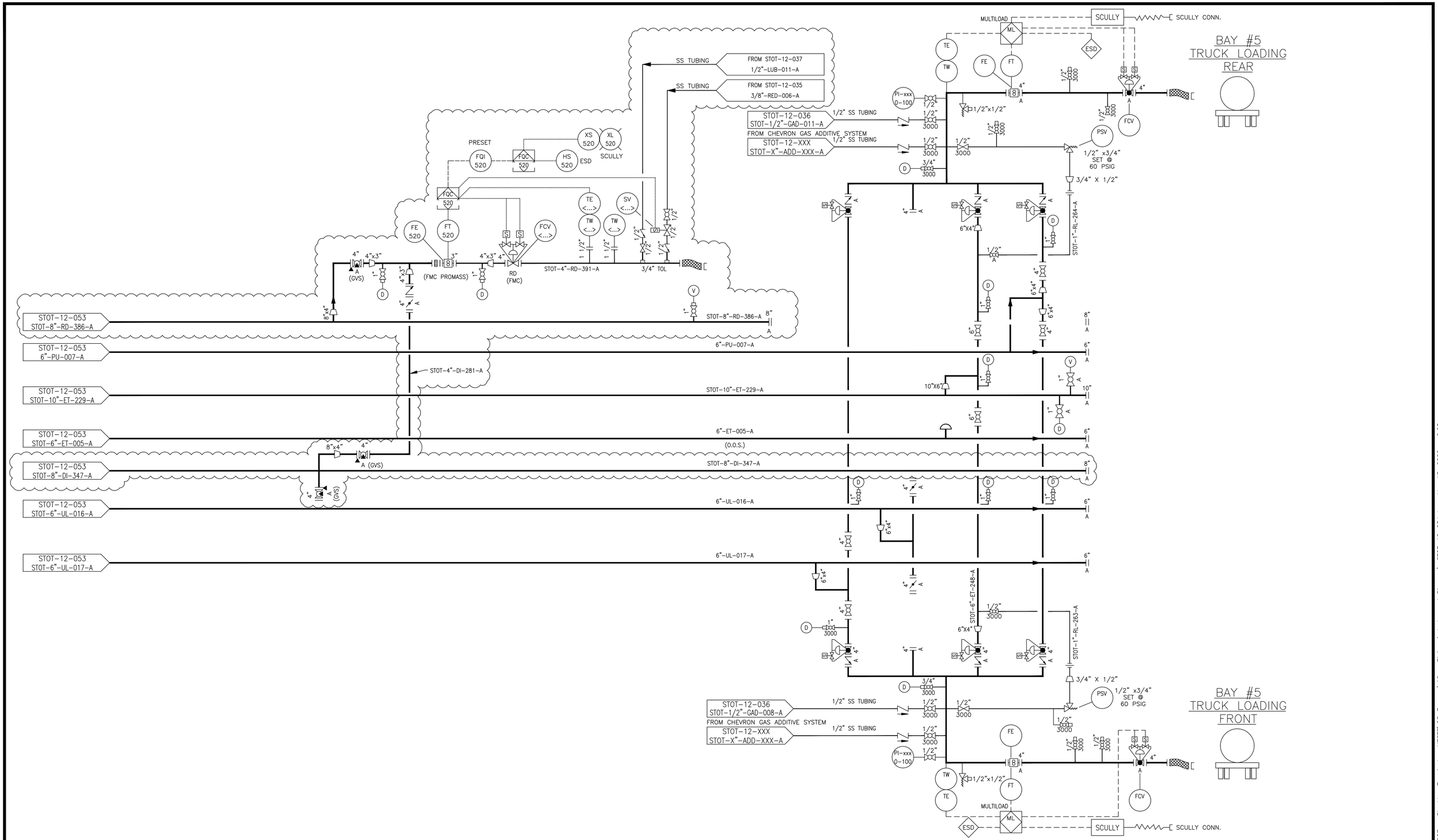
PROJECT LOCATION:			
DRAWN BY:	KLV	DATE:	2/28/19
CHECKED:	JV	DATE:	
APPROVED:	NSD	DATE:	
SCALE:	NONE		

STOCKTON TERMINAL #1
PIPING & INSTRUMENTATION DIAGRAM
TRUCK LOADING BAY #6

ORIGINAL PROJECT NO. **WC_00247**

DRAWING NO. STOT-12-053 REV. 1

L:\Projects\2019\DD-1907 - Stockton Terminal - NESTE\03_Process\12 - Piping & Instrument Diagram\ STOT-12-053.dwg May 13, 2020 - 2:05pm



NOTES:
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

REFERENCE DRAWINGS:

NO.	REVISION	BY	DATE	APR	
1	UPDATE PER WC_00247	KLV	8/05/19	JV	JR
1A	ISSUED FOR ENGINEERING REVIEW WC_00247	KLV	5/06/19	JV	JR
A	REDRAWIN FOR CLARITY,	KLV	2/21/19	JV	JR

PROJECT LOCATION:	
DRAWN BY: KLV	DATE: 2/28/19
CHECKED: JV	DATE:
APPROVED: NSD	DATE:
SCALE: NONE	

STOCKTON TERMINAL #1
PIPING & INSTRUMENTATION DIAGRAM
TRUCK LOADING BAY #5

ORIGINAL PROJECT NO. **WC_00247**

DRAWING NO. STOT-12-054 REV. 1

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