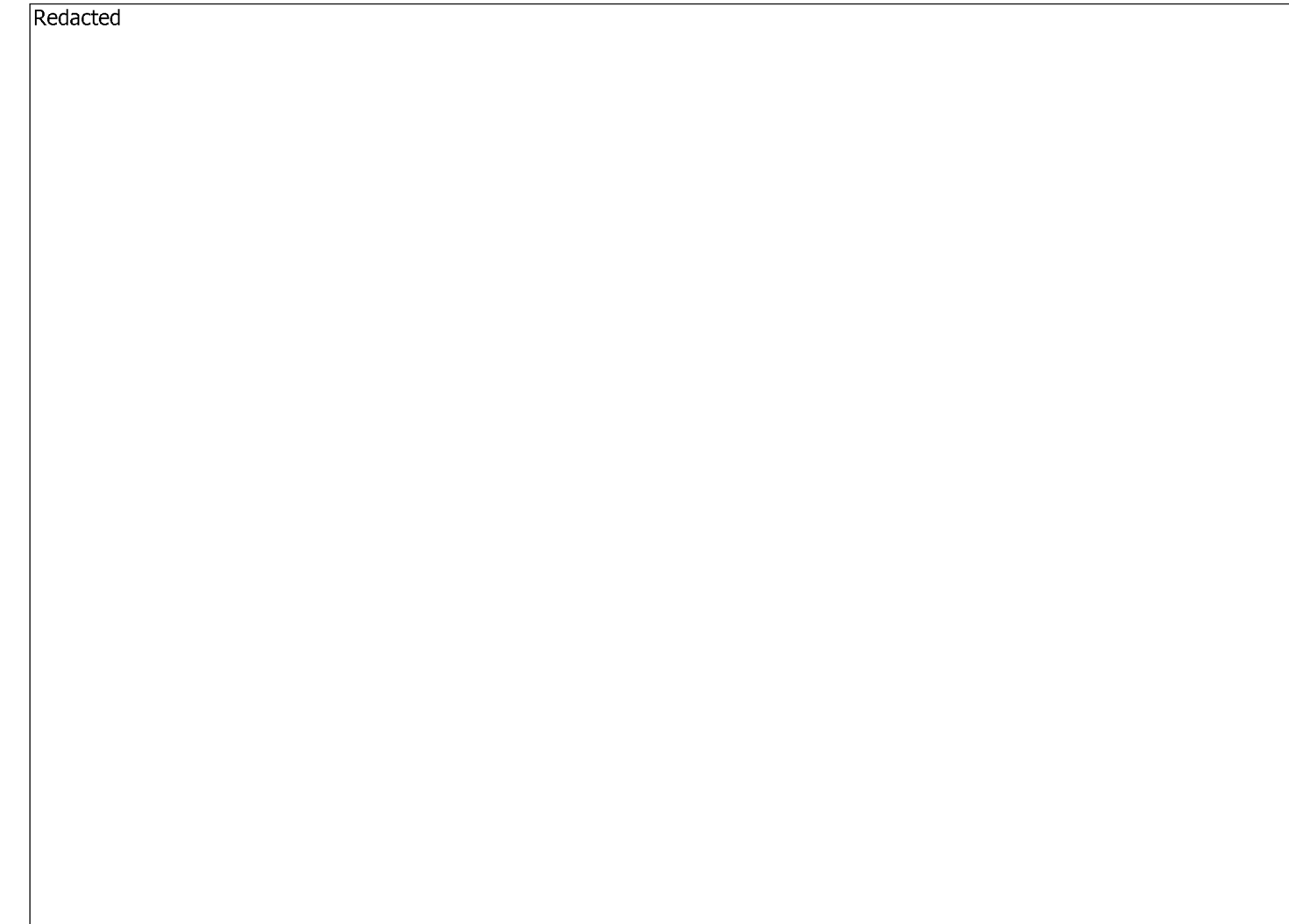


CP AREA # L-300B
WALL MAP N/A
PLAT N/A
SAN BERNARDINO COUNTY



VICINITY SKETCH
NOT TO SCALE

HYDROTEST 122-12 L-300B, MP 0.1294 - 0.1549 ORDER # 41617909

SCHEDULE OF SHEETS

- SHEET 1 - - GENERAL / CONSTRUCTION NOTES
- SHEET 2 - - HYDROTEST PLAN VIEW
- SHEET 3 - - HYDROTEST PROFILE VIEW / PIPELINE FEATURES
- SHEET 4 - - CONSTRUCTION DETAILS
- SHEET 5 - - MATERIAL OF RECORD / BILL OF MATERIALS

SUMMARY OF PROPOSED WORK:

1. HYDROSTATICALLY TEST 34" LINE 300B FROM MP 0.1294 TO MP 0.1549 PER DRAWINGS AND STRENGTH TEST PRESSURE REPORTS (#41617909) AND MATERIAL OF RECORD DRAWING #41617909 SHEET 5 OF 5.
2. INSTALL 13' OF 34.00"OD x 0.505"WT, X-60, DSAW, FBE COATED PIPE.
3. REMOVE 5' OF 34.00"OD x 0.500"WT, X-65, DSAW, PIPE INSTALLED ON GM 41497332 (2011).

SEQUENCE OF OPERATIONS:

1. PRIOR TO TAKING PIPELINE CLEARANCE THE FOLLOWING MUST BE PERFORMED:
 - A. PG&E TOPOCK DISTRICT TO CHECK OFFSET DRIP IN SHUT-IN SEGMENT FOR PRESENCE OF PIPELINE LIQUIDS.
 - B. COMPLETE A-FORMS ON ALL EXPOSED PIPE AND INCLUDE IN AS-BUILT PACKAGE. IF UT W.T. MEASUREMENTS DO NOT MATCH EXISTING PIPE SPECIFICATIONS AS SHOWN ON DRAWINGS, IMMEDIATELY NOTIFY ENGINEER.
 - C. G.C. GAS TO INSTALL SAVE-A-VALVES FOR OIL TESTING AND SNIFF HOLES WHERE DESIGNATED IN THE TIE-IN PROCEDURE. G.C. GAS FOREMAN TO CONFIRM LOCATION AND NUMBER OF SAVE-A-VALVE LOCATIONS AND ENSURE WELD PRESSURE CALCULATIONS ARE PROVIDED BY ENGINEERING PRIOR TO WELDING SAVE-A-VALVES ON PIPELINE.
2. AFTER LINE IS TURNED OVER TO G.C. GAS, G.C. GAS TO CUT OUT AND REMOVE 31' OF EXISTING 34.00"OD PIPE; INCLUDING EXISTING 34.00" INSULATING FLANGES PER ORDER # 30857344, DWG. 4801301.
3. G.C. GAS TO INSTALL NEW 34.00"OD INSULATING FLANGES AND 34.00"OD BALL VALVE PER ORDER # 30857344, DWG. 4801301.
4. SEE T-122-12 HYDROSTATIC TEST PLAN FOR SEQUENCING OF HYDROSTATIC TEST TASKS.

CONSTRUCTION NOTES:

1. WELDING REQUIREMENTS:
ALL ARC WELDING IS TO BE PERFORMED IN ACCORDANCE WITH GAS STANDARD D-22.
2. HYDROSTATIC TEST REQUIREMENTS:
HYDROSTATIC TESTING SHALL MEET PRESSURE AND DURATION REQUIREMENTS OF GAS STANDARD A-34 AND SHALL BE CONDUCTED IN ACCORDANCE WITH GAS STANDARD A-37. SEE ATTACHED STPR AND SITE SPECIFIC TEST PROCEDURE.
3. PAINTING AND COATING REQUIREMENTS:
ALL EXPOSED PIPE AND FITTINGS ARE TO BE PAINTED IN ACCORDANCE WITH GAS STANDARD E-30. ALL COATING ON BURIED PIPE AND FITTINGS ARE TO BE APPLIED IN ACCORDANCE WITH GAS STANDARD E-35. FOR COATING SELECTIONS ON BURIED PIPE SEE DIRECT BURIAL SELECTIONS TABLE.
4. CALL USA AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION (811).
5. LOCATION OF EXISTING SUBSTRUCTURES ARE APPROXIMATE. BEFORE POWER OR HEAVY EQUIPMENT IS USED FOR EXCAVATION, THE EXACT DEPTH AND LOCATION OF SUBSTRUCTURES SHALL FIRST BE DETERMINED BY HAND EXCAVATION, IF NECESSARY.
6. ALL BENDS ARE SMOOTH FIELD BENDS EXCEPT WHERE ELBOWS ARE NOTED. FIELD BEND SHALL BE MADE IN ACCORDANCE WITH GAS STANDARD A-36 SECTION 4-D.
7. ALL ANGLES SHOWN IN THE PLAN AND PROFILE ARE APPROXIMATE AND SHALL BE CUT TO SUIT FIELD CONDITION.
8. THIS PIPELINE MUST BE INSTALLED WITH AT LEAST 12 INCHES OF CLEARANCE FROM ANY OTHER UNDERGROUND STRUCTURE NOT ASSOCIATED WITH THE PIPELINE.
9. COATING REMOVAL:
BEFORE REMOVING THE PIPE COATING ON PRE-1972 PIPE (DOES NOT INCLUDE PLASTIC TAPE OR FUSION BONDED EPOXY COATINGS) THE FOLLOWING STEPS SHALL BE TAKEN:
-FOR ALL NON-EMERGENCY WORK, PRE-1972 PIPE WRAP MUST BE EVALUATED TO DETERMINE IF IT CONTAINS ASBESTOS PRIOR TO REMOVAL.
-FOR EMERGENCY WORK ON PRE-1972 PIPE, ASSUME THE WRAP CONTAINS > 1% ASBESTOS UNTIL THE WRAP CAN BE TESTED.
-OBTAIN SAMPLES OF THE WRAP, AND HAVE SAMPLES TESTED FOR ASBESTOS IN ACCORDANCE WITH RP 4711.
-TEST RESULTS ARE TO BE INCLUDED WITH AS-BUILTS.
-FOLLOW PROCEDURE IN RP 4711 FOR REMOVAL OF PIPE WRAP.
10. BONDING CABLES TO BE INSTALLED ACROSS PIPELINE CUT-OUTS AT ALL LOCATIONS THE PIPELINE IS SEVERED TO INSTALL TEST HEADS PRIOR TO REMOVAL. CHAIN CLAMPS, MAGNETIC CLAMPS, OR OTHER CONSTRUCTION MANAGEMENT APPROVED CLAMPS AND #6 (MIN.) STRANDED COPPER CABLE SHALL BE UTILIZED.
11. ALL BALL VALVES USED FOR TAPS IN HYDROTEST SECTION ARE TO BE CLOSED 50% FROM FULL OPEN POSITION PRIOR TO FILL AND FOR DURATION OF HYDROTEST. ALL PLUG VALVES USED FOR TAPS/BLOWOFFS IN HYDROTEST SECTION ARE TO BE IN FULL OPEN POSITION PRIOR TO FILL AND FOR DURATION OF HYDROTEST UNLESS SPECIFICALLY CALLED OUT TO BE IN CLOSED POSITION ON DRAWING.
12. ALL WELDING ON THE L-300B EXPANSION LOOP TO BE PERFORMED WHEN AMBIENT TEMPERATURE IS AS NEAR AS PRACTICAL TO 70° F.

GENERAL NOTES:

1. THIS DRAWING HAS BEEN CREATED BY REVIEW OF THE AS-BUILT DRAWINGS & RECORDS. ACCURACY IS DEPENDENT UPON THE SOURCE DOCUMENTS LISTED ON THE REFERENCE DRAWINGS.
2. "R" STATIONING ON THIS DRAWING DENOTES "REFERENCE" STATIONING AND IS A RESULT OF PG&E GIS SHAPEFILE OVERLAID UPON GOOGLE EARTH IMAGERY AND MIGHT NOT ACCURATELY DEPICT EXACT DISTANCES. FIELD VERIFY ALL DISTANCES.
3. DISTANCES TO ALL UTILITIES SHOWN ON DRAWING ARE APPROXIMATE BASED UPON REVIEW OF PG&E & OTHER UTILITY/AGENCY DRAWINGS & AS-BUILTS. CONTRACTOR TO CALL USA TO HAVE LOCATION OF THESE FACILITIES MARKED AND POTHOLE TO EXPOSE/VERIFY LOCATION.

DIRECT BURIAL COATING SELECTIONS LISTED IN ORDER OF PREFERENCE

MAIN LINE COATING	FBE
MINOR REPAIRS	PROTAL 7200, POWERCRETE J, DEVGRIP 238
TIE-IN WELDS	PROTAL 7200, POWERCRETE J, DEVGRIP 238
GIRTH WELDS	PROTAL 7200, POWERCRETE J, DEVGRIP 238
BUTT WELDED FITTINGS	PROTAL 7200, POWERCRETE J, DEVGRIP 238
VALVE ASSEMBLIES	DEVGRIP 238
SHORT SEGMENTS OF PIPE	PROTAL 7200, POWERCRETE J, DEVGRIP 238
AIR-TO-SOIL TRANSITIONS	DEVGRIP 238, POWERCRETE J
PRESSURE CONTROL FITTINGS	
BODY	PROTAL 7200
FLANGE	WAX TAPE
TIE-INS/COATING TRANSITIONS	PROTAL 7200, WAXTAPE, POLYKEN TAPE

BORED COATING SELECTIONS LISTED IN ORDER OF PREFERENCE

MAIN LINE COATING	ARC APPLIED OVER FBE
MINOR REPAIRS	PROTAL 7200, POWERCRETE J
GIRTH WELDS	PROTAL 7200, POWERCRETE J

NOTES:

- 1) CONTACT THE RESPONSIBLE PIPELINE ENGINEER TO REQUEST A VARIANCE FROM THE ABOVE COATING SELECTIONS
- 2) ALL COATINGS ARE TO BE APPLIED IN ACCORDANCE WITH GS&S E-30 AND E-35

Installation Tested or Inspected and Noted on Drawing. All Levels Satisfactory per PG&E GS&S 0-16

Qualified Employee Date

Corrosion mechanic's signature is required when a CPA boundary is within the scope of the project



G.C. GAS

WELDING INSPECTED PER PG&E GAS STANDARD D-40

VISUAL _____

MAGNETIC PARTICLE _____

INSPECTOR _____

DATE _____

NOTIFIED
U.S.A.

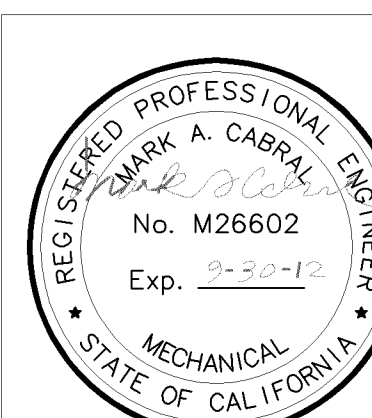
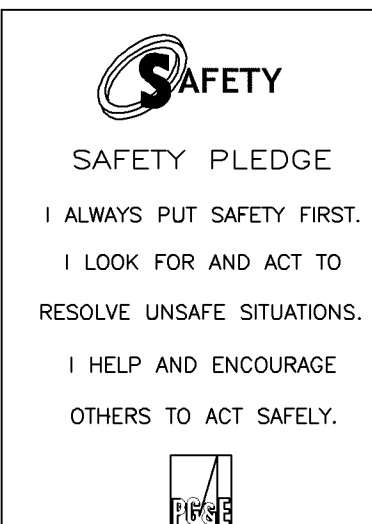
DATE

TICKET NUMBER

BY

REFERENCE DRAWINGS:

- 284093 - - - - OPERATING MAP
- 385122 - - - - TOPOCK TO MILPITAS (SHT. 1 OF 165)
- 41497332 - - - - HYDROTEST 76 L-300B
- 4801301 - - - - TOPOCK OVERPRESSURE PROTECTION



COPY

CONTACT INFORMATION:

CONSTRUCTION MANAGER	Redacted
DISTRICT FOREMAN	Redacted
CLEARANCE SUPERVISOR	Redacted
PROJECT COORDINATOR	Redacted
LEAD ENGINEER	MARK CABRAL (925) 588-3640
ENGINEER	Redacted
MATERIALS (PIPE)	Redacted
MATERIALS (FITTINGS)	Redacted
MATERIALS CHAIN OF CUSTODY	Redacted

PSRS# 25928		APPROVED BY	GM 41617909
		MCJ	DSCN
		IGH	DWN MCJ
		RAA	CHKD IGH
		MAC	OK RAA RAA
0 2/16/12	ISSUED FOR CONSTRUCTION	41617909	MCJ IGH RAA MAC
NO.	DATE	DESCRIPTION	GM/SPEC DWN CHKD SUPV APVD BY
REVISIONS			

HYDROTEST 122-12
L-300B
MP 0.1294 - 0.1549
NEEDLES, CALIFORNIA

PACIFIC GAS AND ELECTRIC COMPANY
WALNUT CREEK, CALIFORNIA

BILL OF MATL 05	
DWG LIST	
SUPSDS	
SUPSD BY	
SHEET NO. 01 OF 05 SHEETS	
41617909	0

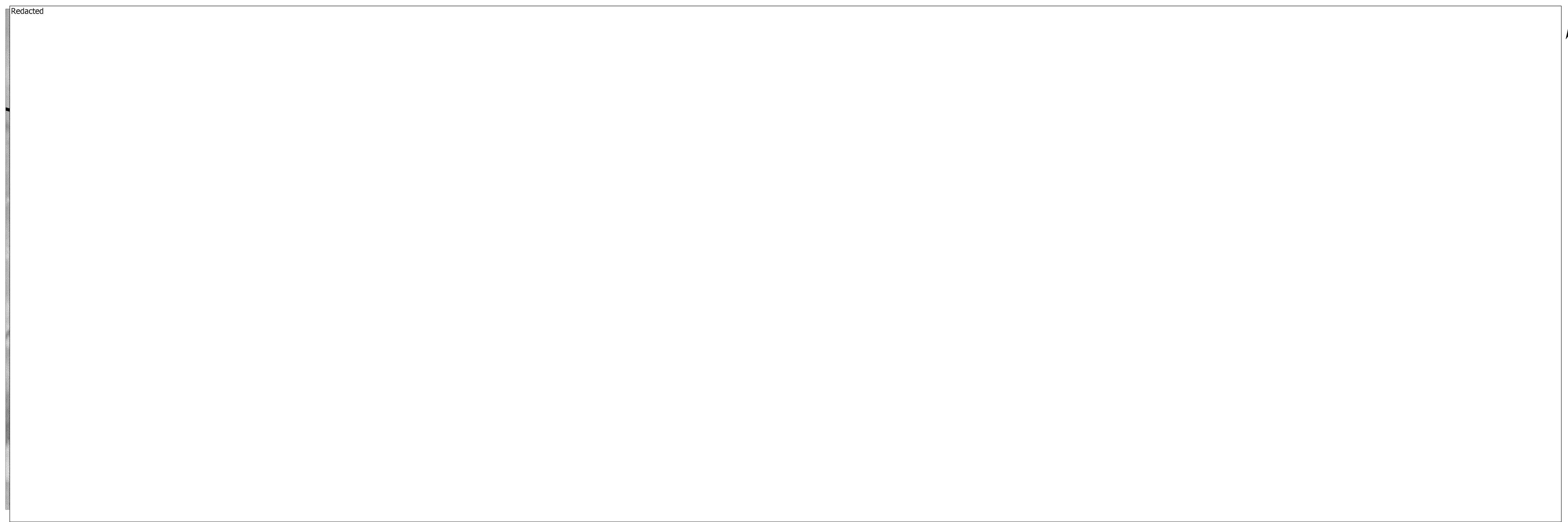
1 2 3 4 5 6 7 8 9 10

E
D
C
B
A

E
D
C
B
A

PLAN VIEW

WALL MAP - N/A; PLAT - N/A; BLOCK - N/A; MP 0.1294 - MP 0.1549
(SCALE: 1" = 60')



ESTIMATED GALLONS OF WATER
REQUIRED LOCATION A TO B TEST:
8,000 GALLONS.

SAFETY
SAFETY PLEDGE
I ALWAYS PUT SAFETY FIRST.
I LOOK FOR AND ACT TO
RESOLVE UNSAFE SITUATIONS.
I HELP AND ENCOURAGE
OTHERS TO ACT SAFELY.



COPY



NO.	DATE	DESCRIPTION	GM/SPEC	DWN	CHKD	SUPV	APVD BY
0	2/16/12	ISSUED FOR CONSTRUCTION	41617909	MCJ	IGH	RAA	MAC

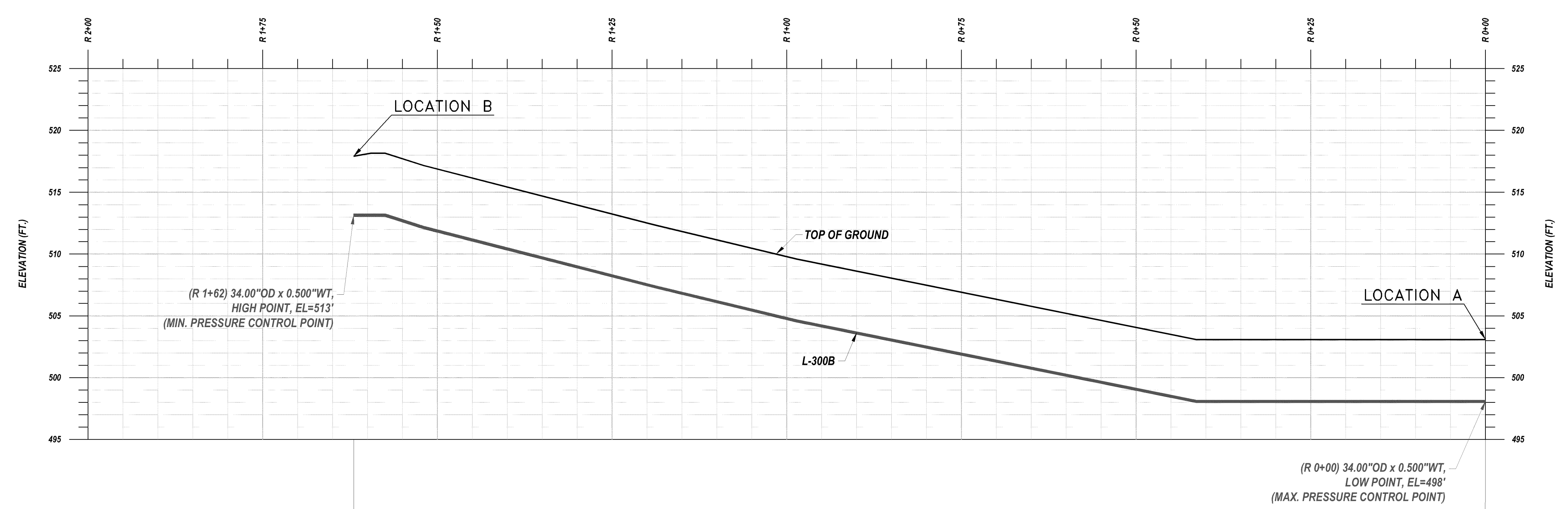
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BY	SUPV
MCJ	DSCN
IGH	DWN MCJ
RAA	CHKD IGH
MAC	OK RAA RAA
	DATE 2-16-12
	SCALE'S AS SHOWN

HYDROTEST 122-12
L-300B
MP 0.1294 - 0.1549
NEEDLES, CALIFORNIA
PACIFIC GAS AND ELECTRIC COMPANY
WALNUT CREEK, CALIFORNIA

MICROFILM	
BILL OF MATL 05	
DWG LIST	
SUPSDS	
SUPSD BY	
SHEET NO. 02 OF 05 SHEETS	
41617909	0

1 2 3 4 5 6 7 8 9 10

PROFILE VIEW
(SCALE 1" = 10')



NOTE:
FIELD TO VERIFY WITH
GPS LAT./LONG. WHERE
SPECIFIED.

	P STATION
	FITTING (MATERIAL OF RECORD)
	PIPE (MATERIAL OF RECORD)
	GM NUMBER
	YEAR INSTALLED (LENGTH)
	R STATION

LOCATION A

LOCATION B

PIPELINE FEATURES
SEE MATERIAL OF RECORD ON
SHEET 5 OF 5
(NOT TO SCALE)

LOCATION	R STA.	ELEV.	MIN. PRESS	MAX. PRESS
MIN. PRESSURE CONTROL POINT	1+62	513'	1050 psig	
MAX. PRESSURE CONTROL POINT	0+00	498'		1100 psig
LOCATION B	1+62	513'	1050 psig	1094 psig
LOCATION A (TEST STATION)	0+00	498'	1056 psig	1100 psig

SEE DRAWING
4801301 FOR NEW
V-0.13 ASSEMBLY
INSTALLATION BILL
OF MATERIAL

SAFETY

SAFETY PLEDGE

- I ALWAYS PUT SAFETY FIRST.
- I LOOK FOR AND ACT TO RESOLVE UNSAFE SITUATIONS.
- I HELP AND ENCOURAGE OTHERS TO ACT SAFELY.

REGISTERED PROFESSIONAL ENGINEER
MARK A. CABRAL
No. M26602
Exp. 9-20-12
MECHANICAL
STATE OF CALIFORNIA

COPY



NO.	DATE	DESCRIPTION	GM/SPEC	DWN	CHKD	SUPV	APVD BY
0	2/16/12	ISSUED FOR CONSTRUCTION	41617909	MCJ	IGH	RAA	MAC

APPROVED BY: GM 41617909
BY: SUPV
MCJ DSCN
IGH DWN MCJ
RAA CHKD IGH
MAC OK RAA | RAA
DATE 2-16-12
SCALES AS SHOWN

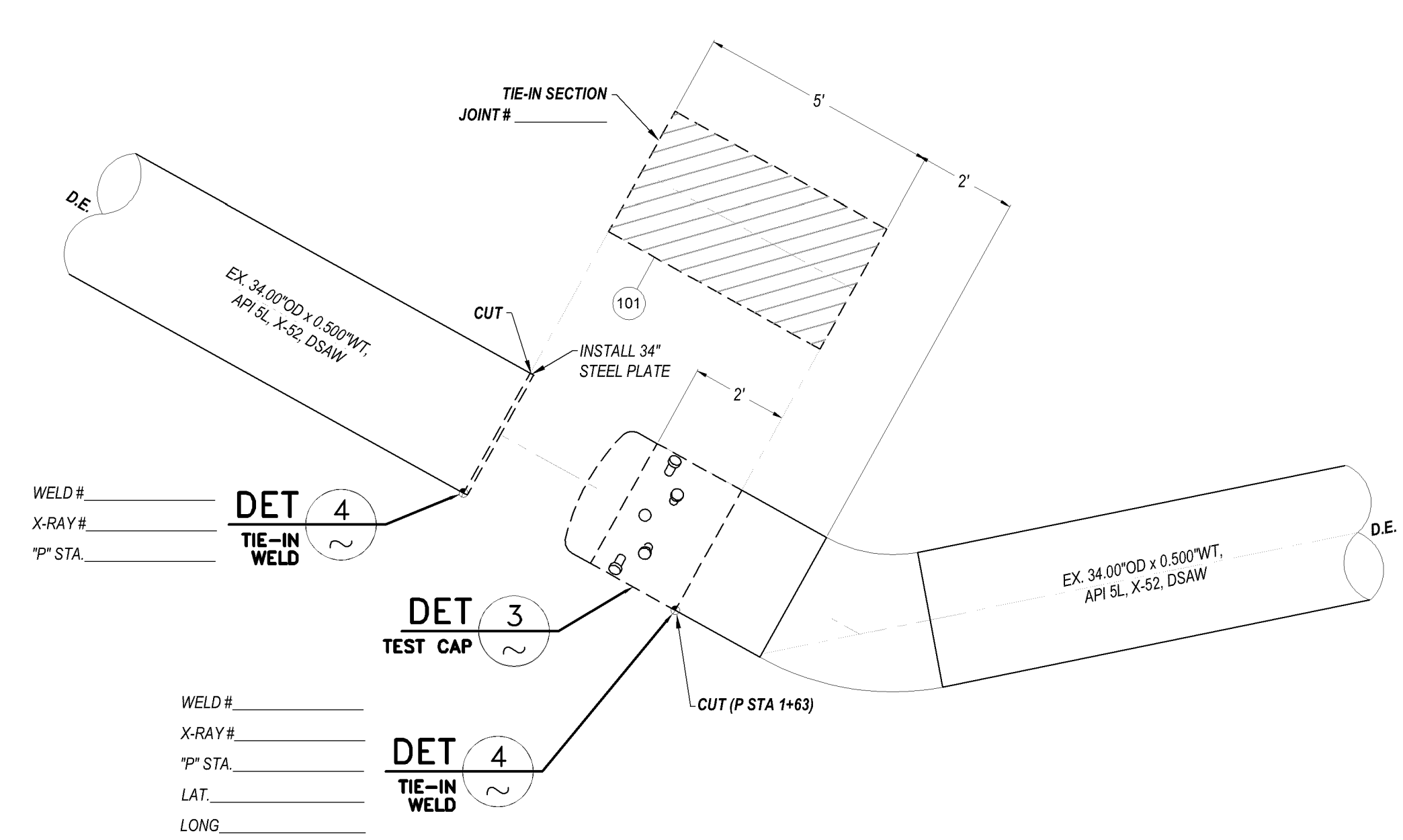
HYDROTEST 122-12
L-300B
MP 0.1294 - 0.1549
NEEDLES, CALIFORNIA
PACIFIC GAS AND ELECTRIC COMPANY
WALNUT CREEK, CALIFORNIA

MICROFILM
BILL OF MATL 05
DWG LIST
SUPSDS
SUPSD BY
SHEET NO. 03 OF 05 SHEETS
41617909

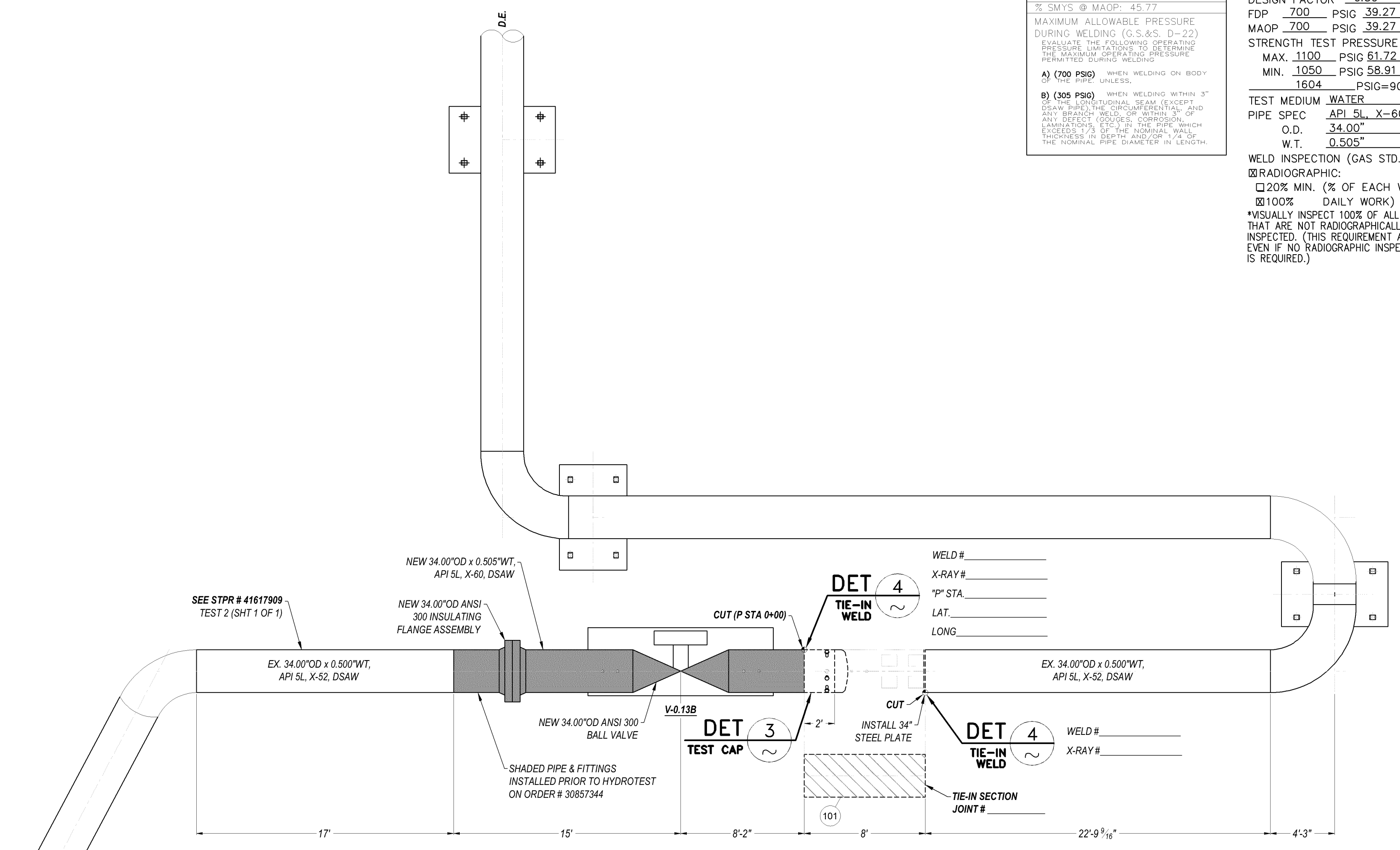
GM 134616	
EXIST PIPE SPECS	
HEADER SIZE:	34.00"
PIPE SPECS:	API 5L, X-52, DSAW
WALL THICKNESS:	0.500"
PRESENT MAOP:	700
% SMYS @ MAOP:	45.77
MAXIMUM ALLOWABLE PRESSURE DURING WELDING (G.S.&S. D-22)	
EVALUATE THE FOLLOWING OPERATING PRESSURE LIMITATIONS TO DETERMINE THE MAXIMUM OPERATING PRESSURE PERMITTED DURING WELDING	
A) (700 PSIG) WHEN WELDING ON BODY OF PIPE UNLESS:	
B) (305 PSIG) WHEN WELDING WITHIN 3" OF THE LONGITUDINAL SEAM (EXCEPT DSAW PIPE) THE CIRCUMFERENTIAL AND ANY BRANCH JOINT OR WITHIN 2" OF ANY DEFECT (CRACKS, CORROSION & SERRATED) EXCEPT THE PIPE WHICH EXCEEDS 1/3 OF THE NOMINAL WALL THICKNESS IN DEPTH AND/OR 1/4 OF THE NOMINAL PIPE DIAMETER IN LENGTH.	

JOB NO.	41617909
BOM #	101
DESIGN CRITERIA	
LOCATION CLASS	1
DESIGN FACTOR	0.50
FDP	700 PSIG 39.27 % SMYS
MAOP	700 PSIG 39.27 % SMYS
STRENGTH TEST PRESSURE	
MAX.	1100 PSIG 61.72 % SMYS
MIN.	1050 PSIG 58.91 % SMYS
	1604 PSIG=90% SMYS
TEST MEDIUM	WATER
PIPE SPEC	API 5L, X-60, DSAW
O.D.	34.00"
W.T.	0.505"

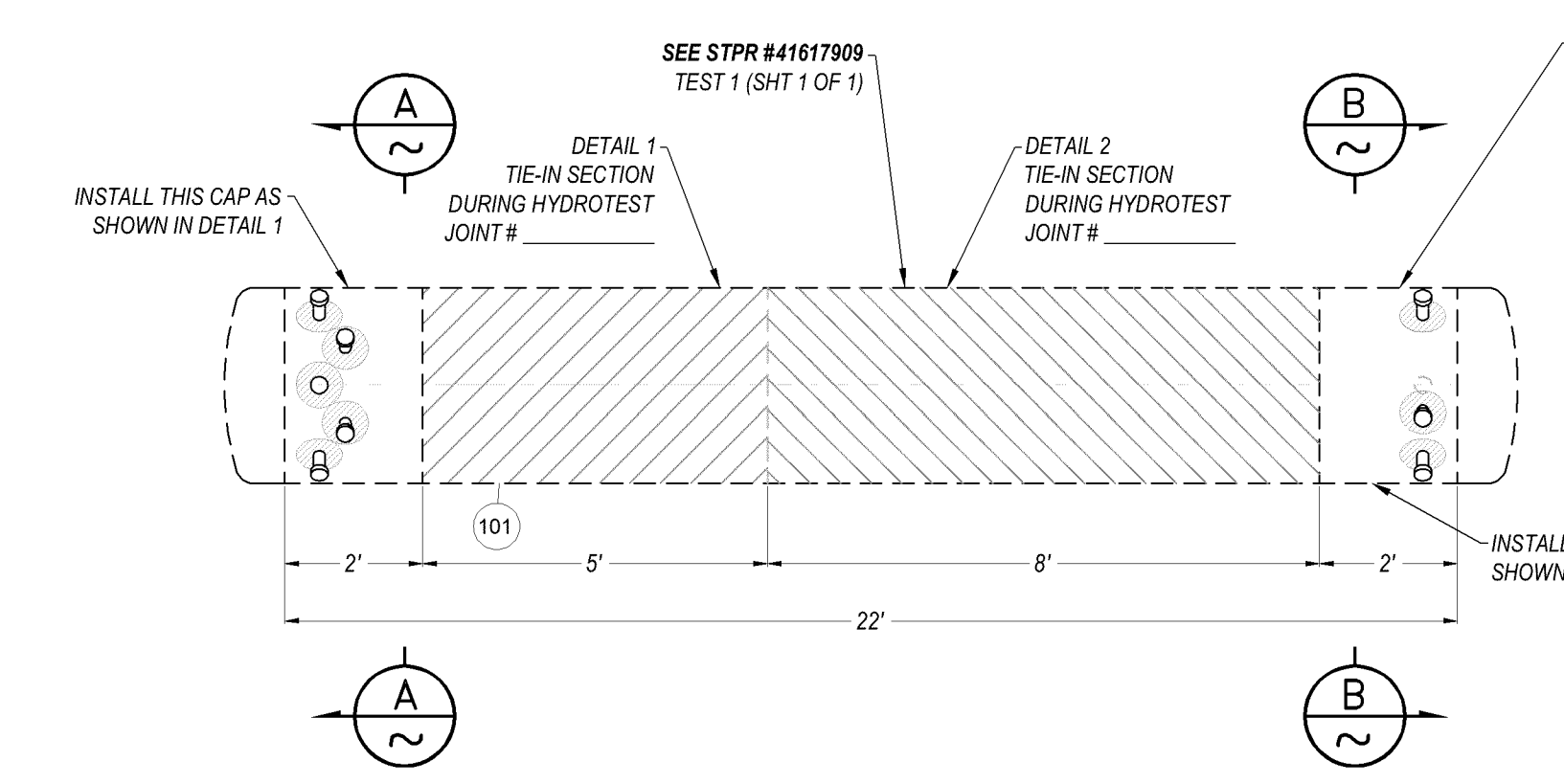
WELD INSPECTION (GAS STD.D-40)*
 ☒ RADIOGRAPHIC
 ☐ 20% MIN. (% OF EACH WELDER'S 100% DAILY WORK)
 *VISUALLY INSPECT 100% OF ALL WELDS THAT ARE NOT RADIOGRAPHICALLY INSPECTED. (THIS REQUIREMENT APPLIES EVEN IF NO RADIOGRAPHIC INSPECTION IS REQUIRED.)



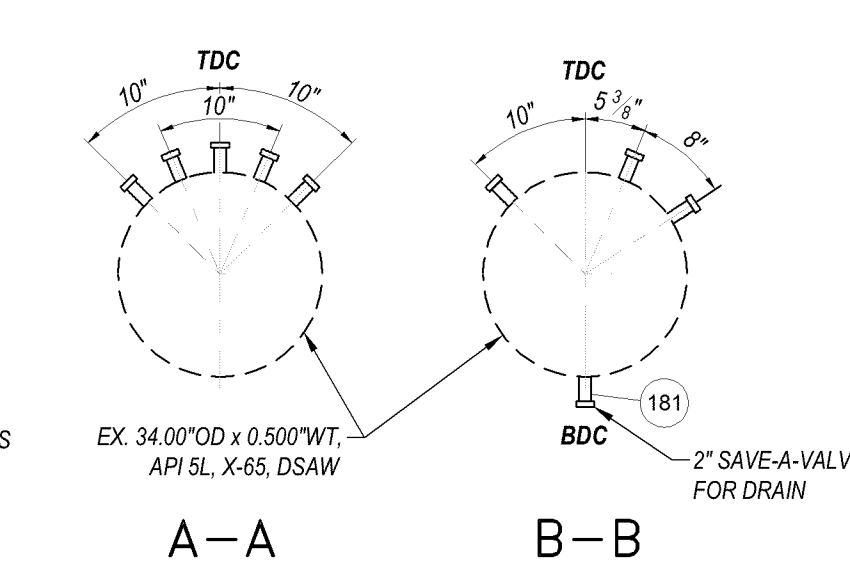
DETAIL 1 HYDROTEST CONFIGURATION
 SCALE: 3/8" = 1'-0" SHT 2 WEST TEST END



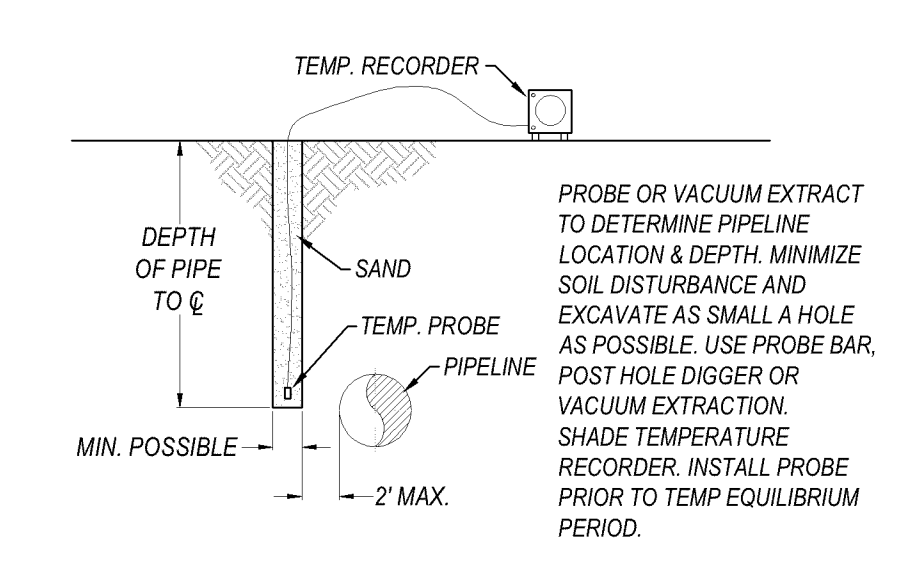
DETAIL 2 HYDROTEST CONFIGURATION
 SCALE: 3/16" = 1'-0" SHT 2 MLV-0.13B & EAST TEST END



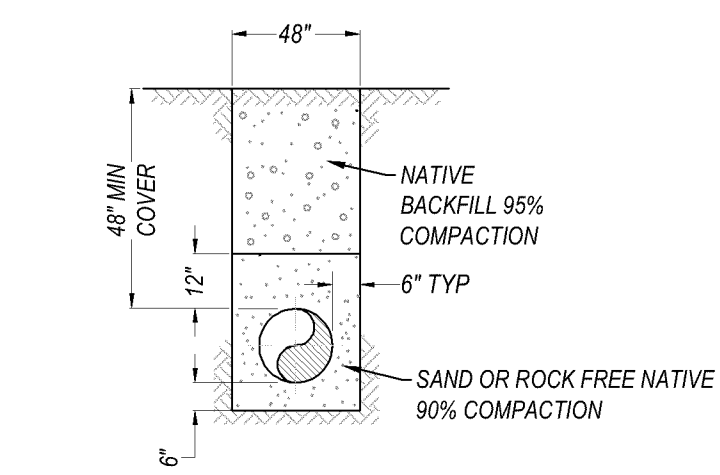
DETAIL 3 34" TEST CAPS & TIE-IN PIECES
 SCALE: 3/8" = 1'-0" HYDROTEST CONFIGURATION



DETAIL 4 GS&S D-22
 NOT TO SCALE FIG. 2

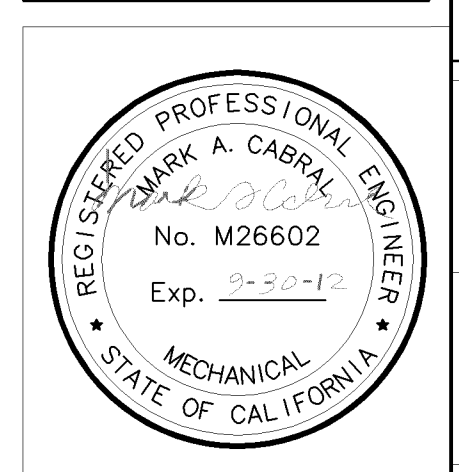


DETAIL 5 TEMPERATURE PROBE
 NOT TO SCALE SHT 2 MIN. 50' FROM TEST STATION



DETAIL 6 R/W TRENCH
 NOT TO SCALE TYPICAL

SAFETY
 SAFETY PLEDGE
 I ALWAYS PUT SAFETY FIRST.
 I LOOK FOR AND ACT TO RESOLVE UNSAFE SITUATIONS.
 I HELP AND ENCOURAGE OTHERS TO ACT SAFELY.



COPY



NO.	DATE	DESCRIPTION	GM/SPEC	DWN	CHKD	SUPV	APVD BY
0	2/16/12	ISSUED FOR CONSTRUCTION	41617909	MCJ	IGH	RAA	MAC

APPROVED BY	GM 41617909
BY	SUPV
MCJ	DSCN
IGH	DWN MCJ
RAA	CHKD IGH
MAC	OK RAA / RAA
DATE	2-16-12
SCALE	AS SHOWN

HYDROTEST 122-12
 L-300B
 MP 0.1294 - 0.1549
 NEEDLES, CALIFORNIA
 PACIFIC GAS AND ELECTRIC COMPANY
 WALNUT CREEK, CALIFORNIA

MICROFILM	
BILL OF MAT'L 05	
DWG LIST	
SUPSDS	
SUPSD BY	
SHEET NO.	04 OF 05 SHEETS
41617909	0

MATERIALS OF RECORD

Item Number	Description	Units	Quantity
1	Pipe, 34.00" x 0.500" WT, API 5L, X-52, DSAW	Ft.	140
2	Pipe, 34.00" x 0.505" WT, API 5L, X-60, DSAW	Ea.	23
3	Elbow, 34.00" OD x 0.500" WT, Y-52	Ea.	2
4	34" Valve, Ball, Full Port, Carbon Steel, ANSI 300, WE, Beveled to Match API 5L, 34.000" OD x 0.505" WT, X-60 Pipe, Above Ground Service	Ea.	1
5	34.00" OD Insulating Flanges, Weldneck, 5.0" Raised Face, Carbon Steel, ANSI 300, Beveled to Match, API 5L, 34.000" OD x 0.505" WT, X-60 Pipe	Ea.	2

BILLS OF MATERIALS

Item Number	Description	PG&E Material Code	Units	Quantity	Heat Number (As-Built for pipe & HY fittings)	Serial Number (As-Built for pipe & HY fittings)
EXPENSE ITEMS ORDER #41617909						
101	Pipe, 34.00" x 0.505" WT API 5L, X-60, DSAW, FBE Coated	01-0780	Ft.	13		
181	Save-A-Valve Nipple, 2"	02-2289	Ea.	1		
CONTINGENCY ITEMS ORDER #41617909						
101	Pipe, 34.000", 0.505" WT API 5L, X-60, DSAW, FBE Coated	01-0780	Ft.	40		

SAFETY
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COPY



NO.	DATE	DESCRIPTION	GM/SPEC	DWN	CHKD	SUPV	APVD BY
0	2/16/12	ISSUED FOR CONSTRUCTION	41617909	MCJ	IGH	RAA	MAC

APPROVED BY	GM 41617909
BY	SUPV
MCJ	DSCN
IGH	DWN MCJ
RAA	CHKD IGH
MAC	OK RAA RAA
	DATE 2-16-12
	SCALES AS SHOWN

HYDROTEST 122-12
 L-300B
 MP 0.1294 - 0.1549
 NEEDLES, CALIFORNIA
 PACIFIC GAS AND ELECTRIC COMPANY
 WALNUT CREEK, CALIFORNIA

MICROFILM	
BILL OF MATL 05	
DWG LIST	
SUPSDS	
SUPSD BY	
SHEET NO. 05 OF 05 SHEETS	
41617909	0