

DrummondWoodsum

Joanna B. Tourangeau

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February 7, 2012

Thomas S. Burack, Commissioner
New Hampshire Department of Environmental Services
29 Hazen Drive; PO Box 95
Concord, NH 03302-0095

RE: Gorham Paper And Tissue, LLC (Docket: DG 2011-03): As Built Plans

Dear Mr. Burack:

As required by the Site Evaluation Committee Decision and Order Granting Exemption with Conditions dated August 5, 2011 ("Exemption"), Gorham Paper And Tissue, LLC ("GPT") encloses a copy of the as built plans for the Natural Gas and Landfill Gas Pipeline Projects. Submission of these plans completes the submission requirements under the Exemption.

Please do not hesitate to contact me if you have any questions. Thank you for your assistance with this matter.

Sincerely,



Joanna B. Tourangeau

JBT/al

Enclosure

cc: Michael Iacopino, Counsel for the SEC (with enclosure)
Charles Willing, Counsel for AVRRD (with enclosure)
Richard Arnold, GPT (without enclosure)
Austin Durant, GPT (without enclosure)
Ben Ward, GPT (without enclosure)
Jim Richards, Cianbro (electronic copy only, without enclosure)
Jared Whitney, RH White (electronic copy only, without enclosure)

Daniel Amory*
David J. Backer*
S. Campbell Badger*
Michael L. Buescher*
Jerrold A. Crouter*
George T. Dilworth*
Jessica M. Emmons*
Peter C. Felmy*
Erin R. Feltes†
Anthony T. Fratianne*
Sara S. Heilstedt*
Eric R. Herlan††
Melissa A. Hewey††
Michael E. High*
David M. Kallin*
John S. Kaminski*
Edward J. Kelleher*
Jeanne M. Kincaid††
Peter D. Klein*
Rodney A. Lake*
Benjamin E. Marcus*
Elek A. Miller*
Mona T. Movafaghit
Michael J. Murray*
Robert P. Nadeau*
Daina J. Nathanson††
Kimberly A. Pacelli*
Jeffrey T. Piampiano*
William L. Plouffe*
Aaron M. Pratt††
Harry R. Pringle*
Daniel J. Rose††
George Royle V*
Gregory W. Sample*
David S. Sherman, Jr.*
Richard A. Shinay*
Christina R. Simpsons†
Kaighn Smith, Jr.*
Bruce W. Smith*
Richard A. Spencer††
Christopher G. Stevenson*
E. William Stockmeyer††
Amy K. Tchao*†
Joanna B. Tourangeau*†
M. Thomas Trenholm*
Matthew H. Upton†
Gary D. Vogel*
Ronald N. Ward*
Brian D. Willing*
Gerald M. Zelint

Consultants

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Policy & Labor Relations

Roger P. Kelley
Labor Relations &
Conflict Management

Michael J. Opuda Ph.D.
Special Education

Of Counsel

Joseph L. Delafield III*
Robert L. Gips*
Donald A. Kopp*
Hugh G. E. MacMahon*
Harold E. Woodsum, Jr.*

* Admitted In Maine

† Admitted In New Hampshire

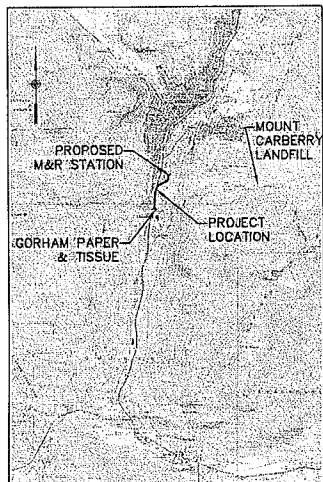
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GORHAM PAPER & TISSUE LLC.

NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT

BERLIN, NEW HAMPSHIRE

LIST OF DRAWINGS



MAGUIRE GROUP DRAWINGS (CIVIL, STRUCTURAL & ELECTRICAL SITE)	FUSS & O'NEILL DRAWINGS (METERING & REGULATING STATION)	REFERENCE DRAWINGS
G000 COVER SHEET C000 CIVIL KEY PLAN C001 GENERAL NOTES & LEGEND C100 EXISTING CONDITIONS PLAN C200 PROPOSED OVERALL PLAN C201 PLAN & PROFILE-1 C202 PLAN & PROFILE-2 C203 PLAN & PROFILE-3 C204 PLAN & PROFILE-4 C205 PLAN & PROFILE-5 C301 M&R FACILITY ENLARGED PLAN & SECTION C302 M&R GRADING AND PNTGS TAP ENLARGED PLANS C401 BRIDGE CROSSING OVERALL PLAN C402 BRIDGE CROSSING GENERAL ARRANGEMENT C403 BRIDGE CROSSING ENLARGED ELEVATIONS-1 C404 BRIDGE CROSSING ENLARGED ELEVATIONS-2 C405 BRIDGE CROSSING ENLARGED ELEVATIONS-3 C406 BRIDGE CROSSING ENLARGED ELEVATIONS-4 C407 BRIDGE CROSSING DETAILS-1 C408 BRIDGE CROSSING DETAILS-2 C409 BRIDGE ASBULT LFG PIPELINE WELD LOCATIONS C410 BRIDGE ASBULT NG PIPELINE WELD LOCATIONS C501 SWPPP SEDIMENT & EROSION CONTROL PLAN-1 C502 SWPPP SEDIMENT & EROSION CONTROL PLAN-2 C503 SWPPP SEDIMENT & EROSION CONTROL PLAN-3 C504 SWPPP SEDIMENT & EROSION CONTROL PLAN-4 C505 SWPPP SEDIMENT & EROSION CONTROL PLAN-5 C701 SEDIMENT & EROSION CONTROL DETAILS C702 TRENCH & PAVEMENT DETAILS C703 PIPING DETAILS ES100 M&R FACILITY ELECTRICAL SITE PLAN ES101 M&R FACILITY ELECTRICAL SITE DETAILS	DI-101 PROCESS & INSTRUMENTATION DIAGRAM DP-101 INTERIOR PIPING ARRANGEMENT DP-102 EXTERIOR PIPING - PLAN & DETAILS DP-103 TIE-IN AT PNTGS TRANSMISSION LINE - PLAN & ELEVATION DP-104 PIPE SUPPORT - DETAILS DP-105 INTERIOR PIPING SPOOLS - SH1 1 DP-106 INTERIOR PIPING SPOOLS - SH1 2 DP-107 EXTERIOR PIPING SPOOLS - SH1 1 DP-108 EXTERIOR PIPING SPOOLS - SH1 2 DP-109 INTERIOR PIPING WELD MAPS - SH1 1 DP-110 INTERIOR PIPING WELD MAPS - SH1 2 DP-111 EXTERIOR PIPING WELD MAPS - SH1 1 DP-112 EXTERIOR PIPING WELD MAPS - SH1 2 E6920-CS COVER SHEET E6920-A1 EXTERIOR ELEVATIONS E6920-A2 FLOOR PLAN E6920-E1 ELECTRICAL ELEVATIONS E6920-E2 ELECTRICAL DETAILS E6920-BM BILL OF MATERIALS E6920-FS1 FOUNDATION SUGGESTIONS DS-101 GENERAL NOTES, FOUNDATION PLANS & SECTIONS DE-100 ELECTRICAL LEGEND & NOTES DE-101 HAZARDOUS AREA CLASSIFICATION PLAN DE-103 INSTRUMENT & CONTROL PLAN DE-104 INSTRUMENTATION LOOP DIAGRAM 1 OF 5 DE-105 INSTRUMENTATION LOOP DIAGRAM 2 OF 5 DE-106 INSTRUMENTATION LOOP DIAGRAM 3 OF 5 DE-107 INSTRUMENTATION LOOP DIAGRAM 4 OF 5 DE-108 INSTRUMENTATION LOOP DIAGRAM 5 OF 5 DE-109 ELECTRICAL GROUNDING PLAN DE-110 ELECTRICAL INTERIOR ELEVATIONS DE-111 ELECTRICAL DETAILS DE-112 POWER/CONTROL WIRING & CONDUIT SCHEDULES DE-113 CATHODIC PROTECTION SITE PLAN & DETAILS DE-114 ONE LINE DIAGRAM	10-030A OVERALL SITE PLAN (YORK LAND SERVICES, LLC)

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

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No. DATE DESCRIPTION BY	EY	
1 10/12/2010 PRELIMINARY DESCRIPTION BY	EY	
REVISIONS		



Maguire Group Inc.
 Architects / Engineers / Planners
 110 Corporate Drive, Suite 6
 Portsmouth, New Hampshire 03801

SCALE:	HORIZ.: NOT TO SCALE
	VERT.:
DATUM:	HGRS.:
	VERT.:
GRAPHIC SCALE	



FUSS & O'NEILL
 Energy Alternatives, LLC
 145 HARTFORD RD MANCHESTER, CT 06040 860.646.2469

GORHAM PAPER & TISSUE LLC.
 COVER SHEET
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. No.: 10100 DATE: 9/13/2011	G000
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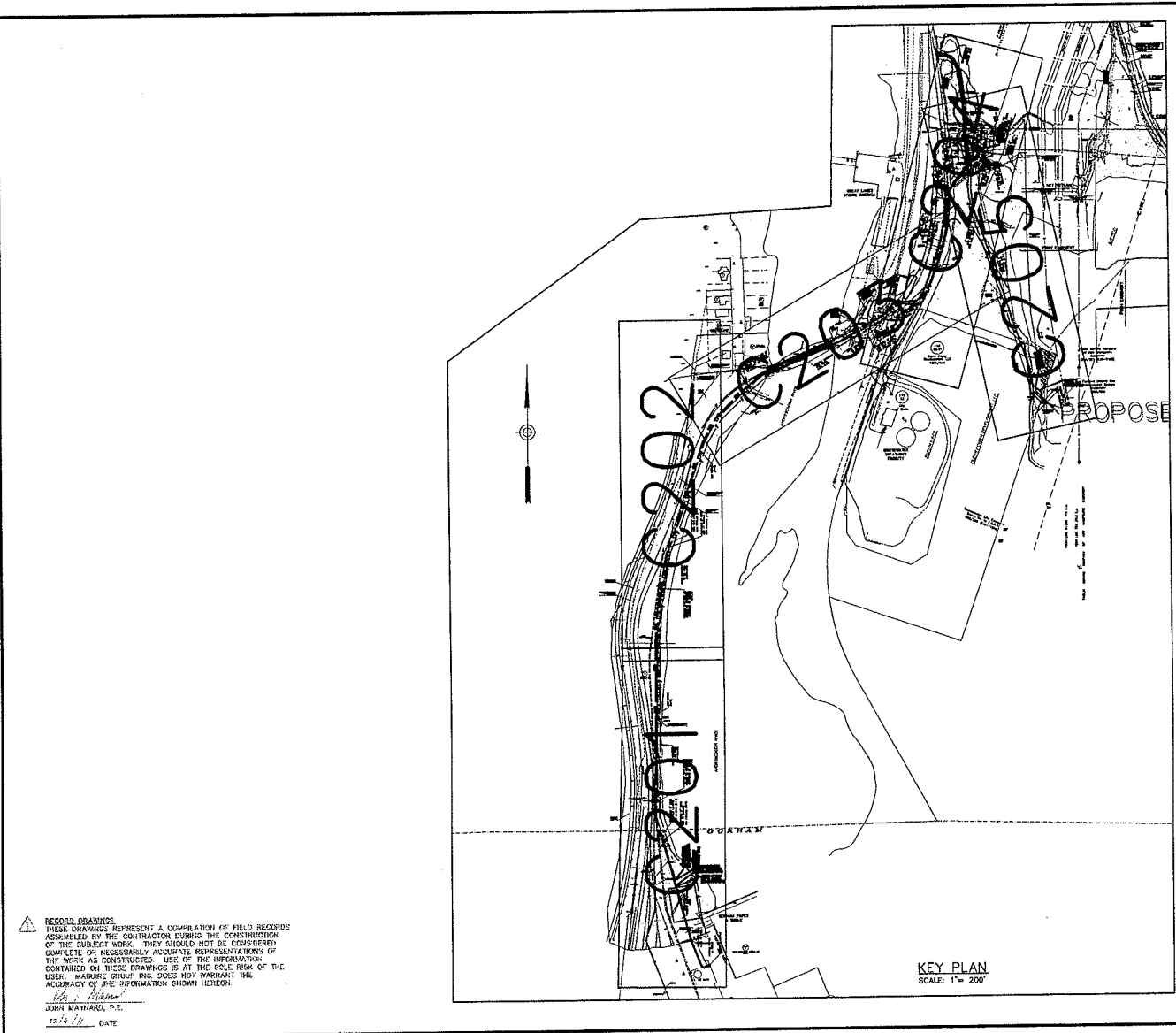
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DATE:



RECORD DRAWINGS
 THESE DRAWINGS REPRESENT A COMPILATION OF FIELD RECORDS ASSEMBLED BY THE CONTRACTOR DURING THE CONSTRUCTION OF THE SUBJECT WORK. THEY SHOULD NOT BE CONSIDERED COMPLETE OR NECESSARILY ACCURATE REPRESENTATIONS OF THE WORK AS CONSTRUCTED. USE OF THE INFORMATION CONTAINED ON THESE DRAWINGS IS AT THE SOLE RISK OF THE USER. MAGUIRE GROUP INC. DOES NOT WARRANT THE ACCURACY OF THE INFORMATION SHOWN HEREON.
 John R. Nathans, P.E.
 12/13/11 DATE

KEY PLAN
SCALE: 1" = 200'

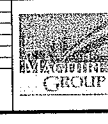
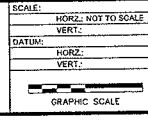
RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

REVISIONS		PROJ. MANAGER:	JAM
No.	DATE	DESCRIPTION	BY
1	10/12/2010	PRELIMINARY	EY
			BY

PROJ. MANAGER:	JAM
CHIEF DESIGNER:	MAD
REVIEWED BY:	DATE



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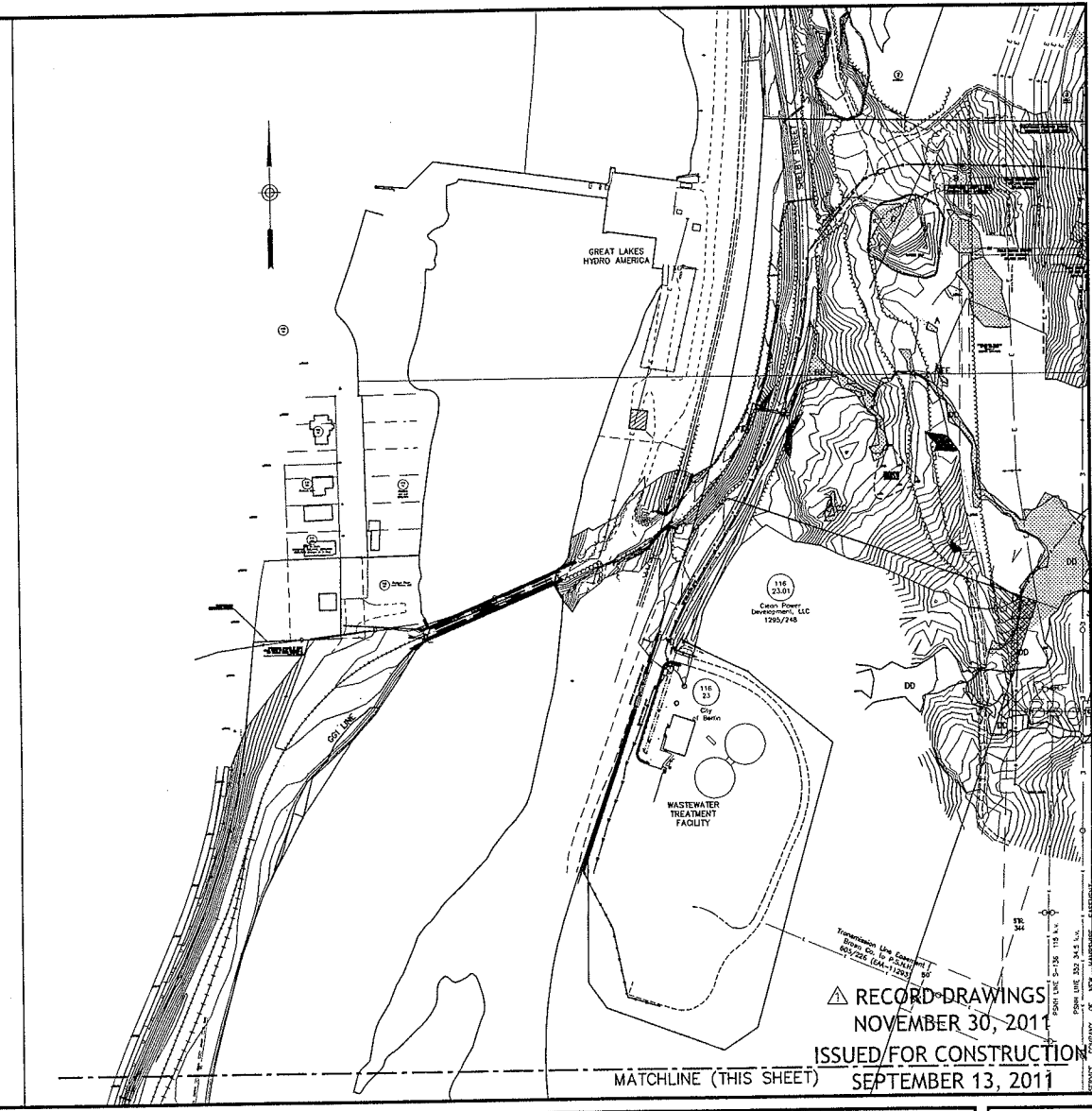
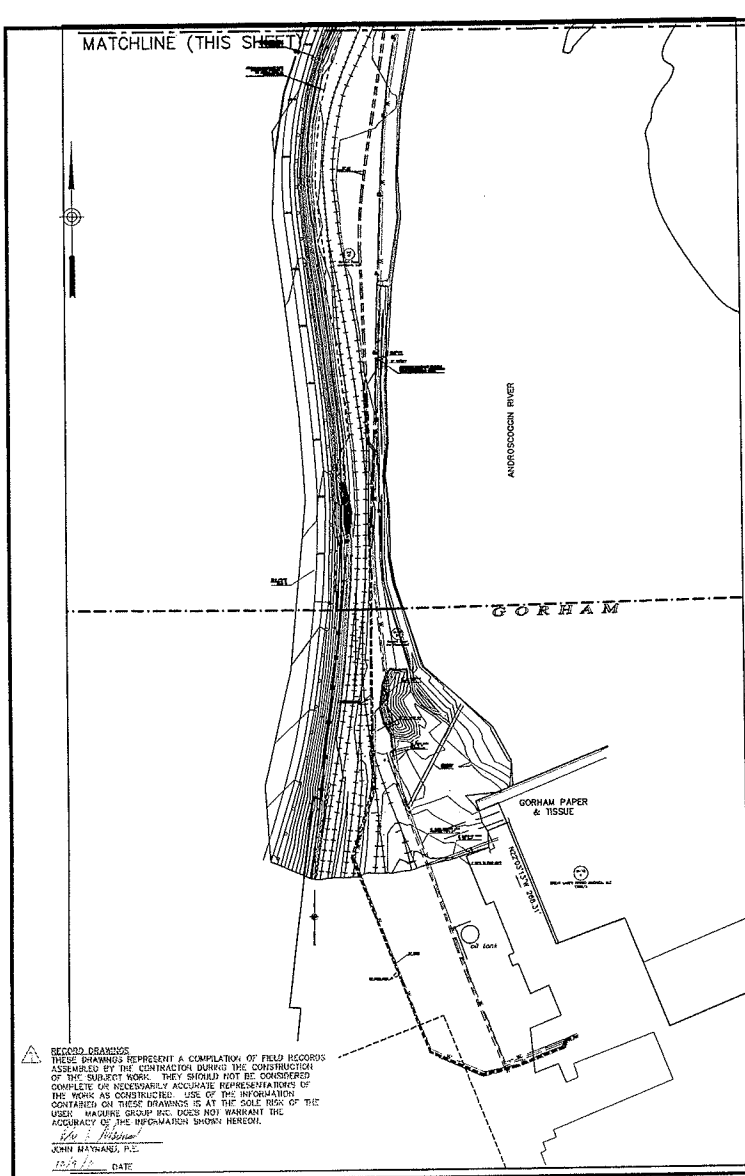
Maguire Group Inc.
 Architects / Engineers / Planners
 110 Corporate Drive, Suite 6
 Portsmouth, New Hampshire 03801

GORHAM PAPER & TISSUE LLC.
 KEY PLAN
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. No.: 10120
 DATE: 9/13/2011

C001

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RECORD DRAWINGS
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 John Maynard, P.E.
 12/29/11 DATE

RECORD DRAWINGS
NOVEMBER 30, 2011
ISSUED FOR CONSTRUCTION
SEPTEMBER 13, 2011

19185-01 RECORD DRAWING INFO ADDED AS PROVIDED BY CONTRACTOR		PROJ. MANAGER: JMA CHIEF DESIGNER: MAD REVIEWED BY: _____ DATE: _____	SEAL
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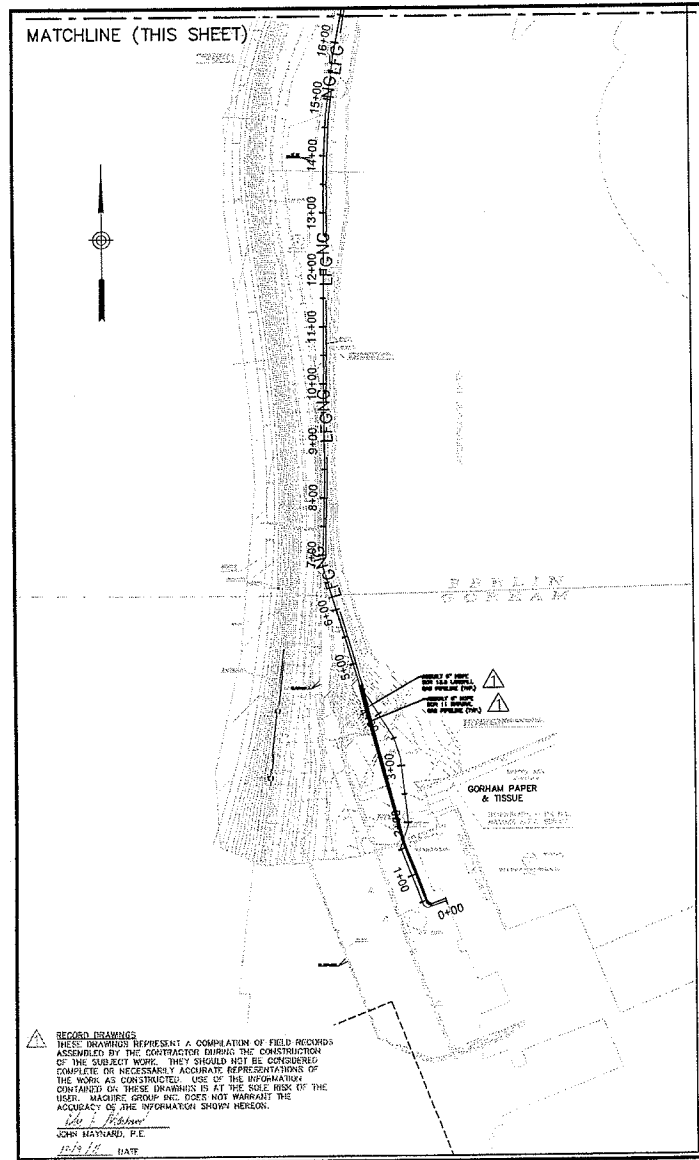
Maguire Group Inc.
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GORHAM PAPER & TISSUE LLC.
 EXISTING CONDITIONS PLAN
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

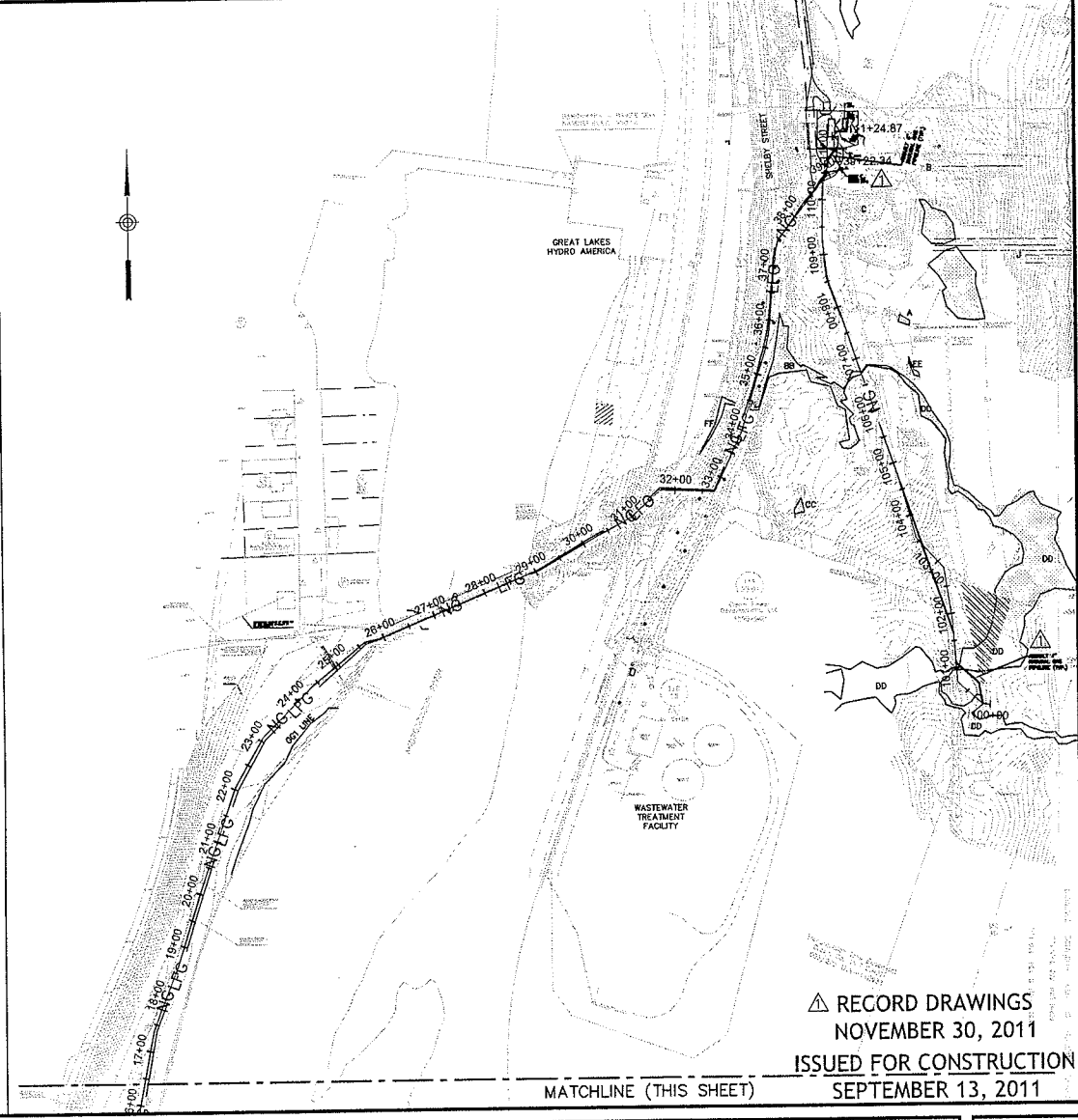
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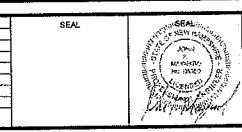


RECORD DRAWINGS
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 John E. Peterson
 JOHN HAYLARD, P.E.
 DATE: 11/29/11



RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

RECORD DRAWING INFO ADDED AS PROVIDED BY CONTRACTOR		PROJ. MANAGER: JKM CHIEF DESIGNER: MAD REVIEWED BY: DATE:	SEAL:
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REVISIONS			



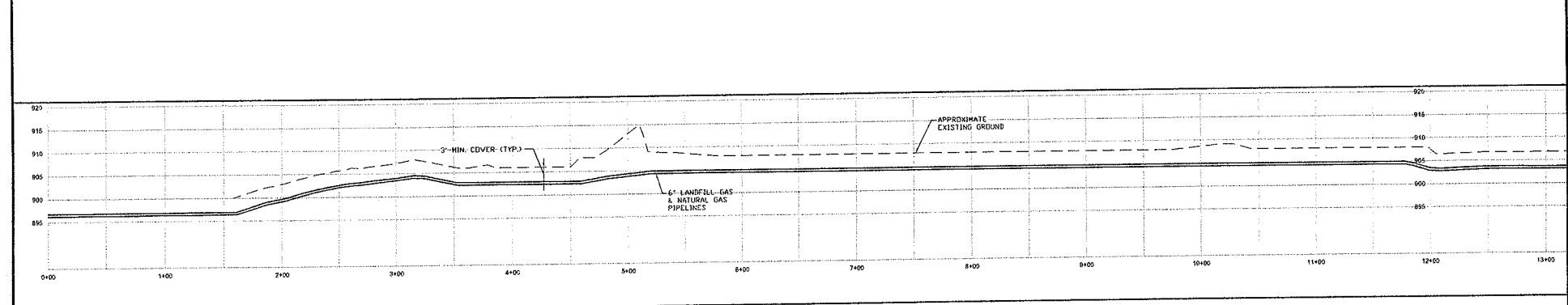
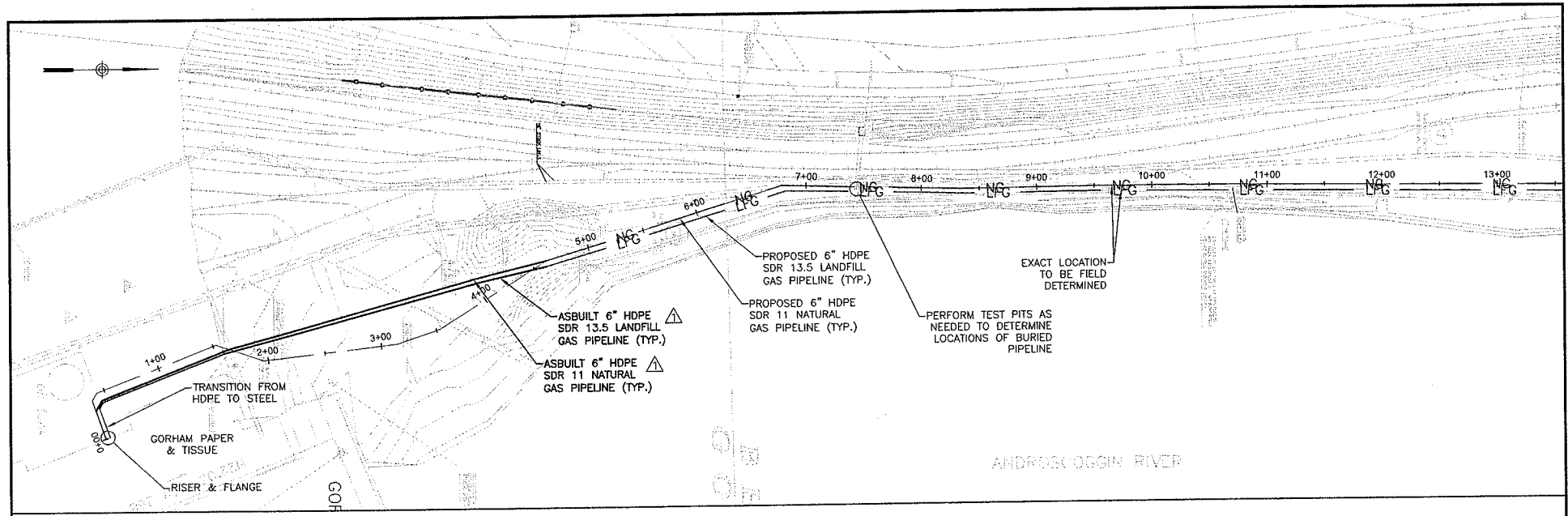
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GORHAM PAPER & TISSUE LLC.
 PROPOSED OVERALL PLAN
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

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RECORD DRAWINGS
 THESE DRAWINGS REPRESENT A COMPILATION OF FIELD RECORDS ASSEMBLED BY THE CONTRACTOR DURING THE CONSTRUCTION OF THE SUBJECT WORK. THEY SHOULD NOT BE CONSIDERED COMPLETE OR NECESSARILY ACCURATE REPRESENTATIONS OF THE WORK AS CONSTRUCTED. USE OF THE INFORMATION CONTAINED ON THESE DRAWINGS IS AT THE SOLE RISK OF THE USER. MAGUIRE GROUP INC. DOES NOT WARRANT THE ACCURACY OF THE INFORMATION SHOWN HEREON.
 JERRY MAYNARD, P.E.
 DATE: 12/13/2011

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

NO.	DATE	DESCRIPTION	BY	DATE
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REVISIONS				

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CHEF DESIGNER: MAD	
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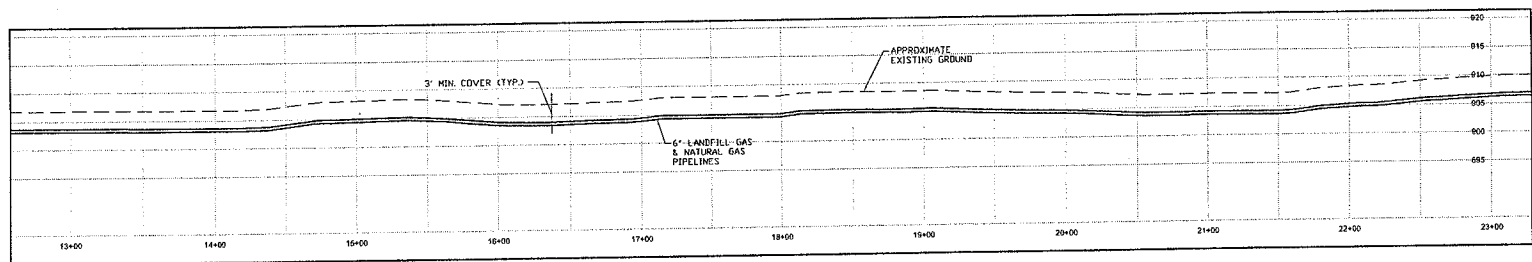
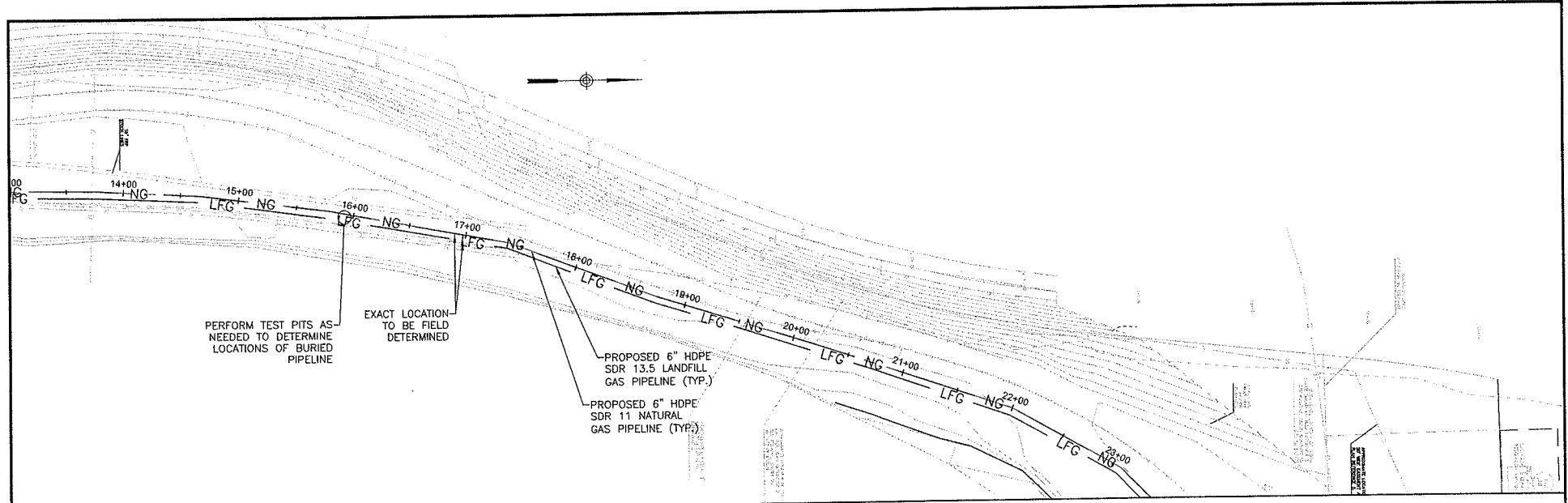
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Maguire Group Inc.
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GORHAM PAPER & TISSUE LLC.
 PLAN & PROFILE-1
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. NO: 118600
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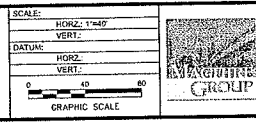


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 THESE DRAWINGS REPRESENT A COMPILATION OF FIELD RECORDS ASSEMBLED BY THE CONTRACTOR DURING THE CONSTRUCTION OF THE SUBJECT WORK. THEY SHOULD NOT BE CONSIDERED COMPLETE OR NECESSARILY ACCURATE REPRESENTATIONS OF THE WORK AS CONSTRUCTED. USE OF THE INFORMATION CONTAINED ON THESE DRAWINGS IS AT THE SOLE RISK OF THE USER. MAGUIRE GROUP INC. DOES NOT WARRANT THE ACCURACY OF THE INFORMATION SHOWN HEREON.
 John Maynard
 JOHN MAYNARD, P.E.
 11/30/11 DATE

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 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

1 10/12/2010 PRELIMINARY EY No. DATE DESCRIPTION BY		PROJ. MANAGER: JJK CHIEF DESIGNER: MAD REVIEWED BY: DATE	SEAL
REVISIONS			

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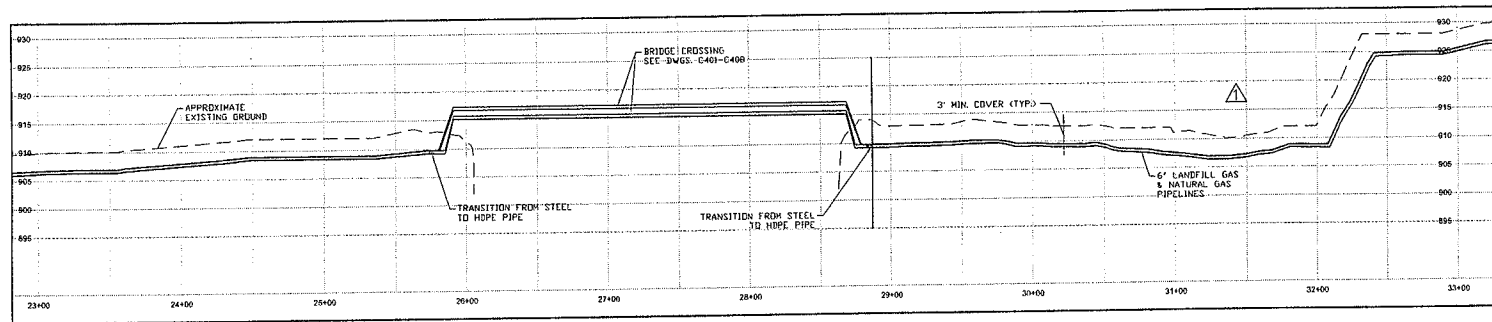
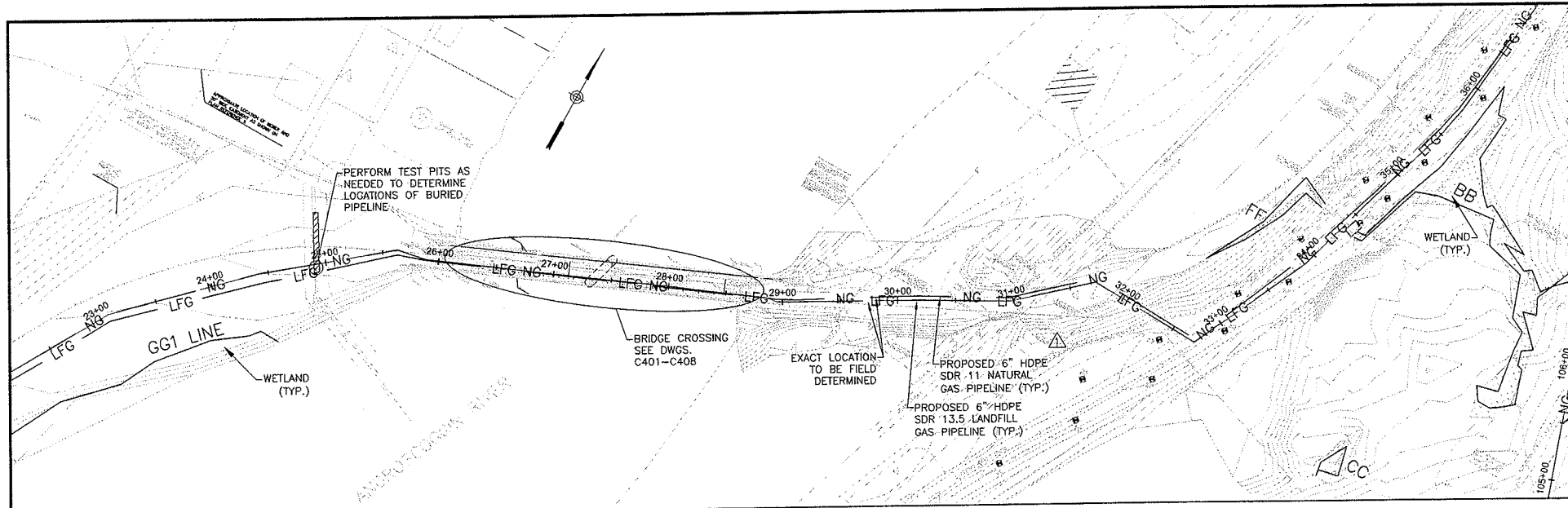


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 110 Corporate Drive, Suite 6
 Portsmouth, New Hampshire 03801

GORHAM PAPER & TISSUE LLC.
 PLAN & PROFILE-2
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. NO: 11186
 DATE: 11/30/11
C202

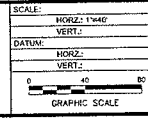
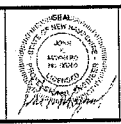
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SECOND DRAWINGS
 THESE DRAWINGS REPRESENT A COMPILED OF FIELD RECORDS
 ASSEMBLED BY THE CONTRACTOR DURING THE CONSTRUCTION
 OF THE SUBJECT WORK. THEY SHOULD NOT BE CONSIDERED
 COMPLETE OR NECESSARILY ACCURATE REPRESENTATIONS OF
 THE WORK AS CONSTRUCTED. USE OF THE INFORMATION
 CONTAINED ON THESE DRAWINGS IS AT THE SOLE RISK OF THE
 USER. MAGUIRE GROUP INC. DOES NOT WARRANT THE
 ACCURACY OF THE INFORMATION SHOWN HEREON.
 JERRY MAYNARD, P.E.
 11/29/11 DATE

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

3006711 RECORD DRAWING INFO. AS PROVIDED BY CONTRACTOR		PROJ. MANAGER: JMM	SEAL
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		REVIEWED BY: DATE	
No.	DATE	DESCRIPTION	BY
1.	10/17/2010	PRELIMINARY	EY
REVISIONS			



Maguire Group Inc.
 Architects / Engineers / Planners
 110 Corporate Drive, Suite 6
 Portsmouth, New Hampshire 03801

GORHAM PAPER & TISSUE LLC.
 PLAN & PROFILE-3
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. No.: 11188
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C203

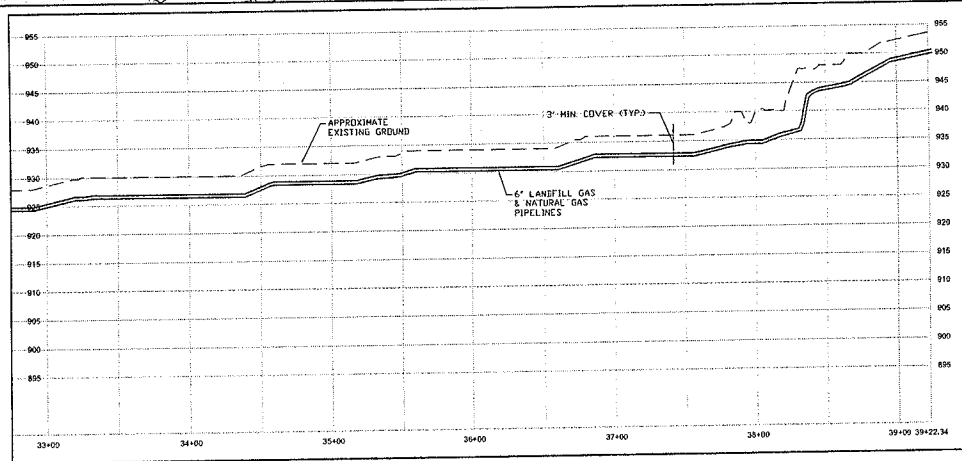
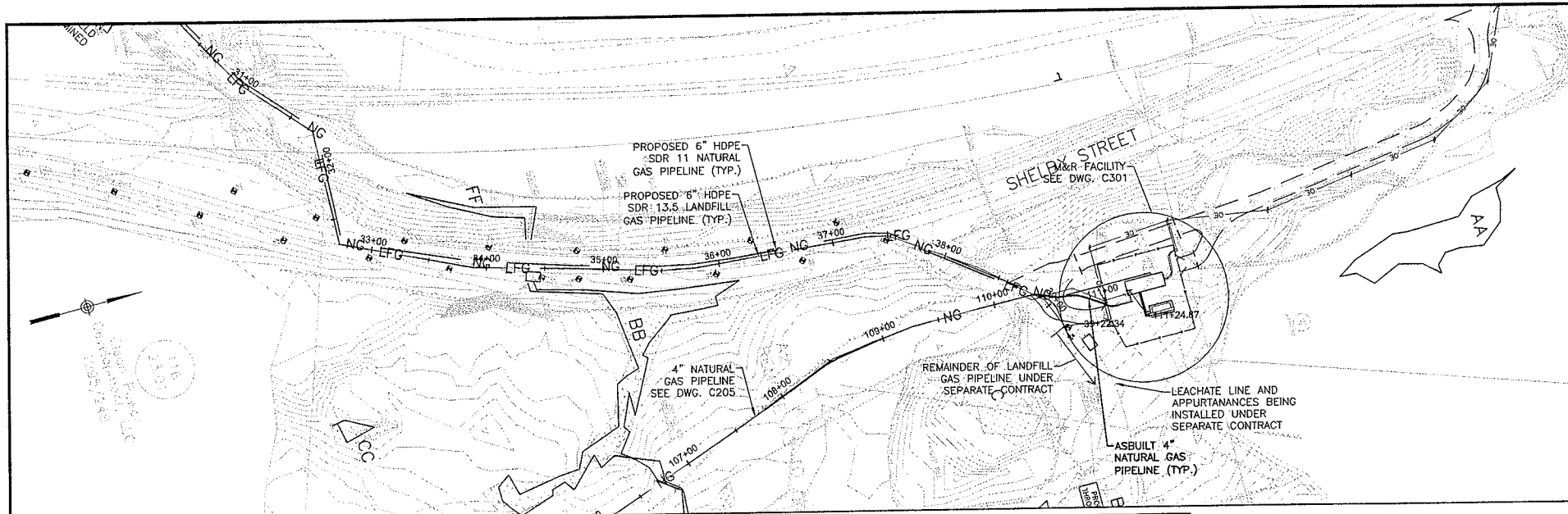
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DATE

LAYOUT

DATE

DATE



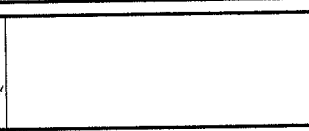
RECORD DRAWINGS
 THESE DRAWINGS REPRESENT A COMPARISON OF FIELD RECORDS ASSEMBLED BY THE CONTRACTOR DURING THE CONSTRUCTION OF THE SUBJECT WORK. THEY SHOULD NOT BE CONSIDERED COMPLETE OR NECESSARILY ACCURATE REPRESENTATIONS OF THE WORK AS CONSTRUCTED. USE OF THE INFORMATION CONTAINED ON THESE DRAWINGS IS AT THE SOLE RISK OF THE USER. MAGUIRE GROUP INC. DOES NOT WARRANT THE ACCURACY OF THE INFORMATION SHOWN HEREON.

John J. Maguire
 JOHN MAGUIRE, P.E.
 DATE: 10/12/2011

△ RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

NO.	DATE	DESCRIPTION	BY	DATE
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REVISIONS				

PROJ. MANAGER:	JM	SEAL
CHIEF DESIGNER:	MAD	
REVIEWED BY:		



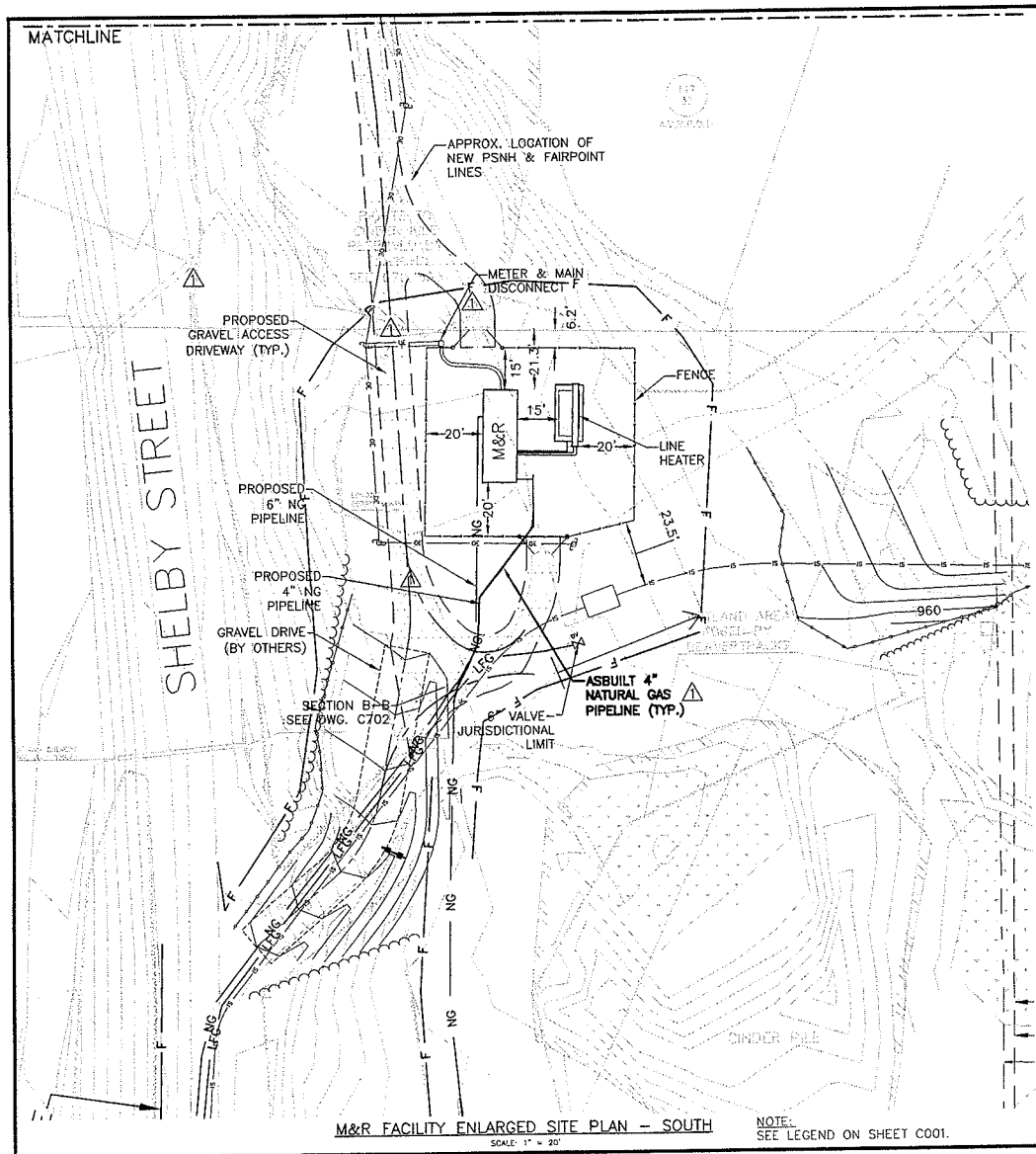
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GRAPHIC SCALE	

Maguire Group Inc.
 Architects / Engineers / Planners
 110 Corporate Drive, Suite 6
 Portsmouth, New Hampshire 03801

GORHAM PAPER & TISSUE L.L.C.
 PLAN & PROFILE-4
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

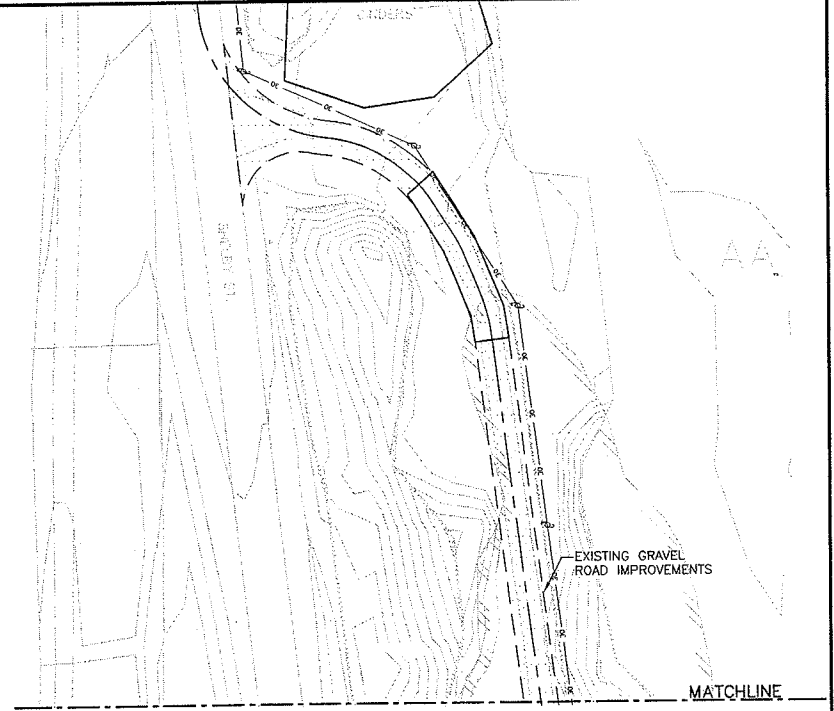
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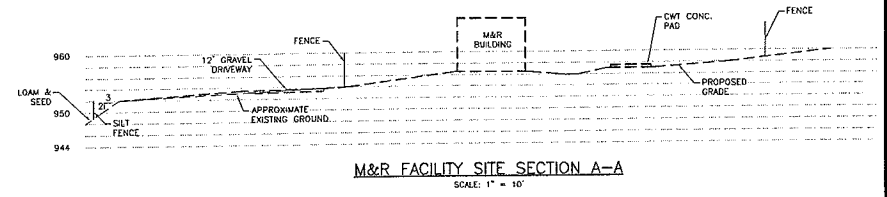


M&R FACILITY ENLARGED SITE PLAN - SOUTH
SCALE: 1" = 20'

NOTE:
SEE LEGEND ON SHEET C001.



M&R FACILITY ENLARGED SITE PLAN - NORTH
SCALE: 1" = 20'



M&R FACILITY SITE SECTION A-A
SCALE: 1" = 10'

RECORD DRAWINGS
 THESE DRAWINGS REPRESENT A COMPILED OF FIELD RECORDS ASSEMBLED BY THE CONTRACTOR DURING THE CONSTRUCTION OF THE SUBJECT WORK. THEY SHOULD NOT BE CONSIDERED COMPLETE OR NECESSARILY ACCURATE REPRESENTATIONS OF THE WORK AS CONSTRUCTED. USE OF THE INFORMATION CONTAINED IN THESE DRAWINGS IS AT THE SOLE RISK OF THE USER. MAGUIRE GROUP, INC. DOES NOT WARRANT THE ACCURACY OF THE INFORMATION SHOWN HEREON.
 John Mayhew, P.E.
 JOHN MAYHEW, P.E.
 DATE

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

1	10/12/2010	PRELIMINARY	BY	
REVISIONS				

PROJ. MANAGER:	JMK	SEAL
CHIEF DESIGNER:	MAD	
REVIEWED BY:	DATE	



SCALE:	HORIZ.:
	VERT.:
DATUM:	HORIZ.:
	VERT.:
GRAPHIC SCALE	



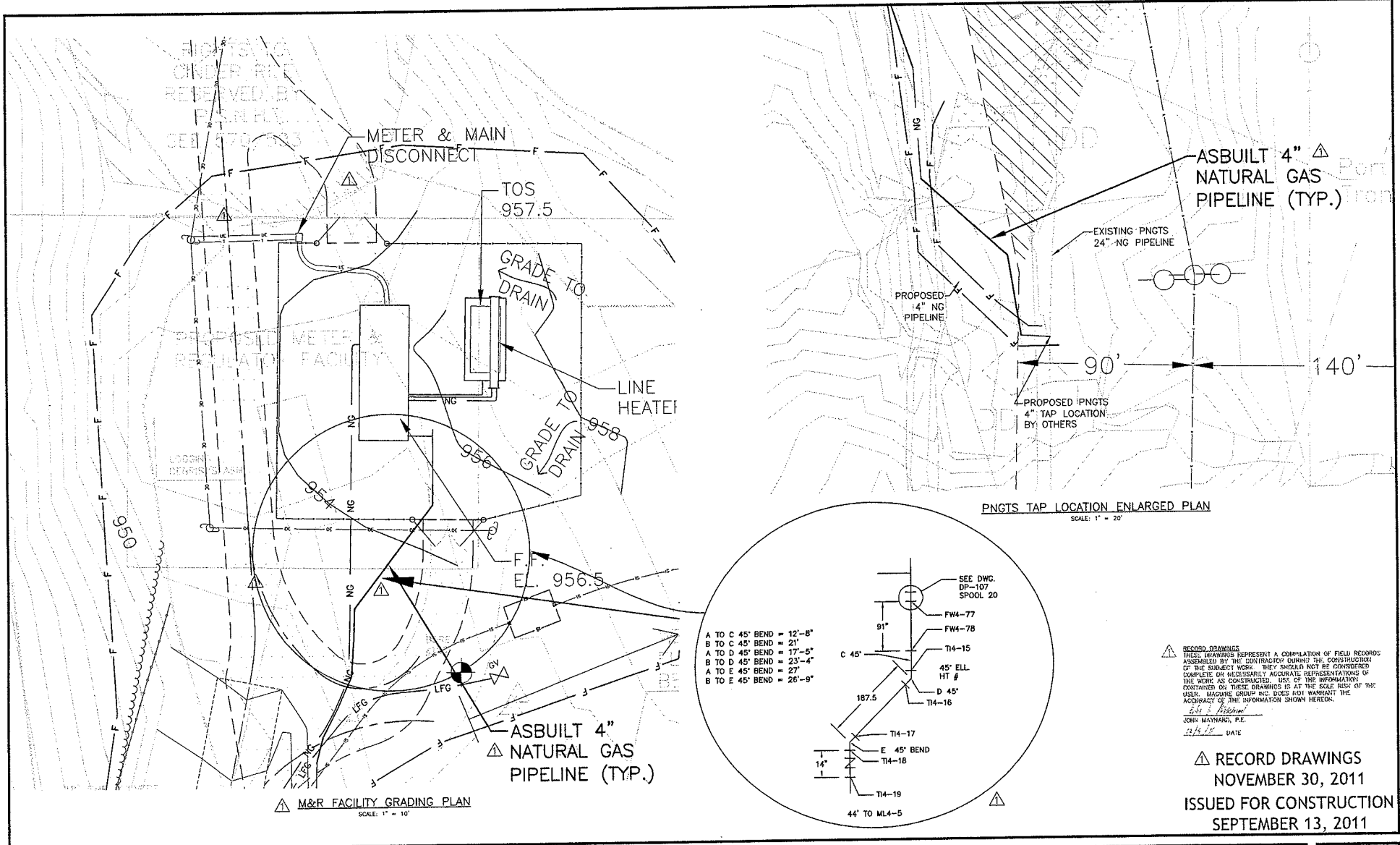
Maguire Group Inc.
 Architects / Engineers / Planners
 110 Corporate Drive, Suite 6
 Portsmouth, New Hampshire 03801

GORHAM PAPER & TISSUE LLC.
M&R FACILITY ENLARGED PLAN
 & SECTION
 NATURAL GAS AND LANDELL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. No: 19186
 DATE: 9/13/2011

C301

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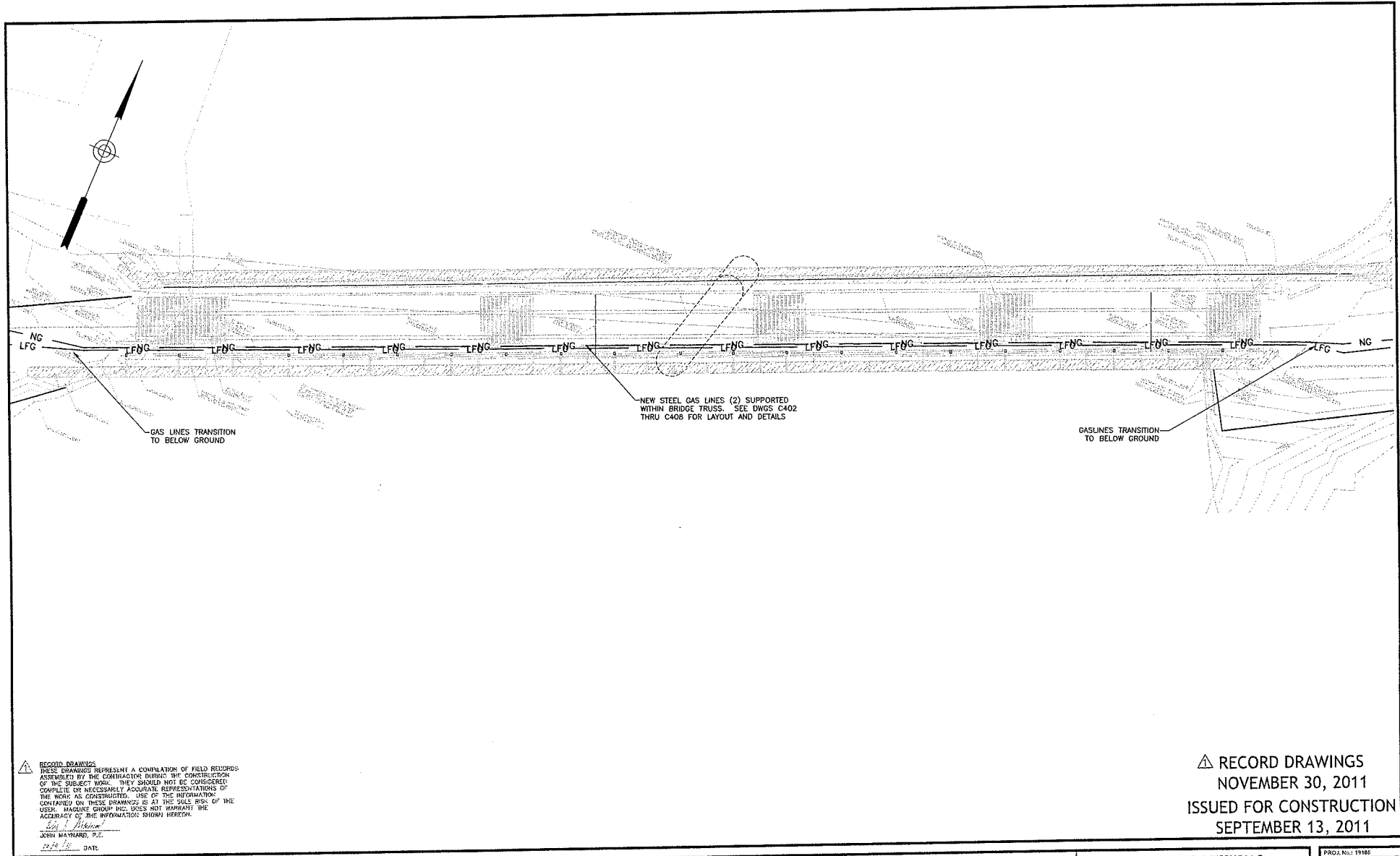
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- B TO C 45° BEND = 21'
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- B TO D 45° BEND = 23'-4"
- A TO E 45° BEND = 23'
- B TO E 45° BEND = 26'-9"

RECORD DRAWINGS
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 E.S. J. Robinson
 JOHN MAYNARD, P.E.
 11/13/11 DATE

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

30NDV11 RECORD DRAWING INFO ADDED AS PROVIDED BY CONTRACTOR		PROJ. MANAGER: JKM CHIEF DESIGNER: MAD REVIEWED BY: DATE		SEAL		SCALE: HORIZ: _____ VERT: _____ DATUM: HORIZ: _____ VERT: _____ 		Maguire Group Inc. Architects / Engineers / Planners 110 Corporate Drive, Suite 6 Portsmouth, New Hampshire 03801	GORHAM PAPER & TISSUE LLC. M&R GRADING AND PNGTS TAP ENLARGED PLANS NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT BERLIN NEW HAMPSHIRE	PROJ. No.: 118186 DATES: 9/13/2011 C302
NO. 101/20110 PRELIMINARY DESCRIPTION: EY DATE: BY:		REVISIONS								

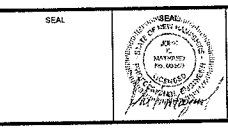
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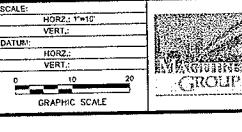
RECORD DRAWINGS
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 JOHN MAYNARD, P.E.
 DATE: 10/26/11

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

3/30/11 RECORD DRAWING INFO. AS PROVIDED BY CONTRACTOR		PROJ. MANAGER: JMM	SEAL
		CHECK ENGINEER: KAO	
		REVIEWED BY:	DATE:
1.	10/26/2011	PRELIMINARY	BY
NO.	DATE	DESCRIPTION	BY
REVISIONS			



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	VERT.: AS SHOWN
DATUM:	HORIZ.: MEAN SEA LEVEL
	VERT.: NAVD 83
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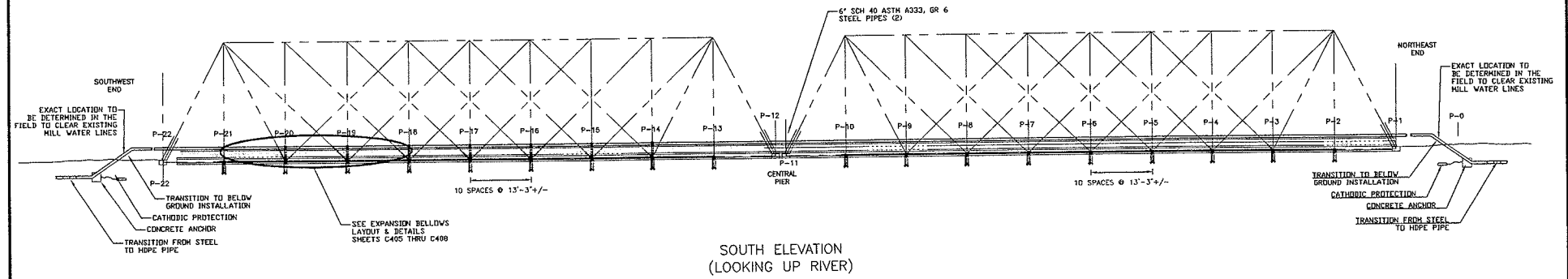
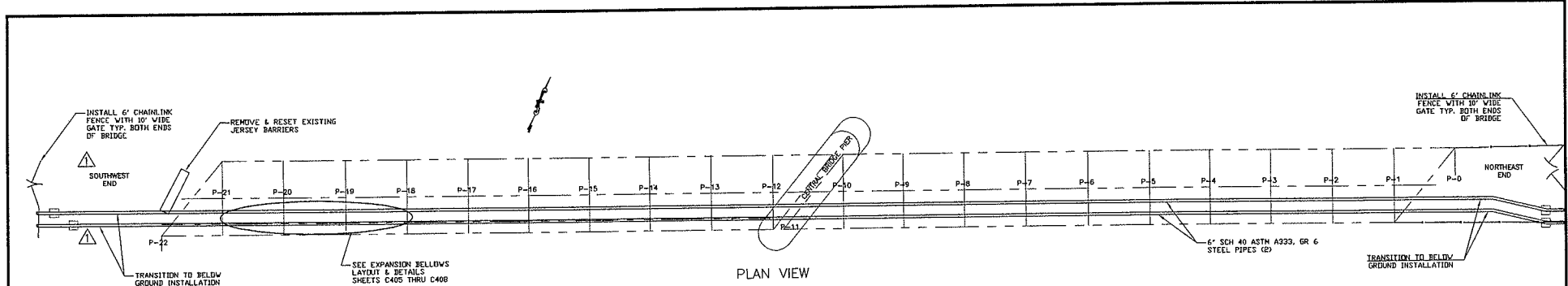


Maguire Group Inc.
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 Portsmouth, New Hampshire 03801

GORHAM PAPER & TISSUE LLC.
 BRIDGE CROSSING OVERALL PLAN
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. No.: 1186
 DATE: 9/13/2011
C401

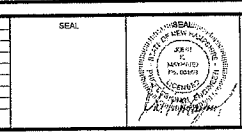
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 REVISIONS



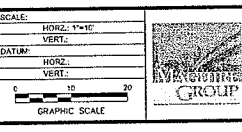
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 John Maynard, P.E.
 DATE

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

1-30(NV)11 RECORD DRAWING INFO ADDED AS PROVIDED BY CONTRACTOR		PROJ. MANAGER: JMM	SEAL
		CHIEF DESIGNER: MAD	
		REVIEWED BY: DATE	
No.	DATE	DESCRIPTION	BY
1	10/27/2010	PRELIMINARY	EV
		REVISIONS	



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 VERT. 1"=10'
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 HORIZ. VERT.

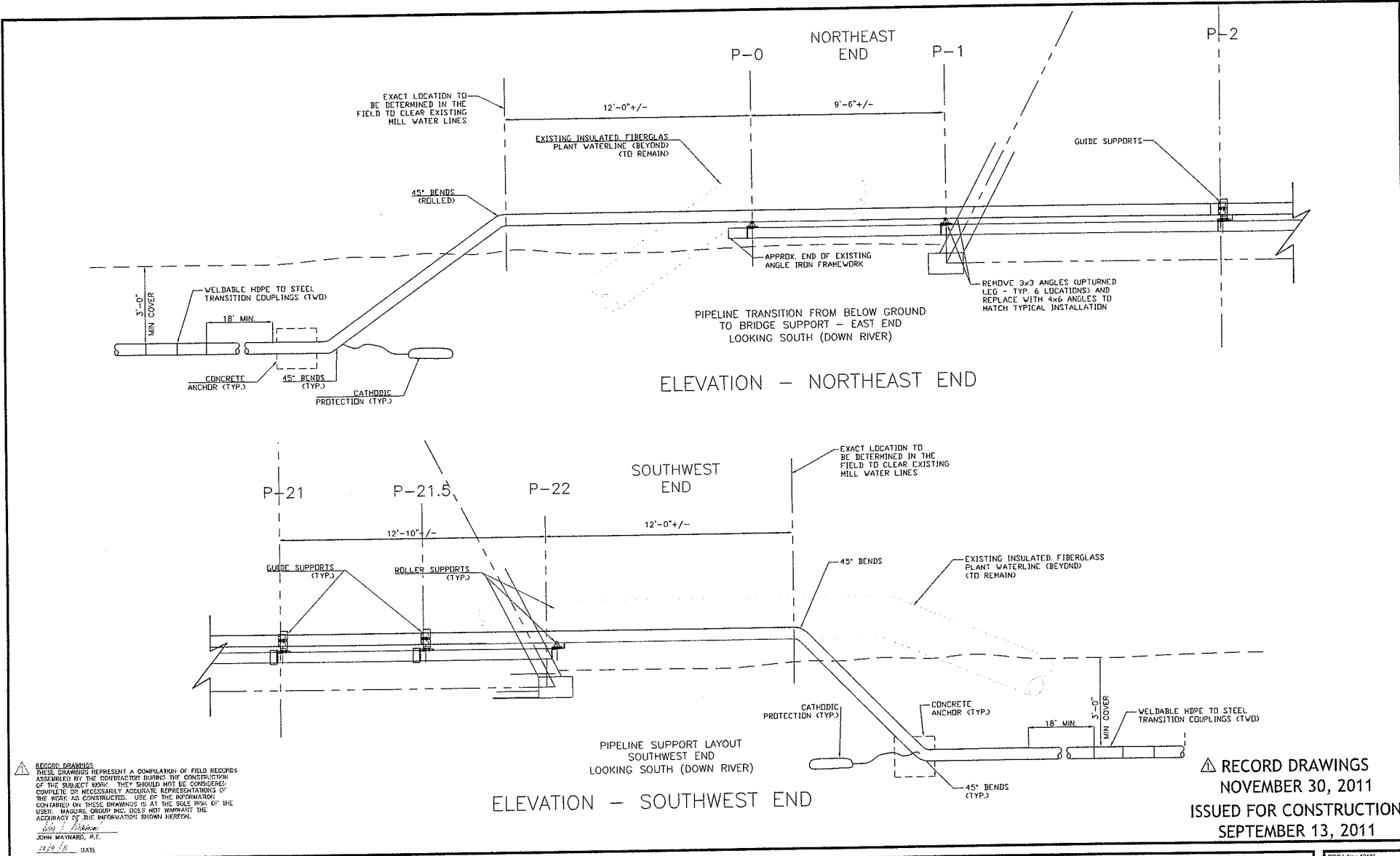


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GORHAM PAPER & TISSUE LLC.
 BRIDGE CROSSING
 GENERAL ARRANGEMENT
 NATURAL GAS AND LANDELL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. No.: 19186
 DATE: 09/13/2011
C402

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RECORD DRAWINGS
 THESE DRAWINGS REPRESENT A COMPILED OF FIELD RECORDS
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 JOHN MAYNARD, P.E.
 DATE

1	10/13/2010	PRELIMINARY	BY
No.	DATE	DESCRIPTION	BY
REVISIONS			

PROJ. MANAGER:	JJM	SEAL
CHIEF DESIGNER:	MM	
REVIEWED BY:	DATE	

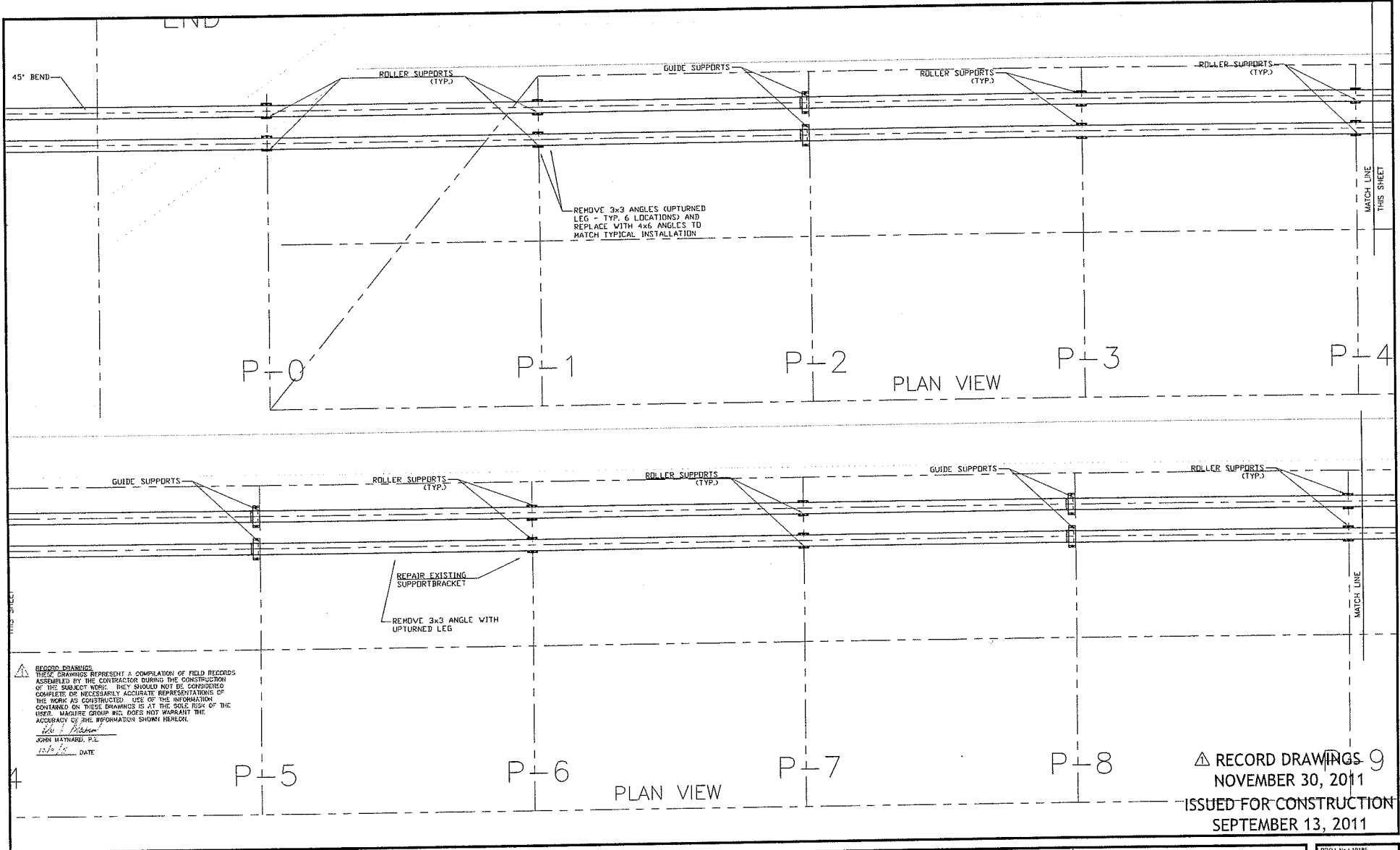
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DATUM:	HORIZ: 1"=2'
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GRAPHIC SCALE	

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GORHAM PAPER & TISSUE LLC.
 BRIDGE CROSSING
 ENLARGED ELEVATIONS
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. NO: 118806
 DATE: 10/20/11
C403

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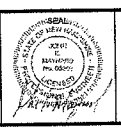


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 John Haynash, P.E.
 DATE: 10/30/11

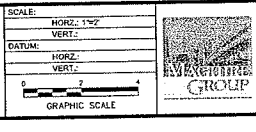
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 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

1	10/12/2010	PRELIMINARY	BY	
No.	DATE	DESCRIPTION	BY	
REVISIONS				

PROJECT MANAGER	JMK	SEAL
CHIEF DESIGNER	KAK	
REVIEWED BY		
DATE		



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GRAPHIC SCALE	

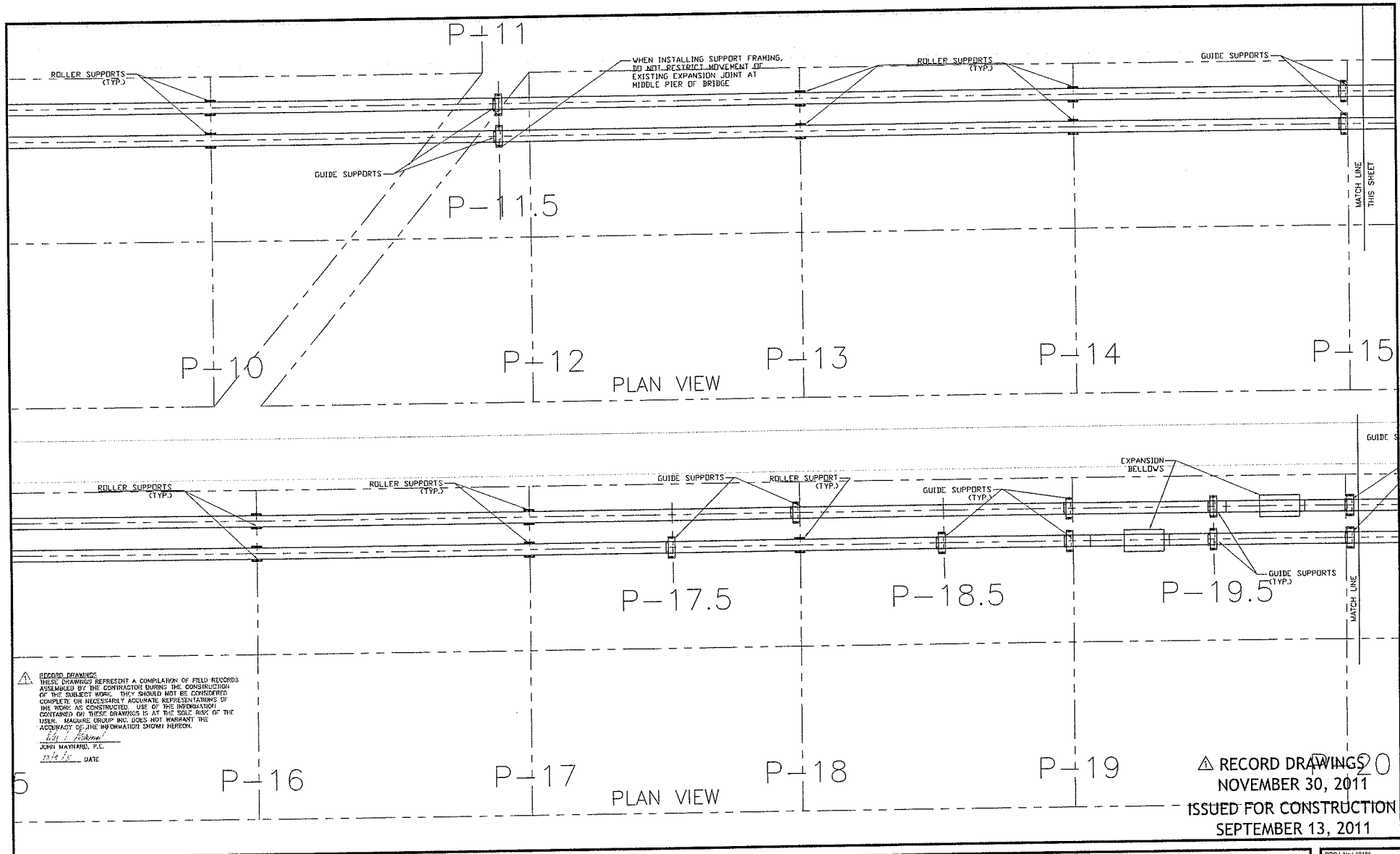


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 Portsmouth, New Hampshire 03801

GORHAM PAPER & TISSUE LLC.
 BRIDGE CROSSING
 PLAN VIEW - 1
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE


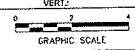

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 USER: _____

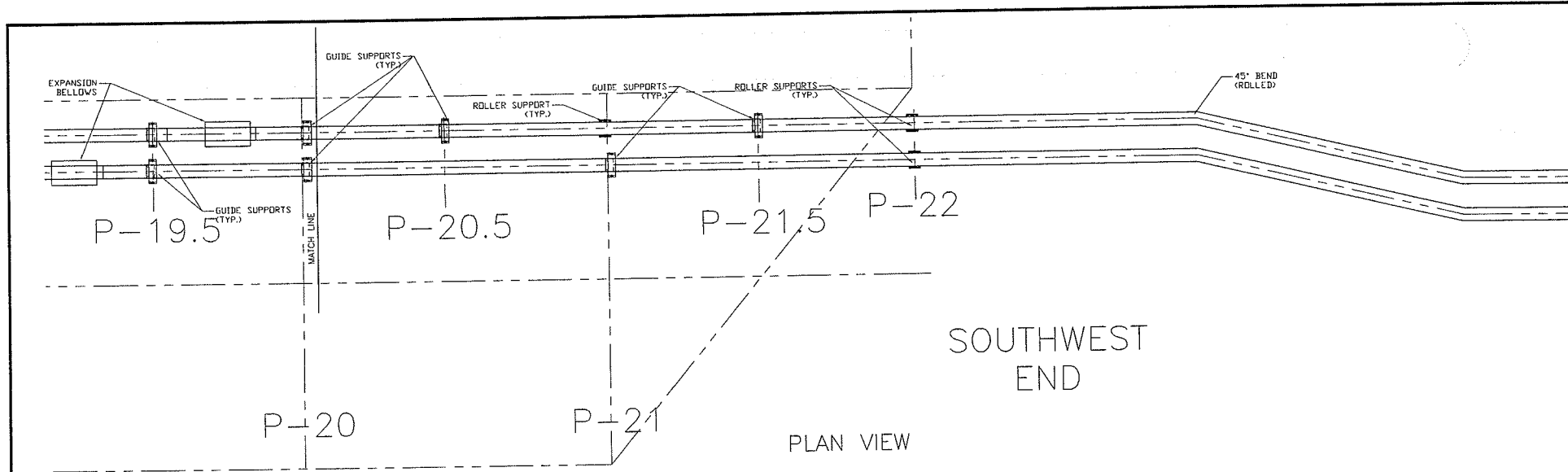


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 J. Maguire
 JOHN MAGUIRE, P.E.
 12/13/11 DATE

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

3000V1 RECORD DRAWING INFO, ADDED AS PROVIDED BY CONTRACTOR		PROJ. MANAGER: JMM CHIEF DESIGNER: MMD REVIEWED BY: _____ DATE: _____	SEAL 	SCALE: HORIZ: 1"=2' VERT: _____ DATUM: HORIZ: _____ VERT: _____ 	 <p> Maguire Group Inc. Architects / Engineers / Planners 110 Corporate Drive, Suite 6 Portsmouth, New Hampshire 03801 </p>	GORHAM PAPER & TISSUE LLC. BRIDGE CROSSING PLAN VIEW - 2 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT BERLIN NEW HAMPSHIRE	PROJ. NO.: 19106 DATE: 9/13/2011 C405
1. 10/12/2010 PRELIMINARY EY No. DATE DESCRIPTION BY		REVISIONS					

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PLAN VIEW

PIPELINE SUPPORT SUMMARY

LOCATION	TYPE	ROLLER QUANTITY	GUIDE QUANTITY	LOCATION	TYPE	ROLLER QUANTITY	GUIDE QUANTITY
P-0	ROLLER	2		P-14	ROLLER	2	
P-1	ROLLER	2		P-15	GUIDE		2
P-2	GUIDE		2	P-16	ROLLER	2	
P-3	ROLLER	2		P-17	ROLLER	2	
P-4	ROLLER	2		P-17.5	GUIDE		1
P-5	GUIDE		2	P-18	ROLLER	1	
P-6	ROLLER	2		P-18.5	GUIDE		1
P-7	ROLLER	2		P-19	GUIDE		2
P-8	GUIDE		2	P-19.5	GUIDE		2
P-9	ROLLER	2		P-20	GUIDE		1
P-10	ROLLER	2		P-20.5	GUIDE		1
P-11.5	GUIDE		2	P-21	GUIDE	1	
P-12	NONE			P-21.5	GUIDE		1
P-13	ROLLER	2		P-22	ROLLER	2	

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JOHN MAYNARD, P.E.
 DATE

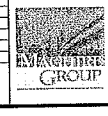
△ RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

NO.	DATE	DESCRIPTION	BY
1.	10/12/2010	PRELIMINARY	EY
		DESCRIPTION	BY
		REVISIONS	

PROJ. MANAGER:	JWJ	SEAL
CHIEF DESIGNER:	MAD	
REVIEWED BY:	DATE	



SCALE:	HORIZ: 1"=2'
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DATUM:	HORIZ: 1"=2'
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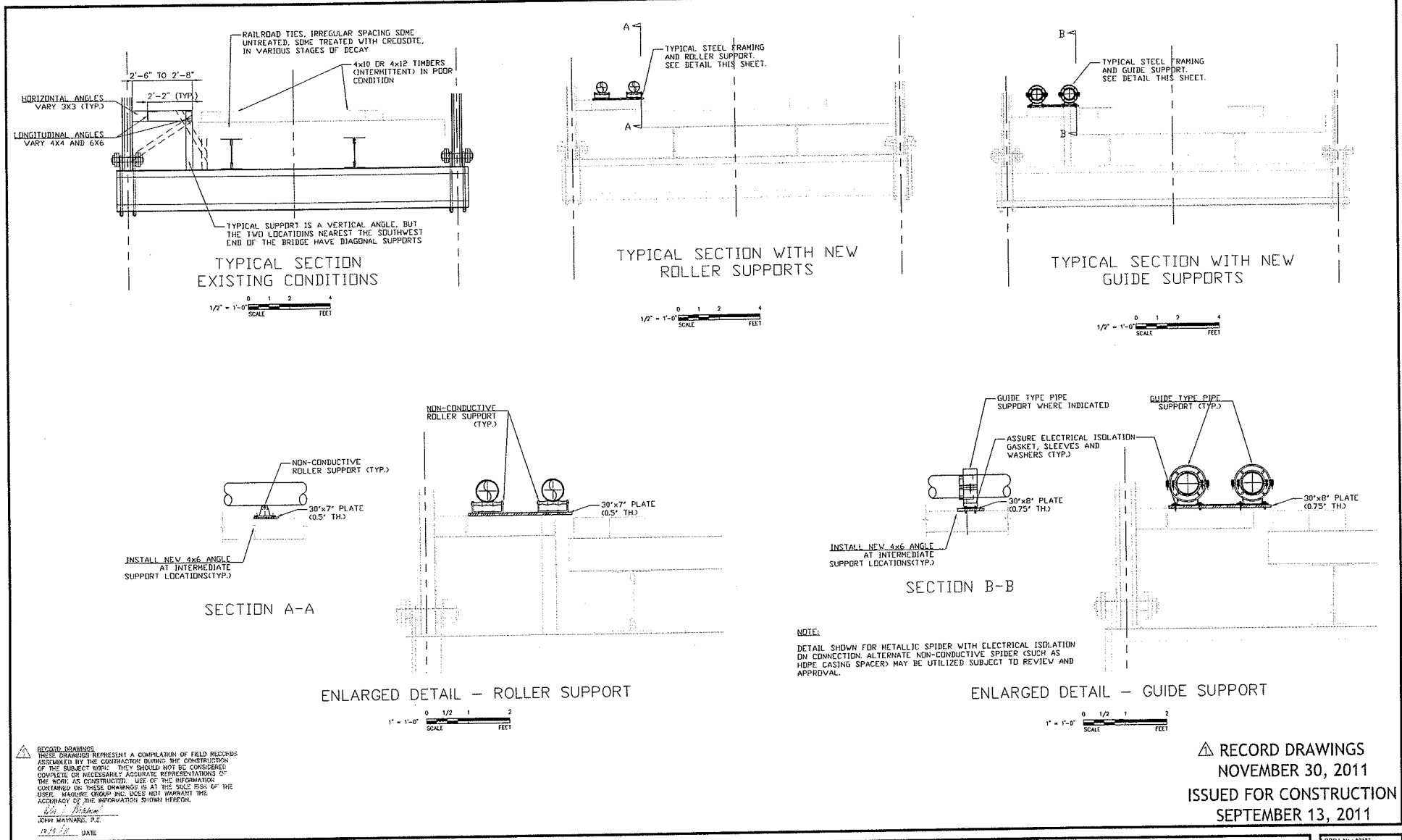


Maguire Group Inc.
 Architects / Engineers / Planners
 110 Corporate Drive, Suite 6
 Portsmouth, New Hampshire 03801

GORHAM PAPER & TISSUE LLC.
 BRIDGE CROSSING
 PLAN VIEW - 3
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE


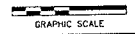

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DATE: 09/13/2011	

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 C406
 C407
 M28a



RECORD DRAWINGS
 THESE DRAWINGS REPRESENT A COMPILATION OF FIELD RECORDS
 SUBMITTED BY THE CONTRACTOR DURING THE CONSTRUCTION
 OF THE SUBJECT WORK. THEY SHOULD NOT BE CONSIDERED
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 John Maynard, P.E.
 12/20/11 DATE

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

30NOV11 RECORD DRAWING INFO ADDED AS PROVIDED BY CONTRACTOR		PROJ. MANAGER: JRM CHIEF DESIGNER: JRM REVIEWED BY: JRM DATE: 11/20/11	SEAL 	SCALE: HORIZ: AS SHOWN VERT: AS SHOWN DATUM: HORIZ: AS SHOWN VERT: AS SHOWN GRAPHIC SCALE 	 Maguire Group Inc. Architects / Engineers / Planners 110 Corporate Drive, Suite 6 Portsmouth, New Hampshire 03801	GORHAM PAPER & TISSUE LLC. BRIDGE CROSSING DETAILS -1 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT BERLIN NEW HAMPSHIRE	PROJ. No.: 03185 DATE: 09/20/11 C407
REVISIONS 1. 10/12/2010 PRELIMINARY DESCRIPTION BY EY							

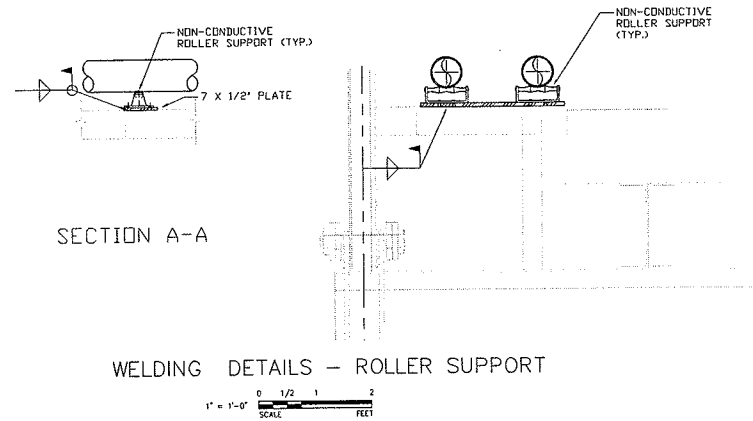
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CDS

LMAK

MAY 2011

CDS



STRUCTURAL STEEL NOTES:

1. ALL WORK SHALL MEET THE STANDARDS IN THE NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
2. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A36.
3. ALL WELDING SHALL CONFORM TO AWS REQUIREMENTS USING E70XX ELECTRODES.
4. WELDS SHALL BE MADE BY OPERATORS CERTIFIED BY THE STANDARD QUALIFICATIONS PROCEDURE OF THE AMERICAN WELDING SOCIETY FOR THE TYPE OF WELD REQUIRED.

CONCRETE NOTES:

1. CONCRETE FOR ANCHOR BLOCKS SHALL CONFORM TO NHDOT STANDARD SPECIFICATION FOR CLASS A, 3,000 PSI.
2. ALL OTHER CONCRETE SHALL CONFORM TO NHDOT STANDARD SPECIFICATION FOR CLASS AA, 4,000 PSI.

RECORD DRAWINGS
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 JOHN MAYNARD, P.E.
 12/13/11 DATE

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

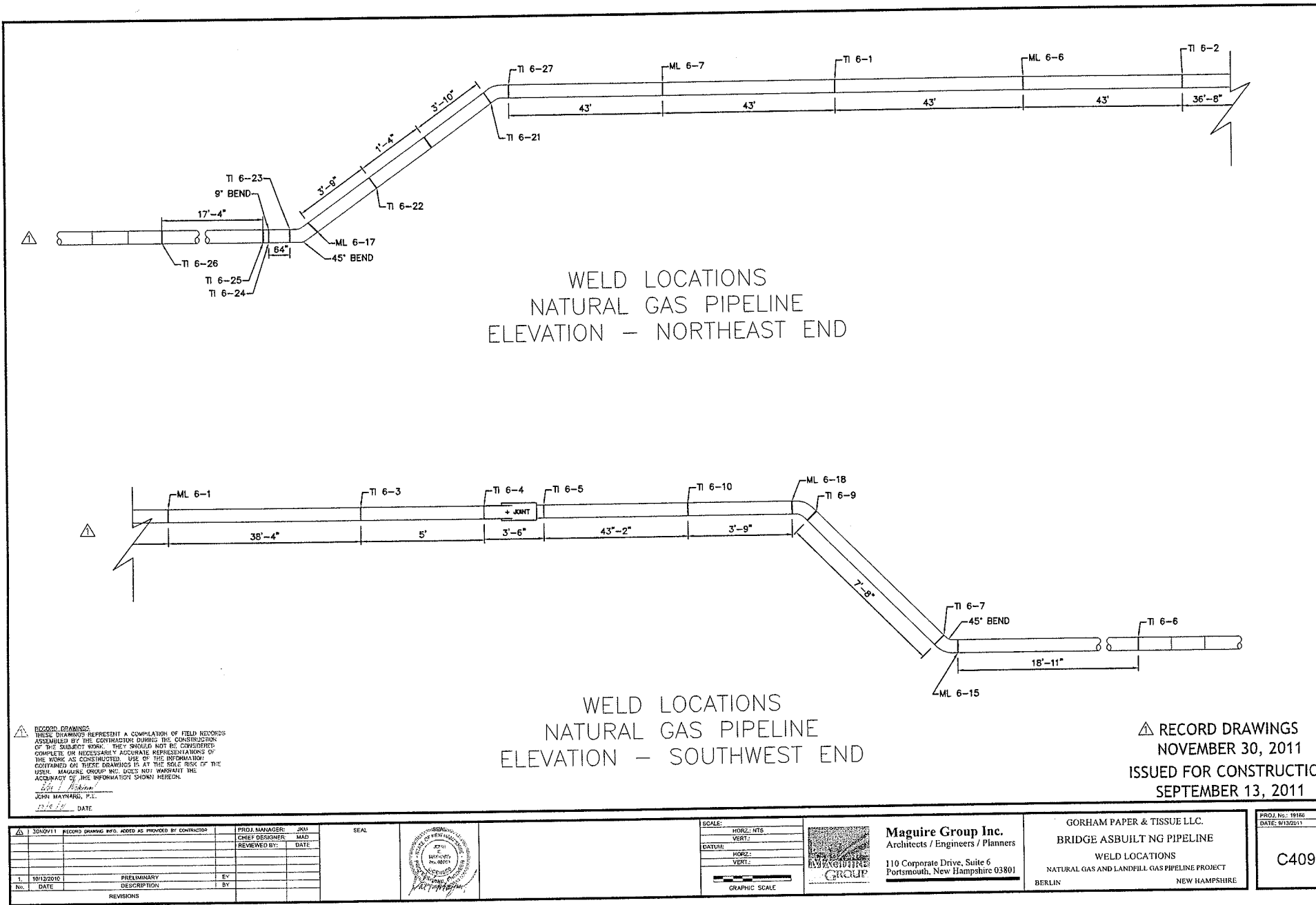
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1. 10/12/2010 PRELIMINARY BY No. DATE DESCRIPTION BY	REVISIONS					

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NAME:

USER:



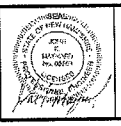
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 NATURAL GAS PIPELINE
 ELEVATION - NORTHEAST END

WELD LOCATIONS
 NATURAL GAS PIPELINE
 ELEVATION - SOUTHWEST END

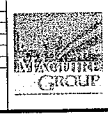
△ RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

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 John J. Maguire
 JOHN MAGUIRE, P.E.
 DATE:

3040V11	RECORD DRAWING INFO. ADDED AS PROVIDED BY CONTRACTOR	PROJ. MANAGER	JKM	SEAL
		CHIEF DESIGNER	MAD	
		REVIEWED BY:	DATE:	
10/12/2010	PRELIMINARY	BY:		
No. DATE	DESCRIPTION	BY:		
	REVISIONS			



SCALE:	HORZ: NTS
	VERT:
DATUM:	HORZ:
	VERT:
GRAPHIC SCALE	



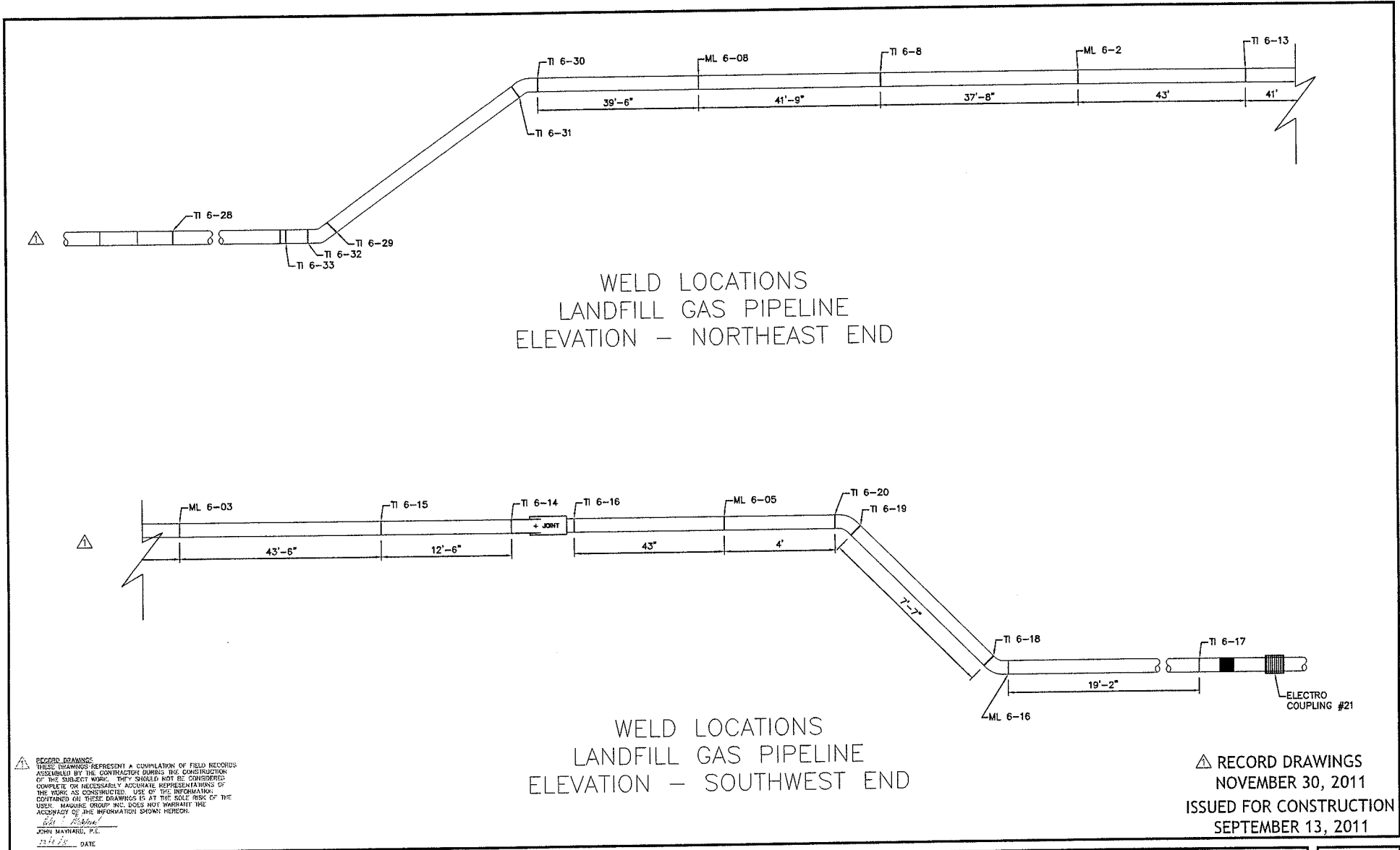
Maguire Group Inc.
 Architects / Engineers / Planners
 110 Corporate Drive, Suite 6
 Portsmouth, New Hampshire 03801

GORHAM PAPER & TISSUE LLC.
 BRIDGE ASBUILT NG PIPELINE
 WELD LOCATIONS
 NATURAL GAS AND LANDELL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. No.: 19186
 DATE: 9/13/2011

C409

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 Plot Size: 36" x 48"



△ RECORD DRAWINGS
 THESE DRAWINGS REPRESENT A COMPILATION OF FIELD RECORDS ASSEMBLED BY THE CONTRACTOR DURING THE CONSTRUCTION OF THE SUBJECT WORK. THEY SHOULD NOT BE CONSIDERED COMPLETE OR NECESSARILY ACCURATE REPRESENTATIONS OF THE WORK AS CONSTRUCTED. USE OF THE INFORMATION CONTAINED ON THESE DRAWINGS IS AT THE SOLE RISK OF THE USER. MAGUIRE GROUP, INC. DOES NOT WARRANT THE ACCURACY OF THE INFORMATION SHOWN HEREON.
 JOHN MAYNARD, P.E.
 DATE

NO. 1	10/12/2010	PRELIMINARY	EV
NO.	DATE	DESCRIPTION	BY
REVISIONS			

PROJ. MANAGER:	JMA	SEAL
CHIEF DESIGNER:	AM	
REVIEWED BY:		
DATE:		



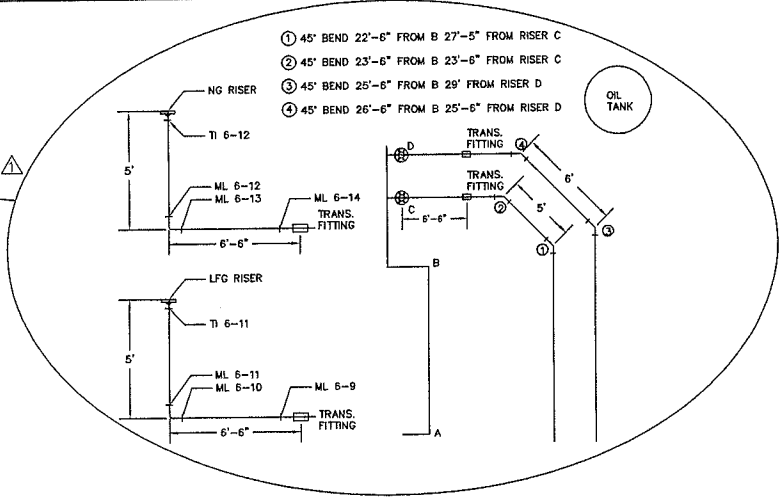
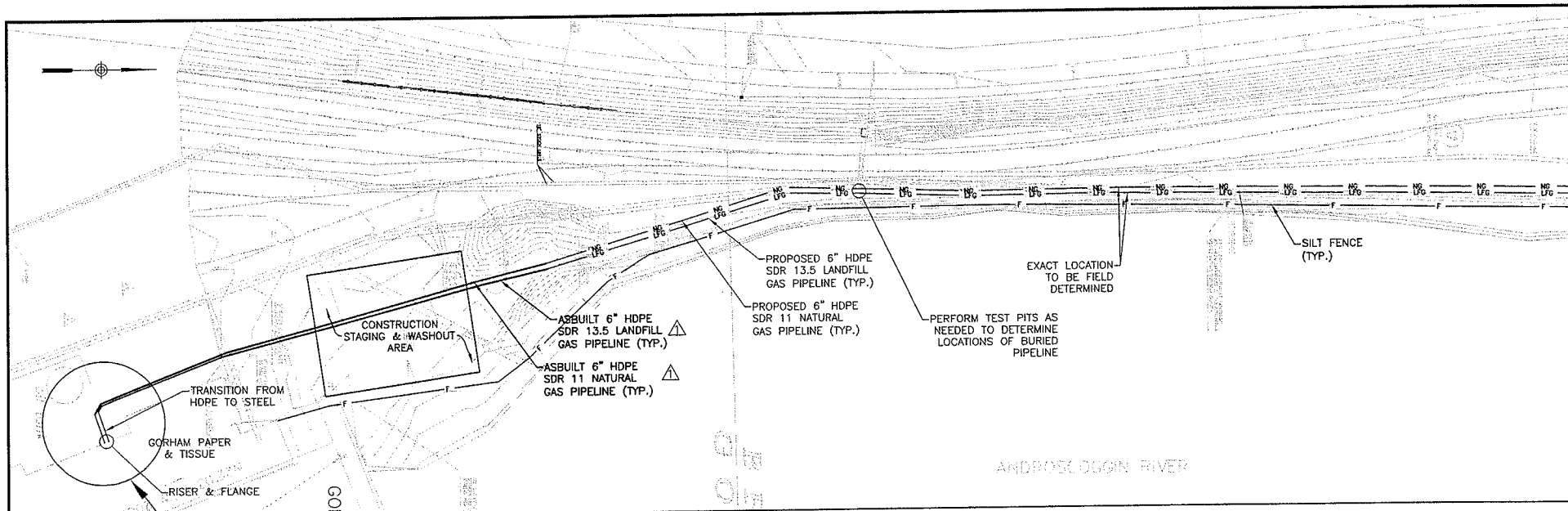
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GRAPHIC SCALE	

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 Portsmouth, New Hampshire 03801

GORHAM PAPER & TISSUE LLC.
 BRIDGE ASBUILT LFG PIPELINE
 WELD LOCATIONS
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. NO.: 19186
 DATE: 9/13/2011
C410

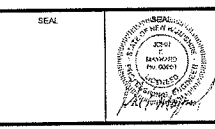
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RECORD DRAWING
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 JOHN MAYNARD, P.E.
 27/11/11 DATE

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

18186-00-01-01 RECORD DRAWING INFO AS PROVIDED BY CONTRACTOR		PROJ. MANAGER: JMK CHIEF DESIGNER: AMAD REVIEWED BY: DATE	SEAL
L. 10/12/2010 No. DATE	PRELIMINARY DESCRIPTION	BY	REVISIONS



SCALE:
 HORIZ: 1"=40'
 VERT: 1"=10'
 DATUM:
 HORIZ: 1985
 VERT: 1985
 GRAPHIC SCALE

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GORHAM PAPER & TISSUE LLC.
 SEDIMENT & EROSION CONTROL PLAN-1
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

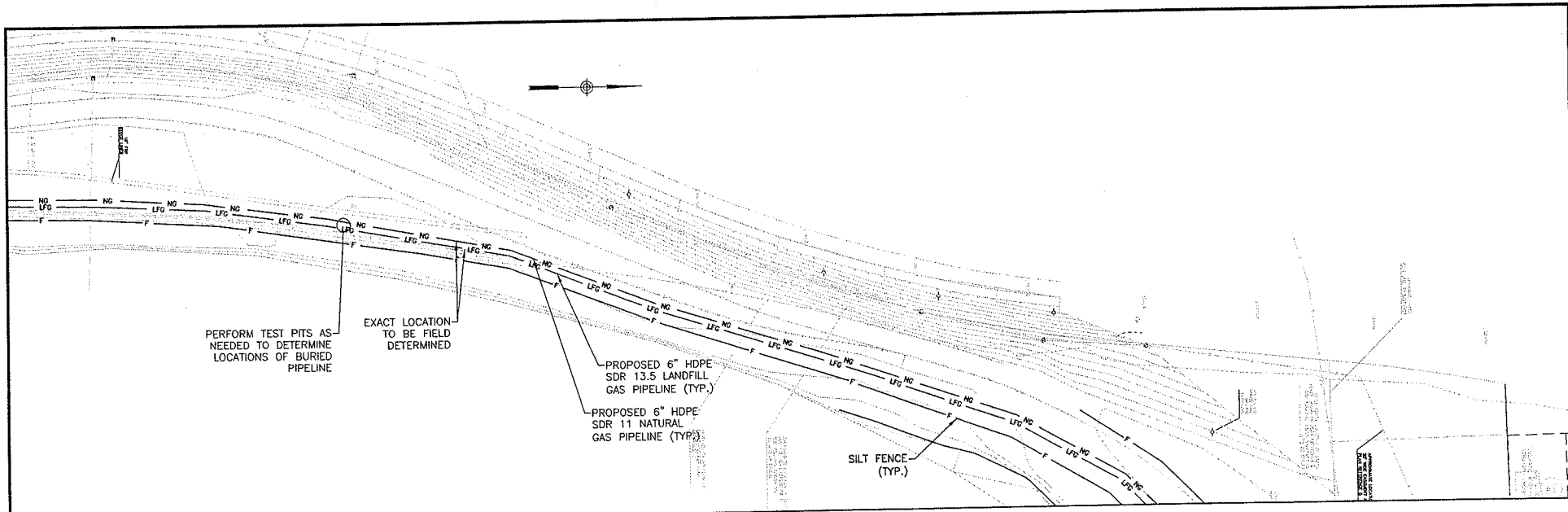
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C501

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DATE

LAYOUT

NO. REVISION

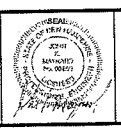


RECORD DRAWINGS
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 John Maynard
 JOHN MAYNARD, P.E.
 12/13/11 DATE

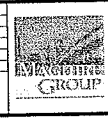
△ RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

NO.	DATE	DESCRIPTION	BY
1	10/13/2010	PRELIMINARY	EY
		REVISIONS	

PROJ. MANAGER:	JJM	SEAL
CHIEF DESIGNER:	JMAY	
REVIEWED BY:		
	DATE	



SCALE:	HORIZ: 1"=40'
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DATUM:	SEA
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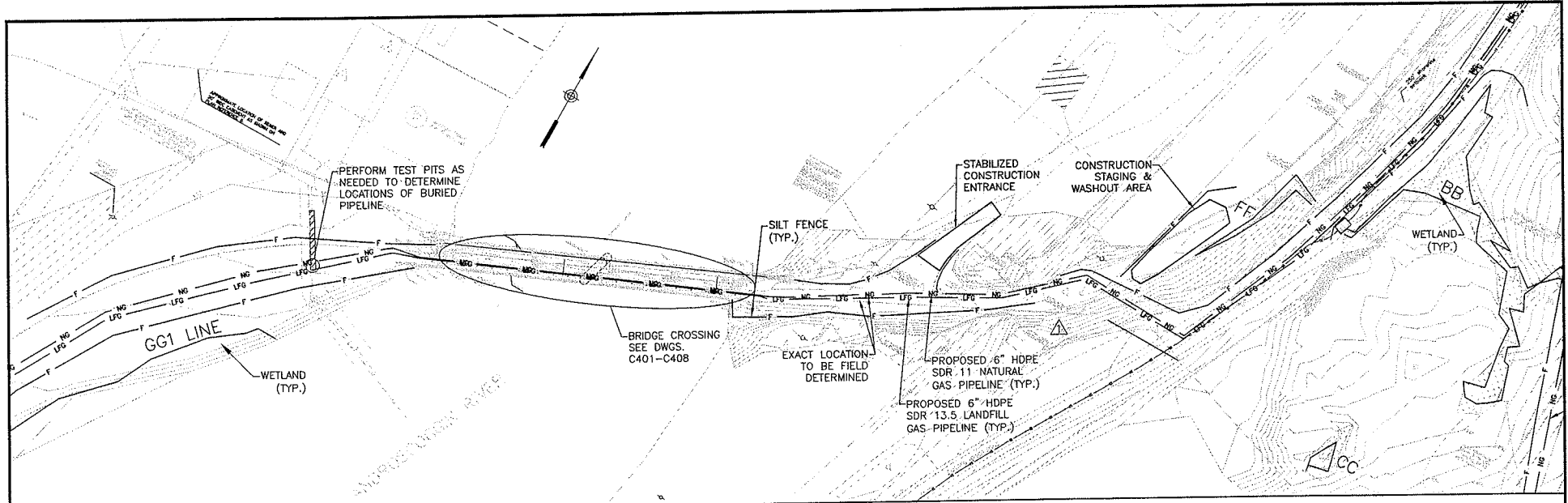


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GORHAM PAPER & TISSUE LLC.
 SEDIMENT & EROSION CONTROL-2
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. NO.: 19186	C502
DATE: 9/13/2011	

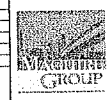
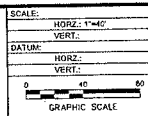
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RECORD DRAWINGS
 THESE DRAWINGS REPRESENT A COMPILATION OF FIELD RECORDS ASSEMBLED BY THE CONTRACTOR DURING THE CONSTRUCTION OF THE SUBJECT WORK. THEY SHOULD NOT BE CONSIDERED COMPLETE OR NECESSARILY ACCURATE REPRESENTATIONS OF THE WORK AS CONSTRUCTED. USE OF THE INFORMATION CONTAINED ON THESE DRAWINGS IS AT THE SOLE RISK OF THE USER. MAGUIRE GROUP INC. DOES NOT WARRANT THE ACCURACY OF THE INFORMATION SHOWN HEREON.
 JOHN MATHIAS, P.E.
 DATE

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

30NOV11	RECORD DRAWING INFO ADDED AS PROVIDED BY CONTRACTOR	PROJ. MANAGER	JCM	SEAL
		CHIEF DESIGNER	MAD	
		REVIEWED BY		
		DATE		
1	10/20/10	PRELIMINARY	EY	
		DESCRIPTION	BY	
		REVISIONS		



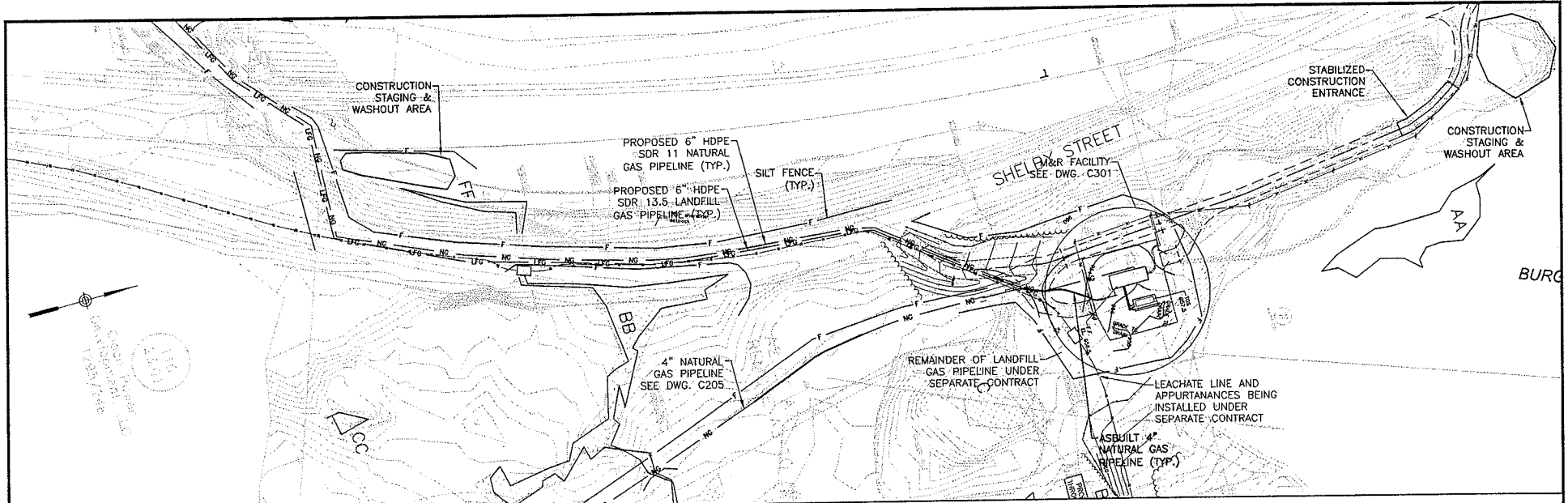
Maguire Group Inc.
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 Portsmouth, New Hampshire 03801

GORHAM PAPER & TISSUE LLC.
 SEDIMENT & EROSION CONTROL-3
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. No.: 10186
 DATE: 9/13/2011

C503

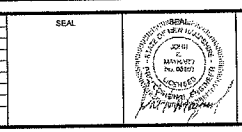
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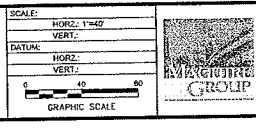
RECORD DRAWING
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 John Maynard, P.E.
 DATE: 11/30/11

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

18186200	RECORD DRAWING INFO ADDED AS PROVIDED BY CONTRACTOR	PROJ. MANAGER: JKM	SEAL
		CHIEF DESIGNER: MAD	
		REVIEWED BY: [Signature]	
		DATE: [Blank]	
1	10/13/2010 PRELIMINARY	BY: EY	
	DATE	DESCRIPTION	
	REVISIONS		



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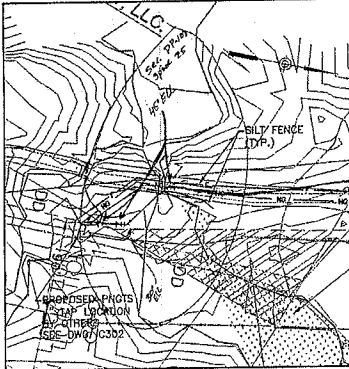
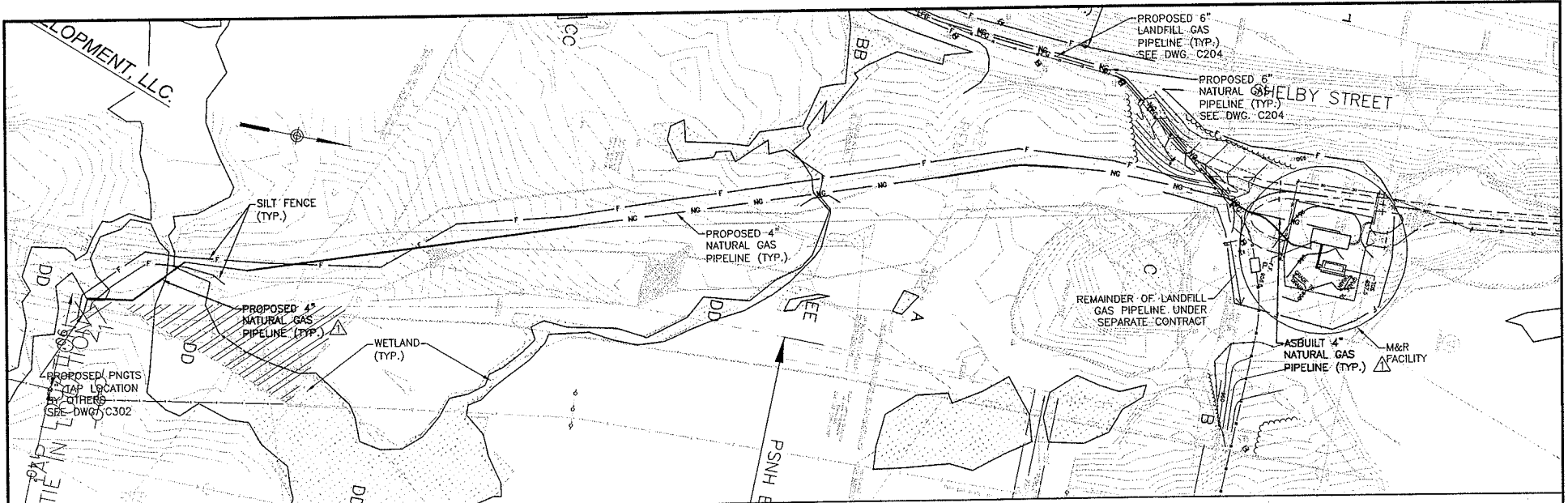


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GORHAM PAPER & TISSUE LLC.
 SEDIMENT & EROSION CONTROL-4
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. No.: 18186200
 DATE: 9/13/2011
C504

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RECORD DRAWINGS
 THESE DRAWINGS REPRESENT A COMPILATION OF FIELD RECORDS
 ASSUMED BY THE CONTRACTOR DURING THE CONSTRUCTION
 OF THE SUBJECT WORK. THEY SHOULD NOT BE CONSIDERED
 COMPLETE OR NECESSARILY ACCURATE REPRESENTATIONS OF
 THE WORK AS CONSTRUCTED. USE OF THE INFORMATION
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 USER. MAGUIRE GROUP, INC. DOES NOT WARRANT THE
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 John Maynard, P.E.
 DATE: 12/20/11

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

1	10/12/2010	PRELIMINARY	BY	
		DESCRIPTION	BY	
REVISIONS				

PROJ. MANAGER:	JMZ	SEAL
CHIEF DESIGNER:	KAD	
REVIEWED BY:		
DATE:		



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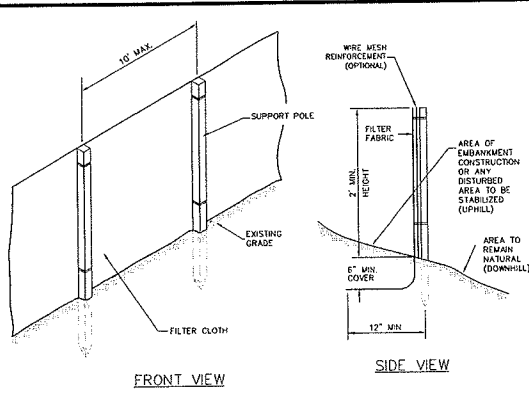


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GORHAM PAPER & TISSUE LLC.
 SEDIMENT & EROSION CONTROL-5
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

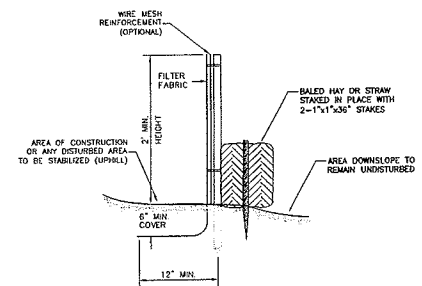
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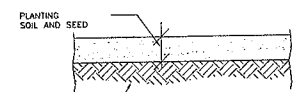


- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**
1. WIRE MESH TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. PRE-FABRICATED SILT FENCE WITH INTEGRAL REINFORCEMENT MAY BE USED IN LIEU OF WIRE MESH.
 2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
 4. PLACE SILT FENCE 5 FT BEYOND THE TOE OF SLOPE OR ON THE CONTOUR. AT THE END OF SILT FENCE RUNS, FLARE UPHILL.
 5. PROVIDE WOMEN WIRE FENCE AND/OR CLOSER FENCE POST SPACING IN AREAS WHERE HIGH RUNOFF VOLUMES ARE ANTICIPATED, OR IN LOW SPOTS WHERE SEDIMENT WILL BE COLLECTED.
 6. REMOVE SILT FENCE AS DIRECTED. WHEN NO LONGER NEEDED, BEFORE THE SILT FENCE IS REMOVED, STABILIZE WITH VEGETATION ANY SEDIMENT WHICH IS PERMITTED TO REMAIN IN PLACE.
- POSTS: STEEL, EITHER T OR U TYPE OR 2" HARDWOOD
 FENCE: WOMEN WIRE, 14 GAUGE 6" MAX. MESH OPENING
 FILTER CLOTH: FILTER X, MIBAF 100K, STABILUNA 1140R OR APPROVED EQUAL
 PREFABRICATED UNIT: GEOTAB, ENVROFENCE, OR APPROVED EQUAL

SILT FENCE
NOT TO SCALE

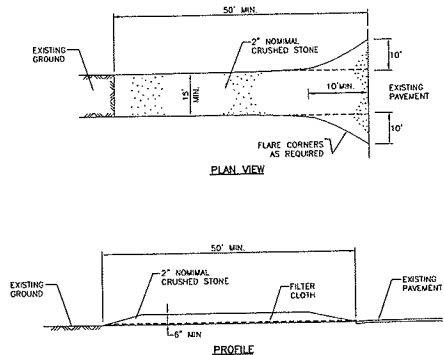


COMBINED SILT FENCE & HAY BALE
NOT TO SCALE

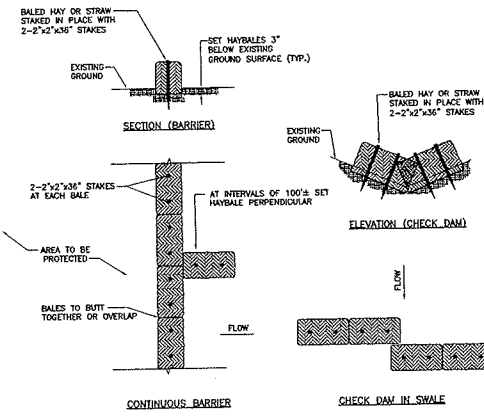


SEEDING DETAIL
NOT TO SCALE

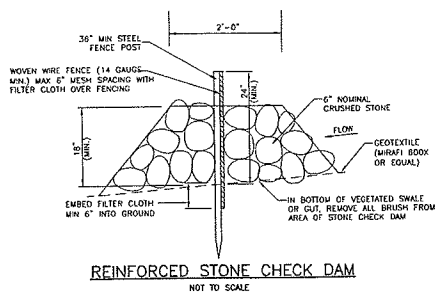
- NOTE:**
1. USE 4" LOAM PLANTING SOIL FOR PAVED ROADWAY EDGE AND PERIMETER AROUND WORK STATION SITE. USE REGRADED EXISTING SOIL FOR ALL OTHER AREAS.
 2. LOAM SHALL BE FRIBALE TOPSOIL STRIPPED FROM ON-SITE. LOAM SHALL BE FREE FROM REFUSE, SIDINGS LARGER THAN 2 INCH AND ROOTS LARGER THAN 1/2 INCH.
 3. STRIP AND REUSE ORGANIC FOREST SOIL MATERIAL IN ALL FORESTED AREAS.
 4. IN DRAVE, ROADS, RAILROAD YARDS AND OTHER AREAS, PLANTING SOIL IS NOT REQUIRED. REPLACE EXISTING SURFACE MATERIAL IN-KIND AND SEED (HYDRO-SEED) AS DIRECTED.



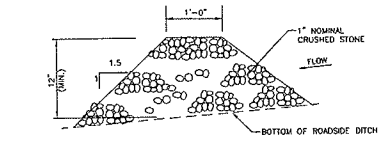
STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE



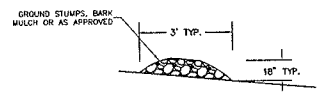
HAY BALE DETAIL
NOT TO SCALE



REINFORCED STONE CHECK DAM
NOT TO SCALE



STONE CHECK DAM ROADSIDE DITCHES
NOT TO SCALE



MULCH BERM DETAIL
NOT TO SCALE

STORMWATER POLLUTION PREVENTION NOTES:

1. REFER TO STORMWATER POLLUTION PREVENTION NOTES ON SHEET C001.
2. WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH WETLAND PERMIT AND OTHER PERMIT CONDITIONS.
3. WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SECTION 645 AND OTHER APPLICABLE SECTIONS OF THE NHDOT STANDARD SPECIFICATIONS.
4. PRIMARY SEDIMENT & EROSION CONTROL METHOD SHALL BE SILT FENCE OR MULCH ("STUMP GRINDINGS") BERM.
5. SIGAL LOGS, COIR LOGS, STAW WATTLES OR OTHER NATURAL FIBER PRODUCTS (MINIMUM 1 1/2-INCH DIAMETER) MAY BE USED AS AN ALTERNATE TO SILT FENCE WHERE ALLOWED BY PERMITS.
6. HAY BALES AND/OR COMBINED SILT FENCE & HAY BALE BARRIER SHALL BE USED WHERE DIRECTED BY OWNER, ENGINEER OR AS OTHERWISE REQUIRED BY PERMITS OR REGULATIONS.

RECORD DRAWINGS
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 John Maynard, P.E.
 11/30/11 DATE

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

NOV11	RECORD DRAWING INFO ADDED AS PROVIDED BY CONTRACTOR	PROJ. MANAGER: JKV	SEAL
		CHIEF DESIGNER: KAD	
		REVIEWED BY: DATE	
10/12/2010	PRELIMINARY	EV	
No.	DATE	DESCRIPTION	BY
REVISIONS			



SCALE:	HORZ: AS SHOWN
	VERT:
DATUM:	HORZ:
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GRAPHIC SCALE	

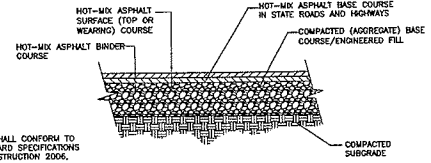


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GORHAM PAPER & TISSUE LLC.
SEDIMENT & EROSION CONTROL DETAILS
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. NO: 11862	C701
DATE: 9/13/2011	

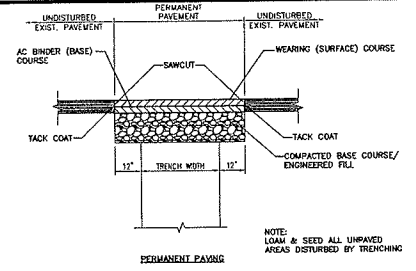
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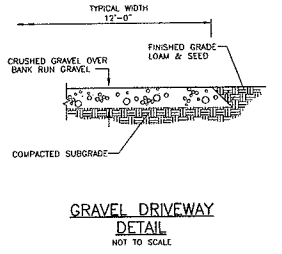
BITUMINOUS CONCRETE PAVEMENT DETAIL
NOT TO SCALE

ASPHALT NOTES:
 1. HOT-MIX ASPHALT SHALL CONFORM TO NHDOT STATE STANDARD SPECIFICATIONS SECTION 400:
 BASE COURSE (BINDER) - TYPE B
 WEARING COURSE (SURFACE COURSE) - TYPE C OR F
 2. PAVEMENT TYPES AND ITEM NOS. BELOW REFER TO NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.

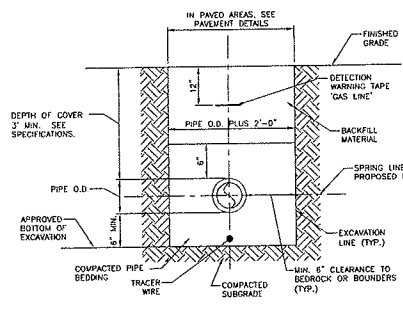
	HOT-MIX ASPHALT WEARING COURSE (TYPE "C")	HOT-MIX ASPHALT BASE COURSE (TYPE "B")	CRUSHED GRAVEL (ITEM 304.3)	GRAVEL (ITEM 304.2)
STREETS	1-1/2"	2"	12"	12"
GRAVEL DRIVEWAYS	-	-	6"	8"



PAVEMENT RESTORATION DETAIL
NOT TO SCALE



GRAVEL DRIVEWAY DETAIL
NOT TO SCALE

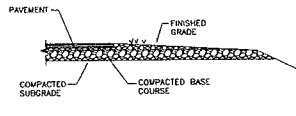


NOTES:
 PIPE SHALL BE BEDDED IN NATIVE MATERIAL PROVIDED IT CONTAINS MATERIAL NO LARGER THAN 3/8" INCHES, CONFORMS TO NHDOT SPECIFICATIONS AND PIPE MANUFACTURER'S RECOMMENDATIONS.

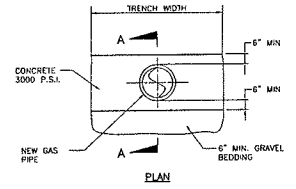
PIPE TRENCH DETAIL
NOT TO SCALE

PIPE BEDDING AND BACKFILL NOTES:
 1. BEDDING MATERIALS (PIPE BEDDING) - INCLUDING BACKFILL TO A LEVEL 6 INCHES ABOVE THE TOP OF PIPE - SHALL HAVE NO PARTICLES LARGER THAN 3/8" INCHES.
 2. BEDDING AND BACKFILL TO A DEPTH OF 6 INCHES ABOVE THE TOP OF PIPE SHALL BE COMPACTED TO A MINIMUM OF 80% MODIFIED PROCTOR.
 3. BACKFILL MATERIAL FROM 6 INCHES TO 12 INCHES ABOVE THE TOP OF THE PIPE SHALL HAVE NO STONES LARGER THAN 3 INCHES.
 4. BACKFILL MATERIAL FROM 12 INCHES TO 18 INCHES ABOVE THE TOP OF THE PIPE SHALL HAVE NO ROCKS LARGER THAN 6 INCHES.
 5. BACKFILL MATERIAL ABOVE 18 INCHES ABOVE THE TOP OF THE PIPE (WHICH IS TYPICALLY ABOUT HALF OF THE DEPTH OF BEDDING) SHALL HAVE NO ROCKS OR PIECES OF LEDGE LARGER THAN 24 INCHES.

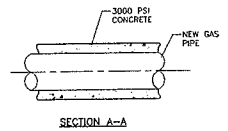
SECTION B-B TRENCH PARALLEL TO LEACHATE LINE
NOT TO SCALE



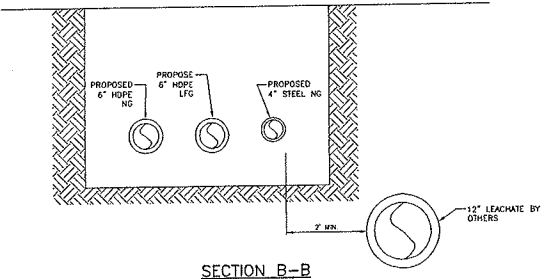
SHOULDER DETAIL
NOT TO SCALE



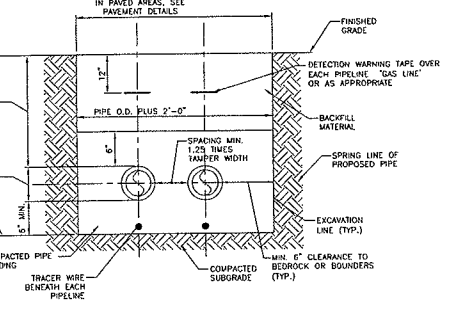
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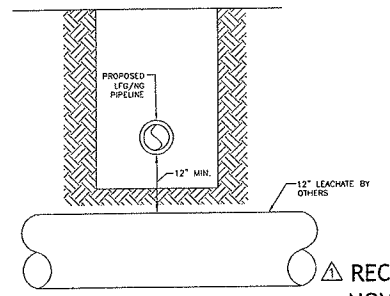
NOTES:
 CONCRETE ENCASEMENT TO BE UTILIZED WHEN DIRECTED BY THE OWNER OR ENGINEER



12" LEACHATE BY OTHERS



MULTIPLE UTILITY TRENCH DETAIL
NOT TO SCALE



GAS LINE CROSSING LEACHATE LINE
NOT TO SCALE

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

1. 10/12/2010 PRELIMINARY DESCRIPTION		BY: EY
REVISIONS		BY: _____

PROJ. MANAGER: JUV	SEAL
CHIEF DESIGNER: MAD	
REVIEWED BY: _____	DATE: _____



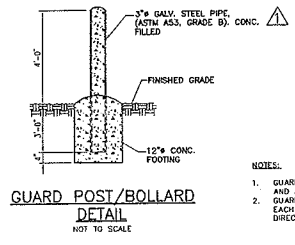
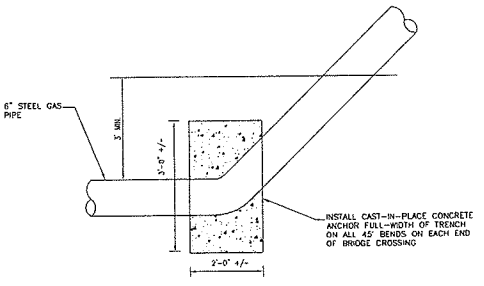
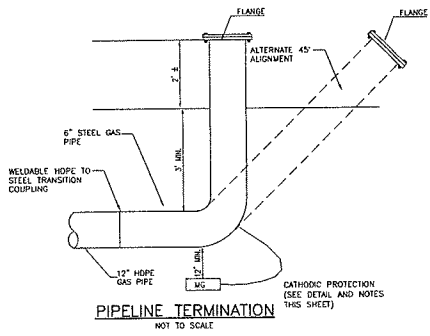
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GRAPHIC SCALE

Maguire Group Inc.
 Architects / Engineers / Planners
 110 Corporate Drive, Suite 6
 Portsmouth, New Hampshire 03801

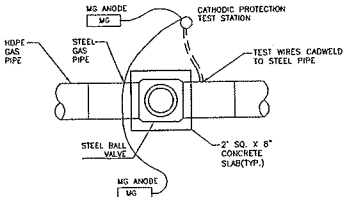
GORHAM PAPER & TISSUE LLC.
 TRENCH & PAVEMENT DETAILS
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. No.: 19186
 DATE: 9/13/2011
C702

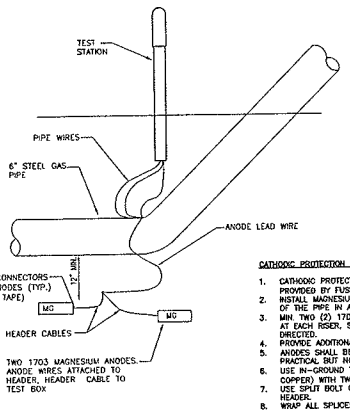
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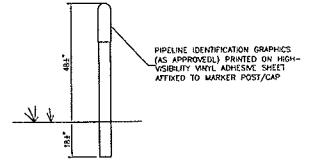
- NOTES:**
1. GUARD POSTS (2) SHALL BE INSTALLED AT ALL ISOLATION VALVE, AND AT OTHER LOCATIONS AS DIRECTED.
 2. GUARD POSTS SHALL BE INSTALLED APPROXIMATELY 4'-0" ON EACH SIDE OF THE PIPELINE CENTERED ON EACH INSTALLATION AS DIRECTED.



- NOTES:**
1. SEE CATHODIC PROTECTION DETAIL AND NOTES BELOW (THIS SHEET)
 2. CATHODIC PROTECTION IS NOT REQUIRED IF APPROVED NON-CORROSIVE (E.G. PLASTIC) VALVES ARE UTILIZED.



- CATHODIC PROTECTION NOTES:**
1. CATHODIC PROTECTION DETAIL AND NOTES ADAPTED FROM DETAIL PROVIDED BY FUGG & O'NEILL
 2. INSTALL MAGNESIUM ANODES MIN. 12-INCHES LOWER THAN THE BOTTOM OF THE PIPE IN A HORIZONTAL POSITION
 3. MIN. TWO (2) 1703 PRE-PACKAGED Mg-POTENTIAL MAGNESIUM ANODES AT EACH RISER, STEEL VALVE OR OTHER STEEL COMPONENT AS DIRECTED.
 4. PROVIDE ADDITIONAL ANODES AS REQUIRED TO SUIT CONDITIONS
 5. ANODES SHALL BE INSTALLED AS FAR (LATERALLY) FROM THE PIPE AS PRACTICAL BUT NOT LESS THAN 1 FOOT
 6. USE IN-GROUND TEST STATION WITH 2-TEST WIRES (#10 AWG STRANDED COPPER) WITH 1/4" OR 1/2" INSULATION CADWELDED TO STEEL PIPE
 7. USE SPLIT BOLT CONNECTOR TO CONNECT ANODE LEAD TO ANODE HEADS.
 8. WRAP ALL SPLICES AND CONNECTIONS WITH PVC ELECTRICAL TAPE



- NOTES:**
1. MARKER POSTS SHALL BE SPACED AT APPROX. 400 FT ALONG LENGTH OF PIPELINE. SPACING SHALL BE CLOSER ALONG CURVED ALIGNMENT AS DIRECTED. SPACING MAY BE INCREASED TO A MAXIMUM OF 500 FT ALONG/IN WETLANDS.
 2. MARKER POSTS SHALL BE INSTALLED AT ALL ROAD & RAILROAD CROSSINGS WITHIN 100 FT OF ANY DRIVEWAY AND AT ALL CHANGES IN DIRECTION.
 3. MARKER POSTS SHALL BE HIGH VISIBILITY YELLOW WITH UV INHIBITORS, 3.25" ROUND PE PLASTIC PIPE OR 3.75" FLAT G.R. POLYESTER FLEX-POSTS AS MARKER BY COTT, VEDDAM, WILLIAM FRICK, FARVEST OR CHRISTY'S.
 4. IF SEPARATE "GULLET" TOPS ARE PROVIDED THEY SHALL BE ATTACHED WITH ADHESIVE OR VANDAL RESISTANT FASTENERS.
 5. ALTERNATE MARKER TYPES, INCLUDING FLUSH AT-GRADE MONUMENTS, TREE MOUNTED SIGNS OR OTHER STYLES MAY BE APPROVED FOR USE IN OTHER THAN OPEN-ALIGNMENT AREAS.

RECORD DRAWINGS
 THESE DRAWINGS REPRESENT A COMPILATION OF FIELD RECORDS ASSEMBLED BY THE CONTRACTOR UNDER THE SUPERVISION OF THE SUBJECT WORK. THEY SHOULD NOT BE CONSIDERED COMPLETE OR NECESSARILY ACCURATE REPRESENTATIONS OF THE WORK AS CONSTRUCTED. USE OF THE INFORMATION CONTAINED ON THESE DRAWINGS IS AT THE SOLE RISK OF THE USER. MAGUIRE GROUP INC. DOES NOT WARRANT THE ACCURACY OF THE INFORMATION SHOWN HEREON.
 John Maguire, P.E.
 12/13/11, DATE

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

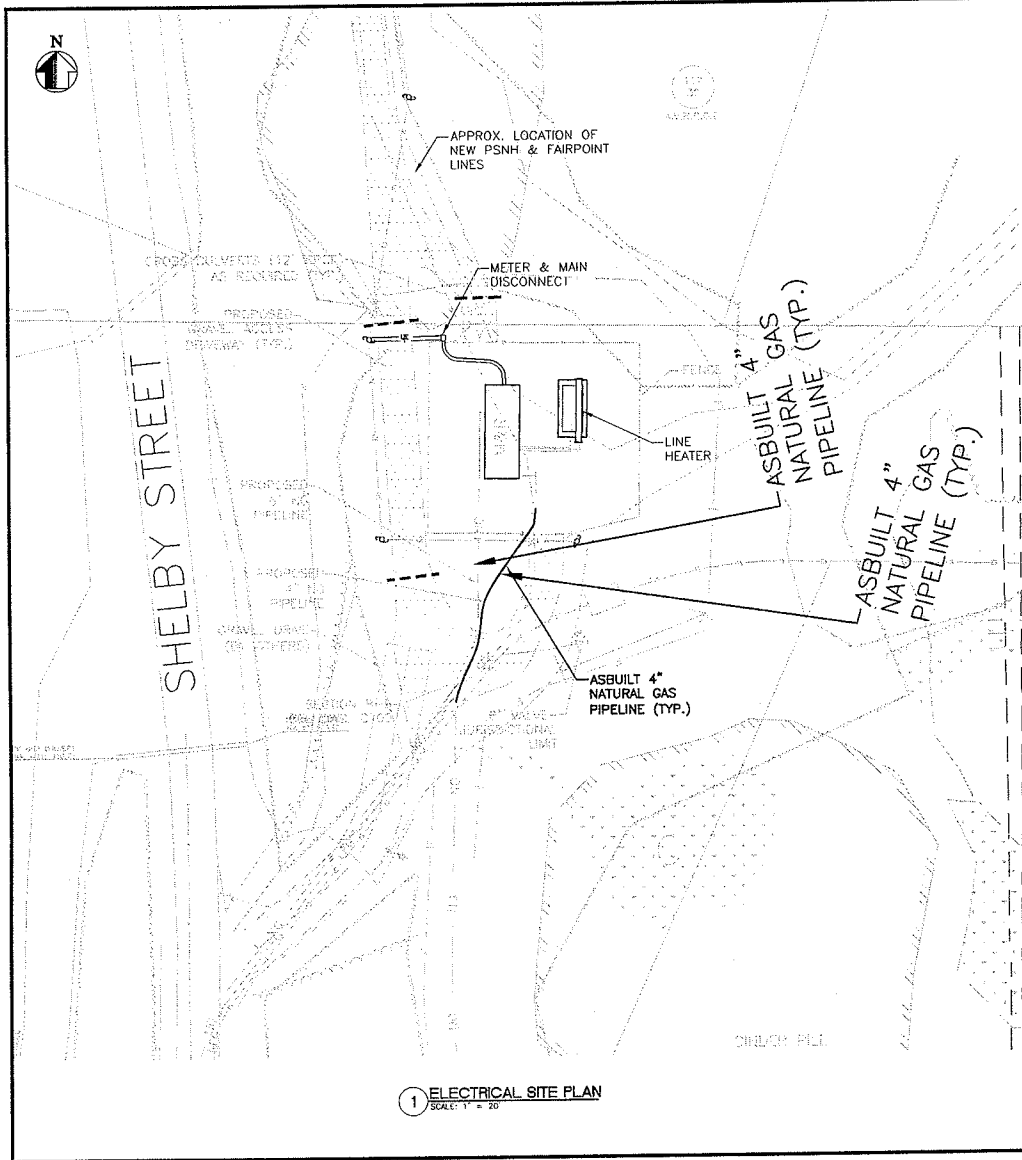
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REVISIONS		MAGUIRE GROUP 110 CORPORATE DRIVE, SUITE 6 PORTSMOUTH, NEW HAMPSHIRE 03801	SCALE: HORIZ: AS SHOWN VERT: _____ DATUM: HORIZ: _____ VERT: _____ GRAPHIC SCALE

PROJ. No.: 19185 DATE: 9/13/2011	C703
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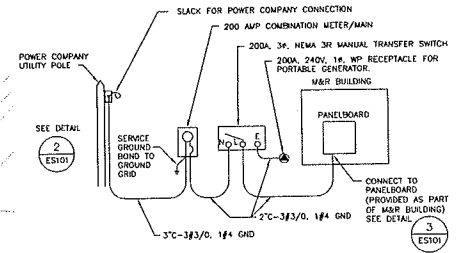
Maguire Group Inc.
 Architects / Engineers / Planners
 110 Corporate Drive, Suite 6
 Portsmouth, New Hampshire 03801

GORHAM PAPER & TISSUE LLC.
 PIPING DETAILS
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

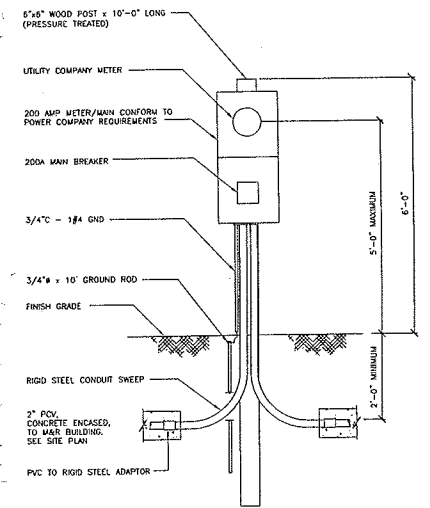
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 USER: MSHA



1 ELECTRICAL SITE PLAN
SCALE: 1" = 20'



POWER DISTRIBUTION - SINGLE LINE DIAGRAM
SCALE: NONE



2 DETAIL
SCALE: 3/4" = 1'-0"

ELECTRICAL GENERAL NOTES:

- ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ACCEPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70), THE STATE OF NEW HAMPSHIRE, THE REQUIREMENTS OF PUBLIC SERVICE OF NEW HAMPSHIRE (PSNH) AND THE LOCAL TELEPHONE SERVICE PROVIDER.
- ELECTRICAL WIRING SHALL BE STRANDED COPPER CONDUCTOR, XHHW INSULATED, 600 VOLT RATED. WIRING SHALL BE INSTALLED IN RIGID STEEL CONDUIT OR CONCRETE ENCASED SCHEDULE 40, PVC CONDUIT.
- ELECTRICAL SERVICE SHALL BE COORDINATED WITH PSNH AND SHALL CONFORM TO ALL UTILITY COMPANY REQUIREMENTS.
- COORDINATE ELECTRICAL WORK WITH M&R BUILDING SUPPLIER.

ELECTRICAL SITE NOTES:

- UNDERGROUND ELECTRICAL CONDUITS SHALL BE RIGID GALVANIZED STEEL. WHERE CONDUITS CROSS DRIVEWAYS OR PARKING LOTS, THEY SHALL BE PVC ENCASED IN CONCRETE.
- INFORMATION PROVIDED ON THE PLANS HEREIN IS PRESENTED AS BEST INFORMATION AVAILABLE. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITIES BEFORE PROCEEDING WITH THE WORK. ANY CONFLICTS ENCOUNTERED SHOULD BE RESOLVED BEFORE PROCEEDING WITH THE WORK. CONTRACTOR SHALL USE EXTREME CAUTION, INCLUDING HAND EXCAVATION AS REQUIRED, WHEN EXCAVATING NEAR EXISTING UTILITIES.

ELECTRICAL SITE LEGEND:

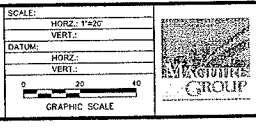
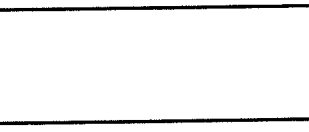
- NEW ELECTRIC SERVICE PEDESTAL WITH UTILITY COMPANY METER AND MAIN SERVICE DISCONNECT SWITCH. SEE DETAIL ON THIS SHEET.
- NEW UTILITY COMPANY POLE, FURNISHED AND INSTALLED BY PSNH.
- (2) UNDERGROUND 4" TELEPHONE CONDUIT WITH NYLON PULL CORB. SEE DETAIL 1 ON DWG. ES101.
- UNDERGROUND ELECTRICAL CONDUIT AND WIRING, 3\"/>

RECORDED DRAWINGS
 THESE DRAWINGS REPRESENT A COMPILATION OF FIELD RECORDS ASSEMBLED BY THE CONTRACTOR DURING THE CONSTRUCTION OF THE SUBJECT WORK. THEY SHOULD NOT BE CONSIDERED COMPLETE OR NECESSARILY ACCURATE REPRESENTATIONS OF THE WORK AS CONSTRUCTED. USE OF THE INFORMATION CONTAINED ON THESE DRAWINGS IS AT THE SOLE RISK OF THE USER. MAGUIRE GROUP INC. DOES NOT WARRANT THE ACCURACY OF THE INFORMATION SHOWN HEREON.
 JOHN HATHAWAY, P.E.
 12/20/11 DATE

RECORD DRAWINGS
NOVEMBER 30, 2011
ISSUED FOR CONSTRUCTION
SEPTEMBER 13, 2011

NO.	DATE	DESCRIPTION	BY	DATE
1	12/20/2010	PRELIMINARY	EY	
REVISIONS				

PROJ. MANAGER	JON	SEAL
CHIEF DESIGNER	MAO	
DESIGNED BY		
CHECKED BY		
DATE		

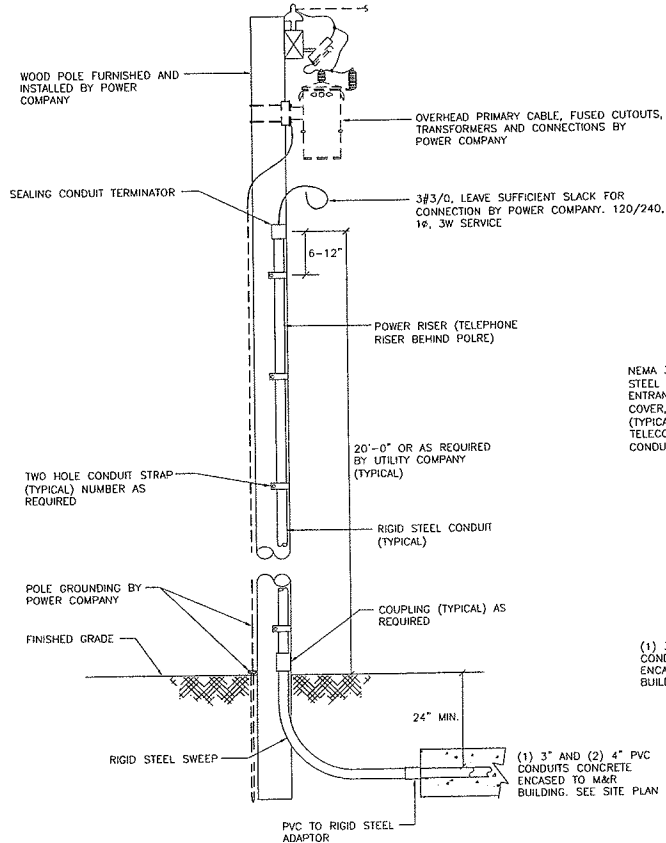
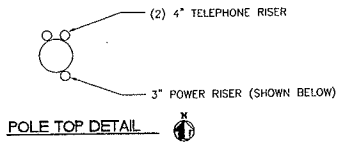


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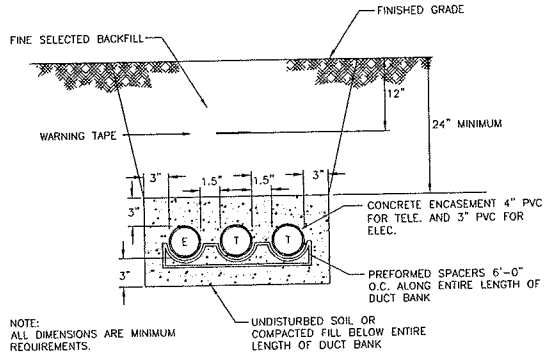
GORHAM PAPER & TISSUE LLC.
M&R FACILITY ELECTRICAL SITE PLAN
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT
 BERLIN NEW HAMPSHIRE

PROJ. NO: 19386
 DATE: 01/20/11
ES100

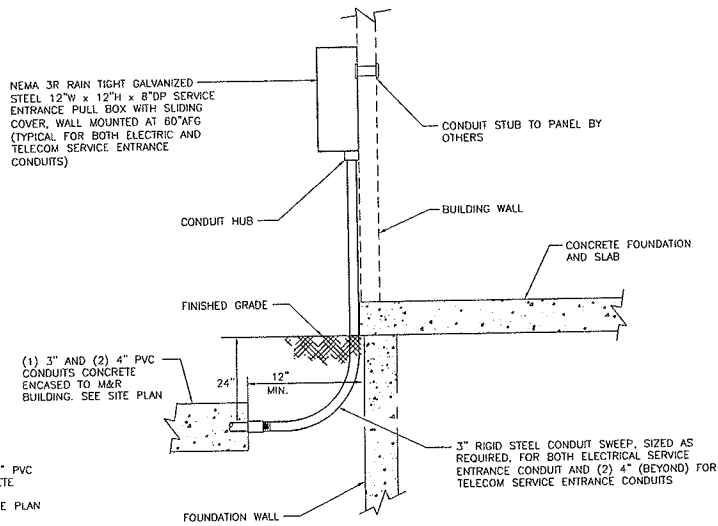
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2 RISER POLE DETAIL - LOOKING NORTH
SCALE: NONE



1 TYPICAL DUCT BANK SECTION
SCALE: NONE



3 SERVICE ENTRANCE CONDUIT DETAIL
SCALE: NONE

SHEET NOTES:

- FOR ELECTRICAL SITE PLAN, SITE NOTES AND SITE LEGEND, REFER TO DRAWING ES101.

RECORD DRAWINGS
 THESE DRAWINGS REPRESENT A COMPILATION OF FIELD RECORDS ASSEMBLED BY THE CONTRACTOR DURING THE CONSTRUCTION OF THE SUBJECT WORK. THEY SHOULD NOT BE CONSIDERED COMPLETE OR NECESSARILY ACCURATE REPRESENTATIONS OF THE WORK AS CONSTRUCTED. USE OF THE INFORMATION CONTAINED ON THESE DRAWINGS IS AT THE SOLE RISK OF THE USER. MAGUIRE GROUP, INC. DOES NOT WARRANT THE ACCURACY OF THE INFORMATION SHOWN HEREON.

JMB / MS
 JOHN MAGUIRE, P.E.
 DATE

RECORD DRAWINGS
 NOVEMBER 30, 2011
 ISSUED FOR CONSTRUCTION
 SEPTEMBER 13, 2011

REVISIONS		NO.	DATE	DESCRIPTION	BY	DATE
1	10/12/2010			PRELIMINARY DESCRIPTION		

PROJ. MANAGER:	JMK	SEAL
CHIEF DESIGNER:	MSD	
REVIEWED BY:		
	DATE	



SCALE:	
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VERT.	
DATUM:	
HORIZ.	
VERT.	
GRAPHIC SCALE	
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Maguire Group Inc.
 Architects / Engineers / Planners

110 Corporate Drive, Suite 6
 Portsmouth, New Hampshire 03801

GORHAM PAPER & TISSUE L.L.C.

M&R FACILITY

ELECTRICAL SITE DETAILS
 NATURAL GAS AND LANDFILL GAS PIPELINE PROJECT

BERLIN

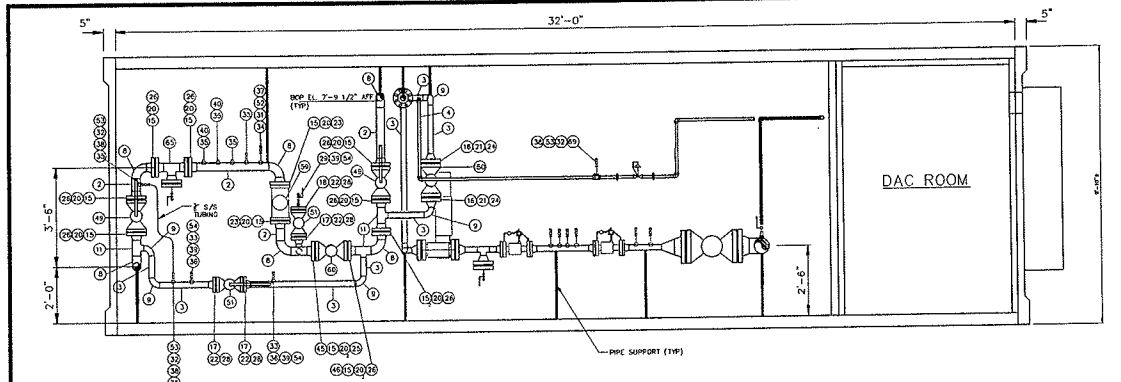
NEW HAMPSHIRE

PROJECT NO. 11862

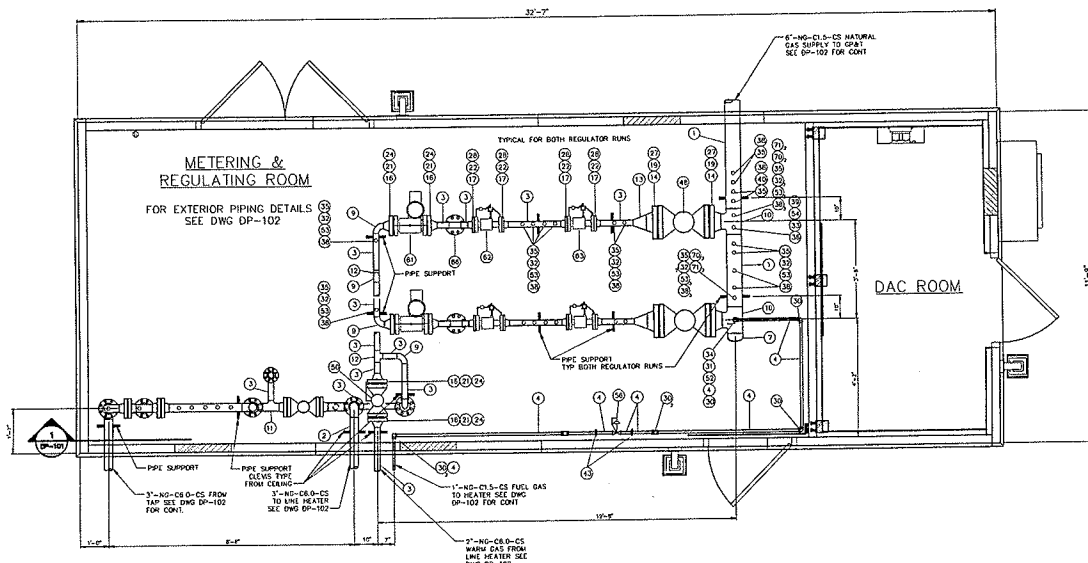
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ES101

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 LUMEN, DTE, US VIEW, DCS



1 M&R BUILDING PIPING LAYOUT - ELEV
 SCALE: 1/2"=1'-0"



M&R BUILDING PIPING LAYOUT - PLAN
 SCALE: 1/2"=1'-0"

INTERIOR PIPE - BILL OF MATERIAL

ITEM	QTY.	DESCRIPTION
1	7	PIPE, 8.25" O.D. X 0.280 WT. ASTM A333 GR 6
2	10	PIPE, 3.00" O.D. X 0.216 WT. ASTM A333 GR 6 M2
3	24	PIPE, 2.375" O.D. X 0.134 WT. ASTM A333 GR 6 SCH 40
4	30	PIPE, 1.315" O.D. X 0.103 WT. ASTM A333 GR 6 SCH 40
5	1	FLANGE, 1" STEEL, ANSI 150, RFV, BORE 1.315, ASME B16.5 & ASTM A192 CL1, TO MATCH PIPE
6	1	CAP, 8.25" O.D. X 0.280 WT. 90 DEG WELD, STL, ASME B16.5 & ASTM A230 WPL6, TO MATCH PIPE
7	1	ELL, 3.00" O.D. X 0.216 WT. 90 DEG WELD, STL, ASME B16.5 & ASTM A230 WPL6, TO MATCH PIPE
8	1	ELL, 2.375" O.D. X 0.134 WT. 90 DEG WELD, STL, ASME B16.5 & ASTM A230 WPL6, TO MATCH PIPE
9	2	TEE, 8.25" O.D. X 0.280 WT. WELD, STL, ASME B16.5 & ASTM A230 WPL6, TO MATCH PIPE
10	4	TEE, REDUCING, 3.00" O.D. X 0.216 WT. X 2.375" O.D. X 0.134 WT. WELD, STL, ASME B16.5 & ASTM A230 WPL6, TO MATCH PIPE
11	4	TEE, REDUCING, 3.00" O.D. X 0.216 WT. X 2.375" O.D. X 0.134 WT. WELD, STL, ASME B16.5 & ASTM A230 WPL6, TO MATCH PIPE
12	1	TEE, 2.375" O.D. X 0.134 WT. WELD, STL, ASME B16.5 & ASTM A230 WPL6, TO MATCH PIPE
13	2	REDUCER, CONCENTRIC, 6" (2.80 WT) X 2" (0.134 WT) WELDED, STL, ASME B16.5 & ASTM A230 WPL6, TO MATCH PIPE
14	4	FLANGE 1" STEEL, ANSI 150, RFV, BORE 1.315, ASME B16.5 & ASTM A192 CL1, TO MATCH PIPE
15	12	FLANGE 1" STEEL, ANSI 150, RFV, BORE 1.315, ASME B16.5 & ASTM A192 CL1, TO MATCH PIPE
16	9	FLANGE 1" STEEL, ANSI 150, RFV, BORE 1.315, ASME B16.5 & ASTM A192 CL1, TO MATCH PIPE
17	11	FLANGE 1" STEEL, ANSI 150, RFV, BORE 1.315, ASME B16.5 & ASTM A192 CL1, TO MATCH PIPE
18	1	FLANGE 1" STEEL, ANSI 150, RF, BLND, ASME B16.5 & ASTM A192 CL1, COU 2"
19	4	ANSI 800 GASKET, ASME B16.20, SPIRAL WOUND WITH TYPE 304SS WINDING CAV 100 INTERNAL & EXTERNAL CS RING
20	13	ANSI 800 GASKET, ASME B16.20, SPIRAL WOUND WITH TYPE 304SS WINDING CAV 100 INTERNAL & EXTERNAL CS RING
21	6	ANSI 800 GASKET, ASME B16.20, SPIRAL WOUND WITH TYPE 304SS WINDING CAV 100 INTERNAL & EXTERNAL CS RING
22	12	ANSI 800 GASKET, ASME B16.20, SPIRAL WOUND WITH TYPE 304SS WINDING CAV 100 INTERNAL & EXTERNAL CS RING
23	16	GAP SCREWS, 3/4"-16 FINE, 1 1/2" LG, GRADE 8, NYWASHER
24	64	STUD BOLTS, 7/8" DIA X 5 1/2" LG, ASTM A320 GR. L7, W/NUITS, ASTM A194 GR 4 OR GR. 7 (2-8000)
25	8	STUD BOLTS, 3/4" DIA X 4" LG, ASTM A320 GR. L7, W/NUITS, ASTM A194 GR 4 OR GR. 7 (2-8000 W/SPACER)
26	64	STUD BOLTS, 3/4" DIA X 5" LG, ASTM A320 GR. L7, W/NUITS, ASTM A194 GR 4 OR GR. 7 (2-8000)
27	48	STUD BOLTS, 1" DIA X 3 3/4" LG, ASTM A320 GR. L7, W/NUITS, ASTM A194 GR 4 OR GR. 7 (2-8000)
28	88	STUD BOLTS, 3/4" DIA X 4 1/2" LG, ASTM A320 GR. L7, W/NUITS, ASTM A194 GR 4 OR GR. 7 (2-8000)
29	1	ISWAGE, CONCENTRIC 2" X 1/2" TEE, STL, MSS SP46 & ASTM A234 WPL6, SCH 80
30	1	ELL, FORGED STL, 1" X 30 DEG, 3000F, SCD, ASME B16.11 & ASTM A105
31	1	WIPPLE, 1" X 3", TEE, ASTM A752 & ASTM A105 GR. B, SCH 80
32	38	WIPPLE, 3/4" X 3", TEE, ASTM A752 & ASTM A105 GR. B, SCH 80
33	2	WIPPLE, 1/2" X 3", TEE, ASTM A752 & ASTM A105 GR. B, SCH 80
34	1	THREADED, 1" STEEL, 3000F, MSS SP-97 & ASTM A105
35	31	THREADED, 3/4" STEEL, 3000F, MSS SP-97 & ASTM A105
36	1	THREADED, 1/2" STEEL, 3000F, MSS SP-97 & ASTM A105
37	2	PLUG, HEX, 1" STEEL, 8000F, FS, SCD, ASME B16.11 & ASTM A105
38	32	PLUG, HEX 3/4" STEEL, 8000F, FS, SCD, ASME B16.11 & ASTM A105
39	1	PLUG, HEX 1/2" STEEL, 8000F, FS, SCD, ASME B16.11 & ASTM A105
40	4	3/4" 3000F THERMOWELL
43	2	UNION, 1" 3000F, SIV, MSS SP-83 & ASTM A105
44	1	SPACER PLATE WIPADDLE HANDLE, 1/2" THK, CS, 7.825" O.D. X 4.151" BORE
45	1	FLOW LIMITING DEVICE, 3.000" ID, X.070" BORE, ANSI 6009 2" FLOW METER
46	2	VALVE, BALL, 1", ANSI 1500, RF, API ID
47	2	VALVE, BALL, 3/4", ANSI 1500, RF, API ID
48	2	VALVE, BALL, 1/2", ANSI 1500, RF, API ID
49	2	VALVE, BALL, 1", SCRD, FNPT CW LEVER, ASME B16.34 & ASTM A105, 2000F WOOD MN
50	2	VALVE, BALL, 3/4", SCRD, FNPT CW LEVER, ASME B16.34 & ASTM A105, 2000F WOOD MN
51	2	VALVE, BALL, 1/2", SCRD, FNPT CW LEVER, ASME B16.34 & ASTM A105, 2000F WOOD MN
52	1	1" NPT PRESSURE REGULATOR, SET @ 15 PSIG
53	1	13" 8000 ROTARY METER, ROOTS MODEL 7M
54	1	2" 8000 SHUT DOWN VALVE, BECKER
55	1	2" 3000F MONITOR VALVE, BECKER
56	2	2" 6000F PRESSURE REGULATOR, GROVE MODEL 001E, 20-600 PSIG
57	2	2" 2400F PRESSURE REGULATOR, GROVE MODEL 001E, 20-60 PSIG
58	1	1" STRAINER, 1" ANSI 1500 RFV, 100 MESH 304SS WIRE CLOTH SCREEN, CAST STL BODY, 1480 PSIG CAV 1/2" DIFFERENTIAL PRESSURE & BLOWDOWN CONNECTIONS
59	1	1" STRAINER, 1" ANSI 1500 RFV, 100 MESH 304SS WIRE CLOTH SCREEN, CAST STL BODY, 1480 PSIG CAV 1/2" DIFFERENTIAL PRESSURE & BLOWDOWN CONNECTIONS
60	1	TEE, FORGED STL, 1" X 3/4" 3000F, SCD, ASME B16.11 & ASTM A105
61	1	TEE, FORGED STL, 3/4" X 3/4" 3000F, SCD, ASME B16.11 & ASTM A105
62	1	ELL, FORGED STL, 3/4" X 90 DEG, 3000F, SCD, ASME B16.11 & ASTM A105

NO.	DATE	DESCRIPTION	BY	DATE
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0	9/2/2011	FOR CONSTRUCTION	BJW	

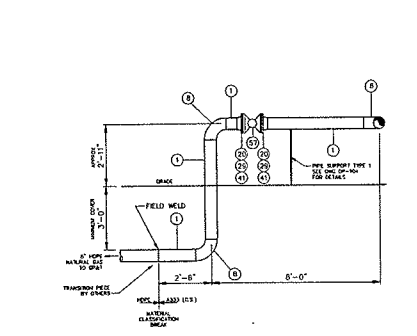
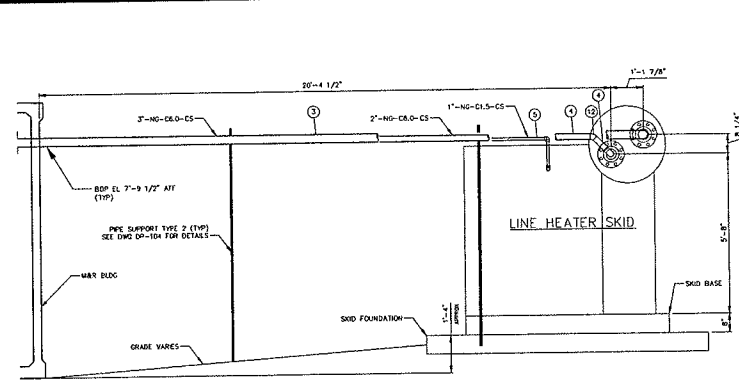
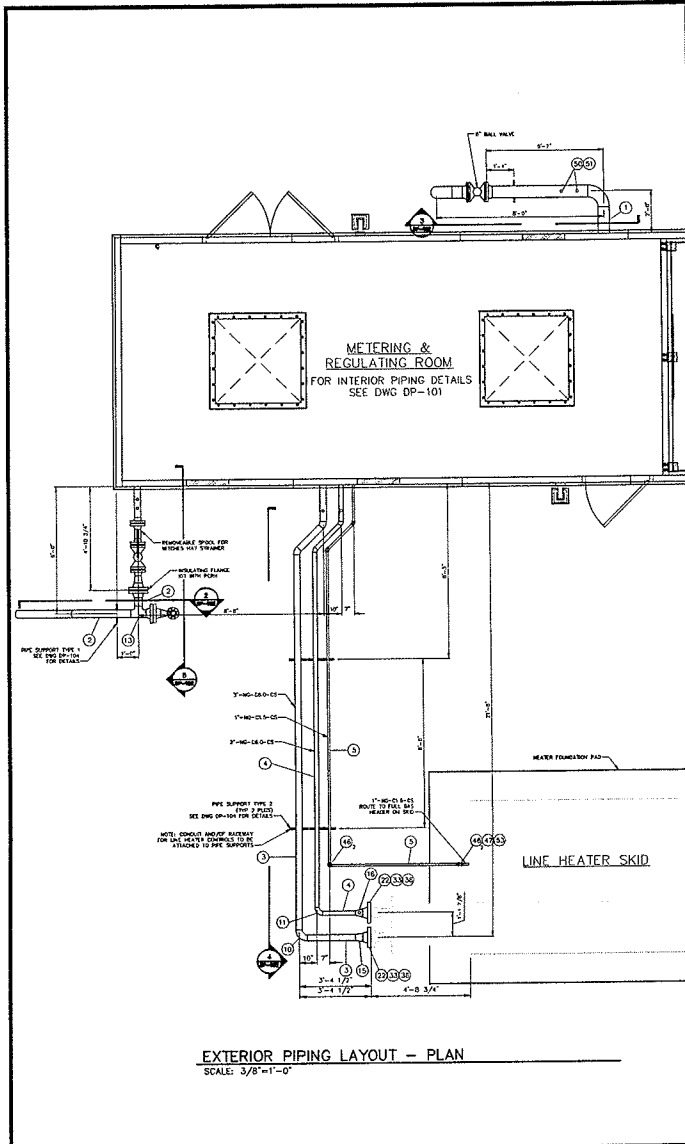
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CHIEF DESIGNER	JEF		
REVIEWED BY			

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GRAPHIC SCALE	

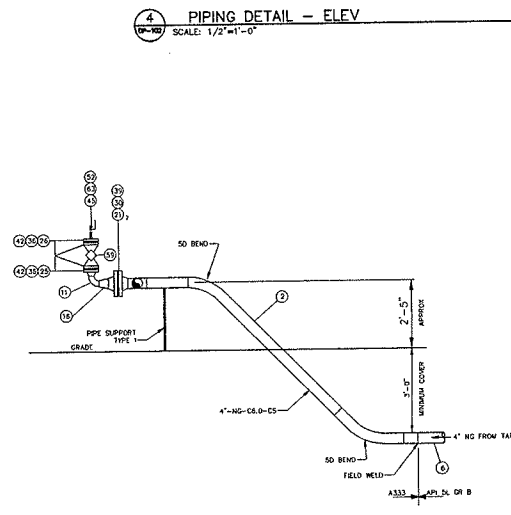
www.Ford0.COM
FUSS & O'NEILL
 Energy Alternatives, LLC
 145 HARTFORD RD WMANCHESTER, CT 06040 860.646.2469
 BERLIN NEW HAMPSHIRE

PROJ. No. 200111411
 DATE 10/09/10
DP-101

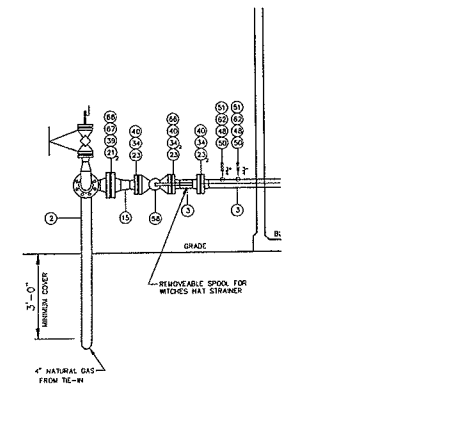
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PIPING DETAIL - ELEV
SCALE: 1/2"=1'-0"



PIPING DETAIL - ELEV
SCALE: 3/8"=1'-0"



PIPING DETAIL - ELEV
SCALE: 1/2"=1'-0"

PIPING DETAIL - ELEV
SCALE: 1/2"=1'-0"

FOR BILL OF MATERIAL
SEE DWG DP-103

NO.	DATE	DESCRIPTION	BY	CHK'D	DATE
2	1/12/2012	ISSUED DRAWINGS	BLAW		
1	01/04/2011	FINAL DESIGN REVISIONS	BLAW		
0	02/20/11	FOR CONSTRUCTION	BLAW		

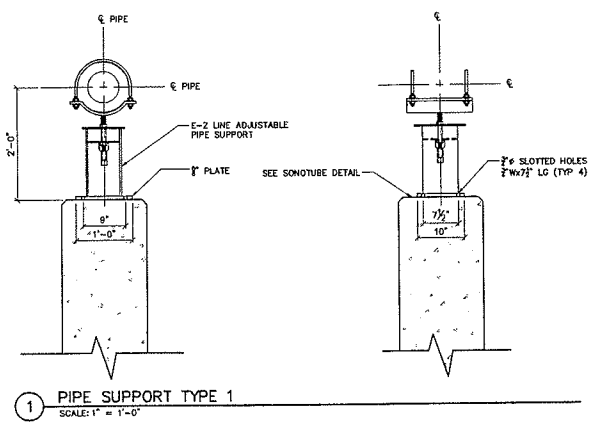
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CHIEF DESIGNER	JWF		
REVIEWED BY			

SCALE	HORIZ. AS NOTED	VERT.
DATUM <td>HORIZ. <td>VERT. </td></td>	HORIZ. <td>VERT. </td>	VERT.
GRAPHIC SCALE		

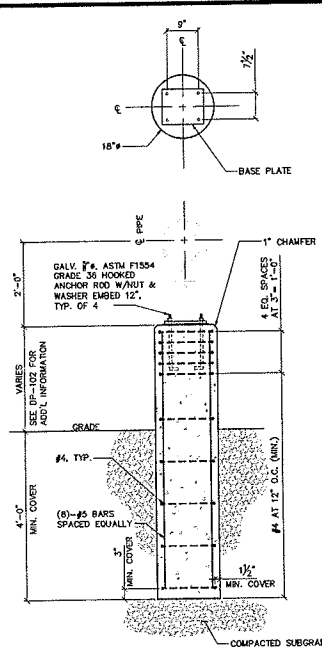
WWW.FOAM0.COM
FUSS & O'NEILL
 Energy Alternatives, LLC
 146 HARTFORD RD MANCHESTER, CT 06040 860.646.2469

GORHAM PAPER & TISSUE LLC.
 EXTERIOR PIPING - PLAN & DETAILS
 METERING & REGULATING STATION
 BERLIN NEW HAMPSHIRE

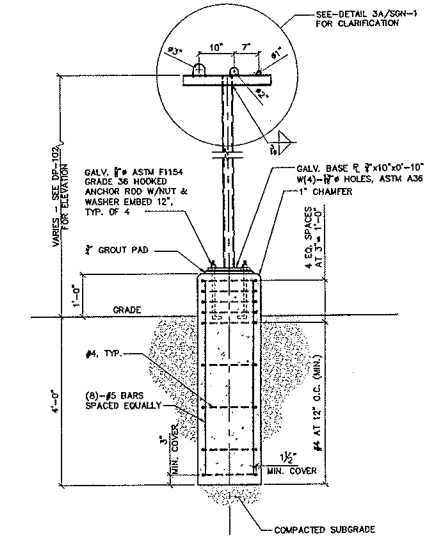
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 DATE 02/20/11
DP-102



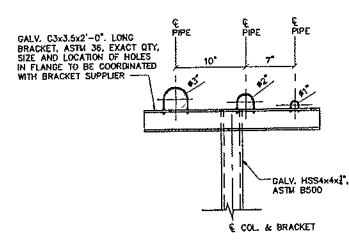
1 PIPE SUPPORT TYPE 1
SCALE: 1" = 1'-0"



2 SONOTUBE DETAIL
SCALE: 3/4" = 1'-0"



3 PIPE SUPPORT TYPE 2
SCALE: 3/4" = 1'-0"



3A PIPE SUPPORT CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"

NOTE: REFER TO DRAWING DS-101 FOR GENERAL, FOUNDATION, AND CONCRETE NOTES.

Project: DP-104 (M) - Metering & Regulating Station
 Date: 07/2011
 Designer: [Redacted]
 Checker: [Redacted]

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1	12/27/2011	RECORD DRAWING	B.W.	W.V.
0	1/27/2011	FOR CONSTRUCTION	B.W.	W.V.

SEAL	SEAL		
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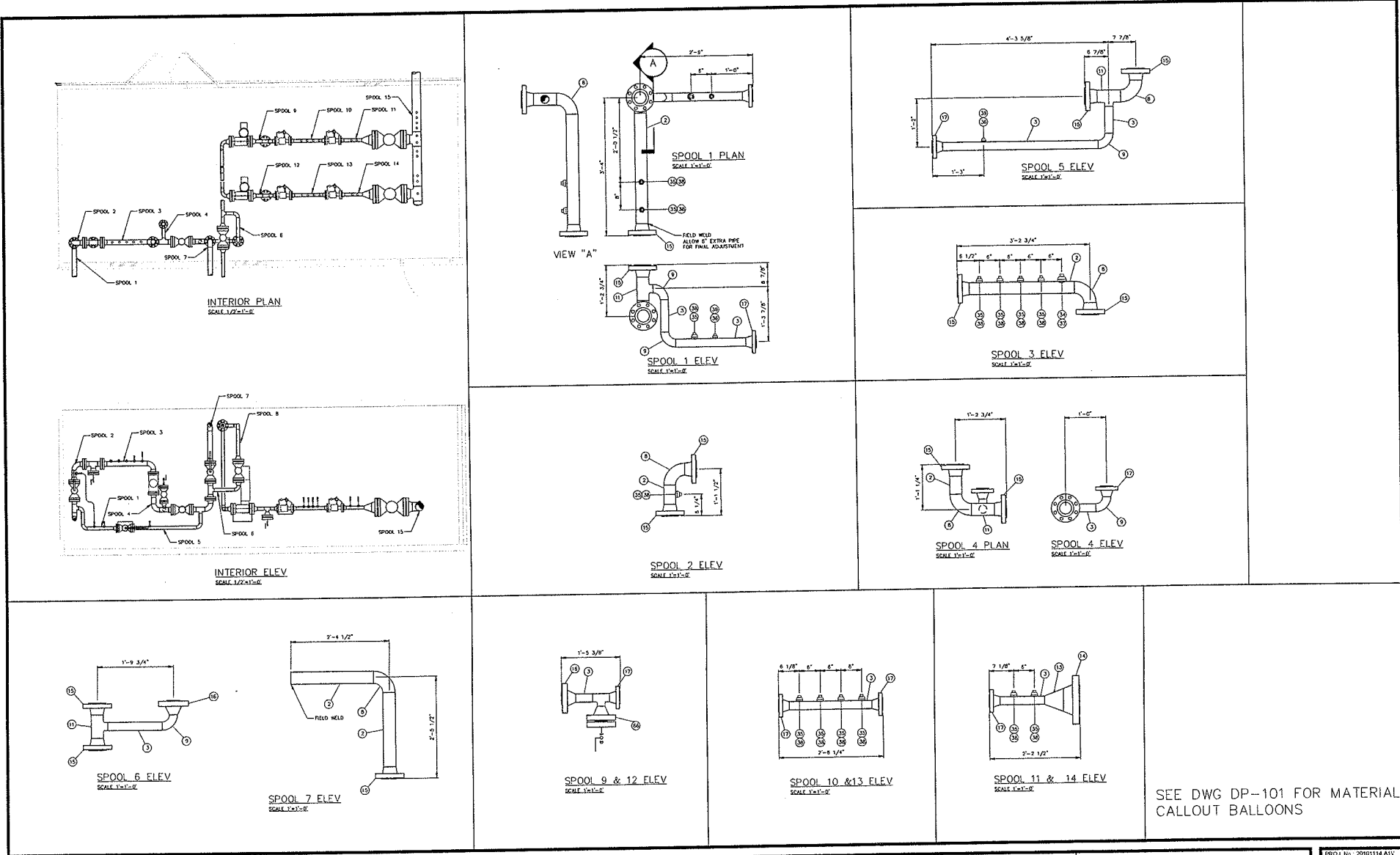
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DATUM	HORIZ.	VERT.
GRAPHIC SCALE		

FUSS & O'NEILL
 146 HARTFORD ROAD
 ALANCHAESTER, CONNECTICUT 06046
 860.446.2467
 www.fussco.com

GORHAM PAPER & TISSUE LLC.
 PIPE SUPPORT DETAILS
 METERING & REGULATING STATION
 BERLIN NEW HAMPSHIRE

PROJ. No. 20101144AW
 DATE: AUGUST 17, 2011
 DP-104

I:\Projects\120101114\1\DWG\Process\Commodore\120101114.dwg P:\SSP003.dwg Layout_DP-105_Tue, Dec 27, 2011, 9:18 PM User: woodburn



1	12/21/2011	RECORD DRAWING FOR CONSTRUCTION	BAV	
0	8/2/2011	DESCRIPTION	BAV	
No.	DATE	DESCRIPTION	BY	
REVISIONS				

PROJ. MANAGER	MAIL	SEAL	SEAL
CHIEF DESIGNER	JMS		
REVIEWED BY	DATE		

SCALE: HORIZ. NOT TO SCALE
VERT. VERT.

DATUM: HORIZ. VERT.

GRAPHIC SCALE

WWW.FOON0.COM

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Energy Alternatives, LLC

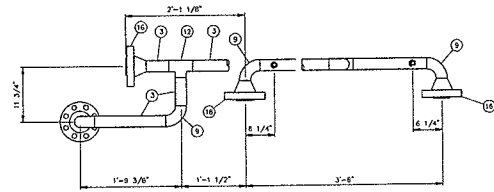
146 HARTFORD RD MANCHESTER, CT 06040 860.646.2469

GORHAM PAPER & TISSUE LLC.
INTERIOR PIPING SPOOLS - SHT 1
METERING & REGULATING STATION

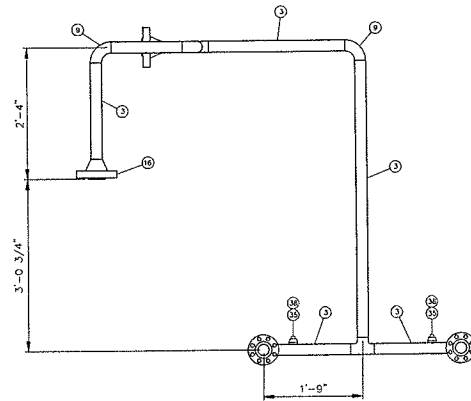
BERLIN NEW HAMPSHIRE

PROJ. No.	20101114.A1V
DATE	10/08/2010
DP-105	

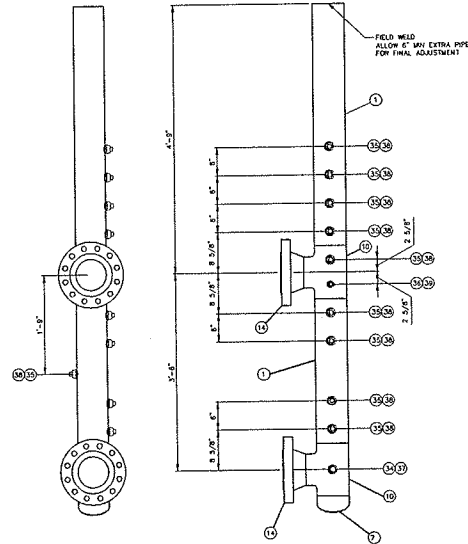
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 US VIEW
 LANK
 DATE



SPOOL 8 PLAN
SCALE: 1/4\"/>



SPOOL 8 ELEV
SCALE: 1/4\"/>



SPOOL 15 ELEV
SCALE: 1/4\"/>

SPOOL 15 PLAN
SCALE: 1/4\"/>

SEE DWG DP-101 FOR MATERIAL
CALLOUT BALLOONS

No.	DATE	DESCRIPTION	BY	DATE
1	12/27/2011	RECORD DRAWING	B.W.	
0	8/2/2011	FOR CONSTRUCTION	B.W.	
		DESCRIPTION	BY	DATE

PROJ. MANAGER	MAN	SEAL	SEAL
CHIEF DESIGNER	DATE		
REVIEWED BY:	DATE		

SCALE: HORIZ. NOT TO SCALE, VERT. DATUM, HORIZ. VERT. GRAPHIC SCALE

146 HARTFORD RD. MANCHESTER, CT 06040 860.645.2469

WWW.FORD0.COM

FUSS & O'NEILL
Energy Alternatives, LLC

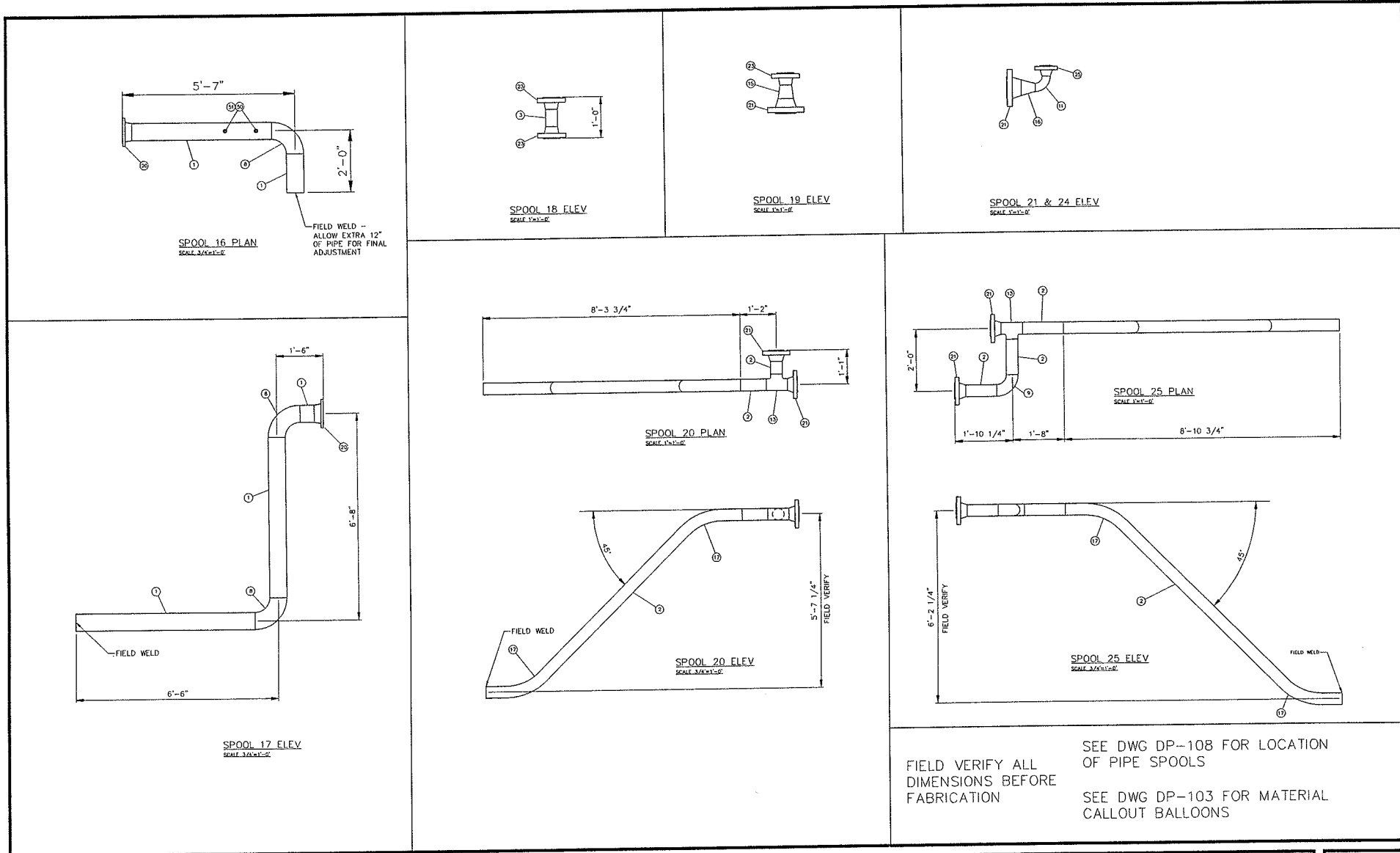
GORHAM PAPER & TISSUE LLC.
INTERIOR PIPING SPOOLS - SHT 2
METERING & REGULATING STATION

BERLIN NEW HAMPSHIRE

PROJ. NO. 20101118.A1.V.
DATE: 10/02/2011

DP-106

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SEE DWG DP-108 FOR LOCATION OF PIPE SPOOLS
 FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION
 SEE DWG DP-103 FOR MATERIAL CALLOUT BALLOONS

NO.	DATE	DESCRIPTION	BY	DATE
2	1/22/2012	RECORD DRAWING	BJW	
1	1/14/2012	FINAL DESIGN REVISIONS	BJW	
0	9/2/2011	FOR CONSTRUCTION	BJW	

PROJ. MANAGER	MAN	SEAL	SEAL
CHIEF DESIGNER	JWF		
REVIEWED BY	DATE		

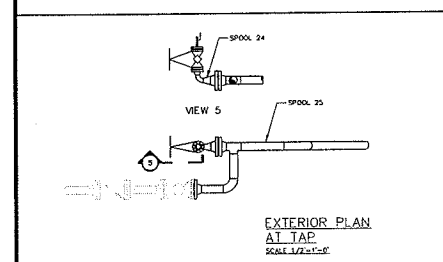
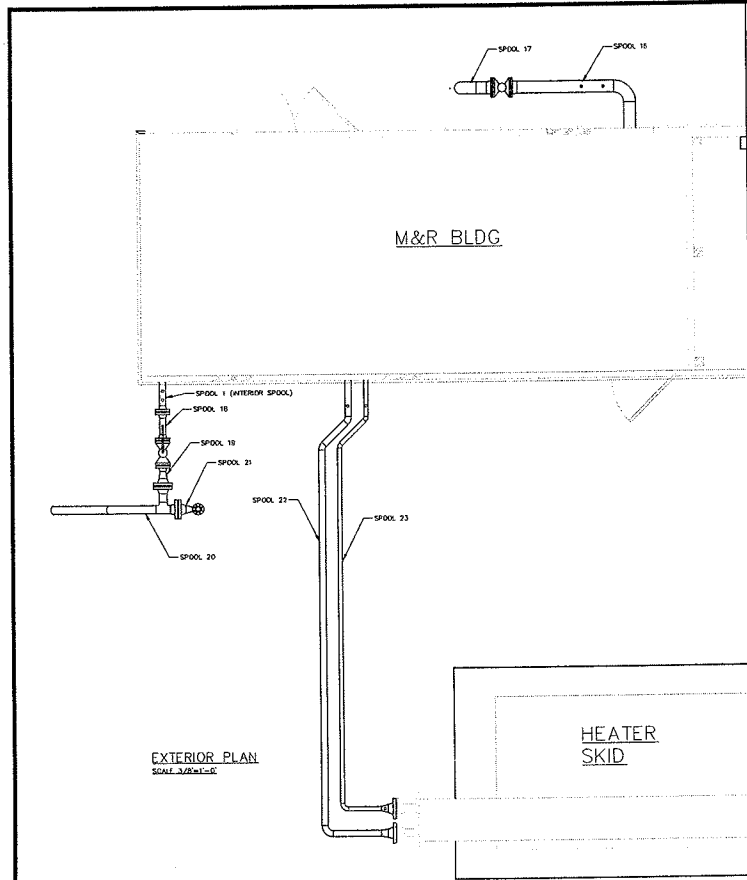
SCALE
HORIZ. AS NOTED
VERT.
DATUM
HORIZ.
VERT.
GRAPHIC SCALE

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FUSS & O'NEILL
 Energy Alternatives, LLC
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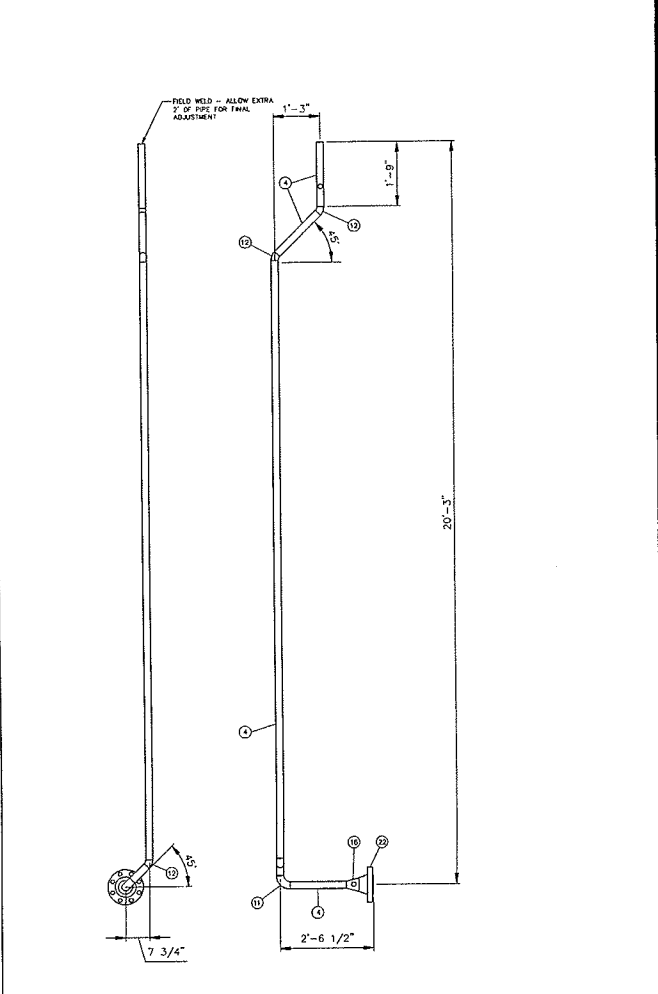
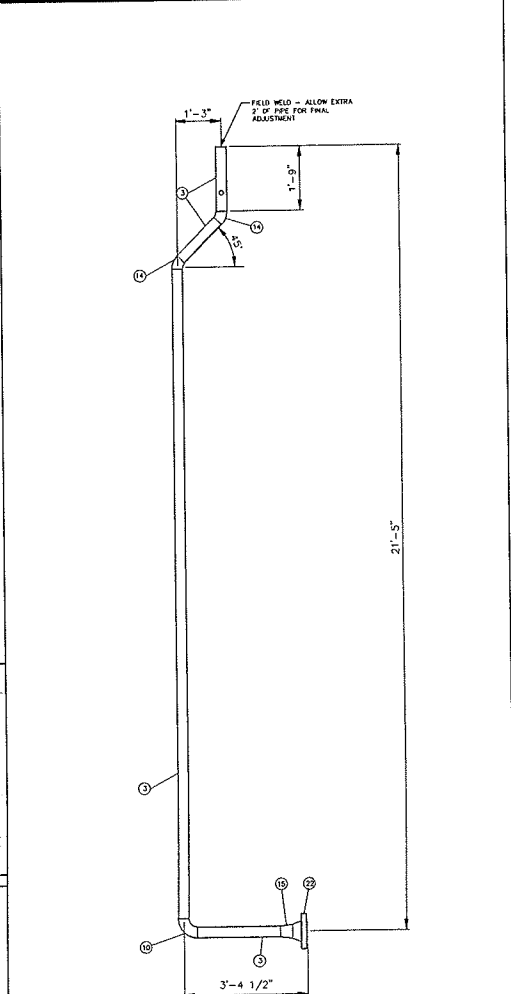
GORHAM PAPER & TISSUE LLC.
 EXTERIOR PIPING SPOOLS - SHT 1
 METERING & REGULATING STATION
 BERLIN NEW HAMPSHIRE

PROJ. No. 20101114A1V
 DATE 10/05/2010
DP-107

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 LVS. VIEW. DIM. CDE



FIELD VERIFY ALL
DIMENSIONS BEFORE
FABRICATION



SEE DWG DP-103 FOR MATERIAL
CALLOUT BALLOONS

No.	DATE	DESCRIPTION	BY

PROJ. MGR.	MAN.	SEAL	SEAL

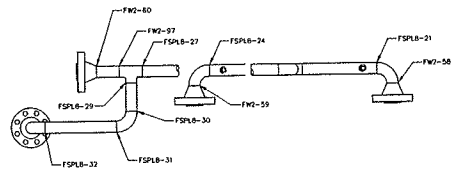
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FUSS & O'NEILL
 Energy Alternatives, LLC
 WWW.FANDO.COM
 146 HARTFORD RD MANCHESTER, CT 06040 860.646.2469

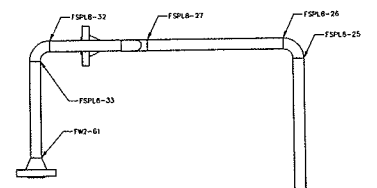
GORHAM PAPER & TISSUE LLC.
 EXTERIOR PIPING SPOOLS - SHT 2
 METERING & REGULATING STATION
 BERLIN NEW HAMPSHIRE

PROJ. No. 20101114.A1V
DATE 10/30/2010
DP-108

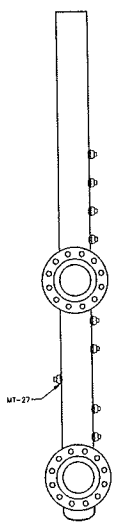
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 Title: DP-110



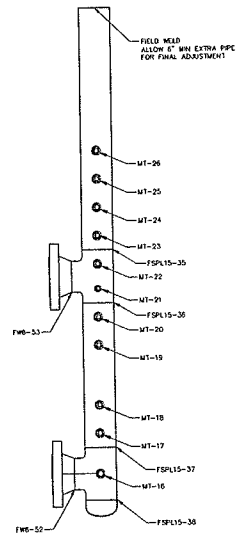
SPOOL 8 PLAN
SCALE: 1"x1'-0"



SPOOL 8 ELEV
SCALE: 1"x1'-0"



SPOOL 15 ELEV
SCALE: 1"x1'-0"



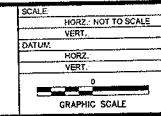
SPOOL 15 PLAN
SCALE: 1"x1'-0"

No.	DATE	DESCRIPTION	BY
1	11/22/12	RECORD DRAWING	B.W.
0	8/22/11	FOR CONSTRUCTION	B.W.

PROJ. MANAGER	MAN.
CHIEF DESIGNER	J.M.
REVIEWED BY	DATE

SEAL	SEAL

NOTE:
REFER TO CONTRACTOR'S
DOCUMENTATION FOR
WELD INFORMATION.

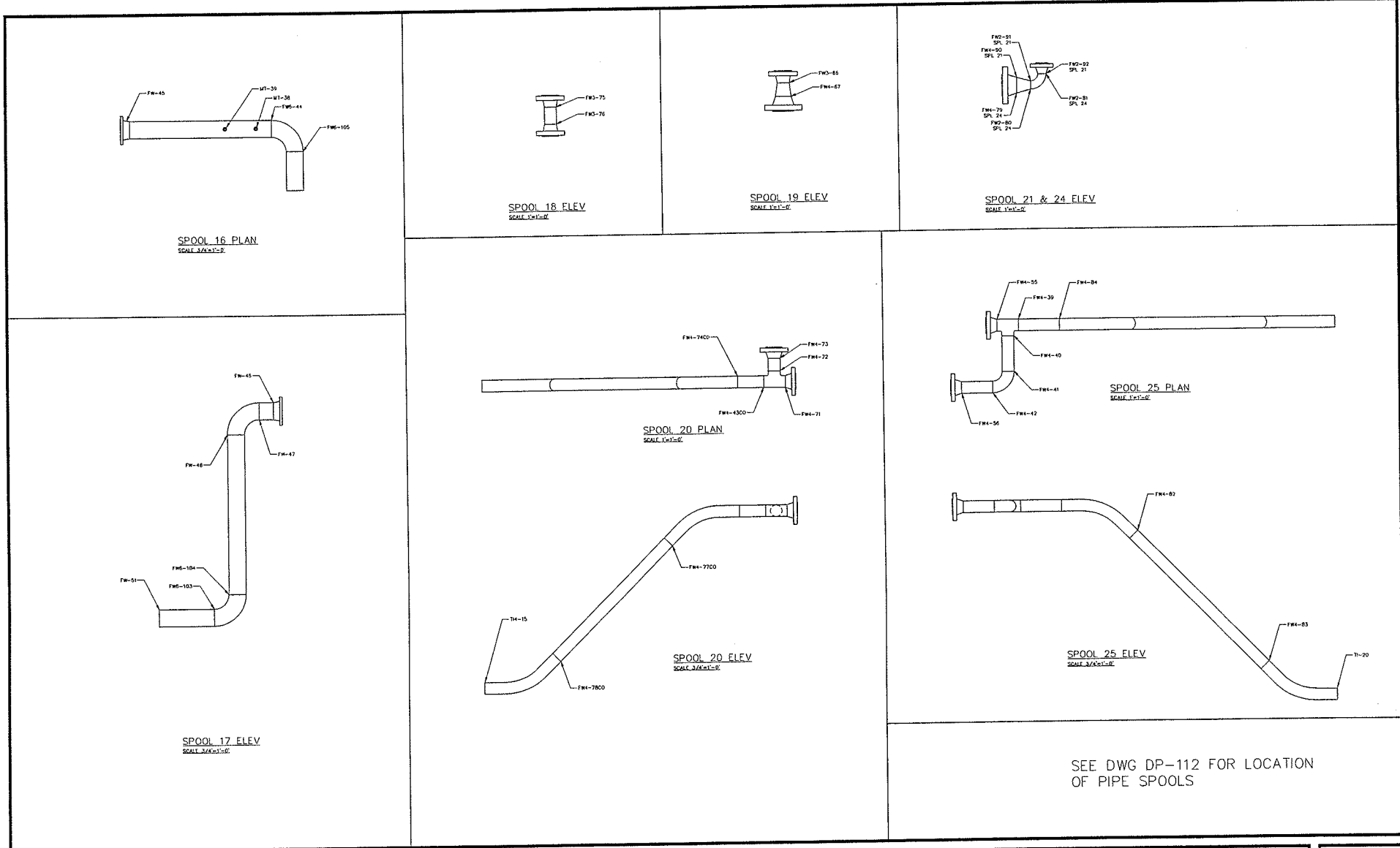



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WWW.FOND0.COM
 GORHAM PAPER & TISSUE LLC.
 INTERIOR PIPING WELDMAPS - SHT 2
 METERING & REGULATING STATION
 BERLIN NEW HAMPSHIRE

PROJ. No. 20101114.A1V
DATE 10/30/2010
DP-110

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NO.	DATE	REVISIONS	BY	DT
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1	9/14/2011	FINAL DESIGN REVISIONS FOR CONSTRUCTION	BJW	
0	9/2/2011	FOR CONSTRUCTION	BJW	
		DESCRIPTION	BT	

PROJ. MANAGER	MAY	SEAL
CHIEF DESIGNER	JWT	
REVIEWED BY		

NOTE:
REFER TO CONTRACTOR'S DOCUMENTATION FOR WELD INFORMATION.

SCALE	
HORIZ.	AS NOTED
VERT.	
DATUM	
HORIZ.	
VERT.	
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GRAPHIC SCALE	

FUSS & O'NEILL
Energy Alternatives, LLC

145 HARTFORD RD MANCHESTER, CT 06040 860.846.2469

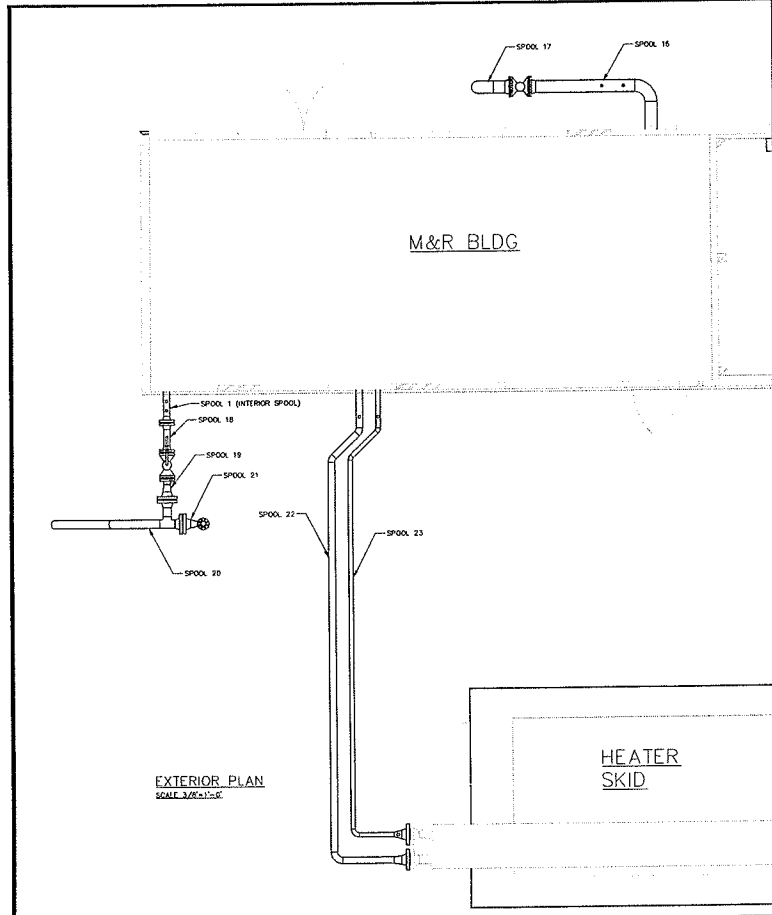
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EXTERIOR PIPING WELD MAPS - SHT 1
METERING & REGULATING STATION

BERLIN NEW HAMPSHIRE

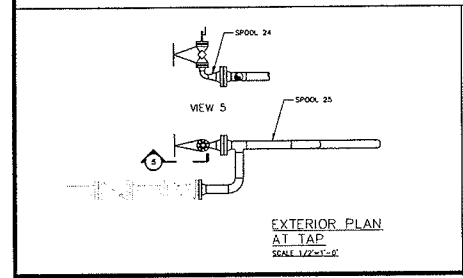
PROJ. NO.	DATE
20101114.A1V	10/06/2010

DP-111

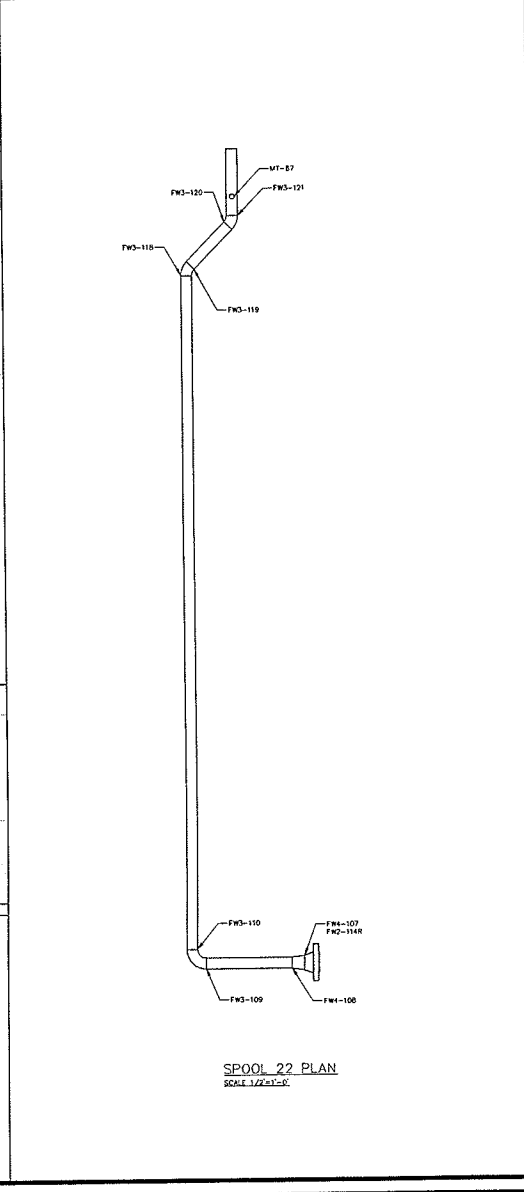
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 DATE
 LUNCH
 INS VIEW
 CSZ



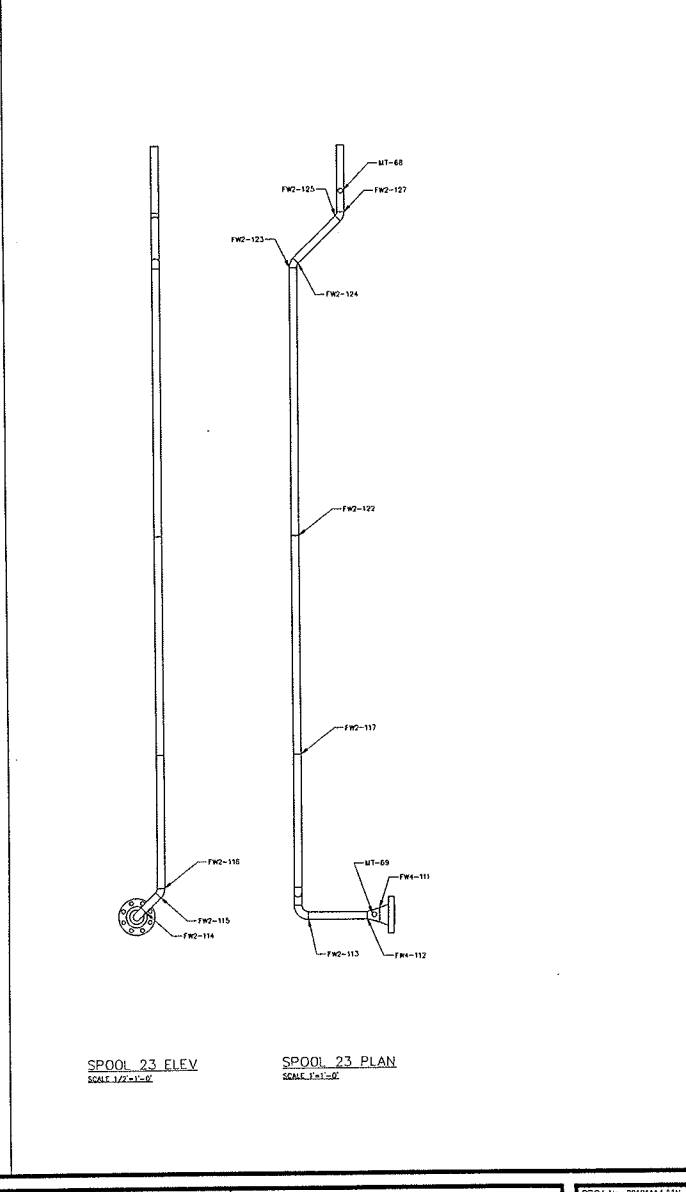
EXTERIOR PLAN
SCALE 3/8"=1'-0"



EXTERIOR PLAN
AT TAP
SCALE 1/2"=1'-0"



SPOOL 22 PLAN
SCALE 1/2"=1'-0"



SPOOL 23 ELEV
SCALE 1/2"=1'-0"

SPOOL 23 PLAN
SCALE 1/2"=1'-0"

No.	DATE	DESCRIPTION	BY
2	4/12/2012	RECORD DRAWING	B.W.
1	9/14/2011	FINAL DESIGN REVISIONS	B.W.
0	8/2/2011	FOR CONSTRUCTION	B.W.

PROJ. MANAGER	MAN.	SEAL	SEAL

NOTE:
REFER TO CONTRACTOR'S
DOCUMENTATION FOR
WELD INFORMATION.

SCALE
HORIZ. AS NOTED
VERT.
DATUM
HORIZ.
VERT.
0
GRAPHIC SCALE



FUSS & O'NEILL
Energy Alternatives, LLC

146 HARTFORD RD WANCHESTER, CT 06040 860.646.2469

GORHAM PAPER & TISSUE LLC.
EXTERIOR PIPING WELD MAPS - SHT 2
METERING & REGULATING STATION
BERLIN NEW HAMPSHIRE

PROJ. No. 20101144 ATV
DATE 10/09/2010
DP-112

NEW HAMPSHIRE DESIGN CODE

- ☑ 2009 International Building Code w/State Amendments
- ☑ 2009 International Mechanical Code w/State Amendments
- ☑ 2008 National Electrical Code w/State Amendments
- ☑ 2009 International Energy Conservation Code w/State Amendments

1. MANUFACTURER
 1.A. NAME:.....C.S.I./SHELTER TECHNOLOGIES
 1.B. ADDRESS:.....15 INDEPENDENCE DRIVE
 LONDONDERRY, NH 03063
- 1.C. ENGINEERING:
 CONTACT PERSON:.....JACLYN REED
 (603)216.0633
2. THIRD PARTY INSPECTION AGENCY
 2.A. NAME:.....T.R. ARNOLD & ASSOCIATES, INC.
 700 EAST BEARDSLY AVENUE
 ELKHART, IN 46515
 PHONE: (574)264.0745
 ROBERT TANGER
3. BUILDING INFORMATION
 3.A. PROJECT NAME:.....RH WHITE CONSTRUCTION
 MODEL IDENTIFICATION:.....MM432
 PROPOSED LOCATION:.....BERLIN, NH
 3.B. USE GROUP CLASSIFICATION:.....U/UNMANNED
 3.C. CONSTRUCTION CLASSIFICATION:.....IIB
 3.D. AREA OF BUILDING PER FLOOR:.....394 SQ. FT.
 3.E. HEIGHT TO BUILDING ABOVE GRADE:
 1. STORIES:.....1
 2. FEET:.....9'-10"
- 3.F. DESIGN LIVE LOADS:
 1. WALL:.....WIND HORIZONTAL (110 MPH)
 2. ROOF:.....(100 PSF)
 3. FLOORS:.....(100 PSF)
 4. SEISMIC:.....S_{MS} = 0.35
 S₁ = 0.088
 SEISMIC LOAD CATEGORY:....."C"
5. WIND LOADING:.....110 MPH (V3s)(EXP. D)
 6. FIRE SEPARATION DISTANCE:
 OVER 20' FROM ELEVATION A, AND OVER 10' FROM
 ELEVATION B, C, & D, FROM PROPERTY LINE OR
 MIDPOINT BETWEEN TWO BUILDINGS ON THE SAME
 PROPERTY.
4. DATA PLATE, TRA. & NEW HAMPSHIRE LABEL LOCATIONS:.....
 LOCATED ON THE ELECTRICAL PANEL.

LIST OF DRAWINGS	
SHEET NO.	DESCRIPTION
CS	COVER SHEET
DS1	DATA PLATE
A1	EXTERIOR ELEVATION
A2	FLOOR PLAN
BM	BILL OF MATERIALS
E1	ELECTRICAL ELEVATIONS
E2	ELECTRICAL DETAILS
FS1	FOUNDATION SURVECTION
S1	STRUCTURAL DETAILS (FOR IN-HOUSE DISTRIBUTION ONLY)
S2	STRUCTURAL DETAILS (FOR IN-HOUSE DISTRIBUTION ONLY)

ABBREVIATIONS	
ABBREVIATION	MEANING
AF	ABOVE FINISHED FLOOR
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
CAB	CABINET
CFC	CONTRACTOR FURNISHED EQUIPMENT
CKT	CIRCUIT
CL	CENTRELINE
COMP	COMPRESSION
COND	CONDUIT
CSI	CONCRETE SYSTEMS, INC.
Ø	DIAMETER
DISC	DISCONNECT
DP	DISTRIBUTION PANEL
DWG	DRAWING
EWT	ELECTRO-METALLIC TUBING
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
FRP	FIBERGLASS REINFORCED PLASTIC
HALV	HALVANIZED
GFCI	GROUND FAULT CIRCUIT INTERRUPT
RMC	GALVANIZED RIGID CONDUIT
GRND	GROUND
HVAC	HEAT VENTILATION AIR CONDITIONING
INSUL	INSULATION
JB	JUNCTION BOX
LAL	LIGHTNING ARRESTOR
LL	LEAD/LAG
MFG	ELECTRONIC MULTI-POINT GROUND
MTC	MANUAL TRANSFER SWITCH
NTS	NOT TO SCALE
PL	PLATE
PVC	POLYVINYL CHLORIDE TUBING
R.O.	ROUGH OPENING
SMK	SMOKE DETECTOR
SPG	SINGLE POINT GROUND
TRHR	HEAT RESISTANT THERMOPLASTIC
TRK	TRUCK
TRF	TYPICAL
UPS	UNINTERRUPTIBLE POWER SUPPLY
UPP	UNION PLASTIC, INC.
WIE	TRANSFORMER CONFIGURATION
W/T	WITH
WMI	TRANSFORMER

IMAGES AND DESIGNS REPRESENTED IN THESE DRAWINGS ARE THE INTERPRETATION OF CUSTOMER PLANS AND SPECS BY C.S.I. ENGINEERS AND DESIGNERS. IT IS THE RESPONSIBILITY OF THE CUSTOMER TO REVIEW AND APPROVE DRAWINGS. ALL DRAWINGS ARE THE SOLE PROPERTY OF C.S.I. AND ARE USED FOR THE CONSTRUCTION OF THE APPROVED SHELTER. ALL BUILDING AND DRAWING MODIFICATIONS ARE THE RESPONSIBILITY OF THE CUSTOMER TO APPROVE BY SIGNATURE. ALL STRUCTURES WILL BE BUILT TO APPROVED DRAWINGS.

CUSTOMER SIGNATURE: _____
 DATE: _____

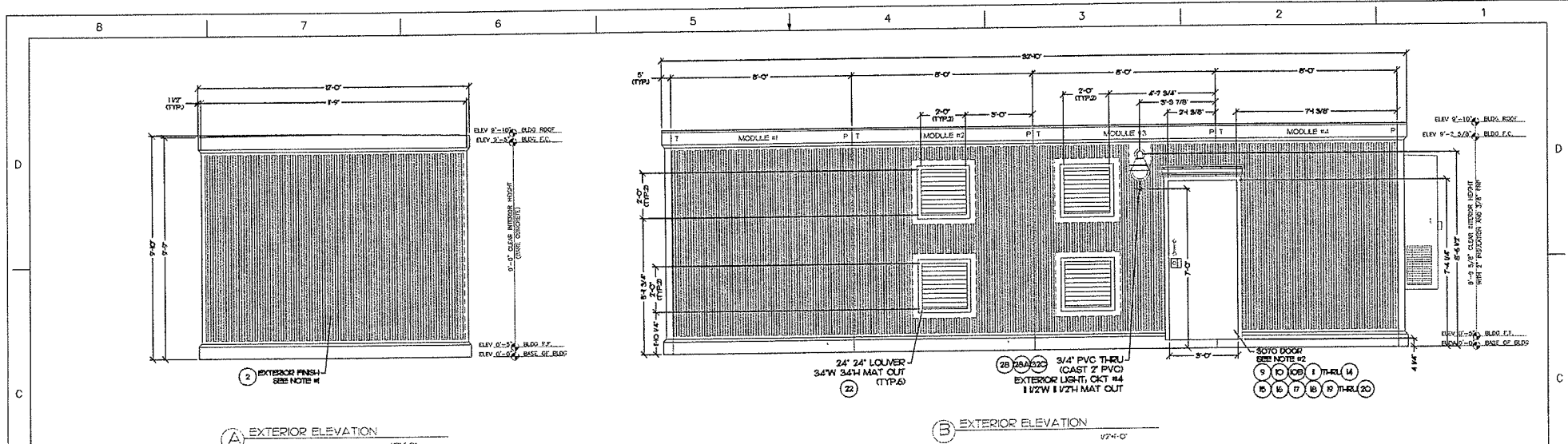
THIRD PARTY ENGINEER STAMP, IF APPLICABLE	ENGINEERING DEPT. MANAGER STAMP
--	------------------------------------

REV.	DATE	BY	DESCRIPTION
7	7.12.11	JPP	ADDED EXTERIA LIGHT NEXT TO DOUBLE DOOR PER SIGNED CHANGE ORDER FROM CUSTOMER
6	7.11.11	JPP	MOVED DOUBLE DOOR 7' TO TOWARD THE END LAR PER CUSTOMER EMAIL DATED 7-26-11
5	7.11.11	JPP	REVISED DRAWINGS PER EMAIL DATED 7.11.11

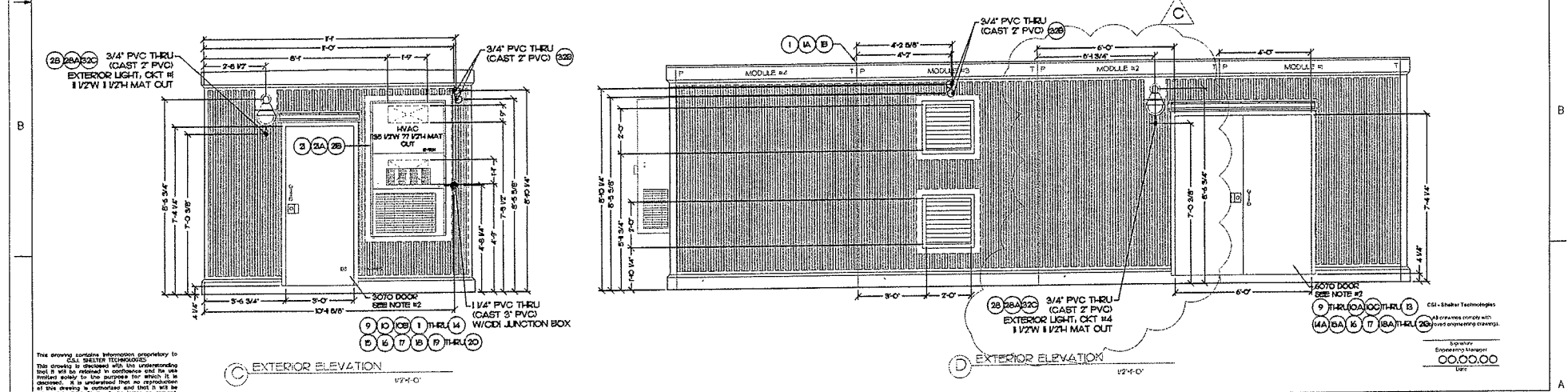


SPECIAL FEATURES	CLASS 1 DIVISION 1
HVAC	2-TON HVAC, 5KW HEAT
ELECTRICAL	200A, 120/240V, 1P, 3Ø PDS
FUNCTION	ENERGY METERING STATION
SHELTER WEIGHT SHELTER ONLY	MM432 70,000 LBS

RH WHITE CONSTRUCTION	
BERLIN, NH	
DRAWING NO.	COVER SHEET
PROJECT NO.	E6920
SHEET NO.	C
SHEET TOTAL	CS



- NOTES:
1. EXTERIOR WALLS SHALL BE PAINTED NATURAL SUEDE.
 2. DOORS SHALL BE PAINTED MC BEIGE.



This drawing contains information proprietary to CSI SHELTER TECHNOLOGIES. This drawing is provided with the understanding that it will be used to construct and the user agrees to indemnify and hold CSI SHELTER TECHNOLOGIES harmless from and against all claims, damages, losses and expenses, including reasonable attorneys' fees, that may be asserted against or incurred by CSI SHELTER TECHNOLOGIES in connection with the use of this drawing, in whole or in part, for any purpose other than that for which it was prepared, and that it will be returned to CSI SHELTER TECHNOLOGIES on demand.

10 SIZE SCALE: 1/2" = 1'-0" 9 SIZE SCALE: NTS			
SIGNATURE:		DATE:	
DESIGNED BY: JACLYN REED		6/21	
CHECKED BY:		DATE:	
APPROVED BY:		DATE:	
REVISIONS REV. DATE BCC BY DESCRIPTION			
A	7/1	JPR	REVISED DRAWINGS PER EMAIL DATED 7/1

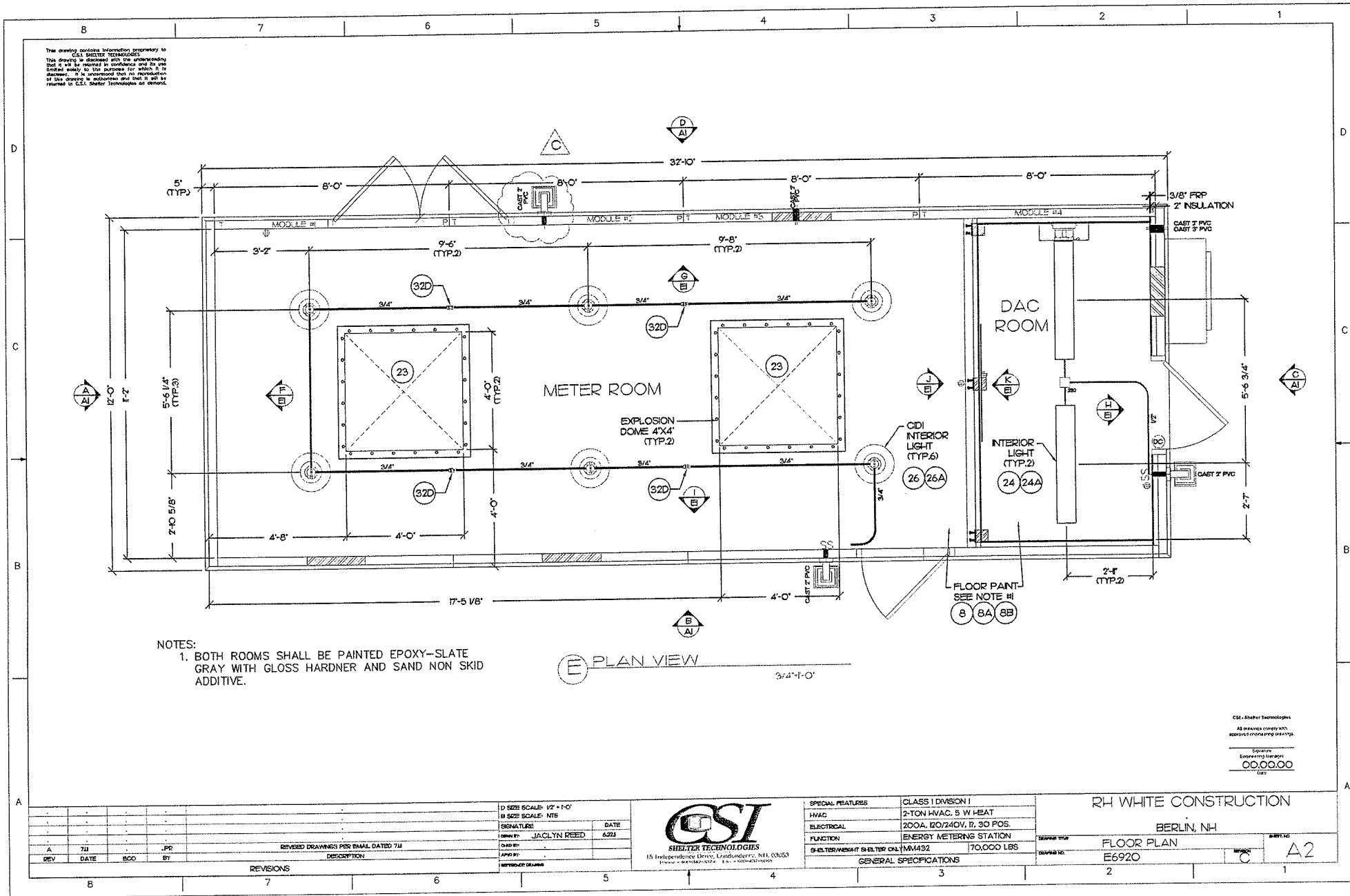


SPECIAL FEATURES:	CLASS I DIVISION I
HVAC:	2-TON HVAC, 5 W HEAT
ELECTRICAL:	200A, 120/240V, IT, 30 POS.
FUNCTION:	ENERGY METERS STATION
SHELTER WEIGHT:	170,000 LBS
GENERAL SPECIFICATIONS	

RH WHITE CONSTRUCTION	
BERLIN, NH	
DRAWING TITLE:	EXTERIOR ELEVATIONS
DRAWING NO.:	E6920
DATE:	6/21

8 7 6 5 4 3 2 1

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NOTES:
 1. BOTH ROOMS SHALL BE PAINTED EPOXY-SLATE GRAY WITH GLOSS HARDNER AND SAND NON SKID ADDITIVE.

E PLAN VIEW
 3/4"=1'-0"

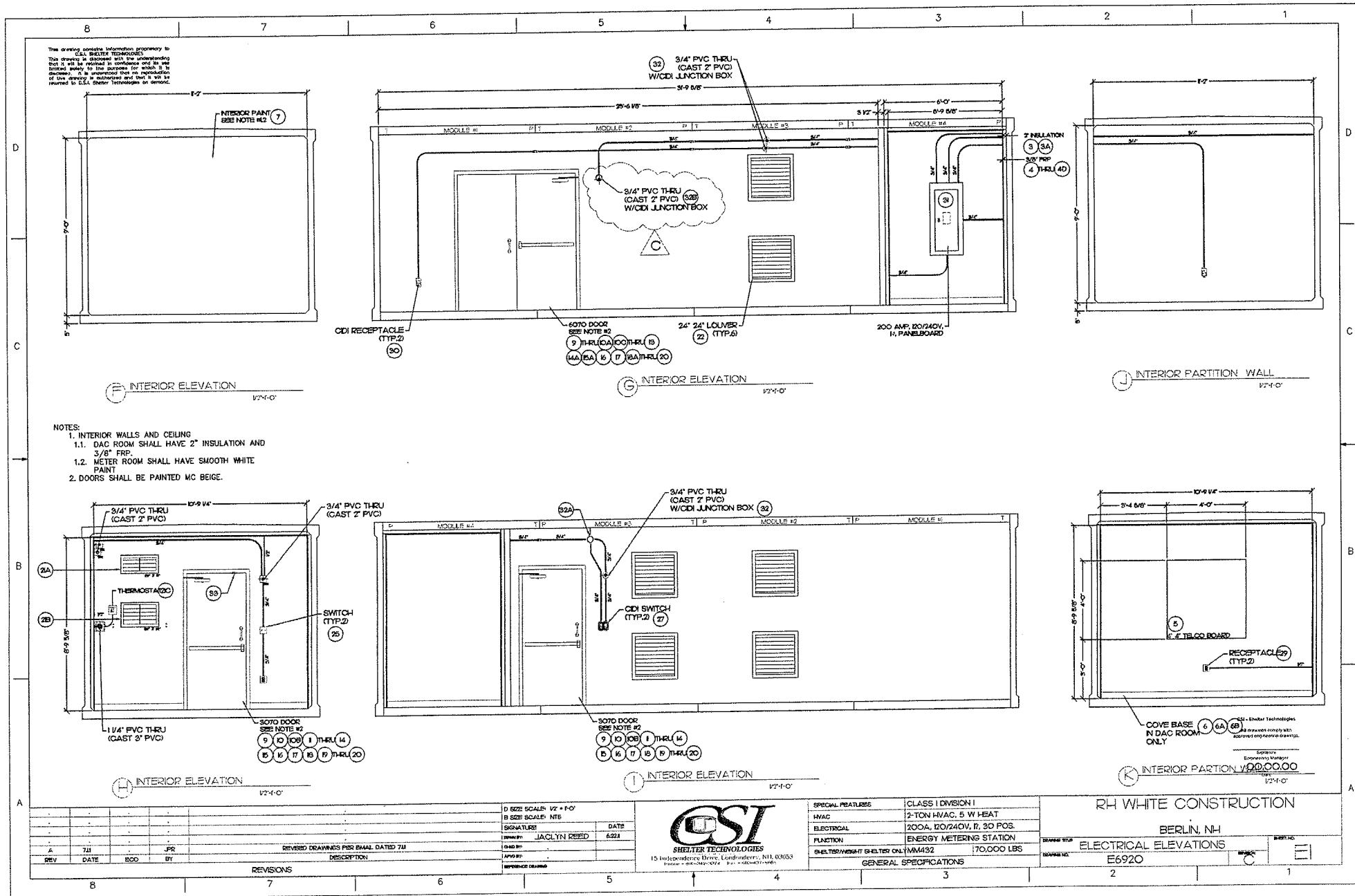
CSI - Shelter Technologies
 All drawings comply with approved engineering standards.
 Signature: [Signature]
 Engineering Standard: 00.00.00
 Date:

D SIZE SCALE: 1/2" = 1'-0"		DATE	
B SIZE SCALE: NTS		6/23	
SIGNATURE		DATE	
DESIGN BY: JACLYN REED		DATE: 6/23	
DRAWN BY:		DATE:	
CHECKED BY:		DATE:	
APPROVED BY:		DATE:	
REVISIONS			
REV	DATE	BY	DESCRIPTION
A	7/1	JPR	REVISED DRAWINGS PER EMAIL DATED 7/1



SPECIAL FEATURES	CLASS I DIVISION 1
HVAC	2-TON HVAC, 5 W HEAT
ELECTRICAL	200A, 120/240V, R, 3Ø POS.
FUNCTION	ENERGY METERING STATION
SHELTER WEIGHT @ ELT 15% ON	1MM432 70,000 LBS
GENERAL SPECIFICATIONS	

RH WHITE CONSTRUCTION
 BERLIN, NH
FLOOR PLAN
 E6920
 SHEET NO: A2



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- NOTES:
1. INTERIOR WALLS AND CEILING
 - 1.1. DAC ROOM SHALL HAVE 2" INSULATION AND 3/8" FRP.
 - 1.2. METER ROOM SHALL HAVE SMOOTH WHITE PAINT.
 2. DOORS SHALL BE PAINTED MC BEIGE.

REV	DATE	BY	DESCRIPTION
A	7/11	JR	REVISIONS PER EMAIL DATED 7/11
7	8/30	ECO	BY

D SIZE SCALE: 1/2" = 1'-0"
 B SIZE SCALE: NTS

DESIGNED BY: JACLYN REED DATE: 6/21

CSI SHELTER TECHNOLOGIES
 15 Independence Drive, Londonderry, NH 03053
 Phone: 603-434-5824 Fax: 603-434-1366

SPECIAL FEATURES	CLASS I DIVISION 1
HVAC	2-TON HVAC, 5 W HEAT
ELECTRICAL	200A, 120/240V, 1F, 3Ø POS.
FUNCTION	ENERGY METERING STATION
SHELTER WEIGHT (SHELTER ONLY)	170,000 LBS

RH WHITE CONSTRUCTION

BERLIN, NH

DRIVING STEP ELECTRICAL ELEVATIONS

E6920

The drawing contains information proprietary to CSI Shelter Technologies. This drawing is disclosed with the understanding that it will be retained in confidence and for use limited solely to the purposes for which it is prepared. It is understood that no reproduction of this drawing is authorized and that it will be returned to CSI Shelter Technologies on demand.

PANEL SCHEDULE									
200 AMP MCB					120 / 240 VOLTS 1PH 60HZ				
CKT #	DESCRIPTION	WIRE SIZE	AMP	AMP	WIRE SIZE	DESCRIPTION	CKT #		
1	EXTERIOR LIGHTING DAC RM	12	20	20	12	INTERIOR LIGHTING DAC RM	2		
3	RECEPT. DAC RM	12	20	20	12	EXTERIOR LIGHTING METER RM	4		
5						INTERIOR LIGHTING METER RM	6		
7	HVAC	10	30	20	12	RECEPT. METER RM	8		
9	SPARE	/	20	20	/	SPARE	10		
11	SPARE	/	20	20	/	SPARE	12		
13	SPARE	/	20	20	/	SPARE	14		
15	SPARE	/	/	/	/	SPARE	16		
17	SPARE	/	/	/	/	SPARE	18		
19	SPACE	/	/	/	/	SPACE	20		
21	SPACE	/	/	/	/	SPACE	22		
23	SPACE	/	/	/	/	SPACE	24		
25	SPACE	/	/	/	/	SPACE	26		
27	SPACE	/	/	/	/	SPACE	28		
29	SPACE	/	/	/	/	SPACE	30		

ELECTRICAL CALCULATIONS			
DEVICE	QUANT.	VA/EA	TOTAL
RECEPTACLES	4	180	720
INTERIOR LIGHTING	8	92	736
EXTERIOR LIGHTING	2	70	140
HVAC (HEAT)	1	5000	5000
MSC. ELEC LOAD	1	5000	5000
TOTAL CONNECTED			15,996
GROWTH FACTOR			125
TOTAL VA REQUIRED			14,495
14,495 VA / 240 V = 60 AMPS			
A 200 AMP 120/240 V, 1P, SERVICE IS REQUESTED.			
TOTAL VA / 12V = TOTAL AMPS			
# OF RECEPTACLES 180W EA = TOTAL VA			

ELECTRICAL NOTES	
1	CONDUIT SHALL BE SURFACE MOUNTED EMT
2	CONDUIT CONNECTORS SHALL BE COMPRESSION FITTINGS
3	CONDUCTORS SHALL BE STRANDED THHN
4	CONDUCTOR SIZES SHALL BE AS INDICATED ON THE PANEL SCHEDULE
5	SPICES FOR CONDUCTORS SHALL BE MADE WITH UL LISTED CONNECTORS
6	ELECTRICAL J-BOXES SHALL BE GALVANIZED STEEL
7	ELECTRICAL DEVICE BOXES SHALL BE GALVANIZED STEEL
8	THERMOSTATS SHALL BE MTD AS INDICATED ON THE DRAWING
9	RECEPTACLES SHALL BE MTD AS INDICATED ON THE DRAWING
10	SWITCHES SHALL BE MTD AT 4'0" TO CENTER ABOVE FINISHED FLOOR
11	ALL ALARM WIRING SHALL BE #8 SOLID BLUE

ELECTRICAL SYMBOLS KEY			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
EMT	ELECTRICAL METALLIC TUBING	S	SINGLE POLE SWITCH
⊕	100 VOLT QUAD RECEPTACLE	⊕	GROUND FAULT CIRCUIT INTERRUPT
⊠	JUNCTION BOX - 4" X 4" X 2 1/2"	⊠	JUNCTION BOX - 4 1/2" X 4 1/2" X 2 1/2"

CSI - Shelter Technologies
All drawings comply with approved engineering drawings.

Signature
Engineering Manager
00.00.00
12/22

D SIZE SCALE: 1/2" = 1'-0"			
B SIZE SCALE: NTS			
SIGNATURE		DATE	
DRAWN BY: JACLYN REED		6/22	
REVISIONS			
REV	DATE	BY	DESCRIPTION
A	7/1	JPR	REVERSE DRAWINGS PER ISMAIL DATED 7/1

CSI
SHELTER TECHNOLOGIES
15 Independence Drive, Londonderry, NH 03053
Phone: 603.883.2024 Fax: 603.883.2025

SPECIAL FEATURES	CLASS I DIVISION I
HVAC	2-TON HVAC, 5 W HEAT
ELECTRICAL	200A, 120/240V, 1P, 30 POS.
FUNCTION	ENERGY METERS STATION
SHELTER WEIGHT (SHELTER ONLY)	170,000 LBS
GENERAL SPECIFICATIONS	

RH WHITE CONSTRUCTION	
BERLIN, NH	
DRAWING TITLE	ELECTRICAL DETAILS
DRAWING NO.	E6920
REVISION	E2

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BILL OF MATERIALS

REF	CSI PART #	DISCRIPTION	REF	CSI PART #	DISCRIPTION
1	079-0002	ROOF MEMBRANE MILLE-IDE # 12' 50'	17	08-C025I	CLOSER
1A	079-0000	MILLE-IDE SEALFAST PRIMER	18	08-H653	DRP CAP- 42"
B	079-0005	CAULKING-DYMONC (TREMCO)	18A	08-H65I	DRP CAP- 76"
2	071-0001	PAINT-NATURAL SUEDE	19	08-C024	BLUE CONSTRUCTION CORE
3	003-0334	INSULATION 2 X 4' X 8'	19A	08-C022	CONTROL/CORE KEY
3A	003-0052	Z CHANNEL-2' X 10' PICES-25 GAUGE	19B	08-C023	MASTER KEY/CONSTRUCTION
4	003-066I	FRP 3/8" PLYWOOD-47X8'-030 CLASS C	19C	08-C024	CYLINDER-RM ARROW
4A	003-0662	FRP 3/8" PLYWOOD-47X9'-CLASS C	20	08-H720	HOOK-6" S KEEPER
4B	003-0652	FRP-INSIDE CORNER- 3/8" X 8"-V43	21	157-020	AVC 2-TON, PH, 5 W HEAT
4C	003-065I	FRP-OUTSIDE CORNER- 3/8" X 10"-V23	21A	157-0509	AVP 24 SUPPLY GRILLE - 20" 8"
4D	003-0654	FRP-DIVISION BAR-3/8" X 10"-V09	22	157-050	AVP 24 RETURN GRILLE - 20" 12"
5	003-0456	PLYWOOD 3/4' X 4' X8' BC	22C	157-0200	DIGITAL THERMOSTAT
6	093-0003	COVE BASE-WHITE 4'	22	158-C023I	VENTI/AJUSTO - 24"W 24"H
6A	093-0004	OUTSIDE CORNERS - COVE BASE-WHITE 4'	23	077-000I	EXPLOSION DOME 4'X4'
6B	093-0006	COVE BASE TAYLOR ADHESIVE	24		WRAP LIGHT - 2 BULB FLUORESCENT T8
7	093-0126	PAINT-SMOOTH WHITE	24A	163-C023	LAMP - STANDARD - T8
8	071-0208	EPOXY-SLATE GRAY	25	163-K009	SWITCH-SINGLE-BRN TOGGLE
8A	071-0209	GLOSS HARDNER	26	163-46I	INTERIOR FIXTURE CDI 200-300 WATT
8B	093-0126	SAND - NON SKD ADDITIVE	26A	163-0716	BULB - 200W/130V
9	071-0055	PANT-HC BEIGE-INDUSTRIAL ENAMEL	27	163-K060	SWITCH CDI SINGLE PULL
10	081-0650	DOOR - IC3070 RIGHT HAND DOOR IS GA	28	163-46I	EXTERIOR LIGHT FIXTURE 150W-INCANDESCENT
10A	081-065I	DOOR - IC3070 W/FLUSH BOLTS & ASTRACAL IS GA	28A	163-0742	BULB 150W A-2I
10B	081-0007	FRAME A3070RH 3' W 166A	29	163-4623	RECEPTACLE-DUPLEX-BROWN
10C	081-0033	FRAME D6070 3' 43	30	163-106	RECEPTACLE-CDI
11	081-0800	HINGS-STANDARD 4 1/2 X 4 1/2	31		200A 120/240V, 1 PHASE, COMPLETE PANEL
12	081-0400	WEATHERSTRIP 72" X 64"	32	163-1008	APPLETON - JUNCTION BOX 3/4" MALLEABLE IRON
13	081-0357	SWEEP 36"	32A	163-1013	APPLETON - JUNCTION BOX 3/4" MALLEABLE IRON
14	081-0372	THRESHOLD 36"	32B	163-1019	APPLETON - JUNCTION BOX 3/4" MALLEABLE IRON
14A	081-0377	THRESHOLD 72"	32C	163-1010	APPLETON - SEAL FITTINGS 3/4" MALLEABLE IRON
15	081-0853	PANC DEVICE-SINGLE- NO CYL	32D	163-1049	APPLETON - UNION EXPAN 3/4" MALLEABLE IRON
15A	081-0852	PANC DEVICE- DOUBLE - NO CYL	33	163-2702	DOOR CONTACT - INTRUSION ALARM
16		DOOR PULL			

CSI - Shelter Technologies
 All drawings comply with
 accepted engineering standards.
 SYSTEM
 Construction Manager
 00.00.00
 DATE

D SIZE SCALE: 1/2" = 1'-0"		DATE	
R SIZE SCALE: NTS		6/22/11	
SIGNATURE		DATE	
DRAWN BY: JACLYN REED		6/22/11	
CHECKED BY:		DATE:	
APPROVED BY:		DATE:	
REVISIONS		DESCRIPTION	
REV	DATE	BY	DESCRIPTION
A	7/11	JFR	REVISED DRAWINGS PER EMAIL DATED 7/11



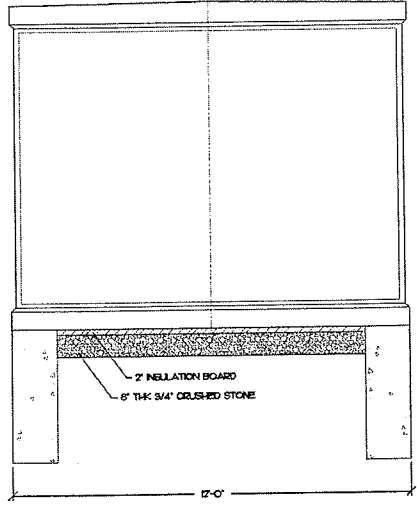
SPECIAL FEATURES	CLASS I DIVISION I
HVAC	2-TON HVAC, 5 W HEAT
ELECTRICAL	200A, 120/240V, R, 30 POS.
FUNCTION	ENERGY METERING STATION
3-ELT/5W/58T/3-ELT/5W/58T/3-ELT/5W/58T	170,000 LBS
GENERAL SPECIFICATIONS	

RH WHITE CONSTRUCTION	
BERLIN, NH	
DATE: 6/22/11	DATE: 6/22/11
PROJECT: BILL OF MATERIALS	PROJECT: BILL OF MATERIALS
DATE: 6/22/11	DATE: 6/22/11
PROJECT: E6920	PROJECT: E6920
DATE: 6/22/11	DATE: 6/22/11

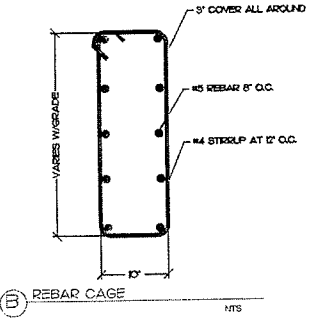
BM

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THESE FOUNDATION DRAWINGS ARE MERELY SUGGESTIONS. CSI ASSUMES NO RESPONSIBILITY FOR THE FOUNDATION OF THE BUILDING. LOCAL CODE SHOULD BE FOLLOWED IN CREATING THE FOUNDATION FOR THE BUILDING.

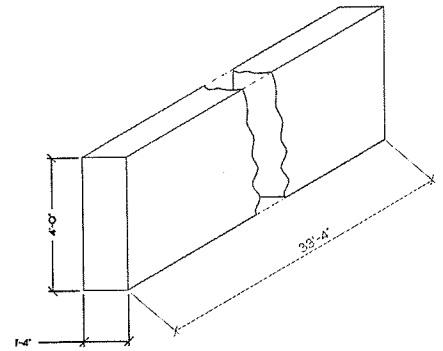


(A) GRADE BEAM ELEVATION NTS

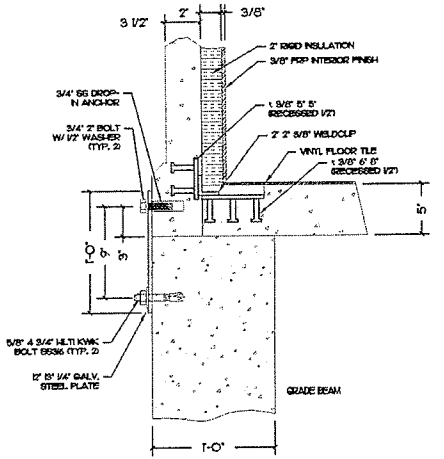


(B) REBAR CAGE NTS

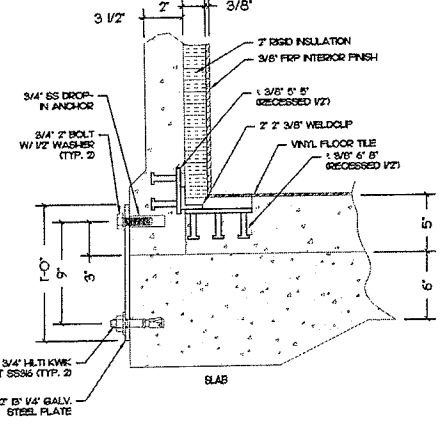
NOTES:
1. 3000 PSI SOIL BEARING CAPACITY ASSUMED.
2. ALL DIMENSIONS NOMINAL.



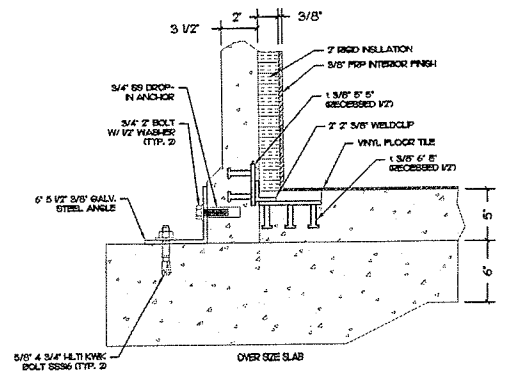
(C) GRADE BEAM ISO NTS



(D) FLOOR TO FOUNDATION CONNECTION NTS



(E) FLOOR TO SLAB CONNECTION NTS



(F) FLOOR TO OVER SIZE SLAB NTS

REVISIONS		DESCRIPTION
A	7/11	JPR
REV	DATE	BY
REVISED DRAWINGS PER EMAIL DATED 7/11		

D SIZE SCALE: 1/2" = 1'-0"
B SIZE SCALE: NTS
SIGNATURE: _____ DATE: 6/21
DRAWN BY: JACLYN REED
CHECK BY: _____
PROJECT NUMBER: _____
PROJECT NAME: _____

SPECIAL FEATURES		CLASS I DIVISION 1
HVAC	2-TON HVAC, 5 W HEAT	
ELECTRICAL	200A, 20/240V, R, 30 POS.	
FUNCTION	ENERGY METERING STATION	
SHELTER WEIGHT	SH-ELTBR-DL1-M4432	170,000 LBS
GENERAL SPECIFICATIONS		

RH-WHITE CONSTRUCTION
BERLIN, NH
FOUNDATION SUGGESTIONS
E6920
CSI

GENERAL NOTES:

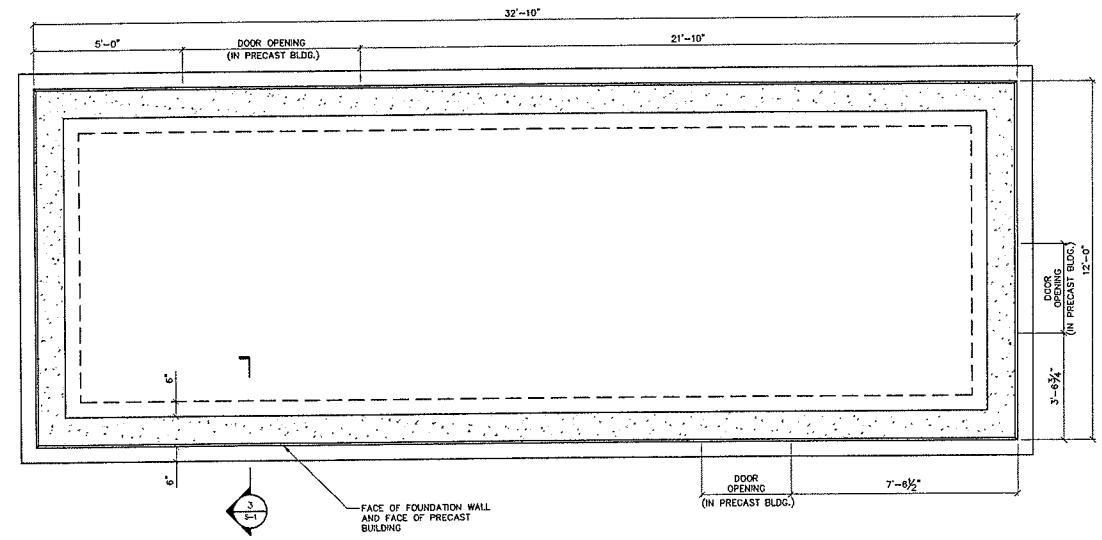
1. THE WORK SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED IN ACCORDANCE WITH THE STRUCTURAL REQUIREMENTS FOR THE 2009 NEW HAMPSHIRE INTERNATIONAL BUILDING CODE AS AMENDED, ALTERED OR DELETED BY THE ADDITIONAL PROVISIONS IN THE NEW HAMPSHIRE SUPPLEMENT.
2. N/A
3. ALL STRUCTURAL WORK SHOWN OR SPECIFIED ON THESE DRAWINGS IS SUBJECT TO REVIEW BY THE STRUCTURAL ENGINEER OF RECORD. ASPECTS OF THE WORK FOUND NOT IN CONFORMANCE WITH THE STRUCTURAL DOCUMENTS SHALL BE CORRECTED AS DIRECTED BY THE ENGINEER.
4. DIMENSIONS OF EXISTING STRUCTURES SHOWN ON THESE PLANS HAVE BEEN TAKEN FROM THE ORIGINAL DESIGN DRAWINGS AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS IN THE FIELD.
5. THE TERM "BEYOND" USED IN SECTION VIEWS OF STRUCTURAL ELEMENTS INDICATES THAT SAID ELEMENT IS NOT IN THE LINE OF THE SECTION CUT; HOWEVER, IT PROVIDES A GREATER UNDERSTANDING OF THE STRUCTURE.
6. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF REINFORCING STEEL, METAL FLOOR AND ROOF DECK AND STRUCTURAL STEEL FOR REVIEW BEFORE PROCEEDING WITH WORK. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND ACCEPT FULL RESPONSIBILITY FOR DIMENSIONAL CORRECTNESS. SHOP DRAWINGS SHALL BEAR THE REVIEW AND APPROVAL STAMP OF THE CONTRACTOR, IN ACCORDANCE WITH THE GENERAL CONDITIONS.
7. STRUCTURAL PLANS SHALL NOT BE REPRODUCED IN WHOLE OR IN PART FOR USE AS SHOP DRAWINGS OR ERECTION PLANS. (THERE WILL BE NO RELAXATION OF THIS RESTRICTION FOR ANY TRADE.)
8. FOR TYPES OF FINISHES ON FLOORS AND ROOFS SEE ARCHITECTURAL DRAWINGS. DEPRESS OR SLOPE SLABS-ON-GRADE AS REQUIRED BY ARCHITECTURAL DRAWINGS.

FOUNDATION NOTES:

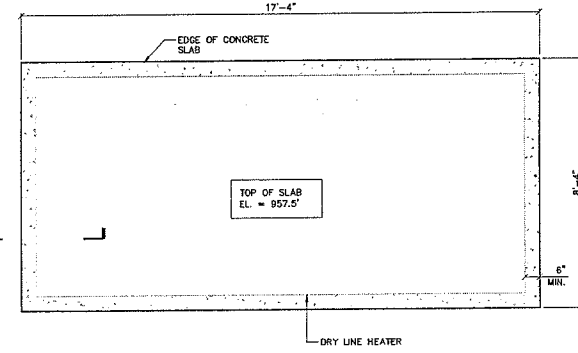
1. ALL EARTHWORK FOR BUILDING FOUNDATIONS SHOWN ON CONTRACT DOCUMENTS SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS NOTED IN THE GEOTECHNICAL ENGINEERING REPORT DATED DECEMBER 12, 2010, CMA ENGINEERS, INC.
2. THE FOUNDATIONS HAVE BEEN DESIGNED TO REST ON INORGANIC, UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL PLACED ON INORGANIC, UNDISTURBED SOIL HAVING A PRESUMPTIVE LOAD BEARING VALUE OF 4,000 PSF EXPECTED TO BE FOUND AT THE SPECIFIED BOTTOM OF FOOTING ELEVATION.
3. THE BOTTOM OF EXTERIOR FOOTINGS NOT ON SOLID ROCK SHALL BE AT LEAST 4'-0" BELOW FINISHED GRADE. FOOTINGS ON LEDGE SHALL REST ON BROOM CLEAN SOLID ROCK. IF SLOPE OF ROCK SURFACE EXCEEDS 1 ON 6, FOOTING SHALL BE DOWELED TO LEDGE.
4. THE SLAB-ON-GRADE BASE COURSE SHALL CONSIST OF A 12" MINIMUM THICKNESS OF COMPACTED STRUCTURAL FILL UNLESS OTHERWISE NOTED.
5. BACKFILL FOR ALL BUILDING FOUNDATION WALLS SHALL BE RAISED SIMULTANEOUSLY ON THE INSIDE AND OUTSIDE OF THE WALL TO PROPOSED GRADES.
6. ALL FILL AND BACKFILL FOR FOOTINGS, SLABS, AND WALLS SHALL BE STRUCTURAL FILL, CONFORMING TO THE SPECIFICATIONS, WITH THE EXCEPTION OF BACKFILL AGAINST EXTERIOR SIDE OF FROST WALLS WHERE SUITABLE FILL MAY BE USED.
7. SIZES AND LOCATIONS OF ALL REQUIRED SLAB PENETRATIONS FOR ALL TRADES SUCH AS PIPING SLEEVES SHALL BE COORDINATED BY THE CONTRACTOR WITH OTHER TRADES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING, OPERATING AND MAINTAINING ALL EQUIPMENT NECESSARY TO DEWATER SITE EXCAVATIONS.
9. ALL BEARING MATERIAL SHALL BE INSPECTED BY A QUALIFIED TECHNICIAN PRIOR TO CONCRETE PLACEMENT. A QUALIFIED TECHNICIAN SHALL BE THE SOLE JUDGE AS TO THE SUITABILITY OF THE BEARING MATERIAL. FOOTING ELEVATIONS SHALL BE ADJUSTED AS REQUIRED.

CONCRETE NOTES:

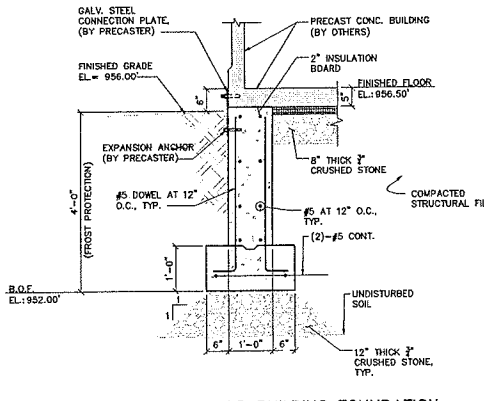
1. ALL CONCRETE WORK SHALL CONFORM TO ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
2. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60 AND BE DETAILED IN ACCORDANCE WITH ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
3. REBARS SHALL HAVE A MINIMUM CONCRETE COVER AS FOLLOWS:
CONCRETE DEPOSITED AGAINST GROUND: 3 IN.
CONCRETE EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: FOR BARS #5 AND LARGER: 2 IN.
FOR BARS SMALLER THAN #5: 1 1/2 IN.
CONCRETE NOT EXPOSED TO THE WEATHER OR THE GROUND: SLABS AND WALLS: 3/4 IN.
4. ALL REINFORCING BARS SHALL BE CONTINUOUS AND LAPPED A MINIMUM OF 48 BAR DIAMETERS AT ALL SPLICES, CORNERS, AND INTERSECTIONS UNLESS NOTED OTHERWISE.
5. ALL REINFORCEMENT SHALL BE SECURELY TIED IN ITS PROPOSED LOCATION PRIOR TO AND DURING PLACEMENT OF CONCRETE USING APPROVED CHAIRS, SPACERS AND TIE WIRE AS REQUIRED. NO BARS SHALL BE CUT OR OMITTED IN THE FIELD WITHOUT THE APPROVAL OF THE ENGINEER.
6. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185, WITH A MINIMUM YIELD STRENGTH OF 75 KSI. LAP EDGES AND ENDS OF FABRIC SHEETS A MINIMUM OF ONE MESH SPACING PLUS 2 INCHES, AND WIRE TOGETHER ALTERNATIVELY. SLABS-ON-GRADE MAY BE REINFORCED WITH FIBER REINFORCEMENT, SUCH AS FIBERMESH, APPLIED AT A DOSAGE RATE OF NO LESS THAN 1.5 LBS/CU YD.
7. CONCRETE PROTECTION FOR REINFORCEMENT SHALL IN ALL CASES BE AT LEAST EQUAL TO THE DIAMETER OF THE BAR EXCEPT FOR CONCRETE SLABS.
8. CONCRETE FOR FLOOR SLABS SHALL BE NORMAL WEIGHT CONCRETE AND SHALL DEVELOP A COMPRESSIVE STRENGTH OF 4,000 PSI IN 28 DAYS. CONCRETE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 3/4 INCH, A MINIMUM CEMENT CONTENT OF 560 LBS/CU YD., AND A MAXIMUM SLUMP OF 4 INCHES.
9. CONCRETE FOR FOOTINGS SHALL BE NORMAL WEIGHT CONCRETE AND SHALL DEVELOP A COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS, UNLESS OTHERWISE NOTED. CONCRETE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 3/4 INCH, A MINIMUM CEMENT CONTENT OF 560 LBS/CU YD., AND A MAXIMUM SLUMP OF 4 INCHES.
10. ALL FOOTINGS AND PIERS SHALL BE CENTERED BELOW THE MEMBERS WHICH THEY SUPPORT UNLESS SHOWN OTHERWISE.
11. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4 INCH CHAMFER UNLESS NOTED OTHERWISE.
12. ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE AIR-ENTRAINED.
13. SIZES AND LOCATIONS OF ALL REQUIRED EMBEDDED ITEMS FOR ALL TRADES SUCH AS ANCHOR BOLTS, PIPING SLEEVES, HOLDING ANCHORS, ETC., SHALL BE COORDINATED BY THE CONTRACTOR WITH OTHER TRADES.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LIMITING POURS TO MINIMIZE SHRINKAGE CRACKING. IN GENERAL, WALLS SHALL NOT BE Poured IN CONTINUOUS LENGTHS EXCEEDING 30 FEET WITHOUT CONTRACTION (CONTROL) JOINTS. THE LOCATION AND CONFIGURATION OF JOINTS EXPOSED TO VIEW SHALL BE COORDINATED WITH THE ARCHITECT. CONTRACTION JOINTS IN SLAB-ON-GRADE SHOULD NOT EXCEED 30 FEET IN ANY DIRECTION. TYPICAL CONTRACTION JOINT PATTERNS ARE INDICATED ON FOUNDATION PLANS.
15. IN FRAMED FLOOR SLABS, CONSTRUCTION JOINTS SHALL BE LOCATED AT POINTS OF MINIMUM SHEAR, GENERALLY AT MID-SPAN. PROPOSED LOCATION OF CONSTRUCTION JOINTS IN FRAMED SLAB CONSTRUCTION SHALL BE SUBMITTED FOR THE ENGINEER'S APPROVAL.



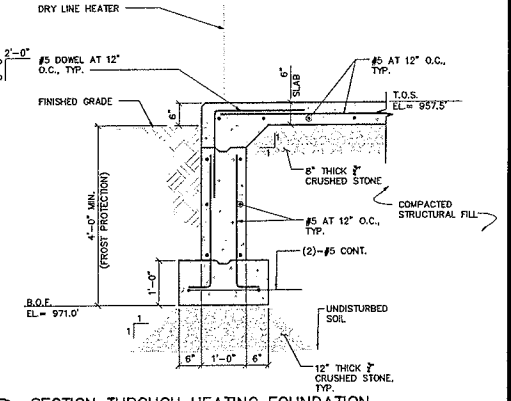
1 M&R BUILDING FOUNDATION PLAN
SCALE: 1/2" = 1'-0"



2 HEATER FOUNDATION PLAN
SCALE: 1/2" = 1'-0"



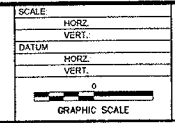
3 SECTION THROUGH M&R BUILDING FOUNDATION
SCALE: 3/4" = 1'-0"



4 SECTION THROUGH HEATING FOUNDATION
SCALE: 3/4" = 1'-0"

NO.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1	12/27/2011	RECORD DRAWING	B.M.	M.H.
2	1/2/2011	FOR CONSTRUCTION	B.M.	M.H.

SEAL SEAL

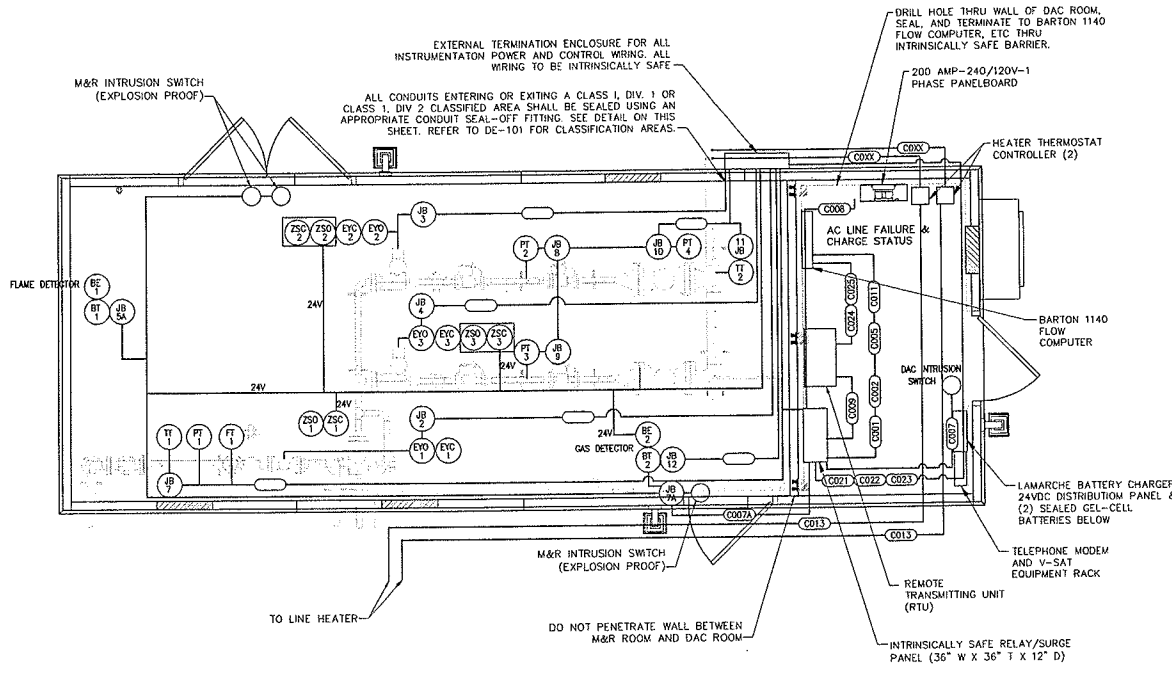


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GORHAM PAPER & TISSUE LLC.
GENERAL NOTES, FOUNDATION PLANS & SECTIONS
METERING & REGULATING STATION
BERLIN NEW HAMPSHIRE

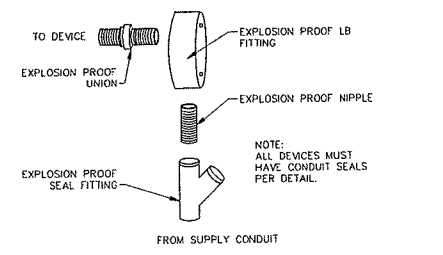
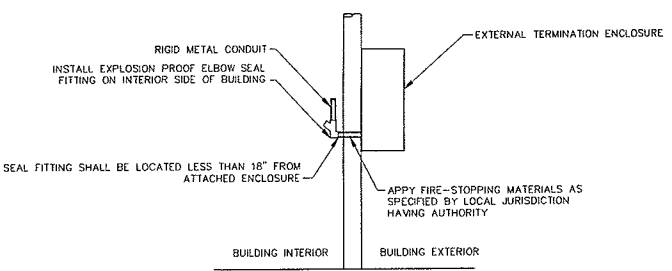
PROJ. No. 2010114.ATV
DATE AUGUST 17, 2011

DS-101



ELECTRICAL NOTES:

1. METERING AND REGULATION STATION TO BE GROUNDED PER TRANSCANADA STANDARD DETAIL DRAWINGS TYP--METR-0004 THRU TYP--METR-0006 AND GROUNDING PLAN.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO ELIMINATE ANY INTERFERENCE WITH PIPES, DUCTS, ETC.
3. ALL WIRE SHALL BE COPPER UNLESS OTHERWISE INDICATED.
4. MINIMUM WIRE SIZE SHALL BE #12 AWG UNLESS OTHERWISE NOTED. MINIMUM CONTROL WIRE SIZE SHALL BE #16 AWG UNLESS OTHERWISE NOTED.
5. ALL WIRE SHALL BE 600V INSULATED TYPES THWN OR XHHW, 75°C, UNLESS OTHERWISE INDICATED.
6. EQUIPMENT GROUND CONDUCTOR TO BE IN CONDUIT WITH LIVE CONDUCTORS.
7. ALL GROUNDING CONDUCTORS TO BE CONTINUOUS TO MAIN GROUNDING CONDUCTOR.
8. ALL LOCATIONS SHOWN ARE APPROXIMATE ONLY. ELECTRICAL CONTRACTOR TO VERIFY FIELD CONDITIONS FOR OPTIMUM ROUTING OF CONDUITS.
9. STAINLESS STEEL SLEEVES SHALL BE USED WHERE A CONDUIT PASSES THRU A CONCRETE FLOOR OR FIRE RATED WALL. WHERE SUBJECTED TO TRUCK TRAFFIC OR OTHER MECHANICAL HAZARDS THE CONDUIT SHALL BE PROTECTED BY A GALVANIZED HEAVY WALL STEEL CONDUIT SLEEVE OR OTHER SUITABLE MEANS. WHERE A STAINLESS STEEL SLEEVE IS USED TO PENETRATE A CONCRETE FLOOR OR MASONARY WALL, THE FIRE RATING OF THE FLOOR OR WALL SHALL BE MAINTAINED BY SEALING BETWEEN THE SLEEVE AND CONDUIT WITH T & B FIRESTOPS OR EQUAL.
10. THE CONTRACTOR SHALL OBTAIN AND BEAR THE COST OF ALL PERMITS REQUIRED TO PERFORM THE WORK.
11. ELECTRICAL CONTRACTOR TO SUPPLY WIRE, CONDUIT, HANGERS, FITTINGS, CONNECTORS, AND ALL MISCELLANEOUS ITEMS COMPRISING A COMPLETE AND OPERATING SYSTEM WHETHER DEPICTED ON THE PLANS OR NOT.
12. PRESSURE TRANSMITTERS, TEMPERATURE TRANSMITTERS, ROTARY METERING WIRES, ETC. TO BE PULLED THROUGH CONDUIT ON OUTSIDE OF BUILDING. AN EXPLOSION-PROOF SEAL FITTING SHALL BE USED AS SHOWN ON DETAIL SHOWN ON THIS DRAWING.
13. MOUNT JUNCTION BOXES (SEALED) NEAR TRANSMITTERS AND INSIDE OF DAC.
14. MOUNT TRANSMITTERS TO UNISTRUT CLOSE TO PRIMARY FLOW METER ON OUTSIDE WALL OF BUILDING.
15. MOUNT FLOW COMPUTER IN THE MOST CONVENIENT LOCATION TO TERMINATE CABLES, TRANSMITTER, WIRES, AND POWER SOURCE.
16. 24VDC POWER NOT SHOWN FOR CLARITY, REFER TO DRAWINGS DE-104 THRU DE-108
17. FEED BATTERY CHARGER FROM SPARE 20 AMP, SINGLE POLE, CIRCUIT BREAKER IN PANELBOARD WITH 3/4" EMT-2#12, 1#12 GND



NO.	DATE	DESCRIPTION	BY	REVISIONS
2	12/27/2011	RECORD DRAWING	BJW	
1	12/14/2011	FINAL DESIGN REVISIONS	BJW	
0	8/2/2011	FOR CONSTRUCTION	BJW	

PROJECT MANAGER	MMN	SEAL	SEAL
CHECK DESIGNER	SHV		
REVIEWED BY	DATE		

SCALE:	
HORIZ.	AS NOTED
VERT.	
DATUM:	
HORIZ.	
VERT.	
0 GRAPHIC SCALE	

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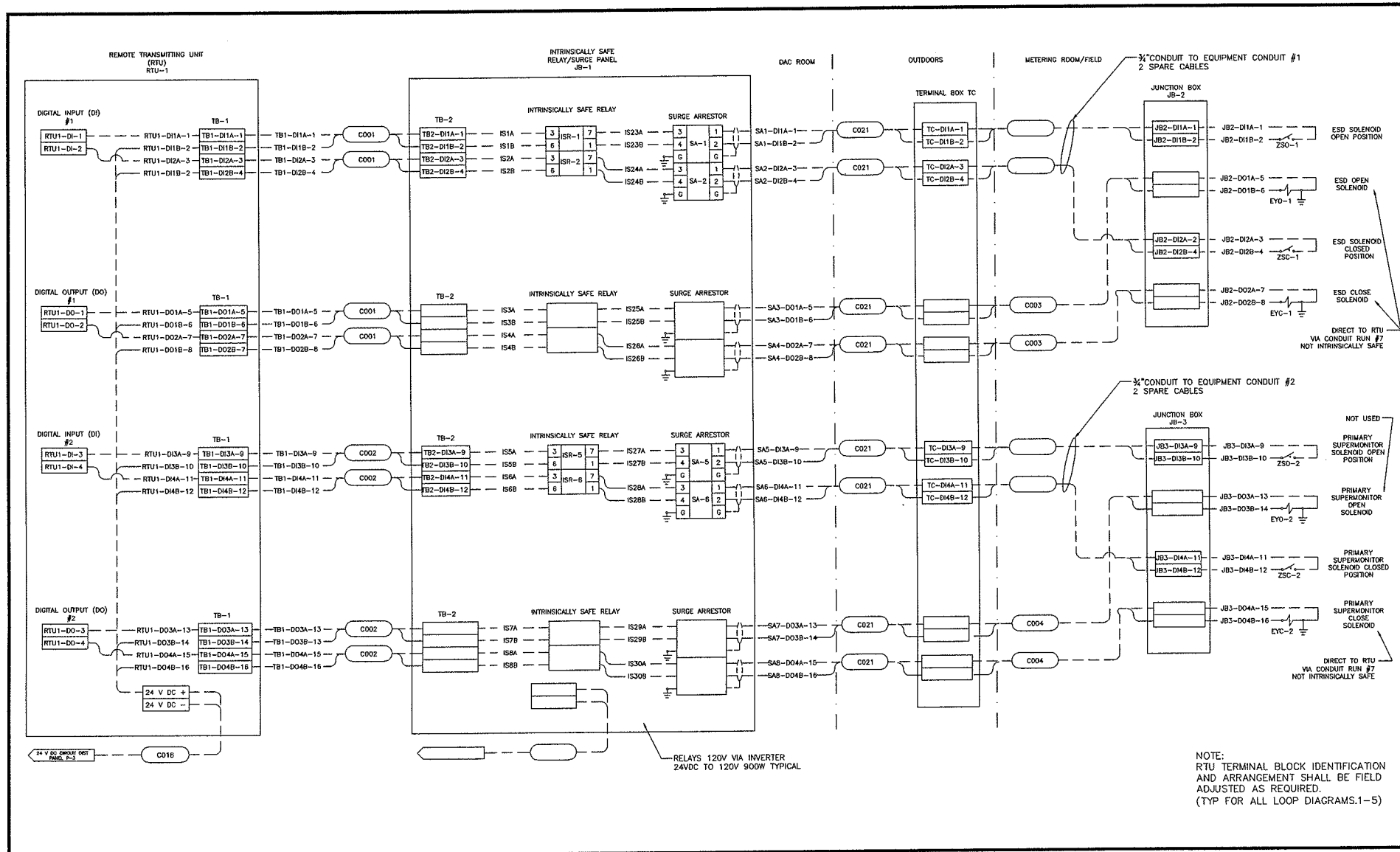
146 HARTFORD RD MANCHESTER, CT 06040 860.646.2469

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GORHAM PAPER & TISSUE LLC.
INSTRUMENTATION & CONTROLS PLAN
METERING & REGULATING STATION

BERLIN NEW HAMPSHIRE

PROJ. No: 2010114ATV DATE: 10/26/2010	DE-103
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NO.	DATE	DESCRIPTION	BY
2	12/27/2011	RECORD DRAWING	BAV
1	9/12/2011	FINAL DESIGN REVISIONS	BAV
0	9/20/2011	FOR CONSTRUCTION	BAV
No. 1			

PROJ. MANAGER	MNC	SEAL	SEAL
CHEF ENGINEER	JTB		
REVIEWED BY	DATE		

SCALE	HORIZ. N.T.S.	VERT.
DATUM	HORIZ.	VERT.
GRAPHIC SCALE		

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860.646.2469

GORHAM PAPER & TISSUE L.L.C.

INSTRUMENTATION LOOP DIAGRAM 1 OF 5

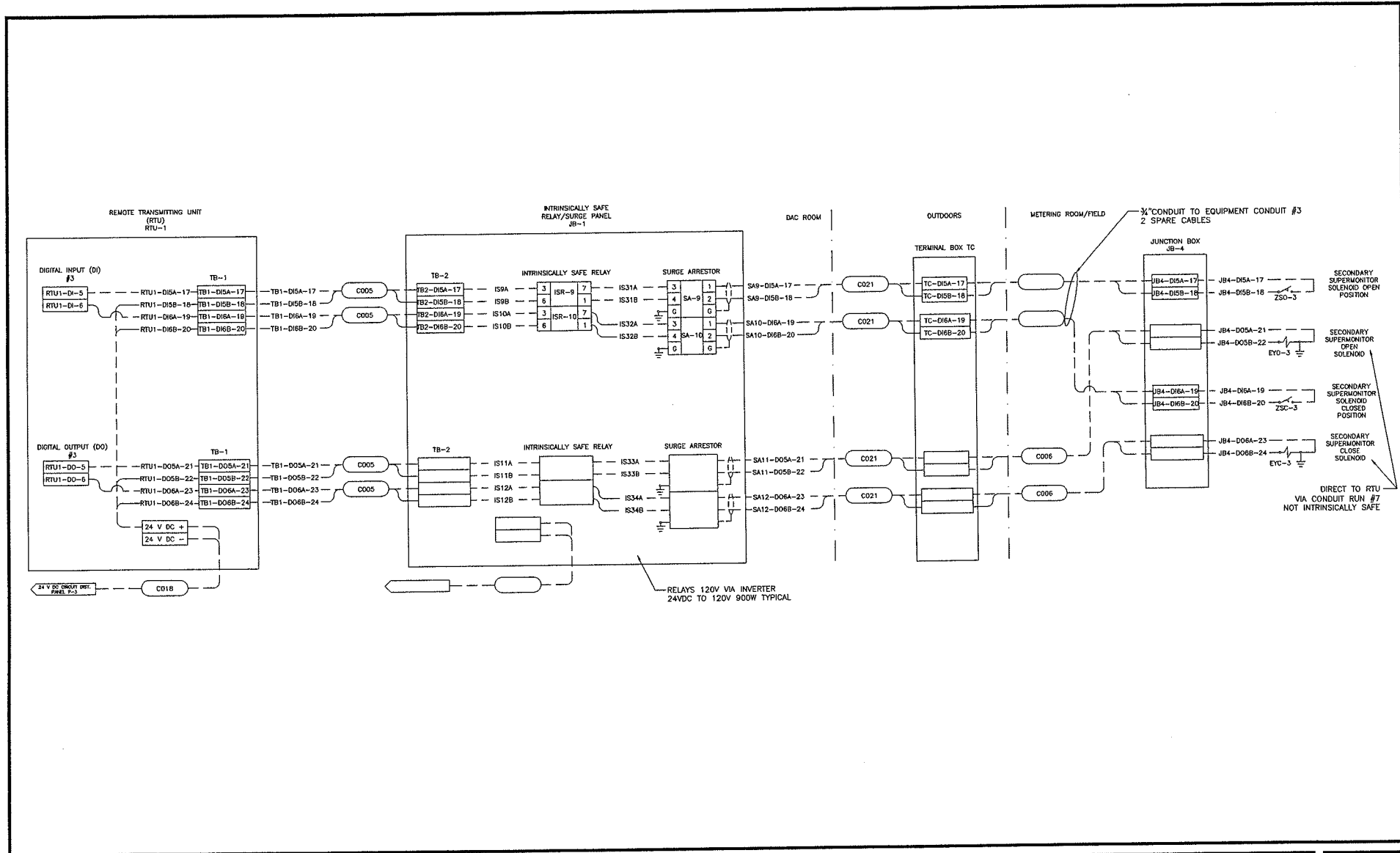
METERING & REGULATING STATION

BERLIN
NEW HAMPSHIRE

PROJ. No.: 20101114.A1V
DATE: AUGUST 2011

DE-104

F&O WORLD



PROJ. MANAGER	MVC	SEAL	SEAL	SCALE	WWW.FO.COM	GORHAM PAPER & TISSUE L.L.C.	PRGJ. NO. 2010114A1V
CHEF DESIGNER	PH			HORIZ. N.T.S.		INSTRUMENTATION LOOP DIAGRAM 2 OF 5	DATE: AUGUST 2011
REVIEWED BY	DATE			VERT.		METERING & REGULATING STATION	
RECORD DRAWINGS	ISAV			DATE			
FINAL DESIGN REVISIONS	ISAV			HORIZ.			
FOR CONSTRUCTION	ISAV			VERT.			
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REVISIONS							

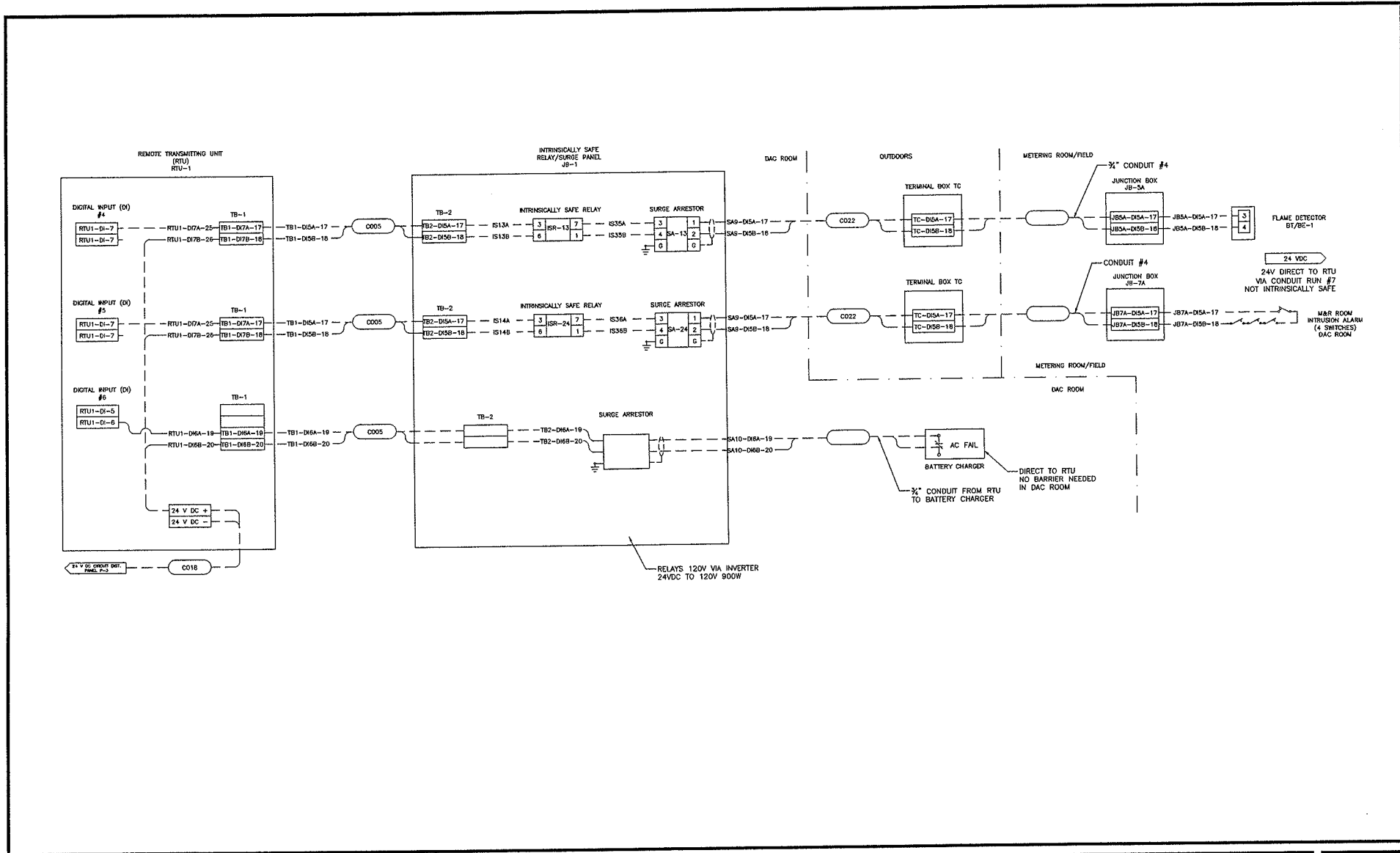


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BERLIN NEW HAMPSHIRE

DE-105



No.	DATE	DESCRIPTION	BY	DATE
2	12/27/2011	RECORD DRAWING	BAY	
1	01/14/2011	FINAL DESIGN REVISIONS	BAW	
0	02/20/11	FOR CONSTRUCTION	BAW	
			HT	

PROJ. MANAGER	AVC	SEAL	SEAL
CHEF ENGINEER	JTB		
REVIEWED BY	DATE		

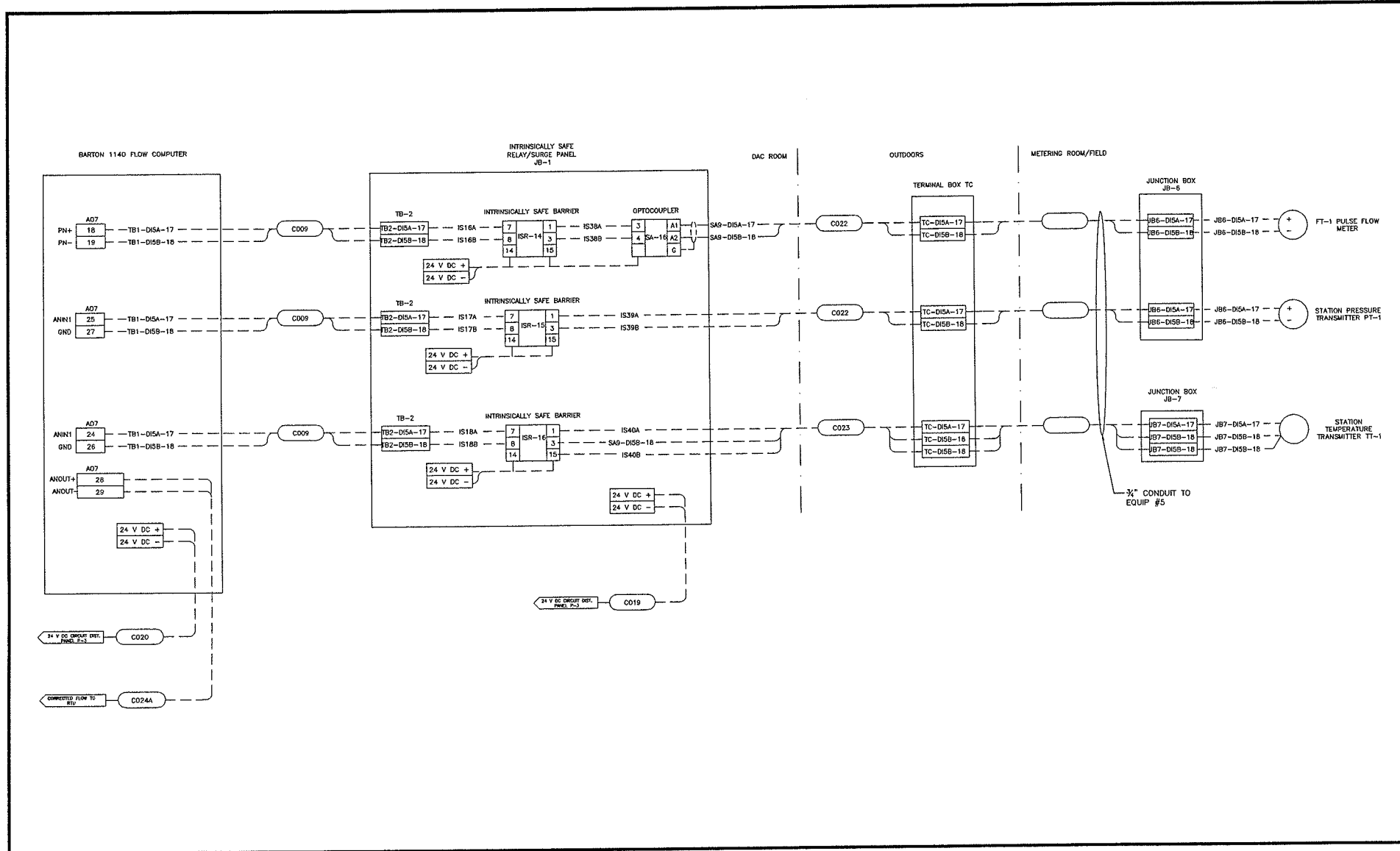
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VERT. 1/8" = 1'-0"
DATUM
HORIZ.
VERT.
GRAPHIC SCALE

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 146 HARTFORD RD MANCHESTER, CT 06040 860.646.2469

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GORHAM PAPER & TISSUE L.L.C.
INSTRUMENTATION LOOP DIAGRAM 3 OF 5
 METERING & REGULATING STATION
 BERLIN NEW HAMPSHIRE

PROJ. No. 20101131A1V
 DATE: AUGUST 2011
DE-106

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No.	DATE	DESCRIPTION	BY
2	12/27/2011	RECORD DRAWING	BJW
1	9/14/2011	FINAL DESIGN REVISIONS	BJW
0	9/2/2011	FOR CONSTRUCTION	BJW

PRGJ. MANAGER	DATE	SEAL	SEAL
MMG			
CHIEF DESIGNER	JTB		
REVIEWED BY	DATE		

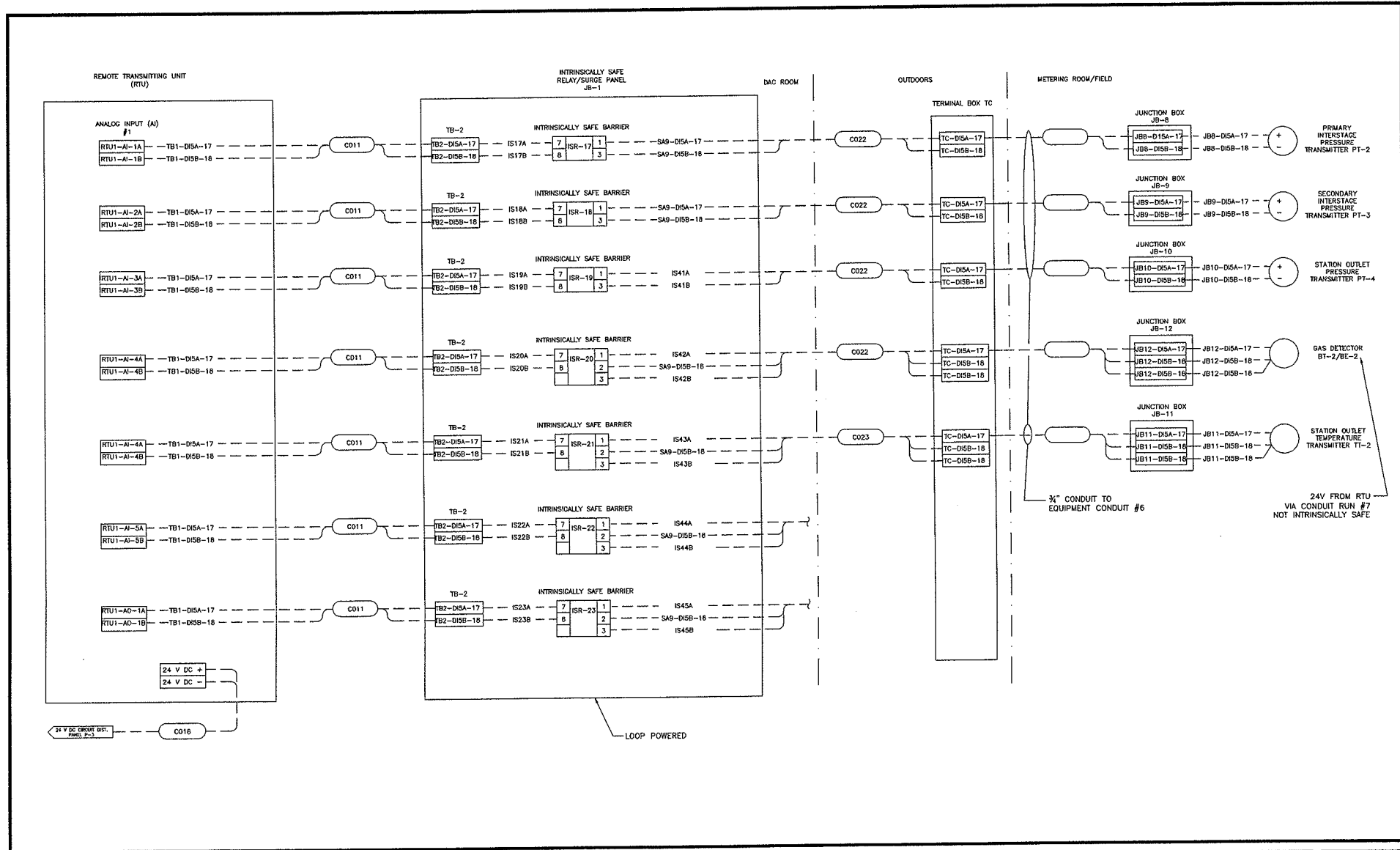
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	VERT:
DATUM	HORIZ:
	VERT:
GRAPHIC SCALE	


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GORHAM PAPER & TISSUE L.L.C.
 INSTRUMENTATION LOOP DIAGRAM 4 OF 5
 METERING & REGULATING STATION
 BERLIN NEW HAMPSHIRE

PROJ. No. 20101114.A1V DATE: AUGUST 2011 DE-107
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FUS & O



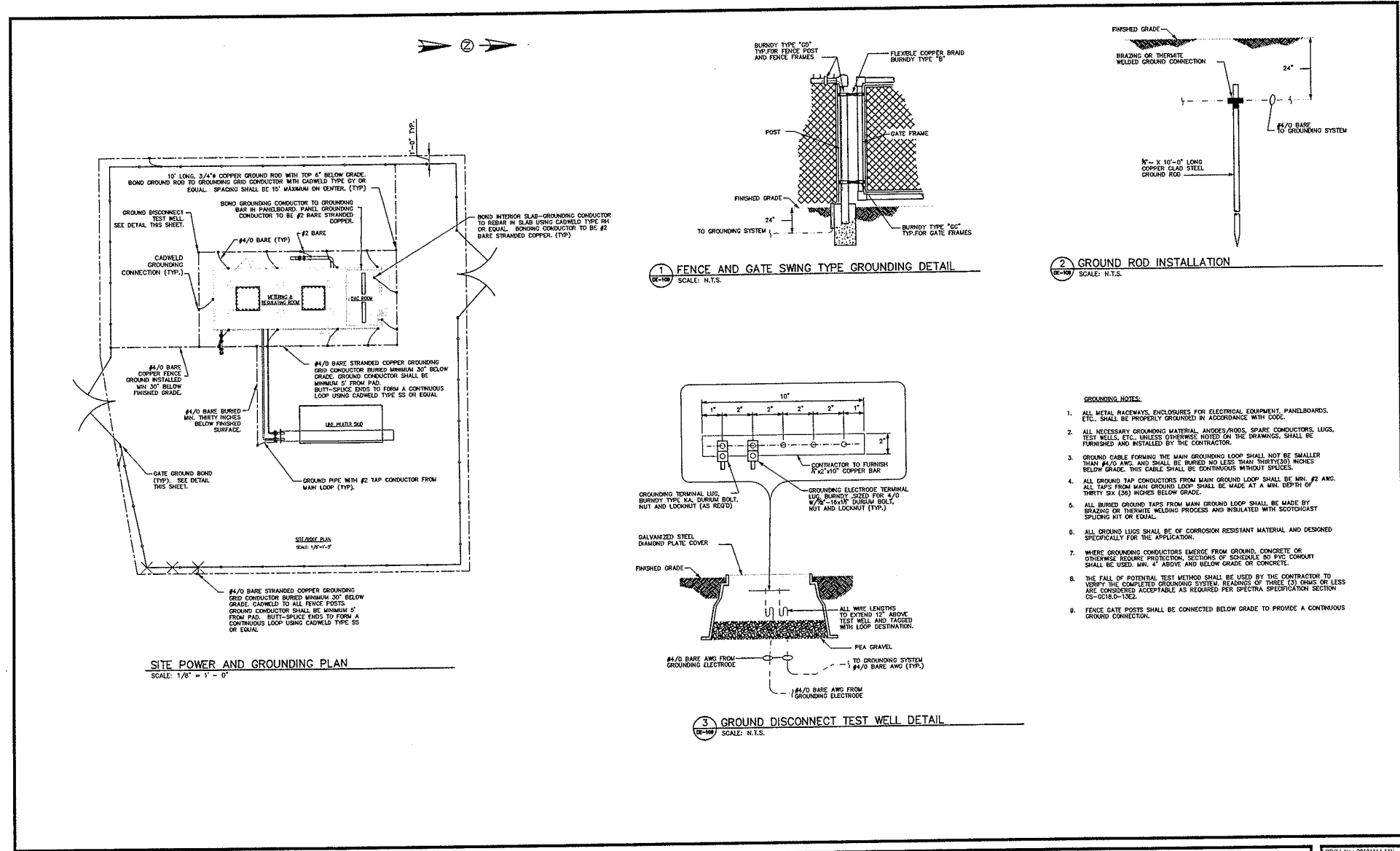
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0	01/02/2011	FOR CONSTRUCTION	BMV			VERT.			
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SCALE: HORIZ. N.T.S. VERT.
 DATUM: HORIZ. VERT.
 GRAPHIC SCALE

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SITE POWER AND GROUNDING PLAN
SCALE: 1/8" = 1' - 0"

1 FENCE AND GATE SWING TYPE GROUNDING DETAIL
SCALE: N.T.S.

2 GROUND ROD INSTALLATION
SCALE: N.T.S.

3 GROUND DISCONNECT TEST WELL DETAIL
SCALE: N.T.S.

- GROUNDING NOTES:**
1. ALL METAL RACEWAYS, ENCLOSURES FOR ELECTRICAL EQUIPMENT, PANELBOARDS, ETC. SHALL BE PROPERLY GROUNDING IN ACCORDANCE WITH CODE.
 2. ALL NECESSARY GROUNDING MATERIAL, ANODES/RODS, SHARE CONDUCTORS, LUGS, TEST WELLS, ETC., UNLESS OTHERWISE NOTED ON THE DRAWINGS, SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
 3. GROUND CABLE FORMING THE MAIN GROUNDING LOOP SHALL NOT BE SMALLER THAN #4/0 AWG, AND SHALL BE BURIED NO LESS THAN THIRTY(30) INCHES BELOW GRADE. THIS CABLE SHALL BE CONTINUOUS WITHOUT SPLICES.
 4. ALL GROUND TAP CONDUCTORS FROM MAIN GROUND LOOP SHALL BE MIN. #2 AWG. ALL TAPS FROM MAIN GROUND LOOP SHALL BE MADE AT A MIN. DEPTH OF THIRTY SIX (36) INCHES BELOW GRADE.
 5. ALL BURIED GROUND TAPS FROM MAIN GROUND LOOP SHALL BE MADE BY BRAZING OR THERMITE WELDING PROCESS AND INSULATED WITH SCOTCHCAST SPLICING KIT OR EQUAL.
 6. ALL GROUND LUGS SHALL BE OF CORROSION RESISTANT MATERIAL AND DESIGNED SPECIFICALLY FOR THE APPLICATION.
 7. WHERE GROUNDING CONDUCTORS EMERGE FROM GROUND, CONCRETE OR OTHERWISE REQUIRE PROTECTION, SECTIONS OF SCHEDULE 80 PVC CONDUIT SHALL BE USED, MIN. 4" ABOVE AND BELOW GRADE OR CONCRETE.
 8. THE FALL OF POTENTIAL TEST METHOD SHALL BE USED BY THE CONTRACTOR TO VERIFY THE COMPLETED GROUNDING SYSTEM. READINGS OF THREE (3) OHMS OR LESS ARE CONSIDERED ACCEPTABLE AS REQUIRED PER SPECTRA SPECIFICATION SECTION CS-GC18.0-13E2.
 9. FENCE GATE POSTS SHALL BE CONNECTED BELOW GRADE TO PROVIDE A CONTINUOUS GROUND CONNECTION.

NO.	DATE	DESCRIPTION	BY	REVISIONS
1	12/27/2011	RECORD DRAWING	BLW	
0	9/27/2011	FOR CONSTRUCTION	BLW	

PROJ. MANAGER	MAN	SEAL	SEAL
CHIEF DESIGNER	JWT		
REVIEWED BY	DATE		

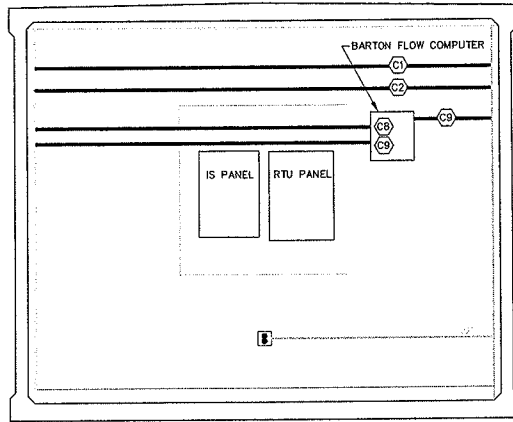
SCALE:	HORIZ. AS NOTED
DATUM:	VERT. AS NOTED

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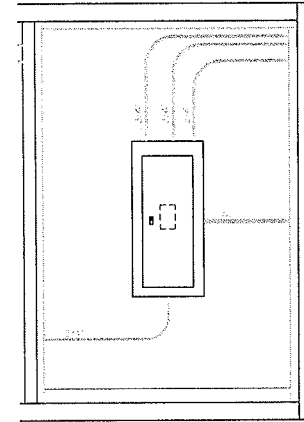
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GORHAM PAPER & TISSUE LLC.
 GROUNDING PLAN
 METERING & REGULATING STATION
 BERLIN NEW HAMPSHIRE

PROJ. No.: 20101142AV
 DATE: 02/20/11
DE-109

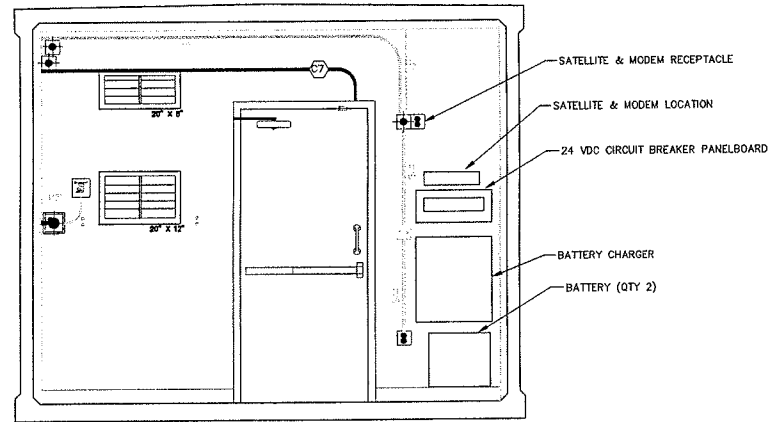
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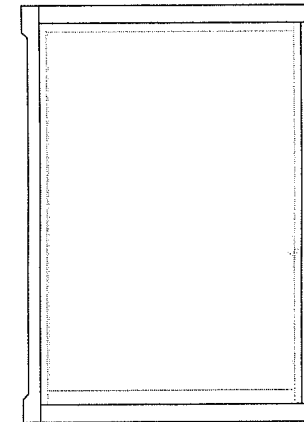
DAC ROOM INSTRUMENTATION AND CONTROLS SECTION
SCALE: 1/2"=1'-0"



DAC ROOM INSTRUMENTATION AND CONTROLS SECTION
SCALE: 1/2"=1'-0"



DAC ROOM INSTRUMENTATION AND CONTROLS SECTION
SCALE: 1/2"=1'-0"

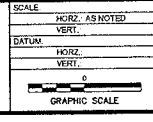



DAC ROOM INSTRUMENTATION AND CONTROLS SECTION
SCALE: 1/2"=1'-0"

No.	DATE	DESCRIPTION	BY	DATE
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0	9/2/2011	FOR CONSTRUCTION	BJW	

PROJ. MANAGER	MAN	SEAL	SEAL
CHIEF DESIGNER	JKF		
REVIEWED BY			

SCALE	HORIZ. AS NOTED
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DATUM	HORIZ.
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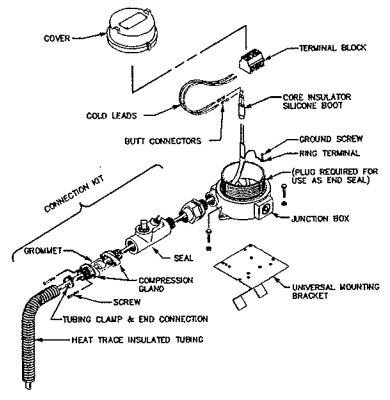



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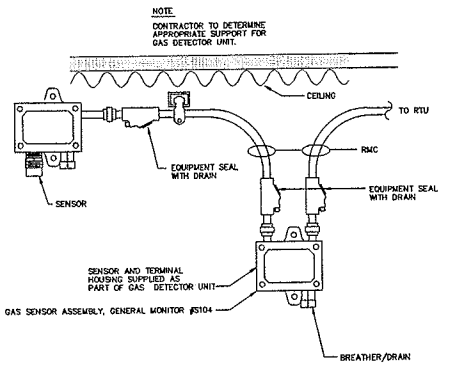
GORHAM PAPER & TISSUE LLC.
 ELECTRICAL ELEVATION VIEWS
 METERING & REGULATING STATION
 BERLIN NEW HAMPSHIRE

PROJ. No. 20101114 A1V
 DATE 10/08/2010
DE-110

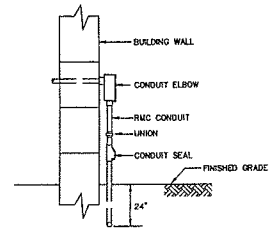
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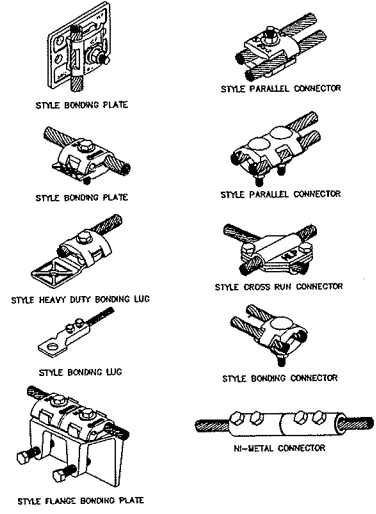
1 POWER AND END SEAL CONNECTION, DIV 1 AREA
 (DE-111) SCALE: N.T.S.



2 GAS DETECTOR DETAIL
 (DE-111) SCALE: N.T.S.



3 CONDUIT ENTRANCE DETAIL
 (DE-111) SCALE: N.T.S.



4 TYPICAL BONDING DETAILS
 (DE-111) SCALE: N.T.S.

No.	DATE	DESCRIPTION	BY
1	12/27/2011	RECORD DRAWING	BAW
0	02/20/11	FOR CONSTRUCTION	BAW

PROJ. MANAGER	MAN.	SEAL	SEAL
CHIEF DESIGNER	JMF		
REVIEWED BY			

SCALE
HORIZ. AS NOTED
VERT. AS NOTED
DATUM
HORIZ.
VERT.

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GORHAM PAPER & TISSUE LLC.
 ELECTRICAL DETAILS
 METERING & REGULATING STATION
 BERLIN NEW HAMPSHIRE

PROJ No. 2010114 ASV
 DATE: 02/20/11
DE-111

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NO.	TYPE	SIZE	QTY	SIZE	FROM	TO	REMARKS
C001	EMT	1"	1PR	18TFS	IS SURGE PANEL	RTU	CUSTOMER ESD DI-OPEN INDICATION DI-CLOSED INDICATION DO-OPEN COMMAND DO-CLOSE COMMAND
C0002	EMT	1"	1PR	18TFS	IS SURGE PANEL	RTU	PRIMARY SUPERMONITOR XMITTER DI-OPEN INDICATION DI-CLOSED INDICATION DO-OPEN COMMAND DO-CLOSE COMMAND
C003	RGM	1"	1PR	18TFS	JUNCTION BOX 2	TERMINAL BOX TC	CUSTOMER ESD DI-OPEN INDICATION DI-CLOSED INDICATION DO-OPEN COMMAND DO-CLOSE COMMAND
C004	RGM	1"	1PR	18TFS	JUNCTION BOX 3	TERMINAL BOX TC	PRIMARY SUPERMONITOR XMITTER DI-OPEN INDICATION DI-CLOSED INDICATION DO-OPEN COMMAND DO-CLOSE COMMAND
C005	EMT	2"	1PR	18TFS	IS SURGE PANEL	RTU	SECONDARY SUPERMONITOR XMITTER DI-OPEN INDICATION DI-CLOSED INDICATION DO-OPEN COMMAND DO-CLOSE COMMAND FLAME DETECTOR DAC INTRUSION ALARM M&R INTRUSION ALARMS
C006	RGM	3/4"	1PR	18TFS	JUNCTION BOX 4	TERMINAL BOX TC	SECONDARY SUPERMONITOR XMITTER DI-OPEN INDICATION DI-CLOSED INDICATION DO-OPEN COMMAND DO-CLOSE COMMAND
C006A	RGM	3/4"	1PR	18TFS	JUNCTION BOX 5A	TERMINAL BOX TC	FIRE PROTECTION - FLAME DETECTOR 24 V DC POWER
C007	EMT	1/2"	1PR	18TFS	DOOR SWITCH	IS SURGE PANEL	DAC INTRUSION ALARM
C007A	RGM	1/2"	1PR	18TFS	JUNCTION BOX 7A	IS SURGE PANEL	M&R INTRUSION ALARMS (WIRE IN SERIES)
C008	EMT	1/2"	1PR	18TFS	BATTERY CHARGER	IS SURGE PANEL	AC POWER FAILURE
C009	EMT	3/4"	1PR	18TFS	IS SURGE PANEL	FLOW COMPUTER	BARTON FLOW COMPUTER AH-INLET PRESSURE AI-TEMPERATURE STATION FLOW PULSE
C010	RGM	3/4"	1PR	18TFS	JUNCTION BOX 6	TERMINAL BOX TC	STATION FLOW AND PRESSURE AH-INLET PRESSURE STATION FLOW PULSE
C011	EMT	2"	7PR	18TFS	IS SURGE PANEL	RTU	
C012	RGM	3/4"	1PR	18TFS	JUNCTION BOX 7	TERMINAL BOX TC	AH-INLET TEMPERATURE
C013	RGM	3/4"	2	#16	LINE TEMP. SWITCH	LINE HEAT CONTROL BOX	LINE HEATER CONTROLS
C014	RGM	3/4"	1PR	18TFS	JUNCTION BOX 9	TERMINAL BOX TC	ANALOG INSTRUMENTATION AI-PRIMARY INTERSTAGE PRESSURE (PT-2) AI-SECONDARY INTERSTAGE PRESSURE (PT-3) AI-OUTLET PRESSURE (PT-4)
C015	RGM	3/4"	1PR	18TFS	JUNCTION BOX 12	TERMINAL BOX TC	AI-GAS DETECTION
C016	RGM	3/4"	1PR	18TFS	JUNCTION BOX 11	TERMINAL BOX TC	AI-OUTLET TEMPERATURE (TT-2)
C018	EMT	1"	3PR	14TFS	RTU	24V DC DISTRIBUTION	24 V DC POWER - RTU
C019	EMT	1"	4PR	14TFS	IS SURGE PANEL	24V DC DISTRIBUTION	24 V DC POWER - IS SURGE PANEL
C020	EMT	3/4"	1PR	14TFS	FLOW COMPUTER	24V DC DISTRIBUTION	24 V DC POWER - BARTON FLOW COMPUTER
C021	RGM	2"	13PR	18TFS	TERMINAL BOX TC	IS SURGE PANEL	CUSTOMER ESD & SUPERMONITORS
C022	RGM	2"	8PR	18TFS	TERMINAL BOX TC	IS SURGE PANEL	ANALOG INSTRUMENTATION
C023	RGM	1"	2PR	18TFS	TERMINAL BOX TC	IS SURGE PANEL	TEMPERATURE INSTRUMENTATION
C024	EMT	3/4"	1PR	18TFS	FLOW COMPUTER	RTU	CORRECTED FLOW ANALOG INPUT
C025	EMT	3/4"	1PR	18TFS	FLOW COMPUTER	RTU	MODBUS COMMUNICATION
C0XX					CAPILLARY TUBE INSIDE LIQUID TIGHT CONDUIT (SEAL AS REQUIRED WHEN ENTERING BUILDING)		

I/O SUMMARY					
		INPUT		OUTPUT	
		A	D	A	D
1	INLET PRESSURE	X			
2	INLET TEMPERATURE	X			
3	FLOW - ROTARY METER	X			
4	CONTROL VALVE-OPEN		X		X
6	CONTROL VALVE-CLOSE		X		X
6	PRIMARY SUPER MONITOR - OPEN		X		X
7	PRIMARY SUPER MONITOR - CLOSE		X		X
8	SECONDARY SUPER MONITOR - OPEN		X		X
9	SECONDARY SUPER MONITOR - CLOSE		X		X
10	PRIMARY INTERMEDIATE PRESSURE	X			
11	SECONDARY INTERMEDIATE PRESSURE	X			
12	OUTLET PRESSURE	X			
13	OUTLET TEMPERATURE	X			
14	LINE HEATER - TEMP SENSORS			X (2)	
15	DAC ROOM POWER FAILURE		X		
16	DAC ROOM DOOR ALARM		X		
17	M&R ROOM DOOR ALARMS		X		
18	M & R COMBUST. GAS	X	X		
19	M & R UVIR - UV		X		
20	M & R UVIR - IR		X		

I & C BILL OF MATERIALS

QTY	Description	MFG	Model #
1	Battery Charger	LaMarche	A12B-20-24V
2	Batteries	UltraPower	UA27
1	24 VDC Distribution Panel w/ breakers (A/R)	LaMarche	BPK19-24VL-18RN-3
1	24 VDC to 12 VDC Converter	Wiimore	Series 1500
10	Surge Arrestor Connector - Digital	Phoenix Contact	PT-2X1-24DC-ST
10	Surge Arrestor Base Element - Digital	Phoenix Contact	PT-2x1-F-BE
10	Surge Arrestor Connector - Analog	Phoenix Contact	PT-1X2-24DC-ST
10	Surge Arrestor Base Element - Analog	Phoenix Contact	PT-1X2-F-BE
10	Intrinsically Safe Barrier - Analog Input	Phoenix Contact	PI/Ex-ME-RPSS-I/I
6	Intrinsically Safe Relay - Digital Input	Phoenix Contact	PI/Ex-ME-2NAM-COC-24VDC
3	Intrinsically Safe Relay - Digital Output	Phoenix Contact	PI/Ex-ME-2SD/24/65-C
1	Optocoupler with Integrated terminal block	Phoenix Contact	PLC-OPIT-24DC/48DC/100
1	Intrinsically Safe Relay/Surge Enclosure	Wiegmann	IN1C243608
A/R	Wire Duct - 3" wide x 2" high	Panduit	E3X2LG6 w/ cover
A/R	DIN Rail - 35 mm	Wiegmann	AM1EA200

NO.	DATE	DESCRIPTION	BY
1	8/14/2011	FINAL DESIGN REVISIONS	BAW
0	9/22/11	FOR CONSTRUCTION	BAW

PROJ. MANAGER	MAN	SEAL
CHIEF DESIGNER	JXF	
REVIEWED BY		

SCALE	HORIZ.	AS NOTED
DATUM	HORIZ.	AS NOTED



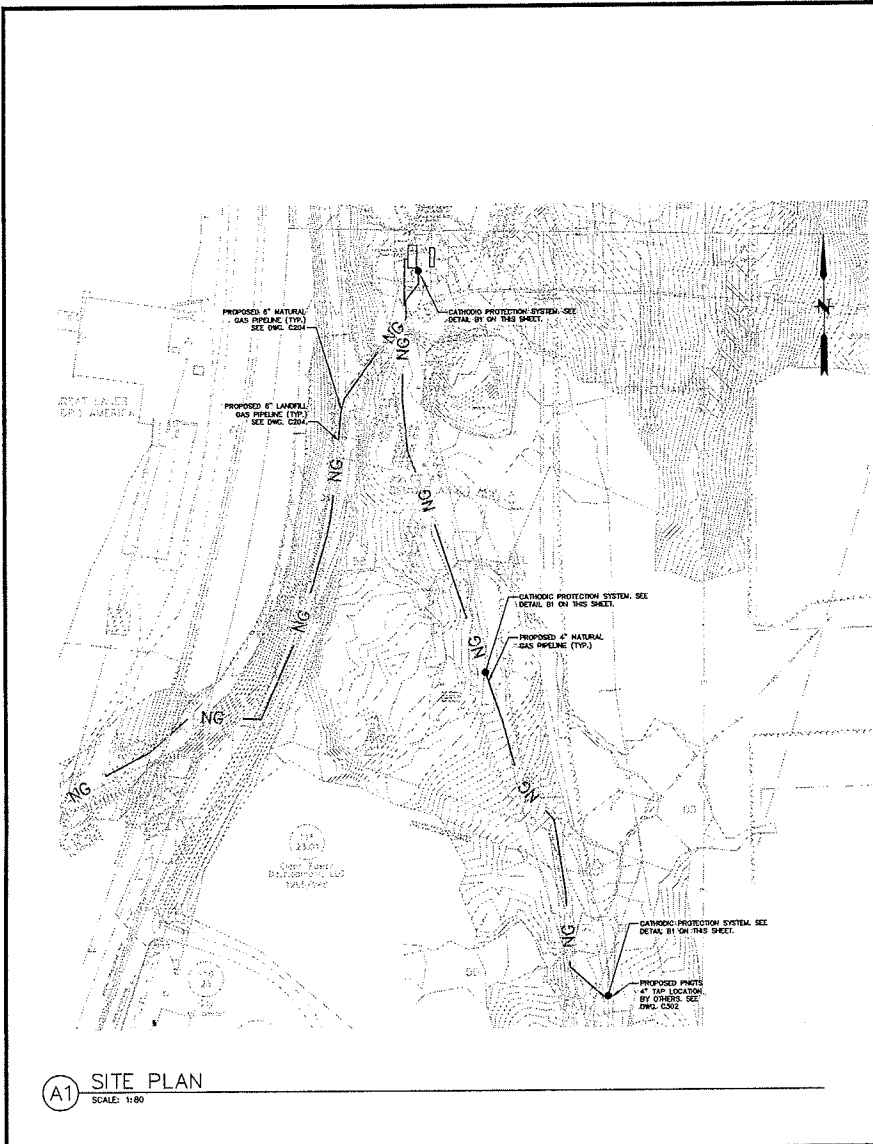
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 CONDUIT SCHEDULE AND I/O LIST
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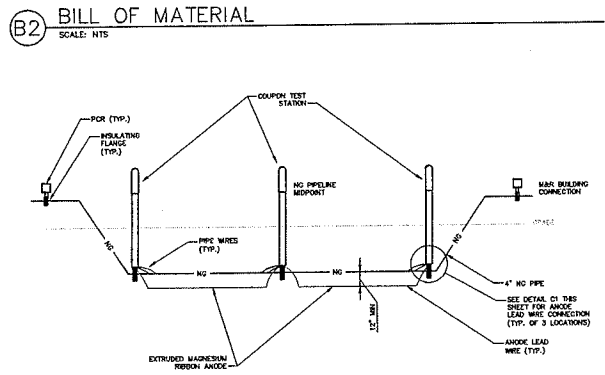
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DE-112

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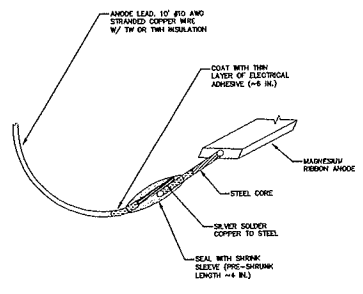


- M&R STATION INLET PIPELINE NOTES**
- TWO LENGTHS OF EXTRUDED MAGNESIUM RIBBON ANODE WILL BE USED TO CATHODICALLY PROTECT THE STATION INLET PIPELINE.
 - ONE LENGTH OF ANODE SHALL EXTEND FROM THE RISER AT THE TAP TO APPROXIMATELY THE MIDPOINT OF THE TOTAL PIPELINE RUN.
 - THE SECOND LENGTH OF ANODE SHALL EXTEND FROM THE RISER AT THE M&R STATION BACK TO WHERE THE FIRST LENGTH ENDS.
 - COPPER LEAD WIRES WILL BE ATTACHED TO THE STEEL CORE OF THE ANODE AT EVERY END (TWO ENDS EACH ANODE LENGTH).
 - ANODES WILL BE INSTALLED 6 INCHES DEEPER THAN THE PIPE, AND A MINIMUM OF 1 FOOT AWAY FROM THE PIPE (THIS SHOULD PLACE IT IN ONE OF THE LOWER CORNERS OF THE EXCAVATED TRENCH).
 - THREE COUPON TEST STATIONS SHALL BE INSTALLED ALONG THE STATION INLET PIPELINE, ONE AT THE RISER AT THE TAP, ONE AT THE APPROXIMATE MIDPOINT OF THE TOTAL PIPELINE RUN (EXACTLY WHERE THE TWO ANODE LENGTHS MEET), AND ONE AT THE RISER AT THE M&R STATION.
 - TWO PIPE WIRES (FIB AWG, STRANDED COPPER, WITH TW OR THW INSULATION) SHALL BE INSTALLED AT EACH COUPON TEST STATION. PIPE WIRE SHALL BE THERMITE WELDED TO PIPE (SEPARATE WELDS FOR EACH WIRE). THE THERMITE WELD AREA SHALL BE CLEANED AND COATED WITH LIQUID EPOXY. THE PIPE WIRES SHALL BE ROUTED INTO THE COUPON TEST STATION TO THE TERMINAL BOARD LOCATED AT THE CAP (SEE DETAIL B1).
 - EXTRUDED MAGNESIUM RIBBON ANODES IS DELIVERED COOLED.
 - RIBBON SHALL BE RECTANGULAR, 3/8" X 3/4" WITH A 0.135" ROUND STEEL CORE.
 - A COPPER LEAD WIRE (ANODE LEAD) SHALL BE ATTACHED TO THE STEEL CORE (SEE DETAIL C1).
 - ANODE LEAD WIRE SHALL BE #10 AWG, STRANDED COPPER WITH TW OR THW INSULATION.
 - STEEL CORE SHALL BE EXPOSED BY USING A HACKSAW TO CUT THE MAGNESIUM DOWN TO, OR NEAR, THE STEEL CORE APPROXIMATELY 6 INCHES FROM THE END OF THE ANODE TWIST OFF THE CUT MAGNESIUM AND SLIDE OFF THE STEEL CORE.
 - SILVER SOLDER A 10 FOOT LENGTH OF ANODE LEAD WIRE TO THE STEEL CORE. COVER THE CONNECTION WITH A THIN LAYER OF ELECTRICAL ADHESIVE (TOTAL LENGTH APPROXIMATELY 6 INCHES). SEAL CONNECTION WITH A SHRINK SLEEVE (TOTAL WIRE-SHRUNK LENGTH OF APPROXIMATELY 4 INCHES).
 - ANODE LEAD WIRE SHALL BE ROUTED INTO THE COUPON TEST STATION LOCATED NEAR BY.
 - A POLARIZATION CELL REPLACEMENT (PCR) SHALL BE INSTALLED AT EACH END OF THE INLET PIPELINE (TWO LOCATIONS). THE PCRs SHALL BE INSTALLED ONTO THE INSULATING FLANGE LOCATED AT EACH END OF THE PIPELINE (SEE DETAIL B1). WELD TAPS WILL BE REQUIRED (PROVIDED BY PCR MANUFACTURER).

QTY	DESCRIPTION	COMMENTS
1500'	EXTRUDED MAGNESIUM ANODE 3/8" X 3/4" RECTANGULAR, 0.135" FBI WEST	4" TRANSMISSION LINE
825'	#10 AWG STRANDED COPPER ANODE LEAD WIRE WITH TW OR THW INSULATION	TEST LEADS A ANODE HEADER CABLE
3	TEST STATION WITH COUPONS, 7' 6" WITH 4" ABOVE GRADE	1 STATIONS TO BE PLACED AT TAP, MIDWAY ALONG PIPELINE, AT M&R STATION INLET
1 CAN	ELECTRICAL ADHESIVE, FLYMOUTH RUBBER COMPANY, 55-C, CATALOG #8422	FIRST LAYER TO COAT COPPER WIRE CONNECTION TO RIBBON ANODE CORE
2	POLARIZATION CELL REPLACEMENT, DORRYLAND PCR MODEL 3.3KA, CLASS 1 DV2 NEMA 4X	AT M&R STATION INLET, AT TRANSMISSION TAP
2 SETS	PCR KIT ACCESSORY - WELD TAPS	
2	HEAVY DUTY ADHESIVE LINED SHRINK TUBING, 3.1, 3/8"	http://www.heathrow.com/greengrass/adhesive-lined_shrink_tubing_heat_shrink_wires/3_1_3_1.html
	LIQUID EPOXY	TO COAT THERMITE WELDS, USE SAME PRODUCT AS SPECIFIED FOR CIRTH WELDS
20	THERMITE WELD CHARGE, C-15	"CADWELD" BRAND
	SILVER SOLDER	AS NEEDED, FOUR (4) WIRE CONNECTIONS
1	ROLL, INSULATING MASTIC, FLYMOUTH RUBBER COMPANY, NO. 2426	SECOND LAYER TO COAT COPPER WIRE CONNECTION TO RIBBON ANODE CORE



(B1) 4" STATION INLET PIPELINE CATHODIC PROTECTION SYSTEM DETAIL
SCALE: NTS



(C1) RIBBON ANODE LEAD WIRE CONNECTION DETAIL
SCALE: NTS

	PROJ. MANAGER: MAN CHIEF DESIGNER: JNF REVIEWED BY: _____ DATE: _____	SEAL	SEAL		SCALE: HORIZ.: NOT TO SCALE VERT.: _____ DATUM: HORIZ.: _____ VERT.: _____	<p>FUSS & O'NEILL Energy Alternatives, LLC</p> <p>146 WATFORD RD MANCHESTER, CT 06040 860.646.2469</p>	<p>WWW.FONDQ.COM</p> <p>GORHAM PAPER & TISSUE LLC. CATHODIC PROTECTION SITE PLAN & DETAILS METERING & REGULATION STATION</p> <p>BERKLIN NEW HAMPSHIRE</p>	PROJ. No.: 23101114 A1V DATE: 02/10/2011 <hr/> DE 113
REVISIONS No. DATE DESCRIPTION BY								

