

IOWA FALLS MAINTENANCE GARAGE RADIANT HEAT REPLACEMENT

IOWA DEPARTMENT OF TRANSPORTATION

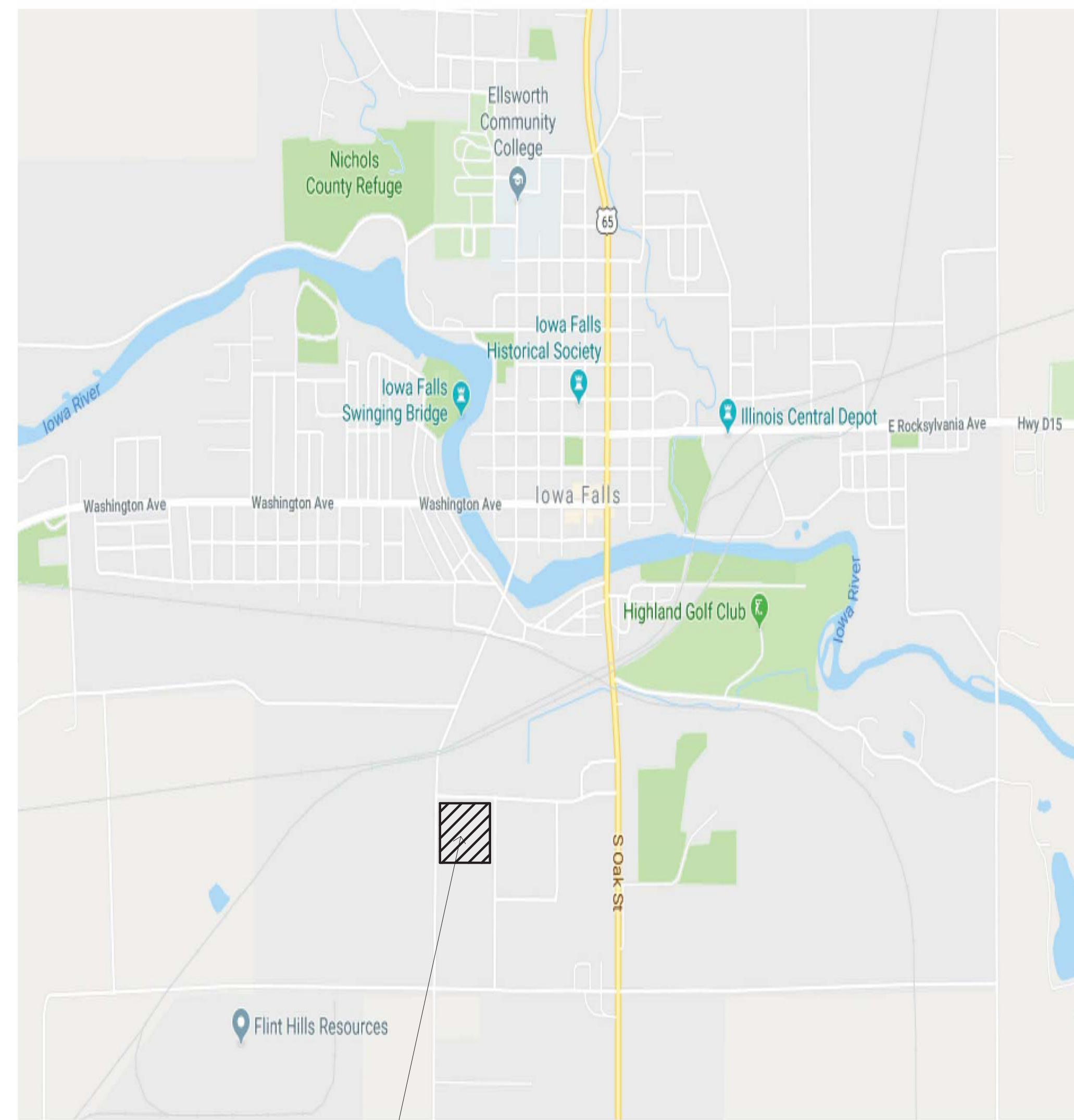
BID SET

1035 Industrial Park Road, Iowa Falls, IA 50126

SHEET INDEX

IaDOT PROJECT NUMBER: BG-2F31(007)-80-42

GENERAL	COVER SHEET
ME00	
MECHANICAL/ELECTRICAL	
MED1	MECHANICAL AND ELECTRICAL DEMOLITION PLANS
ME01	MECHANICAL AND ELECTRICAL PLANS & SCHEDULES



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B

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D

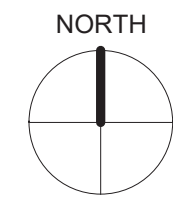
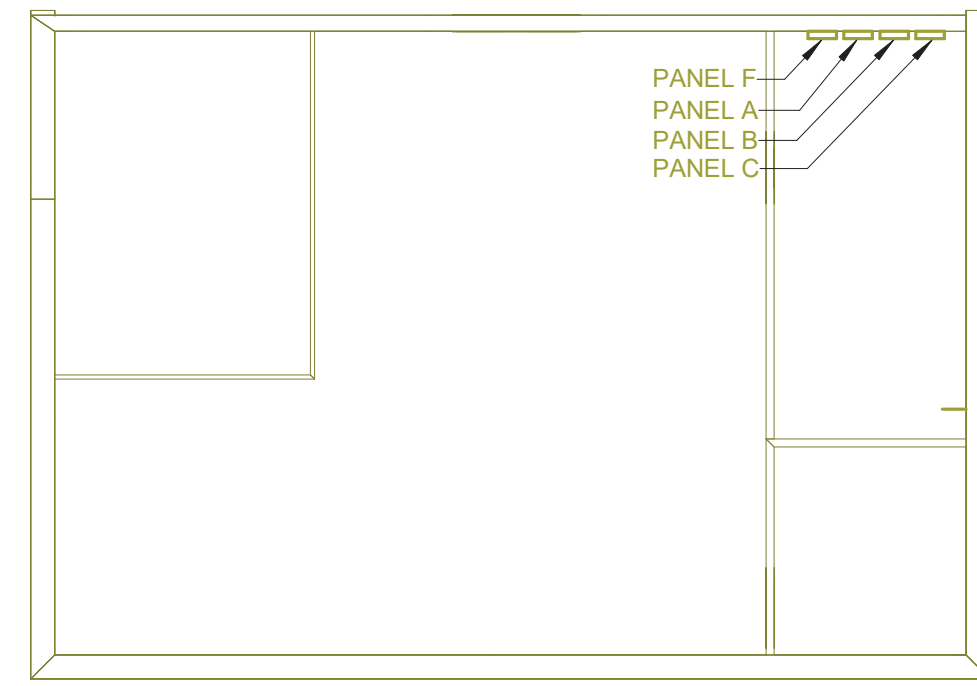
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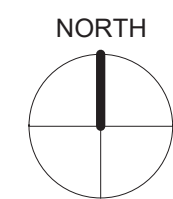
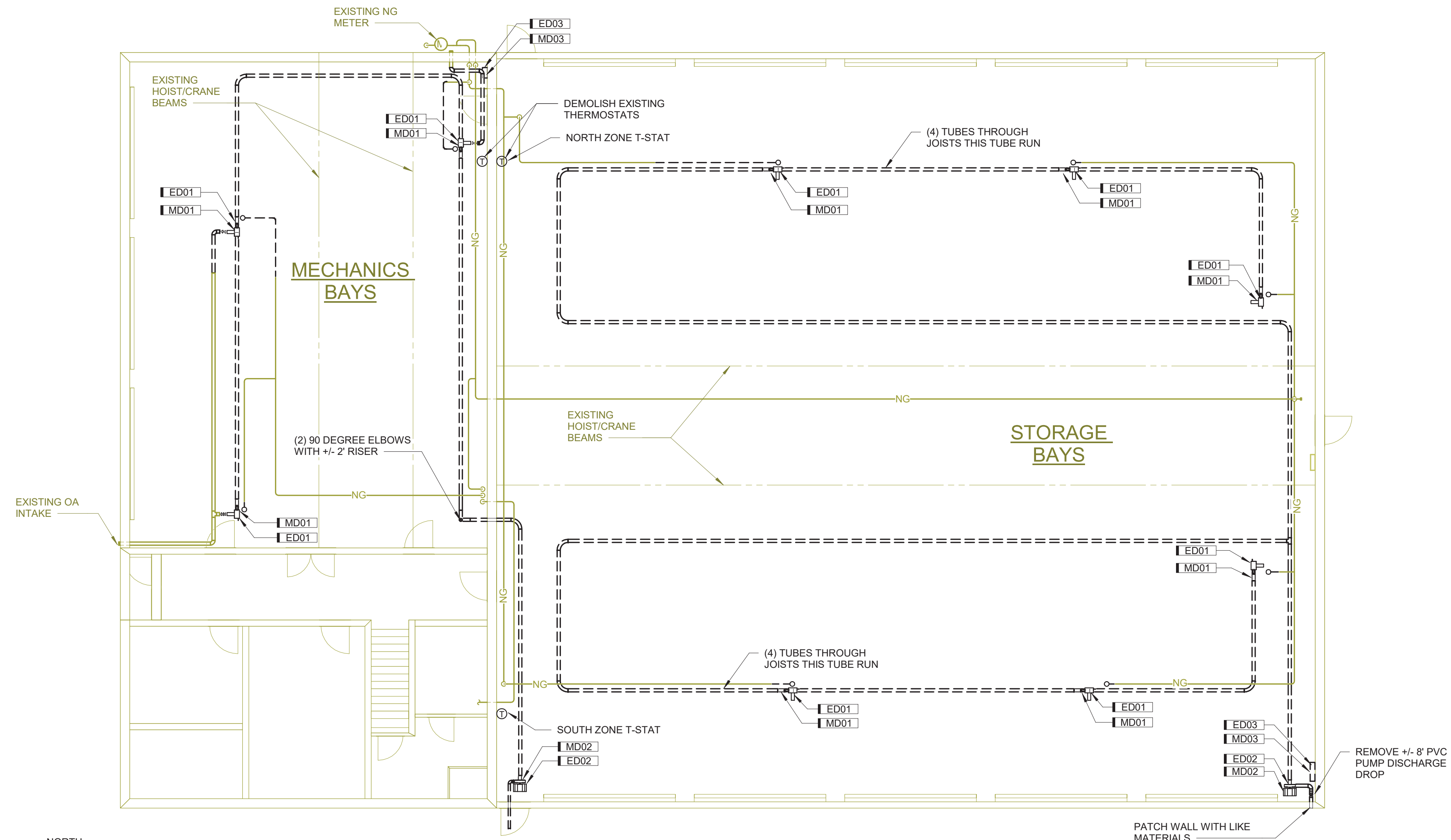
KEYNOTE LEGEND	
KEY	NOTE
ED01	REMOVE RECEPTACLE AND ASSOCIATED WIRING BACK TO HEATER CONTROL PANEL.
ED02	REMOVE ELECTRICAL CONNECTION, DISCONNECT AND WIRING BACK TO HEATER CONTROL PANEL.
ED03	DISCONNECT EXISTING HEATER CONTROL PANEL. SAVE CIRCUIT AND WIRING FOR NEW HEATER CONTROL PANEL.
MD01	REMOVE RADIANT HEATER AND ASSOCIATED PIPING AND CONTROLS. DISCONNECT/REMOVE OA AND GAS PIPING AS SHOWN. SEE NEW WORK PLANS FOR NEW CONNECTIONS.
MD02	REMOVE EXISTING VACUUM PUMP, ASSOCIATED PIPING AND CONTROLS.
MD03	REMOVE EXISTING HEATER CONTROL PANEL AND ASSOCIATED CONTROL WIRING.

GENERAL DEMOLITION NOTES

1. THIS DRAWING DIAGRAMMATICALLY REPRESENTS THE LAYOUT OF EXISTING CONDITIONS WITH MAJOR MECHANICAL AND ELECTRICAL COMPONENTS. THEY ARE NOT INTENDED TO SHOW ACCESSORIES OR INCIDENTALS COMMON TO EQUIPMENT INDICATED, THOUGH THESE ITEMS ARE TO BE REMOVED. ACCESSIBILITY TO DEMOLITION ITEMS SHALL NOT BE INFERRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF BUILDING AND EXISTING CONDITIONS, PRIOR TO BID SUBMISSION.
2. DEMOLITION OF SHALL INCLUDE ALL HANGERS, FITTINGS, DAMPERS, VALVES, ETC.
3. LIGHT LINES INDICATE EXISTING DUCT, PIPING, EQUIPMENT, ETC. TO REMAIN. BOLD DASHED LINES INDICATE DEMOLITION WORK THIS PROJECT.
4. CONTRACTOR SHALL PATCH/REPAIR ALL UNUSED OPENINGS AND MODIFIED FINISH SURFACES. PATCH SHALL MATCH MATERIALS, FINISH, AND TEXTURE OF ADJACENT SURFACES.
5. OWNER SHALL RETAIN FIRST SALVAGE RIGHTS TO ALL REMOVED EQUIPMENT AND MATERIALS. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER AND TIMELY DISPOSAL OF ALL CONSTRUCTION DEBRIS INCLUDING BUT NOT LIMITED TO EQUIPMENT AND MATERIALS NOT CLAIMED BY OWNER.



C2 UPPER LEVEL ELECTRICAL DEMOLITION PLAN



C4 MECHANICAL/ELECTRICAL DEMOLITION PLAN

1/8" = 1'-0" 0 12'

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DRAWN:	JDB
APPROVED:	BAS
ISSUED FOR:	CONSTRUCTION DOCUMENTS
DATE:	2018-03-06
PROJECT NO:	18184230
FIELD BOOK:	
CLIENT NO:	BG-2F31(007)-80-42

GENERAL MECHANICAL NOTES

- LIGHT LINES INDICATE EXISTING PIPING, DUCTWORK, EQUIPMENT, ETC. TO REMAIN. BOLD LINES INDICATE PIPING, DUCTWORK, EQUIPMENT, ETC. TO BE INSTALLED BY THIS CONTRACT UNLESS NOTED OTHERWISE.
- THIS DRAWING SCHEMATICALLY REPRESENTS THE LAYOUT OF THE NEW RADIANT HEATING SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF THE BUILDING AND EXISTING CONDITIONS, PRIOR TO BID SUBMISSION. COORDINATE ROUGH-IN AND FINAL LOCATION OF HEATERS, VACUUM PUMPS, RADIANT PIPING, ETC. WITH EXISTING LIGHTING, STRUCTURE, CONDUITS, HOSTS, ETC. PROVIDE OFFSETS AND/OR EASEMENTS, OR RELOCATE EXISTING AS REQUIRED TO AVOID CONFLICTS WITH INSTALLATION OF NEW WORK.
- INSTALL ALL RADIANT HEATING PER MANUFACTURER'S WRITTEN RECOMMENDATIONS AND MAINTAIN ALL REQUIRED CLEARANCES OF NEW AND EXISTING EQUIPMENT.
- RADIANT HEATING REFLECTORS ARE NOT SHOWN ON DRAWINGS FOR CLARITY, CONTRACTOR SHALL FURNISH AND INSTALL REFLECTORS AS SPECIFIED.
- CONTRACTOR SHALL PATCH/REPAIR ALL UNUSED OPENINGS AND MODIFIED FINISH SURFACES. PATCH SHALL MATCH MATERIALS, FINISH, AND TEXTURE OF ADJACENT SURFACES.
- NEW GAS PIPING SHALL BE 3/4" UNLESS SHOWN OTHERWISE.
- RADIANT TUBE AND OA PIPE SHALL BE 4" UNLESS SHOWN OTHERWISE.
- CONTRACTOR SHALL PAINT ALL EXISTING AND NEW RIGID GAS PIPING.
 - SHERWIN WILLIAMS COLOR 5W 4084
 - SYSTEM TYPE: ALKYD; SURFACE PREP: SSPC SP2/SP3
 - PAINT: 1 COAT PRIMER (KEM BOND HS); 2 COATS FINISH (INDUSTRIAL ENAMEL)
- CONTRACTOR SHALL TEST SYSTEM FOR PROPER VACUUM AT BRANCH END VENTS FOLLOWING INSTALLATION. MAKE ADJUSTMENTS AS NECESSARY TO PROVIDE 2 1/2" TO 3" WATER COLUMN FOR EACH ZONE. PROVIDE PHOTO DOCUMENTATION OF EACH TEST LOCATION TO THE ARCHITECT IMMEDIATELY FOLLOWING THE TEST AND ADJUSTMENT.

GAS FIRED RADIANT HEATER SCHEDULE							
MARK	HEATING INPUT (MBH)	GAS PRESSURE MIN / MAX (IN WC)	ELECTRICAL			DESIGN BASIS	REMARKS
			VOLTS	PHASE	FLA		
RH1-1	80	4.5 / 14	120	1	0.3	CORAYVAC CRV-B8	
RH1-2	80	4.5 / 14	120	1	0.3	CORAYVAC CRV-B8	
RH1-3	80	4.5 / 14	120	1	0.3	CORAYVAC CRV-B8	
RH2-1	80	4.5 / 14	120	1	0.3	CORAYVAC CRV-B8	
RH2-2	80	4.5 / 14	120	1	0.3	CORAYVAC CRV-B8	
RH2-3	80	4.5 / 14	120	1	0.3	CORAYVAC CRV-B8	
RH2-4	80	4.5 / 14	120	1	0.3	CORAYVAC CRV-B8	
RH2-5	80	4.5 / 14	120	1	0.3	CORAYVAC CRV-B8	
RH2-6	80	4.5 / 14	120	1	0.3	CORAYVAC CRV-B8	

VACUUM PUMP SCHEDULE								
MARK	HP	VOLTS	PHASE	FLA	RPM	DRIVE	DESIGN BASIS	REMARKS
VP-1	3/4	120	1	6.6	3450	DIRECT	CORAYVAC EP-201	
VP-2	3/4	120	1	6.6	3450	DIRECT	CORAYVAC EP-201	

LINE WEIGHTS

DEMOLITION APPLIES TO MD SHEETS

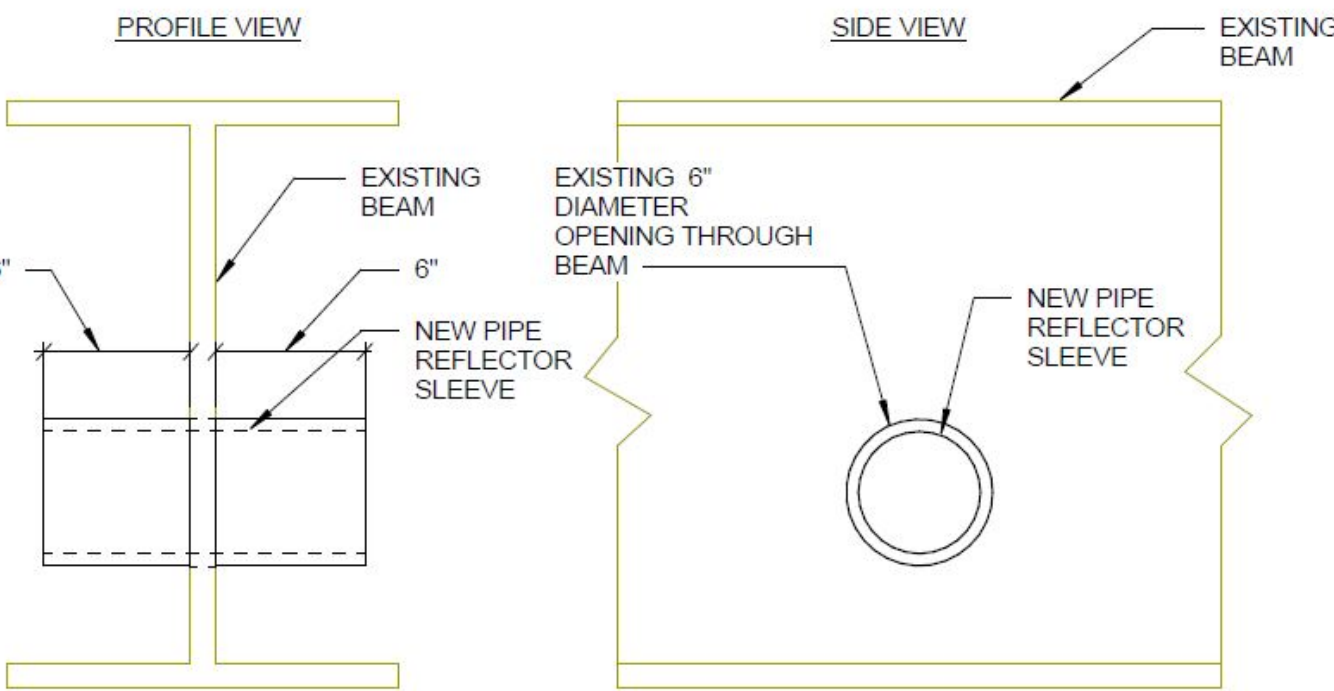
- BOLD DASHED LINES INDICATE EXISTING EQUIPMENT, DUCTWORK, PIPING, ETC. TO BE REMOVED THIS CONTRACT UNLESS NOTED OTHERWISE.
- LIGHT SOLID LINES INDICATE EXISTING EQUIPMENT, DUCTWORK, PIPING, ETC. TO REMAIN UNLESS NOTED OTHERWISE.

NEW WORK

- BOLD LINES INDICATE NEW EQUIPMENT, DUCTWORK, PIPING, ETC. THIS CONTRACT UNLESS NOTED OTHERWISE.
- LIGHT SOLID LINES INDICATE EXISTING EQUIPMENT, DUCTWORK, PIPING, ETC. TO REMAIN UNLESS NOTED OTHERWISE.

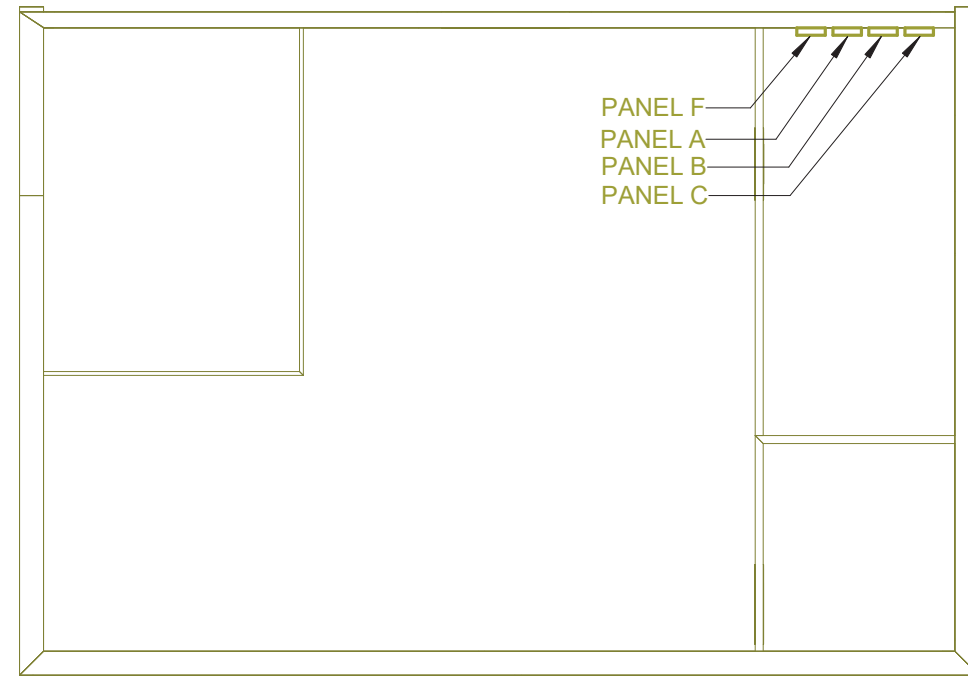
SYMBOLS

- ⊙ DENOTES CAP EXISTING PIPE OR DUCT
- ⊕ DENOTES NEW TO EXISTING CONNECTION
- NG— NATURAL GAS

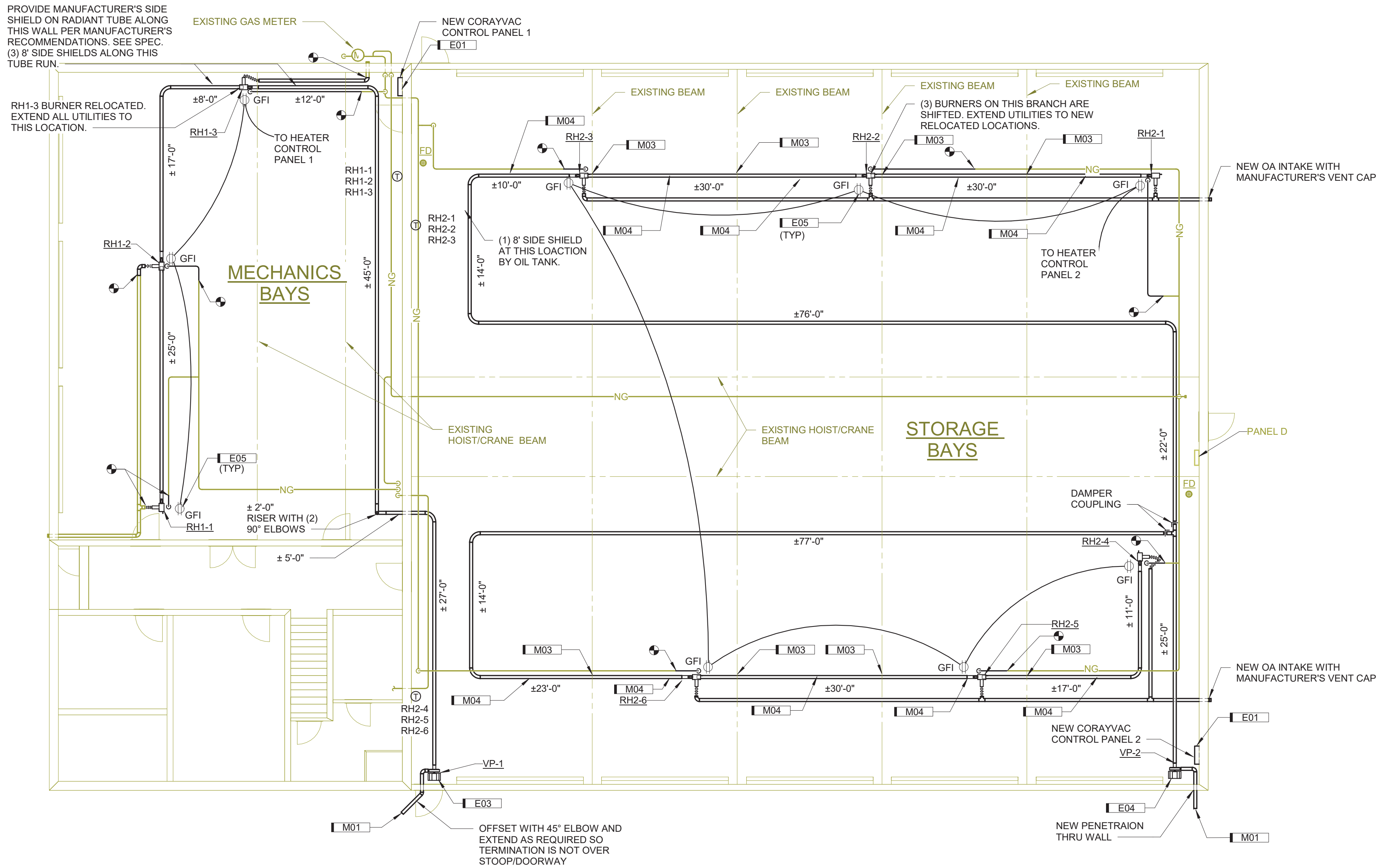


NOTES:
DO NOT ADD, MODIFY, OR CUT ANY BEAM PENETRATIONS.
PROVIDE 6" PIPE REFLECTOR SLEEVE AT RIGID FRAME PENETRATIONS AROUND TUBES. EXTEND SLEEVE 6" ON EACH SIDE OF FRAME.

4B EXISTING BEAM PENETRATION DETAIL
NOT TO SCALE



C2 UPPER LEVEL ELECTRICAL PLAN



C4 MECHANICAL/ELECTRICAL PLAN
1/8" = 1'-0"

KEYNOTE LEGEND

KEY	NOTE
E01	NEW HEATER CONTROL PANEL. RECONNECT TO EXISTING CIRCUIT.
E03	PROVIDE WIRING FROM HEATER CONTROL PANEL 1 TO NEW VACUUM PUMP. PROVIDE SINGLE POLE 20 AMP DISCONNECT SWITCH.
E04	PROVIDE WIRING FROM HEATER CONTROL PANEL 2 TO NEW VACUUM PUMP. PROVIDE SINGLE POLE 20 AMP DISCONNECT SWITCH.
E05	CEILING MOUNTED GFI RECEPTACLE. INSTALL NEAR RADIANT HEATER. COORDINATE EXACT LOCATION WITH FINAL HEATER PLACEMENT. TYP ALL UNIT HEATERS.
M01	EXTEND DOUBLE COATED DISCHARGE TUBE OUT WALL 24" BEYOND WALL FACE. TERMINATE WITH BIRD SCREEN. SEAL OPENINGS WEATHER TIGHT WITH HIGH TEMPERATURE SILICONE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
M03	ROUTE CORAYVAC THRU EXISTING HOLE IN BEAM. SEE DETAIL.
M04	PROVIDE MANUFACTURER'S HEAT SHIELD ON RADIANT TUBE ABOVE GARAGE DOOR TRACK AT POINT INDICATED.

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1035 Industrial Park Road, Iowa Falls, IA 50126

MECHANICAL AND ELECTRICAL PLANS & SCHEDULES

DRAWN: JDB
APPROVED: BAS
ISSUED FOR: CONSTRUCTION DOCUMENTS
DATE: 2019-09-06
PROJECT NO: 18184230
FIELD BOOK:
CLIENT NO: BG-2F3(1007)-80-42

ME01

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