

Old Saybrook High School Fuel-Oil Storage Tank Replacement

1111 Boston Post Road
Old Saybrook, CT 06475

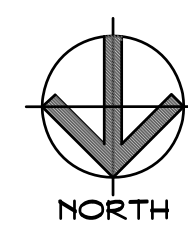
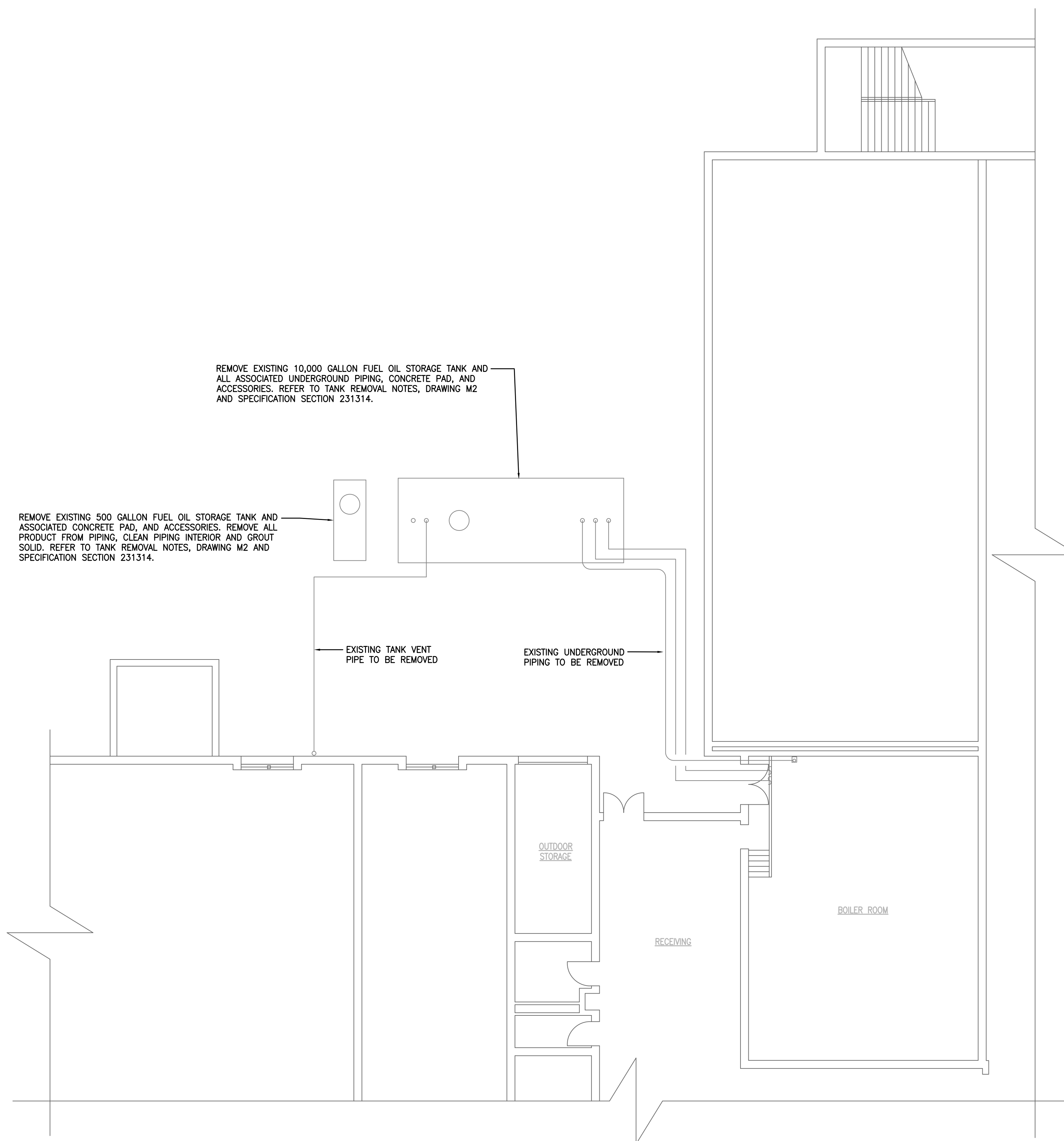
100% Contract Documents



SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers

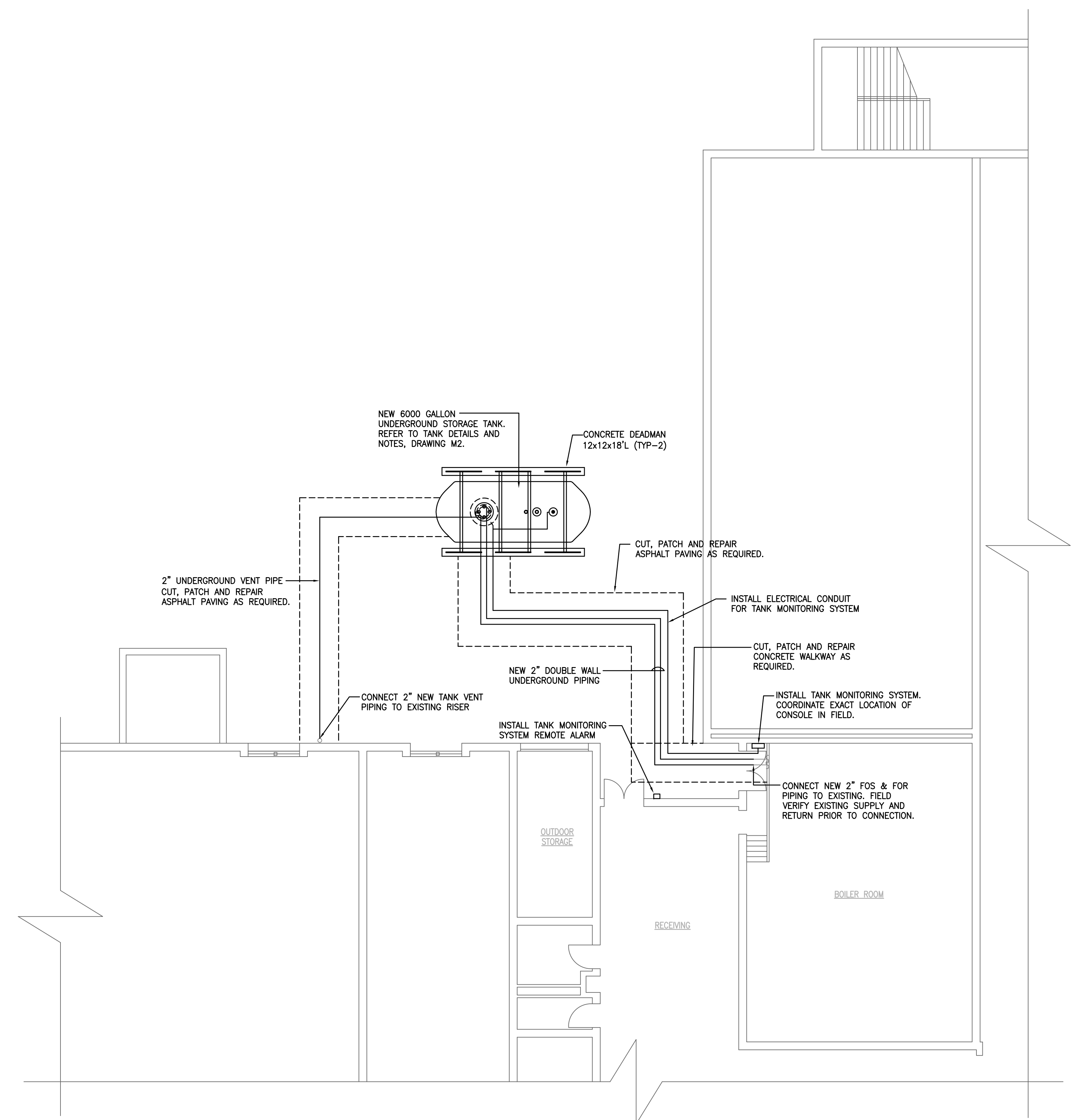
3190 Whitney Avenue, Hamden, CT 06518-2340
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

June 15, 2018



MECHANICAL DEMOLITION PLAN

SCALE: 1/8" = 1'-0"



MECHANICAL PLAN

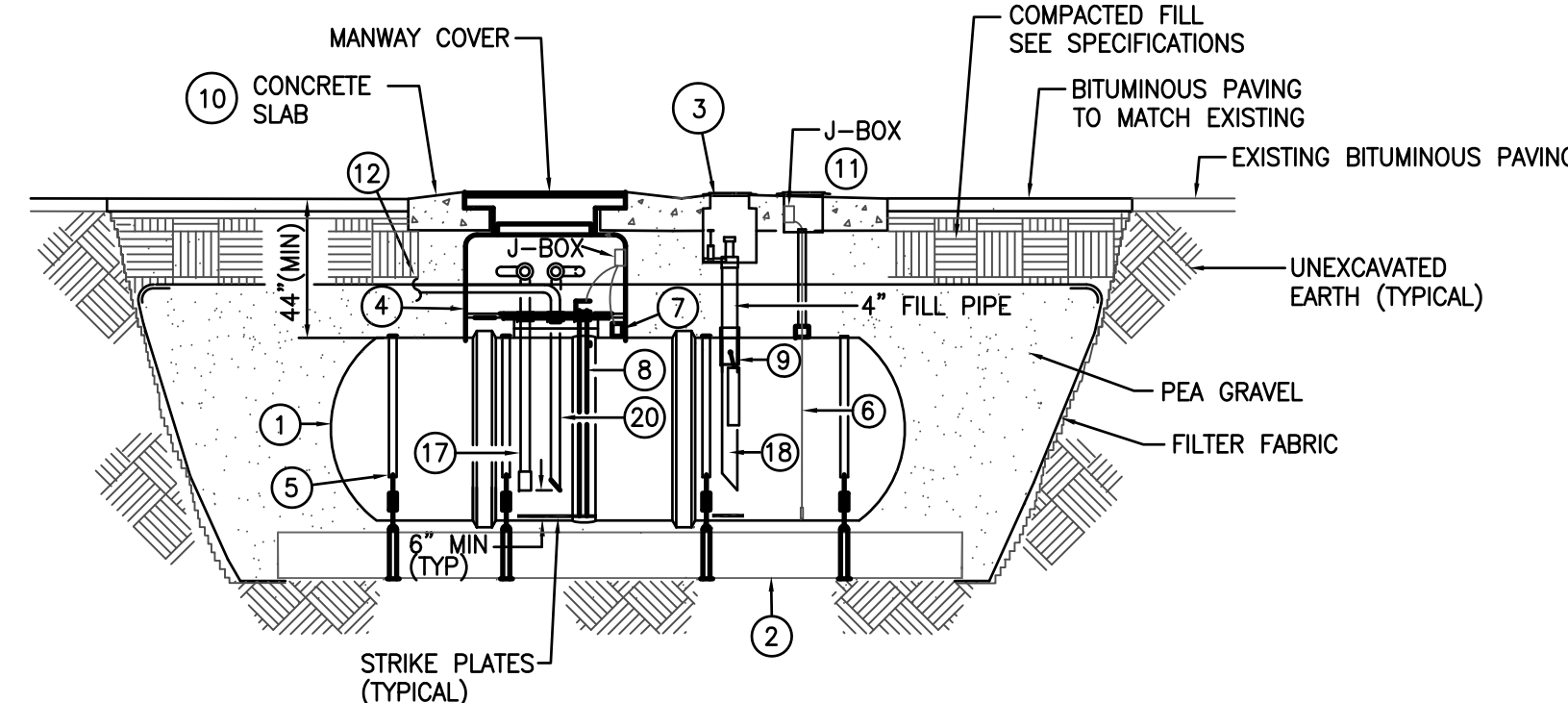
SCALE: 1/8" = 1'-0"



Revision:	Description:	Date:	Revised By:

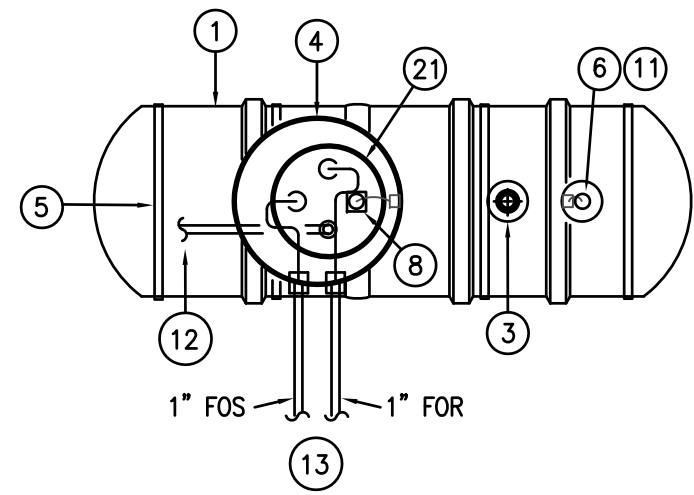
TANK INSTALLATION NOTES

- 1 FURNISH AND INSTALL NEW CONTAINMENT SOLUTIONS 6,000 GAL DOUBLE WALLED FUEL STORAGE TANK. BEDDING & BACKFILL TO BE EITHER PEA GRAVEL, 1/8" - 3/4", OR CRUSHED STONE, 1/8" TO 1/2". INSTALL PER MANUFACTURER'S INSTRUCTIONS. REFER TO SPECIFICATIONS.
- 2 PROVIDE (2) 12" x 12" x 18" CONCRETE DEADMAN ANCHORS.
- 3 FURNISH & INSTALL SPILL CONTAINER FLUSH WITH GRADE. FURNISH & INSTALL 4" FILL PIPE, 4" WITH OPW CAP ADAPTER. PROVIDE DROPTUBE WITH BUILT-IN OVERFLOW VALVE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. BOTTOM OF DROP TUBE TO BE 6" TO 12" FROM BOTTOM OF TANK. SEAL ALL PENETRATIONS & CONNECTIONS PER MFG'S INSTRUCTIONS.
- 4 ATTACHED COLLAR AND COLLAR RISER BY TANK MANUFACTURER. FURNISH AND INSTALL MANHOLE WITH GASKETED COVER IN CONCRETE SLAB. SLOPE SLAB TO GRADE. SEAL ALL PIPE AND CONDUIT PENETRATIONS TO SUMP AND TANK PER MANUFACTURER'S RECOMMENDATIONS.
- 5 PROVIDE (4) HOLDDOWN STRAPS WITH TURNBUCKLES ANCHORED TO DEADMAN EYEBOLTS. INSTALL STRAPS IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 6 INSTALL INTERSTITIAL LIQUID SENSOR AT ANNULAR FITTING. PROVIDE ACCESS BOX IN CONCRETE SLAB FOR JUNCTION BOX. WITH PIPE RISER TO ANNULAR FITTING.
- 7 INSTALL SUMP LIQUID SENSOR.
- 8 INSTALL TANK GAUGING PROBE.
- 9 FURNISH & INSTALL OVERFILL PROTECTION VALVE FOR USE WITH PUMPED DELIVERY SYSTEM. REFER TO EQUIPMENT SCHEDULE.
- 10 PROVIDE 8"Ø (MIN) CONCRETE SLAB FOR INSTALLATION OF SPILL CONTAINER, MANHOLE AND SENSOR ACCESS. PITCH TO DRAIN AWAY FROM COVERS.
- 11 PROVIDE ACCESS BOX WITH GASKETED COVER IN CONCRETE SLAB FOR JUNCTION BOX WITH PIPE RISER TO ANNULAR FITTING.
- 12 2" VENT FROM TANK VENT FITTING TO EXISTING VENT RISER. SEAL PER MANUFACTURER'S RECOMMENDATIONS.
- 13 FUEL OIL SUPPLY & RETURN PIPING IN DOUBLE WALLED CONTAINMENT PIPE. PITCH PIPING 1/8" PER FT TO TANK PIPING SUMP.
- 14 CUT, PATCH & REPAIR WALLS, FLOORS, SLAB AND PAVING AS REQUIRED.
- 15 INSTALL WIRING FROM TANK SENSORS AND REMOTE ALARM TO LEAK DETECTION CONSOLE IN 3/4" CONDUIT BELOW GRADE.
- 16 INSTALL LEAK DETECTION SYSTEM CONSOLE IN BOILER ROOM AT 5' AFF. COORDINATE EXACT LOCATION IN FIELD WITH OWNER. PROVIDE WIRING FROM TANK SENSORS. PROVIDE 120V, 20A DEDICATED BRANCH CIRCUIT. RUN ALL WIRING IN CONDUIT.
- 17 FUEL OIL SUPPLY SUCTION PIPE.
- 18 4" DROP TUBE. TERMINATE AT DIMENSION FROM BOTTOM AS DETERMINED BY MFG.
- 19 INSTALL CHECK VALVE AT TOP OF TANK TO HOLD THE PRIME.
- 20 FUEL OIL RETURN LINE. TERMINATE 6" TO 12" ABOVE BOTTOM OF TANK.
- 21 MANWAY COVER WITH FITTINGS FOR SUPPLY, RETURN AND VENT PIPING, AND TANK GAUGING PROBE.



UNDERGROUND STORAGE TANK DETAIL - SECTION

NOT TO SCALE



UNDERGROUND STORAGE TANK DETAIL - PLAN VIEW

NOT TO SCALE

TANK REMOVAL NOTES

1. CONTRACTOR SHALL REMOVE EXISTING 10,000 GALLON AND 500 GALLON UNDERGROUND STORAGE TANKS AND PIPING IN CONFORMANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL STATUTES, REGULATIONS AND ORDINANCES. REMOVE AND LEGALLY DISPOSE OF EXISTING FUEL OIL STORAGE TANKS, ASSOCIATED CONCRETE PADS, PIPING AND OTHER RELATED SYSTEM COMPONENTS. CONCRETE PADS SHALL BE REMOVED IF CONTAMINATED.
2. STOCKPILE ABSORBENT OIL SPILL CLEAN UP MATERIAL AT SITE PRIOR TO START OF EXCAVATION.
3. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER COMPLYING WITH OSHA GUIDELINES. SAFETY PROCEDURES SHALL BE REVIEWED AND IMPLEMENTED PRIOR TO PERSONNEL ENTERING EXCAVATION OR TANK.
4. LOCATION AND ORIENTATION OF EXISTING TANKS ARE APPROXIMATELY AS INDICATED FOR NEW INSTALLATION. CONTRACTOR TO VERIFY LOCATION IN FIELD AND ADJUST INSTALLATION AS REQUIRED.
5. CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING AND NOTE ALL CONDITIONS UNDER WHICH WORK MUST BE CARRIED OUT.
6. CONTRACTOR SHALL REPORT ALL SPILLS TO THE CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION (DEEP), STATE POLICE, LOCAL FIRE MARSHALL, OWNER AND ENGINEER.
7. CONTRACTOR SHALL LOCATE AND MARK ALL BUILDING SERVICE LINES, PIPING AND UTILITIES AND TAKE REQUIRED PRECAUTIONS TO PROTECT THEM FROM DAMAGE DURING EXCAVATION.
8. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS AND REMOVAL WORK WITHIN PROPERTY LINES OF PROJECT AREA.
9. CONTRACTOR SHALL MAINTAIN UNINTERRUPTED EMERGENCY VEHICLE ACCESS AND EGRESS FROM BUILDING TO THE STREET AT ALL TIMES.
10. THE CONTRACTOR SHALL RESTORE SITE TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION EXISTING PRIOR TO CONSTRUCTION.
11. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS.
12. EXCAVATION SHALL BE DONE IN A SAFE MANNER TO AVOID DAMAGE TO FOUNDATION OF EXISTING STRUCTURE AND UNDERGROUND UTILITY LINES WITHIN AREA FOR WHICH CONTRACTOR IS RESPONSIBLE. THE EXCAVATION SHALL BE SLOPED PROPERLY TO ALLOW WORKERS TO REMOVE ANCHORS AND RELEASE TANK FROM CONCRETE PAD. PROVIDE REQUIRED SHORING AND ADEQUATE SUPPORTS TO PREVENT TANK ROLLOVER.
13. CONTRACTOR SHALL SECURE AND PROTECT AREA IN CONFORMANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS AND OWNER'S INSURER.
14. REMOVAL OF TANK AND PIPING SHALL CONFORM TO REQUIREMENTS OF NFPA 30 AND DEEP REQUIREMENTS.
15. CLEAN TANK IN ACCORDANCE WITH NFPA 326 AND DEEP REGULATIONS BY REMOVING ALL LIQUIDS, SLUDGE AND VAPORS. DISPOSE OF MATERIALS IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
16. AFTER CLEANING, OBTAIN APPROVAL FROM STATE D.O.T. FIRE MARSHALL, BUILDING INSPECTOR AND DEEP BEFORE PROCEEDING WITH DISPOSAL.
17. TANK SHALL BE VAPOR FREED ON SITE IMMEDIATELY UPON REMOVAL. A SUFFICIENT NUMBER OF HOLES SHALL BE MADE TO RENDER TANK UNIT FOR FUTURE USE AND PREVENT VAPOR ACCUMULATION.
18. TEST SOIL - REFER TO "SOIL TESTING/SUSPECTED CONTAMINATION NOTES" ON THIS SHEET.
19. CONTRACTOR SHALL IMMEDIATELY NOTIFY DEP IF SOIL IS CONTAMINATED. REMOVAL AND DISPOSAL OF CONTAMINATED SOIL AND WATER SHALL BE HANDLED ON A UNIT COST BASIS ACCORDING TO THE BID FORM.
20. IF STORED ON SITE, CONTAMINATED SOIL SHALL BE PILED ON AND COVERED WITH 8 MIL POLYETHYLENE SHEETING. COVERING SHALL BE SECURED.
21. IF CONTAMINATED SOIL, GROUNDWATER, OR FREE PRODUCT AS LIQUID OR VAPOR IS OBSERVED ON SITE, OR IS DETECTED BY SAMPLE ANALYSIS, THE DEP MUST BE IMMEDIATELY NOTIFIED AND CORRECTIVE ACTION IN ACCORDANCE WITH SECTION 221-449(d)-106 OF THE REGULATIONS MUST BE UNDERTAKEN.
22. ALL CONTAMINATED OR HAZARDOUS MATERIALS SHALL BE LEGALLY DISPOSED OF IN AN APPROVED SITE. CONTACT DEEP STORAGE TANK ENFORCEMENT UNIT PRIOR TO REMOVING ANY MATERIALS FROM SITE.
23. IF DELAY IN DISPOSAL IS ENCOUNTERED CONTRACTOR SHALL, AT THE DIRECTION OF OWNER, TEMPORARILY REFILL EXCAVATION AND RE-EXCAVATE WHEN DISPOSAL IS POSSIBLE.
24. PROVIDE CLEAN FILL REQUIRED TO REPLACE CONTAMINATED.
25. SCRAPE AND SAVE TOPSOIL TO PROVIDE FINISHED GRADE UPON COMPLETION OF BACKFILL.
26. CONTRACTOR/LEP TO COORDINATE WITH DEP FOR INSPECTION OF EXCAVATION.

SOIL TESTING/SUSPECTED CONTAMINATION NOTES

1. OWNER WILL HIRE A LICENSED ENVIRONMENTAL PROFESSIONAL (LEP) TO DOCUMENT TANK REMOVAL AND PERFORM SOIL TESTING. SHALL OBTAIN SERVICES OF LABORATORY CERTIFIED BY THE CONNECTICUT DEPARTMENT OF HEALTH TO PERFORM ANALYSES OF SOIL AND GROUNDWATER SAMPLES.
2. SOIL AND GROUNDWATER TESTING SHALL BE DONE IN ACCORDANCE WITH CONNECTICUT ETPH METHOD AND EPA METHOD 8270. SAMPLE COLLECTION METHOD SHALL COMPLY WITH EPA 5035.
3. IMMEDIATELY NOTIFY APPROPRIATE AUTHORITIES INCLUDING DEP, STATE POLICE, LOCAL FIRE MARSHALL, OWNER AND ENGINEER OF CONTAMINATION.
4. REPORT SHALL IDENTIFY SOIL AS CONTAMINATED OR HAZARDOUS AND SHALL DEFINE REQUIRED DISPOSAL METHODS.
5. CONTRACTOR/LEP SHALL NOTIFY DEP, OWNER AND ENGINEER IMMEDIATELY IF SOIL CONTAMINATION IS SUSPECTED.
6. EXCAVATION SHALL CONTINUE UNTIL ALL SUSPECTED CONTAMINATION SOIL HAS BEEN REMOVED FROM EXCAVATION AREA.
7. CONTAMINATED SOIL SHALL BE PILED ON 30 MIL AND COVERED WITH 10 MIL POLYETHYLENE SHEETING. COVERING SHALL BE SECURED IN PLACE AS REQUIRED WITH SANDBAGS.
8. CONTRACTOR SHALL LEGALLY DISPOSE OF ALL CONTAMINATED MATERIALS (INCLUDING WATER).
9. IF DELAY IN DISPOSAL IS ENCOUNTERED, CONTRACTOR SHALL, AT DIRECTION OF OWNER, TEMPORARILY REFILL EXCAVATION AND RE-EXCAVATE WHEN DISPOSAL IS POSSIBLE. POLYETHYLENE SHEETING SHALL BE PLACED IN HOLE PRIOR TO REFILL TO SEPARATE EXISTING AND EXCAVATED MATERIAL.
10. CONTRACTOR SHALL PROVIDE CLEAN FILL REQUIRED TO REPLACE CONTAMINATED SOIL. FILL SHALL BE BORROW CONFORMING TO SPECIFICATIONS.

ELECTRICAL SCOPE

PROVIDE 120V, 20A DEDICATED BRANCH CIRCUIT FROM EXISTING JANITOR CLOSET LOAD CENTER AND HARD-WIRED CONNECTION TO NEW TANK MONITORING SYSTEM. PROVIDE CONDUIT & WIRE FROM SYSTEM TO REMOVE ANNUNCIATOR FURNISHED WITH SYSTEM.

GENERAL

1. THE INTENT OF THESE CONTRACT DOCUMENTS IS FOR THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE MECHANICAL AND ELECTRICAL SYSTEMS. THESE MECHANICAL AND ELECTRICAL SYSTEMS INCLUDE HVAC AND ELECTRICAL AND ALL ASSOCIATED SPECIAL SYSTEMS. ALL SYSTEMS SHALL BE COMPLETE IN ALL RESPECTS. OPERATING, TESTED, ADJUSTED, APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.
2. THE CONTRACTOR SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS, INCLUDING PROJECT MANUAL, PLANS AND SPECIFICATIONS OF ALL TRADES BEFORE SUBMITTING BID. REFER TO SPECIFICATIONS, PROJECT MANUAL AND PLANS, INCLUDING ALL EQUIPMENT SCHEDULES FOR MECHANICAL AND ELECTRICAL INFORMATION. CONTRACTOR SHALL WALK THROUGH BUILDING PRIOR TO SUBMITTING BID.
3. ALL OF THE CONTRACT DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY TO FORM A TOTAL DESIGN PACKAGE. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER TO DETERMINE WHICH TRADE CONTRACTOR IS RESPONSIBLE FOR VARIOUS PORTIONS OF THE WORK.
4. ALL WORK AND ACTION DEPICTED AND DESCRIBED SHALL BE PERFORMED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
5. PROVIDE SUPPORT/BRACING OF EQUIPMENT AND BUILDING SERVICES FOR SEISMIC RESTRAINT AS REQUIRED BY CODE.
6. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.
7. ALL EQUIPMENT, MATERIALS AND RELATED SYSTEMS COMPONENTS SHALL BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE.
8. REPAIR AND/OR REPLACE AT NO COST TO OWNER ALL EQUIPMENT AND MATERIALS DAMAGED DURING CONSTRUCTION.
9. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. THE COORDINATING LOCATIONS OF EQUIPMENT WITH ALL TRADES BEFORE STARTING CONSTRUCTION. ANY MODIFICATIONS TO THE EQUIPMENT LAYOUT REQUIRED FOR INSTALLATION ARE TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
10. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE APPLICABLE CODES IN THE ORDINANCES AND THE REGULATORY AGENCIES HAVING JURISDICTION.
11. ALL EQUIPMENT SHALL BE LOCATED IN ACCESSIBLE LOCATIONS. WHEN A PIECE OF EQUIPMENT MUST BE LOCATED ABOVE AN INACCESSIBLE CEILING OR WALL THEN THE APPROPRIATE ACCESS DOOR SHALL BE PROVIDED. THESE SHALL BE COORDINATED WITH THE ARCHITECT.
12. WHEN CONFLICTS OCCUR BETWEEN THE DRAWINGS AND/OR SPECIFICATIONS IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL CARRY AS PART OF THE BID THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEM(S).
13. CONTRACTORS SHALL COORDINATE THEIR WORK WITH ALL OWNER-FURNISHED EQUIPMENT, INCLUDING REQUIRED SERVICE CONNECTIONS, RECEPTACLES, ETC. BEFORE INSTALLATION.
14. CONTRACTORS SHALL PROVIDE ALL REQUIRED SLEEVES AND SEALS FOR PIPES OR CONDUIT PENETRATING WALLS OR FLOOR SLABS WITH FIRE STOPPING SEALANT WHERE REQUIRED.
15. ALL FLOOR MOUNTED MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE INSTALLED ON A CONCRETE HOUSEKEEPING PAD.
16. ELECTRICAL CONDUITS & BOXES TO BE CONCEALED IN WALLS OR ABOVE CEILING WHEREVER POSSIBLE.
17. COORDINATE ALL PIPING AND CONDUITS LEAVING THE BUILDING WITH THE SITE CONTRACTOR(S) BEFORE INSTALLATION.
18. PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS CONNECTED TO AND WITHIN 50 FEET OF ISOLATED EQUIPMENT THROUGHOUT MECHANICAL EQUIPMENT ROOMS.
19. PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE DAMPERS, VALVES, SMOKE DETECTORS AND OTHER CONCEALED MECHANICAL EQUIPMENT.
20. ALL EQUIPMENT, PIPING, DUCT WORK SHALL BE SUPPORTED AS REQUIRED TO PROVIDE A VIBRATION FREE INSTALLATION.
21. LOCATION AND SIZES OF ALL FLOOR, WALL AND ROOF PENETRATIONS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.

RENOVATION

1. THIS PROJECT IS A RENOVATION OF AN EXISTING FACILITY. IT IS THE INTENT OF THE DEMOLITION DRAWING TO LEAVE ALL MATERIALS OUTSIDE THE LIMITS OF THIS CONTRACT IN EXISTING OPERATING CONDITION.
2. DO NOT SCALE DRAWINGS. FIELD VERIFY ALL DIMENSIONS PRIOR TO STARTING WORK.
3. BEFORE SUBMITTING HIS BID THE CONTRACTOR SHALL VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS UNDER WHICH THE PROJECT IS TO BE COMPLETED.
4. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS, OMISSIONS OR ERRORS HE MAKES AS A RESULT ON HIS FAILURE TO BECOME FULLY FAMILIAR WITH THE EXISTING CONDITIONS.
5. IT IS NOT THE INTENT OF THESE DRAWINGS TO SHOW EVERY PIECE OF EQUIPMENT, PIPING OR CONDUIT TO BE REMOVED. EQUIPMENT NOT BEING USED SHALL BE REMOVED INCLUDING ALL ASSOCIATED HANGARS, SUPPORTS, PIPES, DUCTS, CONDUITS, WIRES AND CONTROLS BACK TO THE POINT OF ORIGIN.
6. NO EQUIPMENT, PIPING OR CONDUIT SHALL BE ABANDONED IN PLACE UNLESS SPECIFICALLY NOTED.
7. PROPERLY DISPOSE OF ALL DEMOLISHED EQUIPMENT AND MATERIALS IN COMPLIANCE WITH CODES AND REGULATIONS.
8. RELOCATE EXISTING EQUIPMENT, PIPING, WIRING AND RELATED SYSTEMS TO REMAIN AS REQUIRED FOR CONSTRUCTION. EXTEND FEEDER/CONDUIT AND PROVIDE RECONNECTIONS FOR SYSTEM TO BE FULLY OPERATIONAL. ALL RELOCATED EQUIPMENT SHALL BE PROTECTED DURING CONSTRUCTION.
9. PROVIDE TEMPORARY CONNECTIONS AND SYSTEM MODIFICATIONS AS REQUIRED FOR CONSTRUCTION.
10. INCLUDE ALL WORK REQUIRED TO ALLOW PHASED CONSTRUCTION WHERE NECESSARY. COORDINATE WITH OWNER.
11. CONTRACTOR IS RESPONSIBLE OF PATCHING, REPAIRING, CAPPING, ETC. PER DEMOLITION AND CONSTRUCTION.
12. RESTORE WORK AREA TO A CONDITION MATCHING EXISTING. ALL PAVING AND SURFACES SHALL MATCH EXISTING.

CALL BEFORE YOU DIG
1-800-922-4455
CALL NO LESS THAN TWO FULL WORKING DAYS AND NO MORE THAN 30 DAYS PRIOR TO START OF EXCAVATION MONDAY THRU FRIDAY, 7AM TO 5PM

EXISTING FUEL OIL STORAGE

CONTRACTOR SHALL PROVIDE PRICING TO REMOVE THE FUEL OIL CURRENTLY LOCATED IN THE STORAGE TANK AND STORE IT IN A TANKER ON SITE. CONTRACTOR SHALL PROVIDE ALTERNATE PRICING TO REMOVE FUEL OIL CURRENTLY LOCATED IN TANK AND REDISTRIBUTE TO OTHER TOWN OWNED TANKS.

