

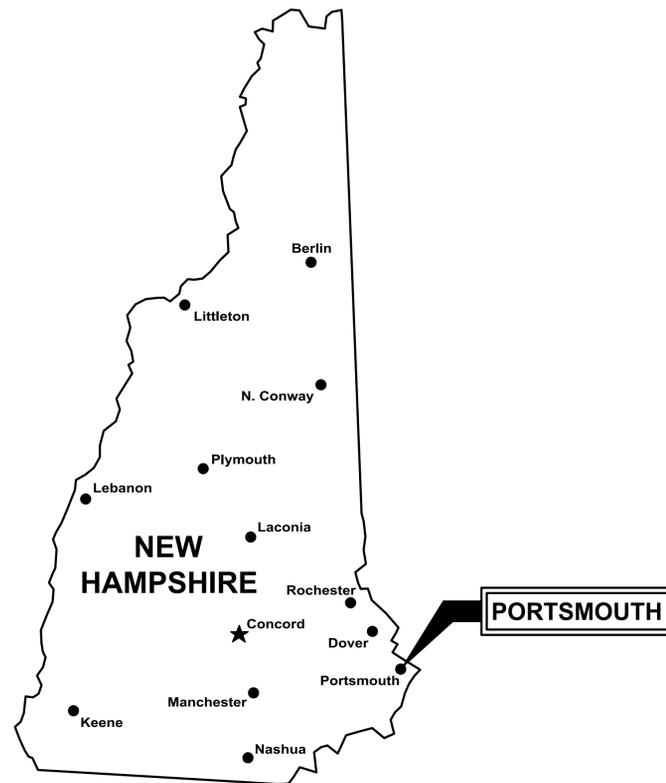
# CITY OF PORTSMOUTH, NEW HAMPSHIRE

## DEPARTMENT OF PUBLIC WORKS

# SAGAMORE AVENUE SEWER EXTENSION PROJECT

NOVEMBER 2021  
CITY CONTRACT NO. 12-22  
CWSRF #CS-330106-17

## RE-BID CONTRACT DRAWINGS



### DRAWING INDEX

#### GENERAL

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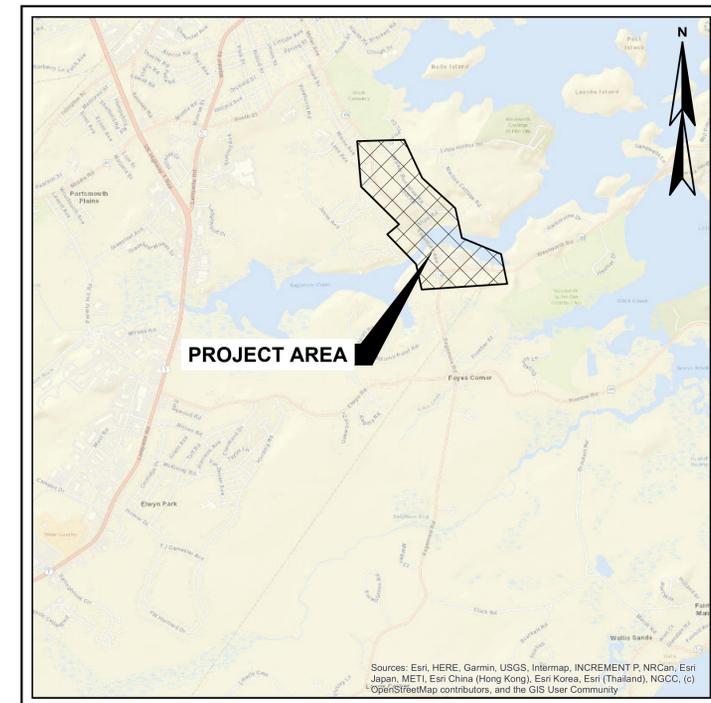
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COVER SHEET



LOCATION PLAN  
SCALE: 1"=2,000'

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FOR REVIEW \_\_\_\_\_

FOR BIDDING NOVEMBER 2021

WP PROJECT No. 11304C

GENERAL NOTES

- 1. THE OWNER WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS LISTED IN THE SUPPLEMENTARY OR SPECIAL CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL OBTAINED PERMITS ARE AVAILABLE FOR REVIEW FROM THE OWNER. ALL OTHER PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHTS OF WAY AND EASEMENTS. THE CONTRACTOR SHALL HAVE THE NECESSARY EASEMENTS AND RIGHTS OF WAY SECURED PRIOR TO THE COMMENCEMENT OF THE WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH EASEMENT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL RIGHTS-OF-WAY AND EASEMENTS ARE AVAILABLE FOR REVIEW FROM THE OWNER.
3. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW AT ALL TIMES. CONTRACTOR SHALL INSTALL AND MAINTAIN TRAFFIC CONTROL SIGNS IN ACCORDANCE WITH THE MUTCD AND ALL STATE AND LOCAL REGULATIONS. THE CONTRACTOR IS REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN TO THE OWNER PRIOR TO COMMENCING CONSTRUCTION. THE POLICE DEPARTMENT AND FIRE DEPARTMENT ARE TO BE NOTIFIED AT LEAST 24-HOURS IN ADVANCE OF ANY STREET CLOSING OR DETOUR. REFER TO SPECIFICATION SECTION 01570.
4. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
5. CONTRACTOR SHALL COMPLY WITH THE COORDINATION REQUIREMENTS AND RELATED COSTS, IF ANY, AS SPECIFIED IN SPECIFICATION SECTION 01050.
6. CONTRACTOR SHALL NOTE THAT, IN GENERAL, ALL EXISTING CONDITION INFORMATION ON THE DRAWINGS ARE SHOWN WITH A LIGHTER LINE WEIGHT AND WITH A DOTTED TEXT. THE EXISTING CONDITIONS TOPOGRAPHIC SURVEY ENDS AT THE LIMIT OF THE RIGHT-OF-WAY. PHOTOS ARE INCLUDED AS AN APPENDIX TO THE SPECIFICATION TO FURTHER HIGHLIGHT EXISTING CONDITIONS ON PRIVATE PROPERTY. SEPTIC TANKS ARE SHOWN IN AN APPROXIMATE LOCATION ONLY AND HAVE NOT BEEN SURVEYED.
7. ALL EXISTING SEWER, STORM DRAIN LINES, AND WATER MAINS LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS CALLED FOR ABANDONMENT ON THE DRAWINGS. ANY EXISTING SEWERS, STORM DRAIN LINES, CULVERTS, OR WATER MAINS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER, EXCEPT WHEN IN DIRECT CONFLICT WITH THE NEW SEWER OR WHEN NOT SHOWN OR INDICATED.
8. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. INJURY TO ANY SUCH STRUCTURES CAUSED BY OR RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE RESPECTIVE UTILITY.
9. IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48-HOUR NOTICE TO THE RESPECTIVE UTILITY POLE OWNER. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES.
10. NEW HAMPSHIRE STATE HIGHWAYS: THE FOLLOWING ROADWAYS FALL WITHIN THE JURISDICTION OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION. ALL WORK CONDUCTED WITHIN THESE ROADWAYS SHALL CONFORM TO NHDOT STANDARDS AND ROAD OPENING PERMIT REQUIREMENTS. NEW HAMPSHIRE STATE HIGHWAYS WITHIN THE PROJECT AREA ARE AS FOLLOWS:
• ROUTE 1A (SAGAMORE AVENUE, SOUTH OF WENTWORTH HOUSE ROAD)
• ROUTE 1B (WENTWORTH HOUSE ROAD)
11. ALL TEST PITS WITHIN THE CITY RIGHTS-OF-WAY SHALL BE EXCAVATED PRIOR TO CONSTRUCTION LAYOUT AND RESULTS REPORTED TO THE ENGINEER FOR REVIEW FOR CONFORMANCE WITH THE PLANS. TESTS PITS ARE REQUIRED WHERE SHOWN ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER. TEST PITS WILL BE DUG PRIOR TO CONNECTING PROPOSED SEWERS TO EXISTING SEWERS. THE RESULTS OF TEST PITS DUG TO DETERMINE EXISTING SEWER ELEVATIONS AND LOCATIONS WILL BE REPORTED TO THE ENGINEER. ADJUSTMENTS TO INVERTS, LENGTHS, AND SLOPES OF PROPOSED SEWER MAY BE REQUIRED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF ALL PROPOSED LINES AND STRUCTURES AS SHOWN ON THE DRAWINGS. THE LAYOUT PLAN SHALL BE REVIEWED BY THE ENGINEER PRIOR TO CONSTRUCTION. PROPOSED CHANGES TO PRIVATE PROPERTY LAYOUT SHALL ALSO BE REVIEWED BY PROPERTY OWNER PRIOR TO CONSTRUCTION. THE HORIZONTAL ALIGNMENT OF THE NEW SEWERS AND FORCE MAINS MAY BE ADJUSTED IN THE FIELD SUBJECT TO PRIOR APPROVAL OF THE ENGINEER. ALL ELEVATIONS REFER TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1988 (NAV88). THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL ELEVATION REFERENCE INFORMATION PRIOR TO USE IN CONSTRUCTION.
12. LOW PRESSURE SEWER SERVICE CONNECTIONS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. THE ACTUAL NUMBER, LENGTH, AND LOCATION SHALL BE AS FIELD DETERMINED AT THE TIME OF CONSTRUCTION. FOR EVERY PROPERTY, A NEW LOW PRESSURE SEWER SERVICE WITH THE LATERAL ASSEMBLY SHALL BE INSTALLED FROM THE NEW LOW PRESSURE SEWER MAIN LINE BACK TO THE PROPERTY LINE OR THE EDGE OF THE PERMANENT EASEMENT BUT NO CLOSER THAN 5-FEET TO EXISTING BUILDINGS. THE NEW LOW PRESSURE SEWER SERVICES SHALL BE 1.5-INCH DIAMETER UNLESS OTHERWISE INDICATED. FOR EACH PROPERTY THAT CHOSE TO CONNECT TO THE LOW PRESSURE SEWER SYSTEM, A NEW LOW PRESSURE SEWER SERVICE SHALL BE INSTALLED FROM THE LATERAL ASSEMBLY TO THE NEW GRINDER PUMP STATION, WHICH SHALL NOT BE CLOSER THAN 5-FEET TO THE EXISTING BUILDINGS.
13. GRAVITY SEWER SERVICE CONNECTIONS UPSTREAM OF THE GRINDER PUMPS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. THE ACTUAL NUMBER, LENGTH, AND LOCATION SHALL BE AS FIELD DETERMINED AT THE TIME OF CONSTRUCTION. FOR EACH PROPERTY THAT CHOOSES TO CONNECT TO THE LOW PRESSURE SEWER SYSTEM, A GRAVITY SEWER SERVICE SHALL BE INSTALLED FROM THE NEW GRINDER PUMP STATION TO THE EXISTING SEPTIC CONNECTION, WHICH MAY BE OUTSIDE OF THE BUILDING OR INSIDE THE FOUNDATION. FOR EACH PROPERTY THAT CHOOSES TO CONNECT TO THE GRAVITY SEWER SYSTEM, A SEWER SERVICE SHALL BE INSTALLED. THE NEW GRAVITY SEWER SERVICES SHALL MATCH EXISTING DIAMETER UNLESS OTHERWISE INDICATED. THE MINIMUM GRAVITY SEWER SERVICE SHALL BE A 4-INCH DIAMETER.
14. INSULATE OVER ANY GRAVITY SEWER, FORCE MAIN, OR SEWER SERVICES WHEN COVER IS LESS THAN 6 FEET IN ROADWAYS AND 4 FEET IN CROSS COUNTRY AREAS, OR THERE IS LESS THAN 2 FEET BETWEEN THE PIPELINE AND A CULVERT.
15. FOR LOCAL ROADS, INITIAL PAVING SHALL BE CONDUCTED WITHIN TWO WEEKS OF COMPLETION OF PLACEMENT OF FINAL BACKFILL UNLESS OTHERWISE AUTHORIZED BY ENGINEER. FOR NHDOT ROADS, ALL EXCAVATIONS WITHIN PAVED AREAS ARE TO BE PAVED BY END OF THE DAY ON FRIDAY WITH TEMPORARY BINDER. REFER TO INITIAL TRENCH PAVING DETAIL ON SHEET C-17. SEE NOTES ON SHEET C-17 FOR MORE DETAILS. FOR ALL ROADS, INITIAL PAVEMENT SHALL BE INSTALLED AND MAINTAINED BY CONTRACTOR FOR A MINIMUM PERIOD OF ONE WINTER BEFORE FINAL PAVEMENT IS PLACED. FINAL PAVEMENT MAY BE PLACED OVER THE INITIAL PAVING PROVIDED INITIAL PAVING COURSE IS IN GOOD REPAIR. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND SHIMMING THE INITIAL PAVEMENT AS NECESSARY TO ACCEPT THE FINAL PAVING COURSE. IF CONDITIONS WARRANT, THE CONTRACTOR MAY BE REQUIRED TO REMOVE AND REPLACE INITIAL PAVING PRIOR TO FINAL PAVING.
16. FORCE MAINS SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS INDICATED ON THE DRAWINGS. NO CRESTS IN NEW PIPING WILL BE PERMITTED UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL BENDS AND FITTINGS SHALL BE SUITABLY MECHANICALLY JOINT RESTRAINED WITH PRECAST CONCRETE THRUST BLOCKS.
17. CONTRACTOR SHALL COORDINATE ALL PRIVATE PROPERTY WORK INCLUDING BUT NOT LIMITED TO ELECTRICAL AND PLUMBING INSPECTIONS AND IMPROVEMENTS, PRE-BLAST SURVEYS AND RADON TESTING.
18. PAY LIMITS FOR SITE RESTORATION SHALL EXTEND 2 FEET BEYOND EITHER SIDE OF TRENCH PAY LIMITS.
19. ALL WORK IN THE RIGHT OF WAY IS INCLUDED IN THE BASE BID UNLESS OTHERWISE NOTED

EXISTING SITE CONDITIONS

- 1. THE LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES, AS SHOWN ON THE DRAWINGS, ARE APPROXIMATE AND MAY NOT BE COMPLETE. NO GUARANTEE IS MADE THAT UTILITIES OR STRUCTURES WILL BE ENCOUNTERED WHERE SHOWN, OR THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. ALL LOCATIONS AND SIZES OF EXISTING UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD WITH TEST PITS AS REQUIRED PRIOR TO BEGINNING CONSTRUCTION OF NEW FACILITIES OR PIPING THAT MAY BE AFFECTED. THE CONTRACTOR WILL REALIGN NEW PIPE LOCATIONS AS REQUIRED TO CONFORM TO EXISTING LINES AND AS APPROVED BY THE ENGINEER.

- 2. BELOW GRADE UTILITY INFORMATION IS BASED ON INFORMATION PROVIDED BY EACH UTILITY. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING UTILITIES IN THE FIELD WITH THE RESPECTIVE UTILITY COMPANY REPRESENTATIVE PRIOR TO COMMENCING WORK. REFER TO SPECIFICATION SECTION 01050. ADDITIONAL TEST PITS, BEYOND THOSE SHOWN, MAY BE REQUIRED. UTILITY CONTACTS ARE AS FOLLOWS:

Table with utility contact information including EVERSOURCE, CITY OF PORTSMOUTH, 680 PEVERLY HILL ROAD, PORTSMOUTH, NH 03801, TEL. (603) 427-1530.

COLIDATED ELECTRICAL DISTRIBUTORS
79 CARL DR.
MANCHESTER, NH 03103
TEL. (603) 669-6427

Table with utility contact information including FAIRPOINT COMMUNICATIONS, 521 E. MOREHEAD STREET, SUITE 230, BOX 29, CHARLOTTE, NH 28202, TEL. (800) 430-2222.

SITE DEMOLITION

- 1. REFER TO SPECIFICATION SECTION 01010A WHICH CONTAINS INFORMATION ON CONSTRAINTS OF CONSTRUCTION SEQUENCING.
2. DEMOLISH/REMOVE EXISTING PIPING AS REQUIRED FOR CONSTRUCTION OF NEW FACILITIES. ALL PIPING, EQUIPMENT AND MATERIALS TO BE DEMOLISHED AND/OR REMOVED FROM SERVICE SHALL BE COORDINATED WITH THE OWNER AND ENGINEER BEFORE COMMENCING THAT WORK. EXISTING PIPING THAT NEEDS TO BE REMOVED TO CONSTRUCT THE NEW FACILITIES, BUT IS TO REMAIN, SHALL BE REINSTALLED/REPLACED AS NEEDED. EXISTING PIPES AND CONDUIT DESIGNATED AS "ABANDONED" MAY BE REMOVED IF THE CONTRACTOR SO CHOOSES. IF ABANDONED PIPE CONFLICTS WITH NEW SITE PIPING OR FACILITIES, THEN A PORTION OF THE ABANDONED PIPE SHALL BE REMOVED, AND THE NEW ENDS OF ABANDONED PIPE CAPPED OR PLUGGED WITH CONCRETE.
3. SEVERING OF EXISTING UTILITIES FOR ABANDONMENT, OR REMOVAL OF A SEGMENT FROM SERVICE, SHALL BE PERFORMED IN SUCH A MANNER AS TO ALLOW THE REMAINING ACTIVE SEGMENT TO CONTINUE IN ITS INTENDED SERVICE. CAP ACTIVE SEGMENTS WITH APPROPRIATE FITTINGS, JOINT RESTRAINT, ETC. TO ENSURE THEIR INTEGRITY. PLUG ENDS OF ABANDONED PIPE SEGMENTS WITH CONCRETE UNLESS SPECIAL CIRCUMSTANCES DICTATE PLUGGING ABANDONED PIPES WITH BLIND FLANGES, RESTRAINED MECHANICAL JOINT PLUGS, ETC. AS APPROPRIATE. PIPES WITH DIAMETERS GREATER THAN 8-INCHES SHALL BE FILLED WITH FLOWABLE FILL.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL DEMOLISHED PIPING, EQUIPMENT AND MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS.
5. SEPTIC TANKS ARE TO BE ABANDONED IN PLACE. EXISTING SEPTIC TANKS ARE TO BE PUMPED OUT BY A LICENSED SEPTAGE HAULER, DRILL HOLES PLACED IN BOTTOM OF TANK, THEN REFILLED WITH SAND. SAND SHOULD FILL ALL COMPARTMENTS AND HATCH COVERS OF THE TANK UP TO THE ROOF OF THE TANK. SEPTIC LINES SUPPLYING THE LEACH FIELD ARE TO BE FILLED IN PLACE. VENT STACKS ARE TO BE REMOVED AND FILLED WITH SOIL.
6. THE CONTRACTOR SHALL KEEP A RECORD OF DEMOLITION AS PART OF THE PROJECT RECORD DOCUMENTS IN ACCORDANCE WITH SPECIFICATION SECTION 01720.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE DISPOSAL OF FLOWS RESULTING FROM PRECIPITATION AND GROUNDWATER DEWATERING OPERATIONS.

SITE CLEARING, GRUBBING AND GRADING

- 1. FOR WORK IN NON-NHDOT RIGHTS-OF-WAY, STRIPPING OF TOPSOIL (LOAM) SHALL BE IN ACCORDANCE WITH SPECIFICATIONS SECTION 02115. FOR WORK WITHIN NHDOT RIGHTS-OF-WAY, REFER TO NOTES ON SHEETS C-3A AND C-4.
2. CONTRACTOR SHALL MINIMIZE CLEARING OPERATIONS. CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02110. CLEARING LIMITS SHALL BE AS INDICATED ON THE DRAWINGS. ALL CLEARING AND GRUBBING MATERIAL SHALL BE THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT A SITE PROVIDED BY THE CONTRACTOR IN COMPLIANCE WITH ALL STATE AND LOCAL LAWS.
3. THE CONTRACTOR SHALL FOLLOW ALL ENDANGERED SPECIES ACT 4(D) RULES REGARDING THE NORTHERN LONG EARED BAT. THIS INCLUDES AVOIDANCE OF TREE REMOVAL DURING THE MONTHS OF JUNE AND JULY. CONTRACTOR SHALL PLAN ACCORDINGLY.
4. CONTRACTOR SHALL PROVIDE PROPER EROSION CONTROL AND DRAINAGE MEASURES IN ALL AREAS OF WORK, AND CONFINE SOIL SEDIMENT TO WITHIN THE LIMITS OF EXCAVATION AND GRADING. PRIOR TO BEGINNING EXCAVATION WORK, EROSION CONTROL FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE ACTUAL LIMITS OF GRUBBING AND/OR GRADING, AND AS SHOWN ON THE DRAWINGS. EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS ARE A MINIMUM, CONTRACTOR SHALL TAKE ALL OTHER NECESSARY MEASURES. EROSION CONTROL FENCE SHALL ALSO BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE TOPSOIL STOCKPILES. ALL DISTURBED EARTH SURFACES SHALL BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION. ALL INSTALLED EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE END OF THE PROJECT. REFER TO SPECIFICATION SECTION 02270.
5. ALL STORM DRAINAGE INLETS SHALL BE PROTECTED TO PREVENT ENTRY OF SEDIMENT FROM RUNOFF WATERS DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL COLLECTED SEDIMENT, AND THAT WHICH COLLECTS IN THE STORM DRAIN SYSTEM. REFER TO THE CIVIL DETAIL DRAWINGS.
6. THE GEOTECHNICAL DATA REPORT FOR THE PROJECT SITE IS INCLUDED IN APPENDIX A AND IS DESCRIBED IN SPECIFICATION SECTION 00800 (SUPPLEMENTAL CONDITIONS).
7. CONTRACTOR SHALL CONTROL DUST ON THE CONSTRUCTION SITE TO A REASONABLE LIMIT, AS DETERMINED BY THE ENGINEER, AND AS OUTLINED IN SPECIFICATION SECTION 01562.
8. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH, DEBRIS OR OTHER CONSTRUCTION MATERIAL ON PUBLIC OR PRIVATE STREETS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE ASSOCIATED CLEAN UP.
9. ALL CATCH BASINS, MANHOLES, VALVE PITS, VALVE BOXES AND OTHER BURIED FACILITIES WITH SURFACE ACCESS SHALL BE ADJUSTED TO MATCH FINAL GRADES, UNLESS OTHERWISE INDICATED.
10. THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY IN ANY MATERIALS TAKEN FROM ANY EXCAVATION. SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED IN THE PROJECT, WITH EXCESS MATERIAL DISPOSED OF AT A WASTE FACILITY LOCATION PROVIDED BY THE CONTRACTOR. THESE PROVISIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF OBLIGATIONS TO PROPERLY DISPOSE OF AND REPLACE ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING. THE CONTRACTOR SHALL DISPOSE OF UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CONTRACT DOCUMENTS.

- 11. CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, TO THE SATISFACTION OF THE OWNER AND ENGINEER.
12. WHERE EXISTING PAVEMENT IS REMOVED AND REPLACED, MATCH EXISTING GRADES TO THE EXTENT POSSIBLE. COORDINATE FINE GRADING WITH THE ENGINEER.
13. ALL ROAD AND DRIVE CROSS SLOPES SHALL PITCH 1/4-INCH PER FOOT MINIMUM. ALL PAVED SURFACES SHALL PITCH 1% UNLESS OTHERWISE NOTED. REFER TO THE CIVIL DETAIL DRAWINGS.
14. ALL NON-ROADWAY AREAS THAT ARE EXCAVATED, FILLED, OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE TOPSOILED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED. THE TOP 6 INCHES OF SOIL SHALL BE TOPSOIL. REFER TO SPECIFICATION SECTION 02480, LANDSCAPING.

CIVIL SITE LAYOUT

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THIS PROVIDED LAYOUT INFORMATION THROUGHOUT THE COURSE OF CONSTRUCTION. REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
2. REFER TO THE PLAN AND PROFILE DRAWINGS FOR ADDITIONAL LAYOUT INFORMATION.
3. THE LOCATIONS AND LIMITS OF ALL ON-SITE WORK AND STORAGE AREAS SHALL BE REVIEWED/COORDINATED WITH, AND ACCEPTABLE TO, THE OWNER AND ENGINEER. THE CONTRACTOR SHALL LIMIT ACTIVITIES TO THESE AREAS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING AND RESETTling ALL EXISTING PROPERTY MONUMENTATION DISTURBED BY CONSTRUCTION. THIS WORK SHALL BE DONE BY A LAND SURVEYOR REGISTERED IN THE STATE OF NEW HAMPSHIRE, AT NO ADDITIONAL COST TO THE OWNER.
5. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
6. ALL ELEVATIONS REFER TO THE NAVD88 DATUM. ORIENTATION IS GRID NORTH ON THE NEW HAMPSHIRE STATE PLANE (2800) NAD83 (2011) COORDINATE SYSTEM. PROJECT BENCH MARK IS SHOWN ON THE DRAWINGS AND IS DERIVED FROM ON-THE-GROUND INSTRUMENT SURVEY. CONTRACTOR SHALL VERIFY BENCHMARK ELEVATIONS PRIOR TO USING IN CONSTRUCTION.
7. EXISTING CONDITIONS SITE PLAN WITHIN THE RIGHTS OF WAY ONLY DEVELOPED FROM SURVEY DRAWING PREPARED BY DOUCET SURVEYING, DATED 11/14/2019, AND EXISTING RECORD DRAWING INFORMATION. PRIVATE PROPERTIES NOT WERE SURVEYED.
8. WETLAND BOUNDARIES DELINEATED BY MARC JACOBS IN WINTER 2021.
9. THE FEMA 100-YEAR FLOODPLAIN ELEVATION FOR THE PROJECT AREA IS 8 FT (NAV88B).

CIVIL SITE PIPING

- 1. NEW PENETRATIONS THROUGH EXISTING PRIVATE PROPERTY STRUCTURE WALLS SHALL BE BY CORING MACHINE AND LINK-TYPE SEALS, UNLESS OTHERWISE INDICATED. OPENINGS TO BE COMPATIBLE WITH REQUIRED PIPING AND STANDARD LINK SEAL SIZES. SEWER MANHOLES CAN USE KOR-N-SALE BOOTS. SEE DETAIL DRAWINGS.
2. MANHOLES ARE 4-FEET IN DIAMETER UNLESS OTHERWISE NOTED. THE TOP OF MANHOLE FRAMES SHALL BE SET FLUSH WITH FINISH GRADE, UNLESS OTHERWISE NOTED ON DRAWINGS. SEWER MANHOLE INVERTS SHOWN ON THE DRAWINGS ARE TO THE INSIDE FACE OF THE MANHOLE.
3. CONTRACTOR SHALL RE-SHAPE INVERTS AS REQUIRED WHEN CONNECTING INTO EXISTING MANHOLES.
4. REFER TO SPECIFICATION SECTION 02200 FOR PIPE AND STRUCTURE BEDDING AND BACKFILL REQUIREMENTS.
5. COMPACTION TESTS WILL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 02200. ANY SETTLEMENT OCCURRING WITHIN ONE-YEAR OF FINAL COMPLETION OF THE WORK SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
6. OPEN TRENCHES IN THE ROADWAY MUST BE BACKFILLED AT THE END OF THE WORKDAY. OPEN TRENCHES OUTSIDE OF THE WAY MAY BE LEFT OPEN IF THE CONTRACTOR PROVIDES ADEQUATELY SAFE BARRICADING AND LIGHTS
7. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPE AS REQUIRED TO COMPLETE THE CONNECTION. CONTRACTOR SHALL VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. TEST PITS SHALL BE USED AS REQUIRED.
8. ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED ON THE CIVIL EXISTING CONDITIONS AND DEMOLITION PLAN. ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
9. WHERE SEWERS AND WATER MAINS MUST CROSS, WATER LINES SHOULD BE INSTALLED OVER WASTEWATER LINES. A MINIMUM SEPARATION OF 18-INCHES BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF THE WASTEWATER LINE SHALL BE MAINTAINED. WHERE A WATER LINE CROSSES UNDER A WASTEWATER LINE, A FULL LENGTH OF PIPE SHALL BE CENTERED ABOVE THE WATER LINE SO THAT BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE.
10. PVC SDR 21 IS AN ACCEPTABLE ALTERNATE IN PLACE OF USING HDPE SDR 11 FOR LOW PRESSURE SEWERS THROUGHOUT THE PROJECT. IF PVC SDR 21 IS USED IN LIEU OF HDPE FOR LOW PRESSURE SEWERS, THE PVC PIPING, FITTINGS, AND ADAPTERS WILL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. ONLY ONE PIPE MATERIAL SHALL BE ACCEPTED FOR ALL PROPOSED LOW PRESSURE SEWERS.

WATER MAIN GENERAL NOTES

- 1. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPE AS REQUIRED TO COMPLETE THE CONNECTION. CONTRACTOR SHALL VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. TEST PITS SHALL BE USED AS REQUIRED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF THE NEW WATER MAIN. LAYOUT SHALL BE REVIEWED AND ACCEPTED BY THE OWNER AND ENGINEER. THE NEW WATER MAIN MUST BE LOCATED WITHIN THE RIGHTS-OF-WAY SHOWN ON THE DRAWINGS.
3. MINIMUM DEPTH OF COVER SHALL BE 5'-0" AND MAXIMUM DEPTH OF COVER SHALL BE 7'-0" UNLESS SHOWN OTHERWISE ON THE DRAWINGS. THE NEW MAIN SHALL GENERALLY FOLLOW THE GROUND CONTOUR, HOWEVER, ABRUPT CHANGES IN GRADE SHALL BE AVOIDED. AT LOCAL HIGH POINTS OR WHERE AIR RELEASE VALVES ARE SHOWN, THE CONTRACTOR SHALL SLOPE NEW MAIN AS NEEDED TO MAINTAIN HIGH POINT AT AIR RELEASE VALVE. IF LEDGE IS ENCOUNTERED THE MINIMUM DEPTH OF COVER SHALL BE 5'-0".
4. IF MINIMUM COVER CANNOT BE ATTAINED DUE TO UTILITY CONFLICTS, THE DEPTH OF COVER SHALL NOT BE LESS THAN 4'-0" AND RIGID INSULATION OVER WATER MAIN PIPING AND FITTINGS SHALL BE USED AS DETAILED.
5. ALL BENDS, TEES, REDUCERS, AND PLUGS SHALL BE RESTRAINED BY USING CONCRETE THRUST BLOCKS AND GRIP-RINGS, RETAINER GLANDS, OR OTHER METHOD AS SHOWN ON THE DRAWINGS.
6. REFER TO SPECIFICATIONS FOR TESTING FOR THE COMBINATION PRESSURE AND LEAKAGE TESTS.
7. CONNECTIONS TO EXISTING WATER MAIN SHALL BE COORDINATED WITH THE OWNER.
8. ALL WATER MAINS THAT ARE DISCONNECTED FROM THE WATER SYSTEM AND ARE TO BE LEFT IN PLACE SHALL BE CAPPED WITH A M.J. CAP OR PLUG.

- 9. ALL EXISTING WATER SERVICES ARE TO BE CONNECTED TO THE NEW MAIN. EXISTING SERVICES, AS SHOWN ON THE DRAWINGS, ARE FOR THE CONTRACTOR'S REFERENCE. THE CONTRACTOR SHALL VERIFY LOCATION, SIZE AND TYPE OF ALL SERVICES. IF NOT LABELED ON THE PLAN, THE SERVICE SHALL BE ASSUMED TO BE A MINIMUM SERVICE SIZE OF 1-INCH.
10. SEWER VALVES SHALL OPEN LEFT, WATER VALVES SHALL OPEN RIGHT.

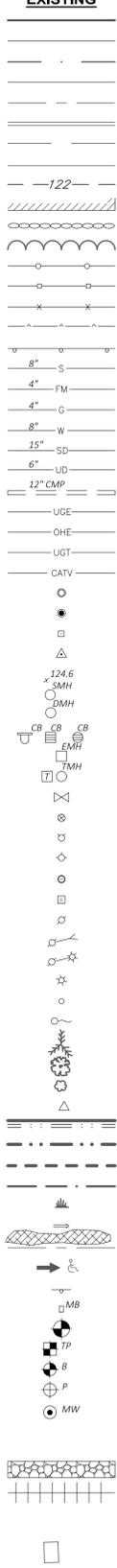
PROJECT PERMITS

- 1. THIS PROJECT IS SUBJECT TO THE CONDITIONS OF AN NHDES WETLANDS PERMIT, NHDES PERMIT AND CITY OF PORTSMOUTH CONDITIONAL USE PERMIT.
2. ALL WORK SHALL BE COMPLETED WITHIN THE LIMITS IDENTIFIED IN THE PERMIT APPLICATIONS. IN GENERAL, A 10 FT WIDTH OF EARTH DISTURBANCE WAS PERMITTED FOR PIPE INSTALLATION.

CIVIL ABBREVIATIONS

Table mapping symbols to abbreviations: & AND, Ø DIA, #, NO NUMBER, ABND ABANDONED, APP'D APPROVED, BLDG BUILDING, CB CATCH BASIN, CEN CENTER, CFS CUBIC FEET PER SECOND CAST IRON, CL CENTERLINE, CORR CORRUGATED METAL PIPE, CMP CLEANOUT, CO CONCRETE, CONC CORNER, CY CUBIC YARD, DEMO DEMOLITION, DMH DRAIN MANHOLE, DI DUCTILE IRON, DR DRAIN, DWG DRAWING, EOP EDGE OF PAVEMENT, EOTL EDGE OF TRAVEL LANE, ELEV ELEVATION, EMH ELECTRIC MANHOLE, FM FORCE MAIN, FT FEET, G GAS, GP GRINDER PUMP, HYD HYDRANT, IN INCH, INF INFLENT, INV INVERT, LBS POUNDS, MAX MAXIMUM, MH MANHOLE, MIN MINIMUM, MW MONITORING WELL, N NORTH, NGVD NATIONAL GEODETIC VERTICAL DATUM, N/A NOT AVAILABLE/APPLICABLE, NTS NOT TO SCALE, OD OUTSIDE DIAMETER, PC PERFORATED CLAY, PSF POUNDS PER SQUARE FOOT, PSI POUNDS PER SQUARE INCH, PS PRIMARY SLUDGE, PT POINT OF TANGENCY, PVC POLYVINYL CHLORIDE, RCP REINFORCED CONCRETE PIPE, RD ROAD, REQ'D REQUIRED, ROW RIGHT OF WAY, S SLOPE, SEWER, SF STORM DRAIN, SD SQUARE FEET, SMH SANITARY SEWER MANHOLE, STA STATION, STA STATION, T, XFMR TRANSFORMER, TBM TEMPORARY BENCH MARK, THK THICKNESS, THS TOP OF STRUCTURE, TYP TYPICAL, UD UNDERDRAIN, UG UNDERGROUND, UGE UNDERGROUND ELECTRIC, VC VITRIFIED CLAY, W WITH, W POTABLE WATER

EXISTING



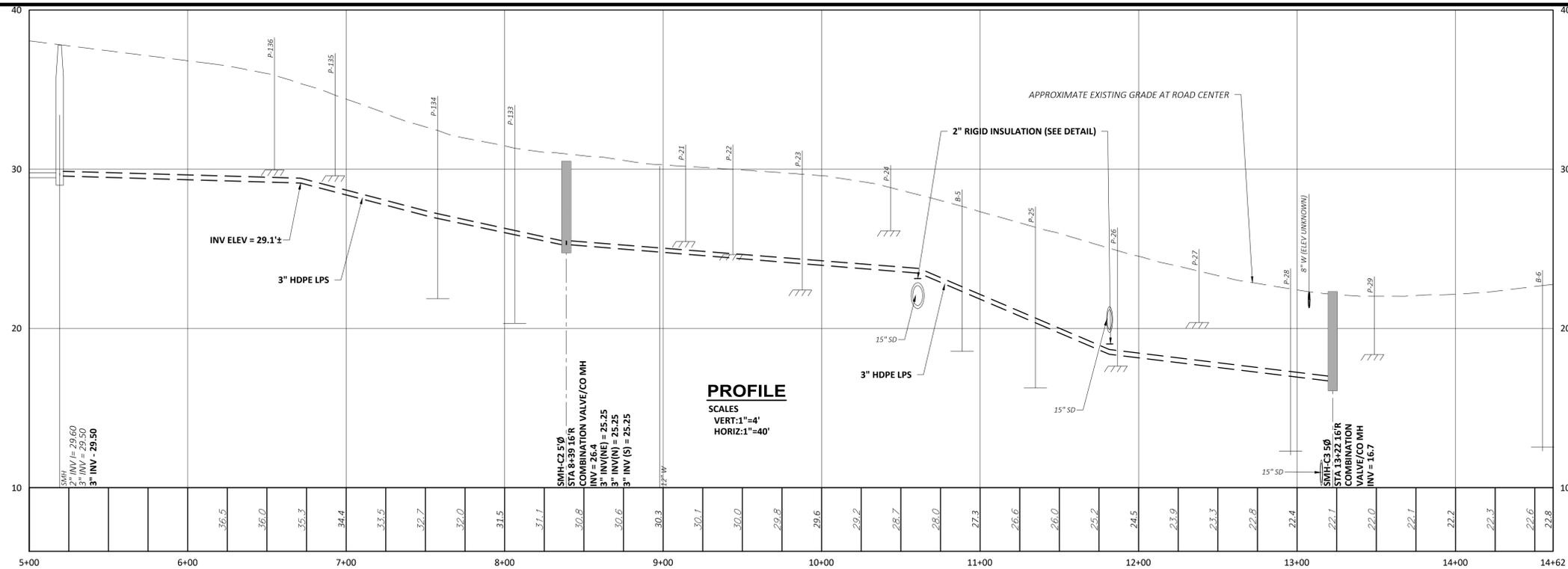
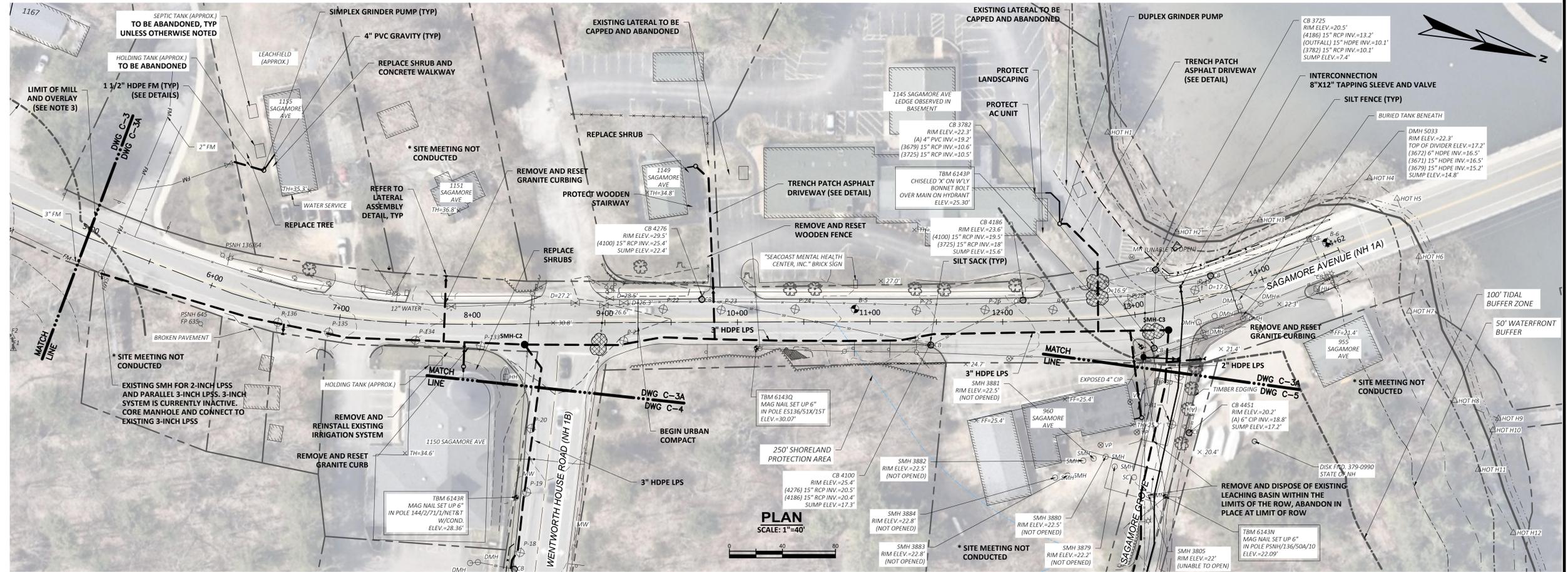
LEGEND



Project information block including: APP'D DATE, RE-BID CONTRACT DRAWINGS, NO, DESIGNED BY: J.L.O.C., CAD CORP.: J.M.I.C., C.D. FILED: K.L.O.B.E., CHECKED BY: M.T.H.E., DATE: 11-23-21, APPROVED BY: M.T.H.E., DATE: 11-23-21, PROJECT NO.: 11304C, WRIGHT-PIERCE logo, Engineering a Better Environment, 888.621.8156 | www.wright-pierce.com, CITY OF PORTSMOUTH, NH, SAGAMORE AVENUE SEWER EXTENSION PROJECT, GENERAL NOTES, LEGEND, AND ABBREVIATIONS, DRAWING, C-1







**NOTES:**

1. WORK OUTSIDE CITY OWNED EASEMENTS AND RIGHTS OF WAY ARE NOT AUTHORIZED UNTIL HOMEOWNER AND CITY SIGN OFFS ARE EXECUTED.
2. ALL AREAS (EXCEPT GRAVEL DRIVEWAYS) THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR AND ARE NOT TO BE PAVED OR FILLED WITH GRAVEL OR RIPRAP SHALL BE LOAMED, GRADED, FERTILIZED, SEEDED AND MULCHED. ALL AREAS ARE TO RECEIVE A MINIMUM OF 6" OF TOPSOIL. REFER TO SPECIFICATION SECTION 02480.
3. SEE DETAIL SHEETS FOR PAVING REQUIREMENTS.
4. ALL EXCAVATED TOPSOIL, OR IN THE ABSENCE OF TOPSOIL THE TOP 6 INCHES OF SOIL, WITHIN THE LIMITS OF STATE ROW SHALL BE PROPERLY RE-USED WITHIN THE LIMITS OF THE STATE ROW. ALL TEMPORARY STOCKPILES OF THE RE-USE MATERIAL SHALL BE LOCATED WITHIN THE STATE ROW, OR AS OTHERWISE APPROVED BY THE DISTRICT ENGINEER.
5. ALL ROW WORK ON SAGAMORE AVENUE SOUTH OF SAGAMORE CREEK SHALL BE PAID FOR UNDER BID ALTERNATE NO. 1 UNLESS OTHERWISE STATED.
6. ALL NON-ROW WORK ON SAGAMORE AVENUE SOUTH OF SAGAMORE CREEK SHALL BE PAID FOR UNDER BID ALTERNATE NO. 5 UNLESS OTHERWISE STATED.

| NO | RE-BID CONTRACT DRAWINGS | DATE  |
|----|--------------------------|-------|
| 1  |                          | 11-21 |

|                    |                    |
|--------------------|--------------------|
| DESIGNED BY: J.LOC | DESIGNED BY: J.LOC |
| CD: D.FUD          | CD: D.FUD          |
| CREATED BY: K.LOBE | CREATED BY: K.LOBE |
| DATE: 11-21        | DATE: 11-21        |
| PROJECT NO: 1304C  | PROJECT NO: 1304C  |

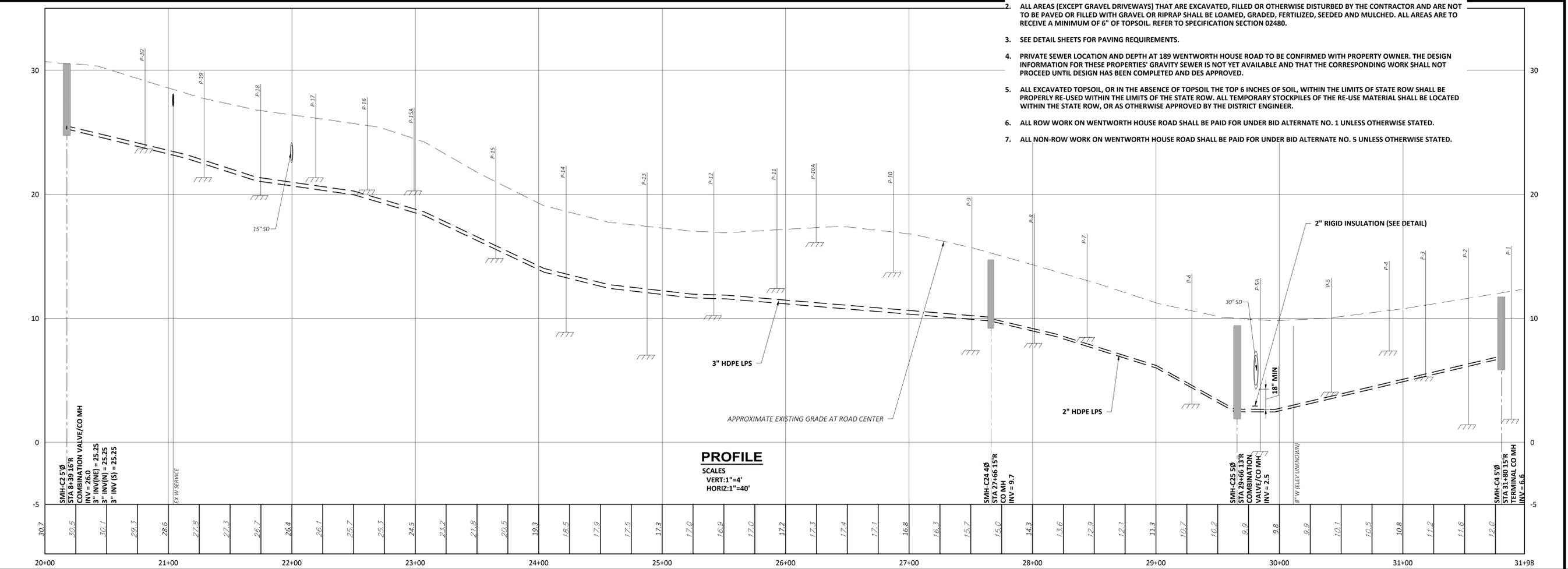
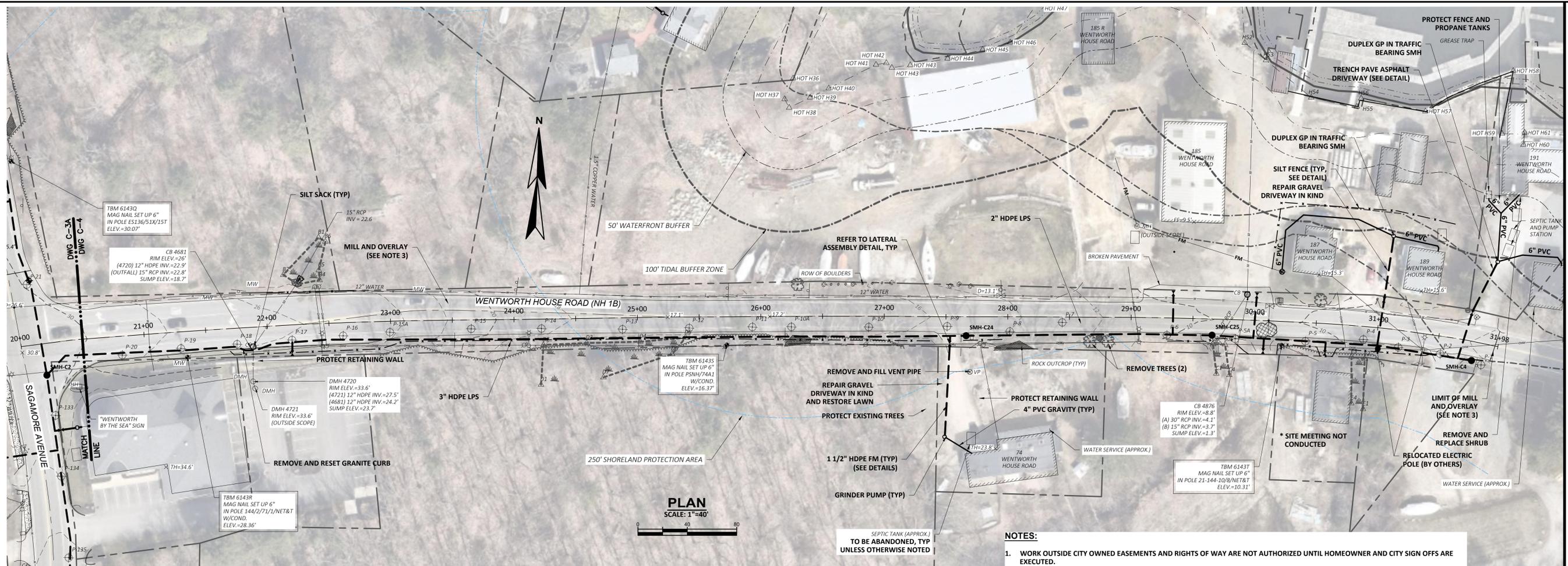


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**CITY OF PORTSMOUTH, NH**  
**SAGAMORE AVENUE SEWER EXTENSION**  
**PROJECT**

PLAN AND PROFILE: SAGAMORE AVE  
 (STA 5+00 TO STA 14+62)

**DRAWING**  
**C-3A**



- NOTES:**
1. WORK OUTSIDE CITY OWNED EASEMENTS AND RIGHTS OF WAY ARE NOT AUTHORIZED UNTIL HOMEOWNER AND CITY SIGN OFFS ARE EXECUTED.
  2. ALL AREAS (EXCEPT GRAVEL DRIVEWAYS) THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR AND ARE NOT TO BE PAVED OR FILLED WITH GRAVEL OR RIPRAP SHALL BE LOAMED, GRADED, FERTILIZED, SEEDED AND MULCHED. ALL AREAS ARE TO RECEIVE A MINIMUM OF 6" OF TOPSOIL. REFER TO SPECIFICATION SECTION 02480.
  3. SEE DETAIL SHEETS FOR PAVING REQUIREMENTS.
  4. PRIVATE SEWER LOCATION AND DEPTH AT 189 WENTWORTH HOUSE ROAD TO BE CONFIRMED WITH PROPERTY OWNER. THE DESIGN INFORMATION FOR THESE PROPERTIES' GRAVITY SEWER IS NOT YET AVAILABLE AND THAT THE CORRESPONDING WORK SHALL NOT PROCEED UNTIL DESIGN HAS BEEN COMPLETED AND DES APPROVED.
  5. ALL EXCAVATED TOPSOIL, OR IN THE ABSENCE OF TOPSOIL THE TOP 6 INCHES OF SOIL, WITHIN THE LIMITS OF STATE ROW SHALL BE PROPERLY RE-USED WITHIN THE LIMITS OF THE STATE ROW. ALL TEMPORARY STOCKPILES OF THE RE-USE MATERIAL SHALL BE LOCATED WITHIN THE STATE ROW, OR AS OTHERWISE APPROVED BY THE DISTRICT ENGINEER.
  6. ALL ROW WORK ON WENTWORTH HOUSE ROAD SHALL BE PAID FOR UNDER BID ALTERNATE NO. 1 UNLESS OTHERWISE STATED.
  7. ALL NON-ROW WORK ON WENTWORTH HOUSE ROAD SHALL BE PAID FOR UNDER BID ALTERNATE NO. 5 UNLESS OTHERWISE STATED.

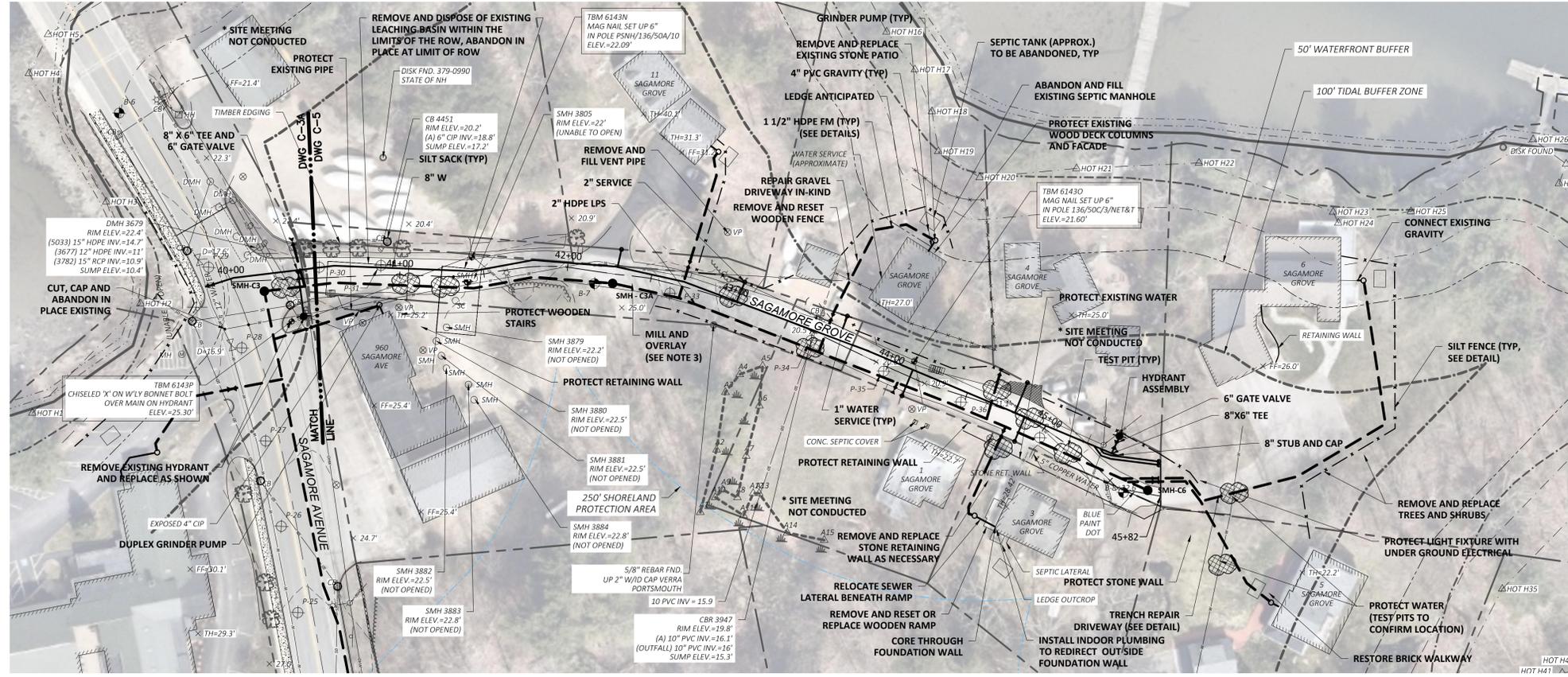
| NO | RE-BID CONTRACT DRAWINGS | DATE  |
|----|--------------------------|-------|
| 1  | M.THE                    | 11-21 |

DESIGNED BY: J.L.O.C.  
 CAD CORP.: J.M.I.C.  
 CHECKED BY: K.LOBE  
 DATE: 11-21 M.THE  
 PROJECT NO.: 1304C

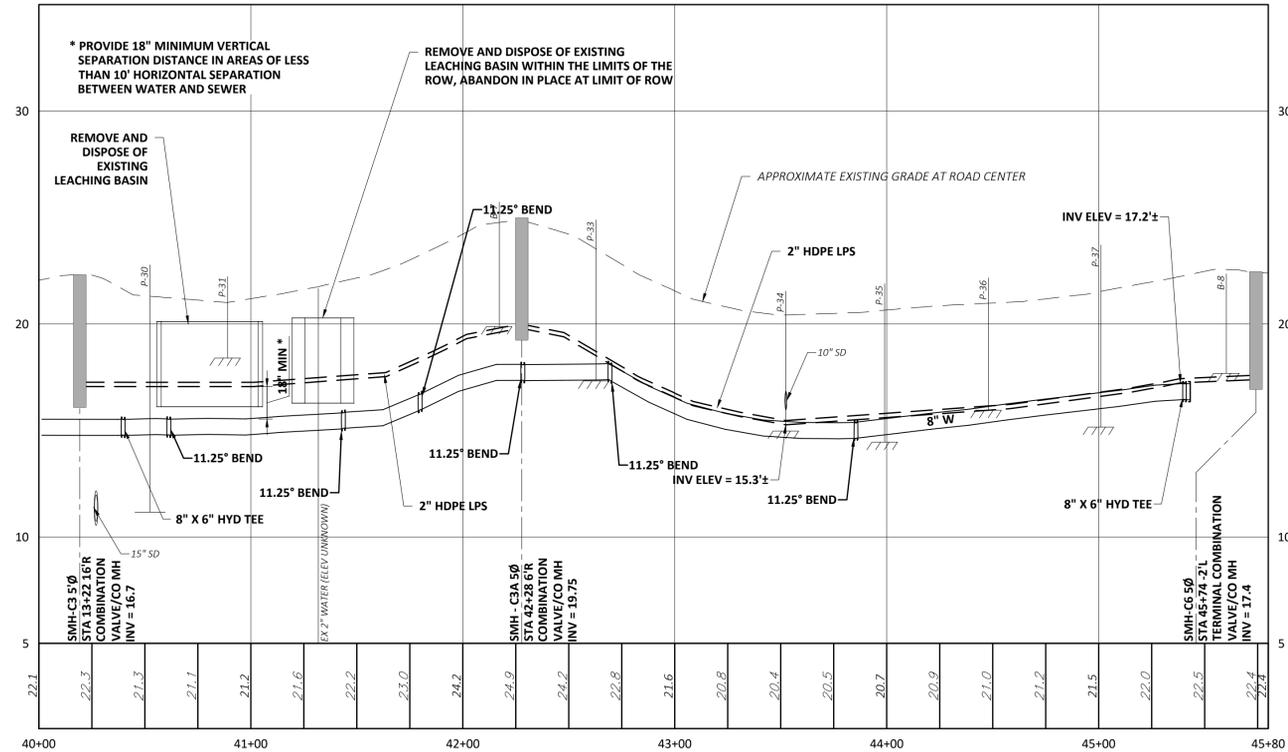


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**CITY OF PORTSMOUTH, NH**  
**SAGAMORE AVENUE SEWER EXTENSION PROJECT**  
 PLAN AND PROFILE: WENTWORTH HOUSE RD (STA 20+00 TO STA 31+98)  
**DRAWING C-4**



**PLAN**  
SCALE: 1"=40'



**PROFILE**

SCALE:  
VERT: 1"=4'  
HORIZ: 1"=40'

**NOTES:**

1. WORK OUTSIDE CITY OWNED EASEMENTS AND RIGHTS OF WAY ARE NOT AUTHORIZED UNTIL HOMEOWNER AND CITY SIGN OFFS ARE EXECUTED.
2. ALL AREAS (EXCEPT GRAVEL DRIVEWAYS) THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR AND ARE NOT TO BE PAVED OR FILLED WITH GRAVEL OR RIPRAP SHALL BE LOAMED, GRADED, FERTILIZED, SEEDED AND MULCHED. ALL AREAS ARE TO RECEIVE A MINIMUM OF 6" OF TOPSOIL. REFER TO SPECIFICATION SECTION 02480.
3. SEE DETAIL SHEETS FOR PAVING REQUIREMENTS.
4. TEMPORARY WATER REQUIRED TO 2, 4, & 11 SAGAMORE GROVE.
5. ALL ROW WORK ON SAGAMORE GROVE SHALL BE PAID FOR UNDER BID ALTERNATE NO. 1 UNLESS OTHERWISE STATED.
6. ALL NON-ROW WORK ON SAGAMORE GROVE SHALL BE PAID FOR UNDER BID ALTERNATE NO. 5 UNLESS OTHERWISE STATED.

| NO | REVISIONS | DATE |
|----|-----------|------|
|    |           |      |
|    |           |      |
|    |           |      |
|    |           |      |

|                     |                    |
|---------------------|--------------------|
| DESIGNED BY: J.LLOC | PROJECT NO.: 1304C |
| CAD CORP: J.MIC     |                    |
| CHKD BY: D.FUD      |                    |
| CHECKED BY: K.LOBE  |                    |
| DATE: 11-21         |                    |
| APPROVED BY: M.THE  |                    |
| DATE: 11-21         |                    |

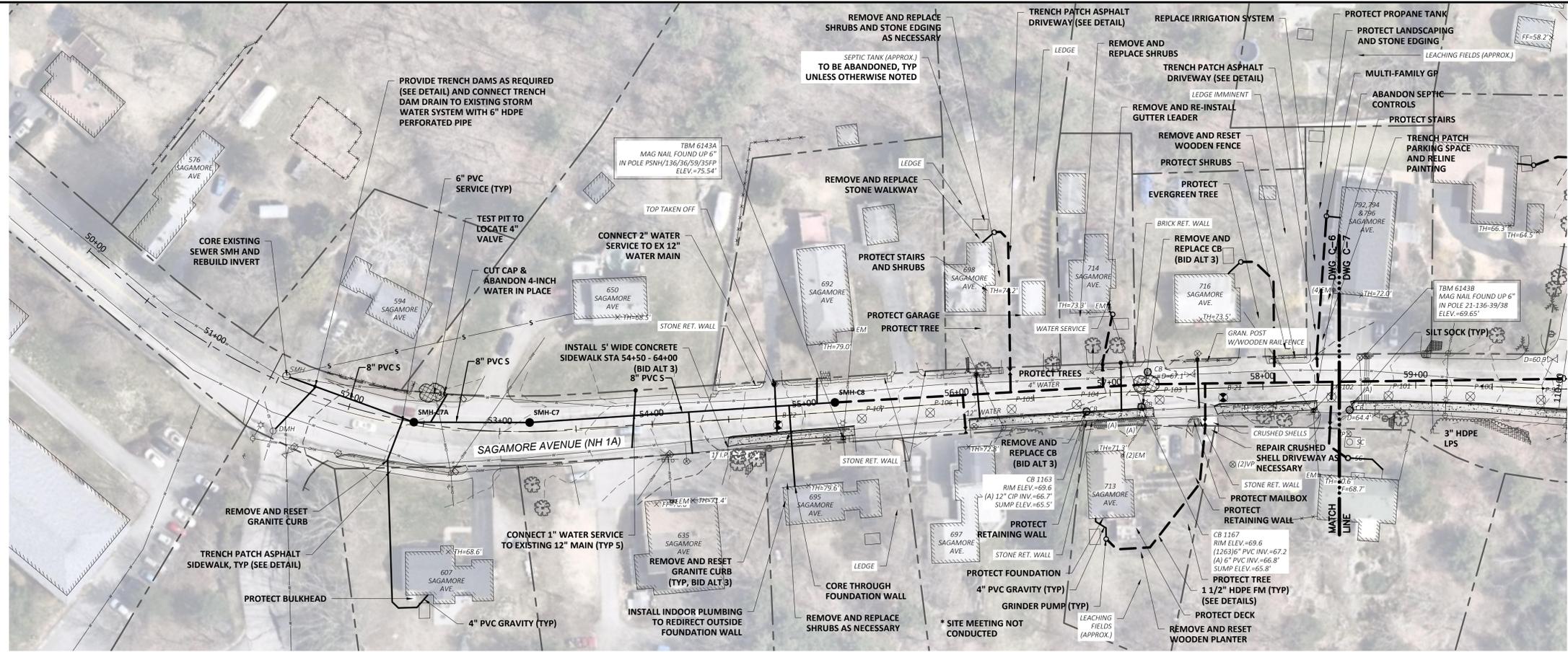


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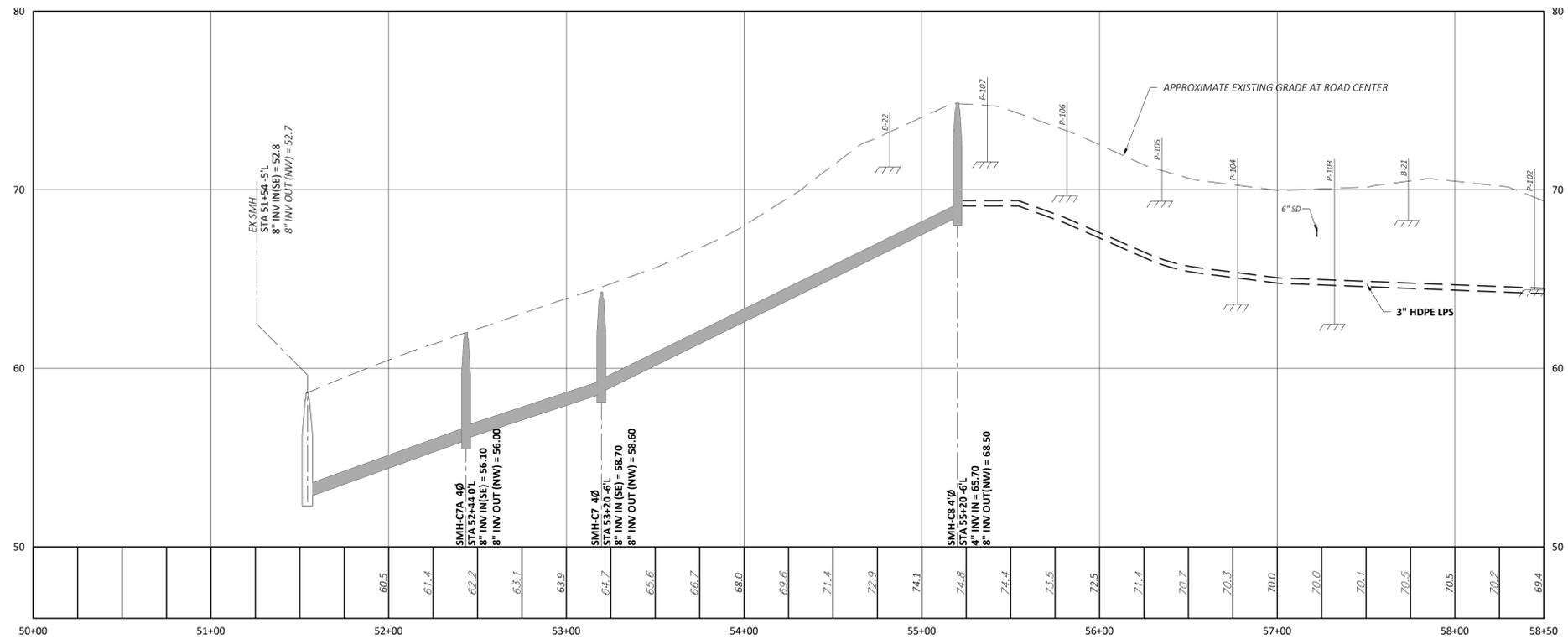
**CITY OF PORTSMOUTH, NH**  
**SAGAMORE AVENUE SEWER EXTENSION**  
**PROJECT**

PLAN AND PROFILE: SAGAMORE GROVE  
(STA 40+00 TO STA 45+80)

**DRAWING**  
C-5



PLAN  
SCALE: 1"=40'



PROFILE  
SCALE: VERT: 1"=4'  
HORIZ: 1"=40'

- NOTES:**
1. WORK OUTSIDE CITY OWNED EASEMENTS AND RIGHTS OF WAY ARE NOT AUTHORIZED UNTIL HOMEOWNER AND CITY SIGN OFFS ARE EXECUTED.
  2. ALL AREAS (EXCEPT GRAVEL DRIVEWAYS) THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR AND ARE NOT TO BE PAVED OR FILLED WITH GRAVEL OR RIPRAP SHALL BE LOAMED, GRADED, FERTILIZED, SEEDED AND MULCHED. ALL AREAS ARE TO RECEIVE A MINIMUM OF 6" OF TOPSOIL. REFER TO SPECIFICATION SECTION 02480.
  3. SEE DETAIL SHEETS FOR PAVING REQUIREMENTS.
  4. THE LIMITS OF CAPPING THE EXISTING 4-INCH WATER MAIN ARE BETWEEN STA 52+60 AND STA 60+60.
  5. ALL ROW WORK ON SAGAMORE AVENUE NORTH OF SAGAMORE CREEK SHALL BE PAID FOR UNDER THE BASE BID UNLESS OTHERWISE STATED.
  6. ALL NON-ROW WORK ON SAGAMORE AVENUE NORTH OF SAGAMORE CREEK SHALL BE PAID FOR UNDER BID ALTERNATE NO. 4 UNLESS OTHERWISE STATED.

| APP'D | DATE  |
|-------|-------|
| M.THE | 11-21 |

| NO | RE-BID CONTRACT DRAWINGS |
|----|--------------------------|
| 1  |                          |
| 2  |                          |
| 3  |                          |
| 4  |                          |

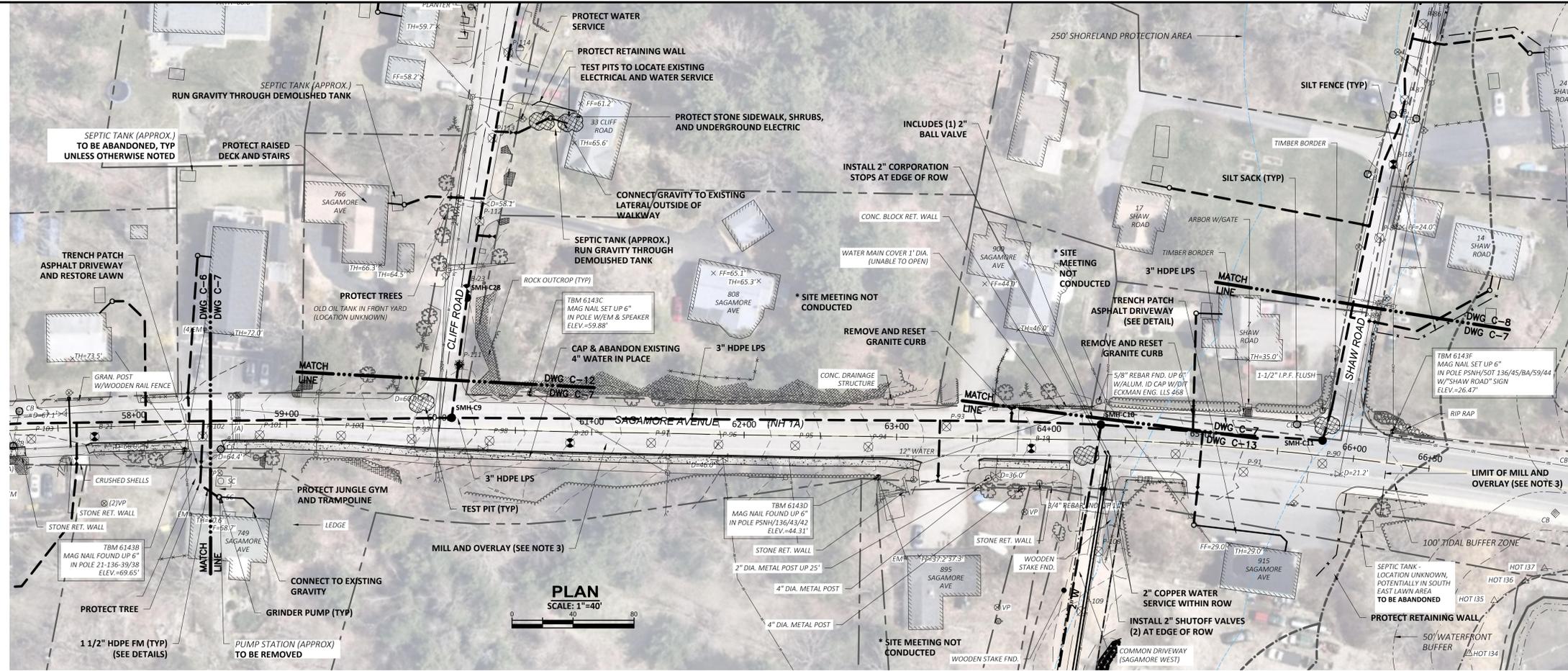
DESIGNED BY: J.L.O.C.  
 CAD CORP.: J.M.C.  
 CD: D.F.U.D.  
 CHECKED BY: K.LOBE  
 DATE: 11-21  
 APPROVED BY: M.THE  
 DATE: 11-21  
 PROJECT NO.: 1304C

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**CITY OF PORTSMOUTH, NH**  
**SAGAMORE AVENUE SEWER EXTENSION**  
**PROJECT**

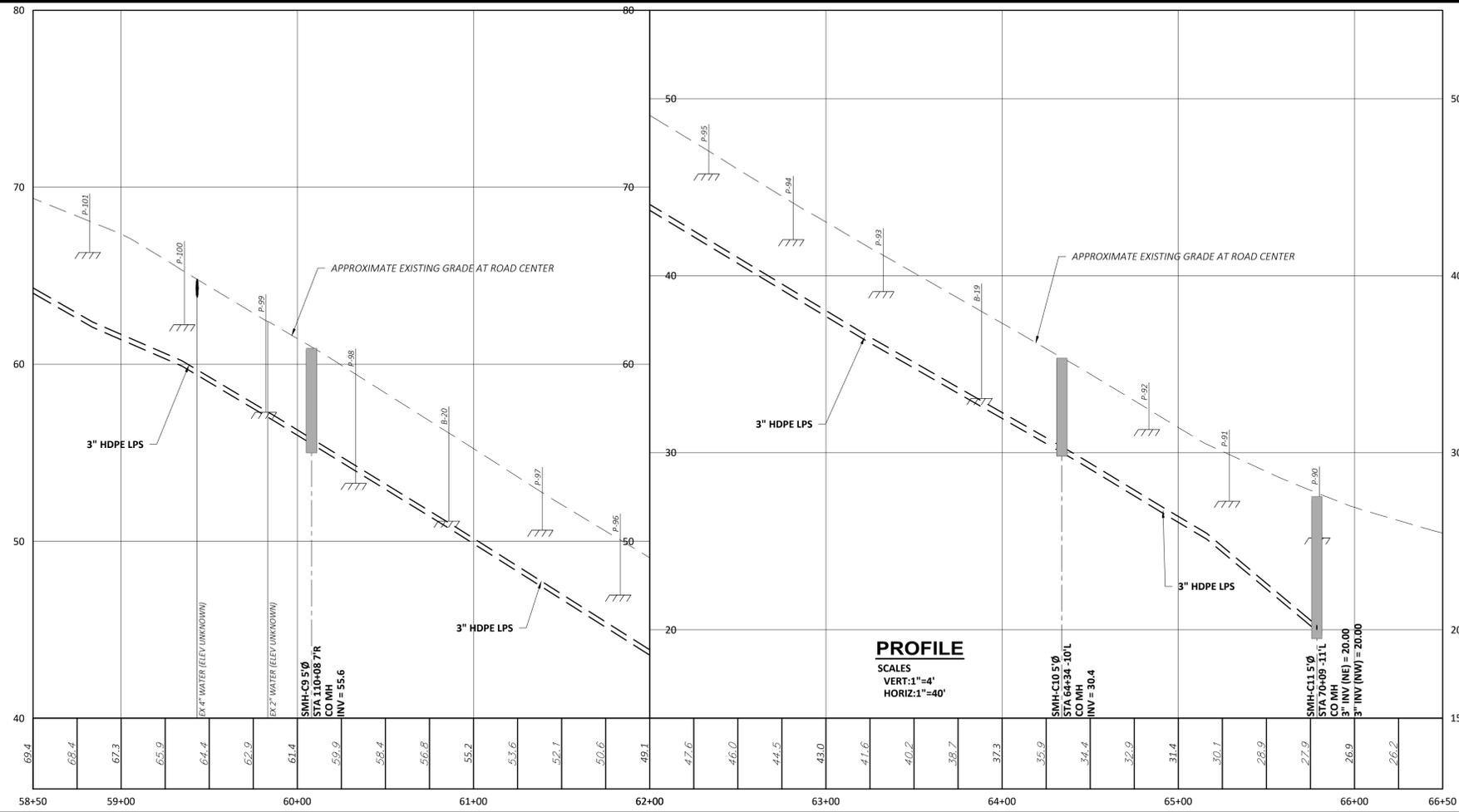
PLAN AND PROFILE: SAGAMORE AVE  
 (STA 50+00 TO STA 58+50)

**DRAWING**  
 C-6



**NOTES:**

1. WORK OUTSIDE CITY OWNED EASEMENTS AND RIGHTS OF WAY ARE NOT AUTHORIZED UNTIL HOMEOWNER AND CITY SIGN OFFS ARE EXECUTED.
2. ALL AREAS (EXCEPT GRAVEL DRIVEWAYS) THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR AND ARE NOT TO BE PAVED OR FILLED WITH GRAVEL OR RIPRAP SHALL BE LOAMED, GRADED, FERTILIZED, SEEDED AND MULCHED. ALL AREAS ARE TO RECEIVE A MINIMUM OF 6" OF TOPSOIL. REFER TO SPECIFICATION SECTION 02480.
3. SEE DETAIL SHEETS FOR PAVING REQUIREMENTS.
4. THE LIMITS OF CAPPING THE EXISTING 4-INCH WATER MAIN ARE BETWEEN STA 52+60 AND STA 60+62.
5. ALL ROW WORK ON SAGAMORE AVENUE NORTH OF SAGAMORE CREEK SHALL BE PAID FOR UNDER THE BASE BID UNLESS OTHERWISE STATED.
6. ALL NON-ROW WORK ON SAGAMORE AVENUE NORTH OF SAGAMORE CREEK SHALL BE PAID FOR UNDER BID ALTERNATE NO. 4 UNLESS OTHERWISE STATED.



| NO | REVISIONS/REVIEWS        | DATE         |
|----|--------------------------|--------------|
| 1  | RE-BID CONTRACT DRAWINGS | M. THE 11-21 |

DESIGNED BY: J.L.O.C.  
 CAD CORP.: J.M.C.  
 CHECKED BY: K.LOBE  
 DATE: 11-21 M.THE  
 APPROVED BY: M.THE  
 DATE: 11-21 M.THE  
 PROJECT NO.: 1304C

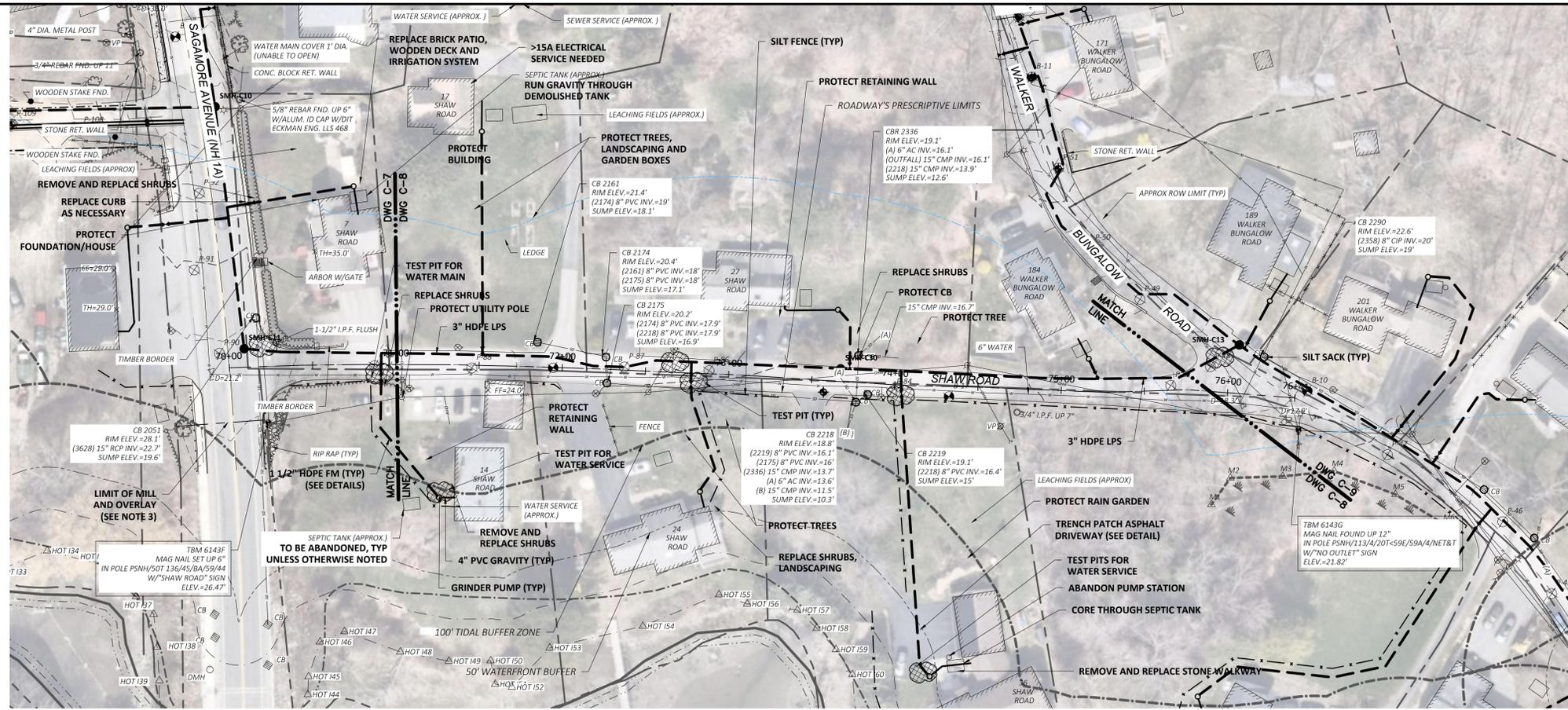


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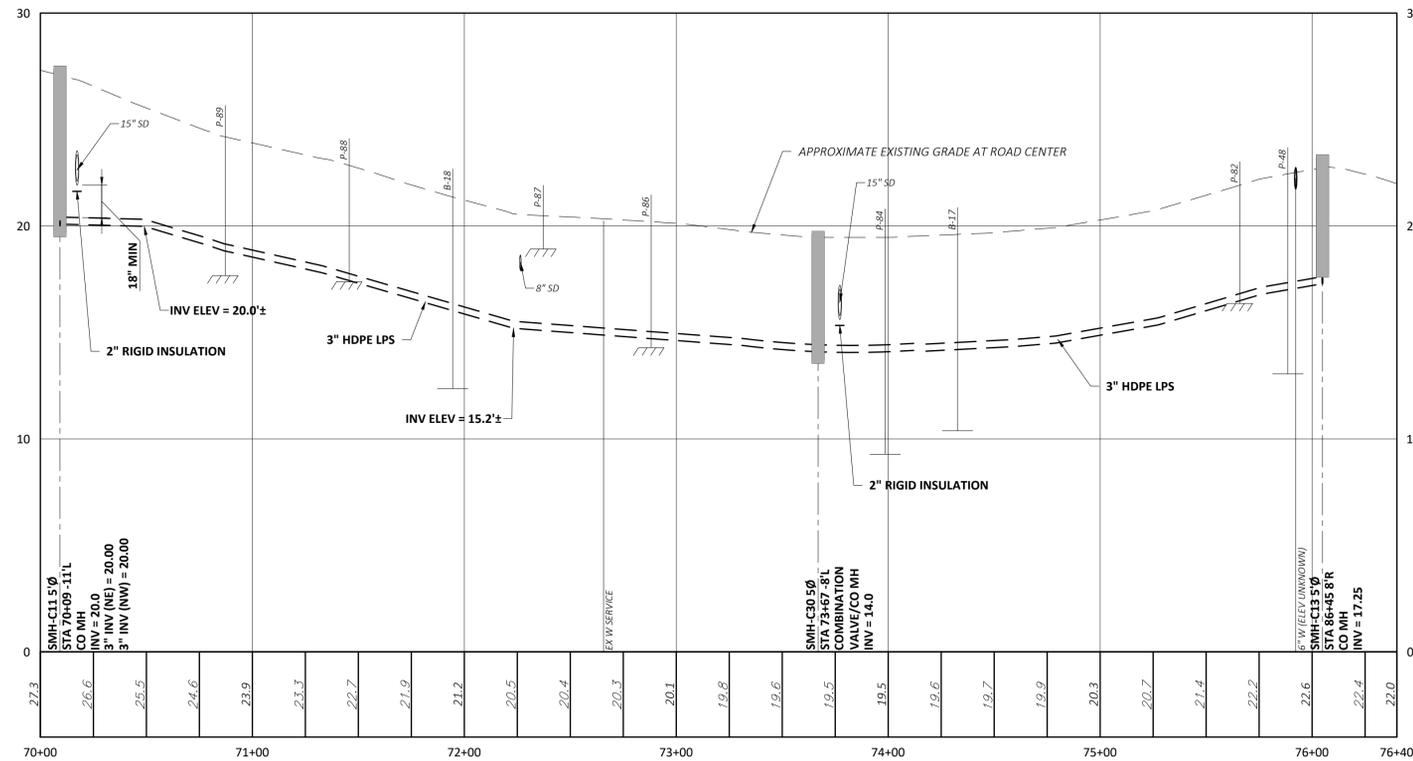
**CITY OF PORTSMOUTH, NH**  
**SAGAMORE AVENUE SEWER EXTENSION**  
**PROJECT**

PLAN AND PROFILE: SAGAMORE AVE  
 (STA 58+50 TO STA 66+50)

**DRAWING**  
 C-7



**PLAN**  
SCALE: 1"=40'



**PROFILE**

SCALE:  
VERT: 1"=4'  
HORIZ: 1"=40'

**NOTES:**

1. WORK OUTSIDE CITY OWNED EASEMENTS AND RIGHTS OF WAY ARE NOT AUTHORIZED UNTIL HOMEOWNER AND CITY SIGN OFFS ARE EXECUTED.
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3. SEE DETAIL SHEETS FOR PAVING REQUIREMENTS.
4. UNLESS OTHERWISE SHOWN, THE CITY HAS A PRESCRIBED ROW OF WAY THAT EXTENDS TO THE LIMITS OF PAVEMENT ON SHAW ROAD AND WALKER BUNGALOW ROAD.
5. ALL ROW WORK ON SHAW ROAD SHALL BE PAID FOR UNDER THE BASE BID UNLESS OTHERWISE STATED.
6. ALL NON-ROW WORK ON SHAW ROAD SHALL BE PAID FOR UNDER BID ALTERNATE NO. 4 UNLESS OTHERWISE STATED.

| NO | REVISIONS/CONTRACT DRAWINGS | DATE  |
|----|-----------------------------|-------|
| 1  | M.THE                       | 11-21 |

|                     |                    |
|---------------------|--------------------|
| DESIGNED BY: J.LLOC | PROJECT NO: 11304C |
| CB CORP: J.MIC      |                    |
| CD: D.FUD           |                    |
| CHECKED BY: K.LOBE  |                    |
| DATE: 11-21         |                    |
| APPROVED BY: M.THE  |                    |
| DATE: 11-21         |                    |

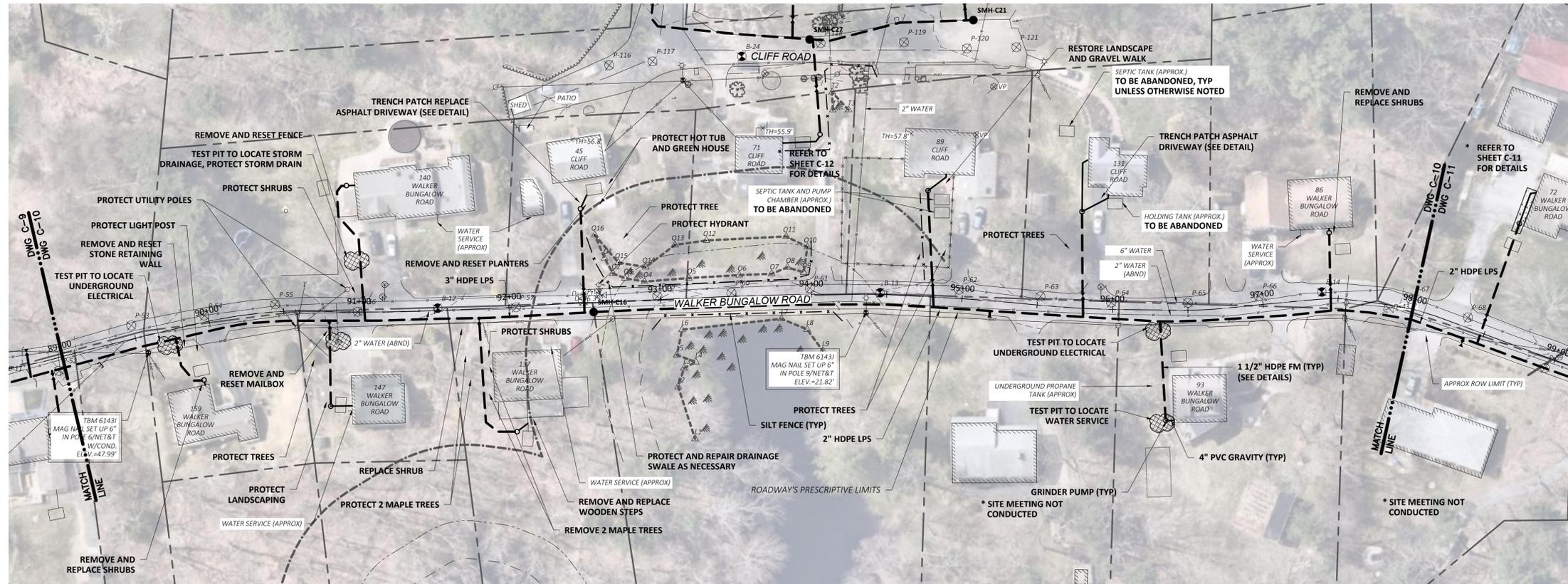
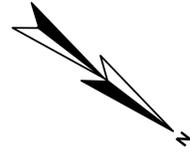
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**CITY OF PORTSMOUTH, NH**  
**SAGAMORE AVENUE SEWER EXTENSION PROJECT**

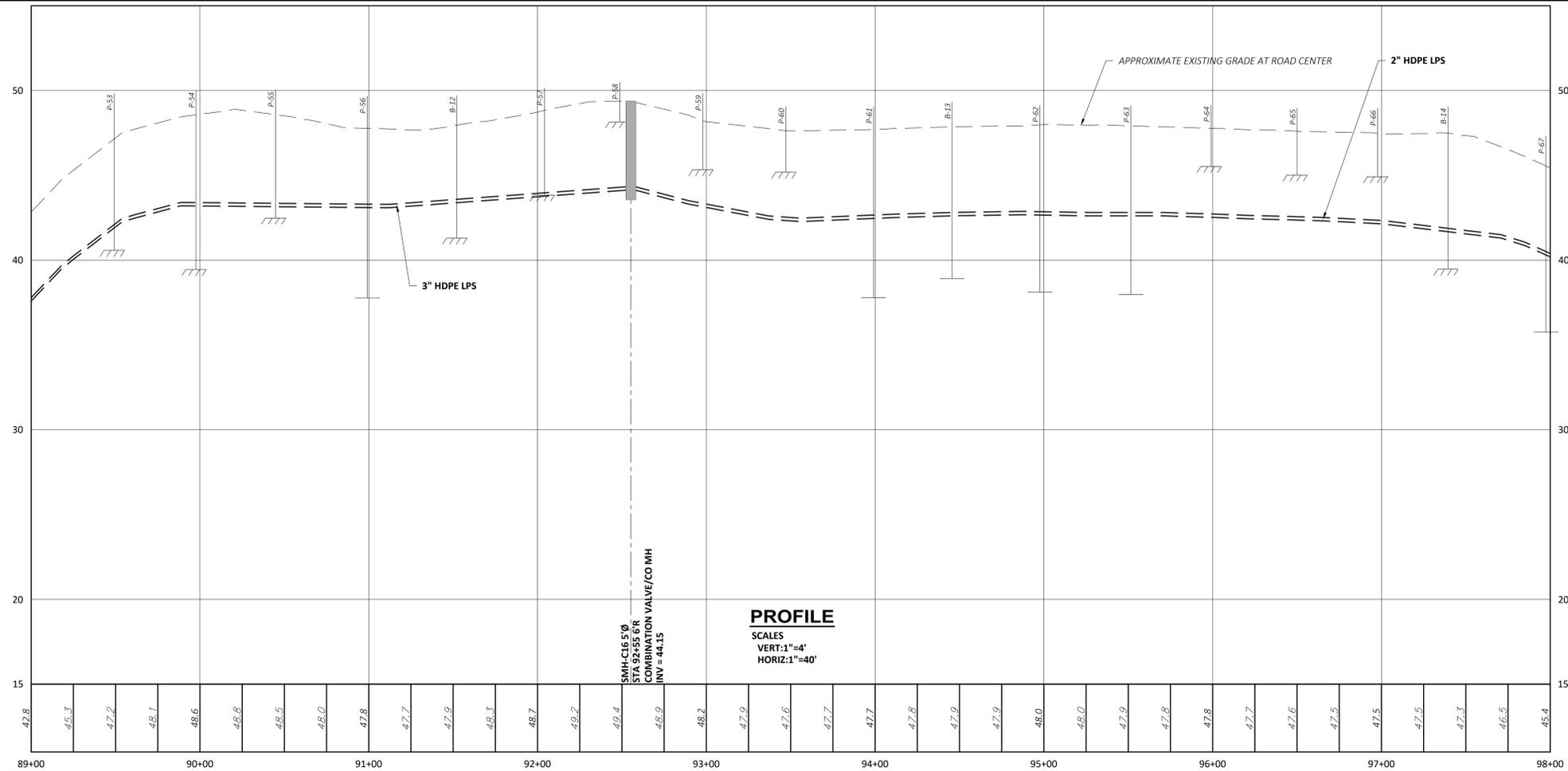
**DRAWING**  
C-8

PLAN AND PROFILE: SHAW RD  
(STA 70+00 TO STA 76+40)





**PLAN**  
SCALE: 1"=40'



**NOTES:**

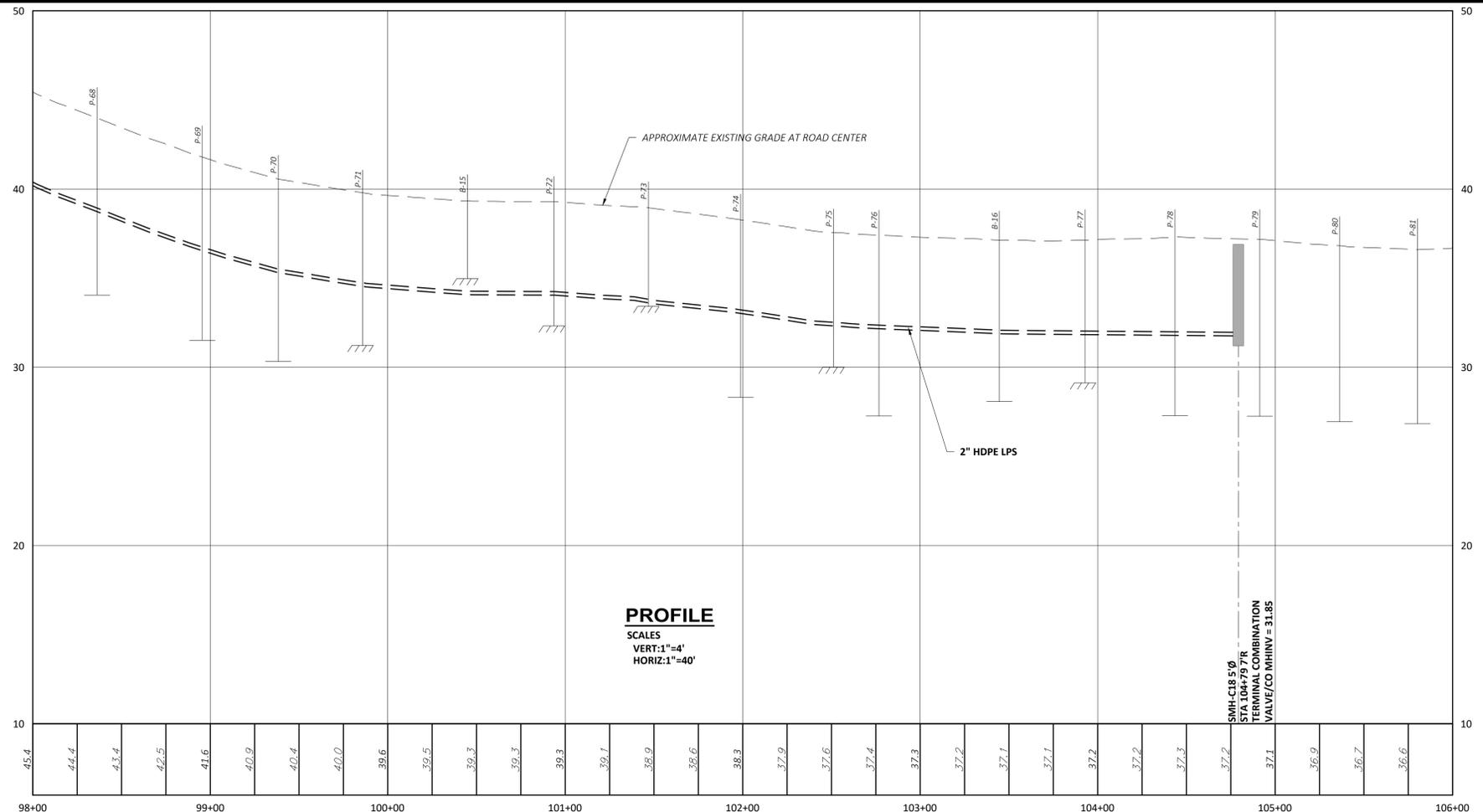
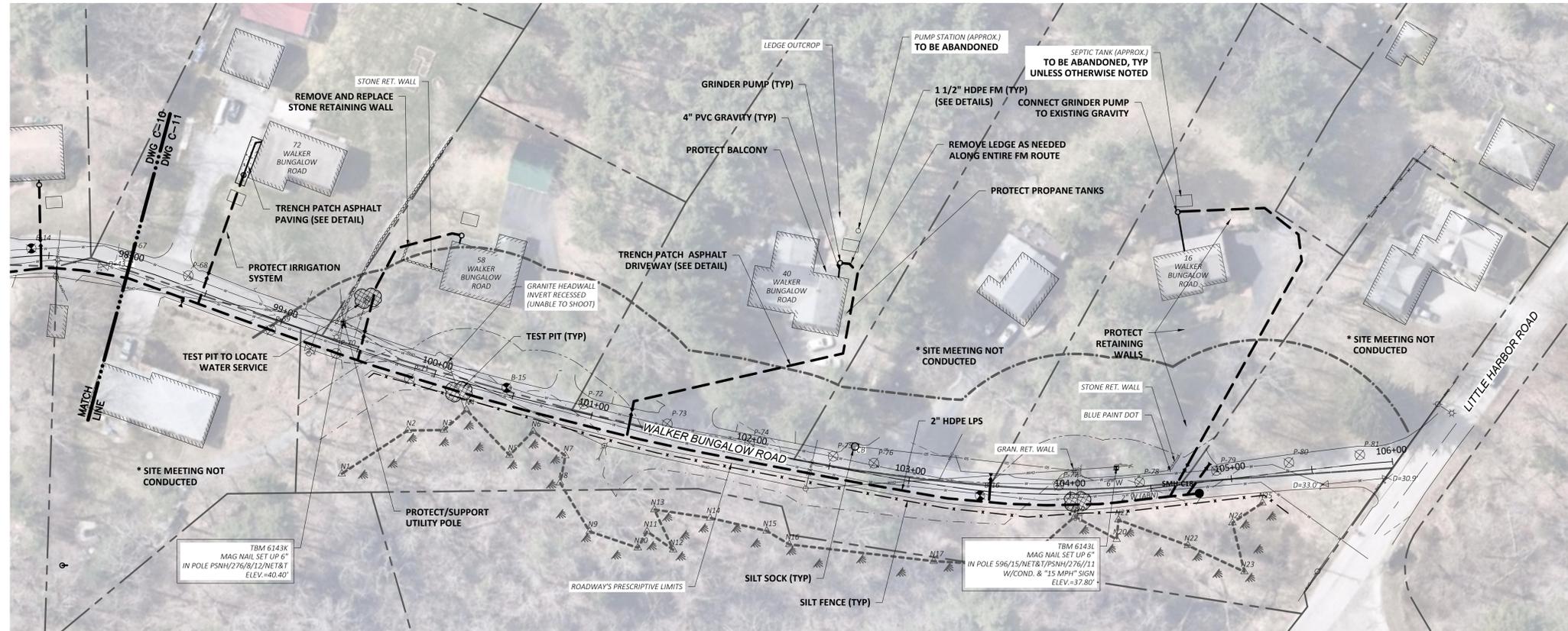
1. WORK OUTSIDE CITY OWNED EASEMENTS AND RIGHTS OF WAY ARE NOT AUTHORIZED UNTIL HOMEOWNER AND CITY SIGN OFFS ARE EXECUTED.
2. ALL AREAS (EXCEPT GRAVEL DRIVEWAYS) THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR AND ARE NOT TO BE PAVED OR FILLED WITH GRAVEL OR RIPRAP SHALL BE LOAMED, GRADED, FERTILIZED, SEEDED AND MULCHED. ALL AREAS ARE TO RECEIVE A MINIMUM OF 6" OF TOPSOIL. REFER TO SPECIFICATION SECTION 02480.
3. SEE DETAIL SHEETS FOR PAVING REQUIREMENTS.
4. UNLESS OTHERWISE SHOWN, THE CITY HAS A PRESCRIBED ROW OF WAY THAT EXTENDS TO THE LIMITS OF PAVEMENT ON SHAW ROAD AND WALKER BUNGALOW ROAD.
5. ALL ROW WORK ON WALKER BUNGALOW ROAD SHALL BE PAID FOR UNDER THE BASE BID UNLESS OTHERWISE STATED.
6. ALL NON-ROW WORK ON WALKER BUNGALOW ROAD SHALL BE PAID FOR UNDER BID ALTERNATE NO. 4 UNLESS OTHERWISE STATED.

| APP'D                 | DATE                     |
|-----------------------|--------------------------|
| M.THE                 | 11-21                    |
| SUBMISSIONS/REVISIONS |                          |
| NO                    | RE-BID CONTRACT DRAWINGS |
| DESIGNED BY: J.LLOC   | CAD CORP: J.MIC          |
| CHECKED BY: K.LOBE    | DATE: 11-21              |
| APPROVED BY: M.THE    | DATE: 11-21              |
| PROJECT NO.: 11304C   |                          |



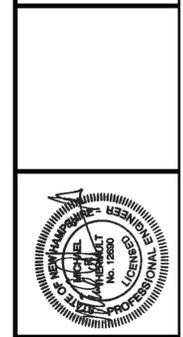
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**CITY OF PORTSMOUTH, NH**  
**SAGAMORE AVENUE SEWER EXTENSION PROJECT**  
PLAN AND PROFILE: WALKER BUNGALOW RD  
(STA 89+00 TO STA 98+00)



- NOTES:**
1. WORK OUTSIDE CITY OWNED EASEMENTS AND RIGHTS OF WAY ARE NOT AUTHORIZED UNTIL HOMEOWNER AND CITY SIGN OFFS ARE EXECUTED.
  2. ALL AREAS (EXCEPT GRAVEL DRIVEWAYS) THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR AND ARE NOT TO BE PAVED OR FILLED WITH GRAVEL OR RIPRAP SHALL BE LOAMED, GRADED, FERTILIZED, SEEDED AND MULCHED. ALL AREAS ARE TO RECEIVE A MINIMUM OF 6" OF TOPSOIL. REFER TO SPECIFICATION SECTION 02480.
  3. UNLESS OTHERWISE SHOWN, THE CITY HAS A PRESCRIBED ROW OF WAY THAT EXTENDS TO THE LIMITS OF PAVEMENT ON SHAW ROAD AND WALKER BUNGALOW ROAD.
  4. ALL ROW WORK ON WALKER BUNGALOW ROAD SHALL BE PAID FOR UNDER THE BASE BID UNLESS OTHERWISE STATED.
  5. ALL NON-ROW WORK ON WALKER BUNGALOW ROAD SHALL BE PAID FOR UNDER BID ALTERNATE NO. 4 UNLESS OTHERWISE STATED.

| NO | RE-BID CONTRACT DRAWINGS | DESIGNED BY: J.L.O.C.  | APP'D DATE  |
|----|--------------------------|------------------------|-------------|
| 1  |                          | CAD CORP.: J.M.I.C.    | M.THE 11-21 |
| 2  |                          | CHD.: D.F.U.D.         |             |
| 3  |                          | CHECKED BY: K.L.O.B.E. |             |
| 4  |                          | DATE: 11-21            |             |
| 5  |                          | APPROVED BY: M.THE     |             |
| 6  |                          | DATE: 11-21            |             |
| 7  |                          | PROJECT NO.: 11304C    |             |

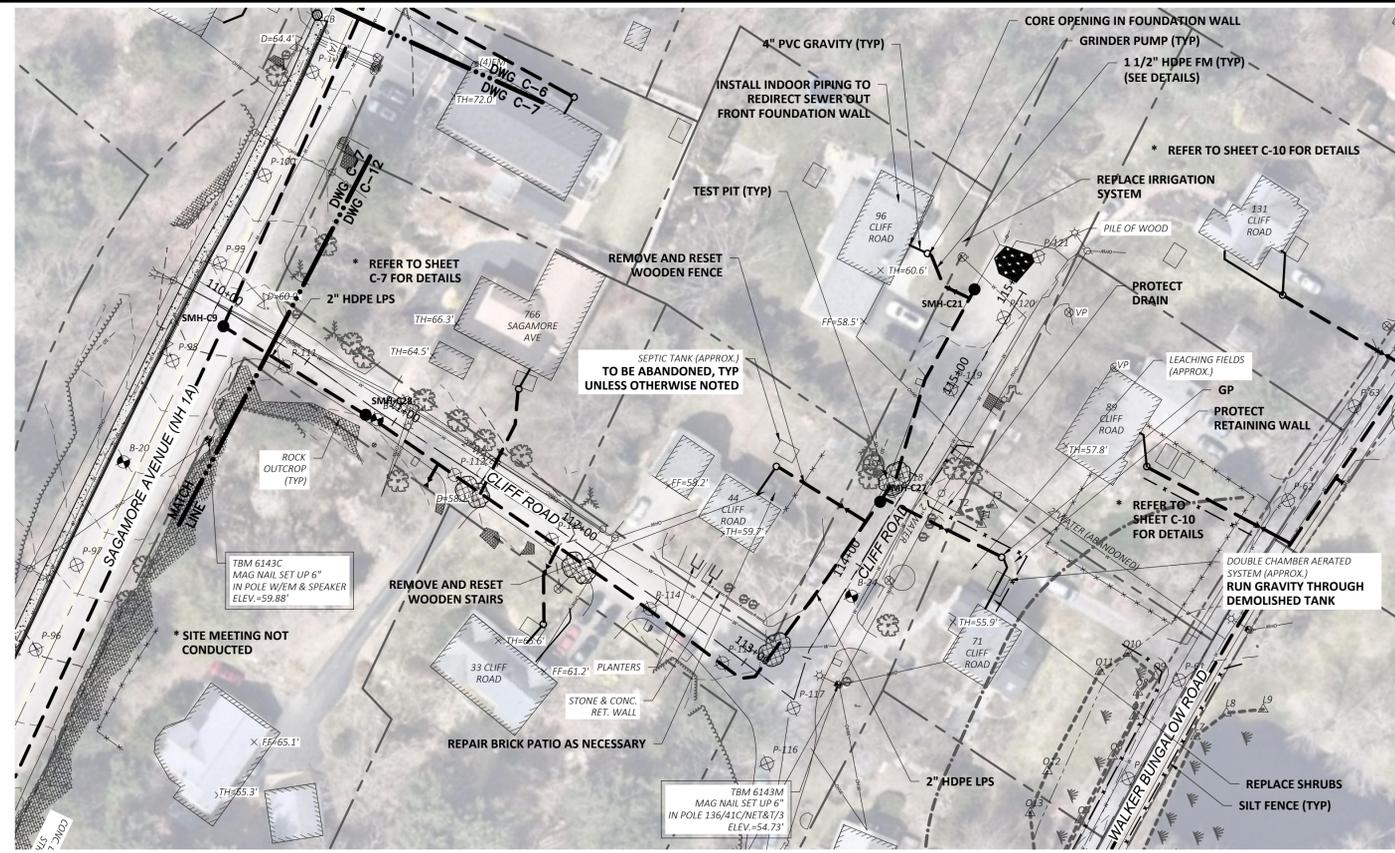


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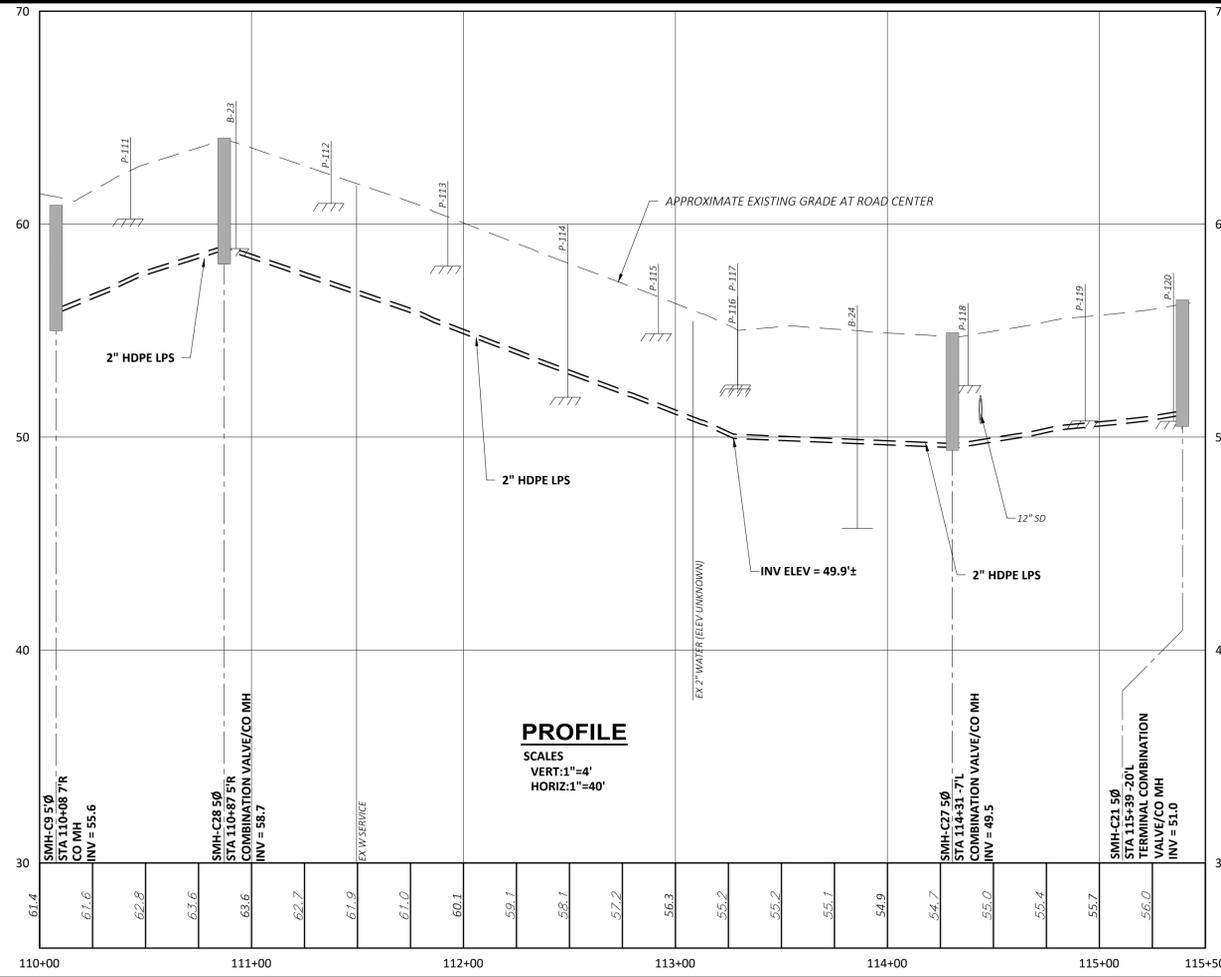
**CITY OF PORTSMOUTH, NH**  
**SAGAMORE AVENUE SEWER EXTENSION**  
**PROJECT**

PLAN AND PROFILE: WALKER BUNGALOW RD  
(STA 98+00 TO STA 106+00)

**DRAWING**  
C-11



- NOTES:**
1. WORK OUTSIDE CITY OWNED EASEMENTS AND RIGHTS OF WAY ARE NOT AUTHORIZED UNTIL HOMEOWNER AND CITY SIGN OFFS ARE EXECUTED.
  2. ALL AREAS (EXCEPT GRAVEL DRIVEWAYS) THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR AND ARE NOT TO BE PAVED OR FILLED WITH GRAVEL OR RIPRAP SHALL BE LOAMED, GRADED, FERTILIZED, SEEDED AND MULCHED. ALL AREAS ARE TO RECEIVE A MINIMUM OF 6" OF TOPSOIL. REFER TO SPECIFICATION SECTION 02480.
  3. SEE DETAIL SHEETS FOR PAVING REQUIREMENTS.
  4. ALL ROW WORK ON CLIFF ROAD SHALL BE PAID FOR UNDER THE BASE BID UNLESS OTHERWISE STATED.
  5. ALL NON-ROW WORK ON CLIFF ROAD SHALL BE PAID FOR UNDER BID ALTERNATE NO. 4 UNLESS OTHERWISE STATED.



| NO | REVISIONS/REVIEWS        | DATE     |
|----|--------------------------|----------|
| 1  | RE-BID CONTRACT DRAWINGS | 11-21-21 |

DESIGNED BY: J.LLOC  
 CAD CORP.: J.MIC  
 CDD: D.FUD  
 CHECKED BY: K.LOBE  
 DATE: 11-21-21  
 APPROVED BY: M.THE  
 DATE: 11-21-21  
 PROJECT NO.: 1304C

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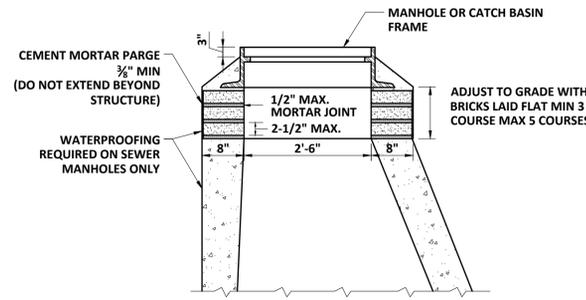
**CITY OF PORTSMOUTH, NH**  
**SAGAMORE AVENUE SEWER EXTENSION PROJECT**

**DRAWING**  
 C-12

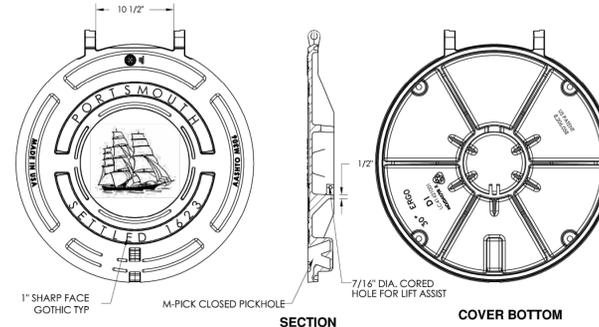
PLAN AND PROFILE: CLIFF RD  
 (STA 110+00 TO STA 115+50)



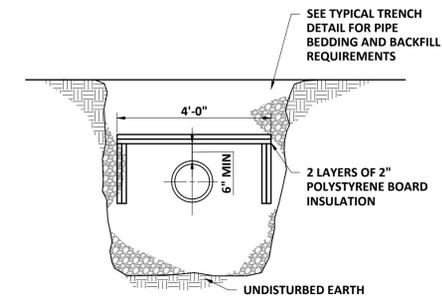
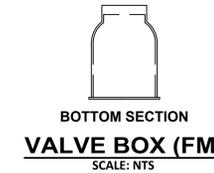
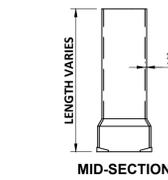
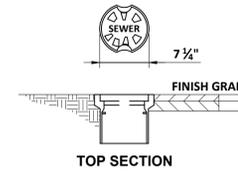




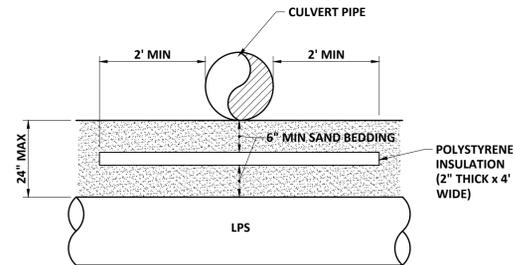
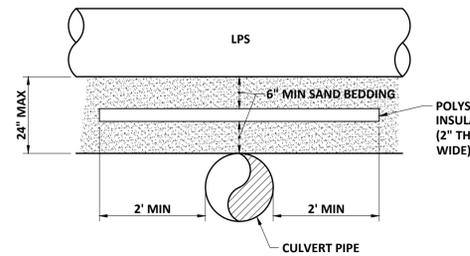
**MANHOLE FRAME INSTALLATION**  
SCALE: NTS



**MANHOLE STANDARD COVER AND FRAME**  
SCALE: NTS



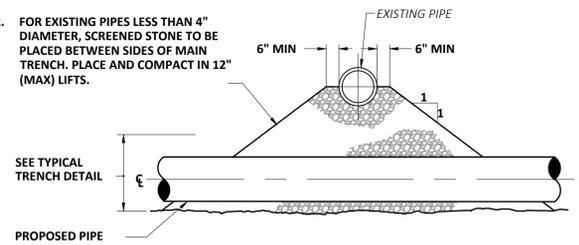
NOTE:  
TRENCH PIPE INSULATION SHALL BE USED AS DIRECTED BY THE ENGINEER OR AS STATED IN THE GENERAL NOTES  
**TRENCH PIPE INSULATION**  
SCALE: NTS



NOTE:  
INSULATION TO BE USED WHERE PIPE SEPARATION IS 24" OR LESS.

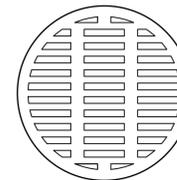
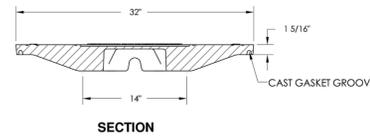
**CULVERT CROSSING**  
SCALE: NTS

- FOR EXISTING PIPES 4" DIAMETER AND GREATER, FLOWABLE FILL SHALL BE PLACED BETWEEN SIDES OF MAIN TRENCH, UNLESS AS DIRECTED BY ENGINEER TO INSTALL SCREENED STONE.
- FOR EXISTING PIPES LESS THAN 4" DIAMETER, SCREENED STONE TO BE PLACED BETWEEN SIDES OF MAIN TRENCH. PLACE AND COMPACT IN 12" (MAX) LIFTS.

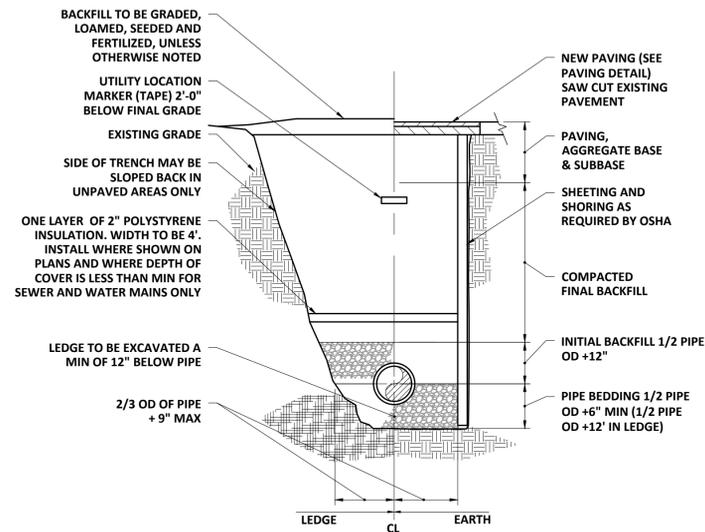


NOTE:  
JOINTS ON EACH PIPE TO BE AS FAR FROM INTERSECTION AS POSSIBLE.

**PIPE CROSSING**  
SCALE: "NTS"

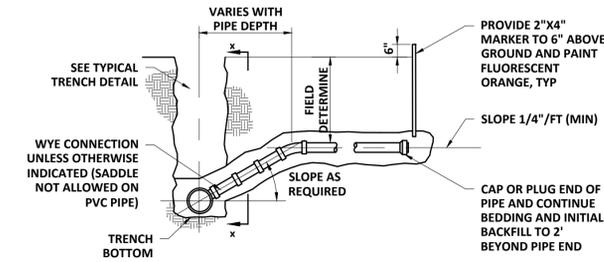


**CATCH BASIN FRAME AND STANDARD AND FRAME**  
SCALE: NTS



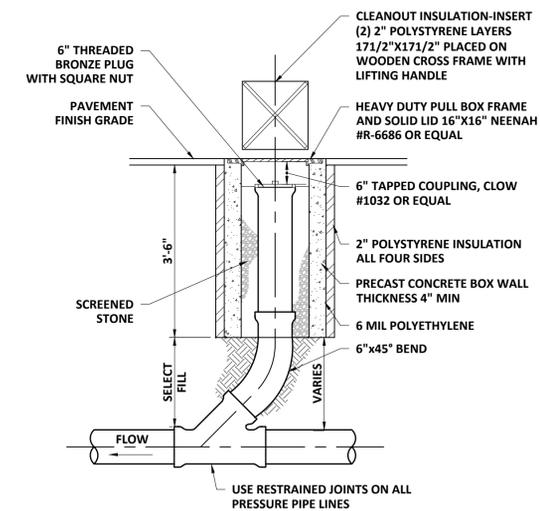
- NOTES:  
1. ALL EXCAVATION MUST MEET OSHA STANDARDS.  
2. INSTALL 3 FOOT LONG IMPERVIOUS MATERIAL DAM IN BEDDING/INITIAL BACKFILL MATERIAL EVERY 100' AND WHERE SHOWN ON PLANS TO PREVENT TRENCH GROUNDWATER FROM BEING CHANNELLED ALONG BEDDING/INITIAL BACKFILL.  
3. SEE SPECIFICATIONS FOR BEDDING AND BACKFILL REQUIREMENTS.

**PIPE TRENCH**  
SCALE: "NTS"



- NOTES:  
1. ALL SERVICE CONNECTIONS TO BE 6" Ø UNLESS OTHERWISE SHOWN ON THE PLANS.  
2. USE CHIMNEY DETAIL WHERE SERVICE CONNECTION ENTERS SEWER AT GREATER THAN 60° TO THE HORIZONTAL.  
3. CLEANOUTS ARE REQUIRED AT ALL BENDS.

**SEWER SERVICE CONNECTION**  
SCALE: "NTS"



**TYPICAL GRAVITY CLEANOUT**  
SCALE: NTS

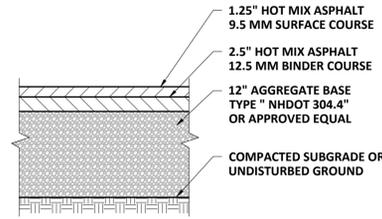
| NO | REVISIONS                | DATE        |
|----|--------------------------|-------------|
| 1  | RE-BID CONTRACT DRAWINGS | M.THE 11-21 |

|                    |                   |                     |
|--------------------|-------------------|---------------------|
| DESIGNED BY: J.LOC | CAD CORP: J.L.MIC | NO. 15880           |
| CHECKED BY: D.FUD  | DATE: 11-21       | PROJECT NO.: 13304C |
| APPROVED BY: M.THE | DATE: 11-21       |                     |

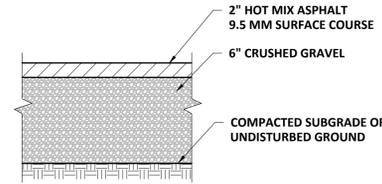
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CITY OF PORTSMOUTH, NH  
SAGAMORE AVENUE SEWER EXTENSION PROJECT  
DRAWING  
C-15  
DETAILS II

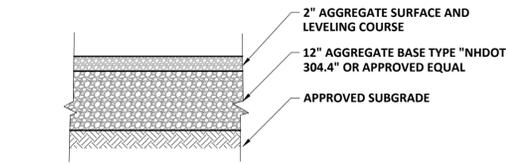




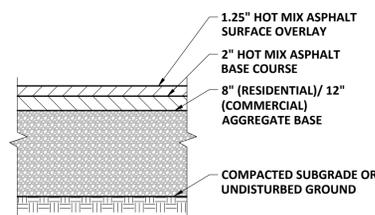
**PARKING LOT PAVEMENT**  
SCALE: "NTS"



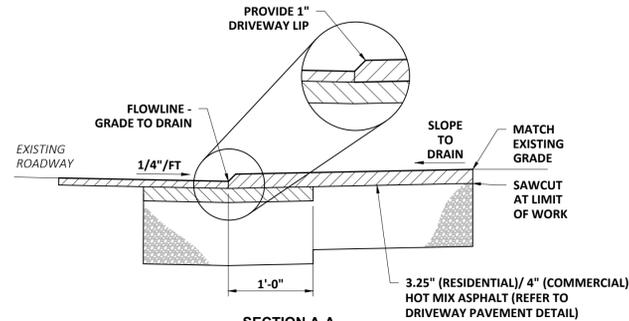
**WALKWAY PAVEMENT**  
SCALE: "NTS"



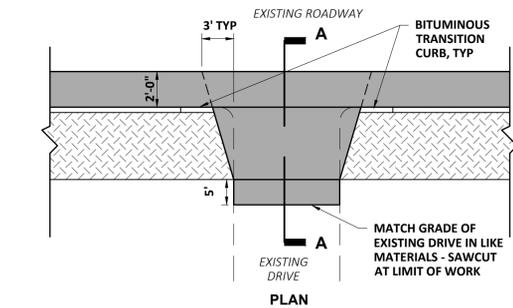
**TYPICAL SECTION OF GRAVEL AREAS**  
SCALE: NTS



**DRIVEWAY PAVEMENT**  
SCALE: "NTS"

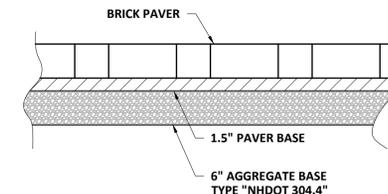


SECTION A-A

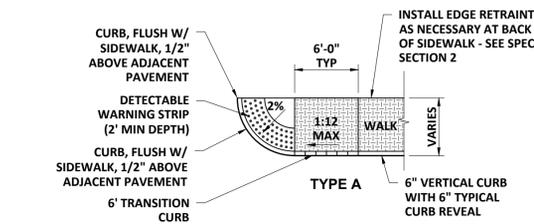


PLAN

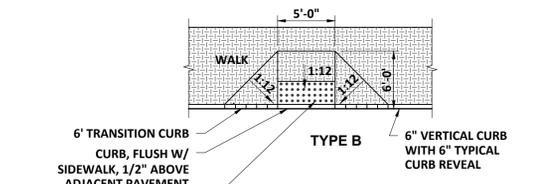
**PAVED DRIVE APRON IN CURBED SECTIONS**  
SCALE: NTS



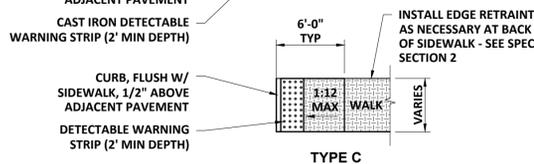
**BRICK PAVER WALKWAY**  
SCALE: NTS



TYPE A



TYPE B

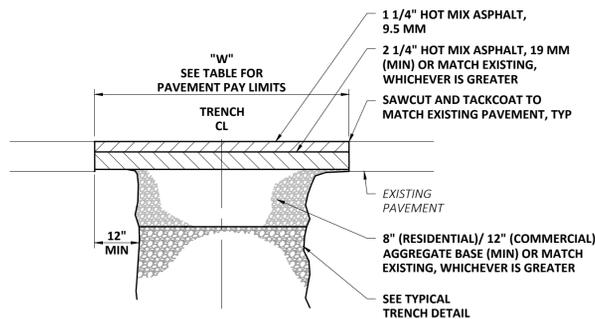


TYPE C

**HANDICAP RAMP**  
SCALE: NTS

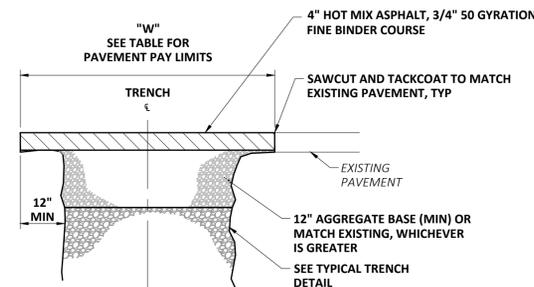
NOTES:

- RAMP SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA).
- DETECTABLE WARNING STRIPS REQUIRED ON ALL RAMPS INDICATED ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER.



NOTE: INITIAL TRENCH PAVING MAY BE USED AS THE BASE COURSE FOR FINAL PAVING IF IN GOOD REPAIR.

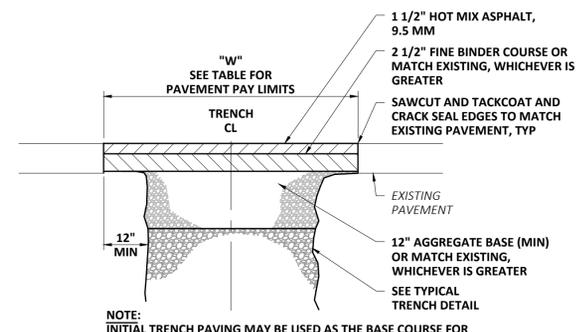
**TRENCH PATCH - DRIVES**  
SCALE: NTS



| PIPE I.D. | "W" (FOR 0'-10' DEEP) |
|-----------|-----------------------|
| 1" - 5"   | 6'-6"                 |
| 6" - 15"  | 7'-0"                 |
| 16" - 21" | 8'-0"                 |

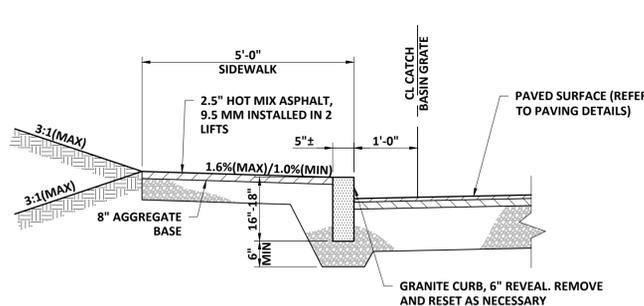
"W" SHALL BE INCREASED BY 1'-0" FOR TRENCHES 10' - 15', AND BY 2'-0" FOR TRENCHES 15' - 20' DEEP.

**INITIAL TRENCH PAVING (WITH OVERLAY)**  
SCALE: NTS



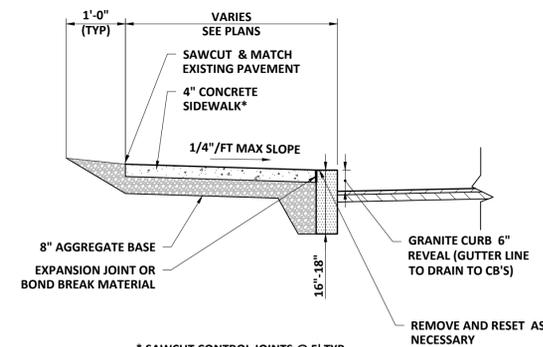
**FINAL TRENCH PAVING (WITHOUT OVERLAY)**  
SCALE: "NTS"

TO BE PERFORMED ON CLIFF ROAD, SHAW ROAD, AND WALKER BUNGALOW ROAD



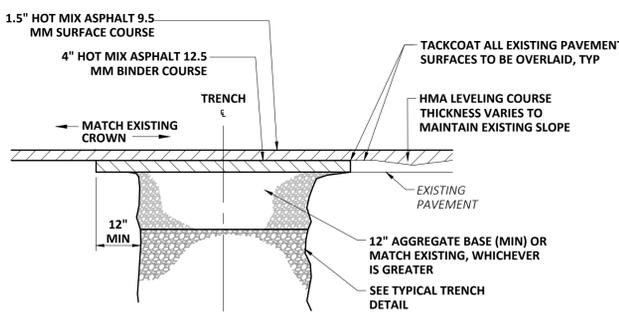
**PAVED SIDEWALK WITH GRANITE CURB**  
SCALE: NTS

NOTE: PROVIDE HANDICAP RAMPS AT SITE ENTRANCE.



**CONCRETE SIDEWALK WITH GRANITE CURB**  
SCALE: NTS

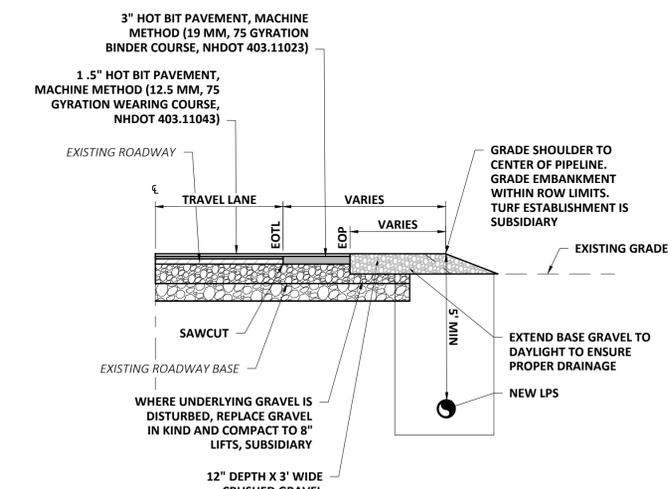
\* SAWCUT CONTROL JOINTS @ 5' TYP



NOTE: INITIAL TRENCH PAVING MAY BE USED AS THE BASE COURSE FOR FINAL PAVING IF IN GOOD REPAIR.

**FINAL TRENCH PAVING (WITH OVERLAY)**  
SCALE: NTS

TO BE PERFORMED ON SAGAMORE AVENUE, SAGAMORE GROVE, AND WENTWORTH HOUSE ROAD



**NHDOT MAINTAINED ROADS FINAL TRENCH PAVING WITH MILL AND OVERLAY**  
SCALE: NTS

NOTE: PRIOR TO MILL AND OVERLAY ON NHDOT ROW, SPECIFICALLY FOR ROAD CROSSINGS, ALL INITIAL TRENCH PAVING SHOULD BE REMOVED. IF THE INITIAL PATCH IS DONE TO THE SATISFACTION OF NHDOT, THEN THE DISTRICT ENGINEER MAY ALLOW IT TO REMAIN AND BE MILLED OVER.

| APP'D | DATE  |
|-------|-------|
| M.THE | 11-21 |

| NO | REVISIONS/REVISIONS      |
|----|--------------------------|
| 1  | RE-BID CONTRACT DRAWINGS |

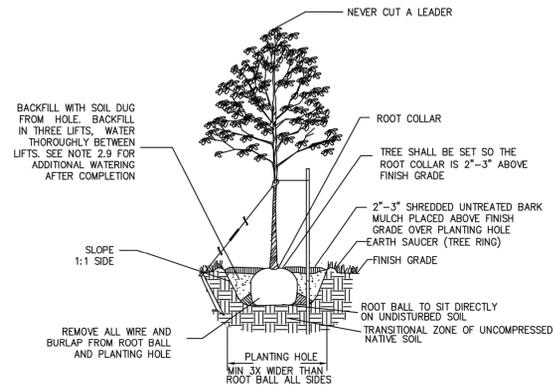
DESIGNED BY: J.LLOC  
 CAD CORP.: J.MIC  
 CHECKED BY: K.LOBE  
 DATE: 11-21  
 APPROVED BY: M.THE  
 DATE: 11-21  
 PROJECT NO.: 11304C

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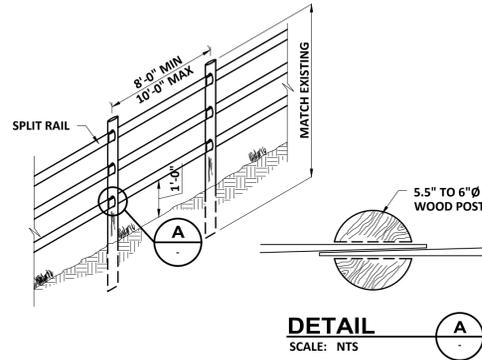
CITY OF PORTSMOUTH, NH  
 SAGAMORE AVENUE SEWER EXTENSION PROJECT

DETAILS IV

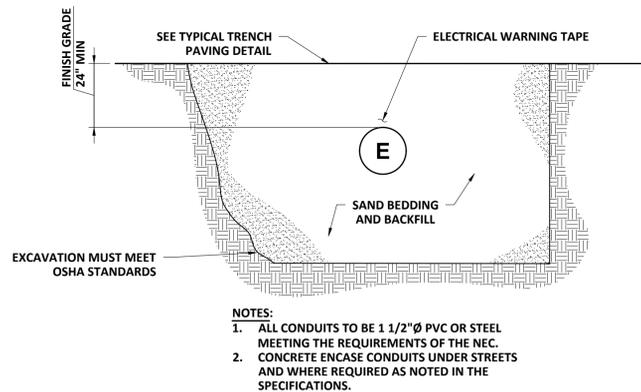
**DRAWING**  
 C-17



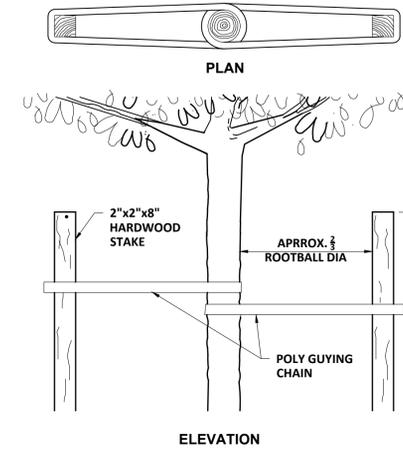
**TREE PLANTING DETAIL**  
SCALE: NTS



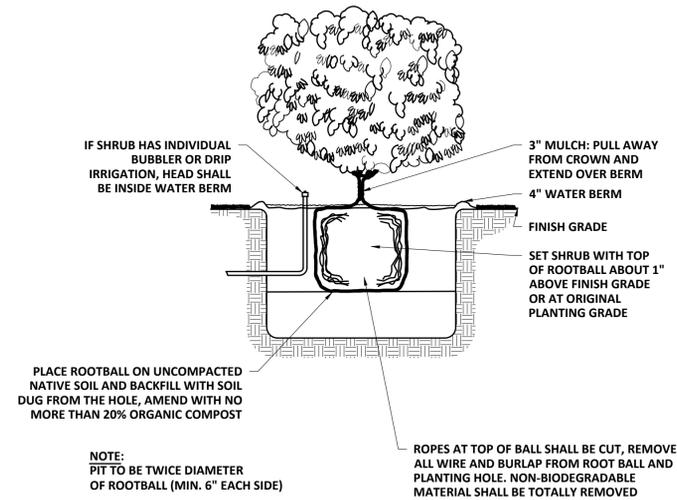
**SPLIT RAIL FENCE**  
SCALE: NTS



**SINGLE ELECTRICAL CONDUIT TRENCH SECTION**  
SCALE: NTS



**POLY GUYING**  
SCALE: NTS



**SHRUB INSTALLATION**  
SCALE: NTS

**TREE AND SHRUB PLANTING NOTES:**

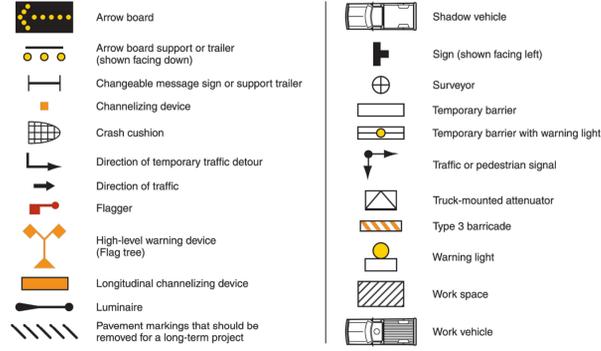
1. ALL PLANTING HOLES SHALL BE DUG BY HAND - NO MACHINES.
2. ALL WIRE AND BURLAP SHALL BE REMOVED FROM THE ROOT BALL AND PLANTING HOLE.
3. THE ROOT BALL OF THE TREE SHALL BE WORKED SO THAT THE ROOT COLLAR OF THE TREE IS VISIBLE AND NO GRIDLING ROOTS ARE PRESENT.
4. THE ROOT COLLAR OF THE TREE SHALL BE 2"-3" ABOVE GRADE OF THE PLANTING HOLE FOR FINISHING DEPTH.
5. ALL PLANTINGS SHALL BE BACKFILLED WITH SOIL FROM THE SITE AND AMENDED NO MORE THAN 20% WITH ORGANIC COMPOST.
6. ALL PLANTINGS SHALL BE BACKFILLED IN THREE LIFTS AND ALL LIFTS SHALL BE WATERED SO THE PLANTING WILL BE SET AND FREE OF AIR POCKETS - NO EXCEPTIONS.
7. AN EARTH BERM SHALL BE PLACED AROUND THE PERIMETER OF THE PLANTING HOLE EXCEPT WHERE CURBED PLANTING BEDS OR PITS ARE USED.
8. 2"-3" OF MULCH SHALL BE PLACED OVER THE PLANTING AREA.
9. AT THE TIME OF PLANTING IS COMPLETE THE PLANTING SHALL RECEIVE ADDITIONAL WATER TO ENSURE COMPLETE HYDRATION OF THE ROOTS, BACKFILL MATERIAL AND MULCH LAYER.
10. STAKES AND GUYS SHALL BE USED WHERE APPROPRIATE AND/OR NECESSARY. GUY MATERIALS SHALL BE NON-DAMAGING TO THE TREE.
11. ALL PLANTING STOCK SHALL BE SPECIMEN QUALITY, FREE OF DEFECTS, AND DISEASE OR INJURY. THE OWNER RESERVES THE RIGHT TO REFUSE/REJECT ANY PLANT MATERIAL OR PLANTING ACTION THAT FAILS TO MEET THE STANDARDS SET FORT IN THE PROJECT SPECIFICATIONS.

| NO | REVISIONS                | DATE     |
|----|--------------------------|----------|
| 1  | RE-BID CONTRACT DRAWINGS | 11-21-21 |

|                    |                    |
|--------------------|--------------------|
| DESIGNED BY: J.LOC | DESIGNED BY: J.LOC |
| CAD CORP: J.MIC    | CAD CORP: J.MIC    |
| CHKD BY: D.FUD     | CHKD BY: D.FUD     |
| CHECKED BY: K.LOBE | CHECKED BY: K.LOBE |
| DATE: 11-21-21     | DATE: 11-21-21     |
| APPROVED BY: M.THE | APPROVED BY: M.THE |
| DATE: 11-21-21     | DATE: 11-21-21     |
| PROJECT NO: 11304C | PROJECT NO: 11304C |

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CITY OF PORTSMOUTH, NH  
SAGAMORE AVENUE SEWER EXTENSION PROJECT  
DETAILS V



**TABLE 6H-2 MEANING OF SYMBOLS**  
SCALE: NTS

| Road Type            | Distance Between Signs** |            |            |
|----------------------|--------------------------|------------|------------|
|                      | A                        | B          | C          |
| Urban (low speed)*   | 100 feet                 | 100 feet   | 100 feet   |
| Urban (high speed)*  | 350 feet                 | 350 feet   | 350 feet   |
| Rural                | 500 feet                 | 500 feet   | 500 feet   |
| Expressway / Freeway | 1,000 feet               | 1,500 feet | 2,640 feet |

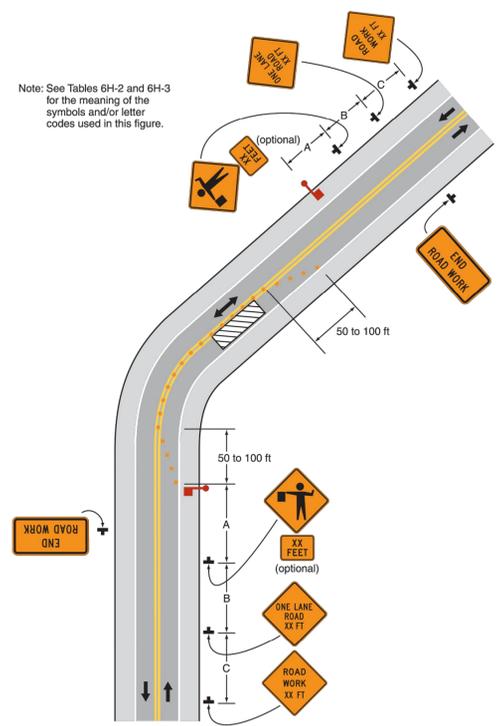
\* Speed category to be determined by highway agency  
 \*\* The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-6. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The "first sign" is the sign in a three-sign series that is closest to the TTC zone. The "third sign" is the sign that is furthest upstream from the TTC zone.)

**TABLE 6H-3 MEANING OF LETTER CODES**  
SCALE: NTS

| Speed (S)      | Taper Length (L) in feet      |
|----------------|-------------------------------|
| 40 mph or less | L = WS <sup>2</sup><br>L = 60 |
| 45 mph or more | L = WS                        |

Where: L = taper length in feet  
 W = width of offset in feet  
 S = posted speed limit, or off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.



**TYPICAL TRAFFIC CONTROL PLAN**  
SCALE: NTS

| CONSTRUCTION SIGN |              |                |
|-------------------|--------------|----------------|
| TEXT              | SIZE OF SIGN | M.U.T.C.D. NO. |
|                   | 36 X 36      | W20-1          |
|                   | 36 X 36      | W3-5           |
|                   | 24 X 30      | R2-10a         |
|                   | 36 X 36      | W20-4          |
|                   | 24 X 24      | W13-1          |
|                   | 36 X 36      | W3-4           |
|                   | 36 X 36      | W3-3           |
|                   | 24 X 36      | R10-6L         |
|                   | 24 X 30      | R10-7          |
|                   | 36 X 18      | G20-2          |
|                   | 36 X 36      | W20-1          |
|                   | 60 X 24      | D3-1           |

|       |       |                          |                       |
|-------|-------|--------------------------|-----------------------|
| APP'D | DATE  | RE-BID CONTRACT DRAWINGS | DESIGNED BY: J.L.O.C. |
| M.THE | 11-21 |                          | CAD CORP.: J.M.C.     |
|       |       |                          | CD: D.F.U.D.          |
|       |       |                          | CHECKED BY: K.LOBE    |
|       |       |                          | DATE: 11-21           |
|       |       |                          | APPROVED BY: M.THE    |
|       |       |                          | DATE: 11-21           |
|       |       |                          | PROJECT NO.: 11304C   |

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|   |            |
|---|------------|
| CITY OF PORTSMOUTH, NH<br>SAGAMORE AVENUE SEWER EXTENSION PROJECT | DETAILS VI |
| <b>DRAWING</b>  |            |
| C-19  |            |

**EROSION AND SEDIMENTATION CONTROL NOTES**

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THE PROPOSED LOCATION OF EROSION AND SEDIMENT CONTROLS ARE DEPICTED IN THE PLANS WHERE WORK ABUTS ENVIRONMENTALLY SENSITIVE LOCATIONS. ADDITIONAL CONTROLS MAY BE NEEDED TO MEET THE REQUIREMENTS OF THE BELOW REFERENCED DOCUMENTS. THIS PLAN IS BASED ON THE NEW HAMPSHIRE STORMWATER MANUAL BY THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES.

PROVIDE SILT FENCE, STONE CHECK DAMS AND OTHER EROSION CONTROL MEASURES AS REQUIRED TO ADEQUATELY PREVENT SEDIMENT TRANSPORT. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL AND THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES, ENV-Wq 1500: ALTERATION OF TERRAIN.

- THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION, IN NO CASE AT MORE THAN 5 ACRES AT A TIME, WILL BE MAINTAINED IN AN UNTREATED OR UN-VEGETATED CONDITION FOR THE MINIMUM TIME REQUIRED. IN GENERAL, AREAS TO BE VEGETATED SHALL BE PERMANENTLY STABILIZED WITHIN 3 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE OF THE SOIL.
- TEMPORARY STORAGE OF STOCKPILED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION.
- EROSION CONTROL MEASURES SUCH AS SEDIMENT BARRIERS (SILT FENCE, STONE CHECK DAMS, ETC.) AND OUTLET PROTECTION (WHERE APPLICABLE) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OR EARTH MOVING OPERATIONS OF UPGRADIENT DRAINAGE AREAS.
- FUGITIVE DUST MUST BE CONTROLLED IN ACCORDANCE WITH NEW HAMPSHIRE STANDARDS AND SPECIFICATION SECTION 01562.
- ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE THIRD THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED AND/OR WILL NOT ERODE UNDER THE CONDITIONS OF A 10-YEAR STORM. STABILIZATION SHALL BE DEFINED AS ONE OF THE FOLLOWING:
  - A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
  - B. A MINIMUM OF 85% VEGETATIVE GROWTH HAS BEEN ESTABLISHED;
  - C. A MINIMUM OF 3" OF NON-EROSIVE MATERIALS SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
  - D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL NOT BE STEEPER THAN THREE HORIZONTAL TO ONE VERTICAL (3 TO 1) UNLESS STABILIZED WITH PERMANENT EROSION CONTROL MEASURES. IF MOWING IS TO OCCUR, MAXIMUM SLOPE ANGLE SHALL BE THREE HORIZONTAL TO ONE VERTICAL (3 TO 1). ON SLOPES FOUR HORIZONTAL TO ONE VERTICAL (4 TO 1), FINAL PREPARATION SHOULD INCLUDE SURFACE ROUGHING.
- DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND RE-GRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY, WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER. AT NO TIME SHALL THE INTEGRITY OF THE EROSION CONTROL FENCE BE IN DANGER DUE TO BUILD UP OF SEDIMENT.
- RE-VEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND RE-VEGETATED.
- AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 2 BALES (70-90 LBS) PER 1,000 SQUARE FEET OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75 TO 90% OF THE GROUND SURFACE.
- DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- SEED MIX SELECTION AND APPLICATION RATES WILL BE CONSISTENT WITH THE FOLLOWING TABLES AS REFERENCED FROM MINNICK, E.L. AND H.T. MARSHALL, STORMWATER MANAGEMENT AND EROSION CONTROL FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE, ROCKINGHAM COUNTY CONSERVATION DISTRICT, AUGUST 1992, AND TABLES 4-1 THROUGH 4-3 OF SECTION 3 IN THE NEW HAMPSHIRE STORMWATER MANUAL. NOTE: REED CANARY GRASS SHALL NOT BE USED.
- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE WORK AREA IS STABILIZED.
- WETLANDS (EXCEPT THOSE WHICH ARE TO BE FILLED IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS) WILL BE PROTECTED WITH SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
- IN GENERAL, AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS SHALL HAVE A MAXIMUM PERIOD OF EXPOSURE OF NOT MORE THAN 15 DAYS.
- FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IN ALL AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS.

**EROSION CONTROL DURING WINTER CONSTRUCTION**

- WINTER CONSTRUCTION PERIOD DEFINED: NOVEMBER 1 THROUGH MAY 1
- WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
- EXPOSED AREAS SHOULD BE LIMITED TO WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY PRECIPITATION EVENT.
- ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
- ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

**LIME AND FERTILIZER SCHEDULE**

| SEEDING TYPE     | SEED DATES        | LIME RATE<br>(TONE/ACRE) | FERTILIZER RATE/RATIO (TYPE)<br>(LBS/ACRE) |
|------------------|-------------------|--------------------------|--|
| PERMANENT AND/OR |                   |                          |  |
| TEMPORARY        | MAY. 1 - SEPT. 15 | 3                        | 600/ENGINEER APPROVED<br>(N-P205-K20)      |

**NOTES:**

- USE LOW PHOSPHATE FERTILIZER AT ALL TIMES AND SLOW RELEASE NITROGEN FERTILIZER WHEN BETWEEN 25 AND 250 FEET OF A SURFACE WATER BODY.
- NO FERTILIZER EXCEPT LIMESTONE SHOULD BE APPLIED WITHIN ANY WETLANDS OR WITHIN 50 FEET OF AN INLAND WETLAND, INTER-TIDAL AREA OR TIDAL WETLAND OR WITHIN 75' OF A VERNAL POOL OR NON-TIDAL PERENNIAL STREAM OR RIVER.
- APPLY LIMESTONE AT 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE.

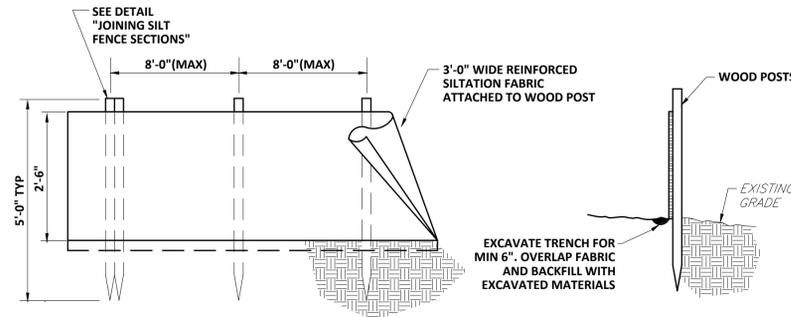
**TEMPORARY VEGETATION (TABLE 4-1)**

**ADDITIONAL TEMPORARY SEED MIXTURE (FOR PERIODS LESS THAN 12 MONTHS)**

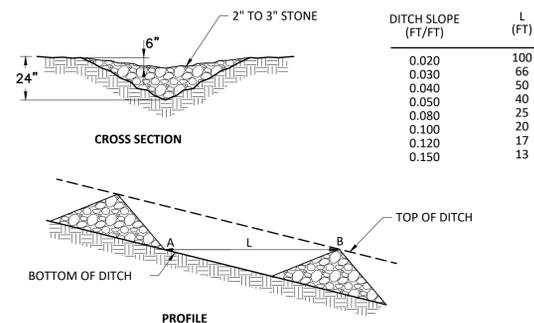
| DATES                                  | SEED                | RATE         |
|--|---------------------|--------------|
| PRIOR TO MAY 15                        | OATS                | 80 LBS/ACRE  |
| AUG. 15 - SEP. 15                      | ANNUAL RYE GRASS    | 40 LBS/ACRE  |
| AUG. 15 - SEP. 15                      | WINTER RYE GRASS    | 112 LBS/ACRE |
| APR. 1 - JUN. 1<br>(AUG. 15 - SEP. 15) | PERENNIAL RYE GRASS | 40 LBS/ACRE  |

**PERMANENT VEGETATION**

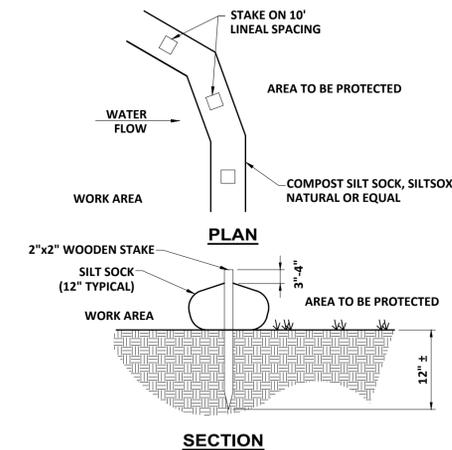
REFER TO LANDSCAPING SPECIFICATION 02480.



**SILT FENCE INSTALLATION**  
SCALE: NTS

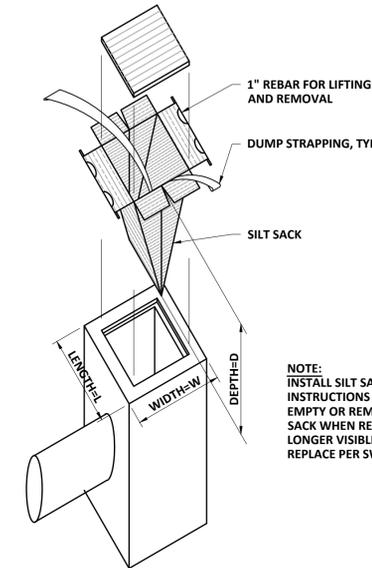


**STONE CHECK DAM**  
SCALE: NTS

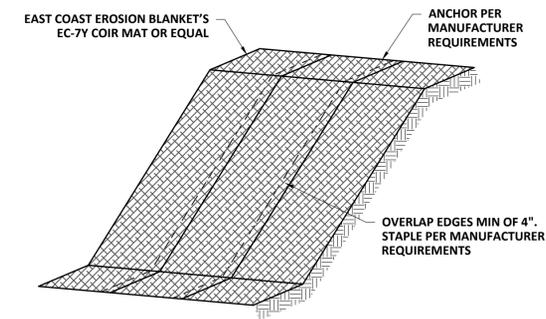


- NOTES:**
- ALL MATERIAL TO MEET SPECIFICATIONS
  - SILT SOCK COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS
  - SILT SOCK DEPICTED IS FOR MINIMUM SLOPES. GREATER SLOPES MAY REQUIRE LARGER SOCKS PER THE ENGINEER
  - COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

**COMPOST SILT SOCK DETAIL**  
SCALE: NTS



**SILT SACK CATCH BASIN INLET**  
SCALE: NTS



**EROSION CONTROL MATTING - SLOPES**  
SCALE: NTS

| NO | RE-BID CONTRACT DRAWINGS | DATE        |
|----|--------------------------|-------------|
|    |                          | M.THE 11-21 |

| DESIGNED BY: | CHKD BY: | DATE: |
|--------------|----------|-------|
| J.LOOC       | D.FUID   | 11-21 |



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CITY OF PORTSMOUTH, NH  
SAGAMORE AVENUE SEWER EXTENSION  
PROJECT

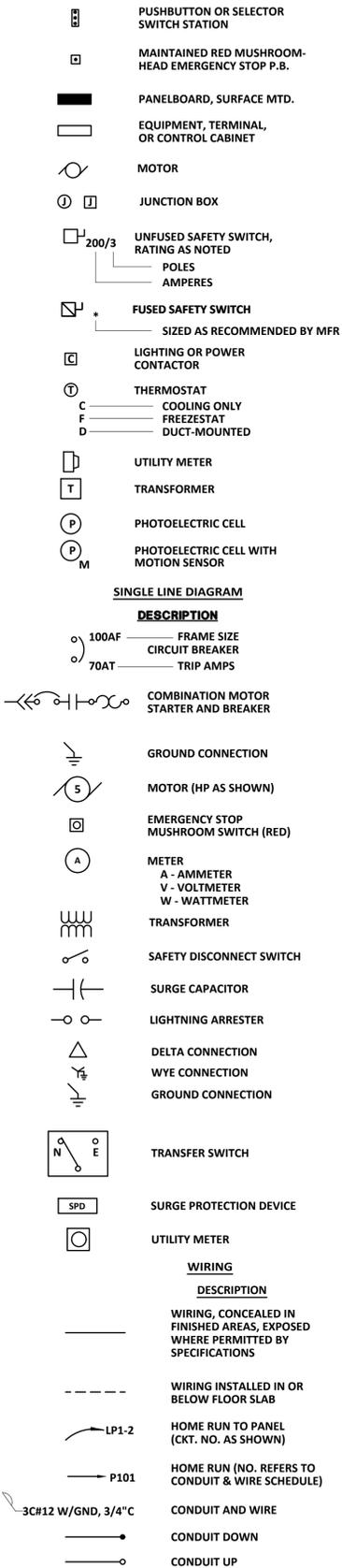
**DRAWING**  
C-20

DETAILS VII

ELECTRICAL LEGEND

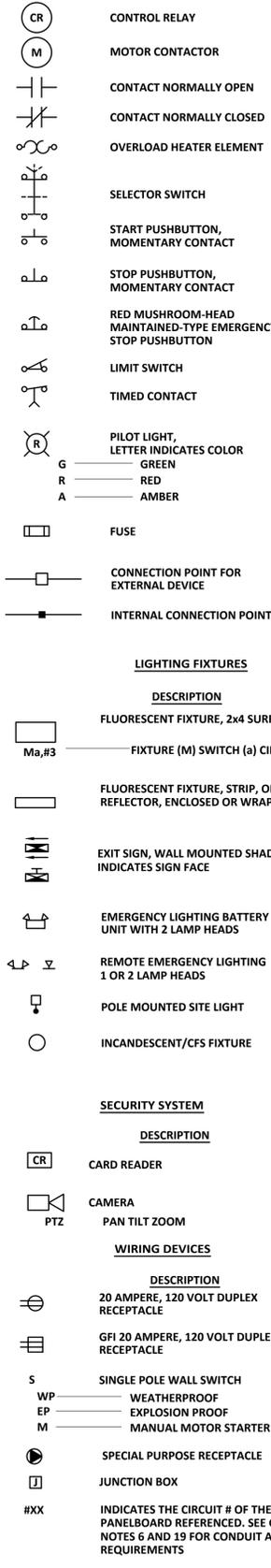
POWER

DESCRIPTION



SCHEMATIC DIAGRAM

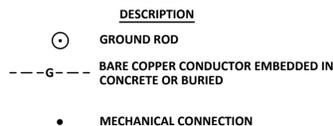
DESCRIPTION



ABBREVIATIONS

Table listing electrical abbreviations such as AMPERE, ALTERNATING CURRENT, ANALOG INPUT (PLC), CONTACT NORMALLY OPEN, etc.

GROUNDING



GENERAL NOTES

- 1. ALL CONDUIT AND EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE CURRENT NATIONAL ELECTRICAL CODE.
2. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURES.
3. CONDUITS SHALL BE PROPERLY TERMINATED WITH NEAT CONNECTIONS TO ALL ASSOCIATED EQUIPMENT.
4. EACH CONDUIT TO CARRY GROUND WIRE(S) IN ADDITION TO NUMBER OF CONDUCTORS SHOWN ON DRAWINGS.
5. MINIMUM CONDUIT SIZE SHALL BE 3/4" TRADE SIZE, UNLESS OTHERWISE NOTED ON THE ELECTRICAL DRAWINGS.
6. ALL SURFACE MOUNTED PANELS ON THE INSIDE OF EXTERIOR WALLS ABOVE GRADE, OR IN OTHER LOCATIONS CONSIDERED AS DAMP, SHALL BE MOUNTED TO MAINTAIN A 1/4" AIR SPACE BETWEEN THE ENCLOSURE AND THE WALL.
7. ELECTRICAL EQUIPMENT LOCATIONS ARE APPROXIMATE ONLY. COORDINATE LOCATIONS WITH PROCESS PIPING AND OTHER DRAWINGS.
8. ALL FIELD CONTROL CONDUCTORS WILL TERMINATE AT INDIVIDUAL TERMINAL BLOCKS WITHIN THE CONTROL ENCLOSURE.
9. GROUND ALL CONDUCTOR SHIELDS AT CONTROL PANEL ONLY - DO NOT GROUND SHIELDS AT BOTH ENDS.
10. AT THE FOLLOWING LOCATIONS, UNLESS OTHERWISE NOTED, PULL, JUNCTION, TERMINAL, SWITCH, AND OUTLET BOXES SHALL BE CAST IRON WHERE STEEL CONDUIT IS TERMINATED; OR SHALL BE CAST ALUMINUM WHERE ALUMINUM CONDUIT IS TERMINATED.
11. NAMEPLATES SHALL CONFORM STRICTLY TO INSTRUCTIONS IN THE ELECTRICAL SPECIFICATIONS AND ON THE DRAWINGS.
12. PIPE SLEEVES FOR CONDUITS PASSING FROM NON-HAZARDOUS AREAS TO HAZARDOUS AREAS SHALL HAVE CAULKING APPLIED TO MAKE THE INSTALLATION GASTIGHT.
13. CONTRACTOR SHALL PROVIDE ALL CONDUIT, WIRING, EQUIPMENT, AND CONTROL DEVICES AS INDICATED BY SCHEMATICS, SINGLE LINE DIAGRAMS, SCHEDULES, PLANS, SPECIFICATIONS, AND VENDOR DOCUMENTATION TO PROVIDE A COMPLETE WORKING SYSTEM.
14. CONTRACTOR SHALL PROVIDE A COMPLETE WORKING OPERATING SYSTEM IN ACCORDANCE WITH ALL DRAWINGS, SPECIFICATIONS, CODES AND STANDARDS.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL OF THE ELECTRICAL DRAWINGS AND CONDUIT AND WIRE SCHEDULES RELATIVE TO THE CONDUIT AND WIRE TO BE PROVIDED ON THIS PROJECT.
16. 120V CIRCUITS EXCEEDING 100 FEET IN LENGTH SHALL BE NO 10 AWG WIRING, MINIMUM.
17. POWER CONDUITS FOR THREE PHASE AND SINGLE PHASE CIRCUITS (DESIGNATED WITH "P" NUMBERS) ARE SHOWN ON POWER PLANS, WITH CONDUIT SIZES AND WIRING INFORMATION INDICATED IN THE CONDUIT AND WIRE SCHEDULES.
18. CONTROL AND INSTRUMENTATION SIGNAL CONDUITS (DESIGNATED WITH "C" AND "S" NUMBERS OR, ALTERNATIVELY, INDICATED BY WAY OF A LEGEND) ARE SHOWN ON CONTROL AND INSTRUMENTATION WIRING DIAGRAMS, WITH CONDUIT SIZES AND WIRING INFORMATION INDICATED EITHER IN THE LEGEND OR IN CONDUIT AND WIRE SCHEDULES.
19. PROVIDE CONDUIT EXPANSION PROTECTION FOR ALL EXTERIOR CONDUIT SYSTEMS.
20. FOR ALL OUTDOOR ELECTRICAL EQUIPMENT AND INSTRUMENTATION, CONTRACTOR SHALL USE CONDUIT INSTALLATION MEANS AND METHODS NECESSARY TO MITIGATE MOISTURE AND CONDENSATION PER NEC AND INSTALLATION METHODS LISTED IN SPECIFICATIONS.

GENERAL DEMOLITION NOTES:

- 1. THE EXISTING ELECTRICAL PLAN FOR THIS PROJECT IS BASED ON INFORMATION PROVIDED BY OTHERS AND FIELD SURVEY OF THE SITE. GENERAL CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
2. FIELD VERIFY ALL CONDITIONS AFFECTING THE WORK PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
3. PROTECT ALL EXISTING ITEMS AND EQUIPMENT ADJACENT TO THE WORK AREA. ALL EXISTING ITEMS, EQUIPMENT AND MATERIALS DAMAGED OR AFFECTED BY THE WORK SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
4. THE EXISTING PROPERTIES SHALL REMAIN OPERATIONAL DURING CONSTRUCTION. SEE SPECIFICATION SECTIONS 01010 AND 16010 FOR ADDITIONAL DETAILS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE DEMOLITION AND CONSTRUCTION WITH THE OWNER'S REQUIREMENTS TO MAINTAIN FACILITY OPERATION.
5. PATCH, REPAIR AND REFINISH ALL EXISTING SURFACES AFFECTED BY THE WORK, TO THE SATISFACTION OF THE ENGINEER.

NEMA CLASSIFICATIONS FOR NEW ELECTRICAL EQUIPMENT AND ENCLOSURES

Table with columns: ROOM NAME, NEMA RATING. Rows include GENERAL OUTDOORS (3R) and GENERAL INDOORS (12).

NOTES:

- 1. THE AREAS NOTED SHALL BE RATED AS INDICATED, EXCEPT THAT EQUIPMENT SUCH AS MOTOR CONTROL CENTERS, SWITCHBOARDS, AND TRANSFORMERS SHALL BE RATED AS SPECIFIED. PANELBOARDS AND TRANSFORMERS SHALL BE, AT A MINIMUM, RATED NEMA 12 IF NOT SPECIFIED.

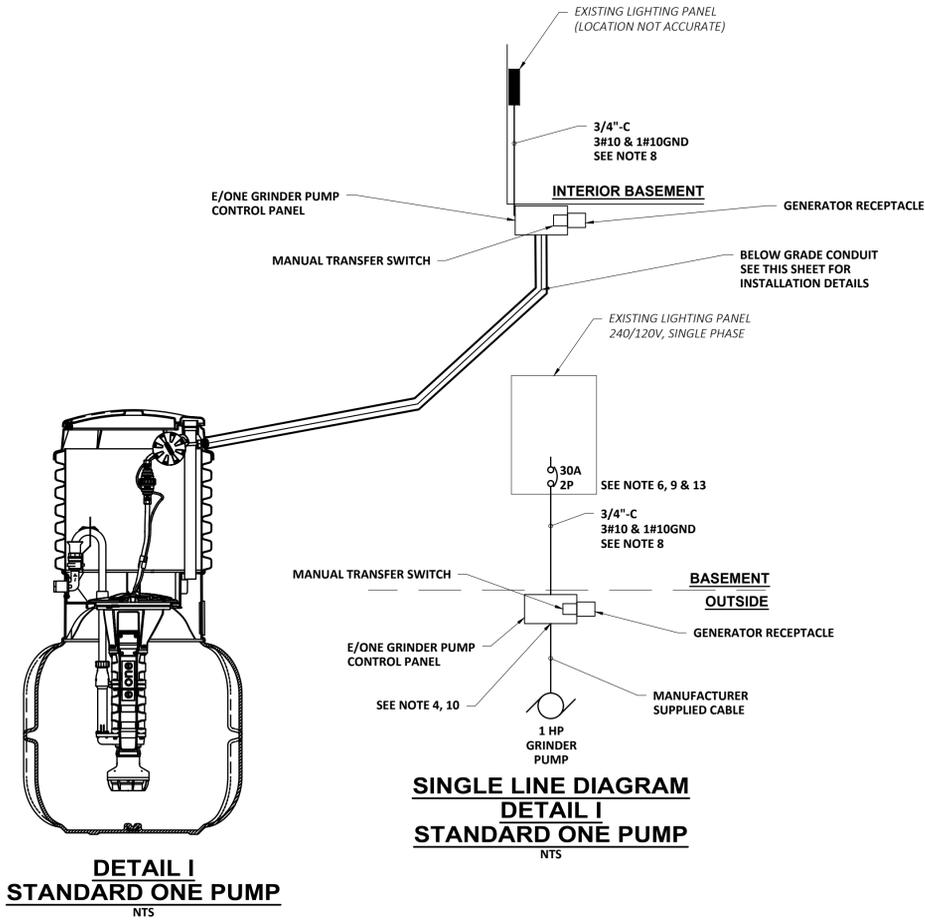
\*\* CONDUIT INSTALLATION SCHEDULE

Table with columns: AREA NEMA RATING PER E-1, CONDUIT REQUIRED IN EXPOSED AREAS, CONDUIT REQUIRED IN NON EXPOSED AREAS. Rows include 1/12, 3R, and BELOW GRADE DUCT NON ENCASED.

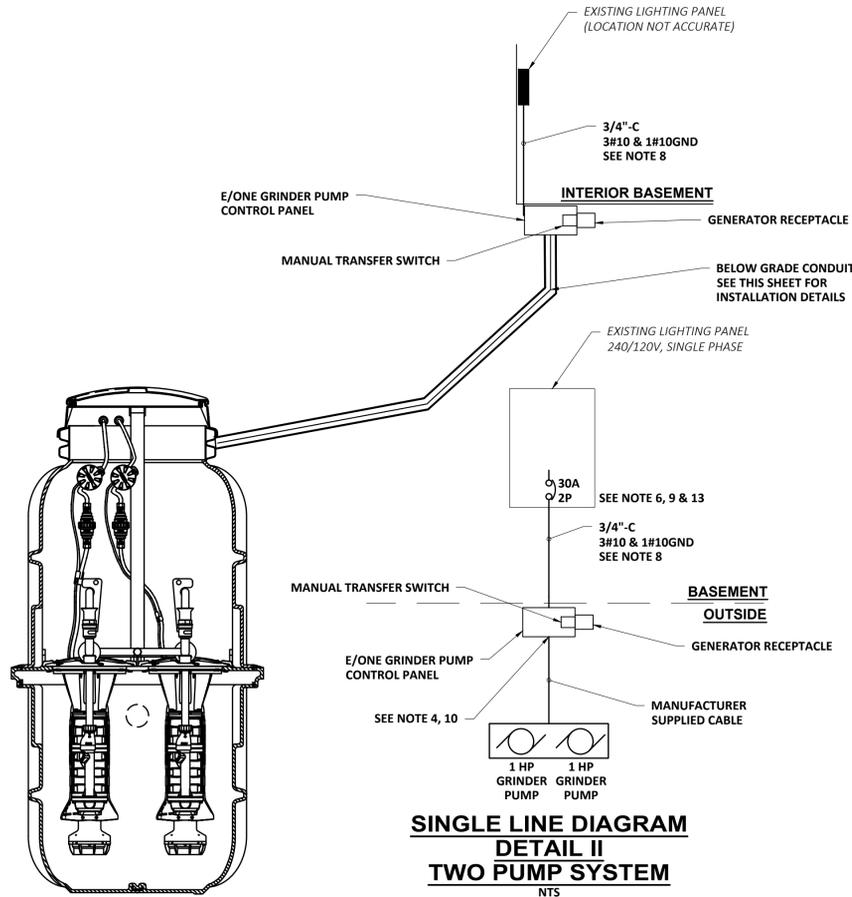
\*\* SEE SPECIFICATIONS FOR INFORMATION ABOUT FINISHED/ UNFINISHED BASEMENTS

NOTE: ALL NOTES AND SYMBOL LISTS SHALL BE CONSIDERED AS APPLICABLE TO ALL ELECTRICAL DRAWINGS FOR THIS PROJECT. SYMBOLS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND DO NOT INDICATE THEIR INCORPORATION IN THE DESIGN.

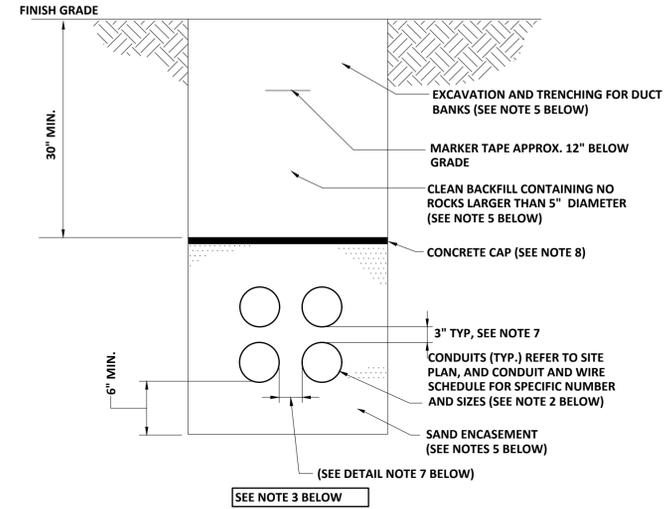
Project information including APP'D, DATE, SUBMISSIONS/REVISIONS, DESIGNED BY, CAD CORP., CHECKED BY, DATE, APPROVED BY, DATE, PROJECT NO., WRIGHT-PIERCE logo, and CITY OF PORTSMOUTH, NH SAGAMORE AVENUE SEWER EXTENSION PROJECT DRAWING E-1.



**DETAIL I  
STANDARD ONE PUMP**  
NTS



**SINGLE LINE DIAGRAM  
DETAIL II  
TWO PUMP SYSTEM**  
NTS



(REFER TO DUCT BANK NOTES BELOW FOR ADDITIONAL REQUIREMENTS)

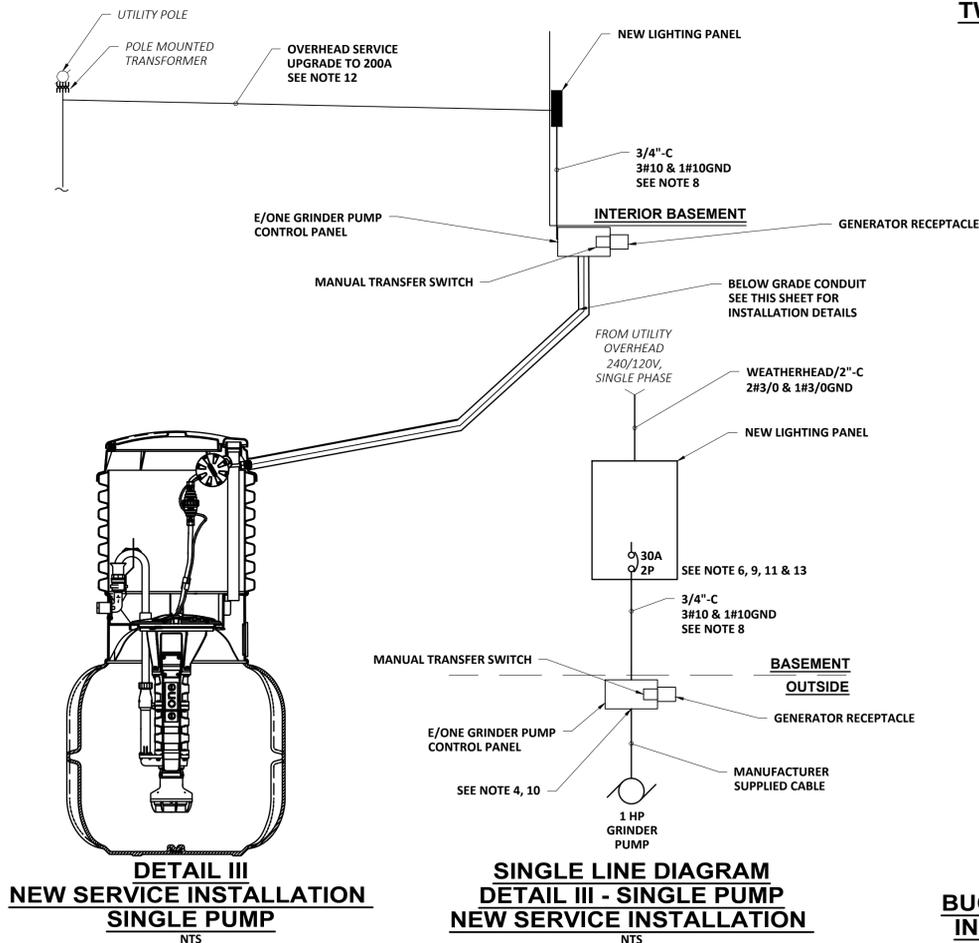
**NOTES: (DUCT BANK DETAIL)**

- DIMENSIONS TYPICAL FOR ALL DUCT BANKS, UNLESS OTHERWISE NOTED.
- FOR CONDUIT DETAILS, SEE CONDUIT AND WIRE SCHEDULE ON THE DRAWINGS. REFERENCES P1 AND C1 DENOTE CONDUIT NUMBERS. REFER TO SPECIFIC DUCT BANK SECTIONS AND CONDUIT AND WIRE SCHEDULES FOR DETAILS.
- THIS TYPICAL DUCT BANK SECTION HAS BEEN SHOWN AS AN EXAMPLE OF THE REQUIREMENTS FOR THE UNDERGROUND INSTALLATION FOR THE DUCT BANK SYSTEM. THIS DENOTES SPECIFIC SPACING, SAND ENCASEMENT, SAND SUBBASE, ETC. REQUIRED FOR DUCT BANK INSTALLATIONS. THE SPECIFIC CONDUIT SIZING AND NUMBERS HAVE BEEN SHOWN BY EACH SPECIFIC DUCT BANK SECTION.
- EXCAVATION, TRENCHING AND BACKFILLING SHALL BE FURNISHED AND INSTALLED AS REQUIRED FOR THE WORK OF THIS CONTRACT.
- SAND ENCASEMENT SHALL BE FURNISHED AND INSTALLED AS REQUIRED FOR THE WORK OF THIS CONTRACT. CONDUIT SHALL REST ON 6" OF SAND. CONDUIT SHALL NOT REST ON HARD PACKED EARTH.
- INSTALL MARKER TAPE THE ENTIRE LENGTH OF EACH DUCT BANK.
- TYPICAL SPACING BETWEEN CONDUITS SHALL BE 3 INCHES UNLESS OTHERWISE NOTED.
- PROVIDE A 2" CONCRETE CAP ON SECTIONS OF DUCT BANK WHICH DO NOT MEET SUFFICIENT DEPTH AS REQUIRED BY THE NEC. IF SUFFICIENT DEPTH IS MAINTAINED, A CONCRETE CAP IS NOT REQUIRED.

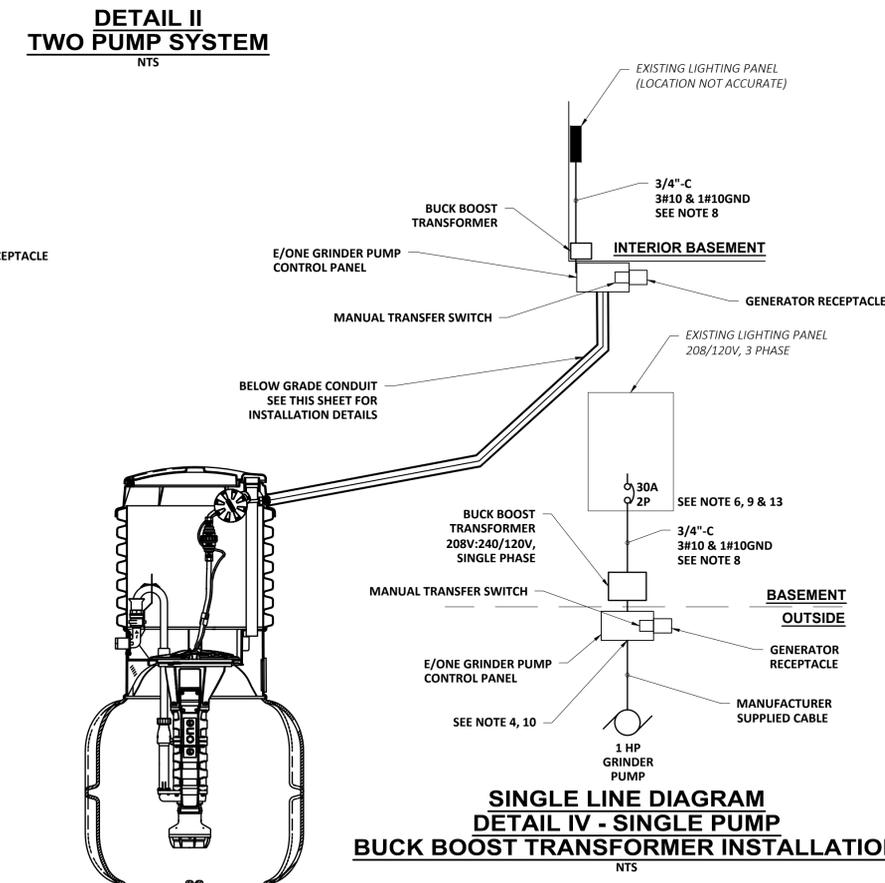
**TYPICAL DUCT BANK DETAIL**  
NTS

**NOTES:**

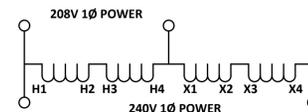
- REFER TO DRAWING E-1 FOR GENERAL NOTES, LEGEND OF SYMBOLS, NEMA RATINGS, AND CONDUIT INSTALLATION SCHEDULE.
- INSTALLATION SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE NEC.
- COORDINATE WITH CITY AND ENGINEER FOR ANY DEVIATIONS DURING CONSTRUCTION
- AN EXPANSIONS FITTING SHALL BE INSTALLED NEAR THE CONTROLLER FOR ALL CONDUITS THAT EMERGE FROM GRADE.
- COORDINATE INSTALLATION OF CONDUIT OR NM WIRING TO THE POWER PANEL WITHIN HOUSEHOLD OR COMMERCIAL FACILITY WITH OWNER OR PROPRIETOR, AND CITY.
- INSTALL A CIRCUIT BREAKER AT POWER PANEL AS NEEDED FOR THE NEW GRINDER PUMP. CIRCUIT BREAKER SHALL MATCH MANUFACTURER, AND PANEL AIC RATING.
- INSTALLATION OF THE BUCK BOOST TRANSFORMER IS TO BE COORDINATED WITH THE CONTRACTOR ON SITE. BUCK BOOST TRANSFORMER IS SUPPLIED BY E/ONE.
- INSTALL EMT CONDUIT FOR FINISHED BASEMENTS AND FOR UNFINISHED BASEMENTS NON-METALLIC WIRING CAN BE INSTALLED WITH NO CONDUIT REQUIRED. REFER TO SPECIFICATION 16000.
- INSTALL TANDEM BREAKERS ON EXISTING PANELS. RELOCATE CIRCUITS TO TANDEM BREAKERS AS NECESSARY TO MAKE ROOM FOR THE 30A, 2 POLE BREAKER.
- CONDUIT CONNECTION TO THE GRINDER CONTROL PANEL SHALL BE BOTTOM ENTRY ONLY.
- NEW SERVICE PANEL SHALL CONTAIN ALL NECESSARY CIRCUIT BREAKERS FOR ALL OF THE EXISTING CIRCUITS AT THE FACILITY OR HOUSEHOLD.
- OVERHEAD SERVICE INSTALLATION SHALL BE INSTALLED PER THE UTILITY COMPANY REQUIREMENTS.
- ELECTRICAL CONTRACTOR SHALL FIELD VERIFY THAT THE NEW PUMP CIRCUITS WILL NOT OVERLOAD THE EXISTING OR PLANNED LIGHTING PANELBOARD. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- ALL NEW SERVICES SHALL HAVE A NEW GROUND ROD INSTALLED PER NEC REQUIREMENTS.



**DETAIL III  
NEW SERVICE INSTALLATION  
SINGLE PUMP**  
NTS



**DETAIL IV  
BUCK BOOSTER TRANSFORMER  
INSTALLATION - SINGLE PUMP**  
NTS



|  |                          |
|--|--------------------------|
| APP'D  | DATE                     |
| M. THE   | 11-21                    |
| SUBMISSIONS/REVISIONS  |                          |
| NO   | RE-BID CONTRACT DRAWINGS |
| DESIGNED BY: C. MINOR  |                          |
| CAD CORP: L. MIC   |                          |
| CHECKED BY: S. MAURO   |                          |
| DATE: 11-21  |                          |
| APPROVED BY: S. LAPRISE  |                          |
| DATE: 11-21  |                          |
| PROJECT NO: 1304C  |                          |
|  |                          |
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| <b>CITY OF PORTSMOUTH, NH</b><br>SAGAMORE AVENUE SEWER EXTENSION PROJECT<br>ELECTRICAL DETAILS   |                          |
| <b>DRAWING</b><br>E-2  |                          |

| ELECTRICAL PROPERTY SCHEDULE |                      |          |  |            |
|------------------------------|----------------------|----------|--|------------|
| PROPERTY #                   | STREET               | CODE NO. | NOTES  | DETAIL NO. |
| 33                           | CLIFF ROAD           | 1        |  | I          |
| 44                           | CLIFF ROAD           | 2        | SUB PANEL IN GARAGE HAS SPACE.                                 | I          |
| 45                           | CLIFF ROAD           | 1        |  | I          |
| 71                           | CLIFF ROAD           | 1        |  | I          |
| 89                           | CLIFF ROAD           | 1        |  | I          |
| 96                           | CLIFF ROAD           | 1        |  | I          |
| 131                          | CLIFF ROAD           | 2        | INSPECTION SAYS 3 CIRCUITS AVAILABLE BUT PHOTOS SHOW NO SPACE. | I          |
| 698                          | SAGAMORE AVENUE      | 3        | 2 SPACES IN THE MAIN PANEL CANNOT BE USED.                     | I & III    |
| 713                          | SAGAMORE AVENUE      | 4        | NO ELECTRICAL INSPECTION.                                      | I          |
| 714                          | SAGAMORE AVENUE      | 3        | COULD NOT VERIFY MAIN BREAKER SIZE.                            | I & III    |
| 716                          | SAGAMORE AVENUE      | 1        |  | I          |
| 749                          | SAGAMORE AVENUE      | 1,4      | COULD NOT VERIFY MAIN BREAKER SIZE.                            | I          |
| 766                          | SAGAMORE AVENUE      | 1        |  | I          |
| 792,794,796                  | SAGAMORE AVENUE      | 1,4      | COULD NOT VERIFY MAIN BREAKER SIZE.                            | I          |
| 910                          | SAGAMORE AVENUE      | 1        |  | I          |
| 911                          | SAGAMORE AVENUE      | 1        |  | I          |
| 912                          | SAGAMORE AVENUE      | 1        |  | I          |
| 913                          | SAGAMORE AVENUE      | 1        |  | I          |
| 915                          | SAGAMORE AVENUE      | 1,5      |  | I & IV     |
| 960                          | SAGAMORE AVENUE      | 1        |  | II         |
| 1145                         | SAGAMORE AVENUE      | 1,5      | NEED TO VERIFY THE INCOMING SERVICE VOLTAGE.                   | II & IV    |
| 1149                         | SAGAMORE AVENUE      | 1,4      | COULD NOT VERIFY MAIN BREAKER SIZE.                            | I          |
| 1150                         | SAGAMORE AVENUE      | 2,5      |  | I & IV     |
| 1155                         | SAGAMORE AVENUE      | 5        | NO ELECTRICAL INSPECTION.                                      | I & IV     |
| 1167                         | SAGAMORE AVENUE      | 1        | NO ELECTRICAL INSPECTION.                                      | I          |
| 2                            | SAGAMORE GROVE       | 1        |  | I          |
| 3                            | SAGAMORE GROVE       | 4        | NO ELECTRICAL INSPECTION.                                      | I          |
| 5                            | SAGAMORE GROVE       | 1        |  | I          |
| 6                            | SAGAMORE GROVE       | 1        |  | I          |
| 11                           | SAGAMORE GROVE       | 3        |  | I & III    |
| 7                            | SHAW ROAD            | 1        |  | I          |
| 14                           | SHAW ROAD            | 1        |  | I          |
| 17                           | SHAW ROAD            | 3        |  | I & III    |
| 24                           | SHAW ROAD            | 1        |  | I          |
| 27                           | SHAW ROAD            | 3        |  | I & III    |
| 36                           | SHAW ROAD            | 1        |  | I          |
| 16                           | WALKER BUNGALOW ROAD | 3        |  | I & III    |
| 40                           | WALKER BUNGALOW ROAD | 1        |  | I          |
| 58                           | WALKER BUNGALOW ROAD | 1        |  | I          |
| 72                           | WALKER BUNGALOW ROAD | 1        |  | I          |
| 86                           | WALKER BUNGALOW ROAD | 4        | NO ELECTRICAL INSPECTION.                                      | I          |
| 93                           | WALKER BUNGALOW ROAD | 2        |  | I          |
| 137                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 140                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 147                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 159                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 171                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 184                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 189                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 201                          | WALKER BUNGALOW ROAD | 2        | NEED TO VERIFY DISTANCE TO THE SUBPANEL.                       | I          |
| 209                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 212                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 220                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 238                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 241                          | WALKER BUNGALOW ROAD | 2        |  | I          |
| 251                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 260                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 272                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 284                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 290                          | WALKER BUNGALOW ROAD | 1        |  | I          |
| 74                           | WENTWORTH HOUSE ROAD | 3        |  | I & III    |
| 187,189                      | WENTWORTH HOUSE ROAD | 1        |  | II         |
| 191                          | WENTWORTH HOUSE ROAD | 1        |  | II         |

| ELECTRICAL UPGRADE CODE NO. |                         |
|-----------------------------|-------------------------|
| 1                           | NO UPGRADE REQUIRED     |
| 2                           | INSTALL TANDEM BREAKERS |
| 3                           | UPGRADE SERVICE         |
| 4                           | NO INFO/ NEED MORE INFO |
| 5                           | TRANSFORMER NEEDED      |

**NOTES:**

- REFER TO DRAWING E-1 FOR GENERAL NOTES, LEGEND OF SYMBOLS, NEMA RATINGS, AND CONDUIT INSTALLATION SCHEDULE.
- INSTALLATION SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE NEC.
- COORDINATE WITH CITY AND ENGINEER FOR ANY DEVIATIONS DURING CONSTRUCTION.
- COORDINATE WITH UTILITY COMPANY TO UPGRADE SERVICE ON THE PROPERTIES THAT HAVE NO ELECTRICAL INSPECTION.
- REFER TO E-2 FOR WHICH DETAIL NUMBER APPLIES TO EACH PROPERTY LISTED IN THE SCHEDULE.

|                            |   |     |  |  |   |  |  |
|----------------------------|---|-----|--|--|---|--|--|
| APP'D DATE<br>M. THE 11-21 | SUBMISSIONS/REVISIONS<br>RE-BID CONTRACT DRAWINGS | NO. | DESIGNED BY: C. MINOR<br>CAD CORP.: LMIC<br>CD: C. MINOR<br>CHECKED BY: S. LAPRISE<br>DATE: 11-21<br>APPROVED BY: S. LAPRISE<br>DATE: 11-21<br>PROJECT NO.: 11304C |  | <p><b>WRIGHT-PIERCE</b><br/>                 Engineering a Better Environment<br/>                 888.621.8156   www.wright-pierce.com</p> | CITY OF PORTSMOUTH, NH<br>SAGAMORE AVENUE SEWER EXTENSION<br>PROJECT | ELECTRICAL SITE AND EQUIPMENT SCHEDULE I |
| <b>DRAWING</b><br>E-3      |   |     |  |  |   |  |  |