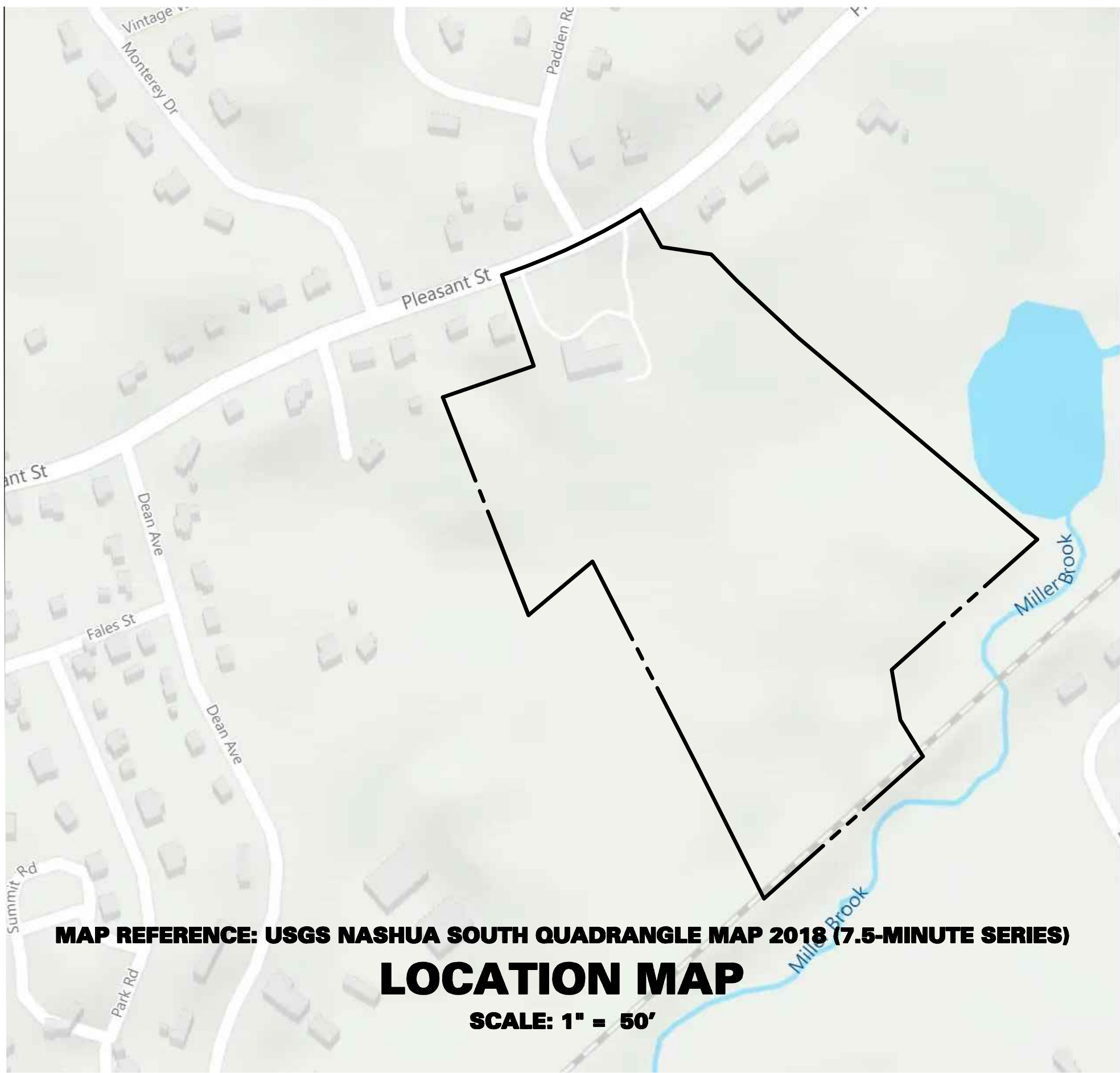


237 PLEASANT STREET  
TOWN OF FRANKLIN, NORFOLK COUNTY, MASSACHUSETTS

CIVIL DRAWING INDEX

SHEET NUMBER	DRAWING TITLE	DATE	LAST REVISED
CS001	SITE COVER SHEET	09-10-2022	01-11-2023
CS002	MASTER LEGEND & NOTES	09-10-2022	
VB101	EXISTING CONDITIONS SURVEY	09-10-2022	
CS100	SITE PLAN	09-10-2022	01-11-2023
CS501	SITE DETAILS I	09-10-2022	01-11-2023
CS502	SITE DETAILS II	09-10-2022	01-11-2023
CS503	SITE DETAILS III	09-10-2022	
CG100	GRADING & DRAINAGE PLAN	09-10-2022	01-11-2023
CG501	GRADING & DRAINAGE DETAILS I	09-10-2022	
CG502	GRADING & DRAINAGE DETAILS II	09-10-2022	
CU100	UTILITY PLAN	09-10-2022	01-11-2023
CU501	UTILITY DETAILS I	09-10-2022	
CU502	UTILITY DETAILS II	09-10-2022	
CE100	SOIL EROSION & SEDIMENT CONTROL PLAN	09-10-2022	01-11-2023
CE501	SOIL EROSION & SEDIMENT CONTROL DETAILS I	09-10-2022	
CD100	DEMOLITION PLAN	09-10-2022	01-11-2023
TM100	TURNING MOVEMENTS PLAN	09-10-2022	
LL100	LIGHTING PLAN	09-10-2022	01-11-2023
LL501	LIGHTING DETAILS	09-10-2022	
LP100	PLANTING PLAN	09-10-2022	01-11-2023
LP501	PLANTING DETAILS	09-10-2022	



RELEASE DATES

DATE	ISSUED FOR
09-10-2022	DESIGN REVIEW AND PRICING
11-23-2022	STORMWATER REPORT
01-11-2023	PEER REVIEW COMMENTS

OWNER  
ST JOHNS EPISCOPAL CHURCH  
237 PLEASANT ST  
FRANKLIN, MA 02038

APPLICANT  
THE COMMUNITY BUILDERS INC.  
C/O JOHN HARDING  
185 DARTMOUTH ST, 9TH FLOOR  
BOSTON, MA 02116  
(617) 695-9595

ARCHITECT  
DBVW ARCHITECTS  
C/O KARISSA KUHN  
111 CHESTNUT ST  
PROVIDENCE, RI 02903  
(401) 831-1240

CIVIL ENGINEER, LAND SURVEY, TRAFFIC ENGINEER,  
ENVIRONMENTAL ENGINEER, GEOTECHNICAL ENGINEER &  
LANDSCAPE ARCHITECT  
LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, INC  
C/O FRANK HOLMES  
100 CAMBRIDGE STREET  
BOSTON, MA 02114  
(617) 824-9100

STRUCTURAL ENGINEER  
RSE ASSOCIATES INC.  
63 PLEASANT STREET, SUITE 300  
WATERTOWN, MA 02472  
(617) 926-9300

MEP ENGINEER  
ENGINEERING DESIGN SERVICES  
141 INDUSTRIAL DRIVE  
SLATERVILLE, RI 02876  
(401) 765-7659

FOR PERMITTING ONLY, NOT FOR CONSTRUCTION

01/11/2023	PEER REVIEW COMMENTS	2
11/23/2022	STORMWATER REPORT	1
Date	Description	No.

Revisions

COMMONWEALTH OF MASSACHUSETTS  
FRANK HOLMES  
CIVIL  
No. 40203  
REGISTERED  
PROFESSIONAL ENGINEER

FRANK HOLMES

**LANGAN**  
Langan Engineering and  
Environmental Services, Inc.  
100 Cambridge Street, Suite 1310  
Boston, MA 02114  
T: 617.824.9100 F: 617.824.9101 www.langan.com

Project

237 PLEASANT STREET  
CONCEPT PLANS

NORFOLK COUNTYFRANKLINMASSACHUSETTS

Drawing Title

COVER SHEET

Project No.	Drawing No.
151019602	CS001
Date	
09/10/2022	
Drawn By	
Checked By	

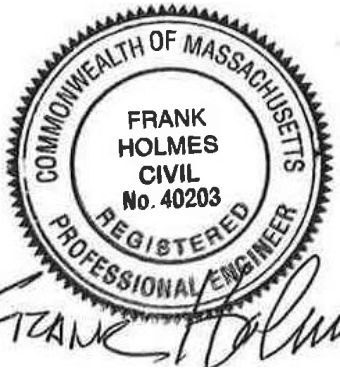


A	<div><div>GENERAL CIVIL NOTES</div><div><div>1. PLANIMETRIC AND TOPOGRAPHIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY PRECISION LAND SURVEYING, INC. THE EXISTING CONDITIONS SHOWN HERE ARE FROM SURVEY DATA UPDATED THROUGH 5/26/2021.</div><div>2. WETLANDS DELINEATED BY LEC ENVIRONMENTAL CONSULTANTS AND LOCATED BY PRECISION LAND SURVEYING, INC.</div><div>3. PROPOSED SITE WORK IMPROVEMENTS SHALL CONFORM TO THE STANDARD DETAILS AND SPECIFICATIONS OF THE TOWN OF FRANKLIN. IN THE ABSENCE OF LOCAL STANDARDS, SITE WORK SHALL CONFORM TO THE REQUIREMENTS OF MASSACHUSETTS DOT STANDARD DETAILS.</div><div>4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING DIG SAFE (WWW.DIGSAFE.COM), EXCAVATION TEST HOLES, PERFORMING TEST BORINGS, AND PERFORMING WHATEVER ADDITIONAL INVESTIGATION NECESSARY TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES TO REMAIN THROUGHOUT THE CONSTRUCTION PERIOD. ANY CONFLICTS BETWEEN EXISTING UTILITIES AND PROPOSED UTILITIES DISCOVERED DURING CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE PROJECT ENGINEER.</div><div>5. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR LOCATIONS, DIMENSIONS AND DETAILS OF ALL DOORS, RAMPS, SIDEWALKS AND WALLS ASSOCIATED WITH THE BUILDING.</div><div>6. ALL IMPROVEMENTS CONSTRUCTED IN THE TOWN PUBLIC RIGHT-OF-WAY SHALL CONFORM TO TOWN OF FRANKLIN STANDARD DETAILS. IN THE ABSENCE OF LOCAL DETAILS &amp; REQUIREMENTS AND WORK IN THE STATE RIGHT-OF-WAY SHALL COMPLY WITH THE STATE OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (2021 EDITION) AND THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS (DATED SEPTEMBER 30, 2021).</div><div>7. FOR AREAS OUTSIDE THE PROPERTY LINES, REPAIR AND/OR REPLACE ALL DAMAGE DONE TO EXISTING ELEMENTS (SIDEWALKS, PAVING, LANDSCAPING, ETC) AS REQUIRED BY OWNER AND/OR GOVERNING AUTHORITY.</div><div>8. ALL SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD AND MASSACHUSETTS DEPARTMENT OF TRANSPORTATION REGULATIONS.</div><div>9. ABBREVIATIONS: ARCH. = ARCHITECTURAL AD = AREA DRAIN BC = BOTTOM OF CURB BW = BOTTOM OF WALL CB = CATCH BASIN CLDI = CONCRETE LINED DUCTILE IRON CO = CLEAN OUT CONC. = CONCRETE DCB = DOUBLE CATCH BASIN DMH = DRAIN MANHOLE EMH = ELECTRIC MANHOLE EX. = EXISTING FES = FLAIED END SECTION FFE = FINISHED FLOOR ELEVATION GR = GRADE HDPE = HIGH DENSITY POLYETHYLENE PIPE HH = HANDHOLE HP = HIGHPOINT INV = INVERT LA = LANDSCAPED AREA LF = LINEAR FEET LP = LOW POINT MH = MANHOLE NTS = NOT TO SCALE OCS = OUTLET CONTROL STRUCTURE PR. = PROPOSED PVC = POLYVINYL CHLORIDE PIPE (SDR-35) RCP = REINFORCED CONCRETE PIPE RET. = RETAINING RL = ROOF LEADER R.O.W = RIGHT OF WAY R&amp;D = REMOVE &amp; DISPOSE R&amp;R = REMOVE &amp; REPLACE R&amp;S = REMOVE &amp; SALVAGE SSMH = SANITARY SEWER MANHOLE TF = TOP OF FRAME TC = TOP OF CURB TW = TOP OF WALL TYP. = TYPICAL VIF = VERIFY IN FIELD WQS = WATER QUALITY STRUCTURE</div></div></div> <td><div><div>SITE PREP, DEMO &amp; EROSION NOTES</div><div><div>1. CLEAR AND GRUB ALL EXISTING PLANTED AREAS WITHIN THE LIMITS OF GRADING. STOCKPILE TOPSOIL FOR REUSE.</div><div>2. SOIL AND SEDIMENT CONTROL PRACTICES MUST BE INSTALLED IN ACCORDANCE WITH THE LOCAL GOVERNING AUTHORITY, THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES AND THE MASSACHUSETTS STORMWATER STANDARDS.</div><div>3. CONTRACTOR SHALL PREVENT DUST, SEDIMENT AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS. ADJOINING STREETS AND PROPERTIES TO BE KEPT FREE OF DEBRIS RESULTING FROM DEMOLITION AND SHALL BE CLEANED ON A DAILY BASIS OR AS NEEDED.</div><div>4. CONTRACTOR SHALL MAINTAIN THE INFILTRATION CAPACITY OF SUBGRADE WITHIN THE FOOTPRINT OF THE INFILTRATION FACILITIES. CONTRACTOR SHALL PREVENT EXCESSIVE SILT AND SEDIMENT BUILDUP AND EXCESSIVE LOADING IN THESE AREAS. IF THE INFILTRATION CAPACITY OF THESE AREAS IS COMPROMISED, THE CONTRACTOR SHALL AMEND OR MODIFY THE SUBGRADE TO RESTORE CAPACITY.</div><div>5. EXISTING TREES TO REMAIN WITHIN THE LIMIT OF WORK ARE TO BE PROTECTED. TREE PROTECTION FENCING TO BE 6" TALL CHAIN LINK FENCE AND TO BE SET UP AT DRIP LINE OF EXISTING TREES OR EXTENT OF CRITICAL ROOT ZONE, WHICHEVER IS GREATER. EXISTING TREES AND SHRUBS TO REMAIN SHALL NOT BE ALTERED UNDER ANY CIRCUMSTANCES UNLESS REVIEWED BY THE LANDSCAPE ARCHITECT AND MUST REMAIN IN THE SAME CONDITION AS OBSERVED PRIOR TO CONSTRUCTION.</div><div>6. TREE AND SHRUB REMOVAL SHALL INCLUDE THE FELLING, CUTTING, GRUBBING OUT OF ROOTS, AND SATISFACTORY OFF-SITE DISPOSAL OF ALL STUMPS AND VEGETATIVE AND EXTRANEOUS DEBRIS PRODUCED THROUGH THE REMOVAL OPERATIONS.</div><div>7. NO HEAVY MACHINERY IS TO BE USED WITHIN THE CRITICAL ROOT ZONES OF EXISTING TREES. EXCAVATION WITHIN CRITICAL ROOT ZONE IS TO BE PERFORMED BY HAND. REVIEW ALL WORK PROPOSED WITHIN THE CRITICAL ROOT ZONE WITH THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.</div><div>8. ALL EXISTING UTILITIES NOT IDENTIFIED AS TO BE REMOVED ARE TO BE PROTECTED. ALL VALVE BOXES, FRAMES, GRATES AND COVERS SHALL BE ADJUSTED TO FINISHED GRADE AS REQUIRED.</div><div>9. DUST CONTROL TREATMENTS SHALL BE APPLIED AS NECESSARY TO CONTROL AND REDUCE THE AMOUNT OF DUST WHICH MAY CAUSE OFF-SITE DAMAGE, BE A HEALTH HAZARD TO HUMANS, WILDLIFE AND PLANT LIFE, OR POSE A HAZARD TO TRAFFIC SAFETY.</div><div>10. EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO START OF DEMOLITION AND CONSTRUCTION AND DISTURBANCE OF SITE. CONTRIBUTORY DRAINAGE AREAS, THE OWNER OR ITS CONTRACTOR SHALL INSPECT, REPAIR AND REMOVE ALL SEDIMENT AND EROSION CONTROL DEVICES, AS INDICATED HEREIN. ALL EARTH CHANGES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED IN SUCH A MANNER SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST POSSIBLE PERIOD OF TIME.</div><div>11. DISPOSAL OF COLLECTED SEDIMENT SHALL BE MADE TO AREA DESIGNATED BY THE OWNER'S SOIL ENGINEER.</div><div>12. FILTER FABRIC/SILT FENCE WILL BE INSTALLED ALONG THE TOE OF ALL CRITICAL CUT AND FILL SLOPES.</div><div>13. ALL TOPSOIL NOT TO BE USED FOR FINAL GRADING/LANDSCAPED AREAS SHALL BE REMOVED FROM THE SITE IMMEDIATELY, IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL LAW. ALL TOPSOIL TO BE USED IN LANDSCAPED AREAS SHALL BE STORED/STOCKPILED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL LAW STANDARDS.</div><div>14. ALL STORM DRAINAGE OUTLETS MUST BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.</div><div>15. SILT FENCES AND BARRIERS MUST BE CLEANED OR REPLACED PERIODICALLY TO REMOVE BUILT-UP SILT.</div><div>16. ALL EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSPECTED ON A DAILY BASIS AND CLEANED IMMEDIATELY AFTER EACH STORM.</div><div>17. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED FOR THE CONVEYANCE OF WATER AROUND, THROUGH, OR FROM THE EARTH CHANGE AREA SHALL BE DESIGNED TO LIMIT THE WATER FLOW TO A NON-EROSIVE VELOCITY.</div><div>18. THE CONTRACTOR SHALL CORRECT ANY OMISSIONS, ERRORS, OR FIELD OPERATIONS IMMEDIATELY AND IN ACCORDANCE WITH THE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.</div><div>19. SEDIMENT DISPOSAL AREAS AND TOPSOIL STOCKPILES NOT SCHEDULED FOR CONSTRUCTION ACTIVITIES WITHIN THIRTY (30) DAYS OF DISTURBANCE SHALL BE STABILIZED AS FOLLOWS:<div><div>A. SOIL AMENDMENTS AS NECESSARY.</div><div>B. ANNUAL RYE GRASS SEEDING APPLIED AT A RATE OF NOT LESS THAN 1 LB. PER 1,000 SF.</div><div>C. MULCH ALL NEWLY SEEDED AREAS WITHIN 80 LBS. OF SALT HAY OR SMALL GRAIN STRAW PER 1,000 SF.</div><div>D. WHEN DISTURBED AREAS ARE SCHEDULED FOR IMMEDIATE LANDSCAPING THEY MAY BE MULCHED AND SEEDED PER ITEM C ABOVE.</div></div></div></div></div></td> <td><div><div>STORM DRAINAGE NOTES</div><div><div>1. ALL STORM DRAINAGE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS/DETAILS OF THE TOWN OF FRANKLIN AND IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL ORDINANCES/REQUIREMENTS GOVERNING THE PROPOSED WORK.</div><div>2. THE LOCATION OF EXISTING UNDERGROUND STORM DRAINAGE INFRASTRUCTURE SHOWN HEREON IS TAKEN FROM DESIGN PLANS, AS-BUILT SKETCHES, LIMITED PHYSICAL EXPLORATION AND OTHER SOURCES OF INFORMATION AND IS NOT TO BE CONSTRUED AS AN ACCURATE "AS-BUILT" SURVEY AND IS SUBJECT TO SUCH CORRECTIONS THAT A MORE ACCURATE SURVEY MAY DISCLOSE.</div><div>3. THE EXISTING STORM DRAINAGE INDICATED HEREON MAY NOT BE LOCATED AS SHOWN. ANY DISCREPANCIES DISCOVERED DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE PROJECT ENGINEER.</div><div>4. RESET ALL EXISTING STORM DRAINAGE STRUCTURES TO MASSACHUSETTS STATE STANDARDS AND AS REQUIRED BY REPAIRING, MILLING OR OVERLAYING ALL PROPOSED STORM DRAINAGE PIPING TO UTILIZE WATER-TIGHT JOINTS.</div><div>5. CLEANOUTS SHALL BE PROVIDED FLUSH TO GRADE AT ALL LOCATIONS OF ROOF DRAIN INTERSECTIONS, BENDS AND UPSTREAM ENDS.</div><div>6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY SIZING ALL DRAINAGE STRUCTURES AND SUBMITTING SHOP DRAWINGS TO ENGINEER FOR REVIEW.</div><div>7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PAVEMENT REPAIRS REQUIRED AS A RESULT OF ANY STORMWATER WORK.</div></div></div></td> <td><div><div>UTILITIES NOTES</div><div><div>1. ALL UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS/DETAILS OF THE UTILITY COMPANY HAVING AUTHORITY OVER THE PROPOSED WORK. ALL PROPOSED UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL ORDINANCES/REQUIREMENTS GOVERNING THE PROPOSED WORK.</div><div>2. THE LOCATION OF EXISTING UNDERGROUND UTILITIES SHOWN HEREON IS TAKEN FROM DESIGN PLANS, AS-BUILT SKETCHES, EXISTING UTILITY COMPANY RECORDS, AND OTHER SOURCES OF INFORMATION AND IS NOT TO BE CONSTRUED AS AN ACCURATE "AS-BUILT" SURVEY AND IS SUBJECT TO SUCH CORRECTIONS THAT A MORE ACCURATE SURVEY MAY DISCLOSE.</div><div>3. THE EXISTING UTILITIES INDICATED HEREON MAY NOT BE LOCATED AS SHOWN. IN ADDITION, OTHER UTILITIES NOT SHOWN HEREON MAY BE PRESENT. ANY DISCREPANCIES DISCOVERED DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE PROJECT ENGINEER.</div><div>4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY DISCREPANCIES DISCOVERED DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE PROJECT ENGINEER.</div><div>5. ANY UTILITY EASEMENTS REQUIRED BY ANY OF THE VARIOUS UTILITY COMPANIES SHALL BE OBTAINED, EXECUTED, AND RECORDED PRIOR TO ANY OF THE AFFECTED UTILITY WORK BEING PERFORMED.</div><div>6. ALL PROPOSED UTILITIES WILL BE LOCATED UNDERGROUND UNLESS OTHERWISE NOTED.</div><div>7. RESET ALL EXISTING UTILITY INFRASTRUCTURE, INCLUDING SANITARY MANHOLE STRUCTURES, VALVE BOXES AND VAULTS, TO PROPOSED FINISHED GRADE IN ACCORDANCE WITH MASSACHUSETTS STATE STANDARDS AND AS REQUIRED BY IMPROVEMENTS, REPAIRING, MILLING OR OVERLAYING.</div><div>8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PAVEMENT REPAIRS REQUIRED AS A RESULT OF ANY UTILITY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF THE DOMESTIC AND FIRE SERVICE LINE CONNECTIONS TO EXISTING MAINS.</div><div>9. TEST PITS ARE TO BE PERFORMED PRIOR TO INSTALLATION OF DOMESTIC AND FIRE SERVICE LINE CONNECTIONS TO CONFIRM THE SIZE AND MATERIAL OF THE MAIN.</div><div>10. TAPPING SLEEVES AND GATE VALVE ASSEMBLIES SHALL BE INSTALLED AT EACH DOMESTIC AND FIRE SERVICE LINE CONNECTION AND SHALL BE MANUFACTURED BY CLOW VALVE CO., MUELLER CO., OR AMERICAN VALVE AND HYDRANT.</div><div>11. SCHEDULING OF ALL DOMESTIC AND FIRE SERVICE LINE CONNECTION WORK SHALL BE COORDINATED WITH THE TOWN OF FRANKLIN WATER DIVISION TO ALLOW FOR A REPRESENTATIVE FROM THE AGENCY TO BE ONSITE TO OVERSEE THE CONNECTIONS AND PERFORM A WATER SHUTDOWN AS NEEDED.</div><div>12. WATER METERS AND ASSOCIATED ENCODER RECEIVER TRANSMITTER EQUIPMENT SHALL BE COMPATIBLE WITH THE TOWN'S EXISTING METER READING SYSTEM.</div><div>13. ALL WATER MAINS AND SERVICES SHALL HAVE A MINIMUM OF 5'-0" OF COVER. INSULATION SHALL BE USED FOR ANY MAINS AND SERVICES RECEIVING LESS THAN 5'-0" OF COVER. INSULATION SHALL BE 2-INCHES THICK, "FOAMGLASS" STYLE WITH JACKETING AS MANUFACTURED BY PITTSBURGH CORNING CORP IN ACCORDANCE WITH AWWA C552.</div><div>14. ALL WATER MAINS AND SERVICES SHALL MAINTAIN A MINIMUM VERTICAL SEPARATION OF 18-INCHES FROM OTHER UTILITIES WITH STRICT ADHERENCE TO THIS SEPARATION FOR SEWER AND DRAIN LINES IN ACCORDANCE WITH MASSDEP'S GUIDELINES AND POLICIES FOR PUBLIC WATER SYSTEMS. IF ADEQUATE SEPARATION IS NOT MAINTAINED, PIPELINES SHALL BE SLEEVED OR ENCASED IN FLOWABLE AND EXCAVATABLE CONCRETE. IN ADDITION, NO WATER MAINS OR SERVICES SHALL BE INSTALLED WITHIN THE SAME TRENCH AS OTHER UTILITIES. A MINIMUM OF 10- FEET OF HORIZONTAL SEPARATION FROM SEWER OR DRAIN LINES SHALL BE MAINTAINED.</div><div>15. VALVE BOXES SHALL BE CAST IRON, ADJUSTABLE SLIDING HEAVY PATTERN TYPE WITH FLANGE ON THE TOP OF THE SECTION, BE STAMPED "WATER" ON THE TOP COVER, BE DIRT-TIGHT, AND FULLY ENCLOSE THE VALVE OPERATING NUT AND STUFFING BOX.</div><div>16. ALL FIRE HYDRANTS SHALL MEET TOWN OF FRANKLIN DESIGN STANDARDS.</div></div></div></td> <td><div><div>LEGEND</div><table><tr><td></td><td>EXISTING</td><td>PROPOSED</td></tr><tr><td>PROPERTY LINE</td><td></td><td>---</td></tr><tr><td>LIMIT OF DISTURBANCE</td><td></td><td>---</td></tr><tr><td>100' WETLAND BUFFER ZONE</td><td></td><td>---</td></tr><tr><td>WETLANDS LIMITS</td><td></td><td>---</td></tr><tr><td>CONSTRUCTION FENCING</td><td></td><td>X X X X</td></tr><tr><td>COMPOST FILTER TUBE &amp; SILT FENCE</td><td></td><td>○ ○ ○ ○</td></tr><tr><td>R&amp;D STRUCTURE AND FOUNDATIONS</td><td></td><td>     </td></tr><tr><td>DEMOLISH EXISTING PAVEMENT</td><td></td><td>     </td></tr><tr><td>MILL EXISTING PAVEMENT</td><td></td><td>     </td></tr><tr><td>STABILIZED CONSTRUCTION ENTRANCE</td><td></td><td>     </td></tr><tr><td>UTILITY REMOVAL</td><td></td><td>     </td></tr><tr><td>WALL REMOVAL</td><td></td><td>     </td></tr><tr><td>RIP RAP OUTLET PROTECTION</td><td></td><td>     </td></tr><tr><td>MILL AND OVERLAY PAVEMENT</td><td></td><td>     </td></tr><tr><td>UNDERGROUND ELECTRIC CONDUIT</td><td></td><td>UE</td></tr><tr><td>UNDERGROUND TELE/COM CONDUIT</td><td></td><td>UT</td></tr><tr><td>NATURAL GAS PIPING</td><td></td><td>C</td></tr><tr><td>WATER SERVICE LINES</td><td></td><td>W</td></tr><tr><td>SANITARY SEWER PIPE</td><td></td><td>---</td></tr><tr><td>STORM SEWER PIPE</td><td></td><td>---</td></tr><tr><td>TRENCH DRAIN</td><td></td><td>---</td></tr><tr><td>STORM CATCH BASIN</td><td></td><td>     </td></tr><tr><td>STORM AREA DRAIN</td><td></td><td>■</td></tr><tr><td>BMP INSPECTION PORT</td><td></td><td>●</td></tr><tr><td>STORM MANHOLE</td><td></td><td>●</td></tr><tr><td>CATCH BASIN</td><td></td><td>     </td></tr><tr><td>TELE/COMM AND ELECTRIC HAND HOLES</td><td></td><td>□ □</td></tr><tr><td>SANITARY SEWER MANHOLE</td><td></td><td>●</td></tr><tr><td>GATE VALVE</td><td></td><td>⊗</td></tr><tr><td>FIRE HYDRANT</td><td></td><td>⊗</td></tr><tr><td>TREE REMOVAL</td><td></td><td>⊗</td></tr><tr><td>INLET PROTECTION</td><td></td><td>■</td></tr><tr><td>R&amp;D LIGHT POLE AND FIXTURE</td><td></td><td>⊗</td></tr><tr><td>R&amp;S LIGHT BOLLARD</td><td></td><td>⊗</td></tr><tr><td>R&amp;D DRAINAGE STRUCTURE</td><td></td><td>     </td></tr></table></div></td> <td></td>	<div><div>SITE PREP, DEMO &amp; EROSION NOTES</div><div><div>1. CLEAR AND GRUB ALL EXISTING PLANTED AREAS WITHIN THE LIMITS OF GRADING. STOCKPILE TOPSOIL FOR REUSE.</div><div>2. SOIL AND SEDIMENT CONTROL PRACTICES MUST BE INSTALLED IN ACCORDANCE WITH THE LOCAL GOVERNING AUTHORITY, THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES AND THE MASSACHUSETTS STORMWATER STANDARDS.</div><div>3. CONTRACTOR SHALL PREVENT DUST, SEDIMENT AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS. ADJOINING STREETS AND PROPERTIES TO BE KEPT FREE OF DEBRIS RESULTING FROM DEMOLITION AND SHALL BE CLEANED ON A DAILY BASIS OR AS NEEDED.</div><div>4. CONTRACTOR SHALL MAINTAIN THE INFILTRATION CAPACITY OF SUBGRADE WITHIN THE FOOTPRINT OF THE INFILTRATION FACILITIES. CONTRACTOR SHALL PREVENT EXCESSIVE SILT AND SEDIMENT BUILDUP AND EXCESSIVE LOADING IN THESE AREAS. IF THE INFILTRATION CAPACITY OF THESE AREAS IS COMPROMISED, THE CONTRACTOR SHALL AMEND OR MODIFY THE SUBGRADE TO RESTORE CAPACITY.</div><div>5. EXISTING TREES TO REMAIN WITHIN THE LIMIT OF WORK ARE TO BE PROTECTED. TREE PROTECTION FENCING TO BE 6" TALL CHAIN LINK FENCE AND TO BE SET UP AT DRIP LINE OF EXISTING TREES OR EXTENT OF CRITICAL ROOT ZONE, WHICHEVER IS GREATER. EXISTING TREES AND SHRUBS TO REMAIN SHALL NOT BE ALTERED UNDER ANY CIRCUMSTANCES UNLESS REVIEWED BY THE LANDSCAPE ARCHITECT AND MUST REMAIN IN THE SAME CONDITION AS OBSERVED PRIOR TO CONSTRUCTION.</div><div>6. TREE AND SHRUB REMOVAL SHALL INCLUDE THE FELLING, CUTTING, GRUBBING OUT OF ROOTS, AND SATISFACTORY OFF-SITE DISPOSAL OF ALL STUMPS AND VEGETATIVE AND EXTRANEOUS DEBRIS PRODUCED THROUGH THE REMOVAL OPERATIONS.</div><div>7. NO HEAVY MACHINERY IS TO BE USED WITHIN THE CRITICAL ROOT ZONES OF EXISTING TREES. EXCAVATION WITHIN CRITICAL ROOT ZONE IS TO BE PERFORMED BY HAND. REVIEW ALL WORK PROPOSED WITHIN THE CRITICAL ROOT ZONE WITH THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.</div><div>8. ALL EXISTING UTILITIES NOT IDENTIFIED AS TO BE REMOVED ARE TO BE PROTECTED. ALL VALVE BOXES, FRAMES, GRATES AND COVERS SHALL BE ADJUSTED TO FINISHED GRADE AS REQUIRED.</div><div>9. DUST CONTROL TREATMENTS SHALL BE APPLIED AS NECESSARY TO CONTROL AND REDUCE THE AMOUNT OF DUST WHICH MAY CAUSE OFF-SITE DAMAGE, BE A HEALTH HAZARD TO HUMANS, WILDLIFE AND PLANT LIFE, OR POSE A HAZARD TO TRAFFIC SAFETY.</div><div>10. EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO START OF DEMOLITION AND CONSTRUCTION AND DISTURBANCE OF SITE. CONTRIBUTORY DRAINAGE AREAS, THE OWNER OR ITS CONTRACTOR SHALL INSPECT, REPAIR AND REMOVE ALL SEDIMENT AND EROSION CONTROL DEVICES, AS INDICATED HEREIN. ALL EARTH CHANGES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED IN SUCH A MANNER SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST POSSIBLE PERIOD OF TIME.</div><div>11. DISPOSAL OF COLLECTED SEDIMENT SHALL BE MADE TO AREA DESIGNATED BY THE OWNER'S SOIL ENGINEER.</div><div>12. FILTER FABRIC/SILT FENCE WILL BE INSTALLED ALONG THE TOE OF ALL CRITICAL CUT AND FILL SLOPES.</div><div>13. ALL TOPSOIL NOT TO BE USED FOR FINAL GRADING/LANDSCAPED AREAS SHALL BE REMOVED FROM THE SITE IMMEDIATELY, IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL LAW. ALL TOPSOIL TO BE USED IN LANDSCAPED AREAS SHALL BE STORED/STOCKPILED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL LAW STANDARDS.</div><div>14. ALL STORM DRAINAGE OUTLETS MUST BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.</div><div>15. SILT FENCES AND BARRIERS MUST BE CLEANED OR REPLACED PERIODICALLY TO REMOVE BUILT-UP SILT.</div><div>16. ALL EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSPECTED ON A DAILY BASIS AND CLEANED IMMEDIATELY AFTER EACH STORM.</div><div>17. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED FOR THE CONVEYANCE OF WATER AROUND, THROUGH, OR FROM THE EARTH CHANGE AREA SHALL BE DESIGNED TO LIMIT THE WATER FLOW TO A NON-EROSIVE VELOCITY.</div><div>18. THE CONTRACTOR SHALL CORRECT ANY OMISSIONS, ERRORS, OR FIELD OPERATIONS IMMEDIATELY AND IN ACCORDANCE WITH THE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.</div><div>19. SEDIMENT DISPOSAL AREAS AND TOPSOIL STOCKPILES NOT SCHEDULED FOR CONSTRUCTION ACTIVITIES WITHIN THIRTY (30) DAYS OF DISTURBANCE SHALL BE STABILIZED AS FOLLOWS:<div><div>A. SOIL AMENDMENTS AS NECESSARY.</div><div>B. ANNUAL RYE GRASS SEEDING APPLIED AT A RATE OF NOT LESS THAN 1 LB. PER 1,000 SF.</div><div>C. MULCH ALL NEWLY SEEDED AREAS WITHIN 80 LBS. OF SALT HAY OR SMALL GRAIN STRAW PER 1,000 SF.</div><div>D. WHEN DISTURBED AREAS ARE SCHEDULED FOR IMMEDIATE LANDSCAPING THEY MAY BE MULCHED AND SEEDED PER ITEM C ABOVE.</div></div></div></div></div>	<div><div>STORM DRAINAGE NOTES</div><div><div>1. ALL STORM DRAINAGE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS/DETAILS OF THE TOWN OF FRANKLIN AND IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL ORDINANCES/REQUIREMENTS GOVERNING THE PROPOSED WORK.</div><div>2. THE LOCATION OF EXISTING UNDERGROUND STORM DRAINAGE INFRASTRUCTURE SHOWN HEREON IS TAKEN FROM DESIGN PLANS, AS-BUILT SKETCHES, LIMITED PHYSICAL EXPLORATION AND OTHER SOURCES OF INFORMATION AND IS NOT TO BE CONSTRUED AS AN ACCURATE "AS-BUILT" SURVEY AND IS SUBJECT TO SUCH CORRECTIONS THAT A MORE ACCURATE SURVEY MAY DISCLOSE.</div><div>3. THE EXISTING STORM DRAINAGE INDICATED HEREON MAY NOT BE LOCATED AS SHOWN. ANY DISCREPANCIES DISCOVERED DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE PROJECT ENGINEER.</div><div>4. RESET ALL EXISTING STORM DRAINAGE STRUCTURES TO MASSACHUSETTS STATE STANDARDS AND AS REQUIRED BY REPAIRING, MILLING OR OVERLAYING ALL PROPOSED STORM DRAINAGE PIPING TO UTILIZE WATER-TIGHT JOINTS.</div><div>5. CLEANOUTS SHALL BE PROVIDED FLUSH TO GRADE AT ALL LOCATIONS OF ROOF DRAIN INTERSECTIONS, BENDS AND UPSTREAM ENDS.</div><div>6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY SIZING ALL DRAINAGE STRUCTURES AND SUBMITTING SHOP DRAWINGS TO ENGINEER FOR REVIEW.</div><div>7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PAVEMENT REPAIRS REQUIRED AS A RESULT OF ANY STORMWATER WORK.</div></div></div>	<div><div>UTILITIES NOTES</div><div><div>1. ALL UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS/DETAILS OF THE UTILITY COMPANY HAVING AUTHORITY OVER THE PROPOSED WORK. ALL PROPOSED UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL ORDINANCES/REQUIREMENTS GOVERNING THE PROPOSED WORK.</div><div>2. THE LOCATION OF EXISTING UNDERGROUND UTILITIES SHOWN HEREON IS TAKEN FROM DESIGN PLANS, AS-BUILT SKETCHES, EXISTING UTILITY COMPANY RECORDS, AND OTHER SOURCES OF INFORMATION AND IS NOT TO BE CONSTRUED AS AN ACCURATE "AS-BUILT" SURVEY AND IS SUBJECT TO SUCH CORRECTIONS THAT A MORE ACCURATE SURVEY MAY DISCLOSE.</div><div>3. THE EXISTING UTILITIES INDICATED HEREON MAY NOT BE LOCATED AS SHOWN. IN ADDITION, OTHER UTILITIES NOT SHOWN HEREON MAY BE PRESENT. ANY DISCREPANCIES DISCOVERED DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE PROJECT ENGINEER.</div><div>4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY DISCREPANCIES DISCOVERED DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE PROJECT ENGINEER.</div><div>5. ANY UTILITY EASEMENTS REQUIRED BY ANY OF THE VARIOUS UTILITY COMPANIES SHALL BE OBTAINED, EXECUTED, AND RECORDED PRIOR TO ANY OF THE AFFECTED UTILITY WORK BEING PERFORMED.</div><div>6. ALL PROPOSED UTILITIES WILL BE LOCATED UNDERGROUND UNLESS OTHERWISE NOTED.</div><div>7. RESET ALL EXISTING UTILITY INFRASTRUCTURE, INCLUDING SANITARY MANHOLE STRUCTURES, VALVE BOXES AND VAULTS, TO PROPOSED FINISHED GRADE IN ACCORDANCE WITH MASSACHUSETTS STATE STANDARDS AND AS REQUIRED BY IMPROVEMENTS, REPAIRING, MILLING OR OVERLAYING.</div><div>8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PAVEMENT REPAIRS REQUIRED AS A RESULT OF ANY UTILITY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF THE DOMESTIC AND FIRE SERVICE LINE CONNECTIONS TO EXISTING MAINS.</div><div>9. TEST PITS ARE TO BE PERFORMED PRIOR TO INSTALLATION OF DOMESTIC AND FIRE SERVICE LINE CONNECTIONS TO CONFIRM THE SIZE AND MATERIAL OF THE MAIN.</div><div>10. TAPPING SLEEVES AND GATE VALVE ASSEMBLIES SHALL BE INSTALLED AT EACH DOMESTIC AND FIRE SERVICE LINE CONNECTION AND SHALL BE MANUFACTURED BY CLOW VALVE CO., MUELLER CO., OR AMERICAN VALVE AND HYDRANT.</div><div>11. SCHEDULING OF ALL DOMESTIC AND FIRE SERVICE LINE CONNECTION WORK SHALL BE COORDINATED WITH THE TOWN OF FRANKLIN WATER DIVISION TO ALLOW FOR A REPRESENTATIVE FROM THE AGENCY TO BE ONSITE TO OVERSEE THE CONNECTIONS AND PERFORM A WATER SHUTDOWN AS NEEDED.</div><div>12. WATER METERS AND ASSOCIATED ENCODER RECEIVER TRANSMITTER EQUIPMENT SHALL BE COMPATIBLE WITH THE TOWN'S EXISTING METER READING SYSTEM.</div><div>13. ALL WATER MAINS AND SERVICES SHALL HAVE A MINIMUM OF 5'-0" OF COVER. INSULATION SHALL BE USED FOR ANY MAINS AND SERVICES RECEIVING LESS THAN 5'-0" OF COVER. INSULATION SHALL BE 2-INCHES THICK, "FOAMGLASS" STYLE WITH JACKETING AS MANUFACTURED BY PITTSBURGH CORNING CORP IN ACCORDANCE WITH AWWA C552.</div><div>14. ALL WATER MAINS AND SERVICES SHALL MAINTAIN A MINIMUM VERTICAL SEPARATION OF 18-INCHES FROM OTHER UTILITIES WITH STRICT ADHERENCE TO THIS SEPARATION FOR SEWER AND DRAIN LINES IN ACCORDANCE WITH MASSDEP'S GUIDELINES AND POLICIES FOR PUBLIC WATER SYSTEMS. IF ADEQUATE SEPARATION IS NOT MAINTAINED, PIPELINES SHALL BE SLEEVED OR ENCASED IN FLOWABLE AND EXCAVATABLE CONCRETE. IN ADDITION, NO WATER MAINS OR SERVICES SHALL BE INSTALLED WITHIN THE SAME TRENCH AS OTHER UTILITIES. A MINIMUM OF 10- FEET OF HORIZONTAL SEPARATION FROM SEWER OR DRAIN LINES SHALL BE MAINTAINED.</div><div>15. VALVE BOXES SHALL BE CAST IRON, ADJUSTABLE SLIDING HEAVY PATTERN TYPE WITH FLANGE ON THE TOP OF THE SECTION, BE STAMPED "WATER" ON THE TOP COVER, BE DIRT-TIGHT, AND FULLY ENCLOSE THE VALVE OPERATING NUT AND STUFFING BOX.</div><div>16. ALL FIRE HYDRANTS SHALL MEET TOWN OF FRANKLIN DESIGN STANDARDS.</div></div></div>	<div><div>LEGEND</div><table><tr><td></td><td>EXISTING</td><td>PROPOSED</td></tr><tr><td>PROPERTY LINE</td><td></td><td>---</td></tr><tr><td>LIMIT OF DISTURBANCE</td><td></td><td>---</td></tr><tr><td>100' WETLAND BUFFER ZONE</td><td></td><td>---</td></tr><tr><td>WETLANDS LIMITS</td><td></td><td>---</td></tr><tr><td>CONSTRUCTION FENCING</td><td></td><td>X X X X</td></tr><tr><td>COMPOST FILTER TUBE &amp; SILT FENCE</td><td></td><td>○ ○ ○ ○</td></tr><tr><td>R&amp;D STRUCTURE AND FOUNDATIONS</td><td></td><td>     </td></tr><tr><td>DEMOLISH EXISTING PAVEMENT</td><td></td><td>     </td></tr><tr><td>MILL EXISTING PAVEMENT</td><td></td><td>     </td></tr><tr><td>STABILIZED CONSTRUCTION ENTRANCE</td><td></td><td>     </td></tr><tr><td>UTILITY REMOVAL</td><td></td><td>     </td></tr><tr><td>WALL REMOVAL</td><td></td><td>     </td></tr><tr><td>RIP RAP OUTLET PROTECTION</td><td></td><td>     </td></tr><tr><td>MILL AND OVERLAY PAVEMENT</td><td></td><td>     </td></tr><tr><td>UNDERGROUND ELECTRIC CONDUIT</td><td></td><td>UE</td></tr><tr><td>UNDERGROUND TELE/COM CONDUIT</td><td></td><td>UT</td></tr><tr><td>NATURAL GAS PIPING</td><td></td><td>C</td></tr><tr><td>WATER SERVICE LINES</td><td></td><td>W</td></tr><tr><td>SANITARY SEWER PIPE</td><td></td><td>---</td></tr><tr><td>STORM SEWER PIPE</td><td></td><td>---</td></tr><tr><td>TRENCH DRAIN</td><td></td><td>---</td></tr><tr><td>STORM CATCH BASIN</td><td></td><td>     </td></tr><tr><td>STORM AREA DRAIN</td><td></td><td>■</td></tr><tr><td>BMP INSPECTION PORT</td><td></td><td>●</td></tr><tr><td>STORM MANHOLE</td><td></td><td>●</td></tr><tr><td>CATCH BASIN</td><td></td><td>     </td></tr><tr><td>TELE/COMM AND ELECTRIC HAND HOLES</td><td></td><td>□ □</td></tr><tr><td>SANITARY SEWER MANHOLE</td><td></td><td>●</td></tr><tr><td>GATE VALVE</td><td></td><td>⊗</td></tr><tr><td>FIRE HYDRANT</td><td></td><td>⊗</td></tr><tr><td>TREE REMOVAL</td><td></td><td>⊗</td></tr><tr><td>INLET PROTECTION</td><td></td><td>■</td></tr><tr><td>R&amp;D LIGHT POLE AND FIXTURE</td><td></td><td>⊗</td></tr><tr><td>R&amp;S LIGHT BOLLARD</td><td></td><td>⊗</td></tr><tr><td>R&amp;D DRAINAGE STRUCTURE</td><td></td><td>     </td></tr></table></div>		EXISTING	PROPOSED	PROPERTY LINE		---	LIMIT OF DISTURBANCE		---	100' WETLAND BUFFER ZONE		---	WETLANDS LIMITS		---	CONSTRUCTION FENCING		X X X X	COMPOST FILTER TUBE & SILT FENCE		○ ○ ○ ○	R&D STRUCTURE AND FOUNDATIONS			DEMOLISH EXISTING PAVEMENT			MILL EXISTING PAVEMENT			STABILIZED CONSTRUCTION ENTRANCE			UTILITY REMOVAL			WALL REMOVAL			RIP RAP OUTLET PROTECTION			MILL AND OVERLAY PAVEMENT			UNDERGROUND ELECTRIC CONDUIT		UE	UNDERGROUND TELE/COM CONDUIT		UT	NATURAL GAS PIPING		C	WATER SERVICE LINES		W	SANITARY SEWER PIPE		---	STORM SEWER PIPE		---	TRENCH DRAIN		---	STORM CATCH BASIN			STORM AREA DRAIN		■	BMP INSPECTION PORT		●	STORM MANHOLE		●	CATCH BASIN			TELE/COMM AND ELECTRIC HAND HOLES		□ □	SANITARY SEWER MANHOLE		●	GATE VALVE		⊗	FIRE HYDRANT		⊗	TREE REMOVAL		⊗	INLET PROTECTION		■	R&D LIGHT POLE AND FIXTURE		⊗	R&S LIGHT BOLLARD		⊗	R&D DRAINAGE STRUCTURE			
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Date	Description	No.
Revisions		
<div><div><div><div><div><div></div><div>COMMONWEALTH OF MASSACHUSETTS</div><div>FRANK HOLMES CIVIL No. 40203 REGISTERED PROFESSIONAL ENGINEER</div></div></div><div><div><div></div><div>FRANK HOLMES</div></div></div></div></div></div>		
<div><div><div>LANGAN</div><div>Langan Engineering and Environmental Services, Inc. 100 Cambridge Street, Suite 1310 Boston, MA 02114 T: 617.824.9100 F: 617.824.9101 www.langan.com</div></div></div>		
Project		
237 PLEASANT STREET CONCEPT PLANS		
NORFOLK COUNTY FRANKLIN MASSACHUSETTS Drawing Title		
NOTES & LEGENDS		
Project No.	Drawing No.	
151019602		
Date		
09/10/2022	CS002	
Drawn By		
Checked By		

Date	Description	No.
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Revisions



**LANGAN**  
Langan Engineering and  
Environmental Services, Inc.

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Project

**237 PLEASANT STREET  
CONCEPT PLANS**

FRANKLIN  
NORFOLK COUNTY MASSACHUSETTS

Drawing Title

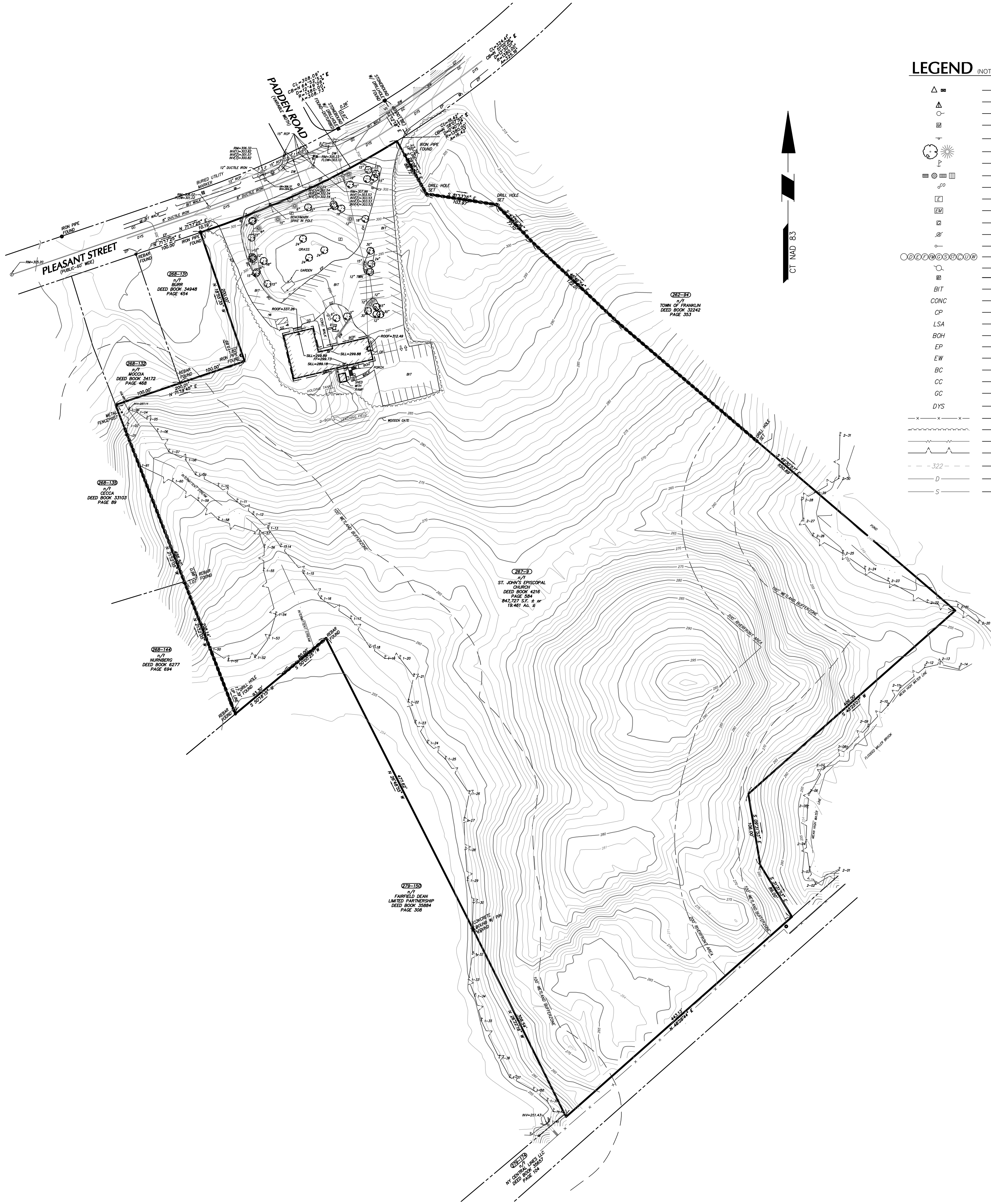
NOTES & LEGENDS

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Checked By	



NOTES

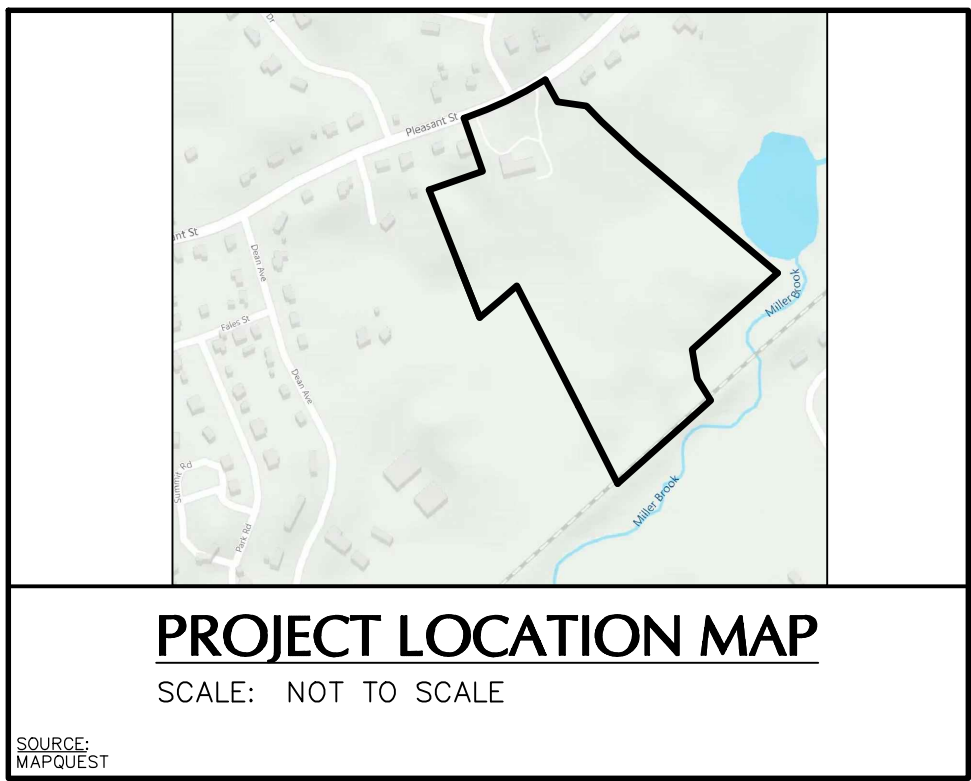
- THIS SURVEY IS BASED UPON AN ON THE GROUND SURVEY.
- THE MERIDIAN OF THIS SURVEY IS REFERENCED TO MASSACHUSETTS STATE PLANE COORDINATE SYSTEM NAD 83 (EPOCH 2001). POSITION WAS DETERMINED BY GLOBAL NAVIGATION SATELLITE SYSTEMS (GNSS) AS PROVIDED BY HXGN SMARTNET CONTINUOUSLY OPERATED REFERENCE STATIONS (CORS).
- ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) (GEOID 12B) AS DETERMINED BY GNSS
- PLANIMETRIC AND TOPOGRAPHIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENVIRONMENTAL AND ENGINEERING SERVICES. FIELD WORK COMPLETED DURING THE MONTH OF MAY 2021. PORTIONS OF THE SITE TOPOGRAPHY IS TAKEN FROM LIDAR DATA OBTAINED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ASSOCIATION.
- AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP ENTITLED "FRANKLIN COUNTY, MASSACHUSETTS PANEL 309 OF 430, MAP NUMBER 2502100309E, EFFECTIVE DATE JULY 17, 2012" THE PROJECT AREA IS IN ZONE X (UNSHADED).
- UNLESS SPECIFICALLY NOTED HEREON, STORM AND SANITARY SEWER INFORMATION (INCLUDING PIPE INVERT, PIPE MATERIAL, AND PIPE SIZE) WAS OBSERVED AND MEASURED AT FIELD LOCATED STRUCTURES (MANHOLES/CATCH BASINS, ETC ). CONDITIONS CAN VARY FROM THOSE ENCOUNTERED AT THE TIMES WHEN AND LOCATIONS WHERE DATA IS OBTAINED. DESPITE MEETING THE REQUIRED STANDARD OF CARE, THE SURVEYOR CANNOT, AND DOES NOT WARRANT THAT PIPE MATERIAL AND/OR PIPE SIZE THROUGHOUT THE PIPE RUN ARE THE SAME AS THOSE OBSERVED AT EACH STRUCTURE, OR THAT THE PIPE RUN IS STRAIGHT BETWEEN THE LOCATED STRUCTURES.
- ADDITIONAL UTILITY (WATER, GAS, ELECTRIC ETC.) DATA IS SHOWN FROM FIELD LOCATED SURFACE MARKINGS (BY OTHERS), EXISTING STRUCTURES, AND/OR FROM EXISTING DRAWINGS.
- UNLESS SPECIFICALLY NOTED HEREON, THE SURVEYOR HAS NOT EXCAVATED TO PHYSICALLY LOCATE THE UNDERGROUND UTILITIES. THE SURVEYOR MAKES NO GUARANTEES THAT THE SHOWN UNDERGROUND UTILITIES ARE EITHER IN SERVICE, ABANDONED OR SUITABLE FOR USE, NOR ARE IN THE EXACT LOCATION OR CONFIGURATION INDICATED HEREON.
- ALL BUILDINGS AND STRUCTURES WERE LOCATED AND MEASURED AT GROUND LEVEL. THE SURVEYOR MAKES NO DETERMINATIONS OR GUARANTEES AS TO THE ABSENCE, EXISTENCE OR LOCATION OF UNDERGROUND STRUCTURES, FOUNDATIONS, FOOTINGS, PROJECTIONS, WALLS, TANKS, SEPTIC SYSTEMS, ETC. NO TEST PITS, EXCAVATIONS OR GROUND PENETRATING RADAR WERE PERFORMED AS PART OF THIS SURVEY.
- PRIOR TO ANY DESIGN OR CONSTRUCTION, THE PROPER UTILITY AGENCIES MUST BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATIONS.
- THIS SURVEY IS NOT VALID WITHOUT THE EMBOSSED OR INKED SEAL OF THE PROFESSIONAL.
- WETLAND DELINEATION PERFORMED BY DEAN GUSTAFSON, SENIOR WETLAND SCIENTIST, ALL-POINTS TECHNOLOGY CORP., P.C. ON APRIL 19, 2021.



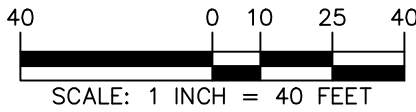
LEGEND

(NOT SHOWN TO SCALE)

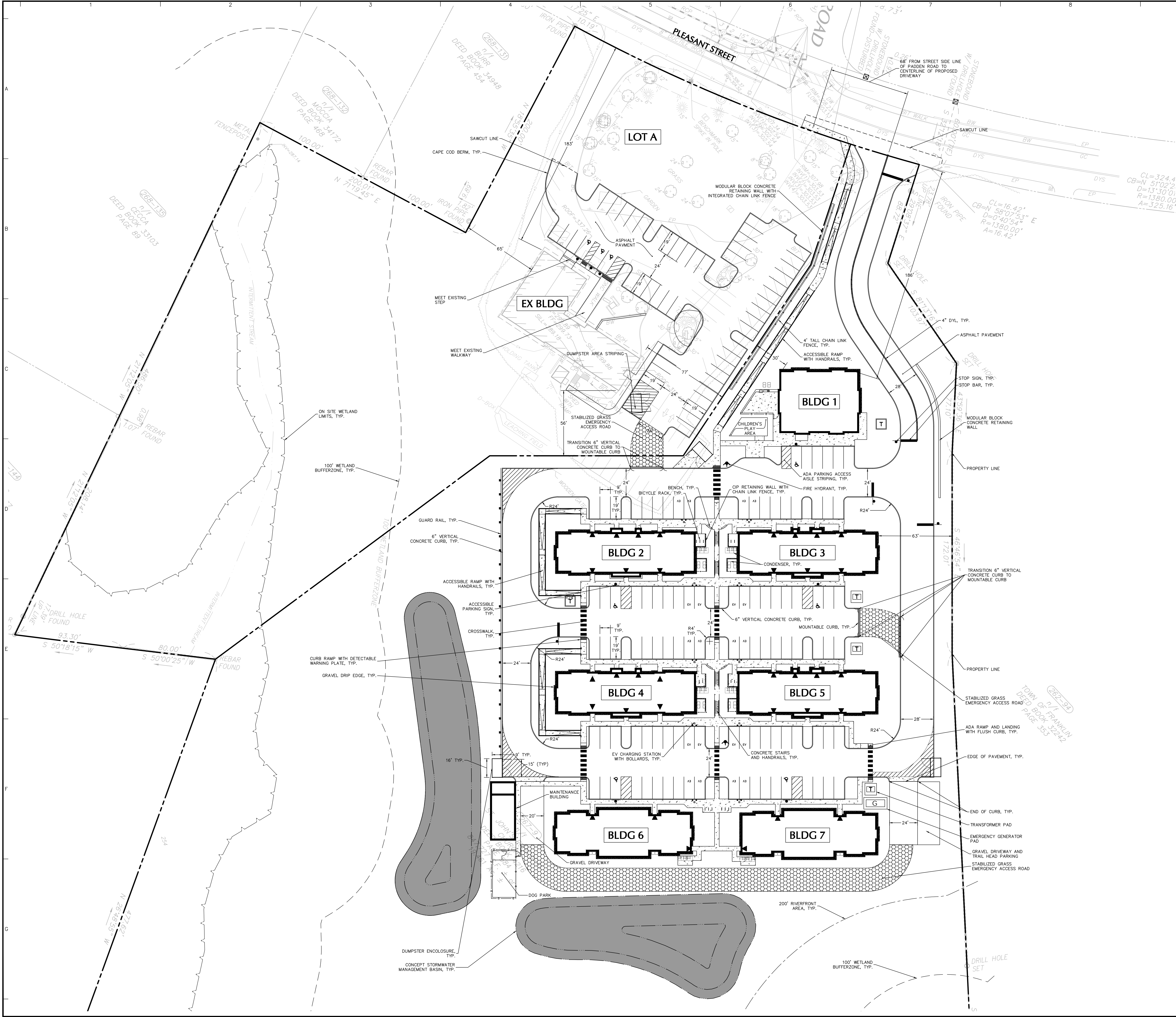
- DOOR
- DOUBLE DOOR
- FLAG POLE
- MAILBOX
- SIGN
- TREE
- BORDERING VEGETATED WETLAND FLAG
- CATCH BASIN
- CLEANOUT
- ELECTRIC BOX
- ELECTRIC METER
- GAS VALVE
- GUY POLE
- GUY WIRE
- MANHOLE (TYPE AS LABELED)
- POWER POLE
- WATER VALVE
- BITUMINOUS
- CONCRETE
- CONCRETE PAD
- LANDSCAPED AREA
- BUILDING OVERHANG
- EDGE OF PAVEMENT
- EDGE OF WALK
- BITUMINOUS CURB
- CONCRETE CURB
- GRANITE CURB
- DOUBLE YELLOW STRIPE
- CHAINLINK FENCE
- TREE LINE
- OVERHEAD WIRE
- BORDERING VEGETATED WETLAND LINE
- CONTOUR LINE
- DRAINAGE MARK OUT LINE
- SANITARY SEWER MARK OUT LINE



Date	Description	No.
REVISIONS		
<div><i>Shan W.</i> 5/26/2021</div> <div>IAN C. WISURI DATE SIGNED</div> <div>MA Professional Land Surveyor #47403</div>		
<div><b>LANGAN</b></div> <div>Langan MA, Inc.</div> <div>888 Boylston Street, Ste 510</div> <div>Boston, MA 02199</div> <div>T: 617.824.9100 F: 617.824.9101 www.langan.com</div>		
Project		
<div>St. John's Episcopal Church</div> <div>257 Pleasant Street</div> <div>Franklin</div> <div>Norfolk County Massachusetts</div>		
Drawing Title		
<div>BOUNDARY &amp; TOPOGRAPHIC PLAN</div>		
Project No.		Drawing No.
151019601		
Date		
5/26/2021		
Drawn By		
SG		VB101
Checked By		
ICW		Sheet 1 of 1







ZONING TABLE			
ZONE: SINGLE-FAMILY RESIDENTIAL III			
USE: MULTIFAMILY OR APARTMENT (6.1)			
	REQUIRED	PROPOSED LOT A	PROPOSED LOT B
MIN. LOT AREA	20,000 SF	±188,550 SF	±659,200 SF
MIN. LOT FRONTAGE	125 FT	±257 FT	±61 FT
MIN. LOT DEPTH	160 FT	>160 FT	>160 FT
MIN. LOT WIDTH	112.50 FT	>112.5 FT	>161 FT
MIN. FRONT YARD	40 FT	±177 FT	±186 FT
MIN. SIDE YARD	25 FT	±65 FT	±27 FT
MIN. REAR YARD	30 FT	±62 FT	±442 FT
MAX BLDG. HEIGHT	35 FT	N/A	33.7 FT
MAX BLDG. STORIES	3	N/A	3
MAX BLDG. AREA	25%	±2.8%	±4.8%
MAX BLDG. + PAVEMENT AREA	35%	±13.1%	±15.7%
OFF-STREET PARKING	2 PER DWELLING UNIT	53 SPACES	102 SPACES [1.5 PER DWELLING UNIT (96) + 1 PER 500 GSA OF COMMUNITY BUILDING (6)]
PARKING SPACE DIM.	9 FT X 19 FT	9 FT X 19 FT	9 FT X 19 FT

01/11/2023	PEER REVIEW COMMENTS	2
11/23/2022	STORMWATER REPORT	1
Date	Description	No.

Revisions



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Langan Engineering and  
Environmental Services, Inc.

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Project

**237 PLEASANT STREET  
CONCEPT PLANS**

NORFOLK COUNTY FRANKLIN MASSACHUSETTS

Drawing Title

**SITE PLAN**

Project No.

151019602

Date

09/10/2022

Drawn By

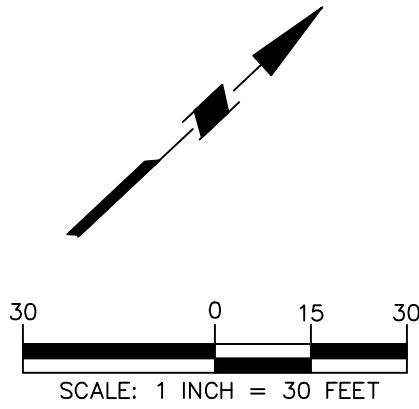
KH

Checked By

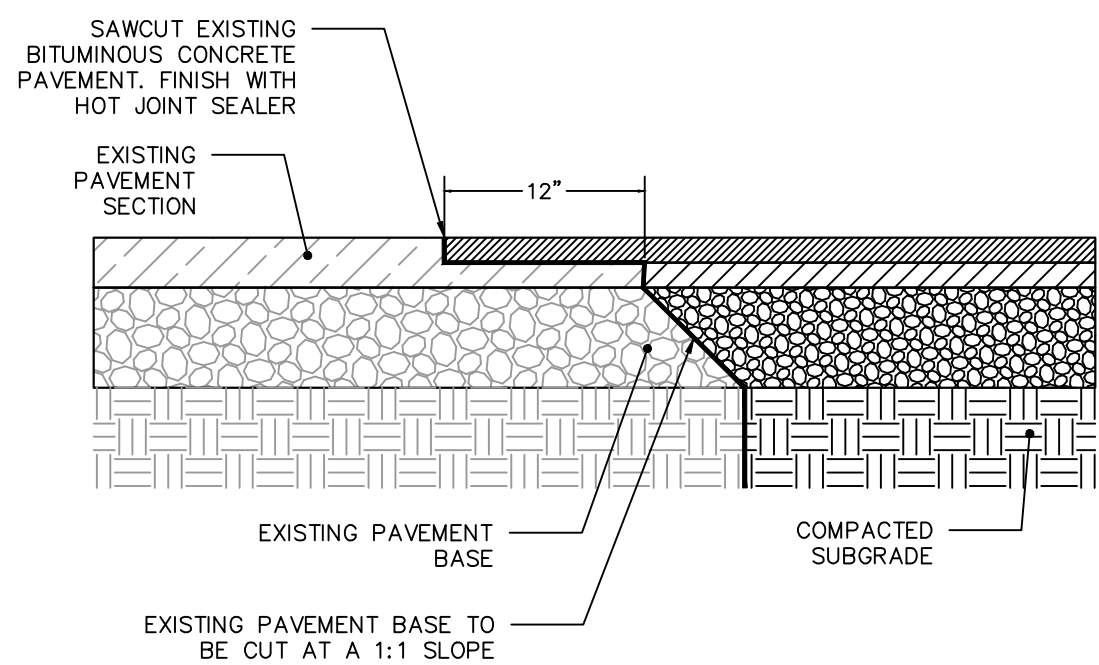
FH

Drawing No.

**CS100**







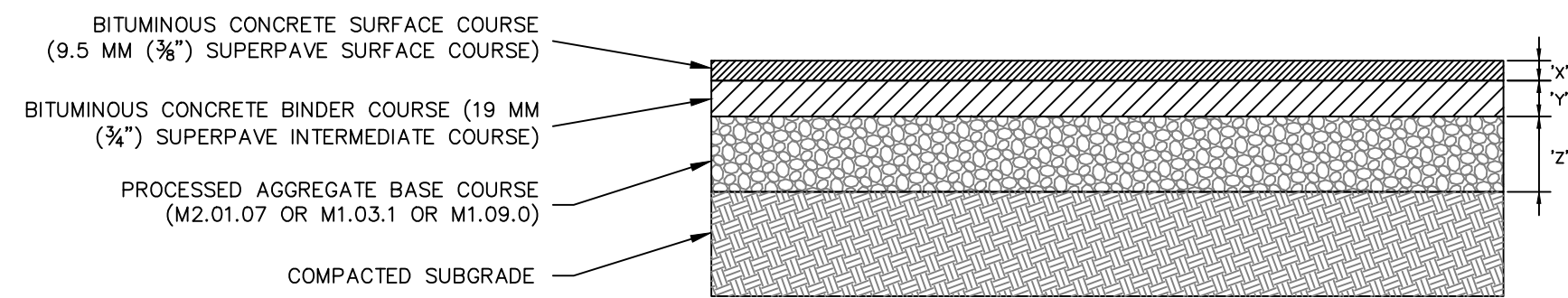
NOTES:  
1. CONTRACTOR TO INSTALL TACK COAT ON ALL BUTT EDGES OF EXISTING PAVEMENT

## 1 SAWCUT PAVEMENT SECTION

N.T.S.

ASPHALT SECTION	SURFACE COURSE - 'X'	BINDER COURSE - 'Y'	SUBBASE - 'Z'
DRIVEWAYS AND PARKING LOTS	1.5 INCHES	2.0 INCHES	6 INCHES

NOTE: SUBJECT TO FINAL GEOTECHNICAL APPROVAL

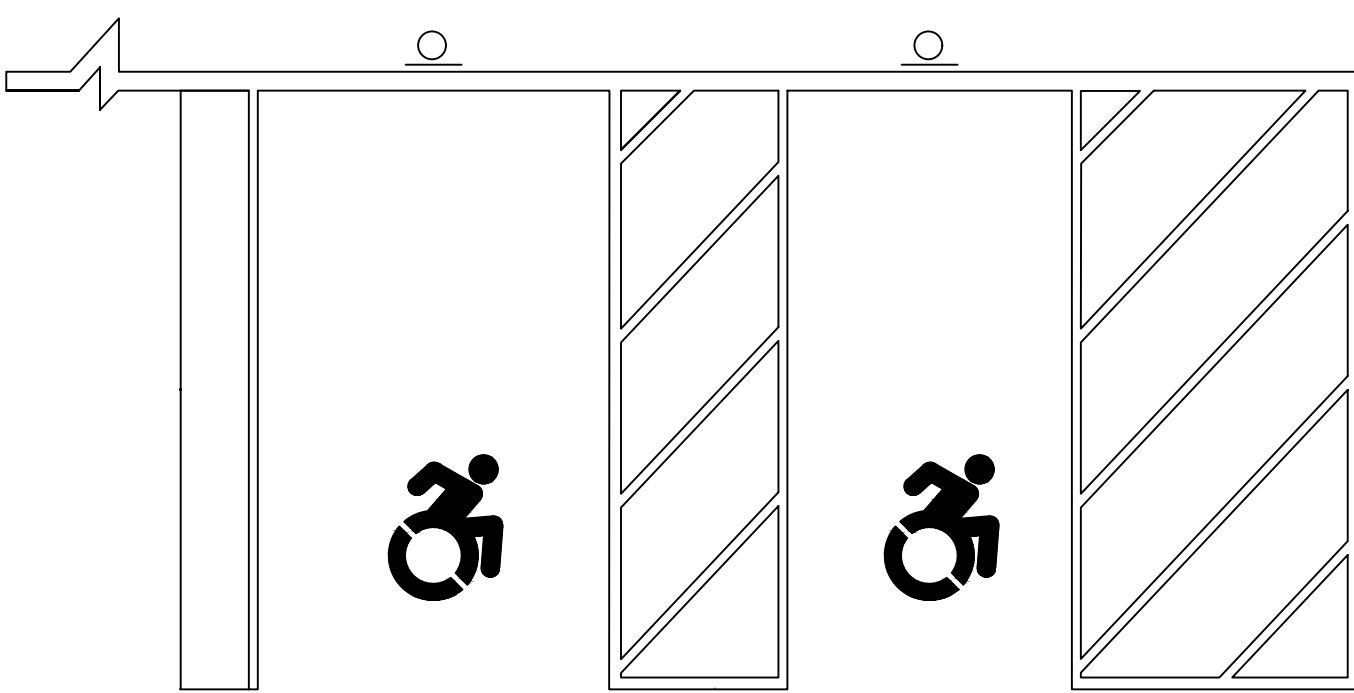


### NOTES:

- PAVING COURSES SHALL BE CONSTRUCTED IN LAYERS NOT LESS THAN 1.5 INCHES THICK PER LIFT.
- ALL AREAS TO BE PAVED SHALL BE PROOFROLLED WITH AT LEAST 4 PASSES OF A SMOOTH ROLLER HAVING A MINIMUM STATIC DRUM WEIGHT OF 10 TONS. ANY SOFT AREAS SHALL BE REMOVED AND REPLACED WITH CLEAN, GRANULAR, FREE-DRAINING SOIL. FILL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 12-INCHES AND SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY THE GEOTECHNICAL REPORT.
- PAVEMENT CLASSES REFER TO MASSACHUSETTS, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION (M07 SS) M3.11.03. PRESSED AGGREGATE SHALL REFER TO M2.01.07 OR M1.03.1.

## 2 ASPHALT PAVEMENT

N.T.S.

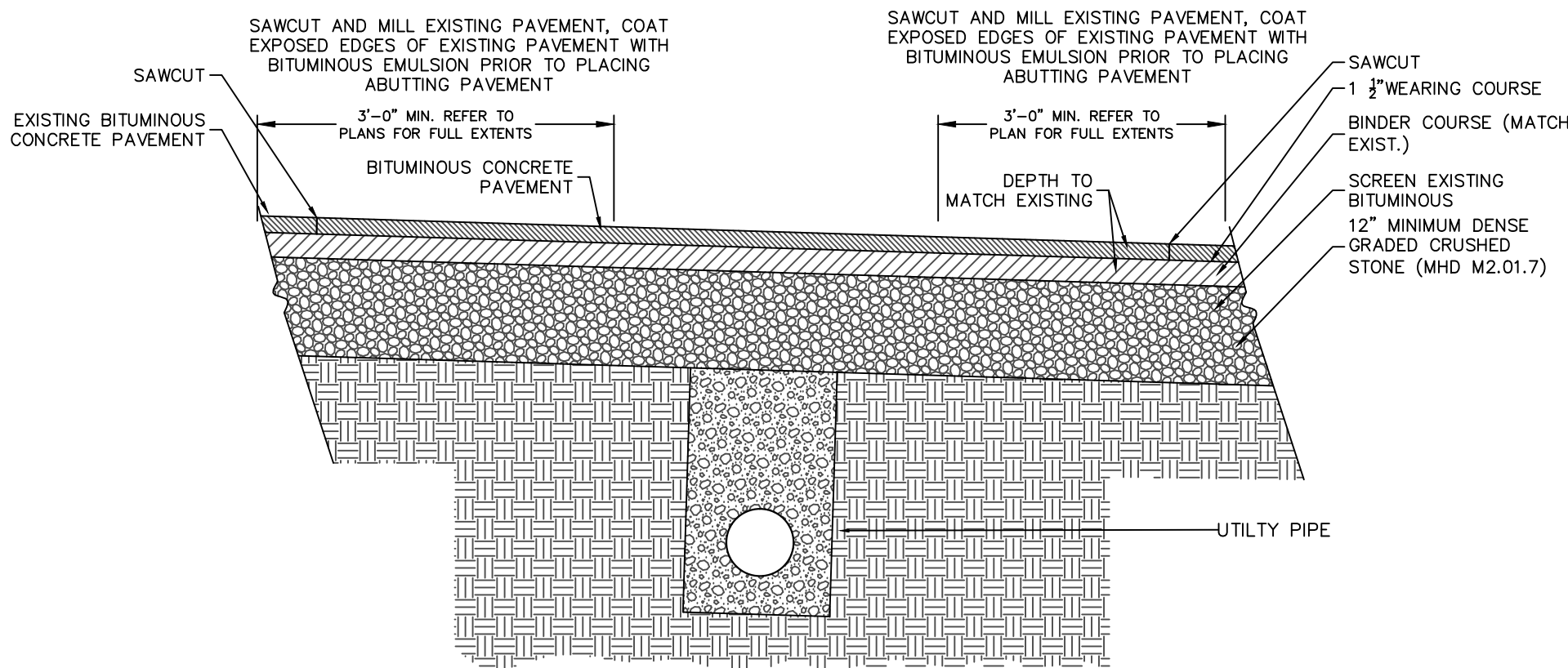


### NOTES:

- ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY THE MANUFACTURER.
- SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN DISABILITIES ACT (ADA) AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
- APPLY TWO COATS OF TRAFFIC PAINT. ALLOW FOR A MINIMUM CURE TIME OF 24 HOURS BETWEEN APPLICATIONS.

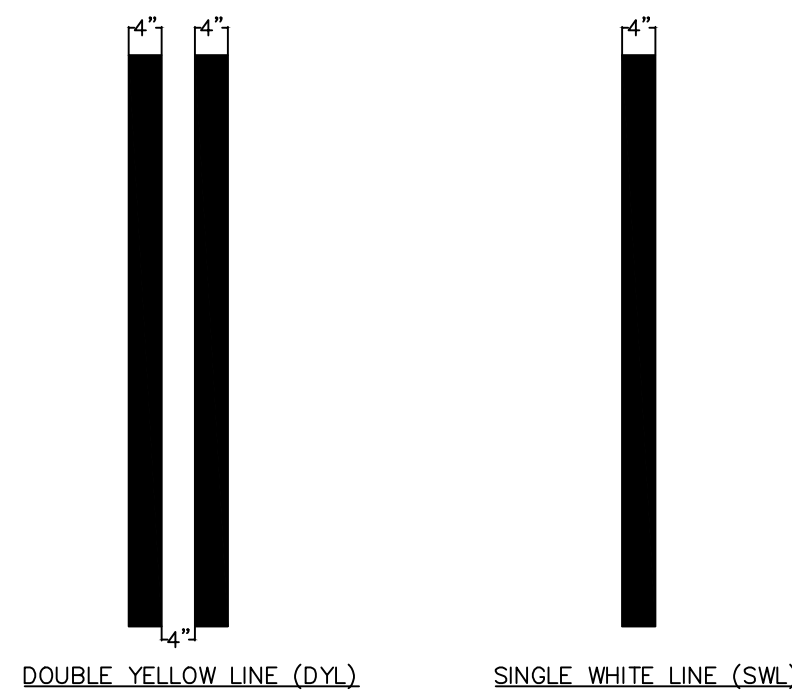
## 4 ADA PARKING STALL STRIPING

N.T.S.



## 5 ASPHALT PATCHING

N.T.S.

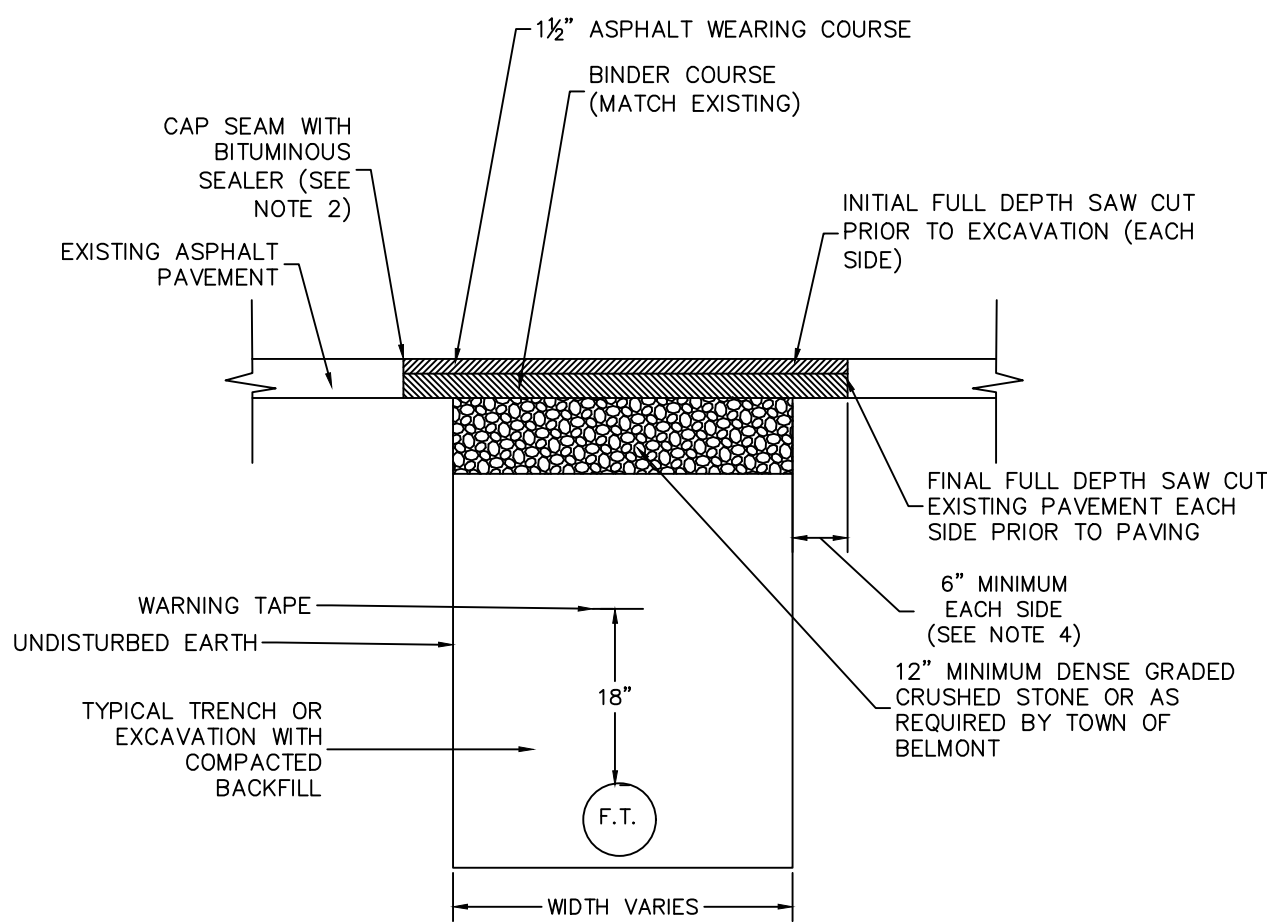


## 6 ROAD STRIPING

N.T.S.

## 3 STABILIZED GRASS PAVEMENT

N.T.S.

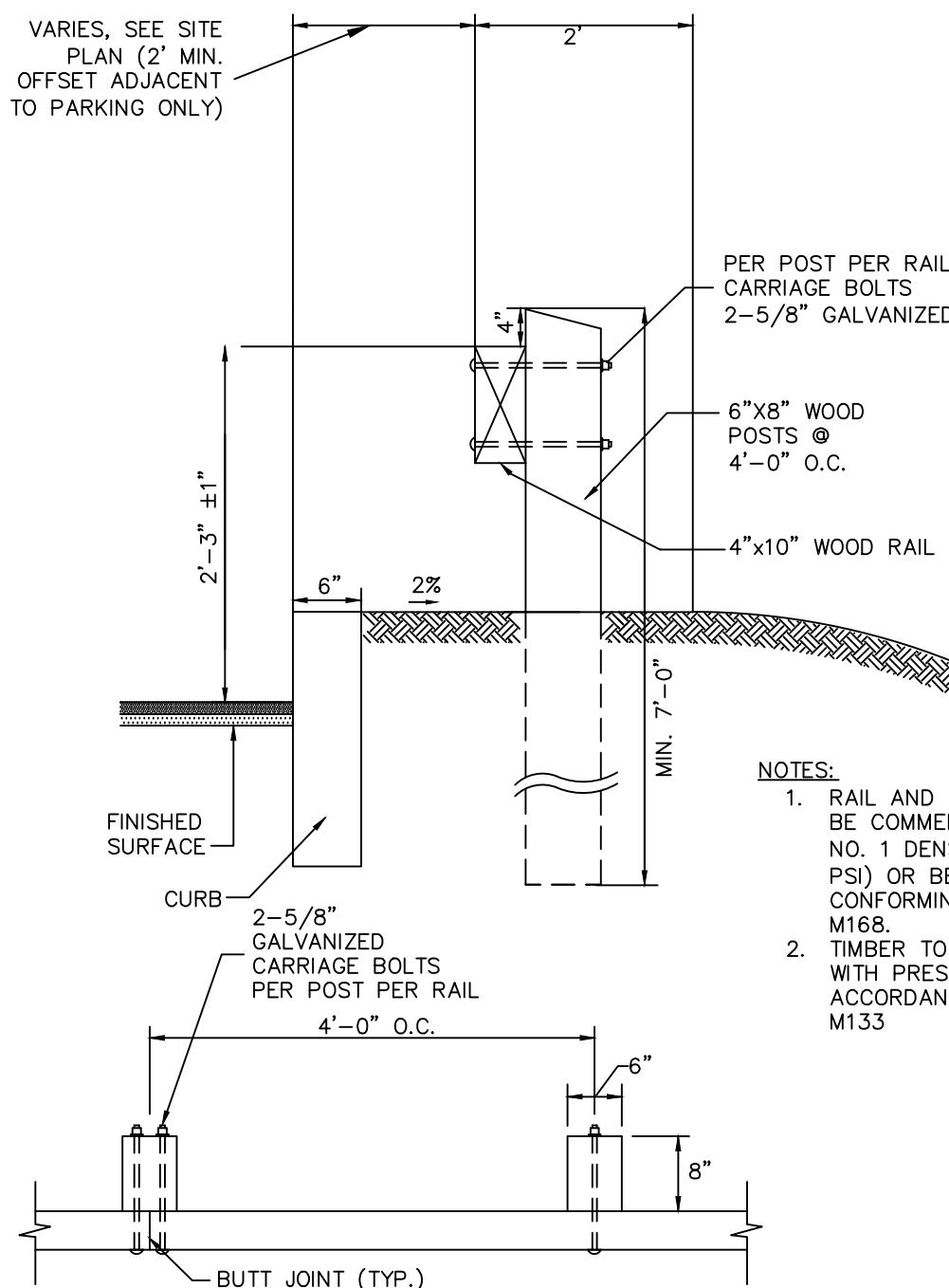


### NOTES:

- EXISTING PAVEMENT IS TO BE SAW CUT FULL DEPTH TO OBTAIN A STRAIGHT AND NEAT EDGE FOR PAVING. SAW CUT IS TO BE MADE AFTER BACKFILLING THE TRENCH AT BOTTOM OF NEW PAVEMENT SECTION.
- ALL SEAMS BETWEEN EXISTING AND NEW SURFACES ARE TO BE SEALED WITH AN ASPHALT EMULSION.
- PAVEMENT SECTION TO BE CONFIRMED WITH THE TOWN OF BELMONT.
- 6 INCH MINIMUM TO BE FROM EDGE OF UNDISTURBED EARTH, EACH SIDE OF TRENCH.

## 7 PAVEMENT TRENCH RESTORATION

N.T.S.



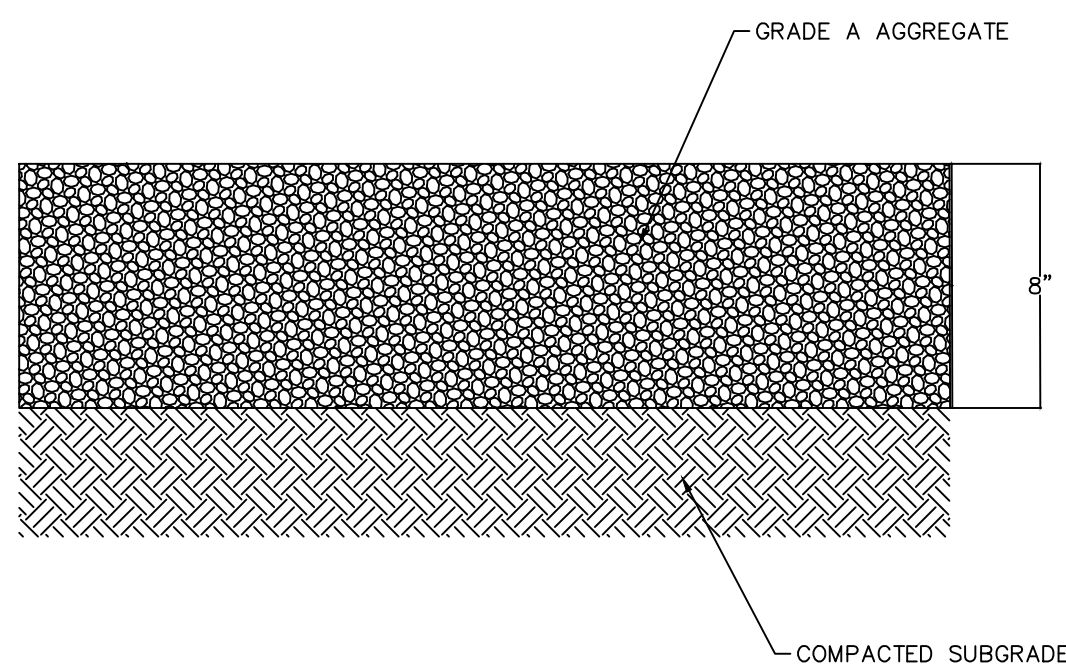
## 9 TIMBER GUIDERAIL

N.T.S.

NOTES:  
TWO COATS OF EPOXY RESIN PAVEMENT MARKING PAINT SHALL BE APPLIED TO ALL PROPOSED PAVEMENT MARKINGS.

## 8 CROSSWALK

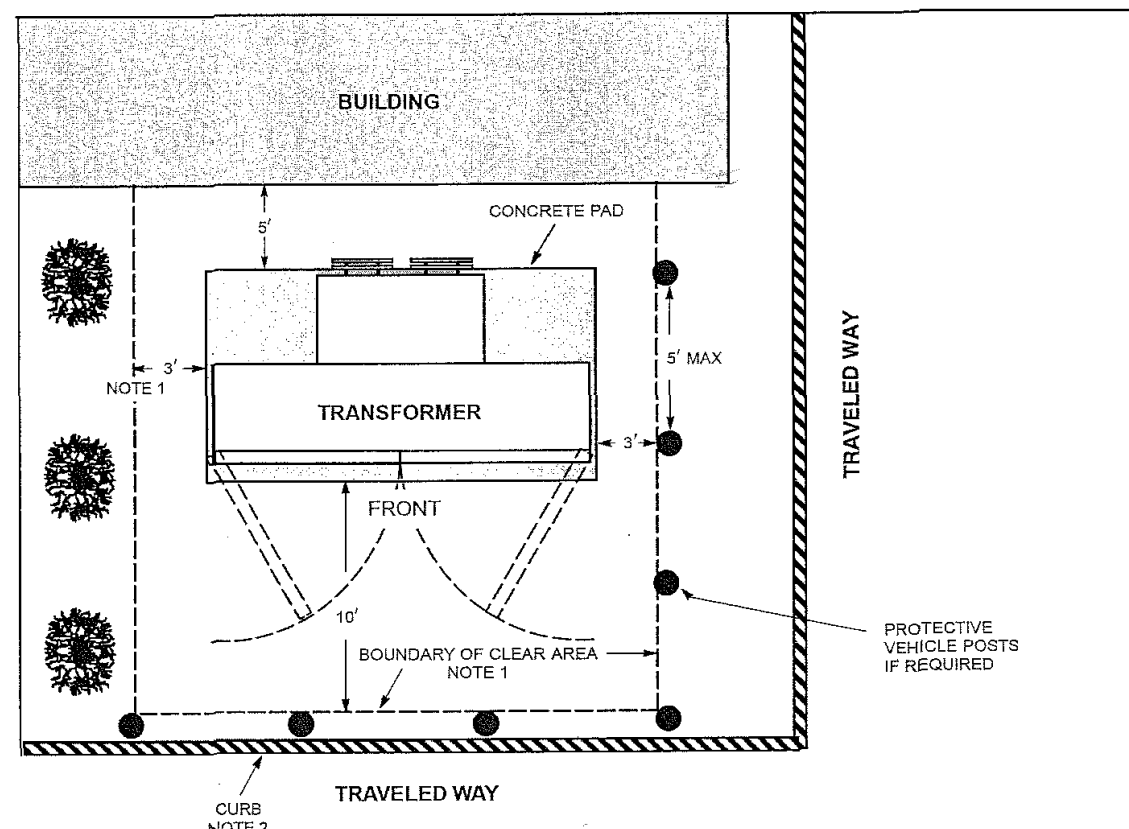
N.T.S.



NOTES:  
1. GRADE A AGGREGATE SHALL CONFORM WITH EQUIVALENT FROM MASSDOT SPECIFICATIONS, DIVISION II SECTION M2

## 10 GRAVEL ROAD

N.T.S.

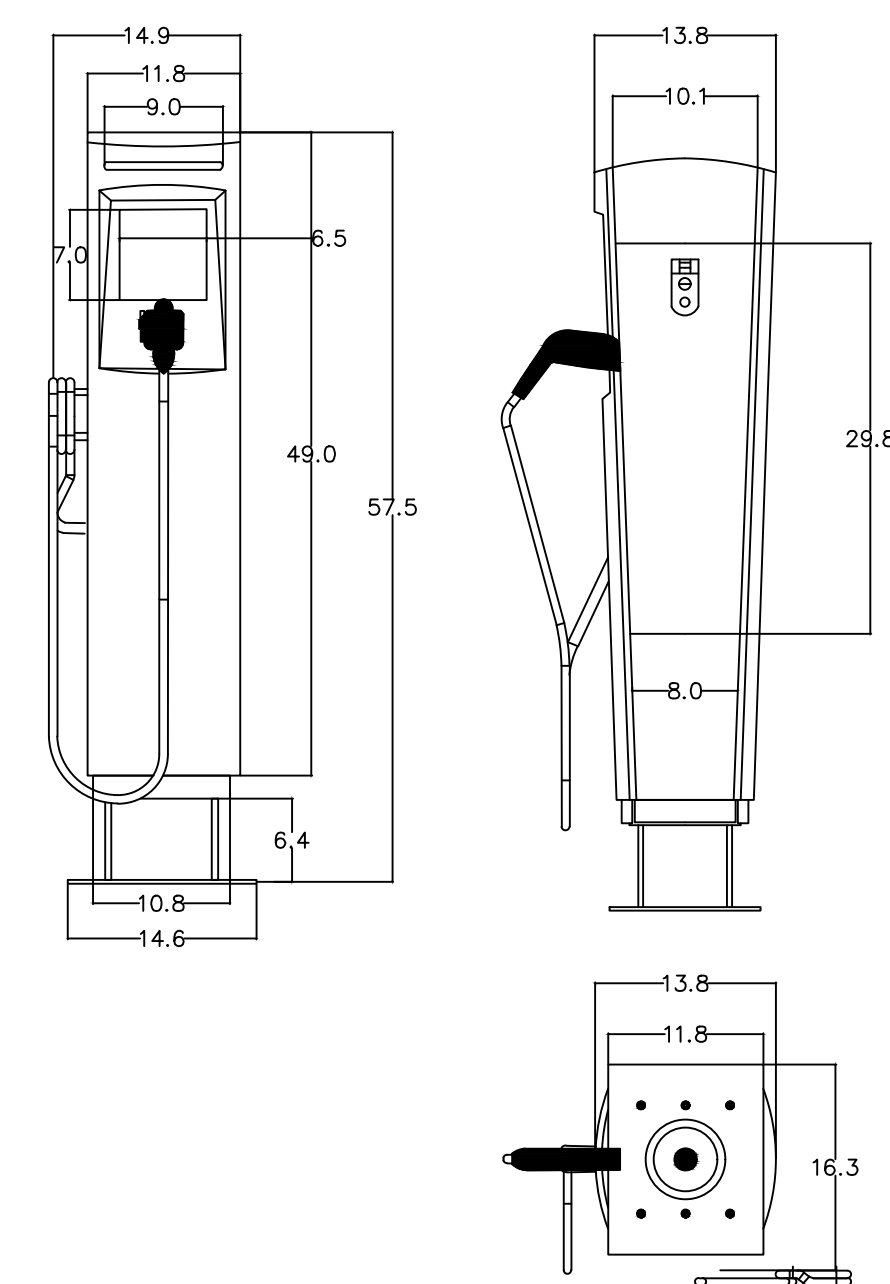


### Notes

- To inspect, provide access, operate elbow connectors and ventilate the transformer, the above specified clear area distances to buildings or shrubs shall be maintained. The distance from the building is to the concrete transformer pad. Property line shall be considered an obstruction, when fences, shrubs, etc. may be installed at a future date by adjacent property owners. Because of the possibility of cooling fins overhanging the pad, side clearance to be increased to 5 feet for transformers 1000 kVA and larger.
- If no curb exists, or transformer is located closer than 10 feet to the traveled way, protective vehicle posts (●) shall be installed as specified in DTR 42.061.
- Top of transformer pad shall be installed 3 inches above final grade.
- Transformer shall not be located on steep grades where access to or elbow operation is made difficult.
- Transformer shall meet the minimum distances to doors, windows, fire escapes, air intakes and walls as specified in DTR 42.061.
- Transformer shall not be located with its door facing the building.
- Refer to DTR 58.301 for specific instructions on the installation of the transformer pad.
- Refer to DSEM Section 66.32 for information on environmental considerations.

## 11 TRANSFORMER PAD

N.T.S.



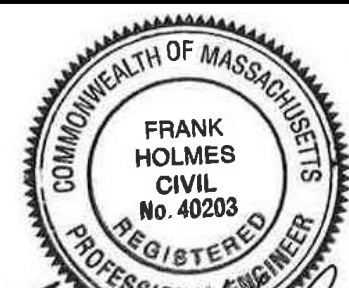
## 12 ELECTRIC CHARGING STATION

N.T.S.

ECORASTER E50 Gross Filled			
DATE	SCALE	NTS	REV
30 JULY 2021			3

01/11/2023	PEER REVIEW COMMENTS	1
Date	Description	No.

### Revisions



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### Project

## 237 PLEASANT STREET CONCEPT PLANS

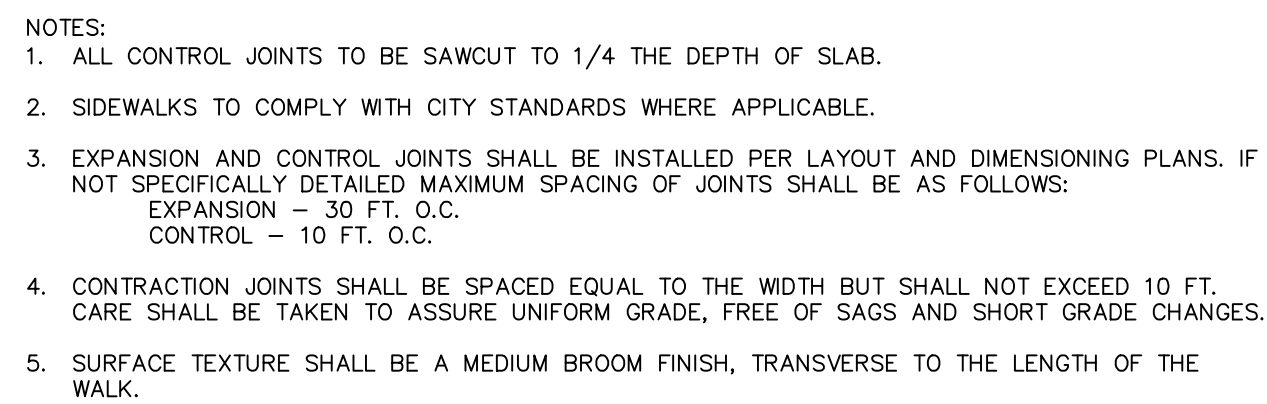
NORFOLK COUNTY FRANKLIN MASSACHUSETTS

### Drawing Title

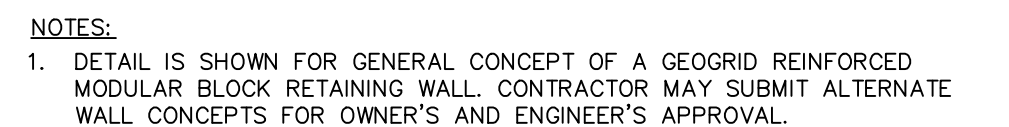
## SITE DETAILS I

Project No.	Drawing No.
151019602	CS501
Date	
09/10/2022	
Drawn By	
Checked By	





1



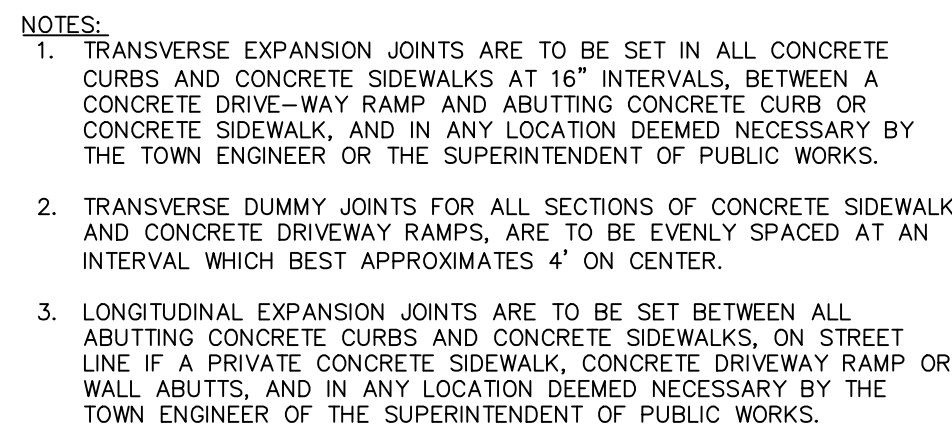
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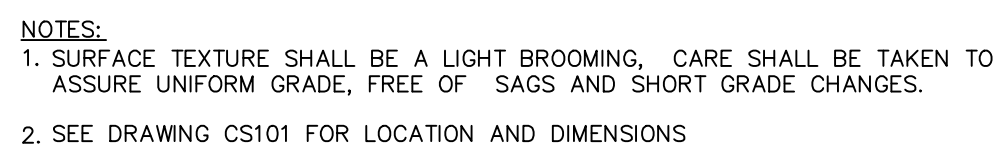
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N.T.S.



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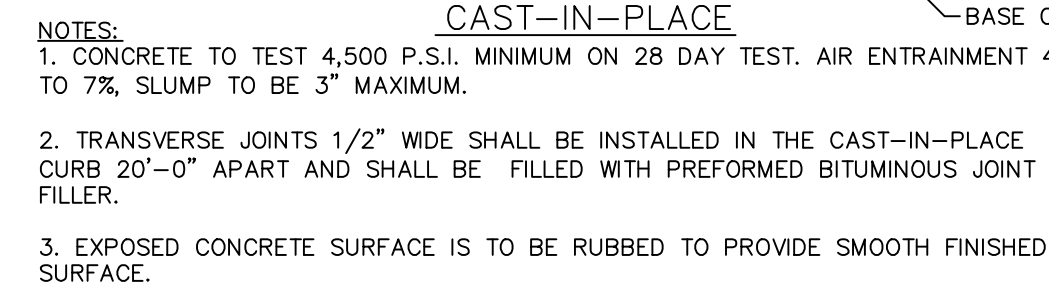
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N.T.S.



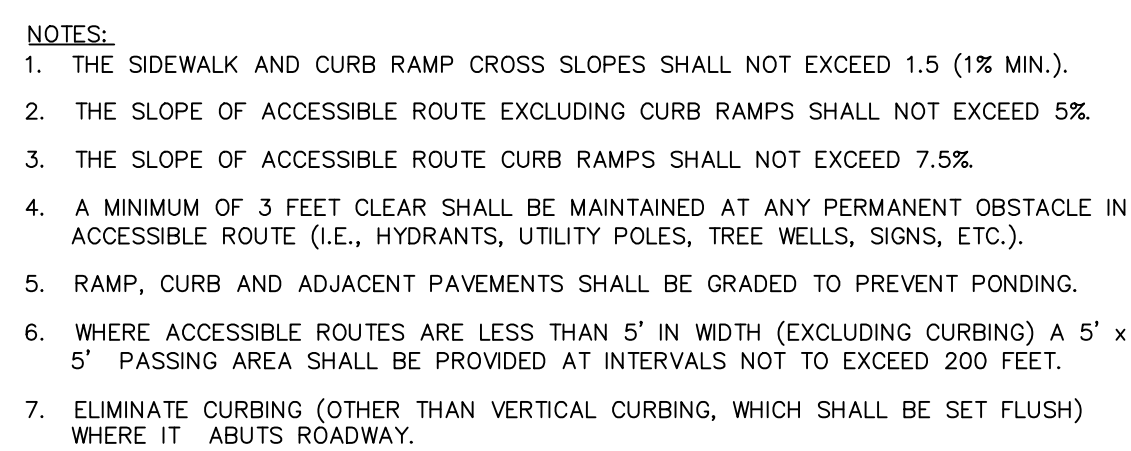
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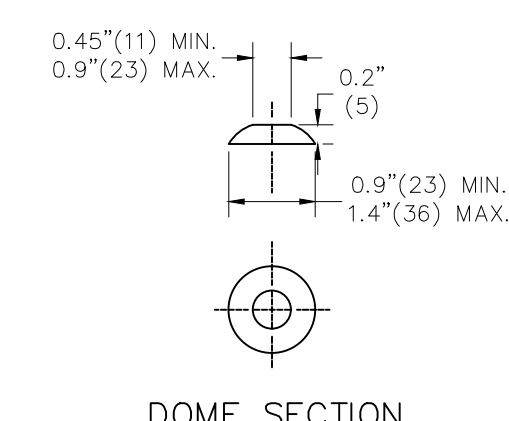
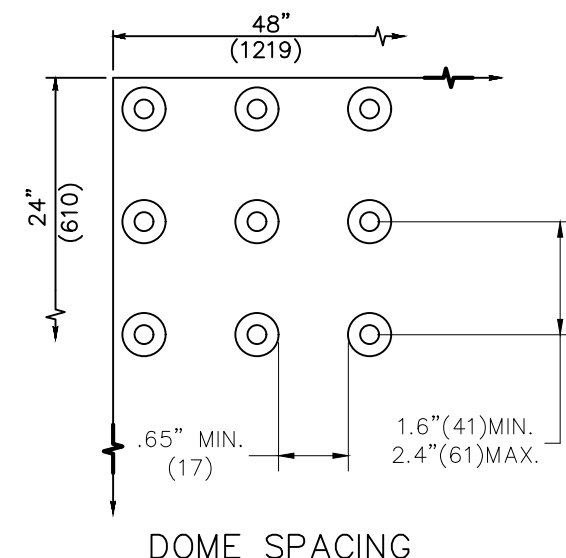
7



9



10



N.T.S.

## Revisions



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Project
---------

## 237 PLEASANT STREET CONCEPT PLANS

FRANKLIN	
NORFOLK COUNTY	MASSACHUSETTS
Drawing Title	

## SITE PLAN DETAILS

Project No. <b>151019602</b>	Drawing No.  <div style="font-size: 48px; text-align: center;">CS502</div>
Date <b>09/10/2022</b>	
Drawn By <b>KBL</b>	
Checked By <b>KH</b>	



A  
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MBE-0510-00010

Legacy # MLB510-M

500 SERIES



**MATERIALS:** Bench ends and seat are made from solid steel flat bar and H.S. steel tube.

**FINISH:** All steel components are protected with E-Coat rust proofing. The Maglin Powdercoat System provides a durable finish on all metal surfaces.

**INSTALLATION:** The bench is delivered pre-assembled. Holes (0.5") are provided in each foot for securing to base.

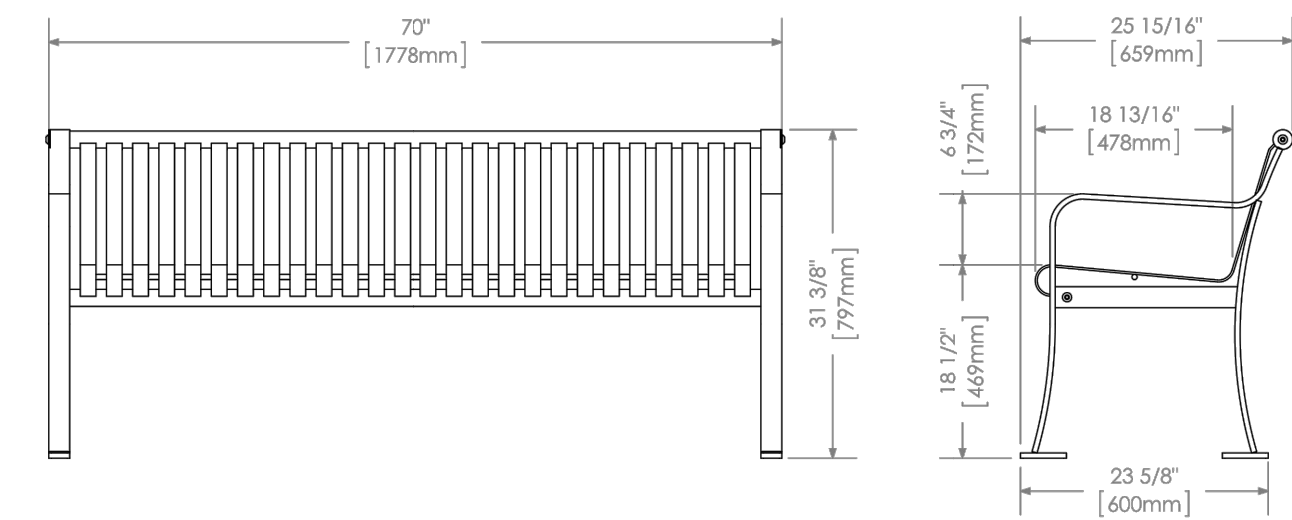
**TO SPECIFY:** Select MBE-0510-00010  
Choose:  
- Powdercoat Color

HEIGHT: 31.38" (79.7cm)

LENGTH: 70" (177.8cm)

DEPTH: 25.94" (65.9cm)

WEIGHT: 152.8 lbs (69.3kg)



T 800-716-5506  
F 877-280-9393  
www.maglin.com  
sales@maglin.com

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- Details and specifications may vary due to continuing improvements of our products.

1

BENCH AT BASIN

N.T.S.

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Bola Bike Rack

Product Data Sheet

landscape forms



An artful solution for bicycle storage and security that meets Association of Pedestrian and Bicycle Professionals (APBP) recommendations. Bola's understated design doesn't conflict with other site elements. An artful solution for bicycle storage and security that meets Association of Pedestrian and Bicycle Professionals (APBP) recommendations. Bola's understated design doesn't conflict with other site elements.

**Bike Rack**


- Capacity: 2 bikes
- Bike racks made of 1.5" o.d., 120" wall stainless steel tubing, with a #4 satin electropolish finish on bare stainless steel.
- Bola is also available in powdercoated steel.
- Bola must be embedded.
- Bola can secure two bicycles parked parallel to the rack.
- The bicycles can be headed in opposite directions, or in the same direction. The rack provides two-point contact to prevent the bicycle from tipping over.
- A standard D-shaped bike lock can secure both a wheel and the frame.

**Finishes**

- All metal parts are finished with Landscape Forms' proprietary Pingerd 180 polyester powdercoat, a hard yet flexible finish that resists rusting, chipping, peeling and fading.
- Call for standard color chart.

**To Specify**

- Select bike rack style. Specify powdercoat color or stainless steel.

Style	Depth	Width	Height	Weight
	1.5"	28.25"	32"	13 lbs

*Designed by Brian Kane, IDSA*

Visit [landscapeforms.com](http://landscapeforms.com) for more information. Specifications are subject to change without notice. Landscape Forms supports the Landscape Architecture Foundation at the Second Century level.

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1

Revised January 11, 2021

Landscape Forms Inc.

800.521.2546

F 269.381.3455

7800 E. Michigan Ave., Kalamazoo, MI 49048

2

BICYCLE RACK

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OGM1900-BC1-SCR7

OGDEN



Front to Back

Left to Right

**MATERIALS:** The seat pan is constructed from steel. The seat employs lpe wood, HDPE (plastic), or HDPC (paper composite) slats. Thickness: lpe 1", HDPE 1", HDPC 3/4"

**FINISH:** All steel components are protected with E-Coat rust proofing. The Maglin Powdercoat System provides a durable finish on all metal surfaces.

**INSTALLATION:** The seat sections come pre-assembled with boards. Mount options come as a separate component. Reference: INSTALLATION-INST\_OGM1900 document for onsite assembly and installation instructions.

**TO SPECIFY:** Please contact your Maglin Site Furniture Representative.

SQUARE LEG - MS1

PEDESTAL LEG - MS2

CANTILEVER - MS3

WALLMOUNT - MS4

FRONT TO BACK SLATS (FB)

LEFT TO RIGHT SLATS (LR)

DIMENSION	RANGE (IN)	RANGE (MM)
B-1	182.5" - 271.5"	4634 - 6895
B-2	18" - 250"	457 - 6350
A	47.5" - 75.5" (1219 - 1927)	1219 - 1927
B	41.3" - 44.1" (1051 - 1119)	1051 - 1119
C	22.3" - 23.1" (568 - 587)	568 - 587

\*Please Note: When HDPC seat material is chosen, seat height is reduced by 1/4".

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F 877-280-9393  
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- Details and specifications may vary due to continuing improvements of our products.

3

CURVED BENCH

N.T.S.

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800.364.7681



www.DOGIPOT.com

ALL ALUMINUM DOGIPOT® PET STATION (ITEM #1003A-L)

SPECIFICATION, INSTALLATION AND OPERATION SHEET



**YOUR ALL ALUMINUM DOGIPOT® PET STATION INCLUDES:**

- Aluminum **DOGIPOT®** Pet Sign, with mounting hardware (two (2) 2 1/4" x 1/4" tap bolts, washers and locknuts)
- Aluminum **DOGIPOT® JUNIOR** Bag Dispenser (ITEM #1002-2), with mounting hardware (two (2) 2 1/4" x 1/4" bolts, washers and locknuts)
- Two (2) keys for Dispenser bottom locking access panel
- Two (2) rolls of **DOGIPOT®** Smart Litter Pick Up Bags™ (ITEM #1402) (200 count per roll), installed in **DOGIPOT® JUNIOR** Bag Dispenser
- 10 Gallon Aluminum Trash Receptacle (ITEM #1206A-L) with attached hinged lid and trash liner bag retainer bands, with mounting hardware (one (1) 2 1/2" x 1/4" and (1) 2 1/4" x 1/4" bolts, washers and locknuts)
- One (1) box **DOGIPOT®** Smart Liner Trash Bags™ (ITEM #1404) (50 count)

**SEPARATE SHIPPING BOX**

- 2" x 2" x 4" - 8' Galvanized Steel Telescopic Mounting Post, with installation hardware (two (2) carriage bolts (2 1/2" x 5/16"), washers and locknuts)

**PLEASE CHECK THE ABOVE INVENTORY AND CALL YOUR DISTRIBUTOR IF ANY PARTS ARE MISSING.**

**INSTALLATION AND OPERATION INSTRUCTIONS**

- Select a good visible spot in your community or park where you want to install the All Aluminum **DOGIPOT®** Pet Station.
- Prior to installation, remove the 1 1/4" x 1 1/4" x 4' portion of the mounting post from the 2" x 2" x 4' portion of the mounting post before cementing. **Insert the larger portion of the mounting post (2" x 2" x 4') approximately 14" into an 18" deep by 8" diameter hole filled with a 40 lb. bag of "ready to use" concrete mix.** To stabilize the post while cementing, place a rod, bolt or other device through the two bottom holes, prior to inserting into the ground and cementing. Level the post in a straight vertical position and let concrete dry for at least 12 hours.
- After the concrete is dry, insert the smaller portion of the post (1 1/4" x 1 1/4" x 4') into the larger cemented portion of the post (2" x 2" x 4') until the first 4 holes are lined up between the two posts. Use two (2) carriage bolts, washers and locknuts to fix the telescopic post in position. The upper bolt in the top overlapping hole, pointing from right to left and the lower bolt in the bottom overlapping hole, pointing from front to back. The total height above ground with both post parts should now be approximately 6' 6".
- Start by installing the **DOGIPOT®** Pet Sign on top of the 1 1/4" post, with the upper hole matching the most upper hole in the square post using the enclosed 2 1/4" bolts, washers and locknuts. Continue installing the Aluminum **DOGIPOT® JUNIOR** Bag Dispenser according to the mounting instructions enclosed with the Dispenser, ensuring that he upper edge of the Dispenser is approximately **1" below** the lower edge of the **DOGIPOT®** Pet Sign.
- Install the Aluminum **DOGIPOT®** Trash Receptacle through the pre-drilled top oval holes in the back wall of the receptacle and through the square post with the remaining bolts, washers and locknuts, using the 2 1/4" bolt on top and the 2 1/2" bolt below. **The upper edge of the trash receptacle must be approximately 12 1/4" below the lower end of your Aluminum DOGIPOT® JUNIOR Bag Dispenser so that the lid may completely open.** The upper back wall of the trash receptacle is supposed to touch the head of the lower post carriage bolt, which creates some space between the post and the receptacle, allowing the receptacle lid to open from left to right, without touching the post.
- Insert one of the enclosed **DOGIPOT®** Smart Liner Trash Bags™ into the trash receptacle, folding it over the interior retainer bands. Proper installation and general maintenance will help expand the life of the trash receptacle and dispenser unit. **DOGIPOT®** offers Product Maintenance Paint to help cover any paint chips which may occur in the powder coating during the life of the product.
- ENJOY WATCHING PET OWNERS PICK UP AFTER THEIR DOGS!**

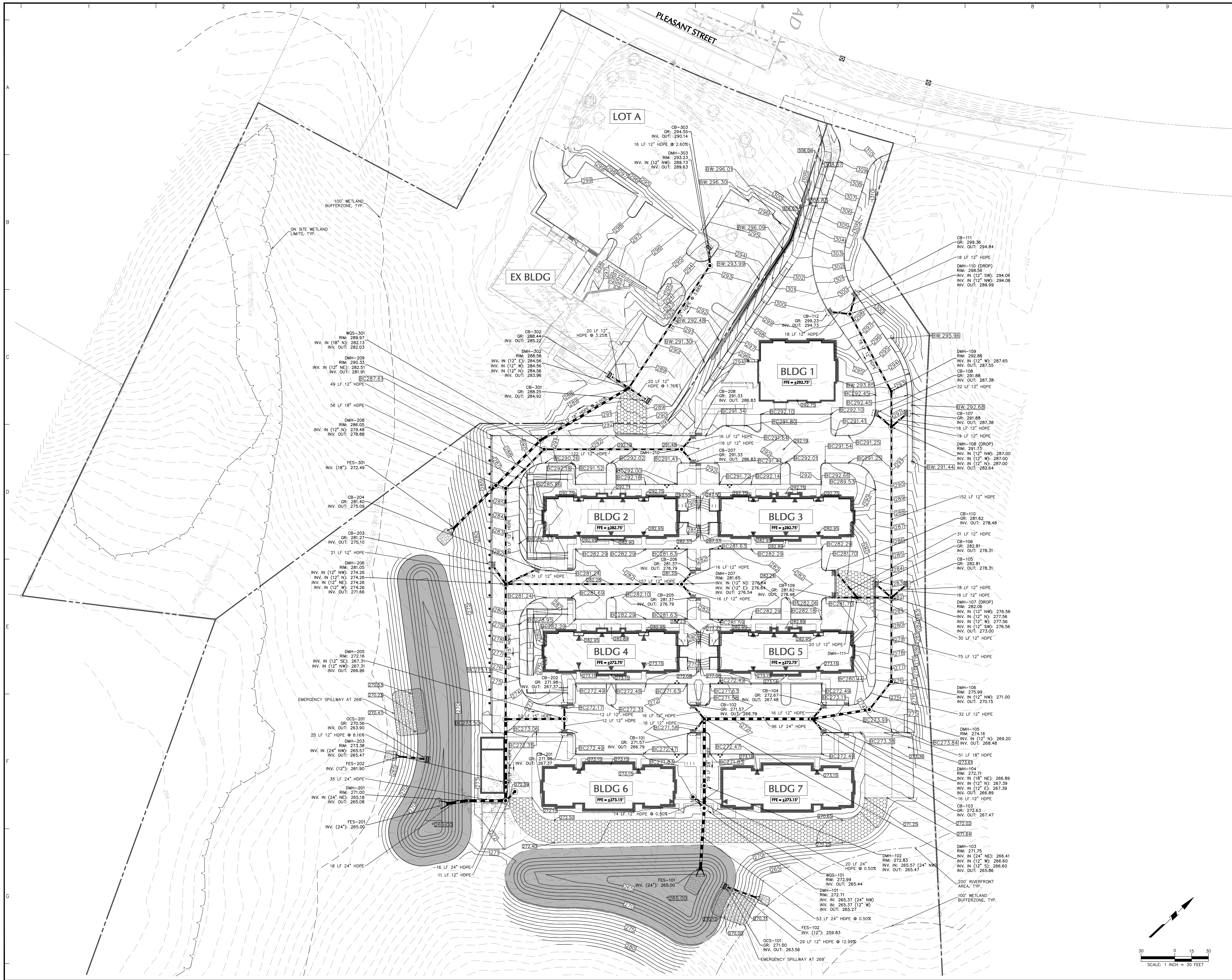
4

DOGIPOT PET STATION

N.T.S.

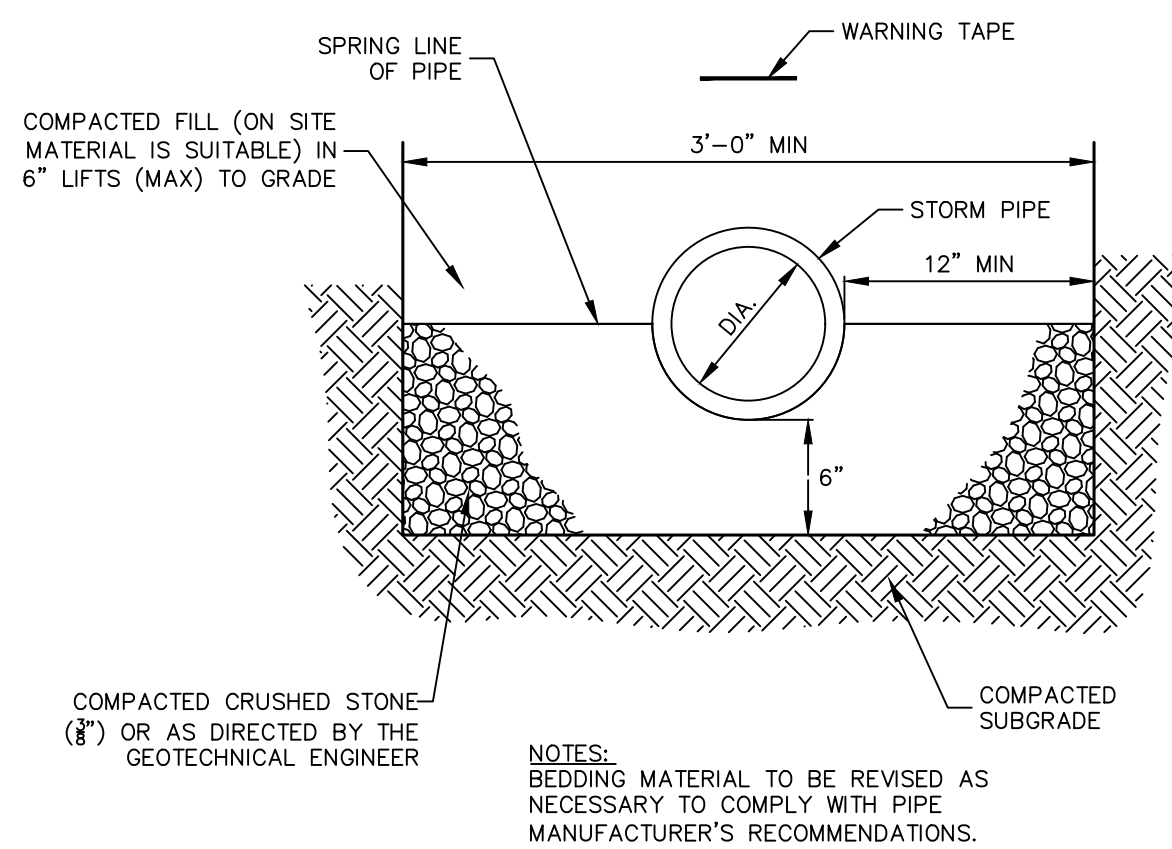
Date	Description	No.
Revisions		
		
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Project		
237 PLEASANT STREET CONCEPT PLANS		
NORFOLK COUNTY FRANKLIN MASSACHUSETTS		
Drawing Title		
SITE PLAN DETAILS III		
Project No. 151019602		Drawing No. CS503
Date		
Drawn By		
Checked By		





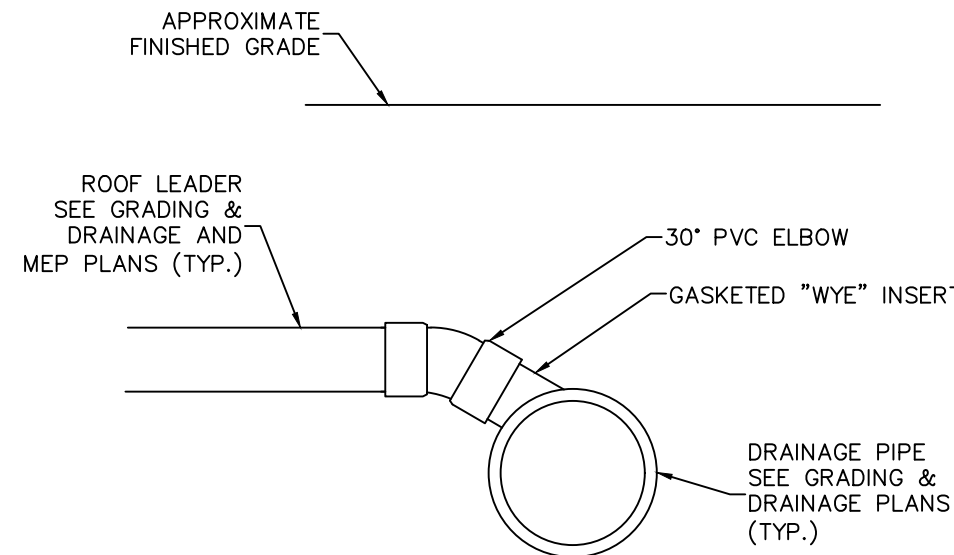
01/11/2023	PEER REVIEW COMMENTS	2
11/23/2022	STORMWATER REPORT	1
Date	Description	No.
Revisions		
<div><div><div><div><div><div><span></span></div><div>COMMONWEALTH OF MASSACHUSETTS</div></div><div><div><div><span></span></div><div>FRANK HOLMES</div><div>CIVIL</div><div>No. 40203</div></div></div><div>REGISTERED PROFESSIONAL ENGINEER</div></div><div><i>Frank Holmes</i></div></div></div></div>		
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Project <b>237 PLEASANT STREET CONCEPT PLANS</b>		
FRANKLIN NORFOLK COUNTY MASSACHUSETTS Drawing Title		
<b>GRADING &amp; DRAINAGE PLAN</b>		
Project No. <b>151019602</b>	Drawing No. <b>CG100</b>	
Date <b>09/10/2022</b>		
Drawn By <b>KH</b>		
Checked By <b>FH</b>		





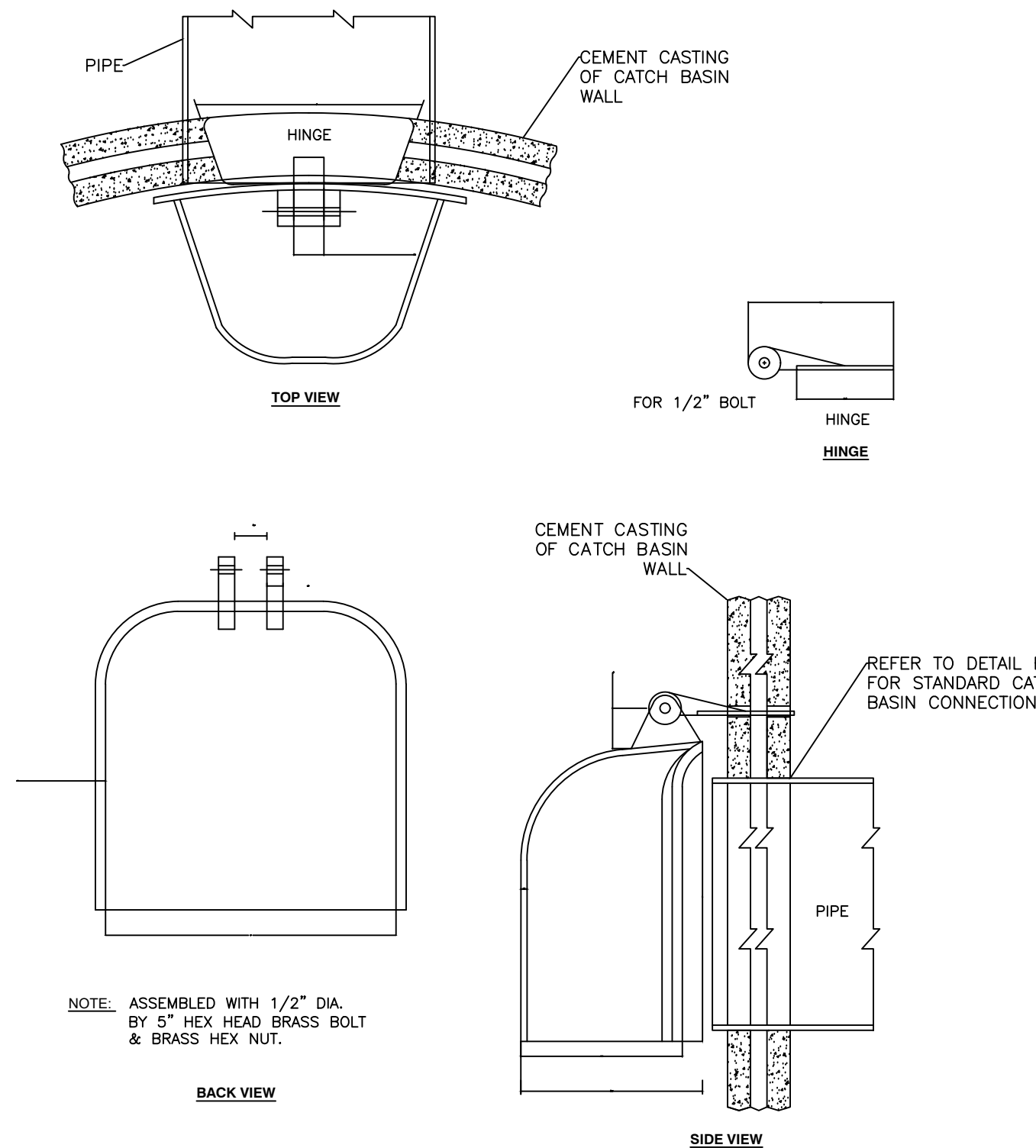
**STORMWATER TRENCH / BEDDING**

N.T.S.



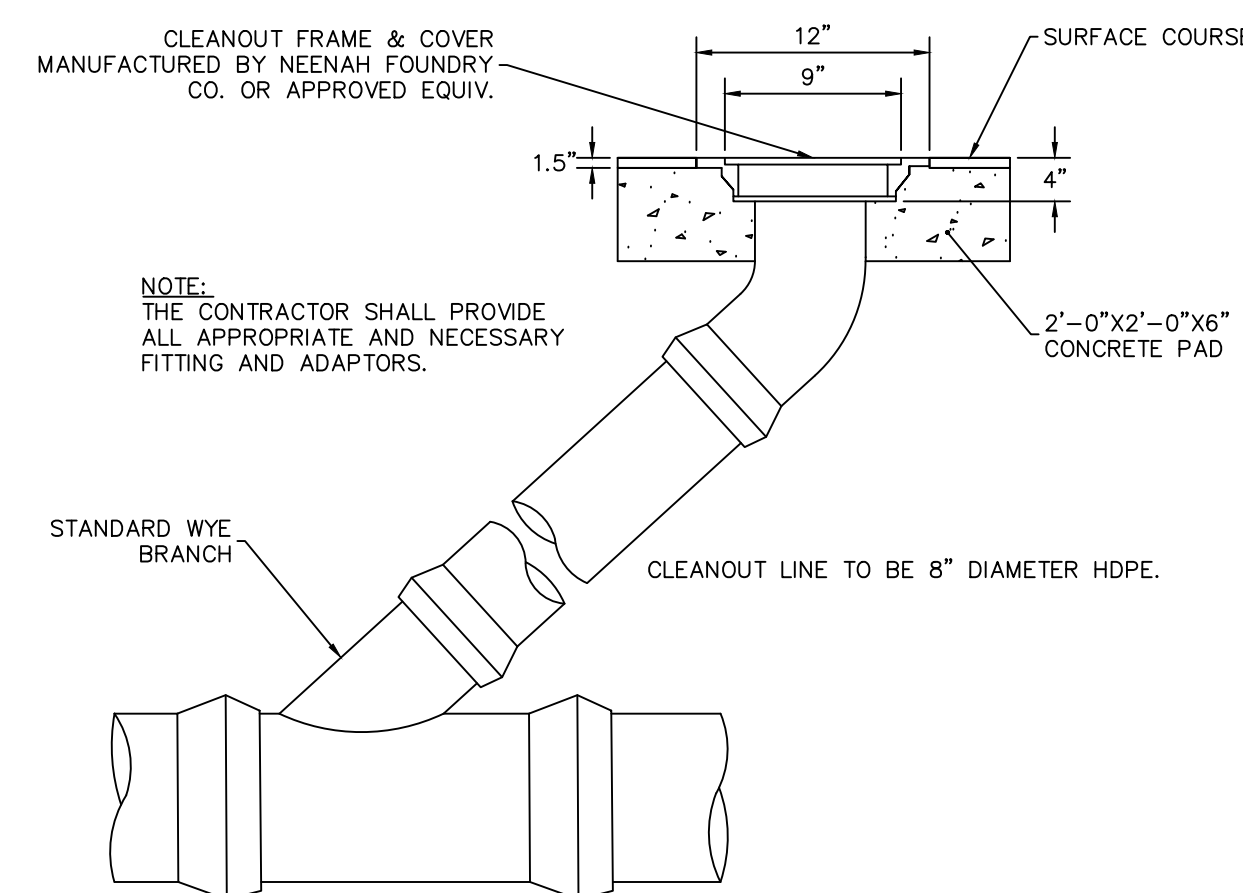
**ROOF DRAIN CONNECTION TO MAIN**

N.T.S.



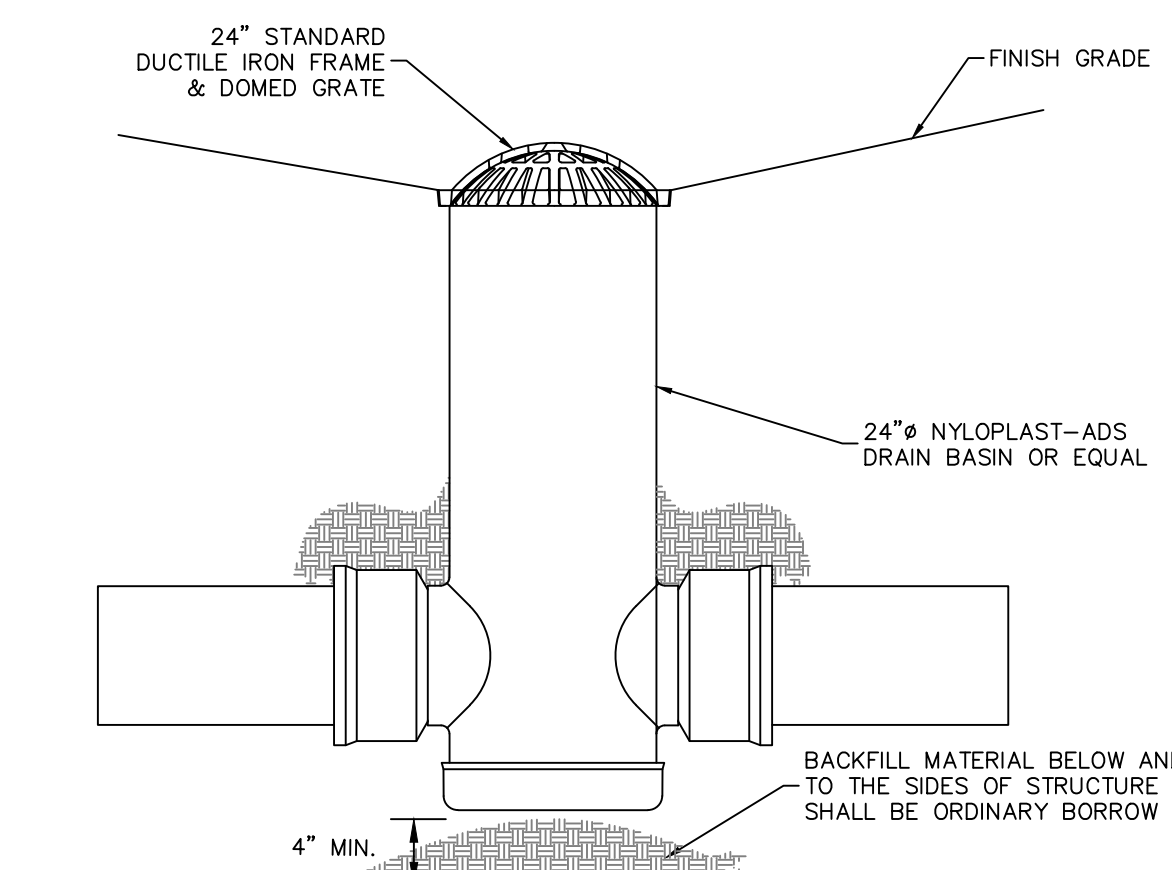
**CATCH BASIN HOOD**

N.T.S.



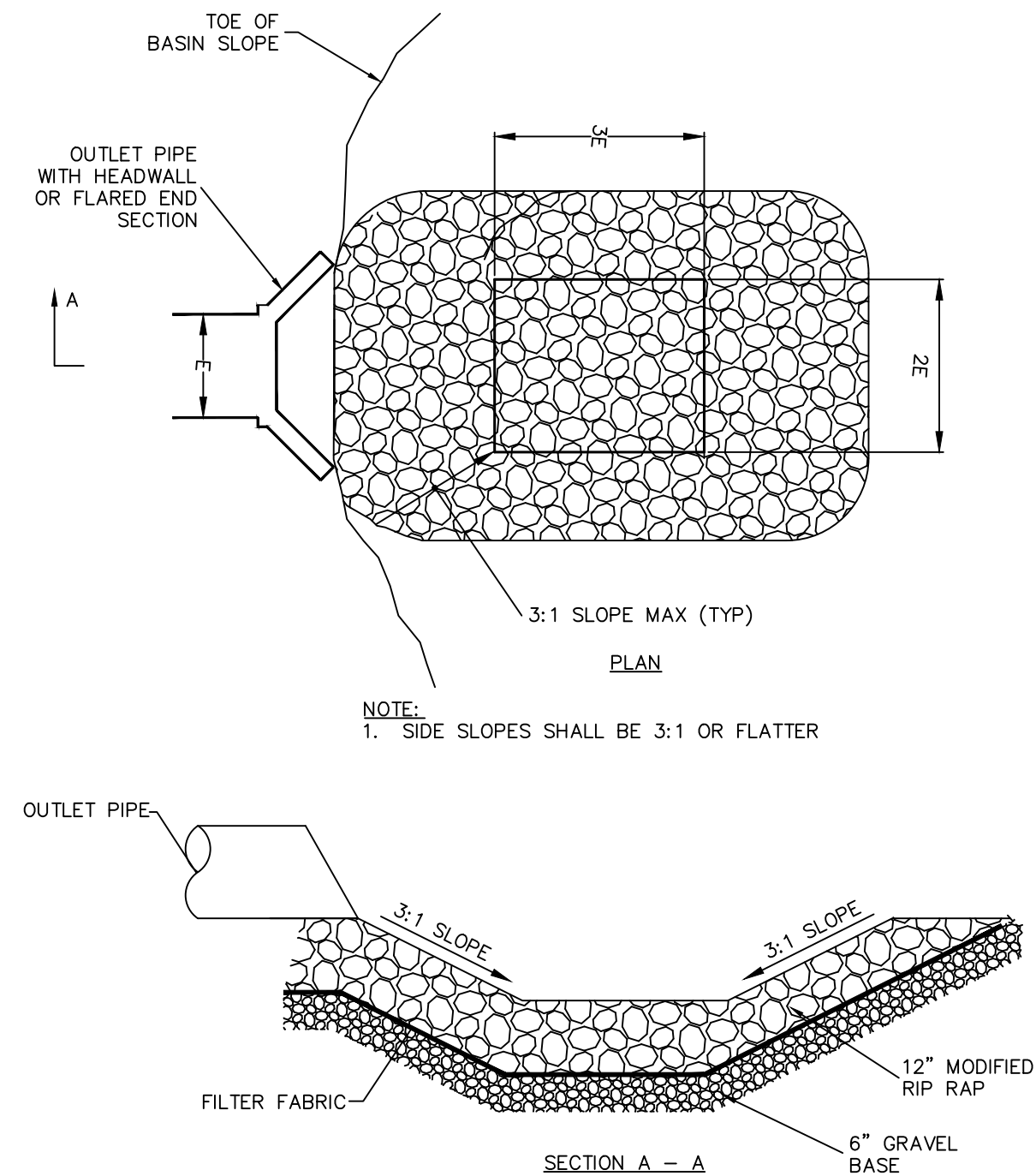
**CLEANOUT**

N.T.S.



**AREA DRAIN IN PLANTING**

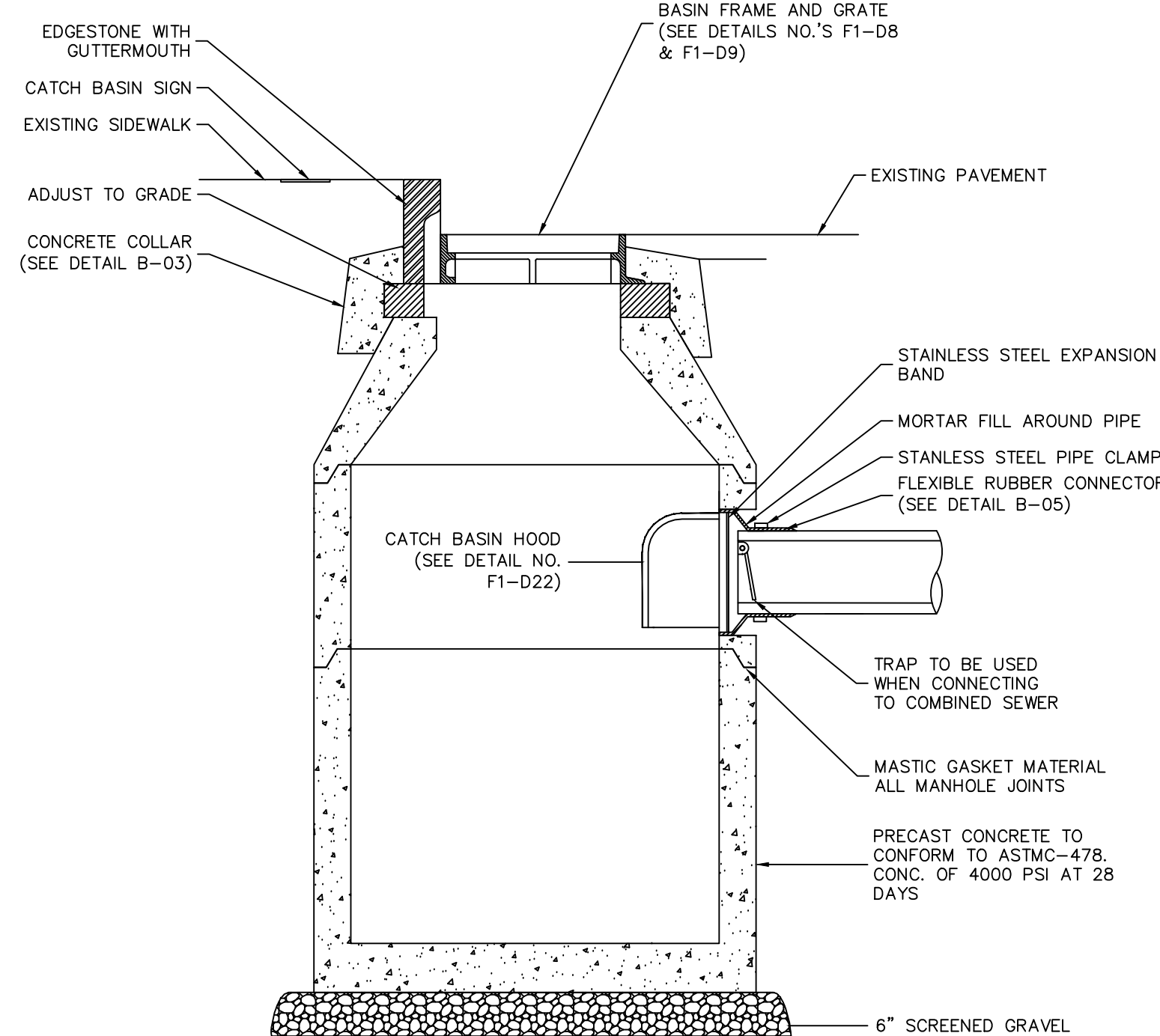
N.T.S.



**RIPRAP PROTECTION & SCOUR HOLE**

N.T.S.

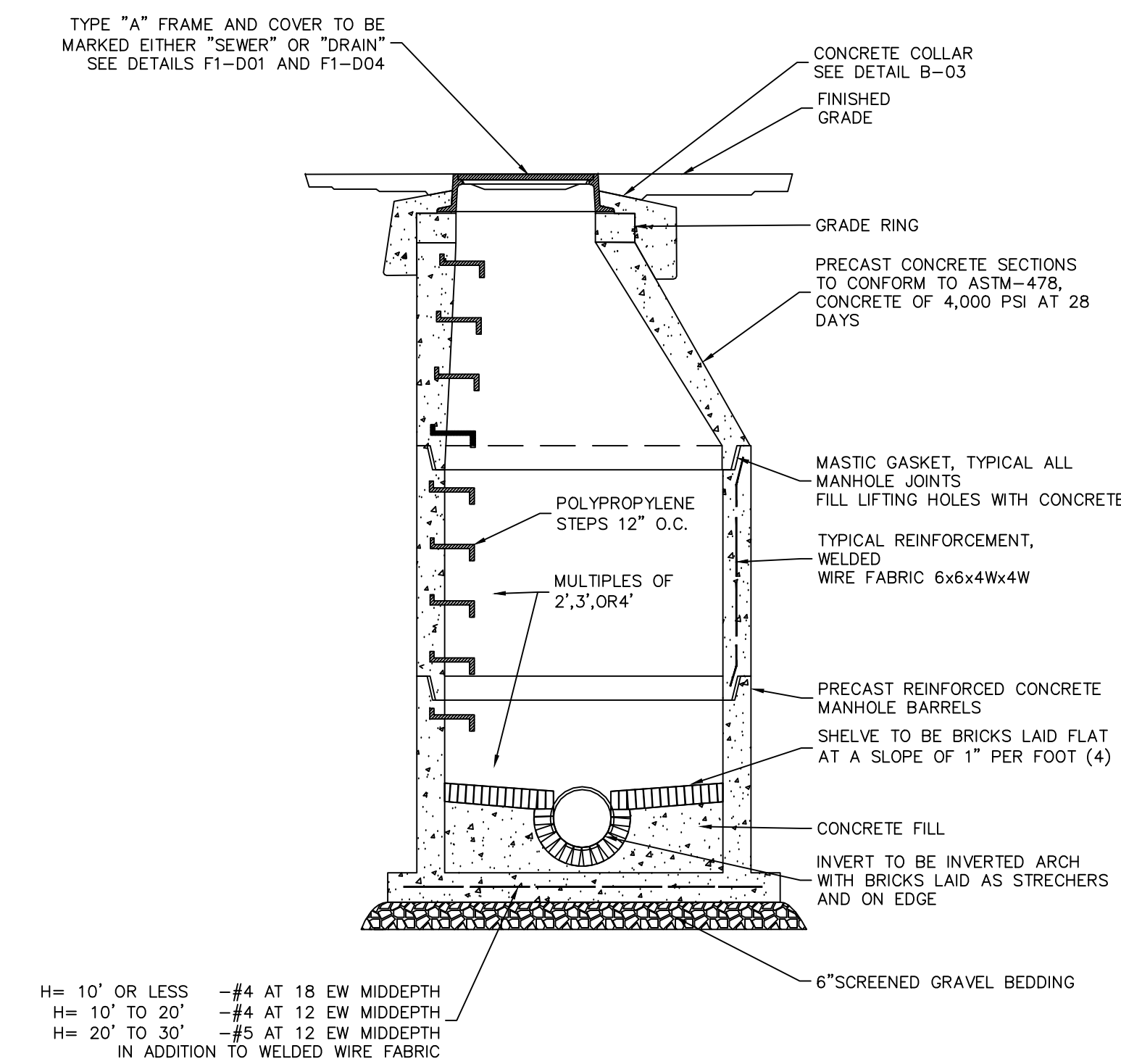
- NOTES:**
- ALL CAST IN PLACE CONCRETE TO HAVE A MINIMUM 28 DAY STRENGTH OF 3000 LBS PER SQ. INCH, USING 3/4" MAXIMUM SIZE AGGREGATE
  - REINFORCING STEEL BARS ARE DEFORMED BARS OF BILLET STEEL ASTM A615 GRADE 60
  - WELDED WIRE FABRIC CONFORMS TO ASTM A185
  - CAST IRON FRAME, TYPE "A" AND COVER TYPE "A" FOR DETAILS SEE DETAILS NOS. F1-D01, F1-D04 AND F1-D05 COVERS TO BE MARKED EITHER "SEWER" OR "DRAIN".
  - DESIGN LIVE LOAD - HS 20 - 44
  - MINIMUM COVER FOR REINFORCING IN WALLS OR SLABS POURED AGAINST EARTH SHALL BE 3 INCHES. ALL OTHERS SHALL BE 2 INCHES UNLESS OTHERWISE NOTED
  - USE 2'-0" LENGTHS OF PIPE STUBS AT ALL MANHOLES FOR VC OR AC PIPE. USE 4'-0" MAX. LENGTHS OF PIPE STUBS AT ALL MANHOLES FOR RC, DI OR PVC.
  - ALL MANHOLES SHALL BE CONSTRUCTED OF REINFORCED CONCRETE SHOP DRAWINGS SUBMITTALS SHALL SHOW ALL REINFORCING DETAILS



**CATCH BASIN**

N.T.S.

- NOTES:**
- 5'-0" DIAMETER FOR ALL MANHOLE DEPTHS GREATER THAN 20 FEET OR WHEN ORDERED BY THE ENGINEER
  - 6" MIN. WALL THICKNESS AND 7 INCH MIN. BASE THICKNESS WITH 5'-0" DIAMETER MANHOLES
  - 6 INCH LIP OPTIONAL UNLESS OTHERWISE NOTED
  - CONCRETE INVERT AND SHELF MAY BE SUBSTITUTED IN STORM DRAIN MANHOLES AS DIRECTED BY THE ENGINEER
  - ALL CAST IN PLACE CONCRETE TO HAVE A MINIMUM 28 DAY STRENGTH OF 3000 LBS PER SQ. INCH, USING 3/4" MAXIMUM SIZE AGGREGATE
  - REINFORCING STEEL BARS ARE DEFORMED BARS OF BILLET STEEL ASTM A615 GRADE 60
  - WELDED WIRE FABRIC CONFORMS TO ASTM A185
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  - ALL MANHOLES SHALL BE CONSTRUCTED OF REINFORCED CONCRETE SHOP DRAWINGS SUBMITTALS SHALL SHOW ALL REINFORCING DETAILS



**STORMWATER MANHOLE**

N.T.S.

Date	Description	No.
Revisions		
<b>LANGAN</b> Langan Engineering and Environmental Services, Inc. 100 Cambridge Street, Suite 1310 Boston, MA 02114 T: 617.824.9100 F: 617.824.9101 www.langan.com		
Project		
237 PLEASANT STREET CONCEPT PLANS		
NORFOLK COUNTY FRANKLIN MASSACHUSETTS Drawing Title		
<b>GRADING &amp; DRAINAGE DETAILS</b> <b>I</b>		
Project No.	Drawing No.	
151019602	CG501	
Date		
09/10/2022		
Drawn By		
Checked By		





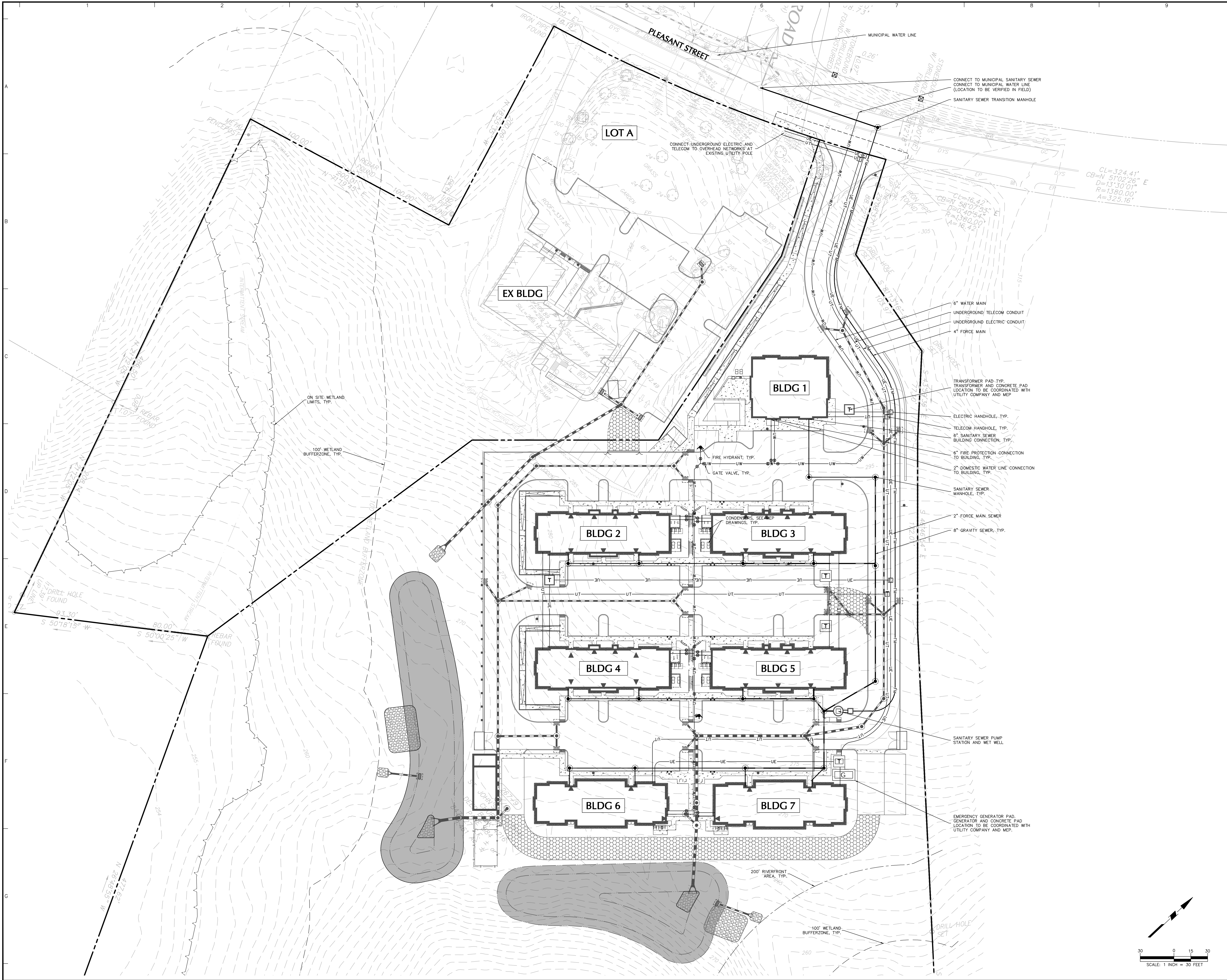
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2

Date: 1/11/2023 Time: 11:25 User: klaresch Style Table: Langan.stb Layout: CG502 Document Code: 151019602-0301-CG501-0102





01/11/2023	PEER REVIEW COMMENTS	2
11/23/2022	STORMWATER REPORT	1
Date	Description	No.

Revisions

**FRANK HOLMES**  
CIVIL  
No. 40203  
REGISTERED PROFESSIONAL ENGINEER

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Project

**237 PLEASANT STREET**  
**CONCEPT PLANS**

NORFOLK COUNTY FRANKLIN MASSACHUSETTS

Drawing Title

**UTILITY PLAN**

Project No. 151019602

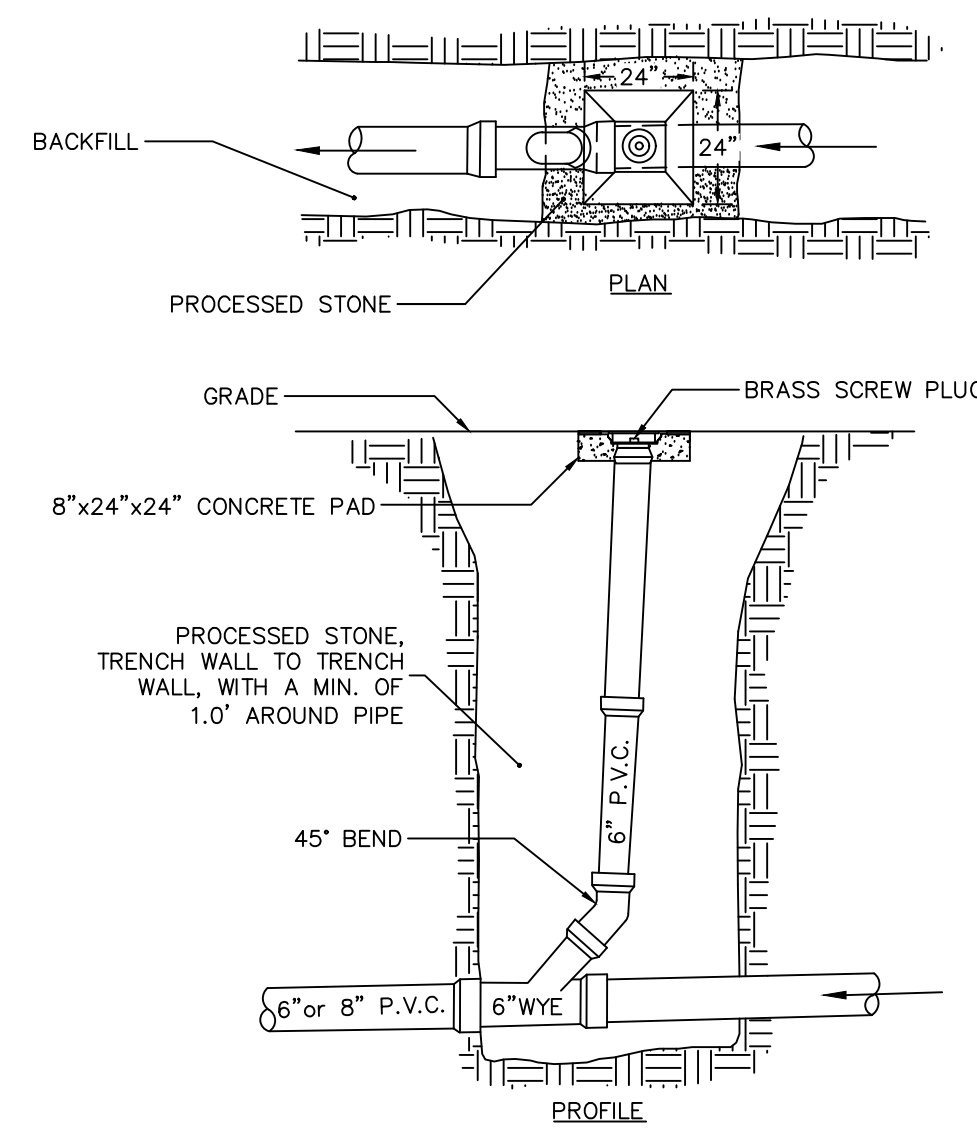
Date 09/10/2022

Drawn By KH

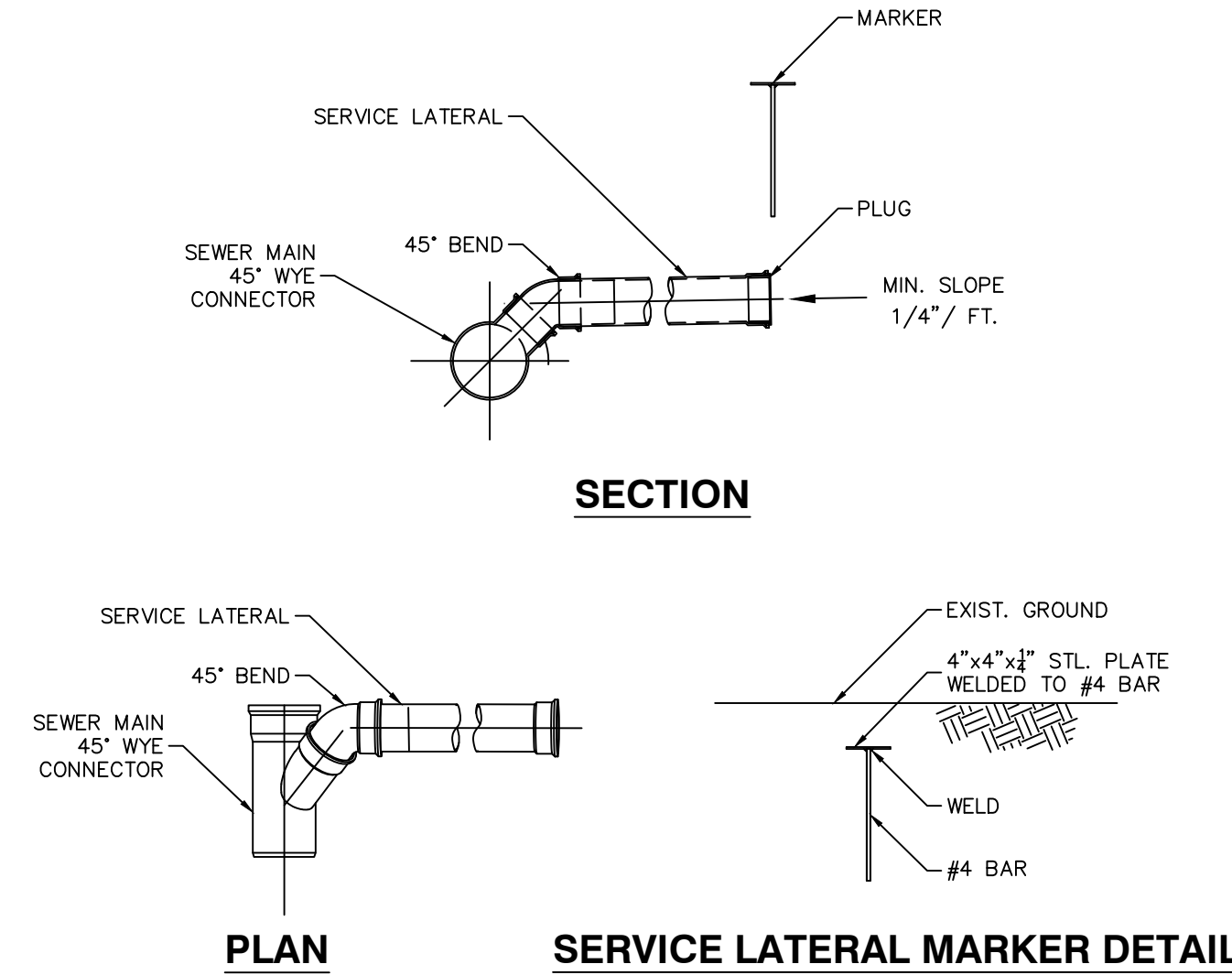
Checked By FH

Drawing No. CU100

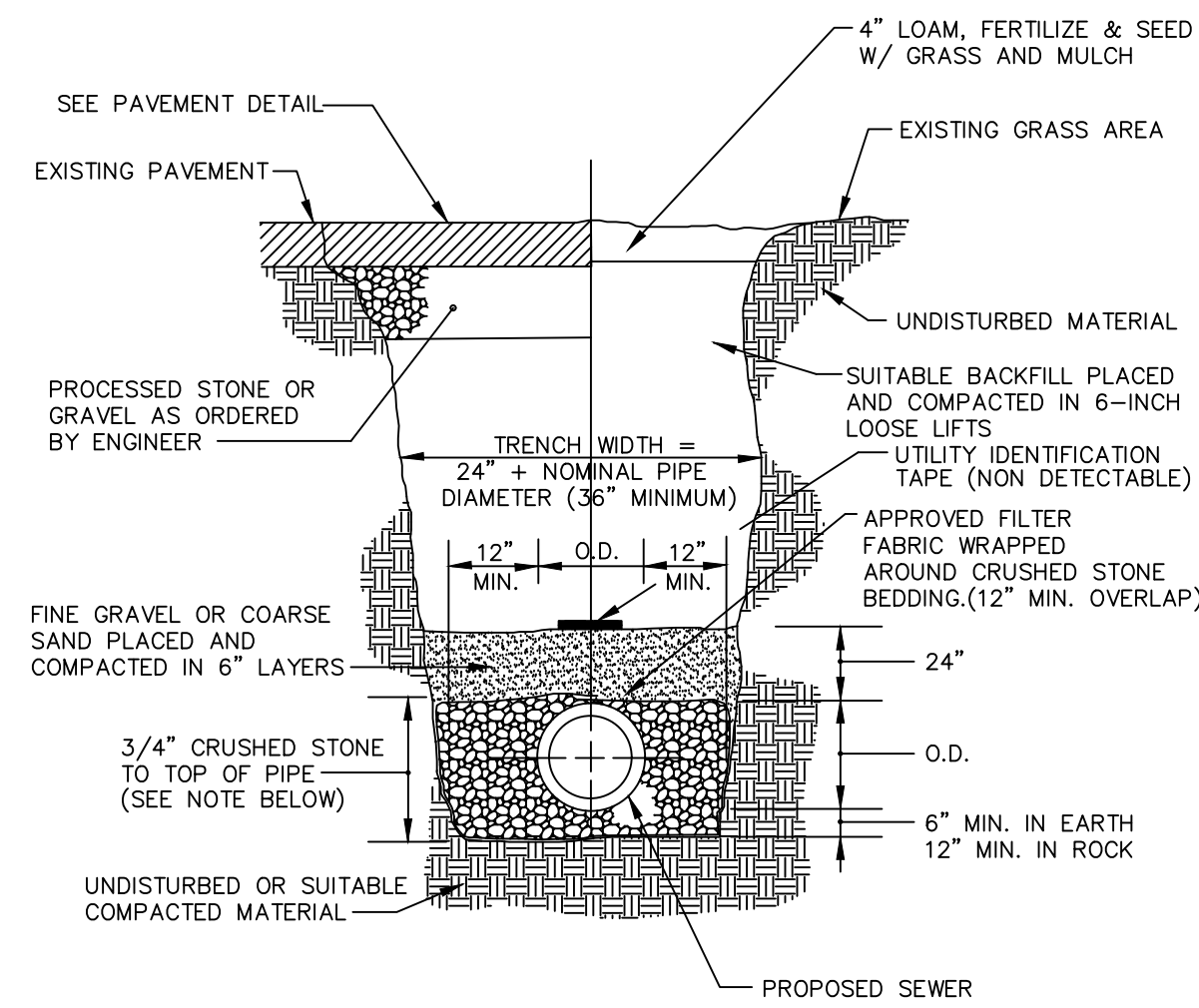




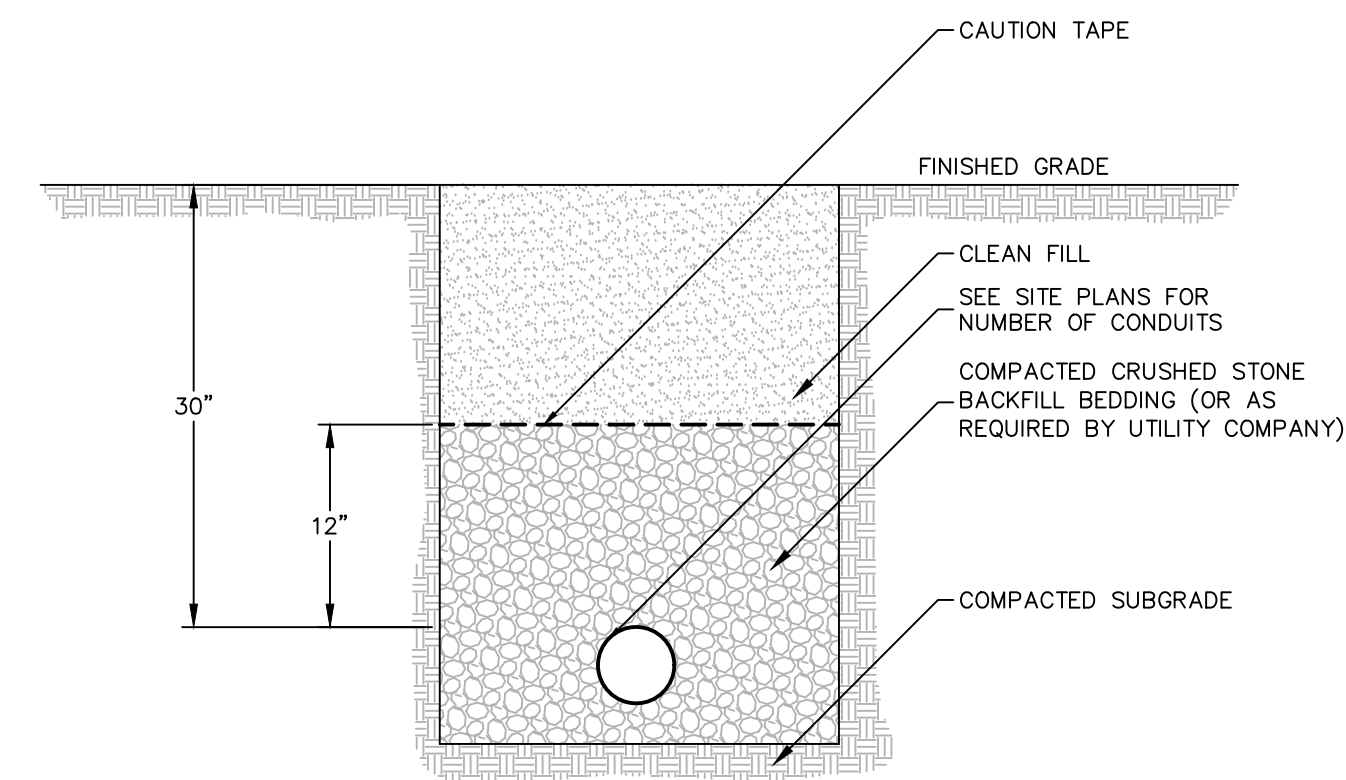
**SANITARY SEWER CLEANOUT**  
N.T.S.



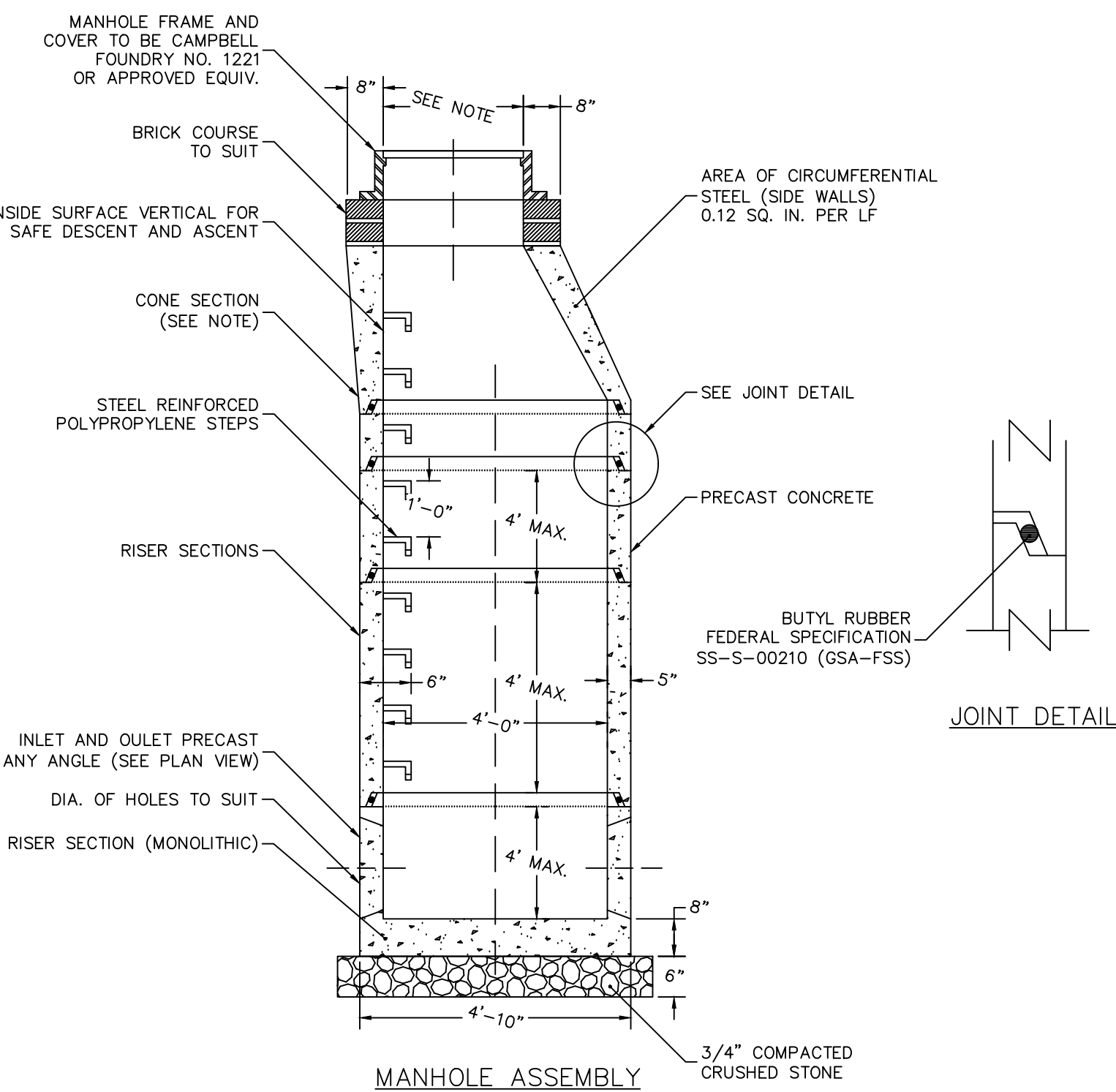
**SANITARY SEWER MAIN CONNECTION**  
N.T.S.



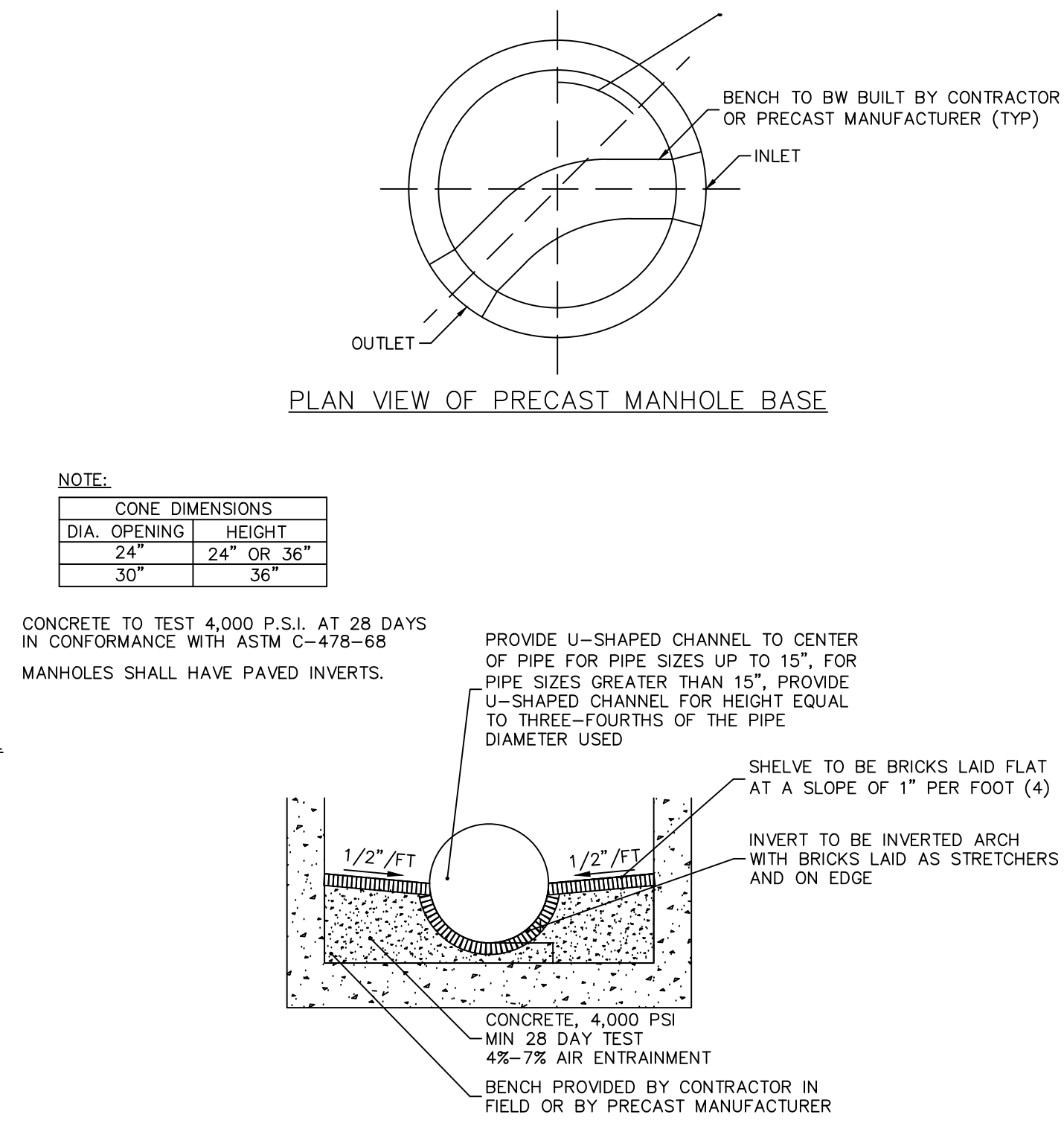
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N.T.S.



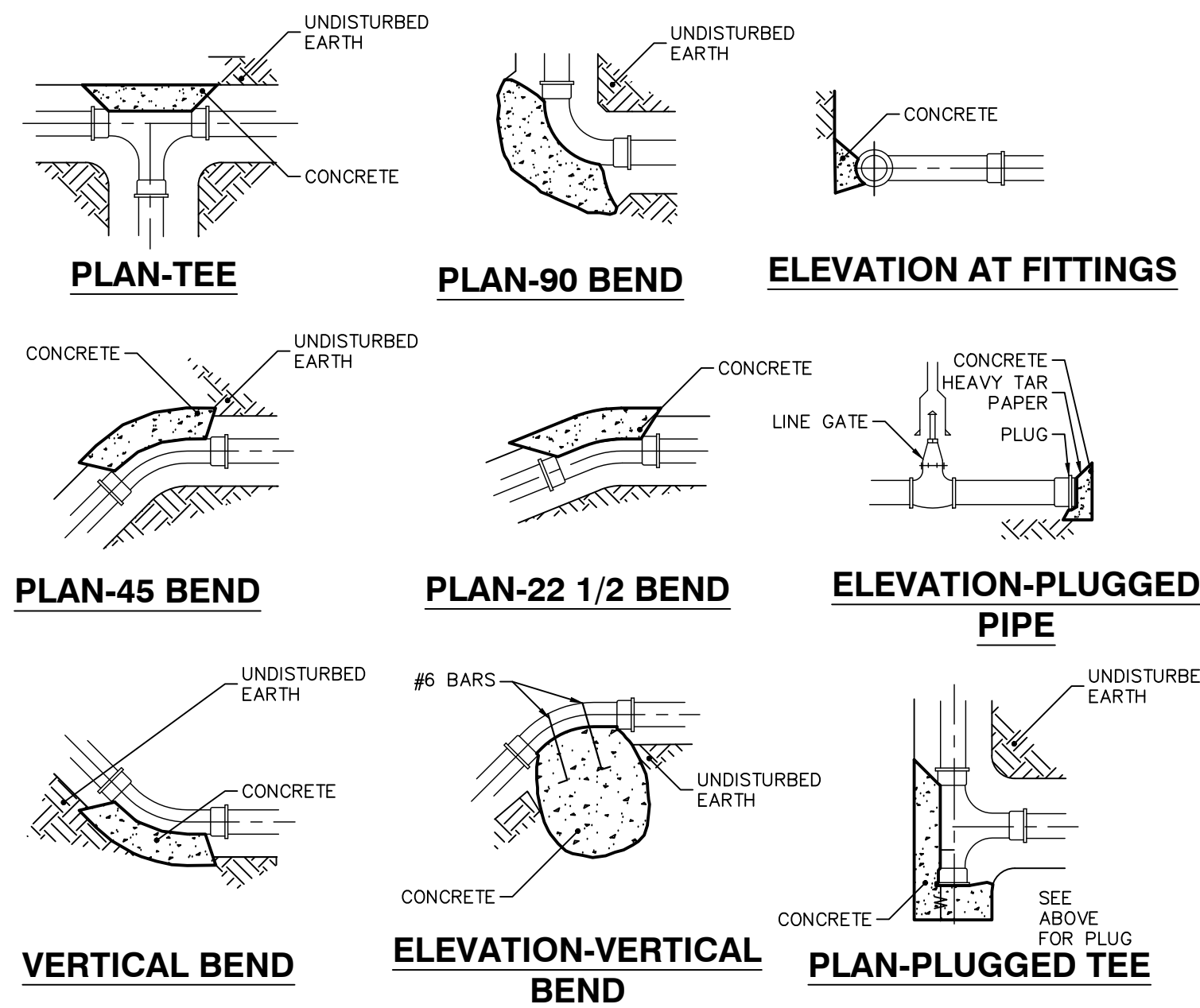
**TRENCH - TELECOM UTILITY**  
N.T.S.



**SANITARY SEWER MANHOLE**  
N.T.S.

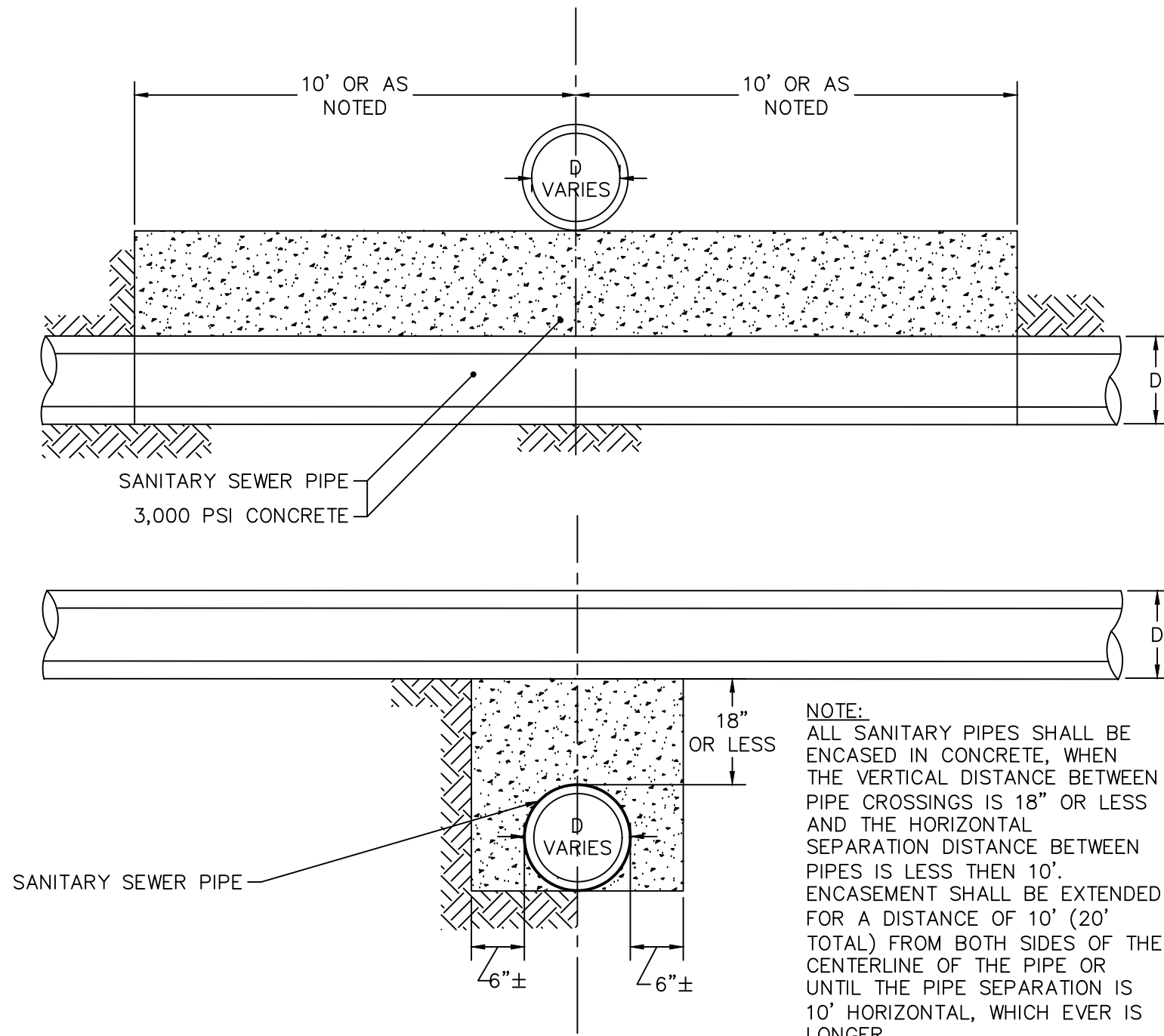


**THRUST BLOCKS**  
N.T.S.

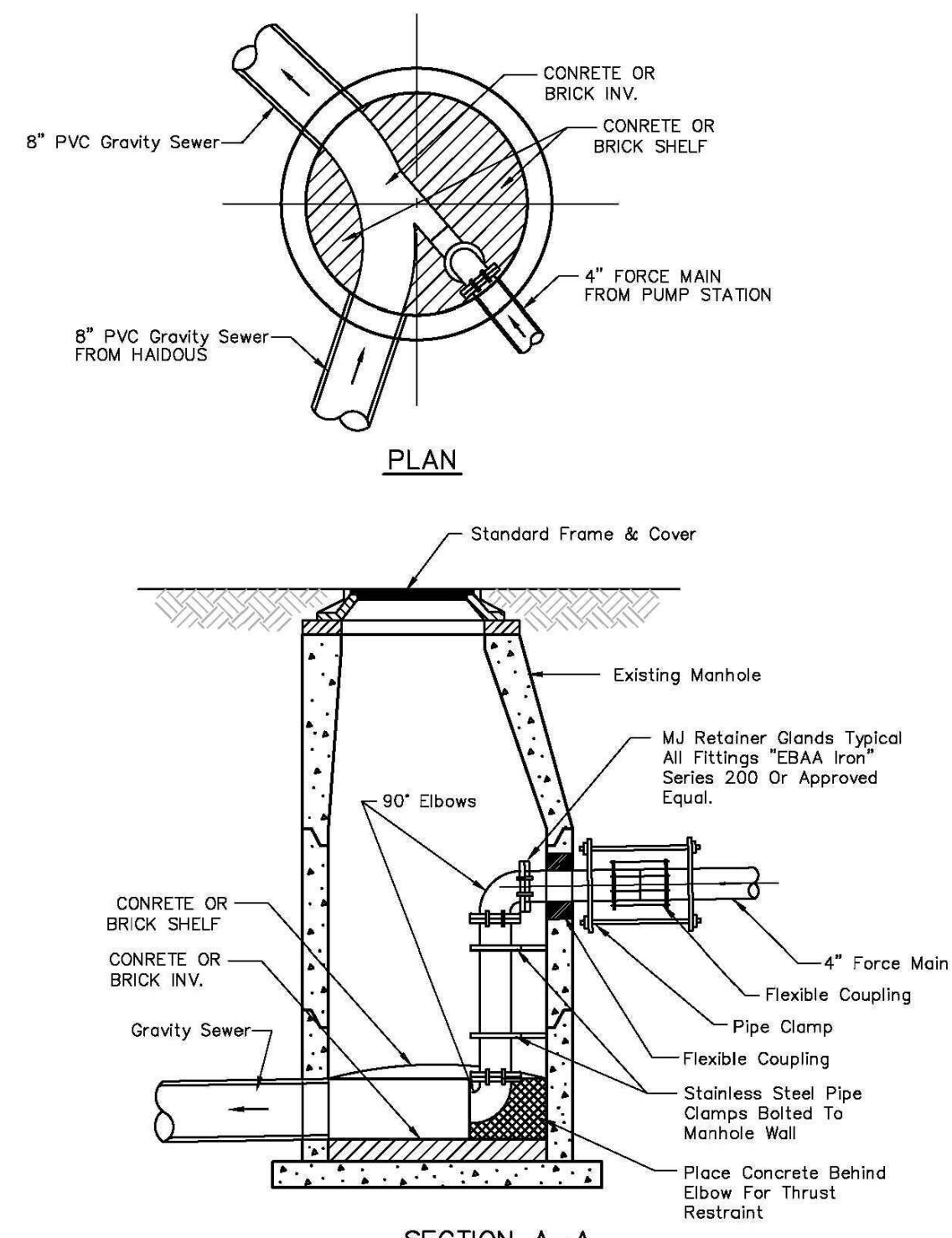


THRUST BLOCK SCHEDULE									
PIPE SIZE	TEE	22 1/2	45	90	W				
6"	18"	15"	15"	12"	15"	15"	21"		
8"	2"	18"	18"	12"	18"	2"	18"		
12"	3"	2"	12"	2"	12"	3"	28"		
16"	4"	2.5"	2"	12"	2.33"	15"	4"	2.5"	31"
20"	5.25"	3"	2"	18"	3"	2"	5.25"	3"	33"
24"	7.5"	3"	3"	18"	4"	2.5"	7.5"	3"	3"

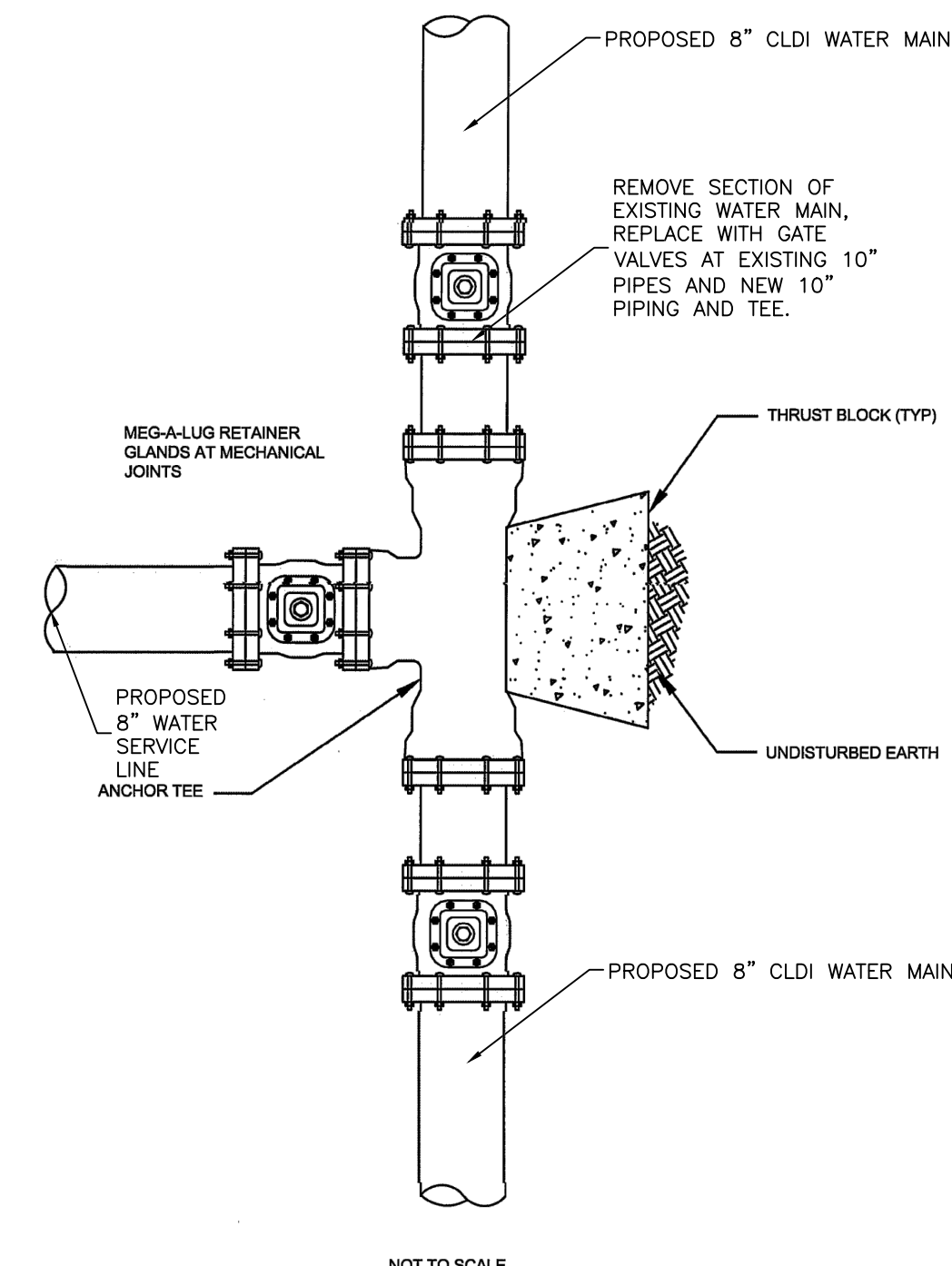
NOTE:  
1. IF SOFT MATERIALS ARE ENCOUNTERED, THE THRUST BLOCKS SIZES SHALL BE ADJUSTED ACCORDINGLY.  
2. CONCRETE TO BE 3000 PSI.



**CONCRETE ENCASEMENT FOR SANITARY SEWER**  
N.T.S.



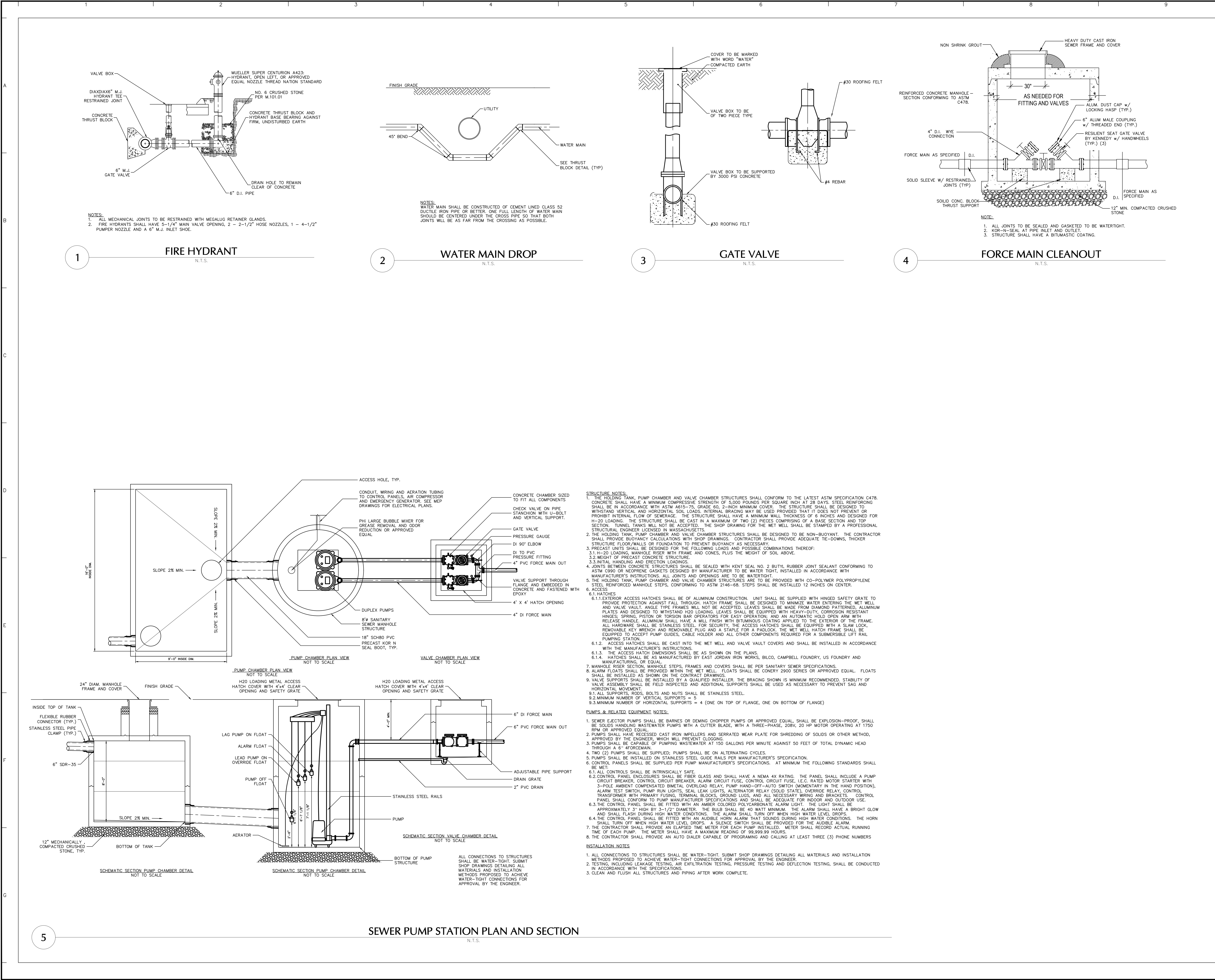
**FORCE MAIN TERMINAL MANHOLE**  
N.T.S.



**WATER SERVICE CONNECTION**  
N.T.S.

Date	Description	No.
Revisions		
<b>LANGAN</b> Langan Engineering and Environmental Services, Inc. 100 Cambridge Street, Suite 1310 Boston, MA 02114 T: 617.824.9100 F: 617.824.9101 www.langan.com		
Project		
237 PLEASANT STREET CONCEPT PLANS		
NORFOLK COUNTY FRANKLIN MASSACHUSETTS Drawing Title		
UTILITY DETAILS I		
Project No.		Drawing No.
151019602		CU501
Date		
09/10/2022		
Drawn By		
Checked By		

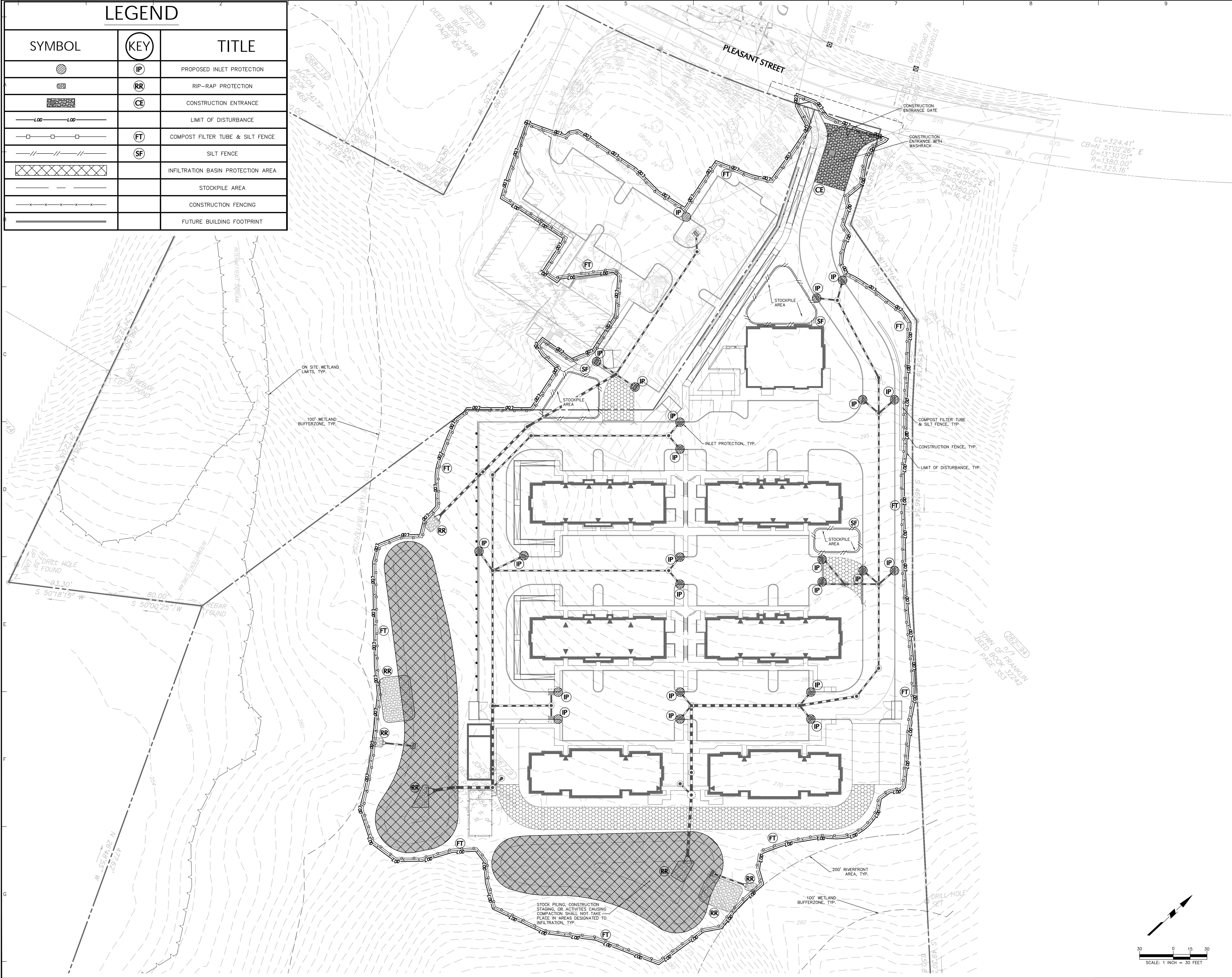




Date	Description	No.
Revisions		
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LEGEND		
SYMBOL	KEY	TITLE
	IP	PROPOSED INLET PROTECTION
	RR	RIP-RAP PROTECTION
	CE	CONSTRUCTION ENTRANCE
		LIMIT OF DISTURBANCE
	FT	COMPOST FILTER TUBE & SILT FENCE
	SF	SILT FENCE
		INFILTRATION BASIN PROTECTION AREA
		STOCKPILE AREA
		CONSTRUCTION FENCING
		FUTURE BUILDING FOOTPRINT



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Project

237 PLEASANT STREET  
CONCEPT PLANS

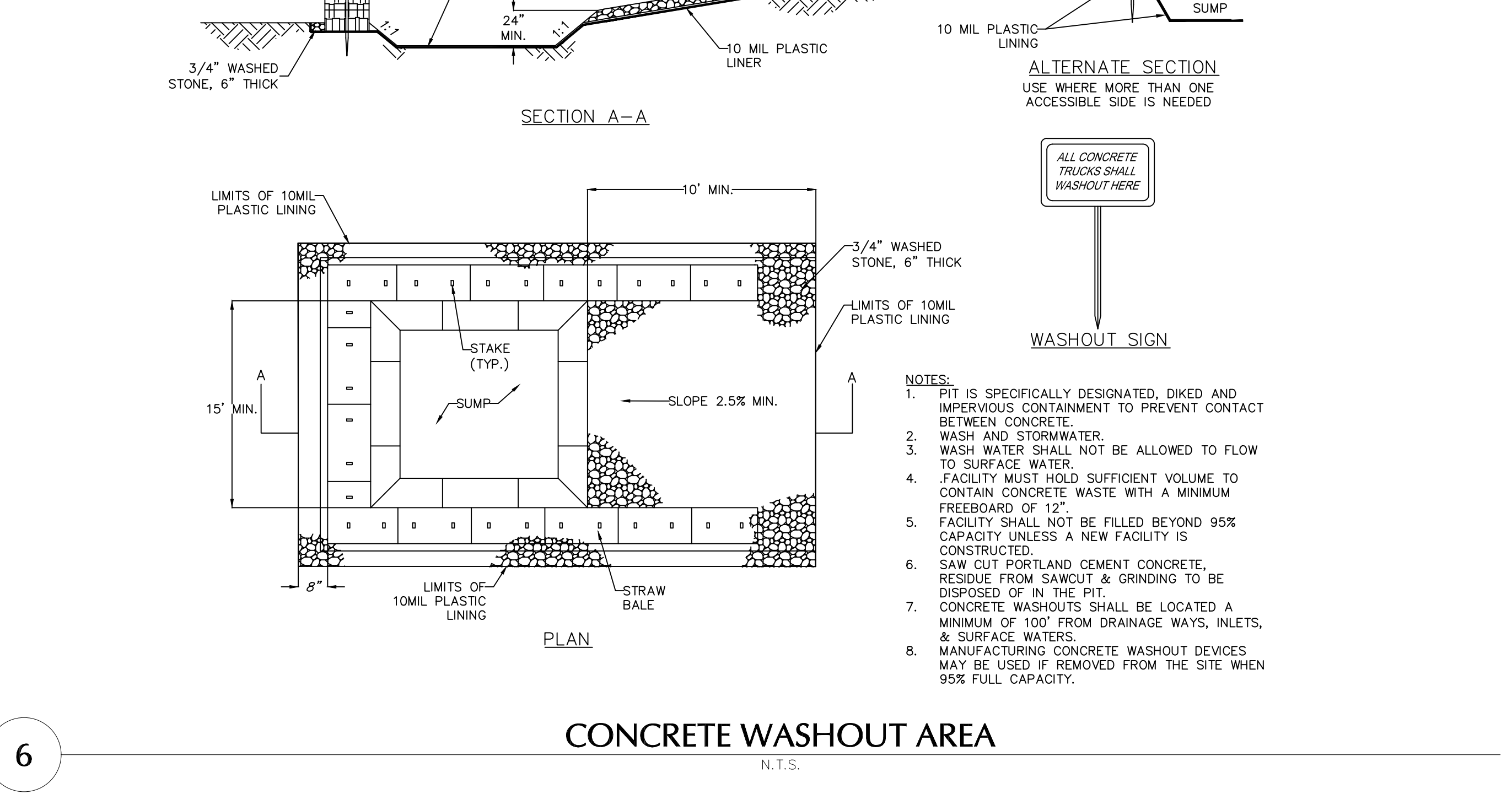
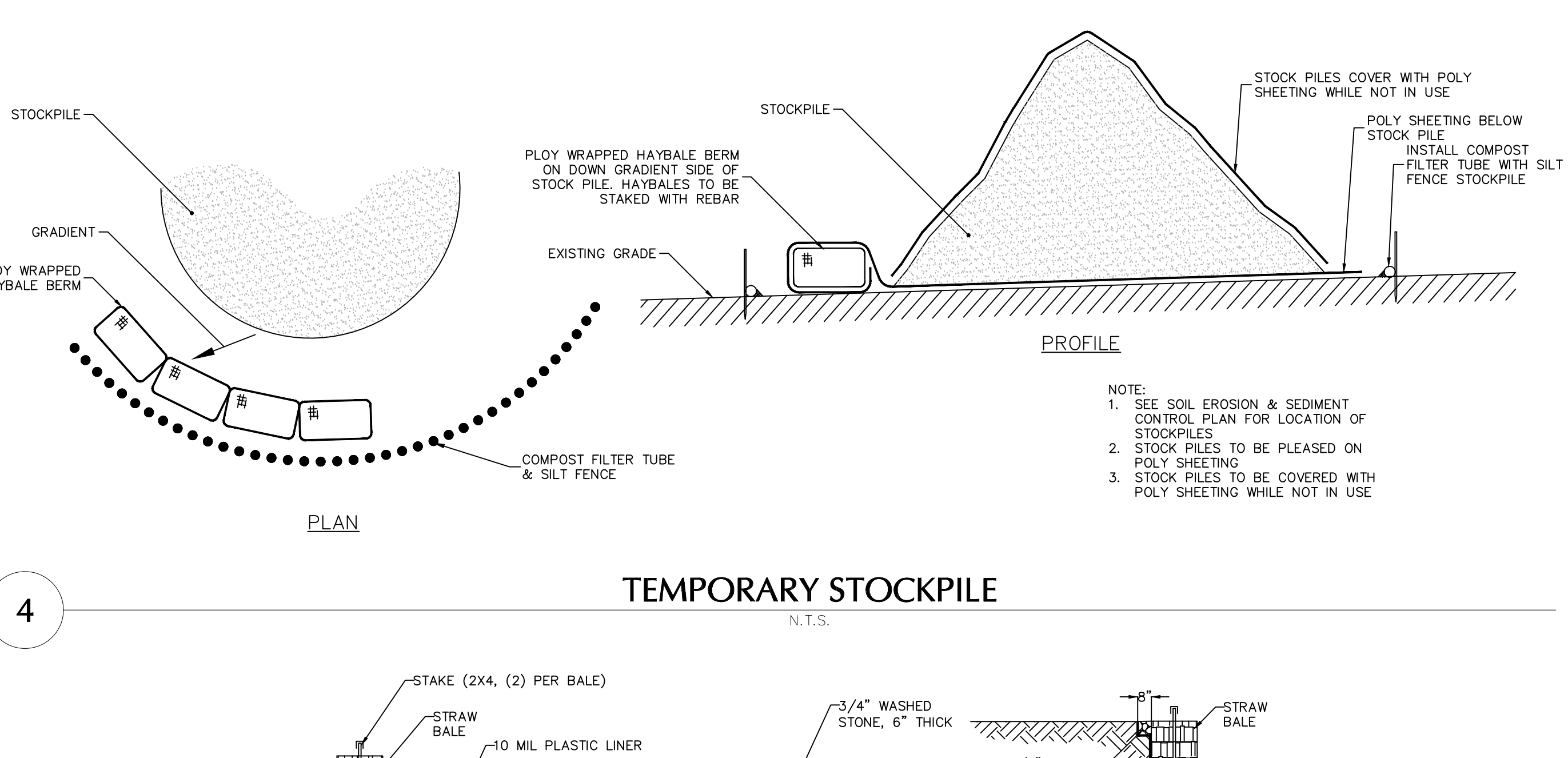
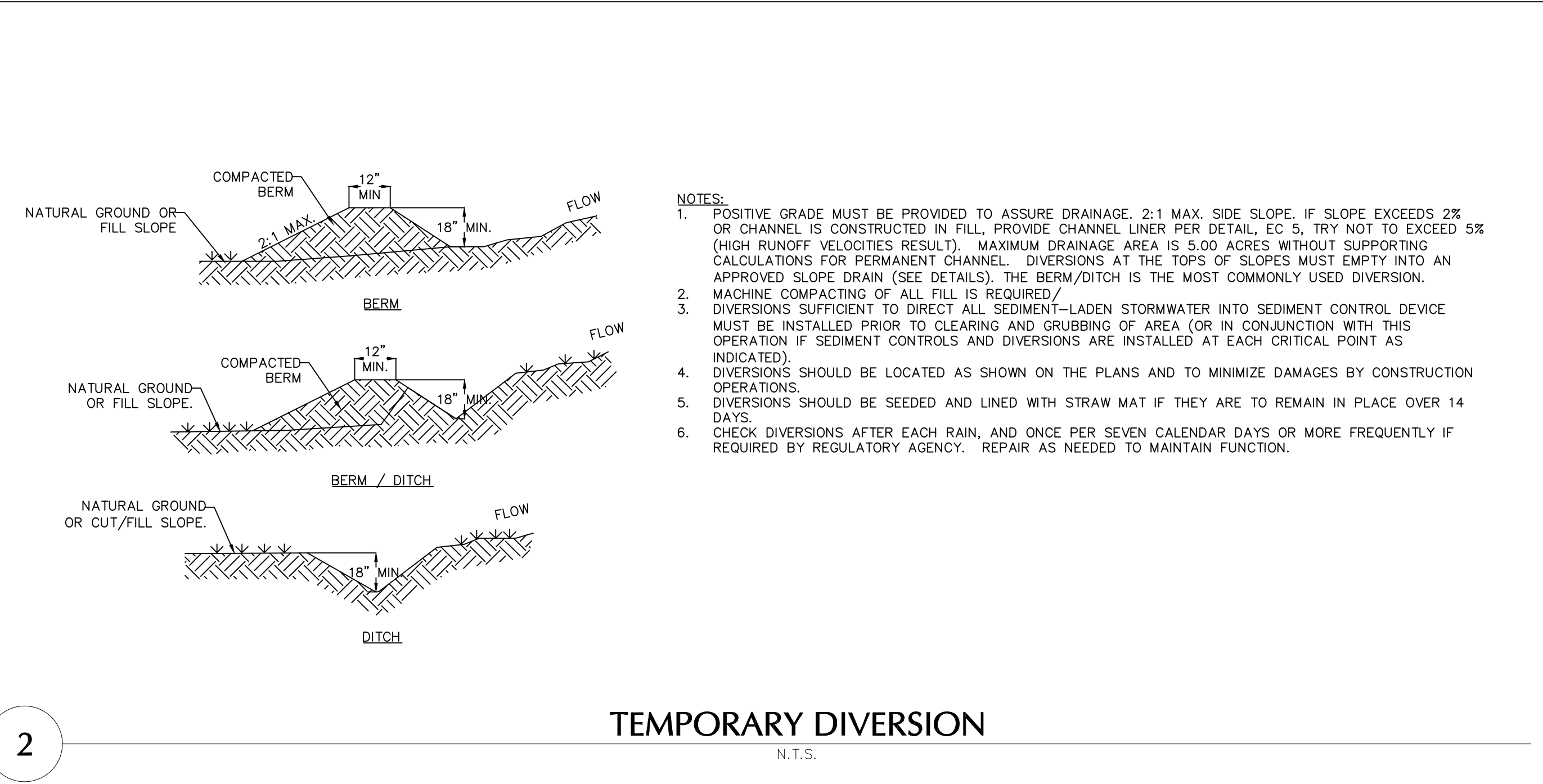
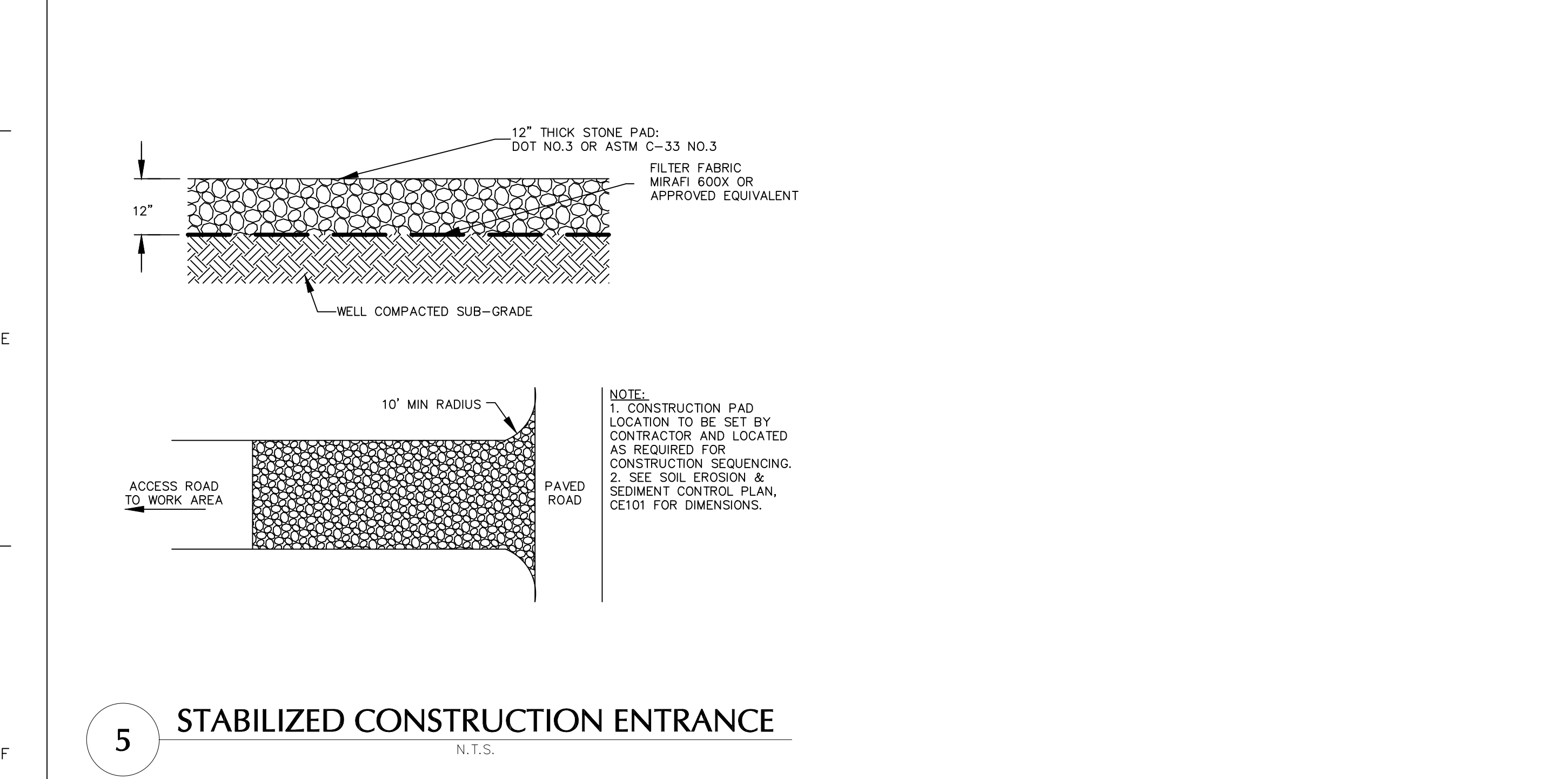
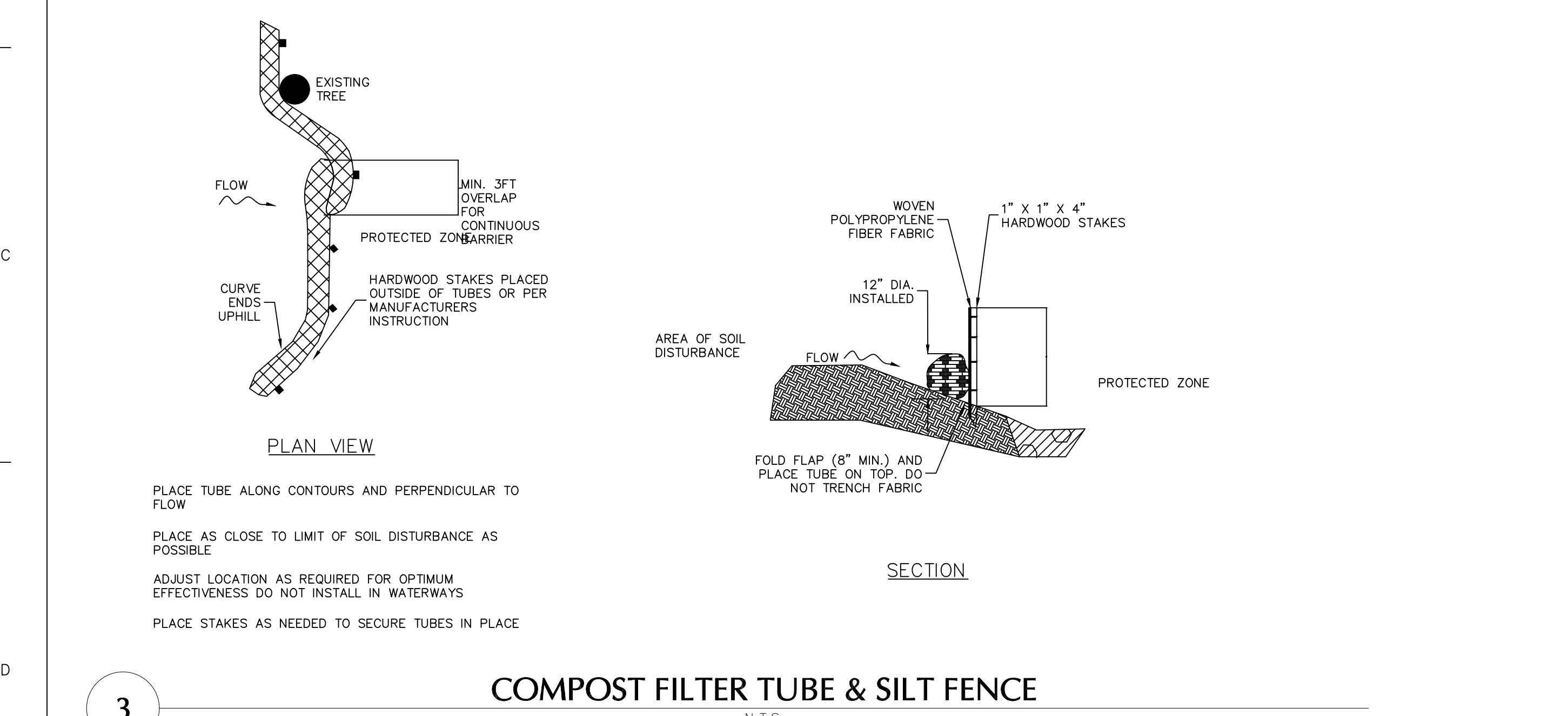
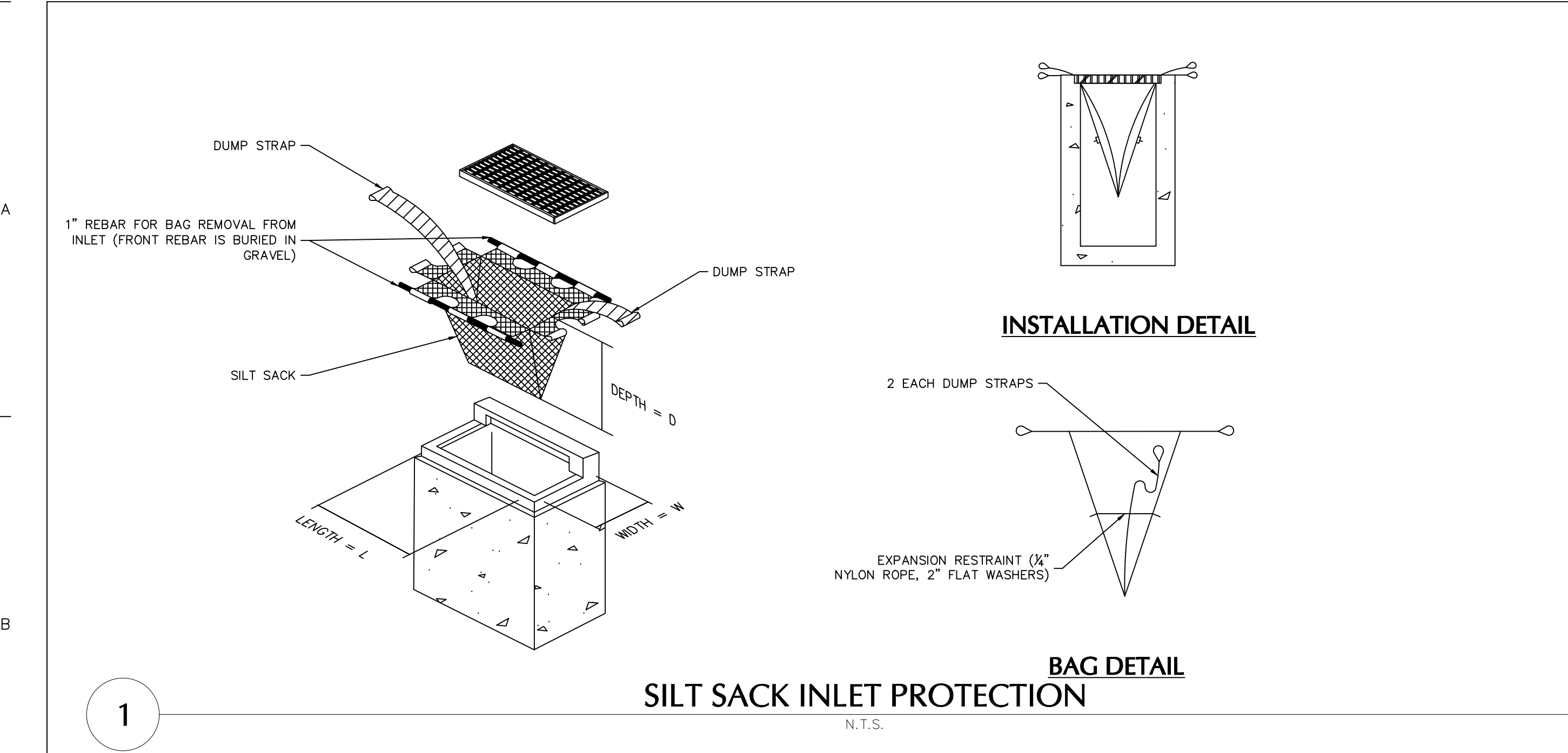
NORFOLK COUNTYFRANKLINMASSACHUSETTS


Drawing Title

SOIL EROSION &  
SEDIMENT  
CONTROL PLAN

Project No.	Drawing No.
151019602	CE100
Date	
09/10/2022	
Drawn By	
KH	
Checked By	
FH	





Date	Description	No.
Revisions		
		
<b>LANGAN</b> Langan Engineering and Environmental Services, Inc. 100 Cambridge Street, Suite 1310 Boston, MA 02114 T: 617.824.9100 F: 617.824.9101 www.langan.com		
Project		
<b>237 PLEASANT STREET CONCEPT PLANS</b>		
FRANKLIN NORFOLK COUNTY MASSACHUSETTS		
Drawing Title		
<b>SOIL EROSION &amp; SEDIMENT CONTROL DETAILS I</b>		
Project No.		Drawing No.
151019602		<b>CE501</b>
Date		
09/10/2022		
Drawn By		
Checked By		





01/11/2023	PEER REVIEW COMMENTS	2
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Revisions


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Project  
**237 PLEASANT STREET  
CONCEPT PLANS**  
FRANKLIN  
NORFOLK COUNTY MASSACHUSETTS  
Drawing Title

Project No. <b>151019602</b>	Drawing No. <b>CD100</b>
Date <b>09/10/2022</b>	
Drawn By <b>KH</b>	
Checked By <b>FH</b>	





Date	Description	No.
Revisions		
 <p><i>Frank Holmes</i></p>		
<h1>LANGAN</h1> <p>Langan Engineering and Environmental Services, Inc.</p> <p>100 Cambridge Street, Suite 1310 Boston, MA 02114</p> <p>T: 617.824.9100      F: 617.824.9101      <a href="http://www.langan.com">www.langan.com</a></p>		
Project		
<h2>237 PLEASANT STREET CONCEPT PLANS</h2>		
NORFOLK COUNTY		FRANKLIN
Drawing Title		MASSACHUSETTS
<h1>TURNING MOVEMENT PLAN</h1>		
Project No.		Drawing No.
151019602		TM100
Date		
09/10/2022		
Drawn By		
KH		
Checked By		
FH		



SITE LIGHTING SCHEDULE

SYMBOL	KEY	QTY.	FIXTURE MANUFACTURER	FIXTURE MODEL	FIXTURE DESCRIPTION	FIXTURE MOUNTING HEIGHT	LAMP	OPTICS	COLOR TEMPERATURE	LUMENS	LLF	FIXTURE CATALOGUE NO.	POLE / ARM MANUFACTURER	ARM / POLE DESCRIPTION	POLE LENGTH	ARM / POLE CATALOGUE NO.
	A	13	SELUX	OURAY 500	SINGLE POLE-MOUNTED AREA FIXTURE; COLOR: SILVER	20'-0"	69W LED	TYPE III W/ HOUSE SIDE SHIELD	2700K	6,078	0.90	U5-R3-S1-XX-5G700-27-XX-XX-UNV-HS-SV	LYTE POLES	ROUND TAPERED ALUMINUM POLE; COLOR: SILVER	20'-0"	405-7015-20-AB-D1-SL
	B	25	SELUX	OURAY 500	SINGLE POLE-MOUNTED AREA FIXTURE; COLOR: SILVER	20'-0"	89W LED	TYPE II W/ HOUSE SIDE SHIELD	2700K	6,072	0.90	U5-R2-S1-XX-5G700-27-XX-XX-UNV-HS-SV	LYTE POLES	ROUND TAPERED ALUMINUM POLE; COLOR: SILVER	20'-0"	405-7015-20-AB-D1-SL
	B1	1	SELUX	OURAY 500	TWIN POLE-MOUNTED AREA FIXTURE; COLOR: SILVER	20'-0"	89W LED	TYPE II W/ HOUSE SIDE SHIELD	2700K	6,072	0.90	U5-R2-S1-XX-5G700-27-XX-XX-UNV-HS-SV	LYTE POLES	ROUND TAPERED ALUMINUM POLE; COLOR: SILVER	20'-0"	405-7015-20-AB-D1-SL
	C	10	SELUX	SATURN CUTOFF LED	SINGLE POLE-MOUNTED AREA FIXTURE; COLOR: SILVER	12'-0"	39W LED	TYPE II W/ HOUSE SIDE SHIELD	2700K	3,036	0.90	SACL-R2-1-5G450-27-XX-XX-UNV-SV	SELUX	STEPPED STEEL POLE; COLOR: SILVER	12'-0"	S635
	D	38	SELUX	INULA BOLLARD	LIGHT BOLLARD; COLOR: SILVER	42"	14W LED	ASYMMETRIC	2700K	1,083	0.90	IBL-3.5-20180-AM-XX-UNV	N/A	N/A	N/A	N/A

NOTES:  
1. REFER TO ELECTRICAL DRAWINGS FOR SITE LIGHTING VOLTAGES.

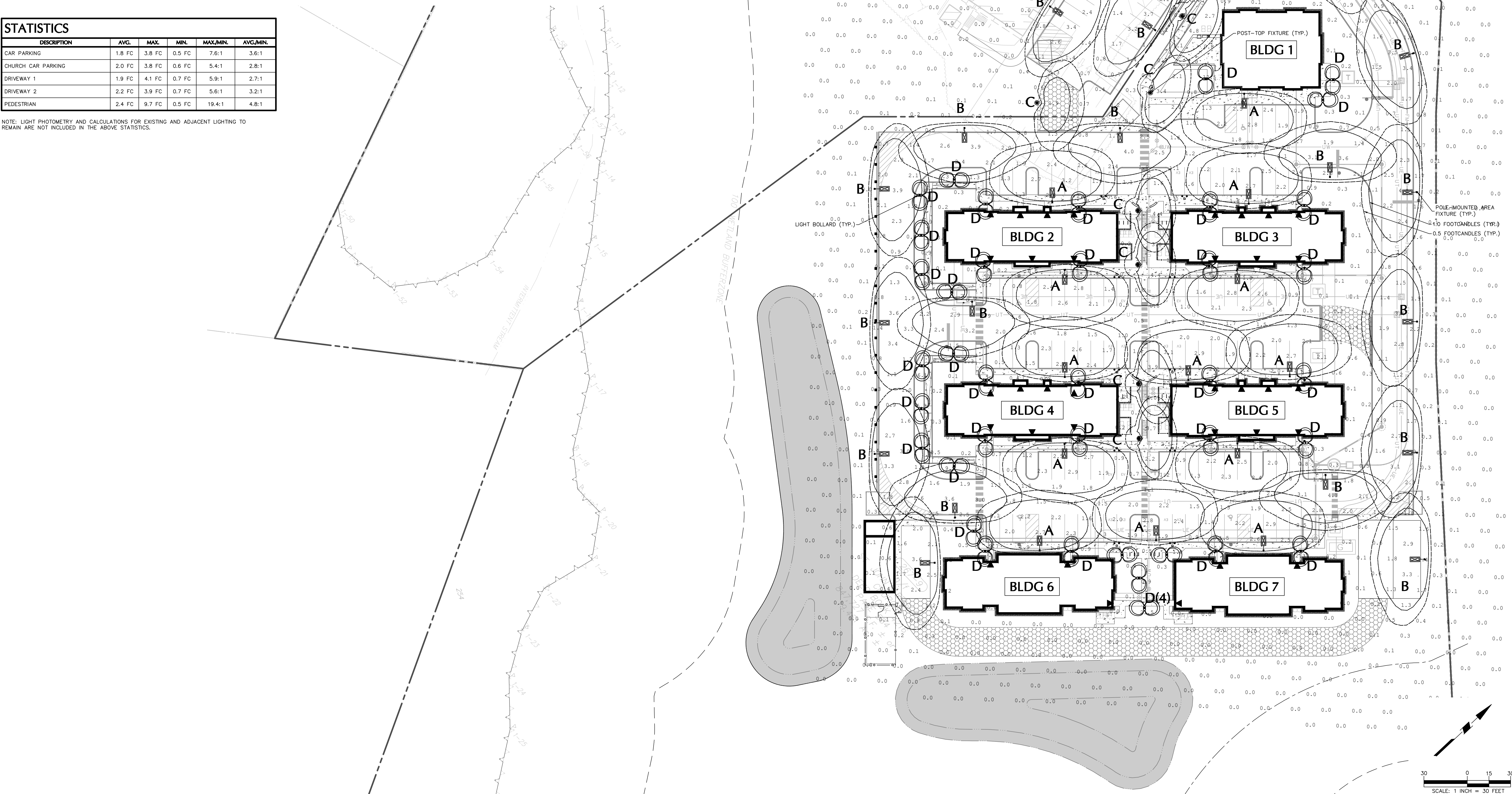
TOWN OF FRANKLIN, MA- ZONING BYLAW REGULATIONS COMPLIANCE CHART

REGULATION SECTION	REQUIRED / PERMITTED	PROVIDED / PROPOSED	COMPLIANCE
195-17.37	OUTDOOR LIGHTING SHALL BE CONSIDERED IN THE LANDSCAPING PLAN AND REQUIRES THE SUBMISSION OF A PHOTOMETRIC LIGHTING PLAN. CUTOFF SHIELDS SHALL BE USED TO MINIMIZE GLARE AND LIGHT SPILLOVER ONTO ADJUTING PROPERTY. ORNAMENTAL STREETLIGHTS, 16 FEET MAXIMUM HEIGHT ON MINOR ROADS AND 24 FEET MAXIMUM HEIGHT ON MAJOR ROADS.	HOUSE SIDE SHIELDS HAVE BEEN PROVIDED TO MINIMIZE LIGHT IMPACT UPON ADJUTING PROPERTIES. FIXTURES ALONG ROADS ARE PROVIDED AT 13 FEET.	COMPLIES
195-17.37	ALL ARTIFICIAL LIGHTING USED TO ILLUMINATE RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL PARKING LOT, LOADING BAY OR DRIVEWAY SHALL HAVE UNDERGROUND WIRING AND SHALL BE SO ARRANGED THAT ALL DIRECT RAYS FROM SUCH LIGHTING FALLS ENTIRELY WITHIN THE PARKING, LOADING OR DRIVEWAY AREA, AND SHALL BE SHIELDED OR RECESSED SO AS NOT TO SHINE UPON ADJUTING PROPERTIES.	HOUSE SIDE SHIELDS HAVE BEEN PROVIDED TO MINIMIZE LIGHT IMPACT UPON ADJUTING PROPERTIES.	COMPLIES TO EXTENT PRACTICABLE

STATISTICS

DESCRIPTION	AVG.	MAX.	MIN.	MAX/MIN.	AVG/MIN.
CAR PARKING	1.8 FC	3.8 FC	0.5 FC	7.6:1	3.6:1
CHURCH CAR PARKING	2.0 FC	3.8 FC	0.6 FC	5.4:1	2.8:1
DRIVEWAY 1	1.9 FC	4.1 FC	0.7 FC	5.9:1	2.7:1
DRIVEWAY 2	2.2 FC	3.9 FC	0.7 FC	5.6:1	3.2:1
PEDESTRIAN	2.4 FC	9.7 FC	0.5 FC	19.4:1	4.8:1

NOTE: LIGHT PHOTOMETRY AND CALCULATIONS FOR EXISTING AND ADJACENT LIGHTING TO REMAIN ARE NOT INCLUDED IN THE ABOVE STATISTICS.



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Revisions

Signature: Date: \_\_\_\_\_

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Project: **237 PLEASANT STREET CONCEPT PLANS**

FRANKLIN  
NORFOLK COUNTY MASSACHUSETTS

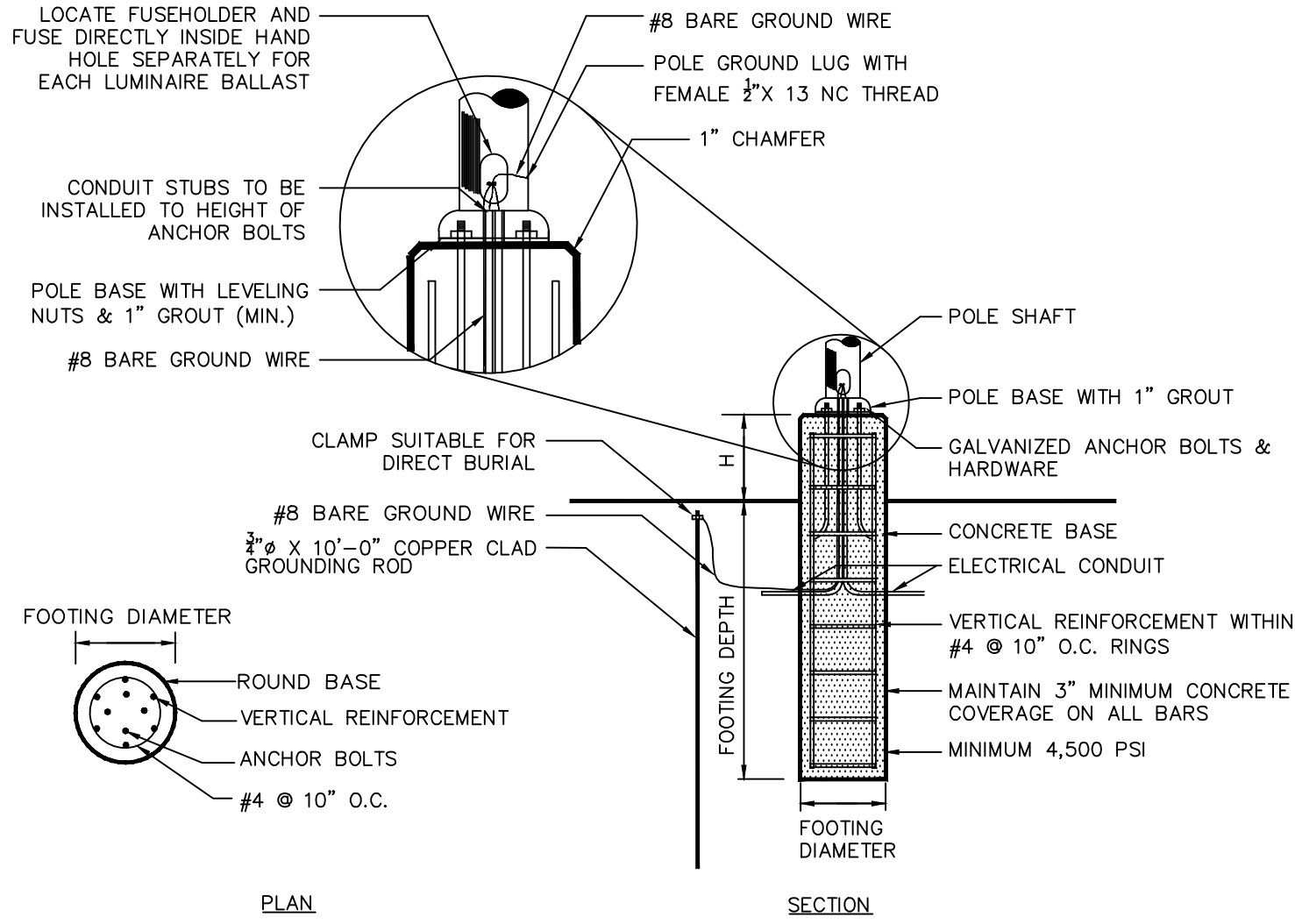
Drawing Title: **LIGHTING PLAN**

Project No.	Drawing No.
151019602	LL100
Date	09/10/2022
Drawn By	AS
Checked By	MH



LIGHTING NOTES:

1. POINT-BY-POINT CALCULATIONS PROVIDED WITHIN HAVE BEEN PREPARED IN ACCORDANCE TO IESNA STANDARDS AND IN CONSIDERATION OF THE VARIABLES WITHIN THESE NOTES AND SITE LIGHTING SCHEDULE. THE VALUES SHOWN ON THE PLANS ARE NOT AN INDICATION OF THE INITIAL LIGHT INTENSITIES OF THE LAMPS. THESE VALUES ARE AN APPROXIMATION OF THE MAINTAINED INTENSITIES DELIVERED TO THE GROUND PLANE USING INDUSTRY ACCEPTABLE LIGHT LOSS FACTORS (LLF) WHICH COVER LAMP DEGRADATION AND NATURAL BUILDUP ON THE FIXTURE LENS. THE LIGHTING PLAN IS DESIGNED WITH AN INDUSTRY ACCEPTABLE LLF TO ENSURE ADEQUATE LIGHT INTENSITIES OVER YEARS OF USE AND WEAR. MINOR VARIATIONS IN TOPOGRAPHY, PHYSICAL OBSTRUCTIONS, AMBIENT OR ADJACENT LIGHT SOURCES AND/OR OTHER POTENTIAL IMPACTS HAVE NOT BEEN INCLUDED IN THESE CALCULATIONS. THEREFORE, AS-BUILT LIGHT INTENSITIES MAY VARY, IN EITHER DIRECTION, FROM WHAT IS EXPLICITLY PORTRAYED WITHIN THESE DRAWINGS.
2. PROVIDE A CONCRETE BASE FOR EACH LIGHT POLE AT THE LOCATIONS INDICATED ON THE CONSTRUCTION DRAWINGS AND IN ACCORDANCE WITH PROJECT PLANS AND SPECIFICATIONS RELATING DIRECTLY TO CAST-IN-PLACE CONCRETE.
3. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND FEEDER CABLE FOR EXTERIOR LIGHTING WITH EXISTING AND PROPOSED UTILITIES, SITE DRAINAGE SYSTEMS, AND PAVING. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE SHOULD ANY UTILITIES, NOT SHOWN ON THE PLANS, BE FOUND DURING EXCAVATIONS.
4. CONTRACTOR TO OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION. INSPECT FOR IMPROPER CONNECTIONS AND OPERATION.
5. AIM AND ADJUST ALL LUMINAIRES TO PROVIDE ILLUMINATION LEVELS AND DISTRIBUTION AS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT AND/OR OWNER.
6. CONTRACTOR TO COORDINATE INSTALLATION OF ALL THE WALL MOUNTED FIXTURES AND ELECTRICAL CONNECTIONS TO SITE STRUCTURE(S) WITH BUILDING MFR, ARCHITECT, AND/OR OWNER.
7. INSTALLATION OF ALL LIGHTING FIXTURES, POLES, FOOTINGS, AND FEEDER CABLE TO BE COORDINATED WITH ALL SITE WORK TRADES TO AVOID CONFLICT WITH FINISHED AND PROPOSED WORK.
8. POINT SPACING ON PLACE OF CALCULATION IS 10 FT. LEFT TO RIGHT AND 10 FT. TOP TO BOTTOM.
9. POINT-BY-POINT CALCULATIONS PROVIDED WITHIN HAVE BEEN PREPARED IN ACCORDANCE TO IESNA STANDARDS AND IN CONSIDERATION OF THE VARIABLES WITHIN THESE NOTES AND SITE LIGHTING SCHEDULE. THE VALUES REPRESENTED ON THE PLANS PRESENT AN APPROXIMATION OF THE MAINTAINED LIGHT LEVELS DELIVERED TO THE GROUND PLANE. MINOR VARIATIONS IN TOPOGRAPHY, PHYSICAL OBSTRUCTIONS, LAMP DEGRADATION, AMBIENT OR ADJACENT LIGHT SOURCES AND/OR OTHER POTENTIAL IMPACTS HAVE NOT BEEN INCLUDED IN THESE CALCULATIONS. GIVEN THIS, AS-BUILT VALUES MAY VARY, GREATER THAN OR LESS THAN, WHAT IS EXPLICITLY PORTRAYED WITHIN THESE DRAWINGS.
10. ALL SITE LIGHTING RELATED WORK AND MATERIALS SHALL COMPLY WITH CITY, COUNTY, AND OTHER APPLICABLE GOVERNING AUTHORITY REQUIREMENTS.
11. SITE ELECTRICAL CONTRACTOR TO COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES AND DRAINAGE BEFORE DRILLING POLE BASES.
12. SITE ELECTRICAL CONTRACTOR TO COORDINATE POWER SOURCE WITH LIGHT FIXTURES TO INSURE ALL SITE LIGHTING IS OPERATING EFFECTIVELY, EFFICIENTLY AND SAFELY.
13. SITE ELECTRICAL CONTRACTOR SHALL CONFIRM THAT LIGHT FIXTURES MATCH SPECIFICATIONS ON THE PLANS.
14. REFER TO ELECTRIFICATION PLAN FOR PROVIDING ADEQUATE POWER FOR SITE LIGHTING.
15. SITE ELECTRICAL CONTRACTOR SHALL EXAMINE AND VERIFY THAT SOIL CONDITIONS ARE SUITABLE TO SUPPORT LOADS EXERTED UPON THE FOUNDATIONS DURING EXCAVATION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNSATISFACTORY CONDITIONS.
16. POLE FOUNDATIONS SHALL NOT BE POURED IF FREE STANDING WATER IS PRESENT IN EXCAVATED AREA.
17. ELECTRICIAN AND INSTALLATION OF WALL MOUNTED FIXTURES SHALL BE COORDINATED WITH THE ARCHITECTURAL, STRUCTURAL, AND SITE DRAWINGS FOR SAFETY AND TO PROVEN EXPOSED WIRING.
18. LIGHTING SUBSTITUTION REQUIREMENTS:  
ALL LIGHTING SUBSTITUTIONS MUST BE MADE WITHIN 14 DAYS PRIOR TO THE BID DATE TO PROVIDE AMPLE TIME FOR REVIEW AND TO ISSUE AN ADDENDUM INCORPORATING THE SUBSTITUTION WITH THE FOLLOWING REQUIREMENTS:  
A. ANY SUBSTITUTION TO LIGHTING FIXTURES, POLES, ETC. MUST BE APPROVED BY THE OWNER, ENGINEER AND TENANTS. ANY COST ASSOCIATED WITH REVIEW AND/OR APPROVAL OF THE SUBSTITUTIONS SHALL BE ENTIRELY BORNE BY THE CONTRACTOR.  
B. COMPUTER PREPARED PHOTOMETRIC LAYOUT OF THE PROPOSED LIGHTED AREA WHICH INDICATES, BY ISOFOOTCANDLE, THE SYSTEM'S PERFORMANCE.  
C. A PHOTOMETRIC REPORT FROM A NATIONAL INDEPENDENT TESTING LABORATORY WITH REPORT NUMBER, DATE, FIXTURE CATALOG NUMBER, LUMINAIRE AND LAMP SPECIFICATIONS, IES CALCULATIONS, CANDLEPOWER TABULATIONS, ZONE LUMEN SUMMARY, ISOLUX PLOT, AND CATALOGUE CUTS. CATALOGUE CUTS MUST IDENTIFY, BUT NOT LIMITED TO, OPTICS, LAMP TYPE, DISTRIBUTION TYPE, REFLECTOR, LENS, BALLASTS, WATTAGE, VOLTAGE, FINISH AND HOUSING DESCRIPTION.  
D. POLE MANUFACTURER AASHTO CALCULATIONS INDICATING THE POLE AND ANCHOR BOLTS BEING SUBMITTED ARE CAPABLE OF SUPPORTING THE POLE AND FIXTURE SYSTEMS BEING UTILIZED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.  
E. THE UNDERWRITERS LABORATORY LISTING AND FILE NUMBER FOR THE SPECIFIC FIXTURE(S) TO BE UTILIZED.  
F. A COLOR PHOTOGRAPH THAT CLEARLY SHOWS THE REPLACEMENT FIXTURE POLE MOUNTED, THE FIXTURE'S COLOR, FINISH, AND PHYSICAL CHARACTERISTICS.



FIXTURE KEY	MOUNTING HEIGHT	FOOTING DEPTH	FOOTING DIAMETER	VERTICAL REINFORCEMENT	'H'
A-C	<=20'-0"	7'-0"	1'-6"	6#5 BARS	FLUSH WITH GRADE

NOTES:

1. SHAFT CAP, ARMS, BASE FLANGE, ANCHOR BOLTS, LEVELING NUTS, CONNECTION HARDWARE, BOLT COVERS, HANDHOLE COVER, AND BOLT CIRCLE TEMPLATE SHALL BE FURNISHED BY POLE MANUFACTURER.  
2. EACH STANDARD TO BE PROTECTED AGAINST LIGHTNING WITH AN INTERCONNECTED GROUND ROD. THIS ROD SHALL BE BONDED PER SECTION NUMBER 250-86, N.E.C.  
3. CONTRACTOR TO ENSURE CONCRETE POLE BASES ARE POURED / PLACED ABSOLUTELY VERTICAL & LEVEL.  
4. POLE BASE SHALL BE ONE CONTINUOUS POUR. EXPOSED PORTION OF BASE SHALL BE HAND-RUBBED SMOOTH.  
5. CONTRACTOR TO COMPACT SUBGRADE AROUND POLE BASE PER EARTHWORK SPECIFICATIONS / GEOTECH REPORT.  
6. THE INFORMATION ILLUSTRATED IN THE LIGHT POLE FOUNDATION DETAIL HAS BEEN PROVIDED FOR GENERAL REFERENCE AND PRELIMINARY COST ESTIMATE PURPOSES. LIGHT POLE FOUNDATIONS SHOULD BE DESIGNED AND DETAILED BY A LICENSED STRUCTURAL ENGINEER BASED ON EXISTING SOIL CONDITIONS, LOCAL DESIGN STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

1 POLE MOUNTED FIXTURE FOOTING

NTS

2 LIGHT BOLLARD FOOTING

NTS

3 BOLLARD LIGHT FIXTURE

NTS

Date: \_\_\_\_\_ Customer: \_\_\_\_\_  
Project: \_\_\_\_\_  
Type: \_\_\_\_\_ Qty: \_\_\_\_\_



Order Code:	US	Series	Height	Finish	Options
US	Ouray 500				
Optics	R1 Type I	R2 Type II	R3 Type III	R3W Type III (Wide)	R4 Type IV
Fixed Mounting	5 50mm Single Pole Slip Fitter	SA Single Pole Adapter	S1 Single Short Arm	S2 Double Short Arm	L1 Single Long Arm
Adjustable Mounting	AT1 Adjustable Trip	AS Adjustable Swivel	XX None		
Light Engine	5G350 3400lm/220lm	5G530 3400lm/220lm	5G700 3400lm/220lm	5G105 3400lm/220lm	5G140 3400lm/220lm
CCT	27* 2700K	30* 3000K	35* 3500K	40 4000K	50* 5000K
Power Cord Length	8 8 ft	10 10 ft	12 12 ft	14 14 ft	18 18 ft
Finish	WH White	BK Black	BL Semi-Matte Black	BZ Bronze	SV Silver
Voltage	UNV 120-277V	120V 120V	240V 240V	277V 277V	347 347V
Options	DM* Dimming (0-10V)	HS1 Phase Shift (0-10V)	HL304* H-LUX 1% LUX Switching (0-10V)	CO* Constant Optics (See page 10 for order code)	GL* Tempered Glass Lens (See page 10 for order code)

4 AREA LIGHT FIXTURE

NTS

5 AREA LIGHT POILE

NTS

Date: \_\_\_\_\_ Customer: \_\_\_\_\_  
Project: \_\_\_\_\_  
Type: \_\_\_\_\_ Qty: \_\_\_\_\_



Order Code:	SACL	Series	Height	Finish	Options
SACL	Saturn Cutoff LED				
Optics	R1 Type I	R2 Type II	R3 Type III	R3W Type III (Wide)	R4 Type IV
Mounting	1 Single	1A Single Arm	2 Double	W Wall Mount	
Light Engine	5G450 3400lm/220lm	5G700 3400lm/220lm	5G105 3400lm/220lm		
CCT	27* 2700K	30* 3000K	40 4000K		
Power Cord Length	08 8 ft	10 10 ft	12 12 ft	14 14 ft	18 18 ft
Finish	WH White	BK Black	BL Semi-Matte Black	BZ Bronze	SV Silver
Voltage	UNV 120-277V	120V 120V	240V 240V	277V 277V	347 347V
Options	DM* Dimming (0-10V)	HS1 Phase Shift (0-10V)	HL304* H-LUX 1% LUX Switching (0-10V)	CO* Constant Optics (See page 10 for order code)	GL* Tempered Glass Lens (See page 10 for order code)

6 PEDESTRIAN LIGHT FIXTURE

NTS

Date: \_\_\_\_\_ Customer: \_\_\_\_\_  
Project: \_\_\_\_\_  
Type: \_\_\_\_\_ Qty: \_\_\_\_\_



Order Code:	S635	Series	Height	Finish	Options
S635	S635				
Height	8 8 ft	10 10 ft	12 12 ft	14 14 ft	16 16 ft
Finish	WH White	BK Black	BZ Bronze	SV Silver	SP Specify Premium Color
Options	BC6 Standard Base Cover	REC REC1 Recap Recap with weatherproof cover	REC2 Recap Recap with weatherproof cover	REC3 Recap Recap with weatherproof cover	REC4 Recap Recap with weatherproof cover
Light Engine	5G450 3400lm/220lm	5G700 3400lm/220lm	5G105 3400lm/220lm		
CCT	27* 2700K	30* 3000K	40 4000K		
Power Cord Length	08 8 ft	10 10 ft	12 12 ft	14 14 ft	18 18 ft
Finish	WH White	BK Black	BL Semi-Matte Black	BZ Bronze	SV Silver
Voltage	UNV 120-277V	120V 120V	240V 240V	277V 277V	347 347V
Options	DM* Dimming (0-10V)	HS1 Phase Shift (0-10V)	HL304* H-LUX 1% LUX Switching (0-10V)	CO* Constant Optics (See page 10 for order code)	GL* Tempered Glass Lens (See page 10 for order code)

7 PEDESTRIAN LIGHT POILE

NTS

Revisions

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**LANGAN**  
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Project: **237 PLEASANT STREET CONCEPT PLANS**

NORFOLK COUNTY FRANKLIN MASSACHUSETTS

Drawing Title

**LIGHTING NOTES AND DETAILS**

Project No. **151019602**  
Date **09/10/2022**  
Drawn By **SD**  
Checked By **MH**

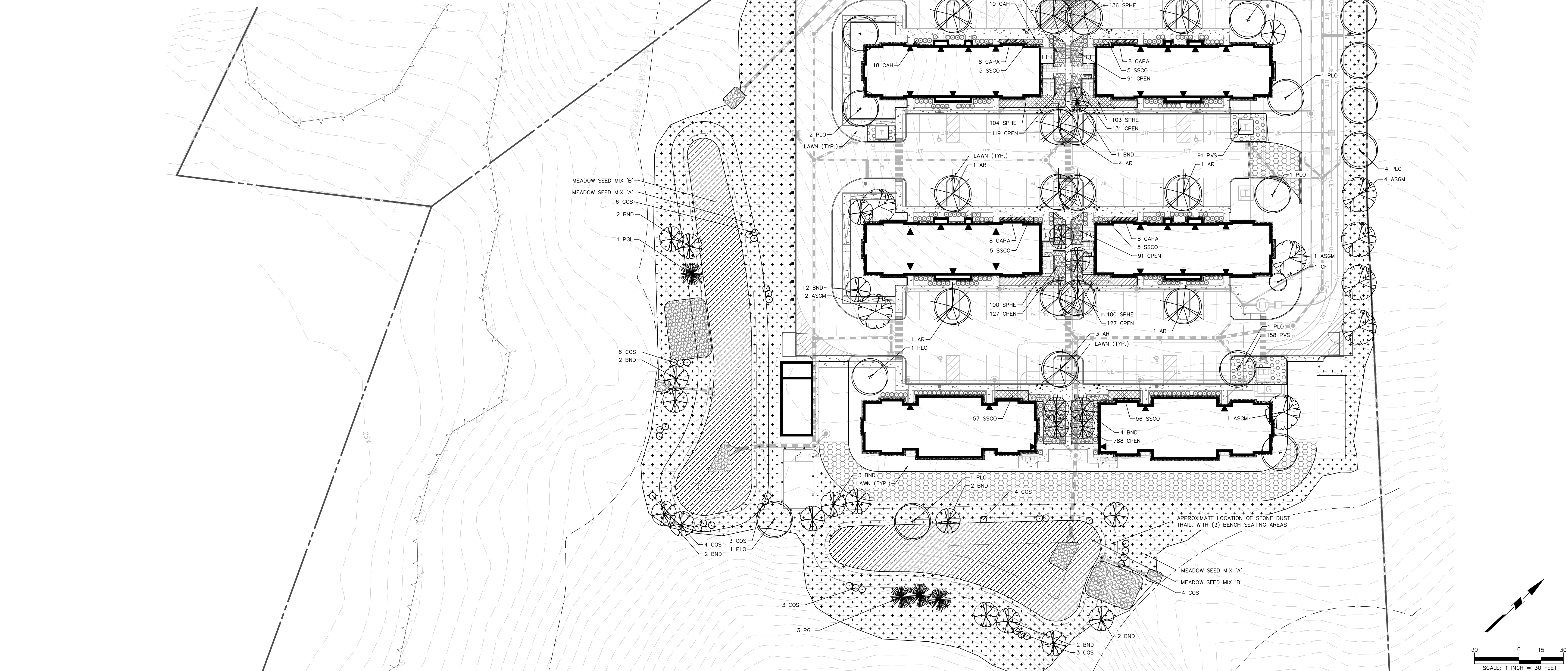
Drawing No. **LL501**



KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
<b>SHADE TREE(S)</b>						
AR	18	ACER RUBRUM	RED MAPLE	2 1/2-3" CAL.	B+B	-
ASGM	18	ACER SACCHARUM 'GREEN MOUNTAIN'	GREEN MOUNTAIN SUGAR MAPLE	2 1/2-3" CAL.	B+B	-
PLO	23	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	2 1/2-3" CAL.	B+B	-
<b>ORNAMENTAL TREE(S)</b>						
BND	32	BETULA NIGRA 'DURA HEAT'	DURA HEAT RIVER BIRCH	10-12'	B+B	-
CF	1	CORNUS FLORIDA	WHITE FLOWERING DOGWOOD	2-2 1/2" CAL.	B+B	-
<b>EVERGREEN TREE(S)</b>						
JV	12	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	8-10'	B+B	-
PGL	7	PICEA GLAUCA	WHITE SPRUCE	6-7'	B+B	-
<b>EVERGREEN SHRUB(S)</b>						
TOE	23	THUJA OCCIDENTALIS 'EMERALD'	EMERALD GREEN ARBORVITAE	5-6'	B+B	-
<b>DECIDUOUS SHRUB(S)</b>						
CAH	201	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	SWEET PEPPERBUSH	18-24"	CONTAINER	-
COS	47	CORNUS SERICEA	RED OSIER DOGWOOD	2-3'	B+B	-
HVCW	6	HAMAMELIS VIRGINIANA	COMMON WITCHHAZEL	3-4'	B+B	-
<b>ORNAMENTAL GRASS(S)</b>						
CAPA	56	CAREX APPALACHICA	APPALACHIAN SEDGE	1 GAL.	CONTAINER	spaced @ 18" o.c.
CPEN	1094	CAREX PENNSYLVANICA	SEDEGE	2 GAL.	CONTAINER	spaced @ 15" o.c.
EGA	96	ERAGROSTIS SPECTABILIS	PURPLE LOVE GRASS	1 GAL.	CONTAINER	spaced @ 18" o.c.
MC	18	MUHLBERGIA CAPILLARIS	MUHLY GRASS	2 GAL.	CONTAINER	spaced @ 24" o.c.
PVS	343	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCH GRASS	2 GAL.	CONTAINER	spaced @ 24" o.c.
SPHE	1071	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSDEE	1 GAL.	CONTAINER	spaced @ 18" o.c.
SSCO	480	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	2 GAL.	CONTAINER	spaced @ 18" o.c.

## TOWN OF FRANKLIN - ZONING BYLAW REGULATIONS COMPLIANCE CHART

REGULATION SECTION	REQUIRED / PERMITTED	PROVIDED / PROPOSED	COMPLIANCE
195-18.5.D.2	LARGE PARKING AREAS (E.G. GREATER THAN 20 PARKING SPACES) SHALL BE SEPARATED BY LANDSCAPED ISLANDS OF AT LEAST EIGHT FEET IN WIDTH, OR IN THE ALTERNATIVE SHALL DEVOTE AT LEAST 5% OF THE INTERIOR OF THE PARKING LOT TO LANDSCAPING. IN ADDITION, A MINIMUM OF ONE TREE SHALL BE PLANTED OR EVERY SIX PARKING SPACES REQUIRED OR BUILT, WITHIN APPROPRIATE LOCATIONS ON THE LOT.	102 PARKING SPACES / 6 = 17 TREES. 17 TREES REQUIRED. 19 TREES PROVIDED	COMPLIES



01/11/2023	PEER REVIEW COMMENTS	2
11/23/2022	STORMWATER REPORT	1
Date	Description	No.

## Revisions

Signature  Date \_\_\_\_\_

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Project

**237 PLEASANT STREET  
CONCEPT PLANS**

FRANKLIN	
NORFOLK COUNTY	MASSACHUSETTS
Drawing Title	

## PLANTING PLAN

Project No.	Drawing No.
<b>151019602</b>	
Date	
<b>09/10/2022</b>	
Drawn By	<b>LP100</b>
<b>AS</b>	
Checked By	
<b>MH</b>	



[illegible]

## 1. PLANTING SOL, ALTERNATELY MAY BE REFERRED TO AS TOPSOIL, SHOULD BE FRAGILE, FERTILE, FRESH, FREE OF PLANTS, WEEDS, AND IN THE BEST CONDITION AVAILABLE. IT SHOULD BE OF A HIGH QUALITY, UNCONTAMINATED, AND CONTAIN SUITABLE TO SUSTAIN HEALTHY PLANT GROWTH AND SHOULD LOOK AESTHETICALLY PLEASING WHEN PLANTING OCCURS.

## 2. PLANNING SOL:

REMOVE SURFACE SOILS STOCKPILED ON SITE, VERIFYING COMPLETION WITH PLANNING SOL AND TOPSOIL. CARRIER IN THIS SPECIFICATION THROUGH TESTING, GIVE CLEARANCE OF ALL OF ROOTS, PLANTS, SOIL, AND DEBRIS IN 74 INCH DEPTH OF PLANNING SOL. MATERIALS TO BE REMOVED IN THIS SPECIFICATION SHOULD BE PROPOSED PLANTING. THE CONTRACTOR SHALL DEMONSTRATE, THROUGH SOL TESTING, THAT ON-SITE SOILS ARE NOT SUITABLE FOR PLANTING PURPOSES.

SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL, FROM OFF SITE SOURCES WHEN TOPSOIL AND PLANNING SOL QUANTITIES ARE INSUFFICIENT. OBTAIN SOL DISPOSED FROM NATURALLY WELL-DRAINED SITE. IMPORTED TOPSOIL, AT LEAST 4" DEEP, DO NOT OBTAIN FROM AGRICULTURAL LAND, BODIES, MARSHES, OR CONTAMINATED SITES.

CONTRACTOR SHALL REMOVE SOILS AND FURNISH SAMPLES (UPON REQUEST) PACKAGED MATERIALS SHALL BE UNOPENED BAGS OR CONTAINERS, EACH BEARING A NAME, GUARANTEE, AND TRADEMARK OF THE PRODUCER, MATERIALS SHALL BE STORED IN THE SAME MANNER AS THE MATERIALS OF THE MATERIALS. AMENDMENTS MATERIALS SHALL BE STORED ON SITE, TEMPORARILY IN STOCKPILES PRIOR TO PLACEMENT AND REMOVED FROM SITE AT LEAST 4" DEEP, DO NOT OBTAIN FROM AGRICULTURAL LAND, BODIES, MARSHES, OR CONTAMINATED SITES. SHALL BE COVERED WITH A TARPULIN UNTIL THE TIME OF ACTUAL USE.

ALL PLANNING SOLS SHALL BE SUBMITTED FOR TESTING TO THE STATE COOPERATIVE EXTENSION SERVICE, OR APPROVED TESTING AGENCY, TO DETERMINE THE FOLLOWING: PHOSPHORUS, POTASSIUM, AND NITROGEN. TEST RESULTS SHALL BE PROVIDED TO LANDSCAPE ARCHITECT FOR REVIEW AT A RATE OF ONE SAMPLE PER 500 SQ. YARDS TO BE PLANTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF THE TESTING. THE CONTRACTOR SHALL EVALUATE FOR ALL CRITERIA LISTED IN THIS SPECIFICATION. IF TESTING AGENCY DETERMINES THAT THE PLANNING SOL IS NOT SUITABLE FOR PLANTING PURPOSES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF THE TESTING. THE CONTRACTOR SHALL FOLLOW STATE RECOMMENDATIONS FOR SOL IMPROVEMENT AND FURNISH SUBMITTALS FOR ALL AMENDMENTS TO THE CONTRACTOR FOR REVIEW AND APPROVAL.

IN THE FOLLOWING TESTING SHALL BE PERFORMED AND RESULTS OBTAINED TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL:

- A. PARTICLE SIZE ANALYSIS - LOAMY SAND, 60-70% SAND, 25-40% SILT, AND 5-10% CLAY.
- B. NUTRIENT ANALYSIS - PHOSPHORUS, POTASSIUM, AND NITROGEN. PHOSPHORUS RANGE OF 6-8 MG/100 G, POTASSIUM, CALCIUM AND MAGNESIUM.
- C. TOXIC SUBSTANCE ANALYSIS - TOXIC SUBSTANCE ANALYSIS - TOXIC SUBSTANCE ANALYSIS - TOXIC SUBSTANCE ANALYSIS.
- D. MATERIALS TO BE REMOVED - MATERIALS TO BE REMOVED - MATERIALS TO BE REMOVED - MATERIALS TO BE REMOVED.

NOT MORE THAN 1% OF MATERIAL SHALL BE RETAINED BY A #4 SIEVE.

## 3. BASIN SOL MIX:

- A. BASIN SOL MIX IS TO BE USED IN ALL DETENTION BASINS.
- B. MIX TO CONSIST OF 60% COARSE SAND, 40% SUBSOL TOPSOIL/HORTICULTURAL SOL MIX.
- C. TOPSOIL/HORTICULTURAL SOL MIX, REFER TO SPECIFICATIONS LISTED IN SECTION ABOVE.
- D. COARSE SAND:

  - 1. 3/8" (9.5 MM)
  - 2. NO 4 (4.75 MM)
  - 3. NO 10 (2.0 MM)
  - 4. NO 16 (1.18 MM)
  - 5. NO 20 (0.85 MM)
  - 6. NO 30 (0.60 MM)
  - 7. NO 40 (0.425 MM)
  - 8. NO 50 (0.30 MM)
  - 9. NO 100 (0.15 MM)
  - 10. NO 200 (0.075 MM)

- E. PERCENT PASSING

  - 1. 100
  - 2. 95-100
  - 3. 85-95
  - 4. 70-85
  - 5. 50-65
  - 6. 30-40
  - 7. 15-25
  - 8. 10-30
  - 9. 5-10
  - 10. 2-10
  - 11. 1-5

## 4. CHEMICAL ANALYSIS:

PH. LOWER THAN 7.0

TOXIC SUBSTANCE ANALYSIS

## 5. FINAL BIORRETION MIX:

- 1. PARTICLE SIZE ANALYSIS - LOAMY SAND, 60-70% SAND, 25-40% SILT, AND 5-10% CLAY.
- 2. NUTRIENT ANALYSIS - PHOSPHORUS, POTASSIUM, AND NITROGEN. PHOSPHORUS RANGE OF 6-8 MG/100 G, POTASSIUM, CALCIUM AND MAGNESIUM.
- 3. TOXIC SUBSTANCE ANALYSIS - TOXIC SUBSTANCE ANALYSIS - TOXIC SUBSTANCE ANALYSIS - TOXIC SUBSTANCE ANALYSIS.
- 4. MATERIALS TO BE REMOVED - MATERIALS TO BE REMOVED - MATERIALS TO BE REMOVED - MATERIALS TO BE REMOVED.

NOT MORE THAN 1% OF MATERIAL SHALL BE RETAINED BY A #4 SIEVE.

## 6. CHEMICAL ANALYSIS:

PH. 5.5-6.5

TOXIC SUBSTANCE ANALYSIS

## 7. CONTRACTOR TO SUBMIT TOPSOIL SUBSTANCE ANALYSIS AND MATERIALS TO BE REMOVED IN ADDITION TO INFORMATION LISTED ABOVE. GRADUANCE RATE OF MATERIAL, EXCEED 1 INCH/HOUR

## 8. SOL AMENDMENT FOR PLANT MATERIAL:

IF SOL AMENDMENT IS NEEDED, SOL SHALL BE AMENDED WITH COMPOST OR ACCEPTABLE, WEED FREE, ORGANIC MATERIALS WITHIN A MIN. OF ONE INCH OF CALCULATED SUBSOL. PHOSPHORUS RANGE OF 6-8 MG/100 G, POTASSIUM, CALCIUM AND MAGNESIUM. MATERIALS SHALL BE STORED IN THE SAME MANNER AS THE MATERIALS OF THE MATERIALS. AMENDMENTS MATERIALS SHALL BE STORED ON SITE, TEMPORARILY IN STOCKPILES PRIOR TO PLACEMENT AND REMOVED FROM SITE AT LEAST 4" DEEP, DO NOT OBTAIN FROM AGRICULTURAL LAND, BODIES, MARSHES, OR CONTAMINATED SITES. SHALL BE COVERED WITH A TARPULIN UNTIL THE TIME OF ACTUAL USE.

A. ORGANIC MATTER AS A WEIGHT AMENDMENT: LEAF MOLD WITH 60-80% ORGANIC CONTENT BY WEIGHT, SHEDDED LEAF LITTER, COMPOSTED FOR A MINIMUM OF 1 YEAR. SHOULD BE FREE OF DEBRIS, STONES OR OTHER FOREIGN MATTER.

B. IN BEDS AND PLANTING ISLANDS OTHER THAN BACKFILL MATERIAL, TOPSOIL, SHOULD BE FRAGILE, WELL DRAINED, AND FREE OF DEBRIS, INCLUDING STONES AND TRASH.

## 9. AMENDMENTS FOR BACK FILL (IN TRENCH AND SHROU) PITS:

CONTRACTOR TO SUBMIT TOPSOIL SUBSTANCE ANALYSIS AND MATERIALS TO BE REMOVED IN ADDITION TO INFORMATION LISTED ABOVE. GRADUANCE RATE OF MATERIAL, EXCEED 1 INCH/HOUR

A. ORGANIC MATTER AS A WEIGHT AMENDMENT: LEAF MOLD WITH 60-80% ORGANIC CONTENT BY WEIGHT, SHEDDED LEAF LITTER, COMPOSTED FOR A MINIMUM OF 1 YEAR. SHOULD BE FREE OF DEBRIS, STONES OR OTHER FOREIGN MATTER.

B. IN BEDS AND PLANTING ISLANDS OTHER THAN BACKFILL MATERIAL, TOPSOIL, SHOULD BE FRAGILE, WELL DRAINED, AND FREE OF DEBRIS, INCLUDING STONES AND TRASH.

## 10. PLANTING SOL PRESENT AT THE SITE, IF ANY, MAY BE USED TO SUPPLEMENT TOTAL AMOUNT REQUIRED. CONTRACTOR TO FURNISH AN ANALYSIS OF ON-SITE PLANTING SOL AVAILABLE IN ALL PLANTING AREAS.

## 11. SOL MODIFICATIONS (FENDING BEHIND OF ANALYSIS):

- A. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- B. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- C. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- D. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- E. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- F. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- G. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- H. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- I. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- J. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- K. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- L. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- M. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- N. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- O. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- P. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- Q. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- R. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- S. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- T. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- U. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- V. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- W. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- X. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- Y. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.
- Z. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOL INTO THE SUBSOL PRIOR TO PLACING PLANTING SOL.

## 12. SOL MODIFICATIONS (FENDING BEHIND OF ANALYSIS):

- A. TOPSOIL SOL OR COMPACTED TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES, THOROUGH

12" MIN.

PLANTING SOIL WITHIN AREAS OF CUT OR RAISED GRADE

6" IMPROVED PLANTING SOIL (OR AMENDED EXISTING PLANTING SOIL) SHALL BE ROTO-TILLED INTO SUBGRADE TO A DEPTH OF 12"

SUBGRADE WITH 2" ± OF FINISH GRADE IN PLANTING AREAS SHALL CONSIST OF FREE DRAINING SAND/SILT FILL

EXISTING SOIL STRIPPED FROM SITE CAN BE USED FOR PLANTING SOIL UPON APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT. CONTRACTOR SHALL REFER TO PLANTING SOIL SPECIFICATIONS FOR REQUIRED SUBMITTALS

DUE TO GENERAL CONSTRUCTION ACTIVITIES AND ADJACENT SITE COMPACTION REQUIREMENTS, SUBGRADE SOILS WITH PROPOSED PLANTING AREAS TEND TO BECOME HEAVILY COMPACTED. IN ORDER TO CREATE A HEALTHY GROWTH MEDIUM TO ALLOW PROPOSED PLANTING AREAS TO ESTABLISH A VIGOROUS ROOT MASS, THE SUBGRADE SOIL MUST UNDERGO A RESTORATION PROCESS. IN ADDITION, IMPORTED OR AMENDED EXISTING SOILS SHALL BE MIXED WITH SUBGRADE SOILS WHERE THEY MEET IN ORDER TO CREATE A TRANSITIONAL GRADIENT TO ALLOW FOR PROPER DRAINAGE.

12" MIN.

EXISTING SOIL IN ALL PROPOSED PLANTING AREAS SHALL BE ROOT-TILLED TO A DEPTH OF 12" (EXCLUDING TREE PROTECTION AREAS) AND AMENDED IN ACCORDANCE WITH PLANTING SOIL SPECIFICATIONS. EXISTING SOIL WITHIN TREE PROTECTION AREAS SHALL BE LOOSENED AND AMENDED BY NON-MECHANICAL METHODS, PROTECTING ROOT MASS AGAINST DAMAGE.

SUBGRADE

PLANTING SOIL WITHIN AREAS OF UNCHANGED GRADE

1. CONTRACTOR IS RESPONSIBLE TO SEND SAMPLES OF EXISTING SOILS INTENDED FOR USE IN PLANTING AREAS (1 PER 500 CY) TO TESTING LABORATORY OR UNIVERSITY COOPERATIVE EXTENSION FOR TESTING. ALL TESTING COSTS ARE AT THE CONTRACTOR'S EXPENSE.
2. RECYCLED CURBED CONCRETE AND ASPHALT MILLINGS SHALL NOT BE PLACED WITHIN 2'-6" OF FINISH GRADE IN PROPOSED LANDSCAPE AREAS.
3. IMPORTED FILL SHALL CONTAIN NO CONTAMINATION IN EXCESS OF THE APPLICABLE STATE ENVIRONMENTAL STANDARDS AND MEET THE ENVIRONMENTAL REQUIREMENTS FOR THE PROJECT. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION OF COMPLIANCE PRIOR TO DELIVERY OF ANY FILL TO THE SITE.
4. CONTRACTOR TO LIGHTLY COMPACT ALL PLACED PLANTING AREAS AND RAISE GRADES ACCORDINGLY TO ALLOW FOR FUTURE SETTLEMENT OF PLANTING SOILS (TYP.)
5. NO STONES, WOOD CHIPS, OR DEBRIS LARGER THAN 1/2" SHALL BE ACCEPTABLE WITHIN PLANTING AREAS.

Diagram illustrating the planting method for a tree, showing the root ball, soil, and surrounding structure. The diagram includes the following instructions:

- CENTRAL LEADER SHALL NOT BE CUT OR DAMAGED
- PLANTING SOIL AS SPECIFIED
- 3" MULCH LAYER OVER WEED BARRIER FABRIC; DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK
- SET TOP OF ROOTBALL FLUSH TO GRADE OR 25-50mm (1-2") HIGHER IN SLOWLY DRAINING SOILS
- REMOVE ALL TWIGG, BARK WIRE, AND BURGLAP FROM TOP HALF OF ROOT BALL AND ALL NON-BiodeGRASSABLE MATERIAL 100mm (4") HIGH EXIST. SAUCLER BEYOND EDGE OF ROOT BALL
- IF PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, CUT THE WIRE BASKET IN FOUR PLACES AND FOLD DOWN 200mm (8") INTO PLANTING HOLE
- TAMP SOIL AROUND ROOT BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT ROOT BALL DOES NOT SHIFT
- SET ROOT BALL ON UNEXCAVATED OR TAMPED SOIL

2.5 X BALL DIA. MIN.

The diagram shows two planting scenarios. On the left, a 'LARGE SHRUB (B&B)' is being planted in a 'LAWN' area. It features a 'WIRE BASKET' around the root ball, which is being cut and folded down into the hole. A '2" MULCH LAYER' is applied around the base, and a '6" HIGH EARTH SAUCE' is built up beyond the root ball edge. On the right, a 'SMALL SHRUB (CONTAINER)' is shown being planted next to a 'SIDEWALK'. Similar steps are followed: removing the wire basket, folding it into the hole, applying mulch, and building an earth sauce. Both diagrams include a 'PLANTING SOIL' layer at the bottom of the hole and a 'TAMP SOIL AROUND ROOT BALL' instruction. Dimensions like '4\"

**PLAN**

**SECTION**

**NOTES:**

1. PLANTS ARE TO BE SPACED EQUIDISTANT FROM EACH OTHER.
2. REFER TO PLAN AND SCHEDULE FOR SPACING OF INDIVIDUAL PLANTS.
3. REMOVE ALL WIRE, PLASTIC, TAGS OR SYNTHETIC MATERIAL FROM PLANTS PRIOR TO PLANTING.

**CALLOUTS:**

- TYPICAL O.C. PLANTING SPACING PLANTS TO BE INSTALLED ALTERNATELY.
- PRIOR TO PLANTING, REMOVE PLANT FROM CONTAINER AND GENTLY COMB OUT ROOTS
- PLANTING SOIL AS SPECIFIED
- 2" MULCH LAYER, MULCH TO BE PLACED DOWN BEFORE PLANTINGS.
- UNDISTURBED SUBGRADE