

LOCATION/KEY MAP  
SCALE: 1"=1000'

PLANS FOR  
**AQUA NEW JERSEY**

**LAWRENCEVILLE WELL STATION WATER TREATMENT UPGRADES**

**PRELIMINARY AND FINAL MINOR SITE PLAN**

SEPTEMBER, 2022  
25 GREEN AVENUE  
LAWRENCE TOWNSHIP  
MERCER COUNTY, NJ 08648  
BLOCK 5703, LOTS 109, 160 & 161

**LEGEND**

R-2B RESIDENTIAL 2B	NC-1 NEIGHBORHOOD CENTER 1
EGI EDUCATION, GOVERNMENT & INSTITUTIONS	OPEN SPACE

**APPLICANT**  
AQUA NEW JERSEY INC.  
10 BLACK FOREST ROAD  
HAMILTON TOWNSHIP, NEW JERSEY 08691  
(856) 587-5406

**OWNER**  
AQUA NEW JERSEY INC.  
10 BLACK FOREST ROAD  
HAMILTON TOWNSHIP, NEW JERSEY 08691  
(856) 587-5406

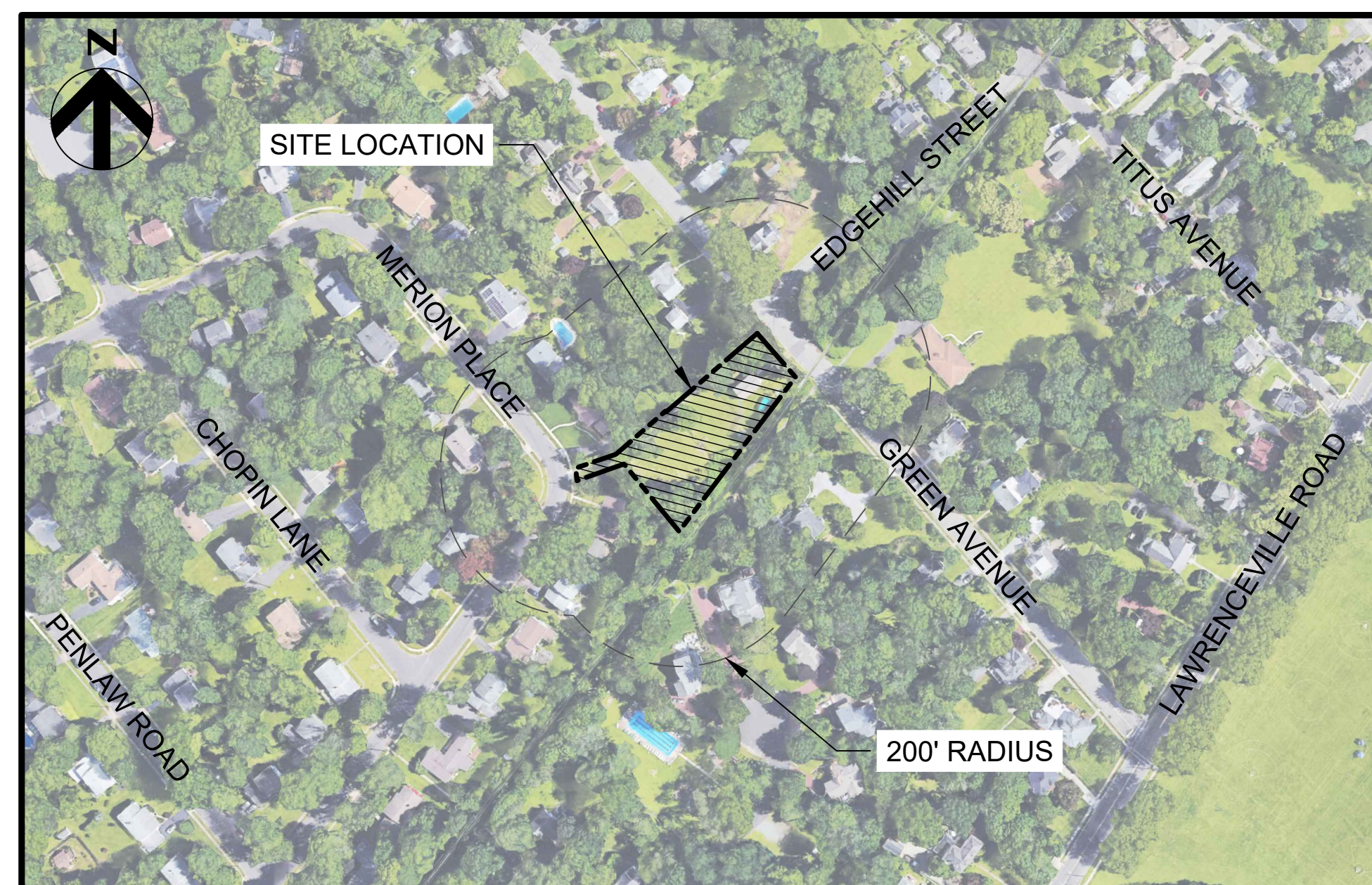
LAND USE AND ZONING		
PLATE 57, BLOCK 5703, LOT 109, 160 & 161		
R-2B - RESIDENTIAL 2B		
PRESENT AND PROPOSED LAND USE: PRODUCTION WELL AND WATER TREATMENT (PERMITTED USE IN ALL DISTRICTS)		
ZONING REQUIREMENT	REQUIRED	PROPOSED
MINIMUM LOT SIZE	60,000	35,182 (*)
MINIMUM LOT WIDTH	150-FT	139.57-FT
MINIMUM USEABLE YARD AREA	20%	60%
MAXIMUM IMPERVIOUS SURFACE RATIO	0.50	0.23
MINIMUM FRONT YARD	50-FT	52.2-FT
MINIMUM REAR YARD	50-FT	162.4-FT
MINIMUM SIDE YARD	40-FT	40-FT
MAXIMUM BUILDING HEIGHT	35-FT	<21-FT

- NOTE:**
- EXISTING NON-CONFORMING PREVIOUSLY APPROVED BY THE TOWNSHIP
  - NO BUILDING IMPROVEMENTS ARE PROPOSED FOR BLOCK 5703, LOTS 160 & 161.
  - EXISTING PARKING PROVIDED: ONE (1) LOADING ZONE AND TWO (2) PARKING SPACES.

CIVIL SHEET INDEX	
01C-00	CIVIL COVER SHEET
01C-01	CIVIL SYMBOLS, ABBREVIATIONS, AND NOTES
01C-02	EXISTING CONDITIONS AND DEMOLITION PLAN
01C-03	SITE PLAN
01C-04	UTILITY PLAN AND PROFILE
01C-05	GRADING AND DRAINAGE PLAN
01C-06	LANDSCAPING AND LIGHTING PLAN
01C-07	CONSTRUCTION DETAILS I
01C-08	CONSTRUCTION DETAILS II
01C-09	CONSTRUCTION DETAILS III
01C-10	SOIL EROSION AND SEDIMENT CONTROL PLAN
01C-11	SOIL EROSION AND SEDIMENT CONTROL DETAILS
01C-12	SOIL EROSION AND SEDIMENT CONTROL GENERAL NOTES

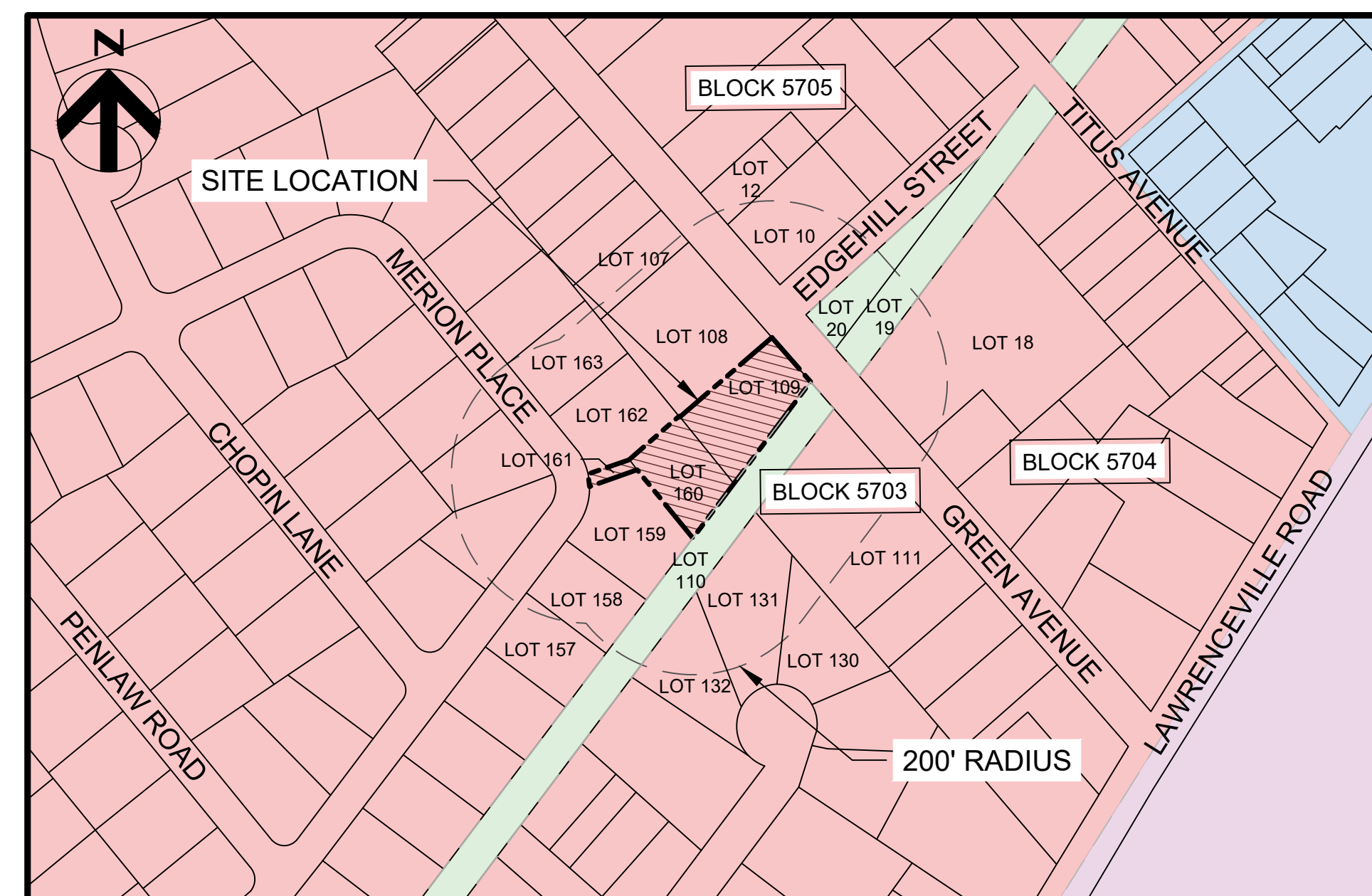


**CALL BEFORE YOU DIG**  
1-800-272-1000  
Dial 811 in the State of New Jersey  
FOR FREE MARKOUTS TO LOCATE  
UNDERGROUND UTILITIES  
IT'S THE LAW - NEW JERSEY ONE CALL



AERIAL MAP OBTAINED FROM GOOGLE EARTH PRO. IMAGE DATED 05/2019.

AERIAL MAP  
SCALE: 1"=200'



ZONING MAP OBTAINED FROM THE TOWNSHIP OF LAWRENCE ZONING MAP. MAP DATED JANUARY 2021. TAX MAP OBTAINED FROM THE TOWNSHIP OF LAWRENCE TAX MAP SHEETS 56, 57, 57.01, & 58. MAPS DATED 1/1/2012.

TAX & ZONING MAP  
SCALE: 1"=200'

200' PROPERTY OWNER'S LIST					
5604	3	MC GLONE, BERNARD M ET UX	21 MERION PLACE	LAWRENCE TOWNSHIP NJ	08648
4	THURSTON, LEWIS B III ET UX	23 MERION PLACE	LAWRENCE TOWNSHIP NJ	08648	
5	OELLERICH, PENNIE L	PO BOX 512	MILLRIFF, PA	18340.0512	
5703	107	KOHLER, JOSEPH E, JR. & WANG, YONG	37 GREEN AVE	LAWRENCE TOWNSHIP NJ	08648
108	BRITTON, ANDREA S.	33 GREEN AVE	LAWRENCE TOWNSHIP NJ	08648.1823	
110	TOWNSHIP OF LAWRENCE	2207 LAWRENCEVILLE RD	LAWRENCE TOWNSHIP NJ	08648	
111	KUSER, ROBERT C JR UX	11 GREEN AVE	LAWRENCE TOWNSHIP NJ	08648	
130	WILDER, HAROLD III & MARGARET A	56 WILLOW ROAD	LAWRENCE TOWNSHIP NJ	08648	
131	MORGAN, JARED & CATHLEEN	51 WILLOW ROAD	LAWRENCE TOWNSHIP NJ	08648	
132	MURPHY, PAUL & WYFFELS, REBECCA	45 WILLOW ROAD	LAWRENCE TOWNSHIP NJ	08648	
157	SCHROEDER, WILLIAM W & MARY SITRUST	38 MERION PLACE	LAWRENCE TOWNSHIP NJ	08648	
158	SOBOLEWSKI, ARKADIUSZ & O'GORMAN, KM	38 MERION PLACE	LAWRENCE TOWNSHIP NJ	08648	
159	STUEBEN, ROBERT W UX	34 MERION PLACE	LAWRENCE TOWNSHIP NJ	08648	
162	BURBELLA, RONALD E UX	32 MERION PLACE	LAWRENCE TOWNSHIP NJ	08648	
163	VOIGHT, MARIA	30 MERION PLACE	LAWRENCE TOWNSHIP NJ	08648	
5704	16	LAVERY, DANIEL & LYNCH, MICHELLE	10 GREEN AVE	LAWRENCE TOWNSHIP NJ	08648
18	CHIARELLO, BRUCE W	3 CHARLES WAY	LAWRENCE TOWNSHIP NJ	08648	
19, 20	TOWNSHIP OF LAWRENCE	2207 LAWRENCEVILLE RD	LAWRENCE TOWNSHIP NJ	08648	
5705	10	PALUMBO, DANIEL & DOMINICK, NICOLE	30 GREEN AVE	LAWRENCE TOWNSHIP NJ	08648
12	GIRANDOLA, PHILLIP	34 GREEN AVE	LAWRENCE TOWNSHIP NJ	08648	

- LIST OF REFERENCES:
- AERIAL MAP OBTAINED FROM GOOGLE EARTH PRO. IMAGE DATED 05/2019.
  - ZONING MAP OBTAINED FROM THE TOWNSHIP OF LAWRENCE ZONING MAP. MAP DATED JANUARY 2021.
  - TAX MAP OBTAINED FROM THE TOWNSHIP OF LAWRENCE TAX MAP SHEETS 56, 57, 57.01, & 58. MAPS DATED 1/1/2012.
  - USGS KEY MAP OBTAINED FROM USGS NATIONAL MAP VIEWER. MAP TITLED USGS US TOPO 7.5 MINUTE MAP PRINCETON QUADRANGLE, NJ 2019. MAP DATED 2019.
  - BOUNDARY AND TOPOGRAPHIC SURVEY PREPARED BY BORBAS SURVEY AND MAPPING, LLC. SURVEY DATED 6/2/2022.
  - WETLANDS AND WATERCOURSES DEPICTED WERE DELINEATED BY HDR ENGINEERING INC. 12/17/2021 AND SURVEYED BY NJ LICENSED SURVEYOR BORBAS SURVEY AND MAPPING, LLC.

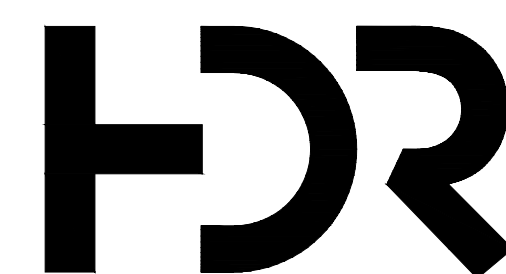
TOWNSHIP BOARD APPROVAL	
BOARD CHAIRPERSON	DATE
BOARD SECRETARY	DATE
MUNICIPAL ENGINEER	DATE
ADMINISTRATIVE OFFICER	DATE

UTILITY OWNERS			
CORPORATE SECRETARY PUBLIC SERVICE ELECTRIC & GAS COMPANY 80 PARK PLAZA, 4B NEWARK, NJ 07101	CORPORATE SECRETARY VERIZON 540 BROAD STREET NEWARK, NJ 07101	SUN PIPE LINE COMPANY ATTN: R-O-W DEPARTMENT 1801 MARKET STREET 26TH FLOOR PHILADELPHIA, PA 19103-1699	N.J. AMERICAN WATER 1025 LAUREL OAK ROAD VOORHEES, NJ 08843 ATTN: DONNA SHORT
CORPORATE SECRETARY JERSEY CENTRAL POWER AND LIGHT 300 MADISON AVENUE MORRISTOWN, NJ 07962	CORPORATE SECRETARY AT&T 1 AT&T WAY BEDMINSTER, NJ 079211	SUNOCO PIPE LINE, L.P. RIGHT-OF-WAY DEPARTMENT MONTELLO COMPLEX 525 FRITZTOWN ROAD SINKING SPRING, PA 19608	COMMISSIONER N.J. DEPARTMENT OF TRANSPORTATION 1035 PARKWAY AVENUE, CN 600 TRENTON NJ 08625
GENERAL MANAGER COMCAST CABLEVISION 940 PROSPECT STREET TRENTON, NJ 08618	ELIZABETHTOWN GAS COMPANY ONE ELIZABETH TOWN PLAZA THIRD FLOOR EAST UNION, NJ 07083-1975	AQUA WATER COMPANY 2875 ERIAL ROAD ERIAL, NJ 08081	
RCN CORPORATION 105 CARNEGIE CENTER PRINCETON, NJ 08540	CORPORATE SECRETARY TRANSCONTINENTAL GAS PIPE LINE CORPORATION 2800 POST OAK BOULEVARD HOUSTON, TX 77056	EWING-LAWRENCE SEWERAGE AUTHORITY ATTN: JAMES BARBATO 600 WHITEHEAD ROAD LAWRENCEVILLE, NJ 08648	
MERCER COUNTY PLANNING BOARD 640 SOUTH BROAD STREET P.O. BOX 8088 TRENTON NJ 08650-8088			
LOCATION OF UTILITIES SHOWN ON THESE PLANS ARE NOT WARRANTED AS TO EXACTNESS. CONTRACTOR SHALL DETERMINE EXACT LOCATION AND DEPTH OF UTILITIES PRIOR TO CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND OTHER APPLICABLE LAWS.			
PRIOR TO DIGGING CALL 1-800-272-1000			

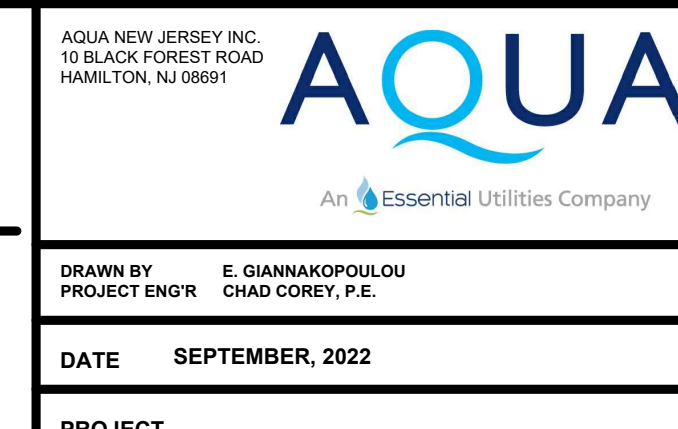
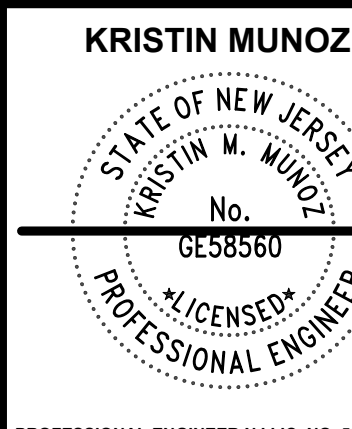
**ISSUED FOR CONSTRUCTION PERMITTING**



REVISIONS	REVISIONS
10/01/2021 30% DESIGN SUBMISSION	
01/28/2022 90% DESIGN SUBMISSION	
06/2022 ISSUE FOR BID	
09/2022 ISSUE FOR PERMIT	



HDR PROJECT NO. - 10201453



LAWRENCEVILLE WELL STATION WATER TREATMENT UPGRADES  
**CIVIL COVER SHEET**

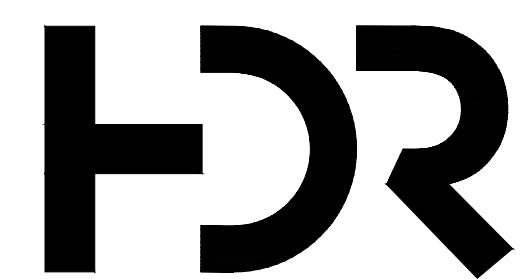
AQUA NEW JERSEY, INC.	USE DIMENSIONS ONLY SCALE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	ISSUE FOR PERMIT
	01C-00

CIVIL PLAN SYMBOLOGY AND ABBREVIATIONS		UTILITY/CIVIL LINE SYMBOLOGY		GENERAL NOTES			
<p><b>EXISTING LEGEND:</b></p> <p>PROPERTY LINE ROADWAY R.O.W. EASEMENT LINE SETBACK LINE WATER LINE GAS LINE TELEPHONE LINE COMMUNICATIONS LINE OVERHEAD ELECTRICAL LINE SANITARY LINE FORCE MAIN LINE UNKNOWN UTILITY LINE CONTOUR LINE ROAD CENTER LINE FENCE LINE PAVEMENT EDGE CONCRETE CURB STREAM CONCRETE CONCRETE PAVERS WATERCOURSE 50-FT RIPARIAN BUFFER WETLAND WETLANDS BUFFER COMMUNICATION SYSTEM RAILROAD UTILITY POLE SIGN UTILITY POLE BOLLARD EXISTING VALVE EXISTING REDUCER WATER VALVE WATER METER HYDRANT GAS VALVE GAS MAIN SANITARY MANHOLE SANITARY VALVE STORM INLET HEADWALL STORM MANHOLE UNKNOWN MANHOLE EXISTING TREE</p> <p><b>DEMO LEGEND:</b></p> <p>SAWCUT PAVEMENT CONCRETE CURB FENCE DEPRESSED CURB DRYWELL REMOVAL EXCAVATION - FULL DEPTH ASPHALT REMOVAL EXCAVATION - CONCRETE PAVERS REMOVAL FENCE REMOVAL CLEANOUT CURB AND/OR PIPE REMOVAL INLET AND/OR TREE REMOVAL</p>		<p><b>PROPOSED LEGEND:</b></p> <p>CONCRETE CURB PAVEMENT CONTOUR LINES FLOOD HAZARD AREA SILT FENCE CONSTRUCTION STOCKPILING AND STAGING AREA SECURITY FENCE LIMIT OF DISTURBANCE SOIL GROUP BOUNDARY STORM DRAIN GAS LINE STABILIZED CONSTRUCTION ENTRANCE CONCRETE BUILDING EXPANSION LIMITS DRYWELL GRASS PAVERS DOOR SPOT ELEVATION VALVE REDUCER MANHOLE FLOW ARROW APPROXIMATE TREE PROTECTION AREA TEMPORARY INLET PROTECTION CLEANOUT SOIL GROUP NAME <b>MBYB</b></p> <p><b>GENERAL SYMBOLOGY</b></p> <p>DETAIL NUMBER SHEET WHERE DETAIL IS LOCATED DETAIL NUMBER SCALE REPRESENTATIVE DRAWING WHERE DETAIL WAS CALLED OUT DETAIL MARKER KEY NOTE DESIGNATION KEY NOTE NUMBER EROSION CONTROL NOTE NUMBER <b>EROSION AND SEDIMENTATION CONTROL DESIGNATION</b> NORTH ARROW</p>		<p>AGGREGATE BASE COURSE ABANDON ASBESTOS CEMENT PIPE ADDITIONAL ADJUSTABLE, ADJACENT AGGREGATE ALIGNMENT APPROXIMATE APPROVED AVENUE BLIND FLANGE BACKFLOW PREVENTER BUTTERFLY VALVE BELOW GRADE SURFACE BITUMINOUS BUILDING BLOCK BENCHMARK BACK OF CURB BOTTOM BETWEEN CABLE CATCH BASIN CAST IRON PIPE CONTROLLED LOW-STRENGTH MATERIAL CORRUGATE METAL PIPE CLEAN OUT CORRUGATE HIGH DENSITY POLYETHYLENE PIPE DETAIL DENSE GRADED AGGREGATE DIAMETER DIMENSION DUCTILE IRON PIPE DRAWING ELBOW ELEVATION ENGINEER EDGE OF PAVEMENT EXISTING FULL DEPTH RECLAMATION FINISHED FLOOR FIRE HYDRANT FEET, FOOT GAS MAIN GALVANIZED GATE VALVE HIGH-DENSITY POLYETHYLENE PIPE HOT MIX ASPHALT HORIZONTAL HIGH POINT ELEVATION INVERT ELEVATION INCH INCLUDE INVERT LINEAR FEET LOW POINT ELEVATION MAILBOX MILLIONS OF GALLONS MANHOLE MECHANICAL JOINT MATERIAL NOT IN CONTRACT NOT TO SCALE OVERHEAD UTILITIES OVERHEAD POLYETHYLENE PIPE PLASTIC POLYVINYL CHLORIDE PIPE OPEN ENDED QUANTITY RADIUS REINFORCED CONCRETE PIPE RESIDENT ENGINEER RESTRAINED JOINT RAILROAD RIGHT-OF-WAY SANITARY SEWER SCHEDULE STAINLESS STEEL SHEET SLOPE STATION STEEL STORM DRAIN SILT FENCE TELEPHONE TEMPORARY THREADED TYPICAL UNKNOWN UNLESS NOTED OTHERWISE UTILITY POLE UTILITY VITRIFIED CLAY PIPE VERIFY IN FIELD VERTICAL WATER WATERCOURSE WETLAND WATER METER WALL THICKNESS</p>		<p><b>UTILITY/CIVIL LINE SYMBOLOGY</b></p> <p>PIPELINE LARGE PIPELINE UTILITY BENEATH STRUCTURE RAILROAD CENTERLINE BOTTOM OF DITCH PROPERTY LINE EASEMENT LIMITS OF CONSTRUCTION ROW EXISTING CONTOUR (MINOR) EXISTING CONTOUR W/ELEVATION (MAJOR) EXISTING FENCE EXISTING VEGETATION/BRUSH LINE FENCE - BARB WIRE FENCE - CHAIN LINK FENCE - FIELD FENCE - OTHER FENCE - WOOD FENCE - WOVEN WIRE FLOOD LIMIT (25 YEAR) FLOOD LIMIT (50 YEAR) FLOOD LIMIT (100 YEAR) FLOOD LIMIT (200 YEAR) FLOOD LIMIT (500 YEAR) HIGHWAY GUARDRAIL LEVEE TOP LEVEE TOE NEW CONTOUR (MINOR) NEW CONTOUR (MAJOR) ROCK BERM SILT FENCE TOE OF SLOPE TOP OF SLOPE FIBER OPTIC FUEL OIL NATURAL GAS INDUSTRIAL WASTE WATER SANITARY SEWER STORM SEWER DOMESTIC WATER DOMESTIC WATER NON-POTABLE</p>	<p><b>GENERAL NOTES</b></p> <p><u>GENERAL CONSTRUCTION NOTES:</u></p> <ol style="list-style-type: none"> <li>EXISTING UNDERGROUND UTILITIES INCLUDING RESIDENTIAL UTILITY SERVICE CONNECTIONS SHOWN ON THESE DRAWINGS ARE BASED UPON AVAILABLE INFORMATION AND ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY THE CONTRACTOR'S FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUANCE OF SERVICE.</li> <li>THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES A MINIMUM OF 72 HOURS PRIOR TO EXCAVATION.</li> <li>THE CONTRACTOR SHALL CONTACT "NEW JERSEY ONE CALL" PRIOR TO CONSTRUCTION ACTIVITIES FOR UTILITY LOCATIONS AND MARKINGS IN ACCORDANCE WITH NEW JERSEY LAW. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, SIZE, TYPE, AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.</li> <li>THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING MUNICIPAL, COUNTY, OR STATE ROADS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS OF MUD AND/OR DUST AND TO TAKE WHATEVER MEASURES NECESSARY TO INSURE THAT THE ROADS ARE KEPT IN A CLEAN AND DUST FREE CONDITION AT ALL TIMES.</li> <li>ALL LAND WHICH IS DISTURBED BY THIS CONSTRUCTION SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION IN ACCORDANCE WITH THE PLANS, DETAILS, AND NOTES OF THIS CONTRACT.</li> <li>UTILITY POLES SHALL BE PROTECTED IN ACCORDANCE WITH THE UTILITY OWNER'S REGULATIONS.</li> <li>THE CONTRACTOR SHALL COMPLY WITH ALL MUNICIPAL, COUNTY, AND STATE REGULATIONS PERTAINING TO THE CLOSING OF PUBLIC STREETS TO TRAFFIC DURING CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AND MAINTAIN PROPER SIGNS, BARRICADES, AND WARNING LIGHTS TO CONTROL THE TRAFFIC AND TO ASSURE THE PUBLICS HEALTH, WELFARE, AND SAFETY. ALL DEVICES MUST COMPLY WITH MUNICIPAL, COUNTY, AND STATE REQUIREMENTS AND CODES.</li> <li>ANY ITEM DAMAGED DUE TO CONSTRUCTION SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.</li> <li>THE CONTRACTOR SHALL REMOVE AND DISPOSE OF DEBRIS, EXCESS BACKFILL OR EXCAVATED MATERIAL OFFSITE IN AN APPROVED MANNER.</li> <li>ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL CODES AND REGULATIONS.</li> <li>CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, NOT OBTAINED BY THE ENGINEER, PRIOR TO CONSTRUCTION. COPIES OF ALL PERMITS SHALL BE RETAINED ON SITE AND BE AVAILABLE FOR INSPECTION AT ALL TIMES.</li> <li>CONTRACTOR SHALL REPLACE IN KIND ALL EXISTING PAVEMENT, SIDEWALKS, CURBS, GUTTERS, BERMS, DRAINAGE DITCHES, CULVERTS, DRAIN PIPES, STREET SIGNS, LANDSCAPING, AND ALL OTHER EXISTING FACILITIES, ABOVE OR BELOW GROUND, DAMAGED DURING CONSTRUCTION OF THE PROJECT, EXCEPT AS SPECIFICALLY INDICATED ON THE DRAWINGS.</li> <li>CONTRACTOR SHALL MAINTAIN A HARD COPY PROGRESS SET OF AS-BUILTS ON SITE AT ALL TIMES FOR REVIEW BY OWNER AND ENGINEER. FINAL SUBMISSION OF AS-BUILTS SHALL BE IN ACCORDANCE WITH SPECIFICATION 01300.</li> <li>THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IMMEDIATELY OF ANY CONDITIONS REQUIRING CHANGE TO THE PLANS.</li> <li>CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL INSPECTIONS WITH MUNICIPAL, COUNTY, OR STATE AGENCIES, AS REQUIRED.</li> <li>TRAFFIC STRIPING AND MARKINGS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED IN KIND IN ACCORDANCE WITH THE GOVERNING AGENCY.</li> <li>ALL REQUIRED DEWATERING SHALL BE INCLUDED IN THE CONTRACTOR'S LUMP SUM PRICE BID FOR DEWATERING. REFER TO SPECIFICATION SECTIONS 01075-BASIS OF PAYMENT, 02020-DEWATERING AND SPECIAL CONDITIONS FOR ADDITIONAL INFORMATION.</li> <li>DURING FLUSHING AND PRESSURE TESTING OF THE WATER TRANSMISSION MAIN AND APPURTENANCES, THE CONTRACTOR SHALL NOT OPERATE ANY VALVES UNLESS UNDER THE DIRECT SUPERVISION OF THE WATER COMPANY, INCLUDING NEW VALVES INSTALLED AS PART OF THIS PROJECT.</li> <li>THE LOCATION AND FULL EXTENT OF TRAFFIC SIGNAL LOOPS, CONDUITS, AND WIRING ARE NOT INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL COORDINATE A MARKOUT OF SIGNAL LOOPS AND WIRING WITH THE GOVERNING AGENCY. SIGNAL LOOPS AND WIRING DAMAGE DURING THE CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE GOVERNING AGENCY AT NO ADDITIONAL COST.</li> <li>ALL AREAS SHALL BE RETURNED TO EXISTING GRADE.</li> </ol> <p><u>MATERIAL PROCUREMENT:</u></p> <ol style="list-style-type: none"> <li>AQUA NEW JERSEY WILL FURNISH VARIOUS MATERIALS AS INDICATED IN THE SPECIFICATIONS. DETAILS ARE PROVIDED WITHIN THE DRAWINGS FOR THE INSTALLATION OF THESE ITEMS.</li> </ol> <p><u>SURVEY NOTES:</u></p> <ol style="list-style-type: none"> <li>THE PROJECT HORIZONTAL DATUM IS NAD 1983; THE PROJECT VERTICAL DATUM IS NAVD 1988.</li> <li>EXISTING CONDITIONS BASED ON BOUNDARY AND TOPOGRAPHIC SURVEY PERFORMED BY BORBAS SURVEY AND MAPPING, LLC., SURVEY PERFORMED JUNE 2, 2022.</li> </ol>

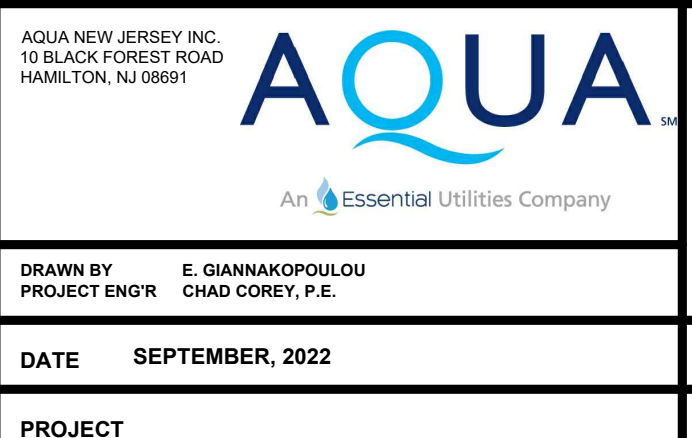


REVISIONS	REVISIONS
1	10/01/2021 30% DESIGN SUBMISSION
2	01/28/2022 90% DESIGN SUBMISSION
3	06/2022 ISSUE FOR BID
4	09/2022 ISSUE FOR PERMIT

REVISIONS	REVISIONS

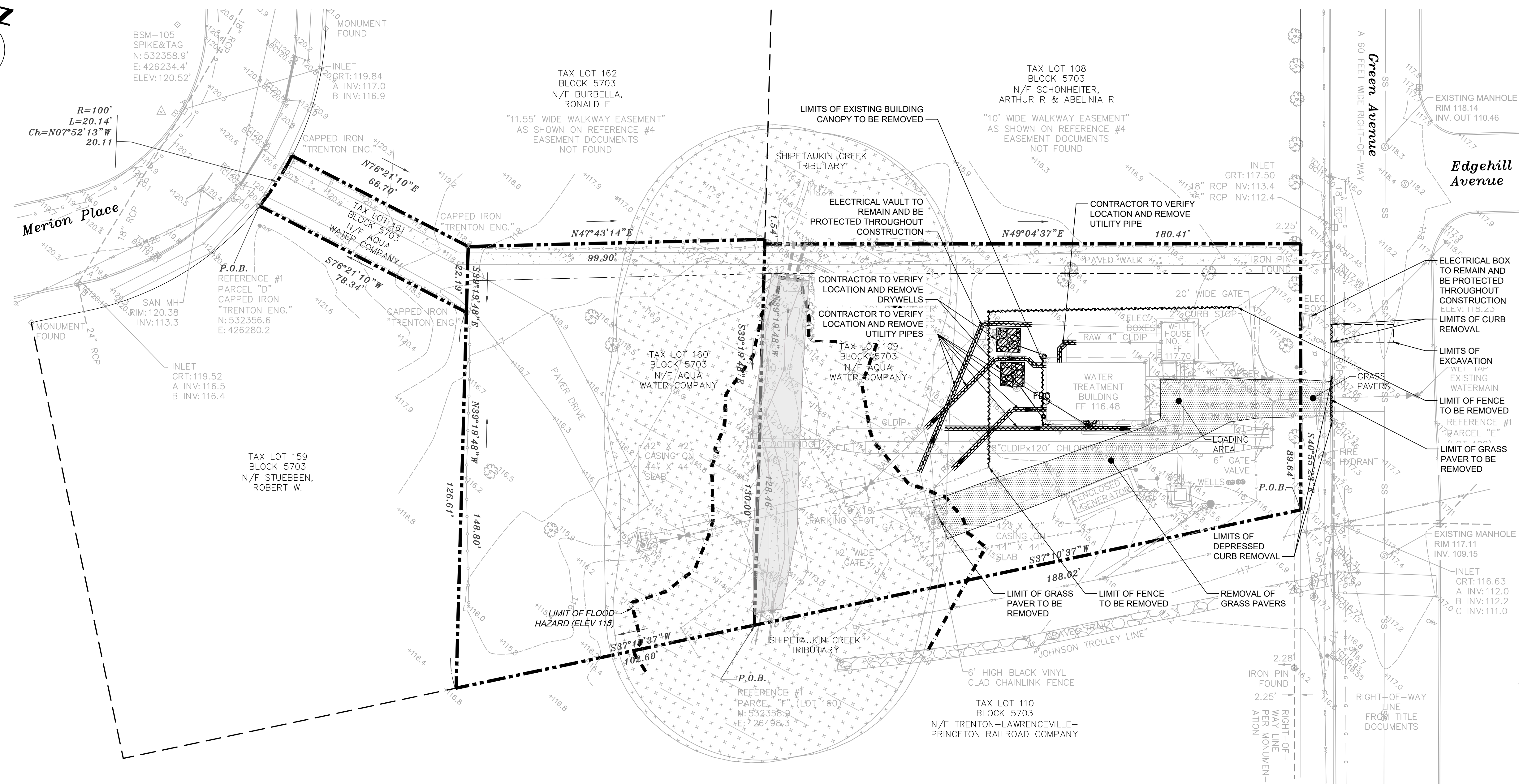
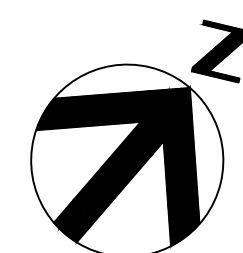


HDR PROJECT NO. - 10201453

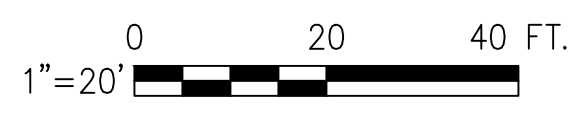


**LAWRENCEVILLE WELL STATION WATER TREATMENT UPGRADES  
CIVIL SYMBOLS, ABBREVIATIONS AND NOTES**

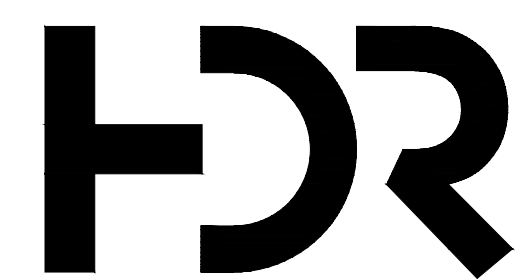
AQUA NEW JERSEY, INC. USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES  
ISSUE FOR PERMIT  
USE DIMENSIONS ONLY SCALE  
**01C-01**



- GENERAL NOTES:**
- UNLESS OTHERWISE NOTED HEREIN, THE CONTRACTOR SHALL COMPLY WITH ALL GENERAL NOTES SHOWN ON SHEET 01C-01.
  - CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION AND SEQUENCING OF DEMOLITION AS DESCRIBED BY THESE DOCUMENTS AND SPECIFICATIONS. CONTRACTOR SHALL OBTAIN ALL REQUIRED DEMOLITION PERMITS PRIOR TO COMMENCING DEMOLITION.
  - THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF DEMOLITION ACTIVITIES.
  - CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF DEMOLITION OR RELOCATION WITH APPLICABLE LOCAL UTILITY COMPANIES (I.E. GAS, CABLE, POWER, TELEPHONE, WATER, SEWER, ETC.).
  - CONTRACTOR SHALL REMOVE ALL CONCRETE AS NOTED IN DEMOLITION PLANS. CRUSHED CONCRETE MAY BE RE-USED IN STABILIZATION OF SITE.
  - THE CONTRACTOR SHALL SAWCUT EXISTING ASPHALT (WHERE APPLICABLE) TO OBTAIN A SQUARE CLEAN EDGE.
  - ALL WASTE/DEBRIS GENERATED FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL RECORDS OF THE DISPOSAL TO DEMONSTRATE COMPLIANCE WITH THE ABOVE REGULATIONS.
  - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CLEARLY DESIGNATE THE LIMITS OF CONSTRUCTION AND DISTURBANCE ON-SITE. THE CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE THE LIMITS OF DISTURBANCE.
  - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND SITE IMPROVEMENTS PRIOR TO BEGINNING SITE WORK. ANY DAMAGE TO EXISTING SITE IMPROVEMENTS DURING CONSTRUCTION IS TO BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE GOVERNING AGENCIES. THE CONTRACTOR SHALL MAINTAIN SUFFICIENT PROTECTION TO THE PUBLIC, INCLUDING ALL UTILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL HOLD AND SAVE THE GOVERNING AGENCIES AND ENGINEERS HARMLESS AGAINST ALL CLAIMS AND DAMAGES.
  - CONSTRUCTION LAYDOWN AREA TO BE RESTORED TO EXISTING CONDITIONS FOLLOWING CONSTRUCTION COMPLETION UNLESS NOTED OTHERWISE.
  - ALL SITE FEATURES LOCATED OUTSIDE OF THE LIMITS OF DISTURBANCE WILL REMAIN AND BE PROTECTED DURING CONSTRUCTION.
  - AQUA NJ IS RESPONSIBLE FOR ALL SOLID WASTE/RECYCLING REMOVAL FROM SITE.
  - THE PROPOSED WATER TREATMENT FACILITY WILL BE UNMANNED. SITE VISITATION BY AQUA NJ WILL BE ONCE PER DAY, FOR OPERATION AND MAINTENANCE.



REVISIONS	REVISIONS
10/01/2021 30% DESIGN SUBMISSION	
01/28/2022 90% DESIGN SUBMISSION	
06/2022 ISSUE FOR BID	
09/2022 ISSUE FOR PERMIT	



HDR PROJECT NO. - 10201493

**KRISTIN MUNOZ**  
 STATE OF NEW JERSEY  
 KRISTIN W. MUNOZ  
 No. GES8560  
 LICENSED PROFESSIONAL ENGINEER  
 PROFESSIONAL ENGINEER N.J. LIC. NO. 85860

**AQUA**  
 An Essential Utilities Company

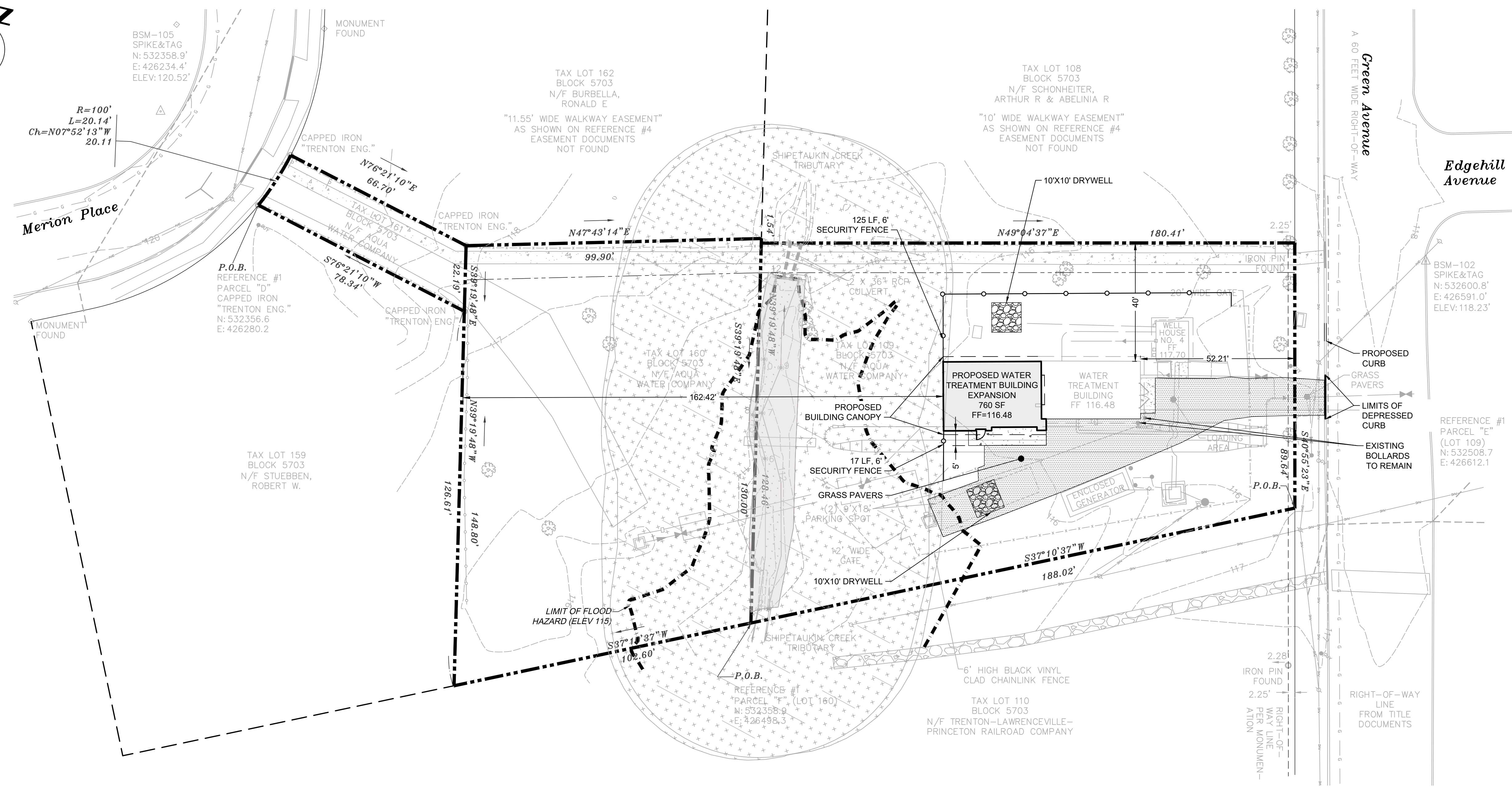
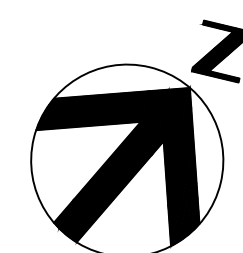
DRAWN BY: E. GIANNAKOPOULOU  
 PROJECT ENGR: CHAD COREY, P.E.

DATE: SEPTEMBER, 2022

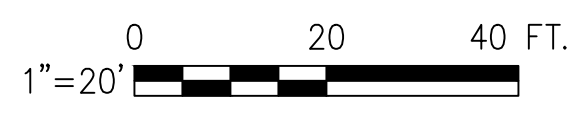
PROJECT: LAWRENCEVILLE WELL STATION WATER TREATMENT UPGRADES

**LAWRENCEVILLE WELL STATION WATER TREATMENT UPGRADES**  
**EXISTING CONDITIONS AND DEMOLITION PLAN**

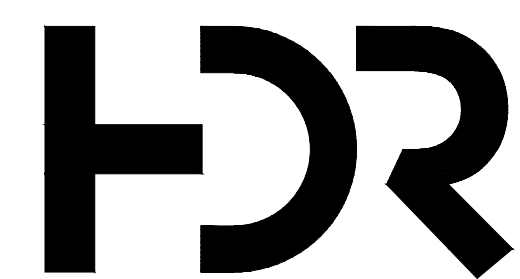
AQUA NEW JERSEY, INC.	USE DIMENSIONS ONLY SCALE 1"=20'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	<b>ISSUE FOR PERMIT</b>
	<b>01C-02</b>



- GENERAL NOTES:**
- UNLESS OTHERWISE NOTED HEREIN, THE CONTRACTOR SHALL COMPLY WITH ALL GENERAL NOTES SHOWN ON SHEET 01C-01.
  - CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION AND SEQUENCING OF DEMOLITION AS DESCRIBED BY THESE DOCUMENTS AND SPECIFICATIONS. CONTRACTOR SHALL OBTAIN ALL REQUIRED DEMOLITION PERMITS PRIOR TO COMMENCING DEMOLITION.
  - THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF DEMOLITION ACTIVITIES.
  - CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF DEMOLITION OR RELOCATION WITH APPLICABLE LOCAL UTILITY COMPANIES (I.E. GAS, CABLE, POWER, TELEPHONE, WATER, SEWER, ETC.).
  - CONTRACTOR SHALL REMOVE ALL CONCRETE AS NOTED IN DEMOLITION PLANS. CRUSHED CONCRETE MAY BE RE-USED IN STABILIZATION OF SITE.
  - THE CONTRACTOR SHALL SAWCUT EXISTING ASPHALT (WHERE APPLICABLE) TO OBTAIN A SQUARE CLEAN EDGE.
  - ALL WASTE/DEBRIS GENERATED FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL RECORDS OF THE DISPOSAL TO DEMONSTRATE COMPLIANCE WITH THE ABOVE REGULATIONS.
  - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CLEARLY DESIGNATE THE LIMITS OF CONSTRUCTION AND DISTURBANCE ON-SITE. THE CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE THE LIMITS OF DISTURBANCE.
  - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND SITE IMPROVEMENTS PRIOR TO BEGINNING SITE WORK. ANY DAMAGE TO EXISTING SITE IMPROVEMENTS DURING CONSTRUCTION IS TO BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE GOVERNING AGENCIES. THE CONTRACTOR SHALL MAINTAIN SUFFICIENT PROTECTION TO THE PUBLIC, INCLUDING ALL UTILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL HOLD AND SAVE THE GOVERNING AGENCIES AND ENGINEERS HARMLESS AGAINST ALL CLAIMS AND DAMAGES.
  - CONSTRUCTION LAYDOWN AREA TO BE RESTORED TO EXISTING CONDITIONS FOLLOWING CONSTRUCTION COMPLETION UNLESS NOTED OTHERWISE.
  - ALL SITE FEATURES LOCATED OUTSIDE OF THE LIMITS OF DISTURBANCE WILL REMAIN AND BE PROTECTED DURING CONSTRUCTION.
  - AQUA NJ IS RESPONSIBLE FOR ALL SOLID WASTE/RECYCLING REMOVAL FROM SITE.
  - THE PROPOSED WATER TREATMENT FACILITY WILL BE UNMANNED. SITE VISITATION BY AQUA NJ WILL BE ONCE PER DAY, FOR OPERATION AND MAINTENANCE.



REVISIONS	REVISIONS
1 10/01/2021 30% DESIGN SUBMISSION	
2 01/28/2022 90% DESIGN SUBMISSION	
3 06/2022 ISSUE FOR BID	
4 09/2022 ISSUE FOR PERMIT	



HDR PROJECT NO. - 10201493

**KRISTIN MUNOZ**  
 STATE OF NEW JERSEY  
 KRISTIN W. MUNOZ  
 No. 658560  
 LICENSED PROFESSIONAL ENGINEER  
 PROFESSIONAL ENGINEER N.J. LIC. NO. 65860

AQUA NEW JERSEY, INC.  
 10 BLACK FOREST ROAD  
 HAMILTON, NJ 08691

**AQUA**  
 An Essential Utilities Company

DRAWN BY: E. GIANNAKOPOULOU  
 PROJECT ENGR: CHAD COREY, P.E.

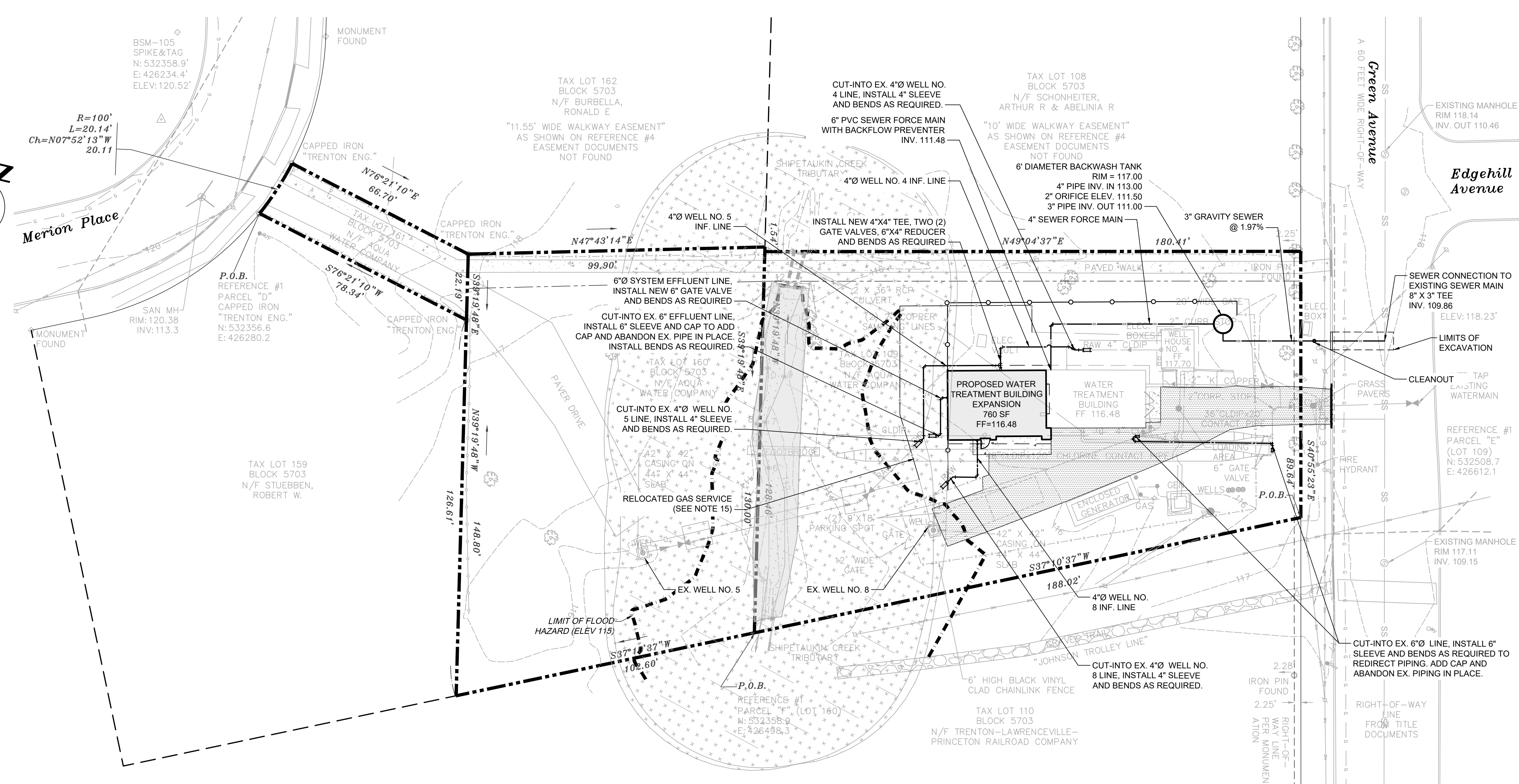
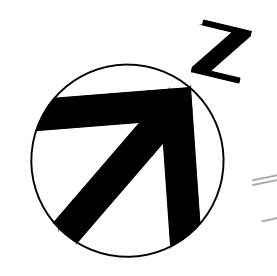
DATE: SEPTEMBER, 2022

PROJECT:

LAWRENCEVILLE WELL STATION WATER TREATMENT UPGRADES

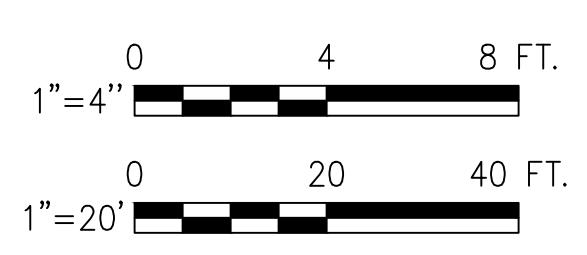
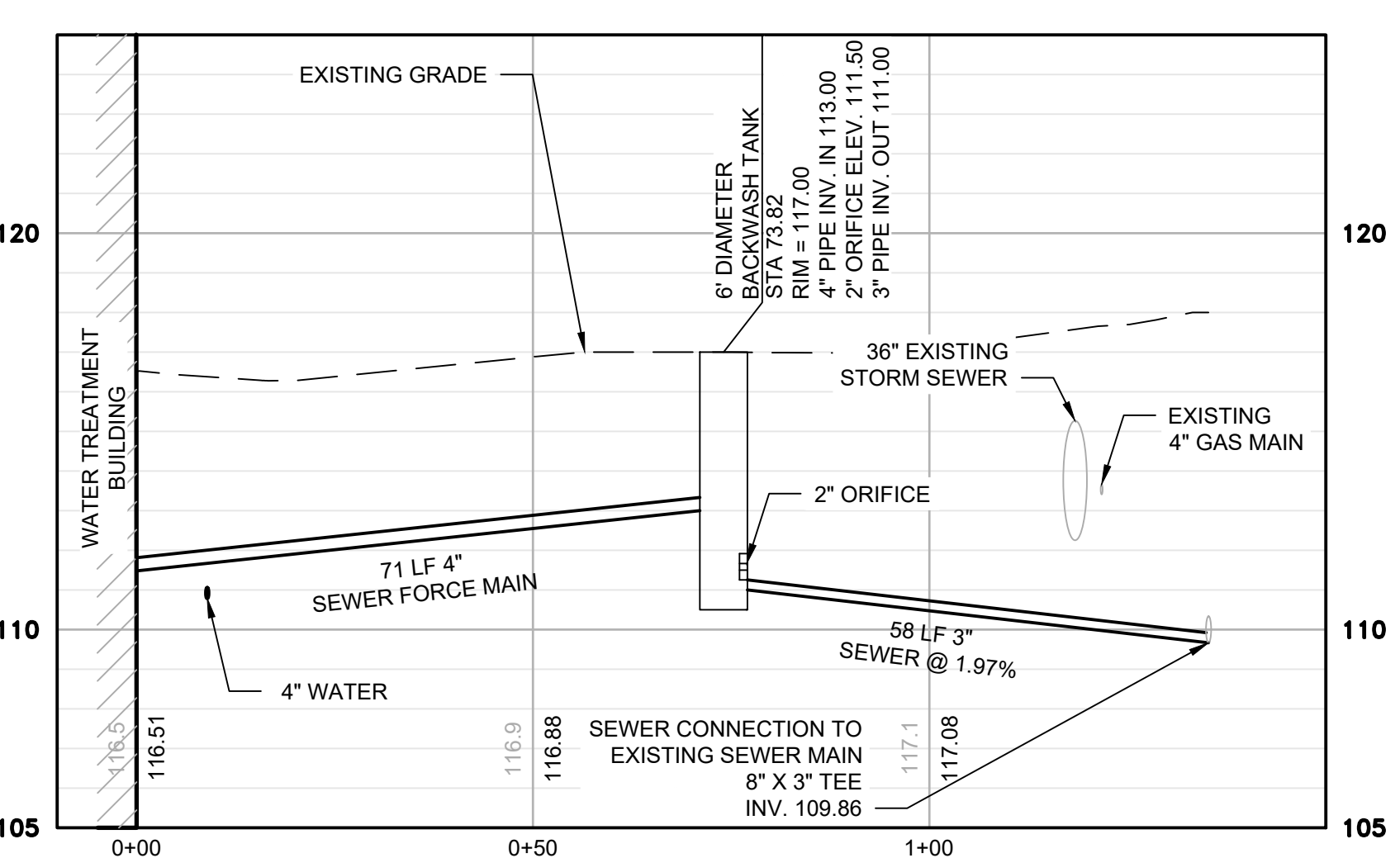
**SITE PLAN**

AQUA NEW JERSEY, INC.	USE DIMENSIONS ONLY SCALE 1"=20'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	<b>ISSUE FOR PERMIT</b>
	<b>01C-03</b>

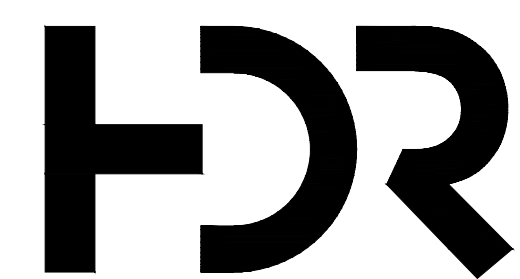


- GENERAL NOTES:**
- UNLESS OTHERWISE NOTED HEREIN, THE CONTRACTOR SHALL COMPLY WITH ALL GENERAL NOTES SHOWN ON SHEET 01C-01.
  - CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION AND SEQUENCING OF DEMOLITION AS DESCRIBED BY THESE DOCUMENTS AND SPECIFICATIONS. CONTRACTOR SHALL OBTAIN ALL REQUIRED DEMOLITION PERMITS PRIOR TO COMMENCING DEMOLITION.
  - THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF DEMOLITION ACTIVITIES.
  - CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF DEMOLITION OR RELOCATION WITH APPLICABLE LOCAL UTILITY COMPANIES (I.E. GAS, CABLE, POWER, TELEPHONE, WATER, SEWER, ETC.).
  - CONTRACTOR SHALL REMOVE ALL CONCRETE AS NOTED IN DEMOLITION PLANS. CRUSHED CONCRETE MAY BE RE-USED IN STABILIZATION OF SITE.
  - THE CONTRACTOR SHALL SAWCUT EXISTING ASPHALT (WHERE APPLICABLE) TO OBTAIN A SQUARE CLEAN EDGE.
  - ALL WASTE/DEBRIS GENERATED FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL RECORDS OF THE DISPOSAL TO DEMONSTRATE COMPLIANCE WITH THE ABOVE REGULATIONS.
  - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CLEARLY DESIGNATE THE LIMITS OF CONSTRUCTION AND DISTURBANCE ON-SITE. THE CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE THE LIMITS OF DISTURBANCE.
  - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND SITE IMPROVEMENTS PRIOR TO BEGINNING SITE WORK. ANY DAMAGE TO EXISTING SITE IMPROVEMENTS DURING CONSTRUCTION IS TO BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE GOVERNING AGENCIES. THE CONTRACTOR SHALL MAINTAIN SUFFICIENT PROTECTION TO THE PUBLIC, INCLUDING ALL UTILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL HOLD AND SAVE THE GOVERNING AGENCIES AND ENGINEERS HARMLESS AGAINST ALL CLAIMS AND DAMAGES.
  - CONSTRUCTION LAYDOWN AREA TO BE RESTORED TO EXISTING CONDITIONS FOLLOWING CONSTRUCTION COMPLETION UNLESS NOTED OTHERWISE.
  - CONTRACTOR SHALL BE RESPONSIBLE OF MAINTAINING EXISTING GRADING WITHIN THE FLOOD HAZARD AREA AND RIPARIAN BUFFER. ANY DISTURBANCE WITHIN THE FLOOD HAZARD AREA SHALL BE LIMITED TO LAND COVER FROM IMPERVIOUS TO PERVIOUS TO IMPROVE THE CONDITIONS ON SITE. NO DEMOLITION IS PERMITTED WITHIN THE RIPARIAN BUFFER AREA.
  - ALL SITE FEATURES LOCATED OUTSIDE OF THE LIMITS OF DISTURBANCE WILL REMAIN AND BE PROTECTED DURING CONSTRUCTION.
  - AQUA NJ IS RESPONSIBLE FOR ALL SOLID WASTE/RECYCLING REMOVAL FROM SITE.
  - THE PROPOSED WATER TREATMENT FACILITY WILL BE UNMANNED. SITE VISITATION BY AQUA NJ WILL BE ONCE PER DAY, FOR OPERATION AND MAINTENANCE.
  - CONTRACTOR TO INSTALL GAS LINE AND MATCH SIZE OF EXISTING PIPE. TEMPORARY GAS SERVICE TO BE PROVIDED TO WELL HOUSE DURING CONSTRUCTION.

**WATER TREATMENT BUILDING - SEWER CONNECTION**  
 H Scale: 1" = 20.00'  
 V Scale: 1" = 4.00'



REVISIONS		REVISIONS	
1	10/01/2021 30% DESIGN SUBMISSION	1	
2	01/28/2022 90% DESIGN SUBMISSION	2	
3	06/2022 ISSUE FOR BID	3	
4	09/2022 ISSUE FOR PERMIT	4	



HDR PROJECT NO. - 10201493

**KRISTIN MUNOZ**  
 STATE OF NEW JERSEY  
 KRISTIN W. MUNOZ  
 No. 6ES8560  
 LICENSED PROFESSIONAL ENGINEER  
 PROFESSIONAL ENGINEER N.J. LIC. NO. 85860

AQUA NEW JERSEY INC.  
 10 BLACK FOREST ROAD  
 HAMILTON, NJ 08691

**AQUA**  
 An Essential Utilities Company

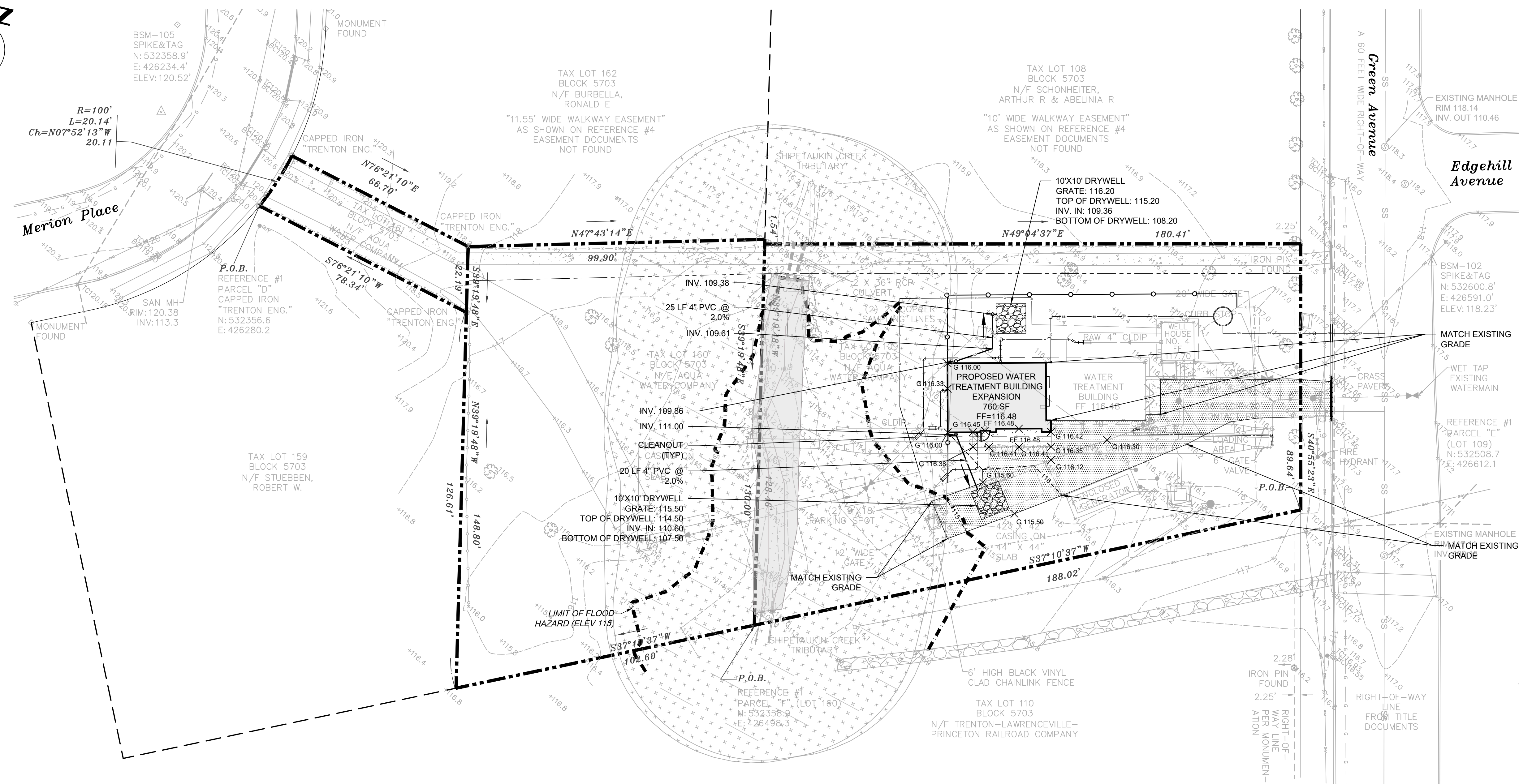
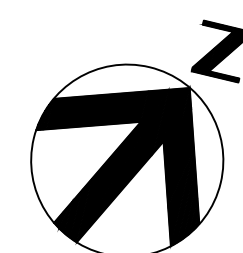
DRAWN BY: E. GIANNAKOPOULOU  
 PROJECT ENGR: CHAD COREY, P.E.

DATE: SEPTEMBER, 2022

PROJECT:

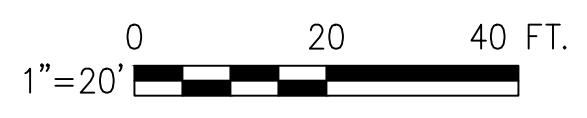
**LAWRENCEVILLE WELL STATION WATER TREATMENT UPGRADES**  
**UTILITY PLAN AND PROFILE**

AQUA NEW JERSEY, INC.	USE DIMENSIONS ONLY SCALE 1"=20'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	ISSUE FOR PERMIT
	<b>01C-04</b>

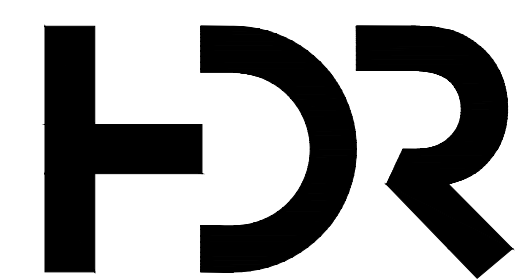


**GENERAL NOTES:**

1. UNLESS OTHERWISE NOTED HEREIN, THE CONTRACTOR SHALL COMPLY WITH ALL GENERAL NOTES SHOWN ON SHEET 01C-01.
2. CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS FOR ENGINEER'S REVIEW.
3. THE CONTRACTOR SHALL START CONSTRUCTION OF ANY GRAVITY SEWER AT THE LOWEST INVERT AND WORK UP-GRADE.
4. ALL SOIL AND MATERIAL REMOVED FROM SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL RECORDS OF THE DISPOSAL TO DEMONSTRATE COMPLIANCE WITH THE ABOVE REGULATIONS.
5. CONTRACTOR SHALL MATCH EXISTING GRADE FOR THE CONSTRUCTION OF THE PROPOSED CURB, PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 4 INCHES TO 7 INCHES ABOVE EXISTING GRADES UNLESS OTHERWISE NOTED.
6. A MINIMUM SLOPE OF 1.00% SHALL BE PROVIDED AWAY FROM THE BUILDING AND MAIN INFRASTRUCTURE. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FROM THE BUILDING IS ACHIEVED AND SHALL NOTIFY THE ENGINEER OF RECORD IF THIS CONDITION CANNOT BE MET.



REVISIONS	REVISIONS
1 10/01/2021 30% DESIGN SUBMISSION	1 10/01/2021 30% DESIGN SUBMISSION
2 01/28/2022 90% DESIGN SUBMISSION	2 01/28/2022 90% DESIGN SUBMISSION
3 06/2022 ISSUE FOR BID	3 06/2022 ISSUE FOR BID
4 09/2022 ISSUE FOR PERMIT	4 09/2022 ISSUE FOR PERMIT



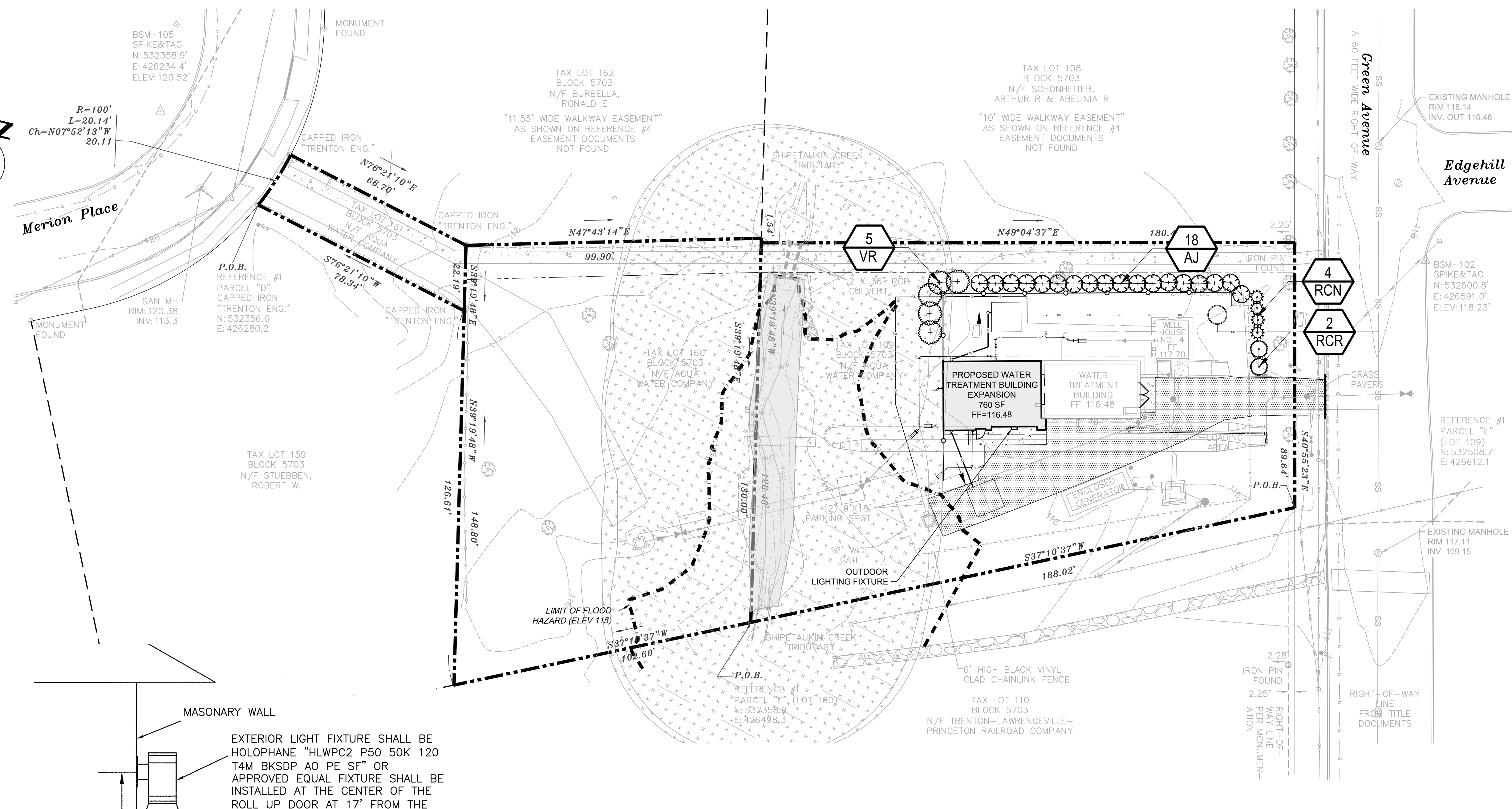
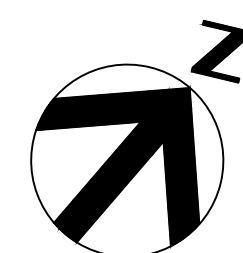
HDR PROJECT NO. - 10201493

**KRISTIN MUNOZ**  
 STATE OF NEW JERSEY  
 KRISTIN W. MUNOZ  
 No. GES8560  
 LICENSED PROFESSIONAL ENGINEER  
 PROFESSIONAL ENGINEER N.J. LIC. NO. 85860

**AQUA**  
 An Essential Utilities Company  
 DRAWN BY E. GIANNAKOPOULOU  
 PROJECT ENGR CHAD COREY, P.E.  
 DATE SEPTEMBER, 2022  
 PROJECT

**LAWRENCEVILLE WELL STATION WATER TREATMENT UPGRADES  
 GRADING AND DRAINAGE PLAN**

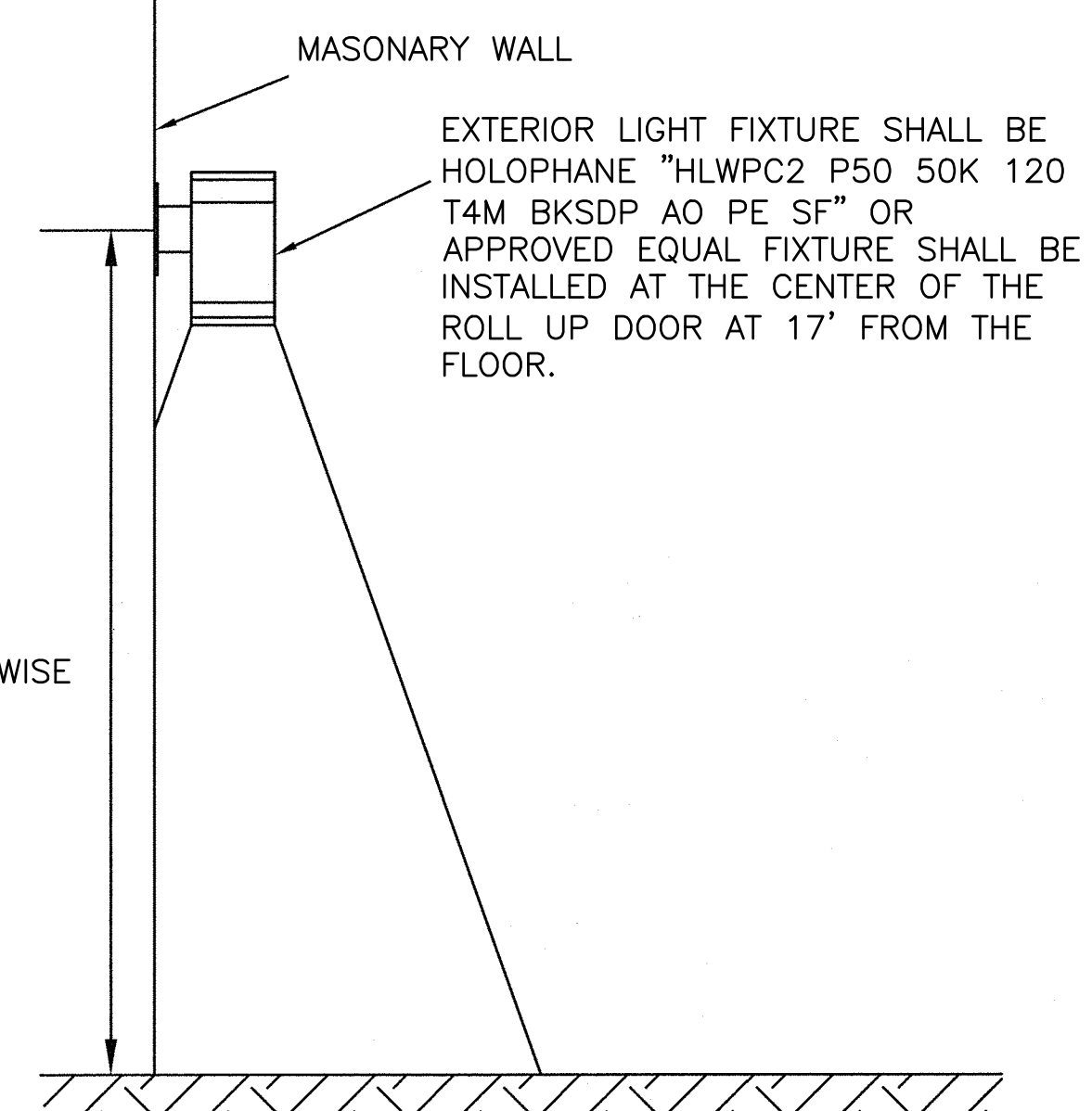
AQUA NEW JERSEY, INC.	USE DIMENSIONS ONLY SCALE 1"=20'-0"
ISSUE FOR PERMIT	<b>01C-05</b>



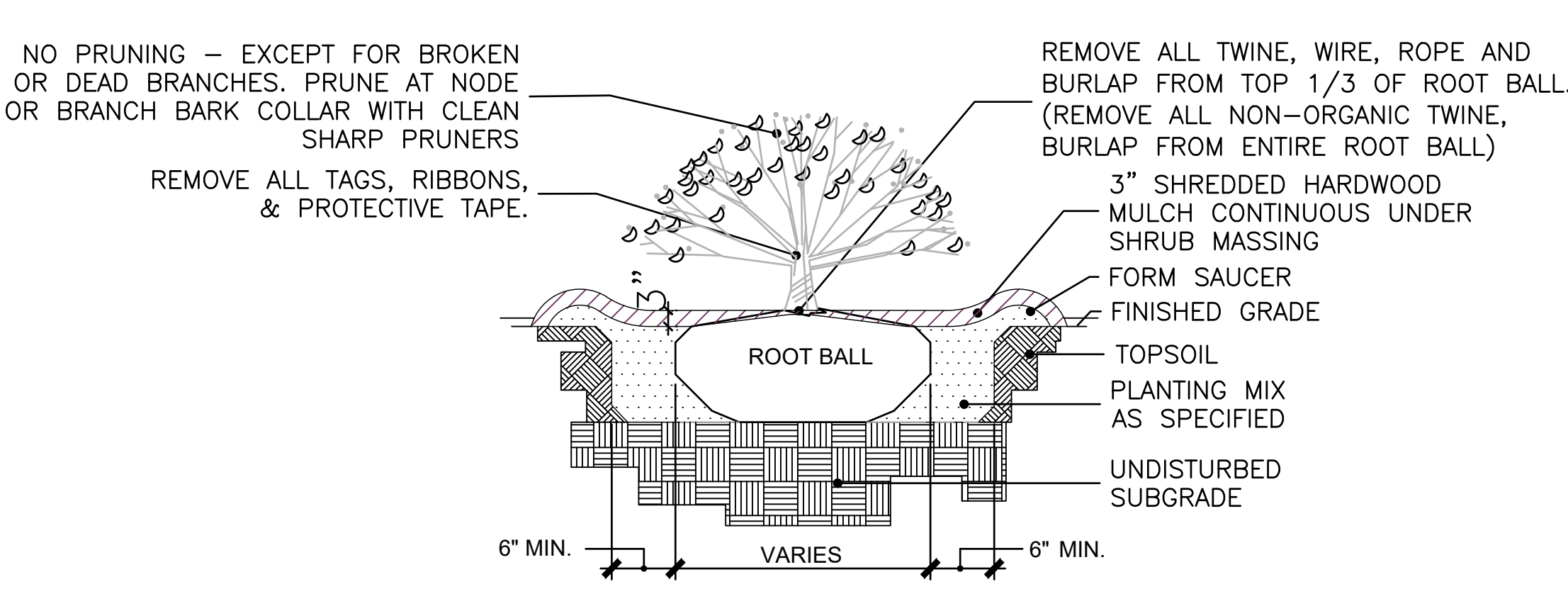
- GENERAL NOTES:**
1. TOPSOIL/PLANTING MIX- MINIMUM REQUIREMENT- WHERE PAVEMENT CUTOUP ON RENOVATED SITES ARE REQUIRED AND/OR WHERE NEW PLANTING STRIPS OR ISLANDS ARE REQUIRED, ALL PAVEMENT, CONSTRUCTION DEBRIS AND GRAVEL SUB-BASE MUST BE REMOVED BEFORE PREPARING SOIL AND PLANTING TREES.
  2. TOPSOIL/ PLANTING MIX SHOULD BE NEUTRAL, FERTILE, AGRICULTURAL SOIL CAPABLE OF SUSTAINING VICEROUS PLANT GROWTH. IT SHOULD BE UNIFORM COMPOSITION THROUGHOUT, WITH ADMIXTURES OF SUBSOIL. IT SHOULD BE FREE OF STONES, LUMPS, LIVE PLANTS AND THEIR ROOTS, STICKS AND OTHER EXTRANEOUS MATTER. TOPSOIL SHOULD NOT BE USED WHILE IN A FROZEN OR MUDDY CONDITION.
  3. TOPSOIL/ PLANTING MIX SHALL HAVE AN ACIDITY RANGE OF PH 5.5-7.0 AND THE FOLLOWING COMPOSITION:CLAY (RED CLAY/WELL PULVERIZED)- MIN. 10%; MAX. 35% COMPOST\*/ORGANIC-MIN. 5%; MAX.10% SILT- MIN.30%; MAX.50% COARSE SAND (FREE OF ROCKS, 5.0 TO 1.0 MM F)- MIN.30% MAX. 45% \*ORGANIC MATERIAL SUCH AS SAWDUST OR LEAF MOLD THAT HAS COMPLETED THE DECOMPOSITION PROCESS.

- PLANTING NOTES:**
1. THE FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE A/E & O/R.
  2. SEE SPECIFICATIONS FOR ADDITIONAL PLANTING REQUIREMENTS.
  3. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING AND PROPOSED SITE UTILITIES PRIOR TO THE INSTALLATION OF PLANT MATERIAL. IF A CONFLICT ARISES, NOTIFY A/E.
  4. PROVIDE 3" SHREDDED COMPOSTED HARDWOOD BARK MULCH CONTINUOUS UNDER PLANT MASSINGS AND AROUND INDIVIDUAL PLANTS.
  5. PERFORM WORK IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF NURSERMEN STANDARDS.
  6. PLANTING SHALL BE GUARANTEED FOR A PERIOD OF ONE GROWING SEASON BEYOND THE TIME OF PLANTING.
  7. CONTRACTOR SHALL ALLOW FOR THE STAKING OF 10% OF THE TOTAL NUMBER OF SHADE, EVERGREEN, AND ORNAMENTAL TREES.

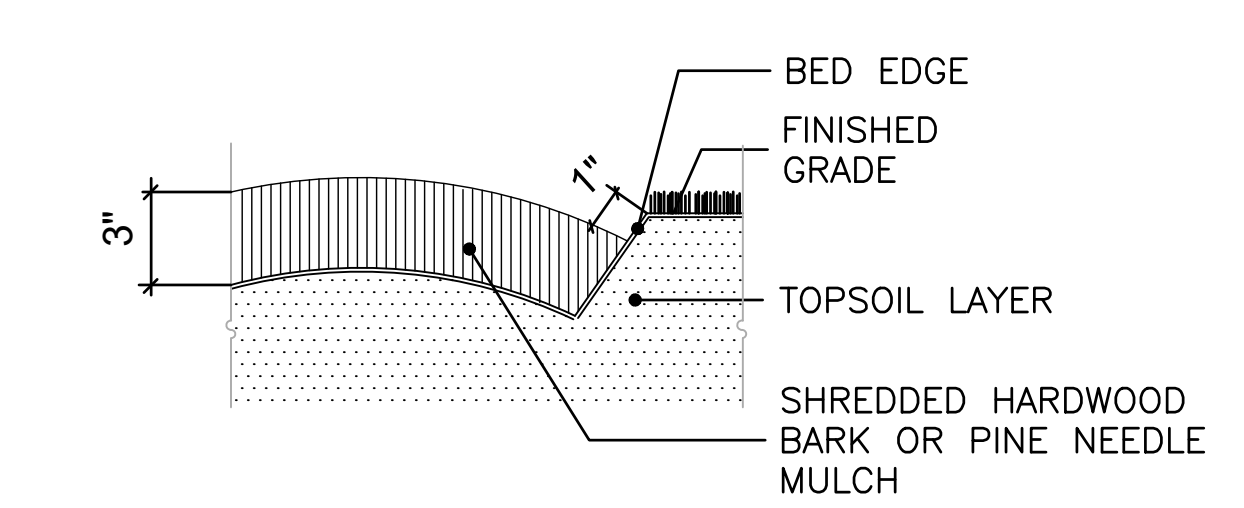
SHRUBS	ABBREVIATION	BOTANICAL / COMMON NAME	SIZE	CONT.	HEIGHT	QTY
	AJ	Aububa japonica / Spotted Laurel	-	B & B	2-3'	18
	RCN	Rhododendron catawbiense 'nova zembla' / Nova Zembla Rhododendron	-	B & B	2-3'	4
	RCR	Rhododendron 'roseum elegans' / Roseum Elegans Rhododendron	-	B & B	2-3'	2
	VR	Viburnum rhytidophylloides 'alleggheny' / Allegheny Viburnum	-	B & B	2-3'	5



**1 LIGHTING DETAIL**  
N.T.S



**2 SHRUB PLANTING**  
N.T.S

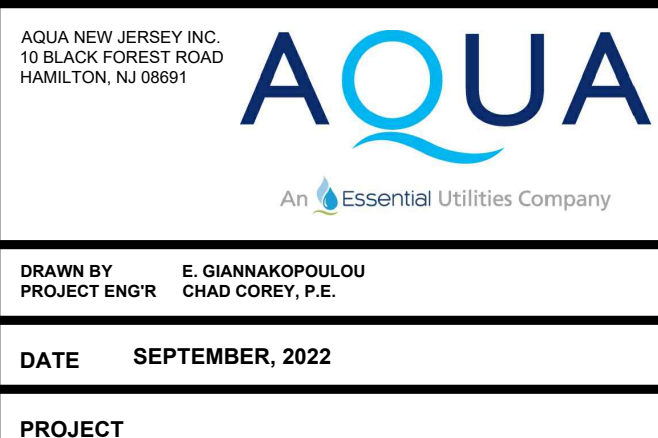
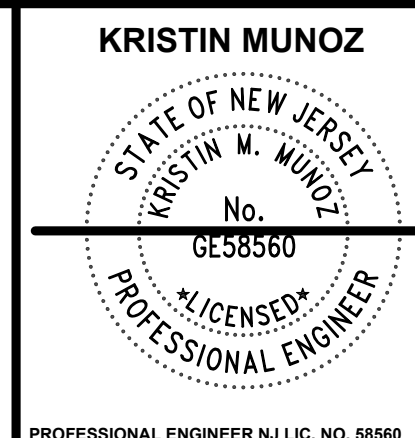


**3 EDGE DETAIL**  
N.T.S

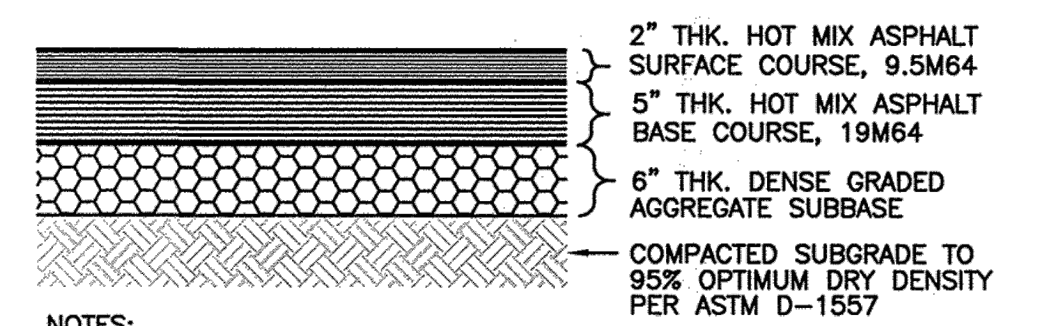
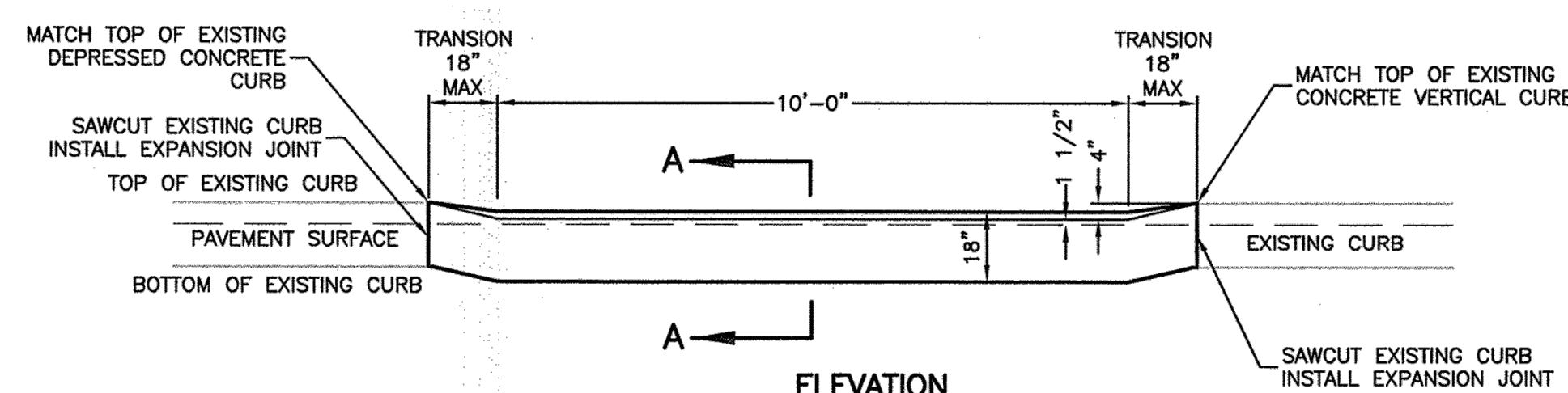


REVISIONS	REVISIONS
	10/01/2021 30% DESIGN SUBMISSION
	01/28/2022 90% DESIGN SUBMISSION
	06/2022 ISSUE FOR BID
	09/2022 ISSUE FOR PERMIT

REVISIONS	REVISIONS

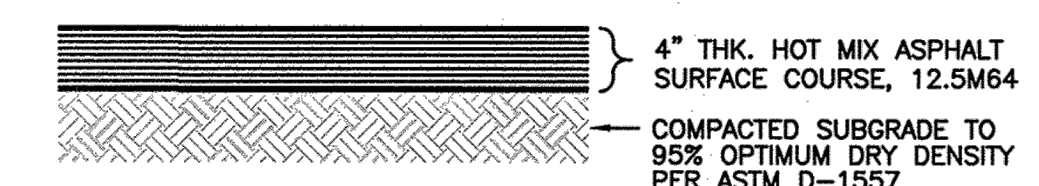


LAWRENCEVILLE WELL STATION WATER TREATMENT UPGRADES	
LANDSCAPING AND LIGHTING PLAN	
DATE: SEPTEMBER, 2022	USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES
PROJECT	ISSUE FOR PERMIT
AQUA NEW JERSEY, INC.	USE DIMENSIONS ONLY SCALE 1"=20'-0"
	<b>01C-06</b>

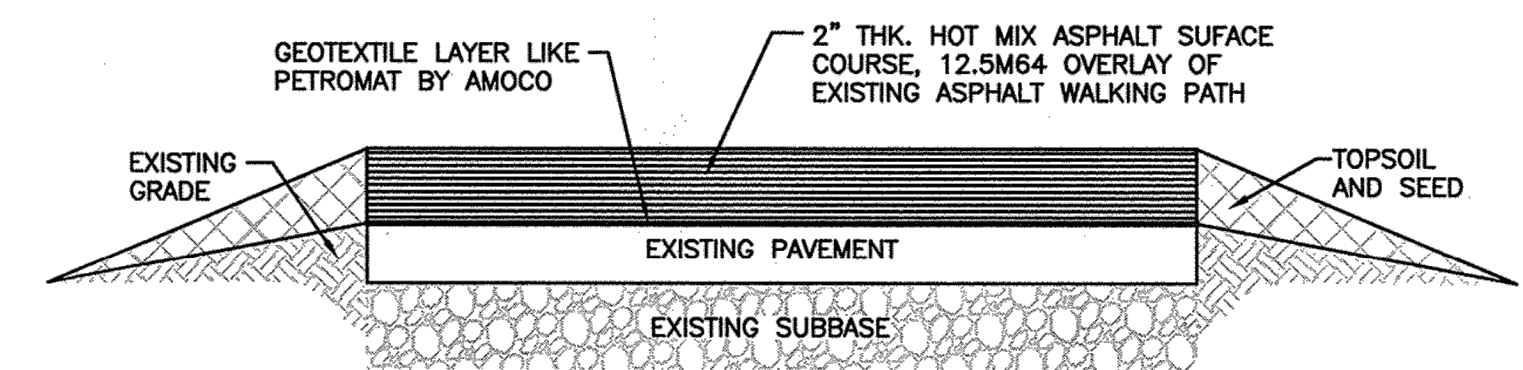


**NOTES:**  
 1. CBR TESTING TO BE PERFORMED AT THE TIME OF CONSTRUCTION TO CONFIRM SUBGRADE CBR LEVEL IF A CHANGE IN PAVEMENT DESIGN IS PROPOSED.  
 2. THE MUNICIPAL ENGINEER SHALL REVIEW ALL CBR DATA AND APPROVE ANY PAVEMENT DESIGN CONSISTENT WITH RESULTS OF SAID TEST.

**ROADWAY PAVING SECTION**



**WALKING PATH FULL DEPTH PAVING SECTION**



**NOTE:**  
 THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ANY TREE ROOTS AND FILLING OF ANY CRACKS THAT WOULD NOT ALLOW HIM TO ENSURE THAT THE PROPOSED WALKWAY OVERLAY RESTORATION WOULD NOT SHOW SIGNS OF THESE EXISTING FAULTS.

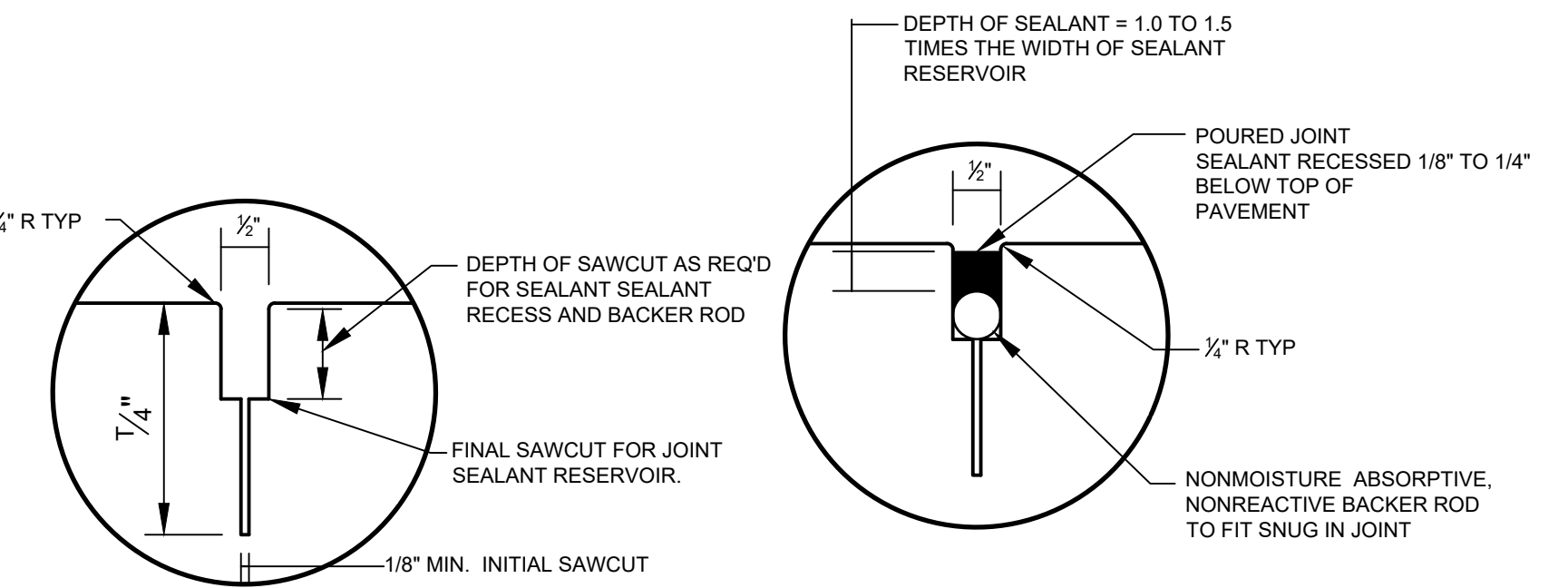
**WALKING PATH RESTORATION SECTION**

**PAVING DETAILS**  
 NOT TO SCALE

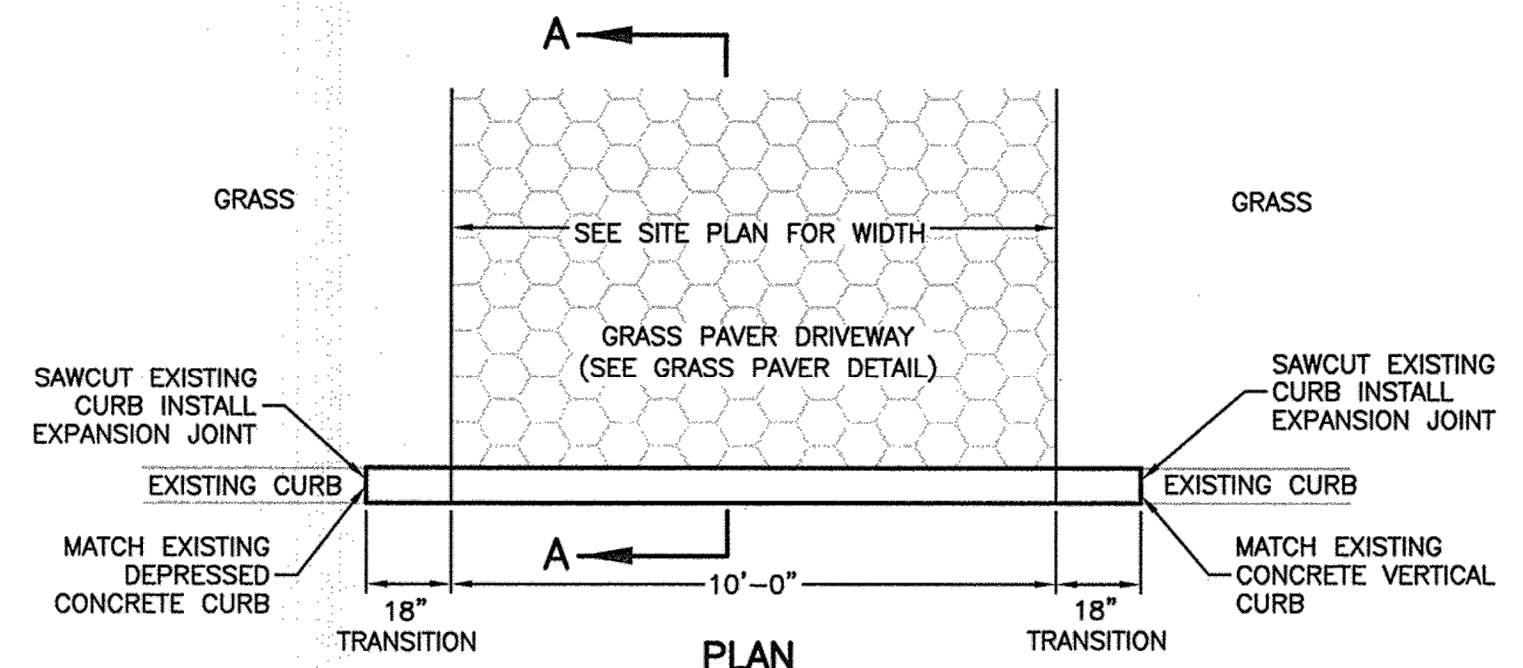
**COLD WEATHER LIMITATIONS**  
 HMA SHALL BE PLACED WHEN COMBINATIONS OF LIFT THICKNESS AND BASE SURFACE TEMPERATURES ARE WITHIN THE FOLLOWING LIMITS:

LIFT THICKNESS INCHES	MINIMUM BASE TEMPERATURE, °F
≤ 1	50
1-2	41
≥ 2	32

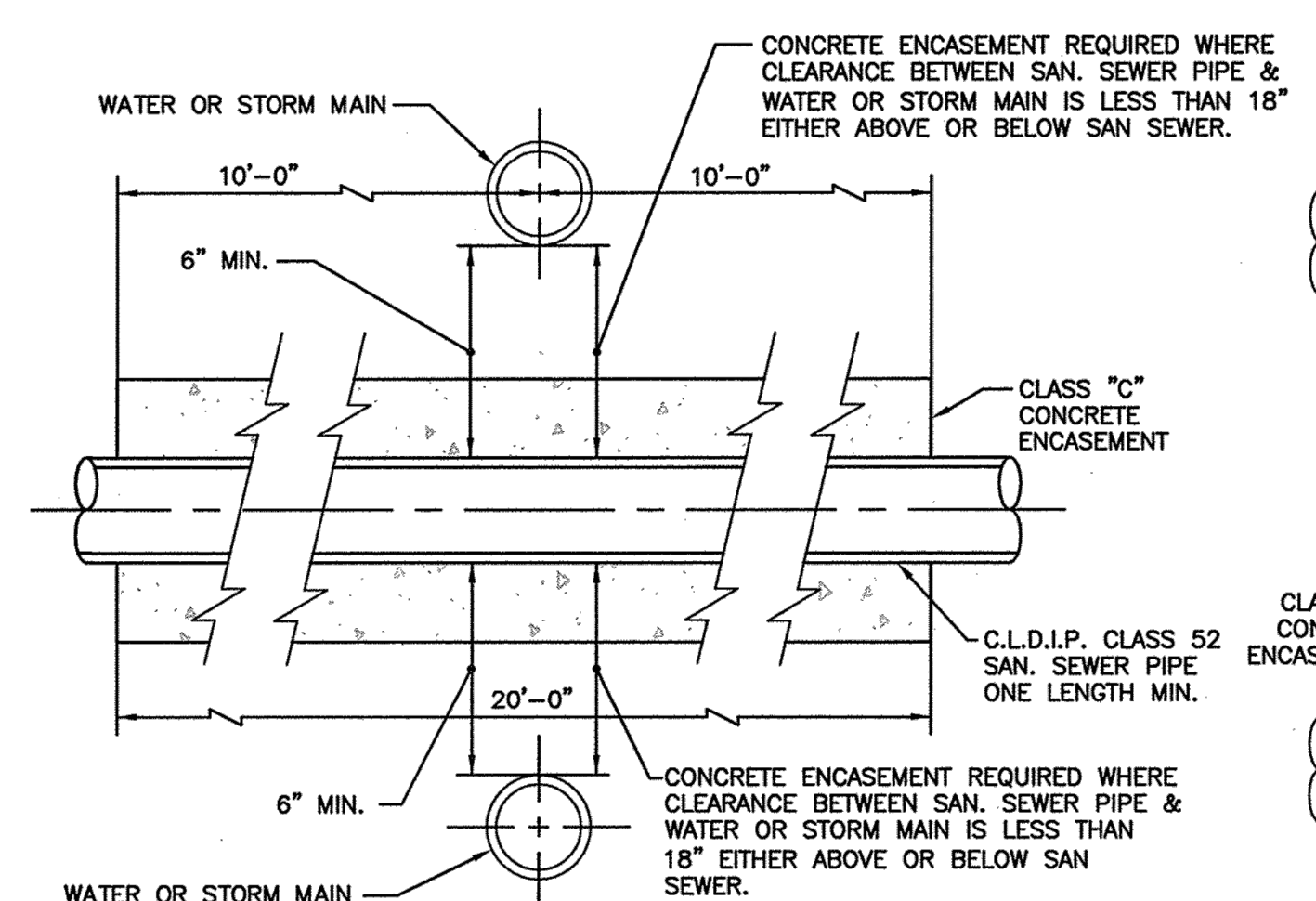
SEE NJDOT STANDARD SPECIFICATION - 2001, SECTION 404.13



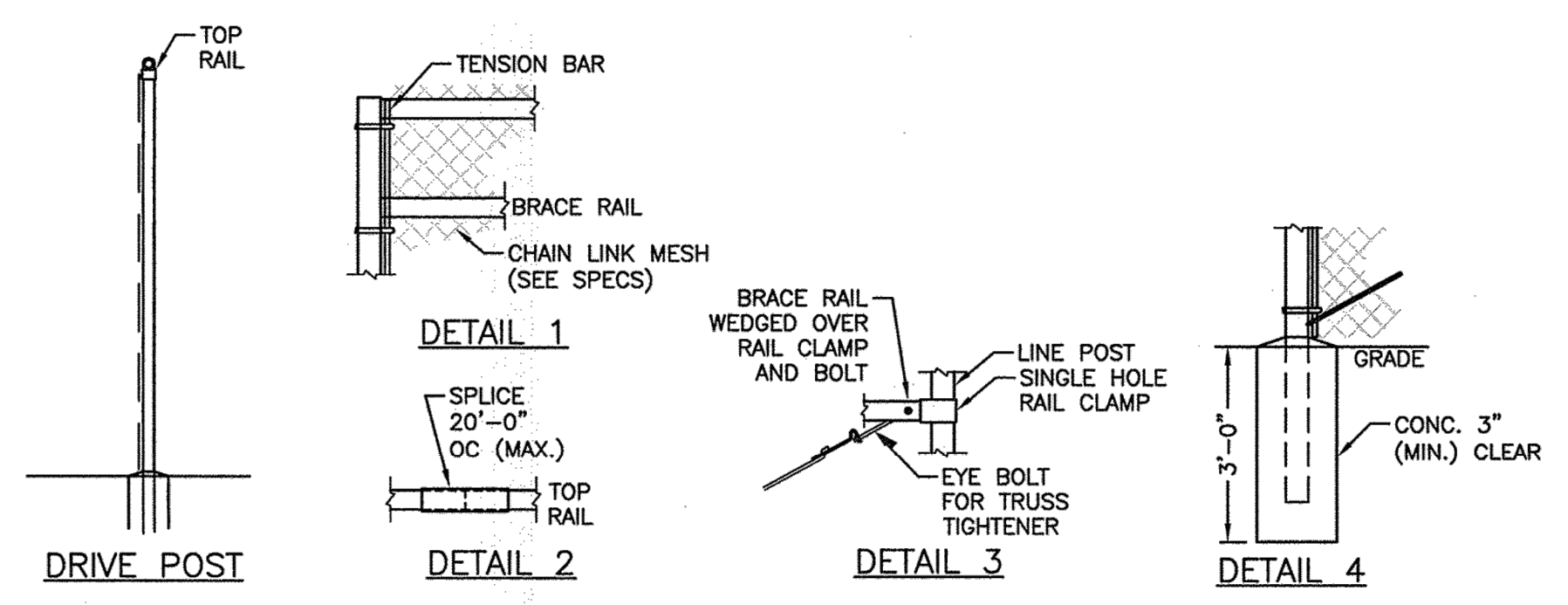
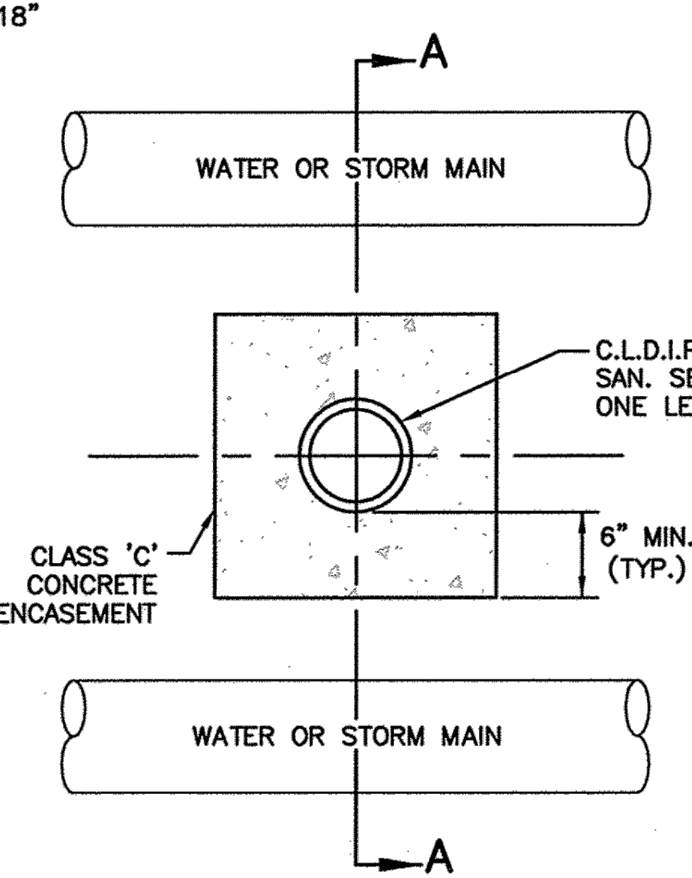
**SAWCUT**  
**SAW CUT DETAILS**  
 NOT TO SCALE



**GRASS PAVER DRIVEWAY APRON AND CURB DEPRESSION DETAIL**  
 NOT TO SCALE

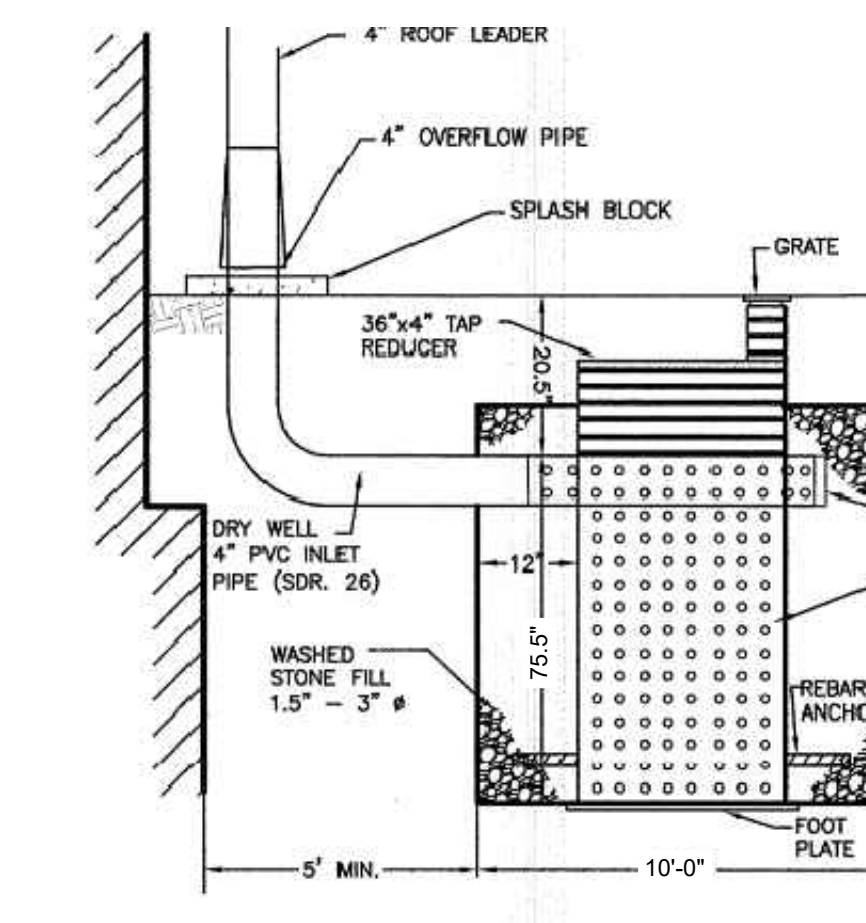


**SECTION A-A**  
**CONCRETE ENCASEMENT DETAIL**  
 NOT TO SCALE



**NOTES:**  
 1. CHAIN LINK MESH, POSTS, RAILS AND ALL HARDWARE SHALL BE THERMALLY FUSED VINYL COATED AND BLACK IN COLOR.  
 2. THE CHAIN LINK CORE WIRE SHALL BE WOVEN IN A 1-INCH MESH FROM 9 GAGE GALVANIZED STEEL WIRE CONFORMING TO ASTM 641-71A.  
 3. ALL POSTS, FRAMING, AND HARDWARE SHALL BE HOT DIPPED GALVANIZED, VINYL COATED 10 TO 14 MILS THICK, APPLIED BY FUSION BONDING, BLACK IN COLOR.  
 4. ALL POSTS SHALL BE VINYL COATED AND HOT DIPPED GALVANIZED STEEL PIPE (SCHEDULE 40, ASTM F1083 (A-120) OF THE SIZES AND WEIGHTS GIVEN BELOW OR OF OTHER APPROVED EQUIVALENT SECTION.  
 A. LINE POSTS SHALL HAVE A 2-1/2 INCH OUTSIDE DIAMETER AND WEIGH 3.65 LB. PER LINEAR FOOT.  
 B. END, CORNER AND PULL POSTS SHALL HAVE A 3 INCH OUTSIDE DIAMETER AND WEIGH 5.79 LB. PER LINEAR FOOT.  
 C. GATE POST FOR SINGLE-SWING GATES UP TO 6 FT. AND DOUBLE SWING GATE OPENINGS UP TO 12 FT. - SHALL BE 3 IN. OUTSIDE DIAMETER AND WEIGH 5.79 LB. PER LINEAR FOOT.  
 D. GATE POSTS FOR DOUBLE-SWING GATE OPENINGS WIDER THAN 12 FEET SHALL BE 4-INCH OUTSIDE DIAMETER AND WEIGH 9.10 LB. PER LINEAR FOOT.  
 5. TOP RAILS SHALL BE VINYL COATED AND HOT DIPPED GALVANIZED STEEL PIPE (SCHEDULE 40, ASTM F1083 (A-120) OF THE SIZES AND WEIGHTS GIVEN BELOW OR OF OTHER APPROVED EQUIVALENT SECTION.  
 A. LINE POSTS SHALL HAVE A 2-1/2 INCH OUTSIDE DIAMETER AND WEIGH 3.65 LB. PER LINEAR FOOT.  
 B. END, CORNER AND PULL POSTS SHALL HAVE A 3 INCH OUTSIDE DIAMETER AND WEIGH 5.79 LB. PER LINEAR FOOT.  
 C. GATE POST FOR SINGLE-SWING GATES UP TO 6 FT. AND DOUBLE SWING GATE OPENINGS UP TO 12 FT. - SHALL BE 3 IN. OUTSIDE DIAMETER AND WEIGH 5.79 LB. PER LINEAR FOOT.  
 D. GATE POSTS FOR DOUBLE-SWING GATE OPENINGS WIDER THAN 12 FEET SHALL BE 4-INCH OUTSIDE DIAMETER AND WEIGH 9.10 LB. PER LINEAR FOOT.  
 6. TOP RAILS SHALL BE VINYL COATED AND HOT DIPPED GALVANIZED STEEL PIPE (SCHEDULE 40, ASTM F1083 (A-120) OF THE SIZES AND WEIGHTS GIVEN BELOW OR OF OTHER APPROVED EQUIVALENT SECTION.  
 A. LINE POSTS SHALL HAVE A 2-1/2 INCH OUTSIDE DIAMETER AND WEIGH 3.65 LB. PER LINEAR FOOT.  
 B. END, CORNER AND PULL POSTS SHALL HAVE A 3 INCH OUTSIDE DIAMETER AND WEIGH 5.79 LB. PER LINEAR FOOT.  
 C. GATE POST FOR SINGLE-SWING GATES UP TO 6 FT. AND DOUBLE SWING GATE OPENINGS UP TO 12 FT. - SHALL BE 3 IN. OUTSIDE DIAMETER AND WEIGH 5.79 LB. PER LINEAR FOOT.  
 D. GATE POSTS FOR DOUBLE-SWING GATE OPENINGS WIDER THAN 12 FEET SHALL BE 4-INCH OUTSIDE DIAMETER AND WEIGH 9.10 LB. PER LINEAR FOOT.  
 7. TENSION WIRE SHALL BE VINYL COATED AND HOT DIPPED GALVANIZED STEEL WIRE (SCHEDULE 40, ASTM F1083 (A-120) OF THE SIZES AND WEIGHTS GIVEN BELOW OR OF OTHER APPROVED EQUIVALENT SECTION.  
 A. LINE POSTS SHALL HAVE A 2-1/2 INCH OUTSIDE DIAMETER AND WEIGH 3.65 LB. PER LINEAR FOOT.  
 B. END, CORNER AND PULL POSTS SHALL HAVE A 3 INCH OUTSIDE DIAMETER AND WEIGH 5.79 LB. PER LINEAR FOOT.  
 C. GATE POST FOR SINGLE-SWING GATES UP TO 6 FT. AND DOUBLE SWING GATE OPENINGS UP TO 12 FT. - SHALL BE 3 IN. OUTSIDE DIAMETER AND WEIGH 5.79 LB. PER LINEAR FOOT.  
 D. GATE POSTS FOR DOUBLE-SWING GATE OPENINGS WIDER THAN 12 FEET SHALL BE 4-INCH OUTSIDE DIAMETER AND WEIGH 9.10 LB. PER LINEAR FOOT.

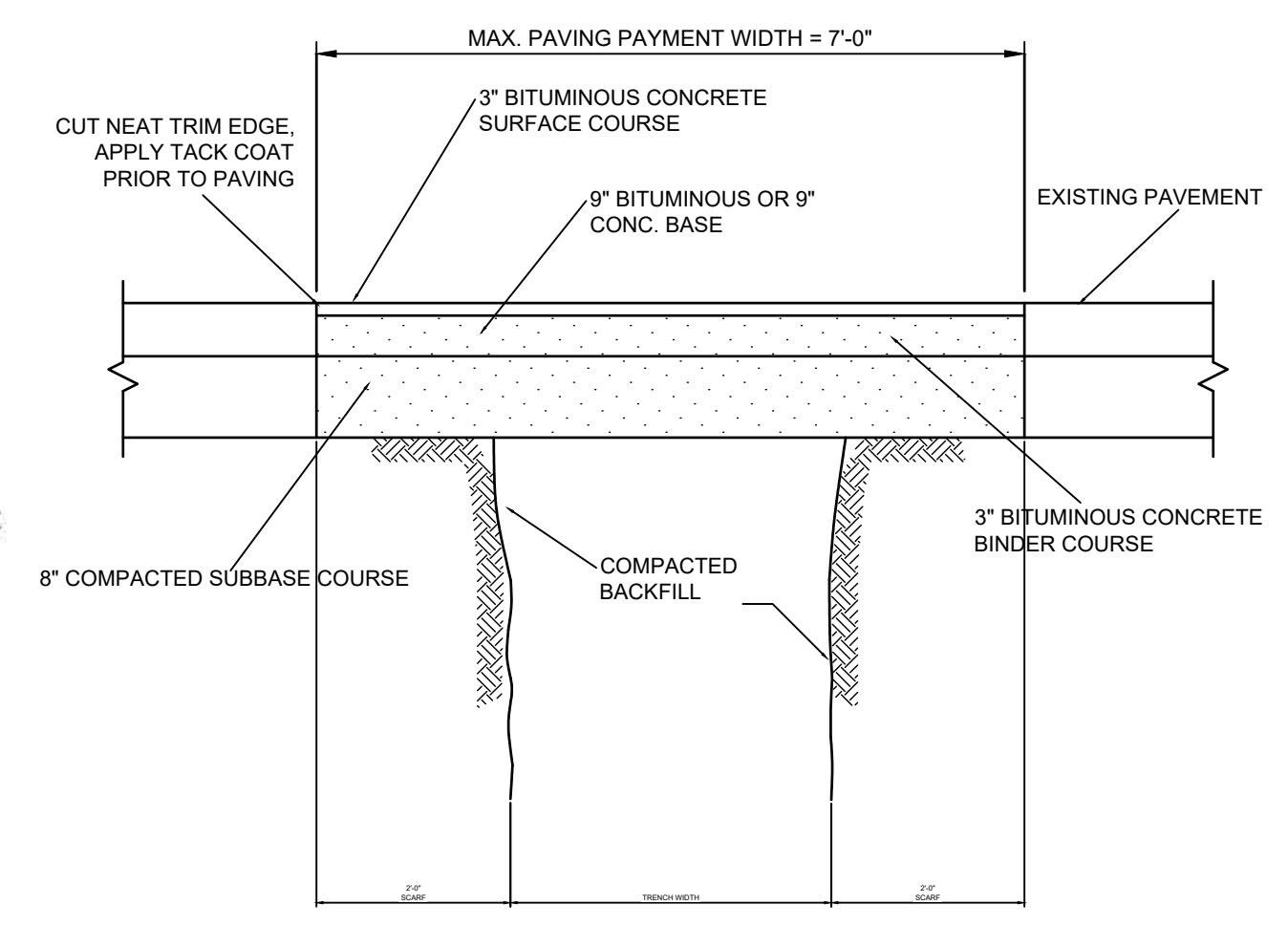
**6' HIGH CHAIN LINK FENCE**  
 NOT TO SCALE



**NOTE:**  
 1. THE STONE CONTRACTOR MUST CERTIFY THAT THE VOID RATIO PROVIDED IN THE STONE IS FORTY PERCENT (40%).  
 2. ROOF LEADERS ON THE NORTH AND SOUTH ELEVATIONS OF THE BUILDING WILL BE PIPED TO A DRYWELL AS SHOWN ON THE UTILITY PLAN.

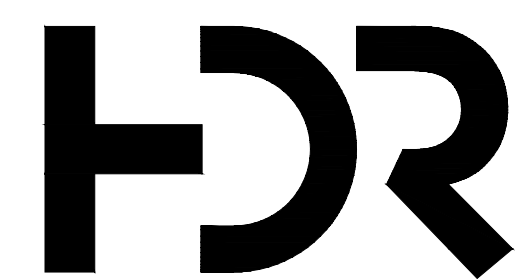
**SECTION VIEW**

**DRYWELL DETAIL**  
 NOT TO SCALE



**PAVEMENT RESTORATION**  
 NOT TO SCALE

REVISIONS	REVISIONS
1	10/01/2021 30% DESIGN SUBMISSION
2	01/28/2022 90% DESIGN SUBMISSION
3	06/2022 ISSUE FOR BID
4	09/2022 ISSUE FOR PERMIT



HDR PROJECT NO. - 10201493

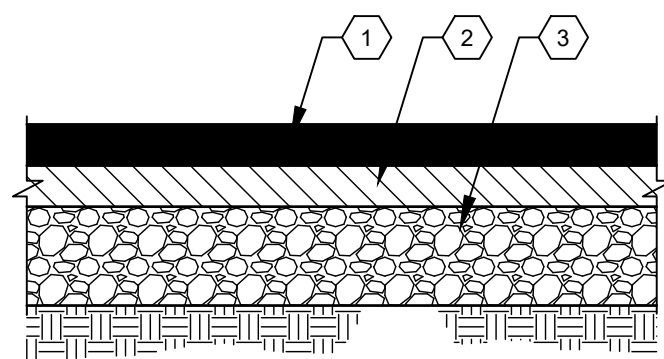
**KRISTIN MUNOZ**  
 STATE OF NEW JERSEY  
 KRISTIN W. MUNOZ  
 No. GES8560  
 LICENSED PROFESSIONAL ENGINEER  
 PROFESSIONAL ENGINEER N.J. LIC. NO. 85860

**AQUA**  
 An Essential Utilities Company  
 DRAWN BY E. GIANNAKOPOULOU  
 PROJECT ENGR CHAD COREY, P.E.  
 DATE SEPTEMBER, 2022  
 PROJECT

**LAWRENCEVILLE WELL STATION WATER TREATMENT UPGRADES**  
**CONSTRUCTION DETAILS I**

AQUA NEW JERSEY, INC.  
 USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES  
 ISSUE FOR PERMIT  
 USE DIMENSIONS ONLY SCALE NOT TO SCALE  
**01C-07**





**KEYNOTES:**

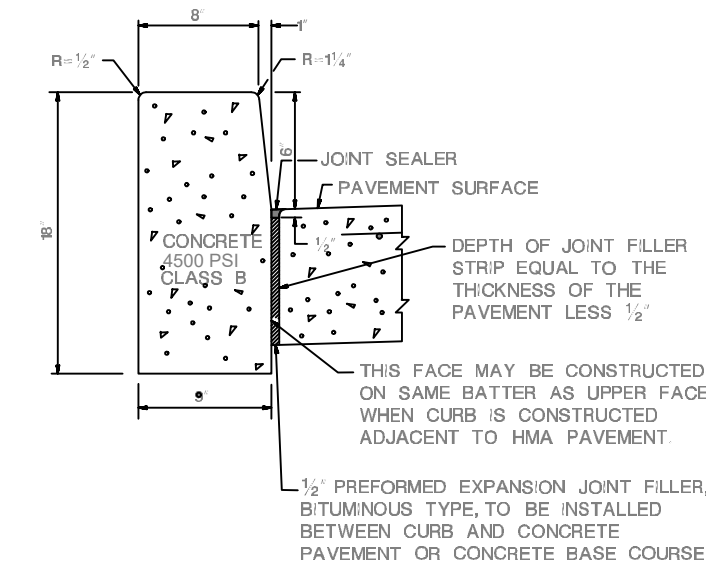
- 1 SURFACE COURSE: 2" MINIMUM COMPACTED THICKNESS WITH 9.5M64 HOT MIX ASPHALT (HMA).
- 2 BASE COURSE: 6" MINIMUM COMPACTED THICKNESS 19M64 HMA.
- 3 SUBBASE: 8" MINIMUM COMPACTED THICKNESS WITH DENSE GRADED AGGREGATE (DGA).

- NOTES:**
1. CRUSHED DENSE GRADED AGGREGATE SUBBASE TO EXTEND A MINIMUM 2 FEET BEYOND EDGE OF PAVEMENT.

**ASPHALT PAVEMENT SECTION**

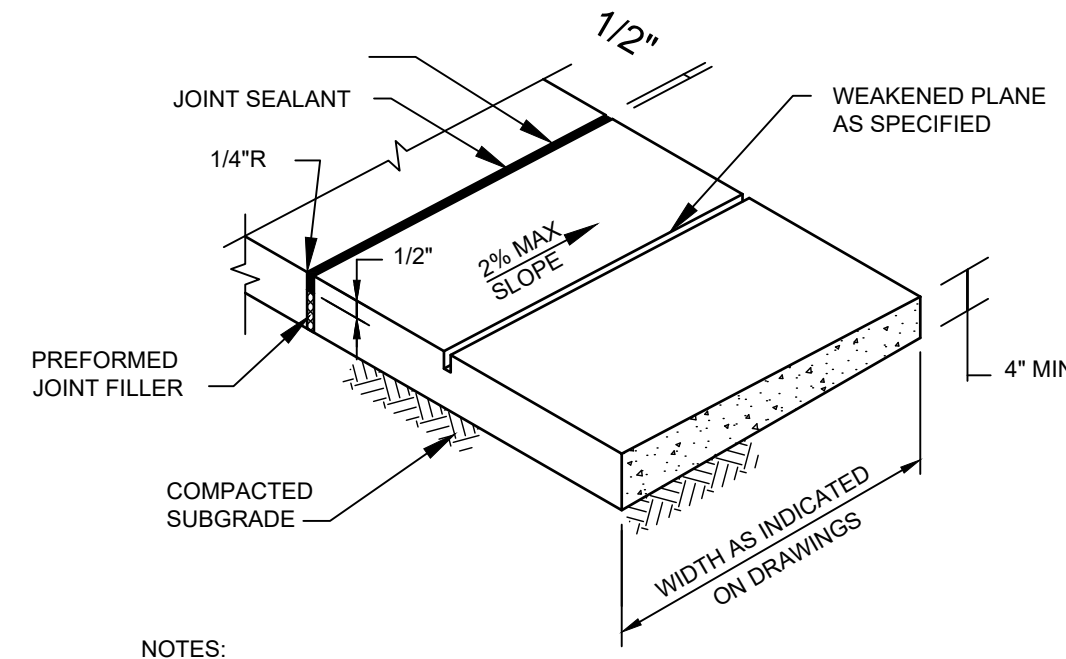
NOT TO SCALE

EXPANSION JOINT AS SPECIFIED



**VERTICAL CURB**

NOT TO SCALE NJDOT CD-607-1.6

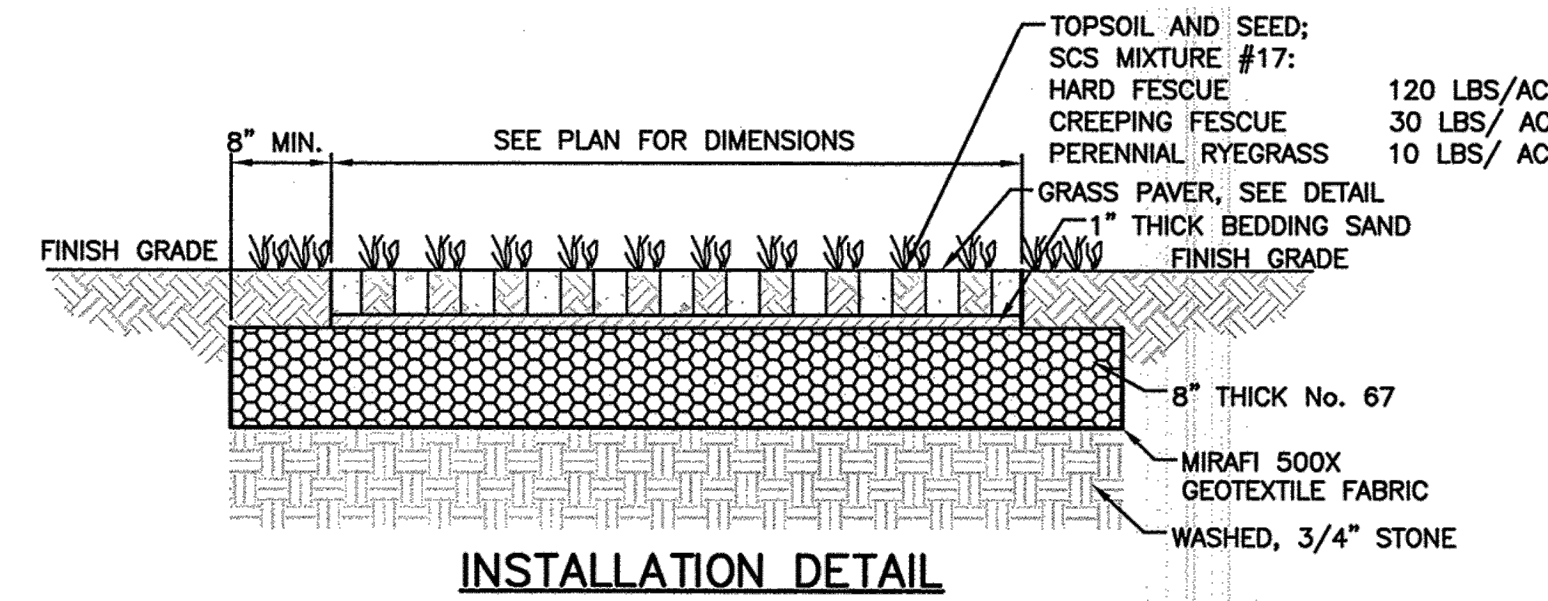


**NOTES:**

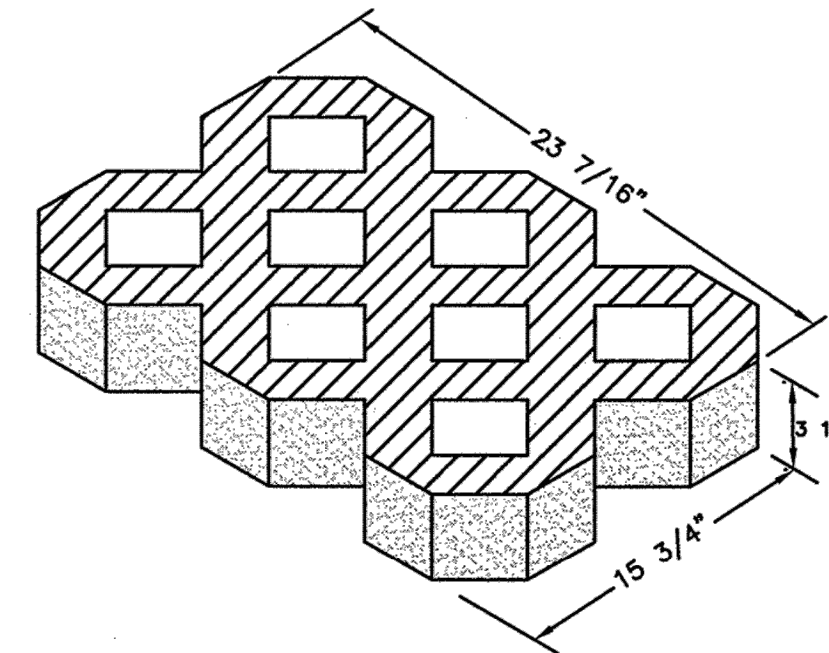
1. PROVIDE FULL DEPTH 3/8 INCH PREFORMED JOINT FILLER ALL AROUND AT ALL UTILITY POLES, METER BOXES, ETC.
2. PLACE PREFORMED JOINT FILLER FULL DEPTH THRU JOINTS AT POINT OF TANGENCY, ABUTTING BUILDINGS, CURBS, WALLS, STRUCTURES, AND AT MINIMUM 25 FOOT INTERVALS.
3. THICKNESS OF CONCRETE AS SHOWN ON DRAWINGS.
4. ALL SIDEWALKS SHALL BE MIN. 4,000 PSI, CLASS B CONCRETE.
5. SEE DETAIL 6105C106 FOR JOINT DETAILS.

**CONCRETE WALKWAY/SIDEWALK**

NOT TO SCALE



**INSTALLATION DETAIL**

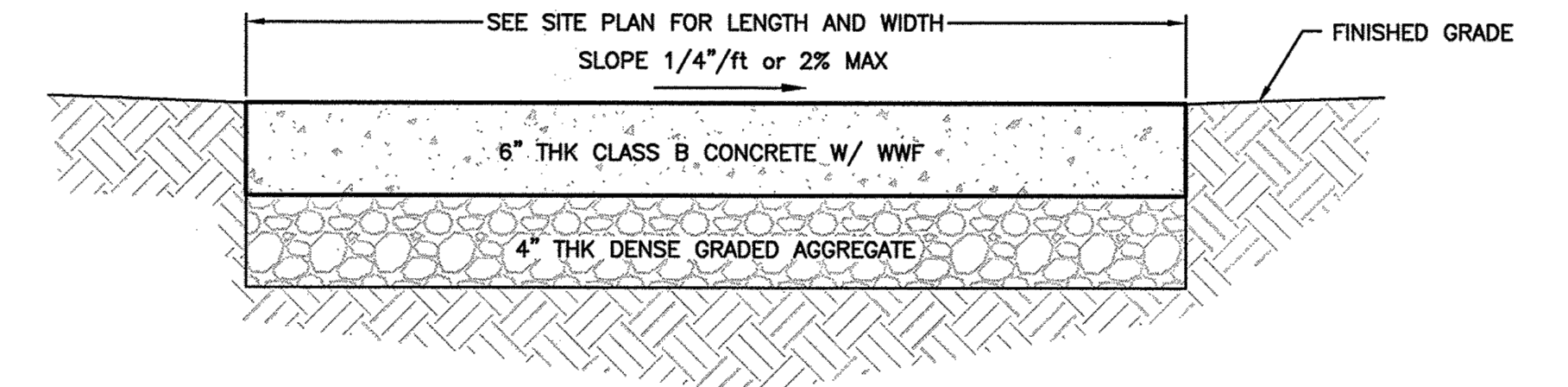


**NOTES:**

1. GRASS PAVERS AS MANUFACTURED BY THE E.P. HENRY CORPORATION AND INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.
2. AREA TO BE EXCAVATED TO REQUIRED DEPTH AND SOIL SUBGRADE TO BE COMPACTED TO AT LEAST 95% OF MODIFIED PROCTOR DENSITY.
3. THE BASE SHOULD BE 8" MINIMUM THICK, NJDOT NO. 67 CRUSHED AGGREGATE TO EXTEND BEYOND THE EDGE OF GRASS PAVER BY 8" MINIMUM.
4. THE SETTING BED SHOULD BE 1 - 1 1/2" THICK, CONCRETE SAND CONFORMING TO ASTM C33 AND SHOULD BE SCREED TO PROPER ELEVATION. THE SCREEDED SAND SHOULD NOT BE SATURATED NOR DISTURBED.

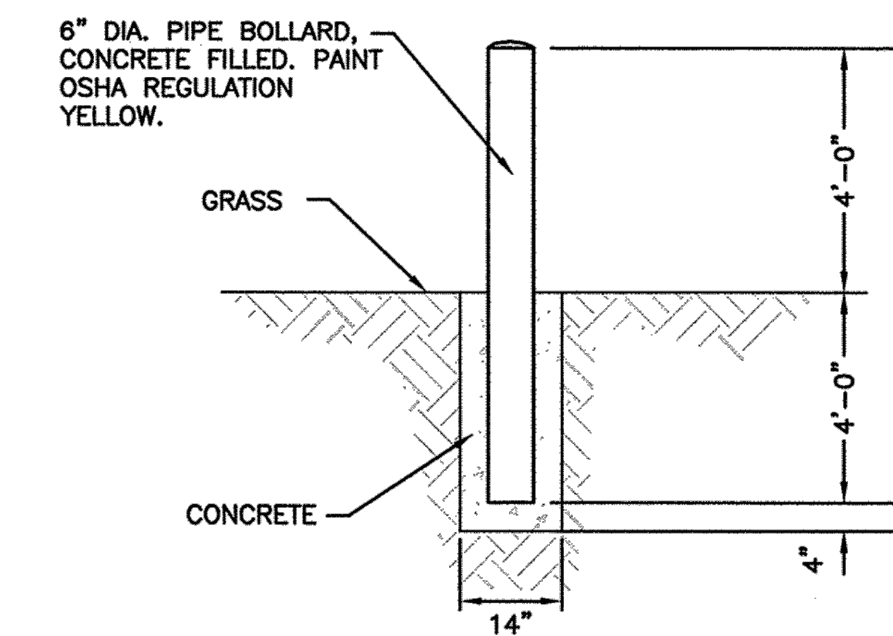
**GRASS PAVER DETAIL**

NOT TO SCALE



**CONCRETE ENTRANCE PAD DETAIL**

NOT TO SCALE



**6" DIAMETER PIPE BOLLARD DETAIL**

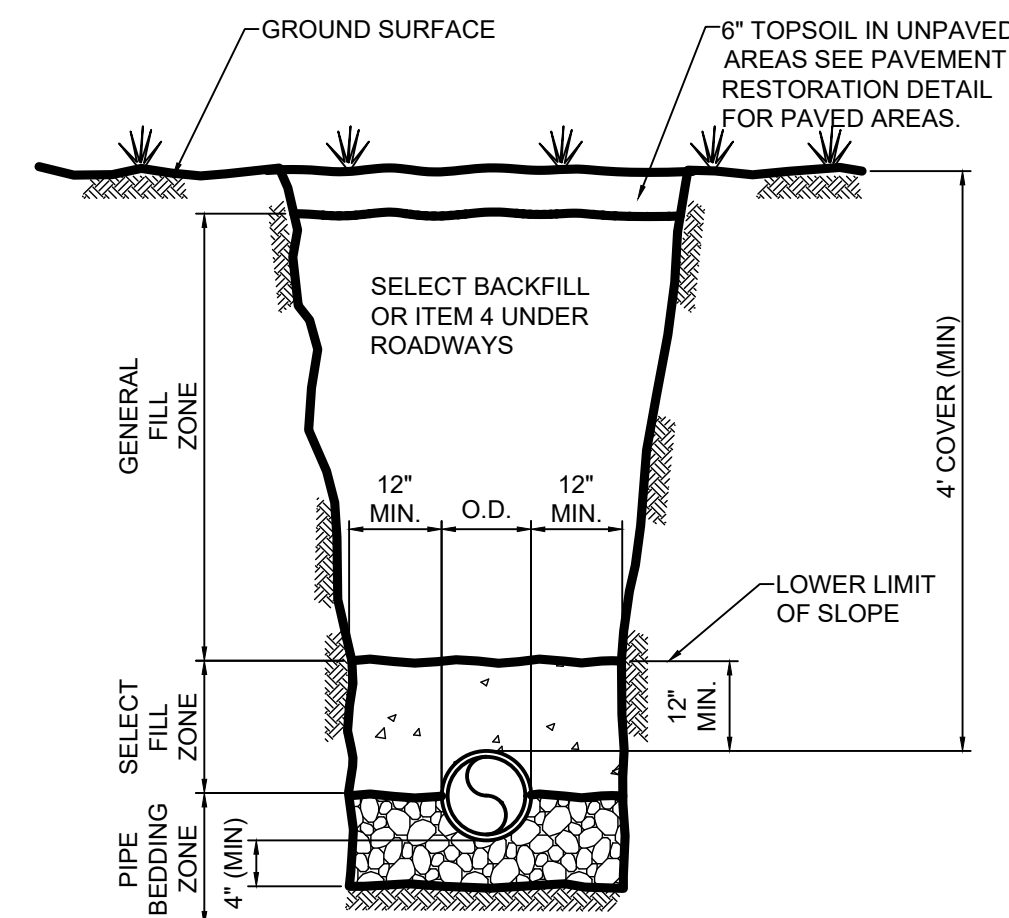
NOT TO SCALE

MINIMUM SIZE OF CONCRETE THRUST BLOCKS																				
D TEES, CROSSES & END CAP	A		B		90° BENDS	A		B		45° BENDS	A		B		DXD REDUCERS	A		B		
	2'-0"	8"	2'-6"	8"		1'-6"	8"	1'-6"	8"		1'-6"	8"	1'-6"	8"		1'-6"	8"	6"x4"	1'-6"	1'-0"
6"	2'-0"	8"	2'-6"	8"	1'-6"	8"	1'-6"	8"	1'-6"	8"	1'-6"	8"	1'-6"	8"	6"x4"	1'-6"	1'-0"	8"x4"	2'-0"	1'-0"
8"	2'-6"	8"	3'-0"	8"	1'-6"	8"	1'-6"	8"	1'-6"	8"	1'-6"	8"	1'-6"	8"	8"x4"	2'-0"	1'-0"	10"x6"	2'-4"	1'-3"
10"	3'-0"	10"	3'-6"	10"	2'-3"	10"	2'-3"	10"	1'-6"	10"	1'-6"	10"	1'-6"	10"	10"x8"	2'-4"	1'-3"	10"x8"	2'-6"	1'-6"
12"	3'-6"	10"	3'-9"	10"	2'-6"	10"	2'-6"	10"	1'-6"	10"	1'-6"	10"	1'-6"	10"	10"x8"	2'-6"	1'-6"	16"x12"	3'-6"	2'-0"
16"	5'-0"	18"	5'-6"	18"	3'-6"	18"	3'-6"	18"	2'-0"	16"	2'-0"	16"	2'-0"	16"	16"x12"	3'-6"	2'-0"			

1. THRUST BLOCKS TO BE USED FOR WATER MAIN AND FORCE MAINS AT ALL BENDS, TEES, REDUCERS AND PLUG
2. BEARING AREAS FOR THRUST BLOCKS ARE BASED ON THE UNDISTURBED SOIL WITH BEARING CAPACITY OF 1000 LBS PER SQ.FT. FOR OTHER SOILS OF LESS BEARING CAPACITY, THE AREAS SHALL BE ADJUSTED ACCORDINGLY. (FIG. 14, ASCE "PIPELINE DESIGN FOR WATER AND WASTEWATER, 1975").
3. ALL CONCRETE FOR THRUST BLOCKS SHALL BE CLASS B CONCRETE.
4. THE THRUST BLOCKS SHALL BE POURED FROM FITTING SUCH THAT THEY BEAR ON THE UNDISTURBED WALL OF THE TRENCH.
5. THE TABULATED CONTACT BEARING AREAS LISTED ARE FOR HORIZONTAL AND DOWNWARD THRUST ONLY AND ARE NOT APPLICABLE FOR UPWARD THRUST.

**CONCRETE THRUST BLOCKS**

NOT TO SCALE

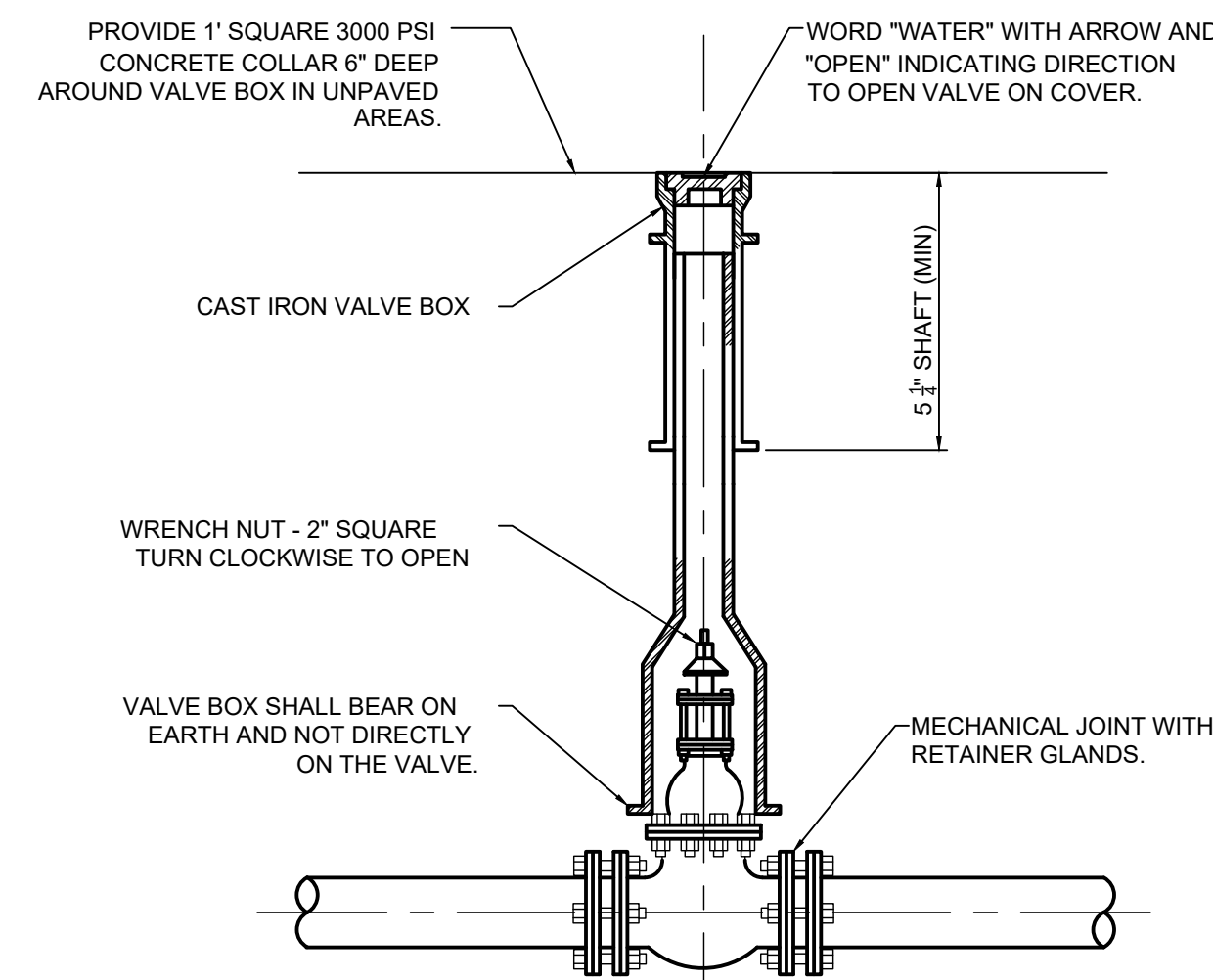


**NOTES:**

1. REFER TO SPECIFICATIONS FOR BEDDING AND BACKFILL DETAILS.

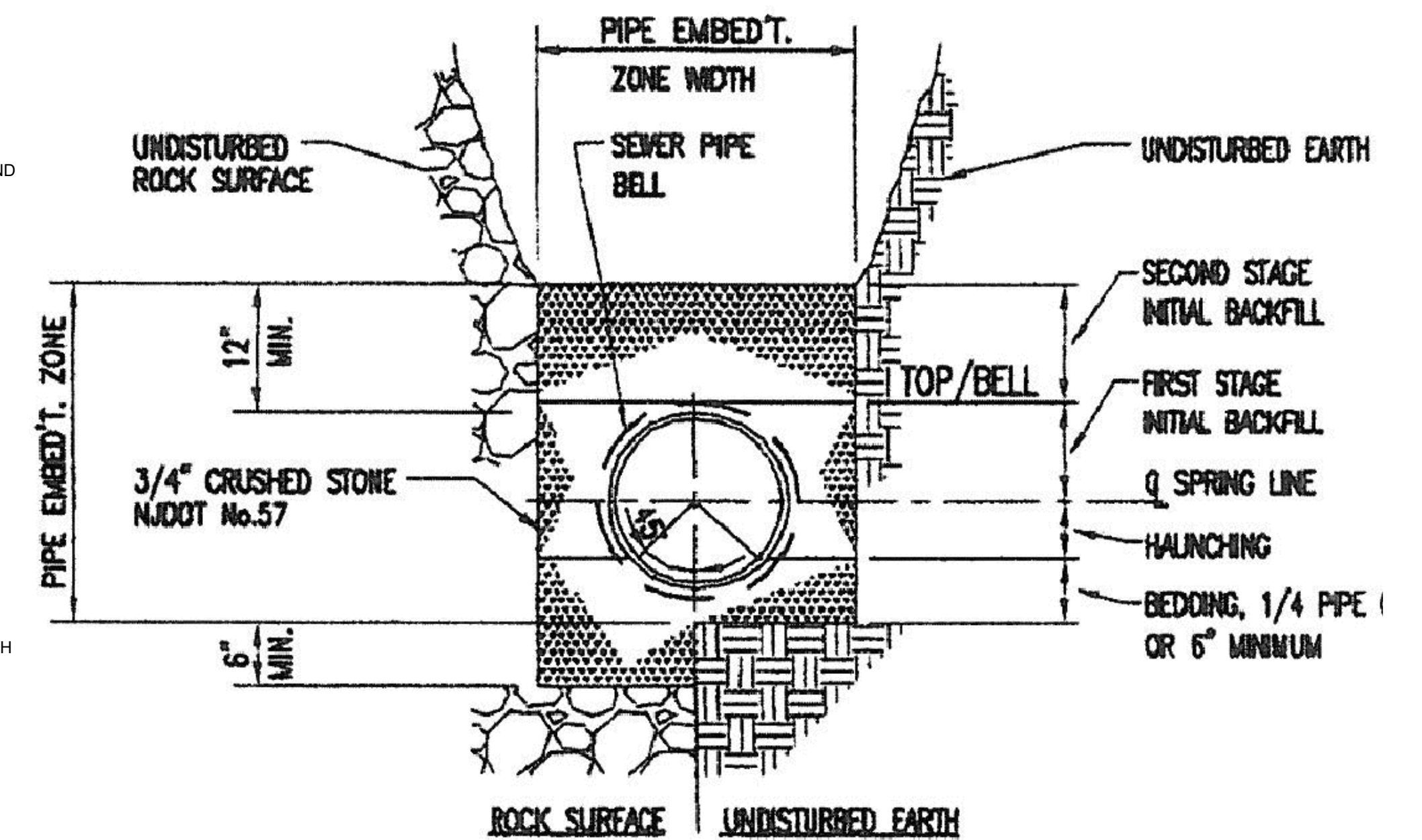
**TYP. PIPE TRENCH DETAIL**

SCALE: NOT TO SCALE



**GATE VALVE INSTALLATION DETAIL**

SCALE: NOT TO SCALE

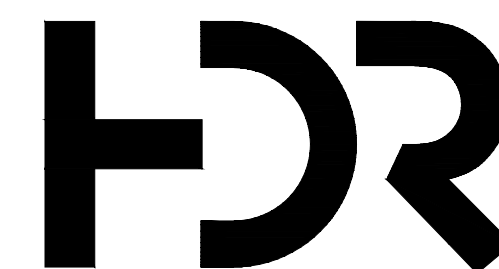


**PVC BEDDING DETAIL**

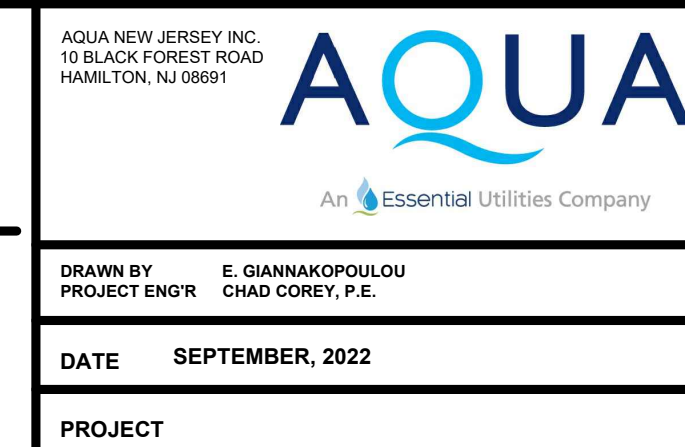
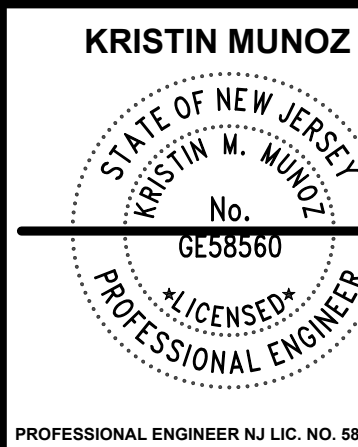
NOT TO SCALE



REVISIONS	REVISIONS
1 10/01/2021 30% DESIGN SUBMISSION	
2 01/28/2022 90% DESIGN SUBMISSION	
3 06/2022 ISSUE FOR BID	
4 09/2022 ISSUE FOR PERMIT	



HDR PROJECT NO. - 10201493

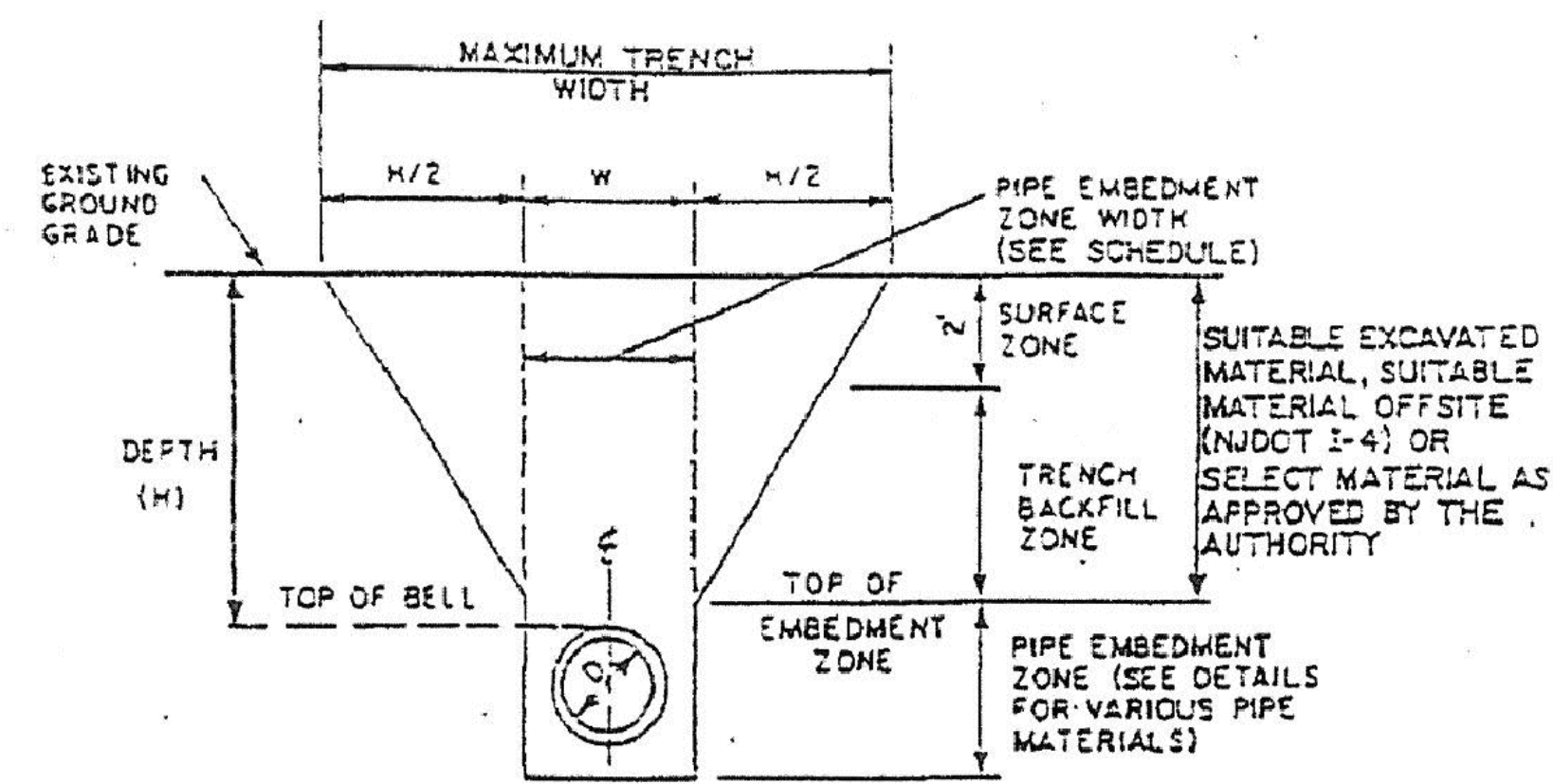


**LAWRENCEVILLE WELL STATION WATER TREATMENT UPGRADES  
CONSTRUCTION DETAILS II**

AQUA NEW JERSEY, INC.	USE DIMENSIONS ONLY SCALE NOT TO SCALE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	ISSUE FOR PERMIT
	01C-08

### 6'-0" DIA. MANHOLE

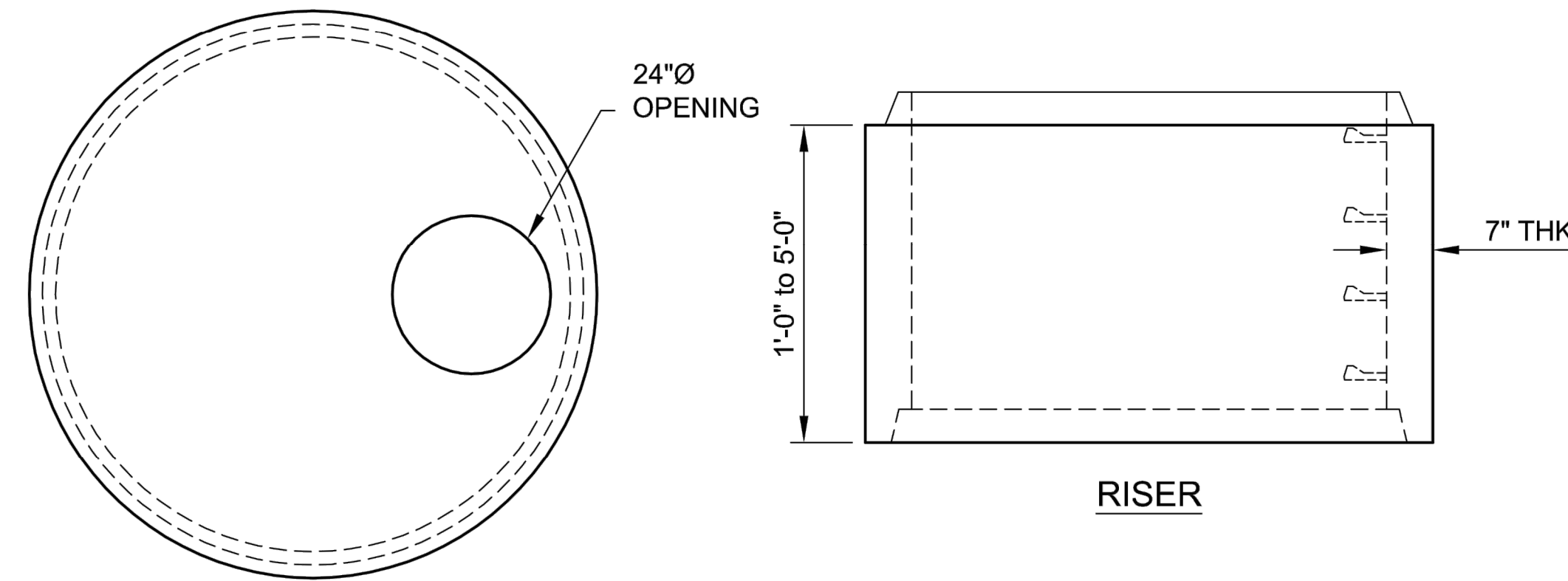
- CONCRETE STRENGTH: 5,000 PSI MIN @ 28 DAYS
- STRUCTURE CONFORMS TO ASTM C478-02
- DESIGN: HS-25 TRAFFIC LOADING
- APPROXIMATE WEIGHT: BASE SLAB - 2.02 TONS  
1'-0" OF RISER - 0.90 TONS  
FLATSLAB - 2.24 TONS



PIPE EMBEDMENT ZONE WIDTH SCHEDULE

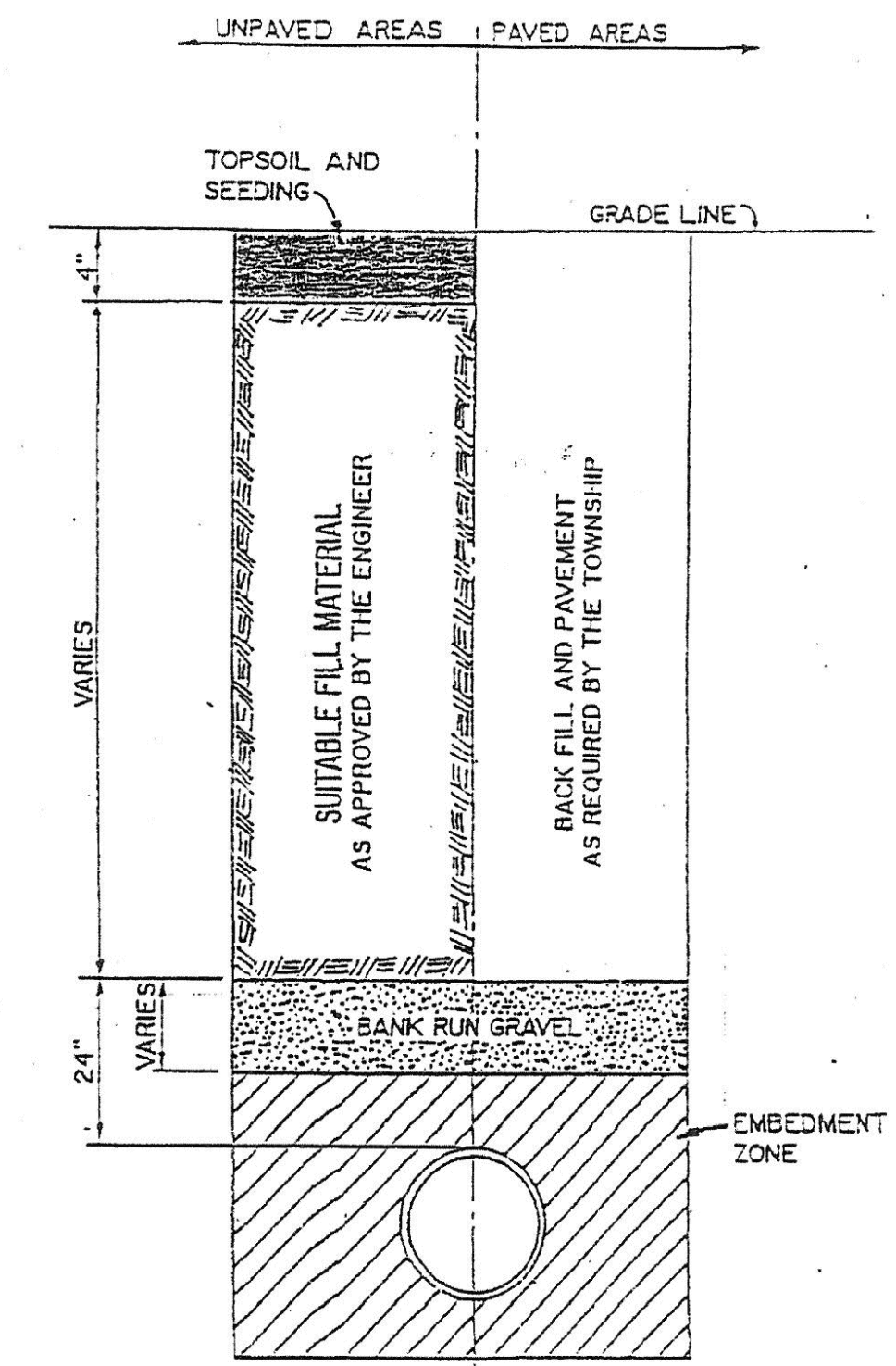
INSIDE DIA. OF PIPE (D)	4" - 6"	15"	18"	21"	24"	27"
EMBEDMENT ZONE WIDTH (W)	3'-0"	3'-6"	3'-6"	4'-0"	4'-0"	4'-6"

PIPE EMBEDMENT DETAIL NOT TO SCALE

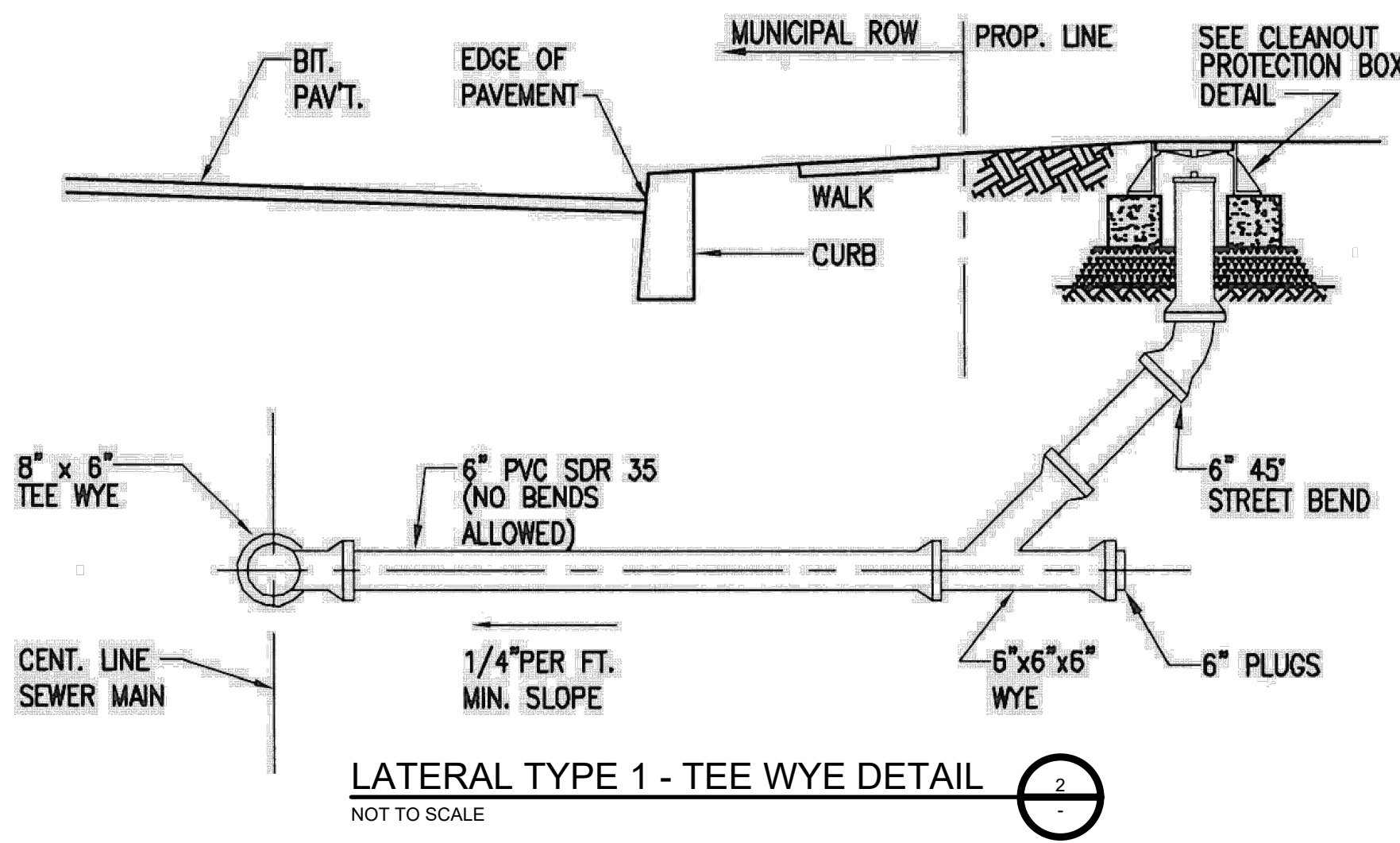


RISER

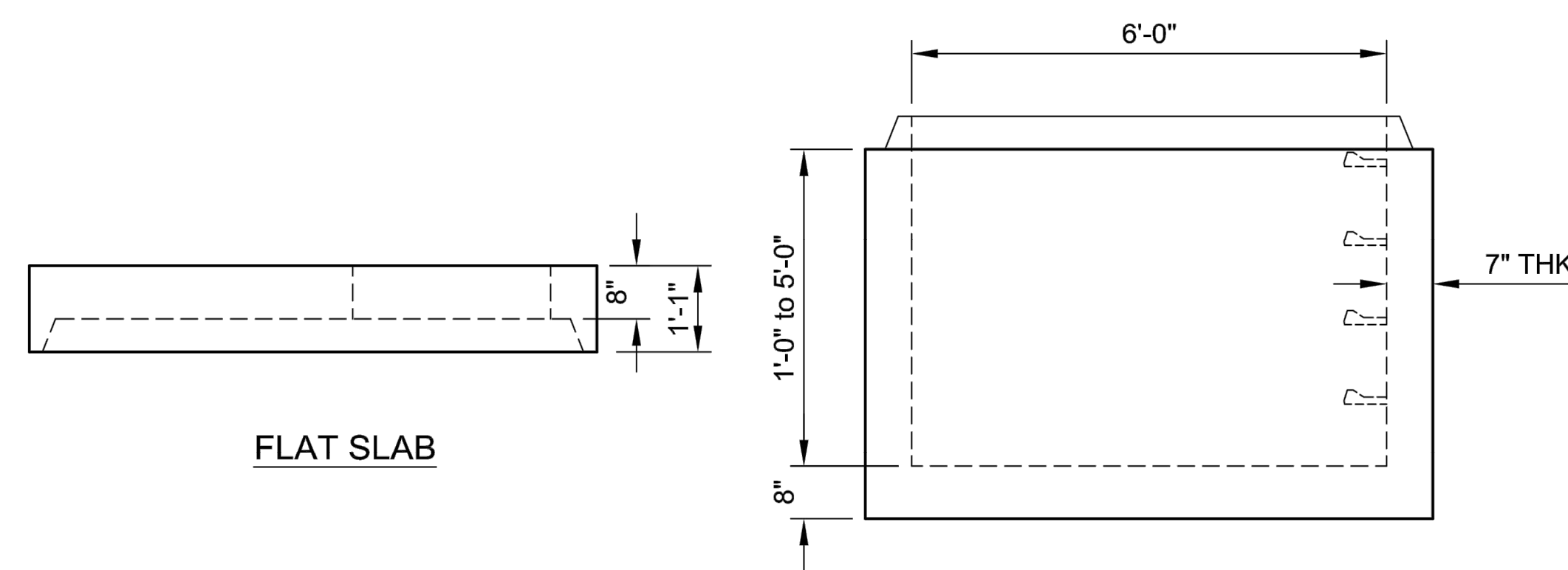
FLAT SLAB



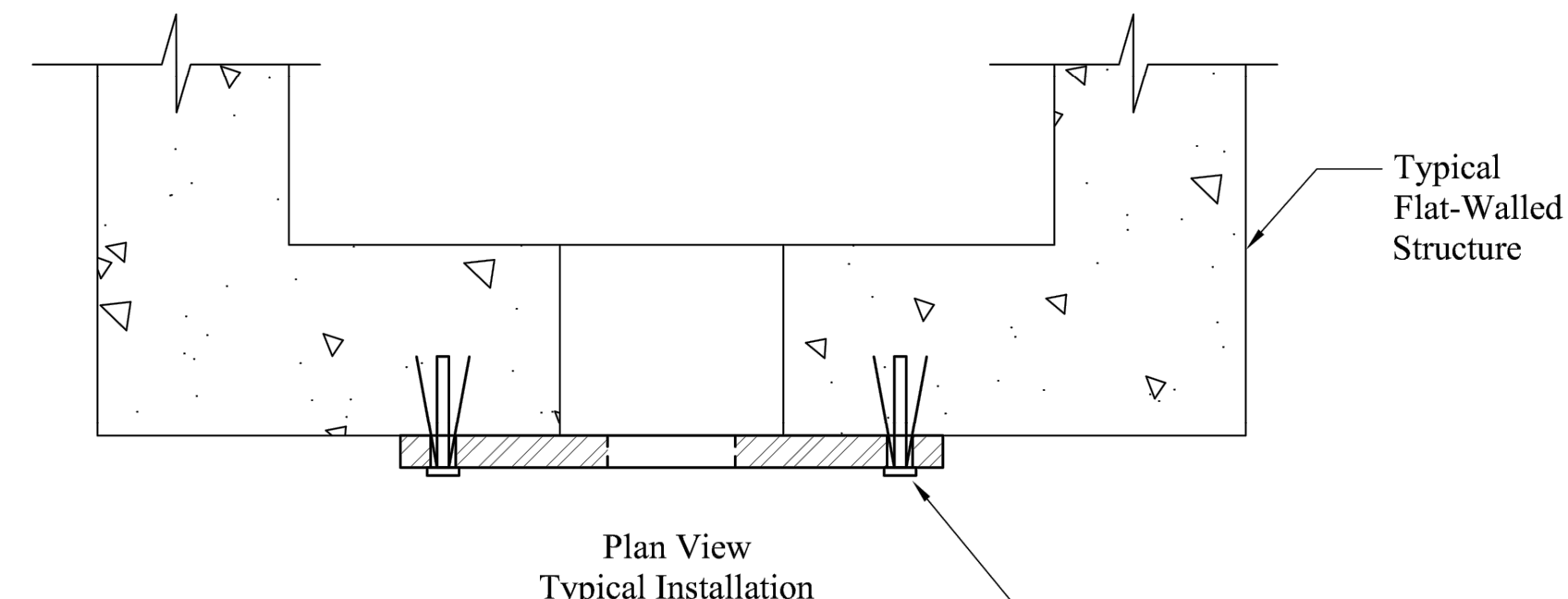
TYP. TRENCH DETAIL NOT TO SCALE



LATERAL TYPE 1 - TEE WYE DETAIL NOT TO SCALE



BACKWASH TANK MANHOLE DETAIL NOT TO SCALE

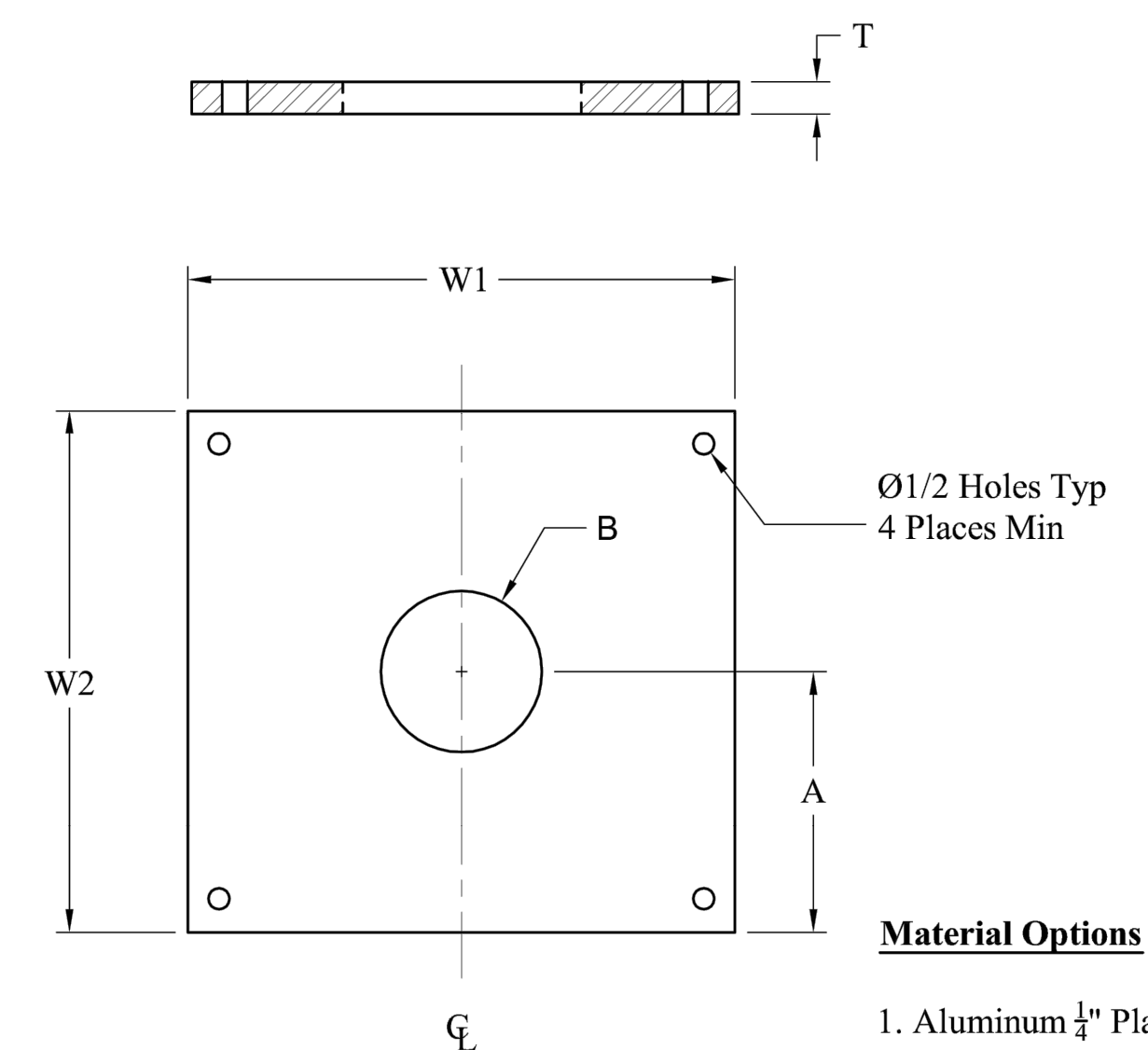


Plan View Typical Installation

**Definitions:**

- A - Orifice Ctr Elev
- B - Orifice Diameter
- L - Length
- W - Width
- T - Thickness
- M - Material
- F - Finish

Requirements	
A	3"
B	2"
W1	6"
W2	6"
T	1/4"
M	OPTION 3
F	PAINTED



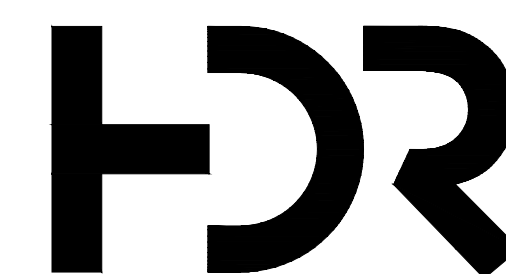
ORIFICE PLATE DETAIL NOT TO SCALE

**Material Options**

1. Aluminum 1/4" Plate
2. #316 Stainless Steel 3/16" Plate
3. Steel 1/4" Plate. Finish Options:  
A. Painted  
B. Hot Dip Galvanized

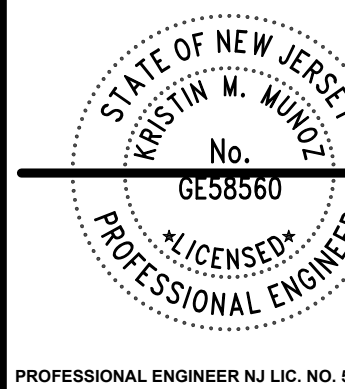


REVISIONS	REVISIONS
1	10/01/2021 30% DESIGN SUBMISSION
2	01/28/2022 90% DESIGN SUBMISSION
3	06/2022 ISSUE FOR BID
4	09/2022 ISSUE FOR PERMIT



HDR PROJECT NO. - 10201493

KRISTIN MUNOZ



AQUA NEW JERSEY INC.  
10 BLACK FOREST ROAD  
HAMILTON, NJ 08691



DATE SEPTEMBER, 2022

PROJECT

LAWRENCEVILLE WELL STATION WATER TREATMENT UPGRADES  
CONSTRUCTION DETAILS III

AQUA NEW JERSEY, INC.

USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES

ISSUE FOR PERMIT

USE DIMENSIONS ONLY SCALE NOT TO SCALE

01C-09