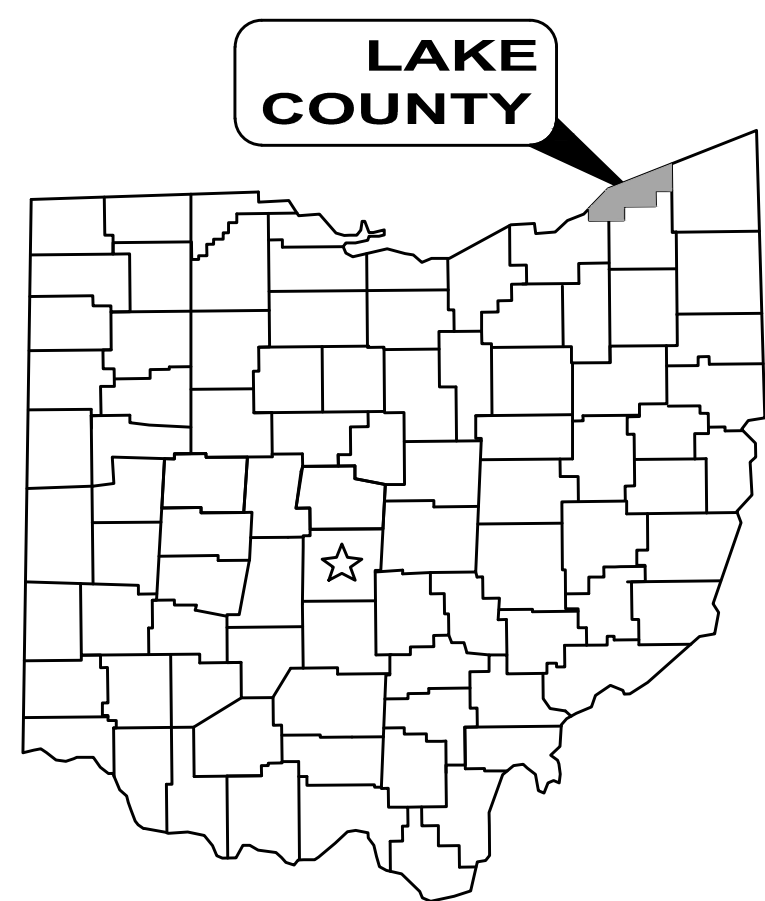


THE CITY OF WILLOWICK

LAKESHORE BLVD TRUNK

SEWER WEST REHAB

LAKE COUNTY, OHIO



CITY COUNCIL:

MS. MONICA KOUDELA	COUNCIL PRESIDENT
MR. PATRICK MOHORCIC	COUNCIL MEMBER, WARD 1
MR. DEVON MCFARLAND	COUNCIL MEMBER, WARD 1
MS. NATALIE ANTOSH	COUNCIL MEMBER, WARD 2
MS. THERESA BISBEE	COUNCIL MEMBER, WARD 2
MR. CHARLIE MALTA	COUNCIL MEMBER, WARD 3
MR. DAVID PHARES	COUNCIL MEMBER, WARD 3



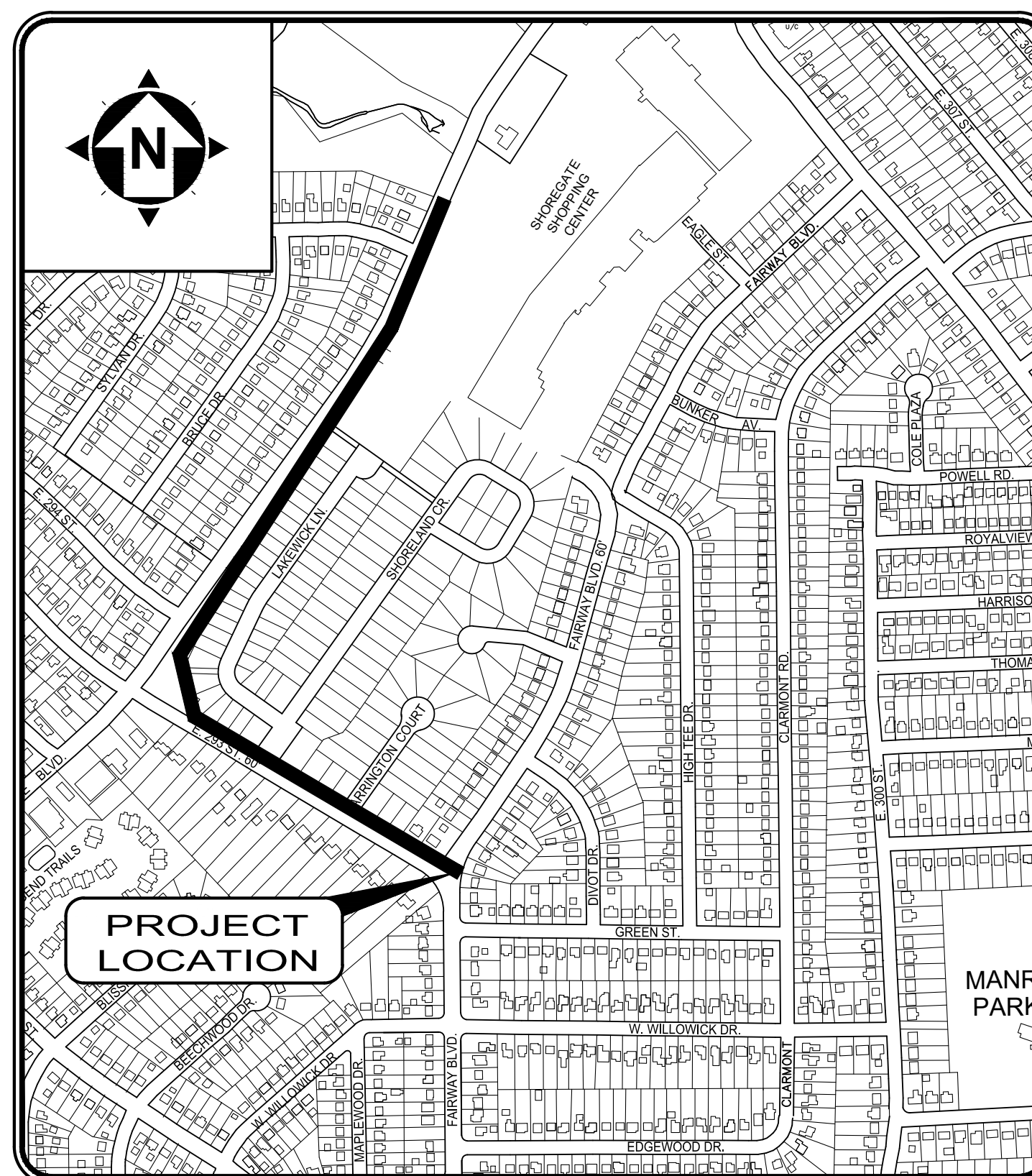
OHIO 811 DESIGN SERIAL NUMBERS & UTILITY MEMBER LIST:

A507200006-00A
A507200008-00A
B507200014-00B

1. THE ILLUMINATING COMPANY
2. DOMINION ENERGY OHIO
3. LAKE COUNTY DEPARTMENT OF UTILITIES
4. AT&T OHIO
5. THE CITY OF WILLOWICK

1. UNDERGROUND BUILDING SERVICE UTILITY LINES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, MAINTAINING AND REPLACING AS NECESSARY TO ENSURE CONTINUAL SERVICE TO BUILDINGS.
2. THE CONTRACTOR IS RESPONSIBLE TO CALL OHIO UTILITIES PROTECTION SERVICE @ 1-800-362-2764, THREE WORKING DAYS PRIOR TO CONSTRUCTION.

SEPTEMBER 2025



LOCATION MAP

N.T.S.



OWNER:

THE CITY OF WILLOWICK
30435 LAKESHORE BOULEVARD
WILLOWICK, OH 44095
(440) 585-3700 PHONE

PROJECT SITE:

E. 293RD FROM FAIRWAY
BOULEVARD INTERSECTION
AND TO LAKESHORE
BOULEVARD AND EXTENDING
NEAR THE INTERSECTION
NEAR SEABORN DRIVE

CITY OFFICIALS:

MR. MICHAEL J. VANNI	CITY MAYOR/ SAFETY DIRECTOR
MR. TODD SHANNON	SERVICE DIRECTOR
MS. CHERYL BENEDICT	FINANCE DIRECTOR
MS. MANDY GWIRTZ	LAW DIRECTOR
MS JULIE KLESS	DIRECTOR OF RECREATION
MR. ROB DAUBEMIRE	POLICE CHIEF
MR. BILL MALOVRH	FIRE CHIEF
MR. SEAN BRENNAN	CHIEF HOUSING AND ZONING INSPECTOR

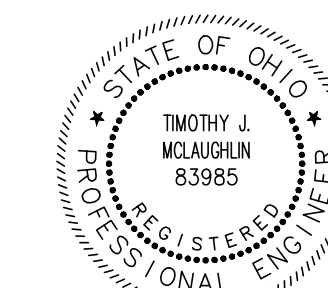
ENGINEER:

VERDANTAS LLC
8150 STERLING COURT
MENTOR, OH 44060

(440) 951-9000 PHONE
(440) 951-7487 FAX

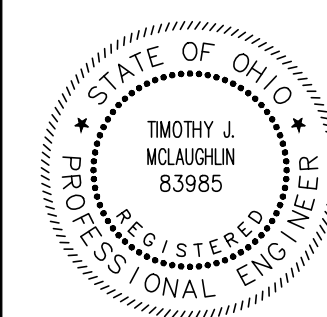
Timothy J. McLaughlin

TIMOTHY J. McLAUGHLIN



P.E. No. 83985

8/25/25
DATE



verdantas

NO	REVISION	DATE

SCALE: AS SHOWN	DATE: 08/27/2025	DESIGNED BY: T.J.M.	DRAWN BY: JPB	CHECKED BY: T.J.M.
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CITY OF WILLOWICK LAKE SHORE BLVD TRUNK SEWER WEST REHAB WILLOWICK, OHIO LAKE COUNTY	GENERAL - 00 SERIES COVERSHEET
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PROJECT NO:	32010
DRAWING NAME	00G-01
SHEET	OF
1	14

ENGINEER'S PROJECT No. 32010

GENERAL:

- THE CONTRACTOR SHALL PERFORM ALL OF THE WORK AND FURNISH ALL OF THE LABOR AND MATERIALS NECESSARY FOR THE FINAL COMPLETION OF THIS CONTRACT IN THE MANNER AND UNDER THE CONDITIONS HEREIN SPECIFIED AND PROVIDED AND IN ACCORDANCE WITH THE CONTRACT DRAWINGS.
- A PRE-CONSTRUCTION VIDEO TAPE OF THE PROJECT AREA WILL BE REQUIRED AND SUBMITTED TO THE ENGINEER BEFORE CONSTRUCTION BEGINS.
- THE CONTRACTOR SHALL NOT COMMENCE ANY FORM OF CONSTRUCTION WITHOUT CONTACTING THE ENGINEER. AS APPROPRIATE, A MINIMUM OF 48 HOURS IN ADVANCE OF CONSTRUCTION ACTIVITY TO ARRANGE FOR OBSERVATION. IF ANY CHANGE IN THE WORK SCHEDULE BECOMES NECESSARY, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE ENGINEER TO AVOID UNNECESSARY OBSERVATION COSTS. IF NO NOTIFICATION IS MADE IN REGARDS TO CANCELLATION OF WORK, THE CONTRACTOR WILL BE CHARGED FOR THE TIME INCURRED.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE LOCAL ACCESS, VEHICULAR AND PEDESTRIAN, TO ALL PROPERTIES WITHIN THE PROJECT LIMITS. THE CONTRACTOR WILL FURNISH, MAINTAIN AND SUBSEQUENTLY REMOVE ALL NECESSARY SAFEGUARDS SUCH AS BARRICADES, BARRIERS, TEMPORARY PAVEMENT, LIGHTING, FLAGGERS, SIGNING AND OTHER TRAFFIC CONTROLS TO INSURE THE SAFETY OF PERSONS AND VEHICLES DURING CONSTRUCTION WITHIN THE PROJECT LIMITS.
- ACCESS TO ALL DRIVEWAYS WILL BE MAINTAINED AT ALL TIMES EXCEPT THE TIME WHEN SEWER INSTALLATION AND PAVEMENT REPLACEMENT WILL NOT PERMIT.
- ALL SHOP DRAWINGS WILL BE SUBMITTED TO THE ENGINEER FOR PRELIMINARY CHECKING. THE ENGINEER SHALL FORWARD THE CHECKED SHOP DRAWINGS TO THE OWNER FOR FINAL CHECKING AND APPROVAL. SHOP DRAWINGS MUST BE APPROVED PRIOR TO ORDERING ANY MATERIALS.
- BEFORE THE OWNER WILL APPROVE AND ACCEPT THE WORK AND RELEASE THE GUARANTEE RETAINER, THE CONTRACTOR WILL FURNISH THE OWNER A WRITTEN REPORT INDICATING THE RESOLUTION OF ANY AND ALL PROPERTY DAMAGE CLAIMS FILED WITH THE CONTRACTOR BY ANY PARTY DURING THE CONSTRUCTION PERIOD. THE INFORMATION TO BE SUPPLIED SHALL INCLUDE, BUT NOT BE LIMITED TO, NAME OF CLAIMANT, DATE FILED WITH CONTRACTOR, NAME OF INSURANCE COMPANY AND/OR ADJUSTER HANDLING CLAIM, HOW CLAIM WAS RESOLVED AND IF CLAIM WAS NOT RESOLVED FOR THE FULL AMOUNT, A STATEMENT INDICATING THE REASON FOR SUCH ACTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ALL MATERIAL AND EQUIPMENT TESTING. THE OWNER MAY REQUIRE SUBGRADE COMPACTION TESTING, ASPHALT AND CONCRETE QUALITY CONTROL TESTING WHICH WILL BE PAID FOR BY THE OWNER.
- WHEN MAILBOXES, FENCES, NEWSPAPER BOXES OR STREET SIGNS AND SUPPORTS INTERFERE WITH CONSTRUCTION, THE CONTRACTOR SHALL REMOVE AND ERECT THEM IN A TEMPORARY LOCATION DURING CONSTRUCTION (EXCEPT FENCES). AFTER COMPLETION OF THE CONSTRUCTION AND BEFORE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL ERECT THE MAILBOXES, FENCES, NEWSPAPER BOXES OR STREET SIGNS AND SUPPORTS IN A PERMANENT LOCATION IN ACCORDANCE WITH THE PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE WORK SHALL BE INCLUDED IN THE UNIT PRICES BID FOR OTHER ITEMS.
- PROPERTY PINS AND MONUMENTS ALONG THE ROUTE OF THE IMPROVEMENT, WHICH MAY BE DISTURBED BY THE CONTRACTOR, SHALL BE REFERENCED BY A PROFESSIONAL SURVEYOR, SO THEY CAN BE REPLACED IN THE EVENT THAT THEY ARE DISTURBED DURING CONSTRUCTION. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT ALL PINS, MONUMENTS AND REFERENCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF LOCATING AND REFERENCING AND REPLACING THE PROPERTY PINS AND MONUMENTS.

PROHIBITED CONSTRCTION ACTIVITIES

- ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED
- THE USE OF EXPLOSIVES, UNLESS A PERMIT IS ISSUED BY THE OWNER.
- PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS DIRECTLY INTO ANY SURFACE WATERS, STREAM CORRIDORS, OR STORM SEWERS; ALL SUCH WATER WILL BE PROPERLY FILTERED OR SETTLED TO REMOVE SILT PRIOR TO RELEASE.
- DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE, OR ANY OTHER HARMFUL WASTE INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO.
- OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT. HE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AN OEPA OPEN BUILDING AIR PERMIT OR DISPOSING OF THE TREES AND STUMPS
- STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED ON THE PLANS BY THE ENGINEER FOR SUCH PURPOSES.
- RUNNING WELL POINT OR PUMP DISCHARGE LINES THROUGH PRIVATE OR PUBLIC PROPERTY AND RIGHTS-OF-WAY WITHOUT PERMISSION OF THE PROPERTY OWNER AND THE CONSENT OF THE ENGINEER.
- OPERATION ENTAILING THE USE OF VIBRATORY HAMMERS OR COMPACTORS OUTSIDE THE HOURS OF 8:00 AM AND 5:00 PM OR OUTSIDE THE HOURS ALLOWED BY LOCAL ORDINANCES OR REGULATIONS.
- CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE OR BOULEVARD WITHOUT THE PRIOR CONSENT OF MUNICIPAL OFFICIALS AND THE ENGINEER AND CLOSING CLEAR ACCESS:
 - BY FIRE PROTECTION EQUIPMENT AND EMERGENCY VEHICLES;
 - BY THE PUBLIC TO ANY COMMERCIAL OR PROFESSIONAL PLACE OF BUSINESS, QUASI-PUBLIC OR PUBLIC ESTABLISHMENT, OR PLACE OF RESIDENCE; OR
 - BY VEHICLES TO DRIVEWAYS WITHOUT THE PROVISION OF ALTERNATIVE MEANS OF BUILDING INGRESS AND EGRESS.
- DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOODPLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER.
- LOCATING STOCKPILE STORAGE AREAS IN ENVIRONMENTALLY SENSITIVE AREAS.
- INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN AND STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS.
- PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF ANY STREAM.
- DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA
- DISPOSAL OF TREES, BRUSH, AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS.
- DISCHARGING INJURIOUS SILICA DUST CONCENTRATIONS INTO THE ATMOSPHERE RESULTING FROM BREAKING, CUTTING, CHIPPING, RILLING, BUFFING, GRINDING, POLISHING, SHAPING OR SURFACING CLOSER THAN 200 FEET TO PLACES OF RESIDENCES OR COMMERCIAL, PROFESSIONAL, QUASI-PUBLIC OR PUBLIC PLACES OF HUMAN OCCUPATION.
- NO USING ANY SUBSTANCE OTHER THAN WATER TO CONTROL DUST
- THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY. SUCH AS CALCIUM CHLORIDE. WATER OR A MOTORIZED DUST-FREE STREET SWEEPING DEVICE PERFORMED DAILY OR AS DIRECTED BY THE OWNER, TO MAINTAIN ALL PAVED AREAS AFFECTED BY THE CONSTRUCTION.
- PAYMENT FOR ALL SOIL EROSION, SEDIMENT AND DUST CONTROL MEASURES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER VARIOUS ITEMS.

EXISTING UTILITIES:

- THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY A COMBINATION OF SEARCHES OF AVAILABLE RECORDS AND SURVEY COMPLETED BY VERDANTAS LLC ON 6/19/2025. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE OWNER DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR IS RESPONSIBLE TO VERIFY AND IDENTIFY ALL UTILITIES ILLUSTRATED ON THE PLANS OR NOT IDENTIFIED.
- BEFORE ANY WORK IS STARTED, THE CONTRACTOR SHALL CALL THE "OHIO UTILITIES PROTECTION SERVICE", OUPS, AT 1-800-362-2764, A MINIMUM OF SEVENTY-TWO (72) HOURS IN ADVANCE OF THE WORK. NON-MEMBER UTILITIES MUST BE CONTACTED DIRECTLY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS, AT NO ADDITIONAL EXPENSE TO THE OWNER, TO AVOID DAMAGE TO EXISTING UNDERGROUND AND OVERHEAD UTILITY LINES DURING THE ENTIRE PROJECT. IN THE EVENT OF DAMAGE TO EXISTING PUBLIC AND/OR PRIVATE UTILITIES, THE AGENCY CONCERNED SHALL BE NOTIFIED IMMEDIATELY BY THE CONTRACTOR AND ALL REPAIR WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE RESPECTIVE AGENCY AT NO ADDITIONAL EXPENSE TO THE OWNER, INCLUDING ANY INSPECTION FEES OR MAINTENANCE CREWS.
- DELAYS TO THE CONTRACTOR AS A RESULT OF TIMING OF POLE RELOCATION OR PROTECTION SHALL NOT BE CONSIDERED COMPENSABLE DELAYS, AS IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE HIS WORK IN CONFORMANCE TO THE UTILITY COMPANY'S SCHEDULE.
- NO SEPARATE PAYMENT WILL BE MADE FOR UTILITY SUPPORT, POLE SUPPORT OR POLE RELOCATION. THE CONTRACTOR SHALL INCLUDE THE COST OF UTILITY SUPPORT, POLE SUPPORT AND POLE RELOCATION IN THE UNIT PRICE(S) BID FOR OTHER RELATED ITEMS OF WORK.
- CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL THE EXISTING GAS, WATER, ELECTRIC, CABLE, FIBER, TELEPHONE, SANITARY OR OTHER UNDERGROUND UTILITIES PRIOR TO THE INSTALLATION OF ANY PROPOSED IMPROVEMENT INDICATED ON THE PLANS. SHOULD A CONFLICT EXIST AT A UTILITY CROSSING, THE PROJECT ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- THE CONTRACTOR SHALL ANTICIPATE AT A MINIMUM ONE SERVICE CONNECTION FOR EACH UTILITY (GAS, WATER, STORM SEWER, FIBER OPTIC OR POWER) SHOWN TO EACH PROPERTY, EVEN IF NOT SHOWN ON PLAN.
- SERVICE CONNECTIONS ON THE PLANS THAT HAVE BEEN IDENTIFIED ARE BASED ON AS BUILTS AND AVAILABLE RECORDS PROVIDED BY THE RESPECTIVE UTILITY COMPANY ARE APPROXIMATE. THE OWNER DOES NOT GUARANTEE THEIR LOCATION AND THE CONTRACTOR IS RESPONSIBLE AND SHALL FIELD VERIFY THE LOCATION AND DEPTH PRIOR TO COMMENCEMENT OF ANY WORK IN THE AREA.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION OF THE EXISTING UTILITY OWNERS AND THE UTILITY PROTECTION SERVICE IN THE LIST FEATURED ON THE COVER OF THE PLANS IN ACCORDANCE WITH SECTION 153.64 OF THE OHIO REVISED CODE
- IN THE EVENT THAT ANY LEAD SERVICE CONNECTION IS ENCOUNTERED DURING THIS PROJECT BY THE CONTRACTOR, AQUA OHIO SHALL BE IMMEDIATELY NOTIFIED AND WORK AT THAT LOCATION SHALL CEASE UNTIL DIRECTION ON HOW TO PROCEED IS MADE BY LCDU. CONTRACTOR SHALL CONTINUE WITH WORK ONCE LCDU GIVES NOTICE TO PROCEED WITHOUT ADDITIONAL PAYMENT FOR REMOBILIZATION.

TRAFFIC CONTROL

- MAINTAINING TRAFFIC SHALL BE IN ACCORDANCE WITH ODOT ITEM 614 AND THE MOST RECENT VERSION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD).
- THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR REVIEW AND ACCEPTANCE BY THE ENGINEER PRIOR TO BEGINNING WORK.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE LOCAL ACCESS, VEHICULAR AND PEDESTRIAN INCLUDING PERSONS WITH DISABILITIES, TO ALL PROPERTIES WITHIN THE PROJECT LIMITS. THE CONTRACTOR WILL FURNISH, MAINTAIN AND SUBSEQUENTLY REMOVE ALL NECESSARY SAFEGUARDS SUCH AS BARRICADES, BARRIERS, TEMPORARY PAVEMENT, LIGHTING, FLAGGERS, SIGNING, PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROLS TO ENSURE THE SAFETY OF PERSONS AND VEHICLES DURING CONSTRUCTION WITHIN THE PROJECT LIMITS.
- AT ALL EXCAVATION LOCATIONS THE CONTRACTOR SHALL PROVIDE SUITABLE FLASHERS, BARRICADES, AND TRAFFIC CONTROL DEVICES AS DEEMED NECESSARY BY THE ENGINEER AND IN ACCORDANCE WITH THE OMUTCD FOR SUCH TIME UNTIL THE AREA IS COMPLETELY BACKFILLED.
- ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MUTCD. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN OR INCLUDED IN OTHER PAY ITEMS.
- ACCESS MUST BE MAINTAINED FOR EMERGENCY VEHICLES AT ALL TIMES.
- NO TRENCH WILL BE LEFT OPEN AT THE END OF A WORK DAY, WHERE PRACTICAL; ANY OPEN TRENCH WILL BE PROPERLY IDENTIFIED AND BARRICADED FOR SAFETY PURPOSES.
- PRIOR TO CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE, OR BOULEVARD, THE CONTRACTOR MUST HAVE CONSENT FROM LOCAL OFFICIALS AND THE ENGINEER.
- PRIOR TO CLOSING OFF ACCESS TO ANY PORTION OF PRIVATE PROPERTY WHERE SEWER WORK MAY BE LOCATED, THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM THE PROPERTY OWNER TO IMPLEMENT PROPOSED TRAFFIC CONTROL DEVICES WHICH SHALL ALSO REQUIRE FINAL APPROVAL BY THE ENGINEER.

TREE/VEGETATION PROTECTION

- TREE REMOVAL WILL NOT BE PERMITTED UNLESS APPROVED BY THE OWNER AND ENGINEER.
- TREE REMOVAL WILL BE LIMITED TO THE TIME PERIOD BETWEEN OCTOBER 1 AND MARCH 31.
- TREE REMOVAL WILL BE LIMITED TO THAT NECESSARY FOR CONSTRUCTION AND WILL BE LIMITED FURTHER TO THE PERMANENT EASEMENT WHEREVER POSSIBLE.
- NO TREE REMOVAL WILL BE PERMITTED OUTSIDE THE TEMPORARY OR PERMANENT EASEMENT WITHOUT PERMISSION OF THE ENGINEER.
- TREES WHICH ARE NOT REMOVED WILL BE PROTECTED BY ENSURING THAT TREES TO BE REMOVED ARE FELLED SO AS NOT TO INJURE THE REMAINING TREES.
- THE PROJECT IS WITHIN THE RANGE OF THE STATE AND FEDERALLY ENDANGERED INDIAN BAT (MYOTIS SODALIS) AND NORTHERN LONG-EARED BAT (MYOTIS SEPTENTRIONALIS), THE STATE ENDANGERED LITTLE BROWN BAT (MYOTIS LUCIFUGUS), AND THE STATE ENDANGERED TRICOLORED BAT (PERIMYOTIS SUBFLAVUS) AND MAY IMPACT SUMMER ROOSTING HABITAT FOR THESE SPECIES. PER U.S. FISH AND WILDLIFE RECOMMENDATIONS, THE REMOVAL OF TREES GREATER THAN OR EQUAL TO 3-INCHES IN DIAMETER SHOULD ONLY OCCUR BETWEEN OCTOBER 1 AND MARCH 31. IF THIS TIME FRAME CANNOT BE FOLLOWED, THE U.S. FISH AND WILDLIFE SERVICE AND OHIO DEPARTMENT OF NATURAL RESOURCES (CONTACT EILEEN WYZA AT EILEEN.WYZA@DNR.OHIO.GOV) MUST BE CONTACTED PRIOR TO CUTTING FOR GUIDANCE ON NECESSARY STEPS TO DOCUMENT THE ABSENCE OR PRESENCE OF THESE SPECIES.
- PRIOR TO CLEARING, THE CONTRACTOR AND ENGINEER, SHALL WALK THE ACQUIRED EASEMENTS IN AN EFFORT TO DESIGNATE THE TREES THAT ARE TO BE SAVED. TREES TO BE SAVED WILL BE CLEARLY MARKED BY PAINT WITH THE LETTER "S". TREES TO BE PROTECTED BY AN APPROPRIATE BARRIER SHALL BE MARKED WITH AN "S" ENCLOSED IN A CIRCLE. TREES MARKED FOR REMOVAL IN THE PLANS WILL BE INSPECTED BY THE OWNER AND THE ENGINEER BEFORE REMOVAL & WILL BE SAVED WHERE POSSIBLE.
- SOIL AND OTHER MATERIAL WILL NOT BE STORED NEXT TO OR WITHIN THE DRIP-LINE OF TREES.
- PRESERVATION OF LANDSCAPING SHOULD TAKE PRECEDENCE OVER REMOVAL. IF REMOVAL OR DAMAGE IS UNAVOIDABLE, EXISTING VEGETATION SHOULD BE REPAIRED OR REPLACED "IN-KIND" UNLESS THE HOMEOWNER SPECIFIES OTHERWISE.

- IF TREES/SHRUBS CANNOT BE REPLACED IN THE SAME LOCATION DUE TO INSTALLATION OF THE SEWER SYSTEM, RELOCATION SHOULD BE CONSIDERED.
- THE CONTRACTOR'S ARBORIST SHALL REPAIR ALL INJURIES TO BARK, TRUNKS, LIMBS, AND ROOTS OF REMAINING VEGETATION BY PROPERLY DRESSING, CUTTING, BRACING AND PAINTING, USING ONLY APPROVED TREE SURGERY METHODS, TOOLS, AND MATERIALS.
- SELECTIVE PRUNING OF TREE LIMBS PRIOR TO INITIATION OF CONSTRUCTION SHOULD ONLY BE USED WITHIN ESTABLISHED EASEMENTS WHERE REMOVAL IS NECESSARY FOR OPERATION OF EQUIPMENT.
- LIMIT THE USE OF RIP-RAP TO AREAS WHERE STREAM FLOW CONDITIONS PREEMPT VEGETATIVE STABILIZATION.
- TREE REMOVAL WILL BE LIMITED TO THAT NECESSARY FOR CONSTRUCTION AND WILL BE LIMITED FURTHER TO THE PERMANENT EASEMENT WHENEVER POSSIBLE. IF THE PROJECT IS LOCATED WITHIN THE RANGE OF THE FEDERALLY-ENDANGERED INDIANA BAT (MYOTIS SODALIS) AND TREES MUST BE CUT, THIS MUST OCCUR BETWEEN SEPTEMBER 30 AND APRIL 1. INDIANA BATS ARE HIGHLY-DEPENDENT UPON TREES INCLUDING DEAD AND DYING TREES OF SPECIES WITH EXFOLIATING BARK, CREVICES, OR CAVITIES IN UPLAND AREAS OR RIPARIAN CORRIDORS AND LIVING TREES OF THE SPECIES LISTED ABOVE WITH EXFOLIATING BARK, CAVITIES, OR HOLLOW AREAS FORMED FROM BROKEN BRANCHES OR TOPS. IF SUITABLE TREES MUST BE CUT DURING THE PROHIBITED TIME PERIOD, A NET SURVEY MUST BE CONDUCTED TO DETERMINE THE PRESENCE OR ABSENCE OF INDIANA BATS PRIOR TO CUTTING.

ENVIRONMENTAL PROTECTION

- ALL MATERIALS TO BE DISPOSED OF OFF-SITE MUST BE DISPOSED OF IN AN ENVIRONMENTALLY SOUND MANNER IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AT A SITE APPROVED BY THE ENGINEER. NO EXCESS MATERIALS ARE TO BE DISPOSED OF IN ANY WETLAND, FLOODPLAIN, SURFACE WATER, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS. EROSION CONTROL MEASURES AT THE DISPOSAL SITE MUST BE INSTALLED AND MAINTAINED UNTIL DISPOSAL IS COMPLETE AND THE DISPOSAL SITE IS PERMANENTLY STABILIZED. GIVING EXCAVATED SOIL AWAY DOES NOT RELIEVE THE CONTRACTOR OR ENGINEER OF THIS RESPONSIBILITY.

EXCAVATION AND TRENCHING

- TRENCHING, HAUNCHING, BEDDING, AND ALL EARTHWORK SHALL BE IN ACCORDANCE WITH DETAILS WITHIN THE PLANS AND SPECIFICATION SECTIONS 310000 AND 333100.
- SLAG PRODUCTS OR CRUSHED CONCRETE WILL NOT BE PERMITTED FOR BEDDING, BACKFILL, OR TRAFFIC COMPACTED SURFACE.
- ALL UTILITY LINES CROSSING THE NEW SEWER TRENCH, (I.E. STORM SEWERS, STORM LATERALS, WATERLINES, WATERLINE CONNECTIONS, SANITARY SEWERS, SANITARY LATERALS, GAS MAINS, GAS SERVICE CONNECTIONS, UNDERGROUND OCT CONDUITS, CABLE TV LINES) SHALL BE PROTECTED AND SUPPORTED WITH HARDWOOD PLANKS OR REMOVED AND REPLACED, RECONNECTED AND SUPPORTED ACROSS THE ENTIRE WIDTH OF THE TRENCH. NO ADDITIONAL COMPENSATION WILL BE PAID FOR THE ABOVE WORK UNLESS ANY OF THE ABOVE UTILITIES ARE ENCOUNTERED AND NOT SHOWN ON THE DRAWINGS.
- ANY COMPACTION TESTING REQUIRED AT THE SOLE DISCRETION OF THE ENGINEER SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

DEWATERING PROCEDURES

- THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING A DEWATERING SYSTEM IN ACCORDANCE WITH SPECIFICATION SECTION 312000. CONTRACTOR SHALL DEVELOP A SYSTEM THAT WILL ENSURE WELL WATER SERVICE IS MAINTAINED FOR ALL PROPERTIES WITHIN THE PROJECT LIMITS FOR THE DURATION OF CONSTRUCTION
- ALL DEWATERING FLOWS FROM EXCAVATION AND TRENCHING OPERATIONS SHALL BE SETTLED INTO INSTALLATION BASINS OR DIRECTED THROUGH APPROVED FILTERING DEVICES PRIOR TO BEING DISCHARGED TO STABILIZED SITES, SUCH AS STREAMS OR STORM SEWER; NOT ONTO EXPOSED SOILS, STREAM BANKS, OR ANY EITHER SITE WHERE THE FLOW COULD CAUSE OR INCREASE THE RATE OF EROSION.
- SILT FROM CONSTRUCTION OPERATIONS SHALL NOT BE PERMITTED TO ENTER INTO THE STORM SEWER SYSTEM. FOR THE ENTIRE COURSE OF CONSTRUCTION, EROSION CONTROL (FILTERS OR OTHER APPROVED BMPs) MEASURES SHALL BE IMPLEMENTED AT ALL NEARBY INLETS TO PREVENT SILT FROM ENTERING INTO THE SYSTEM. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THESE DEVICES FOR THE ENTIRE DURATION OF CONSTRUCTION AND SHALL ONLY REMOVED BY ORDER OF THE ENGINEER.
- CONVEY WATER FROM THE CONSTRUCTION SITE IN A CLOSED CONDUIT. TRENCH EXCAVATIONS SHALL NOT BE PERMITTED AS TEMPORARY DRAINAGE DITCHES.

MATERIAL DISPOSAL AND TEMPORARY SURFACES

- THE REMOVAL AND DISPOSAL OF ALL SURPLUS EXCAVATED MATERIAL AND CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR ULTIMATE DISPOSAL. THE DISPOSAL OF ALL CONSTRUCTION DEBRIS SHALL BE AT AN APPROVED LOCATION BY THE OWNER AND THE ENGINEER. THE DISPOSAL OF ALL "CLEAN" MATERIAL SHALL BE AT APPROVED LANDFILLS, AND/OR OTHER SITES APPROVED BY THE OWNER AND THE DISPOSAL OF EXISTING PIPELINE AND WASTEWATER SLUDGE SHALL BE AN APPROVED LOCATION. THE CONTRACTOR SHALL OBTAIN ALL APPROVALS, PERMITS, LICENSES, ETC. STATE AND FEDERAL AGENCIES AND OR PRIVATE LANDOWNERS. THE CONTRACTOR SHALL FURNISH ENGINEER A COPY OF ALL APPROVALS OR WRITTEN PERMISSION PRIOR TO DISPOSING OF ANY WASTE SITE.
- THE COST OF HEREIN DESCRIBED WORK, INCLUDING SEEDING AND MULCHING NECESSARY TO SECURE RESULTS, SHALL BE CONSIDERED INCIDENTAL TO THE OTHER VARIOUS ITEMS OF WORK IN THIS CONTRACT INCLUDED IN THE RESPECTIVE PAY ITEMS. NO SEPARATE PAYMENT SHALL BE MADE.
- TEMPORARY SURFACES WHERE EXCAVATION ARE LOCATED IN STREETS, DRIVES AND PARKING AREAS FURNISHED AND PLACED BY THE CONTRACTOR AND SHALL BE FULLY MAINTAINED TO MINIMIZE INCONVENIENCE TO THE PUBLIC AT NO ADDITIONAL COST TO THE OWNER.
- THE ABOVE-DESCRIBED WORK SHALL BE CONSIDERED INCIDENTAL TO THE COMPLETION OF ALL WORK INCLUDED IN THE RESPECTIVE PAY ITEMS AND SHALL NOT BE A SEPARATE PAY ITEM.

STATE OF OHIO
REGISTERED
PROFESSIONAL ENGINEER
TIMOTHY J. MCMAHON
83985

verdantas

DATE						
REVISION						
NO						

SCALE: AS SHOWN

DATE: 08/27/2025

DESIGNED BY: TJM

DRAWN BY: JPB

CHECKED BY: TJM

CITY OF WILLOWICK
LAKESHORE BLVD TRUNK
SEWER WEST REHAB
WILLOWICK, OHIO LAKE COUNTY

GENERAL - 00 SERIES

GENERAL NOTES (1 OF 2)

PROJECT NO:
32010

DRAWING NAME
00G-02

SHEET
2

OF
14

Z:\PROJECT FILES\WILLOWICK\02010 - LAKESHORE BLVD TRUNK SEWER WEST REHAB\CADD\SHEETS AND PLANS\03_30010_GENERAL NOTES.DWG - GENERAL NOTES 1 - 8/25/2025 1:57:58 PM - JARED BORDNER

EROSION AND SEDIMENT CONTROL

1.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SOIL EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH ODOT ITEM 207 AND AS REQUIRED BY THE ASHTABULA COUNTY SOIL AND WATER CONSERVATION DISTRICT.
2.

SITE CLEARING AND GRUBBING SHALL NOT COMMENCE UNTIL SUCH TIME THAT THE CONTRACTOR IS PREPARED TO START CONSTRUCTION. REMOVE ONLY THOSE TREES, SHRUBS, AND GRASSES THAT MUST BE REMOVED FOR CONSTRUCTION OF ACTUAL FACILITIES; PROTECT THE REST TO PRESERVE THEIR AESTHETIC, HABITAT, AND EROSION CONTROL VALUES.
3.

IMMEDIATELY FOLLOWING SITE AND ACCESS CLEARING, TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED. THEY WILL BE MAINTAINED IN EFFECTIVE OPERATING CONDITION DURING CONSTRUCTION UNTIL FINAL SEEDING AND SITE RESTORATION OCCURS.
4.

AT THE LIFT STATION CONSTRUCTION SITES INSTALL SEDIMENT BASINS AND DIVERSION DIKES BEFORE DISTURBING THE LAND THAT DRAINS INTO THEM.
5.

DIVERSION CHANNELS WILL BE CONSTRUCTED AROUND THE LIFT STATION SITE TO COLLECT RUNOFF AND PREVENT SILT AND OTHER ERODIBLE MATERIALS FROM ENTERING LOCAL DRAINAGE COURSES. DIVERSION CHANNELS WILL FLOW TO TEMPORARY SEDIMENT BASINS, AND ARE TO BE STABILIZED THROUGH SEEDING, RIP-RAPPING, OR LINING THEM WITH PLASTIC.
6.

EXISTING TOPSOIL WILL BE STOCKPILED AND REPLACED UPON FINAL GRADING OF THE CONSTRUCTION SITE.
7.

EXTENSIVE AREAS OF STOCKPILED TOPSOIL AT THE CONSTRUCTION SITE ARE TO BE PROTECTED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING OR COVERING SUCH AS WITH ANCHORED STRAW MULCH. SILT BARRIERS WILL BE INSTALLED DOWN GRADIENT OF THESE AREAS ON CONTOUR AND WITH THEIR ENDS UP SLOPE OF THE CONTOUR TO PREVENT SILT LADEN RUNOFF FROM ENTERING WATERWAYS OR STORM SEWERS. WITHIN 15 DAYS OF COMPLETION OF CONSTRUCTION, ANY REMAINING SOIL MUST EITHER BE REMOVED OR PERMANENTLY STABILIZED.
8.

SILT FENCES SHOULD BE TRENCHED SIX TO TWELVE INCHES DEEP. THE FABRIC LAID IN THE TRENCH, AND THE SOIL PROPERLY BACKFILLED INTO THE TRENCH TO PREVENT UNDERCUTTING.
9.

WHERE TRENCH EXCAVATION OCCURS PARALLEL TO ANY WATERWAY, A VEGETATED BARRIER SHOULD BE MAINTAINED BETWEEN THE STREAM AND THE CONSTRUCTION SITE. ALL TRENCH SPOILS WILL BE STOCKPILED ON THE SIDE OF THE TRENCH AWAY FROM THE WATERWAY, AND A LINE OF SILT BARRIERS WILL BE ESTABLISHED ALONG THE EDGE OF CONSTRUCTION ON THE CONTOUR BETWEEN THE TRENCH AND THE WATERWAY.
10.

NO MORE THAN 200 FEET OF TRENCH SHALL BE OPEN AT ANY GIVEN TIME. TRENCH OPENING AND LAYING OF PIPE SHOULD OCCUR SO AS TO MINIMIZE THE AMOUNT OF DISTURBED AREA. ALL TRENCHES ARE TO BE BACKFILLED AND COMPACTED IMMEDIATELY AFTER PIPE INSTALLATION. IMMEDIATELY FOLLOWING THE BACKFILLING OF THE TRENCH, THE GROUND SURFACE WILL BE ROUGH GRADED TO THE EXISTING CONTOURS TO ALLOW FOR PROPER DRAINAGE, AND WILL BE SEEDED AND/OR MULCHED IN STAGES TO PREVENT EROSION.
11.

ANY DISTURBED AREA THAT WILL NOT BE ACTIVELY UNDER CONSTRUCTION FOR A PERIOD OF 15 DAYS OR MORE WILL BE TEMPORARILY STABILIZED IMMEDIATELY BY SEEDING AND MULCHING OR BY ANCHORED STRAW MULCH.
12.

AS CONSTRUCTION IS COMPLETED, PERMANENTLY STABILIZE EACH DISTURBED AREA IN STAGES WITH PERENNIAL VEGETATION INSTALLED ACCORDING TO OHIO EPA (OR EQUIVALENT) STANDARDS AND SPECIFICATIONS. AFTER FINAL SOIL SETTLING OVER THE SANITARY SEWER, OUTFALL SEWER, AND FORCE MAIN ALIGNMENTS, THE CONTRACTOR SHALL BRING THE TRENCH BACK TO GRADE IF NECESSARY, PLACE TOPSOIL, AND FINE GRADE, SEED, FERTILIZE, AND MULCH ALL AREAS DISTURBED BY ACTIVITIES ASSOCIATED WITH THE CONSTRUCTION OF THAT SECTION OF PIPE. FINAL GRADING WILL BE CONSISTENT WITH PRE-CONSTRUCTION TOPOGRAPHY FOR DRAINAGE AND AESTHETIC REASONS.
13.

BORING PITS (FOR JACK AND BORE LOCATIONS) SHALL BE SURROUNDED WITH SILT BARRIERS TO PREVENT EROSION OF THE EXCAVATED PIT MATERIAL. STORM SEWER INLETS WILL BE SURROUNDED WITH SILT BARRIERS TO PREVENT SILTATION.
14.

SLOPES EXCEEDING 15 PERCENT OR THAT TEND TO BE UNSTABLE REQUIRE SPECIAL TREATMENT SUCH AS WATER DIVERSION BERMS, SODDING, OR THE USE OF JUTE OR EXCELSIOR BLANKETS.
15.

WHEN BORROW MATERIAL IS OBTAINED FROM OTHER THAN COMMERCIALLY OPERATED SOURCES, EROSION OF THE BORROW SITE WILL BE SO CONTROLLED BOTH DURING AND AFTER COMPLETION OF THE WORK THAT EROSION WILL BE MINIMIZED AND SEDIMENT WILL NOT ENTER STREAMS OR OTHER BODIES OF WATER. WASTE OR DISPOSAL AREAS AND CONSTRUCTION ROADS SHALL BE LOCATED AND CONSTRUCTED IN A MANNER THAT WILL KEEP SEDIMENT FROM ENTERING STREAMS. TEMPORARY EROSION CONTROL BARRIERS AND LIMITED SITE CLEARING WILL BE USED AS NEEDED.
16.

IF WORK IS SUSPENDED FOR ANY REASON, THE CONTRACTOR SHALL MAINTAIN THE SOIL EROSION AND SEDIMENTATION CONTROLS IN GOOD OPERATING CONDITION DURING THE SUSPENSION OF THE WORK. ALSO, WHEN SEASONAL CONDITIONS PERMIT AND THE SUSPENSION OF WORK IS EXPECTED TO EXCEED A PERIOD OF ONE MONTH, THE CONTRACTOR SHALL SEED, FERTILIZE, AND MULCH ALL DISTURBED AREAS LEFT EXPOSED WHEN THE WORK IS STOPPED.

MANHOLE REHABILITATION NOTES

1.

MANHOLE REHABILITATION SHALL BE PERFORMED AND IN ACCORDANCE WITH SPECIFICATION SECTION 330130.81 AND MANHOLE IMPROVEMENT SCHEDULE.
2.

THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEBRIS, SEDIMENT, ROOTS, OR OTHER OBSTRUCTIONS PRIOR TO APPLICATION OF ANY SPRAY OR TROWEL ON SEALING SYSTEM FOR MANHOLES.
3.

CONTRACTOR SHALL FILL ALL VOIDS AT PIPE CONNECTIONS TO EXISTING MANHOLES WITH NON-SHRINK GROUT. GROUT WATER-TIGHT AND FLUSH TO ALL INTERIOR WALLS.
4.

ALL IMPROVEMENTS SHALL BE MADE AS TO NOT CAUSE FURTHER DAMAGE TO STRUCTURE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL PREPARATION AND REPAIRS IN SUCH MANNER THAT NO ADDITIONAL DAMAGE OCCURS THAT REQUIRES ADDITIONAL REPAIRS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS. IF THE CONTRACTOR DETERMINES THE STRUCTURE IS NOT STABLE ENOUGH FOR APPLYING NOTED IMPROVEMENTS, THE ENGINEER SHALL BE NOTIFIED TO DETERMINE COURSE OF ACTION.
5.

FINAL MANHOLE RIMS TO BE FLUSH WITH FINAL GRADE IN PAVED AREAS & 3" BELOW FINAL LAWN GRADE IN UNPAVED AREAS.

GRASS RESTORATION

1.

GRASS AREAS TO BE RESTORED SHALL BE SEEDED UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS.
2.

SEEDING AND/OR SODDING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 329200.19 OF THE DETAILED SPECIFICATIONS.
3.

ALL GRASSED AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED BY SEEDING AND MULCHING RATHER THAN SODDING UNLESS OTHERWISE SHOWN ON PLANS, DETAILS, OR SPECIFICATIONS.
4.

SEEDING AND MULCHING OF ALL DISTURBED AREAS SHALL IMMEDIATELY FOLLOW EXCAVATION AND SEWER INSTALLATION OPERATIONS.
5.

ALL EXPOSED SLOPES ARE TO BE SEEDED AND MULCHED IMMEDIATELY AFTER GRADING WORK IS COMPLETED. IF, IN THE OPINION OF THE ENGINEER, ADDITIONAL EROSION AND SEDIMENTATION CONTROLS ARE REQUIRED, THEY SHALL BE INSTALLED UNDER HIS DIRECTION IN ACCORDANCE WITH APPLICABLE SECTIONS OF ODOT ITEM 207 AND STANDARD CONSTRUCTION DRAWING NO. MC-11.
- SEWER REHABILITATION NOTES
1.

ALL SECTIONS OF SEWER SHALL BE CLEANED AND TELEVIEWED PRIOR TO THE COMMENCEMENT OF ANY REHABILITATION WORK AS REQUIRED BY NASSCO GUIDELINES AND PARTS OF SPECIFICATION DIVISION 33.

2.

ALL MANHOLE REHABILITATION, INVERT REPAIRS, AND JOINT INJECTIONS SHALL BE DESIGNED IN ACCORDNACE WITH THE STANDARD DETAILS AND SPECIFICATION DIVISION 33.

3.

ALL REHAB SYSTEMS SHALL BE PREPPED, STORED, AND INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND GUIDELINES.

4.

SEWER FLOWS SHALL BE MAINTAINED IN ACCORDANCE WITH SPECIFICATION SECTION 330130.03. ANY AND ALL FLOW MANAGEMENT SYSTEMS REQUIRED TO INSTALL THE REHABILITATION PRESCRIPTIONS SHALL BE INCLUDED IN THE REHABILITATION PAY ITEM. ALL FLOW MUST BYPASS METHODS AND SETUPS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

5.

THE CONTRACTOR SHALL VERIFY ALL VISIBLE CONNECTIONS PRIOR TO CONSTRUCTION. THIS WILL INCLUDE, AT THE ENGINEER'S DISCRETION, DYE TESTING AND OR LATERAL LAUNCHING (TELEVISING) TO CONFIRM THE ACTIVITY STATUS OF THE CONNECTION.

6.

ALL ACTIVE CONNECTIONS SHALL BE REINSTATED.
- STORM SEWER SYSTEM NOTES:
1.

ALL STORM SEWER MATERIALS, METHODS AND PROCEDURES FOR INSTALLATION, BEDDING/BACKFILL/HAUNCHING REQUIREMENTS, AND ALL OTHER WORK DIRECTLY ASSOCIATED WITH STORM SEWER SHALL BE IN ACCORDANCE DIVISION 31 AND 33 SPECIFICATION SECTIONS OR AS OTHERWISE SPECIFIED WITHIN THE PLANS AND DETAILS. PROPOSED WORK SHALL FOLLOW ALL ASSOCIATED ASTM STANDARDS.

2.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THE PIPE SIZES IN THE AREAS TO RECEIVE REHABILITATION. DIAMETERS ARE BASED ON AVAILABLE SURVEY, BUT SIZES WILL VARY DUE TO DEFLECTION IN THE PIPES. THERE SHALL BE NO ADDITIONAL PAYMENT FOR VARIATION IN PIPE SIZES. OVALITY CALCULATIONS HAVE BEEN ATTACHED IN THE BID DOCUMENTS FOR REFERENCE.

3.

ALL MATERIAL SHALL BE INSPECTED, STORED, AND INSTALLED PER THE MANUFACTURES SPECIFICATIONS.

4.

CONTRACTOR SHALL RE-CONNECT ALL ENCOUNTERED DOWN SPOUT DRAINS AND OTHER STORM SEWER DRAIN LINES UNLESS DIRECTED OTHERWISE WITHIN.

5.

BEFORE FINAL ACCEPTANCE FOR THE WORK, THE CONTRACTOR SHALL CLEAR THE SEWERS OF ANY MORTAR, DIRT OR OTHER REFUSE THAT MAY HAVE BEEN LEFT OR ACCUMULATED IN THE SEWERS. ALL MANHOLES AND OTHER STRUCTURES SHALL BE CLEARED OF ALL FORMS, SCAFFOLDING, BULKHEADS, CENTERING, SURPLUS MORTAR, RUBBISH OR DIRT AND LEFT IN A CLEAN AND PROPER CONDITION.

6.

IF, AT ANY TIME BEFORE THE COMPLETION OF THE CONTRACT, ANY BROKEN PIPES, OR ANY DEFECTS, ARE FOUND IN THE STORM SEWERS OR IN ANY OF THEIR APPURTENANCES, THE CONTRACTOR SHALL CAUSE THE SAME TO BE REMOVED AND REPLACED BY PROPER MATERIAL AND WORKMANSHIP, WITHOUT EXTRA COMPENSATION FOR THE LABOR AND MATERIAL REQUIRED. ALL MATERIALS SHALL BE CAREFULLY EXAMINED BY THE CONTRACTOR FOR DEFECTS BEFORE PLACING AND ANY FOUND DEFECTIVE SHALL NOT BE PLACED IN THE LINE.
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- | REVISION | | DATE |
|--------------|------------|------|
| NO | | |
| SCALE: | AS SHOWN | |
| DATE: | 08/27/2025 | |
| DESIGNED BY: | TJM | |
| DRAWN BY: | JPB | |
| CHECKED BY: | TJM | |
- CITY OF WILLOWICK
LAKESHORE BLVD TRUNK
SEWER WEST REHAB
WILLOWICK, OHIO LAKE COUNTY

GENERAL - 00 SERIES

GENERAL NOTES (2 OF 2)
- | | |
|--------------|----|
| PROJECT NO: | |
| 32010 | |
| DRAWING NAME | |
| 00G-03 | |
| SHEET | OF |
| 3 | 14 |
- Z:\PROJECT FILES\WILLOWICK\32010 - LAKESHORE BLVD TRUNK SEWER WEST REHAB\CAD\SHEETS AND PLANS\00_32010_GENERAL\NOTES.DWG - GENERAL NOTES 2 - 8/25/2025 1:57:58 PM - JARED BORDNER

	GAS		SANITARY MANHOLE
	GAS, SERVICE		STORM MANHOLE
	SANITARY SEWER		CURB INLET
	SANITARY SEWER, SERVICE		FIRE HYDRANT
	STORM SEWER		WATER VALVE
	WATER LINE		GAS VALVE
	WATER LINE, SERVICE		
	PROPERTY LINE		
	RIGHT-OF-WAY LINE		
	SURVEY STATIONING		
	PAVED ROADWAY		

STORM SEWER TO RECEIVE REHABILITATION AS NOTED ON PLANS

PROPOSED REHAB STORM MANHOLE

BR = BRASS
BS = BLACK STEEL
BZ = BRONZE
CI = GRAY CAST IRON
CU = COPPER
CS = CAST IRON
CT = CARBON STEEL TUBING
DIP = DUCTILE IRON PIPE
DR = DIAMETER RATIO
FRP = FIBERGLASS REINFORCED PLASTIC
GS = GALVANIZED STEEL
HDPE = HIGH-DENSITY POLYETHYLENE PIPE
PVC = POLYVINYL CHLORIDE PIPE
SS = STAINLESS STEEL
STL = STEEL PIPE
SDR = STANDARD DIAMETER RATIO
SCH = SCHEDULE

ADD'L	= ADDITIONAL	HP	= HIGH POINT
AGG	= AGGREGATE	LP	= LOW POINT
ALUM.	= ALUMINUM	MAX	= MAXIMUM
BTWN	= BETWEEN	MFR	= MANUFACTURER
C/L	= CWNTERLINE	MIN	= MINIMUM
CLR	= CLEAR	REF	= REFERENCE
CONC	= CONCRETE	REINF	= REINFORCING
CONT	= CONTINUOUS	STRC	= STRUCTURE
DWL	= DOWEL(S)	T/	= TOP OF
EF	= EACH FACE	TYP	= TYPICAL
EL.	= ELEVATION	UNO	= UNLESS NOTED OTHERWISE
EMBED	= EMBEDMENT	VERT	= VERTICAL
EWB	= EACH WAY		
FF	= FINISH FLOOR		
FG	= FINISH GRADE		
FND	= FOUNDATION		
HORIZ	= HORIZONTAL		

1. THIS IS A STANDARD SHEET SHOWING COMMONLY USED SYMBOLOGY
2. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
3. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE NEW IMPROVEMENTS SO AS TO HIGHLIGHT SPECIFIC TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.
4. SYMBOLOGY OR DIAGRAMMATICAL LEGENDS MAY BE SHOWN ON INDIVIDUAL SHEETS FOR SCHEDULES, DIAGRAMS, DETAILS, SCHEMATICS OR EQUIPMENT.

1. CT CONTRACTUAL NOTES ARE DEPICTED WITH A HEXAGON, SQUARE, CIRCLE OR TRIANGLE. ALL OTHER EXISTING WRITTEN CALLOUTS SHOWN ON THE REUSED SCANNED PLANS, SECTIONS & DETAILS ARE FOR EXISTING CONDITIONS AND REFERENCE ONLY, MANY OF THOSE NOTES FROM THE SCANNED DRAWINGS PERTAIN TO PREVIOUS WORK DONE.

GENERAL - 00 SERIES
CIVIL - 10 SERIES
EROSION CONTROL - 20 SERIES

<u>IDENTIFIER:</u>	<u>DISCIPLINE:</u>
G	GENERAL
C	CIVIL

The diagram illustrates the structure of the INDEX OF SHEETS table, which is a key component in organizing a project's documentation. The table is divided into three main columns: Sheet Number, Sheet Title, and SheetName. The first row is a header row, and the subsequent rows represent individual sheets. The annotations provide a detailed breakdown of the components within each column:

- Sheet Number:** This column contains the sequential sheet number in the set. The first row is labeled "GENERAL - 00 SERIES: GENERAL", and the subsequent rows are numbered 1, 2, and 3.
- Sheet Title:** This column contains the sheet title. The first row is labeled "TITLE", the second row is labeled "SHEET INDEX", and the third row is labeled "GENERAL NOTES".
- SheetName:** This column contains the sheet name, which is a combination of the discipline identifier letter and the sequential sheet number. The first row is labeled "00G-01", the second row is labeled "00G-02", and the third row is labeled "00G-03".

The annotations also highlight the relationship between the columns and the overall project structure:

- The **DISCIPLINE** is represented by the first part of the SheetName (e.g., "00G").
- The **SERIES IDENTIFIER No.** is represented by the second part of the SheetName (e.g., "00").
- The **DISCIPLINE IDENTIFIER LETTER** is represented by the third part of the SheetName (e.g., "G").
- The **SEQUENTIAL SHEET NUMBER ORDER IN THE SERIES** is represented by the fourth part of the SheetName (e.g., "01", "02", "03").

12'-4" (REF.)

REFERENCE DIMENSIONS ARE GIVEN FOR INFORMATION ONLY. THEY ARE CALCULATED DIMENSIONS NOT INTENDED TO BE USED WITHOUT FIELD VERIFICATION AND ARE USEFUL IN SHOWING INTENDED DESIGN.

REVISIONS	
	REVISION DESCRIPTION
	REVISION DESCRIPTION

Sheet Number	Sheet Title	Sheet Name
1	COVERSHEET	00G-01
2	GENERAL NOTES (1 OF 2)	00G-02
3	GENERAL NOTES (2 OF 2)	00G-03
4	LEGEND AND SYMBOLOGY	00G-04
5	MAINTENANCE OF TRAFFIC	00G-05
6	CONSTRUCTION DETAILS	00G-06
7	PLAN & PROFILE - STA 0+00 - 5+00	10C-01
8	PLAN & PROFILE - STA 5+00 - 10+00	10C-02
9	PLAN & PROFILE - STA 10+00 - 15+00	10C-03
10	PLAN & PROFILE - STA 15+00 - 20+00	10C-04
11	PLAN & PROFILE - STA 20+00 - 25+00	10C-05
12	PLAN & PROFILE - STA 25+00 - 30+00	10C-06
13	PLAN & PROFILE - STA 30+00 - END	10C-07
14	EROSION CONTROL DETAILS	20EC-01



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SCALE:	AS SHOWN	NO	REVISION	DATE
DATE:	08/27/2025	*		*
DESIGNED BY:	TJM	*		*
DRAWN BY:	JPB	*		*
CHECKED BY:	TJM	*		*

CITY OF WILLOWICK
LAKESHORE BLVD TRUNK
SEWER WEST REHAB
WILLOWICK, OHIO LAKE COUNTY

GENERAL - 00 SERIES

LEGEND AND SYMBOLS

PROJECT NO

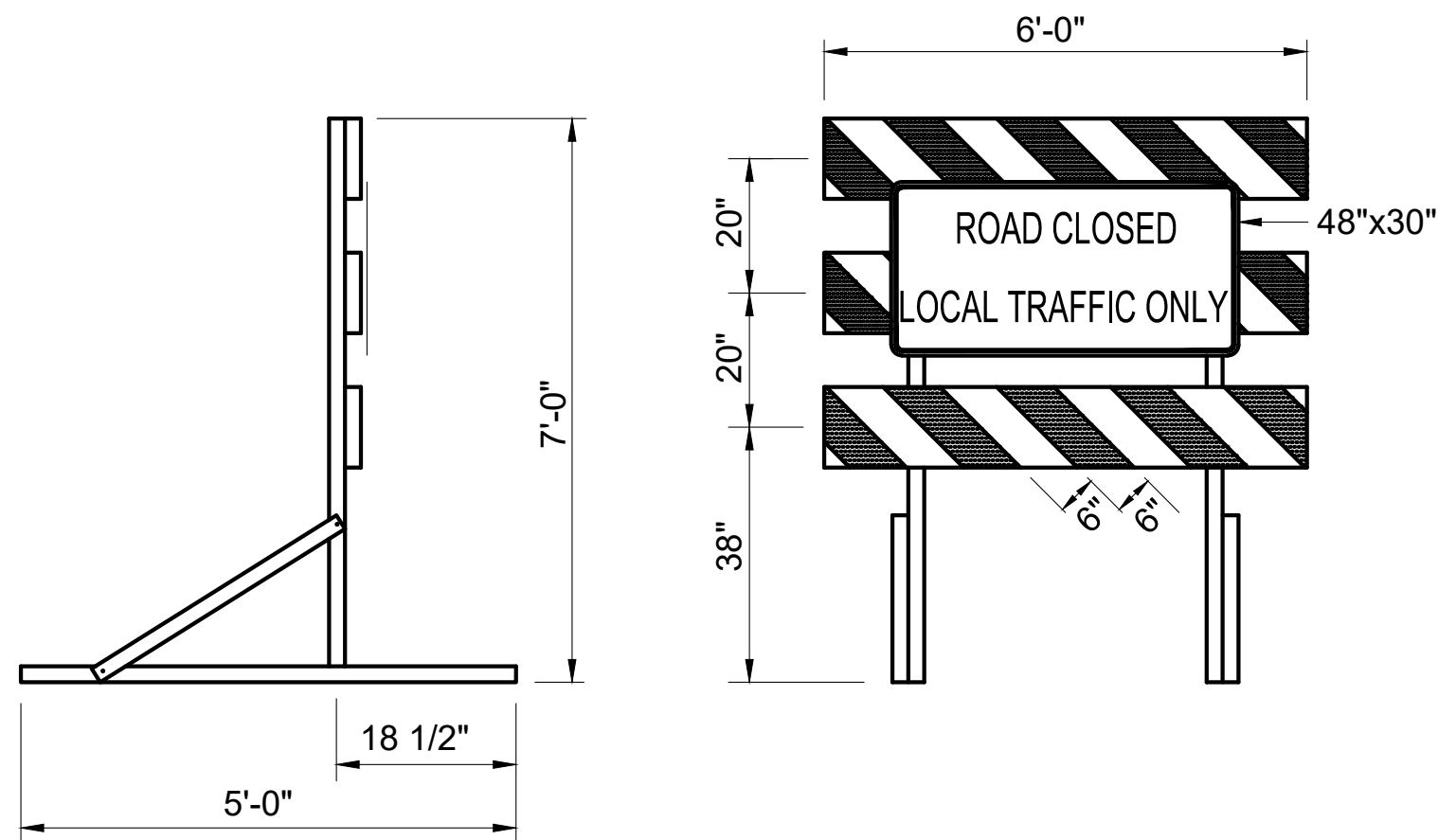
32010

DRAWING NAME

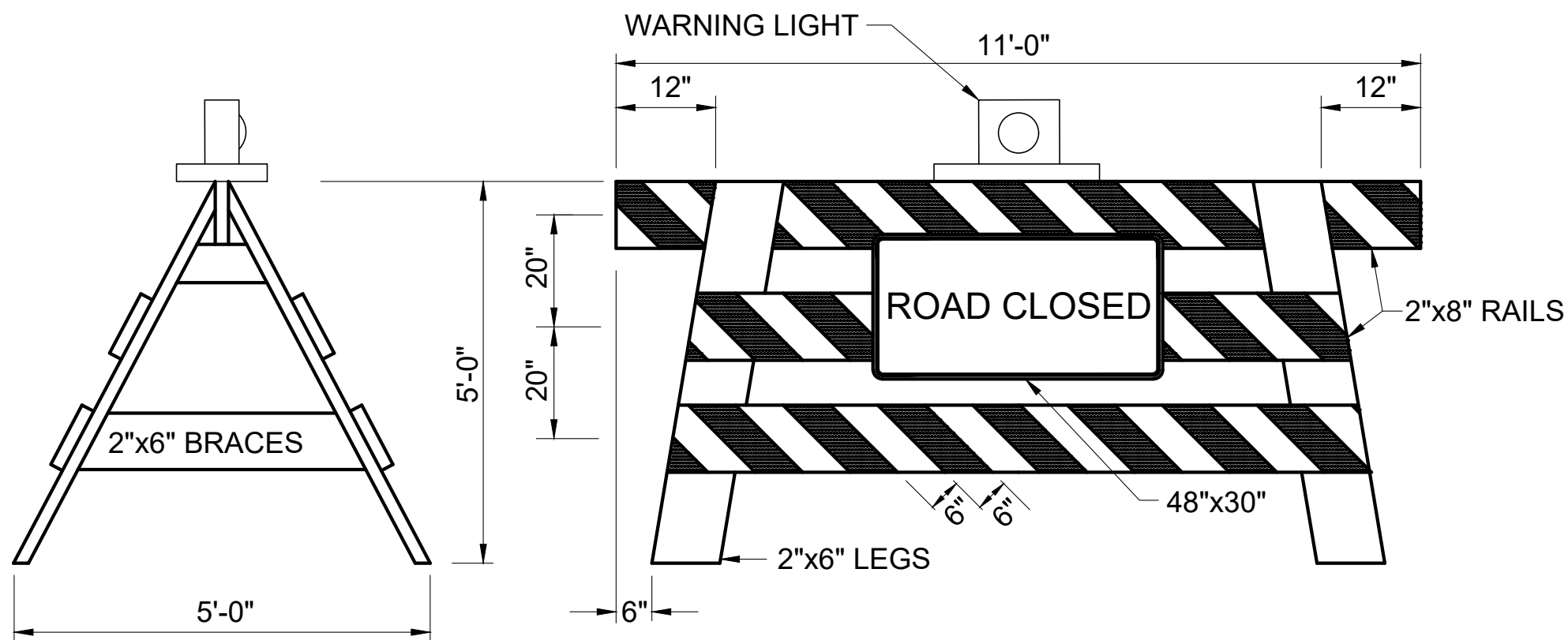
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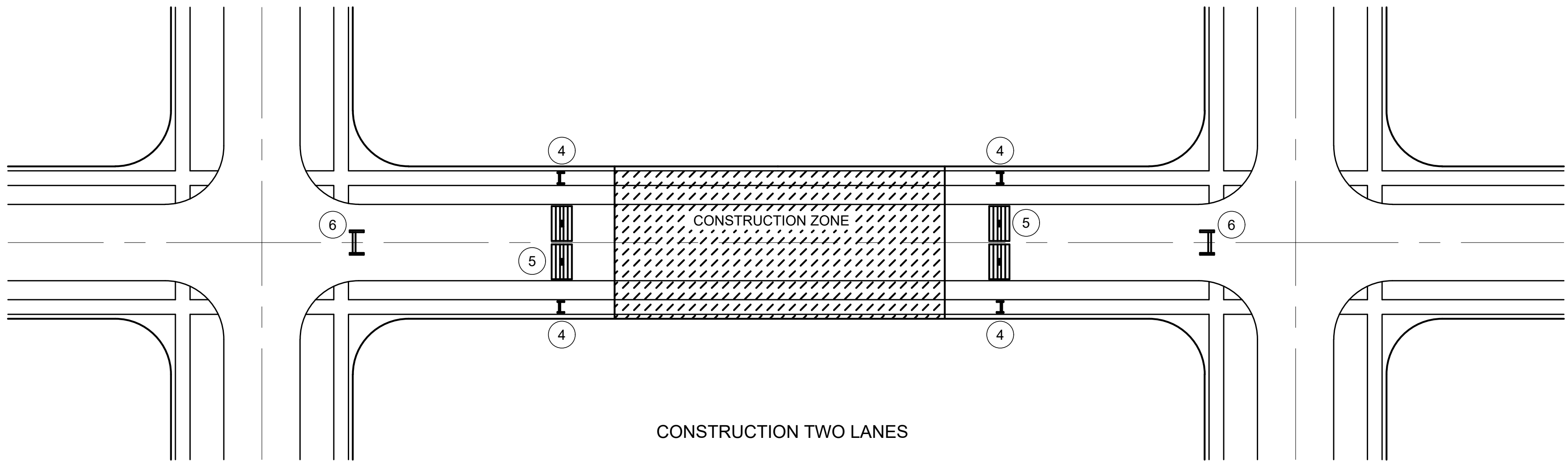
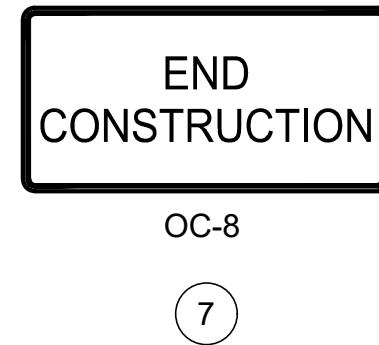
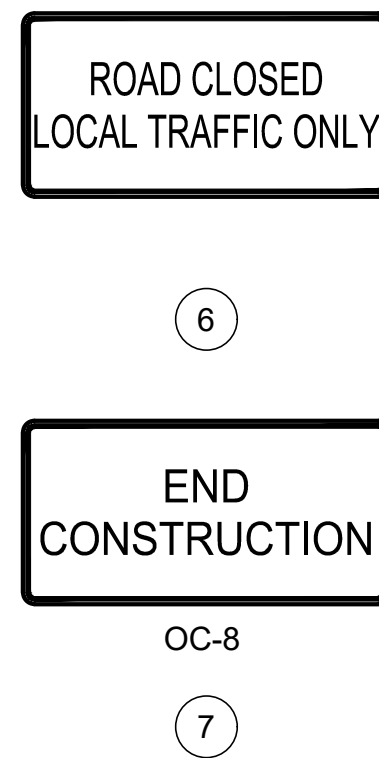
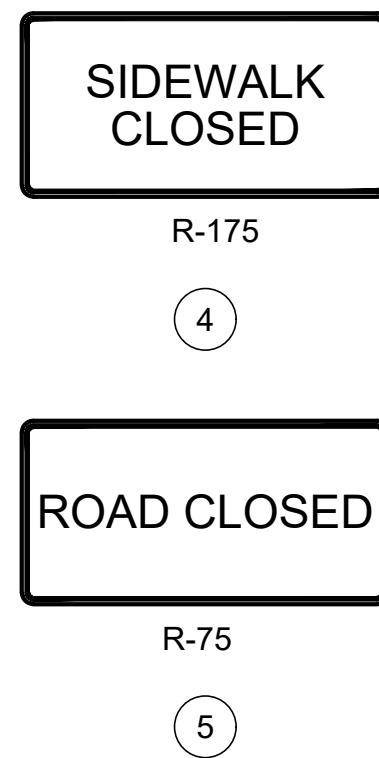


TYPE III PORTABLE CONSTRUCTION BARRICADE



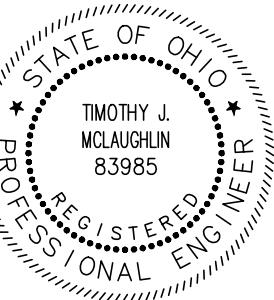
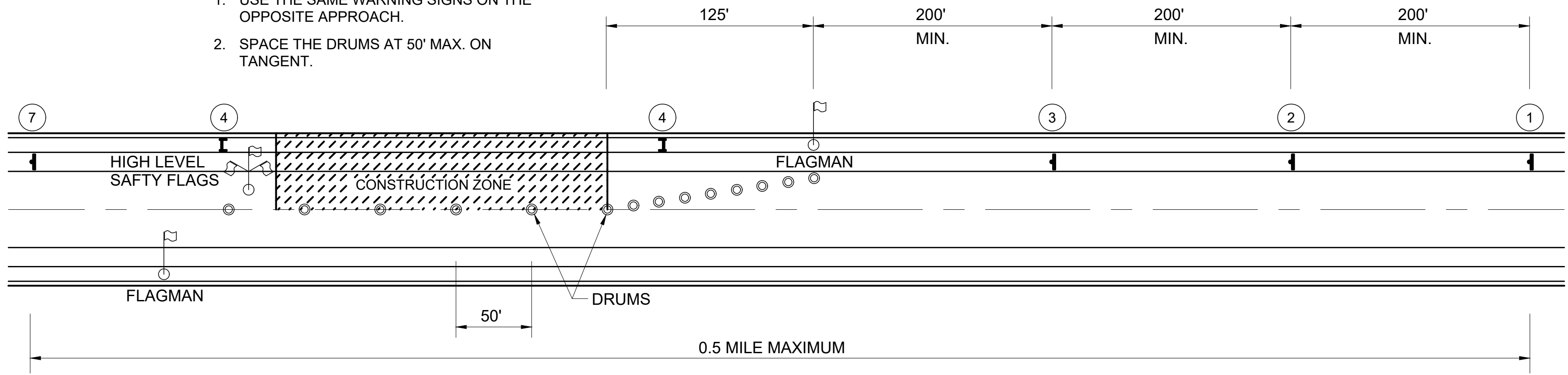
TYPE III DEMOUNTABLE CONSTRUCTION BARRICADE

- A. BARRICADES: BARRICADES SHALL BE CONSTRUCTED ACCORDING TO DETAILS SHOWN. WHEN THE ROAD IS CLOSED TO TRAFFIC, BARRICADES SHALL BE USED TO EFFECTIVELY CLOSE THE ENTIRE ROADWAY. THE ENDS OF THE BARRICADE SHALL BE LOCATED BY THE ENGINEER TO EFFECT THE DESIRED CLOSING OF THE ROADWAY.
- B. PAINTING AND REFLECTORIZATION: ALL RAILS OF THE BARRICADES AND GATES SHALL BE REFLECTORIZED WITH ORANGE AND WHITE REFLECTORIZED TYPE "G" SHEETING IN 6" WIDE ALTERNATE STRIPES WHICH SLOPE DOWNWARD TOWARD THE CENTERLINE OF THE ROAD AT AN ANGLE OF 45°. ALL THREE RAILS OF THE ROAD CLOSED BARRICADE SHALL BE STRIPED ON THE SIDE FACING TRAFFIC. ALL GATE RAILS SHALL BE STRIPED ON BOTH SIDES. ALL POSTS, BRACES, GATE-LEGS, AND UNSTRIPED RAILS SHALL BE PAINTED WHITE.
- C. TYPE "C" STEADY BURNING BARRICADE WARNING LIGHTS: EACH GATE SHALL BE EQUIPPED WITH A TYPE "C" STEADY BURNING BARRICADE WARNING LIGHT, CONSPICUOUSLY VISIBLE AT ALL DISTANCES UP TO 1000' UNDER NORMAL CONDITIONS BETWEEN SUNSET AND SUNRISE DURING THE PERIOD THE ROAD IS CLOSED.
- D. SIGNS: WHERE THE ROAD IS CLOSED TO TRAFFIC BY THE ERECTION OF BARRICADES, "ROAD CLOSED" SIGNS (R-75) SHALL BE MOUNTED ON THE BARRICADES AS SHOWN. WHEN TRAFFIC IS MAINTAINED, A "ROAD CONSTRUCTION AHEAD" SIGN (OW-128) SHALL BE USED ON THE RIGHT SHOULDER ON THE APPROACHES AT THE INTERSECTING STREET IN ADVANCE OF THE PROJECT. WHERE THE SIDEWALK IS CLOSED TO PEDESTRIAN TRAFFIC "SIDEWALK CLOSED" SIGNS SHALL BE ERECTED ACROSS THE WALK AT THE LOCATION SHOWN.



NOTES:

1. USE THE SAME WARNING SIGNS ON THE OPPOSITE APPROACH.
2. SPACE THE DRUMS AT 50' MAX. ON TANGENT.



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DATE	REVISION	NO	SCALE	AS SHOWN	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
					08/27/2025	TJM	JPB	TJM

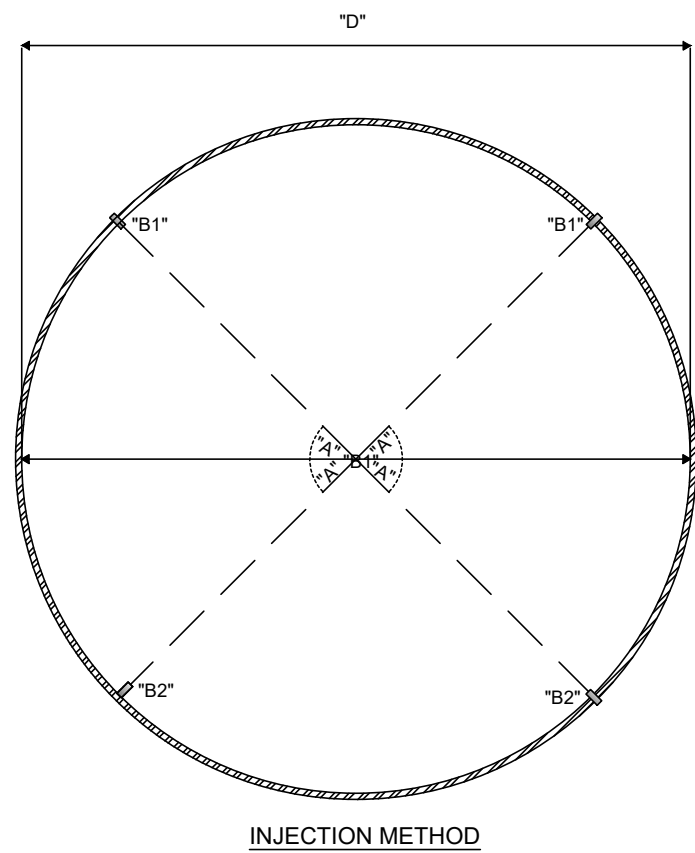
CITY OF WILLOWICK LAKESHORE BLVD TRUNK SEWER WEST REHAB WILLOWICK, OHIO LAKE COUNTY	GENERAL - 00 SERIES	MAINTENANCE OF TRAFFIC
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PROJECT NO:	32010
DRAWING NAME	00G-05
SHEET	OF
5	14

REFERENCE
"A" - ANGLE FROM CENTER = 45°
"B1" - PRIMARY INJECTION INSERTION POINTS
"B2" - SECONDARY INJECTION INSERTION POINTS
"D" - INNER DIAMETER = 84 TO 90"

JOINT INJECTION NOTES:

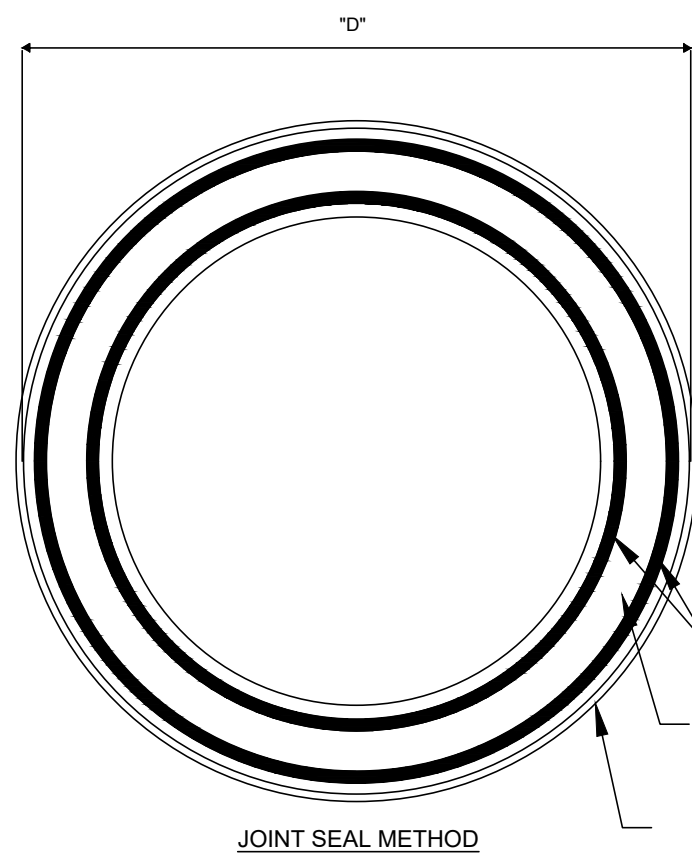
1. INJECTION MATERIALS AND METHODS SHALL BE IN ACCORDANCE WITH SECTIONS 330130.61 AND 330130.63.
2. PRIMARY AND SECONDARY INSERTION POINTS OF INJECTIONS SHALL BE WITHIN 1'-0" OF JOINT.
3. INJECTION POINT SIZE SHALL BE NO LARGER THAN 1" IN DIAMETER. EACH INJECTION POINT SHALL BE CAPPED, CUT, AND FLUSH WITH EXISTING PIPE SURFACE AFTER INJECTION MATERIAL HAS COMPLETELY CURED.
4. CONTRACTOR IS RESPONSIBLE TO ENSURE NO DAMAGE IS MADE TO EXISTING UTILITIES WITHIN 10'-0" OF INJECTION POINT.



JOINT REPAIR GENERAL NOTES:

1. ALL WORK PERFORMED WITHIN PIPE SHALL BE PERFORMED IN ACCORDANCE WITH OSHA AND CITY OF WILLOWICK CONFINED SPACE ENTRY PROCEDURES.
2. THE CONTRACTOR SHALL PERFORM JOINT REPAIR BY EITHER JOINT INJECTIONS (SEE JOINT INJECTION METHOD DETAIL AND NOTES TO THE LEFT) OR JOINT SEAL (SEE JOINT SEAL METHOD DETAIL AND NOTES TO THE RIGHT). THE CONTRACTOR SHALL INDICATE AT THE TIME OF BID WHICH METHOD THEY ARE TO USE AND EITHER METHOD SHALL BE PAID UNDER THE JOINT SEAL, AS PER PLAN PAY ITEMS.

JOINT REPAIR DETAIL
NOT TO SCALE

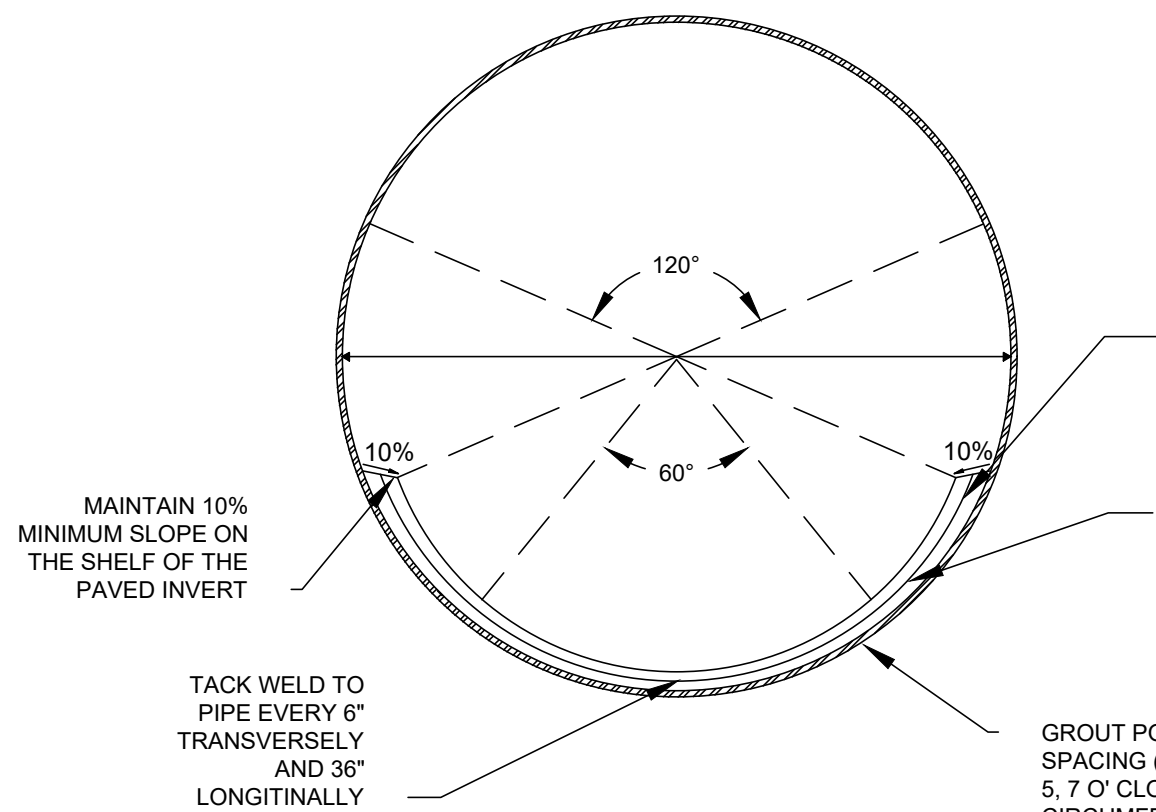


JOINT SEAL NOTES:

1. JOINT SEALS SHALL BE HYDRATITE INTERNAL PIPE JOINT SEALS OR AN EQUIVALENT APPROVED BY THE ENGINEER.
2. SEALS SHALL BE INSTALLED TO CREATE A WATERTIGHT SEAL AROUND JOINTS.
3. THE CONTRACTOR SHALL PREPARE THE AREA, INCLUDING CLEANING AND REMOVAL OF ANY DEBRIS AROUND THE JOINT, TO THE MANUFACTURER'S SPECIFICATIONS AND GUIDELINES.

STAINLESS STEEL RETAINING BANDS (TYP OF 2 PER JOINT)
HYDRATITE EDPM RUBBER JOINT SEAL

EXISTING 84 - 90" CMP

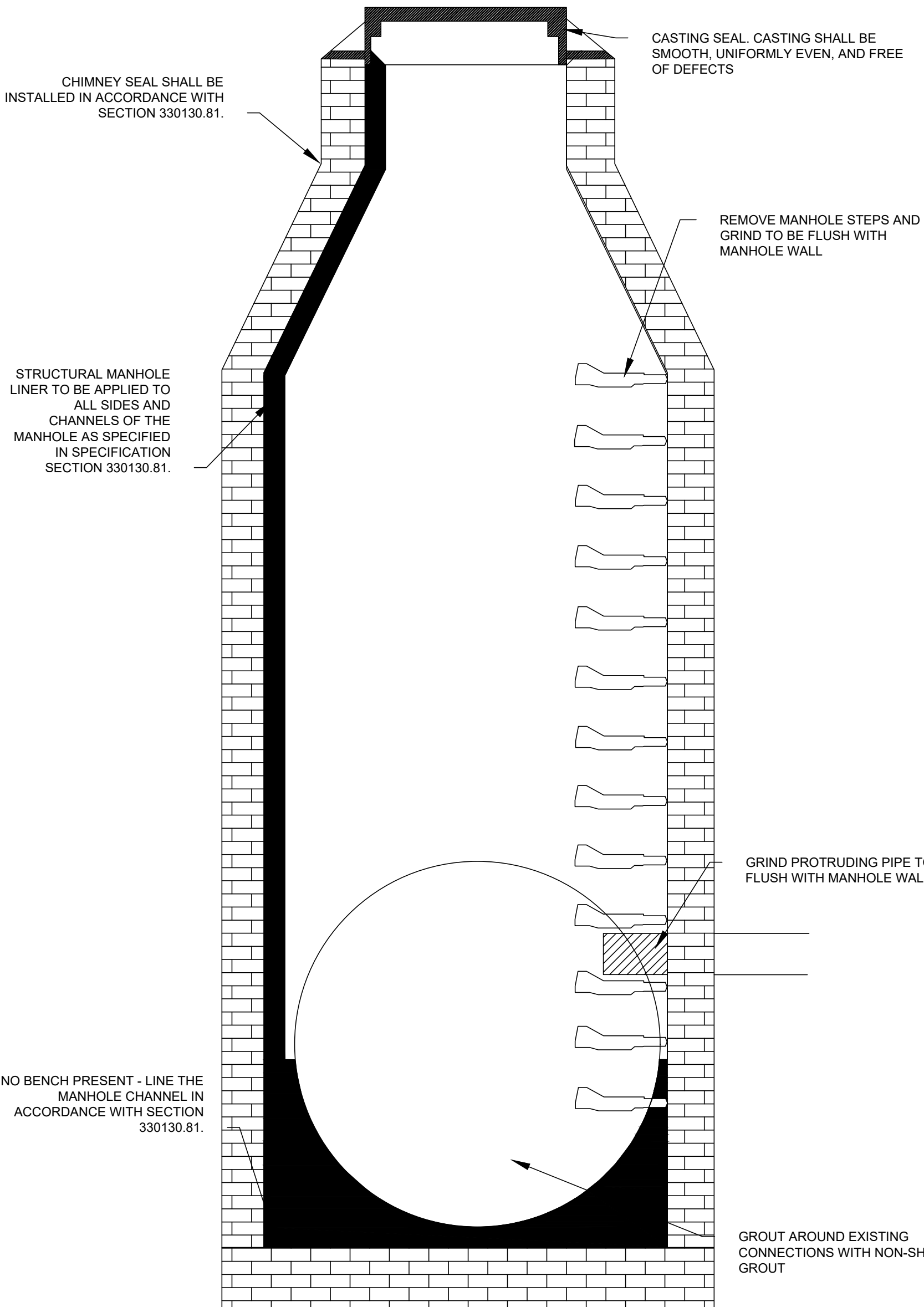


FIELD PAVING OF EXISTING PIPE,
84 - 90 INCH

NOT TO SCALE

NOTES:

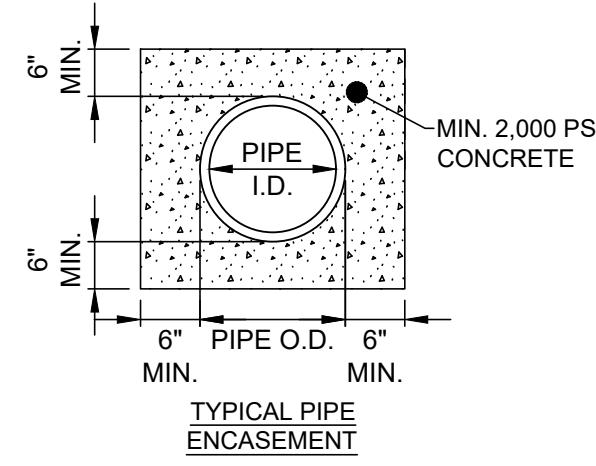
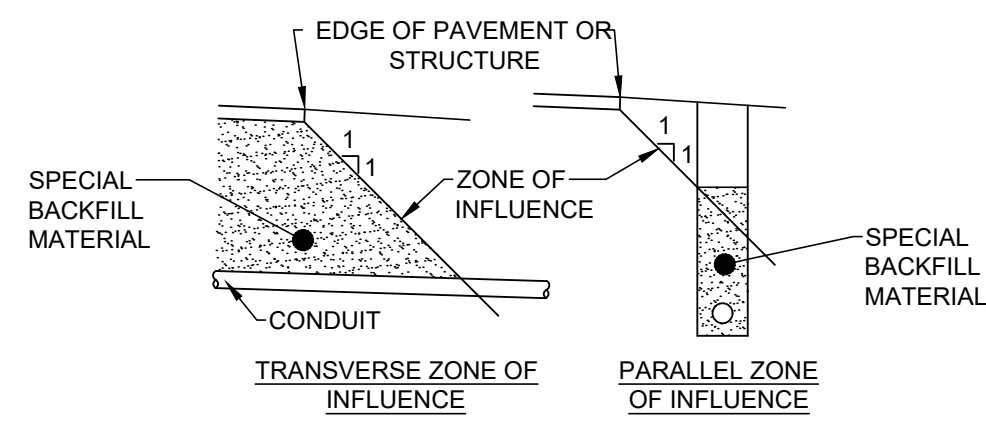
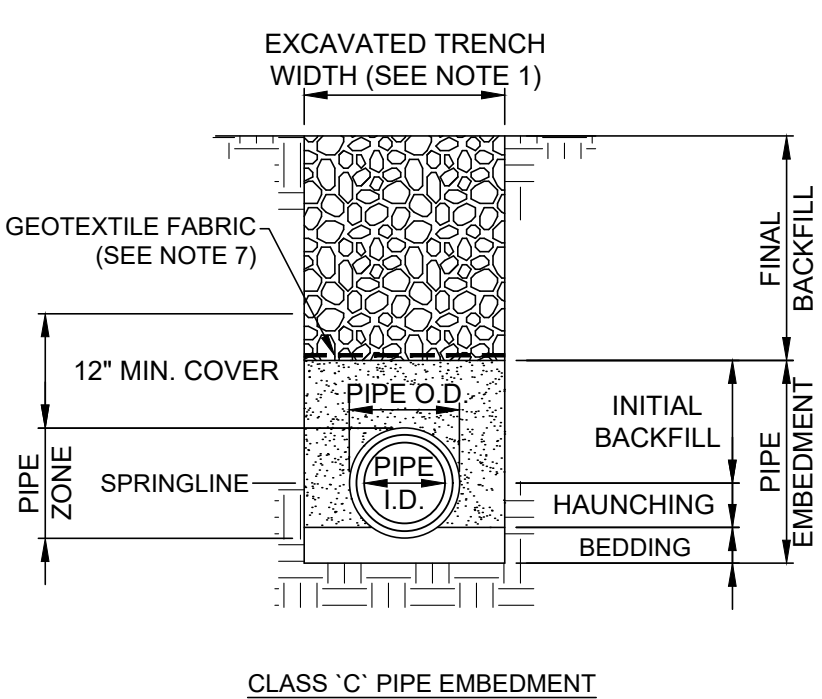
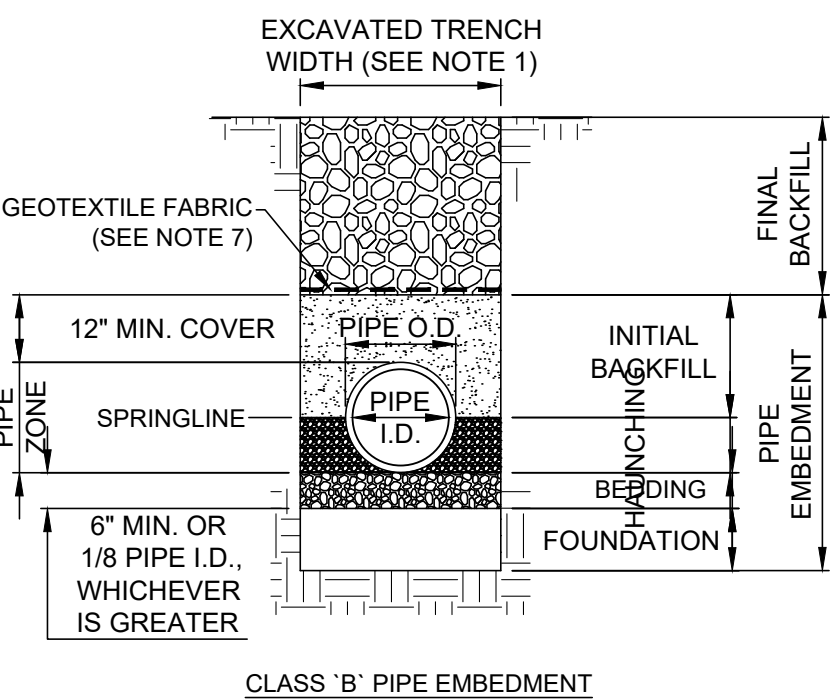
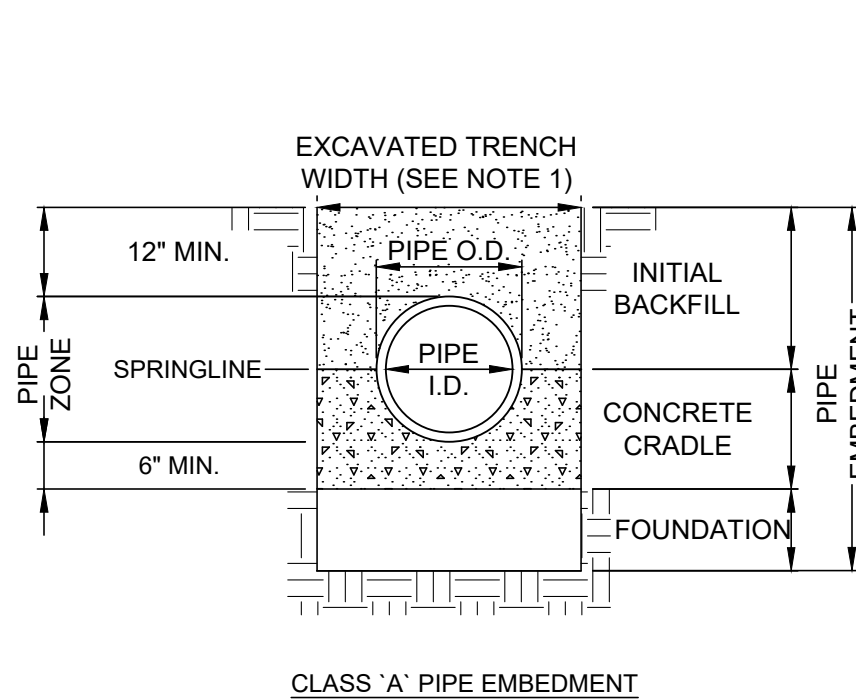
1. PERFORM WORK IN ACCORDANCE WITH ODOT CMS 611.11 AND ALL SUBSEQUENT SPECIFICATIONS UNDER THE MOST RECENT ODOT CMS.
2. CONCRETE SHALL BE ODOT CLASS QC1 IN ACCORDANCE WITH ODOT CMS 499 AND 511.
3. COARSE AGGREGATE SIZE NO. 7, 8, OR 28 SHALL BE IN ACCORDANCE WITH ODOT CMS 703.02.
4. GALVANIZED WELDED WIRE FABRIC FOR REINFORCEMENT OF PAVED INVERT SHALL BE IN ACCORDANCE WITH ODOT CMS 709.08.
5. PAVED INVERT SHALL HAVE A SMOOTH EVEN FINISH TO PROMOTE LAMINAR FLOW.
6. BENCH AT THE TOP OF THE PAVED INVERT SHALL A 10% SLOPE OR GREATER TO LIMIT BUILDUP OF SEDIMENT OR DEBRIS.
7. WHEN AN INVERT TERMINATES AT A MANHOLE, THE CONTRACTOR SHALL TAPER AND FINISH CONCRETE SUCH THAT THERE IS A SMOOTH TRANSITION BETWEEN THE EXISTING CHANNEL INVERT AND PROPOSED PAVED INVERT. TAPER SHALL BE SLOPED AT 1:10 WITH A FLUSH FINISH AT THE EXISTING CHANNEL INVERT.



NOTES:

1. REFER TO SPECIFICATION SECTION 330130.81
2. LINER SHALL OVERLAP FRAME BY 2" (MIN)

REHABILITATION OF EXISTING
MANHOLE
NOT TO SCALE



NOTES:

1. MAXIMUM EXCAVATED TRENCH WIDTH: THE MAXIMUM EXCAVATED TRENCH WIDTH FROM THE BOTTOM OF THE TRENCH TO 12" OVER THE TOP OF THE PIPE (WITHIN PIPE EMBEDMENT) SHALL BE O.D. + 24" FOR ALL PIPES UP TO AND INCLUDING 24" I.D. + 30" FOR PIPE FROM 24" I.D. TO 54" I.D. AND O.D. + 48" FOR PIPES SIZES 60" I.D. AND OVER.

2. FOUNDATION: REQUIRED FOR THIS PROJECT. AS PER THE GEOTECHNICAL REPORT, THE CONTRACTOR SHALL EXCAVATE AND REMOVE AN ADDITIONAL 12" OF MATERIAL AND REPLACE WITH A LAYER OF 6" OF AASHTO NO. 1 AND NO. 2 CRUSHED LIMESTONE, FOLLOWED BY A LAYER OF 6" OF AASHTO NO. 57 GRANULAR LIMESTONE.

3. PIPE EMBEDMENT:

CLASS A: CLASS A PIPE EMBEDMENT SHALL BE USED FOR ALL PIPING UNDER PAVEMENT OR STRUCTURES WITH LESS THAN 12 INCHES OF PIPE COVER TO THE SUBGRADE. THE CONCRETE CRADLE SHALL BE IN ACCORDANCE WITH ODOT ITEM 499, CLASS "C". THE INITIAL BACKFILL SHALL BE AASHTO NO. 57 LIMESTONE GRANULAR PIPE EMBEDMENT.

CLASS B: CLASS B PIPE EMBEDMENT SHALL BE USED FOR ALL PIPING UNLESS OTHERWISE NOTED ON THE PLANS OR AUTHORIZED BY THE ENGINEER. THE HAUNCHING SHALL BE AASHTO NO. 57 LIMESTONE GRANULAR PIPE EMBEDMENT. IN ALL AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE, THE INITIAL BACKFILL SHALL BE AASHTO NO. 57 LIMESTONE GRANULAR PIPE EMBEDMENT. IN ALL AREAS OUTSIDE OF PAVEMENT, STRUCTURES OR THE ZONE OF INFLUENCE, THE INITIAL BACKFILL SHALL BE SUITABLE ON-SITE MATERIAL APPROVED BY THE ENGINEER FOR ONLY REINFORCED CONCRETE PIPE AND DUCTILE IRON PIPE. THE INITIAL BACKFILL FOR ALL OTHER PIPES SHALL BE AASHTO NO. 57 LIMESTONE GRANULAR PIPE EMBEDMENT.

CLASS C: CLASS C PIPE EMBEDMENT SHALL ONLY BE USED FOR DUCTILE IRON WATER MAIN, DUCTILE IRON FORCE MAINS OR AS AUTHORIZED BY THE ENGINEER. THE PIPE EMBEDMENT SHALL BE AASHTO NO. 57 LIMESTONE GRANULAR PIPE EMBEDMENT IN ALL AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE. THE PIPE EMBEDMENT SHALL BE SUITABLE ON-SITE MATERIAL APPROVED BY THE ENGINEER IN ALL AREAS OUTSIDE OF PAVEMENT, STRUCTURES OR THE ZONE OF INFLUENCE. WHERE ROCK OR SHALE IS ENCOUNTERED, A MINIMUM 6-INCHES OF AASHTO NO. 57 LIMESTONE GRANULAR PIPE BEDDING OR SAND BEDDING SHALL BE PLACED AS DIRECTED BY THE ENGINEER.

4. FINAL BACKFILL: IN ALL AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE THE FINAL BACKFILL SHALL BE SPECIAL BACKFILL MATERIAL. IN ALL AREAS OUTSIDE OF PAVEMENT, STRUCTURES OR THE ZONE OF INFLUENCE, THE FINAL BACKFILL SHALL BE SUITABLE ON-SITE MATERIAL APPROVED BY THE ENGINEER. LSM SHALL BE USED IN PLACE OF SPECIAL BACKFILL MATERIAL WHEN TOP OF PIPE IS WITHIN 5' OF PAVEMENT OR WITHIN CITY RIGHT-OF-WAY OR UNLESS INDICATED ON DRAWINGS

5. SPECIFICATIONS: ALL TRENCHING, PIPE EMBEDMENT AND BACKFILL MATERIALS SHALL BE IN ACCORDANCE WITH SPECIFICATION 310000 - EARTHWORK.

6. CLAY TRENCH DAMS: CLAY TRENCH DAMS SHALL BE REQUIRED FOR EACH LATERAL, UPSTREAM OF EVERY MANHOLE, AS SHOWN ON THE DRAWINGS, AND AS DIRECTED BY THE ENGINEER.

7. GEOTEXTILE FABRIC: INSTALL A GEOTEXTILE FABRIC IN ACCORDANCE WITH ODOT 712.09, TYPE A, AFTER ALL INITIAL BACKFILL CONSISTING OF AASHTO NO. 57 LIMESTONE GRANULAR PIPE EMBEDMENT.

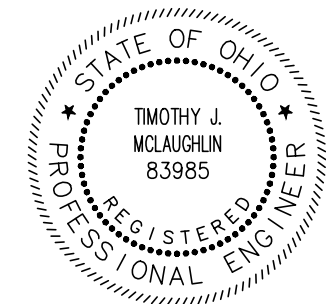
8. TYPICAL PIPE ENCASEMENT, AS PER PLAN OR AS DIRECTED BY THE ENGINEER.

TRENCHING, BEDDING, AND BACKFILL DETAIL

NOT TO SCALE

MANHOLE ID	RIM TO INVERT (FT)	WALL DIAMETER	REPAIR IMPROVEMENTS				
			CONNECTIONS	STEPS	CHIMNEY	WALL	INVERT OR BENCH
MH T208D	19.9'	96"	GROUT AROUND EXISTING PIPES PRIOR TO LINING	REMOVE	CHIMNEY SEAL PER 330130.81	STRUCTURAL LINING PER 330130.81	STRUCTURAL LINING PER 330130.81
MH T207	21.3'	96"	GROUT AROUND EXISTING PIPES PRIOR TO LINING	REMOVE	CHIMNEY SEAL PER 330130.81	STRUCTURAL LINING PER 330130.81	STRUCTURAL LINING PER 330130.81
MH T010	21.9'	96"	GROUT AROUND EXISTING PIPES PRIOR TO LINING	REMOVE	CHIMNEY SEAL PER 330130.81	STRUCTURAL LINING PER 330130.81	STRUCTURAL LINING PER 330130.81
MH T011	25.9'	96"	GROUT AROUND EXISTING PIPES PRIOR TO LINING	REMOVE	CHIMNEY SEAL PER 330130.81	STRUCTURAL LINING PER 330130.81	STRUCTURAL LINING PER 330130.81
MH T012	26.8'	96"	GROUT AROUND EXISTING PIPES PRIOR TO LINING	REMOVE	CHIMNEY SEAL PER 330130.81	STRUCTURAL LINING PER 330130.81	STRUCTURAL LINING PER 330130.81

MANHOLE REHABILITATION SCHEDULE

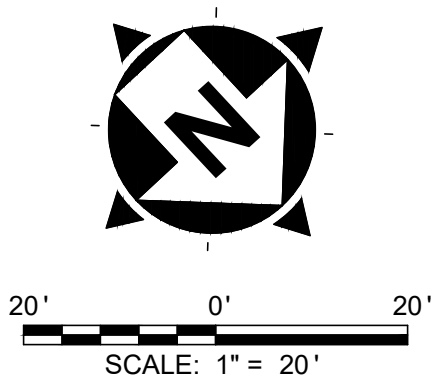
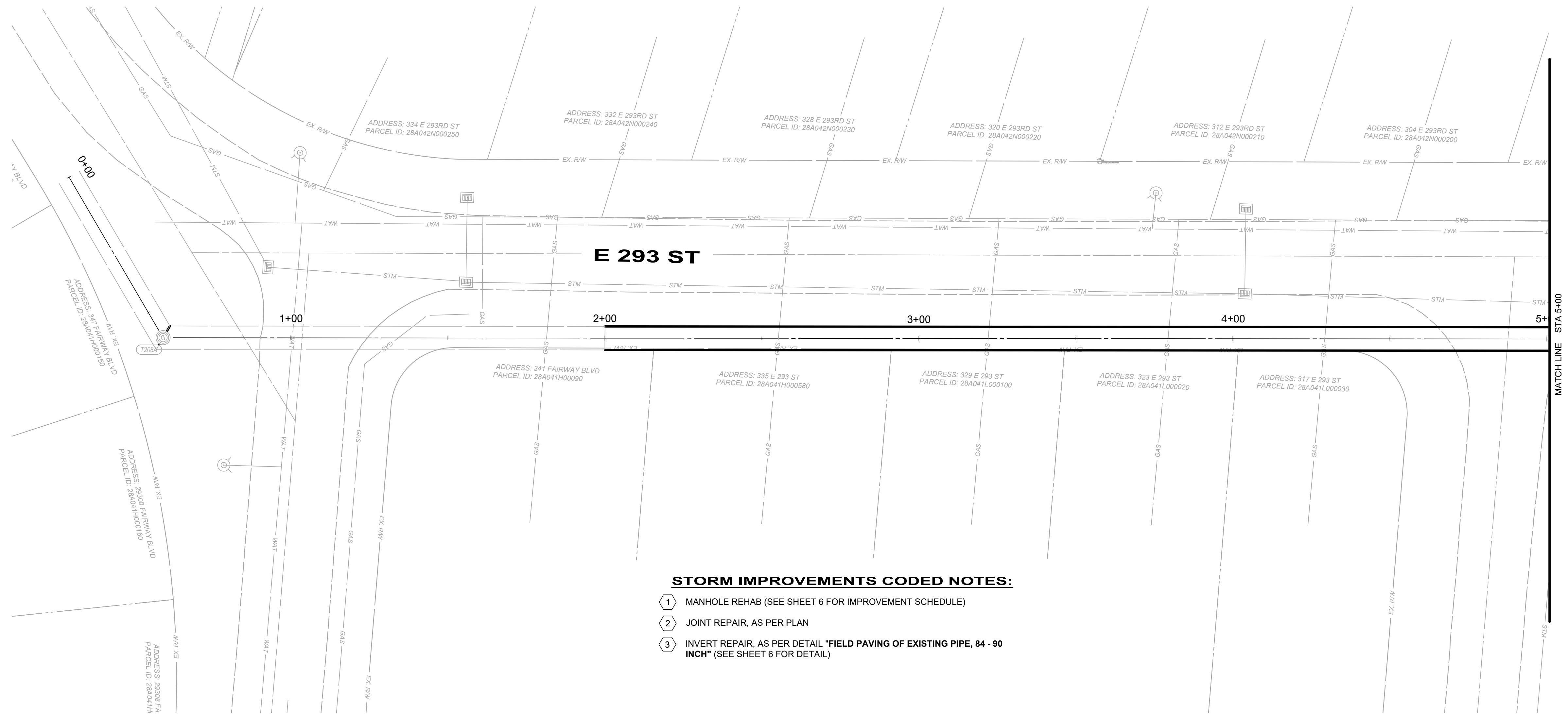


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DATE	REVISION	NO	SCALE	AS SHOWN	DATE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
					08/27/2025	TJM	JPB	TJM

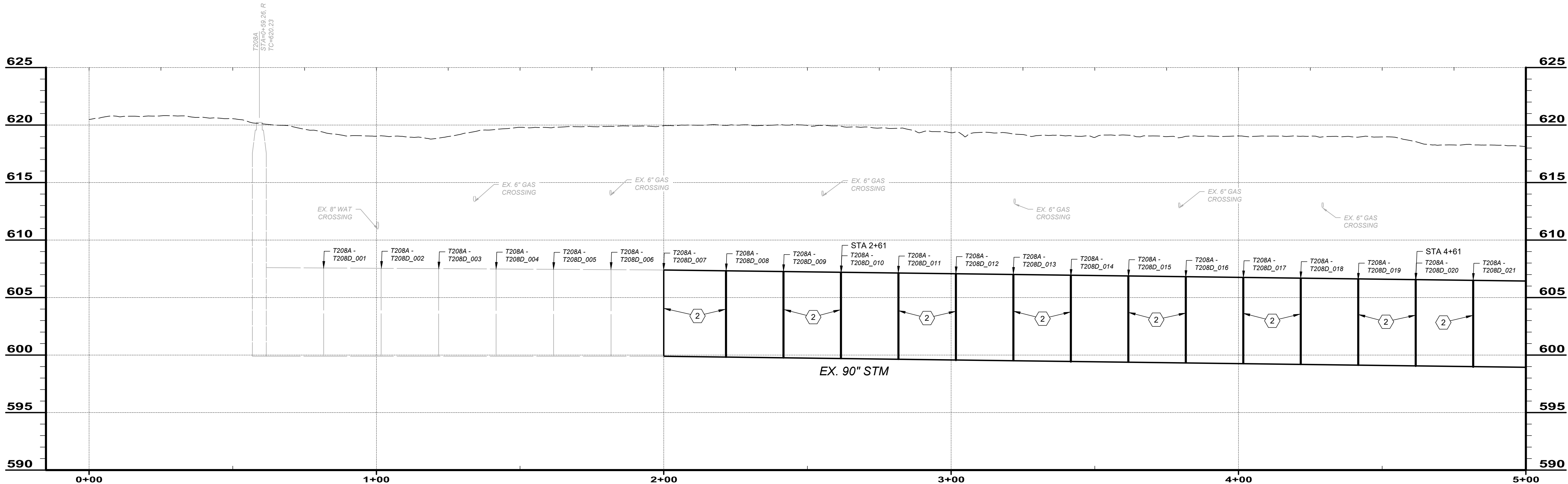
CITY OF WILLOWICK
LAKESHORE BLVD TRUNK
SEWER WEST REHAB
WILLOWICK, OHIO LAKE COUNTY
GENERAL - 00 SERIES
CONSTRUCTION DETAILS

PROJECT NO:	
32010	
DRAWING NAME	
00G-06	
SHEET	OF
6	14

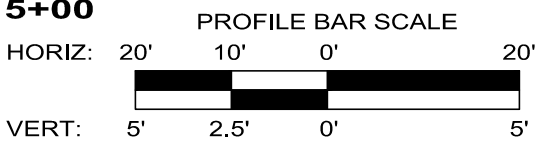


STORM IMPROVEMENTS CODED NOTES:

- 1 MANHOLE REHAB (SEE SHEET 6 FOR IMPROVEMENT SCHEDULE)
- 2 JOINT REPAIR, AS PER PLAN
- 3 INVERT REPAIR, AS PER DETAIL "FIELD PAVING OF EXISTING PIPE, 84 - 90 INCH" (SEE SHEET 6 FOR DETAIL)



LAKESHORE STORM - STA 0+00 TO 5+00

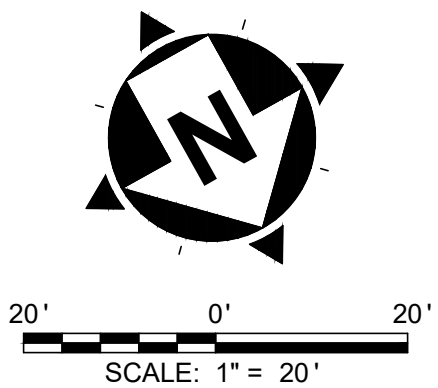


NO	REVISION	DATE

SCALE: AS SHOWN	DATE: 08/27/2025
DESIGNED BY: TJM	DRAWN BY: JPB
CHECKED BY: TJM	

CITY OF WILLOWICK LAKESHORE BLVD TRUNK SEWER WEST REHAB WILLOWICK, OHIO LAKE COUNTY
PLAN & PROFILE - 10 SERIES
PLAN & PROFILE - STA 0+00 - 5+00

PROJECT NO: 32010	
DRAWING NAME 10C-01	
SHEET 7	OF 14



verdantas

[illegible]

SCALE: AS SHOWN
DATE: 08/27/2025
DESIGNED BY: TJM
DRAWN BY: JPB
CHECKED BY: TJM

**CITY OF WILLOWICK
LAKESHORE BLVD TRUNK
SEWER WEST REHAB
WILLOWICK, OHIO LAKE COUNTY**

PLAN & PROFILE - 10 SERIES

PLAN & PROFILE - STA 5+00 - 10+00

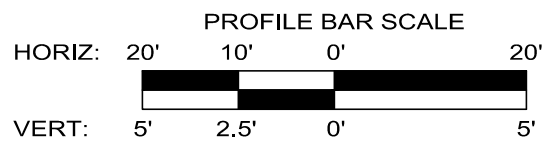
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32010

DRAWING NAME

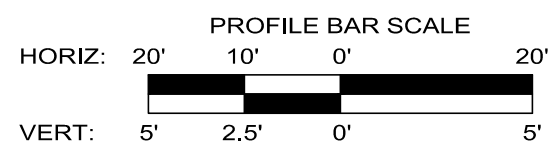
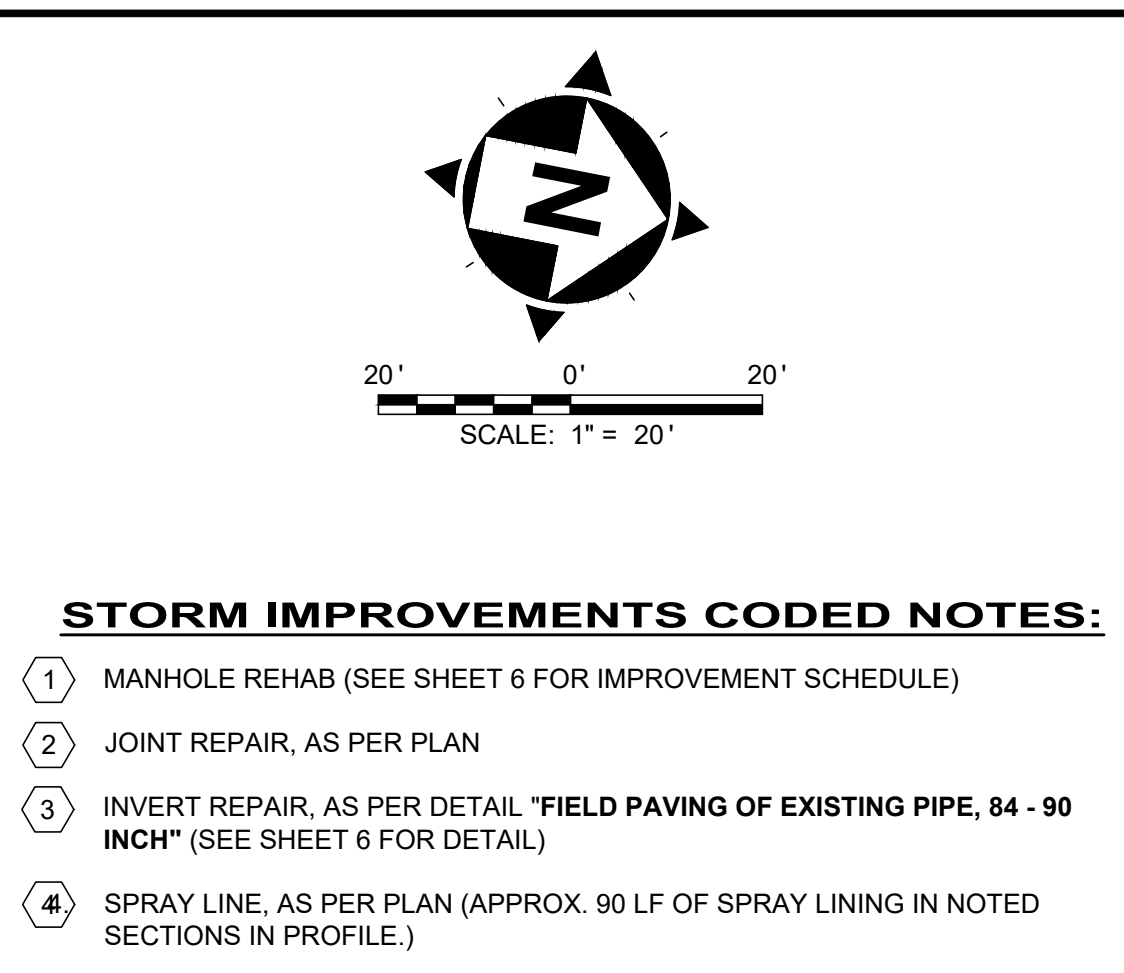
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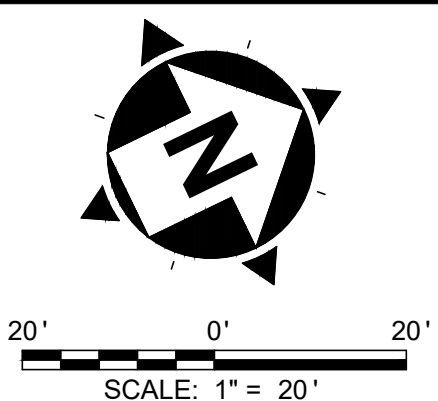
OF
14



- 1 MANHOLE REHAB (SEE SHEET 6 FOR IMPROVEMENT SCHEDULE)
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- 3 INVERT REPAIR, AS PER DETAIL "FIELD PAVING OF EXISTING PIPE, 84 - 90 INCH" (SEE SHEET 6 FOR DETAIL)

LAKESHORE STORM - STA 5+00 TO 10+00



[illegible]

SCALE:	AS SHOWN
DATE:	08/27/2025
DESIGNED BY:	TJM
DRAWN BY:	JPB
CHECKED BY:	TJM

**CITY OF WILLOWICK
LAKESHORE BLVD TRUNK
SEWER WEST REHAB
WILLOWICK, OHIO LAKE COUNTY**

PLAN & PROFILE - 10 SERIES

PLAN & PROFILE - STA 15+00 - 20+00

PROJECT NO:

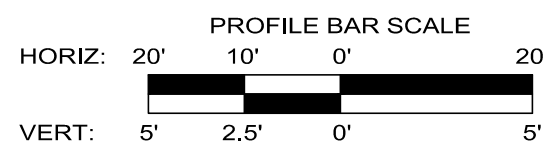
32010

DRAWING NAME

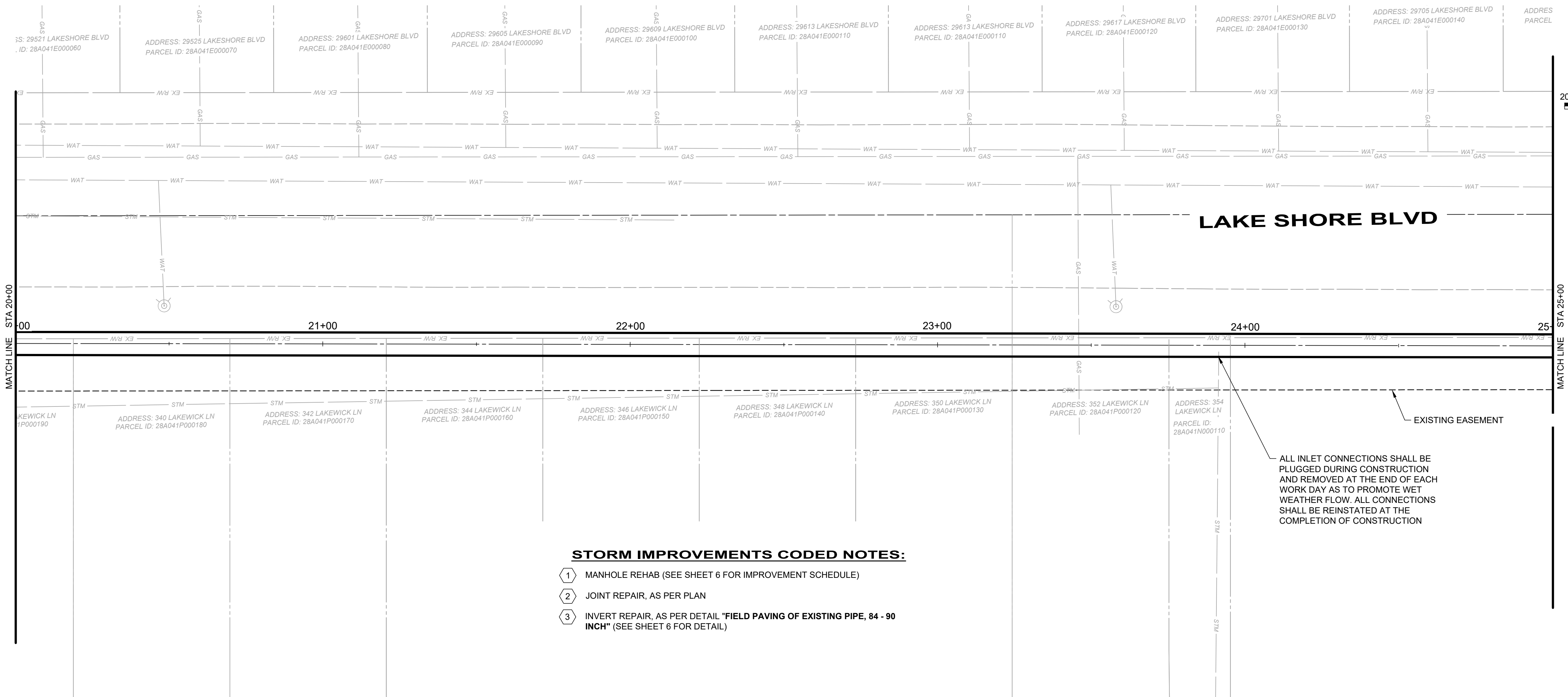
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SHEET

OF

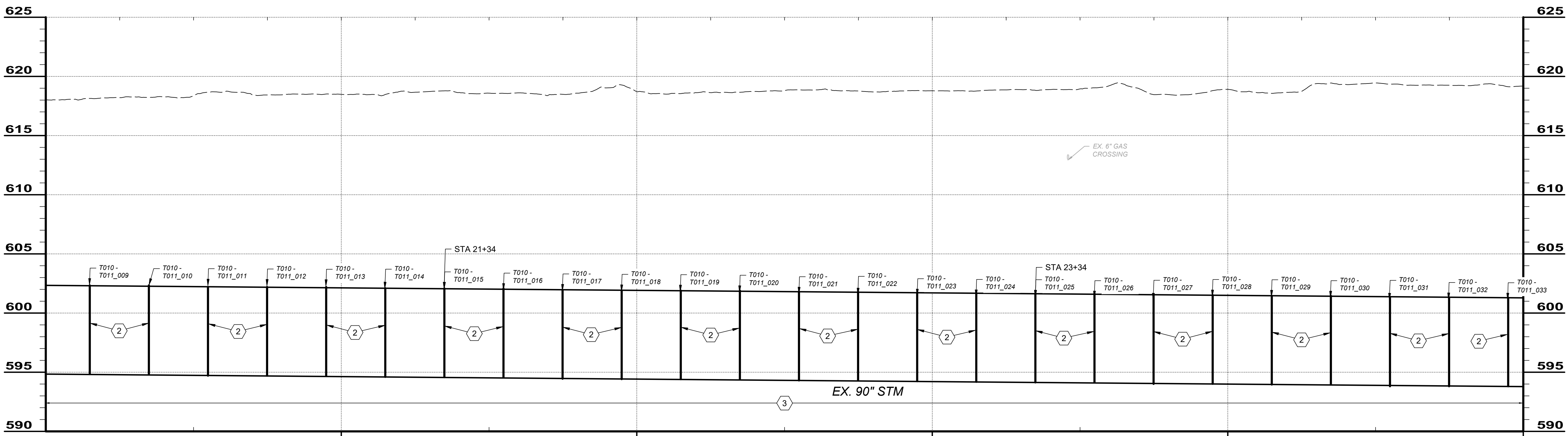


LAKESHORE STORM - STA 15+00 TO 20+00

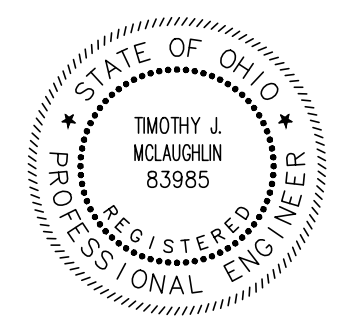
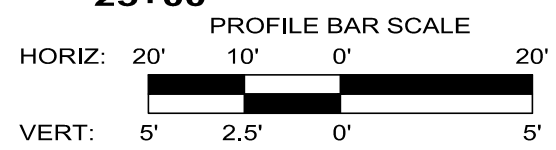


- STORM IMPROVEMENTS CODED NOTES:**
- 1 MANHOLE REHAB (SEE SHEET 6 FOR IMPROVEMENT SCHEDULE)
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ALL INLET CONNECTIONS SHALL BE PLUGGED DURING CONSTRUCTION AND REMOVED AT THE END OF EACH WORK DAY AS TO PROMOTE WET WEATHER FLOW. ALL CONNECTIONS SHALL BE REINSTATED AT THE COMPLETION OF CONSTRUCTION



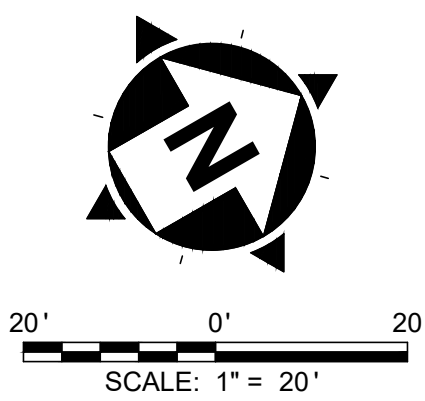
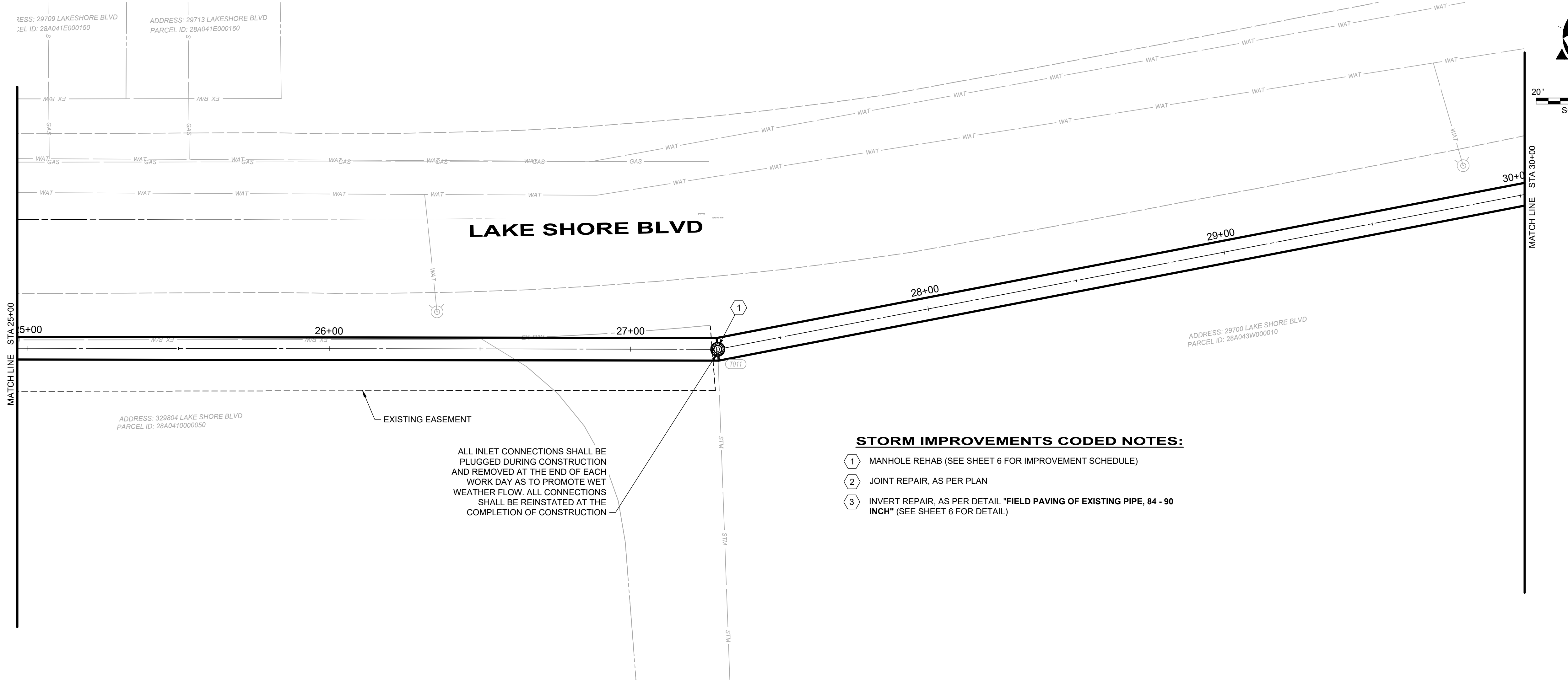
LAKESHORE STORM - STA 20+00 TO 25+00



NO	REVISION	DATE

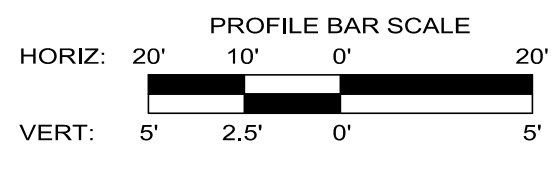
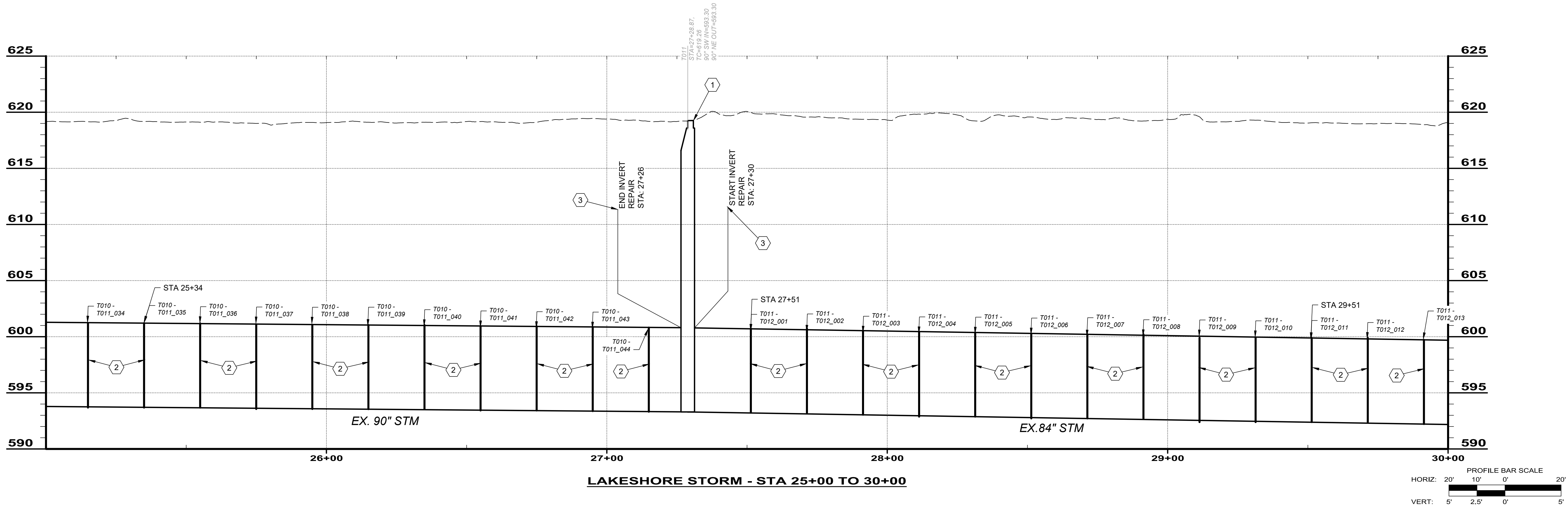
SCALE: AS SHOWN	DATE: 08/27/2025	DESIGNED BY: TJM	DRAWN BY: JPB	CHECKED BY: TJM
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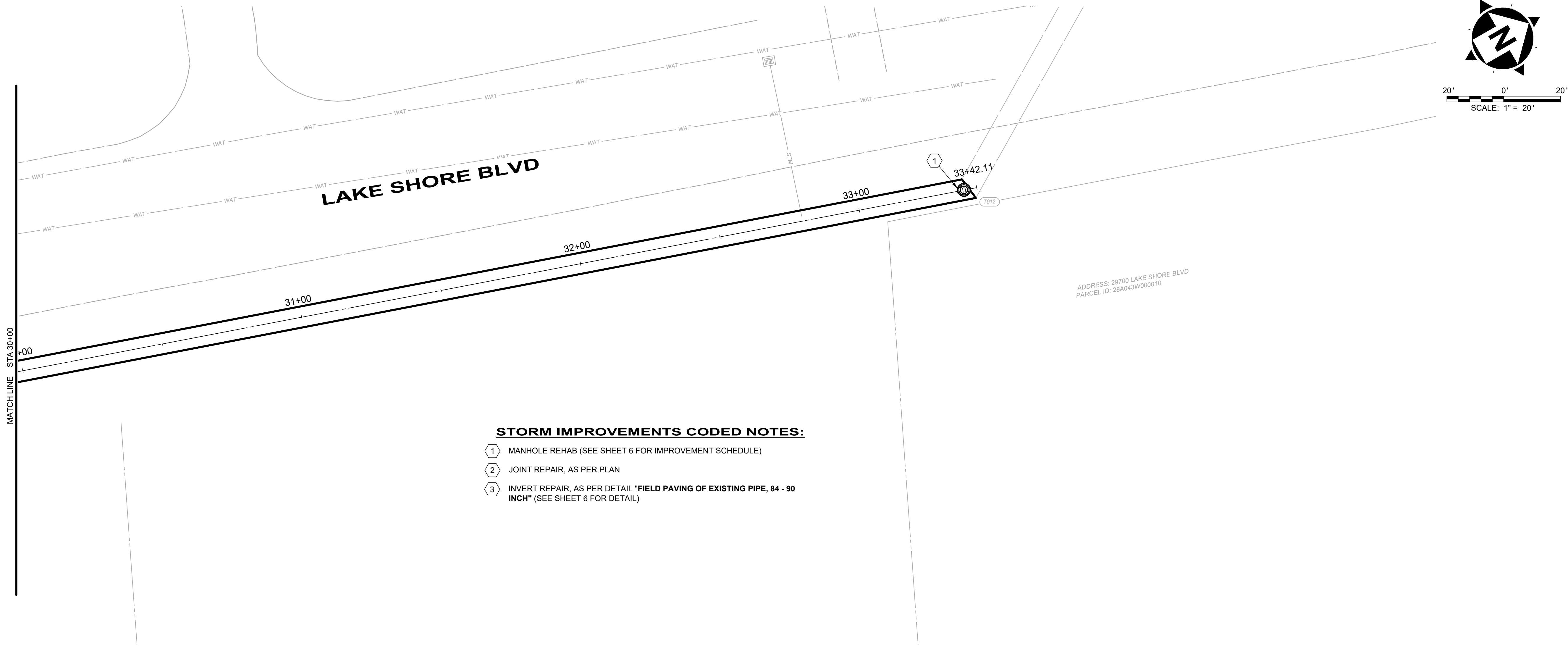
CITY OF WILLOWICK LAKESHORE BLVD TRUNK SEWER WEST REHAB WILLOWICK, OHIO LAKE COUNTY	PROJECT NO:
	32010
	DRAWING NAME
	10C-05
SHEET	OF
11	14



NO	REVISION	DATE	SCALE	AS SHOWN	DATE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
					08/27/2025	TJM	JPB	TJM

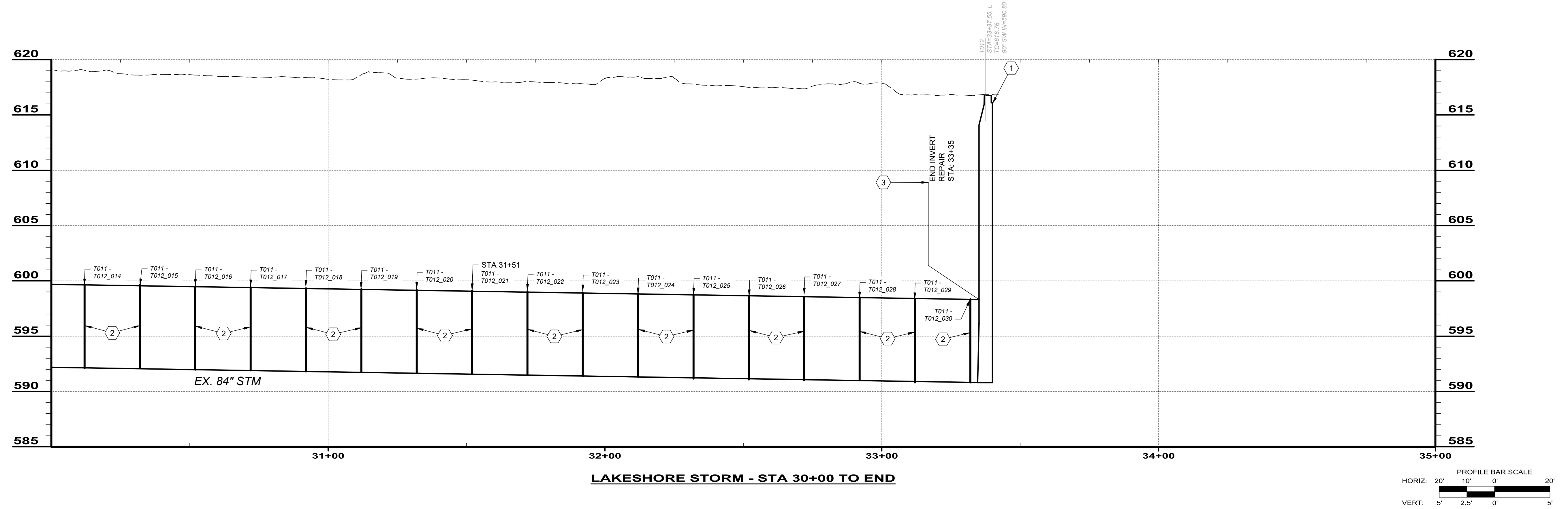
CITY OF WILLOWICK LAKE SHORE BLVD TRUNK SEWER WEST REHAB WILLOWICK, OHIO LAKE COUNTY		PLAN & PROFILE - 10 SERIES	PLAN & PROFILE - STA 25+00 - 30+00
PROJECT NO:			
32010			
DRAWING NAME			
10C-06			
SHEET		OF	
12		14	

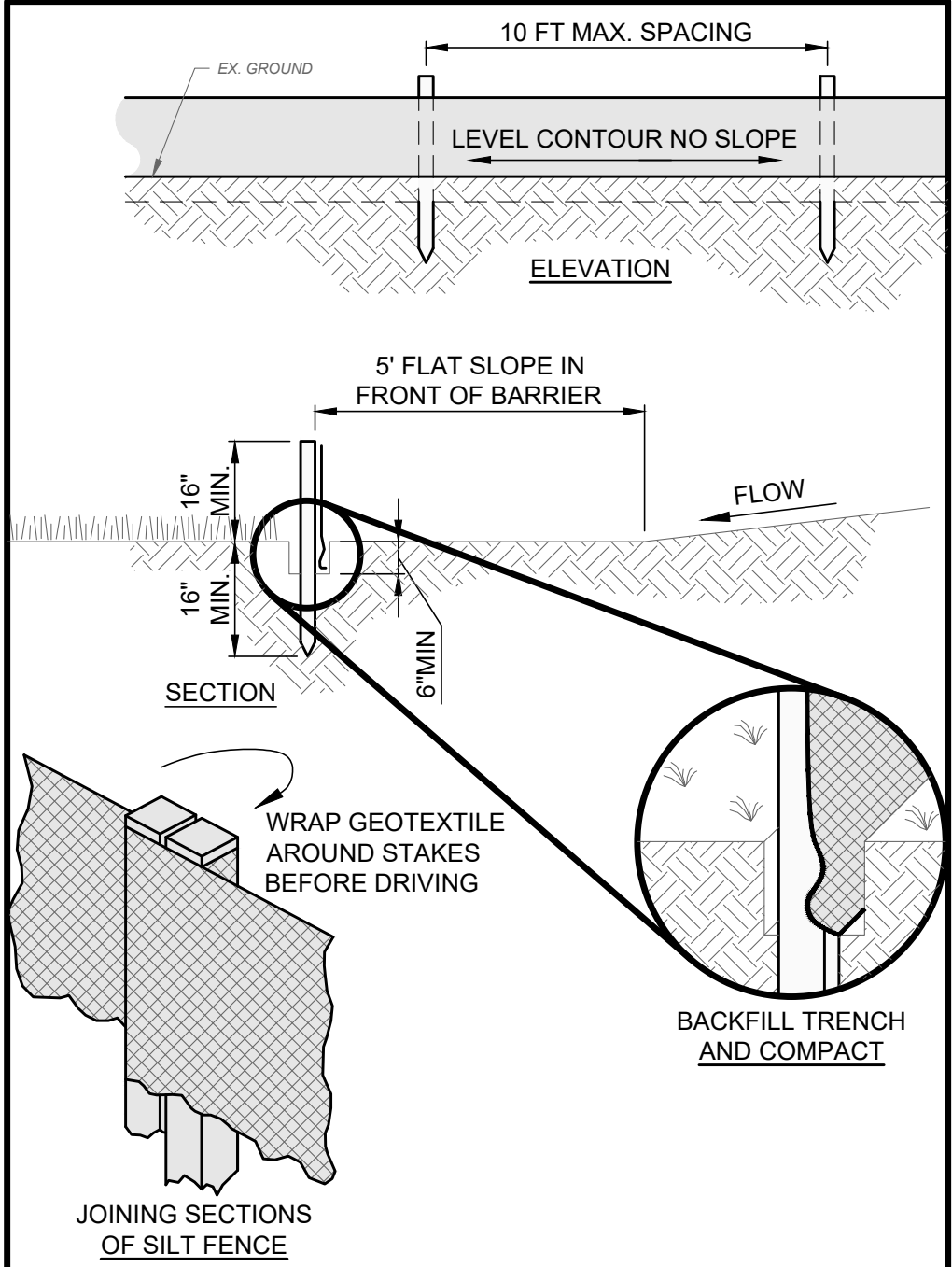




STORM IMPROVEMENTS CODED NOTES:

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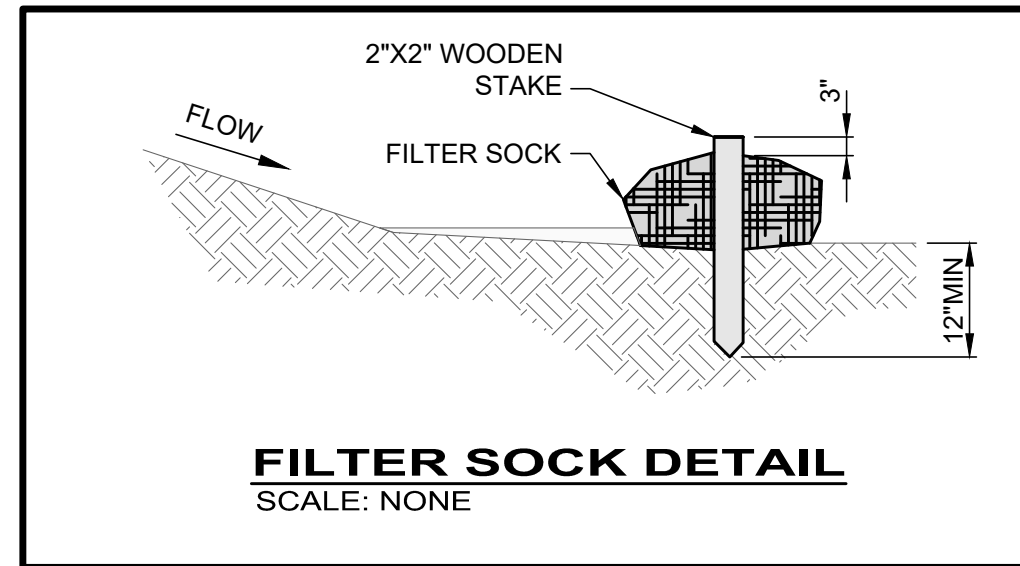
JOINING SECTIONS OF SILT FENCE

NOTES:

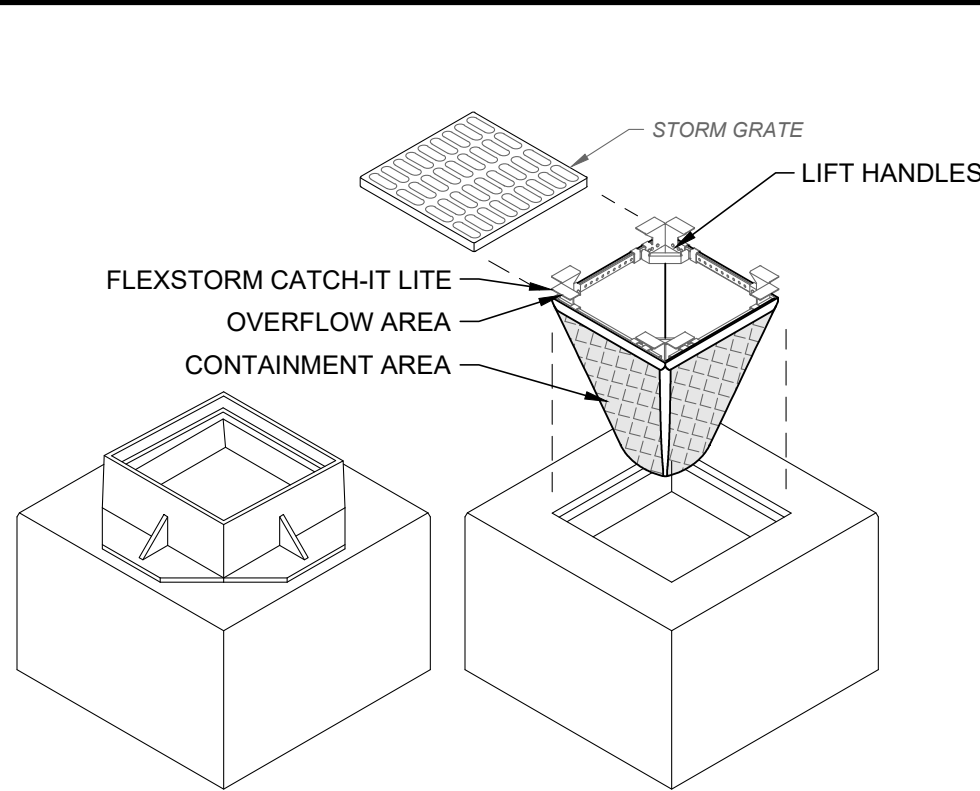
- PRESERVE VEGETATION FOR 5 FEET, OR AS MUCH AS POSSIBLE, UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE RE-ESTABLISHED WITHIN 7 DAYS FROM SILT FENCE INSTALLATION.
- SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. PERFORM ONE OF THE FOLLOWING IF RUNOFF OVERTOPS THE SILT FENCE. FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW:
 - CHANGE THE LAYOUT OF THE SILT FENCE.
 - REMOVE ACCUMULATED SEDIMENT.
 - INSTALL OTHER PRACTICES.

FABRIC PROPERTIES	VALUES	TEST METHOD
GRAB TENSILE STRENGTH	90 LB. MIN	ASTM D-1682
MULLEN BURST STRENGTH	190 PSI MIN	ASTM D-3786
SLURRY FLOW RATE	0.3 GAL./MIN./S.F. MAX.	
EQUIVALENT OPENING SIZE	40-80	US STD. SIEVE CW-02215
ULTRAVIOLET RADIATION STABILITY	90% MIN	ASTM-G-26

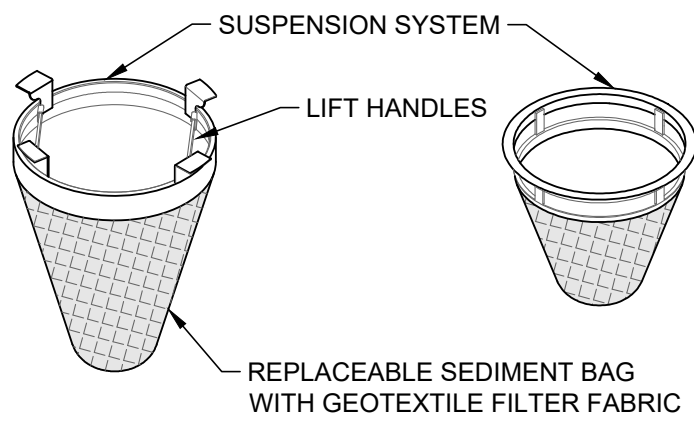
SILT FENCE
SCALE: NONE



FILTER SOCK DETAIL
SCALE: NONE

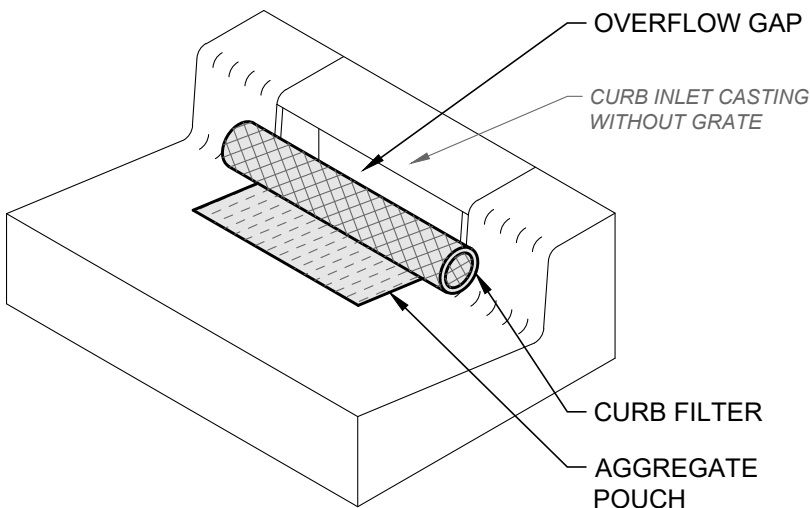


INLET FILTER FOR SQUARE OR RECTANGULAR INLET BASIN WITH OR WITHOUT CASTING FRAME

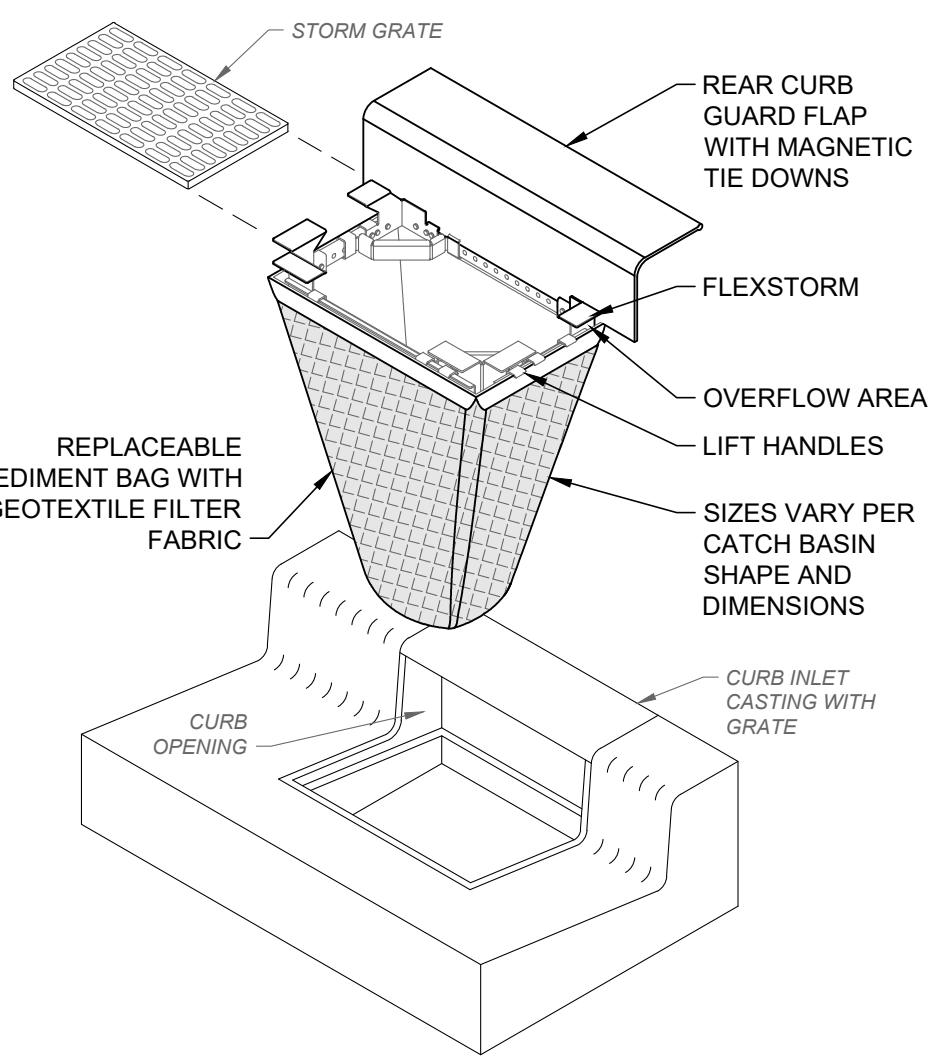


INLET FILTER FOR ROUND INLET BASIN WITH OR WITHOUT CASTING FRAME

INLET FILTER FOR NYLOPLAST CASTING



INLET FILTER FOR CURB INLET BASIN WITHOUT GRATE

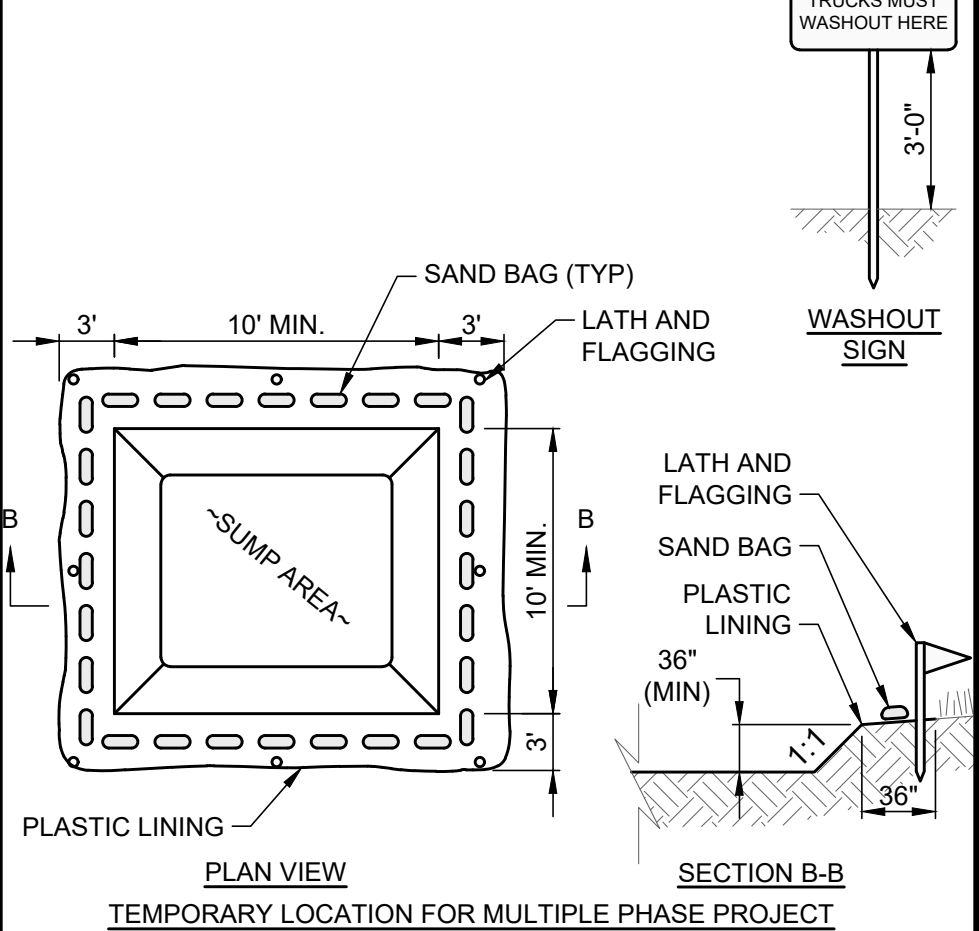
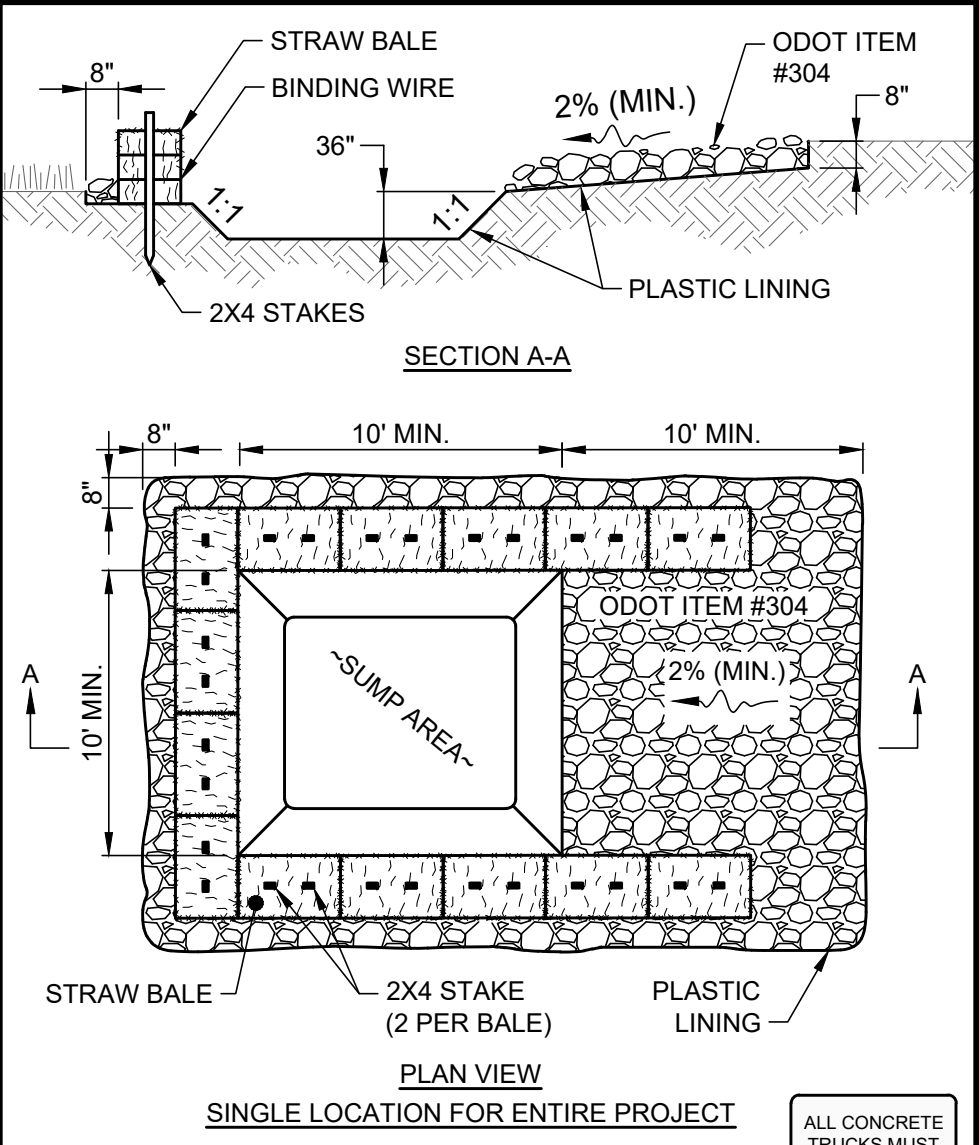


INLET FILTER FOR CURB INLET BASIN WITH GRATE

NOTES:

- ALL FRAMING SHALL BE CONSTRUCTED OF CORROSION RESISTANT STEEL (ZINC PLATED OR GALVANIZED) FOR 7 YEAR MINIMUM SERVICE LIFE.
- CONTRACTOR SHALL PROVIDE EXISTING OR PROPOSED STRUCTURE DETAILED DIMENSIONS, CASTING CALLOUT, MAKE AND MODEL TO CONFIGURE AND ASSEMBLE CUSTOMIZED FLEXSTORM INLET FILTERS.

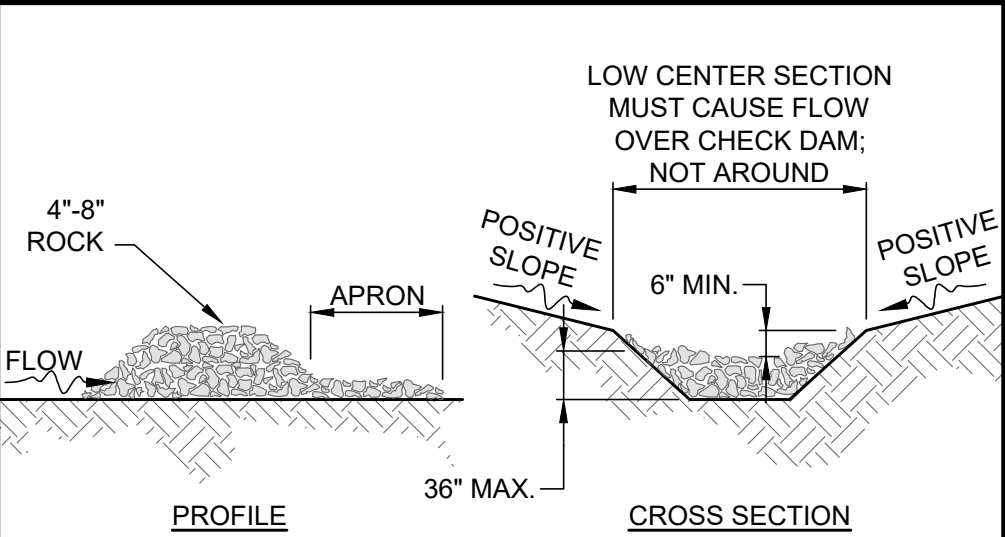
STORM DRAIN INLET PROTECTION DETAIL
SCALE: NONE



NOTES:

- WASHOUT PIT SHALL BE LOCATED 100' MINIMUM FROM INLETS, STREAMS, WETLANDS AND ANY OTHER SURFACE WATERS.
- ALL EXCESS CONCRETE AND CONCRETE WASHOUT, INCLUDING FROM HAND MIXERS AND LIGHT EQUIPMENT, SHALL BE DISPOSED OF IN THE CONCRETE WASHOUT AREA. DISPOSAL OF EXCESS CONCRETE OR CONCRETE WASHOUT ON THE GROUND, OR IN STORM DRAINS, DITCHES OR WATER BODIES, IS PROHIBITED.
- CONCRETE WASHOUT AREA SHALL BE SUFFICIENT SIZE TO CONTAIN CONCRETE WASTE GENERATED. FOR LARGER SITES, MULTIPLE CONCRETE WASHOUT AREAS MAY BE REQUIRED.
- IF CONCRETE WASHOUT AREA IS LOCATED AWAY FROM A PAVED SURFACE, CONSTRUCT A GRAVEL ACCESS ROUTE EQUAL IN COMPOSITION TO THE CONSTRUCTION ENTRANCE.
- PLASTIC LINING SHALL BE DOUBLE-LINED, CONTINUOUS 10-ML POLYETHYLENE SHEETING FREE OF HOLES, TEARS OR OTHER DEFECTS, AND INSTALLED ON A SMOOTH, LEVEL SURFACE, FREE OF ROCKS OR DEBRIS.
- CONCRETE WASHOUT SIGNAGE SHALL BE CLEARLY VISIBLE AND LOCATED WITHIN 30 FEET OF EACH WASHOUT AREA.
- CONCRETE WASHOUT AREAS SHALL BE COVERED DURING INCLEMENT WEATHER TO PREVENT OVERFLOWS.
- PREFABRICATED, PORTABLE AND RE-USABLE CONCRETE WASHOUT CONTAINERS ARE ACCEPTABLE, BUT MUST BE SPECIFICALLY DESIGNED FOR CONCRETE WASHOUT USE.
- CONCRETE WASHOUT AREA SHALL BE INSPECTED DAILY TO CHECK FOR DAMAGE AND TO DETERMINE IF IT NEEDS CLEANED OR REPLACED. ANY DAMAGE TO THE SIDEWALLS OR POLYETHYLENE SHEETING SHALL BE REPAIRED IMMEDIATELY. THE CONCRETE WASHOUT AREA SHALL BE CLEANED OR REPLACED WHEN IT IS 75% FULL. THE POLYETHYLENE SHEETING SHALL BE REPLACED AFTER EACH CLEANING.
- SAW CUT CONCRETE, RESIDUE FROM SAW CUT, AND GRINDINGS SHALL BE DISPOSED OF IN THE WASHOUT PIT.

CONCRETE WASHOUT DETAIL
SCALE: NONE

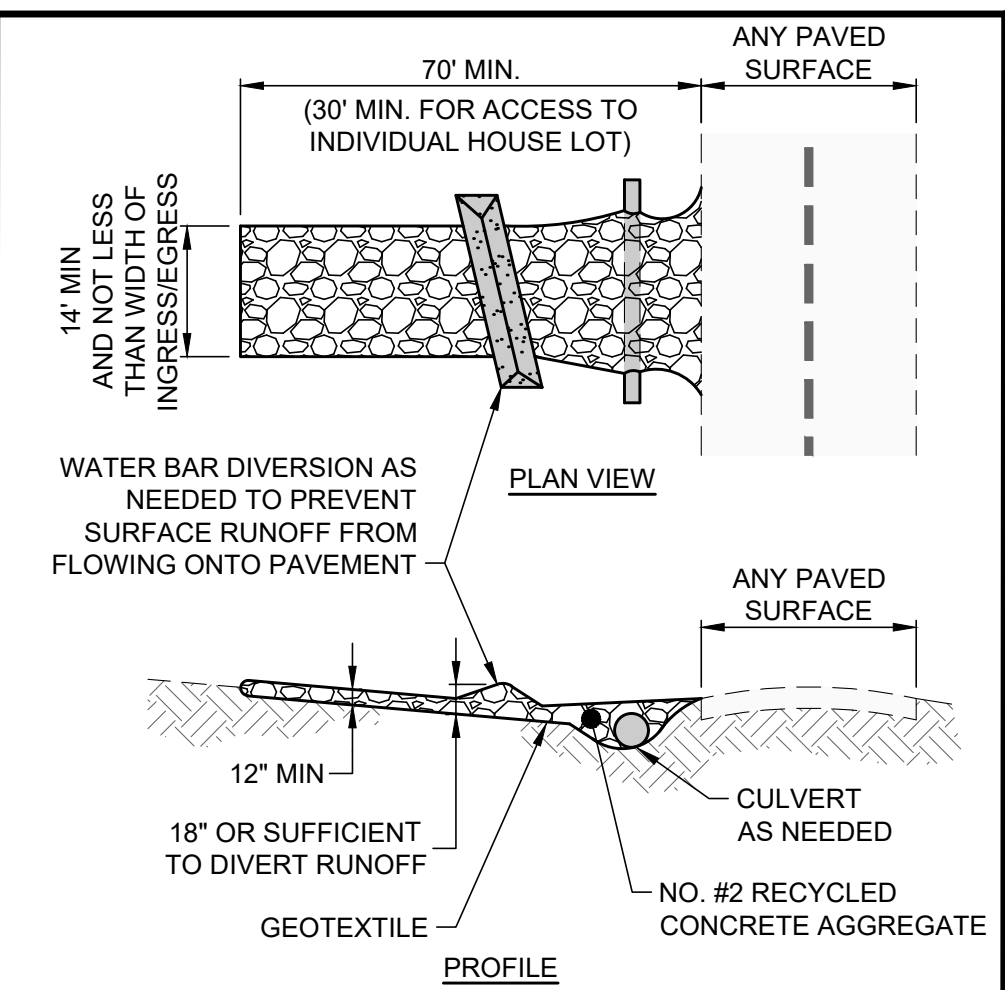


NOTES:

- THE CHECK DAM SHALL BE CONSTRUCTED OF 4" TO 8" DIAMETER STONE, PLACED SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL.
- THE TOP OF THE CHECK DAM SHALL BE CONSTRUCTED SO THE CENTER IS APPROXIMATELY 6" LOWER THAN THE OUTER EDGES, SO WATER WILL FLOW ACROSS THE CENTER AND NOT AROUND THE ENDS.
- THE MAXIMUM HEIGHT OF THE CHECK DAM AT THE CENTER OF THE WEIR SHALL NOT EXCEED 36".
- SPACING BETWEEN DAMS SHALL BE AS SHOWN IN THE CONSTRUCTION PLANS OR BY THE FOLLOWING TABLE:

DAM HEIGHT	CHECK DAM SPACING			
	CHANNEL SLOPE			
	< 5%	5% - 10%	10% - 15%	15% - 20%
1 FT.	65 FT.	30 FT.	20 FT.	15 FT.
2 FT.	130 FT.	65 FT.	40 FT.	30 FT.
3 FT.	200 FT.	100 FT.	65 FT.	50 FT.

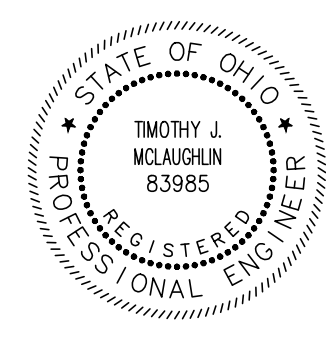
CHECK DAM DETAIL
SCALE: NONE



NOTES:

- PLACE GEOTEXTILE OVER THE ENTIRE AREA PRIOR TO PLACING STONE MEETING THE MIN. SPECIFICATIONS:
 - TENSILE STRENGTH = 200 LBS.
 - PUNCTURE STRENGTH = 80 PSI
 - TEAR STRENGTH = 50 LBS.
 - BURST STRENGTH = 320 PSI
 - ELONGATION = 20%
 - EQUIVALENT OPENING SIZE ≤ 0.6 MM
 - PERMITTIVITY = 0.001 CM/SEC
- APPLY ADDITIONAL STONE AS CONDITIONS DEMAND AND REPLENISH STONE WHEN THE DEPTH IS LESS THAN 6". REMOVE AND REPLACE IF STONES BECOMES MUD-LADEN.
- IMMEDIATELY REMOVE MUD DROPPED, WASHED OR TRACKED ONTO ROADS OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS BY SCRAPING OR SWEEPING.
- CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES OR TO PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

CONSTRUCTION ENTRANCE
SCALE: NONE



verdantas

DATE	REVISION	NO

SCALE:	AS SHOWN	DATE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
		08/27/2025	TJM	JPB	TJM

CITY OF WILLOWICK
LAKESHORE BLVD TRUNK
SEWER WEST REHAB
WILLOWICK, OHIO LAKE COUNTY

EROSION CONTROL - 20 SERIES

EROSION CONTROL DETAILS

PROJECT NO:

32010

DRAWING NAME

20EC-01

SHEET

OF

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