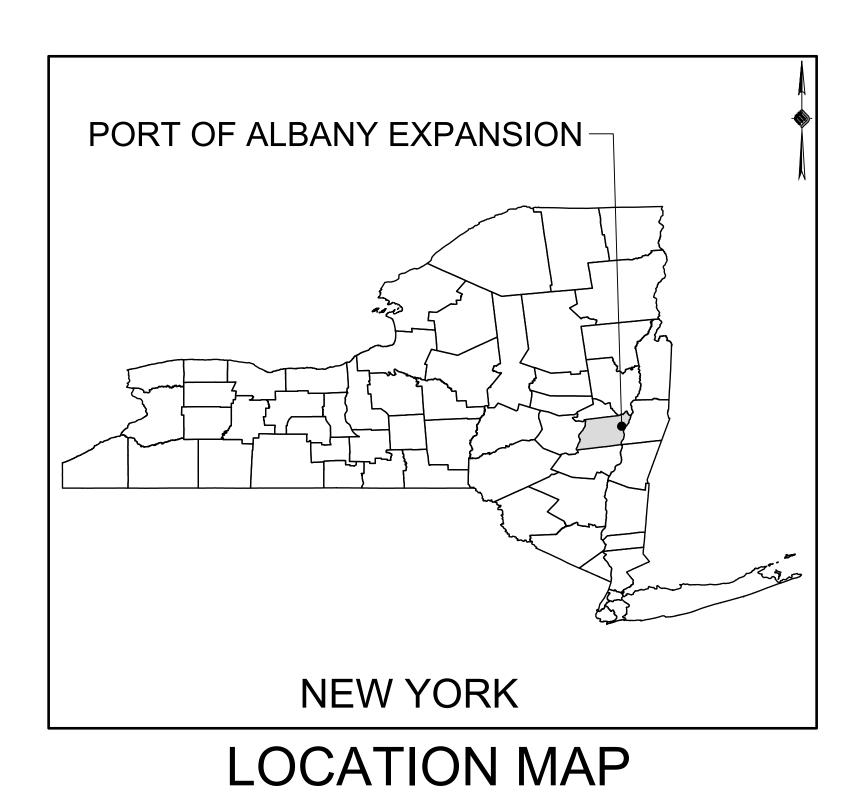
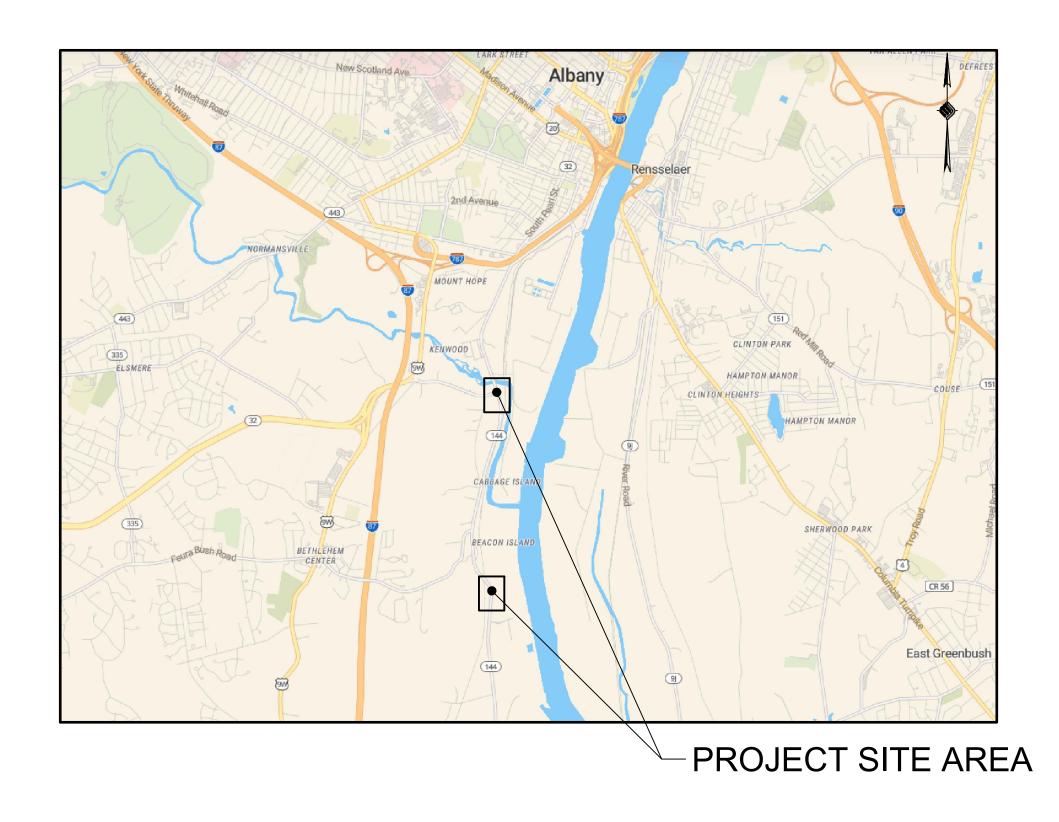
ALBANY PORT DISTRICT COMMISSION OFF-SITE INFRASTRUCTURE IMPROVEMENTS



BID PLANS

JULY 17, 2023

TOWN OF BETHLEHEM **ALBANY COUNTY NEW YORK**



VICINITY MAP

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NYSDOT STANDARD SHEETS TO BE REFERENCED: 203 - EXCAVATION AND EMBANKMENT

SIGHT DISTANCE PLAN

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209 - SOIL EROSION AND SEDIMENT CONTROL

609 - CURBING

680 - TRAFFIC SIGNALS 685 - PAVEMENT MARKINGS

SD-01

619-407

670 - HIGHWAY LIGHTING SYSTEMS

608 - CONCRETE SIDEWALKS 619 - WORK ZONE TRAFFIC CONTROL 645 - SIGNS 655 - FRAMES, GRATES, AND COVERS PREPARED FOR:

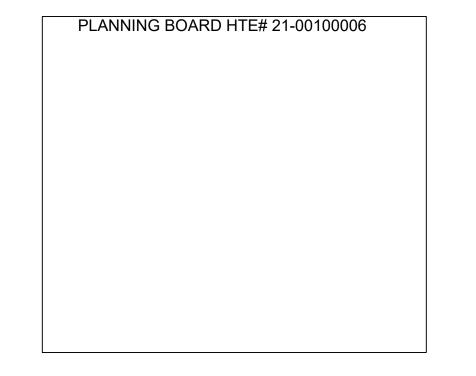


ALBANY PORT DISTRICT COMMISSION 106 SMITH BOULEVARD ALBANY, NEW YORK (518) 463-8763 WWW.ALBANY.GOV

PREPARED BY:

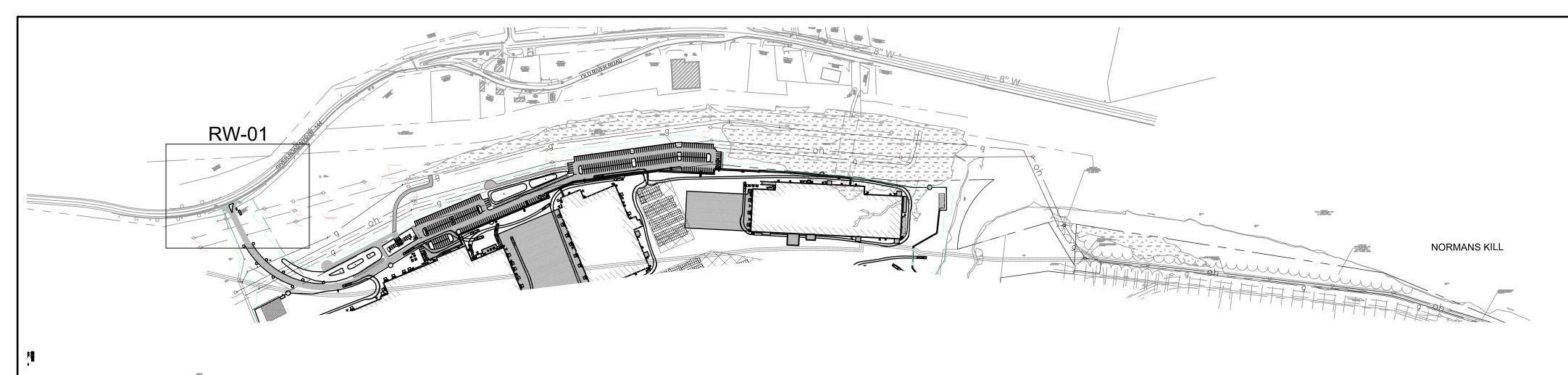


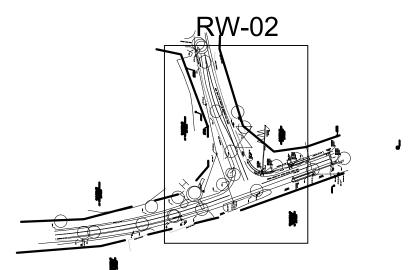
MCFARLAND JOHNSON PROJECT # 18641.00



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SaratogaROM@mjinc.com ROJECT MILESTONE NO. DATE DESCRIPTION

KEY PLAN

GENERAL NOTES

- THE UNDERGROUND STRUCTURES AND UTILITIES SHOWN ON THESE PLANS HAVE BEEN PLOTTED FROM A SURVEY PREPARED BY MASER CONSULTING P.A. 18 COMPUTER DRIVE EAST SUITE 203, ALBANY, NY 12205, DATED JULY 10, 2018 AND AVAILABLE SURVEYS AND RECORD MAPS BY OTHERS. MCFARLAND JOHNSON DOES NOT CERTIFY TO THE ACCURACY OF THEIR LOCATION AND/OR COMPLETENESS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND EXTENT OF ALL UNDERGROUND STRUCTURES AND UTILITIES PRIOR TO ANY DIGGING OR CONSTRUCTION ACTIVITIES IN THEIR VICINITY. THE CONTRACTOR SHALL HAVE ALL EXISTING UTILITIES FIELD STAKED BEFORE STARTING WORK BY CALLING 1-800-962-7962.
- THE CONTRACTOR SHALL PERFORM ALL WORK IN COMPLIANCE WITH TITLE 29 OF FEDERAL REGULATIONS, PART 1926, SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION (OSHA).
- HIGHWAY DRAINAGE ALONG ALL ROADS AND PRIVATE DRIVES SHALL BE KEPT CLEAN OF MUD, DEBRIS ETC. AT ALL TIMES. ALL CATCH BASINS AND STORM SEWER MANHOLES SHALL BE CLEANED PRIOR TO ACCEPTANCE BY THE TOWN.
- THE CONTRACTOR SHALL CONSULT THE DESIGN ENGINEER BEFORE DEVIATING FROM THESE PLANS.
- IN ALL TRENCH EXCAVATIONS, CONTRACTOR MUST LAY THE TRENCH SIDE SLOPES BACK TO A SAFE SLOPE, USE A TRENCH SHIELD OR PROVIDE SHEETING AND BRACING. THE MEANS AND METHODS SHALL BE CERTIFIED BY A PROFESSIONAL ENGINEER.
- EXCAVATED WASTE MATERIAL REMOVED FROM THE SITE SHALL BE PLACED AT A LOCATION ACCEPTABLE TO THE NEW YORK STATE DEPARTMENT OF **ENVIRONMENTAL CONSERVATION.**
- THE CONTRACTOR SHALL TAKE PRECAUTIONS TO MAINTAIN A MINIMUM OF 2' OF COVER OVER ALL EXISTING AND NEW STORM SEWER PIPES AND 4' OF COVER OVER ALL SANITARY PIPES DURING CONSTRUCTION.
- ALL EXISTING SURFACE APPURTENANCES (I.E. WATER VALVES, CATCH BASIN FRAMES AND GRATES, MANHOLE COVERS) WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO FINISHED GRADE. (NO SEPARATE PAYMENT).
- AREAS DISTURBED OR DAMAGED AS PART OF THIS PROJECT'S CONSTRUCTION THAT ARE OUTSIDE OF THE PRIMARY WORK AREA SHALL BE RESTORED, AT THE CONTRACTORS EXPENSE, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
- . UNLESS COVERED BY THE CONTRACT SPECIFICATIONS OR AS NOTED ON THE PLANS, ALL WORK SHALL CONFORM TO THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED JANUARY 8, 2015 AND ANY SUBSEQUENT REVISIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO SECURE ALL PERMITS AND PROVIDE ALL BONDS REQUIRED FOR THIS WORK, INCLUDING BUT NOT LIMITED TO UTILITY CONNECTIONS, BUILDING AND SITE CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODE AND/OR UTILITY SERVICE COMPANIES. THIS SHALL BE COMPLETED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.
- MAINTENANCE AND PROTECTION OF TRAFFIC ALONG WITH SECURING THE WORK AREA SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 4. THE CONTRACTOR SHALL LOCATE, MAKE, SAFEGUARD AND PRESERVE ALL SURVEY CONTROL MONUMENTS AND ROW MONUMENTS IN THE AREAS OF CONSTRUCTION.
- 5. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND SAFETY PROCEDURES. THE OWNER AND/OR ARCHITECT/ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB CONTRACTOR OR THEIR AGENTS, EMPLOYEES OR ANY OTHER PERSON PERFORMING ANY OF THE WORK.
- 16. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATION ASSOCIATED WITH THIS PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATION OR APPLICABLE CODES, IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE OWNERS REP. IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE OWNERS REP. SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.
- 17. ALL WORK SUBJECT TO SECTION 128-49 OF THE TOWN ZONING SHALL BE CERTIFIED BY DESIGNATED PROFESSIONALS PURSUANT TO SECTION 128-49(f)(2)(I).

SEQUENCE OF CONSTRUCTION

- CONDUCT A PRE-CONSTRUCTION MEETING WITH THE MS4 AND ENGINEER TO REVIEW THE SWPPP.
- 2. NOTIFY THE NYSDEC WITHIN 14 DAYS, AND NO LESS THAN 3 DAYS PRIOR TO COMMENCING WORK ACTIVITIES THAT MAY AFFECT AREAS OF THE SUBJECT SITE THAT ARE IMPACTED WITH ASH, AS REQUIRED BY SECTION 3.2 OF THE SMP.
- CLEARLY IDENTIFY PROJECT WORK LIMITS, IDENTIFYING ALL AREAS WHERE CONSTRUCTION DISTURBANCE SHALL BE PERMITTED.
- 4. INSTALL EROSION CONTROL MEASURES PRIOR TO COMMENCING EARTHWORK OPERATIONS. CONSTRUCT TEMPORARY EARTHEN BERMS, DIVERSION SWALES, SEDIMENT CONTROL DAMS AND ASSOCIATED EROSION CONTROL MEASURES NECESSARY TO DIVERT RUNOFF FROM ENTERING PLANNED AREAS OF DISTURBANCE AND TO PROTECT THE ADJACENT WATERWAY.
- ALL INSTALLED EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED AND CERTIFIED AS CORRECTLY INSTALLED BY THE OWNER'S QUALIFIED INSPECTOR AND TOWN OF BETHLEHEM STAFF.
- ESTABLISH TEMPORARY/PERMANENT STORM WATER MANAGEMENT PONDS/EROSION CONTROL BASINS. A. CONSULT THE SMP FOR THE APPROPRIATE MEASURES TO HANDLE OR

DISPOSE OF ANY ENCOUNTERED CONTAMINATED SOILS.

- 7. REMOVE VEGETATION AND DISPOSE OF OFF-SITE.
- STRIP AND STOCKPILE TOPSOIL FROM PROPOSED PAVEMENT. STRUCTURAL FILL AND CUT AREAS (STOCKPILE MATERIALS IN LOCATIONS AS DIRECTED BY OWNER'S REPRESENTATIVE).
- ESTABLISH MASS EARTHWORK SUBGRADE ELEVATIONS. A. CONSULT THE SMP THE APPROPRIATE MEASURES TO HANDLE OR DISPOSE OF ANY ENCOUNTERED CONTAMINATED SOILS.
- 10. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS WELL AS STOCKPILES ARE TO BE MULCHED AND SEEDED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY FOLLOWING GRADING.
- 11. REMOVE EXISTING CABLE GUIDE RAILING AND INSTALL PROPOSED BOX BEAM GUIDE RAILING IN ACCORDANCE WITH NYSDOT SPECIFICATIONS.
- CONSTRUCT UTILITY LINES (WATER/ELECTRIC.GAS.COMMUNICATIONS.SANITARY SEWERS/STORM SEWERS), CONSTRUCT BUILDING AND INSTALL INFRASTRUCTURE IMPROVEMENTS.
- 13. BOX OUT ROADWAY AND PAVEMENT AREAS AND INSTALL CONCRETE CURBING.
- 14. CONSTRUCT ASPHALT PAVEMENT SECTION, UP TO BINDER COURSE.
- 15. FINE GRADE AND SPREAD TOPSOIL, INSTALL LANDSCAPING PLANTINGS AND HARDSCAPES, SITE AMENITIES AND PERMANENT SEEDING.
- STORMWATER FACILITIES ARE OPERATIONAL. 17. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL FEATURES UPON ESTABLISHMENT OF PERMANENT GROUND COVER AND INSPECTION/APPROVAL FROM A TOWN OFFICIAL OR REPRESENTATIVE.

16. TOWN OF BETHLEHEM (MS4) SHALL CONDUCT A SITE INSPECTION TO DETERMINE

(1) THAT THE SITE HAS ACHIEVED 80% STABILIZATION AND (2) THE INSTALLED

- 18. NOTIFY OWNERS REPRESENTATIVE OF COMPLETION OF FINAL SITE STABILIZATION.
- 19. FILE NOTICE OF TERMINATION.

WATER MAIN INSTALLATION:

- 1. WATER SERVICE LINE (LATERALS) SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REGULATIONS AND SPECIFICATIONS OF THE ALBANY COUNTY HEALTH DEPARTMENT, AND THE LOCAL WATER AUTHORITY.
- 2. ALL EROSION CONTROL MEASURES SHALL BE EMPLOYED DURING ALL PHASES OF CONSTRUCTION IN ACCORDANCE WITH ALL APPROPRIATE STANDARDS AND REQUIREMENTS. BEST MANAGEMENT PRACTICES ARE TO BE FOLLOWED.
- 3. WATER MAINS AND ALL WATER SERVICE LINES SHALL HAVE A MINIMUM OF 5 FEET OF COVER FROM FINISH GRADE TO TOP OF PIPE.
- 4. THE MINIMUM VERTICAL SEPARATION BETWEEN WATER MAINS AND SEWER MAINS SHALL BE 18" MEASURED FROM THE OUTSIDE OF THE PIPES AT THE POINT OF CROSSING. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATER MAINS AND SEWER MAINS SHALL BE 10 FEET MEASURED FROM THE OUTSIDE OF THE PIPES. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED UNDER OR OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE, WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT (COMPACTED SELECT FILL) SHALL BE PROVIDED FOR THE SEWERS TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING ON AND BREAKING THE WATER MAINS.
- 5. HYDRANT TYPE SHALL BE AS NOTED ON THE PLANS OR AS REQUIRED BY THE OWN OF BETHLEHEM. GUARD VALVES SHALL BE USED AND ALL HYDRANT STUB PIPING SHALL BE MECHANICAL JOINT. FIRE HYDRANT WEEP HOLES (DRAINS) SHALL BE PLUGGED WHEN GROUND WATER IS ENCOUNTERED WITHIN 7 FEET OF THE FINISHED GRADE. ALL PLUGS SHALL BE MECHANICAL METAL PLUGS. ALL HYDRANTS WITH PLUGGED WEEP HOLES SHALL BE APPROPRIATELY TAGGED.
- 6. ALL MECHANICAL JOINTS, FITTINGS (TEES, BENDS, PLUGS), ETC. SHALL BE BACKED WITH 3,000 P.S.I. CONCRETE THRUST BLOCKS OR APPROVED MECHANICAL RESTRAINTS.
- 7. WHERE PIPING IS TO BE PLACED WITHIN FILL AREAS, THE FILL SHALL BE PLACED AND COMPACTED TO AT LEAST 95% MODIFIED PROCTOR PRIOR TO TRENCH EXCAVATION.
- 8. SHUTDOWN OF EXISTING WATER MAINS SHALL BE IN ACCORDANCE WITH THE LOCAL WATER AUTHORITY. THE TOWN OF BETHLEHEM WATER AND SEWER MANAGER MUST BE NOTIFIED IN ADVANCE OF ALL PROPOSED SHUTDOWNS IN ACCORDANCE WITH THEIR DIRECTION. WATER MUST BE TURNED BACK ON AS SOON AS POSSIBLE. ALL ENDS OF WATER MAINS MUST BE PROVIDED WITH ADEQUATE PLUG, BLOCK, AND BLOW-OFF AS INDICATED ON THE PLANS.
- 5. WATER SERVICE LINES SHALL BE SEPARATED AT LEAST 10 FEET, MEASURED FROM OUTSIDE OF THE PIPES, FROM SEWER MAINS AND SEPTIC SYSTEMS.
- 6. BACKFLOW PREVENTION SHALL BE PROVIDED IN BUILDING.
- 7. BACKFLOW PREVENTION APPLICATION MUST BE SUBMITTED TO AND APPROVED BY THE SUPPLIER WHO WILL FORWARD THE PLANS TO THE NYS DEPARTMENT OF HEALTH FOR THEIR APPROVAL. THE APPROVAL PROCESS MUST BE COMPLETED PRIOR TO INSTALLATION. THE APPROVAL PROCESS SHOULD BE STARTED EARLY TO AVOID UNNECESSARY DELAYS OR CONFLICTS WITH OTHER HEALTH DEPARTMENT APPROVALS.

GUIDE RAIL DOWNTIME RESTRICTIONS

- THIS PROJECT CONTAINS RESTRICTIONS ON THE AMOUNT OF TIME THAT ANY RUN OF GUIDE RAIL MAY BE OUT OF SERVICE OR THAT INSTALLATION OF NEW RUNS MAY BE DEFERRED. THE CONTRACTOR IS ADVISED TO BE AWARE OF THESE RESTRICTIONS WHEN SCHEDULING WORK FOR THIS CONTRACT. GUIDE RAIL SHALL NOT BE REMOVED FROM ANY LOCATION WHERE TRAFFIC IS BEING MAINTAINED UNTIL TEMPORARY CONCRETE BARRIER IS IN PLACE OR THE CONTRACTOR OR SUB-CONTRACTOR IS PREPARED TO FULLY INSTALL THE NEW SECTION OF RAIL AND ITS TERMINALS IN AREAS WHERE NO TEMPORARY CONCRETE BARRIER HAS BEEN PLACED, THE CONTRACTOR SHALL SCHEDULE OPERATIONS TO REPLACE ALL RAIL ON THE SAME DAY AS REMOVED UNLESS SUBSEQUENT CONSTRUCTION OPERATIONS MAKE IT IMPRACTICAL TO DO SO. INSTALLATION OF THE NEW GUIDE RAIL SHALL BEGIN AS SOON AS PRACTICAL AFTER REMOVAL OF THE EXISTING RAIL. INSTALLATION WORK ON ANY INDIVIDUAL LOCATION SHALL CONTINUE UNTIL ALL THE RAILING AT THAT LOCATION HAS BEEN INSTALLED. WHEN GUIDE RAIL RAIL CANNOT BE REPLACED ON THE SAME DAY AS REMOVED, (1) THE WORK AREA SHALL BE DELINEATED USING THE OVERNIGHT SHOULDER CLOSURE DETAILS SHOWN IN THE PLANS AND (2) THE GUIDE RAIL SHALL BE REPLACED WITHIN THE GUIDE RAIL REPLACEMENT TIME DURATION FOR THIS CONTRACT, WHICH IS 14 CALENDAR DAYS, EXCEPT AS NOTED BELOW:
- THE GUIDE RAIL REPLACEMENT DURATION SHALL BE SAME DAY FOR THE FOLLOWING RUNS OF RAIL: STA. 0+00 TO STA. 2+50, RIGHT

THE GUIDE RAIL REPLACEMENT DURATION FOR A GIVEN RUN SHALL BE MEASURED FROM THE FIRST DAY THAT DISMANTLING OF THE RUN BEGINS TO THE DAY OF COMPLETE INSTALLATION OF THE RAIL AND ITS END.

WATER MAIN MATERIALS:

- 1. ALL WATER MAINS AND SERVICE MATERIALS SHALL BE IN CONFORMANCE WITH THE TOWN OF BETHLEHEM STANDARD SPECIFICATION MANUAL.
- 2. CEMENT-LINED DUCTILE-IRON (DI) PIPE OF 12" DIAM. MUST BE CLASS 52 MINIMUM CONFORMING WITH THE LATEST REVISION OF ANSI/AWWA C151/A21.51 STANDARD WITH UNDERWRITERS LABORATORIES, FACTORY MUTUAL AND NSF 61 APPROVALS. THE PIPE JOINTS SHALL USE A SINGLE, ELONGATED GASKET TO AFFECT THE JOINT SEAL. THE PIPE SHALL BE PAINT SEAL COATED IN CONFORMANCE WITH ANSI/AWWA C104/A21.4. ALL BURIED DI PIPE, FITTINGS, AND APPURTANCES SHALL WRAPPED WITH A MINIMUM 8 MIL. V-BIO ENHANCED POLYETHYLENE WRAP AS PER LATEST REVISION OF ANSI/AWWA C105 STANDARD.
- 3. HIGH DENSITY POLYETHYLENE (HDPE) PRESSURE PIPE SHALL BE DUCTILE IRON PIPE SIZES DR-17 OR DR-11, JOINED BY MEANS OF ZERO LEAK-RATE HEAT FUSION OF ELECTRO FUSION, MEETING REQUIREMENTS OF AWWA C906. #10 HDPE HIGH-FLEX STAINLESS STEEL TRACER CABLE IS REQUIRED TO BE INSTALLED ALONG CENTERLINE OF MAINLINE.

WATER SYSTEM TESTS:

- 1. SOIL TEST. THE CONTRACTOR SHALL PROVIDE A SOIL TEST EVALUATION TO DETERMINE THE NEED FOR POLYETHYLENE ENCASEMENT PER ANSI/AWWS C105/AZ1.5-82 PRIOR TO WATER MAIN INSTALLATION. SOIL TESTING SHALL BE CONDUCTED BY AN APPROVED SOIL TESTING LABORATORY IN ACCORDANCE WITH LOCAL WATER AUTHORITY STANDARDS.
- 2. WATER PIPING SHALL BE FLUSHED AND TESTED IN CONFORMANCE WITH THE LATEST REVISION OF ANSI/AWWA C600 STANDARD FOR DUCTILE IRON PIPE, C605 FOR PVC PIPE, OR EQUIVALENT OF C600 AND/OR C605 FOR PE PIPE.
- 3. THE PROPOSED WORKS MUST CONFORM TO THE LATEST REVISION OF ANSI/AWWA C651 STANDARD, TABLET METHOD EXCEPTED. FOLLOWING FLUSHING AND TESTING, THE ENGINEER SHALL OVERSEE COLLECTION OF AN APPROPRIATE NUMBER OF BACTERIOLOGICAL SAMPLES FOR THE TOTAL AND FECAL COLIFORM AND FOR STANDARD BACTERIAL PLATE COUNT AFTER THE FIELD FREE CHLORINE RESIDUAL IS LESS THAN 1.5 PPM AND THE SAMPLING POINTS HAVE BEEN DECONTAMINATED. PRIOR TO SAMPLING, THE ENGINEER SHALL COORDINATE THE APPROPRIATE NUMBER AND LOCATION OF SAMPLES TO BE COLLECTED WITH THE ALBANY COUNTY HEALTH DEPARTMENT.
- 4. THE COMPLETED WORKS SHALL BE VERIFIED WITH ALBANY COUNTY HEALTH DEPARTMENT. PRIOR TO ISSUANCE, A NYS-LICENCED PROFESSIONAL ENGINEER MUST SUBMIT CERTIFICATION TO THE HEALTH DEPARTMENT THAT: THEY OR THEIR DESIGNATED REPRESENTATIVE WITNESSED THAT CONSTRUCTION WAS IN CONFORMANCE WITH THE PLANS AS APPROVED; FLUSHING, TESTING, AND DISINFECTION PROCEDURES NOTED HEREIN HAD BEEN PROPERLY PERFORMED; AND, MICROBACTERIAL SAMPLE RESULTS FROM THE COMPLETED WORKS WERE ACCEPTABLE. COPIES OF THE OFFICIAL LABORATORY RESULTS ARE TO BE INCLUDED WITH THE CERTIFICATION.
- 5. FIRE HYDRANTS ARE NOT ACCEPTABLE TESTING/SAMPLING POINTS.
- 6. WATER SERVICE LINES SIZED 4-INCHES OR GREATER SHALL BE:
- PRESSURE TESTED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS OF THE LOCAL WATER AUTHORITY. THE PRESSURE TEST SHALL BE WITNESSED BY A REPRESENTATIVE FROM THE LOCAL WATER AUTHORITY.

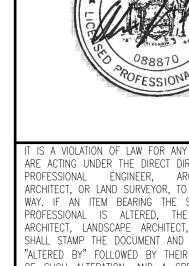
- DISINFECTION BY USING THE CONTINUOUS FEED METHOD ACCORDING TO AWWA STANDARD SPECIFICATIONS. AFTER FLUSHING AND DISINFECTING THE SERVICE LINE, WATER SAMPLES SHALL BE COLLECTED BY THE ALBANY COUNTY HEALTH DEPARTMENT. APPROVAL AND NOTIFICATION BY THE HEALTH DEPARTMENT MUST BE RECEIVED BEFORE THE LATERAL IS PLACED IN SERVICE.

DIRECTIONAL BORING/DRILLING NOTES:

- CONTRACTOR SHALL OBTAIN HIGHWAY WORK PERMIT FROM NYSDOT PRIOR TO COMMENCING UTILITY WORK. REFER TO NYSDOT "BLUE BOOK" FOR GUIDANCE, SUBMITTAL INFORMATION AND DETAILS. GUIDANCE WITHIN "BLUE BOOK" SUPERCEDES NOTES 2-7 BELOW.
- PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A WORK PLAN OUTLINING THE PROCEDURE AND SCHEDULE TO BE USED TO EXECUTE THE DIRECTIONAL BORING.
- CONTRACTOR SHALL SUBMIT SPECIFICATIONS ON DIRECTIONAL BORING EQUIPMENT TO BE USED AND ENSURE THAT THE EQUIPMENT WILL BE ADEQUATE TO COMPLETE THE PROJECT.
- THE DIRECTIONAL BORING EQUIPMENT SHALL CONSIST OF A DIRECTIONAL BORING RIG OF SUFFICIENT CAPACITY TO PERFORM THE BORE AND PULLBACK THE PIPE, A BORING FLUID MIXING & DELIVERY SYSTEM OF SUFFICIENT CAPACIT TO SUCCESSFULLY COMPLETE THE RUNS, A GUIDANCE SYSTEM TO ACCURATEL' GUIDE BORING OPERATIONS AND TRAINED AND COMPETENT PERSONNEL TO OPERATE THE SYSTEM, ALL EQUIPMENT SHALL BE IN GOOD, SAFE OPERATING CONDITION WITH SUFFICIENT SUPPLIES. MATERIALS AND SPARE PARTS ON HAND TO MAINTAIN THE SYSTEM IN GOOD WORKING ORDER FOR THE DURATION OF THIS PROJECT.
- THE ENGINEER MUST BE NOTIFIED 48 HOURS IN ADVANCE OF STARTING A BORE. THE DIRECTIONAL BORE SHALL NOT BEGIN UNTIL THE ENGINEER IS PRESENT AT THE SITE. THE ENGINEER'S APPROVAL FOR BEGINNING THE INSTALLATION SHALL IN NO WAY RELIEVE THE CONTRACTOR OF THE ULTIMATE RESPONSIBILITY FOR THE SATISFACTORY COMPLETION OF THE WORK.
- 6. CONTRACTOR SHALL NOT COMMENCE BORING OPERATIONS UNTIL THE LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE WORK AREA HAVE BEEN VERIFIED AND MARKED OUT.
- FOLLOWING BORING OPERATIONS, CONTRACTOR WILL DE-MOBILIZE EQUIPMENT AND RESTORE THE WORK-SITE TO ITS ORIGINAL CONDITION. ALL EXCAVATIONS WILL BE BACKFILLED AND COMPACTED TO 95% OF ORIGINAL DENSITY.
- 8. CONTRACTOR SHALL PROVIDE SUBMITTAL DESCRIBING IN DETAIL PROPOSED METHOD AND ENTIRE OPERATION INCLUDING, BUT NOT LIMITED TO:
 - SIZE, CAPACITY AND ARRANGEMENT OF EQUIPMENT.
 - LOCATION AND SIZE OF DRILLING AND RECEIVING PITS AS REQUIRED. DEWATERING AND METHODS OF REMOVING SPOILS MATERIAL.
 - METHOD OF INSTALLING DETECTION WIRE AND PIPE.
 - TYPE, LOCATION AND METHOD OF INSTALLING LOCATOR STATION. METHOD OF FUSION PIPE SEGMENT AND TYPE OF EQUIPMENT.
 - TYPE OF CUTTING HEAD. METHOD OF MONITORING AND CONTROLLING LINE AND GRADE.
- DETECTION OF SURFACE MOVEMENT. BENTONITE DRILLING MUD FOR INFORMATION ONLY:
- PRODUCTS INFORMATION, MATERIAL SPECIFICATIONS, AND HANDLING PROCEDURES.
- MATERIAL SAFETY DATA SHEET AND SPECIAL PRECAUTIONS REQUIRED. METHOD OF MIXING AND APPLICATION.
- DETECTABLE WARNING TAPE.

PROPERTIES OF BENTONITE-CEMENT ANNULAR SPACE FILL MATERIAL.

PLANNING BOARD HTE# 21-00100006



DRAWN

DESIGNED

CHECKED

PROJECT

SCALE

GN-01

TCH

TCH

AJF

1"=150'

JULY 17, 2023

18641.00

McFarland Johnson

60 RAILROAD PLACE

SUITE 402 SARATOGA SPRINGS, NEW YORK 12866 P:518-580-9380 F:518-580-9383

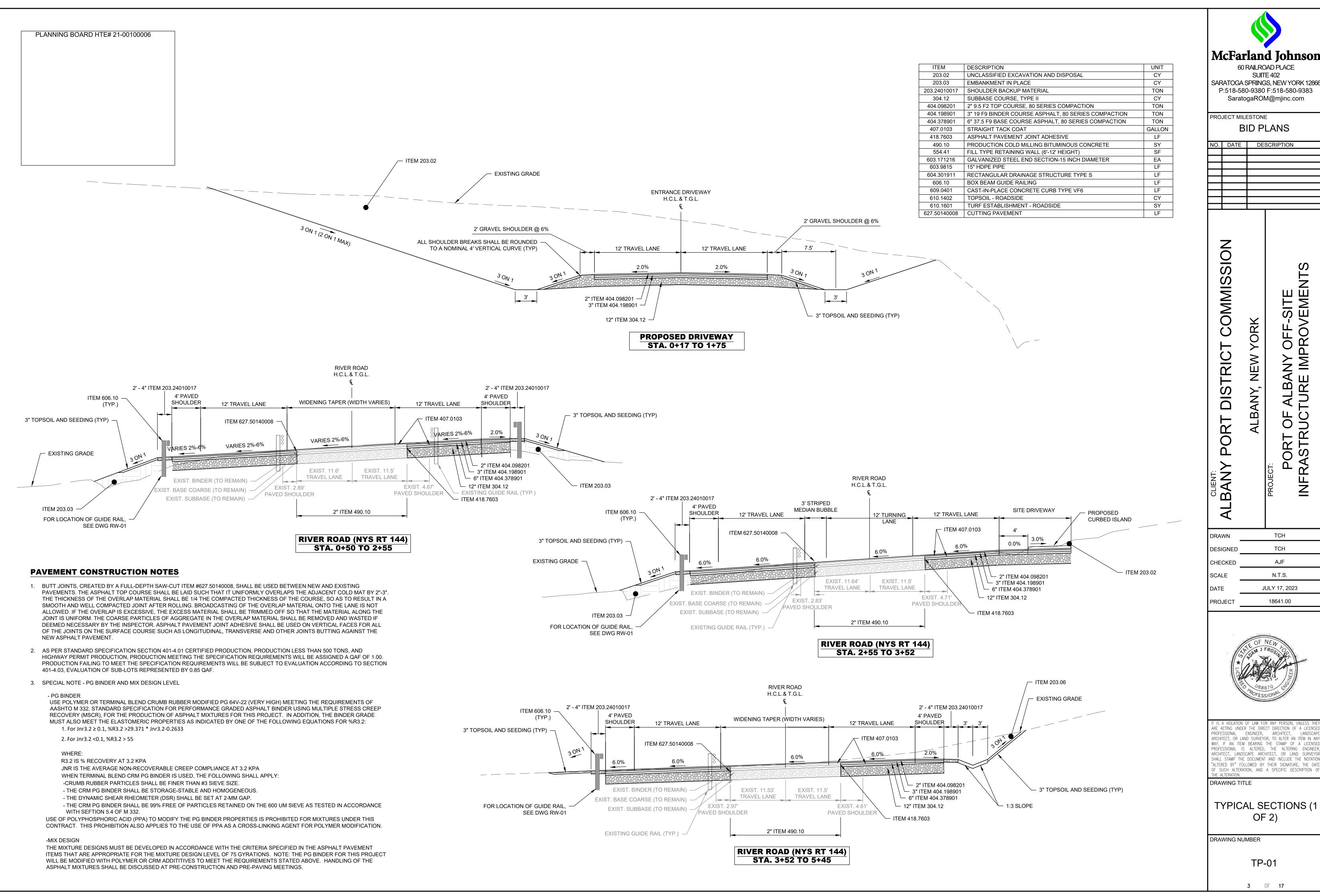
BID PLANS

ARE ACTING UNDER THE DIRECT DIRECTION OF A LICENS PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAP ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY VAY. IF AN ITEM BEARING THE STAMP OF A LICENSI PROFESSIONAL IS ALTERED, THE ALTERING ENGINEE ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYO SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATIO "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DAT OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION

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GENERAL NOTES



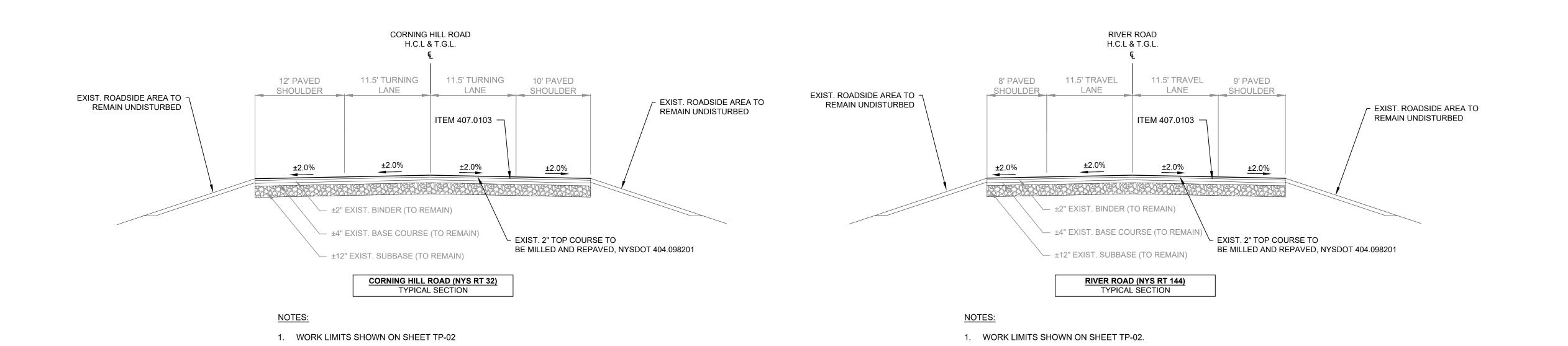
McFarland Johnson

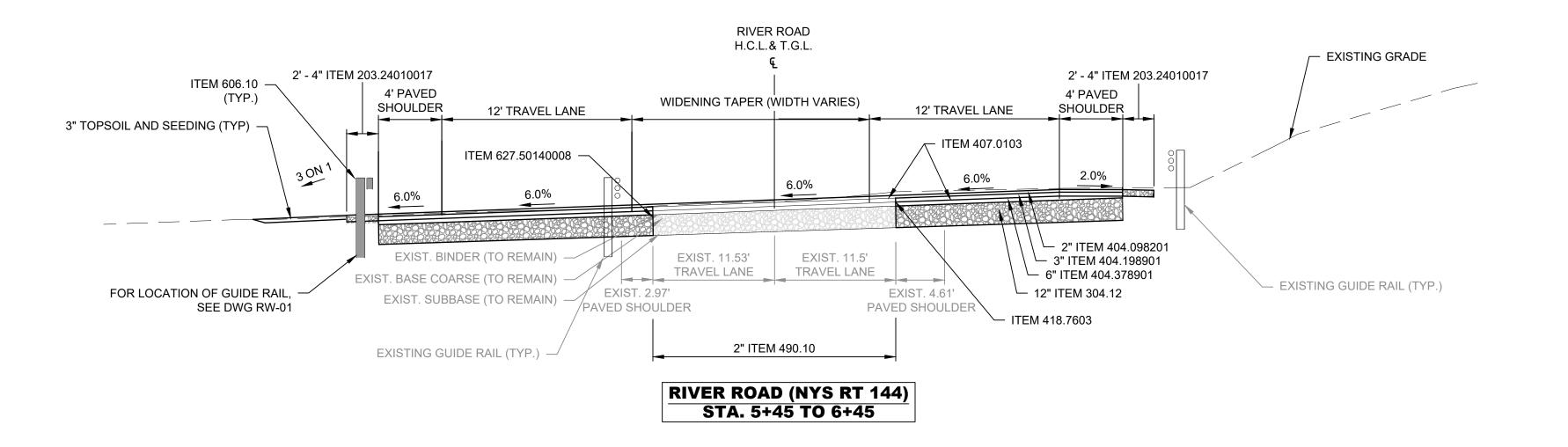
60 RAILROAD PLACE

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McFarland Johnson

60 RAILROAD PLACE SUITE 402 SARATOGA SPRINGS, NEW YORK 12866 P:518-580-9380 F:518-580-9383 SaratogaROM@mjinc.com

PROJECT MILESTONE

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NO.	DATE	DESCRIPTION

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PORT DISTRICT COMMISSION
ALBANY, NEW YORK

DRAWN TCH

DESIGNED TCH

CHECKED AJF

SCALE 1"=40'

DATE 05/10/2022

PROJECT 18641.00



ARE ACTING UNDER THE DIRECT DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

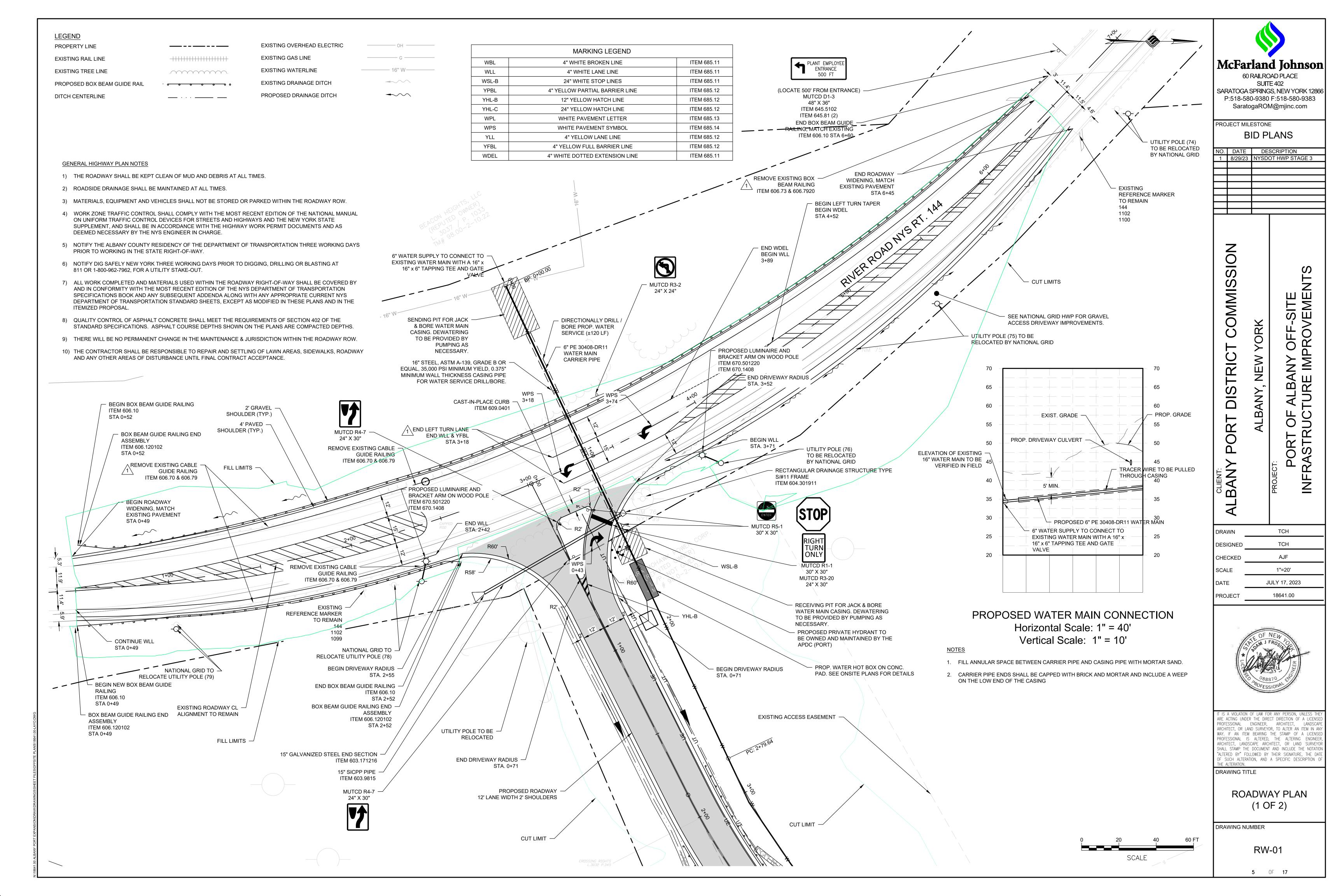
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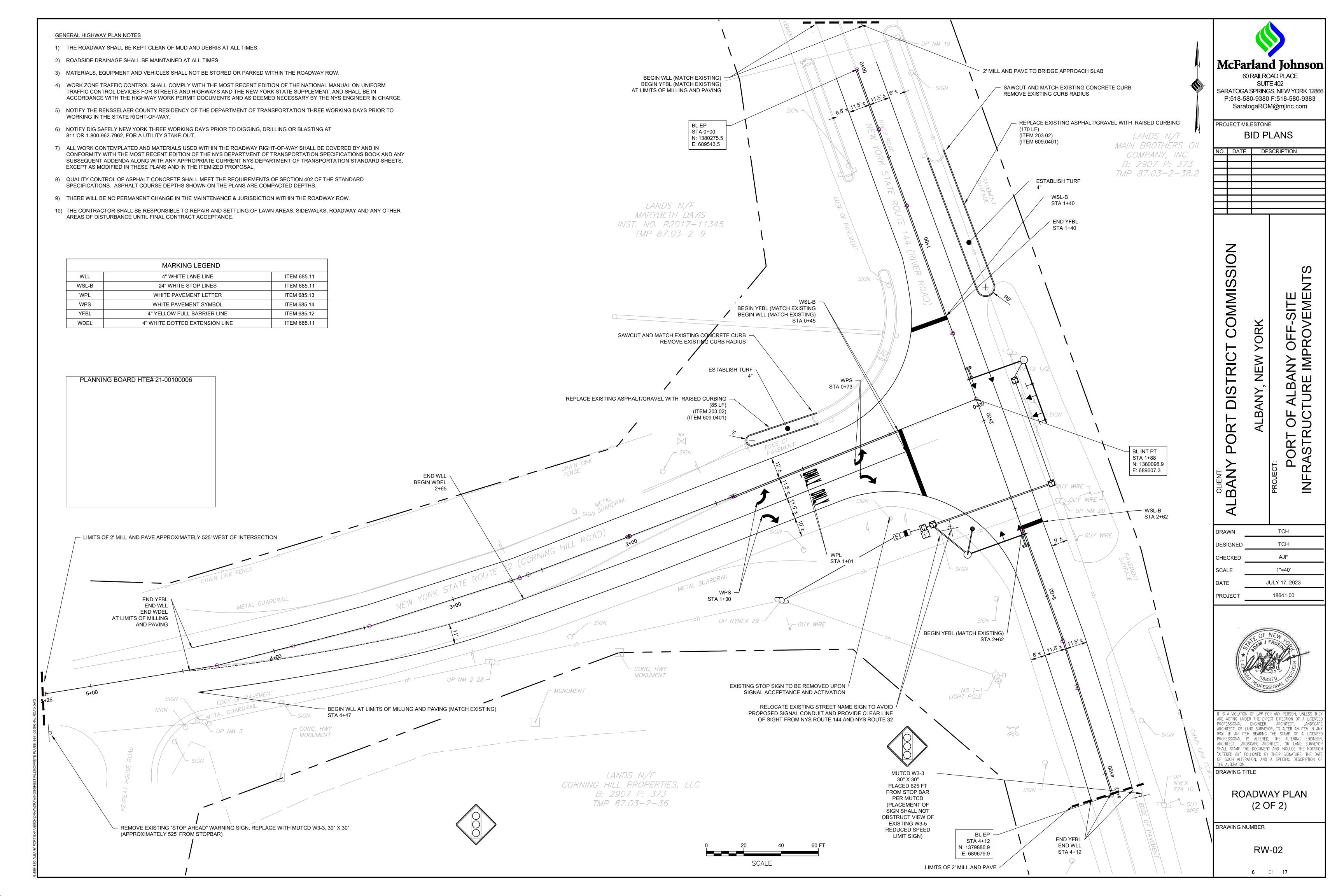
PLANNING BOARD HTE# 21-00100006

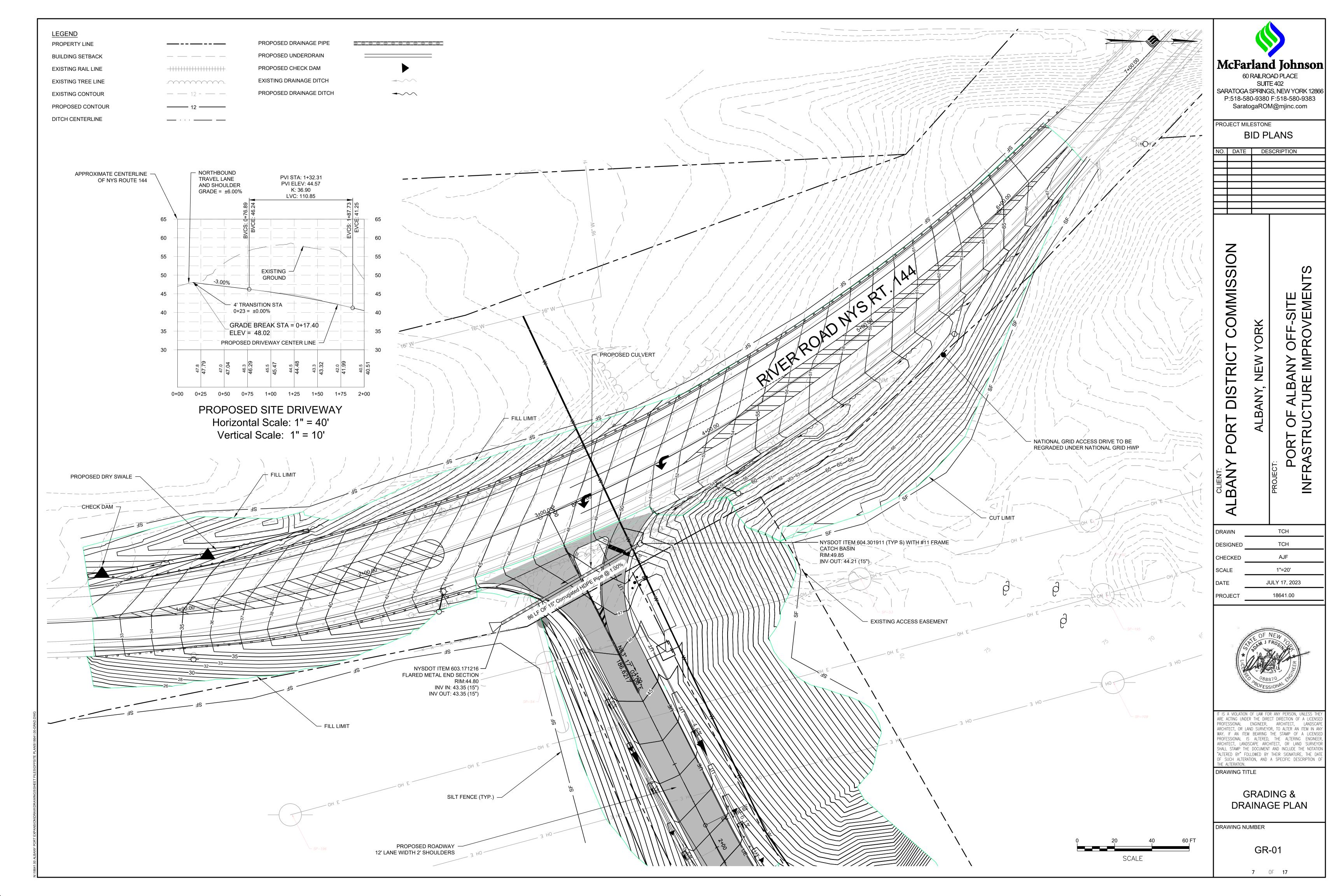
TYPICAL SECTIONS (2 OF 2)

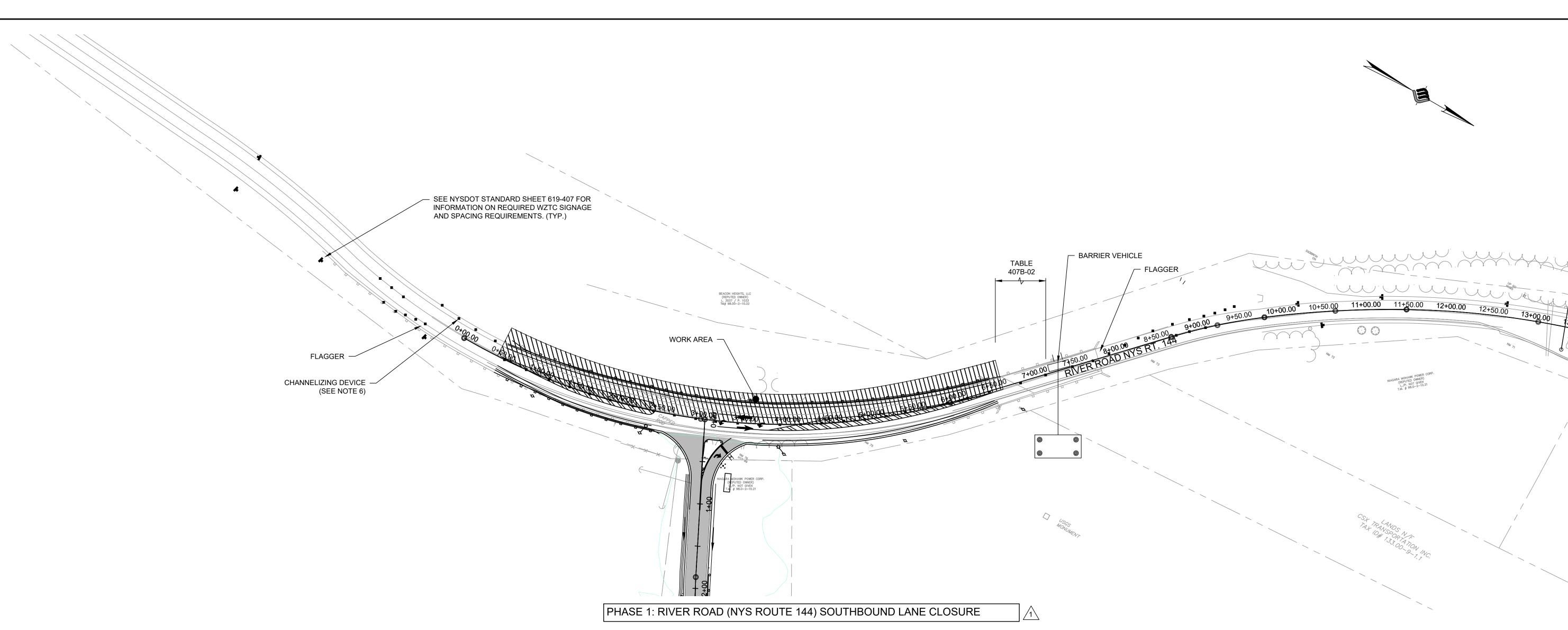
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TP-02









WORK ZONE TRAFFIC CONTROL

GENERAL

- 1. THE TYPICAL DETAILS DEPICTED ON THE STANDARD SHEETS AND IN THE MUTCD, REFLECT THE MINIMUM REQUIREMENTS.
- 2. THE CONTRACTOR MUST SUBMIT TO THE ENGINEER, IN WRITING, PROPOSED REVISIONS TO THE TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL BY THE REGIONAL DIRECTOR OR HIS/HER DESIGNEE FIVE (5) WORK DAYS PRIOR TO THE PLANNED IMPLEMENTATION OF SUCH PROPOSED REVISIONS, EXCEPT FOR CHANGES THAT ALTER THE SCOPE OF THE TRAFFIC CONTROL PLAN. SUCH CHANGES IN SCOPE MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BY THE REGIONAL DIRECTOR OR HIS/HER DESIGNEE THIRTY (30) WORKING DAYS PRIOR TO IMPLEMENTATION OF SUCH REVISIONS.
- 3. THE CONTRACTOR SHALL PROVIDE THE ENGINEER, IN WRITING, WITH THE NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF STAFF WHO ARE AUTHORIZED TO SECURE LABOR, MATERIALS, AND EQUIPMENT FOR EMERGENCY REPAIRS OUTSIDE NORMAL WORKING HOURS, THE ENGINEER WILL PROVIDE THE SUBMITTED INFORMATION TO REGIONAL MANAGEMENT, THE NEW YORK STATE POLICE, THE RESIDENT ENGINEER, AND THE LOCAL POLICE.
- 4. THIS CONTRACT INCLUDES THE USE OF PORTABLE VARIABLE MESSAGE DISPLAY UNITS (PVMS), ITEM 619.111113. THESE UNITS WILL BE STRATEGICALLY PLACED, AS ORDERED BY THE ENGINEER, PRIOR TO CONSTRUCTION TO WARN OF PROPOSED LANE CLOSURE SCHEDULES FOR ALL WORK. THE PVMS SHALL BE PLACED NO LESS THAN THREE DAYS PRIOR TO THE START OF LANE CLOSURES AND REMAIN UP THROUGHOUT THE DURATION OF THE LANE CLOSURES. IT MAY BE NECESSARY TO RELOCATE THESE UNITS NUMEROUS TIMES TO MORE STRATEGIC LOCATIONS. THE PVMS SHALL BE PLACED AT APPROXIMATELY 25 FT. FROM THE EDGE OF THE ROADWAY, OR AS ORDERED BY THE ENGINEER.
- 5. EXCAVATIONS THAT PRODUCE A DROP-OFF GREATER THAN 24 INCHES AND WITHIN 10 FEET FROM THE EDGE OF THE TRAVEL LANE THAT WILL REMAIN AT THE END OF THE WORK SHIFT SHALL BE SEPARATED FROM TRAFFIC WITH TEMPORARY CONCRETE BARRIERS. EXCAVATIONS THAT PRODUCE DROP-OFFS ON BOTH SIDES OF THE TRAVEL WAY AT THE SAME TIME SHALL NOT BE PERMITTED. SHOULDER AREAS SHOULD BE PREPARED TO RECEIVE THE SHOULDER PAVEMENT MATERIAL IMMEDIATELY AHEAD OF THE SHOULDER PAVING OPERATIONS TO MINIMIZE THE TIME A DROP-OFF EXISTS. THE CONTRACTOR SHALL BEGIN WORK TO ELIMINATE UNPROTECTED DROP-OFFS CREATED BY CONTRACT WORK WITHIN 7 CALENDAR DAYS OF COMPLETION OF THE WORK CREATING THE DROP-OFF.

ACTIVITY AREA

- THE CONTRACTOR SHALL MAINTAIN A MINIMUM 500' LONGITUDINAL DISTANCE BETWEEN CONSTRUCTION OPERATIONS ON ALTERNATE SIDES OF THE ROADWAY UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- 2. WHEN TWO OR MORE AREAS ARE ADJACENT, OVERLAP, OR ARE IN CLOSE PROXIMITY, THE CONTRACTOR SHALL ENSURE THERE ARE NO CONFLICTING SIGNS AND THAT LANE CONTINUITY IS MAINTAINED THROUGHOUT ALL WORK AREAS.

LANE WIDTHS

- 1. UNLESS AUTHORIZED BY THE ENGINEER, THE MINIMUM LANE WIDTHS FOR WORK ZONE TRAVEL LANES SHALL BE AS FOLLOWS: FREEWAYS AND/OR EXPRESSWAYS IS 11'. THE MINIMUM LANE WIDTH FOR ALL OTHER TYPES OF ROADWAYS IS 10'.
- 2. THE CONTRACTOR SHALL PROVIDE A WRITTEN NOTICE TO THE ENGINEER, A MINIMUM OF 21 CALENDAR DAYS IN ADVANCE OF PERFORMING ANY WORK THAT RESULTS IN THE REDUCED WIDTH OF AN EXISTING ROADWAY, SO THAT THE ENGINEER MAY NOTIFY THE REGIONAL PERMIT ENGINEER IN A TIMELY MANNER.

SIGNS

- 1. THE LOCATIONS OF THE SIGNS SHOWN ON THE WORK ZONE TRAFFIC CONTROL PLANS AND DETAILS MAY BE ADJUSTED BASED ON SIGHT DISTANCE AND OTHER CONSIDERATIONS. THE FINAL LOCATIONS OF SIGNS ARE SUBJECT TO APPROVAL OF THE ENGINEER.
- 2. ANY EXISTING SIGNS, INCLUDING OVERHEAD SIGNS, WHICH CONFLICT WITH THE TEMPORARY TRAFFIC CONTROL SIGN LAYOUT SHALL BE COVERED, REMOVED, STORED OR RESET, AS APPROVED BY THE ENGINEER. ALL APPROPRIATE EXISTING SIGNS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND/OR LOCATION UNLESS OTHERWISE REPLACED IN THIS CONTRACT.
- 3. SIGNS AT OR NEAR INTERSECTIONS SHALL BE PLACED SO THAT THEY DO NOT OBSTRUCT A MOTORIST'S LINE OF SIGHT.
- 4. ALL WARNING AND REGULATORY SIGNS SHALL BE POSTED ON BOTH SIDES OF MULTI-LANE RAMPS, AND ONE-WAY STREETS. IN CASES WHERE LANE RESTRICTIONS REDUCE THE TRAVEL LANE TO ONE LANE, SIGNS SHALL BE POSTED ON THE RIGHT SIDE OF THE ACTIVE TRAVEL LANE, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
- 5. THE DIMENSIONS OF WORK ZONE TRAFFIC CONTROL SIGNS ARE DESCRIBED IN THE MUTCD. ANY CHANGES TO THE DIMENSIONS SHALL BE APPROVED BY THE REGIONAL DIRECTOR OR BY HIS/HER DESIGNEE
- 6. NYR9-12 MAY BE USED IN PLACE OF NYR9-11.
- 7. W3-3 AND FLASHING BEACON SHALL BE PLACED AT THE LOCATIONS SHOWN AFTER SIGNAL IS OPERATIONAL. FLASHING BEACON WILL BE LEFT IN PLACE FOR 30 (THIRTY) DAYS AFTER SIGNAL BECOMES OPERATIONAL.

BARRIER/SHADOW VEHICLES

- 1. BARRIER AND SHADOW VEHICLES SHALL BE REQUIRED AS PER STANDARD SHEET TITLED "WORK ZONE TRAFFIC CONTROL LEGENDS AND NOTES".
- 2. NO WORK ACTIVITY, EQUIPMENT, VEHICLES AND/OR MATERIALS SHALL BE LOCATED BETWEEN THE BARRIER OR SHADOW VEHICLE AND THE ACTIVE WORK AREA (ROLL AHEAD DISTANCE).
- 3. THE CONTRACTOR MAY BE REQUIRED TO PROVIDE A BARRIER VEHICLE IN CONJUNCTION WITH POLICE PRESENCE IN THE WORK ZONE, TO BE INCLUDED IN THE UNIT BID PRICE FOR BASIC WORK ZONE TRAFFIC CONTROL.

CHANNELIZING DEVICES

1. WHERE POSSIBLE ALL CHANNELIZING AND GUIDING DEVICES ARE TO BE PLACED SO AS TO PROVIDE A MINIMUM 2' LATERAL CLEARANCE TO THE TRAVELED WAY.

LANE CLOSURES

- 1. THE DEPARTMENT RETAINS THE RIGHT TO CANCEL ANY WORK OPERATIONS INCLUDING LANE CLOSURE AND/OR TOTAL ROAD CLOSURES THAT WOULD BE AFFECTED BY UNFORESEEN MAJOR EVENTS THAT MAY CREATE TRAFFIC DELAYS SEVEN (7) CALENDAR DAYS PRIOR TO THE PROPOSED WORK. SPECIFIC DATES ARE YET TO BE DETERMINED.
- 2. PEDESTRIAN ACCOMODATIONS MUST BE MAINTAINED AT ALL TIMES DURING
- CONSTRUCTION.

 3. LANE CLOSURES AND/OR USE OF TEMPORARY CONCRETE BARRIER WITHIN FIVE FEET OF AN ACTIVE TRAVEL WAY BETWEEN NOVEMBER 1 & APRIL 15 SHALL REQUIRE SPECIAL PERMISSION FROM THE ENGINEER WITH CONCURRENCE FROM THE REGIONAL TRAFFIC OFFICE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER ONE WEEK IN ADVANCE OF ANY REQUESTED CLOSURE.

DAILY CLOSURE RESTRICTIONS - ROUTE 144 DRIVEWAY

THERE SHALL BE NO TEMPORARY LANE CLOSURES ON STATE HIGHWAYS DURING THE FOLLOWING DAYS AND TIMES:

MONDAY - FRIDAY: 6:00 A.M. THROUGH 9:00 A.M. 3:00 P.M. THROUGH 6:00 P.M.

DAILY CLOSURE RESTRICTIONS - ROUTE 144/ROUTE 32 INTERSECTION

THERE SHALL BE NO TEMPORARY LANE CLOSURES ON STATE HIGHWAYS DURING THE FOLLOWING DAYS AND TIMES:

MONDAY - FRIDAY: 6:00 A.M. THROUGH 9:00 A.M.

12:00 P.M. THROUGH 6:00 P.M. HOLIDAY CLOSURE RESTRICTIONS

THERE SHALL NOT BE TEMPORARY LANE CLOSURES ON (RTE 144) DURING THE FOLLOWING DATES:

2023

6:00 AM, SATURDAY, DECEMBER 31, 2022 THRU 6:00 AM, TUESDAY JANUARY 3, 2023 - (NEW YEAR'S DAY)
6:00 AM, SATURDAY, MAY 27, 2023 THRU 6:00 AM WEDNESDAY, MAY 31, 2023 - (MEMORIAL DAY HOLIDAY)
6:00 AM, SATURDAY, JULY 1, 2023 THRU 6:00 AM, WEDNESDAY, JULY 5, 2023 - (INDEPENDENCE DAY HOLIDAY)
6:00 AM, SATURDAY, SEPTEMBER 2, 2023 THRU 6:00 AM, WEDNESDAY, SEPTEMBER 6, 2023 - (LABOR DAY HOLIDAY)
6:00 AM FRIDAY, NOVEMBER 23, 2023 THRU 6:00 AM TUESDAY, NOVEMBER 28, 2023 - (THANKSGIVING DAY HOLIDAY)
6:00 AM FRIDAY, DECEMBER 22, 2023 THRU 6:00 AM TUESDAY, DECEMBER 26, 2023 - (CHRISTMAS DAY HOLIDAY)

<u>!</u>	<u>LEGEND</u>	PLANNING BOARD HTE# 21-00100006
	WORK ZONE	
	CHANNELIZING DEVICE	
-	WORK ZONE SIGN	
†	DIRECTIONAL ARROWS	
	RIGHT OF WAY	
• • • • • • • • • • • • • • • • • • •	ARROW PANEL, CAUTION MODE	

PUBLIC ACCESS

- 1. PROPERTY OWNERS WHOSE DRIVEWAYS WILL BE MADE INACCESSIBLE SHALL BE NOTIFIED BY THE CONTRACTOR AT LEAST 24 HOURS PRIOR TO RESTRICTING USE OF THE DRIVEWAY. FOR MULTIPLE ACCESS PROPERTIES, AT LEAST ONE DRIVEWAY SHALL BE OPEN AT ALL TIMES. ACCESS SHALL BE RESTORED TO ALL DRIVEWAYS AS SOON AS POSSIBLE.
- SUITABLE RAMPS SHALL BE INSTALLED TO MAINTAIN SMOOTH TRANSITIONS FROM RESIDENTIAL AND COMMERCIAL DRIVEWAYS TO AND FROM THE WORK AREA.
- 3. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN AND BICYCLE TRAFFIC THROUGH AND AROUND THE PROJECT FOR THE DURATION OF CONSTRUCTION. MATERIAL, EQUIPMENT OR OTHER BARRIERS SHALL NOT BE PLACED OR MARKED IN SUCH A MANNER AS TO OBSTRUCT PEDESTRIAN OR BICYCLE TRAFFIC OR TO PRESENT A SAFETY HAZARD TO THE NON-MOTORIZED PUBLIC. WHERE PEDESTRIAN TRAFFIC MUST BE RELOCATED OFF THE EXISTING FACILITY, WALKWAYS SHALL BE CLEARLY MARKED AND HAVE A LOGICAL START AND TERMINUS.

NOTES

- NORTHBOUND LANE CLOSURES ARE SYMMETRICAL TO SOUTHBOUND LANE
 CLOSURES
- 2. NO WORK ACTIVITY, EQUIPMENT, OR STORAGE OF VEHICLES, OR MATERIAL SHALL OCCUR WITHIN THE BUFFER SPACE AT ANY TIME.
- CHANNELIZING DEVICE SPACING (CENTER TO CENTER) SHALL NOT EXCEED 40' IN THE ACTIVE WORK SPACE.
- 4. TRANSVERSE DEVICES SHALL BE REQUIRED (AS PER 619 STANDARD SPECIFICATIONS) WHEN A PAVED SHOULDER HAVING A WIDTH OF 8' OR GREATER IS
- CLOSED FOR A DISTANCE GREATER THAN 1500'.

 5. FOR BARRIER VEHICLE USE REQUIREMENTS SEE TABLES NY1-A AND NY2-A ON THE
- STANDARD SHEET TITLED "WORK ZONE TRAFFIC CONTROL LEGENDS AND NOTES".

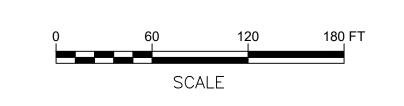
 6. WHEN PAVED SHOULDERS HAVING A WIDTH OF 8' OR MORE ARE CLOSED,
 CHANNELIZING DEVICES SHALL BE USED TO CLOSE THE SHOULDER IN ADVANCE TO
- DELINEATE THE BEGINNING OF THE WORK SPACE AND TO DIRECT VEHICULAR TRAFFIC TO REMAIN IN THE TRAVELED WAY.

 7. WHEN WORKS AND EQUIPMENT ARE NOT ENCROACHING INTO THE TRAVEL LANE A
- SHOULDER CLOSURE MAY BE USED.

 8. CENTERLINE CONES MAY BE ADDED TO ENHANCE THE VISIBILITY OF THE FLAGGER STATION. IF CONES DIRECTIONS/LEGS OF THE INTERSECTION OR DURING INCIDENT
- MANAGEMENT SITUATIONS.

 9. ALL FLAGGERS SHALL USE 24" (MIN.) OCTAGON SHAPED STOP/SLOW PADDLES HAVING 6' STAFF. THE PADDLE IS THE PREFERRED DEVICE, BUT THE FLAG MAY BE USED AT INTERSECTIONS WHERE THE STOP/SLOW PADDLE WOULD OFFER CONTRADICTING INFORMATION TO DRIVERS TRAVELING IN OPPOSITE
- 10. FLAGGER SIGN (W20-7a) AND ONE LANE ROAD AHEAD SIGN (W20-4) SHALL BE REMOVED, COVERED OR TURNED AWAY FROM ROAD USERS WHEN FLAGGING OPERATIONS ARE NOT OCCURRING..

DIRECTION/LEGS OF THE INTERSECTION OR DURING INCIDENT MANAGEMENT



McFarland Johnson

60 RAILROAD PLACE SUITE 402 SARATOGA SPRINGS, NEW YORK 12860 P:518-580-9380 F:518-580-9383 SaratogaROM@mjinc.com

ROJECT MILESTONE

BID PLANS

NO.	DATE	DESCRIPTION
1	8/29/23	NYSDOT HWP STAGE 3

NY PORT DISTRICT COMMISSION ALBANY, NEW YORK

DRAWN TCH

DESIGNED TCH

CHECKED AJF

SCALE 1"=20'

DATE JULY 17, 2023

18641.00



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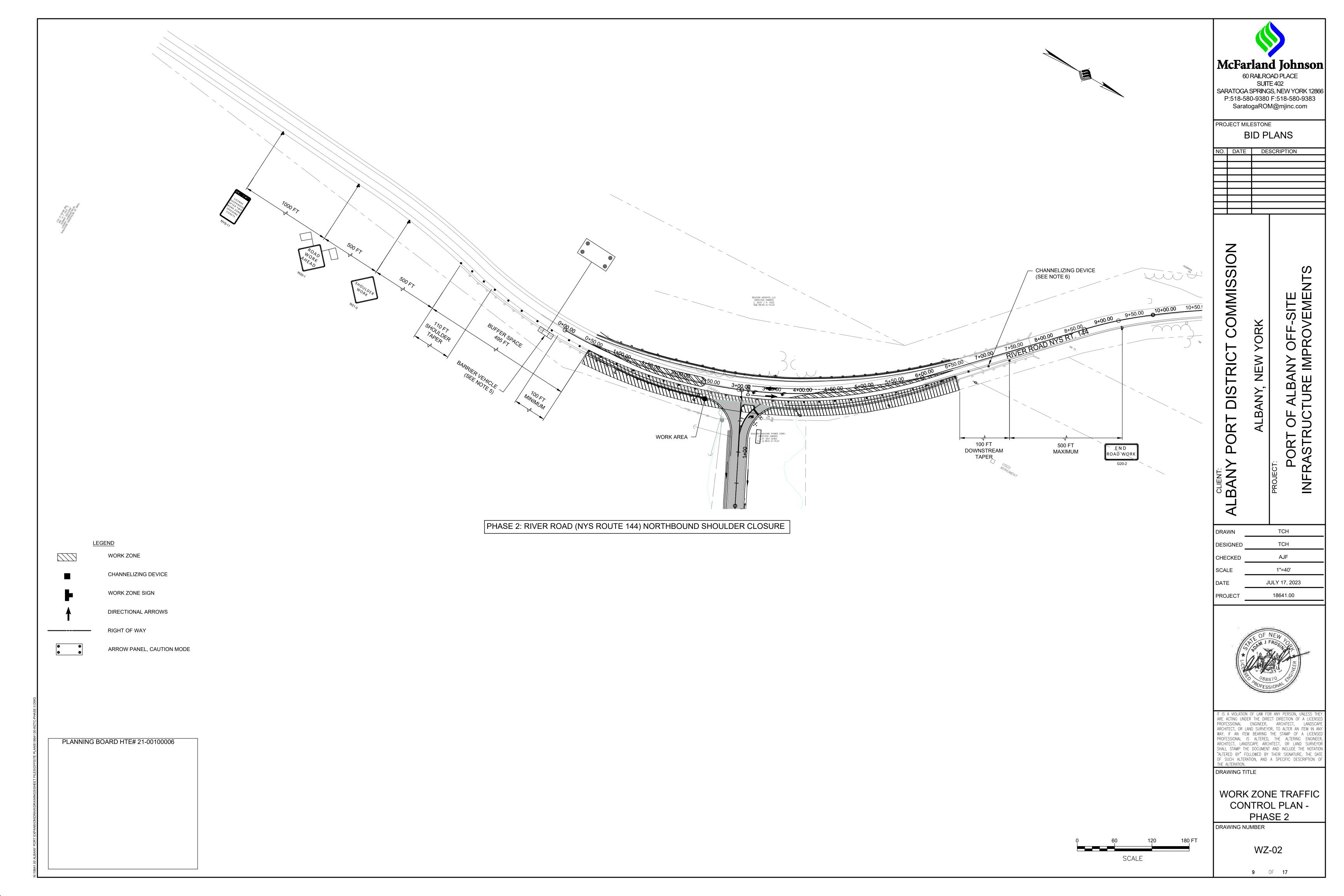
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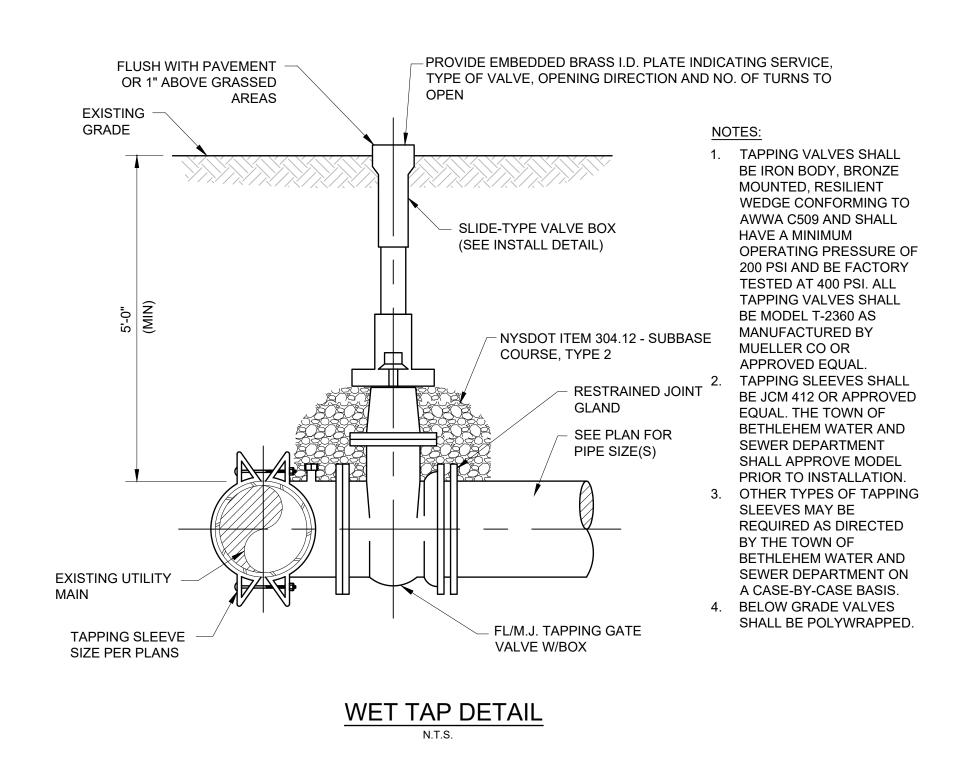
PROJECT

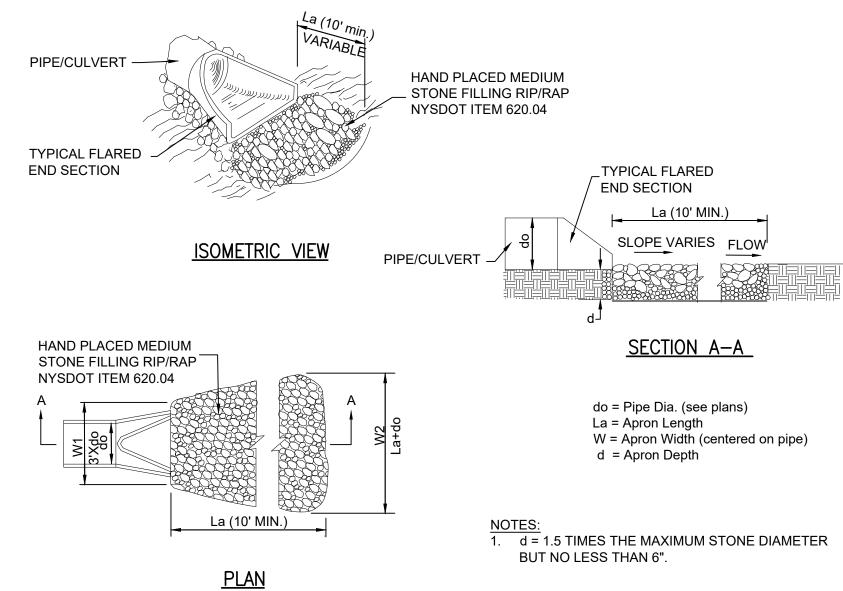
WORK ZONE TRAFFIC CONTROL PLAN -PHASE 1

DRAWING NUMBER

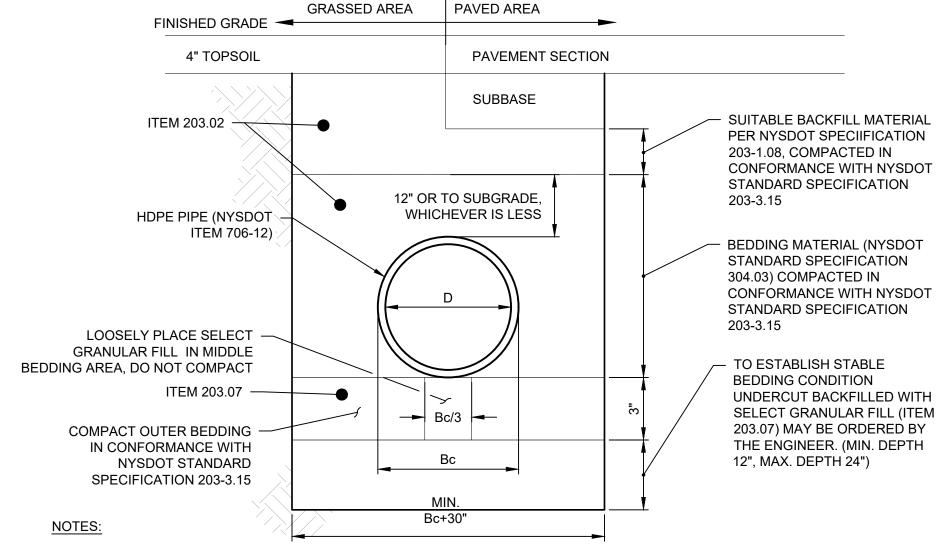
WZ-01





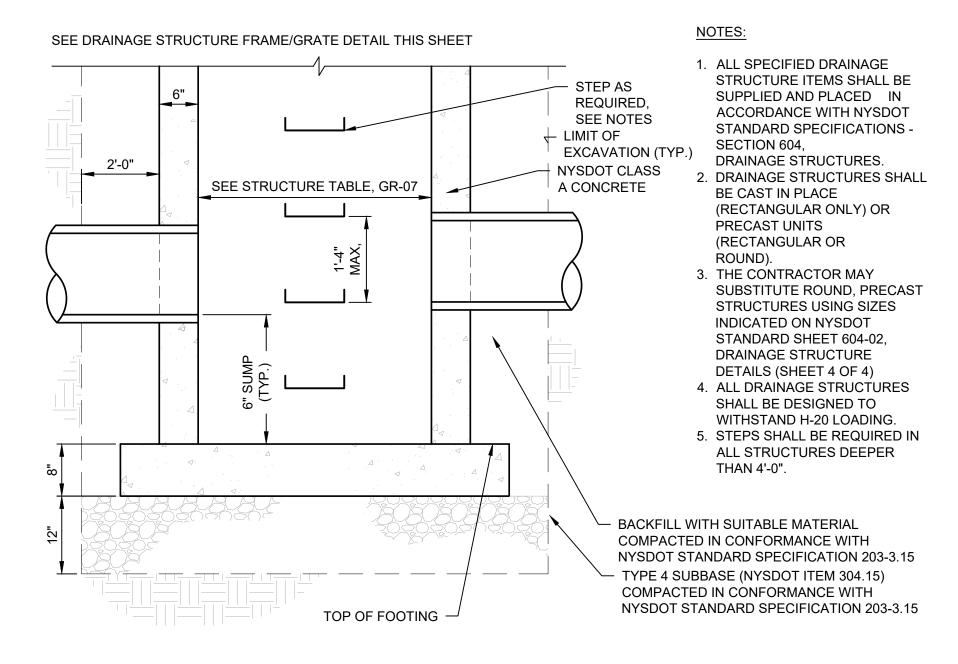


OUTLET PROTECTION - RIP RAP

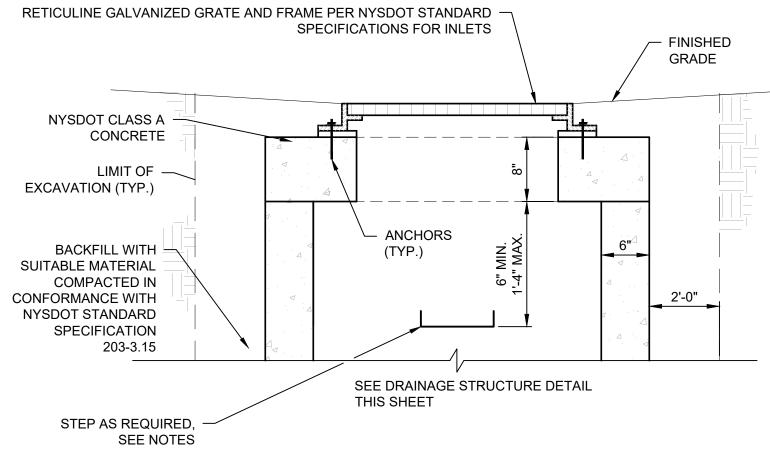


- 1. BRACING, SHEETING OR SHORING AS REQUIRED BY THE LATEST VERSION OF THE NEW YORK STATE DEPARTMENT OF LABOR AND U.S. DEPARTMENT OF LABOR O.S.H.A. REGULATIONS SHALL BE PREPARED BY A NYS LICENSED PROFESSIONAL ENGINEER. 2. ALL SPECIFIED STORM PIPE ITEMS SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH NYSDOT STANDARD
- SPECIFICATIONS SECTION 603, CULVERT AND STORM DRAINS.

STORM PIPE BEDDING



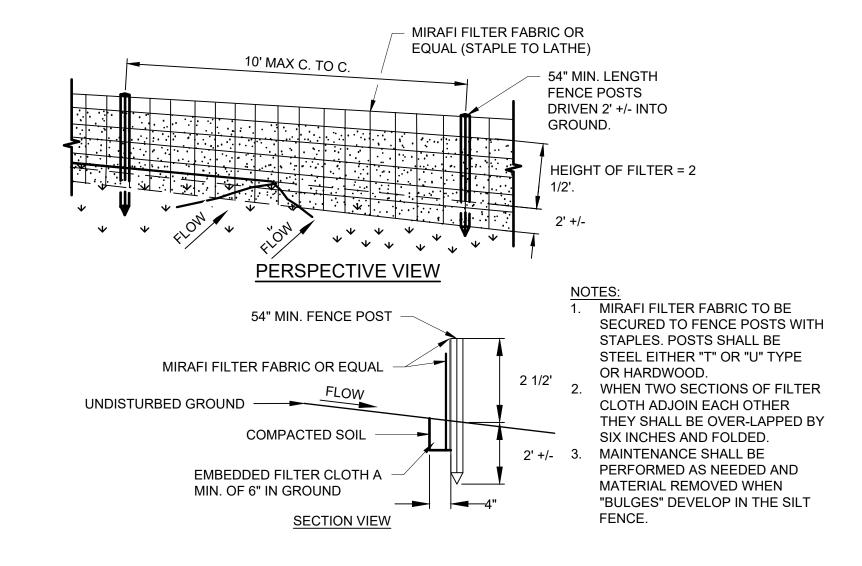
DRAINAGE STRUCTURE



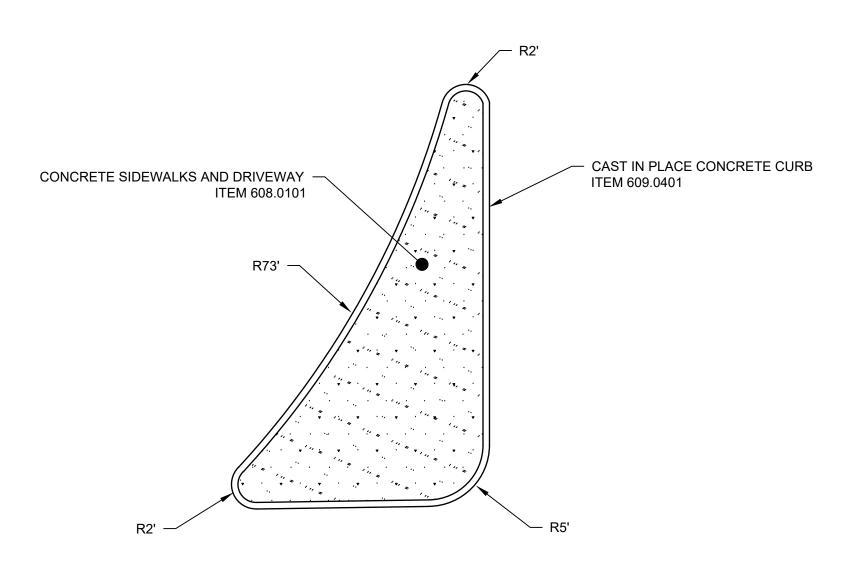
NOTES:

- 1. ALL SPECIFIED STORM STRUCTURE ITEMS SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATIONS - SECTION 604, DRAINAGE STRUCTURES.
- 2. ALL DRAINAGE STRUCTURES SHALL BE DESIGNED TO WITHSTAND H-20 LOADING. 3. STEPS SHALL BE REQUIRED IN ALL STRUCTURES DEEPER THAN 4'-0".

DRAINAGE STRUCTURE FRAME AND GRATE



SILT FENCE



CURBED ISLAND DETAIL N.T.S.

| McFarland Johnson 60 RAILROAD PLACE SUITE 402

SARATOGA SPRINGS, NEW YORK 12866 P:518-580-9380 F:518-580-9383 SaratogaROM@mjinc.com

PROJECT MILESTONE **BID PLANS**

NO. DATE DESCRIPTION

SION COMMIS ORK

OFF-SITE PROVEMEN NEW

TRIC

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TCH DRAWN TCH DESIGNED AJF CHECKED SCALE 1"=40' JULY 17, 2023

18641.00



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DRAWING TITLE

PROJECT

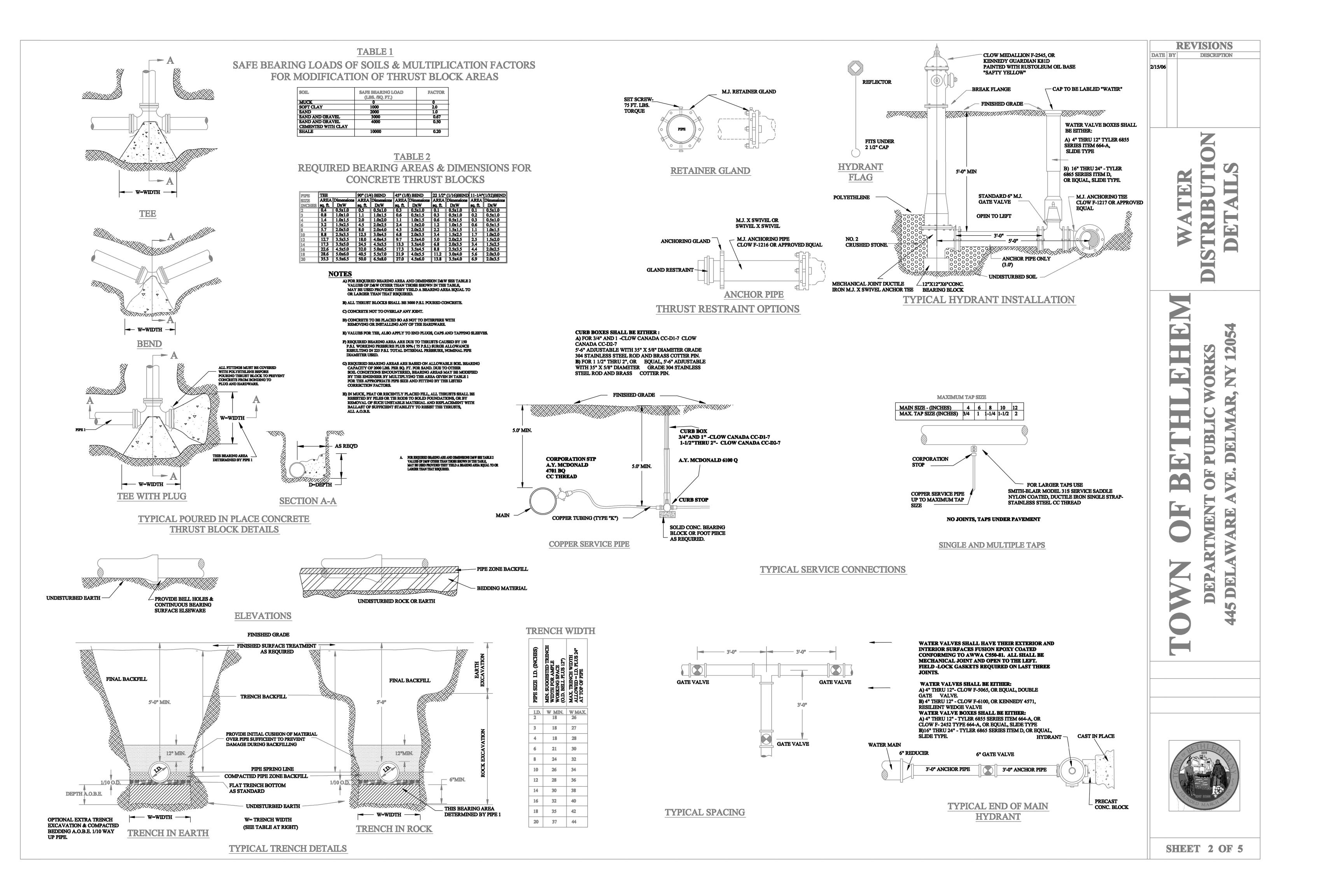
MISCELLANEOUS DETAILS

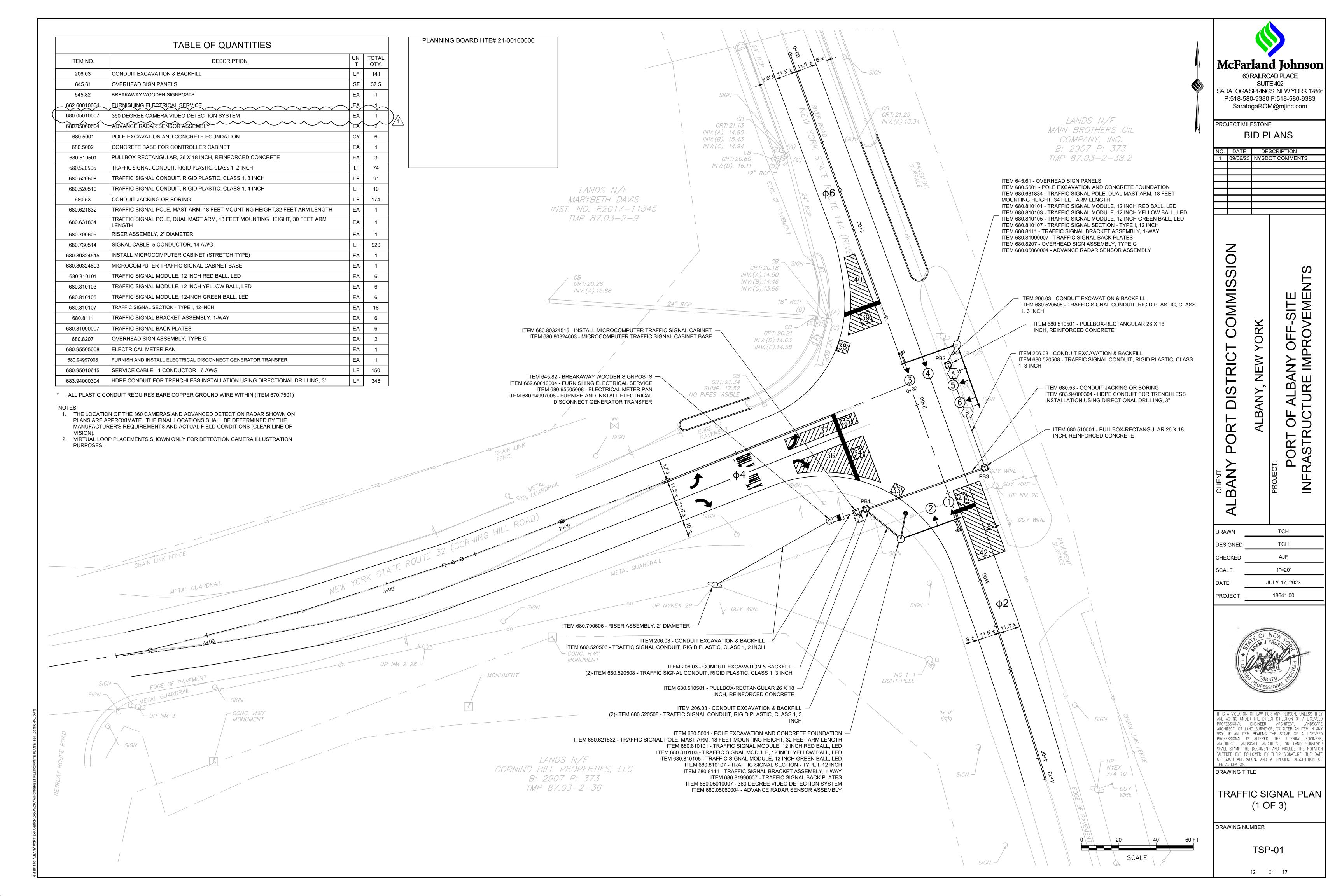
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10 OF **17**

PLANNING BOARD HTE# 21-00100006

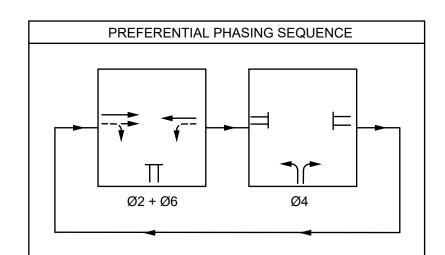




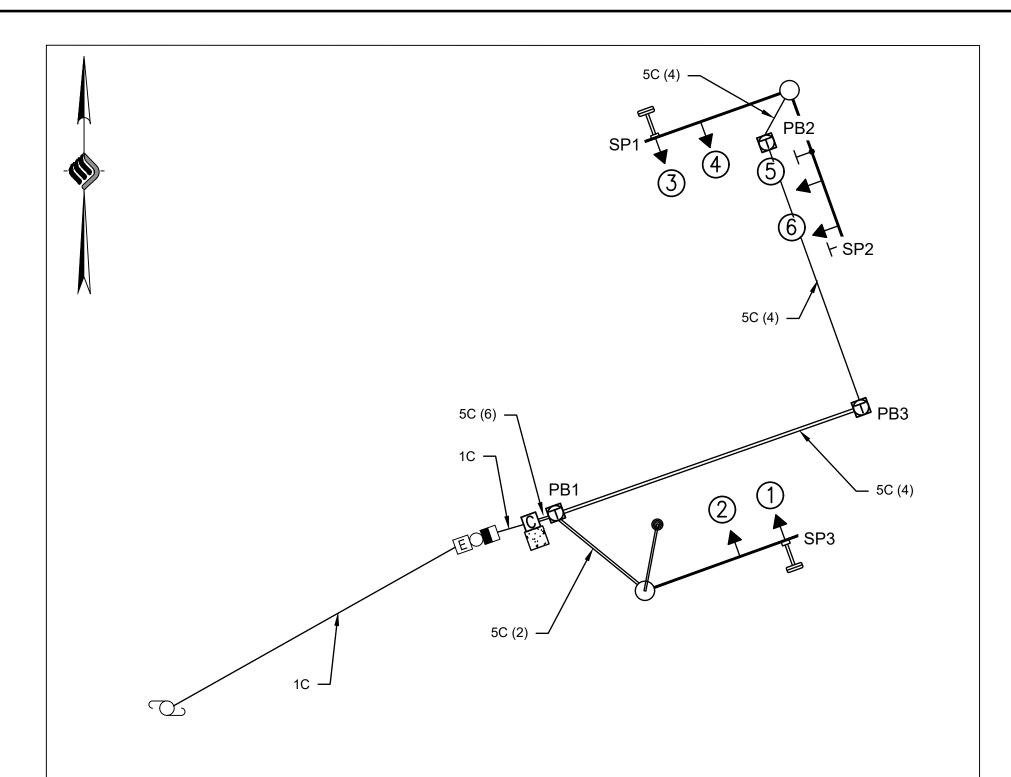
	NEW OVERHEAD SIGNS									
SYMBOL	OL ITEM NO. TEXT MUTCD NO. APPROX. SIZE OF SIGN TYPE OF MO									
A	680.8207	ONLY	R3-5L	30" X 36"	MAST ARM					
B	680.8207	ONLY	R3-5R	30" X 36"	MAST ARM					

TABLE OF OPERATIONS							
			FAC	CES			
PHASE	1	2	3	4	5	6	
Ø2+Ø6	G	G	G	G	R	R	
Ø4	R	R	R	R	G	G	
FLASHING OPERATION	FY	FY	FY	FY	FR	FR	
		DIS	SPLAY				
12 IN DIAMETER LENSES R R R R R R R R R R R R R R R R R R							

TABLE OF			
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SDLC CHANNEL	FUNCTION	DETECTION ZONE NUMBER	SIZE	REMARKS
33	Ø4	33	6' X 6'	EB RIGHT COUNT
34	Ø4	34	6' X 6'	EB RIGHT COUNT
35	Ø4	35	6' X 6'	EB LEFT COUNT
36	Ø4	36	6' X 40' X 14' X 41'	EB THRU / RIGHT
37	Ø4	37	6' X 40'	EB LEFT
38	Ø6	38	6' X 6'	SB RIGHT COUNT
39	Ø6	39	6' X 6'	SB THRU COUNT
40	Ø6	40	6' X 6'	SB THRU / RIGHT
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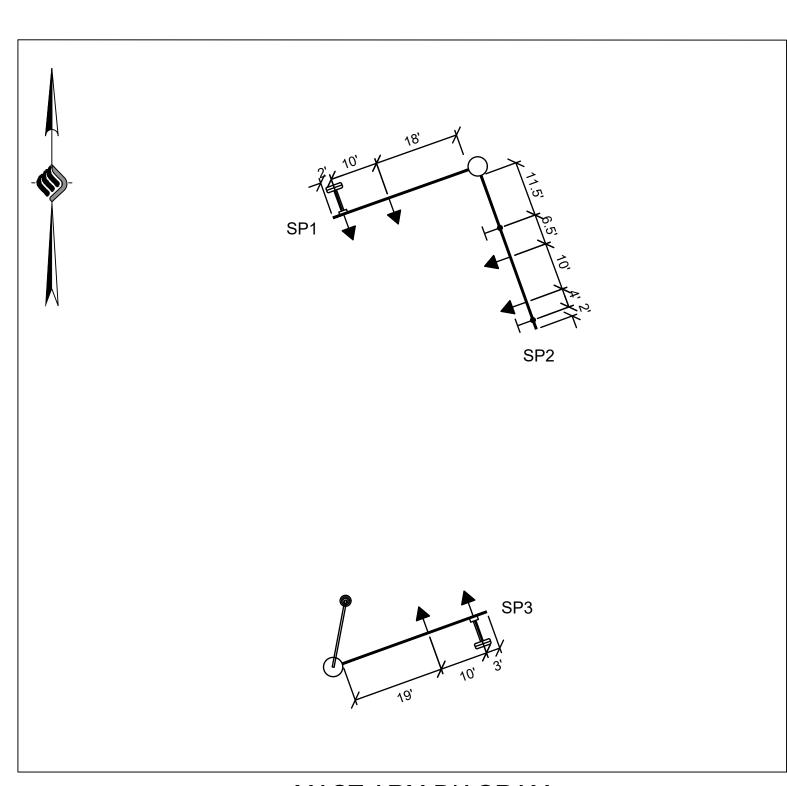


WIRING DIAGRAM 1" = 20'

<u>LEGEND</u>

5C = SIGNAL CABLE, 5 CONDUCTOR, 14 AWG - ITEM 680.730514

1C = SERVICE CABLE, 1 CONDUCTOR, 6 AWG - ITEM 680.95010615



MAST ARM DIAGRAM

1" = 20'

		TABI	E OF S	WITCH PA	CKS	
SIGNA NO.	XX: NYS RO	OUTE 32 & N	IYS ROUTE	144	CO	UNTY: ALBANY
SWITCH PACK	FUNCTION	FACE NO.S	FLASH PLUG COLOR	INDICATIONS		IAL BOARD WIRING
			OOLOIV		TERMINAL	WIRE COLOR CODE
SP 1						
SP 2	Ø2	1,2	Y	R Y G GRND. WIRE	SP 1R SP 1Y SP 1G	14/5C-1-R, 14/5C-2-R 14/5C-1-O, 14/5C-2-O 14/5C-1-G, 14/5C-2-G 14/5C-1-W, 14/5C-2-W
SP 3				R Y G GRND. WIRE		
SP 4	Ø4	5,6	R	R Y G GRND. WIRE	SP 2R SP 2Y SP 2G	14/5C-3-R, 14/5C-4-R 14/5C-3-0, 14/5C-4-0 14/5C-3-G, 14/5C-4-G 14/5C-3-W, 14/5C-4-W
SP 5				GRND. WIR	SP 5R SP 5Y SP 5G	
SP 6	Ø6	3,4	Y	R Y G GRND. WIRE		14/5C-5-R, 14/5C-6-R 14/5C-5-0, 14/5C-6-0 14/5C-5-G, 14/5C-6-G 14/5C-5-W, 14/5C-6-W
SP 7				GRND. WIR	SP 7R SP 7Y SP 7G GRND. BUS	
SP 8				GRND. WIR	SP 8R SP 8Y SP 8G GRND. BUS	
SP 9				GRND. WIRE	SP 9R SP 9Y SP 9G GRND. BUS	
SP 10				GRND. WIR	SP 10R SP 10Y SP 10G GRND. BUS	
SP 11				GRND. WIRE	SP 11R SP 11Y SP 11G GRND. BUS	
SP 12				GRND. WIRE	SP 12R SP 12Y SP 12G GRND. BUS	
SP 13				GRND. WIR	SP 13R SP 13Y SP 13G GRND. BUS	
SP 14					SP 14R SP 14Y SP 14G GRND. BUS	
SP 15					SP 15R SP 15Y SP 15G GRND. BUS	
SP-16				GRND. WIR	SP 16R SP 16Y SP 16G GRND. BUS	

CUT CONFLICT MONITOR DIODES: 2-6

PLANNING BOARD HTE# 21-00100006

NOTES:

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REGIONAL TRAFFIC SIGNAL DETAILS AND NYS STANDARD SHEETS.
- 2. THE CONTRACTOR SHALL NOTIFY THE REGION 1 TRAFFIC SIGNAL MAINTENANCE FOREMAN (518) 237-3954 AT LEAST 2 WEEKS IN ADVANCE OF WHEN WORK IS TO BEGIN.
- 3. TRAFFIC SIGNAL TURN-ON SHALL BE DONE BY NYS TRAFFIC SIGNAL PERSONNEL ONLY. THE CONTRACTOR SHALL PAY A LIQUIDATED DAMAGES CHARGE OF \$10,000 IF THE TRAFFIC SIGNAL IS TURNED ON (INCLUDING FLASHING OPERATION) WITHOUT NYS TRAFFIC SIGNAL PERSONNEL PRESENT. THE CONTRACTOR SHALL NOTIFY THE NYS TRAFFIC SIGNAL SECTION TWO WEEKS PRIOR TO THE REQUESTED DATE OF TURN-ON.
- 4. WHERE THERE IS A POTENTIAL FOR DANGEROUS PROXIMITY OR CONTACT WITH ENERGIZED ELECTRICAL SYSTEMS, UTILITIES SHALL BE CALLED TO DECIDE THE NEED TO DE-ENERGIZE OR INSULATE LINES, OR OTHERWISE PROTECT AGAINST ACCIDENTAL CONTACT.
- 5. THE REQUIRED WORK ZONE TRAFFIC CONTROL SHALL CONFORM TO THE NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE NEW YORK STATE SUPPLEMENT.



| McFarland Johnson 60 RAILROAD PLACE

SUITE 402

SARATOGA SPRINGS, NEW YORK 12866 P:518-580-9380 F:518-580-9383 SaratogaROM@mjinc.com

PROJECT MILESTONE **BID PLANS**

NO.	DATE	DESCRIPTION

COMMISSION

DISTRICT

PORT

PROJECT

DRAWN TCH TCH DESIGNED AJF CHECKED SCALE 1"=20' JULY 17, 2023

18641.00



ARE ACTING UNDER THE DIRECT DIRECTION OF A LICENSI PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSI PROFESSIONAL IS ALTERED, THE ALTERING ENGINEEF ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION (

DRAWING TITLE

TRAFFIC SIGNAL PLAN (2 OF 3)

DRAWING NUMBER

TSP-02

TRAFFIC SIGNAL NOTES

SPECIFICATION TS2-2003 AS AMENDED.

- 1. ALL TRAFFIC SIGNAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH NEW YORK STATE STANDARD SHEETS 680-01 THRU 680-17 INCLUSIVE, AS APPLICABLE, EXCEPT AS MODIFIED BELOW OR IN THE CONTRACT PLANS.
- 2. WHERE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA) SPECIFICATION EQUIPMENT IS TO BE INSTALLED, SUCH EQUIPMENT SHALL MEET ALL REQUIREMENTS OF N.E.M.A.
- 3. UNLESS OTHERWISE NOTED, NYSDOT SHALL HAVE MAINTENANCE JURISDICTION OVER ALL SIGNALS IN THIS CONTRACT UPON COMPLETION OF THEIR INSTALLATION AND OFFICIAL ACCEPTANCE.
- 4. ALL MATERIALS CATALOG CUT SHEETS MUST BE SELECTED FROM NYSDOT APPROVED PRODUCT LIST. THE CUT SHEETS CAN THEN BE SUBMITTED TO THE E.I.C. FOR REVIEW AND ACCEPTANCE PRIOR TO INSTALLATION.
- 5. THE CONTRACTOR SHALL HAVE ALL CONVENTIONAL, N.E.M.A. OR INTERSECTION FLASHER EQUIPMENT (TO BE INSTALLED), INSPECTED BY NYSDOT SIGNAL MAINTENANCE FORCES BEFORE THE SIGNAL IS ENERGIZED. THE CONTRACTOR SHALL MAINTAIN EACH. SIGNAL IN CONTINUOUS OPERATION AS SPECIFIED BY THE TABLE OF OPERATIONS FOR 30 DAYS BEFORE SEEKING FINAL ACCEPTANCE.
- 6. UPON COMPLETION OF WORK AT AN INTERSECTION, NYSDOT TRAFFIC SIGNAL MAINTENANCE PERSONNEL WILL PERFORM AN INSPECTION OF THE SIGNAL SYSTEM. WITHIN TWO WEEKS OF NOTIFICATION, THE CONTRACTOR SHALL UNBAG THE NEW SIGNAL HEADS AND SHALL PROVIDE ACCESS TO ALL PULLBOXES FOR INSPECTION PURPOSES. THE CONTRACTOR SHALL BE NOTIFIED OF ANY DEFECTS FOUND DURING THE INSPECTION, AND WILL MAKE THE NECESSARY CORRECTIONS BEFORE THE INTERSECTION WILL BE ACCEPTED. THE CONTRACTOR SHALL PROVIDE SUFFICIENT PERSONNEL AND TRAFFIC CONTROL DEVICES TO SAFELY MAINTAIN TRAFFIC THROUGH THE INTERSECTION WHILE THE INSPECTION IS BEING PERFORMED. THE SIGNAL HEADS SHALL BE REBAGGED SHOULD THE INSPECTION FAIL.
- 7. WORK ZONE TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 619 WORK ZONE TRAFFIC CONTROL - OF THE NYSDOT STANDARD SPECIFICATIONS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ANY PROVISIONS CONTAINED IN THE PLANS. THE CONTRACTOR SHALL INSTALL SIGNS ON ALL LEGS OF AN INTERSECTION PRIOR TO WORKING AT THAT INTERSECTION.
- 8. THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN A TRAFFIC SIGNAL SHALL INCLUDE MAINTAINING VEHICLE DETECTORS ON A VEHICLE ACTUATED INSTALLATION. IF A VEHICLE DETECTOR BECOMES INOPERATIVE, THE CONTRACTOR SHALL REPAIR IT, REPLACE IT, OR, IF A NEW COMPATIBLE DETECTOR IS CALLED FOR IN THE PLANS, HE MAY, WITH THE PERMISSION OF THE E.I.C., CONNECT THE NEW DETECTOR INTO THE EXISTING SYSTEM.
- ALL SIGNAL IMPROVEMENTS SHOWN ON THE PLANS, INCLUDING LANE DESIGNATION SIGNS, TURNING LANES, CHANNELIZATION, PAVEMENT MARKINGS, ETC., SHALL BE IN PLACE BEFORE THE NEW SIGNAL SYSTEM IS PLACED INTO OPERATION. THE CONTRACTOR SHALL WORK WITH THE E.I.C. AND THE REGIONAL TRAFFIC ENGINEER TO COORDINATE THESE OPERATIONS.
- 10. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY THAT WILL BE SUPPLYING POWER TO THE TRAFFIC SIGNAL EQUIPMENT AT EACH INTERSECTION WITHIN 30 DAYS OF THE CONTRACT AWARD. THE CONTRACTOR SHALL MEET ALL REQUIREMENTS OF THE NEW YORK BOARD OF FIRE UNDERWRITERS IN THEIR SIGNAL INSTALLATIONS AND EACH INSTALLATION MUST PASS A FIRE UNDERWRITERS INSPECTION BEFORE SERVICE CONNECTION WILL BE MADE BY THE UTILITY COMPANY. THE COST OF THE INSPECTION SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS TRAFFIC SIGNAL ITEMS.
- 11. IF IT IS DISCOVERED THAT THE MINIMUM CLEARANCES FROM PRIMARY AND/OR SECONDARY POWER CONDUCTORS AS REQUIRED BY SECTION 23 OF THE NATIONAL ELECTRICAL SAFETY CODE (ANSI STANDARD C2-1997) AND LOCAL UTILITY CODES CANNOT BE ACHIEVED, THE UTILITY COMPANY OWNING SUCH CONDUCTORS SHALL BE NOTIFIED IN WRITING OF THE PROBLEM. NO FURTHER WORK SHALL BE DONE UNTIL SAID POWER LINES HAVE BEEN RELOCATED TO PROVIDE THE PROPER CLEARANCE
- 12. UNDER NO CONDITION SHALL THE CONTRACTOR MAKE THE SERVICE CONNECTION; ALL SERVICE CONNECTIONS SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANY.
- 13. THE LOCATIONS OF ALL UNDERGROUND OBJECTS HAVE NOT BEEN SHOWN ON ALL PLANS. THE CONTRACTOR SHALL DETERMINE THE EXISTING CONDITIONS AND SUPPORT AND PROTECT ALL LINES ENCOUNTERED IN THE TRENCHING AND EXCAVATION OPERATIONS. THE CONTRACTOR SHALL NOTIFY DIG SAFELY NEW YORK 2 (TWO) WORK DAYS PRIOR TO DIGGING, DRILLING, OR BLASTING AT 811 FOR A UTILITY STAKE-OUT.
- 14. WHERE ONE CONDUIT IS TOO SMALL TO PERMIT PASSAGE OF THE REQUIRED SIGNAL WIRING, TWO OR MORE CONDUITS SHALL BE USED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE NUMBER OF CONDUITS NEEDED.
- 15. ALL HOLES FOR L.B. CONDULETS, THIMBLE BOLTS, AND POLE-MOUNTED SIGNAL AND/OR PEDESTRIAN HEADS SHALL BE DRILLED. THE USE OF CUTTING TORCHES IS NOT PERMITTED UNLESS WRITTEN PERMISSION IS GRANTED IN ADVANCE BY THE REGIONAL TRAFFIC ENGINEER.

16. EACH PHASE SHALL HAVE ITS OWN GROUND WIRE.

- 17. A CARD SHALL BE PLACED ON THE INSIDE DOOR OF EACH CONTROLLER CABINET LISTING ALL THE COMPONENT PARTS BY SERIAL NUMBER, THE DATE OF INSTALLATION, AND DATE OF OFFICIAL OPERATION. WHERE STATE MICROCOMPUTERS ARE TO BE USED, THIS WILL BE DONE BY STATE MAINTENANCE FORCES.
- 18. ON ALL SIGNAL HEAD ASSEMBLIES ALL FEMALE THREADED CONNECTING HARDWARE SHALL HAVE TWO SET SCREWS AND ALL THREADED PIPE NIPPLES SHALL HAVE TAPERED THREADS.
- 19. THE BOTTOMS OF ALL TRAFFIC SIGNAL HEADS SHALL BE LOCATED AT LEAST 17.0' (5.2 M) ABOVE THE PAVEMENT SURFACE.
- 20.ONCE TRAFFIC SIGNAL HEAD ASSEMBLIES HAVE BEEN INSTALLED AND ADJUSTED IN THE FIELD TO THE SATISFACTION OF NYSDOT TRAFFIC MAINTENANCE PERSONNEL, THE CONTRACTOR SHALL APPLY A BEAD OF SILICONE SEALANT AROUND THE SERRATED LOCK RING AT ALL LOCATIONS WHERE VERTICAL PIPE NIPPLES ARE ATTACHED TO THE TOP SURFACES OF BOTH TRAFFIC SIGNAL SECTIONS AND PIPE CROSS BODIES TO PREVENT WATER INFILTRATION INTO THE SIGNAL ASSEMBLY.
- 21. ALL SIGNAL WIRE CONNECTIONS TO THE SIGNAL HEADS SHALL BE MADE DIRECTLY TO THE TERMINAL BLOCK(S) INSIDE OF EACH SIGNAL HEAD ASSEMBLY; PIGTAILS AND EXPOSED SPLICES SHALL NOT BE PERMITTED. WHERE TWO SIGNAL HEADS ARE TO BE WIRED FROM THE SAME CABLE, THE SIGNALS SHALL BE DAISY CHAINED WITH ONE LENGTH OF WIRE RUNNING FROM THE CONTROLLER ENTERING THE FIRST SIGNALS WEATHERHEAD AND A SECOND LENGTH LEAVING THE WEATHERHEAD AND RUNNING TO THE OTHER SIGNALS WEATHERHEAD.

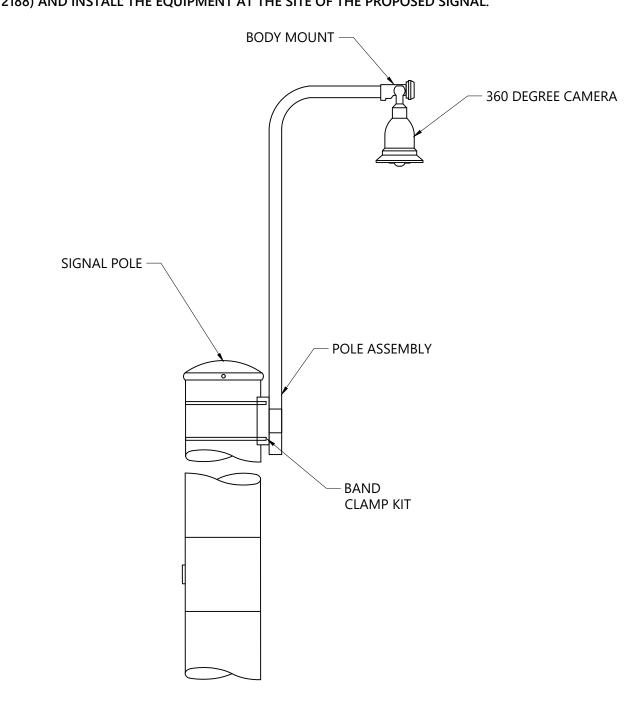
- 22.LEAD-INS FROM ALL TRAFFIC SIGNAL DETECTORS SHALL BE TAGGED OR DIAGRAMMED IN THE CONTROLLER CABINET TO IDENTIFY THE DETECTOR THEY SERVE.
- 23.NO SPLICES SHALL BE ALLOWED IN THE SIGNAL CONTROL CABLE WITH THE EXCEPTION OF THE SHIELDED LEAD-IN CABLE TO THE INDUCTANCE LOOP CABLE.

24.THE DISTURBED GROUND SHALL BE RESTORED TO A CONDITION MATCHING ADJACENT AREAS.

25.THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN AND BICYCLE TRAFFIC THROUGH OR AROUND EACH PROJECT LOCATION FOR THE DURATION OF THE CONSTRUCTION. MATERIAL, EQUIPMENT OR OTHER SUCH BARRIERS SHALL NOT BE PLACED OR PARKED IN SUCH A MANNER AS TO OBSTRUCT PEDESTRIAN OR BICYCLE TRAFFIC OR TO PRESENT A SAFETY HAZARD TO THE NON-MOTORIZED PUBLIC. WHERE PEDESTRIAN TRAFFIC MUST BE RELOCATED OFF THE EXISTING FACILITY, WALKWAYS SHALL BE CLEARLY MARKED AND HAVE A LOGICAL START AND TERMINUS.

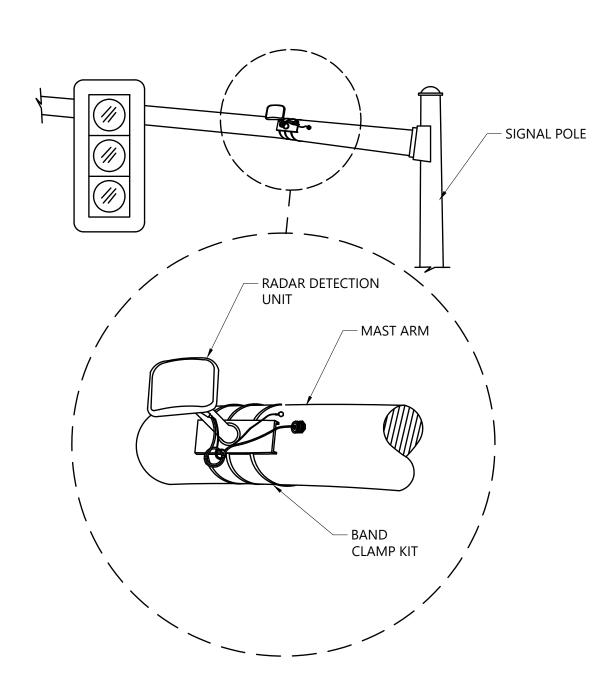
NYSDOT REGION 1 NOTES:

- 1. THE REGIONAL TRAFFIC ENGINEER (RTE) SHALL DETERMINE THE HOURS DURING WHICH LANES MAY BE CLOSED TO INSTALL THE TRAFFIC SIGNAL. THE ENGINEER WILL COORDINATE THE TIME RESTRICTION SCHEDULE WITH THE REGIONAL TRAFFIC ENGINEER AT LEAST 1 WEEK PRIOR TO COMMENCING WORK. SEE WZ-01 FOR PEAK HOUR/HOLIDAY RESTRICTIONS.
- 2. NO WORK SHALL BE PERFORMED AT THIS LOCATION WITHOUT NOTIFYING THE NYSDOT SIGNAL MAINTENANCE SHOP AT (518) 237-3954 TWO WEEKS IN ADVANCE OF THE PROPOSED COMMENCEMENT OF WORK.
- 3. UNDER ITEM 680.80324515. THE CONTRACTOR SHALL PICK UP THE STATE SUPPLIED (MODEL 2070 CONTRACTOR PURCHASED FROM THE STATE BY THE SIGNAL PERMITTEE) CONTROLLER, CABINET - STRETCH TYPE, SWITCHPACKS, AND CONFLICT MONITORS FROM THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 1 SIGNAL SHOP (21 NINTH ST. WATERFORD, NY 12188) AND INSTALL THE EQUIPMENT AT THE SITE OF THE PROPOSED SIGNAL.



VIDEO DETECTION CAMERA DETAIL N.T.S.

NOTE: INSTALL PER MANUFACTURERS INSTRUCTIONS



WORK ZONE TRAFFIC CONTROL NOTES

- 1. THE WORK ZONE TRAFFIC CONTROL (WZTC) PLANS IN NYSDOT STANDARD SHEETS ARE STANDARD FOR MOST COMMON SITUATIONS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL PROTECTION PAID UNDER ITEM 619.01 AS DIRECTED BY THE ENGINEER WHERE SPECIAL CIRCUMSTANCES OCCUR.
- 2. ALL TRAFFIC CONTROL DEVICES USED FOR WORK ZONE TRAFFIC CONTROL SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS SET FORTH IN THE MUTCD 20-09 EDITION WITH REVISIONS 1 AND 2, THE NYS SUPPLEMENT AND THE MOST CURRENT NYSDOT STANDARD SPECIFICATIONS.
- 3. DRIVING AGAINST TRAFFIC AT ANY TIME, REGARDLESS OF WHETHER THE AREA HAS BEEN CLOSED TO TRAFFIC SHALL NOT BE PERMITTED. EXCEPT FOR TRAFFIC CONE PICKUP. AND AS SPECIFICALLY PERMITTED BY THE ENGINEER.
- 4. WHEN REOPENING DRIVING LANES TO TRAFFIC, THE CONTRACTOR SHALL START BY REMOVING THE CONES AT THE FAR END OF THE LANE CLOSURE AND WORKING TOWARDS THE SIGNS AT THE BEGINNING OF THE LANE CLOSURE. SIGNS ARE NOT TO BE TAKEN DOWN UNTIL ALL TRAFFIC CONTROL DEVICES HAVE BEEN REMOVED.
- 5. PRIOR TO ANY REDUCTION IN ROADWAY WIDTH, THE CONTRACTOR SHALL PROVIDE THE ENGINEER TWENTY ONE (21) DAYS NOTICE IN WRITING SO HE/SHE MAY CONTACT THE REGIONAL PERMIT ENGINEER OF THE WIDTH RESTRICTION IN A TIMELY MANNER. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING IMMEDIATELY UPON THE REMOVAL OF THE LANE WIDTH RESTRICTION SO THE ENGINEER MAY NOTIFY THE REGIONAL PERMIT ENGINEER.
- 6. EXCAVATIONS THAT PRODUCE DROP-OFFS ON BOTH SIDES OF THE TRAVEL WAY AT THE SAME TIME SHALL NOT BE PERMITTED. SHOULDER AREAS SHOULD BE PREPARED TO RECEIVE THE SHOULDER PAVEMENT MATERIAL IMMEDIATELY AHEAD OF THE SHOULDER PAVING OPERATIONS TO MINIMIZE THE TIME A DROP-OFF EXISTS. "NO SHOULDER" (W08-23) SIGNS SHALL BE ERECTED NO MORE THAN 1,300 FT APART THROUGHOUT THE PROJECT WERE A DROP-OFF EXISTS.
- 7. THE CONTRACTOR SHALL PROVIDE PAVEMENT MARKINGS FOR TRAFFIC CONTROL IN CONFORMANCE WITH THE REQUIREMENTS OF TEMPORARY AND INTERIM PAVEMENT MARKINGS. IT MAY BE NECESSARY TO MARK, REMARK, ALTER AND/OR OBLITERATE PAVEMENT MARKINGS WHERE DIRECTED BY THE ENGINEER. THE MARKINGS SHALL BE REMOVED BY MEANS WHICH COMPLETELY REMOVE ALL TRACES OF STRIPES. ALL TOP COURSE STRIPING SHALL CONFORM TO THE PROJECTS FINAL MARKINGS WITH RESPECT TO COLOR AND PATTERN.
- 8. "IN LANE" SIGNS (NYW5-32P) AND BICYCLE SIGN (W11-1) SHALL BE INSTALLED, AS DIRECTED BY THE ENGINEER, WHEN CONSTRUCTION REQUIRES BICYCLE TRAFFIC TO USE THE TRAVEL LANE.
- 9. ALL TYPE III BARRICADES AT CLOSURE POINTS SHALL HAVE WARNING LIGHTS.
- 10. IF THE ENGINEER NOTIFIES THE CONTRACTOR OR HIS SUPERINTENDENT OF ANY HAZARDOUS CONSTRUCTION PRACTICES, ALL OPERATIONS IN THAT AREA SHALL BE DISCONTINUED AND IMMEDIATE REMEDIAL ACTION SHALL BE TAKEN TO THE SATISFACTION OF THE ENGINEER BEFORE WORK IS RESUMED.
- 11. THIS CONTRACT INCLUDES THE USE OF PORTABLE VARIABLE MESSAGE DISPLAY UNITS, ITEM 619.111113. THE CONTRACTOR SHALL UTILIZE PVMS TO WARN OF PROPOSED LANE CLOSURE SCHEDULES FOR ALL NIGHT WORK. THE PVMS SHALL BE PLACED NO LESS THAN THREE DAYS PRIOR TO THE START OF LANE CLOSURES AND REMAIN UP THROUGHOUT THE DURATION OF LANE CLOSURES.
- 12. IF, IN THE ENGINEERS JUDGEMENT, FLAGS ON SIGNS ARE NECESSARY DUE TO LIMITED SIGHT DISTANCE, THEY SAHLL BE PROVIDED BY THE CONTRACTOR. COST SHALL BE INCLUDED IN ITEM 619.01 - BASIC WORK ZONE TRAFFIC CONTROL.

13. CONSTRUCTION VEHICLES, EQUIPMENT AND MATERIALS:

- A. THE CLEAR ROADSIDE AREA IS DEFINED AS THE AREA WITHIN 10 FEET (30 FEET ON FREEWAYS AS DEFINED BY THE ENGINEER) OF THE EDGE OF THE TRAVEL WAY.
- B. CONTRACTOR VEHICLES NOT IN USE AND PRIVATE VEHICLES OWNED BY CONTRACTORS EMPLOYEES SHALL NOT BE PARKED IN THE CLEAR ROADSIDE AREA, OR ANY OTHER LOCATION CONSIDERED BY THE ENGINEER TO BE A HAZARD. THIS REQUIREMENT IS NOT LIMITED TO THE CONTRACT LIMITS.
- C. NO MATERIAL IS TO BE STORED WITHIN THE CLEAR ROADSIDE AREA WITHOUT THE APPROVAL OR THE ENGINEER.
- D. VEHICLES BELONGING TO THE CONTRACTOR OR THE CONTRACTORS EMPLOYEES SHALL NOT BE PARKED IN A MANNER WHICH OBSTRUCTS SIGNS, BARRIERS, BARRICADES OR OTHER TRAFFIC **CONTROL DEVICES.**
- E. VEHICLES BELONGING TO THE CONTRACTOR OR THE CONTRACTORS EMPLOYEES SHALL NOT BE PARKED IN A MANNER WHICH INTERFERES WITH ACCESS TO ABUTTING PROPERTIES.
- F. THE CONTRACTOR SHALL PLAN AND INCORPORATE ACCESS POINTS INTO THE WORK ZONE SUCH THAT, TO THE EXTENT PRACTICAL, THE CONTRACTORS VEHICLES ENTERING AND LEAVING THE WORK ZONE SHALL NOT IMPEDE THE MOVEMENT OF THROUGH TRAFFIC IN THE ADJACENT OPEN LANES.
- 14. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 7 DAYS PRIOR TO PLACING THE TOP COURSE PAVEMENT IN ORDER TO CONTACT THE REGIONAL TRAFFIC ENGINEER TO SCHEDULE BALL BANKING TO DETERMINE RECOMMENDED SPEED. THE RESULTANT RECOMMENDED SPEEDS MAY JUSTIFY ADDING, MOVING, OR ELIMINATING SOME OF THE CURVE WARNING SIGNS AND W13-1 ADVISORY SPEED SIGNS.
- 15. TRAFFIC SHALL BE ALLOWED TO BE MAINTAINED ON A MILLED SURFACE FOR A MAXIMUM OF SEVEN (7) CONSECUTIVE DAYS. DURING THIS PERIOD, ON ROADS WHERE THE POSTED SPEED LIMIT IS 45 MPH OR HIGHER, PVMS SHALL BE USED TO WARN OF THE CONDITION WITH THE FOLLOWING MESSAGES:

"MILLED "M'CYCLES SURFACE USE AHEAD" CAUTION"

- 16. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN AND BICYCLE TRAFFIC THROUGH AND AROUND THE PROJECT FOR THE DURATION OF CONSTRUCTION. MATERIAL, EQUIPMENT OR OTHER BARRIERS SHALL NOT BE PLACED OR MARKED IN SUCH A MANNER AS TO OBSTRUCT PEDESTRIAN OR BICYCLE TRAFFIC OR TO PRESENT A SAFETY HAZARD TO THE NON-MOTORIZED PUBLIC. WHERE PEDESTRIAN TRAFFIC MUST BE RELOCATED OFF THE EXISTING FACILITY, WALKWAYS SHALL BE CLEARLY MARKED AND HAVE A LOGICAL START AND TERMINUS. TEMPORARY RAMPS MAY NEED TO BE INSTALLED TO MAINTAIN ADA STANDARDS.
- 17. LANE CLOSURES AND/OR USE OF TEMPORARY CONCRETE BARRIER WITHIN FIVE FEET OF AN ACTIVE TRAVEL WAY BETWEEN NOVEMBER 15 & APRIL 15 SHALL REQUIRE SPECIAL PERMISSION FROM THE ENGINEER WITH CONCURRENCE FROM THE REGIONAL TRAFFIC OFFICE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER ONE WEEK IN ADVANCE OF ANY REQUESTED CLOSURE.

- 18. ALL EXISTING TRAFFIC SIGNS THAT ARE APPROPRIATE SHALL REMAIN IN PLACE UNTIL THE NEW TRAFFIC SIGNS ARE INSTALLED.
- 19. AFTER PAVEMENT MARKINGS ARE REMOVED TEMPORARY EDGE LINES SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC UNLESS THE SHOULDERS ARE OTHERWISE DELINEATED TO THE SATISFACTION OF THE ENGINEER. THE COST OF SUCH EDGE LINES OR DELINEATION IS TO BE INCLUDED IN THE PRICE BID FOR ITEM 619.01.
- 20.ALL INTERIM STRIPING IS TO BE REMOVED FROM THE TRAVEL LANES AND SHOULDERS AFTER THE INSTALLATION OF PERMANENT STRIPING PRIOR TO OPENING THE TRAVEL LANES TO TRAFFIC.
- ENGINEER TO THE EXTENT POSSIBLE BETWEEN 10:00 PM AND 6:00 AM.

21. THE CONTRACTOR SHALL LIMIT LOUD AND SUSTAINED PROJECT NOISE AS DETERMINED BY THE

- 22.THE CONTRACTOR SHALL EMPLOY A TRAFFIC CONTROL SUPERVISOR AS SPECIFIED IN SECTION 619-3.20 OF THE NYSDOT STANDARD SPECIFICATIONS. PAYMENT SHALL BE MADE UNDER ITEM 619.25, TRAFFIC CONTROL SUPERVISOR. THE TRAFFIC CONTROL SUPERVISOR SHALL REVIEW THE WORK ZONE TRAFFIC CONTROL PERIODICALLY AND PROVIDE THE ENGINEER WITH A WEEKLY LOG DOCUMENTING THE REVIEWS.
- 23.THE UNEVEN TRANSVERSE PAVEMENT SURFACES, (IE. PAVEMENT REBATES, END OF PAVED OR MILLED SECTIONS) SHALL BE POSTED WITH "BUMP" (W8-1) SIGNS TO BE LOCATED IN ADVANCE OF THE CONDITION. THE "BUMP" (W8-1) SIGNS SHALL BE PLACED ON ITS OWN POST. ALL PAVEMENT TRANSITIONS SHALL HAVE NO STEEPER THAN 1 ON 10 LONGITUDINAL SLOPE AS MEASURED IN THE DIRECTION OF TRAVEL.

DAILY CLOSURE RESTRICTIONS - ROUTE 144/ROUTE 32 INTERSECTION

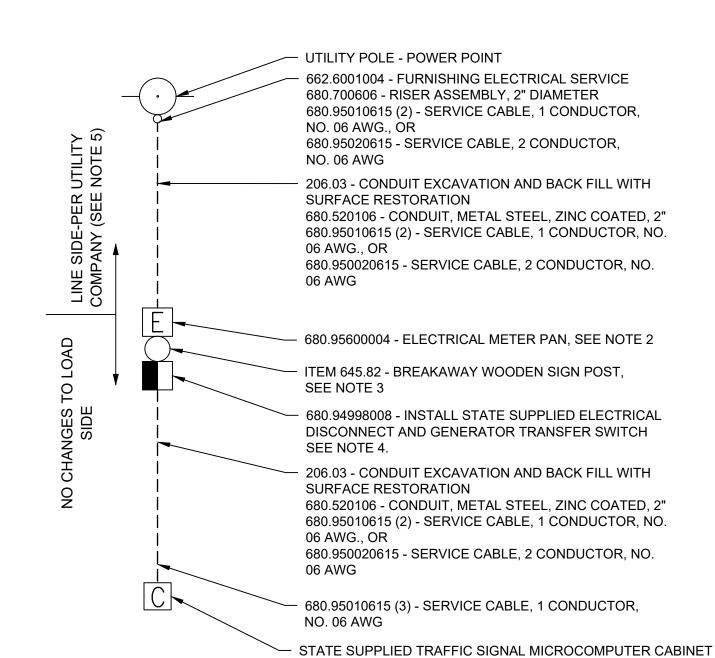
- THERE SHALL BE NO TEMPORARY LANE CLOSURES ON STATE HIGHWAYS DURING THE FOLLOWING DAYS AND TIMES:
- MONDAY FRIDAY: 6:00 A.M. THROUGH 9:00 A.M. 12:00 P.M. THROUGH 6:00 P.M.

HOLIDAY CLOSURE RESTRICTIONS

THERE SHALL NOT BE TEMPORARY LANE CLOSURES ON (RTE 144) DURING THE FOLLOWING DATES:

- 6:00 AM, SATURDAY, DECEMBER 31, 2022 THRU 6:00 AM, TUESDAY JANUARY 3, 2023 (NEW YEAR'S DAY) 6:00 AM, SATURDAY, MAY 27, 2023 THRU 6:00 AM WEDNESDAY, MAY 31, 2023 - (MEMORIAL DAY HOLIDAY) 6:00 AM, SATURDAY, JULY 1, 2023 THRU 6:00 AM, WEDNESDAY, JULY 5, 2023 - (INDEPENDENCE DAY HOLIDAY)
- 6:00 AM FRIDAY, NOVEMBER 23, 2023 THRU 6:00 AM TUESDAY, NOVEMBER 28, 2023 (THANKSGIVING DAY HOLIDAY) 6:00 AM FRIDAY, DECEMBER 22, 2023 THRU 6:00 AM TUESDAY, DECEMBER 26, 2023 - (CHRISTMAS DAY HOLIDAY)

6:00 AM, SATURDAY, SEPTEMBER 2, 2023 THRU 6:00 AM, WEDNESDAY, SEPTEMBER 6, 2023 - (LABOR DAY HOLIDAY)



1. DETAIL SHOWN IN STRAIGHT LINE FOR CLARITY, ACTUAL INSTALLATION MAY VARY.

- 2. THE METER PAN SHALL BE ATTACHED TO THE POST FOUR (4) FEET ABOVE THE EXISTING GROUND, FACING AWAY FROM ONCOMING TRAFFIC AND THE EDGE OF THE PAVEMENT. THE ATTACHMENT SHALL BE MADE USING WEATHER RESISTANT FASTENERS, IN ACCORDANCE WITH THE SPECIFICATION AND TO THE SATISFACTION OF THE ENGINEER.
- 3. THE POST SHALL BE 6" X 6" X 8' MINIMUM LENGTH AND MEETING THE REQUIREMENTS OF SECTION 645.02-06 OF THE STANDARD SPECIFICATIONS. THE POST SHALL BE DIRECT BURIED WITH A MINIMUM OF FOUR (4) FEET BELOW EXISTING GROUND, THE TOP OF THE POST SHALL BE BEVELED (DOG-EARED).
- 4. THE BOX CONTAINING THE ELECTRICAL DISCONNECT AND GENERATOR TRANSFER SWITCH SHALL BE ATTACHED TO THE POST FOUR (4) FEET ABOVE THE EXISTING GROUND USING WEATHER RESISTANT FASTENERS, IN ACCORDANCE WITH THE SPECIFICATION AND TO THE SATISFACTION OF THE ENGINEER.
- 5. THE BOX SHALL ALSO BE SECURED WITH A LATCHING MECHANISM, HAVE A TAB FOR PAD LOCK USE, AND BE TO THE SATISFACTION OF THE ENGINEER.
- 6. SERVICE CABLES SHALL CONSIST OF THE NUMBER OF CONDUCTORS AND GAUGE REQUIREMENTS OF THE SPECIFIC ELECTRIC COMPANY.

DISCONNECT / METER PAN DETAIL



| McFarland Johnson 60 RAILROAD PLACE

SUITE 402 SARATOGA SPRINGS, NEW YORK 12866 P:518-580-9380 F:518-580-9383 SaratogaROM@mjinc.com

PROJECT MILESTONE BID PLANS

NO.	DATE	DESCRIPTION
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OR

PROJECT

TCH DRAWN TCH DESIGNED AJF CHECKED SCALE N.T.S.

JULY 17, 2023

18641.00

ARE ACTING UNDER THE DIRECT DIRECTION OF A LICENS PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAP ARCHITECT. OR LAND SURVEYOR. TO ALTER AN ITEM IN AN VAY. IF AN ITEM BEARING THE STAMP OF A LICENSI PROFESSIONAL IS ALTERED, THE ALTERING ENGINEE ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYO SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATIO "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DAT F SUCH ALTERATION, AND A SPECIFIC DESCRIPTION

DRAWING TITLE

TRAFFIC SIGNAL PLAN (3 OF 3)

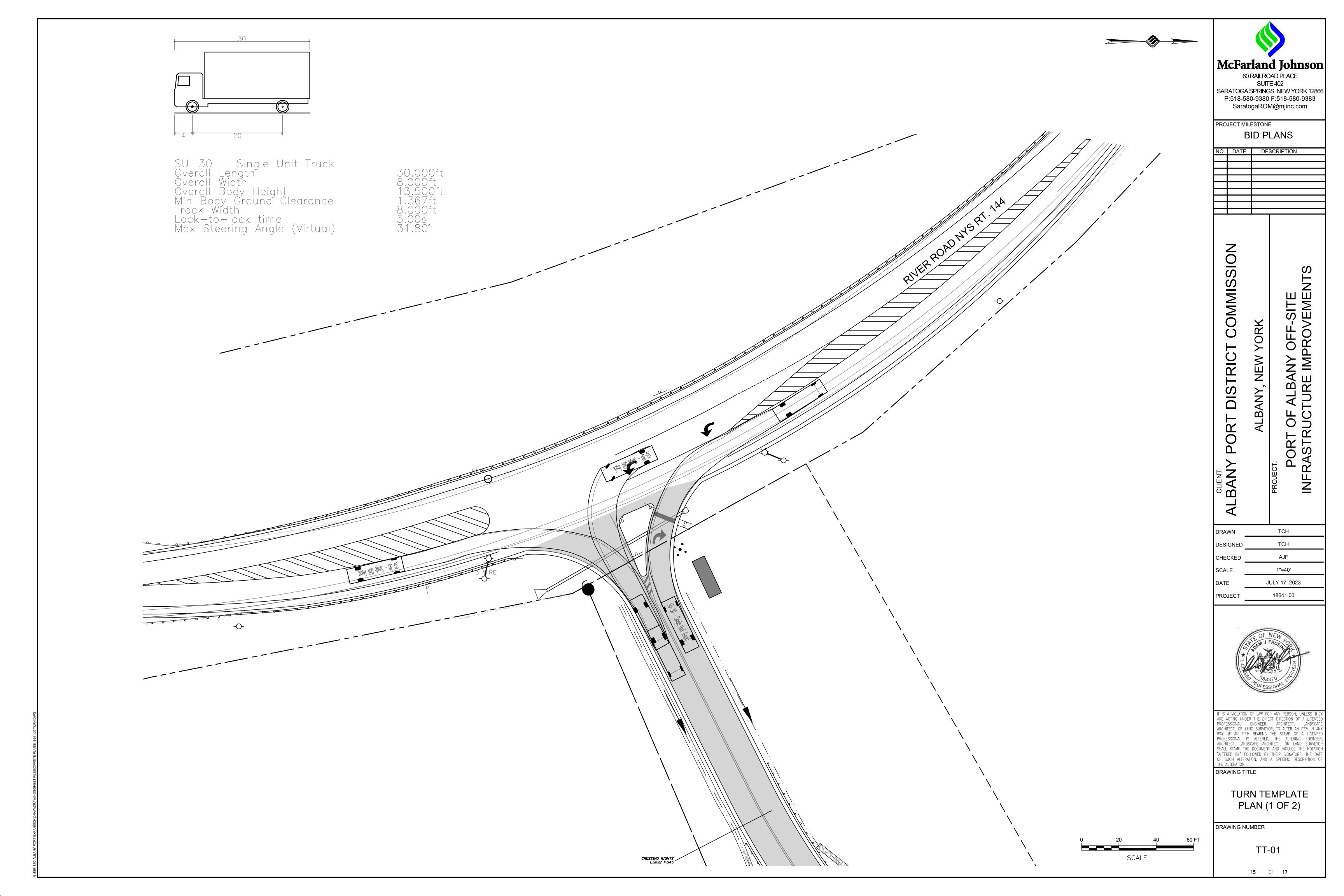
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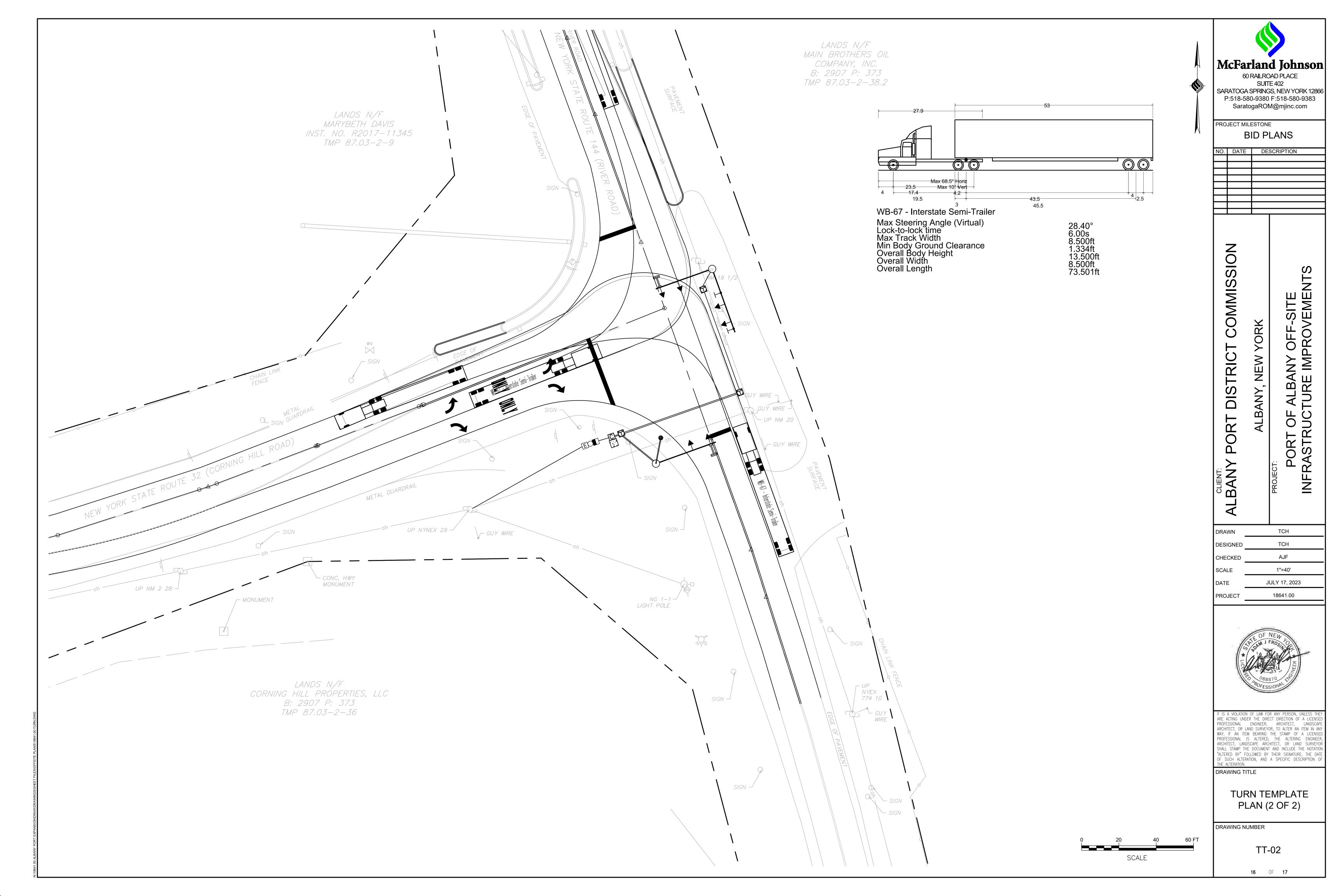
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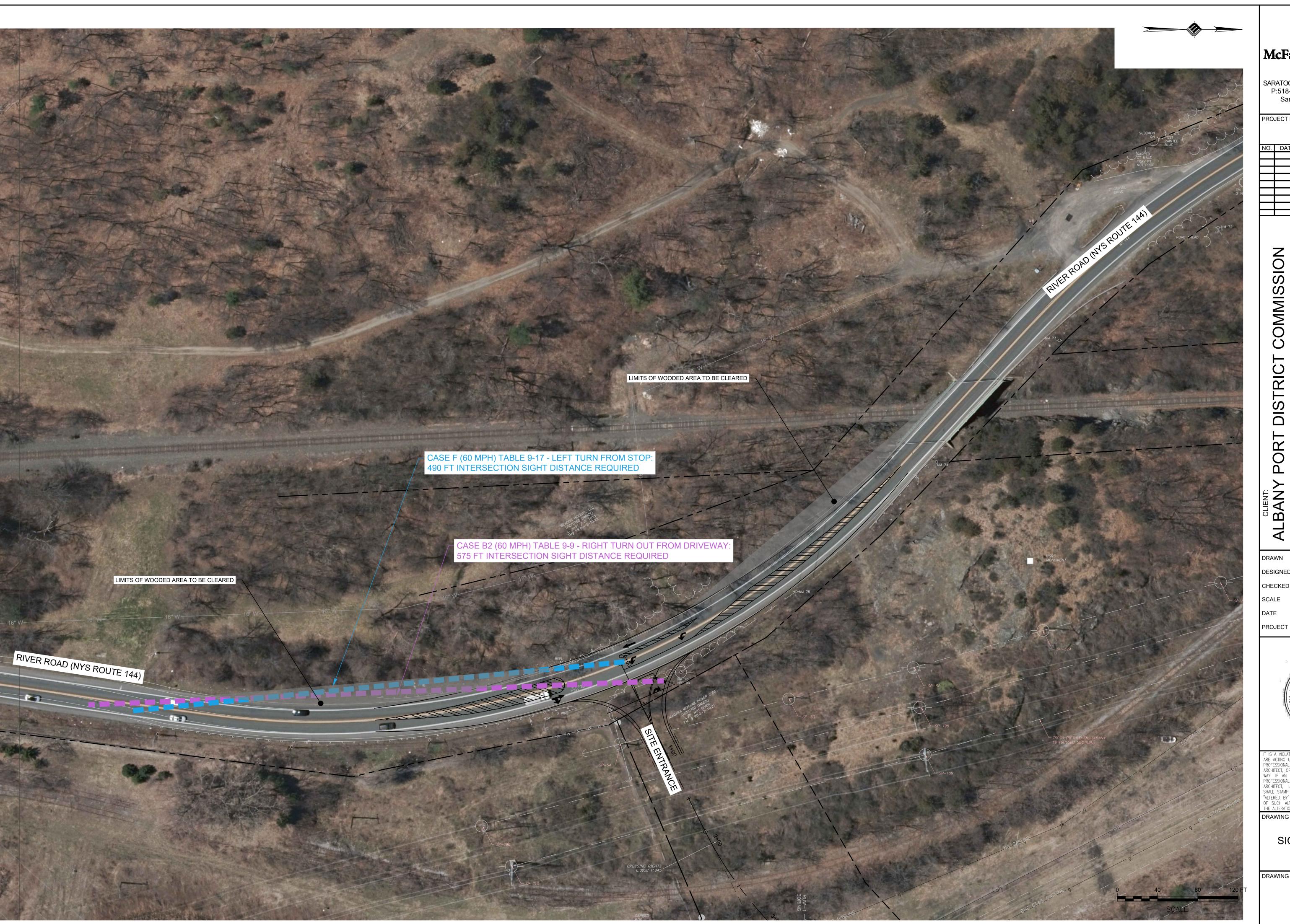
14 OF **17**

N.T.S. NOTE: INSTALL PER MANUFACTURERS INSTRUCTIONS

ADVANCED RADAR DETECTION DETAIL









McFarland Johnson
60 RAILROAD PLACE
SUITE 402
SARATOGA SPRINGS, NEW YORK 12866
P:518-580-9380 F:518-580-9383 SaratogaROM@mjinc.com

PROJECT MILESTONE **BID PLANS**

NO. DATE DESCRIPTION

TCH

TCH DESIGNED AJF CHECKED 1"=40' SCALE JULY 17, 2023 18641.00 PROJECT



ARE ACTING UNDER THE DIRECT DIRECTION OF A LICENSI PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAP ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSI ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYO SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATIO "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

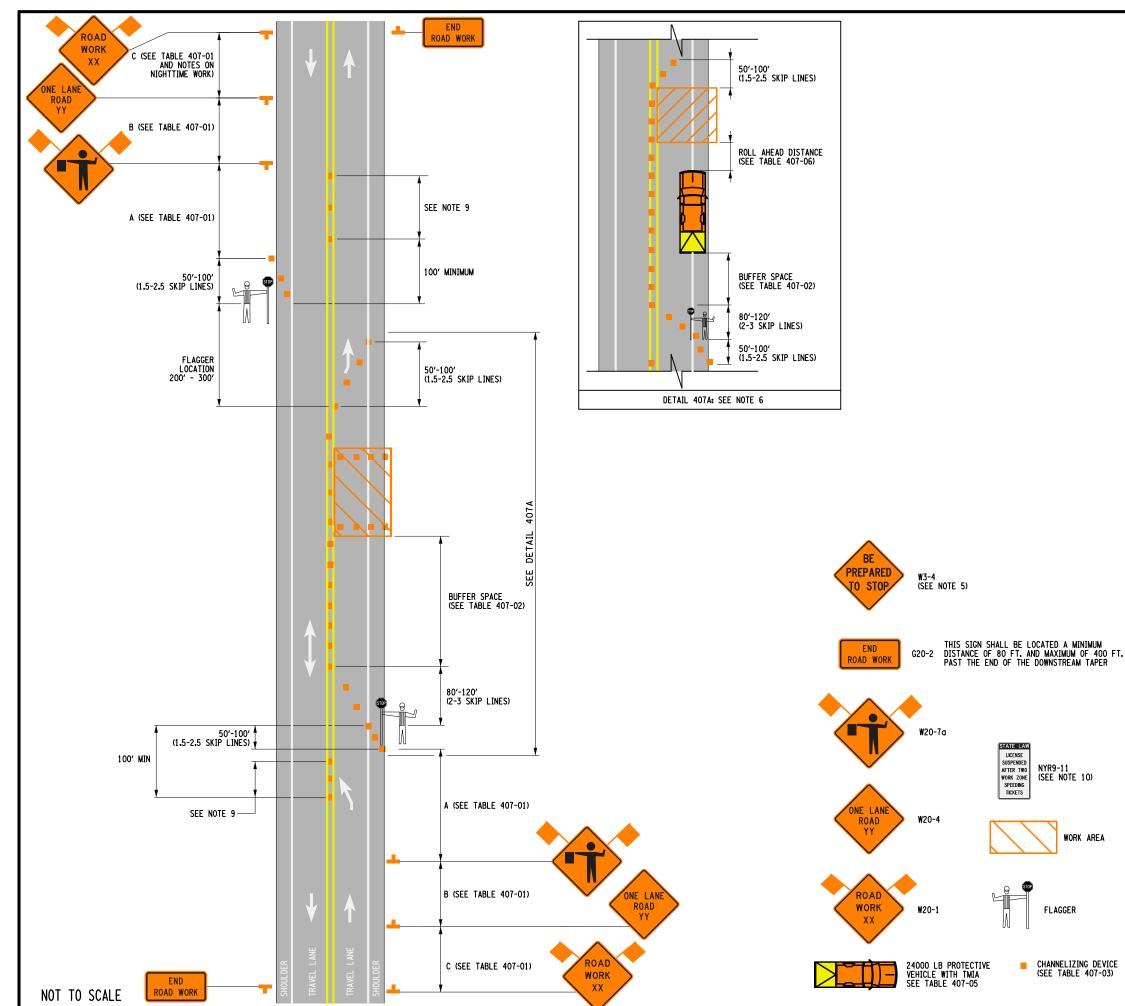
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SIGHT DISTANCE PLAN

DRAWING NUMBER

SD-01





NOTES:

1. INTERMEDIATE-TERM IS STATIONARY WORK THAT OCCUPIES A LOCATION MORE THAN ONE DAYLIGHT PERIOD UP TO 3 CONSECUTIVE DAYS, OR NIGHTIME WORK LASTING MORE THAN 1 HOUR

2. WHEN A SIDE ROAD OR DRIVEWAY INTERSECTS THE ROADWAY WITHIN A WORK ZONE TRAFFIC CONTROL AREA, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES AND/OR FLAGGERS SHALL BE PLACED AS NEEDED. ADDITIONAL FLAGGERS SHALL BE LOCATED AT ALL INTERSECTIONS AND COMMERCIAL DRIVEWAYS LOCATED WITHIN OR NEAR THE ACTIVE WORK SPACE. NO WORK ACTIVITY, EQUIPMENT, OR STORAGE OF VEHICLES, OR MATERIAL SHALL OCCUR WITHIN THE BUFFER SPACE AT ANY TIME.

3. CHANNELIZING DEVICE SPACING (CENTER TO CENTER) SHALL NOT EXCEED 20^{\prime} IN THE ACTIVE WORK SPACE.

4. CHANNELIZING DEVICES SHALL BE PLACED TRANSVERSELY A MINIMUM OF EVERY 800' AS SHOWN WHEN A PAYED SHOULDER HAVING A WIDTH OF 8' OR GREATER IS CLOSED FOR A DISTANCE GREATER THAN 800'.

5. IF THE TRAFFIC IS EXPECTED TO QUEUE PAST THE W20-4 SIGN, A W3-4 SIGN SHOULD BE ADDED HALFWAY BETWEEN THE W20-4 AND W20-1 SIGNS.

6. IF CONDITION WARRANTS, PROTECTIVE VEHICLE WITH APPROPRIATE ROLL AHEAD DISTANCE MAY BE USED IN ADVANCE OF THE WORK AREA. TO USE PROTECTIVE VEHICLE, BUFFER SPACE SHALL BE PROVIDED ACCORDINGLY, AND THE WHEELS SHALL BE ALIGNED WITH THE LANE STRIPING.

7. FLAGGER SIGN (W20-7g) AND ONE LANE ROAD AHEAD SIGN (W20-4) SHALL BE REMOVED, COVERED OR TURNED AWAY FROM ROAD USERS WHEN FLAGGING OPERATIONS ARE

8. ALL FLAGGERS SHALL USE 24" (MIN.) OCTAGON SHAPED STOP/SLOW PADDLES HAVING 6' STAFF. THE PADDLE IS THE PREFERRED DEVICE, BUT THE FLAG MAY BE USED AT INTERSECTIONS WHERE THE STOP/SLOW PADDLE WOULD OFFER CONTRADICTING INFORMATION TO DRIVERS TRAVELING IN OPPOSITE DIRECTIONS/LEGS OF THE INTERSECTION OR DURING INCIDENT MANAGEMENT SITUATIONS.

9. CENTERLINE CONES MAY BE ADDED TO ENHANCE THE VISIBILITY OF THE FLAGGER STATION. IF CONES ARE USED, PLACE THEM 100 FT. (MINIMUM) FROM FLAGGER.

10. THE NY9-11 SIGN IS RECOMMENDED, WHEN USED, IT SHALL BE PLACED IN ADVANCE OF THE FIRST ADVANCE WARNING SIGN. THE PLACEMENT DISTANCE SHALL BE 1000' FOR POSTED SPEED LIMITS OF 45 MPH OR HIGHER, AND 300' - 500' FOR POSTED SPEED LIMITS OF LESS THAN 45 MPH.

NOTES ON NIGHTTIME WORK:

N1. WORK OCCURRING AFTER SUNSET AND BEFORE SUNRISE WILL BE CONSIDERED NIGHTTIME OPERATIONS.

N2. ALL SIGNS, STOP / SLOW PADDLES AND RED FLAGS USED TO WARN / ALERT / CONTROL TRAFFIC SHALL BE RETROREFLECTIVE.

N3. ALL WORKERS INVOLVED SHALL WEAR PROTECTIVE HELMET AND NIGHTTIME APPAREL IN ACCORDANCE WITH §107-05A. HIGH VISIBILITY APPAREL AT ALL TIMES.

N4. VEHICLES OPERATING ON THE PAVEMENT OF A CLOSED ROADWAY OR TRAVEL LANE SHALL DISPLAY ROTATING AMBER BEACONS AT ALL TIMES.

N5. LEVEL I ILLUMINATION SHALL BE PROVIDED NEAR THE BEGINNING OF LANE CLOSURE TAPERS AND AT ROAD CLOSURES, INCLUDING THE SETUP AND REMOVAL OF THE CLOSURE TAPERS.

NG. LEVEL II ILLUMINATION SHALL BE PROVIDED FOR FLAGGING STATIONS, ASPHALT PAVING, MILLING, AND CONCRETE PLACEMENT AND/OR REMOVAL OPERATIONS, INCLUDING BRIDGE DECKS, 50 FEET AHEAD OF AND 100 FEET BEHIND A PAVING OR MILLING MACHINE.

N7. LEVEL III ILLUMINATION SHALL BE PROVIDED FOR PAVEMENT OR STRUCTURAL CRACK FILLING, JOINT REPAIR, PAVEMENT PATCHING AND REPAIRS, INSTALLATION OF SIGNAL EQUIPMENT OR OTHER ELECTRICAL/MECHANICAL, AND OTHER TASKS INVOLVING FINE DETAILS OR INTRICATE PARTS AND EQUIPMENT.

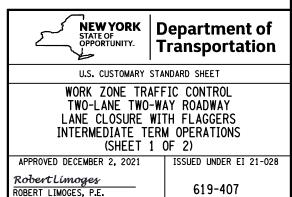
N8. ALL LIGHTING SHALL BE DESIGNED, INSTALLED, AND OPERATED TO AVOID GLARE THAT AFFECTS TRAFFIC ON THE ROADWAY OR THAT CAUSES ANNOYANCE OR DISCOMFORT FOR RESIDENCES ADJOINING THE ROADWAY.

N9. PRIOR TO THE START OF NIGHTTIME OPERATIONS, A WRITTEN NIGHTTIME OPERATIONS AND LIGHTING PLAN IS REQUIRED FOR APPROVAL.

DIRECTOR, OTSM

N10. SEE NIGHTTIME SAFETY BULLETIN, HDM §16.5.7, & STANDARD SPECIFICATIONS §619 FOR ADDITIONAL REQUIREMENTS AND CONSIDERATIONS.

REFER TO SHEET 2 OF 2 FOR ALL TABLES



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TABLE 407-01: ADVANCE WARNING SIGN SPACING							
	DISTANCE	BETWEE	N SIGNS	SIGN LEGEND			
ROAD TYPE	A (FT.)	B (FT.)	C (FT.)	XX	YY		
URBAN (≤ 30 MPH*)	100	100	100	AHEAD	AHEAD		
URBAN (35-40 MPH+)	200	200	200	AHEAD	AHEAD		
URBAN (≥45 MPH*)	350	350	350	1000 FT.	AHEAD		
RURAL	500	500	500	1500 FT.	1000 FT.		

* PRECONSTRUCTION POSTED SPEED LIMIT

TABLE 407-02: LONGITUDINAL BUFFER SPACE				
PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	LONGITUDINAL BUFFER SPACE DISTANCE (FT.)/ * OF SKIP LINES			
45	360/9			
50	425/11			
55	495/13			
65	645/16			

TABLE 4	07-03: CHA	NNELIZ	ING DEVIC	E APPL	ICATIO	N FOR INTE	ERMEDIATI	E-TERM	STATIONAR	Y WORK ZON	IES
WORK ZONE PROVISIONS	SN_	CHANNELIZING DEVICE									
INTERMEDIATE-TERM STATIONARY WORK ZONES INVOLVE WORK THAT OCCUPIES A LOCATION FOR MORE THAN 1 DAYLIGHT PERIOD OR NIGHTTIME WORK THAT OCCUPIES A LOCATION FOR MORE THAN 1 HOUR	MAXIMUM DEVICE SPACING (CENTER TO CENTER)	DRUMS	STANDARD CONES	TALL CONES	EXTRA TALL CONES	TEMPORARY Tubular Markers	INTERIM TUBULAR MARKERS	VERTICAL PANELS	OVERSIZED VERTICAL PANELS	TYPE II BARRICADES	TYPE III BARRICADES
SHOULDER/MERGING/	20 FT. *	Х							Х	Х	
SHIFTING TAPERS	40 FT.	Х							Х	Х	
MARKING FOR TRANSVERSE BUMPS'	N/A	x ²			χ2				χ2		
TRANSVERSE DEVICE WITHIN CLOSED TRAFFIC LANE AND/OR SHOULDER	800 FT.	Х		х	х			Х	х	х	0
REMOVAL OF EXISTING GUIDE RAIL	80 FT.	x		l x	x	x		Х	l x	×	0
	40 FT.	^		^	^	^		^	^	^	"

NOTES: X= ALLOWED BLANK = NOT ALLOWED O = OPTIONAL

1. - A TYPE 1 OBJECT MARKER MAY BE USED IN LIEU OF CHANNELIZING DEVICE.

2. - CHANNELIZING DEVICES SHALL BE EQUIPPED WITH A FLASHING WARNING LIGHT.

• SEE NOTE 3 ON SHEET 1 OF 2.

TABLE 407-04: REQUIRED SIGN SIZES.			
SIGN	NON-FREEWAY	FREEWAY	
G20-2	36×18	48×24	
W3-4	36x36	48×48	
W20-1	36x36	48×48	
W20-4	36x36	48×48	
W 20-7a	36x36	48×48	
WARNING FLAG	18×18	18×18	
*FREEWAY SIZES MAY	BE USED ON NON-FREEWAY,	IF SPACE CONSTRAINTS DO NOT	

TABLE 407-05: PROTECTIVE VEHICLE REQUIREMENTS						
CLOSURE TYPE	ROAD TYPE & SPEED -	NON-FREEWAY				
		≥ 45 MPH	35 - 40 MPH	≤ 30 MPH		
	EXPOSURE CONDITIONS ¹					
LANE CLOSURE OR ENCROACHMENT	WORKERS ON FOOT OR VEHICLE EXPOSED TO TRAFFIC	P, TMIA	P, TMIA	SEE NOTE 2		
	OTHER HAZARDS NO WORKERS EXPOSED	P, TMIA	SEE NOTE 2	SEE NOTE 2		
SHOULDER CLOSURE OR ENCROACHMENT	WORKERS ON FOOT OR VEHICLE EXPOSED TO TRAFFIC	P, TMIA	SEE NOTE 2	SEE NOTE 2		
	OTHER HAZARDS NO WORKERS EXPOSED	SEE NOTE 2	SEE NOTE 2	SEE NOTE 2		

P: PROTECTIVE VEHICLE REQUIRED FOR EACH CLOSED LANE & EACH CLOSED PAVED SHOULDER 8' OR WIDER, IF THE WORK SPACE MOVES WITHIN THE STATIONARY CLOSURE, THE PROTECTIVE VEHICLE SHALL BE REPOSITIONED ACCORDINGLY

TMIA: TMIA REQUIRED

NOTES: 1. THE EXPOSURE CONDITIONS ASSUMES THERE IS NO POSITIVE PROTECTION PRESENT

2. EITHER A PROTECTIVE VEHICLE OR THE STANDARD BUFFER SPACE SHALL BE PROVIDED

TABLE 407-06: ROLL AHEAD DISTANCE				
ROLL AHEAD DISTANCE (FT.)/* OF SKIP LINES FOR VEHICLES				
PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	STATIONARY OPERATION			
	MIN	MAX		
≥ 55	120/3	200/5		
45 - 50	80/2	160/4		
≤ 40	40/1	120/3		



Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL TWO-LANE TWO-WAY ROADWAY LANE CLOSURE WITH FLAGGERS INTERMEDIATE TERM OPERATION (SHEET 2 OF 2)

APPROVED DECEMBER 2, 2021

619-407

ISSUED UNDER EI 21-028

Robert Limoges ROBERT LIMOGES, P.E. DIRECTOR, OTSM