



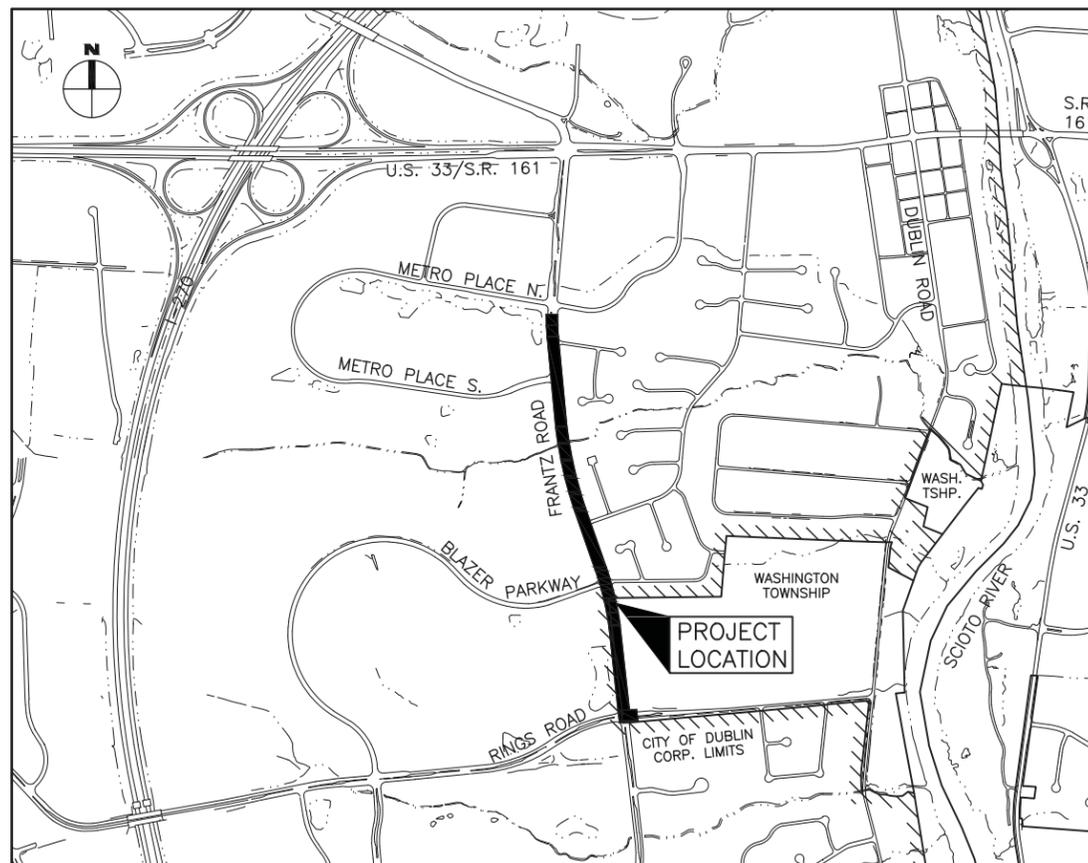
# FRANTZ ROAD UTILITY BURIAL

## RINGS ROAD TO METRO PLACE NORTH

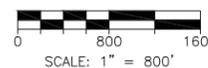
### 11-021-CIP

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LOCATION MAP



OCTOBER 2014



*James E. Dippel* 1.27.14  
JAMES E. DIPPEL, P.E.

P.E. NO. 52444

SIGNATURES BELOW SIGNIFY CONCURRENCE WITH THE GENERAL PURPOSES AND AND GENERAL LOCATION OF THE PROJECT ONLY AND DO NOT CONSTITUTE ASSURANCE TO OPERATE AS INTENDED. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER PREPARING THE PLANS.

CITY OF DUBLIN

APPROVED:

*Paul A. Hammer*  
CITY ENGINEER

1-27-2014  
DATE



Know what's below.  
Call before you dig.

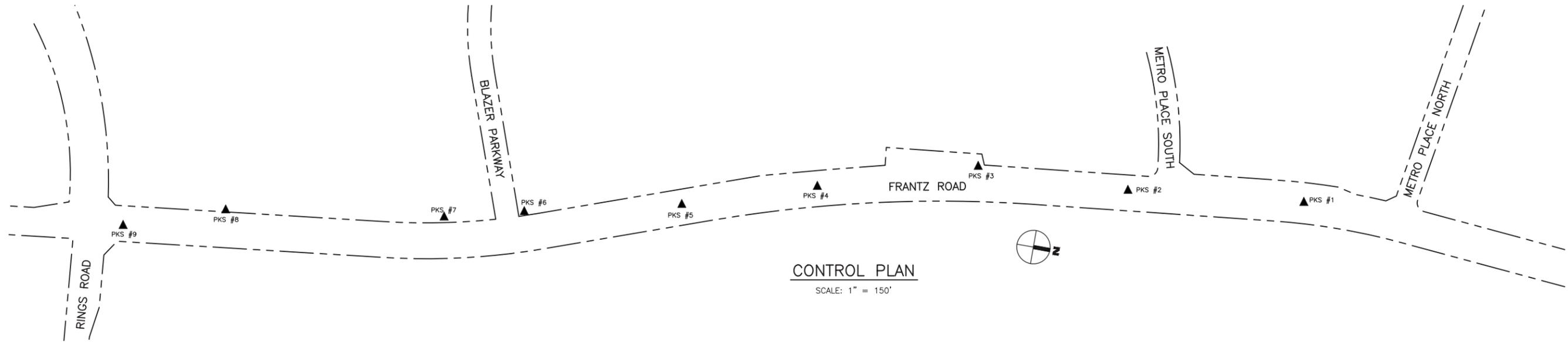
PLANS PREPARED BY:

**BURGESS & NIPLE**

5085 REED ROAD  
COLUMBUS, OHIO 43220







**CONTROL PLAN**

SCALE: 1" = 150'

**HORIZONTAL CONTROL** - NAD83 OHIO SOUTH (CORS 96)  
ALL COORDINATES SHOWN ARE GRID VALUES

**VERTICAL CONTROL** - VERTICAL DATUM BASED ON NAVD88 (GEIOD09)  
OBTAINED BY GPS OBSERVATIONS TAKEN ON  
PROJECT CONTROL POINT 9 AND EXPANDED TO  
OTHER PROJECT CONTROL POINTS BY  
DIFFERENTIAL LEVELING.

**BENCHMARKS** - REFERENCE POINTS PROVIDE VERTICAL CONTROL

<p>PK NAIL SET #1 NORTHING: 763573.75 EASTING: 1793624.49 ELEVATION: 870.29</p>	<p>PK NAIL SET #2 NORTHING: 763083.24 EASTING: 1793676.97 ELEVATION: 868.77</p>	<p>PK NAIL SET #3 NORTHING: 762659.08 EASTING: 1793683.78 ELEVATION: 866.29</p>
<p>PK NAIL SET #4 NORTHING: 762225.61 EASTING: 1793816.75 ELEVATION: 868.87</p>	<p>PK NAIL SET #5 NORTHING: 761861.08 EASTING: 1793932.41 ELEVATION: 866.86</p>	<p>PK NAIL SET #6 NORTHING: 761430.66 EASTING: 1794028.61 ELEVATION: 865.02</p>
<p>PK NAIL SET #7 NORTHING: 761212.32 EASTING: 1794082.24 ELEVATION: 865.93</p>	<p>PK NAIL SET #8 NORTHING: 760607.22 EASTING: 1794168.96 ELEVATION: 864.73</p>	<p>PK NAIL SET #9 NORTHING: 760332.24 EASTING: 1794261.39 ELEVATION: 865.48</p>

**REFERENCE POINTS**  
SCALE: NONE

**BURGESS & NIPLÉ**

5085 REED ROAD  
COLUMBUS, OHIO 43220

CITY OF DUBLIN, OHIO  
FRANTZ ROAD UTILITY BURIAL  
RINGS ROAD TO METRO PLACE NORTH  
11-021 - CIP

NO.	DESCRIPTION	DATE

**JOB NO:** PR50708  
**DATE:** OCT. 2014  
**DESIGNED BY:** WHW  
**DRAWN BY:** WHW  
**CHECKED BY:** JED  
**APPROVED BY:** JED  
**SCALE:** AS NOTED

CONTROL POINTS AND BENCHMARKS

**GENERAL**

CITY OF COLUMBUS MATERIAL SPECIFICATION, CURRENT EDITION, AND ANY SUPPLEMENTS THERETO (HEREAFTER REFERRED TO AS STANDARD SPECIFICATIONS), SHALL GOVERN ALL CONSTRUCTION ITEMS UNLESS OTHERWISE NOTED.

THE CONTRACTOR INTENDING TO SUBMIT A BID FOR CITY OF DUBLIN CAPITAL IMPROVEMENT CONTRACTS SHALL BE PREQUALIFIED WITH THE OHIO DEPARTMENT OF TRANSPORTATION IN ACCORDANCE WITH SECTION 102 OF THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS, AND CHAPTER 5525 OF THE OHIO REVISED CODE CONCERNING CONSTRUCTION CONTRACTS.

ALL ITEMS OF WORK CALLED FOR ON THE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR WITH THE COST TO BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS RELATED ITEMS.

IT IS THE INTENTION OF THE CONTRACT DOCUMENTS TO PROVIDE AND REQUIRE A COMPLETED PROJECT READY FOR OPERATION. ANY WORK ITEMS OMITTED FROM THE CONTRACT DOCUMENTS WHICH ARE CLEARLY NECESSARY FOR COMPLETION OF THE WORK AND ITS APPURTENANCES SHALL BE CONSIDERED A PART OF SUCH WORK, THOUGH NOT DIRECTLY SPECIFIED OR CALLED FOR IN THE CONTRACT DOCUMENTS. THIS INCLUDES, BUT IS NOT LIMITED TO, SUCH INCIDENTAL ITEMS AS RELOCATION OF MAIL BOXES, SAW CUTTING, AND REMOVAL AND/OR RELOCATION OF SIGNS, SPRINKLERS, OR OTHER MISCELLANEOUS ITEMS.

THE CITY ENGINEER IS NOT RESPONSIBLE FOR MEANS, METHODS, PROCEDURES, TECHNIQUES, OR SEQUENCES OF CONSTRUCTION THAT ARE NOT SPECIFIED HEREIN. THE CITY ENGINEER IS NOT RESPONSIBLE FOR SAFETY ON THE WORK SITE, OR FOR FAILURE BY THE CONTRACTOR TO PERFORM WORK ACCORDING TO THE CONTRACT DOCUMENTS.

THE CONTRACTOR SHALL NOTIFY THE CITY OF DUBLIN DIVISION OF ENGINEERING AT LEAST 3 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.

THE CITY IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE AND LOCAL SAFETY REQUIREMENTS INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970. THE CONTRACTOR SHALL EXERCISE CAUTION ALWAYS FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT SHALL ALSO BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK, INCLUDING THE REQUIREMENTS FOR CONFINED SPACES PER 29 CFR 1910.146.

ANY MODIFICATIONS TO THE WORK AS SHOWN ON THESE APPROVED PLANS SHALL HAVE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE CITY ENGINEER.

THE CONTRACTOR SHALL RESTRICT CONSTRUCTION ACTIVITY TO PUBLIC RIGHT-OF-WAY, AREAS DEFINED AS PERMANENT AND/OR TEMPORARY CONSTRUCTION EASEMENTS, AND/OR THE LIMITS OF DISTURBANCE SHOWN.

TEMPORARY EASEMENTS ARE INTENDED FOR USE BY THE CONTRACTOR FOR CONSTRUCTION AND GRADING PURPOSES ONLY. THE CONTRACTOR SHALL NOT USE TEMPORARY EASEMENTS FOR STORAGE OF EQUIPMENT OR MATERIALS UNLESS HE HAS OBTAINED WRITTEN APPROVAL FROM THE CITY. COMPLIANCE WITH THIS REQUIREMENT ALONG WITH ADDITIONAL PROVISIONS OF THE CONTRACT SPECIFICATIONS SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS LEGAL RESPONSIBILITIES OR LIABILITIES FOR THE SAFETY OF THE PUBLIC. THE CONTRACTOR SHALL INFORM THE CITY OF ANY PLAN FOR ON-SITE STORAGE OF EQUIPMENT AND MATERIALS AT THE PRECONSTRUCTION MEETING.

PROPERTY BOUNDARIES, INCLUDING PROPERTY LINES AND ROAD RIGHTS-OF-WAY, ARE SHOWN FROM THE BEST INFORMATION AVAILABLE AND ARE NOT NECESSARILY COMPLETE OR CORRECT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE FINISHED WORK CONFORM TO THE LINES, GRADES, ELEVATIONS, AND DIMENSIONS CALLED FOR ON THE DRAWINGS AND TYPICAL SECTIONS. PAYMENT FOR CONSTRUCTION LAYOUT SHALL BE MADE AT THE LUMP SUM PRICE BID FOR ITEM 623, CONSTRUCTION LAYOUT STAKES.

THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCH MARKS, PROPERTY CORNERS, REFERENCE POINTS, STAKES, AND OTHER SURVEY REFERENCE MONUMENTS OR MARKERS. IN CASES OF DESTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATIONS. RESETTING OF MARKERS SHALL BE PERFORMED BY AN OHIO PROFESSIONAL SURVEYOR AS APPROVED BY THE CITY ENGINEER AT THE CONTRACTOR'S EXPENSE.

SUBSURFACE INVESTIGATIONS WERE PERFORMED FOR DESIGN AND ESTIMATING PURPOSES AND ARE PROVIDED IN THE BIDDING DOCUMENTS. LOGS AND TEST DATA ARE NOT WARRANTED TO SHOW THE ACTUAL SUBSURFACE CONDITIONS. THE CONTRACTOR SHALL EXAMINE THIS INFORMATION AND OBTAIN ADDITIONAL INFORMATION AT HIS OWN EXPENSE, IF NECESSARY, IN HIS JUDGMENT.

THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO EQUAL OR BETTER CONDITION THAN EXISTED BEFORE CONSTRUCTION. DRAINAGE DITCHES OR WATER COURSES THAT ARE DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THE GRADES AND CROSS-SECTIONS THAT EXISTED BEFORE CONSTRUCTION.

ALL SIGNS AND ASSOCIATED LIGHTING, FENCES, LANDSCAPING, STRUCTURES, OR OTHER APPURTENANCES DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE CITY ENGINEER. THE COST OF THIS WORK SHALL BE PAID FOR BY THE CONTRACTOR.

WHERE THE WORK REQUIRES REMOVAL OF BUSINESS SIGNS OR PRIVATE LANDSCAPING SUCH AS DECORATIVE ROCKS, CROSSTIES, FENCES, OR OTHER SALVAGEABLE AND REUSABLE ITEMS, THE CONTRACTOR SHALL COORDINATE SUCH REMOVAL WITH THE PROPERTY OWNER PRIOR TO THE START OF WORK. IF THESE ITEMS CANNOT BE REPLACED TO THEIR ORIGINAL LOCATION FOLLOWING COMPLETION OF THE WORK, THE CONTRACTOR SHALL BE OBLIGATED TO RELOCATE THESE ITEMS TO A STORAGE FACILITY OF THE OWNER'S CHOICE LOCATED ON THE SAME PROPERTY. IF THE PROPERTY OWNER DOES NOT WISH TO SALVAGE THESE ITEMS THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER REMOVAL AND DISPOSAL. PUBLIC PROPERTY TO BE SALVAGED MUST BE DELIVERED BY THE CONTRACTOR TO THE MAINTENANCE FACILITY ON SHIER RINGS ROAD. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS RELATED ITEMS OF THE CONTRACT.

SOME LAWN AREAS FRONTING THE WORK MAY HAVE EXISTING IN-GROUND SPRINKLER SYSTEMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING SPRINKLER SYSTEMS PRIOR TO THE START OF WORK. RESTORING THEM TO THEIR PREVIOUS CONDITION AND FUNCTION WHERE AFFECTED, INCLUDING PIPING, SPRINKLER HEADS, AND OTHER APPURTENANCES, SHALL BE APPROVED BY THE ENGINEER. THE COST OF RESTORATION OF SPRINKLER SYSTEMS SHALL BE PAID BY THE CITY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT U.S. MAIL DELIVERY WITHIN THE PROJECT LIMITS IS NOT DISRUPTED BY CONSTRUCTION OPERATIONS. THIS RESPONSIBILITY IS LIMITED TO RELOCATION OF MAILBOXES TO A TEMPORARY LOCATION THAT WILL ALLOW THE COMPLETION OF THE WORK AND SHALL ALSO INCLUDE THE RESTORATION OF MAILBOXES TO THEIR ORIGINAL LOCATION OR APPROVED NEW LOCATION. ANY RELOCATION OF MAILBOX SERVICES MUST FIRST BE COORDINATED WITH THE U.S. POSTAL SERVICE AND AFFECTED PROPERTY OWNERS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

BEFORE RELOCATING ANY MAILBOXES, THE CONTRACTOR SHALL CONTACT THE U.S. POSTAL SERVICE AND RELOCATE MAILBOXES ACCORDING TO POSTAL SERVICE REQUIREMENTS.

NON-RUBBER Tired VEHICLES SHALL NOT BE MOVED ON OR ACROSS PUBLIC STREETS OR HIGHWAYS WITHOUT WRITTEN PERMISSION FROM THE CITY ENGINEER.

TRACKING OR SPILLING MUD, DIRT, OR DEBRIS UPON STREETS, RESIDENTIAL OR COMMERCIAL DRIVES, SIDEWALKS, OR BIKE PATHS IS PROHIBITED AND ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. IF THE CONTRACTOR FAILS TO REMOVE THE MUD, DIRT, DEBRIS, OR SPILLAGE, THE CITY OF DUBLIN RESERVES THE RIGHT TO REMOVE THESE MATERIALS AND CLEAN AFFECTED AREAS, THE COST OF WHICH SHALL BE WITHHELD FROM MONIES THAT ARE DUE OR MAY BECOME DUE THE CONTRACTOR.

EXCESS EXCAVATED MATERIAL FROM THIS PROJECT SHALL BE HAULED OFFSITE BY THE CONTRACTOR AND COMPENSATION FOR HAULING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, EXCAVATION.

THE COST OF FULL DEPTH CONCRETE PAVEMENT REMOVAL FOR STREETS OR DRIVEWAYS WILL BE PAID AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 202 - CONCRETE PAVEMENT REMOVED AND DISPOSED OF. PAVEMENTS SHALL BE SAWCUT IN NEAT, STRAIGHT LINES TO THE FULL DEPTH OF THE EXISTING PAVEMENT. REMOVAL OF ASPHALT DRIVEWAY AND BIKE PATH PAVEMENTS WILL BE PAID PER CUBIC YARD UNDER ITEM 203 - EXCAVATION.

THE COST FOR REMOVAL AND DISPOSAL OF CONCRETE CURB AND CONCRETE CURB AND GUTTER WILL BE PAID AT THE UNIT PRICE BID PER LINEAL FOOT UNDER THE APPROPRIATE 202 ITEM. REMOVAL AND DISPOSAL OF CONCRETE SIDEWALK WILL BE PAID AT THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM 202 - CONCRETE WALK REMOVED AND DISPOSED OF.

TRENCH EXCAVATION SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. THE LENGTH OF TRENCH OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.

ALL TRENCHES WITHIN PAVEMENT, BERM, AND SHOULDER LIMITS SHALL BE BACKFILLED OR SECURELY PLATED DURING NONWORKING HOURS. TRENCHES OUTSIDE THESE AREAS SHALL BE BACKFILLED OR SHALL BE PROTECTED BY APPROVED TEMPORARY FENCING OR BARRICADES DURING NONWORKING HOURS. CLEAN UP SHALL FOLLOW CLOSELY BEHIND THE TRENCHING OPERATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONDITION OF ALL TRENCHES FOR ONE-YEAR FROM THE TIME OF FINAL ACCEPTANCE OF THE WORK, AND SHALL MAKE ANY NECESSARY REPAIRS AT NO COST TO THE CITY.

THE CONTRACTOR'S CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED SO AS TO ELIMINATE ALL UNNECESSARY NOISE, DUST, AND ODORS. THE USE OF OIL OR OTHER MATERIAL FOR DUST CONTROL, WHICH MAY CAUSE TRACKING, IS NOT PERMITTED.

DUST CONTROL OPERATIONS SHALL BE PERFORMED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED AS AN ALLOWANCE FOR BIDDING PURPOSES. USE OF CALCIUM CHLORIDE WILL NOT BE PERMITTED.

ITEM 616 WATER 5 M. GALS

IN THE EVENT THAT IT BECOMES NECESSARY FOR THE CITY TO PERFORM WORK OF AN IMMEDIATE NATURE (SUCH AS THE PLACEMENT OF BARRICADES OR REPLACEMENT OF SIGNS AND OTHER WARNING OR PROTECTIVE DEVICES) BECAUSE OF FAILURE OR REFUSAL OF THE CONTRACTOR TO PERFORM SUCH WORK AS REQUIRED BY THE CONTRACT, THE CONTRACTOR SHALL REIMBURSE THE CITY AT THE RATE OF 2.5 TIMES THE ACTUAL COST OF LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO PERFORM SUCH WORK. THE CITY SHALL BE REQUIRED TO NOTIFY OR ATTEMPT TO NOTIFY THE DESIGNATED REPRESENTATIVE OF THE CONTRACTOR OF THE NECESSITY TO PERFORM SUCH WORK. IF THE CONTRACTOR REFUSES OR FAILS WITHIN A REASONABLE TIME TO PERFORM OR CAUSE THE PERFORMANCE OF SUCH WORK, THE CITY SHALL BE REIMBURSED BY THE CONTRACTOR IN THE AMOUNT PROVIDED HEREIN BY WAY OF A DEDUCTION FROM THE CONTRACTOR'S NEXT PAYMENT UNDER THE CONTRACT. REASONABLE TIME FOR ALL STREETS INVOLVED ON THIS CONTRACT IS 1 HOUR FROM THE TIME OF NOTIFICATION BY THE CITY.

**ITEM 653-TOPSOIL FURNISHED AND PLACED, A.P.P.**

A MINIMUM 3 INCHES OF TOPSOIL SHALL BE PRESENT IN ALL AREAS TO BE SEEDED. WHERE TOP SOIL MUST BE ADDED TO PROVIDE THE MINIMUM, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH SUFFICIENT TO PLACE THE REQUIRED TOP SOIL THICKNESS. THE COST OF EXCAVATION AND DISPOSAL OF SURPLUS MATERIALS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE VARIOUS CONTRACT ITEMS.

TOPSOIL SHALL BE REMOVED AND WASTED OR UTILIZED IN NON-LOAD BEARING FILLS IN ACCORDANCE WITH THE SPECIFICATIONS. NO EXTRA COMPENSATION SHALL BE PAID FOR THE REMOVAL OF EXCESS TOPSOIL AS REQUIRED TO OBTAIN A SUITABLE SUBGRADE.

ALL TOPSOIL MATERIALS AND FINAL AREA OF SUBGRADE PREPARATION SHALL BE FREE FROM ROCK AND OTHER FOREIGN MATERIAL OF 1/2" OR GREATER IN ANY DIMENSION. FOR ITEM 653, TOPSOIL FURNISHED AND PLACED, A.P.P., IF SUITABLE AS APPROVED BY THE ENGINEER.

**ITEM 659-SEEDING AND MULCHING, A.P.P.**

SEED. CERTIFICATION OF GRASS SEED SHALL BE PROVIDED BY SEED VENDOR FOR EACH GRASS-SEED MIXTURE STATING THE BOTANICAL AND COMMON NAME, PERCENTAGE BY WEIGHT OF EACH SPECIES AND VARIETY; AND PERCENTAGE OF PURITY, GERMINATION, AND WEED SEED. INCLUDE THE YEAR OF PRODUCTION AND DATE OF PACKAGING. FURNISH NATIONAL TURFGRASS EVALUATION PROGRAM (NTEP) DATA FOR EACH SPECIES TO BE USED.

GRASS SEED MUST BE FRESH, CLEAN, DRY, NEW-CROP SEED COMPLYING WITH THE A.O.S.A. "JOURNAL OF SEED TECHNOLOGY" RULES FOR TESTING SEEDS FOR PURITY AND GERMINATION TOLERANCES.

SEED SPECIES SHALL BE AS FOLLOWS, WITH NOT LESS THAN **90 PERCENT GERMINATION**, NOT LESS THAN **98 PERCENT PURE SEED**, AND NOT MORE THAN 0.5 PERCENT WEED SEED.

TURFGRASS SEED MIX PROPORTIONED BY WEIGHT:

- A. 80 PERCENT TALL FESCUE (FESTUCA ARUNDINACEA), WITH A MINIMUM OF 3 IMPROVED TURF-TYPE VARIETIES. KENTUCKY-31 AND ALTA VARIETIES ARE NOT APPROVED.
- B. 20 PERCENT PERENNIAL RYEGRASS (LOLIUM PERENNE).

SEEDING. SOW SEED AT A TOTAL RATE OF 7-9 LB. / 1,000 S.F. WITH A SPREADER OR SEEDING MACHINE. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY.

PROTECT SEEDED AREAS WITH SLOPES EXCEEDING 3:1 WITH EROSION CONTROL BLANKETS AS DIRECTED BY THE ENGINEER. COST OF EROSION CONTROL BLANKETS, MATERIAL, AND LABOR SHALL BE PAID FOR BY THE CITY.

HYDRO-SEEDING. NOT PERMITTED.

HYDRO-MULCHING. APPLY SLURRY AT A RATE SO THAT MULCH COMPONENT IS DEPOSITED AT NOT LESS THAN 1,500 LB. / ACRE DRY WEIGHT.

TURF MAINTENANCE. MAINTAIN AND ESTABLISH TURF BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, AND REPLANTING TO ESTABLISH HEALTHY, VIABLE TURF. ROLL, REGRADE, AND REPLANT BARE OR ERODED AREAS AND REMULCH TO PRODUCE A UNIFORMLY SMOOTH TURF. PROVIDE THE SAME MATERIALS AND INSTALLATION AS THOSE USED IN THE ORIGINAL INSTALLATION. WATER TURF WITH FINE SPRAY AT A MINIMUM RATE OF 1 INCH PER WEEK UNLESS RAINFALL PRECIPITATION IS ADEQUATE.

MOW TURFGRASS SEED MIX AREAS AS SOON AS TOP GROWTH IS TALL ENOUGH TO CUT. REPEAT MOWING TO MAINTAIN SPECIFIED HEIGHT WITHOUT CUTTING MORE THAN 1/3 OF GRASS HEIGHT. MOW AREAS TO A HEIGHT OF 2 TO 3 INCHES.

SODDING. IN LIEU OF SEEDING AND MULCHING, **THE CONTRACTOR SHALL PLACE SOD FOR THE DISTURBED AREAS ON THE MILLENNIUM PROPERTY ONLY**, INCLUDING ALL FURNISHING, HAULING, EXCAVATING, BED PREPARATION, AND PLACING IN ACCORDANCE WITH ITEM 660.

**BURGESS & NIPLÉ**

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COLUMBUS, OHIO 43220

CITY OF DUBLIN, OHIO  
FRANTZ ROAD UTILITY BURIAL  
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NO.	DESCRIPTION	DATE

**JOB NO:** PR50708  
**DATE:** OCT. 2014  
**DESIGNED BY:** WHW  
**DRAWN BY:** WHW  
**CHECKED BY:** JED  
**APPROVED BY:** JED  
**SCALE:** NONE

GENERAL NOTES

**ITEM 207-CONSTRUCTION SEEDING AND MULCHING, A.P.P.**

ALL NON-PAVEMENT AREAS DISTURBED WITHIN THE DESIGNATED EASEMENTS, RIGHTS-OF-WAY, AND LIMITS OF DISTURBANCE AS SHOWN, SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH ITEM 207, "CONSTRUCTION SEEDING AND MULCHING, A.P.P." ALL AREAS DISTURBED OUTSIDE THESE LIMITS SHALL BE SEEDED AND MULCHED AT THE CONTRACTOR'S EXPENSE.

SEEDING AND MULCHING SHALL CONFORM TO STANDARDS SET FORTH IN CITY OF COLUMBUS SPECIFICATIONS, ITEM 207. HYDRO-SEEDING IS NOT ALLOWED.

**TREES**

ALL TREES WITHIN THE CONSTRUCTION AREA NOT DESIGNATED FOR REMOVAL, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE PRESERVED WITHOUT DAMAGE. TREES TO BE PRESERVED SHALL BE PROTECTED WITH HIGH VISIBILITY TREE PROTECTION FENCING AS INDICATED ON THE PLANS PRIOR TO THE START OF ANY CONSTRUCTION. THE CITY RESERVES THE RIGHT TO DIRECT THE CONTRACTOR TO INSTALL ADDITIONAL FENCING IN AREAS WHERE TREES COULD BE DAMAGED DURING CONSTRUCTION. SEE THE TREE PRESERVATION NOTES FOR COMPLETE SPECIFICATIONS AND DETAILS.

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER ITEM 201, TREES OR STUMPS REMOVED. TREES WITH TRUNK DIAMETERS 12 INCHES AND LESS SHALL BE CONSIDERED BRUSH AND THEIR REMOVAL PAID UNDER ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

SIZE	NO. OF TREES
OVER 12"-24" (18" SIZE)	7 EA.
OVER 24"-36" (30" SIZE)	1 EA.

THE ABOVE TREE REMOVAL QUANTITIES ARE APPROXIMATE AND THE CITY OF DUBLIN RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES AND/OR STUMPS WITHIN THE LIMITS OF CONSTRUCTION.

**DRAINAGE**

THE FLOW OF ALL STORM SEWERS, DRAINS, AND OTHER WATER COURSES ENCOUNTERED AND DISTURBED OR DESTROYED DURING THE PROSECUTION OF THE WORK SHALL BE RESTORED BY THE CONTRACTOR TO A CONDITION SATISFACTORY TO THE CITY ENGINEER. PAYMENT FOR THIS SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

ALL FIELD TILE BROKEN OR ENCOUNTERED DURING EXCAVATION SHALL BE REPLACED OR REPAIRED IN LIKE KIND AND CONNECTED TO THE NEAREST STORM SEWER OR OPEN CHANNEL OUTLET, RESTORING NORMAL FUNCTION TO THE TILE, AS DIRECTED BY THE CITY ENGINEER. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

ALL 4-INCH PIPE UNDERDRAIN DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED IN-KIND IN ACCORDANCE WITH ITEM 605. THE COST OF UNDERDRAIN REPLACEMENT SHALL BE INCLUDED THE COST OF CONCRETE CURB AND GUTTER, AND WILL NOT BE PAID SEPARATELY.

**BACKFILL**

BACKFILL WITHIN A 1:1 INFLUENCE LINE OF EXISTING STRUCTURES (PAVEMENTS, SIDEWALKS, CURBS, ETC.) SHALL BE ITEM 912, COMPACTED GRANULAR MATERIAL, OR ITEM 636, TYPE 2.

TRENCHES WITHIN 2 FEET OF PROPOSED PAVEMENT, CURB AND GUTTER, BERM, SHOULDERS, SIDEWALK, BIKE PATH, OR WHERE SPECIFICALLY CALLED FOR ON THE PLANS, SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS.

GRANULAR BACKFILL SHALL BE COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS OR CONTROLLED DENSITY BACKFILL ACCORDING TO ITEM 613, TYPE 2, OF THE STANDARD SPECIFICATIONS AS DIRECTED BY THE CITY ENGINEER. **ITEM 912 MATERIAL SHALL CONSIST OF NATURAL, BROKEN, OR CRUSHED ROCK. SYNTHETIC OR MANMADE MATERIALS ARE UNACCEPTABLE.**

ALL NON-GRANULAR BACKFILL SHALL BE FURNISHED AND PLACED IN ACCORDANCE WITH ITEM 911. **THE COST OF ITEM 911 AND 912 BACKFILL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS TRENCH TYPES, MANHOLES, ETC.**

ALL TRENCHES WITHIN PAVEMENT, BERM, AND SHOULDER LIMITS SHALL BE BACKFILLED OR SECURELY PLATED DURING NON-WORKING HOURS. TRENCHES OUTSIDE THESE AREAS SHALL BE BACKFILLED OR SHALL BE PROTECTED BY APPROVED TEMPORARY FENCING OR BARRICADES DURING NON-WORKING HOURS. CLEAN UP SHALL FOLLOW CLOSELY BEHIND THE TRENCHING OPERATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONDITION OF THE TRENCHES FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE OF THE WORK, AND SHALL MAKE ANY NECESSARY REPAIRS AT NO COST TO THE CITY.

**SUBGRADE**

ALL SOIL SUBGRADES SHALL BE PREPARED AND COMPACTED IN ACCORDANCE WITH ITEM 204 TO A DEPTH OF 12-INCHES BELOW THE SUBGRADE SURFACE. SUBGRADE SHALL BE SCARIFIED AND CONTAIN SUFFICIENT MOISTURE TO MEET ITEM 204 COMPACTION REQUIREMENTS.

SUBGRADE COMPACTION SHALL BE REQUIRED UNDER NEW DRIVEWAYS, SIDEWALKS, AND BIKE PATHS, AND SHALL FOLLOW THE REQUIREMENTS FOR COMPACTION AS DESCRIBED IN SECTION 204.03. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, EXCAVATION.

THE CONTRACTOR SHALL DEFINE THE LIMITS OF ANY WEAK SOILS ENCOUNTERED BY PROOF ROLLING. WHERE SOFT SUBGRADE IS ENCOUNTERED IN CUTS, DUE TO NO FAULT OF THE CONTRACTOR, AND SATISFACTORY COMPACTION CANNOT BE OBTAINED, THE UNSTABLE MATERIAL SHALL BE REMOVED AND REPLACED PER SECTION 204.04. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED AS AN ALLOWANCE FOR BIDDING PURPOSES.

ITEM 204	EXCAVATION OF SUBGRADE	75 C.Y.
ITEM 204	GRANULAR EMBANKMENT, NO. 2 STONE, A.P.P.	75 C.Y.

**PAVEMENT**

PAVEMENTS SHALL BE CUT IN NEAT, STRAIGHT LINES TO THE FULL DEPTH OF THE PAVEMENT, OR AS REQUIRED BY THE CITY ENGINEER.

BUTT JOINTS BETWEEN EXISTING AND NEW PAVEMENT SHALL BE MADE IN ACCORDANCE WITH ODOT STD. CONSTRUCTION DWG. BP-3.1.

THE CONTRACTOR SHALL SUBMIT TO THE CITY ENGINEER AT THE PRECONSTRUCTION MEETING HIS PROPOSED DESIGN MIX FORMULA FOR ALL BITUMINOUS MIXTURES TO BE PLACED ON THE PROJECT FOR REVIEW AND APPROVAL. A DESIGN MIX FORMULA SHALL BE SUBMITTED FOR EACH MIXTURE AND EACH PRODUCER AND SHALL PROVIDE GRADATION OF ALL COMPONENT AGGREGATES, PERCENTAGE OF BLENDING OF AGGREGATES, PERCENTAGE OF BITUMEN, ANY ADDITIVES AND APPLICATION RATE, NAMES AND ADDRESSES OF AGGREGATE SUPPLIERS, MARSHALL MIX DESIGN DATA, AND THE THEORETICAL LABORATORY DENSITY.

**THE CONTRACTOR SHALL NOT USE ANY RECLAIMED MATERIALS IN ITEM 304.**

**ITEM SPECIAL - CONCRETE DRIVEWAY (12") COMMERCIAL**

ITEM SPECIAL, CONCRETE DRIVEWAY (12") COMMERCIAL SHALL INCLUDE ALL CONCRETE, BASE COURSE, AND SCH. 80 CONDUIT IN ACCORDANCE WITH THE PLANS, COLUMBUS STD. DWG. 2203 (6/1/14), AND THE DUBLIN STANDARD DETAIL FOR COMMERCIAL AND RESIDENTIAL DRIVES. DRIVEWAY GRADES AND DIMENSIONS PROVIDED ON THE PLANS GOVERN OVER THOSE SHOWN ON THE STD. DRAWINGS. EXCAVATION, DRAINAGE, AND OTHER APPURTENANT WORK WILL BE PAID UNDER THE OTHER APPLICABLE CONTRACT ITEMS. THE PAY QUANTITY FOR ITEM SPECIAL, CONCRETE DRIVEWAY (12") COMMERCIAL SHALL EXCLUDE THE AREA COVERED UNDER ITEM SPECIAL, TRENCH TYPE 2 - CONCRETE DRIVEWAY.

**REMOVE AND REPLACE EXISTING BIKEPATH SURFACE**

FOLLOWING COMPLETION OF ALL OTHER CONSTRUCTION, THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL BIKEPATH ASPHALT SURFACING WHERE INDICATED ON THE PLANS AND REPAVE THE BIKEPATH OVER THE EXISTING BASE MATERIAL TO THE SAME ALIGNMENT, GRADE, AND WIDTH AS PREVIOUSLY EXISTED. RESURFACING SHALL CONSIST OF 1-1/2 INCHES OF ITEM 448 ASPHALT SURFACE COURSE, AND 3 INCHES OF ITEM 301 ASPHALT BASE COURSE. THE EXISTING AGGREGATE BASE SHALL BE LEFT CLEAN, SMOOTH, AND COMPACT PRIOR TO PAVING.

THE COST OF REMOVAL AND DISPOSAL OF BIKEPATH ASPHALT WILL BE PAID PER CUBIC YARD UNDER ITEM 203 - EXCAVATION. PROOF ROLLING WILL NOT BE REQUIRED. THE COST OF ANY BASE PREPARATION PRIOR TO ASPHALT PAVING WILL NOT BE PAID SEPARATELY BUT SHALL BE INCLUDED IN THE RELATED ITEMS OF THE CONTRACT.

REPAVING OF EXISTING BIKEPATH WILL BE PAID UNDER THE APPROPRIATE 301 AND 448 ITEMS, EXCLUDING THOSE AREAS COVERED UNDER ITEM SPECIAL, TRENCH TYPE 4 - ASPHALT BIKEPATH (PERMANENT).

PAY LIMITS FOR TURF RESTORATION (TOP SOIL, SEEDING AND MULCHING) RELATED TO BIKEPATH RECONSTRUCTION SHALL NOT EXCEED 10 FEET FROM EITHER EDGE OF THE BIKEPATH. SURFACES DISTURBED BEYOND THESE LIMITS, AND NOT COVERED UNDER TRENCH RESTORATION, SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE.

**CURB RAMP REMOVAL AND REPLACEMENT**

THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING CURB RAMPS WHERE INDICATED ON THE PLANS AND REPLACE THEM IN LIKE KIND WITH NEW CONCRETE RAMPS IN ACCORDANCE WITH THE PLANS, CITY OF DUBLIN CURB RAMP STANDARD DRAWINGS AND GENERAL NOTES, AND OTHER REQUIREMENTS INCLUDED IN THE FOLLOWING SECTION OF THESE GENERAL NOTES ENTITLED "AMERICANS WITH DISABILITIES ACT (ADA)."

THE COST OF REMOVAL AND DISPOSAL OF EXISTING CONCRETE RAMPS WILL BE PAID AT THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM 202 - CONCRETE WALK REMOVED AND DISPOSED OF. NEW CONCRETE RAMPS COMPLETE, WILL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR ITEM 608 - CURB RAMPS AS PER PLAN, WITHOUT DETECTABLE WARNINGS. PAYMENT FOR THIS ITEM SHALL BE IN ADDITION TO THAT PAID UNDER ITEM 608 - 4" CONCRETE WALK. RAMPS SHALL BE A MINIMUM 6 INCHES THICK.

**AMERICANS WITH DISABILITIES ACT (ADA)**

ALL SIDEWALKS, PEDESTRIAN PATHS, CURB RAMPS, AND DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST STANDARDS OF THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAGG), EXCEPT THAT DETECTABLE WARNINGS WILL NOT BE INSTALLED AT NON-PUBLIC DRIVEWAYS.

WHERE ELEVATIONS AND SLOPES ARE PROVIDED ON THE DRAWINGS, THEY ARE INTENDED TO CONVEY A DESIGN THAT IS COMPATIBLE WITH ADA GUIDELINES. THE CONTRACTOR SHALL DETERMINE THE AS-BUILT ELEVATIONS OF ADJACENT NEW OR EXISTING CONCRETE CURB AND ADJACENT NEW OR EXISTING WALK PRIOR TO THE START OF RAMP CONSTRUCTION. ADJUSTMENTS IN GRADE SHALL BE MADE BY THE CONTRACTOR BASED ON THE AS-BUILT INFORMATION TO ENSURE THAT THE FINISHED WORK IS IN ACCORDANCE WITH ADA GUIDELINES.

**UTILITIES**

UTILITIES KNOWN TO BE LOCATED WITHIN THE LIMITS OF THIS PROJECT ARE LISTED BELOW WITH CONTACT INFORMATION.

COLUMBIA GAS OF OHIO  
ROB CALDWELL - FIELD ENGINEER  
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AT&T OF OHIO  
TOM ZIOMEK - MANAGER OSPE  
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AMERICAN ELECTRIC POWER  
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COLUMBUS DIVISION OF WATER  
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COLUMBUS, OHIO 43215

DUBLINK PROFESSIONAL  
SERVICES GROUP  
JOE TEPPER  
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COLUMBUS, OHIO 43215

TW TELECOM  
RON LEFFLER - OUTSIDE PLANT ENGINEER  
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TIME WARNER CABLE  
RAY MAURER - CONSTRUCTION SUPERVISOR  
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PHONE: (614) 481-5262  
3760 INTERCHANGE ROAD,  
COLUMBUS, OHIO 43204

THE CONTRACTOR SHALL GIVE NOTICE OF INTENT TO CONSTRUCT TO OHIO UTILITIES PROTECTION SERVICE (TELEPHONE NUMBER 800-362-2764) AND TO OWNERS OF UNDERGROUND UTILITIES THAT ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE. NOTICE SHALL BE GIVEN AT LEAST 2 WORKING DAYS BEFORE START OF CONSTRUCTION.

THE IDENTITY AND LOCATIONS OF EXISTING UNDERGROUND UTILITIES IN THE CONSTRUCTION AREA HAVE BEEN SHOWN ON THE PLANS AS ACCURATELY AS PROVIDED BY THE OWNER OF THE UNDERGROUND UTILITY. THE CITY OF DUBLIN AND THE CITY ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR DEPTHS OF UNDERGROUND FACILITIES SHOWN ON THE PLANS. IF DAMAGE IS CAUSED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF THE SAME AND FOR ANY RESULTING CONTINGENT DAMAGE.

**LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES, SHOWN OR NOT SHOWN ON THE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING COORDINATION WITH THE AFFECTED UTILITY OWNER.** THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

WHEN UNKNOWN OR INCORRECTLY LOCATED UNDERGROUND UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER AND THE CITY ENGINEER.

**BURGESS & NIPLÉ**

5085 REED ROAD  
COLUMBUS, OHIO 43220

CITY OF DUBLIN, OHIO  
FRANTZ ROAD UTILITY BURIAL  
RINGS ROAD TO METRO PLACE NORTH  
11-021 - CIP

NO.	DESCRIPTION	DATE

<b>JOB NO:</b>	PR50708
<b>DATE:</b>	OCT. 2014
<b>DESIGNED BY:</b>	WHW
<b>DRAWN BY:</b>	WHW
<b>CHECKED BY:</b>	JED
<b>APPROVED BY:</b>	JED
<b>SCALE:</b>	NONE

GENERAL NOTES

**OVERHEAD UTILITY BURIAL (GENERAL)**

THE CONTRACTOR SHALL FURNISH ALL MATERIALS AND LABOR TO CONSTRUCT ALL CONCRETE ENCASED DUCT, NON-ENCASED DUCT, AND MANHOLES, INCLUDING EARTHWORK AND GRADING, REQUIRED FOR BURIAL OF THE EXISTING OVERHEAD UTILITIES AS SHOWN ON THE PLANS AND SPECIFIED HEREIN. OTHER WORK INCLUDES INSTALLATION OF MATERIALS FURNISHED BY THE UTILITY COMPANIES. REFER TO THE MATRIX FOR RESPONSIBILITIES.

**INSPECTION.** ALL OPEN CUT WORK PERFORMED BY THE CONTRACTOR, INCLUDING DUCT AND MANHOLES, THAT BECOMES THE PROPERTY OF AEP OR TWC, SHALL BE THOROUGHLY INSPECTED AND APPROVED BY A REPRESENTATIVE OF THE AFFECTED UTILITY COMPANY PRIOR TO COVERING. **ALL DUCT RUNS MUST BE APPROVED BY THE AFFECTED UTILITY COMPANY PRIOR TO POURING OF CONCRETE.** THE CONTRACTOR MUST GIVE THE UTILITY COMPANIES AT LEAST 48 HOURS NOTICE BEFORE CONCRETE POURS OR BACKFILLING DUCT AND/OR STRUCTURES. ANY WORK NOT APPROVED BY THE UTILITY COMPANY REPRESENTATIVE WILL NOT BE ACCEPTED FOR PAYMENT.

**UTILITY COMPANY WORK.** UPON ACCEPTANCE OF THE WORK BY THE AFFECTED UTILITY COMPANY, UTILITY FORCES WILL FURNISH AND INSTALL THE PAD MOUNTED EQUIPMENT, ALL WIRE AND CABLE THROUGH THE COMPLETED DUCT SYSTEM, AND ALL RISER POLES, COMPLETE. REMOVAL OF THE EXISTING OVERHEAD WIRE WILL BE PERFORMED BY THE UTILITY COMPANIES IMMEDIATELY FOLLOWING ENERGIZING OF THE NEW UNDERGROUND FACILITIES. POLES WILL BE REMOVED BY THE RESPONSIBLE UTILITY COMPANY.

**POWER AND COMMUNICATION DUCT.** CONDUIT FOR AEP AND TWC SHALL BE INSTALLED BY THE CONTRACTOR USING OPEN CUT METHODS. THE COST OF CONDUIT INSTALLATION, INCLUDING SAWCUTTING, TRENCH EXCAVATION, CONDUIT, COUPLINGS, SPACERS, AND REINFORCEMENTS, WILL BE PAID AT THE UNIT PRICE BID PER LINEAL FOOT FOR ITEM SPECIAL - 4" (OR 5") PVC CONDUIT. CONCRETE ENCASEMENT WILL BE PAID AT THE UNIT PRICE BID PER CUBIC YARD. REMOVAL OF CURBS WILL BE PAID UNDER THE APPLICABLE 202 ITEM. ASPHALT SHALL BE REMOVED UNDER THE APPROPRIATE EXCAVATION ITEM.

**ITEM SPECIAL - TRENCH TYPE 1, 2, 3, OR 4.** TRENCH BACKFILL AND SURFACE REPAIR WILL BE PAID AT THE UNIT PRICE BID PER LINEAL FOOT FOR EACH TRENCH TYPE AND SURFACE AS DETAILED ON SHEET 9, INCLUDING ROCK EXCAVATION, CONTROLLED DENSITY FILL, GRANULAR BACKFILL, COMPACTED BACKFILL, AGGREGATE BASE, ASPHALT BASE, ASPHALT SURFACING, AND CONCRETE PAVING. TOPSOIL, SEEDING, AND MULCHING WILL BE PAID SEPARATELY UNDER THE APPROPRIATE ITEM.

**EARTHWORK.** THE CONTRACTOR SHALL COMPLETE THE EARTHWORK AND GRADING NECESSARY FOR PROPER PLACEMENT OF ALL ABOVE-GROUND EQUIPMENT (SWITCHES, TRANSFORMERS, VAULTS, ETC.) TO THE ELEVATIONS SHOWN ON THE DRAWINGS. **ACTUAL PLACEMENT OF EQUIPMENT WILL BE PERFORMED BY THE UTILITY COMPANIES.** THE COST OF EARTHWORK AND GRADING NECESSARY TO PREPARE FOR PLACEMENT OF UTILITY EQUIPMENT WILL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE RELATED ITEMS.

**METHOD OF MEASUREMENT.** THE LENGTH OF DUCT AND TRENCH, BY TYPE, SHALL BE PAID FOR BY THE ACTUAL NUMBER OF FEET MEASURED BETWEEN MANHOLES, PADS, ETC. DEDUCTIONS SHALL BE MADE FOR MANHOLE LENGTHS.

**SURFACE RESTORATION.** PAY LIMITS FOR SURFACE RESTORATION OVER THE TRENCH SHALL BE THE TRENCH WIDTH PLUS 2 FEET FOR ASPHALT ROADWAY, SHALL EQUAL THE TRENCH WIDTH FOR CONCRETE DRIVEWAY, AND SHALL BE THE TRENCH WIDTH PLUS 10 FEET FOR NON-PAVEMENT AREAS. DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE.

**ELEVATIONS.** PAD, BOX, OR MANHOLE CASTING ELEVATIONS PROVIDED ON THE PLANS ARE APPROXIMATE FINISHED GRADE AND SHALL BE ADJUSTED, IF NEEDED, IN THE FIELD BY THE CONTRACTOR TO MATCH SURROUNDING FINAL GRADES WITH APPROVAL OF THE AFFECTED UTILITY.

**SUBSURFACE INFORMATION.** TEST BORINGS WERE PERFORMED AT 7 LOCATIONS AS INDICATED ON THE PLANS. LOGS ARE AVAILABLE FROM THE CITY UPON REQUEST FOR THE CONTRACTOR'S INFORMATION. BORING LOGS ARE NOT WARRANTED TO REFLECT ACTUAL SUBSURFACE CONDITIONS. **THE COST OF ROCK EXCAVATION SHALL BE INCLUDED IN THE UNIT PRICES BID FOR TRENCH AND MANHOLE CONSTRUCTION.**

**AEP UTILITY DUCT**

ALL UNDERGROUND CONDUIT SYSTEM WORK SHALL BE DONE ACCORDING TO THE MOST RECENT REVISION OF THE FOLLOWING AEP SPECIFICATIONS:

AMERICAN ELECTRIC POWER - SPECIFICATION FOR STRUCTURAL CONCRETE SPECIFICATION NO. CE-1000-A

AMERICAN ELECTRIC POWER SPECIFICATION FOR UNDERGROUND DISTRIBUTION CONSTRUCTION SPECIFICATION TDO-003

ANY CHANGES, ALTERATIONS OR MODIFICATIONS TO THESE PLANS AND SPECIFICATIONS SHALL BE APPROVED BY THE AEP ENGINEER, PRIOR TO THEIR IMPLEMENTATION.

AN AEP INSPECTOR MUST APPROVE ALL DUCT AND MANHOLE INSTALLATION PRIOR TO CONCRETE PLACEMENT OR BURIAL OF CONDUIT. CONTACT JEFF HICKS 614-223-3915 OR ROBERTA PYLE 614-883-6901 TO ARRANGE INSPECTOR.

1. MATERIALS

- A. CONDUIT - NONMETALLIC CONDUIT SHALL BE SCHEDULE 40, ELECTRIC RATED POLYVINYL CHLORIDE (PVC). IT SHALL BE DESIGNED TO FORM A SOUND, STRONG DUCT, FREE FROM DEFECTS. IT SHALL BE NONMAGNETIC, RESISTANT TO CORROSIVE ACTION, UNAFFECTED BY ELECTROLYSIS AND SHALL NOT SOFTEN, DEFORM OR DETERIORATE WHEN EXPOSED TO THE MAXIMUM SAFE OPERATING TEMPERATURE OF THE CABLES. THE INSIDE SURFACE OF THE CONDUIT SHALL BE SMOOTH, ROUND, AND HAVE A 5-INCH NOMINAL INSIDE DIAMETER. THE CONDUIT SHALL BE CARLON HEAVY WALL "PV-DUIT PLUS" CONDUIT OR AN APPROVED EQUAL.
- B. COUPLINGS - THE COUPLINGS SHALL BE OF THE SAME MATERIAL AS THE CONDUIT AND SHALL BE SUFFICIENTLY TIGHT TO PREVENT SILT OR CONCRETE FROM ENTERING THE CONDUIT.
- C. SPACERS - THE SPACERS SHALL BE PLASTIC BASE AND INTERMEDIATE TYPE FOR PVC CONDUIT.
- D. REINFORCEMENTS - ALL REINFORCING SHALL BE #4, GRADE 60, DEFORMED STEEL BARS, PLACED AS SHOWN, WITH A MINIMUM 9-INCH LAP SPACE.

2. INSTALLATION

- A. THE CONDUIT SHALL BE INSTALLED AS SHOWN ON THE PLANS.
- B. EXCAVATION FOR THE UNDERGROUND CONDUIT DUCTS SHALL EXTEND TO THE PROFILE OF THE LOWER SIDE OF THE CONDUIT ENCASEMENT, EXCEPT WHERE SPECIFIED IN THE PLANS OR DIRECTED BY THE ENGINEER. THE DUCTS SHALL HAVE A **MINIMUM DEPTH OF COVER OF 36 INCHES** FROM THE TOP OF THE ENCASEMENT TO THE FINISHED GRADE. THE PROFILE BETWEEN STRUCTURES SHALL BE SET SO THAT THE CONDUITS ARE LEVEL OR SLOPED TO THE NEXT STRUCTURE. WHERE CONDUITS ENTER A STRUCTURE AT A LOWER LEVEL THAN THE APPROACHING PROFILE OF THE CONDUIT, THE CONDUIT SHALL BE SLOPED DOWN TO THE STRUCTURE AT A RATE NOT-TO-EXCEED 5 PERCENT.
- C. THE TRENCH SHALL BE EXCAVATED SO THAT ANY CURVE RADIUS WILL BE AS LARGE AS POSSIBLE (36 FOOT RADIUS MINIMUM UNLESS OTHERWISE INDICATED). THE TRENCH SHALL BE EXCAVATED NO WIDER THAN NECESSARY TO ACCOMMODATE THE CONDUIT AND CONCRETE ENCASEMENT AS SHOWN ON THE DETAILS. THE BOTTOM OF THE TRENCH SHALL BE UNDISTURBED, TAMPED, AND RELATIVELY SMOOTH EARTH. TRENCHES WHICH HAVE BEEN EXCAVATED TOO DEEP AT ANY POINT ARE TO BE PARTIALLY REFILLED AND TAMPED SOLID. THE SIDES OF THE TRENCH SHALL BE TRIMMED SMOOTH TO PROVIDE FOR A UNIFORM SHEATH OF CONCRETE AROUND THE CONDUITS. THE SIDES OF THE EXCAVATION SHALL BE FORMED WHERE NECESSARY TO MAINTAIN A UNIFORM ENCASEMENT.
- D. WHERE A CONDUIT CROSSES A SEWER OR WATERLINE, OR ANY OTHER UNDERGROUND UTILITY, THE CLEARANCE BETWEEN THEM SHALL BE LARGE ENOUGH TO PERMIT MAINTENANCE OF THE SYSTEM WITHOUT DAMAGE TO THE STRUCTURES. THE MINIMUM CLEARANCE SHALL BE DETERMINED BY THE UTILITIES INVOLVED. A SUITABLE SUPPORT, ON EACH SIDE OF THE STRUCTURE, SHALL BE CONSTRUCTED TO AVOID TRANSFERRING ANY DIRECT LOAD ONTO THE STRUCTURE.
- E. THE CONDUIT RUNS SHALL BE AS STRAIGHT AS POSSIBLE. TYPE SCH. 40, ELECTRIC RATED, 5-DEGREE ANGLE COUPLINGS OR COMBINATIONS OF 5-DEGREE ANGLE COUPLINGS WITH STRAIGHT SECTIONS OF CONDUIT ARE RECOMMENDED TO NEGOTIATE CURVES. NO FIELD BENDS.
- F. PRECAST PLASTIC BASE AND INTERMEDIATE SPACERS SHALL BE PLACED AT 5-FOOT INTERVALS THAT SHALL SEPARATE THE CONDUITS A MINIMUM OF 2 INCHES APART AND PROVIDE A 3-INCH MINIMUM OUTSIDE ENCASEMENT. BURRS ON THE ENDS OF THE CONDUIT, AS THE RESULT OF SAWING, MUST BE REMOVED PRIOR TO COMPLETING A JOINT. JOINTS SHALL FORM A CONTINUOUS SMOOTH INTERIOR SURFACE BETWEEN CONDUIT SECTIONS SO THAT THE CABLE WILL NOT BE DAMAGED WHEN PULLING PAST THE JOINT. SURFACES TO BE JOINED SHALL BE CLEAN AND FREE FROM DIRT, FOREIGN MATERIALS, AND MOISTURE. THE JOINTS SHALL BE SEALED WITH PROPER CEMENT SPECIFIED BY THE CONDUIT MANUFACTURER. THE CONDUITS SHALL BE TIED TOGETHER WITH HEAVY CORD SO AS TO SECURELY HOLD THE CONDUITS IN PLACE. THE OPEN ENDS OF THE CONDUITS SHALL BE CLOSED WITH TIGHT FITTING PLUGS TO PREVENT MUD OR OTHER FOREIGN MATERIAL FROM GETTING INTO THE CONDUIT. AFTER THE CONDUIT IS PLACED, IT SHALL BE INSPECTED BEFORE THE CONCRETE IS POURED.
- G. PEA GRAVEL CONCRETE (CLASS "A" PER COLS. CMS 499) SHALL BE POURED AS SOON AS POSSIBLE AFTER THE CONDUITS HAVE BEEN PLACED. THE CONDUITS SHALL BE TIED DOWN TO HOLD THEM IN POSITION WHILE THE PEA GRAVEL CONCRETE IS POURED. THE PEA GRAVEL CONCRETE SHALL HAVE A SLUMP OF 4 TO 5 INCHES. THE CONCRETE DELIVERY CHUTE SHALL BE ADJUSTED SO THAT THE FALL OF THE PEA GRAVEL CONCRETE INTO THE TRENCH IS MINIMAL. A SPLASHBOARD SHALL BE USED TO DIVERT THE FLOW OF PEA GRAVEL CONCRETE AWAY FROM THE TRENCH SIDES TO AVOID DISLODGING SOIL AND STONES. PEA GRAVEL CONCRETE SHALL BE PLACED FROM ONE END OF THE DUCT SECTION TO THE OTHER END OF THE SECTION. CONTINUOUS SPADING SHALL BE DONE TO ENSURE A FLOW OF CONCRETE BETWEEN AND UNDER THE INDIVIDUAL CONDUITS. A LONG FLAT TOOL OR SPATULA SHALL BE WORKED CAREFULLY UP AND DOWN BETWEEN EACH VERTICAL LINE OF CONDUITS TO ELIMINATE ANY VOIDS. THE TOP OF THE PEA GRAVEL CONCRETE SHALL THEN BE SMOOTHED.
- H. AFTER THE CONCRETE HAS TAKEN ITS INITIAL SET, THE TRENCH CAN BE BACKFILLED.
- I. AFTER THE DUCTS ARE INSTALLED, A FLEXIBLE STEEL MANDREL NOT LESS THAN 12 INCHES LONG WITH A CROSS SECTION OF 4 3/4 INCHES (FITTED WITH A PULLING EYE AT EACH END) SHALL BE PULLED THROUGH EACH CONDUIT. BY WORKING THE MANDREL BACK AND FORTH, OBSTRUCTIONS SUCH AS CONCRETE WILL BE REMOVED. AFTER THE MANDREL HAS BEEN PULLED THROUGH, A STIFF 5-INCH CIRCULAR WIRE BRUSH AND A SWAB SHALL BE PULLED THROUGH THE CONDUITS TO REMOVE ANY OBJECTS, BITS OF CONCRETE, DIRT, ETC.
- J. **A 1/2-INCH P-LINE SHALL BE INSTALLED IN ALL CONDUITS.** ENDS OF THE CONDUIT SHALL BE SEALED IN AN APPROVED MANNER TO KEEP ALL MOISTURE AND FOREIGN MATERIALS OUT OF THE CONDUIT.

**ITEM SPECIAL - PRECAST CONCRETE ELECTRIC MANHOLE**

1. ELECTRIC MANHOLE MATERIALS

THE PRECAST CONCRETE ELECTRIC MANHOLES SHALL BE FURNISHED BY THE CONTRACTOR AND MEET THE FOLLOWING SPECIFICATIONS:

- A. THE MANHOLES SHALL BE AS MANUFACTURED BY UNITED PRECAST, NORWALK CONCRETE INDUSTRIES, INC., OR AN APPROVED EQUAL.
- B. THE MANHOLES SHALL BE MANUFACTURED IN ACCORDANCE WITH THE DETAILS SHOWN ON SHEET 23 AND 24 TITLED "AEP PRECAST ELECTRIC MANHOLE". **OPENINGS FOR CONDUIT PENETRATION SHALL BE FIELD CORED IN A NEAT, WORKMANLIKE MANNER BY THE CONTRACTOR, NO FACTORY KNOCK-OUTS.**
- C. THE MANHOLES SHALL HAVE OVERALL NOMINAL DIMENSIONS OF 8'-2" x 13'-2". DEPTH SHALL BE 7'-10" NOMINAL INSIDE DIMENSION.
- D. THE MANHOLES SHALL BE DESIGNED IN ACCORDANCE WITH AASHTO STANDARD HS-20-44 FOR TRUCK LOADING.
- E. THE TOP OPENING SHALL BE 38 INCHES IN DIAMETER AT THE GEOMETRIC CENTER OF THE TOP SLAB.
- F. THE MANHOLE FRAMES WITH HEAVY DUTY SOLID LIDS, SIMILAR TO NEENAH FOUNDRY CO., R-1753A, SHALL INSTALLED AT EACH TOP OPENING. CASTINGS TO BE FURNISHED BE AEP.
- G. PULLING EYES SHALL BE PROVIDED ON THE OPPOSITE SIDE OF EACH DUCT OPENING. PULLING EYES SHALL BE AS THAT MANUFACTURED BY LINE MATERIAL COMPANY, STYLE NO. DU 2T3, OR AN APPROVED EQUAL. PULLING EYES MUST BE PLATED BEHIND THE NUT TO PREVENT PULL-THROUGH.
- H. ALL CONCRETE USED IN CONSTRUCTION OF THE MANHOLES SHALL BE CLASS "C".
- I. UNLESS SPECIFIED BY AEP, PRECAST MANHOLES SHALL BE ORDERED WITHOUT WINDOWS, KNOCK-OUTS, BELL ENDS OR OTHER PROVISIONS FOR CONDUIT ENTRY.
- J. UNLESS SPECIFIED BY AEP, ENTRY OF CONDUITS INTO MANHOLES SHALL BE AT APPROXIMATELY THE LOCATIONS AND DEPTHS SHOWN ON THE DRAWINGS. CONDUIT ENTRY SHALL BE ACCOMPLISHED BY CORE-BORING OF HOLES AT APPROPRIATE LOCATIONS, IN THE FIELD, AFTER THE MANHOLE HAS BEEN INSTALLED IN ITS FINAL LOCATION. THE DIAMETER OF THE BORES SHALL BE CHOSEN TO ACCOMMODATE THE OUTSIDE DIAMETER OF THE INDIVIDUAL DUCTS WITHOUT INTERFERENCE, BUT WITH MINIMAL SPACE AROUND THE INDIVIDUAL DUCT ONCE IT IS IN PLACE. THE LOCATION OF THE BORES SHALL BE SUCH THAT THE FORMATION AND SPACING OF THE DUCT BANK IS MAINTAINED AND AS IS SHOWN ON THE DRAWINGS. ONCE ALL CONDUITS OF A BANK ARE IN PLACE IN THE MANHOLE, AND APPROPRIATE BELL ENDS HAVE BEEN INSTALLED, THE SPACE AROUND EACH INDIVIDUAL CONDUIT SHALL BE FILLED WITH NON-SHRINK GROUT.

2. INSTALLATION

- I. THE CONTRACTOR SHALL PROVIDE ALL EXCAVATION AND BACKFILL NECESSARY FOR MANHOLES AND UNDERGROUND CONDUIT DUCT INSTALLATIONS, INCLUDING ROCK EXCAVATION.
- J. EXCAVATION FOR MANHOLES SHALL EXTEND A MINIMUM OF 6 INCHES BELOW THE BOTTOM OF THEIR BASES OR AS NECESSARY FOR PROPER INSTALLATION OF DRAINAGE AND THE COMPLETION OF THE WORK. NO. 8 AGGREGATE OR SIMILAR DRAINAGE MEDIUM SHALL BE PLACED UNDER THE MANHOLES.
- K. THE TOP OF THE PRECAST STRUCTURE SHALL BE AT LEAST 30" BELOW EXISTING/PROPOSED GROUND. IF THE BOX IS LOCATED IN A SLOPED AREA THE MINIMUM DEPTH WILL BE MEASURED FROM THE LOWEST GROUND POINT ABOVE THE STRUCTURE.
- L. AFTER THE MANHOLES ARE SET AND CONDUITS ARE INSTALLED, BACKFILL SHALL BE BROUGHT TO PROPERTY LEVEL AND SHALL BE COMPACTED IN ACCORDANCE WITH ODOT ITEM 604, SECTION 604.04 OF THE "CONSTRUCTION AND MATERIAL SPECIFICATIONS." BACKFILL SHALL BE BROUGHT TO THE BOTTOM OF THE PROPOSED PAVING BASE IN PAVED AREAS. RESTORATION OF THE SURFACE SHALL BE AS DETAILED ON THE PLANS AND SHALL BE IN KIND WITH THE SURROUNDING MATERIALS (SOD, GRAVEL, ETC.).
- E. WORK SHALL BE PLANNED SO THAT EXCAVATIONS ARE OPEN FOR A MINIMUM OF TIME. NO LOAD OR BACKFILL SHALL BE APPLIED OR OTHER WORK CONDUCTED THAT WOULD DAMAGE THE NEW CONCRETE OR INTERFERE WITH CURING.
- F. ALL OPEN TRENCHES SHALL BE BARRICADED AND PROPERLY PROTECTED.
- G. AFTER MANHOLES ARE PLACED, THE MANHOLE COVER FRAMES SHALL BE PLACED AND THE TOP ADJUSTED TO GROUND OR PAVING LEVEL. FINAL ADJUSTMENTS WILL BE REQUIRED FOR FINAL RESURFACING. A 6-INCH THICK CONCRETE OR BRICK ADJUSTING RING SHALL BE PROVIDED TO ENSURE CLOSURE BETWEEN THE TOP SLAB OF THE MANHOLE AND THE FRAME.

3. BASIS OF PAYMENT

THE WORK INCLUDED IN THESE ITEMS, INCLUDING SOIL AND ROCK EXCAVATION, EMBANKMENT, BACKFILL, AND ALL EQUIPMENT AND MATERIALS NECESSARY, SHALL BE PAID FOR AT THE CONTRACT PRICE, COMPLETED IN PLACE.

**BURGESS & NIPLÉ**

5085 REED ROAD  
COLUMBUS, OHIO 43220

CITY OF DUBLIN, OHIO  
FRANTZ ROAD UTILITY BURIAL  
RINGS ROAD TO METRO PLACE NORTH  
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<b>APPROVED BY:</b>	JED
<b>SCALE:</b>	NONE

GENERAL NOTES

**AEP MATRIX FOR RESPONSIBILITIES**

ITEM	FURNISHED BY	INSTALLED BY
SWITCH BOX AND PAD	AEP	CONTRACTOR
SWITCH	AEP	AEP
1-PHASE TRANSF. PAD (FIBERGLASS)	AEP	AEP
1-PHASE TRANSFORMER	AEP	AEP
3-PHASE TRANSF. PAD (CONCRETE)	CONTRACTOR	CONTRACTOR
3-PHASE TRANSFORMER	AEP	AEP
DUCT	CONTRACTOR	CONTRACTOR
CABLE	AEP	AEP
MANHOLE (CONCRETE)	CONTRACTOR	CONTRACTOR

**ITEM SPECIAL - FIBERGLASS SWITCH PAD INSTALLATION**

THE CONTRACTOR SHALL INSTALL AN AEP FURNISHED BOX AND PAD AT THE LOCATIONS SHOWN ON THE PLANS FOR EACH SWITCH PRIOR TO BACKFILLING THE CONDUIT TRENCH.

THE COST FOR INSTALLATION OF THE AEP FURNISHED SWITCH BOX AND PAD, INCLUDING ALL EXCAVATION, BACKFILL, EMBANKMENT, AND CONNECTION OF DUCT, WILL BE PAID AT THE UNIT PRICE BID PER EACH INSTALLED, COMPLETE, AND READY FOR INSTALLATION OF THE SWITCH AND CABLE BY AEP.

**TWC UTILITY CONDUIT**

1. MATERIALS

- A. CONDUIT - NONMETALLIC CONDUIT SHALL BE SCHEDULE 40 POLYVINYL CHLORIDE (PVC) AS MANUFACTURED BY OSBURN ASSOCIATES, OR APPROVED EQUAL. THEY SHALL BE DESIGNED TO FORM SOUND, STRONG DUCT, FREE FROM DEFECTS. THE INSIDE SURFACE OF THE CONDUIT SHALL BE SMOOTH, ROUND, AND HAVE A 4-INCH NOMINAL INSIDE DIAMETER.
- B. COUPLINGS - THE COUPLINGS SHALL BE OF THE SAME MATERIAL AS THE CONDUIT AND SHALL BE SUFFICIENTLY TIGHT TO PREVENT SILT OR CONCRETE FROM ENTERING THE CONDUIT.
- C. SPACERS - CONDUIT SHALL BE SUPPORTED AND SEPARATED BY CONDUIT BRACKETS AS MANUFACTURED BY OSBURN ASSOCIATES, PART NOS. 5120, 5121, 5150, OR 5151, OR APPROVED EQUAL.

2. INSTALLATION

- A. THE CONDUIT SHALL BE INSTALLED AS SHOWN ON THE PLANS.
- B. EXCAVATION FOR THE UNDERGROUND CONDUIT DUCTS SHALL EXTEND TO THE PROFILE OF THE LOWER SIDE OF THE CONDUIT ENCASEMENT, EXCEPT WHERE SPECIFIED IN THE PLANS OR DIRECTED BY THE ENGINEER. THE DUCTS SHALL HAVE A **MINIMUM DEPTH OF COVER OF 30 INCHES** TO FINISHED GRADE. THE PROFILE BETWEEN STRUCTURES SHALL BE SET SO THAT THE CONDUITS ARE LEVEL OR SLOPED TO THE NEXT STRUCTURE. WHERE CONDUITS ENTER A STRUCTURE AT A LOWER LEVEL THAN THE APPROACHING PROFILE OF THE CONDUIT, THE CONDUIT SHALL BE SLOPED DOWN TO THE STRUCTURE AT A RATE NOT-TO-EXCEED 5 PERCENT.
- C. THE TRENCH SHALL BE EXCAVATED SO THAT ANY CURVE RADIUS WILL BE AS LARGE AS POSSIBLE (5 FOOT RADIUS MINIMUM). THE TRENCH SHALL BE EXCAVATED NO WIDER THAN NECESSARY TO ACCOMMODATE THE CONDUIT AND GRANULAR BACKFILL AS SHOWN ON THE DETAILS. THE BOTTOM OF THE TRENCH SHALL BE UNDISTURBED, TAMPED, AND RELATIVELY SMOOTH EARTH. TRENCHES WHICH HAVE BEEN EXCAVATED TOO DEEP AT ANY POINT ARE TO BE PARTIALLY REFILLED AND TAMPED SOLID. THE SIDES OF THE TRENCH SHALL BE TRIMMED SMOOTH TO PROVIDE FOR A UNIFORM SHEATH OF GRANULAR BACKFILL AROUND THE CONDUITS AS REQUIRED.
- D. WHERE A CONDUIT CROSSES A SEWER OR WATERLINE, OR ANY OTHER UNDERGROUND UTILITY, THE CLEARANCE BETWEEN THEM SHALL BE LARGE ENOUGH TO PERMIT MAINTENANCE OF THE SYSTEM WITHOUT DAMAGE TO THE STRUCTURES. THE MINIMUM CLEARANCE SHALL BE DETERMINED BY THE UTILITIES INVOLVED. A SUITABLE SUPPORT, ON EACH SIDE OF THE STRUCTURE, SHALL BE CONSTRUCTED TO AVOID TRANSFERRING ANY DIRECT LOAD ONTO THE STRUCTURE.
- E. THE CONDUIT RUNS SHALL BE AS STRAIGHT AS POSSIBLE. FIVE DEGREE ANGLE COUPLINGS OR COMBINATIONS OF 5-DEGREE ANGLE COUPLINGS WITH STRAIGHT SECTIONS OF CONDUIT ARE RECOMMENDED TO NEGOTIATE CURVES. ANY FIELD BENDING OF CONDUIT SHALL BE DONE USING THE MANUFACTURER'S RECOMMENDED EQUIPMENT AND PROCEDURES.
- F. PRECAST PLASTIC BASE AND CONDUIT BRACKETS SHALL BE PLACED AT 5-FOOT INTERVALS THAT SHALL SEPARATE THE CONDUITS A MINIMUM OF 2 INCHES APART AND PROVIDE A 3-INCH MINIMUM OUTSIDE ENCASEMENT. BURRS ON THE ENDS OF THE CONDUIT, AS A RESULT OF SAWING, MUST BE REMOVED PRIOR TO COMPLETING A JOINT. JOINTS SHALL FORM A CONTINUOUS SMOOTH INTERIOR SURFACE BETWEEN CONDUIT SECTIONS SO THAT THE CABLE WILL NOT BE DAMAGED WHEN PULLING PAST THE JOINT. SURFACES TO BE JOINED SHALL BE CLEAN AND FREE FROM DIRT, FOREIGN MATERIALS, AND MOISTURE. THE JOINTS SHALL BE SEALED WITH PROPER CEMENT SPECIFIED BY THE CONDUIT MANUFACTURER. THE CONDUITS SHALL BE TIED TOGETHER WITH HEAVY CORD SO AS TO SECURELY HOLD THE CONDUITS IN PLACE. THE OPEN ENDS OF THE CONDUITS SHALL BE CLOSED WITH TIGHT FITTING PLUGS TO PREVENT MUD OR OTHER FOREIGN MATERIAL FROM GETTING INTO THE CONDUIT. AFTER THE CONDUIT IS PLACED, IT MUST BE INSPECTED BY TIME WARNER BEFORE PLACEMENT OF GRANULAR BACKFILL.
- G. THE GRANULAR BACKFILL SHALL BE PLACED AS SOON AS POSSIBLE AFTER THE CONDUITS HAVE BEEN INSTALLED AND INSPECTED. CONDUITS SHALL BE TIED DOWN TO HOLD THEM IN POSITION WHILE THE GRANULAR BACKFILL IS PLACED AND COMPACTED. GRANULAR BACKFILL SHALL BE SIFTED AROUND AND BETWEEN THE CONDUIT AT A RATE THAT ALLOWS FOR COMPLETE FILLING OF VOIDS. THE COST OF GRANULAR BACKFILL SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAL FOOT FOR TRENCH, TYPES 1, 2, 3, OR 4. THE CONTRACTOR MAY SUBSTITUTE CONTROLLED DENSITY FILL PER CITY OF COLUMBUS ITEM 613, TYPE 2 AT NO ADDITIONAL COST.

- H. AFTER THE DUCTS ARE INSTALLED, A FLEXIBLE STEEL MANDREL NOT LESS THAN 12 INCHES LONG WITH A CROSS SECTION OF 3 3/4 INCHES (FITTED WITH A PULLING EYE AT EACH END) SHALL BE PULLED THROUGH EACH CONDUIT TO INSURE CLEANLINESS AND CONTINUITY. BY WORKING THE MANDREL BACK AND FORTH, OBSTRUCTIONS SUCH AS CONCRETE MUST BE REMOVED. AFTER THE MANDREL HAS BEEN PULLED THROUGH, A STIFF 4-INCH CIRCULAR WIRE BRUSH AND A SWAB SHALL BE PULLED THROUGH THE CONDUITS TO REMOVE ANY FOREIGN OBJECTS, BITS OF CONCRETE, DIRT, ETC.
- I. A 1/4-INCH BRAIDED NYLON PULLING ROPE SHALL BE INSTALLED IN ALL SPARE CONDUITS. ENDS OF THE CONDUIT SHALL BE SEALED IN AN APPROVED MANNER TO KEEP ALL MOISTURE AND FOREIGN MATERIALS OUT OF THE CONDUIT.
- J. AT "PULL-UP" LOCATIONS, 12 INCHES OF CONDUIT SHALL BE EXPOSED ABOVE FINISHED GRADE AND SEALED WITH A 4-INCH CAP.
- K. CONDUIT ONLY SHALL BE INSTALLED BY THE CONTRACTOR TO THE LOCATIONS SHOWN FOR THE POWER SUPPLY AND AMPLIFIER. FOUNDATIONS, PADS, AND EQUIPMENT FOR THE POWER SUPPLY AND AMPLIFIER WILL BE CONSTRUCTED BY TWC.
- L. THE CONTRACTOR MUST COORDINATE THE TERMINATION OF ALL CONDUITS FOR EQUIPMENT AND RISERS WITH TWC. THE COST OF COORDINATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE CONDUIT ITEM.

**ITEM SPECIAL - PRIMARY AND DISTRIBUTION VAULTS (INSTALLATION ONLY)**

- A. THE CONTRACTOR SHALL INSTALL THE PRIMARY AND DISTRIBUTION VAULTS WHERE SHOWN ON THE PLANS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER AND TIME WARNER CABLE (TWC). POLYMER CONCRETE BOXES AND COVER ASSEMBLIES, AS MANUFACTURED BY ARMORCAST, OR EQUAL, WILL BE FURNISHED BY TWC.
- B. THE POLYMER CONCRETE BOXES FURNISHED WILL MEASURE 30"x 48"x 36" FOR PRIMARY VAULTS, AND 24"x 36"x 24" FOR DISTRIBUTION VAULTS.
- C. THE COST FOR INSTALLATION OF PRIMARY AND DISTRIBUTION VAULTS, FURNISHED BY TWC, WILL BE PAID AT THE UNIT PRICE BID PER EACH INSTALLED, COMPLETE, AND READY FOR INSTALLATION OF CABLE, INCLUDING ALL EXCAVATION, BACKFILL, EMBANKMENT, AND CONNECTION OF DUCT. ALL CABLE WILL BE INSTALLED BY TWC.

**TWC MATRIX FOR RESPONSIBILITIES**

ITEM	FURNISHED BY	INSTALLED BY
PRIMARY VAULT	TWC	CONTRACTOR
DISTRIBUTION VAULT	TWC	CONTRACTOR
MANHOLE (CONCRETE)	NOT USED	NOT USED
POWER SUPPLY	TWC	TWC
AMPLIFIER	TWC	TWC
DUCT	CONTRACTOR	CONTRACTOR
CABLE	TWC	TWC

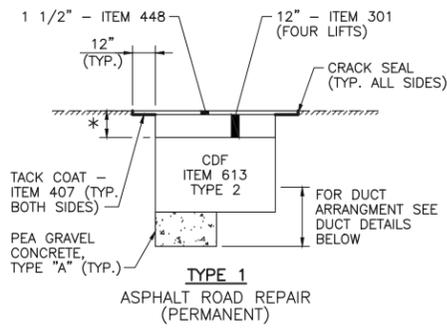
**BURGESS & NIPLÉ**  
5085 REED ROAD  
COLUMBUS, OHIO 43220

CITY OF DUBLIN, OHIO  
FRANTZ ROAD UTILITY BURIAL  
RINGS ROAD TO METRO PLACE NORTH  
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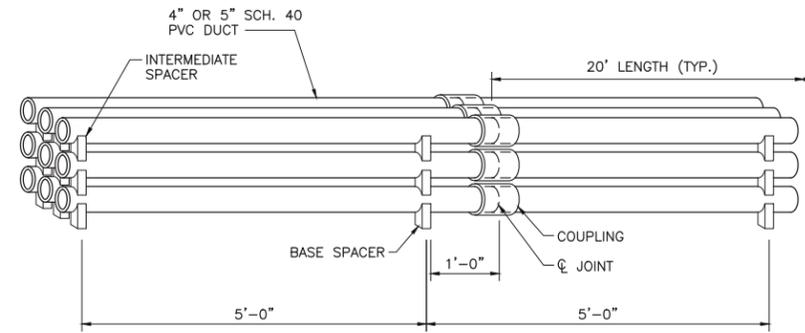
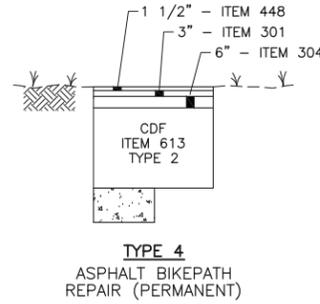
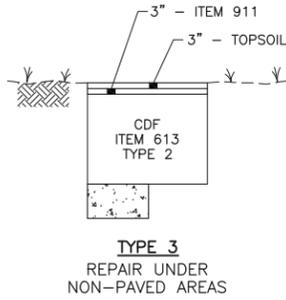
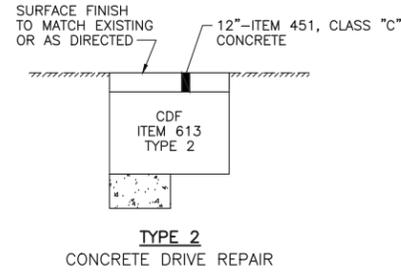
NO.	DESCRIPTION	DATE

JOB NO: PR50708  
DATE: OCT. 2014  
DESIGNED BY: WHW  
DRAWN BY: WHW  
CHECKED BY: JED  
APPROVED BY: JED  
SCALE: NONE

GENERAL NOTES

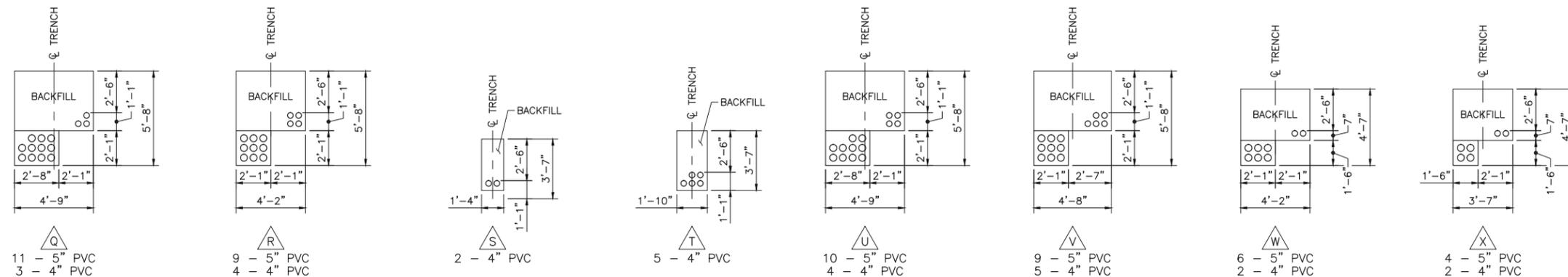
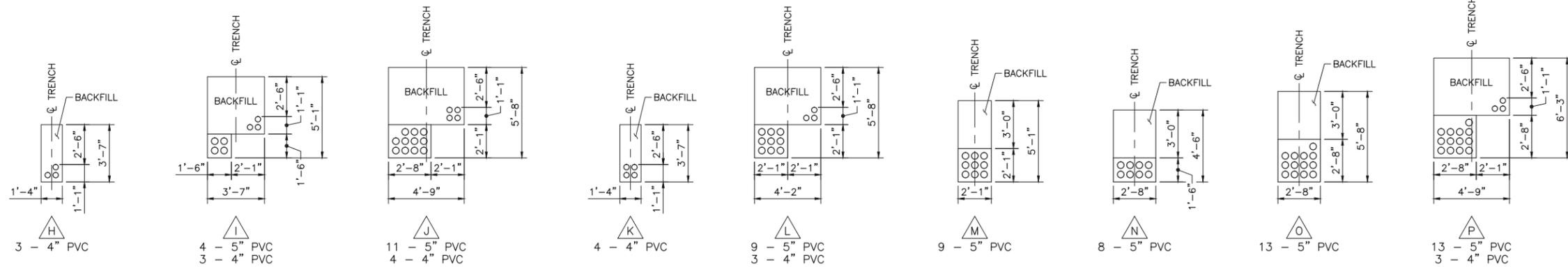
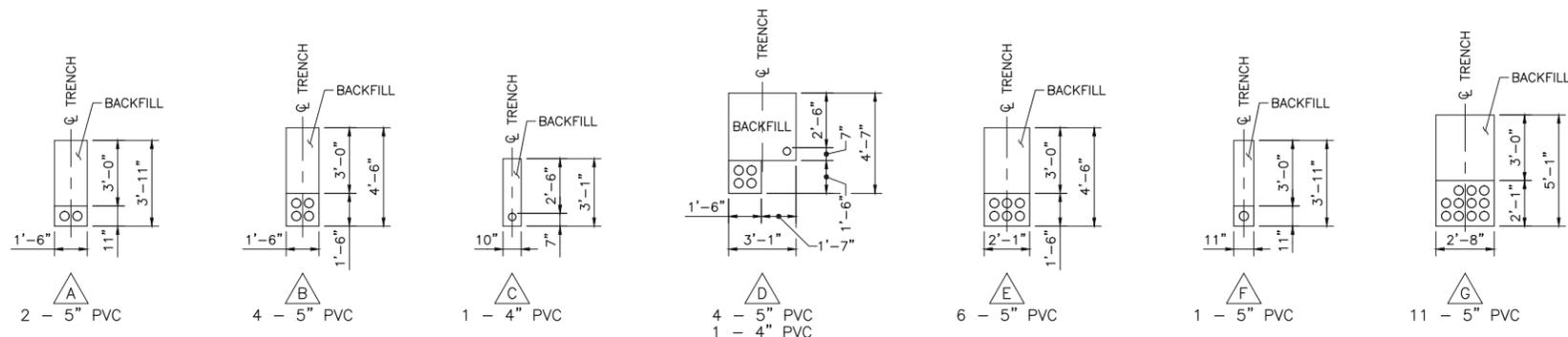


\* 13 1/2" MIN. THICKNESS (OR MATCH EXISTING)



DUCT STACKING DETAIL  
NOT TO SCALE - FOR INFORMATION ONLY

TRENCH AND SURFACE RESTORATION DETAILS



NOTES

**TRENCH.** ALL 5" PVC DUCT (AEP) SHALL HAVE A 2" MIN. SEPARATION, A 3" MIN. ENVELOPE, AND BE ENCASED IN PEA GRAVEL CONCRETE, CLASS "A". SPACING FOR 4" PVC DUCT SHALL BE THE SAME BUT WITHOUT CONCRETE ENCASEMENT.

THE CONTRACTOR SHALL NOT USE ANY RECLAIMED MATERIALS IN ITEM 304.

**DRIVEWAY REPLACEMENT (OTHER THAN MILLENNIUM).** WHERE TRENCHES FOR DUCT CROSS EXISTING CONCRETE DRIVE APRONS, OTHER THAN MILLENNIUM, THE APRON SHALL BE REMOVED AND REPLACED FULL WIDTH FROM THE BACK OF CURB TO THE FIRST EXISTING JOINT WEST OF THE TRENCH (MINIMUM ONE FOOT FROM THE TRENCH). NEW CONCRETE DRIVEWAY PAVEMENT SHALL CONSIST OF 12-INCHES OF ITEM 451, CLASS "C" CONCRETE. FINAL DRIVE WIDTH, GRADES, AND RADIUS RETURNS SHALL MATCH THOSE EXISTING PRIOR TO CONSTRUCTION. THE DRIVEWAY AT MILLENNIUM SHALL BE RECONSTRUCTED TO THE LINES AND GRADES DETAILED ON SHEET 26.

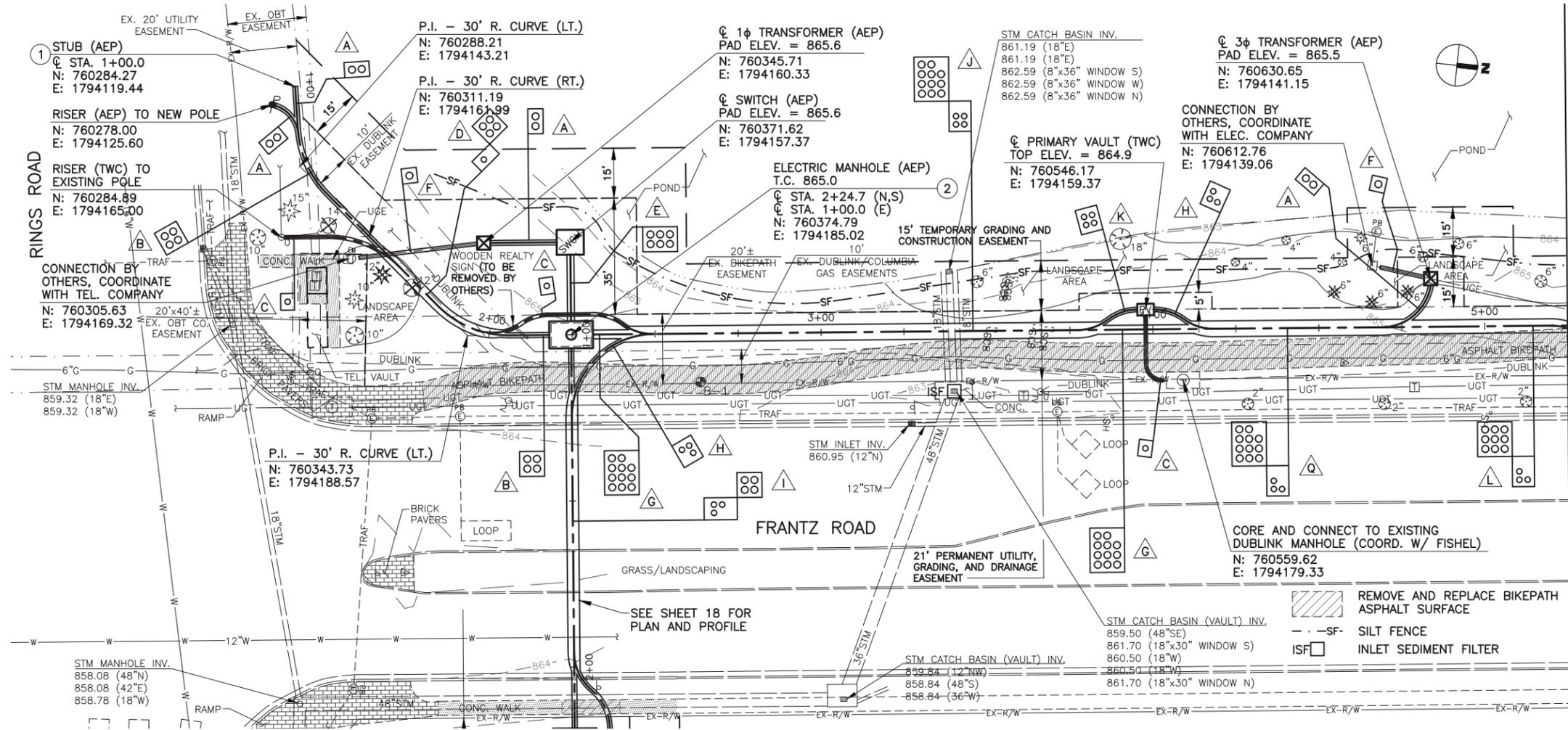
THE COST FOR ALL CONCRETE DRIVEWAY REPLACEMENT, INCLUDING MILLENNIUM, WILL BE PAID AT THE UNIT PRICE BID PER SQUARE YARD (EXCLUDING TRENCH) FOR ITEM SPECIAL - CONCRETE DRIVEWAY (12") - COMMERCIAL (EXCLUDES TRENCH), INCLUDING PREPARATION OF SUBGRADE, BASE, SURFACING, FINISHING, AND JOINTING. REMOVAL OF EXISTING CONCRETE PAVEMENT WILL BE PAID UNDER ITEM 202. REMOVAL OF ASPHALT DRIVEWAY PAVEMENT AT MILLENNIUM WILL BE PAID PER CUBIC YARD UNDER ITEM 203 - EXCAVATION. THE COST FOR SAWCUTTING SHALL BE INCLUDED IN THE RELATED ITEMS. NO SEPARATE PAYMENT.

POWER AND COMMUNICATION DUCT TRENCH DETAILS

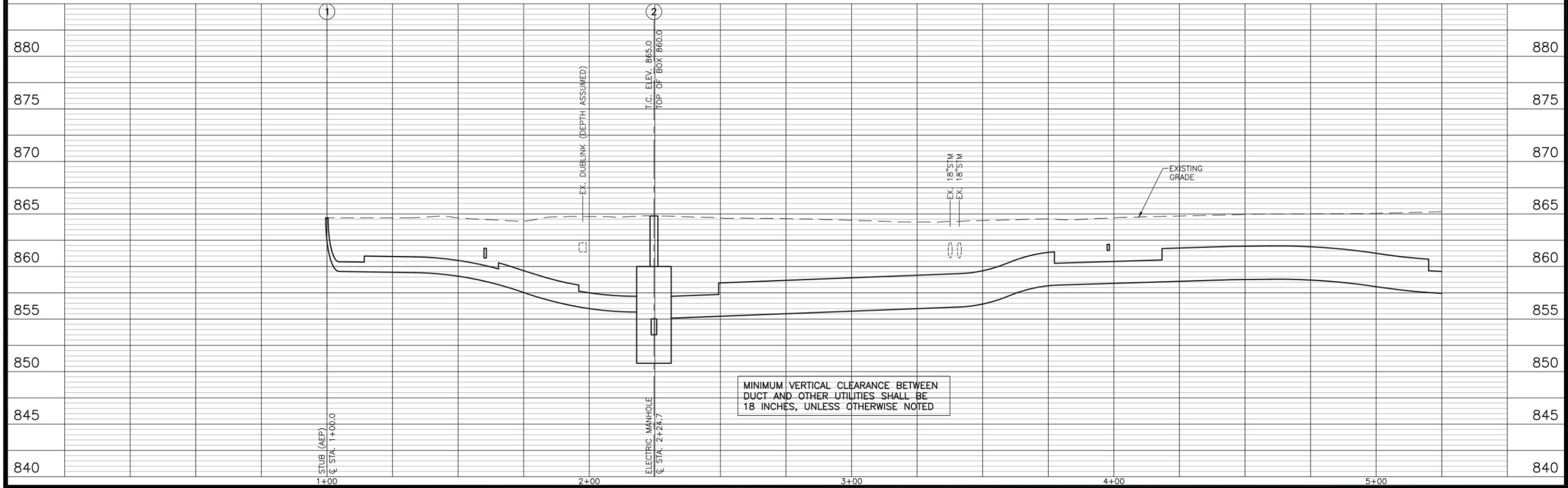
NO.	DESCRIPTION	DATE

<b>JOB NO:</b>	PR50708
<b>DATE:</b>	OCT. 2014
<b>DESIGNED BY:</b>	WHW
<b>DRAWN BY:</b>	WHW
<b>CHECKED BY:</b>	JED
<b>APPROVED BY:</b>	JED
<b>SCALE:</b>	NONE

UTILITY CONDITION  
TRENCH DETAILS



MATCH LINE @ STA. 5+25



MINIMUM VERTICAL CLEARANCE BETWEEN DUCT AND OTHER UTILITIES SHALL BE 18 INCHES, UNLESS OTHERWISE NOTED

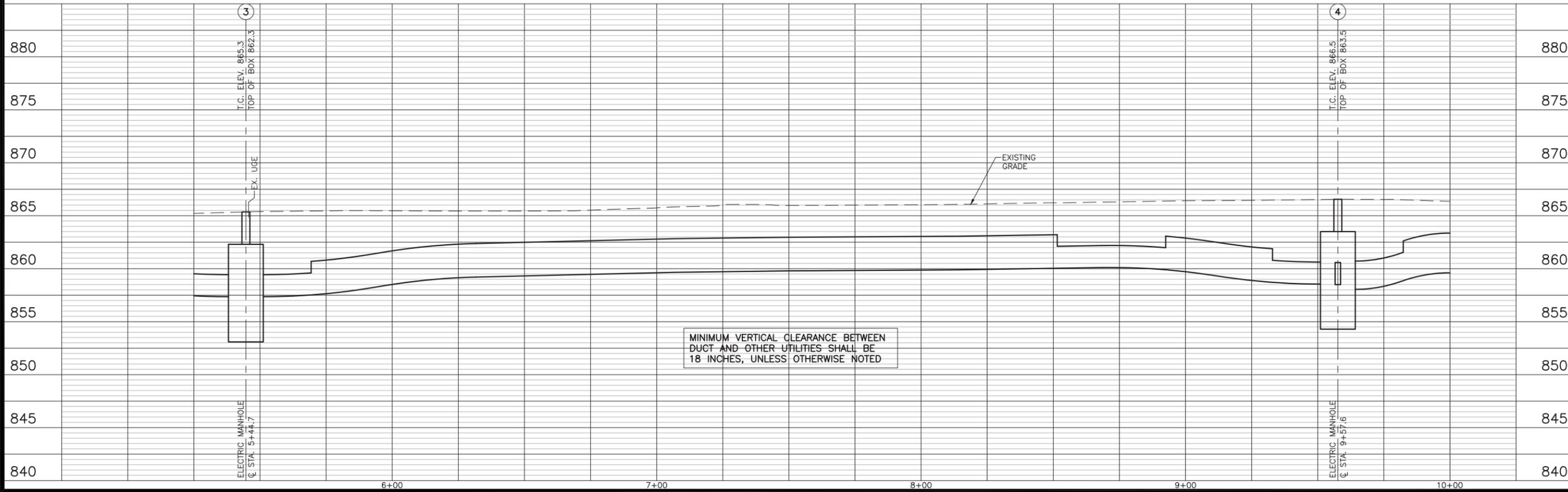
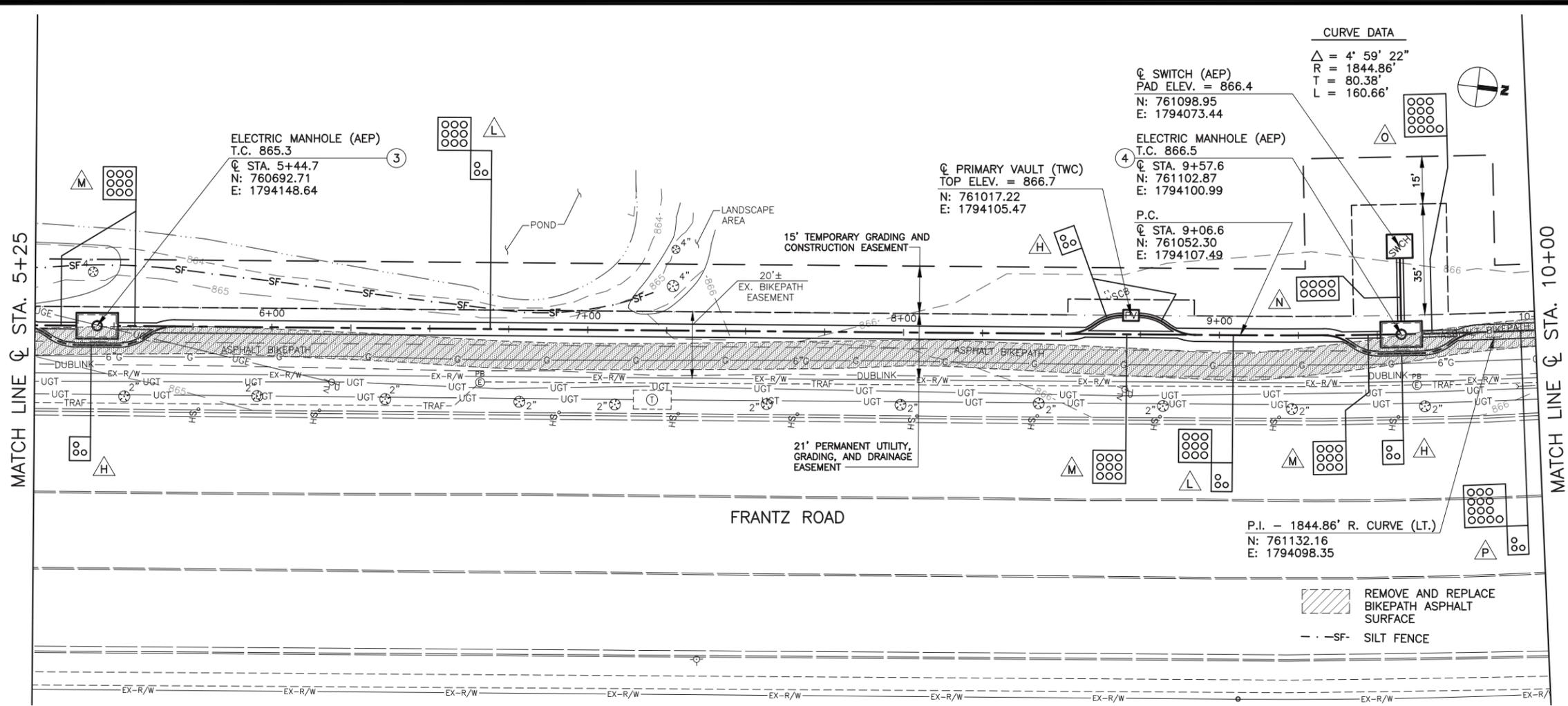
**BURGESS & NIPLÉ**  
5085 REED ROAD  
COLUMBUS, OHIO 43220

CITY OF DUBLIN, OHIO  
FRANTZ ROAD UTILITY CORRIAL  
RINGS ROAD TO METRO PLACE NORTH  
11-021 - CIP

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SCALE: 1"=20' H  
 1"=5' V  
 PLAN AND PROFILE  
 @ STA. 1+00 TO  
 @ STA. 5+25



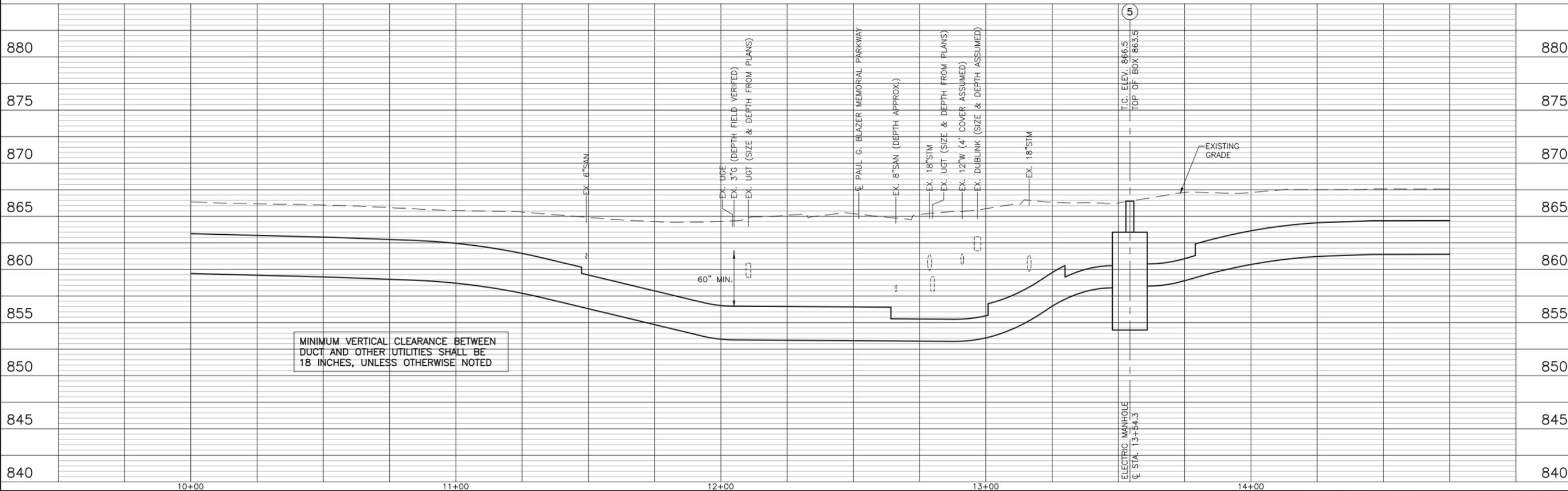
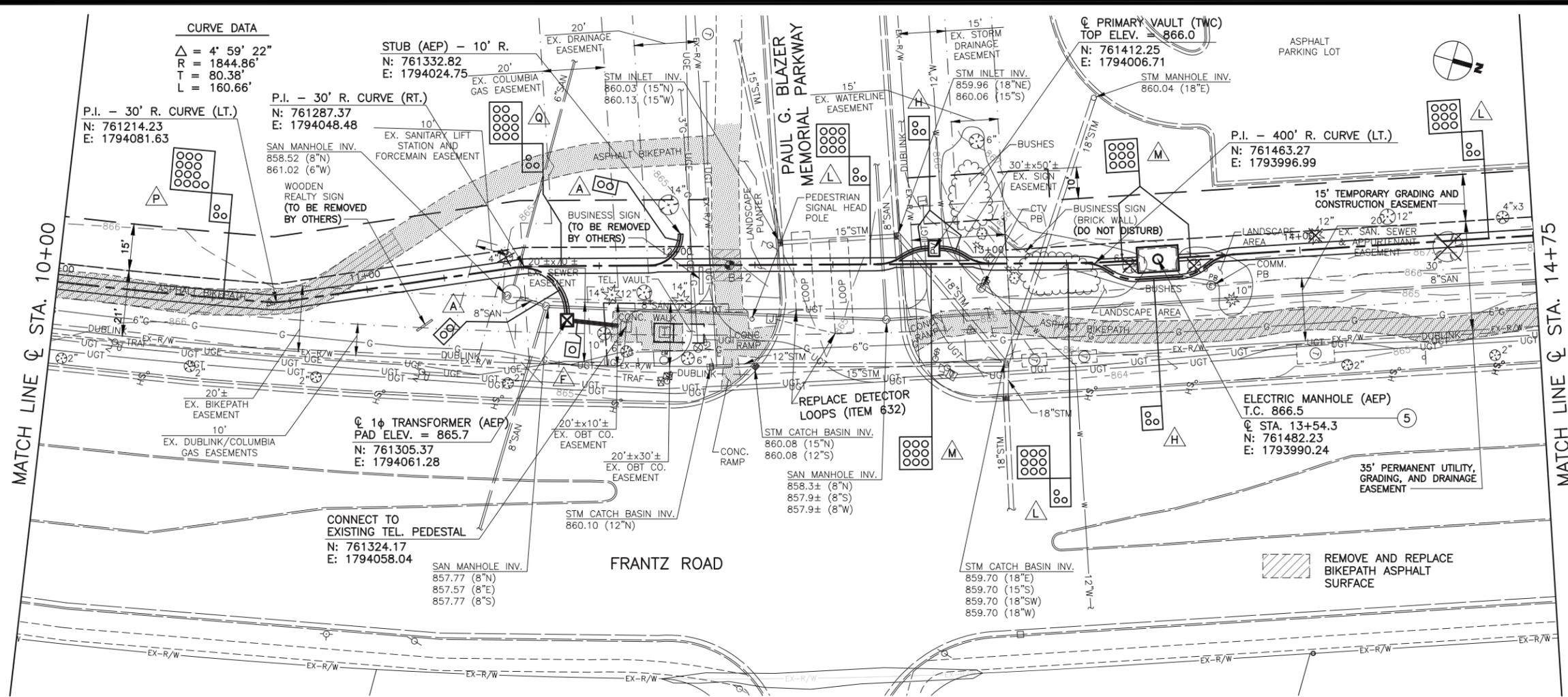
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 FRANTZ ROAD UTILITY SERIAL  
 RINOS ROAD TO METRO PLACE NORTH  
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SCALE: 1" = 20' H  
 1" = 5' V  
 PLAN AND PROFILE  
 @ STA. 5+25 TO  
 @ STA. 10+00



MINIMUM VERTICAL CLEARANCE BETWEEN DUCT AND OTHER UTILITIES SHALL BE 18 INCHES, UNLESS OTHERWISE NOTED

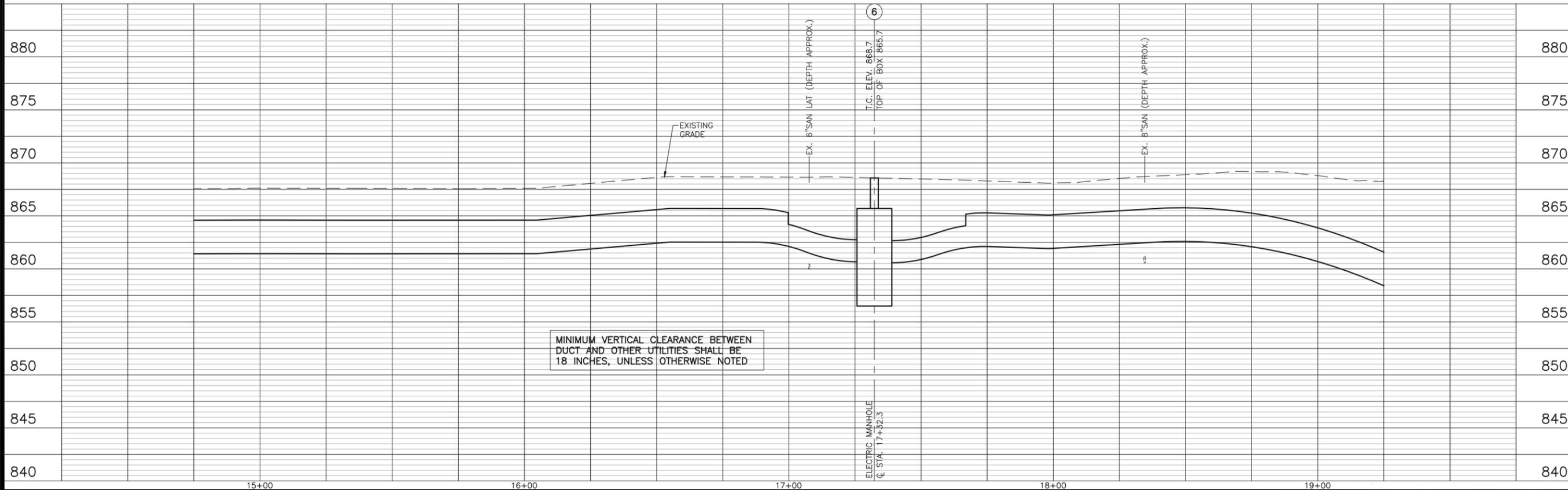
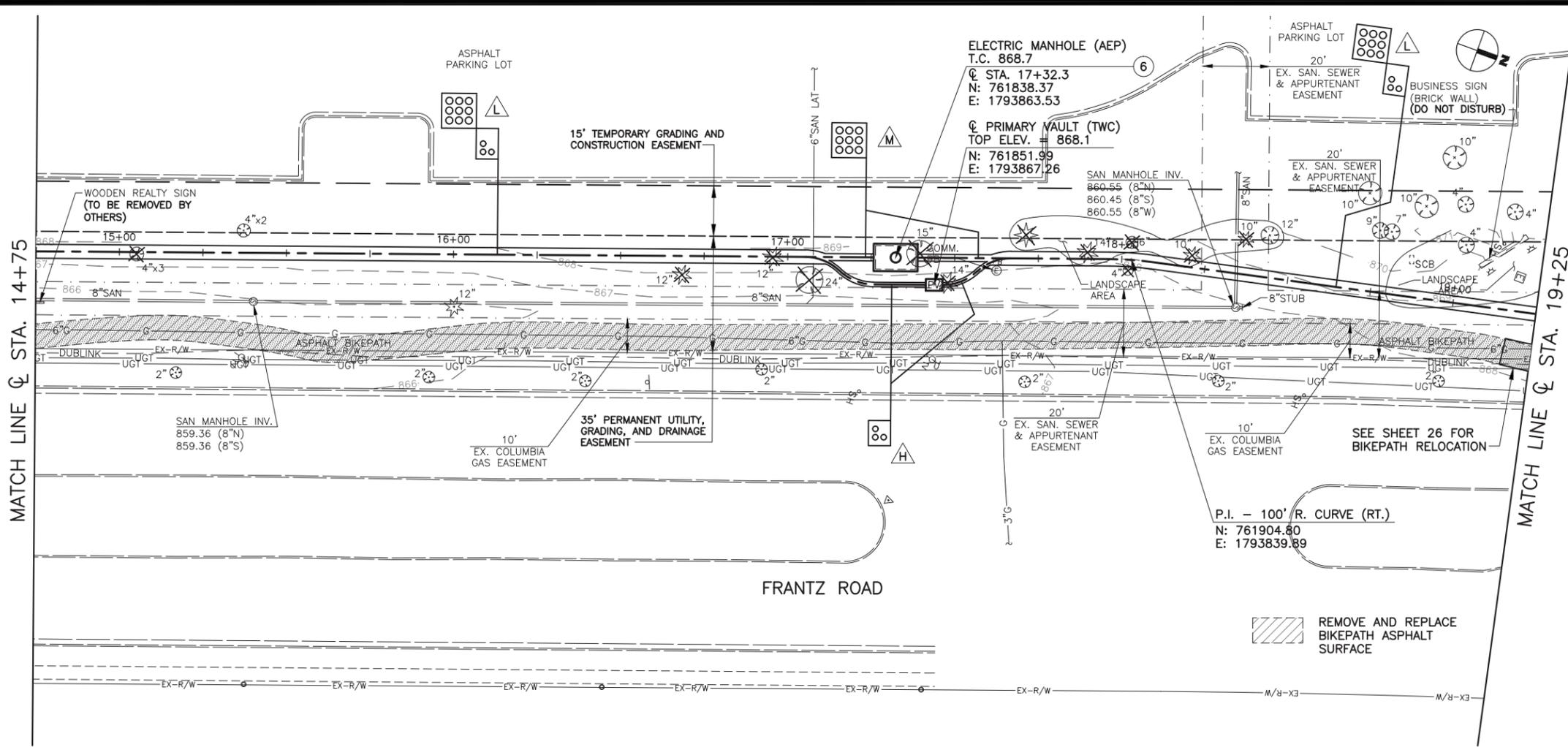
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1"=5' P  
PLAN AND PROFILE  
@ STA. 10+00 TO  
@ STA. 14+75



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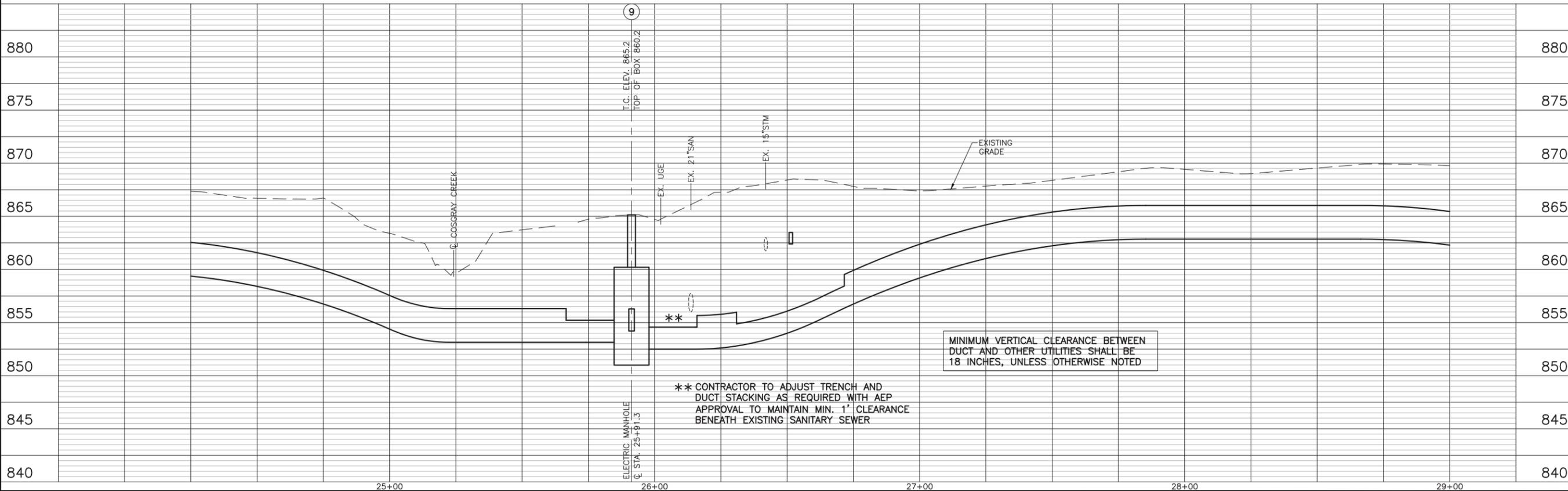
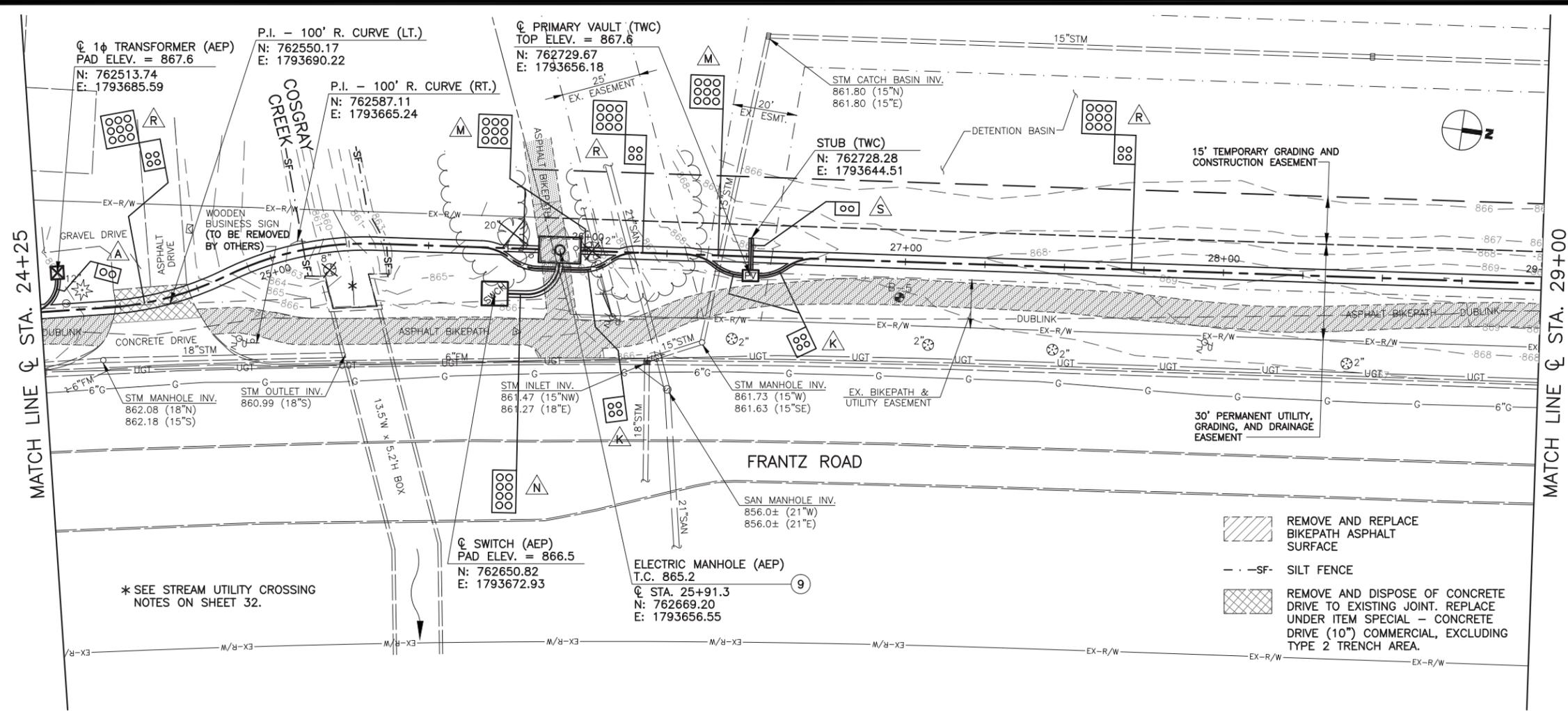
CITY OF DUBLIN, OHIO  
 FRANTZ ROAD UTILITY TRIAL  
 RINOS ROAD TO METRO PLACE NORTH  
 11-021 - CIP

NO.	DESCRIPTION	DATE

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 APPROVED BY: JED

SCALE: 1" = 20' H  
 1" = 5' P  
 PLAN AND PROFILE  
 Q STA. 14+75 TO  
 Q STA. 19+25





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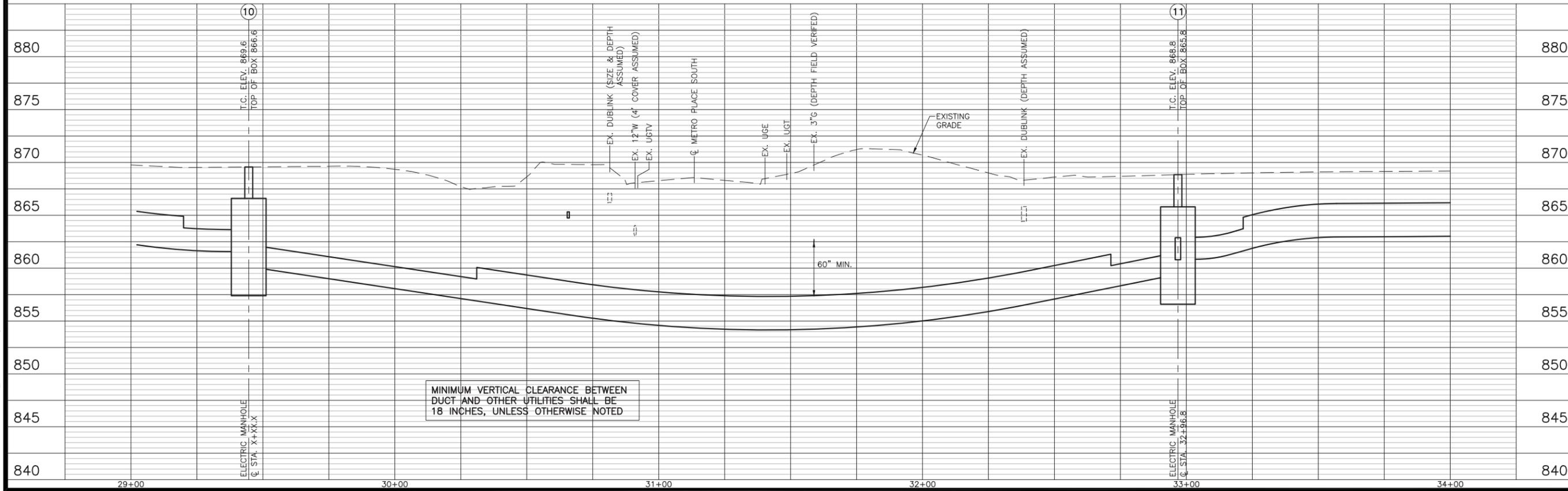
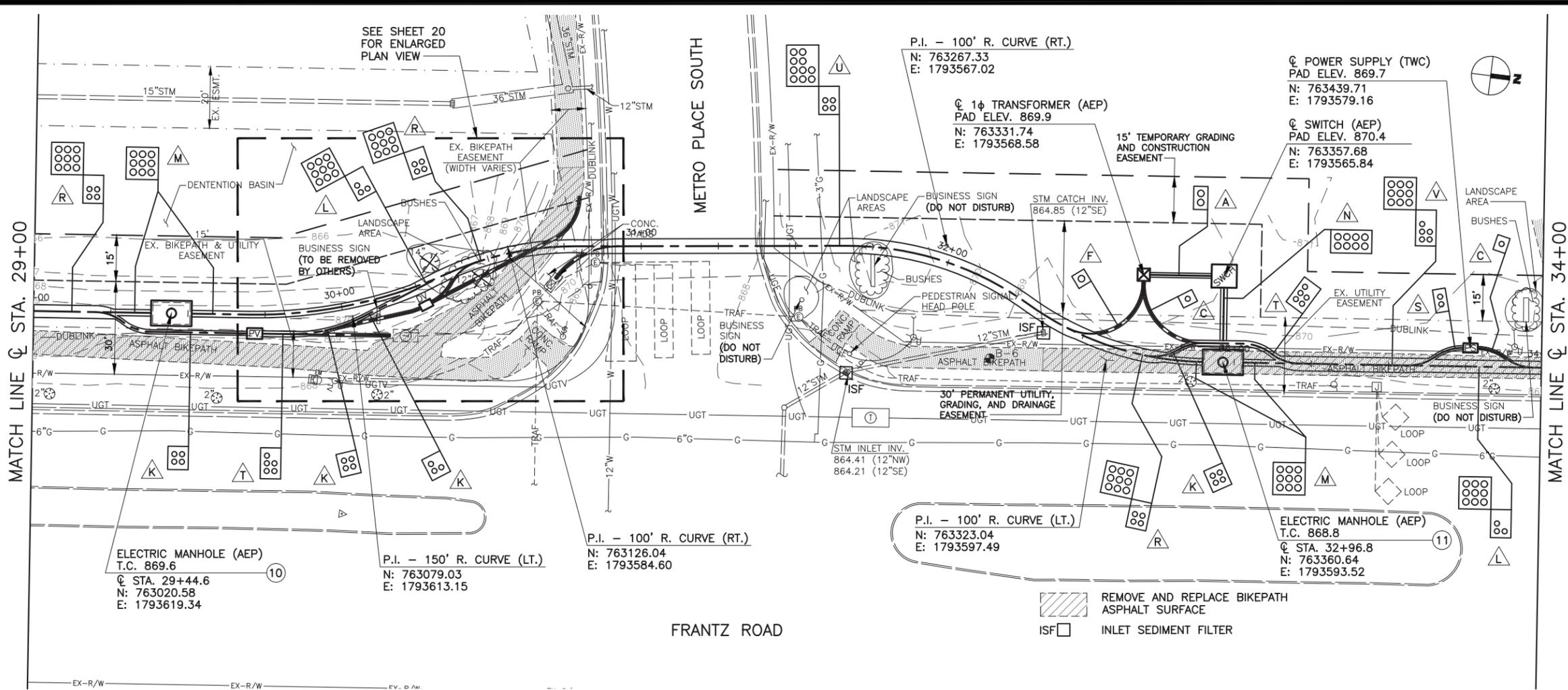
CITY OF DUBLIN, OHIO  
 FRANTZ ROAD UTILITY BURIAL  
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 11-021 - CIP

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SCALE: 1"=20'H  
 1"=5'

PLAN AND PROFILE  
 @ STA. 24+35 TO  
 @ STA. 29+00



MINIMUM VERTICAL CLEARANCE BETWEEN DUCT AND OTHER UTILITIES SHALL BE 18 INCHES, UNLESS OTHERWISE NOTED

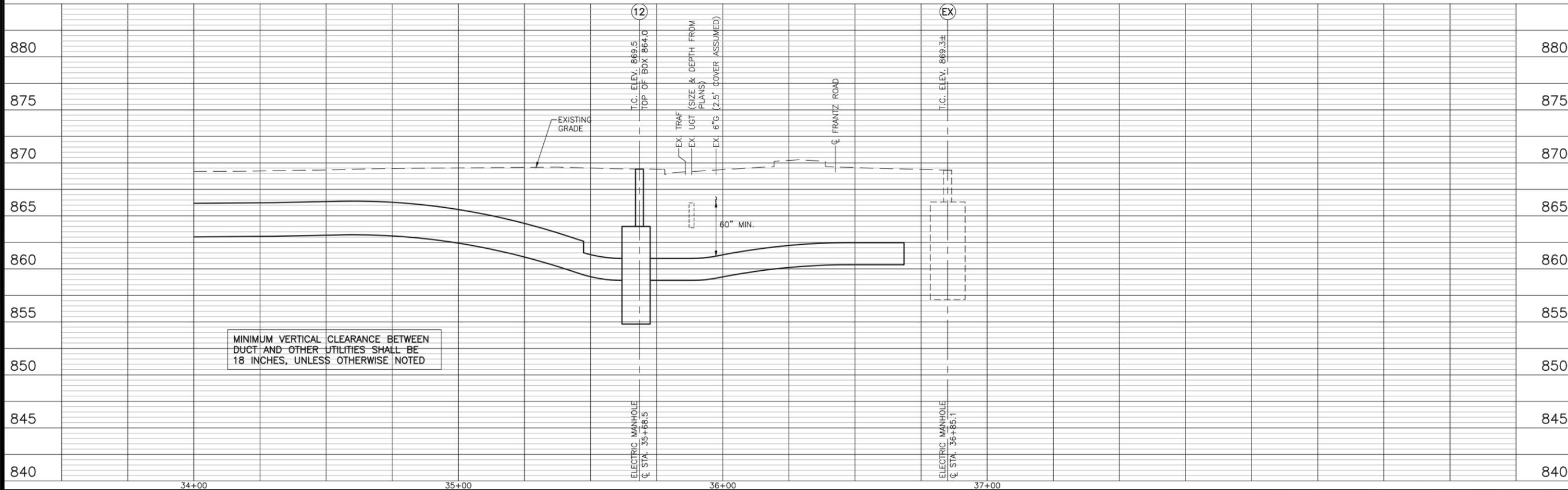
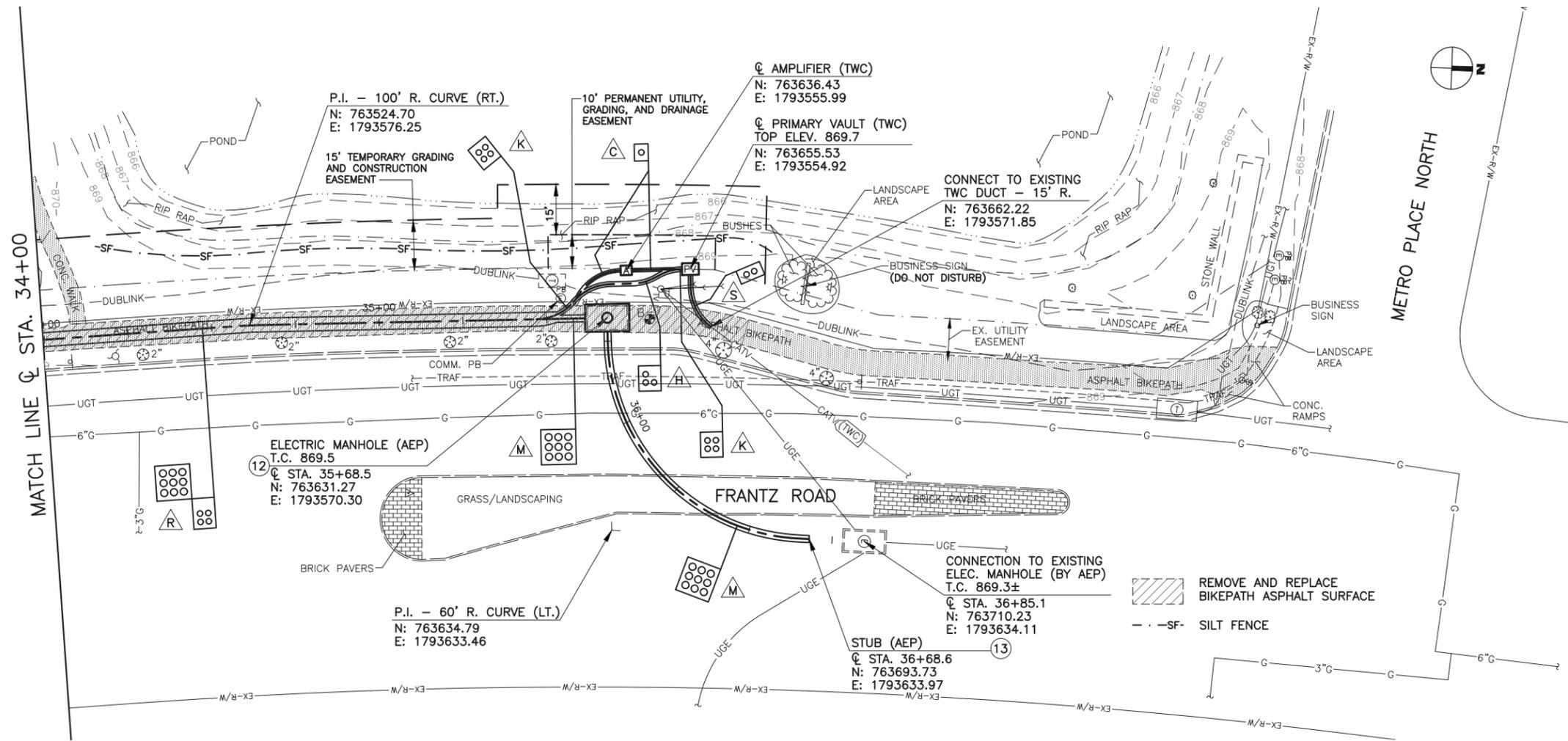
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FRANTZ ROAD UTILITY BURIAL  
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SCALE: 1"=20'H  
1"=5' □  
PLAN AND PROFILE  
@ STA. 29+00 TO  
@ STA. 34+00



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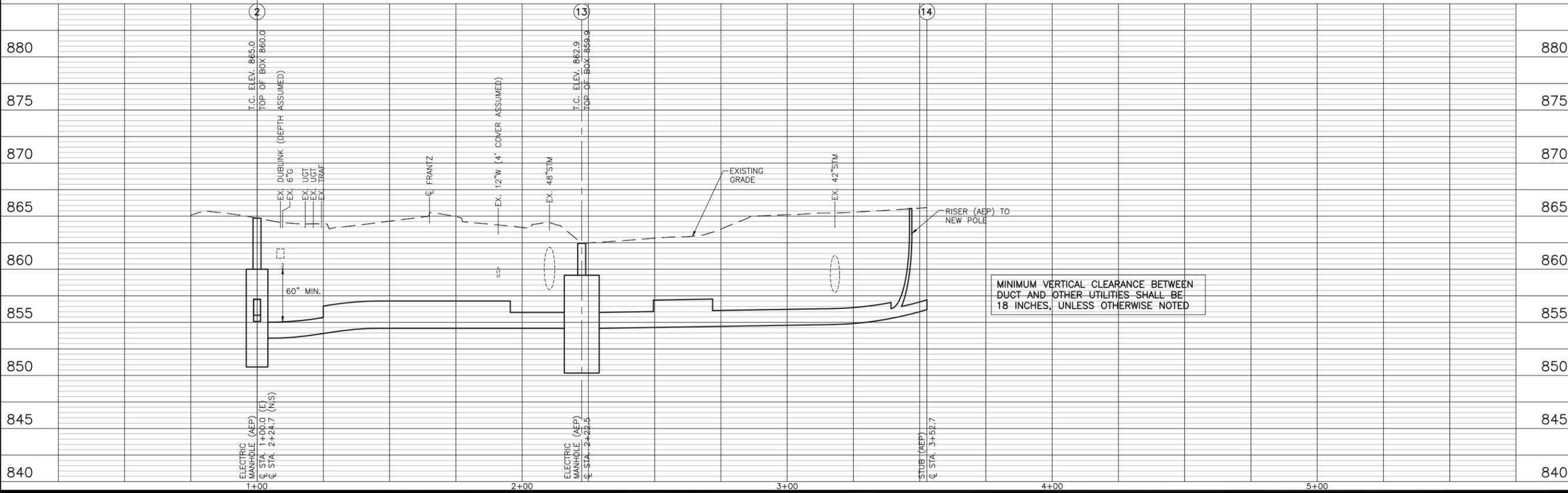
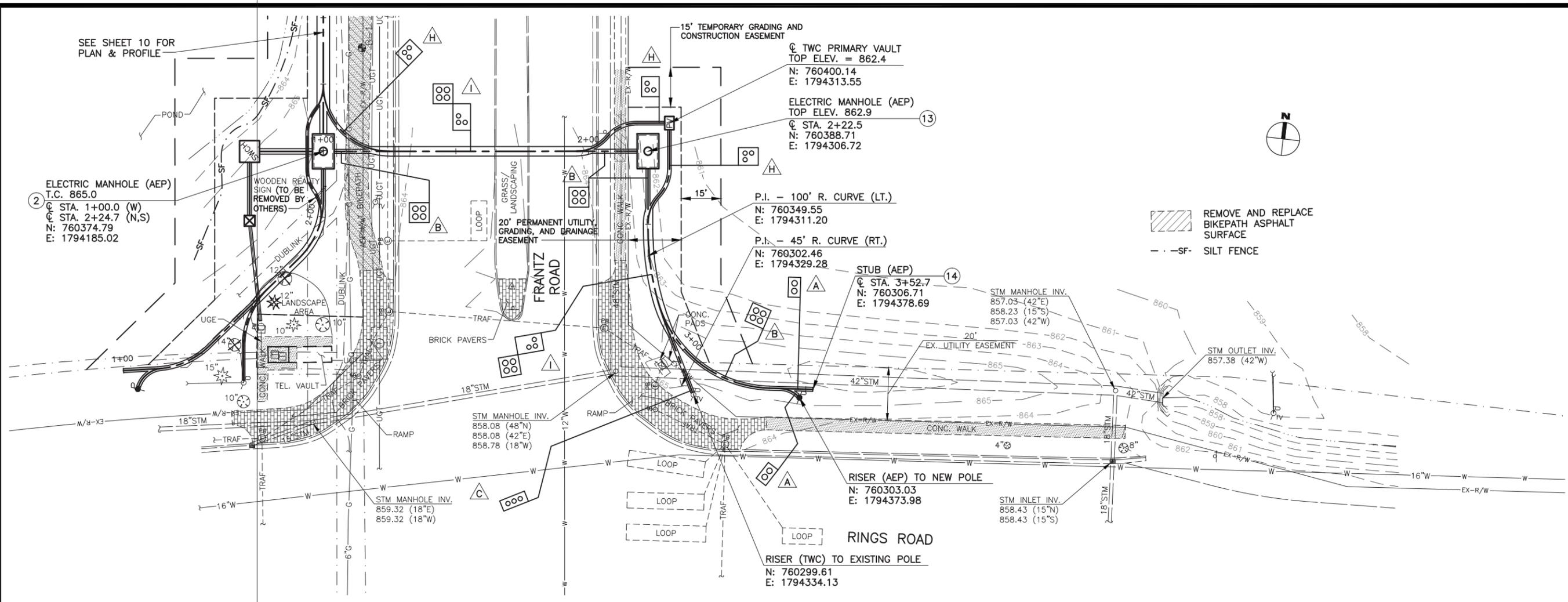
CITY OF DUBLIN, OHIO  
 FRANTZ ROAD UTILITY BURIAL  
 RINGS ROAD TO METRO PLACE NORTH  
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SCALE: 1"=20'H  
 1"=5'

PLAN AND PROFILE  
 @ STA. 34+00 TO  
 @ STA. 36+86



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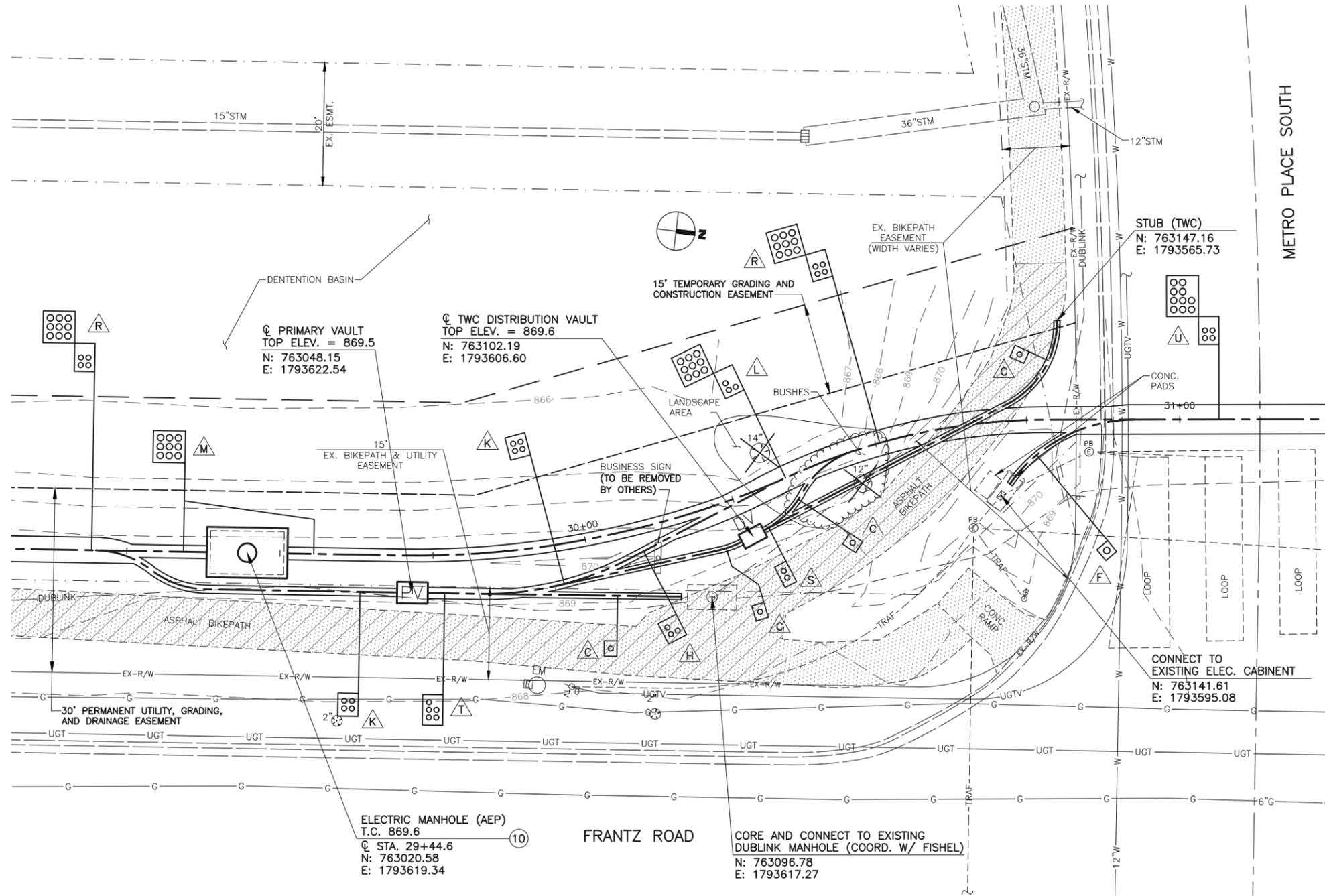
NO.	DESCRIPTION	DATE

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APPROVED BY: JED

SCALE: 1"=20'H  
1"=5' P

PLAN AND PROFILE  
C STA. 1+00 TO  
C STA. 3+53





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FRANTZ ROAD UTILITY BURIAL  
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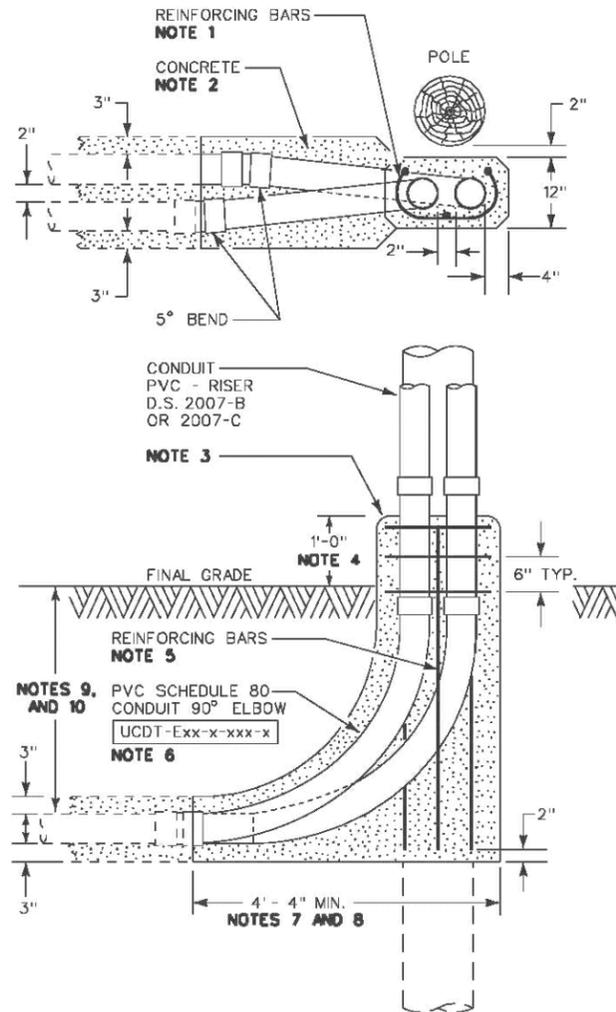
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DATE: OCT. 2014  
DESIGNED BY: WHW  
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CHECKED BY: JED  
APPROVED BY: JED

SCALE: 1" = 10'

ENLARGED PLAN  
□ I EWS

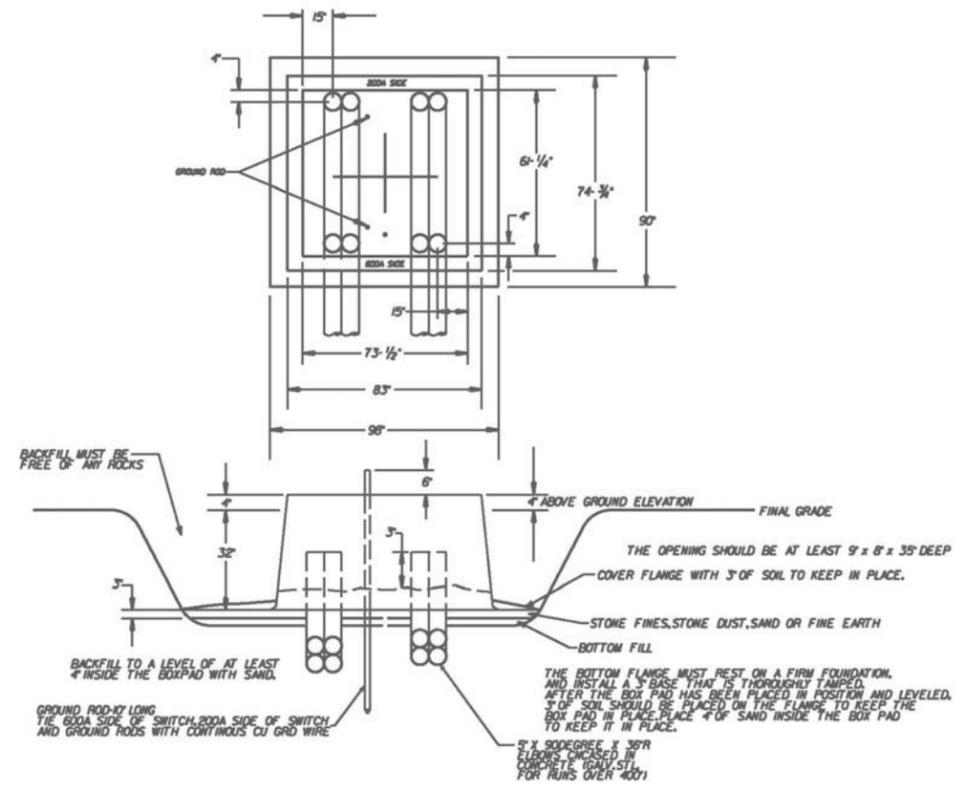
NOTES:

- THREE HORIZONTAL REINFORCING BARS; 1/4" STEEL (NO. 2 PLAIN ROUND) ASTM-A615 GRADE 40KSI.
- 3000 PSI AT 28 DAYS; 5% ± 1% AIR ENTRAINED.
- SLOPE FINISHED TOP TO DRAIN WATER.
- INCREASE TO 3 FEET WHEN IN CONGESTED AREAS. EXTEND HORIZONTAL REINFORCING BARS WITH SHOWN SPACING.
- THREE VERTICAL REINFORCING BARS; 1/2" STEEL (NO. 4 DEFORMED) ASTM-A615 GRADE 40KSI.
- ENGINEER TO SPECIFY SIZE AND DIRECTION OF CONDUIT.
- SLOPE DUCT LINE TO VAULT OR MANHOLE.
- CONCRETE ENCASUREMENT SHALL TERMINATE AT SHOWN DIMENSION FOR DIRECT BURIED CONDUIT SYSTEMS. ENGINEER SHALL SPECIFY CONCRETE ARRANGEMENT TO TIE INTO OTHER UNDERGROUND SYSTEMS.
- BURIAL DEPTH FOR DIRECT BURIED CABLE OR CONDUIT IS DEFINED AS THE DISTANCE BETWEEN FINAL GRADE AND THE TOP OF THE CABLE OR CONDUIT. DIRECT BURIED PRIMARY SUPPLY CABLES OR CONDUITS SHALL BE INSTALLED AT A BURIAL DEPTH OF NOT LESS THAN 3'-0" AND SECONDARY SUPPLY CABLES OR CONDUITS SHALL BE INSTALLED AT A BURIAL DEPTH OF NOT LESS THAN 2'-8". THESE INITIAL DEPTHS ARE TO ALLOW FOR CHANGES TO SURFACE CONDITIONS. LOCAL AGREEMENTS AND CODES MAY REQUIRE ADDITIONAL DEPTH. IF THERE ARE KNOWN, EXTENSIVE CHANGES TO THE FINAL GRADE SUCH THAT THESE DEPTHS ARE NOT MAINTAINED CORRECTIVE ACTION SHALL BE TAKEN.
- BURIAL DEPTH FOR CONCRETE ENCASED CONDUITS IS THE DISTANCE BETWEEN FINAL GRADE AND THE TOP OF THE CONCRETE. CONCRETE ENCASED CONDUITS (DS 2060) SHOULD BE INSTALLED AT A BURIAL DEPTH OF 36" INCHES. DEPTHS LESS THAN THIS MAY BE ACCEPTABLE AFTER AN ENGINEERING EVALUATION.



TERMINATION OF UNDERGROUND CONDUIT AT RISER POLES

ALL DISTRIBUTION VOLTAGES  
CONCRETE ENCASED, MULTI-RISERS OR SINGLE RISER

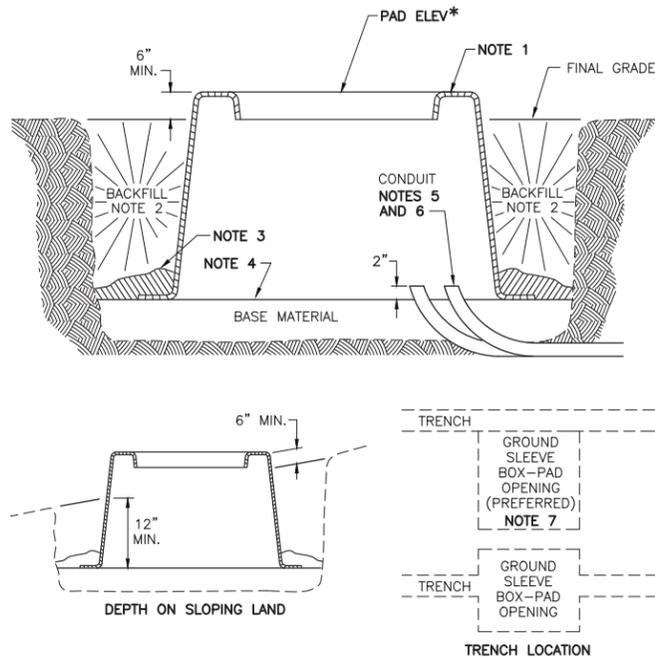


BOX PAD DETAIL

NOTES:

- FINAL PAD/SLEEVE INSTALLATION SHALL BE LEVEL AS MEASURED BY A CARPENTER'S LEVEL IN ALL DIRECTIONS.
- DO NOT BACKFILL WITH CHUNKS OF FROZEN MATERIAL OR ROCKS. PACK LOOSE BACKFILL BY FOOT TAMPING. HYDRAULIC TAMPING IS NOT RECOMMENDED. DO NOT BACKFILL WITH SAND.
- BACKFILLING MAY BE DELAYED SO THAT LINE PERSONNEL CAN STAND IN THE EXCAVATION AND WORK THE EQUIPMENT AT WAIST-HEIGHT. WHEN THIS IS DONE COVER THE FLANGE WITH 3 INCHES OF FILL TO HOLD THE PAD IN PLACE.
- EXCAVATE THE AREA 4 TO 6 INCHES DEEPER THAN FINAL BURIAL DEPTH. BACKFILL WITH BASE MATERIAL AND THOROUGHLY TAMP. CRUSHED STONES PREFERRED FOR BASE MATERIAL. STONE DUST, SAND OR FINE EARTH ARE ACCEPTABLE.
- CONDUIT NUMBER, SIZE, LOCATION AND DIRECTION TO BE SPECIFIED BY ENGINEER. CONDUIT MAY BE FLEXIBLE OR SCHEDULE 40 PVC CONDUIT, WITH 36 INCH RADIUS BENDS.
- CUT CONDUIT EXTENDING INTO BOX PAD/GROUND SLEEVE AS SHOWN TO MAXIMIZE FLEXIBILITY OF CABLE.
- WHEN THE CABLE IS INSTALLED IN CONDUIT THE NUMBER OF BENDS REQUIRED BY THIS TRENCH LOCATION MAY NOT PERMIT ITS USE BECAUSE OF CABLE PULLING PROBLEMS.

\* SEE PLAN AND PROFILE SHEETS FOR PAD ELEVATION.



BOX PAD/GROUND SLEEVE INSTALLATION

PAD FOR TRANSFORMERS  
NO LARGER THAN 38" DEEP

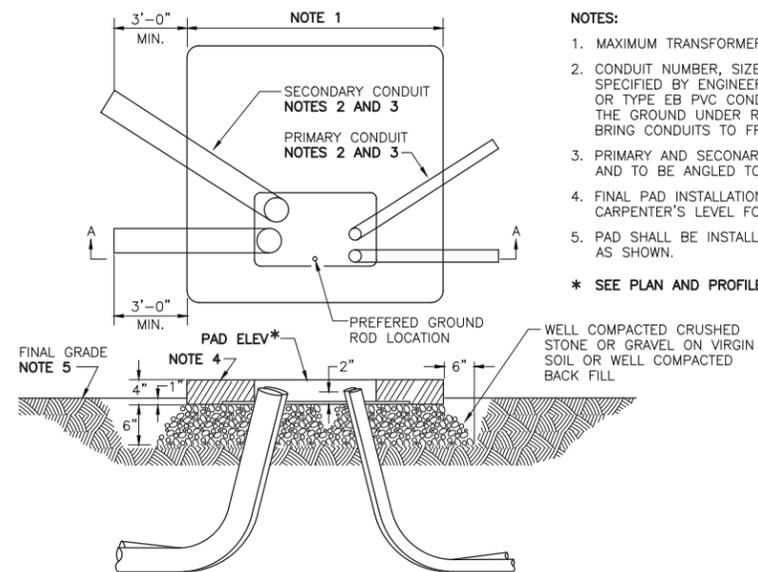
- SYNTHETIC  
C ID 66481500  
UPAD-S-IX-38-FP
- OR
- POLYMER CONCRETE  
C ID 66482100  
UPAD-P-IX-38-FP

PAD FOR TRANSFORMERS  
NO LARGER THAN 44" DEEP

- CONCRETE  
C ID 66481460  
UPAD-C-IX-44-FP

PAD FOR TRANSFORMERS  
NO LARGER THAN 50" DEEP

- SYNTHETIC  
C ID 66481700  
UPAD-S-IX-50-FP
- OR
- CONCRETE  
C ID 66481470  
UPAD-C-IX-50-FP
- OR
- POLYMER CONCRETE  
C ID 66482400  
UPAD-P-IX-50-FP



FLAT PAD FOR SINGLE PHASE TRANSFORMERS

NOTES:

- MAXIMUM TRANSFORMER WIDTH 38" (42" WIDTH WITH FINS).
  - CONDUIT NUMBER, SIZE, LOCATION AND DIRECTION TO BE SPECIFIED BY ENGINEER. CONDUIT CAN BE FLEXIBLE CONDUIT, OR TYPE EB PVC CONDUIT OR 90° BENDS. AVOID DISTURBING THE GROUND UNDER REAR OF PAD. TO MINIMIZE SETTLING, BRING CONDUITS TO FRONT OR SIDES WHEN EVER POSSIBLE.
  - PRIMARY AND SECONDARY CONDUITS TO ENTER PAD AS SHOWN AND TO BE ANGLED TOWARDS THEIR RESPECTIVE BUSHINGS.
  - FINAL PAD INSTALLATION SHALL BE LEVEL AS MEASURED BY CARPENTER'S LEVEL FOR ALL DIRECTIONS.
  - PAD SHALL BE INSTALLED SO THAT FINAL GRADE SHALL BE AS SHOWN.
- \* SEE PLAN AND PROFILE SHEETS FOR PAD ELEVATION.

NO.	DESCRIPTION	DATE

JOB NO: PR50708

DATE: OCT. 2014

DESIGNED BY: WHW

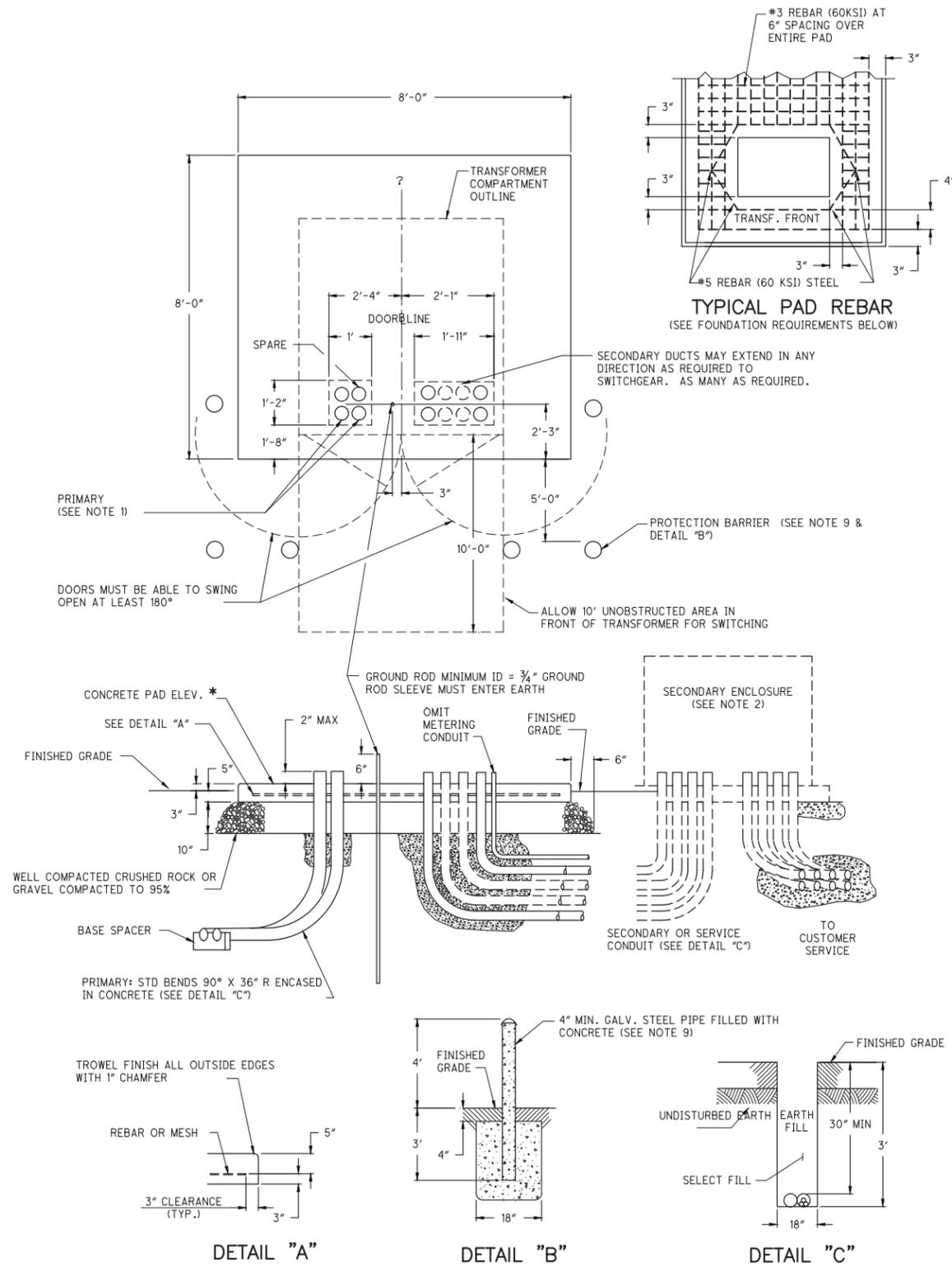
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CHECKED BY: JED

APPROVED BY: JED

SCALE: NONE

UTILITY CONDUIT AND PAD DETAILS



15KV TRANSFORMER PAD (AEP)

**ITEM SPECIAL – 3 PHASE PAD MOUNT TRANSFORMER FOUNDATION**

- DUCTS THAT WILL HAVE PRIMARY CABLE ARE TO BE INSTALLED SIDE BY SIDE TOWARDS THE FRONT OF THE PAD. PRIMARY DUCTS MAY EXTEND IN ANY DIRECTION AS REQUIRED TO TERMINAL POLE. DO NOT INSTALL MORE THAN 2 ELBOWS TO A TERMINAL POLE.
- A SECONDARY ENCLOSURE IS NOT REQUIRED FOR THIS PROJECT.
- AFTER PRIMARY AND SECONDARY CONDUITS ARE IN PLACE, THE AREA FOR THE TRANSFORMER FOUNDATION MUST BE THOROUGHLY COMPACTED BEFORE PLACING CRUSHED STONE OR GRAVEL AND BEFORE POURING FOUNDATION.
- CONCRETE TO BE CITY OF COLUMBUS OR STATE OF OHIO DEPARTMENT OF TRANSPORTATION CLASS "C" WITH 6% TO 8% AIR ENTRAINMENT, 2"-4" SLUMP, AND 3500 PSI MINIMUM. PAD TO BE CONSTRUCTED WITH A MINIMUM 3 INCH COVER OVER ALL REBAR. WIRE MESH WITH A MINIMUM CROSS-SECTIONAL AREA OF 0.175 SQUARE INCHES PER FOOT OF PAD WIDTH MAY BE USED IN PLACE OF REBAR.
- THE TYPE, THICKNESS, AND REINFORCING OF THE FOUNDATION IS A MINIMUM DESIGN, ACTUAL FOUNDATION FURNISHED MAY EXCEED THESE REQUIREMENTS, BUT MUST BE APPROVED BY AEP ENGINEERING. PRIMARY AND SECONDARY MUST COME THROUGH THE FOUNDATION IN DESIGNATED AREAS.
- THE FOUNDATION SHALL BE LOCATED AWAY FROM WINDOWS, DOORS, FIRE ESCAPES, ENTRANCES, AND VENTILATING DUCTS. THE LOCATION MUST COMPLY WITH THE NATIONAL ELECTRICAL CODE FOR OIL INSULATED TRANSFORMERS INSTALLED OUTDOORS.
- THE FOUNDATION SHALL BE PLACED 3'-0" HORIZONTALLY FROM BUILDING OR STRUCTURE. SINGLE-STORY BUILDINGS WITH ROOF OVERHANGS REQUIRE THAT THE FOUNDATION BE PLACED NO CLOSER THAN 3'-0" HORIZONTALLY OUT FROM THE EDGE OF THE OVERHANG. A 10' UNOBSTRUCTED AREA IN FRONT OF THE TRANSFORMER IS REQUIRED FOR SWITCHING.
- THE CUSTOMER SHALL BE RESPONSIBLE FOR OBTAINING ANY INSPECTIONS OR APPROVALS NECESSARY TO ENSURE COMPLIANCE WITH ALL APPLICABLE BUILDING OR FIRE CODES, AND LOCAL ORDINANCES AND LAWS.
- PROTECTION BARRIER. 4" MIN. STEEL POSTS FILLED WITH CONCRETE AND SET IN CONCRETE, MINIMUM HEIGHT 4 FEET, MUST BE PROVIDED. LOCATIONS SHALL BE SPECIFIED BY THE AEP ENGINEER TO INSURE ACCESS TO TRANSFORMER. BARRIERS SHALL BE PLACED SO THAT BOTH TRANSFORMER DOORS CAN FREELY SWING OPEN AT LEAST 180°. NO NEW BARRIERS SHALL BE PLACED OR EXISTING ONES MOVED AFTER TRANSFORMER INSTALLATION. ANY EXCEPTIONS TO THIS RULE MUST BE APPROVED BY THE AEP ENGINEER IN WRITING, AFTER CONSULTING THE APPLICABLE LINE DEPARTMENT.
- BASIS OF PAYMENT. THE COST FOR CONSTRUCTION OF CONCRETE FOUNDATIONS FOR 3-PHASE PAD MOUNT TRANSFORMERS AND THE ASSOCIATED PROTECTION BARRIERS WILL BE PAID AT THE UNIT PRICE BID PER EACH FOR ITEM SPECIAL, 3-PHASE PAD MOUNT TRANSFORMER FOUNDATION, INCLUDING ALL EXCAVATION, BASE, CONCRETE, REINFORCEMENTS, STEEL POSTS, BACKFILL, AND GRADING, COMPLETE AND READY FOR PLACEMENT OF EQUIPMENT BY THE UTILITY COMPANY.

\* SEE PLAN AND PROFILE SHEETS FOR PAD ELEVATION.

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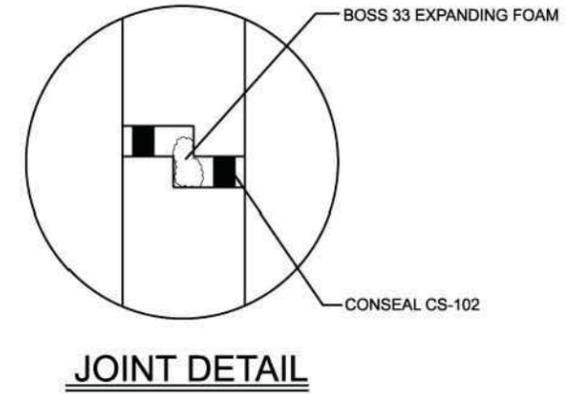
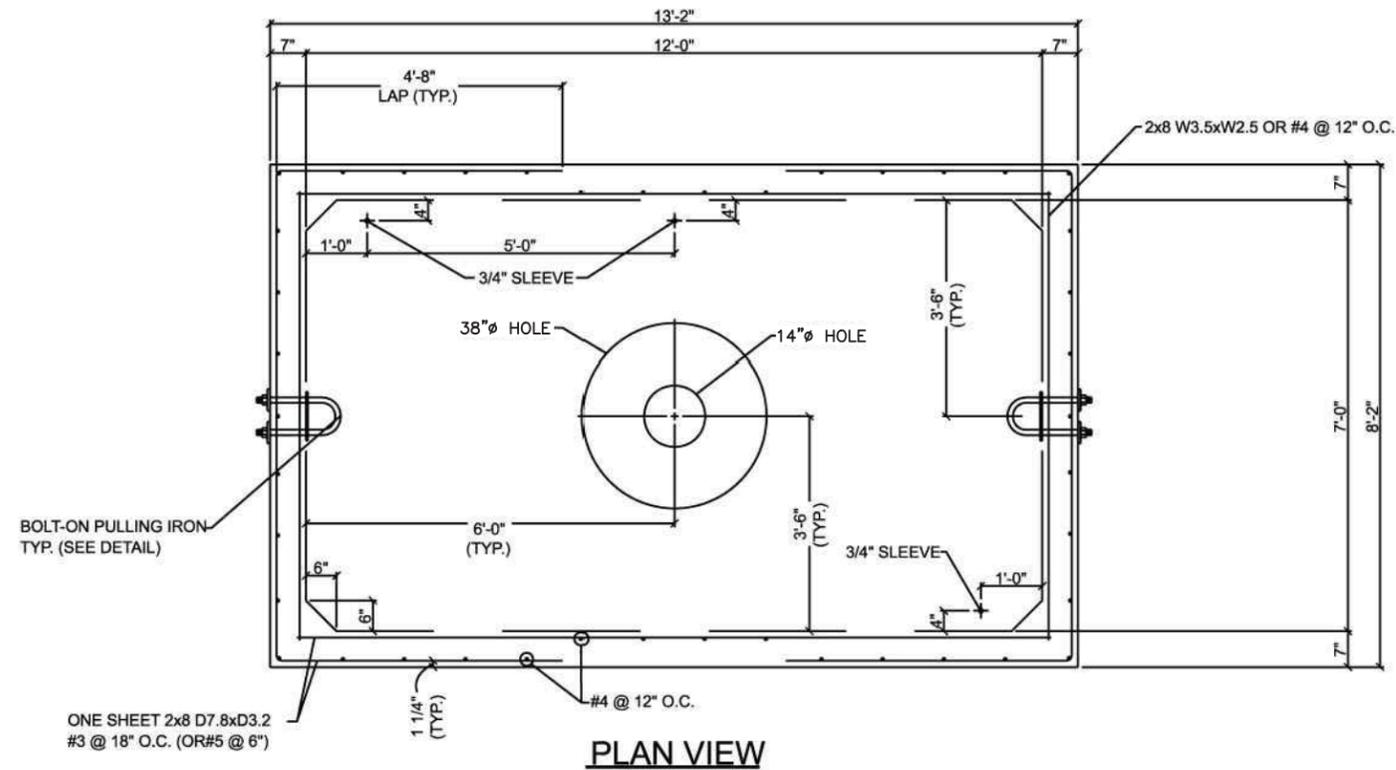
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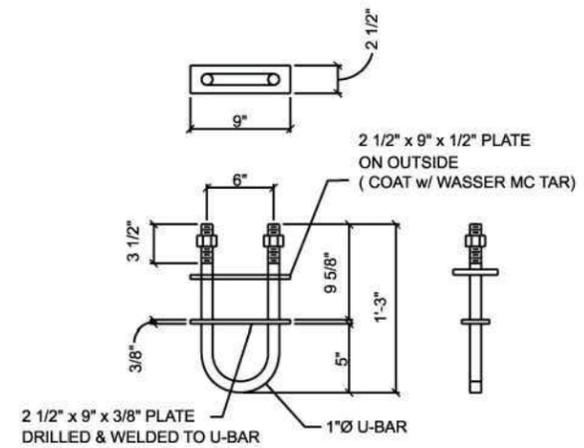
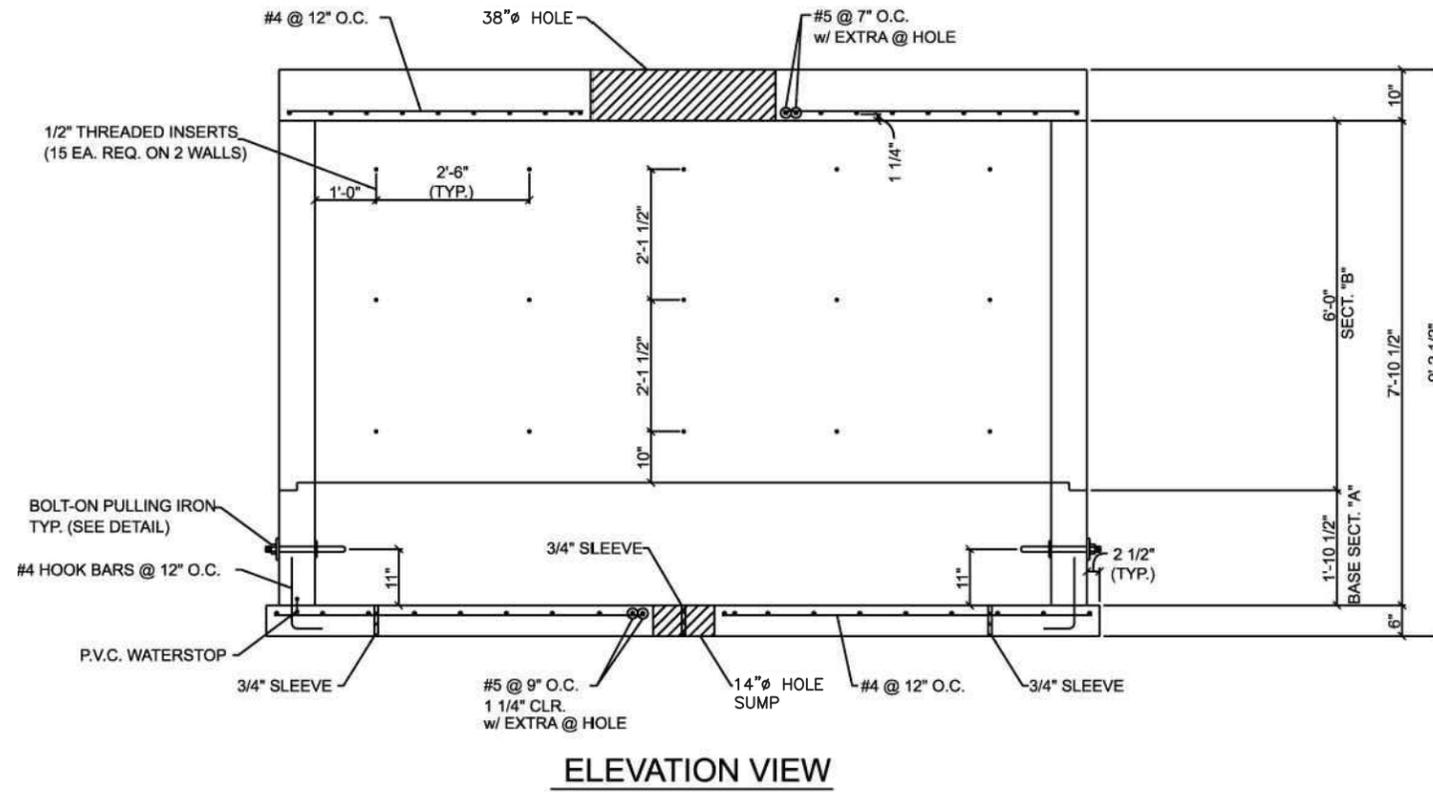
APPROVED BY: JED

SCALE: NONE

AEP 3 PHASE TRANSFORMER PAD



**WEIGHTS:**  
 BASE SECTION "A": 15,600#  
 SECTION "B": 21,700#  
 TOP SLAB: 13,300#



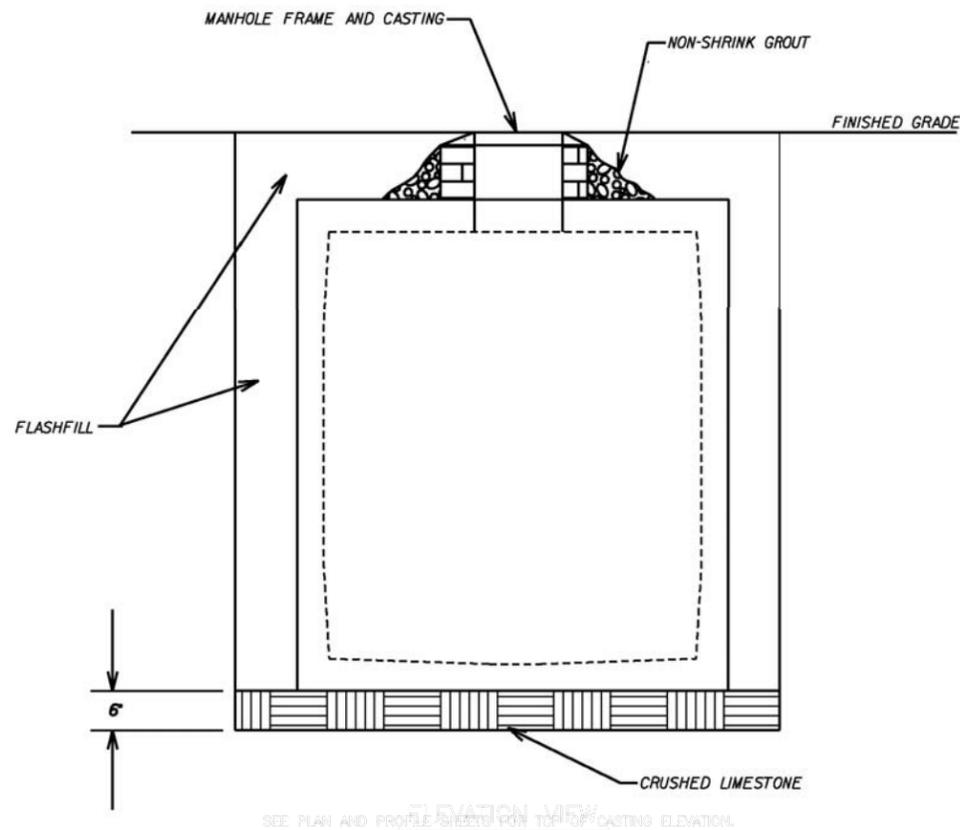
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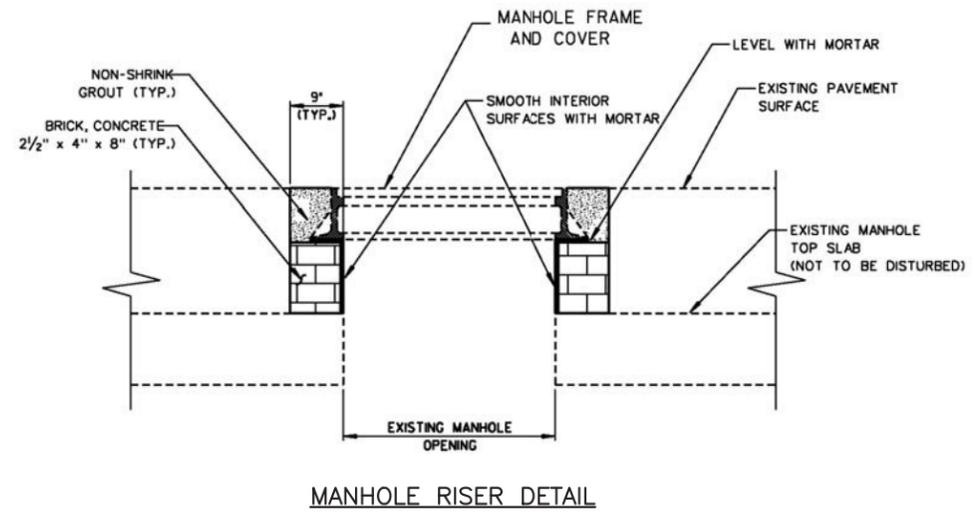
AEP PRECAST  
 ELECTRIC  
 MANHOLE

**GENERAL NOTES**

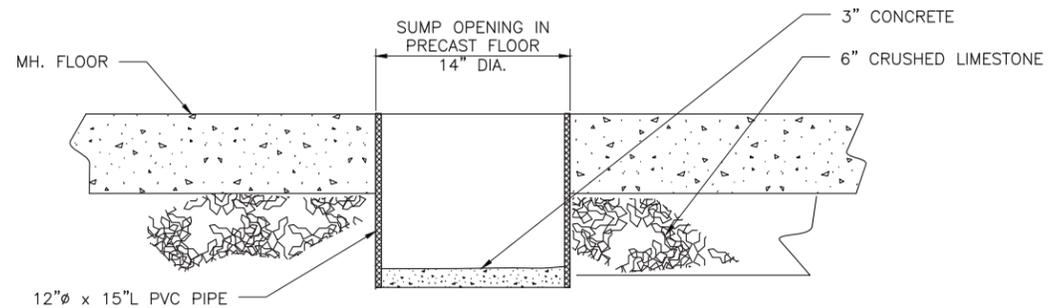
1. GROUT SHALL BE NON-SHRINK GROUT WITH A COMPRESSIVE SURFACES STRENGTH OF 5,000 PSI AT 7 DAYS. CONCRETE RECEIVING GROUT SHALL BE CLEAN AND FREE OF DEBRIS AND OTHER FOREIGN SUBSTANCES.
2. TOP ELEVATION, TRANSVERSE AND LONGITUDINAL SLOPE SHALL MATCH EXISTING.
3. TRAFFIC SHALL NOT BE ALLOWED ON THE STRUCTURE FOR A MINIMUM OF 7 DAYS FROM THE COMPLETION OF THE CONSTRUCTION
4. ANY PAVEMENT DAMAGE BEYOND THE WORK LIMITS THAT OCCURED DUE TO CONSTRUCTION, SHALL BE REPAIRED.



**MANHOLE INSTALLATION**



**MANHOLE RISER DETAIL**

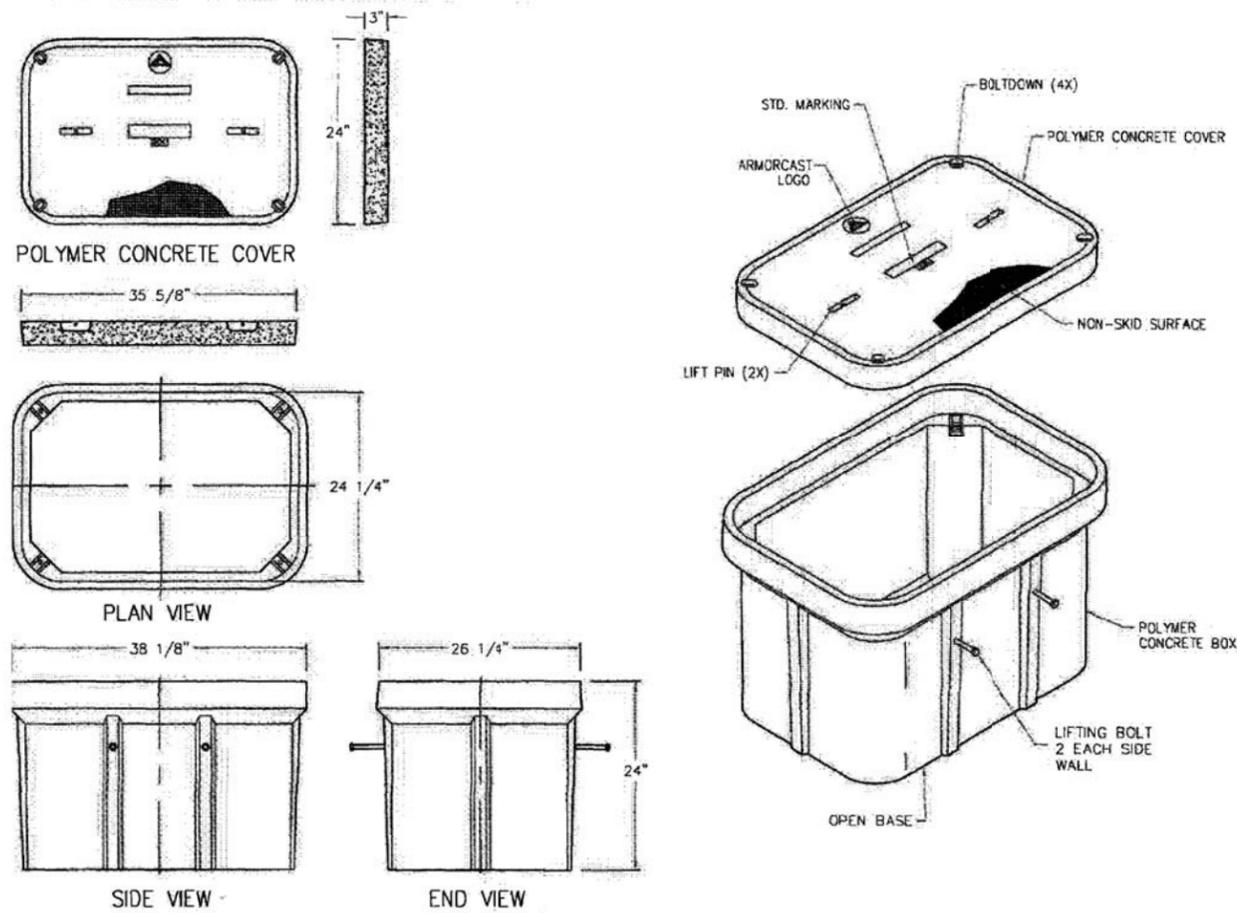


**MANHOLE SUMP DETAIL**

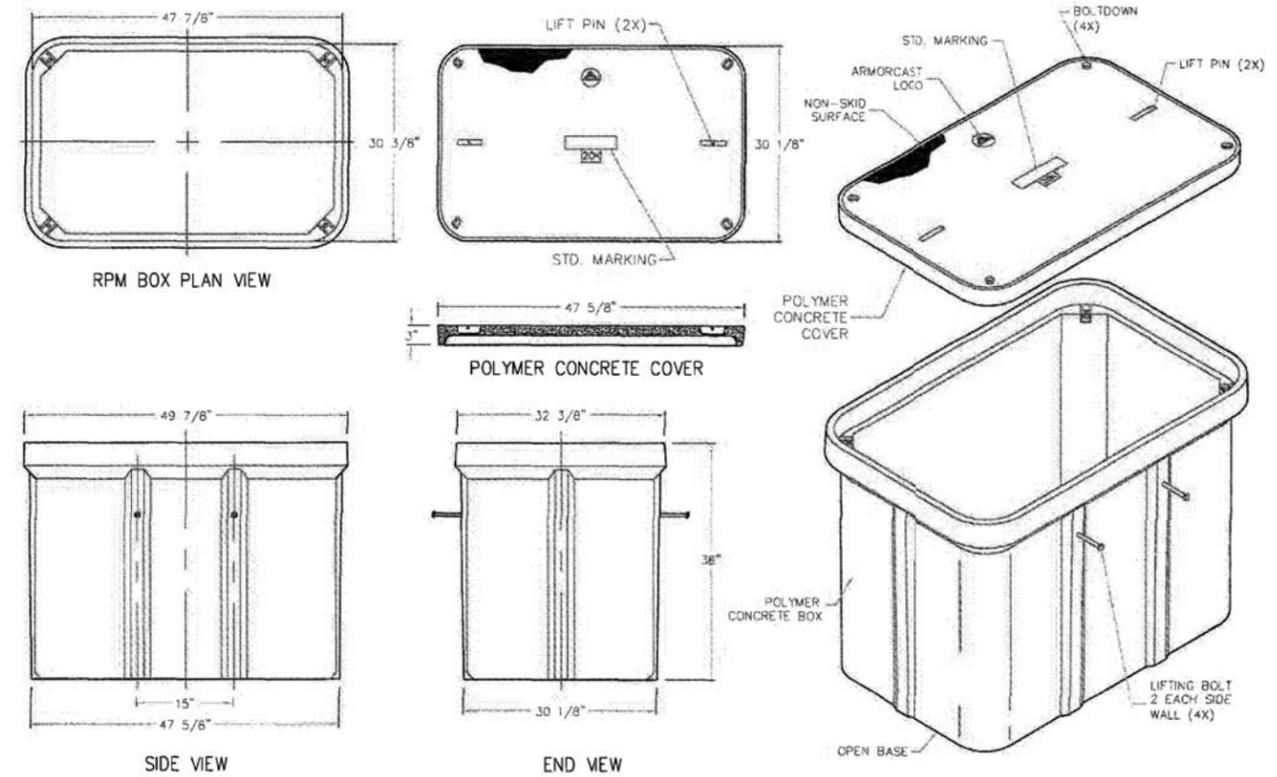
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DATE: OCT. 2014  
DESIGNED BY: WHW  
DRAWN BY: WHW  
CHECKED BY: JED  
APPROVED BY: JED  
SCALE: NONE

AEP PRECAST  
ELECTRIC  
MANHOLE



DISTRIBUTION VAULT (TWC)  
 24"x36"x24" POLYMER CONCRETE BOX  
 AND COVER ASSEMBLY

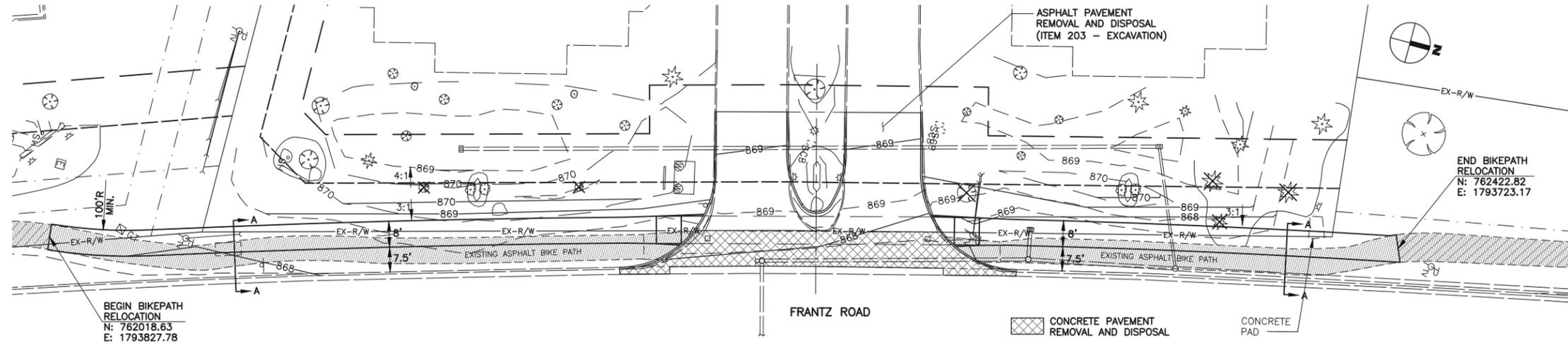


PRIMARY VAULT (TWC)  
 30"x48"x36" POLYMER CONCRETE BOX  
 AND COVER ASSEMBLY

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DRAWN BY:	WHW
CHECKED BY:	JED
APPROVED BY:	JED
SCALE:	AS NOTED

TWC  
 ENCLOSURES

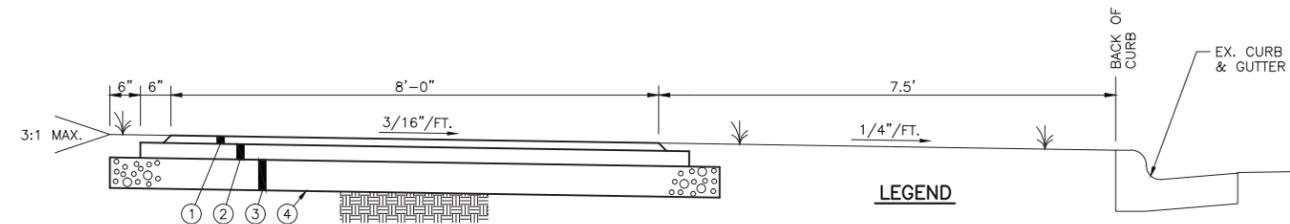


**BIKEPATH RELOCATION AND GRADING PLAN**  
SCALE 1"=20'

**CURVE LAYOUT DATA (BACK OF CURB)**

CURVE NO.	RADIUS	CENTER POINT		BEGIN CURVE		END CURVE			
		NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING		
C1	30.0	762261.82	1793735.95	PC	762232.80	1793743.57	PCC	762241.13	1793757.68
C2	5.0	762244.58	1793754.06	PCC	762241.13	1793757.68	PCC	762249.36	1793755.52
C3	30.0	762220.67	1793746.75	PCC	762249.36	1793755.52	PT	762249.69	1793739.13
C4	30.0	762183.19	1793762.35	PC	762191.52	1793791.17	PT	762212.21	1793754.74
C5	30.0	762303.35	1793730.91	PC	762274.33	1793738.52	PT	762310.30	1793760.09

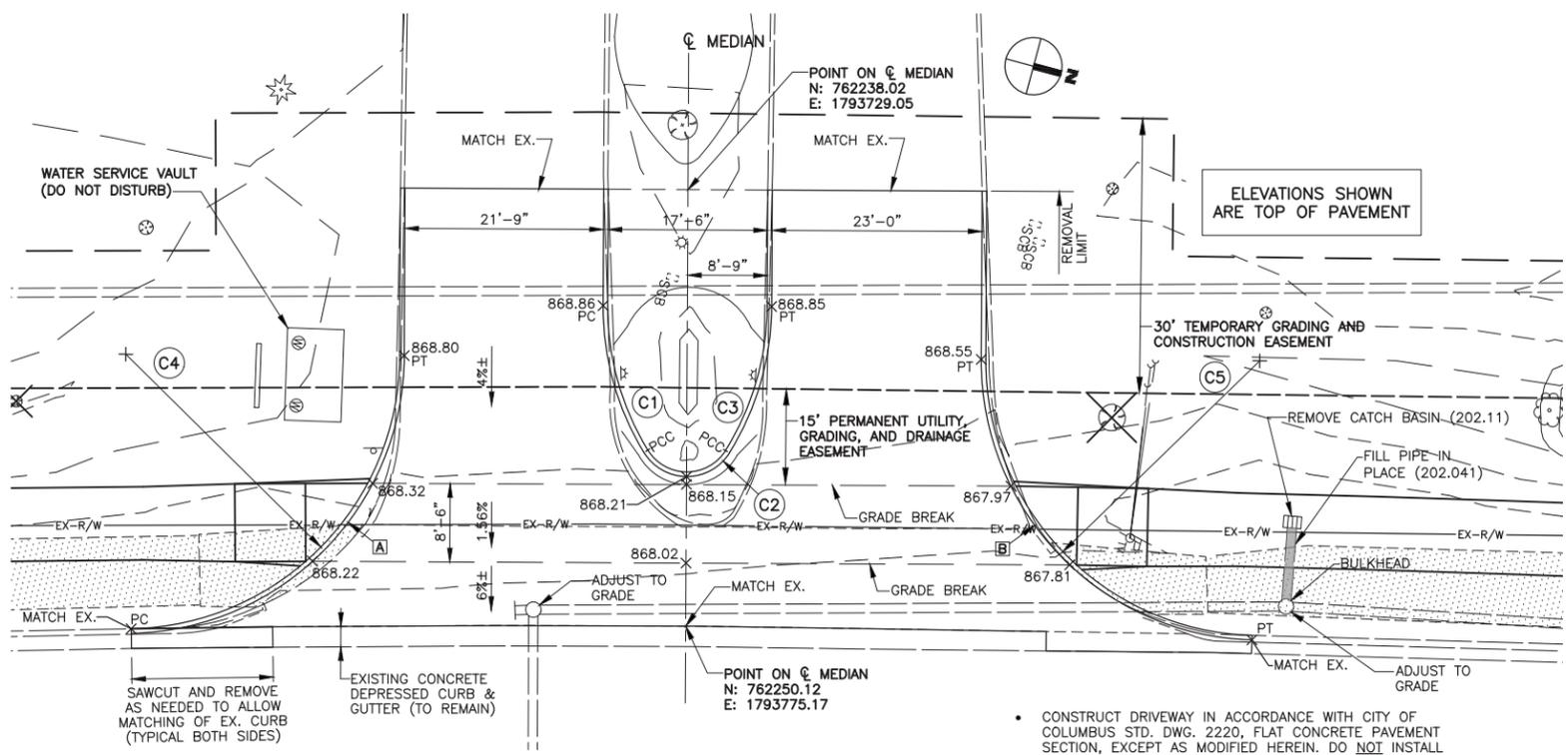
RAMP @ FACE OF CURB		
ID	NORTHING	EASTING
A	762211.47	1793773.78
B	762284.19	1793754.64



**ASPHALT BIKEPATH RELOCATION TYPICAL SECTION A-A**  
NOT TO SCALE

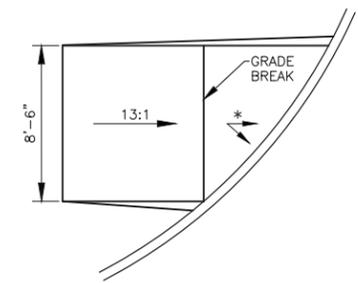
- LEGEND**
- ① ITEM 448 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, MED. TRAFFIC
  - ② ITEM 301 - 3" ASPHALT BASE COURSE
  - ③ ITEM 304 - 6" AGGREGATE BASE
  - ④ ITEM 204 - SUBGRADE COMPACTION

NOTE: THE EXISTING BIKEPATH SHALL BE REMOVED COMPLETELY, WITHIN THE LIMITS OF THE RELOCATION, INCLUDING ASPHALT AND AGGREGATE BASE. REMOVAL WILL BE PAID AT THE UNIT PRICE BID FOR ITEM 203 - EXCAVATION.



**CONCRETE ENTRANCE DRIVE DETAIL @ MILLENNIUM**  
SCALE 1"=10'

- CONSTRUCT DRIVEWAY IN ACCORDANCE WITH CITY OF COLUMBUS STD. DWG. 2220, FLAT CONCRETE PAVEMENT SECTION, EXCEPT AS MODIFIED HEREIN. DO NOT INSTALL DETECTABLE WARNINGS.
- FOR SPECIFICATIONS SEE STD. DWG. 2202.
- FOR JOINT DETAIL SEE STD. DWG. 2170.
- INSTALL 4"-SCH 80 CONDUIT AS SHOWN ON DUBLIN STD. DETAIL RD-07, SHEET 6 OF 9 (NOT SEPARATE PAYMENT).



**CURB RAMP DETAIL**  
NOT TO SCALE

SEE GENERAL NOTES FOR CURB RAMP SPECIFICATIONS.  
\* LANDING WITH MAX. SLOPE OF 3/16" / FT. IN ANY DIRECTION. SLOPE TO DRAIN.

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<b>DESIGNED BY:</b>	WHW
<b>DRAWN BY:</b>	WHW
<b>CHECKED BY:</b>	JED
<b>APPROVED BY:</b>	JED
<b>SCALE:</b>	AS NOTED

BIKEPATH AND DRIVEWAY DETAILS

**ITEM 614 - MAINTAINING TRAFFIC**

NO STREET CLOSURES WILL BE PERMITTED PRIOR TO OR DURING THE MEMORIAL TOURNAMENT (MAY 26 - 31, 2014).

NO WORK OR TRAFFIC LANES MAY BE CLOSED ON FRANTZ ROAD, METRO PLACE SOUTH, PAUL BLAZER PARKWAY, AND RINGS ROAD DURING THE FOLLOWING DATES:

JUNE 1-7, 2015 THE MEMORIAL TOURNAMENT

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ALONG FRANTZ ROAD AND METRO PLACE SOUTH AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, OR TEMPORARY ROADWAY PLATES.

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ALONG PAUL BLAZER PARKWAY AND METRO PLACE NORTH AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, OR TEMPORARY ROADWAY PLATES, EXCEPT ON A SATURDAY WHEN EASTBOUND LANES MAY BE CLOSED. SEE "MAINTENANCE OF TRAFFIC DETAILS" NOTES ON THIS SHEET FOR FURTHER DETAILS.

NO LANE CLOSURES WILL BE PERMITTED ON RINGS ROAD, LONGBRANCH DRIVE, OR MONTEREY DRIVE.

ACCESS TO ALL DRIVEWAYS WITHIN THE PROJECT AREA SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL COORDINATE WITH THE PROPERTY OWNERS ON ACCESS DETAILS FOR THE DRIVEWAYS ON FRANTZ ROAD THAT WILL BE DIRECTLY AFFECTED BY THE UTILITY BURIAL. THESE DRIVEWAYS SHALL BE CONSTRUCTED PART-WIDTH UNLESS THE PROPERTY OWNERS AGREE TO AN ALTERNATIVE METHOD IN WRITING.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, WILL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE CITY OF DUBLIN AT LEAST 14 DAYS IN ADVANCE OF ANY PLANNED LANE CLOSURES OR OTHER DISRUPTION OF TRAFFIC.

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 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. 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.

**CONSTRUCTION INITIATION**

THE CONTRACTOR WILL NOTIFY THE ENGINEER AND THE CITY OF DUBLIN 14 DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR WILL IMMEDIATELY INFORM THE ENGINEER AND THE CITY OF DUBLIN OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION PROJECT.

**ALTERNATIVE METHODS**

THE CONTRACTOR MAY SUBMIT ALTERNATIVE METHODS FOR THE MAINTENANCE OF TRAFFIC PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS FROM THE CHANGE. NO ALTERNATIVE PLANS SHALL BE PLACED IN EFFECT UNTIL APPROVAL HAS BEEN RECEIVED FROM THE ENGINEER IN WRITING.

**MAINTENANCE OF TRAFFIC DETAILS**

THE UTILITY WORK THAT RUNS ALONG THE WEST SIDE OF FRANTZ ROAD SHALL BE CONSTRUCTED BY CLOSING THE CURB LANE PER ODOT STANDARD CONSTRUCTION DRAWING MT-95.30. THIS WORK SHOULD BE PERFORMED ONE BLOCK AT A TIME. OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) FIGURE 6H-22 SHALL BE FOLLOWED WHEN APPLICABLE.

THE LATERALS EXTENDING ACROSS FRANTZ ROAD AT RINGS ROAD AND NEAR METRO PLACE NORTH SHALL BE CONSTRUCTED IN PHASES PER ODOT STANDARD CONSTRUCTION DRAWING MT-95.40 AND OMUTCD FIGURES 6H-22 AND 6H-25; HOWEVER, IN FIGURES 6H-22 AND 6H-25 PCB SHALL BE USED INSTEAD OF DRUMS AROUND THE WORK AREA TO MEET THE DROP-OFFS IN WORK ZONES REQUIREMENTS AS STATED IN ODOT STANDARD CONSTRUCTION DRAWING MT-101.90.

THE UTILITY CROSSING AT METRO PLACE SOUTH SHALL OCCUR ONLY ON SATURDAY. ONE LANE OF TRAFFIC IN THE WESTBOUND DIRECTION SHALL BE PROVIDED AT ALL TIMES. EASTBOUND TRAFFIC SHALL BE CLOSED AND DETOURED TO METRO PLACE NORTH.

THE UTILITY CROSSING AT PAUL BLAZER PARKWAY SHALL OCCUR ONLY ON SATURDAY. ONE LANE OF TRAFFIC IN THE WESTBOUND DIRECTION SHALL BE PROVIDED AT ALL TIMES. EASTBOUND TRAFFIC SHALL BE CLOSED AND DETOURED TO RINGS ROAD.

PEDESTRIAN TRAFFIC MUST BE DETOURED PER ODOT STANDARD CONSTRUCTION DRAWING MT-110.10 ANY TIME A PEDESTRIAN CURB RAMP OR SIDEWALK IS NOT ACCESSIBLE OR IS NOT USEABLE.

**MAINTENANCE OF TRAFFIC SIGNALS**

THE CONTRACTOR SHALL NOT MAKE ANY CHANGES TO THE EXISTING TRAFFIC SIGNALS. IF THE SIGNAL TIMINGS NEED TO BE ADJUSTED DURING CONSTRUCTION DUE TO LANE CLOSURES THE CONTRACTOR SHALL CONTACT THE CITY OF DUBLIN.

THE CONTRACTOR WILL REPLACE TRAFFIC SIGNAL LOOPS AT ALL INTERSECTIONS WHERE THE LOOPS WERE DAMAGED DUE TO OPEN TRENCHING. LOOP REPAIRS MAY BE PERFORMED 9 AM - 3 PM WEEKDAYS ONLY. COORDINATE WITH CITY OF DUBLIN ENGINEERING DEPARTMENT ON THE TIMING OF THIS WORK.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS USED BY THE CONTRACTOR FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM CONTRACTOR PRICE FOR ITEM 614 - MAINTAINING TRAFFIC EXCEPT THE LOOP REPLACEMENT SHALL BE PAID FOR UNDER ITEM 632 - DETECTOR LOOP.

**ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS**

USE OF LAW ENFORCEMENT OFFICERS (LEOs) BY CONTRACTORS, OTHER THAN THE USES SPECIFIED BELOW, WILL NOT BE PERMITTED AT PROJECT COST. LEOs SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

A. DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

B. DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G. DIRECTING MOTORISTS THROUGH A RED LIGHT).

C. FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOs SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

D. WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC ON I-270. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

LEOs SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOs WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOs WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOs. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOs' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOs (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE MAINTENANCE OF TRAFFIC SUBSUMMARY.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 100 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

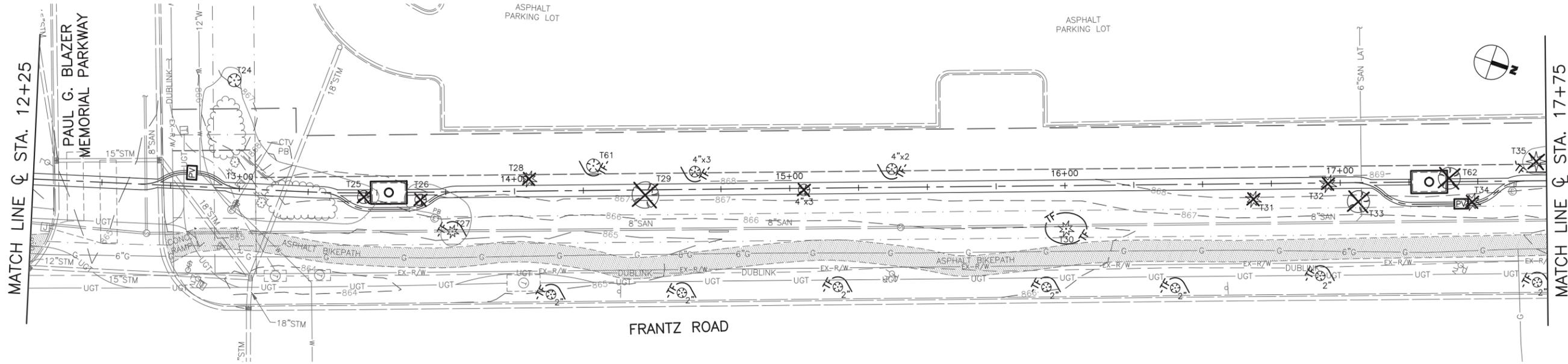
NO.	DESCRIPTION	DATE

JOB NO:	PR50708
DATE:	OCT. 2014
DESIGNED BY:	EMW
DRAWN BY:	EMW
CHECKED BY:	RMK
APPROVED BY:	JED

SCALE:

MOT NOTES





TREE INFORMATION				
ID	DIAMETER	TYPE	CONDITION	NOTES
T24	6"	CRAB APPLE	GOOD	
T25	6"	CRAB APPLE	GOOD	REMOVE
T26	6"	CRAB APPLE	GOOD	REMOVE
T27	10"	SPRUCE	GOOD	
T28	12"	SPRUCE	GOOD	REMOVE
T29	30"	BIRCH	GOOD	REMOVE (1)
T30	12"	SPRUCE	GOOD	
T31	12"	SPRUCE	GOOD	REMOVE
T32	12"	SPRUCE	GOOD	REMOVE
T33	24"	BIRCH	GOOD	REMOVE (2)
T34	14"	SPRUCE	GOOD	REMOVE

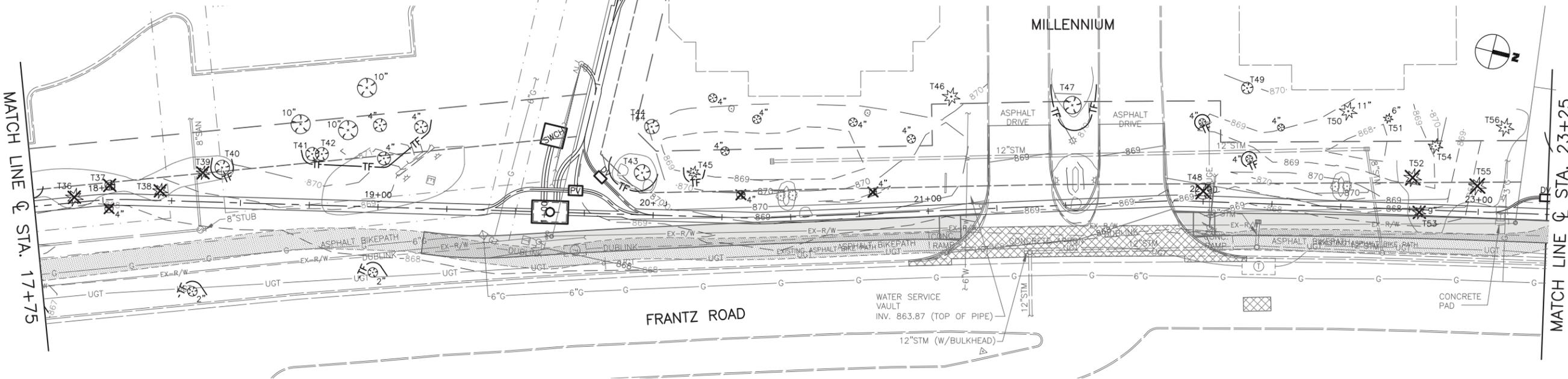
1 - CONSISTS OF 3 TRUNKS OF 14, 11, & 6-INCHES.  
 2 - CONSISTS OF 3 TRUNKS OF 8, 8, & 6-INCHES.

ID	DIAMETER	TYPE	CONDITION	NOTES
T35	12"	SPRUCE	GOOD	
T36	14"	SPRUCE	GOOD	REMOVE
T37	6"	CRAB APPLE	GOOD	REMOVE
T38	10"	SPRUCE	GOOD	REMOVE
T39	10"	SPRUCE	GOOD	REMOVE
T40	12"	CRAB APPLE	GOOD	
T41	9"	BIRCH	GOOD	(3)
T42	7"	BIRCH	GOOD	(3)
T43	10"	PEAR	GOOD	
T44	12"	PEAR	GOOD	
T45	8"	SPRUCE	GOOD	
T46	12"	SPRUCE	GOOD	

3 - CONSISTS OF 2 EQUALLY SIZED TRUNKS.

ID	DIAMETER	TYPE	CONDITION	NOTES
T47	18"	PEAR	GOOD	(4)
T48	10"	PEAR	GOOD	REMOVE
T49	8"	PEAR	GOOD	
T50	11"	SPRUCE	GOOD	
T51	6"	SPRUCE	GOOD	
T52	12"	SPRUCE	GOOD	REMOVE
T53	9"	SPRUCE	GOOD	REMOVE
T54	12"	SPRUCE	GOOD	
T55	12"	SPRUCE	GOOD	REMOVE
T56	12"	SPRUCE	GOOD	
T61	12"	BIRCH	GOOD	
T62	15"	BIRCH	GOOD	REMOVE

4 - CONSISTS OF 2 TRUNKS OF 10 & 12-INCHES.



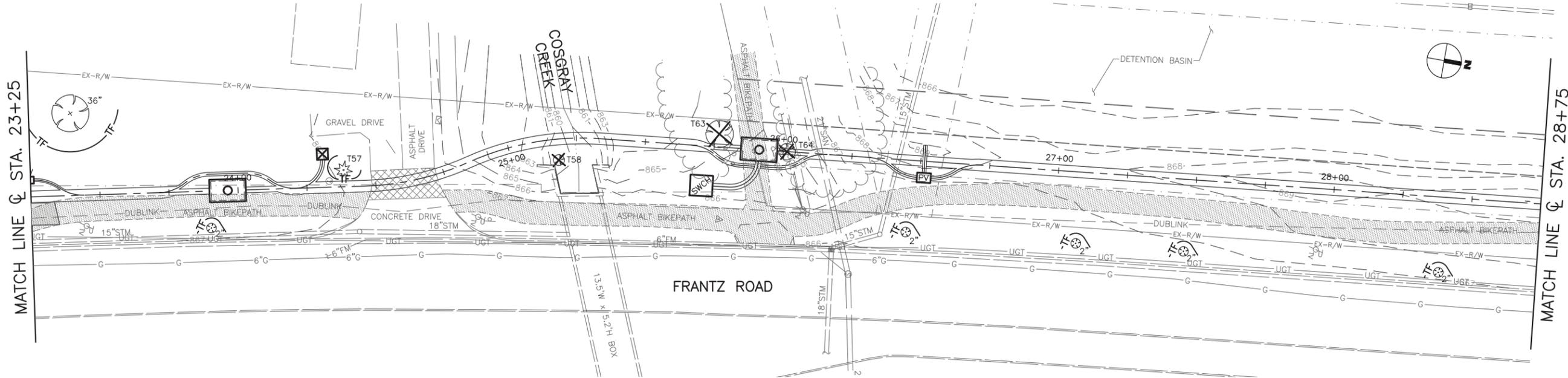
**BURGESS & NIPLÉ**  
 5085 REED ROAD  
 COLUMBUS, OHIO 43220

CITY OF COLUMBIA, OHIO  
 FRANTZ ROAD UTILITY CORRIDOR  
 RIN S ROAD TO METRO PLACE NORTH  
 11-021 - CIP

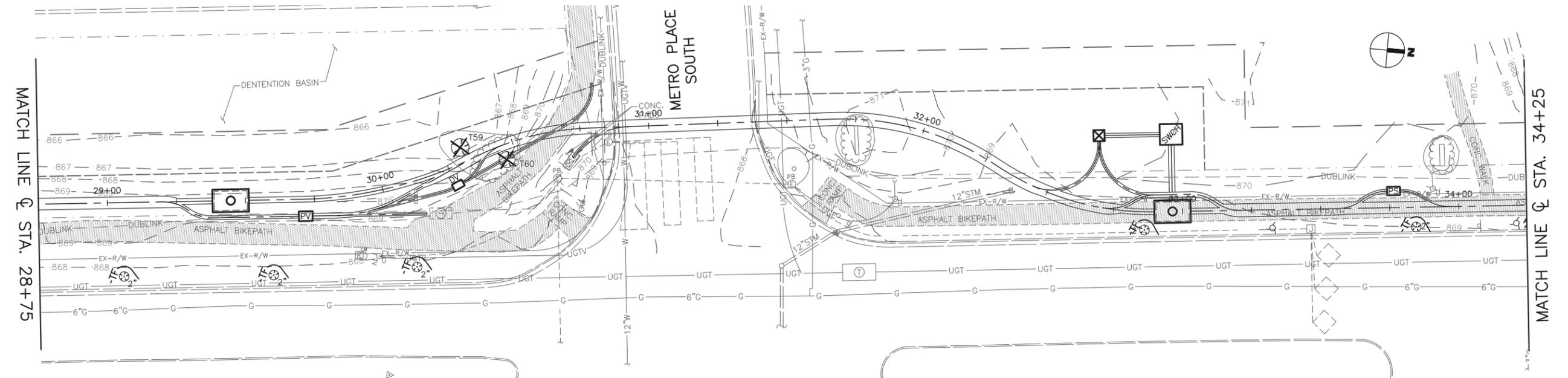
NO.	DESCRIPTION	REVISIONS	
		DATE	

JOB NO: PR50708  
 DATE: OCT. 2014  
 DESIGNED BY: WHW  
 DRAWN BY: WHW  
 CHECKED BY: JED  
 APPROVED BY: JED  
 SCALE: 1" = 20'

TREE PRESERVATION PLAN



TREE INFORMATION				
ID	DIAMETER	TYPE	CONDITION	NOTES
T57	12"	SPRUCE	GOOD	REMOVE
T58	8"	ASH	POOR	REMOVE
T59	14"	HONEY LOCUST	GOOD	REMOVE
T60	12"	HONEY LOCUST	GOOD	REMOVE
T63	20"	ASH	DEAD	REMOVE
T64	12"	OSAGE ORANGE	FAIR	REMOVE



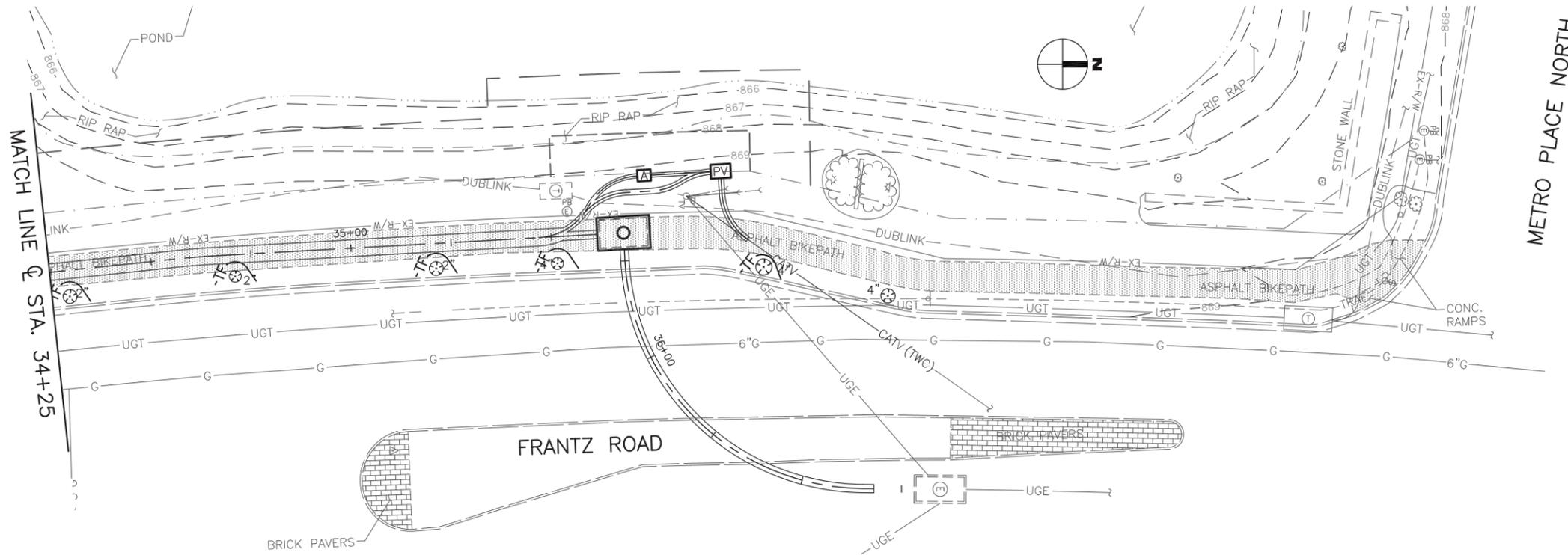
**BURGESS & NIPLÉ**  
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CITY OF DUBLIN, OHIO  
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TREE PRESERVATION PLAN

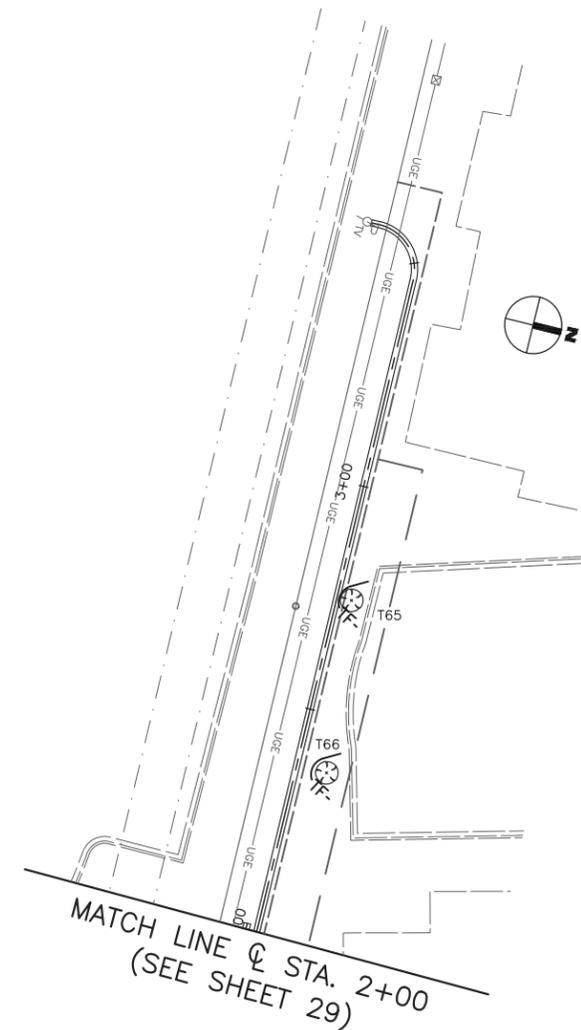


**TREE PRESERVATION NOTES**

1. A PROTECTED TREE SHALL BE DEFINED AS ANY TREE HAVING A TRUNK DIAMETER OF 6-INCHES OR GREATER, AS MEASURED 4.5 FEET ABOVE THE GROUND AT CHEST HEIGHT.
2. ALL TREES NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PRESERVED, WHETHER SHOWN OR NOT SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS. WHERE SHOWN ON THE DRAWINGS, HIGH VISIBILITY TREE PROTECTION FENCING SHALL BE PLACED BEYOND THE CRITICAL ROOT ZONE OR 15 FEET FROM THE TRUNK, WHICHEVER IS GREATER, OR AS DIRECTED BY THE CITY LANDSCAPE INSPECTOR.
3. THE CONTRACTOR SHALL LIMIT WORK TO AREAS WITHIN PUBLIC RIGHTS-OF-WAY, EASEMENTS, OR OTHER SPECIFICALLY DESIGNATED WORK AREAS.
4. NO ATTACHMENTS SHALL BE MADE TO ANY PROTECTED TREE. (I.E. NO ROPES, NAILS, WIRES, ETC.) UNLESS APPROVED BY THE CITY LANDSCAPE INSPECTOR.
5. THE CONTRACTOR MAY INSTALL PROTECTION FENCING IN PHASES TO MATCH CONSTRUCTION SEQUENCING TO ALLOW REUSE OF FENCING. HOWEVER, PROTECTION FENCING SHALL REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION FOR ANY PARTICULAR WORK LOCATION. ANY CHANGES TO PROTECTIVE FENCING MUST BE APPROVED BY THE CITY OF DUBLIN.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION, ERECTION, AND MAINTENANCE OF PROTECTION FENCING. TREE PROTECTION FENCING IS SHOWN ON THE PLANS FOR BIDDING PURPOSES AND MAY BE ADJUSTED FOR FIELD CONDITIONS IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.
7. CONTACT THE DIVISION OF ENGINEERING FOR INSPECTION OF PROTECTION FENCING AND INSTALLATION OF PROTECTION ZONE SIGNS PRIOR TO THE START OF CONSTRUCTION.
8. TREES WITH TRUNK DIAMETERS LESS THAN 12 INCHES SHALL BE CONSIDERED BRUSH AND THEIR REMOVAL PAID UNDER ITEM 201, CLEARING AND GRUBBING, WHERE SPECIFICALLY MARKED FOR REMOVAL.
9. THE CITY OF DUBLIN RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES AND/OR STUMPS WITHIN THE LIMITS OF CONSTRUCTION.
10. QUESTIONS CONCERNING TREE PRESERVATION AND SPECIAL PROTECTIVE MEASURES (I.E. HAND PRUNING OF SHOOTS, ETC.) SHOULD BE DIRECTED TO KEN RICHARDSON, P.E., ENGINEERING MANAGER AT 614-410-4631.

TREE INFORMATION				
ID	DIAMETER	TYPE	CONDITION	NOTES
T65	12"	HONEY LOCUST	GOOD	
T66	12"	HONEY LOCUST	GOOD	

LEGEND	
	DECIDUOUS, EVERGREEN (SYMBOL INDICATES APPROX. DRIP LINE - 6" AND ABOVE)
	TREE TO BE REMOVED
	TREE I.D.
	TREE PROTECTION FENCE



NO.	DESCRIPTION	REVISIONS	
		DATE	

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DATE: OCT. 2014  
DESIGNED BY: WHW  
DRAWN BY: WHW  
CHECKED BY: JED  
APPROVED BY: JED  
SCALE: 1" = 20'

TREE PRESERVATION PLAN AND NOTES

EROSION AND SEDIMENT CONTROL NOTES \*

- THE DESIGN OF EROSION CONTROL SYSTEMS SHALL FOLLOW THE REQUIREMENTS OF OHIO EPA, ITEM 207 OF OHIO DEPARTMENT OF TRANSPORTATION (ODOT) STANDARD SPECIFICATIONS AND THE CITY ENGINEER. THE CONTRACTOR SHALL BE CONSIDERED THE DEVELOPER OF THE STORMWATER DISCHARGE.
- THE CONTRACTOR SHALL PROVIDE SEDIMENT CONTROL AT ALL POINTS WHERE WATER LEAVES THE PROJECT, INCLUDING WATERWAYS, OVERLAND SHEET FLOW, AND STORM SEWERS, WHETHER SPECIFICALLY SHOWN ON THE PLANS OR NOT.
- ACCEPTED METHODS OF PROVIDING EROSION/SEDIMENT CONTROL INCLUDE BUT ARE NOT LIMITED TO: SEDIMENT FILTERS, SILT FILTER FENCE, ROCK CHECK DAMS, AND TEMPORARY GROUND COVER.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE OF THE WORK AREA AT ALL TIMES CONSISTENT WITH EROSION CONTROL PRACTICES.
- DISTURBED AREAS THAT WILL REMAIN UNWORKED FOR 45 DAYS OR MORE SHALL BE SEEDED WITHIN 7 CALENDAR DAYS OF THE DISTURBANCE. OTHER SEDIMENT CONTROLS THAT ARE INSTALLED SHALL BE MAINTAINED UNTIL VEGETATIVE GROWTH HAS BEEN ESTABLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY SEDIMENT DEVICES AT THE CONCLUSION OF CONSTRUCTION BUT NOT BEFORE GROWTH OF PERMANENT GROUND COVER.
- ALL DENUDED AREAS, INCLUDING STOCKPILED TOPSOIL AND EXCAVATED MATERIAL, ARE TO BE PROTECTED THROUGH THE USE OF TEMPORARY SEEDING, OR COVERED WITH ANCHORED STRAW MULCH.
- FINAL GRADING WILL BE CONSISTENT WITH PRECONSTRUCTION TOPOGRAPHY TO MAINTAIN DRAINAGE AND AESTHETICS.
- REMOVE ONLY THE TREES, SHRUBS, AND GRASSES THAT MUST BE REMOVED TO PERMIT ACTUAL CONSTRUCTION. PROTECT THE REMAINING TO PRESERVE THEIR AESTHETIC AND EROSION CONTROL VALUE.
- BACKFILL TRENCHES IMMEDIATELY AFTER USE. SEED AND MULCH TRENCH AREA WITHIN 1 WEEK AFTER AREA OR SECTION HAS BEEN OPENED.
- SETTLING FACILITIES, SEDIMENT FILTERS, PERIMETER CONTROLS, AND OTHER PRACTICES INTENDED TO TRAP SEDIMENT SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING OR CONSTRUCTION AND WITHIN 7 DAYS FROM THE START OF GRUBBING. THEY SHALL CONTINUE TO FUNCTION UNTIL THE UPSLOPE DEVELOPMENT AREA IS RESTABILIZED.
- STORM SEWER INLET PROTECTION. ALL STORM SEWER INLETS WHICH ACCEPT WATER RUNOFF FROM THE PROJECT AREA SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER WILL NOT ENTER THE STORM SEWER SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT, UNLESS THE STORM SEWER SYSTEM DRAINS TO A SETTLING FACILITY. THESE CONTROLS SHALL BE SELECTED AND LOCATED AS INDICATED IN THE PLANS AND AS DIRECTED BY THE CITY ENGINEER.
- WORKING IN OR CROSSING STREAMS. STREAMS INCLUDING BED AND BANKS SHALL BE RESTABILIZED IMMEDIATELY AFTER IN-CHANNEL WORK IS COMPLETED, INTERRUPTED, OR STOPPED. TO THE EXTENT PRACTICABLE, CONSTRUCTION VEHICLES SHALL BE KEPT OUT OF STREAMS. WHERE IN-CHANNEL WORK IS NECESSARY, PRECAUTIONS SHALL BE TAKEN TO STABILIZE THE WORK AREA DURING CONSTRUCTION TO MINIMIZE EROSION. WHERE A STREAM MUST BE CROSSED BY CONSTRUCTION VEHICLES REGULARLY DURING CONSTRUCTION, A TEMPORARY CULVERT SHALL BE PROVIDED. SEE ITEM SPECIAL - STREAM UTILITY CROSSING (THIS SHEET).
- CONSTRUCTION ACCESS ROUTES. MEASURES SHALL BE TAKEN TO PREVENT SOIL TRANSPORT ONTO SURFACES WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, OR ONTO PUBLIC ROADS. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT OFF-SITE TRACKING OF SEDIMENTS BY VEHICLES AND EQUIPMENT IS ELIMINATED.
- SLOUGHING AND DUMPING. NO SOIL, ROCK, DEBRIS, OR ANY OTHER MATERIAL SHALL BE DUMPED OR PLACED INTO A WATER RESOURCE OR INTO SUCH PROXIMITY THAT IT MAY READILY SLOUGH, SLIP, OR ERODE INTO A WATER RESOURCE. UNSTABLE SOILS PRONE TO SLIPPING OR LANDSLIDING SHALL NOT BE GRADED, EXCAVATED, FILLED, OR HAVE LOADS IMPOSED UPON THEM UNLESS THE WORK IS DONE IN ACCORDANCE WITH A QUALIFIED PROFESSIONAL ENGINEER'S RECOMMENDATIONS TO CORRECT, ELIMINATE, OR ADEQUATELY ADDRESS THE PROBLEMS.

- MAINTENANCE AND INSPECTION. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE DESIGNED AND CONSTRUCTED TO MINIMIZE MAINTENANCE REQUIREMENTS. THEY SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. MAINTENANCE AND INSPECTION OF ALL EROSION/SEDIMENT CONTROL DEVICES REQUIRED BY THE CITY ENGINEER SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. INSPECTIONS SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF THE CITY ENGINEER, ONCE EVERY 7 CALENDAR DAYS AND/OR WITHIN 24 HOURS AFTER A RAIN EVENT OF GREATER THAN 0.5 INCHES IN A 24-HOUR PERIOD. THESE INSPECTIONS SHALL IDENTIFY AREAS CONTRIBUTING TO STORMWATER DISCHARGES ASSOCIATED WITH THE PROJECT; EVALUATE THE ADEQUACY, IMPLEMENTATION, AND MAINTENANCE OF EXISTING AND PROPOSED EROSION/SEDIMENTATION MEASURES; AND DETERMINE WHETHER ADDITIONAL MEASURES ARE REQUIRED. ACCEPTABLE INSPECTION REPORTS SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE CITY ENGINEER WITHIN 48 HOURS OF INSPECTION COMPLETION. THE REPORT SHALL CONTAIN THE RESULTS OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN, A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE PLAN, AND IDENTIFYING ANY INCIDENTS OF NONCOMPLIANCE.
- OUTFLOWS FROM DEWATERING OPERATIONS. ALL WATER PRODUCED FROM CLEANING AND DEWATERING OPERATIONS, WHETHER SPECIFICALLY FROM TRENCH DEWATERING OPERATIONS OR FROM MORE EXTENSIVE DEWATERING OPERATIONS, SHALL BE DISCHARGED IN SUCH A MANNER AS TO ELIMINATE EROSION FROM SUCH DISCHARGE.
- ADDITIONAL CONTROLS. THE CONTRACTOR SHALL ENSURE THAT NO SEDIMENTS ARE TRACKED OFF-SITE BY CONSTRUCTION EQUIPMENT, VEHICLES, AND WORKERS. THE CONTRACTOR SHALL ALSO ENSURE THAT NO SOLID OR LIQUID WASTE IS DISCHARGED INTO ANY STORMWATER FLOW.
- TEMPORARY EROSION AND SEDIMENT CONTROL PLAN AVAILABILITY AND UPDATES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO ENSURE THE IMMEDIATE AVAILABILITY OF THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN ON-SITE. THE CONTRACTOR SHALL ALSO BE SOLELY RESPONSIBLE TO PERFORM ALL UPDATES AND ADJUSTMENTS TO THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN.

PROHIBITED CONSTRUCTION ACTIVITIES

THE CONTRACTOR SHALL NOT USE CONSTRUCTION PROCEDURES, ACTIVITIES, OR OPERATIONS THAT MAY UNNECESSARILY IMPACT THE NATURAL ENVIRONMENTAL OR THE PUBLIC HEALTH AND SAFETY. PROHIBITED CONSTRUCTION PROCEDURES, ACTIVITIES, OR OPERATIONS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOOD PLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER.
- INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS.
- PUMPING OF SEDIMENT LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM DRAINS.
- DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE, AND/OR ANY OTHER HARMFUL WASTE, INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS, OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO.
- PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOWLINE OF A STREAM.
- DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA.
- DISPOSAL OF TREES, BRUSH, AND OTHER DEBRIS IN ANY STREAM CORRIDORS, WETLANDS, OR SURFACE WATERS.
- OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT.
- STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY (PUBLIC OR PRIVATE) NOT PREVIOUSLY SPECIFIED BY THE CITY ENGINEER FOR SAID PURPOSES.

ITEM SPECIAL - STREAM UTILITY CROSSING

- WHEN SITE CONDITIONS ALLOW, ONE OF THE FOLLOWING SHALL BE USED TO DIVERT STREAM FLOW OR KEEP THE FLOW AWAY FROM CONSTRUCTION ACTIVITY:
  - CONSTRUCT A COFFERDAM OR BARRICADE OF SAND BAGS, OR A TURBIDITY CURTAIN TO KEEP FLOW FROM MOVING THROUGH THE DISTURBED AREA. TURBIDITY CURTAINS SHALL BE A PRE-ASSEMBLED SYSTEM AND USED ONLY PARALLEL TO FLOW.
  - STAGE CONSTRUCTION BY FIRST CONFINING ONE-HALF OF THE CHANNEL UNTIL WORK THERE IS COMPLETED AND STABILIZED, THEN MOVE TO THE OTHER SIDE TO COMPLETE THE CROSSING.
  - ROUTE THE STREAM FLOW AROUND THE WORK AREA BY BRIDGING THE TRENCH WITH A RIGID CULVERT, PUMPING, OR CONSTRUCTING A TEMPORARY CHANNEL. TEMPORARY CHANNELS SHALL BE STABILIZED BY ROCK OR A GEOTEXTILE COMPLETELY LINING THE CHANNEL BOTTOM AND SIDE SLOPES.
- CROSSING WIDTH. THE WIDTH OF CLEARING SHALL BE MINIMIZED THROUGH THE RIPARIAN AREA. THE LIMITS OF DISTURBANCE SHALL BE AS NARROW AS POSSIBLE INCLUDING NOT ONLY CONSTRUCTION OPERATIONS WITHIN THE CHANNEL ITSELF BUT ALSO CLEARING DONE THROUGH THE VEGETATION GROWING ON THE STREAMBANKS.
- CLEARING SHALL BE DONE BY CUTTING NOT GRUBBING. THE ROOTS AND STUMPS SHALL BE LEFT IN PLACE TO HELP STABILIZE THE BANKS AND ACCELERATE RE-VEGETATION.
- MATERIAL EXCAVATED FROM THE TRENCH SHALL BE PLACED AT LEAST 20 FEET FROM THE STREAMBANKS.
- TO THE EXTENT OTHER CONSTRAINTS ALLOW, STREAM SHALL BE CROSSED DURING PERIODS OF LOW FLOW.
- DURATION OF CONSTRUCTION. THE TIME BETWEEN INITIAL DISTURBANCE OF THE STREAM AND FINAL STABILIZATION SHALL BE KEPT TO A MINIMUM. CONSTRUCTION SHALL NOT BEGIN ON THE CROSSING UNTIL THE UTILITY LINE IS IN PLACE TO WITHIN 10 FEET OF THE STREAMBANK.
- FILL PLACED WITHIN THE CHANNEL. THE ONLY FILL PERMITTED IN THE CHANNEL SHOULD BE CLEAN AGGREGATE OR STONE. NO SOIL OR OTHER FINE ERODIBLE MATERIAL SHALL BE PLACED IN THE CHANNEL. THIS RESTRICTION INCLUDES ALL FILL FOR TEMPORARY CROSSINGS, DIVERSIONS, AND TRENCH BACKFILL WHEN PLACED IN FLOWING WATER. IF THE STREAM FLOW IS DIVERTED AWAY FROM CONSTRUCTION ACTIVITY THE MATERIAL ORIGINALLY EXCAVATED FROM THE TRENCH MAY BE USED TO BACKFILL THE TRENCH.
- STREAMBANK RESTORATIONS. STREAMBANKS SHALL BE RESTORED TO THEIR ORIGINAL LINE AND GRADE AND STABILIZED WITH RIPRAP OR VEGETATIVE BANK STABILIZATION.
- RUNOFF CONTROL ALONG THE RIGHT-OF-WAY. TO PREVENT SEDIMENT-LADEN RUNOFF FROM FLOWING TO THE STREAM, RUNOFF SHALL BE DIVERTED WITH WATER BAR OR SWALES TO A SEDIMENT TRAPPING PRACTICE A MINIMUM OF 50 FEET FROM THE STREAM.
- SEDIMENT LADEN WATER FROM PUMPING OR DEWATERING SHALL NOT BE DISCHARGED DIRECTLY TO A STREAM. FLOW SHALL BE ROUTED THROUGH A SETTLING POND, DEWATERING SUMP OR A FLAT, WELL-VEGETATED AREA ADEQUATE FOR REMOVING SEDIMENT BEFORE THE PUMPED WATER REACHES THE STREAM.
- DEWATERING OPERATIONS SHALL NOT CAUSE SIGNIFICANT REDUCTIONS IN STREAM TEMPERATURES. IF GROUNDWATER IS TO BE DISCHARGED IN HIGH VOLUMES DURING SUMMER MONTHS, IT SHALL FIRST BE ROUTED THROUGH A SETTLING POND OR OVERLAND THROUGH A FLAT WELL-VEGETATED AREA.
- THE CONTRACTOR SHALL SUBMIT A STREAM CROSSING PROCEDURE, IN WRITING, TO THE CITY PRIOR TO THE START OF CONSTRUCTION, DETAILING HIS PROPOSED METHOD FOR CROSSING THE STREAM IN ACCORDANCE WITH THE ABOVE REQUIREMENTS. THE SUBMITTAL SHALL DESCRIBE IN DETAIL THE CONTRACTOR'S METHODS FOR EXCAVATION, SOIL STOCKPILING, FLOW DIVERSION, EROSION AND SEDIMENT CONTROL, BACKFILL, AND STREAM RESTORATION.
- PAYMENT FOR THE STREAM CROSSING WILL BE MADE AT THE LUMP SUM PRICE BID AND SHALL INCLUDE ALL COSTS, **INCLUDING ROCK EXCAVATION**, INCURRED OVER AND ABOVE THOSE COSTS INCLUDED IN THE PER FOOT PRICES BID FOR TRENCH TYPE 3, PVC CONDUIT, AND PEA GRAVEL ENCASUREMENT.

\* SEE PLAN AND PROFILE SHEETS FOR PLACEMENT OF EROSION AND SEDIMENT CONTROL ITEMS.

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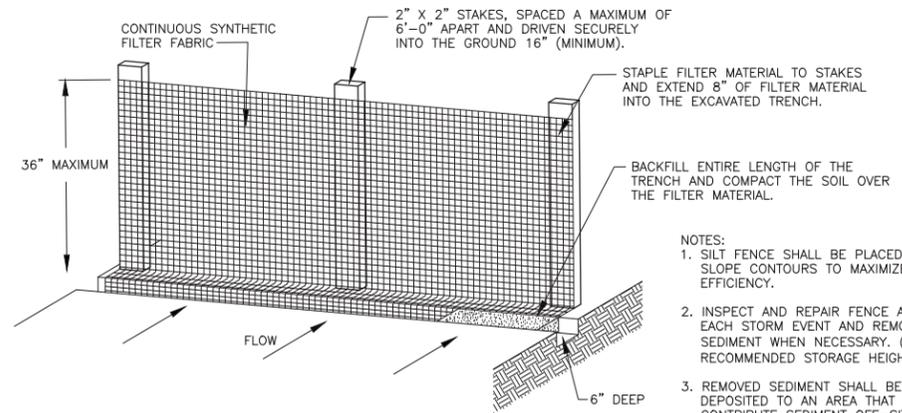
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<b>SCALE:</b>	NONE

TEMPORARY EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

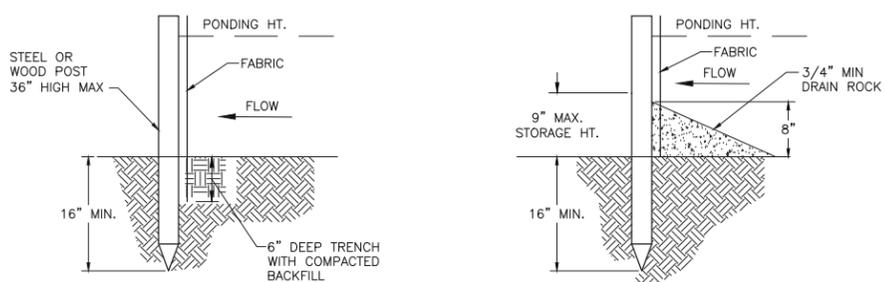
### FILTER FABRIC FENCE

THIS SEDIMENT BARRIER UTILIZES STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS. IT IS DESIGNED FOR SITUATIONS IN WHICH ONLY SHEET OR OVERLAND FLOWS ARE EXPECTED.

1. THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE).
2. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6 INCH OVERLAP, AND SECURELY SEALED.
3. POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 12 INCHES). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET.
4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
5. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
6. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
7. WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF ITEM NO. 6 APPLYING.
8. THE TRENCH SHALL BE BACKFILLED AND SOIL COMPACTED OVER THE FILTER FABRIC.
9. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.



- NOTES:
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
  2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. (9\"/>



TRENCH DETAIL      INSTALLATION WITHOUT TRENCHING  
**FILTER FABRIC FENCE**

#### MAINTENANCE

SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS EACH SHALL BE MADE IMMEDIATELY.

SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.

SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED, AND SEEDED.

THIS WORK SHALL BE PAID AT THE UNIT PRICE BID PER LINEAL FOOT FOR ITEM 207 - "FILTER FABRIC FENCE".

### TEMPORARY ROCK CHECK DAM

TEMPORARY ROCK CHECK DAMS SHALL CONSIST OF NO. 2 STONE WITHOUT FILTER, PER ITEM 601.08, AND PLACED TO THE DIMENSIONS SHOWN ON THE DETAIL.

#### MAINTENANCE

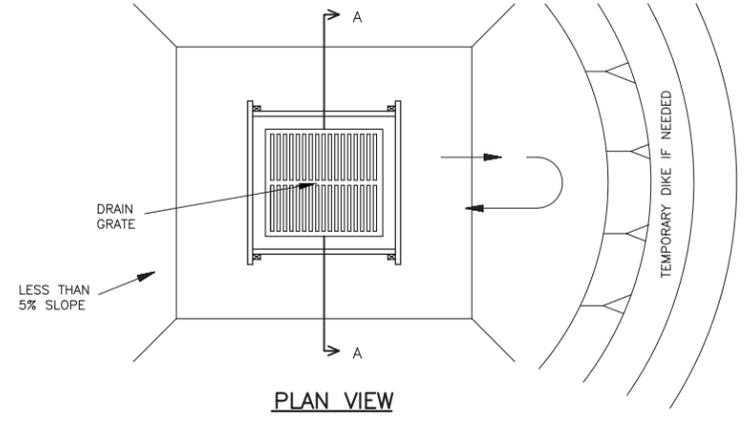
THE DAM SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED. SEDIMENT SHALL BE REMOVED AND THE DAM RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DAM DESIGN HEIGHT. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA NOT SUBJECT TO EROSION.

DAMS SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

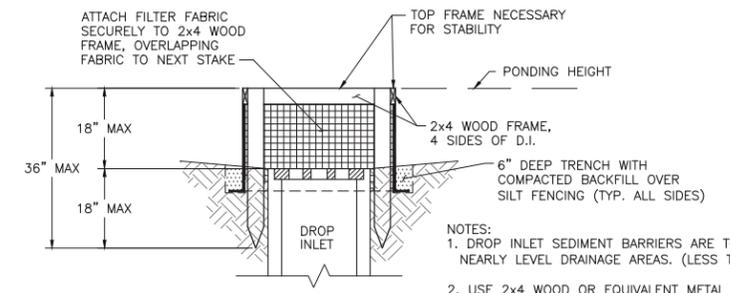
PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR ITEM SPECIAL-TEMPORARY ROCK CHECK DAM; INCLUDING MATERIAL, PLACEMENT, MAINTENANCE, AND REMOVAL.

### INLET SEDIMENT FILTER

INSTALLATION AND MAINTENANCE OF INLET SEDIMENT FILTERS SHALL BE IN ACCORDANCE WITH THE DETAILS AND THE MANUFACTURER'S RECOMMENDATIONS. PAYMENT WILL BE PER EACH FOR ITEM 207 - INLET PROTECTION, A.P.P.



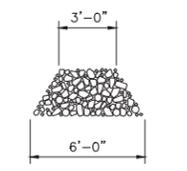
PLAN VIEW



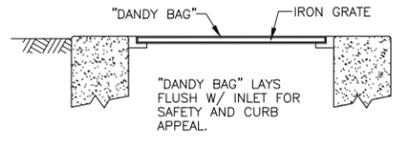
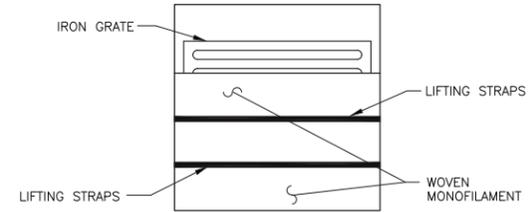
SECTION A-A

- NOTES:
1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%).
  2. USE 2x4 WOOD OR EQUIVALENT METAL STAKES, (3FT. MIN. LENGTH).
  3. INSTALL 2x4 WOOD TOP FRAME TO INSURE STABILITY.
  4. THE TOP OF THE FRAME (PONDING HEIGHT) MUST BE WELL BELOW GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BY-PASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

### SILT FENCE DROP INLET SEDIMENT BARRIER



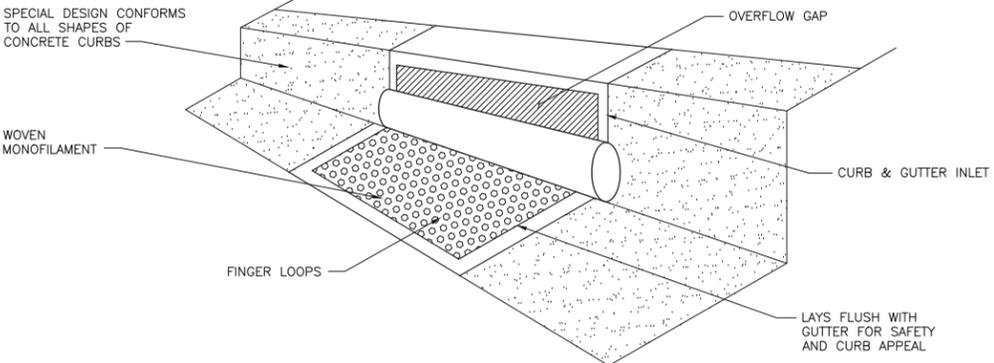
SECTION B-B



INLET SEDIMENT FILTER

MAINTENANCE: REMOVE DRIED SEDIMENT FROM SURFACE OF UNIT WITH A STIFF BRISTLE BROOM OR SQUARE POINT SHOVEL. REMOVE FINE MATERIAL FROM INSIDE ENVELOPE AS NEEDED.

TO INSPECT CATCH BASIN: REMOVE UNIT WITH GRATE INSIDE, INSPECT CATCH BASIN AND REPLACE UNIT.



TO INSPECT CATCH BASIN: REMOVE UNIT WITH GRATE INSIDE, INSPECT CATCH BASIN AND REPLACE UNIT. NO NEED TO REINSTALL.

MAINTENANCE: REMOVE DRIED SEDIMENT FROM SURFACE OF UNIT AS NEEDED WITH STIFF BROOM OR SQUARE POINT SHOVEL. REMOVE FINE MATERIAL FROM INSIDE ENVELOPE AS NEEDED.

### CURB INLET SEDIMENT BARRIER/FILTER

DANDY PRODUCTS INC.  
2011 R HARRISBURG PIKE, GROVE CITY, OH 43123  
(800) 591-2284 (614) 875-2284 FAX (614) 875-6305

**BURGESS & NIPLÉ**  
5085 REED ROAD  
COLUMBUS, OHIO 43220

CITY OF DUBLIN, OHIO  
FRANTZ ROAD UTILITY BURIAL  
RINGS ROAD TO METRO PLACE NORTH  
11-021 - CIP

NO.	DESCRIPTION	REVISIONS	DATE

JOB NO:	PR50708
DATE:	OCT. 2014
DESIGNED BY:	WHW
DRAWN BY:	WHW
CHECKED BY:	JED
APPROVED BY:	JED
SCALE:	NONE

TEMPORARY EROSION AND SEDIMENT CONTROL NOTES AND DETAILS