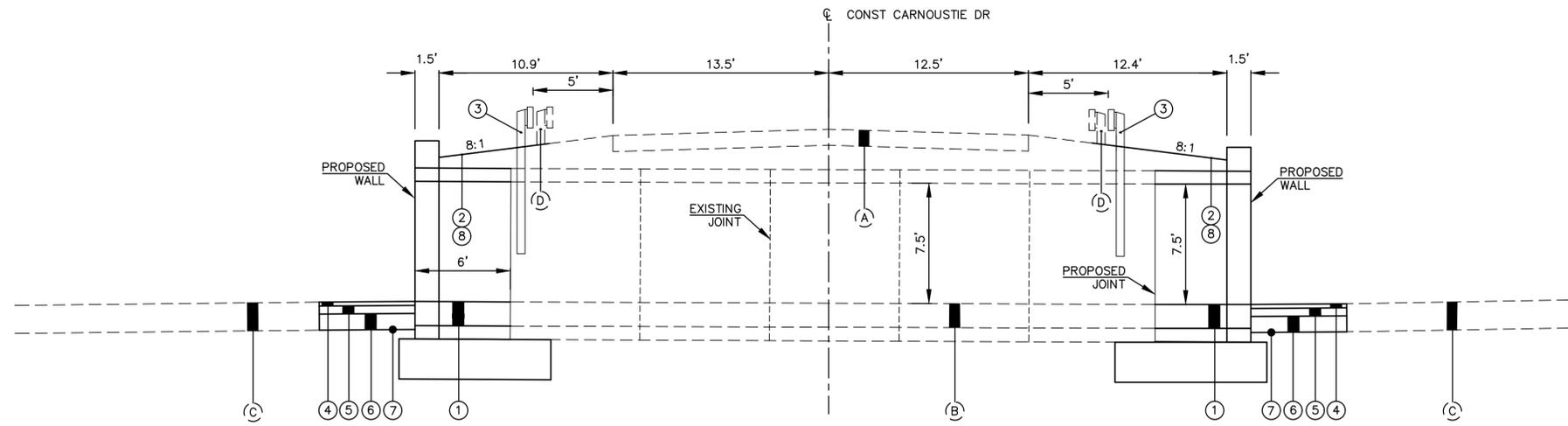
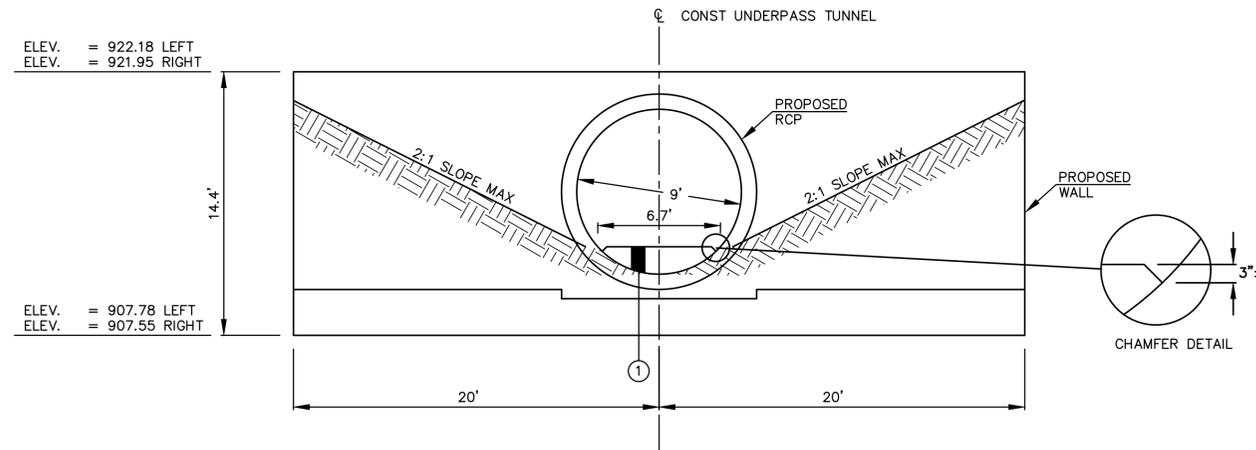


O:\2016\01432\C. Design\12345_ProjDescription\Roadway\Sheets\01432GY001.dwg 07-Nov-16 1:35 PM



CARNOSTIE DRIVE - SECTION
STA 27+30.00 TO STA 27+70.00



UNDERPASS TUNNEL - SECTION
STA 20+38.31 TO STA 20+52.61
STA 20+87.92 TO STA 21+02.72

LEGEND

EXISTING LEGEND

- (A) EXISTING PAVEMENT
- (B) EXISTING CONCRETE CLASS C VARIABLE THICKNESS
- (C) EXISTING ASPHALT PATH
- (D) EXISTING GUARDRAIL

- (1) ITEM 452 - VARIABLE THICKNESS (1.4'± MAX @ CL, MATCH EXISTING SURFACE ELEVATION), NON-REINFORCED CONCRETE PAVEMENT, CLASS C
- (2) ITEM 659 - SEEDING AND MULCHING, AS PER PLAN
- (3) ITEM SPEC - STEEL-BACKED TIMBER GUARDRAIL, TYPE A, 7-FT POST
- (4) ITEM 448 - 1.5" ASPHALT CONCRETE SURFACE COURSE (MEDIUM TRAFFIC), PG64-22
- (5) ITEM 301 - 3" ASPHALT CONCRETE BASE
- (6) ITEM 304 - 6" AGGREGATE BASE
- (7) ITEM 204 - SUBGRADE COMPACTION
- (8) ITEM 653 - 3" TOPSOIL FURNISHED AND PLACED, AS PER PLAN

GENERAL

CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS, 2012 EDITION, AND ANY SUPPLEMENTS THERETO, ALONG WITH CITY OF DUBLIN GENERAL CONDITIONS, DIVISION 100 SHALL GOVERN ALL CONSTRUCTION ITEMS UNLESS OTHERWISE NOTED. ITEM NUMBERS LISTED REFER TO CITY OF COLUMBUS ITEM NUMBERS UNLESS OTHERWISE NOTED.

THE CONTRACTOR INTENDING TO SUBMIT A BID FOR THIS PROJECT 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 RESTRICT CONSTRUCTION ACTIVITY TO PUBLIC RIGHT-OF-WAY, AREAS DEFINED AS PERMANENT AND/OR TEMPORARY CONSTRUCTION EASEMENTS, AND/OR THE LIMITS OF DISTURBANCE SHOWN.

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

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINISHED WORK CONFORMING 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.

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, 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.

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 SHARED-USE 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.

ALL PRECAST CONCRETE PRODUCTS SHALL BE INSPECTED AT THE LOCATION OF MANUFACTURER. APPROVED PRECAST CONCRETE PRODUCTS WILL BE STAMPED OR HAVE SUCH IDENTIFICATION NOTING THAT INSPECTION HAS BEEN PERFORMED BY THE CITY OF COLUMBUS. PRECAST CONCRETE PRODUCTS WITHOUT PROOF OF INSPECTION SHALL NOT BE APPROVED FOR INSTALLATION. THE COST OF INSPECTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS RELATED ITEMS.

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, AS PER PLAN.

THE COST OF ALL ASPHALT PAVEMENT REMOVAL AND DISPOSAL SHALL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR ITEM 203 - EXCAVATION. THE COST OF CONCRETE PAVEMENT REMOVAL AND DISPOSAL WILL BE PAID AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 202 - CONCRETE PAVEMENT REMOVED.

ALL NON-PAVEMENT AREAS DISTURBED WITHIN THE DESIGNATED EASEMENTS, RIGHTS-OF-WAY, AND LIMITS OF DISTURBANCE AS SHOWN, SHALL BE SEEDED AND STRAWED IN ACCORDANCE WITH ITEM 659 - SEEDING AND MULCHING, AS PER PLAN. ALL AREAS DISTURBED OUTSIDE THESE LIMITS SHALL BE SEEDED AND STRAWED AT THE CONTRACTOR'S EXPENSE.

PROOF SURVEY

FOLLOWING COMPLETION OF CONSTRUCTION, A PROOF SURVEY SHALL BE PROVIDED BY THE CONTRACTOR DOCUMENTING AS-BUILT INFORMATION ON ALL PUBLIC UTILITIES (SANITARY, STORM, WATER) COMPLETED AS PART OF THIS PROJECT. THE SURVEY SHALL BE PREPARED AND SIGNED BY AN OHIO PROFESSIONAL SURVEYOR. THE CONTRACTOR SHALL REVISE THE ORIGINAL MYLARS IN RED INK, TO THE SATISFACTION OF THE CITY, SHOWING ALL CHANGES IN THE WORK. THE COST OF THE PROOF SURVEY, INCLUDING MYLAR REVISIONS, WILL BE PAID AT THE LUMP SUM PRICE BID FOR ITEM SPECIAL - PROOF SURVEY.

SURVEY MONUMENTATION

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. RESETTling OF MARKERS SHALL BE PERFORMED BY AN OHIO PROFESSIONAL SURVEYOR AS APPROVED BY THE CITY ENGINEER AT THE CONTRACTOR'S EXPENSE.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THE WORK LIMITS.

COORDINATES AND VERTICAL DATUM

COORDINATES ARE OHIO STATE PLANE SOUTH ZONE. ELEVATIONS ARE BASED ON NAVD88 VERTICAL DATUM.

CONSTRUCTION NOISE

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.

CONTINGENCY QUANTITIES

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.

UTILITIES

LISTED BELOW ARE ALL UTILITIES THAT ARE KNOWN TO BE LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR PROSPECTIVE OWNERS:

- | | |
|--|--|
| COLUMBIA GAS OF OHIO
3350 JOHNNY APPELSEED CT.
COLUMBUS, OH 43231
(614) 818-2113
CELL: (614) 315-3770
ATTN: MATT MYERS | AEP
850 TECH CENTER DRIVE
GAHANNA, OH 43230
OFFICE: (614) 883-6831
ATTN: PAUL PAXTON |
| COLUMBUS DEPARTMENT OF UTILITIES (WATER)
910 DUBLIN ROAD
COLUMBUS, OH 43215
(614) 645-7677 | WOW INTERNET CABLE & PHONE
3675 CORPORATE DRIVE
COLUMBUS, OH 43231
OFFICE: (614) 948-4665
ATTN: ROBERT CARPENTER |
| AT&T
111 N. 4TH STREET
ROOM 802
COLUMBUS, OH 43215
OFFICE: (614) 223-7276
ATTN: GARY VAN ALMSICK | TIME WARNER TELECOM
3760 INTERCHANGE DRIVE
COLUMBUS, OH 43204
OFFICE: (614) 481-5262
ATTN: RAY MAURER |
| TW TELECOM INC.
250 WEST OLD WILSON BRIDGE ROAD
SUITE 130
WORTHINGTON, OH 43085
OFFICE: (614) 255-2148
ATTN: MARK BLACKBURN | CITY OF DUBLIN
DIVISION OF ENGINEERING
5800 SHIER-RINGS ROAD
DUBLIN, OHIO 43016
(614) 410-4621
ATTN: KEN RICHARDSON, P.E., P.S. |

THE CONTRACTOR SHALL GIVE NOTICE OF INTENT TO CONSTRUCT TO OHIO UTILITIES PROTECTION SERVICE (TELEPHONE NUMBER 811 OR 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 LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C. AND ARE SHOWN AS ACCURATELY AS PROVIDED BY 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. 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.

COORDINATION WITH UTILITIES

THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE PROXIMITY OF EXISTING AND/OR RELOCATED UTILITY FACILITIES. COSTS TO EXPOSE CONDUIT SHALL BE INCLUDED IN THE ITEMS OF WORK AFFECTED. THE CONTRACTOR IS REMINDED TO KEEP THEIR OUPS TICKET UPDATED ACCORDING TO INDUSTRY PRACTICES.

PAVEMENT

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

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

PAVEMENT REPLACEMENT SHALL BE CONDUCTED ACCORDING TO CITY OF COLUMBUS STANDARD DRAWING 1441 AND APPLICABLE CITY OF DUBLIN STANDARD DRAWINGS. THE REPLACEMENT OF DRIVEWAYS, HANDICAPPED RAMPS, SIDEWALKS, SHARED-USE PATHS, PARKING LOT PAVEMENT, ETC. SHALL BE PROVIDED ACCORDING TO THE APPROVED CONSTRUCTION DRAWINGS AND CITY OF DUBLIN STANDARD CONSTRUCTION DRAWINGS.

TOP OF PAVEMENT ELEVATIONS SHOWN ON THE PAVEMENT DETAILS MAY REFLECT DEVIATIONS FROM THE ROADWAY PROFILES AND TYPICAL SECTION CROSS SLOPES IN SOME AREAS DUE TO PAVEMENT WARPING. IN ALL CASES, THE TOP OF PAVEMENT ELEVATIONS SHOWN ON THE PAVEMENT DETAILS SHALL GOVERN.

THE CONTRACTOR SHALL SUBMIT TO THE CITY ENGINEER AT THE PRECONSTRUCTION MEETING HIS/HER 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 IS NOT PERMITTED TO USE ANY RECLAIMED MATERIALS IN ITEM 304.

SUBGRADE

ALL SOIL SUBGRADES SHALL BE PREPARED AND COMPACTED IN ACCORDANCE WITH ITEM 204, SUBGRADE COMPACTION, 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 ALSO BE REQUIRED UNDER THE SIDEWALKS, SHARED-USE PATHS, GRANITE PAVER AREAS, AND BRICK PAVER AREAS AND SHALL FOLLOW THE REQUIREMENTS FOR COMPACTION UNDER DRIVEWAYS AS DESCRIBED IN SECTION 204.03. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 204 - SUBGRADE COMPACTION.

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 | 25 CY |
| ITEM 204 - GRANULAR EMBANKMENT, NO. 2 STONE | 25 CY |

TRENCH AND BACKFILL

TRENCH EXCAVATION SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF OPEN TRENCH 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 PUBLIC RIGHT-OF-WAY SHALL BE BACKFILLED OR SECURELY PLATED DURING NON-WORKING HOURS. TRENCHES OUTSIDE THESE AREA 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.

BACKFILL WITHIN A 1:1 INFLUENCE LINE OF EXISTING STRUCTURES (HOUSES, GARAGES, ETC.) OR PUBLIC INFRASTRUCTURE (PAVEMENTS, SIDEWALKS, CURBS, ETC.) SHALL BE ITEM 912, COMPACTED GRANULAR MATERIAL, OR ITEM 613, FLOWABLE CONTROLLED DENSITY FILL, TYPE 2.

TRENCHES WITHIN 2 FEET OF PROPOSED PAVEMENT, CURB AND GUTTER, BERM, SHOULDERS, SIDEWALK, OR 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 FLOWABLE 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.

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

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 901 PIPE ITEMS.

ITEMS, SUCH AS WEARING COURSE REMOVAL OR ASPHALT CEMENT COATING, THAT ARE NECESSARY TO CONSTRUCTION BUTT JOINT OR TAPER EDGE TYPE FEATHERED AREAS PER ODOT STANDARD CONSTRUCTION DRAWING BP-3.1 ARE TO BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND ARE TO BE INCLUDED WITH ASSOCIATED PAVEMENT ITEMS FOR PAYMENT.

DRAINAGE

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN AT ALL TIMES STORM SEWER, DRAIN, AND DITCH FLOWS THROUGH EXISTING FACILITIES TO REMAIN IN PLACE AND THROUGH EXISTING FACILITIES TO BE REPLACED UNTIL NEW FACILITIES ARE COMPLETED AND PUT INTO SERVICE. THE FLOW OF ALL STORM SEWER, DRAINS, AND OTHER WATERCOURSES ENCOUNTERED AND DISTURBED OR DESTROYED DURING CONSTRUCTION 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.

WHERE THE WORK CALLS FOR RELOCATION OF EXISTING DITCHES OR STORM SEWER, THE CONTRACTOR SHALL REESTABLISH THE OUTLETS OF ALL PRIVATE DRAINS ENCOUNTERED; SUCH AS DOWNSPOUTS, FOUNDATION DRAINS, CATCH BASINS, YARD DRAINS, ETC., INTO THE NEAREST NEW DITCH OR STORM SEWER AS APPROVED BY THE ENGINEER. THE COST FOR REESTABLISHING PRIVATE DRAIN OUTLETS SHALL BE INCLUDED IN THE VARIOUS STORM SEWER ITEMS.

EXISTING STORM SEWER LOCATED WITHIN THE WORK LIMITS THAT IS TO REMAIN IN SERVICE HAS BEEN MARKED ON THE PLANS "TO REMAIN" OR "DO NOT DISTURB". THE CONTRACTOR SHALL PROTECT THESE SEWERS AND THEIR ASSOCIATED STRUCTURES FROM DAMAGE DURING CONSTRUCTION. ALL OTHER EXISTING STORM SEWER PIPE, CATCH BASINS, AND INLETS LOCATED WITHIN THE CONSTRUCTION LIMITS NOT DESIGNATED TO REMAIN SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH THE APPLICABLE ITEM 202. EXISTING HEADWALLS SHALL BE REMOVED AND DISPOSED OF AS INDICATED WITH NO SEPARATE PAYMENT.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS CALL FOR CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES FOR BOTH LINE AND GRADE PRIOR TO START OF PIPE LAYING.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT OR EXISTING APPURTENANCE TO BE CONNECTED DIFFERS FROM THE PLAN ELEVATION, THE CITY ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT A PROPOSED CONDUIT WILL CONFLICT WITH AN EXISTING SEWER OR UNDERGROUND UTILITY WHEN CONSTRUCTED AS SHOWN ON THE PLAN, THE CITY ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION ON ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE CONFLICT.

PAYMENT FOR DETERMINATION OF LINE AND GRADE OF EXISTING UTILITIES AS REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT CONTRACT ITEMS.

O:\2016\01432\C. Design\12345_ProjDescription\Roadway\Sheets\01432GN001.dwg 07-Nov-16 1:36 PM

C:\2016\01432\C. Design\12345_ProjDescription\Roadway\Sheets\01432GN001.dwg 07-Nov-16 1:36 PM

STORM SEWER

UNLESS OTHERWISE INDICATED, STORM SEWERS SHALL BE REINFORCED CONCRETE OR HIGH DENSITY POLYPROPYLENE PIPE (HDPP).

IF USED, REINFORCED CONCRETE PIPE SHALL CONFORM TO ASTM DESIGNATION C76, WALL B, CLASS IV FOR PIPE DIAMETERS 12 INCHES TO 15 INCHES AND CLASS III FOR 18 INCHES AND LARGER.

HIGH DENSITY POLYPROPYLENE PIPE SHALL MEET THE REQUIREMENTS OF ITEM 20 IN SECTION 901.02 IN THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS.

THE CONTRACTOR SHALL INCLUDE THE COST OF CONNECTION TO EXISTING STRUCTURES AND PIPES IN THE UNIT PRICE BID FOR THE VARIOUS 901 ITEMS. ALL MANHOLE CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE PROVISIONS OF ITEM 604.

TEMPORARY BULKHEADS SHALL BE BUILT IN ACCORDANCE WITH 901.13, AND BE INCLUDED WITH THE UNIT PRICE BID FOR THE VARIOUS 901 ITEMS.

ALL INLETS, CATCH BASINS, AND MANHOLES SHALL BE CHANNELIZED.

BICYCLE SAFE GRATES SHALL BE USED FOR ALL PROPOSED CURB AND GUTTER INLETS AND CATCH BASINS. ALL CATCH BASINS ARE TO BE EQUIPPED WITH EAST JORDAN #5110, TYPE M3 GRATES.

WHEREVER REFERENCE IS MADE TO THE ELEVATION TERM "TC" ON THE PLANS, THIS ABBREVIATION SHALL BE UNDERSTOOD AS MEANING THE FOLLOWING:

STRUCTURE	"TC" ELEVATION LOCATION
PROP MANHOLES	TOP OF CASTING
PROP CATCH BASINS	TOP OF CASTING
PROP CURB INLETS	TOP OF CURB

THE REQUIRED HORIZONTAL CLEARANCE BETWEEN PROPOSED GRAVITY SEWERS AND EXISTING WATER LINES SHALL BE A MINIMUM OF 10 FEET (OUT-TO-OUT). ADDITIONALLY, THE VERTICAL CLEARANCE BETWEEN PROPOSED GRAVITY SEWERS AND EXISTING WATER LINES SHALL BE A MINIMUM OF 18 INCHES (OUT-TO-OUT). SHOULD THIS REQUIREMENT NOT BE FEASIBLE, UPON APPROVAL OF THE ENGINEER (DOW), PREMIUM PIPE MAY BE USED IN LIEU OF STANDARD SEWER PIPE. THE PREMIUM PIPE SHALL BE PRESSURE RATED (150 PSI) WATER WORKS GRADE PIPE MEETING AWWA STANDARDS. FURTHERMORE, THE PROPOSED PREMIUM PIPE SHALL BE PRESSURE TESTED IN ACCORDANCE WITH 801.14 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATIONS TO ENSURE WATER TIGHTNESS.

WHERE CONCRETE ENCASEMENT IS INDICATED ON THE PLANS, OR DIRECTED BY THE ENGINEER, THE WORK SHALL BE IN ACCORDANCE WITH CITY OF COLUMBUS STANDARD DRAWING AA-S151, TYPE 1 BEDDING FOR RIGID SEWER PIPE USING CLASS "C" CONCRETE. THE TOTAL LENGTH OF BACKFILL SHALL BE FOR ALL EXPOSED PORTIONS OF PIPE, OR AS DIRECTED BY THE ENGINEER. NO SEPARATE PAYMENT SHALL BE MADE.

PAYMENT FOR CONCRETE COLLARS, BULKHEADS, AND CRADLES SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE STORM SEWER PIPE.

ALL EXISTING AND PROPOSED CASTINGS SHALL BE ADJUSTED TO MATCH THE SURROUNDING FINISH GRADE BY THE CONTRACTOR. TOP OF CASTING ELEVATIONS PROVIDED ON THE PLANS ARE APPROXIMATE. PAYMENT UNDER ITEM 604, EXISTING MANHOLES ADJUSTED TO GRADE, SHALL ONLY BE FOR CASTING ADJUSTMENTS ON EXISTING MANHOLES THAT REQUIRE NO OTHER WORK. THE COST OF ALL CASTING ADJUSTMENTS FOR NEW OR RECONSTRUCTED MANHOLES OR OTHER DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE PRICE BID FOR THOSE STRUCTURES.

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE CITY, REPRESENTATIVES OF THE CITY AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE CITY.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY ENGINEER.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATERIAL AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE CITY.

PAYMENT FOR ALL INSPECTIONS, CLEANING, AND MAINTENANCE OF EXISTING AND NEW STORM SEWER DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT CONTRACT ITEMS.

ITEM 201 – TREES REMOVED

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. TREES	TOTAL
TREES 12"-24" (18" SIZE)	1	1

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

ITEM 203 – EXCAVATION, AS PER PLAN
ITEM 203 – EMBANKMENT, AS PER PLAN

THE EXCAVATION OF ASPHALT PAVEMENT, ASPHALT CURB, BRICK MATERIALS, TOPSOIL OR UNSUITABLE MATERIALS NOT OTHERWISE ITEMIZED ON THIS PROJECT ARE INCLUDED WITHIN ITEM 203 – EXCAVATION, AS PER PLAN QUANTITIES FOR PAYMENT. ALL MATERIAL EXCAVATED FOR CONSTRUCTION INCLUDING TOPSOIL AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF UNLESS OTHERWISE APPROVED BY THE CITY.

ALL SOIL STOCKPILES INCLUDING TRENCH EXCAVATION STOCKPILES, SHALL BE PROTECTED FROM EROSION.

ALL MATERIAL TO BE DISPOSED OF OFF-SITE MUST BE DISPOSED OF IN AN ENVIRONMENTALLY SOUND MANNER IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. NO EXCESS MATERIALS ARE TO BE DISPOSED OF IN ANY WETLAND, FLOOD PLAIN, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS.

ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED, AS PER PLAN

A MINIMUM 3 INCHES OF TOPSOIL SHALL BE PLACED IN ALL AREAS TO BE SEEDED. PRIOR TO PLACING TOPSOIL IN CUT AREAS, THE EARTH SHALL BE EXCAVATED TO A DEPTH SUFFICIENT TO PLACE 3 INCHES OF TOPSOIL. 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. PAYMENT FOR TOPSOIL REMOVAL IS INCLUDED IN ITEM 203 – EXCAVATION.

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. TOPSOIL REMOVED ON SITE CAN BE REUSED FOR ITEM 653 – TOPSOIL FURNISHED AND PLACED, AS PER PLAN, IF SUITABLE AS APPROVED BY THE ENGINEER.

ITEM 659 – SEEDING AND MULCHING, AS PER PLAN

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. / 1000 SF. THOROUGHLY COVER WITH STRAW AND TACK TO PREVENT THE STRAW FROM BEING BLOWN OR WASHED AWAY IN AREAS THAT ARE NOT COVERED WITH EROSION CONTROL MATS.

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 IS PERMITTED. HYDRO-MULCHING IS NOT PERMITTED.

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, FOR 5 CONSECUTIVE WEEKS.

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 659 – SEEDING AND MULCHING, AS PER PLAN	460 SY
ITEM 659 – COMMERCIAL FERTILIZER	0.10 TON
ITEM 659 – WATER	2.00 M GAL

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL WITHIN THE CONSTRUCTION LIMITS. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS AND WERE DERIVED FROM CADD AREAS.

ITEM 661 – EVERGREEN TREE (6' – 7' HT.), SCOTCH PINE
ITEM 661 – EVERGREEN TREE (6' – 7' HT.), NORWAY SPRUCE

INSTALLATION OF EVERGREEN TREES SHALL CONFORM TO SPECIFICATIONS FOR ITEM 661. LOCATION OF PROPOSED TREES TO BE DETERMINED BY ENGINEER IN THE FIELD.

ITEM 670 – DITCH EROSION PROTECTION MAT, AS PER PLAN
ITEM 670 – SLOPE EROSION PROTECTION MAT, AS PER PLAN

SLOPE EROSION PROTECTION SHALL BE APPLIED TO ALL PERMANENT SLOPES STEEPER THAN 3:1. DITCH EROSION PROTECTION SHALL BE INSTALLED ON ALL PROPOSED DITCHES. MATTING SHALL BE ASPEN EXCELSIOR (GREEN), TYPE G PER 712.11.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH DUBLIN 107.12. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

THE FOLLOWING QUANTITIES ARE PROVIDED TO ADDRESS LOCATIONS REQUIRING THESE ITEMS:

ITEM 670 – SLOPE EROSION PROTECTION MAT, AS PER PLAN	100 SY
ITEM 670 – DITCH EROSION PROTECTION MAT, AS PER PLAN	35 SY

ITEM SPECIAL – TREE PROTECTION FENCE

ALL TREES WITHIN THE CONSTRUCTION AREA NOT DESIGNED 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 PLACED AT THE PERIMETER OF THE DRIFLINE OF THE CANOPY OF THE TREE. TREES 6 INCHES OR GREATER AT DBH (DIAMETER BREST HEIGHT) MUST BE PROTECTED WITH FENCING PLACED AT THE CRITICAL ROOT ZONE OR 15 FEET, WHICHEVER IS GREATER. WHERE 15 FEET CANNOT BE MAINTAINED, THE FENCING SHALL BE PLACED IN SUCH A WAY AS TO MAXIMIZE PROTECTION OF THE BRANCHES, TRUNK, AND ROOTS. A QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR SAID WORK.

TREES NOT INDICATED ON THE APPROVED CONSTRUCTION DRAWINGS FOR REMOVAL MAY NOT BE REMOVED WITHOUT PRIOR APPROVAL OF THE DIVISION OF ENGINEERING.

ITEM SPECIAL – STEEL-BACKED TIMBER GUARDRAIL, TYPE A, 7-FT POST
ITEM SPECIAL – STEEL-BACKED TIMBER GUARDRAIL, TERMINAL SECTION, TYPE SBT FAT-30, 7-FT POST

THIS WORK CONSISTS OF CONSTRUCTING STEEL-BACKED TIMBER GUARDRAIL AND RELATED POSTS, TERMINAL SECTIONS, STRUCTURE CONNECTIONS, SPECIAL CONNECTIONS TO OTHER GUARDRAIL TYPES, AND RELATED APPURTENANCES. THE WORK SHALL INCLUDE THE FURNISHING, ASSEMBLING, AND ERECTING OF ALL COMPONENT PARTS, MATERIALS, AND INCIDENTALS, COMPLETE AND IN PLACE, IN ACCORDANCE WITH THE DETAILS AND AT THE LOCATIONS SHOWN IN THE PLANS, OR AS DIRECTED BY THE CITY ENGINEER, AND ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS WHERE APPLICABLE.

FOR DETAILS NOT SHOWN OR DESCRIBED HEREIN, REFERENCE THE FOLLOWING STANDARD CONSTRUCTION DRAWINGS OF THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, FEDERAL LANDS HIGHWAY OFFICE:

617-60 AND 617-61

MATERIALS – THE CONTRACTOR SHALL FURNISH MATERIALS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

TIMBER RAIL, POSTS AND BLOCKOUTS: FURNISH TIMBER CONFORMING TO AASHTO M168. FABRICATE THE TIMBER RAIL, POSTS, AND BLOCKOUTS FROM DRY, WELL SEASONED, AND DRESSED ROUGH SAWN DOUGLAS FIR, SOUTHERN PINE, OR OTHER SPECIES HAVING A STRESS GRADE OF AT LEAST 1500 POUNDS PER SQUARE INCH. TREAT THE TIMBER RAIL, BLOCKOUT ELEMENTS, AND POSTS ACCORDING TO AASHTO M133. POSTS SHALL HAVE A 10"x12" CROSS SECTIONAL DIMENSION UNLESS OTHERWISE SPECIFIED IN THE PLANS. NO TIMBER RAIL, POST, OR BLOCKOUT SHALL BE USED THAT EXHIBITS A THROUGH CHECK, SHAKE, OR END SPLIT IN THE SAME PLANE AS, OR PARALLEL TO, THE BOLT HOLE AND EXTENDING FROM THE TOP OF THE RAIL, POST, OR BLOCKOUT TO WITHIN 3 INCHES OF THE BOLT HOLE.

STEEL BACKING AND HARDWARE: FABRICATE THE STEEL BACKING ELEMENTS FROM 3/8-INCH STRUCTURAL STEEL THAT CONFORMS TO THE HIGH-STRENGTH, LOW-ALLOY REQUIREMENTS OF ASTM A242. ALL FASTENER HARDWARE SHALL ALSO CONFORM TO THE STRENGTH REQUIREMENTS OF ASTM A 242. THE STEEL BACKING ELEMENTS AND FASTENER HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ODOT 711.02.

CONCRETE ANCHORS AND CURBING: SHALL BE CLASS C CONFORMING TO ODOT 499, ODOT 511, AND ODOT 609.

REINFORCING STEEL: SHALL CONFORM TO ODOT 509. 709.01 (ASTM A615)

DOWEL BARS: SHALL CONFORM TO ODOT 709.13

PAINTING: TIMBER RAIL, BLOCKOUTS, AND THE EXPOSED POST LENGTHS AND HARDWARE SHALL BE PAINTED WOLF GREY USING SHERWIN WILLIAMS PAINT. CONTACT DAVE WINTERING AT (614) 299-2116. THE FIRST PAINT COAT SHALL BE A PRIMER AND USED ON WOOD AND GALVANIZED SURFACES. ALL GALVANIZED STEEL AND BARE STEEL NEEDS A PRIMER. PRIMER SHALL BE PRO-CRYL BY SHERWIN WILLIAMS. FINAL PAINT SURFACE SHALL BE APPLIED

IN TWO COATS, EACH WITH A MINIMUM 2.0 MILL DRY FILM THICKNESS FOR EACH COAT. TOP COAT SHALL BE WOODSCAPES BY SHERWIN WILLIAMS ON ALL SURFACES.

CONSTRUCTION REQUIREMENTS – THE FOLLOWING REQUIREMENTS SHALL SUPPLEMENT, AND IN CASES OF PERCEIVED CONFLICT, REPLACE THE REQUIREMENTS OF ODOT 606.

POSTS: TREAT FIELD CUTS FOR WOOD POSTS WITH TWO COATS OF PRESERVATIVE APPLIED WITH A BRUSH OR SPRAYER. DO NOT PLACE FIELD CUTS IN CONTACT WITH THE GROUND. ALL POSTS SHALL BE 7 FEET IN LENGTH.

GUARDRAIL POSTS SHALL BE POST DRIVEN TO PREVENT GRANULAR MATERIAL FOR UNDERDRAIN BACKFILL FROM COLLAPSING.

WHERE AN IMPENETRABLE OBJECT IS ENCOUNTERED, USE A SHORT POST WITH A CONCRETE ANCHOR, DECREASE THE POST SPACING, OR NEST TWO RAIL ELEMENTS AS APPROVED BY THE ENGINEER. DO NOT CHANGE THE POST LENGTHS AND SPACINGS IN THE TERMINAL SECTIONS WITHOUT THE APPROVAL OF THE ENGINEER.

RAIL ELEMENTS: DO NOT MODIFY SPECIFIED HOLE DIAMETERS OR SLOT DIMENSIONS.

EQUALLY SPACE BOLTS ALONG THE FRONT FACE OF THE TIMBER RAIL TO MATCH THE HOLES IN THE STEEL BACKING. ALIGN TIMBER GUARDRAIL ALONG THE TOP AND FRONT OF THE TIMBER RAIL.

FIELD CUT TIMBER RAILS TO PRODUCE A CLOSE FIT AT JOINTS. TREAT FIELD CUTS WITH 2 COATS OF CHROMATED COPPER ARSENATE OR APPROVED ODOT EQUAL.

WHEN REQUIRED, FIELD DRILL HOLES IN THE STEEL BACKING ON CURVED SECTIONS TO CORRESPOND TO THE FIELD CUT WOOD RAILS AT THE JOINTS. DO NOT USE A TORCH TO CUT HOLES.

CONSTRUCT TERMINAL SECTIONS IN ACCORDANCE WITH THE DETAILS AND AT THE LOCATIONS SHOWN IN THE PLANS. TERMINAL SECTIONS CONSIST OF POSTS, RAILING, HARDWARE, TRANSITION CURBING, AND ANCHORAGE ASSEMBLIES NECESSARY TO CONSTRUCT THE TYPE OF TERMINAL SECTION SPECIFIED.

WHERE CONCRETE ANCHORS ARE INSTALLED, CONSTRUCT EITHER CAST-IN-PLACE OR PRECAST UNITS. DO NOT CONNECT THE GUARDRAIL TO CAST-IN-PLACE ANCHORS UNTIL THE CONCRETE HAS CURED 7 DAYS. INSTALL END ANCHOR CABLES TIGHTLY WITHOUT SLACK.

GUARDRAIL REFLECTOR TABS: INSTALL IN ACCORDANCE WITH THE REQUIREMENTS OF ODOT ITEM 626 PERTINENT TO TYPE A, ONE-WAY GUARDRAIL BLOCKOUT REFLECTORS.

MEASUREMENT – STEEL BACKED TIMBER RAIL OF THE TYPE AND POST LENGTH SPECIFIED IN THE PLANS WILL BE MEASURED BY THE NUMBER OF FEET FROM CENTER-TO-CENTER OF END POSTFURNISHED AND ERECTED COMPLETE, EXCLUDING TERMINAL SECTIONS AND STRUCTURE CONNECTIONS, AS SHOWN IN THE PLAN DETAILS.

TERMINAL SECTIONS AND STRUCTURE CONNECTIONS OF THE TYPE(S) SPECIFIED SHALL BE MEASURED BY THE NUMBER OF EACH FURNISHED AND ERECTED COMPLETE.

PAYMENT – ALL COSTS ASSOCIATED WITH FURNISHING AND INSTALLING EXTRA-LENGTH POSTS INSTEAD OF STANDARD-LENGTH GUARDRAIL POSTS, PROVIDING REDUCTIONS TO THE STANDARD POST SPACING (AS NEEDED/DIRECTED), AND PLACING REQUIRED TRANSITION CURBING, AND PAINTING THE GUARDRAIL SYSTEM ARE CONSIDERED INCIDENTAL TO THE CONTRACT UNIT PRICE OF THE RESPECTIVE STEEL-BACKED TIMBER GUARDRAIL, TERMINAL SECTION, AND STRUCTURE CONNECTION ITEMS.

ACCEPTED QUANTITIES WILL BE PAID AT THE CONTRACT PRICE PER UNIT AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
SPECIAL	FT	STEEL-BACKED TIMBER GUARDRAIL, TYPE A, 7-FT POST
SPECIAL	EACH	STEEL-BACKED TIMBER GUARDRAIL TERMINAL SECTION, TYPE SBT FAT-30, 7-FT POST

PAYMENT WILL BE FULL COMPENSATION FOR THE WORK PRESCRIBED IN THIS SECTION.

CALCULATED
AVP
CHECKED
MTL

GENERAL NOTES

CARNOUSTIE DRIVE

4
14

O:\2016\01432\C. Design\12345_ProjDescription\Roadway\Sheets\01432GN001.dwg 07-Nov-16 2:10 PM

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD DRAWINGS:
CITY OF DUBLIN: ST-01

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:
SS834 DATED 07/17/15

DESIGN SPECIFICATIONS:

THE STRUCTURES CONFORM TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, AND THE ODOT BRIDGE DESIGN MANUAL, 2004.

DESIGN LOADING:

DESIGN LOADING: 240 PSF LIVE LOAD SURCHARGE

DESIGN STRESSES:

CAST-IN-PLACE STRUCTURES
CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60, MINIMUM YIELD STRENGTH 60000 PSI
WELDED WIRE FABRIC - 70 KSI

FOUNDATION BEARING RESISTANCE:

SPREAD FOOTINGS, AS DESIGN, PRODUCE A MAXIMUM BEARING PRESSURE OF 1.90 TONS PER SQUARE FOOT. THE ALLOWABLE BEARING PRESSURE 2.0 TONS.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO DUBLIN SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURES BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

EXISTING PLANS MAY BE INSPECTED AT THE CITY OF DUBLIN:

THE CITY OF DUBLIN, OHIO
ENGINEERING DEPARTMENT
5800 SHIER-RINGS ROAD
DUBLIN, OHIO 43016
(614) 410-4631

DEMOLITION AND CONSTRUCTION: IN REMOVING EXISTING MATERIAL, THE CONTRACTOR SHALL EXERCISE CARE TO PREVENT DAMAGE TO THOSE PARTS OF THE STRUCTURES WHICH ARE TO REMAIN IN PLACE. ANY PORTION OF THE STRUCTURES DAMAGED DURING DEMOLITION AND CONSTRUCTION BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.

PROPOSED WORK:

THIS PORTION OF THE PROJECT CONSIST OF, BUT IS NOT LIMITED TO THE FOLLOWING WORK:

1. REMOVAL OF EXISTING CONCRETE INVERT.
2. REMOVAL OF EXISTING LIMESTONE SLOPE PROTECTION, CONCRETE FOOTING, AND ONE EXISTING PRECAST CONCRETE PIPE SECTION (PER SIDE).
3. CONSTRUCTION OF CAST-IN-PLACE CONCRETE RETAINING WALL AND FOOTING.
4. INSTALLATION OF ONE ADDITIONAL PRECAST CONCRETE PIPE SECTION (6'-0" LONG, 9'-0" DIAMETER, PER SIDE).
5. CONSTRUCTION OF AND BACKFILLING BEHIND CAST-IN-PLACE CONCRETE RETAINING WALL STEM.
6. PAVING OF EXISTING CULVERT INVERT.
7. INSTALLATION OF PRE-MANUFACTURED STONE VENEER ON FASCIA OF NEW HEADWALLS.
8. SEALING OF INTERIOR SURFACES OF CONCRETE PIPE.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS WORK CONSISTS OF THE REMOVAL OF PORTIONS OF THE FOOTING, LIMESTONE, EXISTING PIPE SECTIONS, AND EXISTING PIPE PAVED INVERTS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING REMOVAL TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO SALVAGED/INCORPORATED INTO THE PROPOSED STRUCTURE.

REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO EXTRA COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE ENGINEER. OBTAIN THE ENGINEER'S APPROVAL BEFORE PERFORMING REPAIR. ALL REMOVALS ARE COVERED BY THIS LUMP SUM ITEM UNLESS SPECIFIED ELSEWHERE IN THE PLANS.

MEASUREMENT & PAYMENT: THE CITY WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE CITY WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVAL AT THE CONTRACT PRICE FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

UTILITIES

SUPPORT AND PROTECTION OF ALL UTILITIES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COSTS FOR THE REPAIR AND RESTORATION OF EXISTING UTILITIES DAMAGED BY THE CONTRACTOR. COSTS ASSOCIATED WITH THE ABOVE WORK RESPONSIBILITIES SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS ITEMS.

PRIOR TO EXCAVATION, THE CONTRACTOR SHALL GIVE A 48-HOUR NOTICE TO THE OHIO UTILITIES PROTECTION SERVICE (OUPS) BY CALLING 811. A 48-HOUR NOTICE SHALL BE GIVEN TO THE OWNERS OF UNDERGROUND UTILITIES SHOWN ON THE PLANS WHO ARE NOT MEMBERS OF THE REGISTERED UNDERGROUND PROTECTION SERVICE.

CONSTRUCTION CONSTRAINTS

FILL THE VOID CREATED BY EXCAVATING FOR THE FOOTINGS WITH TYPE B GRANULAR MATERIAL, 703.16.C.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

USE BACKFILL MEETING THE MATERIAL REQUIREMENTS OF THE CITY OF COLUMBUS CMS 203, TYPE B GRANULAR MATERIAL, 703.16C. PLACE AND COMPACT BACKFILL ACCORDING TO 203.06 AND 203.07, EXCEPT PLACE IN 6" LOOSE LIFTS AND COMPACT TO A MINIMUM OF 98% OF MAXIMUM LABORATORY DRY DENSITY. PAYMENT FOR ALL TYPE B GRANULAR MATERIAL NECESSARY FOR BACKFILL AND EMBANKMENT BEHIND PROPOSED HEADWALLS SHALL BE INCLUDED IN ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN.

PAYMENT FOR DESIGN, DRAWINGS, LABOR, EQUIPMENT, AND MATERIAL NECESSARY FOR TEMPORARY SHORING IN PLACE SHALL BE INCLUDED IN ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN.

TEMPORARY SHORING SHALL BE REMOVED AFTER COMPLETION OF WORK.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

THIS ITEM SHALL CONSIST OF THE APPLICATION OF BOTH AND EPOXY AND URETHANE SEALER TO THE CONCRETE SURFACES DESIGNATED ON THE PLANS IN ACCORDANCE WITH THE SPECIFICATION 512 WITH THE EXCEPTION THAT THE COLOR OF THE URETHANE COATING SHALL BE FEDERAL STANDARD NO. 595B-36492 (GREY). SEALING SHALL NOT BE DONE UNTIL ALL SECTIONS OF THE PIPE HAVE BEEN INSTALLED. IN ADDITION TO REQUIRED CLEANING, SURFACE PREPARATION SHALL INCLUDE REMOVAL OF ANY RUST STAINS BY EITHER WATER BLAST OR SAND BLAST METHODS AS DESCRIBED IN THE SPECIFICATIONS.

ITEM 901 - 108" CONDUIT, TYPE D, 706.02, AS PER PLAN

FOLLOWING THE REMOVAL OF THE EXISTING FOOTING, LIMESTONE, AND PIPE SECTION, THE FACE OF THE EXISTING CONDUIT SECTION TO REMAIN SHALL BE FIELD MEASURED. PROPOSED CONDUITS ABUTTING THE EXISTING PIPE SECTION SHALL BE FABRICATED OR RETROFITTED AS NECESSARY AND AS APPROVED BY THE CITY OF DUBLIN ENGINEER TO MATCH FLUSH WITH THE FACE OF THE EXISTING CONDUIT SECTION. CONDUIT JOINTS SHALL CONFORM TO THE CITY OF COLUMBUS CMS 901.15.

FIELD MEASUREMENT OF EXISTING CONDUITS AND SPECIAL FABRICATION OR RETROFITTING OF CONDUIT ENDS SHALL BE DONE AT NO ADDITIONAL COST TO THE PROJECT.

CONCRETE FINISHING

CHAMFER EXPOSED CONCRETE EDGES 1" BY 1" UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

ITEM SPECIAL - STONE VENEER

ITEM SPECIAL - 22" CAPSTONE

ALL EXPOSED FACES OF THE PROPOSED HEADWALL/RETAINING WALL SHALL HAVE A STONE FACING. MANUFACTURED SYNTHETIC STONE VENEER (COLOR BEIGE) SHALL BE GREAT LAKES LIMESTONE AS MANUFACTURED BY DUTCH QUALITY STONE, INC (330-359-7866) OR APPROVED ALTERNATIVE. MORTAR AND GROUTING TYPE SHALL BE PER THE MANUFACTURER'S INSTRUCTIONS. USE TYPE "S" MORTAR. A SCRATCH COURSE OF MORTAR SHALL BE APPLIED AND CURED BEFORE PLACEMENT ON THE STONE. THE STONE SHALL BE PLACED IN A RANDOM PATTERN. THE STONE MUST COVER ALL EXPOSED SURFACES AN SHALL EXTEND 4" BELOW FINAL GRADE.

SUBSTRATE PREPARATION: ACID WASH THE CONCRETE SURFACE BEFORE APPLYING SCRATCH COARSE. A SCRATCH COARSE OF MORTAR SHALL BE APPLIED APPROXIMATELY 1/8 INCH THICK EVENLY OVER THE EXPOSED SURFACE AND CURED 12 HOURS BEFORE PLACEMENT OF STONE. THE STONE SHALL BE PLACED IN A RANDOM ASHLAR PATTERN.

PATTERN AND JOINTS: STONE SHALL BE PLACED IN A RANDOM ASHLAR PATTERN SIMILAR TO AVERY-MURFIELD BRIDGE OVER US 33/SR 161 IN DUBLIN, OHIO.

RAKE, CLEAN, AND FINISH JOINTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

TEMPERATURE LIMITATIONS OF ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS, SECTION 602.03, SHALL GOVERN.

JOINT SEALING: ALL STONE VENEER JOINTS SHALL BE SEALED WITH POLYURETHANE CAULK PER RECOMMENDATIONS OF MANUFACTURER.

ITEM SPECIAL - POLYURETHANE CAULKING FOR STONE VENEER

CAULK VERTICAL CONTRACTION JOINTS WITH POLYURETHANE CAULKING MATERIAL MANUFACTURED FOR OUTDOOR MASONRY. COLOR TO BE BEIGE. METHODS, PROCEDURES AND MATERIALS SHALL ADHERE TO MANUFACTURER'S SPECIFICATIONS.

ITEM 613 - FLOWABLE CONTROL DENSITY FILL, TYPE II

THE 3" THICK MUD MAT BELOW THE PROPOSED FOOTING SHALL BE INCLUDED FOR PAYMENT WITH ITEM 613-FLOWABLE CONTROLLED DENSITY FILL, TYPE II.

CALCULATED
AVP
CHECKED
MTL

STRUCTURE GENERAL NOTES

CARNOUSTIE DRIVE

C:\2016\01432\C. Design\12345_ProjDescription\Roadway\Sheets\01432GN001.dwg 07-Nov-16 1:36 PM

ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN

ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (CURRENT EDITION), COPIES OF WHICH ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, OFFICE OF TRAFFIC ENGINEERING, 1980 WEST BROAD STREET, COLUMBUS, OHIO 43223.

THE ROADWAY SHALL NOT BE OPENED TO TRAFFIC UNTIL PERMANENT TRAFFIC CONTROLS ARE IN PLACE, OR UNTIL TEMPORARY TRAFFIC CONTROLS, APPROVED BY THE ENGINEER, ARE INSTALLED. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE PREMATURE REMOVAL OF TEMPORARY TRAFFIC CONTROLS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REINSTALLATION AND/OR REPLACEMENT OF ALL PERMANENT TRAFFIC CONTROL DEVICES DAMAGED OR REMOVED DURING THE CONSTRUCTION. PERMANENT TRAFFIC CONTROL THAT IS NO LONGER IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE REPLACED IMMEDIATELY. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED AND IMPROPERLY PLACED TRAFFIC CONTROL DEVICES.

THE CONTRACTOR SHALL PROVIDE A 24 HOUR CONTACT WHO WILL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC FOR THE DURATION OF THE PROJECT.

CONSTRUCTION OPERATIONS SHALL NOT BEGIN UNTIL ALL TEMPORARY TRAFFIC CONTROL DEVICES ARE IN PLACE AND APPROVED BY THE ENGINEER AND THE CITY.

MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES INCLUDING DRUMS, SIGNS, BARRICADES, SIGN BOARDS, DETOUR SIGNAGE, ETC., SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

STEADY-BURNING, TYPE "C" LIGHTS SHALL BE REQUIRED ON ALL BARRICADES, DRUMS, AND SIMILAR TRAFFIC CONTROL DEVICES IN USE AT NIGHT.

ALL TRENCHES SHALL BE BACKFILLED OR SECURELY PLATED DURING ALL NIGHTTIME AND NON-WORKING HOURS.

DROP OFF WITHIN THE WORK ZONE SHALL CONFORM TO THE REQUIREMENTS SET FORTH ON ODOT STANDARD CONSTRUCTION DRAWING MT-101.90

IF THE CITY ENGINEER DETERMINES THAT THE CONTRACTOR IS NOT PROVIDING PROPER PROVISIONS FOR TRAFFIC CONTROL, THE CITY ENGINEER SHALL ASSIGN UNIFORMED, OFF-DUTY POLICE OFFICERS TO THE PROJECT AT NO COST TO THE CITY.

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, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

PAYMENT

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL MAINTENANCE OF TRAFFIC ITEMS, INCLUDING THE FURNISHING, INSTALLATION AND MAINTENANCE OF BUT NOT LIMITED TO: ALTERNATE ROUTE SIGNAGE, FLASHING ARROWS PANELS, SIGNS, SIGN SUPPORTS, FLAGS, FLAGGERS, BARRICADES, NOTICE OF CLOSURE SIGNS, DRUMS, CONES CONSTRUCTION FENCING, TEMPORARY PAVEMENT MARKINGS, TRAFFIC COMPACTED SURFACE, MATERIALS AND LABOR FOR MAINTAINING ACCESS TO DRIVEWAYS, PROPERTY OWNER NOTIFICATION/COORDINATION AND DEVELOPMENT OF THE OPERATIONS SCHEDULE SHALL BE AT THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR MATERIAL, EQUIPMENT, AND INCIDENTALS TO COMPLETE THE WORK AS DETAILED IN THE PLANS. UNLESS SEPARATELY ITEMIZED IN THE PLANS, NO SEPARATE PAYMENT SHALL BE MADE.

CONSTRUCTION INITIATION

THE CONTRACTOR WILL NOTIFY THE CITY OF DUBLIN 3 DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR WILL IMMEDIATELY INFORM THE CITY OF DUBLIN OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION PROJECT. THE CITY ENGINEER WILL PROVIDE CLARIFICATION FOR ANY QUESTIONS ABOUT THE NOTIFICATION REQUIREMENT.

THE CONTRACTOR SHALL SUBMIT A CLOSURE SCHEDULE TO THE CITY OF DUBLIN FOR APPROVAL PRIOR TO INITIATING ANY CLOSURE.

DRUM AND PCB REQUIREMENTS

IN ADDITION TO THE REQUIREMENTS OF THE PLANS, SPECIFICATION AND PROPOSAL, DRUMS FURNISHED BY THE CONTRACTOR SHALL BE IN GOOD CONDITION AND MEET RETROREFLECTIVITY STANDARDS. PAYMENT FOR DRUMS AND PCB SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED.

SIGNS, BARRICADES AND VERTICAL PANELS

ALL CONSTRUCTION SIGNS, BARRICADES, VERTICAL PANELS, AND DRUMS SHALL CONFORM TO ODOT AND THE LATEST REVISION OF THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. ALL CONSTRUCTION SIGNAGE SHALL BE INSTALLED AND COVERED BEFORE CONSTRUCTION BEGINS. AFTER CONSTRUCTION SIGN INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER THREE WORKING DAYS BEFORE WORK BEGINS AND REQUEST AN INSPECTION OF ALL SIGNAGE. FACES OF CONSTRUCTION SIGNS AND REFLECTIVE SHEETING ON BARRICADES SHALL BE TYPE "H" (VIP). ALL ORANGE CONSTRUCTION SIGNS SHALL BE FLUORESCENT ORANGE. ALL SHEETING WILL BE TESTED FOR REFLECTIVITY PER ODOT 730.192. VERTICAL PANELS AND DRUM BANDS SHALL BE REFLECTORIZED WITH TYPE "G" (HIGH INTENSITY) SHEETING COMPLYING WITH THE REQUIREMENTS OF 730.19. ALL SIGNS AND BARRICADES, VERTICAL PANELS, AND DRUMS WILL BE LIKE NEW AND IN GOOD CONDITION IN CONFORMANCE WITH QUALITY GUIDELINES FOR TEMPORARY TRAFFIC CONTROL DEVICES AND FEATURES PUBLISHED BY ATSSA. MAINTENANCE OF ALL CONTRACTOR SUPPLIED SIGNS, BARRICADES, VERTICAL PANELS, AND DRUMS IS THE CONTRACTOR'S RESPONSIBILITY. IF THE CONTRACTOR FAILS TO CORRECT DEFICIENCIES WITHIN FOUR HOURS OF NOTIFICATION, THE CITY WILL CORRECT OR HIRE SOMEONE TO CORRECT THE DEFICIENCIES. THE CONTRACTOR WILL THEN BE BACK CHARGED PER ODOT SPECIFICATION 614.04. IN THE CASE THAT BACK CHARGING THE CONTRACTOR IS NOT APPLICABLE, THE CITY WILL RESCIND AND WITHHOLD ALL PERMITS ISSUED TO THE CONTRACTOR TO WORK WITHIN CITY RIGHT-OF-WAY UNTIL THE ISSUE IS SETTLED. THESE PROVISIONS SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF ANY OF HIS LEGAL RESPONSIBILITIES OR LIABILITIES FOR THE SAFETY OF THE PUBLIC. ALL BARRICADES AT CLOSURES SHALL HAVE YELLOW TYPE "C" STEADY BURN LIGHTS. ALL BARRELS IN TAPERS SHALL HAVE YELLOW TYPE "C" STEADY BURN LIGHTS. ALL ADVANCE SIGNING SHALL BE EQUIPPED WITH TYPE "A" FLASHING LIGHTS AND (2) ORANGE FLAGS (24"x24"). LIGHTS ARE NOT REQUIRED ON SIGNS IN PLACE DURING DAYLIGHT HOURS. CONES ARE NOT APPROVED FOR USE AT NIGHT. DRUMS SHALL BE PLACED AS FOLLOWS: 25' C/C ON TANGENTS, 10' C/C ON TAPERS, AND 8' C/C IN RADII.

PEDESTRIAN ACCESS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND SAFE MOVEMENT OF PEDESTRIANS THROUGH, AROUND, AND AWAY FROM THE CONSTRUCTION SITE. THE SAFETY OF PEDESTRIAN TRAFFIC SHALL BE CONSIDERED AT ALL TIMES IN THE PROVISION OF TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS AND NOTES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE LIGHTS, SIGNS, BARRICADES, AND OTHER WARNINGS TO PHYSICALLY SEPARATE THE PEDESTRIAN FROM HAZARDS INCIDENTAL TO THE CONSTRUCTION OPERATIONS SUCH AS OPEN EXCAVATIONS, ETC. AT ALL TIMES, THE PEDESTRIAN MOT SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. IT IS RECOMMENDED THAT THE CONTRACTOR ELIMINATE PEDESTRIAN TRAFFIC WITHIN THE PROJECT SITE BY CLOSING THE PEDESTRIAN PATH. THIS SHALL BE DONE BY INSTALLING "PATH CLOSED" SIGNAGE AT THE BEGINNING, ENDING, AND INTERSECTIONS OF THE AFFECTED PATH. NO PEDESTRIAN DETOUR PROVIDED.

ALL COST ASSOCIATED WITH MAINTAINING PEDESTRIAN TRAFFIC SHALL BE INCIDENTAL TO ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED IN THIS NOTE WILL NOT BE PERMITTED AT PROJECT COST UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE ENGINEER. LEOS SHOULD NOT BE USED WHERE THE ODOT INTENDS THAT FLAGGERS BE USED. IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE ODOT, 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. 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. 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.

B. DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED. 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 CONTRACTOR SHALL UTILIZE ANY OF THE FOLLOWING LAW ENFORCEMENT AGENCIES: CITY OF DUBLIN (614-410-4800), DELAWARE COUNTY SHERIFF'S OFFICE, OR OHIO STATE HIGHWAY PATROL.

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, AS PER PLAN. THE FOLLOWING ESTIMATED QUANTITY HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN 20 HOURS

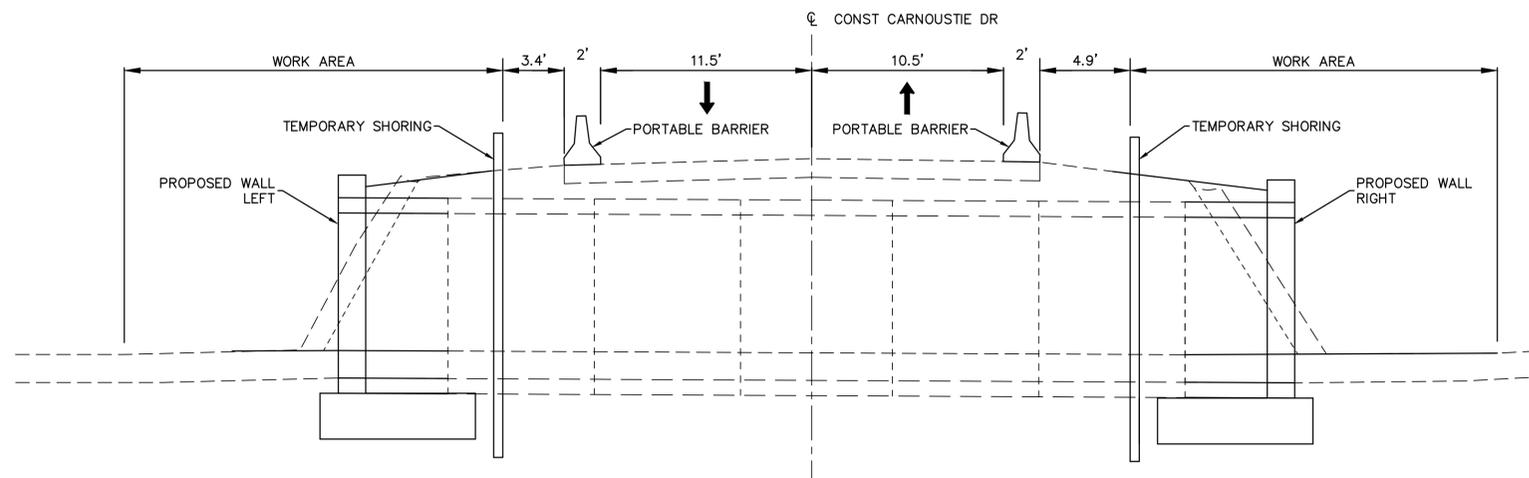
THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN.

PROJECT SUMMARY

THIS PROJECT WILL PROVIDE IMPROVEMENTS TO THE EXISTING TUNNEL UNDER CARNOUSTIE DRIVE AT PRESTON MILL WAY BY REPLACING THE STONE FAÇADE WITH A CAST-IN-PLACE RETAINING WALL, REMOVING AND REPLACING THE LAST LENGTH OF 108-INCH CONCRETE PIPE ON BOTH ENDS, AND REPLACEMENT OF EXISTING GUARDRAIL ALONG CARNOUSTIE DRIVE.

TWO LANES OF TRAFFIC (ONE LANE EACH DIRECTION) MUST BE AVAILABLE ALONG CARNOUSTIE DRIVE DURING NON-WORKING HOURS. EMERGENCY VEHICLES AND PERSONNEL MUST HAVE ACCESS THROUGH THE PROJECT ZONE AT ALL TIMES. DURING WORKING HOURS, CARNOUSTIE DRIVE MAY BE REDUCED TO ONE SHARED LANE OF TRAFFIC UNDER FLAGGER OPERATION UTILIZING ODOT SCD MT-97.10. LABOR MATERIAL, EQUIPMENT, AND INCIDENTALS TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN.

PORTABLE CONCRETE BARRIERS SHALL BE USED TO SEPARATE THE TRAVEL LANES FROM CONSTRUCTION AT ALL TIMES. IMPACT ATTENUATORS SHALL BE PROHIBITED AT THIS LOCATION. THE BEGINNING AND ENDING OF PORTABLE CONCRETE BARRIER RUNS SHALL BE TAPERED PER ODOT SCD MT-101.75.



TRAFFIC PATTERN DURING WALL AND RCP CONSTRUCTION

CALCULATED
AVP
CHECKED
MTL

MAINTENANCE OF TRAFFIC NOTES

CARNOUSTIE DRIVE

GENERAL NOTES

1. 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.
2. 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 USE OF STRAW BALES IS PROHIBITED.
3. THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE OF THE WORK AREA AT ALL TIMES CONSISTENT WITH EROSION CONTROL PRACTICES.
4. 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.
5. ALL DENUDED AREAS, INCLUDING STOCKPILED TOPSOIL AND EXCAVATED MATERIAL, ARE TO BE PROTECTED THROUGH THE USE OF TEMPORARY SEEDING, OR COVERED WITH STRAW MULCH.
6. FINAL GRADING WILL BE CONSISTENT WITH PRECONSTRUCTION TOPOGRAPHY TO MAINTAIN DRAINAGE AND AESTHETICS.
7. 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.
8. BACKFILL TRENCHES IMMEDIATELY AFTER USE. SEED AND MULCH TRENCH AREA WITHIN 7 DAYS AFTER AREA OR SECTION HAS BEEN OPENED.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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 UNLESS SUCH DUMPING OR PLACING IS AUTHORIZED BY THE CITY ENGINEER. 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.

14. 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 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.
15. 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.
16. 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.
17. 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 ENVIRONMENT OR THE PUBLIC HEALTH AND SAFETY. PROHIBITED CONSTRUCTION PROCEDURES, ACTIVITIES, OR OPERATIONS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

1. PUMPING OF SEDIMENT LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM DRAINS.
2. 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.
3. DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA.

CALCULATED
AVP
CHECKED
MTL

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

CARNOUSTIE DRIVE

PERIMETER FILTER FABRIC FENCE, WATTLES

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 UP SLOPE FROM THE BARRIER.
5. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UP SLOPE 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 UP SLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
10. WATTLES WILL BE PERMITTED IN LIEU OF PERIMETER FILTER FABRIC FENCE IF PREFERRED BY CONTRACTOR

MAINTENANCE

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

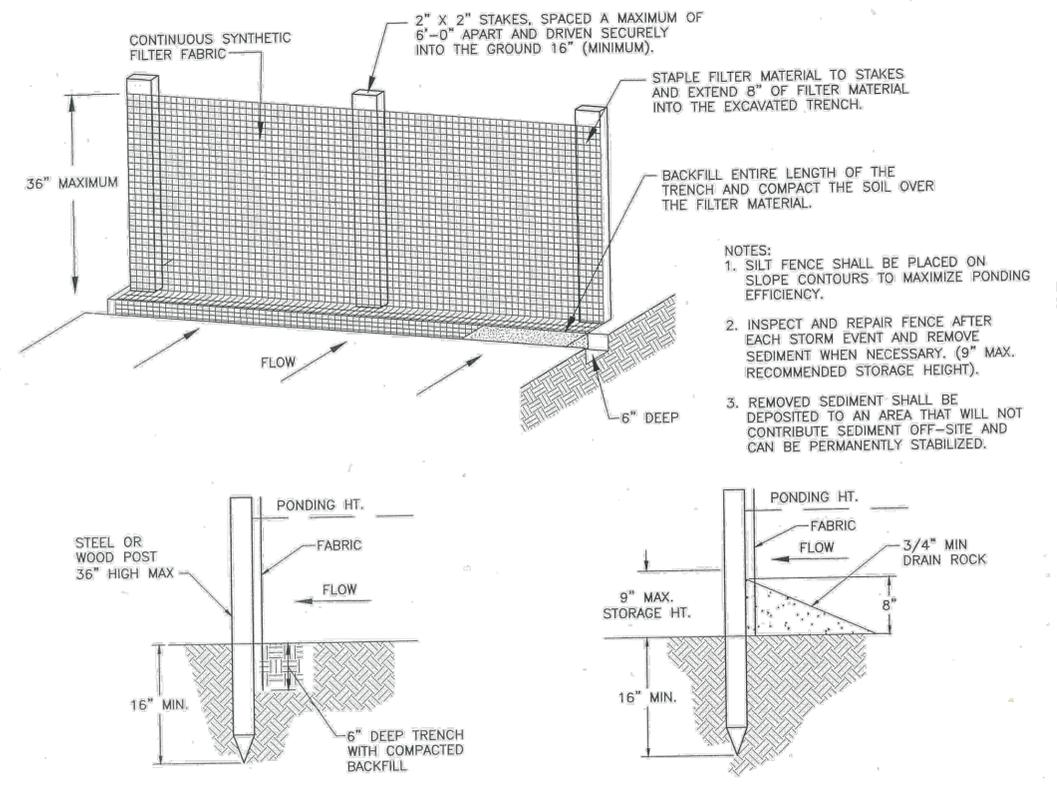
ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED, AND SEEDED.

THIS WORK SHALL BE PAID AT THE UNIT PRICE BID PER LINEAL FOOT FOR
ITEM 207 - PERIMETER FILTER FABRIC FENCE (FT)

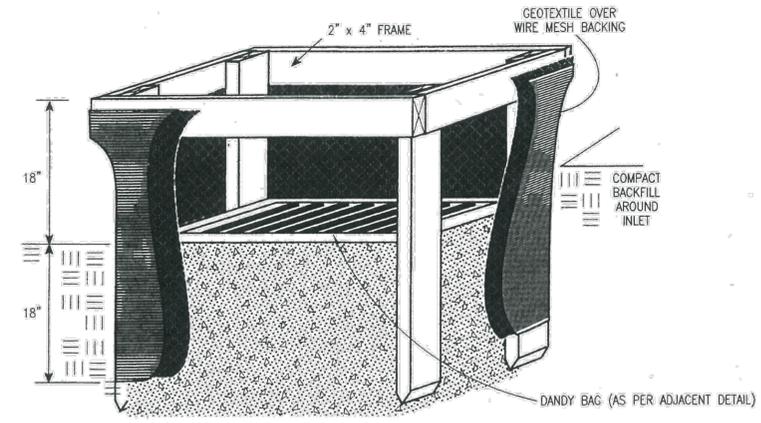
INLET PROTECTION

INSTALLATION AND MAINTENANCE OF INLET SEDIMENT FILTERS SHALL BE IN ACCORDANCE WITH THAT SPECIFIED FOR FILTER FABRIC FENCE. THIS WORK SHALL BE PAID AT THE UNIT PRICE BID PER EACH FOR

ITEM 207 - INLET PROTECTION (EA)



PERIMETER FILTER FABRIC FENCE



1. Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational.
2. The earth around the inlet shall be excavated completely to a depth at least 18 in.
3. The wooden frame shall be constructed of 2-by-4-in. construction-grade lumber. The 2-by-4-in. posts shall be driven 1 ft. into the ground at four corners of the inlet and the top portion of 2-by-4-in. frame assembled using the overlap joint shown. The top of the frame shall be at least 6 in. below adjacent roads if ponded water would pose a safety hazard to traffic.
4. Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stretched tightly around the frame and fastened securely to the frame.
5. Geotextile shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall be stretched tightly around the frame and fastened securely. It shall extend from the top of the frame to 18 in. below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastened to the same post.
6. Backfill shall be placed around the inlet in compacted 6-in. layers until the earth is even with notch elevation on ends and top elevation on sides.
7. A compacted earth dike or a check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression and if runoff bypassing the inlet will not flow to a settling pond. The top of earth dikes shall be at least 6 in. higher than the top of the frame.

INLET PROTECTION

o:\2016\01432\C. Design\12345_ProjDescription\Roadway\Sheets\01432DE001.dwg 07-Nov-16 1:36 PM

O:\2016\01432\C. Design\12345_ProjDescription\Roadway\Sheets\01432GG001.dwg 07-Nov-16 4:36 PM

ITEM	DESCRIPTION	TOTAL QUANTITY	UNIT
ROADWAY			
201	CLEARING AND GRUBBING	1	LUMP
202	TREE REMOVED, 18" SIZE	1	EACH
202	PAVEMENT REMOVED, CONCRETE	12	SY
202	PIPE REMOVED, 24" AND UNDER	97	FT
202	CATCH BASIN REMOVED	1	EACH
202	STONE WALL REMOVED	28	FT
202	GUARDRAIL REMOVED	235	FT
203	EXCAVATION, AS PER PLAN	10	CY
203	EMBANKMENT, AS PER PLAN	15	CY
204	SUBGRADE COMPACTION	44	SY
204	EXCAVATION OF SUBGRADE	25	CY
204	GRANULAR EMBANKMENT, NO. 2 STONE	25	CY
SPECIAL	STEEL-BACKED TIMBER GUARDRAIL, TYPE A, 7-FOOT POST	120	FT
SPECIAL	STEEL-BACKED TIMBER GUARDRAIL TERMINAL SECTION, TYPE SBT FAT-30, 7-FOOT POST	4	EACH
SPECIAL	TREE PROTECTION FENCE	100	FT
EROSION CONTROL			
207	PERIMETER FILTER FABRIC FENCE, WATTLES	320	FT
207	INLET PROTECTION	2	EACH
653	3" TOPSOIL FURNISHED AND PLACED, AS PER PLAN	25	CY
659	SEEDING AND MULCHING, AS PER PLAN	460	SY
659	COMMERCIAL FERTILIZER	0.1	TON
659	WATER	2.0	M GAL
670	SLOPE EROSION PROTECTION MAT, AS PER PLAN	100	SY
670	DITCH EROSION PROTECTION MAT, AS PER PLAN	35	SY
DRAINAGE			
604	INLINE DRAIN	2	EACH
604	CATCH BASIN (AA-S133A)	2	EACH
901	8 INCH PIPE, 707.62, WITH TYPE 1 BEDDING, WITH CMSC 912 COMPACTED GRANULAR MATERIAL	25	FT
901	12 INCH PIPE, 707.62, WITH TYPE 1 BEDDING, WITH CMSC 912 COMPACTED GRANULAR MATERIAL	41	FT
901	12 INCH PIPE, 706.02, WITH TYPE 1 BEDDING, WITH CMSC 912 COMPACTED GRANULAR MATERIAL	65	FT
PAVEMENT			
301	ASPHALT CONCRETE BASE	7.2	TON
304	AGGREGATE BASE	7.3	CY
448	ASPHALT CONCRETE SURFACE COURSE (MEDIUM TRAFFIC), PG64-22	3.6	TON
452	NON-REINFORCED CONCRETE PAVEMENT, CLASS C	9	SY

ITEM	DESCRIPTION	TOTAL QUANTITY	UNIT
TUNNEL			
202	PORTION OF STRUCTURE REMOVED, AS PER PLAN	1	LUMP
503	COFERDAMS AND EXCAVATION BRACING, AS PER PLAN	1	LUMP
503	UNCLASSIFIED EXCAVATION, AS PER PLAN	1	LUMP
509	EPOXY COATED REINFORCING STEEL	10842	LB
511	CLASS C CONCRETE, HEADWALL	53	CY
511	CLASS C CONCRETE, FOOTING	62	CY
512	SEALING CONCRETE SURFACES (EPOXY URETHANE)	122	SY
516	1/2" PREFORMED EXPANSION JOINT FILLER	101	SF
518	POROUS BACKFILL WITH FILTER FABRIC	44	CY
518	4" PERFORATED CORRUGATED PLASTIC PIPE	60	FT
613	FLOWABLE CONTROLLED DENSITY FILL, TYPE II, MUD MAT	9	CY
901	108" CONDUIT, TYPE D, 706.02, AS PER PLAN	12	FT
SPECIAL	STONE VENEER	496	SF
SPECIAL	POLYURETHANE CAULKING FOR STONE VENEER	77	FT
SPECIAL	22" CAPSTONE	80	FT
LANDSCAPING			
661	EVERGREEN TREE (6' - 7' HT.), SCOTCH PINE	1	EACH
661	EVERGREEN TREE (6' - 7' HT.), NORWAY SPRUCE	3	EACH
MISCELLANEOUS			
*614	MAINTAINING TRAFFIC, AS PER PLAN	1	LUMP
614	LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN	20	HOURS
623	CONSTRUCTION LAYOUT STAKES	1	LUMP
624	MOBILIZATION	1	LUMP
SPECIAL	PROOF SURVEY	1	LUMP

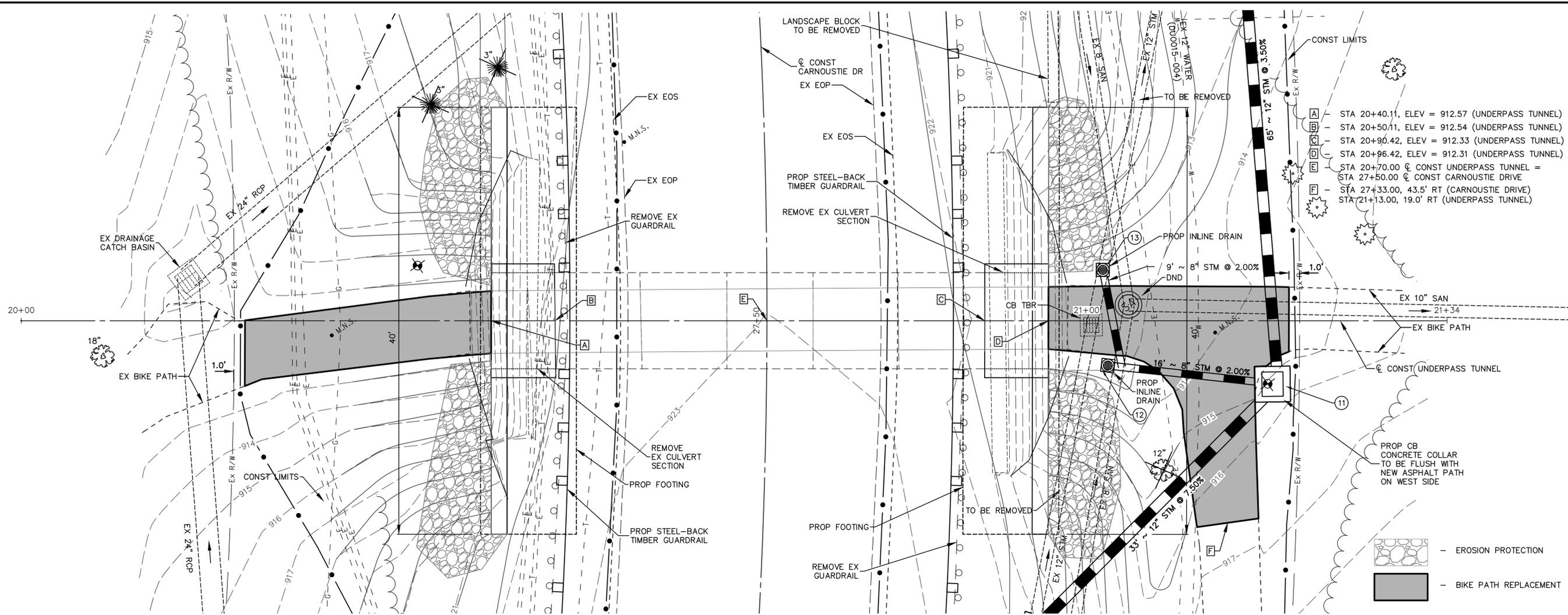
* DENOTES OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (2016 EDITION). ALL OTHER ITEMS REFERENCE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATION

CALCULATED
AVP
CHECKED
MTL

GENERAL SUMMARY

CARNOUSTIE DRIVE

C:\2016\01432\C...Design\12345_ProjDescription\Roadway_Sheets\01432GP001.dwg 07-Nov-16 1:37 PM



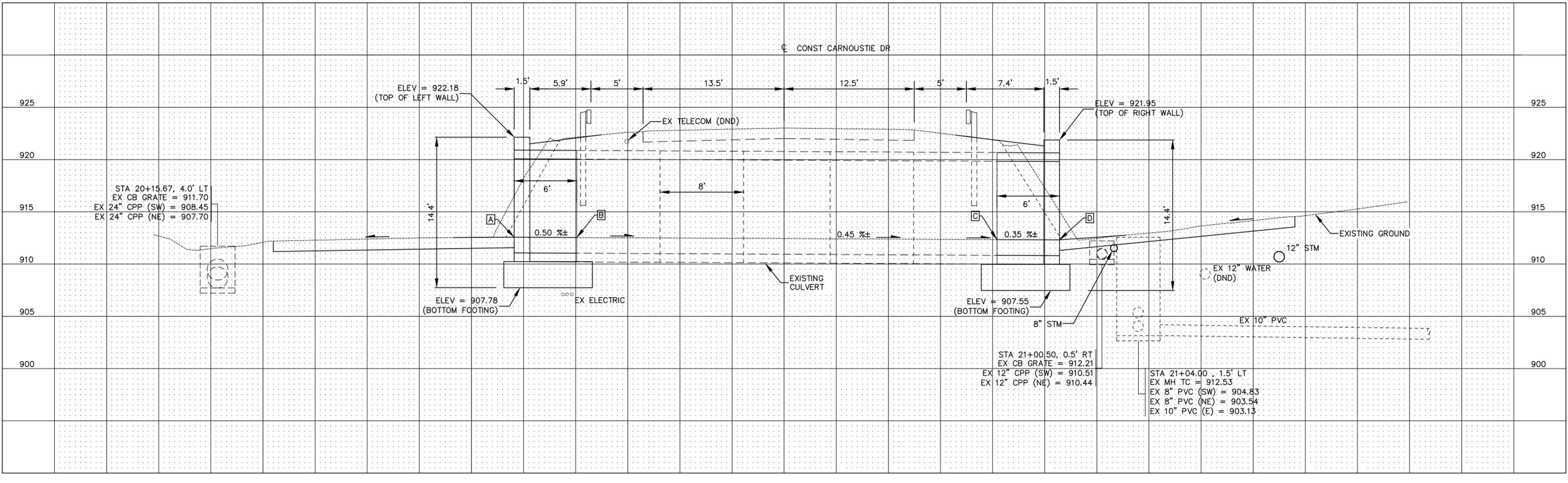
- STA 20+40.11, ELEV = 912.57 (UNDERPASS TUNNEL)
- STA 20+50.11, ELEV = 912.54 (UNDERPASS TUNNEL)
- STA 20+90.42, ELEV = 912.33 (UNDERPASS TUNNEL)
- STA 20+96.42, ELEV = 912.31 (UNDERPASS TUNNEL)
- STA 20+70.00 @ CONST UNDERPASS TUNNEL =
- STA 27+50.00 @ CONST CARNOUSTIE DRIVE
- STA 27+33.00, 43.5' RT (CARNOUSTIE DRIVE)
- STA 21+13.00, 19.0' RT (UNDERPASS TUNNEL)

- EROSION PROTECTION
- BIKE PATH REPLACEMENT

CALCULATED
AVP
CHECKED
MTL

2.5'
HORIZONTAL
SCALE IN FEET

**PLAN AND PROFILE UNDERPASS TUNNEL
STA 20+00 TO STA 21+34**



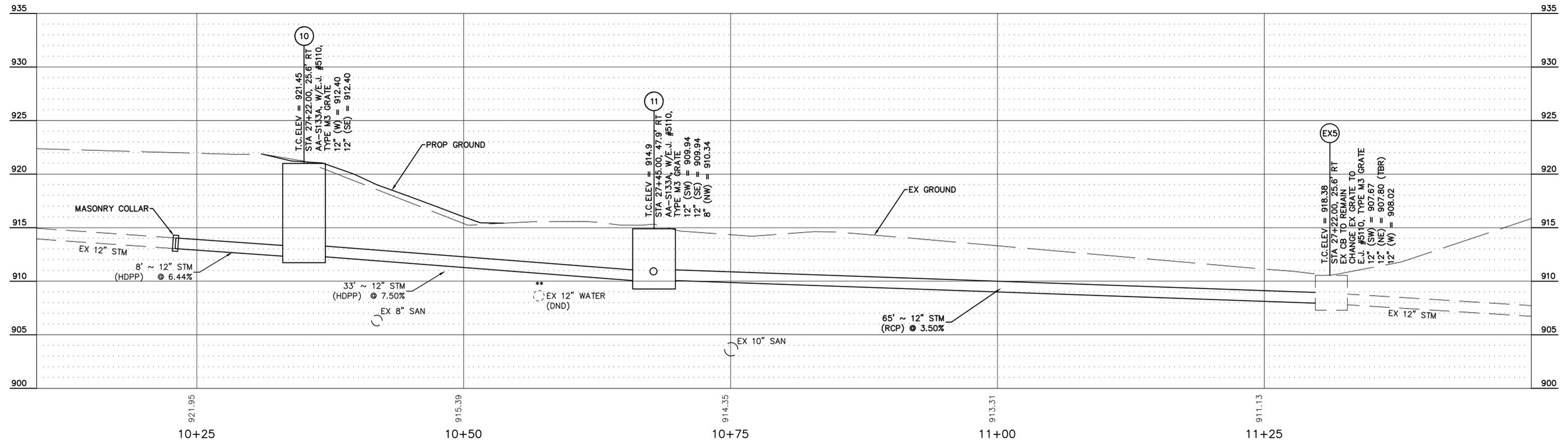
STA 20+15.67, 4.0' LT
EX CB GRATE = 911.70
EX 24\"/>

STA 21+00.50, 0.5' RT
EX CB GRATE = 912.21
EX 12\"/>

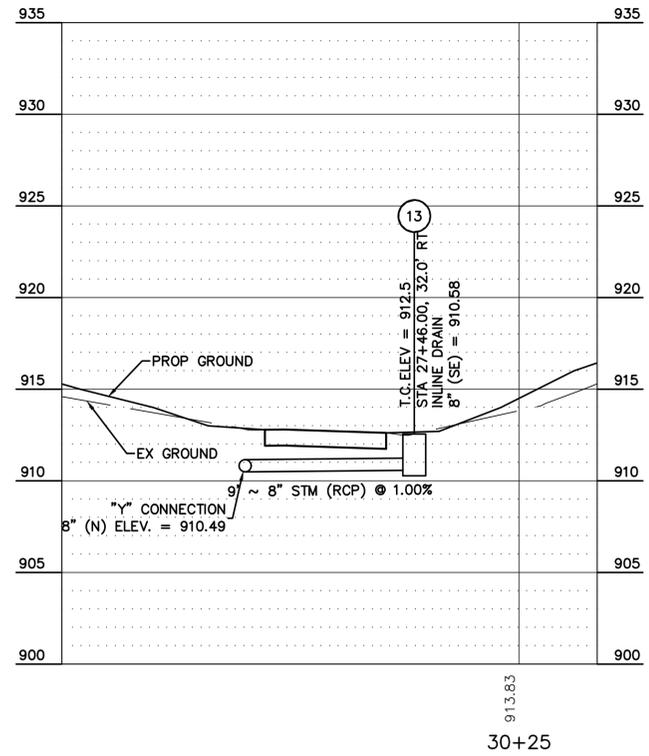
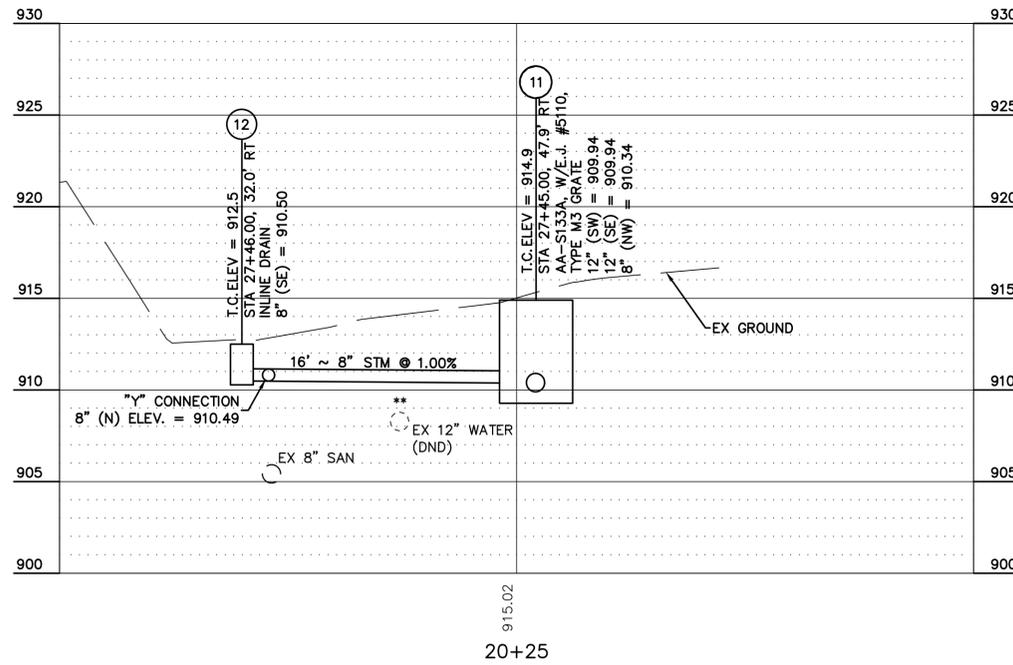
STA 21+04.00, 1.5' LT
EX MH TC = 912.53
EX 8\"/>

CARNOSTIE DRIVE

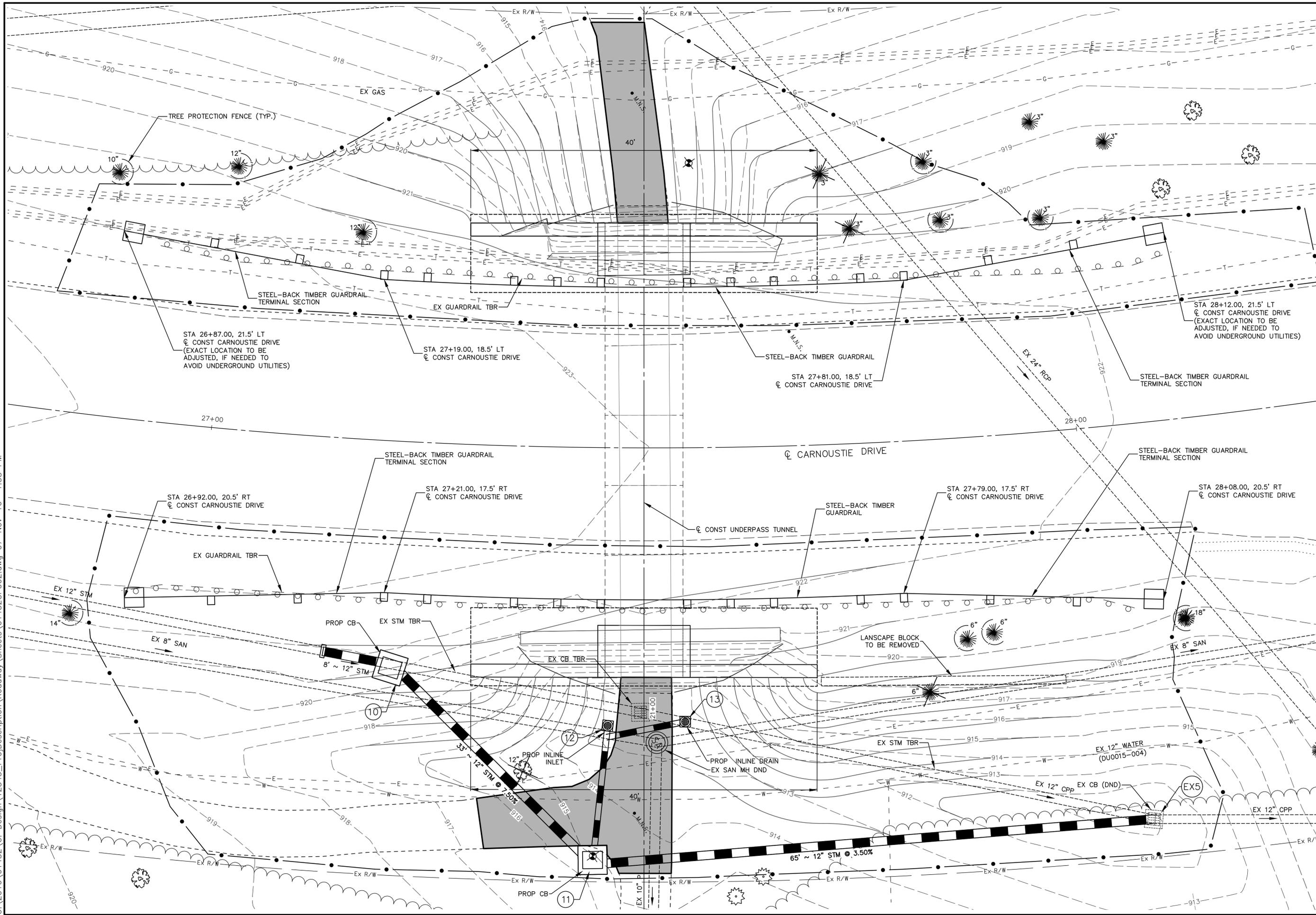
10
14



NOTE:
 ** - CONTRACTOR MAINTAIN 18" OF CLEARANCE



O:\2016\01432\C. Design\12345_ProjDescription\Roadway\Sheets\01432GP002.dwg 07-Nov-16 1:38 PM



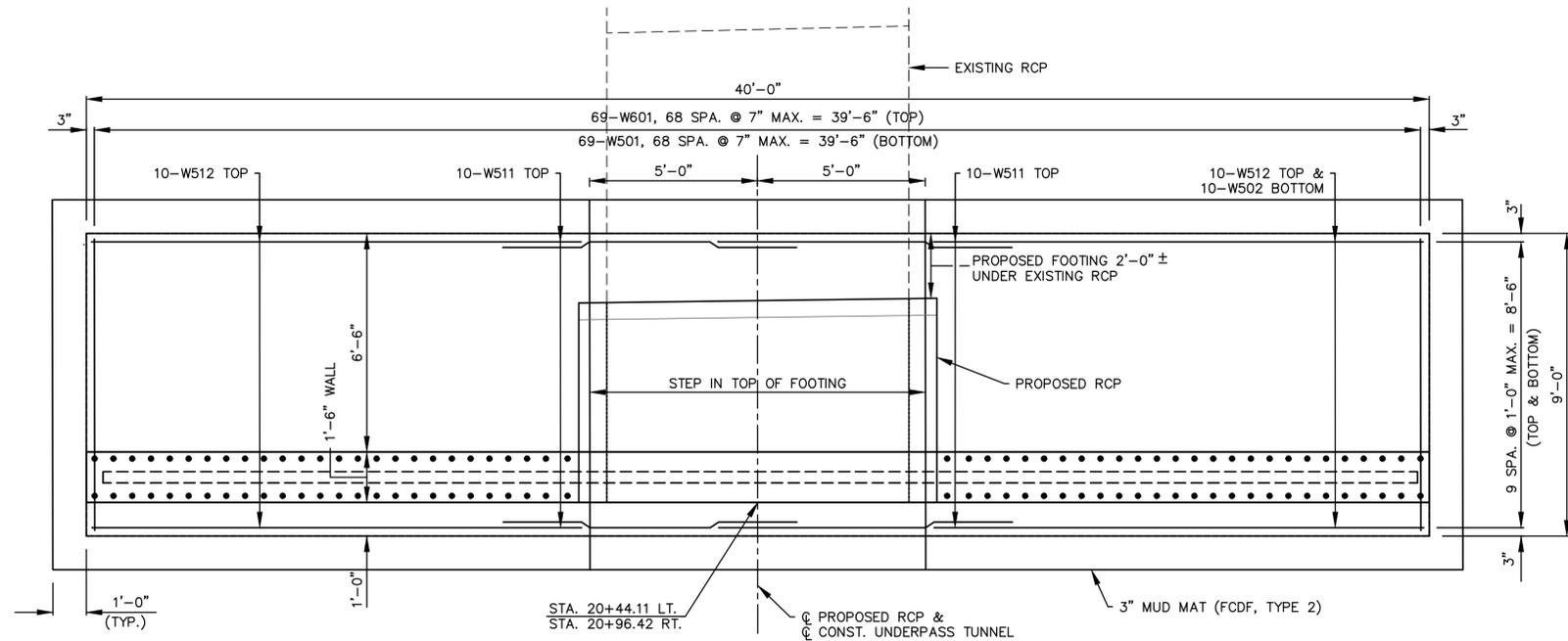
CALCULATED
 AVP
 CHECKED
 MTL

0 5 10
 2.5'
 HORIZONTAL
 SCALE IN FEET

**GRADING PLAN
 UNDERPASS TUNNEL**

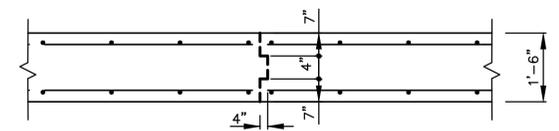
CARNOUSTIE DRIVE

12
 14

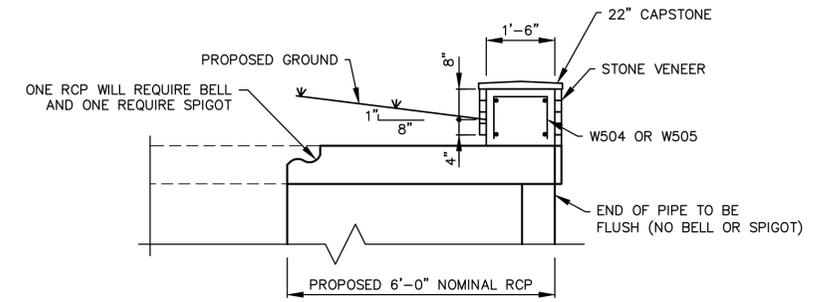


PLAN
LEFT HEADWALL SHOWN, RIGHT HEADWALL SAME BY 180° ROTATION

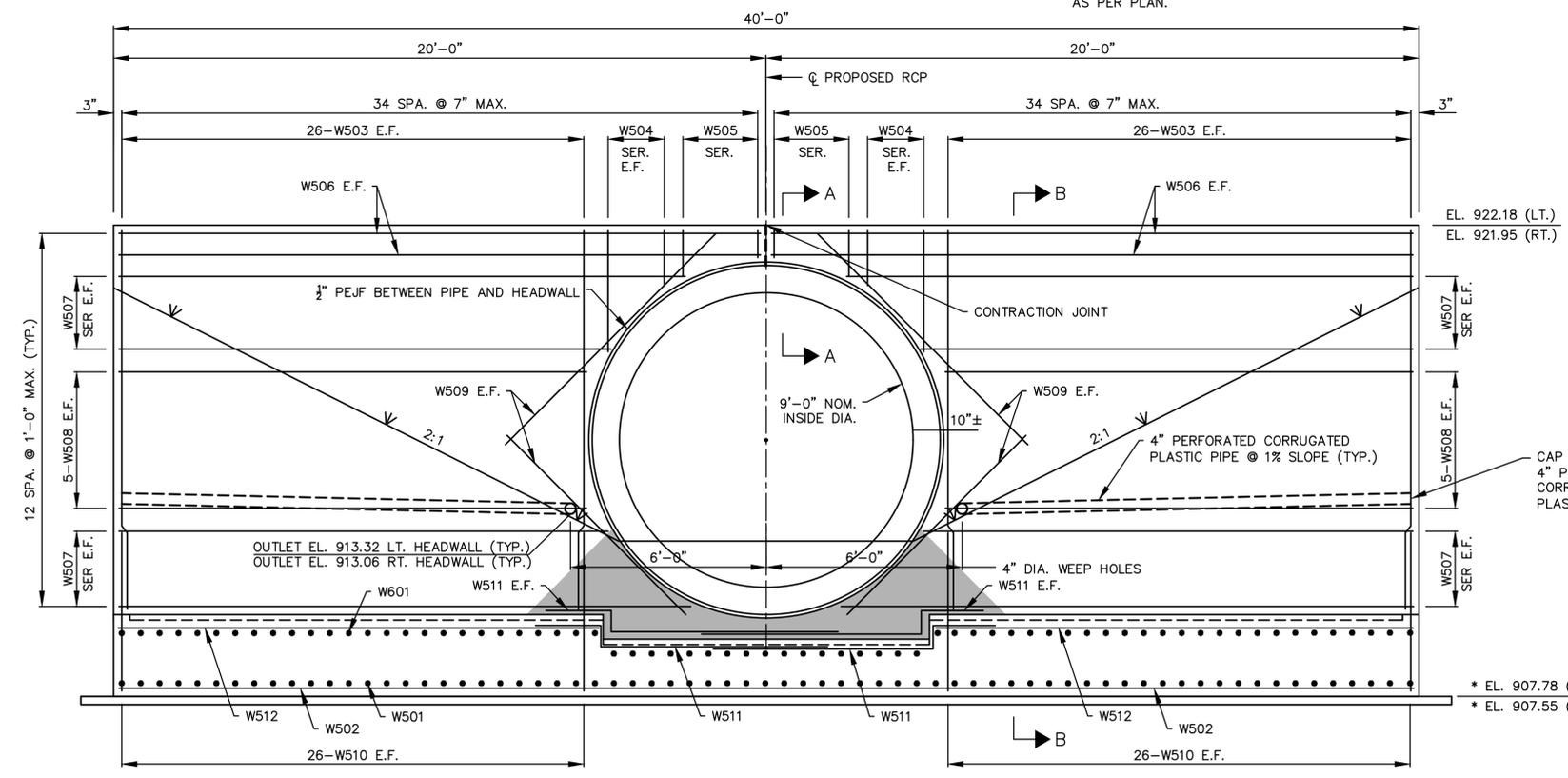
NOTES:
FOR AESTHETIC FINISH DETAILS SEE SHEET 13/13.
FRONT OF RETAINING WALL SHALL BE CAST FLUSH WITH END OF PIPE. CONTRACTOR SHALL VERIFY ACTUAL DIMENSION OF PIPE INCLUDING SQUARE END WITH FABRICATOR PRIOR TO CONSTRUCTING FOOTING.
MAINTAIN 2" MIN. COVER ON ALL REINFORCING STEEL TO FORMED CONCRETE SURFACES INCLUDING SURFACE IN CONTACT WITH RCP.
* BOTTOM OF EXISTING RCP ELEVATION SHALL BE VERIFIED BY CONTRACTOR AND FOOTING ELEVATION ADJUSTED AS REQUIRED. REFER TO STRUCTURE GENERAL NOTES "EXISTING STRUCTURE VERIFICATION" AND "ITEM 611-108" CONDUIT, TYPE D, 706.02, AS PER PLAN.



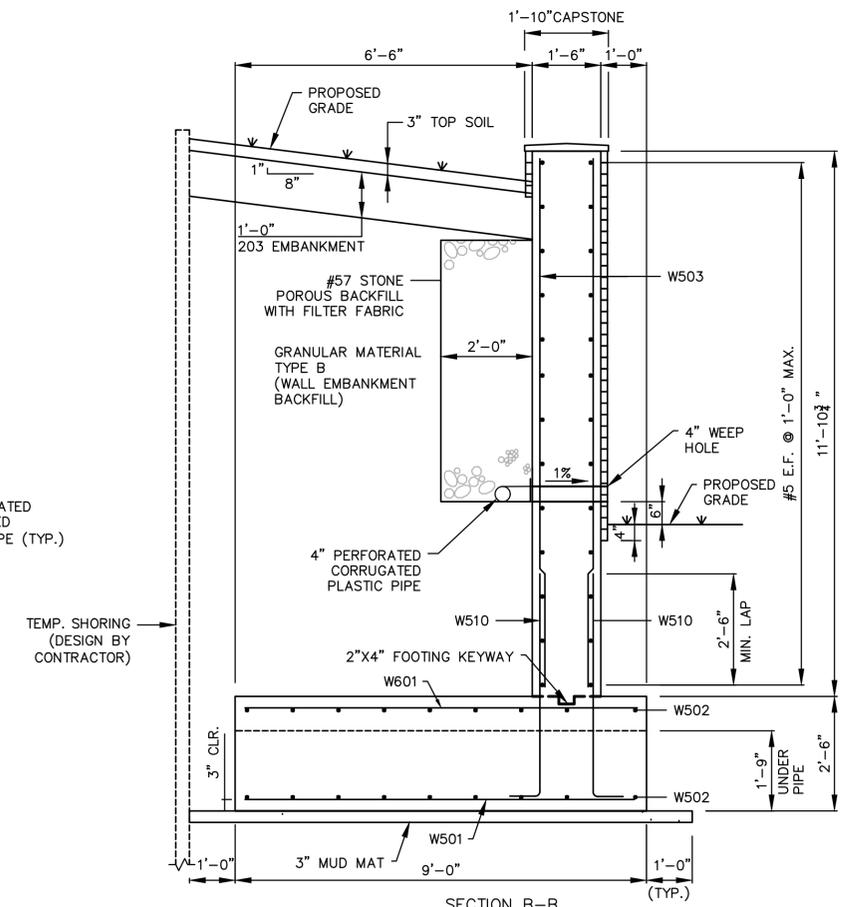
CONTRACTION JOINT DETAIL



SECTION A-A



ELEVATION
LEFT HEADWALL SHOWN, RIGHT HEADWALL SAME BY 180° ROTATION

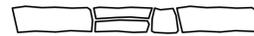
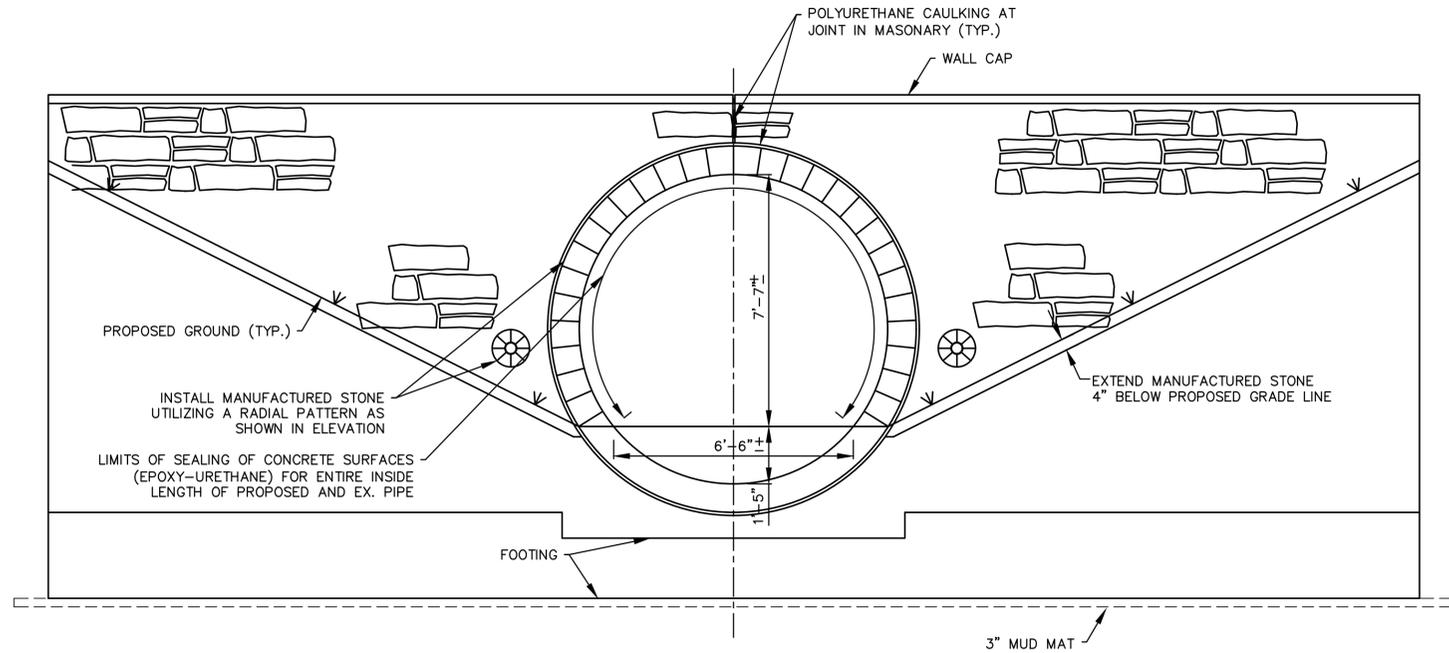


SECTION B-B

#57 STONE BEDDING INCLUDED FOR PAYMENT WITH ITEM 901 - 108" CONDUIT, TYPE D, 706.02, AS PER PLAN

O:\2016\01432\C. Design\12345_ProjDescription\Structures\Wall_1111\Sheets\01432WE001.dwg 07-Nov-16 1:38 PM

O:\2016\01432\C. Design\12345_ProjDescription\Structures\Wall_1111\Sheets\01432WE002.dwg_07--Nov--16 1:38 PM



= PORTIONS OF WALL DECORATED WITH MANUFACTURED STONE UTILIZING A RADIAL PATTERN AS SHOWN IN ELEVATION. HATCH PATTERN IS NOT REPRESENTATIVE OF RANDOM PATTERN.

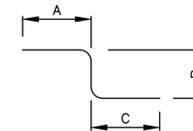
ELEVATION

LEFT HEADWALL SHOWN, RIGHT HEADWALL SAME BY 180 ROTATION

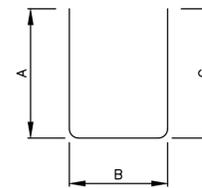
REINFORCING STEEL SCHEDULE											
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
LEFT HEADWALL (RIGHT HEADWALL SAME)											
W501	69	8'-6"	612	STR							
W502	10	39'-6"	412	STR							
W503	104	11'-6"	1247	STR							
W504	4 SR	1'-8"									
	OF	TO	45	STR							0'-8"
	4	3'-8"									
	2 SR	2'-7"			0'-10"			0'-10"			
W505	OF	TO	34	2	TO	1'-2"	TO				0'-4"
W506	5	3'-11"			1'-6"			1'-6"			
	8	19'-6"	163	STR							
W507	8 SR	15'-0"									
	OF	TO	404	STR							1'-1"
	3	17'-3"									
W508	20	14'-3"	297	STR							
W509	8	9'-0"	75	STR							
W510	104	6'-6"	705	1	5'-0"	1'-7"					
W511	24	9'-7"	240	8	2'-9"	9"	6'-4"				
W512	20	14'-8"	306	STR							
W601	69	8'-6"	881	STR							
SUB-TOTAL			5,421								



TYPE-1



TYPE-8



TYPE-2

NOTES:

ALL REINFORCING STEEL SHALL BE EPOXY COATED, GRADE 60.

LENGTHS ARE RECORDED IN FEET - INCHES.

"STR" IN THE TYPE COLUMN INDICATES STRAIGHT BARS.

ALL DIMENSIONS ARE MEASURED OUT-TO-OUT OF BAR.

THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

FOR RETAINING WALL DETAILS SEE SHEET 12/13.