



CITY OF DUBLIN, OHIO  
 PUBLIC STREET, STORM & WATER IMPROVEMENTS  
 FOR  
**CROSBY BUSINESS PARK**  
 14-018-CIP  
 2015



VICINITY MAP  
 SCALE: 1" = 3000'

Ohio Utilities Protection Service  
**Call 811**  
 before you dig

PREPARED FOR:  
**CITY OF DUBLIN, OHIO**  
 5800 SHIER-RINGS ROAD  
 DUBLIN, OHIO  
 (614) 410-4600

PREPARED BY:  
**Stantec**  
 1500 Lake Shore Drive, Suite 100  
 Columbus, Ohio 43204  
 (614) 486-4383  
 (614) 486-4387



*Kevin D. Kershner*  
 REGISTERED ENGINEER NO. **E-64492** DATE **3/23/15**

CITY OF DUBLIN, OHIO

*Paul A. Heunemann*  
 CITY ENGINEER, CITY OF DUBLIN, OHIO DATE **3/24/2015**

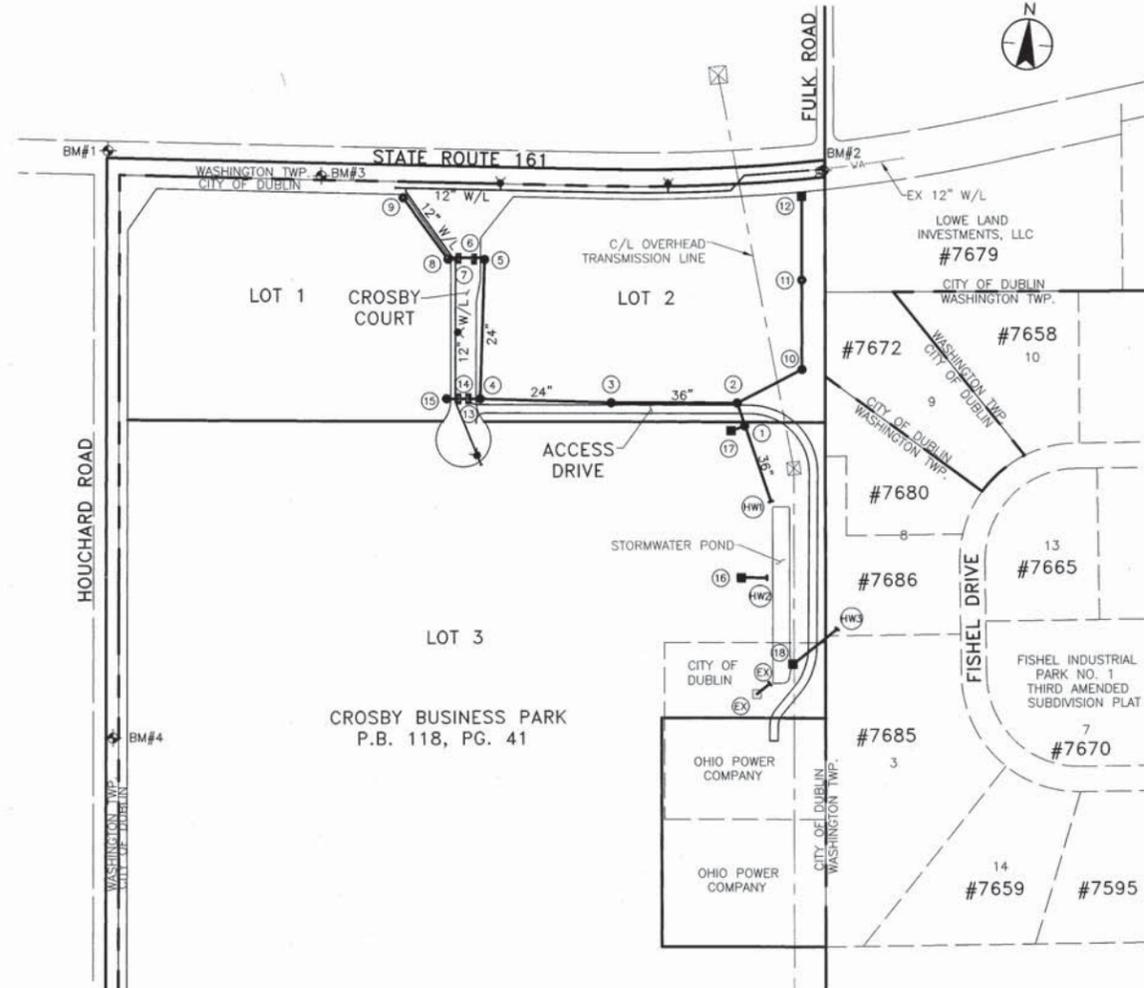
APPROVAL ON THE PART OF THE CITY OF COLUMBUS IS GIVEN PURSUANT TO PROVISIONS OF THE WATER SERVICE AGREEMENT WITH THE CITY OF DUBLIN, OHIO AND THE CITY OF COLUMBUS, OHIO, ON APRIL 13, 1993 AND ALL SUBSEQUENT AMENDMENTS THEREOF.

CITY OF COLUMBUS, OHIO

ADMINISTRATOR, DIVISION OF WATER  
 CITY OF COLUMBUS, OHIO

DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES  
 CITY OF COLUMBUS, OHIO

APPROVALS: SIGNATURES ABOVE SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSE AND GENERAL LOCATION OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS.



BACKGROUND & INDEX MAP  
 SCALE 1" = 200'



**BENCH MARKS**  
 (1988 DATUM)

- SOURCE BENCHMARK BM #1 FRANKLIN COUNTY MONUMENT N29 BRASS PLUG IN CONCRETE MONUMENT AT THE INTERSECTION OF HOUGHARD ROAD AND DUBLIN-PLAIN CITY ROAD, 16.5 FEET NORTH OF THE CENTERLINE OF DUBLIN-PLAIN CITY ROAD, 33.0 FEET SOUTHEAST OF A POWER POLE, 0.3 FEET BELOW THE GROUND. ELEVATION 946.07
- BM #2 3/4" DIAMETER IRON PIPE 30" IN LENGTH WITH RED CAP STAMPED, "STANTEC TRAVERSE"  
 N 767949.275  
 E 1773812.190  
 EL 943.82
- BM #3 3/4" DIAMETER IRON PIPE 30" IN LENGTH WITH RED CAP STAMPED, "STANTEC TRAVERSE"  
 N 767835.885  
 E 1772621.345  
 EL 947.28
- BM #4 3/4" DIAMETER IRON PIPE 30" IN LENGTH WITH RED CAP STAMPED, "STANTEC TRAVERSE"  
 N 766465.480  
 E 1772237.725  
 EL 944.89

STANDARD DRAWINGS				
CITY OF COLUMBUS				
AA-S100	AA-S139	L-1001	L-6310	L-6637C
AA-S101	AA-S149	L-1003	L-6311	L-6640
AA-S106	AA-S150	L-1004	L-6312	L-7001
AA-S107	AA-S151	L-6101	L-6316A	L-7601
AA-S117	AA-S155	L-6306	L-6316B	L-9901
AA-S119	AA-S168	L-6309A	L-6320	
AA-S125	AA-S112	L-6309B	L-6409A	
AA-S128	(FRAME ONLY)		L-6637A	
AA-S133				
CITY OF DUBLIN				
PD-01	SL-01	ST-01	RD-01	WA-1
PD-02	SL-02	ST-02	RD-02 (MOD)	
PD-03	SL-03	ST-03	RD-03	
PD-04	SL-04	ST-05	RD-05	
PD-06	SL-05	ST-06	RD-06	
PD-08	SL-06		RD-07 (MOD)	
			RD-10	
ODOT				
				CB 2-1 CB 2-5 (MOD)

THE STANDARD DRAWINGS LISTED ABOVE SHALL BE CONSIDERED A PART OF THESE DRAWINGS.

**INDEX OF SHEETS**

- SHEET 1 COVER SHEET
- SHEET 2 GENERAL NOTES
- SHEET 3 QUANTITIES, TYPICAL SECTIONS & INTERSECTION DETAILS
- SHEET 4 CROSBY COURT PLAN & PROFILE
- SHEET 5 WATER SERVICES & HYDRANT PROFILES
- SHEET 6 ACCESS DRIVE
- SHEET 7 OFFSITE WATERLINE PLAN & PROFILE
- SHEET 8 STREET TREE PLAN
- SHEET 9 STREET LIGHTING AND STRIPING PLAN
- SHEET 10 STORM SEWER PROFILES
- SHEET 11 NARRATIVE & DETAILS (EROSION NOTES)
- SHEET 12 BASIN DETAILS

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NOTICE TO CONTRACTORS: THE ELECTRONIC FILES FOR THIS PROJECT ARE INSTRUMENTS OF SERVICE OF AND ARE OWNED BY STANTEC CONSULTING SERVICES, INC. DATA FROM SUCH ELECTRONIC FILES CAN BE PROVIDED FOR CONSTRUCTION STAKING. CONTACT KEVIN KERSHNER, P.E., STANTEC'S PROJECT MANAGER FOR THIS PROJECT, FOR INFORMATION ABOUT THE FEES ASSOCIATED WITH PROVIDING SUCH DATA AND THE RELEASE AND INDEMNITY THAT MUST BE SIGNED BEFORE THE DATA IS RELEASED.

REVISIONS		
NO.	DESCRIPTION	APPROVAL DATE

## GENERAL NOTES

1. CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS, 2012 EDITION, INCLUDING ALL SUPPLEMENTS THERETO, AND OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, CURRENT EDITIONS, AND ANY SUPPLEMENTS THERETO (HEREAFTER REFERRED TO AS STANDARD SPECIFICATIONS), SHALL GOVERN ALL CONSTRUCTION ITEMS UNLESS OTHERWISE NOTED. IF A CONFLICT BETWEEN SPECIFICATIONS IS FOUND, THE MORE STRICT SPECIFICATION WILL APPLY AS DECIDED BY THE CITY ENGINEER. ITEM NUMBERS LISTED REFER TO CITY OF COLUMBUS ITEM NUMBERS UNLESS OTHERWISE NOTED.
2. THE CITY ENGINEER WILL NOT BE RESPONSIBLE FOR MEANS, METHODS, PROCEDURES, TECHNIQUES, OR SEQUENCES OF CONSTRUCTION THAT ARE NOT SPECIFIED HEREIN. THE CITY ENGINEER WILL NOT BE RESPONSIBLE FOR SAFETY ON THE WORK SITE, OR FOR FAILURE BY THE CONTRACTOR TO PERFORM WORK ACCORDING TO CONTRACT DOCUMENTS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS INCLUDING BUT NOT LIMITED TO OHIO EPA PERMITS TO INSTALL (PTI) AND NOTICES OF INTENT (NOI), BUILDING PERMITS, ETC.
4. THE CONTRACTOR SHALL NOTIFY THE CITY OF DUBLIN DIVISION OF ENGINEERING IN WRITING AT LEAST 3 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.
5. 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 PRECAUTION 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.
6. FOLLOWING COMPLETION OF CONSTRUCTION OF THE SITE IMPROVEMENTS AND BEFORE REQUESTING OCCUPANCY, A PROOF SURVEY SHALL BE PROVIDED TO THE DIVISION OF ENGINEERING THAT DOCUMENTS "AS-BUILT" ELEVATIONS, DIMENSIONS, SLOPES AND ALIGNMENTS OF ALL ELEMENTS OF THIS PROJECT. THE PROOF SURVEY SHALL BE PREPARED, SIGNED AND SUBMITTED BY THE PROFESSIONAL ENGINEER WHO SEALED THE CONSTRUCTIONS DRAWINGS.
7. THE CONTRACTOR SHALL RESTRICT CONSTRUCTION ACTIVITY TO PUBLIC RIGHT-OF-WAY AND AREAS DEFINED AS PERMANENT AND/OR TEMPORARY CONSTRUCTION EASEMENTS, UNLESS OTHERWISE AUTHORIZED BY THE CITY ENGINEER.
8. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCH MARKS, PROPERTY CORNERS, REFERENCE POINTS, STAKES AND OTHER SURVEY REFERENCE MONUMENTS OR MARKERS. IN CASES OF WILLFUL OR CARELESS 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.
9. NON-RUBBER Tired VEHICLES SHALL NOT BE MOVED ON OR ACROSS PUBLIC STREETS OR HIGHWAYS WITHOUT THE WRITTEN PERMISSION OF THE CITY ENGINEER.
10. THE CONTRACTOR SHALL SUBSTANTIALLY RESTORE ALL DISTURBED AREAS TO EQUAL 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.
11. TRACKING OR SPILLING MUD, DIRT OR DEBRIS UPON STREETS, RESIDENTIAL OR COMMERCIAL DRIVES, SIDEWALKS OR BIKE PATHS IS PROHIBITED ACCORDING TO SECTION 97.38 OF THE DUBLIN CODE OF ORDINANCES. ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE CITY. IF THE CONTRACTOR FAILS TO REMOVE SAID MUD, DIRT, DEBRIS, OR SPILLAGE, THE CITY RESERVES THE RIGHT TO REMOVE THESE MATERIALS AND CLEAN AFFECTED AREAS, THE COST OF WHICH SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
12. DISPOSAL OF EXCESS EXCAVATION WITHIN SPECIAL FLOOD HAZARD AREAS (100-YEAR FLOODPLAIN) IS NOT PERMITTED.
13. ALL SIGNS, LANDSCAPING, STRUCTURES OR OTHER APPURTENANCES WITHIN RIGHT-OF-WAY DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE CITY ENGINEER. THE COST OF THIS WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
14. ALL FIELD TILE BROKEN OR ENCOUNTERED DURING EXCAVATION SHALL BE REPLACED OR REPAIRED AND CONNECTED TO THE PUBLIC STORM SEWER SYSTEM AS DIRECTED BY THE CITY ENGINEER. THE COST OF THIS WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
15. ALL PRECAST CONCRETE PRODUCTS SHALL BE INSPECTED AT THE LOCATION OF MANUFACTURE. APPROVED PRECAST CONCRETE PRODUCTS WILL BE STAMPED OR HAVE SUCH IDENTIFICATION NOTING THAT INSPECTION HAS BEEN CONDUCTED BY THE CITY OF DUBLIN. PRECAST CONCRETE PRODUCTS WITHOUT PROOF OF INSPECTION SHALL NOT BE APPROVED FOR INSTALLATION.
16. BACKFILL WITHIN A 1:1 INFLUENCE LINE OF EXISTING STRUCTURES (HOUSES, GARAGES, ETC.) OR PUBLIC INFRASTRUCTURE (PAVEMENT, CURBS, SIDEWALKS, BIKE PATHS, ETC.) SHALL BE COMPACTED GRANULAR BACKFILL ACCORDING TO ITEM 612 OF THE STANDARD SPECIFICATIONS OR FLOWABLE COF, TYPE III ACCORDING TO ITEM 636. ITEM 911 OF THE STANDARD SPECIFICATIONS MAY BE USED ELSEWHERE.
17. THE CONTRACTOR SHALL SUBMIT A COPY OF THE APPROVED CONSTRUCTION DRAWINGS AND A LIST OF PROPOSED PRECAST CONCRETE PRODUCT MANUFACTURERS TO THE CITY OF COLUMBUS CONSTRUCTION INSPECTION DIVISION BEFORE COMMENCING CONSTRUCTION.  
  
SEND THE INFORMATION TO THE FOLLOWING ADDRESS:  
CONSTRUCTION INSPECTION DIVISION  
CITY OF COLUMBUS  
1800 EAST 17TH AVENUE  
COLUMBUS, OHIO 43219  
  
SEND A COPY OF THE TRANSMITTAL LETTER TO THE FOLLOWING ADDRESS:  
DIVISION OF ENGINEERING  
CITY OF DUBLIN  
5800 SHIER RINGS ROAD  
DUBLIN, OHIO 43016
18. ALL TRENCHES WITHIN PUBLIC RIGHT-OF-WAY SHALL BE BACKFILLED ACCORDING TO THE APPROVED CONSTRUCTION DRAWINGS 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.
19. ALL TREES WITHIN THE CONSTRUCTION AREA NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PRESERVED, WHETHER SHOWN OR NOT SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS. TREES TO BE PRESERVED SHALL BE PROTECTED WITH HIGH VISIBILITY FENCING PLACED A MINIMUM 15 FEET FROM THE TREE TRUNK. TREES 6 - INCHES OR GREATER AT DBH (DIAMETER BRESTH HEIGHT) MUST BE PROTECTED WITH FENCING PLACED AT THE CRITICAL ROOT ZONE OR 15 FEET, WHICHEVER IS GREATER. TREES NOT INDICATED ON THE APPROVED CONSTRUCTION DRAWINGS FOR REMOVAL MAY NOT BE REMOVED WITHOUT PRIOR APPROVAL OF THE DIVISION OF ENGINEERING.
20. CONDUIT MUST BE DIRECTIONALLY BORED ACROSS STREETS INSTEAD OF OPEN CUT, UNLESS SPECIFICALLY APPROVED BY THE CITY ENGINEER. USE OF PNEUMATIC AIR RAM DEVICES IS NOT PERMITTED. PERMITS TO CONSTRUCT IN THE RIGHT-OF-WAY OF EXISTING STREETS MUST BE OBTAINED FROM THE CITY OF DUBLIN DIVISION OF ENGINEERING BEFORE COMMENCING CONSTRUCTION. SHOULD OPEN CUTTING OF EXISTING PAVEMENT BE PERMITTED, CONTROLLED DENSITY BACKFILL (TYPE III) SHALL BE USED IN PLACE OF COMPACTED GRANULAR BACKFILL, ACCORDING TO ITEM 636 OF THE STANDARD SPECIFICATIONS.

21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONDITION OF TRENCHES WITHIN THE RIGHT-OF-WAY AND PUBLIC EASEMENTS 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.
22. PAVEMENTS SHALL BE CUT IN NEAT, STRAIGHT LINES THE FULL DEPTH OF THE EXISTING PAVEMENT, OR AS REQUIRED BY THE CITY ENGINEER. PAVEMENT REPLACEMENT SHALL BE CONDUCTED ACCORDING TO CITY OF COLUMBUS STANDARD DRAWING 1441 DR. A AND APPLICABLE CITY OF DUBLIN STANDARD DRAWINGS. THE REPLACEMENT OF DRIVEWAYS, HANDICAPPED RAMPS, SIDEWALKS, BIKE PATHS, PARKING LOT PAVEMENT, ETC. SHALL BE PROVIDED ACCORDING TO THE APPROVED CONSTRUCTION DRAWINGS AND CITY OF DUBLIN STANDARD CONSTRUCTION DRAWINGS.
23. TREE TRIMMING WITHIN THE CONSTRUCTION ZONE IS TO BE COMPLETED BY A CERTIFIED ARBORIST. AT THE COMPLETION OF THE PROJECT THE ARBORIST IS TO RETURN AND TRIM ANY BROKEN BRANCHES AS NEEDED.
24. ANY MODIFICATION TO THE WORK SHOWN ON DRAWINGS MUST HAVE PRIOR WRITTEN APPROVAL BY THE CITY ENGINEER, CITY OF DUBLIN.
25. ALL INLETS SHALL BE CHANNELIZED.

26. PARK AREAS SHALL BE FINE-GRADED AND SEEDED WITH THE FOLLOWING MIXTURE: IMPROVED KENTUCKY BLUEGRASS, 40% OF WEIGHT (2 VARIETIES IN EQUAL PARTS) IMPROVED PERENNIAL RYE, 60% OF WEIGHT (2 VARIETIES IN EQUAL PARTS) GERMINATION RATE: 85% APPLICATION RATE: 7 LBS PER 1000 SQ FT AS DIRECTED BY THE DIVISION OF PARKS AND RECREATION, CITY OF DUBLIN, OHIO.
27. TRAFFIC CONTROL AND OTHER REGULATORY SIGNS SHALL BE TYPE S WITH A SQUARE POST ANCHOR BASE INSTALLATION AND MEET THE REQUIREMENTS OF ODOT TC-41.20 AND APPLICABLE CITY OF DUBLIN SPECIFICATIONS.
28. STREET SIGNS SHALL MEET ALL CITY OF DUBLIN SPECIFICATIONS WITH LETTERING COLORED IN WHITE DISPLAYED OVER A BROWN BACKGROUND. SIGN TUBING SHALL BE BROWN IN COLOR AND CONFORM WITH THE TYPE S, SQUARE POST ANCHOR BASE INSTALLATION REQUIREMENTS OF ODOT TC-41.20.

### UTILITY

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

AT&T (CONDUIT)  
GARY VAN ALMSICK  
111 N. 4TH STREET, ROOM 802  
COLUMBUS, OHIO 43215  
(614) 223-7276

AT&T (CABLE)  
ROGER MIKESSELL  
111 N. 4TH STREET, ROOM 802  
COLUMBUS, OHIO 43215  
(614) 223-7162  
(614) 208-7731 (MOBILE)

COLUMBIA GAS OF OHIO  
MATT MYERS  
3550 JOHNNY APLESEED COURT  
COLUMBUS, OHIO 43231  
(614) 315-3770 (MOBILE)  
(614) 818-2113

TIME WARNER CABLE  
RAY MAURER  
3760 INTERCHANGE DRIVE  
COLUMBUS, OHIO 43204  
(614) 481-5262  
(614) 348-2979 (MOBILE)

WIDE OPEN WEST  
MARK FREY  
3675 CORPORATE DRIVE  
COLUMBUS, OHIO 43231  
(614) 668-8079 (MOBILE)  
(614) 948-4616

AMERICAN ELECTRIC POWER  
PAUL PAXTON  
850 TECH CENTER DRIVE  
GAHANNA, OHIO 43230-6605  
(614) 883-6831  
(614) 949-8883 (MOBILE)

DUBLINK (TEAM FISHEL)  
JOE TEPPER  
1600 WALCUTT ROAD  
COLUMBUS, OHIO 43228  
(614) 921-8620

CITY OF DUBLIN  
DIVISION OF ENGINEERING  
MIKE SWEDER, P.E.  
5800 SHIER-RINGS ROAD  
DUBLIN, OHIO 43016-1236  
(614) 410-4621

CITY OF COLUMBUS  
DIVISION OF WATER  
TIM HUFFMAN  
910 DUBLIN ROAD  
COLUMBUS, OHIO 43215  
(614) 645-7788

FRONTIER COMMUNICATIONS  
ROBERT CHANDLER  
2780 LIBERTY RD.  
DELAWARE, OHIO 43015  
(740) 369-0826

2. THE CONTRACTOR SHALL GIVE NOTICE OF INTENT TO CONSTRUCT TO OHIO UTILITIES PROTECTION SERVICE (TELEPHONE NUMBER 800-362-2764), PRODUCERS UNDERGROUND PROTECTION SERVICE (TELEPHONE NUMBER 614-587-0486), 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.

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

4. LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES, WHETHER SHOWN OR NOT SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

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

### DELETED.

### TRAFFIC CONTROL

1. TRAFFIC CONTROL SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR ACCORDING TO OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), CURRENT EDITION.
2. ALL TRAFFIC LANES OF PUBLIC ROADWAYS SHALL BE FULLY OPEN TO TRAFFIC FROM 7:00 AM TO 9:00 AM AND FROM 4:00 PM TO 6:00 PM UNLESS AUTHORIZED DIFFERENTLY BY THE CITY ENGINEER. AT ALL OTHER HOURS THE CONTRACTOR SHALL MAINTAIN MINIMUM ONE-LANE TWO-WAY TRAFFIC. UNIFORMED, OFF-DUTY POLICE OFFICERS SHALL REPLACE FLAGMEN DESIGNATED BY THE OMUTCD, AND SHALL BE PRESENT WHENEVER ONE-LANE, TWO-WAY TRAFFIC CONTROL IS IN EFFECT. POLICE CRUISERS MAY BE REQUIRED AS DIRECTED BY THE CITY ENGINEER.
3. IF THE CITY ENGINEER DETERMINES PROPER PROVISIONS FOR TRAFFIC CONTROL ARE NOT BEING PROVIDED BY THE CONTRACTOR, THE CITY ENGINEER SHALL ASSIGN UNIFORMED, OFF-DUTY POLICE OFFICERS TO THE PROJECT AT NO COST TO THE CITY.
4. STEADY-BURNING, TYPE "C" LIGHTS SHALL BE REQUIRED ON ALL BARRICADES, DRUMS, AND SIMILAR TRAFFIC CONTROL DEVICES IN USE AT NIGHT.
5. ACCESS FROM PUBLIC ROADWAYS TO ALL ADJOINING PROPERTIES FOR EXISTING RESIDENTS OR BUSINESSES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT FOR MAIL, PUBLIC WATER AND SANITARY SEWER SERVICE, AND EMERGENCY VEHICLES. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN DETAILING THE PROPOSED MAINTENANCE OF TRAFFIC PROCEDURES. THE TRAFFIC CONTROL PLAN MUST INCORPORATE ANY TRAFFIC CONTROL DETAILS CONTAINED HEREIN. THE TRAFFIC CONTROL PLAN PROPOSED BY THE CONTRACTOR MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO CONSTRUCTION.

### SANITARY SEWER

NOTES 1 THRU 13 DELETED.

14. ROOF DRAINS, FOUNDATION DRAINS, FIELD TILE OR OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE STRICTLY PROHIBITED ACCORDING TO SECTION 51.23 OF THE DUBLIN CODE OF ORDINANCES.

NOTES 15 THRU 20 DELETED.

### WATER LINE

1. ALL WATER LINE MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE CITY OF COLUMBUS, DIVISION OF WATER.
2. NOTE HAS BEEN DELETED.
3. ONLY FIRE HYDRANTS CONFORMING TO CITY OF DUBLIN STANDARDS WILL BE APPROVED FOR USE. ALL FIRE HYDRANTS SHALL BE AWWA APPROVED.
4. PUBLIC WATER LINES SHALL BE DISINFECTED BY THE CITY OF COLUMBUS DIVISION OF WATER. REQUESTS FOR WATER LINE CHLORINATION SHALL BE MADE THROUGH THE CITY OF DUBLIN DIVISION OF ENGINEERING. THE COST FOR CHLORINATION SHALL BE PAID FOR BY THE CONTRACTOR.
5. ALL WATER LINES SHALL BE DISINFECTED IN ACCORDANCE WITH SECTION 801.15 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS. SPECIAL ATTENTION IS DIRECTED TO APPLICABLE SECTION OF A.W.W.A. C-651, PARTICULARLY FOR FLUSHING (SECTION 5) AND FOR CHLORINATING VALVES AND FOR FIRE HYDRANTS (SECTION 7). WHEN THE WATER LINES ARE READY FOR DISINFECTION, THE CITY OF DUBLIN SHALL SUBMIT THREE (3) SETS OF "AS BUILT" PLANS, (FULL SIZE SHEETS ONLY), THE AS-BUILT SURVEY COORDINATES, AND A LETTER STATING THAT THE WATER LINES HAVE BEEN PRESSURE TESTED AND NEED TO BE DISINFECTED, TO THE CITY OF COLUMBUS, DIVISION OF WATER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE DISINFECTION OF ALL WATER LINES CONSTRUCTED UNDER THIS PLAN.
6. THE CONTRACTOR SHALL PAINT ALL FIRE HYDRANTS ACCORDING TO CITY OF DUBLIN STANDARDS. THE COST OF PAINTING FIRE HYDRANTS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR FIRE HYDRANTS.
7. NO WATER TAPS MAY BE ISSUED UNTIL ADJACENT PUBLIC WATER LINES SERVING THE CONSTRUCTION SITE HAVE BEEN DISINFECTED BY THE CITY OF COLUMBUS DIVISION OF WATER AND HAVE BEEN ACCEPTED BY THE CITY ENGINEER. A TAP AND THE CITY OF COLUMBUS DIVISION OF WATER BEFORE MAKING ANY TAPS INTO PUBLIC WATER LINES. NO SERVICE CONNECTION PERMITS SHALL BE ISSUED OR CONNECTIONS MADE TO ANY SERVICE TAPS UNTIL WATER MAINS HAVE BEEN DISINFECTED BY THE CITY OF COLUMBUS, DIVISION OF WATER.

8. THE CONTRACTOR SHALL NOTIFY THE CITY OF COLUMBUS DIVISION OF WATER AT 645-7788 AND THE CITY OF DUBLIN DIVISION OF ENGINEERING AT LEAST 24 HOURS BEFORE TAPPING INTO EXISTING WATER LINES.

9. ALL WATER MAIN STATIONING SHALL BE BASED ON STREET CENTERLINE STATIONING.

10. ALL BENDS, JOINT DEFLECTIONS AND FITTINGS SHALL BE BACKED WITH PERMIT FOR EACH WATER SERVICE MUST BE OBTAINED FROM THE CITY OF DUBLIN CONCRETE PER CITY OF COLUMBUS STANDARDS.

11. THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO ALL AFFECTED PROPERTY OWNERS AT LEAST 1 WORKING DAY BUT NOT MORE THAN 3 WORKING DAYS PRIOR TO ANY TEMPORARY INTERRUPTION OF WATER SERVICE. INTERRUPTION OF WATER SERVICE SHALL BE MINIMIZED AND MUST BE APPROVED BY THE CITY ENGINEER.

12. ALL WATER METERS ASSOCIATED WITH THIS PROJECT SHALL BE INSTALLED INSIDE PROPOSED STRUCTURES UNLESS A METER PIT IS APPROVED BY THE CITY OF COLUMBUS, ADMINISTRATOR OF THE DIVISION OF WATER. ALL METER PITS MUST CONFORM TO STANDARD DRAWING L-7103 FOR 5/8" THROUGH 1" METERS OR L-6317, A,B,C,D&E FOR 1-1/2" OR LARGER METERS.

13. WATER LINES TO BE INSTALLED IN EMBANKMENT AREAS SHALL BE PLACED AFTER THE EMBANKMENT HAS BEEN PLACED AND COMPACTED ACCORDING TO THE STANDARD SPECIFICATIONS.

14. WATER SERVICE BOXES SHALL BE PLACED 1' FROM THE EDGE OF THE PROPOSED OR EXISTING SIDEWALK BETWEEN THE SIDEWALK AND THE CURB, OR 2' INSIDE THE RIGHT-OF-WAY OR EASEMENT LINE WHEN NO SIDEWALK IS PRESENT OR PROPOSED. REFER TO STANDARD DRAWING L-9901 FOR ADDITIONAL INFORMATION.

15. ALL WATER LINES SHALL BE PLACED AT A MINIMUM DEPTH OF 4 FEET MEASURED FROM TOP OF FINISHED GRADE TO TOP OF WATER LINE. WATER LINES SHALL BE SET DEEPER AT ALL POINTS WHERE BEING INSTALLED WITHIN EXISTING OR PROPOSED UTILITY LINES OR OTHER UNDERGROUND RESTRICTIONS BY A MINIMUM OF 18 INCHES.

16. IT SHALL BE UNLAWFUL FOR ANY PERSON TO PERFORM ANY WORK ON CITY OF COLUMBUS WATER LINE SYSTEMS WITHOUT FIRST SECURING LICENSE TO ENGAGE IN SUCH WORK, AS INDICATED IN COLUMBUS CITY CODE SECTION 1103.02 AND 1103.06. THIS WORK INCLUDES ANY ATTACHMENTS, ADDITIONS TO OR ALTERATIONS IN ANY CITY SERVICE PIPE OR APPURTENANCES (INCLUDING WATER SERVICE LINES AND TAPS). THIS REQUIREMENT MAY BE MET BY UTILIZATION OF A SUBCONTRACTOR WHO HOLDS A CITY OF COLUMBUS WATER CONTRACTOR LICENSE OR A COMBINED WATER/SEWER CONTRACTOR LICENSE TO PERFORM THIS WORK. UTILIZATION OF A SUBCONTRACTOR MUST MEET THE LICENSING REQUIREMENTS OF CITY OF COLUMBUS BUILDING CODE, IN PARTICULAR SECTION 4114.119 AND 4114.529.

17. NO PERSON SHALL BEGIN CONSTRUCTION OR INSTALLATION OF A PUBLIC WATER MAIN UNTIL PLANS HAVE BEEN APPROVED BY THE STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA).

18. THE CONTRACTOR SHALL OBTAIN THE PROPER HYDRANT PERMIT(S), AND PAY ANY APPLICABLE FEES, FOR ANY APPROVED HYDRANT USAGE DEEMED NECESSARY FOR WORK UNDER THIS IMPROVEMENT. PERMITS MAY BE OBTAINED THROUGH THE DIVISION OF WATER PERMIT OFFICE (645-7330). THE CONTRACTOR SHALL ADHERE TO ALL RULES AND REGULATIONS GOVERNING SAID PERMIT AND MUST HAVE THE ORIGINAL PERMIT ON SITE ANYTIME IN WHICH THE HYDRANT IS IN USE. COST TO BE INCLUDED IN THE VARIOUS BID ITEMS.

19. ALL WATER MAINS SHALL BE CLEANED AND FLUSHED, ALSO ANY WATER MAIN 12-INCH AND LARGER MUST BE PROPERLY PIGGED IN ACCORDANCE WITH SECTION 801.13 OF THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS.

20. "SURVEY COORDINATES" SHALL INCLUDE ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO OBTAIN HORIZONTAL AND VERTICAL (NORTHING, EASTING, AND ELEVATION) SURVEY COORDINATES FOR THE WATER MAIN IMPROVEMENTS. THE SURVEY COORDINATES SHALL BE OBTAINED FOR THE COMPLETED WATER MAIN CONSTRUCTION AND SHALL INCLUDE ALL VALVES, TEES, CROSSES, BENDS, DEFLECTIONS, PLUGS, REDUCERS, TAPPING SLEEVES, BLOW OFFS, CHLORINATION TAPS, FIRE HYDRANTS, AIR RELEASES, CURB STOPS, CASING PIPE TERMINI AND OTHER FITTINGS. ADDITIONAL SURVEY COORDINATES ARE REQUIRED ON THE WATER MAIN EVERY 500' WHERE NO FITTING OR OTHER WATER MAIN STRUCTURE IS BEING INSTALLED WITHIN THAT LENGTH OF THE IMPROVEMENT. ALL SURVEY COORDINATES SHALL BE REFERENCED TO THE APPLICABLE COUNTY ENGINEER'S MONUMENTS, AND SHALL BE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83) WITH THE (NSRS2007) ADJUSTMENT, WITH FURTHER REFERENCE MADE TO THE OHIO STATE PLANE SOUTH COORDINATE SYSTEM, SOUTH ZONE, WITH ELEVATIONS BASED ON NAVD 88 DATUM. ALL COORDINATES (NORTHING, EASTING, ELEVATION) SHALL BE REFERENCED TO THE NEAREST HUNDRETH (N XXXXXX.XX, E XXXXXX.XX, ELEV. XXX.XX). ALL SURVEY COORDINATES SHALL BE ACCURATE TO WITHIN 1.0 FOOT HORIZONTAL AND A TENTH OF A FOOT (0.10) OR LESS VERTICAL.

THE COORDINATES SHALL BE DOCUMENTED TO THE MUNICIPALITY ENGINEER OR DESIGNATED REPRESENTATIVE IN DIGITAL SPREADSHEET FORM AND SHALL INCLUDE THE APPLICABLE ITEM, STATION, NORTHING, EASTING, AND ELEVATION. COORDINATES SHALL BE SUBMITTED TO THE MUNICIPALITY ENGINEER OR DESIGNATED REPRESENTATIVE ON A BI-WEEKLY BASIS. COORDINATES SHALL ALSO BE REQUIRED TO BE SUBMITTED TO THE DIVISION OF WATER AS PART OF THE REQUEST FOR CHLORINATION.

LUMP SUM PAYMENT IS FULL COMPENSATION FOR ALL WORK INVOLVED IN OBTAINING AND DOCUMENTING THE SURVEY COORDINATES AS DESCRIBED IN THIS SPECIFICATION.

NOTE TO CONSULTANT: PROVIDE THE X,Y,Z COORDINATE TABLE FOR PROPOSED WORK AND BLANK SPACES FOR AS-BUILTS ON THE SHEETS AS REQUIRED BY C.O.C. WATER DISTRIBUTION ENGINEERING SECTION.

21. ALL WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH SECTION 801.14 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS WITH THE FOLLOWING EXCEPTION: 150 PSI OF PRESSURE SHALL BE MAINTAINED FOR AT LEAST TWO HOURS IN ANY TESTED SECTION. THE CITY MAY NOT APPROVE ANY TEST LASTING LESS THAN TWO HOURS REGARDLESS OF THE AMOUNT OF LEAKAGE.
22. ALL BRASS FITTINGS ASSOCIATED WITH WATER WORK, INCLUDING REPAIRS TO THE EXISTING SYSTEM, SHALL CONFORM TO THE REVISED ALLOWABLE LEAD EXTRACTION LIMIT PER THE UPDATED NSF/ANSI 61 STANDARD. THE DIVISION OF WATER'S APPROVED MATERIALS LIST HAS BEEN UPDATED TO REFLECT THIS REQUIREMENT.
23. NO SHUTS ARE PERMITTED TO OCCUR ONE (1) BUSINESS DAY BEFORE A FEDERAL HOLIDAY, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
24. NO SERVICE CONNECTION PERMITS SHALL BE ISSUED OR CONNECTIONS MADE TO ANY SERVICE TAPS UNTIL WATER MAINS HAVE BEEN DISINFECTED BY THE CITY OF COLUMBUS, DIVISION OF WATER.
25. FOR ANY EMERGENCIES INVOLVING THE WATER DISTRIBUTION SYSTEM, PLEASE CONTACT THE DIVISION OF WATER DISTRIBUTION MAINTENANCE OFFICE AT 614-645-7788.

SPEC ALL WATER LINES SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY AND 18 INCHES VERTICALLY FROM SANITARY SEWERS AND STORM SEWERS.

SPEC INDIVIDUAL BOOSTER PUMPS SHALL NOT BE ALLOWED FOR ANY INDIVIDUAL SERVICE.

SPEC THE NORMAL WORKING PRESSURE IN THE WATERLINES SHALL NOT BE LESS THAN 35 PSI.

### SPEC STORM SEWER

1. ALL STORM WATER DETENTION AND RETENTION AREAS AND MAJOR FLOOD ROUTING SWALES SHALL BE CONSTRUCTED TO FINISH GRADE, HYDRO-SEEDED AND HYDRO-MULCHED ACCORDING TO ITEMS 203 AND 659 OF THE STANDARD SPECIFICATIONS.
2. WHERE PRIVATE STORM SEWERS CONNECT TO PUBLIC STORM SEWERS, THE LAST RUN OF PRIVATE STORM SEWER CONNECTING TO THE PUBLIC STORM SEWER SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM DESIGNATION C 76, WALL B, CLASS IV FOR PIPE DIAMETERS 12 INCHES TO 15 INCHES, CLASS III FOR 18 INCHES TO 24 INCHES PIPE, AND 27 INCHES AND LARGER PIPE SHALL BE CLASS II, UNLESS OTHERWISE SHOWN ON THE CITY OF DUBLIN'S DIVISION OF ENGINEERING.
3. GRANULAR BACKFILL SHALL BE COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS OR CONTROLLED DENSITY BACKFILL ACCORDING TO ITEM 636, TYPE 2 OF THE STANDARD SPECIFICATIONS, AS DIRECTED BY THE CITY ENGINEER.
4. ALL STORM SEWERS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM DESIGNATION C76, WALL B, CLASS IV FOR PIPE DIAMETERS 12 INCHES TO 15 INCHES, CLASS III FOR 18 INCHES TO 24 INCH PIPES, AND 27 INCHES AND LARGER PIPE SHALL BE CLASS II, UNLESS OTHERWISE SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS.
5. HEADWALLS SHALL BE REQUIRED AT ALL STORM SEWER INLETS OR OUTLETS TO AND FROM STORM WATER MANAGEMENT FACILITIES. NATURAL STONE AND/OR BRICK APPROVED BY THE CITY ENGINEER SHALL BE PROVIDED ON ALL VISIBLE HEADWALLS AND/OR ENDWALLS.
6. STORM INLETS OR CATCH BASINS SHALL HAVE BICYCLE SAFE GRATES. MANHOLE LIDS SHALL INCLUDE CITY OF DUBLIN LOGO AND ALL CURB INLET AND CATCH BASIN GRATES SHALL INCLUDE ENGRAVED LETTERING "DUMP NO WASTE; DRAINS TO RIVER".
7. STORM SEWER GREATER THAN 18 INCHES IN DIAMETER ACCESSIBLE FROM STORM WATER MANAGEMENT FACILITIES OR WATERCOURSES SHALL BE PROVIDED WITH SAFETY GRATES, AS APPROVED BY THE CITY ENGINEER.

### MAIL DELIVERY

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT U.S. MAIL DELIVERY WITHIN THE PROJECT LIMITS IS NOT DISRUPTED BY CONSTRUCTION OPERATIONS. THIS RESPONSIBILITY IS LIMITED TO TOF MAILBOXES TO THEIR ORIGINAL LOCATION OR APPROVED NEW LOCATION. ANY RELOCATION OF MAILBOX SERVICES MUST BE FIRST COORDINATED WITH RELOCATION OF MAILBOXES TO A TEMPORARY LOCATION THAT WILL ALLOW THE COMPLETION OF THE WORK AND SHALL ALSO INCLUDE THE RESTORATION THE US POSTAL SERVICE AND THE HOMEOWNER.

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

TRASH AND OLD FENCING SHALL BE REMOVED FROM THE SITE, COST TO BE INCLUDED IN MISCELLANEOUS BID ITEMS.

### USE OF FIRE HYDRANTS

1. THE CONTRACTOR SHALL MAKE PROPER ARRANGEMENTS WITH THE DUBLIN SERVICE DEPARTMENT AND THE COLUMBUS DIVISION OF WATER FOR THE USE OF FIRE HYDRANTS WHEN USED FOR WORK PERFORMED UNDER THIS CONTRACT AND PROVIDE THE CITY OF DUBLIN A COPY OF THE HYDRANT USAGE PERMIT OBTAINED FROM THE CITY OF COLUMBUS. THE CONTRACTOR SHALL ALSO SEND COPIES OF PERMITS OBTAINED FROM DUBLIN AND COLUMBUS TO THE WASHINGTON AND/OR PERRY TOWNSHIP FIRE DEPARTMENT. PERMITS SHALL BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES.
2. BEFORE THE FINAL ESTIMATE IS PAID, THE CONTRACTOR SHALL SUBMIT A LETTER FROM THE CITY OF COLUMBUS DIVISION OF WATER TO THE CITY ENGINEER STATING THAT THE CONTRACTOR HAS RETURNED THE SIAMESE VALVE TO THE CITY OF COLUMBUS AND HAS PAID ALL COSTS ARISING FROM THE USE OF THE FIRE HYDRANTS.

### ITEM 206-LIME KILN DUST STABILIZED SUBGRADE, 16" DEEP, AS PER PLAN

1. THE ITEM SHALL COMPLY WITH THE GENERAL MATERIAL AND CONSTRUCTION REQUIREMENTS OF ODOT CMS 206. LIME KILN DUST SHALL BE APPLIED AT A 7% RATE BY VOLUME. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED AS AN ALLOWANCE FOR BIDDING PURPOSES FOR USE AS DIRECTED BY THE ENGINEER.

ITEM 206-LIME KILN DUST STABILIZED SUBGRADE, 16" DEEP, AS PER PLAN 2061 SQ YD

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PERFORM THE WORK NOTED ABOVE, INCLUDING LIME KILN DUST, CURING COAT, AND TEST ROLLING, SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 206, LIME KILN DUST STABILIZED SUBGRADE, 16" DEEP, AS PER PLAN.

### 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).

THE ELEVATIONS AND SLOPES PROVIDED ON THE DRAWINGS ARE INTENDED TO CONVEY A DESIGN THAT IS COMPATIBLE WITH ADA GUIDELINES. THE CONTRACTOR SHALL DETERMINE THE EXISTING 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 ELEVATION INFORMATION TO INSURE THAT THE FINISHED WORK IS IN ACCORDANCE WITH ADA GUIDELINES.

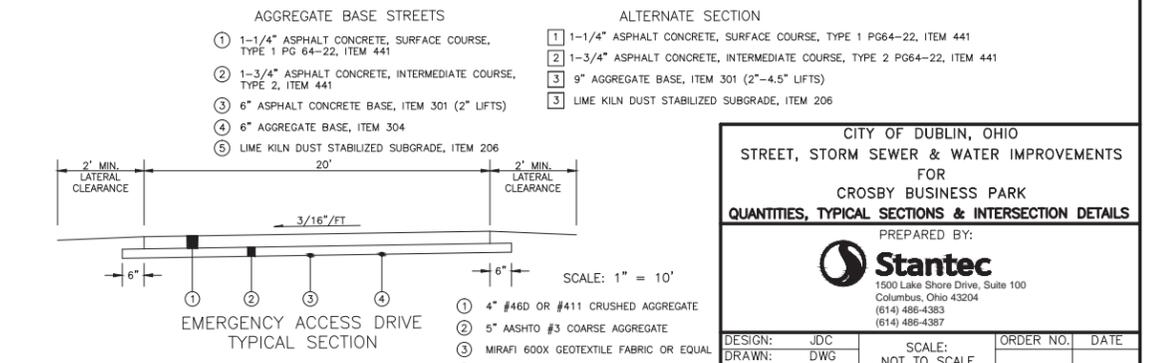
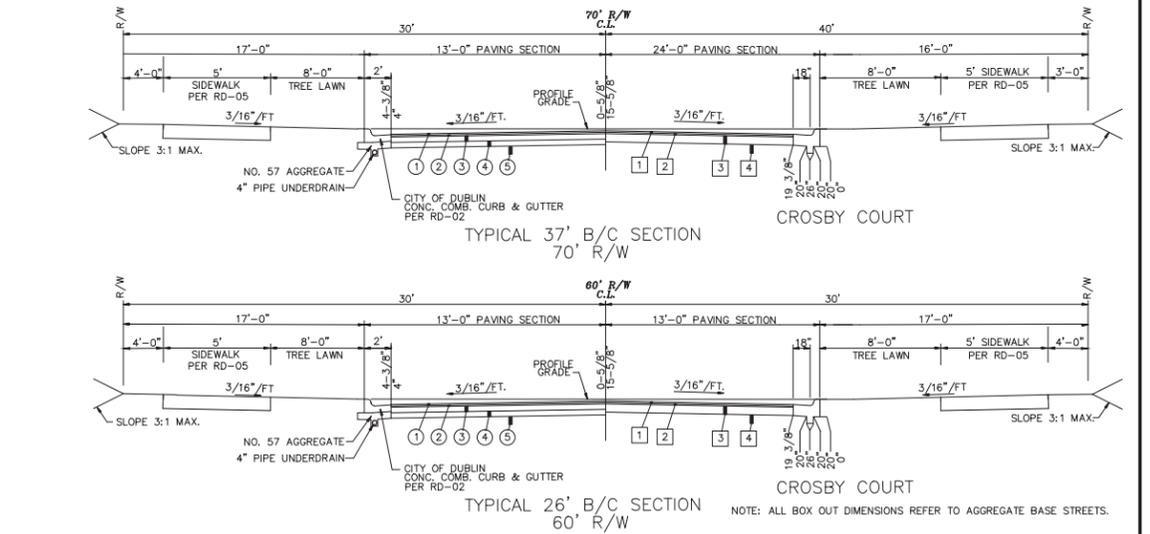
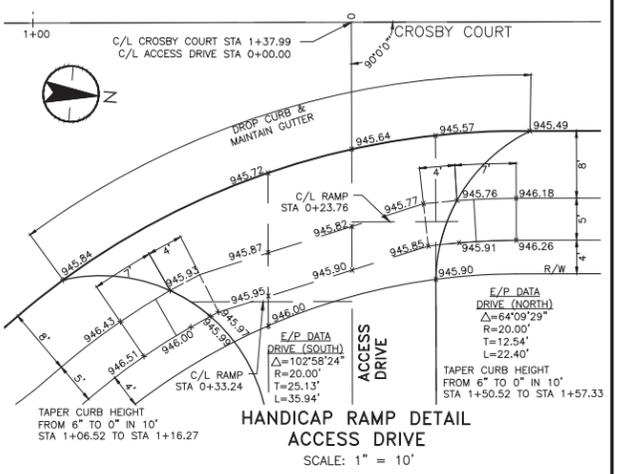
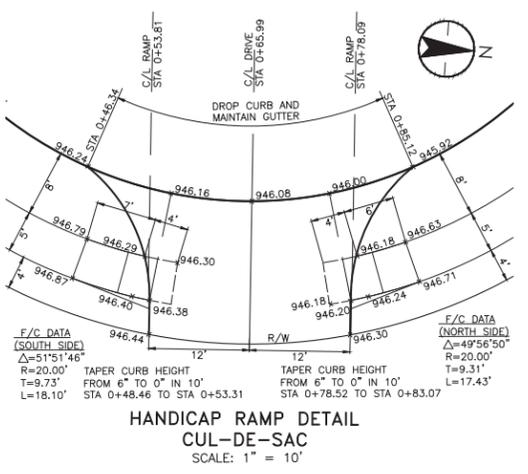
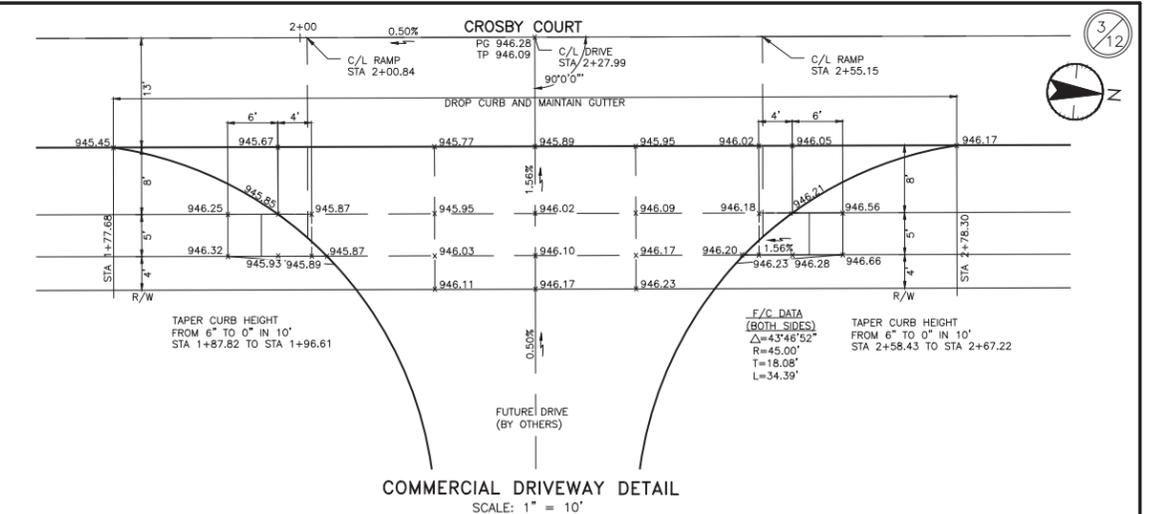
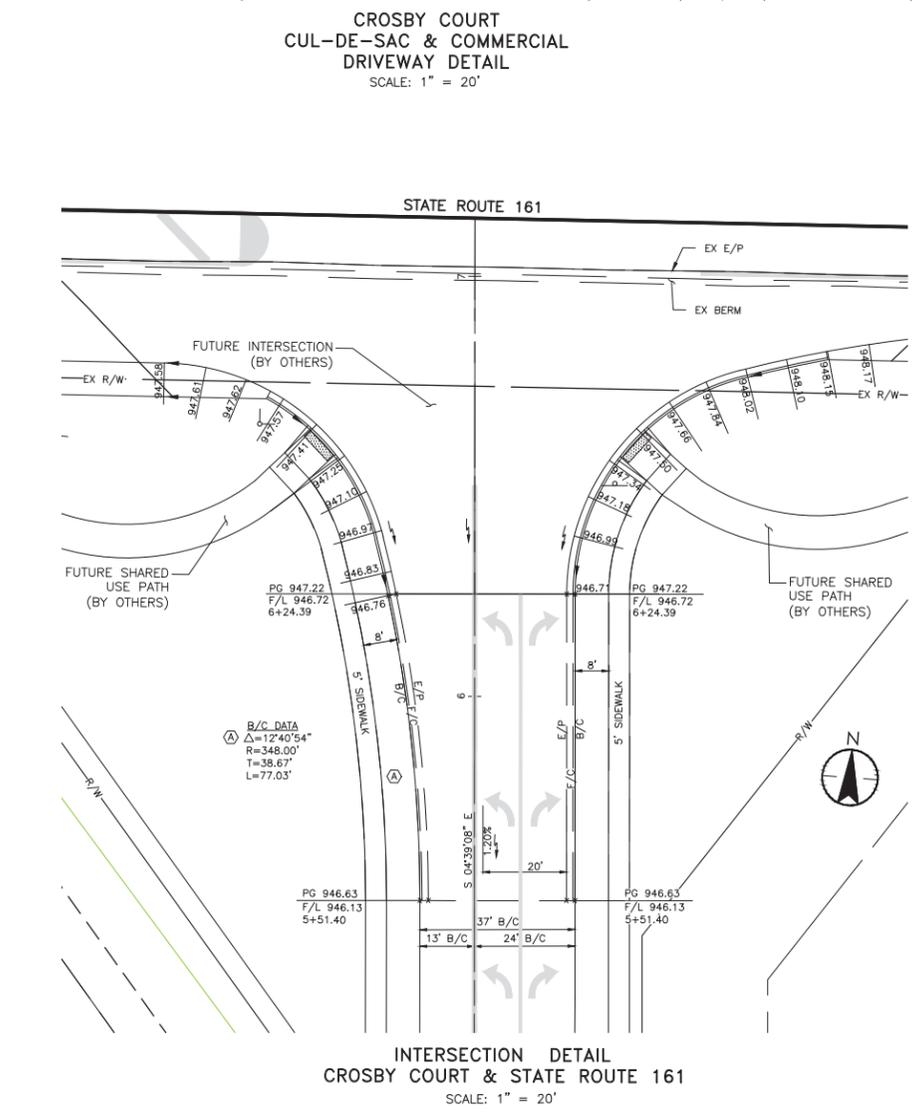
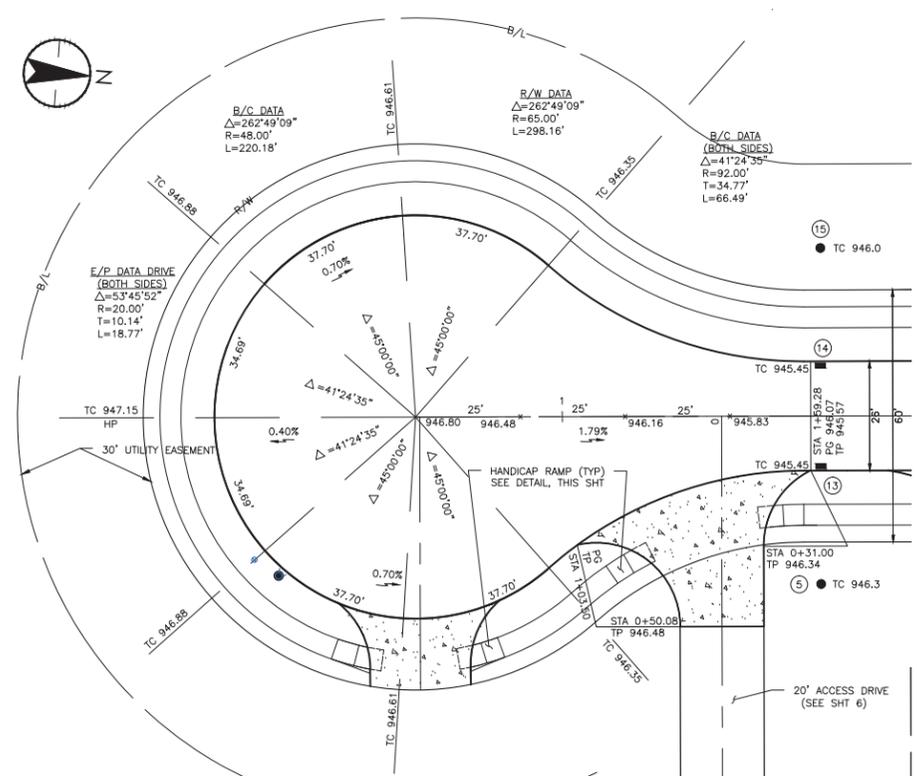
ALL DETECTABLE WARNINGS SHALL BE ADA SOLUTIONS TACTILE WARNING SURFACE MATS - REPLACEABLE WE-T-SET COMPOSITE TACTILE WITH A DOME SPACING OF 2.35 INCHES. MANUFACTURER PART NUMBER 2448REP. BRICK RED COLOR SHALL BE USED IN MOST LOCATIONS UNLESS OTHERWISE NOTED. THE COST OF THIS WORK WILL BE PAID AT THE UNIT PRICE BID PER EACH, AND SHALL BE IN ADDITION TO ANY OVERLAPPING PAYMENTS PER SQUARE FOOT FOR SIDEWALK OR PEDESTRIAN PATH.

### ITEM 604-MANHOLES, CATCH BASINS AND INLETS, A.P.P.

THE CONTRACTOR WILL MAKE ALL FINAL GRADE ADJUSTMENT OF MANHOLE, CATCH BASIN AND INLET COVERS AND FRAME ASSEMBLIES USING INJECTION MOLDED HIGH DENSITY POLYETHYLENE (HDPE) ADJUSTMENT RINGS WHERE PRACTICAL. THESE ADJUSTMENT RINGS SHALL BE MANUFACTURED FROM POLYETHYLENE PLASTIC AS IDENTIFIED IN ASTM DESIGNATION D-1248 (STANDARD SPECIFICATION FOR POLYETHYLENE PLASTIC MOLDING AND EXTRUSION MATERIALS). INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS RINGS, AND THE RINGS AND COVER FRAME SHALL BE SEALED UTILIZING ONLY THE ANNULAR SPACE BETWEEN THE RINGS AND CONE BASIN. THE AN APPROVED BUTYL SEALANT

CITY OF DUBLIN, OHIO STREET, STORM SEWER & WATER IMPROVEMENTS FOR CROSBY BUSINESS PARK GENERAL NOTES			
PREPARED BY:  1500 Lake Shore Drive, Suite 100 Columbus, Ohio 43204 (614) 486-4383 (614) 486-4387			
DESIGN: JDC	SCALE:	ORDER NO.	DATE
DRAWN: DWG	NOT TO SCALE		
CHECKED: KDK			

ESTIMATE OF QUANTITIES			
ITEM	UNIT	TOTAL	DESCRIPTION
ROADWAY			
201	LUMP	1	CLEARING AND GRUBBING
202	LF	200	PIPE REMOVED AND DISPOSED OF
203	CY	2,756	EXCAVATION
203	CY	5,583	EMBANKMENT
204	HR	1	PROOF ROLLING
204	SY	2,584	SUBGRADE COMPACTION
206	SY	2,061	LIME KILN DUST STABILIZED SUBGRADE, 16" DEEP, AS PER PLAN
608	SF	5,778	4" CONCRETE WALK, AS PER PLAN
608	EA	6	CURB RAMP
653	CY	213	TOPSOIL FURNISHED AND PLACED, AS PER PLAN
EROSION CONTROL			
207	EA	7	INLET PROTECTION
207	LF	670	PERIMETER FILTER FABRIC FENCE
207	SY	1,692	CONSTRUCTION SEEDING & MULCHING
659	SY	11,809	SEEDING & MULCHING, AS PER PLAN
DRAINAGE			
601	CY	12	RCP, TYPE B W/FILTER FABRIC
604	EA	4	PRECAST REINFORCED CONCRETE HEADWALL
604	EA	4	CATCH BASIN, NO. AA-S125A
604	EA	1	CATCH BASIN, NO. AA-S133A
604	EA	1	CATCH BASIN, NO. AA-S133B
604	EA	1	CATCH BASIN, NO. AA-S134A
604	EA	1	CATCH BASIN, NO. 2-5 (MODIFIED)
604	EA	10	MANHOLE TYPE C
605	LF	1,283	4" PIPE UNDERDRAIN (720.12)
901	LF	235	12" PIPE W/ TYPE 1 BEDDING, 706.02
901	LF	240	15" PIPE W/ TYPE 1 BEDDING, 706.02
901	LF	296	18" PIPE W/ TYPE 1 BEDDING, 706.02
901	LF	801	24" PIPE W/ TYPE 1 BEDDING, 706.02
901	LF	919	36" PIPE W/ TYPE 1 BEDDING, 706.02
SPEC	EA	3	TRENCH DAM
PAVEMENT			
301	CY	391	ASPHALT CONCRETE BASE
304	CY	391	AGGREGATE BASE
304	CY	40	AGGREGATE BASE (COMMERCIAL DRIVE)
411	CY	353	4" CRUSHED AGGREGATE (ACCESS DRIVE)
441	TON	228	ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2, (448)
441	TON	162	ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, (448), PG64-22
452	SY	241	8" NON REINFORCED CONCRETE PAVEMENT
609	LF	1,283	COMBINATION CURB & GUTTER, AS PER PLAN
SPEC	CY	478	5" AASHTO #3 AGGREGATE BASE
WATER			
801	LF	59	6" WATER PIPE & FITTINGS
801	LF	1,700	12" WATER PIPE & FITTINGS
802	EA	6	6" VALVE & APPURTENANCES
802	EA	3	12" VALVE & APPURTENANCES
805	EA	1	8" WATER SERVICE TAP (COMPLETE) LONG
809	EA	4	FIRE HYDRANT, TYPE A W/ HEAVY DUTY VALVE BOX
SPEC	LUMP	1	SURVEY COORDINATES AND WATER LINE AS-BUILTS
TRAFFIC CONTROL			
630	SF	7.5	SIGN, FLAT SHEET
630	EA	1	2 1/4" SQUARE ANCHOR POST, AS PER PLAN
630	LF	9.2	GROUND MOUNTED SUPPORT POST, NO. 3 POST, AS PER PLAN
644	MI	0.05	CENTER LINE, DOUBLE YELLOW, 4"
644	LF	153	CHANNELIZING LINE, 8"
644	EA	6	LANE ARROW, 72"
LIGHTING			
625	EA	7	LIGHT POLE, 35'-0", AS PER PLAN
625	EA	7	CONNECTOR KIT, TYPE II
625	EA	14	CONNECTOR KIT, TYPE III
625	EA	7	LIGHT POLE FOUNDATION, 24"x7' DEEP, AS PER PLAN
625	EA	7	TRANSFORMER BASE, TYPE AT-A
625	EA	3,090	NO. 4 AWG, 600 VOLT DISTRIBUTION CABLE
625	EA	504	NO. 12 AWG, POLE AND BRACKET CABLE
625	EA	903	CONDUIT, 2", 725.051
625	EA	229	CONDUIT, 3", 725.051, SCHEDULE 80
625	EA	5	LUMINAIRE, MISC.: CREE ARE-EDG-2M-DA-08-D-UL-BZ-525-40K
625	EA	2	LUMINAIRE, MISC.: CREE ARE-EDG-3M-DA-08-D-UL-BZ-525-40K
625	EA	903	TRENCH
625	EA	7	LIGHTING MISC.: CADWELD CONNECTION
625	EA	6	CONNECTION, UNFUSED PERMANENT
625	EA	2	PULL BOX, 725.06, 18"x11"x18"
625	EA	7	GROUND ROD
625	EA	1	POWER SERVICE, AS PER PLAN
625	EA	903	METALIZED CAUTION TAPE



**CITY OF DUBLIN, OHIO**  
**STREET, STORM SEWER & WATER IMPROVEMENTS FOR CROSBY BUSINESS PARK**  
**QUANTITIES, TYPICAL SECTIONS & INTERSECTION DETAILS**

PREPARED BY:  
**Stantec**  
1500 Lake Shore Drive, Suite 100  
Columbus, Ohio 43204  
(614) 486-4383  
(614) 486-4387

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\* ODOT CMS, 2013 EDITION

GENERAL NOTES (CONTINUED)

ITEM 653 - TOPSOIL FURNISHED AND PLACED, AS PER PLAN

A MINIMUM OF 3 INCHES OF TOPSOIL SHALL BE PLACED IN ALL AREAS TO BE SEED. 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.

ITEM 653 - TOPSOIL FURNISHED AND PLACED, AS PER PLAN 213 CU YD

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).

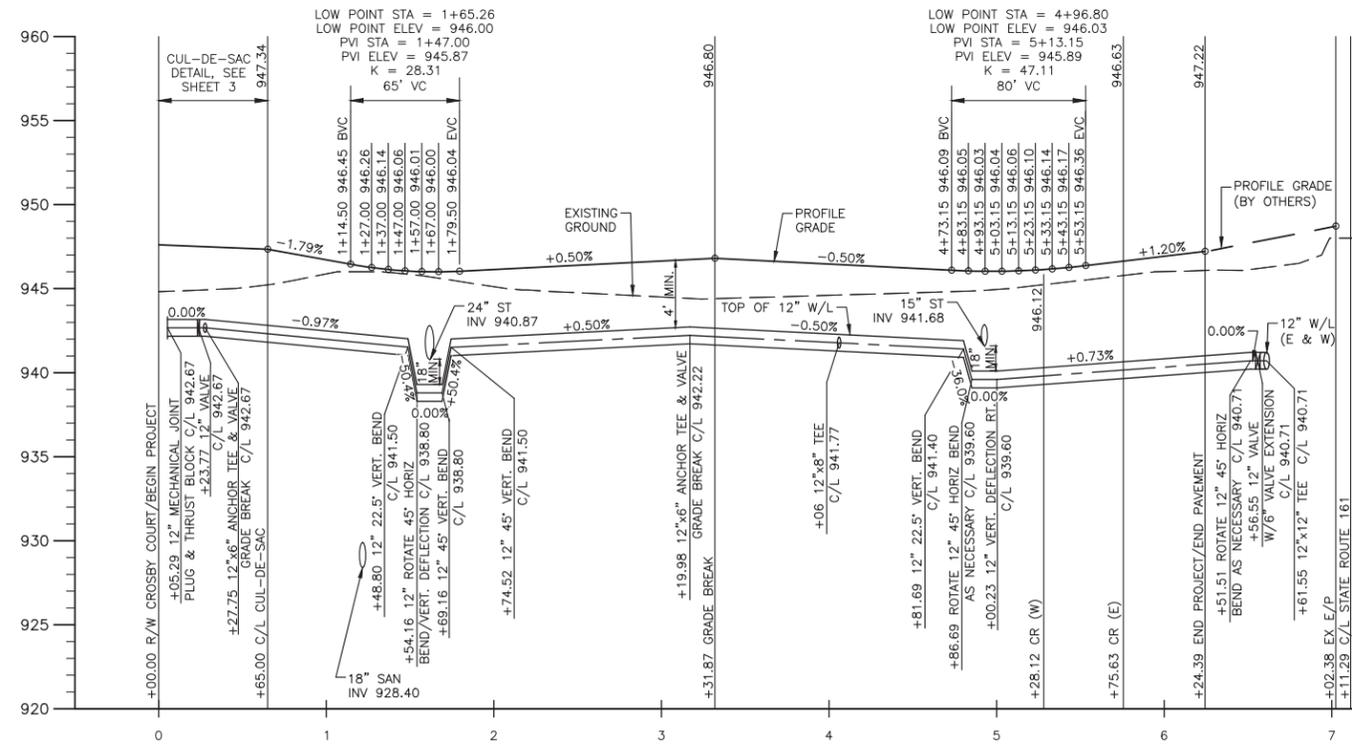
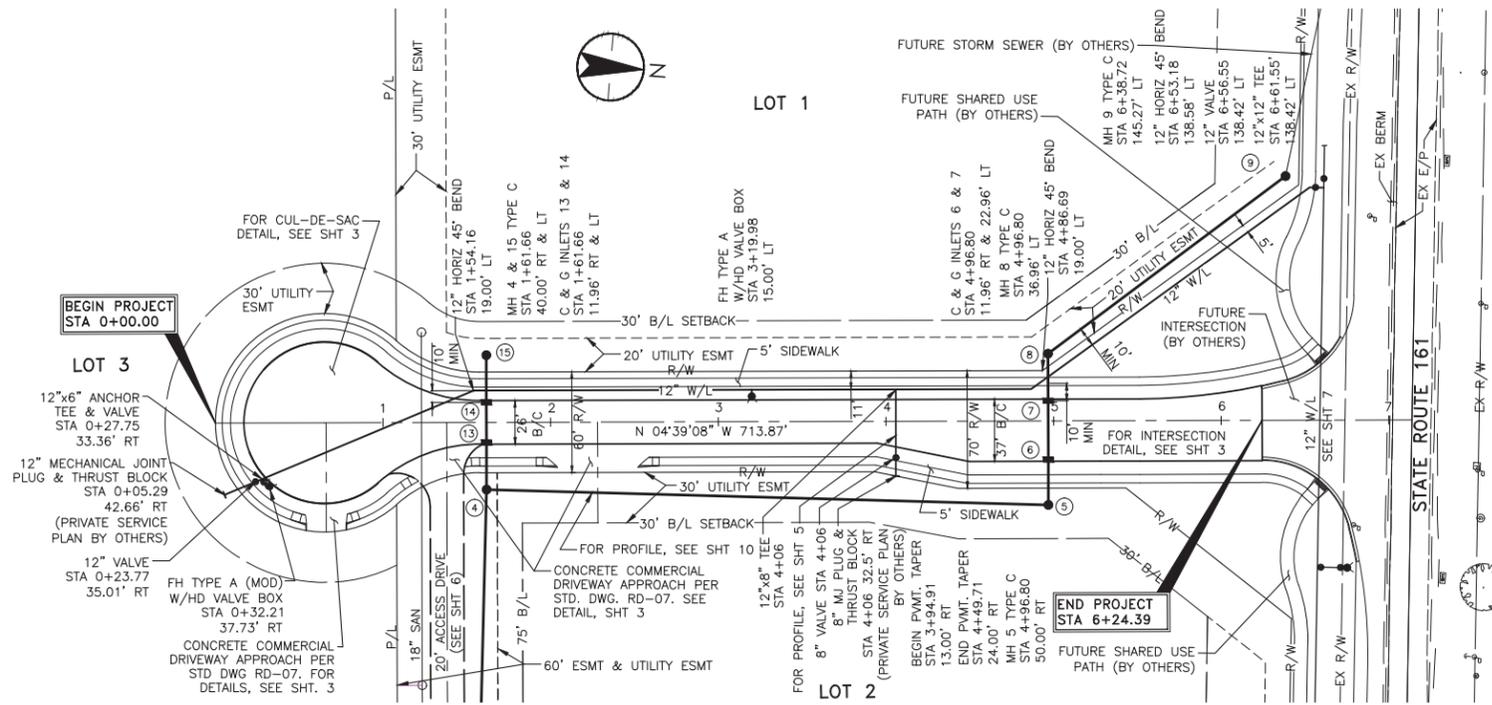
SEEDING - SOW SEED AT A TOTAL RATE OF 7-9 LB. / 1,000 SF WITH A SPREADER OR SEEDING MACHINE. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY. THOROUGHLY COVER WITH STRAW AND TACK TO PREVENT THE STRAW FROM BEING BLOWN OR WASHED AWAY.

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 & HYDRO-MULCHING ARE NOT PERMITTED.

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.



CROSBY COURT  
SCALE: HORIZ. 1" = 50'  
VERT. 1" = 5'

CROSBY COURT		AS-BUILT		
ITEM	STATION	NORTHING	EASTING	C/L ELEV.
12" MECHANICAL JOINT PLUG & THRUST BLOCK, 42.7' RT	0+05			
12" VALVE, 35.0' RT	0+24			
12"x6" ANCHOR TEE, 33.4' RT	0+28			
6" VALVE, 35.2' RT	0+29			
FIRE HYDRANT, 37.7' RT	0+32			
12" 22.5" VERT. BEND, 19.0' LT	1+49			
12" ROTATE 45° HORIZ. BEND/ VERT. DEFLECTION, 17.8' LT	1+54			
12" 45" VERT BEND, 19.0' LT	1+69			
12" 45" VERT BEND, 19.0' LT	1+75			
12" X 6" ANCHOR TEE, 19.0' LT	3+17			
6" VALVE, 17.0' LT	3+18			
FIRE HYDRANT, 15.0' LT	3+20			
12"x8" TEE LOT 2, 19.0' LT	4+06			
8" VALVE LOT 2, 21.6' RT	4+06			
8" MJ PLUG & THRUST BLOCK LOT 2, 32.5' RT	4+06			
12" 22.5" VERT BEND, 19.0' LT	4+82			
12" ROTATE 45° BEND HORIZ BEND AS NECESSARY, 19.0' LT	4+87			
VERTICAL DEFLECTION, 28.7' LT	5+00			
12" ROTATE 45° BEND HORIZ BEND AS NECESSARY, 137.4' LT	6+52			
12" VALVE, 138.5' LT	6+57			
12" X 12" TEE, 138.5' LT	6+62			

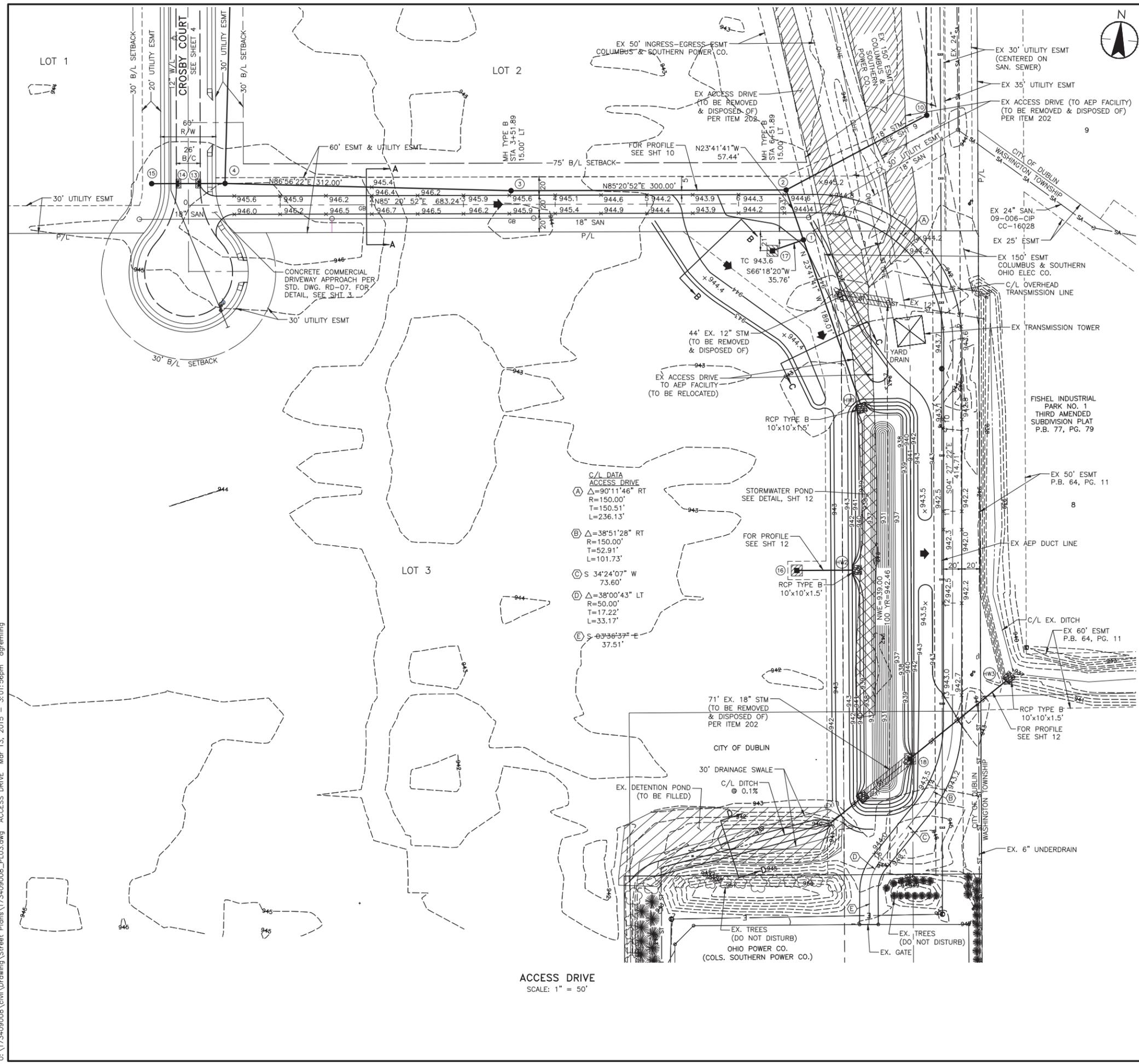
CITY OF DUBLIN, OHIO  
STREET, STORM SEWER & WATER IMPROVEMENTS  
FOR  
CROSBY BUSINESS PARK  
CROSBY COURT PLAN & PROFILE

PREPARED BY:  
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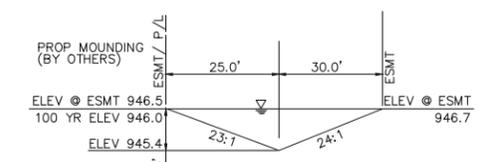
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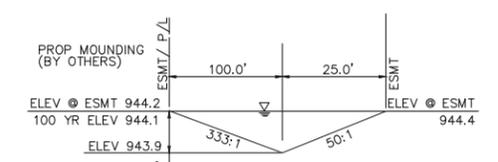




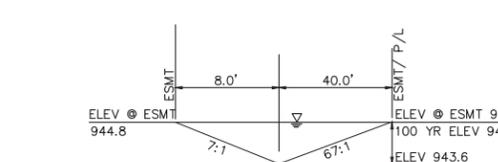
MAJOR FLOOD ROUTING SWALES DETAILS NOT TO SCALE



SECTION A-A

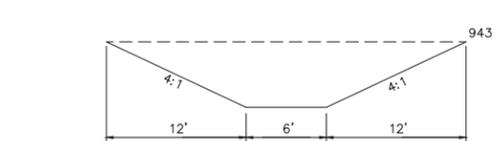


SECTION B-B



SECTION C-C

DRAINAGE SWALE TO REPLACE EX. DETENTION POND TYPICAL SECTION NOT TO SCALE



SECTION D-D

- C/L DATA ACCESS DRIVE
- (A)  $\Delta=90^{\circ}11'46''$  RT  
R=150.00'  
T=150.51'  
L=236.13'
  - (B)  $\Delta=38^{\circ}51'28''$  RT  
R=150.00'  
T=52.91'  
L=101.73'
  - (C) S 34°24'07" W  
73.60'
  - (D)  $\Delta=38^{\circ}00'43''$  LT  
R=50.00'  
T=17.22'  
L=33.17'
  - (E) S 03°36'37" E  
37.51'

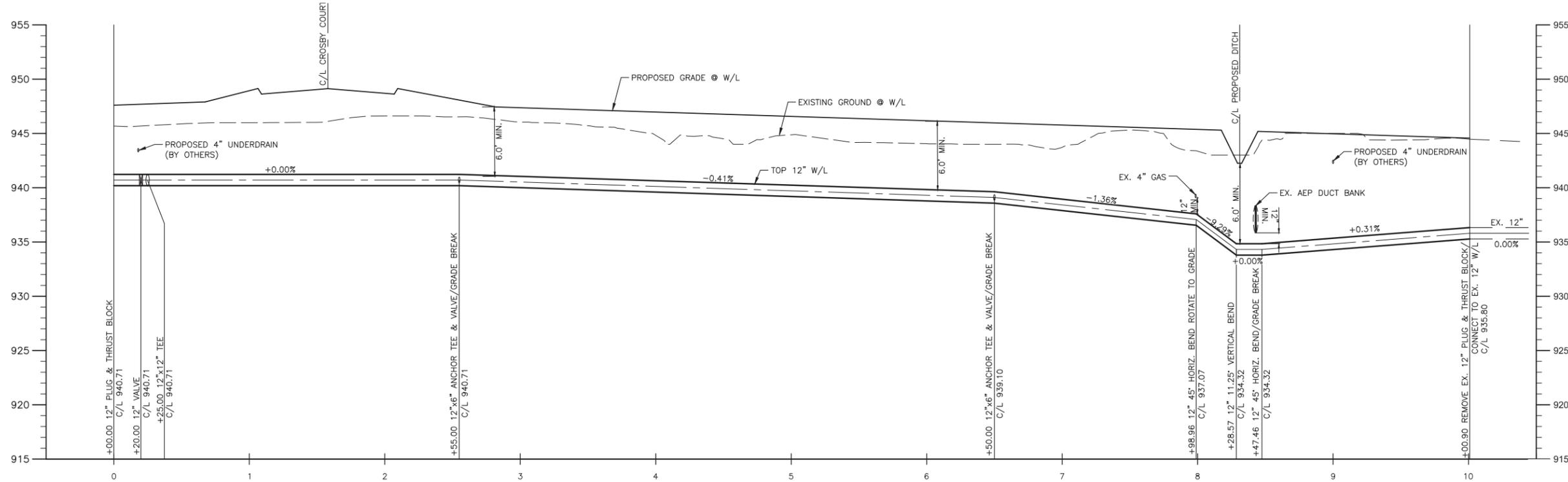
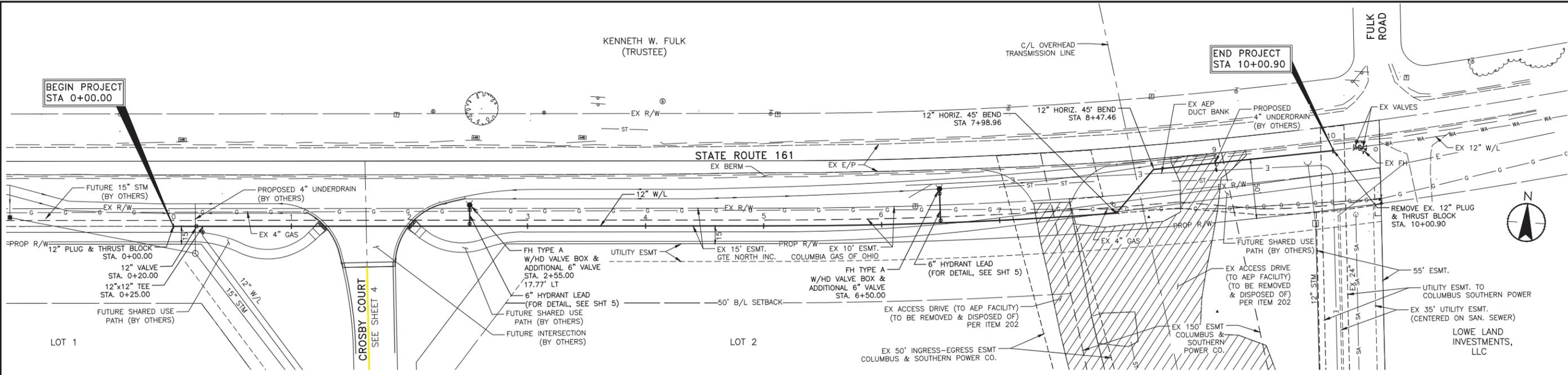
ACCESS DRIVE SCALE: 1" = 50'

CITY OF DUBLIN, OHIO  
STREET, STORM SEWER & WATER IMPROVEMENTS  
FOR  
CROSBY BUSINESS PARK  
ACCESS DRIVE

PREPARED BY:  
**Stantec**  
1500 Lake Shore Drive, Suite 100  
Columbus, Ohio 43204  
(614) 486-4383  
(614) 486-4387

DESIGN: JDC	SCALE: AS SHOWN	ORDER NO.	DATE
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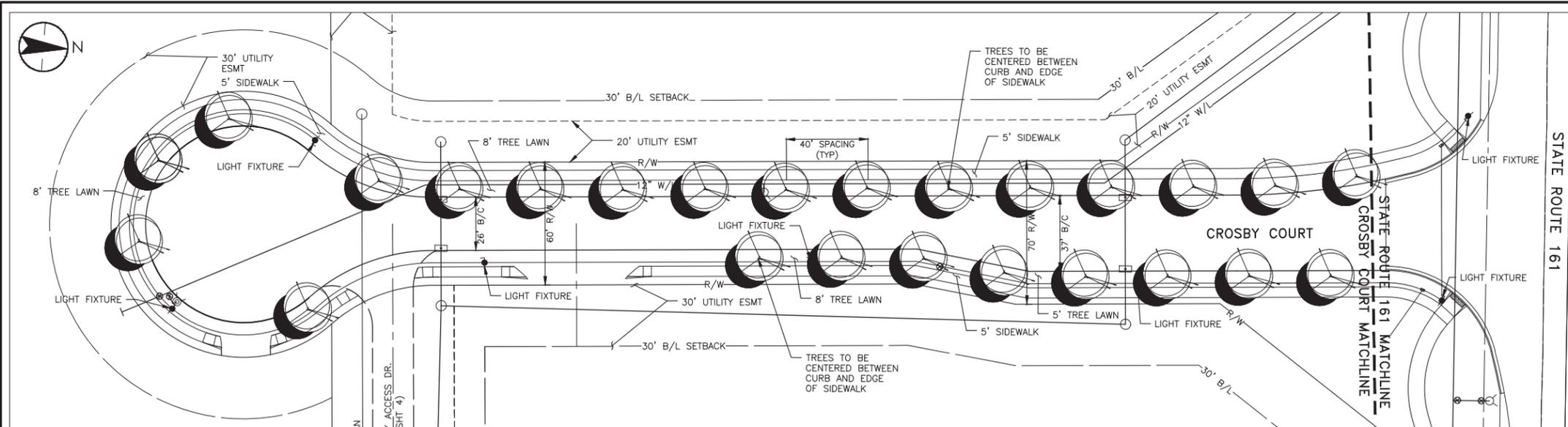
STATE ROUTE 161		AS-BUILT		
ITEM	STATION	NORTHING	EASTING	C/L ELEV.
12" PLUG & THRUST BLOCK	0+00			
12" VALVE	0+20			
12"x12" TEE	0+25			
12"x6" ANCHOR TEE	2+55			
6" VALVE, 2' LT	2+55			
6" 45° VERTICAL BEND, 5' LT	2+55			
6" 45° VERTICAL BEND, 10' LT	2+55			
6" VALVE, 15' LT	2+55			
FIRE HYDRANT, 17.8' LT	2+55			
12"x6" ANCHOR TEE	6+50			
6" VALVE, 2' LT	6+50			
6" 45° VERTICAL BEND, 5' LT	6+50			
6" 45° VERTICAL BEND, 10' LT	6+50			
6" VALVE, 25' LT	6+50			
FIRE HYDRANT, 28.8' LT	6+50			
ROTATE 12" 45° HORIZ. BEND AS NECESSARY	7+99			
12" 11.25° VERTICAL BEND	8+29			
12" 45° HORIZ. BEND	8+47			
REMOVE EX 12" PLUG & THRUST BLOCK AND CONNECT TO EX. 12" W/L	10+01			

CITY OF DUBLIN, OHIO  
 STREET, STORM SEWER & WATER IMPROVEMENTS  
 FOR  
 CROSBY BUSINESS PARK  
 OFFSITE WATERLINE PLAN & PROFILE

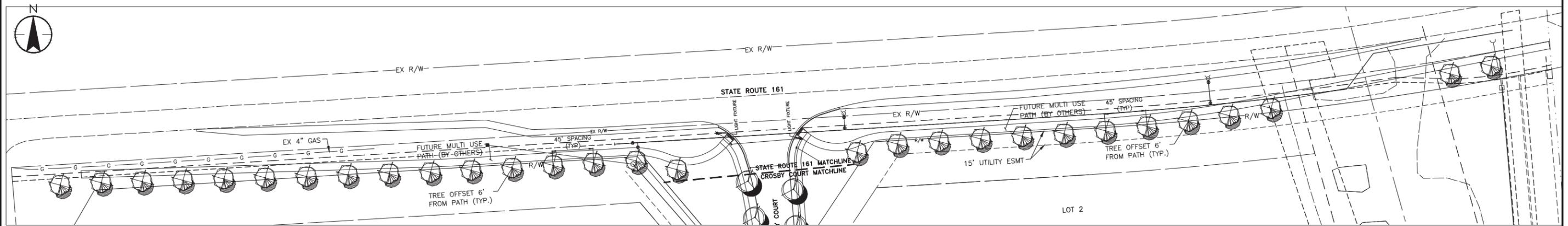
PREPARED BY:  
**Stantec**  
 1500 Lake Shore Drive, Suite 100  
 Columbus, Ohio 43204  
 (614) 486-4383  
 (614) 486-4387

DESIGN: JDC	SCALE: HORIZ 1" = 40'	ORDER NO.:	DATE:
DRAWN: DWG	VERT 1" = 5'		
CHECKED: KDK			

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**CROSBY COURT STREET TREE PLAN**  
SCALE: 1" = 30'

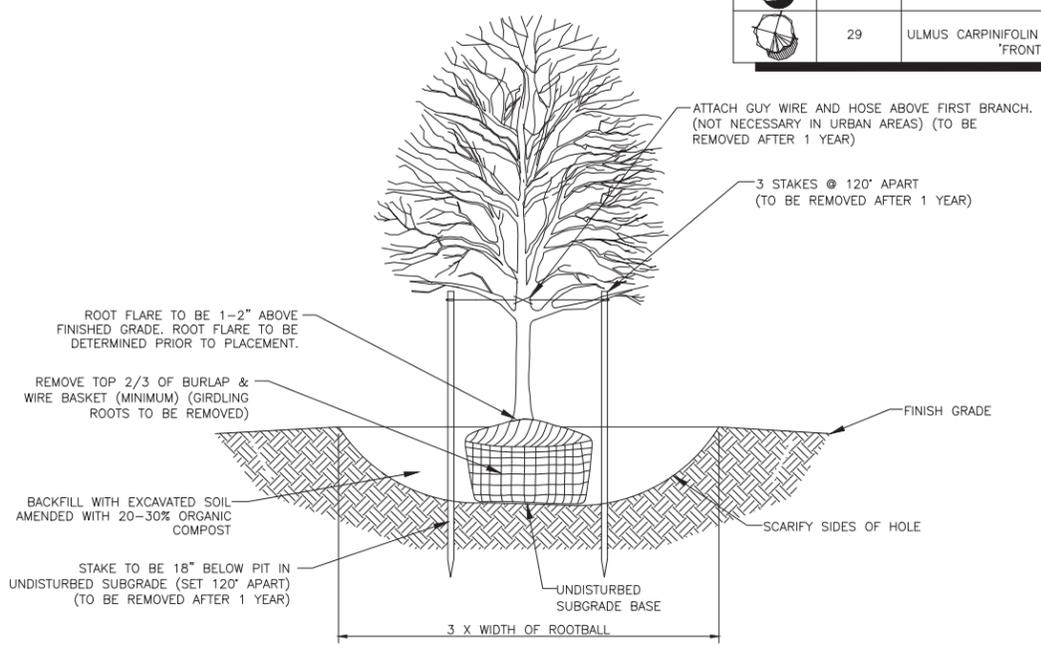


**STATE ROUTE 161/ POST ROAD STREET TREE PLAN**  
SCALE: 1" = 50'

**LANDSCAPE NOTES**

- CONTRACTOR SHALL FIELD STAKE AND VERIFY ALL TREE LOCATIONS WITH PAULA CHOPE (CITY FORESTER) PRIOR TO INITIATING PLANTING INSTALLATION.
- CONTRACTOR SHALL NOTIFY ALL PERTINENT UTILITY COMPANIES 48 HOURS MINIMUM PRIOR TO DIGGING FOR VERIFICATION OF ALL UNDERGROUND UTILITIES. PLANS ARE PREPARED ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARING THESE DOCUMENTS.
- THE CONTRACTOR SHALL BECOME COMPLETELY FAMILIAR WITH EXISTING SITE CONDITIONS PRIOR TO BEGINNING INSTALLATION. ALL EXISTING SITE IMPROVEMENTS, PAVING, LANDSCAPE, LIGHTING, AND OTHER SITE ELEMENTS TO REMAIN SHALL BE PROTECTED FROM DAMAGE UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DRAWINGS AND ACTUAL FIELD CONDITIONS TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.
- THE CONTRACTOR SHALL COORDINATE ALL WORK WITH RELATED CONTRACTORS AND WITH THE GENERAL CONSTRUCTION OF THE PROJECT IN ORDER TO NOT IMPEDE THE PROGRESS OF WORK OF OTHERS OR THE CONTRACTOR'S OWN WORK.
- CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE ALL EXISTING GROUND COVERS FOR ALL NEW PLANTING BEDS BY APPROVED MEANS PRIOR TO PLANTING INSTALLATION. CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ALL PORTIONS OF EXISTING PLANTING OR LAWN AREAS INDICATED TO REMAIN WHILE COMPLETING NEW PLANTING INSTALLATION WORK WITH SAME KIND OF PLANTS OR GRASS TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL BEAR ALL COST ASSOCIATED WITH SOIL TESTING AND SOIL AMENDMENTS AS REQUIRED AS A RESULT OF THE SOIL TESTING LABORATORY'S RECOMMENDATIONS. PRIOR TO INITIATING INSTALLATION THE CONTRACTOR SHALL PROVIDE SOIL TEST FOR AT LEAST TWO ON-SITE LOCATIONS.
- ALL PLANT SIZES NOTED ON THE PLANT LIST/MATERIAL SCHEDULE ARE MINIMUM. INCREASE SIZE IF NECESSARY TO CONFORM TO THE PLANT SIZE AND SPECIFICATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AS REQUIRED TO MAINTAIN AND ESTABLISH ALL PLANTING (NEW, EXISTING TO BE RELOCATED, AND EXISTING PLANTINGS TO REMAIN WHILE IRRIGATION SYSTEM IS BEING INSTALLED OR REPAIRED) TO SUPPLEMENT IRRIGATION AND RAINFALL. THE IRRIGATION SYSTEM IS DESIGNED TO MAINTAIN THE LANDSCAPE PLANTINGS AND NOT ESTABLISH THEM. THE CONTRACTOR IS RESPONSIBLE FOR WATERING IN ALL PLANTING AREAS, REGARDLESS OF THE STATUS OF EXISTING OR PROPOSED IRRIGATION SYSTEMS.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING, IN FULL, ALL PLANTING AREAS (INCLUDING WATERING, SPRAYING, MULCHING, MOWING, FERTILIZING, AND WEEDING, ETC.) UNTIL THE JOB IS ACCEPTED.
- CONTRACTOR SHALL ASSURE DRAINAGE AND PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION OF PLANT MATERIAL. CORRECT IF REQUIRED TO ASSURE PERCOLATION. CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT OF ALL PLANTS LOST DUE TO INADEQUATE DRAINAGE CONDITIONS.
- CONTRACTOR SHALL RE-GRADE ALL AREAS DISTURBED BY PLANT REMOVAL, RELOCATION, AND/OR FROM INSTALLATION WORK. THE CONTRACTOR SHALL REPLACE BY EQUAL SIZE AND QUALITY ANY AND ALL EXISTING PLANT MATERIAL DISTURBED OR DAMAGED BY PLANTING REMOVAL, RELOCATION, AND/OR INSTALLATION.

STREET TREE PLANT LIST					
SYMBOL	QUANTITY	SCIENTIFIC NAME	COMMON NAME	PLANTING SIZE	CONDITION
	25	LIQUIDAMBAR STYRACIFLUA 'MORaine'	'MORaine' SWEETGUM	2"-2.5" CAL. 40' O.C.	B&B
	29	ULMUS CARPINIFOLIA X PARVIFOLIA 'FRONTIER'	'FRONTIER' ELM	2"-2.5" CAL. 45' O.C.	B&B



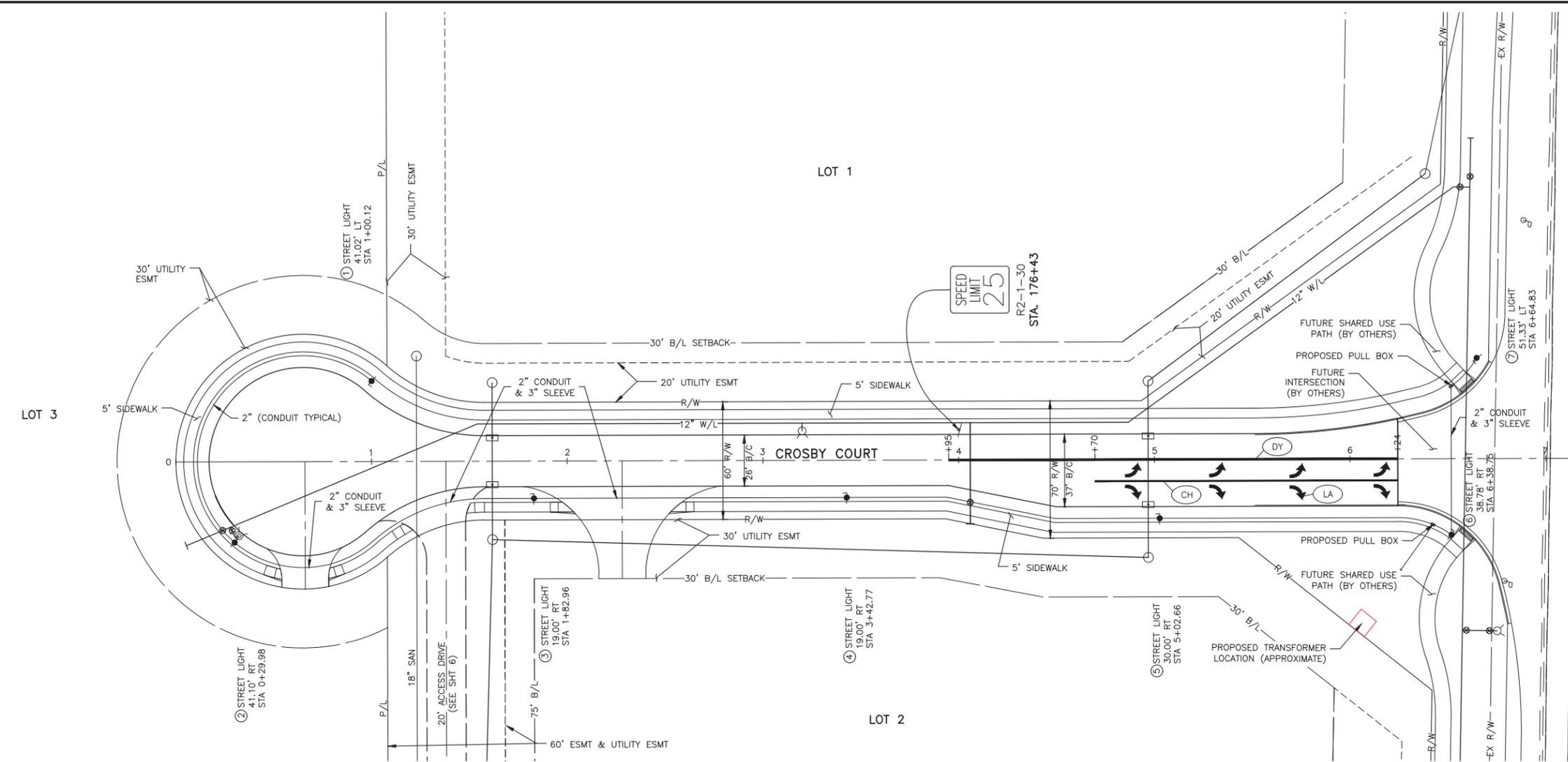
**A STREET TREE PLANTING DETAIL**  
NOT TO SCALE

CITY OF DUBLIN, OHIO  
STREET, STORM SEWER & WATER IMPROVEMENTS  
FOR  
CROSBY BUSINESS PARK  
STREET TREE PLAN

PREPARED BY:  
**Stantec**  
1500 Lake Shore Drive, Suite 100  
Columbus, Ohio 43204  
(614) 486-4383  
(614) 486-4387

DESIGN: JDC	SCALE: AS SHOWN	ORDER NO.:	DATE:
DRAWN: DWG			
CHECKED: KDK			

U:\173409008\civil\Drawing\Street\Plans\173409008\_TR.dwg STREET TREE PLAN Mar 13, 2015 3:02:56pm dgremling



**STREET LIGHTING PLAN**  
SCALE: 1" = 30'

**GENERAL NOTES:**

THE CONTRACTOR IS TO COORDINATE THE FINAL CONDUIT LOCATIONS WITH OTHER UTILITIES. ALL ELECTRICAL AND CONTROL WIRING SHALL HAVE 600V INSULATION.

**ITEM 625, LIGHT POLE, AS PER PLAN**

ALL LIGHT POLES SHALL BE WITHOUT BANNER ARMS. THE CONTRACTOR SHALL INSTALL THE LIGHT POLES PER ODOT ITEM 625. ALL EQUIPMENT AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF DUBLIN'S STANDARD CONSTRUCTION DRAWING SL-03.

**ITEM 625, LIGHT POLE FOUNDATION, AS PER PLAN**

THE EXCAVATION FOR THE LIGHT POLE FOUNDATIONS SHALL BE PER ODOT ITEM 625. ALL EQUIPMENT, MATERIALS AND OTHER INSTALLATION METHODS SHALL BE IN ACCORDANCE WITH THE CITY OF DUBLIN'S STANDARD CONSTRUCTION DRAWING SL-04.

**LEGEND**

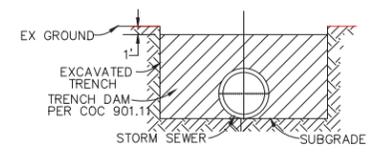
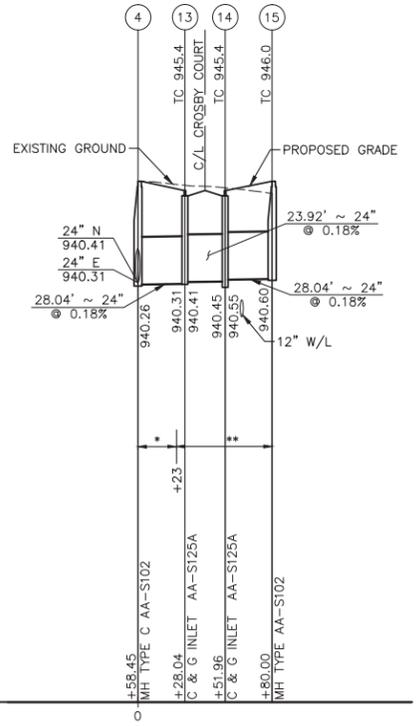
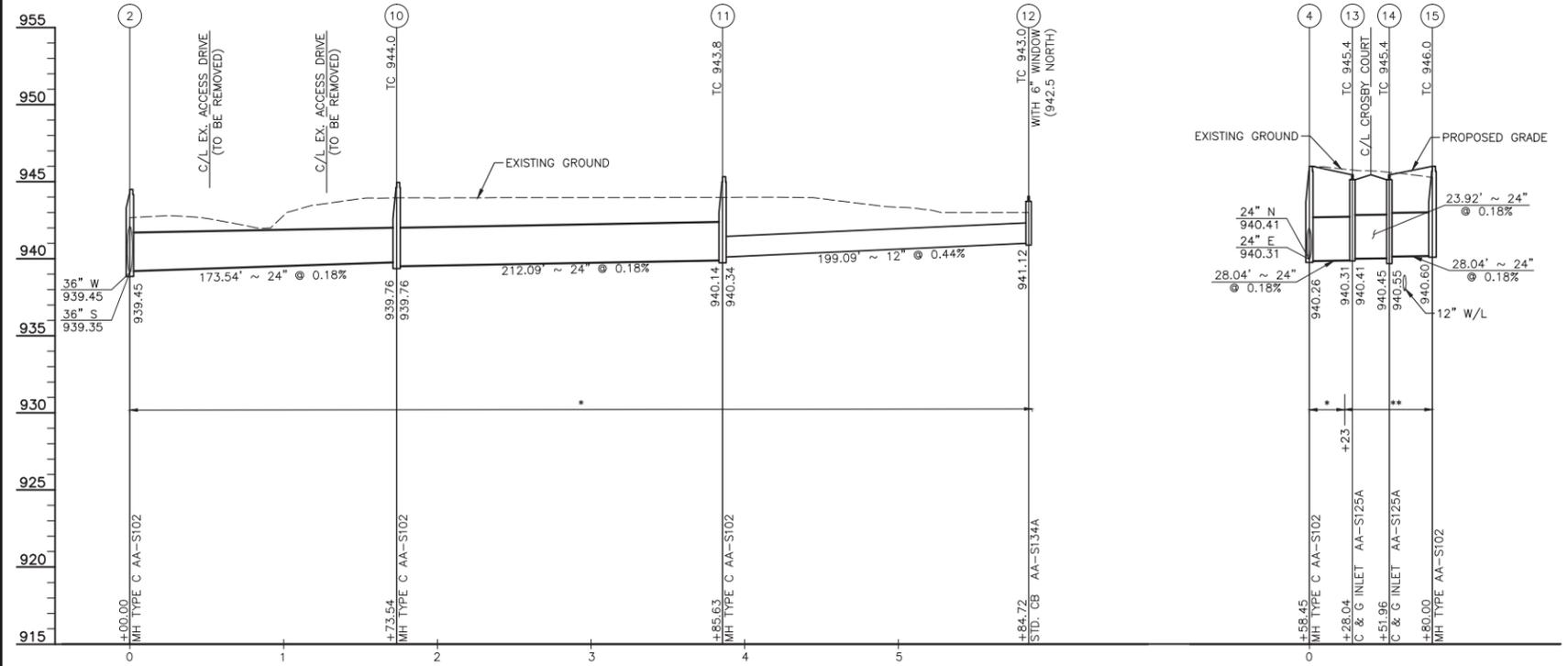
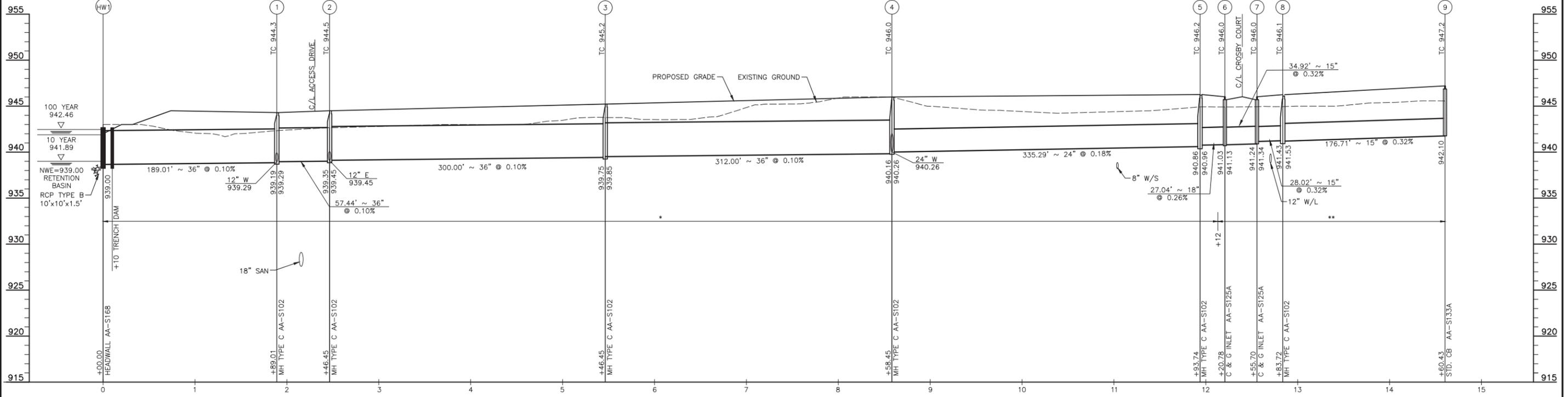
- LIGHT POLE, AS PER PLAN
- ⊢ PROPOSED SIGN
- DY CENTER LINE, 4", DOUBLE YELLOW
- CH CHANNELIZING LINE, 8", WHITE
- LA LANE ARROW, 72", WHITE

LUMINAIRE SCHEDULE		
DESCRIPTION	LIGHT NO.	
CREE ARE-EDG-2M-DA-08-D-UL-BZ-525-40K	3, 4, 5, 6, 7	
CREE ARE-EDG-3M-DA-08-D-UL-BZ-525-40K	1, 2	

CITY OF DUBLIN, OHIO  
STREET, STORM SEWER & WATER IMPROVEMENTS  
FOR  
CROSBY BUSINESS PARK  
**STREET LIGHTING AND STRIPING PLAN**

PREPARED BY:  
**Stantec**  
1500 Lake Shore Drive, Suite 100  
Columbus, Ohio 43204  
(614) 486-4383  
(614) 486-4387

DESIGN: JDC	SCALE: AS SHOWN	ORDER NO.:	DATE:
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TRENCH DAM DETAIL  
NOT TO SCALE

NOTE: NO STORM STRUCTURE SHALL BE CLOSER THAN 10' HORIZONTAL AND 1.5' VERTICALLY OUT TO OUT TO ANY SANITARY OR WATER MAINLINE OR STRUCTURE.

\* COMPACTED BACKFILL PER ITEM 911  
\*\* COMPACTED GRANULAR BACKFILL PER ITEM 912

CITY OF DUBLIN, OHIO  
STREET, STORM SEWER & WATER IMPROVEMENTS  
FOR  
CROSBY BUSINESS PARK  
STORM SEWER PROFILES

PREPARED BY:  
**Stantec**  
1500 Lake Shore Drive, Suite 100  
Columbus, Ohio 43204  
(614) 486-4383  
(614) 486-4387

DESIGN: JDC	SCALE: AS SHOWN	ORDER NO.:	DATE:
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U:\173409008\civil\Drawing\Street\_Plan\173409008\_PROF.dwg STORM SEWER PROFILES Mar 13, 2015 - 3:03:36pm agreming

**SITE DATA**

OWNER/DEVELOPER: CITY OF DUBLIN, OHIO  
5800 SHER-RINGS ROAD  
DUBLIN, OHIO 43016

CONTACT: PHONE: (614) 410-4000

PLAN DESIGNER: STANTEC CONSULTING SERVICES INC.  
1500 LAKE SHORE DRIVE  
SUITE 100  
COLUMBUS, OHIO 43204

DEVELOPMENT TYPE: BUSINESS PARK

SITE ACREAGE: 91.85 AC.

DISTURBED ACREAGE: 7.14 AC.

AVERAGE SLOPE: EXISTING - 0%-0.5%  
PROPOSED - 0.5%-2%

SITE VEGETATION: EXISTING - OPEN FIELD

ADJACENT AREAS: THIS SITE IS BOUNDED BY FUTURE DEVELOPMENT TO THE SOUTH AND WEST, EXISTING FISHEL INDUSTRIAL PARK TO THE EAST AND STATE ROUTE 161 TO THE NORTH.

STORM WATER MANAGEMENT: THE STORM RUNOFF FOR THIS SITE IS DIRECTED TO A PROPOSED RETENTION BASIN ON THE EAST PROPERTY LINE WITH EACH SUBDIVIDED LOT PROVIDING ITS OWN STORM WATER MANAGEMENT.

**MAINTENANCE NOTES**

ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED BY THE OWNER'S REPRESENTATIVE WEEKLY AND WITHIN 24 HOURS AFTER EACH RAINFALL TO ASSURE THAT THE MEASURES ARE FUNCTIONING ADEQUATELY. SEDIMENT THAT IS COLLECTED WILL BE DISTRIBUTED ON THE PROTECTED PORTION OF THE SITE AND STABILIZED. ALL STOCKPILES OF EARTH AND TOPSOILS WILL BE PROTECTED WITH TEMPORARY SEEDING OR OTHER MEANS TO PREVENT EROSION.

**CONSTRUCTION ROAD STABILIZATION (CRS)**

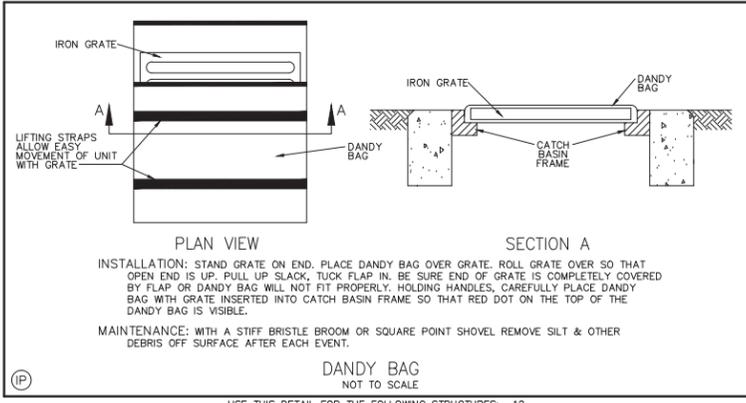
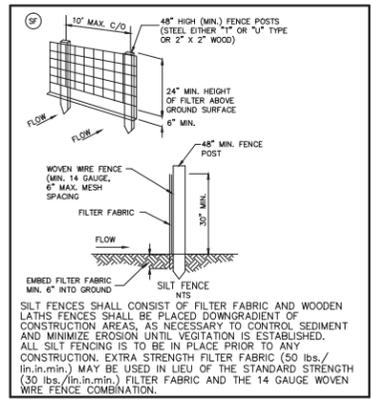
BOTH TEMPORARY AND PERMANENT ROADS AND PARKING AREAS MAY REQUIRE PERIODIC TOP DRESSING WITH NEW GRAVEL. SEEDING AREAS ADJACENT TO THE ROADS AND PARKING AREAS SHOULD BE CHECKED PERIODICALLY TO ENSURE THAT A VIGOROUS STAND OF VEGETATION IS MAINTAINED. ROADSIDE DITCHES AND OTHER DRAINAGE STRUCTURES SHOULD BE CHECKED REGULARLY TO ENSURE THAT THEY DO NOT BECOME CLOGGED WITH SILT OR OTHER DEBRIS.

**SILT FENCE (SF)**

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.



**SEQUENCE OF CONSTRUCTION**

- 1) INSTALL CONSTRUCTION ENTRANCE.
- 2) CLEAR & GRUB SITE.
- 3) INSTALL SILT FENCE AS INDICATED ON PLAN.
- 4) ROUGH GRADE SITE.
- 5) CONSTRUCT SANITARY, DISTURBING TRENCH AREA ONLY.
- 6) INSTALL STORM & W/L, PLACING INLET PROTECTION AS INLETS ARE CONSTRUCTED.
- 7) GRADE STREETS FINING INLET PROTECTION AS NEEDED.
- 8) REMOVE CONSTRUCTION ROAD STABILIZATION.
- 9) PAVE STREETS.
- 10) GRADE LOTS TO PREGRADE ELEVATION.
- 11) SEED & MULCH ALL DISTURBED AREAS.
- 12) REMOVE ALL EROSION CONTROL DEVICES.

**GENERAL LAND CONSERVATION NOTES**

NO DISTURBED AREA WILL BE DENuded FOR MORE THAN 7 DAYS IF IT IS TO REMAIN DORMANT FOR MORE THAN 21 DAYS UNLESS AUTHORIZED BY THE GOVERNING JURISDICTION'S INSPECTOR. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.

ALL STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING FOR ALL SITES.

ALL STORM SEWER, SANITARY SEWER, WATER MAIN AND SERVICE TRENCHES SHALL BE MULCHED AND SEEDDED WITHIN 14 DAYS AFTER BACKFILL IF INSTALLATION IS THROUGH STABILIZED AREAS. NO MORE THAN 500 FEET OF TRENCH WILL BE OPEN AT ANY ONE TIME.

ELECTRIC POWER, TELEPHONE, CATV AND GAS SUPPLY TRENCHES SHALL BE COMPACTED SEEDDED AND MULCHED WITHIN 14 DAYS AFTER BACKFILL, IF INSTALLATION IS THROUGH STABILIZED AREAS.

ALL TEMPORARY DIVERSIONS, SEDIMENT BASIN EMBANKMENTS AND EARTH STOCKPILES SHALL BE SEEDDED AND MULCHED FOR TEMPORARY VEGETATIVE COVER WITHIN 7 DAYS AFTER GRADING. STRAW, HAY MULCH OR EQUIVALENT IS REQUIRED.

ALL STORM SEWER INLETS SHALL BE PROTECTED BY SEDIMENT TRAPS (INLET PROTECTION) WHICH WILL BE MAINTAINED AND MODIFIED AS REQUIRED AS CONSTRUCTION PROGRESSES.

ANY DISTURBED AREA NOT STABILIZED WITH SEEDING, SODDING, PAVING OR BUILT UPON BY NOVEMBER 1ST, OR AREAS DISTURBED AFTER THAT DATE, SHALL BE MULCHED IMMEDIATELY WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE AND OVER-SEEDED BY APRIL 15TH.

AT THE COMPLETION OF CONSTRUCTION, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENuded AREAS SHALL BE STABILIZED.

**SEEDING & MULCHING**

**GENERAL:**

THE SEEDING, EITHER PERMANENT OR TEMPORARY, SHALL COMMENCE WITHIN 14 DAYS AFTER THE STREET AND LOT GRADING IS COMPLETED.

THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO ACCOMPLISH BOTH TEMPORARY AND PERMANENT SEEDING.

ALL DITCHES, DIVERSIONS, SEDIMENT BASINS/TRAPS, RIGHT-OF-WAY AREAS, AND AREAS DISTURBED DURING CONSTRUCTION SHALL BE SEEDDED AND MULCHED, OR SODDED.

THE LIMITS OF SEEDING AND MULCHING ARE AS SHOWN ON THE PLAN. SEEDING HAS BEEN ASSUMED TO A DISTANCE OF 5 FEET OUTSIDE THE WORK LIMITS OR RIGHT-OF-WAY, WHICHEVER IS GREATER. ALL AREAS NOT DESIGNATED TO BE SODDED SHALL REMAIN UNDER EXISTING GROUND COVER. THOSE AREAS DISTURBED OUTSIDE THE SEEDING LIMITS SHALL BE SEEDDED AND MULCHED AT THE CONTRACTOR'S EXPENSE.

PAYMENT FOR TEMPORARY SEEDING SHALL BE INCLUDED UNDER "EROSION CONTROL".

OTHER EROSION AND SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THEY ARE ORDERED REMOVED BY THE ENGINEER OR AS DIRECTED BY THE "SEQUENCE OF CONSTRUCTION".

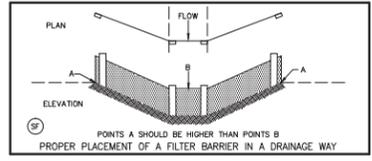
**MATERIALS:**

KIND OF SEED	SEEDING DATES	PER 1000 SQ. FT.	PER ACRE
a) CREEPING RED FESCUE plus DOMESTIC RYE GRASS plus KENTUCKY BLUEGRASS	MARCH - MAY/2 lb. AUG. - SEPT. 1/4 lb.	20 LBS. 10 LBS.	20 LBS. 10 LBS.
b) TALL FESCUE	MARCH - MAY/1 lb. AUG. - SEPT.	40 LBS.	40 LBS.
c) DWARF (TURF-TYPE) FESCUE	MARCH - MAY/1 lb. AUG. - SEPT.	40 LBS.	40 LBS.
KIND OF SEED	SEEDING DATES	PER 1000 SQ. FT.	PER ACRE
a) OATS or PERENNIAL RYEGRASS	MARCH 1 - AUGUST 15 3lbs. 1 lb.	40 bu. 40 lbs.	40 bu. 40 lbs.
b) TALL FESCUE	MARCH 1 - AUGUST 15 1 lb.	40 lbs.	40 lbs.
c) RYE or PERENNIAL RYEGRASS	AUGUST 16 - NOVEMBER 1 3 lbs. 1 lb.	2 bu. 40 lbs.	2 bu. 40 lbs.
d) TALL FESCUE	AUGUST 16 - NOVEMBER 1 1 lb.	40 lbs.	40 lbs.

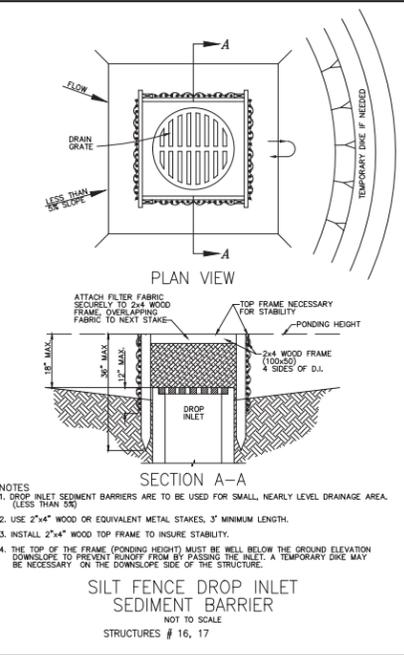
**INLET PROTECTION (IP)**

THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN, AND REPAIRS MADE AS NEEDED. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

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



- INSTALLATION:**
- A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE. AFTER THE GRADING OPERATION SPREAD TOPSOIL WHERE NEEDED.
  - B. WHERE COMPACTED SOILS OCCUR, THEY SHOULD BE BROKEN UP SUFFICIENTLY TO CREATE A FAVORABLE ROOTING DEPTH OF 6-8 INCHES.
  - C. FOR PERMANENT SEEDING, PLACE TOPSOIL TO A DEPTH OF 3 INCHES MINIMUM.
  - D. APPLY LIME AT A RATE AS RECOMMENDED BY SOIL TESTS, OR AT A RATE OF 100 POUNDS PER 1000 SQUARE FEET OR TWO TONS PER ACRE OF AGRICULTURAL GROUND LIMESTONE. FOR BEST RESULTS MAKE A SOIL TEST.
  - E. APPLY FERTILIZER AT A RATE AS RECOMMENDED BY SOIL TESTS, OR AT A RATE OF 25 POUNDS PER 1000 SQUARE FEET OR 1000 POUNDS PER ACRE OF 10-10-10. FOR BEST RESULTS MAKE A SOIL TEST.
  - F. WORK THE LIME AND FERTILIZER INTO THE SOIL WITH A DISK HARROW, SPRINGTOOTH HARROW, OR OTHER SUITABLE FIELD EQUIPMENT TO A DEPTH OF THREE INCHES. ON SLOPING LAND, THE FINAL OPERATION SHALL BE ON THE CONTOUR.
  - G. APPLY THE SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER OR HYDROSEEDER (SLURRY MAY INCLUDE SEED AND FERTILIZER) PREFERABLY ON A FIRM, MOIST SEEDBED. SEED WHEAT OR RYE NO DEEPER THAN ONE INCH. SEED RYEGRASS NO DEEPER THAN ONE-FOURTH INCH.
  - H. WHEN FEASIBLE, EXCEPT WHERE A CULTIPACKER TYPE SEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A CULTI-PACKER, ROLLER, OR LIGHT DRAG. ON SLOPING LAND, SEEDING OPERATIONS SHOULD BE ON THE CONTOUR WHEREVER POSSIBLE.
  - I. APPLY MULCH AT A RATE OF TWO TONS PER ACRE OR 100 POUNDS (TWO TO THREE BALES) PER 1000 SQUARE FEET.
  - J. SPREAD THE MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THE SOIL SURFACE IS COVERED.
  - K. ANCHOR MULCH BY ONE OF THE FOLLOWING METHODS:
    1. MECHANICAL - USE A DISK, CRIMPER, OR SIMILAR TYPE TOOL SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL.
    2. ASPHALT EMULSION - APPLY AT THE RATE OF 160 GALLONS PER ACRE INTO THE MULCH AS IT IS BEING APPLIED.
    3. MULCH NETTINGS - USE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. USE IN AREAS OF WATER CONCENTRATION TO HOLD MULCH IN PLACE.



**MAINTENANCE:**

- A. IRRIGATION - IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY AND HOT SEASONS, OR ON ADVERSE SITES.
- B. REPAIRS - INSPECT ALL SEEDDED AREAS FOR FAILURES AND MAKE NECESSARY REPAIRS, REPLACEMENTS, RESEEDINGS, AND REMULCHING WITHIN THE PLANTING SEASON, IF POSSIBLE.

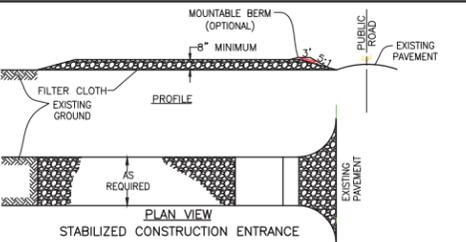
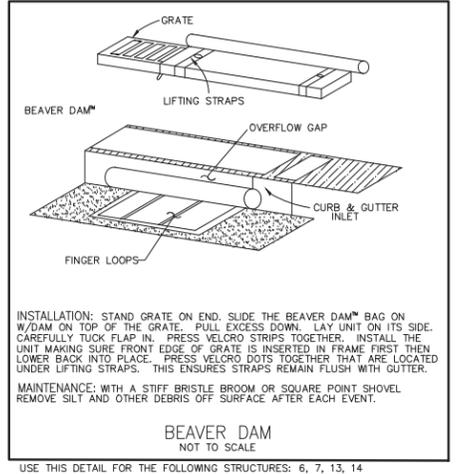
1. IF STAND IS INADEQUATE, OVERSEED AND FERTILIZE, USING HALF OF THE RATES ORIGINALLY APPLIED, AND MULCH.
2. IF STAND IS OVER 60 PERCENT DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME FERTILIZER, SEEDBED PREPARATION, SEEDING RECOMMENDATIONS, AND MULCHING RECOMMENDATIONS.

**MAINTENANCE FERTILIZATION AND MOWING FOR PERMANENT SEEDING**

MIXTURE	FORMULA	Lbs./Ac.	/1000 SQ. FT.	TIME	MOWING
CREEPING RED FESCUE	10-10-10	500	12	FALL YEARLY OR AS NEEDED	NOT CLOSER THAN 3"
KENTUCKY BLUEGRASS	10-10-10	500	12	FALL YEARLY OR AS NEEDED	NOT CLOSER THAN 4"
DWARF (TURF-TYPE) FESCUE	10-10-10	500	12	FALL YEARLY OR AS NEEDED	NOT CLOSER THAN 2"
FLATPEA AND CROWNVECH WITH FESCUE	0-20-20	400	10	SPRING YEARLY FOLLOWING ESTABLISHMENT AND EVERY 4-7 YEARS THEREAFTER	DO NOT MOW

**EROSION AND SEDIMENT CONTROL**

1. THE CITY IS RESPONSIBLE FOR SUBMITTING A NOTICE OF INTENT (NOI) TO BE REVIEWED AND APPROVED BY THE OHIO EPA. THE NOI MUST BE SUBMITTED TO OEPA 45 DAYS PRIOR TO THE START OF CONSTRUCTION AND MAY ENTITLE COVERAGE UNDER THE OHIO EPA GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY. A PROJECT LOCATION MAP MUST BE SUBMITTED WITH THE NOI. A SEDIMENT AND EROSION CONTROL PLAN MUST BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL IF A SEDIMENT AND EROSION CONTROL PLAN HAS NOT ALREADY BEEN INCLUDED WITH THE APPROVED CONSTRUCTION DRAWINGS. THIS PLAN MUST BE MADE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE DESIGN OF EROSION CONTROL SYSTEMS SHALL FOLLOW THE REQUIREMENTS OF THE OHIO EPA, ITEM 207 OF OHIO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AND THE CITY ENGINEER. AN INDIVIDUAL NPDES STORM WATER DISCHARGE PERMIT MAY BE REQUIRED. THE CONTRACTOR SHALL BE CONSIDERED THE CO-PERMITTEE.
2. THE CONTRACTOR SHALL PROVIDE SEDIMENT CONTROL AT ALL POINTS WHERE STORM WATER RUNOFF LEAVES THE PROJECT, INCLUDING WATERWAYS, OVERLAND SHEET FLOW, AND STORM SEWERS.
3. ACCEPTED METHODS OF PROVIDING EROSION/SEDIMENT CONTROL INCLUDE BUT ARE NOT LIMITED TO: HAY OR STRAW BALES, SEDIMENT BASINS, SILT FILTER FENCE, AGGREGATE CHECK DAMS, AND TEMPORARY GROUND COVER. 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 30 DAYS OR MORE SHALL BE SEEDDED OR PROTECTED WITHIN SEVEN 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.



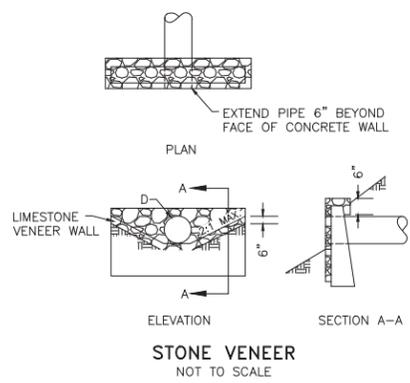
- CONSTRUCTION SPECIFICATIONS**
1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED EQUIVALENT.
  2. LENGTH - 50' AS REQUIRED.
  3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
  4. WIDTH - TWENTY (20) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
  5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
  6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED ACROSS THE ENTRANCE.
  7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
  8. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
  9. WHEN ORDERED BY THE ENGINEER, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL MATERIALS AND RESTORE THE AREA TO THE PRE-EXISTING GRADE AND DRAINAGE CONDITION.

CITY OF DUBLIN, OHIO  
STREET, STORM SEWER & WATER IMPROVEMENTS  
FOR  
CROSBY BUSINESS PARK  
**NARRATIVE & DETAILS (EROSION NOTES)**

PREPARED BY:  
**Stantec**  
1500 Lake Shore Drive, Suite 100  
Columbus, Ohio 43204  
(614) 486-4383  
(614) 486-4387

DESIGN: JDC	SCALE: AS SHOWN	ORDER NO.:	DATE:
DRAWN: DWG			
CHECKED: KDK			

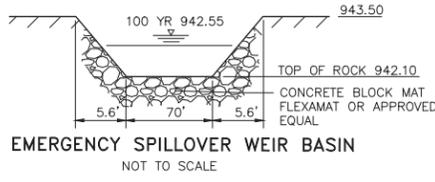
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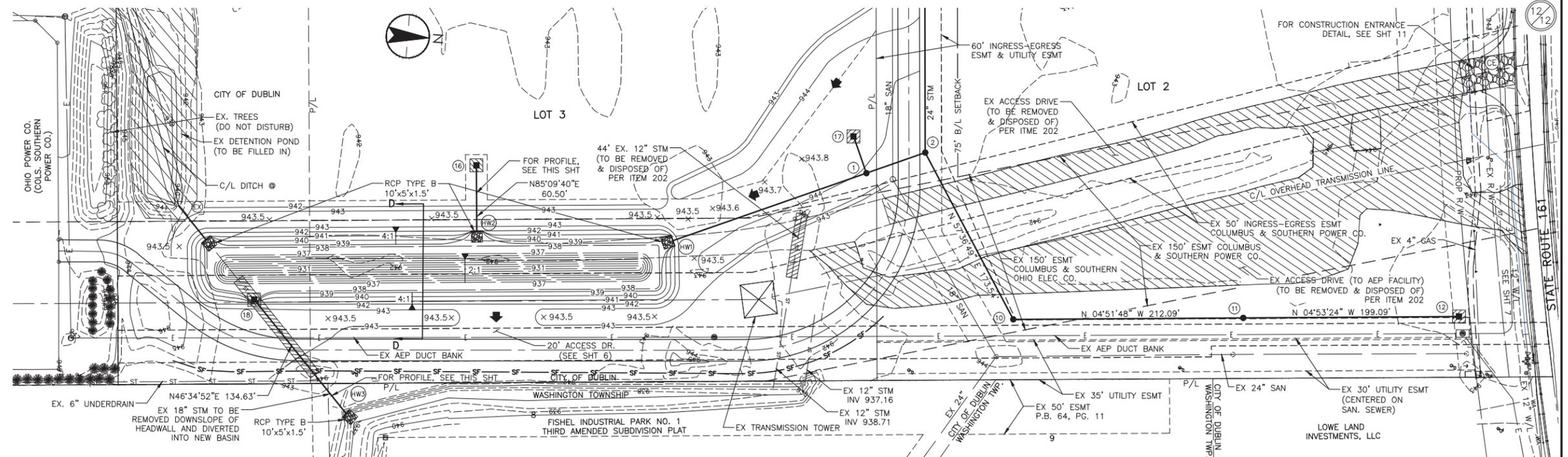
**STONE VENEER**  
NOT TO SCALE

NOTES:

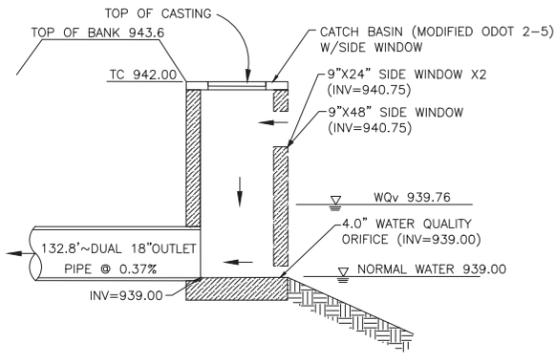
- STONE VENEER: MANUFACTURED SYNTHETIC STONE VENEER SHALL BE GREAT LAKE LIMESTONE AS MANUFACTURED BY DUTCH QUALITY STONE, INC. (1-330-359-7866) OR AN APPROVED ALTERNATIVE. MORTAR COLOR SHALL APPROXIMATE THE STONE COLOR. MORTAR AND GROUTING TYPE S PER MANUFACTURER'S INSTRUCTIONS. STONE SHALL BE PLACED IN A RANDOM PATTERN SIMILAR TO AVERY/MUIRFIELD BRIDGE OVER US 33/SR 161.
- ALL EXPOSED CONCRETE STRUCTURES SHALL COMPLY WITH THE STONE VENEER AS SHOWN ON THIS DETAIL.



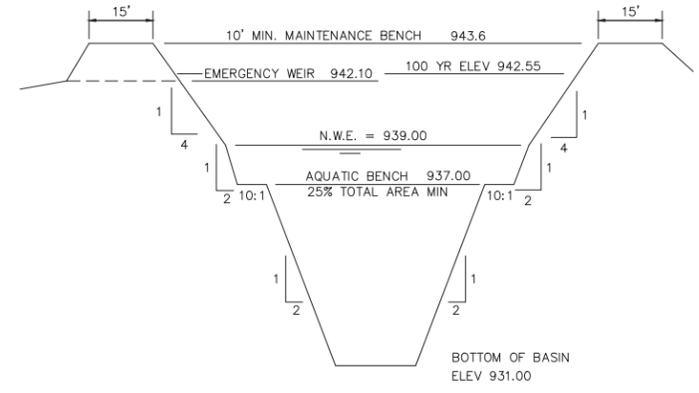
**EMERGENCY SPILLOVER WEIR BASIN**  
NOT TO SCALE



**GRADING AND EROSION CONTROL PLAN**  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'



**STRUCTURE #18 DETAILS**  
NOT TO SCALE



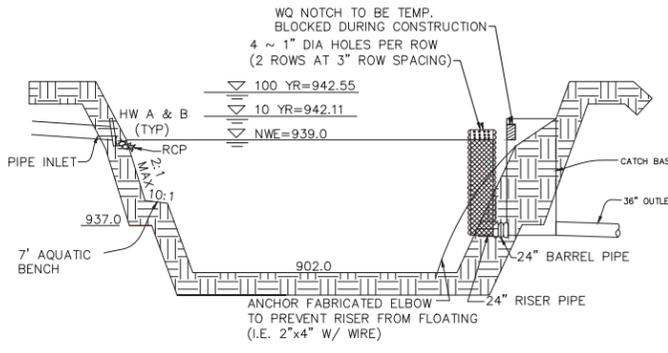
**SECTION D-D**  
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**STORM EVENT RELEASE RATES**

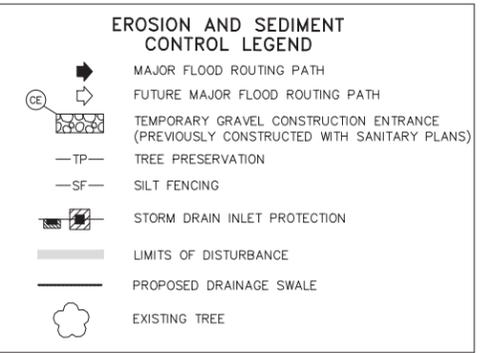
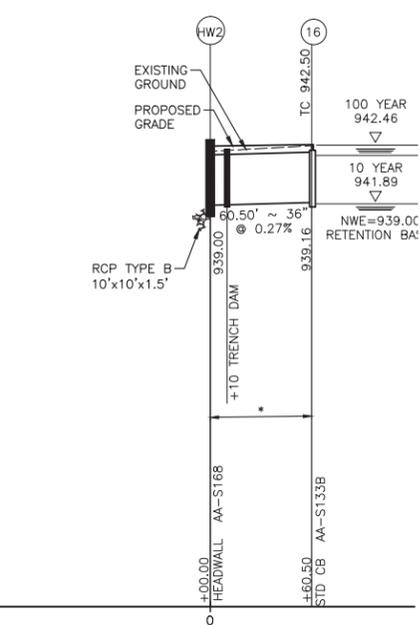
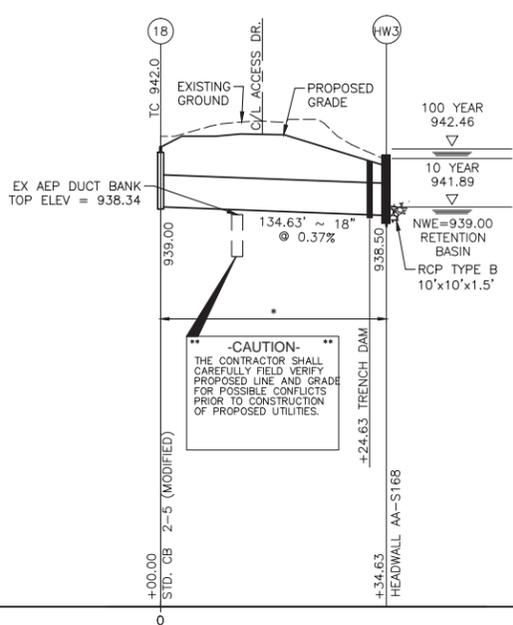
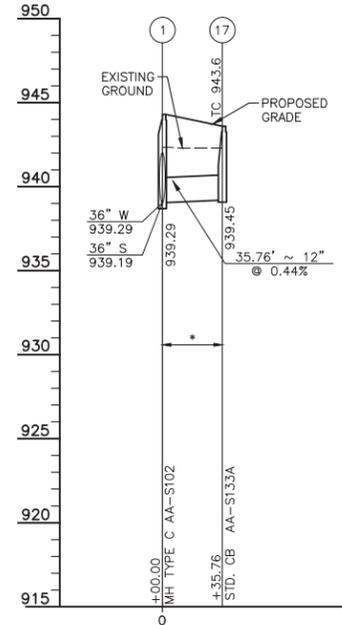
STORM EVENT	(A) OFFSITE FLOW (PASS THROUGH) FLOWS ROUTED THROUGH BASIN (CFS)	(B) ONSITE POST-DEVELOPED PEAK DISCHARGE (CFS)	(A+B) TOTAL ONSITE & OFFSITE DISCHARGE ROUTED TO BASIN (CFS)	(C) ONSITE PRE-DEVELOPED PEAK DISCHARGE (CFS)	(D) ALLOWABLE ONSITE RELEASE RATE (CFS)	(E=D+A) ALLOWABLE BASIN RELEASE RATE INCLUDING OFFSITE FLOWS (CFS)	(LESS THAN E) DESIGN RELEASE RATE (CFS)	PONDING ELEVATION FOR GIVEN STORM (FEET)
1-YEAR	7.35	192.22	199.57	43.92	36.57	43.92	6.63	941.13
2-YEAR	10.57	246.40	256.97	63.24	36.57	47.14	11.92	941.33
5-YEAR	15.47	323.03	338.50	92.32	36.57	52.04	18.64	941.70
10-YEAR	19.72	385.69	405.41	117.27	36.57	56.29	21.10	942.11
25-YEAR	25.86	473.56	499.42	153.55	36.57	62.43	34.90	942.27
50-YEAR	31.05	546.34	577.39	184.4	36.57	67.62	48.95	942.38
100-YEAR	36.58	622.60	659.18	217.28	180.7	217.28	76.67	942.55

**BASIN VOLUMES AND RELEASE RATES BASED ON ELEVATION**

ELEVATION	SURFACE AREA (SQ FT)	BASIN STORAGE VOLUME (CU FT)	CUMMULATIVE STORAGE VOLUME (CU FT)	DISCHARGE RATE AT GIVEN WATER SURFACE ELEVATION (CFS)
939	18,802	0	0	0
940	22,556	20,679	20,679	1.19
941	26,417	24,487	45,166	9.54
942	30,385	28,401	73,567	26.27
943	34,461	32,423	105,990	196.68



**TEMPORARY SEDIMENT BASIN RISER DETAIL BASIN**  
NOT TO SCALE



\* COMPACTED BACKFILL PER ITEM 911  
\*\* COMPACTED GRANULAR BACKFILL PER ITEM 912

CITY OF DUBLIN, OHIO  
STREET, STORM SEWER & WATER IMPROVEMENTS FOR  
CROSBY BUSINESS PARK  
BASIN DETAILS



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CHECKED: KDK			

U:\173409008\Civil\Drawing\Street\Plans\173409008\_BASIN.dwg BASIN DETAILS Mar 13, 2015 3:04:05pm dgramling