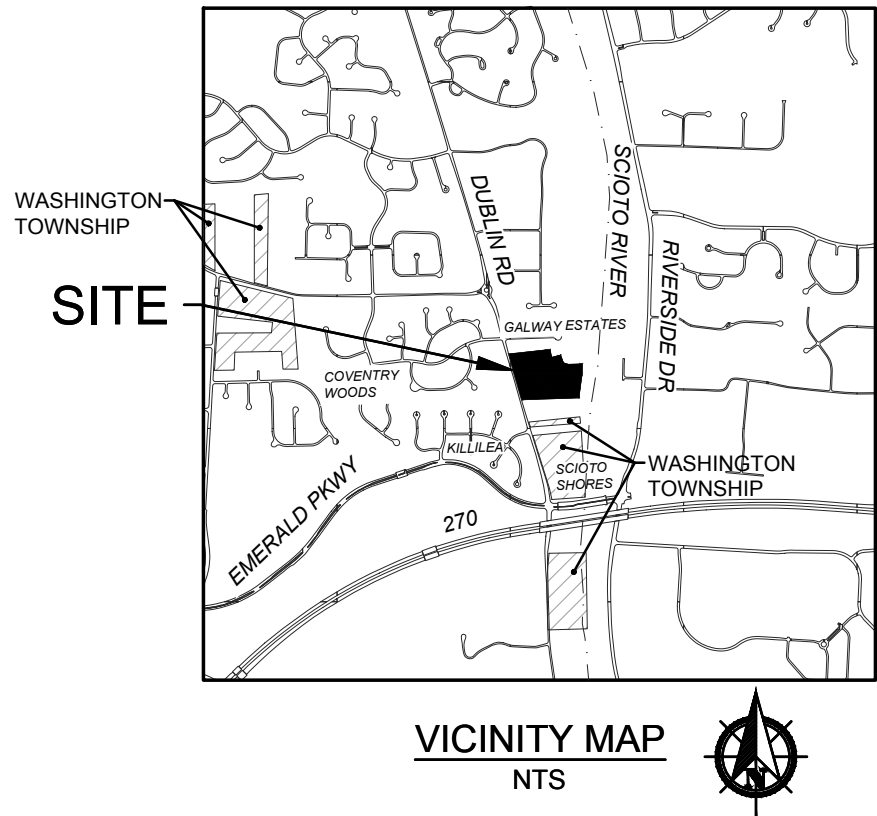


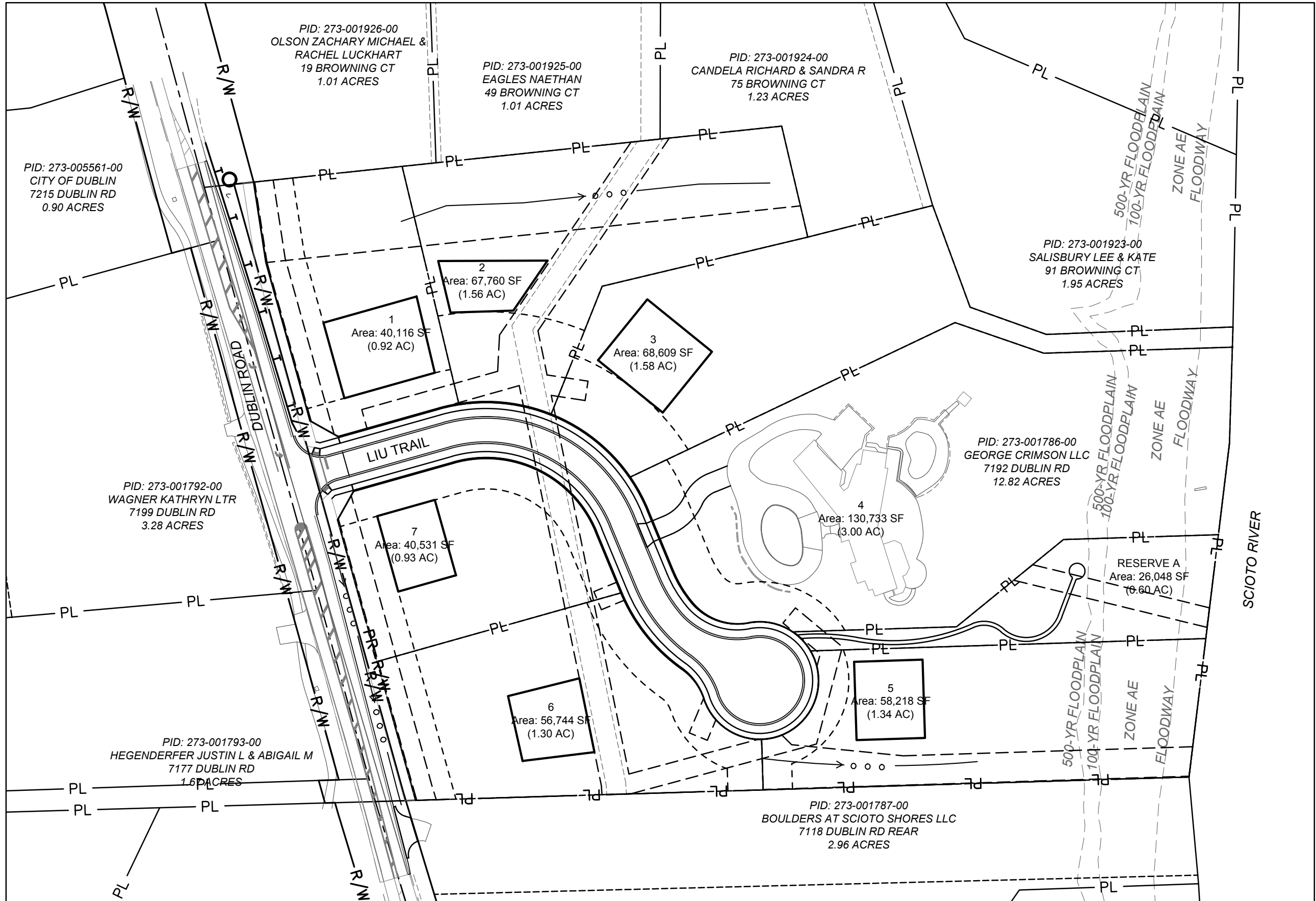
SHEET INDEX

- 1 - TITLE SHEET  
2 - PRELIMINARY PLAT

PRELIMINARY PLAT  
FOR  
**LIU TRAIL**  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO



SITE DATA	
ZONING:	
PROPERTY OWNER:	GEORGE CRIMSON LLC
PARCEL ID:	273-001786-00
SITE ACREAGE:	12.820 (REC) 12.793 (MEASURED)
SITE ZONING	R-1, RESTRICTED SUBURBAN RESIDENTIAL DISTRICT
FEMA FLOODPLAIN:	39049C0151K (6/17/2008) ZONE X
SITE LAYOUT DATA:	
TOTAL LOTS:	7 LOTS
GROSS DENSITY (NET DENSITY):	0.55 LOTS/ACRE
MINIMUM DRIVE AISLE WIDTH:	24'
MINIMUM LOT WIDTH:	150' AT THE FRONT LINE OF THE DWELLING
MINIMUM FRONT YARD SETBACK:	30'
MINIMUM REAR YARD SETBACK:	50'
TOTAL SIDE YARD SETBACK:	25', 8' MINIMUM ON ONE SIDE
REAR YARD MINIMUM:	20% OF THE LOT DEPTH
BUILDING DATA:	
BUILDING HEIGHT:	35' MAXIMUM HEIGHT
LANDSCAPE DATA:	
EXISTING IMPERVIOUS AREA:	1.04 AC
PROPOSED IMPERVIOUS AREA:	2.01 AC
GREENSPACE:	10.10 AC (79%)



	OWNER	MAINTENANCE	DESCRIPTION
RESERVE A	HOA	HOA	PRIVATE OPEN SPACE WITH PROPOSED GRAVEL PATH TO PROVIDE ACCESS TO SEATING AREA AND WATERFRONT.
SANITARY EASEMENT	CITY OF DUBLIN	CITY OF DUBLIN	EASEMENT FOR SANITARY SEWER.
STORM EASEMENT	CITY OF DUBLIN	CITY OF DUBLIN	EASEMENT FOR STORM SEWER AND SWALE.
LANDSCAPE EASEMENT	HOA	HOA	EASEMENT FOR LANDSCAPE BUFFER BETWEEN DUBLIN RD AND LOTS 1, 6, AND 7.

UTILITY CONTACTS

AMERITECH  
408 CRITES ROAD  
CIRCLEVILLE, OH 43113  
PHONE: (740) 477-3658

CITY OF COLUMBUS  
DIVISION OF WATER  
910 DUBLIN ROAD  
COLUMBUS, OH 43215  
PHONE: (614) 645-7788

AMERICAN ELECTRIC POWER  
850 TECH CENTER DRIVE  
GAHANNA, OH 43230  
PHONE: (614) 883-6831

COLUMBIA GAS OF OHIO  
200 S CIVIC CENTER DR  
COLUMBUS, OH 43215  
PHONE: (614) 460-6000

CITY OF DUBLIN  
DIVISION OF ENGINEERING  
5800 SHIER-RINGS ROAD  
DUBLIN, OH 43016  
PHONE: (614) 410-4600

TIME WARNER CABLE  
1980 ALUM CREEK DR  
COLUMBUS, OH 43207  
PHONE: (614) 918-8439

BASIS OF BEARINGS

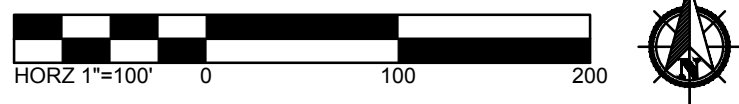
BEARINGS SHOWN HEREON ARE BASED ON GRID NORTH, REFERENCED TO THE OHIO STATE PLANE COORDINATE SYSTEM (SOUTH ZONE) AND THE NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT), AS ESTABLISHED UTILIZING A GPS SURVEY AND AN NGS OPUS SOLUTION

VERTICAL CONTROL

ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, AS DERIVED FROM GNSS OBSERVATIONS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT) AND GEOID 18, AND AN NGS OPUS SOLUTION FOR CONTROL POINT 900. THE ELEVATIONS FOR ALL OTHER CONTROL POINTS AND BENCHMARKS LISTED HEREON WERE ESTABLISHED UTILIZING A DIFFERENTIAL LEVEL CIRCUIT ORIGINATING FROM CONTROL POINT 900.

B.M.	DESCRIPTION	NORTHING (GROUND)	EASTING (GROUND)	ELEVATION
CP 900	5/8" IRON PIN SET W/ "ASI CONTROL POINT" CAP	770657.227	1796156.545	852.24
TBM 1	MAG NAIL FOUND IN POWER POLE +/- 72' NORTH OF THE DRIVE FOR 7192 DUBLIN ROAD, +/- 48' WEST OF CP 900, +/- 27' EAST OF THE CENTER LINE OF DUBLIN ROAD	N/A	N/A	853.64

INDEX MAP



OWNER/ DEVELOPER

MR. JASON LIU  
10279 WELLINGTON BLVD.  
POWELL, OHIO 43065  
CONTACT: JASON LIU  
PHONE: (614) 313-1268  
EMAIL: JASONLIU1218@YAHOO.COM

ARCHITECT

BASS STUDIO ARCHITECTS  
36 KING AVENUE  
COLUMBUS, OHIO 43201  
CONTACT: TIMOTHY A. BASS, AIA, LEED AP  
PHONE: (614) 294-4893  
EMAIL: WWW.BASSSTUDIOARCHITECTS.COM

ENGINEER

AMERICAN STRUCTUREPOINT  
2550 CORPORATE EXCHANGE DRIVE, SUITE 300  
COLUMBUS, OHIO 43231  
CONTACT: BENJAMIN SCHILLING  
PHONE: (614) 901-2235  
EMAIL: BSCHILLING@STRUCTUREPOINT.COM

AMERICAN  
**STRUCTUREPOINT**  
INC.



2550 Corporate Exchange Dr., Ste 300 | Columbus, Ohio 43231  
TEL: (614) 901-2235 FAX: (614) 901-2236  
www.structurepoint.com

PRELIMINARY PLAT  
FOR  
**LIU TRAIL**  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO  
**TITLE SHEET**

REVISIONS	DATE	SHEET NO.	DESCRIPTION

**APPROVAL PENDING NOT FOR CONSTRUCTION**  
IN SUBMITTING BIDS IN RELIANCE ON THESE PLANS THE CONTRACTOR ASSUMES ALL RISKS OF ADDITIONAL COSTS OF REVISIONS DUE TO REQUIREMENTS OF THE OWNER OR GOVERNMENTAL AUTHORITIES AND MATERIAL REVISIONS IN THE COURSE OF COMPLETING THE FINAL DESIGN.

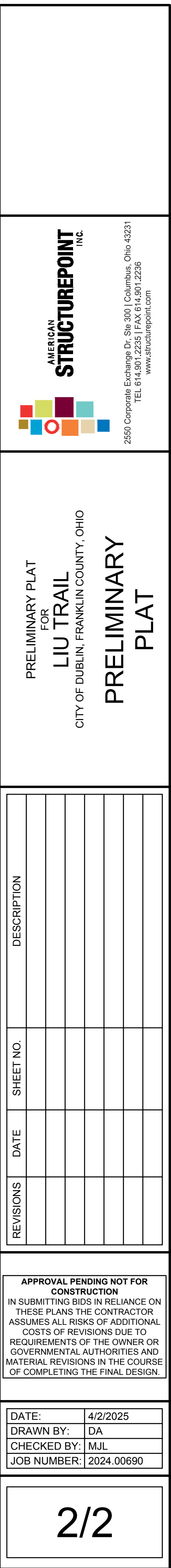
DATE:	4/1/2025
DRAWN BY:	DA
CHECKED BY:	MJL
JOB NUMBER:	2024.00690

1/2

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

24-005-RES



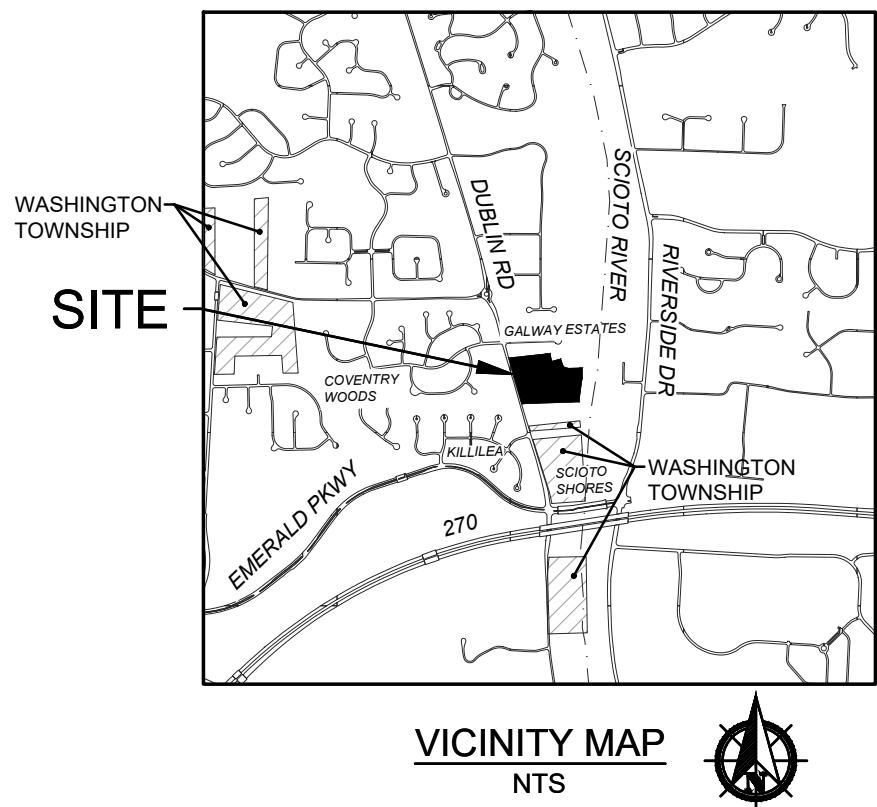




SHEET INDEX

- 1 - TITLE SHEET  
2 - GENERAL NOTES  
3 - TYPICAL SECTIONS & DETAILS  
4 - EXISTING CONDITIONS & DEMOLITION PLAN  
5 - SITE PLAN  
6 - UTILITY PLAN  
7 - PLAN & PROFILE  
8 - GRADING PLAN  
9 - TREE PRESERVATION  
10 - TREE PRESERVATION SCHEDULE  
11 - LANDSCAPE PLAN  
12 - LANDSCAPE SCHEDULE & DETAILS

PUBLIC STREET, STORM, AND WATER IMPROVEMENTS  
FOR  
**LIU TRAIL**  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO



**SITE DATA**

**ZONING:**

PROPERTY OWNER: GEORGE CRIMSON LLC

PARCEL ID: 273-001786-00

SITE ACREAGE: 12.820 (REC)  
12.793 (MEASURED)

SITE ZONING: R-1, RESTRICTED SUBURBAN  
RESIDENTIAL DISTRICT

FEMA FLOODPLAIN: 39049C0151K (6/17/2008) ZONE X

**SITE LAYOUT DATA:**

TOTAL LOTS: 7 LOTS

GROSS DENSITY (NET DENSITY): 0.55 LOTS/ACRE

MINIMUM DRIVE AISLE WIDTH: 24'

MINIMUM LOT WIDTH: 150' AT THE FRONT LINE OF THE DWELLING

MINIMUM FRONT YARD SETBACK: 30'

MINIMUM REAR YARD SETBACK: 50'

TOTAL SIDE YARD SETBACK: 25', 8' MINIMUM ON ONE SIDE

REAR YARD MINIMUM: 20% OF THE LOT DEPTH

**BUILDING DATA:**

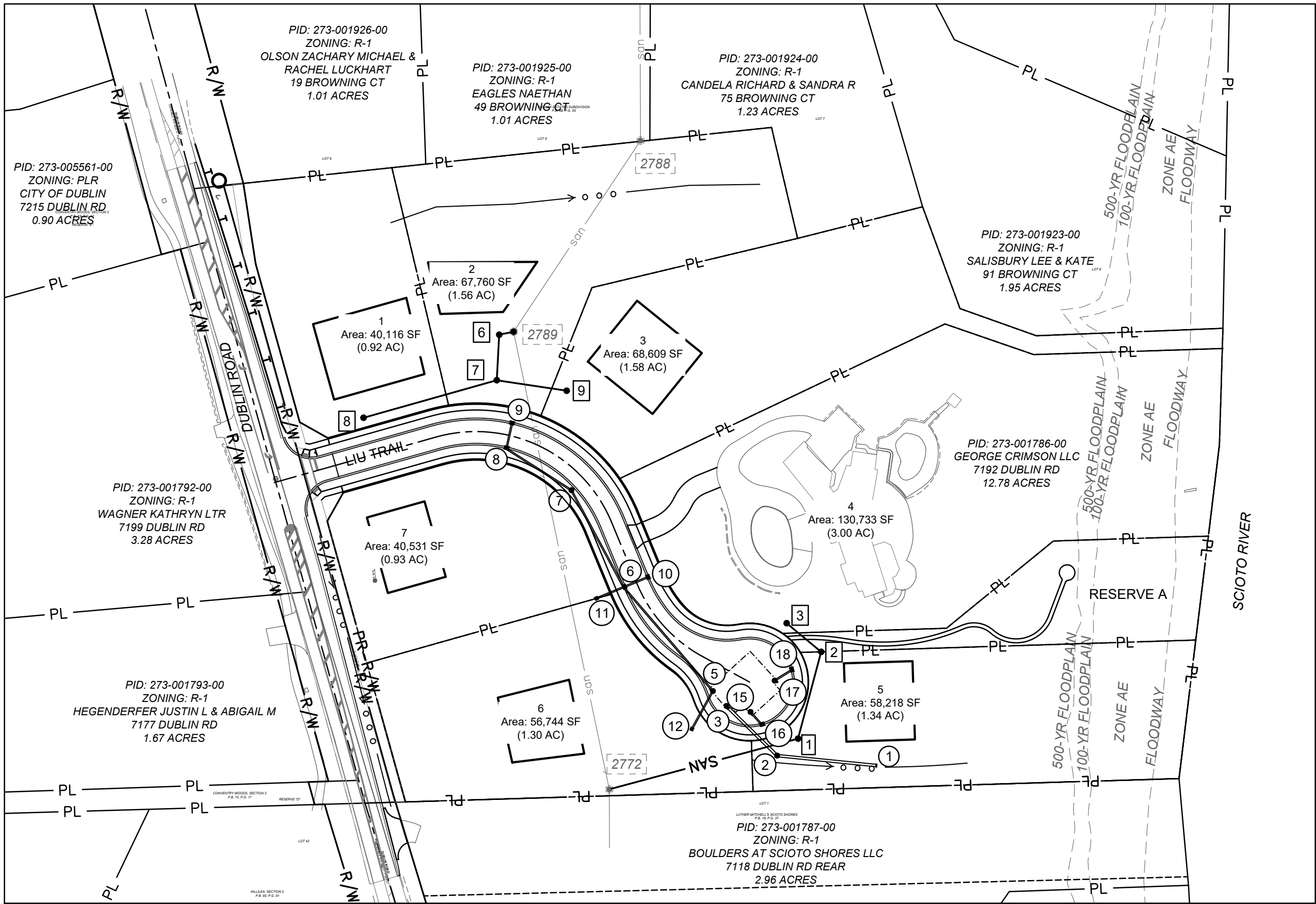
BUILDING HEIGHT: 35' MAXIMUM HEIGHT

**LANDSCAPE DATA:**

EXISTING IMPERVIOUS AREA: 1.04 AC

PROPOSED IMPERVIOUS AREA: 2.01 AC

GREENSPACE: 10.10 AC (79%)



STANDARD CONSTRUCTION DRAWINGS

THE STANDARD CONSTRUCTION DRAWINGS LISTED ON THESE PLANS SHALL BE CONSIDERED A PART THEREOF.

CITY OF DUBLIN (2020 EDITION)	ODOT
MD-02 RD-02 ST-03	BP-3.1
MD-03 RD-03 ST-04	
MD-05 RD-05 ST-05	
PD-02 RD-08 ST-06	
PD-03 RD-10 WA-01	
PD-04 RD-15	
PD-06 SA-04	
RD-01 ST-01	



REGISTERED ENGINEER E-86125 04/02/2025 DATE

APPROVED:

CITY OF DUBLIN:  
SIGNATURES BELOW SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSE AND GENERAL LOCATION OF THE PROJECT AND DOES NOT CONSTITUTE ASSURANCE TO OPERATE AS INTENDED. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL CIVIL ENGINEER PREPARING THE PLANS.

DIRECTOR OF ENGINEERING/CITY ENGINEER DATE  
CITY OF DUBLIN, OHIO  
PAUL A. HAMMERSMITH, P.E.

CITY OF COLUMBUS:

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

ADMINISTRATOR, DIVISION OF WATER DATE  
CITY OF COLUMBUS, OHIO

DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES DATE  
CITY OF COLUMBUS, OHIO



24-005-RES

UTILITY CONTACTS

AMERITECH  
408 CRITES ROAD  
CIRCLEVILLE, OH 43113  
PHONE: (740) 477-3658

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COLUMBUS, OHIO 43231  
CONTACT: BENJAMIN SCHILLING  
PHONE: (614) 901-2235  
EMAIL: BSCHILLING@STRUCTUREPOINT.COM

PUBLIC STREET, STORM, AND WATER IMPROVEMENTS

LIU TRAIL  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO

TITLE SHEET

DESCRIPTION

SHEET NO.

DATE

REVISIONS

APPROVAL PENDING NOT FOR CONSTRUCTION

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DATE:	4/2/2025
DRAWN BY:	HSR
CHECKED BY:	MJL
JOB NUMBER:	2024.00690

1/12



PLOT SCALE: 1"= 40' DATE: 4/25/25 - 3:48 PM EDITED BY: DANUGERAH DRAWING FILE: \C:\01\US2\PROJECTS\2024\006600.DRAWINGS\CIVIL\CONSTRUCTION\DOCUMENTS\ON SITE\006600.TSG&N.DWG

GENERAL NOTES

1. CITY OF COLUMBUS 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 DEVELOPER OR 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 BENCHMARKS, 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 RESTORE ALL DISTURBED AREAS TO EQUAL OR BETTER CONDITION THAN EXISTED BEFORE CONSTRUCTION. DRAINAGE DITCHES OR WATERCOURSES 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 COLUMBUS. 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 912 OF THE STANDARD SPECIFICATIONS OR FLOWABLE CDF, TYPE II ACCORDING TO ITEM 613. ITEM 911 OF THE STANDARD SPECIFICATIONS SHALL 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  
6555 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 BREST 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 II) SHALL BE USED IN PLACE OF COMPACTED GRANULAR BACKFILL, ACCORDING TO ITEM 613 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 OR 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 ALL 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.

UTILITIES

1. THE FOLLOWING UTILITIES ARE KNOWN TO BE LOCATED WITHIN THE LIMITS OF THIS PROJECT:

AEP OHIO- ELECTRIC  
BREEZELINE- TELECOM  
COLUMBIA GAS OF OH- COLUMBUS - GAS  
DUBLIN SEWER- SANITARY SEWER  
DUBLIN WATER- WATER MAIN  
DUBLIN DIVISION OF ENGINEERING - STORMWATER  
AT&T- TELECOM  
CHARTER COMM- TELECOM
2. THE CONTRACTOR SHALL GIVE NOTICE OF INTENT TO CONSTRUCT TO OHIO UTILITIES PROTECTION SERVICE (TELEPHONE NUMBER 800.362.2764), PRODUCER'S 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 ASSUMES 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.
6. PUBLIC STREET LIGHTING MAY BE IN THE VICINITY OF THIS PROJECT. CONTACT THE CITY OF DUBLIN, DIVISION OF ENGINEERING AT 410-4637, TWO DAYS PRIOR TO BEGINNING WORK.

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 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.
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.

EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR OR DEVELOPER 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 ENTITILE COVERAGE

UNDER THE OHIO EPA GENERAL PERMIT FOR STORMWATER 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 OHIO EPA, ITEM 207 OF OHIO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AND THE CITY ENGINEER. AN INDIVIDUAL NPDES STORMWATER DISCHARGE PERMIT MAY BE REQUIRED. THE CONTRACTOR SHALL BE CONSIDERED THE 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: SEDIMENT BASINS, SILT FILTER FENCE, AGGREGATE CHECK DAMS, AND TEMPORARY GROUND COVER. HAY OR STRAW BALES ARE NOT PERMITTED.
4. THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE OF THE WORK AREA AT ALL TIMES CONSISTENT WITH EROSION CONTROL PRACTICES.
5. DISTURBED AREAS THAT WILL REMAIN UNWORKED FOR 30 DAYS OR MORE SHALL BE SEEDED 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.

BLASTING (IF PERMITTED)

1. THE CONTRACTOR MUST OBTAIN A BLASTING PERMIT FROM WASHINGTON TOWNSHIP FIRE DEPARTMENT PRIOR TO BLASTING FOR ROCK EXCAVATION. THE CONTRACTOR SHALL SUBMIT BLASTING REPORTS UPON COMPLETION OF BLASTING TO THE CITY ENGINEER, THE OWNER, AND THE OWNER'S ENGINEER. TOP OF ROCK ELEVATIONS SHALL BE SHOWN ON "AS\_BUILT" CONSTRUCTION DRAWINGS.

WATER LINE

1. ALL WATER LINE MATERIALS SHALL BE PROVIDED AND INSTALLED ACCORDING TO CURRENT SPECIFICATIONS OF THE CITY OF COLUMBUS DIVISION OF WATER.
2. ALL PUBLIC WATER PIPE WITH A DIAMETER 3 INCHES TO 8 INCHES SHALL BE DUCTILE IRON, CLASS 53. PUBLIC WATER PIPE 12 INCHES IN DIAMETER OR LARGER SHALL BE DUCTILE IRON, CLASS 54. PUBLIC WATER PIPE 20 INCHES IN DIAMETER OR LARGER MAY BE PRESTRESSED CONCRETE PIPE. PRIVATE WATER PIPE SHALL MEET THE APPROVAL OF THE CITY OF COLUMBUS DIVISION OF WATER PRIOR TO APPROVAL OF THE CONSTRUCTION DRAWINGS.
3. ONLY FIRE HYDRANTS CONFORMING TO CITY OF COLUMBUS STANDARDS WILL BE APPROVED FOR USE.
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 ACCORDING TO ITEM 801.13 OF THE STANDARD SPECIFICATIONS. SPECIAL ATTENTION IS DIRECTED TO APPLICABLE SECTIONS OF AMERICAN WATER WORKS ASSOCIATION SPECIFICATION C.651, PARTICULARLY FOR FLUSHING (SECTION 5) AND FOR CHLORINATING VALVES AND FIRE HYDRANTS (SECTION 7). PRESSURE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 801.12 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS. WHEN WATER LINES ARE READY FOR DISINFECTION, THE CITY OF DUBLIN SHALL SUBMIT TWO (2) SETS OF "AS-BUILT" PLANS, 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 CONSTRUCTION PER THIS PLAN. PRESSURE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 801.12 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS.
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 OR SERVICE CONNECTIONS (E.G., TO CURB STOPS OR METER PITS) 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 PERMIT FOR EACH WATER SERVICE MUST BE OBTAINED FROM THE CITY OF DUBLIN AND THE CITY OF COLUMBUS DIVISION OF WATER BEFORE MAKING ANY TAPS INTO PUBLIC WATER LINES.
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 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. WATER METERS SHALL BE INSTALLED INSIDE PROPOSED STRUCTURES UNLESS A METER PIT INSTALLATION IS APPROVED BY THE CITY OF COLUMBUS DIVISION OF WATER. METER PITS MUST CONFORM TO STANDARD DRAWINGS L-7103, A&B FOR 5/8" THROUGH 1" METERS OR L-6317, A, B, C&D 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. CURB STOP BOXES SHALL BE LOCATED AT LEAST 1 FOOT INSIDE THE RIGHT\_OF\_WAY AND SET AT FINISHED GRADE.
15. IF THE TOP OF THE OPERATING NUT OF ANY VALVE IS GREATER THAN 36 INCHES BELOW FINISHED GRADE, AN EXTENSION STEM SHALL BE FURNISHED TO BRING THE TOP OF THE OPERATING NUT TO WITHIN 24 INCHES OF FINISHED GRADE ELEVATION.
16. 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 NECESSARY TO CLEAR EXISTING OR PROPOSED UTILITY LINES OR OTHER UNDERGROUND RESTRICTIONS BY A MINIMUM OF 18 INCHES.
17. TWO ¾ INCH TAPS SHALL BE INSTALLED WITHIN 2 FEET OF THE END OF THE LINE ON ALL DEAD-END WATER LINES.

STORM SEWER

1. ALL STORM WATER DETENTION AND RETENTION AREAS AND MAJOR FLOOD ROUTING SWALES SHALL BE CONSTRUCTED TO FINISH GRADE AND 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 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. INSPECTION IS REQUIRED BY 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 613, TYPE II 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 STORMWATER MANAGEMENT FACILITIES. NATURAL STONE AND/OR BRICK APPROVED BY THE CITY ENGINEER SHALL BE PROVIDED ON ALL VISIBLE HEADWALLS SURFACES.
6. STORM INLETS OR CATCH BASINS SHALL BE CHANNELIZED AND HAVE BICYCLE SAFE GRATES. MANHOLE LIDS SHALL INCLUDE CITY OF DUBLIN LOGO AND ALL CURB INLET AND CATCH BASIN GRATES SHALL INDLUCE ENGRAVED LETTERING: "DUMP NO WASTE; DRAINS TO RIVER."
6. STORM SEWER OUTLETS GREATER THAN 18 INCHES IN DIAMETER ACCESSIBLE FROM STORMWATER MANAGEMENT FACILITIES OR WATERCOURSES SHALL BE PROVIDED WITH SAFETY GRATES, AS APPROVED BY THE CITY ENGINEER.
7. HP STORM AND HP SANITITE OR APPROVED EQUAL ARE APPROVED ALTERNATIVES TO REINFORCED CONCRETE PIPE IN PAVED AND NON PAVED AREAS AS APPROVED BY THE CITY ENGINEER. THIS INCLUDES APPLICATIONS INSIDE THE RIGHT-OF-WAY.
8. HP STORM AND HP SANITITE OR APPROVED EQUAL PIPE JOINTS SHALL BE WATERTIGHT ACCORDING TO REQUIREMENTS OF ASTM D3212. PIPES SHALL BE JOINED WITH A GASKETED INTEGRAL BELL & SPIGOT JOINT MEETING THE REQUIREMENTS OF ASTM F2881 (HP STORM) AND ASTM F2764 (HP SANITITE). GASKETS SHALL BE INSTALLED BY PIPE MANUFACTURER AND COVERED WITH REMOVABLE, PROTECTIVE WRAP TO ENSURE THE GASKET IS FREE FROM DEBRIS. A JOINT LUBRICANT AVAILABLE FROM THE MANUFACTURER SHALL BE USED ON THE GASKET AND BELL DURING JOINT ASSEMBLY.
9. ALL BEDDING MATERIAL SHALL BE IN ACCORDANCE WITH CITY OF COLUMBUS STANDARD CONSTRUCTION DRAWING AA-S149.
10. BACKFILL MATERIAL SHALL BE PLACED IN ACCORDANCE WITH ITEM 911 OR ITEM 912 OF THE CITY OF COLUMBUS CONSTRUCTION MATERIAL SPECIFICATIONS (CMS).
11. BACKFILL MATERIAL IN AREAS LOCATED OUTSIDE THE PUBLIC RIGHT-OF-WAY SHALL BE PLACED IN ACCORDANCE WITH ITEM 901 OF THE CITY OF COLUMBUS (CMS).

ALL HP STORM AND HP SANITITE PIPE (FOR STORM SEWER) SHALL BE MANDREL TESTED IN ACCORDANCE WITH CITY OF COLUMBUS ITEM 901.21, WITH THE EXCEPTION THAT THE WAITING PERIOD PRIOR TO TESTING SHALL BE 30 DAYS.

MAIL DELIVERY

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

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 A 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.

PUBLIC STREET, STORM, AND WATER IMPROVEMENTS

LIU TRAIL

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO

GENERAL NOTES



2650 Corporate Exchange Dr., Ste 300 | Columbus, Ohio 43231  
TEL 614 444-8800 | FAX 614 444-8871  
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REVISIONS	DATE	SHEET NO.	DESCRIPTION

APPROVAL PENDING NOT FOR CONSTRUCTION  
IN SUBMITTING BIDS IN RELIANCE ON THESE PLANS THE CONTRACTOR ASSUMES ALL RISKS OF ADDITIONAL COSTS OR REVISIONS DUE TO REQUIREMENTS OF THE OWNER OR GOVERNMENTAL AUTHORITIES AND MATERIAL REVISIONS IN THE COURSE OF COMPLETING THE FINAL DESIGN.

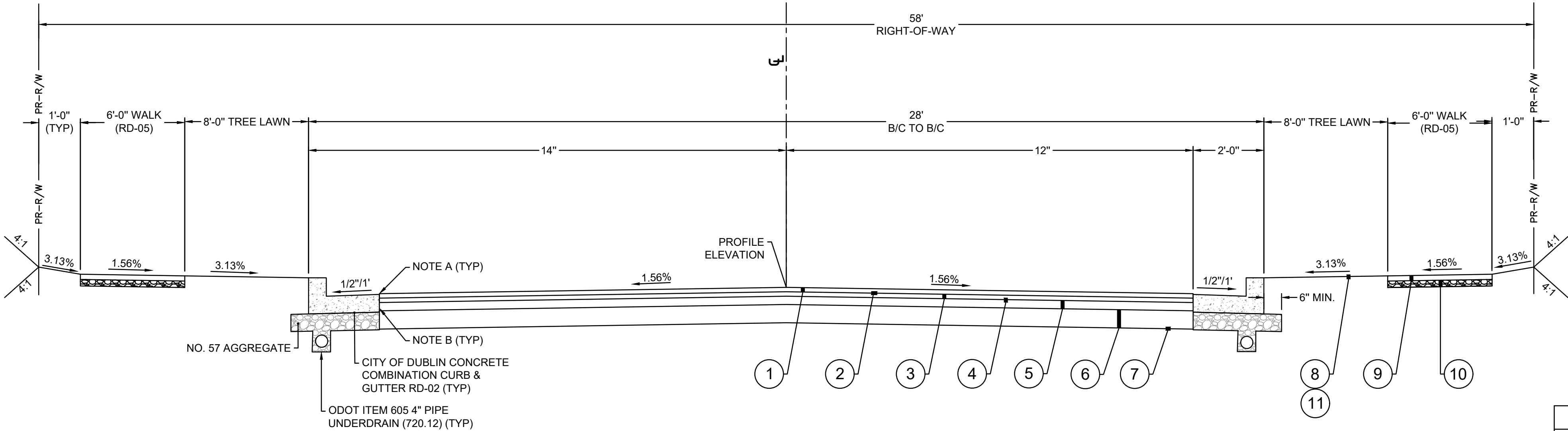
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DRAWN BY:	HSR
CHECKED BY:	MJL
JOB NUMBER:	2024.00690



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NOTE A  
ITEM 441 ASPHALT SURFACE COURSE IS TO BE  
MAXIMUM 1/4" ABOVE GUTTER PLATE.

NOTE B  
TACK COAT (AC) FACE OF CURB (INCIDENTAL  
TO ITEM 441 ASPHALT CONCRETE.)



A TYPICAL SECTION - LIU TRAIL  
NOT TO SCALE

TYPICAL SECTION LEGEND	
①	ITEM 442 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG. 64-22
②	ITEM 407 - NON-TRACKING TACK COAT @ 0.075 GAL/S.Y.
③	ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), PG. 64-22
④	ITEM 407 - NON-TRACKING TACK COAT @ 0.10 GAL/S.Y.
⑤	ITEM 301 - 3" ASPHALT CONCRETE BASE
⑥	ITEM 304 - 6" AGGREGATE BASE
⑦	ITEM 204 - SUBGRADE COMPACTION
⑧	ITEM 659 - SEEDING AND MULCHING, CLASS 1 AS PER PLAN (SEE NOTE 32 ON GENERAL NOTE PAGE)
⑨	ITEM 608 - 4" CONCRETE SIDEWALK
⑩	ITEM 304 - 3" AGGREGATE BASE
⑪	ITEM 653 - 3" TOPSOIL FURNISHED AND PLACED

PUBLIC STREET, STORM, AND WATER IMPROVEMENTS  
FOR  
LIU TRAIL  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO

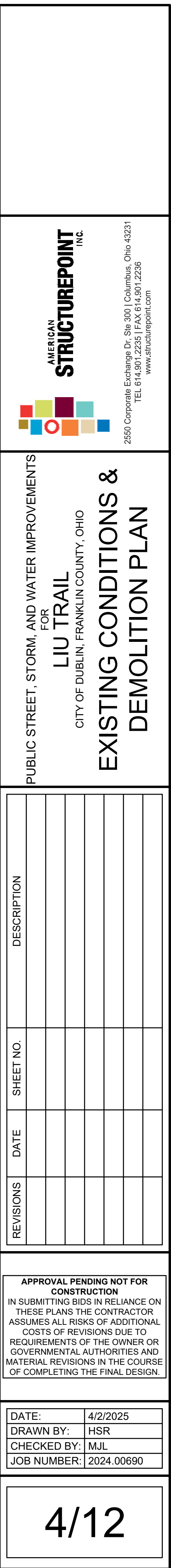
TYPICAL SECTIONS &  
DETAILS

REVISIONS	DATE	SHEET NO.	DESCRIPTION

APPROVAL PENDING NOT FOR  
CONSTRUCTION  
IN SUBMITTING BIDS IN RELIANCE ON  
THESE PLANS THE CONTRACTOR  
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COSTS OF REVISIONS DUE TO  
REQUIREMENTS OF THE OWNER OR  
GOVERNMENTAL AUTHORITIES AND  
MATERIAL REVISIONS IN THE COURSE  
OF COMPLETING THE FINAL DESIGN.

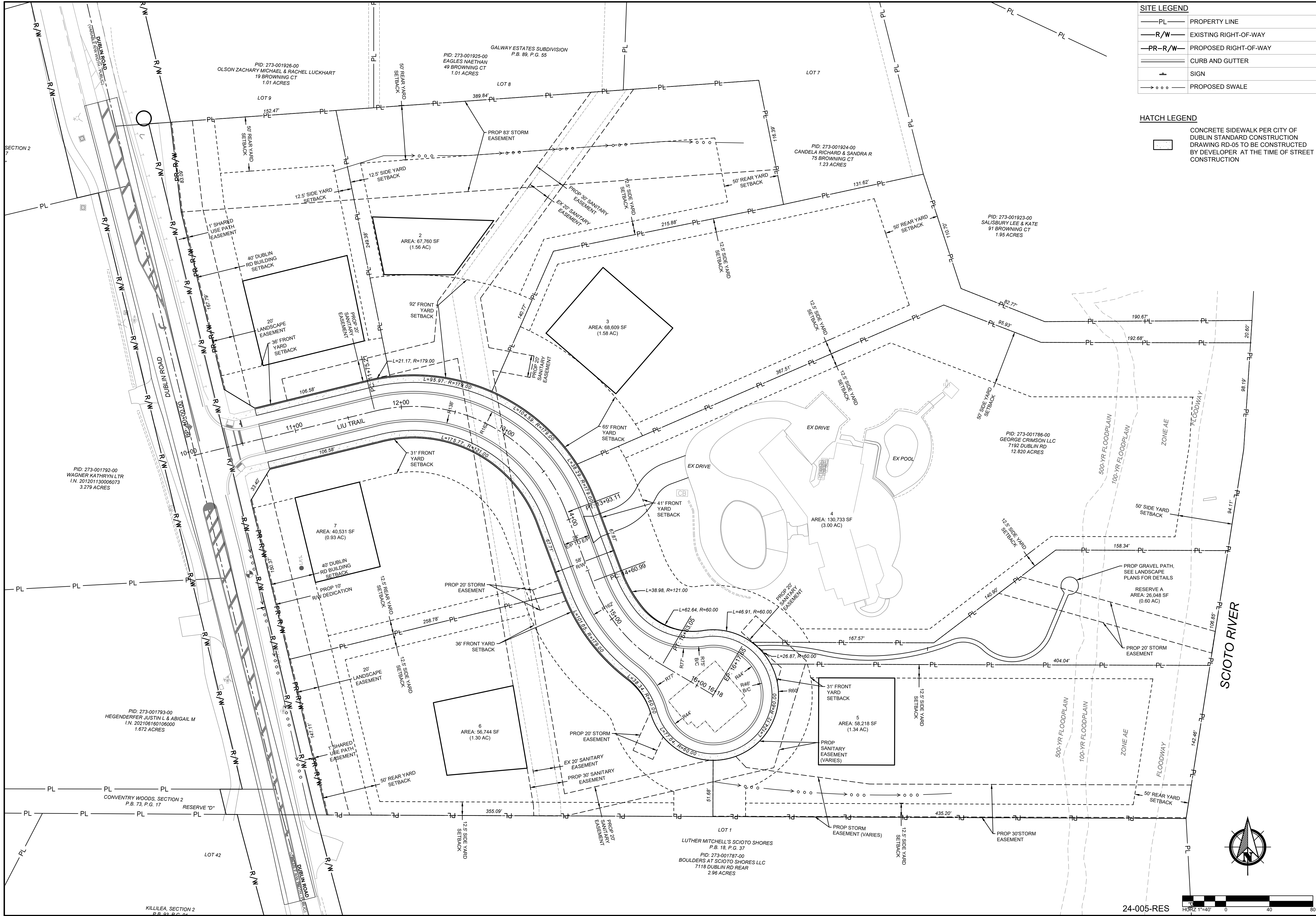
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JOB NUMBER:	2024.00690







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SITE LEGEND

PL

PROPERTY LINE

R/W

EXISTING RIGHT-OF-WAY

PR-R/W

PROPOSED RIGHT-OF-WAY

CURB AND GUTTER

SIGN

PROPOSED SWALE

HATCH LEGEND

CONCRETE SIDEWALK PER CITY OF DUBLIN STANDARD CONSTRUCTION DRAWING RD-05 TO BE CONSTRUCTED BY DEVELOPER AT THE TIME OF STREET CONSTRUCTION

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PUBLIC STREET, STORM, AND WATER IMPROVEMENTS

LIU TRAIL

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO

SITE PLAN

REVISIONS	DATE	SHEET NO.	DESCRIPTION

APPROVAL PENDING NOT FOR CONSTRUCTION

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DATE:

4/2/2025

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MJL

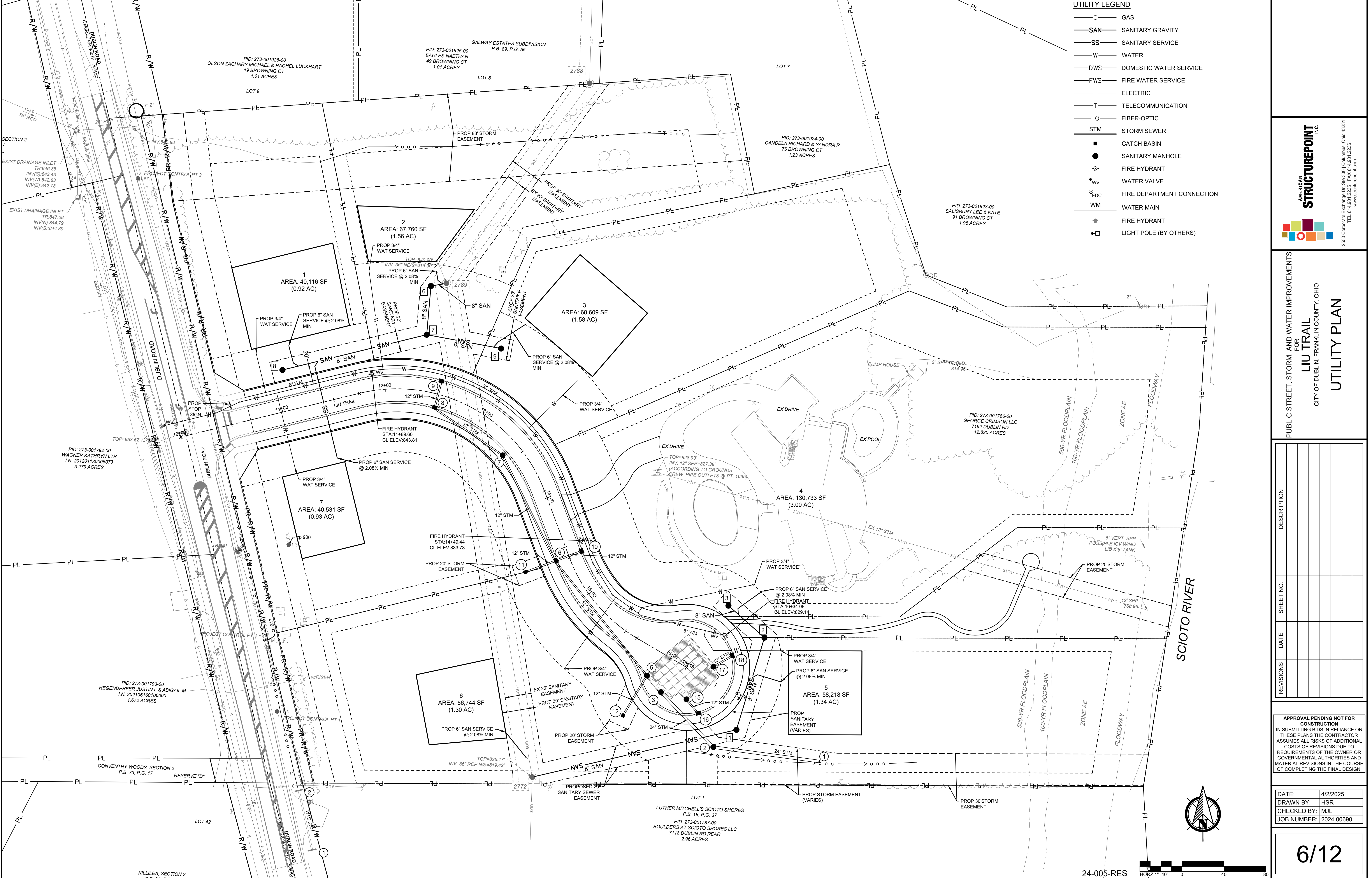
JOB NUMBER:

2024.00690

5/12

24-005-RES





**UTILITY LEGEND**

- G — GAS
- SAN — SANITARY GRAVITY
- SS — SANITARY SERVICE
- W — WATER
- DWS — DOMESTIC WATER SERVICE
- FWS — FIRE WATER SERVICE
- E — ELECTRIC
- T — TELECOMMUNICATION
- FO — FIBER-OPTIC
- STM — STORM SEWER
- CATCH BASIN
- SANITARY MANHOLE
- FIRE HYDRANT
- WATER VALVE
- FDC — FIRE DEPARTMENT CONNECTION
- WM — WATER MAIN
- FIRE HYDRANT
- LIGHT POLE (BY OTHERS)

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**LIU TRAIL**

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO

**UTILITY PLAN**

REVISIONS	DATE	SHEET NO.	DESCRIPTION

**APPROVAL PENDING NOT FOR CONSTRUCTION**

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DATE: 4/2/2025

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CHECKED BY: MJL

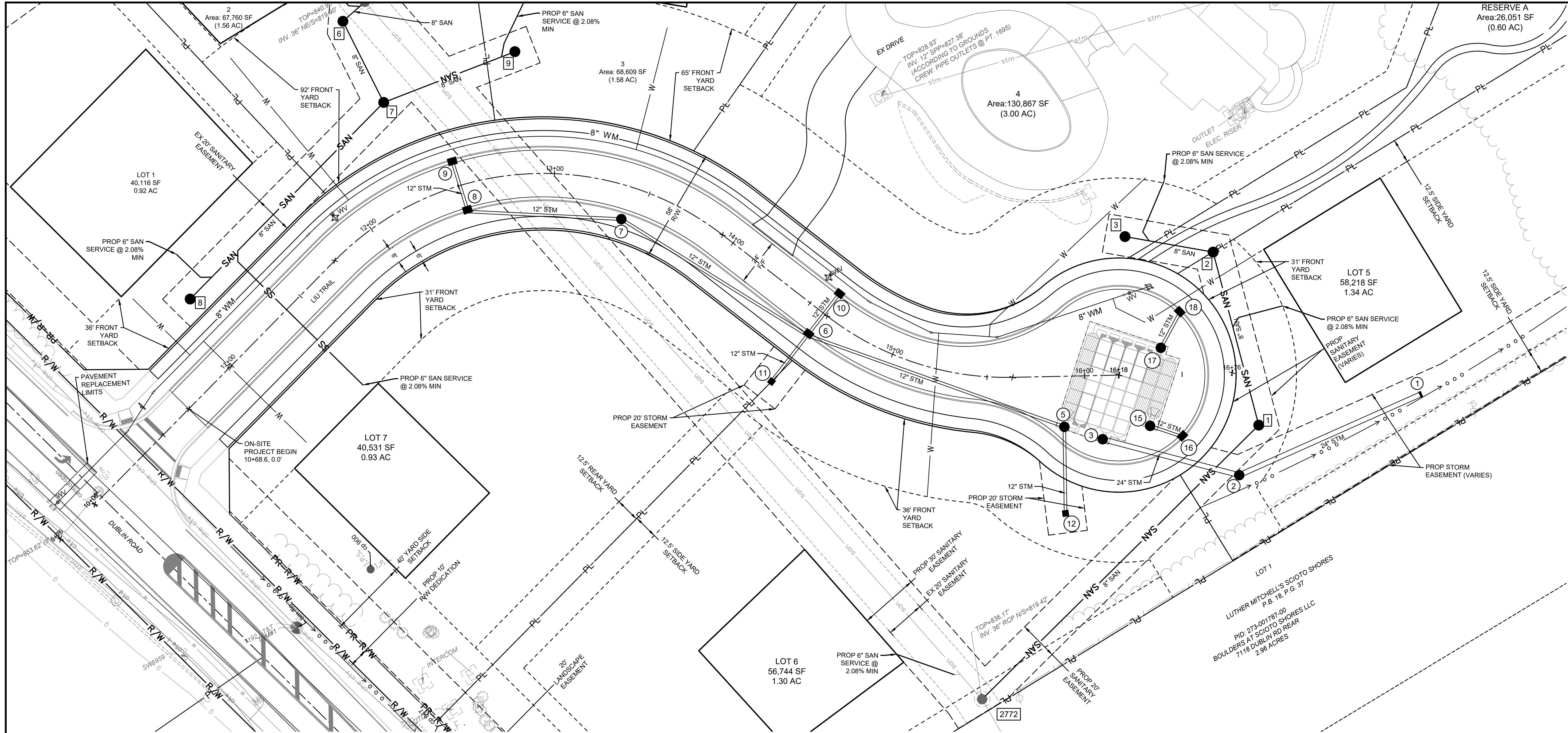
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**6/12**

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- UTILITY LEGEND**
- SAN — SANITARY MAIN
  - SS — SANITARY SERVICE
  - W — WATER
  - STM — STORM SEWER MAIN
  - XX — CATCH BASIN
  - XX — HEADWALL
  - XX — STORM MANHOLE
  - XX — SANITARY MANHOLE
  - — FIRE HYDRANT
  - — WATER VALVE
  - WM — WATER MAIN
  - — WATER TEE
  - — WATER BEND
  - — WATER REDUCER

- EXISTING LEGEND**
- PL — PROPERTY LINE
  - R/W — RIGHT-OF-WAY
  - — PAVEMENT/ SIDEWALK
  - — CURB
  - — ROAD CENTERLINE
  - stm — STORM SEWER
  - son — SANITARY SEWER
  - w — WATER LINE
  - g — GAS LINE
  - fo — FIBER OPTIC LINE
  - e — ELECTRIC
  - oh-e — OVERHEAD ELECTRIC
  - t — TELECOMMUNICATION
  - ctv — CABLE TELEVISION

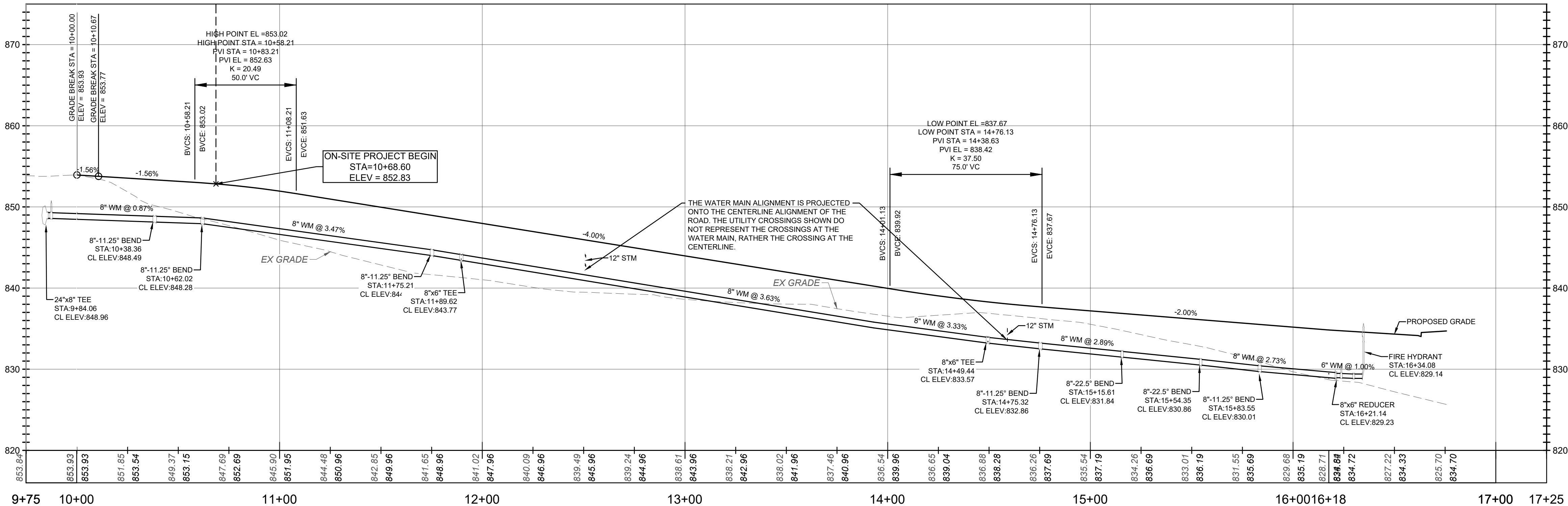


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PUBLIC STREET, STORM, AND WATER IMPROVEMENTS

LIU TRAIL  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO

## PLAN & PROFILE



24-005-RES

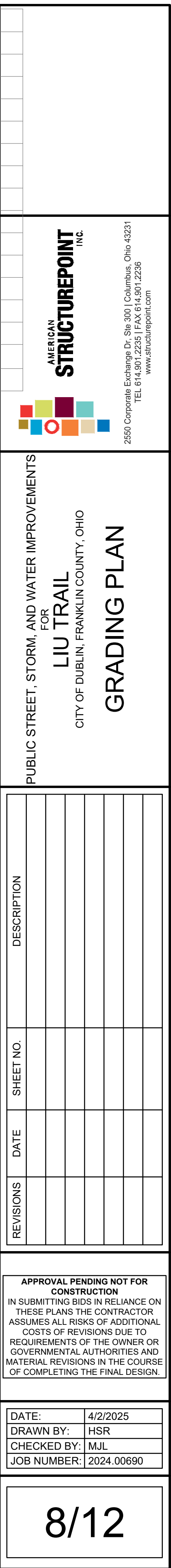
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**APPROVAL PENDING NOT FOR CONSTRUCTION**  
IN SUBMITTING BIDS IN RELIANCE ON THESE PLANS THE CONTRACTOR ASSUMES ALL RISKS OF ADDITIONAL COSTS OF REVISIONS DUE TO REQUIREMENTS OF THE OWNER OR GOVERNMENTAL AUTHORITIES AND MATERIAL REVISIONS IN THE COURSE OF COMPLETING THE FINAL DESIGN.

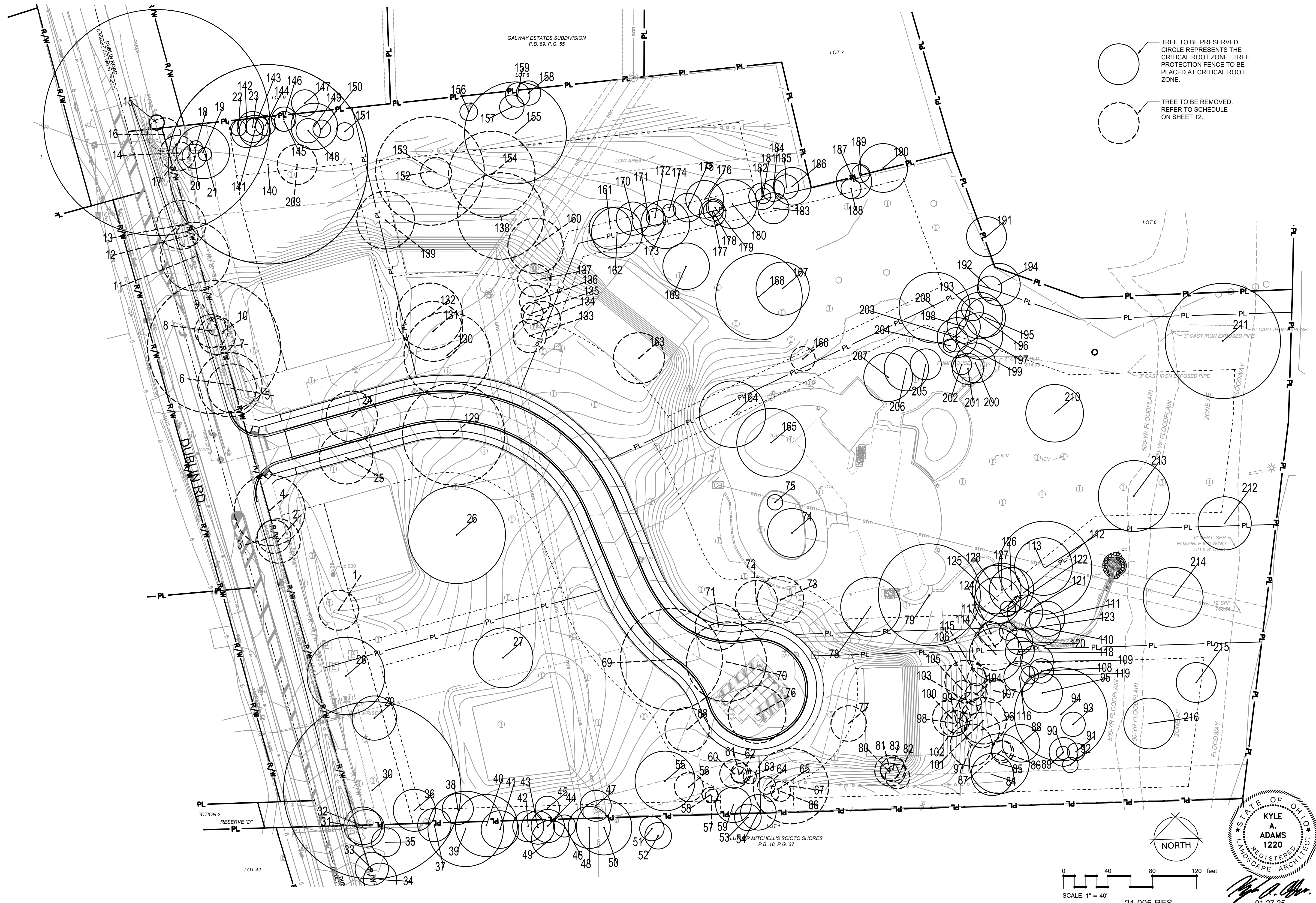
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JOB NUMBER: 2024.00690

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JOB NUMBER:	2024.00690



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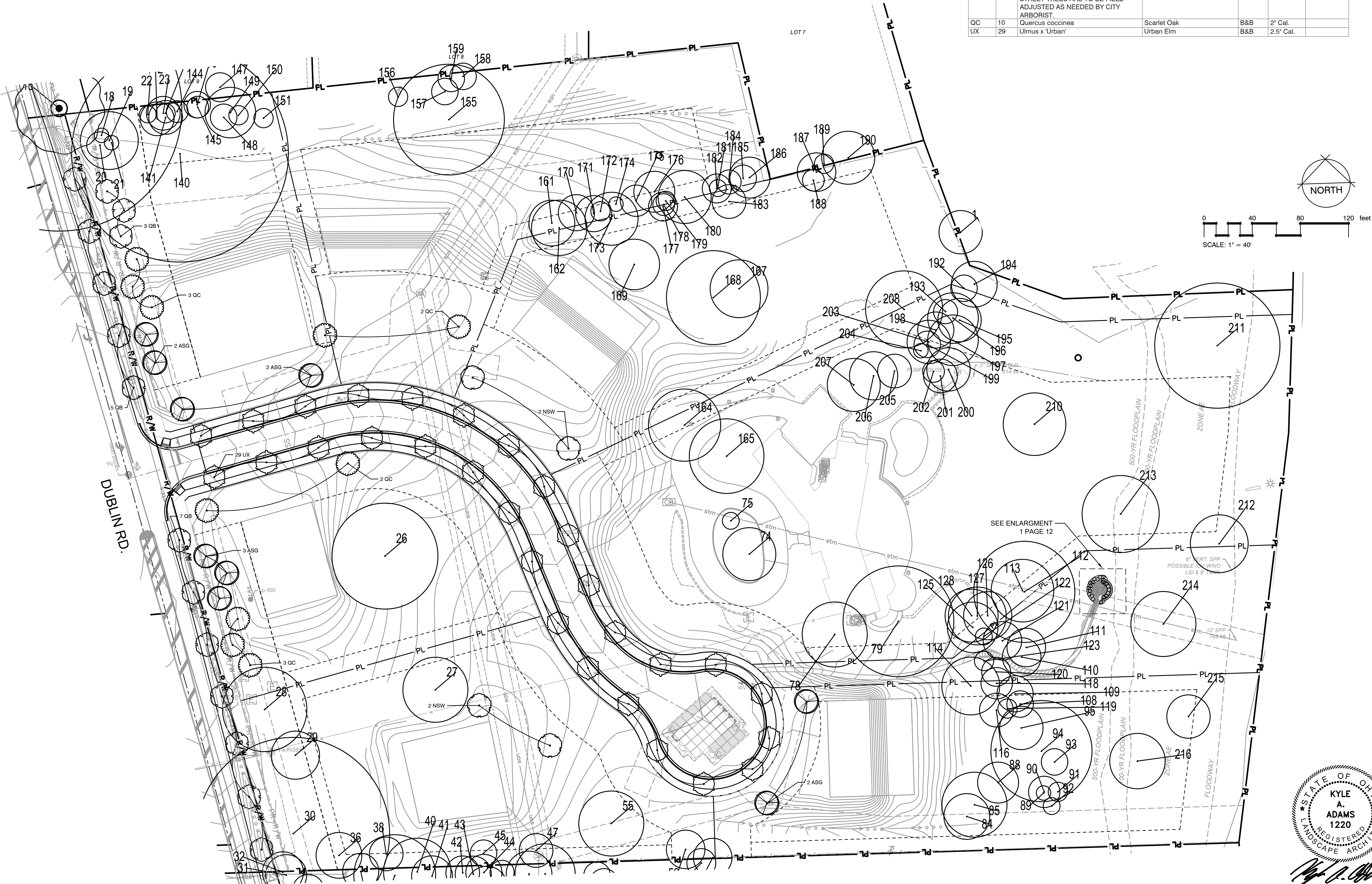
EXISTING TREES											
7192 Dublin Road - Dublin											
TREE NUMBER	SIZE	SPECIES	CONDITION	STATUS	PRIORITY 3	PRIORITY 2	PRIORITY 1	LANDMARK	REMARKS		
					PRESERVE	REMOVE	PRESERVE	REMOVE	PRESERVE	REMOVE	
1	18	DOGWOOD	GOOD	REMOVE				18			
2	20	RED CEDAR	GOOD	REMOVE				20			
3	15	RED CEDAR	POOR	REMOVE							
4	30	SPRUCE	GOOD	REMOVE				30			
5	22	CATALPA	GOOD	REMOVE		22					
6	29	MAPLE	FAIR	REMOVE						29	MULTI-STEM
7	60	MAPLE	FAIR	REMOVE						60	MULTI-STEM
8	15	MAPLE	FAIR	REMOVE			15				
9	8	MAPLE	POOR	REMOVE							
10	17	HACKBERRY	FAIR	REMOVE		17					
11	21	WALNUT	FAIR	REMOVE			21				
12	10	CHERRY	POOR	REMOVE							
13	22	CATALPA	GOOD	REMOVE		22					
14	16	ELM	FAIR	REMOVE			16				
15	102	HACKBERRY	FAIR	PRESERVE							
16	15	HACKBERRY	FAIR	PRESERVE			15				
17	8	CATALPA	FAIR	REMOVE		8					
18	6	CATALPA	FAIR	PRESERVE	6						
19	24	CATALPA	FAIR	PRESERVE				24			
20	11	LOCUST	FAIR	PRESERVE			11				
21	6	CATALPA	FAIR	PRESERVE	6						
22	7	WALNUT	FAIR	PRESERVE		7					
23	14	CATALPA	FAIR	PRESERVE	14						
24	23	DAK	FAIR	REMOVE				23			
25	24	DAK	FAIR	REMOVE					24		
26	44	MAPLE	GOOD	PRESERVE				44			
27	27	HICKORY	GOOD	PRESERVE				27			
28	35	HICKORY	GOOD	PRESERVE				35			
29	20	DAK	GOOD	PRESERVE			20				
30	80	MAPLE	FAIR	PRESERVE				80			
31	17	MULBERRY	FAIR	PRESERVE							
32	17	MAPLE	FAIR	PRESERVE		17					
33	15	HACKBERRY	POOR	PRESERVE							
34	15	MAPLE	POOR	PRESERVE							
35	13	SPRUCE	FAIR	PRESERVE							
36	19	PINE	GOOD	PRESERVE			19				
37	15	MULBERRY	FAIR	PRESERVE							
38	14	PINE	FAIR	PRESERVE		14					
39	34	WALNUT	FAIR	PRESERVE							
40	28	MAPLE	FAIR	PRESERVE							
41	17	MAPLE	FAIR	PRESERVE							
42	14	WALNUT	FAIR	PRESERVE							
43	15	MAPLE	FAIR	PRESERVE							
44	15	WALNUT	FAIR	PRESERVE							
45	11	PINE	FAIR	PRESERVE		11					
46	10	MAPLE	FAIR	PRESERVE							
47	14	PINE	GOOD	PRESERVE		14					
48	19	SPRUCE	POOR	PRESERVE							
49	17	MAPLE	FAIR	PRESERVE							
50	25	SPRUCE	FAIR	PRESERVE							
51	11	MAPLE	POOR	PRESERVE							
52	12	BOXELDER	POOR	PRESERVE							
53	12	SPRUCE	POOR	PRESERVE							
54	16	PINE	POOR	PRESERVE							
55	27	HICKORY	GOOD	PRESERVE			27				
56	13	PINE	FAIR	REMOVE		13					
57	6	HACKBERRY	FAIR	REMOVE		6					
58	7	MAPLE	FAIR	REMOVE		7					
59	16	CHERRY	FAIR	PRESERVE	16						
60	13	MAPLE	FAIR	REMOVE		13					
61	7	MAPLE	FAIR	REMOVE		7					
62	5	MAPLE	FAIR	REMOVE		9					
63	6	MAPLE	FAIR	PRESERVE		6					
64	8	PINE	POOR	REMOVE							
65	7	MAPLE	FAIR	REMOVE		7					
66	9	PINE	POOR	REMOVE							
67	34	WALNUT	FAIR	REMOVE						34	
68	20	MAPLE	FAIR	REMOVE				20			
69	46	MAPLE	FAIR	REMOVE					46		
70	36	MAPLE	FAIR	REMOVE					36		
71	21	LOCUST	GOOD	REMOVE							
72	19	LOCUST	GOOD	REMOVE				19			
73	21	LOCUST	GOOD	REMOVE				21			
74	22	LOCUST	GOOD	PRESERVE			22				
75	7	WALNUT	GOOD	PRESERVE		7					
76	26	MAPLE	FAIR	REMOVE					26		
77	16	MAPLE	GOOD	REMOVE		16					
78	27	MAPLE	GOOD	PRESERVE				27			
79	46	CHERRY	FAIR	PRESERVE				46			MULTI-STEM
80	8	CHERRY	POOR	REMOVE							
81	14	PINE	FAIR	REMOVE		14					
82	11	WALNUT	FAIR	REMOVE		11					
83	11	PINE	POOR	REMOVE							
84	19	MAPLE	GOOD	PRESERVE	19						
85	27	WALNUT	FAIR	PRESERVE				27			
86	10	HACKBERRY	FAIR	REMOVE		10					
87	9	HACKBERRY	FAIR	REMOVE		9					
88	17	HACKBERRY	POOR	PRESERVE							
89	6	MAPLE	FAIR	PRESERVE		6					
90	13	MAPLE	FAIR	PRESERVE		13					
91	8	MAPLE	FAIR	PRESERVE		8					
92	7	MAPLE	FAIR	PRESERVE		7					
93	11	MAPLE	GOOD	PRESERVE		11					
94	42	HACKBERRY	POOR	PRESERVE							
95	18	HACKBERRY	POOR	PRESERVE							
96	16	MAPLE	FAIR	REMOVE		16					
97	19	HACKBERRY	FAIR	REMOVE		19					
98	12	MAPLE	FAIR	REMOVE		12					
99	10	MAPLE	POOR	REMOVE							
100	47	HACKBERRY	POOR	REMOVE							
101	21	WALNUT	FAIR	REMOVE			21				
102	10	MAPLE	FAIR	REMOVE		10					
103	10	HACKBERRY	POOR	REMOVE							
104	10	MAPLE	FAIR	REMOVE		10					
105	6	MAPLE	POOR	REMOVE							
106	19	MAPLE	FAIR	REMOVE				19			
107	11	MAPLE	FAIR	REMOVE							
108	11	HACKBERRY	FAIR	PRESERVE		11					
109	15	MAPLE	FAIR	PRESERVE		15					
110	16	MAPLE	FAIR	PRESERVE		16					
111	16	WALNUT	FAIR	PRESERVE		16					
112	41	HACKBERRY	FAIR	PRESERVE				41			MULTI-STEM
113	26	MAPLE	FAIR	PRESERVE				26			
114	24	HACKBERRY	FAIR	PRESERVE				24			
115	8	MAPLE	FAIR	REMOVE							
116	14	MAPLE	FAIR	PRESERVE		14					
117	21	MAPLE	POOR	REMOVE							
118	13	MAPLE	FAIR	PRESERVE		13					
119	8	MAPLE	POOR	PRESERVE	8						
120	12	MAPLE	FAIR	PRESERVE		12					
121	16	MAPLE	FAIR	PRESERVE		16					
122	7	HACKBERRY	FAIR	PRESERVE		7					
123	8	HACKBERRY	FAIR	PRESERVE		8					
124	11	MAPLE	FAIR	REMOVE			11				
125	21	HACKBERRY	FAIR	PRESERVE			21				
126	20	HACKBERRY	FAIR	PRESERVE			20				
127	24	HACKBERRY	FAIR	PRESERVE				24			
128	22	HACKBERRY	FAIR	PRESERVE			22				
129	46	HICKORY	GOOD	REMOVE				46			
130	39	SPRUCE	GOOD	REMOVE				39			
131	27	SPRUCE	FAIR	REMOVE				27			
132	30	SPRUCE	FAIR	REMOVE				30			
133	15	PINE	FAIR	REMOVE		15					
134	17	PINE	FAIR	REMOVE		17					
135	10	PINE	FAIR	REMOVE		10					
136	14	PINE	FAIR	REMOVE		14					
137	15	PINE	DEAD	REMOVE							
138	39	ELM	FAIR	REMOVE				39			
139	26	PEAR	FAIR	REMOVE				26			
140	90	MAPLE	FAIR	PRESERVE				90			MULTI-STEM
141	14	CATALPA	FAIR	PRESERVE	14						
142	14	WALNUT	FAIR	PRESERVE		14					
143	8	MULBERRY	POOR	PRESERVE							
144	9	WALNUT	POOR	PRESERVE							
145	9	CATALPA	POOR	PRESERVE							
146	11	WALNUT	FAIR	PRESERVE							
147	12	WALNUT	FAIR	PRESERVE			11				
148	11	HACKBERRY	FAIR	PRESERVE							
149	21	CATALPA	FAIR	PRESERVE		21					
150	8	HACKBERRY	FAIR	PRESERVE		8					
151	8	HACKBERRY	FAIR	PRESERVE		8					
152	49	COTTONWOOD	FAIR	REMOVE				49			
153	14	COTTONWOOD	FAIR	REMOVE	14						

EXISTING TREES													
7192 Dublin Road - Dublin													
TREE NUMBER	SIZE	SPECIES	CONDITION	STATUS	PRIORITY 3		PRIORITY 2		PRIORITY 1		LANDMARK		REMARKS
					PRESERVE	REMOVE	PRESERVE	REMOVE	PRESERVE	REMOVE	PRESERVE	REMOVE	
154	39	ELM	POOR	REMOVE									
155	46	ELM	POOR	PRESERVE									
156	8	WALNUT	FAIR	PRESERVE			8						
157	11	WALNUT	FAIR	PRESERVE			11						
158	11	WALNUT	FAIR	PRESERVE			11						
159	11	CHERRY	POOR	PRESERVE									
160	25	MAPLE	FAIR	REMOVE								25	
161	19	MAPLE	FAIR	PRESERVE					19				
162	23	MAPLE	FAIR	PRESERVE					23				
163	23	MAPLE	GOOD	REMOVE						23			
164	30	HICKORY	GOOD	PRESERVE							30		
165	31	MAPLE	GOOD	PRESERVE							31		
166	11	PINE	FAIR	REMOVE			11						
167	24	PINE	FAIR	PRESERVE								24	
168	39	MAPLE	FAIR	PRESERVE								39	
169	21	PINE	GOOD	PRESERVE					21				
170	15	MAPLE	FAIR	PRESERVE			15						
171	15	MAPLE	FAIR	PRESERVE									
172	8	HACKBERRY	FAIR	PRESERVE			8						
173	22	MAPLE	FAIR	PRESERVE					22				
174	6	MAPLE	GOOD	PRESERVE			6						
175	13	MAPLE	GOOD	PRESERVE							13		
176	17	HACKBERRY	FAIR	PRESERVE			17						
177	12	MAPLE	FAIR	PRESERVE							12		
178	9	MAPLE	FAIR	PRESERVE			9						
179	6	MAPLE	FAIR	PRESERVE									
180	22	CHERRY	FAIR	PRESERVE	22								
181	7	HACKBERRY	FAIR	PRESERVE			7						
182	12	MAPLE	FAIR	PRESERVE			12						
183	14	WALNUT	FAIR	PRESERVE							14		
184	10	MAPLE	FAIR	PRESERVE			10						
185	11	MAPLE	FAIR	PRESERVE			11						
186	19	MAPLE	FAIR	PRESERVE					19				
187	16	LOCUST	GOOD	PRESERVE			16						
188	9	HACKBERRY	GOOD	PRESERVE			9						
189	8	MAPLE	GOOD	PRESERVE									
190	22	WALNUT	FAIR	PRESERVE					22				
191	19	WALNUT	FAIR	PRESERVE					18				
192	11	HACKBERRY	FAIR	PRESERVE			11						
193	10	MAPLE	GOOD	PRESERVE			10						
194	19	MAPLE	FAIR	PRESERVE							19		
195	18	SPRUCE	FAIR	PRESERVE							18		
196	21	SPRUCE	FAIR	PRESERVE							21		
197	21	SPRUCE	FAIR	PRESERVE							21		
198	15	HACKBERRY	FAIR	PRESERVE			15						
199	11	WALNUT	FAIR	PRESERVE			11						
200	18	WALNUT	GOOD	PRESERVE							18		
201	14	HACKBERRY	FAIR	PRESERVE			14						
202	9	MAPLE	GOOD	PRESERVE			9						
203	18	WALNUT	GOOD	PRESERVE							18		
204	6	REDBUD	GOOD	PRESERVE			6						
205	14	PEAR	FAIR	PRESERVE	14								
206	20	PEAR	GOOD	PRESERVE							20		
207	22	PEAR	FAIR	PRESERVE	22								
208	32	ELM	POOR	PRESERVE									
209	18	COTTONWOOD	FAIR	REMOVE	18								
210	26	HACKBERRY	GOOD	PRESERVE								26	
211	52	OAK	GOOD	PRESERVE								52	
212	24	SYCAMORE	GOOD	PRESERVE								24	
213	32	OAK	GOOD	PRESERVE								32	
214	27	OAK	GOOD	PRESERVE								27	
215	23	OAK	GOOD	PRESERVE							23		
216	18	OAK	GOOD	PRESERVE							18		
TOTALS	4111				5 TREES		27 TREES		451	245	800	566	566 INCHES



PLOT SCALE: 1" = 40' DATE: 4/2/25 - 12:04 PM EDITED BY: PLOUES DRAWING FILE: \COLUFS2\PROJECTS\2024\00690.D. DRAWINGS\CIVIL\CONSTRUCTION DOCUMENTS\SITE\CD\2024\00690.D.DWG

PLANT SCHEDULE						
CODE	QTY	BOTANICAL NAME	COMMON NAME	COND.	SIZE	SPACING
SHADE TREES						
ASG	9	Acer saccharum 'Green Mountain' TM	Green Mountain Sugar Maple	B&B	2" Cal.	As shown
NSW	4	Nyssa sylvatica 'Wildfire'	Wildfire Tupelo	B&B	2" Cal.	As Shown
QB	15	Quercus bicolor	Swamp White Oak	B&B	2.5" Cal.	
STREET TREES ARE TO BE FIELD ADJUSTED AS NEEDED BY CITY ARBORIST.						
OC	10	Quercus coccinea	Scarlet Oak	B&B	2" Cal.	
UX	29	Ulmus x 'Urban'	Urban Elm	B&B	2.5" Cal.	



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PUBLIC STREET, STORM, AND WATER IMPROVEMENTS  
FOR  
**LIU TRAIL**  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO  
**LANDSCAPE PLAN**

REVISIONS	DATE	SHEET NO.	DESCRIPTION

APPROVAL PENDING NOT FOR CONSTRUCTION

IN SUBMITTING BIDS IN RELIANCE ON THESE PLANS THE CONTRACTOR ASSUMES ALL RISKS OF ADDITIONAL COSTS OR REVISIONS DUE TO REQUIREMENTS OF THE OWNER OR GOVERNMENTAL AUTHORITIES AND MATERIAL REVISIONS IN THE COURSE OF COMPLETING THE FINAL DESIGN.

DATE:	4/2/2025
DRAWN BY:	PWJ
CHECKED BY:	KAA
JOB NUMBER:	2024.00690

11/12

KYLE  
A.  
ADAMS  
1220  
REGISTERED  
LANDSCAPE ARCHITECT

*Kyle A. Adams*

04.2.25



PLOT SCALE: 1"= 12'-0" PM EDITED BY: P.OJONES DRAWING FILE: \\C:\001\F252\PROJECTS\2024\00690.D DRAWINGS\CIVIL\CONSTRUCTION DOCUMENTS\ON SITE CDS\2024\00690.D IP DWG

SOIL PREPARATION (PERFORMANCE SPECIFICATION)  
PART 1 - GENERAL

- 1.1 SUMMARY
- A. Section includes planting soils specified according to performance requirements of the mixes.
- 1.2 DEFINITIONS
- A. CEC: Cation exchange capacity.
- B. Duff Layer: A surface layer of soil, typical of forested areas, that is composed of mostly decayed leaves, twigs, and detritus.
- C. Imported Soil: Soil that is transported to Project site for use.
- D. Manufactured Soil: Soil produced by blending soils, sand, stabilized organic soil amendments, and other materials to produce planting soil.
- E. Organic Matter: The total of organic materials in soil exclusive of undecayed plant and animal tissues, their partial decomposition products, and the soil biomass; also called "humus" or "soil organic matter."
- F. Planting Soil: Existing soil, or manufactured soil, or material used for the Resource Conservation and Recovery Act.
- G. RCRA Metals: Hazardous metals identified by the EPA under the Resource Conservation and Recovery Act.
- H. SSSA: Soil Science Society of America.
- I. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- J. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.
- K. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil"; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- L. USCC: U.S. Composting Council.

PART 2 - PRODUCTS

2.1 PLANTING SOILS SPECIFIED ACCORDING TO PERFORMANCE REQUIREMENTS

- A. Planting Soil Type 1: Existing, on-site surface soil, with the duff layer, if any, retained and stockpiled on-site; modified to produce viable planting soil. Using preconstruction soil analyses and materials specified in other articles of this Section, amend existing, on-site surface soil to become planting soil complying with the following requirements:
1. Particle Size Distribution by USDA Textures: Classified as sandy loam / loam / silt loam / loamy sand soil according to USDA textures.
2. Fragment Size Distribution:
- a. Coarse Fragments: Maximum 8 percent by dry weight.
- b. Sticks and Roots: Maximum 1 percent by dry weight.
- c. Debris and Other Foreign Materials: Maximum 1 percent by dry weight.
3. Percentage of Organic Matter: Minimum 3 percent by volume.
4. Soil Reaction: pH of 6 to 7.
5. CEC of Total Soil: Minimum 10 meq/100 mL at pH of 7.0.
6. Soluble-Salt Content: 5 to 10 dS/m measured by electrical conductivity.
7. Bulk Density: 1.0 g/cm. cm to 1.5 g/cm. cm at 85 percent compaction.
8. Total Porosity: Minimum 45 percent at 85 percent compaction.
9. Macro Porosity: Minimum 5 percent at 85 percent compaction.
10. RCRA Metals: Below maximum limits established by the EPA.
11. Phytotoxicity: Below phytotoxicity limits established by SSSA.

- B. Planting Soil Type 2: Manufactured soil consisting of manufacturer's basic topsoil, blended in a manufacturing facility with sand, stabilized organic soil amendments, and other materials as specified in other articles of this Section to produce viable planting soil.
1. Basic Properties: Manufactured soil shall not contain the following:
- a. Unacceptable Materials: Concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
- b. Unsuitable Materials: Stones, roots, plants, sod, clay lumps, and pockets of coarse sand that exceed a combined maximum of 5 percent by dry weight of the manufactured soil.
- c. Large Materials: Stones, clods, roots, clay lumps, and pockets of coarse sand exceeding 1-1/2 inches in any dimension.
2. Fragment Size Distribution:
- a. Coarse Fragments: Maximum 8 percent by dry weight.
- b. Sticks and Roots: Maximum 1 percent by dry weight.
- c. Debris and Other Foreign Materials: Maximum 1 percent by dry weight.
3. Percentage of Organic Matter: Minimum 6 percent by volume.
4. Soil Reaction: pH of 6 to 7.
5. CEC of Total Soil: Minimum 10 meq/100 mL at pH of 7.0.
6. Soluble-Salt Content: 5 to 10 dS/m measured by electrical conductivity.
7. Bulk Density: 1.0 g/cm. cm to 1.5 g/cm. cm at 85 percent compaction.
8. Total Porosity: Minimum 50 percent at 85 percent compaction.
9. Macro Porosity: Minimum 5 percent at 85 percent compaction.
10. RCRA Metals: Below maximum limits established by the EPA.
11. Phytotoxicity: Below phytotoxicity limits established by SSSA.

2.2 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent.
- B. Sulfur: Granular, biodegradable, and containing a minimum of 90 percent elemental sulfur, with a minimum of 99 percent passing through a No. 6 sieve and a maximum of 10 percent passing through a No. 40 sieve.
- C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
- D. Agricultural Gypsum: Minimum 90 percent calcium sulfate, finely ground with 90 percent passing through a No. 50 sieve.
- E. Sand: Clean, washed, natural or manufactured, free of toxic materials, and according to ASTM C33/C33M.
- 2.3 ORGANIC SOIL AMENDMENTS
- A. Compost: Well-composted, stable, and weed-free organic matter produced by composting feedstock, and bearing USCC's "Seal of Testing Assurance," and as follows:
1. Feedstock: Limited to leaves.
2. Reaction: pH of 5.5 to 6.
3. Soluble-Salt Concentration: Less than 4 dS/m.
4. Moisture Content: 35 to 55 percent by weight.
5. Organic-Matter Content: 50 to 60 percent of dry weight.
6. Particle Size: Minimum of 98 percent passing through a 2-inch sieve.
- B. Sphagnum Peat: Partially decomposed sphagnum peat moss, finely divided or of granular texture, a pH of 3.4 to 4.8, and a soluble-salt content measured by electrical conductivity of maximum 5 dS/m.
- C. Muck Peat: Partially decomposed moss peat, native peat, or reed-sedge peat, finely divided or of granular texture, a pH of 6 to 7.5, a soluble-salt content measured by electrical conductivity of maximum 5 dS/m, having a water-absorbing capacity of 1100 to 2000 percent, and containing no sand.
- D. Wood Derivatives: Shredded and composted, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture and free of chips, stones, sticks, soil, or toxic materials.
- E. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, debris, and material harmful to plant growth.
- 2.4 FERTILIZERS
- A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium.
- B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorous, and potassium.

PART 3 - EXECUTION

- 3.1 GENERAL
- A. Place planting soil and fertilizers according to requirements in other Specification Sections.
- B. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in planting soil.

3.2 PREPARATION OF UNAMENDED, ON-SITE SOIL BEFORE AMENDING

- A. Excavation: Excavate soil from designated area(s) to a depth of 6 inches and stockpile until amended.
- B. Unacceptable Materials: Clean soil of concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
- C. Unsuitable Materials: Clean soil to contain a combined maximum of 8 percent by dry weight of stones, roots, plants, sod, clay lumps, and pockets of coarse sand.
- D. Screening: Pass unamended soil through a 3-inch sieve to remove large materials.
- 3.3 PLACING AND MIXING PLANTING SOIL OVER EXPOSED SUBGRADE
- A. General: Apply and mix unamended soil with amendments on-site to produce required planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.
- B. Subgrade Preparation: Till subgrade to a minimum depth of 12 inches. Remove stones larger than 2 inches in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
- C. Mixing: Spread unamended soil to total depth of 6 inches, but not less than required to meet finish grades after mixing with amendments and natural settlement. Do not spread if soil or subgrade is frozen, muddy, or excessively wet.
1. Amendments: Apply soil amendments and fertilizer, if required, evenly on surface, and thoroughly blend them with unamended soil to produce planting soil.
- a. Mix lime and sulfur with dry soil before mixing fertilizer.
- b. Mix fertilizer with planting soil no more than seven days before planting.
2. Lifts: Apply and mix unamended soil and amendments in lifts not exceeding 8 inches in loose depth for material compacted by compaction equipment, and not more than 6 inches in loose depth for material compacted by hand-operated tampers.

- D. Compaction: Compact each blended lift of planting soil to 75 to 82 percent of maximum Standard Proctor density according to ASTM D698.
- E. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
- 3.4 PLACING MANUFACTURED PLANTING SOIL OVER EXPOSED SUBGRADE
- A. General: Apply manufactured soil on-site in its final, blended condition. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.
- B. Subgrade Preparation: Till subgrade to a minimum depth of 12 inches. Remove stones larger than 2 inches in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
- C. Application: Spread planting soil to total depth of 12 inches, but not less than required to meet finish grades after natural settlement. Do not spread if soil or subgrade is frozen, muddy, or excessively wet.
1. Lifts: Apply planting soil in lifts not exceeding 12 inches in loose depth for material compacted by compaction equipment, and not more than 6 inches in loose depth for material compacted by hand-operated tampers.
- D. Compaction: Compact each lift of planting soil to 75 to 82 percent of maximum Standard Proctor density according to ASTM D698.
- E. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.5 BLENDING PLANTING SOIL IN PLACE

- A. General: Mix amendments with in-place, unamended soil to produce required planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.
- B. Preparation: Till unamended, existing soil in planting areas to a minimum depth of 12 inches. Remove stones larger than 3 inches in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
- C. Mixing: Apply soil amendments and fertilizer, if required, evenly on surface, and thoroughly blend them into full depth of unamended, in-place soil to produce planting soil.
1. Mix lime and sulfur with dry soil before mixing fertilizer.
2. Mix fertilizer with planting soil no more than seven days before planting.
- D. Compaction: Compact blended planting soil to 75 to 82 percent of maximum Standard Proctor density according to ASTM D698.
- E. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

- fill depressions to meet finish grades.
- 3.6 FIELD QUALITY CONTROL
- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Perform the following tests:
1. Compaction: Test planting-soil compaction after placing each lift and at completion using a densitometer or soil-compaction meter calibrated to a reference test value based on laboratory testing according to ASTM D698. Space tests at no less than one for each 2000 sq. ft. of in-place soil or part thereof.
2. Performance Testing: For each amended planting-soil type, demonstrating compliance with specified performance requirements. Perform testing according to "Soil-Sampling Requirements" and "Testing Requirements" articles.
- C. Soil will be considered defective if it does not pass tests.
- D. Prepare test reports.
- E. Label each sample and test report with the date, location keyed to a site plan or other location system, visible conditions when and where sample was taken, and sampling depth.

3.7 PROTECTION AND CLEANING

- A. Protection Zone: Identify protection zones according to Section 015639 "Temporary Tree and Plant Protection."
- B. Protect areas of in-place soil from additional compaction, disturbance, and contamination. Prohibit the following practices within these areas except as required to perform planting operations:
1. Storage of construction materials, debris, or excavated material.
2. Parking vehicles or equipment.
3. Vehicle traffic.
4. Foot traffic.
5. Erection of sheds or structures.
6. Impoundment of water.
7. Excavation or other digging unless otherwise indicated.
- C. Remove surplus soil and waste material including excess subsoil, unsuitable materials, trash, and debris and legally dispose of them off Owner's property unless otherwise indicated.
- END OF SECTION

PLANTS, TREE WATERING DEVICES, MULCHES, EDGINGS

PART 1 - GENERAL

- 1.1 DEFINITIONS
- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant. Some sources classify herbicides separately from pesticides.
- C. Planting Soil: Existing, on-site soil, imported soil, or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 329115 "Soil Preparation (Performance Specification)" for drawing designations for planting soils.
- D. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.
- 1.2 CLOSEOUT SUBMITTALS
- A. Maintenance Data: Recommended procedures to be provided to Owner for maintenance of plants during a calendar year.
- 1.3 QUALITY ASSURANCE
- A. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
- 1.4 DELIVERY, STORAGE, AND HANDLING
- A. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind live trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.
- B. Handle planting stock by root ball.
- C. Store bulbs, corms, and tubers in a dry place at 60 to 65 deg F until planting.
- D. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.

1.5 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.
1. Failures include, but are not limited to, the following:
- a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner.
- b. Structural failures including plantings falling or blowing over.
2. Warranty Periods: From date of Substantial Completion.
- a. Trees, Shrubs, Vines, and Ornamental Grasses: 12 months.
- b. Ground Covers, Biennials, Perennials, and Other Plants: October 15<sup>th</sup> of year of Substantial Completion.
- c. Annuals: Two months.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL

- A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant List, Plant Schedule, or Plant Legend indicated on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Root-Ball Depth: Furnish plants with root balls measured from top of root ball, which begins at root flare according to ANSI Z60.1. Root flare shall be visible before planting.
- C. Annuals and Biennials: Provide healthy, disease-free plants of species and variety shown or listed, with well-established root systems reaching to sides of the container to maintain a firm ball, but not with excessive root growth encircling the container. Provide only plants that are acclimated to outdoor conditions before delivery and that are in bud but not yet in bloom.

2.2 FERTILIZERS

- A. Planting Tablets: Tightly compressed chit-type, long-lasting, slow-release, commercial-grade planting fertilizer in tablet form. Tablets shall break down with soil bacteria, converting nutrients into a form that can be absorbed by plant roots.
1. Size: 10-gram tablets.
2. Nutrient Composition: 20 percent nitrogen, 10 percent phosphorous, and 5 percent potassium, by weight plus micronutrients.

2.3 MULCHES

- A. Organic Mulch: Shredded hardwood.
- B. Mineral Mulch: Rounded riverbed gravel or smooth-faced stone, washed.
1. Size Range: 1-1/2 inches maximum, 3/4 inch minimum.
2. Color: Natural gravel full color range.

2.4 WEED-CONTROL BARRIERS

- A. Nonwoven Geotextile Filter Fabric: Polypropylene or polyester fabric, 3 oz./sq. yd. minimum, composed of fibers formed into a stable network so that fibers retain their relative position. Fabric shall be inert to biological degradation and resist naturally encountered chemicals, alkalis, and acids.

2.5 PESTICIDES

- A. General: Pesticide registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

2.6 LANDSCAPE EDGINGS

- A. Steel Edging: Standard commercial-steel edging, fabricated in sections of standard lengths, with loops stamped from or welded to face of sections to receive stakes.
1. Edging Size: 1/8 inch thick by 5-1/2 inches deep.
2. Finish: Black.
- B. Aluminum Edging: Standard-profile extruded-aluminum edging, ASTM B221, Alloy 6063-T6, fabricated in standard lengths with interlocking sections with loops stamped from face of sections to receive stakes.
1. Edging Size: 1/8 inch thick by 5-1/2 inches deep.
2. Finish: Black anodized.

2.7 TREE-WATERING DEVICES

- A. Slow-Release Watering Device: Standard product manufactured for drip irrigation of plants and emptying its water contents over an extended time period; manufactured from UV-light-stabilized nylon-reinforced polyethylene sheet, PVC, or HDPE plastic.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
- a. Spectrum Products, Inc.; Treegator® Original

PART 3 - EXECUTION

3.1 PLANTING AREA ESTABLISHMENT

- A. General: Prepare planting area for soil placement and mix planting soil according to "Soil Preparation (Performance Specification)."
- B. Placing Planting Soil: Place manufactured planting soil over exposed subgrade, unless otherwise indicated on Drawings.

3.2 EXCAVATION FOR TREES AND SHRUBS

- A. Planting Pits and Trenches: Excavate circular planting pits.
1. Excavate planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are unacceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.
2. Excavate approximately three times as wide as ball diameter.
3. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
- B. Backfill Soil: Subsoil and topsoil removed from excavations may be used as backfill soil unless otherwise indicated.
- 3.3 TREE, SHRUB, AND VINE PLANTING
- A. Inspection: At time of planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.
- B. Roots: Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
- C. Set each plant plumb and in center of planting pit or trench with root flare adjacent finish grades according to planting details.
1. Balled and Burlapped Stock: After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, ropes, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
2. Balled and Potted and Container-Grown Stock: Carefully remove root ball from container without damaging root ball or plant.

3. Fabric Bag-Grown Stock: Carefully remove root ball from fabric bag without damaging root ball or plant. Do not use planting stock if root ball is cracked or broken before or during planting operation.
4. Bare-Root Stock: Support stem of each plant and spread roots without tangling or turning toward surface. Plumb before backfilling, and maintain plumb while working. Carefully work backfill around roots by hand. Bring roots into close contact with the soil.
5. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat transferring until no air pockets are absorbed.
6. Place planting tablets equally distributed around each planting pit when pit is approximately one-half filled. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.
- a. Quantity: Per manufacturer recommendations.
7. Continue backfilling process. Water again after placing and tamping final layer of soil.
- D. Slopes: When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to the downhill side of the root ball.

3.4 TREE, SHRUB, AND VINE PRUNING

- A. Remove only dead, dying, or broken branches. Do not prune for shape.
- B. Prune, thin, and shape trees, shrubs, and vines as directed by Landscape Architect.
- C. Prune, thin, and shape trees, shrubs, and vines according to standard professional horticultural and arboricultural practices. Unless otherwise indicated by Landscape Architect, do not cut tree leaders; remove only injured, dying, or dead branches from trees and shrubs; and prune to retain natural character.
- D. Do not apply pruning paint to wounds.
- 3.5 GROUND COVER AND PLANT PLANTING
- A. Set out and space ground cover and plants other than trees, shrubs, and vines as indicated on Drawings in even rows with triangular spacing.
- B. Use planting soil as indicated on Drawings for backfill.
- C. Dig holes large enough to allow spreading of roots.
- D. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- E. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- F. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.6 PLANTING AREA MULCHING

- 3.7 INSTALLATION OF EDGING
- A. Steel Edging: Install steel edging where indicated according to manufacturer's written instructions. Anchor with steel stakes spaced approximately 30 inches apart, driven below top elevation of edging.
- B. Aluminum Edging: Install aluminum edging where indicated according to manufacturer's written instructions. Anchor with aluminum stakes spaced approximately 36 inches apart, driven below top elevation of edging.
- C. Shovel-Cut Edging: Separate mulched areas from turf areas with a 45-degree, 4- to 6-inch-deep, shovel-cut edge.
- 3.8 INSTALLATION OF SLOW-RELEASE WATERING DEVICE
- A. Provide one device for each tree.
- 3.9 PLANT MAINTENANCE
- A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.
- B. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
- C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.
- D. Apply pesticides and other chemical products and biological control agents according to authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- E. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
- F. If time of Substantial Completion for tree-watering devices are in good working order and leave them in place. Replace improperly functioning devices.

3.10 MAINTENANCE SERVICE

- A. Maintenance Service: Provide maintenance by skilled employees of landscape Installer. Maintain as required in "Plant Maintenance" Article. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established, but for not less than maintenance period below:
1. Maintenance Period for Trees and Shrubs: 12 months from date of Substantial Completion.
2. Maintenance Period for Ground Cover and Other Plants: October 15<sup>th</sup> of year of Substantial Completion.
- END OF SECTION

TURF AND GRASSES

PART 1 - GENERAL

- 1.1 DEFINITIONS
- A. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- B. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 329115 "Soil Preparation (Performance Specification)" and drawing designations for planting soils.
- 1.2 DELIVERY, STORAGE, AND HANDLING
- A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.
- B. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" sections in TPI's "Guideline Specifications to Turfgrass Sodding." Deliver sod within 24 hours of harvesting and in time for planting promptly. Protect sod from breakage and drying.

PART 2 - PRODUCTS

- 2.1 SEED
- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Rules for Testing Seeds" for purity and germination tolerances.
- B. Seed Species:
1. Quality Non-Seed Certified: Seed of grass species as listed below for solar exposure, with not less than 85 percent germination, not less than 95 percent pure seed, and not more than 0.5 percent weed seed:
- a. Full Sun and Partial Shade: Blend at least three locally appropriate strain varieties by weight as follows:
1. Turf-Type Tall Fescue, 40-80 percent
2. Turf-Type Perennial Ryegrass, 10-40 percent
3. Kentucky Bluegrass, 10-20 percent
- c. Shade: Blend at least three locally appropriate strain varieties by weight as follows:
1. Creeping Fescue, Chewings Fescue, and/or Hard Fescue, 40-70 percent
2. Turf-Type Perennial Ryegrass, 20-40 percent
3. Kentucky Bluegrass, 10-20 percent

2.2 FERTILIZERS

- A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
- B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorous, and potassium in the following composition:
1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
2. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
- a. Spectrum Products, Inc.; Treegator® Original

PART 3 - EXECUTION

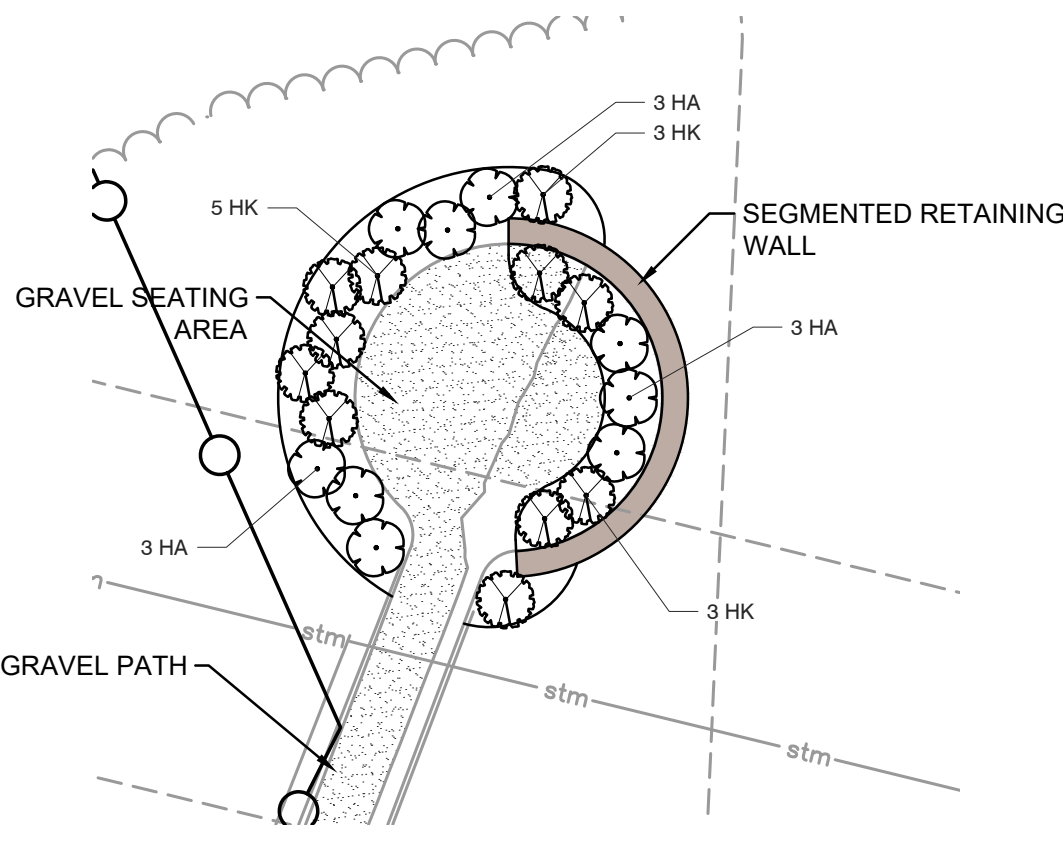
- 3.1 TURF AREA PREPARATION
- A. General: Prepare planting area for soil placement and mix planting soil according to "Soil Preparation (Performance Specification)", modify topsoil depth to 4 inches, minimum.
- B. Moisture prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

3.2 SEEDING

- A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph.
1. Evenly distribute seed by laying equal quantities in two directions at right angles to each other.
2. Do not use wet seed or seed that is moldy or otherwise damaged.
3. Do not seed against existing trees. Limit extent of seed to outside edge of planting saucer.
- B. Sow seed at a total rate of 8 lb/1000 sq. ft..
- C. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.
- D. Protect seeded areas with slopes not exceeding 1:8 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre to form a continuous blanket 1-1/2 inches in loose thickness over seeded areas.
1. Anchor straw mulch by crimping into soil with suitable mechanical equipment.
- 3.3 TURF MAINTENANCE
- A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and reseed to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
- B. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than one-third of grass length. Remove no more than one-third of grass-leaf growth in initial or subsequent mowings.

3.4 SATISFACTORY TURF

- A. Turf installations shall meet the following criteria:
1. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.
2. Satisfactory Seeded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.
- B. Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory.
- END OF SECTION



1 LANDSCAPE ENLARGEMENT

1" = 10'

PLANT SCHEDULE REPLACEMENT TREE

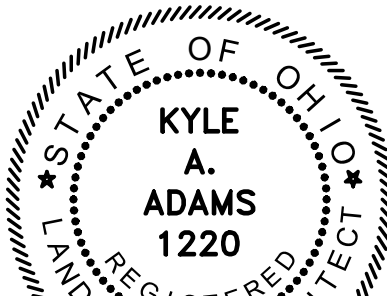
CODE	QTY	BOTANICAL NAME	COMMON NAME	COND.	SIZE
DECIDUOUS SHRUBS					
HA	9	Hydrangea macrophylla 'All Summer Beauty'	All Summer Beauty Hydrangea	CONT	3 Gal.
PERENNIALS					
HK	11	Hosta x 'Krossa Regal'	Krossa Regal Hosta	CONT	1 GAL



2 DECOMPOSED AGGREGATE PATH



3 RETAINING WALL



01.27.25

PUBLIC STREET, STORM, AND WATER IMPROVEMENTS

LIU TRAIL

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO

DESCRIPTION

SHEET NO.

DATE

REVISIONS

APPROVAL PENDING NOT FOR CONSTRUCTION  
IN SUBMITTING BIDS IN RELIANCE ON THESE PLANS THE CONTRACTOR ASSUMES ALL RISKS OF ADDITIONAL COSTS OF REVISIONS TO REQUIREMENTS OF THE OWNER OR GOVERNMENTAL AUTHORITIES AND MATERIAL REVISIONS IN THE COURSE OF COMPLETING THE FINAL DESIGN.

DATE: 4/2/2025  
DRAWN BY: PWJ  
CHECKED BY: KAA  
JOB NUMBER: 2024.00690

12/12



- 1 - TITLE SHEET
- 2 - GENERAL NOTES
- 3 - TYPICAL SECTIONS
- 4 - DEMOLITION PLAN
- 5 - MAINTENANCE OF TRAFFIC PLAN
- 6 - MAINTENANCE OF TRAFFIC PLAN PHASE 2
- 7 - SCHEMATIC PLAN
- 8 - PLAN & PROFILE
- 9 - PLAN & PROFILE
- 10 - SIGHT DISTANCE PLAN

WASHINGTON TOWNSHIP

EMERALD PKWY

270

GALWAY ESTATES

DUBLIN RD

SCOOT RIVER

PIETERSDIE DR

WASHINGTON TOWNSHIP

COVENTRY WOODS

KILLED

SHOOTING

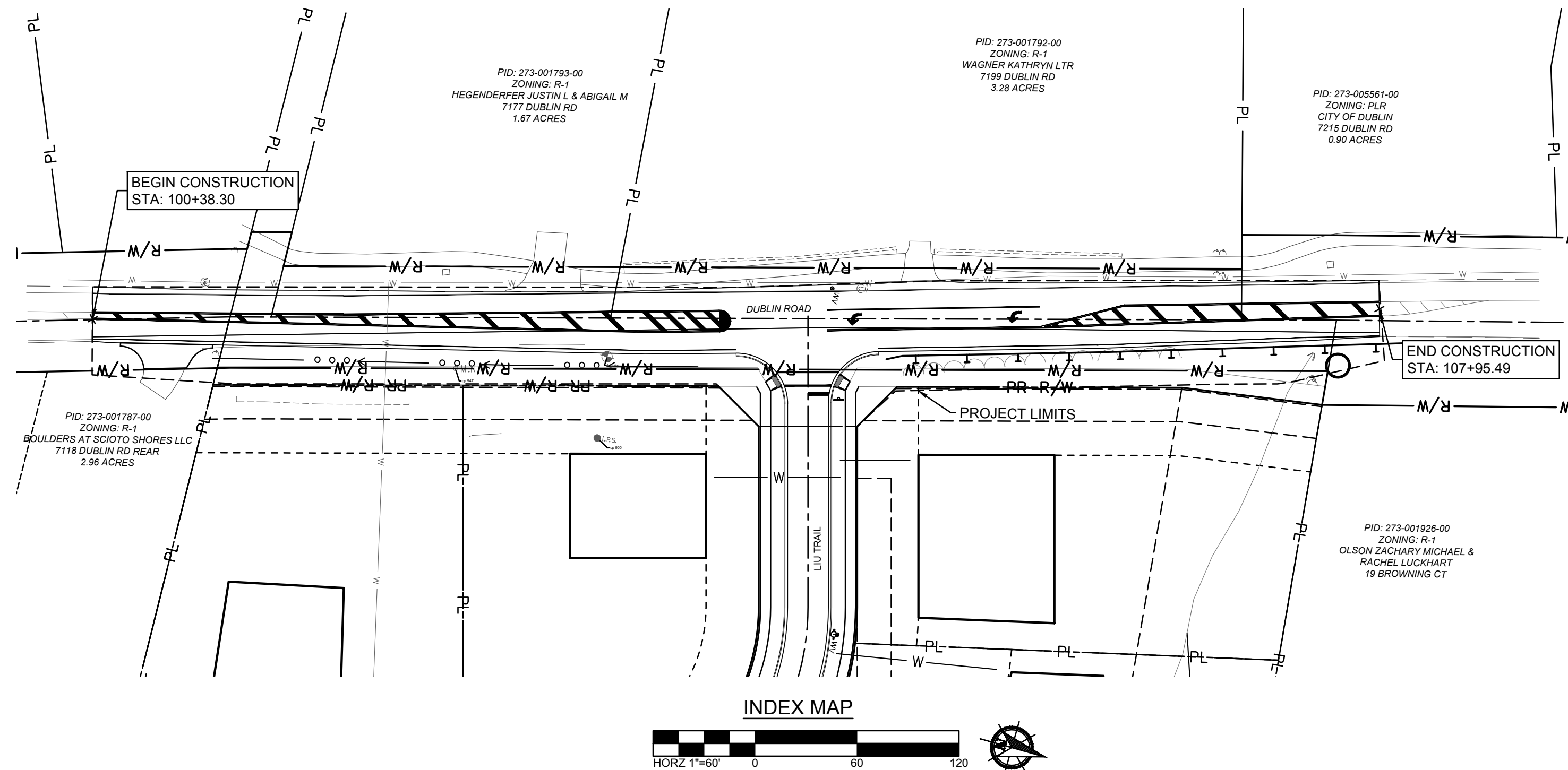
SITE

VICINITY MAP

NTS

North Arrow

DESIGN CRITERIA	<u>DESIGN SPEED</u>	<u>POSTED SPEED</u>
DUBLIN ROAD	50 MPH	45 MPH



<b>AMERITECH</b> 408 CRITES ROAD CIRCLEVILLE, OH 43113 PHONE: (740) 477-3658	DIVISION OF WATER 910 DUBLIN ROAD COLUMBUS, OH 43215 PHONE: (614) 645-7788
<b><u>AMERICAN ELECTRIC POWER</u></b> 850 TECH CENTER DRIVE GAHANNA, OH 43230 PHONE: (614) 883-6831	<b><u>COLUMBIA GAS OF OHIO</u></b> 200 S CIVIC CENTER DR COLUMBUS, OH 43215 PHONE: (614) 460-6000
<b><u>CITY OF DUBLIN</u></b> DIVISION OF ENGINEERING 5800 SHIER-RENSHAW ROAD DUBLIN, OH 43016 PHONE: (614) 410-4600	<b><u>TIME WARNER CABLE</u></b> 1980 ALUM CREEK DR COLUMBUS, OH 43207 PHONE: (614) 918-8439

BASIS OF BEARINGS
BEARINGS SHOWN HEREON ARE BASED ON GRID NORTH, REFERENCED TO THE OHIO STATE PLANE COORDINATE SYSTEM (SOUTH ZONE) AND THE NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT), AS ESTABLISHED UTILIZING A GPS SURVEY AND AN NGS OPUS SOLUTION

VERTICAL CONTROL				
ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, AS DERIVED FROM GNSS OBSERVATIONS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT) AND GEOID 18, AND AN NGS OPUS SOLUTION FOR CONTROL POINT 900. THE ELEVATIONS FOR ALL OTHER CONTROL POINTS AND BENCHMARKS LISTED HEREON WERE ESTABLISHED UTILIZING A DIFFERENTIAL LEVEL CIRCUIT ORIGINATING FROM CONTROL POINT 900.				
B.M.	DESCRIPTION	NORTHING (GROUND)	EASTING (GROUND)	ELEVATION
CP 900	5/8" IRON PIN SET W/ "ASI CONTROL POINT" CAP	770657.227	1796156.545	852.24
TBM 1	MAG NAIL FOUND IN POWER POLE +/- 72' NORTH OF THE DRIVE FOR 7192 DUBLIN ROAD, +/- 48' WEST OF CP 900, +/- 27' EAST OF THE CENTER LINE OF DUBLIN ROAD	N/A	N/A	853.64

**OWNER/ DEVELOPER**  
MR. JASON LIU  
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CONTACT: JASON LIU  
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**ARCHITECT**  
BASS STUDIO ARCHITECTS  
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PHONE: (614) 294-4893  
EMAIL: [WWW.BASSSTUDIOARCHITECTS.COM](http://WWW.BASSSTUDIOARCHITECTS.COM)

**ENGINEER**  
AMERICAN STRUCTUREPOINT  
2550 CORPORATE EXCHANGE DRIVE, SUITE 300  
COLUMBUS, OHIO 43231  
CONTACT: BENJAMIN SCHILLING  
PHONE: (614) 901-2235  
EMAIL: [BSCHILLING@STRUCTUREPOINT.COM](mailto:BSCHILLING@STRUCTUREPOINT.COM)

04/02/2025

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REGISTERED ENGINEER                      E-86125                      DATE

APPROVED:

CITY OF DUBLIN:  
SIGNATURES BELOW SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSE  
AND GENERAL LOCATION OF THE PROJECT AND DOES NOT CONSTITUTE  
ASSURANCE TO OPERATE AS INTENDED. ALL TECHNICAL DETAILS REMAIN THE  
RESPONSIBILITY OF THE PROFESSIONAL CIVIL ENGINEER PREPARING THE PLANS.

DIRECTOR OF ENGINEERING/CITY ENGINEER  
CITY OF DUBLIN, OHIO  
PAUL A. HAMMERSMITH, P.E.

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



AMERICAN  
**STRUCTUREPOINT**  
INC.

2550 Corporate Exchange Dr, Ste 300 | Columbus, Ohio 43231  
TEL 614.901.2235 | FAX 614.901.2236  
[www.structurepoint.com](http://www.structurepoint.com)

PUBLIC ROADWAY WIDENING PLANS  
FOR  
**DUBLIN ROAD**  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO  
**TITLE SHEET**

[illegible]

**APPROVAL PENDING NOT FOR CONSTRUCTION**  
IN SUBMITTING BIDS IN RELIANCE ON THESE PLANS THE CONTRACTOR ASSUMES ALL RISKS OF ADDITIONAL COSTS OF REVISIONS DUE TO REQUIREMENTS OF THE OWNER OR GOVERNMENTAL AUTHORITIES AND MATERIAL REVISIONS IN THE COURSE OF COMPLETING THE FINAL DESIGN.

DATE:	04/02/2025
DRAWN BY:	HSR
CHECKED BY:	MJL
JOB NUMBER:	2024.00690

1/10



PLOT SCALE: 1"=1' EDIT DATE: 4/22/25 - 3:17 PM EDITED BY: MLIE DRAWING FILE: O:\2024\0669\0-DRAWINGS\CIVIL\CONSTRUCTION DOCUMENTS\0669\0669\TS.DWG

GENERAL NOTES

1. CITY OF COLUMBUS 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 DEVELOPER OR 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 BENCHMARKS, 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 TIERED VEHICLES SHALL NOT BE MOVED ON OR ACROSS PUBLIC STREETS OR HIGHWAYS WITHOUT THE WRITTEN PERMISSION OF THE CITY ENGINEER.

10. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO EQUAL OR BETTER CONDITION THAN EXISTED BEFORE CONSTRUCTION. DRAINAGE DITCHES OR WATERCOURSES 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 COLUMBUS. 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 912 OF THE STANDARD SPECIFICATIONS OR FLOWABLE CDF, TYPE II ACCORDING TO ITEM 613. ITEM 911 OF THE STANDARD SPECIFICATIONS SHALL 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  
6555 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 BREAST 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 II) SHALL BE USED IN PLACE OF COMPACTED GRANULAR BACKFILL, ACCORDING TO ITEM 613 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 OR 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 ALL 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.

UTILITIES

1. THE FOLLOWING UTILITIES ARE KNOWN TO BE LOCATED WITHIN THE LIMITS OF THIS PROJECT:

AEP OHIO - ELECTRIC

BREEZELINE - TELECOM

COLUMBIA GAS OF OH-COLUMBUS - GAS

DUBLIN SEWER - SANITARY SEWER

DUBLIN WATER - WATER MAIN

DUBLIN DIVISION OF ENGINEERING - STORMWATER

AT&T - TELECOM

CHARTER COMM - TELECOM

2. THE CONTRACTOR SHALL GIVE NOTICE OF INTENT TO CONSTRUCT TO OHIO UTILITIES PROTECTION SERVICE (TELEPHONE NUMBER 800\_362\_2764), PRODUCER'S 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 ASSUMES 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.

6. PUBLIC STREET LIGHTING MAY BE IN THE VICINITY OF THIS PROJECT. CONTACT THE CITY OF DUBLIN, DIVISION OF ENGINEERING AT 410-4637, TWO DAYS PRIOR TO BEGINNING WORK.

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 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.

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.

EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR OR DEVELOPER 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 STORMWATER 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 OHIO EPA, ITEM 207 OF OHIO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AND THE CITY ENGINEER. AN INDIVIDUAL NPDES STORMWATER DISCHARGE PERMIT MAY BE REQUIRED. THE CONTRACTOR SHALL BE CONSIDERED THE 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: SEDIMENT BASINS, SILT FILTER FENCE, AGGREGATE CHECK DAMS, AND TEMPORARY GROUND COVER. HAY OR STRAW BALES ARE NOT PERMITTED.

4. THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE OF THE WORK AREA AT ALL TIMES CONSISTENT WITH EROSION CONTROL PRACTICES.

5. DISTURBED AREAS THAT WILL REMAIN UNWORKED FOR 30 DAYS OR MORE SHALL BE SEEDED 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.

BLASTING (IF PERMITTED)

1. THE CONTRACTOR MUST OBTAIN A BLASTING PERMIT FROM WASHINGTON TOWNSHIP FIRE DEPARTMENT PRIOR TO BLASTING FOR ROCK EXCAVATION. THE CONTRACTOR SHALL SUBMIT BLASTING REPORTS UPON COMPLETION OF BLASTING TO THE CITY ENGINEER, THE OWNER, AND THE OWNER'S ENGINEER. TOP OF ROCK ELEVATIONS SHALL BE SHOWN ON "AS\_BUILT" CONSTRUCTION DRAWINGS.

SANITARY SEWERS

1. CONNECTIONS TO THE SANITARY SEWER WILL BE PERMITTED UPON RECEIVING AN OEPA PERMIT TO INSTALL (PTI), AND UPON RECEIVING A SATISFACTORY LETTER FROM THE DESIGN ENGINEER STATING THAT THE PROJECT HAS BEEN CONSTRUCTED AS PER THE PLANS, AND ALL OF THE CONDITIONS OF THE PTI HAVE BEEN MET. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL REQUIRED OHIO EPA APPROVALS AND PAYING REVIEW FEES.

2. SANITARY SEWAGE COLLECTION SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RULES, REGULATIONS, STANDARDS AND SPECIFICATIONS OF THE CITY OF DUBLIN, OHIO EPA, OHIO DEPARTMENT OF HEALTH AND THE CURRENT EDITION OF THE GREAT LAKES-UPPER MISSISSIPPI RIVER BOARD (TEN STATES) - RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES.

3. THE MINIMUM REQUIREMENTS FOR SANITARY SEWER PIPE WITH DIAMETERS 8 INCHES TO 10 INCHES SHALL BE PVC SEWER PIPE ASTM D3034, SDR 35. PIPE FOR 6 INCH DIAMETER HOUSE SERVICE LINES SHALL BE PVC PIPE ASTM D3034, SDR 35. PVC PIPE SHALL NOT BE USED AT DEPTHS GREATER THAN 28 FEET. PIPE MATERIALS AND RELATED STRUCTURES SHALL BE SHOP TESTED IN ACCORDANCE WITH CITY OF COLUMBUS CONSTRUCTION INSPECTION DIVISION QUALITY CONTROL REQUIREMENTS.

4. THE MINIMUM REQUIREMENTS FOR SANITARY SEWER PIPES WITH DIAMETERS 12 INCHES TO 30 INCHES SHALL BE PVC SEWER PIPE, ASTM D3034, SDR 35 OR SANITITE HP PIPE, ASTM F2736. SANITARY SEWER PIPES WITH DIAMETERS 30 INCHES TO 60 INCHES SHALL BE PVC SEWER PIPE, ASTM D3034, SDR 35 OR SANITITE HP PIPE, ASTM F2764.

5. ALL IN\_LINE WYE AND TEE CONNECTIONS IN CONCRETE SEWERS, 18-INCH DIAMETER AND LARGER, SHALL BE EITHER KOR\_N\_TEE OR KOR\_N\_SEAL CONNECTIONS CONFORMING TO THE MANUFACTURER'S RECOMMENDATIONS.

6. GRANULAR BACKFILL SHALL BE COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS OR CONTROLLED DENSITY BACKFILL ACCORDING TO ITEM 613, TYPE II OF THE STANDARD SPECIFICATIONS AS DIRECTED BY THE CITY ENGINEER.

7. ALL MANHOLE LIDS SHALL BE PROVIDED WITH CONTINUOUS SELF\_SEALING GASKETS. THE APPROVED CONSTRUCTION DRAWINGS SHALL SHOW WHERE BOLT\_DOWN LIDS ARE REQUIRED. SANITARY SEWER MANHOLES SHALL BE PRECAST CONCRETE OR AS APPROVED BY THE CITY ENGINEER AND CONFORM TO THE CITY OF DUBLIN SANITARY MANHOLE STANDARD DRAWING. MANHOLE LIDS SHALL INCLUDE CITY OF DUBLIN LOGO.

8. ALL PVC SEWER PIPES SHALL BE DEFLECTION TESTED NO LESS THAN 60 DAYS AFTER COMPLETION OF BACKFILLING OPERATIONS. ALL OTHER REQUIREMENTS SHALL BE ACCORDING TO ITEM 901.21 OF THE STANDARD SPECIFICATIONS.

9. TEMPORARY BULKHEADS SHALL BE PLACED IN PIPES AT LOCATIONS SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS AND SHALL REMAIN IN PLACE UNTIL THE PERMIT TO INSTALL (PTI) HAS BEEN ISSUED BY THE OEPA AND THE SEWERS HAVE BEEN APPROVED FOR USE BY THE CITY ENGINEER. THE COST FOR FURNISHING, INSTALLING, MAINTAINING, AND REMOVING BULKHEADS SHALL BE INCLUDED IN THE CONTRACT UNIT BID PRICE FOR THE VARIOUS SANITARY SEWER ITEMS.

10. ALL SANITARY SEWERS INCLUDING SANITARY SEWER SERVICE LINES SHALL BE SUBJECTED TO AND PASS INFILTRATION OR EXFILTRATION TESTS ACCORDING TO ITEM 901 OF THE STANDARD SPECIFICATIONS AND MUST BE APPROVED FOR USE BY THE CITY ENGINEER BEFORE ANY SERVICE CONNECTIONS ARE TAPPED INTO SEWERS.

11. FOR SANITARY SEWER INFILTRATION, LEAKAGE THROUGH JOINTS SHALL NOT EXCEED 100 GALLONS PER INCH OF TRIBUTARY SEWER DIAMETER PER 24 HOURS PER MILE OF LENGTH OR THE COMPUTED EQUIVALENT. ALL SANITARY SEWERS SHALL BE TESTED.

12. AT THE DETERMINATION OF THE CITY ENGINEER, THE CONTRACTOR MAY BE REQUIRED TO PERFORM A TV INSPECTION OF THE SANITARY SEWER SYSTEM PRIOR TO FINAL ACCEPTANCE BY THE CITY. THIS WORK SHALL BE COMPLETED BY THE CONTRACTOR AT HIS EXPENSE.

13. VISIBLE LEAKS OR OTHER DEFECTS OBSERVED OR DISCOVERED DURING TV INSPECTION SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

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.

15. ALL WATER LINES SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY AND 18 INCHES VERTICALLY, FROM SANITARY SEWERS AND STORM SEWERS, TO THE GREATEST EXTENT PRACTICABLE. WHERE SANITARY SEWERS CROSS WATER MAINS OR OTHER SEWERS OR OTHER UTILITIES, TRENCH BACKFILL SHALL BE PLACED BETWEEN THE PIPES CROSSING AND SHALL BE COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS. IN THE EVENT THAT A WATER LINE MUST CROSS WITHIN 18 INCHES OF A SANITARY SEWER, THE SANITARY SEWER SHALL BE CONCRETE ENCASED OR CONSIST OF DUCTILE IRON PIPE MATERIAL.

16. SERVICE RISERS SHALL BE INSTALLED WHERE THE DEPTH FROM WYES TO PROPOSED GROUND ELEVATION EXCEEDS 10 FEET. TOPS OF RISERS SHALL BE NO LESS THAN 9 FEET BELOW PROPOSED GROUND ELEVATION IF BASEMENT SERVICE IS INTENDED.

17. WHERE SERVICE RISERS ARE NOT INSTALLED, A MINIMUM 5 FOOT LENGTH OF SANITARY SEWER SERVICE PIPE OF THE SAME SIZE AS THE WYE OPENING SHALL BE INSTALLED.

18. THE CONTRACTOR SHALL FURNISH AND PLACE, AS DIRECTED, APPROVED WYE POLES MADE OF 2 INCHES X 2 INCHES LUMBER AT ALL WYE LOCATIONS, ENDS OF EXTENDED SERVICES, OR AT THE END OF EACH RISER WHERE RISERS ARE REQUIRED. WYE POLES SHALL BE VISIBLE BEFORE ACCEPTANCE BY THE CITY. THE COST OF THESE POLES SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE VARIOUS SEWER ITEMS.

19. EXISTING SANITARY SEWER FLOWS SHALL BE MAINTAINED AT ALL TIMES. COSTS FOR PUMPING AND BYPASSING SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE BID FOR THE RELATED ITEMS.

20. THE CONTRACTOR SHALL FURNISH ALL MATERIAL, EQUIPMENT, AND LABOR TO MAKE CONNECTIONS TO EXISTING MANHOLES. THE SEWER PIPE TO MANHOLE CONNECTIONS FOR ALL SANITARY SEWERS SHALL BE FLEXIBLE AND WATERTIGHT. ALL HOLES SHALL BE NEATLY CORED. THE SEWER PIPE BARREL AT THE SPRINGLINE SHALL NOT EXTEND MORE THAN 1 INCH BEYOND THE INSIDE FACE OF THE MANHOLE. TO MAINTAIN FLEXIBILITY IN THE CONNECTION, A 1\_INCH SPACE SHALL BE LEFT BETWEEN THE END OF THE PIPE INSIDE THE MANHOLE AND THE CONCRETE CHANNEL; THIS SPACE SHALL BE FILLED WITH A WATERPROOF FLEXIBLE JOINT FILLER. ANY METAL THAT IS USED SHALL BE TYPE 300 SERIES STAINLESS STEEL. THE CONNECTION MAY BE ANY OF THE FOLLOWING TYPES:

A. RUBBER SLEEVE WITH STAINLESS STEEL BANDING.

1) KOR\_N\_SEAL AS MANUFACTURED BY NATIONAL POLLUTION CONTROL SYSTEMS, INC.

2) LOCK JOINT FLEXIBLE MANHOLE SLEEVE AS MANUFACTURED BY INTERPACE CORPORATION.

3) OR EQUAL AS APPROVED BY THE CITY ENGINEER.

B. RUBBER GASKET COMPRESSION.

1) PRESS WEDGE II AS MANUFACTURED BY PRESS\_SEAL GASKET CORPORATION.

2) DURA SEAL III AS MANUFACTURED BY DURA TECH, INC.

3) LINK\_SEAL AS MANUFACTURED BY THUNDERLINE CORPORATION.

4) OR EQUAL AS APPROVED BY THE CITY ENGINEER.

THE COST FOR THIS WORK ALONG WITH A NEW CHANNELIZED BASE FOR THE MANHOLE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE RELATED ITEMS OF WORK.

WATER LINE 1-17 DELETED

STORM SEWER 1-11 DELETED

MAIL DELIVERY

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

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 A 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.

AMERICAN  
STRUCTUREPOINT  
INC.

2550 Corporate Exchange Dr., Ste 300 | Columbus, Ohio 43219  
TEL: 614.461.1226  
www.structurepoint.com

PUBLIC ROADWAY WIDENING PLANS  
FOR  
DUBLIN ROAD  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO

GENERAL NOTES

REVISIONS	DATE	SHEET NO.	DESCRIPTION

APPROVAL PENDING NOT FOR CONSTRUCTION

IN SUBMITTING BIDS IN RELIANCE ON THESE PLANS THE CONTRACTOR ASSUMES ALL RISKS OF ADDITIONAL COSTS OR REVISIONS DUE TO REQUIREMENTS OF THE OWNER OR GOVERNMENTAL AUTHORITIES AND MATERIAL REVISIONS IN THE COURSE OF COMPLETING THE FINAL DESIGN.

DATE:

04/02/2025

DRAWN BY:

HSR

CHECKED BY:

MJL

JOB NUMBER:

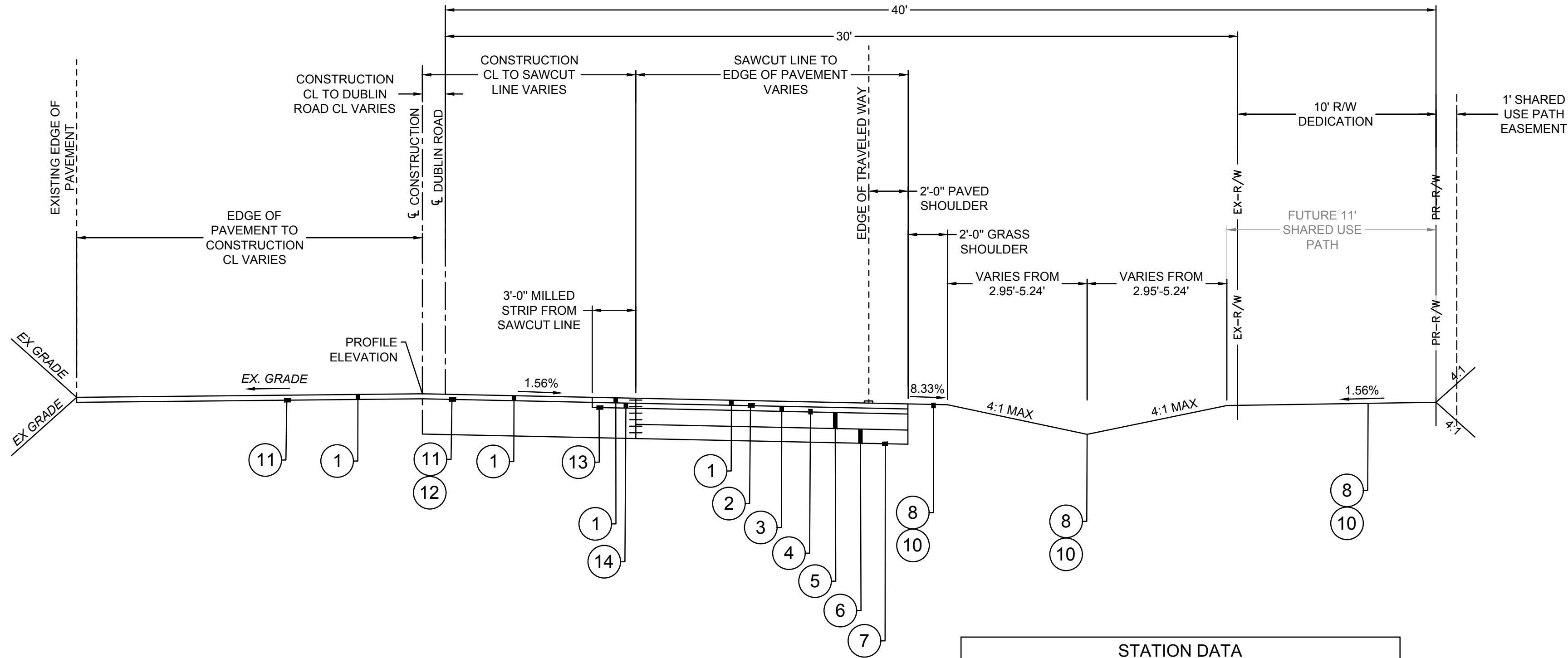
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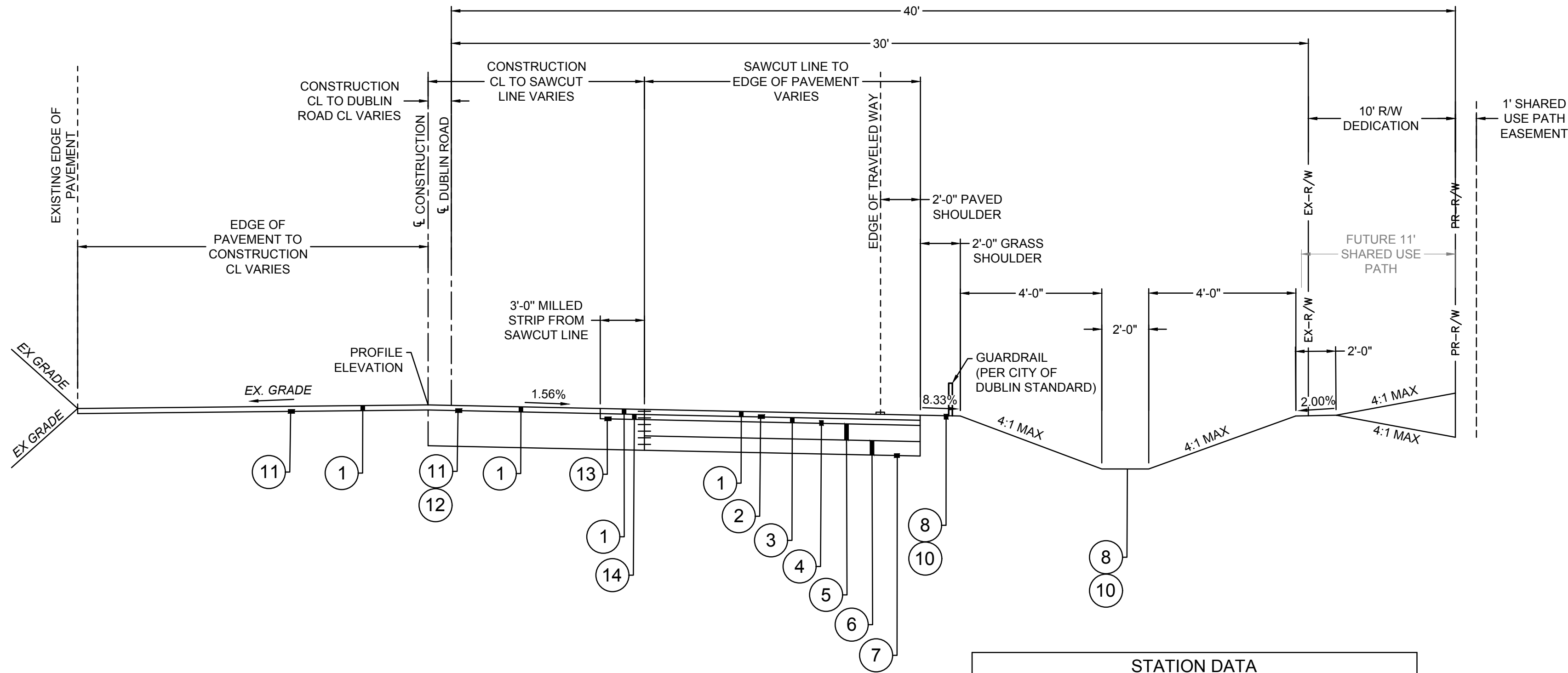


PLOT SCALE: 1"=1' EDIT DATE: 4/22/25 3:17 PM EDITED BY: MJLIE DRAWING FILE: O:\2024\00690.D DRAWINGS\CIVIL\CONSTRUCTION DOCUMENTS\00690.D\00690.TS.DWG



A TYPICAL SECTION - DUBLIN ROAD  
NOT TO SCALE

STATION DATA		
NAME	BEGIN STA	END STA
DUBLIN ROAD	100+38.29	104+05.0



B TYPICAL SECTION - DUBLIN ROAD  
NOT TO SCALE

STATION DATA		
NAME	BEGIN STA	END STA
DUBLIN ROAD	105+13.2	107+95.49

TYPICAL SECTION LEGEND	
①	ITEM 442 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG. 64-22
②	ITEM 407 - NON-TRACKING TACK COAT @ 0.075 GAL/S.Y.
③	ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), PG. 64-22
④	ITEM 407 - NON-TRACKING TACK COAT @ 0.10 GAL/S.Y.
⑤	ITEM 301 - 6" BITUMINOUS AGGREGATE BASE
⑥	ITEM 304 - 6" AGGREGATE BASE
⑦	ITEM 204 - SUBGRADE COMPACTION
⑧	ITEM 659 - SEEDING AND MULCHING, AS PER PLAN (SEE NOTE 32 ON GENERAL NOTE PAGE)
⑨	NOT USED
⑩	ITEM 653 - 3" TOPSOIL FURNISHED AND PLACED
⑪	ITEM 254 - PAVEMENT PLANING, 1 1/4" TYP
⑫	ITEM 442 - THICKNESS VARIES, ASPHALT CONCRETE INTERMEDIATE COURSE (WEDGE COURSE), 12.5MM, TYPE A (449), SEE VARIABLE THICKNESS TABLE BELOW
⑬	ITEM 254 - PAVEMENT PLANING, 2 1/2" TYP
⑭	ITEM 441 - 1 1/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), PG. 64-22



PUBLIC ROADWAY WIDENING PLANS  
FOR  
DUBLIN ROAD  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO  
TYPICAL SECTIONS

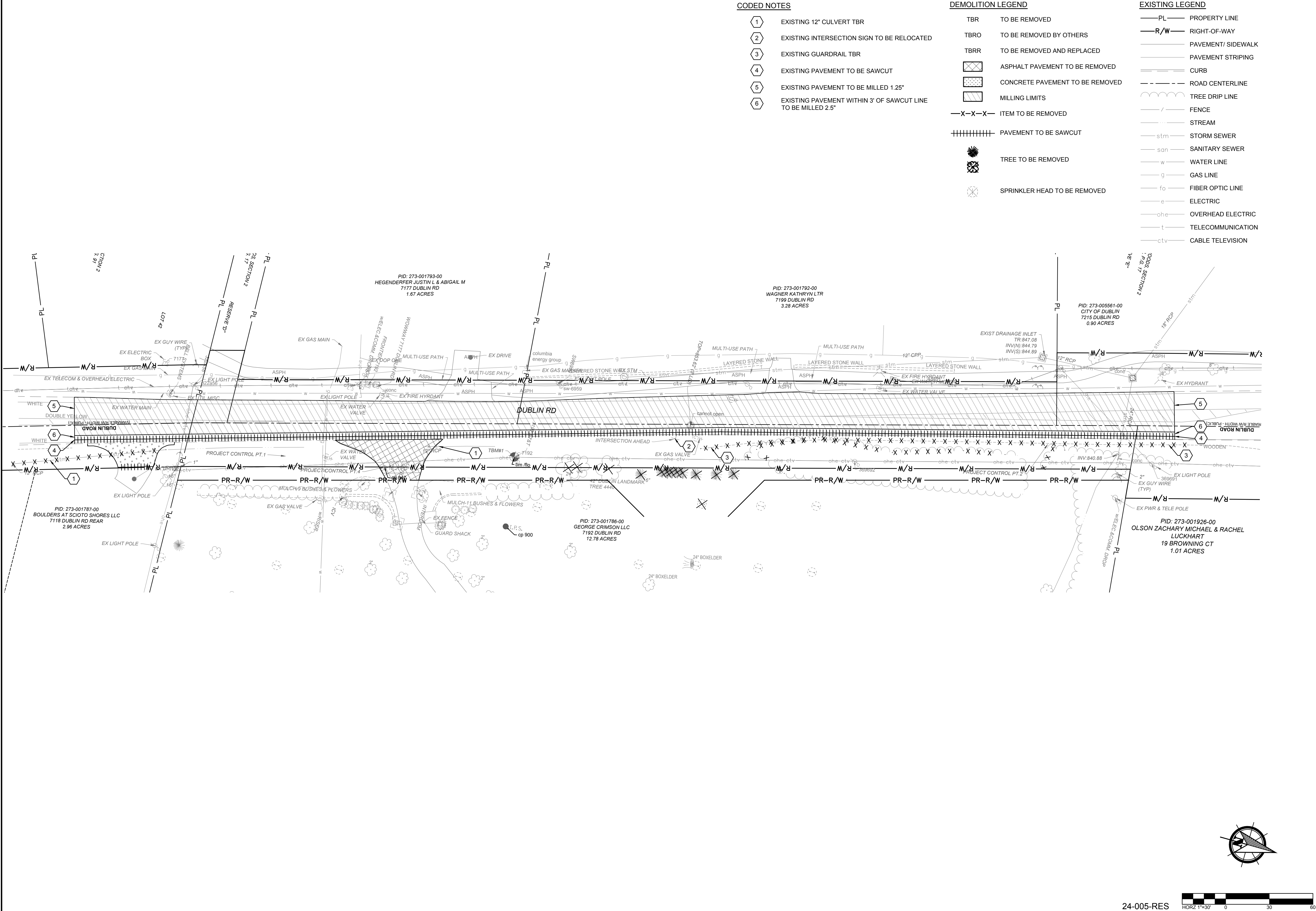
REVISIONS	DATE	SHEET NO.	DESCRIPTION

APPROVAL PENDING NOT FOR CONSTRUCTION  
IN SUBMITTING BIDS IN RELIANCE ON THESE PLANS THE CONTRACTOR ASSUMES ALL RISKS OF ADDITIONAL COSTS OF REVISIONS DUE TO REQUIREMENTS OF THE OWNER OR GOVERNMENTAL AUTHORITIES AND MATERIAL REVISIONS IN THE COURSE OF COMPLETING THE FINAL DESIGN.

DATE:	04/02/2025
DRAWN BY:	HSR
CHECKED BY:	MJL
JOB NUMBER:	2024.00690



PLOT SCALE: 1"=100' DATE: 12/25 - 10:45 AM EDITED BY: DANUGERAH DRAWING FILE: O:\2024\00690\00.DRAWINGSCIVIL\CONSTRUCTION DOCUMENTS\00690.DWG



CODED NOTES

- 1 EXISTING 12" CULVERT TBR
- 2 EXISTING INTERSECTION SIGN TO BE RELOCATED
- 3 EXISTING GUARDRAIL TBR
- 4 EXISTING PAVEMENT TO BE SAWCUT
- 5 EXISTING PAVEMENT TO BE MILLED 1.25"
- 6 EXISTING PAVEMENT WITHIN 3' OF SAWCUT LINE TO BE MILLED 2.5"

DEMOLITION LEGEND

- TBR TO BE REMOVED
- TBRO TO BE REMOVED BY OTHERS
- TBRR TO BE REMOVED AND REPLACED
- ASPHALT PAVEMENT TO BE REMOVED
- CONCRETE PAVEMENT TO BE REMOVED
- MILLING LIMITS
- ITEM TO BE REMOVED
- PAVEMENT TO BE SAWCUT
- TREE TO BE REMOVED
- SPRINKLER HEAD TO BE REMOVED

EXISTING LEGEND

- PL PROPERTY LINE
- R/W RIGHT-OF-WAY
- PAVEMENT/ SIDEWALK
- PAVEMENT STRIPING
- CURB
- ROAD CENTERLINE
- TREE DRIP LINE
- FENCE
- STREAM
- STM STORM SEWER
- SSN SANITARY SEWER
- W WATER LINE
- G GAS LINE
- FO FIBER OPTIC LINE
- E ELECTRIC
- OHE OVERHEAD ELECTRIC
- T TELECOMMUNICATION
- CTV CABLE TELEVISION

PUBLIC ROADWAY WIDENING PLANS  
FOR  
DUBLIN ROAD  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO  
DEMOLITION PLAN

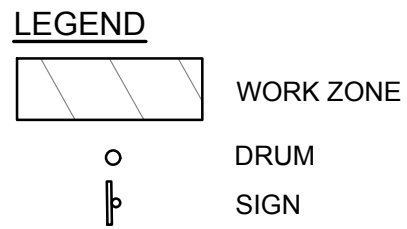
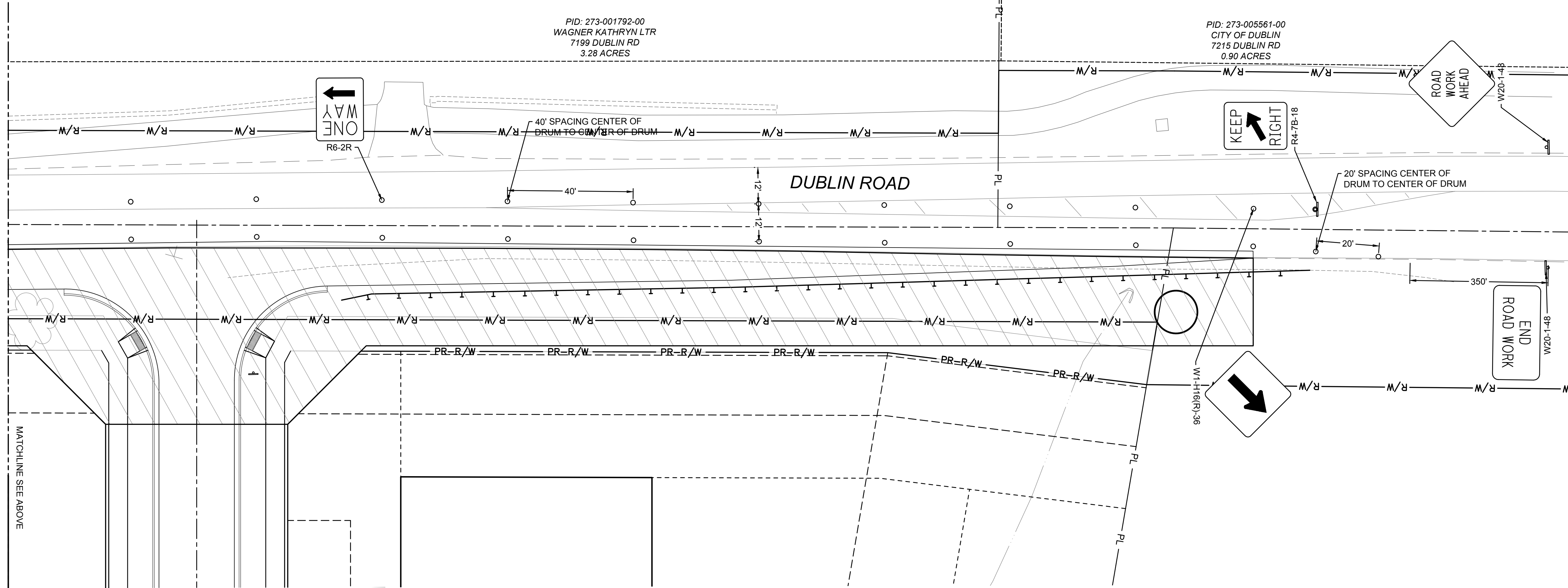
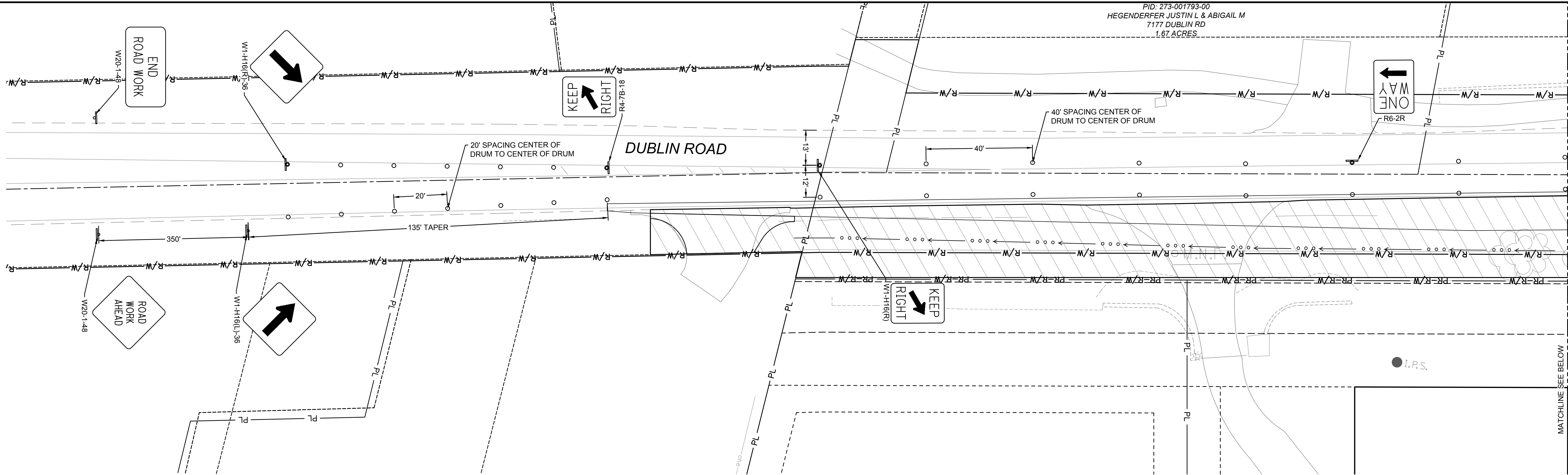
REVISIONS	DATE	SHEET NO.	DESCRIPTION

APPROVAL PENDING NOT FOR CONSTRUCTION  
IN SUBMITTING BIDS IN RELIANCE ON THESE PLANS THE CONTRACTOR ASSUMES ALL RISKS OF ADDITIONAL COSTS OF REVISIONS DUE TO REQUIREMENTS OF THE OWNER OR GOVERNMENTAL AUTHORITIES AND MATERIAL REVISIONS IN THE COURSE OF COMPLETING THE FINAL DESIGN.

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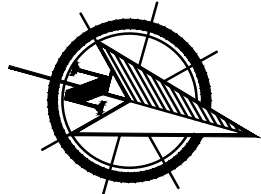


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PHASE 1:  
MOT DURING INSTALLATION OF TURN LANE.

NOTES:  
CONTRACTOR TO MAINTAIN ACCESS TO ALL DRIVES DURING CONSTRUCTION  
NO PEDESTRIAN TRAVEL IS PERMITTED WITHIN WORK ZONE AREAS



24-005-RES

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PUBLIC ROADWAY WIDENING PLANS  
FOR  
**DUBLIN ROAD**  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO

**MAINTENANCE OF  
TRAFFIC PLAN**

REVISIONS	DATE	SHEET NO.	DESCRIPTION

APPROVAL PENDING NOT FOR CONSTRUCTION

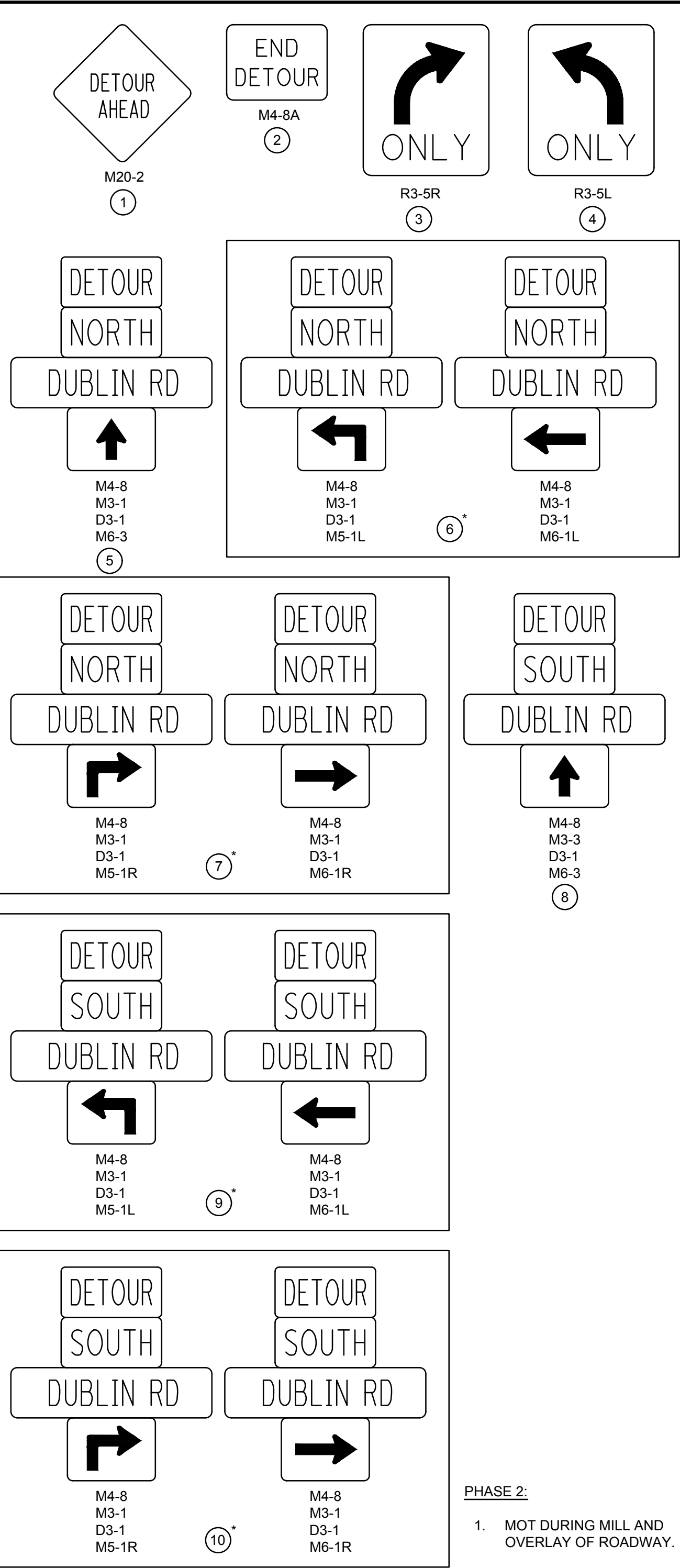
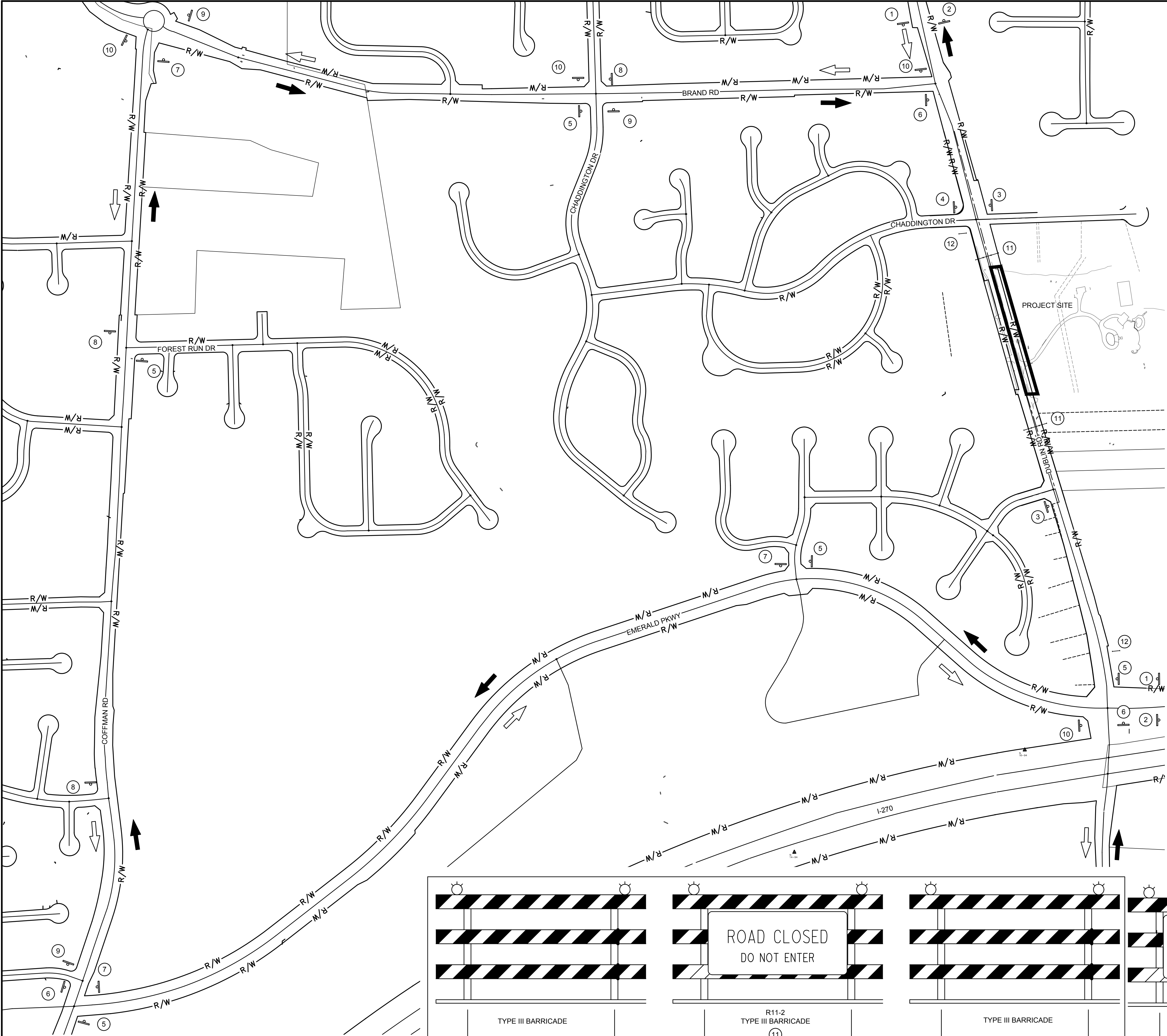
IN SUBMITTING BIDS IN RELIANCE ON THESE PLANS THE CONTRACTOR ASSUMES ALL RISKS OF ADDITIONAL COSTS OF REVISIONS DUE TO REQUIREMENTS OF THE OWNER OR GOVERNMENTAL AUTHORITIES AND MATERIAL REVISIONS IN THE COURSE OF COMPLETING THE FINAL DESIGN.

DATE:	04/02/2025
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CHECKED BY:	MJL
JOB NUMBER:	2024.00690

5/10



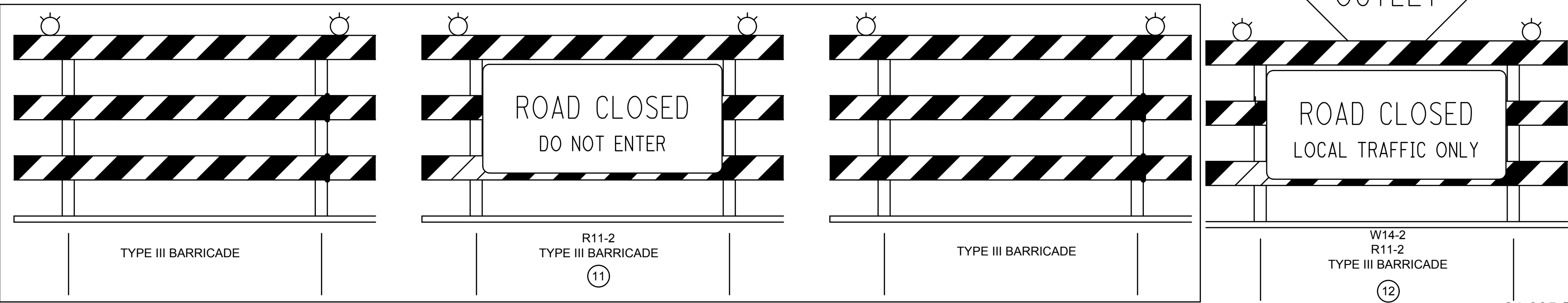
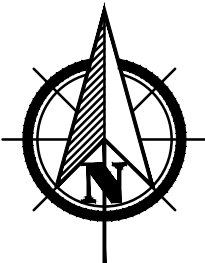
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PHASE 2:  
1. MOT DURING MILL AND OVERLAY OF ROADWAY.

- NOTES:
- CONTRACTOR TO MAINTAIN LOCAL ACCESS TO RESIDENTIAL DRIVEWAYS AND ACCESS FOR EMERGENCY RESPONDERS, MAIL DELIVERIES, ETC.

- LEGEND
- NB DETOURED TRAFFIC
  - SB DETOURED TRAFFIC
  - SIGN
  - SIGNS PLACED IN SEQUENCE
  - TYPE III BARRICADE



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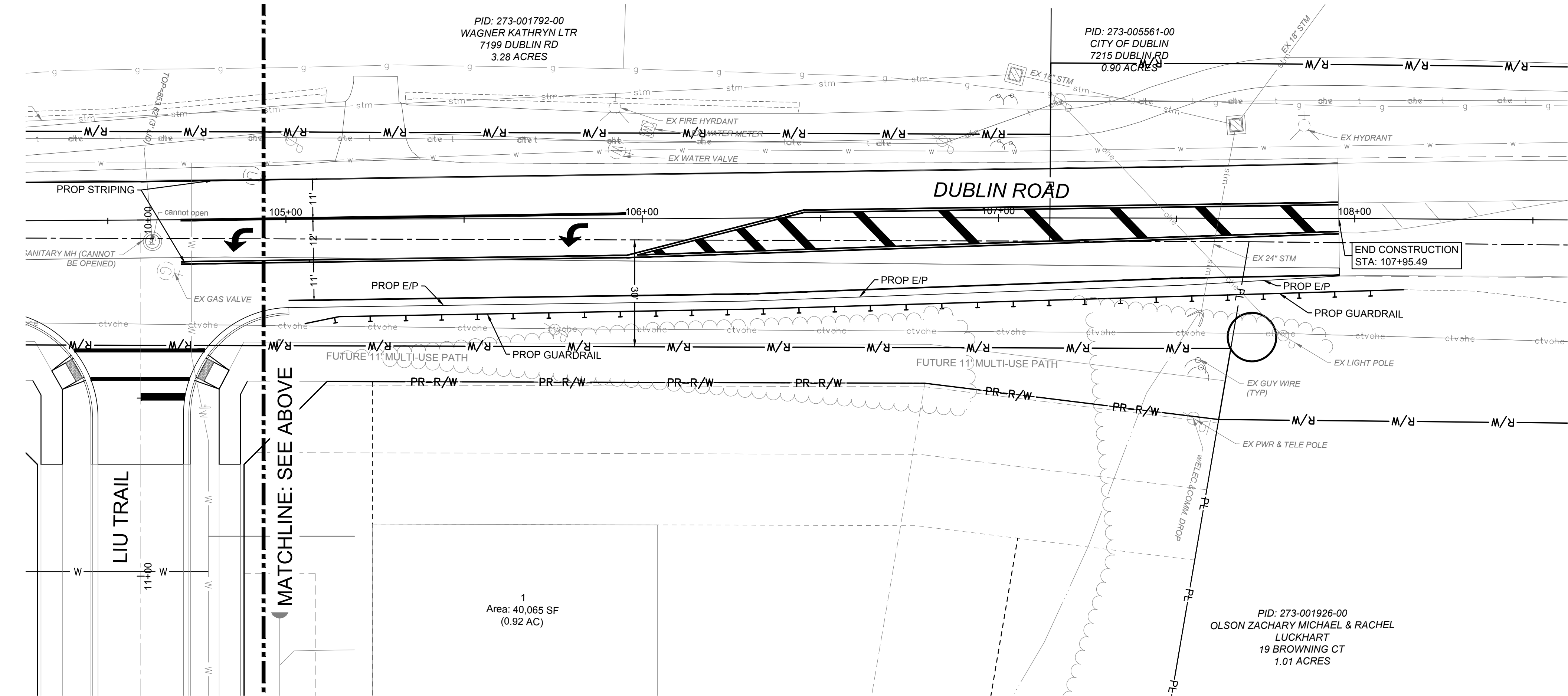
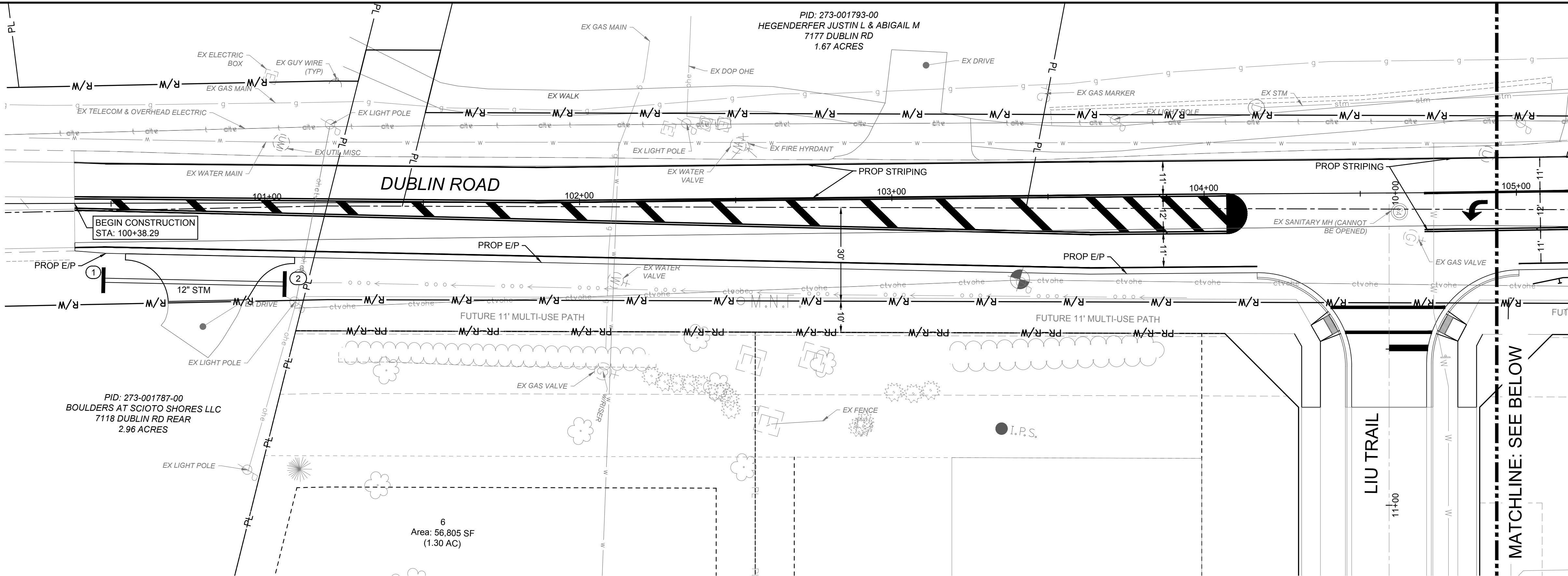
PUBLIC ROADWAY WIDENING PLANS  
FOR  
**DUBLIN ROAD**  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO  
**MAINTENANCE OF  
TRAFFIC PLAN PHASE 2**

REVISIONS	DATE	SHEET NO.	DESCRIPTION

APPROVAL PENDING NOT FOR CONSTRUCTION	
IN SUBMITTING BIDS IN RELIANCE ON THESE PLANS THE CONTRACTOR ASSUMES ALL RISKS OF ADDITIONAL COSTS OF REVISIONS DUE TO REQUIREMENTS OF THE OWNER OR GOVERNMENTAL AUTHORITIES AND MATERIAL REVISIONS IN THE COURSE OF COMPLETING THE FINAL DESIGN.	
DATE:	04/02/2025
DRAWN BY:	HSR
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JOB NUMBER:	2024.00690



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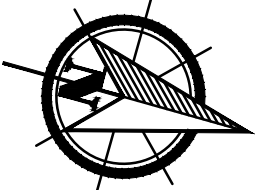


EXISTING LEGEND

- PL PROPERTY LINE
- R/W RIGHT-OF-WAY
- PAVEMENT/ SIDEWALK
- PAVEMENT STRIPING
- CURB
- ROAD CENTERLINE
- TREE DRIP LINE
- FENCE
- STREAM
- stm STORM SEWER
- san SANITARY SEWER
- w WATER LINE
- g GAS LINE
- fo FIBER OPTIC LINE
- e ELECTRIC
- ohe OVERHEAD ELECTRIC
- t TELECOMMUNICATION
- ctv CABLE TELEVISION

SITE LEGEND

- PL PROPERTY LINE
- R/W RIGHT-OF-WAY
- STRAIGHT CURB
- CURB AND GUTTER
- SIGN
- CONCRETE BOLLARD
- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD DUTY ASPHALT PAVEMENT
- HEAVY DUTY CONCRETE
- CONCRETE WALK
- GRAVEL PATH
- PAVEMENT MARKINGS



24-005-RES



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PUBLIC ROADWAY WIDENING PLANS  
FOR  
**DUBLIN ROAD**  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO  
**SCHEMATIC PLAN**

REVISIONS	DATE	SHEET NO.	DESCRIPTION

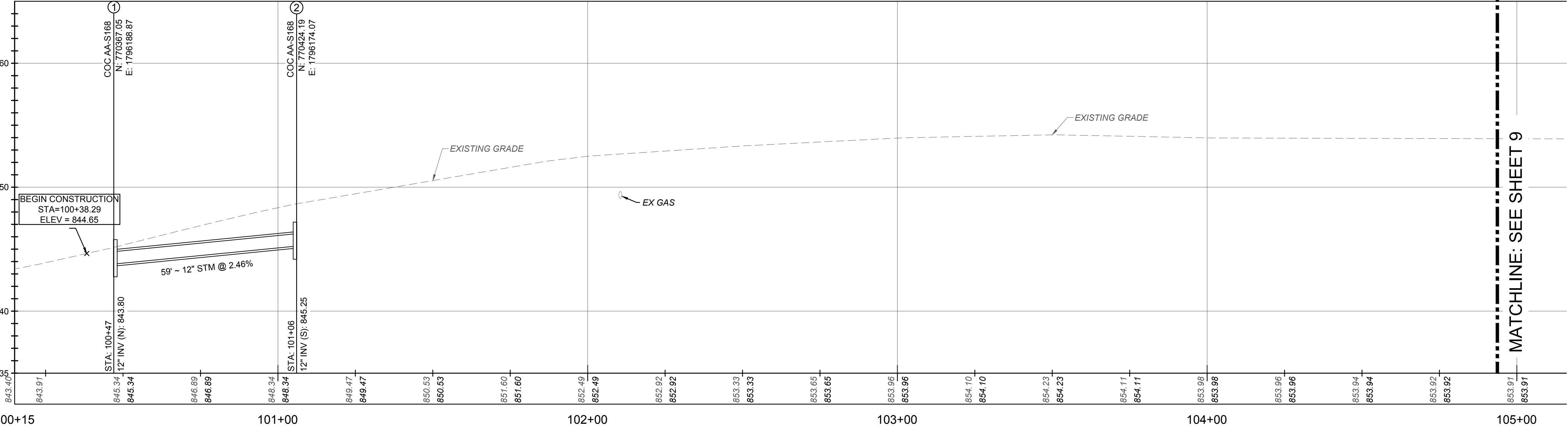
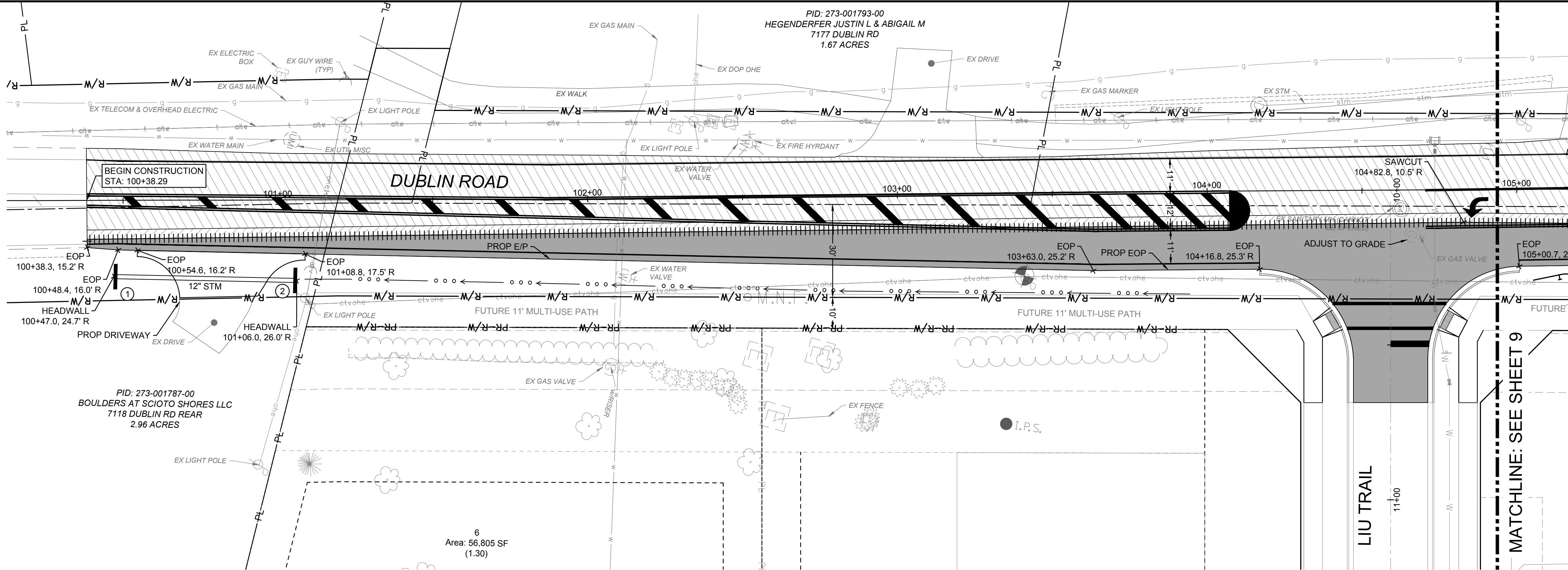
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CONSTRUCTION  
IN SUBMITTING BIDS IN RELIANCE ON  
THESE PLANS THE CONTRACTOR  
ASSUMES ALL RISKS OF ADDITIONAL  
COSTS OF REVISIONS DUE TO  
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OF COMPLETING THE FINAL DESIGN.

DATE:	04/02/2025
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7/10



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DUBLIN ROAD  
SCALE: H:1"=20', V:1"=5'



24-005-RES

PUBLIC ROADWAY WIDENING PLANS  
FOR  
DUBLIN ROAD  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO  
PLAN & PROFILE

DESCRIPTION

SHEET NO.

DATE

REVISIONS

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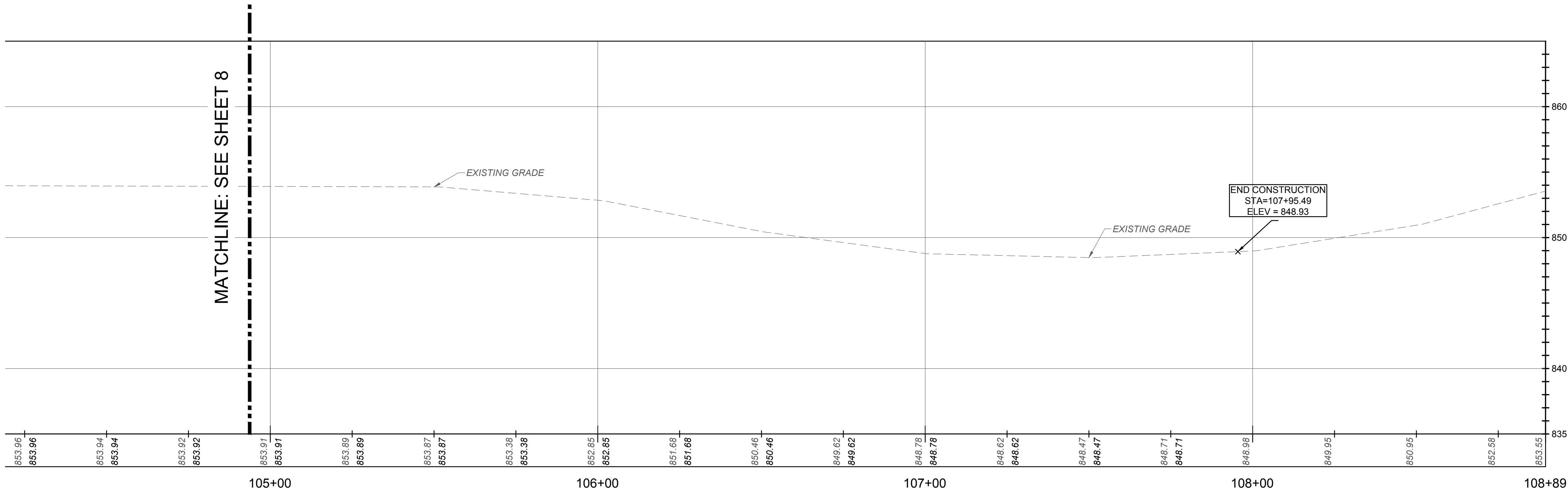
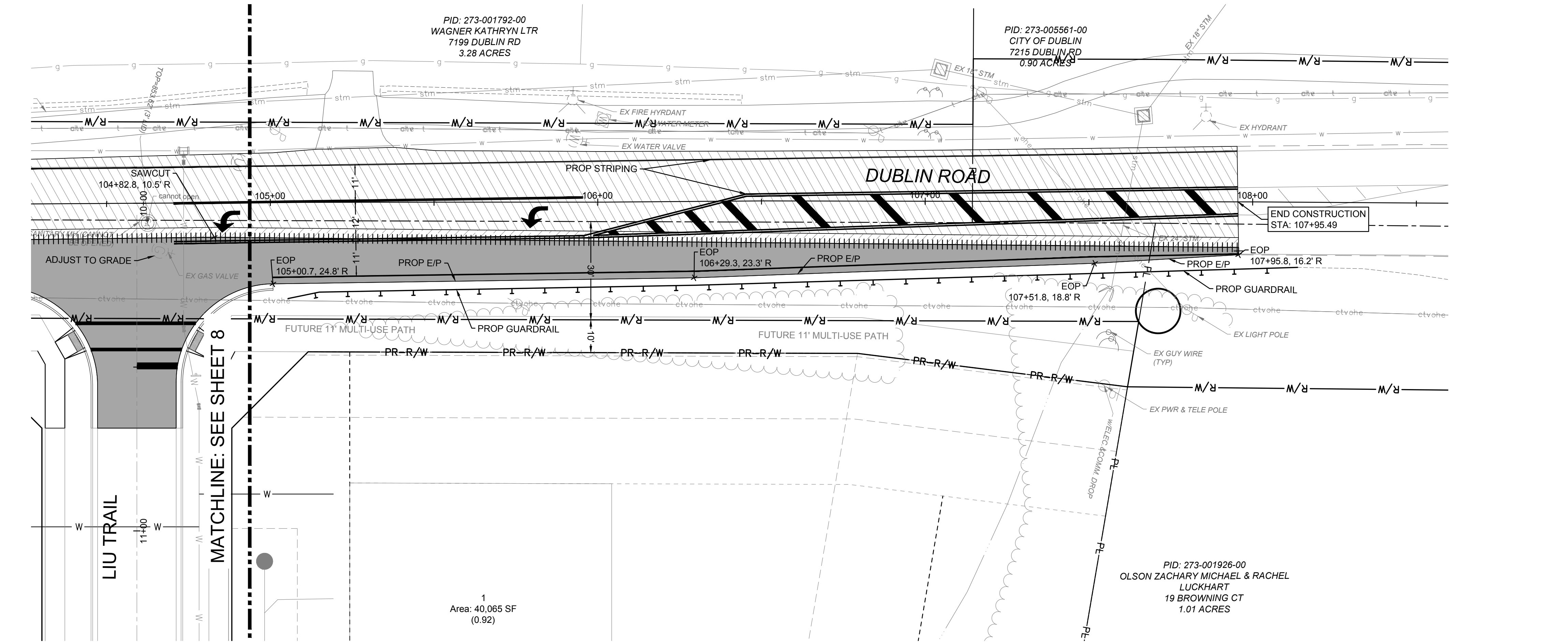
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DUBLIN ROAD  
SCALE: H: 1"=20', V: 1"=5'

EXISTING LEGEND

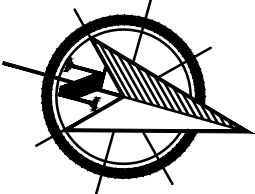
- PL PROPERTY LINE
- R/W RIGHT-OF-WAY
- PAVEMENT/ SIDEWALK
- PAVEMENT STRIPING
- CURB
- ROAD CENTERLINE
- TREE DRIP LINE
- FENCE
- STREAM
- STM STORM SEWER
- SAN SANITARY SEWER
- W WATER LINE
- G GAS LINE
- FO FIBER OPTIC LINE
- E ELECTRIC
- OHE OVERHEAD ELECTRIC
- T TELECOMMUNICATION
- CTV CABLE TELEVISION

SITE LEGEND

- STRAIGHT CURB
- CURB AND GUTTER
- SIGN
- PROPOSED MILL & OVERLAY (1.5" DEPTH)
- PROPOSED MILL & OVERLAY (2.5" DEPTH)
- PROPOSED NEW ASPHALT PAVEMENT
- PAVEMENT MARKINGS

UTILITY LEGEND

- SAN SANITARY MAIN
- W WATER
- STM STORM SEWER MAIN
- HEADWALL
- SANITARY MANHOLE
- FIRE HYDRANT
- WATER VALVE
- WATER MAIN
- WATER TEE
- WATER BEND
- WATER REDUCER



PUBLIC ROADWAY WIDENING PLANS  
FOR  
DUBLIN ROAD  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO  
PLAN & PROFILE

REVISIONS	DATE	SHEET NO.	DESCRIPTION

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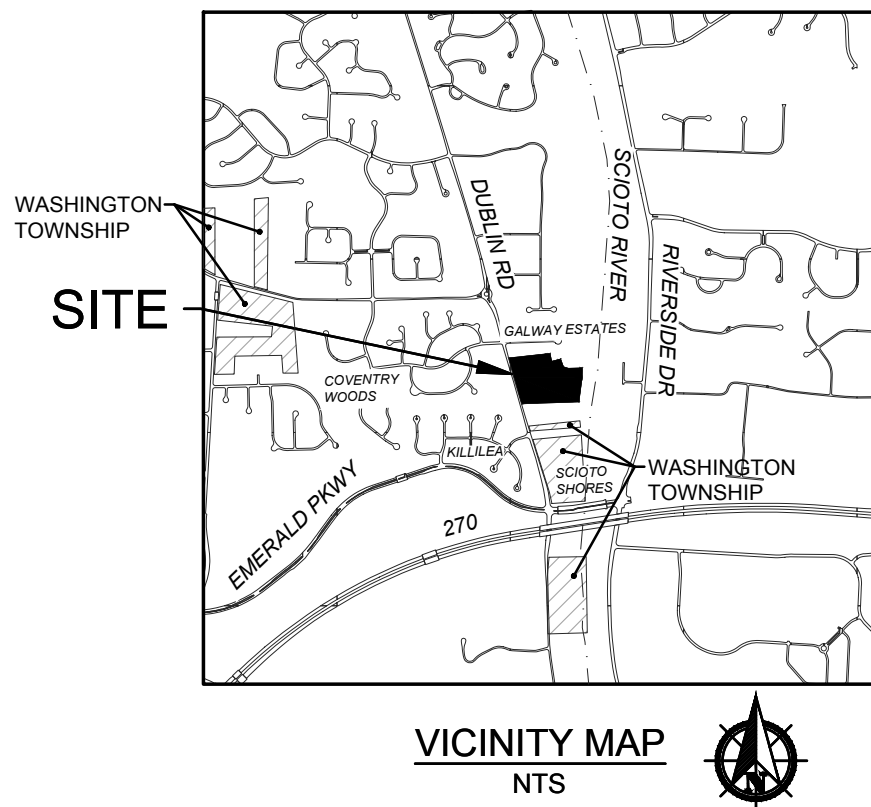




SHEET INDEX

- 1 - TITLE SHEET  
2 - GENERAL NOTES  
3 - PLAN & PROFILE

SANITARY SEWER PLANS  
FOR  
**LIU TRAIL**  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO



SANITARY SEWER PLANS  
FOR  
**LIU TRAIL**  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO  
**TITLE SHEET**

STANDARD CONSTRUCTION DRAWINGS

THE STANDARD CONSTRUCTION DRAWINGS LISTED ON THESE PLANS SHALL BE CONSIDERED A PART THEREOF.

CITY OF DUBLIN  
(2020 EDITION)

SA-01  
SA-02  
SA-03  
SA-04

CITY OF COLUMBUS

AA-S102  
AA-S106  
AA-S107  
AA-S110  
AA-S117  
AA-S119  
AA-S149  
AA-S150



04/02/2025

REGISTERED ENGINEER E-86125

DATE

APPROVED:

CITY OF DUBLIN:  
SIGNATURES BELOW SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSE AND GENERAL LOCATION OF THE PROJECT AND DOES NOT CONSTITUTE ASSURANCE TO OPERATE AS INTENDED. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL CIVIL ENGINEER PREPARING THE PLANS.

DIRECTOR OF ENGINEERING/CITY ENGINEER  
CITY OF DUBLIN, OHIO  
PAUL A. HAMMERSMITH, P.E.

DATE

CITY OF COLUMBUS:

APPROVAL ON THE PART OF THE CITY OF COLUMBUS IS GIVEN PURSUANT TO THE PROVISIONS OF THE SEWER (AND/OR WATER) SERVICE AGREEMENT BETWEEN THE CITY OF DUBLIN, OHIO, DATED APRIL 13, 1993.

ADMINISTRATOR, DIVISION OF SEWERAGE & DRAINAGE  
CITY OF COLUMBUS, OHIO

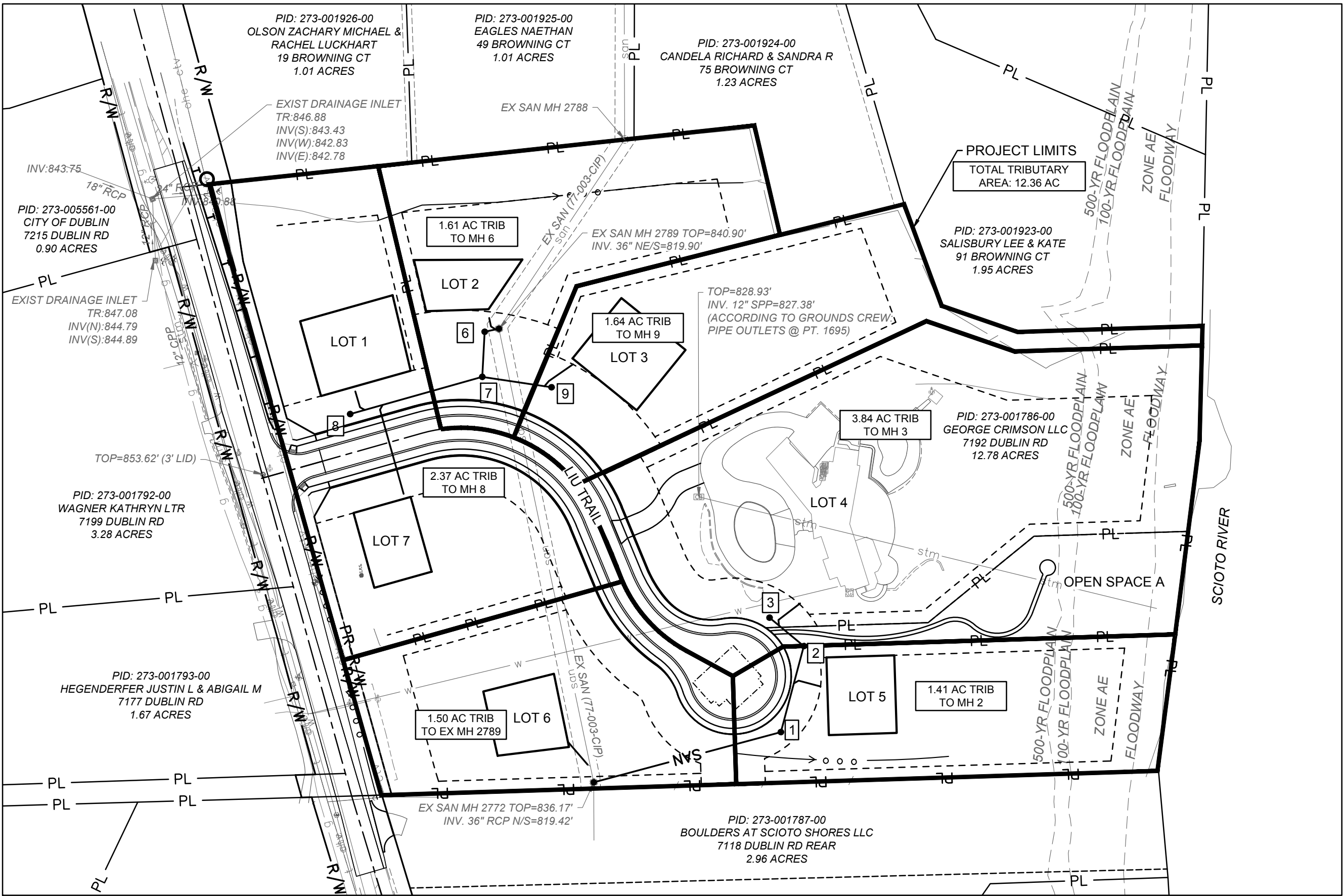
DATE

DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES  
CITY OF COLUMBUS, OHIO

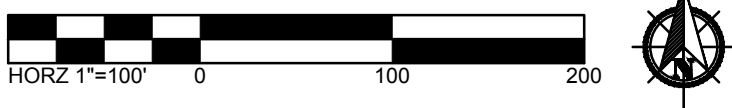
DATE



24-005-RES



INDEX AND TRIBUTARY AREA MAP



OWNER/ DEVELOPER

JASON LIU  
10279 WELLINGTON BLVD  
POWELL, OHIO 43065  
PHONE: 614-313-1268  
EMAIL: JASONLIU@YAHOO.COM

ARCHITECT

BASS STUDIO ARCHITECTS  
36 KING AVENUE  
COLUMBUS, OHIO 43201  
CONTACT: TIMOTHY BASS  
PHONE: 614-294-4893  
EMAIL: TIM@BASSSTUDIOARCHITECTS.COM

ENGINEER

AMERICAN STRUCTUREPOINT  
2550 CORPORATE EXCHANGE DRIVE, SUITE 300  
COLUMBUS, OHIO 43231  
CONTACT: MATT LILIE  
PHONE: 614-901-2235  
EMAIL: MLILIE@STRUCTUREPOINT.COM

UTILITY CONTACTS

AMERITECH  
408 CRITES ROAD  
CIRCLEVILLE, OH 43113  
PHONE: (740) 477-3658

AMERICAN ELECTRIC POWER  
850 TECH CENTER DRIVE  
GAHANA, OH 43230  
PHONE: (614) 883-6831

CITY OF DUBLIN  
DIVISION OF ENGINEERING  
5800 SHIER-RINGS ROAD  
DUBLIN, OH 43016  
PHONE: (614) 410-4600

CITY OF COLUMBUS  
DIVISION OF WATER  
910 DUBLIN ROAD  
COLUMBUS, OH 43215  
PHONE: (614) 645-7788

COLUMBIA GAS OF OHIO  
200 S CIVIC CENTER DR  
COLUMBUS, OH 43215  
PHONE: (614) 460-6000

TIME WARNER CABLE  
1980 ALUM CREEK DR  
COLUMBUS, OH 43207  
PHONE: (614) 918-8439

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE BASED ON GRID NORTH, REFERENCED TO THE OHIO STATE PLANE COORDINATE SYSTEM (SOUTH ZONE) AND THE NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT), AS ESTABLISHED UTILIZING A GPS SURVEY AND AN NGS OPUS SOLUTION

VERTICAL CONTROL

ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, AS DERIVED FROM GNSS OBSERVATIONS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT) AND GEOID 18, AND AN NGS OPUS SOLUTION FOR CONTROL POINT 900. THE ELEVATIONS FOR ALL OTHER CONTROL POINTS AND BENCHMARKS LISTED HEREON WERE ESTABLISHED UTILIZING A DIFFERENTIAL LEVEL CIRCUIT ORIGINATING FROM CONTROL POINT 900.

B.M.	DESCRIPTION	NORTHING (GROUND)	EASTING (GROUND)	ELEVATION
CP 900	5/8" IRON PIN SET W/ "ASI CONTROL POINT" CAP	770657.227	1796156.545	852.24
TBM 1	MAG NAIL FOUND IN POWER POLE +/- 72' NORTH OF THE DRIVE FOR 7192 DUBLIN ROAD, +/- 48' WEST OF CP 900, +/- 27' EAST OF THE CENTER LINE OF DUBLIN ROAD	N/A	N/A	853.64

PLOT SCALE: 1"=110' EDIT DATE: 4/2/25 3:56 PM EDITED BY: MLILIE DRAWING FILE: O:\2024\06690.D DRAWINGS\CIVIL\CONSTRUCTION DOCUMENTS\SANITARY PLAN\2024\_06690.TSDWG



PLOT SCALE: 1"= 40'-0" DATE: 4/22/25 3:56 PM EDITED BY: MLIE DRAWING FILE: O:\2024\0660\0.DRAWINGS\CIVIL\CONSTRUCTION DOCUMENTS\SANITARY PLAN\0224-0660.D TSD\DWG

GENERAL NOTES

1. CITY OF COLUMBUS 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 DEVELOPER OR 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 BENCHMARKS, 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 TIERED VEHICLES SHALL NOT BE MOVED ON OR ACROSS PUBLIC STREETS OR HIGHWAYS WITHOUT THE WRITTEN PERMISSION OF THE CITY ENGINEER.

10. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO EQUAL OR BETTER CONDITION THAN EXISTED BEFORE CONSTRUCTION. DRAINAGE DITCHES OR WATERCOURSES 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 COLUMBUS. 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 912 OF THE STANDARD SPECIFICATIONS OR FLOWABLE CDF, TYPE II ACCORDING TO ITEM 613. ITEM 911 OF THE STANDARD SPECIFICATIONS SHALL 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  
6555 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 BREAST 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 II) SHALL BE USED IN PLACE OF COMPACTED GRANULAR BACKFILL, ACCORDING TO ITEM 613 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 OR AS DIRECTED BY THE DIVISION OF PARKS AND RECREATION, CITY OF DUBLIN, OHIO.
- UTILITIES
1. THE FOLLOWING UTILITIES ARE KNOWN TO BE LOCATED WITHIN THE LIMITS OF THIS PROJECT:  

AEP OHIO - ELECTRIC  
BREEZELINE - TELECOM  
COLUMBIA GAS OF OH-COLUMBUS - GAS  
DUBLIN SEWER - SANITARY SEWER  
DUBLIN WATER - WATER MAIN  
DUBLIN DIVISION OF ENGINEERING - STORMWATER  
AT&T - TELECOM  
CHARTER COMM - TELECOM

2. THE CONTRACTOR SHALL GIVE NOTICE OF INTENT TO CONSTRUCT TO OHIO UTILITIES PROTECTION SERVICE (TELEPHONE NUMBER 800\_362\_2764), PRODUCER'S 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 ASSUMES 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.

6. PUBLIC STREET LIGHTING MAY BE IN THE VICINITY OF THIS PROJECT. CONTACT THE CITY OF DUBLIN, DIVISION OF ENGINEERING AT 410-4637, TWO DAYS PRIOR TO BEGINNING WORK.
- 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 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.

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.
- EROSION AND SEDIMENT CONTROL
1. THE CONTRACTOR OR DEVELOPER 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 STORMWATER 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 OHIO EPA, ITEM 207 OF OHIO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AND THE CITY ENGINEER. AN INDIVIDUAL NPDES STORMWATER DISCHARGE PERMIT MAY BE REQUIRED. THE CONTRACTOR SHALL BE CONSIDERED THE 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: SEDIMENT BASINS, SILT FILTER FENCE, AGGREGATE CHECK DAMS, AND TEMPORARY GROUND COVER. HAY OR STRAW BALES ARE NOT PERMITTED.

4. THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE OF THE WORK AREA AT ALL TIMES CONSISTENT WITH EROSION CONTROL PRACTICES.
- BLASTING (IF PERMITTED)
1. THE CONTRACTOR MUST OBTAIN A BLASTING PERMIT FROM WASHINGTON TOWNSHIP FIRE DEPARTMENT PRIOR TO BLASTING FOR ROCK EXCAVATION. THE CONTRACTOR SHALL SUBMIT BLASTING REPORTS UPON COMPLETION OF BLASTING TO THE CITY ENGINEER, THE OWNER, AND THE OWNER'S ENGINEER. TOP OF ROCK ELEVATIONS SHALL BE SHOWN ON "AS\_BUILT" CONSTRUCTION DRAWINGS.
- SANITARY SEWERS
1. CONNECTIONS TO THE SANITARY SEWER WILL BE PERMITTED UPON RECEIVING AN OEPA PERMIT TO INSTALL (PTI), AND UPON RECEIVING A SATISFACTORY LETTER FROM THE DESIGN ENGINEER STATING THAT THE PROJECT HAS BEEN CONSTRUCTED AS PER THE PLANS, AND ALL OF THE CONDITIONS OF THE PTI HAVE BEEN MET. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL REQUIRED OHIO EPA APPROVALS AND PAYING REVIEW FEES.

2. SANITARY SEWAGE COLLECTION SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RULES, REGULATIONS, STANDARDS AND SPECIFICATIONS OF THE CITY OF DUBLIN, OHIO EPA, OHIO DEPARTMENT OF HEALTH AND THE CURRENT EDITION OF THE GREAT LAKES-UPPER MISSISSIPPI RIVER BOARD (TEN STATES) - RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES.

3. THE MINIMUM REQUIREMENTS FOR SANITARY SEWER PIPE WITH DIAMETERS 8 INCHES TO 10 INCHES SHALL BE PVC SEWER PIPE ASTM D3034, SDR 35. PIPE FOR 6 INCH DIAMETER HOUSE SERVICE LINES SHALL BE PVC PIPE ASTM D3034, SDR 35. PVC PIPE SHALL NOT BE USED AT DEPTHS GREATER THAN 28 FEET. PIPE MATERIALS AND RELATED STRUCTURES SHALL BE SHOP TESTED IN ACCORDANCE WITH CITY OF COLUMBUS CONSTRUCTION INSPECTION DIVISION QUALITY CONTROL REQUIREMENTS.

4. THE MINIMUM REQUIREMENTS FOR SANITARY SEWER PIPES WITH DIAMETERS 12 INCHES TO 30 INCHES SHALL BE PVC SEWER PIPE, ASTM D3034, SDR 35 OR SANITITE HP PIPE, ASTM F2736. SANITARY SEWER PIPES WITH DIAMETERS 30 INCHES TO 60 INCHES SHALL BE PVC SEWER PIPE, ASTM D3034, SDR 35 OR SANITITE HP PIPE, ASTM F2764.

5. ALL IN-LINE WYE AND TEE CONNECTIONS IN CONCRETE SEWERS, 18-INCH DIAMETER AND LARGER, SHALL BE EITHER KOR\_N\_TEE OR KOR\_N\_SEAL CONNECTIONS CONFORMING TO THE MANUFACTURER'S RECOMMENDATIONS.

6. GRANULAR BACKFILL SHALL BE COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS OR CONTROLLED DENSITY BACKFILL ACCORDING TO ITEM 613, TYPE II OF THE STANDARD SPECIFICATIONS AS DIRECTED BY THE CITY ENGINEER.

7. ALL MANHOLE LIDS SHALL BE PROVIDED WITH CONTINUOUS SELF-SEALING GASKETS. THE APPROVED CONSTRUCTION DRAWINGS SHALL SHOW WHERE BOLT DOWN LIDS ARE REQUIRED. SANITARY SEWER MANHOLES SHALL BE PRECAST CONCRETE OR AS APPROVED BY THE CITY ENGINEER AND CONFORM TO THE CITY OF DUBLIN SANITARY MANHOLE STANDARD DRAWING. MANHOLE LIDS SHALL INCLUDE CITY OF DUBLIN LOGO.

8. ALL PVC SEWER PIPES SHALL BE DEFLECTION TESTED NO LESS THAN 60 DAYS AFTER COMPLETION OF BACKFILLING OPERATIONS. ALL OTHER REQUIREMENTS SHALL BE ACCORDING TO ITEM 901.21 OF THE STANDARD SPECIFICATIONS.

9. TEMPORARY BULKHEADS SHALL BE PLACED IN PIPES AT LOCATIONS SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS AND SHALL REMAIN IN PLACE UNTIL THE PERMIT TO INSTALL (PTI) HAS BEEN ISSUED BY THE OEPA AND THE SEWERS HAVE BEEN APPROVED FOR USE BY THE CITY ENGINEER. THE COST FOR FURNISHING, INSTALLING, MAINTAINING, AND REMOVING BULKHEADS SHALL BE INCLUDED IN THE CONTRACT UNIT BID PRICE FOR THE VARIOUS SANITARY SEWER ITEMS.

10. ALL SANITARY SEWERS INCLUDING SANITARY SEWER SERVICE LINES SHALL BE SUBJECTED TO AND PASS INFILTRATION OR EXFILTRATION TESTS ACCORDING TO ITEM 901 OF THE STANDARD SPECIFICATIONS AND MUST BE APPROVED FOR USE BY THE CITY ENGINEER BEFORE ANY SERVICE CONNECTIONS ARE TAPPED INTO SEWERS.

11. FOR SANITARY SEWER INFILTRATION, LEAKAGE THROUGH JOINTS SHALL NOT EXCEED 100 GALLONS PER INCH OF TRIBUTARY SEWER DIAMETER PER 24 HOURS PER MILE OF LENGTH OR THE COMPUTED EQUIVALENT. ALL SANITARY SEWERS SHALL BE TESTED.

12. AT THE DETERMINATION OF THE CITY ENGINEER, THE CONTRACTOR MAY BE REQUIRED TO PERFORM A TV INSPECTION OF THE SANITARY SEWER SYSTEM PRIOR TO FINAL ACCEPTANCE BY THE CITY. THIS WORK SHALL BE COMPLETED BY THE CONTRACTOR AT HIS EXPENSE.

13. VISIBLE LEAKS OR OTHER DEFECTS OBSERVED OR DISCOVERED DURING TV INSPECTION SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

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.

15. ALL WATER LINES SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY AND 18 INCHES VERTICALLY, FROM SANITARY SEWERS AND STORM SEWERS, TO THE GREATEST EXTENT PRACTICABLE. WHERE SANITARY SEWERS CROSS WATER MAINS OR OTHER SEWERS OR OTHER UTILITIES, TRENCH BACKFILL SHALL BE PLACED BETWEEN THE PIPES CROSSING AND SHALL BE COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS. IN THE EVENT THAT A WATER LINE MUST CROSS WITHIN 18 INCHES OF A SANITARY SEWER, THE SANITARY SEWER SHALL BE CONCRETE ENCASED OR CONSIST OF DUCTILE IRON PIPE MATERIAL.

16. SERVICE RISERS SHALL BE INSTALLED WHERE THE DEPTH FROM WYES TO PROPOSED GROUND ELEVATION EXCEEDS 10 FEET. TOPS OF RISERS SHALL BE NO LESS THAN 9 FEET BELOW PROPOSED GROUND ELEVATION IF BASEMENT SERVICE IS INTENDED.
17. WHERE SERVICE RISERS ARE NOT INSTALLED, A MINIMUM 5-FOOT LENGTH OF SANITARY SEWER SERVICE PIPE OF THE SAME SIZE AS THE WYE OPENING SHALL BE INSTALLED.

18. THE CONTRACTOR SHALL FURNISH AND PLACE, AS DIRECTED, APPROVED WYE POLES MADE OF 2 INCHES X 2 INCHES LUMBER AT ALL WYE LOCATIONS, ENDS OF EXTENDED SERVICES, OR AT THE END OF EACH RISER WHERE RISERS ARE REQUIRED. WYE POLES SHALL BE VISIBLE BEFORE ACCEPTANCE BY THE CITY. THE COST OF THESE POLES SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE VARIOUS SEWER ITEMS.

19. EXISTING SANITARY SEWER FLOWS SHALL BE MAINTAINED AT ALL TIMES. COSTS FOR PUMPING AND BYPASSING SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE BID FOR THE RELATED ITEMS.

20. THE CONTRACTOR SHALL FURNISH ALL MATERIAL, EQUIPMENT, AND LABOR TO MAKE CONNECTIONS TO EXISTING MANHOLES. THE SEWER PIPE TO MANHOLE CONNECTIONS FOR ALL SANITARY SEWERS SHALL BE FLEXIBLE AND WATERTIGHT. ALL HOLES SHALL BE NEATLY CORED. THE SEWER PIPE BARREL AT THE SPRINGLINE SHALL NOT EXTEND MORE THAN 1 INCH BEYOND THE INSIDE FACE OF THE MANHOLE. TO MAINTAIN FLEXIBILITY IN THE CONNECTION, A 1\_INCH SPACE SHALL BE LEFT BETWEEN THE END OF THE PIPE INSIDE THE MANHOLE AND THE CONCRETE CHANNEL; THIS SPACE SHALL BE FILLED WITH A WATERPROOF FLEXIBLE JOINT FILLER. ANY METAL THAT IS USED SHALL BE TYPE 300 SERIES STAINLESS STEEL. THE CONNECTION MAY BE ANY OF THE FOLLOWING TYPES:  

A. RUBBER SLEEVE WITH STAINLESS STEEL BANDING.  
1) KOR\_N\_SEAL AS MANUFACTURED BY NATIONAL POLLUTION CONTROL SYSTEMS, INC.  
2) LOCK JOINT FLEXIBLE MANHOLE SLEEVE AS MANUFACTURED BY INTERPACE CORPORATION.  
3) OR EQUAL AS APPROVED BY THE CITY ENGINEER.

B. RUBBER GASKET COMPRESSION.  
1) PRESS WEDGE II AS MANUFACTURED BY PRESS\_SEAL GASKET CORPORATION.  
2) DURA SEAL III AS MANUFACTURED BY DURA TECH, INC.  
3) LINK\_SEAL AS MANUFACTURED BY THUNDERLINE CORPORATION.  
4) OR EQUAL AS APPROVED BY THE CITY ENGINEER.

THE COST FOR THIS WORK ALONG WITH A NEW CHANNELIZED BASE FOR THE MANHOLE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE RELATED ITEMS OF WORK.
- WATER LINE 1-17 DELETED
- STORM SEWER 1-11 DELETED
- MAIL DELIVERY
1. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT US MAIL DELIVERY WITHIN THE PROJECT LIMITS IS NOT DISRUPTED BY CONSTRUCTION OPERATIONS. THIS RESPONSIBILITY IS LIMITED TO RELOCATION OF MAILBOXES TO A TEMPORARY LOCATION THAT WILL ALLOW THE COMPLETION OF THE WORK AND SHALL ALSO INCLUDE THE RESTORATION OF MAILBOXES TO THEIR ORIGINAL LOCATION OR APPROVED NEW LOCATION. ANY RELOCATION OF MAILBOX SERVICES MUST BE FIRST COORDINATED WITH 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.
- 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 A 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.
- FLEXIBLE SEWER PIPE

RIGID SEWER PIPE

PROP. STM & WATER MAIN

STORM SEWER

BEDDING 4" MIN.

1' MIN.

1' BEDDING MATERIAL

FOR BEDDING MATERIAL REQUIREMENTS SEE STD DWG AA-S149 (FLEXIBLE SEWER)

4" BEDDING MATERIAL

SUBGRADE

BELL HOLE

COMPACTED CLAY PER ITEM 203, STARTING AT 1' ABOVE SANITARY SEWER. 1' THICK BETWEEN STORM AND SANITARY SEWER LINES

SEE STD DWG AA-S151 FOR BEDDING MATERIAL REQUIREMENTS (RIGID SEWER)

TYPE "A" - FOR CLEARANCES 28" AND GREATER

FLEXIBLE SEWER PIPE

RIGID SEWER PIPE

PROP. STORM & WATER MAIN

STORM SEWER

BEDDING 1' BEDDING MATERIAL

4" MIN.

FOR BEDDING MATERIAL REQUIREMENTS SEE STD DWG AA-S149 (FLEXIBLE SEWER)

4" BEDDING MATERIAL

SUBGRADE

BELL HOLE

BENTOFIX THERMAL LOCK GEOSYNTHETIC CLAY LINER (GCL) OR APPROVED EQUAL

SEE STD DWG AA-S151 FOR BEDDING MATERIAL REQUIREMENTS (RIGID SEWER)

TYPE "B" - FOR CLEARANCES LESS THAN 28"

\* INCHES

D	W <sub>n</sub>	D	W <sub>n</sub>
6	30	24	48
8	30	27	52
10	30	30	56
12	32	36	64
15	36	42	72
18	40	48	80
21	44		

\* INCHES

D	W <sub>n</sub>	D	W <sub>n</sub>	D	W <sub>n</sub>
6	24	27	52	66	105
8	27	30	57	72	116
10	30	33	61	78	123
12	32	36	64	84	130
15	36	42	71	90	138
18	40	48	78	96	143
21	44	54	87	102	151
24	48	60	96	108	160

NOTES:

1. THIS DETAIL IS REQUIRED AT ALL SANITARY SEWER AND WATER MAIN CROSSINGS. IF IT IS DISTURBED DURING THE CONSTRUCTION OF THE STORM SEWER OR WATER MAIN IT MUST BE RESTORED TO THE REQUIREMENTS OF THE DETAIL. THIS DETAIL IS NOT BEING USED TO MITIGATE CROSSINGS WHERE THERE IS LESS THAN 18" OF VERTICAL DISTANCE FROM OUTSIDE TO OUTSIDE OF PIPES.

AMERICAN  
STRUCTUREPOINT  
INC.

2650 Corporate Exchange Dr., Ste 300 | Columbus, Ohio 43231  
TEL: 614-446-1226  
www.structurepoint.com

SANITARY SEWER PLANS  
FOR  
LIU TRAIL  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO

GENERAL NOTES

DESCRIPTION	SHEET NO.	DATE	REVISIONS

APPROVAL PENDING NOT FOR CONSTRUCTION  
IN SUBMITTING BIDS IN RELIANCE ON THESE PLANS THE CONTRACTOR ASSUMES ALL RISKS OF ADDITIONAL COSTS OF REVISIONS DUE TO REQUIREMENTS OF THE OWNER OR GOVERNMENTAL AUTHORITIES AND MATERIAL REVISIONS IN THE COURSE OF COMPLETING THE FINAL DESIGN.

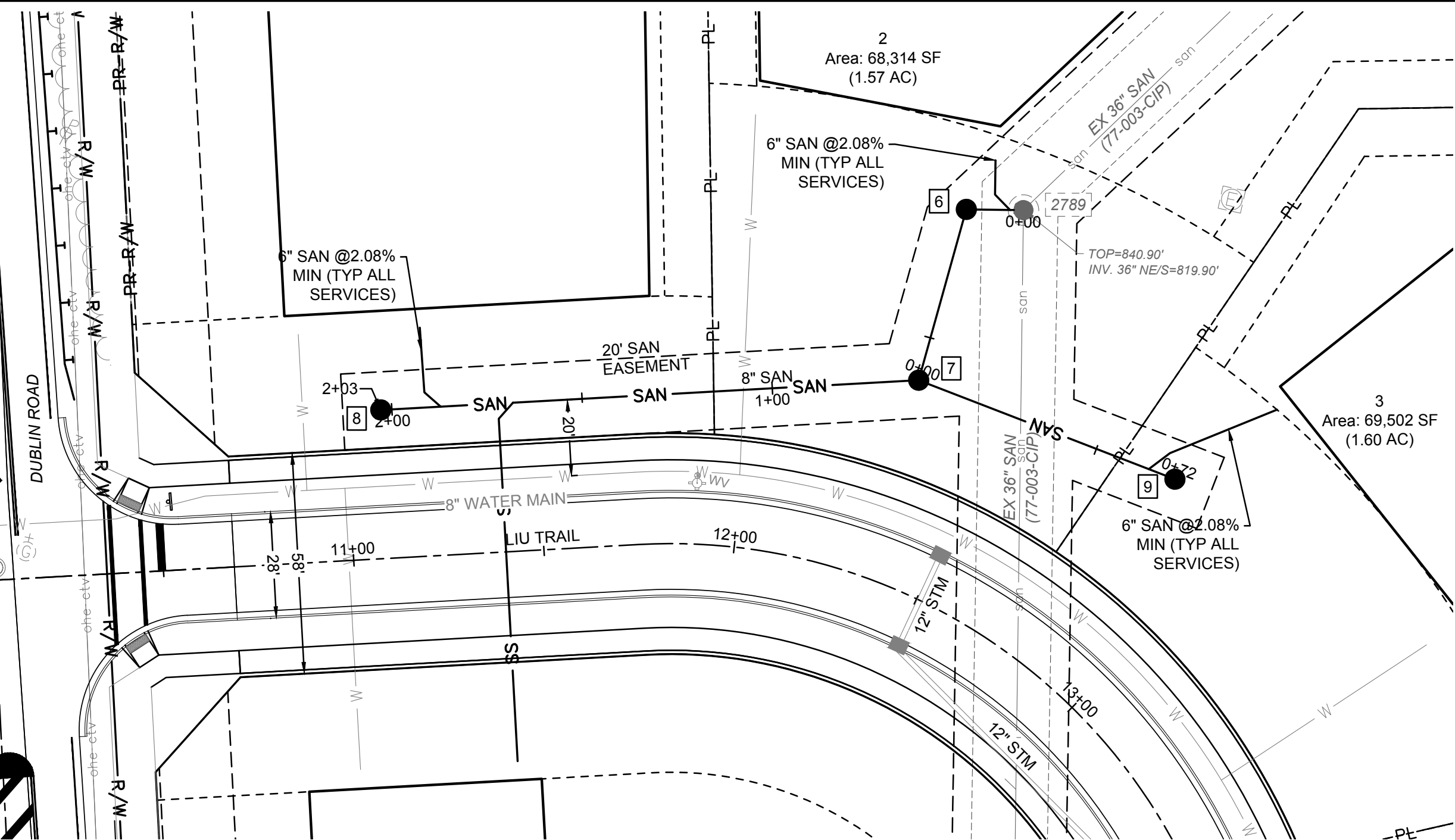
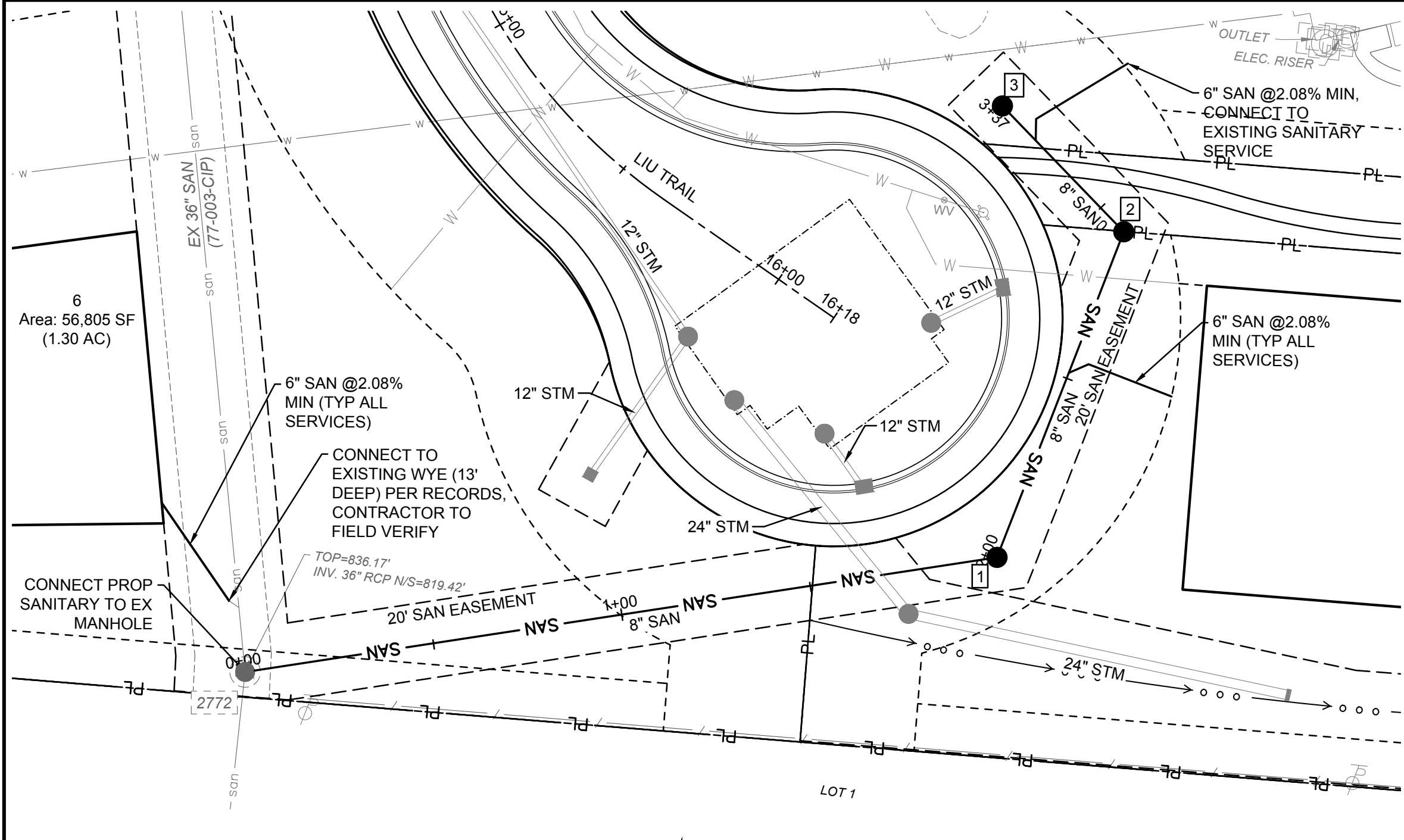
DATE: 04/02/2025  
DRAWN BY: HSR  
CHECKED BY: MJL  
JOB NUMBER: 2024.00690

2/3

24-005-RES



PLOT SCALE: 1"=100' DATE: 4/25/25 3:56 PM EDITED BY: MLIE DRAWING FILE: O:\2024\06690.DRAWINGS\CIVIL\CONSTRUCTION DOCUMENTS\SANITARY PLAN\2024.06690 P&P.DWG



- SITE LEGEND**
- PL PROPERTY LINE
  - R/W RIGHT-OF-WAY
  - CURB AND GUTTER
  - SIGN
- UTILITY LEGEND**
- SAN SANITARY GRAVITY
  - SS SANITARY SERVICE
  - W WATER
  - STM STORM SEWER
  - CATCH BASIN
  - HEADWALL
  - SANITARY MANHOLE
  - FIRE HYDRANT
  - WATER VALVE

**NOTE:**

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ELEVATIONS AND INVERTS PRIOR TO START OF CONSTRUCTION.

LONG SERVICES ARE TO HAVE AT LEAST 2' OF RISER ON HOUSE SIDE OF STREET IN ACCORDANCE WITH CITY OF DUBLIN STANDARD CONSTRUCTION DRAWING SA-03.

TAPS INTO EXISTING SEWER SYSTEMS ARE TO BE CORE DRILLED AND INSPECTED BY THE CITY OF DUBLIN.

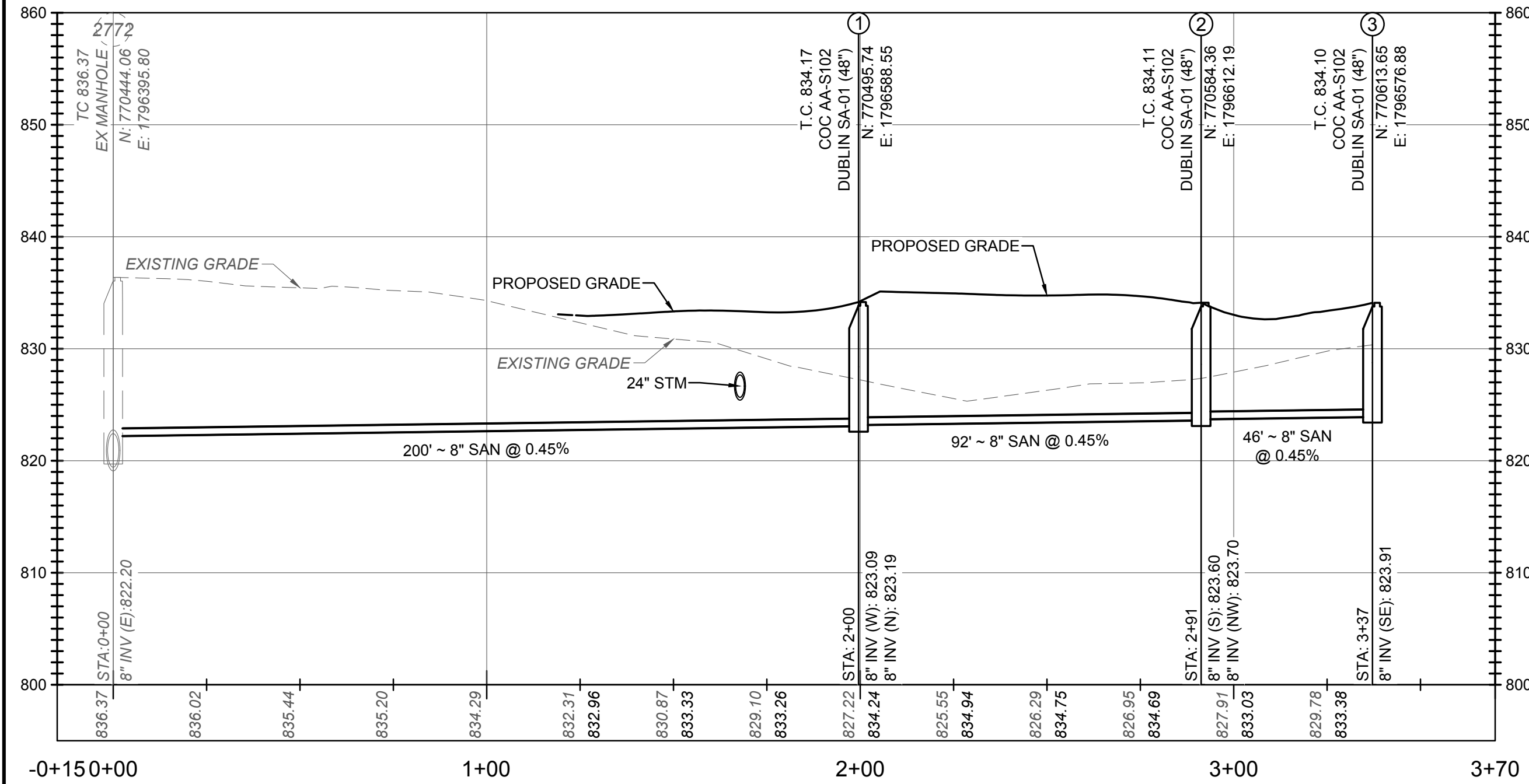
END OF SANITARY STUBS SHALL BE MARKED WITH 4"x4" POST.

THE CONTRACTOR IS RESPONSIBLE TO PROVIDE A MINIMUM 2.5' CLEARANCE BETWEEN THE 6" SANITARY SEWER SERVICES AND ALL UTILITY CROSSINGS WHILE MAINTAINING A MINIMUM 2.08% GRADE FOR THE SANITARY SERVICES. CONSTRUCT THE TYPICAL ANTI-INFILTRATION & INFLOW BARRIER FOR ALL CROSSINGS OF SANITARY SEWERS AND WATER MAINS AND STORM SEWERS; SEE DETAIL SHOWN ON SHEET 2

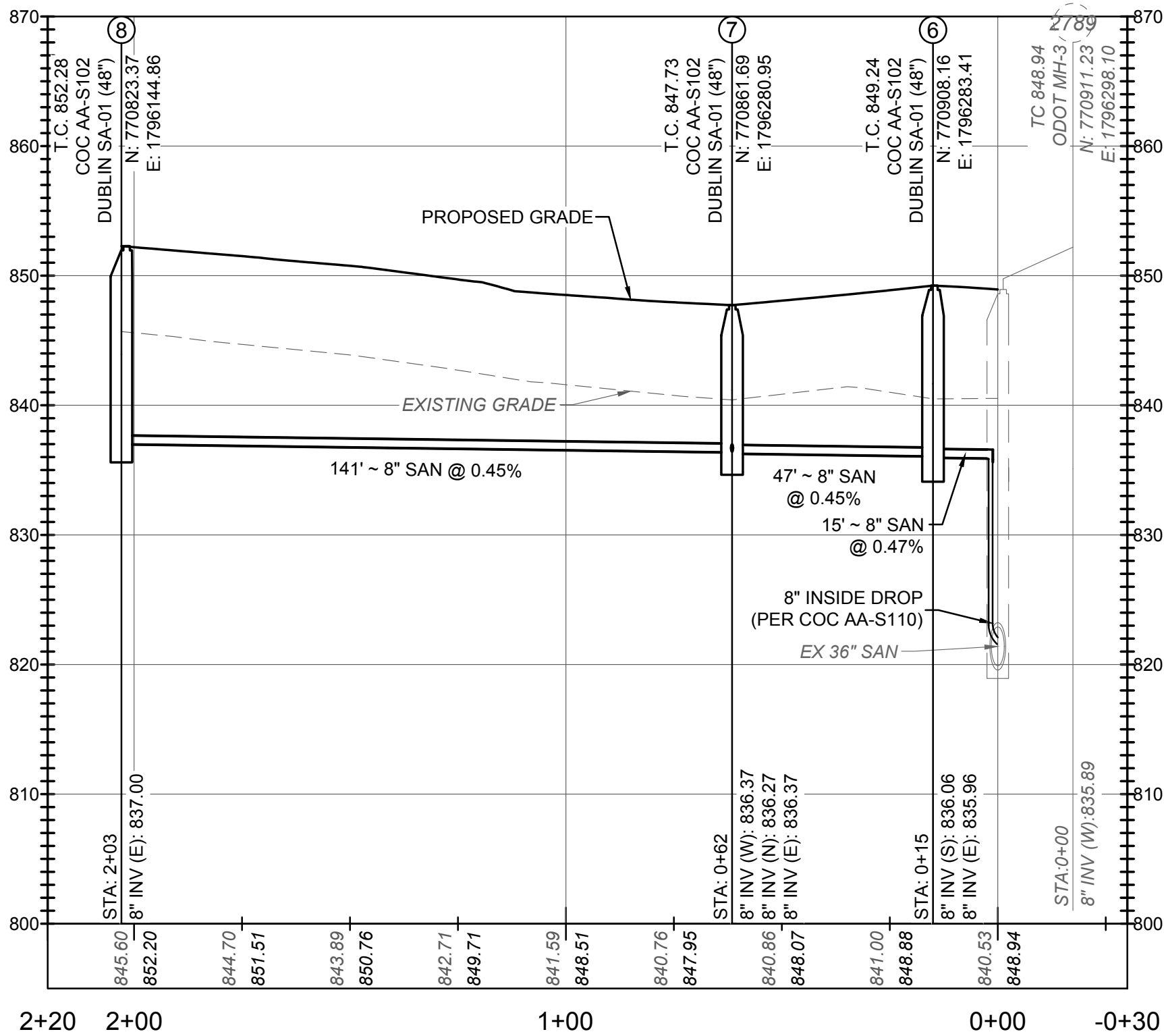
PROPOSED NON-SANITARY SITE IMPROVEMENTS ARE SHOWN FOR REFERENCE ONLY. PLEASE REFER TO THE 7192 DUBLIN RD PRIVATE ON-SITE AND PUBLIC ROAD WIDENING PLANS.

**PROFILE NOTES:**

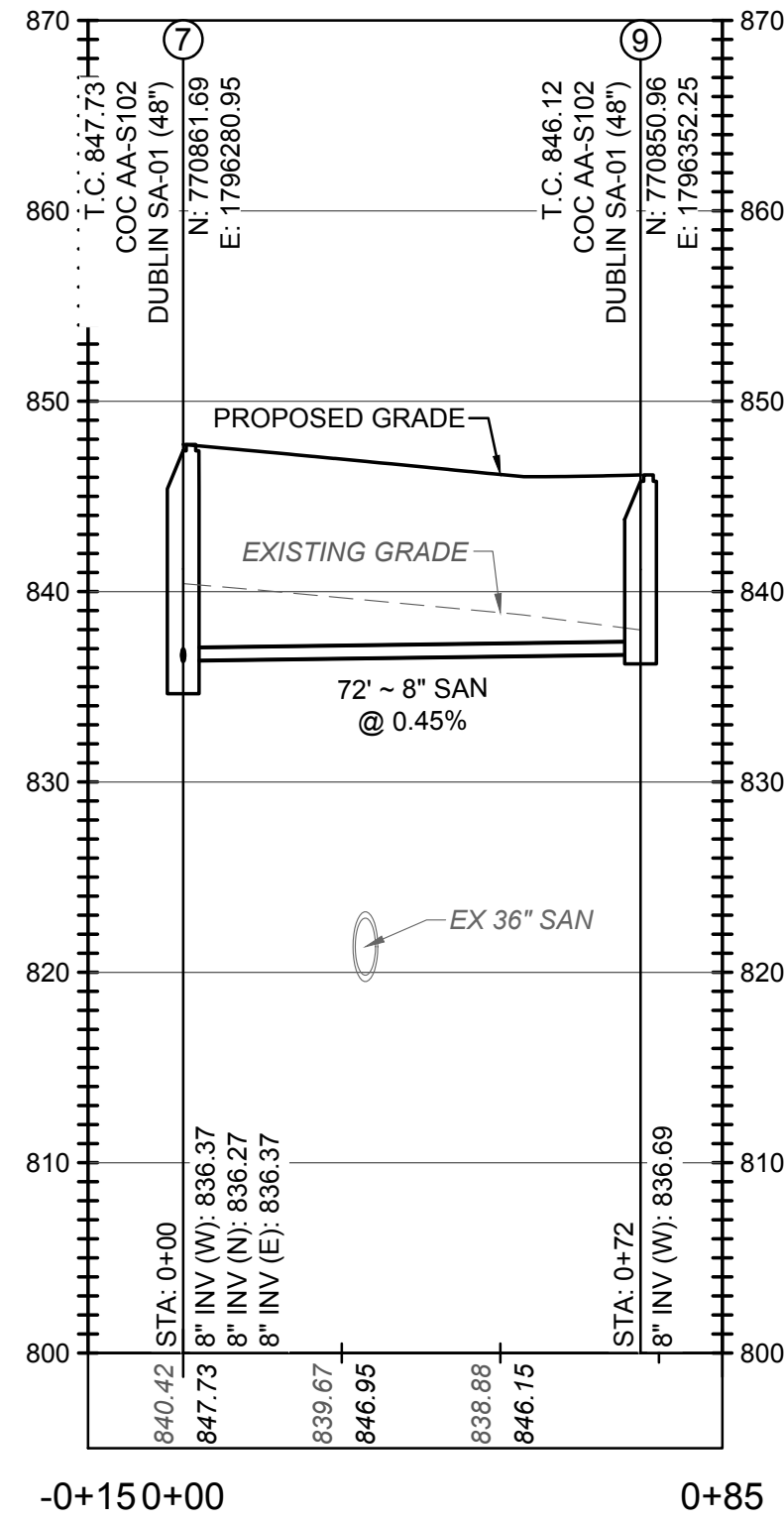
- \* COMPACTED BACKFILL, ITEM 911
- \*\* COMPACTED GRANULAR BACKFILL, ITEM 912
- # SEE ANTI INFILTRATION AND INFLOW BARRIER DETAIL, SHEET 2



**SANITARY SEWER PROFILE SAN 1-3**  
SCALE: H:1"=30', V:1"=10'



**SANITARY SEWER PROFILE SAN 6-8**  
SCALE: H:1"=30', V:1"=10'



**SANITARY SEWER PROFILE SAN 7-9**  
SCALE: H:1"=30', V:1"=10'



24-005-RES



SANITARY SEWER PLANS  
FOR  
**LIU TRAIL**  
CITY OF DUBLIN, FRANKLIN COUNTY, OHIO

REVISIONS	DATE	SHEET NO.	DESCRIPTION

**APPROVAL PENDING NOT FOR CONSTRUCTION**

IN SUBMITTING BIDS IN RELIANCE ON THESE PLANS THE CONTRACTOR ASSUMES ALL RISKS OF ADDITIONAL COSTS OR REVISIONS DUE TO REQUIREMENTS OF THE OWNER OR GOVERNMENTAL AUTHORITIES AND MATERIAL REVISIONS IN THE COURSE OF COMPLETING THE FINAL DESIGN.

DATE: 04/02/2025  
DRAWN BY: HSR  
CHECKED BY: MJL  
JOB NUMBER: 2024.00690