CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
2016

OHIO Utilities Protection SERVICE
Call Before You Dig
800-362-2764 or 8-1-1
www.oups.org

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PROJECT SUMMARY

Project Area ..... 82.26 Ac
Right-of-way Area ..... 9.54 Ac
Number of Lots 85

STANDARD DRAWINGS

CITY OF DUBLIN (2014)			CITY OF COLUMBUS		
PD-01	RD-06	SL-05	AA-S102	AA-S134B	L-6306
PD-02	RD-07	SL-06	AA-S106	AA-S139	L-6309
PD-03	RD-10	SL-08	AA-S107	AA-S142	L-6310
PD-04	RD-11	ST-01	AA-S112	AA-S149	L-6311
PD-06	RD-12	ST-02	AA-S117	AA-S150	L-6312
RD-01	SL-01	ST-03	AA-S119	AA-S151	L-6316A
RD-02	SL-02	ST-04	AA-S121	AA-S168	L-6409A
RD-03	SL-03	ST-05	AA-S125A	AA-S169	L-6473B
RD-05	SL-04	ST-06	AA-S125B		L-6640
		WA-01	AA-S128	1441	L-7001
ODOT			AA-S133A		L-9901
			AA-S133B		
BP-3.1	CB-1.2		AA-S134A		

BENCH MARKS
(NAVD 1988)

BM#1 Chiseled "X" on the northwest bolt of a light pole located at the southeast corner of the intersection of Avery Road and Memorial Drive.

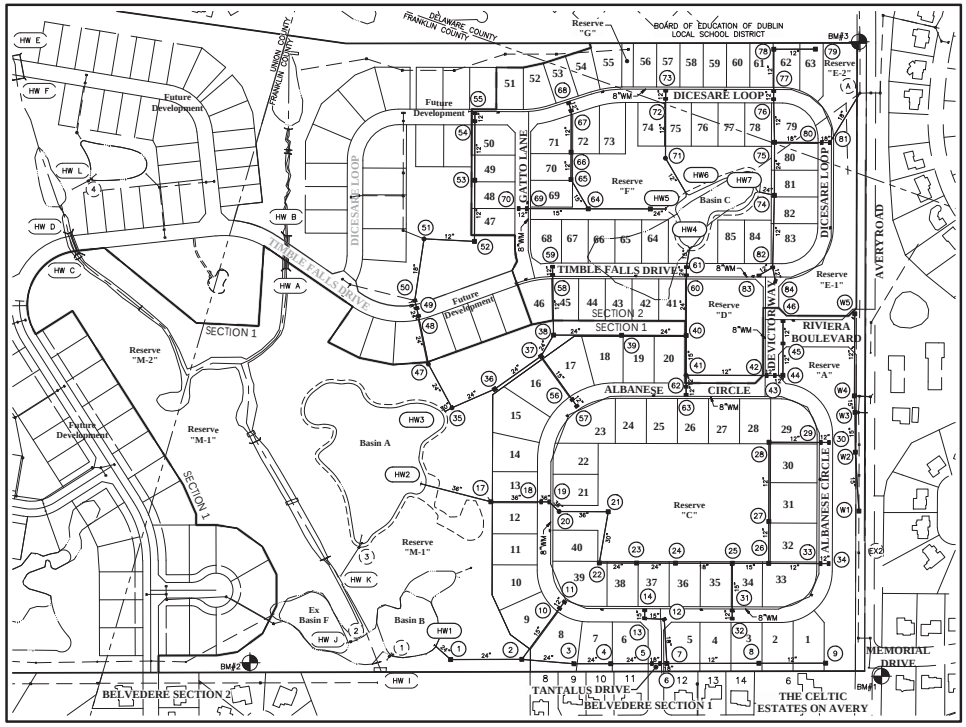
Elevation = 939.48

BM#2 Chiseled "X" on the north rim of a sanitary sewer manhole located 215 feet northwest from the center of the Grafton End cul-de-sac.

Elevation = 924.52

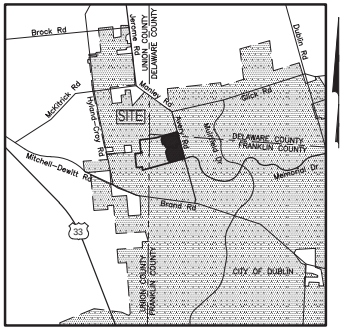
BM#3 Chiseled square on the southwest corner of a storm sewer catch basin located on the west side of Avery Road, being 520 feet south of the entrance drive to Deer Run Elementary School and Willard Grizzell Middle School.

Elevation = 955.63



INDEX MAP
Scale: 1" = 200'

Storm Structures #15 and #16 do not exist



LOCATION MAP
Not to Scale

DEVELOPER/OWNER

Riviera Ventures, LLC
Jason Francis
3 Easton Oval, Suite 540
Columbus, Ohio 43219
Tel: (614) 418-8000
Fax: (614) 418-8030

GRAPHIC SCALE
0 100 200 400
1 inch = 200 feet

PREPARED BY:
EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com
Fax: 614-775-4805

REGISTERED ENGINEER NO. DATE

APPROVED:

CITY OF DUBLIN:
SIGNATURES BELOW SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES 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.

CITY ENGINEER, CITY OF DUBLIN, OHIO DATE
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, OHIO AND THE CITY OF COLUMBUS, OHIO, ON APRIL 13, 1993 AND ALL SUBSEQUENT AMENDMENTS THEREOF.

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

ADMINISTRATOR, DIVISION OF WATER DATE
CITY OF COLUMBUS, OHIO

DOW No: 15-142 RES

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
TITLE SHEET

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE: April, 2016
SCALE: As Noted
JOB NO.: 20150910
SHEET: 1/27

A:\20150910\Dwg\CivSheets\Base\A1_Title_Sheet.dwg Layout: Sheet Plot Date: Wednesday, April 27, 2016 10:20 AM Last Plotted By: Hammersmith, Kevin 4/8/2016 12:43 PM (No Xrefs)

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 bench marks, property corners, reference points, stakes and other survey reference monuments or markers. In cases of willful or careless destruction, the Contractor shall be responsible for restorations. Resetting of markers shall be performed by an Ohio Professional Surveyor as approved by the City Engineer.

9. Non-rubber tired vehicles shall not be moved on or across public streets or highways without the written permission of the City Engineer.

10. The Contractor shall restore all disturbed areas to equal or better condition than existed before construction. Drainage ditches or water courses that are disturbed by construction shall be restored to the grades and cross-sections that existed before construction.

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 III according to Item 613. Item 911 of the Standard Specifications may be used elsewhere.

17. The Contractor shall submit a copy of the approved construction drawings and a list of proposed precast concrete product manufacturers to the City of Columbus Construction Inspection Division before commencing construction.

    Send the information to the following address:

    Construction Inspection Division
    City of Columbus
    1800 East 17th Avenue
    Columbus, Ohio 43219

    Send a copy of the transmittal letter to the following address:

    Division of Engineering
    City of Dublin
    5800 Shier Rings Road
    Dublin, Ohio 43016

18. All trenches within public right-of-way shall be backfilled according to the approved construction drawings or securely plated during nonworking hours. Trenches outside these areas shall be backfilled or shall be protected by approved temporary fencing or barricades during nonworking hours. Clean-up shall follow closely behind the trenching operation.

19. All trees within the construction area not specifically designated for removal shall be preserved, whether shown or not shown on the approved construction drawings. Trees to be preserved shall be protected with high visibility fencing placed a minimum 15 feet from the tree trunk. Trees 6 -inches or greater at DBH (Diameter 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 III) 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 & 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:

    Columbia Gas of Ohio
    Attn. Tammy Schmid
    200 Civic Center Dr., 4th Floor
    Columbus, Ohio 43215
    1-800-440-6111

    American Electric Power
    Robin Hand
    Engineering Liaison Coordinator
    850 Tech Center Drive
    Gahanna, Ohio 43230-6605
    (614) 883-6829

    City of Dublin Division of Engineering
    Paul Hammersmith, P.E.
    5800 Shier Rings Road
    Dublin, Ohio 43016
    (614) 410-4600

    Time Warner Cable
    Kevin Rich
    1266 Dublin Road
    Columbus, Ohio 43215
    (614) 481-5263

    City of Columbus Division of Water
    910 Dublin Road, 2nd Floor
    Columbus, Ohio 43215
    (614) 645-7788

    Ohio Edison
    Gary Smith
    1040 South Prospect Street
    Marion, Ohio 43302
    (740) 382-7104

    Verizon
    Bill Muether / Randy Brooks
    550 Leader Street
    Marion, Ohio 43302
    (740) 383-0527

    Wide Open West
    Ken Holderfield
    Engineering Manager
    3675 Corporate Drive
    Columbus, Ohio 43231
    (614) 236-3922

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 proper provisions for traffic control are not being provided by the Contractor, the City Engineer shall assign uniformed, off-duty police officers to the project at no cost to the City.

4. Steady-burning, Type "C" lights shall be required on all barricades, drums, and similar traffic control devices in use at night.

5. Access from public roadways to all adjoining properties for existing residents or businesses shall be maintained throughout the duration of the project for mail, public water and sanitary sewer service, and emergency vehicles. The Contractor shall provide a traffic control plan detailing the proposed maintenance of traffic procedures. The traffic control plan must incorporate any traffic control details contained herein. The traffic control plan proposed by the Contractor must be approved by the City Engineer prior to construction.

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 14 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 NOTES 1-20 DELETED

WATER LINE

1. All water main materials and installations shall be in accordance with the current rules and regulations of the City of Columbus, Division of Water. All City of Columbus, Division of Water Standard Drawings shall apply to the project, unless otherwise noted.

3. Only fire hydrants conforming to City of Columbus standards will be approved for use, except that the nozzle shall be threaded to the barrel of the hydrant.

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.

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.

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.

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.

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.z e

WATER LINE NOTES 2, 5, 7, 12, 14, 16 AND 17 DELETED

STORM SEWERS

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 III 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 and endwalls 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 and/or endwalls and other exposed concrete surfaces. Surfaces to be acid washed before approval of stone facing.

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 include ingraved lettering: "Dump No Waste; Drains to River".

7. 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.

MAIL DELIVERY

1. The Contractor shall be responsible to ensure that U.S. Mail delivery within the project limits is not disrupted by construction operations. This responsibility is limited to 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 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.

MISCELLANEOUS

1. High Density Polyethylene (HDPE) corrugated pipe with integrally formed smooth interior wall, ADS N-12 or approved equal, is an approved alternate to reinforced concrete pipe in paved and non-paved areas. This includes applications inside the right-of-way.

2. HDPE pipe joints shall be made using watertight couplers with "O"-ring gasket, ADS WT of approved equal, where rubber "O"-ring gasket (ASTM C-361) pipe is required on approved constructions plans or within contract documents. All other pipe shall have a bell and spigot joint with rubber gasket meeting ASTM F477.

3. All bedding material shall be in accordance with City of Columbus Standard Construction Drawing AA-S149.

4. Backfill material shall be placed in accordance with Item 911 or Item 912 of the City of Columbus Construction Material Specifications (CMS).

5. Backfill material in areas located outside the public right-of-way shall be placed in accordance with City of Columbus Standard Construction Drawing AA-S155.

6. Height of cover shall be in accordance with the Ohio Department of Transportation (ODOT) Location and Design (L&D) Manual, Volume Two, Section 1008.3.1.

7. All HDPE pipe 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.

8. For any and all installations requiring the minimization of trench water migration, anti-seep collars shall be installed in accordance with the ODOT L&D Manual, Volume Two Section 1118.4.1.2 and ODOT Standard Hydraulic Construction Drawing WQ-1.2.

CITY OF COLUMBUS DIVISION OF WATER NOTES

The City of Columbus, Construction and Material Specifications, 2012 edition and all revisions, including all supplements thereto, shall govern all construction items that are a part of this plan, unless otherwise noted.

All water main materials and installations shall be in accordance with the current rules and regulations of the City of Columbus, Division of Water. All City of Columbus, Division of Water Standard Drawings shall apply to the project, unless otherwise noted.

For any emergencies involving the water distribution system, please contact the Division of Water Distribution Maintenance Office at 614-645-7788.

All brass fittings associated with water work, including repairs to the existing system, shall conform to the revised allowable lead extraction limit per the updated NSF/ANSI 61 Standard. The Division of Water's Approved Materials List has been updated to reflect this requirement.

It shall be unlawful for any person to perform any work on City of Columbus water line systems without first securing license to engage in such work, as indicated in Columbus City Code Section 1103.02 and 1103.06. This work includes any attachments, additions to or alterations in any city service pipe or appurtenances (including water service lines and taps). This requirement may be met by utilization of a subcontractor who holds a City of Columbus Water Contractor License or a Combined Water/Sewer Contractor License to perform this work. Utilization of a subcontractor must meet the licensing requirements of City of Columbus Building Code, in particular Section 4114.119 and 4114.529.

No person shall begin construction or installation of a public water main until plans have been approved by the State of Ohio Environmental Protection Agency (OEPA).

The Contractor shall obtain the proper hydrant permit(s), and pay any applicable fees, for any approved hydrant usage deemed necessary for work under this improvement. Permits may be obtained through the Division of Water Permit Office (645-7330). The contractor shall adhere to all rules & regulations governing said permit and must have the original permit on site anytime in which the hydrant is in use. Cost to be included in the various bid items.

All water mains shall be cleaned and flushed, also any water main 12-inch and larger must be properly pigged, in accordance with section 801.13 of the City of Columbus, Construction and Material Specifications.

All water mains shall be pressure tested in accordance with section 801.14 of the City of Columbus, Construction and Material Specifications. 150 psi of pressure shall be maintained for at least two hours in any tested section. The City may not approve any test lasting less than two hours regardless of the amount of leakage.

All water mains shall be disinfected in accordance with section 801.15 of the City of Columbus Construction and Material Specifications. Special attention is directed to applicable sections of A.W.W.A. C-651. When the water mains are ready for disinfection, the City of Dublin shall submit a written request for chlorination of the mains that need disinfected, three (3) sets of "as-built" plans (full size sheets only), the as-built survey coordinates, water service reports and a pressure test to the City of Columbus, Division of Water. The contractor shall be responsible for all costs associated with the disinfection of all water mains constructed under this plan.

Only one connection to an existing water line is permitted before disinfection of a new water line has been completed. All other connections must be made after the line has been disinfected.

All water meters associated with this project shall be installed inside the proposed structure unless a meter pit is approved by the Administrator of the Division of Water. All meter pits must be approved prior to the issuing of any service permits and must conform to Standard Drawing L-7103 for 5/8" through 1" meters, or L-6317 A, B, C, D, & E for 1-1/2" or larger meters.

No service connection permits shall be issued or connections made to any service taps until water mains have been disinfected by the City of Columbus, Division of Water.

Water service boxes shall be placed 1' from the edge of the proposed or existing sidewalk between the sidewalk and the curb, or 2 feet inside the right-of-way or easement line when no sidewalk is present or proposed. Refer to Standard Drawing L-9901 for additional information.

Maintain eighteen (18) inches vertical and ten (10) feet horizontal separation between any sanitary or storm sewer piping and structures and all proposed water mains.

When Controlled Density Fill (Item 613) is to be used as backfill, the Contractor shall provide Size No. 57 Crushed Carbonate Stone (CCS) 1 foot below to 1 foot above the existing water line.

"Survey Coordinates" shall include all material, equipment, and labor necessary to obtain horizontal and vertical (northing, easting, and elevation) survey coordinates for the water main improvements. The survey coordinates shall be obtained for the completed water main construction and shall include all valves, tees, crosses, bends, deflections, plugs, reducers, tapping sleeves, blow offs, chlorination taps, fire hydrants, air releases, curb stops, casing pipe termini, and other fittings. Additional survey coordinates are required on the water main every 500' where no fitting or other water main structure is being installed within that length of the improvement.

All survey coordinates shall be referenced to the applicable County Engineer's Monuments, and shall be based on the North American Datum of 1983 (NAD 83) with the (NSRS2007) adjustment, with further reference made to the Ohio State Plane South Coordinate System, South Zone, with elevations based on NAVD 88 datum. All coordinates (Northing, Easting, Elevation) shall be referenced to the nearest hundredth (N xxxxxx.xx, E xxxxxx.xx, Elev. xxx.xx). All survey coordinates shall be accurate to within 1.0 foot horizontal and a tenth of a foot (0.10) or less vertical.

The coordinates shall be documented to the Engineer in digital spreadsheet form and shall include the applicable item, station, northing, easting, and elevation. Coordinates shall be submitted to the Engineer on a bi-weekly basis. Coordinates shall also be required to be submitted to the Division of Water as part of the request for chlorination.

Lump sum payment is full compensation for all work involved in obtaining and documenting the survey coordinates as described in this specification.

SPECIAL NOTES

All water line valve boxes, service boxes, test stations, pitometer tap structures, meter pit covers, and other surface utility structures within the disturbed area shall be adjusted to grade. Any of these structures located within pavement, driveways, or other traveled areas, whether existing or proposed, shall be equipped with a traffic rated, heavy duty valve box and/or cover in accordance with the Standard Drawings. Existing water service boxes to remain that are encountered within the project limits shall be cleaned out, centered over the curb stop, and adjusted to the proposed grade.

Where new conduit is proposed to cross an existing or proposed water main or water service, a minimum of 12-inches of vertical clearance shall be maintained between the conduit and the water main or service. A minimum of 3-feet of horizontal clearance (out to out) is required at locations where the conduit is parallel to the water main and at locations of water line thrust blocks.

A minimum of 3 feet of horizontal clearance (out to out) shall be maintained between all existing water mains and foundations for poles, pull boxes, push button pedestals, and any other miscellaneous electrical structure.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
GENERAL NOTES

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
Fax: 614.775.4800 emht.com

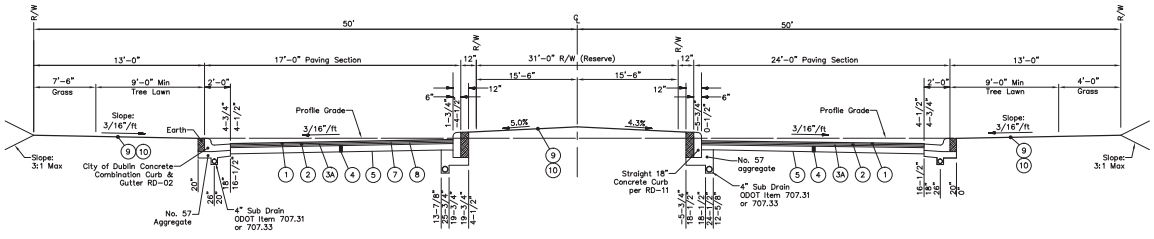
DATE
April, 2016

SCALE
1" = 50'

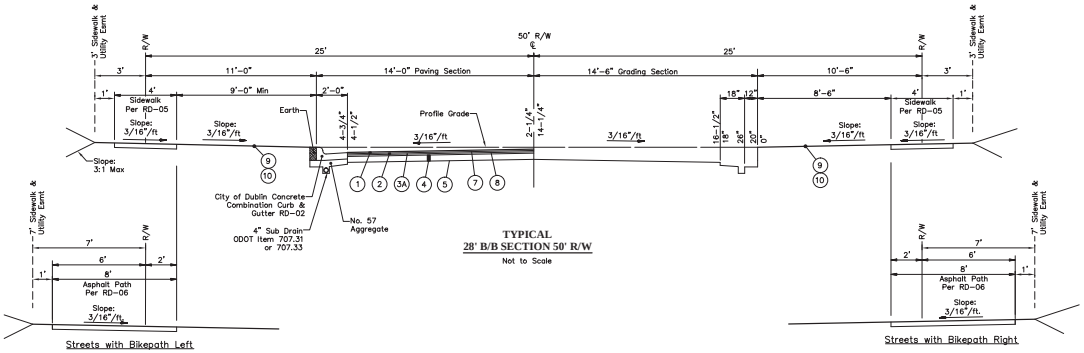
JOB NO.
20150910

SHEET
2/27

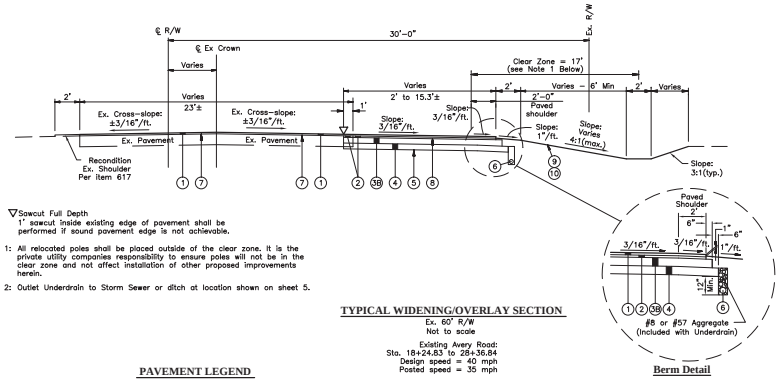
J:\20150910\Civil\CD\Sheets\Group\2_General Notes.dwg - Last Saved By: Mchristian, Kyle - 4/6/2016 9:01 AM Last Plotted By: Mchristian, Kyle - 4/6/2016 12:43 PM (No Xrefs)



ENTRANCE
TYPICAL BOULEVARD SECTION 50' R/W
Not to Scale



TYPICAL
28' B/B SECTION 50' R/W
Not to Scale



▽Sawcut Full Depth
1' sawcut inside existing edge of pavement shall be performed if sound pavement edge is not achievable.

Note 1: All relocated poles shall be placed outside of the clear zone. It is the private utility companies responsibility to ensure poles will not be in the clear zone and not affect installation of other proposed improvements herein.

Note 2: Outlet Underdrain to Storm Sewer or ditch at location shown on sheet 5.

TYPICAL WIDENING/OVERLAY SECTION
Ex. 60' R/W
Not to scale

Existing Avery Road:
Sta. 18+24.83 to 28+36.84
Design speed = 40 mph
Posted speed = 35 mph

Berm Detail

PAVEMENT LEGEND
(Per City of Dublin Standard Drawing RD-01 Dated 05/01/2014)

1. Item 448, 1.25" Asphalt Concrete, Surface Course, Type 1, pg 64-22, Medium Traffic. *
2. Item 448, 1.75" Asphalt Concrete, Intermediate Course, Type 2, pg 64-22, Medium Traffic.
3A. Item 301, 3" Bituminous Aggregate Base Course
3B. Item 301, 6" Bituminous Aggregate Base Course
4. Item 304, 6" Aggregate Base
5. Item 204, Subgrade Compaction
6. Item 605, 4" Pipe Underdrain w/No. 8 or No. 57 Stone
7. Item 407, Tack Coat (0.075 gal per sq.Yd.)
8. Item 407, Tack Coat (0.10 gal per sq.Yd.)
9. Item 653, 3" Topsoil Furnished and Placed
10. Item 659, Seeding and Mulching

* Note: 448 surface course to be installed within 7 days of intermediate course or provide tack coat (407) @ 0.15 gal per sq. Yd. at contractor's expense (1483 sq. Yd. = 223 gal).

ESTIMATE OF QUANTITIES

The contractor shall be solely responsible for determining the required bid quantities necessary for the completion of the plan improvements.

ITEM	QUANTITY SECTION 1	QUANTITY SECTION 2	QUANTITY TOTAL	UNIT	DESCRIPTION
					ROADWAY
201	Lump	Lump	Lump	SUM	Clearing & Grubbing
203	8952	7803	16755	CY	Excavation Including Embankment Construction
204	10596	8596	19191	SY	Compacted Subgrade
301	1766	1433	3199	TONS	Bituminous Aggregate Base
304	1766	1433	3199	CY	Aggregate Base
407	1854	1504	3358	GAL	Tack Coat
448	736	597	1333	TONS	Asphalt Concrete (Surface Course-Type I, Pg 64-22)
448	1030	836	1866	TONS	Asphalt Concrete (Intermediate Course-Type-II, Pg 64-22)
605	7566	6312	13878	LF	4" Pipe Sub Drain
608	6	9	15	Each	Curb Ramps w/Detectable Warnings
608	2631	3676	6307	SF	Concrete Sidewalk
609	7127	6312	13439	LF	Concrete Curb & Gutter
609	439	0	439	LF	Straight 18" Concrete Curb
653	698	555	1253	CY	Topsoil Furnished and Placed
659	4625	6340	10965	SY	Seeding & Mulching (R/W)
659	Lump	Lump	Lump	SUM	Seeding & Mulching (Reserves & Basins)
SPEC	2170	0	2170	SF	Brick Pavers (Entry Landscaping per RD-12)
SPEC	1	2	3	Each	Temporary Barricade
					PEDESTRIAN CROSSING
608	3	0	3	Each	Curb Ramps w/Detectable Warnings
608	915	0	915	SF	Concrete Sidewalk
630	2	0	2	Each	Pedestrian Crossing Warning System Foundation (By Contractor), Complete, As Per Plan
630	2	0	2	Each	Pedestrian Crossing Signs-200ft Ahead, Complete
644	80	0	80	LF	Crosswalk Line, 12", White
807	1	0	1	Each	Valve Box Adjusted to Grade
					SHARED-USE PATH
204	2627	854	3481	SY	Compacted Subgrade
301	438	142	580	TONS	Bituminous Aggregate Base
304	438	142	580	CY	Aggregate Base
448	219	71	290	TONS	Asphalt Concrete (Surface Course-Type I, Pg 64-22)
					STORM SEWER
202	3	0	3	Each	Catch Basin Removed (Avery Road Widening)
202	352	0	352	LF	Pipe Removed (Avery Road Widening)
202	0	686	686	LF	Pipe Removed or Filled in Place
601	15	13	29	CY	Rock Channel Protection Type "C" w/Filter Fabric
604	2	0	2	Each	Headwall (AA-S168) submerged without stone facing
604	1	4	5	Each	Headwall (AA-S168) w/Stone Facing on Exposed Surfaces
604	4	6	10	Each	Manhole Type C, AA-S302 [Section 2: 1 w/grate top lid; 4 w/Neenah (R-3246-F)]
604	20	14	34	Each	Curb and Gutter Inlet (AA-S125A)
604	3	3	6	Each	Curb and Gutter Inlet (AA-S125B)
604	9	6	15	Each	Catch Basin (AA-S133A)
604	9	2	11	Each	Catch Basin (AA-S133B)
604	4	1	5	Each	Catch Basin (AA-S134A w/Side Inlet)
604	5	2	7	Each	Catch Basin (AA-S134B w/Side Inlet)
901	11	0	11	LF	8" Storm Sewer w/Concrete Encasement
901	1907	1635	3543	LF	12" Storm Pipe
901	167	520	687	LF	12" Reinforced Concrete Pipe w/Joints per ASTM C-443
901	104	26	130	LF	12" Storm Sewer w/Concrete Encasement
901	488	370	858	LF	15" Storm Pipe
901	656	0	656	LF	15" Reinforced Concrete Pipe w/Joints per ASTM C-443
901	105	0	105	LF	15" Storm Sewer w/Concrete Encasement
901	348	439	787	LF	18" Storm Pipe
901	0	152	152	LF	18" Reinforced Concrete Pipe w/Joints per ASTM C-443
901	26	0	26	LF	18" Storm Sewer w/Concrete Encasement
901	1963	523	2485	LF	24" Storm Pipe
901	0	352	352	LF	24" Reinforced Concrete Pipe w/Joints per ASTM C-443
901	192	0	192	LF	30" Storm Pipe
901	461	0	461	LF	36" Storm Pipe
901	162	0	162	LF	36" Reinforced Concrete Pipe w/Joints per ASTM C-443
901	6580	4016	10596	LF	Storm Sewer Pipe Total
					WATERLINE
259	4	0	4	CY	Permanent Pavement Replacement, Type I
801	54	54	108	LF	6" Water Pipe
801	3715	3304	7019	LF	8" Water Pipe
802	5	6	11	Each	8" Valve w/ Box
802	9	9	18	Each	6" Valve w/ Box (Including Hydrants)
803	1	0	1	Each	16"X8" Tapping Sleeve & Valve
805	19	22	41	Each	3/4" Water Service-Long
805	21	24	45	Each	3/4" Water Service-Short
809	7	8	15	Each	Fire Hydrant Type B
809	2	1	3	Each	Fire Hydrant Type A
SPEC	Lump	Lump	Lump	SUM	Survey Coordinates
					SEDIMENT CONTROL
207	25	11	36	Each	Inlet Protection (Dandy Bag)
207	26	24	50	Each	Inlet Protection (Dandy Curb Bag)
207	0	13	13	CY	Construction Entrance
					LIGHTING
SPEC	2	0	2	Each	Street Light Complete

For Avery Road Widening Quantities, See Sheet 21
For Avery Road Traffic Control Quantities, See Sheet 25
For Avery Road Maintenance of Traffic Quantities, See Sheet 26

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
QUANTITIES AND TYPICAL SECTIONS

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone 614.775.4500 Toll Free 888.775.3648
emht.com

DATE: April, 2016

SCALE: None

JOB NO.: 20150910

SHEET: 3/27

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SECTION 1

TANTALUS DRIVE-WATER COORDINATE TABLE

SHEET	ITEM	STATION	FIELD NORTHING	FIELD EASTING	FIELD ℄ ELEVATION
7/27	Remove Ex 8" Plug & Thrust Block/Vertical Joint Deflection	1+69.47			
7/27	Vertical Joint Deflection (8")	1+92.10			
7/27	Vertical Joint Deflection (8")	2+10.10			
7/27	3/4" Water Service (Short) (5)	2+78.56			
7/27	Horizontal Joint Deflection (8")	3+01.49			
7/27	Vertical Joint Deflection (8")	3+40.82			
7/27	Horizontal & Vertical Joint Deflection (8")	3+58.82			

SECTION 1

ALBANESE CIRCLE (N&W)-WATER COORDINATE TABLE

SHEET	ITEM	STATION	FIELD NORTHING	FIELD EASTING	FIELD ℄ ELEVATION
8/27	45° Horizontal Bend (8")	0+03.33			
8/27	3/4" Water Service (Long) (9)	0+36.20			
8/27	Vertical Joint Deflection (8")	0+39.22			
8/27	3/4" Water Service (Long) (10)	1+03.95			
8/27	22.5° Horizontal Bend (8")	1+52.59			
8/27	3/4" Water Service (Long) (11)	1+99.24			
8/27	Vertical Joint Deflection (8")	2+02.48			
8/27	3/4" Water Service (Short) (40)	2+11.30			
8/27	6" 90° Fire Hydrant Bend	2+56.80			
8/27	8"x6" Tee/Vertical Joint Deflection	2+56.80			
8/27	6" Fire Hydrant Valve	2+57.22			
8/27	Fire Hydrant Type "B"	2+61.30			
8/27	3/4" Water Service (Long) (12)	2+99.24			
8/27	22.5° Vertical Bend (8")	3+28.24			
8/27	22.5° Vertical Bend (8")	3+38.41			
8/27	22.5° Vertical Bend (8")	3+56.41			
8/27	22.5° Vertical Bend (8")	3+66.66			
8/27	3/4" Water Service (Short) (21)	3+91.30			
8/27	3/4" Water Service (Long) (13)	3+99.24			
8/27	3/4" Water Service (Short) (22)	4+76.74			
8/27	22.5° Horizontal Bend (8")	4+81.74			
8/27	3/4" Water Service (Long) (14)	4+97.77			
8/27	3/4" Water Service (Long) (15)	5+73.21			
8/27	3/4" Water Service (Long) (16)	6+47.18			
8/27	Fire Hydrant Type "A"	6+55.54			
8/27	6" Fire Hydrant Valve	6+56.91			
8/27	8"x6" Tee	6+57.11			
8/27	45° Horizontal Bend (8")	6+62.14			
8/27	3/4" Water Service (Short) (23)	6+67.25			
8/27	Vertical Joint Deflection (8")	6+97.48			
8/27	3/4" Water Service (Long) (17)	7+39.31			
8/27	3/4" Water Service (Long) (18)	8+17.48			
8/27	22.5° Horizontal Bend (8")	8+22.64			
8/27	3/4" Water Service (Short) (24)	8+91.87			
8/27	3/4" Water Service (Long) (19)	8+96.87			
8/27	6" 90° Fire Hydrant Bend	9+61.87			
8/27	8"x6" Tee	9+61.87			
8/27	6" Fire Hydrant Valve	9+62.30			
8/27	Fire Hydrant Type "B"	9+66.37			
8/27	3/4" Water Service (Short) (25)	9+91.87			
8/27	3/4" Water Service (Long) (20)	9+96.87			
8/27	Vertical Joint Deflection (8")	10+67.48			
8/27	3/4" Water Service (Short) (26)	10+91.87			
8/27	3/4" Water Service (Short) (27)	11+91.87			
8/27	3/4" Water Service (Short) (28)	12+83.87			
8/27	Vertical Joint Deflection (8")	12+86.99			
8/27	8" Valve	12+91.87			
8/27	8"x8" Tee	13+23.87			
8/27	6" 90° Fire Hydrant Bend	13+40.37			
8/27	8"x6" Tee	13+40.37			
8/27	6" Fire Hydrant Valve	13+40.80			
8/27	Fire Hydrant Type "B"	13+44.87			
8/27	8" Valve	13+55.37			
8/27	3/4" Water Service (Short) (29)	13+71.87			
8/27	22.5° Horizontal Bend/Vertical Joint Deflection (8")	13+76.87			
8/27	Vertical Joint Deflection (8")	14+50.00			

SECTION 1

ALBANESE CIRCLE (S&E)-WATER COORDINATE TABLE

SHEET	ITEM	STATION	FIELD NORTHING	FIELD EASTING	FIELD ℄ ELEVATION
9/27	3/4" Water Service (Long) (8)	0+36.66			
9/27	22.5° Horizontal Bend (8")	0+81.25			
9/27	3/4" Water Service (Short) (39)	0+86.98			
9/27	3/4" Water Service (Long) (7)	1+16.03			
9/27	6" 90° Fire Hydrant Bend	1+29.11			
9/27	8"x6" Tee/Vertical Joint Deflection	1+29.11			
9/27	6" Fire Hydrant Valve	1+29.54			
9/27	Fire Hydrant Type "B"	1+33.61			
9/27	3/4" Water Service (Short) (38)	1+98.61			
9/27	3/4" Water Service (Long) (6)	2+16.03			
9/27	8" Valve/Vertical Joint Deflection	2+92.60			
9/27	3/4" Water Service (Short) (37)	2+98.61			
9/27	8"x8" Tee	3+20.70			
9/27	8" Valve	3+56.16			
9/27	Vertical Joint Deflection (8")	3+61.16			
9/27	3/4" Water Service (Short) (36)	3+98.61			
9/27	6" 90° Fire Hydrant Bend	4+49.11			
9/27	8"x6" Tee/Vertical Joint Deflection	4+49.11			
9/27	6" Fire Hydrant Valve	4+49.54			
9/27	Fire Hydrant Type "B"	4+53.61			
9/27	3/4" Water Service (Long) (4)	4+93.61			
9/27	3/4" Water Service (Short) (35)	4+98.61			
9/27	Vertical Joint Deflection (8")	5+17.10			
9/27	Vertical Joint Deflection (8")	5+60.61			
9/27	Vertical Joint Deflection (8")	5+72.49			
9/27	3/4" Water Service (Long) (3)	5+93.61			
9/27	3/4" Water Service (Short) (34)	5+98.61			
9/27	3/4" Water Service (Long) (2)	6+90.39			
9/27	3/4" Water Service (Short) (33)	6+95.39			
9/27	22.5° Horizontal Bend/Vertical Joint Deflection (8")	7+00.39			
9/27	3/4" Water Service (Long) (1)	7+74.38			
9/27	45° Horizontal Bend/Vertical Joint Deflection (8")	8+26.77			
9/27	8"x6" Tee	8+35.27			
9/27	6" Fire Hydrant Valve	8+35.43			
9/27	Fire Hydrant Type "A"	8+36.30			
9/27	22.5° Horizontal Bend (8")	9+19.05			
9/27	22.5° Vertical Bend (8")	9+62.53			
9/27	22.5° Vertical Bend (8")	9+68.86			
9/27	3/4" Water Service (Short) (32)	10+21.03			
10/27	3/4" Water Service (Short) (31)	11+45.53			
10/27	Vertical Deflection Use Joint Deflection	11+48.53			
10/27	Fire Hydrant Type "B"	12+23.44			
10/27	6" Fire Hydrant Valve	12+27.52			
10/27	6" 90° Fire Hydrant Bend	12+27.94			
10/27	8"x6" Tee	12+27.94			
10/27	3/4" Water Service (Short) (30)	12+76.03			
10/27	Vertical Joint Deflection (8")	12+92.45			
10/27	22.5° Horizontal Bend/Vertical Joint Deflection (8")	13+74.00			
10/27	Vertical Joint Deflection (8")	14+23.67			
10/27	45° Horizontal Bend (8")	14+82.54			
10/27	Vertical Joint Deflection (8")	15+15.31			

SECTION 1

DEVICTOR WAY-WATER COORDINATE TABLE

SHEET	ITEM	STATION	FIELD NORTHING	FIELD EASTING	FIELD ℄ ELEVATION
7/27	Vertical Joint Deflection (8")	0+23.27			
7/27	Vertical Joint Deflection (8")	0+41.00			
7/27	22.5° Vertical Bend (8")	0+59.00			
7/27	22.5° Vertical Bend (8")	0+66.35			
7/27	Vertical Joint Deflection (8")	1+27.30			
7/27	8"x8" Tee/Vertical Joint Deflection	2+30.00			
7/27	8" Valve	2+42.50			
7/27	8" Plug & Thrust Block/Vertical Joint Deflection	2+67.50			

SECTION 1

RIVIERA BOULEVARD-WATER COORDINATE TABLE

SHEET	ITEM	STATION	FIELD NORTHING	FIELD EASTING	FIELD ℄ ELEVATION
7/27	16"x8" Tapping Sleeve & Valve	3+33.03			
7/27	6" 90° Fire Hydrant Bend	0+69.00			
7/27	8"x6" Tee/Vertical Joint Deflection	0+69.00			
7/27	6" Fire Hydrant Valve	0+69.43			
7/27	Fire Hydrant Type "B"	0+73.50			
7/27	45° Horizontal Bend (8")	2+29.15			
7/27	45° Horizontal Bend (8")	2+63.20			

SECTION 2

DICESARE LOOP-WATER COORDINATE TABLE

SHEET	ITEM	STATION	FIELD NORTHING	FIELD EASTING	FIELD ℄ ELEVATION
11/27	8" Plug & Thrust Block	8+71.28			
11/27	3/4" Water Service (Short) (131)	9+17.28			
11/27	Fire Hydrant Type "B"	9+65.28			
11/27	6" Fire Hydrant Valve	9+69.36			
11/27	6" 90° Fire Hydrant Bend	9+69.78			
11/27	8"x6" Tee/Vertical Joint Deflection	9+69.78			
11/27	8" Valve	9+97.28			
11/27	3/4" Water Service (Short) (51)	9+99.28			
11/27	Vertical Joint Deflection (8")	10+02.28			
11/27	8"x8" Tee/Vertical Joint Deflection	10+65.45			
11/27	3/4" Water Service (Short) (52)	11+07.56			
11/27	3/4" Water Service (Short) (53)	12+00.77			
11/27	Vertical Joint Deflection (8")	12+10.25			
11/27	3/4" Water Service (Long) (72)	12+36.93			
11/27	3/4" Water Service (Short) (54)	12+75.77			
11/27	Fire Hydrant Type "B"	13+14.15			
11/27	6" Fire Hydrant Valve	13+18.02			
11/27	8"x6" Tee	13+18.41			
11/27	6" 90° Fire Hydrant Bend	13+18.42			
11/27	3/4" Water Service (Long) (73)	13+44.25			
11/27	3/4" Water Service (Short) (55)	13+47.08			
11/27	3/4" Water Service (Short) (56)	14+47.44			
11/27	3/4" Water Service (Long) (74)	14+52.44			
11/27	Vertical Joint Deflection (8")	15+12.44			
11/27	3/4" Water Service (Short) (57)	15+15.44			
11/27	3/4" Water Service (Long) (75)	15+41.44			
11/27	3/4" Water Service (Short) (58)	15+97.47			
11/27	3/4" Water Service (Long) (76)	16+41.44			
11/27	3/4" Water Service (Short) (59)	16+73.52			
11/27	Fire Hydrant Type "B"	17+06.02			
11/27	6" Fire Hydrant Valve	17+10.09			
11/27	6" 90° Fire Hydrant Bend	17+10.52			
11/27	8"x6" Tee/Vertical Joint Deflection	17+10.52			
11/27	3/4" Water Service (Long) (77)	17+44.46			
11/27	3/4" Water Service (Short) (60)	17+49.46			
11/27	3/4" Water Service (Long) (78)	18+18.52			
11/27	3/4" Water Service (Short) (61)	18+23.52			
11/27	22.5° Vertical Bend (8")	18+48.39			
11/27	22.5° Vertical Bend (8")	18+54.02			
11/27	22.5° Vertical Bend (8")	18+72.02			
11/27	22.5° Vertical Bend (8")	18+78.71			
11/27	3/4" Water Service (Short) (62)	18+96.09			
11/27	22.5° Horizontal Bend (8")	19+17.46			
11/27	3/4" Water Service (Short) (63)	19+48.99			
11/27	22.5° Horizontal Bend (8")	19+71.44			
11/27	22.5° Horizontal Bend (8")	20+17.96			
11/27	3/4" Water Service (Long) (79)	20+30.85			
11/27	8"x6" Tee	20+62.90			
11/27	6" Fire Hydrant Valve	20+62.93			
11/27	Fire Hydrant Type "A"	20+63.11			
11/27	22.5° Horizontal Bend (8")	20+80.28			
11/27	22.5° Vertical Bend (8")	20+97.46			
11/27	22.5° Vertical Bend (8")	21+06.08			
11/27	22.5° Vertical Bend (8")	21+24.08			
11/27	22.5° Vertical Bend (8")	21+35.48			
11/27	3/4" Water Service (Long) (80)	21+73.65			
12/27	3/4" Water Service (Long) (81)	22+60.15			
12/27	3/4" Water Service (Long) (82)	23+46.15			
12/27	6" 90° Fire Hydrant Bend	23+94.35			
12/27	8"x6" Tee/Vertical Joint Deflection	23+94.35			
12/27	6" Fire Hydrant Valve	23+94.76			
12/27	Fire Hydrant Type "B"	23+98.85			
12/27	22.5° Horizontal Bend (8")	24+26.69			
12/27	3/4" Water Service (Long) (83)	24+46.36			
12/27	45° Horizontal Bend (8")	25+01.84			
12/27	22.5° Horizontal Bend/Vertical Joint Deflection (8")	25+91.74			
12/27	8" Valve	26+07.25			
12/27	11.25° Vertical Bend (8")	26+12.24			
12/27	11.25° Vertical Bend (8")	26+27.67			
12/27	Vertical Joint Deflection (8")	26+45.67			

SECTION 2

TIMBLE FALLS DRIVE-WATER COORDINATE TABLE

SHEET	ITEM	STATION	FIELD NORTHING	FIELD EASTING	FIELD ℄ ELEVATION
10/27	8" Plug & Thrust Block	30+99.24			
10/27	Vertical Joint Deflection (8")	31+24.39			
10/27	8" Valve	31+29.10			
10/27	8"x6" Tee	31+34.37			
10/27	6" 90° Fire Hydrant Bend	31+34.38			
10/27	6" Fire Hydrant Valve	31+34.83			
10/27	Fire Hydrant Type "B"	31+39.10			
10/27	8"x8" Tee	31+67.83			
10/27	3/4" Water Service (Short) (46)	31+73.89			
10/27	22.5° Vertical Bend (8")	32+10.84			
10/27	22.5° Vertical Bend (8")	32+19.83			
10/27	22.5° Vertical Bend (8")	32+37.83			
10/27	22.5° Vertical Bend (8")	32+48.42			
10/27	3/4" Water Service (Short) (45)	32+69.62			
10/27	3/4" Water Service (Long) (67)	32+95.14			
10/27	3/4" Water Service (Short) (44)	33+55.62			
10/27	3/4" Water Service (Long) (66)	33+81.14			
10/27	3/4" Water Service (Short) (43)	34+41.62			
10/27	3/4" Water Service (Long) (65)	34+67.14			
10/27	6" 90° Fire Hydrant Bend	34+93.11			
10/27	8"x6" Tee	34+93.11			
10/27	6" Fire Hydrant Valve	34+93.54			
10/27	Fire Hydrant Type "B"	34+97.61			
10/27	3/4" Water Service (Short) (42)	35+27.62			
10/27	3/4" Water Service (Long) (64)	35+53.14			
10/27	Vertical Joint Deflection (8")	35+90.00			
10/27	3/4" Water Service (Short) (41)	36+13.62			
10/27	3/4" Water Service (Long) (85)	38+03.14			
10/27	6" 90° Fire Hydrant Bend	38+71.01			
10/27	8"x6" Tee/Vertical Joint Deflection	38+71.01			
10/27	6" Fire Hydrant Valve	38+71.44			
10/27	Fire Hydrant Type "B"	38+75.51			
10/27	8" Valve	38+82.14			
10/27	3/4" Water Service (Long) (84)	38+87.99			
10/27	8"x8" Tee/Vertical Joint Deflection	39+14.14			

SECTION 2

GATTO LANE-WATER COORDINATE TABLE

SHEET	ITEM	STATION	FIELD NORTHING	FIELD EASTING	FIELD ℄ ELEVATION
12/27	8" Valve	0+30.59			
12/27	11.25° Horizontal Bend (8")	0+74.14			
12/27	3/4" Water Service (Short) (68)	1+07.56			
12/27	Vertical Joint Deflection (8")	1+33.89			
12/27	3/4" Water Service (Long) (47)	1+68.75			
12/27	Vertical Joint Deflection (8")	1+82.15			
12/27	Vertical Joint Deflection (8")	1+99.43			
12/27	Vertical Joint Deflection (8")	2+17.43			
12/27	Fire Hydrant Type "B"	2+29.70			
12/27	6" Fire Hydrant Valve	2+33.77			
12/27	6" 90° Fire Hydrant Bend	2+34.20			
12/27	8"x6" Tee/Vertical Joint Deflection	2+34.20			
12/27	3/4" Water Service (Long) (48)	2+54.75			
12/27	3/4" Water Service (Short) (69)	2+59.80			
12/27	3/4" Water Service (Long) (49)	3+40.75			
12/27	3/4" Water Service (Short) (70)	3+45.80			
12/27	3/4" Water Service (Long) (50)	4+26.75			
12/27	3/4" Water Service (Short) (71)	4+31.75			
12/27	Vertical Joint Deflection (8")	4+63.71			
12/27	8" Valve	4+75.27			

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
WATER COORDINATE TABLES

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
April, 2016

SCALE
None

JOB NO.
20150910

SHEET
4/27

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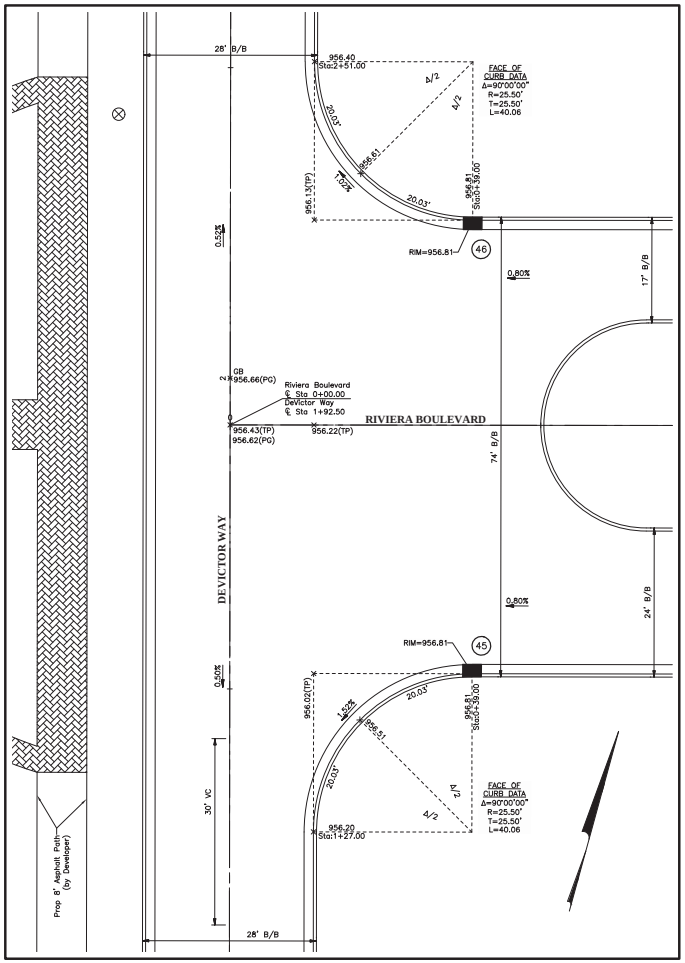


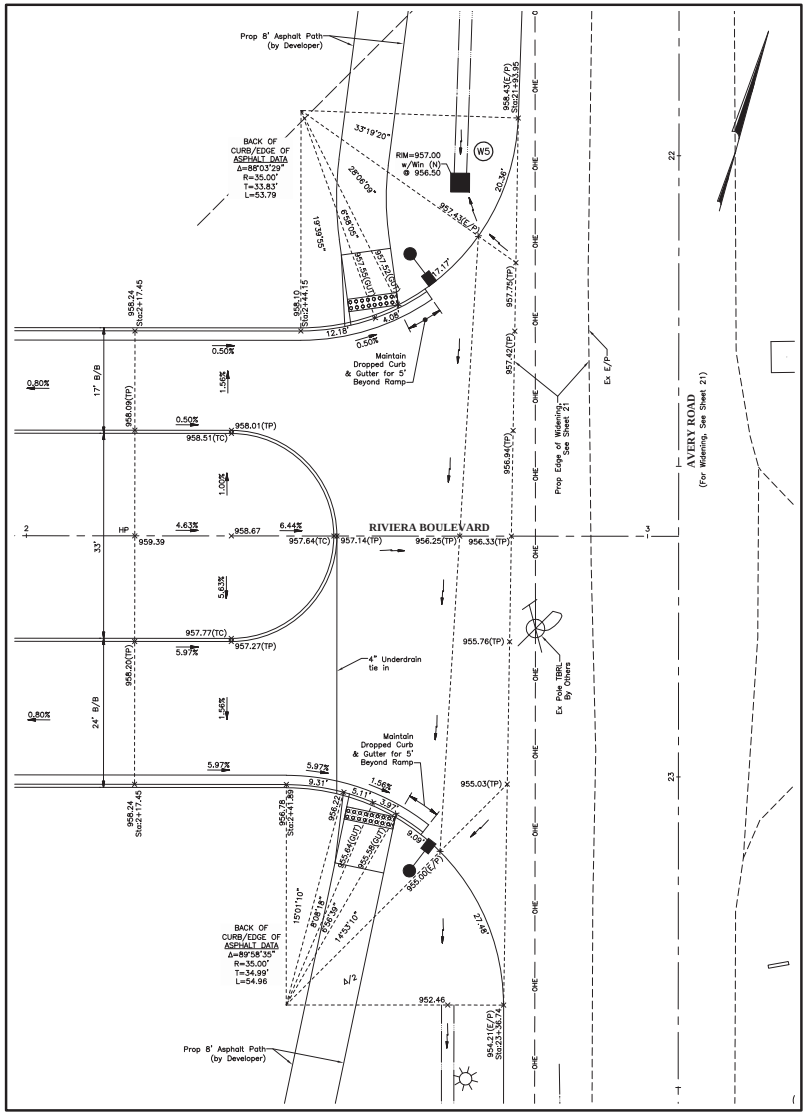
INTERSECTION DETAIL:
Riviera Boulevard / DeVictor Way
SCALE: 1" = 10'

GRAPHIC SCALE

0 5 10 20

1 inch = 10 feet

Note: All elevations are top of curb unless otherwise noted.



INTERSECTION/CURB RAMP DETAIL:
Riviera Boulevard/Avery Road
SCALE: 1" = 10'

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
INTERSECTION AND CURB RAMP DETAILS

EMH&T
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5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Fax: 614.775.4800
Toll Free: 888.775.3648
emht.com

DATE
April, 2016

SCALE
1" = 10'

JOB NO.
20150910

SHEET
5/27

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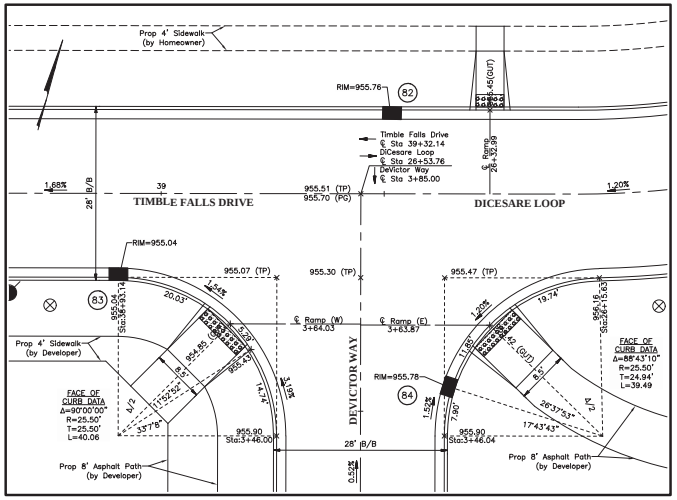
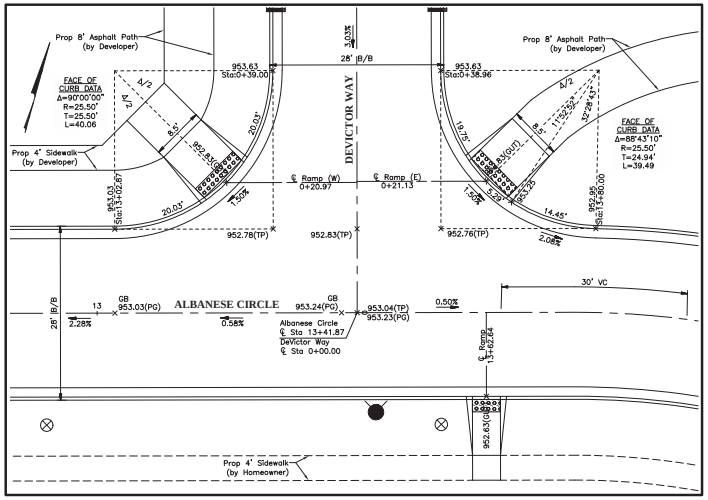


INTERSECTION / CURB RAMP DETAIL:
Timble Falls Drive / DiCesare Loop / DeVictor Way
SCALE: 1" = 10'

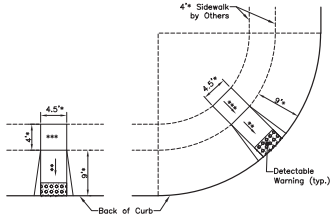


INTERSECTION / CURB RAMP DETAIL:
Albanese Circle / DeVictor Way
SCALE: 1" = 10'

* Dimensions are as shown unless otherwise noted. See intersection details sheet 5 & this sheet.

** Ramp slope (5.0% min. – 7.69% max.) is designed @ 7.12% unless otherwise noted.

*** Top landing slope shall not exceed 1.56%



Notes:
Detectable Warnings shall be provided wherever a curb ramp crosses a vehicular way, excluding unsignalized driveway crossings.

All detectable warnings shall be ADA Solutions Tactile Warning Surface Mats – Replaceable Wet-Set Composite Tactile with a dome spacing of 2.35 inches, manufacturer part number 2448REP. Brick red color shall be used in most locations unless otherwise noted. The cost of this work will be paid at the unit price bid per each, and shall be in addition to any overlapping payments per square foot for sidewalk or pedestrian path.

Refer to Dublin Standard Drawings PD-01, 02, 03, 04, 05, 06, and 08 for curb ramp requirements & RD-03 for typical curb section.

CURB RAMP DETAILS
Not to Scale

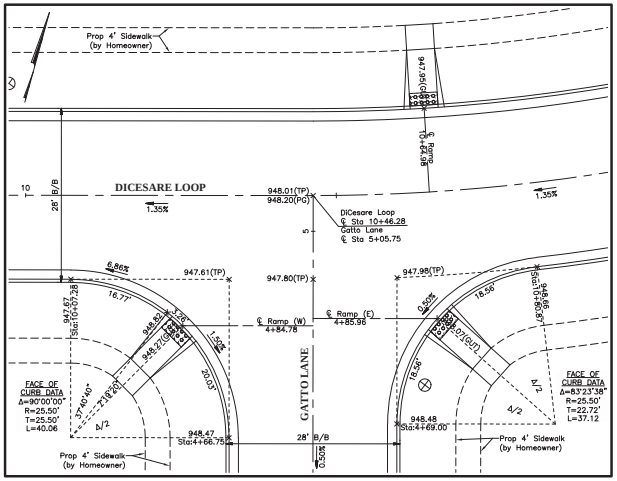
Note:

All elevations are top of curb unless otherwise noted.

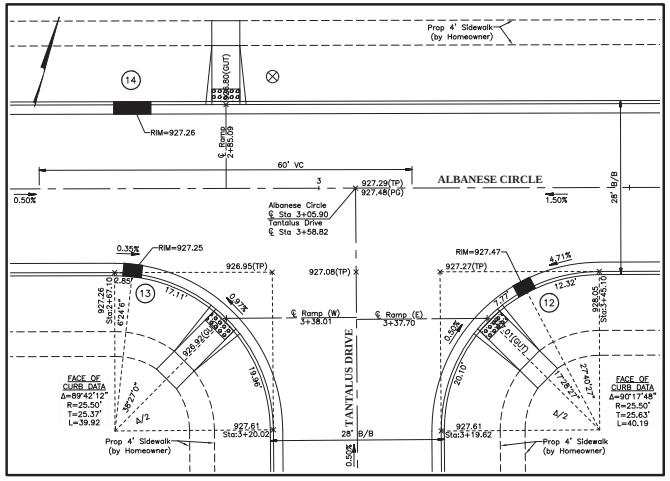
GRAPHIC SCALE

0 5 10 20

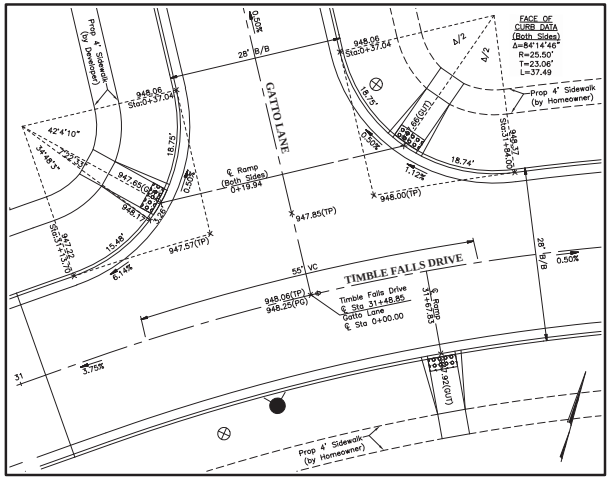
1 inch = 10 feet



INTERSECTION / CURB RAMP DETAIL:
DiCesare Loop / Gatto Lane
SCALE: 1" = 10'



INTERSECTION / CURB RAMP DETAIL:
Albanese Circle / Tantalus Drive
SCALE: 1" = 10'



INTERSECTION / CURB RAMP DETAIL:
Timble Falls Drive / Gatto Lane
SCALE: 1" = 10'

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
INTERSECTION AND CURB RAMP DETAILS

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
phone: 614.775.4500 fax: 614.775.4800
Phone & / 7.8.800 Office: 888.7.8.9.8
emht.com

DATE
April, 2016

SCALE
1" = 10'

JOB NO.
20150910

SHEET
6/27

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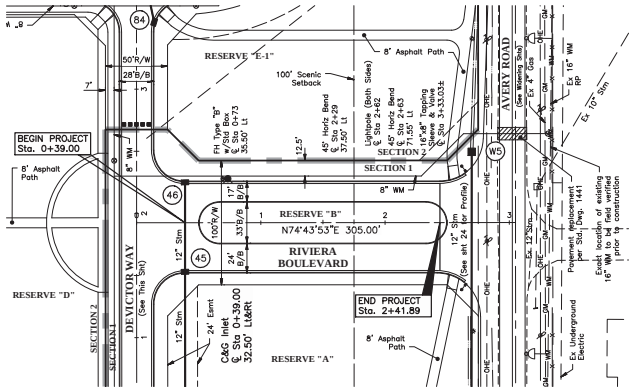
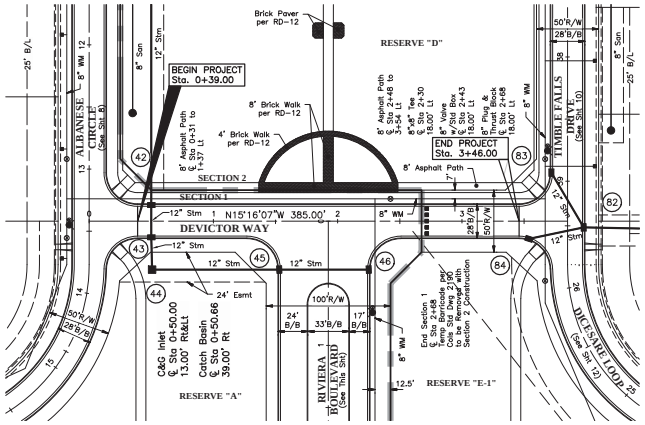
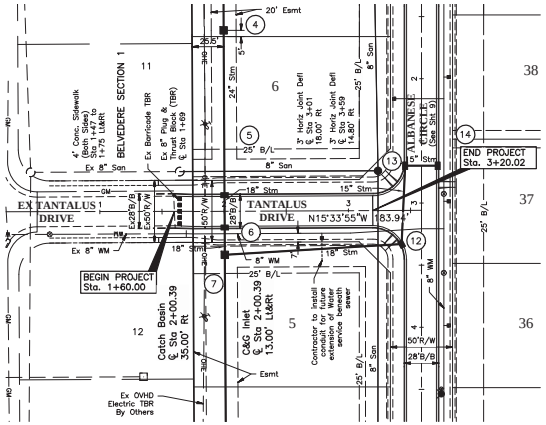






GRAPHIC SCALE

0 25 50 100

Horiz: 1 inch = 50 feet

GRAPHIC SCALE

0 2.5 5 10

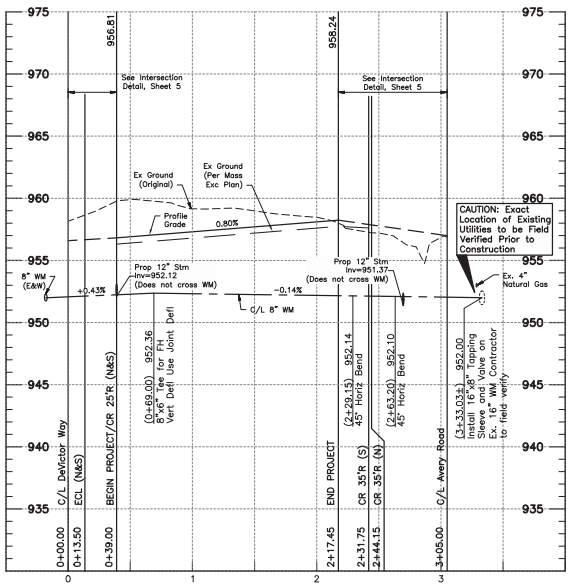
Vert: 1 inch = 5 feet

Note:
For Intersection Details, See Sheets 5 & 6.

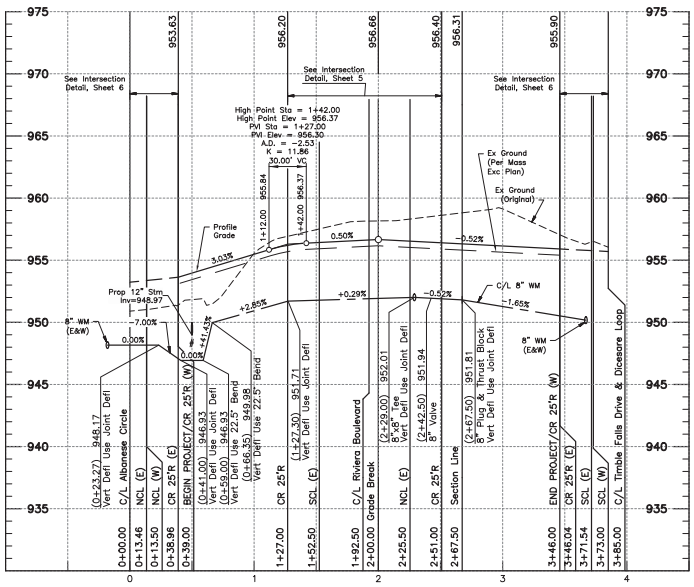
For Storm Sewer Profiles, See Sheets 13–15.

Provide 18" Minimum Clearance at Utility Crossings.

SECTION 1



SECTION 1 ← → SECTION 2



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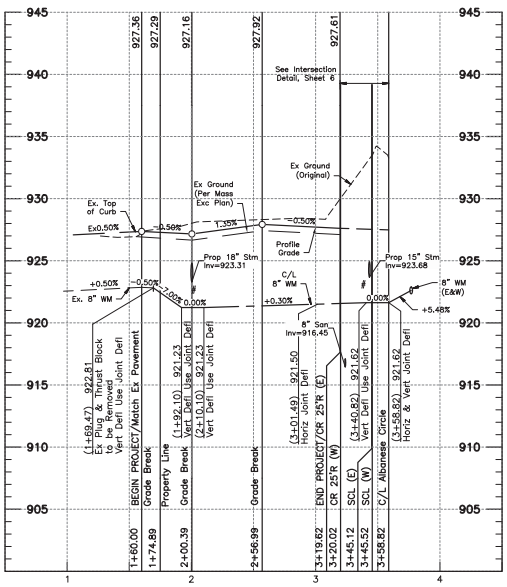


REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
PLAN AND PROFILE

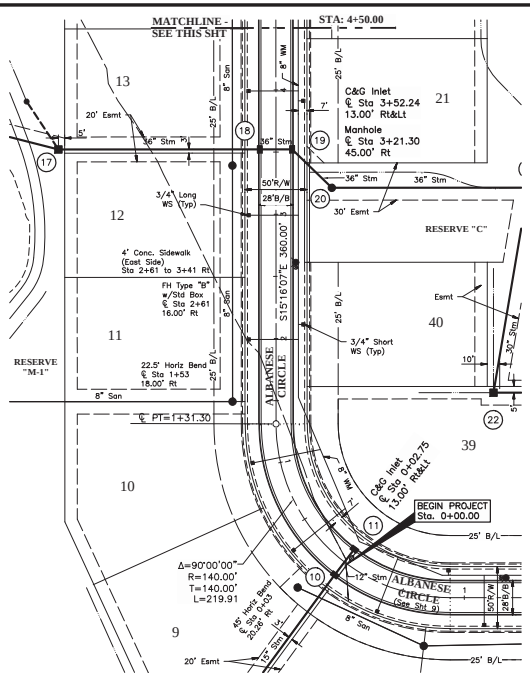
EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Fax: 614.775.4800
Office: 888.718.9618
emht.com

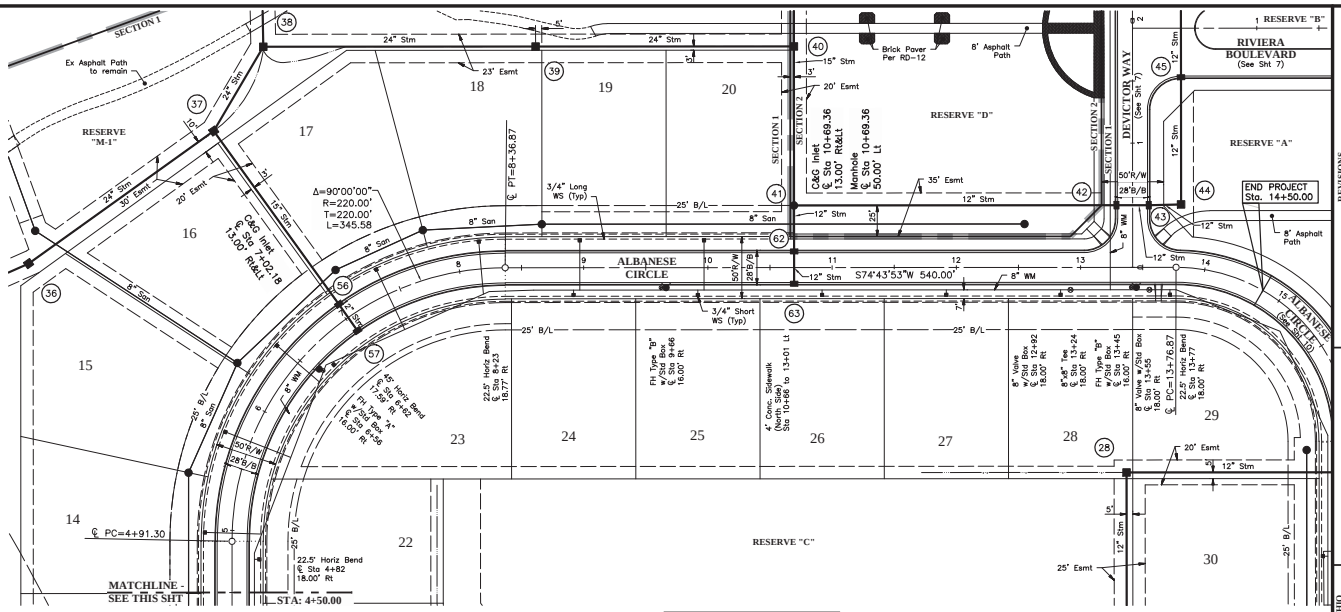
DATE
April, 2016

SCALE
Horiz: 1" = 50'
Vert: 1" = 5'

JOB NO.
20150910

SHEET
7/27





GRAPHIC SCALE

0 25 50 100

Horiz: 1 inch = 50 feet

GRAPHIC SCALE

0 2.5 5 10

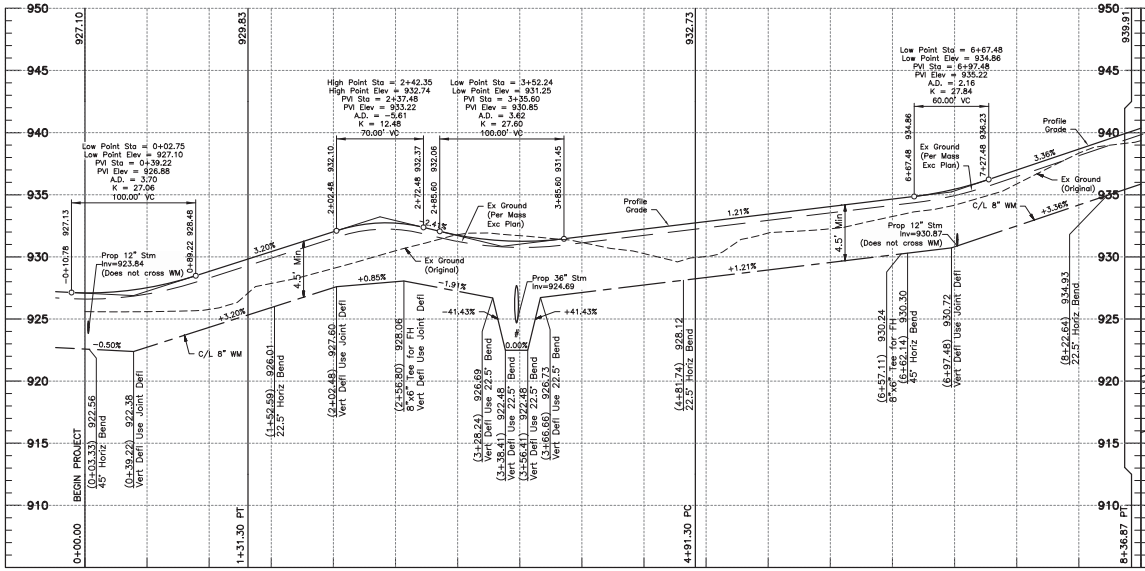
Vert: 1 inch = 5 feet

Note:
For Intersection Details, See Sheets 5 & 6

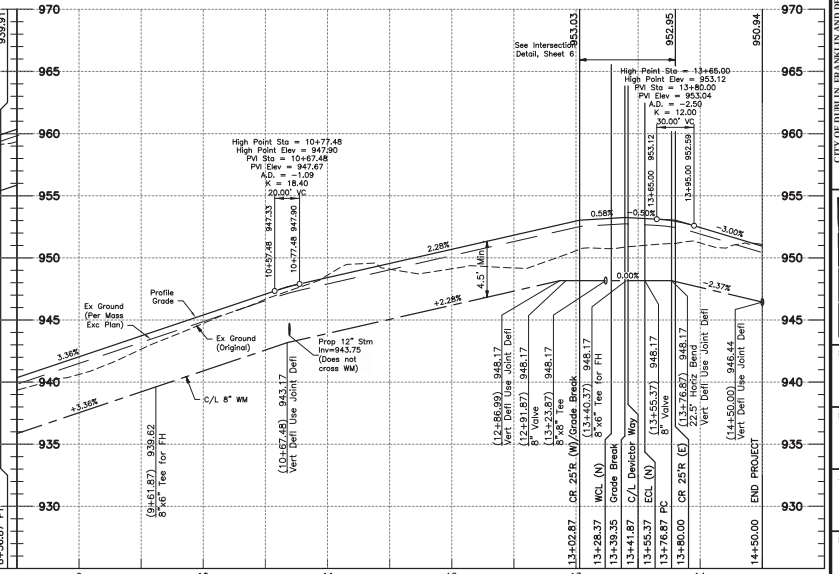
For Storm Sewer Profiles, See Sheets 13–15

Provide 18" Minimum Clearance at Utility Crossings.

SECTION 1



SECTION 1



REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
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PLAN AND PROFILE

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Toll Free: 888.775.3648
emht.com

DATE
April, 2016

SCALE
Horiz: 1" = 50'
Vert: 1" = 5'

JOB NO.
20150910

SHEET
8/27

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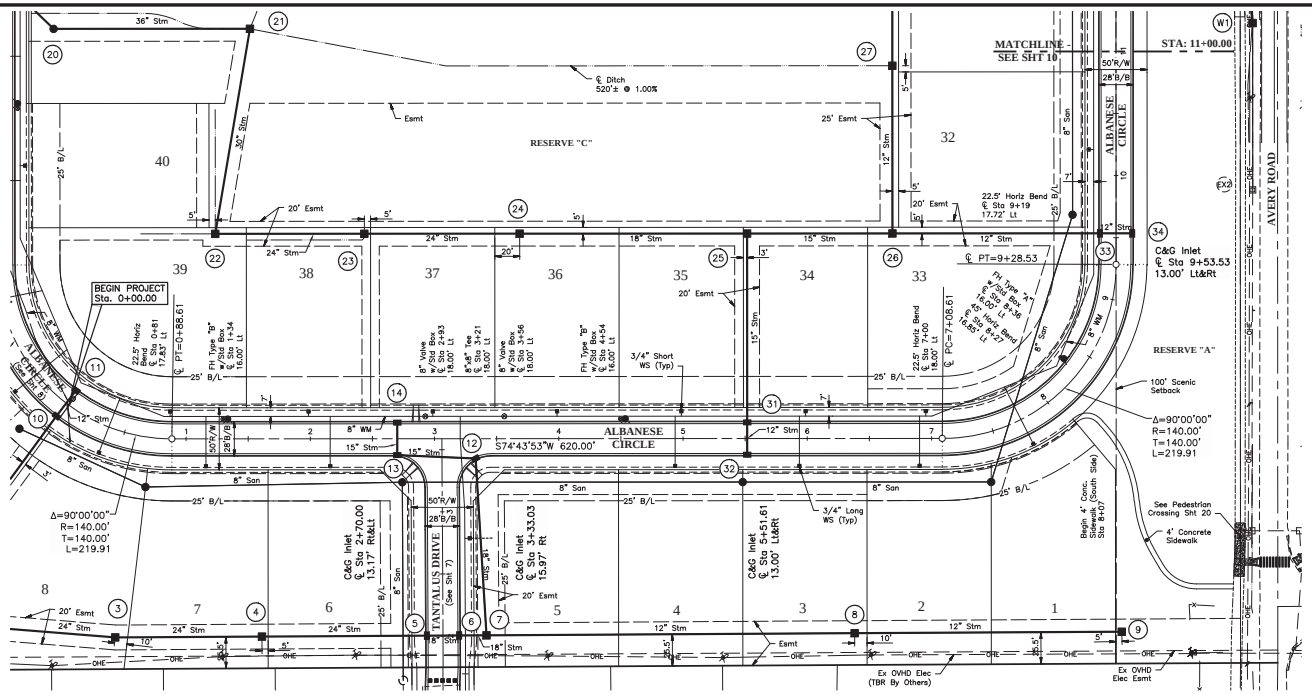
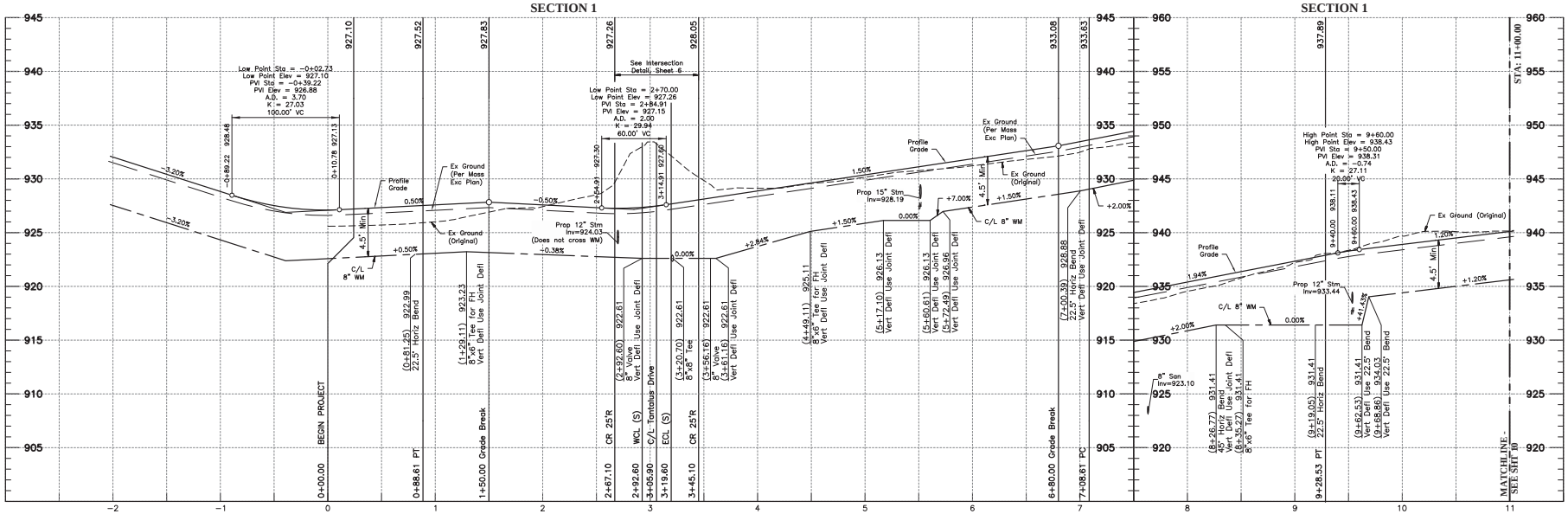


Note:
For Intersection Details, See Sheets 5 & 6

For Storm Sewer Profiles, See Sheets 13–15

Provide 18" Minimum Clearance at Utility Crossings.



REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
PLAN AND PROFILE

EMH&T
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5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
Fax: 614.775.4800 Office: 888.775.3648
emht.com

DATE
April, 2016

SCALE
Horiz: 1" = 50'
Vert: 1" = 5'

JOB NO.
20150910

SHEET
9/27

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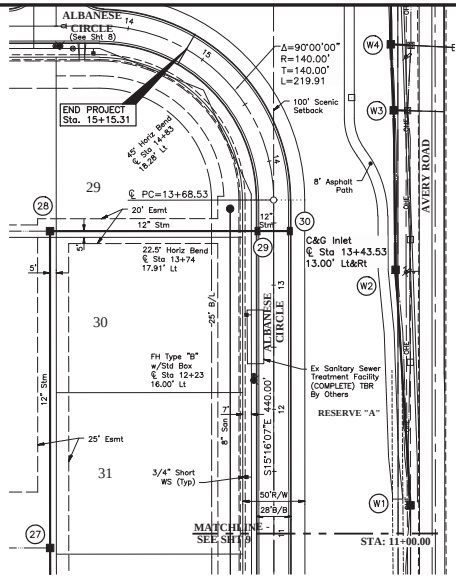
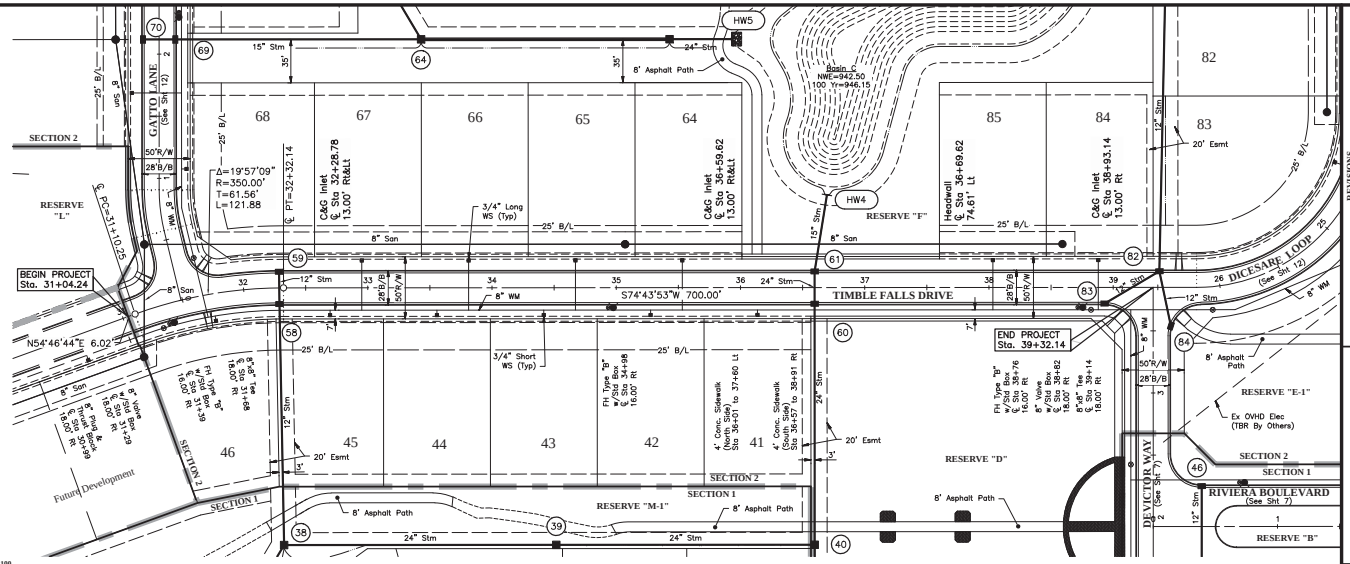




GRAPHIC SCALE

0 25 50 100

Horiz: 1 inch = 50 feet

GRAPHIC SCALE

0 2.5 5 10

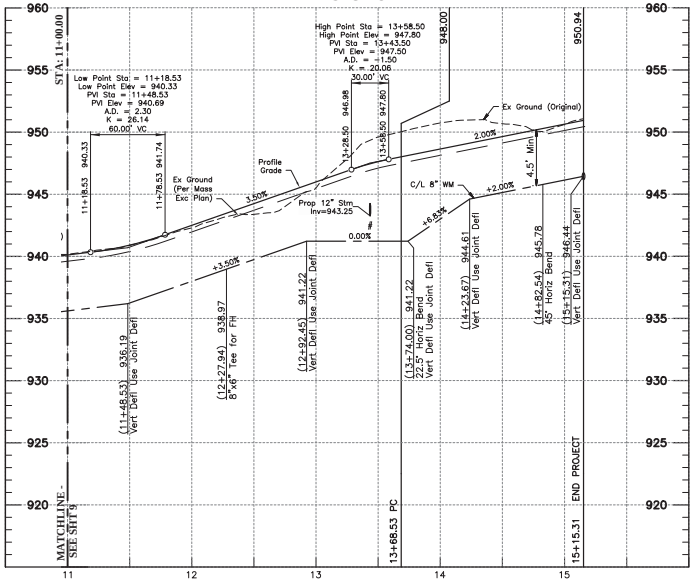
Vert: 1 inch = 5 feet

Note:
For Intersection Details, See Sheets 5 & 6

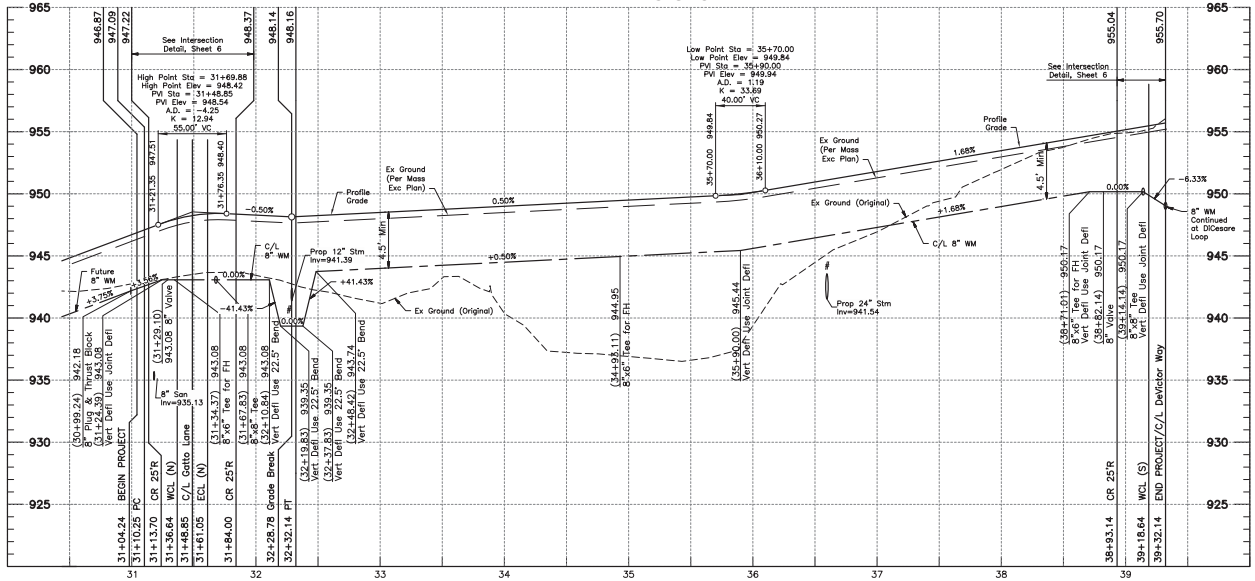
For Storm Sewer Profiles, See Sheets 13–15

Provide 18" Minimum Clearance at Utility Crossings.

SECTION 1



SECTION 2



REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
PLAN AND PROFILE

EMH&T
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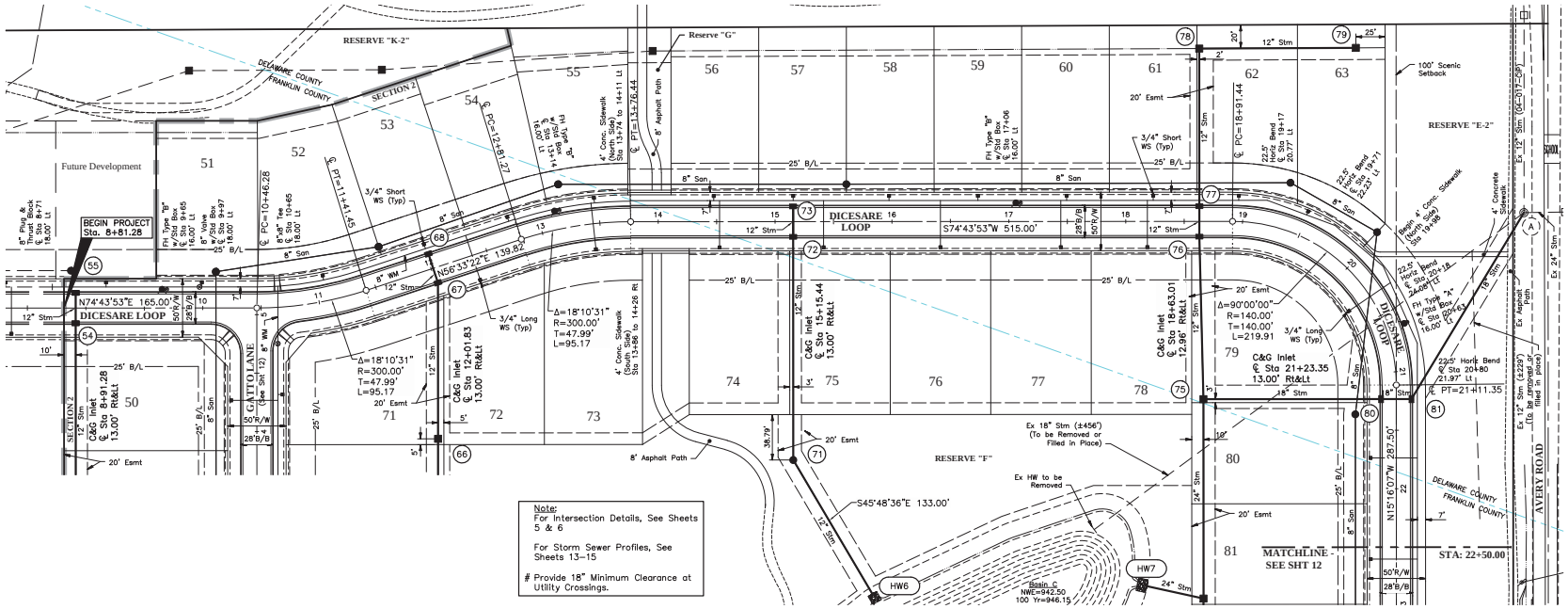
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Fax: 614.775.4800
Toll Free: 888.775.3648
emht.com

DATE
April, 2016

SCALE
Horiz: 1" = 50'
Vert: 1" = 5'

JOB NO.
20150910

SHEET
10/27



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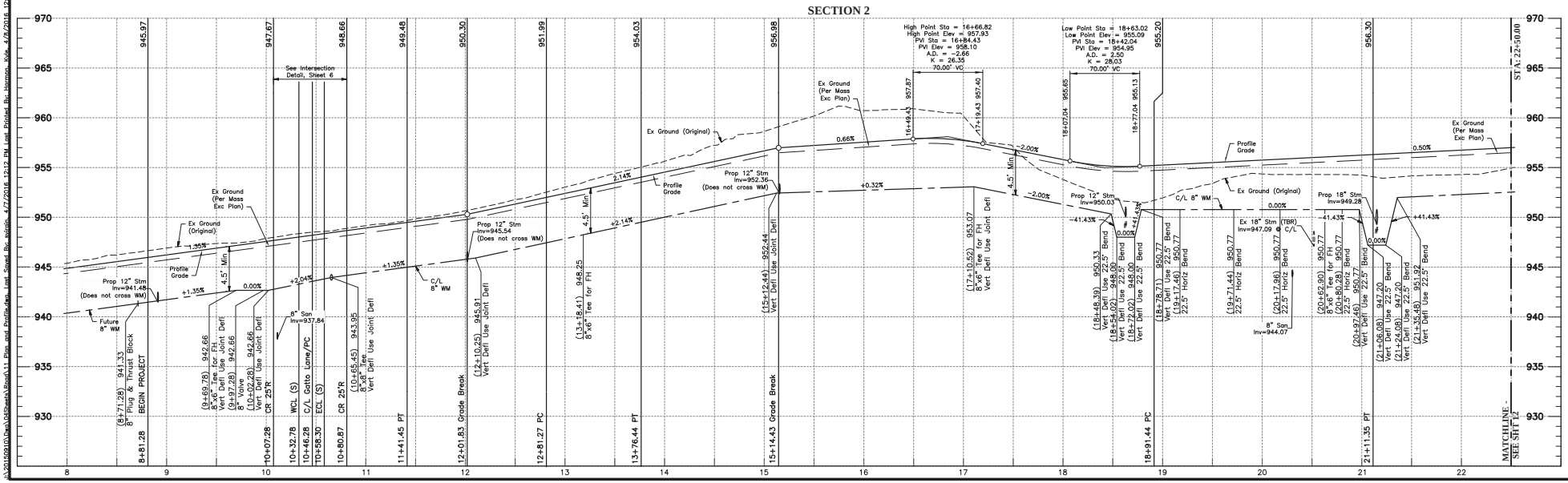

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
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Phone: 614.775.4500 Toll Free: 888.775.3648
Fax: 614.775.4800 Office: 888.775.3648
emht.com

DATE
April, 2016

SCALE
Horiz: 1" = 50'
Vert: 1" = 5'

JOB NO.
20150910

SHEET
11/27

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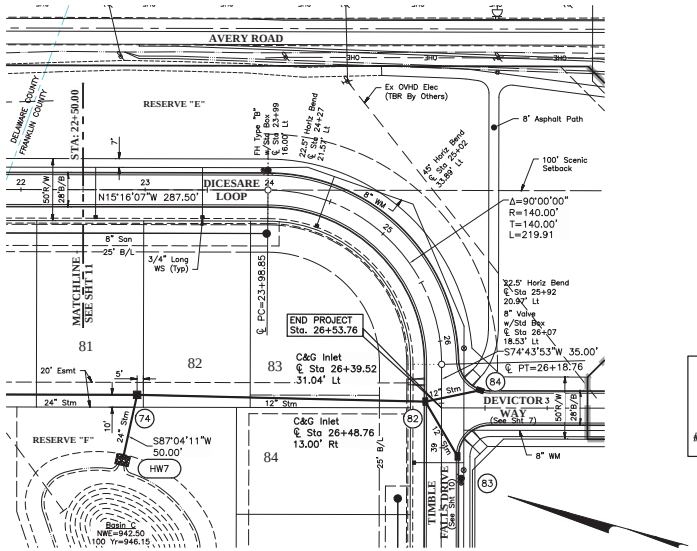


Note:
For Intersection Details, See Sheets 5 & 6

For Storm Sewer Profiles, See Sheets 13–15

Provide 18" Minimum Clearance at Utility Crossings.

GRAPHIC SCALE

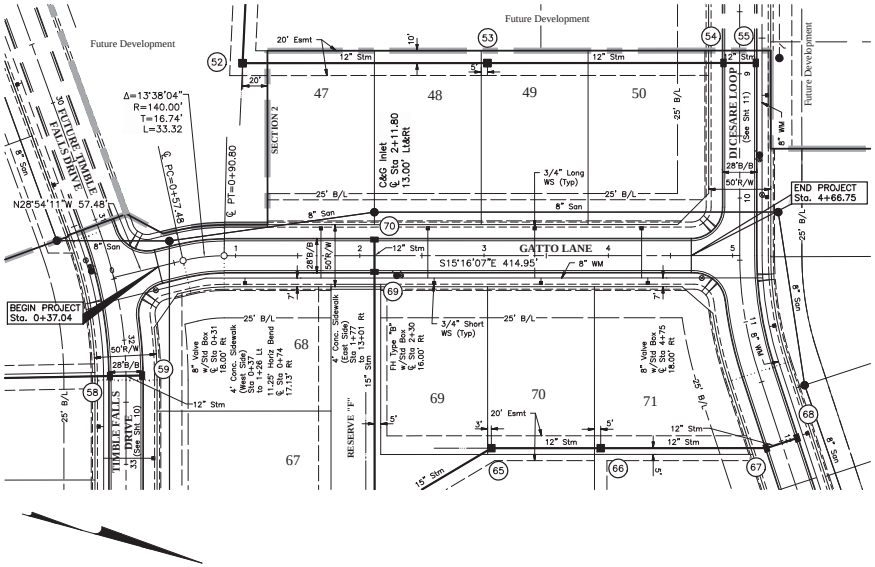
0 25 50 100

Horiz: 1 inch = 50 feet

GRAPHIC SCALE

0 2.5 5 10

Vert: 1 inch = 5 feet



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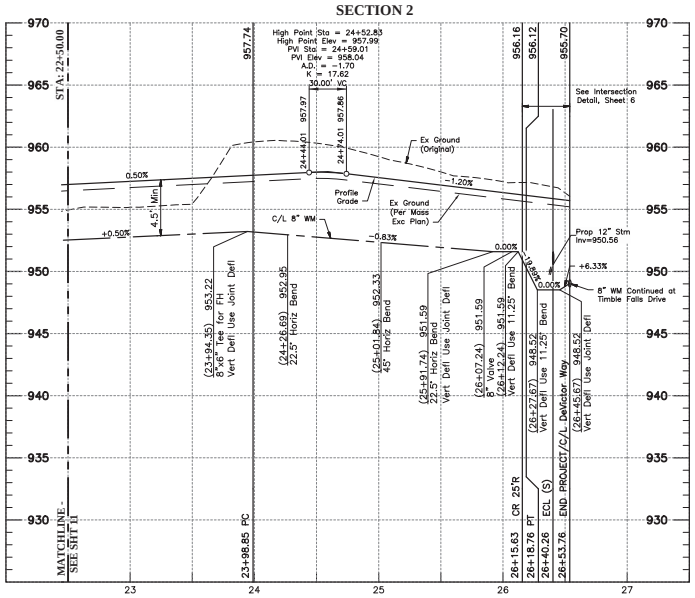
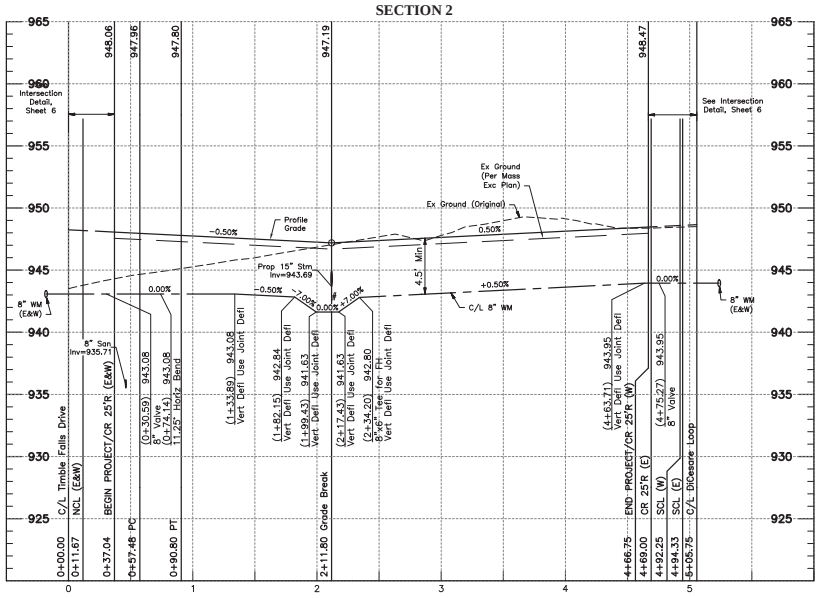


SECTION 2



REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
PLAN AND PROFILE

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Fax: 614.775.4800
Toll Free: 888.775.3648
emht.com

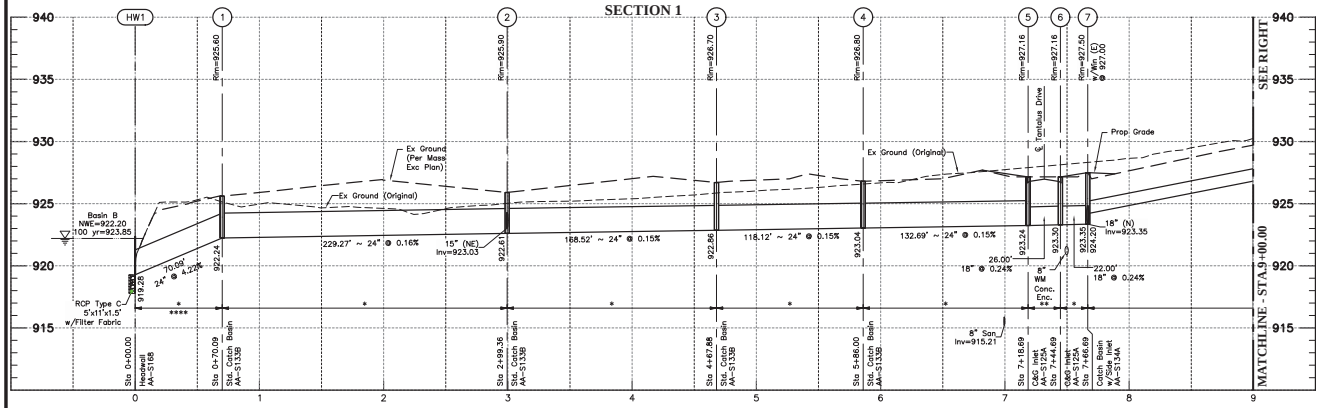
DATE
April, 2016

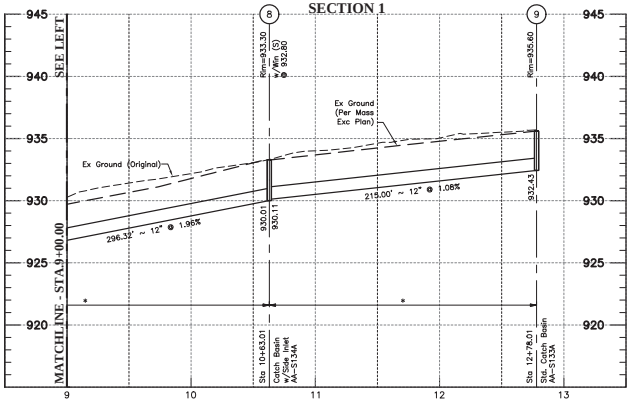
SCALE
Horiz: 1" = 50'
Vert: 1" = 5'

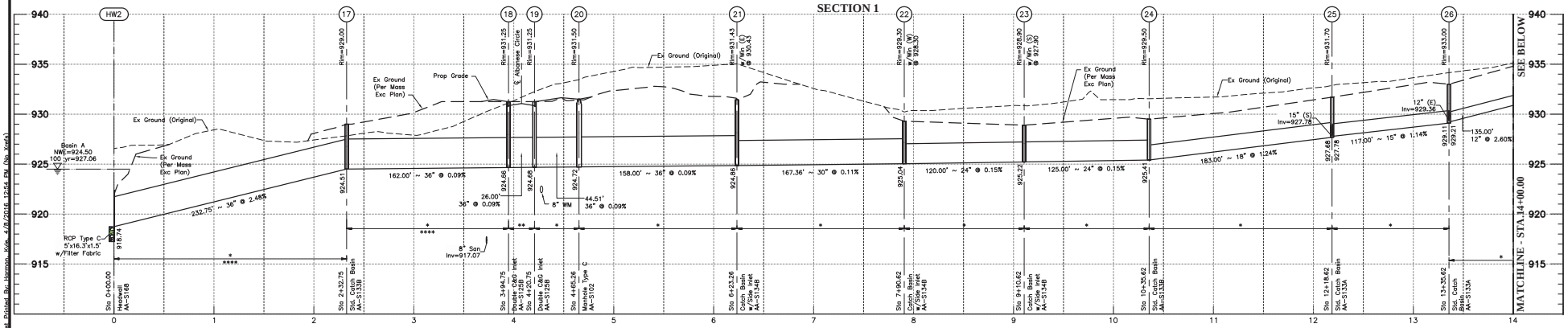
JOB NO.
20150910

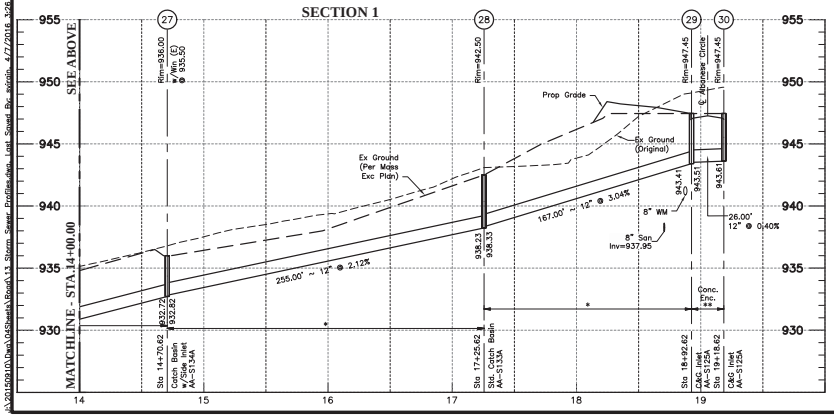
SHEET
12/27

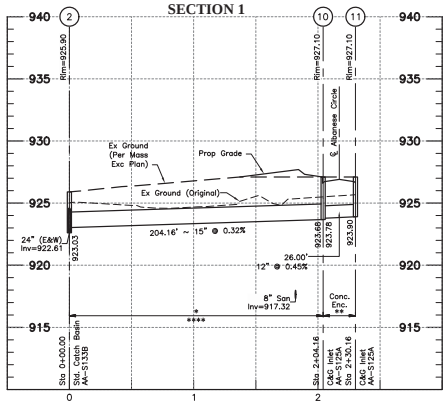
J:\20150910\Dwg\CdSheets\Riv\12 Plan and Profile plan and Section Box.dgn(dgn, 4/7/2016 2:54 PM Neil Bryland Box: Hannon, Kyle, 4/8/2016 12:53 PM Kile Hyer)

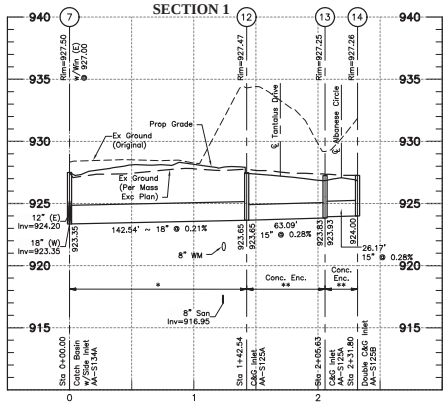












Notes:
Maintain a minimum of 1.5' vertical and 10' horizontal clearance from proposed water mains.

All backfill shall be compacted to the density of the surrounding ground unless otherwise noted:

* —Compacted Backfill Item 911
** —Compacted Granular Backfill, Item 912
**** —Reinforced Concrete Pipe, (ASTM C-76) with joints meeting ASTM C-443 requirements and with no aggregate bedding or backfill. See Standard Drawing ST-06.

HORIZ 0 25 50 100
1 inch = 50 feet
VERT 0 2.5 5 10
1 inch = 5 feet

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
STORM SEWER PROFILES

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
Fax: 614.775.4800 emht.com

DATE
April, 2016

SCALE
Horiz: 1" = 50'
Vert: 1" = 5'

JOB NO.
20150910

SHEET
13/27

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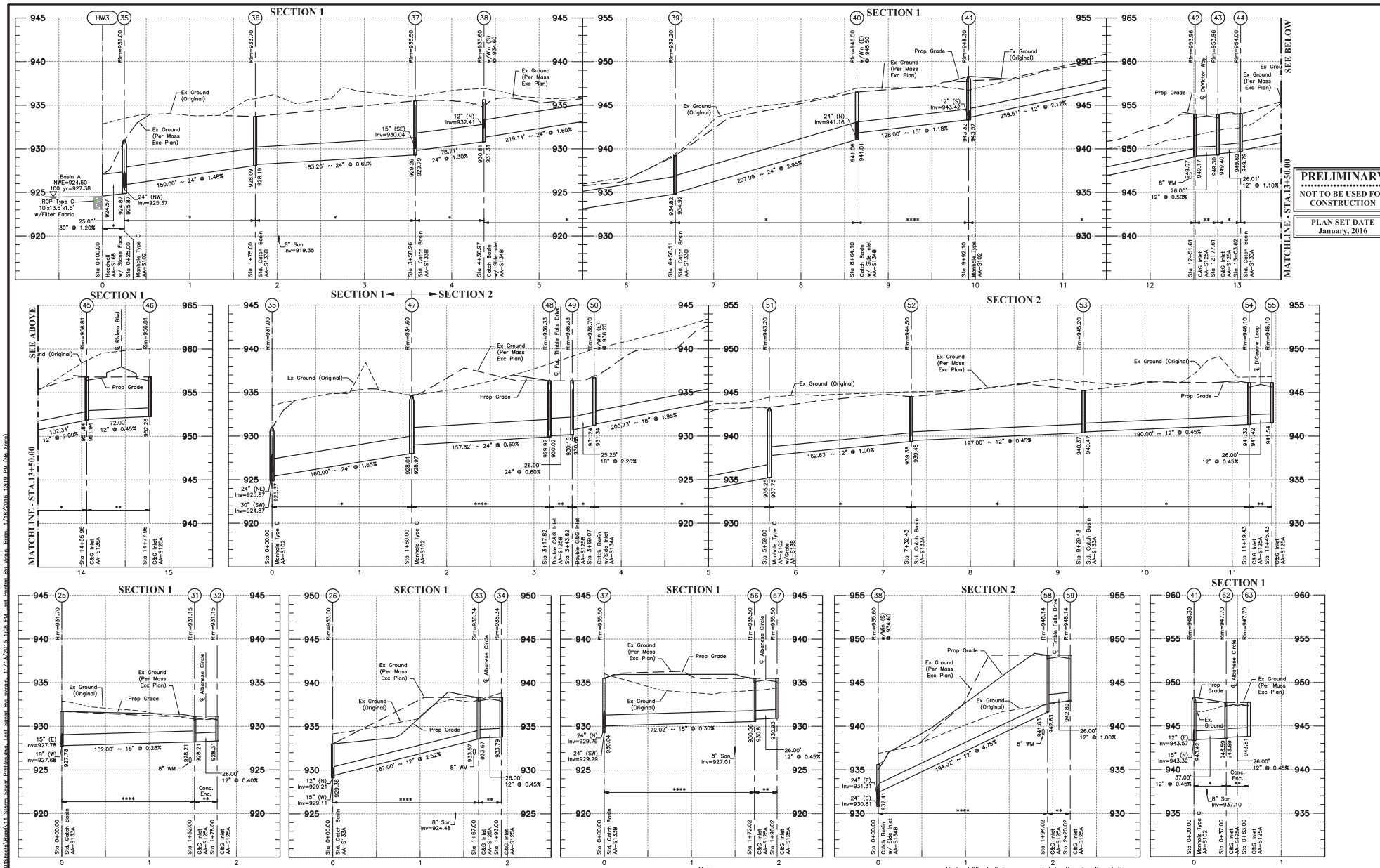

Notes:
Maintain a minimum of 1.5' vertical and 10' horizontal clearance from proposed water mains.

All backfill shall be compacted to the density of the surrounding ground unless otherwise noted:
* —Compacted Backfill Item 911
** —Compacted Granular Backfill, Item 912
**** —Reinforced Concrete Pipe, (ASTM C-76) with joints meeting ASTM C-443 requirements and with no aggregate bedding or backfill. See Standard Drawing ST-06.

HORIZ 0 25 50 100
1 inch = 50 feet
VERT 0 2.5 5 10
1 inch = 5 feet

REVISIONS

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CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
STORM SEWER PROFILES

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Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
January, 2016

SCALE
Horiz: 1" = 50'
Vert: 1" = 5'

JOB NO.
20150910

SHEET
14/27

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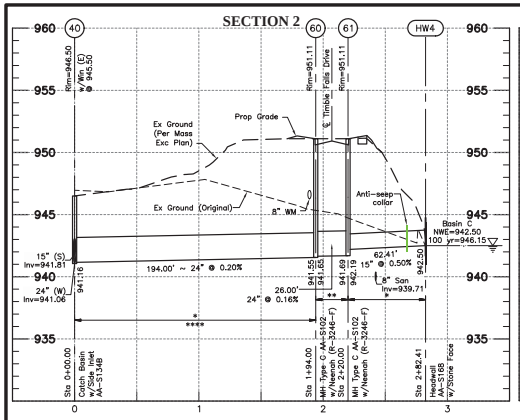

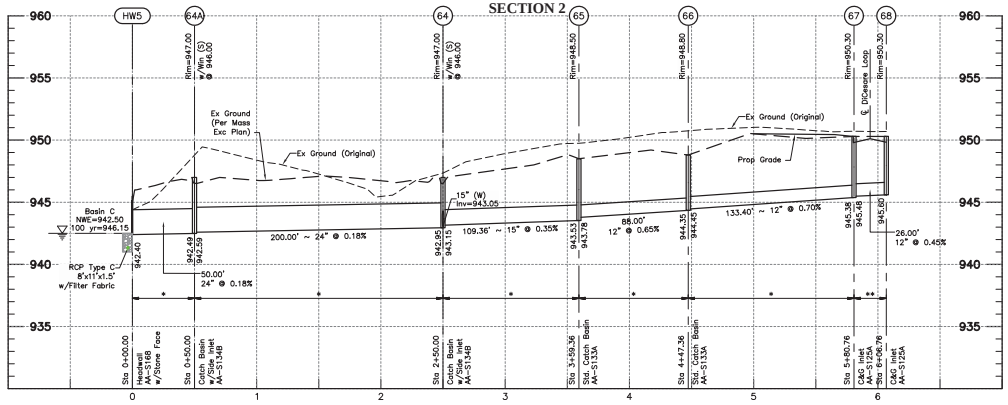

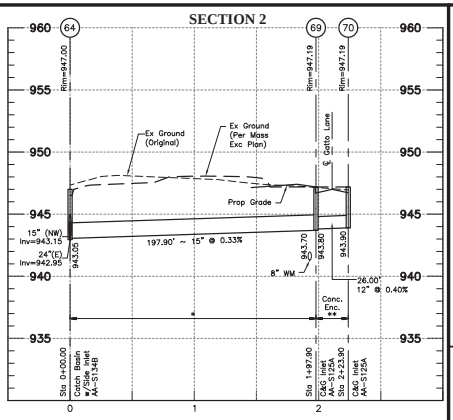

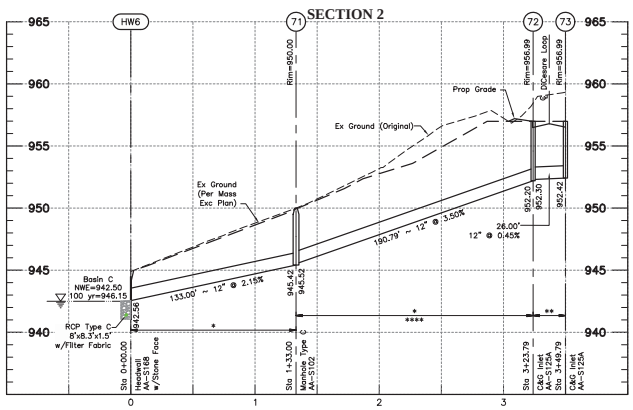

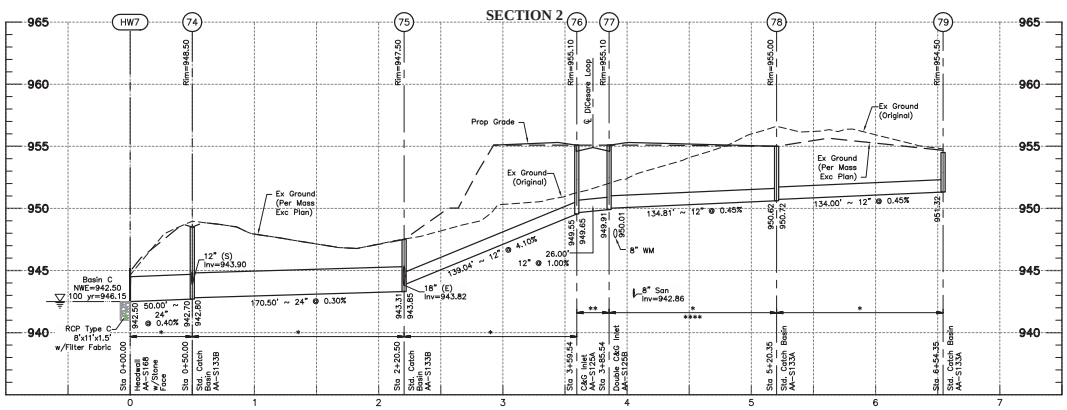

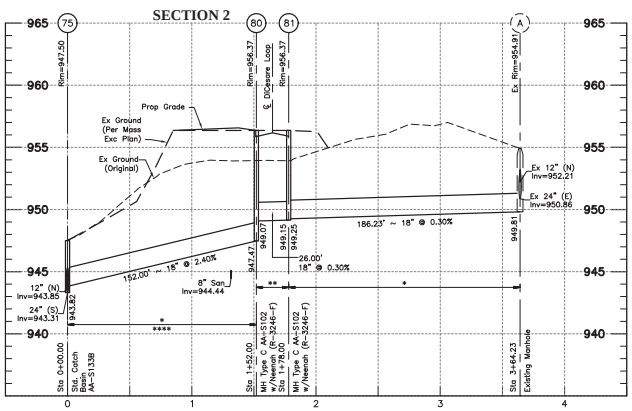

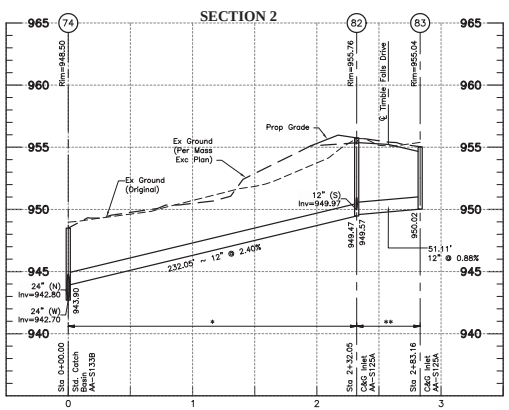

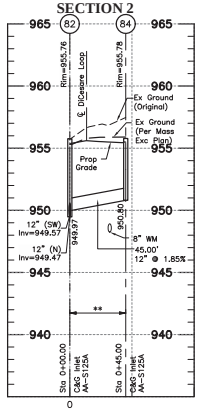

HORIZ 1 inch = 50 feet: 0, 25, 50, 100

VERT 1 inch = 5 feet: 0, 2.5, 5, 10

Notes:
Maintain a minimum of 1.5' vertical and 10' horizontal clearance from proposed water mains.

All backfill shall be compacted to the density of the surrounding ground unless otherwise noted:

* —Compacted Backfill Item 911

** —Compacted Granular Backfill, Item 912

**** —Reinforced Concrete Pipe, (ASTM C-76) with joints meeting ASTM C-443 requirements and with no aggregate bedding or backfill. See Standard Drawing ST-06.

For Storm Sewer along Avery Road Widening, see sheet 24.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
STORM SEWER PROFILES

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
April, 2016

SCALE
Horiz: 1" = 50'
Vert: 1" = 5'

JOB NO.
20150910

SHEET
15/27

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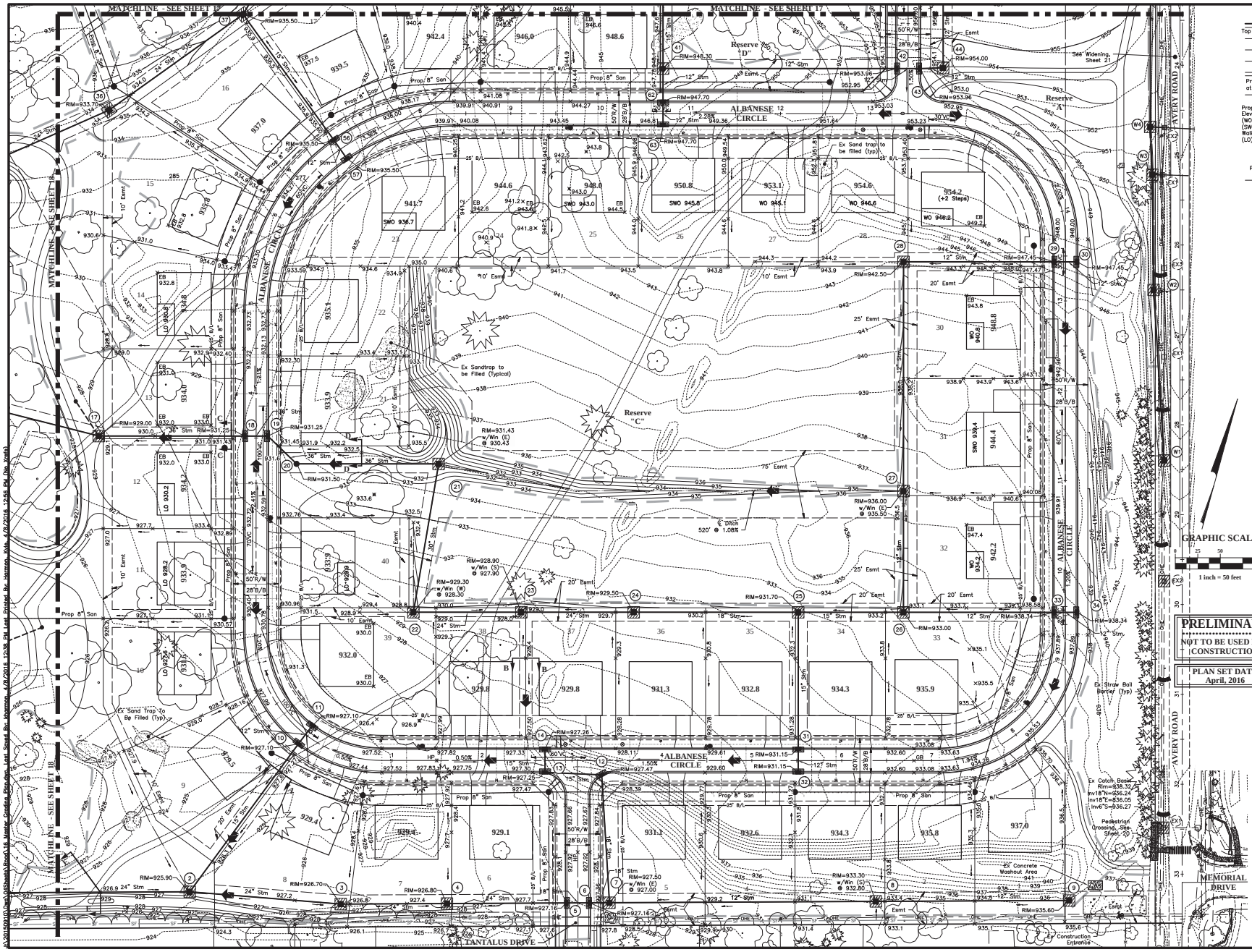


MARK	DATE	DESCRIPTION

REVISIONS

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
MASTER GRADING PLAN

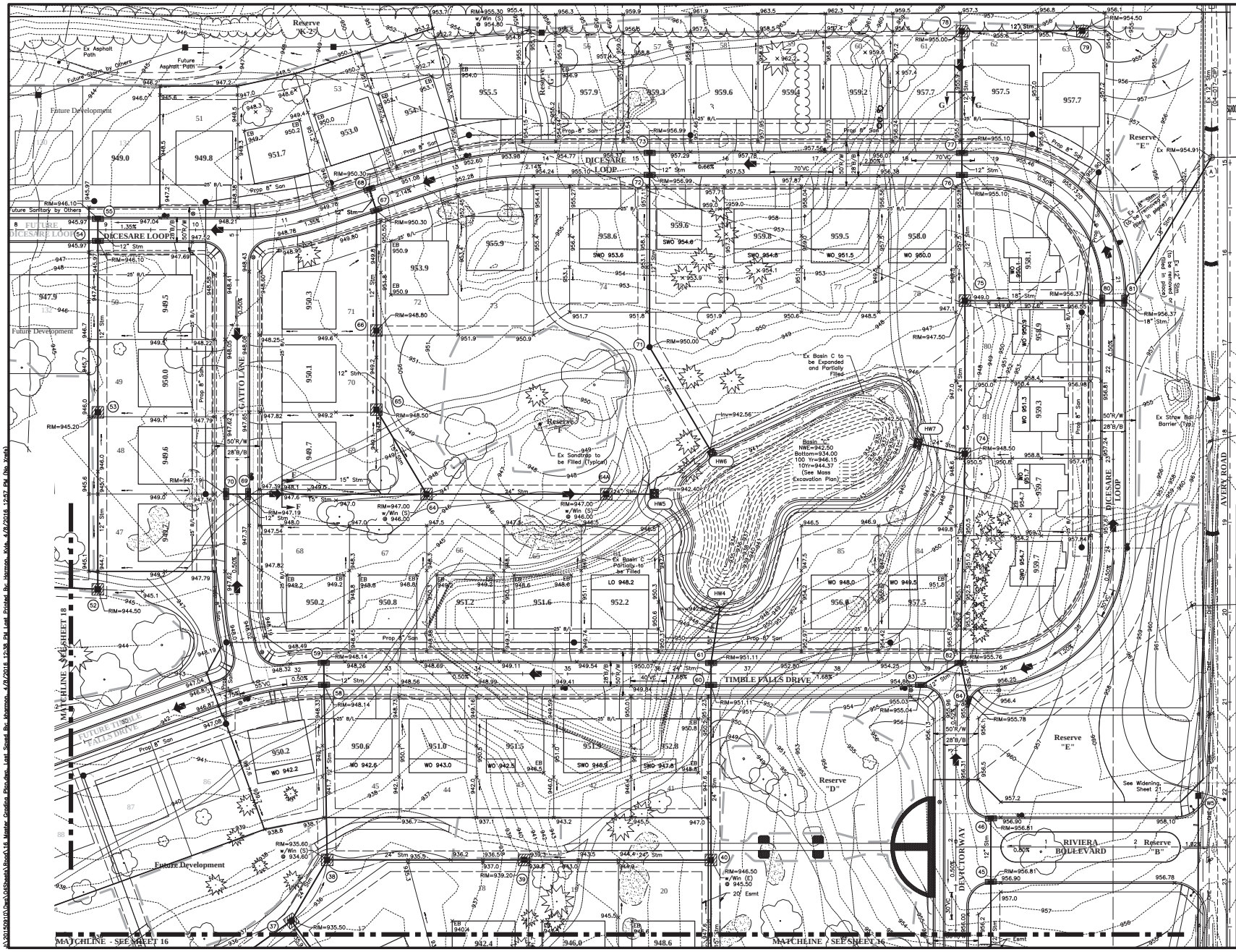
EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Fax: 614.775.4800
Office: 888.775.3648
emht.com

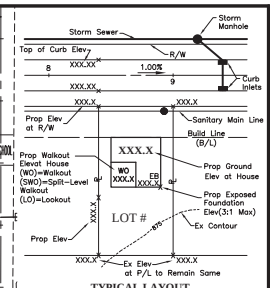
DATE: April, 2016

SCALE: 1" = 50'

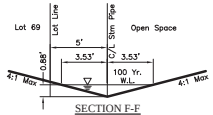
JOB NO.: 20150910

SHEET: 16/27

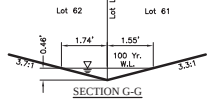




TYPICAL LAYOUT
Not To Scale
Note: Maximum Driveway Slope shall be 8%



SECTION F-F
CHANNEL



SECTION G-G
WEIR

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
April, 2016

GRAPHIC SCALE
0 25 50 100
1 inch = 50 feet

LEGEND

- Inlet Protection
- Existing Straw Bale Barrier
- Grading Limits
- Existing Sediment Fence
- Major Flood Route
- Overland Flow
- Ex Tree to be saved (Tree to be welled and drained, if needed, to preserve root system) At builder discretion tree can be removed if Dublin tree removal requirements/fees are met.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
MASTER GRADING PLAN

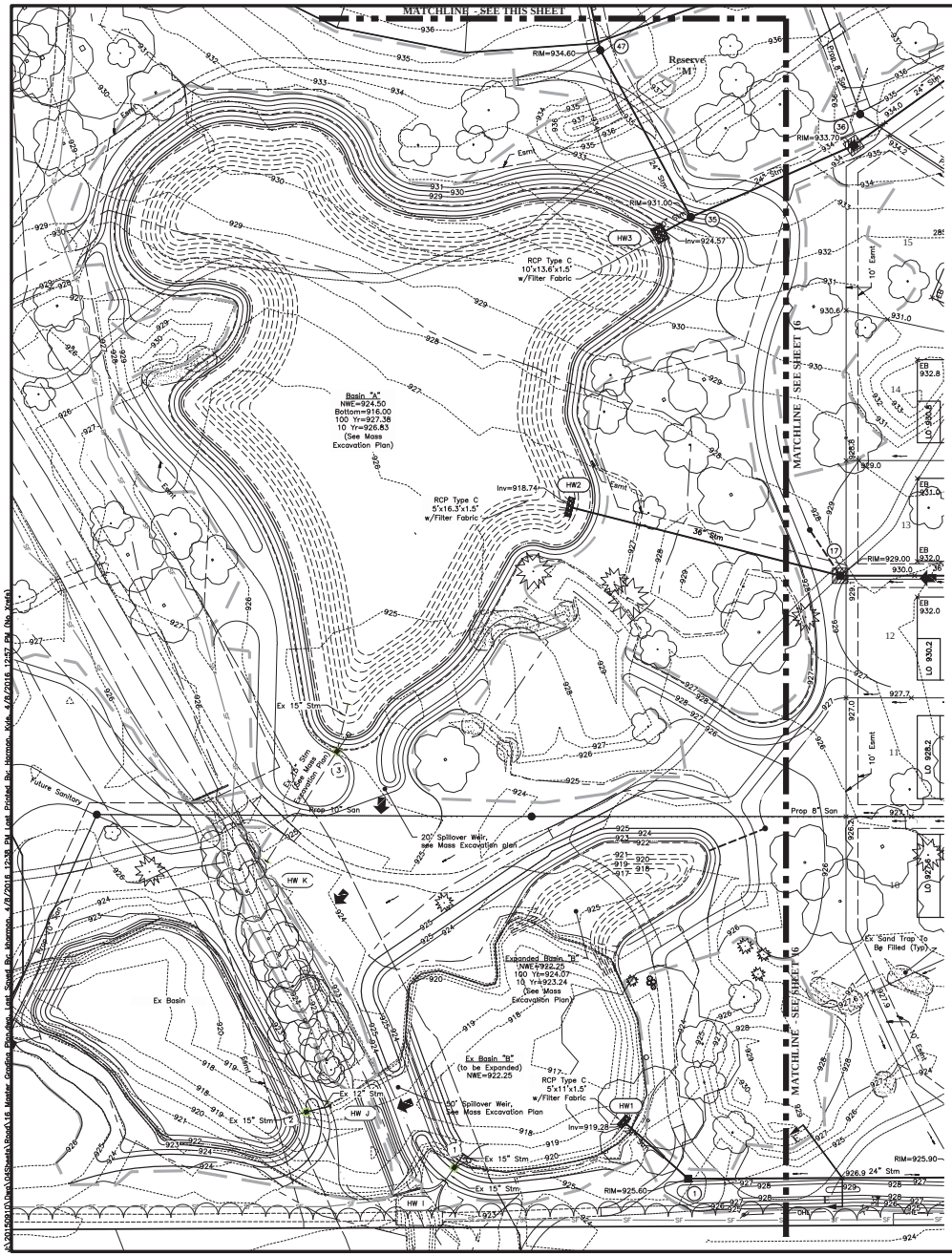
EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Fax: 614.775.4800
Toll Free: 888.775.3648
emht.com

DATE
April, 2016

SCALE
1" = 50'

JOB NO.
20150910

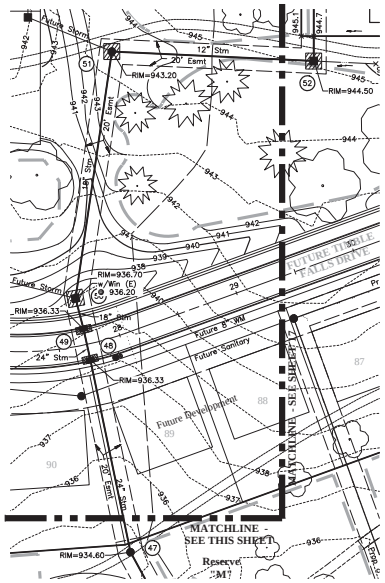
SHEET
17/27



GRAPHIC SCALE

0 25 50 100

1 inch = 50 feet



PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
April, 2016

LEGEND

- Inlet Protection
- Grading Limits
- SF — Existing Sediment Fence
- Major Flood Route
- Overland Flow
- SCPZ=Stream Corridor Protection Zone
- Ex Tree to be saved (Tree to be welled and drained, if needed, to preserve root system) At builder discretion tree can be removed if Dublin tree removal requirements/fees are met.

See Erosion & Sedimentation Control Details, Sheet 19

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
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Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
April, 2016

SCALE
1" = 50'

JOB NO.
20150910

SHEET
18/27

J:\20150910\Dwg\CivSheets\GradX16_Master_Grading_Plan.dwg, Layout: Grading Plan, Jeff Hammon, 4/8/2016 12:28 PM, Last Printed By: Jeff Hammon, 4/8/2016 12:27 PM (No Xrefs)

SITE DATA

OWNER/DEVELOPER	MI Homes of Central Ohio, LLC Attn. Mr. Jason Francis 3 Easton Oval, Suite 540 Columbus, Ohio 43219 Phone: 614-418-8000 Fax: 614-418-8030
PLAN DESIGNER:	EMH&T, Inc. 5500 New Albany Road Columbus, Ohio 43054 Phone: 614-775-4500 Fax: 614-775-4800
DEVELOPMENT TYPE:	Single Family
SITE ACREAGE:	26.547 Acres
DISTURBED ACREAGE:	20.859 Acres
EXISTING SITE AREA:	The existing site consists of a golf course.
ADJACENT AREAS:	The site is bordered by Willard Grizzell Middle School, to the south by single-family residential development, to the east by Avery Road, and to the west by Dublin Jerome High School.
STORM WATER	Site stormwater drains via storm sewer to proposed wet basins A and B before discharging to Tributary 1-2.
STORM WATER QUALITY:	Permanent water quality to meet OEPA standards is being provided by Proposed Retention Basins.

SEQUENCE OF CONSTRUCTION

1. Ensure that a copy of the NOI, Ohio EPA approval letter, and the SWPPP are available on-site during working hours.
2. Establish the construction exit, concrete washout pit, temporary parking, and staging area.
3. Install perimeter sediment fence as indicated on the erosion and sediment control plan.
4. Ensure proposed sediment basins A, B, and D are installed per the Mass Excavation Plan along with the permanent Outlet Structures, complete with the temporary risers and skimmers.
5. Use temporary Diversion Channels to rout runoff to the sediment Basins prior to the Storm Sewer installation.
6. Install utilities and storm sewer inlet protection.
7. Commence with construction of the single family homes.
8. Disturbed areas shall be stabilized according to temporary and permanent seeding requirements.
9. Temporary sediment controls shall be removed upon permanent stabilization of the site.

TEMPORARY AND PERMANENT SEEDING

The limits of seeding and mulching are as shown within the plan as indicated by the limits of disturbance. All areas not designated to be seeded shall remain under natural ground cover. Those areas disturbed outside the seeding limits shall be seeded and mulched at the Contractor's expense.

TEMPORARY SEEDING

Any area which will be left dormant (undisturbed) for more than 14 days shall be seeded within 7 days of terminated work. Disturbed areas within 50 feet of a stream, first order or larger, shall be stabilized within 2 days of inactivity. Temporary seeding consists of seedbed preparation and application of seed, fertilizer, and water. Soil test is recommended to determine proper application rate of fertilizer and if lime is necessary.

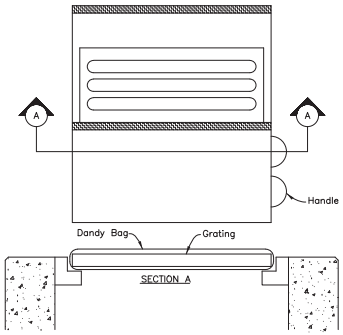
Fertilizer 12-12-12	25 lb/1000 sq. ft.
Straw Mulch	2 tons/acre
Water	300 G/1000 sq. ft.

TEMPORARY SEEDING			
SEEDING DATES	SPECIES	lb./1000 sq. ft.	Per acre
March 1 to August 15	Oats	3	4 bushel
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Perennial Ryegrass	1	40 lb.
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
August 16 to November 1	Rye	3	2 bushel
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Wheat	3	2 bushel
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Perennial Ryegrass	1	40 lb.
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
Nov. 1 to Spring Seeding	Use mulch only, sodding practices or dormant seeding		

PERMANENT SEEDING

Any area that is at final grade shall be seeded within 7 days of terminated work. Permanent seeding consists of seedbed preparation and application of seed, fertilizer, and water. Soil test is recommended to determine proper application rate of fertilizer and if lime is necessary. Ideal conditions for permanent seeding are from March 1-May 31 and August 1-October 15.

PERMANENT SEEDING		
SEED MIX	SEEDING RATE lb/1000 sq.ft.	NOTES
GENERAL USE		
Creeping Red Fescue	1.6	
Kentucky Bluegrass	1.6	
Annual Ryegrass	0.8	

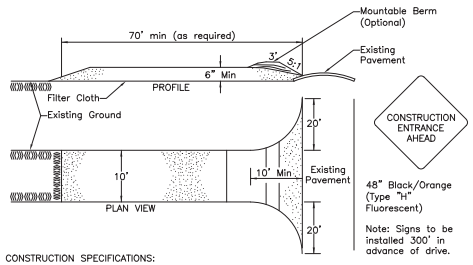


Installation: Stand grate on end. Place Dandy Bag over grate. Flip grate over so that open end is up. Pull up slack. Tuck flap in. Be sure end of grate is completely covered by flap or Dandy Bag will not fit properly. Holding handles, carefully place Dandy Bag with grate inserted into Catch Basin frame so that red dot on the top of the Dandy Bag is visible.

Maintenance: After silt has dried, remove it from the surface of Dandy Bag with broom.

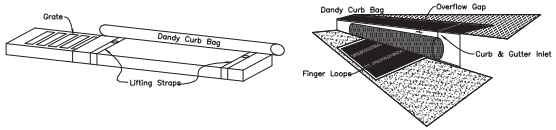
For Structures Sec. 1: 1-4, 7-9, 16, 17, 21-28, 36-41, 44, 85
Sec. 2: 50-53, 64-66, 74, 75, 78, 79

DANDY BAG DETAIL
Not To Scale



CONSTRUCTION SPECIFICATIONS:
1. Stone Size – Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length – 70' minimum
3. Thickness – Not less than six (6) inches.
4. Width – Fifteen (15) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth – will be placed over the entire area prior to placing of stone.
6. Surface Water – All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance – The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measure used to trap all sediment spilled, dropped, washed or tracked onto public rights of way must be removed immediately.
8. Washing – Wheels shall be cleaned to remove sediment prior to entrance onto public right-of-ways. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE
Not To Scale



Installation: Stand grate on end. Slide the Dandy Curb Bag on with Dam on top of the grate. Pull all excess down. Lay unit on its side. Carefully tuck flap in. Press Velcro strips together. Install the unit making sure front edge of grate is inserted in frame first then lower back into place. Press Velcro dots together which are located under lifting straps. This insures straps remain flush with gutter.

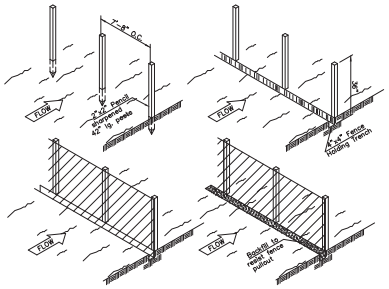
Maintenance: With a stiff bristle broom sweep silt and other debris off surface after each event.

For Structures

Sec. 1: 5, 6, 10, 11, 13, 14, 15(x2), 18(x2), 19(x2), 29-34, 42, 43, 45, 46, 56, 57, 62, 63

Section 2: 48, 49, 54, 55, 58-61, 67-70, 72, 73, 76, 77, 80-84

DANDY CURB BAG



Silt fence fabric shall be ODOT, Type C Geotextile fabric or the equivalent to the following properties:

MATERIAL PROPERTIES

Maximum Tensile Strength	120 lbs
Maximum Elongation At 60 Lbs.	50%
Minimum Puncture Strength	50 lbs
Minimum Tear Strength	40 lbs
Minimum Burst Strength	200 psi
Apparent Opening Size	0.84 mm
Minimum Permitivity	1×10^{-2} sec.-1
Ultraviolet Exposure Strength Retention	70%

Silt fence shall be installed by the Owner and maintained by the Site Contractor.

SILT FENCE:
This sediment barrier utilizes standard strength or extra strength synthetic filter fabrics. It is designed for situations in which only sheet or overland flows are expected. Material Properties are listed in the provided table.

1. The height of a silt fence shall not exceed 36-inches (higher fences may impound volumes of water sufficient to cause failure of the structure).
2. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum of a 6 inch overlap, and securely sealed.
3. Posts shall be spaced a maximum of 10 feet apart at the barrier location and driven securely into the ground (minimum of 12-inches). Wood posts will be a minimum of 32" long When extra strength fabric is used without the wire support fence, post spacing shall not exceed 6 feet.
4. A trench shall be excavated approximately 4-inches wide and 6-inches deep along the line of posts and upslope from the barrier.
5. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least 1-inch long, tie wires or hog rings. The wire shall extend into the trench a minimum of 2-inches and shall not extend more than 36-inches above the original ground surface.
6. The standard strength filter fabric shall be stapled or wired to the fence, and 8-inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36-inches above the original ground surface. Filter fabric shall not be stapled to existing trees.
7. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of Item No. 6 applying.
8. The trench shall be backfilled and soil compacted over the filter fabric.
9. Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.
10. To prevent water ponded by the silt fence from flowing around the ends, each end shall be constructed upslope so that the ends are at a higher elevation.

MAINTENANCE:

Silt fences and filter barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.

Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly.

Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one-half the height of the barrier.

Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform with the existing grade, prepared and seeded.

NOTES:

1. Sediment basins shall be constructed and operational before upslope land disturbance begins.
2. SEDIMENT CLEANOUT:
   Sediment shall be removed and the sediment basin restored to its original dimensions when the sediment has filled to one-half the sediment storage zone. Sediment removed from the basin shall be placed so that it will not erode and stabilized similar to other fill material placed on the site.
3. FINAL REMOVAL:
   The sediment control structure shall be removed only after the upstream drainage area is stabilized, and upon approval from Franklin SWCD. Dewatering and removal shall not cause sediment to be discharged. Accumulated sediment within the proposed basin shall be removed upon completion of construction. Install the permanent riser pipe within the catch basin structure.

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
April, 2016

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
EROSION CONTROL NOTES AND DETAILS

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Fax: 614.775.4800
Office: 888.718.5648
emht.com

DATE
April, 2016

SCALE
As Noted

JOB NO.
20150910

SHEET
19/27

J:\20150910\Dwg\A\CSheets\Riviera\19 Erosion Control Notes and Details.dwg last saved by: matthewhuffle 4/18/2016 12:00 PM Last Printed By: Hannah Kile 4/18/2016 12:53 PM (No Xrefs)

ITEM 630 SIGNING, MISC.: PEDESTRIAN CROSSING WARNING SYSTEM FOUNDATION (BY CONTRACTOR)
ITEM 630 SIGNING, MISC.: PEDESTRIAN CROSSING WARNING SYSTEM (BY CITY)

THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING A SOLAR POWERED PEDESTRIAN CROSSING WARNING SIGN SYSTEM. THE "SYSTEM" SHALL BE CONSIDERED ONE PAIR OF WARNING SIGN ASSEMBLIES (ONE ASSEMBLY FOR EACH DIRECTION OF AVERY ROAD). THE SIGNS SHALL INCLUDE FLASHING LEDs ALONG THE SIGN BORDER (BLINKERSIGN BY TAPCO), BE SOLAR POWERED, AND PEDESTRIAN ACTIVATED VIA MICROWAVE DETECTORS AND ADA-COMPLIANT PUSHBUTTONS. THE SYSTEM SHALL BE WIRELESSLY CONTROLLED AND SYNCHRONIZED VIA THE BLINKERBEAM SYSTEM BY TAPCO. EACH SYSTEM COMPONENT SHALL BE COMPLIANT WITH THE MOST CURRENT OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD). SEE DETAIL ON THIS SHEET FOR ADDITIONAL REQUIREMENTS.

GENERAL REQUIREMENTS
EACH ASSEMBLY SHALL INCLUDE A 30-INCH PEDESTRIAN WARNING SIGN (W11-2) WITH FLASHING YELLOW LEDs ALONG THE SIGN BORDER.

EACH INSTALLATION SHALL BE A COMPLETE ASSEMBLY CONSISTING OF, BUT NOT LIMITED TO, A FOUNDATION FURNISHED AND INSTALLED BY THE CONTRACTOR, AND SIGNS, SIGN MOUNTING HARDWARE, DETECTORS, SOLAR PANEL, POLE, AND ELECTRICAL COMPONENTS (WIRING, SOLID-STATE CIRCUIT BOARDS, ETC.) FURNISHED AND INSTALLED BY THE CITY OF DUBLIN.

FUNCTIONAL REQUIREMENTS
EACH ASSEMBLY SHALL UTILIZE SOLAR POWER.

THE SYSTEM SHALL BE ACTIVATED VIA PASSIVE PEDESTRIAN DETECTION (MICROWAVE PRESENCE SENSOR) AND PUSHBUTTON ON EACH ASSEMBLY.

THE SIGN LEDs SHALL BE NORMALLY DARK, SHALL INITIATE OPERATION ONLY UPON PEDESTRIAN ACTUATION, AND SHALL CEASE OPERATION AFTER 10 SECONDS (BASED ON OMUTCD PROCEDURES FOR TIMING OF PEDESTRIAN CLEARANCE INTERVALS).

THE SIGN ASSEMBLY ON THE OPPOSITE SIDE OF THE ROAD FROM THE ASSEMBLY WHICH DETECTS APPROACHING PEDESTRIANS SHALL BE WIRELESSLY ACTIVATED.

ALL LED INDICATIONS SHALL BE WIRELESSLY SYNCHRONIZED (ALL LIGHTS WILL TURN ON WITHIN 120 MSEC AND REMAIN SYNCHRONIZED THROUGHOUT THE DURATION OF THE FLASHING CYCLE).

THE SIGN LED INDICATIONS SHALL FLASH SIMULTANEOUSLY AT MORE THAN 50 BUT LESS THAN 60 TIMES PER MINUTE.

THE UNIT SHALL BE CAPABLE OF RUNNING UP TO 30 DAYS WITHOUT SUNLIGHT.

IF VOLTAGES OVER 50V AC OR DC ARE PRESENT, GROUNDING AND BONDING REQUIREMENTS SPECIFIED IN THE ODOT CMS SHALL BE FOLLOWED.

MATERIALS
FURNISH A COMPLETE ASSEMBLY, CONSISTING OF BUT NOT LIMITED TO, A FOUNDATION (FURNISHED AND INSTALLED BY CONTRACTOR) AND SIGNS, SIGN MOUNTING HARDWARE, DETECTORS, SOLAR PANEL, POLE, AND ELECTRICAL COMPONENTS (WIRING, SOLID-STATE CIRCUIT BOARDS, ETC.) (FURNISHED AND INSTALLED BY CITY OF DUBLIN). THE ASSEMBLY INCLUDES THE FOLLOWING ITEMS:

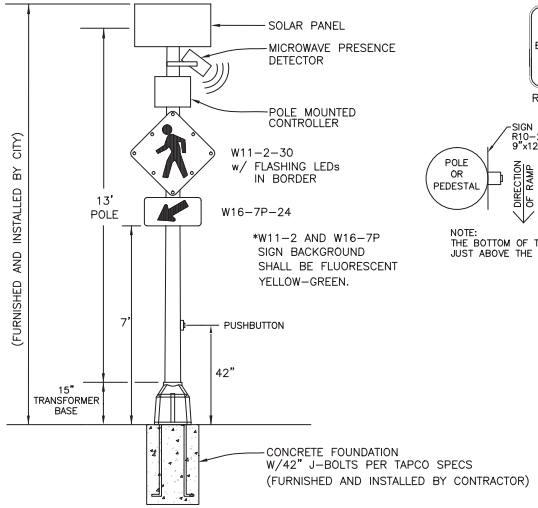
1. SIGNS (FURNISHED AND INSTALLED BY CITY OF DUBLIN)
   A. THE SIGNS SHALL INCLUDE 8 AMBER LEDs ALONG THE SIGN BORDER (BLINKERSIGN MODEL BY TAPCO).
   B. ALL SIGN ASSEMBLIES SHALL USE ANTI-VANDAL FASTENERS TO MOUNT COMPONENTS TO SIGN AND SIGN TO FIXTURE.
   C. ALL EXPOSED HARDWARE SHALL BE ANTI-VANDAL.
2. CONTROL CIRCUIT (FURNISHED AND INSTALLED BY CITY OF DUBLIN)
   A. WHEN ACTIVATED, THE LED INDICATIONS IN EACH OF THE DESIGNATED SIGN FACES SHALL FLASH SIMULTANEOUSLY.
   B. THE CONTROL CIRCUIT SHALL BE SEALED WATERTIGHT (NEMA 4) TO ELIMINATE DIRT CONTAMINATION AND ALLOW FOR SAFE HANDLING IN ALL WEATHER CONDITIONS.
   C. THE LEDS SHALL BE SEALED AGAINST DUST AND MOISTURE INTRUSION AS PER THE REQUIREMENTS OF NEMA STANDARD 250-1991 FOR TYPE 4 ENCLOSURE AND TO PROTECT ALL INTERNAL LED AND ELECTRICAL COMPONENTS.
3. BATTERY AND SOLAR PANELS (FURNISHED AND INSTALLED BY CITY OF DUBLIN)
   A. THE SOLAR PANEL AND/OR CONTROLLER MANUFACTURER WILL PROVIDE SIGNED COPIES OF CALCULATIONS USED TO SIZE THE SOLAR PANEL AND BATTERIES. INCLUDED IN THESE CALCULATIONS WILL BE THE INSOLATION VALUE USED AND ITS SOURCE, THE SOLAR PANEL EFFICIENCY, CHARGER/CONTROLLER EFFICIENCY, INVERTER EFFICIENCY, PROPOSED LED LAMP LOAD, AND A FIGURE REPRESENTING ANTICIPATED MISCELLANEOUS LOSSES.
   B. THE SOLAR PANEL MANUFACTURER MUST TEST PANEL ACCORDING TO IEC61215 OR EQUIVALENT APPROVED STANDARD. SOLAR PANEL MOUNTING MUST BE RATED FOR 90MPH DESIGN WIND.
   C. BATTERY UNIT SHALL BE A 12VDC, 40 AHR MINIMUM, SEALED GEL OR AGM LEAD ACID BATTERY. BATTERIES SHALL HAVE A WRITTEN TWO YEAR FULL REPLACEMENT WARRANTY.
   D. THE SOLAR PANEL SHALL PROVIDE A MINIMUM OF 55 WATTS PEAK TOTAL OUTPUT.
   E. THE SOLAR PANEL SHALL BE MOUNTED TO AN ALUMINUM PLATE AND BRACKET (COATED TO MATCH THE SUPPORT POLE) AND ANGLED TO PROVIDE MAXIMUM OUTPUT.
   F. ALL FASTENERS USED SHALL BE ANTI-VANDAL.
4. WIRELESS RADIO (FURNISHED AND INSTALLED BY CITY OF DUBLIN)
   A. RADIO CONTROL SHALL OPERATE ON A 902 MHZ TO 928 MHZ FREQUENCY HOPPING SPREAD SPECTRUM NETWORK, WI-FI OR APPROVED EQUAL.
   B. RADIO SHALL INTEGRATE COMMUNICATION OF LED CONTROL CIRCUIT TO ACTIVATE SIGN FROM PEDESTRIAN DETECTOR INPUT.
   C. THE RADIO SHALL BE SYNCHRONIZED SO ALL OF THE REMOTE LED INDICATIONS WILL TURN ON WITHIN 120 MSEC OF EACH OTHER AND REMAIN SYNCHRONIZED THROUGH-OUT THE DURATION OF THE FLASHING CYCLE.
   D. RADIO SYSTEMS SHALL OPERATE FROM: 3VDC TO 15VDC.
5. PUSHBUTTON (FURNISHED AND INSTALLED BY CITY OF DUBLIN)
   A. THE PUSHBUTTON SHALL BE A POLARA BULLDOG MODEL NO. BDL3-Y WITH POLARA BULLDOG MOUNTING, MODEL NO. APBC-Y.
   B. A CLEAR BEAD OF SILICONE SEALANT SHALL BE APPLIED TO THE TOP OF THE PUSHBUTTON HOUSING (1 INCH EACH SIDE OF TOP CENTER) AGAINST THE POLE TO PREVENT WATER FROM ENTERING THE BACK OF THE PUSHBUTTON HOUSING.
   C. PEDESTRIAN PUSHBUTTON SIGNS SHALL BE PROVIDED AND INCLUDE THE LEGEND "PUSH BUTTON TO TURN ON WARNING LIGHTS". SIGNS SHOULD BE MOUNTED ADJACENT TO OR INTEGRAL WITH EACH PEDESTRIAN PUSHBUTTON. THE BOTTOM OF THE SIGN SHALL BE MOUNTED JUST ABOVE THE TOP OF THE PUSHBUTTON. MOUNT THE CENTER OF THE PUSHBUTTON 42" ABOVE THE PEDESTRIAN PATHWAY SURFACE.
6. PASSIVE (MICROWAVE) PEDESTRIAN DETECTOR UNIT (FURNISHED AND INSTALLED BY CITY OF DUBLIN)
   A. THE UNIT SHALL BE CAREFULLY POSITIONED AND CALIBRATED TO MINIMIZE THE POTENTIAL FOR FALSE ACTIVATIONS.
   B. ALL EXPOSED HARDWARE AND FASTENERS SHALL BE ANTI-VANDAL.
7. PEDESTAL SHAFT AND BASE (FURNISHED AND INSTALLED BY CITY OF DUBLIN)
   A. POLE AND BASE SHALL BE MANUFACTURED BY TAPCO.
   B. MOUNT ON A STANDARD 4.5-INCH OD ALUMINUM PEDESTAL POLE WITH CAST ALUMINUM TRANSFORMER BASE (15-IN. TALL, 12.75-IN. BOLT CIRCLE).
   C. A 13 FOOT POLE SHALL BE PROVIDED AND FIELD ADJUSTED TO MAINTAIN THE PROPER SIGN MOUNTING HEIGHTS, UNLESS SPECIFIED OTHERWISE IN THE PLANS.
   D. POLE AND BASE SHALL BE POWDER COATED MATCHING FEDERAL BROWN (TIGER DRYLAC RAL 8016 49/6608O).
8. FOUNDATION (FURNISHED AND INSTALLED BY CONTRACTOR)
   A. FOUNDATION SHALL BE POURED CONCRETE WITH 2'X2' SQUARE FORMED TOP.
   B. ANCHOR BOLTS SHALL BE 42" J-BOLTS BY TAPCO.

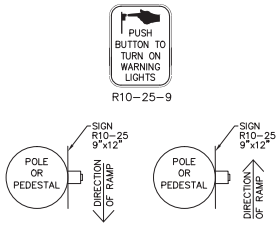
CONSTRUCTION
THE SYSTEM SHALL BE ASSEMBLED AND CONSTRUCTED AS SHOWN AND SPECIFIED ON THE PLANS.

WARRANTY
WARRANTY SHALL BE TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE.

MEASUREMENT
THE DEPARTMENT WILL MEASURE THE ITEM COMPLETE IN PLACE, INCLUDING ALL MATERIALS, TESTING, LABOR AND SOFTWARE FOR A FULLY FUNCTIONAL SYSTEM.

PAYMENT
PAYMENT WILL BE AT THE CONTRACT LUMP SUM PRICE BID FOR ITEM 630 SIGNING, MISC.: PEDESTRIAN CROSSING WARNING SYSTEM FOUNDATION (BY CONTRACTOR) AND ITEM 630 SIGNING, MISC.: PEDESTRIAN CROSSING WARNING SYSTEM (BY CITY)

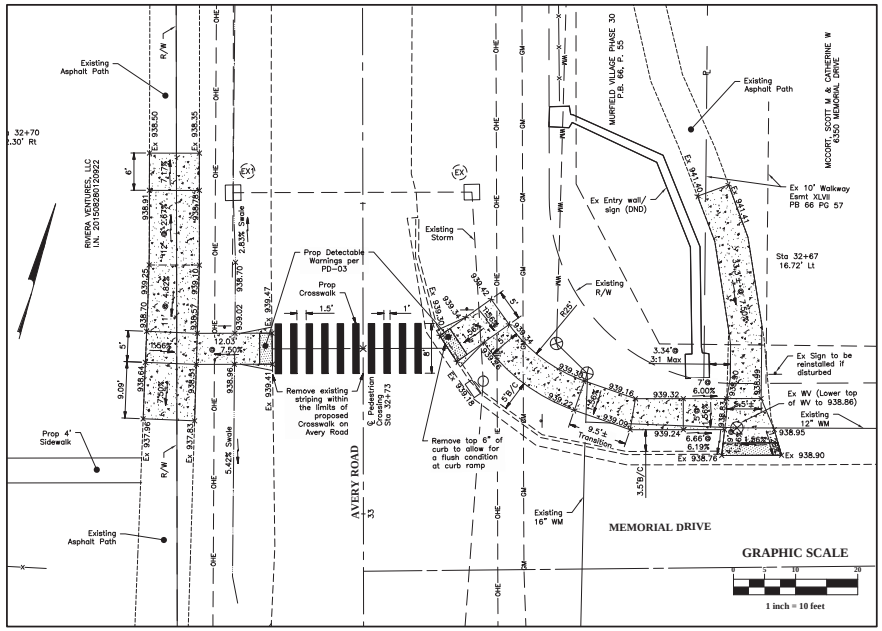




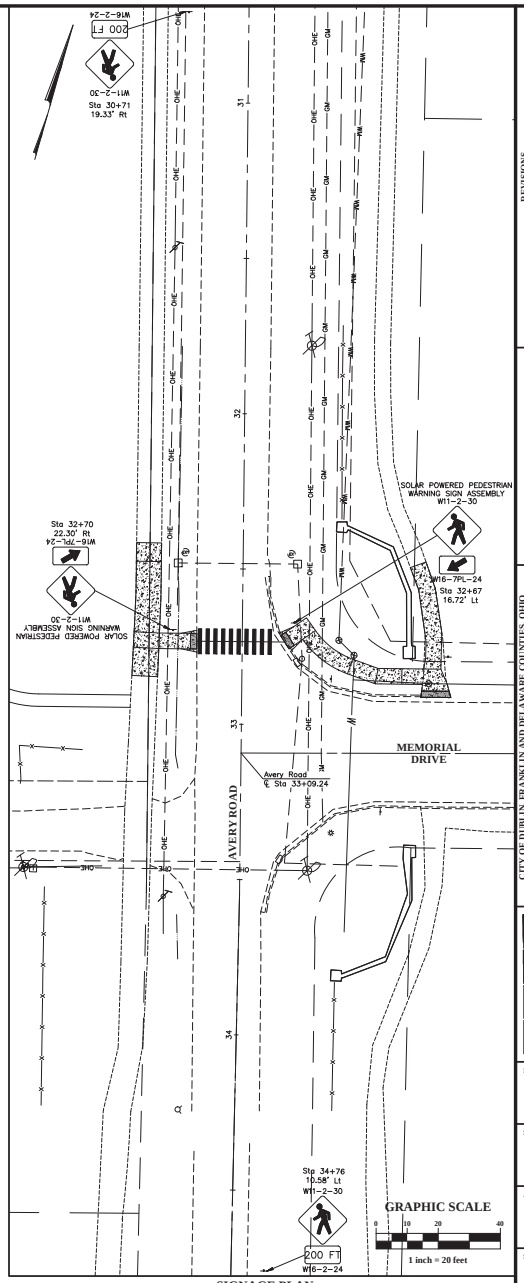
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
April, 2016

ITEM 630 SIGNING, MISC.: PEDESTRIAN CROSSING WARNING SYSTEM FOUNDATION (BY CONTRACTOR)
ITEM 630 SIGNING, MISC.: PEDESTRIAN CROSSING WARNING SYSTEM (BY CITY)
Not to Scale



PEDESTRIAN CROSSING GRADING PLAN
Scale: 1"=10'



SIGNAGE PLAN
Scale: 1"=20'

REVISIONS		
MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
AVERY ROAD PEDESTRIAN CROSSING

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone 614.775.4500 Fax 614.775.4800
Toll Free 888.775.3648
emht.com

DATE
April, 2016

SCALE
As Noted

JOB NO.
20150910

SHEET
20/27

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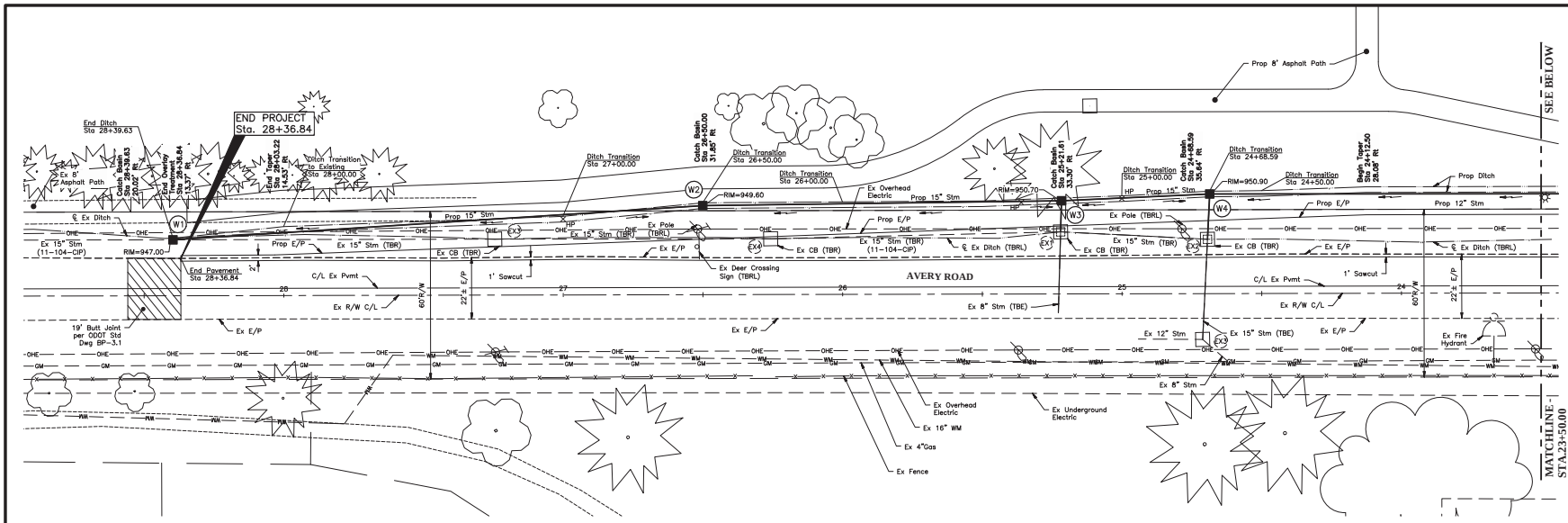


PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
April, 2016

GRAPHIC SCALE

0 10 20 40

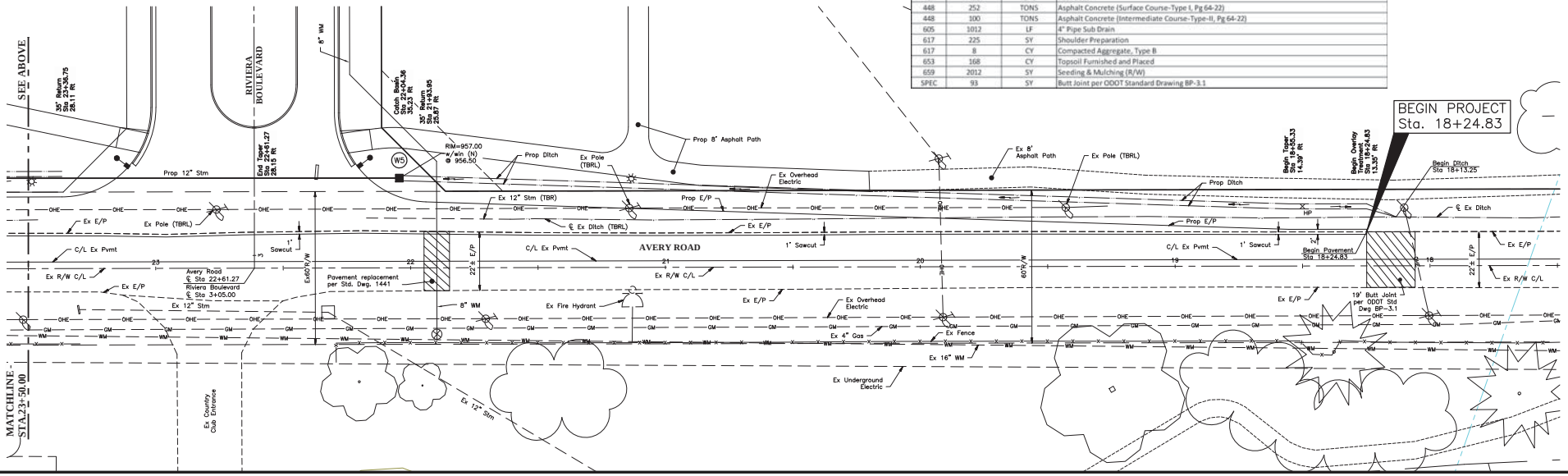
1 inch = 20 feet

Note:
TBRL = To be Relocated by others
TBR = To be Removed
TBE = To be Extended

ESTIMATE OF QUANTITIES

The contractor shall be solely responsible for determining the required bid quantities necessary for the completion of the plan improvements.

ITEM	QUANITY	UNIT	DESCRIPTION
			AVERY ROAD WIDENING
203	Lump	SUM	Excavation Including Embankment Construction
204	Lump	SUM	Clearing & Grubbing
204	1138	SY	Compacted Subgrade
301	361	TONS	Bituminous Aggregate Base
304	190	CY	Aggregate Base
407	488	GAL	Tack Coat
448	252	TONS	Asphalt Concrete (Surface Course-Type I, Pg 64-22)
448	100	TONS	Asphalt Concrete (Intermediate Course-Type-II, Pg 64-22)
605	1012	LF	4" Pipe Sub Drain
617	225	SY	Shoulder Preparation
617	8	CY	Compacted Aggregate, Type B
653	168	CY	Topsoil Furnished and Placed
659	2012	SY	Seeding & Mulching (R/W)
SPEC	93	SY	Butt Joint per ODOT Standard Drawing BP-3.1



REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
AVERY ROAD WIDENING PLAN

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
Fax: 614.775.4800 emht.com

DATE
April, 2016

SCALE
1" = 20'

JOB NO.
20150910

SHEET
21/27

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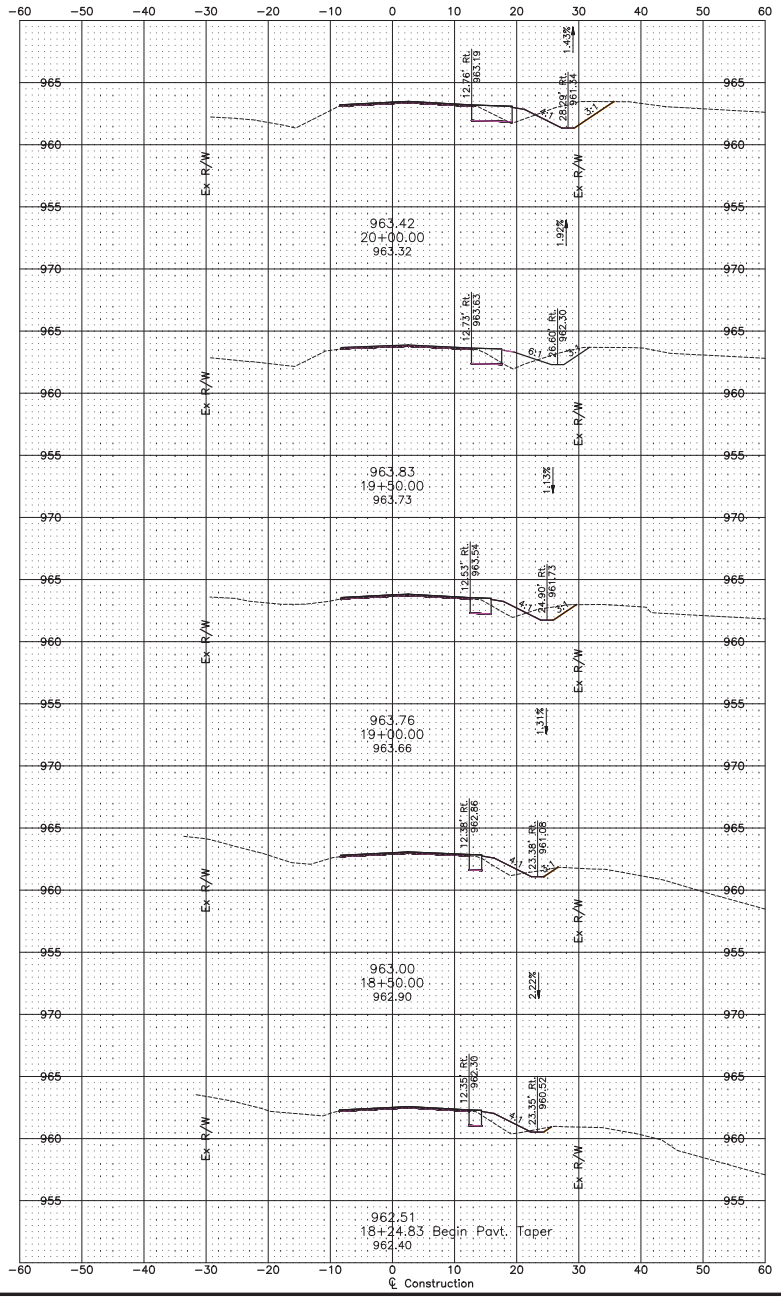

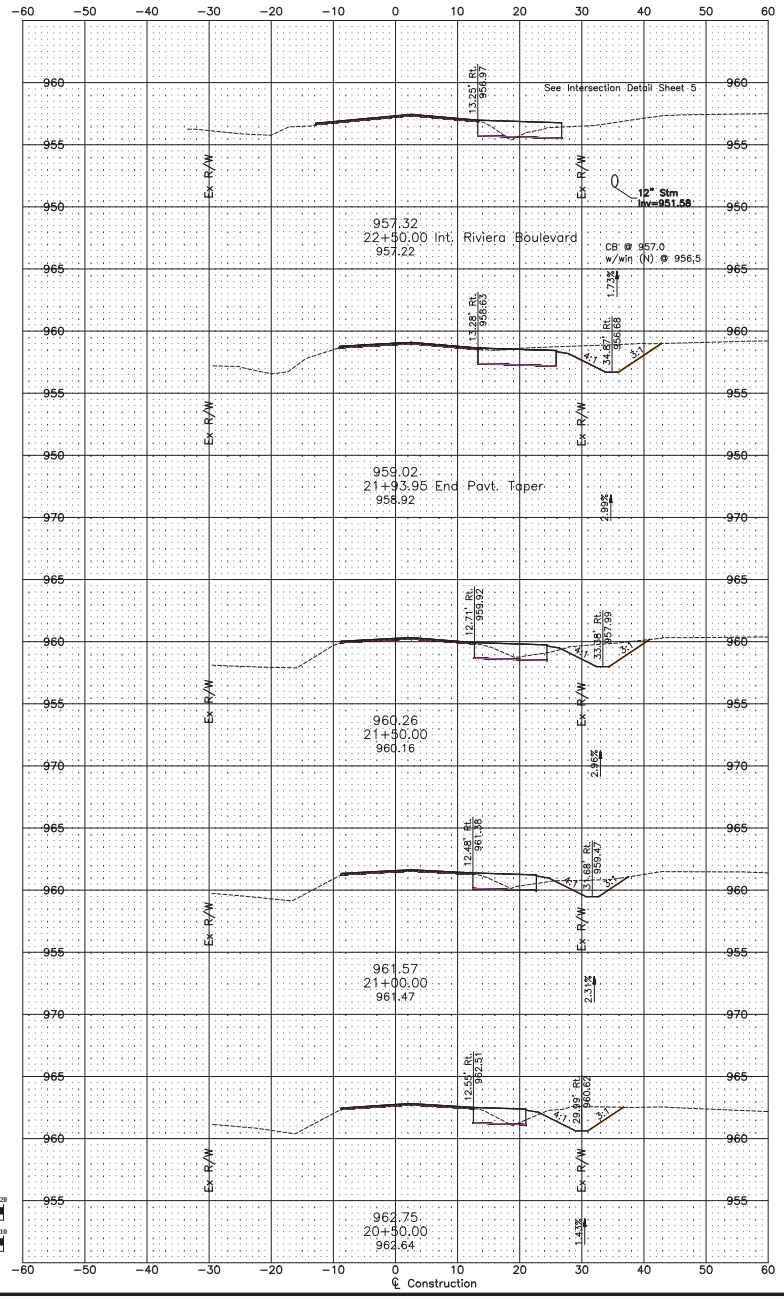

PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
April, 2016

HORIZ 1 inch = 10 feet

VERT 1 inch = 5 feet

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
AVERY ROAD CROSS SECTIONS

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
Fax: 614.775.4800 Office Hours: 7:30 - 5:30
emht.com

DATE
April, 2016

SCALE
Horiz: 1" = 10'
Vert: 1" = 5'

JOB NO.
20150910

SHEET
22/27

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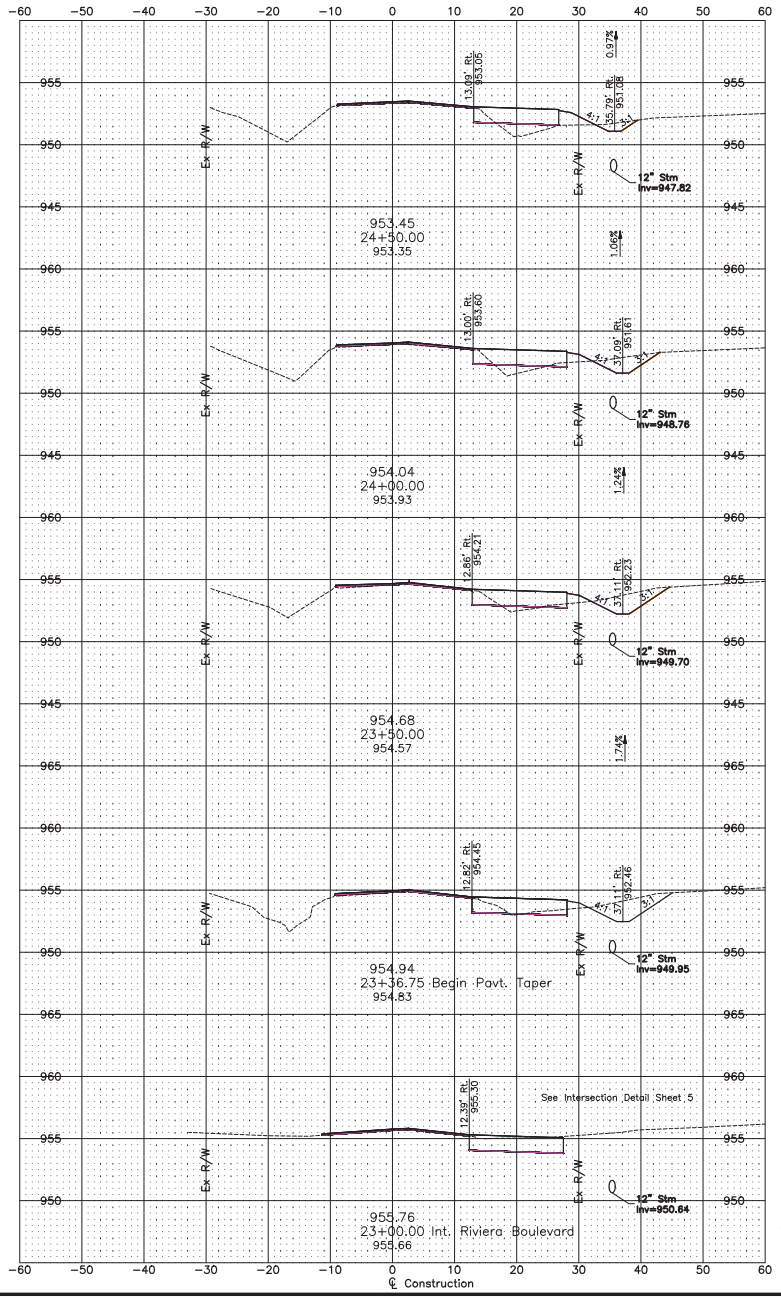

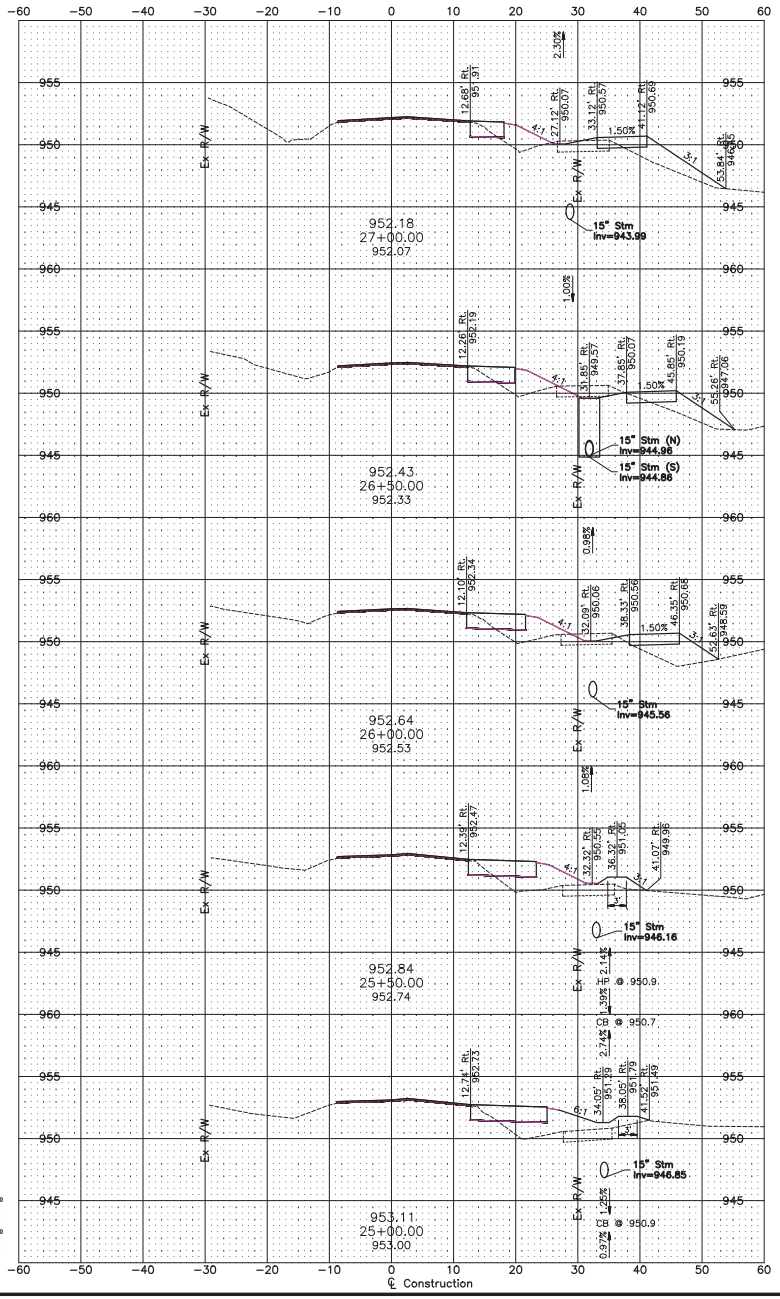

PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
April, 2016

HORIZ 1 inch = 10 feet

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MARK	DATE	DESCRIPTION

REVISIONS

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
AVERY ROAD CROSS SECTIONS

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
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Fax: 614.775.4800 Office Hours: 7:30 - 5:30
emht.com

DATE
April, 2016

SCALE
Horiz: 1" = 10'
Vert: 1" = 5'

JOB NO.
20150910

SHEET
23/27

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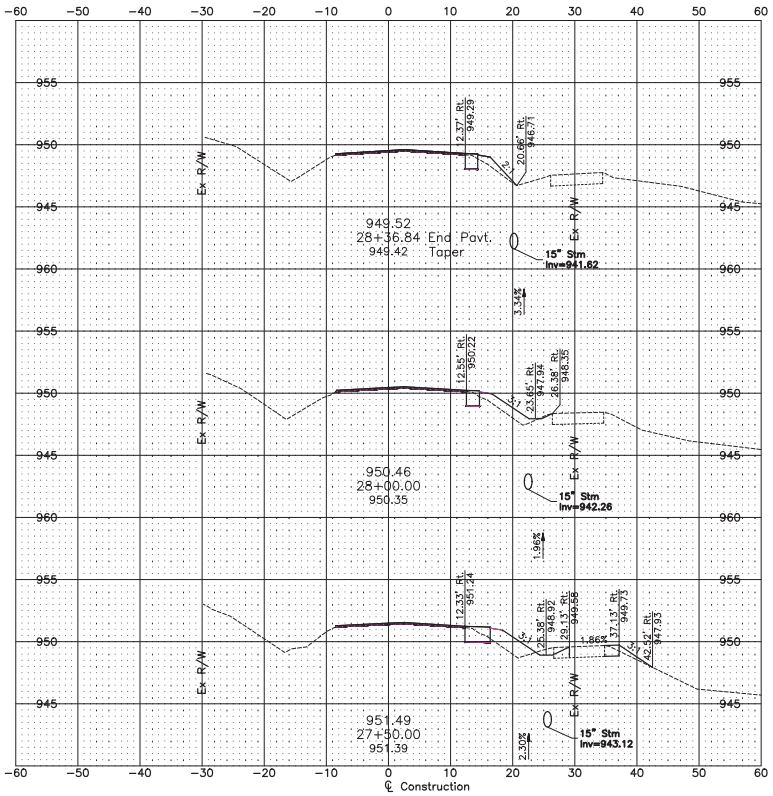

PRELIMINARY
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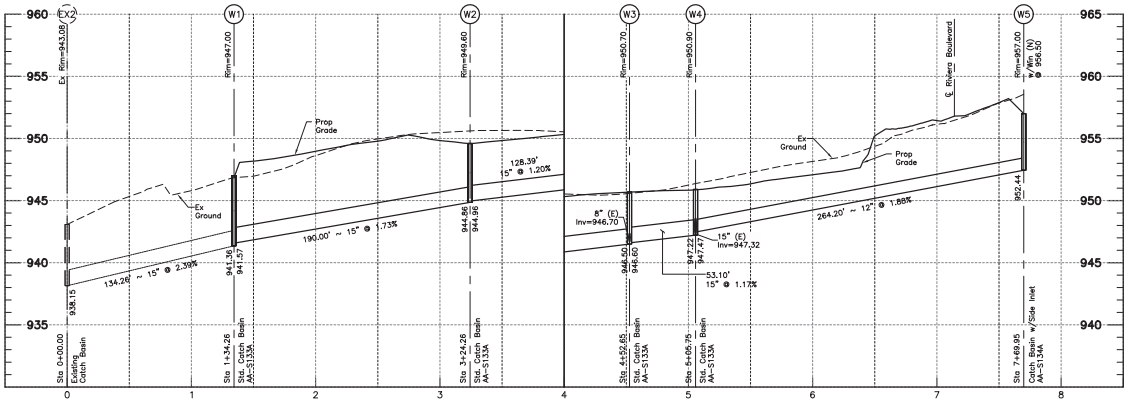
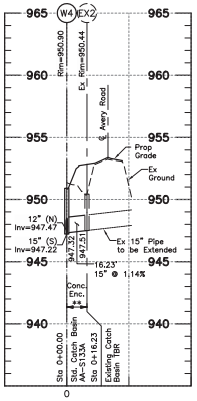
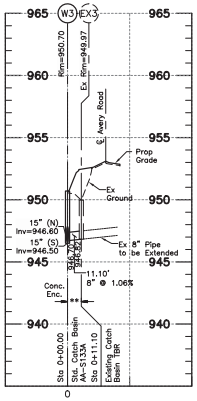
VERT 1 inch = 5 feet







HORIZ 1 inch = 50 feet
VERT 1 inch = 5 feet

MARK	DATE	DESCRIPTION

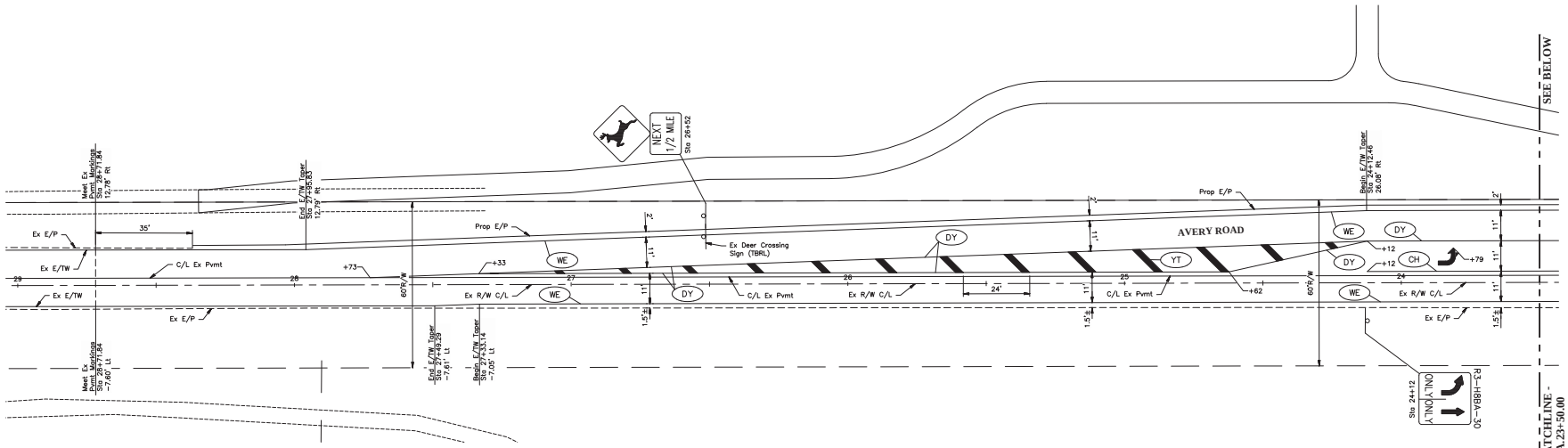
REVISIONS

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
AVERY ROAD CROSS SECTIONS & STORM SEWER PROFILE

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone 614.775.4500 Toll Free 888.775.3648
Fax 614.775.4800 emht.com

DATE: April, 2016
SCALE: As Noted
JOB NO.: 20150910
SHEET: 24/27

J:\20150910\Dwg\04Sheets\Road\24 Avery Road Cross Sections & Storm Sewer Profile.dwg, Last Saved By: kharmon, 4/5/2016 3:43 PM Last Printed By: Harmon, Kyle, 4/8/2016 1:00 PM



ESTIMATE OF QUANTITIES

The contractor shall be solely responsible for determining the required bid quantities necessary for the completion of the plan improvements.

ITEM	QUANITY	UNIT	DESCRIPTION
			TRAFFIC CONTROL
630	15	LF	Ground Mounted Support, No. 3 Post
630	6	SF	Sign, Flat Sheet
630	1	Each	Removal of Ground Mounted Sign and Reerection
644	0.40	MI	Edge Line, 6"
644	0.31	MI	Center Line, 6"
644	111	LF	Channelizing Line, 12"
644	176	LF	Transverse Line, 24"
644	2	Each	Lane Arrow, White, 72"

TRAFFIC CONTROL NOTES

GENERAL

These specifications, together with the accompanying plans are intended to describe the type, size and location of the products and materials to be provided and installed under the various bid items related to traffic control. The Contractor shall furnish and install traffic control devices and related materials in compliance with these plans and specifications, as well as the 2013 Ohio Department of Transportation Construction and Material Specifications, the Ohio Manual of Uniform Traffic Control Devices and the Standard Construction Standard Drawings issued by the Ohio Department of Transportation. These specifications set forth the minimum performance and operating requirements of the traffic control items referred to herein.

ITEM 630 SIGN, FLAT SHEET, AS PER PLAN

In addition to 630, all sign sheet material shall be Diamond Grade DG3 manufactured by 3M Company or approved equal.

Payment shall be as per Item 630.

ITEM 630 GROUND MOUNTED SUPPORT, NO 3 POST, TYPE S, AS PER PLAN

All sign supports shall be 2-inch square galvanized posts with die cut knock outs (allied quick-punch supports or approved equal). A single breakaway anchor shall be used. All signs shall be erected with a 7-foot vertical clearance between finished grade and the bottom of each sign, unless otherwise designated by the City Engineer. Horizontal clearance for both curb and ditch sections shall be as per ODOT Standards. The anchor post has been itemized separately. This Item shall be provided and installed by the City of Dublin.

	LINE SPECIFICATIONS
WE	Edge Line, 6" White
YT	Transverse Line, 24" Yellow
DY	Center Line, 6" Solid Double Yellow
CH	Channelizing Line, 12" White

XX Proposed Pavement Markings (Item 644)

TBRL = To be Relocated
E/TW = Edge of Traveled Way

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
April, 2016

GRAPHIC SCALE
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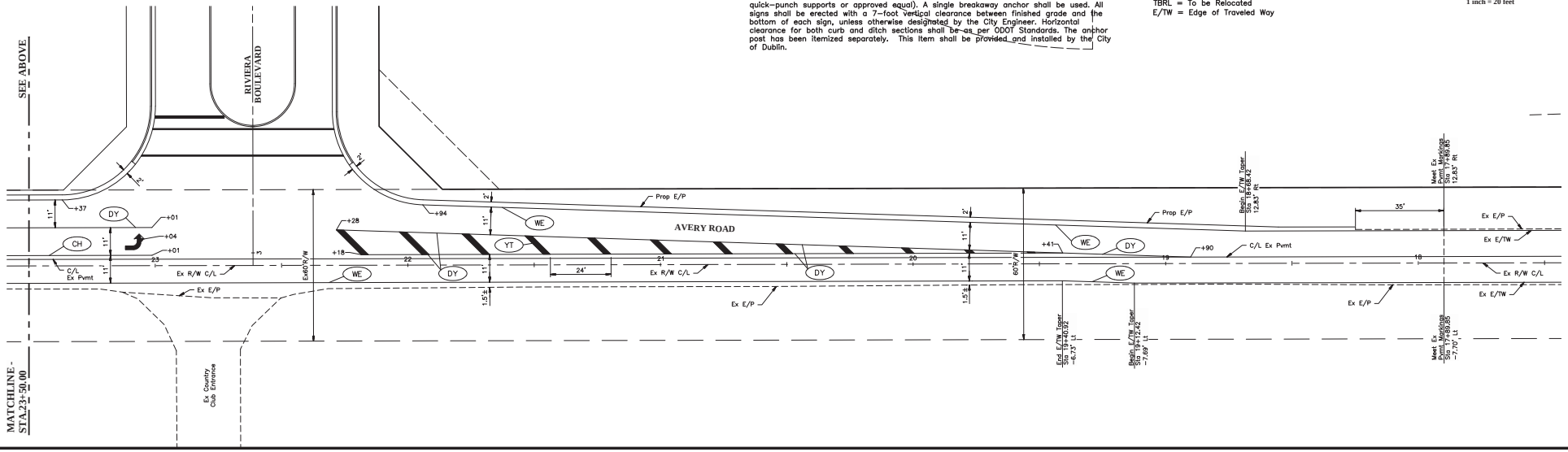
1 inch = 20 feet



REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
AVERY ROAD TRAFFIC CONTROL PLAN

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone 614.775.4500 Fax 614.775.4800 Office: 888.718.9618
emht.com

DATE
April, 2016

SCALE
1" = 20'

JOB NO.
20150910

SHEET
25/27

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ITEM 614 – MAINTAINING TRAFFIC, AS PER PLAN

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

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

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

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

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

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

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

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

CONSTRUCTION INITIATION
THE CONTRACTOR WILL NOTIFY THE CITY OF DUBLIN 14 DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR WILL IMMEDIATELY INFORM THE CITY OF DUBLIN OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION PROJECT. THE CITY ENGINEER WILL PROVIDE CLARIFICATION FOR ANY QUESTIONS ABOUT THE NOTIFICATION REQUIREMENT.

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

TEMPORARY PAVEMENT MARKINGS
ALL MATERIALS AND LABOR ASSOCIATED WITH THE INSTALLATION AND REMOVAL OF TEMPORARY PAVEMENT MARKINGS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN.

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

LOCAL ACCESS
INGRESS AND EGRESS SHALL BE MAINTAINED TO ALL RESIDENTIAL AND COMMERCIAL PROPERTIES. DRIVEWAY CLOSURE MAY BE NECESSARY TO ENABLE WORK ON OR IN FRONT OF A DRIVE. THE CONTRACTOR WILL BE RESPONSIBLE FOR NOTIFYING OWNERS, RESIDENTS, OR BUSINESS OPERATORS IN WRITING AT LEAST 48 HOURS BUT NOT MORE THAN 72 HOURS PRIOR TO CLOSURE. THE ENGINEER SHALL BE GIVEN A LIST OF THE PERSONS THAT WERE GIVEN NOTICES WITH THE DATE OF NOTICE INCLUDED. CLOSURE IS PERMITTED ONLY DURING WORK HOURS AND ACCESS MUST BE RETURNED AT THE END OF EACH WORKING DAY. PROPERTIES WITH MULTIPLE DRIVES MAY HAVE ONE DRIVE CLOSED AT A TIME, WHILE WORK IS PERFORMED IN THE AREA OF THE CLOSED DRIVE.

INDIVIDUAL DRIVE CLOSURES SHALL BE KEPT TO THE MINIMUM TIME NEEDED FOR CONSTRUCTION ACTIVITIES. EVERY EFFORT MUST BE MADE TO ACCOMMODATE THE OWNER'S NEED FOR ACCESS.

PEDESTRIAN ACCESS
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND SAFE MOVEMENT OF PEDESTRIANS THROUGH, AROUND, AND AWAY FROM THE CONSTRUCTION SITE.

THE SAFETY OF PEDESTRIAN TRAFFIC SHALL BE CONSIDERED AT ALL TIMES IN THE PROVISION OF TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS AND NOTES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE LIGHTS, SIGNS, BARRICADES, AND OTHER WARNINGS TO PHYSICALLY SEPARATE THE PEDESTRIAN FROM HAZARDS INCIDENTAL TO THE CONSTRUCTION OPERATIONS SUCH AS OPEN EXCAVATIONS, ETC. AT ALL TIME, THE PEDESTRIAN MOT SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

NOISE CONTROL
ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE ADVERSELY AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE SUCH AFFECTS, ANY POWER–OPERATED CONSTRUCTION–TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 9 PM AND 6 AM. IN ADDITION, NO SUCH DEVICE SHALL BE OPERATED AT ANY TIME ON IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THAT CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

COVERING SIGNS
THE CONTRACTOR SHALL COVER ALL EXISTING SIGNS THAT CONFLICT WITH MAINTENANCE OF TRAFFIC SIGNS. COVERING OF SIGNS SHALL BE IN ACCORDANCE WITH 614.05. COSTS FOR COVERING SIGNS SHALL BE INCLUDED IN ITEM 614 – MAINTAINING TRAFFIC, AS PER PLAN.

CONFLICTING MARKINGS
THE CONTRACTOR SHALL, PRIOR TO PLACING TEMPORARY MARKINGS, REMOVE ALL EXISTING CONFLICTING MARKINGS VISIBLE TO THE TRAVELING PUBLIC DURING DAYLIGHT OR NIGHTTIME HOURS IN ACCORDANCE WITH 641.10. THE COST FOR REMOVAL OF CONFLICTING MARKINGS SHALL BE INCIDENTAL TO ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN.

EXISTING TRAFFIC SIGN MAINTENANCE
SPECIAL CARE SHALL BE TAKEN TO MAINTAIN EXISTING STREET NAME SIGNS AND STOP SIGNS. IF NECESSARY, THE CONTRACTOR SHALL RELOCATE THESE SIGNS OUT OF THE WAY OF CONSTRUCTION, BUT IN CONFORMANCE WITH OMUTCD.

COORDINATION WITH THE COLUMBUS PAVING THE WAY PROGRAM (PTWP)
THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES ON A WEEKLY BASIS. WHEN DETOURS ARE PLANNED, THE NOTIFICATION SHALL BE AT THE PRE–CONSTRUCTION MEETING OR 30 DAYS IN ADVANCE ONCE CONSTRUCTION HAS BEGUN. LANE AND RAMP CLOSURES OF LESS THAN TWO WEEKS DURATION AND MORE THAN TWO DAYS SHALL BE REPORTED AT LEAST 3 WORKING DAYS IN ADVANCE. FOR SHORT–TERM LANE OR RAMP CLOSURES (TWO DAYS OR LESS) NOTIFICATION SHALL BE MADE AT LEAST ONE DAY IN ADVANCE.

INFORMATION SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT TRAFFIC AT PRESENT AND IN THE NEXT 30 DAYS. THE REPORT FORMAT SHALL BE APPROVED BY THE ENGINEER OR ONE SUPPLIED BY THE PTWP. THE CONTACTOR SHALL DESIGNATE AN INDIVIDUAL AT THE PRE–CONSTRUCTION MEETING WHO WILL BE RESPONSIBLE FOR PREPARATION OF THIS REPORT.

ANY UNFORESEEN IMPACT TO TRAFFIC SHALL BE REPORTED TO THE ENGINEER AS SOON AS POSSIBLE.

THE ENGINEER WILL PROVIDE THIS INFORMATION TO THE PTWP. ALL CONSTUCTION ACTIVITIES THAT INTERFERE WITH TRAFFIC SHALL BE REPORTED TO THE PTWP. THIS INFORMATION SHALL BE PROVIDED TO THE PROGRAM COORDINATOR AT (614) 645–7283, OR (614) 645–6016.

SIGNS, BARRICADES, AND VERTICAL PANELS
ALL CONSTRUCTION SIGNS, BARRICADES, VERTICAL PANELS, AND DRUMS SHALL CONFORM TO OMUTCD AND THE LATEST REVISION OF THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS.

ALL CONSTRUCTION SIGNAGE SHALL BE INSTALLED AND COVERED BEFORE CONSTRUCTION BEGINS. AFTER CONSTRUCTION SIGN INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER THREE WORKING DAYS BEFORE WORK BEGINS AND REQUEST AN INSPECTION OF ALL SIGNAGE.

FACES OF CONSTRUCTION SIGNS AND REFLECTIVE SHEETING ON BARRICADES SHALL BE TYPE "H" (VIP). ALL ORANGE CONSTRUCTION SIGNS SHALL BE FLUORESCENT ORANGE. ALL SHEETING WILL BE TESTED FOR REFLECTIVITY PER ODOT 730.192. VERTICAL PANELS AND DRUM BANDS SHALL BE REFLECTORIZED WITH TYPE "G" (HIGH INTENSITY) SHEETING COMPLYING WITH THE REQUIREMENTS OF 730.19. ALL SIGNS AND BARRICADES, VERTICAL PANELS, AND DRUMS WILL BE LIKE NEW AND IN GOOD CONDITION IN CONFORMANCE WITH "QUALITY GUIDELINES FOR TEMPORARY TRAFFIC CONTROL DEVICES AND FEATURES" PUBLISHED BY ATSSA.

MAINTENANCE OF ALL CONTRACTOR SUPPLIED SIGNS, BARRICADES, VERTICAL PANELS, AND DRUMS IS THE CONTRACTOR'S RESPONSIBILITY. IF THE CONTRACTOR FAILS TO CORRECT DEFICIENCIES WITHIN FOUR HOURS OF NOTIFICATION, THE CITY WILL CORRECT OR HIRE SOMEONE TO CORRECT THE DEFICIENCIES. THE CONTRACTOR WILL THEN BE BACK CHARGED PER ODOT SPECIFICATION 614.04. IN THE CASE THAT BACK CHARGING THE CONTRACTOR IS NOT APPLICABLE, THE CITY WILL RESCIND AND WITHHOLD ALL PERMITS ISSUED TO THE CONTRACTOR TO WORK WITHIN CITY RIGHT–OF–WAY UNTIL THE ISSUE IS SETTLED.

THESE PROVISIONS SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF ANY OF HIS LEGAL RESPONSIBILITIES OR LIABILITIES FOR THE SAFETY OF THE PUBLIC.

ALL BARRICADES AT CLOSURES SHALL HAVE YELLOW TYPE "C" STEADY BURN LIGHTS. ALL BARRELS IN TAPERS SHALL HAVE YELLOW TYPE "C" STEADY BURN LIGHTS.

ALL ADVANCE SIGNING SHALL BE EQUIPPED WITH TYPE "A" FLASHING LIGHTS AND (2) ORANGE FLAGS (24"X24"). LIGHTS ARE NOT REQUIRED ON SIGNS IN PLACE DURING DAYLIGHT HOURS.

CONES ARE NOT APPROVED FOR USE AT NIGHT.

DRUMS SHALL BE PLACED AS FOLLOWS: 25' C/C ON TANGENTS, 10' C/C ON TAPERS, AND 8' C/C IN RADII.

PAYMENT
PAYMENT FOR ALL MATERIALS AND LABOR RELATED TO MAINTAINING TRAFFIC SHALL BE INCIDENTAL TO ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN, UNLESS SEPARATELY ITEMIZED WITHIN.

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

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED IN THIS NOTE WILL NOT BE PERMITTED AT PROJECT COST UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE ENGINEER. LEOS SHOULD NOT BE USED WHERE THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) INTENDS FOR FLAGGERS BE USED.

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

A. FOR LANE CLOSURES: DURING INITIAL SET–UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED. IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

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

C. DURING A TRAFFIC MAST ARM AND POLE INSTALLATION.

LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF LEOS AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES. THE CONTRACTOR SHALL UTILIZE ANY OF THE FOLLOWING LAW ENFORCEMENT AGENCY(S): CITY OF DUBLIN, FRANKLIN COUNTY SHERIFF'S OFFICE, OR OHIO STATE HIGHWAY PATROL.

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 – LAW ENFORCEMENT OFFICE WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITY HAS CARRIED TO THE GENERAL SUMMARY.

ITEM 614 – LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN 40 HOURS

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER–MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON–SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE–PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE–PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON–BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE–LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24–HOUR–PER–DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

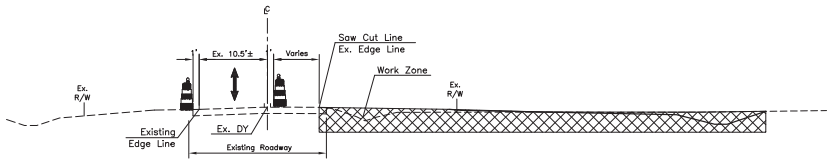
ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN _____ SIGN MONTH ASSUMING _____ PCMS SIGN(S) FOR _____ MONTH(S

MAINTENANCE OF TRAFFIC ESTIMATE OF QUANTITIES

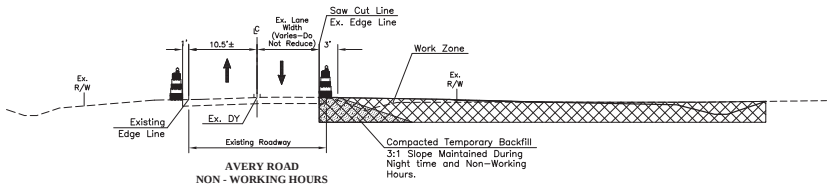
ITEM NO.	TOTAL	UNIT	ITEM DESCRIPTION
614	–	LUMP	Maintaining traffic, As Per Plan
614	80	HOUR	Law Enforcement Officer with Patrol Car, As Per Plan
614	120	DAY	Portable Changeable Message Signs, As Per Plan

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
April, 2016



AVERY ROAD WORKING HOURS TYPICAL SECTION
Not to Scale



AVERY ROAD NON - WORKING HOURS TYPICAL SECTION
Not to Scale

NOTES:
1. The Contractor shall only work on one side of Avery Road at a time.
2. All travel lanes shall be fully open to traffic on Avery Road from 7:00 to 9:00 A.M. and 4:00 to 6:00 P.M., Monday through Friday. All lanes shall be open to traffic during nighttime and non–working hours as detailed on the maintenance of traffic typical sections.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
AVERY ROAD MAINTENANCE OF TRAFFIC

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone 614.775.4500 Toll Free 888.775.3648
Fax 614.775.4800 Office Hours: 7:30 AM - 5:30 PM
emht.com

DATE
April, 2016

SCALE
None

JOB NO.
20150910

SHEET
26/27

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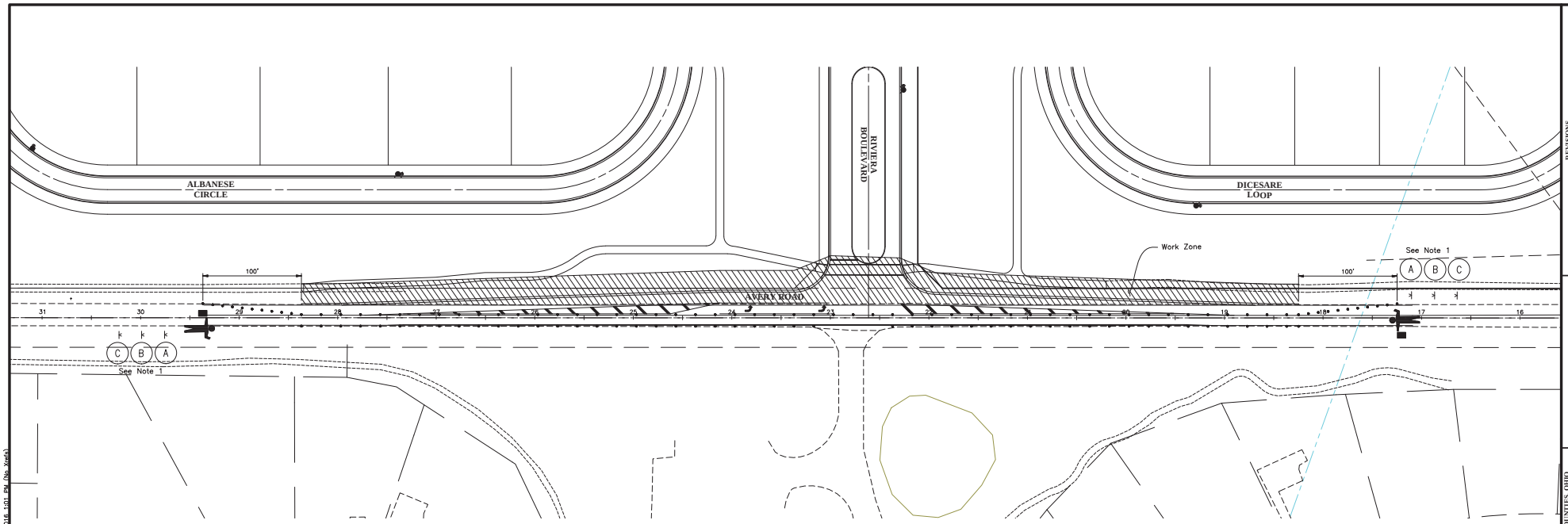


GRAPHIC SCALE

0 25 50 100

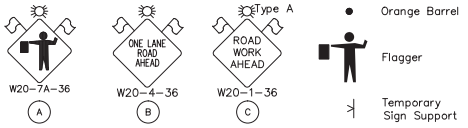
1 inch = 50 feet

PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
April, 2016

MAINTENANCE OF TRAFFIC SIGN LEGEND



NOTES:

1. All Maintenance of Traffic signs shall be mounted a minimum of 200' from each other and from the beginning of drum taper for each work zone.

2. All travel lanes shall be fully open to traffic on Avery Road from 7:00 to 9:00 A.M. and 4:00 to 6:00 P.M., Monday through Friday. All lanes shall be open to traffic during nighttime and non-working hours as detailed on the maintenance of traffic typical sections.

3. While the maintenance of traffic plan illustrated above encompasses the entire length of the project, the closure length shall be limited to the amount of work that can be completed within one day. Flagger positioning and corresponding tapers and signs shall be adjusted according to OMUTCD Figure 6H-10.

4. See previous sheet for working hours and non-working hours Typical Sections.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF DUBLIN, FRANKLIN AND DELAWARE COUNTIES, OHIO
PUBLIC STREET, STORM AND WATER IMPROVEMENTS
FOR
RIVIERA
SECTION 1 & 2
AVERY ROAD MAINTENANCE OF TRAFFIC

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
April, 2016

SCALE
1" = 50'

JOB NO.
20150910

SHEET
27/27

J:\20150910\Dwg\CoSheets\Riv\27-Avery Road Maintenance of Traffic.dwg, Layout: Sheet, By: Harrison, 1/15/2016 6:58 PM, Last Printed By: Harrison, 4/8/2016 1:01 PM (No Xrefs)