CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR
COTA PARK AND RIDE
2015

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 636. Item 911 of the Standard Specifications may be used elsewhere.
17. The Contractor shall submit a copy of the approved construction drawings and a list of proposed precast concrete product manufacturers to the City of Columbus Construction Inspection Division before commencing construction.

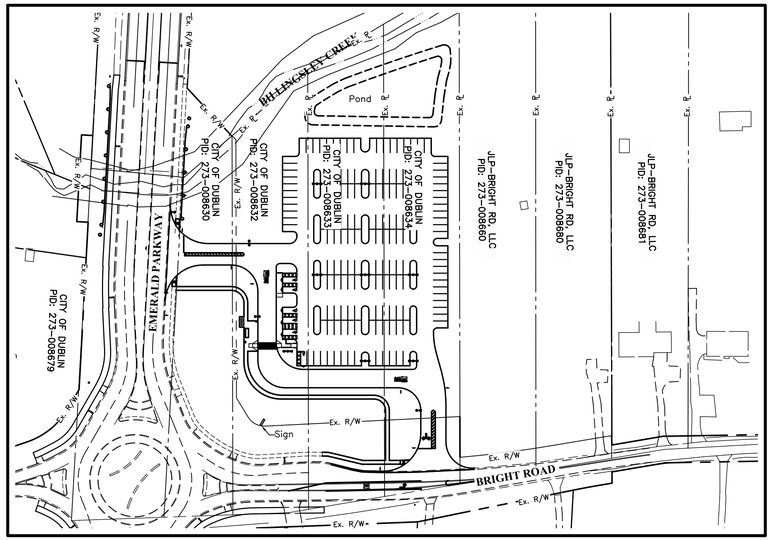
    Send the information to the following address:
    Construction Inspection Division
    City of Columbus
    1800 East 17th Avenue
    Columbus, Ohio 43219

    Send a copy of the transmittal letter to the following address:
    Division of Engineering
    City of Dublin
    5800 Shier Rings Road
    Dublin, Ohio 43016
18. All trenches within public right-of-way shall be backfilled according to the approved construction drawings or securely plated during nonworking hours. Trenches outside these areas shall be backfilled or shall be protected by approved temporary fencing or barricades during nonworking hours. Clean-up shall follow closely behind the trenching operation.
19. All trees within the construction area not specifically designated for removal shall be preserved, whether shown or not shown on the approved construction drawings. Trees to be preserved shall be protected with high visibility fencing placed a minimum 15 feet from the tree trunk. Trees 6 -inches or greater at DBH (Diameter 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 636 of the Standard Specifications.
21. The Contractor shall be responsible for the condition of trenches within the right-of-way and public easements for a period of one year from the final acceptance of the work, and shall make any necessary repairs at no cost to the City.
22. Pavements shall be cut in neat, straight lines the full depth of the existing pavement, or as required by the City Engineer. Pavement replacement shall be conducted according to City of Columbus Standard Drawing 1441 and applicable City of Dublin standard drawings. The replacement of driveways, handicapped ramps, sidewalks, bike paths, parking lot pavement, etc. shall be provided according to the approved construction drawings and City of Dublin standard construction drawings.
23. Tree trimming within the construction zone is to be completed by a certified Arborist. At the completion of the project the Arborist is to return and trim any broken branches as needed.
24. Any modification to the work shown on drawings must have prior written approval by the City Engineer, City of Dublin.
25. All inlets shall be channelized.
26. Park areas shall be fine-graded and seeded with the following mixture:
    Improved Kentucky Bluegrass, 40% of weight (2 varieties in equal parts)
    Improved Perennial Rye, 60% of weight (2 varieties in equal parts)
    Germination Rate: 85%
    Application Rate: 7 lbs per 1000 sq ft as directed by the Division of Parks & 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

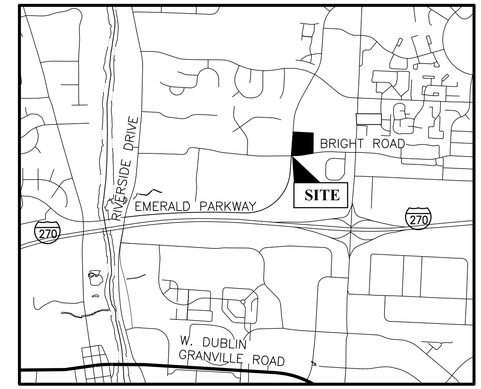
1. The following utilities are known to be located within the limits of this project:

Columbia Gas of Ohio Rob Coldwell – Field Engineer 1600 Dublin Road Columbus, Ohio 43212	City of Dublin Division of Engineering Ken Richardson, P.E. 5800 Shier Rings Road Dublin, Ohio 43016 (614) 410-4631	City of Columbus Division of Power and Water (Water) 910 Dublin Road, 2nd Floor Columbus, Ohio 43215 (614) 645-7677	Verizon Bill Muether 550 Leader Street Marion, Ohio 43302 (740) 383-0527
American Electric Power Rob Stoneker 850 Tech Center Drive Gahanna, Ohio 43230-6605 (614) 883-6829	Time Warner Cable Ray Maurer 3760 Interchange Road Columbus, Ohio 43204 (614) 481-5262	AT&T of Ohio Tom Ziomek 111 North 4th Street Columbus, OH 43215 (614)223-7162	Wide Open West Jaytee Novaria 3675 Corporate Drive Columbus, Ohio 43231 (614) 948-4653



INDEX MAP
Scale: 1" = 100'

GRAPHIC SCALE
0 50 100 200
1 inch = 100 feet



LOCATION MAP
Not to Scale

ZONING SUMMARY

Impacted Parcels:	
273-008630	0.8 Acres
273-008632	1.2 Acres
273-008633	1.4 Acres
273-008634	1.5 Acres
Total:	±4.9 Acres
Ex. Site Area:	±3.33 Acres
Total Impervious Area:	±1.63 Acres (49%)
Disturbed Area:	±2.92 Acres
Proposed COTA Park and Ride Parking Stalls	169 Spaces

DEVELOPER/OWNER

City of Dublin
5800 Shier Rings Road
Dublin, Ohio 43016
Tel: (614) 410-4600
Fax: (614) 410-4747

BENCH MARKS
(NAVD 1988)

BM#1 Railroad spike in the south side of a wooden utility pole located on the north side of Bright Road, at the east entrance to the roundabout with Emerald Parkway.
Elev. = 899.91

BM#2 Chiseled "X" on the west flange bolt of a fire hydrant located on the east side of Emerald Parkway, being the first hydrant north of the roundabout with Bright Road.
Elev. = 893.88

BM#3 Chiseled "X" on the west flange bolt of a fire hydrant located on the east side of Emerald Parkway, being the second hydrant north of the roundabout with Bright Road.
Elev. = 893.16

STANDARD CONSTRUCTION DRAWINGS

The Standard Construction Drawings listed on these plans are to be considered a part thereof.

City of Dublin	City of Columbus	
PD-01	AA-S102	AA-S133A
PD-02	AA-S106	AA-S149
PD-03	AA-S107	AA-S150
PD-06	AA-S112	AA-S151
PD-08	AA-S117	1441
PD-11	AA-S119	2000
RD-02	AA-S125A	2160
RD-05		
RD-07		
ST-03		
ST-04		
ST-05		

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

CITY OF DUBLIN APPROVAL

The signatures below signify only concurrence with the general purpose and general location of the project and does not constitute assistance to operate as intended. All technical details remain the responsibility of the Engineer preparing the plans.

City Engineer, City of Dublin, Ohio — Date

Director of Land Use & Long Range Planning, City of Dublin, Ohio — Date

SHEET INDEX

Sheet Title	Sheet Number
Title Sheet	1
General Notes and Details	2
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Site Staking Plan	4
Utility Plan	5
Grading Plan	6
Storm Sewer Profiles	7
Storm Sewer Profiles	8
Erosion Control Details	9
Outlet Control Structure Details	10
Landscape Plan	11
Landscape Details	12
Lighting Plan	13

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
January 26, 2015

Registered Engineer No. 67680 — Date

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

REVISIONS

MARK	DATE	DESCRIPTION

City of Dublin

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR
COTA PARK AND RIDE
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
January 26, 2015

SCALE
As Noted

JOB NO.
2014-0588

SHEET
1/14

J:\20140588\Dwg\04Sheets\Private Site Improvement Plan\20140588-1 Title Sheet.dwg Last Saved By: ebode, 1/27/2015 9:09 AM Last Printed By: Peltier, James, 1/27/2015 10:56 AM (No Xref(s))

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 21 days or more shall be seeded or protected within seven calendar days of the disturbance. Other sediment controls that are installed shall be maintained until vegetative growth has been established. The Contractor shall be responsible for the removal of all temporary sediment devices at the conclusion of construction but not before growth of permanent ground cover.

BLASTING (IF PERMITTED)

1. The Contractor must obtain a blasting permit from Washington Township Fire Department prior to blasting for rock excavation. The Contractor shall submit blasting reports upon completion of blasting to the City Engineer, the Owner, and the Owner's engineer. Top of rock elevations shall be shown on "as–built" construction drawings.

SANITARY SEWERS

1. Construction of the sanitary sewer will be permitted upon receiving an OEPA Permit to Install (PTI). The developer is responsible for obtaining all required Ohio EPA approvals and paying review fees.

2. Sanitary sewage collection systems shall be constructed in accordance with the rules, regulations, standards and specifications of the City of Dublin, Ohio EPA, Ohio Department of Health and the current edition of the Great Lakes – Upper Mississippi River Board (Ten States) – Recommended standards for wastewater facilities.

3. The minimum requirements for sanitary sewer pipes with diameters 15 inch and smaller shall be reinforced concrete pipe ASTM C76 Class 3, or PVC sewer pipe ASTM D3034, SDR 35. Pipe for 6 inch diameter house service lines shall be PVC pipe ASTM D3034, SDR 35. PVC pipe shall not be used at depths greater than 28 feet, instead Ductile Iron, Cl. 50 (AWWA 151) shall be used with prior written approval by the City Engineer. Pipe materials and related structures shall be shop tested in accordance with City of Columbus Construction Inspection Division quality control requirements.

4. The minimum requirements for sanitary sewer pipes with diameters greater than 15 inch shall be reinforced concrete pipe ASTM C76 with Class according to the approved construction drawings.

5. All in–line wye and tee connections in concrete sewers, 18 inch diameter and larger, shall be either Kor–N–Tee or Kor–N–Seal connections conforming to the manufacturer's recommendations.

6. Granular backfill shall be compacted granular material according to Item 912 of the Standard Specifications or Controlled Density Backfill according to Item 636, Type III of the Standard Specifications as directed by the City Engineer.

7. All manhole lids shall be provided with continuous self–sealing gaskets. The approved construction drawings shall show where bolt–down lids are required. Sanitary sewer manholes shall be precast concrete or as approved by the City Engineer and conform to the City of Dublin sanitary manhole standard drawing. Manhole lids shall include City of Dublin logo.

8. All PVC sewer pipes shall be deflection tested no less than 60 days after completion of backfilling operations. All other requirements shall be according to Item 901.21 of the Standard Specifications.

9. Temporary bulkheads shall be placed in pipes at locations shown on the approved construction drawings and shall remain in place until the sewers have been approved for use by the City Engineer. The cost for furnishing, installing, maintaining, and removing bulkheads shall be included in the contract unit bid price for the various sanitary sewer items.

10. All sanitary sewers including sanitary sewer service lines shall be subjected to and pass infiltration or exfiltration tests according to Item 901 of the Standard Specifications and must be approved for use by the City Engineer before any service connections are tapped into sewers.

11. For sanitary sewer infiltration, leakage through joints shall not exceed 100 gallons per inch of tributary sewer diameter per 24 hours per mile of length or the computed equivalent. All sanitary sewers shall be tested.

12. At the determination of the City Engineer, the Contractor may be required to perform a TV inspection of the sanitary sewer system prior to final acceptance by the City. This work shall be completed by the Contractor at his expense.

13. Visable leaks or other defects observed or discovered during TV inspection shall be repaired to the satisfaction of the Engineer.

14. Roof drains, foundation drains, field tile or other clean water connections to the sanitary sewer system are strictly prohibited according to Section 51.23 of the Dublin Code of Ordinances.

15. All water lines shall be located at least 10 feet horizontally and 18 inches vertically, from sanitary sewers and storm sewers, to the greatest extent practicable. Where sanitary sewers cross water mains or other sewers or other utilities, trench backfill shall be placed between the pipes crossing and shall be compacted granular material according to Item 912 of the Standard Specifications. In the event that a water line must cross within 18 inches of a sanitary sewer, the sanitary sewer shall be concrete encased or consist of ductile iron pipe material.

16. Service risers shall be installed where the depth from wyes to proposed ground elevation exceeds 10 feet. Tops of risers shall be no less than 9 feet below proposed ground elevation if basement service is intended.

17. Where service risers are not installed, a minimum 5–foot length of sanitary sewer service pipe of the same size as the wye opening shall be installed.

18. The Contractor shall furnish and place, as directed, approved wye poles made of 2 inches x 2 inches lumber at all wye locations, ends of extended services, or at the end of each riser where risers are required. Wye poles shall be visible before acceptance by the City. The cost of these poles shall be included in the contract unit price for the various sewer items.

19. Existing sanitary sewer flows shall be maintained at all times. Costs for pumping and bypassing shall be included in the Contractor's unit price bid for the related items.

20. The Contractor shall furnish all material, equipment, and labor to make connections to existing manholes. The sewer pipe to manhole connections for all sanitary sewers shall be flexible and watertight. All holes shall be neatly cored. The sewer pipe barrel at the springline shall not extend more than 1 inch beyond the inside face of the manhole. To maintain flexibility in the connection, a 1–inch space shall be left between the end of the pipe inside the manhole and the concrete channel; this space shall be filled with a waterproof flexible joint filler. Any metal that is used shall be Type 300 Series Stainless Steel. The connection may be any of the following types:
   A. Rubber sleeve with stainless steel banding.
      1) Kor–N–Seal as manufactured by National Pollution Control Systems, Inc.
      2) Lock Joint Flexible Manhole Sleeve as manufactured by Interpace Corporation.
      3) Or equal as approved by the City Engineer.
   B. Rubber gasket compression.
      1) Press Wedge II as manufactured by Press–Seal Gasket Corporation.
      2) Duro Seal III as manufactured by Dura Tech, Inc.
      3) Link–Seal as manufactured by Thunderline Corporation.
      4) Or equal as approved by the City Engineer.

   The cost for this work along with a new channelized base for the manhole shall be included in the unit bid price for the related items of work.

WATERLINE

1. All water line materials shall be provided and installed according to current specifications of the City of Columbus Division of Power and Water (Water).

2. All public water pipe with a diameter 3 inches to 8 inches shall be Ductile Iron, Class 53. Public water pipe 12 in diameter or larger shall be Ductile Iron, Class 54. Public water pipe 20 inches in diameter or larger may be prestressed concrete pipe. Private water pipe shall meet the approval of the City of Columbus Division of Power and Water (Water) prior to approval of the construction drawings.

3. Only fire hydrants conforming to City of Columbus standards will be approved for use.

4. Public water lines shall be disinfected by the City of Columbus Division of Power and Water (Water). Requests for water line chlorination shall be made through the City of Dublin Division of Engineering. The cost for chlorination shall be paid for by the Contractor.

5. All water lines shall be disinfected according to Item 801.13 of the Standard specifications. Special attention is directed to applicable sections of American Water Works Association specification C–651, particularly for flushing (Section 5) and for chlorinating valves and fire hydrants (Section 7). Pressure testing shall be performed in accordance with Section 801.12 of the City of Columbus Construction and Material Specifications. When water lines are ready for disinfection, the City of Dublin shall submit two (2) sets of "as–built" plans, and a letter stating that the water lines have been pressure tested and need to be disinfected, to the City of Columbus, Division of Power and Water (Water). The Contractor shall be responsible for all costs associated with the disinfection of all water lines construction per this plan. Pressure testing shall be performed in accordance with Section 801.12 of the City of Columbus Construction and Material Specifications.

6. The Contractor shall paint all fire hydrants according to City of Dublin standards. The cost of painting fire hydrants shall be included in the contract unit price for fire hydrants.

7. No water taps or service connection permits (e.g., to curb stops or meter pits) may be issued until adjacent public water lines serving the construction site have been disinfected by the City of Columbus Division of Power and Water (Water) and have been accepted by the City Engineer. A tap permit for each water service must be obtained from the City of Dublin and the City of Columbus Division of Power and Water (Water) before making any taps into public water lines.

8. The Contractor shall notify the City of Columbus Division of Power and Water (Water) at 645–7788 and the City of Dublin Division of Engineering at least 24 hours before tapping into existing water lines.

9. All water main stationing shall be based on street centerline stationing.

10. All bends, joint deflections and fittings shall be backed with concrete per City of Columbus standards.

11. The Contractor shall give written notice to all affected property owners at least 1 working day but not more than 3 working days prior to any temporary interruption of water service. Interruption of water service shall be minimized and must be approved by the City Engineer.

12. Water meters shall be installed inside proposed structures unless a meter pit installation is approved by the City of Columbus Division of Power and Water (Water). Meter pits must conform to standard drawings L–7103, A&B for 5/8" through 1" meters or L–6317, A,B,C&D for 1–1/2" or larger meters.

13. Water lines to be installed in embankment areas shall be placed after the embankment has been placed and compacted according to the Standard Specifications.

14. Curb stop boxes shall be located at least 2 feet inside the right–of–way or 1 foot inside of sidewalk towards the curb and set at finished grade.

15. If the top of the operating nut of any valve is greater than 36 inches below finished grade, an extension stem shall be furnished to bring the top of the operating nut to within 24 inches of finished grade elevation.

16. All water lines shall be placed at a minimum depth of 4 feet measured from top of finished grade to top of water line. Water lines shall be set deeper at all points where necessary to clear existing or proposed utility lines or other underground restrictions by a minimum of 18 inches.

17. Two 3/4 inch taps shall be installed within 2 feet of the end of a line on all dead–end water lines.

18. All water mains shall be cleaned and flushed, also any water main 12–inch and larger must be properly pigged, in accordance with section 801.11 of the City of Columbus, Construction and Materials Specifications.

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 636, 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. All 8 inch storm sewers shall be Ductile Iron Pipe conforming to the material specification of AWWA C151, Joint Specification of AWWA C111, and Bedding Classification of ASTM C–12. All Ductile Iron Pipe shall be concrete encasing per City of Columbus Standard Drawing AA–S148.

6. 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 surfaces. Surfaces to be acid washed before approval of stone facing.

7. Storm inlets or catch basins shall be channelized and have bicycle safe grates.

8. 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

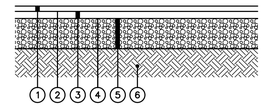
1. The Contractor shall make proper arrangements with the Dublin Service Department and the Columbus Division of Power and Water for the use of fire hydrants when used for work performed under this contract and provide the city of Dublin a copy of the Hydrant Usage Permit obtained from the City of Columbus. 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 Power and Water (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 - DEVELOPER NOTES

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.
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 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.

AS-BUILTS

1. As–builts of the site, utilities and stormwater management facilities shall be performed per requirements of the City of Dublin Administrative Policy & Procedure #08–030 prior to obtaining occupancy for the building.



TYPICAL SECTION

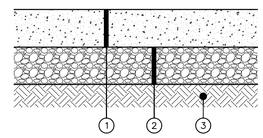
1. Item 448, 1 1/2" Asphalt Concrete Surface Course
2. Item 407, NTSS–1HM Trackless Tack Coat (0.06 Gal/Sq. Yd)
3. Item 448, 2 1/2" Asphalt Concrete Intermediate Course
4. Item 407, NTSS–1HM Trackless Tack Coat (0.08 Gal/Sq. Yd)
5. Item 304, 6" Crushed Aggregate Base
6. Item 203, Subgrade Compaction

Note:

Pavement Section is per the recommendation of the Central Ohio Transit Authority (COTA) on December 22, 2014. All Pavement Materials shall Conform to the City of Columbus Construction and Material Specifications Together with the State of Ohio, Department of Transportation Construction and Material Specifications.

PAVEMENT SECTION

Not To Scale



TYPICAL SECTION

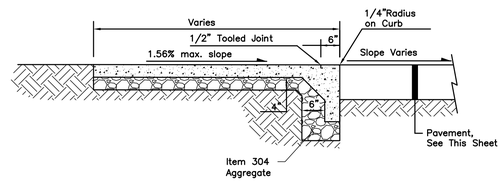
1. Item 452, 10" Non–Reinforced Concrete Pavement (Class C)
2. Item 304, 8" Crushed Aggregate Base
3. Item 204, Subgrade Compaction

Note:

Pavement Section is per the recommendation of the Central Ohio Transit Authority (COTA) on December 22, 2014. All Pavement Materials shall Conform to the City of Columbus Construction and Material Specifications Together with the State of Ohio, Department of Transportation Construction and Material Specifications.

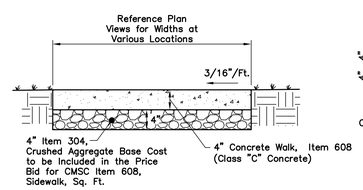
CONCRETE PAVEMENT

Not to Scale



FLUSH COMBINATION CURB AND SIDEWALK

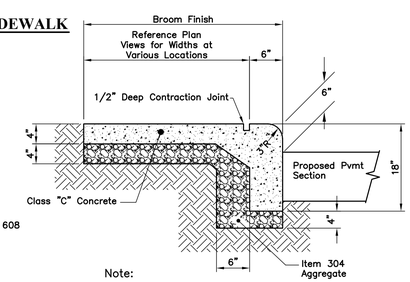
Not To Scale



Sidewalk Joints (Price shall be Included w/Item 608) Shall be in Accordance With CMSC Item 608.03 Unless Otherwise Detailed as a part of the Architectural Plans.

TYPICAL SIDEWALK SECTION

Not To Scale

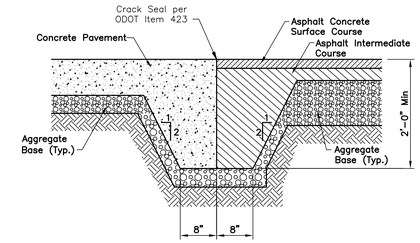


Note:

Sidewalk Joints shall be in Accordance with CMSC Item 608.03 Unless Otherwise Detailed as a Part of the Building or Landscape Architect Plans.

STANDARD COMBINED CURB AND WALK

Not To Scale

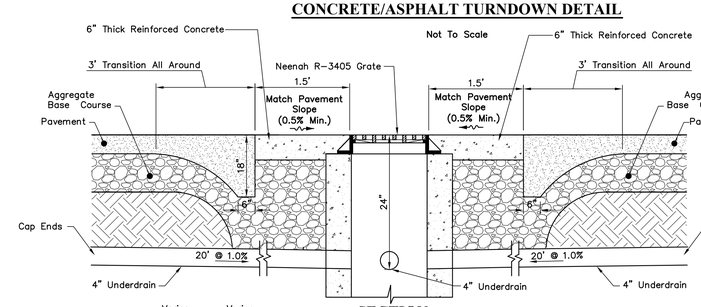


Note:

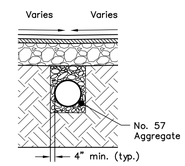
Contractor Shall Provide Turndown Anywhere Asphalt and Concrete or Concrete Base Pavement Meet.

CONCRETE/ASPHALT TURNDOWN DETAIL

Not To Scale



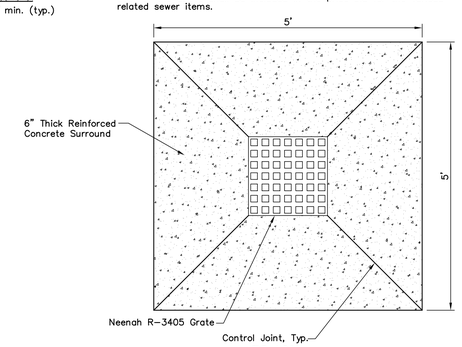
SECTION



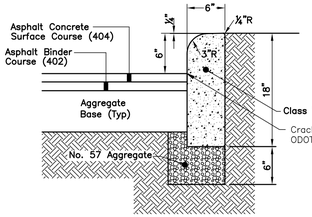
The 4" Perforated Underdrain shall be provided for each structure in all four directions unless otherwise directed.

The Perforated Pipe shall be protected from heavy traffic after installation prior to placement of proposed pavement.

The Contractor shall initially set the top of casting for an inlet structure within the paved areas to the elevation of the intermediate pavement course. Prior to final paving of surface course, the Contractor shall adjust the top of casting to finish pavement grade. cost of the above shall be included in the price bid for the various related sewer items.



PLAN
CONCRETE SURROUND WITH ASPHALT TURNDOWN FOR STRUCTURES WITHIN PAVEMENT



STRAIGHT 18" CONCRETE CURB

Not To Scale

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
January 26, 2015

REVISIONS

MARK	DATE	DESCRIPTION

City of Dublin

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR
COTA PARK AND RIDE
GENERAL NOTES AND DETAILS

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

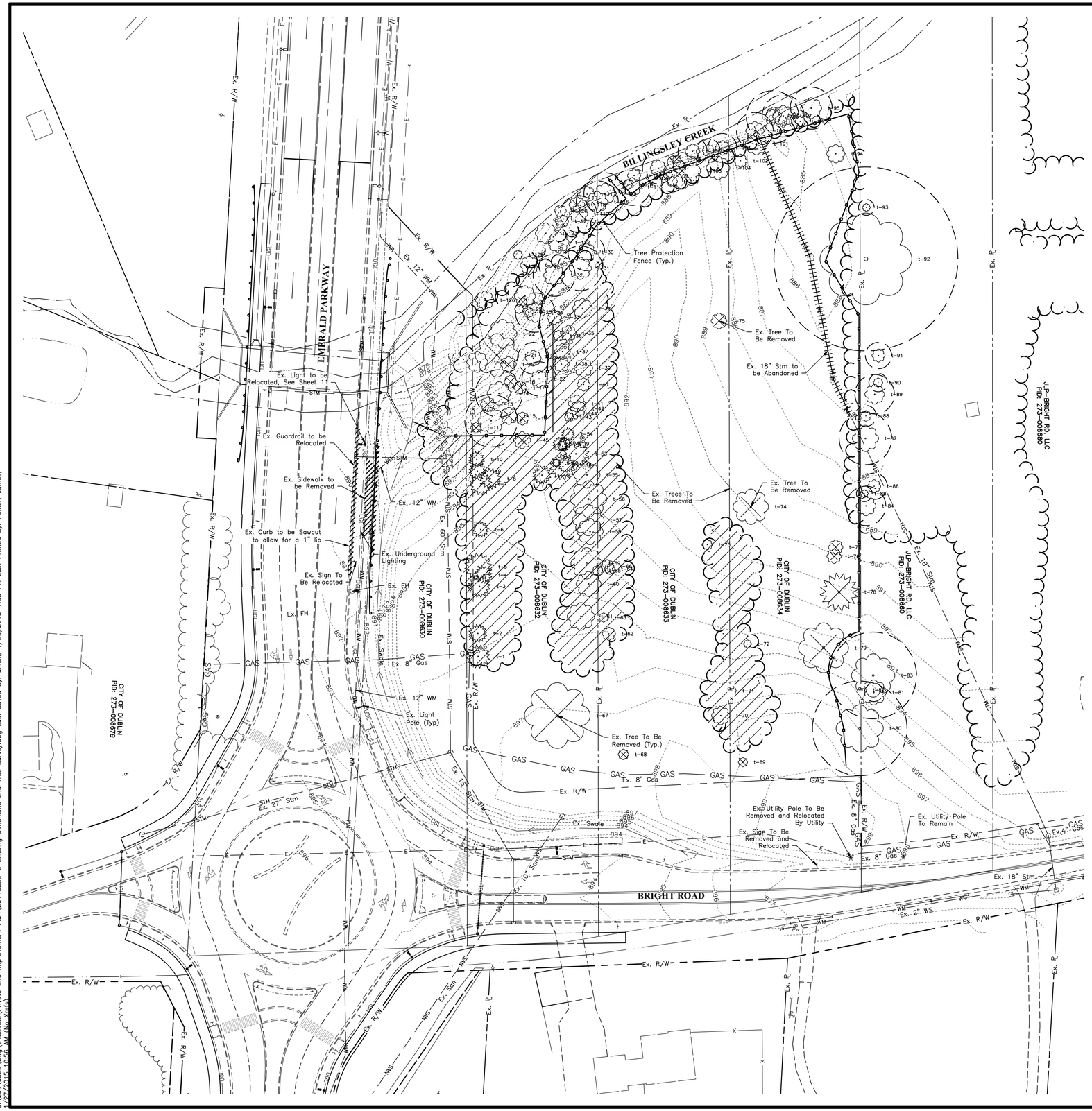
DATE: January 26, 2015

SCALE: Not To Scale

JOB NO.: 2014-0588

SHEET: 2/14

J:\2014058\Dwg\04Sheets\Private Site Improvement Plan\20140588–2 General Notes and Details.dwg Last Saved By: jpetler, 1/26/2015 9:30 AM Last Printed By: Petler, James, 1/27/2015 10:56 AM (No Xrefs)



Tree ID	Common Name	Scientic Name	DBH Inches	Trunk Count	Condition
~~1~~	~~Virginia Pine~~	~~Pinus virginiana~~	~~18~~	~~1~~	Dead
2	Virginia Pine	Pinus virginiana	14	1	Poor
~~3~~	~~Virginia Pine~~	~~Pinus virginiana~~	~~17~~	~~1~~	~~Dead~~
4	Virginia Pine	Pinus virginiana	13	1	Poor
5	Virginia Pine	Pinus virginiana	21	1	Poor
6	Virginia Pine	Pinus virginiana	~~12~~	~~1~~	Dead
7	Virginia Pine	Pinus virginiana	17	1	Poor
8	Virginia Pine	Pinus virginiana	16	1	Poor
~~9~~	~~Virginia Pine~~	~~Pinus virginiana~~	~~13~~	~~1~~	~~Dead~~
10	Virginia Pine	Pinus virginiana	12	1	Poor
~~11~~	~~Black Locust~~	~~Robinia pseudoacacia~~	~~8~~	~~1~~	Dead
12	Black Locust	Robinia pseudoacacia	20	1	Fair
~~13~~	~~Green Ash~~	~~Fraxinus pennsylvanica~~	~~11~~	~~1~~	Dead
14	Black Walnut	Juglans nigra	18	1	Fair
~~15~~	~~Green Ash~~	~~Fraxinus pennsylvanica~~	~~13~~	~~1~~	Dead
~~16~~	~~Green Ash~~	~~Fraxinus pennsylvanica~~	~~10~~	~~1~~	Dead
~~17~~	~~Green Ash~~	~~Fraxinus pennsylvanica~~	~~10~~	~~1~~	Dead
~~18~~	~~Green Ash~~	~~Fraxinus pennsylvanica~~	~~10~~	~~1~~	Dead
~~19~~	~~Green Ash~~	~~Fraxinus pennsylvanica~~	~~12~~	~~1~~	~~Dead~~
20	Black Walnut	Juglans nigra	16	1	Fair
~~21~~	~~Green Ash~~	~~Fraxinus pennsylvanica~~	~~33~~	~~1~~	~~Dead~~
22	Black Walnut	Juglans nigra	22	1	Fair
23	Black Walnut	Juglans nigra	13	1	Fair
24	Hackberry	Celtis occidentalis	12	1	Fair
25	Hackberry	Celtis occidentalis	6,8	2	Poor
26	Hackberry	Celtis occidentalis	15	1	Fair
27	Hackberry	Celtis occidentalis	16	1	Good
28	Hackberry	~~Celtis occidentalis~~	6	~~1~~	Dead
29	Black Walnut	Juglans nigra	7	1	Fair
30	Tulip Tree	Liriodendron tulipifera	14	1	Good
31	Tulip Tree	Liriodendron tulipifera	17	1	Good
32	Tulip Tree	Liriodendron tulipifera	14,16	2	Fair
~~33~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~11~~	~~1~~	~~Poor~~
~~34~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~15~~	~~1~~	~~Poor~~
~~35~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~12~~	~~1~~	~~Fair~~
~~36~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~8~~	~~1~~	~~Dead~~
~~37~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~12~~	~~1~~	~~Fair~~
~~38~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~12~~	~~1~~	~~Fair~~
~~39~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~14~~	~~1~~	~~Fair~~
~~40~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~10~~	~~1~~	~~Fair~~
~~41~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~13~~	~~1~~	~~Poor~~
~~42~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~12~~	~~1~~	~~Fair~~
~~43~~	~~Sugar Maple~~	~~Acer saccharum~~	~~7~~	~~1~~	~~Good~~
44	Virginia Pine	Pinus virginiana	10	1	Dead
~~45~~	~~Sugar Maple~~	~~Acer saccharum~~	~~13~~	~~1~~	Poor
~~46~~	~~Virginia Pine~~	~~Pinus virginiana~~	~~14~~	~~1~~	~~Fair~~
~~47~~	~~Virginia Pine~~	~~Pinus virginiana~~	~~20~~	~~1~~	~~Good~~
~~48~~	~~Virginia Pine~~	~~Pinus virginiana~~	~~12~~	~~1~~	~~Good~~
~~49~~	~~Virginia Pine~~	~~Pinus virginiana~~	~~10~~	~~1~~	~~Poor~~
~~50~~	~~Virginia Pine~~	~~Pinus virginiana~~	~~6~~	~~1~~	~~Poor~~
~~51~~	~~Virginia Pine~~	~~Pinus virginiana~~	~~11~~	~~1~~	~~Fair~~
~~52~~	~~Virginia Pine~~	~~Pinus virginiana~~	~~8~~	~~1~~	~~Fair~~
~~53~~	~~Virginia Pine~~	~~Pinus virginiana~~	~~20~~	~~1~~	~~Good~~
54	Virginia Pine	Pinus virginiana	10	1	Fair
~~55~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~20~~	~~1~~	~~Good~~
~~56~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~28~~	~~1~~	~~Good~~
~~57~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~24~~	~~1~~	~~Fair~~
~~58~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~20~~	~~1~~	~~Fair~~
~~59~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~24~~	~~1~~	~~Fair~~
~~60~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~19~~	~~1~~	~~Fair~~
~~61~~	~~Tulip Tree~~	~~Liriodendron tulipifera~~	~~21~~	~~1~~	~~Good~~
~~62~~	~~Red Mulberry~~	~~Morus rubra~~	~~10,8,7,6~~	~~4~~	~~Poor~~
~~63~~	~~Red Mulberry~~	~~Morus rubra~~	~~7,6,6~~	~~3~~	~~Fair~~

Tree ID	Common Name	Scientic Name	DBH Inches	Trunk Count	Condition
~~64~~	~~Red Mulberry~~	~~Morus rubra~~	~~8,7,5~~	~~3~~	~~Fair~~
~~65~~	~~Hackberry~~	~~Celtis occidentalis~~	~~8~~	~~1~~	~~Fair~~
~~66~~	~~Red Mulberry~~	~~Morus rubra~~	~~10,7,6~~	~~3~~	~~Fair~~
~~67~~	~~Sugar Maple~~	~~Acer saccharum~~	~~25~~	~~1~~	~~Poor~~
~~68~~	~~American Elm~~	~~Ulmus americana~~	~~8,6,6~~	~~3~~	~~Poor~~
~~69~~	Sugar Maple	Acer saccharum	~~7,7~~	2	Fair
~~70~~	~~Green Ash~~	~~Fraxinus pennsylvanica~~	~~14~~	~~1~~	~~Dead~~
~~71~~	~~American Elm~~	~~Ulmus americana~~	~~6~~	~~1~~	~~Fair~~
~~72~~	~~Green Ash~~	~~Fraxinus pennsylvanica~~	~~6~~	~~1~~	~~Dead~~
~~73~~	Green Ash	Fraxinus pennsylvanica	8	1	Dead
~~74~~	Green Ash	Fraxinus pennsylvanica	~~27~~	1	Dead
~~75~~	~~Green Ash~~	~~Fraxinus pennsylvanica~~	~~12~~	~~1~~	~~Dead~~
~~76~~	~~Cottonwood~~	~~Populus deltoides~~	~~11,9,8~~	~~3~~	~~Poor~~
~~77~~	~~Cottonwood~~	~~Populus deltoides~~	~~11,7~~	~~2~~	~~Poor~~
~~78~~	~~Virginia Pine~~	~~Pinus virginiana~~	~~29~~	~~1~~	~~Fair~~
79	Silver Maple	Acer saccharinum	38	1	Good
80	Cottonwood	Populus deltoides	36	1	Good
81	Sycamore	Platanus occidentalis	19	1	Good
82	Sugar Maple	Acer saccharum	6,7	2	Good
83	Cottonwood	Populus deltoides	33	1	Good
84	Black Locust	Robinia pseudoacacia	15,11	1	Fair
85	Black Locust	Robinia pseudoacacia	6	1	Fair
86	Red Mulberry	Morus rubra	10,7,10,6,6	5	Fair
87	Silver Maple	Acer saccharinum	20,9,12	3	Fair
88	Silver Maple	Acer saccharinum	8	1	Dead
89	Black Walnut	Juglans nigra	15	1	Poor
90	Red Mulberry	Morus rubra	6,7	2	Poor
91	Red Mulberry	Morus rubra	10	1	Fair
92	Cottonwood	Populus deltoides	70	1	Fair
93	Hawthorn	Crataegus phaenopyrum	6	1	Fair
~~94~~	~~Red Mulberry~~	~~Morus rubra~~	~~14,8~~	~~2~~	~~Poor~~
95	Black Walnut	Juglans nigra	16	1	Good
96	Black Walnut	Juglans nigra	8	1	Good
97	Black Walnut	Juglans nigra	16	1	Good
98	Hackberry	Celtis occidentalis	12	1	Good
99	Hackberry	Celtis occidentalis	12,8	2	Good
100	Black Walnut	Juglans nigra	14	1	Good
~~101~~	~~Black Walnut~~	~~Juglans nigra~~	~~17~~	~~1~~	~~Good~~
~~102~~	~~Hackberry~~	~~Celtis occidentalis~~	~~10~~	~~1~~	~~Good~~
103	Black Walnut	Juglans nigra	11	1	Good
104	Hackberry	Celtis occidentalis	18	1	Good
105	Hackberry	Celtis occidentalis	9	1	Good
106	Hackberry	Celtis occidentalis	11	1	Good
~~107~~	~~Hackberry~~	~~Celtis occidentalis~~	~~6~~	~~1~~	~~Fair~~
~~108~~	~~Green Ash~~	~~Fraxinus pennsylvanica~~	~~28~~	~~1~~	~~Dead~~
~~109~~	~~Green Ash~~	~~Fraxinus pennsylvanica~~	~~6~~	~~1~~	~~Dead~~
~~110~~	~~Hackberry~~	~~Celtis occidentalis~~	~~8~~	~~1~~	~~Fair~~
111	Hackberry	Celtis occidentalis	12	1	Good
112	Hackberry	Celtis occidentalis	10	1	Good
113	Red Mulberry	Morus rubra	14	1	Fair
114	American Elm	Ulmus americana	7	1	Fair
115	Black Walnut	Juglans nigra	16	1	Fair
116	Hackberry	Celtis occidentalis	16	1	Fair
117	Hackberry	Celtis occidentalis	12	1	Fair
~~118~~	~~Black Locust~~	~~Robinia pseudoacacia~~	~~12,10~~	~~1~~	Dead
119	Black Walnut	Juglans nigra	14	1	Fair
120	Black Walnut	Juglans nigra	9	1	Fair
121	Black Walnut	Juglans nigra	10	1	Poor
122	Black Walnut	Juglans nigra	16	1	Fair
123	Black Walnut	Juglans nigra	16	1	Fair
124	Hackberry	Celtis occidentalis	14,10	1	Good
125	Hackberry	Celtis occidentalis	7	1	Good
126	Black Walnut	Juglans nigra	14	1	Good

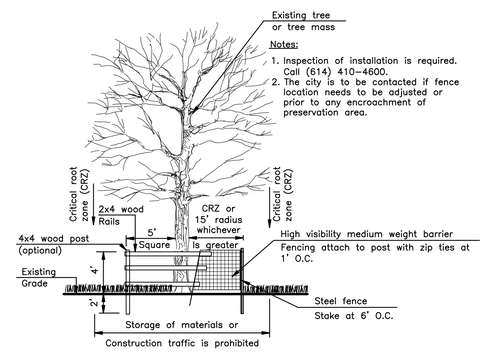
TREE SURVEY DATA

Total Trees: 113 Trees on site (1754 Caliper Inches)
Total Trees to be Removed: 76 Trees (1195 Caliper Inches)
–Dead Trees: 23 Trees (314 Caliper Inches)*
*Includes Landmark Trees: 3 Trees (88 Caliper Inches)
–Living Trees: 53 Trees (881 Caliper Inches)**
**Includes Landmark Trees: 8 Trees (209 Caliper Inches)

Notes: 1. Tree Survey Data does not include trees located outside of the property.
2. All dead trees on the property shall be removed.

LEGEND

- WM — Existing Watermain
- STM — Existing Storm Sewer
- SAN — Existing Sanitary Sewer
- GAS — Existing Gas Main
- OHE — Existing Overhead Electric
- E — Existing Underground Electric
- UGL — Existing Underground Lighting
- Ex. Trees To Be Removed
- Ex. Trees to Be Removed
- Tree Protection Fence
- Critical Root Zone (CRZ)



TREE PROTECTION

NO SCALE

GRAPHIC SCALE

0 20 40 80

1 inch = 40 feet

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
January 26, 2015

REVISIONS

MARK	DATE	DESCRIPTION

City of Dublin

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR
COTA PARK AND RIDE
EXISTING CONDITIONS, TREE SURVEY, AND DEMOLITION

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
January 26, 2015

SCALE
1" = 40'

JOB NO.
2014-0588

SHEET
3/14

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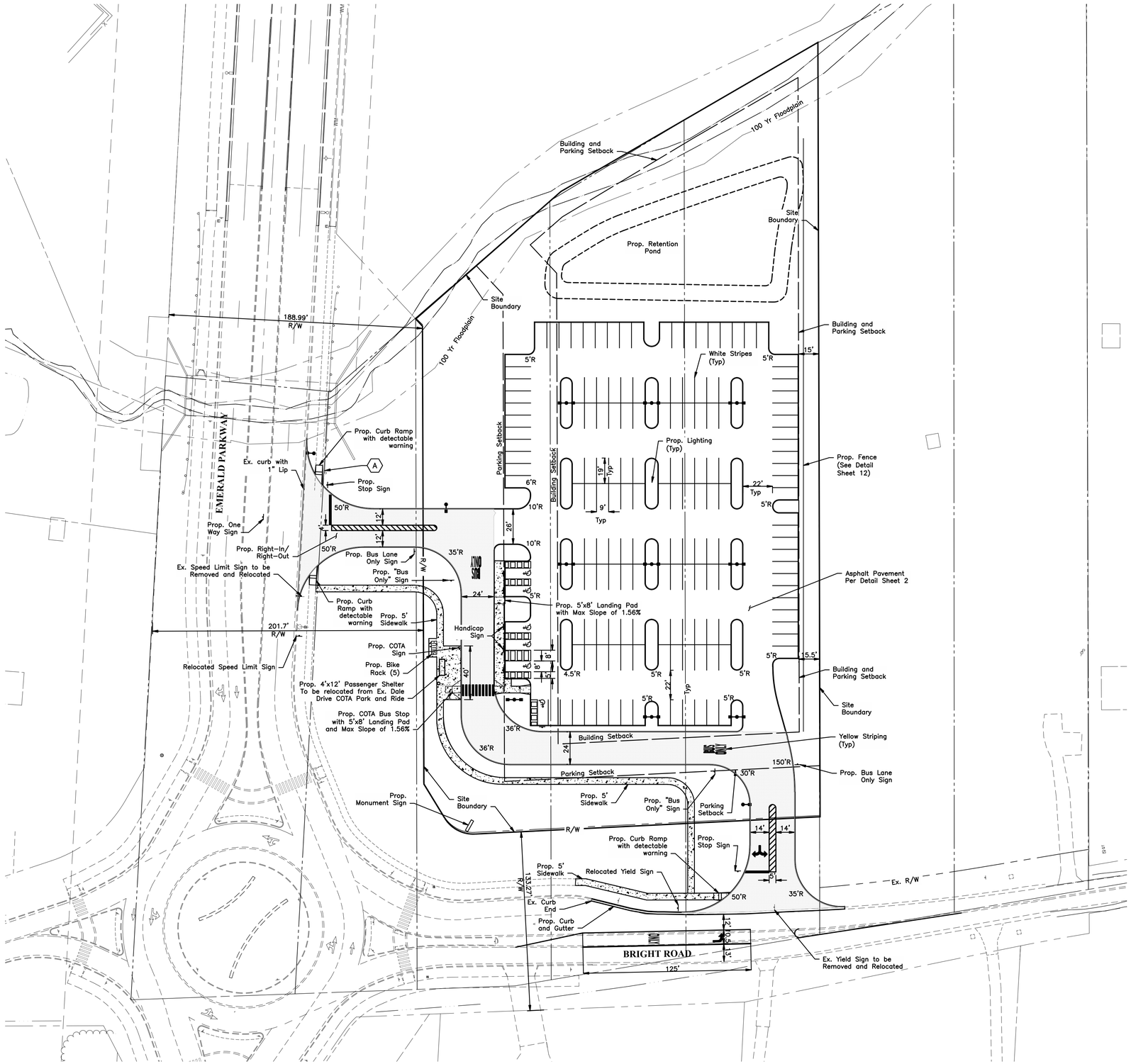

NOTE:

(A) Existing guard rail to be reconstructed as a beginning flare per Emerald Parkway Phase 8 Plans (07-008-CIP)

NOTE:

All Radii are 5' unless otherwise noted.

LEGEND

Concrete Pavement, See Detail, Sheet 2

Concrete Sidewalk, See Detail, Sheet 2

GRAPHIC SCALE

0 20 40 80

1 inch = 40 feet

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
January 26, 2015

REVISIONS

MARK	DATE	DESCRIPTION

City of Dublin

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR
COTA PARK AND RIDE
SITE STAKING PLAN

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
January 26, 2015

SCALE
1" = 40'

JOB NO.
2014-0588

SHEET
4/14

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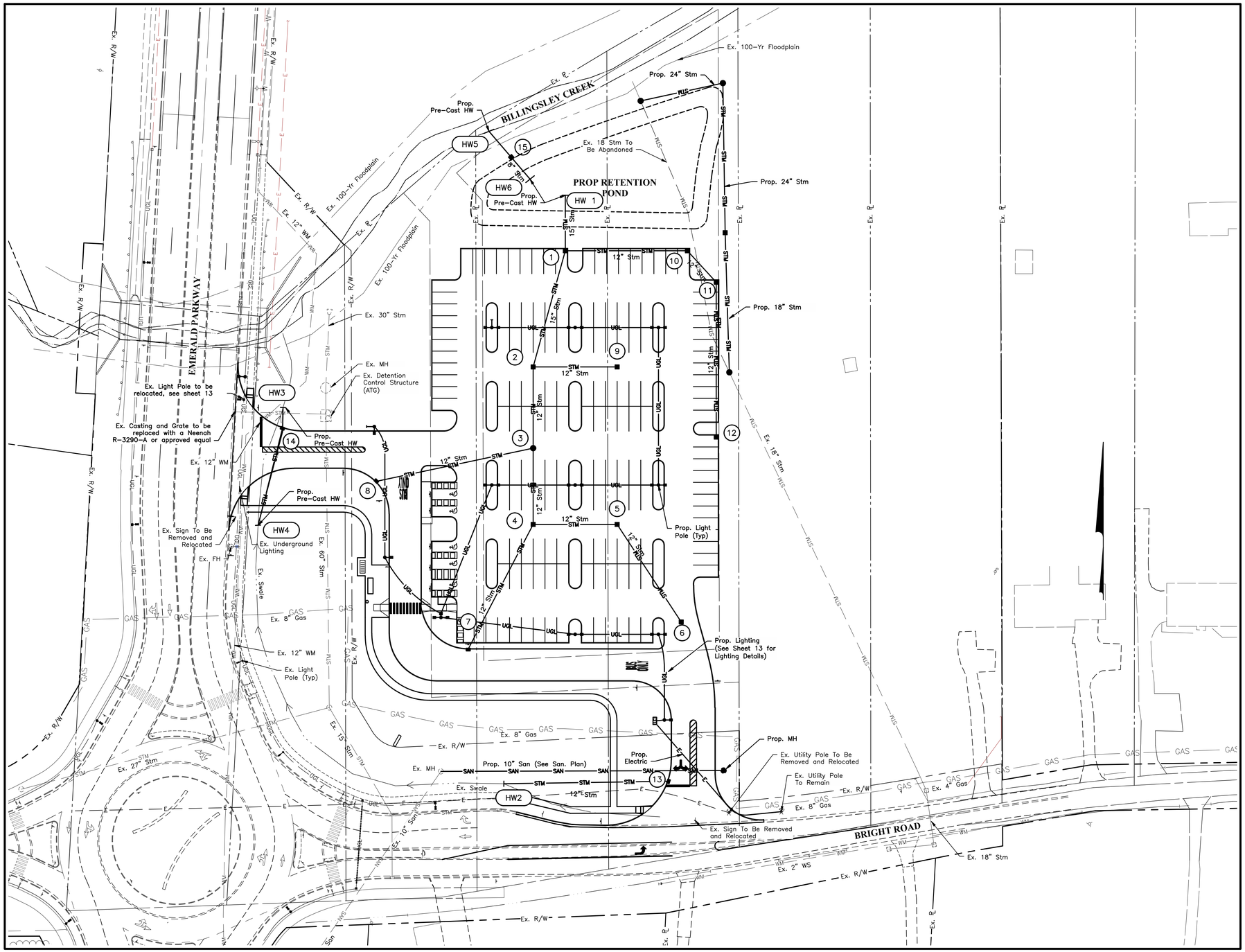

LEGEND

WM	Existing Watermain
STM	Existing Storm Sewer
GAS	Existing Gas Main
OHE	Existing Overhead Electric
E	Existing Underground Electric
UGL	Existing Underground Street Lighting (DOP)
OHC	Existing Overhead Communication
C	Existing Underground Communication
OHE-OHC	Existing Overhead Communication & Electric
FO	Existing Fiber Optic
STM	Proposed Storm Sewer Main
WS	Proposed Water Service (By Separate Plan)
DWS	Proposed Domestic Water Service (By Separate Plan)
FWS	Proposed Fire Service (By Separate Plan)
GM	Proposed Gas Main (By Separate Plan)
SAN	Proposed Sanitary Sewer Main (By Separate Plan)
SAS	Proposed Sanitary Service (By Separate Plan)
C	Proposed Underground Communication (By Separate Plan)
E	Proposed Underground Electric (By Separate Plan)
UGL	Proposed Underground Lighting
SD	Silt Fence
854 855	Existing Contours
854 855	Proposed Contours
× 856.00	Proposed Spot Elevation (Top of Pavement Unless Noted Otherwise)
	Flow Direction Arrow
	100-Yr Flood Routing In Pipe
	Grade Break
ME	Match Existing
HP	High Point
HW	Headwall
C&GI	Curb and Gutter Inlet
CB	Catch Basin
ATG	Adjust To Grade

GRAPHIC SCALE

0 20 40 80

1 inch = 40 feet

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
January 26, 2015

REVISIONS

MARK	DATE	DESCRIPTION

City of Dublin

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR
COTA PARK AND RIDE
UTILITY PLAN

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

DATE
January 26, 2015

SCALE
1" = 40'

JOB NO.
2014-0588

SHEET
5/14

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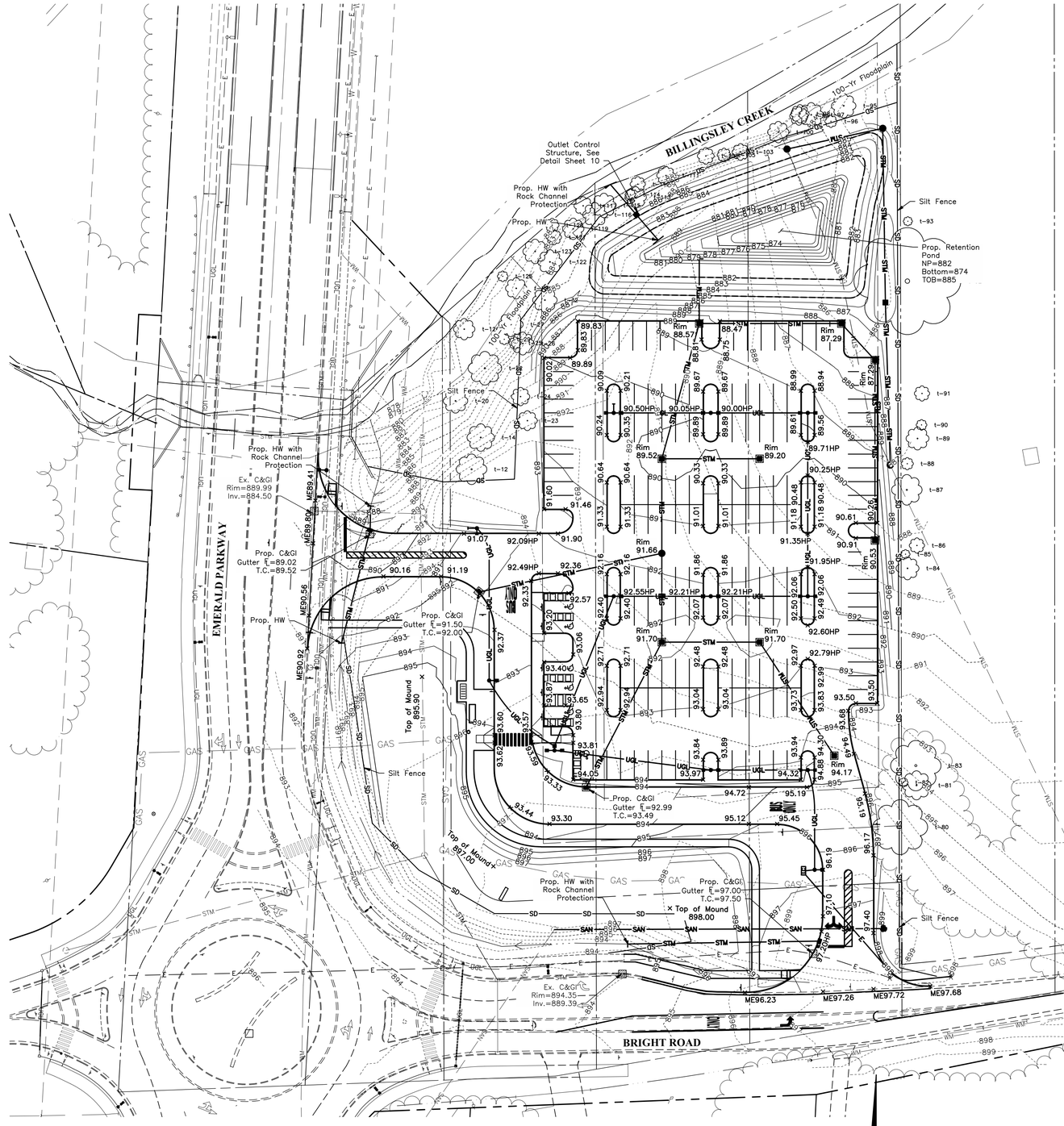

NOTES:
All elevations are to the top of pavement unless otherwise noted.
Add 800 to spot elevations to obtain final grade elevations.

LEGEND

WM	Existing Watermain
STM	Existing Storm Sewer
GAS	Existing Gas Main
OHE	Existing Overhead Electric
E	Existing Underground Electric
UGL	Existing Underground Street Lighting (DOP)
OHC	Existing Overhead Communication
C	Existing Underground Communication
OHE-OHC	Existing Overhead Communication & Electric
FO	Existing Fiber Optic
STM	Proposed Storm Sewer Main
WS	Proposed Water Service (By Separate Plan)
DWS	Proposed Domestic Water Service (By Separate Plan)
FWS	Proposed Fire Service (By Separate Plan)
GM	Proposed Gas Main (By Separate Plan)
SAN	Proposed Sanitary Sewer Main (By Separate Plan)
SAS	Proposed Sanitary Service (By Separate Plan)
C	Proposed Underground Communication (By Separate Plan)
E	Proposed Underground Electric (By Separate Plan)
UGL	Proposed Underground Lighting
SD	Silt Fence
854 855	Existing Contours
854 855	Proposed Contours
×856.00	Proposed Spot Elevation (Top of Pavement Unless Noted Otherwise)
	Flow Direction Arrow
	100-Yr Flood Routing In Pipe
	Grade Break
ME	Match Existing
HP	High Point
HW	Headwall
C&GI	Curb and Gutter Inlet
CB	Catch Basin
ATG	Adjust To Grade

GRAPHIC SCALE
0 20 40 80
1 inch = 40 feet

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
January 26, 2015

REVISIONS

MARK	DATE	DESCRIPTION

City of Dublin

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR
COTA PARK AND RIDE
GRADING PLAN

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
January 26, 2015

SCALE
1" = 40'

JOB NO.
2014-0588

SHEET
6/14

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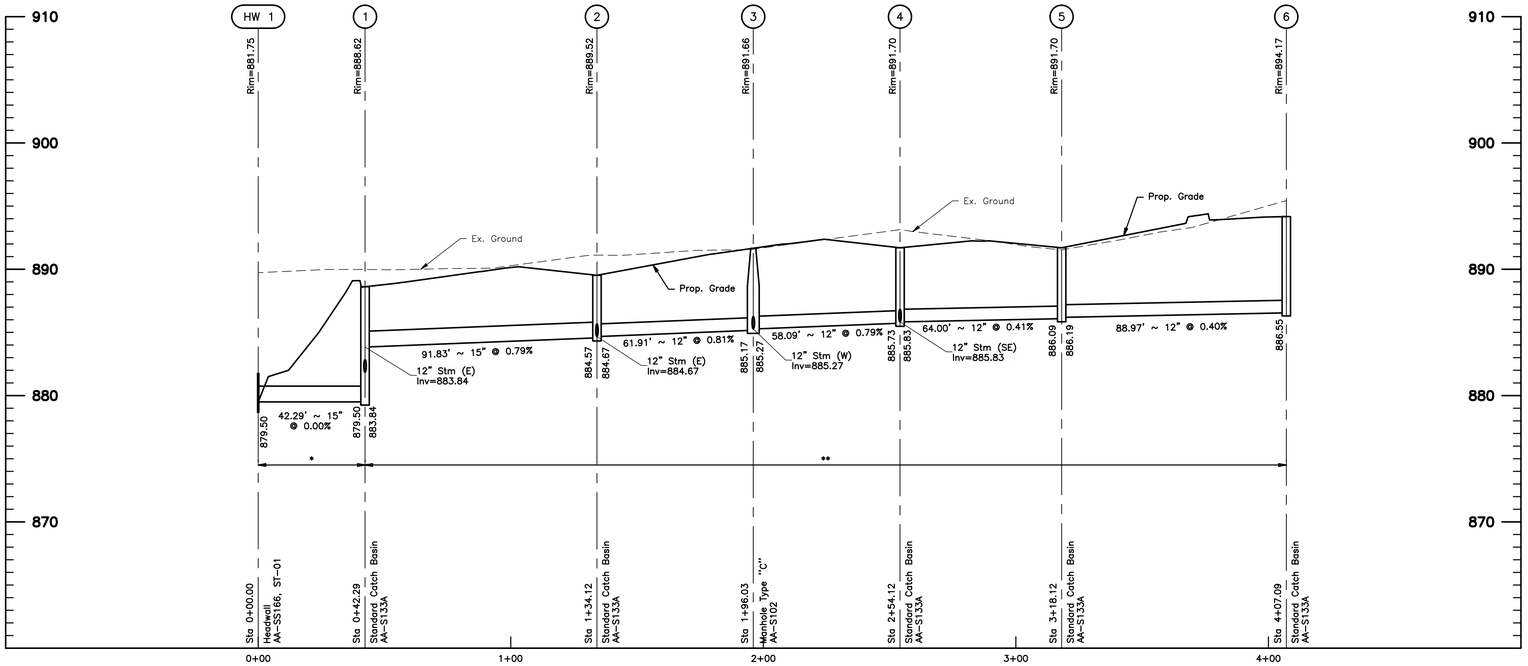
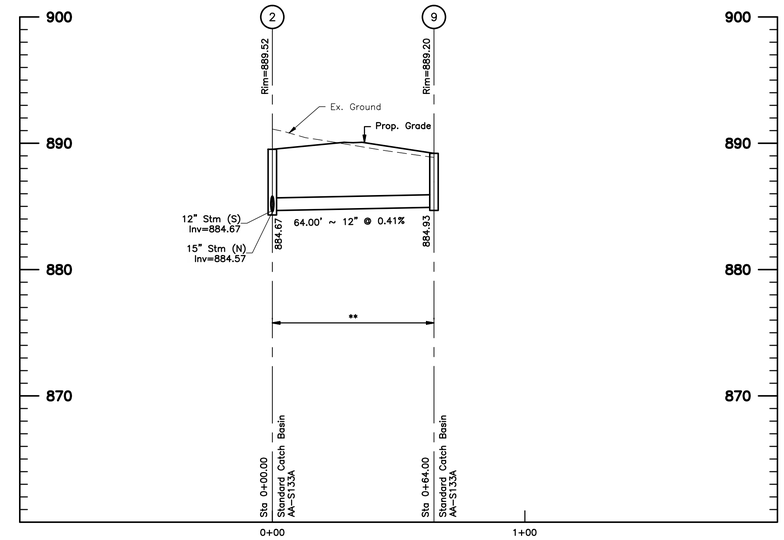
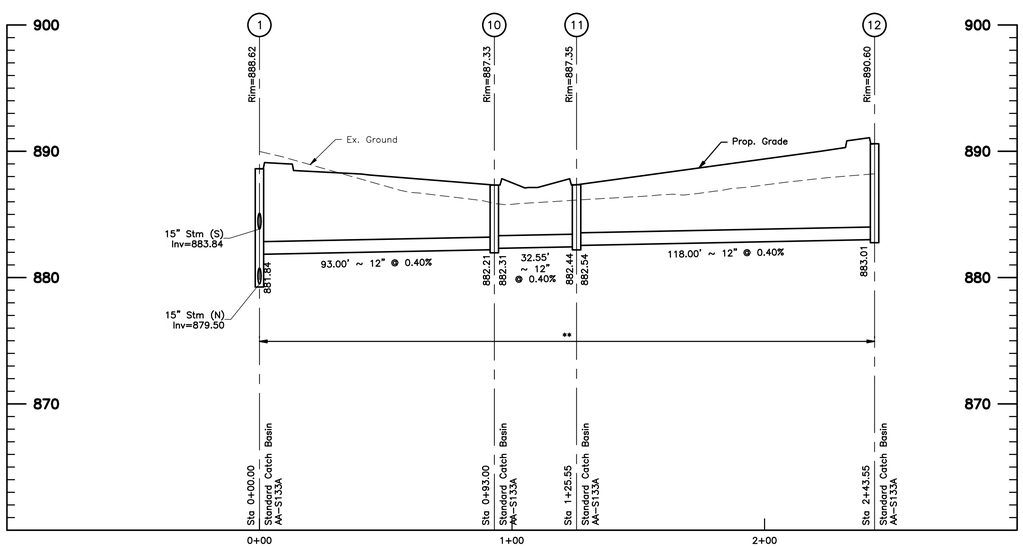


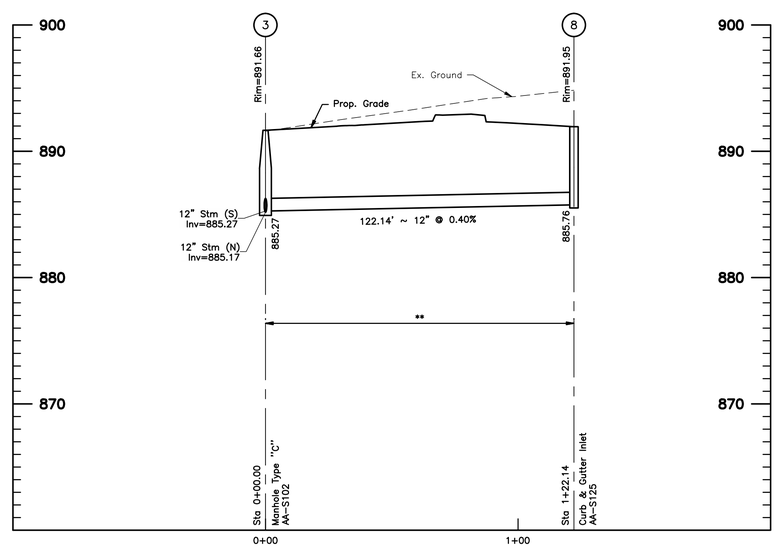
STORM PROFILE HW1-6
Horizontal Scale: 1"=30'
Vertical Scale: 1"=5'



STORM PROFILE 2-9
Horizontal Scale: 1"=30'
Vertical Scale: 1"=5'



STORM PROFILE 1-12
Horizontal Scale: 1"=30'
Vertical Scale: 1"=5'



STORM PROFILE 3-8
Horizontal Scale: 1"=30'
Vertical Scale: 1"=5'

NOTES

1. The Contractor shall field verify locations of any present existing utilities and report any conflicts discovered to the Engineer.
2. Proposed ground shown on the profiles indicates final elevations. All elevations in parking/pavement areas are final pavement elevations unless otherwise noted.
3. All headwalls are to include stone veneer per City of Dublin Standard Drawing ST-01.
4. All manhole lids are to be solid lids unless otherwise noted on plans and shall conform with City of Dublin Standard Drawing ST-03.
5. Backfill shall be as indicated on the profiles and in accordance with the following:

* Compacted Backfill per CMSC Item 911.

** Compacted Granular Backfill per CMSC Item 912.

Limits to be filled prior to construction of sewer in accordance with ODOT Item 203.

\# I/I for proposed storm crossing, see Detail, This Sheet. Proposed storm shall be watertight sanitary grade pipe and joints from structure to structure.

GRAPHIC SCALE

0 15 30 60

1 inch = 30 feet

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SCALE
Horiz: 1" = 30'
Vert: 1" = 5'

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2014-0588

SHEET
7/14

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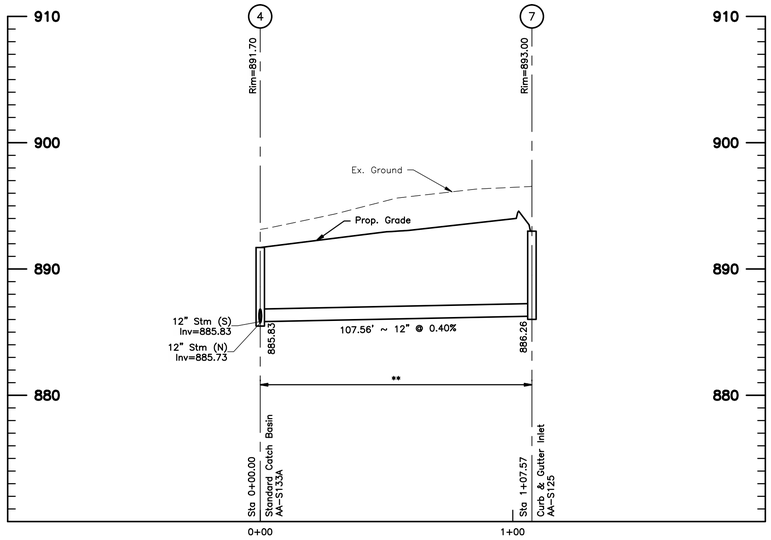
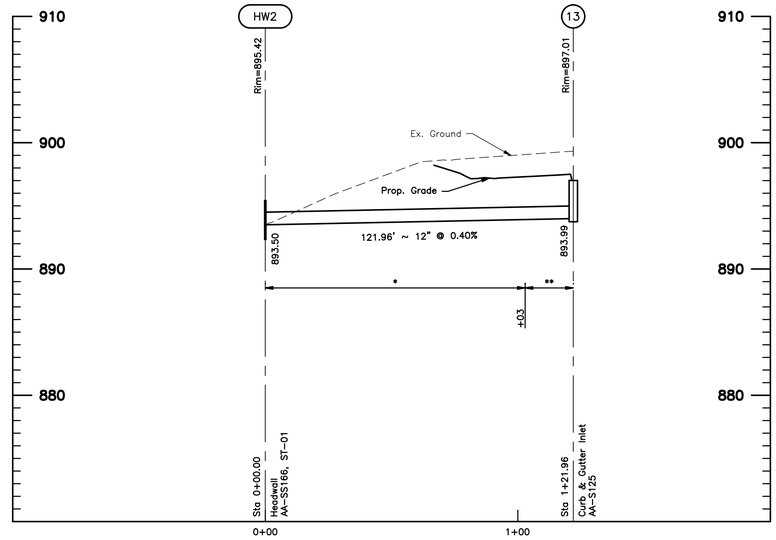
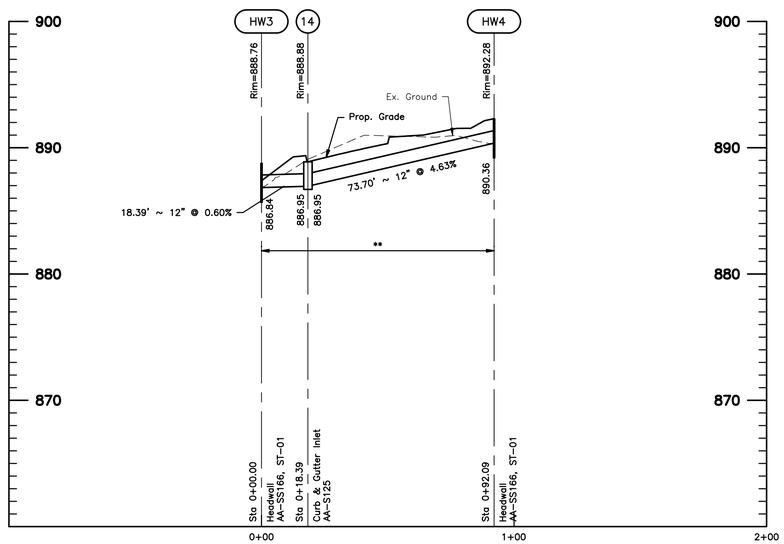


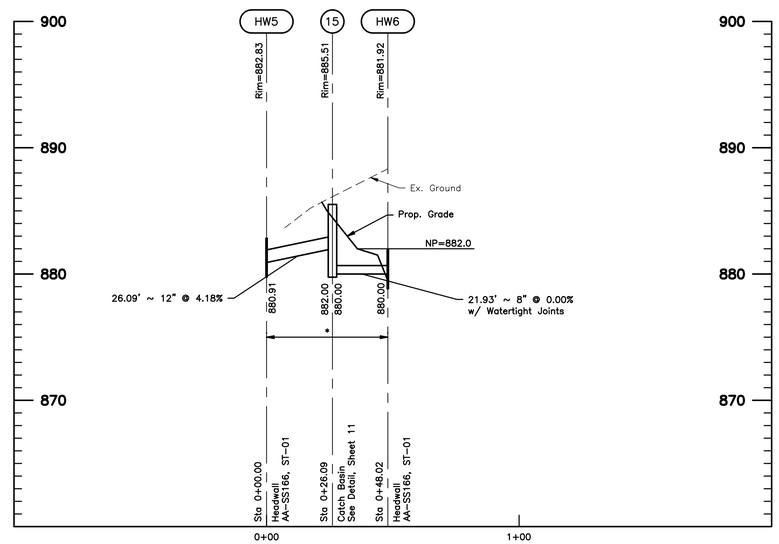
STORM PROFILE 4-7
Horizontal Scale: 1"=30'
Vertical Scale: 1"=5'



STORM PROFILE HW2-13
Horizontal Scale: 1"=30'
Vertical Scale: 1"=5'



STORM PROFILE HW3-HW4
Horizontal Scale: 1"=30'
Vertical Scale: 1"=5'



STORM PROFILE HW5-HW6
Horizontal Scale: 1"=30'
Vertical Scale: 1"=5'

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3. All headwalls are to include stone veneer per City of Dublin Standard Drawing ST-01.
4. All manhole lids are to be solid lids unless otherwise noted on plans and shall conform with City of Dublin Standard Drawing ST-03.
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\# I/I for proposed storm crossing, see Detail, This Sheet. Proposed storm shall be watertight sanitary grade pipe and joints from structure to structure.

GRAPHIC SCALE

0 15 30 60

1 inch = 30 feet

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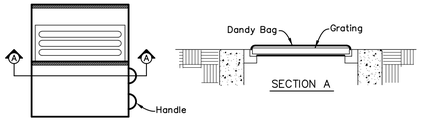
DANDY BAG SEDIMENT FILTER DETAIL



INSTALLATION:

Stand grate on end. Place Dandy Bag over grate. Roll 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.

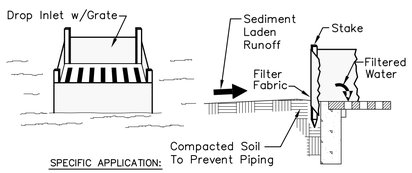
MAINTENANCE:

With a stiff bristle broom or square point shovel remove silt & other debris off surface after each event.

PROVIDE FOR THE FOLLOWING STRUCTURES:

Existing parking lot structures receiving flow from construction area.

FILTER FABRIC DROP INLET SEDIMENT FILTER DETAIL



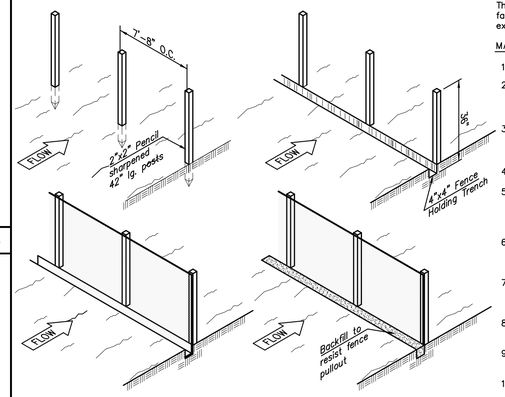
SPECIFIC APPLICATION:

This method of inlet protection is applicable where the inlet drains a relatively flat area (slopes no greater than 5 percent) where sheet or overland flows (not exceeding 0.5 cfs) are typical. This method shall not apply to inlets receiving concentrated flows, such as in street and highway medians.

PROVIDE FOR THE FOLLOWING STRUCTURES:

1, 4, 5, 6, 7

SEDIMENT FENCE BARRIER DETAIL



FABRIC PROPERTIES	VALUES	TEST METHOD
Grab Tensile Strength	90 lb. Minimum	ASTM 1682
Mullen Burst Strength	190 psi Minimum	ASTM 3786
Slurry Flow Rate	0.3 gal./min./ft² Maximum	
Equivalent Opening Size	40–80	U.S. Std. Sieve CW–02215
Ultraviolet Radiation Stability	90% Minimum	ASTM–G–26

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:

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. Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.
9. 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.
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.

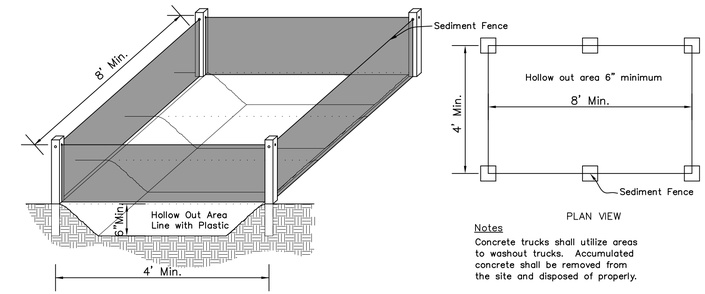
MAINTENANCE:

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.

CONCRETE WASHOUT AREA

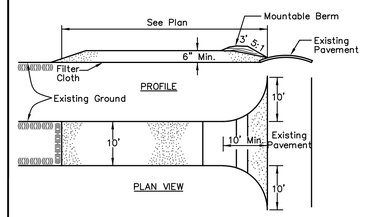


Notes

Concrete trucks shall utilize areas to washout trucks. Accumulated concrete shall be removed from the site and disposed of properly.

Contractor to determine location of Concrete Washout Area.

STABILIZED CONSTRUCTION ENTRANCE



CONSTRUCTION SPECIFICATIONS
1. Stone Size – Use 2 inch stone, or reclaimed or recycled concrete equivalent.
2. Length – As required.
3. Thickness – Not less than six (6) inches.
4. Width – Ten (10) 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 measures used to trap sediment. 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.

EROSION & SEDIMENT CONTROL NARRATIVE

CONTRACTOR RESPONSIBILITY: Details have been provided on the plans in an effort to help the Contractor provide erosion and sedimentation control. The details shown on the plan shall be considered a minimum. Additional or alternate details may be found in the O.D.N.R. Manual "Rainwater and Land Development." The Contractor shall be solely responsible for providing necessary and adequate measures for proper control of erosion and sediment runoff from the site along with proper maintenance and inspection in compliance with the NPDES General Permit for Stormwater Discharges Associated with Construction Activity.

All Erosion & Sediment Control practices are subject to Field Modification at the direction of the City of Dublin and/or Ohio EPA.

Plan Engineer: Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road
Columbus, OH 43054
Phone: (614) 775–4500
Fax: (614) 775–4800

Owner's Representative: City of Dublin
Ken Richardson
5800 Shier Rings Road
Dublin, OH 43016
Phone: (614) 410–4631

On–Site Contact: City of Dublin
Ken Richardson
5800 Shier Rings Road
Dublin, OH 43016
Phone: (614) 410–4631

Existing Site Conditions: The proposed development is located on approximately 3.3± acres within an existing site consisting of a mown grassy field with interspersed clusters of trees and shrubs. The existing topography of the site generally slopes from the southwest towards the northeast.

Existing Site Drainage Condition: Stormwater run off generated by the site discharges into Billingsley Creek.

Proposed Site Drainage Condition: The stormwater runoff generated by the site under post–developed conditions will be collected in catch basins and piped to a retention basin and released to Billingsley Creek.

Adjacent Areas: The site is located near adjacent to the existing Emerald Parkway and Bright Road roundabout.

Critical Areas: The most critical areas related to implementing the erosion and sediment control are the northern and eastern boundaries.

StormWater Pollution Prevention Measures: Approximately 2.5± acres of land will be disturbed during the construction of this project. Stormwater pollution prevention will be accomplished through the implementation of the BMP's detailed on this sheet.

Sequence of Construction:
1. Install the tree protection fence and erosion control devices.
2. Relocate existing utilities, remove trees, and demolish pavement, walks and curbs.
3. Perform mass earthwork activities and begin building foundations. Install temporary seeding as needed.
4. Install storm sewer and other utilities.
5. Construct remainder of building.
6. Fine grade the site and install paving and landscape.
7. Once site is stabilized, remove tree protection and erosion control devices.

PRELIMINARY
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PRIVATE SITE IMPROVEMENT PLAN
FOR
COTA PARK AND RIDE
EROSION CONTROL DETAILS

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Wet Basin

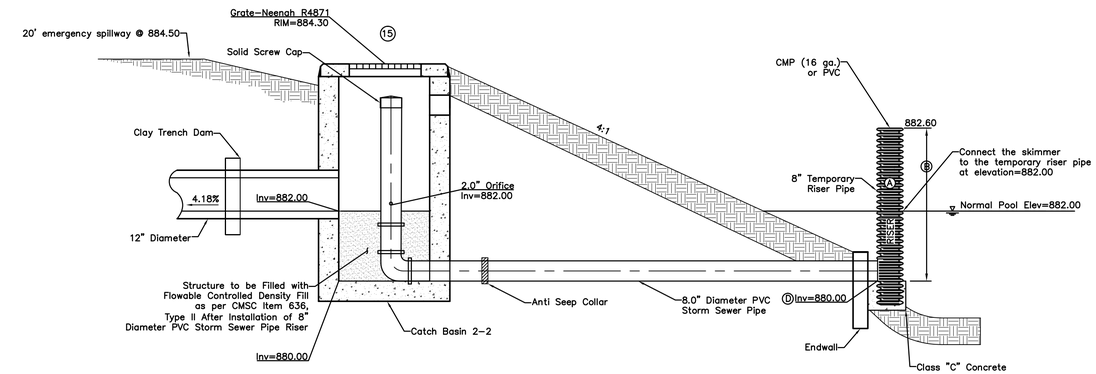
Inspection Item	Maintenance Procedures	Frequency of Inspection
Inlet/Outlet Structure & Side Slopes	•Do not fertilize vegetation surrounding basin. •Remove accumulated sediment and debris from inlet and outlet structures. •Mow side slopes.	Monthly
Basin Embankment	•Repair undercut/eroded areas and stabilize.	Every 6 months
Storm Sewer System	• Remove debris from the sewer system to ensure positive flow to the basin.	Every 6 months
Stormwater Basin	• Inspect for damage, paying particular attention to the outlet control structure • Check for signs of eutrophic conditions (algae buildup) • Note signs of hydrocarbon build-up, remove appropriately •Monitor sediment accumulation in the facility • Examine to ensure inlet and outlet devices are free of debris and are operational. • Inspect for invasive vegetation if wetland components included.	Annually
Stormwater Basin Sediment Accumulation	• Monitor sediment accumulations, and remove sediment when the pool volume has become reduced significantly (25% of permanent pool volume lost), or the pond becomes eutrophic.	5 to10 years

The Owner shall be responsible for the inspection and maintenance of the stormwater basin, associated outlet structure and all other maintenance procedures listed above. Inspections and maintenance that are conducted shall be documented and filed for future reviews by the City of Dublin.

Stormwater Basins treat incoming stormwater runoff by physical, biological, and chemical processes. The primary removal mechanism is the gravitational settling of particulates, organic matter, metals, bacteria and organics as stormwater runoff resides in the basin. Another mechanism for pollutant removal is uptake by algae and wetland plants in the wet basin permanent pool, particularly removing nutrients. Other contaminants such as hydrocarbons are broken down and eliminated by volatilization and chemical activity. Stormwater Basins are utilized to remove 80% of the total suspended solids load in typical urban post-development runoff when designed and maintained properly.

Stormwater basins naturally collect sediment, including gravel, sand, and mud, as well as other debris like litter. To maintain its capacity and function, a basin should be kept free of excessive debris, litter, and sediment. The permanent pool for the proposed basin is designed to be eight feet in depth. This design depth should be verified every 5-10 years to ensure that the basin will continue to function properly. Property owners or contracted personnel shall use a boat, canoe, kayak, or similar means to position themselves in the middle of the stormwater basin. Several measurements around center of the stormwater basin shall be taken using a Stadia Rod to determine the depth of the permanent pool. Measurements taken when basin water level is at N.P. Elevation (Min. 72 hours after rain event. Once the depth of the stormwater basin reaches four feet or less, the accumulated sediment shall be excavated to restore the permanent pool depth to eight feet in depth. The stormwater basin is to be temporarily drained/pumped down so that the accumulated sediment can be removed. Sediment excavated from stormwater basin is required to be tested to determine where to appropriately dispose the material offsite. Sediment removed from the stormwater basin should be stored properly until disposal to ensure no exposure to stormwater runoff and properly disposed of per local guidelines.

INSPECTION AND MAINTENANCE

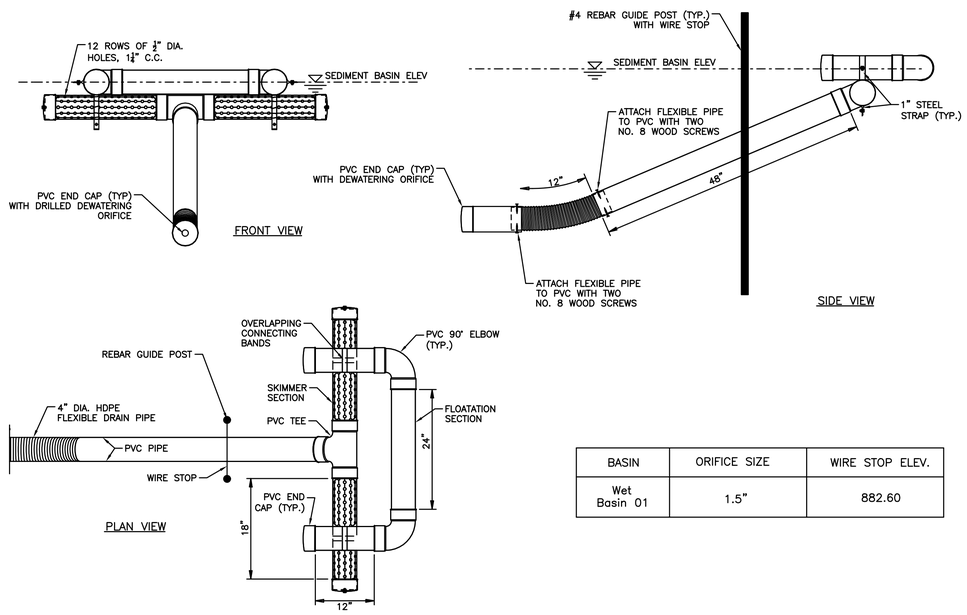


TEMPORARY SEDIMENT CONTROL/ PERMANENT OUTLET STRUCTURE - BASIN 02
Not to Scale

TEMPORARY SEDIMENT CONTROL STRUCTURE SCHEDULE

BASIN	TRIBUTARY ACREAGE	DISTURBED ACREAGE	REQUIRED BASIN DEWATERING VOLUME (67 CY/AC)	PROVIDED BASIN DEWATERING VOLUME	REQUIRED SEDIMENT STORAGE VOLUME (37 C.Y. DISTURBED A.C.)	PROVIDED SEDIMENT STORAGE VOLUME	CONTROL STRUCTURE	
							TEMPORAY RISER PIPE DIAMETER (A)	TEMPORARY RISER HEIGHT (B)
Wet Basin 01	2.62 Ac	2.62 Ac	177.5 CY	876.0 CY	96.8 CY	195.2 CY	8"	2.6'

Required Dewatering Volume Drawdown > 48 Hrs.



BASIN	ORIFICE SIZE	WIRE STOP ELEV.
Wet Basin 01	1.5"	882.60

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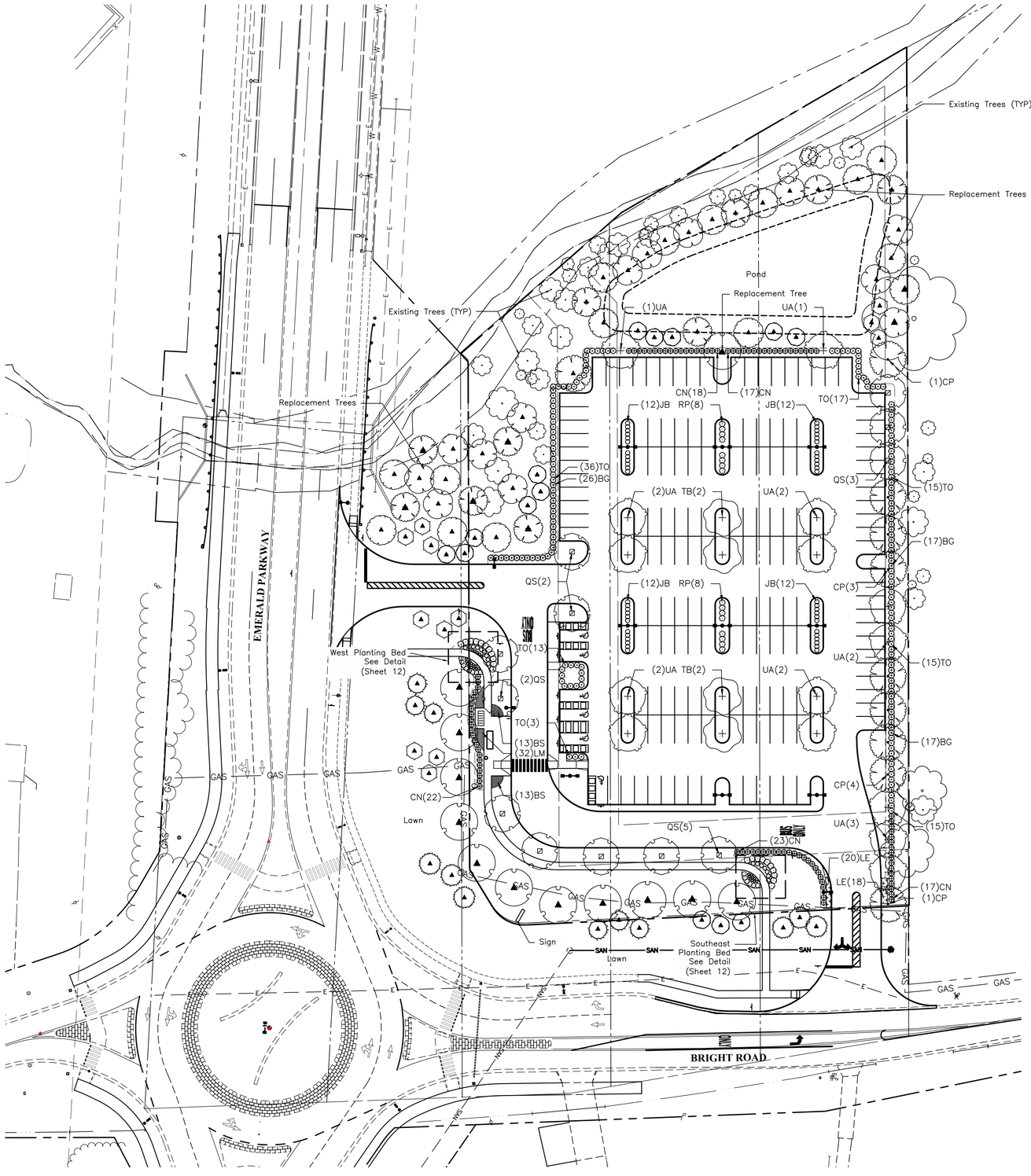

LANDSCAPE CALCULATIONS

153.133.A.5 – VEHICULAR USE AREA PERIMETER REQUIRES 1 TREE PER 40 LF OF VUA BOUNDARY AND 3.5' HT HEDGE

±1360 / 40 = 34 TREES REQUIRED

15 TREES PROVIDED AND EXISTING TREES TO REMAIN
3.5' HT HEDGE AND 6' HT FENCE PROVIDED

153.133.B.2 – FOR EACH 100 SF OR FRACTION THEREOF, OF VEHICULAR USE AREA, A MINIMUM TOTAL OF 5 SQUARE FEET OF LANDSCAPED AREA SHALL BE PROVIDED (5%)

±77,300 SF x .05 = ±3,865 SF REQUIRED
= ±4,894 SF PROVIDED

153.133.B.3.A – MINIMUM OF 1 TREE FOR EVERY 5,000 SF OF GROUND COVERAGE. TREES MUST BE AT LEAST 2" OF CALIPER AT INSTALLATION

1 TREE PER 5000 SF=

±77,300 SF / 5000 = 16 TREES

153.134 – EXISTING STREET TREES TO REMAIN

153.146.A – EXISTING TREES TO BE REMOVED = 881 DBH

REPLACEMENT TREES = 220 CALIPER INCHES
(INCLUDES 2.5" CALIPER PER EVERGREEN TREE)

661 CALIPER INCHES NOT PROVIDED

PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
CP	10	Celtis occidentalis 'Prairie Pride'	Prairie Pride Hackberry	2" Cal.	B&B
QS	12	Quercus shumardii	Shumard Oak	2" Cal.	B&B
TB	4	Tilia americana 'Boulevard'	Boulevard Linden	2" Cal.	B&B
UA	15	Ulmus parvifolia	Lacebark Elm	2" Cal.	B&B
REPLACEMENT TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**
LT	10	Liriodendron tulipifera	Tulip Tree	2.5" Cal.	B&B
MS	14	Malus x 'Spring Snow'	Spring Snow Crab Apple	2.5" Cal.	B&B
NW	13	Nyssa sylvatica 'Wildfire'	Wildfire Black Gum	2.5" Cal.	B&B
PA	6	Picea abies	Norway Spruce	6' Ht.	B&B
PG	6	Picea glauca	White Spruce	6' Ht.	B&B
QB	15	Quercus bicolor	Swamp White Oak	2.5" Cal.	B&B
SI	12	Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	2.5" Cal.	B&B
TR	12	Tilia americana 'Redmond'	Redmond American Linden	2.5" Cal.	B&B
SHRUBS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**
AM	21	Aronia melanocarpa 'Autumn Magic'	Autumn Magic Black Chokeberry	#5	Cont.
BG	60	Buxus x 'Green Gem'	Green Gem Boxwood	24" Ht.	Cont.
CN	98	Chamaecyparis obtusa 'Nana'	Dwarf Hinoki False Cypress	24" Ht.	B&B or Cont.
JB	48	Juniperus sabina 'Buffalo'	Buffalo Juniper	18" Spr.	Cont.
RP	16	Rosa Meidiland series	Meidiland Rose	24" Spr.	Cont.
TO	114	Thuja occidentalis 'Dwarf Globe'	Dwarf Globe Arborvitae	24" Ht.	B&B
PERENNIALS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**
CM	26	Coreopsis verticillata 'Moonbeam'	Moonbeam Coreopsis	#2	Cont.
PL	14	Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage	#2	Cont.
SA	16	Rudbeckia hirta	Black–eyed Susan	#2	Cont.
PERENNIALS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**SPACING**
BS	26	Baptisia sphaerocarpa 'Screaming Yellow'	Screaming Yellow False Indigo	#2 Cont.	24" o.c.
LM	32	Lavandula a. 'Munstead Strain'	Munstead Lavender	#2 Cont.	24" o.c.
LE	38	Stachys byzantina	Lamb's Ear	#2 Cont.	24" o.c.

NOTE:

- TREES REQUIRED FOR PARKING LOT ARE INCLUDED IN ABOVE SCHEDULE

PLANT LEGEND: REPLACEMENT TREES

REPLACEMENT TREES	BOTANICAL NAME	COMMON NAME
	Liriodendron tulipifera	Tulip Tree
	Malus x 'Spring Snow'	Spring Snow Crab Apple
	Nyssa sylvatica 'Wildfire'	Wildfire Black Gum
	Picea abies	Norway Spruce
	Picea glauca	White Spruce
	Quercus bicolor	Swamp White Oak
	Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac
	Tilia americana 'Redmond'	Redmond American Linden

NOTE:

- REPLACEMENT TREE QUANTITIES INCLUDED IN ABOVE SCHEDULE

GRAPHIC SCALE

0 20 40 80

1 inch = 40 feet

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
JANUARY 26, 2015

REVISIONS

MARK	DATE	DESCRIPTION

City of Dublin

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR
COTA PARK AND RIDE
LANDSCAPE PLAN

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

DATE
JANUARY 26, 2015

SCALE
1" = 40'

JOB NO.
2014-0588

SHEET
11/14

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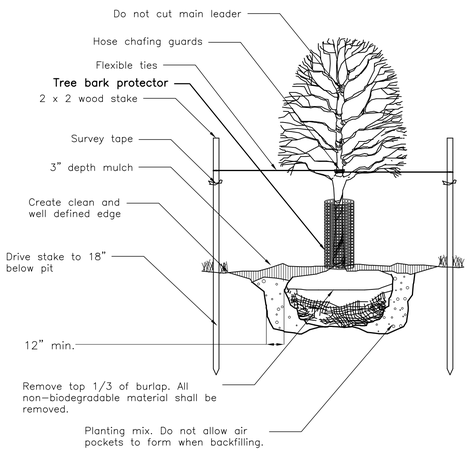
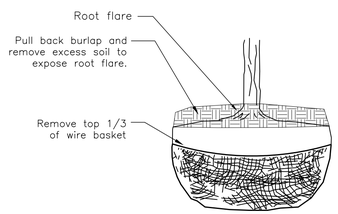
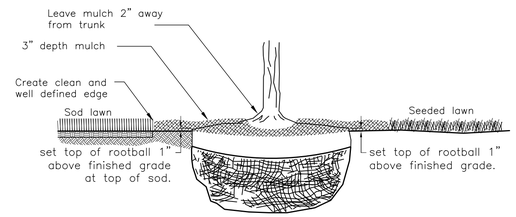


Note: Do NOT stake replacement trees

Deciduous Tree Planting
No Scale



Rootball Preparation
No Scale



Rootball Setting
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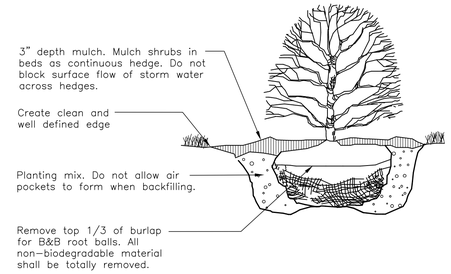
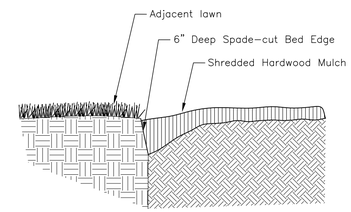
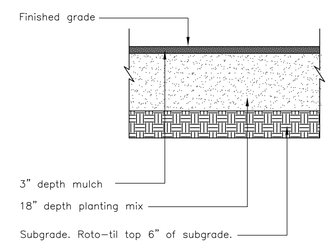


Shrub Planting
No Scale



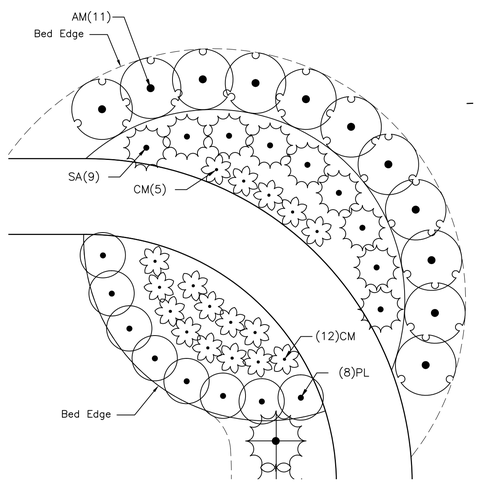
Planting Bed Edge
No Scale



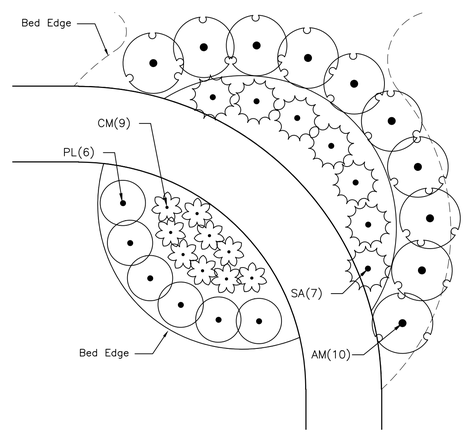
Planting Area Establishment
No Scale

GENERAL NOTES

1. Prior to installation, the landscape contractor shall inspect the general site conditions and verify the subgrade, elevations, utility locations and topsoil provided by general contractor. The landscape contractor shall notify the general contractor of any unsatisfactory conditions and work shall not proceed until such conditions have been corrected and are acceptable to the landscape contractor.
2. All plants shall meet or exceed standards set in the American Standard for Nursery Stock, ANSI Z60.1, 2004. All plants shall equal or exceed the measurements and sizes specified in the schedule.
3. All planting operations shall adhere to American Nursery & Landscape Association standards unless noted otherwise.
4. Substitutions shall be permitted with notification and written approval from the Owner. Substituted material shall be equivalent or greater in size than the specified plant. Substituted plants shall have the same essential characteristics and growth habit of the specified plant.
5. Confirm location of all utilities and subsurface drain lines prior to plant installation.
6. Contractor may slightly field adjust plant locations as necessary to avoid utilities. Finished planting beds shall be graded to provide positive drainage.
7. Contractor shall repair all lawn areas disturbed during construction with seed and warrant a healthy, weed free lawn prior to project acceptance.
8. Seed all areas within contract limits that are not covered by paving, buildings or planting beds unless otherwise noted. Seeding shall not begin until area has received topsoil and finished grade.
9. Mulch planting beds with shredded hardwood mulch of uniform dark brown color. It shall be free of twigs, leaves, disease, pest or other material unsightly or injurious to plants. Average applied thickness shall be 3" depth. Mulch hedges in a continuous bed.
10. Planting beds shall be covered with pre-emergent herbicide applied at product specified rate unless otherwise noted.
11. Bed edge shall be smooth, consistent, hand trenched 6" deep and "V" shaped unless otherwise noted. All excavated material shall be removed from the bed edge and planting bed.
12. All planting bed edges to be smooth flowing arcs or straight lines as shown on plan. Plant locations and layout of beds shall be located by Contractor and approved by Landscape Architect prior to planting.
13. Install all plants in accordance with planting details and specifications.
14. Parking lot and street trees shall have a clear canopy height of 6' min.
15. Tree shall be placed a minimum of 3' from sidewalks and curbs.
16. All planting beds to be tilled and backfilled with prepared planting mix to a minimum depth of 18 inches unless otherwise indicated. All individually planted trees and shrubs to be backfilled with prepared planting mix. Prepared planting mix shall be mixed on site and consist of one part topsoil, one part soil amendment, one part soil from excavation. Topsoil: ASTM D5268, ph range of 5.5 to 7, min. 4 percent organic material, free of stones 1 inch and larger. Soil amendment: Source separated yard waste compost from on Ohio EPA rated class IV compost facility.
17. Raised beds, including mulch, shall be no higher than 6 inches above adjacent grade.
18. Lawn areas to be backfilled with topsoil to a minimum settled thickness of 6 inches.
19. All trees, shrubs, groundcover, and lawns to be fertilized with a commercial grade fertilizer consisting of fast and slow release nitrogen.
20. Composition and application rate of fertilizer shall be sufficient to amend soil according to recommendations of a qualified soil testing agency. Submit test results and amendment recommendations to Landscape Architect. Fertilizer shall be in a dry granular form for lawns and granular or tablet form for plants.
21. Contractor to determine plant list quantities from the plan. Graphic representation on plan supersedes in case of discrepancy with quantities on schedule.
22. Any item or areas damaged during construction shall be repaired or replaced to its original condition at the contractor expense.
23. Contractor shall thoroughly water all plants at time of installation and as needed until project acceptance by owner. Contractor shall guarantee all plants installed for one full year from date of acceptance by the Owner. All plants shall be alive and at a vigorous rate of growth at the end of the guarantee period.
24. Lawn seed mix shall proportioned by weight as follows: 10 percent NuBlue or Blue Chip Kentucky Bluegrass; 10 percent Caddieshack or GoalKeeper Perennial Ryegrass; 80 percent Quest, Inferno, Arid 3 and/or Pixie Tall Fescue (select 2). Sodded lawns shall match seeded lawns.
25. Lawn seed shall not have less than 95 percent germination, not less than 85 percent pure seed, and not more than 0.5 percent weed seed.



West Planting Bed Enlargement
1"=5'



Southeast Planting Bed Enlargement
1"=5'

PLANT SCHEDULE WEST PLANTING BED

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
AM	11	Aronia melanocarpa 'Autumn Magic'	Autumn Magic Black Chokeberry	#5	Cont.
PERENNIALS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**
CM	17	Coreopsis verticillata 'Moonbeam'	Moonbeam Coreopsis	#2	Cont.
PL	8	Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage	#2	Cont.
SA	9	Rudbeckia hirta	Black-eyed Susan	#2	Cont.

PLANT SCHEDULE SOUTHEAST PLANTING BED

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
AM	10	Aronia melanocarpa 'Autumn Magic'	Autumn Magic Black Chokeberry	#5	Cont.
PERENNIALS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**
CM	9	Coreopsis verticillata 'Moonbeam'	Moonbeam Coreopsis	#2	Cont.
PL	6	Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage	#2	Cont.
SA	7	Rudbeckia hirta	Black-eyed Susan	#2	Cont.

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PLAN SET DATE
January 26, 2015

MARK	DATE	DESCRIPTION

REVISIONS

City of Dublin

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR
COTA PARK AND RIDE
LANDSCAPE DETAILS

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
January 26, 2015

SCALE
As Noted

JOB NO.
2014-0588

SHEET
12/14

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STREET LIGHTING NOTES

PLAN AND SPECIFICATION COMPLIANCE

These specifications, together with the accompanying plans, are to describe the type, size, and location of the products and material to be provided and installed under various bid items related to Street Lighting. The Contractor shall furnish and install Street Lighting items and related material in compliance with these plans and specifications, as well as the current Ohio Department of Transportation Construction and Material Specifications, and the City of Dublin Standard Detail drawings for Street Lighting. Street Lighting plans shall meet or exceed the standards specified. In case of a conflicting specification statement, the specification document hierarchy shall be in the order listed from (A) highest to (C) lowest.

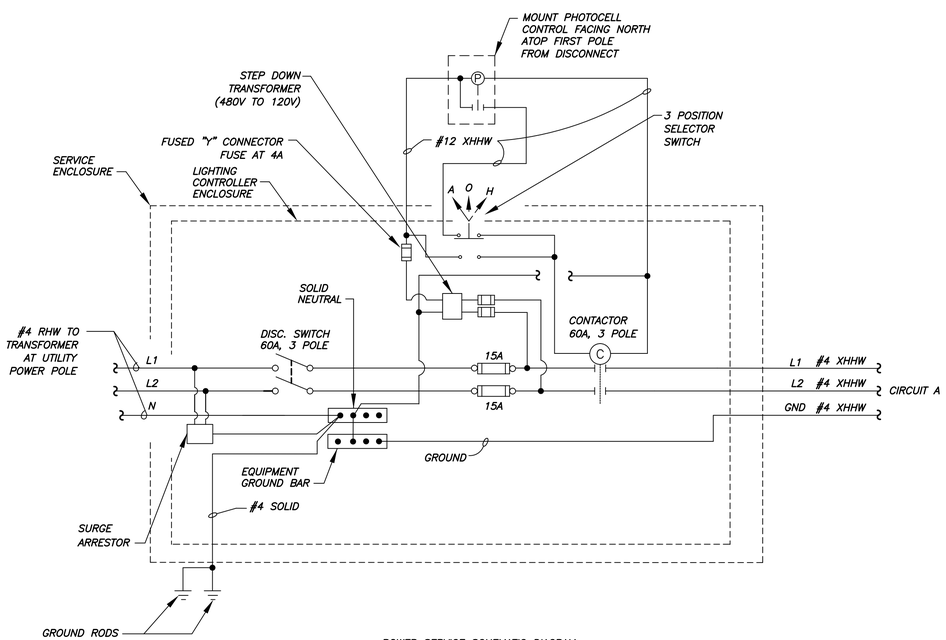
(A) Specifications listed in this plan
(B) City of Dublin Street Lighting Standard Drawings and Specifications
(C) ODOT Construction and Material Specificaitons

ITEM 625 – POWER SERVICE, AS PER PLAN

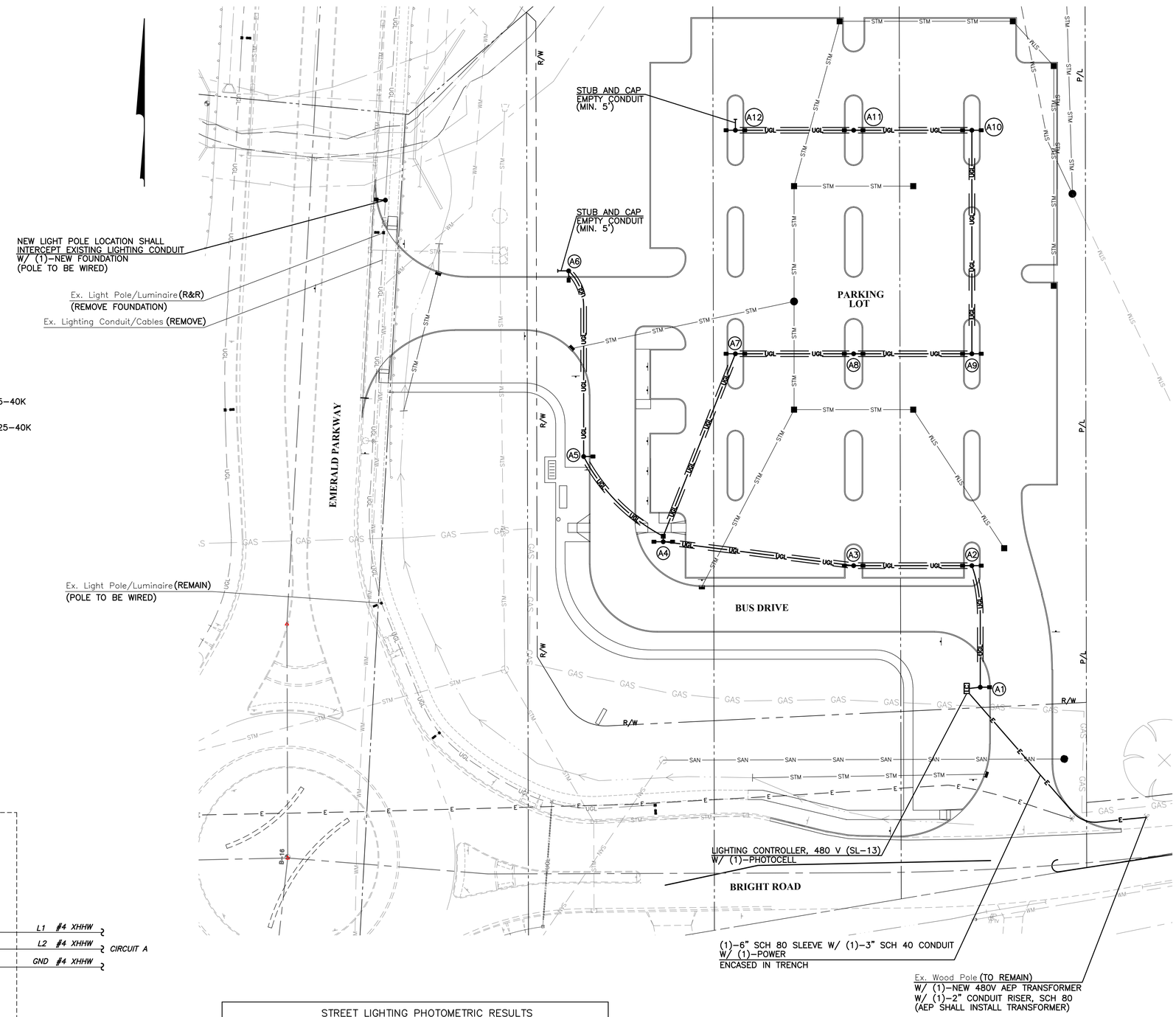
Power Service shall be as per Item 625, the power service schematic diagram shown on this sheet, and the City of Dublin Standard Drawing SL–13.

LEGEND

	LIGHT POLE (SL–03, 20') W/ (1)–LUMINAIRE (SL–01), ARE–EDG–2M–DA–06–E–UH–BZ–525–40K
	LIGHT POLE (SL–03, 20') W/ (2)–LUMINAIRES (SL–01), ARE–EDG–5M–DA–06–E–UH–BZ–525–40K
UGL	3" SCH 40 CONDUIT IN TRENCH W/ (3)–#4 AWG, 600V LIGHTING CABLES
UGL	6" SCH 80 SLEEVE AND 3" SCH 40 INNER CONDUIT W/ (3)–#4 AWG, 600V LIGHTING CABLES
LCT	PAD MOUNTED LIGHTING CONTROLLER (SL–13)
PB	PULL BOX, 725.06, POLYMER CONCRETE, 24"
	EX. LIGHT POLE (TO REMAIN UNLESS OTHERWISE NOTED)
UGL	EX. UNDERGROUND STREET LIGHTING (TO REMAIN)
R&R	REMOVE AND RELOCATE



POWER SERVICE SCHEMATIC DIAGRAM
SCALE: NONE



NOTE TO REVIEWER: POWER SOURCE CURRENTLY UNDER INVESTIGATION

STREET LIGHTING PHOTOMETRIC RESULTS					
DESCRIPTION	AVE	MAX	MIN	MAX/MIN	AVE/MIN
PARKING LOT	1.9 fc	4.1 fc	0.5 fc	8.2:1	3.8:1
BUS DRIVE	2.0 fc	4.0 fc	0.6 fc	6.7:1	3.3:1

REVISIONS

MARK	DATE	DESCRIPTION

City of Dublin

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR
COTA PARK AND RIDE
LIGHTING PLAN

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Engineers • Surveyors • Planners • Scientists
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emht.com

DATE
January 15, 2015

SCALE
1" = 30'

JOB NO.
2014-0588

SHEET
13/14

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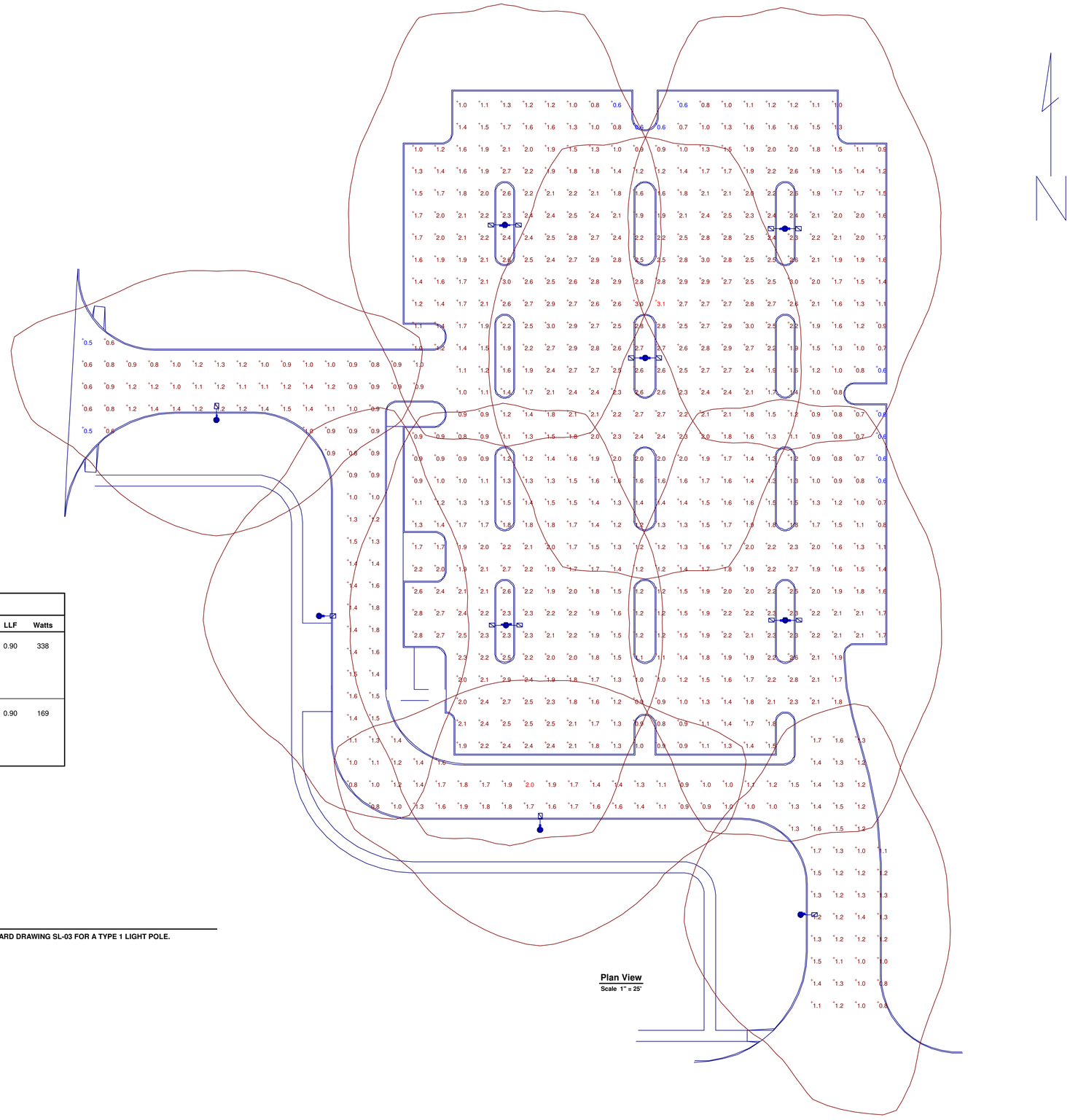

Plan View
Scale 1" = 25'

LUMINAIRE SCHEDULE

Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
5	ARE-EDG-2M-**-10-E-UH-525-40K (525mA) CONFIGURED FROM ARE-EDG-2M-xx-06-E-UL-xx-700-40K-xxxx (BXALx206E-UD7)	CONFIGURED FROM Cree Edge Area, Type II Medium, 60 LEDs, 700mA, 4000K	CONFIGURED FROM Sixty White LEDs, Vertical Base-Up Position	ARE-EDG-2M-__-10-E-UH-525-40K-CONFIGURED.IES	Absolute	0.90	338
4	ARE-EDG-2M-**-10-E-UH-525-40K (525mA) CONFIGURED FROM ARE-EDG-2M-xx-06-E-UL-xx-700-40K-xxxx (BXALx206E-UD7)	CONFIGURED FROM Cree Edge Area, Type II Medium, 60 LEDs, 700mA, 4000K	CONFIGURED FROM Sixty White LEDs, Vertical Base-Up Position	ARE-EDG-2M-__-10-E-UH-525-40K-CONFIGURED.IES	Absolute	0.90	169

STATISTICS

Description	Avg	Min	Avg/Min
Bus Drive	1.2 fc	0.5 fc	2.4:1
Parking Area	1.8 fc	0.6 fc	3.0:1

NOTES

1. LUMINAIRES ARE MODELED USING A MOUNTING HEIGHT OF 36'-8" AS GIVEN BY DUBLIN STANDARD DRAWING SL-03 FOR A TYPE 1 LIGHT POLE.

EMH&T

COTA

DUBLIN PARK and RIDE
PHOTOMETRIC ANALYSIS

Designer
EMHT

Date
Jan 6 2015

Scale
As Noted

Drawing No.