## GENERAL NOTES

1. City of Columbus 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 City 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.

29. The Contractor shall coordinate with COTA throughout the various phases of the project. The Contractor shall provide COTA with an estimated duration of time for the construction activities within this area so that COTA may make the appropriate modifications to service.

## UTILITIES

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

| | | | |
|---|---|---|---|
| Columbia Gas of Ohio<br>Matt Meyeres<br>3350 Johnny Appleseed Ct<br>Columbus, Ohio 43231<br>(614) 818-2113 | City of Dublin<br>Division of Engineering<br>5800 Shier Rings Road<br>Dublin, Ohio 43016<br>(614) 410-4600 | City of Columbus<br>Division of Power and Water (Water)<br>910 Dublin Road, 2nd Floor<br>Columbus, Ohio 43215<br>(614) 645-7677 | Verizon<br>Bill Muether<br>550 Leader Street<br>Marion, Ohio 43302<br>(740) 383-0527 |
| American Electric Power<br>Paul Paxton<br>850 Tech Center Drive<br>Gahanna, Ohio 43230-6605<br>(614) 883-6831 | Time Warner Cable<br>Ray Maurer<br>3760 Interchange Road<br>Columbus, Ohio 43204<br>(614) 481-5262 | AT&T of Ohio<br>Gary VanAlmsick<br>111 North 4th Street<br>Columbus, OH 43215<br>(614) 223-7276 | Wide Open West<br>Jaytee Novaria<br>3675 Corporate Drive<br>Columbus, Ohio 43231<br>(614) 948-4653 |

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 City is responsible for submitting a Notice of Intent (NOI) to be reviewed and approved by the Ohio EPA. The NOI must be submitted to OEPA 45 days prior to the start of construction and may entitle coverage under the Ohio EPA General Permit for 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.

## SANITARY SEWERS

1. Construction of the sanitary sewer will be permitted upon receiving an OEPA Permit to Install (PTI). The city 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) Dura Seal III as manufactured by Dura Tech, Inc.
        3) Link-Seal as manufactured by Thunderline Corporation.
        4) Or equal as approved by the City Engineer.

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

## 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. See "Miscellaneous – City Notes". 1

5. Removed 1

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 - CITY 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.

## ROCK EXCAVATION

Subsurface investigations that were performed in the area indicate the presence of bedrock within the limits of excavation. Approximate top of bedrock information shown on the plans was interpolated for design purposes only. These interpolations are not warranted to reflect actual subsurface conditions. The Contractor shall examine the available information; including subsurface investigations performed for this project, and obtain additional information if necessary, in his judgement, for estimating, bidding, and construction purposes.

Excavation of rock associated with pavement excavation will be included for payment under Excavation, As Per Plan. Rock excavation for storm sewer and utility trenches will be included for payment with the associated utility installation.

The use of blasting is not permitted.

## 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.

## ITEM SPECIAL - SIGN, COMPLETE

1. Payment for this item shall include all labor, materials, equipment and related accessories for a complete sign as shown and described on the plans including, but not limited to, sign cabinet, linear LED floodlight, conduit, wall caps, wall stone, concrete footing and reinforcement. No separate itemized payments shall be made. See lighting plans for power source.

| Item | Description | Quantity | Units |
|---|---|---|---|
| | **Roadway** | | |
| 201 | Clearing and Grubbing | 1 | L.Sum |
| 202 | Concrete Walk Removed | 1,709 | S.F. |
| 202 | Curb Removed | 62 | Lin. Ft. |
| 203 | Excavation | 957 | C.Y. |
| 203 | Embankment | 849 | C.Y. |
| 204 | Proof Rolling | 2 | Hour |
| 204 | Subgrade Compaction | 3,072 | S.Y. |
| 452 | Non-Reinforced Concrete Pavement (T=8") | 66 | S.Y. |
| 608 | Concrete Walk (T=4") | 2,391 | S.F. |
| 608 | Curb Ramp | 2 | Each |
| 608 | Concrete Steps | 1 | L.Sum |
| | | | |
| | **Erosion Control** | | |
| 207 | Inlet Protection | 6 | Each |
| 207 | Perimeter Filter Fabric Fence | 391 | Lin. Ft. |
| 653 | Topsoil Furnished and Placed (T=4") | 130 | C.Y. |
| 659 | Seeding and Mulching, Class 1 | 1,150 | S.Y. |
| SPEC | Concrete Washout | 1 | Each |
| | | | |
| | **Drainage** | | |
| 604 | Catch Basin, Standard (AA-S133A) | 5 | Each |
| 604 | Manhole Type C (AA-S102) | 4 | Each |
| 604 | Manhole Type E (AA-S104) | 1 | Each |
| 605 | 4 Inch Pipe Underdrains | 283 | Lin. Ft. |
| 901 | 12" Pipe, with Type 1 Bedding, with Compacted Granular Material | 369 | Lin. Ft. |
| 452 | Concrete Collar at Catch Basin (T=6") | 105 | S.F. |
| SPEC | StormTech System | 1 | L. Sum |
| 604 | Custom Outlet Structure | 1 | Each |
| | | | |
| | **Sanitary Sewer** | | |
| 604 | Existing Sanitary Manhole, Reconstructed to Grade | 1 | Each |
| | | | |
| | **Pavement** | | |
| 304 | Aggregate Base | 550 | C.Y. |
| 407 | Trackless Tack Coat | 190 | Gal. |
| 423 | Crack Seal | 87 | Lb. |
| 448 | Asphalt Concrete Intermediate Course (Medium Traffic), PG64-22 | 209 | C.Y. |
| 448 | Asphalt Concrete Surface Course (Medium Traffic), PG64-22 | 126 | C.Y. |
| 609 | Curb, Straight 18" | 1,136 | Lin. Ft. |
| | | | |
| | **Lighting** | | |
| 625 | Connector Kit, Type II (SL-02) | 14 | Each |
| 625 | Connector Kit, Type III (SL-02) | 7 | Each |
| 625 | Luminaire, ARE-EDG-3M-DA-08-E-UL-BZ-525-40K (SL-01) | 8 | Each |
| 625 | Light Pole, Single Luminaire, As Per Plan (SL-03) | 6 | Each |
| 625 | Light Pole, Double Luminaire, As Per Plan (SL-03) | 1 | Each |
| 625 | Light Pole Foundation (SL-04) | 7 | Each |
| 625 | No. 4 AWG, 600 Volt Distribution Cable | 2064 | Lin. Ft. |
| 625 | No. 10 AWG, 600 Volt Distribution Cable | 2631 | Lin. Ft. |
| 625 | No. 10 AWG, 600 Volt Pole and Bracket Cable | 525 | Lin. Ft. |
| 625 | Conduit, 2", 725.051 (SL-05) | 1917 | Lin. Ft. |
| 625 | Conduit, 3", 725.051, Sch. 80 (SL-05) | 873 | Lin. Ft. |
| 625 | Trench (SL-05) | 1338 | Lin. Ft. |
| 625 | Plastic Caution Tape (SL-05) | 1338 | Lin. Ft. |
| 625 | Ground Rod | 7 | Each |
| 625 | Power Service, As Per Plan (SL-13) | 1 | Each |
| 625 | Cadweld Connection | 7 | Each |
| 625 | High Voltage Test | 1 | L. Sum |
| Spec. | Service to Security Camera System, As Per Plan | 1 | Each |
| Spec. | Security Camera Relocated, As Per Plan | 5 | Each |
| | | | |
| | **Landscaping** | | |
| 661 | Deciduous Tree, Sugar Maple, 2.5" Cal., B&B | 7 | Each |
| 661 | Deciduous Tree, Prairie Pride Hackberry, 2.5" Cal., B&B | 3 | Each |
| 661 | Deciduous Tree, Wildfire Black Gum, 2.5" Cal., B&B | 3 | Each |
| 661 | Deciduous Tree, Shumard Oak, 2.5" Cal., B&B | 13 | Each |
| 661 | Deciduous Tree, Boulevard Linden, 2.5" Cal., B&B | 8 | Each |
| 661 | Deciduous Shrubs, Green Mountain Boxwood, 24" Ht., B&B | 21 | Each |
| 661 | Deciduous Shrubs, Buffalo Juniper, 18" Spr., Cont. | 8 | Each |
| 661 | Deciduous Shrubs, Dense Yew, 24" Ht., B&B | 56 | Each |
| 661 | Perennial, Big Blue Liriope, #1 Cont. | 12 | Each |
| | | | |
| | **Miscellaneous** | | |
| 616 | Dust Control | 1 | L. Sum |
| 623 | Construction Layout Stakes | 1 | L. Sum |
| 624 | Mobilization | 1 | L. Sum |
| 630 | Ground Mounted Support, No. 3 Post, Type S | 28 | Lin. Ft. |
| 630 | 2 1/4" Square Anchor Post | 4 | Each |
| 642 | Parking Lot Stall Marking, Type 1 | 1,655 | Lin. Ft. |
| SPEC | Bike Rack | 5 | Each |
| SPEC | Tree Protection Fence | 267 | Lin. Ft. |
| SPEC | Retaining Wall | 230 | S.F. |
| SPEC | Column | 3 | Each |
| SPEC | Column Footing | 3 | Each |
| SPEC* | Column Mud slab | 2 | C.Y. |
| SPEC | Monument Sign Complete, As Per Plan | 1 | Each |
| SPEC | Parking Block, As Per Plan | 4 | Each |
| SPEC | Construction Entrance | 1 | L. Sum |
| SPEC | City of Dublin 108.03 - Type B Critical Path Method (CPM) Schedule | 1 | L. Sum |
| Notes: * = Denotes Contingency Items | | | |

REVISIONS

| MARK | DATE | DESCRIPTION |
|---|---|---|
| 1 | 1/27/16 | Addendum 1 |

City of Dublin

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR
**DALE DRIVE COTA PARK AND RIDE**
**GENERAL SUMMARY AND NOTES**

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: November 18, 2015

SCALE: Not To Scale

JOB NO.: 2014-0588

SHEET: 2/22

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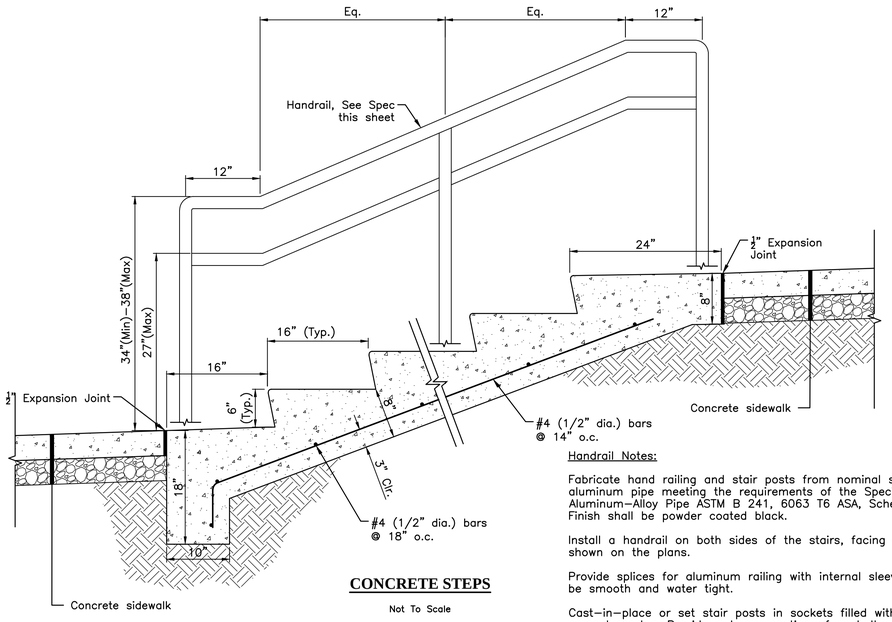



## CONCRETE STEPS

Not To Scale

Handrail Notes:

Fabricate hand railing and stair posts from nominal size 1 ½" diameter aluminum pipe meeting the requirements of the Specification for Aluminum-Alloy Pipe ASTM B 241, 6063 T6 ASA, Schedule Number 40. Finish shall be powder coated black.

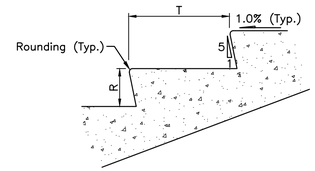
Install a handrail on both sides of the stairs, facing up, unless otherwise shown on the plans.

Provide splices for aluminum railing with internal sleeves, and after welding, be smooth and water tight.

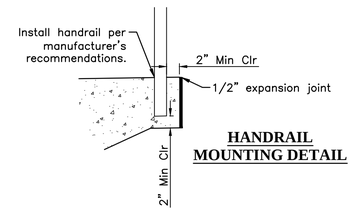
Cast-in-place or set stair posts in sockets filled in 1:3 proportioned cement mortar. Provide a heavy coating of asphalt varnish or cool-tar pitch paint (both inside and outside) to the portion of aluminum stair posts set into concrete or mortar.

Embed the stair posts a minimum depth 4".

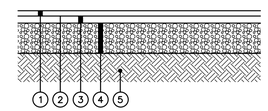
Install stair posts and handrails free of burrs, or sharp projections.




## NOSING DETAIL




## HANDRAIL MOUNTING DETAIL

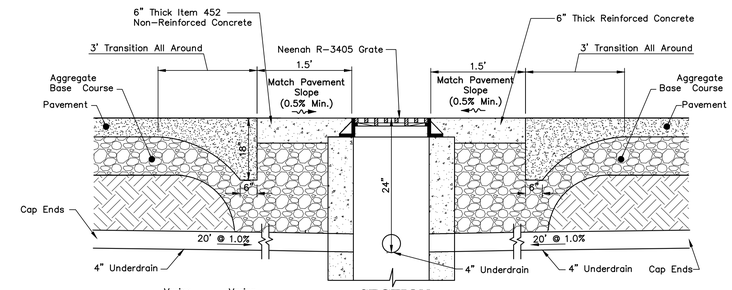



## TYPICAL SECTION

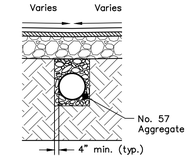
1. Item 448, 1 1/2" Asphalt Concrete Surface Course
2. Item 407, NTSS-1HM Trackless Tack Coat (0.06 Gal/Sq. Yd)
3. Item 448, 2 1/2" Asphalt Concrete Intermediate Course
4. Item 304, 6" Crushed Aggregate Base
5. Item 203, Subgrade Compaction

Note:

Pavement Section is per the recommendation of the Geotechnical Report provided by Geotechnical Consultants Inc. dated October 6, 2015. All Pavement Materials shall Conform to the City of Columbus Construction and Material Specifications.



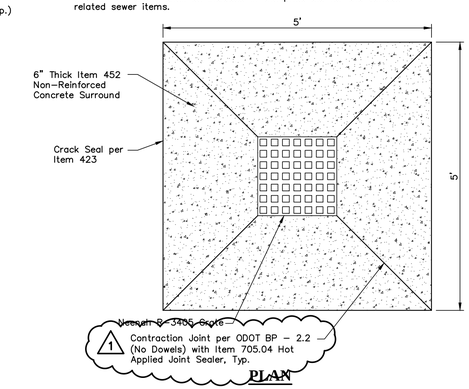

## SECTION




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

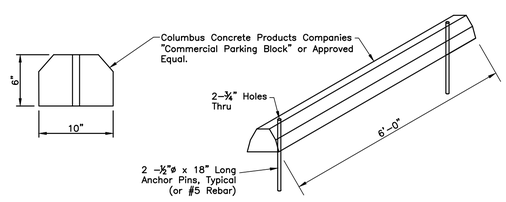
The Perforated Pipe shall be protected from heavy traffic after installation prior to placement of proposed pavement.

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.



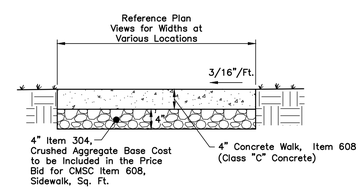

## PLAN

## CONCRETE SURROUND WITH ASPHALT TURNDOWN FOR STRUCTURES WITHIN PAVEMENT




## STANDARD PARKING BLOCK DETAIL

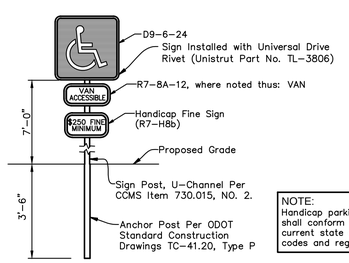
Not To Scale




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

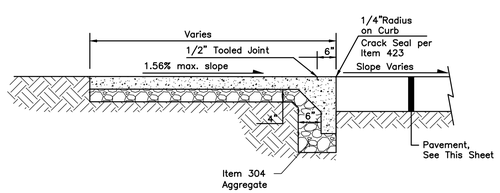
Not To Scale




NOTE:
Handicap parking sign shall conform with current state and local codes and regulations.

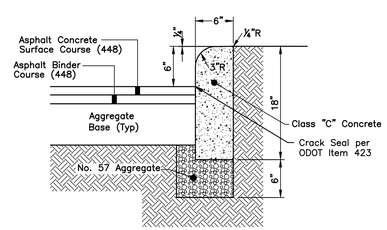
## HANDICAP PARKING SIGN DETAIL

Not to Scale



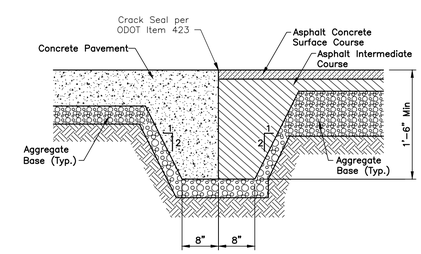

## FLUSH COMBINATION CURB AND SIDEWALK

Not To Scale




## STRAIGHT 18" CONCRETE CURB

Not To Scale




Note:

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

## CONCRETE/ASPHALT TURNDOWN DETAIL

Not To Scale

REVISIONS

| MARK | DATE | DESCRIPTION |
|---|---|---|
| 1 | 1/27/16 | Addendum 1 |

City of Dublin

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

EMHT
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
November 18, 2015

SCALE
Not To Scale

JOB NO.
2014-0588

SHEET
3/22

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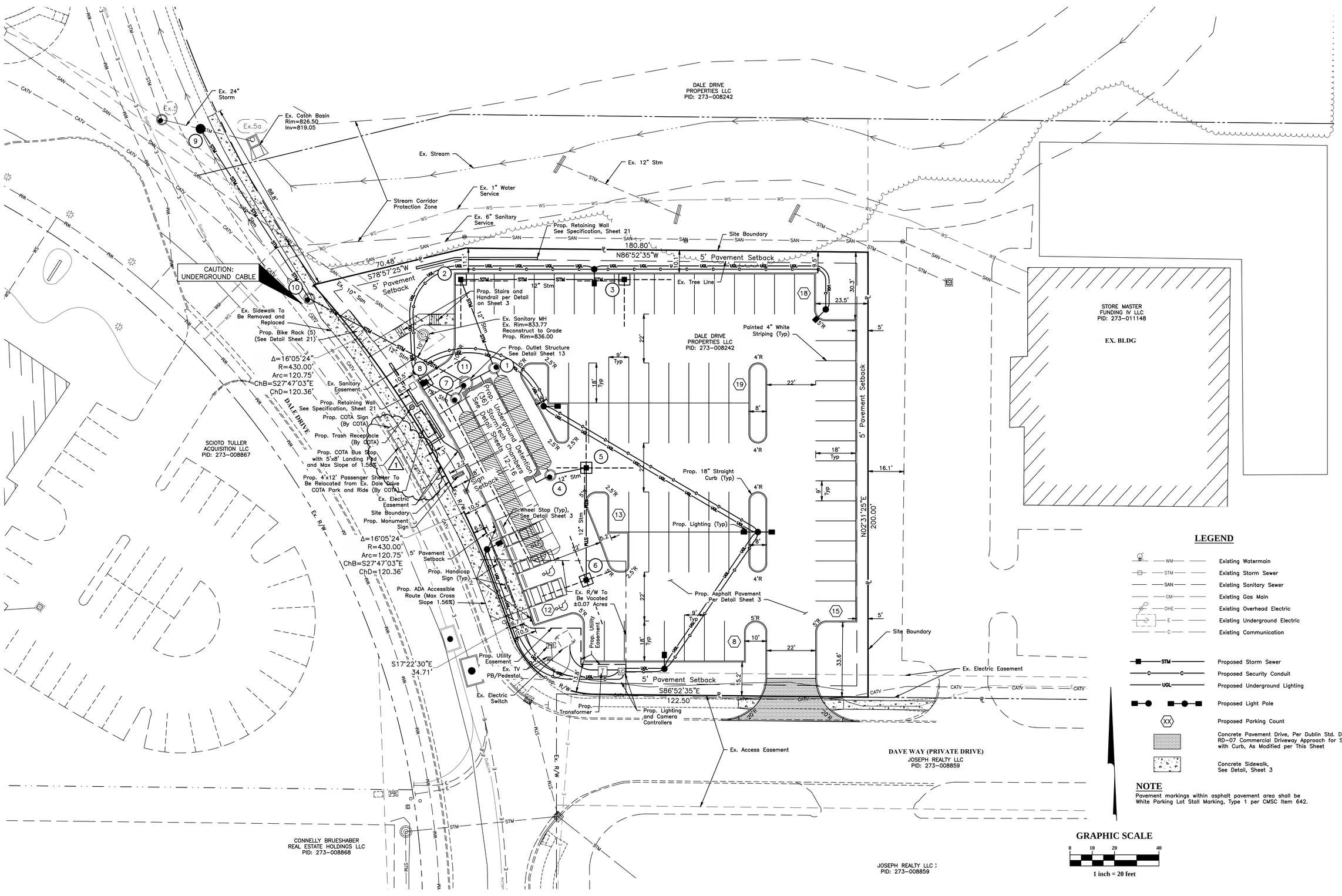


REVISIONS

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|---|---|---|
| 1 | 1/27/16 | Addendum 1 |

City of Dublin

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR
# DALE DRIVE COTA PARK AND RIDE
## SITE STAKING AND UTILITY 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
November 18, 2015

SCALE
1" = 20'

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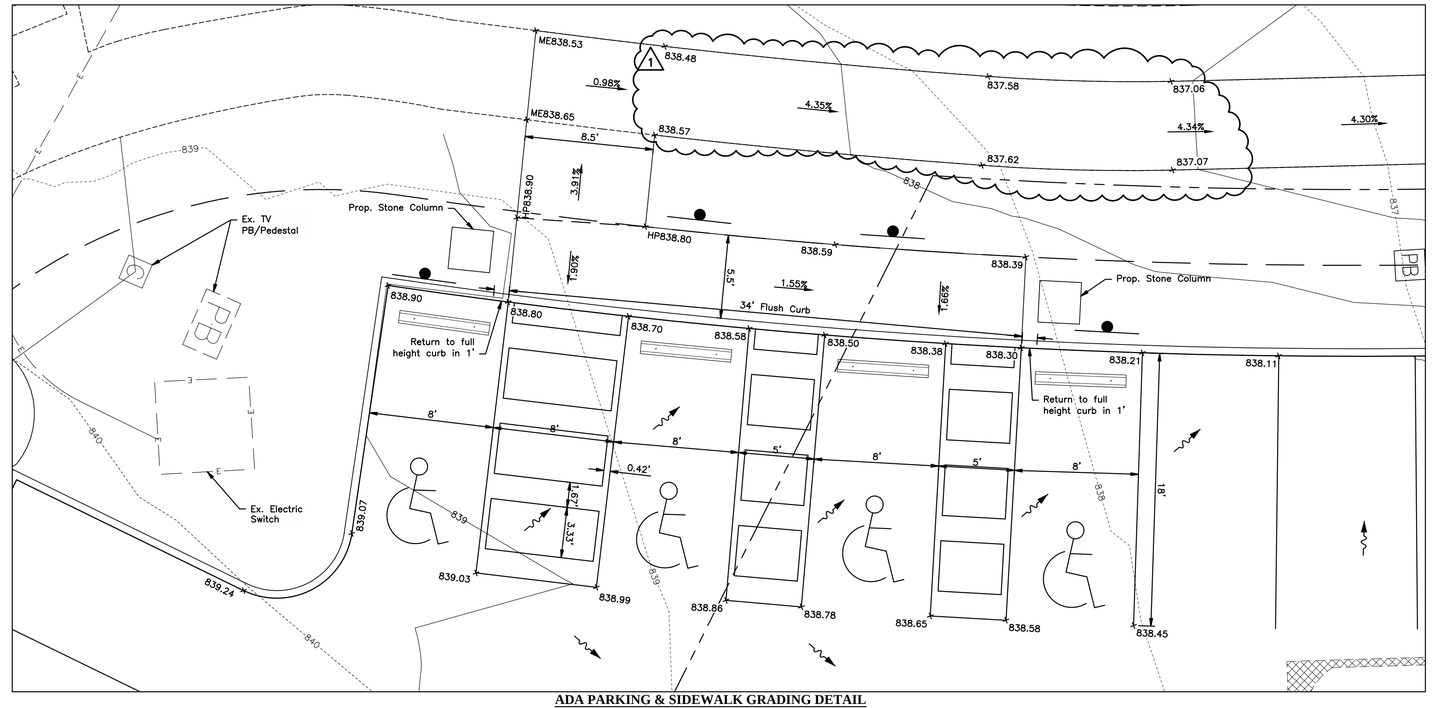
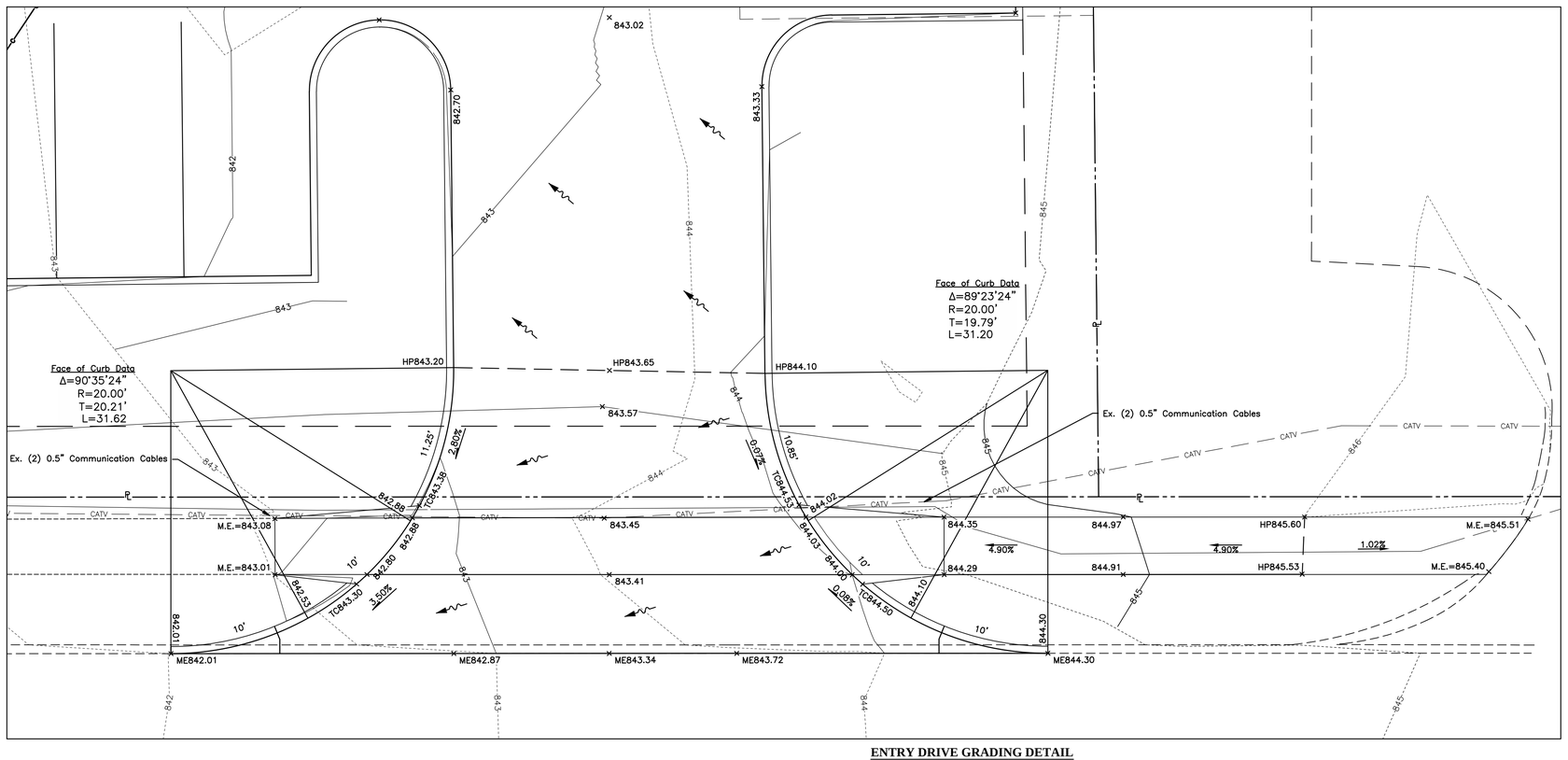
2014-0588

SHEET
6/22




**ADA PARKING & SIDEWALK GRADING DETAIL**
Scale:1"=5'




**ENTRY DRIVE GRADING DETAIL**
Scale:1"=5'

## LEGEND

| | |
|---|---|
| TC | Top of Curb |
| TW | Top of Wall |
| BW | Bottom of Wall |
| HP | High Point |
| ME | Match Existing |

## GRAPHIC SCALE

0 2.5 5 10

1 inch = 5 feet

REVISIONS

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|---|---|---|
| 1 | 1/27/16 | Addendum 1 |

City of Dublin

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

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

DATE
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SCALE
1" = 5'

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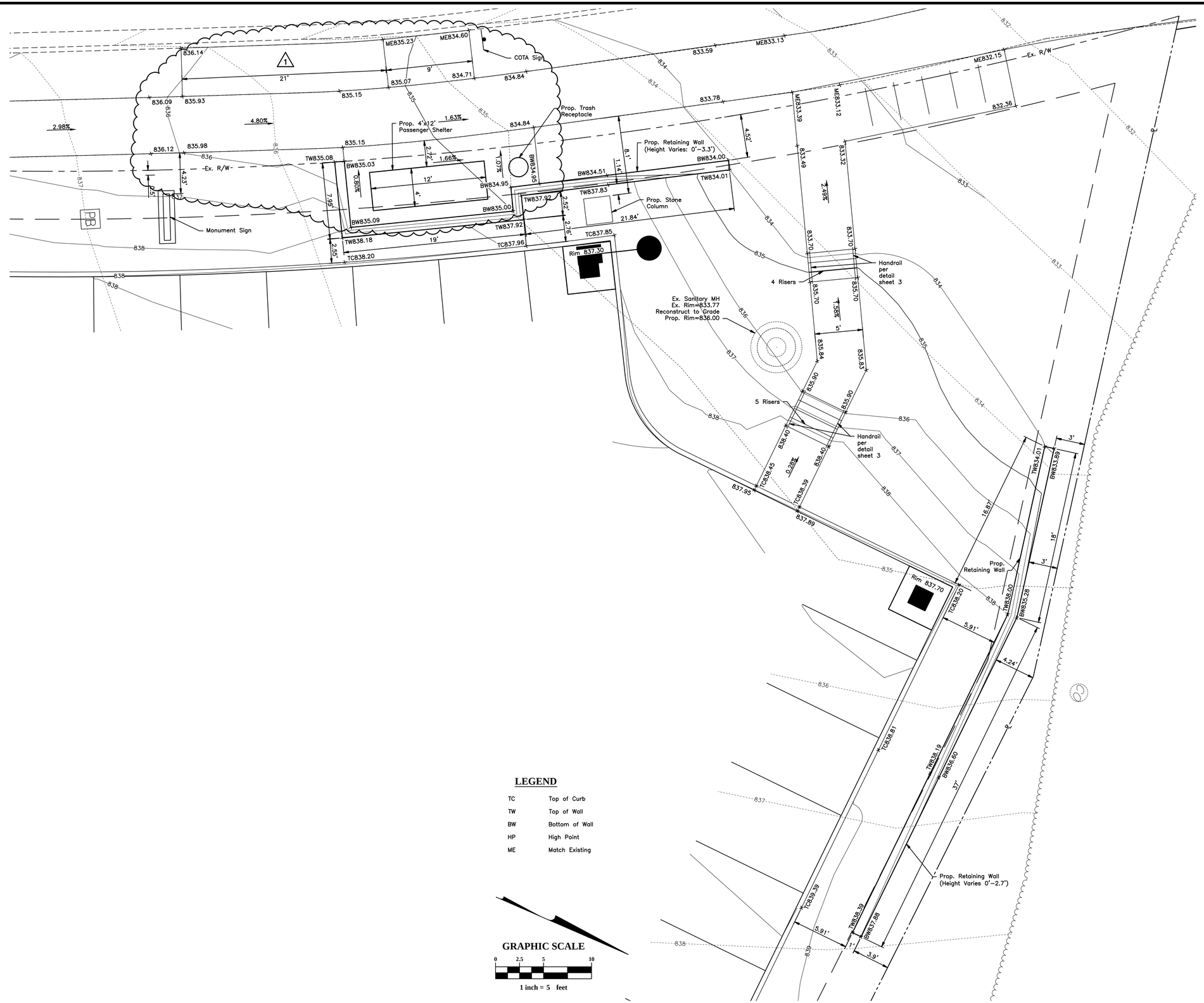


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| 1 | 1/27/16 | Addendum 1 |

City of Dublin

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR

# DALE DRIVE COTA PARK AND RIDE

## GRADING DETAILS

EMH&T
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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 – LIGHT POLE, SINGLE LUMINAIRE, AS PER PLAN

Light pole shall conform with City of Dublin Standard Drawing SL–03, Type 1 and the detail shown on this sheet. The pole shall be furnished with an approved handhole, 12' from grade to center of handhole, to allow for access to interior surveillance camera cables. The Contractor shall coordinate with the pole manufacturer and COTA to ensure that the pole can accommodate a future pole mounted, COTA approved surveillance camera and mounting hardware. Light pole structures shall be designed and constructed by the supplier to support the loads that the plan requires the Contractor to install. The use of standard design designations and any details provided in this plan are intended to promote uniformity of design and are not warranted to be structurally adequate. The Contractor shall verify the anchor bolt circle, anchor bolt diameter, and orientation pattern with the light pole manufacturer. The manufacturer shall be responsible for verifying the pole design, and shall prepare shop drawings and structural design calculations stamped by an Ohio Professional Engineer. The shop drawings and calculations shall be submitted to the City of Dublin for approval prior to fabrication.

Payment shall be as per Item 625.

### ITEM 625 – LIGHT POLE, TWIN LUMINAIRE, AS PER PLAN

Light pole shall conform with City of Dublin Standard Drawing SL–03, Type 1 and the detail shown on this sheet. The pole shall be furnished with an approved handhole, 12' from grade to center of handhole, to allow for access to interior surveillance camera cables. The Contractor shall coordinate with the pole manufacturer and COTA to ensure that the pole can accommodate a future pole mounted, COTA approved surveillance camera. Light pole structures shall be designed and constructed by the supplier to support the loads that the plan requires the Contractor to install, including two luminaires and two luminaire brackets. The use of standard design designations and any details provided in this plan are intended to promote uniformity of design and are not warranted to be structurally adequate. The Contractor shall verify the anchor bolt circle, anchor bolt diameter, and orientation pattern with the light pole manufacturer. The manufacturer shall be responsible for verifying the pole design, and shall prepare shop drawings and structural design calculations stamped by an Ohio Professional Engineer. The shop drawings and calculations shall be submitted to the City of Dublin for approval prior to fabrication.

Payment shall be as per Item 625.

### 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. Coordinate with AEP.

Additionally, a CT cabinet is to be furnished and installed by Contractor and shall be of substantial strength with corrosion protection, such as painted galvanized steel NEMA 3R. Ct cabinet shall be painted dark bronze to match the light poles. It shall be fitted with hinged door(s) and shall have provisions for installing a company padlock and seal. The inside back of the cabinet shall be entirely covered by 3/4" treated plywood for mounting the current transformers or suitable mounting brackets may be provided. A grounding lug shall be provided to ground the cabinet.

The white dot polarity mark on the CT shall be toward the energy source or line side.

Contractor shall mount the meter socket next to the CT cabinet and install 1 1/4" conduit between the two.

The CT cabinet and meter socket shall be grounded. The meter socket and CT cabinet shall be bonded through a separate equipment–grounding conductor connected to the grounded service conductor (usually the neutral).

AEP will install the secondary wiring between the CT and the meter socket.

The conductor splice in the CT cabinet shall be made with bolted connections furnished and installed by the Contractor. The conductor shall pass through the CTs without a splice.

Provide an Arc Flash Hazard Warning sign on the outside front door of the enclosure in accordance with the current National Electrical Code paragraph 110.16.

Provide an Available Fault Current sign on the outside of the front door of the service disconnect enclosure in accordance with the current National Electrical Code paragraph 110.24.

Provide locking tabs on 10A circuit breakers capable for locking in the open position.

All enclosures and mounting hardware shall be painted dark green. A paint chip shall be submitted to the City of Dublin prior to painting for approval. (1)

Payment shall be as per Item 625.

### ITEM SPECIAL, SECURITY CAMERA RELOCATED, AS PER PLAN

The Contractor shall coordinate with COTA to remove and relocate the existing security cameras from the temporary COTA site on Village Parkway, Dublin, Ohio. Security cameras shall be relocated to the designated light poles shown within these plans.

Prior to performing any removal, the Contractor shall perform an inspection with COTA personnel to identify any existing damages or defects to the security cameras and to confirm that they are in full working order. Any damages identified after the relocation process will be assumed to have been caused by the Contractor, and it shall be the Contractor's responsibility to replace/repair the camera.

All camera mounting hardware shall be considered incidental to this item of work and shall be coated to match the street light pole.

Payment shall be made at the unit bid price for each relocated security camera after all cameras have been tested and accepted by COTA.

### ITEM SPECIAL, SERVICE TO SECURITY CAMERA SYSTEM, AS PER PLAN

This item shall consist of designing and providing a complete electrical power and communication network for the security camera system. The installation work shall include disconnect switch, panel, conduits, conduit riser, conduit grounding, mountings, fittings, junction boxes, camera housings, device enclosures, wired and wireless transmission devices, pole mounting systems, electric and data cables of all sizes (including 10 percent spares in each control run), and all incidentals necessary to complete, ready for use, the camera system as outlined in the COTA contract specifications. Any camera system enclosures shall be sized appropriately to include all of the contents required by the specifications.

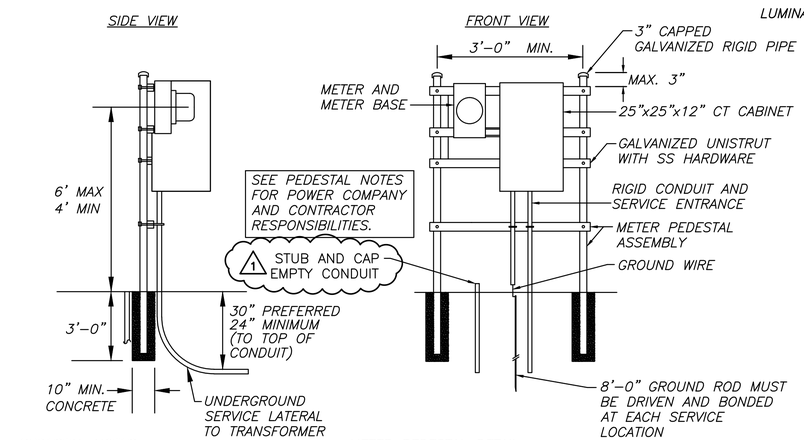
The Contractor shall closely coordinate with COTA to ensure that the installation meets the contract specifications and COTA preferenes.

The price bid for Item Special "Service to Security Camera System, As Per Plan" shall include payment for all equipment, labor, and materials necessary to complete the work as specified. Component parts not specifically mentioned, but required for satisfactory operation of this item, shall be furnished and considered paid for as part of this item.

### GROUNDING AND BONDING

The requirements of the State of Ohio Department of Transportation Construction and Material Specifications (C&MS) and the HL series of Standard Construction Drawings are modified as follows:

1. All metallic parts containing electrical conductors shall be permanently joined to form an Effective Ground Fault Current Path back to the grounded conductor in the power service disconnect switch.
   a. Provide an equipment grounding conductor in metallic conduits (725.04) in addition to the conductors specified and bond the conduit to this grounding conductor.
   b. When an equipment grounding conductor is required in plastic conduit (725.05), the installation shall include a separate equipment grounding conductor in addition to the conductors specified.
   c. Metal pull box lids shall be bonded by attachment of the equipment grounding conductor to the frame diagonal as provided on HL–30.11.
2. Conduits
   a. The 725.04 conduit shall have grounding bushings installed at all termination points. The bushing material shall be compatible with galvanized steel conduit and the grounding lug material shall be compatible for use with copper wire. Threaded or compression type bushings may be used.
   b. The 725.05 conduit shall have the inside and outside diameters of the conduit deburred at all termination points.
   c. Both ends of metallic conduit shall be bonded to the equipment grounding conductor.
   d. Metallic conduit may be bonded to metallic boxes through the use of conduit fittings UL approved for this type of connection, with the box bonded to the equipment grounding conductor.
3. Wire for Grounding and Bonding
   a. Use insulated, copper wire for the equipment grounding conductor. Bonding jumpers in boxes and enclosures may be bare or insulated copper wire. Wire size shall be as follows: The insulation shall be green or green with yellow stripe(s). For 4 AWG or larger, insulation may also be black with green tape/labels installed at all access points.
   b. In a highway lighting system, the equipment grounding conductor shall be the same wire size as the duct cable or distribution cable circuit conductors, with the minimum conductor size of 4 AWG. Bonding jumpers will be minimum size 4 AWG.
4. Ground Rod
   a. A 3/4 inch Schedule 40 PVC conduit will be used in foundations and concrete walls for the grounding conductor (ground wire) raceway to the ground rod. Should metallic conduit be used, both ends of the conduit shall be bonded to the grounding conductor.
   b. The typical grounding conductor (ground wire) shall be 4 AWG insulated, copper.
5. Power Service and Disconnect Switch
   a. At the power service location, the grounding conductor (ground wire) from the disconnect switch neutral (AC–) bar to the ground rod shall be a continuous, unspliced conductor. If spliced, it shall be an exothermic weld butt splice.
   b. The service neutral shall only be connected to ground at the main power service disconnect switch.

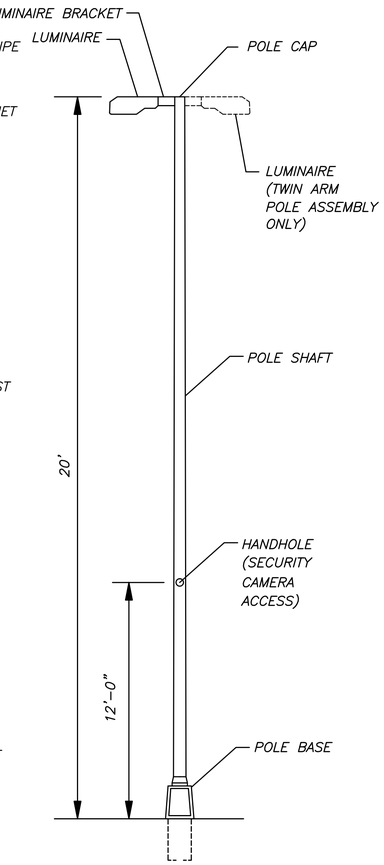



METER PEDESTAL DETAIL
SCALE: NONE

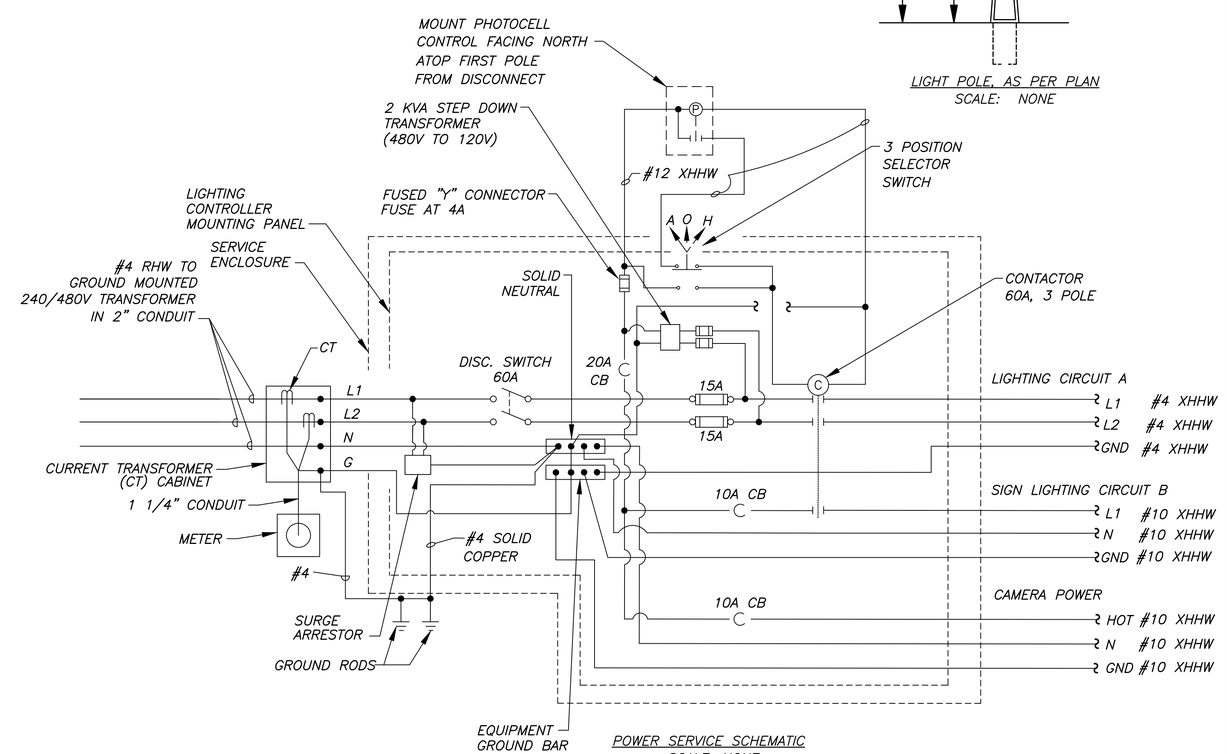
PEDESTAL NOTES:

THE POWER COMPANY WILL BE RESPONSIBLE FOR:
A) SPECIFYING THE METER PEDESTAL LOCATION.
B) INSTALLING THE METER.
C) FURNISHING THE METER BASE, CURRENT TRANSFORMERS, AND WIRING THE CTS.
D) MARKING CONNECTIONS AT THE TRANSFORMER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR:
A) FURNISHING AND INSTALLING THE METER PEDESTAL.
B) FURNISHING AND INSTALLING THE CT CABINET.
C) FURNISHING AND INSTALLING ADEQUATE GROUND TO THE SERVICE EQUIPMENT DISCONNECT DEVICE. GROUND IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
D) SECURELY INSTALLING THE METER PEDESTAL AS SHOWN.
E) SECURELY MOUNTING THE METER BASE IN A LEVEL AND PLUMB POSITION. METER MUST FACE STREET OR ACCESS WALKWAY.
F) INSTALLING THE CURRENT TRANSFORMERS.
G) FURNISHING AND INSTALLING SERVICE ENTRANCE CONDUCTORS OF SUFFICIENT AMPACITY TO SERVE THE CONNECTED LOAD ACCORDING TO THE CURRENT NEC.
H) FURNISHING AND INSTALLING THE UNDERGROUND SERVICE LATERAL TO TRANSFORMER WITH 8 FEET OF WIRE COILED AT TRANSFORMER. FURNISH WIRE LUGS LOOSE TO AEP.




LIGHT POLE, AS PER PLAN
SCALE: NONE




POWER SERVICE SCHEMATIC
SCALE: NONE

REVISIONS

| MARK | DATE | DESCRIPTION |
|---|---|---|
| 1 | 1/27/16 | Addendum 1 |

City of Dublin

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


EMHT Inc
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
November 18, 2015

SCALE
NONE

JOB NO.
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SHEET
17/22


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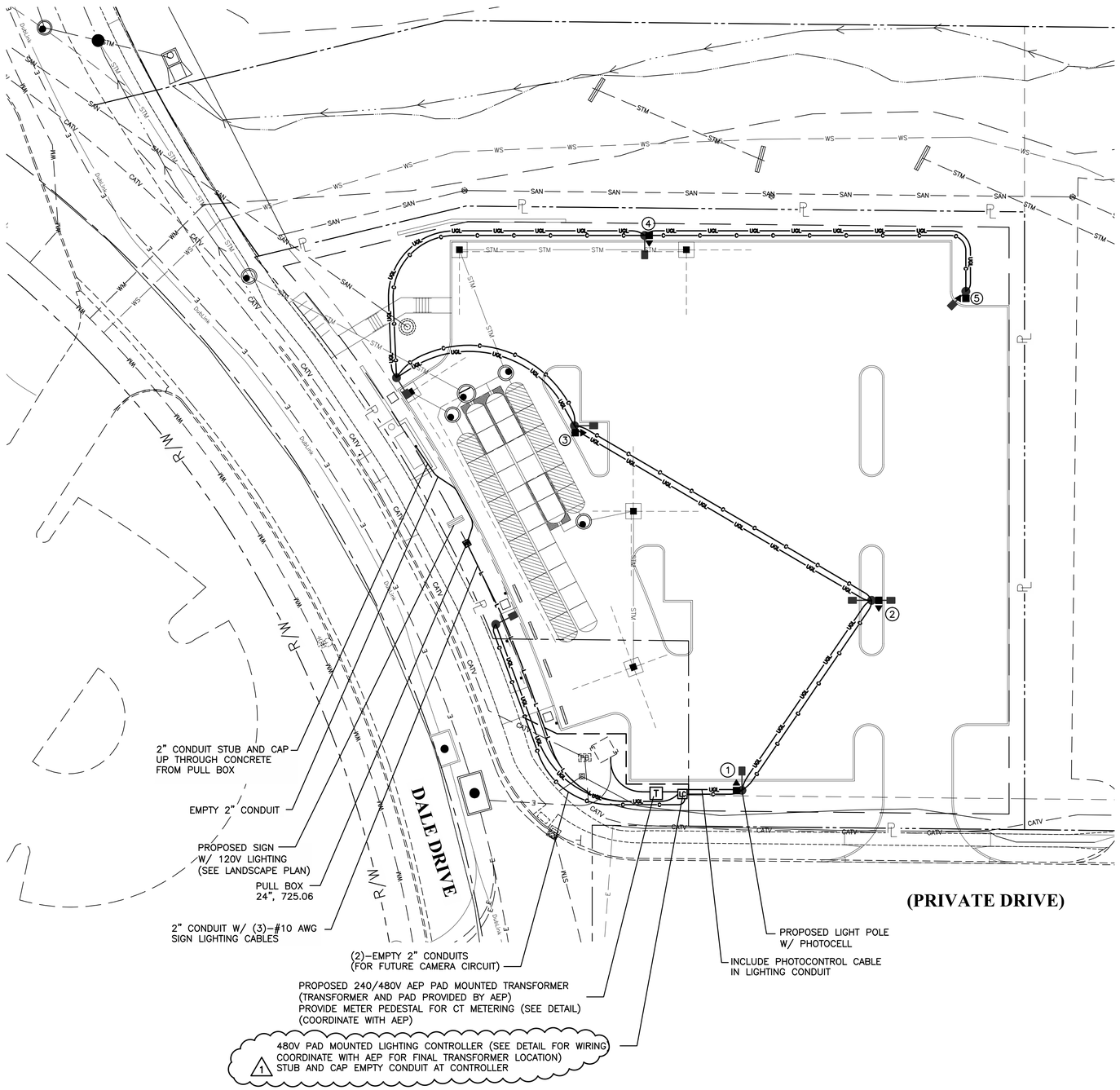


STATE OF OHIO
WILLIAM CLIFFORD MESS
38250
REGISTERED PROFESSIONAL ENGINEER

William C. Mess
William C. Mess, Date 12-2-2015
For Power Distribution and Grounding Only.
Sheets 17 and 18 Only.

| LIGHTING ESTIMATE OF QUANTITIES | | | |
|---|---|---|---|
| ITEM NO. | QTY | UNIT | ITEM DESCRIPTION |
| 625 | 14 | EA | Connector Kit, Type II (SL-02) |
| 625 | 7 | EA | Connector Kit, Type III (SL-02) |
| 625 | 8 | EA | Luminaire, ARE-EDG-3M-DA-08-E-UL-BZ-525-40K (SL-01) |
| 625 | 6 | EA | Light Pole, Single Luminaire, As Per Plan (SL-03) |
| 625 | 1 | EA | Light Pole, Double Luminaire, As Per Plan (SL-03) |
| 625 | 7 | EA | Light Pole Foundation (SL-04) |
| 625 | 2064 | LF | No. 4 AWG, 600 Volt Distribution Cable |
| 625 | 2631 | LF | No. 10 AWG, 600 Volt Distribution Cable |
| 625 | 525 | LF | No. 10 AWG, 600 Volt Pole and Bracket Cable |
| 625 | 1917 | LF | Conduit, 2", 725.051 (SL-05) |
| 625 | 873 | LF | Conduit, 3", 725.051, Sch. 80 (SL-05) |
| 625 | 1338 | LF | Trench (SL-05) |
| 625 | 1338 | LF | Plastic Caution Tape (SL-05) |
| 625 | 7 | EA | Ground Rod |
| 625 | 1 | EA | Power Service, As Per Plan (SL-13) |
| 625 | 7 | EA | Cadweld Connection |
| 625 | 1 | LUMP | High Voltage Test |
| SPECIAL | 1 | EA | Service to Security Camera System, As Per Plan |
| SPECIAL | 5 | EA | Security Camera Relocated, As Per Plan |

**LEGEND**

- LIGHT POLE, SINGLE LUMINAIRE, AS PER PLAN, T-BASE, AND FOUNDATION (SL-02, SL-03, SL-04) W/ (1)-LUMINAIRE (SL-01), ARE-EDG-3M-DA-08-E-UL-BZ-525-40K
- LIGHT POLE, DOUBLE LUMINAIRE, AS PER PLAN, T-BASE, AND FOUNDATION (SL-02, SL-03, SL-04) W/ (2)-LUMINAIRES (SL-01), ARE-EDG-3M-DA-08-E-UL-BZ-525-40K
- UGL — 2" SCH 40 CONDUIT W/ (3)-#4 AWG, 600V LIGHTING CABLES IN TRENCH (INCLUDE 3" SCH. 80 SLEEVE FOR CONDUIT UNDER PAVEMENT)
- C — 2" SCH 40 CONDUIT W/ (3)-#10 AWG, 600V CAMERA POWER CABLES; 2" SCH 40 CONDUIT (EMPTY FOR FUTURE USE) IN TRENCH (INCLUDE 3" SCH. 80 SLEEVE FOR EACH CONDUIT UNDER PAVEMENT)
- L — 2" SCH 40 CONDUIT W/ (3)-#10 AWG, 600V SIGN LIGHTING CABLES
- LC — PAD MOUNTED LIGHTING CONTROLLER (SL-13)
- T — PAD MOUNTED TRANSFORMER WITH POWER TO CONTROLLER (COORDINATE WITH AEP) CT ENCLOSURE TO BE PROVIDED AND INSTALLED BY THE CONTRACTOR
- PB — PULL BOX, 725.06, POLYMER CONCRETE, 24"
- RELOCATED POLE MOUNTED SECURITY CAMERA (ORIENTED AS SHOWN) WITH CAMERA NUMBER AS SHOWN

REVISIONS

| MARK | DATE | DESCRIPTION |
|---|---|---|
| 1 | 1/27/16 | Addendum 1 |

City of Dublin

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

EMHT
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
November 18, 2015

SCALE
1" = 40'

JOB NO.
2014-0588

SHEET
18/22

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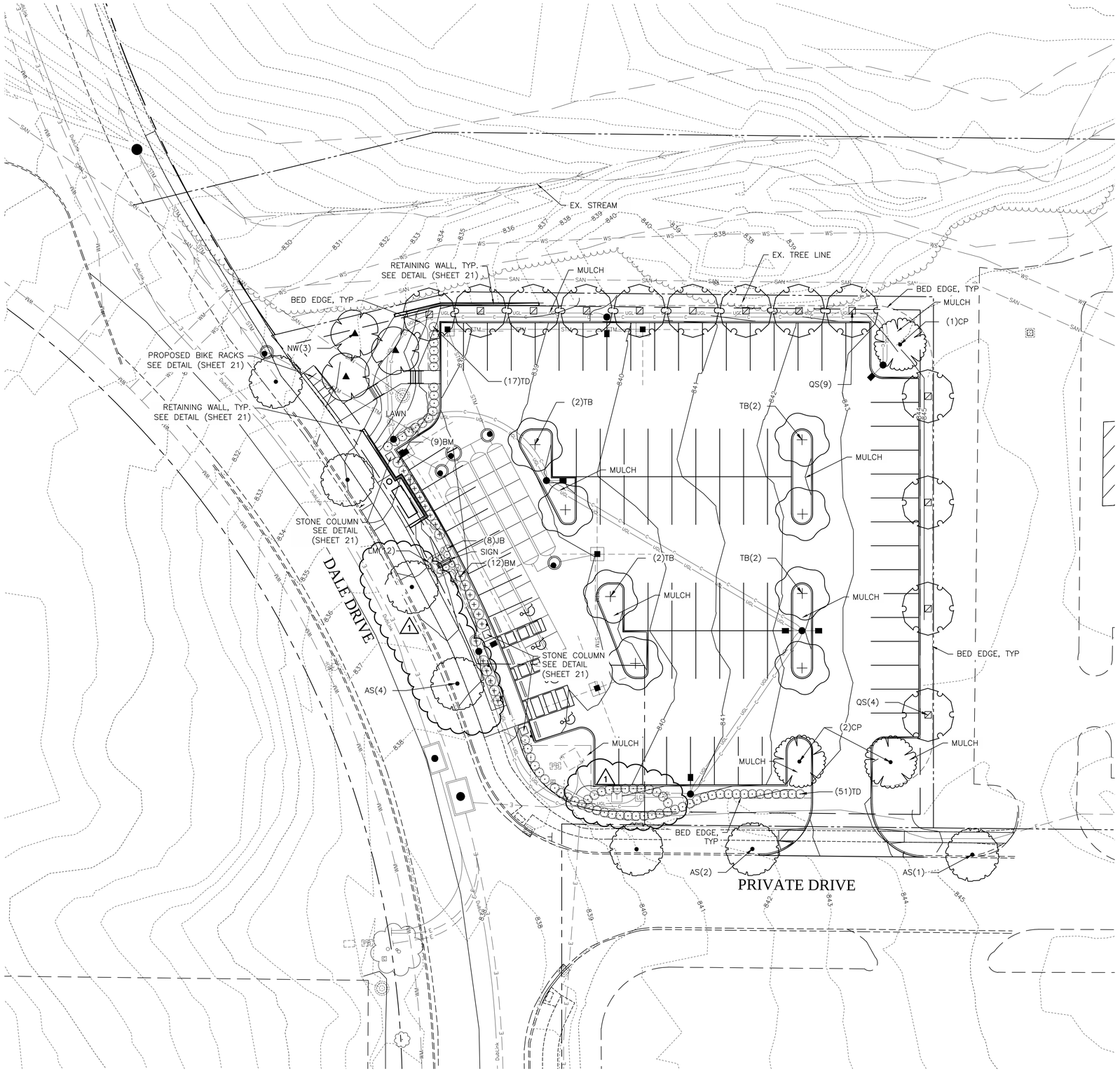


## LANDSCAPE CALCULATIONS

153.065(D)(3)(a,f(2)) – A MINIMUM OF 1 TREE PER 40 L.F. OF STREET FRONTAGE OR FRACTION THEREOF. TREES SHALL BE NO LESS THAN 2.5 CALIPER INCHES AT INSTALLATION.

±295 L.F. STREET FRONTAGE
TREES REQUIRED: 7
TREES PROVIDED: 7

153.065(D)(5)(b) – PERIMETER BUFFER NOT REQUIRED DUE TO ADJOINING SITE BEING LOCATED WITHIN THE BSD AS WELL.

153.065(D)(5)(c)(1) – A MINIMUM OF 5% OF THE INTERIOR PARKING LOT AREA SHALL BE LANDSCAPED.

TOTAL AREA = ±29,278 S.F.
±29,278 x .05 = ±1,464 S.F. LANDSCAPE REQUIRED
±2,060 S.F. LANDSCAPE PROVIDED

153.065(D)(5)(c)(2)(A) – ONE MEDIUM DECIDUOUS TREE SHALL BE PLANTED FOR EVERY 12 PARKING SPACES.

TOTAL PARKING = 85 SPACES
TREES REQUIRED = 7 TREES
TREES PROVIDED = 11 TREES

153.065(D)(5)(d) – EVERGREEN HEDGE WITH MATURE HEIGHT OF 3' PROVIDED AS ALTERNATIVE STREET LANDSCAPING.

153.065(E)(2) – 30–36" HT STREET WALL PROVIDED

TREE REPLACEMENT

TREES REQUIRED = 159" CAL
TREES PROVIDED = 85" CAL

## PLANT SCHEDULE

| TREES | QTY | BOTANICAL NAME | COMMON NAME | SIZE | CONDITION |
|---|---|---|---|---|---|
| AS | 7 | Acer saccharum | Sugar Maple | 2.5" Cal. | B&B |
| CP | 3 | Celtis occidentalis 'Prairie Pride' | Prairie Pride Hackberry | 2.5" Cal. | B&B |
| NW | 3 | Nyssa sylvatica 'Wildfire' | Wildfire Black Gum | 2.5" Cal. | B&B |
| QS | 13 | Quercus shumardii | Shumard Oak | 2.5" Cal. | B&B |
| TB | 8 | Tilia americana 'Boulevard' | Boulevard Linden | 2.5" Cal. | B&B |

| SHRUBS | QTY | BOTANICAL NAME | COMMON NAME | SIZE | CONDITION |
|---|---|---|---|---|---|
| BM | 21 | Buxus x 'Green Mountain' | Green Mountain Boxwood | 24" Ht. | B&B |
| JB | 6 | Juniperus sabina 'Buffalo' | Buffalo Juniper | 18" Spr. | Cont. |
| TD | 68 | Taxus x media 'Densiformis' | Dense Yew | 24" Ht. | B&B |

| SHRUB AREAS | QTY | BOTANICAL NAME | COMMON NAME | SIZE | CONDITION | SPACING |
|---|---|---|---|---|---|---|
| LM | 12 | Liriope muscari 'Big Blue' | Big Blue Liriope | #1 | Cont. | 18" o.c. |

STATE OF OHIO
FRANCO S. MANNO
937
REGISTERED
LANDSCAPE ARCHITECT
11-23-2015

GRAPHIC SCALE

0 10 20 40

1 inch = 20 feet

REVISIONS

| MARK | DATE | DESCRIPTION |
|---|---|---|
| 1 | 1/27/16 | Addendum 1 |

City of Dublin

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR
# DALE DRIVE COTA PARK AND RIDE
LANDSCAPE 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
November 18, 2015

SCALE
1" = 20'

JOB NO.
2014-0588

SHEET
20/22

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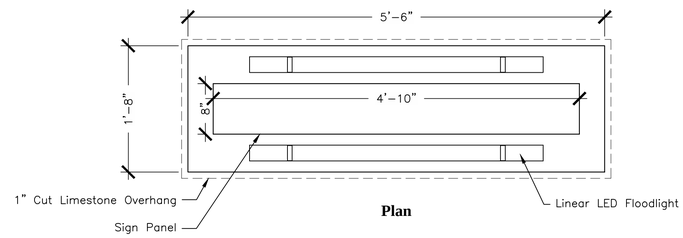
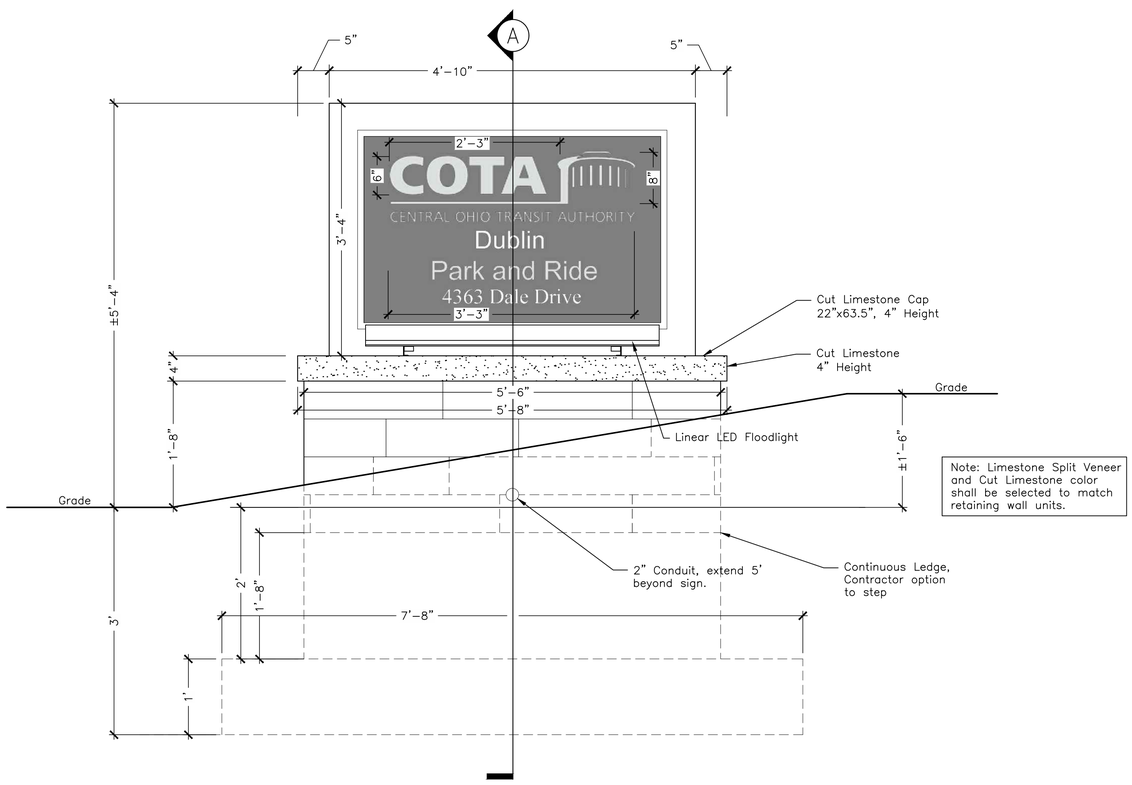
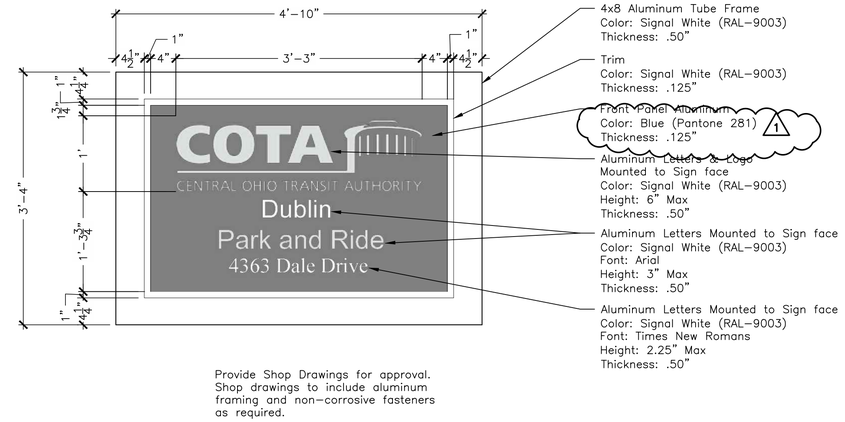



**Plan**

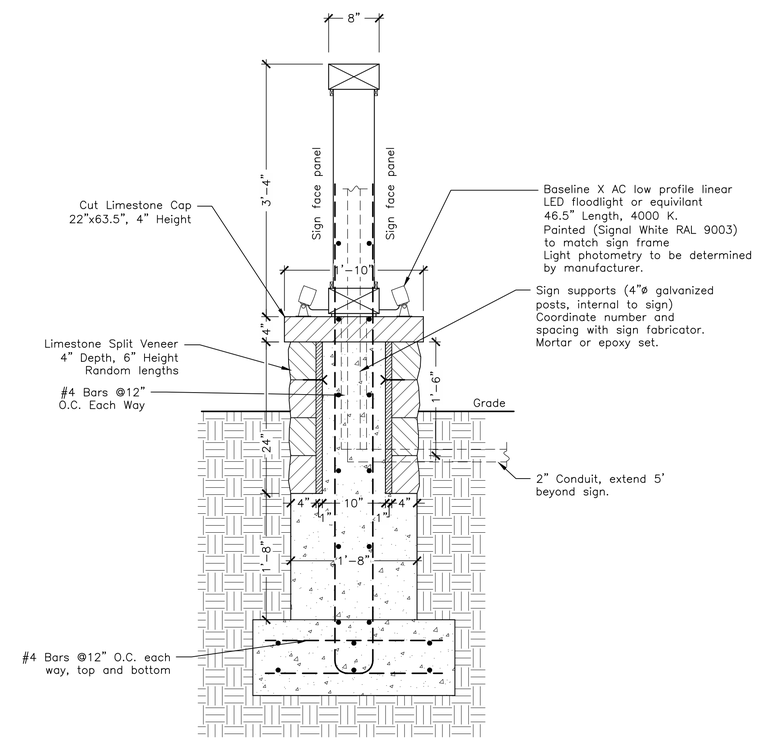



**Elevation**




Provide Shop Drawings for approval. Shop drawings to include aluminum framing and non-corrosive fasteners as required.

**Sign Panel**




**Section A**

STATE OF OHIO
FRANCO S. MANNO
8037
REGISTERED
LANDSCAPE ARCHITECT
1-13-16

**Sign**
Scale: 1" = 1'-0"

REVISIONS

| MARK | DATE | DESCRIPTION |
|---|---|---|
| 1 | 1/27/16 | Addendum 1 |

City of Dublin

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO
PRIVATE SITE IMPROVEMENT PLAN
FOR
**DALE DRIVE COTA PARK AND RIDE**
**SIGN 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
November 18, 2015

SCALE
1" = 1'-0"

JOB NO.
2014-0588

SHEET
22/22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