CONCORD PIKE AND NAAMANS ROAD PEDESTRIAN IMPROVEMENTS

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AGREEMENT 1710 – TASK 6

NEW CASTLE COUNTY, DELAWARE

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EXECUTIVE SUMMARY

Pennoni prepared this report and the accompanying Roll Plan to summarize the existing conditions of the Pedestrian Access Routes (PAR) and provide recommendations for PAR improvements along US Route 202 (Concord Pike) from the southern intersection of Rocky Run Parkway to Brandywine Parkway and along Delaware Route 92 (Naamans Road) from Concord Pike to Perry Place in the North Wilmington area of New Castle County, Delaware. The existing pedestrian facilities along the study corridor were evaluated and compared to State and Federal standards and regulations, including the latest DelDOT *Pedestrian Accessibility Standards for Facilities in the Public Right of Way*. The evaluation includes field-collected ADA curb ramp data to determine compliancy of existing sidewalks and curb ramps, crash data analysis, DART ridership information and general observations of traffic operations and pedestrian activity. The assessment identified issues with sidewalk network connectivity, existing pedestrian facilities that do not meet current ADA standards, and a general lack of pedestrian facilities along the corridor. This report provides recommendations to improve pedestrian safety and connectivity within this area of study (see Figure 1 for study area).

DelDOT currently has three projects in the study area that were in construction or recently completed as of November, 2016. The first project, 2011 HEP Site CC, includes two separate intersection improvement contracts; Contract T201501002 at the Concord Pike/Naamans Road intersection and Contract T201101001 at the Naamans Road/Brandywine Town Center intersection. Both projects included full traffic signal rebuilds with new mast arms and signal equipment plus pedestrian improvements including the addition of ADA-compliant curb ramps and signalized crosswalks. The second project, Contract T201606103, is a pavement and rehabilitation project along Naamans Road from Concord Pike to Foulk Road (Delaware Route 261), which includes pavement resurfacing of the and upgrades to curb ramps at various intersections and driveways. As of November 2016, both DelDOT projects are substantially complete with only minor punch-list items remaining. The third DelDOT project, Contract T201504004, was completed earlier in 2016 and involved improvements to the Concord Pike and Brandywine Parkway intersection. Improvements included the addition of signalized pedestrian crossings on the north and east legs of the intersection and signal equipment upgrades. A pavement and rehabilitation project is also planned for Concord Pike in the study area, but there are no details regarding the schedule or project limits at this time. In addition to the adjacent DelDOT projects, there are three planned developer projects in the study area including the new Wilmington University campus at the southeast corner of the Concord Pike and Naamans Road intersection, a AAA Car Care Center located at Brandywine Town Center off Concord Pike and Brandywine Parkway, and a convenience store and bank on the northwest corner of Concord Pike and Rocky Run Parkway. The Wilmington University campus will add a 10-foot multi-use path along Concord Pike and Beaver Valley Road, and the other two projects will add 5-foot concrete sidewalks to missing sidewalk links on the frontage of these properties. The proposed PAR project that is the subject of this report will tie in with each of these planned projects and will improve existing pedestrian facilities to provide an ADA-compliant pedestrian network along Concord Pike and Naamans Road within the study area. Although outside of the specified study area for this report, existing conditions on Naamans Road between Perry Place and Shipley Road and along the westerly side of Concord Pike were evaluated and shown on the Roll Plan to provide a more complete picture of the PAR network in the area with the completion of the adjacent DelDOT projects. The adjacent DelDOT and developer projects described above are displayed in Figure 2.

Concord Pike is a six-lane divided highway with a concrete median and exclusive turn lanes at major intersections within the study area. It is classified as a principal arterial with a posted speed limit of 50 MPH. Naamans Road is a four-lane divided highway with a concrete and grass median and exclusive turn lanes at major intersections within the study area. It is classified as a principal arterial with a posted speed limit of 40 MPH. No bicycle lane markings are provided within the study area and the entire study corridor contains curb and gutter along both sides of the road with a closed drainage system. There are five signalized intersections within the area of study which includes Concord Pike and South Concord Mall driveway, Concord Pike and Rocky Run Parkway/North

Concord Mall driveway, Concord Pike and Naamans Road, Concord Pike at ACE USA Entrance, and Concord Pike and Brandywine Parkway.

Land uses in the study area include a busy mix of commercial, residential, and farmland. The Concord Mall, Brandywine Commons Shopping Center, Brandywine Town Center and Market Square Shopping Center are large commercial/retail hubs within this area. Residential uses include the Perry Park single-family development and Stratford Apartments on the south side of Naamans Road and the Devonshire single-family development located behind the Concord Mall with access to/from Shipley Road. Other land uses in the study area include the Grace Episcopal Church located on the westerly side of Concord Pike opposite the Concord Mall and two large office buildings at the northwest corner of Concord Pike and Naamans Road. The 42 acres of farmland that currently exists at the southwest corner of Concord Pike and Naamans Road will be developed into the new Wilmington University campus comprised of three buildings totaling 200,000 SF and accommodating approximately 1000 students and 250 faculty.

Regarding existing pedestrian facilities, much of the eastern side of Concord Pike lacks sidewalk in the study area. Some of the western side of the roadway has sidewalks with curb ramps that are both ADA compliant and non-compliant. There is currently no sidewalk on Concord Pike as it approaches the Naamans Road intersection from either direction. Sidewalk is present on both sides for much of Naamans Road except for the stretch approaching Concord Pike. Most of the existing curb ramps on Naamans Road were reconstructed as part of the pavement and rehabilitation project currently under construction. Though not a simple application in all locations, it is feasible to add sidewalk in places where it is missing, which will result in a continuous PAR throughout the study area.

Crash data was provided by DelDOT for the most recent three-year period, from May 2013 to May 2016. A total of 323 crashes were reported during that period, of which five (5) involved pedestrians. The five pedestrian crashes resulted in one fatality and four personal injuries. An additional pedestrian fatality recently occurred on November 14, 2016 outside of this study period.

The Delaware Transit Corporation (DTC) operates DART Bus Route 2, 35, & 61 along Concord Pike and Naamans Road. These routes connect the study area to Wilmington and Claymont. There are twenty-nine bus stops in the general area covered by the Roll Plan; however, only five of these stops are within the narrowed study area of this project. The five stops are all near the Concord Pike and Naamans Road intersection with most of the surrounding stops located in shopping centers such as Concord Mall, Brandywine Town Center, and Brandywine Commons.

Existing corridor lighting is provided along both directions of Concord Pike from the southern project limits to the Naamans Road intersection. Intersection lighting is provided at the Naamans Road and Brandywine Town Center intersection, but is otherwise sparse throughout the project limits. Signing and striping in the study area was observed to be adequate and in good condition. Brand new signing and striping is provided along Naamans Road as part of the pavement and rehabilitation project currently under construction.

The proposed PAR design recommends both corridor-wide and intersection specific improvements based on the *DelDOT Pedestrian Accessibility Standards for Facilities in the Public Right of Way*.

Corridor-Wide Recommendations

- Construct ADA-compliant sidewalk and curb ramps along Concord Pike and add missing links on Naamans Road between the Concord Pike intersection and existing ADA-compliant facilities as shown on the Roll Plan.
- Modify the existing retaining wall along northbound Concord Pike between the southern and northern Concord Mall entrances to increase the wall height to provide an ADA-compliant PAR along the eastern side of Concord Pike. Pending structural/geotechnical analysis, extend the wall height to approximately 3 feet above roadway grade to eliminate the need for existing guardrail and proposed pedestrian hand rail.

- Reconstruct commercial driveways/entrances along northbound Concord Pike at Days Inn and Bank of America and along eastbound Naamans Road at The Shoppes at Naamans Shopping Center to meet minimum PAR requirements and current DelDOT entrance standards.
- Implement median fencing/barrier as shown on the Roll Plan to prevent unwarranted mid-block crossings.
- Reduce the southbound Concord Pike shoulder width from approximately 13 feet to 10 feet along the 300-foot long Grace Episcopal Church cemetery frontage to provide sidewalk without impacting the existing stone wall. Curb and drainage relocation will be required.
- Perform a lighting evaluation to determine the need for additional lighting along Concord Pike and Naamans Road.
- Provide minimum 8'x5' bus stop pads at marked DART bus route stops in accordance with DART/DelDOT standards.
- During preliminary design, review all signing and pavement markings along Concord Pike throughout the study corridor and consider pavement testing to determine the need for pavement resurfacing.

Intersection Improvements

- Concord Pike and Southern Concord Mall Entrance – Install a signalized pedestrian crossing across the east leg of the intersection which will require geometric improvements to the existing median/barrier and adjustment of stop bar locations. Install a two-stage signalized pedestrian crossing of Concord Pike concurrent with the southbound left-turn and westbound left-turn phase. Reconstruction of the existing concrete median will be required to provide an ADA-compliant curb ramps/refuge area with pedestrian signals.
- Concord Pike and Northern Concord Mall Entrance – Install a signalized pedestrian crossing across the east leg of the intersection, which will require geometric improvements to the existing channelizing islands to accommodate ADA-compliant curb ramps/refuge areas with pedestrian signals. In conjunction with the reconstruction of the northeast island, install an approximately 150-foot long mountable concrete curb median to formalize a channelized acceleration lane and reduce weaving conflicts between exiting mall traffic and northbound Concord Pike traffic destined for Naamans Road.
- Concord Pike and Naamans Road – Install sidewalk at the southeast and northeast quadrants of the intersection to connect to the pedestrian facilities constructed under Contract 201501002.
- Concord Pike and Brandywine Parkway – No improvements are recommended at this intersection. Pedestrian facilities were recently added under Contract T201504004 and the proposed AAA Car Care Center development will complete the missing sidewalk link along the east side of Concord Pike, connecting to the recently constructed intersection pedestrian improvements.
- Concord Pike and ACE USA – Install signalized pedestrian crossings across the south and west legs of the intersection, which will require geometric improvements to the existing channelizing islands to accommodate ADA-compliant curb ramps/refuge areas with pedestrian signals.

Prior to the submission of the Concord Pike/Naamans Road PAR Findings Report and Roll Plan, Pennoni had met with representatives of DelDOT's PAR Program and Project Development North Section in October 2016 and with representatives of DelDOT's Traffic Section in November 2017. At each meeting, the Concord Pike/Naamans Road PAR project was briefly discussed in addition to other ongoing PAR projects. The minutes from these

coordination meetings are provided in Appendix A. Pennoni looks forward to facilitating a meeting with various departments of DelDOT to determine an implementation strategy for constructing the proposed Concord Pike/Naamans Road PAR improvements.

INTRODUCTION

The purpose of this study was to assess and provide recommendations to enhance existing pedestrian accommodations along Concord Pike from the southern intersection of Rocky Run Parkway to Brandywine Parkway and along Naamans Road from Concord Pike to Perry Place in the North Wilmington area of New Castle County, Delaware. Existing pedestrian facilities were compared to State and Federal standards and regulations, including the latest DelDOT *Pedestrian Accessibility Standards for Facilities in the Public Right of Way*. The assessment identified issues with sidewalk network connectivity deficiencies and provides recommendations to improve pedestrian safety and connectivity along these sections of Concord Pike and Naamans Road.

Background

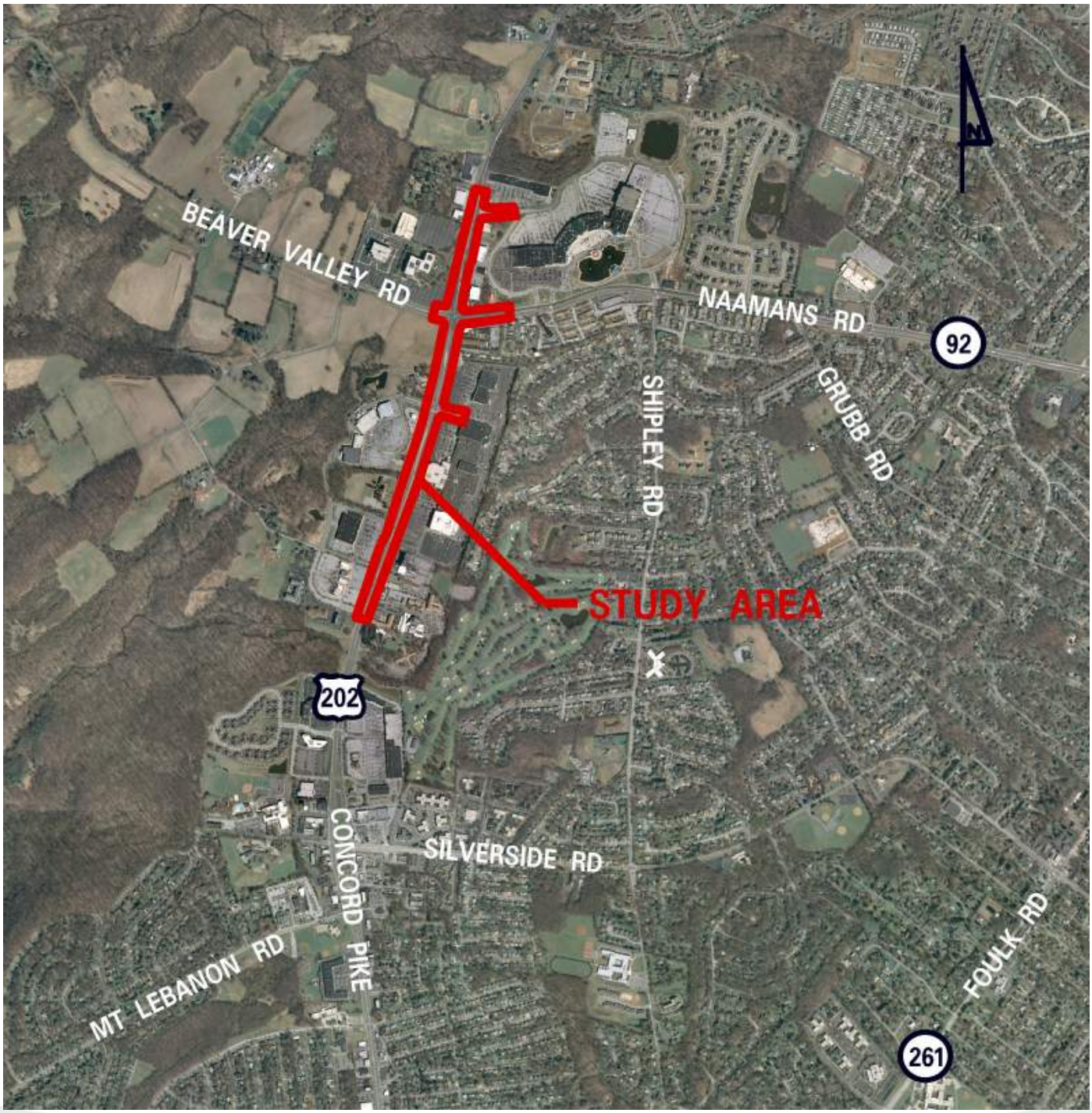
In January 2012, the Wilmington Area Planning Council (WILMAPCO) published a report titled: *Top Pedestrian Priority Segments: An Analysis of the WILMAPCO Region*. The WILMPACO study scored 33,000 individual road segments for pedestrian improvement prioritization and ranked them based on surrounding population and employment density, pedestrian crash rates, and proximity to shops, libraries and community centers. The report focuses on the top 20 pedestrian priority areas in the region encompassing New Castle County, Delaware and Cecil County, Maryland. While the WILMAPCO study did not specifically recommend pedestrian facility improvements within these segments of Concord Pike and Naamans Road, they are located within the Pedestrian Priority Area (due to location of several DART Route Bus Stops) and the stops' interaction with pedestrian generators. In addition, based on the *Delaware Strategic Highway Safety Plan* (2015) this study area presents a need for pedestrian safety improvements because "a large portion of pedestrian crashes occur on high-speed, multi-lane suburban corridors that are surrounded by commercial and residential land uses and significant transit usage which combine to create an unsafe environment for pedestrian crossings."

The Delaware Department of Transportation (DelDOT) has identified three projects that are within or border the study area of this study area. The projects are: Wilmington University campus on the southwest corner of the Concord Pike/ Naamans Road intersection, a convenience store and bank on the northwest corner of Concord Pike and Rocky Run Parkway, and a AAA Car Care Center near the northern Concord Pike study area limit in the Brandywine Town Center. The latter two projects are not assumed to have any real impact on pedestrian/bicycle trip generation, but Wilmington University may create measurable pedestrian trips to Brandywine Town Center, Concord Mall and other commercial attractions within a half mile radius of the campus. The PAR project that is the subject of this report seizes on the opportunity to improve the corridor's pedestrian compatibility in conjunction with these projects.

Study Area

The study area for the pedestrian facilities assessment is limited to the stretch of Concord Pike (US 202) from the southern intersection of Concord Pike and Rocky Run Parkway to Brandywine Parkway, and the stretch of Naamans Road (SR 92) between Concord Pike and Perry Place. This study area is in New Castle County, north of the City of Wilmington and is approximately 6,300 linear feet (1.19 miles) in length. Figure 1 shows the study area location.

Figure 1 - Site Location Map



ADJACENT PROJECTS

DelDOT's Transportation Solutions, Traffic Safety and Development Coordination Sections were contacted to determine active DelDOT and developer projects in the study area which may require roadway improvements. The various sections of DelDOT confirmed that there are three active/recently completed DelDOT projects and three planned developer projects within the study area. DelDOT's Traffic Safety Section also confirmed that all improvements proposed as part of past Highway Safety Improvement Program (HSIP) or Hazard Elimination Program (HEP) sites have been implemented. The three DelDOT projects and three planned developer projects are described below and shown in Figure 2. Relevant plans for each project can be found in Appendix B.

DelDOT Projects

- 2011 HEP, Site CC – Concord Pike and Naamans Road Intersection Improvements (T201501002) and Naamans Road and Brandywine Town Center Intersection Improvements (T201101001) - The two intersections listed above were identified as Site CC in the 2011 Hazard Elimination Program (HEP). Improvements at each of these intersections were recently completed under separate contracts in advance of the Naamans Road Pavement and Rehabilitation project described below. These HEP projects involved full traffic signal rebuilds with new mast arms and signal equipment plus pedestrian improvements including the addition/reconstruction of ADA-compliant curb ramps and signalized crosswalks and improved intersection lighting. New crosswalks were added to the north, east and west legs of the Concord Pike/Naamans Road intersection, although the signed signal plan from February 2015 shows the proposed Concord Pike crosswalk on the south leg. A field visit on November 11, 2016 revealed that the new signal equipment is in operation and curb ramps are complete at each intersection, but the permanent pavement markings that are part of the pavement and rehabilitation project had not yet been placed.



NE Corner of Concord Pike & Naamans Road Intersection looking West (taken 11/11/16)

- Pavement and Rehabilitation North III, 2016, SR 92 Naamans Road (T201606103) - This DelDOT Pavement and Rehabilitation project includes pavement resurfacing and curb ramp upgrades along the approximately 2.35-mile stretch of Naamans Road from Concord Pike to Foulk Road (SR 261). Pedestrian improvement within the extended study area that is shown on the companion Roll Plan include the installation of curb ramps at the northeast and southeast corners of Naamans Road and Concord Pike, and reconstruction of existing curb ramps at the intersections of Naamans Road with the Magic Car Wash Driveways, Perry Place, Talley Place and Shipley Road. A field visit on November 4, 2016 revealed that the curb ramps are complete within the project limits. The paving of the traveled way was complete on this date, but paving of the shoulders was not performed. It should be noted that the Naamans Road Pavement and Rehabilitation project did not address the existing curb ramps at either of the two driveways to the Shoppes at Naamans Shopping Center, located west of Shipley Road.

- US 202 (Concord Pike) at Brandywine Parkway Signal Improvements (T201504004) - This stand-alone intersection improvement project included the installation of signalized crosswalks on the north and east legs of the Concord Pike/Brandywine Parkway (aka Brandywine Raceway Entrance) intersection. The existing channelizing islands were reconstructed and extended to accommodate ADA-compliant curb ramps and pedestrian signals with pushbuttons. Isolated curb ramps were also constructed on the

northeast, southeast and northwest corners of the intersection. Signal equipment upgrades were also implemented via this project which include a new signal controller cabinet, new signal heads and emergency preemption opticoms, new wiring, and several new junction wells and conduit runs to accommodate the new pedestrian signal equipment. The plans for this project were signed in November, 2015 and construction was completed in 2016.

Developer Projects

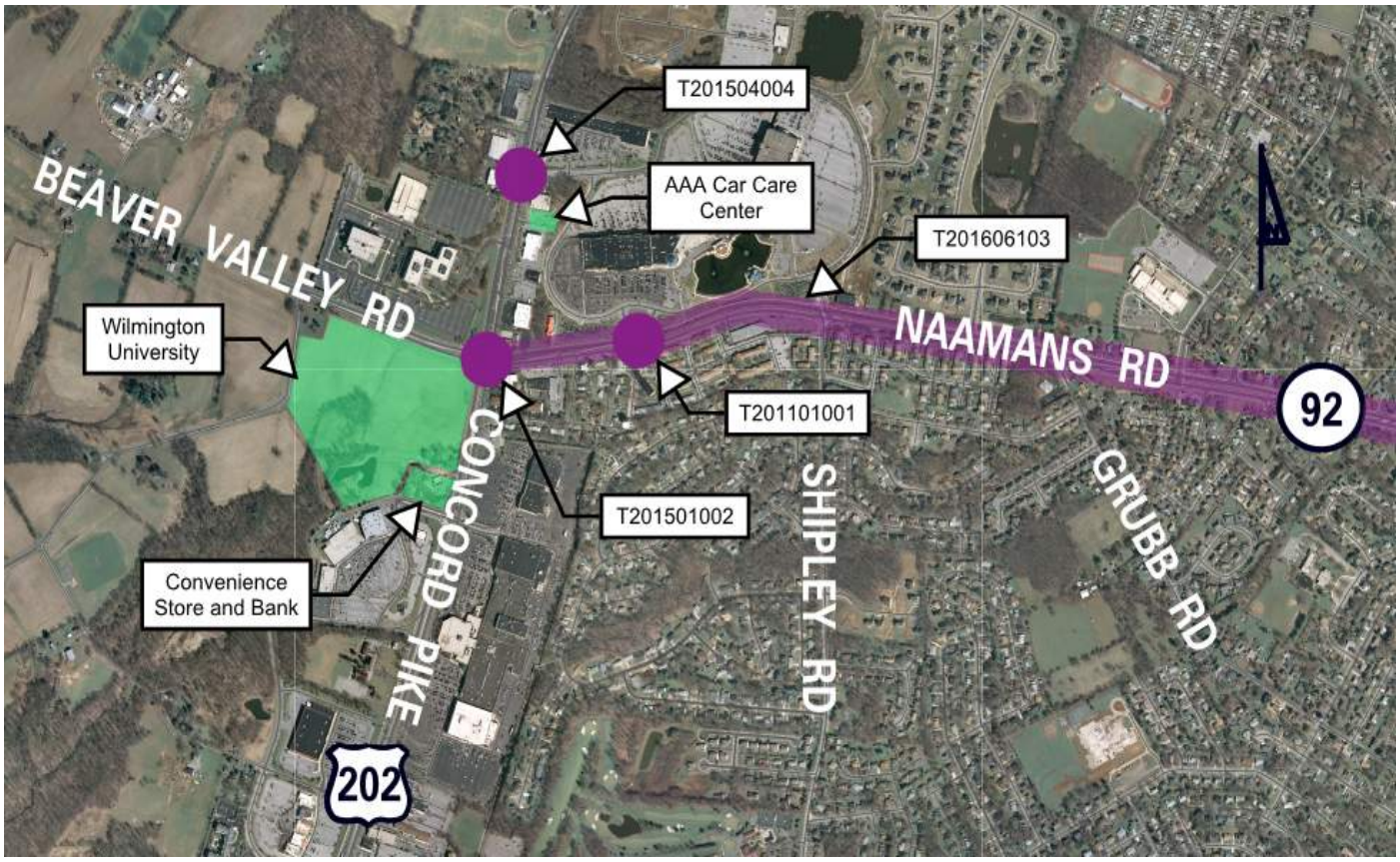
- Wilmington University – The new commuter campus for Wilmington University will be located at the southwestern corner of the Concord Pike and Naamans Road intersection. This development includes a 10-foot multi-use path along the west side of Concord Pike and Beaver Valley Road that circles the entire complex. The new Wilmington University Campus will be composed of three buildings totaling 200,000 SF/GFA, accommodating approximately 1000 students supported by 250 faculty and administrative staff. The parcel is 42 acres and the buildings and parking areas will cover approximately 19 acres of that total. It is required through a mitigation agreement with New Castle County to reduce its use of single-occupant automobiles by 15 percent leading to more car-pooling and transit use, both of which will likely increase pedestrian activity in the area, especially at the intersection of US 202/SR 92 and its approaches.

- AAA Car Care Center – The proposed car care center will be located in the Brandywine Town Center along northbound Concord Pike just south of the signalized intersection at Brandywine Parkway. This project will add 5-foot wide concrete sidewalk along the Concord Pike frontage, filling in a missing link between the existing right-in/right-out access and the southeast corner of the Concord Pike/Brandywine Parkway intersection. This project will route the PAR from the southeast corner of the intersection, through the parking lot and along the existing sidewalk in front of the Basset Furniture store, crossing the parking lot access from Brandywine Parkway to a proposed link of 5-foot wide sidewalk along the south side of Brandywine Parkway.

- Convenience Store and Bank – The proposed commercial development will be located on the northwest corner of Concord Pike and Rocky Run Parkway, adjacent to the proposed Wilmington University Campus. This project will add a 5-foot wide concrete sidewalk link on the north side of Rocky Run Parkway, connecting to the existing sidewalk/curb ramp at the northwest corner of the Concord Pike/Rocky Run Parkway intersection.

The proposed PAR project that is the subject of this report will complement each of these planned projects to improve pedestrian facilities and provide an ADA-compliant pedestrian network along Concord Pike and Naamans Road within the area of study.

Figure 2 - Adjacent Projects Map



EVALUATION OF EXISTING CONDITIONS

Site Description

Within the study area, Concord Pike is a six-lane divided highway with a concrete median and exclusive turn lanes at major intersections. Concord Pike is classified as a principal arterial with a posted speed limit of 50 MPH. Per DelDOT's 2015 Traffic Summary, the annual average daily traffic (AADT) along Concord Pike is approximately 30,162 vehicles per day (vpd) south of Naamans Road and 42,821 vpd north of Naamans Road to the state line. The area of this study along Concord Pike is approximately one-mile-long and includes six signalized intersections and several residential and business driveways.

Within the study area, Naamans Road is a four-lane divided highway with a concrete and grass median and exclusive turn lanes at major intersections. Naamans Road is classified as a principal arterial with a posted speed limit of 40 MPH. Per DelDOT's 2015 Traffic Summary, the AADT along Naamans Road is approximately 26,301 vpd. The Naamans Road study area within the limits of proposed improvements for this project is approximately 600 feet long miles long and contains several unsignalized business driveways. The expanded study area shown on the Roll Plan includes the abnormal signalized 3-legged intersection with Brandywine Parkway and the Stratford Apartments entrance and the signalized intersection with Shipley Road and the western access to Brandywine Parkway. Pedestrian facilities were recently upgraded at these intersections which both contain signalized crosswalks and ADA-compliant curb ramps. The sidewalk network is complete along both side of Naamans Raod in this expanded study area.



East Side of Concord Pike looking North (taken 11/4/16)

The focused study area currently lacks sidewalks along most of the easterly side of Concord Pike, small stretches of the western side of Concord Pike and on both sides of Naamans Road just east of Concord Pike. This report outlines the proposed improvements necessary to provide pedestrian connectivity throughout the study area. These stretches to be filled in have evidence of current pedestrian use due to the presence of goat paths. Based on archive plans, the right-of-way width is approximately 150 feet along Concord Pike that varies in certain locations and 128 feet along Naamans Road. Both roadways contain curb and gutter along both sides of the road with a closed drainage system. There are several areas with utility conflicts and grade differences that will require meandering of the PAR, potential utility relocation, installation of retaining wall and modified retaining curb, etc. These potential conflicts and proposed design elements are outlined in the Recommended Improvements section of this report.

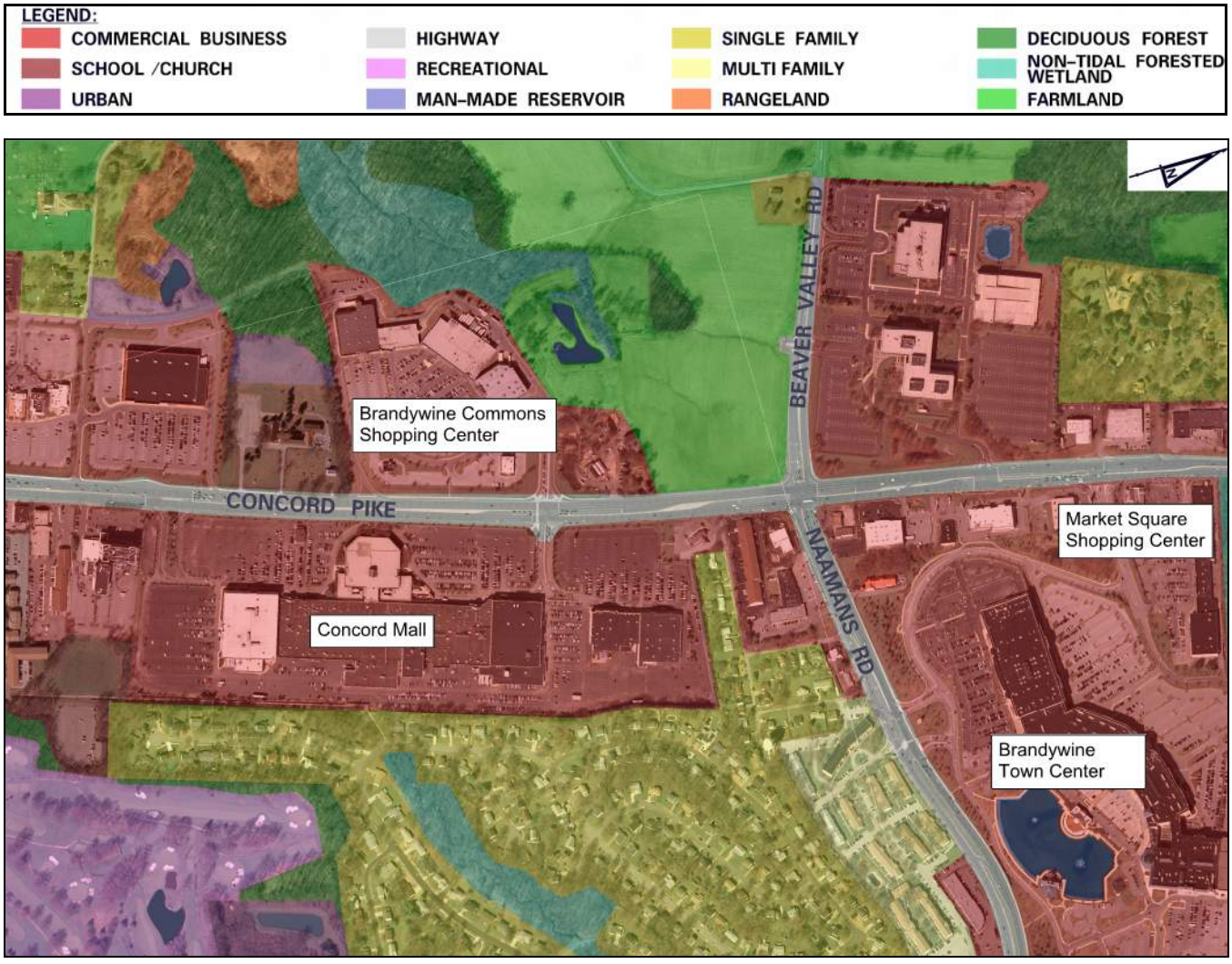
No bicycle lane markings are provided along the Concord Pike corridor. Adequate shoulder width for cyclists is very limited along this section of Concord Pike due to the presence of high-volume auxiliary lanes. Per the New Castle County Bicycle Map, Concord Pike is identified as a high traffic roadway that is challenging for cyclists and is not identified as a bicycle route. Naamans Road is classified as a high-traffic Regional Bicycle Route with a bikeway. Regional Bicycle Routes provide connections from local activity and recreational centers to the larger bicycle network.

The Delaware Transit Corporation (DTC) operates DART Bus Route 2, 35, & 61 along Concord Pike and Naamans Road. These routes connect the study area to Wilmington and Claymont. There are twenty-nine bus stops within the immediate area; however, only five of these stops are within the study area of this project. The five stops within the study area of this project are all near the Concord Pike and Naamans Road intersection. Most of the surrounding stops are in shopping centers such as Concord Mall, Brandywine Town Center, or Brandywine Commons.

Land Use

Land uses in the study area include a busy mix of commercial, residential, and farmland. The Concord Mall (950,000 SF), Brandywine Commons Shopping Center (165,000 SF), Brandywine Town Center (875,000 SF) and Market Square Shopping Center (100,000 SF) are large commercial/retail hubs within this area. Residential uses include the Perry Park single-family development and Stratford Apartments on the south side of Naamans Road and the Devonshire single-family development located behind the Concord Mall with access to/from Shipley Road. Other land uses in the study area include the Grace Episcopal Church located on the westerly side of Concord Pike opposite the Concord Mall and two large office buildings at the northwest corner of Concord Pike and Naamans Road. The farmland that currently exists at the southwest corner of Concord Pike and Naamans Road will be developed into the new Wilmington University campus. A map of existing land use is provided in Figure 3 below.

Figure 3 - Existing Land Use Map



Sidewalks and Curb Ramps

Currently, most of the Concord Pike study corridor lacks sidewalk on the east side of the roadway. There are stretches of sidewalk along the west side of the roadway that include curb ramps that are both ADA compliant and non-compliant. Naamans Road currently has sidewalk along most of the study corridor; however, there is no sidewalk connecting to the Concord Pike and Naamans Road intersection. Existing curb ramps and sidewalk segments within the study area were measured in the field to determine ADA compliancy. The field measurements and summary of results are provided in Appendix C. The existing sidewalk segments and curb ramps are described below.

East Side of Concord Pike:

- South of the southern entrance to the Concord Mall, there is existing sidewalk along the east side of Concord Pike from the study limits at the entrance to Widener University to the southern mall entrance. This segment is five feet wide and ADA-compliant, but terminates at a non-compliant curb ramp at the right-in only entrance to the mall, which does not connect to a crosswalk or any other pedestrian facilities. There are nine curb ramps in the stretch between Widener University and the southern mall entrance that are not ADA-compliant based on visual observations.
- An approximately 300-foot long segment of sidewalk exists in front of the Kitchen & Company, Leisure Fitness, and Jared Galleria of Jewelry shops north of the Naamans Road intersection. This sidewalk is five feet wide and ADA compliant. The sidewalk ends abruptly at the southern end and does not connect to any pedestrian facilities. The northern terminus of the sidewalk wraps around the right-in, right-out access to the Brandywine Town Center and into the parking lot. A non-compliant curb ramp is provided at the southeast corner of the right-in, right-out access, but there is no marked crosswalk or receiving ramp on the northeast corner of the access.

West Side of Concord Pike:

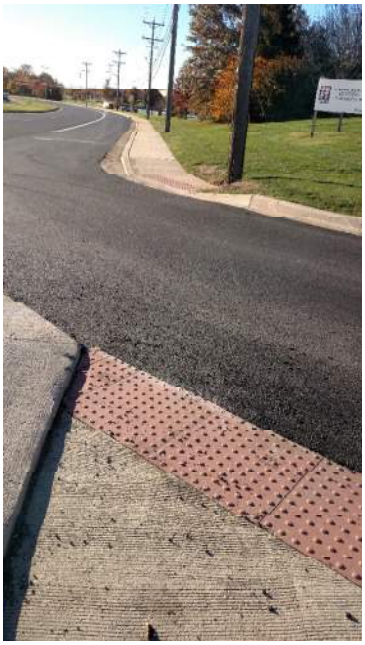
- Existing ADA-compliant sidewalk is provided from the southern intersection of Concord Pike and Rocky Run Parkway to the Northern Concord Mall Entrance. This sidewalk (approximately 2000 feet total) is continuous except for an approximately 350-foot stretch in front of the Grace Episcopal Church. Other than this stretch, the entire length of sidewalk includes ADA-compliant curb ramps at all crossings.
- There is no sidewalk on the Western side of Concord Pike North of Naamans Road.

North Side of Beaver Valley Road:

- On the northwest corner of the Naamans Road and Concord Pike intersection, there is an existing sidewalk segment that is four feet wide. This segment extends from this intersection corner to the parking lot of Ace USA and is approximately 180 feet in length.

North Side of Naamans Road:

- There is a five-foot wide sidewalk that runs along the north side of Naamans Road starting at the southern parking lot for Raymour & Flanigan that continues beyond the limits of this project. The curb ramps at each crossing along this existing stretch of sidewalk have been recently reconstructed to meet ADA standards.



North Side of Naamans Road looking West (taken 11/4/16)

South Side of Naamans Road:

There is 5-foot wide sidewalk that runs along the south side of Naamans Road starting east of the Talley Ho Shopping Center and Continuing beyond the limits of this project. The curb ramps at each crossing along this existing stretch of sidewalk have been recently reconstructed to meet ADA standards with the exception of the two driveways for the Shoppes at Naamans Shopping Center.

Signalized Intersections

There are five signalized intersections located within the study area. The intersections within the project limits are described below:

Concord Pike and Rock Run Parkway (Widener University):

This four-leg intersection contains existing pedestrian facilities, including signalzed crossings across the west, south and east legs. The existing curb ramps are all ADA-compliant except the curb ramp in the island separating the entrance and exit of Widener University on the east leg. This curb ramp lacks detectable warning surface, but is otherwise compliant.

Concord Pike at Concord Mall Entrance (South):

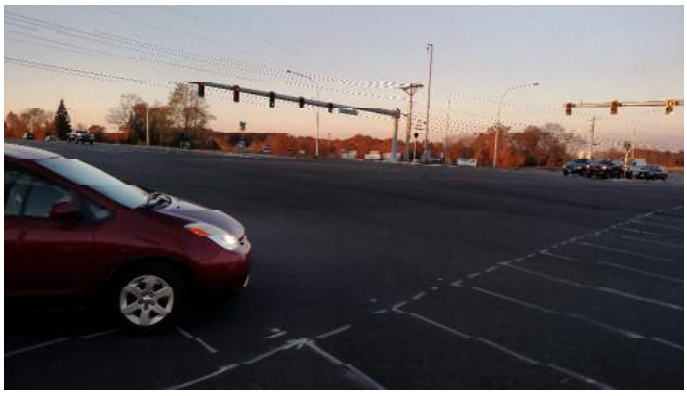
This unconventional three-leg signalized intersection separates the southbound lefts-in to the mall from the westbound lefts-out by an approximate 50-foot wide median along the mall driveway. The large median allows the lefts-in and lefts-out to operate concurrently, thus reducing the impact to Concord Pike through traffic. There is existing sidewalk along the western side of Concord Pike near this intersection. There is existing sidewalk on the east side of Concord Pike, south of this intersection, which terminates at a non-compliant curb ramp near the southwest corner of the intersection. There are no pedestrian signals or marked crosswalks at this intersection.

Concord Pike at Concord Mall Entrance (North):

This four-leg signalized intersection contains pedestrian crossings with pedestrian signals (with countdown displays), pushbuttons and marked crosswalks across the west Rocky Run Parkway leg, and the south Concord Pike leg of the intersection. The pedestrian crossings connect to an existing sidewalk network on the west side of Concord Pike, while there is a single curb ramp on the southeast corner of the intersection that does not connect to any existing pedestrian facilities.

Concord Pike and Naamans Road:

This four-leg signalized intersection is currently undergoing improvements as part of DelDOT Contracts T201501002 and T201606103. Contract T201501002 involves signal equipment upgrades including replacing the span wire with mast arms, installing pedestrian signals, curb ramps and crosswalks, new signal controller cabinet, signal heads, cables and revised signal timings and phasings. The Naamans Road pavement and rehabilitation project (Contract T201606103) is currently finishing up behind the signal improvement project with updated signing and striping at the intersection.



Concord Pike and Naamans Road Intersection Northeast corner (taken 11/11/16)

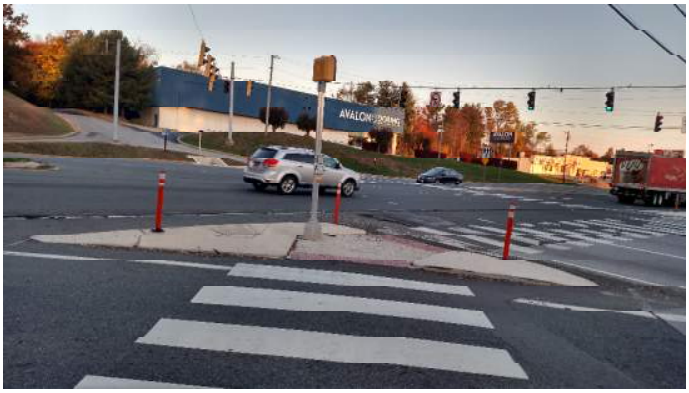
Concord Pike at Ace USA Entrance:

This three-leg signalized intersection does not contain pedestrian facilities. There are concrete channelizing islands at the eastbound approach from the office complex, but there are no curb ramps or sidewalks at this

intersection. Pennoni conducted several field observations during lunch time, and there was no pedestrian activity observed at this intersection.

Concord Pike and Brandywine Parkway:

This three-leg signalized intersection was recently updated under Contract 201504004, which included the installation of pedestrian crossings with pedestrian signals, pushbuttons and marked crosswalks across the northern and eastern legs of the intersection. The east leg contains two channelizing islands with signal heads and pushbuttons for pedestrian refuge. The receiving curb ramps at the northeast, southeast and northwest corners of the intersection do not connect to any existing pedestrian facilities.



Concord Pike and Brandywine Parkway Intersection
Southeast corner (taken 11/11/16)

Crash Data

Crash summary reports were provided by DelDOT for all types of crashes during the last three years, from May 2013 to May 2016. A total of 323 crashes were reported within the 3.36-mile section of Concord Pike from just south of Rocky Run Parkway to Zeigler lane and 0.63 miles along Naamans Road from the Concord Pike intersection to 500 feet past the Shipley Road intersection. The data indicated that during the 3-year period, five (5) crashes (approximately 1.5%) of the 323 crashes involved pedestrians, resulting in one fatality and four injuries along this section of Concord Pike and Naamans Road.

Following is a summary of the crashes by type:

- 35 crashes (11%) resulted in personal injury (55 injuries total).
- Eight (8) of the reported crashes (2.5%) of the 323 crashes were alcohol related.
- 103 crashes (32%) of the total crashes were of people from ages 16-29.
- 95 crashes (29%) of the total crashes occurred in dark conditions (lighted and not lighted).
- 250 crashes (77%) of the total crashes occurred in dry conditions.
- 230 crashes (71%) of the 323 crashes were reported to happen under clear weather conditions.
- No crashes related to speeding were reported during the 3-year period.

Of the 323 reported crashes, 32 crashes (10%) occurred at the Rocky Run Parkway and Concord pike intersection, 28 crashes (9%) occurred at the southernmost entrance to Concord Mall, 36 crashes (11%) occurred at the northern entrance to Concord Mall, 93 crashes (29%) occurred at the Concord Pike and Naamans Road intersection, 27 crashes (8%) occurred at the Concord Pike entrance to Brandywine Town Center, 27 crashes (8%) occurred at the Naamans Road entrance to Brandywine Town Center, and 44 crashes (14%) occurred at the Naamans Road and Shipley Road intersection. 211 of the 323 crashes obtained (65%) occurred with the limits of this project. A summary of the crash reports is provided in Appendix D.

The following are details of each of the five (5) pedestrian-involved crashes:

- A personal injury crash occurred when a pedestrian attempted to cross Concord Pike, west-to-east, 50 yards south of the north entrance to the Concord Mall. While crossing the road, not in a crosswalk, the pedestrian was struck by a vehicle in the right turn lane who did not see the pedestrian until he was struck. The crash occurred 50 yards from a marked crosswalk with a traffic light and pedestrian signal. The crash occurred at 4:29 PM during daylight hours. The weather was clear and the surface condition was dry.

- A personal injury crash occurred when a pedestrian jumped into the roadway when a vehicle was traveling in the right turn lane on Naamans Road approaching Concord Pike. The pedestrian was described as "shadowboxing" and the driver of the vehicle was unable to react and stop in time. This pedestrian was known for acting in this way before and had been told on multiple occasions to stay on the sidewalks. The crash occurred at 10:16 PM while dark, but the area was lighted. The weather was clear and the surface condition was dry.

- A pedestrian fatality occurred at the intersection of Concord Pike and Rocky Run Parkway as a pedestrian crossing westbound across the northbound lanes of Concord Pike was struck by a vehicle traveling northbound in the far-left lane. The pedestrian crossed at a marked crosswalk without yielding to oncoming traffic. The crash occurred at 8:07 AM during daylight hours. The weather was clear and the surface condition was dry.

- A pedestrian was struck by a vehicle while attempting to cross Concord Pike near the southern limits of this project. While crossing at an unmarked location, the pedestrian was hit by a vehicle traveling in the left lane and resulted in personal injury. The crash occurred at 5:30 AM in the dark, and the area was not lighted. The weather was clear and the surface condition was dry.

- A pedestrian was struck by a vehicle at the intersection of Naamans Road and the entrance to the Brandywine Town Center, resulting in personal injury. The pedestrian stated that he was not paying attention and walked out into the street at a crosswalk while not having the walk sign and was struck by a westbound vehicle that had a green light. The crash occurred at 5:43 AM while dark, but the area was lighted. The weather was clear and the surface condition was dry.

- UPDATE: On November 14, 2016, a pedestrian was struck and killed crossing Concord Pike south of the northern Concord Mall entrance. This crash occurred at 8:20 PM during dark lit conditions. The pedestrian was not using a crosswalk and was wearing dark-colored clothing. Alcohol use by the pedestrian is considered as a factor in the crash. It should be noted that this crash occurred outside of the 3-year study period from May 2013 to May 2016.

Transit Inventory

Currently, the Delaware Transit Corporation (DTC) operates DART Route 2, 35, & 61 along Concord Pike and Naamans Road within the study area. Route 2 runs along Concord Pike and connects Brandywine Town Center and Concord Mall to the Septa and Amtrak stations in Wilmington. Route 35 follows a similar route; it also connects Brandywine Town Center and Concord Mall to the Septa and Amtrak stations in Wilmington, but detours along Naamans Road and Shipley Road with stops along residential areas. Route 61 runs along Naamans Road and connects the Concord Mall and Brandywine Town Center to Claymont. It has stops at the Claymont Train Station and Tri State Mall.

There are twenty-nine bus stops within the general area covered by the roll plan; however, only five of these stops are within the immediate study area of this project. These five stops are all in the vicinity of the Concord Pike and Naamans Road intersection. The large number of neighboring stops is due to the proximity of shopping centers including Concord Mall, Brandywine Town Center, and Brandywine Commons. Three of the twenty-nine

bus stops provide a waiting pad with a shelter, two of which also contain a bench. The Shops at Naamans Road stop also has a bench, but does not have a shelter. The additional twenty-five stops lack passenger amenities.

A summary of existing bus stop locations, amenities, and ridership is presented in Table 1. The stops with the highest ridership are Brandywine Commons & Shop Rite (50), Brandywine Town Center Target (59), Concord Mall Sears (110), Brandywine Town Center Park and Ride (155), and Concord Mall Boscovs (161).

Table 1 – Transit Ridership Summary

Location	Stop Location	Amenities	Lighting[1]	Daily Weekday Ridership[2]	
				On	Off
DART Routes 2, 35, & 61					
Brandywine Commons & OP Shop Rite	Mid-block	None	No	3	46
Brandywine Commons & Shop Rite	Mid-block	None	No	46	5
Brandywine Town Center & Community Center	Mid-block	None	No	3	0
Brandywine Town Center & OP Community Center	Mid-block	None	Yes	3	4
Brandywine Town Center & P-N-R Eastbound	Mid-block	Shelter & Bench	No	90	64
Brandywine Town Center Regal Cinema	Mid-block	Pad	No	0	0
Brandywine Town Center OP Regal Cinema	Mid-block	None	Yes	0	1
Brandywine Town Center Target	Mid-block	None	No	42	1
Brandywine Town Center OP Target	Mid-block	None	Yes	5	54
Concord Mall & Boscov's	Mid-block	None	Yes	96	64
Concord Mall & OP Boscov's	Mid-block	None	Yes	1	31
Concord Mall & OP Sears	Mid-block	None	Yes	1	7
Concord Mall & Sears	Mid-block	Shelter	Yes	45	64
Concord Pike & Cigna	Far-side	None	No	0	3
Concord Pike & M&T Bank/ Naamans Rd	Near-side	None	No	0	7
Concord Pike & Naamans Rd	Far-side	None	No	3	1
Concord Pike & OP Rocky Run Pkwy	Near-side	None	Yes	0	28
Concord Pike & Rocky Run Blvd	Near-side	None	Yes	18	1
Concord Pike Raymour & Flanigan	Mid-block	None	No	0	0
Market Square & TJ Maxx	Mid-block	None	Yes	1	14
Market Square & OP TJ Maxx	Mid-block	None	No	5	0
Naamans Rd & Brandywine Entrance	Near-side	None	No	0	1
Naamans Rd & OP Shopping Center	Far-side	None	No	6	5
Naamans Rd & Perry Pl	Near-side	None	No	3	24
Rocky Run Pkwy & Courtyard Marriott	Mid-block	None	No	22	18
Shipley Rd & Granite Way	Far-side	None	No	0	24
Shipley Rd & OP Granite Way	Near-side	Shelter & Bench	No	16	0
Shops at Naamans Rd	Near-side	Bench	Yes	3	0
Woodlawn Rd & Red Lobster Restaurant	Mid-block	None	No	1	5

1- May 2015 to February 2016 ridership data provided by DART. Data reflects average weekday daily ridership.

Lighting Evaluation

There is existing roadway lighting within the study area. Along the east side of Concord Pike in front of the Concord Mall, luminaires are spaced between 150-250 feet apart on utility poles. There is an approximate 500-foot gap in luminaires along Concord Pike in front of M&T Bank just south of Washington Avenue. North of the Naamans Road intersection, there are three utility pole mounted luminaires on the east side of Concord Pike along the 1,300-foot stretch between Naamans Road and Brandywine Parkway. The west side of Concord Pike also contains utility-pole mounted luminaires from the southern project limits to the northern end of the Brandywine Commons shopping center. Standalone DelDOT light standards were recently installed on the west side of Concord Pike from the northern end of Brandywine Commons to the ACE USA office complex intersection, including intersection lighting at Concord Pike and Naamans Road/Beaver Valley Road. Along the south side of Naamans Road, there are two existing utility pole-mounted luminaires located at the Tally Ho Shopping Center that are oriented over the shopping center parking lot. Roadway lighting is provided at the Brandywine Town Center intersection and the Shipley Road intersection. The various shopping centers throughout the project area provide ambient lighting, but they do not directly light Concord Pike or Naamans Road. A majority of the study area is adequately lit, but opportunities exist to improve lighting on the east side of Concord Pike north of Naamans Road and along both sides of Naamans Road utilizing existing utility poles.

Signing and Pavement Markings

Signing and pavement markings were assessed along Concord Pike and Naamans Road in the study area. The signing and pavement markings are generally adequate and in good condition. Naamans Road within the study area will have new signing and striping as part of the pavement rehabilitation contract that is currently in construction. With the construction of new curb ramps along Concord Pike, marked crosswalks will be considered at commercial driveways.

RECOMMENDED IMPROVEMENTS

The recommended improvements provided in this document and on the included Roll Plan are based on the DelDOT *Pedestrian Accessibility Standards for Facilities in the Public Right of Way* and the observed sidewalk connectivity deficiencies and pedestrian behavior along Concord Pike and Naamans Road within the study area.

Corridor-Wide Recommendations

- Construct ADA-compliant sidewalk and curb ramps along Concord Pike and add missing links on Naamans Road between the Concord Pike intersection and existing ADA-compliant facilities as shown on the Roll Plan.
- Modify the existing retaining wall along northbound Concord Pike between the southern and northern Concord Mall entrances to increase the wall height to provide an ADA-compliant PAR along the eastern side of Concord Pike. Pending structural/geotechnical analysis, extend the wall height to approximately 3 feet above roadway grade to eliminate the need for existing guardrail and proposed pedestrian hand rail.
- Reconstruct commercial driveways/entrances along northbound Concord Pike at Days Inn and Bank of America and along eastbound Naamans Road at The Shoppes at Naamans Shopping Center to meet minimum PAR requirements and current DelDOT entrance standards.
- Implement median fencing/barrier as shown on the Roll Plan to prevent unwarranted mid-block crossings.
- Reduce the southbound Concord Pike shoulder width from approximately 13 feet to 10 feet along the 300-foot long Grace Episcopal Church cemetery frontage to provide sidewalk without impacting the existing stone wall. Curb and drainage relocation will be required.
- Perform a lighting evaluation to determine the need for additional lighting along Concord Pike and Naamans Road.
- Provide minimum 8'x5' bus stop pads at marked DART bus route stops in accordance with DART/DelDOT standards.
- During preliminary design, review all signing and pavement markings along Concord Pike throughout the study corridor and consider pavement testing to determine the need for pavement resurfacing.

Intersection Improvements

Concord Pike and Southern Concord Mall Entrance

The proposed PAR design includes the installation of signalized pedestrian crosswalks across the two access drives at the southern mall entrance that are separated by a wide grass median. A signalized crosswalk across Concord Pike is also proposed at this location. The existing curb ramp near the southeast corner of the intersection will be relocated closer to Concord Pike and will transition to a crosswalk across the southern access drive, leading to the large median. This crosswalk will require adjustments to the westbound left-turn stop bar location and/or modifications to the median/concrete barrier that separates the travel lanes at the southern access. The signalized crosswalk for the northern access drive will also require modifications to the westbound right-turn stop bar location and/or the concrete median island that separates the travel lanes at the northern access. The new curb ramp on the northeast side corner of the intersection will connect to the proposed sidewalk along the east side of Concord Pike in front of Concord Mall. The proposed crossing of Concord Pike will be located between the northern and southern access drives at the south mall entrance. Concord Pike through traffic currently stops

during westbound lefts out of the southern access drive, which operates concurrently with southbound lefts in to the mall at the northern access drive. A pedestrian crossing can be accommodated during this existing phase with no vehicular conflicts. The existing concrete median on concord Pike at this location will be reconstructed to provide an accessible route/pedestrian refuge area with pedestrian signals to accommodate a two-stage crossing if necessary. The nearest signalized crossings of Concord Pike are approximately 1,100 feet to the south at Rocky Run Parkway (south) and approximately 1,800 feet to the north at Rocky Run Parkway (north). Signal timings/phasings will be adjusted accordingly to accommodate the new pedestrian phases.

Concord Pike and Northern Concord Mall Entrance

The proposed PAR design involves reconstruction/extension of the existing channelizing islands at the southeast and northeast corners of the intersection to accommodate a new signalized crosswalk across the east leg of the intersection. This will also require reconstruction of the curb ramp at the southeast corner of the intersection that is currently non-complaint based on Pennoni's field evaluation. A new curb ramp will be installed at the northeast corner of the intersection to provide an uncontrolled crosswalk across the channelized westbound right-turn lane, which will connect to the proposed sidewalk along the east side of Concord Pike in front of the Concord Mall. The reconstructed channelizing islands on the east side of the intersection will be furnished with new pedestrian countdown signals with pushbuttons Signal timings/phasings will be adjusted accordingly to accommodate the new pedestrian phase. In conjuction with the reconstruction of the northeast channelizing island, install an approximately 150-foot long mountable concrete median to formalize a channelized acceleration lane. This will eliminate the need for the existing tubular markers and reduce weaving conflicts between exiting mall traffic and northbound Concord Pike traffic destined for Naamans Road. This median will require the narrowing of the existing lanes in the area of the median. The 4 existing lanes are 12 feet wide and will need to be reduced to 11 feet to accommodate the median without needing to widen the roadway. After the median ends, the lanes will taper back to 12 feet wide.

Concord Pike and Naamans Road

The proposed PAR design at this intersection is focused on installing new sidewalk where there are missing links in the southeast and northeast quadrants of the intersection. The proposed sidewalk will connect the existing sidewalk along both sides of Naamans Road to the new curb ramps that were recently constructed at the intersection under Contract T201501002. The proposed Wilmington University and convenience store/bank developments will complete the pedestrian network at the southwest quadrant of the intersection.

Concord Pike and ACE USA Entrance

Although there was no observed pedestrian activity at this intersection during field visits, Pennoni recommends installing signalized pedestrian crossings across the west and south legs of the intersection to provide an additional crossing of Concord Pike. This recommendation is made because of the locations of office space and the proposed Wilmington University campus on the west side of Concord Pike and the abundance of pedestrian generators located in the Brandywine Town Center on the east side of Concord Pike. Installing these crossings will require the reconstruction of both islands of the ACE USA entrance to include ADA-compliant curb ramps and pedestrian signals. A pedestrian signal and curb ramp will also be installed on the east side of Concord Pike and will connect to existing and proposed sidewalk.

Concord Pike and Brandywine Parkway

The proposed PAR Design does not include any improvements at this intersection. Pedestrian facilities were recently added under Contract T201504004 which include ADA-compliant curb ramps and signalized crosswalks across the east and north legs of the intersection. The proposed AAA Car Care Center development will complete

the missing sidewalk link along the east side of Concord Pike and will connect to the recent intersection pedestrian improvements.

Proposed PAR Design Challenges

There are several locations throughout the study area that pose challenges for installing ADA-compliant sidewalk and curb ramps. Descriptions of these areas are listed below:

Concord Pike Northbound along Concord Mall Parking Lot

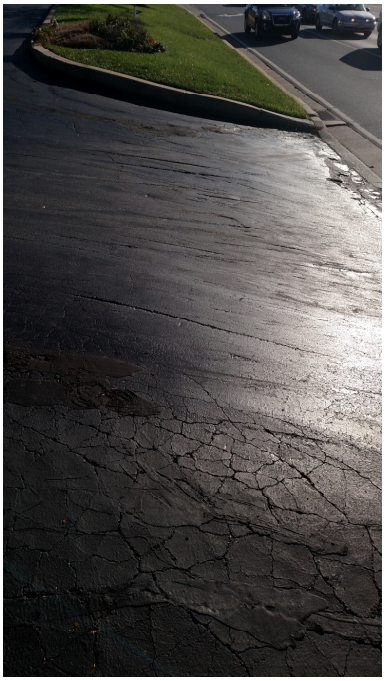


Retaining wall along east side of Concord Pike (taken 11/4/16)

Along northbound Concord Pike between the southern and northern Concord Mall entrances, there is an approximate 500-feet long retaining wall located between the guardrail along the northbound shoulder of Concord Pike and the mall parking area. The top of the retaining wall is approximately 18" lower than the edge of pavement/back of guardrail. The height of the existing retaining wall must be raised to provide an ADA-compliant sidewalk with respect to cross slope between the back of guardrail and the retaining wall. Spalling and delamination to the top of the existing wall was observed in the field; thus, doweling in to the wall to raise the height will also improve the condition of the wall. Geotechnical/structural analysis will be required to verify that that the existing footing can handle the additional horizontal load, which is expected to have a negligible effect on the structural capacity of the wall/footing. Weep holes are present on the existing structure; however, some field exploration and subsequent wall modifications may be required to ensure they are functioning properly. A handrail will be required along the back of the proposed sidewalk or along the top retaining wall to protect pedestrians from the vertical drop-off. There are several existing utility poles located between the guardrail and the retaining wall that may present pinch points, however, the minimum 32-inch clear width will be provided.

Concord Pike Northbound from Days Inn to Naamans Road

An approximately 300-foot stretch along the east side of Concord Pike includes severe slopes, steep driveways, and utility conflicts. Both driveways in to and out of Days Inn have severe slopes (12.7% and 15.6% respectively) that will require regrading to provide a PAR with ADA-compliant cross slopes. Scrape marks from the vehicle undercarriages were observed on the 15.6% exit driveway for Days Inn. The Bank of America driveway just north of Days Inn has a slope of 13.7%. This entire stretch of Concord Pike from Days Inn to Naamans Road will require a modified retaining curb along the back of sidewalk to accommodate the steep grades without excessive right-of-way impacts due to grading. Additionally, the area between the Days Inn and Bank of America driveways will have a 4-foot wide pinch point to avoid the red-light camera pole base.



Days Inn driveway showing scraping from vehicles (taken 11/4/16)



Vehicle exiting Days Inn driveway (taken 11/11/16)

Concord Pike at Exxon Driveway

Existing utilities at the northeast corner of the intersection of Concord Pike and Naamans Road present a conflict with installing sidewalk and curb ramps across the existing Exxon driveways. To avoid the existing utility pole at the south Exxon driveway, the proposed sidewalk, curb ramps and crosswalk must be shifted east and may impact the Exxon property.



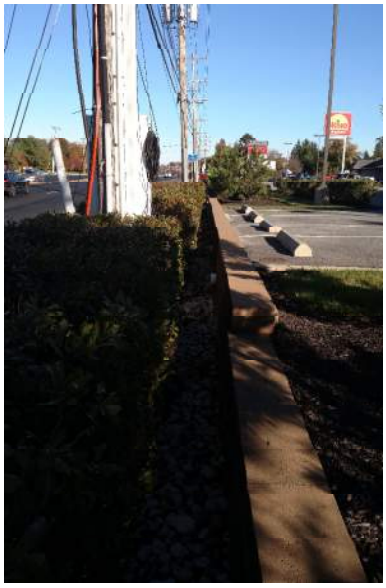
Existing Utilities on Northeast corner of Concord Pike neighboring Exxon (taken 11/11/16)

Naamans Road at Bank of America

An existing utility pole on the south side of Naamans Road is surrounded by a hedge and is located approximately four feet from the back of curb and three feet from an existing retaining wall that separates the Bank of America parking lot from Naamans RoadRouting the PAR between the utility pole and back of curb is preferred as it provides a wider pinch point than between the pole and the retaining wall. Installing a sidewalk between the pole and retaining wall will also impact the existing drainage weep holes within the wall, which would need to be vertically adjusted. This section of Naamans Road was recently re-striped to remove the sub-standard acceleration lane for northbound right turns off Concord Pike; thus, the Naamans Road curb line could be realigned to provide a full five-foot wide PAR between the utility pole and back of curb.



Utility pole adjacent to Bank of America, looking west (taken



Retaining wall on Naamans Road adjacent to Bank of America, looking east (taken 11/4/16)

APPENDIX A

PREVIOUS PAR PROJECT COORDINATION MEETING MINUTES

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MEMORANDUM

To: All in Attendance

From: Kyle Clevenger, PE

Subject: Pedestrian Improvement (PAR) Projects Coordination Meeting Minutes
T201601104, Old Baltimore Pike from east of SR 72 to west of Salem Church Rd
T201601103, Lancaster Pike from West Court Drive to North Dupont Road
T201701101, Airport Road from SR 273 to Churchmans Road (SR 58)
T201601105, Concord Pike and Naamans Road

Date: October 5, 2016

A meeting was held at 10:30 AM on October 5, 2016 in the Fenwick Conference Room at DelDOT to discuss proposed pedestrian improvements for Old Baltimore Pike (OBP) from east of SR 72 to west of Salem Church Road. The status of additional PAR projects, specifically Lancaster Pike (Contract T201601103), Airport Road (Contract T201701101) and US 202/Naamans Road (Contract T201601105) were also discussed. The following persons were in attendance:

Name	Representing	Phone No.	Email
Tom Nickel	DelDOT PAR	(302) 760-2401	Tom.Nickel@state.de.us
Mark Tudor	DelDOT Transportation Solutions	(302) 760-2275	Mark.Tudor@state.de.us
Denny Hehman	DelDOT Traffic Design	(302) 659-4070	Denny.Hehman@state.de.us
Philip Horsey	Pennoni	(302) 351-5243	PHorsey@pennoni.com
Kyle Clevenger	Pennoni	(302) 351-5263	KClevenger@pennoni.com
Zach Brander	Pennoni	(302) 351-5237	ZBrander@pennoni.com

The goal of the meeting was to present the concept plan for the Old Baltimore Pike Pedestrian Improvements Project, facilitate coordination between DelDOT Transportation Solutions, DelDOT Traffic and Pennoni, and come to a consensus on a path forward for this project.

Old Baltimore Pike Pedestrian Improvements Project

Discussion:

- Mr. Horsey gave a brief overview of the project area and objectives. Mr. Horsey noted that there are active DelDOT projects currently in the design phase at the intersections of OBP and SR 72 and OBP and Salem Church Road, and the PAR project that was the subject of the meeting will provide pedestrian connectivity between these two projects. Mr. Clevenger described the improvement recommendations in detail, which are outlined in the findings report and depicted on the project roll plan.

- A full traffic signal justification study/warrant analysis will be required at OBP and Lucerne Drive if the proposed design moves forward with signalization of this intersection and relocation of the existing mid-block pedestrian crossing to the signalized intersection (Alternate 1).
- DelDOT expressed concerns that pedestrians will still try to cross OBP at the existing crossing location even if the crosswalks and bus stops are relocated closer to the intersection with Lucerne Drive under Alternate 1. If this alternative is chosen, consideration should be given to some sort of barrier to prevent pedestrians from crossing at the original location. Consideration should also be given to not providing sidewalk along the north side of OBP at this location (only providing a bus stop waiting pad), to deter pedestrians from crossing.
- DelDOT questioned if there were any plans to develop the industrial parcels opposite Lucerne Drive. Should a future fourth leg be considered when developing signal plans if Alternative 1 is chosen? Pennoni noted that DelDOT's Development Coordination Section confirmed that there are no active developer projects in the study area, but further coordination will be required with New Castle County to see if they have additional information on these parcels.
- Pennoni presented Alternative 2 for Lucerne Drive, which includes installation of a rectangular rapid flashing beacon (RRFB) at the existing crosswalk location. DelDOT directed Pennoni to contact Peter Haag from DelDOT's Traffic Section regarding the installation of a RRFB system at the existing mid-block crossing. Mr. Haag is currently studying various locations throughout the state for potential implementation of RRFB systems.
- DelDOT Traffic would likely prefer Alternative 2 (RRFB system) over Alternative 1 (signalization of Lucerne Drive and relocation of crosswalk/bus stop) for simplicity, cost and timing of installation.
- Pennoni discussed improvement alternatives at East and West Albe Drive that include installation of concrete channelizing islands to provide pedestrian refuge areas and to reduce crossing distances and pedestrian clearance intervals. This work would require widening of the northwest and northeast corner radii and could require significant utility relocations. This resulted in a subsequent discussion over the benefits of providing concrete islands solely for pedestrian purposes. The islands are required to be ADA-compliant, while a crossing of an existing roadway may not require improvements to the roadway. It was mentioned that visually-impaired pedestrians may prefer direct crossings that are longer in length, as opposed to the multiple-stage crossings through islands that also require direction changes. There are several projects throughout the state that are removing substandard islands and adjusting signing and striping to provide longer, direct crossings in lieu of widening intersection radii to provide ADA-compliant islands. Mr. Hehman mentioned that he would like DelDOT staff to have an internal meeting to discuss the advantages and disadvantages of concrete islands and come up with a preferred option and direction for future PAR projects. There was no consensus on the preferred design for the Albe Drive intersections, or the provision of islands at Lucerne Drive and Deer Run Drive.
- DelDOT suggested coordinating with DART/DTC regarding removal of the bus stops along eastbound and westbound OBP near East Albe Drive/Christiana Farms Way. There was one pedestrian crash at this intersection that resulted in personal injury. There is no traffic signal or crosswalk at this intersection and the presence of bus stops on either side of the road encourages illegal mid-block crossings.

- DelDOT instructed Pennoni to move forward with DART/DTC coordination regarding the bus stop relocation near Torington Way and the potential improvements near Lucerne Drive, in addition to the bus stop removals at East Albe Drive/Christiana Farms Way.
- The provision of a grass buffer between the curb and proposed sidewalk was discussed. DelDOT recommended reaching out to the maintenance department to see what they prefer. Pennoni noted that provision of a grass buffer would require additional earthwork, which may significantly affect cost.
- Pennoni presented the proposed lighting improvements, which includes the evaluation/installation of intersection lighting at each intersection along the study corridor. Mr. Hehman recommended reaching out to Peter Haag to see if Old Baltimore Pike should be considered for a corridor lighting study that may result in the recommendation of lighting along the entire corridor.
- Pennoni briefly discussed stormwater management impacts. It is anticipated that project will qualify for the Standard Plan Application for Sidewalk, Trails, or other Linear Surfaces, but further evaluation will be required once the design scope is finalized. Mr. Tudor mentioned that the adjacent projects at OBP and SR 72 and OBP and Salem Church Road both qualified for Standard Plan.
- Pennoni recommended adding sidewalk along the south side of OBP between each leg of Salem Church Road. This section of sidewalk was not included in the planned project. Mr. Tudor will look in to the reasoning for not including this sidewalk and provide feedback.

Action Items:

- Pennoni will prepare a proposal for design services for the Old Baltimore Pike Pedestrian Improvements Project.
- Pennoni will contact Peter Haag from DelDOT Traffic regarding the RRFB system near Lucerne Drive and the possibility of a corridor lighting study for this section of Old Baltimore Pike.
- Pennoni will reach out to DART/DTC to coordinate the proposed transit improvements.
- Pennoni will contact New Castle County to determine if there are any development plans for the parcels opposite Lucerne Drive.
- Pennoni will schedule a follow up meeting with DelDOT Traffic to discuss the final recommendation at Lucerne Drive following discussion with Peter Haag regarding the RRFB system, and to discuss the final recommendation regarding lighting through the corridor. This meeting will also include discussion on the Lancaster Pike, Airport Road and US 202/Naamans Road PAR projects.

Lancaster Pike Pedestrian Improvements Project

- Pennnoi updated DelDOT on the status of the Lancaster Pike PAR project. Property corners are being surveyed in the field and survey plans are expected to be submitted by the end of October. Traffic counts are being conducted this week for the HAWK analysis. Preliminary design is currently in progress.
- Pennoni discussed the need to take a proactive approach and reach out to the property owners who will be affected by the proposed improvements, specifically the leasing company for the Lancaster

Court Apartments, the landlord for the shops east of Court Drive, the 7-Day Farmers Market, and the leasing company for the shopping center west of North Dupont Road.

- Pennoni explained that the parking blocks for the shopping center west of North Dupont Road were moved back to provide a 5' wide PAR, but the existing surface is hot-mix (this area is located within the right-of-way). Pennoni asked if DelDOT preferred leaving the hot-mix, or replacing with concrete. DelDOT confirmed that they prefer new concrete sidewalk in this area.
- DelDOT instructed Pennoni to prepare two options for improvements at the strip mall east of Court Drive to take to the property owner. The first option should show the preferred improvements which involve installation of sidewalk on the east side of the parking lot and routing the PAR in front of the stores. The second option would require reconstruction/regrading of the entire parking lot to provide an ADA-compliant sidewalk along Lancaster Pike. This sidewalk would also have to extend around the corner and cut off access to the shops from Court Drive.
- DelDOT is on board with consolidating the westbound bus stops on either side of the 7-Day Farmers Market entrance and providing sidewalk behind the utility conflicts at the northwest corner of the intersection. Pennoni should reach out to DART/DTC and the 7-Day Farmer's Market to coordinate these improvements.
- Pennoni recommended that the proposed improvements end at the BP gas station on the north side of Lancaster Pike. The BP gas station entrance has an existing 11% cross slope that will require significant reconstruction and to extend the sidewalk west of the gas station will require extension of the existing culvert.
- DelDOT instructed Pennoni to hold off on coordinating with the Lancaster Court Apartments regarding conversion of the frontage road to one-way eastbound. DelDOT will coordinate with the state representative that brought this area to their attention and then follow up with Pennoni.
- DelDOT Traffic requested that a meeting be held before Thanksgiving to discuss the HAWK analysis. This meeting will also include discussion on the Old Baltimore Pike, Airport Road and US 202/Naamans Road PAR projects.

Airport Road Pedestrian Improvements Project

- Pennoni briefly ran through the preliminary improvement recommendations for Airport Road, which includes sidewalk on both side of the road and installation of ADA-compliant curb ramps, crosswalks and pedestrian signals at Airport Road and Edinburgh Drive.
- Mr. Hehman mentioned that DelDOT Traffic is currently designing improvements to the intersection of Airport Road and Edinburgh Drive. He will provide these plans to Pennoni so those improvements are taken into account when developing the conceptual design for the PAR improvements.
- DelDOT confirmed that they do not intend to reconstruct any pedestrian facilities north of Cherry Road/Prestwick Drive, which were constructed within the last 10 years.
- A follow-up meeting will be held with DelDOT Traffic to discuss plans for the Airport Road/Edinburgh Drive intersection. This meeting will also include discussion on the Old Baltimore Pike, Lancaster Pike and US 202/Naamans Road PAR projects

Concord Pike (US 202) and Naamans Road Pedestrian Improvements Project

- Pennoni briefly discussed the Concord Pike and Naamans Road PAR project and the adjacent ongoing projects; specifically the pave and rehab job, Concord Pike and Naamans Road intersection signal/pedestrian improvements, and various developer projects, including Wilmington University on the southwest corner of Concord Pike and Naamans Road.
- Pennoni and DelDOT agreed to hold a coordination meeting with the Traffic Section so that the project limits, schedule and project implementation strategy can be clearly defined.

The above statements represent a true and accurate account of the discussion during this meeting to the best of our knowledge. If there are any conflicts, misrepresentations or omissions with the above statements, please contact Mr. Clevenger at (302) 351-5263 or kclevenger@pennoni.com within five (5) days of receipt of these minutes.

Kyle Clevenger *10-6-2016*

_____ _____

Kyle Clevenger, PE Date

Cc Attendees
Peter Haag, DelDOT Traffic

Christiana Executive Campus
121 Continental Drive, Suite 207
Newark, DE 19713
T: 302-655-4451
F: 302-654-2895

www.pennoni.com

MEMORANDUM

To: All in attendance

From: Kyle Clevenger, PE

Subject: Pedestrian Access Route (PAR) Projects - DelDOT Traffic Coordination Meeting Minutes
Contract T201601103, Lancaster Pike
Contract T201601104, Old Baltimore Pike
Contract T201601105, Concord Pike and Naamans Road
Contract T201701101, Airport Road

Date: November 17, 2016

A meeting was held at 9:00 AM on November 17, 2016 in the Newark Conference Room at DelDOT's Transportation Management Center to discuss the above referenced PAR projects with respect to traffic related items. The following persons were in attendance:

Name	Representing	Phone No.	Email
Denny Hehman	DelDOT Traffic Design	(302) 659-4070	Denny.Hehman@state.de.us
Peter Haag	DelDOT Traffic Studies	(302) 659-4084	Peter.Haag@state.de.us
Philip Horsey	Pennoni	(302) 351-5243	PHorsey@pennoni.com
Kyle Clevenger	Pennoni	(302) 351-5263	KClevenger@pennoni.com
Zach Brander	Pennoni	(302) 351-5237	ZBrander@pennoni.com

Agenda

Lancaster Pike PAR Project:

- Review of HAWK Justification Study and path forward for design
- Proposed lighting improvements
- MOT/construction phasing/pedestrian detours
- Property impacts

Old Baltimore Pike PAR Project:

- Improvement alternatives at Lucerne Drive (signalization vs. rectangular rapid flashing beacons)
- Proposed lighting improvements
- Installation of channelizing islands for pedestrian refuge and shorter crossing distances versus longer, direct crossings from corner to corner

Airport Road PAR Project:

- Status of Traffic's intersection improvement/signal replacement project at Airport Road and Edinburgh Drive and how this project can be incorporated with the PAR project.

Concord Pike & Naamans Road PAR Project:

- Status of Naamans Road pave and rehab project and Concord Pike/Naamans Road intersection and signal improvements
- Previous studies and past HEP/HSIP locations in the project area

Discussion

Lancaster Pike:

HAWK Signal / Road Diet

- DelDOT Traffic is not opposed to the installation of a HAWK signal, but asked if a road diet was ever considered for this section of Lancaster Pike. Motorist compliance at HAWK signals is generally improved when there are lower speeds and traffic calming measures incorporated in to the design, such as median refuge islands.
- The benefits of a road diet were discussed which include:
  - Priority to pedestrians and bicyclists in the densely populated urban area
  - Installation of bicycle lanes at other locations has increased bicycle activity
  - Minimizing disruption to through traffic by moving left-turning vehicles from the left through lane to a two-way center left-turn lane (TWCLTL)
  - Providing dedicated left turn lanes for eastbound lefts on to North Dupont Road and westbound lefts on to South Dupont Roads as opposed to the current configuration that utilizes shared through/left-turn lanes at each intersection
  - Lancaster Pike already necks down to one lane in each direction east of Greenhill Avenue, which is only 2,150 feet east of the project limits at North Dupont Road
- A road diet was recently implemented on Philadelphia Pike/US Route 13 (AADT = 14,032 vpd) in Claymont and is planned for Maryland Avenue/DE Route 4 from Race Street to South Monroe Street (AADT = 13,770 to 19,131) in the City of Wilmington. Lancaster Pike has an AADT of 28,680 vpd in the study area.
- Pennoni will perform capacity analysis in Synchro to determine the effects of a road diet and determine if it is feasible or not from a traffic capacity standpoint.
- DelDOT's Materials and Research Section is investigating new technology where old pavement markings are grinded off and then sealed, allowing for fresh re-striping of the roadway without obvious scarring from removal of the previous pavement markings. If a road diet is feasible, Lancaster Pike could be a candidate location for this application.
- If a road diet is determined to be feasible, Pennoni will update the HAWK Signal Justification Study to include the road diet scenario with a median refuge area. Additional NCHRP 562 worksheets will be provided that account for shorter pedestrian crossing distances and lower speeds (assuming the speed limit would be reduced to 35 MPH for a road diet scenario).
- DelDOT Traffic is still open to the installation of a HAWK signal with a road diet in place, but would need to review the revised justification study before making a final decision.
- The exact location of the HAWK should be coordinated with DelDOT once a decision is made on whether or not to install the HAWK. DelDOT Traffic would prefer that bus stops on each side of Lancaster Pike are within 50 feet of the HAWK signal to ensure that transit riders utilize the HAWK crossing rather than cross illegally at the existing bus stops as they do today.
- The potential redevelopment of the Dupont Barley Mill Plaza site was discussed. Increased traffic volumes from this site could be a cause for concern if a road diet were implemented.

Lighting Improvements

- DelDOT Traffic recommends Pennoni study complete corridor lighting given the pedestrian activity and crash history in this area. Utility poles are located throughout the entire corridor.
- Pennoni will contact Delmarva Power & Light to determine the feasibility and costs associated with installing luminaires on their utility poles.

- Pennoni will include an assessment of existing lighting conditions in the lighting design report and will provide corridor lighting improvements via utility-pole mounted luminaires where possible and DelDOT stand-alone light poles as needed.

Switchback Ramp / Retaining Wall at Greenview Apartments and 7-Day Farmers Market Intersection

- DelDOT Traffic had no comments on the conceptual design for the switchback ramp at the Lancaster Pike/7 Day Farmer's Market intersection and conversion of the Greenview Apartments frontage road to one-way eastbound with a marked crosswalk across the frontage road. Final design of this area should be driven by constructability.
- DelDOT Traffic prefers that parking is provided on the southern side of the frontage road, utilizing a "chicane" to direct traffic around the ramp area rather than providing parking against the wall.
- DelDOT Traffic prefers that parking spots NOT be marked to reduce future maintenance. Signage should be installed to prohibit parking near the pedestrian crossing.
- Pennoni mentioned that coordination is ongoing between Mark Tudor, the owner of the apartment complex and the state representative that brought this issue to light.
- Pennoni will reach out to Adam Weiser to discuss railing and guardrail alternatives and needs at this location. It was noted that installation of guardrail may be complicated by the existing utility poles located in the wall.

Maintence of Traffic / Construction Phasing / Pedestrian Detours

- Pennoni presented the following conceptual MOT scheme:
  - Phase 1 – construct the HAWK signal to provide a crossing for pedestrian detours in future phases
  - Phase 2 – construct the switchback ramp at 7-Day Farmers Market (will require closure of the right eastbound through lane of Lancaster Pike for approximately one month). Does existing crossing need to be maintained since it puts pedestrians on an "island" in existing conditions?
  - Phase 3 – construct sidewalk and curb ramps on south side of Lancaster Pike utilizing modified TA-30 to close the right eastbound lane from 9 AM – 3 PM. Utilize flaggers to guide pedestrians through the closed lane during the day and provide temporary material / boardwalk / curb ramps at end of each working day.
  - Phase 4/5 – construct sidewalk and curb ramps on north side of Lancaster Pike using the same methodology described above for Phase 3.
- DelDOT Traffic noted that if the HAWK is constructed first, it must be left in a "temporary" state. If a pedestrian detour route utilizes an ADA-compliant crossing, the rest of the detour route must be ADA-compliant.
- Pennoni and DelDOT Traffic discussed the challenge of implementing pedestrian detours for this project because of the existing crossing at the 7-Day Farmers Market that leaves pedestrians on the retaining wall and the fact that there is no pedestrian crossing of the railroad on the south side of Lancaster Pike or sidewalk on the south side of Lancaster Pike east of Mary Ella Drive.
- DelDOT Traffic advised Pennoni to coordinate with Adam Weiser regarding MOT phasing, pedestrian detour requirements and what temporary measures will be required at the 7-Day Farmers Market crossing during construction.

Old Baltimore Pike:

- DelDOT requested a signal warrant analysis for the intersection of Lucerne Drive and Old Baltimore Pike to determine if the existing intersection warrants a signal. If no signal is warranted, RRFBs and HAWK treatments will be considered for the crossing. Based on the lack of pedestrian crash history at

the mid-block crossing location and the presence of an existing median refuge area, the existing crossing will be sufficient if the Lucerne Drive intersection does not meet the warrant for a traffic signal and the other treatments are not warranted. The existing crossing, however, will need to be improved with ADA ramps, sufficient width, and signing.

- There are existing parcels located opposite Lucerne Drive on the north side of Old Baltimore Pike that are zoned industrial but are currently not developed. Pennoni contacted New Castle County who confirmed that there are recorded plans for an industrial park at this location but there are no current plans for development of these parcels. If the existing volumes at Lucerne Drive do not warrant a signal, Pennoni will investigate the recorded plans to determine if additional traffic generated by the industrial park may warrant a signal in the future.
- DelDOT Traffic noted that there were plans for a Wawa to be developed on the corner of Salem Church Road and Old Baltimore Pike.
- Regarding the installation of pork chop islands to provide pedestrian refuge areas and shorter crossing distances versus longer, direct crossings, DelDOT Traffic prefers the installation of islands if there are no impacts to the existing curb line. If the installation of islands requires flattening corner radii, a direct crossing is preferred to minimize costs of right-of-way, drainage, and utility impacts. At intersections with heavy right turns, flattening the curb radius to provide a channelizing/pedestrian refuge island should be considered.
- DelDOT Traffic concurred with the proposed intersection lighting improvements and also suggested that lighting be installed at crash cluster locations identified within the project limits. Corridor lighting will be considered in design.

Airport Road:

- DelDOT Traffic had an in-house project for intersection improvements at Airport Road and Edinburgh Drive which includes a full signal re-build and the installation of signalized pedestrian crossings on the east, west and north legs of the intersection. DelDOT Traffic will discuss incorporating this traffic project into the Airport Road PAR project with Tom Nickel.

Concord Pike and Naamans Road:

- Attendees discussed the status of the Naamans Road pave and rehab project and the traffic signal upgrade at Concord Pike and Naamans Road which are substantially complete at this time.
- This week's pedestrian fatality crash in the southbound lanes of 202/Concord Pike was discussed in relation to the project.
- DelDOT Traffic noted that the area of Concord Pike near the north entrance to the Concord Mall was included in the HSIP/HEP due to the conflicting weaving movements in this area. There were discussions within DelDOT in the past regarding installation of a crosswalk across Concord Pike at this location as well. Adam Weiser should be contacted to determine background info on this area and to see if this section of Concord Pike was included in a previous safety audit or if the PAR program can implement a safety audit in conjunction with pedestrian improvements.

Action Items

- Pennoni will perform capacity analysis for a road diet on Lancaster Pike and update the NCHRP Report 562 worksheet for road diet conditions with a pedestrian refuge island in place. A schematic will be provided with the proposed road diet striping and placement of the refuge island. If a road diet is not identified as the path forward, Pennoni is prepared to advance with the current plans.
- Pennoni will contact Adam Weiser to discuss construction phasing and pedestrian detour requirements for Lancaster Pike.
- Pennoni will contact Delmarva Power and Light to determine the feasibility of installing corridor lighting utilizing the existing utility poles along Lancaster Pike, Old Baltimore Pike and Airport Road. Existing lighting conditions and proposed corridor lighting will be summarized in the lighting design report with the first plan submission.
- Pennoni will conduct traffic counts and perform a signal warrant analysis for the intersection of Lucerne Drive and Old Baltimore Pike as part of the design process. Pennoni will also investigate the recorded plan for the industrial park opposite Lucerne Drive and include any applicable traffic data in an additional "future" warrant analysis.
- DelDOT Traffic, Tom Nickel, and Pennoni to coordinate and determine path forward for inclusion of the Edinburgh Drive intersection improvement project with the Airport Road PAR project.
- Pennoni will coordinate with Adam Weiser regarding previous safety studies along the Concord Pike study corridor.

The above statements represent a true and accurate account of the discussion during this meeting to the best of our knowledge. If there are any conflicts, misrepresentations or omissions with the above statements, please contact Mr. Clevenger at (302) 351-5263 or kclevenger@pennoni.com within five (5) days of receipt of these minutes.

Kyle Clevenger 11-18-2016

Kyle Clevenger, PE Date

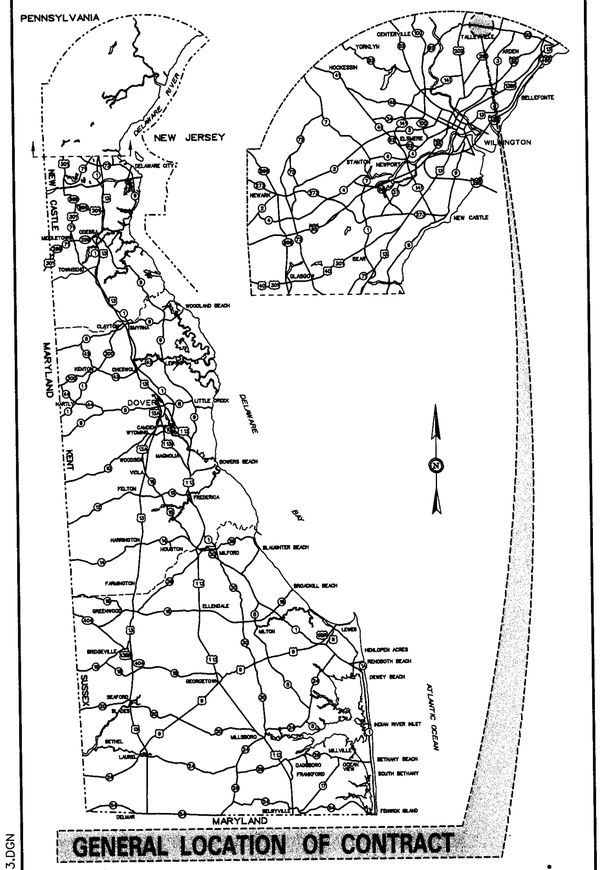
Cc Attendees
Tom Nickel, DelDOT PAR
Mark Tudor, DelDOT Transportation Solutions
Adam Weiser, DelDOT Traffic Safety

APPENDIX B

PLANS FOR ADJACENT PROJECTS

DELDOT CONTRACT T201606103
PAVEMENT & REHABILITATION NORTH III, 2016
SR 92 (NAAMANS ROAD) FROM US 202 (CONCORD PIKE) TO 500 FT EAST OF SR 261 (FOULK ROAD)

Pennoni



THE STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY UNITS

CONSTRUCTION PLANS FOR:

PAVEMENT & REHABILITATION, NORTH III, 2016
SR 92 (NAAMANS ROAD) FROM US 202 (CONCORD PIKE) TO 500 FT EAST OF SR 261 (FOULK ROAD)

CONTRACT NUMBER: T201606103

FEDERAL AID PROJECT NUMBER: ESTP-2016(02)

COUNTY: NEW CASTLE M.R. #: 17

DESIGN DESIGNATION

FUNCTIONAL CLASS:		D.H.V. PROJECTED:	YEAR:
TYPE OF CONSTRUCTION:		DESIGN SPEED: M.P.H.	
A.A.D.T. CURRENT:	YEAR:	TRUCKS: %	
A.A.D.T. PROJECTED:	YEAR:	DIRECTION OF DISTRIBUTION: %	

INDEX OF SHEETS

SHEET NO	TABLE OF CONTENTS
1	TITLE SHEET
2	GENERAL NOTES
3	LEGEND
4-6	CONSTRUCTION DETAILS
7-40	CONSTRUCTION PLANS

TOTAL SHEETS: 40

APPROVED DESIGN EXCEPTIONS

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE

ADDENDA & REVISIONS

	DESCRIPTION	NAME & DATE
1		

ASSOCIATED CONTRACTS

CONTRACT NO.	CONTRACT NAME
78-061-06	NAAMANS RDAD U.S. RTE 202 (CONCORD PIKE) TO U.S RTE 13 (PHILA. PIKE)
81-102-01	CONCORD PIKE & NAAMANS ROAD INTERSECTION
85-102-03	NAAMANS ROAD (EAST OF GRUBB RDAD TO WEST OF FOULK ROAD)
85-102-05	NAAMANS ROAD SECTION 4B (WEST OF FOULK ROAD TO WEST OF MARSH ROAD)

PREPARED BY
THE CONSULTING FIRM OF

AECOM
1700 MARKET STREET, SUITE 1600
PHILADELPHIA, PA 19103
(215) 735-0832

BEN FRANCIS SENGER LICENSE No. 19915 DELAWARE PROFESSIONAL ENGINEER

SEAL

RECOMMENDED _____ 4-20-16 DATE

RECOMMENDED

SQUAD MANAGER, CONSTRUCTION _____ 4-22-16 DATE

GROUP ENGINEER, CONSTRUCTION _____ 4/22/16 DATE

ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS (CONSTRUCTION) _____ 4/25/16 DATE

RECOMMENDED AS TO PROCESS

PAR COORDINATOR

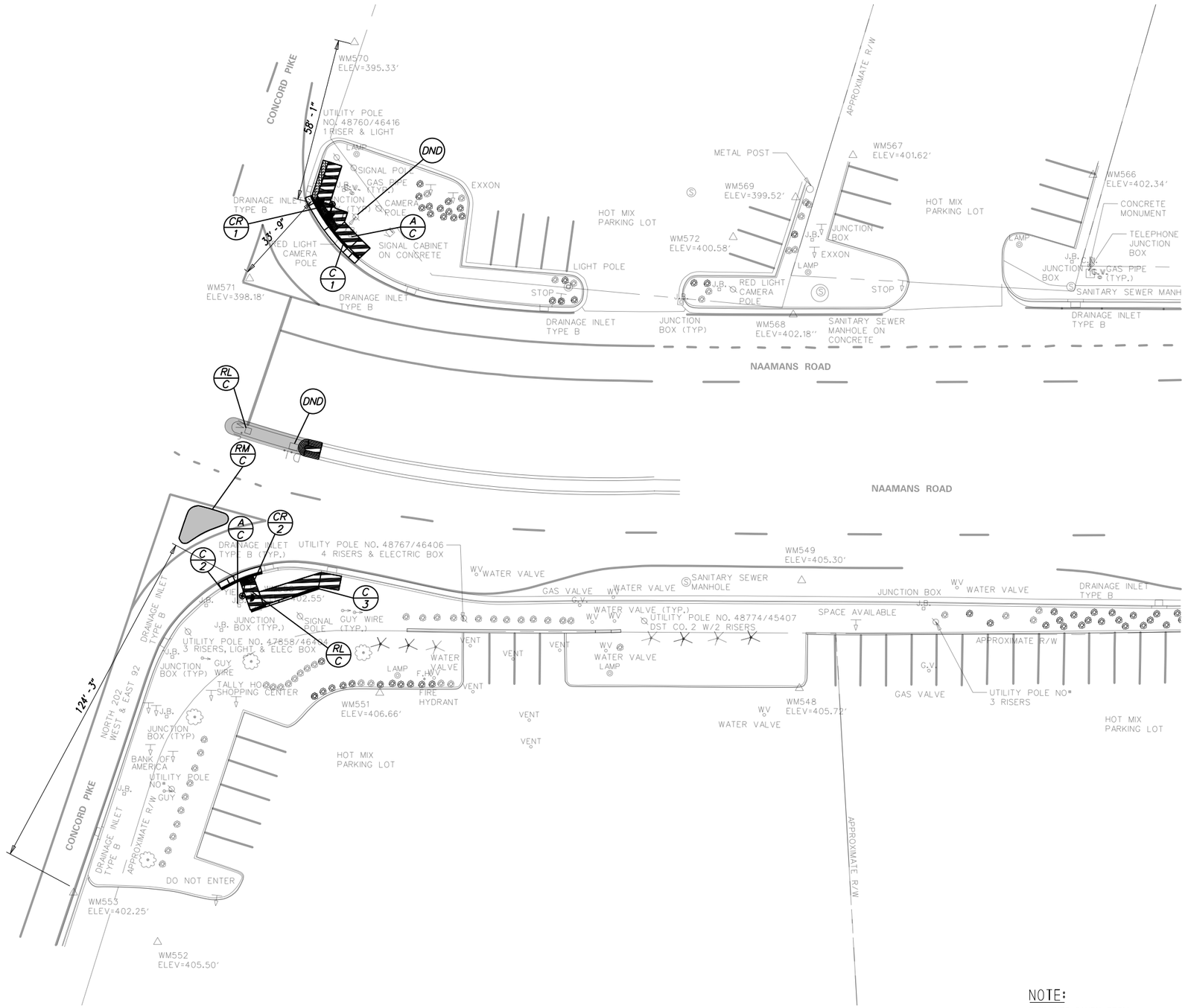
DATE 4/21/2016

APPROVED AS TO PROCESS

CHIEF ENGINEER

DATE 4/26/2016

LAST REVISED: 8/7/2008
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	CURB RAMP, TYPE 2	1

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2	P.C.C. CURB AND GUTTER TYPE 1-8	16.00
3	P.C.C. CURB TYPE 1-8	25.50

NOTE:

R/W INFO TAKEN FROM:
NAAMANS ROAD DELDOT R/W PLANS
CONTRACT • 79-102-01
WEST OF MARSH ROAD TO
WEST OF MERRIBROOK ROAD
DATE: OCT. 1987
SHT. 20 OF 25

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

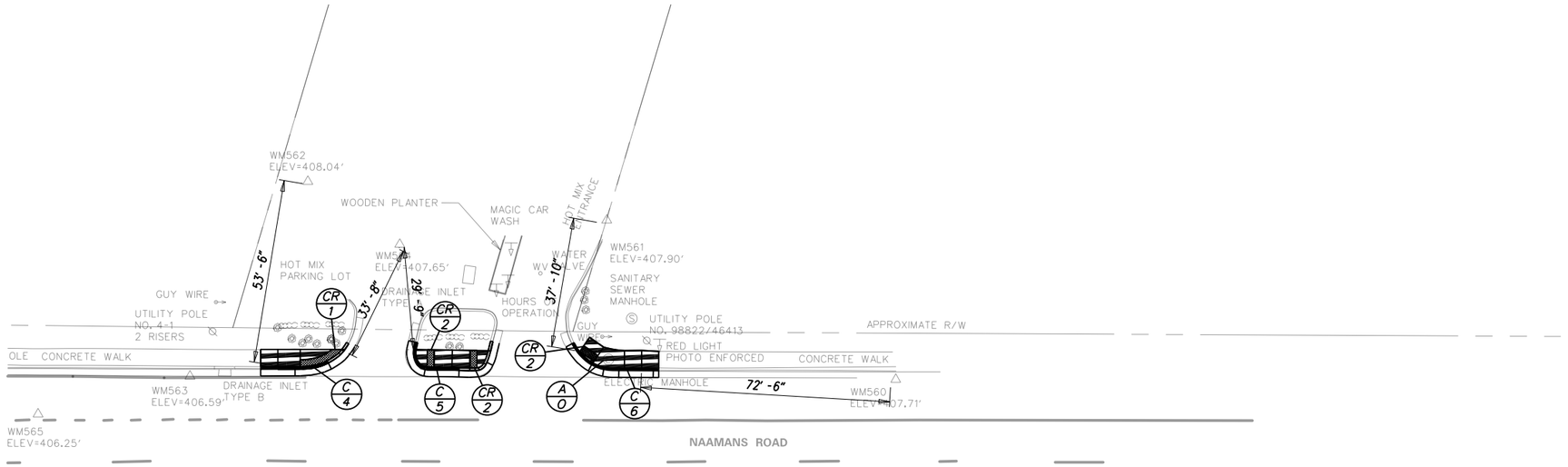
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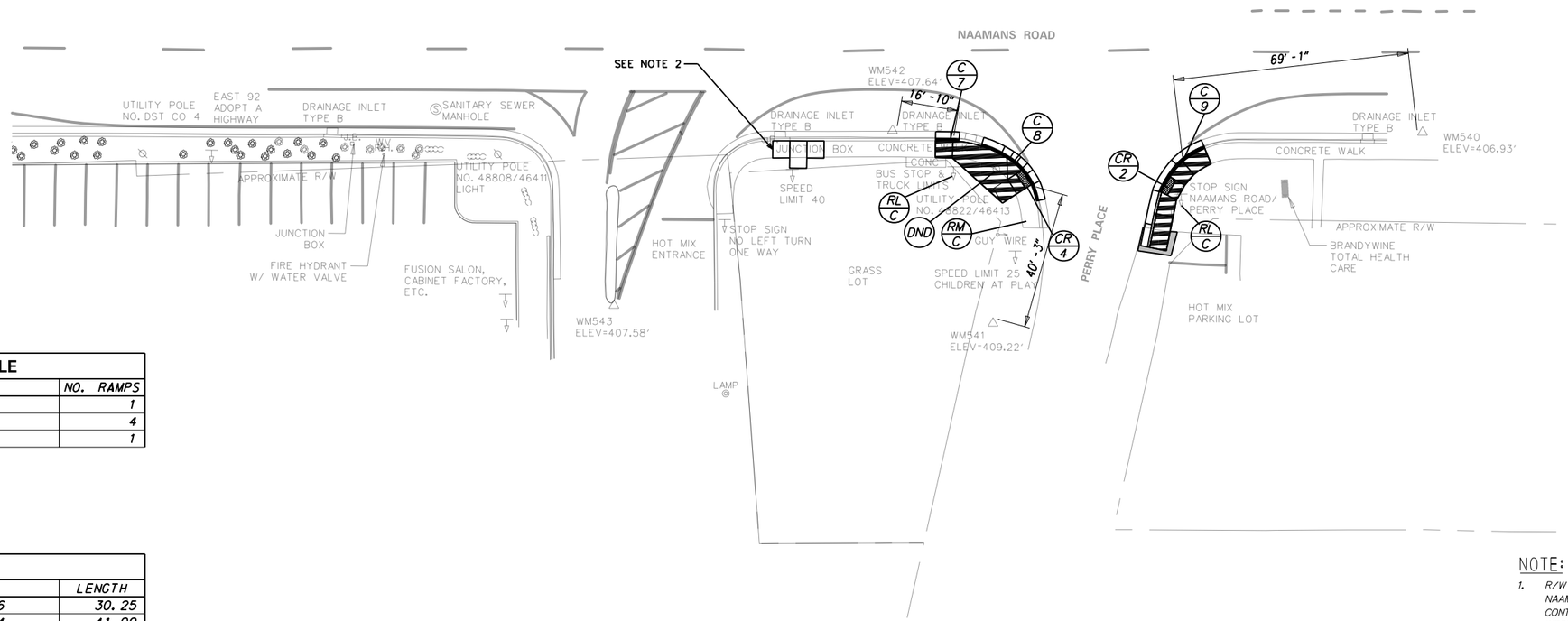
PAVEMENT & REHABILITATION,
NORTH III, 2016
SR 92 (NAAMANS ROAD)

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COUNTY	CHECKED BY: BFS (AEC)	
NEW CASTLE		

CONSTRUCTION PLAN

SHEET NO.
7
TOTAL SHTS.
40





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	CURB RAMP, TYPE 2	4
	CURB RAMP, TYPE 4	1

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5	P.C.C. CURB AND GUTTER TYPE 1-4	41.00
6	P.C.C. CURB AND GUTTER TYPE 1-6	30.50
7	P.C.C. CURB AND GUTTER TYPE 1-6	7.00
8	P.C.C. CURB AND GUTTER TYPE 1-6	27.00
9	P.C.C. CURB AND GUTTER TYPE 1-4	15.00
9	P.C.C. CURB AND GUTTER TYPE 1-6	18.67

NOTE:

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   NAAMANS ROAD DELDOT R/W PLANS
   CONTRACT • 79-102-01
   WEST OF MARSH ROAD TO WEST OF MERRIBROOK ROAD
   DATE: OCT. 1987
   SHT. 20 OF 25

2. SEE DETAIL SHT. 5 FOR BUS STOP PAD TYPE 1 DETAIL.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

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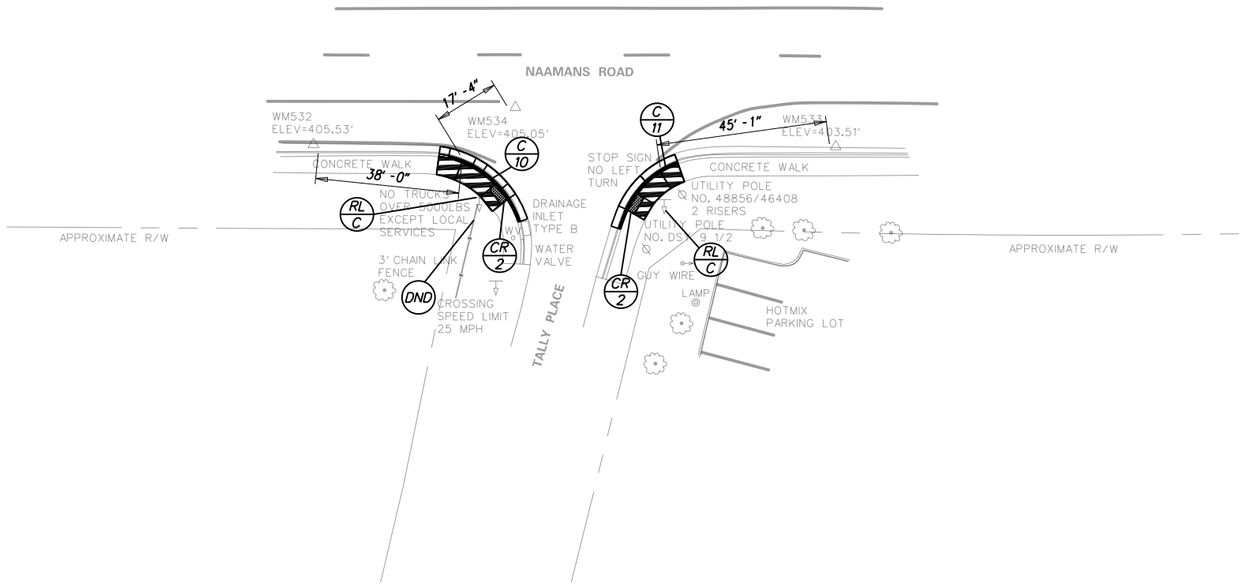
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SR 92 (NAAMANS ROAD)

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COUNTY	CHECKED BY: BFS (AEC)	
NEW CASTLE		

CONSTRUCTION PLAN

SHEET NO.
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TOTAL SHTS.
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NOTE:

R/W INFO TAKEN FROM:
NAAMANS ROAD DELDOT R/W PLANS
CONTRACT # 79-102-01
WEST OF MARSH ROAD TO
WEST OF MERRIBROOK ROAD
DATE: OCT. 1987
SHT. 20 OF 25

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

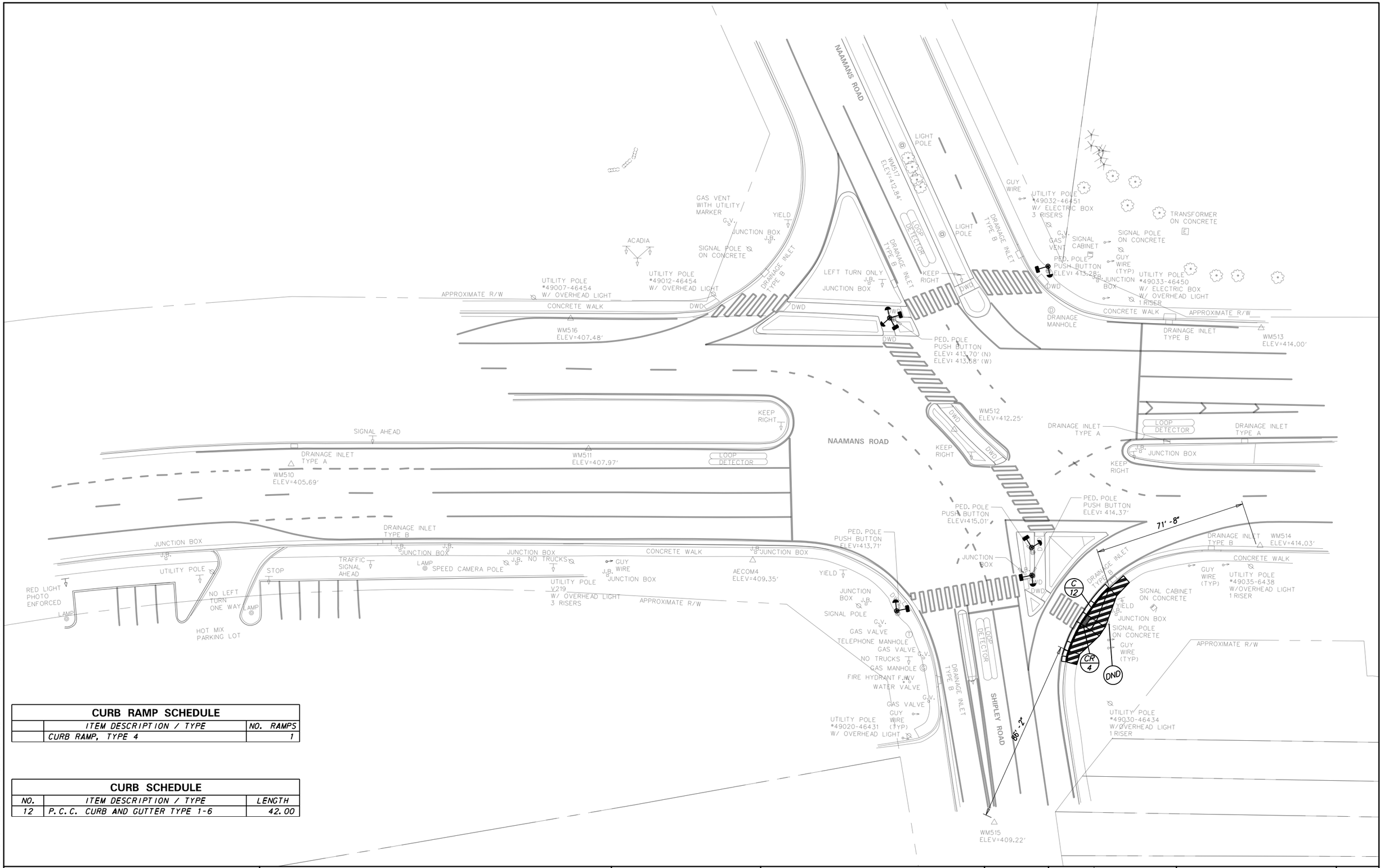
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PAVEMENT & REHABILITATION, NORTH III, 2016
SR 92 (NAAMANS ROAD)

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COUNTY	CHECKED BY: BFS (AEC)	
NEW CASTLE		

CONSTRUCTION PLAN

SHEET NO.
13
TOTAL SHTS.
40



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	CURB RAMP, TYPE 4	1

CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

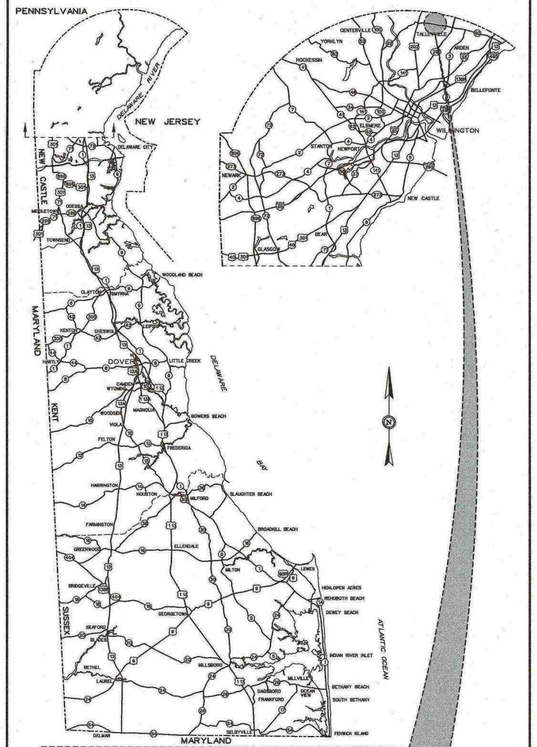
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PAVEMENT & REHABILITATION, NORTH III, 2016
SR 92 (NAAMANS ROAD)

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COUNTY		
NEW CASTLE	CHECKED BY: BFS (AEC)	

CONSTRUCTION PLAN

SHEET NO.
15
TOTAL SHTS.
40



GENERAL LOCATION OF CONTRACT

THE STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY UNITS

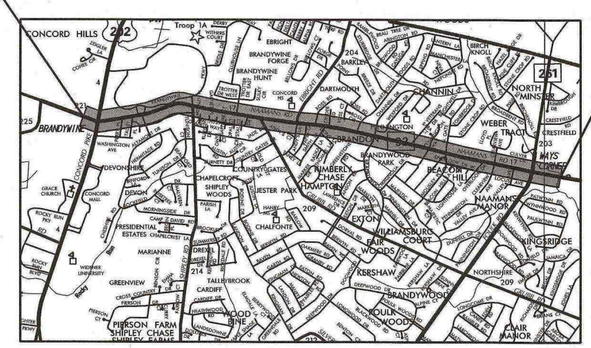
SIGNING AND STRIPING PLANS FOR:

PAVEMENT & REHABILITATION NORTH III, 2016 SR 92 (NAAMANS ROAD) FROM US 202 (CONCORD PIKE) TO 500 FT EAST OF SR 261 (FOULK ROAD)

CONTRACT NUMBER: T201606103
FEDERAL AID PROJECT NUMBER: ESTP-2016(02)

COUNTY: NEW CASTLE M.R. #: 17

BEGIN CONTRACT T201606103



LOCATION MAP
SCALE: 1" = 2000'

END CONTRACT T201606103

DESIGN DESIGNATION

INDEX OF SHEETS

SHEET Nº	TABLE OF CONTENTS
1	TITLE SHEET
2-3	PLAN SHEET INDEX
4-19	SIGNING AND STRIPING PLANS
20-26	SIGN SCHEDULE

TOTAL SHEETS: 26

APPROVED DESIGN EXCEPTIONS

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE

ADDENDA & REVISIONS

DESCRIPTION	NAME & DATE

ASSOCIATED CONTRACTS

CONTRACT NO.	CONTRACT NAME

PREPARED BY
THE CONSULTING FIRM OF

AECOM
1700 MARKET STREET, SUITE 1600
PHILADELPHIA, PA 19103
(215) 735-0832

REG. FRANCIS SENNER LICENSE No. 19916 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED 08/30/2016
DATE

RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	APPROVED
DATE	DATE	DATE	DATE	DATE 08/30/16	TRAFFIC ENGINEER DATE 08/30/2016

LAST REVISED: 8/7/2008
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PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM
(A)	WHITE ALKYD-THERMOPLASTIC, PERMANENT PAVEMENT STRIPING SYMBOL/LEGEND (ITEM 748015)
(B)	5" SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)
(C)	5" DOTTED WHITE EPOXY RESIN PAINT, PERMANENT PAVEMENT STRIPING - 2' LINE & 6' GAP (ITEM 748548)
(D)	16" WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)
(E)	5" SOLID DOUBLE YELLOW EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)
(F)	5" BROKEN WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING - 10' LINE, 30' GAP (ITEM 748548)
(G)	10" SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748549)
(H)	5" DOTTED WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING - 2' LINE, 6' GAP (ITEM 748033)
(I)	12" SOLID YELLOW ALKYD-THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748027)
(J)	5" SOLID YELLOW EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)
(K)	24" WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)
(L)	6' X 2' SOLID WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748015)
(M)	10' X 2' SOLID WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748015)
(N)	5" DOTTED YELLOW ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING - 2' LINE, 6' GAP (ITEM 748033)
(T)	10" DOTTED WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING - 2' LINE & 6' GAP (ITEM 748549)

- FLEXIBLE DELINEATOR

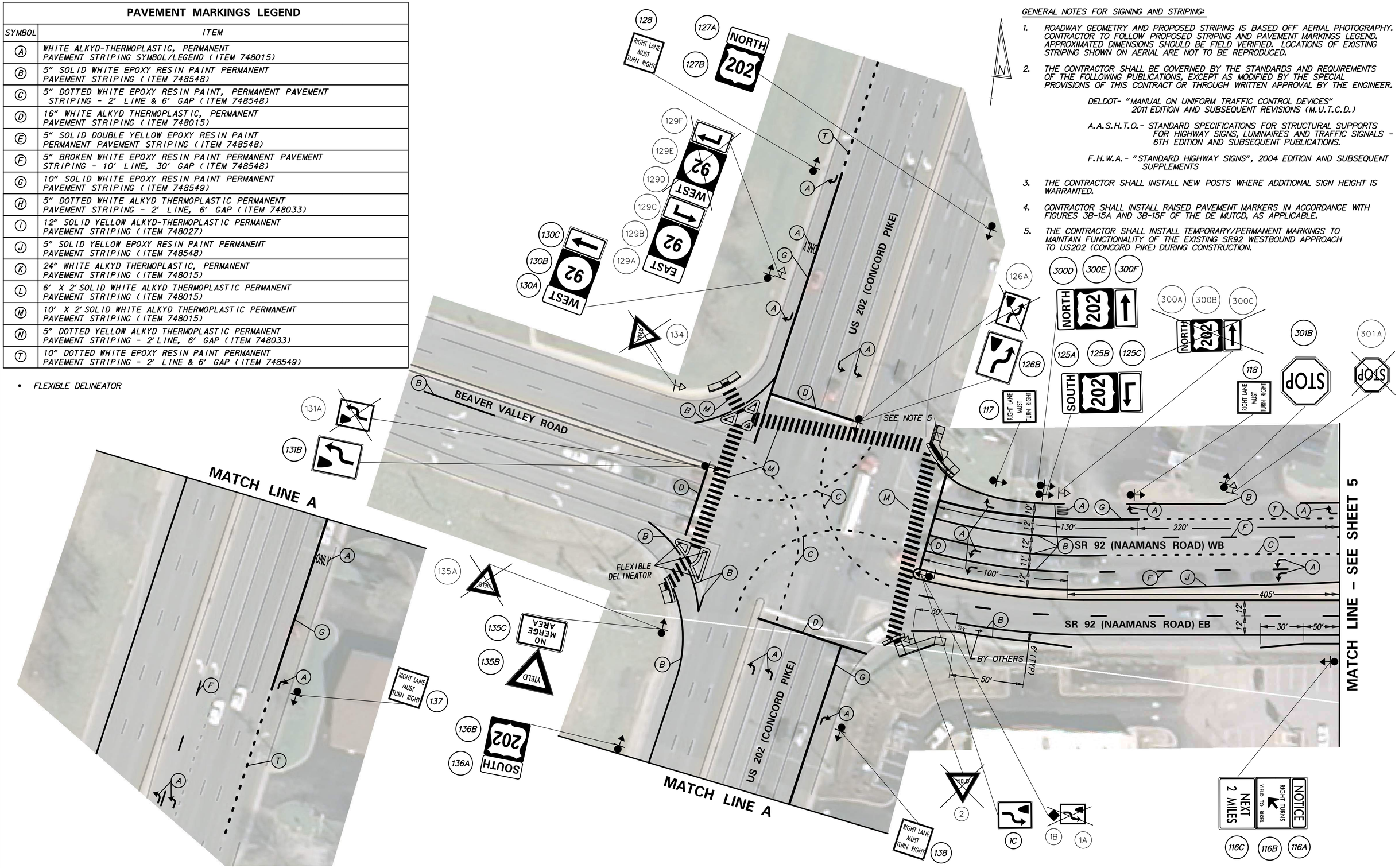
GENERAL NOTES FOR SIGNING AND STRIPING:

1. ROADWAY GEOMETRY AND PROPOSED STRIPING IS BASED OFF AERIAL PHOTOGRAPHY. CONTRACTOR TO FOLLOW PROPOSED STRIPING AND PAVEMENT MARKINGS LEGEND. APPROXIMATED DIMENSIONS SHOULD BE FIELD VERIFIED. LOCATIONS OF EXISTING STRIPING SHOWN ON AERIAL ARE NOT TO BE REPRODUCED.
2. THE CONTRACTOR SHALL BE GOVERNED BY THE STANDARDS AND REQUIREMENTS OF THE FOLLOWING PUBLICATIONS, EXCEPT AS MODIFIED BY THE SPECIAL PROVISIONS OF THIS CONTRACT OR THROUGH WRITTEN APPROVAL BY THE ENGINEER.

   DELDOT- "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" 2011 EDITION AND SUBSEQUENT REVISIONS (M.U.T.C.D.)

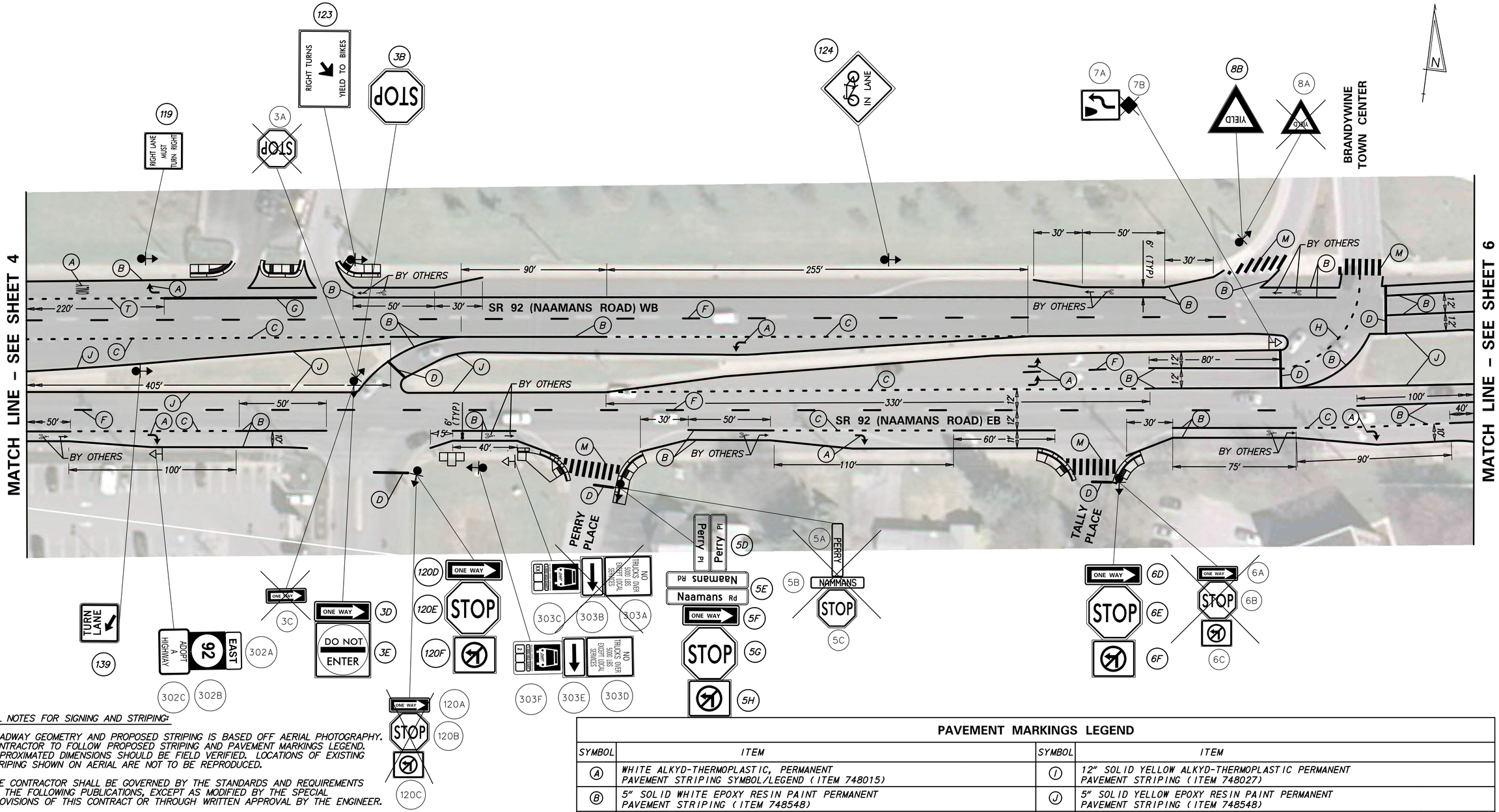
   A.A.S.H.T.O.- STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS - 6TH EDITION AND SUBSEQUENT PUBLICATIONS.

   F.H.W.A.- "STANDARD HIGHWAY SIGNS", 2004 EDITION AND SUBSEQUENT SUPPLEMENTS
3. THE CONTRACTOR SHALL INSTALL NEW POSTS WHERE ADDITIONAL SIGN HEIGHT IS WARRANTED.
4. CONTRACTOR SHALL INSTALL RAISED PAVEMENT MARKERS IN ACCORDANCE WITH FIGURES 3B-15A AND 3B-15F OF THE DE MUTCD, AS APPLICABLE.
5. THE CONTRACTOR SHALL INSTALL TEMPORARY/PERMANENT MARKINGS TO MAINTAIN FUNCTIONALITY OF THE EXISTING SR92 WESTBOUND APPROACH TO US202 (CONCORD PIKE) DURING CONSTRUCTION.



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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	PAVEMENT & REHABILITATION NORTH III, 2016 SR 92 (NAAMANS ROAD)	CONTRACT T201606103 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: RDN (AECOM) / CHECKED BY: ADM (AECOM)
				SIGNING AND STRIPING PLAN	SHEET NO. 4 / TOTAL SHTS. 26



GENERAL NOTES FOR SIGNING AND STRIPING:

1. *ROADWAY GEOMETRY AND PROPOSED STRIPING IS BASED OFF AERIAL PHOTOGRAPHY. CONTRACTOR TO FOLLOW PROPOSED STRIPING AND PAVEMENT MARKINGS LEGEND. APPROXIMATED DIMENSIONS SHOULD BE FIELD VERIFIED. LOCATIONS OF EXISTING STRIPING SHOWN ON AERIAL ARE NOT TO BE REPRODUCED.*
2. *THE CONTRACTOR SHALL BE GOVERNED BY THE STANDARDS AND REQUIREMENTS OF THE FOLLOWING PUBLICATIONS, EXCEPT AS MODIFIED BY THE SPECIAL PROVISIONS OF THIS CONTRACT OR THROUGH WRITTEN APPROVAL BY THE ENGINEER.*

   DELDOT- "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" 2011 EDITION AND SUBSEQUENT REVISIONS (M.U.T.C.D.)

   A.A.S.H.T.O.- STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS - 6TH EDITION AND SUBSEQUENT PUBLICATIONS.

   F.H.W.A.- "STANDARD HIGHWAY SIGNS", 2004 EDITION AND SUBSEQUENT SUPPLEMENTS
3. *THE CONTRACTOR SHALL INSTALL NEW POSTS WHERE ADDITIONAL SIGN HEIGHT IS WARRANTED.*
4. *CONTRACTOR SHALL INSTALL RAISED PAVEMENT MARKERS IN ACCORDANCE WITH FIGURES 3B-15A AND 3B-15F OF THE DE MUTCD, AS APPLICABLE.*

PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	SYMBOL	ITEM
(A)	WHITE ALKYD-THERMOPLASTIC, PERMANENT PAVEMENT STRIPING SYMBOL/LEGEND (ITEM 748015)	(I)	12" SOLID YELLOW ALKYD-THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748027)
(B)	5" SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)	(J)	5" SOLID YELLOW EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)
(C)	5" DOTTED WHITE EPOXY RESIN PAINT, PERMANENT PAVEMENT STRIPING - 2' LINE & 6' GAP (ITEM 748548)	(K)	24" WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)
(D)	16" WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)	(L)	6' X 2' SOLID WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748015)
(E)	5" SOLID DOUBLE YELLOW EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)	(M)	10' X 2' SOLID WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748015)
(F)	5" BROKEN WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING - 10' LINE, 30' GAP (ITEM 748548)	(N)	5" DOTTED YELLOW ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING - 2' LINE, 6' GAP (ITEM 748033)
(G)	10" SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748549)	(T)	10" DOTTED WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING - 2' LINE & 6' GAP (ITEM 748549)
(H)	5" DOTTED WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING - 2' LINE, 6' GAP (ITEM 748033)		

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

SCALE 0 30 60 90 FEET

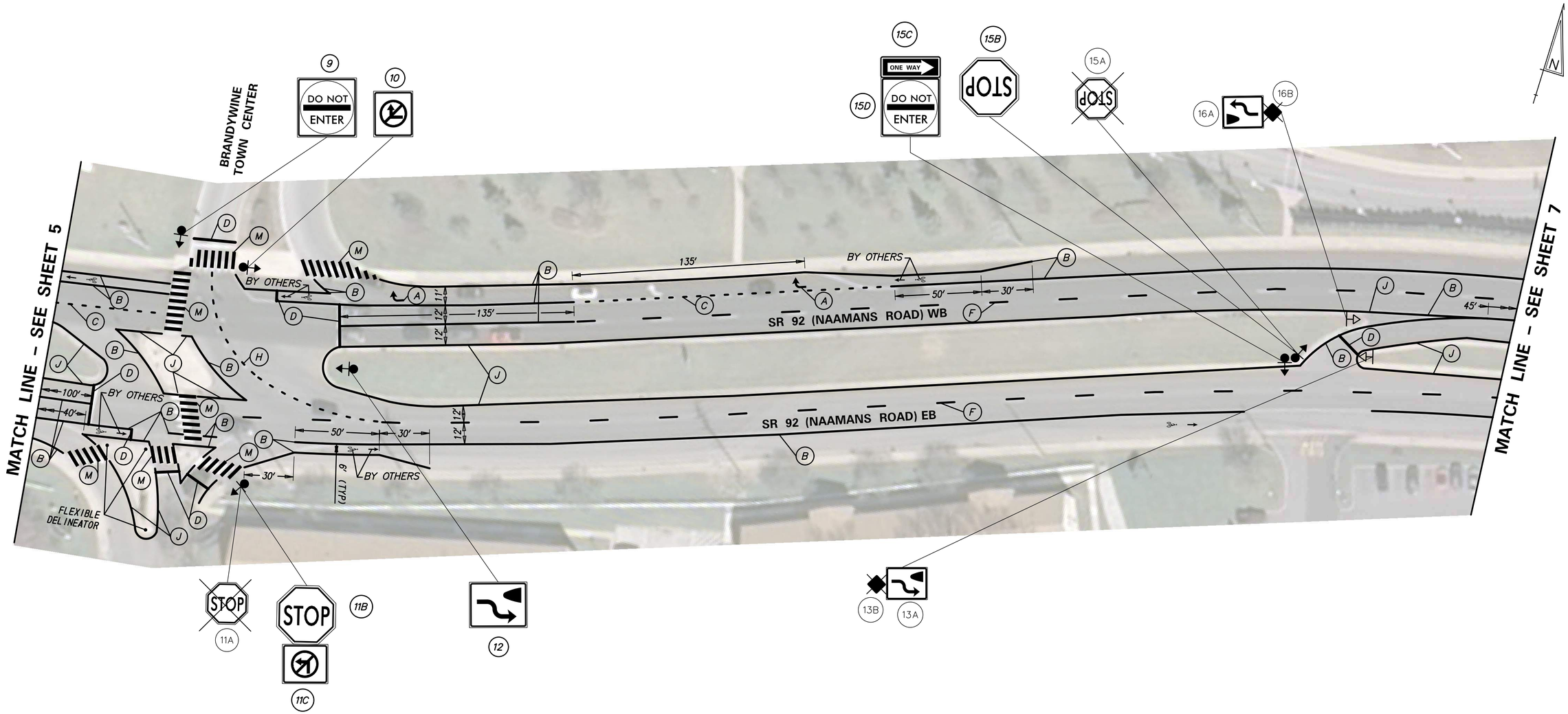
PAVEMENT & REHABILITATION NORTH III, 2016
SR 92 (NAAMANS ROAD)

CONTRACT	BRIDGE NO.	
T201606103	DESIGNED BY: RDN (AECOM)	
COUNTY	CHECKED BY: ADM (AECOM)	
NEW CASTLE		

SIGNING AND STRIPING PLAN

SHEET NO.
5
TOTAL SHTS.
26

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GENERAL NOTES FOR SIGNING AND STRIPING:

1. *ROADWAY GEOMETRY AND PROPOSED STRIPING IS BASED OFF AERIAL PHOTOGRAPHY. CONTRACTOR TO FOLLOW PROPOSED STRIPING AND PAVEMENT MARKINGS LEGEND. APPROXIMATED DIMENSIONS SHOULD BE FIELD VERIFIED. LOCATIONS OF EXISTING STRIPING SHOWN ON AERIAL ARE NOT TO BE REPRODUCED.*

2. *THE CONTRACTOR SHALL BE GOVERNED BY THE STANDARDS AND REQUIREMENTS OF THE FOLLOWING PUBLICATIONS, EXCEPT AS MODIFIED BY THE SPECIAL PROVISIONS OF THIS CONTRACT OR THROUGH WRITTEN APPROVAL BY THE ENGINEER.*

   DELDOT- "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" 2011 EDITION AND SUBSEQUENT REVISIONS (M.U.T.C.D.)

   A.A.S.H.T.O.- STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS - 6TH EDITION AND SUBSEQUENT PUBLICATIONS.

   F.H.W.A.- "STANDARD HIGHWAY SIGNS", 2004 EDITION AND SUBSEQUENT SUPPLEMENTS

3. *THE CONTRACTOR SHALL INSTALL NEW POSTS WHERE ADDITIONAL SIGN HEIGHT IS WARRANTED.*

4. *CONTRACTOR SHALL INSTALL RAISED PAVEMENT MARKERS IN ACCORDANCE WITH FIGURES 3B-15A AND 3B-15F OF THE DE MUTCD, AS APPLICABLE.*

• *FLEXIBLE DELINEATOR*

PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	SYMBOL	ITEM
Ⓐ	WHITE ALKYD-THERMOPLASTIC, PERMANENT PAVEMENT STRIPING SYMBOL/LEGEND (ITEM 748015)	Ⓗ	5″ DOTTED WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING - 2′ LINE, 6′ GAP (ITEM 748033)
Ⓑ	5″ SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)	Ⓘ	12″ SOLID YELLOW ALKYD-THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748027)
Ⓒ	5″ DOTTED WHITE EPOXY RESIN PAINT, PERMANENT PAVEMENT STRIPING - 2′ LINE & 6′ GAP (ITEM 748548)	Ⓙ	5″ SOLID YELLOW EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)
Ⓓ	16″ WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)	Ⓚ	24″ WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)
Ⓔ	5″ SOLID DOUBLE YELLOW EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)	Ⓛ	6′ X 2′ SOLID WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748015)
Ⓕ	5″ BROKEN WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING - 10′ LINE, 30′ GAP (ITEM 748548)	Ⓜ	10′ X 2′ SOLID WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748015)
Ⓖ	10″ SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748549)	Ⓝ	5″ DOTTED YELLOW ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING - 2′ LINE, 6′ GAP (ITEM 748033)

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

PAVEMENT & REHABILITATION NORTH III, 2016 SR 92 (NAAMANS ROAD)

CONTRACT	BRIDGE NO.	
T201606103	DESIGNED BY: RDN (AECOM)	
COUNTY	CHECKED BY: ADM (AECOM)	
NEW CASTLE		

SIGNING AND STRIPING PLAN

SHEET NO.
6
TOTAL SHTS.
26

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GENERAL NOTES FOR SIGNING AND STRIPING:

1. ROADWAY GEOMETRY AND PROPOSED STRIPING IS BASED OFF AERIAL PHOTOGRAPHY. CONTRACTOR TO FOLLOW PROPOSED STRIPING AND PAVEMENT MARKINGS LEGEND. APPROXIMATED DIMENSIONS SHOULD BE FIELD VERIFIED. LOCATIONS OF EXISTING STRIPING SHOWN ON AERIAL ARE NOT TO BE REPRODUCED.

2. THE CONTRACTOR SHALL BE GOVERNED BY THE STANDARDS AND REQUIREMENTS OF THE FOLLOWING PUBLICATIONS, EXCEPT AS MODIFIED BY THE SPECIAL PROVISIONS OF THIS CONTRACT OR THROUGH WRITTEN APPROVAL BY THE ENGINEER.

   DELDOT- "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" 2011 EDITION AND SUBSEQUENT REVISIONS (M.U.T.C.D.)

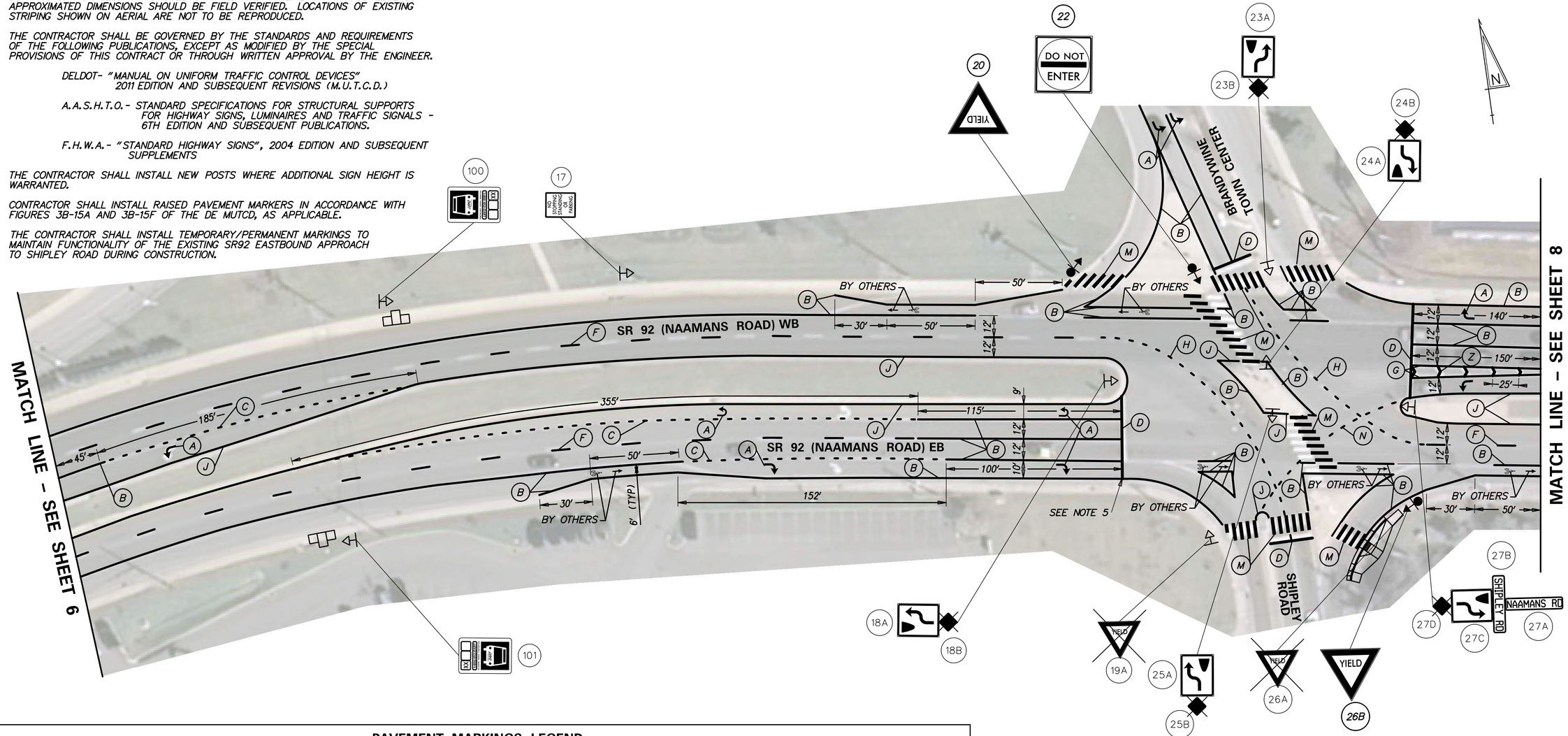
   A.A.S.H.T.O.- STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS - 6TH EDITION AND SUBSEQUENT PUBLICATIONS.

   F.H.W.A.- "STANDARD HIGHWAY SIGNS", 2004 EDITION AND SUBSEQUENT SUPPLEMENTS

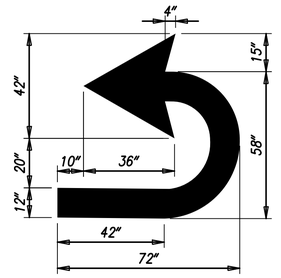
3. THE CONTRACTOR SHALL INSTALL NEW POSTS WHERE ADDITIONAL SIGN HEIGHT IS WARRANTED.

4. CONTRACTOR SHALL INSTALL RAISED PAVEMENT MARKERS IN ACCORDANCE WITH FIGURES 3B-15A AND 3B-15F OF THE DE MUTCD, AS APPLICABLE.

5. THE CONTRACTOR SHALL INSTALL TEMPORARY/PERMANENT MARKINGS TO MAINTAIN FUNCTIONALITY OF THE EXISTING SR92 EASTBOUND APPROACH TO SHIPLEY ROAD DURING CONSTRUCTION.



PAVEMENT MARKINGS LEGEND			
SYMBOL	ITEM	SYMBOL	ITEM
(A)	WHITE ALKYD-THERMOPLASTIC, PERMANENT PAVEMENT STRIPING SYMBOL/LEGEND (ITEM 748015)	(I)	12" SOLID YELLOW ALKYD-THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748027)
(B)	5" SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)	(J)	5" SOLID YELLOW EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)
(C)	5" DOTTED WHITE EPOXY RESIN PAINT, PERMANENT PAVEMENT STRIPING - 2' LINE & 6' GAP (ITEM 748548)	(K)	24" WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)
(D)	16" WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)	(L)	6' X 2' SOLID WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748015)
(E)	5" SOLID DOUBLE YELLOW EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)	(M)	10' X 2' SOLID WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748015)
(F)	5" BROKEN WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING - 10' LINE, 30' GAP (ITEM 748548)	(N)	5" DOTTED YELLOW ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING - 2' LINE, 6' GAP (ITEM 748033)
(G)	10" SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748549)	(X)	5" DOTTED DOUBLE YELLOW EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING - 2' LINE & 6' GAP (ITEM 748548)
(H)	5" DOTTED WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING - 2' LINE, 6' GAP (ITEM 748033)	(Z)	12" SOLID WHITE ALKYD-THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748027)



U-TURN ARROW DETAIL

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	PAVEMENT & REHABILITATION NORTH III, 2016 SR 92 (NAAMANS ROAD)	CONTRACT T201606103	BRIDGE NO.	SIGNING AND STRIPING PLAN	SHEET NO. 7
				COUNTY NEW CASTLE	DESIGNED BY: RDN (AECOM)		TOTAL SHTS. 26
					CHECKED BY: ADM (AECOM)		

MATCH LINE CC – SEE SHEET 4

MATCH LINE AA – SEE SHEET 4

MATCH LINE BB – SEE SHEET 4

WB SR 92 (BEAVER VALLEY ROAD)

EB SR 92 (NAAMANS ROAD)

NB US 202 (CONCORD PIKE)

SB US 202 (CONCORD PIKE)

INSTALL NEW SIGN R4-7 (24" x30")

INSTALL NEW SIGNS M3-3 (24" x12") SOUTH 202 M1-4 (30" x24")

INSTALL NEW SIGNS R1-2 (48" x48" x48") YIELD W4-5P (24" x30") NO MERGE AREA

REMOVE EXISTING SIGN

REMOVE EXISTING SIGN

INSTALL NEW SIGNS M3-4 (24" x12") WEST 92 M6-1R (21" x15") M1-5 (24" x24")

EXISTING SIGNS TO REMAIN EAST 92

REMOVE EXISTING SIGNS WEST 92

INSTALL NEW SIGN R3-7R (36" x36") RIGHT LANE MUST TURN RIGHT

INSTALL NEW SIGN R3-20-DE (18" x18") TURN LANE

DOTTED STRIPING (TYP.)

ARROW

ONLY

(TYP.)

INSTALL NEW SIGN R3-7R (36" x36") RIGHT LANE MUST TURN RIGHT

REMOVE EXISTING SIGN

INSTALL NEW SIGN R3-7R (36" x36") RIGHT LANE MUST TURN RIGHT

RELOCATE EXISTING SIGN

INSTALL NEW SIGN R4-7 (24" x30")

INSTALL NEW SIGNS 202 NORTH M3-1 (24" x12") M1-4 (30" x24")

REMOVE EXISTING SIGN

INSTALL NEW SIGNS M3-3 (24" x12") SOUTH 202 M1-4 (30" x24") M5-1L (21" x15")

160'

INSTALL NEW SIGN R3-20-DE (18" x18") TURN LANE

PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
(A)	5" SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)	530 LF
(B)	10' x2' SOLID WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748015)	1840 SF
(C)	5" SOLID YELLOW EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)	15 LF
(D)	16" WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)	325 SF
(E)	SOLID WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)	266 SF
(F)	5" BROKEN WHITE EPOXY RESIN PAINT, PERMANENT PAVEMENT STRIPING (ITEM 748548) (10' LINE, 30' GAP, 10' LINE)	70 LF
(G)	10" SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748549)	430 LF
(H)	10" DOTTED WHITE EPOXY RESIN PAINT, PERMANENT PAVEMENT STRIPING (ITEM 748549) (2' LINE, 6' GAP, 2' LINE)	96 LF

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 30 60 90
FEET

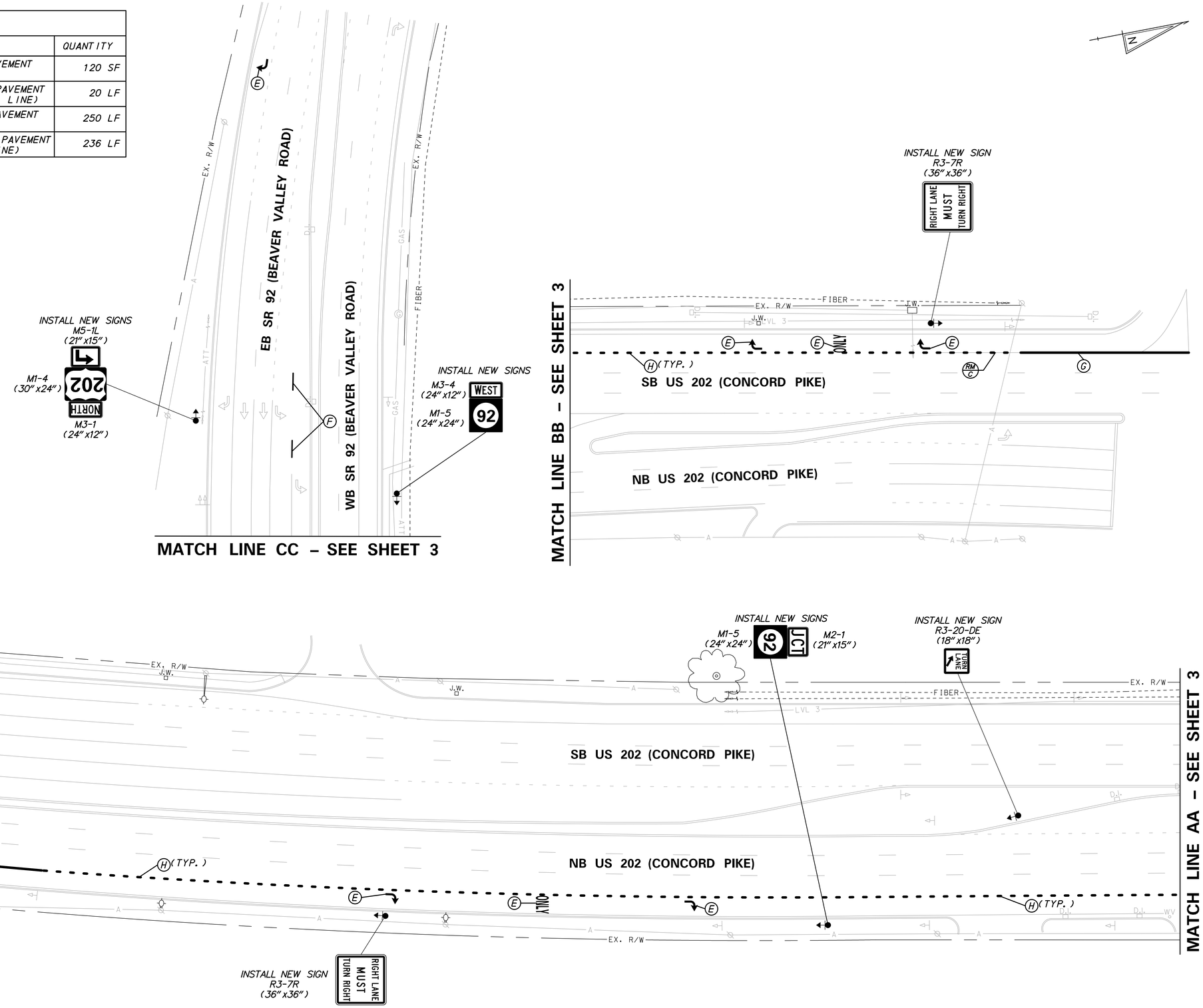
PAVEMENT & REHABILITATION, NORTH III, 2016 (2011 HEP, SITE CC)

CONTRACT	PERMIT NO.	N101
T201606103	DESIGNED BY: D.W.C. (WRA)	
COUNTY	CHECKED BY: M.J.B. (WRA)	
NEW CASTLE		

SIGNING AND STRIPING PLAN US 202 (CONCORD PIKE) @ SR 92 (NAAMANS ROAD / BEAVER VALLEY ROAD)

SHEET NO.	3
TOTAL SHTS.	4

PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(E)	SOLID WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)	120 SF
(F)	5" BROKEN WHITE EPOXY RESIN PAINT, PERMANENT PAVEMENT STRIPING (ITEM 748548) (10' LINE, 30' GAP, 10' LINE)	20 LF
(G)	10" SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748549)	250 LF
(H)	10" DOTTED WHITE EPOXY RESIN PAINT, PERMANENT PAVEMENT STRIPING (ITEM 748549) (2' LINE, 6' GAP, 2' LINE)	236 LF



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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	PAVEMENT & REHABILITATION, NORTH III, 2016 (2011 HEP, SITE CC)	CONTRACT T201606103	PERMIT NO. N101	SIGNING AND STRIPING PLAN US 202 (CONCORD PIKE) @ SR 92 (NAAMANS ROAD / BEAVER VALLEY ROAD)	SHEET NO. 4
				COUNTY NEW CASTLE	DESIGNED BY: D.W.C. (WRA)		TOTAL SHTS. 4
					CHECKED BY: M.J.B. (WRA)		

MATCH LINE CC – SEE SHEET 4

MATCH LINE AA – SEE SHEET 4

MATCH LINE BB – SEE SHEET 4

WB SR 92 (BEAVER VALLEY ROAD)

EB SR 92 (NAAMANS ROAD)

NB US 202 (CONCORD PIKE)

SB US 202 (CONCORD PIKE)

INSTALL NEW SIGN R4-7 (24" x30")

INSTALL NEW SIGNS M3-3 (24" x12") SOUTH 202 M1-4 (30" x24")

INSTALL NEW SIGNS R1-2 (48" x48" x48") YIELD W4-5P (24" x30") NO MERGE AREA

REMOVE EXISTING SIGN

REMOVE EXISTING SIGN

INSTALL NEW SIGNS M3-4 (24" x12") WEST 92 M6-1R (21" x15") M1-5 (24" x24")

EXISTING SIGNS TO REMAIN EAST 92

REMOVE EXISTING SIGNS WEST 92

INSTALL NEW SIGN R3-7R (36" x36") RIGHT LANE MUST TURN RIGHT

INSTALL NEW SIGN R3-20-DE (18" x18") TURN LANE

INSTALL NEW SIGN R3-7R (36" x36") RIGHT LANE MUST TURN RIGHT

INSTALL NEW SIGN R3-7R (36" x36") RIGHT LANE MUST TURN RIGHT

REMOVE EXISTING SIGN

RELOCATE EXISTING SIGN

INSTALL NEW SIGNS M1-4 (30" x24") NORTH 202 M3-1 (24" x12")

INSTALL NEW SIGNS M3-3 (24" x12") SOUTH 202 M1-4 (30" x24") M5-1L (21" x15")

INSTALL NEW SIGN R3-20-DE (18" x18") TURN LANE

STRIPING

ARROW

ONLY

(TYP.)

160'

PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
(A)	5" SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)	450 LF
(B)	10' x2' SOLID WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748015)	1860 SF
(C)	5" SOLID YELLOW EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)	50 LF
(D)	16" WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)	255 SF
(E)	SOLID WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)	285 SF
(F)	5" BROKEN WHITE EPOXY RESIN PAINT, PERMANENT PAVEMENT STRIPING (ITEM 748548) (10' LINE, 30' GAP, 10' LINE)	70 LF
(G)	10" SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748549)	430 LF
(H)	10" DOTTED WHITE EPOXY RESIN PAINT, PERMANENT PAVEMENT STRIPING (ITEM 748549) (2' LINE, 6' GAP, 2' LINE)	96 LF

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

2011 HEP, SITE CC

CONTRACT T201501002

COUNTY NEW CASTLE

PERMIT NO. N101

DESIGNED BY: D.W.C. (WR&A)

CHECKED BY: M.J.B. (WR&A)

SIGNING AND STRIPING PLAN US 202 (CONCORD PIKE) @ SR 92 (NAAMANS ROAD / BEAVER VALLEY ROAD)

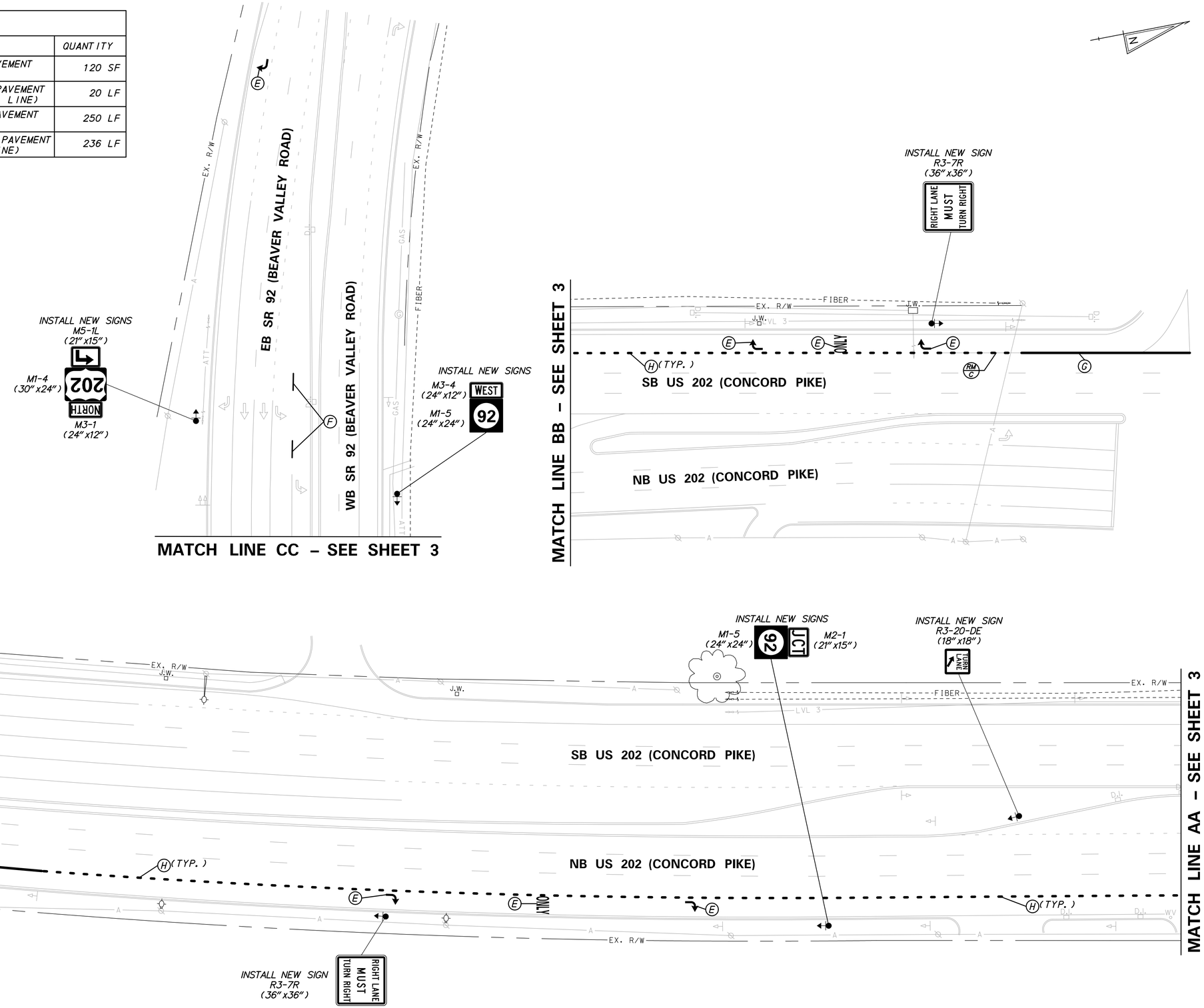
SHEET NO. 3

TOTAL SHTS. 4

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PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
(E)	SOLID WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)	120 SF
(F)	5" BROKEN WHITE EPOXY RESIN PAINT, PERMANENT PAVEMENT STRIPING (ITEM 748548) (10' LINE, 30' GAP, 10' LINE)	20 LF
(G)	10" SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748549)	250 LF
(H)	10" DOTTED WHITE EPOXY RESIN PAINT, PERMANENT PAVEMENT STRIPING (ITEM 748549) (2' LINE, 6' GAP, 2' LINE)	236 LF



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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

SCALE
0 30 60 90
FEET

2011 HEP, SITE CC

CONTRACT	PERMIT NO.	N101
T201501002	DESIGNED BY: D.W.C. (WR&A)	
COUNTY	CHECKED BY: M.J.B. (WR&A)	
NEW CASTLE		

SIGNING AND STRIPING PLAN US 202 (CONCORD PIKE) @ SR 92 (NAAMANS ROAD / BEAVER VALLEY ROAD)

SHEET NO.	4
TOTAL SHTS.	4

DELDOT 2011 HEP SITE CC

CONTRACT T201501002 – CONCORD PIKE & NAAMANS ROAD INTERSECTION IMPROVEMENTS

CONTRACT T201101001 –NAAMANS ROAD & BRANDYWINE PARKWAY INTERSECTION IMPROVEMENTS

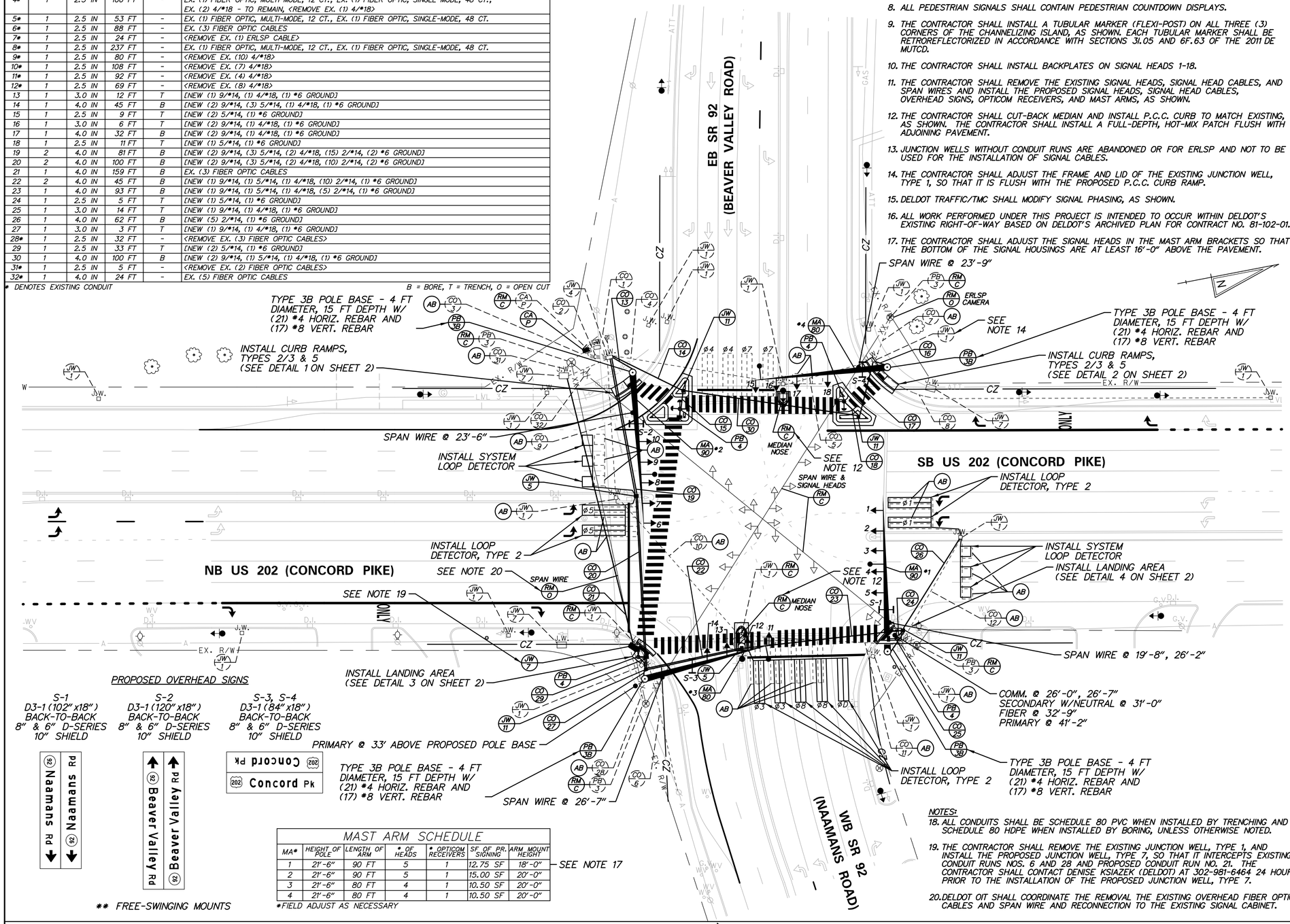
Pennoni

CONDUIT RUN SCHEDULE

CO#	# OF CONDUITS	SIZE	LENGTH	B/T/O	AMOUNT AND TYPE OF CABLE/ WIRE
1#	1	1.5 IN	10 FT	-	EX. (1) 2/#8 U.F. W/GROUND - LOAD SIDE
2#	3	2.5 IN	12 FT	-	EX. (2) FIBER OPTIC, SINGLE-MODE, 6 CT., EX. (2) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (6) LIGHTING CABLES, EX. (1) 2/#8 U.F. W/GROUND - LOAD SIDE, EX. (2) 4/#18 - TO REMAIN, EX. (1) COMM. CABLE - TO REMAIN, <REMOVE EX. (1) COMM. CABLE, EX. (13) 4/#18>, [NEW (5) 9/#14, (6) 5/#14, (4) 4/#18, (15) 2/#14, (3) #6 GROUND]
3#	1	2.5 IN	8 FT	-	<REMOVE EX. (2) 16/#14, EX. (1) FIBER OPTIC CABLE>
4#	1	2.5 IN	100 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (2) 4/#18 - TO REMAIN, <REMOVE EX. (1) 4/#18>
5#	1	2.5 IN	53 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT.
6#	1	2.5 IN	88 FT	-	EX. (3) FIBER OPTIC CABLES
7#	1	2.5 IN	24 FT	-	<REMOVE EX. (1) ERLSP CABLE>
8#	1	2.5 IN	237 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT.
9#	1	2.5 IN	80 FT	-	<REMOVE EX. (10) 4/#18>
10#	1	2.5 IN	108 FT	-	<REMOVE EX. (7) 4/#18>
11#	1	2.5 IN	92 FT	-	<REMOVE EX. (4) 4/#18>
12#	1	2.5 IN	69 FT	-	<REMOVE EX. (8) 4/#18>
13	1	3.0 IN	12 FT	T	[NEW (1) 9/#14, (1) 4/#18, (1) #6 GROUND]
14	1	4.0 IN	45 FT	B	[NEW (2) 9/#14, (3) 5/#14, (1) 4/#18, (1) #6 GROUND]
15	1	2.5 IN	9 FT	T	[NEW (2) 5/#14, (1) #6 GROUND]
16	1	3.0 IN	6 FT	T	[NEW (2) 9/#14, (1) 4/#18, (1) #6 GROUND]
17	1	4.0 IN	32 FT	B	[NEW (2) 9/#14, (1) 4/#18, (1) #6 GROUND]
18	1	2.5 IN	11 FT	T	[NEW (1) 5/#14, (1) #6 GROUND]
19	2	4.0 IN	81 FT	B	[NEW (2) 9/#14, (3) 5/#14, (2) 4/#18, (15) 2/#14, (2) #6 GROUND]
20	2	4.0 IN	100 FT	B	[NEW (2) 9/#14, (3) 5/#14, (2) 4/#18, (10) 2/#14, (2) #6 GROUND]
21	1	4.0 IN	159 FT	B	EX. (3) FIBER OPTIC CABLES
22	2	4.0 IN	45 FT	B	[NEW (1) 9/#14, (1) 5/#14, (1) 4/#18, (10) 2/#14, (1) #6 GROUND]
23	1	4.0 IN	93 FT	B	[NEW (1) 9/#14, (1) 5/#14, (1) 4/#18, (5) 2/#14, (1) #6 GROUND]
24	1	2.5 IN	5 FT	T	[NEW (1) 5/#14, (1) #6 GROUND]
25	1	3.0 IN	14 FT	T	[NEW (1) 9/#14, (1) 4/#18, (1) #6 GROUND]
26	1	4.0 IN	62 FT	B	[NEW (5) 2/#14, (1) #6 GROUND]
27	1	3.0 IN	3 FT	T	[NEW (1) 9/#14, (1) 4/#18, (1) #6 GROUND]
28#	1	2.5 IN	32 FT	-	<REMOVE EX. (3) FIBER OPTIC CABLES>
29	1	2.5 IN	33 FT	T	[NEW (2) 5/#14, (1) #6 GROUND]
30	1	4.0 IN	100 FT	B	[NEW (2) 9/#14, (1) 5/#14, (1) 4/#18, (1) #6 GROUND]
31#	1	2.5 IN	5 FT	-	<REMOVE EX. (2) FIBER OPTIC CABLES>
32#	1	4.0 IN	24 FT	-	EX. (5) FIBER OPTIC CABLES

# DENOTES EXISTING CONDUIT

B = BORE, T = TRENCH, O = OPEN CUT



MAST ARM SCHEDULE

MA#	HEIGHT OF POLE	LENGTH OF ARM	# OF HEADS	# OPTICOM RECEIVERS	SF OF PR. SIGNING	ARM MOUNT HEIGHT
1	21'-6"	90 FT	5	1	12.75 SF	18'-0"
2	21'-6"	90 FT	5	1	15.00 SF	20'-0"
3	21'-6"	80 FT	4	1	10.50 SF	20'-0"
4	21'-6"	80 FT	4	1	10.50 SF	20'-0"

SEE NOTE 17

*FIELD ADJUST AS NECESSARY

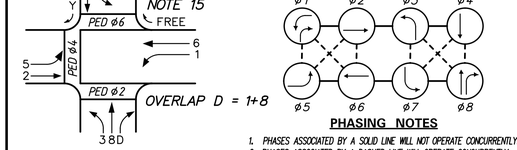
NOTES:

7. PROPOSED POLE BASES SUPPORTING POLES WITH PEDESTRIAN PUSHBUTTONS SHALL BE CONSTRUCTED IMMEDIATELY ADJACENT TO THE FLAT (50:1 OR FLATTER) LANDING AREA OF THE CURB RAMP OR SIDEWALK IN ACCORDANCE WITH CURRENT ADA BEST PRACTICES. THESE POLE BASES SHALL BE FLUSH WITH THE ADJOINING LANDING AREA. THE PEDESTRIAN PUSHBUTTON SHOULD BE INSTALLED AT A HEIGHT OF 42 TO 48 INCHES ABOVE THE LANDING AREA/SIDEWALK, AND SHALL BE LOCATED SUCH THAT THE MAXIMUM REACH DISTANCE IS 10 INCHES FROM THE LANDING AREA TO THE FACE OF THE PUSHBUTTON. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 7 FEET OR MORE THAN 10 FEET ABOVE SIDEWALK LEVEL.
8. ALL PEDESTRIAN SIGNALS SHALL CONTAIN PEDESTRIAN COUNTDOWN DISPLAYS.
9. THE CONTRACTOR SHALL INSTALL A TUBULAR MARKER (FLEXI-POST) ON ALL THREE (3) CORNERS OF THE CHANNELIZING ISLAND, AS SHOWN. EACH TUBULAR MARKER SHALL BE RETROREFLECTORIZED IN ACCORDANCE WITH SECTIONS 3I.05 AND 6F.63 OF THE 2011 DE MUTCD.
10. THE CONTRACTOR SHALL INSTALL BACKPLATES ON SIGNAL HEADS 1-18.
11. THE CONTRACTOR SHALL REMOVE THE EXISTING SIGNAL HEADS, SIGNAL HEAD CABLES, AND SPAN WIRES AND INSTALL THE PROPOSED SIGNAL HEADS, SIGNAL HEAD CABLES, OVERHEAD SIGNS, OPTICOM RECEIVERS, AND MAST ARMS, AS SHOWN.
12. THE CONTRACTOR SHALL CUT-BACK MEDIAN AND INSTALL P.C.C. CURB TO MATCH EXISTING, AS SHOWN. THE CONTRACTOR SHALL INSTALL A FULL-DEPTH, HOT-MIX PATCH FLUSH WITH ADJOINING PAVEMENT.
13. JUNCTION WELLS WITHOUT CONDUIT RUNS ARE ABANDONED OR FOR ERLSP AND NOT TO BE USED FOR THE INSTALLATION OF SIGNAL CABLES.
14. THE CONTRACTOR SHALL ADJUST THE FRAME AND LID OF THE EXISTING JUNCTION WELL, TYPE 1, SO THAT IT IS FLUSH WITH THE PROPOSED P.C.C. CURB RAMP.
15. DELDOT TRAFFIC/TMC SHALL MODIFY SIGNAL PHASING, AS SHOWN.
16. ALL WORK PERFORMED UNDER THIS PROJECT IS INTENDED TO OCCUR WITHIN DELDOT'S EXISTING RIGHT-OF-WAY BASED ON DELDOT'S ARCHIVED PLAN FOR CONTRACT NO. 81-102-01.
17. THE CONTRACTOR SHALL ADJUST THE SIGNAL HEADS IN THE MAST ARM BRACKETS SO THAT THE BOTTOM OF THE SIGNAL HOUSINGS ARE AT LEAST 16'-0" ABOVE THE PAVEMENT.

NOTES:

18. ALL CONDUITS SHALL BE SCHEDULE 80 PVC WHEN INSTALLED BY TRENCHING AND SCHEDULE 80 HDPE WHEN INSTALLED BY BORING, UNLESS OTHERWISE NOTED.
19. THE CONTRACTOR SHALL REMOVE THE EXISTING JUNCTION WELL, TYPE 1, AND INSTALL THE PROPOSED JUNCTION WELL, TYPE 7, SO THAT IT INTERCEPTS EXISTING CONDUIT RUNS NOS. 6 AND 28 AND PROPOSED CONDUIT RUN NO. 21. THE CONTRACTOR SHALL CONTACT DENISE KSIAZEK (DELDOT) AT 302-981-6464 24 HOURS PRIOR TO THE INSTALLATION OF THE PROPOSED JUNCTION WELL, TYPE 7.
20. DELDOT OIT SHALL COORDINATE THE REMOVAL THE EXISTING OVERHEAD FIBER OPTIC CABLES AND SPAN WIRE AND RECONNECTION TO THE EXISTING SIGNAL CABINET.

SIGNAL PHASING

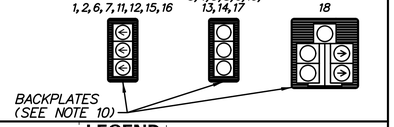


PHASING NOTES

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

SIGNAL HEAD DIAGRAM

*ALL EXISTING SIGNAL HEADS SHALL BE REMOVED



LEGEND

(AB)	ABANDON
(CA/X)	EXISTING CABINET IDENTIFIER (TYPE OF CABINET)
(CA/X)	PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)
(CO/#)	EXISTING CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)
(CO/#)	PROPOSED CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)
(JW/X)	EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)
(JW/X)	PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)
(MA/XX)	EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)
(MA/XX)	PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)
(OH/#)	EXISTING OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
(OH/#)	PROPOSED OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
(PB/X)	EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
(PB/X)	PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
(PL/X)	EXISTING POLE IDENTIFIER (# OF POLE)
(PL/X)	PROPOSED POLE IDENTIFIER (# OF POLE)
(RM/C)	REMOVE BY CONTRACTOR
(RM/O)	REMOVE BY OTHERS
(RM/TC)	REMOVE BY TRAFFIC CONTRACTOR

	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1		
LOOP DETECTOR, TYPE 2		
LUMINAIRE		
MAST ARM		
MICROWAVE DETECTION		
OPTICOM RECEIVER		
OVERHEAD SIGNING		
PEDESTRIAN POLE/BASE		
PEDESTRIAN PUSHBUTTON		
PEDESTRIAN SIGNAL HEAD		
RIGHT-OF-WAY		R/W
SERVICE PEDESTAL		P
SIGNAL CABINET		
SIGNAL HEAD		
SIGNAL POLE/BASE		
SPAN INSULATOR		
SPAN WIRE	XX	
UTILITY POLE		
VIDEO DETECTION		

GENERAL SIGNAL NOTES

1. EXISTING LOOP DETECTORS - TO REMAIN:
   TYPE #2 - 6' x 25' - EB SR 92 THROUGH AND LEFT-TURN MOVEMENTS.

   PROPOSED LOOP DETECTORS:
   TYPE #2 - 6' x 25' - TO BE INSTALLED ON US 202 LEFT-TURN MOVEMENTS.
   TYPE #2 - 6' x 25' - TO BE INSTALLED ON WB SR 92 ALL MOVEMENTS.
   SYSTEM - 6' x 6' - TO BE INSTALLED IN US 202 RECEIVING LANES, AS SHOWN.
2. PROPOSED SIGNAL POLES ARE DELDOT MAST ARMS.
3. ALL SIGNAL EQUIPMENT REMOVED FROM A PROJECT IS TO BE RETURNED TO DELDOT TRAFFIC - DOVER, DELAWARE.
4. POLE BASES AND CONDUIT JUNCTION WELLS ARE TO BE REMOVED IN ACCORDANCE WITH SECTION 201 AND 202 OF THE STANDARD SPECIFICATIONS OR AS DIRECTED BY ENGINEER. EXISTING CONDUIT IS TO BE ABANDONED.
5. ALL GALVANIZED CONDUIT (GRC) SHALL BE REAMED AND THREADED. ALL GRC SHALL BE THREADED TOGETHER WITH APPROVED COUPLINGS. SET SCREW, BOLTED, AND COMPRESSION FITTING ARE NOT ACCEPTABLE.
6. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

RECOMMENDED _____ DATE: _____

RECOMMENDED _____ DATE: _____

RECOMMENDED _____ DATE: 2/24/15

APPROVED TRAFFIC ENGINEER _____ DATE: 2/24/15

APPROVED FOR INSTALLATION
CHIEF TRAFFIC ENGINEER _____ DATE: 2/25/15

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

1 INSTALLED MAST ARMS, BACKPLATES, OPTICOM RECEIVERS, AND PED PHASES 2, 4, AND 6 PER ADA/MUTCD STANDARDS. D.W.C. (WR&A) 2-15 (CONTRACT # T201501002)

SCALE 0 30 60 90 FEET

2011 HEP, SITE CC

CONTRACT	T201501002
COUNTY	NEW CASTLE
PERMIT NO.	N101
DESIGNED BY: D.W.C. (WR&A)	
CHECKED BY: M.J.B. (WR&A)	

SIGNAL PLAN US 202 (CONCORD PIKE) @ SR 92 (NAAMANS ROAD / BEAVER VALLEY ROAD)

SHEET NO.	1
TOTAL SHTS.	4

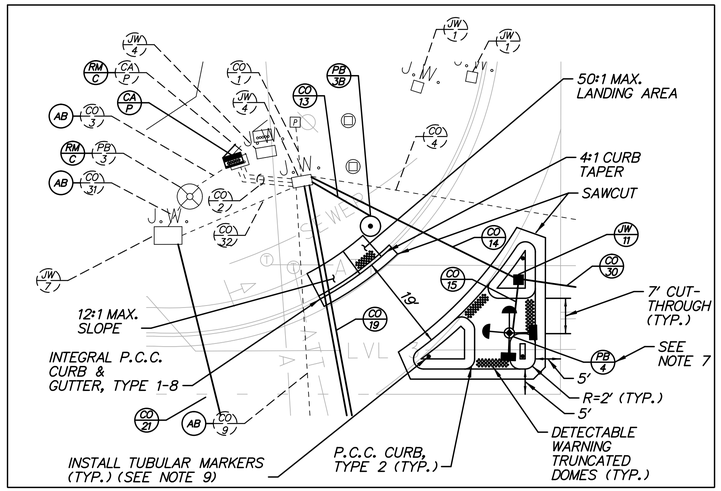
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CONDUIT RUN SCHEDULE

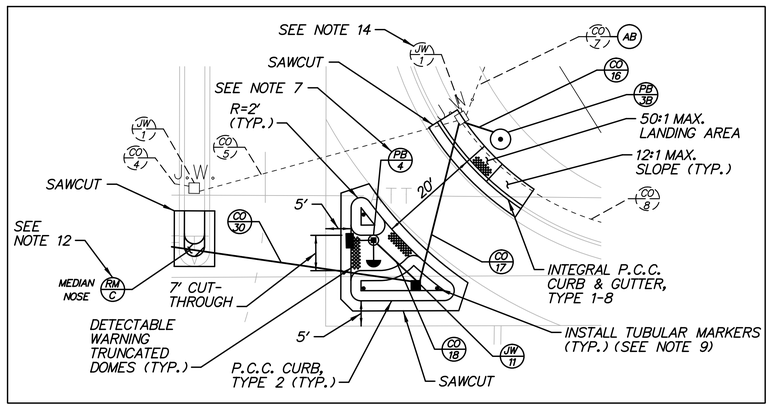
CO#	# OF CONDUITS	SIZE	LENGTH	B/T/O	AMOUNT AND TYPE OF CABLE/ WIRE
1#	1	1.5 IN	10 FT	-	EX. (1) 2/#8 U.F. W/GROUND - LOAD SIDE
2#	3	2.5 IN	12 FT	-	EX. (2) FIBER OPTIC, SINGLE-MODE, 6 CT., EX. (2) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (6) LIGHTING CABLES, EX. (1) 2/#8 U.F. W/GROUND - LOAD SIDE, EX. (2) 4/#18 - TO REMAIN, EX. (1) COMM. CABLE - TO REMAIN, <REMOVE EX. (1) COMM. CABLE, EX. (13) 4/#18>, [NEW (5) 9/#14, (6) 5/#14, (4) 4/#18, (15) 2/#14, (3) #6 GROUND]
3#	1	2.5 IN	8 FT	-	<REMOVE EX. (2) 16/#14, EX. (1) FIBER OPTIC CABLE>
4#	1	2.5 IN	100 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (2) 4/#18 - TO REMAIN, <REMOVE EX. (1) 4/#18>
5#	1	2.5 IN	53 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT.
6#	1	2.5 IN	88 FT	-	EX. (3) FIBER OPTIC CABLES
7#	1	2.5 IN	24 FT	-	<REMOVE EX. (1) ERLSP CABLE>
8#	1	2.5 IN	237 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT.
9#	1	2.5 IN	80 FT	-	<REMOVE EX. (10) 4/#18>
10#	1	2.5 IN	108 FT	-	<REMOVE EX. (7) 4/#18>
11#	1	2.5 IN	92 FT	-	<REMOVE EX. (4) 4/#18>
12#	1	2.5 IN	69 FT	-	<REMOVE EX. (8) 4/#18>
13	1	3.0 IN	12 FT	T	[NEW (1) 9/#14, (1) 4/#18, (1) #6 GROUND]
14	1	4.0 IN	45 FT	B	[NEW (2) 9/#14, (3) 5/#14, (1) 4/#18, (1) #6 GROUND]
15	1	2.5 IN	9 FT	T	[NEW (2) 5/#14, (1) #6 GROUND]
16	1	3.0 IN	6 FT	T	[NEW (2) 9/#14, (1) 4/#18, (1) #6 GROUND]
17	1	4.0 IN	32 FT	B	[NEW (2) 9/#14, (1) 4/#18, (1) #6 GROUND]
18	1	2.5 IN	11 FT	T	[NEW (1) 5/#14, (1) #6 GROUND]
19	2	4.0 IN	81 FT	B	[NEW (2) 9/#14, (3) 5/#14, (2) 4/#18, (15) 2/#14, (2) #6 GROUND]
20	2	4.0 IN	100 FT	B	[NEW (2) 9/#14, (3) 5/#14, (2) 4/#18, (10) 2/#14, (2) #6 GROUND]
21	1	4.0 IN	159 FT	B	EX. (3) FIBER OPTIC CABLES
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24	1	2.5 IN	5 FT	T	[NEW (1) 5/#14, (1) #6 GROUND]
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26	1	4.0 IN	62 FT	B	[NEW (5) 2/#14, (1) #6 GROUND]
27	1	3.0 IN	3 FT	T	[NEW (1) 9/#14, (1) 4/#18, (1) #6 GROUND]
28#	1	2.5 IN	32 FT	-	<REMOVE EX. (3) FIBER OPTIC CABLES>
29	1	2.5 IN	33 FT	T	[NEW (2) 5/#14, (1) #6 GROUND]
30	1	4.0 IN	100 FT	B	[NEW (2) 9/#14, (1) 5/#14, (1) 4/#18, (1) #6 GROUND]
31#	1	2.5 IN	5 FT	-	<REMOVE EX. (2) FIBER OPTIC CABLES>
32#	1	4.0 IN	24 FT	-	EX. (5) FIBER OPTIC CABLES

# DENOTES EXISTING CONDUIT

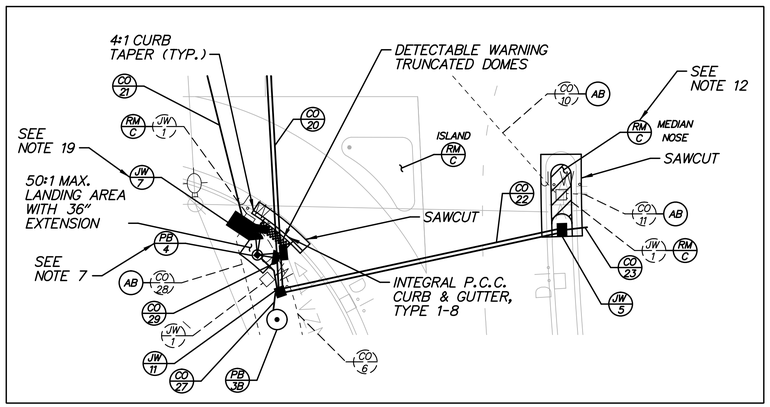
B = BORE, T = TRENCH, O = OPEN CUT



DETAIL 1 – CURB RAMPS, TYPES 2 /3 & 5
SCALE: 1" = 15'



DETAIL 2 – CURB RAMPS, TYPES 2 /3 & 5
SCALE: 1" = 15'



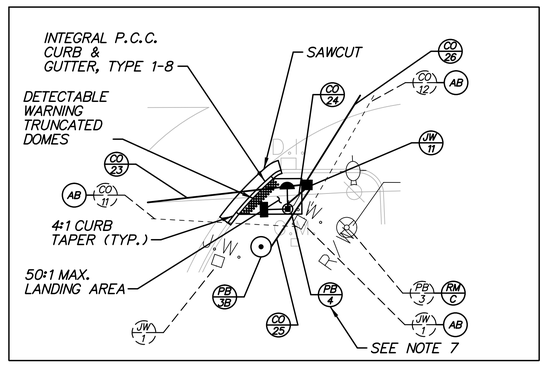
DETAIL 3 – LANDING AREA
SCALE: 1" = 15'

NOTES:

7. PROPOSED POLE BASES SUPPORTING POLES WITH PEDESTRIAN PUSHBUTTONS SHALL BE CONSTRUCTED IMMEDIATELY ADJACENT TO THE FLAT (50:1 OR FLATTER) LANDING AREA OF THE CURB RAMP OR SIDEWALK IN ACCORDANCE WITH CURRENT ADA BEST PRACTICES. THESE POLE BASES SHALL BE FLUSH WITH THE ADJOINING LANDING AREA. THE PEDESTRIAN PUSHBUTTON SHOULD BE INSTALLED AT A HEIGHT OF 42 TO 48 INCHES ABOVE THE LANDING AREA/SIDEWALK,AND SHALL BE LOCATED SUCH THAT THE MAXIMUM REACH DISTANCE IS 10 INCHES FROM THE LANDING AREA TO THE FACE OF THE PUSHBUTTON. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 7 FEET OR MORE THAN 10 FEET ABOVE SIDEWALK LEVEL.
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15. DELDOT TRAFFIC/TMC SHALL MODIFY SIGNAL PHASING, AS SHOWN.
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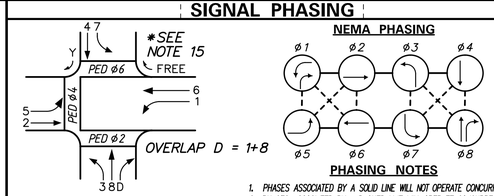
NOTES:

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20. DELDOT OIT SHALL COORDINATE THE REMOVAL THE EXISTING OVERHEAD FIBER OPTIC CABLES AND SPAN WIRE AND RECONNECTION TO THE EXISTING SIGNAL CABINET.



DETAIL 4 – LANDING AREA
SCALE: 1" = 15'

SIGNAL PHASING

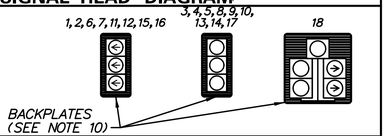


PHASING NOTES

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

SIGNAL HEAD DIAGRAM

*ALL EXISTING SIGNAL HEADS SHALL BE REMOVED



LEGEND

AB	ABANDON	OH-X	EXISTING OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
CA-X	EXISTING CABINET IDENTIFIER (TYPE OF CABINET)	OH-X	PROPOSED OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
CA-X	PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)	PB-X	EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO-#	EXISTING CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	PB-X	PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO-#	PROPOSED CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	PL-X	EXISTING POLE IDENTIFIER (# OF POLE)
JW-X	EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	PL-X	PROPOSED POLE IDENTIFIER (# OF POLE)
JW-X	PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	RM-C	REMOVE BY CONTRACTOR
MA-XX	EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)	RM-O	REMOVE BY OTHERS
MA-XX	PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)	RM-TC	REMOVE BY TRAFFIC CONTRACTOR

	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1		
LOOP DETECTOR, TYPE 2		
LUMINAIRE		
MAST ARM		
MICROWAVE DETECTION		
OPTICOM RECEIVER		
OVERHEAD SIGNING		
PEDESTRIAN POLE/BASE		
PEDESTRIAN PUSHBUTTON		
PEDESTRIAN SIGNAL HEAD		
RIGHT-OF-WAY		R/W
SERVICE PEDESTAL		P
SIGNAL CABINET		
SIGNAL HEAD		
SIGNAL POLE/BASE		
SPAN INSULATOR		
SPAN WIRE	XX	
UTILITY POLE		
VIDEO DETECTION		

GENERAL SIGNAL NOTES

1. EXISTING LOOP DETECTORS - TO REMAIN:
   TYPE #2 - 6' x 25' - EB SR 92 THROUGH AND LEFT-TURN MOVEMENTS.

   PROPOSED LOOP DETECTORS:
   TYPE #2 - 6' x 25' - TO BE INSTALLED ON US 202 LEFT-TURN MOVEMENTS.
   TYPE #2 - 6' x 25' - TO BE INSTALLED ON WB SR 92 ALL MOVEMENTS.
   SYSTEM - 6' x 6' - TO BE INSTALLED IN US 202 RECEIVING LANES, AS SHOWN.
2. PROPOSED SIGNAL POLES ARE DELDOT MAST ARMS.
3. ALL SIGNAL EQUIPMENT REMOVED FROM A PROJECT IS TO BE RETURNED TO DELDOT TRAFFIC - DOVER, DELAWARE.
4. POLE BASES AND CONDUIT JUNCTION WELLS ARE TO BE REMOVED IN ACCORDANCE WITH SECTION 201 AND 202 OF THE STANDARD SPECIFICATIONS OR AS DIRECTED BY ENGINEER. EXISTING CONDUIT IS TO BE ABANDONED.
5. ALL GALVANIZED CONDUIT (GRC) SHALL BE REAMED AND THREADED. ALL GRC SHALL BE THREADED TOGETHER WITH APPROVED COUPLINGS. SET SCREW, BOLTED, AND COMPRESSION FITTING ARE NOT ACCEPTABLE.
6. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

RECOMMENDED _____ DATE:_____

RECOMMENDED _____ DATE:_____

RECOMMENDED _____ DATE: 2/24/15

APPROVED TRAFFIC ENGINEER _____ DATE: 2/24/15

APPROVED FOR INSTALLATION
CHIEF TRAFFIC ENGINEER _____ DATE: 2/25/15

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

1 INSTALLED MAST ARMS, BACKPLATES, OPTICOM RECEIVERS, AND PED PHASES 2, 4, AND 6 PER ADA/MUTCD STANDARDS.
D.W.C. (WR&A) 2-15 (CONTRACT # T201501002)

2011 HEP, SITE CC

CONTRACT	T201501002	PERMIT NO.	N101
COUNTY	NEW CASTLE	DESIGNED BY: D.W.C. (WR&A)	
		CHECKED BY: M.J.B. (WR&A)	

SIGNAL PLAN
US 202 (CONCORD PIKE) @ SR 92 (NAAMANS ROAD / BEAVER VALLEY ROAD)

SHEET NO. 2
TOTAL SHTS. 4

N:\31627-000\CADD\SG02_SR 92 @ US 202_option 2.dgn
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CONDUIT RUN SCHEDULE

CO#	# OF CONDUITS	SIZE	LENGTH	B/T/O	AMOUNT AND TYPE OF CABLE/ WIRE
1*	1	2.0 IN	212 FT	-	EX. (3) POWER CABLES
2*	2	2.5 IN	8 FT	-	EX. (2) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (4) 4/*18 - TO REMAIN, <REMOVE EX. (3) 16/*14, EX. (1) 9/*14, EX. (2) 4/*18>, [NEW (4) 9/*14, (5) 5/*14, (2) 4/*18, (4) 2/*14, (2) *6 GROUND]
3*	1	2.5 IN	13 FT	-	<REMOVE EX. (2) 4/*18, EX. (1) 16/*14, EX. (1) 9/*14>
4*	1	2.5 IN	24 FT	-	EX. (1) 4/*18, <REMOVE EX. (1) 9/*14>, [NEW (1) 9/*14, (3) 5/*14, (1) 4/*18, (1) *6 GROUND]
5*	1	2.5 IN	62 FT	-	<REMOVE EX. (1) 9/*14>
6*	1	1.5 IN	2 FT	-	<REMOVE EX. (1) 9/*14>
7*	2	2.5 IN	34 FT	-	EX. (2) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (4) 4/*18 - TO REMAIN, <REMOVE EX. (3) 16/*14, EX. (1) 9/*14, EX. (2) 4/*18>, [NEW (3) 9/*14, (5) 5/*14, (1) 4/*18, (4) 2/*14, (2) *6 GROUND]
8*	1	2.5 IN	60 FT	-	EX. (4) 4/*18, EX. (2) FIBER OPTIC, MULTI-MODE, 12 CT., <REMOVE EX. (1) 9/*14>
9*	1	2.5 IN	20 FT	-	<REMOVE EX. (2) 4/*18, EX. (1) 16/*14, EX. (1) 9/*14>
10*	1	2.5 IN	141 FT	-	<REMOVE EX. (1) 16/*14>, [NEW (1) 9/*14, (1) *6 GROUND]
11*	1	2.5 IN	8 FT	-	<REMOVE EX. (1) 16/*14>
12*	1	2.5 IN	71 FT	-	EX. (2) 4/*18, EX. (2) FIBER OPTIC, MULTI-MODE, 12 CT., <REMOVE EX. (1) 9/*14>
13*	1	2.5 IN	110 FT	-	EX. (1) 4/*18, [NEW (2) 2/*14, (1) *6 GROUND]
14*	1	2.5 IN	363 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 144 CT., [NEW (2) 2/*14, (1) *6 GROUND]
15*	1	2.5 IN	XX FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 144 CT.
16*	1	2.5 IN	95 FT	-	EX. (1) 4/*18, <REMOVE EX. (1) 9/*14>, [NEW (1) 9/*14, (3) 5/*14, (1) *6 GROUND]
17*	1	1.5 IN	3 FT	-	<REMOVE EX. (1) 9/*14>
18*	1	2.5 IN	6 FT	-	EX. (1) 4/*18, EX. (2) FIBER OPTIC, MULTI-MODE, 12 CT., [NEW (1) 9/*14, (1) 4/*18, (1) *6 GROUND]
19*	1	2.5 IN	311 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 144 CT.
20*	1	2.5 IN	XX FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 144 CT.
21	1	2.5 IN	7 FT	T	[NEW (2) 5/*14, (1) *6 GROUND]
22	1	4.0 IN	55 FT	B	[NEW (1) 9/*14, (1) 4/*18, (1) 5/*14, (1) *6 GROUND]
23	1	2.5 IN	12 FT	T	[NEW (1) 5/*14, (1) *6 GROUND]
24	1	3.0 IN	11 FT	T	[NEW (1) 9/*14, (1) 4/*18, (1) *6 GROUND]
25	1	2.5 IN	1 FT	T	[NEW (2) 5/*14, (1) *6 GROUND]
26	1	4.0 IN	31 FT	B	[NEW (1) 5/*14, (1) *6 GROUND]
27	1	2.5 IN	3 FT	T	[NEW (1) 5/*14, (1) *6 GROUND]
28	1	4.0 IN	71 FT	B	[NEW (1) 5/*14, (1) *6 GROUND]
29	1	2.5 IN	34 FT	T	[NEW (1) 5/*14, (1) *6 GROUND]
30	1	3.0 IN	12 FT	T	[NEW (1) 9/*14, (1) 4/*18, (1) *6 GROUND]
31	1	4.0 IN	33 FT	B	[NEW (1) 9/*14, (1) *6 GROUND]
32	1	3.0 IN	24 FT	T	[NEW (1) 9/*14, (1) *6 GROUND]
33	1	4.0 IN	50 FT	B	[NEW (1) 9/*14, (1) 4/*18, (1) *6 GROUND]
34	1	3.0 IN	3 FT	T	[NEW (1) 9/*14, (1) 4/*18, (1) *6 GROUND]
35	1	3.0 IN	4 FT	T	[NEW (1) 9/*14, (1) *6 GROUND]
36	1	2.5 IN	3 FT	T	[NEW (1) 5/*14, (1) *6 GROUND]
37	1	4.0 IN	60 FT	B	[NEW (2) 9/*14, (1) 4/*18, (3) 5/*14, (4) 2/*14, (1) *6 GROUND]
38	1	4.0 IN	71 FT	B	[NEW (2) 9/*14, (1) 4/*18, (3) 5/*14, (2) 2/*14, (1) *6 GROUND]

* DENOTES EXISTING CONDUIT

B = BORE, T = TRENCH, O = OPEN CUT

MAST ARM SCHEDULE

MA#	HEIGHT OF POLE	LENGTH OF ARM	# OF HEADS	# OPTICOM RECEIVERS	SF OF PR. SIGNING	ARM MOUNT HEIGHT
1	21'-6"	70 FT	2	1	0.0 SF	17'-0"
2	21'-6"	50 FT	2	0	9.0 SF	17'-0"
3	21'-6"	80 FT	4	2	18.0 SF	18'-0"
4	21'-6"	50 FT	2	0	9.0 SF	20'-0"
5	21'-6"	25 FT	2	1	10.5 SF	20'-0"

*ALL MEASUREMENTS TAKEN WITH RESPECT TO TOP OF POLE BASE

** FIELD ADJUST AS NECESSARY

NOTES:

6. THE CONTRACTOR SHALL REMOVE THE EXISTING JUNCTION WELL, TYPE 1, AND INSTALL THE PROPOSED JUNCTION WELL, TYPE 14, SO THAT IT INTERCEPTS EXISTING CONDUIT RUNS NOS. 7, 8, 9, AND 10 AND PROPOSED CONDUIT RUNS NOS. 28 AND 29.
7. ALL PEDESTRIAN SIGNALS SHALL CONTAIN PEDESTRIAN COUNTDOWN DISPLAYS.
8. THE CONTRACTOR SHALL INSTALL BACKPLATES ON SIGNAL HEADS 1-6.
9. PROPOSED POLE BASES SUPPORTING POLES WITH PEDESTRIAN PUSHBUTTONS SHALL BE CONSTRUCTED IMMEDIATELY ADJACENT TO THE FLAT (50:1 OR FLATTER) LANDING AREA OF THE CURB RAMP OR SIDEWALK IN ACCORDANCE WITH CURRENT ADA BEST PRACTICES. THESE POLE BASES SHALL BE FLUSH WITH THE ADJOINING LANDING AREA. THE PEDESTRIAN PUSHBUTTON SHOULD BE INSTALLED AT A HEIGHT OF 42 TO 48 INCHES ABOVE THE LANDING AREA/SIDEWALK, AND SHALL BE LOCATED SUCH THAT THE MAXIMUM REACH DISTANCE IS 10 INCHES FROM THE LANDING AREA TO THE FACE OF THE PUSHBUTTON. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 7 FEET OR MORE THAN 10 FEET ABOVE SIDEWALK LEVEL.
10. THE CONTRACTOR SHALL SPLICE THE LEAD-IN CABLES FOR THE PROPOSED LOOP DETECTOR TO THE EXISTING 4/*18 'HOME RUN' CABLE.
11. THE CONTRACTOR SHALL INSTALL A TUBULAR MARKER (FLEXI-POST) ON ALL CORNERS OF THE CHANNELIZING ISLAND, AS SHOWN. EACH TUBULAR MARKER SHALL BE RETROREFLECTORIZED IN ACCORDANCE WITH SECTIONS 31.05 AND 6F.63 OF THE 2011 DE MUTCD.
12. THE CONTRACTOR SHALL REMOVE THE EXISTING SIGNAL HEADS, SIGNAL HEAD CABLES, AND SPAN WIRES AND INSTALL THE PROPOSED SIGNAL HEADS, SIGNAL HEAD CABLES, MAST ARMS, OVERHEAD SIGNS, AND OPTICOM RECEIVERS, AS SHOWN.
13. ALL WORK PERFORMED UNDER THIS PROJECT IS INTENDED TO OCCUR WITHIN DELDOT'S EXISTING RIGHT-OF-WAY BASED ON DELDOT'S ARCHIVED SIGNAL PLAN ON FILE FOR N085P OR IN ACCORDANCE WITH THE "TRAFFIC SIGNAL INSTALLATION AND MAINTENANCE AGREEMENT" DATED 2-15-96.
14. SIGNAL HEADS 7 AND 8 SHALL BE RIGID-MOUNTED, OPTICALLY-PROGRAMMED SIGNAL HEADS.
15. THE CONTRACTOR SHALL ADJUST THE SIGNAL HEADS IN THE MAST ARM BRACKETS SO THAT THE BOTTOM OF THE SIGNAL HOUSINGS ARE AT LEAST 16'-0" ABOVE THE PAVEMENT.
16. THE CONTRACTOR SHALL INSTALL THE PROPOSED CURB RAMP, TYPE 5, IN ACCORDANCE WITH DELDOT STANDARD NO. D-5 FOR DRAINAGE INLET, TYPE E, SO THAT IT DOES NOT IMPACT THE EXISTING CATCH BASIN.
17. THE CONTRACTOR SHALL ADJUST THE EXISTING INLET FRAME AND LID SO THAT IT IS FLUSH WITH THE ADJOINING ROADWAY.

PROPOSED OVERHEAD SIGNS

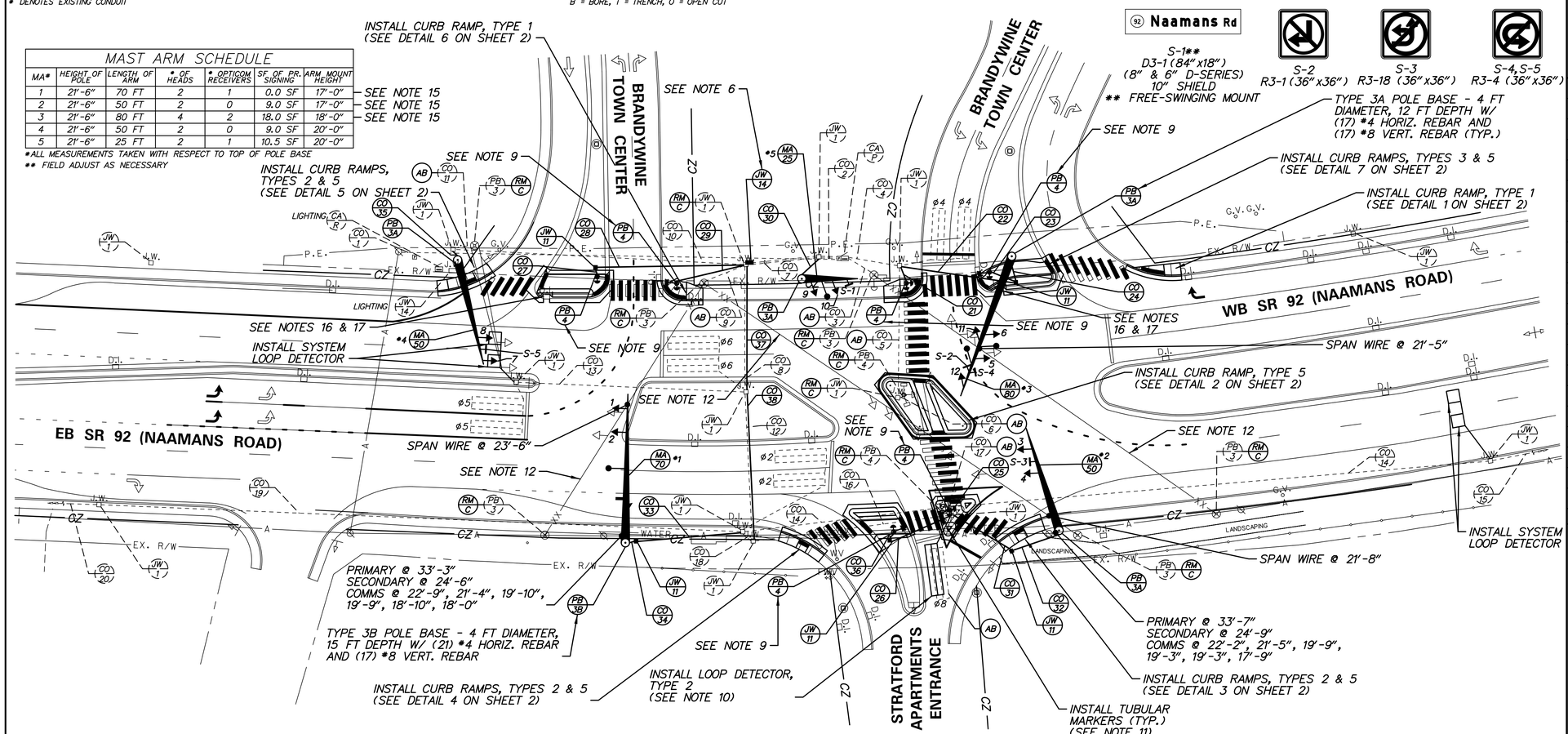
92 Naamans Rd

S-1** D3-1 (84"x18") (8" & 6" D-SERIES) 10" SHIELD
** FREE-SWINGING MOUNT

S-2 R3-1 (36"x36")

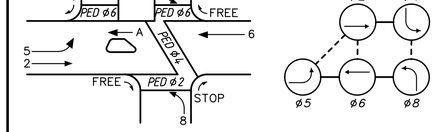
S-3 R3-18 (36"x36")

S-4, S-5 R3-4 (36"x36")



SIGNAL PHASING

NEMA PHASING

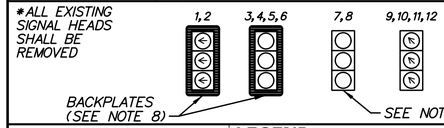


OVERLAP A = 4+6+8

PHASING NOTES

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

SIGNAL HEAD DIAGRAM



LEGEND

AB	ABANDON	OH (•)	EXISTING OVERHEAD RUN IDENTIFIER (• OF OVERHEAD RUN)
CA (X)	EXISTING CABINET IDENTIFIER (TYPE OF CABINET)	OH (•)	PROPOSED OVERHEAD RUN IDENTIFIER (• OF OVERHEAD RUN)
CA (X)	PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)	PB (X)	EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO (•)	EXISTING CONDUIT RUN IDENTIFIER (• OF CONDUIT RUN)	PB (X)	PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO (•)	PROPOSED CONDUIT RUN IDENTIFIER (• OF CONDUIT RUN)	PL (X)	EXISTING POLE IDENTIFIER (• OF POLE)
JW (X)	EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	PL (X)	PROPOSED POLE IDENTIFIER (• OF POLE)
JW (X)	PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	RM (C)	REMOVE BY CONTRACTOR
MA (XX)	EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)	RM (O)	REMOVE BY OTHERS
MA (XX)	PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)	RM (TC)	REMOVE BY TRAFFIC CONTRACTOR

	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1		
LOOP DETECTOR, TYPE 2		
LUMINAIRE		
MAST ARM		
MICROWAVE DETECTION		
OPTICOM RECEIVER		
OVERHEAD SIGNING		
PEDESTRIAN POLE/BASE		
PEDESTRIAN PUSHBUTTON		
PEDESTRIAN SIGNAL HEAD		
RIGHT-OF-WAY		R/W
SERVICE PEDESTAL		P
SIGNAL CABINET		
SIGNAL HEAD		
SIGNAL POLE/BASE		
SPAN INSULATOR		
SPAN WIRE	XX	
UTILITY POLE		
VIDEO DETECTION		

GENERAL SIGNAL NOTES

1. EXISTING LOOP DETECTORS - (TO REMAIN):
   TYPE *2 - 6' x 25' - SR 92 ALL MOVEMENTS, SB BRANDYWINE TOWN CENTER LEFT-TURN MOVEMENTS.
   PROPOSED LOOP DETECTORS:
   TYPE *2 - 6' x 25' - TO BE INSTALLED ON STRATFORD APARTMENTS LEFT-TURN MOVEMENT.
   SYSTEM - 6' x 6' - TO BE INSTALLED IN SR 92 RECEIVING LANES, AS SHOWN.
2. ALL SIGNAL EQUIPMENT REMOVED FROM A PROJECT IS TO BE RETURNED TO DELDOT TRAFFIC - DOVER, DELAWARE.
3. CONDUIT JUNCTION WELLS ARE TO BE REMOVED IN ACCORDANCE WITH SECTION 201 AND 202 OF THE STANDARD SPECIFICATIONS OR AS DIRECTED BY ENGINEER. EXISTING CONDUIT IS TO BE ABANDONED.
4. ALL GALVANIZED CONDUIT (GRC) SHALL BE REAMED AND THREADED. ALL GRC SHALL BE THREADED TOGETHER WITH APPROVED COUPLINGS. SET SCREW, BOLTED, AND COMPRESSION FITTING ARE NOT ACCEPTABLE.
5. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

RECOMMENDED _____ DATE: _____

RECOMMENDED _____ DATE: _____

RECOMMENDED _____ DATE: 5/14/15

APPROVED TRAFFIC ENGINEER _____ DATE: 5/14/15

APPROVED FOR INSTALLATION
CHIEF TRAFFIC ENGINEER _____ DATE: 5/15/15

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

1 INSTALLED MAST ARMS, BACKPLATES, OPTICOM RECEIVERS AND PED PHASES 2 AND 6 PER ADA/MUTCD STANDARDS AND RECONSTRUCTED PED PHASE 4 PER ADA/MUTCD STANDARDS. A.S.P. (WR&A) 3-15 (CONTRACT # T201101001)

SCALE
0 30 60 90
FEET

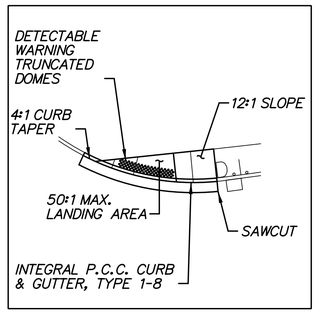
2011 HEP, SITE CC

CONTRACT	T201101001
COUNTY	NEW CASTLE
PERMIT NO.	N085P
DESIGNED BY: A.S.P. (WRA)	
CHECKED BY: M.J.B. (WRA)	

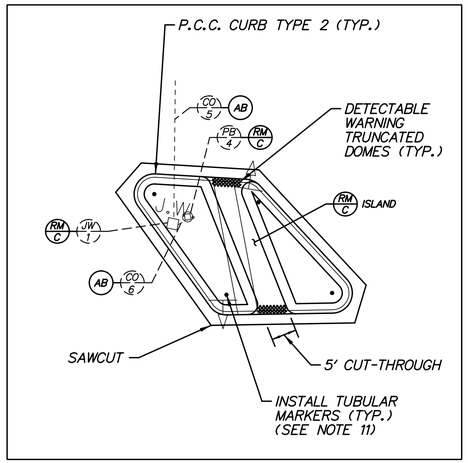
SIGNAL PLAN
SR 92 (NAAMANS ROAD) @ BRANDYWINE TOWN CENTER

SHEET NO.	
1	
TOTAL SHTS.	
3	

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DETAIL 1 – CURB RAMP, TYPE 1
SCALE: 1" = 15'

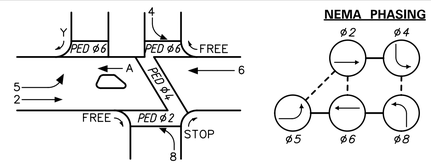


DETAIL 2 – CURB RAMP, TYPE 5
SCALE: 1" = 15'

NOTES:

6. THE CONTRACTOR SHALL REMOVE THE EXISTING JUNCTION WELL, TYPE 1, AND INSTALL THE PROPOSED JUNCTION WELL, TYPE 14, SO THAT IT INTERCEPTS EXISTING CONDUIT RUNS NOS. 7, 8, 9, AND 10 AND PROPOSED CONDUIT RUNS NOS. 28 AND 29.
7. ALL PEDESTRIAN SIGNALS SHALL CONTAIN PEDESTRIAN COUNTDOWN DISPLAYS.
8. THE CONTRACTOR SHALL INSTALL BACKPLATES ON SIGNAL HEADS 1-6.
9. PROPOSED POLE BASES SUPPORTING POLES WITH PEDESTRIAN PUSHBUTTONS SHALL BE CONSTRUCTED IMMEDIATELY ADJACENT TO THE FLAT (50:1 OR FLATTER) LANDING AREA OF THE CURB RAMP OR SIDEWALK IN ACCORDANCE WITH CURRENT ADA BEST PRACTICES. THESE POLE BASES SHALL BE FLUSH WITH THE ADJOINING LANDING AREA. THE PEDESTRIAN PUSHBUTTON SHOULD BE INSTALLED AT A HEIGHT OF 42 TO 48 INCHES ABOVE THE LANDING AREA/SIDEWALK, AND SHALL BE LOCATED SUCH THAT THE MAXIMUM REACH DISTANCE IS 10 INCHES FROM THE LANDING AREA TO THE FACE OF THE PUSHBUTTON. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 7 FEET OR MORE THAN 10 FEET ABOVE SIDEWALK LEVEL.
10. THE CONTRACTOR SHALL SPLICE THE LEAD-IN CABLES FOR THE PROPOSED LOOP DETECTOR TO THE EXISTING 4/#18 'HOME RUN' CABLE.
11. THE CONTRACTOR SHALL INSTALL A TUBULAR MARKER (FLEXI-POST) ON ALL CORNERS OF THE CHANNELIZING ISLAND, AS SHOWN. EACH TUBULAR MARKER SHALL BE RETROREFLECTORIZED IN ACCORDANCE WITH SECTIONS 3I.05 AND 6F.63 OF THE 2011 DE MUTCD.
12. THE CONTRACTOR SHALL REMOVE THE EXISTING SIGNAL HEADS, SIGNAL HEAD CABLES, AND SPAN WIRES AND INSTALL THE PROPOSED SIGNAL HEADS, SIGNAL HEAD CABLES, MAST ARMS, OVERHEAD SIGNS, AND OPTICOM RECEIVERS, AS SHOWN.
13. ALL WORK PERFORMED UNDER THIS PROJECT IS INTENDED TO OCCUR WITHIN DELDOT'S EXISTING RIGHT-OF-WAY BASED ON DELDOT'S ARCHIVED SIGNAL PLAN ON FILE FOR N085P OR IN ACCORDANCE WITH THE "TRAFFIC SIGNAL INSTALLATION AND MAINTENANCE AGREEMENT" DATED 2-15-96.
14. SIGNAL HEADS 7 AND 8 SHALL BE RIGID-MOUNTED, OPTICALLY-PROGRAMMED SIGNAL HEADS.
15. THE CONTRACTOR SHALL ADJUST THE SIGNAL HEADS IN THE MAST ARM BRACKETS SO THAT THE BOTTOM OF THE SIGNAL HOUSINGS ARE AT LEAST 16'-0" ABOVE THE PAVEMENT.
16. THE CONTRACTOR SHALL INSTALL THE PROPOSED CURB RAMP, TYPE 5, IN ACCORDANCE WITH DELDOT STANDARD NO. D-5 FOR DRAINAGE INLET, TYPE E, SO THAT IT DOES NOT IMPACT THE EXISTING CATCH BASIN.
17. THE CONTRACTOR SHALL ADJUST THE EXISTING INLET FRAME AND LID SO THAT IT IS FLUSH WITH THE ADJOINING ROADWAY.

SIGNAL PHASING

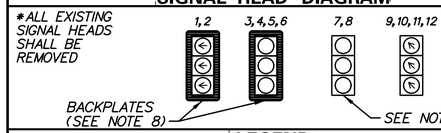


OVERLAP A = 4+6+8

PHASING NOTES

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

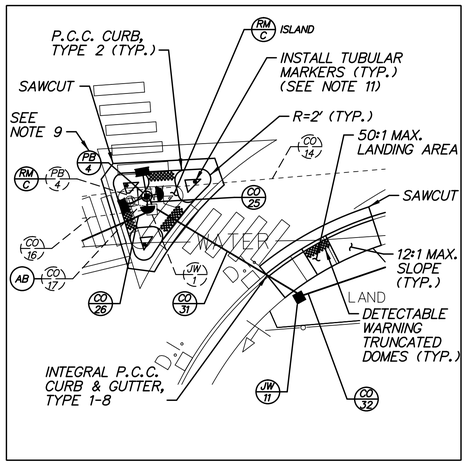
SIGNAL HEAD DIAGRAM



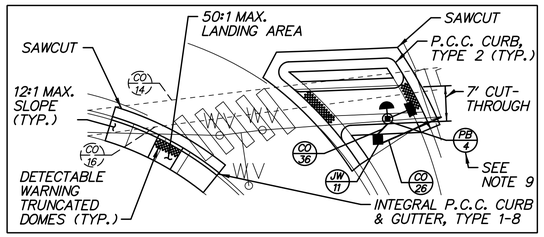
LEGEND

AB	ABANDON	OH •	EXISTING OVERHEAD RUN IDENTIFIER (• OF OVERHEAD RUN)
CA X	EXISTING CABINET IDENTIFIER (TYPE OF CABINET)	OH •	PROPOSED OVERHEAD RUN IDENTIFIER (• OF OVERHEAD RUN)
CA X	PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)	PB X	EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO •	EXISTING CONDUIT RUN IDENTIFIER (• OF CONDUIT RUN)	PB X	PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO •	PROPOSED CONDUIT RUN IDENTIFIER (• OF CONDUIT RUN)	PL X	EXISTING POLE IDENTIFIER (• OF POLE)
JW X	EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	PL X	PROPOSED POLE IDENTIFIER (• OF POLE)
JW X	PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	RM C	REMOVE BY CONTRACTOR
MA XX	EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)	RM O	REMOVE BY OTHERS
MA XX	PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)	RM TC	REMOVE BY TRAFFIC CONTRACTOR

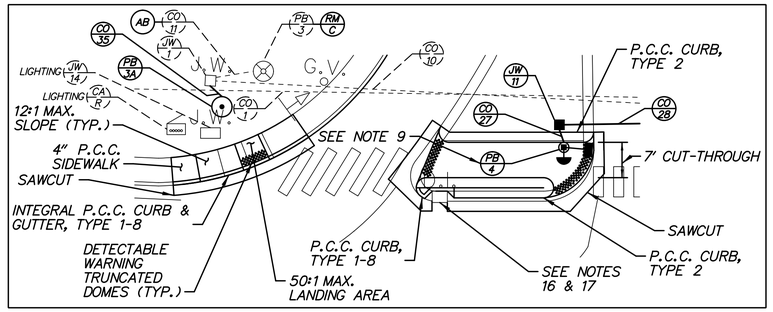
	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1	⬚	□
LOOP DETECTOR, TYPE 2	⬚	▭
LUMINAIRE	—○	—●
MAST ARM	▷	▶
MICROWAVE DETECTION	—◀	—◀
OPTICOM RECEIVER	—○	—●
OVERHEAD SIGNING		—|
PEDESTRIAN POLE/BASE	⊚	◉
PEDESTRIAN PUSHBUTTON	—▯	—▮
PEDESTRIAN SIGNAL HEAD	—▱	—▰
RIGHT-OF-WAY	— — —	—R/W—
SERVICE PEDESTAL		P
SIGNAL CABINET	▱	▰
SIGNAL HEAD	—▷	—▶
SIGNAL POLE/BASE	⊗	⊙
SPAN INSULATOR	◇	◆
SPAN WIRE	—XX—	—◇—
UTILITY POLE	⊘	◥
VIDEO DETECTION	◀	◀



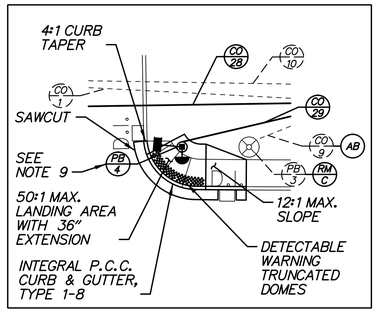
DETAIL 3 – CURB RAMPS, TYPES 2 & 5
SCALE: 1" = 15'



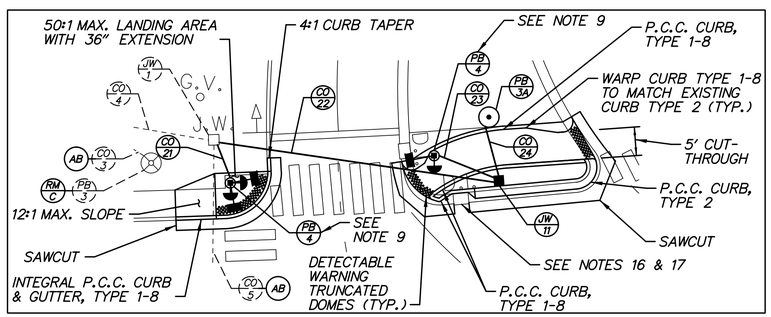
DETAIL 4 – CURB RAMPS, TYPES 2 & 5
SCALE: 1" = 15'



DETAIL 5 – CURB RAMPS, TYPES 2 & 5
SCALE: 1" = 15'



DETAIL 6 – CURB RAMP, TYPE 1
SCALE: 1" = 15'



DETAIL 7 – CURB RAMPS, TYPES 3 & 5
SCALE: 1" = 15'

CONDUIT RUN SCHEDULE

CO#	# OF CONDUITS	SIZE	LENGTH	B/T/O	AMOUNT AND TYPE OF CABLE/ WIRE
1*	1	2.0 IN	212 FT	-	EX. (3) POWER CABLES
2*	2	2.5 IN	8 FT	-	EX. (2) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (4) 4/#18 - TO REMAIN, <REMOVE EX. (3) 16/#14, EX. (1) 9/#14, EX. (2) 4/#18>, [NEW (4) 9/#14, (5) 5/#14, (2) 4/#18, (4) 2/#14, (2) #6 GROUND]
3*	1	2.5 IN	13 FT	-	<REMOVE EX. (2) 4/#18, EX. (1) 16/#14, EX. (1) 9/#14>
4*	1	2.5 IN	24 FT	-	EX. (1) 4/#18, <REMOVE EX. (1) 9/#14>, [NEW (1) 9/#14, (3) 5/#14, (1) 4/#18, (1) #6 GROUND]
5*	1	2.5 IN	62 FT	-	<REMOVE EX. (1) 9/#14>
6*	1	1.5 IN	2 FT	-	<REMOVE EX. (1) 9/#14>
7*	2	2.5 IN	34 FT	-	EX. (2) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (4) 4/#18 - TO REMAIN, <REMOVE EX. (3) 16/#14, EX. (1) 9/#14, EX. (2) 4/#18>, [NEW (3) 9/#14, (5) 5/#14, (1) 4/#18, (4) 2/#14, (2) #6 GROUND]
8*	1	2.5 IN	60 FT	-	EX. (4) 4/#18, EX. (2) FIBER OPTIC, MULTI-MODE, 12 CT., <REMOVE EX. (1) 9/#14>
9*	1	2.5 IN	20 FT	-	<REMOVE EX. (2) 4/#18, EX. (1) 16/#14, EX. (1) 9/#14>
10*	1	2.5 IN	141 FT	-	<REMOVE EX. (1) 16/#14>, [NEW (1) 9/#14, (1) #6 GROUND]
11*	1	2.5 IN	8 FT	-	<REMOVE EX. (1) 16/#14>
12*	1	2.5 IN	71 FT	-	EX. (2) 4/#18, EX. (2) FIBER OPTIC, MULTI-MODE, 12 CT., <REMOVE EX. (1) 9/#14>
13*	1	2.5 IN	110 FT	-	EX. (1) 4/#18, [NEW (2) 2/#14, (1) #6 GROUND]
14*	1	2.5 IN	363 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 144 CT., [NEW (2) 2/#14, (1) #6 GROUND]
15*	1	2.5 IN	XX FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 144 CT.
16*	1	2.5 IN	95 FT	-	EX. (1) 4/#18, <REMOVE EX. (1) 9/#14>, [NEW (1) 9/#14, (3) 5/#14, (1) #6 GROUND]
17*	1	1.5 IN	3 FT	-	<REMOVE EX. (1) 9/#14>
18*	1	2.5 IN	6 FT	-	EX. (1) 4/#18, EX. (2) FIBER OPTIC, MULTI-MODE, 12 CT., [NEW (1) 9/#14, (1) 4/#18, (1) #6 GROUND]
19*	1	2.5 IN	311 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 144 CT.
20*	1	2.5 IN	XX FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 144 CT.
21	1	2.5 IN	7 FT	T	[NEW (2) 5/#14, (1) #6 GROUND]
22	1	4.0 IN	55 FT	B	[NEW (1) 9/#14, (1) 4/#18, (1) 5/#14, (1) #6 GROUND]
23	1	2.5 IN	12 FT	T	[NEW (1) 5/#14, (1) #6 GROUND]
24	1	3.0 IN	11 FT	T	[NEW (1) 9/#14, (1) 4/#18, (1) #6 GROUND]
25	1	2.5 IN	1 FT	T	[NEW (2) 5/#14, (1) #6 GROUND]
26	1	4.0 IN	31 FT	B	[NEW (1) 5/#14, (1) #6 GROUND]
27	1	2.5 IN	3 FT	T	[NEW (1) 5/#14, (1) #6 GROUND]
28	1	4.0 IN	71 FT	B	[NEW (1) 5/#14, (1) #6 GROUND]
29	1	2.5 IN	34 FT	T	[NEW (1) 5/#14, (1) #6 GROUND]
30	1	3.0 IN	12 FT	T	[NEW (1) 9/#14, (1) 4/#18, (1) #6 GROUND]
31	1	4.0 IN	33 FT	B	[NEW (1) 9/#14, (1) #6 GROUND]
32	1	3.0 IN	24 FT	T	[NEW (1) 9/#14, (1) #6 GROUND]
33	1	4.0 IN	50 FT	B	[NEW (1) 9/#14, (1) 4/#18, (1) #6 GROUND]
34	1	3.0 IN	3 FT	T	[NEW (1) 9/#14, (1) 4/#18, (1) #6 GROUND]
35	1	3.0 IN	4 FT	T	[NEW (1) 9/#14, (1) #6 GROUND]
36	1	2.5 IN	3 FT	T	[NEW (1) 5/#14, (1) #6 GROUND]
37	1	4.0 IN	60 FT	B	[NEW (2) 9/#14, (1) 4/#18, (3) 5/#14, (4) 2/#14, (1) #6 GROUND]
38	1	4.0 IN	71 FT	B	[NEW (2) 9/#14, (1) 4/#18, (3) 5/#14, (2) 2/#14, (1) #6 GROUND]

* DENOTES EXISTING CONDUIT

B = BORE, T = TRENCH, O = OPEN CUT

GENERAL SIGNAL NOTES

1. EXISTING LOOP DETECTORS - (TO REMAIN):
   TYPE #2 - 6' x 25' - SR 92 ALL MOVEMENTS, SB BRANDYWINE TOWN CENTER LEFT-TURN MOVEMENTS.

   PROPOSED LOOP DETECTORS:
   TYPE #2 - 6' x 25' - TO BE INSTALLED ON STRATFORD APARTMENTS LEFT-TURN MOVEMENT.
   SYSTEM - 6' x 6' - TO BE INSTALLED IN SR 92 RECEIVING LANES, AS SHOWN.
2. ALL SIGNAL EQUIPMENT REMOVED FROM A PROJECT IS TO BE RETURNED TO DELDOT TRAFFIC - DOVER, DELAWARE.
3. CONDUIT JUNCTION WELLS ARE TO BE REMOVED IN ACCORDANCE WITH SECTION 201 AND 202 OF THE STANDARD SPECIFICATIONS OR AS DIRECTED BY ENGINEER. EXISTING CONDUIT IS TO BE ABANDONED.
4. ALL GALVANIZED CONDUIT (GRC) SHALL BE REAMED AND THREADED. ALL GRC SHALL BE THREADED TOGETHER WITH APPROVED COUPLINGS. SET SCREW, BOLTED, AND COMPRESSION FITTING ARE NOT ACCEPTABLE.
5. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

RECOMMENDED _____ DATE: _____

RECOMMENDED _____ DATE: _____

RECOMMENDED _____ DATE: 5/14/15

APPROVED TRAFFIC ENGINEER _____ DATE: 5/14/15

APPROVED FOR INSTALLATION
CHIEF TRAFFIC ENGINEER _____ DATE: 5/15/15

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

1 INSTALLED MAST ARMS, BACKPLATES, OPTICOM RECEIVERS AND PED PHASES 2 AND 6 PER ADA/MUTCD STANDARDS AND RECONSTRUCTED PED PHASE 4 PER ADA/MUTCD STANDARDS. A.S.P. (WR&A) 3-15 (CONTRACT # T201101001)

SCALE
0 30 60 90
FEET

2011 HEP, SITE CC

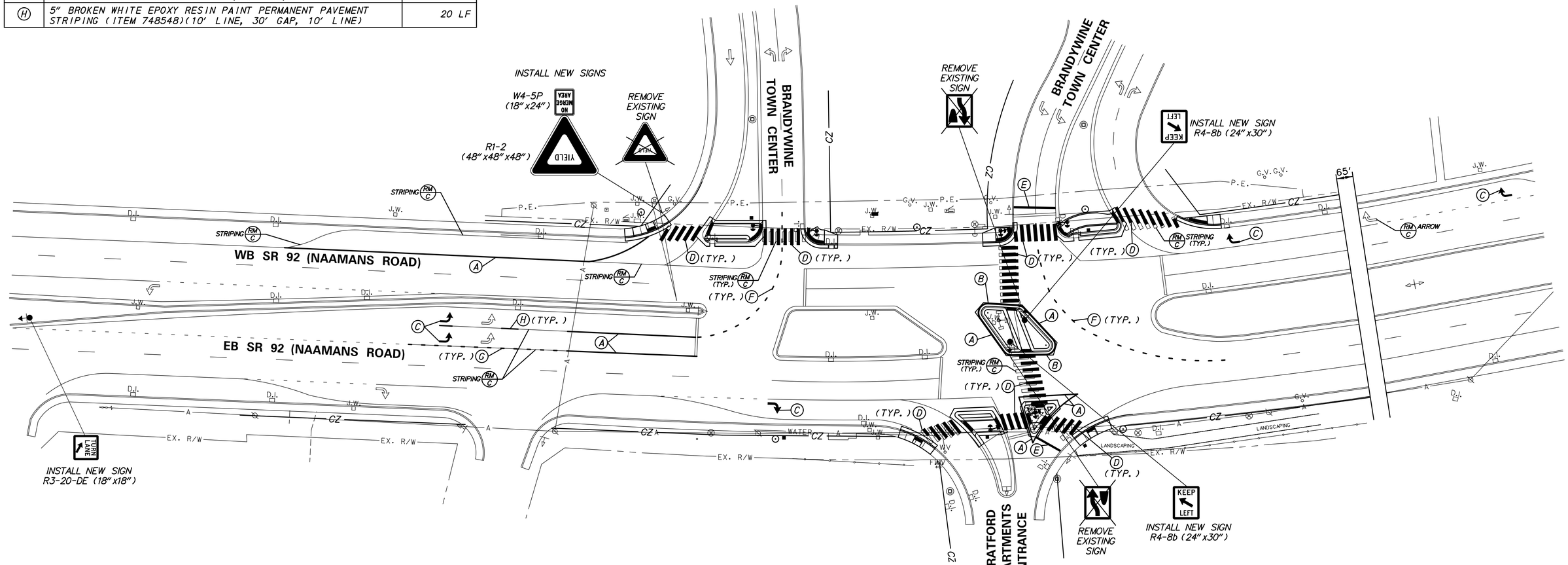
CONTRACT	T201101001
COUNTY	NEW CASTLE
PERMIT NO.	N085P
DESIGNED BY: A.S.P. (WRA)	
CHECKED BY: M.J.B. (WRA)	

SIGNAL PLAN
SR 92 (NAAMANS ROAD) @ BRANDYWINE TOWN CENTER

SHEET NO.	2
TOTAL SHTS.	3

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PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(A)	5" SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)	540 LF
(B)	5" SOLID YELLOW EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)	75 LF
(C)	WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING SYMBOL (ITEM 748015)	80 SF
(D)	10'x2' SOLID WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748015)	1140 SF
(E)	16" SOLID WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748015)	60 SF
(F)	5" DOTTED ALKYD-THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748033)(2' LINE, 6' GAP, 2' LINE)	70 LF
(G)	5" DOTTED WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)(2' LINE, 6' GAP, 2' LINE)	24 LF
(H)	5" BROKEN WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)(10' LINE, 30' GAP, 10' LINE)	20 LF



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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	2011 HEP, SITE CC	CONTRACT T201101001	PERMIT NO. N085P	SIGNING & STRIPING PLAN SR 92 (NAAMANS ROAD) @ BRANDYWINE TOWN CENTER	SHEET NO. 3
				COUNTY NEW CASTLE	DESIGNED BY: A.S.P. (WRA)		TOTAL SHTS. 3
					CHECKED BY: M.J.B. (WRA)		

DELDOT CONTRACT T201504004
CONCORD PIKE AND BRANDYWINE PARKWAY
INTERSECTION IMPROVEMENTS

NOTES:

6. POLE BASES SUPPORTING POLES WITH PEDESTRIAN PUSHBUTTONS SHALL BE CONSTRUCTED IMMEDIATELY ADJACENT TO THE FLAT (50:1 OR FLATTER) LANDING AREA OF THE CURB RAMP OR SIDEWALK IN ACCORDANCE WITH CURRENT ADA BEST PRACTICES. THESE POLE BASES SHALL BE FLUSH WITH THE ADJOINING LANDING AREA. THE PEDESTRIAN PUSHBUTTON SHALL BE INSTALLED AT A HEIGHT OF 42 TO 48 INCHES ABOVE THE LANDING AREA / SIDEWALK, AND SHALL BE LOCATED SUCH THAT THE MAXIMUM REACH DISTANCE IS 10 INCHES FROM THE LANDING AREA TO THE FACE OF THE PUSHBUTTON. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 7 FEET OR MORE THAN 10 FEET ABOVE SIDEWALK LEVEL.

7. THE CONTRACTOR SHALL REMOVE THE EXISTING JUNCTION WELL, TYPE 1, AND INSTALL THE PROPOSED JUNCTION WELL, TYPE 14, SO THAT IT INTERCEPTS EXISTING CONDUIT RUNS NOS. 3, 4, AND 6 AND PROPOSED CONDUIT RUNS NOS. 11 AND 22.

8. THE CONTRACTOR SHALL CUT BACK THE P.C.C. MEDIAN NOSE AND INSTALL MODIFIED INTEGRAL P.C.C. CURB & GUTTER, TYPE 2, TO MATCH THE EXISTING CURB, AS SHOWN. THE CONTRACTOR SHALL INSTALL A FULL-DEPTH HOT-MIX PATCH FLUSH WITH THE ADJOINING PAVEMENT.

9. THE CONTRACTOR SHALL INSTALL A TUBULAR MARKER (FLEXI-POST) ON ALL THREE (3) CORNERS OF THE CHANNELIZING ISLAND, AS SHOWN. EACH TUBULAR MARKER SHALL BE RETROREFLECTORIZED IN ACCORDANCE WITH SECTIONS 31.05 AND 6F.63 OF THE 2011 DE MUTCD.

10. ALL PEDESTRIAN SIGNALS SHALL CONTAIN COUNTDOWN DISPLAYS.

11. THE CONTRACTOR SHALL ADJUST THE EXISTING JUNCTION WELL, TYPE 1, SO THAT IT IS FLUSH WITH THE PROPOSED CURB RAMP AND INSTALL A JUNCTION WELL, TYPE 11 FRAME/LID.

12. THE CONTRACTOR SHALL SPLICE THE LEAD-IN CABLES FOR THE PROPOSED LOOP DETECTOR TO THE EXISTING 4/#18 'HOME RUN' CABLE.

13. THE CONTRACTOR SHALL REPLACE THE DAMAGED LID FOR THE JUNCTION WELL, TYPE 1 WITH A JUNCTION WELL, TYPE 11 FRAME/LID.

14. ALL WORK PERFORMED UNDER THIS PROJECT IS INTENDED TO OCCUR WITHIN DELDOT'S EXISTING RIGHT-OF-WAY BASED ON THE ARCHIVED PLANS FOR CONTRACT NO. 81-102-01 AND THE SIGNAL AGREEMENT FROM FEBRUARY 15, 1996.

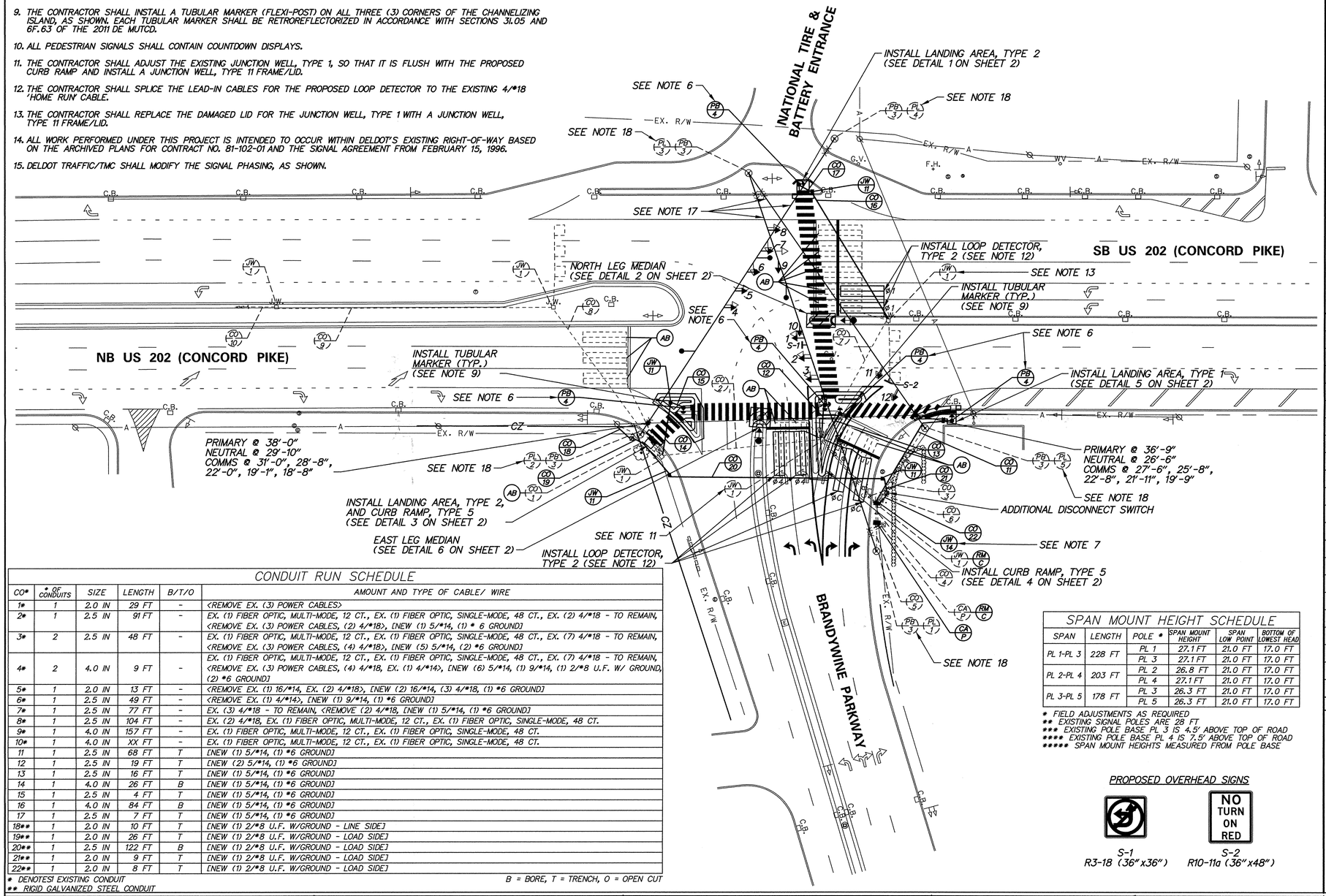
15. DELDOT TRAFFIC/TMC SHALL MODIFY THE SIGNAL PHASING, AS SHOWN.

NOTES CONTINUED:

16. ALL CONDUIT SHALL BE SCHEDULE 80 PVC WHEN INSTALLED BY TRENCHING AND SCHEDULE 80 HDPE WHEN INSTALLED BY BORING, UNLESS OTHERWISE NOTED.

17. THE CONTRACTOR SHALL REMOVE THE EXISTING SIGNAL HEADS, SIGNAL HEAD CABLES, AND SPAN WIRES AND INSTALL THE PROPOSED SIGNAL HEADS, OPTICOM RECEIVERS, SIGNAL HEAD CABLES, OVERHEAD SIGNS, AND SPAN WIRES, AS SHOWN.

18. THE CONTRACTOR SHALL INSTALL BACK GUYS IN ACCORDANCE WITH ITEM 746501, ON THE EXISTING SIGNAL POLE PRIOR TO INSTALLING THE PROPOSED SPAN WIRES. THE BACK GUYS SHALL BE REMOVED WHEN THE EXISTING SPAN WIRE IS REMOVED FROM THE EXISTING SIGNAL POLE.



CONDUIT RUN SCHEDULE

CO*	# OF CONDUITS	SIZE	LENGTH	B/T/O	AMOUNT AND TYPE OF CABLE/ WIRE
1*	1	2.0 IN	29 FT	-	<REMOVE EX. (3) POWER CABLES>
2*	1	2.5 IN	91 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (2) 4/#18 - TO REMAIN, <REMOVE EX. (3) POWER CABLES, (2) 4/#18>, [NEW (1) 5/#14, (1) * 6 GROUND]
3*	2	2.5 IN	48 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (7) 4/#18 - TO REMAIN, <REMOVE EX. (3) POWER CABLES, (4) 4/#18>, [NEW (5) 5/#14, (2) #6 GROUND]
4*	2	4.0 IN	9 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (7) 4/#18 - TO REMAIN, <REMOVE EX. (3) POWER CABLES, (4) 4/#18, EX. (1) 4/#14>, [NEW (6) 5/#14, (1) 9/#14, (1) 2/#8 U.F. W/ GROUND, (2) #6 GROUND]
5*	1	2.0 IN	13 FT	-	<REMOVE EX. (1) 16/#14, EX. (2) 4/#18>, [NEW (2) 16/#14, (3) 4/#18, (1) #6 GROUND]
6*	1	2.5 IN	49 FT	-	<REMOVE EX. (1) 4/#14>, [NEW (1) 9/#14, (1) #6 GROUND]
7*	1	2.5 IN	77 FT	-	EX. (3) 4/#18 - TO REMAIN, <REMOVE (2) 4/#18, [NEW (1) 5/#14, (1) #6 GROUND]
8*	1	2.5 IN	104 FT	-	EX. (2) 4/#18, EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT.
9*	1	4.0 IN	157 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT.
10*	1	4.0 IN	XX FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT.
11	1	2.5 IN	68 FT	T	[NEW (1) 5/#14, (1) #6 GROUND]
12	1	2.5 IN	19 FT	T	[NEW (2) 5/#14, (1) #6 GROUND]
13	1	2.5 IN	16 FT	T	[NEW (1) 5/#14, (1) #6 GROUND]
14	1	4.0 IN	26 FT	B	[NEW (1) 5/#14, (1) #6 GROUND]
15	1	2.5 IN	4 FT	T	[NEW (1) 5/#14, (1) #6 GROUND]
16	1	4.0 IN	84 FT	B	[NEW (1) 5/#14, (1) #6 GROUND]
17	1	2.5 IN	7 FT	T	[NEW (1) 5/#14, (1) #6 GROUND]
18**	1	2.0 IN	10 FT	T	[NEW (1) 2/#8 U.F. W/GROUND - LINE SIDE]
19**	1	2.0 IN	26 FT	T	[NEW (1) 2/#8 U.F. W/GROUND - LOAD SIDE]
20**	1	2.5 IN	122 FT	B	[NEW (1) 2/#8 U.F. W/GROUND - LOAD SIDE]
21**	1	2.0 IN	9 FT	T	[NEW (1) 2/#8 U.F. W/GROUND - LOAD SIDE]
22**	1	2.0 IN	8 FT	T	[NEW (1) 2/#8 U.F. W/GROUND - LOAD SIDE]

* DENOTES EXISTING CONDUIT
** RIGID GALVANIZED STEEL CONDUIT
B = BORE, T = TRENCH, O = OPEN CUT

SPAN MOUNT HEIGHT SCHEDULE

SPAN	LENGTH	POLE #	SPAN MOUNT HEIGHT	SPAN LOW POINT	BOTTOM OF LOWEST HEAD
PL 1-PL 3	228 FT	PL 1	27.1 FT	21.0 FT	17.0 FT
		PL 3	27.1 FT	21.0 FT	17.0 FT
PL 2-PL 4	203 FT	PL 2	26.8 FT	21.0 FT	17.0 FT
		PL 4	27.1 FT	21.0 FT	17.0 FT
PL 3-PL 5	178 FT	PL 3	26.3 FT	21.0 FT	17.0 FT
		PL 5	26.3 FT	21.0 FT	17.0 FT

* FIELD ADJUSTMENTS AS REQUIRED
** EXISTING SIGNAL POLES ARE 28 FT
*** EXISTING POLE BASE PL 3 IS 4.5' ABOVE TOP OF ROAD
**** EXISTING POLE BASE PL 4 IS 7.5' ABOVE TOP OF ROAD
***** SPAN MOUNT HEIGHTS MEASURED FROM POLE BASE

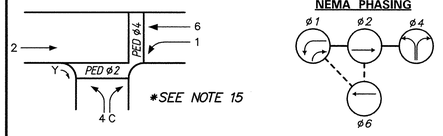
PROPOSED OVERHEAD SIGNS

S-1
R3-18 (36"x36")

S-2
R10-11a (36"x48")

SIGNAL PHASING

NEMA PHASING



OVERLAP C = 1+ 4

PHASING NOTES

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

SIGNAL HEAD DIAGRAM

*ALL EXISTING SIGNAL HEADS SHALL BE REMOVED	1-3, 6-8	4,5, 9,10	11,12

LEGEND

AB	ABANDON	OH-•	EXISTING OVERHEAD RUN IDENTIFIER (* OF OVERHEAD RUN)
CA-X	EXISTING CABINET IDENTIFIER (TYPE OF CABINET)	OH-•	PROPOSED OVERHEAD RUN IDENTIFIER (* OF OVERHEAD RUN)
CA-X	PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)	PB-X	EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO-•	EXISTING CONDUIT RUN IDENTIFIER (* OF CONDUIT RUN)	PB-X	PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO-•	PROPOSED CONDUIT RUN IDENTIFIER (* OF CONDUIT RUN)	PL-X	EXISTING POLE IDENTIFIER (* OF POLE)
JW-X	EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	PL-X	PROPOSED POLE IDENTIFIER (* OF POLE)
JW-X	PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	RM-C	REMOVE BY CONTRACTOR
MA-XX	EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)	RM-O	REMOVE BY OTHERS
MA-XX	PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)	RM-TC	REMOVE BY TRAFFIC CONTRACTOR

	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1		□
LOOP DETECTOR, TYPE 2		▭
LUMINAIRE		
MAST ARM		
MICROWAVE DETECTION		
OPTICOM RECEIVER		
OVERHEAD SIGNING		
PEDESTRIAN POLE/BASE		
PEDESTRIAN PUSHBUTTON		
PEDESTRIAN SIGNAL HEAD		
RIGHT-OF-WAY		R/W
SERVICE PEDESTAL		P
SIGNAL CABINET		
SIGNAL HEAD		
SIGNAL POLE/BASE		
SPAN INSULATOR		
SPAN WIRE	XX	
UTILITY POLE		
VIDEO DETECTION		
ADDITIONAL DISCONNECT SWITCH		D

GENERAL SIGNAL NOTES

1. EXISTING LOOP DETECTORS (TO REMAIN):
   SYSTEM - 6' x 6' - US 202 RECEIVING LANES.

   PROPOSED LOOP DETECTORS:
   TYPE #2 - TO BE INSTALLED ON SB US 202 LEFT-TURN AND WB BRANDYWINE PARKWAY MOVEMENTS.
2. ALL SIGNAL EQUIPMENT REMOVED FROM A PROJECT IS TO BE RETURNED TO DELDOT TRAFFIC - DOVER, DELAWARE.
3. CONDUIT JUNCTION WELLS TO BE REMOVED IN ACCORDANCE WITH SECTION 201 AND 202 OF THE STANDARD SPECIFICATIONS OR AS DIRECTED BY ENGINEER. EXISTING CONDUIT IS TO BE ABANDONED.
4. ALL GALVANIZED CONDUIT (GRC) SHALL BE REAMED AND THREADED. ALL GRC SHALL BE THREADED TOGETHER WITH APPROVED COUPLINGS. SET SCREW, BOLTED, AND COMPRESSION FITTING ARE NOT ACCEPTABLE.
5. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

RECOMMENDED _____ DATE:_____

RECOMMENDED _____ DATE:_____

RECOMMENDED M&R J.B.G. DATE: 11/16/15

APPROVED TRAFFIC ENGINEER _____ DATE: 11/17/15

APPROVED FOR INSTALLATION
CHIEF TRAFFIC ENGINEER _____ DATE: 11/17/15

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

1 INSTALLED OPTICOMS AND PED PHASES 2 & 4 PER ADA/MUTCD STANDARDS. A.S.P. (WRA) 11-15 (CONTRACT #T201504004)

SCALE
0 30 60 90
FEET

CONTRACT	PERMIT NO.	N030P
T201504004	DESIGNED BY: A.S.P. (WRA)	
COUNTY	CHECKED BY: M.J.B. (WRA)	
NEW CASTLE		

SIGNAL PLAN
US 202 (CONCORD PIKE)
@ BRANDYWINE PARKWAY
(F.K.A. "BRANDYWINE RACEWAY ENT.")

SHEET NO. 1
TOTAL SHTS. 3

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NOTES:

6. POLE BASES SUPPORTING POLES WITH PEDESTRIAN PUSHBUTTONS SHALL BE CONSTRUCTED IMMEDIATELY ADJACENT TO THE FLAT (50:1 OR FLATTER) LANDING AREA OF THE CURB RAMP OR SIDEWALK IN ACCORDANCE WITH CURRENT ADA BEST PRACTICES. THESE POLE BASES SHALL BE FLUSH WITH THE ADJOINING LANDING AREA. THE PEDESTRIAN PUSHBUTTON SHALL BE INSTALLED AT A HEIGHT OF 42 TO 48 INCHES ABOVE THE LANDING AREA / SIDEWALK AND SHALL BE LOCATED SUCH THAT THE MAXIMUM REACH DISTANCE IS 10 INCHES FROM THE LANDING AREA TO THE FACE OF THE PUSHBUTTON. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 7 FEET OR MORE THAN 10 FEET ABOVE SIDEWALK LEVEL.

7. THE CONTRACTOR SHALL REMOVE THE EXISTING JUNCTION WELL, TYPE 1, AND INSTALL THE PROPOSED JUNCTION WELL, TYPE 1A, SO THAT IT INTERCEPTS EXISTING CONDUIT RUNS NOS. 3, 4, AND 6 AND PROPOSED CONDUIT RUNS NOS. 11 AND 22.

8. THE CONTRACTOR SHALL CUT BACK THE P.C.C. MEDIAN NOSE AND INSTALL MODIFIED INTEGRAL P.C.C. CURB & GUTTER, TYPE 2, TO MATCH THE EXISTING CURB, AS SHOWN. THE CONTRACTOR SHALL INSTALL A FULL-DEPTH HOT-MIX PATCH FLUSH WITH THE ADJOINING PAVEMENT.

9. THE CONTRACTOR SHALL INSTALL A TUBULAR MARKER (FLEXI-POST) ON ALL THREE (3) CORNERS OF THE CHANNELIZING ISLAND, AS SHOWN. EACH TUBULAR MARKER SHALL BE RETROREFLECTORIZED IN ACCORDANCE WITH SECTIONS 3L.05 AND 6F.63 OF THE 2011 DE MUTCD.

10. ALL PEDESTRIAN SIGNALS SHALL CONTAIN COUNTDOWN DISPLAYS.

11. THE CONTRACTOR SHALL ADJUST THE EXISTING JUNCTION WELL, TYPE 1, SO THAT IT IS FLUSH WITH THE PROPOSED CURB RAMP AND INSTALL A JUNCTION WELL, TYPE 11 FRAME/LID.

12. THE CONTRACTOR SHALL SPLICE THE LEAD-IN CABLES FOR THE PROPOSED LOOP DETECTOR TO THE EXISTING 4/*18 'HOME RUN' CABLE.

13. THE CONTRACTOR SHALL REPLACE THE DAMAGED LID FOR THE JUNCTION WELL, TYPE 1 WITH A JUNCTION WELL, TYPE 11 FRAME/LID.

14. ALL WORK PERFORMED UNDER THIS PROJECT IS INTENDED TO OCCUR WITHIN DELDOT'S EXISTING RIGHT-OF-WAY BASED ON THE ARCHIVED PLANS FOR CONTRACT NO. 81-102-01 AND THE SIGNAL AGREEMENT FROM FEBRUARY 15, 1996.

15. DELDOT TRAFFIC/TMC SHALL MODIFY THE SIGNAL PHASING, AS SHOWN.

16. ALL CONDUIT SHALL BE SCHEDULE 80 PVC WHEN INSTALLED BY TRENCHING AND SCHEDULE 80 HDPE WHEN INSTALLED BY BORING, UNLESS OTHERWISE NOTED.

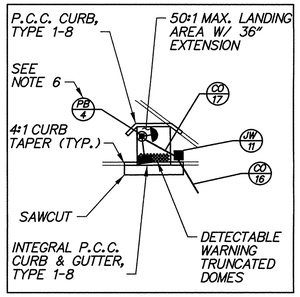
17. THE CONTRACTOR SHALL REMOVE THE EXISTING SIGNAL HEADS, SIGNAL HEAD CABLES, AND SPAN WIRES AND INSTALL THE PROPOSED SIGNAL HEADS, OPTICOM RECEIVERS, SIGNAL HEAD CABLES, OVERHEAD SIGNS, AND SPAN WIRES, AS SHOWN.

18. THE CONTRACTOR SHALL INSTALL BACK GUYS IN ACCORDANCE WITH ITEM 746501, ON THE EXISTING SIGNAL POLE PRIOR TO INSTALLING THE PROPOSED SPAN WIRES. THE BACK GUYS SHALL BE REMOVED WHEN THE EXISTING SPAN WIRE IS REMOVED FROM THE EXISTING SIGNAL POLE.

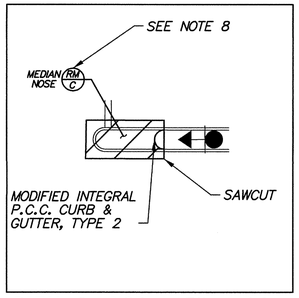
CONDUIT RUN SCHEDULE

CO*	* OF CONDUITS	SIZE	LENGTH	B/T/O	AMOUNT AND TYPE OF CABLE/ WIRE
1*	1	2.0 IN	29 FT	-	<REMOVE EX. (3) POWER CABLES>
2*	1	2.5 IN	91 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (2) 4/*18 - TO REMAIN, <REMOVE EX. (3) POWER CABLES, (2) 4/*18>, [NEW (1) 5/*14, (1) * 6 GROUND]
3*	2	2.5 IN	48 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (7) 4/*18 - TO REMAIN, <REMOVE EX. (3) POWER CABLES, (4) 4/*18>, [NEW (5) 5/*14, (2) *6 GROUND]
4*	2	4.0 IN	9 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT., EX. (7) 4/*18 - TO REMAIN, <REMOVE EX. (3) POWER CABLES, (4) 4/*18, EX. (1) 4/*14>, [NEW (6) 5/*14, (1) 9/*14, (1) 2/*8 U.F. W/ GROUND, (2) *6 GROUND]
5*	1	2.0 IN	13 FT	-	<REMOVE EX. (1) 16/*14, EX. (2) 4/*18>, [NEW (2) 16/*14, (3) 4/*18, (1) *6 GROUND]
6*	1	2.5 IN	49 FT	-	<REMOVE EX. (1) 4/*14>, [NEW (1) 9/*14, (1) *6 GROUND]
7*	1	2.5 IN	77 FT	-	EX. (3) 4/*18 - TO REMAIN, <REMOVE (2) 4/*18, [NEW (1) 5/*14, (1) *6 GROUND]
8*	1	2.5 IN	104 FT	-	EX. (2) 4/*18, EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT.
9*	1	4.0 IN	157 FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT.
10*	1	4.0 IN	XX FT	-	EX. (1) FIBER OPTIC, MULTI-MODE, 12 CT., EX. (1) FIBER OPTIC, SINGLE-MODE, 48 CT.
11	1	2.5 IN	68 FT	T	[NEW (1) 5/*14, (1) *6 GROUND]
12	1	2.5 IN	19 FT	T	[NEW (2) 5/*14, (1) *6 GROUND]
13	1	2.5 IN	16 FT	T	[NEW (1) 5/*14, (1) *6 GROUND]
14	1	4.0 IN	26 FT	B	[NEW (1) 5/*14, (1) *6 GROUND]
15	1	2.5 IN	4 FT	T	[NEW (1) 5/*14, (1) *6 GROUND]
16	1	4.0 IN	84 FT	B	[NEW (1) 5/*14, (1) *6 GROUND]
17	1	2.5 IN	7 FT	T	[NEW (1) 5/*14, (1) *6 GROUND]
18**	1	2.0 IN	10 FT	T	[NEW (1) 2/*8 U.F. W/GROUND - LINE SIDE]
19**	1	2.0 IN	26 FT	T	[NEW (1) 2/*8 U.F. W/GROUND - LOAD SIDE]
20**	1	2.5 IN	122 FT	B	[NEW (1) 2/*8 U.F. W/GROUND - LOAD SIDE]
21**	1	2.0 IN	9 FT	T	[NEW (1) 2/*8 U.F. W/GROUND - LOAD SIDE]
22**	1	2.0 IN	8 FT	T	[NEW (1) 2/*8 U.F. W/GROUND - LOAD SIDE]

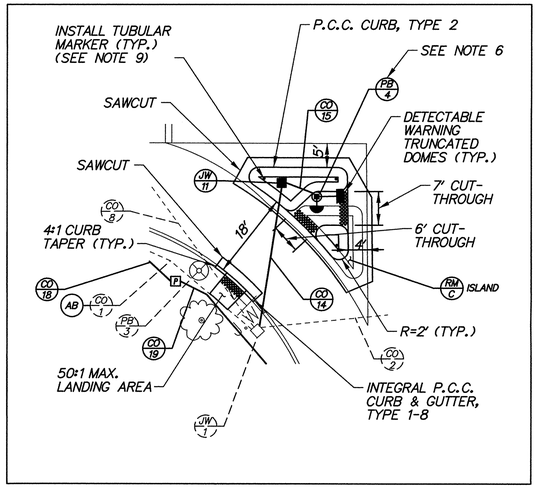
* DENOTES EXISTING CONDUIT
** RIGID GALVANIZED STEEL CONDUIT
B = BORE, T = TRENCH, O = OPEN CUT



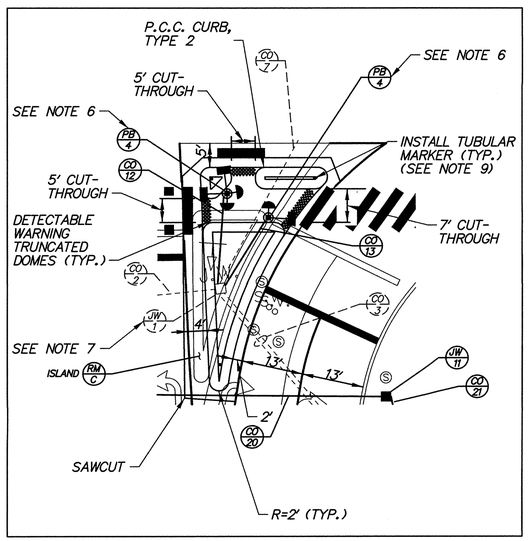
DETAIL 1 – LANDING AREA, TYPE 2
SCALE: 1" = 15'



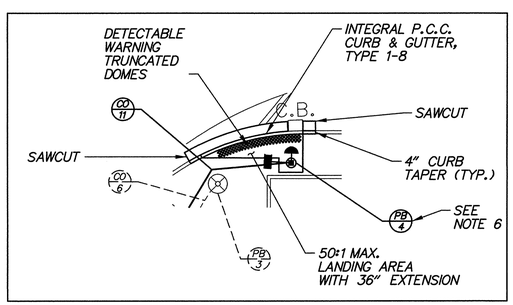
DETAIL 2 – NORTH LEG MEDIAN
SCALE: 1" = 15'



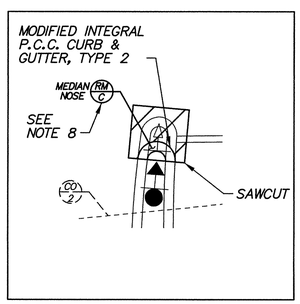
DETAIL 3 – LANDING AREA, TYPE 2 AND CURB RAMP, TYPE 5
SCALE: 1" = 15'



DETAIL 4 – CURB RAMP, TYPE 5
SCALE: 1" = 15'

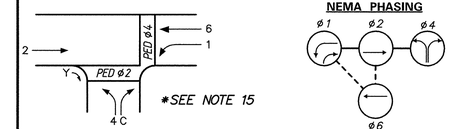


DETAIL 5 – LANDING AREA, TYPE 1
SCALE: 1" = 15'



DETAIL 6 – EAST LEG MEDIAN
SCALE: 1" = 15'

SIGNAL PHASING



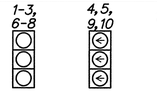
OVERLAP C = 1 + 4

PHASING NOTES

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

SIGNAL HEAD DIAGRAM

*ALL EXISTING SIGNAL HEADS SHALL BE REMOVED



LEGEND

AB ABANDON	OH EXISTING OVERHEAD RUN IDENTIFIER (* OF OVERHEAD RUN)
CA X EXISTING CABINET IDENTIFIER (TYPE OF CABINET)	OH * PROPOSED OVERHEAD RUN IDENTIFIER (* OF OVERHEAD RUN)
CA X PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)	PB X EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO * EXISTING CONDUIT RUN IDENTIFIER (* OF CONDUIT RUN)	PB X PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO * PROPOSED CONDUIT RUN IDENTIFIER (* OF CONDUIT RUN)	PL X EXISTING POLE IDENTIFIER (* OF POLE)
JW X EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	PL X PROPOSED POLE IDENTIFIER (* OF POLE)
JW X PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	RM C REMOVE BY CONTRACTOR
MA XX EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)	RM O REMOVE BY OTHERS
MA XX PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)	RM TC REMOVE BY TRAFFIC CONTRACTOR

	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1	⬚	□
LOOP DETECTOR, TYPE 2	⬚	▭
LUMINAIRE	—○	—✦
MAST ARM	▷	➤
MICROWAVE DETECTION	—◀	—◀
OPTICOM RECEIVER	—○	—●
OVERHEAD SIGNING		—┤
PEDESTRIAN POLE/BASE	⊙	⊗
PEDESTRIAN PUSHBUTTON	—▷	—▶
PEDESTRIAN SIGNAL HEAD	—⧉	—⧉
RIGHT-OF-WAY	———	—R/W—
SERVICE PEDESTAL		P
SIGNAL CABINET	▯	▮
SIGNAL HEAD	—▷	—▶
SIGNAL POLE/BASE	⊗	⊙
SPAN INSULATOR	◇	◆
SPAN WIRE	—XX—	—◇—
UTILITY POLE	⊘	◔
VIDEO DETECTION	◀	◀
ADDITIONAL DISCONNECT SWITCH		D

GENERAL SIGNAL NOTES

1. EXISTING LOOP DETECTORS (TO REMAIN):
   SYSTEM - 6' x 6' - US 202 RECEIVING LANES.

   PROPOSED LOOP DETECTORS:
   TYPE *2 - TO BE INSTALLED ON SB US 202 LEFT-TURN AND WB BRANDYWINE PARKWAY MOVEMENTS.

2. ALL SIGNAL EQUIPMENT REMOVED FROM A PROJECT IS TO BE RETURNED TO DELDOT TRAFFIC - DOVER, DELAWARE.

3. CONDUIT JUNCTION WELLS TO BE REMOVED IN ACCORDANCE WITH SECTION 201 AND 202 OF THE STANDARD SPECIFICATIONS OR AS DIRECTED BY ENGINEER. EXISTING CONDUIT IS TO BE ABANDONED.

4. ALL GALVANIZED CONDUIT (GRC) SHALL BE REAMED AND THREADED. ALL GRC SHALL BE THREADED TOGETHER WITH APPROVED COUPLINGS. SET SCREW, BOLTED, AND COMPRESSION FITTING ARE NOT ACCEPTABLE.

5. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

RECOMMENDED _____ DATE: _____
RECOMMENDED _____ DATE: _____
RECOMMENDED Matthew J. Rich DATE: 11/16/15
APPROVED TRAFFIC ENGINEER Jean Sainvil DATE: 11/17/15
APPROVED FOR INSTALLATION CHIEF TRAFFIC ENGINEER Mark Luzo DATE: 11/17/15

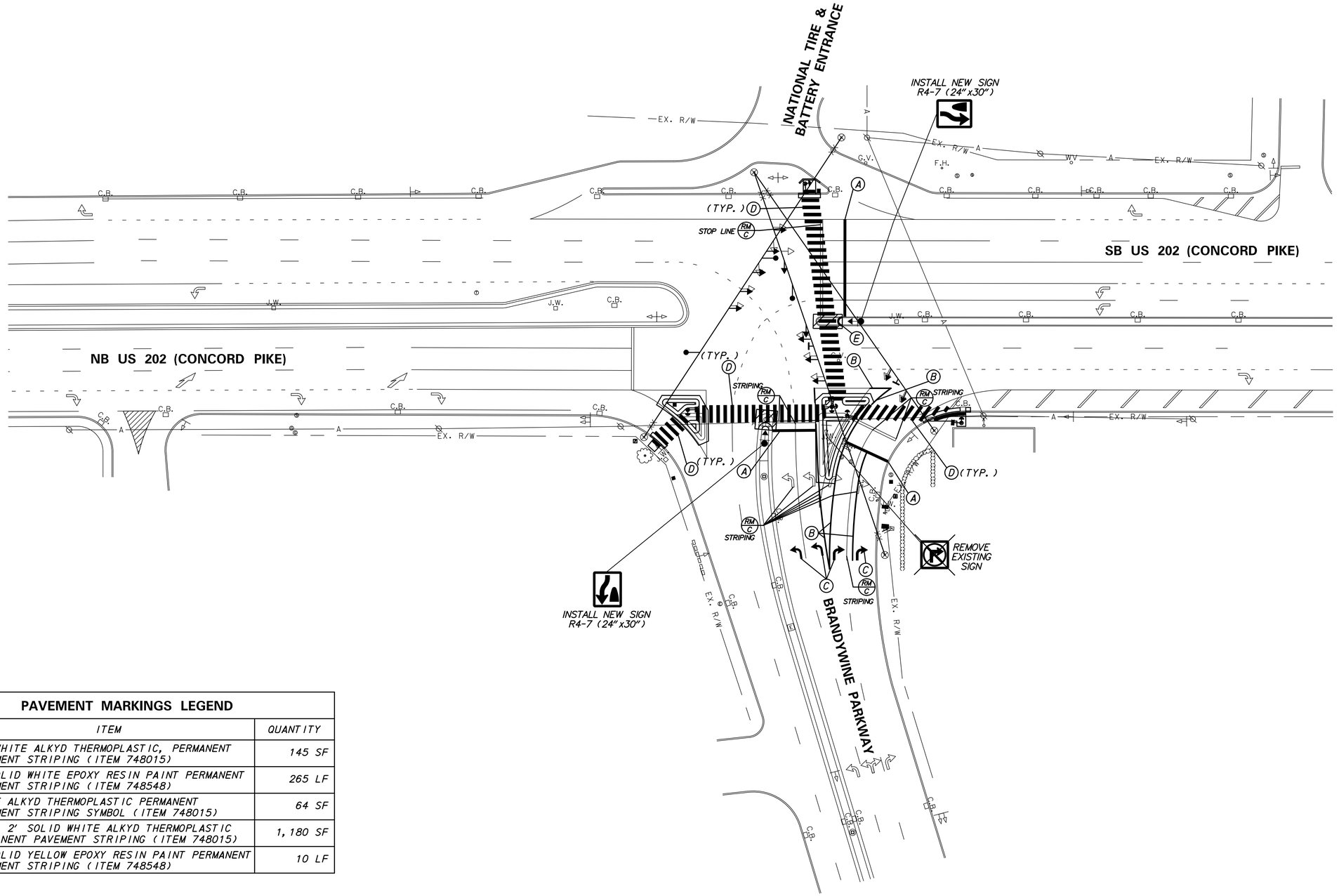
DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS
1 INSTALLED OPTICOMS AND PED PHASES 2 & 4 PER ADA/MUTCD STANDARDS. A.S.P. (WRA) 11-15 (CONTRACT #T201504004)

SCALE
0 15 30 45
FEET

CONTRACT	PERMIT NO.	N030P	SIGNAL PLAN US 202 (CONCORD PIKE) @ BRANDYWINE PARKWAY (F.K.A. "BRANDYWINE RACEWAY ENT.")	SHEET NO. 2
T201504004	DESIGNED BY: A.S.P. (WRA)			TOTAL SHTS. 3
COUNTY NEW CASTLE	CHECKED BY: M.J.B. (WRA)			

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PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(A)	16" WHITE ALKYD THERMOPLASTIC, PERMANENT PAVEMENT STRIPING (ITEM 748015)	145 SF
(B)	5" SOLID WHITE EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)	265 LF
(C)	WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING SYMBOL (ITEM 748015)	64 SF
(D)	10' x 2' SOLID WHITE ALKYD THERMOPLASTIC PERMANENT PAVEMENT STRIPING (ITEM 748015)	1,180 SF
(E)	5" SOLID YELLOW EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 748548)	10 LF

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

1 INSTALLED OPTICOMS AND PED PHASES 2 & 4 PER ADA/MUTCD STANDARDS. A.S.P. (WRA) 11-15 (CONTRACT #T201504004)

SCALE
0 30 60 90
FEET

CONTRACT	PERMIT NO.	N030P
T201504004	DESIGNED BY: A.S.P. (WRA)	
COUNTY	CHECKED BY: M.J.B. (WRA)	
NEW CASTLE		

SIGNING AND STRIPING PLAN

SHEET NO.
3
TOTAL SHTS.
3

WILMINGTON UNIVERSITY

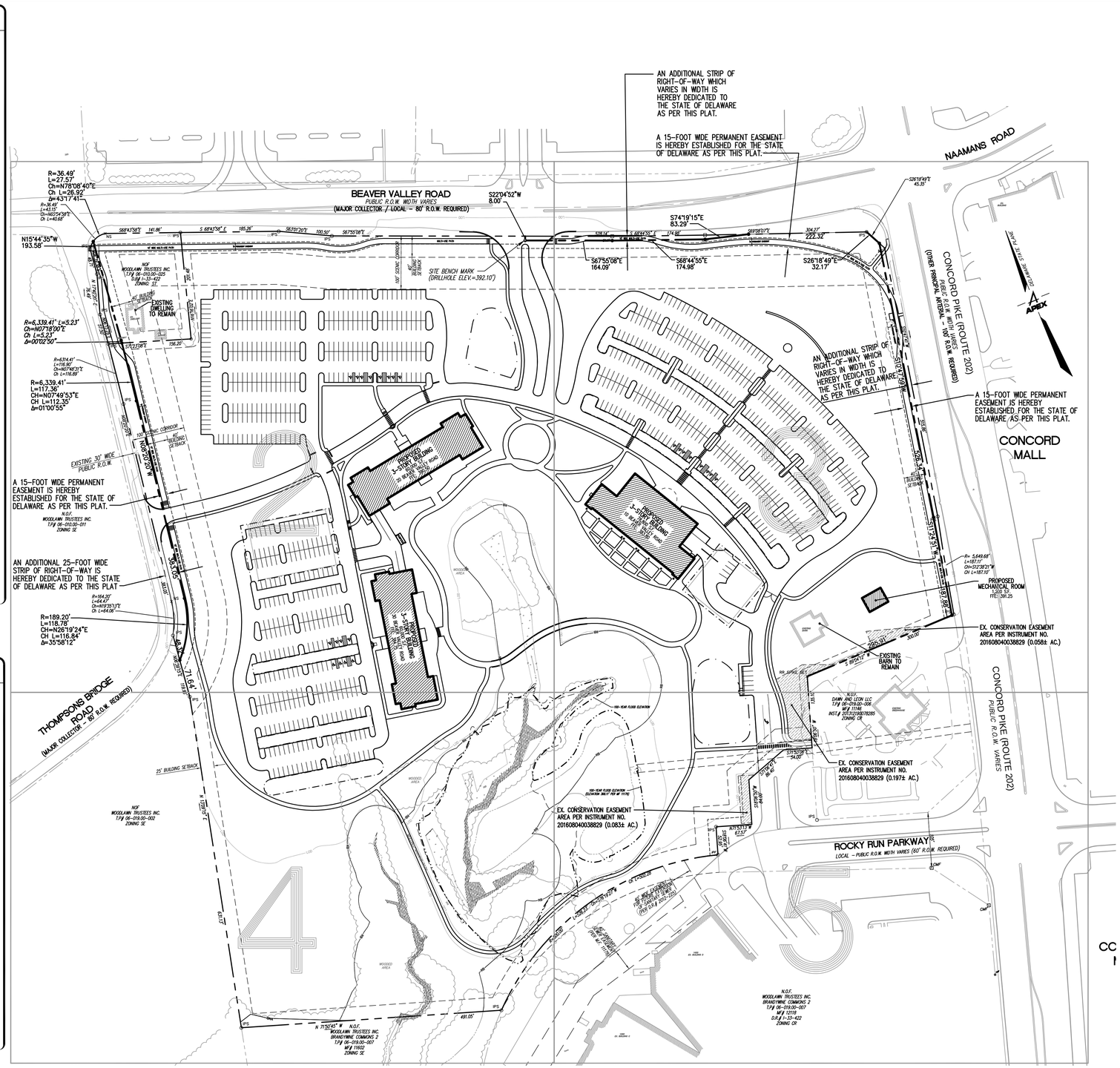
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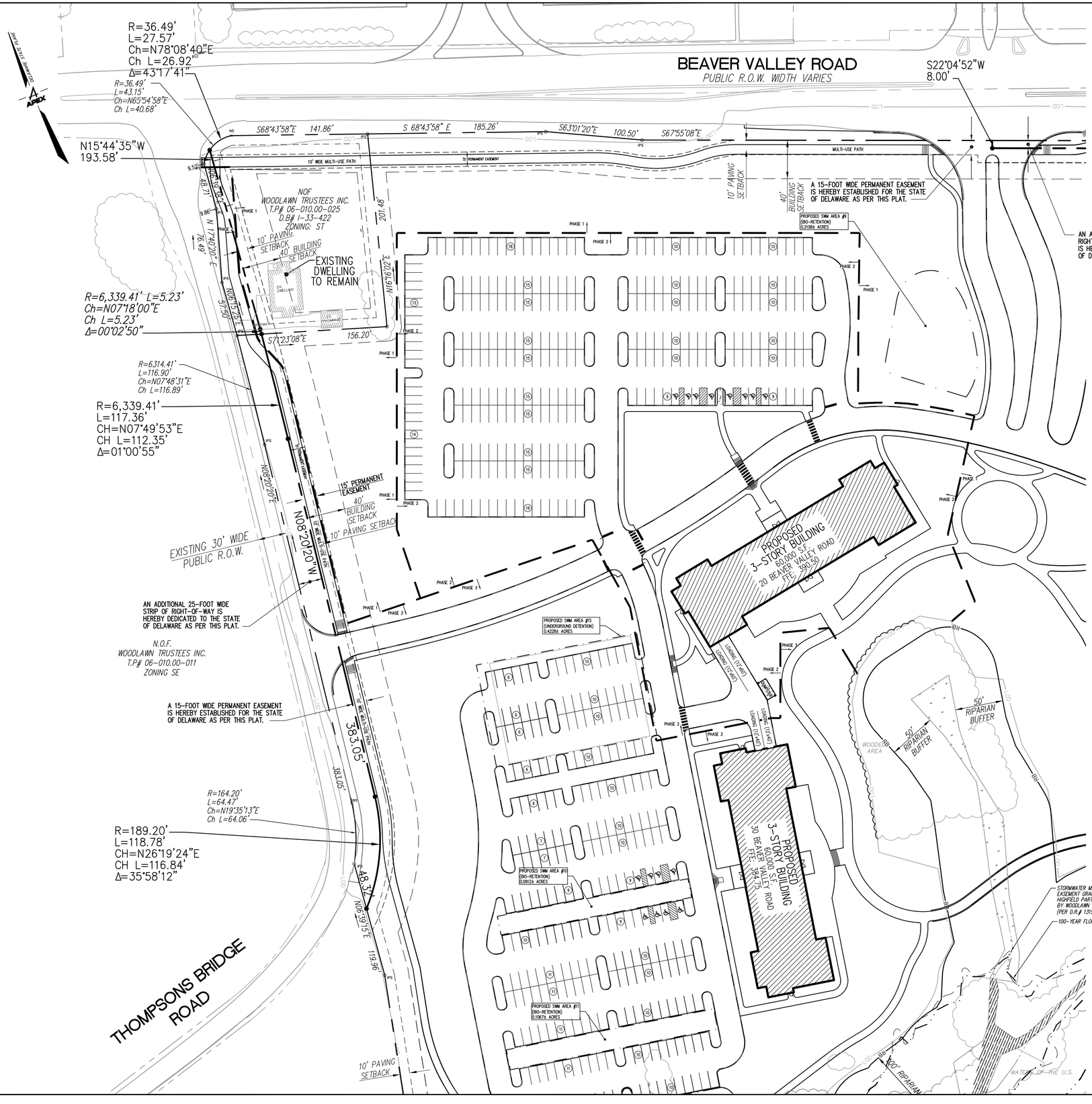
DELDOT RECORD PLAN NOTES

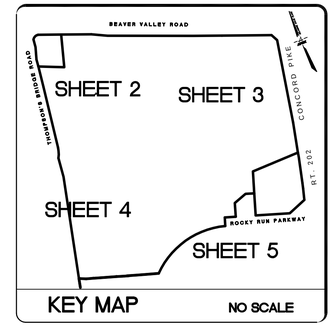
1. ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO ITS APPROVAL.
2. SHRUBBERY, PLANTINGS, SIGNS AND/OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO AN ADJACENT PROPERTY OWNER'S LAND, A SIGHT EASEMENT SHOULD BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.
3. UPON COMPLETION OF THE CONSTRUCTION OF THE SIDEWALK AND/OR SHARED-USE PATH ACROSS THIS PROJECT'S FRONTAGE AND PHYSICAL CONNECTION TO ADJACENT EXISTING FACILITIES, THE DEVELOPER, THE PROPERTY OWNERS OR BOTH ASSOCIATED WITH THIS PROJECT, SHALL BE RESPONSIBLE TO REMOVE ANY EXISTING ROAD TIE-IN CONNECTIONS LOCATED ALONG ADJACENT PROPERTIES, AND RESTORE THE AREA TO GRASS. SUCH ACTIONS SHALL BE COMPLETED AT DELDOT'S DISCRETION, AND IN CONFORMANCE WITH DELDOT'S "SHARED-USE PATH AND/OR SIDEWALK TERMINATION POLICY".
4. THE SIDEWALK AND/OR SHARED-USE PATH SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, THE PROPERTY OWNERS OR BOTH WITHIN THIS SUBDIVISION. THE STATE OF DELAWARE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE FOR THE SIDEWALK.
5. CONSTRUCTION WILL NOT BE PERMITTED UNTIL CONSTRUCTION PLANS HVE BEEN APPROVED AND SURETY HAS BEEN RECEIVED. AT DELDOT'S DISCRETION, A TEMPORARY CONSTRUCTION ENTRANCE PERMIT MAY BE ISSUED FOR CLEARING, GRUBBING, TEMPORARY ENTRANCE CONSTRUCTION, BULK GRADING AND PERIMETER EROSION AND SEDIMENT CONTROLS UP TO 30 DAYS PRIOR TO PLAN APPROVAL. NO BUILDING CONSTRUCTION WILL BE PERMITTED UNDER A TEMPORARY ENTRANCE CONSTRUCTION PERMIT. IF PLAN APPROVAL IS NOT RECEIVED WITHIN 30 CALENDAR DAYS, ALL CONSTRUCTION ACTIVITIES SHALL BE STOPPED. DELDOT WILL NOT PROVIDE A C/O APPROVAL FOR A COMMERCIAL ENTRANCE TO NCC UNTIL THE ENTRANCE(S) ARE COMPLETED TO THE SATISFACTION OF THE DEPARTMENT.
6. AT THE DISCRETION OF THE PUBLIC WORKS INSPECTOR, ANY DAMAGED CURB OR SIDEWALK FOUND ON SITE WILL NEED TO BE REPAIRED OR REPLACED TO MEET CURRENT DELDOT STANDARDS.
7. ALL THE UTILITIES LOCATED WITHIN THE PERMANENT EASEMENT FOR THE STATE OF DELAWARE WILL CONTINUE TO BE SUBJECT TO THE EXISTING UTILITY FRANCHISE AGREEMENTS.
8. AN ADDITIONAL 25' OF RIGHT-OF-WAY ALONG THOMPSONS BRIDGE ROAD IS HEREBY DEDICATED FOR THE STATE OF DELAWARE AS PER THIS PLAT. AN ADDITIONAL VARYING WIDTH OF 4 FEET TO 8 FEET OF RIGHT-OF-WAY ALONG CONCORD PIKE IS HEREBY DEDICATED FOR THE STATE OF DELAWARE AS PER THIS PLAT.
9. A 15-FOOT WIDE PERMANENT EASEMENT IS HEREBY ESTABLISHED FOR THE STATE OF DELAWARE AS PER THIS PLAT.
10. ANY UTILITY WORK WITHIN THE PERMANENT EASEMENT SHALL PROCEED ONLY AFTER PRIOR NOTICE OF AT LEAST 24 HOURS HAS BEEN GIVEN TO DELDOT.
11. THE DEVELOPER SHALL BE REQUIRED TO FURNISH AND PLACE RIGHT-OF-WAY MARKERS TO PROVIDE A PERMANENT REFERENCE FOR RE-ESTABLISHING THE RIGHT-OF-WAY AND PROPERTY CORNERS ON LOCAL AND HIGHER ORDER FRONTAGE ROADS. RIGHT-OF-WAY MARKERS SHALL BE SET AND/OR PLACED ALONG THE FRONTAGE ROAD RIGHT-OF-WAY AT PROPERTY CORNERS AND AT EACH CHANGE IN RIGHT-OF-WAY ALIGNMENT IN ACCORDANCE WITH SECTION 3.2.4.2 OF THE DEVELOPMENT COORDINATION MANUAL.
12. CONSTRUCTION WILL NOT BE PERMITTED UNTIL CONSTRUCTION PLANS HAVE BEEN APPROVED, SURETY HAS BEEN RECEIVED, AND THE TRAFFIC SIGNAL AGREEMENT IS COMPLETE. AT DELDOT'S DISCRETION, A TEMPORARY CONSTRUCTION ENTRANCE PERMIT MAY BE ISSUED FOR CREARING, GRUBBING, TEMPORARY ENTRANCE CONSTRUCTION, BULK GRADING, AND PERIMETER EROSION AND SEDIMENT CONTROLS UP TO 30 DAYS PRIOR TO PLAN APPROVAL. NO BUILDING CONSTRUCTION WILL BE PERMITTED UNDER A TEMPORARY ENTRANCE CONSTRUCTION PERMIT. IF PLAN APPROVAL IS NOT RECEIVED WITHIN 30 CALENDAR DAYS, ALL CONSTRUCTION ACTIVITIES SHALL BE STOPPED. DELDOT WILL NOT PROVIDE A C/O APPROVAL FOR A COMMERCIAL ENTRANCE TO NCCo UNTIL THE ENTRANCE(S) ARE COMPLETED TO THE SATISFACTION OF THE DEPARTMENT.
13. AT THE DISCRETION OF THE PUBLIC WORKS INSPECTOR, ANY DAMAGED OR MISSING CURB OR SIDEWALK FOUND ON SITE WILL NEED TO BE REPAIRED OR REPLACED TO MEET CURRENT DELDOT STANDARDS.
14. ON _____, PURSUANT TO SECTION 11.230 OF THE UNIFIED DEVELOPMENT CODE, COUNTY COUNCIL (GRANTED A WAIVER FROM THE HIGHWAY LEVEL OF SERVICE REQUIREMENTS OF SECTION 11.210A, PURSUANT TO RESOLUTION NO. _____. THIS WAIVER IS CONDITIONED UPON THE IMPLEMENTATION OF THE TRAFFIC MITIGATION AGREEMENT DATED APPROVED BY DELDOT AND NEW CASTLE COUNTY. THE TRAFFIC MITIGATION AGREEMENT ENTERED INTO BETWEEN WILMINGTON UNIVERSITY AND DELDOT, DATED _____ AND RECORDED IN THE FORM OF A MEMORANDUM OF DEED RESTRICTIONS, DATED _____ IS RECORDED AT INSTRUMENT NO. _____ IN THE OFFICE OF THE RECORDER OF DEEDS IN AND FOR NEW CASTLE COUNTY, DELAWARE.
15. THE EXISTING STORM 15" WIDE DRAINAGE EASEMENT DEPICTED ON THIS PLAN AND LOCATED ON NEW CASTLE COUNTY TAX PARCEL NO. 06-19.00-004 SHALL BE MAINTAINED IN PERPETUITY BY THE LEGAL OWNER OF NEW CASTLE COUNTY TAX PARCEL NO. 06-019.00-004 IN ACCORDANCE WITH APPLICABLE STATE OF DELAWARE AND NEW CASTLE COUNTY REQUIREMENTS. IN THE EVENT OF A FAILURE OF THE PIPE WITHIN THE EASEMENT LOCATED ON THE AFOREMENTIONED PROPERTY, CAUSING FLOODING OR DAMAGE TO UPSTREAM FACILITIES AND 2 HOURS OF NON-RESPONSIVENESS ON THE PART OF THE PROPERTY OWNER, DELDOT WILL HAVE THE RIGHT TO ACCESS AND REPAIR THIS PIPE WITH TOTAL AND COMPLETE AUTHORITY TO OPERATE WITHIN THE EASEMENT WITH NO REGARD AS TO OPERATING REQUIREMENTS OF THE PROPERTY OWNER. RESTORATION OF THE SURFACE WILL BE STONE OR CAN BE PERFORMED BY THE PROPERTY OWNER.

NOTES:

1. THIS PLAN SUPERSEDES, IN PART, THE PLAN OF CONVENIENCE STORE & BANK 1700 ROCKY RUN PARKWAY DATED 3/11/2016 AND RECORDED ON 8/4/2016 IN THE RECORDER OF DEEDS IN AND FOR NEW CASTLE COUNTY, STATE OF DELAWARE, INSTRUMENT NO. 20160804-0038829.
2. NO DEBRIS SHALL BE BURIED ON THE SITE.
3. ALL CURBING IN PARKING AREAS AND AISLEWAYS SHALL BE DELDOT TYPE 1-6 UNLESS OTHERWISE NOTED, AND ALL PAVEMENT SHALL BE BITUMINOUS CONCRETE ASPHALT UNLESS OTHERWISE NOTED.
4. LEVEL 1 (PER 2015 STATE STRATEGIES FOR POLICIES AND SPENDING.)
5. A TRAFFIC IMPACT STUDY WAS PERFORMED BY APEX ENGINEERING, INC. IN DECEMBER 2015. DELDOT REVIEWED THE TRAFFIC STUDY, PROVIDING COMMENTS AND RECOMMENTDATION IN A LETTER DATED MARCH 23, 2016.
6. A LANDSCAPE PLAN PREPARED BY _____, LAST DATED _____ OR AS AMENDED AND APPROVED IN WRITING BY THE DEPARTMENT OF LAND USE, IS HEREBY CONSIDERED A PART OF THE RECORD PLAN.
7. THIS PLAN IS SUBJECT TO THE IMPACT FEE PROVISIONS OF CHAPTER 40, ARTICLE 14 OF THE NEW CASTLE COUNTY CODE, AS MAY BE AMENDED BY NEW CASTLE COUNTY COUNCIL.
8. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.
9. ALL IMPROVEMENTS REQUIRED BY THIS PLAN AND THE NEW CASTLE COUNTY CODE SHALL BE SUBJECT TO THE LAND DEVELOPMENT IMPROVEMENT AGREEMENT (LDIA), AND THE PERFORMANCE GUARANTEE INCORPORATED THEREIN. THE LDIA IS RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS IN AND FOR NEW CASTLE COUNTY ON _____, AT INSTRUMENT NO. _____.
10. DRAINAGE, EROSION AND SEDIMENT CONTROL, AND STORMWATER MANAGEMENT SHALL BE PROVIDED IN ACCORDANCE WITH THE NEW CASTLE COUNTY DRAINAGE CODE.
11. POSTAL BOXES SHALL BE INSTALLED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE UNITED STATES POSTAL SERVICE.
12. THE OWNER/DEVELOPER SHALL PAY, TO NEW CASTLE COUNTY, FUNDS FOR LONG TERM STORMWATER MAINTENANCE AND INSPECTION PURSUANT TO SECTION 40.27.240 OF THE COUNTY CODE. THE FUNDS SHALL BE USED FOR THE COSTS ASSOCIATED WITH INSPECTIONS. AN AMOUNT OF _____ SHALL BE FUNDED PRIOR TO RECEIVING THE FIRST CERTIFICATE OF OCCUPANCY. THE DEPARTMENT OF LAND USE SHALL WITHHOLD THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY UNTIL SATISFACTORY WRITTEN PROOF THAT THE FUNDS HAVE BEEN PAID TO NEW CASTLE COUNTY IS FURNISHED IN ACCORDANCE WITH THE REQUIREMENTS.
13. EASEMENTS:
    a. ANY AREA DESIGNATED FOR PROTECTION AS A NATURAL RESOURCE PURSUANT TO ARTICLE 10 OF THE NEW CASTLE COUNTY UNIFIED DEVELOPMENT CODE IS HEREBY PROTECTED BY A CONSERVATION EASEMENT THAT SHALL RUN IN PERPETUITY FOR THE BENEFIT OF NEW CASTLE COUNTY. ANY AREA ON THIS PLAN DELINEATED AS A CONSERVATION EASEMENT SHALL REMAIN IN ITS NATURAL STATE.
    b. THE STORMWATER ACCESS AND MAINTENANCE EASEMENT PROVIDED IS FOR THE BENEFIT OF NEW CASTLE COUNTY AND ITS ASSIGNS.
    c. THE PERMANENT EASEMENTS PROVIDED ARE FOR THE BENEFIT OF THE STATE OF DELAWARE AND ITS ASSIGNS, AND FOR UTILITY PROVIDERS.


BEAVER VALLEY ROAD
PUBLIC R.O.W. WIDTH VARIES
(MAJOR COLLECTOR / LOCAL - 80' R.O.W. REQUIRED)
NAAMANS ROAD
CONCORD PIKE (ROUTE 202)
(OTHER PRINCIPAL ARTERIAL - PUBLIC R.O.W. VARIES 80' TO 100' R.O.W. REQUIRED)
THOMPSONS BRIDGE ROAD
(MAJOR COLLECTOR - 80' R.O.W. REQUIRED)
ROCKY RUN PARKWAY
LOCAL - PUBLIC R.O.W. WIDTH VARIES (60' R.O.W. REQUIRED)
CONCORD MALL
AN ADDITIONAL STRIP OF RIGHT-OF-WAY WHICH VARIES IN WIDTH IS HEREBY DEDICATED TO THE STATE OF DELAWARE AS PER THIS PLAT.
A 15-FOOT WIDE PERMANENT EASEMENT IS HEREBY ESTABLISHED FOR THE STATE OF DELAWARE AS PER THIS PLAT.
AN ADDITIONAL 25-FOOT WIDE STRIP OF RIGHT-OF-WAY IS HEREBY DEDICATED TO THE STATE OF DELAWARE AS PER THIS PLAT
EXISTING DWELLING TO REMAIN
EXISTING BARN TO REMAIN
PROPOSED 1-STORY BUILDING 10 BEDROOMS, 20 BEDS 1,200 S.F. FFE=390.25
PROPOSED 3-STORY BUILDING 10 BEDROOMS, 20 BEDS 1,200 S.F. FFE=390.25
PROPOSED MECHANICAL ROOM 1,200 S.F. FFE=390.25
EX. CONSERVATION EASEMENT AREA PER INSTRUMENT NO. 20160804003829 (0.058± AC.)
EX. CONSERVATION EASEMENT AREA PER INSTRUMENT NO. 20160804003829 (0.197± AC.)
EX. CONSERVATION EASEMENT AREA PER INSTRUMENT NO. 20160804003829 (0.083± AC.)
SITE BENCH MARK (DRILLHOLE ELEV.=392.10')
APEX
SCHAMMEL STATE PARK
N.O.F. WOODLAWN TRUSTEES INC. T/M 06-019.00-002 ZONING: SE
N.O.F. WOODLAWN TRUSTEES INC. BRANDYWINE COMMONS 2 T/M 06-019.00-007 M/F 11602 ZONING: SE
N.O.F. WOODLAWN TRUSTEES INC. BRANDYWINE COMMONS 2 T/M 06-019.00-007 M/F 12118 D.B.# 11-33-422 ZONING: CR
N.O.F. DAWN AND LYON LLC T/M 06-019.00-006 M/F 11146 INST.# 20120308039285 ZONING: CR
N.O.F. WOODLAWN TRUSTEES INC. T/M 06-019.00-025 D.B.# 1-33-422 ZONING: SE
S22°04'52"W 8.00'
S74°19'15"E 83.29'
S67°55'08"E 164.09'
S68°44'55"E 174.98'
S26°18'49"E 32.17'
S26°18'49"E 45.35'
S26°18'49"E 222.32'
N15°44'35"W 193.58'
R=36.49' L=27.57' Ch=N78°08'40"E Ch L=26.92' Δ=43°17'41"
R=6,339.41' L=5.23' Ch=N07°18'00"E Ch L=5.23' Δ=00°02'50"
R=6,339.41' L=117.36' CH=N07°49'53"E CH L=112.35' Δ=01°00'55"
R=189.20' L=118.78' CH=N26°19'24"E CH L=116.84' Δ=35°58'12"
R=164.20' L=64.47' Ch=N15°25'13"E Ch L=64.06'
R=5,649.68' L=187.11' Ch=S12°25'07"W Ch L=187.10'
R=6,574.41' L=176.59' Ch=N07°48'53"E Ch L=176.59'
N 71°50'40" W 691.05'
S 71°50'40" E 691.05'
S 67°55'08" E 100.50'
S 68°44'55" E 174.98'
S 68°19'07" E 304.27'
S 68°47'58" E 141.86'
S 68°47'58" E 185.26'
S 58°17'20" E 100.50'
S 67°55'08" E 164.09'
N 67°55'08" W 67.57'
N 67°55'08" W 54.00'
S 67°55'08" E 54.00'
S 67°55'08" E 67.57'
S 67°55'08" E 67.57





LEGEND

EXISTING	ITEM	PROPOSED
	FIRE HYDRANT	
WV	WATER VALVE	WV
WM	WATER METER	WM
W	WATER LINE W/SIZE	W 8"
TB	TELEPHONE BOX	
TP	TELEPHONE M.H.	
IPF	IRON PIPE	IPS
CMF	CONCRETE MONUMENT	
NF	SURVEY NAIL	
FDDH	DRILL HOLE	DHS
50	CONTOUR	50
50.00	SPOT ELEVATION	x 50.00
SB#	SOIL BORING	
CO	SAN. CLEAN OUT	CO
S	SANITARY M.H.	S
SS	SANITARY MAIN	SS
	UTILITY POLE	
EB	ELECTRIC BOX	
EM	ELECTRIC METER	
	LIGHT POLE	
TS	TRAFFIC SIGNAL	TS
E	ELECTRIC M.H.	E
	PULL BOX	PB
12"RCP	DRAINAGE PIPE W/ SIZE & TYPE	12"RCP
	CATCH BASIN	
D	DRAINAGE M.H.	D
	DOWNSPOUT	
	GAS METER	
GV	GAS VALVE	
GVENT	GAS VENT	
G 2"	GAS LINE W/ SIZE	GAS
G	GAS M.H.	G
	CURB & GUTTER	
	CONCRETE SIDEWALK, SLAB, PAVING	
	IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING	
	STRUCTURE	
	PROPERTY LINE	
	CENTER LINE	
X	FENCE	X
	STREAM, DITCH OR SWALE	
	EVERGREEN TREE	
	DECIDUOUS TREE	
	WOODS	
WL	WETLANDS	
	LIMITS OF DISTURBANCE	LOD

REV.	DATE:	COMMENT	CHECKED
1	11-1-2016	PER DELDOT COMMENTS EMAILED 10-12-2016	SGD
1	11-30-2016	PER DELDOT COMMENTS EMAILED 5-25-2016	SGD

APPLICATION NO.: 2014-0797
RECORD
MAJOR LAND DEVELOPMENT PLAN
WILMINGTON UNIVERSITY
NORTH CAMPUS

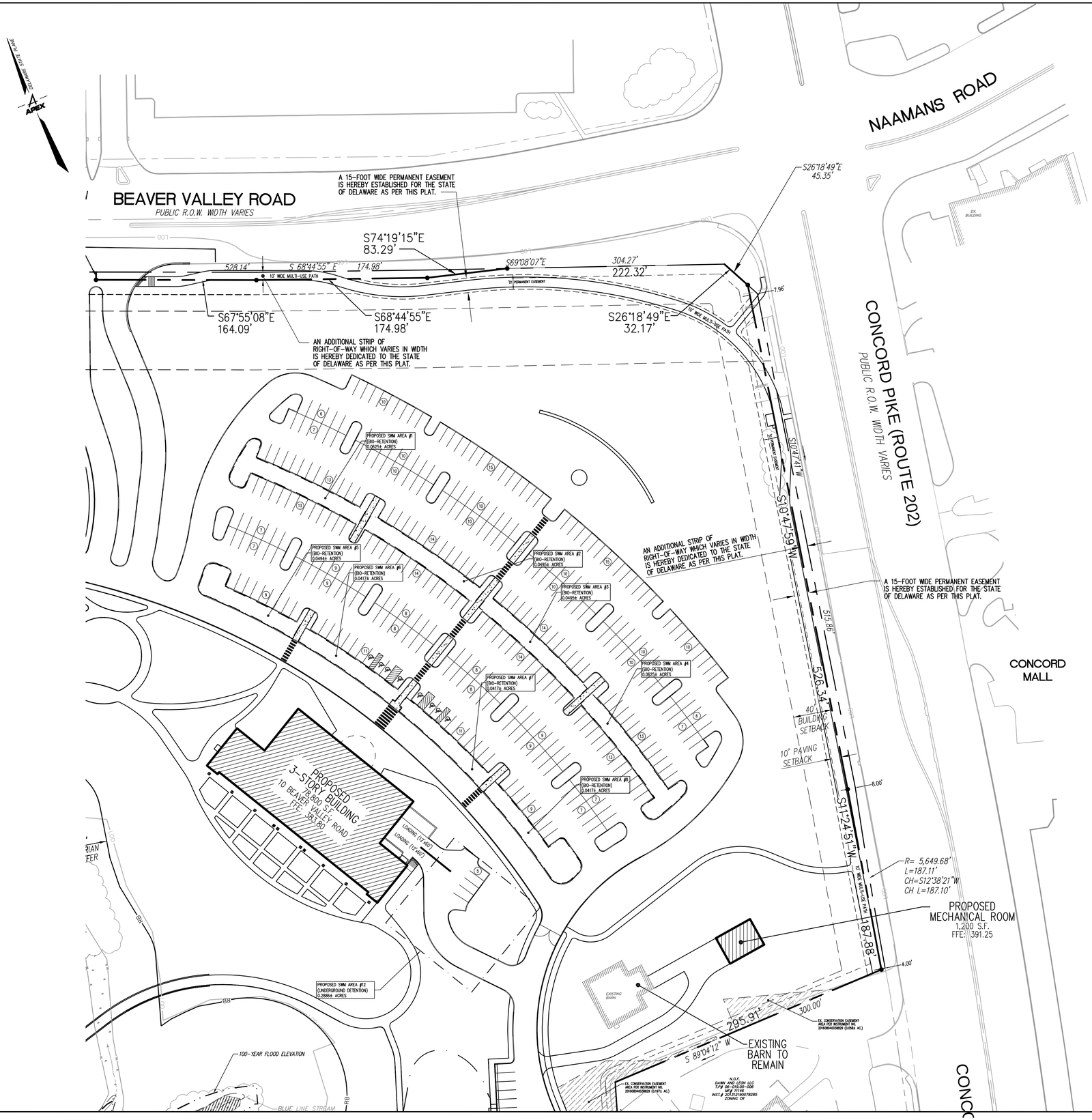
BRANDYWINE HUNDRED NEW CASTLE COUNTY DELAWARE

APEX ENGINEERING INCORPORATED
27 W. MARKET STREET NEWPORT, DELAWARE 19804
(302) 994-1900 (302) 994-9099 FAX

50 25 0 50 100 150

SCALE	DATE:	SHEET NO.
1" = 50'	4/12/2016	2 OF 6
SURVEYED BY: J.S./K.P.	DRAWN BY: L.K.F.	
INSTRUMENT NO.	CHECKED BY: S.G.D.	
PROJECT / FILE NUMBER 03258007PLOT-RECORD-C3D		REVISION 2

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LEGEND

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WV	WATER VALVE	WV
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CMF	CONCRETE MONUMENT	
NF	SURVEY NAIL	
FDDH	DRILL HOLE	DHS
50	CONTOUR	50
x 50.00	SPOT ELEVATION	x 50.00
SB#	SOIL BORING	
CO	SAN. CLEAN OUT	CO
	SANITARY M.H.	S
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12"RCP	DRAINAGE PIPE W/ SIZE & TYPE	12"RCP
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	STRUCTURE	
	PROPERTY LINE	
	CENTER LINE	
X	FENCE	X
	STREAM, DITCH OR SWALE	
	EVERGREEN TREE	
	DECIDUOUS TREE	
	WOODS	
WL	WETLANDS	
	LIMITS OF DISTURBANCE	LOD

REV.	DATE:	COMMENT	CHECKED
1	11-1-2016	PER DELDOT COMMENTS EMAILED 10-12-2016	SGD
1	9-30-2016	PER DELDOT COMMENTS EMAILED 5-25-2016	SGD

APPLICATION NO.: 2014-0797
RECORD
MAJOR LAND DEVELOPMENT PLAN
WILMINGTON UNIVERSITY
NORTH CAMPUS

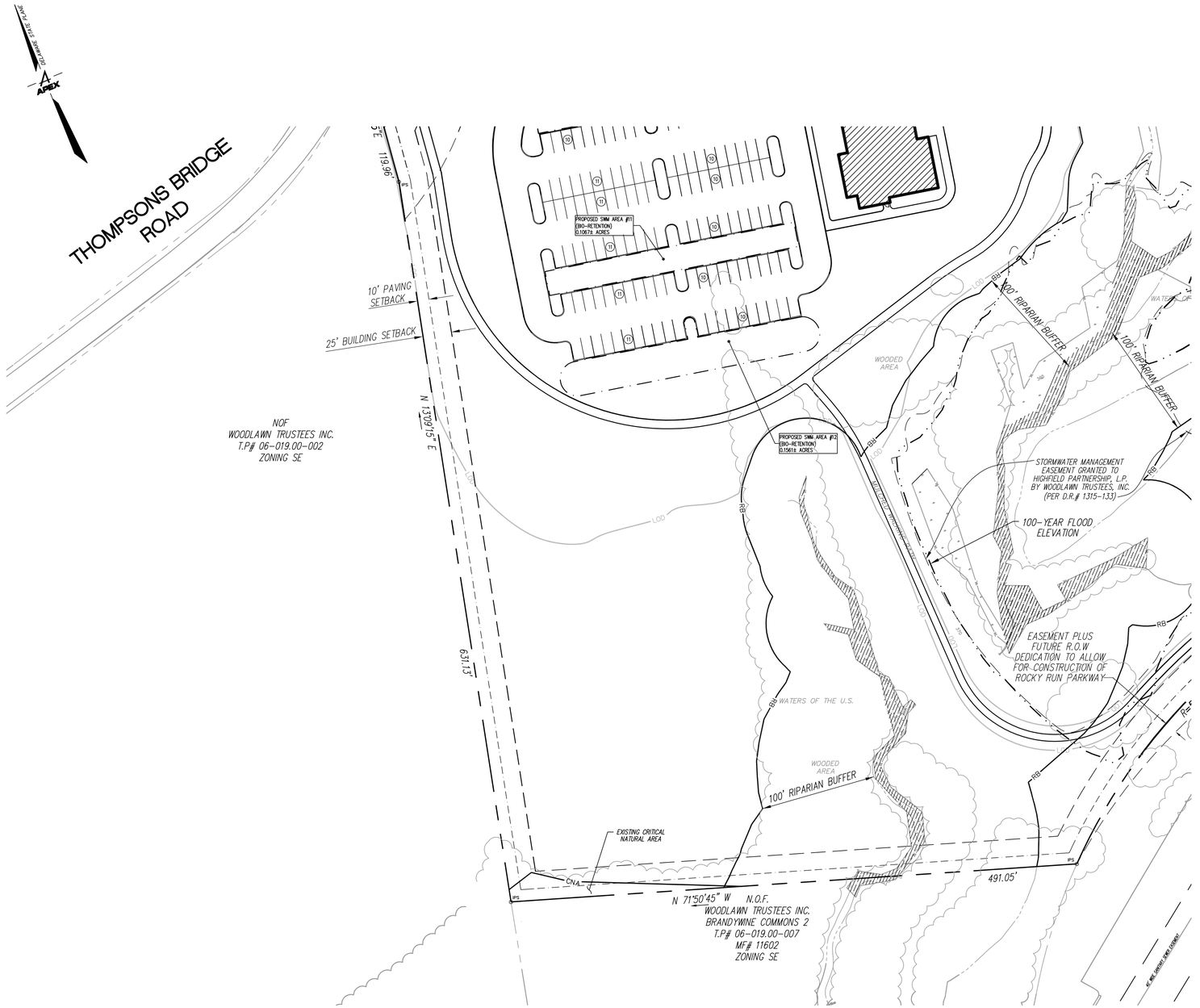
BRANDYWINE HUNDRED NEW CASTLE COUNTY DELAWARE

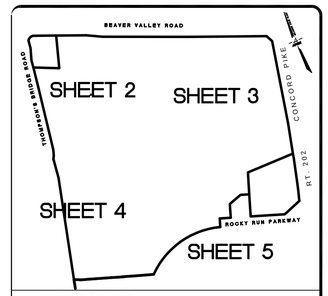
APEX ENGINEERING INCORPORATED
27 W. MARKET STREET NEWPORT, DELAWARE 19804
(302) 994-1900 (302) 994-9099 FAX

50 25 0 50 100 150

SCALE	DATE:	SHEET NO.
1" = 50'	4/12/2016	3 OF 6
SURVEYED BY: J.S./K.P.	DRAWN BY: L.K.F.	
INSTRUMENT NO.	CHECKED BY: S.G.D.	
PROJECT / FILE NUMBER: 03258007PLOT-RECORD-C3D		REVISION 2

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G 2"	GAS LINE W/ SIZE	GAS
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APPLICATION NO.: 2014-0797
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MAJOR LAND DEVELOPMENT PLAN
WILMINGTON UNIVERSITY
NORTH CAMPUS

BRANDYWINE HUNDRED NEW CASTLE COUNTY DELAWARE

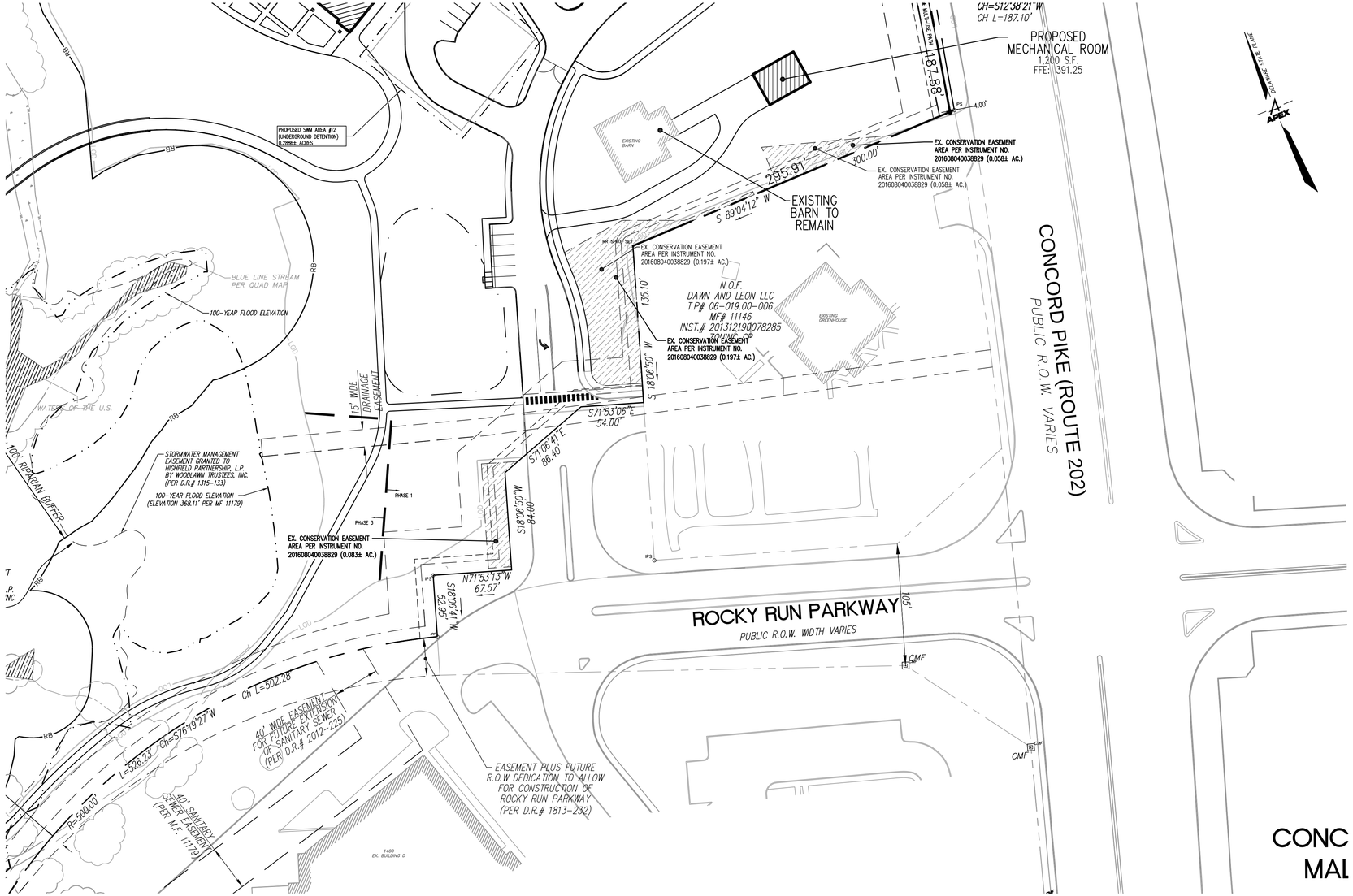
REV.	DATE:	COMMENT	CHECKED
1	11-1-2016	PER DELDOT COMMENTS EMAILED 10-12-2016	SGD
1	8-30-2016	PER DELDOT COMMENTS EMAILED 5-25-2016	SGD

APEX ENGINEERING INCORPORATED
27 W. MARKET STREET NEWPORT, DELAWARE 19804
(302) 994-1900 (302) 994-9099 FAX

50 25 0 50 100 150

SCALE: 1" = 50'	DATE: 4/12/2016	SHEET NO. 4 OF 6
SURVEYED BY: J.S./K.P.	DRAWN BY: L.K.F.	
INSTRUMENT NO.	CHECKED BY: S.G.D.	
PROJECT / FILE NUMBER 03258007PLOT-RECORD-C3D		REVISION 2

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SB#	SOIL BORING	
CO	SAN. CLEAN OUT	CO
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EB	ELECTRIC BOX	
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G 2"	GAS LINE W/ SIZE	GAS
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	STRUCTURE	
	PROPERTY LINE	
	CENTER LINE	
X	FENCE	X
	STREAM, DITCH OR SWALE	
	EVERGREEN TREE	
	DECIDUOUS TREE	
	WOODS	
WL	WETLANDS	
	LIMITS OF DISTURBANCE	LOD

APPLICATION NO.: 2014-0797
RECORD
MAJOR LAND DEVELOPMENT PLAN
WILMINGTON UNIVERSITY
NORTH CAMPUS

BRANDYWINE HUNDRED NEW CASTLE COUNTY DELAWARE

REV.	DATE:	COMMENT	CHECKED
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1	8-30-2016	PER DELDOT COMMENTS EMAILED 5-25-2016	SGD

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50 25 0 50 100 150

SCALE: 1" = 50'	DATE: 4/12/2016	SHEET NO. 5 OF 6
SURVEYED BY: J.S./K.P.	DRAWN BY: L.K.F.	
INSTRUMENT NO.	CHECKED BY: S.G.D.	
PROJECT / FILE NUMBER 03258007PLOT-RECORD-C3D		REVISION 2

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TRAFFIC IMPACT STUDY NOTES:

1. The developer should provide a bituminous concrete overlay to the North Rocky Run Parkway existing travel lanes from US Route 202 to the Site Entrance, at DelDOT' s discretion. DelDOT should analyze the existing lanes' pavement section and recommend an overlay thickness to the developer's engineer, if necessary.

2. The developer should provide a bituminous concrete overlay to the Beaver Valley Road existing travel lanes along the site frontage from Ramsey Road to US Route 202, at DelDOT' s discretion. DelDOT should analyze the existing lanes' pavement section and recommend an overlay thickness to the developer's engineer, if necessary. Based on DelDOT's assessment, only shoulder paving may be necessary.

3. The developer should provide a bituminous concrete overlay to the Thompson Bridge Road existing travel lanes from Beaver Valley Road to the Site Entrance, at DelDOT' s discretion. DelDOT should analyze the existing lanes' pavement section and recommend an overlay thickness to the developer's engineer, if necessary.

4. The developer should provide the following lane configurations for the proposed Wilmington University Brandywine Campus development entrance on North Rocky Run Parkway, approximately 400 feet west of the North Rocky Run Parkway/North Concord Mall Entrance with US Route 202 intersection, as shown in the table below:

Approach	Current Configuation	Proposed Configuration
Eastbound Driveway	One shared through/left tum/right turn lane	No Change
WestboundNorth Rocky Run Parkway	One shared through/left tum/right turn lane	One shared through/left turn lane and one right turn lane
NorthboundNorth Rocky Run Parkway	One shared through/left turn land and one channelized right turn lane	No Change
Southbound Site Entrance	One shared through/left tum/right turn lane	No Change

Based on DelDOT's *Development Coordination Manual,* the recommended minimum storage length (excluding taper) is 100 feet for the westbound North Rocky Run Parkway right tum lane.

5. The developer should construct a full movement entrance for the proposed Wilmington University Brandywine Campus development on Beaver Valley Road, approximately 675 feet west of the Beaver Valley Road intersection with US Route 202, to be consistent with the proposed lane configurations as shown in the table below:

Approach	Current Configuration	Proposed Configuration
Eastbound Beaver Valley Road	One left turn lane and one through lane	One left turn lane, one through lane and one right turn lane
Westbound Beaver Valley Road	One left tum lane, two through lanes, and one right tum lane	No Change
Northbound Site Entrance	One shared through/left turn lane, and one right turn lane	No Change
Southbound ACE Office Complex	One shared through/left turn lane, and one right turn lane	No Change

Based on DelDOT's *Development Coordination Manual,* the recommended minimum storage length (excluding taper) is 110 feet for the eastbound Beaver Valley Road right tum lane.

Left tum lanes currently exist at the intersection for both the eastbound and westbound Beaver Valley Road approaches (145 feet of storage). The left tum lane storage lengths based on the HCS analysis results shows 95th percentile queue lengths less than existing storage lengths. The right tum lane storage length for eastbound Beaver Valley Road are based on the higher value between the HCS analysis results and DelDOT's *Development Coordination Manual.*

6. The developer should construct a full movement entrance for the proposed Wilmington University Brandywine Campus development on Thompson Bridge Road, approximately 865 feet south O f the Beaver Valley Road intersection with Ramsey Road (at the apex of the horizontal curve), to be consistent with the proposed lane configurations as shown in the table below:

Approach	Current Configuration	Proposed Configuration
Westbound Site Entrance	Approach does not exist	One shared left/right turn lane
Northbound Thompson Bridge Road	One through lane	One through lane and one right turn lane
Southbound Thompson Bridge Road	One through lane	One shared through/left turn lane

Final location of this Site Entrance along Thompson Bridge Road will be based on sight distance requirements in addition to the site plan review.

Based on DelDOT's *Development Coordination Manual,* the recommended minimum storage length (excluding taper) is 145 feet for the northbound Thompson Bridge Road right tum lane.
As the Thompson Bridge Road access is needed primarily to support the third building on the campus, it is our understanding that Wilmington University and DelDOT have agreed that the design and construction of this driveway can be postponed to coincide with the construction of the third building. As such, the recommendations provided here are based on our review of Apex Engineering, Inc. TIS. If the construction of the building is significantly delayed, it may be appropriate to revisit these recommendations with regard to this entrance along Thompson Bridge Road.

7. The developer should install the following *DE MUTCD* compliant signing at the North Rocky Run Parkway and Site Driveway intersection:

   a. Stop sign (Rl-1) along with Oncoming Traffic Does Not Stop plaque (W4-4bP) for the eastbound Driveway approach
   b. Stop sign (Rl-1) along with Traffic From Right Does Not Stop plaque (W4-2aP) for the northbound Rocky Run Parkway approach
   c. Stop sign (Rl-1) along with Traffic From Left Does Not Stop plaque (W4-2aP) for the southbound Site Entrance Driveway

All stop signs should be 36" x 36" while all supplemental plaques should be 24" x 12".

TRAFFIC IMPACT STUDY NOTES: (CONTINUED)

8. The following bicycle, pedestrian, and transit improvements should be included:

   a. A minimum fifteen-foot wide permanent easement from the edge of the right-of-way should be dedicated to DelDOT along the North Rocky Run, Beaver Valley Road, Thompson Bridge Road, and US Route 202 site frontages. This fifteen-foot wide easement can deviate further within the proposed development if the shared-use path is not parallel to the roadway. Within this easement, the developer should construct a ten• foot wide shared-use path that meets current AASHTO and ADA standards. A minimum five-foot setback should be maintained from the edge of the pavement to the shared-use path. If feasible, street trees should be provided within the buffer area, in accordance with New Castle County's Unified Development Code. The developer should coordinate with DelDOT's Subdivision Section during the plan review process to identify the exact locations of the proposed pathway.
   b. The developer should extend the proposed shared-use path on the northeast comer of the site to tie-in to the curb ramp being constructed on the southwest comer of the US Route 202 and Naamans Road/Beaver Valley Road intersection.
   c. The developer should provide curb ramps on the southeast comer and a receiving ramp on the southwest comer of the Beaver Valley Road and Ramsey Road intersection. The developer should tie-in the ten-foot wide shared-use path to the curb ramp on the northwest comer of the site at the Beaver Valley Road/Ramsey Road intersection.
   d. Where internal sidewalks are located alongside of parking spaces, a buffer, physical barrier or signage should be added to eliminate vehicular overhang onto the sidewalk.
   e. ADA compliant curb ramps and marked crosswalks should be provided at the site entrance locations on Thompson Bridge Road, Beaver Valley Road, and Rocky Run Parkway. The use of Type 3 curb ramps is discouraged.
   f. Bike parking should be provided near the building entrances within this development. Where the building architecture provides for an awning or other overhang, the bike parking should be covered.
   g. Utility covers should be moved outside of any paved shoulders or should be flush with the pavement.
   h. The developer should provide connection of the trail on the west side of the Site Entrance and the proposed shared-use path on the east side of the Site Entrance at the intersection of North Rocky Run Parkway.
   i. Wherever applicable, the developer should provide internal sidewalk within the site campus.
   j. The developer should provide lighting for the shared-use path and trail within the proposed campus.
   k. The developer should coordinate with DART to install a bus stop to be ADA compliant (five-foot by nine-foot bus pad) at the North Rocky Run Parkway Site Entrance to the Wilmington University Brandywine Campus property.
   l. The developer should coordinate with DART to install a bus shelter at the bus stop located approximately 200 feet south of the US Route 202 of Naamans Road/Beaver Valley Road intersection.
   m. For any proposed bus stop pad location, the developer should provide internal connection between the proposed shared-use path (ten-foot wide) and the proposed bus pad.

APPLICATION NO.: 2014-0797
RECORD
MAJOR LAND DEVELOPMENT PLAN
WILMINGTON UNIVERSITY
NORTH CAMPUS
BRANDYWINE HUNDRED NEW CASTLE COUNTY DELAWARE

REV.	DATE:	COMMENT	CHECKED
1	11-1-2016	PER DELDOT COMMENTS EMAILED 10-12-2016	SGD
1	8-30-2016	PER DELDOT COMMENTS EMAILED 5-25-2016	SGD

APEX ENGINEERING INCORPORATED
27 W. MARKET STREET NEWPORT, DELAWARE 19804
(302) 994-1900 (302) 994-9099 FAX

50 25 0 50 100 150

SCALE: 1" = 50'	DATE: 4/12/2016	SHEET NO. 6
SURVEYED BY: J.S./K.P.	DRAWN BY: L.K.F.	
INSTRUMENT NO.	CHECKED BY: S.G.D.	OF 6
PROJECT / FILE NUMBER 03258007PLOT-RECORD-C3D		REVISION 2

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CONVENIENCE STORE AND BANK

Pennoni

COMMERCIAL ENTRANCEPLAN
CONVENIENCE STORE & BANK
1700 ROCKY RUN PARKWAY

GENERAL NOTES:

1. **THE PURPOSE OF THIS MINOR PLAN IS TO REDEVELOP THE PROPERTY PURSUANT TO ARTICEE 8, SECTION 40.08.130(6) OF THE UDC, BY DEMOLISHING THE EXISTING 3,840+/- S.F. BUILDING, DEDICATING THE EXISTING CROSS ACCESS EASEMENT LOCATED ON TP06-019.00-004 AT ROCKY RUN PARKWAY TO THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION FOR PUBLIC USE (SEE NOTE 23), AND CONSTRUCTING A 4,622 +/- CONVENIENCE STORE AND 3,011 S.F. DRIVE-IN BANK WITH ASSOCIATED PARKING, GASOLINE PUMPS, AND ACCESS DRIVEWAYS.**
2. THE PROPERTY LINES DEPICTED ON THIS PLAN ARE TAKEN FROM RECORD MINOR LAND DEVELOPMENT PLAN, GARDEN VALLEY NURSERIES (MP#11145) DATED FEBRUARY 24, 1992. TOPOGRAPHIC FEATURES ARE SHOWN BY EXISTING NEW CASTLE COUNTY LIDAR.
3. FLOODPLAIN: DOES NOT EXIST ON THIS SITE, PER FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL NO. 10003C0069J, EFFECTIVE DATE FEBRUARY 4, 2015.
4. ACCORDING TO NEW CASTLE COUNTY WATER RESOURCE PROTECTION AREA MAP 1 OF 3, DATED JANUARY 1993, AND REVISED MAY 2001, FEBRUARY 2006 AND DECEMBER 2011, THIS SITE DOES NOT LIE WITHIN A WATER RESOURCE PROTECTION AREA (WRPA).
5. ACCORDING TO DATA COMPILED BY DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, 2009, THE SITE DOES NOT LIE WITHIN A CRITICAL NATURAL AREA.
6. THIS SITE WAS EVALUATED IN ACCORDANCE WITH THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL TO IDENTIFY THE PRESENCE OF WETLANDS, AND NO WETLANDS WERE FOUND TO EXIST ON THE SITE. A LETTER OF NO FINDINGS HAS BEEN PREPARED BY DUFFIELD ASSOCIATES, DATED FEBRUARY 11, 2015.
7. NO DEBRIS IS TO BE BURIED ON THIS SITE.
8. ALL FIRE LANES, FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED AND MAINTAINED IN ACCORDANCE WITH THE STATE OF DELAWARE FIRE PROTECTION REGULATIONS.
9. STORMWATER MANAGEMENT SHALL BE PROVIDED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC) DELAWARE SEDIMENT AND STORMWATER REGULATIONS EFFECTIVE DATE JANUARY 1, 2014, THE DELAWARE URBAN RUNOFF MANAGEMENT MODEL (DURMM) DATED JANUARY 2004 (OR AS LATER AMENDED) AND NEW CASTLE COUNTY DRAINAGE CODE.
10. SHRUBBERY, PLANTINGS, SIGNS AND OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO AN ADJACENT PROPERTY OWNER'S LAND, A SIGHT EASEMENT SHALL BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.
11. A TRAFFIC OPERATIONAL ANALYSIS REPORT, DATED DECEMBER, 2015, WAS PREPARED FOR THIS PLAN BY DUFFIELD ASSOCIATES, INC. DELDOT REVIEWED THE TRAFFIC OPERATIONAL ANALYSIS, PROVIDING COMMENTS AND RECOMMENDATIONS IN A LETTER DATED FEBRUARY 12, 2016.
12. THE PROPERTY DEDICATED HEREIN TO PUBLIC USE (being 359 +/- acres), IS SUBJECT TO ALL EASEMENTS, AND SHALL BE MAINTAINED IN PERPETUITY BY THE OWNER OF NEW CASTLE COUNTY PARCEL NUMBER 06-019.00-005 IN ACCORDANCE WITH APPLICABLE DEPARTMENT OF TRANSPORTATION (DELDOT'S) REQUIREMENTS UNTIL SUCH TIME AS MAY OTHERWISE BE REQUIRED BY DELDOT. THE PORTIONS OF THE DEDICATION AREA LOCATED OUTSIDE OF THE "DIAMOND ROADWAY" AS DEPICTED UPON THIS PLAN, SHALL BE SUBJECT TO A PERPETUAL EASEMENT HEREBY CREATED AND RESERVED UNTO THE LEGAL OWNERS OF NEW CASTLE COUNTY PARCEL NUMBERS 06-019.00-004 AND 06-019.00-006 FOR INSTALLATION, REPAIR, REPLACEMENT AND MAINTENANCE OF LANDSCAPING THEREON.

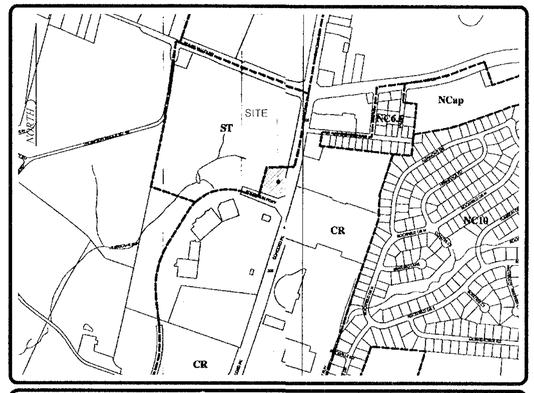
DELDOT NOTES (EFFECTIVE OCTOBER 13, 2015):

1. ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO ITS APPROVAL.
2. ALL MATERIALS AND WORKMANSHIP WITHIN THE STATE OF DELAWARE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH CURRENT STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SUPPLEMENTAL SPECIFICATIONS, STANDARD CONSTRUCTION DETAILS, SPECIAL PROVISIONS AND DESIGN GUIDANCE MEMORANDUMS.
3. ALL DISTURBED AREAS WITHIN THE STATE RIGHT-OF-WAY, BUT NOT IN THE PAVEMENT, SHALL BE TOPSOILED (6" MINIMUM), FERTILIZED, SEEDED AND MULCHED. IF SOD IS USED NEXT TO SIDEWALK OR SHARED-USE PATH, CONTRACTOR SHALL GRADE TOPSOIL ADJACENT TO THE SIDEWALK OR SHARED-USE PATH PRIOR TO PLACEMENT OF SOD TO ENSURE THAT SOD IS PLACED FLUSH OR JUST BELOW EDGE OF SIDEWALK OR SHARED USE PATH TO AVOID WATER PONDING ON THE SIDEWALK OR SHARED-USE PATH.
4. A 72-HOUR (MINIMUM) NOTICE SHALL BE GIVEN TO THE DELDOT DISTRICT PERMIT SUPERVISOR PRIOR TO STARTING ENTRANCE CONSTRUCTION.
5. MISS UTILITY OF DELAWARE SHALL BE NOTIFIED THREE (3) CONSECUTIVE WORKING DAYS PRIOR TO EXCAVATION, AT 1-800-282-8555.
6. ALL SIGNING, STRIPING AND MAINTENANCE OF TRAFFIC IN THE CONTRACTOR'S RESPONSIBILITY AND SHALL FOLLOW THE GUIDELINES SHOWN IN THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD) FOR STREETS AND HIGHWAYS (LATEST EDITION). THE OWNER OR MAINTENANCE CORPORATION SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL SIGNS INSTALLED AS PART OF THIS PROJECT.
7. PLAN LOCATION AND DIMENSIONS SHALL BE STRICTLY ADHERED TO UNLESS OTHERWISE DIRECTED BY THE DELDOT INSPECTOR.
8. A COPY OF THE UP TO DATE APPROVED CONSTRUCTION DOCUMENTS AND DELDOT APPROVAL LETTERS SHALL BE MAINTAINED ON THE PROJECT SITE AT ALL TIMES AND BE AVAILABLE FOR INSPECTION BY DELDOT PERSONNEL.
9. EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. COMPLETENESS OR CORRECTNESS THEREOF IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE UTILITY COMPANIES INVOLVED IN ORDER TO SECURE THE MOST ACCURATE INFORMATION AVAILABLE AS TO UTILITY LOCATION AND ELEVATION. NO CONSTRUCTION AROUND OR ADJACENT TO UTILITIES SHALL BEGIN WITHOUT NOTIFYING THEIR OWNERS AT LEAST 48-HOURS IN ADVANCE. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE AND ANY DAMAGE DONE TO THEM DUE TO HIS/HER NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE. TO LOCATE EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELAWARE (SEE NOTE #5).
10. SHOULD UTILITY RELOCATION BE REQUIRED, THE DEVELOPER MUST SUBMIT A UTILITY RELOCATION PLAN FOR DELDOT REVIEW ALONG WITH CORRESPONDENCE FROM THE UTILITY COMPANIES STATING PRELIMINARY APPROVAL TO THE RELOCATION AND DESIGN OF THE UTILITIES PRIOR TO THE DELDOT PRE-CONSTRUCTION MEETING. NO PHYSICAL CONSTRUCTION CAN OCCUR UNTIL THE UTILITY PLANS ARE APPROVED, THE INDIVIDUAL UTILITY COMPANIES ISSUE FINAL APPROVAL, AND A DELDOT UTILITY PERMIT IS ISSUED TO THE UTILITY COMPANY.
11. UPON COMPLETION OF THE CONSTRUCTION OF THE SIDEWALK OR SHARED-USE PATH ACROSS THIS PROJECT'S FRONTAGE AND PHYSICAL CONNECTION TO ADJACENT EXISTING FACILITIES, THE DEVELOPER, THE PROPERTY OWNERS OR BOTH ASSOCIATED WITH THIS PROJECT, SHALL BE RESPONSIBLE TO REMOVE ANY EXISTING ROAD TIE-IN CONNECTIONS LOCATED ALONG ADJACENT PROPERTIES, AND RESTORE THE AREA TO GRASS. THESE DISTURBED AREAS SHALL BE TOP SOILED (6" MINIMUM), FERTILIZED, SEEDED AND MULCHED. SUCH ACTIONS SHALL BE COMPLETED AT DELDOT'S DISCRETION, AND IN CONFORMANCE WITH DELDOT'S "SHARED-USE PATH AND/OR SIDEWALK TERMINATION POLICY".
12. DELDOT WILL NOT PROVIDE THE RESPECTIVE LOCAL LAND USE AGENCY WITH A NO OBJECTION TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY NOTICE UNTIL THE ENTRANCE(S) ARE COMPLETED TO THE SATISFACTION OF THE DEPARTMENT.
13. DESIGN, FABRICATION AND INSTALLATION OF ALL PERMANENT SIGNING SHALL BE AS OUTLINED IN THE LATEST VERSION OF THE DE MUTCD.
14. DESIGN AND INSTALLATION OF ALL PAVEMENT MARKINGS AND STRIPING SHALL BE AS OUTLINED IN THE LATEST VERSION OF THE DE MUTCD. FOR FINAL PERMANENT PAVEMENT MARKINGS:
    A. EPOXY RESIN PAINT SHALL BE REQUIRED FOR LONG LINE STRIPING.
    B. THERMO PLASTIC (EXTRUDED OR PREFORMED MATERIAL) WILL BE REQUIRED ON ASPHALT SURFACES, FOR SHORT LINE STRIPING, I.E. SYMBOLS/LEGENDS.
    C. PERMANENT PAVEMENT MARKING TAPE (PER DELDOT APPROVED MATERIALS LIST) WILL BE REQUIRED ON CONCRETE SURFACES, FOR SHORT LINE STRIPING, I.E. SYMBOLS/LEGENDS.
15. REMOVAL OF LONG LINE PAVEMENT STRIPING SHALL BE PERFORMED USING SHOT, SAND OR HYDRO-BLASTING.
16. BREAKAWAY POSTS SHALL BE USED WHEN INSTALLING ALL SIGNS. REFERENCE DELDOT STANDARD CONSTRUCTION DETAIL T-15.
17. CONTRACTOR SHALL SUPPLY MESSAGE BOARDS THAT ARE TO BE PLACED TEN (10) DAYS PRIOR TO CONSTRUCTION ALONG ROUTE 202. THE PROPER WORDING ON THE MESSAGE BOARD WILL NEED TO BE COORDINATED WITH THE DISTRICT SAFETY OFFICER.
18. SUBDIVISION STREETS CONSTRUCTED WITHIN THE LIMITS OF THE RIGHT-OF-WAY DEDICATED TO PUBLIC USE SHOWN ON THIS PLAN ARE TO BE MAINTAINED BY THE STATE OF DELAWARE FOLLOWING THE COMPLETION OF THE STREETS BY THE DEVELOPER TO THE SATISFACTION OF THE STATE. THE STATE ACCEPTS NO MAINTENANCE RESPONSIBILITY WITHIN THE DEDICATED STREET RIGHT-OF-WAY UNTIL THE STREETS HAVE BEEN ACCEPTED BY THE STATE.
19. THE ENDS OF ALL CURBS SHALL BE TRANSITIONED TO BE FLUSH WITH THE PAVEMENT AT A RATIO OF TWELVE TO ONE (12:1).
    ALL APPROACH AND EXIT ENDS OF MEDIAN ISLAND AND CURB SHALL ALSO BE TRANSITIONED FLUSH WITH THE PAVEMENT AT A RATIO OF TWELVE TO ONE (12:1).
    TRIANGULAR (PORK CHOP) ISLAND CURB SHALL HAVE ALL CORNERS TRANSITIONED FLUSH WITH PAVEMENT AT A SLOPE OF FOUR TO ONE (4:1).
    WHERE CURB TYPE AND/OR HEIGHT IS BEING VARIED, TAPER CURB PER DELDOT INSPECTOR (TYPICAL FOR BOTH SIDES OF THE ENTRANCE).
20. A DOUBLE YELLOW CENTERLINE WILL BE REQUIRED ALONG THE PAVED PORTION OF ROUTE 202. STRIPING OF THE CENTERLINE SHALL BE 6-INCH WIDE LINE, SEPARATED BY A 6-INCH SPACE.
21. MAINTENANCE OF ALL LANDSCAPING SHOWN ON THIS PLAN WILL BE THE RESPONSIBILITY OF THE DEVELOPER. THE STATE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF THE LANDSCAPING. DELDOT MUST REVIEW AND APPROVE ANY PLANTINGS PROPOSED WITHIN THE RIGHT OF WAY PRIOR TO INSTALLATION OF ANY PLANTINGS. ARE PLANTED WITHOUT DELDOT'S KNOWLEDGE AND/OR APPROVAL, THEN DELDOT HAS THE RIGHT TO HAVE THE DEVELOPER REMOVE THE PLANTINGS, WITH ALL COSTS BEING PAID FOR BY THE DEVELOPER.
22. VERIFY IF ANY UTILITIES WILL NEED TO BE RELOCATED DUE TO THE ADDITION OF THE SHOULDER FOR CLEAR ZONE PURPOSES. ALL UTILITIES ARE TO BE A MINIMUM OF 10-FEET FROM THE EDGE OF TRAVEL LANE OR 5-FEET FROM THE EDGE OF PAVEMENT, ANY UTILITY THAT DOES NOT MEET THIS REQUIREMENT SHALL BE RELOCATED.
23. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT PAVING WITHIN THE STATE OF DELAWARE RIGHT-OF-WAY IS INSTALLED TO THE ELEVATIONS SHOWN AND THAT NO PONDING OF WATER EXISTS AFTER PAVING IS COMPLETE.
24. ALL STORM DRAIN PIPING DESIGNATED AS RCP IS TO BE REINFORCED CONCRETE PIPE, MEETING AASHTO M-170 SPECIFICATIONS. SEE PLANS FOR SPECIFIC CLASS OF PIPE.
25. ALL PROPOSED CLOSED STORMDRAIN SYSTEMS SHALL BE VIDEO INSPECTED, REPAIRED AS NECESSARY AND APPROVED PRIOR TO THE INSTALLATION OF FINAL PAVING. IF REPAIRS ARE NEEDED, THE REPAIRED PIPE SECTIONS WILL NEED TO BE VIDEO INSPECTED AGAIN BEFORE THE REPAIR CAN BE APPROVED.
26. DRIVEWAYS WILL NOT BE PERMITTED TO BE PLACED AT DRAINAGE INLET LOCATIONS.
27. WARM MIX ASPHALT (WMA) SHALL BE PLACED IN ACCORDANCE WITH DELDOT SPECIAL PROVISION(S) 401827 & 401810 - WMA SUPERPAVE.
28. THE DEVELOPER AND EXISTING/FUTURE OWNER OF NON-STATE-MAINTAINED ROADWAYS SHALL ENSURE THAT THE TRAFFIC CONTROL DEVICES ON SAID ROADWAYS OPEN TO PUBLIC TRAVEL ARE IN COMPLIANCE WITH THE LATEST VERSION OF THE DELAWARE MUTCD.



REVIEWED FOR GENERAL CONFORMITY WITH CURRENT REGULATIONS, STANDARD SPECIFICATIONS, AND STANDARD DETAILS. THE DEVELOPER'S ENGINEER IS RESPONSIBLE FOR ACCURACY OF CONTENT.

SUBDIVISION ENGINEER
DELAWARE DEPARTMENT OF TRANSPORTATION



MAP: NCC NOS. 3 & 4 — LOCATION MAP — SCALE: 1" = 800'

SITE DATA:

1. APPLICATION NO.:	2015-0281(S)	
2. TAX PARCEL NO.:	06-019.00-006	06-019.00-004
3. SITE ADDRESS:	1700 ROCKY RUN PARKWAY WILMINGTON, DE 19803	5014 CONCORD ROAD WILMINGTON, DE 19803
4. OWNER:	DAWN & LEON LLC 1100 LOVERING AVENUE WILMINGTON, DE 19806	WOODLAWN TRUSTEES, INC 1020 NORTH BANCROFT PARKWAY, SUITE 200 WILMINGTON, DE 19805
5. DEVELOPER:	THREE W's, LLC 910 SOUTH CHAPEL STREET, SUITE 100 NEWARK, DE 19713	
6. SOURCE OF TITLE:	IN20131219-0078285	DR I-33-422
7. EXISTING USE: PROPOSED USES:	GARDEN CENTER CONVENIENCE STORE WITH GSOLINE, DRIVE-IN BRANCH BANK	
8. ZONING:	CR - COMMERCIAL REGIONAL	ST - SUBURBAN TRANSITION
9. SITE ACREAGE:	2,118 ± AC (92,261 SF.)	
10. GROSS FLOOR AREA:	EXISTING: GREENHOUS PROPOSED: CONVENIENE STORE BANK	3,840 SF 4,622 SF (1 STORY) 2,509 SF (1 STORY)
11. PARKING RATIONALE:	REQUIRED: 4,622 S.F. (C-STOF) @ 4.0 P.S. PER 1000 S.F. = 19 SPACES 2,548 S.F. (BAN) @ 4.0 P.S. PER 1000 S.F. = 11 SPACES 30 SPACES	
	PROPOSED: CONVENIENCE S'RE BANK TOTAL	44 SPACES, w/2 HANDICAP SPACES 28 SPACES, w/2 HANDICAP SPACES 72 SPACES, w/4 HANDICAP SPACES

SHEET INDEX

1 INDEX SHEET
2 OVERALL PLAN
3 EXISTING CONDITIONS/DEMO PLAN
4 CONSTRUCTION PLAN
5 GRADING PLAN
6 UTILITY PLAN
7 SIGNAGE AND STRIPING PLAN
8 TYPICAL SECTIONS
9 DETAILS / MAINTENANCE OF TRAFFIC NOTES

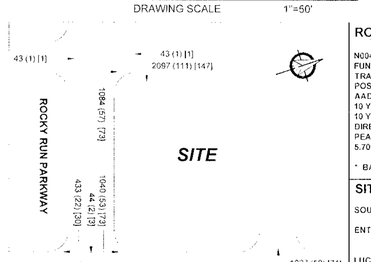
THE COMPLETE PROJECT SET INCLUDES THE FOLLOWING DRAWINGS:
- RECORD MINOR LAND DEVELOPMENT PLAN
- COMMERCIAL ENTRANCEPLAN
- SEDIMENT AND STORMWATER PLAN
- LANDSCAPE PLAN
- LIGHTING PLAN
- SANITARY SEWER PLAN
- FIRE MARSHAL SITE PLAN
- COMMERCIAL ENTRANCE PLAN

LEGEND

- EXISNG CONCRETE MONUMENT FOUND
- EXISNG REBAR/CAPPED REBAR/IRON PIPE FOUND
- EXISNG MAG NAIL SET
- EXISNG BOLLARD
- EXISNG TREELINE
- EXISNG PROPERTY LINE
- EXISNG CURB
- EXISNG BUILDING
- EXISNG CONCRETE SIDEWALK
- PROPSED MONUMENT MARKER (PR. MON.)
- PROPSED CURB
- PROPSED SIDEWALK
- PROPSED BUILDING

DELAWARE DEPARTMENT OF TRANSPORTATION - TRAFFIC OPERATIONAL ANALYSIS (TOA) RECOMMENDATIONS:

1. THE DEVELOPER SHOULD DEDICATE RIGHTS-OF-WAY AS NECESSARY TO PROVIDE 30 FEET OF RIGHT-OF-WAY MEASURED FROM THE OUTER EDGE OF THE SOUTHBOUND THROUGH LANES OF US ROUTE 202. ADDITIONALLY, THE DEVELOPER SHOULD PROVIDE A 15-FOOT PERMANENT EASEMENT ALONG THE US ROUTE 202 FRONTAGE PARALLEL AND OUTSIDE THE ULTIMATE RIGHT-OF-WAY.
2. THE DEVELOPER SHOULD PROVIDE A TEN-FOOT WIDE SHARED-USE PATH ALONG THE SUBJECT SITE FRONTAGE ON US ROUTE 202 AND ROCKY RUN PARKWAY. THE EXISTING SIDEWALK ALONG US ROUTE 202 SHOULD BE REMOVED TO ALLOW FOR THE INCORPORATION OF THE SHARED-USE PATH. THE SHARED-USE PATH SHALL HAVE A MINIMUM FIVE-FOOT WIDE GRASS BUFFER FROM THE BACK OF CURB. IN ADDITION, THE EXISTING CURB RAMP ALONG WESTBOUND ROCKY RUN PARKWAY WILL NEED TO BE REMOVED AND RECONSTRUCTED.
3. THE DEVELOPER SHOULD PROVIDE AN INTERNAL SIDEWALK CONNECTION FROM US ROUTE 202.
4. THE DEVELOPER SHOULD CONSTRUCT A RIGHT-TURN LANE INTO THE SITE ENTRANCE ALONG US ROUTE 202, BASED ON DECELERATION AND STORAGE LENGTH PER DELDOT'S DEVELOPMENT COORDINATION MANUAL. A 400-FOOT RIGHT-TURN LANE IS NEEDED. THE DEVELOPER SHOULD CONTACT THE SUBDIVISION SECTION OF DELDOT FOR THE DETAILS OF THESE MODIFICATIONS.
5. THE DEVELOPER SHOULD CONSTRUCT A RIGHT-TURN LANE INTO THE SITE ENTRANCE ALONG ROCKY RUN PARKWAY, BASED ON DECELERATION AND STORAGE LENGTH PER DELDOT'S DEVELOPMENT COORDINATION MANUAL. A 150-FOOT RIGHT-TURN LANE IS NEEDED. THE DEVELOPER SHOULD CONTACT THE SUBDIVISION SECTION OF DELDOT FOR THE DETAILS OF THESE MODIFICATIONS.
6. THE DEVELOPER SHOULD ENTER INTO A TRAFFIC SIGNAL AGREEMENT WITH DELDOT TO FUND AN EQUITABLE PORTION OF ANY NEEDED IMPROVEMENTS AND / OR MAINTENANCE FOR THE INTERSECTION OF US ROUTE 202 AND ROCKY RUN PARKWAY. THE AGREEMENT SHOULD INCLUDE PEDESTRIAN SIGNALS, CROSSWALKS AND INTERCONNECTION AT DELDOT'S DISCRETION. ONE OR MORE DEVELOPERS MANY ENTER INTO A TRAFFIC SIGNAL AGREEMENT FOR THIS INTERSECTION.
7. THE DEVELOPER SHOULD PROVIDE BIKE PARKING NEAR THE BUILDING ENTRANCES WITHIN THIS DEVELOPMENT. WHERE THE BUILDING ARCHITECTURE PROVIDES FOR AN AWNING AND OTHER OVERHANG, THE BIKE PARKING SHOULD BE COVERED.
8. THE DEVELOPER SHOULD PROVIDE ADA-COMPLIANT CURB RAMPS AND MARKED CROSSWALKS AT BOTH SITE ENTRANCES.
9. THE DEVELOPER SHOULD RELOCATE THE EXISTING CATCH BASIN THAT IS CURRENTLY LOCATED WITHIN THE CROSSWALK ON THE WESTBOUND APPROACH OF ROCKY RUN PARKWAY, FROM THE TRAVEL LANE. THE DEVELOPER SHOULD COORDINATE WITH THE SUBDIVISION SECTION OF DELDOT FOR THE DETAILS OF THESE MODIFICATIONS.
10. THE DEVELOPER SHOULD CONTRIBUTE TOWARDS AN ADA ACCESSIBLE DART BUS SHELTER BY CONSTRUCTING THE BUS PAD WHICH WOULD BE LOCATED JUST WEST OF THE PROPOSED SITE ENTRANCE ON ROCKY RUN PARKWAY WITHIN THE LIMITS OF THE EXISTING RIGHT-OF-WAY. THE WILMINGTON UNIVERSITY BRANDYWINE CAMPUS, PROPOSED TO BE LOCATED ON THE ADJACENT PARCEL (TAX PARCEL: 06-01500-004), WOULD BE RESPONSIBLE FOR THE COMPLETION OF THE BUS SHELTER. THE DEVELOPER SHOULD COORDINATE WITH THE DELAWARE TRANSIT CORPORATION (DTC) FOR THE DETAILS AND IMPLEMENTATION OF THE BUS SHELTER AND TRANSIT-RELATED IMPROVEMENTS.



TRAFFIC GENERATION DIAGRAM
TRIPS PER DAY (AM PEAK) [PM PEAK]

ROAD TRAFFIC DATA

N004 - CONCORD PIKE (US RT 202)
FUNCTIONAL CLASSIFICATION: OTHER PRINCIPAL ARTERIAL
TRAFFIC GROUP: 2
POSTED SPEED LIMIT: 50 MPH
AADT = 45,220 TRIPS (FROM 2013 DELDOT TRAFFIC SUMMARY)
10 YEAR PROJECTED AADT = 45,220 X 1.10 = 49,742 TRIPS
10 YEAR PROJECTED AADT + SITE ADT (4333*) = 54,075 TRIPS
DIRECTIONAL SPLIT = 50% / 50%
PEAK HOUR = 9.86% X 54,075 = 5,332 TRIPS
5.70% TRUCKS & BUSES X 5,332 = 304

* BASED ON ROUTE TO ENTRANCE AND NET NEW TRIPS

ROAD TRAFFIC DATA

ROCKY RU PARKWAY (NO MAINTENANCE NUMBER)
FUNCTION_CLASSIFICATION: URBAN LOCAL STREET
POSTED SEED LIMIT: NONE
ADT = 5,397TRIPS (FROM ATR DATA OBTAINED FOR TOA)

SITE TRIPS GENERATED

SOURCES: ITE TRIP GENERATION MANUAL 9th EDITION

ENTRANCE: CONCORD PIKE - RIGHT IN, RIGHT OUT
ROCKY RUN PARKWAY - FULL MOVEMENT

LUC 853 4,622 SF CONVENIENCE STORE W/ GAS PUMPS — LUC 912 2,500 SF DRIVE IN BANK
4,622 SF @ 845.6 TRIPS / 1000 SF = 3909 TRIPS — 2,500 SF @ 148.15 TRIPS / 1000 SF = 371 TRIPS

TOTAL ADT: 4,280 TRIPS — N004 - 4,196 TRIPS — ROCKY RUN - 3,167 TRIPS

DIRECTIONAL DISTRIBUTION:		ADT	IN	OUT
	48% TO/FROM NORTH	2054	102	1027
	2% TO/FROM EAST	86	4	43
	48% TO/FROM SOUTH	2054	102	1027
	2% TO/FROM WEST	86	4	43

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No.	REVISION	CHECKED BY	DATE
1	REV. PER DELDOT COMMENTS DATED 4.13.16	MJK	5/25/2016
2	REV. PER DELDOT COMMENTS DATED 7.20.16	MJK	8/5/2016

DESIGNED BY: MJK
CHECKED BY: DJW
DRAWN BY: CMC
FILE NAME: 10386CAENT-R1

MICHAEL J. KASZYNSKI, JR. — No. 15284 — STATE: DELAWARE — P.E. 15284

OWNER:
DAWN & LEON LLC
1100 LOVERING AVENUE
WILMINGTON, DE 19806

DEVELOPER:
THREE W's, LLC
910 SOUTH CHAPEL STREET,
SUITE 100
NEWARK, DE 19713

COMMERCIAL ENTRANCE PLAN
INDEX SHEET
CONVENIENCE STORE & BANK
1700 ROCKY RUN PARKWAY
BRANDYWINE HUNDRED–NEW CASTLE COUNTY–DELAWARE

DATE: 1 MARCH 2016
SCALE: 1" = 50'
PROJECT NO. 10386.CA
SHEET: 1 OF 9



DATE: 1 MARCH 2016
SCALE: 1" = 100'
PROJECT NO. 10386.CA
SHEET: 2 OF 9

COMMERCIAL ENTRANCEPLAN
OVERALL PLAN
CONVENIENCE STORE & BANK
1700 ROCKY RUN PARKWAY
BRANDYWINE HUNDRED~NEW CASTLE COUNTY~DELAWARE

OWNER:
DAWN & LEON LLC
1100 LOVERING AVENUE
WILMINGTON, DE 19806

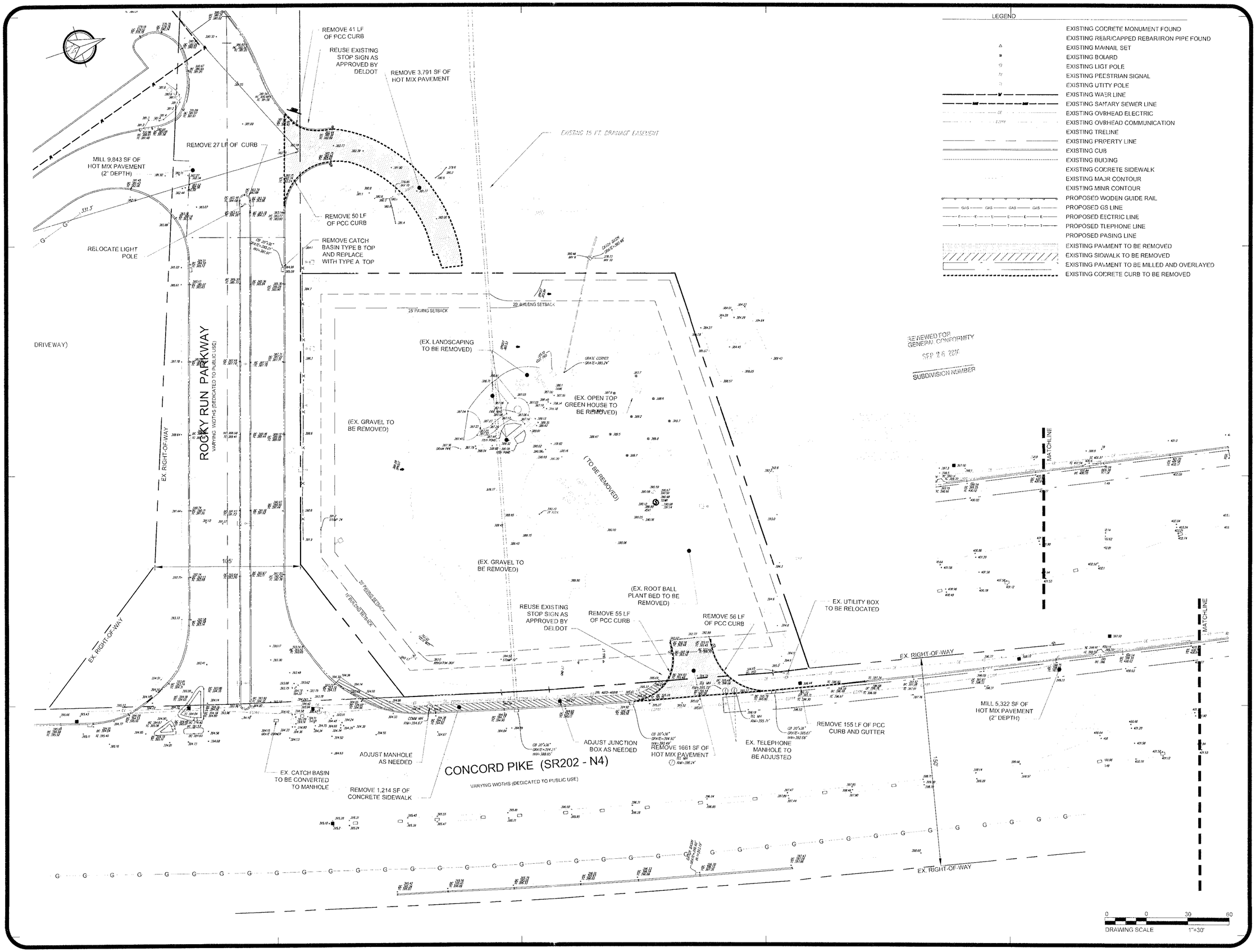
DEVELOPER:
THREE W's, LLC
910 SOUTH CHAPEL STREET
SUITE 100
NEWARK, DE 19713

No.	REVISION	CHKD BY DATE
1	REV PER DELDOT COMMENTS DATED 4.13.16	MJK 5-25-2016
2	REV PER DELDOT COMMENTS DATED 7.20.16	MJK 8-5-2016

DESIGNED BY:	CHECKED BY:
MJK	DDW
DRAWN BY:	FILE NAME:
CMC	10386CA-ENT-R1

MICHAEL J. KASZYSKI JR.
REG. 15284
STATE: DELAWARE P.E. 15284

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LEGEND

- EXISTING CONCRETE MONUMENT FOUND
- EXISTING REBAR/CAPPED REBAR/IRON PIPE FOUND
- EXISTING MAINAIL SET
- EXISTING BOLARD
- EXISTING LIGT POLE
- EXISTING PEESTRIAN SIGNAL
- EXISTING UTITY POLE
- EXISTING WAER LINE
- EXISTING SANTARY SEWER LINE
- EXISTING OVRHEAD ELECTRIC
- EXISTING OVRHEAD COMMUNICATION
- EXISTING TRELINE
- EXISTING PROPERTY LINE
- EXISTING CUB
- EXISTING BUDING
- EXISTING CONCRETE SIDEWALK
- EXISTING MAJR CONTOUR
- EXISTING MINR CONTOUR
- PROPOSED WODEN GUIDE RAIL
- PROPOSED GS LINE
- PROPOSED EECTRIC LINE
- PROPOSED TLEPHONE LINE
- PROPOSED PASING LINE
- EXISTING PAVMENT TO BE REMOVED
- EXISTING SIDWALK TO BE REMOVED
- EXISTING PAVMENT TO BE MILLED AND OVERLAYED
- EXISTING CONCRETE CURB TO BE REMOVED

REVIEWED FOR GENERAL CONFORMITY
SEP 26 2016
SUBDIVISION NUMBER

No.	REVISION	CHK'D DATE	CHECKED BY: CDW
1	REV PER DELDOT COMMENTS DATED 4.15.16	MJK 5/25/2016	DESIGNED BY: MJK
2	REV PER DELDOT COMMENTS DATED 7.20.16	MJK 8/5/2016	DRAWN BY: CWC

FILE NAME: 10386CA-ENT-RE

MICHAEL J. KASZOSKI, JR. P.E. # 15284 STATE: DELAWARE

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OWNER:
DAWN & LEON LLC
1700 ROCKY RUN AVENUE
WILMINGTON, DE 19808

DEVELOPER:
THREE W's, LLC
910 SOUTH CHAPEL STREET
SUITE 100
NEWARK, DE 19713

COMMERCIAL ENTRANCEPLAN
EXISTING CONDITIONS/DEMO PLAN
CONVENIENCE STORE & BANK
1700 ROCKY RUN PARKWAY
BRANDYWINE HUNDRED-NEW CASTLE COUNTY-DELAWARE

DATE: 1 MARCH 2016
SCALE: 1" = 30'
PROJECT NO. 10386.CA
SHEET: 3 OF 9

CURB SCHEDULE			
NO.	TYPE	LENGTH (LF)	NOTES
C-1	TYPE 1-4 CURB & GUTTER	89	NOTE 1,2
C-2	TYPE 1-4 CURB & GUTTER	164	NOTE 1,2
C-3	TYPE 1-6 CURB	808	NOTE 2
C-4	TYPE 1-6 CURB	263	NOTE 2
C-5	TYPE 1-6 CURB	246	NOTE 2
C-6	TYPE 1-6 CURB	571	NOTE 2
C-7	TYPE 1-6 CURB	186	NOTE 2
C-8	TYPE 1-6 CURB	206	NOTE 2
C-9	TYPE 1-6 CURB	188	NOTE 2

1. INCLUDES ENTRANCE CURB RETURN TO PT.
2. PROPOSED CURB SHALL BE CONSTRUCTED IN ACCORDANCE WITH DELDOT STANDARD DETAIL C-1, LATEST VERSION.

LEGEND

- EXISTING CONCRETE MONUMENT FOUND
- EXISTING REBAR/CAPPED REBAR/IRON PIPE FOUND
- EXISTING MAG NAIL SET
- EXISTING BILLARD
- EXISTING TEELINE
- EXISTING PROPERTY LINE
- EXISTING CRB
- EXISTING BILDING
- PR. MON. — PROPOSED MONUMENT MARKER
- PROPOSED CURB
- PROPOSED SIDEWALK
- PROPOSED BUILDING
- DRIVE-THR STACKING LANE
- PROPOSED ELECTRIC LINE
- EXISTING SIDEWALK TO BE REMOVED
- EXISTING PVEMENT TO BE MILLED AND OVERLAYED
- EXISTING ANITARY SEWER EASEMENT
- PROPOSE WATER LINE EASEMENT
- DIAMOND OADWAY/DEDICATED TO DELDOT (0.358 Ac. :

CURB RAMP SCHEDULE			
NO.	TYPE	CURB NO.	NOTES
CR-1	TYPE 1	C-1	1
CR-2	TYPE 1	C-2	1
CR-3	TYPE 2	C-3	1
CR-4	TYPE 2	C-6	1
CR-5	TYPE 1	C-6	1
CR-6	TYPE 1	C-5	1
CR-7	TYPE 1	C-3	1
CR-8	TYPE 1	C-9	1
CR-9	TYPE 5	C-8	1
CR-10	TYPE 1	C-3	1
CR-11	TYPE 2	EXISTING	1

1. PROPOSED CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DELDOT STANDARD DETAIL C-2, LATEST VERSION.

CONSERVATION EASEMENT AREA 'C' 0.083 Ac.±
EXISTING SANITARY SEWER EASEMENT (DB 2012 PG 225) (PARCEL 06-019.00-004)
BUS STOP WITH SHELTER PAD, TYPE 1
PROPERTY TO BE DEDICATED TO PUBLIC USE, PRIVATELY MAINTAINED, PER ROADWAY MAINTENANCE AGREEMENT (SEE GENERAL NOTE 12)
EXISTING 15 FT. DRAINAGE EASEMENT
DIAMOND ROADWAY
OVERLAY 9,843 SF OF HOT MIX PAVEMENT (2" DEPTH)
PROVIDE TYPE III BARRICADES ACROSS STUB CONNECTION UNTIL FUTURE ROADWAY IS CONSTRUCTED BY OTHERS
PROPOSED 20' WIDE WATER LINE EASEMENT (IN
CONSERVATION EASEMENT AREA 'A' 0.191 Ac.±
RETAINING WALL
PROPOSED DUMSTER PAD W/ SOLID ENCLOSURE
WOODEN GUIDE RAIL
FLUSH CURB
PARKING BUMPER
STORMWATER MANAGEMENT AREA #3 7541 SF
CURB OPENING WITH SIDEWALK
STORMWATER MANAGEMENT AREA #2 4201 SF
1700 PROPOSED BANK 2,548 S.F.
FF = 358.0
108' STACKING LANE
1702 U45-FB PROPOSED CONVENIENCE STORE (4,622 SF)
FF = 370.5
BICYCLE PARKING
STRAIGHT 5' CANOPY (3,828 SF)
CONSERVATION EASEMENT AREA 'B' 0.058 Ac.±
PROPOSED AIR PUMP MACHINE
STORMWATER MANAGEMENT AREA #1 1124± SF
CURB OPENING
PROPOSED CONCRETE UTILITY PAD
FILL END
8' WIDE BITUMINOUS SIDE PATH
10' WIDE BITUMINOUS SIDE PATH
RELOCATED UTILITY POLE AND BOX
OVERLAY 5,322 SF OF HOT MIX PAVEMENT (2" DEPTH)
"CROSSWALK CLOSED" SIGN MOT SIGN MOUNTED ON TYPE 3 BARRICADE
A 7' PERMANENT EASEMENT IS HEREBY ESTABLISHED FOR THE STATE OF DELAWARE AS PER THIS PLAT
ROCKY RUN PARKWAY
VARYING WIDTHS (DEDICATED TO PUBLIC USE)
CONCORD PIKE (SR202 - N4)
VARYING WIDTHS (DEDICATED TO PUBLIC USE)
EX. RIGHT-OF-WAY
MATCHLINE
T.A. 29
T.A. 3A
T.A. 33
105'
150'
REVIEW FOR GENERAL CONFORMITY
SEP 08 2016
SUBMISSION NUMBER
DRAWING SCALE 1"=30'

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CHECKED BY: DDW
FILE NAME: 10386CA-ENTR1
DESIGNED BY: NJK
DRAWN BY: CMC
MICHAEL J. KASPUSKI, JR. PE No. 14884 STATE: DELAWARE P.E. 14884

No.	REVISION	CHECKED DATE
1	REV. PER DELDOT COMMENTS DATED 2-13-16	NJK 2-24-2016
2	REV. PER DELDOT COMMENTS DATED 7-20-16	NJK 8-5-2016

OWNER:
DAWN & LEON LLC
1100 LOVERING AVENUE
WILMINGTON, DE 19806

DEVELOPER:
THREE W's, LLC
910 SOUTH CHAPEL STREET
SUITE 100
NEWARK, DE 19713

COMMERCIAL ENTRANCEPLAN
CONSTRUCTION PLAN
CONVENIENCE STORE & BANK
1700 ROCKY RUN PARKWAY
BRANDYWINE HUNDRED–NEW CASTLE COUNTY–DELAWARE

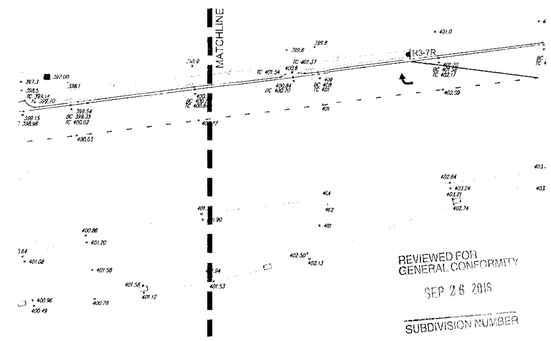
DATE: 1 MARCH 2016
SCALE: 1" – 30'
PROJECT NO. 10386.CA
SHEET: 4 OF 9

LEGEND

- EXISTING CNCRETE MONUMENT FOUND
- EXISTING R3AR/CAPPED REBAR/IRON PIPE FOUND
- EXISTING MG NAIL SET
- EXISTING BLLARD
- EXISTING LIHT POLE
- EXISTING PDESTRIAN SIGNAL
- EXISTING ULITY POLE
- EXISTING WTER LINE
- EXISTING SNITARY SEWER LINE
- EXISTING OERHEAD ELECTRIC
- EXISTING OERHEAD COMMUNICATION
- EXISTING TEELINE
- EXISTING PDPERTY LINE
- EXISTING CRB
- EXISTING BILDING
- EXISTING CNCRETE SIDEWALK
- EXISTING MJOR CONTOUR
- EXISTING MIOR CONTOUR
- PROPOSEDIONUMENT MARKER
- PROPOSED URB
- PROPOSED IDEWALK
- PROPOSED UILDING
- PROPOSED ANITARY SEWER LINE / CLEANOUT
- PROPOSED ANITARY SEWER MANHOLE
- PROPOSED TORM DRAIN LINE
- PROPOSED OOF DRAIN LINE / CLEANOUT
- PROPOSED TORM DRAIN MANHOLE
- PROPOSED /ATER LINE
- DRIVE-THRSTACKING LANE

- EXISTING SNITARY SEWER EASEMENT
- PROPOSEDWATER LINE EASEMENT
- DIAMOND ROADWAY/DEDICATED TO DELDOT (0.358 Ac. ±

NOTE: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONSAND ELEVATIONS (CURBING, PAVING, SIDEWALK, UTILITY, DRAINAGE, ETC.) IN THE FIELD AND RPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH WORK.



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DESIGNED BY:	CHECKED BY:
MJK	DDW
DRAWN BY:	FILE NAME:
CMC	10386CA-HNT-R1

MICHAEL J. KASZYNSKI, JR. — P.E. 15284 — STATE: DELAWARE

No.	REVISION	CHECKED BY:	DATE:
1	REVISER DELDOT COMMENTS DATED 4/13/16	MJK	5/25/2016
2	REVISER DELDOT COMMENTS DATED 7/29/16	MJK	8/25/2016

OWNER:
DAWN & LEON LLC
1100 LOVERING AVENUE
WILMINGTON, DE 19806

DEVELOPER:
THREE W'S, LLC
910 SOUTH CHAPEL STREET
SUITE 100
NEWARK, DE 19713

COMMERCIAL ENTRANCEPLAN
GRADING PLAN
CONVENIENCE STORE & BANK
1700 ROCKY RUN PARKWAY
BRANDYWINE HUNDRED-NEW CASTLE COUNTY-DELAWARE

DATE: 1 MARCH 2016
SCALE: 1" = 30'
PROJECT NO. 10386.CA
SHEET: 5 OF 9

RAWING SCALE 1"=30'

WATER LATERAL PIPE SCHEDULE

LINE #	SIZE	TYPE	LENGTH	METER	COMMENT
W-1	8"	CL50 DUCTILE IRON	321 FT.	NONE	MAIN SERVICE
W-2	1"	TYPE K COPPER	160 FT.	1"	DOMESTIC - BANK
W-3	2"	TYPE K COPPER	155 FT.	1"	IRRIGATION - BANK
W-4	2"	TYPE K COPPER	152 FT.	1"	DOMESTIC - C-STORE
W-5	2"	TYPE K COPPER	148 FT.	1"	IRRIGATION - C-STORE
W-6	3/4"	PVC	88 FT.	NONE	TRASH - C-STORE

SANITARY SEWER LATERAL PIPE SCHEDULE

LINE #	SIZE	TYPE	LENGTH	SLOPE	INV. IN	INV. OUT
S-1	6"	SDR 26 PVC	26 FT.	0.0211 FT/FT	383.25	382.70
S-2	4"	SDR 26 PVC	61 FT.	0.0131 FT/FT	383.50	382.70
S-3	4"	SDR 26 PVC	13 FT.	0.0200 FT/FT	384.00	383.75
S-4	4"	SDR 26 PVC	63 FT.	0.0206 FT/FT	384.00	382.70
S-5	8"	SDR 26 PVC	132 FT.	0.0471 FT/FT	382.50	376.28
S-6	8"	SDR 26 PVC	117 FT.	0.0050 FT/FT	376.08	375.49
S-7	8"	SDR 26 PVC	296 FT.	0.0050 FT/FT	375.29	373.81
S-8	8"	SDR 26 PVC	18 FT.	0.0050 FT/FT	376.37	376.28

SANITARY SEWER STRUCTURE SCHEDULE

STRUCTURE	SIZE	RIM	INVERT	TYPE	COMMENT
SMH-1	4' DIA. PRECAST	388.72	382.50	SS-MH-1	SEE DETAIL SHEET 11
SMH-2	4' DIA. PRECAST	382.18	376.08	SS-MH-1	SEE DETAIL SHEET 11
SMH-3	4' DIA. PRECAST	383.50	375.29	SS-MH-1	SEE DETAIL SHEET 11
SMH-4	4' DIA. PRECAST	383.00	376.50	SS-MH-1	SEE DETAIL SHEET 11
SCO-1	6" LAT. CLEANOUT	388.13	383.08	CO	SEE DETAIL SHEET 11
SCO-2	6" LAT. CLEANOUT	389.34	383.21	CO	SEE DETAIL SHEET 11
SCO-3	6" LAT. CLEANOUT	389.22	383.73	CO	SEE DETAIL SHEET 11
SCO-4 -TWO-WAY	4" LAT. CLEANOUT	389.47	383.73	CO	SEE DETAIL SHEET 11
SCO-5 -TWO-WAY	4" LAT. CLEANOUT	389.47	384.37	CO	SEE DETAIL SHEET 11

LEGEND

- EXISTING CONRETE MONUMENT FOUND
- EXISTING REBR/CAPPED REBAR/IRON PIPE FOUND
- EXISTING MAGNAIL SET
- EXISTING BOLARD
- EXISTING LIGHT POLE
- EXISTING PEDSTRIAN SIGNAL
- EXISTING UTILTY POLE
- EXISTING WATR LINE
- EXISTING SANTARY SEWER LINE
- EXISTING OVEHEAD ELECTRIC
- EXISTING OVEHEAD COMMUNICATION
- EXISTING TREELINE
- EXISTING PROERTY LINE
- EXISTING CUR
- EXISTING BUILING
- EXISTING CONRETE SIDEWALK
- PROPOSED MNUMENT MARKER
- PROPOSED CUB
- PROPOSED SIEWALK
- PROPOSED BLDING
- PROPOSED SAITARY SEWER LINE / CLEANOUT
- PROPOSED SAITARY SEWER MANHOLE
- PROPOSED STRM DRAIN LINE
- PROPOSED ROF DRAIN LINE / CLEANOUT
- PROPOSED STRM DRAIN MANHOLE
- PROPOSED WTER LINE
- DRIVE-THRU SACKING LANE
- EXISTING SANTARY SEWER EASEMENT
- PROPOSED WTER LINE EASEMENT
- DIAMOND ROADWAY/DEDICATED TO DELDOT (0.358 Ac. ±)

STORM DRAIN PIPE SCHEDULE

PIPE NO.	PIPE LENGTH (L.F.)	PIPE SIZE (IN.)	MATERIAL	SLOPE (ft./ft.)	INV. IN	INV. OUT	ORIGIN
P-1	50	15" W/ 12" ORIFICE	HDPE	0.0100	382.25	381.75	OS-1
P-2	83	24	HDPE	0.0976	388.85	380.75	EX STMH
P-3	47	12	HDPE	0.0106	380.64	380.14	OS-2
P-4	147	24	HDPE	0.0110	380.75	379.14	STMH-1
P-5	81	24	HDPE	0.0110	379.14	378.25	STMH-2
P-6	88	15	HDPE	0.0064	379.56	379.00	OS-3
P-7	67	12	DUCTILE IRON	0.0112	383.75	383.00	INL-4
P-8	10	8	HDPE	0.1030	385.55	384.52	INL-3
P-9	179	8	HDPE	0.0111	388.00	386.00	ROOF[1]
P-10	12	6	HDPE	0.0200	387.09	386.84	ROOF
P-11	12	6	HDPE	0.0200	387.38	387.13	ROOF
P-12	12	6	HDPE	0.0200	387.77	387.52	ROOF
P-13	12	6	HDPE	0.0200	387.96	387.71	ROOF
P-14	12	6	HDPE	0.0200	388.25	388.00	ROOF
P-15	173	8	HDPE	0.0142	388.45	386.00	ROOF[2,3]
P-16	42	6	HDPE	0.0100	387.00	386.60	ROOF[3,4]
P-17	11	6	HDPE	0.0100	386.60	386.50	ROOF[3,4]

NOTES:
1. GASOLINE CANOPY ROOF DRAIN
2. CONVENIENCE STORE ROOF DRAIN
3. INSTALL ROOF DRAIN CLEANOUTS (SEE DETAIL SHEET 8) AT 80 FOOT INTERVALS. BENDS, INTERSECTIONS, OR AS DIRECTED BY ENGINEER. PIES P-8 THRU P=16
4. BANK ROOF DRAIN

STORM DRAIN STRUCTURE SCHDULE

STRUCTURE NO.	SIZE	RIM	INVERT	TOPINIT	GRATE
STMH-1	34X24	389.64	380.75	N	MH
STMH-2	34X24	389.03	379.14	N	MH
STMH-3	34X24	385.00	378.25	N	MH
INL-3	TRENCH	386.57	385.55	-	GHPDE
INL-4	TRENCH	385.27	383.75	-	GHPDE
OS-1	34X24	387.00	382.25	TYE A	TYPE 1
OS-2	34X24	386.70	380.64	TYE A	TYPE 1
OS-3	34X24	383.50	379.56	TYE A	TYPE 1

NOTE: REFER TO SHEET 8 FOR DELDOT STORM DRAIN STRUCTUE STANDARD DETAILS. REFER TO SHEET 9 FOR TRENCH DRAIN DETAILS.

EXISTING FIRE HYDRANT
MODIFICATION OF EXISTING SANITARY SEWER EASEMENT (DB 2012 PG 225) (PARCEL 06-019.00-003)
EXISTING SANITARY SEWER EASEMENT (DB 2012 PG 225) (PARCEL 06-019.00-004)
PROPERTY TO BE DEDICATED TO PUBLIC USE, PRIVATELY MAINTAINED, PER ROADWAY MAINTENANCE AGREEMENT (SEE GENERAL NOTE 12)
8"x8" TAPPING SLEEVE WITH 8" TAPPING VALVE
BUS STOP WITH SHELTER PAD, TYPE 1
DIAMOND ROADWAY
PROPOSED FIRE HYDRANT
PROPOSED CURB STOP AND DOMESTIC METER PIT W/ 1" METER
PROPOSED CURB STOP AND IRRIGATION METER PIT W/ 1" METER AND 2" TO 1" REDUCER ON EACH SIDE
8" TEE w/ 8"X2" REDUCER
PROPOSED 20' WIDE WATER LINE EASEMENT (IN
RETAINING WALL
WOODEN GUIDE RAIL
PROPOSED DUMPSTER PAD W/ SCREEN ENCLOSURE
UD STORMWATER MANAGEMENT AREA #3 7541 SF
FLUSH CURB
PARKING BUMPER
CURB OPENING WITH SIDEWALK
STORMWATER MANAGEMENT AREA #2 4201 SF
PROPOSED TELEPHONE SERV. CF - (2)-4" CONDUIT
PROPOSED ELECTRIC SERVICE - (2)-4" CONDUITS & (1)-2" CONDUIT
SEE ELECTRIC SERVICE NOTES
(1702) PROPOSED CONVENIENCE STORE (4,622 SF)
PROPOSED GREASE TRAP
(1706) PROPOSED BANK 2,548 S.F.
BICYCLE PARKING
STORMWATER MANAGEMENT AREA #1 1284 SF
CURB OPENING
CANOPY (3,828 SF)
CURB OPENING WITH SIDEWALK
EXCAVATION FOR FUEL TANK INSTALLATION MAY REQUIRE SHEETING AND SHORING. CONTRACTOR IS RESPONSIBLE FOR PERMITS, INSTALLATION, MAINTENANCE AND SAFETY OF EXCAVATION, INCLUDING SHEETING AND SHORING PROVISION
PROPOSED AIR/H2O MACHINE
JUNCTION BOX TO BE ADJUSTED
PROPOSED CONCRETE UTILITY PAD FOR ELECTRIC AND TELEPHONE SERVICE TO BE COORDINATED WITH UTILITY COMPANIES
FLARE END
EXISTING FIRE HYDRANT (BRANDYWINE COMMONS DRIVEWAY)
ROCKY RUN PARKWAY
VARYING WIDTHS (DEDICATED TO PUBLIC USE)
EX. RIGHT-OF-WAY
105'
CONCORD PIKE (SR202 - N4)
VARYING WIDTHS (DEDICATED TO PUBLIC USE)
A 7' PERMANENT EASEMENT IS HEREBY ESTABLISHED FOR THE STATE OF DELAWARE, AS PER THIS PLAT
UTILITY POLE TO BE RELOCATED
150'
REVIEWED FOR GENERAL CONFORMITY
SEP 26 2016
SUBDIVISION MANAGER

DRAWING SCALE 1"=40'

DUFFIELD ASSOCIATES
Soil, Water & the Environment
5400 LIMESTONE ROAD
WILMINGTON, DE 19808-1232
TEL. 302.239.6634
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OFFICES IN DELAWARE, MARYLAND, PENNSYLVANIA AND NEW JERSEY
WEB: HTTP://DUFFIELDASSOCIATES.COM
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CHECKED BY: DJW
DESIGNED BY: MJK
DRAWN BY: CMC
FILE NAME: 10386CA-ENT-R1
MICHAEL J. KASZYNSKI, JR. P.E. #15384
STATE: DELAWARE

No.	REVISION	CHECKED BY	DATE
1	REVISIONS PER DELDOT COMMENTS DATED 4.15.16	DJW	5.26.16
2	REVISIONS PER DELDOT COMMENTS DATED 7.20.16	MJK	8.5.2016

OWNER:
DAWN & LEON LLC
1100 LOVERING AVENUE
WILMINGTON, DE 19806

DEVELOPER:
THREE M'S, LLC
900 OLD CHAPEL STREET,
SUITE 100
NEWARK, DE 19713

COMMERCIAL ENTRANCEPLAN
UTILITY PLAN
CONVENIENCE STORE & BANK
1700 ROCKY RUN PARKWAY
BRANDYWINE HUNDRED-NEW CASTLE COUNTY-DELAWARE

DATE: 1 MARCH 2016
SCALE: 1" = 40'
PROJECT NO. 10386.CA
SHEET: 6 OF 9

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SIGN LEGEND		
DESIGNATION	TYPE	SIZE
R1-1	STOP SIGN	36"X36"
R3-7R	RIGHT LANE MUST TURN RIGHT	30"X30"
R5-1	DO NOT ENTER	30"X30"
R6-1	ONE WAY	36"X12"
R7-8/R7-8a	RESERVED PARKING / VAN ACCESSIBLE	12"X6"

LEGEND

- EXISTING CONCRETE MONUMENT FOUND
- EXISTING REBAR/CAPPED REBAR/IRON PIPE FOUND
- EXISTING MAG NAIL SET
- EXISTING BILLARD
- EXISTING TEELINE
- EXISTING POPERTY LINE
- EXISTING CRB
- EXISTING BILDING
- EXISTING CONCRETE SIDEWALK
- PROPOSED MONUMENT MARKER
- PROPOSED CURB
- PROPOSED SIDEWALK
- PROPOSED BUILDING
- EXISTING SNITARY SEWER EASEMENT
- PROPOSED WATER LINE EASEMENT
- DIAMOND RADWAY/DEDICATED TO DELDOT (0.358 Ac. ±)

NOTES:

1. ALL EXISTING PAVEMENT MARKINGS THAT ARE NO LONGER APPROPRIATE SHALL BE ERADICATED BY PERMITTEE. ERADICATION SHALL BE ACCOMPLISHED BY SANDBLASTING. PERMITTEE SHALL PLACE ALL REQUIRED NEW MARKINGS.
2. DIMENSIONED LANE WIDTHS ARE CURB-TO-CURB OR CENTERLINE OF STRIPING.
3. ALL NEW LONGITUDINAL PAVEMENT MARKINGS SHALL BE EPOXY RESIN PAINT MARKINGS, AND ALL NEW SHORT / TRANSVERSE AND SYMBOL MARKINGS SHALL BE HOT THERMOPLASTIC, AS DIRECTED BY DELDOT.
4. REFER TO SIGNAGE AND STRIPING DETAILS - SHEET 9 AND LEGEND THIS SHEET.
5. ** NORMAL WIDTH LONGITUDUAL MARKINGS SHALL BE 5 INCHES. WIDE WIDTH MARKINGS (10 INCHES) SHALL BE PROVIDED IN ACCORDANCE WITH THE DELAWARE MUTCD WHERE SPECIFIED ON THIS PLAN

MARKING LEGEND

SOLID WHITE OR YELLOW (SW/5" **, SW/10" ** OR SY/5") ** SEE NOTE 5

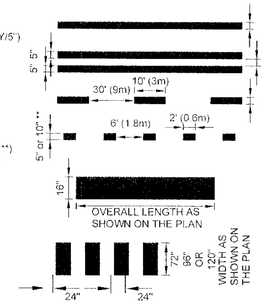
SOLID DOUBLE YELLOW (DSY/5")

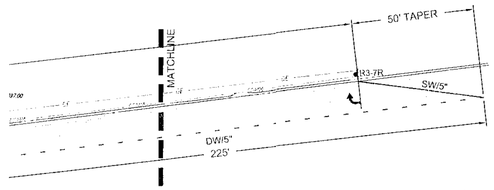
BROKEN WHITE (BW/5")

DOTTED WHITE (DW/5" ** OR DW10" **) ** SEE NOTE 5

STOP BAR (WHITE)

CROSS WALK (WHITE)





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WEB: HTTP://DUFFNET.COM
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DESIGNED BY: MJK
DRAWN BY: CMC
CHECKED BY: DDW
FILE NAME: 10386-A-ENT-R1
MICHAEL J. KANZYSKI, JR
P.E. 15284
STATE: DELAWARE

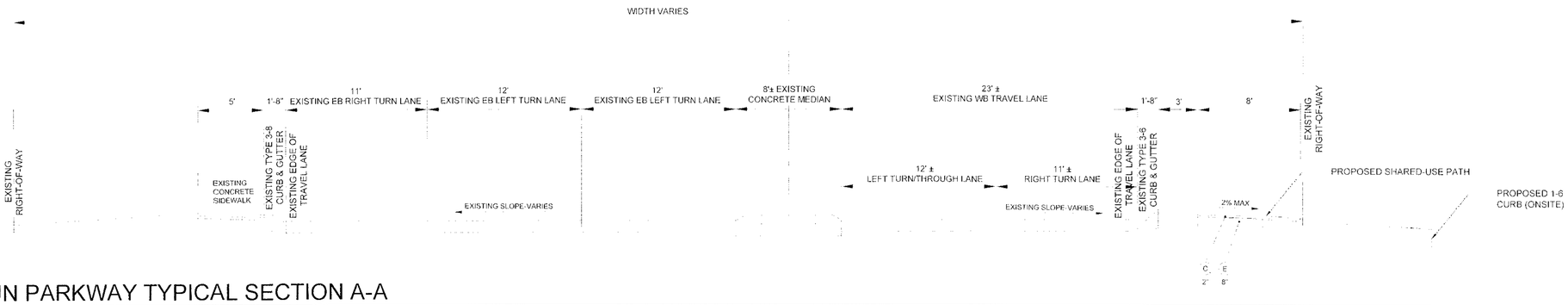
No.	REVISION	CHECKED BY	DATE
1	REVISIONS PER DELDOT COMMENTS DATED 4-13-16	DDW	5-25-16
2	REVISIONS PER DELDOT COMMENTS DATED 7-20-16	MJK	8-5-16

OWNER:
DAWN & LEON LLC
1100 LOVERING AVENUE
WILMINGTON, DE 19806

DEVELOPER:
THE ESTIS GROUP, LLC
910 SOUTH CHAPEL STREET
SUITE 100
NEWARK, DE 19713

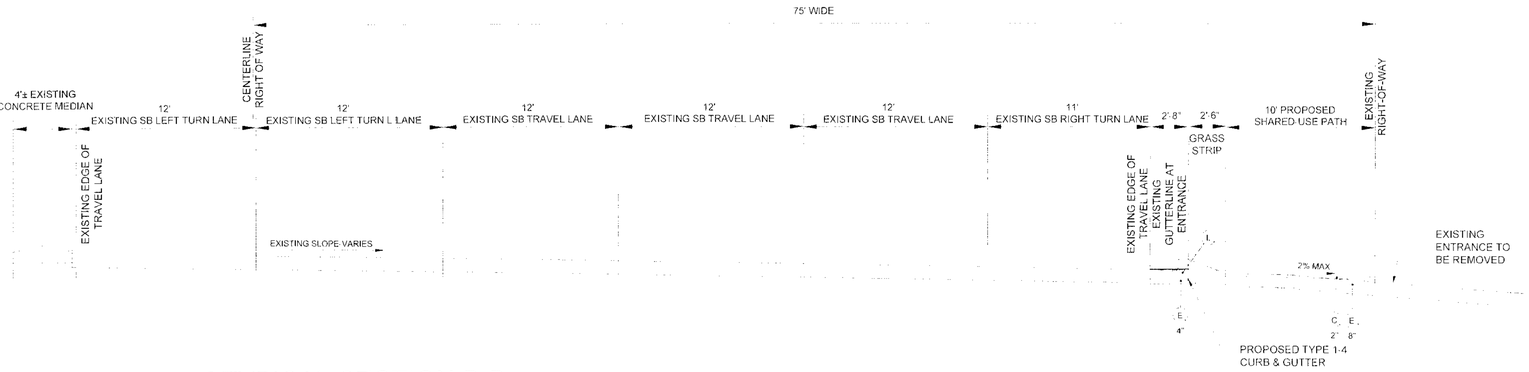
COMMERCIAL ENTRANCEPLAN SIGNAGE AND STRIPING PLAN
CONVENIENCE STORE & BANK
1700 ROCKY RUN PARKWAY
BRANDYWINE HUNDRED–NEW CASTLE COUNTY–DELAWARE

DATE: 1 MARCH 2016
SCALE: 1" = 30'
PROJECT NO. 10386.CA
SHEET: 7 OF 9



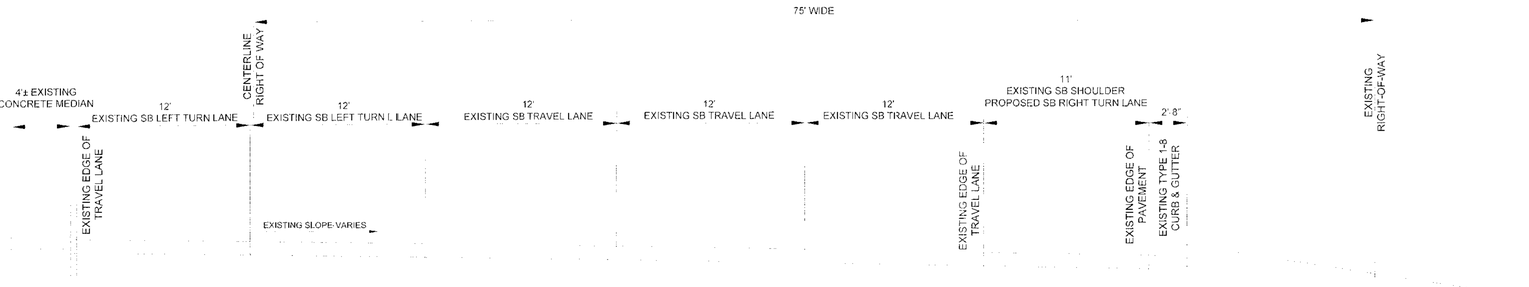
ROCKY RUN PARKWAY TYPICAL SECTION A-A

SCALE: 1" = 5'



CONCORD PIKE TYPICAL SECTION B-B

SCALE: 1" = 5'



CONCORD PIKE TYPICAL SECTION C-C

SCALE: 1" = 5'

REVIEWED FOR
GENERAL CONFORMITY
SEP 26 2016
SUBDIVISION NUMBER

PAVEMENT LIFT NOTE:

THE MAXIMUM LIFTS FOR THE INDIVIDUAL PAVING MATERIAARE AS FOLLOWS:

- SUPERPAVE, TYPE C WARM MIX - 2"
- SUPERPAVE, TYPE B WARM MIX - 4"
- SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE - 1
- GRADED AGGREGATE BASE COURSE - 8"

CROSS SECTION ITEMS LIST & NOTES

A. ITEM 760000 - PAVEMENT MILLING, EXISTING HOT-MIX

B. ITEM 401810 - SUPERPAVE, TYPE B WARM-MIX, 160 GRATIONS , PG 64-22

C. ITEM 401827 - SUPERPAVE, TYPE C WARM-MIX, 160 GRATIONS , PG 64-22, (NON-CARBONATE)

D. ITEM 401819 - SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22

E. ITEM 302005 - GRADED AGGREGATE BASE COURSE, TPE B

L. ITEM 701020 - P.C.C. CURB & GUTTER, TYPE 1-8 (ITEM 701014 = P.C.C. CURB, TYPE 1-6 ON SITE)

M. ITEM 705001 - P.C.C. SIDEWALK, 4" DEPTH

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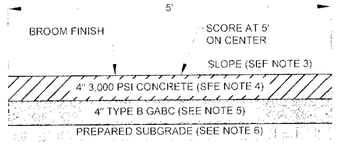
No.	REVISION	DESIGN DATE
1	REV. PER DELDOT COMMENTS DATED 2-15-16	MJK 2-25-2016
2	REV. PER DELDOT COMMENTS DATED 2-30-16	MJK 8-5-2016

OWNER:
DAWN & LEON LLC
1100 LOVERING AVENUE
WILMINGTON, DE 19806

DEVELOPER
THREE W's LLC
910 SOUTH CHAPEL STREET
SUITE 100
NEWARK, DE 19713

COMMERCIAL ENTRANCEPLAN
TYPICAL SECTIONS
CONVENIENCE STORE & BANK
1700 ROCKY RUN PARKWAY
BRANDYWINE HUNDRED–NEW CASTLE COUNTY–DELAWARE

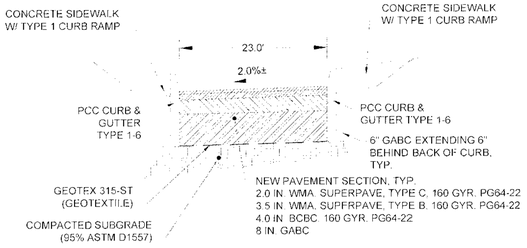
DATE: 1 MARCH 2016
SCALE: 1" = 30'
PROJECT NO. 10386.CA
SHEET: 8 OF 9



NOTES:
1. MARK IN 5-FOOT SQUARES, USE CORK EXPANSION JOINTS AT INTERVALS NOT GREATER THAN 20 FFET.
2. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED AS PFR DELDOT SPECIFICATIONS.
3. MINIMUM SIDEWALK CROSS SLOPE = 1%
   MAXIMUM SIDEWALK CROSS SLOPE = 2%
   TYPICAL SIDEWALK CROSS SLOPE = 1.5%
4. STANDARD SIDEWALK SHALL BE 4 INCHES THICK. DEPRESSED AND TRANSITION SIDEWALK SHALL BE 6 INCHES THICK.
5. STONE AGGREGATE BELOW CONCRETE SIDEWALK SHALL BE TYPE B GABC. THICKNESS OF GABC SHALL BE 4 INCHES FOR STANDARD SIDEWALK AND 6 INCHES FOR DEPRESSED AND TRANSITION SIDEWALK.
6. PROOF ROLL SUBGRADE, COMPACT TO 95% DFNSITY (ASTM D-1557)

DETAIL: SIDEWALK SECTION

SCALE: NONE



PAVEMENT SN VALUES

SECTION	REQUIRED THICKNESS	PROVIDED THICKNESS
TYPE C WMA	1.5"[1]	2.0"
	1.25"[2]	
TYPE B WMA	3.5"	3.5"
BCBC	-	4.0"
GABC	8"	8.0" (2 EQUAL LIFTS)

Notes (per DelDOT Development Coordination Manual Fig. 5.6.2-a):
1 - Asphalt Type C course to be installed with Type B and GABC.
2 - Asphalt Type C course to be installed just prior to DelDOT acceptance.

FOR ADT 501 - 2,000 REQUIRED SN = 3.62 FINAL
WITH LESS THAN 15 TRUCKS PER DAY

POST SN:
2" TYPE C (0.40) = 0.80
3.5" TYPE B (0.40) = 1.40
4" BCBC(0.40) = 1.60
8" GABC (0.14) = 1.12
= 4.92 OK

DETAIL: CONCORD PIKE ENTRANCE SECTION

SCALE: NONE



SIGN SIZE: 36" X 12"
COLOR: ARROW AND BORDER WHITE (REFLECTORIZED)
BACKGROUND AND LEGEND BLACK (NON-REFLECTORIZED)

INSTALLED HEIGHT OF SIGN SHALL BE IN ACCORDANCE WITH SECTION 24-23 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

DETAIL: ONE-WAY SIGN (R6-1)

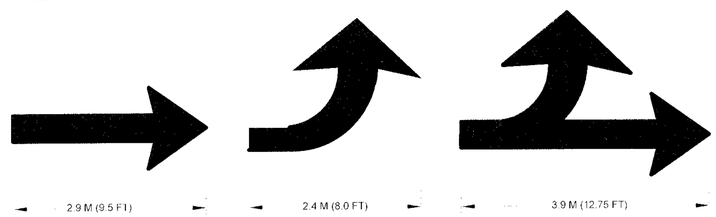
SCALE: NONE



SIGN SIZE: 36" X 36"
COLOR: LEGEND AND BORDER WHITE (REFLECTORIZED)
BACKGROUND: RED (REFLECTORIZED)

DETAIL: STOP SIGN (R1-1)

SCALE: NONE



DETAIL: LANE-USE ARROWS

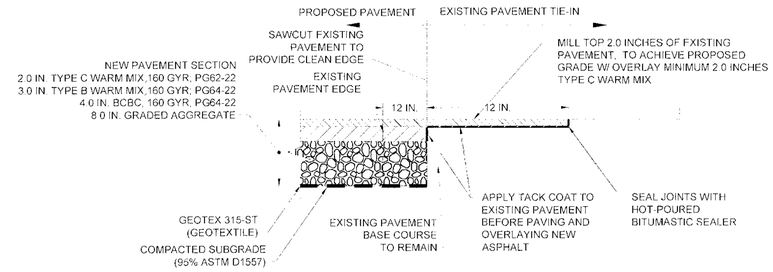
SCALE: NONE



SIGN SIZE: 30" X 30"
COLOR: BACKGROUND WHITE (RETROREFLECTIVE)
LEGEND BLACK (RETROREFLECTIVE)

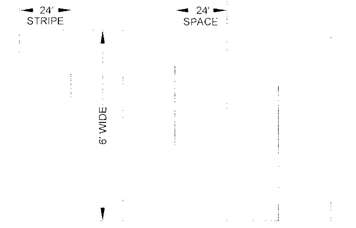
DETAIL: MANDATORY RIGHT TURN (R3-7R)

SCALE: NONE



DETAIL: PAVEMENT SECTION / TIE-IN

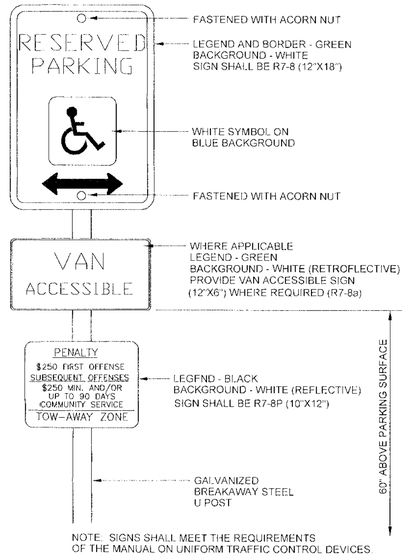
SCALE: NONE



NOTE: PERMANENT MARKINGS SHALL BE HOT THERMOPLASTIC

DETAIL: WHITE CROSSWALK

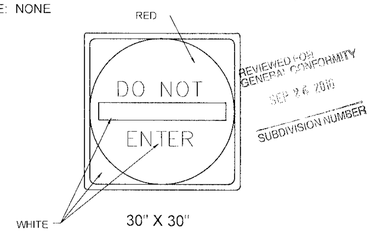
SCALE: NONE



NOTE: SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

DETAIL: ACCESSIBLE PARKING SIGN (R7-8/R7-8a)

SCALE: NONE



DETAIL: DO NOT ENTER SIGN (R5-1)

SCALE: NTS



GENERAL NOTES:

1. ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE TO THE DE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
2. THE CONTRACTOR SHALL COMPLY WITH GUIDFI INES IN "THE DELAWARE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (DE-MUTCD PART 6) FOR LIGHTS, BARRICADES AND SIGNS, (AS PER LATEST REVISION)
3. FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES WILL PREVAIL.
4. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.
5. PEDESTRIAN MAINTENANCE OF TRAFFIC PLAN SUBJECT TO ADJUSTMENT THE DELDOT INSPECTOR/SAFETY OFFICER.

DETAIL: PEDESTRIAN MOT SIGN & TYPE III BARRICADE

SCALE: NONE

SUBDIVISION MANUAL TEMPORARY TRAFFIC CONTROL NOTES (AST REVISED OCTOBER 23, 2013)

1. ALL WORK SHALL BE PERFORMED IN A MANNER THAT WILL REASONABLYPROVIDE THE LEAST PRACTICABLE OBSTRUCTION TO ROAD USERS, INCLUDING VEHICULAR TRAFFIC, BICYCE TRAFFIC AND PEDESTRIAN TRAFFIC
2. ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTRC DEVICES SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE LATEST EDITION OF THE MANUA TITLED "STATE OF DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)" (HERFINAFTER REFERED TO AS THE "DELAWARE MUTCD"), CURRENT STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION STADARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND SUPPLEMENTAL SPECIFICATIONS, INCLUDIG ALL REVISIONS AS OF THE DATE OF THE ENTRANCE PERMIT APPROVAL.
3. THE DEPARTMENT RESERVES THE RIGHT TO STOP THE CONTRACTOR'S PERATIONS, IF, IN THE OPINION OF THE DEPARTMENT'S REPRESENTATIVE, THE CONTRACTOR'S OPERATIONS AR NOT IN COMPLIANCE WITH THE DELAWARE MUTCD, THE SPECIFICATIONS OR THE PLANS OR IF THE CONTACTOR'S OPERATIONS ARE DEEMED UNSAFE.
4. IF THE CONTRACTOR DESIRES TO DEVIATE FROM THE TEMPORARY TRAFIC CONTROL PLAN (TTCP) PROVIDED IN THE PLAN SET OR DESIRES CHANGES TO THE PHASING OR SCOPE OF TH TTCP, THE CONTRACTOR SHALL SUBMIT A NEW TTCP TO THE DISTRICT SAFETY OFFICFR FOR APPROVAL RIOR TO THE START OF WORK AT EACH AND EVERY LOCATION. THE TTCP SHALL BE PREPARED, SIGNED AND SEAED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF DELAWARE AND SHALL BE PREPARED IN ACORDANCE WITH ALL APPLICABLE DELDOT STANDARDS. THE TTCP SHALL BE SUBMITTED 14 CALENDAR DAY IN ADVANCE OF STARTING WORK.
5. ALL ROADWAY CLOSURES OR LANE CLOSURES BEYOND THOSE SPECIFID AND APPROVED IN THE PLANS SHALL BF APPROVED BY THE DISTRICT SAFETY OFFICER A MINIMUM OF TWO WEKS IN ADVANCE OF THE PROPOSED RESTRICTION
6. TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE MAINTAINED IN GOO CONDITION IN ACCORDANCE WITH THE BROCHURF ENTITLED "QUALITY GUIDELINES FOR TEMPORARY TRAFFIC ONTROL DEVICES", PUBLISHED BY THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA). ANY TEMPRARY TRAFFIC CONTROL DEVICES THAT DO NOT MEET THE QUALITY GUIDELINES SHALL BE REMOVED AND REPLAED WITH ACCEPTABLE DEVICES. FAILURE TO COMPLY WILL RESULT IN WORK STOPPAGE.
7. TEMPORARY TRAFFIC CONTROL DEVICES USED ON ALL ROADWAYS OPE TO THF PUBLIC IN DELAWARE SHALL CONFORM TO THE DELAWARE MUTCD AND SHALL BE IN NEW OR REFURBHED CONDITION. ALL DEVICES SHALL BE CRASHWORTHY IN ACCORDANCE WITH THE NATIONAL COOPERATIVE IGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350 AND/OR IN ACCORDANCE WITH THE LATEST EDITION OF THEMANUAL FOR ASSESSING SAFETY HARDWARE (MASH), PUBLISHED BY THE AMERICAN ASSOCIATION OF STAE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO). THE CONTRACTOR SHALL SUBMIT CERTIFICATION FR ALL TEMPORARY TRAFFIC CONTROL DEVICES USED SPECIFICALLY ON THIS PROJECT TO THE DISTRICT SAFET OFFICER AT OR PRIOR TO THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL NOT BEGIN WOK OR PLACE ANY TEMPORARY TRAFFIC CONTROL DEVICES UNTIL THE CERTIFICATION OF DEVICES HAS BEEN APROVED BY THE DISTRICT SAFETY OFFICER.
8. ANY DEFICIENCIES RELATED TO TEMPORARY TRAFFIC CONTROL THAT AE REPORTED TO THE CONTRACTOR IN WRITING SHALL BE CORRECTED WITHIN 24 HOURS OR AS DIRECTED BY TE DISTRICT SAFETY OFFICER. CORRECTIVE ACTIONS ON SEVERE DEFICIENCIES SHALL BE TAKEN IMMEIATELY. FAILURE TO COMPLY WILL RESULT IN THE SUSPENSION OF WORK UNTIL DEVICES ARE BROUGHT BAK INTO COMPLIANCE.
9. ACCESS TO ALL BUSINESSES AND RESIDENCES WITHIN THE PROJECT LIITS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS CONTRACT. ANY TEMPORARY CLOURE OF A DRIVEWAY OR ENTRANCE FOR TIE-IN PURPOSES SHALL BE COORDINATED WITH THE ENGINEER ANITHE PROPERTY OWNER IN ADVANCE OF THE CLOSURE.
10. ACCESS TO ALL TRANSIT STOPS LOCATED WITHIN THE PROJECT LIMITS HALL BE MAINTAINED UNLESS OTHERWISE DIRECTED BY THE PLANS OR THE ENGINEFR. MAINTAINING ACESS TO THE TRANSIT STOP SHALL INCLUDE MAINTAINING AN ARFA OF THE TRANSIT VFHICLE TO STOP TO PIK-UP AND DISCHARGE PASSENGERS AND ALSO AN ACCESSIBLE PATH FOR PEDESTRIANS TO SAFELY ACCESS HE TRANSIT STOP.
11. THE CONTRACTOR SHALL PROVIDE ALL PROPERTY OWNERS AND RESIDNTS WHO LIVE ADJACENT TO THE WORK ZONE WITH WRITTEN NOTICE 48 HOURS IN ADVANCE OF THE START OF ONSTRUCTION WORK. THIS NOTIFICATION SHALL INCLUDE THE SCOPE OF WORK, WORKING HOURS, ATICIPATED START AND COMPLETION DATES; A SUMMARY OF CONSTRUCTION ACTIVITIES WHICH MAY INTERFEE WITH ACCESS TO THE PROPERTY INCLUDING A SCHEDULE AND ACCESS COORDINATION PLAN. CONTRACTO'S NAME AND ADDRESS AND A DELDOT CONTACT PHONE NUMBER. FAILURE TO GIVE PROPER NOTICE WILL RFSLT IN A SUSPENSION OF THE WORK REQUIRING NOTICE, UNTIL PROPER NOTICE IS PROVIDED. THE CONTRACOR SHALL PROVIDE WRITTEN VERIFICATION TO THE ENGINEER THAT THE PROPERTY OWNERS AND RESDENTS WERE NOTIFIED.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE LOCAL 11 CENTER, LOCAL SCHOOLS AND THE DELDOT PUBLIC INFORMATION CENTER OF ALL ROADS AND LANES TO BE CLOSED A MINIMUM OF SEVEN CALENDAR DAYS BEFORE THE CLOSURE.
13. THE CONTRACTOR SHALL NOTIFY THE LOCAL 911 CENTER IF ACCESS TO FIRE HYDRANT IS TEMPORARILY RESTRICTED.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE TANSPORTATION MANAGEMENT CENTER IS NOTIFIED EACH AND EVERY DAY WHEN WORK IS BEING PERFORMED INTATE RIGHT-OF-WAY. THE CONTRACTOR SHALL IDENTIFY THE TYPE OF WORK, ANY LANE(S) OR SHOLDERS CLOSED, THE LENGTH OF TIME FOR WORK, WHEN THE LANE RESTRICTIONS ARE IN PLACE AND WHEN LAE RESTRICTIONS ARE LIFTED. CONTACT PERSON/PHONE NUMBER AND STATE INSPECTOR. THE TRANSPORTATIOMANAGEMENT CENTER CAN BE REACHED AT (302) 659-4600.
15. AT THE END OF EACH WORKDAY, THE CONTRACTOR SHALL CORRECT AL VERTICAL DIFFERFNCES IN ACCORDANCE WITH TABLE 6G-1 OF THE DELAWARE MUTCD.
16. AT THE END OF EACH DAY'S OPERATION AND BEFORE TRAFFIC IS RETURED TO UNRESTRICTED ROADWAY USE, TEMPORARY PAVEMENT MARKINGS SHALL BE APPLIED IN ACCORDANCE WITH THE DELAWARE MUTCD AND DELDOT'S TEMPORARY PAVEMENT MARKINGS POLICY.
17. WHEN SIDE ROADS INTERSECT THE WORK ZONE, ADDITIONAL TRAFFIC ONTROL DEVICES SHALL BE ERECTED INCLUDING PERMANENT WARNING SIGNS.
18. ALL STORAGE OF EQUIPMENT AND MATERIAL SHALL COMPLY WITH SECTON 6G.21 OF THE DELAWARE MUTCD.
19. ALL FLAGGERS SHALL COMPLY WITH CHAPTER 6E OF THE DELAWARE MCD.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS/HERWORK WITH OTHER CONTRACTORS IN THE AREA.
21. ALL PERSONS WORKING WITHIN THE STATE RIGHT-OF-WAY SHALL WEAR MINIMUM OF AN ANSI CLASS II SAFETY VEST MEETING OR EXCEEDING THE ANSI 107-2004 REQUIREMENTS, AS SECIFIED IN THE DELAWARE MUTCD.
22. ALL PAVEMENT MARKINGS THAT ARE NO LONGER IN USE AND CONFLICT WITH TEMPORARY PAVEMENT MARKINGS SHALL BF REMOVED AND COMPLETELY OBLITFRATED BY A METHOD APPOVED BY THE ENGINFER. PAINTING OVER THE CONFLICTING PAVEMENT MARKINGS WILL NOT BE ACCEPTED AS A METHOD OF REMOVAL.
23. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF EXISTINPAVEMENT WITHIN THE PROJECT LIMITS FOR THE DURATION OF THE CONTRACT OR AS DIRECTED BY THE EGINEER.
24. ALL ROADWAYS AND ENTRANCES NOT OPEN TO TRAFFIC SHALL BE CLOSED USING TYPE III BARRICADFS AND SHALL BE INSTALLED PER THE DELAWARE MUTCD. IF THE ROADWAY OR SITRANCE IS CLOSED FOR MORE THAN ONE MONTH, THE CONTRACTOR SHALL ERECT PERMANENT BARRICADES AS DIRECTED IN PART 3 OF THE DELAWARE MUTCD.
25. WITHIN THE MAINLINE WORK AREA, PERMANENT ADVANCE WARNING SIGS WITH THE LEGENDS ROAD WORK 1500 FT, ROAD WORK 1000 FT AND ROAD WORK 500 FT SHALL BE INSTALLED INDVANCE OF THE WORK AREA IN BOTH DIRECTIONS. AN END ROAD WORK SIGN SHALL BE LOCATED 500 FEET DO'NSTREAM FROM THE WORK AREA. ON INTERSECTING ROADWAYS WITHIN THE PROJECT LIMITS, A ROAD WORK AEAD SIGN SHALL BE PLACED AT A DISTANCE NOT LESS THAN 500 FEET IN ADVANCE OF THE WORK AREA AN AN END ROAD WORK SIGN SHALL BE LOCATED 500 FEET DOWNSTREAM OF THE WORK AREA. ALL PERMANENT DVANCE WARNING SIGNS SHALL BE GROUND MOUNTED ON TWO NCHRP-350 OR MASH APPROVED BREAKAWAY POSTS AND SHALL BE MOUNTED IN COMPLIANCE WITH THE DELAWARE MUTCD. PERMANENT ADVANCE WARNG SIGNS SHALL BE MOUNTED AT A HEIGHT OF 7 FEET, MEASURED FROM THE ROADWAY TO THE BOTTOM OF HE SIGN. THE USE OF SKID MOUNTED SIGN SUPPORTS IS NOT ALLOWED UNLESS THE CONTRACTOR CAN DEMOSTRATE THAT A UTILITY CONFLICT EXISTS, WHICH SHALL BE VERIFIED BY THE ENGINEER; OR CONCRETE MEIANS PREVENT THE INSTALLATION OF THE PERMANENT ADVANCE WARNING SIGNS IN THE APPROPRIATE LOCATON.
26. TYPICAL APPLICATIONS PER THE DELAWARE MUTCD SHALL BE INCORPORTED TO ACHIEVE REQUIRED TEMPORARY TRAFFIC CONTROL AND SAFETY REQUIREMENTS. THIS PROJCT IS SUBJECT TO THE FOLLOWING TYPICAL APPLICATIONS UNLESS DIRECTED OTHERWISE BY THE DELDOT ISTRICT SAFETY OFFICER:
    - 26.1. TYPICAL APPLICATION TA-3A: WORK ON THE SHOULDER OF A MULTI-LNE CONVENTIONAL ROAD
    - 26.2. TYPICAL APPLICATION TA-4A: SHORT DURATION OR MOBILE OPERATIN ON A SHOULDER OF A MULTI-LANE CONVENTIONAL ROAD
    - 26.3. TYPICAL APPLICATION TA-29: A "CROSSWALK CLOSED" SIGN SHALL BPLACED IN THE CHANNALIZING TRIANGULAR ISLAND AT THE SOUTHWEST CORNER OF THE INTERSEION FOR THE CROSSWALK ENTRANCE TO THE NORTHWEST CORNER.
    - 26.4. TYPICAL APPLICATION TA-33: STATIONARY LANE CLOSURE ON A DIVIED HIGHWAY - PERMITTED ONLY BETWEEN 9AM-3PM AND 7PM-6AM.

DUFFIELD ASSOCIATES
Soil, Water & the Environment
5400 LIMESTONE ROAD
WILMINGTON, DE 19808-1232
TEL: 302.239.6634
FAX 302.239.8485
OFFICES IN DELAWARE, MARYLAND, PENNSYLVANIA AND NEW JERSEY
WEB: HTTP://DUFFIELD.COM
E-MAIL: DUFFIELD@DUFFIELD.COM

DESIGNED BY:	CHECKED BY:
MJK	DDW
DRAWN BY:	FILE NAME:
CMC	10386C-ENT-R1

MICHAEL J. KANZYSKI, JR. — No. 19394 — STATE OF DELAWARE — P.E. 19394

No.	REVISION	DESIGNED	DRAWN	CHECKED
1	REVISIONS PER DELDOT COMMENTS DATED 4-15-16	MJK 4-29-16	CMC 4-29-16	DDW 4-29-16
2	REVISIONS PER DELDOT COMMENTS DATED 7-20-16	MJK 8-25-16	CMC 8-25-16	

OWNER:
DAWN & LEON LLC
1100 LOVERING AVENUE
WILMINGTON, DE 19806

DEVELOPER:
THREE W's LLC
151 SOUTH CHAPEL STREET
SUITE 100
NEWARK, DE 19713

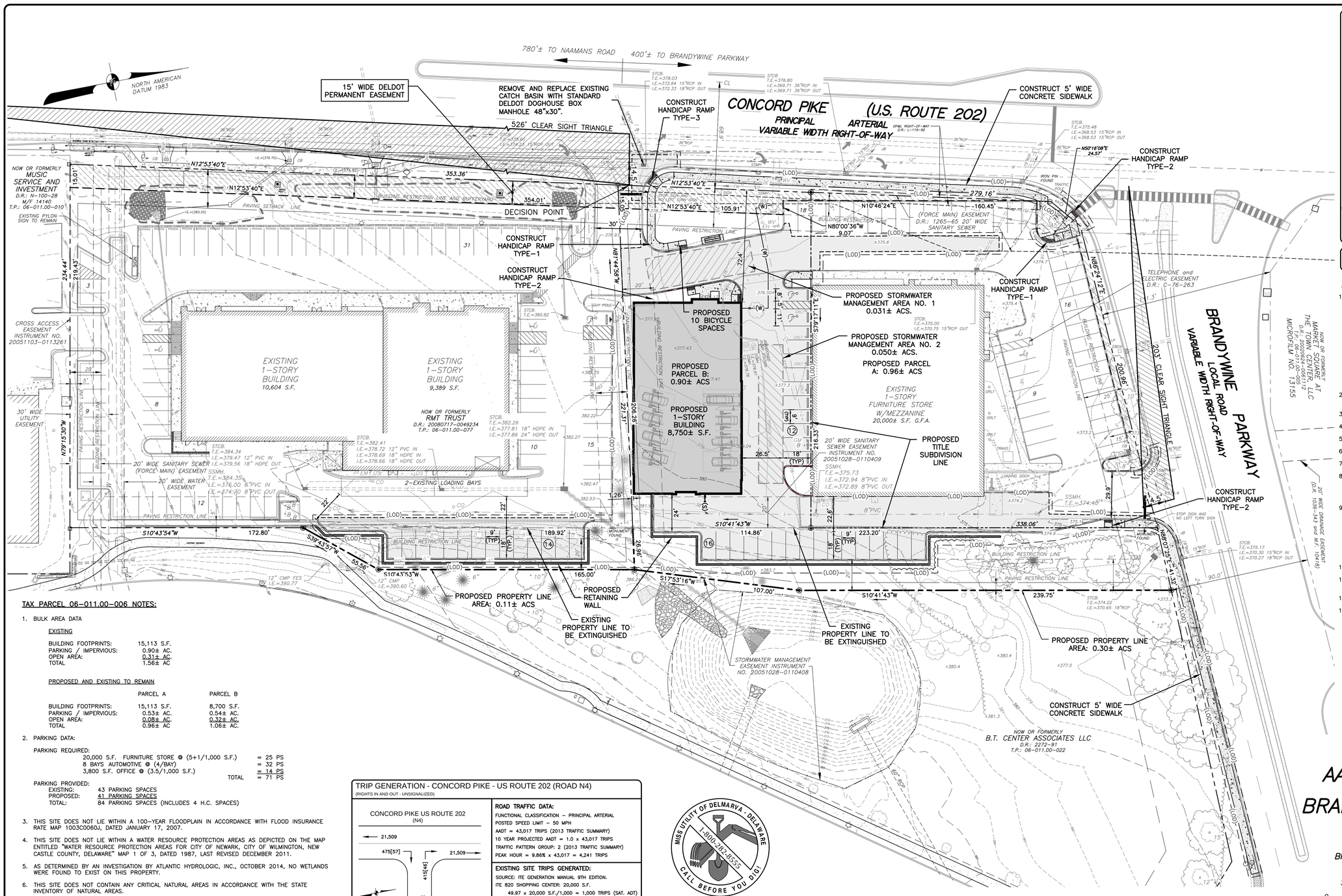
COMMERCIAL ENTRANCEPLAN
DETAILS / MAINTENANCE OF TRAFFIC NOTES
CONVENIENCE STORE & BANK
1700 ROCKY RUN PARKWAY
BRANDYWINE HUNDRED–NEW CASTLE COUNTY–DELAWARE

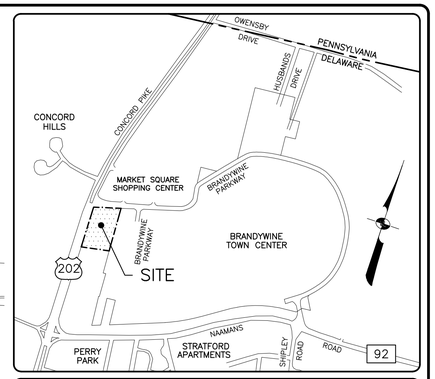
DATE: 1 MARCH 2016
SCALE: 1" = 30'
PROJECT NO. 10386.CA
SHEET: 9 OF 9

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AAA CAR CARE CENTER

Pennoni





ADC MAP NO. 3

LOCATION PLAN SCALE: 1" = 800'

GENERAL DATA

1. OWNERS:

TAX PARCEL NUMBER		AREA	OWNER
06-011.00-006	EXISTING	1.560± AC.	ACADIA MARKET SQUARE, LLC, SUCCESSOR-BY-MERGER TO MARKET SQUARE AT THE TOWN CENTER, LLC
		+0.460± Ac.	
	PROPOSED	2.020± AC.	
06-011.00-022	EXISTING	71.345± AC.	B.T. CENTER ASSOCIATES, LLC
		-0.460± AC.	
	PROPOSED	70.885± AC.*	

*INCLUDES 17.04± AC. OF PARKLAND AND 4.0± AC. OF WATER FEATURES

2. ADDRESSES: PARCEL A 5515 CONCORD PIKE WILMINGTON, DE, 19803; PARCEL B 5511 CONCORD PIKE WILMINGTON, DE, 19803
3. MODIFIED GRID NUMBER: 114/380
4. COUNCILMANIC DISTRICT: 2
5. TAX PARCEL NUMBERS: SEE CHART
6. HORIZONTAL DATUM: DELAWARE STATE PLANE, NAD 83
7. VERTICAL DATUM: NGVD 1929
8. SITE BENCHMARK: CONCRETE MONUMENT AT NORTH EAST CORNER OF PROPERTY NEAR BRANDYWINE PARKWAY TAX PARCEL 06-011.00-006 ELEVATION: 383.09
9. ZONING: CR (FORMERLY C-3)

STREET YARD SETBACK:	15'
SIDE YARD:	20'
REAR YARD:	20'
LOT AREA:	1 ACRE
BUILDING HEIGHT:	50'
PAVING SETBACK (STREET/OTHER):	25'/5'

10. AREA: SEE CHART
11. SOURCE OF TOPOGRAPHY: FIELD TOPOGRAPHY PREFORMED BY VANDEMARK & LYNCH, JULY 2014.
12. WATER SUPPLY: UNITED WATER DELAWARE
13. SANITARY SEWER: NEW CASTLE COUNTY

TAX PARCEL 06-011.00-006 NOTES:

1. BULK AREA DATA

EXISTING

BUILDING FOOTPRINTS:	15,113 S.F.
PARKING / IMPERVIOUS:	0.90± AC.
OPEN AREA:	0.31± AC.
TOTAL	1.56± AC

PROPOSED AND EXISTING TO REMAIN

	PARCEL A	PARCEL B
BUILDING FOOTPRINTS:	15,113 S.F.	8,700 S.F.
PARKING / IMPERVIOUS:	0.53± AC.	0.54± AC.
OPEN AREA:	0.08± AC.	0.32± AC.
TOTAL	0.96± AC	1.06± AC.

2. PARKING DATA:

PARKING REQUIRED:

20,000 S.F. FURNITURE STORE @ (5+1/1,000 S.F.)	= 25 PS
8 BAYS AUTOMOTIVE @ (4/BAY)	= 32 PS
3,800 S.F. OFFICE @ (3.5/1,000 S.F.)	= 14 PS
TOTAL	= 71 PS

PARKING PROVIDED:

EXISTING:	43 PARKING SPACES
PROPOSED:	41 PARKING SPACES
TOTAL:	84 PARKING SPACES (INCLUDES 4 H.C. SPACES)

3. THIS SITE DOES NOT LIE WITHIN A 100-YEAR FLOODPLAIN IN ACCORDANCE WITH FLOOD INSURANCE RATE MAP 1003C0060J, DATED JANUARY 17, 2007.
4. THIS SITE DOES NOT LIE WITHIN A WATER RESOURCE PROTECTION AREAS AS DEPICTED ON THE MAP ENTITLED "WATER RESOURCE PROTECTION AREAS FOR CITY OF NEWARK, CITY OF WILMINGTON, NEW CASTLE COUNTY, DELAWARE" MAP 1 OF 3, DATED 1987, LAST REVISED DECEMBER 2011.
5. AS DETERMINED BY AN INVESTIGATION BY ATLANTIC HYDROLOGIC, INC., OCTOBER 2014, NO WETLANDS WERE FOUND TO EXIST ON THIS PROPERTY.
6. THIS SITE DOES NOT CONTAIN ANY CRITICAL NATURAL AREAS IN ACCORDANCE WITH THE STATE INVENTORY OF NATURAL AREAS.
7. ALL FIRE LANES, HYDRANTS, SPRINKLERS, STANDPIPE CONNECTIONS, AND FIRE EXITS SHALL BE MARKED AND PROTECTED IN ACCORDANCE WITH THE STATE OF DELAWARE FIRE PREVENTION REGULATIONS.
8. UNLESS OTHERWISE SPECIFIED ON THE PLAN, SIDEWALKS SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THIS PLAN PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR THE BUILDING IN FRONT OF WHICH THEY ARE SHOWN. SIDEWALKS SHALL BE FIVE (5) FEET IN WIDTH AND CONSTRUCTED OF PORTLAND CEMENT CONCRETE.
9. UPON COMPLETION OF THE CONSTRUCTION OF SIDEWALK OR SHARED-USE PATH ACROSS THIS PROJECT'S FRONTAGE AND PHYSICAL CONNECTION TO ADJACENT EXISTING FACILITIES, THE DEVELOPER, THE PROPERTY OWNERS, OR BOTH, ASSOCIATED WITH THIS PROJECT SHALL BE RESPONSIBLE TO REMOVE ANY EXISTING ROAD TIE-IN CONNECTIONS LOCATED ALONG ADJACENT PROPERTIES AND RESTORE THE AREA TO GRASS. SUCH ACTIONS SHALL BE COMPLETED AT DELDOT'S DISCRETION AND IN CONFORMANCE WITH DELDOT'S "SHARED-USE PATH AND/OR SIDEWALK TERMINATION POLICY."

TRIP GENERATION - CONCORD PIKE - US ROUTE 202 (ROAD N4)

(RIGHTS IN AND OUT - UNSIGNALIZED)

TRAFFIC GENERATION DIAGRAM

TRIPS PER DAY - SATURDAY [PEAK HOUR]

ROAD TRAFFIC DATA:
FUNCTIONAL CLASSIFICATION - PRINCIPAL ARTERIAL
POSTED SPEED LIMIT - 50 MPH
AADT = 43,017 TRIPS (2013 TRAFFIC SUMMARY)
10 YEAR PROJECTED AADT = 1.0 x 43,017 TRIPS
TRAFFIC PATTERN GROUP: 2 (2013 TRAFFIC SUMMARY)
PEAK HOUR = 9.86% x 43,017 = 4,241 TRIPS

EXISTING SITE TRIPS GENERATED:
SOURCE: ITE GENERATION MANUAL 9TH EDITION.
ITE 820 SHOPPING CENTER: 20,000 S.F.
49.97 x 20,000 S.F./1,000 = 1,000 TRIPS (SAT. ADT)
SAT. PEAK: 4.97 X 20,000/1,000 = 100 TRIPS
ITE 890 FURNITURE STORE: 20,000 S.F.
4.94 X 20,000 S.F./1,000 = 99 TRIPS (SAT. ADT)
SAT. PEAK: 0.82 X 20,000/1,000 = 17 TRIPS

PROPOSED SITE TRIPS GENERATED:
SOURCE: ITE GENERATION MANUAL 9TH EDITION.
ITE 942 AUTO REPAIR SERVICE: 4,830 S.F.
15.86 x 4,830 S.F./1,000 = 77 TRIPS (SAT. ADT)
SAT. PEAK: 4.01 X 4,830/1,000 = 19 TRIPS
ITE 710 GENERAL OFFICE: 3,850 S.F.
2.37 X 3,850 S.F./1,000 = 10 TRIPS (SAT. ADT)
SAT. PEAK: 0.41 X 3,850/1,000 = 2 TRIPS

TOTAL SITE TRIP GENERATED:
1,186 (SAT. ADT); 138 (SAT. PEAK)
DIRECTIONAL DISTRIBUTION:
80% FROM SOUTH: 475 ADT [57 PM]
70% TO NORTH: 415 ADT [46]
(REMAINING TRIPS ON BRANDYWINE PARKWAY)

MISS UTILITY OF DELMARVA - DELAWARE
1-800-282-8555
CALL BEFORE YOU DIG!

LEGEND

EXISTING	PROPOSED		EXISTING	PROPOSED
		PROPERTY LINE		
N/A	N/A	TITLE SUBDIVISION LINE		
	N/A	ADJACENT PROPERTY LINE		
	N/A	BUILDING RESTRICTION LINE		
N/A		PAVING RESTRICTION LINE		
	N/A	DELDOT PERMANENT EASEMENT		
	N/A	EASEMENTS		
	N/A	CONTOURS		
x380.10		SPOT GRADES		
		BUILDINGS		
		PAVEMENT		
		CURB		
		CONCRETE		
		STORMWATER MANAGEMENT AREA (SWMA)		
N/A	N/A	LIMIT OF DISTURBANCE		
N/A		SIGHT TRIANGLE		

EXISTING	PROPOSED	
-S-	(S)	SANITARY SEWER
-FM-	N/A	FORCE MAIN
		STORM SEWER
-UE-	N/A	UNDERGROUND ELECTRIC LINE
-OE-	N/A	OVERHEAD ELECTRIC LINE
-W-	(W)	WATER LINE
-G-	(G)	GAS LINE
SSMH	N/A	SANITARY SEWER MANHOLE
CB	N/A	CATCH BASIN
WV	(WV)	WATER VALVE
GV	N/A	GAS VALVE
FH	N/A	FIRE HYDRANT
	N/A	UTILITY POLE W/GUY WIRE
DECIDUOUS	EVERGREEN	TREE/SIZE

NO.	DATE	REVISION	BY	APPROVED
3	7/7/16	DELDOT COMMENTS DATED 6/21/16	DJS	SLJ
2	5/11/16	DELDOT COMMENTS DATED 3/21/16	DJS	SLJ
1	2/5/16	DELDOT COMMENTS DATED 3/18/15	DJS	SLJ

VANDEMARK & LYNCH, INC. IS NOT RESPONSIBLE FOR ANY MODIFICATION MADE TO THIS PLAN AND/OR CADD FILE WITHOUT ITS WRITTEN AUTHORIZATION.

VANDEMARK & LYNCH, INC.
ENGINEERS - PLANNERS - SURVEYORS
4305 MILLER ROAD
WILMINGTON, DE 19802/(302) 764-7635
WWW.VANDEMARKLYNCH.COM

SURVEYED BY:	J. WIFFEL
COMPUTED BY:	K. GOLDSTONE
PROJECT MANAGER	S. JOHNS
DRAWN BY:	D. SHEEKY

FILE NAME	REVISION	SHEET	
23725.01-ENTR-01	3	1 OF 3	
PERMANENT FILE	QA REVIEW	SIZE	
114/380		L	
APPROVED BY		1	

SEAL IS NOT VALID UNLESS RED OR EMBOSSED

APPLICATION No. 2015-0048

ENTRANCE/EXIT PLAN

AAA CAR CARE CENTER

AT THE

BRANDYWINE TOWN CENTER

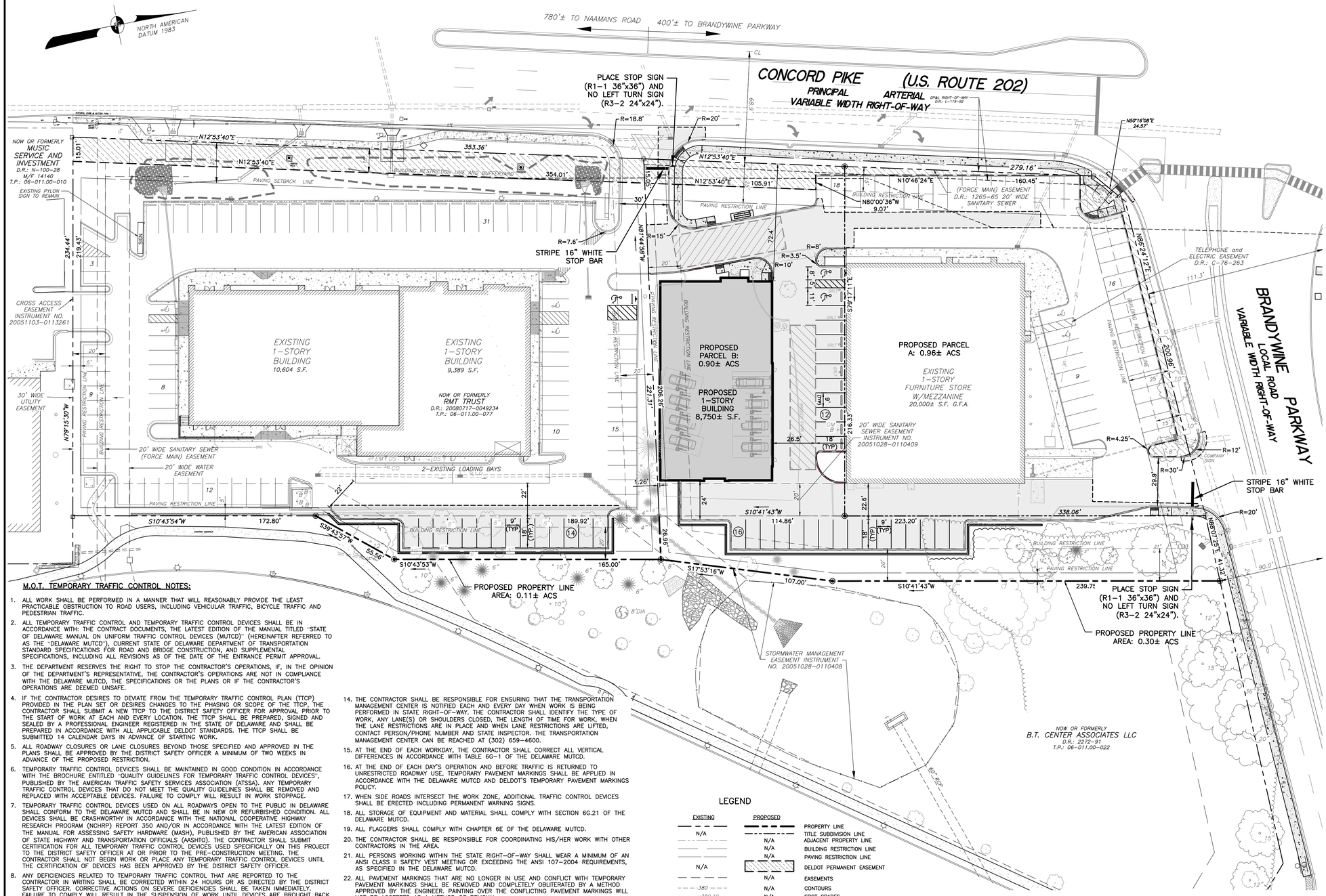
CONCORD PIKE (U.S. ROUTE 202) AND NAAMANS ROAD (DEL. ROUTE 92)

BRANDYWINE HUNDRED NEW CASTLE COUNTY DELAWARE

SCALE: 1" = 30' MARCH 17, 2015

0 30 60 90 120 150

P:\Land Projects\23725 BTC AAA\Plan Prod\AAA Entrance Final\23725.01-ENTR-01.dwg, 7/7/2016 9:07:16 AM, David J. Sheeky, VanDemark & Lynch, Inc.



M.O.T. TEMPORARY TRAFFIC CONTROL NOTES:

1. ALL WORK SHALL BE PERFORMED IN A MANNER THAT WILL REASONABLY PROVIDE THE LEAST PRACTICABLE OBSTRUCTION TO ROAD USERS, INCLUDING VEHICULAR TRAFFIC, BICYCLE TRAFFIC AND PEDESTRIAN TRAFFIC.
2. ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH: THE CONTRACT DOCUMENTS, THE LATEST EDITION OF THE MANUAL TITLED "STATE OF DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)" (HEREINAFTER REFERRED TO AS THE "DELAWARE MUTCD"), CURRENT STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND SUPPLEMENTAL SPECIFICATIONS, INCLUDING ALL REVISIONS AS OF THE DATE OF THE ENTRANCE PERMIT APPROVAL.
3. THE DEPARTMENT RESERVES THE RIGHT TO STOP THE CONTRACTOR'S OPERATIONS, IF, IN THE OPINION OF THE DEPARTMENT'S REPRESENTATIVE, THE CONTRACTOR'S OPERATIONS ARE NOT IN COMPLIANCE WITH THE DELAWARE MUTCD, THE SPECIFICATIONS OR THE PLANS OR IF THE CONTRACTOR'S OPERATIONS ARE DEEMED UNSAFE.
4. IF THE CONTRACTOR DESIRES TO DEVIATE FROM THE TEMPORARY TRAFFIC CONTROL PLAN (TTCP) PROVIDED IN THE PLAN SET OR DESIRES CHANGES TO THE PHASING OR SCOPE OF THE TTCP, THE CONTRACTOR SHALL SUBMIT A NEW TTCP TO THE DISTRICT SAFETY OFFICER FOR APPROVAL PRIOR TO THE START OF WORK AT EACH AND EVERY LOCATION. THE TTCP SHALL BE PREPARED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF DELAWARE AND SHALL BE PREPARED IN ACCORDANCE WITH ALL APPLICABLE DELDOT STANDARDS. THE TTCP SHALL BE SUBMITTED 14 CALENDAR DAYS IN ADVANCE OF STARTING WORK.
5. ALL ROADWAY CLOSURES OR LANE CLOSURES BEYOND THOSE SPECIFIED AND APPROVED IN THE PLANS SHALL BE APPROVED BY THE DISTRICT SAFETY OFFICER A MINIMUM OF TWO WEEKS IN ADVANCE OF THE PROPOSED RESTRICTION.
6. TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE MAINTAINED IN GOOD CONDITION IN ACCORDANCE WITH THE BROCHURE ENTITLED "QUALITY GUIDELINES FOR TEMPORARY TRAFFIC CONTROL DEVICES", PUBLISHED BY THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA). ANY TEMPORARY TRAFFIC CONTROL DEVICES THAT DO NOT MEET THE QUALITY GUIDELINES SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE DEVICES. FAILURE TO COMPLY WILL RESULT IN WORK STOPPAGE.
7. TEMPORARY TRAFFIC CONTROL DEVICES USED ON ALL ROADWAYS OPEN TO THE PUBLIC IN DELAWARE SHALL CONFORM TO THE DELAWARE MUTCD AND SHALL BE IN NEW OR REFURBISHED CONDITION. ALL DEVICES SHALL BE CRASHWORTHY IN ACCORDANCE WITH THE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350 AND/OR IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO). THE CONTRACTOR SHALL SUBMIT CERTIFICATION FOR ALL TEMPORARY TRAFFIC CONTROL DEVICES USED SPECIFICALLY ON THIS PROJECT TO THE DISTRICT SAFETY OFFICER AT OR PRIOR TO THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL NOT BEGIN WORK OR PLACE ANY TEMPORARY TRAFFIC CONTROL DEVICES UNTIL THE CERTIFICATION OF DEVICES HAS BEEN APPROVED BY THE DISTRICT SAFETY OFFICER.
8. ANY DEFICIENCIES RELATED TO TEMPORARY TRAFFIC CONTROL THAT ARE REPORTED TO THE CONTRACTOR IN WRITING SHALL BE CORRECTED WITHIN 24 HOURS OR AS DIRECTED BY THE DISTRICT SAFETY OFFICER. CORRECTIVE ACTIONS ON SEVERE DEFICIENCIES SHALL BE TAKEN IMMEDIATELY. FAILURE TO COMPLY WILL RESULT IN THE SUSPENSION OF WORK UNTIL DEVICES ARE BROUGHT BACK INTO COMPLIANCE.
9. ACCESS TO ALL BUSINESSES AND RESIDENCES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS CONTRACT. ANY TEMPORARY CLOSURE OF A DRIVEWAY OR ENTRANCE FOR TIE-IN PURPOSES SHALL BE COORDINATED WITH THE ENGINEER AND THE PROPERTY OWNER IN ADVANCE OF THE CLOSURE.
10. ACCESS TO ALL TRANSIT STOPS LOCATED WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED UNLESS OTHERWISE DIRECTED BY THE PLANS OR THE ENGINEER. MAINTAINING ACCESS TO THE TRANSIT STOP SHALL INCLUDE MAINTAINING AN AREA OF THE TRANSIT VEHICLE TO STOP TO PICK-UP AND DISCHARGE PASSENGERS AND ALSO AN ACCESSIBLE PATH FOR PEDESTRIANS TO SAFELY ACCESS THE TRANSIT STOP.
11. THE CONTRACTOR SHALL PROVIDE ALL PROPERTY OWNERS AND RESIDENTS WHO LIVE ADJACENT TO THE WORK ZONE WITH WRITTEN NOTICE, 48 HOURS IN ADVANCE OF THE START OF CONSTRUCTION WORK. THIS NOTIFICATION SHALL INCLUDE THE SCOPE OF WORK, WORKING HOURS, ANTICIPATED START AND COMPLETION DATES; A SUMMARY OF CONSTRUCTION ACTIVITIES WHICH MAY INTERFERE WITH ACCESS TO THE PROPERTY INCLUDING A SCHEDULE AND ACCESS COORDINATION PLAN, CONTRACTOR'S NAME AND ADDRESS AND A DELDOT CONTACT PHONE NUMBER. FAILURE TO GIVE PROPER NOTICE WILL RESULT IN A SUSPENSION OF THE WORK REQUIRING NOTICE, UNTIL PROPER NOTICE IS PROVIDED. THE CONTRACTOR SHALL PROVIDE WRITTEN VERIFICATION TO THE ENGINEER THAT THE PROPERTY OWNERS AND RESIDENTS WERE NOTIFIED.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE LOCAL 911 CENTER, LOCAL SCHOOLS AND THE DELDOT PUBLIC INFORMATION CENTER OF ALL ROADS AND LANES TO BE CLOSED A MINIMUM OF SEVEN CALENDAR DAYS BEFORE THE CLOSURE.
13. THE CONTRACTOR SHALL NOTIFY THE LOCAL 911 CENTER IF ACCESS TO A FIRE HYDRANT IS TEMPORARILY RESTRICTED.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE TRANSPORTATION MANAGEMENT CENTER IS NOTIFIED EACH AND EVERY DAY WHEN WORK IS BEING PERFORMED IN STATE RIGHT-OF-WAY. THE CONTRACTOR SHALL IDENTIFY THE TYPE OF WORK, ANY LANE(S) OR SHOULDERS CLOSED, THE LENGTH OF TIME FOR WORK, WHEN THE LANE RESTRICTIONS ARE IN PLACE AND WHEN LANE RESTRICTIONS ARE LIFTED, CONTACT PERSON/PHONE NUMBER AND STATE INSPECTOR. THE TRANSPORTATION MANAGEMENT CENTER CAN BE REACHED AT (302) 659-4600.
15. AT THE END OF EACH WORKDAY, THE CONTRACTOR SHALL CORRECT ALL VERTICAL DIFFERENCES IN ACCORDANCE WITH TABLE 6G-1 OF THE DELAWARE MUTCD.
16. AT THE END OF EACH DAY'S OPERATION AND BEFORE TRAFFIC IS RETURNED TO UNRESTRICTED ROADWAY USE, TEMPORARY PAVEMENT MARKINGS SHALL BE APPLIED IN ACCORDANCE WITH THE DELAWARE MUTCD AND DELDOT'S TEMPORARY PAVEMENT MARKINGS POLICY.
17. WHEN SIDE ROADS INTERSECT THE WORK ZONE, ADDITIONAL TRAFFIC CONTROL DEVICES SHALL BE ERECTED INCLUDING PERMANENT WARNING SIGNS.
18. ALL STORAGE OF EQUIPMENT AND MATERIAL SHALL COMPLY WITH SECTION 6G.21 OF THE DELAWARE MUTCD.
19. ALL FLAGGERS SHALL COMPLY WITH CHAPTER 6E OF THE DELAWARE MUTCD.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS/HER WORK WITH OTHER CONTRACTORS IN THE AREA.
21. ALL PERSONS WORKING WITHIN THE STATE RIGHT-OF-WAY SHALL WEAR A MINIMUM OF AN ANSI CLASS II SAFETY VEST MEETING OR EXCEEDING THE ANSI 107-2004 REQUIREMENTS, AS SPECIFIED IN THE DELAWARE MUTCD.
22. ALL PAVEMENT MARKINGS THAT ARE NO LONGER IN USE AND CONFLICT WITH TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED AND COMPLETELY OBLITERATED BY A METHOD APPROVED BY THE ENGINEER. PAINTING OVER THE CONFLICTING PAVEMENT MARKINGS WILL NOT BE ACCEPTED AS A METHOD OF REMOVAL.
23. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF EXISTING PAVEMENT WITHIN THE PROJECT LIMITS FOR THE DURATION OF THE CONTRACT OR AS DIRECTED BY THE ENGINEER.
24. ALL ROADWAYS AND ENTRANCES NOT OPEN TO TRAFFIC SHALL BE CLOSED USING TYPE III BARRICADES AND SHALL BE INSTALLED PER THE DELAWARE MUTCD. IF THE ROADWAY OR ENTRANCE IS CLOSED FOR MORE THAN ONE MONTH, THE CONTRACTOR SHALL ERECT PERMANENT BARRICADES AS DIRECTED IN PART 3 OF THE DELAWARE MUTCD.
25. WITHIN THE MAINLINE WORK AREA, PERMANENT ADVANCE WARNING SIGNS WITH THE LEGENDS ROAD WORK 1500 FT, ROAD WORK 1000 FT AND ROAD WORK 500 FT SHALL BE INSTALLED IN ADVANCE OF THE WORK AREA IN BOTH DIRECTIONS. AN END ROAD WORK SIGN SHALL BE LOCATED 500 FEET DOWNSTREAM FROM THE WORK AREA. ON INTERSECTING ROADWAYS WITHIN THE PROJECT LIMITS, A ROAD WORK AHEAD SIGN SHALL BE PLACED AT A DISTANCE NOT LESS THAN 500 FEET IN ADVANCE OF THE WORK AREA AND AN END ROAD WORK SIGN SHALL BE LOCATED 500 FEET DOWNSTREAM OF THE WORK AREA. ALL PERMANENT ADVANCE WARNING SIGNS SHALL BE GROUND MOUNTED ON TWO NCHRP-350 OR MASH APPROVED BREAKAWAY POSTS AND SHALL BE MOUNTED IN COMPLIANCE WITH THE DELAWARE MUTCD. PERMANENT ADVANCE WARNING SIGNS SHALL BE MOUNTED AT A HEIGHT OF 7 FEET, MEASURED FROM THE ROADWAY TO THE BOTTOM OF THE SIGN. THE USE OF SKID MOUNTED SIGN SUPPORTS IS NOT ALLOWED UNLESS THE CONTRACTOR CAN DEMONSTRATE THAT A UTILITY CONFLICT EXISTS, WHICH SHALL BE VERIFIED BY THE ENGINEER; OR CONCRETE MEDIANS PREVENT THE INSTALLATION OF THE PERMANENT ADVANCE WARNING SIGNS IN THE APPROPRIATE LOCATION.
26. TYPICAL APPLICATIONS PER THE DELAWARE MUTCD SHALL BE INCORPORATED TO ACHIEVE REQUIRED TEMPORARY TRAFFIC CONTROL AND SAFETY REQUIREMENTS. THIS PROJECT IS SUBJECT TO THE FOLLOWING TYPICAL APPLICATIONS UNLESS DIRECTED OTHERWISE BY THE DELDOT DISTRICT SAFETY OFFICER: 33 (FIGURE 6H-33).

LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
N/A		TITLE SUBDIVISION LINE
	N/A	ADJACENT PROPERTY LINE
	N/A	BUILDING RESTRICTION LINE
	N/A	PAVING RESTRICTION LINE
N/A		DELDOT PERMANENT EASEMENT
	N/A	EASEMENTS
380	N/A	CONTOURS
x380.10	N/A	SPOT GRADES
		BUILDINGS
		PAVEMENT
		CURB
		CONCRETE
N/A		STORMWATER MANAGEMENT AREA (SWMA)
S	(S)	SANITARY SEWER
FM	N/A	FORCE MAIN
	N/A	STORM SEWER
UE	N/A	UNDERGROUND ELECTRIC LINE
OE	N/A	OVERHEAD ELECTRIC LINE
W	(W)	WATER LINE
G	(G)	GAS LINE
SSMH	N/A	SANITARY SEWER MANHOLE
CB	N/A	CATCH BASIN
WV	(WV)	WATER VALVE
GV	N/A	GAS VALVE
FH	N/A	FIRE HYDRANT
	N/A	UTILITY POLE W/GUY WIRE
DECIDUOUS EVERGREEN	N/A	TREE/SIZE

TYPICAL APPLICATION 33 (FIGURE 6H-33) WORK ON THE SHOULDER OF A TWO-LANE ROAD.

DELDOT GENERAL CONSTRUCTION NOTES:

1. ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO ITS APPROVAL.
2. ALL MATERIALS AND WORKMANSHIP WITHIN THE STATE OF DELAWARE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH CURRENT STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SUPPLEMENTAL SPECIFICATIONS, STANDARD CONSTRUCTION DETAILS, SPECIAL PROVISIONS AND DESIGN GUIDANCE MEMORANDUMS.
3. ALL DISTURBED AREAS WITHIN THE STATE RIGHT-OF-WAY, BUT NOT IN THE PAVEMENT, SHALL BE TOP-SOILED (6" MINIMUM), FERTILIZED, SEEDED AND MULCHED. IF SOD IS USED NEXT TO SIDEWALK OR SHARED-USE PATH, CONTRACTOR SHALL GRADE TOPSOIL ADJACENT TO THE SIDEWALK OR SHARED-USE PATH PRIOR TO PLACEMENT OF SOD TO ENSURE THAT SOD IS PLACED FLUSH OR JUST BELOW EDGE OF SIDEWALK OR SHARED-USE PATH TO AVOID WATER PONDING ON THE SIDEWALK OR SHARED-USE PATH.
4. A 72-HOUR (MINIMUM) NOTICE SHALL BE GIVEN TO THE DELDOT DISTRICT PERMIT SUPERVISOR PRIOR TO STARTING ENTRANCE CONSTRUCTION.
5. MISS UTILITY OF DELAWARE SHALL BE NOTIFIED THREE (3) CONSECUTIVE WORKING DAYS PRIOR TO EXCAVATION, AT 1-800-282-8555.
6. ALL SIGNING, STRIPING AND MAINTENANCE OF TRAFFIC IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL FOLLOW THE GUIDELINES SHOWN IN THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD) FOR STREETS AND HIGHWAYS (LATEST EDITION). THE OWNER OR MAINTENANCE CORPORATION SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL SIGNS INSTALLED AS PART OF THIS PROJECT.
7. PLAN LOCATION AND DIMENSIONS SHALL BE STRICTLY ADHERED TO UNLESS OTHERWISE DIRECTED BY THE DELDOT INSPECTOR.
8. A COPY OF THE UP TO DATE APPROVED CONSTRUCTION DOCUMENTS AND DELDOT APPROVAL LETTERS SHALL BE MAINTAINED ON THE PROJECT SITE AT ALL TIMES AND BE AVAILABLE FOR INSPECTION BY DELDOT PERSONNEL.
9. EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. COMPLETENESS OR CORRECTNESS THEREOF IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE UTILITY COMPANIES INVOLVED IN ORDER TO SECURE THE MOST ACCURATE INFORMATION AVAILABLE AS TO UTILITY LOCATION AND ELEVATION. NO CONSTRUCTION AROUND OR ADJACENT TO UTILITIES SHALL BEGIN WITHOUT NOTIFYING THEIR OWNERS AT LEAST 48-HOURS IN ADVANCE. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE AND ANY DAMAGE DONE TO THEM DUE TO HIS/HER NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE. TO LOCATE EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELAWARE (SEE NOTE #5).
10. SHOULD UTILITY RELOCATION BE REQUIRED, THE DEVELOPER MUST SUBMIT A UTILITY RELOCATION PLAN FOR DELDOT REVIEW, ALONG WITH CORRESPONDENCE FROM THE UTILITY COMPANIES STATING PRELIMINARY APPROVAL TO THE RELOCATION AND DESIGN OF THE UTILITIES PRIOR TO THE DELDOT PRE-CONSTRUCTION MEETING. NO PHYSICAL CONSTRUCTION CAN OCCUR UNTIL THE UTILITY PLANS ARE APPROVED, THE INDIVIDUAL UTILITY COMPANIES ISSUE FINAL APPROVAL, AND A DELDOT UTILITY PERMIT IS ISSUED TO THE UTILITY COMPANY.
11. UPON COMPLETION OF THE CONSTRUCTION OF THE SIDEWALK OR SHARED-USE PATH ACROSS THIS PROJECT'S FRONTAGE AND PHYSICAL CONNECTION TO ADJACENT EXISTING FACILITIES, THE DEVELOPER, THE PROPERTY OWNERS OR BOTH ASSOCIATED WITH THIS PROJECT, SHALL BE RESPONSIBLE TO REMOVE ANY EXISTING ROAD TIE-IN CONNECTIONS LOCATED ALONG ADJACENT PROPERTIES, AND RESTORE THE AREA TO GRASS. THESE DISTURBED AREAS SHALL BE TOP-SOILED (6" MINIMUM), FERTILIZED, SEEDED AND MULCHED. SUCH ACTIONS SHALL BE COMPLETED AT DELDOT'S DISCRETION, AND IN CONFORMANCE WITH DELDOT'S "SHARED-USE PATH AND/OR SIDEWALK TERMINATION POLICY".
12. DELDOT WILL NOT PROVIDE THE RESPECTIVE LOCAL LAND USE AGENCY WITH A "NO OBJECTION TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY NOTICE" UNTIL THE ENTRANCE(S) ARE COMPLETED TO THE SATISFACTION OF THE DEPARTMENT.
13. DESIGN, FABRICATION AND INSTALLATION OF ALL PERMANENT SIGNING SHALL BE AS OUTLINED IN THE LATEST VERSION OF THE DE MUTCD.
14. DESIGN AND INSTALLATION OF ALL PAVEMENT MARKINGS AND STRIPING SHALL BE AS OUTLINED IN THE LATEST VERSION OF THE DE MUTCD. FOR FINAL PERMANENT PAVEMENT MARKINGS:
    A. EPOXY RESIN PAINT SHALL BE REQUIRED FOR LONG LINE STRIPING.
    B. THERMO PLASTIC (EXTRUDED OR PREFORMED MATERIAL) WILL BE REQUIRED ON ASPHALT SURFACES, FOR SHORT LINE STRIPING, I.E. SYMBOLS/LEGENDS.
    C. PERMANENT PAVEMENT MARKING TAPE (PER DELDOT APPROVED MATERIALS LIST) WILL BE REQUIRED ON CONCRETE SURFACES, FOR SHORT LINE STRIPING, I.E. SYMBOLS/LEGENDS.
15. REMOVAL OF LONG LINE PAVEMENT STRIPING SHALL BE PERFORMED USING: SHOT, SAND OR HYDRO-BLASTING.
16. BREAKAWAY POSTS SHALL BE USED WHEN INSTALLING ALL SIGNS. REFERENCE DELDOT STANDARD CONSTRUCTION DETAIL T-15.
17. THIS ENTRANCE IS CONSIDERED TEMPORARY AND AT SUCH TIME THAT THE SERVICE ROAD IS CONSTRUCTED THIS ENTRANCE WILL BE REMOVED, TOP-SOILED, SEEDED, MULCHED AND RE-GRADED TO ASSURE POSITIVE DRAINAGE.
21. THE ENDS OF ALL CURBS SHALL BE TRANSITIONED TO BE FLUSH WITH THE PAVEMENT AT A RATIO OF TWELVE TO ONE (12:1).
22. WHERE CURB TYPE AND/OR HEIGHT IS BEING VARIED, TAPER CURB PER DELDOT INSPECTOR (TYPICAL FOR BOTH SIDES OF THE ENTRANCE).
22. MAINTENANCE OF ALL LANDSCAPING SHOWN ON THIS PLAN WILL BE THE RESPONSIBILITY OF THE DEVELOPER, THE HOMEOWNERS ASSOCIATION OR BOTH. THE STATE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF THE LANDSCAPING. DELDOT MUST REVIEW AND APPROVE ANY PLANTINGS PROPOSED WITHIN THE RIGHT OF WAY PRIOR TO INSTALLATION. IF ANY PLANTINGS ARE PLANTED WITHOUT DELDOT'S KNOWLEDGE AND/OR APPROVAL, THEN DELDOT HAS THE RIGHT TO HAVE THE DEVELOPER REMOVE THE PLANTINGS, WITH ALL COSTS BEING PAID FOR BY THE DEVELOPER.
23. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT PAVING WITHIN THE STATE OF DELAWARE RIGHT-OF-WAY IS INSTALLED TO THE ELEVATIONS SHOWN AND THAT NO PONDING OF WATER EXISTS AFTER PAVING IS COMPLETE.
24. WARM MIX ASPHALT SHALL BE PLACED IN ACCORDANCE WITH DELDOT SPECIAL PROVISION(S) 401830 & 401810-WMA SUPERPAVE.
25. THE DEVELOPER AND EXISTING/FUTURE OWNER OF NON-STATE-MAINTAINED ROADWAYS SHALL ENSURE THAT THE TRAFFIC CONTROL DEVICES ON SAID ROADWAYS OPEN TO PUBLIC TRAVEL ARE IN COMPLIANCE WITH THE LATEST VERSION OF THE DELAWARE MUTCD.

APPLICATION No. 2015-0048

SIGNING AND STRIPING PLAN

AAA CAR CARE CENTER

AT THE

BRANDYWINE TOWN CENTER

CONCORD PIKE (U.S. ROUTE 202) AND NAAMANS ROAD (DEL. ROUTE 92)

BRANDYWINE HUNDRED NEW CASTLE COUNTY DELAWARE

SCALE: 1" = 30' *MARCH 17, 2015*

0 30 60 90 120 150

NO.	DATE	REVISION	BY	APPROVED
3	7/7/16	DELDOT COMMENTS DATED 6/21/16	DJS	SLJ
2	5/11/16	DELDOT COMMENTS DATED 3/21/16	DJS	SLJ
1	2/5/16	DELDOT COMMENTS DATED 3/18/15	DJS	SLJ

VANDEMARK & LYNCH, INC. IS NOT RESPONSIBLE FOR ANY MODIFICATION MADE TO THIS PLAN AND/OR CADD FILE WITHOUT ITS WRITTEN AUTHORIZATION.

MISS UTILITY OF DELMARVA - DELAWARE 1-800-282-8555 CALL BEFORE YOU DIG!

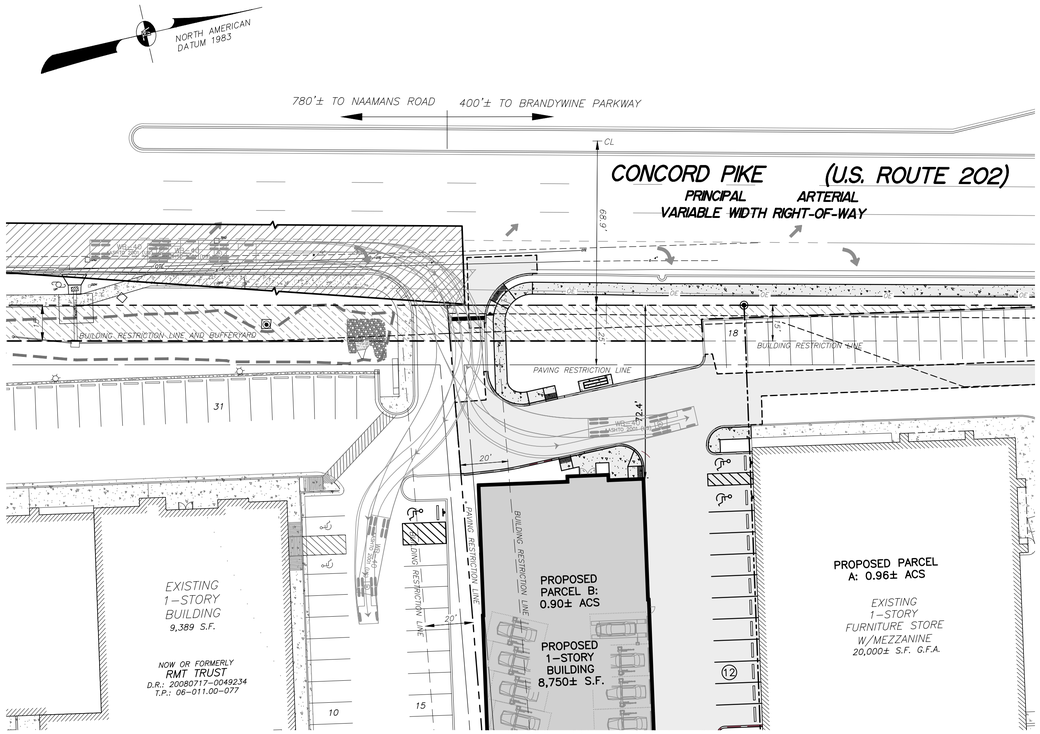
VANDEMARK & LYNCH, INC.
ENGINEERS - PLANNERS - SURVEYORS
4305 MILLER ROAD
WILMINGTON, DE 19802/(302) 764-7635
WWW.VANDEMARKLYNCH.COM

SURVEYED BY: J. WIFFEL
COMPUTED BY: K. GOLDSTONE
PROJECT MANAGER: S. JOHNS
DRAWN BY: D. SHEEKY

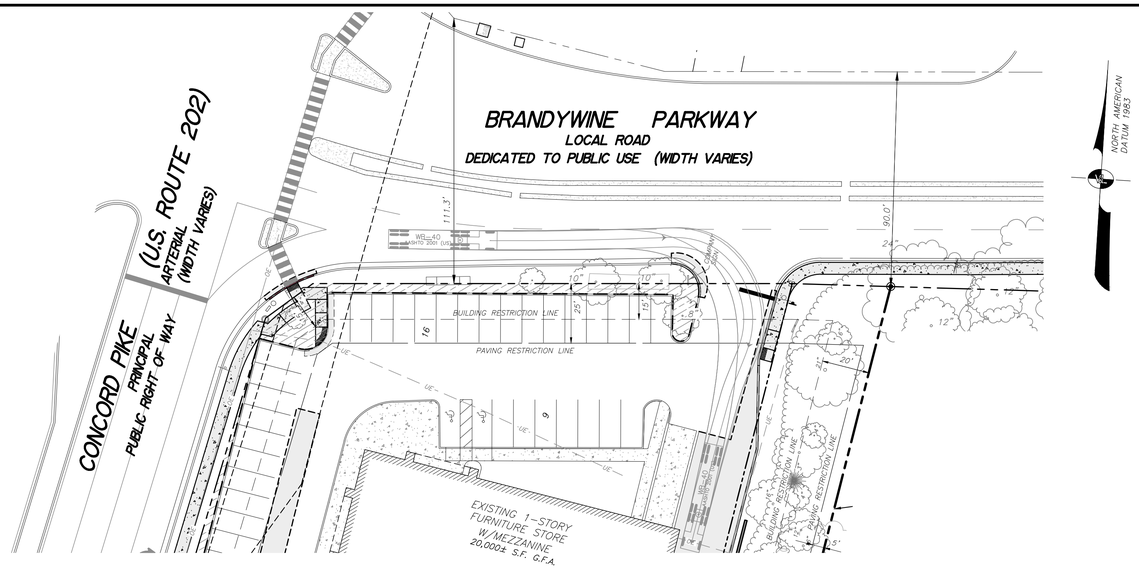
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APPROVED BY:
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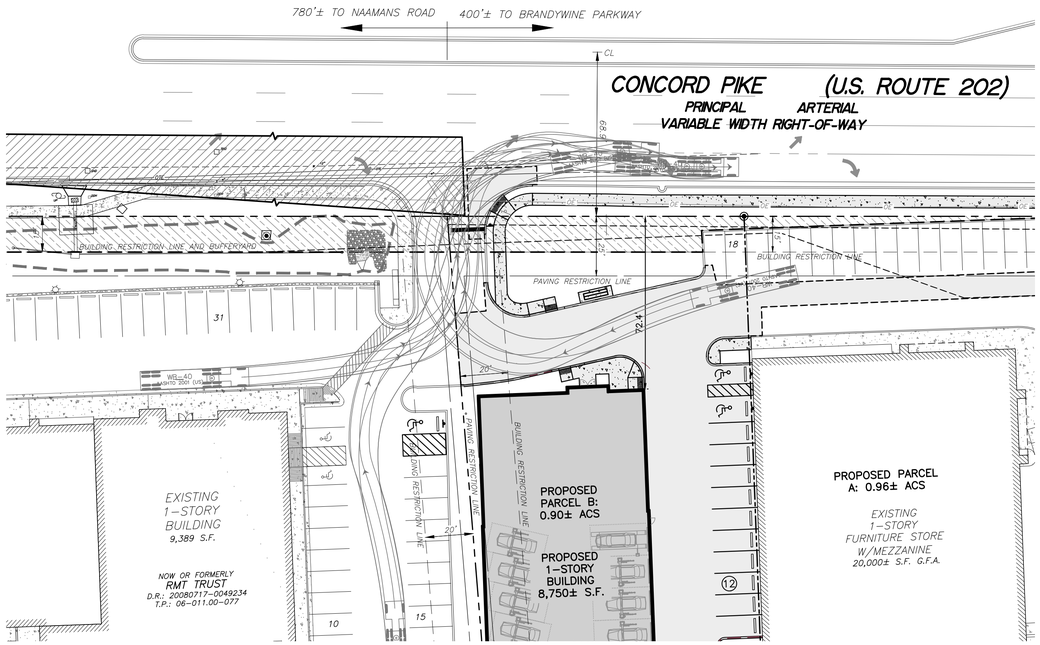
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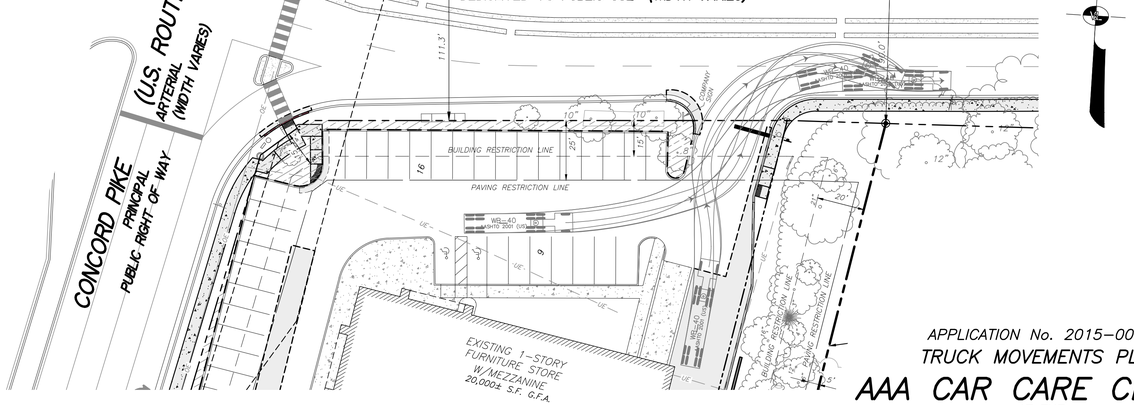
CONCORD PIKE (U.S. ROUTE 202)
WB-40 TRUCK TURNING MOVEMENTS IN
SCALE: 1" = 30'



BRANDYWINE PARKWAY
WB-40 TRUCK TURNING MOVEMENTS IN
SCALE: 1" = 30'



CONCORD PIKE (U.S. ROUTE 202)
WB-40 TRUCK TURNING MOVEMENTS OUT
SCALE: 1" = 30'



BRANDYWINE PARKWAY
WB-40 TRUCK TURNING MOVEMENTS OUT
SCALE: 1" = 30'

EXISTING	PROPOSED	LEGEND
— —	N/A	PROPERTY LINE
	N/A	TITLE SUBDIVISION LINE ADJACENT PROPERTY LINE
	N/A	BUILDING RESTRICTION LINE
	N/A	PAVING RESTRICTION LINE
N/A		DELDOT PERMANENT EASEMENT
	N/A	EASEMENTS
380	N/A	CONTOURS
x380.10	N/A	SPOT GRADES
		BUILDINGS
		PAVEMENT
		CURB
		CONCRETE
	N/A	UTILITY POLE W/GUY WIRE
	N/A	TREE/SIZE

DECIDUOUS EVERGREEN

MISS UTILITY OF DELMARVA - DELAWARE
1-800-282-8555
CALL BEFORE YOU DIG!

NO.	DATE	REVISION	BY	APPROVED
3	7/7/16	DELDOT COMMENTS DATED 6/21/16	DJS	SLJ
2	5/11/16	DELDOT COMMENTS DATED 3/21/16	DJS	SLJ
1	2/5/16	DELDOT COMMENTS DATED 3/18/15	DJS	SLJ

VANDEMARK & LYNCH, INC. IS NOT RESPONSIBLE FOR ANY MODIFICATION MADE TO THIS PLAN AND/OR CADD FILE WITHOUT ITS WRITTEN AUTHORIZATION.

APPLICATION No. 2015-0048

TRUCK MOVEMENTS PLAN

AAA CAR CARE CENTER
AT THE
BRANDYWINE TOWN CENTER

CONCORD PIKE (U.S. ROUTE 202) AND
NAAMANS ROAD (DEL. ROUTE 92)
BRANDYWINE HUNDRED NEW CASTLE COUNTY
DELAWARE

SCALE: 1" = 30' MARCH 17, 2015

0 30 60 90 120 150

VANDEMARK & LYNCH, INC.
ENGINEERS – PLANNERS – SURVEYORS
4305 MILLER ROAD
WILMINGTON, DE 19802/(302) 764-7635
WWW.VANDEMARKLYNCH.COM

SURVEYED BY: J. WIRFEL	FILE NAME: 23725.01-ENTR-01	REVISION: 3	SHEET: 3 OF 3
COMPUTED BY: K. GOLDSTONE	PERMANENT FILE: 114/380	QA REVIEW	SIZE: L
PROJECT MANAGER: S. JOHNS	APPROVED BY		3
DRAWN BY: D. SHEEKY	SEAL IS NOT VALID UNLESS RED OR EMBOSSED		

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APPENDIX C

EXISTING CURB RAMP AND SIDEWALK ADA INVENTORY

Concord Pike/Naamans Road ADA Ramp Inventory

AGREEMENT NO. 1710, TASK 6

Ramp ID	General Location; Curb Ramp Location	Curb Ramp Type	DelDOT Gateway*	Pennoni Observed	Comments
N-1	202 - Concord Mall S entrance; SE	2a	Non-Compliant	Non-Compliant	
N-2	202 - Concord Mall N entrance; SE	2a	Non-Compliant	Compliant	
N-3	202 - Concord Mall N entrance; SE island	5a	Compliant	Compliant	
N-5	202 - Brandywine Town Center Jared; SE	2a	Compliant	Non-Compliant	**landing 55" wide**
N-6	202 - Brandywine Town Center N entrance; SE	2a	N/A	Compliant	T201504004 - constructed 2016
N-7	202 - Brandywine Town Center N entrance; SE island	5a	N/A	Compliant	T201504004 - constructed 2016
N-8	202 - Brandywine Town Center N entrance; NE island	5a	N/A	Compliant	T201504004 - constructed 2016
N-9	202 - Brandywine Town Center N entrance; NE	2a	N/A	Compliant	T201504004 - constructed 2016
S-0	202 - Brandywine Town Center N entrance; W	2a	N/A	Compliant	T201504004 - constructed 2016
S-1	202 - Leon's Garden World; SW	2a	Non-Compliant	Compliant	
S-2	202 - Brandywine Commons; NW	2a	Compliant	Compliant	
S-3	202 - Brandywine Commons; NW island	5a	Compliant	Non-Compliant	**poor drainage**
S-5	202 - Brandywine Commons; SW island	5a	Compliant	Compliant	
S-8	202 - Brandywine Commons; SW	2a	Compliant	Non-Compliant	**slopes OK; 4" horizontal gap**
S-9	202 - Brandywine Commons @ S entrance; NW	1a	Non-Compliant	Compliant	
S-10	202 - Brandywine Commons @ S entrance; N @ island	1b	Non-Compliant	Non-Compliant	**short landing**
S-11	202 - Brandywine Commons @ S exit; S @ island	1b	Non-Compliant	Non-Compliant	**short landing and steep**
S-12	202 - Grace Episcopical Church N entrance; S	3	Compliant	Non-Compliant	**landing < 25 SF**
S-13	202 - Grace Episcopical Church S entrance; N	3	Compliant	Compliant	
S-14	202 - Grace Episcopical Church S entrance; S	3	Compliant	Compliant	
S-15	202 - Kohl's; S @ entrance	1a	Non-Compliant	Compliant	
S-16	202 - Kohl's; N @ entrance	1b	Compliant	Compliant	
E-1	92 - Wawa; E @ entrance	3	Non-Compliant	Non-Compliant	**No DWS**
E-2	92 - Perry Place; W @ intersection	4	Non-Compliant	Compliant	T201606103 - reconstructed 2016
E-3	92 - Perry Place; E @ intersection	2a	Non-Compliant	Compliant	T201606103 - reconstructed 2016
E-4	92 - Talley Place; W @ intersection	2a	Non-Compliant	Compliant	T201606103 - reconstructed 2016
E-5	92 - Talley Place; E @ intersection	2a	Non-Compliant	Compliant	T201606103 - reconstructed 2016
E-6	92 - Stratford Suites; W @ intersection	2a	Non-Compliant	Compliant	T201101001 - reconstructed 2015
E-7	92 - Stratford Suites; SW island	5a	Non-Compliant	Compliant	T201101001 - reconstructed 2015
E-9	92 - Stratford Suites; @ SE island	5a	Non-Compliant	Compliant	T201101001 - reconstructed 2015
E-12	92 - Stratford Suites; E @ intersection	2a	Non-Compliant	Compliant	T201101001 - reconstructed 2015
E-13	92 - Stratford Suites; N @ median island	5b	Non-Compliant	Compliant	T201101001 - reconstructed 2015
E-14	92 - Shoppes at Naamans; W @ W entrance	1a	Non-Compliant	Non-Compliant	
E-15	92 - Shoppes at Naamans; E @ W entrance	1a	Non-Compliant	Non-Compliant	
E-16	92 - Shoppes at Naamans; W @ E entrance	1b	Non-Compliant	Non-Compliant	
E-17	92 - Shoppes at Naamans; E @ E entrance	1a	Non-Compliant	Non-Compliant	
E-18	92 - Shipley Road; W @ intersection	2a	Non-Compliant	Compliant	
E-19	92 - Shipley Road; SE island	5a	Non-Compliant	Non-Compliant	**poor drainage**
E-22	92 - Shipley Road; E @ intersection	2a	Non-Compliant	Compliant	T201606103 - reconstructed 2016
E-23	92 - Shipley Road; N @ median island	5b	Non-Compliant	Non-Compliant	**poor drainage & 3/4" vert diff**
W-1	92 - Shipley Road; E @ intersection	2a	Non-Compliant	Compliant	
W-2	92 - Shipey Road; NE median island	5b	Non-Compliant	Compliant	
W-5	92 - Shipley Road; NW island	5a	Non-Compliant	Compliant	
W-8	92 - Shipley Road; W @ intersection	2a	Non-Compliant	Compliant	
W-9	92 - Brandywine Parkway; E @ WB entrance	1a	Non-Compliant	Compliant	T201101001 - reconstructed 2015
W-10	92 - Brandywine Parkway; W @ WB entrance	5b	Non-Compliant	Compliant	**poor drainage/sump** T201101001 - reconstructed 2015
W-12	92 - Brandywine Parkway; W @ WB exit	3	Non-Compliant	Compliant	T201101001 - reconstructed 2015
W-14	92 - Brandywine Parkway; E @ EB entrance	3	Non-Compliant	Compliant	T201101001 - reconstructed 2015
W-15	92 - Brandywine Parkway; W @ EB entrance	5b	Non-Compliant	Compliant	T201101001 - reconstructed 2015
W-16	92 - Brandywine Parkway; E @ EB exit	5b	Non-Compliant	Non-Compliant	**4.3% cross slope** T201101001 - reconstructed 2015
W-17	92 - Brandywine Parkway; W @ EB exit	2a	Non-Compliant	Compliant	**slopes OK; DWS is in gutter** T201101001 - reconstructed 2015
W-18	92 - Magic Car Wash; E @ entrance	1a	Non-Compliant	Compliant	T201606103 - reconstructed 2016
W-19	92 - Magic Car Wash; W @ entrance	5b	Non-Compliant	Compliant	T201606103 - reconstructed 2016
W-21	92 - Magic Car Wash; E @ exit	1a	Non-Compliant	Compliant	T201606103 - reconstructed 2016
W-22	92 - Raymour & Flanigan Side Lot; E @ entrance	1b	Non-Compliant	Non-Compliant	**No DWS**

*** DelDOT Gateway Inventory dated 2012 - prior to recent DelDOT projects**

US 202 / SR 92 PEDESTRIAN IMPROVEMENTS
CURB RAMP INDEX – SECTION 1



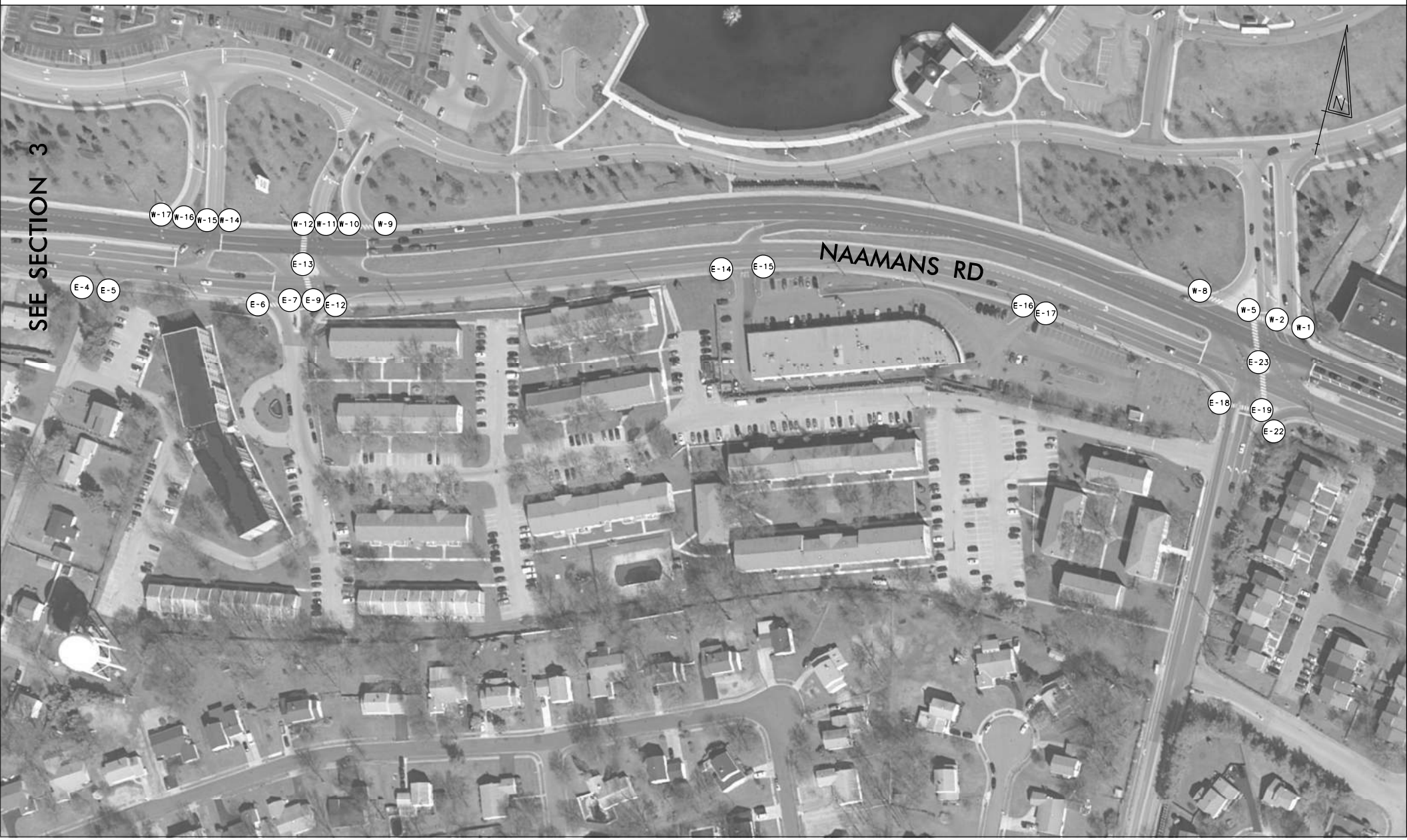
US 202 / SR 92 PEDESTRIAN IMPROVEMENTS
CURB RAMP INDEX – SECTION 2



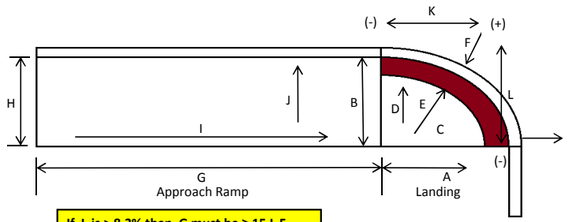
US 202 / SR 92 PEDESTRIAN IMPROVEMENTS
CURB RAMP INDEX – SECTION 3



US 202 / SR 92 PEDESTRIAN IMPROVEMENTS
CURB RAMP INDEX – SECTION 4



Main Menu



If I is > 8.3% then G must be ≥ 15 L.F.

The Sum of E and F shall never be > 13%

The fall between the tangent of K and L must run constant to ensure drainage.

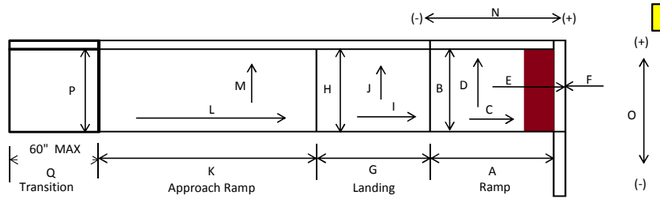
Curb Ramp, Type 1A (Retrofit)

Date	Ramp ID	Loc.	Dir.	Landing				Counter Slope			Approach Ramp				Road Grade		Drainage	Curb Height (In.)	Constraint	Pinch Point Width (In.)	Gap (In.)	Vertical Difference	Height (In.)	Crosswalk	Stop Bar Offset	Compliant	Practical Exception	Comments
				A	B	C	D	E	F	E+F	G	H	I	J	K	L												
				Inches	Inches	%	%	%	%	%	Feet	Inches	%	%	%	%									Feet	Feet			
8/2/2016	S-9			252.00	62.40	1.6%	0.9%	1.0%	0.8%	1.8%	13.00	60.00	1.7%	0.7%	1.7%	0.7%	Good	7.00						10.00	4.00			
8/2/2016	S-15			120.00	49.20	0.2%	0.8%	0.4%	2.6%	3.0%	9.20	62.40	3.5%	0.8%	0.8%		Good	8.00										
8/2/2016	W-18			72.00	50.40	3.2%	0.3%	4.2%	0.8%	5.0%	25.00	50.40	0.2%	1.1%	0.4%	1.0%	Good	6.00										Reconstructed in 2016 (Contract T201606103)
8/2/2016	W-21			108.00	54.00	2.7%	2.3%	2.9%	1.2%	4.1%	25+	60.00	0.4%	1.7%	0.6%	1.2%	Good	7.00										Reconstructed in 2016 (Contract T201606103)
8/3/2016	E-14			204.00	57.60	1.0%	4.2%	4.3%	5.4%	9.7%					0.7%	3.2%	Good	6.00										
8/3/2016	E-15			120.00	60.00	0.6%	5.1%	4.5%	4.7%	9.2%	5.00	60.00	3.0%	3.0%	0.0%	3.1%	Good	7.00										
8/3/2016	E-17			156.00	60.00	3.1%	4.7%	6.7%	2.1%	8.8%	5.00	60.00	1.7%	1.2%	1.4%	1.4%	Good	7.00				Yes	1					
8/4/2016	W-9			204.00	66.00	1.0%	1.1%	1.1%	2.8%	3.9%	4.50	68.40	1.2%	0.0%	0.3%	1.6%	Good	6.00										Reconstructed in 2015 (Contract T201101001)

Contract No. T201601105 ADA Reviewer N/A Field Inspector Pennoni

F.A.P. No. N/A ADA Coordinator N/A Project Supervisor N/A

Main Menu



The Sum of E and F shall never be > 13%

If L > 9.3% and up to 10% max, approval is required

K limited to 15 L.F. max

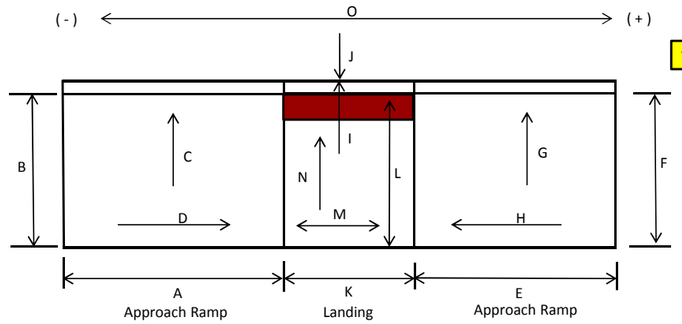
Curb Ramp, Type 1B (Retrofit)

Date	Ramp ID	Loc.	Dir.	Ramp				Counter Slope			Landing				Approach Ramp			Road Grade		Transition		Drainage	Curb Height (In.)	Constraint	Pinch Point Width (In.)	Gap (In.)	Vertical Difference	Height (In.)	Crosswalk	Stop Bar Offset	Compliant	Practical Exception	Comments
				A	B	C	D	E	F	E+F	G	H	I	J	K	L	M	N	O	P	Q												
				Inches	Inches	%	%	%	%	%	Inches	Inches	%	%	Feet	%	%	%	%	Inches	Inches												
8/2/2016	S-11			54.00	55.20	3.2%	0.0%	0.7%	0.6%	1.3%	186.00	55.20	3.2%	0.0%	60+	0.2%	1.2%	0.4%	1.2%			Good	7.00										
8/2/2016	S-16			63.60	62.40	0.9%	0.8%	0.6%	1.1%	1.7%	148.80	60.00	0.9%	0.6%		0.5%	0.1%	0.9%	1.8%			Good	8.00										
8/2/2016	W-22			168.00	108.00	6.0%	1.6%	5.1%	1.3%	6.4%	300+	60.00	0.8%	1.8%				0.7%	2.9%			Good	6.00										No DWS
8/3/2016	E-16			96.00	60.00	3.6%	3.1%	1.1%	0.8%	1.9%	60.00	60.00	1.8%	1.1%				1.4%	2.1%			Good	7.00				Yes	1					
8/2/2016	S-10			50.40	60.00	1.5%	0.4%	1.5%	0.3%	1.8%	180.00	60.00	1.0%	0.2%				1.0%	0.7%			Good											

Contract No. T201601105 ADA Reviewer N/A Field Inspector Pennoni

F.A.P. No. N/A ADA Coordinator N/A Project Supervisor N/A

Main Menu



The Sum of I and J should never be > 13%

If D is > 8.3% then A must be ≥ 15 L.F.

If H is > 8.3% then E must be ≥ 15 L.F.

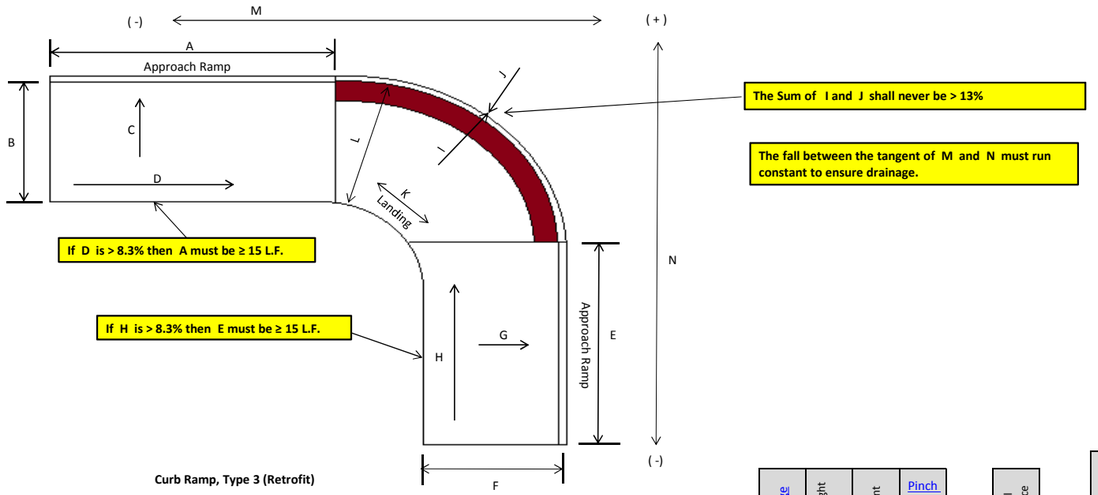
Curb Ramp, Type 2A (Retrofit)

				Approach Ramp				Approach Ramp				Counter Slope			Landing					Drainage	Curb Height (In.)	Constraint	Pinch Point Width (In.)	Gap (In.)	Vertical Difference	Height (In.)	Crosswalk	Stop Bar Offset	Compliant	Practical Exception	Comments
Date	Ramp ID	Loc.	Dir.	A	B	C	D	E	F	G	H	I	J	I+J	K	L	M	N	O												
				Feet	Inches	%	%	Feet	Inches	%	%	%	%		Inches	Inches	%	%	%								Feet	Feet			
8/2/2016	N-1			7.30	48.00	2.1%	7.7%	4.00	88.80	0.1%	2.7%	2.5%	6.9%	9.4%	46.80	85.20	2.6%	1.6%	1.8%	Good	6.00					Yes	1"					No DWS
8/2/2016	N-2			8.50	60.00	0.7%	3.7%	9.00	60.00	0.7%	0.1%	0.4%	0.8%	1.2%	60.00	60.00	1.9%	0.8%	2.5%	Good	7.00							10.20				
8/2/2016	S-2			10.00	60.00	1.0%	3.1%	7.10	62.40	0.2%	2.0%	0.4%	0.5%	0.9%	60.00	62.40	0.3%	1.0%	0.6%	Good	7.00							10.00				
8/2/2016	S-1			8.50	60.00	0.8%	2.5%	8.50	60.00	0.8%	1.8%	1.3%	0.8%	2.1%	60.00	60.00	0.2%	1.0%	0.1%	Good	6.00											
8/2/2016	S-8			6.80	60.00	1.2%	1.5%	15.00	60.00	0.2%	3.8%	0.3%	0.4%	0.7%	60.00	60.00	0.6%	0.5%	1.0%	Good	6.00				4"							
8/2/2016	E-3			6.00	61.20	0.3%	4.2%	4.50	61.20	0.8%	4.0%	1.5%	0.3%	1.8%	60.00	60.00	1.4%	1.1%	1.8%	Good	7.00											Reconstructed 2016 (Contract T201606103)
8/2/2016	E-4			11.50	60.00	1.5%	4.3%					0.8%	0.3%	1.1%	60.00	60.00	0.1%	0.8%	0.9%	Good	6.00											Reconstructed 2016 (Contract T201606103)
8/2/2016	E-5							7.80	60.00	0.3%	2.0%	1.1%	2.0%	3.1%	60.00	60.00	0.3%	0.9%	0.3%	Good	6.00											Reconstructed 2016 (Contract T201606103)
8/2/2016	E-6			10.00	62.40	0.3%	3.7%	4.20	63.60	0.5%	1.3%	0.9%	0.2%	1.1%	60.00	64.80	0.3%	0.8%	2.0%	Good	6.00							10.50				Reconstructed 2015 (Contract T201101001)
8/2/2016	W-17			9.30	60.00	0.2%	4.1%	6.00	60.00	0.4%	3.9%	0.3%	1.0%	1.3%	61.20	80.40	2.1%	1.2%	1.1%	Good	5.00											DWS located in gutter. Reconstructed in 2015 (Contract T201101001)
8/3/2016	E-12			5.50	60.00	0.4%	2.6%	11.90	60.00	1.0%	2.6%	0.6%	1.4%	2.0%	60.00	60.00	0.7%	0.5%	0.8%	Good	6.00							10.00				Reconstructed 2015 (Contract T201101001)
8/3/2016	E-18			14.30	60.00	1.0%	1.4%	6.30	62.40	1.0%	1.0%	1.0%	0.3%	1.3%	60.00	82.80	0.9%	0.4%	0.2%	Good	5.00											
8/3/2016	W-1			9.50	62.40	0.1%	4.4%	11.50	62.40	0.8%	1.6%	0.1%	0.8%	0.9%	62.40	85.20	0.8%	0.6%	1.6%	Good	6.00											
8/4/2016	W-8			13.50	61.20	0.5%	0.7%					1.0%	1.4%	2.4%	82.80	48.00	0.6%	0.4%	1.2%	Good	6.00											
8/4/2016	N-5			5.70	60.00	1.4%	3.7%	6.50	62.40	0.5%	5.8%	1.3%	2.0%	3.3%	55.20	60.00	1.0%	1.2%	0.9%	Good	7.00											Landing is 55.2" wide

Contract No. T201601105 ADA Reviewer N/A Field Inspector Pennoni

F.A.P. No. N/A ADA Coordinator N/A Project Supervisor N/A

Main Menu



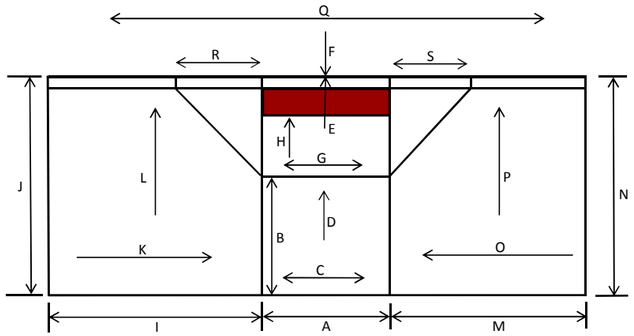
Curb Ramp, Type 3 (Retrofit)

			Approach Ramp				Approach Ramp				Counter Slope			Landing				Road Profile															
Date	Ramp ID	Corner	A	B	C	D	E	F	G	H	I	J	I+J	K	L	K	L	M	N	Drainage	Curb Height (In.)	Constraint	Pinch Point Width (In.)	Gap (In.)	Vertical Difference	Height (In.)	Crosswalk	Stop Bar Offset	Compliant	Tech. Feasible	Comments
			Feet	Inches	%	%	Feet	Inches	%	%	%	%		Inches	Inches	%	%	%	%								Feet	Feet			
8/2/2016	S-12						9.30	60.00	0.5%	0.7%	0.6%	1.1%	1.7%	57.60	60.00	1.1%	0.6%	0.9%	1.0%	Good	7.00										Landing < 25 SF
8/2/2016	S-13		6.50	60.00	0.1%	4.3%					1.4%	1.9%	3.3%	63.60	58.80	2.2%	1.4%	0.1%	0.7%	Good	7.00											
8/2/2016	S-14						7.00	60.00	0.6%	5.0%	0.1%	0.6%	0.7%	61.20	60.00	1.5%	0.1%	1.1%	0.5%	Good	8.00											
8/2/2016	E-1		2.80	62.40	5.3%	9.1%	3.40	62.40	3.3%	6.8%	6.7%	1.8%	8.5%	54.00	75.60	3.8%	6.7%	1.2%	0.8%	Good	7.00										No DWS
8/2/2016	W-12						9.00	62.40	1.8%	3.9%	0.6%	2.2%	2.8%	72.00	96.00	0.1%	0.4%	1.2%	1.7%	Good	6.00										Reconstructed in 2015 (Contract T201101001)
8/2/2016	W-14		4.60	87.60	1.4%	4.6%					0.0%	0.2%	0.2%	72.00	102.00	1.3%	1.4%	0.9%	0.8%	Good	8.00						10.00				Reconstructed in 2015 (Contract T201101001)

Contract No. T201601105 ADA Reviewer N/A Field Inspector Pennoni

F.A.P. No. N/A ADA Coordinator N/A Project Supervisor N/A

Main Menu



The Sum of E and F should never be > 13%

If K is > 8.3% then I must be >

If O is > 8.3% then M must be > 15 L.F.

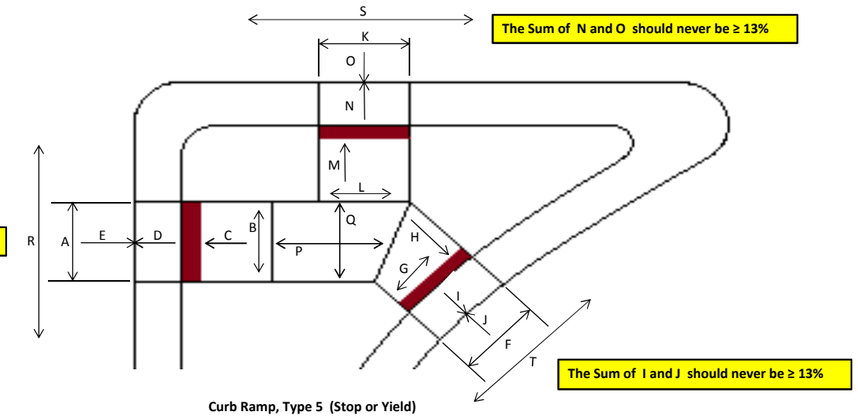
Type 4 (Retrofit)

				Landing				Counter Slope			Ramp		Approach Ramp				Approach Ramp				Road	Apron		Constraint	Pinch Point Width (In.)	Gap (In.)	Vertical Difference	Height (In.)	Crosswalk	Stop Bar Offset	Compliant	Practical Exception	
Date	Street & Block	Loc.	Dir.	A	B	C	D	E	F	E+F	G	H	I	J	K	L	M	N	O	P	Q	R	S									
				Inches	Inches	%	%	%	%	%	%	%	Feet	Inches	%	%	Feet	Inches	%	%	%	%	%							Feet	Feet			Comments
8/2/2016	E-2			60.00	69.60	0.4%	0.7%	2.4%	2.0%	4.4%	1.1%	2.4%	16.50	105.60	0.3%	0.5%					2.4%	3.5%											Reconstructed 2016 (Contract T201606103)

Contract No. T201601105 ADA Reviewer N/A Field Inspector Pennoni

F.A.P. No. N/A ADA Coordinator N/A Project Supervisor N/A

Main Menu



The Sum of N and O should never be ≥ 13%

The Sum of D and E should never

The Sum of I and J should never be ≥ 13%

Curb Ramp, Type 5 (Stop or Yield)

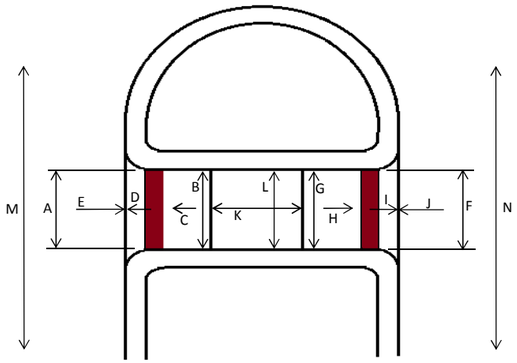
Date	Ramp ID	Loc.	Dir.	Ramp A			Counter Slope			Ramp F			Counter Slope			Ramp K			Counter Slope			Landing				Road Grades			Drainage	Constraint	Pinch Point Width (In.)	Gap (In.)	Vertical Difference	Height (In.)	Crosswalk	Stop Bar Offset	Compliant	Tech. Feasible	Comments
				A	B	C	D	E	D+E	F	G	H	I	J	I+J	K	L	M	N	O	N+O	P	P	Q	Q	R	S	T											
				Inches	%	%	%	%	%	Inches	%	%	%	%	%	Inches	%	%	%	%	%	Inches	%	Inches	%	%	%	%							Feet	Feet			
8/2/2016	N-3			66.00	0.4%	1.6%	0.1%	0.6%	0.7%	60.00	1.5%	1.4%	0.9%	0.8%	1.7%						0.0%	72.00	1.9%	64.80	1.2%	0.0%		2.1%	Good						9.80	20+			
8/2/2016	S-5			62.40	1.3%	0.4%	0.5%	0.5%	1.0%	74.40	0.5%	1.4%	0.9%	1.1%	2.0%	66.00	0.5%	0.2%	0.4%	0.5%	0.9%	144.00	0.1%	72.00	2.0%	1.5%	0.4%	1.0%	Good						10.00	9.50			
8/2/2016	S-3								0.0%	66.00	0.7%	0.6%	0.5%	0.5%	1.0%	62.40	1.2%	0.9%	0.2%	0.4%	0.6%	58.80	1.2%	186.00	0.9%		2.1%	1.1%	Sump						10.00				
8/2/2016	E-7								0.0%	115.20	0.7%	0.7%	0.4%	1.2%	1.6%	91.20	0.4%	0.5%	0.9%	1.0%	1.9%	81.60	0.4%	120.00	0.5%		0.8%	1.2%	Good						10.00	5.50			Reconstructed 2015 (Contract T201101001)
8/2/2016	E-9			70.80	0.8%	0.4%	0.2%	1.1%	1.3%	110.40	0.8%	0.6%	1.0%	0.2%	1.2%	86.40	0.7%	0.6%	0.6%	1.4%	2.0%					0.3%	0.6%	0.8%	Good						10.00	4.80			Reconstructed 2015 (Contract T201101001)
8/3/2016	E-19			61.20	0.7%	0.6%	0.6%	1.3%	1.9%						0.0%	61.20	1.1%	2.7%	3.1%	0.8%	3.9%	60.00	0.6%	60.00	0.8%	1.5%	1.4%		Sump						10.00	3.20			
8/3/2016	W-5			66.00	1.0%	0.0%	0.4%	0.8%	1.2%	78.00	0.9%	1.0%	0.2%	1.2%	1.4%	64.80	1.2%	1.1%	1.1%	0.2%	1.3%	300+	0.8%	60.00	0.8%	0.4%	1.2%	1.3%	Good										

Contract No. T201601105 ADA Reviewer N/A Field Inspector Pennoni

F.A.P. No. N/A ADA Coordinator N/A Project Supervisor N/A

Main Menu

The Sum of D and E should never be



The Sum of I and J should never be ≥ 13%

Curb Ramp, Type 5 (Stop or Yield)

Date	Street & Block	Loc.	Dir.	Ramp A			Counter Slope			Ramp B			Counter Slope			Landing				Road Grades		Drainage	Constraint	Pinch Point Width (In.)	Gap (In.)	Vertical Difference	Height (In.)	Crosswalk	Stop Bar Offset	Compliant	Practical Exception	Comments
				A	B	C	D	E	D+E	F	G	H	I	J	I+J	K	K	L	L	M	N											
				Inches	%	%	%	%	%	Inches	%	%	%	%	%	Inches	%	Inches	%	%	%							Feet	Feet			
8/2/2016	E-13			64.80	1.1%	0.8%	1.4%	1.6%	3.0%	74.40	0.7%	0.6%	0.4%	0.8%	1.2%	180.00	1.0%	60.00	0.5%	0.3%	0.6%	Good						10.00				No ped buttons in center. Reconstructed 2015 (Contract 201101001)
8/2/2016	W-15			82.80	1.0%	1.6%	0.8%	1.1%	1.9%	84.00	2.7%	2.6%	2.1%	1.4%	3.5%	184.80	3.4%	81.60	1.9%	0.0%	1.3%	Good						15.50				Reconstructed in 2015 (Contract T201101001)
8/2/2016	W-16			60.00	1.9%	5.5%	3.4%	0.3%	3.7%	60.00	4.3%	3.5%	4.1%	0.3%	4.4%					2.0%	0.7%	Good										4.3% cross slope at western ramp. Reconstructed in 2015 (Contract T201101001)
8/3/2016	E-23			66.00	0.6%	0.2%	1.0%	1.4%	2.4%	78.00	1.2%	1.3%	1.0%	1.1%	2.1%	180.00	0.8%	60.00	0.9%	0.8%	1.4%	Sump				Yes	3/4"					no ped buttons in center
8/3/2016	W-2			60.00	0.3%	1.0%	0.0%	0.1%	0.1%	61.20	0.1%	0.0%	1.0%	0.2%	1.2%					0.5%	0.1%	Good						10.00	4+			
8/4/2016	W-10			60.00	0.2%	3.9%	0.9%	2.0%	2.9%	60.00	1.0%	0.3%	0.4%	0.2%	0.6%	249.60	0.2%	94.80	0.6%	0.4%	1.2%	Sump										Slight drainage sump at eastern landing. Reconstructed in 2015 (Contract T201101001)
8/2/2016	W-19			60.00	1.9%	5.5%	3.4%	0.3%	3.7%	60.00	4.3%	3.5%	4.1%	0.3%	4.4%					2.0%	0.7%											Reconstructe in 2016 (Contract T201606103)

Contract No. T201601105 ADA Reviewer N/A Field Inspector Pennoni

PAR Inspection Worksheet

Contract/Agreement/Permit No.: Agr 1710, Task 6 - T201601105
Contract/Development Name: Concord Pike and Naamans Road Pedestrian Improvements (PAR)
Date: November 1, 2016
Names: AM / SN / AT
Sheet: 1 of 3

PAR Type	Width (Inches)	Action	Passing Zones	Street / Intersection	Location	Direction	Start/Stop Description	Measurement	Intervals (Feet)																			
									0	50	100	150	200															
Sidewalk	60.00			US 202		South	Leon's - Shoprite N	Cross Slope	1.0%	1.0%	0.5%	1.1%	0.7%															
								Roadway Grade	0.0%	0.4%	0.1%	0.4%	0.3%															
								Running Slope	0.4%	1.3%	0.1%	0.8%	0.5%															
PAR Type	Width (Inches)	Action		Street / Intersection	Location	Direction	Start/Stop Description	Measurement	0	50	100	150	200	250	300	350	400	450	500	550								
Sidewalk	60.00			US 202		South	Shoprite N - Shoprite S	Cross Slope	0.4%	0.5%	0.2%	0.8%	0.4%	0.1%	1.2%	1.1%	1.5%	2.0%	1.7%	1.3%								
								Roadway Grade	0.7%	0.3%	0.2%	0.3%	0.7%	0.2%	0.1%	0.8%	0.2%	0.2%	0.7%	0.7%								
								Running Slope	0.3%	0.4%	0.3%	0.3%	0.1%	0.6%	0.3%	0.4%	0.5%	0.2%	0.3%	0.2%								
PAR Type	Width (Inches)	Action		Street / Intersection	Location	Direction	Start/Stop Description	Measurement	0	50	100																	
Sidewalk	60.00			US 202		South	Grace - Khols	Cross Slope	0.6%	1.2%	0.1%																	
								Roadway Grade	0.5%	0.6%	0.1%																	
								Running Slope	0.6%	0.2%	0.5%																	
PAR Type	Width (Inches)	Action		Street / Intersection	Location	Direction	Start/Stop Description	Measurement	0	50	100	150	200	250														
Sidewalk	60.00			US 202		South	Khols - Concord Mall	Cross Slope	1.8%	1.7%	3.3%	1.5%	0.9%	1.0%														
								Roadway Grade	0.1%	0.6%	0.1%	0.2%	0.1%	0.1%														
								Running Slope	0.3%	0.2%	0.4%	0.0%	0.0%	0.2%														
PAR Type	Width (Inches)	Action		Street / Intersection	Location	Direction	Start/Stop Description	Measurement	SE Corner		202																	
Crosswalk				US 202		North	Concord Mall	Cross Slope	2.2%		0.0%																	
								Roadway Grade	2.2%		0.0%																	
								Running Slope	2.4%		0.7%																	
PAR Type	Width (Inches)	Action		Street / Intersection	Location	Direction	Start/Stop Description	Measurement	0	50	100	150	200	250														
Sidewalk	60.00			US 202		North	Jared Jewelry	Cross Slope	1.4%	1.1%	2.0%	0.9%	2.5%	1.8%														
								Roadway Grade	0.8%	1.0%	1.0%	0.6%	0.1%	0.3%														
								Running Slope	0.3%	1.2%	0.7%	0.2%	0.2%	0.2%														

PAR Inspection Worksheet

Contract/Agreement/Permit No.: Agr 1710, Task 6 - T201601105
Contract/Development Name: Concord Pike and Naamans Road Pedestrian Improvements (PAR)
Date: November 1, 2016
Names: AM / SN / AT
Sheet: 2 of 3

PAR Type	Width (Inches)	Action	Passing Zones	Street / Intersection	Location	Direction	Start/Stop Description	Measurement	Intervals (Feet)																			
Sidewalk	60.00			92	Parallel	East	Wawa	Cross Slope	3.5%																			
								Roadway Grade	0.8%																			
								Running Slope	0.8%																			
PAR Type	Width (Inches)	Action		Street / Intersection	Location	Direction	Start/Stop Description	Measurement	0	50	100	150	200															
Sidewalk	60.00			SR 92	Parallel	East	Perry - Tally	Cross Slope	2.4%	2.2%	1.6%	4.3%	0.9%															
								Roadway Grade	0.6%	1.0%	0.7%	0.9%	0.4%															
								Running Slope	1.6%	1.0%	0.6%	0.4%	0.8%															
PAR Type	Width (Inches)	Action		Street / Intersection	Location	Direction	Start/Stop Description	Measurement	0	50	100	150	200															
Sidewalk	60.00			SR 92	Parallel	East	Tally - Straford	Cross Slope	1.5%	1.4%	0.1%	1.5%	2.4%															
								Roadway Grade	0.8%	0.4%	0.4%	0.1%	0.8%															
								Running Slope	0.6%	0.5%	1.2%	0.1%	0.9%															
PAR Type	Width (Inches)	Action		Street / Intersection	Location	Direction	Start/Stop Description	Measurement	EB	WB																		
Crosswalk				SR 92	Lateral	North	Stratford - 92 Median - BTC	Cross Slope	0.6%	1.3%																		
								Roadway Grade	0.6%	1.3%																		
								Running Slope	2.5%	0.3%																		
PAR Type	Width (Inches)	Action		Street / Intersection	Location	Direction	Start/Stop Description	Measurement	0	50	100	150	200	250	300	350	400	450	500									
Sidewalk	60.00			SR 92	Parallel	East	Stratford - Shops	Cross Slope	0.4%	0.7%	2.8%	2.5%	3.0%	0.2%	0.8%	1.5%	1.4%	0.6%	2.0%									
								Roadway Grade	0.4%	0.4%	0.2%	0.5%	0.5%	0.2%	0.2%	0.4%	0.5%	0.5%	0.4%									
								Running Slope	0.4%	0.5%	0.2%	0.5%	0.1%	0.3%	0.3%	0.2%	0.5%	0.1%	0.7%									
PAR Type	Width (Inches)	Action		Street / Intersection	Location	Direction	Start/Stop Description	Measurement	0	50	100	150	200	250	300													
Sidewalk	60.00			SR 92	Parallel	East	Shops Entrance - Exit	Cross Slope	1.3%	1.3%	1.0%	2.2%	1.1%	1.0%	1.8%													
								Roadway Grade	0.4%	1.2%	1.2%	0.7%	0.6%	0.5%	0.5%													
								Running Slope	0.3%	0.6%	0.8%	1.0%	0.4%	0.5%	1.5%													
PAR Type	Width (Inches)	Action		Street / Intersection	Location	Direction	Start/Stop Description	Measurement	0	50	100	150																
Sidewalk	60.00			SR 92	Parallel	East	Shops Exit - Shipley	Cross Slope	1.1%	2.2%	0.2%	1.2%																
								Roadway Grade	1.3%	1.2%	0.9%	1.4%																
								Running Slope	1.3%	0.9%	0.7%	2.2%																

PAR Inspection Worksheet

Contract/Agreement/Permit No.: Agr 1710, Task 6 - T201601105
Contract/Development Name: Concord Pike and Naamans Road Pedestrian Improvements (PAR)
Date: November 1, 2016
Names: AM / SN / AT
Sheet: 3 of 3

PAR Type	Width (Inches)	Action	Passing Zones	Street / Intersection	Location	Direction	Start/Stop Description	Measurement	Intervals (Feet) 0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
Sidewalk	60.00			SR 92		West	Shipley - BTC	Cross Slope	2.0%	3.6%	2.2%	1.9%	1.9%	2.2%	2.1%	1.0%	2.0%	0.6%	1.5%	0.5%	0.5%	0.2%	0.4%	0.9%	0.7%	0.4%	0.8%	0.4%	2.1%	1.9%
								Roadway Grade	0.7%	0.5%	0.4%	0.3%	0.2%	0.3%	0.4%	0.4%	0.7%	0.7%	0.4%	0.2%	0.8%	1.1%	0.7%	0.6%	0.2%	0.4%	0.5%	0.3%	0.4%	0.5%
								Running Slope	0.4%	0.4%	0.5%	0.1%	1.0%	0.2%	0.5%	0.7%	0.8%	1.0%	0.2%	0.5%	1.0%	0.8%	3.2%	0.7%	1.4%	1.2%	0.8%	1.0%	0.2%	0.4%
PAR Type	Width (Inches)	Action		Street / Intersection	Location	Direction	Start/Stop Description	Measurement	1100	1150																				
Sidewalk	60.00			SR 92		West	Shipley - BTC	Cross Slope	3.3%	3.0%																				
								Roadway Grade	0.1%	0.4%																				
								Running Slope	1.0%	0.4%																				
PAR Type	Width (Inches)	Action		Street / Intersection	Location	Direction	Start/Stop Description	Measurement																						
Crosswalk				SR 92		West	BTC	Cross Slope			1.0%																			
								Roadway Grade			1.0%																			
								Running Slope			0.7%																			
PAR Type	Width (Inches)	Action		Street / Intersection	Location	Direction	Start/Stop Description	Measurement	0	50	100	150	200	250																
Sidewalk	60.00			SR 92		West	BTC - Exxon	Cross Slope	1.1%	2.9%	3.3%	1.1%	1.0%	0.6%																
								Roadway Grade	0.1%	0.3%	0.2%	0.9%	1.1%	0.8%																
								Running Slope	0.2%	0.4%	0.9%	0.9%	1.1%	0.9%																

APPENDIX D

CRASH DATA SUMMARY

Delaware Crash Analysis Reporting System

Crash Study Time Period:	5/24/2013 - 5/24/2016
Query Type:	SearchTool
Description:	US-202 & SR-92
Study Requested By:	Pennoni
Study Generated By:	TDTSSWN
Number of Crashes:	323
Includes Non-Reportable Crashes:	N
Study Code:	



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State of Delaware Crash Study

Summary	
	# of Crashes
Total Crashes	323
Fatal Crashes	1
Total Alcohol-Related Crashes	8
Total Non Alcohol-Related Crashes	315
Total Fatalities	1
Total Pedestrian Fatalities	1
Total Pedestrian Injuries	4
Total Pedestrian Crashes	4
Total Motorcycle Crashes	4
Total Pedalcyclist Crashes	0

Classification		
	# of Crashes	**% of Total Crashes**
Non-Reportable	0	0.00%
Reportable	286	88.54%
Personal Injury	36	11.15%
Fatality	1	0.31%
Total	**323**	

Manner of Impact		
	# of Crashes	**% of Total Crashes**
Front to rear	193	59.75%
Front to front	5	1.55%
Angle	49	15.17%
Sideswipe, same direction	40	12.38%
Sideswipe, opposite direction	2	0.62%
Rear to side	0	0.00%
Rear to rear	0	0.00%
Other	1	0.31%
Unknown	9	2.79%
Not a collision between two vehicles	24	7.43%
Total	**323**	

Alcohol Related Crashes By Classification					
	Non-reportable	Reportable	Personal Injury	Fatality	**Total**
Alcohol Related	0	5	3	0	**8**
Non-Alcohol Related	0	281	33	1	**315**
Total	**0**	**286**	**36**	**1**	**323**

Manner of Impact By Classification					
	Non-Reportable	Reportable	Personal Injury	Fatality	**Total**
Front to rear	0	176	17	0	**193**
Front to front	0	3	2	0	**5**
Angle	0	41	8	0	**49**
Sideswipe, same direction	0	38	2	0	**40**
Sideswipe, opposite direction	0	2	0	0	**2**
Rear to side	0	0	0	0	**0**
Rear to rear	0	0	0	0	**0**
Other	0	1	0	0	**1**
Unknown	0	9	0	0	**9**
Not a collision between two vehicles	0	16	7	1	**24**
Total	**0**	**286**	**36**	**1**	**323**

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Day Of Week		
	# of Crashes	% of Total Crashes
Sunday	45	13.93%
Monday	42	13.00%
Tuesday	50	15.48%
Wednesday	47	14.55%
Thursday	34	10.53%
Friday	50	15.48%
Saturday	55	17.03%
Total	**323**	

Time Of Day (AM)		
	# of Crashes	% of Total Crashes
00:00 - 00:59	7	2.17%
01:00 - 01:59	2	0.62%
02:00 - 02:59	0	0.00%
03:00 - 03:59	1	0.31%
04:00 - 04:59	0	0.00%
05:00 - 05:59	2	0.62%
06:00 - 06:59	7	2.17%
07:00 - 07:59	6	1.86%
08:00 - 08:59	12	3.72%
09:00 - 09:59	9	2.79%
10:00 - 10:59	12	3.72%
11:00 - 11:59	17	5.26%
Total	**75**	

Time Of Day (PM)		
	# of Crashes	% of Total Crashes
12:00 - 12:59	23	7.12%
13:00 - 13:59	26	8.05%
14:00 - 14:59	27	8.36%
15:00 - 15:59	34	10.53%
16:00 - 16:59	22	6.81%
17:00 - 17:59	29	8.98%
18:00 - 18:59	28	8.67%
19:00 - 19:59	15	4.64%
20:00 - 20:59	16	4.95%
21:00 - 21:59	10	3.10%
22:00 - 22:59	11	3.41%
23:00 - 23:59	7	2.17%
Total	**248**	
Unknown Time	0	

Surface Conditions		
	# of Crashes	% of Total Crashes
Dry	250	77.40%
Wet	68	21.05%
Snow	1	0.31%
Ice/Frost	1	0.31%
Sand	0	0.00%
Water (standing, moving)	0	0.00%
Slush	1	0.31%
Oil	0	0.00%
Mud, Dirt, Gravel	0	0.00%
Other	0	0.00%
Unknown	2	0.62%
Total	**323**	

Lighting Conditions		
	# of Crashes	% of Total Crashes
Daylight	222	68.73%
Dawn	1	0.31%
Dusk	4	1.24%
Dark-Lighted	83	25.70%
Dark-Not Lighted	12	3.72%
Dark-Unknown Lighting	0	0.00%
Other	0	0.00%
Unknown	1	0.31%
Total	**323**	

Weather Conditions		
	# of Crashes	% of Total Crashes
Clear	230	71.21%
Cloudy	50	15.48%
Fog, Smog, Smoke	2	0.62%
Rain	34	10.53%
Sleet, Hail (freezing rain or drizzle)	1	0.31%
Snow	3	0.93%
Blowing Snow	0	0.00%
Severe Crosswinds	0	0.00%
Blowing Sand, Soil, Dirt	0	0.00%
Other	1	0.31%
Unknown	2	0.62%
Total	**323**	

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First Harmful Event		
	# of Crashes	% of Total Crashes
Overturn/Rollover, Non-Collision	0	0.00%
Fire/Explosion, Non-Collision	0	0.00%
Immersion, Non-Collision	0	0.00%
Jackknife, Non-Collision	0	0.00%
Cargo/Equipment Loss or Shift, Non-Collision	0	0.00%
Fell/Jumped From Motor Vehicle, Non-Collision	0	0.00%
Thrown or Falling Object, Non-Collision	0	0.00%
Other Non-Collision, Non-Collision	1	0.31%
Pedestrian, Collision With Person, Motor Vehicle, or Non-Fixed	6	1.86%
Pedalcycle, Collision With Person, Motor Vehicle, or Non-Fixed	1	0.31%
Railway Vehicle (train, engine), Collision With Person, Motor Vehicle, or Non-Fixed	0	0.00%
Animal, Collision With Person, Motor Vehicle, or Non-Fixed	2	0.62%
Motor Vehicle in Transport, Collision With Person, Motor Vehicle, or Non-Fixed	272	84.21%
Legally Parked Motor Vehicle, Collision With Person, Motor Vehicle, or Non-Fixed	7	2.17%
Struck by Anything Set in Motion by Vehicle, Collision With Person, Motor Vehicle, or Non-Fixed	0	0.00%
Work Zone / Maintenance Equipment, Collision With Person, Motor Vehicle, or Non-Fixed	0	0.00%
Other Non-Fixed Object, Collision With Person, Motor Vehicle, or Non-Fixed	1	0.31%
Impact Attenuator/Crash Cushion, Collision With Fixed Object	0	0.00%
null, Collision With Fixed Object	0	0.00%
Bridge Pier or Support, Collision With Fixed Object	0	0.00%
Bridge Rail, Collision With Fixed Object	0	0.00%
Cable Barrier, Collision With Fixed Object	0	0.00%
Culvert, Collision With Fixed Object	0	0.00%
Curb, Collision With Fixed Object	4	1.24%
Ditch, Collision With Fixed Object	0	0.00%
Embankment, Collision With Fixed Object	0	0.00%
Guardrail Face, Collision With Fixed Object	1	0.31%
Guardrail End, Collision With Fixed Object	0	0.00%
Concrete Traffic Barrier, Collision With Fixed Object	2	0.62%

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Other Traffic Barrier, Collision With Fixed Object	0	0.00%
Tree (standing), Collision With Fixed Object	0	0.00%
Utility Pole, Collision With Fixed Object	0	0.00%
Light Support, Collision With Fixed Object	0	0.00%
Traffic Sign Support, Collision With Fixed Object	3	0.93%
Overhead Sign Support, Collision With Fixed Object	0	0.00%
Traffic Signal Support, Collision With Fixed Object	0	0.00%
Fence, Collision With Fixed Object	0	0.00%
Mailbox, Collision With Fixed Object	1	0.31%
Other Post, Pole or Support, Collision With Fixed Object	3	0.93%
Other Fixed Object (wall, building, tunnel, etc.), Collision With Fixed Object	1	0.31%
Illegally Parked Motor Vehicle, Collision with person, vehicle, or object not fixe	0	0.00%
Stopped Motor Vehicle, Collision with person, vehicle, or object not fixe	15	4.64%
Unknown, Collision With Fixed Object	3	0.93%
Total	**321**	

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Primary Contributing Circumstance		
	# of Crashes	**% of Total Crashes**
Speeding	0	0.00%
Failed to yield right of way	18	5.57%
Passed Stop Sign	1	0.31%
Disregard Traffic Signal	16	4.95%
Wrong side or wrong way	0	0.00%
Improper passing	0	0.00%
Improper lane change	31	9.60%
Following too close	77	23.84%
Made improper turn	6	1.86%
Driving under the influence	8	2.48%
Driver inattention, distraction, or fatigue	86	26.63%
Driving in a careless or reckless manner	23	7.12%
Driving in an aggressive manner	0	0.00%
Improper backing	7	2.17%
Other improper driving	2	0.62%
Mechanical defects	1	0.31%
Animal in Roadway - Deer	2	0.62%
Animal in Roadway - Other Animal	0	0.00%
Other environmental circumstances - weather, glare	0	0.00%
Roadway circumstances - debris, holes, work zone,	1	0.31%
Other	10	3.10%
Unknown	29	8.98%
Total	**318**	

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Driver Action		
	# of Drivers	**% of Total Crashes**
No Contributing Action	329	51.41%
Failed to yield right of way	22	3.44%
Ran Red Light	13	2.03%
Ran Stop Sign	0	0.00%
Disregard other traffic sign	2	0.31%
Disregard other road markings	0	0.00%
Exceeded authorized speed limit	0	0.00%
Driving too fast for conditions	2	0.31%
Made an improper turn	8	1.25%
Improper backing	6	0.94%
Wrong side or wrong way	0	0.00%
Followed to closely	86	13.44%
Failure to keep in proper lane	22	3.44%
Ran off roadway	1	0.16%
Operating vehicle in erratic, reckless, careless, negligent or aggressive manner	68	10.63%
Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc.	0	0.00%
Over-correcting/over-steering	0	0.00%
Improper Passing	3	0.47%
Other Contributing Action	47	7.34%
Unknown	31	4.84%
Total	**640**	

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CTY	RD	MP	C-MP	DIR	COMP/HQ#	Date	Time	Day	Fat	Inj	AL	LC	WC	SC	FHE	PC	Class	MOI
2013																		
N	00004	5.62	5.62	1	0113040565	05/24/2013	15:37	6	0	0	N	01	01	01	13	99	02	03
N	00214	4.95	4.95	1	0113042495	05/31/2013	09:53	6	0	0	N	01	01	01	13	08	02	01
N	00004	0.83	6.98	2	0113043469	06/03/2013	09:08	2	0	0	N	01	02	02	13	08	02	01
N	00017	5.16	10.81	4	0113044892	06/07/2013	15:35	6	0	0	N	01	04	02	13	12	02	01
N	00004	4.78	4.78	1	0113047128	06/14/2013	21:17	6	0	0	N	04	01	01	13	11	02	01
N	00004	5.26	5.26	1	0113048322	06/18/2013	17:14	3	0	0	N	01	04	02	13	99	02	01
N	00017	5.47	11.12	4	0113049487	06/22/2013	15:19	7	0	0	N	01	01	01	13	11	02	01
N	00017	5.15	10.80	4	0113050377	06/25/2013	17:02	3	0	1	N	01	04	02	13	11	03	01
N	00004	1.49	7.64	2	0113051460	06/28/2013	21:39	6	0	6	N	05	02	02	13	12	03	01
N	00004	5.37	5.37	1	0113051548	06/28/2013	21:37	6	0	0	N	04	02	02	13	08	02	01
N	00017	5.65	11.30	4	0113052015	06/30/2013	17:05	1	0	0	N	01	01	01	13	88	02	01
N	00004	5.13	5.13	1	0113054634	07/09/2013	16:29	3	0	1	N	01	01	01	09	88	03	00
N	00004	5.63	5.63	1	0113056778	07/16/2013	18:02	3	0	0	N	01	01	01	13	07	02	04
N	00017	5.17	10.82	4	0113057044	07/17/2013	17:01	4	0	0	N	01	01	01	13	11	02	01
N	00004	1.26	7.41	2	0113057882	07/20/2013	10:47	7	0	0	N	01	01	01	13	99	02	01
N	00017	5.62	11.27	4	0113059374	07/25/2013	14:33	5	0	0	N	01	01	01	13	07	02	03
N	00004	1.01	7.16	2	0113065047	08/13/2013	12:57	3	0	0	N	01	01	01	13	04	02	03
N	00004	5.58	5.58	1	0113066268	08/17/2013	12:14	7	0	0	N	01	01	01	13	11	02	01
N	00004	4.96	4.96	1	0113066626	08/18/2013	13:59	1	0	0	N	01	02	02	13	12	02	01
N	00004	4.78	4.78	1	0113067232	08/20/2013	17:11	3	0	0	N	01	01	01	10	21	02	00
N	00004	5.32	5.32	1	0113069719	08/28/2013	20:23	4	0	0	N	04	04	02	13	11	02	01
N	00017	5.2	10.85	4	0113069771	08/29/2013	06:31	5	0	1	N	01	03	02	39	12	03	00
N	00017	0.01	0.01	1	0113070794	09/01/2013	15:36	1	0	0	N	01	01	01	13	09	02	03
N	00004	5.29	5.29	1	0113074228	09/13/2013	21:38	6	0	0	N	04	01	01	13	08	02	01
N	00004	4.57	4.57	1	0113074495	09/14/2013	21:07	7	0	0	N	04	01	01	13	09	02	03
N	00221	0.27	5.21	4	0113075457	09/18/2013	16:12	4	0	0	N	01	01	01	13	08	02	01
N	00004	5.37	5.37	1	0113077860	09/26/2013	20:05	5	0	0	N	04	01	01	13	04	02	03
N	00004	5.37	5.37	1	0113079302	10/01/2013	22:00	3	0	0	N	04	01	01	13	02	02	03
N	00004	0.76	6.91	2	0113080432	10/05/2013	17:32	7	0	0	N	01	01	01	13	11	02	01
N	00004	5.54	5.54	1	0113081538	10/09/2013	20:04	4	0	0	N	05	01	01	13	11	02	01
N					0113081727	10/09/2013	10:00	4	0	0	N	01	01	01	14	99	02	99
N	00004	0.78	6.93	2	0113082345	10/12/2013	13:53	7	0	0	N	01	02	01	13	08	02	01
N	00017	0.54	0.54	3	0113083243	10/15/2013	20:21	3	0	0	N	01	01	01	13	11	02	01
N	00004	5.14	5.14	1	0113084541	10/20/2013	14:18	1	0	0	N	01	01	01	13	04	02	03
N	00004	1.6	7.75	2	0113085389	10/23/2013	16:53	4	0	0	N	01	01	01	27	88	02	00
N	00004	0.82	6.97	2	0113086504	10/27/2013	14:30	1	0	0	N	01	01	01	13	07	02	01
N	00004	4.69	4.69	1	0113088191	11/02/2013	14:45	7	0	0	N	01	01	01	13	08	02	01
N	00004	0.9	7.05	2	0113088423	11/03/2013	12:42	1	0	0	N	01	01	01	13	08	02	01
N	00004	0.88	7.03	2	0113088437	11/03/2013	14:05	1	0	0	N	01	01	01	13	12	02	01
N	00004	1.29	7.44	2	0113090887	11/12/2013	15:20	3	0	0	N	01	02	01	13	12	02	01

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CTY	RD	MP	C-MP	DIR	COMP/HQ#	Date	Time	Day	Fat	Inj	AL	LC	WC	SC	FHE	PC	Class	MOI
2013																		
N	00004	5.43	5.43	1	0113091833	11/15/2013	22:20	6	0	1	Y	04	01	01	24	10	03	04
N	00004	0.5	6.65	2	0113091950	11/16/2013	12:17	7	0	0	N	01	02	01	13	04	02	03
N	00004	4.75	4.75	1	0113092240	11/17/2013	13:29	1	0	0	N	01	01	01	13	11	02	01
N	00004	0.77	6.92	2	0113095027	11/27/2013	10:14	4	0	0	N	01	04	02	13	09	02	04
N	00004	5.1	5.10	1	0113095083	11/27/2013	13:19	4	0	0	N	01	04	02	13	12	02	01
N	00004	5.61	5.61	1	0113095200	11/27/2013	19:31	4	0	0	N	04	01	02	13	08	02	01
N	00004	0.87	7.02	2	0113095464	11/28/2013	21:39	5	0	0	N	05	01	01	13	08	02	01
N	00017	5.45	11.10	4	0113095713	11/29/2013	20:39	6	0	0	N	04	01	01	42	99	02	01
N	00017	0.05	0.05	3	0113097280	12/05/2013	18:26	5	0	0	N	04	02	02	13	08	02	01
N	00004	5.56	5.56	1	0113097294	12/05/2013	19:16	5	0	0	N	04	04	02	13	07	02	01
N	00017	5.34	10.99	4	0113097937	12/07/2013	19:43	7	0	1	N	05	01	01	13	11	03	01
N	00004	5.15	5.15	1	0113099823	12/13/2013	12:58	6	0	0	N	01	01	02	13	11	02	01
N	00017	5.11	10.76	4	0113099853	12/13/2013	14:27	6	0	0	N	01	01	01	13	08	02	01
N	00004	5.32	5.32	1	0113100706	12/16/2013	20:14	2	0	0	N	04	01	01	13	07	02	04
N	00004	0.7	6.85	2	0113101035	12/18/2013	06:22	4	0	0	N	01	01	01	13	11	02	04
N	00004	5.65	5.65	1	0113101037	12/18/2013	06:39	4	0	0	N	05	02	02	13	11	02	01
N	00004	4.81	4.81	1	0113101545	12/19/2013	19:21	5	0	3	N	04	02	01	13	02	03	03
N	00214	4.95	4.95	1	0113101546	12/19/2013	19:22	5	0	0	N	04	01	01	13	99	02	01
N	00017	5.65	11.30	4	0113102140	12/21/2013	15:32	7	0	0	N	01	01	01	13	09	02	04
N	00004	1.24	7.39	2	0113102143	12/21/2013	15:46	7	0	0	N	01	01	01	13	08	02	01
N	00004	4.9	4.90	1	0113102169	12/21/2013	17:01	7	0	0	N	04	01	01	13	08	02	01
N	00004	5.65	5.65	1	0113102477	12/22/2013	18:14	1	0	0	N	04	04	02	13	12	02	01
N	00017	5.16	10.81	4	0113102688	12/23/2013	13:02	2	0	0	N	01	04	02	13	08	02	01
N	00004	4.81	4.81	1	0113102710	12/23/2013	14:08	2	0	0	N	01	04	02	13	11	02	01
N	00017	0.52	0.52	3	0113102857	12/23/2013	23:10	2	0	0	Y	04	01	01	13	10	02	01
N	00017	5.47	11.12	4	0113103215	12/25/2013	12:09	4	0	0	N	01	01	01	13	11	02	01
2014																		
N	00004	5.37	5.37	3	0114002302	01/08/2014	21:37	4	0	0	N	04	01	01	13	08	02	01
N	00017	0.52	0.52	3	0114006087	01/22/2014	17:02	4	0	0	N	04	01	01	13	08	02	01
N	00004	1	7.15	2	0114006192	01/23/2014	07:47	5	0	0	N	01	01	01	13	08	02	01
N	00004	0.73	6.88	2	0114006292	01/23/2014	13:22	5	0	0	N	01	01	01	13	08	02	01
N	00004	4.58	4.58	1	0114006368	01/23/2014	18:01	5	0	0	N	04	01	04	13	02	02	03
N	00004	0.49	6.64	2	0114007317	01/27/2014	15:16	2	0	0	Y	01	02	01	13	08	02	01
N	00017	5.65	11.30	4	0114008205	01/30/2014	21:59	5	0	0	N	04	01	01	13	11	02	01
N	00017	5.47	11.12	4	0114008382	01/31/2014	15:55	6	0	0	N	01	01	01	13	02	02	04
N	00004	4.78	4.78	1	0114010711	02/09/2014	17:41	1	0	0	N	04	06	03	13	12	02	01
N	00004	5.09	5.09	1	0114010995	02/10/2014	16:17	2	0	0	N	01	01	01	13	99	02	01
N	00017	0.01	0.01	3	0114011222	02/11/2014	14:36	3	0	0	N	01	01	01	13	07	02	04
N	00004	0.68	6.83	2	0114011509	02/12/2014	14:46	4	0	0	N	01	01	01	13	08	02	01
N	00004	1.38	7.53	2	0114013001	02/18/2014	08:16	3	0	0	N	01	02	02	13	08	02	01
N	00017	5.16	10.81	4	0114013572	02/20/2014	08:58	5	0	0	N	01	01	01	13	11	02	01

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CTY	RD	MP	C-MP	DIR	COMP/HQ#	Date	Time	Day	Fat	Inj	AL	LC	WC	SC	FHE	PC	Class	MOI
2014																		
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N	00017	0.52	0.52	3	0114017902	03/08/2014	16:02	7	0	0	N	01	01	01	13	08	02	01
N	00004	5.01	5.01	1	0114023692	03/30/2014	13:21	1	0	0	N	01	04	02	13	99	02	01
N					0114023900	03/31/2014	11:41	2	0	0	N	01	01	01	14	99	02	99
N	00004	1.56	7.71	2	0114025842	04/07/2014	14:59	2	0	0	N	01	04	02	13	99	02	01
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N	00004	1.32	7.47	2	0114025896	04/07/2014	17:49	2	0	0	N	01	04	02	13	11	02	01
N	00017	0.01	0.01	1	0114026074	04/08/2014	14:14	3	0	0	N	01	01	01	13	11	02	01
N					0114027224	04/11/2014	22:45	6	0	1	N	04	04	02	42	11	03	01
N	00017	0	0.00	2	0114028114	04/15/2014	08:48	3	0	0	N	01	04	02	42	12	02	01
N	00017	5.17	10.82	4	0114028164	04/15/2014	00:00	3	0	1	N	01	04	02	42	12	03	01
N	00004	5.65	5.65	1	0114028281	04/15/2014	18:11	3	0	0	N	01	04	02	42	11	02	01
N					0114029069	04/16/2014	12:00	4	0	0	N	01	01	01	14	99	02	99
N					0114029888	04/21/2014	18:27	2	0	0	N	01	01	01	14	99	02	99
N	00017	5.64	11.29	4	0114030293	04/23/2014	11:49	4	0	0	N	01	01	01	13	14	02	01
N	00004	1.52	7.67	2	0114033734	05/05/2014	15:02	2	0	0	N	01	01	01	13	08	02	01
N	00004	1.01	7.16	2	0114033967	05/06/2014	12:28	3	0	1	N	01	01	01	13	15	03	03
N	00004	5.43	5.43	1	0114034033	05/06/2014	15:55	3	0	0	N	01	01	01	08	08	02	04
N	00017	0.23	0.23	3	0114034898	05/09/2014	18:20	6	0	0	N	01	01	01	13	08	02	01
N	00004	0.77	6.92	2	0114036251	05/13/2014	22:38	3	0	1	N	04	01	01	13	11	03	01
N	00004	0.5	6.65	2	0114036338	05/14/2014	10:54	4	0	0	N	01	01	01	13	04	02	03
N	00004	5.65	5.65	1	0114040697	05/29/2014	11:52	5	0	0	N	01	02	01	13	88	02	03
N	00214	4.96	4.96	1	0114042028	06/02/2014	23:43	2	0	0	N	04	01	01	29	88	02	00
N	00004	5.41	5.41	1	0114042368	06/04/2014	00:07	4	0	0	N	04	02	02	29	88	02	00
N	00004	1.56	7.71	2	0114042505	06/04/2014	13:22	4	0	0	N	01	01	01	13	11	02	01
N					0114043490	06/06/2014	09:42	6	0	0	N	01	01	01	13	99	02	03
N	00017	0.01	0.01	1	0114044327	06/09/2014	23:26	2	0	1	N	04	01	01	13	04	03	02
N	00004	4.77	4.77	1	0114046575	06/17/2014	13:38	3	0	0	N	01	01	01	13	11	02	01
N	00017	0.39	0.39	3	0114047585	06/20/2014	17:42	6	0	0	N	01	01	01	13	03	02	03
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N	00004	5.43	5.43	1	0114050210	06/29/2014	11:54	1	0	0	N	01	01	01	38	12	02	03
N	00017	5.56	11.21	4	0114056038	07/17/2014	22:16	5	0	1	N	04	01	01	09	21	03	00
N	00004	1.34	7.49	2	0114057951	07/24/2014	11:33	5	0	0	N	01	02	01	13	08	02	01
N	00017	0.55	0.55	3	0114060299	08/01/2014	13:00	6	0	0	N	01	01	01	13	11	02	01
N	00004	0.5	6.65	2	0114060929	08/03/2014	14:42	1	0	0	N	01	04	02	13	09	02	03
N	00017	5.17	10.82	4	0114061146	08/04/2014	11:22	2	0	0	N	01	01	01	13	88	02	04
N	00004	1.56	7.71	2	0114061240	08/04/2014	15:56	2	0	0	N	01	01	01	13	08	02	01
N	00017	0.21	0.21	3	0114062839	08/09/2014	17:59	7	0	0	N	01	01	01	13	11	02	01
N	00017	0.52	0.52	3	0114063433	08/11/2014	18:14	2	0	0	N	01	01	01	13	11	02	01

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CTY	RD	MP	C-MP	DIR	COMP/HQ#	Date	Time	Day	Fat	Inj	AL	LC	WC	SC	FHE	PC	Class	MOI
2014																		
N	00004	5.37	5.37	1	0114064610	08/15/2014	14:55	6	0	0	N	01	01	01	13	14	02	01
N	00004	4.76	4.76	1	0114065758	08/19/2014	09:41	3	0	0	N	01	01	01	13	08	02	01
N	00004	4.58	4.58	1	0114067138	08/23/2014	12:30	7	0	0	N	01	01	01	13	02	02	03
N	00004	1.41	7.56	2	0114067885	08/25/2014	23:20	2	0	0	Y	04	01	01	13	10	02	01
N					0114068240	08/27/2014	08:07	4	1	0	N	01	01	01	09	21	04	00
N	00004	4.81	4.81	1	0114069277	08/30/2014	16:43	7	0	0	N	01	01	01	13	02	02	03
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N					0114071305	09/06/2014	15:02	7	0	0	N	01	01	01	99	99	02	99
N	00004	0.77	6.92	2	0114071331	09/06/2014	16:51	7	0	0	N	01	02	01	13	08	02	01
N	00004	0.66	6.81	2	0114072100	09/09/2014	14:52	3	0	0	N	01	02	01	13	11	02	01
N	00004	1.02	7.17	2	0114072306	09/10/2014	10:57	4	0	0	N	01	01	01	13	99	02	01
N	00004	4.52	4.52	1	0114073482	09/14/2014	13:21	1	0	0	N	01	01	01	13	11	02	01
N					0114075288	09/20/2014	18:37	7	0	0	N	01	01	01	13	99	02	99
N	00004	1.01	7.16	2	0114075710	09/22/2014	13:34	2	0	2	N	01	01	01	42	11	03	01
N	00004	5.35	5.35	1	0114076220	09/24/2014	08:29	4	0	1	N	01	01	01	13	08	03	02
N	00004	1.01	7.16	2	0114076340	09/24/2014	16:13	4	0	0	N	01	01	01	13	02	02	03
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N	00004	4.68	4.68	1	0114081252	10/11/2014	20:12	7	0	0	N	04	01	01	13	11	02	01
N	00004	1.38	7.53	2	0114081940	10/14/2014	11:57	3	0	1	N	01	01	01	13	08	03	03
N	00004	5.59	5.59	1	0114082154	10/15/2014	06:31	4	0	0	N	05	01	01	12	17	02	00
N	00004	5.37	5.37	1	0114083885	10/20/2014	15:21	2	0	0	N	01	02	01	13	11	02	01
N	00017	5.54	11.19	4	0114086897	10/30/2014	18:51	5	0	0	N	04	02	01	13	08	02	01
N	00017	5.66	11.31	2	0114087152	10/31/2014	15:01	6	0	1	N	01	02	01	13	10	03	01
N	00214	4.95	4.95	1	0114087700	11/02/2014	13:20	1	0	0	N	01	01	01	13	08	02	01
N	00004	0.78	6.93	2	0114088895	11/06/2014	15:00	5	0	0	N	01	01	01	13	07	02	04
N	00017	0.52	0.52	3	0114089115	11/07/2014	12:01	6	0	0	N	01	04	02	13	08	02	01
N	00004	0.75	6.90	2	0114090325	11/11/2014	17:40	3	0	0	N	04	01	01	13	07	02	04
N	00004	4.57	4.57	1	0114090341	11/11/2014	18:28	3	0	0	N	04	01	01	13	07	02	03
N	00017	5.16	10.81	4	0114090507	11/12/2014	10:17	4	0	0	N	01	01	01	13	02	02	03
N	00017	0.11	0.11	3	0114091839	11/16/2014	17:53	1	0	0	N	04	04	02	13	02	02	03
N					0114094336	11/25/2014	12:31	3	0	0	N	01	02	01	13	99	02	05
N	00017	5.45	11.10	4	0114095031	11/28/2014	05:43	6	0	1	N	04	01	01	09	21	03	00
N	00004	4.6	4.60	1	0114095075	11/28/2014	09:25	6	0	0	N	01	01	01	13	11	02	01
N	00004	5	5.00	1	0114095432	11/29/2014	13:54	7	0	0	N	01	01	01	13	11	02	01
N	00004	0.71	6.86	2	0114095867	12/01/2014	08:35	2	0	0	N	01	01	01	13	07	02	04
N	00004	4.57	4.57	1	0114096698	12/04/2014	06:03	5	0	1	N	01	01	01	40	88	03	00
N	00004	1.15	7.30	2	0114097520	12/06/2014	17:44	7	0	0	N	04	04	02	13	12	02	01
N	00004	1.45	7.60	2	0114097608	12/06/2014	23:46	7	0	0	N	04	04	02	13	14	02	03
N					0114097992	12/08/2014	17:16	2	0	0	N	04	01	01	14	99	02	04
N					0114097998	12/07/2014	14:40	1	0	0	N	01	01	01	14	88	02	04

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CTY	RD	MP	C-MP	DIR	COMP/HQ#	Date	Time	Day	Fat	Inj	AL	LC	WC	SC	FHE	PC	Class	MOI
2014																		
N					0114098258	12/04/2014	20:00	5	0	0	N	99	99	99	99	99	02	99
N	00004	1.57	7.72	2	0114098614	12/10/2014	20:47	4	0	0	N	04	01	01	12	17	02	00
N	00004	5.14	5.14	1	0114099277	12/13/2014	08:52	7	0	0	N	01	01	01	13	11	02	01
N	00017	5.47	11.12	4	0114099337	12/13/2014	12:43	7	0	0	N	01	01	01	13	11	02	01
N	00017	5.41	11.06	4	0114099393	12/13/2014	15:13	7	0	0	N	01	01	01	13	08	02	01
N					0114099407	12/13/2014	16:14	7	0	0	N	01	01	01	13	99	02	99
N	00017	0.17	0.17	3	0114099441	12/13/2014	18:03	7	0	0	N	05	02	01	13	08	02	01
N	00017	5.16	10.81	4	0114099933	12/15/2014	19:36	2	0	0	N	01	01	01	13	99	02	01
N	00004	0.69	6.84	2	0114101709	12/21/2014	16:52	1	0	0	N	03	01	01	13	11	02	01
N	00004	4.58	4.58	1	0114102305	12/23/2014	14:46	3	0	0	N	01	04	02	13	11	02	03
N					0114103422	12/27/2014	14:46	7	0	0	N	01	01	01	14	14	02	05
N	00004	1.01	7.16	2	0114103509	12/27/2014	18:49	7	0	4	N	04	01	01	13	07	03	01
N	00004	4.85	4.85	1	0114103955	12/29/2014	15:31	2	0	0	N	01	01	01	13	08	02	01
N	00004	4.78	4.78	1	0114104301	12/30/2014	19:09	3	0	0	N	04	01	01	13	88	02	01
2015																		
N	00017	0.01	0.01	1	0115000682	01/03/2015	22:19	7	0	0	N	04	02	02	13	08	02	01
N	00017	0.52	0.52	3	0115001504	01/06/2015	20:52	3	0	0	N	04	02	02	13	12	02	03
N	00004	4.57	4.57	1	0115001769	01/07/2015	18:20	4	0	0	N	04	01	01	13	07	02	04
N	00214	4.94	4.94	1	0115004855	01/18/2015	18:46	1	0	0	N	04	04	02	13	02	02	03
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N	00004	4.58	4.58	1	0115005386	01/20/2015	18:36	3	0	0	N	04	01	01	13	11	02	01
N	00004	0.77	6.92	2	0115008069	01/31/2015	00:49	7	0	0	N	04	01	01	13	11	02	01
N	00004	5.12	5.12	1	0115009161	02/04/2015	07:48	4	0	0	N	01	01	01	42	08	02	01
N	00004	1.59	7.74	2	0115010151	02/07/2015	19:38	7	0	2	Y	04	01	01	13	10	03	01
N					0115010634	02/09/2015	22:02	2	0	0	N	04	02	02	13	14	02	01
N	00004	0.47	6.62	2	0115010755	02/10/2015	11:36	3	0	0	N	01	01	01	13	07	02	04
N	00017	5.41	11.06	4	0115011910	02/14/2015	13:42	7	0	0	N	01	06	02	13	08	02	01
N	00017	5.5	11.15	4	0115011915	02/14/2015	13:59	7	0	0	N	01	02	02	13	07	02	01
N	00004	0.78	6.93	3	0115011951	02/14/2015	16:58	7	0	0	N	01	02	02	13	99	02	04
N	00004	5.07	5.07	1	0115012305	02/15/2015	15:16	1	0	0	N	01	01	01	13	07	02	04
N					0115013438	02/19/2015	15:37	5	0	0	N	05	99	99	13	99	02	03
N	00004	4.68	4.68	1	0115013593	02/20/2015	05:30	6	0	1	N	05	01	01	09	21	03	00
N	00017	0.54	0.54	3	0115014394	02/22/2015	11:04	1	0	0	N	01	02	02	13	04	02	03
N	00004	0.98	7.13	2	0115015183	02/25/2015	11:30	4	0	3	N	01	01	01	13	11	03	01
N	00017	5.45	11.10	4	0115015965	02/28/2015	08:12	7	0	0	N	01	01	01	13	11	02	01
N	00017	5.19	10.84	4	0115016638	03/02/2015	17:14	2	0	0	N	01	01	01	13	07	02	01
N	00017	0	0.00	2	0115021692	03/20/2015	17:40	6	0	0	N	01	05	07	13	08	02	01
N	00004	5.31	5.31	1	0115023680	03/28/2015	15:19	7	0	0	N	01	01	01	13	02	02	04
N	00004	5.59	5.59	1	0115025167	04/03/2015	13:26	6	0	0	N	01	04	02	13	07	02	04
N	00004	4.78	4.78	1	0115025320	04/03/2015	21:41	6	0	0	N	04	02	02	13	08	02	01
N	00017	5.42	11.07	4	0115026833	04/10/2015	09:57	6	0	0	N	01	03	02	13	12	02	01

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CTY	RD	MP	C-MP	DIR	COMP/HQ#	Date	Time	Day	Fat	Inj	AL	LC	WC	SC	FHE	PC	Class	MOI
2015																		
N	00004	5.65	5.65	1	0115027634	04/13/2015	11:32	2	0	0	N	01	01 - 01	01	13	08	02	01
N	00004	1.28	7.43	2	0115028847	04/17/2015	19:08	6	0	0	N	01	01	01	13	07	02	04
N	00004	4.55	4.55	1	0115029011	04/18/2015	11:29	7	0	0	N	01	01	01	13	08	02	01
N	00004	5.39	5.39	1	0115029450	04/20/2015	07:55	2	0	0	N	01	04	02	13	07	02	04
N	00214	4.96	4.96	3	0115029537	04/20/2015	13:20	2	0	1	N	01	01	01	24	04	03	03
N	00017	0.53	0.53	3	0115032010	04/29/2015	14:47	4	0	0	N	01	01	01	13	02	02	04
N	00004	1.01	7.16	2	0115035230	05/10/2015	15:18	1	0	0	N	01	02	01	13	07	02	04
N	00221	4.93	4.93	3	0115037264	05/17/2015	13:43	1	0	0	N	01	02	01	13	11	02	01
N	00004	1.38	7.53	2	0115037757	05/19/2015	07:26	3	0	0	N	01	02	02	13	12	02	03
N	00017	0.52	0.52	3	0115039126	05/23/2015	20:43	7	0	0	N	04	01	01	13	14	02	03
N					0115039267	05/24/2015	13:07	1	0	0	N	01	01 - 01	01	13	07	02	04
N	00004	5.05	5.05	1	0115040526	05/28/2015	15:29	5	0	0	N	01	02	01	13	11	02	01
N	00004	0.74	6.89	2	0115041471	05/31/2015	15:35	1	0	0	N	01	01	01	13	11	02	01
N	00017	0.46	0.46	3	0115042460	06/03/2015	12:15	4	0	0	N	01	01	01	34	12	02	00
N	00004	0.77	6.92	4	0115043719	06/07/2015	17:05	1	0	0	N	01	01	01	13	09	02	01
N	00004	1.15	7.30	2	0115043742	06/07/2015	19:15	1	0	0	N	01	88	01	13	11	02	01
N	00004	0.78	6.93	2	0115044804	06/11/2015	07:50	5	0	0	N	01	01	01	13	11	02	01
N	00004	0.77	6.92	2	0115045165	06/12/2015	09:43	6	0	2	N	01	01	01	13	04	03	03
N	00017	0.54	0.54	3	0115045641	06/13/2015	16:18	7	0	1	N	01	01	01	13	11	03	01
N	00004	0.77	6.92	2	0115046054	06/15/2015	08:14	2	0	0	N	01	02	02	13	08	02	01
N	00004	5.38	5.38	1	0115046240	06/15/2015	18:26	2	0	0	N	01	01	01	13	12	02	03
N	00214	4.93	4.93	1	0115049696	06/26/2015	08:36	6	0	0	N	01	02	01	13	07	02	04
N	00004	5.64	5.64	1	0115049881	06/26/2015	18:30	6	0	0	N	01	01	01	13	11	02	01
N	00004	4.62	4.62	1	0115050122	06/27/2015	13:06	7	0	0	N	01	04	02	13	08	02	01
N	00017	0.55	0.55	3	0115051262	07/01/2015	01:32	4	0	0	N	04	01	02	24	11	02	00
N	00004	5.37	5.37	1	0115051574	07/01/2015	22:25	4	0	0	N	04	01	01	13	08	02	03
N	00017	5.66	11.31	2	0115052608	07/05/2015	15:56	1	0	0	N	01	01	01	13	04	02	03
N	00214	4.96	4.96	1	0115053287	07/07/2015	18:19	3	0	2	N	01	01	01	13	11	03	03
N	00004	0.49	6.64	2	0115053561	07/08/2015	15:47	4	0	1	N	01	02	01	13	11	03	04
N	00004	1.32	7.47	2	0115053594	07/08/2015	00:00	4	0	0	N	01	01	01	13	08	02	01
N	00004	4.68	4.68	1	0115058589	07/24/2015	17:53	6	0	0	N	01	01	01	13	11	02	01
N	00017	0.01	0.01	3	0115059168	07/26/2015	18:02	1	0	0	N	01	01	01	13	04	02	03
N	00004	5.42	5.42	1	0115060989	08/01/2015	09:28	7	0	0	N	01	01	01	13	11	02	01
N	00004	5.38	5.38	1	0115065815	08/17/2015	06:25	2	0	0	N	02	01	01	34	11	02	00
N	00017	0.01	0.01	1	0115066569	08/19/2015	14:40	4	0	0	N	01	01	01	13	10	02	01
N	00004	0.75	6.90	2	0115066647	08/19/2015	17:48	4	0	0	N	01	01	01	42	11	02	01
N	00004	1.57	7.72	2	0115067202	08/21/2015	12:51	6	0	0	N	01	01	01	13	08	02	01
N	00017	5.65	11.30	4	0115067754	08/23/2015	13:06	1	0	0	N	01	01	01	13	08	02	02
N	00004	5.69	5.69	1	0115069631	08/29/2015	16:12	7	0	0	N	01	01	01	13	16	02	00
N	00017	0.52	0.52	3	0115070005	08/30/2015	18:57	1	0	0	N	03	01	01	99	99	02	99

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CTY	RD	MP	C-MP	DIR	COMP/HQ#	Date	Time	Day	Fat	Inj	AL	LC	WC	SC	FHE	PC	Class	MOI
2015																		
N	00004	0.76	6.91	2	0115070460	08/31/2015	23:45	2	0	0	N	05	01	01	13	08	02	01
N	00017	5.65	11.30	4	0115071958	09/05/2015	10:14	7	0	0	N	01	01	01	13	11	02	01
N					0115072070	09/05/2015	16:00	7	0	0	N	01	01	01	13	12	02	01
N	00004	1	7.15	2	0115073282	09/09/2015	13:33	4	0	0	N	01	01	01	13	08	02	01
N	00017	5.48	11.13	4	0115074545	09/13/2015	13:59	1	0	0	N	01	01	01	13	11	02	01
N	00004	4.57	4.57	1	0115075031	09/15/2015	10:05	3	0	1	N	01	01	01	13	08	03	01
N	00004	0.76	6.91	2	0115075045	09/15/2015	11:10	3	0	0	N	01	01	01	13	11	02	01
N	00004	5.37	5.37	1	0115076189	09/18/2015	17:06	6	0	0	N	01	01	01	13	08	02	01
N	00004	5.11	5.11	1	0115076242	09/18/2015	20:23	6	0	0	N	04	01	01	13	08	02	01
N	00004	5.45	5.45	1	0115076508	09/19/2015	18:18	7	0	0	N	01	01	01	13	08	02	01
N	00004	1.01	7.16	2	0115077252	09/22/2015	11:16	3	0	0	N	01	01	01	13	11	02	01
N	00017	5.48	11.13	4	0115078449	09/26/2015	03:13	7	0	0	Y	04	01	01	24	10	02	00
N					0115078885	09/27/2015	19:50	1	0	1	N	04	01	01	13	11	03	01
N	00004	1.57	7.72	2	0115079512	09/29/2015	18:35	3	0	0	N	03	02	01	13	04	02	03
N	00004	0.89	7.04	2	0115080776	10/03/2015	18:20	7	0	1	Y	04	01	02	13	08	03	01
N	00004	5.37	5.37	1	0115081685	10/06/2015	14:55	3	0	0	N	01	01	01	13	02	02	02
N	00221	4.94	4.94	3	0115083735	10/13/2015	11:02	3	0	0	N	01	02	02	13	12	02	04
N	00214	4.96	4.96	1	0115084302	10/14/2015	22:19	4	0	0	N	04	01	01	39	99	02	00
N	00004	1.44	7.59	2	0115086927	10/23/2015	15:58	6	0	0	N	01	01	01	13	07	02	04
N	00004	1.09	7.24	2	0115088056	10/27/2015	12:00	3	0	0	N	01	01	01	13	07	02	04
N	00017	5.4	11.05	4	0115089107	10/30/2015	17:02	6	0	0	N	01	01	01	13	08	02	01
N	00004	1.57	7.72	2	0115089446	10/31/2015	17:36	7	0	1	N	04	01	01	13	10	03	03
N	00017	5.47	11.12	4	0115090053	11/02/2015	17:11	2	0	0	N	05	01	01	13	12	02	01
N	00004	1.01	7.16	2	0115090075	11/02/2015	17:55	2	0	2	N	05	01	01	13	15	03	03
N	00004	4.67	4.67	1	0115096182	11/21/2015	00:00	7	0	0	N	01	01	01	13	08	02	01
N	00004	5.15	5.15	1	0115096927	11/24/2015	10:38	3	0	0	N	01	01	01	13	14	02	88
N	00004	5.24	5.24	1	0115097343	11/25/2015	15:41	4	0	0	N	01	01	01	42	11	02	01
N	00004	0.77	6.92	2	0115097708	11/26/2015	23:53	5	0	0	N	04	02	01	42	08	02	01
N	00004	5.19	5.19	1	0115097868	11/25/2015	16:00	4	0	0	N	01	01	01	13	99	02	03
N	00017	0.01	0.01	1	0115098315	11/29/2015	01:34	1	0	0	N	04	01	02	13	11	02	01
N	00017	5.19	10.84	4	0115099334	12/02/2015	12:38	4	0	0	N	01	04	02	39	12	02	00
N	00004	4.6	4.60	1	0115100467	12/05/2015	16:55	7	0	0	N	03	01	01	13	11	02	01
N	00004	1	7.15	2	0115100661	12/06/2015	10:01	1	0	0	N	01	01	01	13	07	02	04
N	00214	4.96	4.96	1	0115101098	12/07/2015	19:29	2	0	0	N	04	01	01	13	99	02	01
N	00017	5.64	11.29	4	0115102110	12/10/2015	14:50	5	0	0	N	01	01	01	42	11	02	01
N	00017	5.5	11.15	4	0115103349	12/14/2015	17:39	2	0	0	N	04	04	02	13	08	02	01
N	00221	4.94	4.94	3	0115104084	12/16/2015	17:47	4	0	0	N	04	01	01	13	08	02	01
N	00004	5.58	5.58	1	0115104123	12/16/2015	19:26	4	0	0	N	04	01	01	13	07	02	04
N	00004	5.38	5.38	1	0115104567	12/18/2015	07:06	6	0	0	N	01	01	01	34	07	02	00
N	00017	5.47	11.12	4	0115105377	12/20/2015	15:02	1	0	0	N	01	01	01	13	08	02	01

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CTY	RD	MP	C-MP	DIR	COMP/HQ#	Date	Time	Day	Fat	Inj	AL	LC	WC	SC	FHE	PC	Class	MOI
2015																		
N	00004	5.33	5.33	1	0115105441	12/20/2015	18:56	1	0	0	N	04	01	01	13	08	02	01
N	00017	0.01	0.01	3	0115105797	12/21/2015	20:40	2	0	0	N	04	01	01	13	02	02	03
N	00017	5.16	10.81	4	0115105980	12/22/2015	15:01	3	0	0	N	01	01	01	13	11	02	01
N	00004	0.78	6.93	2	0115106018	12/22/2015	16:45	3	0	0	Y	04	02	02	13	11	02	01
N	00017	5.42	11.07	4	0115106028	12/22/2015	16:19	3	0	0	N	04	02	02	13	08	02	01
N	00004	4.81	4.81	1	0115106569	12/24/2015	08:23	5	0	0	N	01	04	02	13	04	02	03
N	00017	5.57	11.22	4	0115106627	12/24/2015	11:29	5	0	0	N	01	04	02	13	08	02	01
N	00004	1.57	7.72	2	0115106648	12/24/2015	12:13	5	0	0	N	01	01	02	13	99	02	01
N	00004	4.77	4.77	1	0115106721	12/24/2015	15:18	5	0	0	N	01	02	02	13	08	02	01
N	00017	5.65	11.30	4	0115106758	12/24/2015	15:55	5	0	0	N	04	01	02	13	08	02	01
N	00004	0.74	6.89	2	0115107161	12/26/2015	12:34	7	0	0	N	01	02	01	42	11	02	01
2016																		
N	00004	4.76	4.76	1	0116002960	01/11/2016	11:04	2	0	0	N	01	01	01	13	11	02	01
N	00004	1.2	7.35	2	0116005153	01/18/2016	13:13	2	0	0	N	01	01	01	13	11	02	01
N	00004	1.01	7.16	2	0116005393	01/19/2016	06:57	3	0	0	N	01	01	01	13	11	02	01
N	00004	5.36	5.36	1	0116006471	01/22/2016	14:06	6	0	0	N	01	02	01	13	08	02	01
N	00017	0.01	0.01	1	0116007092	01/24/2016	22:38	1	0	0	N	04	01	02	13	08	02	01
N	00004	5.06	5.06	1	0116009266	01/31/2016	18:31	1	0	2	N	04	01 - 01	01	13	08	03	01
N	00004	0.5	6.65	2	0116010854	02/05/2016	14:46	6	0	0	N	01	01	01	13	11	02	01
N					0116012144	02/09/2016	17:31	3	0	0	N	04	06	02	13	20	02	01
N	00017	0.49	0.49	3	0116013111	02/12/2016	14:40	6	0	0	N	01	02	01	13	08	02	01
N	00017	0.23	0.23	3	0116016137	02/21/2016	18:11	1	0	0	N	04	01	01	17	11	02	00
N	00004	5.13	5.13	1	0116017080	02/24/2016	13:31	4	0	0	N	01	04	02	13	08	02	01
N	00017	5.12	10.77	4	0116020716	03/06/2016	14:20	1	0	0	N	01	02	01	13	11	02	01
N	00017	5.12	10.77	4	0116020733	03/06/2016	15:28	1	0	0	N	01	02	01	13	11	02	01
N	00017	0.01	0.01	1	0116021262	03/08/2016	09:32	3	0	0	N	01	01	01	13	07	02	04
N	00004	0.76	6.91	2	0116022355	03/11/2016	12:44	6	0	2	N	01	01	01	13	08	03	01
N					0116022422	03/11/2016	00:00	6	0	0	N	01	01	01	09	11	02	00
N	00004	1.52	7.67	2	0116022837	03/12/2016	19:53	7	0	0	N	04	01	01	13	08	02	01
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N	00004	4.62	4.62	1	0116027133	03/25/2016	20:01	6	0	1	N	04	01	01	13	02	03	00
N	00004	5.65	5.65	1	0116028352	03/30/2016	08:48	4	0	0	N	01	01	01	13	12	02	01
N	00004	0.98	7.13	2	0116031932	04/10/2016	12:53	1	0	0	N	01	01	01	13	11	02	01
N	00017	0.25	0.25	3	0116033145	04/14/2016	15:20	5	0	0	N	01	01	01	13	11	02	01
N	00221	0.27	5.21	4	0116033498	04/15/2016	16:18	6	0	0	N	01	01	01	13	04	02	01
N	00004	1.02	7.17	2	0116034645	04/19/2016	14:05	3	0	0	N	01	01	01	13	07	02	04
N	00004	1.02	7.17	2	0116034773	04/19/2016	21:02	3	0	0	N	04	01	01	42	11	02	01
N	00017	0.01	0.01	3	0116035195	04/21/2016	12:07	5	0	0	N	01	02	01	13	02	02	04
N	00017	0.01	0.01	3	0116035209	04/21/2016	12:28	5	0	0	N	01	01	01	13	11	02	04
N	00017	5.65	11.30	4	0116035504	04/22/2016	10:51	6	0	0	N	01	01	01	13	04	02	03
N	00017	5.45	11.10	4	0116035911	04/23/2016	12:02	7	0	0	N	01	04	02	13	02	02	03

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CTY	RD	MP	C-MP	DIR	COMP/HQ#	Date	Time	Day	Fat	Inj	AL	LC	WC	SC	FHE	PC	Class	MOI
2016																		
N	00004	1.42	7.57	2	0116037470	04/28/2016	16:45	5	0	0	N	01	02	01	13	08	02	01
N	00004	5.32	5.32	1	0116037741	04/29/2016	14:26	6	0	0	N	01	02	01	13	07	02	04
N	00214	4.96	4.96	3	0116040640	05/08/2016	20:30	1	0	0	N	04	01	01	13	04	02	02

Report generated by TDTSSWN at 2016-05-24 07:09:00.938

Report Legend

Cty - County
Rd - Maintenance Road
MP - Milepoint
C-MP - Continuous Milepoint
Dir - Direction of Highway
COMP/HQ# - Complaint Number/Headquarters Number
DAY - Day Of Week Code
Fat - Fatality
Inj - Injury
AL - Alcohol Involved
LC - Lighting Condition
WC - Weather Condition
SC - Surface Condition
MHE - Most Harmful Event
PC - Primary Contributing Circumstance
Class - Report Classification
MOI - Manner of Impact

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