

CONSTRUCTION PLANS

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Soil Erosion Notes:

(NO SPECIFIC PAYMENT WILL BE MADE FOR SOIL EROSION CONTROL. THE PRICE FOR ALL SOIL EROSION CONTROL SHALL BE INCLUDED IN THE PRICE OF VARIOUS ITEMS IN THE PROPOSAL.)

- Contractor shall install all soil erosion and sediment control measures necessary of site; i.e. sediment barrier for soil retention, inlet protection structures, dust control, etc. All soil erosion and sediment control measures shall be in compliance with Chapter 3 and 4 of the Standards for Soil Erosion and Sediment Control in New Jersey adopted in July 1999 and as amended.
- All soil erosion and sediment control measures shall be installed before all other work on the site, at the locations as noted on the construction plans.
- All erosion and sediment control practices shall be left in place until construction is complete or the area is stabilized in accordance with the Soil Conservation District recommendations and to the County Engineer's satisfaction.
- Stabilization with Mulch Only – When seasons and other conditions are not suitable for growing an erosion-resistant cover (November 1st through April 1st, and May 15th through August 15th) all exposed areas will be stabilized with mulch, salt hay or straw and will be applied at a rate of 80%/2,000 S.F. and anchored immediately after placement to minimize loss by wind or water. Stabilization with mulch will comply with Section 3.31 of said Standards, including details of anchoring mulch.

Permanent vegetation cover— After final grading is completed a permanent vegetative cover will be used to stabilize the soil consisting of the following in the areas designated on the construction plans:

- Sodding placed in accordance with Sections 806, 810, 813 & 909 of the N.J.D.O.T. Standard Specifications with a 1-2-2 ratio fertilizer, applied at a rate necessary to yield 50 pounds of nitrogen per acre.
- Temporary Vegetation Cover – Temporarily stabilize the soil and reduce damage from wind and water erosion until permanent stabilization is accomplished. Apply limestone and fertilizer according to soil test recommendations. Fertilizer may be applied at the rate of 500 lbs per acre or 11 lbs. per 1,000 S.F. of 10-20 or equivalent. Apply limestone (equivalent to 50% calcium plus magnesium oxides) as follows: 2 tons per acre to 90 lbs. per S.F. Work lime and fertilizer into the soil to a depth of 4" with a disc, spring tooth harrow, or other suitable tool. Inspect seedbed just before seeding. If the soil is compacted the area must be retiled.
 - Soils high in sulfides or having a pH of 4 or less should be mulched only. See Standards p. 3.3.1. For temporary seeding, see recommendations in Table 3.1.1.

- Mulching is required on all seeding. Mulch materials should be unrotten small grain straw, hay free of seeds or salt hay to be applied at the rate of 1-1/2 - 2 tons per acre (70 to 90 lbs. per 1,000 S.F.), except that where a crimper is used instead of a liquid mulch-binder (locking or adhesive agent), the rate of application must be double the lower rate. Mulch chopper-blowers must not grind the material. Spread uniformly by hand or mechanically so that approximately 1,000 S.F. sections and distribute 70 to 90 lbs. within each section.

- Dust Control— The contractor shall prevent movement and/or blowing of dust from exposed soil surface. This requirement is to reduce damage, health hazards and improve traffic safety in accordance with section 4.10.1 of the standards for Soil Erosion and Sediment Control and section 107.28 of the N.J.D.O.T. Standard Specifications. Methods for dust control shall consist of mulches, spray-on adhesives, calcium chloride, sprinkling with water, street sweeping or other methods approved by the Engineer and/or Soil Conservation District. The contractor shall clean the roadway as needed and directed by the engineer and/or the Soil Conservation District. In conjunction with cleaning, the contractor shall be required to sprinkle areas with water or another approved method shall be performed to keep all areas damp and dust free.

- All soil erosion and sediment control practices to be installed prior to any major soil disturbances, or in their proper sequence, and maintained until permanent protection is established.
- Any disturbed area that will be left exposed more than thirty (30) days and not subject to construction traffic, will immediately receive a temporary seeding. If the season prevents the establishment of a temporary cover, the disturbed area will be mulched with straw, or equivalent material, at a rate of two (2) tons per acre, according to State Standards.
- Permanent vegetation to be seeded or hydroseeded on all exposed areas within two (2) days after final grading. Mulch will be used for protection until seeding is established.
- All work to be done in accordance with the State Standards for Soil Erosion and Sediment Control in New Jersey.
- A subbase course will be applied immediately following rough grading and installation of improvements in order to stabilize streets, roads, driveways and parking areas. In areas where no utilities are present, the subbase shall be installed within fifteen (15) days of preliminary grading.
- Immediately following initial disturbance or rough grading all critical areas subject to erosion (i.e.: steep slopes, roadway embankments) will receive a temporary seeding in combination with straw mulch or a suitable equivalent, at a rate of two (2) tons per acre, according to State Standards.
- Any steep slopes receiving pipeline installation will be back-filled and stabilized only, as the installation proceeds, (i.e.: slopes greater than 3:1).
- The contractor shall utilize the roadways as a construction entrance. The existing roadways shall be cleaned as needed & directed by the Camden County Soil Conservation District and the Engineer.
- In accordance with the Standards for Permanent Vegetative Cover for Soil Stabilization, any soil having a pH of 4 or less or containing iron sulfides shall be covered with a minimum of 12" of soil having a pH of 5 or more prior to seedbed preparation.
- The Camden County Soil Conservation District shall be notified seventy-two (72) hours in advance of any land disturbing activity @ (856) 767-6299.
- At the time when the site preparation for permanent vegetative stabilization is going to be accomplished, any soil that will not provide a suitable environment to support adequate vegetative ground cover, shall be removed or treated in such a way that will permanently adjust the soil conditions and render it suitable for vegetative ground cover.
- Before the provisions of the certified plan for soil erosion and sediment control have been complied with for permanent measures, all site work for the construction plans will have to be completed prior to the District issuing a Report of compliance for the final payment by the County.
- Any change to the Construction Plan will require the submission of a revised Soil Erosion and Sediment Control Plan to the Camden County Soil Conservation District for recertification. The revised plans must meet all current New Jersey Soil Erosion and Sediment Control Standards.

General Construction Notes:

- All clearing items (trees, stumps, concrete, etc.) shall be removed from the project and disposed of at a lawful disposal site to be furnished by the contractor, at his expense.
- The Contractor shall procure all required permits, licenses and inspections. Contractor shall be responsible for all charges and fees as well as, give notices necessary for all incidentals for project. County Road Opening Permits & Soil Conservation Permits, if required shall be obtained by the Municipality at no cost to the Contractor.
- All construction debris (asphalt, concrete, etc.) must be removed from the project site prior to the end of each day to eliminate any potential hazards.
- All demolition/ removal items (concrete, asphalt, etc.) shall be removed from the project and disposed of at a lawful disposal site, provided by the contractor, at his expense.
- Excess excavated materials shall be delivered to a lawful site location, provided by the Contractor at his expense.
- The quantities of all asphalt or concrete, which is to be recycled, must be reported to the Municipality and County.
- All areas disturbed/damaged by the Contractor, shall be returned to its original condition or better, by the Contractor, at his expense.
- The location of all existing utility lines, mains, services, appurtenances must be verified by the Contractor prior to the commencement of construction. The Contractor shall perform test pits in the presence of the Construction Engineer. The Contractor shall be responsible for the repair of any damage caused by his operations. He shall notify the respective utility company for location markout prior to any excavation and the performance of the above mentioned test pits.
- The Contractor is required to perform the proper notification of New Jersey One – Call Center (formerly the Garden State Underground Plant Location Service) prior to excavation for the purpose of identifying the location of underground facilities. This requirement is in accordance with the Underground Facilities Protection Act (P.L. 1994 c. 118). Any and all utilities not subscribing to the New Jersey One – Call Center shall be contacted individually. No work shall commence without proper notifications and verification of all markouts being performed.
- All Utility Contractors shall procure all required permits, licenses and inspections, pay all charges and give notices necessary for all incidentals to the due and lawful prosecution of the project.
- The Contractor shall be required to coordinate his work with any and all utility companies in order to eliminate any conflicts and/or delays.
- The Contractor shall be responsible for properly backfilling and compacting all trenches. No trenches shall be left open after construction hours for the day. All construction areas are to be kept in a condition that allows for safe movement of all vehicular and pedestrian traffic. (There will be no specific payment for this item, cost to be included in the price for the various items in the Proposal.)
- All areas adjacent to newly installed concrete curbing, sidewalk, etc., shall be backfilled to finished grade prior to the end of each day to eliminate any potential hazards. (There will be no specific payment for this item, cost to be included in the price for various items in the Proposal.)
- All areas of disturbance shall be graded so as to eliminate any mounds and/or depressions prior the end of each day to eliminate any potential hazards. (There will be no specific payment for this item, cost to be included in the price for the various items in the Proposal.)
- In accordance with the "Maintenance and Protection of Pedestrian and Vehicular traffic" specification, the Contractor shall maintain "two (2) lanes of traffic, a minimum of 10 feet wide each, during all other hours." The Contractor shall provide the Engineer with a Staging Plan with the proper traffic control measures to protect both pedestrian and vehicular traffic, during all other hours. The Staging Plan shall be submitted to the Engineer and Chief of Police prior to the commencement of construction for approval.
- Barricades, lighting devices and other traffic control devices shall be placed in accordance with and shall conform to Section 110, New Jersey Department of Transportation Traffic Control Standard Specifications for Road and Bridge Construction, Part 6 of the current M.U.T.C.D. and Work Zone Traffic Control (US Department of Transportation).
- Traffic/ pedestrian control devices and equipment shall be placed in accordance with all applicable Federal, State, County and Municipal regulations.
- All signs which are removed during construction shall be reset either temporarily or permanently prior to the end of each day. (There will be no specific payment for this item, cost to be included in the price of various items in the Proposal.)
- Temporary line striping shall be provided in order to maintain traffic flow, safety and convenient passage of traffic through project. A minimum of a 10' wide lane in each direction shall be provided during construction (NO SPECIFIC PAYMENT) DETOURING OF TRAFFIC AND/OR ROAD CLOSURES SHALL NOT BE PERMITTED UNLESS APPROVED BY THE CHIEF OF POLICE. Should Police Traffic Directors be required, their services shall be paid for by the Municipality at no cost to the Contractor.

IMPROVEMENTS TO DAY AVENUE

FROM N.J.S.H. 73 TO CLOVER AVENUE

(PARTIALLY FUNDED BY THE N.J.D.O.T. MUNICIPAL AID

PROGRAM, FY2020)

(LENGTH OF PROJECT 850±/ 0.16 MILES)



Key Map
Improvements to Day Avenue
scale 1 inch = 500 feet
taken from GOOGLMAPS

UTILITY COMPANIES

ELECTRIC

ATLANTIC CITY ELECTRIC
295 N. GROVE STREET
BERLIN, NJ 08009

CONTACT:
MR. JULIUS ZACONE
DIRECTOR
(856)753-2808

TELEPHONE

VERIZON
10 TANSBORO ROAD
BERLIN, NJ 08009

CONTACT:
MR. MICHAEL LEONE
(856)308-8611

GAS

SOUTH JERSEY GAS COMPANY
1 SOUTH JERSEY PLAZA
FOLSOM, NJ 08037

CONTACT:
MR. GLEN NANEK
(609)645-2690 EXT. 6451

WATER

BOROUGH OF BERLIN
WATER DEPARTMENT
59 S. WHITE HORSE PIKE
BERLIN, NJ 08009

CONTACT:
MR. JOHN ALLESEBROOK
(856)767-0056

SEWER

TOWNSHIP OF BERLIN
SEWER DEPARTMENT
135 ROUTE 73 SOUTH
WEST BERLIN, NJ 08091

CONTACT:
MR. ANDY SIMONE
(856)767-5052

CABLE

COMCAST
250 HADDONFIELD-BERLIN RD.
P.O. BOX 5025
CHERRY HILL, NJ 08034

CONTACT:
MR. KEN STRONSKI, SR
(856)669-0119

PUBLIC WORKS

BERLIN TOWNSHIP
PUBLIC WORKS DEPARTMENT
135 ROUTE 73 SOUTH
WEST BERLIN, NJ 08091

CONTACT:
Mr. Andy Simone
(856)767-5052

Anticipated Project Schedule:

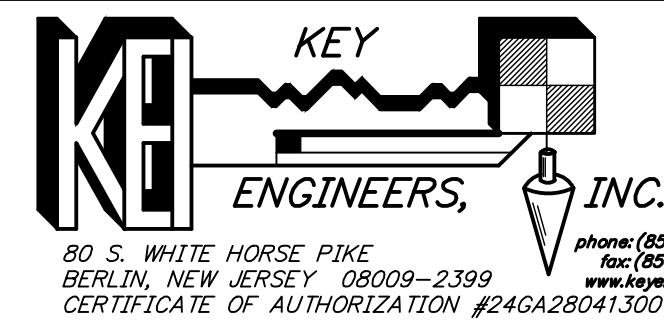
- Receipt of bids: October 21, 2021
- Award of contract: October 25, 2021
- Process contract: November 2021
- Obtain N.J.D.O.T. award concurrence: November 2021
- Obtain N.J.D.O.T. highway occupancy permit: November 2021
- Hold pre-construction meeting and commence with construction: spring 2022

Sheet List Table	
Sheet Number	Sheet Title
1	Cover Sheet
2	Quantity Distribution Sheet
3	Construction Plan and Profile
4	Construction Plan and Profile
5	Construction Plan and Profile
6	Intersection Grading Plan
7	Intersection Grading Plan
8	Temporary Traffic Control Plan
9	Details

- The Township shall submit and obtain the N.J.D.O.T. Highway Occupancy Permit for the proposed work at the intersection of Day Avenue and N.J.S.H. 73 at no cost to the contractor. The contractor shall comply with all permit requirements.
 - The intersection of Day Avenue and N.J.S.H. 73 shall be reconstructed, i.e. Dense Graded Aggregate Subbase, 6" thick, H.M.A. 25M64 Base Course, 6" thick, and H.M.A. 12.5M64 Surface Course, 2" Thick in one (1) calendar day.
- The Contractor shall email submittals two (2) weeks prior to the commencement of construction for all items for review by the Engineer. (There will be no specific payment for this item, cost to be included in the price of the various items in the Proposal.)
 - The Contractor shall video record, with audio description, the entire project limits to document the site conditions and provide a CD or DVD copy to the Engineer. (there will be no specific payment for this item, cost to be included in the price of the various items in the Proposal.)
 - The Contractor shall not be permitted to deny access to or enter onto any residential or commercial property without the written permission of the property owner. The contractor shall take all measures to perform the construction to maintain access to the properties and to cause minimal inconvenience.
 - The Contractor shall not enter onto any properties without the Engineer having secured a Consent to Enter from the property owner.
 - Failure of the Contractor to follow the directions of the Engineer and/or his representatives may result in a "STOP WORK" order. Should a "STOP WORK" order be issued, the Contractor shall incur all expenses to secure the job site and remediation costs when authorized by the Engineer to recommence.
 - Crushed or recycled concrete or crushed or recycled asphalt will not be acceptable as a substitute to dense graded aggregate for this job.
 - All disturbed lawn areas shall be excavated and receive Topsoil, 5" and Hydroseeded, in the locations and to the limits as shown on the construction plans. The restoration shall commence within seven days of the completion of the improvements. Any area disturbed outside the limits shall be restored by the Contractor, at his expense. The sod shall be watered and maintained by the Contractor. If the sod dies within one (1) month of installation, the Contractor must remove sodding and install additional topsoil and hydroseeding, and all costs shall be at the Contractor's expense.
 - Standard Construction Details shall conform to the latest requirements of the New Jersey Department of Transportation.

CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE DEPARTMENT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2019 EDITION, WHICH IS INCORPORATED HEREIN BY REFERENCE, AS AMENDED AND SUPPLEMENTED, AND THE DEPARTMENT'S SUPPLEMENTARY SPECIFICATIONS FOR STATE AID PROJECTS, 2019 EDITION, WHICH IS INCORPORATED HEREIN BY REFERENCE, AS AMENDED AND SUPPLEMENTED. STANDARD CONSTRUCTION DETAILS SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE DEPARTMENT OF TRANSPORTATION. THE NEW JERSEY DEPARTMENT OF TRANSPORTATION "STANDARD ROADWAY CONSTRUCTION/ TRAFFIC CONTROL/ BRIDGE CONSTRUCTION DETAILS" BOOKLET DATED 2016 AND "ELECTRICAL BUREAU STANDARD DETAILS, 2007" AND ALL BASELINE DOCUMENT CHANGES MADE TO THESE CONSTRUCTION DETAILS, SHALL GOVERN, EXCEPT FOR THOSE DETAILS CONTAINED HEREIN. PARTIALLY FUNDED THROUGH NEW JERSEY DEPARTMENT OF TRANSPORTATION MUNICIPAL AID PROGRAM FY2020.

REPRODUCTION, ALTERATION AND AMENDMENT OF THIS PLAN SHALL BE PERFORMED ONLY BY KEY ENGINEERS, INC. AND SHALL BE PERFORMED UNDER THE ABSOLUTE DIRECTION OF THE LICENSED PROFESSIONAL WHOSE NAME AND SIGNATURE APPEARS HEREON.



DATE _____

Base Bid: Improvements to Day Avenue
FROM N.J.S.H. 73 TO CLOVER AVENUE
(PARTIALLY FUNDED THROUGH THE N.J.D.O.T. MUNICIPAL AID, FY2020)
Payment Items

ITEM NUMBER	DESCRIPTION	UNIT MEASURED	SHEET 3	SHEET 4	SHEET 5	SHEET8
1	CLEARING SITE	LS	LS	LS	LS	LS
2	INLET FILTER, TYPE II, 2' X 4'	UNIT	5	0	0	0
3	CONCRETE WASHOUT SYSTEM	LS	LS	LS	LS	LS
4	ROADWAY CLEANING	LS	LS	LS	LS	LS
5	SAWCUTTING	LF	640	53	100	0
6	HMA PROFILE MILLING 1 1/2" TO 3 1/2"	SY	1050	1445	290	0
7	EXCAVATION, UNCLASSIFIED	CY	124	5	6	0
8	CLEAN AND SEAL JOINTS	LF	660	660	145	0
9	TRAFFIC STRIPES, DOUBLE 4" WIDE YELLOW, THERMOPLASTIC	LF	76	0	0	0
10	TRAFFIC STRIPES, 6" WIDE WHITE, THERMOPLASTIC	LF	76	66	97	0
11	TRAFFIC STRIPES, 12" WIDE WHITE, THERMOPLASTIC	LF	0	66	110	0
12	TRAFFIC STRIPES, 24" WIDE WHITE, THERMOPLASTIC	LF	18	0	0	0
13	REGULATORY SIGN	SF	14.5	0	6.5	0
14	WARNING SIGN	SF	3	13	6.5	0
15	6"X8"X18" CONCRETE CURB, CLASS 'B'	LF	90	97	74	0
16	9"X16" CONCRETE CURB, CLASS 'B'	LF	50	0	0	0
17	CONCRETE SIDEWALK AND CURB RAMP, 4" THICK, CLASS 'B'	SY	21	26	25	0
18	DETECTABLE WARNING SURFACE	SF	16	16	16	0
19	DENSE GRADED AGGREGATE SUBBASE, 6" THICK	SY	220	0	0	0
20	HOT MIX ASPHALT 25M64, BASE COURSE, 6" THICK	SY	220	0	0	0
21	HOT MIX ASPHALT 12.5M64 SURFACE COURSE, 2" THICK	SY	295	0	0	0
22	HOT MIX ASPHALT, 25M64, BASE COURSE, 4" THICK	SY	280	11	12	0
23	HOT MIX ASPHALT, 9.5M64, SURFACE COURSE, 1 1/2" THICK	SY	1255	1455	305	0
24	TOPSOIL, 5" THICK	SY	65	11	22	0
25	FERTILIZER AND SEEDING, TYPE 'A'	SY	65	11	22	0
26	MULCH, 4" THICK	SY	0	8	1	0
27	FUEL PRICE ADJUSTMENT	LS	LS	LS	LS	LS
28	ASPHALT PRICE ADJUSTMENT	LS	LS	LS	LS	LS
29	TRAFFIC CONE	UNIT	19	0	0	0
30	TRAFFIC DRUM	UNIT	0	0	0	26
31	TYPE I BREAKAWAY BARRICADE	UNIT	0	0	0	11
32	TYPE III BREAKAWAY BARRICADE	UNIT	0	0	0	8
33	CONSTRUCTION SIGNS	SF	0	0	0	210
34	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSTON AND FLASHING ARROW BOARD 2' X 4'	UNIT	0	0	0	1
35	STATE POLICE TRAFFIC DIRECTOR	MH	0	0	0	24

No Specific Payment Items:

ITEM NUMBER	DESCRIPTION	UNIT MEASURED	SHEET 3	SHEET 4	SHEET 5	SHEET8
A	RECORDING CONDITIONS	NSP	NSP	NSP	NSP	NSP
B	RESET RAILROAD TIE EDGING (INCLUDED IN CLEARING SITE LINE ITEM)	LF	0	0	18	0
C	REMOVE RAILROAD TIE EDGING (INCLUDED IN CLEARING SITE LINE ITEM)	LF	0	28	26	0
D	CUT TREE ROOTS (INCLUDED IN CLEARING SITE LINE ITEM)	NSP	NSP	NSP	NSP	NSP
E	CUT TREE BRANCHES (INCLUDED IN CLEARING SITE LINE ITEM)	NSP	NSP	NSP	NSP	NSP
F	REMOVE IVY (INCLUDED IN CLEARING SITE LINE ITEM)	NSP	NSP	NSP	NSP	NSP
G	RESET STREET SIGN (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	1	0	1	0
H	REMOVE SIGN (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	2	2	2	0
I	RESET UTILITY VALVE BOX (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	5	0	2	0
J	RESET MANHOLE CASTING (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	1	1	1	0
K	REMOVE CONCRETE CURB (INCLUDED IN RESPECTIVE CURB LINE ITEMS)	LF	140	97	50	0
L	REMOVE CONCRETE SIDEWALK AND CURB RAMP (INCLUDED IN CONCRETE SIDEWALK AND CURB RAMP, 4" THICK, CLASS 'B'	SY	21	26	25	0
M	JOINT SEALER (INCLUDED IN RESPECTIVE HOT MIX ASPHALT ITEMS)	LF	120	0	70	0
N	CLEANING AND SWEEPING (INCLUDED IN RESPECTIVE HOT MIX ASPHALT ITEMS)	SY	1540	1456	300	0
O	TACK COAT (INCLUDED IN RESPECTIVE HOT MIX ASPHALT LINE ITEMS)	GAL	105	146	30	0
P	CONCRETE SEALING (INCLUDED IN RESPECTIVE CONCRETE ITEMS)	NSP	NSP	NSP	NSP	NSP
Q	WATERING (INCLUDED IN FERTILIZER AND SEEDING, TYPE 'A' ITEM)	NSP	NSP	NSP	NSP	NSP
R	MAINTENANCE AND PROTECTION OF VEHICULAR AND PEDESTRIAN TRAFFIC (INCLUDED IN VARIOUS WORK ZONE ITEMS)	NSP	NSP	NSP	NSP	NSP

Alternate No. 1
(PARTIALLY FUNDED THROUGH THE N.J.D.O.T. MUNICIPAL AID, FY2020)
Payment Items

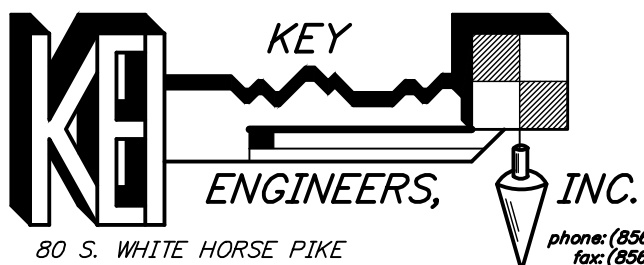
ITEM NUMBER	DESCRIPTION	UNIT MEASURED	QUANTITY
1	CONCRETE SIDEWALK, 4" THICK, CLASS 'B'	SY	46
2	TOPSOIL, 5" THICK	SY	30
3	FERTILIZER AND SEEDING, TYPE 'A'	SY	30

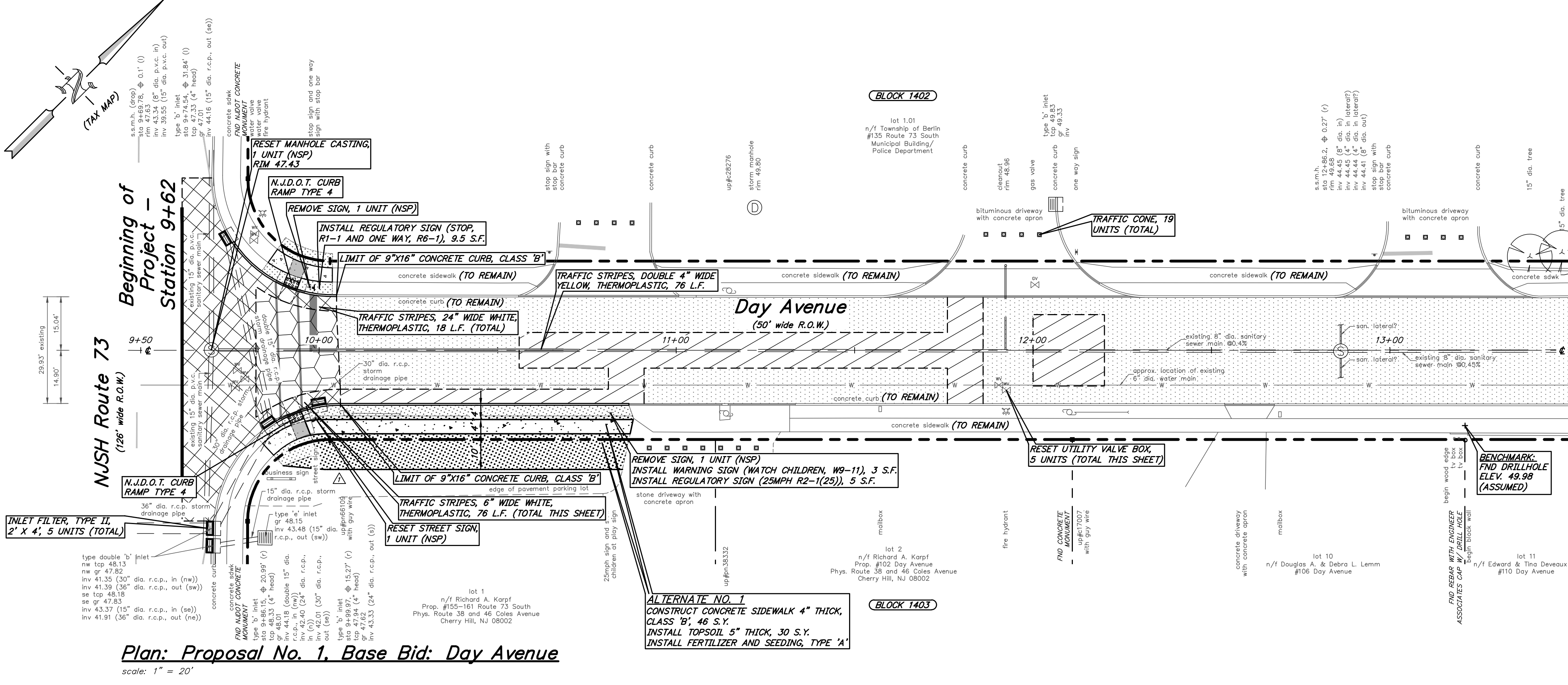
No Specific Payment Items:

ITEM NUMBER	DESCRIPTION	UNIT MEASURED	QUANTITY
A	CONCRETE SEALING (INCLUDED IN CONCRETE SIDEWALK, 4" THICK, CLASS 'B')	NSP	NSP
B	WATERING (INCLUDED IN FERTILIZER AND SEEDING, TYPE 'A' LINE ITEM)	NSP	NSP
C	MAINTENANCE AND PROTECTION OF VEHICULAR AND PEDESTRIAN TRAFFIC (INCLUDED IN VARIOUS WORK ZONE ITEMS)	NSP	NSP

CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE DEPARTMENT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2019 EDITION, WHICH IS INCORPORATED HEREIN BY REFERENCE, AS AMENDED AND SUPPLEMENTED, AND THE DEPARTMENT'S SUPPLEMENTARY SPECIFICATIONS FOR STATE AID PROJECTS, 2019 EDITION, WHICH IS INCORPORATED HEREIN BY REFERENCE, AS AMENDED AND SUPPLEMENTED. STANDARD CONSTRUCTION DETAILS SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE DEPARTMENT OF TRANSPORTATION. THE NEW JERSEY DEPARTMENT OF TRANSPORTATION "STANDARD ROADWAY CONSTRUCTION/ TRAFFIC CONTROL/ BRIDGE CONSTRUCTION DETAILS" BOOKLET DATED 2016 AND "ELECTRICAL BUREAU STANDARD DETAILS, 2007" AND ALL BASELINE DOCUMENT CHANGES MADE TO THESE CONSTRUCTION DETAILS, SHALL GOVERN, EXCEPT FOR THOSE DETAILS CONTAINED HEREIN. PARTIALLY FUNDED THROUGH NEW JERSEY DEPARTMENT OF TRANSPORTATION MUNICIPAL AID PROGRAM FY2020.

REPRODUCTION, ALTERATION AND AMENDMENT OF THIS PLAN SHALL BE PERFORMED ONLY BY KEY ENGINEERS, INC. AND SHALL BE PERFORMED UNDER THE ABSOLUTE DIRECTION OF THE LICENSED PROFESSIONAL WHOSE NAME AND SIGNATURE APPEARS HEREON.

7/11/21		GENERAL REVISIONS		SH	GE
REV.	DATE:	DESCRIPTION	DRWN.	CHKD.	
Quantity Distribution Sheet					
NJDOT FY2020 Municipal Aid Program Improvements to Day Avenue from NJSH 73 to Clover Avenue					
Township of Berlin Camden County, New Jersey					
DATE: 08/26/21		DRAWN BY: S. Heebner		CHKD. BY:	SCALE: AS NOTED
PROJECT No. 29-5248T0121		FIELD BOOK/PAGE:		SHEET No. 2 OF 9	
GREGORY BLASE FUSCO PROFESSIONAL ENGINEER NJPE No. 32853 PA.PE No. 036608-E NJ PROFESSIONAL PLANNER No. 4076					
 KEY ENGINEERS, INC. 80 S. WHITE HORSE PIKE BERLIN, NEW JERSEY 08009-2399 CERTIFICATE OF AUTHORIZATION #246A28041300				DATE _____	



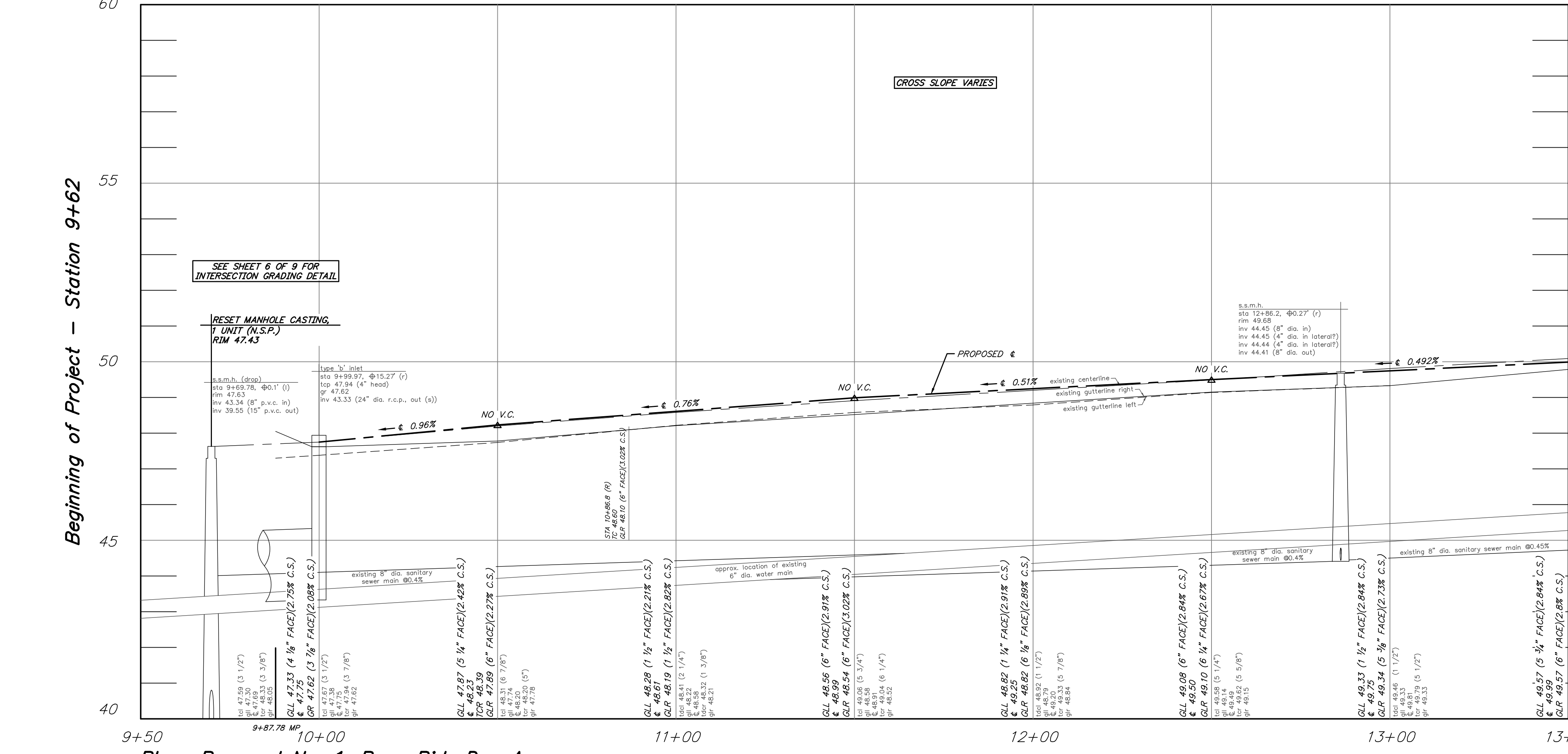
- ROADWAY IMPROVEMENTS:**
SAWCUTTING, 640 L.F.
HMA PROFILE MILLING 1 1/2" TO 3 1/2", 1,050 S.Y.
EXCAVATION, UNCLASSIFIED, 124 C.Y.
HOT MIX ASPHALT, 9.5M64, SURFACE COURSE, 1 1/2" THICK, 1255 S.Y.
HOT MIX ASPHALT, 12.5M64, SURFACE COURSE, 2" THICK, 295 S.Y.
HOT MIX ASPHALT, 25M64, BASE COURSE, 4" THICK, 280 S.Y.
HOT MIX ASPHALT, 25M64, BASE COURSE, 6" THICK, 220 S.Y.
DENSE GRADED AGGREGATE, 6" THICK, 220 S.Y.
- CONCRETE IMPROVEMENTS:**
REMOVE CONCRETE CURB, 140 L.F. (N.S.P.)
REMOVE CONCRETE SIDEWALK, 21 S.Y. (N.S.P.)
CONSTRUCT 9"x16" CONCRETE CURB, CLASS 'B', 50 L.F.
CONSTRUCT 6"x8"x18" CONCRETE CURB, CLASS 'B', 89 L.F.
CONSTRUCT CONCRETE SIDEWALK AND CURB RAMP, 4" THICK, CLASS 'B', 21 S.Y.
DETECTABLE WARNING SURFACE, 16 S.F.
- TOPSOIL, 5" THICK, 65 S.Y.
FERTILIZER AND SEEDING TYPE 'A', 65 S.Y.
- RESET UTILITY VALVE BOX, 5 UNITS (N.S.P.)

Base Bid: Improvements to Day Avenue
FROM N.J.S.H. 73 TO CLOVER AVENUE
(PARTIALLY FUNDED THROUGH THE N.J.D.O.T. MUNICIPAL AID, FY2020)

Payment Items

ITEM NUMBER	DESCRIPTION	UNIT MEASURED	QUANTITY
1	CLEARING SITE	LS	LS
2	INLET FILTER, TYPE II, 2' X 4'	UNIT	5
3	CONCRETE WASHOUT SYSTEM	LS	LS
4	ROADWAY CLEANING	LS	LS
5	SAWCUTTING	LF	640
6	HMA PROFILE MILLING 1 1/2" TO 3 1/2"	SY	1050
7	EXCAVATION, UNCLASSIFIED	CY	124
8	CLEAN AND SEAL JOINTS	LF	660
9	TRAFFIC STRIPES, DOUBLE 4" WIDE YELLOW, THERMOPLASTIC	LF	76
10	TRAFFIC STRIPES, 6" WIDE WHITE, THERMOPLASTIC	LF	76
11	TRAFFIC STRIPES, 12" WIDE WHITE, THERMOPLASTIC	LF	0
12	TRAFFIC STRIPES, 24" WIDE WHITE, THERMOPLASTIC	LF	18
13	REGULATORY SIGN	SF	14.5
14	WARNING SIGN	SF	3
15	6"x8"x18" CONCRETE CURB, CLASS 'B'	LF	90
16	9"x16" CONCRETE CURB, CLASS 'B'	LF	50
17	CONCRETE SIDEWALK AND CURB RAMP, 4" THICK, CLASS 'B'	SY	21
18	DETECTABLE WARNING SURFACE	SF	16
19	DENSE GRADED AGGREGATE SUBBASE, 6" THICK	SY	220
20	HOT MIX ASPHALT 25M64, BASE COURSE, 6" THICK	SY	220
21	HOT MIX ASPHALT 12.5M64 SURFACE COURSE, 2" THICK	SY	295
22	HOT MIX ASPHALT 25M64, BASE COURSE, 4" THICK	SY	280
23	HOT MIX ASPHALT 9.5M64, SURFACE COURSE, 1 1/2" THICK	SY	1255
24	TOPSOIL, 5" THICK	SY	65
25	FERTILIZER AND SEEDING, TYPE 'A'	SY	65
26	MULCH, 4" THICK	SY	0
27	FUEL PRICE ADJUSTMENT	LS	LS
28	ASPHALT PRICE ADJUSTMENT	LS	LS
29	TRAFFIC CONE	UNIT	19

Matchline 'A' - Station 13+50



Matchline 'A' - Station 13+50

Plan: Proposal No. 1, Base Bid: Day Avenue

scale: horizontal 1" = 20'
vertical 1" = 2'

- THE CONTRACTOR SHALL UTILIZE THE EXISTING ROADWAY AS A CONSTRUCTION ENTRANCE. THE ROADWAY SHALL BE CLEANED AS NEEDED OR AS DIRECTED BY THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT AND THE TOWNSHIP ENGINEER, TO ELIMINATE TRAFFIC HAZARDS, DUST, ETC. (INCLUDED IN ROADWAY CLEANING LINE ITEM)
- CRUSHED OR RECYCLED CONCRETE OR CRUSHED OR RECYCLED ASPHALT WILL NOT BE ACCEPTED AS A SUBSTITUTE TO DENSE GRADED AGGREGATE FOR THIS PROJECT
- (N.S.P.) INDICATES NO SPECIFIC PAYMENT WILL BE MADE FOR THE ITEM. THE COST SHALL BE INCLUDED IN VARIOUS ITEMS IN THE PROPOSAL
- THE CONTRACTOR SHALL NOT ENTER ONTO ANY PRIVATE PROPERTIES WITHOUT RECEIVING A "CONSENT TO ENTER AGREEMENT" FROM THE PROPERTY OWNER
- SHOULD POLICE TRAFFIC DIRECTORS BE REQUIRED, THEIR SERVICES SHALL BE PAID FOR BY THE TOWNSHIP, AT NO COST TO THE CONTRACTOR. HOWEVER, THE CONTRACTOR MUST STILL PROVIDE, AT HIS COST, MAINTENANCE AND PROTECTION OF TRAFFIC IN ACCORDANCE WITH THE SPECIFICATIONS. 24-HOUR ROAD CLOSINGS WILL NOT BE PERMITTED.
- ALL CURB RAMPS CONSTRUCTED SHALL MEET THE "PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY" (P.R.O.W.A.G.), DATED JULY 26, 2011

CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE DEPARTMENT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2019 EDITION, WHICH IS INCORPORATED HEREIN BY REFERENCE, AS AMENDED AND SUPPLEMENTED, AND THE DEPARTMENT'S SUPPLEMENTARY SPECIFICATIONS FOR STATE AID PROJECTS, 2019 EDITION, WHICH IS INCORPORATED HEREIN BY REFERENCE, AS AMENDED AND SUPPLEMENTED. STANDARD CONSTRUCTION DETAILS SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE DEPARTMENT OF TRANSPORTATION. THE NEW JERSEY DEPARTMENT OF TRANSPORTATION "STANDARD ROADWAY CONSTRUCTION/ TRAFFIC CONTROL/ BRIDGE CONSTRUCTION DETAILS" BOOKLET DATED 2016 AND "ELECTRICAL BUREAU STANDARD DETAILS, 2007" AND ALL BASELINE DOCUMENT CHANGES MADE TO THESE CONSTRUCTION DETAILS, SHALL GOVERN, EXCEPT FOR THOSE DETAILS CONTAINED HEREIN. PARTIALLY FUNDED THROUGH NEW JERSEY DEPARTMENT OF TRANSPORTATION MUNICIPAL AID PROGRAM FY2020.

No Specific Payment Items:

ITEM NUMBER	DESCRIPTION	UNIT MEASURED	QUANTITY
A	RECORDING CONDITIONS	NSP	NSP
B	RESET RAILROAD TIE EDGING (INCLUDED IN CLEARING SITE LINE ITEM)	LF	0
C	REMOVE RAILROAD TIE EDGING (INCLUDED IN CLEARING SITE LINE ITEM)	LF	0
D	CUT TREE ROOTS (INCLUDED IN CLEARING SITE LINE ITEM)	NSP	NSP
E	CUT TREE BRANCHES (INCLUDED IN CLEARING SITE LINE ITEM)	NSP	NSP
F	REMOVE IVY (INCLUDED IN CLEARING SITE LINE ITEM)	NSP	NSP
G	RESET STREET SIGN (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	1
H	REMOVE SIGN (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	2
I	RESET UTILITY VALVE BOX (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	5
J	RESET MANHOLE CASTING (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	1
K	REMOVE CONCRETE CURB (INCLUDED IN RESPECTIVE CURB LINE ITEMS)	LF	140
L	REMOVE CONCRETE SIDEWALK AND CURB RAMP (INCLUDED IN CONCRETE SIDEWALK AND CURB RAMP, 4" THICK, CLASS 'B')	SY	21
M	JOINT SEALER (INCLUDED IN RESPECTIVE HOT MIX ASPHALT ITEMS)	LF	120
N	CLEANING AND SWEEPING (INCLUDED IN RESPECTIVE HOT MIX ASPHALT ITEMS)	SY	1540
O	TACK COAT (INCLUDED IN RESPECTIVE HOT MIX ASPHALT LINE ITEMS)	GAL	105
P	CONCRETE SEALING (INCLUDED IN RESPECTIVE CONCRETE ITEMS)	NSP	NSP
Q	WATERING (INCLUDED IN FERTILIZER AND SEEDING, TYPE 'A' ITEM)	NSP	NSP
R	MAINTENANCE AND PROTECTION OF VEHICULAR AND PEDESTRIAN TRAFFIC (INCLUDED IN VARIOUS WORK ZONE ITEMS)	NSP	NSP

Alternate No. 1: Improvements to Day Avenue
FROM N.J.S.H. 73 TO CLOVER AVENUE
(PARTIALLY FUNDED THROUGH THE N.J.D.O.T. MUNICIPAL AID, FY2020)

Payment Items

ITEM NUMBER	DESCRIPTION	UNIT MEASURED	QUANTITY
1	CONCRETE SIDEWALK, 4" THICK, CLASS 'B'	SY	46
2	TOPSOIL, 5" THICK	SY	30
3	FERTILIZER AND SEEDING, TYPE 'A'	SY	30

No Specific Payment Items:

ITEM NUMBER	DESCRIPTION	UNIT MEASURED	QUANTITY
A	CONCRETE SEALING (INCLUDED IN CONCRETE SIDEWALK, 4" THICK, CLASS 'B')	NSP	NSP
B	WATERING (INCLUDED IN FERTILIZER AND SEEDING, TYPE 'A' LINE ITEM)	NSP	NSP
C	MAINTENANCE AND PROTECTION OF VEHICULAR AND PEDESTRIAN TRAFFIC (INCLUDED IN VARIOUS WORK ZONE ITEMS)	NSP	NSP

Legend: Base Bid

- EXCAVATION, UNCLASSIFIED
HOT MIX ASPHALT, 9.5M64, SURFACE COURSE, 1 1/2" THICK
HOT MIX ASPHALT, 25M64, BASE COURSE, 4" THICK
- EXCAVATION, UNCLASSIFIED
HOT MIX ASPHALT, 12.5M64, SURFACE COURSE, 2" THICK
HOT MIX ASPHALT, 25M64, BASE COURSE, 6" THICK
DENSE GRADED AGGREGATE SUBBASE, 6" THICK
- HMA PROFILE MILLING 1 1/2" TO 3 1/2"
HOT MIX ASPHALT, 9.5M64 SURFACE COURSE 1.5" THICK
- HMA PROFILE MILLING 1 1/2" TO 3 1/2"
HOT MIX ASPHALT, 12.5M64 SURFACE COURSE 2" THICK
- 6"x8"x18" OR 9"x16" CONCRETE CURB, CLASS 'B'
- CONCRETE SIDEWALK/CURB RAMP 4" THICK, CLASS B

Legend: Alternate No. 1

- TOPSOIL, 5" THICK
FERTILIZER AND SEEDING, TYPE 'A'
- CONCRETE SIDEWALK/CURB RAMP 4" THICK, CLASS B

REPRODUCTION, ALTERATION AND AMENDMENT OF THIS PLAN SHALL BE PERFORMED ONLY BY KEY ENGINEERS, INC. AND SHALL BE PERFORMED UNDER THE ABSOLUTE DIRECTION OF THE LICENSED PROFESSIONAL WHOSE NAME AND SIGNATURE APPEARS HEREON.

7/11/21
REV. DATE: DESCRIPTION SH. GE. DRWN. CHKD.

Construction Plan and Profile

NJDOT FY2020 Municipal Aid Program
Improvements to Day Avenue from
NJSH 73 to Clover Avenue

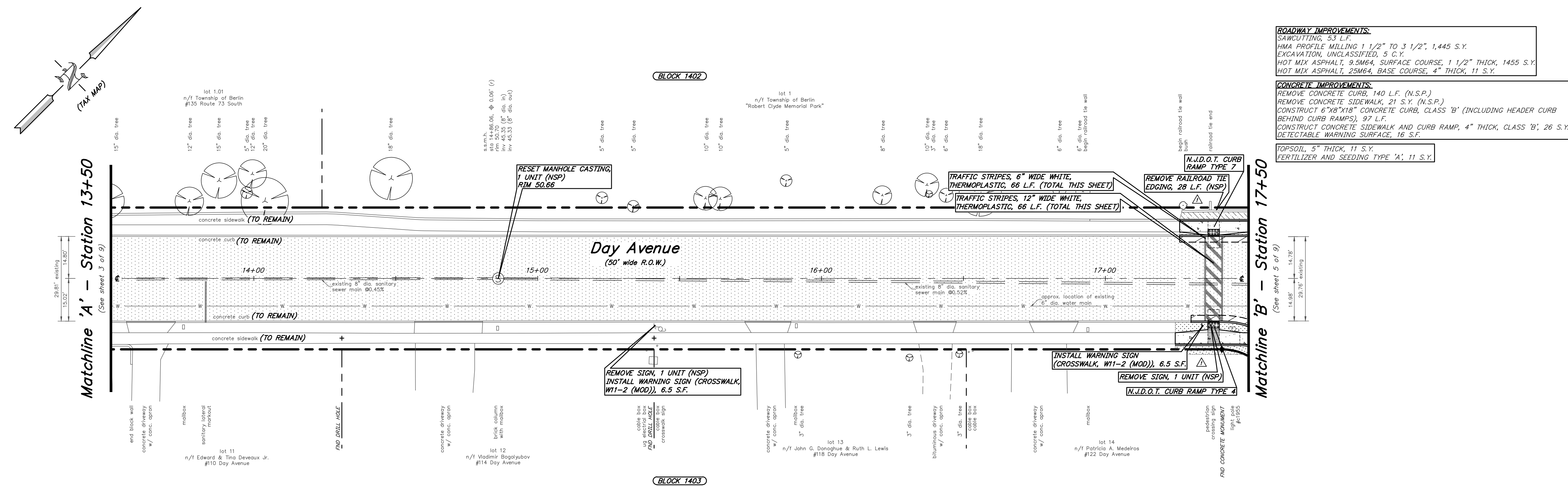
Township of Berlin
Camden County, New Jersey

DATE: 08/26/21 DRAWN BY: S. Heebner CHKD. BY: SCALE: AS NOTED
PROJECT No. 29-5248T0121 FIELD BOOK/PAGE: SHEET No. 3 OF 9

GREGORY BLASE FUSCO
PROFESSIONAL ENGINEER
NJPE No. 32853 P.A.PE No. 036608-E
NJ PROFESSIONAL PLANNER No. 4076

KEY ENGINEERS, INC.
80 S. WHITE HORSE PIKE
BERLIN, NEW JERSEY 08009-2399
CERTIFICATE OF AUTHORIZATION #24GA28041300
phone (856) 767-6111
fax (856) 753-1091
www.keyengineers.com

DATE



ROADWAY IMPROVEMENTS:
 SAWCUTTING, 53 L.F.
 HMA PROFILE MILLING 1 1/2" TO 3 1/2", 1,445 S.Y.
 EXCAVATION, UNCLASSIFIED, 5 C.Y.
 HOT MIX ASPHALT, 9.5M64, SURFACE COURSE, 1 1/2" THICK, 1455 S.Y.
 HOT MIX ASPHALT, 25M64, BASE COURSE, 4" THICK, 11 S.Y.

CONCRETE IMPROVEMENTS:
 REMOVE CONCRETE CURB, 140 L.F. (N.S.P.)
 REMOVE CONCRETE SIDEWALK, 21 S.Y. (N.S.P.)
 CONSTRUCT 6"x8"x18" CONCRETE CURB, CLASS 'B' (INCLUDING HEADER CURB BEHIND CURB RAMPS), 97 L.F.
 CONSTRUCT CONCRETE SIDEWALK AND CURB RAMP, 4" THICK, CLASS 'B', 26 S.Y.
 DETECTABLE WARNING SURFACE, 16 S.F.

TOPSOIL, 5" THICK, 11 S.Y.
 FERTILIZER AND SEEDING TYPE 'A', 11 S.Y.

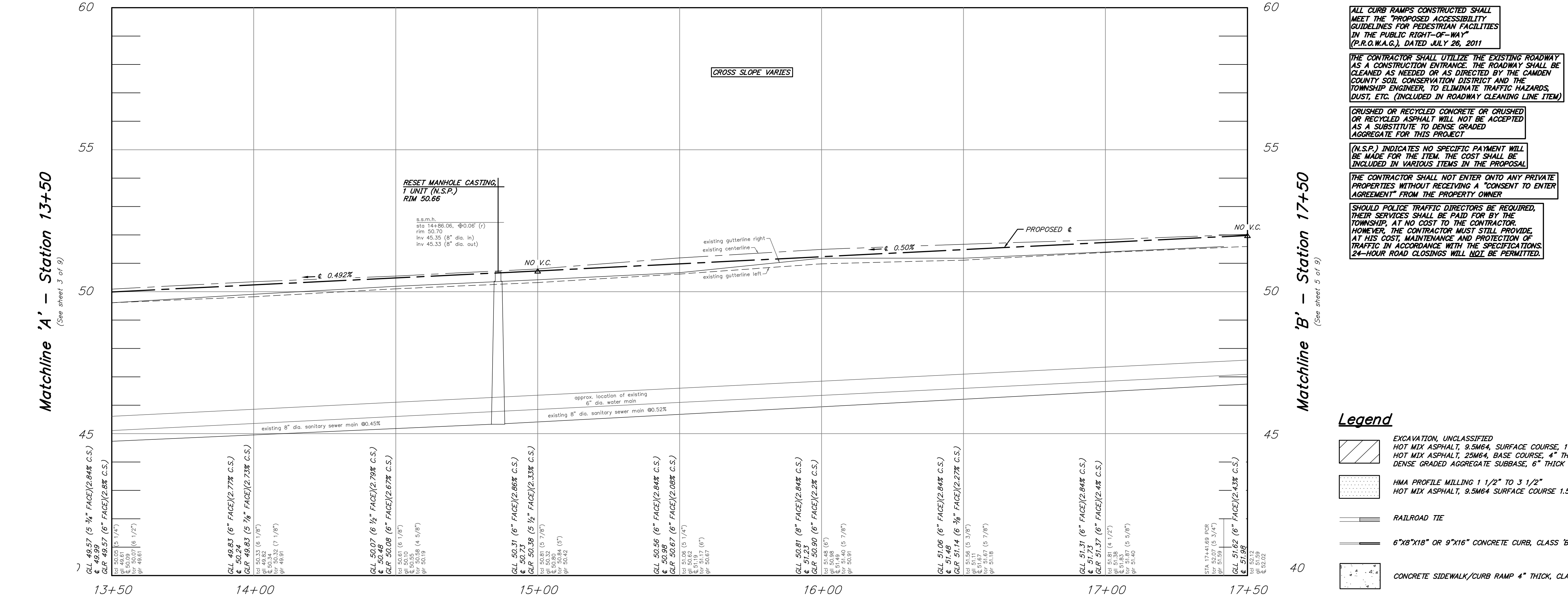
Base Bid: Improvements to Day Avenue
FROM N.J.S.H. 73 TO CLOVER AVENUE
 (PARTIALLY FUNDED THROUGH THE N.J.D.O.T. MUNICIPAL AID, FY2020)

Payment Items

ITEM NUMBER	DESCRIPTION	UNIT MEASURED	QUANTITY
1	CLEARING SITE	LS	LS
2	INLET FILTER, TYPE II, 2' X 4'	UNIT	0
3	CONCRETE WASHOUT SYSTEM	LS	LS
4	ROADWAY CLEANING	LS	LS
5	SAWCUTTING	LF	53
6	HMA PROFILE MILLING 1 1/2" TO 3 1/2"	SY	1445
7	EXCAVATION, UNCLASSIFIED	CY	5
8	CLEAN AND SEAL JOINTS	LF	660
9	TRAFFIC STRIPES, DOUBLE 4" WIDE YELLOW, THERMOPLASTIC	LF	0
10	TRAFFIC STRIPES, 6" WIDE WHITE, THERMOPLASTIC	LF	66
11	TRAFFIC STRIPES, 12" WIDE WHITE, THERMOPLASTIC	LF	66
12	TRAFFIC STRIPES, 24" WIDE WHITE, THERMOPLASTIC	LF	0
13	REGULATORY SIGN	SF	0
14	WARNING SIGN	SF	13
15	6"x8"x18" CONCRETE CURB, CLASS 'B'	LF	97
16	9"x16" CONCRETE CURB, CLASS 'B'	LF	0
17	CONCRETE SIDEWALK AND CURB RAMP, 4" THICK, CLASS 'B'	SY	26
18	DETECTABLE WARNING SURFACE	SF	16
19	DENSE GRADED AGGREGATE SUBBASE, 6" THICK	SY	0
20	HOT MIX ASPHALT 25M64, BASE COURSE, 6" THICK	SY	0
21	HOT MIX ASPHALT 12.5M64 SURFACE COURSE, 2" THICK	SY	0
22	HOT MIX ASPHALT, 25M64, BASE COURSE, 4" THICK	SY	11
23	HOT MIX ASPHALT, 9.5M64, SURFACE COURSE, 1 1/2" THICK	SY	1455
24	TOPSOIL, 5" THICK	SY	11
25	FERTILIZER AND SEEDING, TYPE 'A'	SY	11
26	MULCH, 4" THICK	SY	8
27	FUEL PRICE ADJUSTMENT	LS	LS
28	ASPHALT PRICE ADJUSTMENT	LS	LS
29	TRAFFIC CONE	UNIT	0
30	TRAFFIC DRUM	UNIT	0
31	TYPE I BREAKAWAY BARRICADE	UNIT	0
32	TYPE III BREAKAWAY BARRICADE	UNIT	0
33	CONSTRUCTION SIGNS	SF	0
34	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION AND FLASHING ARROW BOARD 2' X 4'	UNIT	0
35	STATE POLICE TRAFFIC DIRECTOR	MH	0

Plan: Proposal No. 1. Base Bid: Day Avenue

scale: 1" = 20'



ALL CURB RAMPS CONSTRUCTED SHALL MEET THE PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY (P.R.O.W.A.G.), DATED JULY 26, 2011

THE CONTRACTOR SHALL UTILIZE THE EXISTING ROADWAY AS A CONSTRUCTION ENTRANCE. THE ROADWAY SHALL BE CLEANED AS NEEDED OR AS DIRECTED BY THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT AND THE TOWNSHIP ENGINEER, TO ELIMINATE TRAFFIC HAZARDS, DUST, ETC. (INCLUDED IN ROADWAY CLEANING LINE ITEM)

CRUSHED OR RECYCLED CONCRETE OR CRUSHED OR RECYCLED ASPHALT WILL NOT BE ACCEPTED AS A SUBSTITUTE TO DENSE GRADED AGGREGATE FOR THIS PROJECT

(N.S.P.) INDICATES NO SPECIFIC PAYMENT WILL BE MADE FOR THE ITEM. THE COST SHALL BE INCLUDED IN VARIOUS ITEMS IN THE PROPOSAL

THE CONTRACTOR SHALL NOT ENTER ONTO ANY PRIVATE PROPERTIES WITHOUT RECEIVING A "CONSENT TO ENTER AGREEMENT" FROM THE PROPERTY OWNER

SHOULD POLICE TRAFFIC DIRECTORS BE REQUIRED, THEIR SERVICES SHALL BE PAID FOR BY THE TOWNSHIP. AT NO COST TO THE CONTRACTOR. HOWEVER, THE CONTRACTOR MUST STILL PROVIDE, AT HIS COST, MAINTENANCE AND PROTECTION OF TRAFFIC IN ACCORDANCE WITH THE SPECIFICATIONS. 24-HOUR ROAD CLOSINGS WILL NOT BE PERMITTED.

Legend

- EXCAVATION, UNCLASSIFIED
HOT MIX ASPHALT, 9.5M64, SURFACE COURSE, 1 1/2" THICK
HOT MIX ASPHALT, 25M64, BASE COURSE, 4" THICK
DENSE GRADED AGGREGATE SUBBASE, 6" THICK
- HMA PROFILE MILLING 1 1/2" TO 3 1/2"
HOT MIX ASPHALT, 9.5M64 SURFACE COURSE 1.5" THICK
- RAILROAD TIE
- 6"x8"x18" OR 9"x16" CONCRETE CURB, CLASS 'B'
- CONCRETE SIDEWALK/CURB RAMP 4" THICK, CLASS B
- TOPSOIL, 5" THICK
FERTILIZER AND SEEDING, TYPE 'A'
- MULCH, 4" THICK

BENCHMARK:
 FND DRILLHOLE
 (SEE SHEET 3)
 ELEV. 49.98

REPRODUCTION, ALTERATION AND AMENDMENT OF THIS PLAN SHALL BE PERFORMED ONLY BY KEY ENGINEERS, INC. AND SHALL BE PERFORMED UNDER THE ABSOLUTE DIRECTION OF THE LICENSED PROFESSIONAL WHOSE NAME AND SIGNATURE APPEARS HEREON.

No Specific Payment Items:

ITEM NUMBER	DESCRIPTION	UNIT MEASURED	QUANTITY
A	RECORDING CONDITIONS	NSP	NSP
B	RESET RAILROAD TIE EDGING (INCLUDED IN CLEARING SITE LINE ITEM)	LF	0
C	REMOVE RAILROAD TIE EDGING (INCLUDED IN CLEARING SITE LINE ITEM)	LF	0
D	CUT TREE ROOTS (INCLUDED IN CLEARING SITE LINE ITEM)	NSP	NSP
E	CUT TREE BRANCHES (INCLUDED IN CLEARING SITE LINE ITEM)	NSP	NSP
F	REMOVE IVY (INCLUDED IN CLEARING SITE LINE ITEM)	NSP	NSP
G	RESET STREET SIGN (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	1
H	REMOVE SIGN (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	2
I	RESET UTILITY VALVE BOX (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	5
J	RESET MANHOLE CASTING (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	1
K	REMOVE CONCRETE CURB (INCLUDED IN RESPECTIVE CURB LINE ITEMS)	LF	140
L	REMOVE CONCRETE SIDEWALK AND CURB RAMP (INCLUDED IN CONCRETE SIDEWALK AND CURB RAMP, 4" THICK, CLASS 'B' LINE ITEMS)	SY	21
M	JOINT SEALER (INCLUDED IN RESPECTIVE HOT MIX ASPHALT ITEMS)	LF	120
N	CLEANING AND SWEEPING (INCLUDED IN RESPECTIVE HOT MIX ASPHALT ITEMS)	SY	1540
O	TACK COAT (INCLUDED IN RESPECTIVE HOT MIX ASPHALT LINE ITEMS)	GAL	105
P	CONCRETE SEALING (INCLUDED IN RESPECTIVE CONCRETE ITEMS)	NSP	NSP
Q	WATERING (INCLUDED IN FERTILIZER AND SEEDING, TYPE 'A' ITEM)	NSP	NSP
R	MAINTENANCE AND PROTECTION OF VEHICULAR AND PEDESTRIAN TRAFFIC (INCLUDED IN VARIOUS WORK ZONE ITEMS)	NSP	NSP

Plan: Proposal No. 1. Base Bid: Day Avenue

scale: horizontal 1" = 20'
 vertical 1" = 2'

CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE DEPARTMENT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2019 EDITION, WHICH IS INCORPORATED HEREIN BY REFERENCE, AS AMENDED AND SUPPLEMENTED, AND THE DEPARTMENT'S SUPPLEMENTARY SPECIFICATIONS FOR STATE AID PROJECTS, 2019 EDITION, WHICH IS INCORPORATED HEREIN BY REFERENCE, AS AMENDED AND SUPPLEMENTED. STANDARD CONSTRUCTION DETAILS SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE DEPARTMENT OF TRANSPORTATION. THE NEW JERSEY DEPARTMENT OF TRANSPORTATION "STANDARD ROADWAY CONSTRUCTION/ TRAFFIC CONTROL/ BRIDGE CONSTRUCTION DETAILS" BOOKLET DATED 2016 AND "ELECTRICAL BUREAU STANDARD DETAILS, 2007" AND ALL BASELINE DOCUMENT CHANGES MADE TO THESE CONSTRUCTION DETAILS, SHALL GOVERN, EXCEPT FOR THOSE DETAILS CONTAINED HEREIN. PARTIALLY FUNDED THROUGH NEW JERSEY DEPARTMENT OF TRANSPORTATION MUNICIPAL AID PROGRAM FY2020.

7/11/21

REV.

DATE:

GENERAL REVISIONS

DESCRIPTION

SH

GE

DRWN.

CHKD.

Construction Plan and Profile

NJDOT FY2020 Municipal Aid Program

Improvements to Day Avenue from

NJSH 73 to Clover Avenue

Township of Berlin

Camden County, New Jersey

DATE: 08/26/21

DRAWN BY: S. Heebner

CHKD. BY:

SCALE: AS NOTED

PROJECT No. 29-5248T0121

FIELD BOOK/PAGE:

SHEET No. 4 OF 9

GREGORY BLASE FUSCO

PROFESSIONAL ENGINEER

NJPE No. 32853

PA/PE No. 036608-E

NJ PROFESSIONAL PLANNER No. 4076

KEY

ENGINEERS, INC.

80 S. WHITE HORSE PIKE

BERLIN, NEW JERSEY 08009-2399

CERTIFICATE OF AUTHORIZATION #24GA28041300

phone (856) 767-6111

fax (856) 753-1091

www.keyengineers.com

DATE

Base Bid: Improvements to Day Avenue
FROM N.J.S.H. 73 TO CLOVER AVENUE
(PARTIALLY FUNDED THROUGH THE N.J.D.O.T. MUNICIPAL AID, FY2020)
Payment Items

ITEM NUMBER	DESCRIPTION	UNIT MEASURED	QUANTITY
1	CLEARING SITE	LS	LS
2	INLET FILTER, TYPE II, 2' X 4'	UNIT	0
3	CONCRETE WASHOUT SYSTEM	LS	LS
4	ROADWAY CLEANING	LS	LS
5	SAWCUTTING	LF	100
6	HMA PROFILE MILLING 1 1/2" TO 3 1/2"	SY	290
7	EXCAVATION, UNCLASSIFIED	CY	6
8	CLEAN AND SEAL JOINTS	LF	145
9	TRAFFIC STRIPES, DOUBLE 4" WIDE YELLOW, THERMOPLASTIC	LF	0
10	TRAFFIC STRIPES, 6" WIDE WHITE, THERMOPLASTIC	LF	97
11	TRAFFIC STRIPES, 12" WIDE WHITE, THERMOPLASTIC	LF	110
12	TRAFFIC STRIPES, 24" WIDE WHITE, THERMOPLASTIC	LF	0
13	REGULATORY SIGN	SF	6.5
14	WARNING SIGN	SF	6.5
15	6"X8"X18" CONCRETE CURB, CLASS 'B'	LF	74
16	9"X16" CONCRETE CURB, CLASS 'B'	LF	0
17	CONCRETE SIDEWALK AND CURB RAMP, 4" THICK, CLASS 'B'	SY	25
18	DETECTABLE WARNING SURFACE	SF	16
19	DENSE GRADED AGGREGATE SUBBASE, 6" THICK	SY	0
20	HOT MIX ASPHALT 25M64, BASE COURSE, 6" THICK	SY	0
21	HOT MIX ASPHALT 12.5M64 SURFACE COURSE, 2" THICK	SY	0
22	HOT MIX ASPHALT, 25M64, BASE COURSE, 4" THICK	SY	12
23	HOT MIX ASPHALT, 9.5M64, SURFACE COURSE, 1 1/2" THICK	SY	305
24	TOPSOIL, 5" THICK	SY	22
25	FERTILIZER AND SEEDING, TYPE 'A'	SY	22
26	MULCH, 4" THICK	SY	1
27	FUEL PRICE ADJUSTMENT	LS	LS
28	ASPHALT PRICE ADJUSTMENT	LS	LS
29	TRAFFIC CONE	UNIT	0
30	TRAFFIC DRUM	UNIT	0
31	TYPE I BREAKAWAY BARRICADE	UNIT	0
32	TYPE III BREAKAWAY BARRICADE	UNIT	0
33	CONSTRUCTION SIGNS	SF	0
34	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION AND FLASHING ARROW BOARD 2' X 4'	UNIT	0
35	STATE POLICE TRAFFIC DIRECTOR	MH	0

No Specific Payment Items:

ITEM NUMBER	DESCRIPTION	UNIT MEASURED	QUANTITY
A	RECORDING CONDITIONS	NSP	NSP
B	RESET RAILROAD TIE EDGING (INCLUDED IN CLEARING SITE LINE ITEM)	LF	18
C	REMOVE RAILROAD TIE EDGING (INCLUDED IN CLEARING SITE LINE ITEM)	LF	26
D	CUT TREE ROOTS (INCLUDED IN CLEARING SITE LINE ITEM)	NSP	NSP
E	CUT TREE BRANCHES (INCLUDED IN CLEARING SITE LINE ITEM)	NSP	NSP
F	REMOVE IVY (INCLUDED IN CLEARING SITE LINE ITEM)	NSP	NSP
G	RESET STREET SIGN (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	1
H	REMOVE SIGN (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	2
I	RESET UTILITY VALVE BOX (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	2
J	RESET MANHOLE CASTING (INCLUDED IN CLEARING SITE LINE ITEM)	UNIT	1
K	REMOVE CONCRETE CURB (INCLUDED IN RESPECTIVE CURB LINE ITEMS)	LF	50
L	REMOVE CONCRETE SIDEWALK AND CURB RAMP (INCLUDED IN CONCRETE SIDEWALK AND CURB RAMP, 4" THICK, CLASS 'B')	SY	25
M	JOINT SEALER (INCLUDED IN RESPECTIVE HOT MIX ASPHALT ITEMS)	LF	70
N	CLEANING AND SWEEPING (INCLUDED IN RESPECTIVE HOT MIX ASPHALT ITEMS)	SY	300
O	TACK COAT (INCLUDED IN RESPECTIVE HOT MIX ASPHALT LINE ITEMS)	GAL	30
P	CONCRETE SEALING (INCLUDED IN RESPECTIVE CONCRETE ITEMS)	NSP	NSP
Q	WATERING (INCLUDED IN FERTILIZER AND SEEDING, TYPE 'A' ITEM)	NSP	NSP
R	MAINTENANCE AND PROTECTION OF VEHICULAR AND PEDESTRIAN TRAFFIC (INCLUDED IN VARIOUS WORK ZONE ITEMS)	NSP	NSP

ROADWAY IMPROVEMENTS:
SAWCUTTING, 100 L.F.
HMA PROFILE MILLING 1 1/2" TO 3 1/2", 290 S.Y.
EXCAVATION, UNCLASSIFIED, 6 C.Y.
HOT MIX ASPHALT, 9.5M64, SURFACE COURSE, 1 1/2" THICK, 305 S.Y.
HOT MIX ASPHALT, 25M64, BASE COURSE, 4" THICK, 12 S.Y.

CONCRETE IMPROVEMENTS:
REMOVE CONCRETE CURB, 50 L.F. (N.S.P.)
REMOVE CONCRETE SIDEWALK, 25 S.Y. (N.S.P.)
CONSTRUCT 6"X8"X18" CONCRETE CURB, CLASS 'B' (INCLUDING HEADER CURB BEHIND CURB RAMPS), 74 L.F.
CONSTRUCT CONCRETE SIDEWALK AND CURB RAMP, 4" THICK, CLASS 'B', 25 S.Y.
DETECTABLE WARNING SURFACE, 16 S.F.

TOPSOIL, 5" THICK, 22 S.Y.
FERTILIZER AND SEEDING TYPE 'A', 22 S.Y.
RESET UTILITY VALVE BOX, 2 UNITS (N.S.P.)

ALL CURB RAMPS CONSTRUCTED SHALL MEET THE PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY (P.R.O.W.A.C.), DATED JULY 26, 2011

THE CONTRACTOR SHALL UTILIZE THE EXISTING ROADWAY AS A CONSTRUCTION ENTRANCE. THE ROADWAY SHALL BE CLEANED AS NEEDED OR AS DIRECTED BY THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT AND THE TOWNSHIP ENGINEER, TO ELIMINATE TRAFFIC HAZARDS, DUST, ETC. (INCLUDED IN ROADWAY CLEANING LINE ITEM)

CRUSHED OR RECYCLED CONCRETE OR CRUSHED OR RECYCLED ASPHALT WILL NOT BE ACCEPTED AS A SUBSTITUTE TO DENSE GRADED AGGREGATE FOR THIS PROJECT

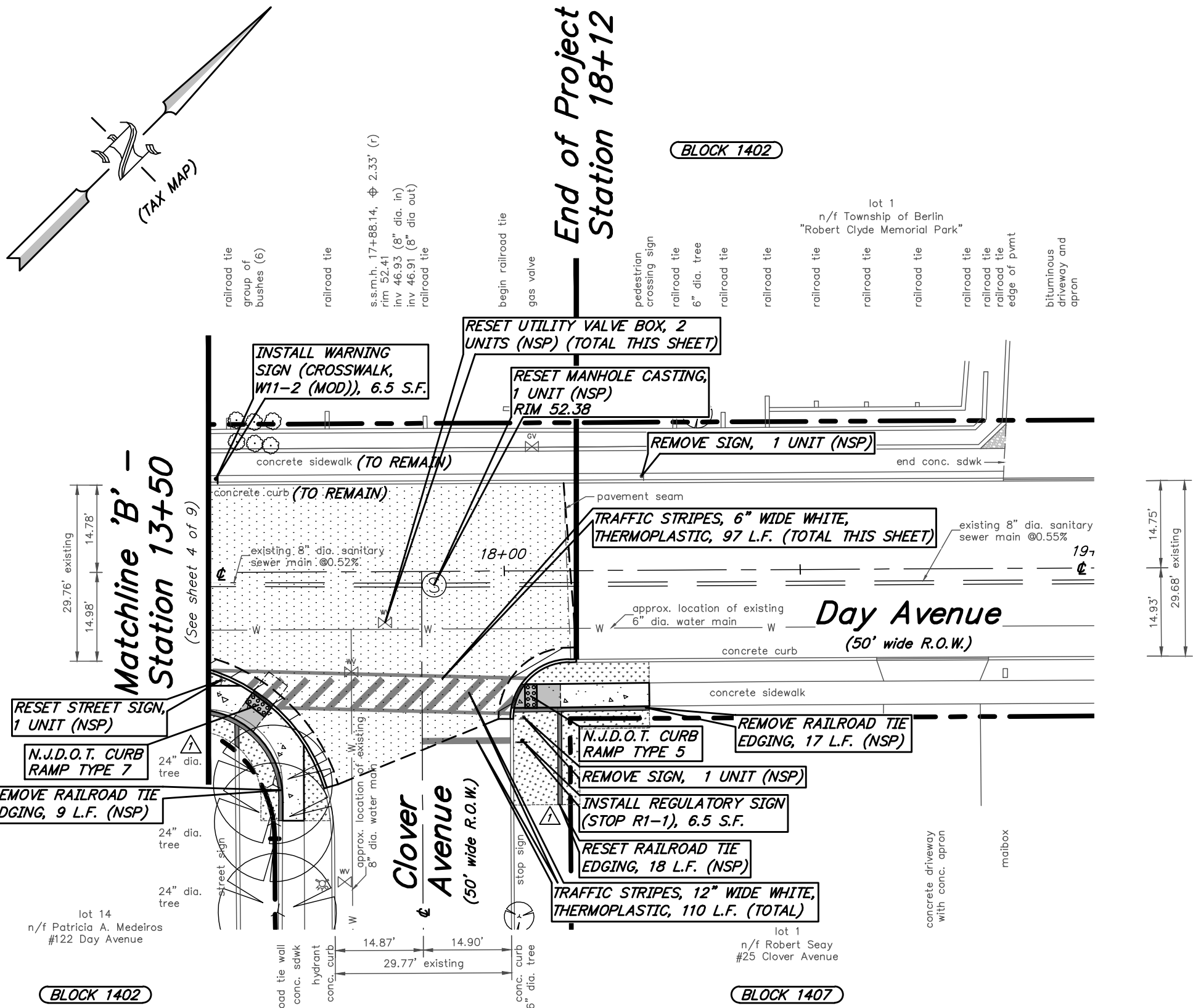
(N.S.P.) INDICATES NO SPECIFIC PAYMENT WILL BE MADE FOR THE ITEM. THE COST SHALL BE INCLUDED IN VARIOUS ITEMS IN THE PROPOSAL

THE CONTRACTOR SHALL NOT ENTER ONTO ANY PRIVATE PROPERTIES WITHOUT RECEIVING A "CONSENT TO ENTER AGREEMENT" FROM THE PROPERTY OWNER

SHOULD POLICE TRAFFIC DIRECTORS BE REQUIRED, THEIR SERVICES SHALL BE PAID FOR BY THE TOWNSHIP, AT NO COST TO THE CONTRACTOR. HOWEVER, THE CONTRACTOR MUST STILL PROVIDE, AT HIS COST, MAINTENANCE AND PROTECTION OF TRAFFIC IN ACCORDANCE WITH THE SPECIFICATIONS. 24-HOUR ROAD CLOSINGS WILL NOT BE PERMITTED.

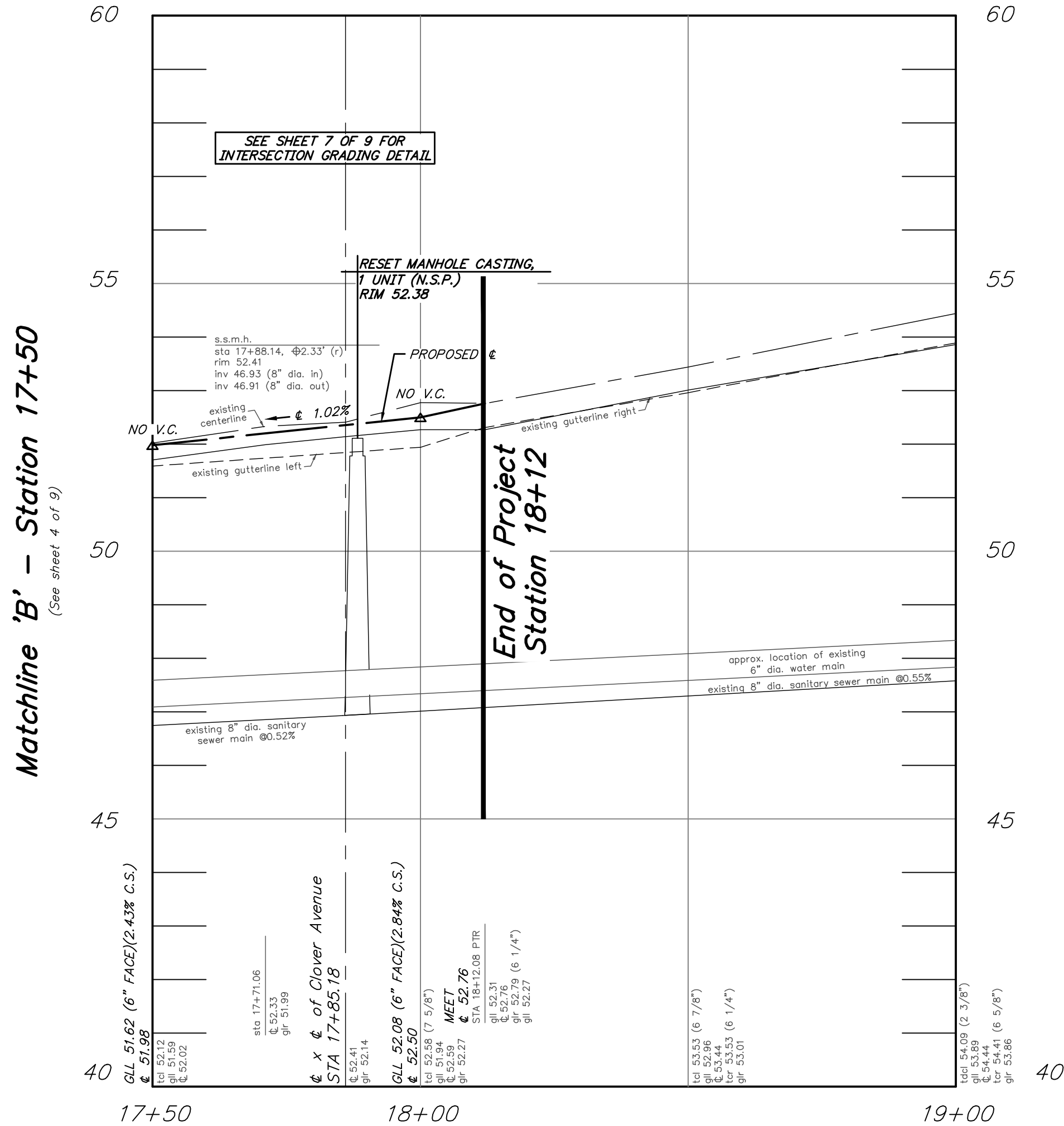
Legend

- EXCAVATION, UNCLASSIFIED
HOT MIX ASPHALT, 9.5M64, SURFACE COURSE, 1 1/2" THICK
HOT MIX ASPHALT, 25M64, BASE COURSE, 4" THICK
DENSE GRADED AGGREGATE SUBBASE, 6" THICK
- HMA PROFILE MILLING 1 1/2" TO 3 1/2"
HOT MIX ASPHALT, 9.5M64, SURFACE COURSE 1.5" THICK
- RAILROAD TIE
- 6"X8"X18" OR 9"X16" CONCRETE CURB, CLASS 'B'
- CONCRETE SIDEWALK/CURB RAMP 4" THICK, CLASS B
- TOPSOIL, 5" THICK
FERTILIZER AND SEEDING, TYPE 'A'
- MULCH, 4" THICK



Plan: Proposal No. 1, Base Bid: Day Avenue

scale: 1" = 20'



Plan: Proposal No. 1, Base Bid: Day Avenue

scale: horizontal 1" = 20'
vertical 1" = 2'

CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE DEPARTMENT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2019 EDITION, WHICH IS INCORPORATED HEREIN BY REFERENCE, AS AMENDED AND SUPPLEMENTED, AND THE DEPARTMENT'S SUPPLEMENTARY SPECIFICATIONS FOR STATE AID PROJECTS, 2019 EDITION, WHICH IS INCORPORATED HEREIN BY REFERENCE, AS AMENDED AND SUPPLEMENTED. STANDARD CONSTRUCTION DETAILS SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE DEPARTMENT OF TRANSPORTATION. THE NEW JERSEY DEPARTMENT OF TRANSPORTATION "STANDARD ROADWAY CONSTRUCTION/ TRAFFIC CONTROL/ BRIDGE CONSTRUCTION DETAILS" BOOKLET DATED 2016 AND "ELECTRICAL BUREAU STANDARD DETAILS, 2007" AND ALL BASELINE DOCUMENT CHANGES MADE TO THESE CONSTRUCTION DETAILS, SHALL GOVERN, EXCEPT FOR THOSE DETAILS CONTAINED HEREIN. PARTIALLY FUNDED THROUGH NEW JERSEY DEPARTMENT OF TRANSPORTATION MUNICIPAL AID PROGRAM FY2020.

BENCHMARK:
FIND DRILLHOLE
(SEE SHEET 3)
ELEV. 49.98

REPRODUCTION, ALTERATION AND AMENDMENT OF THIS PLAN SHALL BE PERFORMED ONLY BY KEY ENGINEERS, INC. AND SHALL BE PERFORMED UNDER THE ABSOLUTE DIRECTION OF THE LICENSED PROFESSIONAL WHOSE NAME AND SIGNATURE APPEARS HEREON.

7/11/21

GENERAL REVISIONS

SH

GE

REV.

DATE:

DESCRIPTION

DRWN.

CHKD.

Construction Plan and Profile

NJDOT FY2020 Municipal Aid Program

Improvements to Day Avenue from

NJSH 73 to Clover Avenue

Township of Berlin

Camden County, New Jersey

DATE: 08/26/21

DRAWN BY: S. Heebner

CHKD. BY:

SCALE: AS NOTED

PROJECT No. 29-5248T0121

FIELD BOOK/PAGE:

SHEET No. 5 OF 9

GREGORY BLASE FUSCO

PROFESSIONAL ENGINEER

NJPE No. 32853

PA/PE No. 036608-E

NJ PROFESSIONAL PLANNER No. 4076

KEY

ENGINEERS, INC.

80 S. WHITE HORSE PIKE

BERLIN, NEW JERSEY 08009-2399

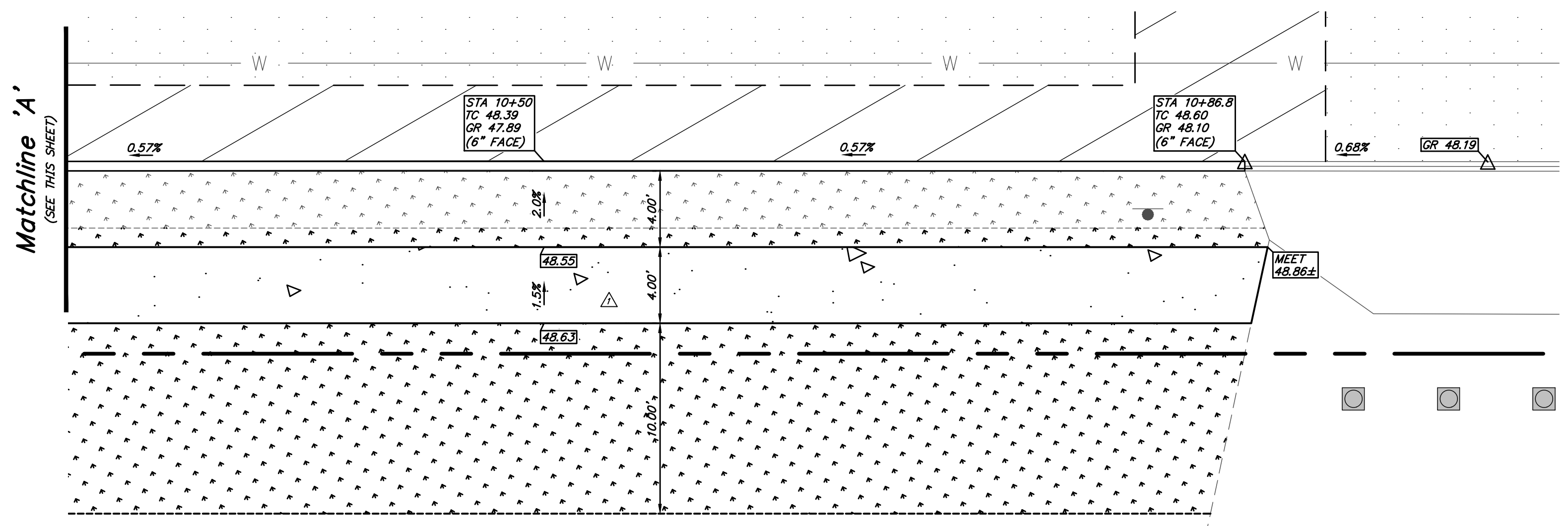
CERTIFICATE OF AUTHORIZATION #24628041300

phone (856) 767-6111

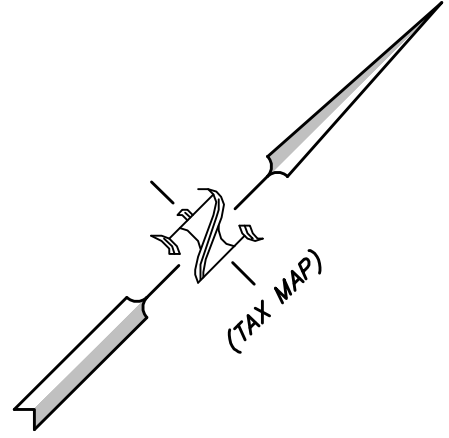
fax (856) 753-1091

www.keyengineers.com

DATE _____

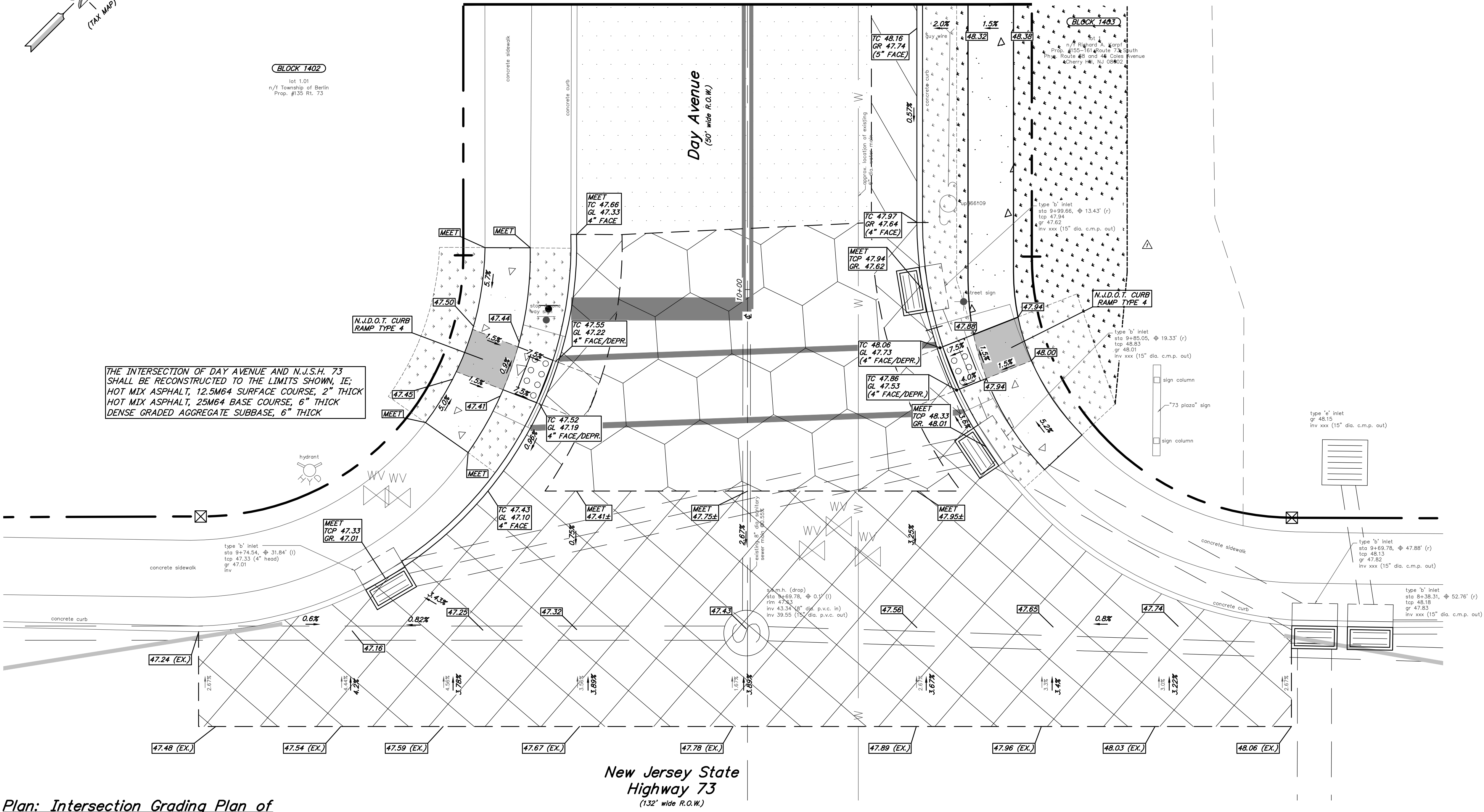


Plan: Grading Plan for Alternate No. 1 Sidewalk Construction
scale: 1" = 5'



BLOCK 1402
lot 1.01
n/t Township of Berlin
Prop. #135 Rt. 73

Matchline 'A'
(SEE THIS SHEET)



Plan: Intersection Grading Plan of
Day Avenue and NJSH 73
scale: 1" = 5'

ALL CURB RAMPS CONSTRUCTED SHALL MEET THE PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY (P.R.O.W.A.G.), DATED JULY 26, 2011

THE CONTRACTOR SHALL UTILIZE THE EXISTING ROADWAY AS A CONSTRUCTION ENTRANCE. THE ROADWAY SHALL BE CLEANED AS NEEDED OR AS DIRECTED BY THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT AND THE TOWNSHIP ENGINEER, TO ELIMINATE TRAFFIC HAZARDS, DUST, ETC. (INCLUDED IN ROADWAY CLEANING LINE ITEM)

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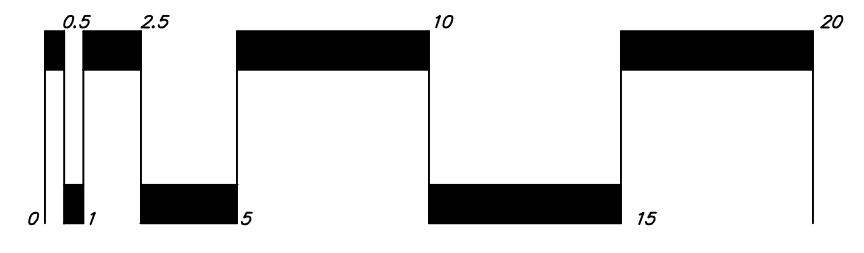
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Legend: Base Bid

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HOT MIX ASPHALT, 9.5M64, SURFACE COURSE, 1 1/2" THICK
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- TOPSOIL, 5" THICK
FERTILIZER AND SEEDING, TYPE 'A'

Legend: Alternate No. 1

- TOPSOIL, 5" THICK
FERTILIZER AND SEEDING, TYPE 'A'
- CONCRETE SIDEWALK/CURB RAMP 4" THICK, CLASS 'B'



Graphic Scale
scale: 1 inch = 5 feet

REV.	DATE	DESCRIPTION	SH	GE
1	7/11/21	GENERAL REVISIONS		

Intersection Grading Plan

NJDOT FY2020 Municipal Aid Program
Improvements to Day Avenue from
NJSH 73 to Clover Avenue

Township of Berlin
Camden County, New Jersey

DATE: 08/26/21 DRAWN BY: S. Heebner CHKD. BY: SCALE: 1" = 5'
PROJECT No. 29-5248T0121 FIELD BOOK/PAGE: SHEET No. 6 OF 9

GREGORY BLASE FUSCO
PROFESSIONAL ENGINEER
NJPE No. 32853 PA/PE No. 036608-E
NJ PROFESSIONAL PLANNER No. 4076

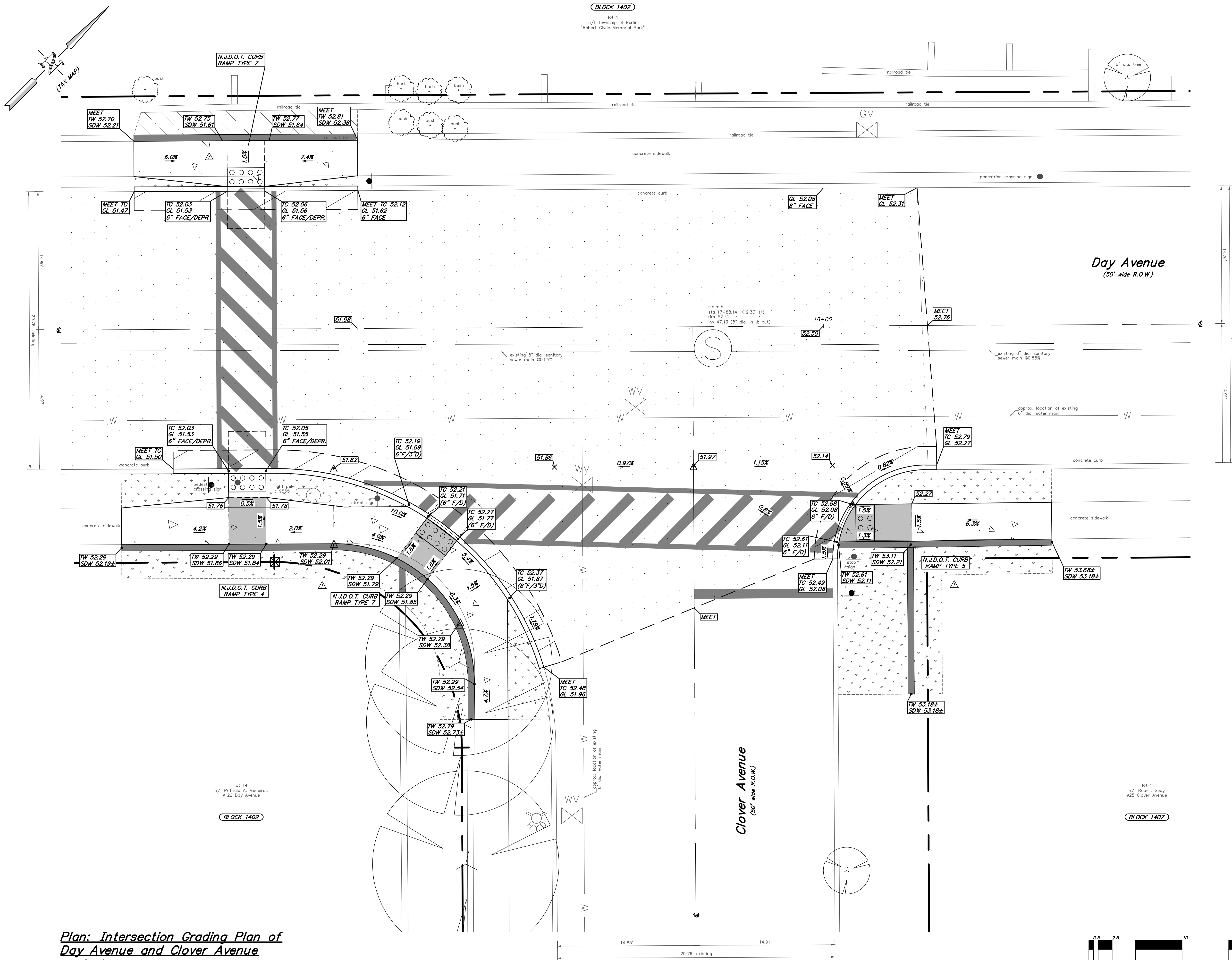
KEY ENGINEERS, INC.
80 S. WHITE HORSE PIKE
BERLIN, NEW JERSEY 08009-2399
phone: (856) 767-6111
fax: (856) 753-1091
www.keyengineers.com
CERTIFICATE OF AUTHORIZATION #246A28041300

DATE _____

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BENCHMARK:
FIND DRILLHOLE
(SEE SHEET 3)
ELEV. 49.98

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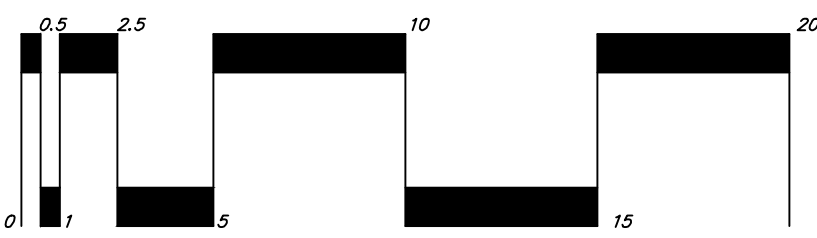
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- Legend**
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 - TOPSOIL, 5" THICK
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Plan: Intersection Grading Plan of Day Avenue and Clover Avenue

scale: 1" = 5'

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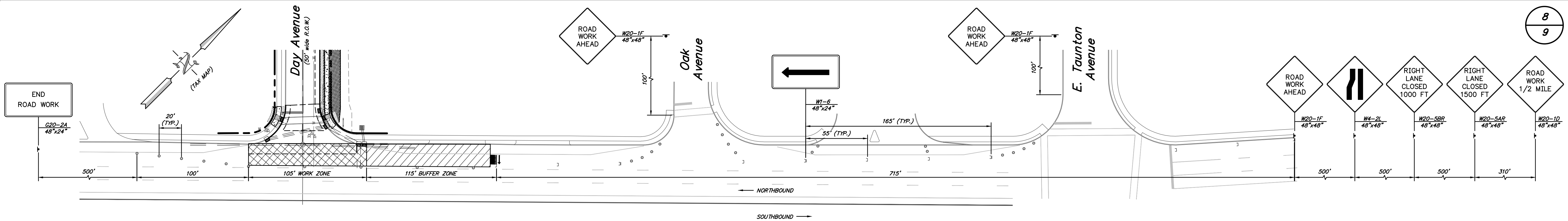


Graphic Scale
scale: 1 inch = 5 feet

BENCHMARK: FIND DRILLHOLE (SEE SHEET 3) ELEV. 49.98

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REV.	7/11/21	DATE:	GENERAL REVISIONS	SH	GE
			DESCRIPTION	DRWN.	CHKD.
Intersection Grading Plan					
NJDOT FY2020 Municipal Aid Program Improvements to Day Avenue from NJSH Route 73 to Clover Avenue					
Township of Berlin Camden County, New Jersey					
DATE: 08/26/21 DRAWN BY: S. Heebner CHKD. BY: SCALE: AS NOTED					
PROJECT No. 29-5248T0121 FIELD BOOK/PAGE: SHEET No. 7 OF 9					
GREGORY BLASE FUSCO PROFESSIONAL ENGINEER					
NJPE No. 32853 PA.PE No. 036608-E NJ PROFESSIONAL PLANNER No. 4076					
80 S. WHITE HORSE PIKE phone (856) 767-6111 BERLIN, NEW JERSEY 08009-2399 fax (856) 753-1091 CERTIFICATE OF AUTHORIZATION #246A28041300					
DATE _____					



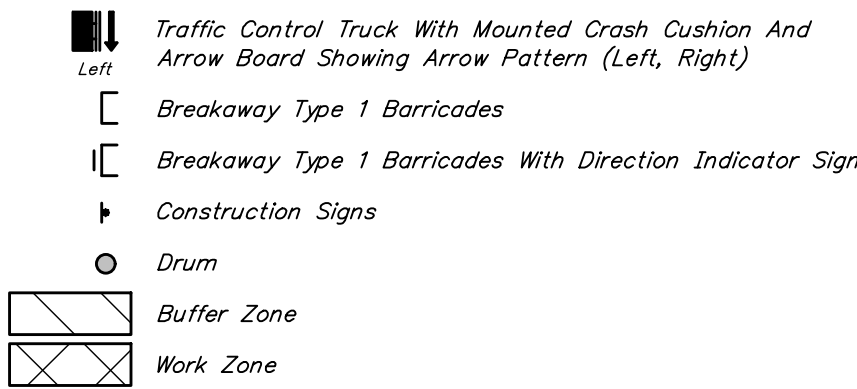
Temporary Traffic Control Plan

scale: 1" = 40'

Taper Length Calculation (Merging Taper):

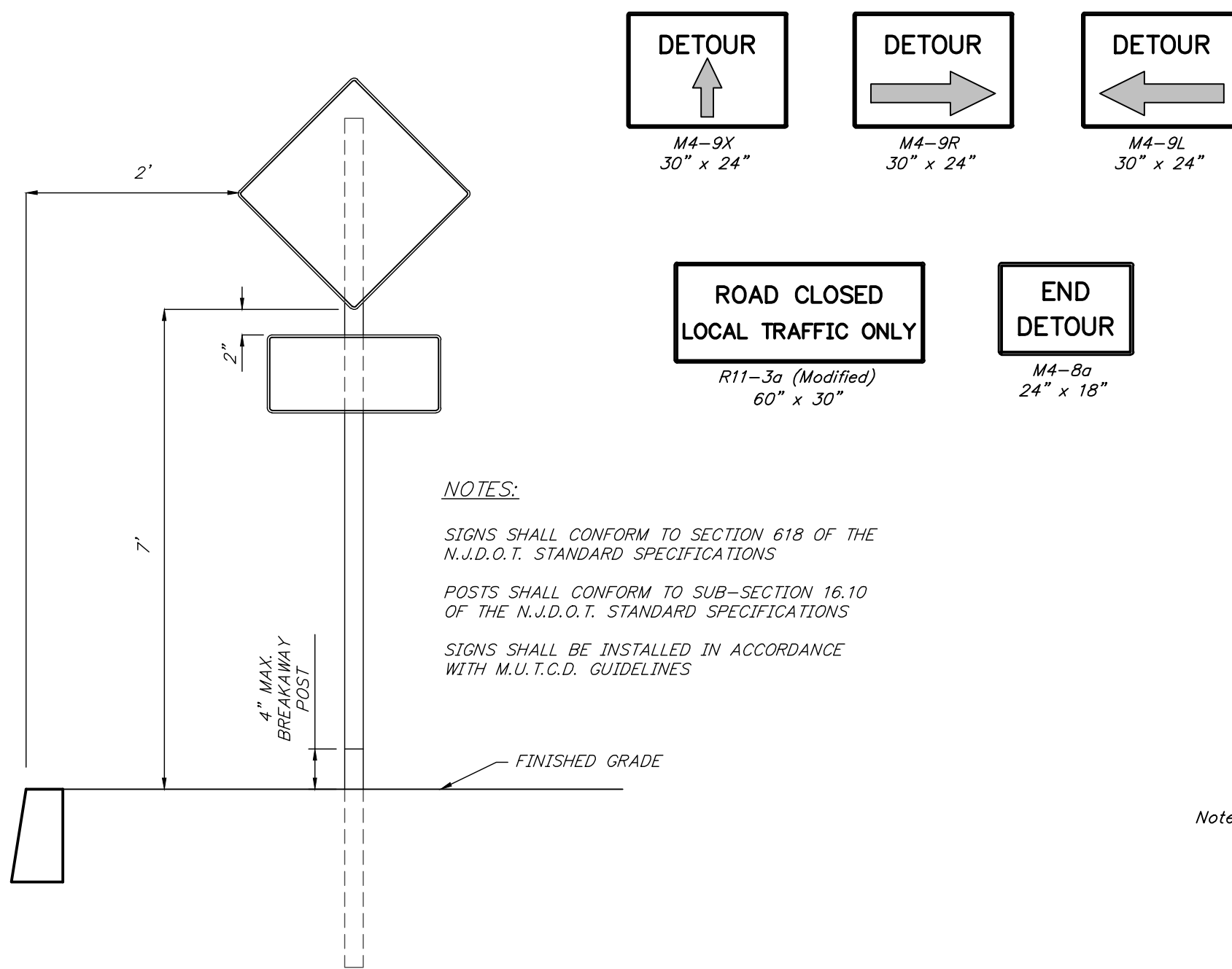
$$L = WS \quad L = 13(55) = 715'$$

Legend:



RECOMMENDED TAPER LENGTH AND SPACING FOR CHANNELIZING TAPERS					RECOMMENDED SPACING ALONG TANGENTS	
REGULATORY APPROACH SPEED OF TRAFFIC MILES/HOUR	MINIMUM TAPER RATIO IN LENGTH PER FOOT OF WIDTH	MINIMUM TAPER LENGTH L - FOR LANE WIDTHS	MAXIMUM DEVICE (B) SPACING ALONG TAPERS IN FEET	MAXIMUM DEVICE (D) SPACING ALONG TANGENTS IN FEET		
25	10:5:1	105	115	125	25	50
30	15:1	150	165	180	30	60
35	20:5:1	205	225	245	35	70
40	27:1	270	300	325	40	80
45	45:1	450	495	540	45	90
50	59:1	590	650	690	50	100
55	55:1	550	605	660	55	110
60	60:1	600	660	720	60	120
65	65:1	650	715	780	65	130

NOTE:
THE MAXIMUM DEVICE SPACING ALONG CURVES SHALL BE AS DEFINED FOR TAPERS (B) IN THE ABOVE TABLE.



Sign Location Detail

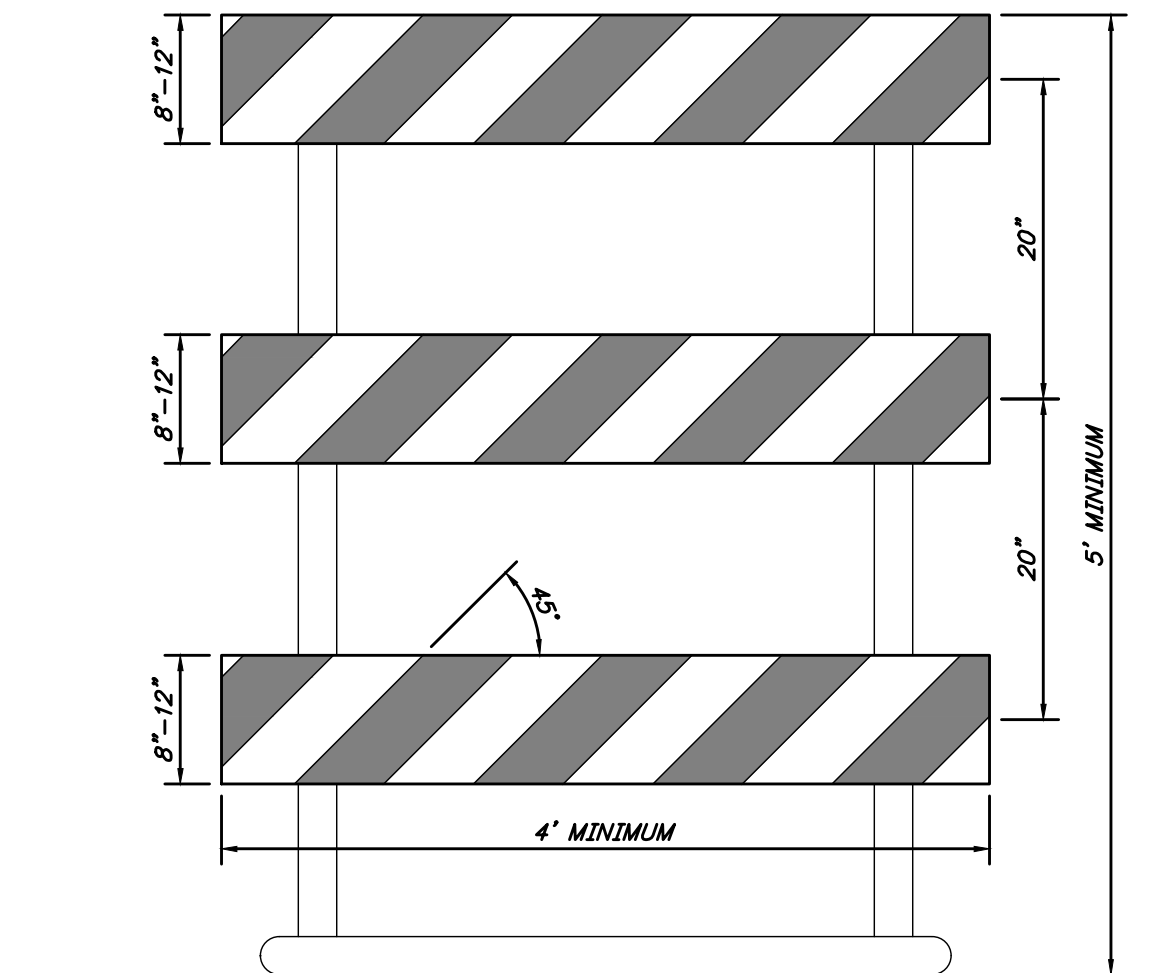
N.T.S.

New Jersey State Highway 73

(132' wide R.O.W.)

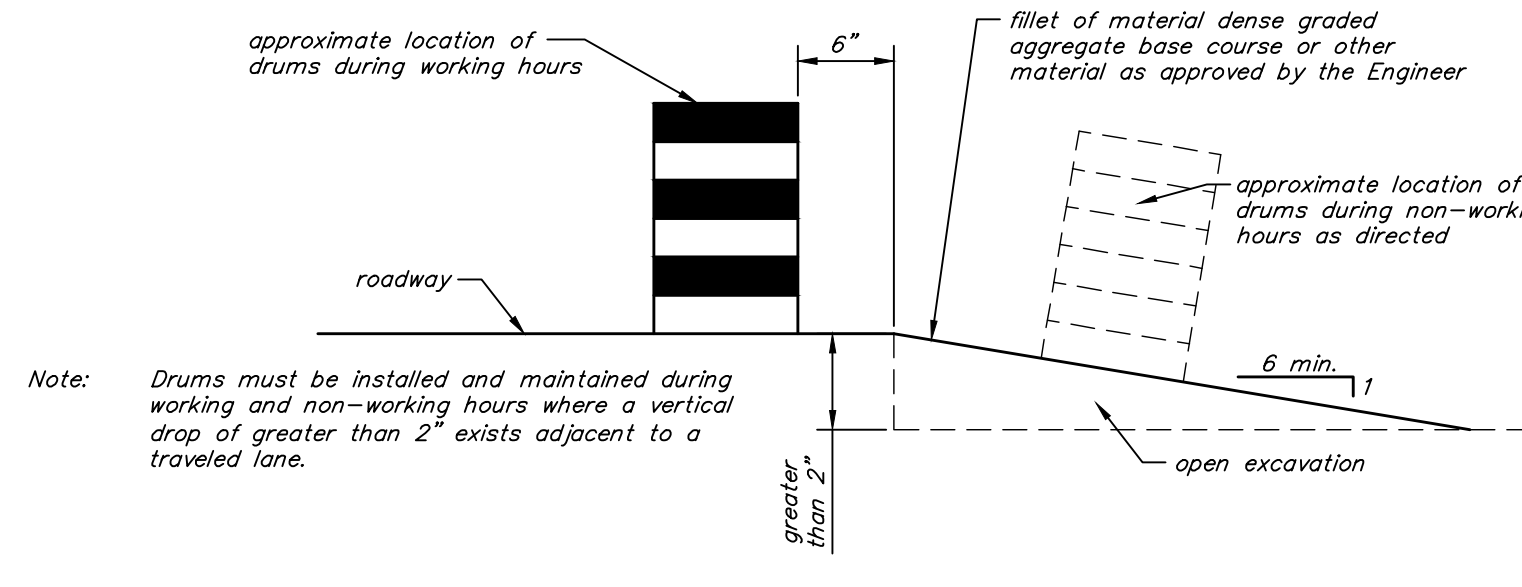
Construction Notes:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF VEHICLE AND PEDESTRIAN TRAFFIC CIRCULATION THROUGHOUT THE DURATION OF THE PROJECT.
- THE CONTRACTOR MUST CONTACT THE BERLIN TOWNSHIP POLICE DEPARTMENT FOR ALL REQUIREMENTS REGARDING THE USE OF TRAFFIC DIRECTORS FOR THIS PROJECT. SHOULD POLICE TRAFFIC DIRECTORS BE REQUIRED, THEY WILL BE PAID FOR BY THE TOWNSHIP.
- BARRICADES, LIGHTING DEVICES AND OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE IN ACCORDANCE WITH AND SHALL CONFORM TO SECTION 110, NEW JERSEY DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, PART 6 OF THE MUTCD AND WORK ZONE TRAFFIC CONTROL. (U.S. DEPARTMENT OF TRANSPORTATION)
- TRAFFIC/PEDESTRIAN CONTROL DEVICES AND EQUIPMENT SHALL BE IN PLACE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, COUNTY AND MUNICIPAL REGULATIONS.
- ALL SIGNS WHICH ARE REMOVED DURING CONSTRUCTION SHALL BE RESET EITHER TEMPORARILY OR PERMANENTLY PRIOR TO THE END OF EACH DAY.
- TEMPORARY LINE STRIPING SHALL BE PROVIDED IN ORDER TO MAINTAIN TRAFFIC FLOW, SAFETY AND CONTROLLED PASSAGE OF TRAFFIC THROUGH THE WORK ZONE AND PROJECT, IF NECESSARY.
- BARRELS OR BARRICADES, LIGHTING DEVICES, ETC. SHALL NOT BE PLACED IN FRONT OF DRIVEWAY ENTRANCES.
- POSTED SPEED WITHIN THE PROJECT LIMITS IS 55 M.P.H.
- ALL SIGNS SHALL BE ORANGE BACKGROUND WITH BLACK LETTERING AND EDGE LINES.



Type III Breakaway Barricade Detail

scale: 1" = 1'



Drum Location Detail

not to scale

Base Bid: Improvements to Day Avenue FROM N.J.S.H. 73 TO CLOVER AVENUE

(PARTIALLY FUNDED THROUGH THE N.J.D.O.T. MUNICIPAL AID, FY2020)

Payment Items

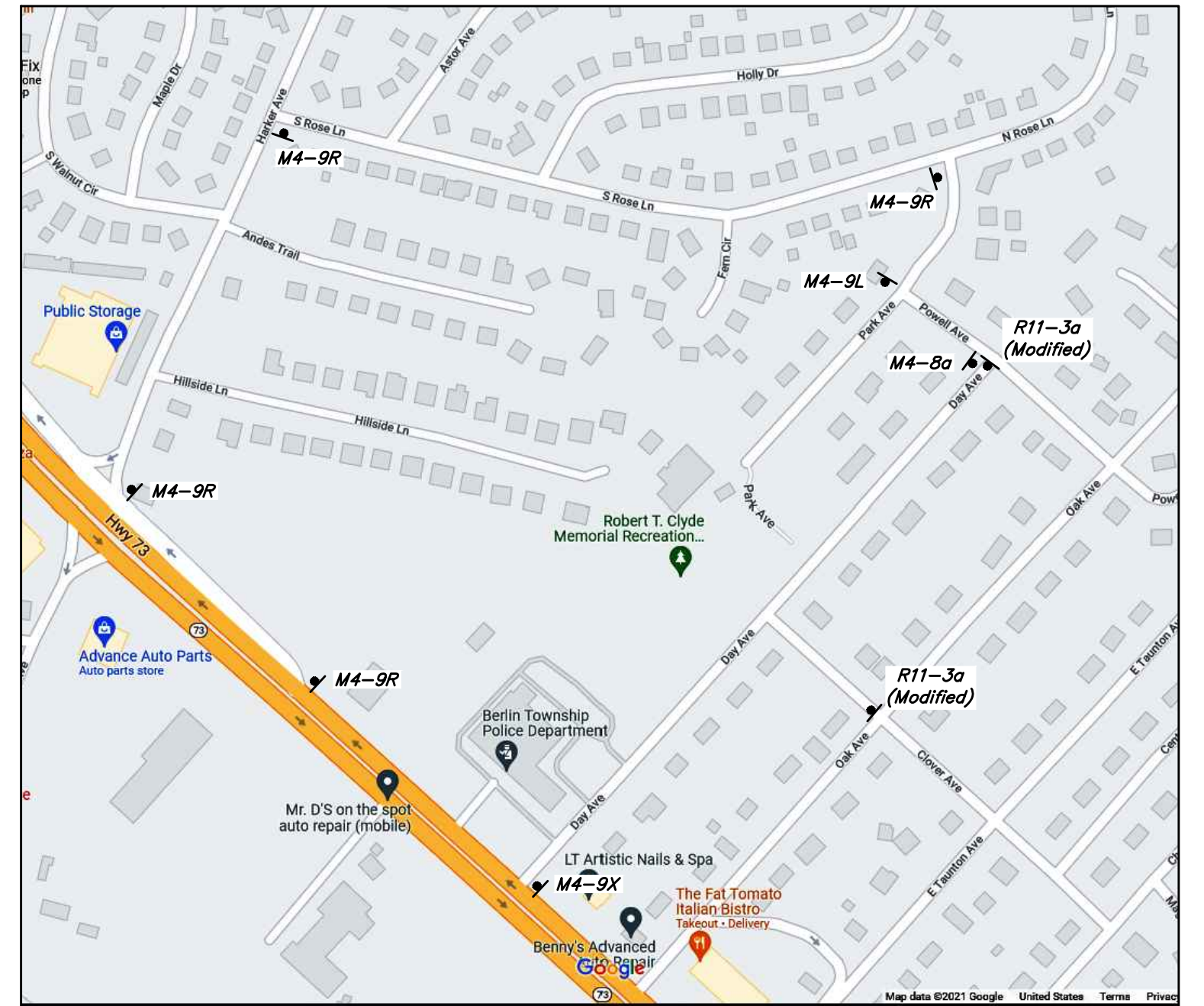
ITEM NUMBER	DESCRIPTION	UNIT MEASURED	QUANTITY
30	TRAFFIC DRUM	UNIT	26
31	TYPE I BREAKAWAY BARRICADE	UNIT	11
32	TYPE III BREAKAWAY BARRICADE	UNIT	8
33	CONSTRUCTION SIGNS	SF	210
34	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION AND FLASHING ARROW BOARD 2' X 4'	UNIT	1
35	STATE POLICE TRAFFIC DIRECTOR	MH	24

TRAFFIC IMPACT NOTICES AND CHANGES

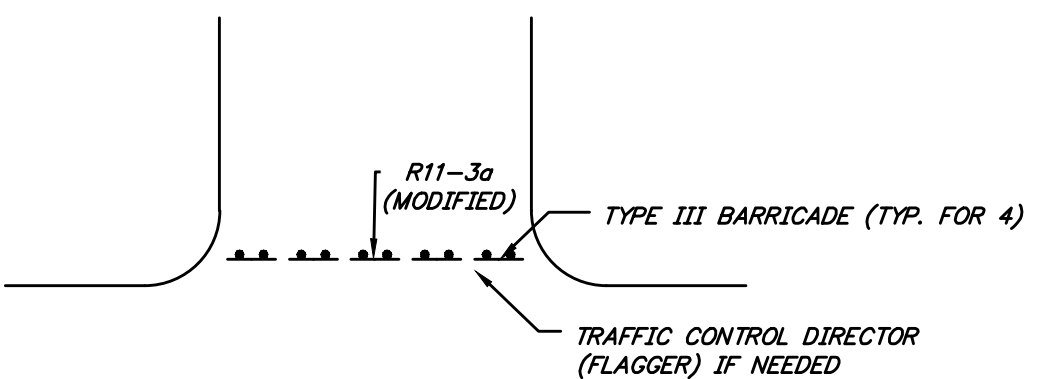
- TERMS
When the following terms are used, the intent and meaning shall be as follows:
IMPACTS TO NORMAL TRAFFIC FLOW - WORK THAT REQUIRES A PORTION OF THE PAVED ROADWAY BEING BLOCKED OR CLOSED WITH SAFETY DEVICES OR VEHICLES, INCLUDING, BUT NOT LIMITED TO, FULL OR PARTIAL LANE CLOSURES, FULL OR PARTIAL RAMP CLOSURES, SHOULDER CLOSURES, MOVING OPERATIONS SUCH AS TRAFFIC STRIPING OR SWEEPING, LANE SHIFTS, OR ALTERNATING TRAFFIC.
THIS APPLIES EVEN WHEN DETOURS ARE PROVIDED.
TEMPORARY LANE CLOSURES - WORK DESCRIBED UNDER 'IMPACTS TO NORMAL TRAFFIC FLOW' WHICH IS ROUTINELY SET UP AND REMOVED ON A DAILY BASIS.
PERMANENT LANE CLOSURES - WORK DESCRIBED UNDER 'IMPACTS TO NORMAL TRAFFIC FLOW' WHICH REMAINS IN PLACE CONTINUOUSLY FOR 24 HOURS OR MORE.
- ADVANCE NOTICES
FOR THE INITIAL START OF WORK THAT REQUIRES 'IMPACTS TO NORMAL TRAFFIC FLOW', THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER IN WRITING, ON THE ADVANCE FORM TO-103 PROVIDED BY THE DEPARTMENT, OF THE PROPOSED DATE, THE NOTICE SHALL BE SUBMITTED AT LEAST TWENTY-THREE CALENDAR DAYS, BUT NOT MORE THAN SIXTY CALENDAR DAYS, BEFORE THE PROPOSED DATE. START OF WORK THAT IMPACTS NORMAL TRAFFIC FLOW SHALL NOT BE PERMITTED PRIOR TO THE DATE STATED IN THE NOTICE. THE CONTRACTOR SHALL CONFIRM, IN WRITING TO THE RESIDENT ENGINEER, THE PROPOSED DATE SEVEN AND/OR FOURTEEN CALENDAR DAYS BEFORE STARTING THE ESTABLISHMENT OF THE TRAFFIC CONTROL MEASURES FOR THE TRAFFIC IMPACT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE RESIDENT ENGINEER IF THE PROPOSED ESTABLISHMENT CAN NOT BE COMPLETED ON THE PROPOSED DATE.
FOR A 'PERMANENT LANE CLOSURE', THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER IN WRITING, ON ADVANCE FORM TO-103, OF THE PROPOSED DATE A NEW TRAFFIC PATTERN WILL BE ESTABLISHED. THE NOTICE SHALL BE SUBMITTED AT LEAST TWENTY-THREE CALENDAR DAYS, BUT NOT MORE THAN SIXTY CALENDAR DAYS, IN ADVANCE OF THE PROPOSED DATE. START OF A NEW TRAFFIC PATTERN WILL NOT BE PERMITTED PRIOR TO THE DATE.

GENERAL NOTES:

- ADVANCE WARNING SIGNS, DISTANCES, AND TAPER LENGTHS MAY BE EXTENDED AT DIRECTION OF THE ENGINEER TO ADJUST FOR REDUCED VISIBILITY DUE TO HORIZONTAL AND VERTICAL CURVATURE OF THE ROADWAY.
- THE APPROXIMATE LOCATIONS OF THE ILLUMINATED FLASHING ARROW BOARDS ARE SHOWN ON THE TRAFFIC CONTROL PLANS. THESE LOCATIONS MAY BE MODIFIED TO ADJUST FOR VISIBILITY DUE TO HORIZONTAL OR VERTICAL CURVATURE OF THE ROADWAY OR TO POSITION AT A SAFER LOCATION. ILLUMINATED FLASHING ARROW BOARDS ARE TO BE USED FOR TEMPORARY LANE CLOSURES AND AT LOCATIONS SHOWN ON THE TRAFFIC CONTROL PLANS.
- PRIOR TO ANY ROAD WORK DURING STAGING WORK, TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE IN PLACE AND COMPLETED DURING NON-PEAK HOURS.
- RAMP AND/OR SIDE STREETS ENTERING THE ROADWAY AFTER THE FIRST ADVANCE WARNING SIGN SHALL BE PROVIDED WITH AT LEAST ONE WORK SIGN (ROAD WORK AHEAD) AS A MINIMUM.
- ALL EXISTING ROAD SIGNS, PAVEMENT MARKINGS AND/OR FLOWABLE PAVEMENT REFLECTORS WHICH CONFLICT WITH THE PROPOSED TRAFFIC CONTROL PLAN SHALL BE COVERED, BRANCHED OR RELOCATED AS DIRECTED BY THE ENGINEER.
- CONFLICTING OR NON-OPERATING SIGNAL INDICATIONS ON EITHER THE EXISTING, TEMPORARY OR PROPOSED TRAFFIC SIGNAL SYSTEMS SHALL BE BAGGED OR COVERED.
- MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, STANDARDS AND GUIDES FOR TRAFFIC CONTROL, FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY AND NON-OPERATING SIGNAL INDICATIONS ON EITHER THE EXISTING, TEMPORARY OR PROPOSED TRAFFIC SIGNAL SYSTEMS SHALL BE BAGGED OR COVERED.
- CONSTRUCTION SIGN W99-2 (GIVE US A BREAK) SHOULD BE LOCATED 200 FEET IN ADVANCE OF PROJECT LIMITS.
- A W46 (ARROW) SIGN MOUNTED ON A BREAKAWAY BARRICADE AND CENTERED ON THE CLOSED WORK AREA SHALL BE LOCATED 80 FEET BEYOND EACH INTERSECTION OR MAIN ACCESS POINT WITHIN THE AREA OF A LANE OR SHOULDER CLOSURE.
- CONSTRUCTION SIGNS W88A (SYMBOL FOR UNEVEN PAVEMENT) AND W88A (IMPROVED PAVEMENT) SHALL BE USED WHEN SUCH PAVEMENT CONDITIONS EXIST. THE PLACEMENT OF THESE SIGNS SHALL BE AS DIRECTED BY THE ENGINEER.
- MOVING WORK AREAS IN A PERMANENT LANE CLOSURE REQUIRE A TRAILER MOUNTED FLASHING ARROW TO REMAIN AT THE END OF THE TAPER. THE TRUCK MOUNTED CRASH CUSHION SHALL MOVE WITH THE WORK AREA TO KEEP ITS 15 FOOT MINIMUM AND A 105 FOOT MAXIMUM BUFFER IN ADVANCE OF EACH WORK AREA.
- THE CONTRACTOR SHALL SUBMIT A PLAN FOR THE SAFE ACCESS OF CONSTRUCTION VEHICLES THROUGHOUT THE WORK SITE WHERE SPACE CONSTRAINTS PREVENT THE USE OF LANE CLOSURES. THE PLAN SHALL BE SUBMITTED TO THE ENGINEER IN ACCORDANCE WITH SECTION 807 OF THE STANDARD SPECIFICATIONS.
- TRAFFIC SAFETY SERVICES SHALL BE USED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL, SECTION 807.
- ALL EXCAVATED AREAS WITHIN OR ADJACENT TO THE ROADWAY SHALL BE BACKFILLED AND PLACED ON A MINIMUM 1% SLOPE PRIOR TO THE END OF EACH WORK DAY. OTHER EXCAVATED AREAS WITHIN THE CLEAR ZONE ARE TO BE EITHER BACKFILLED OR A PRECAST CONCRETE CURB CONSTRUCTION BARRIER SET TEMPORARILY IN PLACE TO SHIELD VEHICULAR AND PEDESTRIAN TRAFFIC (SEE ESCAPE RAMP DETAIL 10-3).
- SEE SHEETS 10-2 AND 10-3 FOR ADDITIONAL NOTES.
- WHERE REQUIRED, THE CONTRACTOR SHALL MAKE PROVISIONS FOR MAINTAINING PEDESTRIAN CROSSING LOCATIONS AND TYPE AS DIRECTED BY THE ENGINEER.
- BITUMINOUS CONCRETE PLACED DURING THE VARIOUS CONSTRUCTION STAGES SHALL BE TRANSITIONED ON A MINIMUM 2% IN SLOPE TO MEET THE ADJACENT EXISTING GRADE AT THE LONGITUDINAL AND TRANSVERSE UNITS OF THE STAGE CONSTRUCTION AREAS UNLESS OTHERWISE NOTED ON THE STAGE CONSTRUCTION PLANS.
- THE PLACEMENT AND OR RELOCATION OF PRECAST CONCRETE CURB CONSTRUCTION BARRIER SHALL BE DONE DURING APPROVED OFF-PEAK HOURS WHEN TRAFFIC MAY BE REDUCED TO ONE OR TWO LANE IN EACH DIRECTION.
- CONSTRUCTION ZONE SPEED LIMIT WILL BE DETERMINED BY THE TRAFFIC SIGNAL AND SAFETY ENGINEERING REGIONAL TRAFFIC ENGINEER - WORKZONE AT THE TIME OF OR DURING CONSTRUCTION AS REQUESTED BY THE RESIDENT ENGINEER.
- THE SPEED LIMIT R2-1 (BLACK ON WHITE) SIGN SHALL BE LOCATED THROUGH WORK AREAS AS DIRECTED BY THE TRAFFIC SIGNAL AND SAFETY ENGINEERING REGIONAL TRAFFIC ENGINEER - WORKZONE.
- THE REDUCED SPEED AHEAD SIGN (R2-5A) (BLACK ON WHITE) SHALL BE LOCATED IN ADVANCE OF SPEED LIMIT R2-1 SIGNS WHICH REDUCE THE NORMAL POSTED SPEED LIMIT THROUGH THE CONSTRUCTION ZONE.
- TRAFFIC LANE DOUBLED IN WORK AREA - R2-5 (15) - 4 FEET BY 25 FEET SIGN SHALL BE LOCATED 500 FEET AFTER THE FIRST ADVANCE WARNING SIGN (W99 SERIES) AT EACH WORK AREA. LOCATED WITHIN URBAN AREAS THE SIGN SHALL ALSO BE USED ON PROJECTS REQUIRING MOVING OPERATIONS IN WHICH CASE THE SIGN SHALL BE MOUNTED ON A SLOW MOVING CONSTRUCTION VEHICLE.
- THE FINAL BITUMINOUS CONCRETE SURFACE PAVEMENT SHOULD NOT BE CONSTRUCTED UNTIL THE FINAL STAGE OF THE PROJECT MANHOLES AND INLETS SHALL BE SET TO FINISHED GRADE AND TEMPORARY PAVEMENT RAMP ARE TO BE CONSTRUCTED AROUND THEM WITH A MINIMUM 2% IN SLOPE IN ALL DIRECTIONS USING HOT MIX ASPHALT PAVEMENT THIS TEMPORARY MATERIAL WILL BE REMOVED IMMEDIATELY PRIOR TO PLACING THE SURFACE COURSE.
- TRAFFIC CONTROL DEVICES FOR LANE CLOSURES INCLUDING SIGNS, CONES, BARRICADES, ETC. SHALL BE PLACED AS SHOWN ON PLANS. SIGNS SHALL NOT BE PLACED WITHOUT ACTUAL LANE CLOSURES AND SHALL BE IMMEDIATELY REMOVED UPON REMOVAL OF THE CLOSURES.
- CONES MAY BE SUBSTITUTED FOR DRUMS AND INSTALLED UPON THE APPROVAL OF THE ENGINEER.
- CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES.
- THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER AND ANY OWNER 7 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION AND PRIOR TO CLOSURE OF ONE OF THEIR DRIVEWAYS.
- ALL WORK REQUIRING CLOSURE OF ROADWAY WITHOUT A DETOUR SHALL BE ALLOWED DURING 12 AM - 1 AM USING 15 MINUTES CLOSURE INTERVALS (NOT EXCEEDING MORE THAN 3 PER HOUR) AND TRAFFIC IS ALLOWED TO FLOW FREELY BETWEEN CLOSURES.
- WHEN TEMPORARY TRAFFIC SIGNALS ARE NOT BEING USED FOR STAGING OF AN EXISTING SIGNALIZED INTERSECTION, POLICE TRAFFIC DIRECTORS SHALL BE USED EXCLUSIVELY.
- THE CONTRACTOR WILL REQUEST THE APPROVAL OF THE ENGINEER FOR THE LOCATIONS OF STOCKPILE & STORAGE AREAS.
- ANY UNDESIRABLE PATCHES OR WEAK AREAS OF PAVEMENT SHOULD BE REMOVED AND REPLACED WITH SUPER PAVE HOT MIX ASPHALT AFTER MILLING AND PRIOR TO RESURFACING.
- EXCAVATE AND REPLACE ANY UNSTABLE SUBGRADE MATERIAL WITH SUBGRADE DESIGNATION 1-3 OR BORROW EXCAVATION SELECT MATERIAL 1-3.



Detour Map



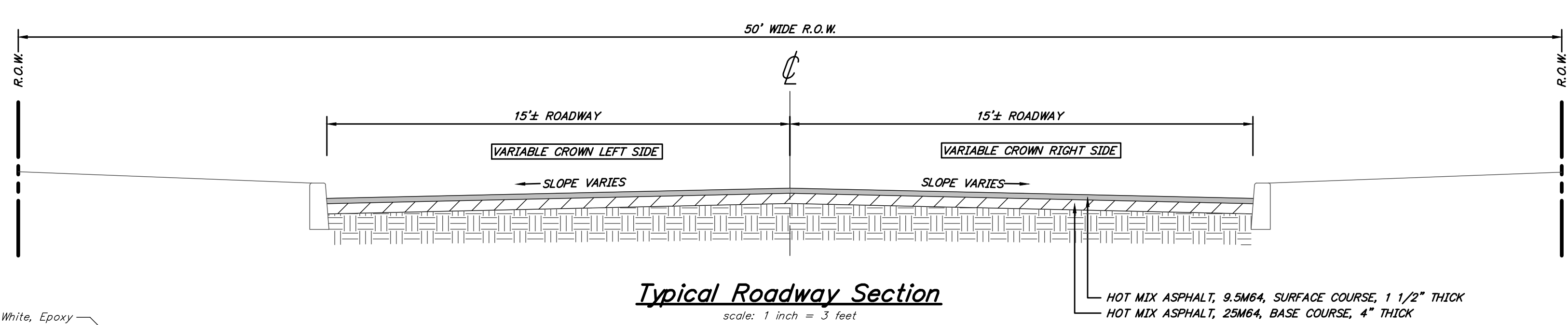
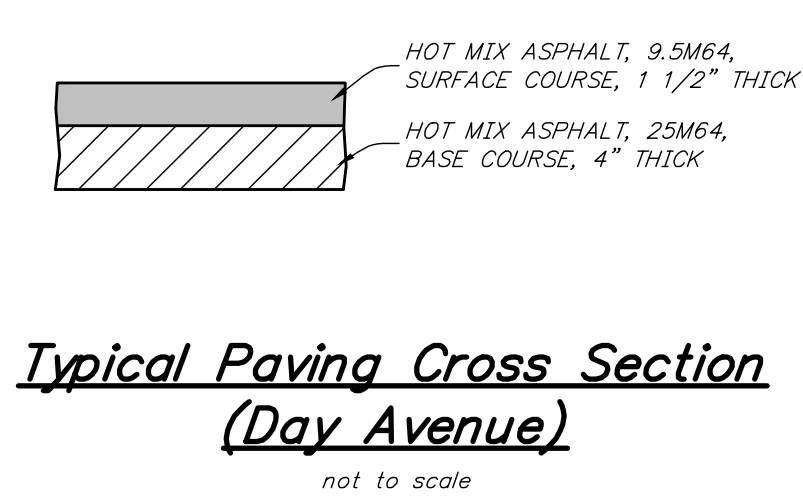
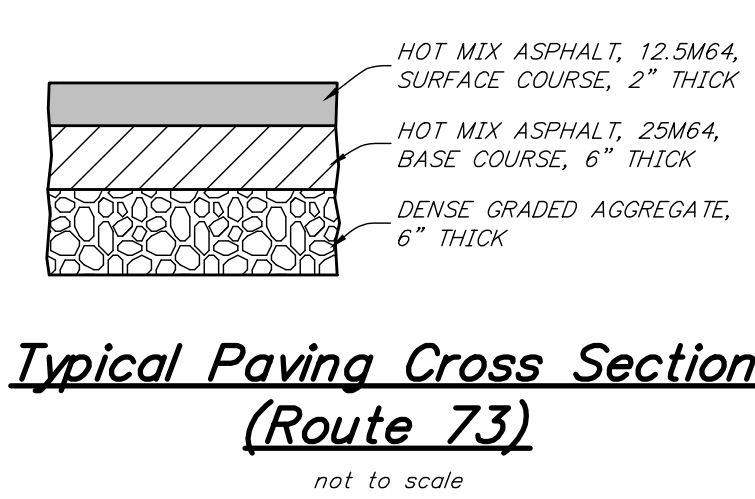
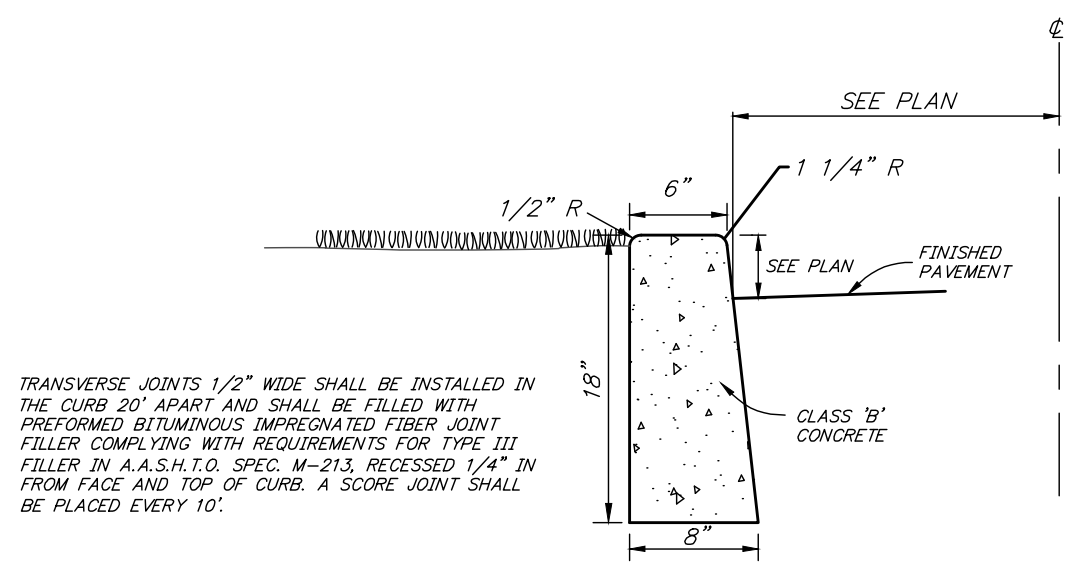
Road/Intersection Closure Detail

N.T.S.

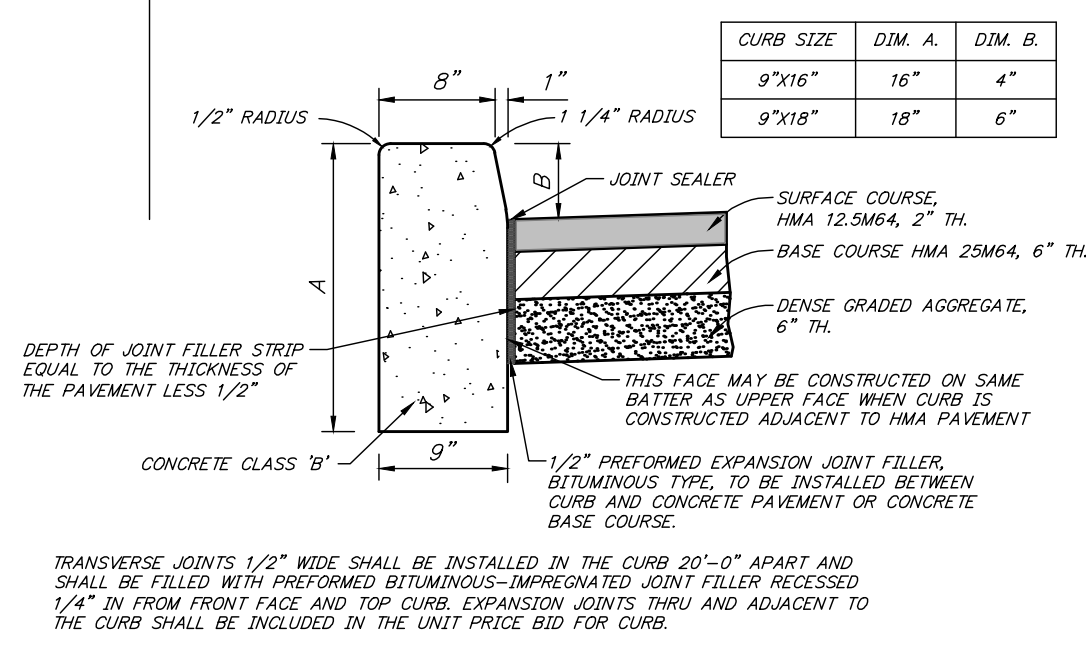
7/11/21	GENERAL REVISIONS	SH	GE
REV.	DATE:	DESCRIPTION	DRWN.
<h3>Temporary Traffic Control Plan</h3> <p>NJDOT FY2020 Municipal Aid Program Improvements to Day Avenue from NJSH 73 to Clover Avenue</p> <p>Township of Berlin Camden County, New Jersey</p> <p>DATE: 08/26/21 DRAWN BY: S. Heebner CHKD. BY: SCALE: AS NOTED PROJECT No. 29-5248T0121 FIELD BOOK/PAGE: SHEET No. 8 OF 9</p> <p>GREGORY BLASE FUSCO PROFESSIONAL ENGINEER NJPE No. 32853 PAPE No. 036608-E NJ PROFESSIONAL PLANNER No. 4076</p> <p>KEY ENGINEERS, INC. 80 S. WHITE HORSE PIKE BERLIN, NEW JERSEY 08009-2399 CERTIFICATE OF AUTHORIZATION #24GA28041300</p> <p>phone: (856) 767-6111 fax: (856) 753-1091 www.keyengineers.com</p> <p>DATE _____</p>			

CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE DEPARTMENT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2019 EDITION, WHICH IS INCORPORATED HEREIN BY REFERENCE, AS AMENDED AND SUPPLEMENTED, AND THE DEPARTMENT'S SUPPLEMENTARY SPECIFICATIONS FOR STATE AID PROJECTS, 2019 EDITION, WHICH IS INCORPORATED HEREIN BY REFERENCE, AS AMENDED AND SUPPLEMENTED. STANDARD CONSTRUCTION DETAILS SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE DEPARTMENT OF TRANSPORTATION. THE NEW JERSEY DEPARTMENT OF TRANSPORTATION "STANDARD ROADWAY CONSTRUCTION/ TRAFFIC CONTROL/ BRIDGE CONSTRUCTION DETAILS" BOOKLET DATED 2016 AND "ELECTRICAL BUREAU STANDARD DETAILS, 2007" AND ALL BASELINE DOCUMENT CHANGES MADE TO THESE CONSTRUCTION DETAILS, SHALL GOVERN, EXCEPT FOR THOSE DETAILS CONTAINED HEREIN. PARTIALLY FUNDED THROUGH NEW JERSEY DEPARTMENT OF TRANSPORTATION MUNICIPAL AID PROGRAM FY2020.

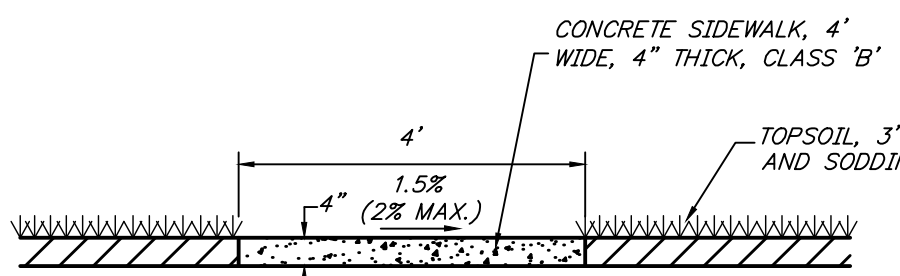
REPRODUCTION, ALTERATION AND AMENDMENT OF THIS PLAN SHALL BE PERFORMED ONLY BY KEY ENGINEERS, INC. AND SHALL BE PERFORMED UNDER THE ABSOLUTE DIRECTION OF THE LICENSED PROFESSIONAL WHOSE NAME AND SIGNATURE APPEARS HEREON.



6"x8"x18" Vertical Curb Detail
not to scale

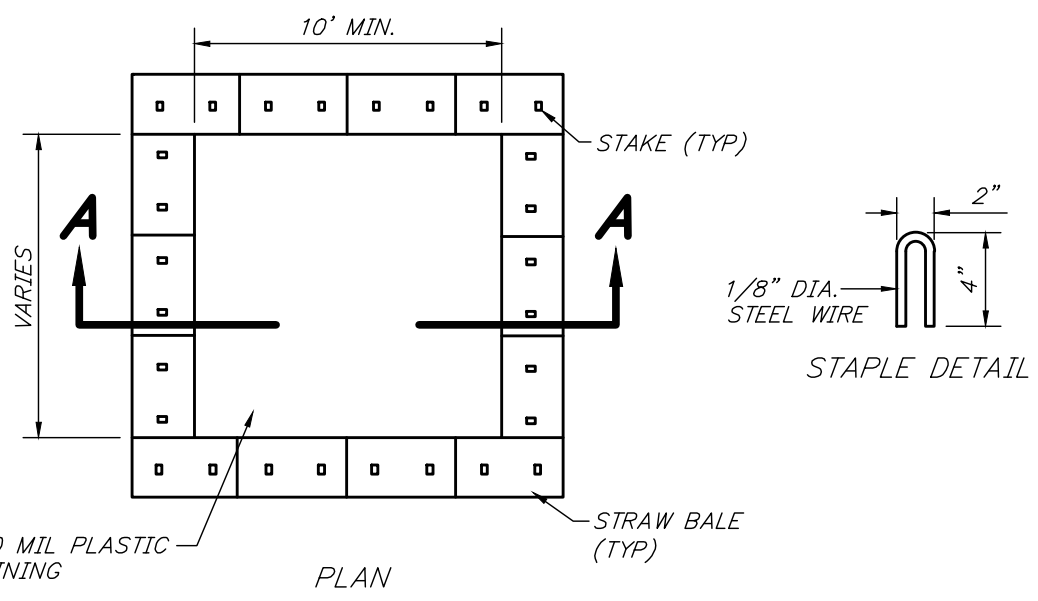


State Curb Detail & Pavement X-Section Detail
not to scale

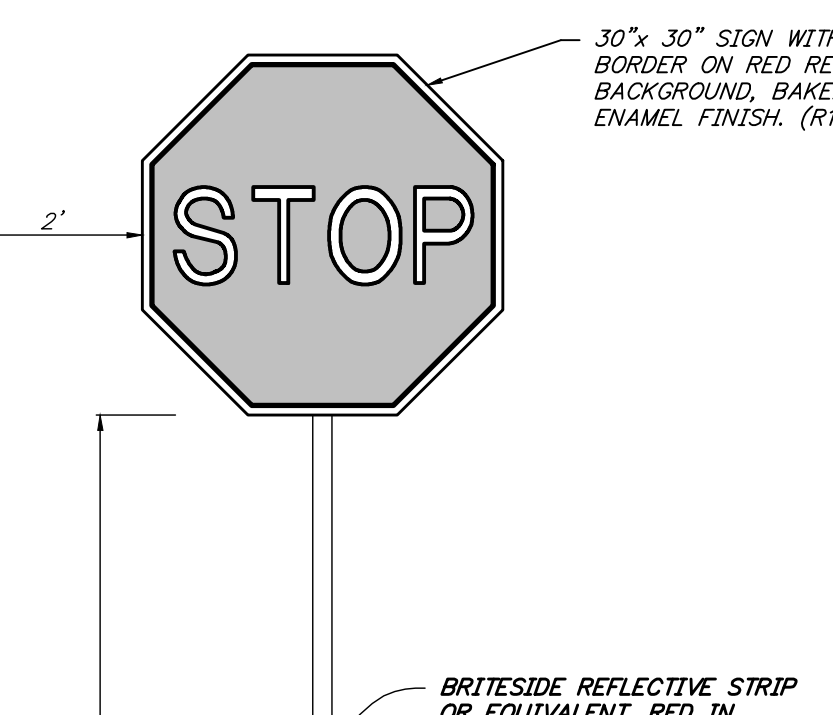


Concrete Sidewalk, 4 inch Thick, Class 'B' Detail
not to scale

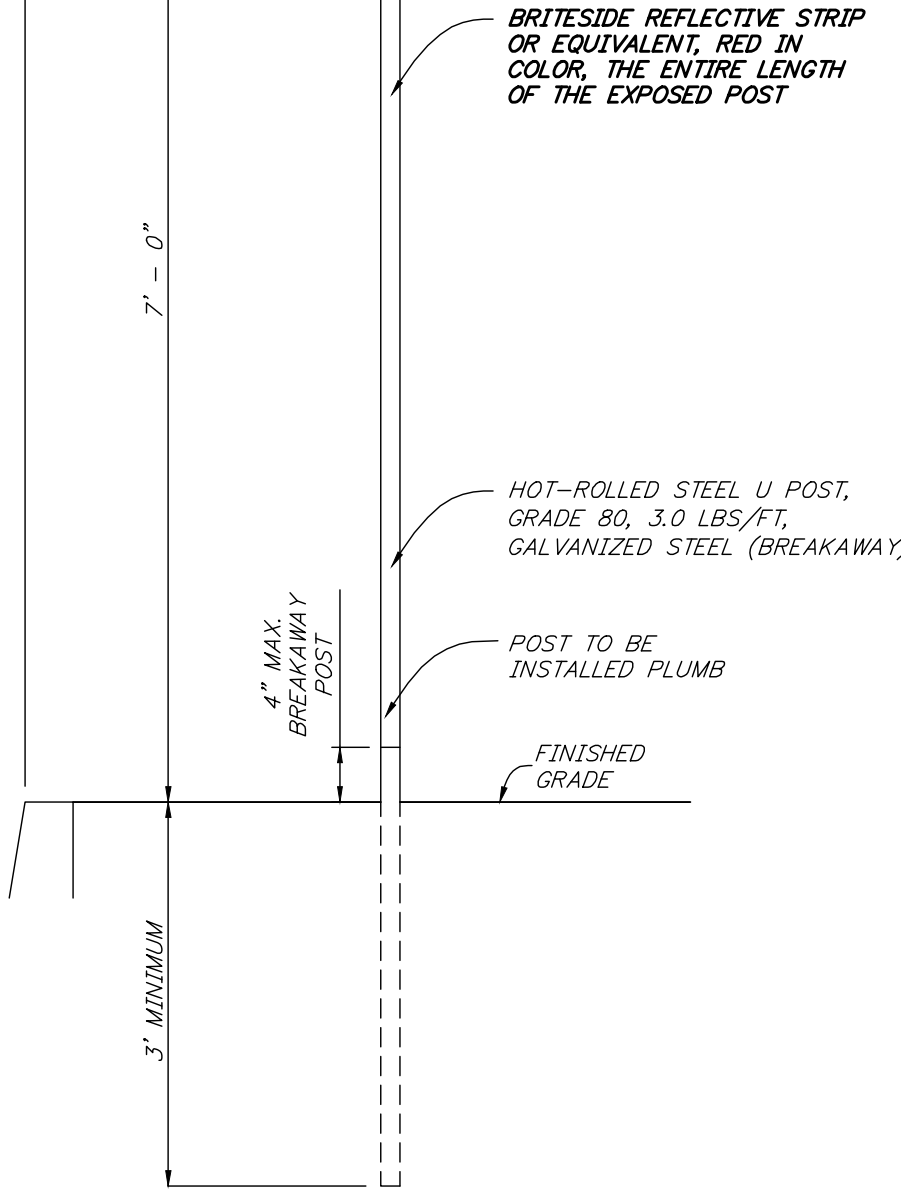
- NOTES:
1. ACTUAL LAYOUT DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY
 3. CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY PLACEMENT ON SITE
 4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP TRUCKS
 5. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE
 6. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN ACCEPTED WASTE SITE
 7. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER ACCEPTED BY THE DISTRICT



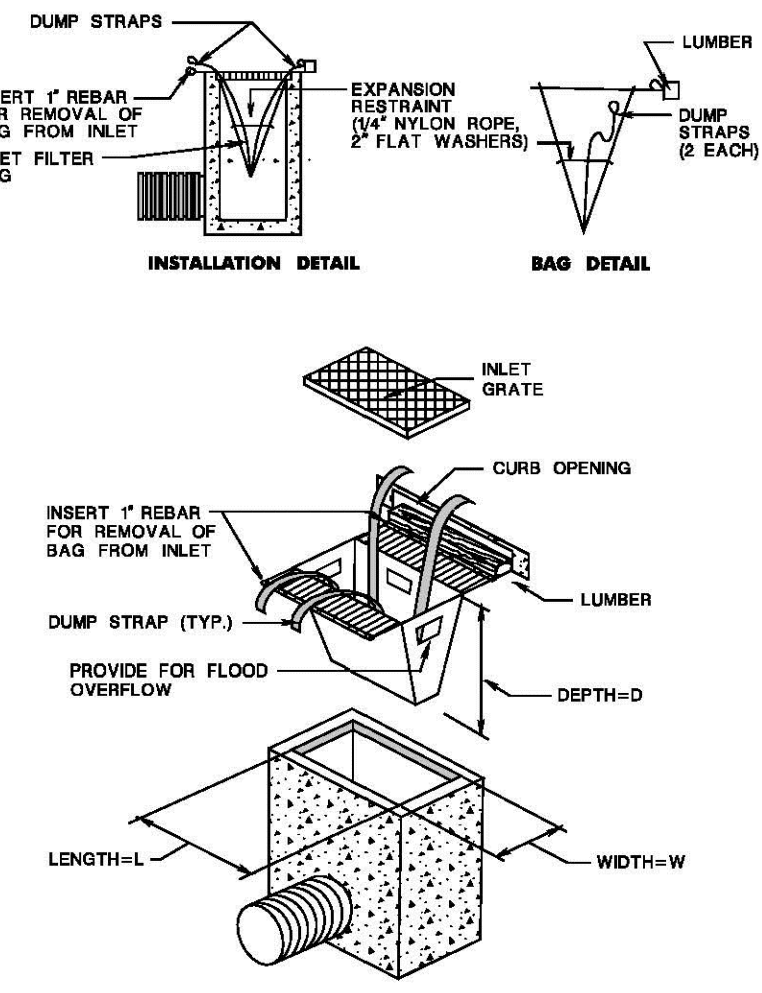
Concrete Washout Area Detail
not to scale



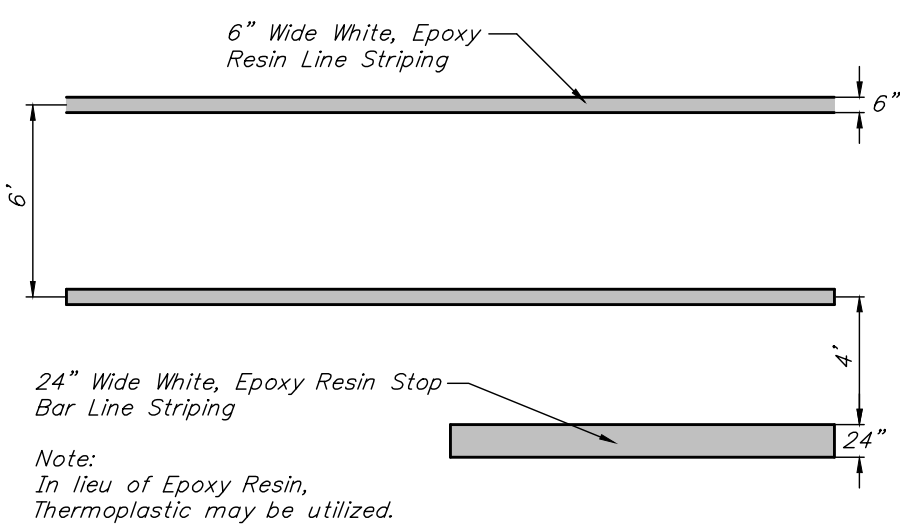
"Stop" Sign Detail
N.T.S.



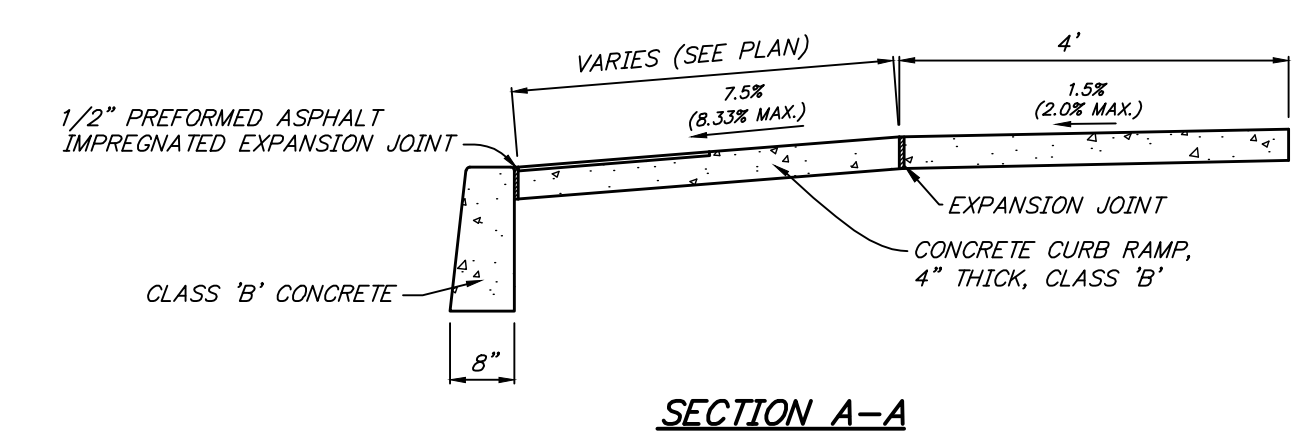
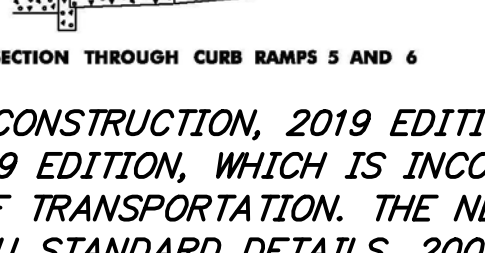
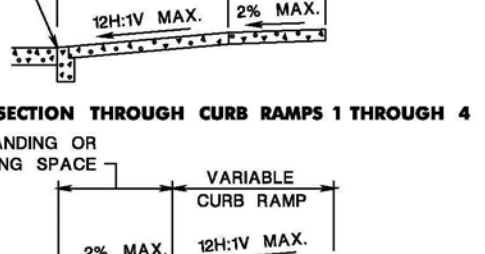
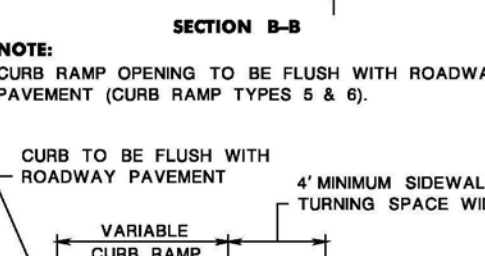
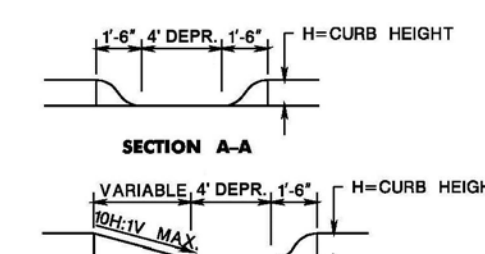
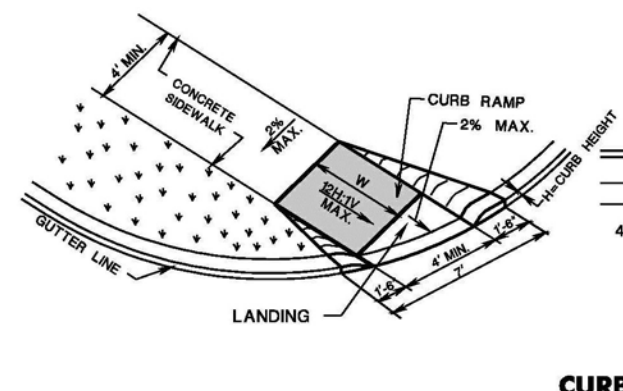
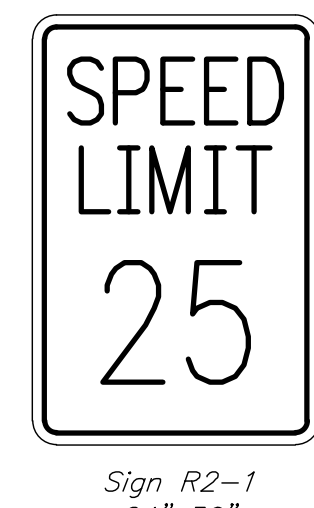
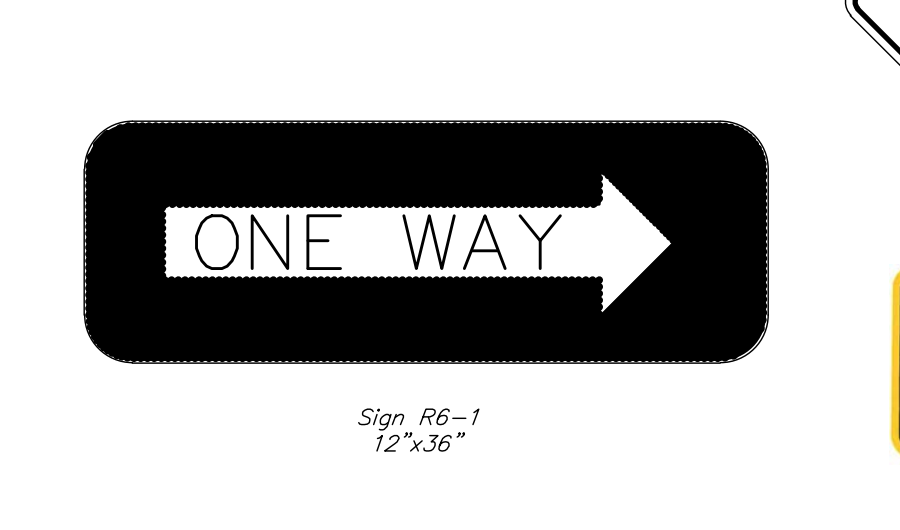
Inlet Filter, Type 2 Detail
not to scale



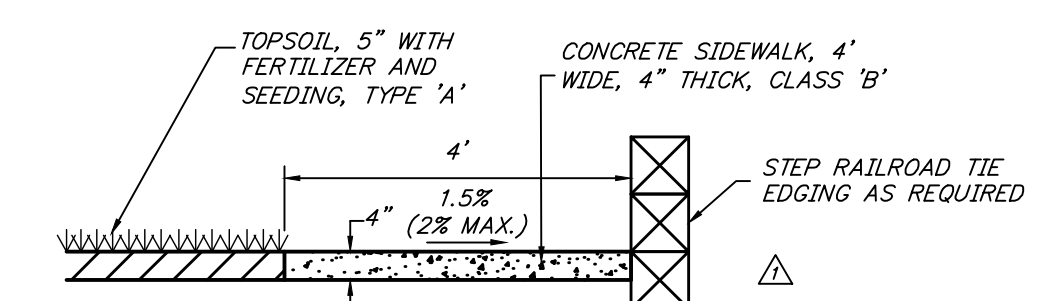
Crosswalk/Stop Bar Detail (Intersection of Day Avenue and Clover Avenue)
Scale 1" = 6'



Crosswalk/Stop Bar Detail (Intersection of Day Avenue and Route 73)
Scale 1" = 6'



Typical Curb Ramp Detail
not to scale



Concrete Sidewalk, 4 inch Thick, Class 'B', with Pressure Treated Railroad Tie Edging Detail
not to scale

REV.	DATE	DESCRIPTION	SH	GE
7/11/21		GENERAL REVISIONS		
Details				
NJDOT FY2020 Municipal Aid Program Improvements to Day Avenue from NJSH 73 to Clover Avenue				
Township of Berlin Camden County, New Jersey				
DATE: 08/26/21 DRAWN BY: S. Heebner CHKD. BY: SCALE: AS NOTED				
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