TOWNSHIP OF MORRIS
MORRIS COUNTY, NEW JERSEY
SOUTHGATE PARKWAY
ROAD RESURFACING PROJECT

MAYOR
MARK J. GYORFY

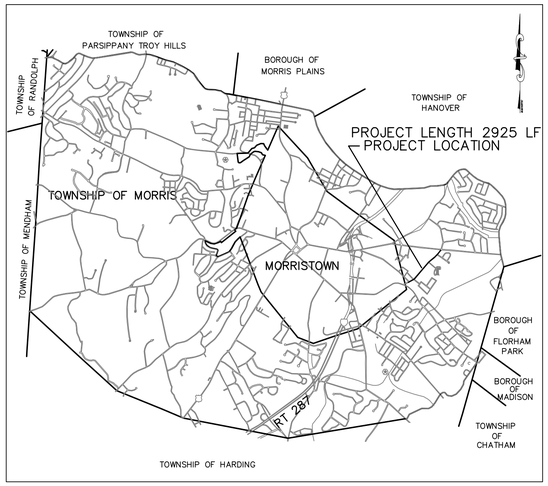
TOWNSHIP COMMITTEE
WILLIAM V. RAVITZ, DEPUTY MAYOR
CATHERINE J. WILSON
JEFFERY R. GRAYZEL
DONNA J. GUARIGLIA

TOWNSHIP ATTORNEY
JARRID H. KANTOR ESQ.

TOWNSHIP CLERK
SUSANNE WALSH

TOWNSHIP ADMINISTRATOR
TIMOTHY QUINN

TOWNSHIP ENGINEER
JAMES R. SLATE, P.E.



AREA MAP
SCALE 1" = 1.0 MILES

INDEX OF SHEETS

SHEET #	TITLE
1	COVER SHEET
2	PROJECT LOCATION MAP
3	CONSTRUCTION NOTES AND QUANTITIES
4	ROAD RESURFACING STATION 0+00 TO 19+50
5	ROAD RESURFACING STATION 19+50 TO 39+00
6	ROAD RESURFACING STATION 39+00 TO 53+00
7	SIDEWALK HANDICAP RAMP GRADING DETAILS
8	CONSTRUCTION DETAILS
9	CONSTRUCTION DETAILS
10	CONSTRUCTION DETAILS
11	CONSTRUCTION DETAILS
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
A-1	
A-2	

AUGUST 30, 2023

DRAWN BY: BGS:3
CHECKED BY: DSH

REVISIONS

NO.	DATE
1.	
2.	
3.	

JAMES R. SLATE
TOWNSHIP ENGINEER
NEW JERSEY PROFESSIONAL ENGINEER LIC. NO.40693

COVER SHEET

SOUTHGATE PARKWAY
ROAD RESURFACING PROJECT

TOWNSHIP OF MORRIS
ENGINEERING DEPARTMENT
MORRIS COUNTY, NEW JERSEY
50 WOODLAND AVENUE, CONVENT STATION, 07961-7603

DATE: 8/30/2023 | SCALE: NTS | GCP-23-01 | SHT. NO. 1 of 11

P:\Projects\Engineering Projects\Southgate Parkway\Cover Sheet.dwg, 8/30/2023 9:26:28 AM

DRAWN BY: BGS:3	REVISIONS
CHECKED BY: DSH	NO. DATE

JAMES R. SLATE
TOWNSHIP ENGINEER
NEW JERSEY PROFESSIONAL ENGINEER LIC. NO.40693

PROJECT LOCATION MAP

SOUTHGATE PARKWAY ROAD RESURFACING PROJECT

TOWNSHIP OF MORRIS
ENGINEERING DEPARTMENT
MORRIS COUNTY, NEW JERSEY
50 WOODLAND AVENUE, CONVENT STATION, 07961-7603

DATE: 8/30/2023 | SCALE: NTS | GCP–23–01 | SHT. NO. 2 of 11

P:\Projects\Engineering Projects\Southgate Parkway\Area Map.dwg, 8/30/2023 9:27:40 AM

GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL UTILIZE A SUITABLE PAVEMENT SAW OR MILLING MACHINE TO CUT ALL PAVEMENT IN NEAT LINES. PAYMENT FOR PAVEMENT CUTTING SHALL BE INCLUDED UNDER THE PRICE BID FOR THOSE ITEMS REQUIRING SAME.
2. THE CONTRACTOR SHALL PHASE AND COMPLETE THE WORK WITH MINIMAL DISRUPTION TO PROPERTIES. THE WORK SHALL BE COMPLETED OR STAFFED IN SMALL SEGMENTS TO AVOID LONG TIME PERIODS OF ROADWAY DISRUPTION.
3. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED IN CONFORMANCE WITH THE MORRIS COUNTY SOIL CONSERVATION DISTRICT STANDARDS PRIOR TO ANY SOIL DISTURBANCES OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
4. THE CONTRACTOR SHALL BROOM SWEEP OR MECHANICALLY SWEEP ALL STREETS IN THE AREA DISTURBED BY CONSTRUCTION ACTIVITIES ON A DAILY BASIS.
5. THE LOCATIONS OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST ONE (1) WEEK PRIOR TO CONSTRUCTION FOR PHYSICAL MARKOUTS OF UTILITIES. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN ACCORDANCE WITH THE "UNDERGROUND FACILITY PROTECTION ACT" (P.L. 1994 CH. 118) AND PROVIDE THE ENGINEER WITH THE NOTIFICATION CONFIRMATION NUMBER PRIOR TO EXCAVATION. THE CONTRACTOR IS TO CALL THE GARDEN STATE UNDERGROUND PLANT LOCATION SERVICE (GSUPLS), AKA NJ ONE CALL, AT 1-800-272-1000 PRIOR TO ANY EXCAVATION.
6. RESTORATION OF LAWN AREAS ADJACENT TO CURB AND SIDEWALK TO BE COMPLETED WHERE ORDERED BY THE ENGINEER. ALL DISTURBED LAWN AREAS ADJACENT TO CURB AND SIDEWALK SHALL BE RESTORED IN ACCORDANCE WITH THESE PLANS AS DIRECTED BY THE ENGINEER.
7. EXCAVATION, BACKFILL, COMPACTION, AND OTHER METHODS OF CONSTRUCTION SHALL BE SUCH THAT THE WATER MAIN, GAS MAINS, SANITARY AND STORM SEWERS ARE ADEQUATELY PROTECTED. ANY DAMAGE, DISTURBANCE, OR BREAKAGE OF ANY UTILITY PIPES SHALL BE REPAIRED BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THE OWNER. ALSO NOTE THAT MOST STORM DRAINS ARE AT SHALLOW DEPTHS WITH MINIMAL COVER, AND MUST BE PROTECTED DURING WORK.
8. ALL INFORMATION SHOWN OR NOTED FOR EXISTING FACILITIES, GRADES, ROADWAYS, AND MATERIALS IS APPROXIMATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ALL INFORMATION WHICH MAY AFFECT HIS WORK. LOCATION AND DEPTHS OF EXISTING UTILITIES ARE ONLY INDICATED TO BRING ATTENTION TO POSSIBLE CONFLICT.
9. ANY DAMAGE TO UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ALL COSTS FOR REPAIRS SHALL BE BORNE BY THE CONTRACTOR.
10. ALL DISTURBED SHRUBS, FENCINGS, WALKWAYS, SIGNS, MAILBOXES, DRIVES, ETC., SHALL BE RELOCATED AND/OR RESTORED TO THEIR ORIGINAL CONDITION AND THE SATISFACTION OF THE OWNER. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS RESTORATION UNLESS SPECIFIED. PAYMENT SHALL BE MADE UNDER THE CLEARING SITE ITEM. INCLUDED IN THE CLEARING SITE SHALL BE ALL COSTS FOR LABOR, MATERIALS, AND EQUIPMENT FOR REMOVING DISPOSING, AND/OR ABANDONING EXISTING CULVERTS BENEATH DRIVES, RELOCATION MAILBOXES, MODIFICATIONS TO DRIVES OTHER THAN BITUMINOUS CONCRETE OF CONCRETE, REMOVING AND REPLACING CURBING IN DRIVEWAYS, AND FILLING/REGARDING EXISTING GUTTER SWALES, ETC., AS SHOWN ON THE PLANS AND AS REQUIRED.
11. THE CONTRACTOR SHALL DEFINE THE LOCATION OF SITES TO BE USED FOR STORAGE OF EXCAVATION MATERIALS PRIOR TO THE PRE-CONSTRUCTION MEETING.
12. TOPOGRAPHY AND EXISTING CONDITIONS INFORMATION IS BASED ON A FIELD SURVEY PREPARED BY ANTHONY M. DEVIZIO P.L.S., DATED 3/24/23, FOR THE TOWNSHIP OF MORRIS, . A COPY OF THE SIGNED AND SEAL SURVEY IS ON FILE AT THE TOWNSHIP OF MORRIS ENGINEERING DEPARTMENT. ALL EXISTING CONDITIONS AND UTILITY LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED BY THE CONTRACTORS SURVEYOR. THE CONTRACTORS SURVEYOR SHALL PROVIDE CUT-SHEETS FOR PROPOSED CURB AND DRAINAGE STAKEOUT AND SHALL CONFIRM ALL PROPOSED AND EXISTING GRADES AS PROVIDED IN THE ENGINEERING CONSTRUCTION PLANS.
13. THE CONTRACTOR SHALL COMPLY WITH ALL ENVIRONMENTAL PROTECTION AND RESTORATION REQUIREMENTS SHOWN ON CONTRACT DRAWINGS AND INCLUDED IN THE CONTRACT SPECIFICATIONS.
14. SEEDING AND GRADING LIMITS SHALL INCLUDE ALL AREAS WHICH ARE PART OF THE NEW CONSTRUCTION AND ALL AREAS DISTURBED BY CONSTRUCTION PROCEDURES, EQUIPMENT, OR VEHICLES. ALL DECORATIVE SHRUBS DISTURBED SHALL BE REPLACED AS DIRECTED BY THE ENGINEER.
15. ALL PROPERTY CORNERS AND MONUMENTS REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY A NEW JERSEY LICENSED LAND SURVEYOR.
16. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE SAFETY REQUIREMENTS IN THE INFORMATION FOR BIDDERS. THE OWNER SHALL ASSUME NO RESPONSIBILITY/LIABILITY FOR THE SAFETY OF THE WORKERS OR THE WORK PERFORMED.
17. THE CONTRACTOR SHALL COMPLETE TEST PITS IN ADVANCE OF ORDERING ANY CONSTRUCTION MATERIALS. TEST PITS SHALL BE PAID FOR UNDER ITEM 5 OF THE CONTRACT SPECIFICATIONS. WHEN AND WHERE DIRECTED BY THE ENGINEER, TEST PITS SHALL BE COMPLETED TO FURTHER EVALUATE AREAS IDENTIFIED AS WEAK SOIL FOUNDATION OR SOFT SPOTS.
18. THE CONTRACTOR SHALL ESTABLISH AND/OR VERIFY ALL BENCHMARKS AND HORIZONTAL CONTROLS PRIOR TO THE START OF CONSTRUCTION THE WORK FOR WHICH SHALL BE INCLUDED UNDER ITEM 3, CONSTRUCTION LAYOUT, AND SHALL BE COMPLETED BY A NEW JERSEY LICENSED LAND SURVEYOR.
19. ALL WATER AND GAS CURB BOXES, ETC., WITHIN THE LIMITS OF THE WORK SHALL BE RESET OR RELOCATED WHERE NECESSARY AS DIRECTED BY THE ENGINEER. PAYMENT SHALL BE INCLUDED UNDER ITEM 2a, CLEARING SITE.
20. THE CONTRACTOR IS TO PROTECT ALL SECTIONS OF CURBING SPECIFIED TO REMAIN AT ALL TIMES DURING WORK. ANY DISTURBANCE OR DAMAGE TO CURBING TO REMAIN SHALL BE RECTIFIED AND CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
21. EXISTING FRAMES AND GRATES SHALL BE RETURNED TO THE MORRIS TOWNSHIP DEPARTMENT OF PUBLIC WORKS AS DIRECTED AT NO ADDITIONAL COST. ALL NEW TYPE "N" INLET GRATES AND CASTINGS SHALL BE AS MANUFACTURED BY CAMPBELL FOUNDRY, OR APPROVED EQUAL.
22. INLETS TO BE REPAIRED AND REPLASTERED WHERE DIRECTED BY THE ENGINEER.
23. EACH EXISTING DRIVEWAY WITHIN THE PROJECT LIMITS SHALL BE SAW CUT WITH A SUITABLE PAVEMENT SAW AND REPLACED WITH A DROP CURB, MATCHING DRIVEWAY APRON, AND RECONSTRUCTED DRIVEWAY MATCHING THE EXISTING WIDTH OR AS DIRECTED BY THE ENGINEER. THE LENGTH OF THE DRIVEWAY RECONSTRUCTION SHALL BE FIELD DETERMINED BY THE ENGINEER. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK, OTHER THAN FOR SPECIFIC DRIVEWAY RESTORATION ITEMS. SAW CUTTING SHALL TAKE PLACE UPON FINAL DRIVEWAY RESTORATION.
24. HYDRANT RELOCATIONS SHALL BE COORDINATED BY THE CONTRACTOR WITH THE WATER COMPANY, SOUTHEAST MORRIS MUNICIPAL UTILITIES AUTHORITY.
25. ROOF DRAIN LEADER PIPES INTO STREET GUTTERS, WHETHER NOTED OR NOT SHALL BE RECONSTRUCTED AND CONNECTED TO THE STORM SEWER SYSTEM. PAYMENT INCLUDED UNDER VARIOUS DRAINAGE ITEMS.
26. CONTRACTOR SHALL BE REQUIRED TO FURNISH ALL DISPOSAL TICKETS FOR ALL SOLID WASTE REMOVED FROM THE SITE FROM THE LIMITS OF THE PROJECT TO THE OWNER.
27. CONTRACTOR SHALL BE REQUIRED TO PERFORM THE PAVEMENT CORING OR TESTING ANALYSIS AS REQUIRED BY THE NJDOT MUNICIPAL AID PROGRAM. PAYMENT SHALL BE INCLUDED UNDER ITEM HOT MIX ASPHALT 9.5 M 64 SURFACE COURSE, 2" THICK IF A SEPERATE BID PAY ITEM IS NOT PROVIDED. PLANT MATERIAL CERTIFICATION IN LIEU OF PAVEMENT CORES WILL BE ACCEPTABLE TO THE TOWNSHIP SHOULD THE CONTRACTOR CHOOSE THIS MANNER OF PAVEMENT QUALITY CERTIFICATION, PROVIDED TESTING METHODS ARE APPROVED BY NJDOT.
28. ALL TREES THAT ARE REQUIRED TO BE REMOVED FOR WHICH THERE IS NO SEPARATE PAY ITEM SHALL BE PAID FOR UNDER THE CLEARING SITE ITEM. LIMITS OF CLEARING SHALL BE IN ACCORDANCE WITH THE LIMIT OF PROPOSED FINISHED GRADE IDENTIFIED IN THE CROSS SECTION PLANS PREPARED FOR THE PROJECT.
29. ALL EXISTING PIPES TO BE ABANDONED SHALL HAVE THE ENDS PLUGGED WITH CONCRETE. THERE WILL BE NO SEPARATE PAYMENT FOR THIS WORK. COST FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS DRAINAGE ITEMS.
30. CLEARING SITE ITEM SHALL INCLUDE THE REMOVAL OF ALL EXISTING SIDEWALKS AND CURBS EXCEPT EXISTING SIDEWALK AND CURBS WHICH HAVE BEEN IDENTIFIED TO REMAIN.
31. ALL CONSTRUCTION SHALL CONFORM TO THE 2019 NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ALL SUPPLEMENTARY SPECIFICATIONS.
32. CONTRACTOR SHALL PROVIDE A TRAFFIC DETOUR PLAN IF ROADWAY CLOSURES ARE PROPOSED BY THE CONTRACOR. SAID PLANS SHALL BE SUBMITTED TO THE POLICE DEPARTMENT FOR APPROVAL. ROADWAY CLOSURES SHALL ALLOW FOR LOCAL TRAFFIC ONLY . CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ONE LANE CLEAR AT ALL TIMES FOR PASSAGE OF LOCAL TRAFFIC, SCHOOL BUSES AND EMERGENCY VEHICLES. ROAD CLOSURES AND DETOUR SIGNAGE SHALL BE COMPLETED IN ACCORDANCE WITH THE 2016 NJDOT STANDARD CONSTRUCTION DETAILS FOR ROAD AND BRIDGE CONSTRUCTION.
33. WHEN ROADWAY CLOSURES ARE NOT PROPOSED OR APPROVED THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL MEASURE FOR LANE SHIFTS OR ALTERNATING LANE TRAFFIC DIRECTION. LANE SHIFTS AND ALTERNATING LANE CONTROL SHALL BE COMPLETED IN ACCORDANCE WITH THE 2019 NJDOT STANDARD SPECIFICATIONS.

ESTIMATE OF QUANTITIES

SECTION NO.	ITEM NO.	DESCRIPTION	BID QUANTITY	UNIT
154	1	MOBILIZATION	1	LS
159	2	BREAKAWAY BARRICADE	6	UNIT
159	3	DRUM	24	UNIT
159	4	TRAFFIC CONE	100	UNIT
159	5	CONSTRUCTION IDENTIFICATION SIGNS, 84" X 42" (ON OR ABOUT- START DATE OF CONSTRUCTION)	2	UNIT
159	6	CONSTRUCTION SIGNS	96	SF
159	7	TRAFFIC DIRECTOR, FLAGGER	450	HOUR
159	8	UNIFORMED TRAFFIC DIRECTORS (ALLOWANCE)	1	ALLOW
160	9	FUEL PRICE ADJUSTMENT (ALLOWANCE)	1	ALLOW
160	10	ASPHALT PRICE ADJUSTMENT (ALLOWANCE)	1	ALLOW
201	11	CLEARING SITE	1	LS
202	12	EXCAVATION, TEST PIT (IF AND WHERE DIRECTED)	5	CY
202	13	EXCAVATION, UNCLASSIFIED	142	CY
202	14	EXCAVATION, UNCLASSIFIED (IF AND WHERE DIRECTED)	20	CY
202	15	PAVEMENT REMOVAL	3,413	SY
202	16	PAVEMENT REMOVAL (IF AND WHERE DIRECTED)	200	SY
302	17	I- 14 SOIL AGGREGATE, VARIABLE THICKNESS	1,198	CY
302	18	DENSE-GRADED AGGREGATE BASE COURSE	16	CY
302	19	DENSE-GRADED AGGREGATE BASE COURSE (IF AND WHERE DIRECTED)	100	CY
400	20	HOT MIX ASPHALT MILLING, 2" OR LESS	24,755	SY
401	21	HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK	2,875	TON
401	22	HOT MIX ASPHALT 9.5M64 LEVELING COURSE (IF & WHERE DIRECTED)	288	TON
401	23	HOT MIX ASPHALT 19.5M64 BASE COURSE, 4" THICK	46	TON
401	24	HOT MIX ASPHALT 19.5M64 BASE COURSE, 4" THICK (IF AND WHERE DIRECTED)	48	TON
401	25	CORE SAMPLES, HOT MIX ASPHALT	10	UNIT
602	26	REPAIR EXISTING INLET	3	UNIT
602	27	RESET EXISTING INLET CASTING	4	UNIT
602	28	RECONSTRUCT INLET USING EXISTING CASTING	7	UNIT
602	29	BICYCLE SAFE GRATE	3	UNIT
602	30	CURB PIECE, 6"	11	UNIT
602	31	SET INLET TYPE "B" CASTING, COMPLETE (IF AND WHERE DIRECTED)	1	UNIT
602	32	SET INLET TYPE "B" FRAME (IF AND WHERE DIRECTED)	1	UNIT
606	33	CONCRETE SIDEWALK, 4" THICK	3,526	SY
606	34	DETECTABLE WARNING SURFACE	18	SY
607	35	CONCRETE VERTICAL CURB, 9" X 18"	1,045	LF
607	36	CONCRETE VERTICAL CURB, 9" X 18" (IF AND WHERE DIRECTED)	50	LF
607	37	GRANITE BLOCK CURB	5,594	LF
607	38	GRANITE BLOCK CURB (IF AND WHERE DIRECTED)	100	LF
607	39	GRANITE BLOCK CURB REPOINTING (IF AND WHERE DIRECTED)	500	LF
609	40	TANGENT GUIDE RAIL TERMINAL	4	UNIT
609	41	BEAM GUIDE RAIL END ANCHORAGE	3	UNIT
610	42	TRAFFIC STRIPES, 4" WHITE THERMOPLASTIC	9,561	LF
610	43	TRAFFIC STRIPES, 4" YELLOW THERMOPLASTIC	3,761	LF
610	44	TRAFFIC STRIPES, 6" WHITE THERMOPLASTIC	10,725	LF
610	45	TRAFFIC STRIPES, 6" YELLOW THERMOPLASTIC	891	LF
610	46	TRAFFIC STRIPES, 12" WHITE THERMOPLASTIC	131	LF
610	47	TRAFFIC STRIPES, 12" YELLOW THERMOPLASTIC	535	LF
610	48	TRAFFIC MARKINGS, LINES, 24" WHITE THERMOPLASTIC	838	LF
610	49	TRAFFIC MARKINGS, SYMBOLS, WHITE THERMOPLASTIC	676	SF
612	50	TRAFFIC SIGNAGE WITH BREAKAWAY POSTS	75	SF
612	51	TRAFFIC SIGNAGE WITH BREAKAWAY POSTS (IF AND WHERE DIRECTED)	124	SF
652	52	RESET MANHOLE, SANITARY SEWER, USING NEW CASTING	1	UNIT
802	53	TREE REMOVAL, OVER 12" TO 24" DIAMETER	7	UNIT
802	54	TREE REMOVAL, OVER 24" TO 36" DIAMETER (IF AND WHERE DIRECTED)	1	UNIT
802	55	TREE REMOVAL, OVER 36" DIAMETER	1	UNIT
804	56	TOPSOILING, 4" THICK	4,179	SY
804	57	FERTILIZING AND SEEDING	4,179	SY
804	58	STRAW MULCHING	4,179	SY
811	59	LITTLELEAF LINDEN TREE, 3' DIAMETER	57	UNIT

DRAWN BY: BGS:3
CHECKED BY: DSH

REVISIONS

NO.	DATE
1.	
2.	

JAMES R. SLATE
TOWNSHIP ENGINEER
NEW JERSEY PROFESSIONAL ENGINEER LIC. NO.40693

CONSTRUCTION NOTES AND QUANTITIES

SOUTHGATE PARKWAY
ROAD RESURFACING PROJECT

TOWNSHIP OF MORRIS
ENGINEERING DEPARTMENT
MORRIS COUNTY, NEW JERSEY
50 WOODLAND AVENUE, CONVENT STATION, 07961-7603

DATE: 8/30/2023 | SCALE: NTS | GCP-23-01 | SHT. NO. 3 of 11

P:\Projects\Engineering Projects\Southgate Parkway\Quantity Sheet.dwg, 8/31/2023 8:53:51 AM

CONSTRUCT
180 LF REMOVE EX. CURB
INCLUDED IN CLEARING SITE TYP.

MATCH EX. CURB

LIMIT OF PAVEMENT RESURFACING

JAMES STREET
(MORRIS COUNTY ROUTE 663)
66' WIDE R.O.W.

BP: 0+00.00

CONSTRUCT
52 SY CONCRETE SIDEWALK 4" THICK
1 UNIT DETECTIBLE WARNING SURFACE

CONSTRUCT
250 SY REMOVAL OF PAVEMENT
80 CY I-14 SOIL AGGREGATE
250 SY TOPSOIL, SEED AND MULCH

CONSTRUCT
3 S.F. R3-17 SIGN "BIKE LANE"

CONSTRUCT
208 LF CONCRETE VERTICLE
CURB, 9"X18", 6" FACE

CONSTRUCT
130 CY EXCAVATION
15 CY DGA
30 TONS HOT MIX ASPHALT
(19.5M64 BASE COURSE 4" THICK)

CONSTRUCT
REMOVE EXISTING ISLAND
150 LF REMOVE EXISTING CURB
INCLUDED IN CLEARING SITE TYP

CONSTRUCT
5 SY CONCRETE SIDEWALK 4" THICK
1 UNITS DETECTIBLE WARNING SURFACE
10 LF CONCRETE VERTICLE CURB
9"X18", 6" FACE

ADJUST LOCATION OF LANDSCAPE
FIXTURE BEHIND NEW CURB

CONSTRUCT
10 LF GRANITE BLOCK CURB SLOPED
16 LF REMOVE EXISTING CURB
6 SY FULL DEPTH PAVEMENT CONSTRUCTION
5 CY EXCAVATION UNCLASSIFIED

CONSTRUCT
72 LF TRAFFIC STRIPE 24" WIDE WHITE

BLOCK 7101
LOT 1

CONSTRUCT
1 UNIT TANGENT
GUIDE RAIL TERMINAL

CONSTRUCT
117 LF REMOVE EXISTING CURB
INCLUDED IN CLEARING SITE TYP.

CONSTRUCT
105 SY REMOVAL OF PAVEMENT
40 CY I-14 SOIL AGGREGATE
105 SY TOPSOIL, SEED AND MULCH

CONSTRUCT
7 SY CONCRETE SIDEWALK 4" THICK
1 UNIT DETECTIBLE WARNING SURFACE

CONSTRUCT
134 LF CONCRETE VERTICLE CURB 9"X18", 6" FACE

CONSTRUCT
100 LF TRAFFIC STRIPE 4" WIDE WHITE
122 LF TRAFFIC STRIPE 24" WIDE WHITE
56 SF TRAFFIC MARKING SYMBOL

CONSTRUCT
1,681 LF TRAFFIC STRIPE 4" WIDE WHITE
1,551 LF TRAFFIC STRIPE 6" WHITE
2,018 LF TRAFFIC STRIPE 4" WIDE YELLOW
138 SF TRAFFIC MARKING SYMBOL

CONSTRUCT
6 S.F. R3-17 SIGN "BIKE LANE"

MATCH EX. CURB

HYDRANT TO BE
RELOCATED BY OTHERS

CONSTRUCT
140 LF CONCRETE VERTICLE CURB 9"X18", 6" FACE

CONSTRUCT
80 SY CONCRETE SIDEWALK 4" THICK
2 UNITS DETECTIBLE WARNING SURFACE
100 SY TOPSOIL, SEED AND MULCH

CONSTRUCT
2 UNITS RECONSTRUCT INLET USING EXISTING CASTING

CONSTRUCT
4,300 SY HOT MIX ASPHALT MILLING 2" OR LESS
510 TONS HOT MIX ASPHALT 9.5M64 SURFACE COURSE 2" THICK

CONSTRUCT
84 LF TRAFFIC STRIPE 24" WIDE WHITE

6' WIDE SIDEWALK REFUGE

SOUTHGATE PARKWAY
66' WIDE R.O.W. PER TAX MAP

CONSTRUCT
1 UNIT TANGENT
GUIDE RAIL TERMINAL

CONSTRUCT
2 UNITS TREE REMOVAL OVER 12"-24" DIAMETER

CONSTRUCT
23 LF CONCRETE VERTICLE CURB 9"X18, 6" FACE"
10 LF REMOVE EXISTING CURB
5 SY CONCRETE SIDEWALK 4" THICK
7 SY EXCAVATION UNCLASSIFIED
2 UNITS DETECTIBLE WARNING SURFACE

CONSTRUCT
1 UNIT GUIDE RAIL END ANCHORAGE

CONSTRUCT
690 SY CONCRETE SIDEWALK 4" THICK
1 UNIT DETECTIBLE WARNING SURFACE

CONSTRUCT
500 LF CONCRETE VERTICLE CURB
9" X 18", 6" FACE

CONSTRUCT
650 SY TOPSOIL, SEED AND MULCH

CONSTRUCT
3 S.F. R3-17 SIGN "BIKE LANE"

TRANSITION BIKE LANE BUFFER 1.5' TO 3'

MATCH EX. CURB

MATCH LINE
STA 9+81.04

BLOCK 7101
LOT 2

0 30' 60'

LIMIT OF PAVEMENT RESURFACING

TRANSITION BIKE LANE BUFFER 1.5' TO 3'

ROUTE 287
R.O.W.

U.S. ROUTE 287
NORTHBOUND RAMP

U.S. ROUTE 287
SOUTHBOUND RAMP

CONSTRUCT
1 UNIT CURB PIECE, 6"
1 UNIT BICYCLE SAFE GRATE

CONSTRUCT
3 S.F. R3-17 SIGN "BIKE LANE"

SOUTHGATE PARKWAY
66' WIDE R.O.W. PER TAX MAP

BLOCK 7101
LOT 3
(STATE of NEW JERSEY)

CONSTRUCT
345 LF TRAFFIC STRIPE 4" WIDE WHITE
131 LF TRAFFIC STRIPE 12" WIDE WHITE
46 SF TRAFFIC MARKING SYMBOL

CONSTRUCT
2 UNIT CURB PIECE, 6"
2 UNITS RESET EXISTING INLET CASTING

CONSTRUCT
1 UNITS TREE REMOVAL OVER 12"-24" DIAMETER

FORMER 60' WIDE R.O.W.

LIMIT OF PAVEMENT RESURFACING

CONSTRUCT
3 S.F. R3-17 SIGN "BIKE LANE"

CONSTRUCT
90 LF REMOVE EXISTING CURB
INCLUDED IN CLEARING SITE TYP.

BLOCK 7001
LOT 1

CONSTRUCT
1 UNIT GUIDE RAIL
END ANCHORAGE

CONSTRUCT
1 UNIT TANGENT
GUIDE RAIL TERMINAL

CONSTRUCT
1022 LF GRANITE BLOCK CURB 6" FACE

CONSTRUCT
435 SY CONCRETE SIDEWALK 4" THICK

CONSTRUCT
2,075 LF TRAFFIC STRIPE 4" WIDE WHITE
1,915 OF TRAFFIC STRIPE 6" WIDE WHITE
92 SF TRAFFIC MARKING SYMBOL

CONSTRUCT
5,260 SY HOT MIX ASPHALT MILLING, 2" OR LESS
600 TONS HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK

TRANSITION BIKE LANE BUFFER 1.5' TO 3'

CONSTRUCT
12 UNITS LITTLELEAF LINDEN TREE (POLLARDED)

CONSTRUCT
80 LF GRANITE BLOCK CURB 6" FACE

CONSTRUCT
3 S.F. R3-17 SIGN "BIKE LANE"

CONSTRUCT
570 SY REMOVAL OF PAVEMENT
190 CY I-14 SOIL AGGREGATE
570 SY TOPSOIL, SEED AND MULCH

CONSTRUCT
1 UNIT TANGENT
GUIDE RAIL TERMINAL

BLOCK 7002
LOT 1

1.5' BUFFER WITH MIN. 5' BIKE
LANE BOTH SIDES OF ROADWAY

MATCH EX. CURB

BLOCK 7001
LOT 1

MATCH EX. CURB

CONSTRUCT
3 S.F. R3-17 SIGN "BIKE LANE"

MATCH LINE
STA 9+60.75

0 30' 60'

DRAWN BY: BGS3		REVISIONS	
CHECKED BY: DH		NO.	DATE

SOUTHGATE PARKWAY

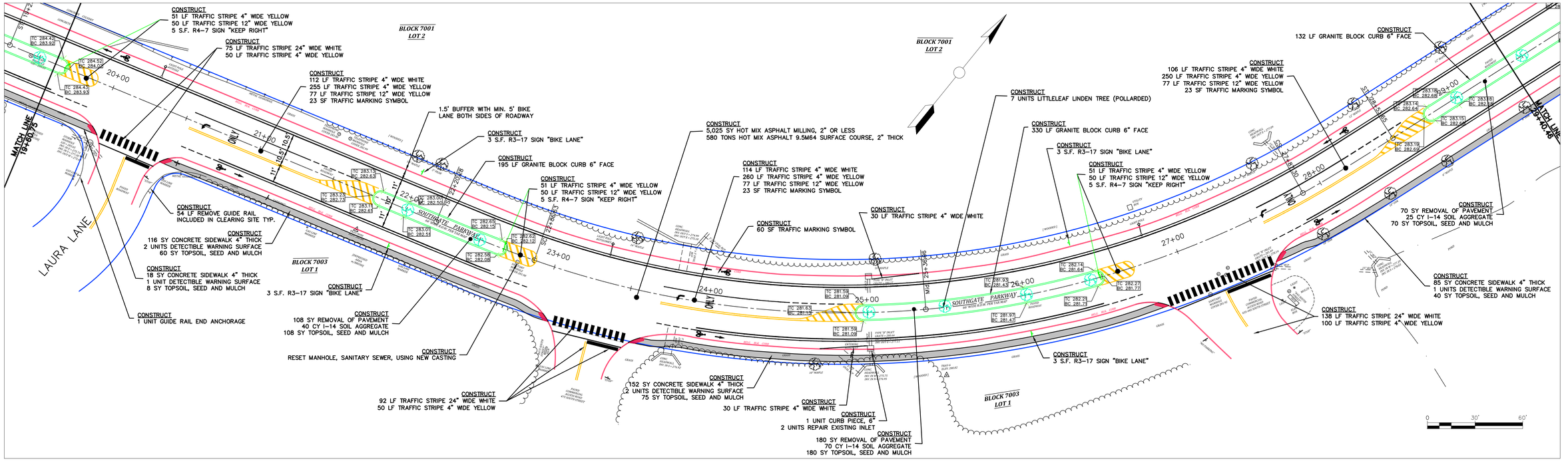
ROAD RESURFACING PROJECT
STATION 0+00 TO 19+50

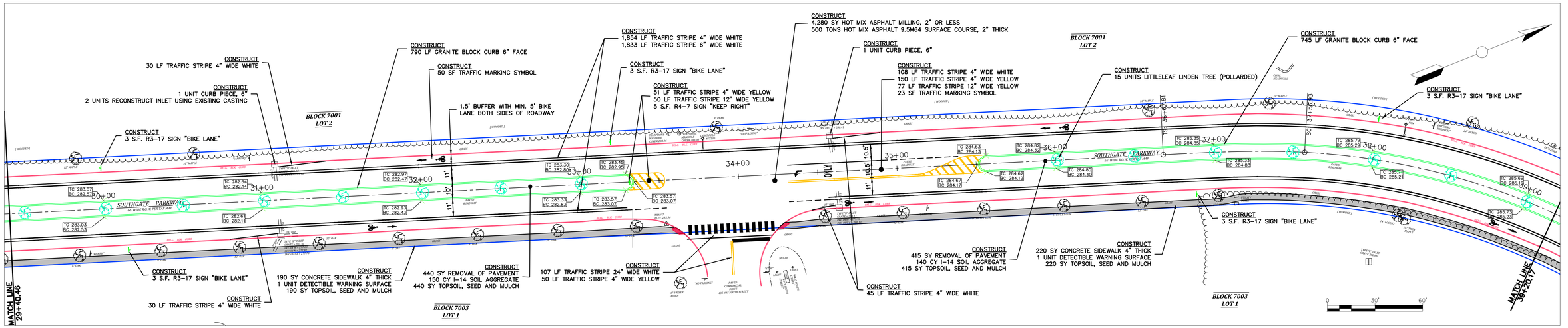
TOWNSHIP OF MORRIS
ENGINEERING DEPARTMENT
50 WOODLAND AVE. CONVENT STATION
MORRIS COUNTY NEW JERSEY,07961-7603

JAMES R. SLATE
TOWNSHIP ENGINEER
NEW JERSEY PROFESSIONAL
ENGINEER LIC. NO.40693

DATE: 8/30/2023 | SCALE: 1"= 30' | GCP-23-01 | SHT. NO. 4 OF 11

P:\Projects\Engineering Projects\Southgate Parkway\Southgate Parkway Road Improvements Project.dwg, 8/30/2023 1:35:57 PM





DRAWN BY: BGS3
CHECKED BY: DH

JAMES R. SLATE
TOWNSHIP ENGINEER
NEW JERSEY PROFESSIONAL ENGINEER LIC. NO.40693

REVISIONS NO.	DATE

SOUTHGATE PARKWAY

ROAD RESURFACING PROJECT

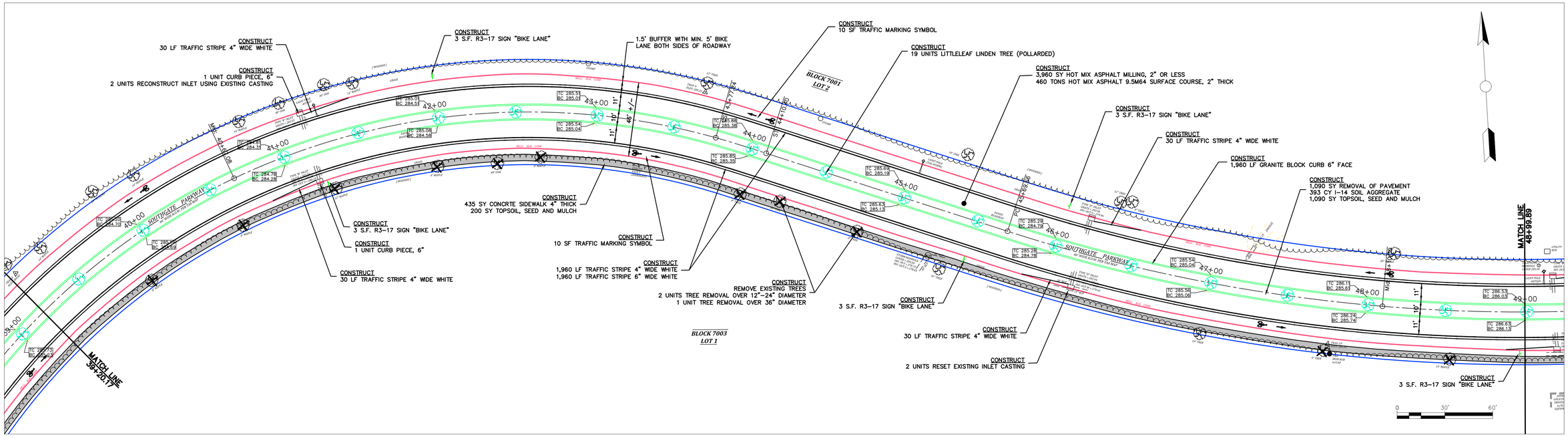
STATION 19+50 TO 39+00

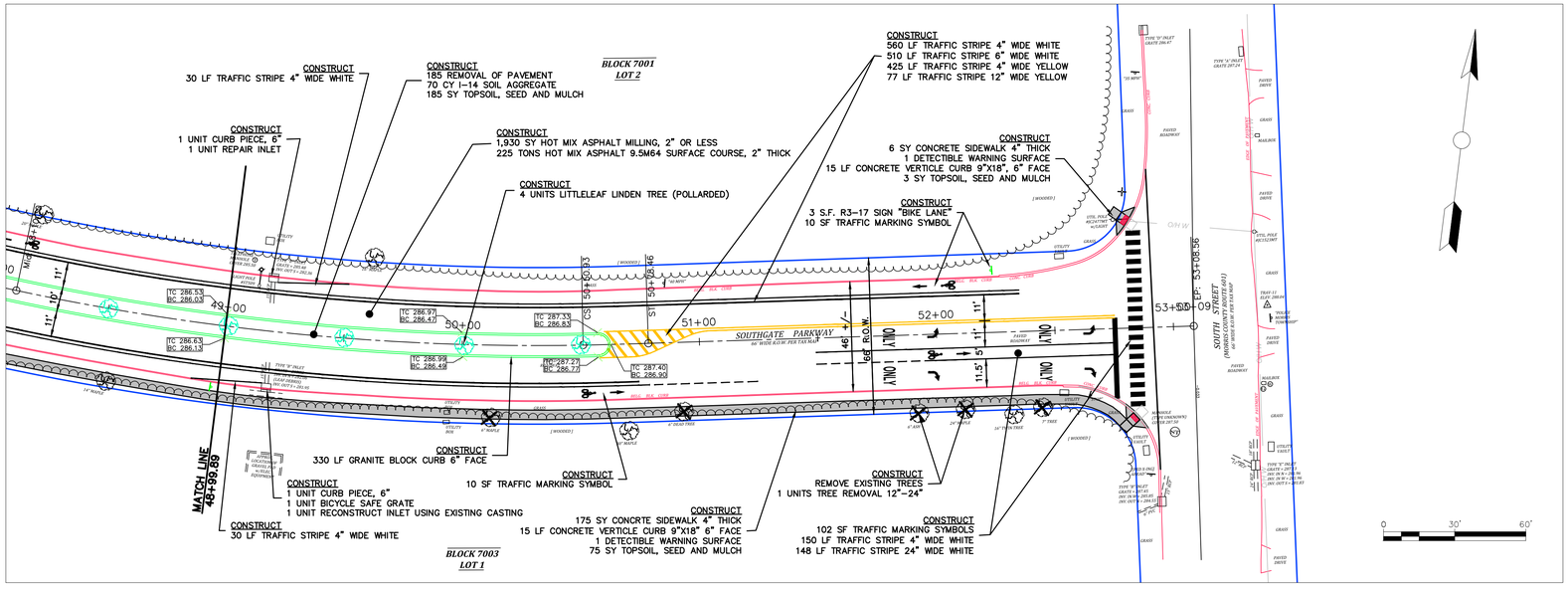
TOWNSHIP OF MORRIS ENGINEERING DEPARTMENT

50 WOODLAND AVE. CONVENT STATION
MORRIS COUNTY NEW JERSEY,07961-7603

DATE: 8/30/2023 | SCALE: 1"= 30' | GCP-23-01 | SHT. NO. 5 OF 11

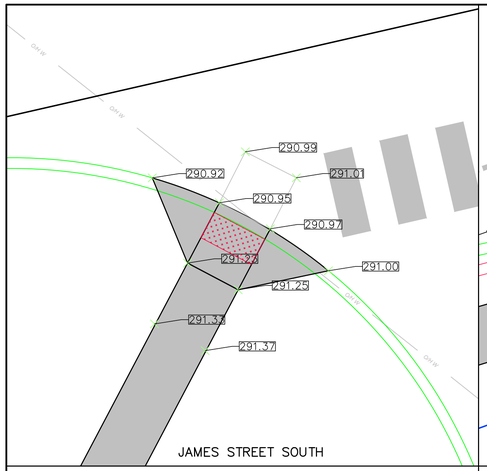
P:\Projects\Engineering Projects\Southgate Parkway\Southgate Parkway Road Improvements Project.dwg, 8/30/2023 11:36:21 PM



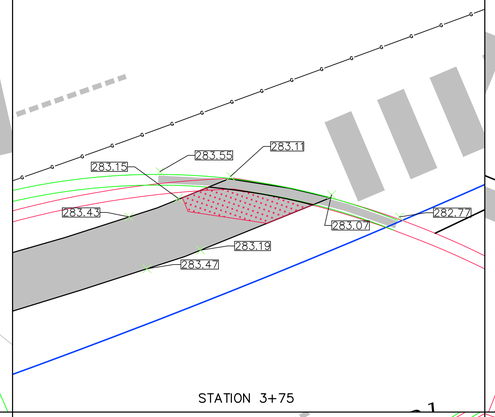


DRAWN BY: BGS3		REVISIONS	SOUTHGATE PARKWAY
CHECKED BY: DH		NO. DATE	ROAD RESURFACING PROJECT
			STATION 39+00 TO 53+00
JAMES R. SLATE TOWNSHIP ENGINEER NEW JERSEY PROFESSIONAL ENGINEER LIC. NO.40693			TOWNSHIP OF MORRIS ENGINEERING DEPARTMENT 50 WOODLAND AVE. CONVENT STATION MORRIS COUNTY NEW JERSEY,07961-7603
DATE: 8/30/2023	SCALE: 1"= 30'	GCP-23-01	SHT. NO. 6 OF 11

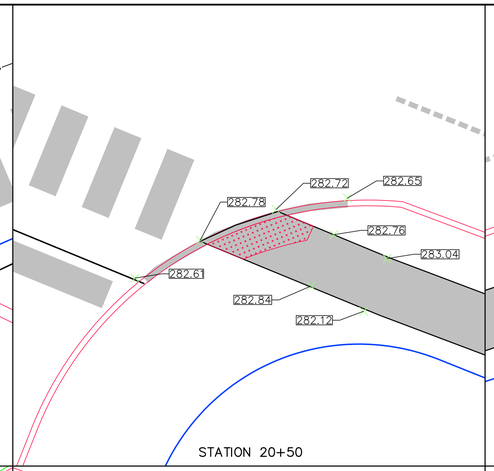
P:\Projects\Engineering Projects\Southgate Parkway\Southgate Parkway Road Improvements Project.dwg, 8/30/2023 1:36:42 PM



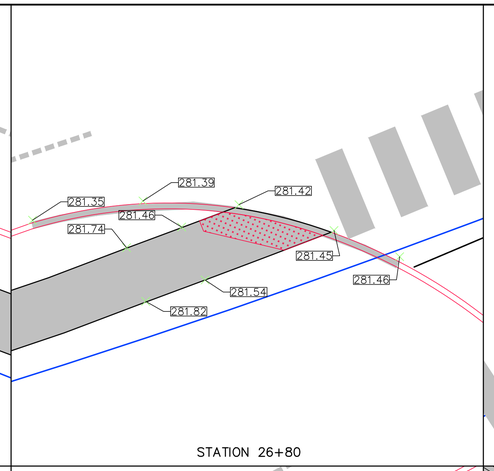
JAMES STREET SOUTH



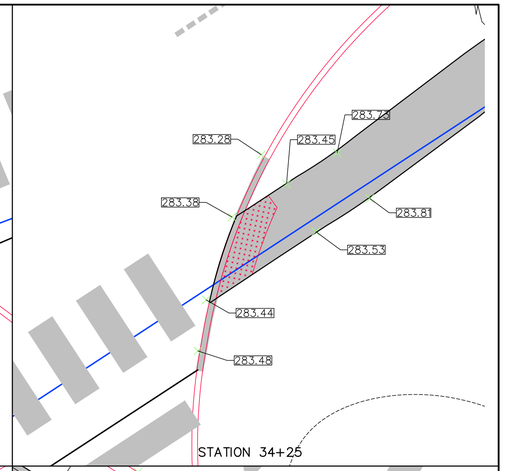
STATION 3+75



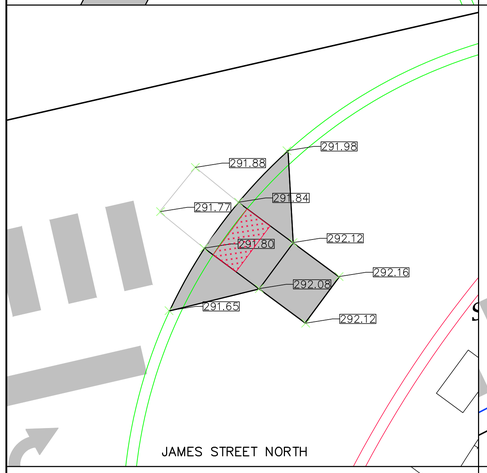
STATION 20+50



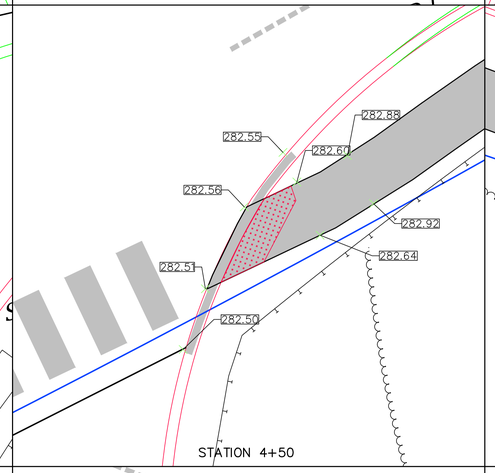
STATION 26+80



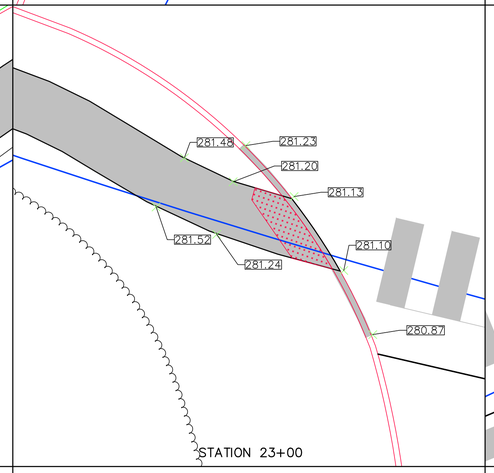
STATION 34+25



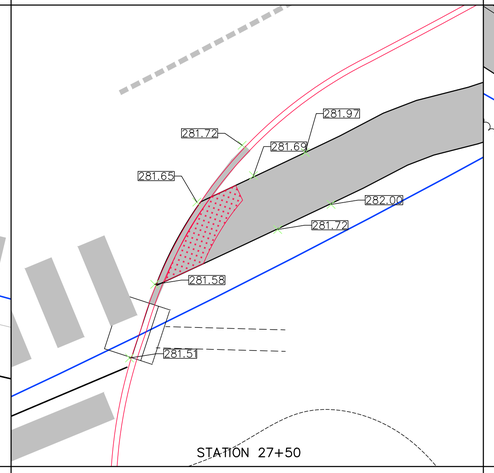
JAMES STREET NORTH



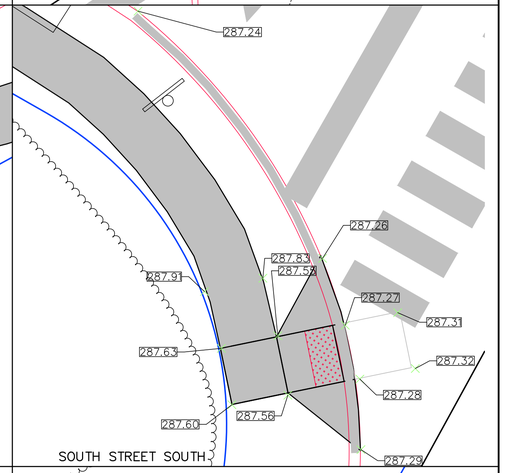
STATION 4+50



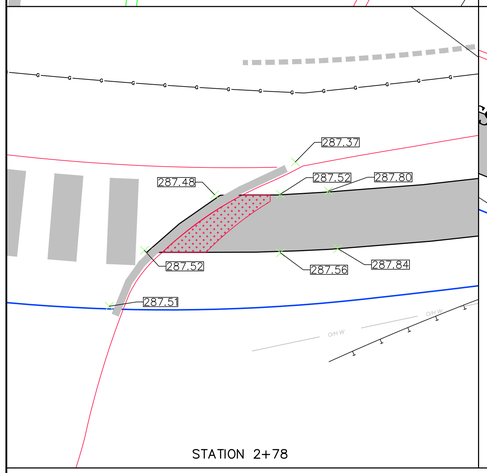
STATION 23+00



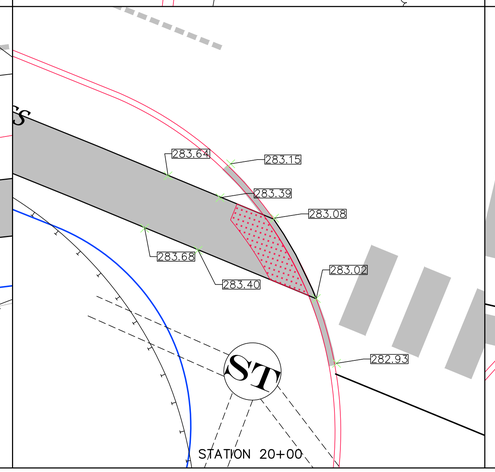
STATION 27+50



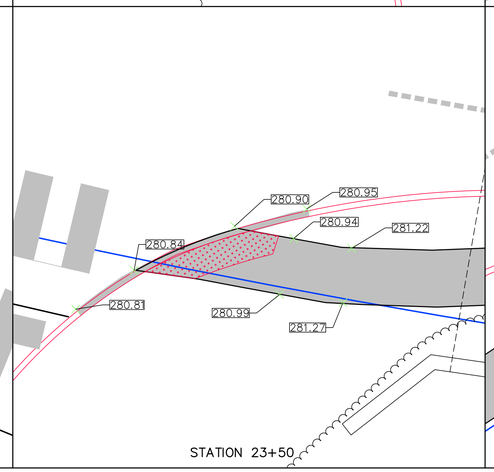
SOUTH STREET SOUTH



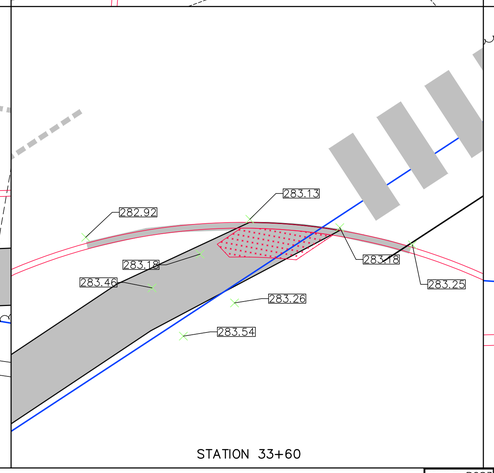
STATION 2+78



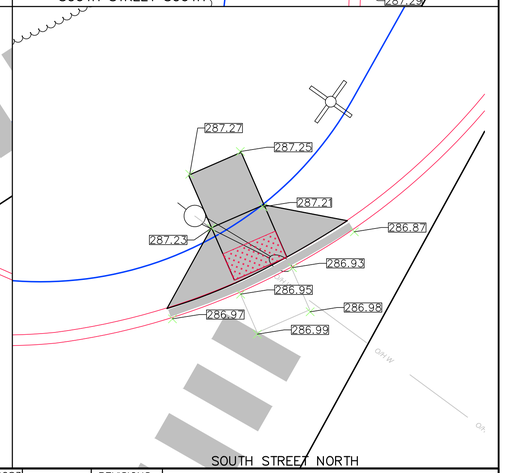
STATION 20+00



STATION 23+50



STATION 33+60



SOUTH STREET NORTH

DRAWN BY: BGS3
CHECKED BY: DH

JAMES R. SLATE
TOWNSHIP ENGINEER
NEW JERSEY PROFESSIONAL ENGINEER LIC. NO.40693

REVISIONS

NO.	DATE

SOUTHGATE PARKWAY

ROAD RESURFACING PROJECT
SIDEWALK HANDICAP RAMPS

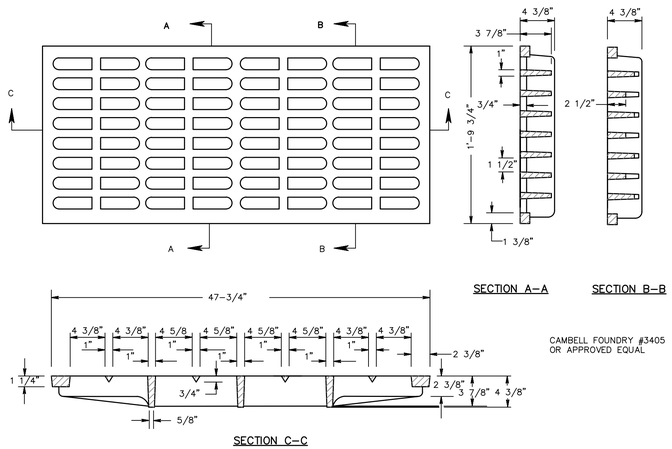
TOWNSHIP OF MORRIS
ENGINEERING DEPARTMENT

50 WOODLAND AVE. CONVENT STATION
MORRIS COUNTY NEW JERSEY,07961-7603

DATE: 8/30/2023 | SCALE: 1"= 5' | GCP-23-01 | SHT. NO. 7 OF 11

P:\Projects\Engineering Projects\Southgate Parkway\Southgate Parkway Road Improvements Project.dwg, 8/30/2023 1:37:13 PM

D1



SECTION A–A SECTION B–B

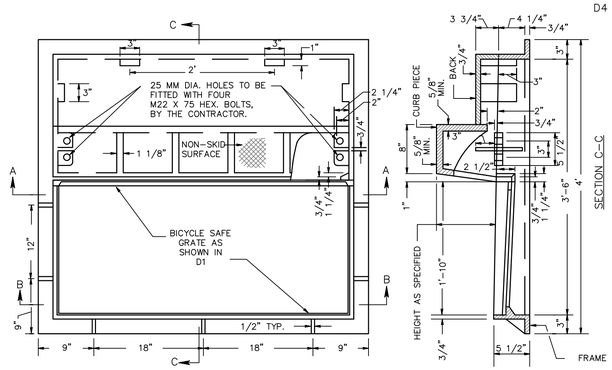
SECTION C–C

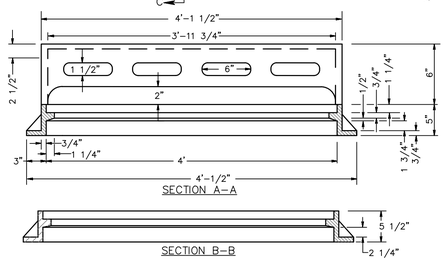
CAMBELL FOUNDRY #3405
OR APPROVED EQUAL

BICYCLE SAFE GRATES

N.T.S.

D4





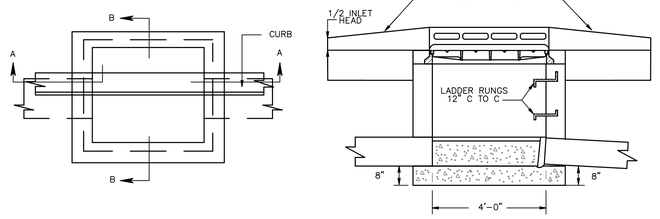
FRAME–BACK–CURB PIECE FOR INLET TYPE N

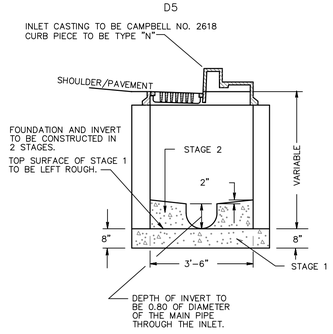
N.T.S.

MINIMUM WEIGHTS

WEIGHT OF GRATE = 324 LBS
WEIGHT OF FRAME = 313 LBS
WEIGHT OF BACK = 121 KG

WEIGHT OF CURB PIECE
- 6" = 125.7 LBS
- 8" = 167.6 LBS
- 10" = 209 1/2 LBS
- 12" = 251.4 LBS





INLETS, TYPE N WITH C.I. CURB PIECE–BACK–FRAME AND GRATE

N.T.S.

D19

GENERAL NOTES

1. INLETS MAYBE CONSTRUCTED OF CONCRETE, CONCRETE BLOCK, OR PRECAST CONCRETE. WALLS SHALL BE 6" THICK IF CONCRETE, CONCRETE BLOCK, OR PRECAST CONCRETE. INLET FOUNDATIONS AND INVERTS SHALL BE CLASS C CONCRETE.

2. CORBELLING OF INLET WALLS WILL BE PERMITTED AT THE RATE OF 1/2" PER 8" OF HEIGHT; MAXIMUM CORBEL 6" PER WALL.

3. WHEN THE DEPTH OF AN INLET THAT IS NOT PRECAST EXCEEDS 10' AS MEASURED FROM THE TOP OF GRATE TO INVERT, WALLS BELOW A DEPTH OF 8' SHALL BE 12" THICK AND THE DEPTH OF FOUNDATION INCREASED TO 12." WHEN ROCK IS ENCOUNTERED, THE DEPTH OF THE FOUNDATION SHALL NOT BE INCREASED.

4. INLET FOUNDATIONS WHICH ARE PRECAST SHALL BE PLACED ON A 6" THICK BED OF COMPACTED COURSE AGGREGATE SIZE NO. 57. THE COURSE AGGREGATE SHALL EXTEND 6" BEYOND THE HORIZONTAL LIMITS OF THE INLET FOUNDATION.

5. LADDER RUNGS OF PRECAST INLETS SHALL BE PLACED A MAXIMUM OF 18."

6. CASTINGS FOR PRECAST INLETS SHALL BE ADJUSTED TO GRADE WITH COURSES OF CONCRETE BLOCK AS REQUIRED, 12" MAXIMUM.

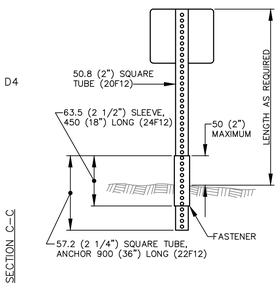
7. WHEN THE DEPTH OF A PRECAST INLET EXCEEDS 10' AS MEASURED FROM THE TOP OF GRATE TO INVERT, THE FOUNDATION SHALL BE INCREASED TO 12." WHEN ROCK IS ENCOUNTERED, THE DEPTH OF THE FOUNDATION SHALL NOT BE INCREASED.

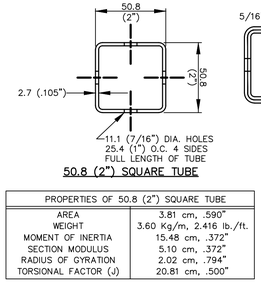
8. MINIMUM WALL REINFORCEMENT FOR PRECAST INLETS TYPE A, B, C, E, D–1, AND B MODIFIED:

DEPTH BELOW TOP OF GRATE	HORIZONTAL REINF.	VERTICAL REINF.	WALL THICK.
0' TO 10'–0"	#4 @ 10" OC.	#4 @ 18" OC.	6"
10'–1" TO 15'–0"	#4 @ 8" OC.	#4 @ 18" OC.	6"
15'–1" TO 20'–0"	#4 @ 6" OC.	#4 @ 18" OC.	6"

REINFORCING SHOWN FOR PRECAST INLETS IS THE MINIMUM REQUIRED. ADDITIONAL REINFORCING FOR HANDLING IS THE RESPONSIBILITY OF THE CONTRACTOR.

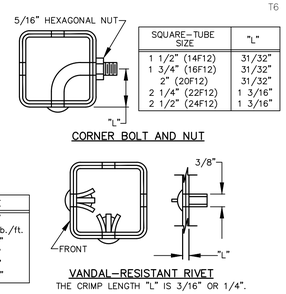
T6





50.8 (2") SQUARE TUBE

PROPERTIES OF 50.8 (2") SQUARE TUBE	
AREA	3.81 cm, .590"
WEIGHT	3.60 Kg/m, 2.416 lb./ft.
MOMENT OF INERTIA	15.48 cm, .372"
SECTION MODULUS	5.10 cm, .372"
RADIUS OF GYRATION	2.02 cm, .794"
TORSIONAL FACTOR (J)	20.81 cm, .500"



SQUARE–TUBE SIZE	"L"
1 1/2" (14F12)	31/32"
1 3/4" (16F12)	31/32"
2" (20F12)	31/32"
2 1/4" (22F12)	1 3/16"
2 1/2" (24F12)	1 3/16"

CORNER BOLT AND NUT

VANDAL–RESISTANT RIVET

THE CRIMP LENGTH "L" IS 3/16" OR 1/4".

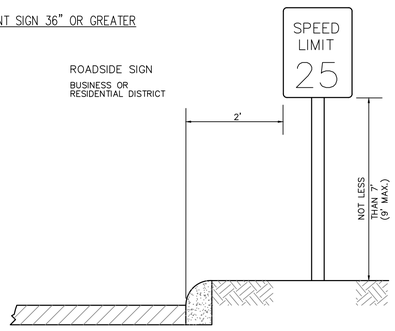
GENERAL NOTES

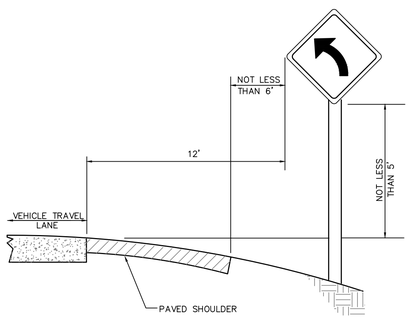
1. SQUARE–TUBE SUPPORTS ARE TO BE THE TELESPAR SYSTEM BY THE UNISTRUT CORPORATION OR AN APPROVED EQUAL, AND ONLY TYPE III BREAKAWAY UNITS SHALL BE USED.
2. BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A–307 AND NUTS TO A–563, GRADE A, AND SHALL BE ELECTROGALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM B–633, TYPE III, SC 1.
3. THE POSTS SHALL BE 50.8 (2") TUBES FORMED FROM 2.7 (.105") THICK STEEL CAREFULLY ROLLED TO SIZE, CORNER–WELDED BY HIGH–FREQUENCY RESISTANCE WELDING AND EXTERNALLY SCARFED TO AGREE WITH THE CORNER RADII. THE POSTS SHALL HAVE 11.1 (7/16") DIAMETER HOLES SPACED 25.4 (1") ON CENTER ALONG THE CENTER LINE OF EACH SIDE.
4. THE ANCHOR TUBE SHALL BE A 57.2 (2 1/4") SQUARE TUBE, 750 (30") TO 1200 (48") LONG, INSTALLED IN SOIL 50 (2") TO 75 (3") ABOVE THE GROUND BUT NOT HIGHER THAN 100 (4"). THE UPPER SIGNPOST SHALL TELESCOPE INSIDE THE ANCHOR APPROXIMATELY 200 (8") TO 300 (12").
5. A TUBE–REINFORCED SLEEVE, 63.5 (2 1/2") SQUARE AND 450 (18") LONG, SHALL BE INSTALLED OVER THE 57.2 (2 1/4") SQUARE ANCHOR AND FLUSH WITH THE TOP.
6. GALVANIZED SIGNPOSTS SHALL BE ROLL FORMED FROM STEEL CONFORMING TO ASTM SPECIFICATION A–446 WITH ZINC COATING DESIGNATION G–90.

SQUARE–TUBE SUPPORT FOR PERMANENT SIGN 36" OR GREATER

N.T.S.

T5





LOCATION OF SIGNS

GENERAL NOTES:

1. ALL POSTS TO BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND AS INDICATED BELOW.
2. ALL SMALL SIGN SUPPORTS TO BE OF THE BREAKAWAY TYPE WITH EXCEPTION OF THOSE INSTALLED BEHIND GUIDE RAIL OR OTHER ROADSIDE BARRIER.
3. ALL STEEL POSTS AND BRACKETS TO BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING TO BE ACCORDING TO ASTM A123.
4. ALL STEEL U–POST SIGN SUPPORTS MUST BE INSTALLED FACING THE PREDOMINANT TRAFFIC FLOW, USE A MOUNTING BRACKET ON SIDE MOUNTED SIGNS SUCH AS "ONE WAY" SIGNS INSTALLED IN MEDIANS.
5. SIGN PANEL SIZES ARE TO DETERMINE POST TYPE AND NUMBER AS SHOWN ON THIS DETAIL.
6. BOLTS ARE NOT TO PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT, BUT ARE TO ENGAGE ALL THREADS IN THE NUT.
7. WHEN SIGNS ARE INSTALLED ON SLOPES 10H:1V OR FLATTER, THE MINIMUM VERTICAL CLEARANCE REQUIREMENTS FOR SIGNS ARE:

   FOR SINGLE POST INSTALLATIONS – THE MINIMUM DISTANCE BETWEEN THE EDGE OF THE PAVEMENT AND THE BOTTOM OF ANY PANEL MUST BE 7 FEET, AND THE MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO THE TOP OF ANY SIGN PANEL MUST BE 9 FEET.

   FOR MULTI–POST INSTALLATIONS – THE MINIMUM DISTANCE BETWEEN THE EDGE OF PAVEMENT AND THE BOTTOM OF A MAIN SIGN PANEL MUST BE 7 FEET.

   SECONDARY SIGN PANELS (LAND SERVICE HIGHWAYS) – THE MINIMUM DISTANCE BETWEEN THE EDGE OF PAVEMENT AND THE BOTTOM OF A SECONDARY SIGN PANEL IS 6 FEET.

   SECONDARY SIGN PANELS (INTERSTATE AND FREEWAYS) – THE BOTTOM OF THE MAIN SIGN TO BE A MINIMUM OF 8 FEET AND THE SECONDARY SIGN PANEL A MINIMUM OF 5 FEET ABOVE THE EDGE OF PAVEMENT.

   WHERE GRADING OF 10H:1V OR FLATTER CANNOT BE OBTAINED, OR WHERE CURB OR BERM IS GREATER THAN 4 INCHES, THE MINIMUM VERTICAL CLEARANCE WILL BE MEASURED FROM THE GROUND LINE TO THE BOTTOM OF THE SIGN.
8. THE HORIZONTAL OFFSET FROM EDGE OF PAVEMENT TO EDGE OF SIGN IS DERIVED FROM SECTION 2A.19 OF THE MUTCD AS FOLLOWS:

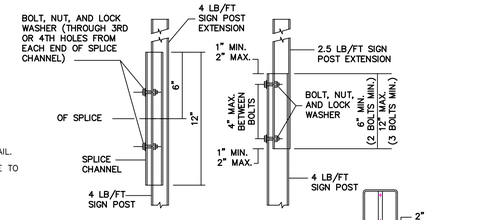
   FOR URBAN INSTALLATIONS – IN AREAS WHERE LATERAL OFFSETS ARE LIMITED, A MINIMUM LATERAL OFFSET OF 2 FEET IS DESIRABLE. A MINIMUM OFFSET OF 1 FOOT FROM THE FACE OF THE CURB MAY BE USED IN AREAS WHERE THE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE CLOSE TO THE CURB.

   FOR RURAL INSTALLATIONS – 6 FEET MINIMUM DESIRABLE FROM EDGE OF SHOULDER, BUT 12 FEET MINIMUM DESIRABLE FROM EDGE OF TRAFFIC OR AUXILIARY LANE.

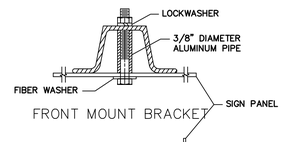
   FOR INTERSTATE AND FREEWAY INSTALLATIONS – 6 FEET MINIMUM DESIRABLE FROM EDGE OF SHOULDER, BUT NOT LESS THAN 12 FEET FROM THE EDGE OF TRAFFIC OR AUXILIARY LANE.

   FOR RAMP INSTALLATIONS – 6 FEET MINIMUM FROM EDGE OF ROAD.

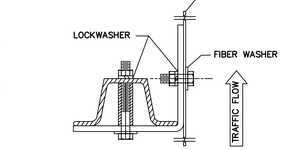
   WHERE BEHIND GUIDE RAIL – 4 FEET MINIMUM FROM BACK OF BEAM GUIDE RAIL ELEMENT TO SIGN POST.
9. DO NOT INSTALL PERMANENT SIGN SUPPORTS ON SLOPES GREATER THAN 10H:1V, EXCEPT WHERE GRADING OF 10H:1V CANNOT BE OBTAINED OR THE SIGN SUPPORTS WILL BE BEHIND A TRAFFIC BARRIER. THE SLOPE IS TO EXTEND A MINIMUM OF 3 FEET BEYOND THE OUTSIDE EDGE OF SIGN (SEE GRADING DETAIL FOR SLOPE TREATMENT).
10. EXTRUDED ALUMINUM SIGN PANELS ARE NOT PERMITTED FOR USE WITH STEEL U–POST SIGN SUPPORTS.
11. DO NOT PLACE STEEL U–POST SIGN SUPPORTS IN FRONT OF GUIDE RAIL AND THE POSTS MUST NOT STRADDLE GUIDE RAIL.
12. TO EXTEND THE HEIGHT OF A SIGN POST, A MAXIMUM OF ONE SPLICE MAY BE MADE AND MUST BE A MINIMUM OF 9 FEET FROM THE GROUNDLINE TO CENTER LINE OF SPLICE.



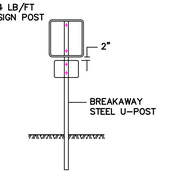
SIGN POST EXTENSION SPLICE DETAILS

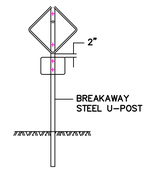


FRONT MOUNT BRACKET



SIDE MOUNT BRACKET



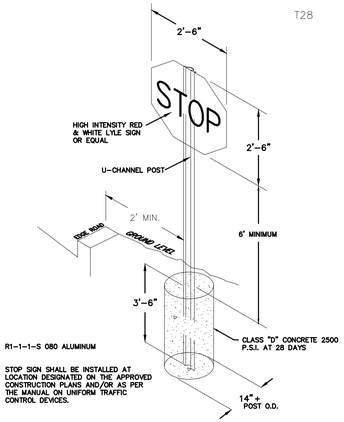


PANEL SIZE (W x H)	# OF POSTS	POST SIZE (LB/ FT)
18" x 18"	1	2.5
18" x 24"	1	2.5
24" x 24"	1	2.5
24" x 30"	1	2.5
24" x 36"	1	2.5
30" x 24"	1	2.5
30" x 30"	1	2.5
36" x 12"	2	2.5
36" x 36" x 36"	2	2.5
30" x 36"	1	4.0

PANEL SIZE (W x H)	# OF POSTS	POST SIZE (LB/FT)
36" x 36"	2	2.5
36" x 48"	2	2.5
45" x 36"	2	2.5
48" x 24"	2	2.5
48" x 36"	2	2.5
48" x 48"	2	4.0
48" x 64" x 64"	2	2.5
60" x 36"	2	4.0
48" x 60"	2	4.0
60" x 30"	2	4.0

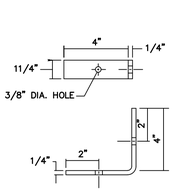
U–POST SELECTION TABLE
BREAKAWAY SIGN SUPPORT

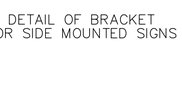
T28



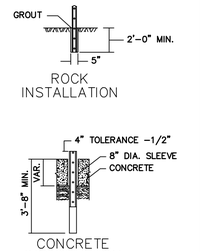
STOP SIGN

N.T.S.





DETAIL OF BRACKET FOR SIDE MOUNTED SIGNS



DRAWN BY: NIP		REVISIONS	
CHECKED BY: JRS		NO.	DATE

CONSTRUCTION DETAILS

SOUTHGATE PARKWAY
ROAD RESURFACING PROJECT

JAMES R. SLATE
TOWNSHIP ENGINEER
NEW JERSEY PROFESSIONAL ENGINEER LIC. NO.40693

TOWNSHIP OF MORRIS
ENGINEERING DEPARTMENT
MORRIS COUNTY, NEW JERSEY
50 WOODLAND AVENUE, CONVENT STATION, 07961-7603

DATE: 8/30/2023 | SCALE: 1"= NTS | GCP–23–01 | SHT.NO. 8 of 11

P:\Projects\Engineering Projects\Southgate Parkway\Construction Details.dwg, 8/30/2023 9:28:46 AM

SE4A

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, AND WILL BE IN PLACE PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

2. ANY DISTURBED AREA THAT WILL BE LEFT EXPOSED FOR MORE THEN THIRTY (30) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW OR HAY AND TACKED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS. SEE NOTE 21 BELOW.

3. PERMANENT VEGETATION IS TO BE ESTABLISHED ON EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING. MULCH IS TO BE USED FOR PROTECTION UNTIL VEGETATION IS ESTABLISHED. SEE NOTE 22 BELOW.

4. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS (STEEP SLOPES, SANDY SOILS, WET CONDITIONS) SUBJECT TO EROSION WILL RECEIVE A TEMPORARY SEEDING IN ACCORDANCE WITH NOTE 21 BELOW.

5. TEMPORARY DIVERSION BERMS ARE TO BE INSTALLED ON ALL CLEARED ROADWAYS AND EASEMENT AREAS. SEE THE DIVERSION DETAIL.

6. PERMANENT SEEDING AND STABILIZATION TO BE IN ACCORDANCE WITH THE "STANDARDS FOR PERMANENT VEGETATIVE COVER FOR SOIL STABLIZATION COVER". SPECIFICED RATES AND LOCATIONS SHALL BE ON THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN.

7. THE SITE SHALL AT ALL TIME BE GRADED AND MAINTAINED SO THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.

8. ALL SEDIMENTATION STRUCTURES (SILT FENCE, INLET FILTERS, AND SEDIMENT BASINS) WILL BE INSPECTED AND MAINTAINED DAILY.

9. STOCKPILES SHALL NOT BE LOCATED WITHIN 50' OF A FLOODPLAIN, SLOPE, DRAINAGE FACILITY, OR ROADWAY. ALL STOCKPILES BASES SHALL HAVE SILT FENCE PROPERLY ENTRENCHED AT THE TOE OF SLOPE.

10. A STABILIZED CONTRUCTION ACCESS WILL BE INSTALLED, WHENEVER AN EARTHEN ROAD INTERSECTS WITH A PAVED ROAD. SEE THE STABILIZED CONTRUCTION ACCESS DETAIL AND CHART FOR DIMENSIONS.

11. ALL NEW ROADWAYS WILL BE TREATED WITH SUITABLE SUBBASE UPON ESTABLISHMENT OF FINAL GRADE ELEVATIONS.

12. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.

13. BEFORE DISCHARGE POINTS BECOME OPERATIONAL, ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED AS REQUIRED.

14. ALL DEWATERING OPERATIONS MUST BE DISCHARGED DIRECTLY INTO A SEDIMENT FILTER AREA. THE FILTER SHOULD BE COMPOSED OF A FABRIC OR APPROVED MATERIAL. SEE THE DEWATERING DETAIL.

15. ALL SEDIMENT BASINS WILL BE CLEANED WHEN THE CAPACITY HAS BEEN REDUCED BY 50%. A CLEAN OUT ELEVATION WILL BE IDENTIFIED ON THE PLAN AND A MARKER INSTALLED ON THE SITE.

16. DURING AND AFTER CONSTRUCTION, THE APPLICANT WILL BE RESPONSIBLE FOR THE MAINTENANCE AND UPKEEP OF THE DRAINAGE STRUCTURES, VEGETATION COVER, AND ANY OTHER MEASURES DEEMED APPROPRIATE BY THE DISTRICT. SAID RESPONSIBILITY WILL END WHEN COMPLETED WORK IS APPROVED BY THE MORRIS COUNTY SOIL CONSERVATION DISTRICT.

17. ALL TREES OUTSIDE THE DISTURBANCE LIMIT INDICATED ONT EH SUBJECT PLAN OR THOSE TREES WITHIN THE DISTURBANCE AREA WHICH ARE DESIGNATED TO REMAIN AFTER CONSTRUCTION ARE TO BE PROTECTED WITH TREE PROTECTION DEVICES. SEE THE TREE PROTECTION DETAIL.

18. THE MORRIS COUNTY SOIL CONSERVATION DISTRICT MAY REQUEST ADDITIONAL MEASURES TO MINIMIZE ON SITE OR OFF SITE EROSION PROBLEMS DURING CONSTRUCTION.

19. THE MORRIS COUNTY SOIL CONSERVATION DISTRICT MUST BE NOTIFIED, IN WRITING, AT LEAST 72 HOURS PRIOR TO ANY LAND DISTURBANCE, AND A PRE-CONSTRUCTION MEETING HELD.

20. CONTRACTOR TO SET UP A MEETING WITH THE INSPECTOR FOR PERIODIC INSPECTIONS OF THE TEMPORARY SEDIMENT BASIN PRIOR TO AND DURING ITS CONSTRUCTION.

21. TOPSOIL STOCKPILE PROTECTION:
A) APPLY GROUND LIMESTONE AT A RATE OF 90 LBS. PER 1000 SQ.FT.
B) APPLY FERTILIZER (10-20-10) AT A RATE OF 11 LBS. PER 1000 SQ.FT.
C) APPLY PERENNIAL RYEGRASS SEED AT 1 LB. PER 1000 SQ.FT. AND ANNUAL RYEGRASS AT 1 LB. PER 1000 SQ.FT.
D) MULCH STOCKPILE WITH STRAW OR HAY AT A RATE OF 90 LBS. PER 1000 SQ.FT.
E) APPLY A LIQUID MULCH BINDER OR TACK TO STRAW OR HAY MULCH.
F) PROPERLY ENTRENCH A SILT FENCE AT THE BOTTOM OF THE STOCKPILE.

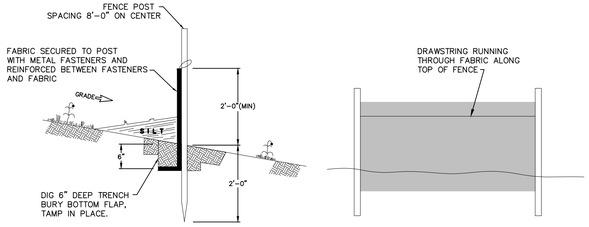
22. TEMPORARY STABILIZATION SPECIFICATIONS:
A) APPLY GROUND LIMESTONE AT A RATE OF 90 LBS. PER 1000 SQ.FT.
B) APPLY FERTILIZER (10-20-10) AT A RATE OF 11 LBS. PER 1000 SQ.FT.
C) APPLY PERENNIAL RYEGRASS SEED AT 1 LB. PER 1000 SQ.FT. AND ANNUAL RYEGRASS AT 1 LB. PER 1000 SQ.FT.
D) MULCH STOCKPILE WITH STRAW OR HAY AT A RATE OF 90 LBS. PER 1000 SQ.FT.
E) APPLY A MULCH BINDER OR TACK TO STRAW OR HAY MULCH.

23. PERMANENT STABILIZATION SPECIFICATIONS:
A) APPLY TOPSOIL TO A DEPTH OF 5" (UNSETTLED).
B) APPLY GROUND LIMESTONE AT A RATE OF 90 LBS. PER 1000 SQ.FT. AND WORK FOUR INCHES INTO SOIL.
C) APPLY FERTILIZER (10-20-10) AT A RATE OF 11 LBS. PER 1000 SQ.FT.
D) APPLY SEED MIXTURE AS FOLLOWS:

Kentucky Blue	20% by weight
Chewings Fescue	35% by weight
Alta or Ky 31 Fescue	20% by weight
Red Top	10% by weight
Perennial Rye	10% by weight
White Clover	5% by weight

E) MULCH STOCKPILE WITH STRAW OR HAY AT A RATE OF 90 LBS. PER 1000 SQ.FT.
F) APPLY A MULCH BINDER OR TACK TO STRAW OR HAY MULCH.

*NOTE: 72 HOURS PRIOR TO ANY SOIL DISTURBANCE, NOTICE IN WRITING, SHALL BE GIVEN TO THE MORRIS COUNTY SOIL CONSERVATION DISTRICT AND A PRE-CONSTRUCTION MEETING HELD.



NOTES:
1. FENCE POSTS SHALL BE SPACED 8 FEET CENTER-TO-CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST 2 FEET INTO THE GROUND AND EXTEND AT LEAST 2 FEET ABOVE GROUND (FIG. 25-2). POSTS SHALL BE CONSTRUCTED OF HARDWOOD WITH A MINIMUM DIAMETER THICKNESS OF 1½ INCHES.
2. A METAL FENCE WITH 6 INCH OR SMALLER OPENINGS AND A LEAST 2 FEET HIGH MAY BE UTILIZED, FASTENED TO THE FENCE POSTS, TO PROVIDE REINFORCEMENT AND SUPPORT TO THE GEOTEXTILE FABRIC WHERE SPACES FOR OTHER PRACTICES IS LIMITED AND HEAVY SEDIMENT LOADING IS EXPECTED.
3. A GEOTEXTILE FABRIC, RECOMMENDED FOR SUCH USE BY MANUFACTURER, SHALL BE BURIED AT LEAST 6 INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST 2 FEET ABOVE THE GROUND. THE FABRIC MUST BE SECURELY FASTENED TO THE POSTS USING A SYSTEM CONSISTING OF METAL FASTENERS (NAIL OR STAPLES) AND A HIGH STRENGTH REINFORCEMENT MATERIAL (NYLON WEBBING, GROMMETS, WASHERS ETC.) PLACED BETWEEN THE FASTENERS AND THE GEOTEXTILE FABRIC. THE FASTENING SYSTEM SHALL RESIST TEARING AWAY THE POSTS. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP PORTION OF THE FENCE FOR ADDED STRENGTH.

SILT FENCE DETAIL
NOT TO SCALE

SE4A

DUST CONTROL NOTES

THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLING DUST:

MULCHES – SEE STANDARD FOR STABILIZATION WITH MULCHES ONLY (PG 5-1)

VEGETATIVE COVER – SEE STANDARD FOR TEMPORARY VEGETATIVE COVER (PG. 7-1), PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION (PG. 4-1), AND PERMANENT STABILIZATION WITH SOD (PG. 6-1).

SPRAY-ON ADHESIVES – ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS.

TABLE 16-1: DUST CONTROL MATERIALS

MATERIAL	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLONS/ACRE
ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1200
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIN IN WATER	4:1	FINE SPRAY	300
POLYACRYLAMIDE (PAM) – SPRAY ON POLYACRYLAMIDE (PAM) – DRY SPRAY	APPLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS. MAY ALSO BE USED AS AN ADDITIVE TO SEDIMENT BASINS TO FLOCCULATE AND PRECIPITATE SUSPENDED COLLOIDS. SEE SEDIMENT BASIN STANDARD (PG. 26-1)		
ACIDULATED SOY BEAN SOAP STICK	NONE	COARSE SPRAY	1200

TILLAGE – TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACES ABOUT 12 INCHES APART, AND SPRING-TOOTHED HARROWS ARE EXAMPLES OF EQUIPEMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

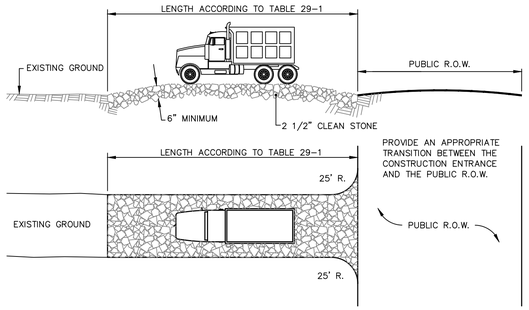
SPRINKLING – SITE IS SPRINKLED UNTIL THE SURFACE IS WET.

BARRIERS – SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.

CALCIUM CHLORIDE – SHALL BE IN THE FORM OF LOOSE, DRY GRANULATES OF FLAKES FINE ENOUGHT TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. IF USED ON STEEPER SLOPES, THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS, OR ACCUMULATION AROUND PLANTS.

STONE – COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

SE8



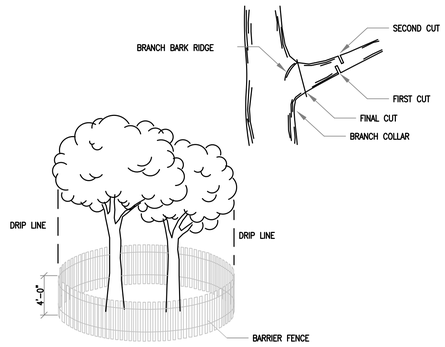
STABLILIZED CONSTRUCTION ENTRANCE
N.T.S.

NOTE: INDIVIDUAL LOT ACCESS POINTS MAY REQUIRE STABILIZATION. THICKNESS SHOWN IS FOR CONSRUCTION ENTRANCE ONLY (TYP.)

TABLE 29-1: LENGTHS OF CONSTRUCTION EXITS ON SLOPING ROADBEDS

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2 TO 5%	100 FT	200 FT
> 5%	ENTIRE SURFACE STABILIZED WITH FABC BASE COURSE *	

* AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

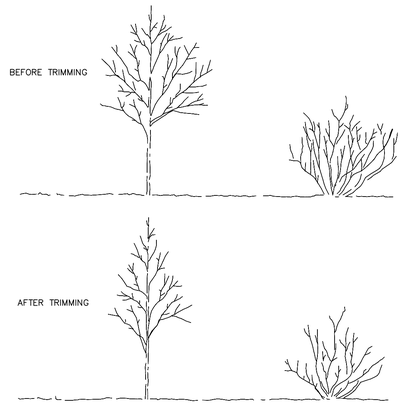


TREE PROTECTION FENCING AND TREE LIMB REMOVAL

LAN10

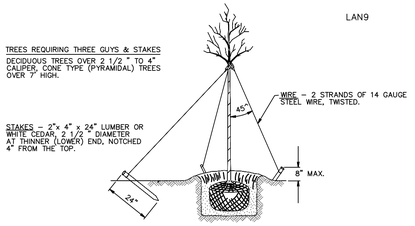
DAMAGED BRANCHES SHALL BE TRIMMED OFF BELOW THE POINT OF INJURY. THE CENTRAL TRUNK OR "LEADER" SHOULD BE LEFT INTACT AND THE SIDE BRANCHES SHOULD BE SHORTENED BY APPROXIMATELY 1/3 TO 1/2 PREVIOUS SEASON'S GROWTH. BROKEN ROOTS SHALL BE CUT OFF ABOVE THE BREAK AND BRUISED ENDS CUT OFF CLEANLY.

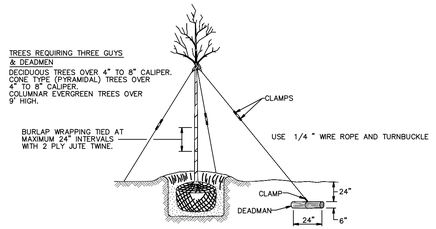
WHEN PLANTING A YOUNG SHRUB, THIN TOP GROWTH BY 1/3 TO BALANCE THE TOP WITH THE ROOTS. PRUNE JUST ABOVE A BUD AND RETAIN THE NATURAL SHAPE OF THE SHRUB.



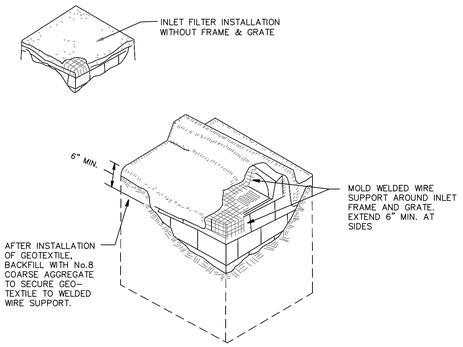
PRUNING TREES WHEN PLANTING

LAN9



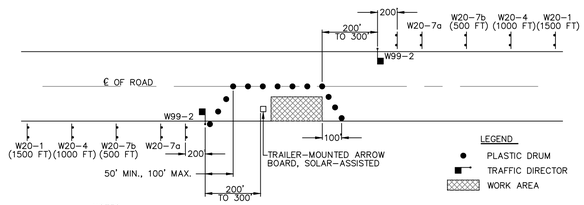


GUYING DETAILS
N.T.S.



INLET FILTER
N.T.S.

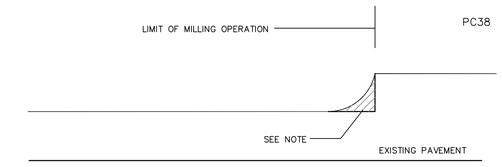
MP12



NOTES
1. ALL SIGNS AND OTHER TRAFFIC CONTROL DEVICES ARE TO CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, WHEREIN THE SIGNS IN THIS FIGURE ARE IDENTIFIED.
2. FLASHING WARNING LIGHTS ARE *NOT* TO BE MOUNTED ON ANY SIGNS.
3. FOR DAYTIME OPERATIONS OF A SHORT DURATION, AND ON ROADS THAT ARE NOT MAJOR ARTERIES, THE W20-1 (AHEAD), W20-7a AND W20-7b SIGNS WILL SUFFICE FOR EACH APPROACH. THE TRAFFIC DIRECTOR AND ALL OTHER DEVICES REMAIN THE SAME.
4. DRUMS ARE TO BE PLACED AT 30' INTERVALS THROUGHOUT THE WORK ZONE.
5. TRAFFIC DIRECTORS SHALL USE STOP/SLOW PADDLES (R1-1) AND, WHERE SIGHT IS OBSTRUCTED, WALKIE-TALKIES.

TYPICAL ONE-LANE-CLOSURE OPERATION
N.T.S.

PC38



NOTE:
AT THE LIMITS OF THE MILLING OPERATION, THE BITUMINOUS MATERIAL LEFT BY THE DRUM RADIUS SHALL BE REMOVED. SAWING OR TRANSVERSE MILLING SHALL BE USED TO INSURE THAT THE FACE IS CLEAN AND VERTICAL. THIS END TREATMENT IS NOT APPLICABLE TO TEMPORARY LIMITS OF MILLING (END OF WORKDAY.) IT IS APPLICABLE TO ALL AREAS WHERE THE COMPLETED MILLING OPERATION MATCHES ANY EXISTING PAVEMENT INCLUDING BRIDGES.

END TREATMENT FOR MILLING OPERATIONS
N.T.S.

DRAWN BY: BGS.3
CHECKED BY: HD

JAMES R. SLATE
TOWNSHIP ENGINEER
NEW JERSEY PROFESSIONAL ENGINEER LIC. NO.40693

REVISIONS NO.	DATE

CONSTRUCTION DETAILS

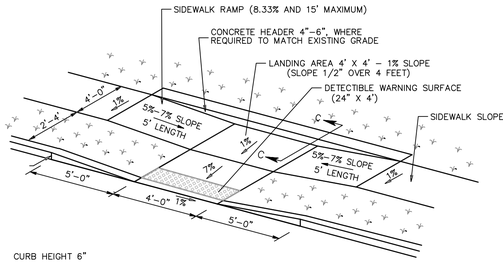
SOUTHGATE PARKWAY
ROAD RESURFACING PROJECT

TOWNSHIP OF MORRIS
ENGINEERING DEPARTMENT
MORRIS COUNTY, NEW JERSEY
50 WOODLAND AVENUE, CONVENT STATION, 07961-7603

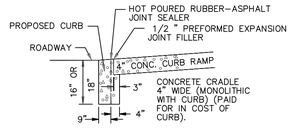
DATE: 8/30/2023 | SCALE: 1"= NTS | GCP-23-01 | SHT.NO. 9 of 11

P:\Projects\Engineering Projects\Southgate Parkway\Construction Details.dwg, 8/30/2023 9:29:24 AM

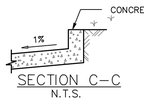
PC14ADA MID-BLOCK



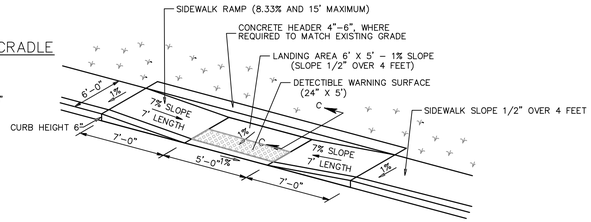
CURB RAMP TREATMENT-GRASS BUFFER STRIP
2'-4' WIDE GRASS BUFFER
N.T.S.



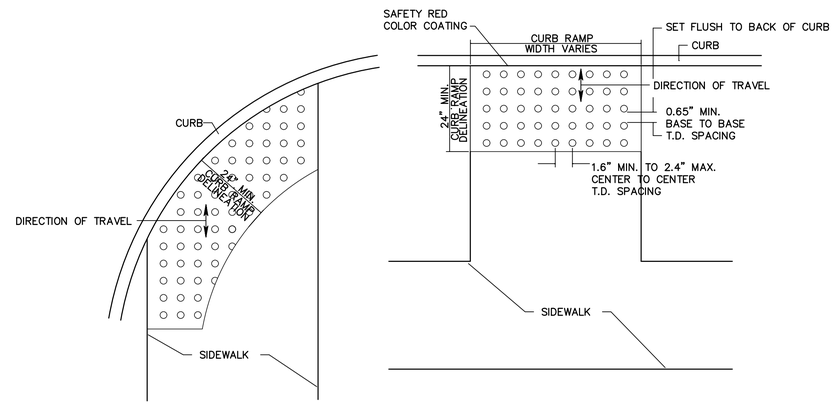
DETAIL OF DROPPED CURB AND CRADLE
N.T.S.



SECTION C-C
N.T.S.



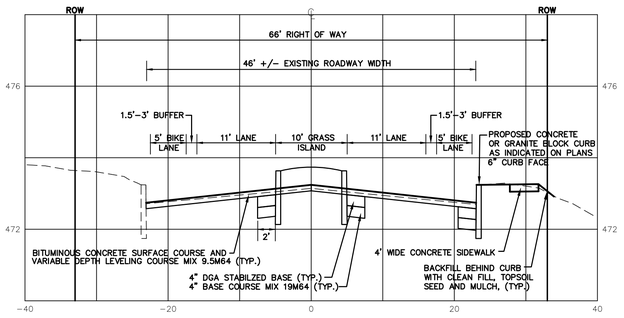
CURB RAMP TREATMENT-NO GRASS BUFFER
SIDEWALK ABUTS CURB
N.T.S.



PLAN VIEW

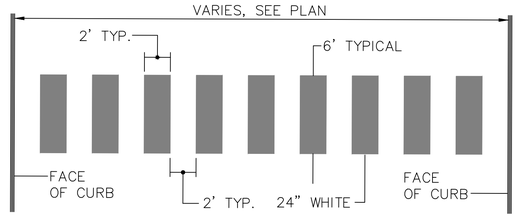
DETECTABLE WARNING SURFACE
N.T.S.

MID-BLOCK PUBLIC SIDEWALK AND CURB RAMPS

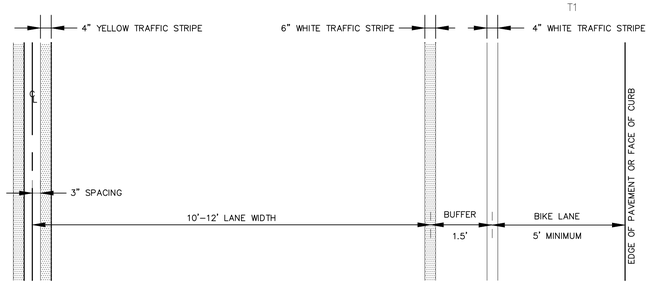


NOTE: SEE PLAN VIEW FOR LANE AND BUFFER WIDTHS

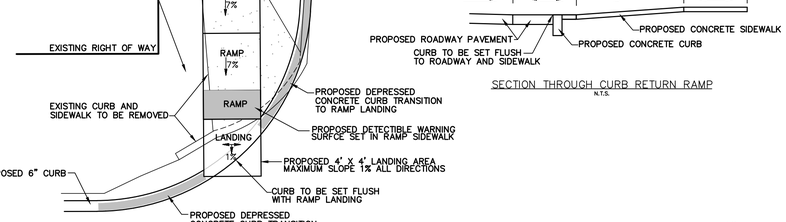
TYPICAL ROAD CROSS-SECTION RESURFACING
N.T.S.



TYPICAL STRIPING FOR CROSSWALK ZONE
N.T.S.

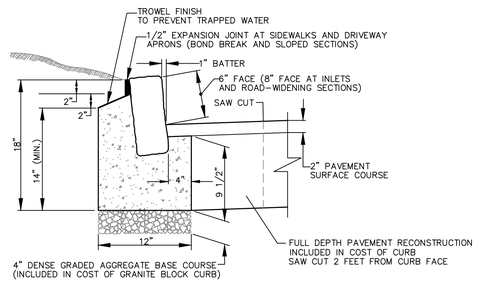


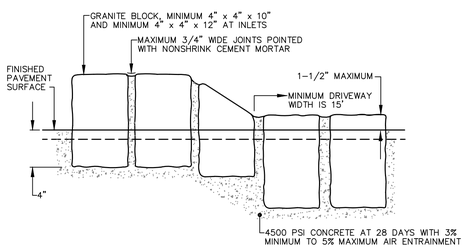
TYPICAL STRIPING LAYOUT
N.T.S.



SECTION THROUGH CURB RETURN RAMP
N.T.S.

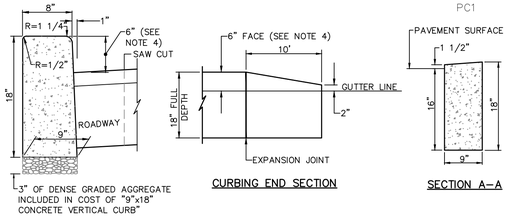
PC2





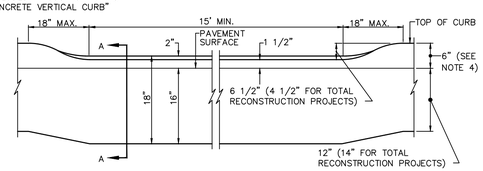
GRANITE BLOCK CURB DETAILS
N.T.S.

PC1



CURBING END SECTION

SECTION A-A

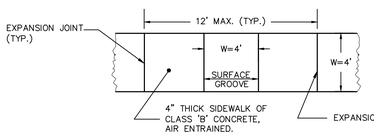


METHOD OF DEPRESSING CURB AT DRIVEWAYS

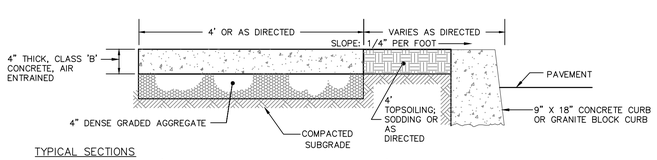
NOTES

1. EXPANSION JOINTS ALTERNATE EVERY 10 FEET WITH CONSTRUCTION JOINTS. EXPANSION JOINTS SHALL BE FILLED WITH PREFORMED, BITUMINOUS-IMPREGNATED FIBER JOINT FILLER RECESSED 1/4" FROM THE FACE AND TOP OF THE CURB. SUCH JOINTS SHALL BE INSTALLED BETWEEN CURB AND INLET HEADS.
2. ALL JOINTS SHALL EXTEND THE FULL 18" DEPTH OF THE CURB.
3. THE CURB SHALL BE COMPOSED OF CLASS "B" CONCRETE.
4. THE CURB FACE IS 6" FOR TOTAL RECONSTRUCTION PROJECTS AND 8" FOR PAVEMENT WIDENING PROJECTS UNLESS INDICATED OTHERWISE ON THE PLANS.

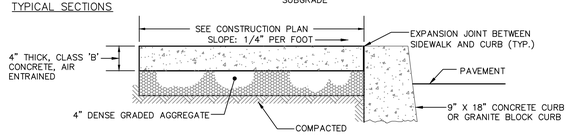
9" x 18" CONCRETE CURB DETAILS
N.T.S.



JOINT PLACEMENT DETAIL

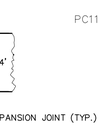


TYPICAL SECTIONS



CONCRETE SIDEWALK DETAILS
N.T.S.

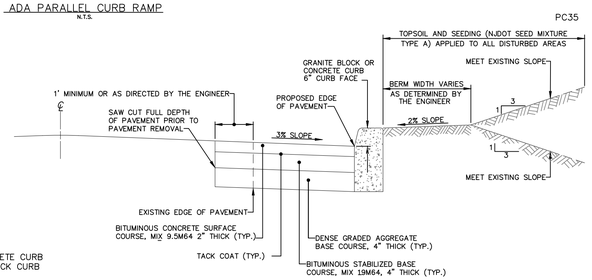
PC11



ADA PARALLEL CURB RAMP
N.T.S.

T2

PC35



TYPICAL ROAD-WIDENING DETAIL
N.T.S.

DRAWN BY: NIP
CHECKED BY: JRS

JAMES R. SLATE
TOWNSHIP ENGINEER
NEW JERSEY PROFESSIONAL ENGINEER LIC. NO.40693

REVISIONS	
NO.	DATE

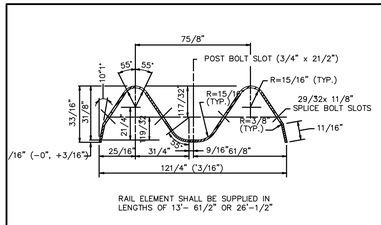
CONSTRUCTION DETAILS

SOUTHGATE PARKWAY
ROAD RESURFACING PROJECT

TOWNSHIP OF MORRIS
ENGINEERING DEPARTMENT
MORRIS COUNTY, NEW JERSEY
50 WOODLAND AVENUE, CONVENT STATION, 07961-7603

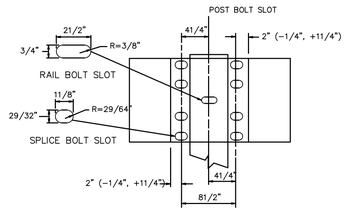
DATE: 8/30/2023 | SCALE: 1"= NTS | GCP-23-01 | SHT.NO. 10 of 11

P:\Projects\Engineering Projects\Southgate Parkway\Construction Details.dwg, 8/30/2023 9:31:07 AM

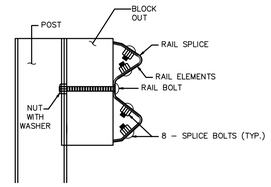


RAIL ELEMENT SHALL BE SUPPLIED IN LENGTHS OF 13'- 61/2" OR 26'-1/2"

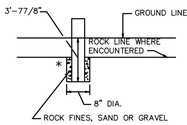
W-BEAM RAIL ELEMENT



RAIL SPLICE



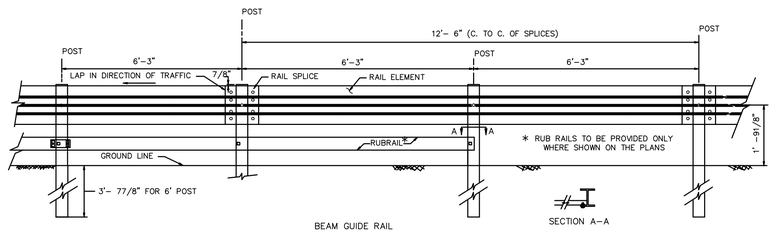
BEAM GUIDE RAIL POST ASSEMBLY



* ALTERNATE CONSTRUCTION METHOD: PLACE POST IN 8" DIA. HOLE AND BACKFILL WITH CLASS "B" CONCRETE

GUIDE RAIL POST INSTALLATION IN ROCK

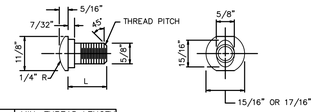
CD-609-1.2



BEAM GUIDE RAIL

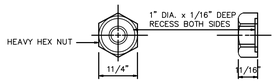
CD-609-1

SECTION A-A



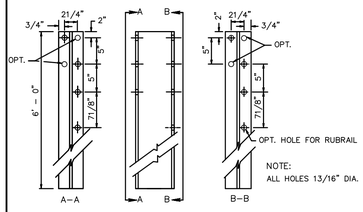
TYPE	L	MIN. THREAD LENGTH
SPLICE	11/4"	FULL LENGTH THREAD
RAIL	91/2"	13/4"

5/8" DIA. BUTTON HEAD BOLT



5/8" DIA. RECESS NUT

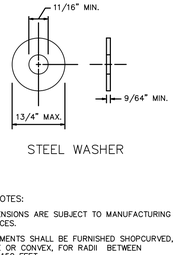
SPLICE & RAIL NUT & BOLT



NOTE:
ALL HOLES 13/16" DIA.

W6 x 8.5 OR W6 x 9 STEEL POST

6' POST



NOTE:
DIMENSIONS SHOWN MAY VARY FOR RECYCLED/SYNTHETIC BLOCK OUTS.

APPROVED RECYCLED/ SYNTHETIC MATERIALS

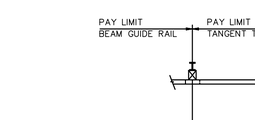
14" BLOCK OUT

STEEL WASHER

GENERAL NOTES:

1. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
2. RAIL ELEMENTS SHALL BE FURNISHED SHOPCURVED, CONCAVE OR CONVEX, FOR RADII BETWEEN 20 AND 150 FEET.
3. THE STEEL FOR RAIL ELEMENTS AND BOLTS SHALL CONFORM TO NJDOT STANDARD SPECIFICATIONS AND ITS AMENDMENTS.

CD-609-1.1

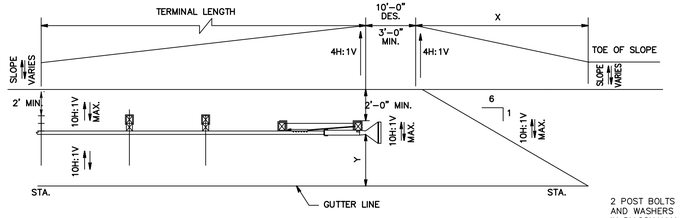


NOTE:
WOOD POSTS SHALL BE CONSTRUCTED USING FOUNDATION TUBES.

TANGENT GUIDE RAIL TERMINAL

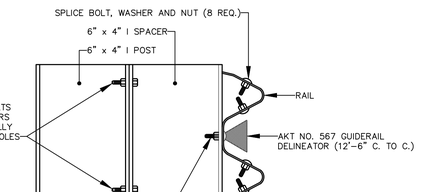
CD-609-5.2

NOTE:
NUMBER OF POSTS, TYPE OF POST, POST SPACING AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION AND THE DEPARTMENT'S QUALIFIED PRODUCTS LIST



Y = OFFSET FROM GUTTER LINE	X	X + 10' (DES.)
* 1'-0"	24'-0"	34'-0"
4'-0"	42'-0"	52'-0"
7'-0"	60'-0"	70'-0"
10'-0"	78'-0"	88'-0"

GRADING TREATMENT AT FLARED AND TANGENT TERMINALS

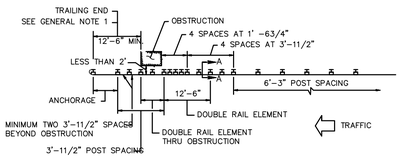


NOTES
1. THE DELINEATOR IS TO HAVE HIGH-INTENSITY WHITE REFLECTIVE MATERIAL ON BOTH SIDES.
2. THE COST OF THE DELINEATOR SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "BEAM GUIDERAIL."

AKT DELINEATOR AND GUIDERAIL HARDWARE

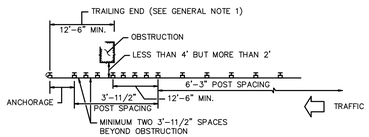
N.T.S.

SECTION A-A



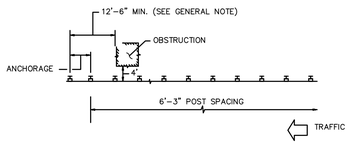
WHERE CLEARANCE FROM BACK OF RAIL TO OBSTRUCTION IS LESS THAN 2'

CD-609-8.1



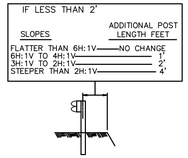
WHERE CLEARANCE FROM BACK OF RAIL TO OBSTRUCTION IS MORE THAN 2' BUT LESS THAN 4'

CD-609-8.2



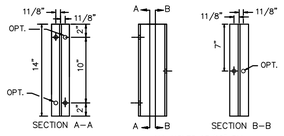
WHERE CLEARANCE FROM BACK OF RAIL TO OBSTRUCTION IS 4' OR GREATER

CD-609-8.3

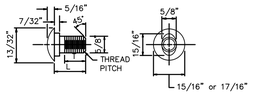


ADDITIONAL LENGTH BEAM GUIDE RAIL POSTS

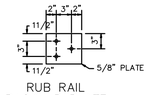
CD-609-8.4



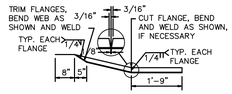
14" SPACER



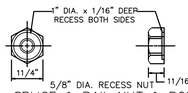
5/8" BUTTON HEAD BOLT



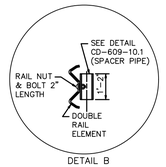
RUB RAIL BACK UP PLATE



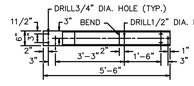
TYPE	L	MIN. THREAD LENGTH
SPLICE	13/8"	13/16"
RAIL	2"	11/2"



SPLICE & RAIL NUT & BOLT



DETAIL B



DETAIL A
C6 x 8.2 RUB RAIL

GENERAL NOTES

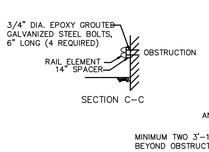
1. WHERE A CRASHWORTHY END TREATMENT IS SHOWN AT THE TRAILING END ON THE PLANS, THE POST SPACING AND DOUBLE RAIL ELEMENT FOR THE GUIDE RAIL SHALL BE THE SAME AS THE APPROACH END.
2. WHERE DOUBLE RAIL ELEMENT IS REQUIRED, THE ADDITIONAL RAIL ELEMENT SHOULD BE ADDED BEHIND THE CONTINUOUS FRONT RAIL.

CD-609-8.6

BEAM GUIDE RAIL END TREATMENT

N.T.S.

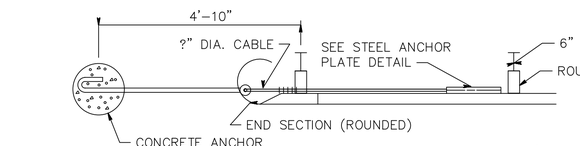
CD-609-8



WHERE RAIL ELEMENT WITH SPACER IS ATTACHED TO OBSTRUCTION

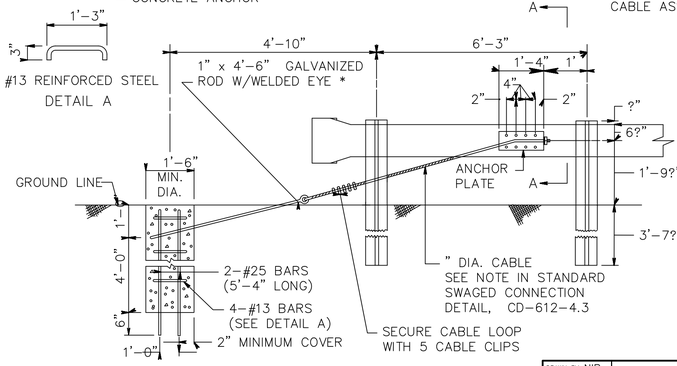
CD-609-8.5

* NOTE:
WHERE GUIDE RAIL IS INSTALLED FLUSH WITH THE GUTTER LINE, THE TANGENT TERMINAL SHALL BE CONSTRUCTED WITH A 50:1 STRAIGHT FLARE FOR ITS ENTIRE LENGTH SO THAT THE EXTRUDER HEAD DOES NOT PROTRUDE INTO THE ROADWAY.



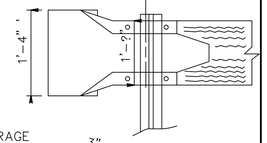
NOTE:
CD-609-9.2
CABLE TO BE PARALLEL TO GUIDE RAIL FOR STRAIGHT RUNS OF RAIL. CABLE MAY HAVE ANGLE POINT AT ANCHOR PLATE IF RAIL IS CURVED.

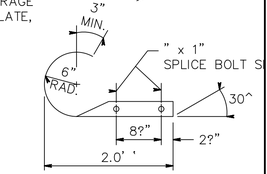
NOTE:
PAYMENT FOR THE ITEM ANCHORAGE SHALL INCLUDE THE ANCHOR PLATE, CABLE ASSEMBLY & FOOTING.



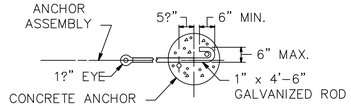
* 20 MIL. COAT OF COAL TAR ENAMEL OR EPOXY SHALL BE APPLIED TO GALVANIZED ROD BETWEEN EYE AND CONCRETE ANCHOR.

BEAM GUIDE RAIL END ANCHORAGE





END SECTION (ROUNDED)



SINGLE GUIDE RAIL ANCHOR

DRAWN BY: NIP
CHECKED BY: JRS

REVISIONS NO.	DATE

CONSTRUCTION DETAILS

SOUTHGATE PARKWAY
ROAD RESURFACING PROJECT

TOWNSHIP OF MORRIS
ENGINEERING DEPARTMENT
MORRIS COUNTY, NEW JERSEY
50 WOODLAND AVENUE, CONVENT STATION, 07961-7603

JAMES R. SLATE
TOWNSHIP ENGINEER
NEW JERSEY PROFESSIONAL ENGINEER LIC. NO.40693

DATE: 8/30/2023 | SCALE:1"= NTS | GCP-23-01 | SHT.NO. 11 of 11

P:\Projects\Engineering Projects\Southgate Parkway\Construction Details.dwg, 8/30/2023 9:31:41 AM