CANOE BROOK PARKWAY IMPROVEMENT PROJECT

ENTIRE LENGTH
CITY OF SUMMIT
UNION COUNTY, NEW JERSEY

GENERAL CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE SUMMIT POLICE DEPARTMENT 72 HOURS PRIOR TO THE START OF ANY WORK AND SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITHIN 30 DAYS OF THE DAY THE PROJECT IS AWARDED TO CONTRACTOR.

2. ALL EXISTING AND PROPOSED ADA CURB RAMPS SHALL COMPLY WITH THE LATEST ADA STANDARDS FOR ACCESSIBLE DESIGN.

3. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ACCESS TO ALL DRIVEWAYS AND AT ANY VERTICAL TRANSITIONS DURING CONSTRUCTION AND AT THE END OF EACH WORK DAY. THE CONTRACTOR SHALL INSTALL AND MAINTAIN A TEMPORARY HOT MIX ASPHALT RAMP TO PROVIDE A SMOOTH RIDING SURFACE AT DRIVEWAYS AND AT ANY VERTICAL TRANSITIONS, AS DIRECTED BY THE ENGINEER. ANY EXCAVATED AREAS WITHIN THE ROADWAY SHALL RECEIVE A TEMPORARY ASPHALT TOPPING BY THE END OF EACH WORK DAY. EXPOSED D.G.A. AT THE ROAD SURFACE WILL NOT BE PERMITTED. METAL PLATES MUST ALSO BE MADE AVAILABLE AND MAY BE BE USED AT THE DISCRETION OF THE ENGINEER OR TO PROVIDE ACCESS FOR EMERGENCY SERVICE VEHICLES. NO SEPARATE PAYMENT SHALL BE MADE FOR TEMPORARY ASPHALT. ALL COSTS ASSOCIATED WITH TEMPORARY ASPHALT MEASURES, INCLUDING METAL PLATES, SHALL BE INLCUDED IN THE VARIOUS BID ITEMS FOR THE PROJECT.

4. ALL ROADWAY AREA IS TO BE PROOF ROLLED AFTER MILLING AND BEFORE FINAL PAVING AT THE ENGINEERS DISCRETION. PROOF ROLLING MUST BE COMPLETED WITH A LOADED DUMP TRUCK IN THE PRESENCE OF THE ENGINEER OR PROJECT INSPECTOR. COSTS SHALL BE INCLUDED IN BID ITEM FOR MILLING.

5. ALLOWABLE START TIME IS 8:00 AM FOR ALL WORK. THE CONTRACTOR SHALL MAKE PROVISIONS FOR MATERIAL AND EQUIPMENT STORAGE. THE CONTRACTOR SHALL COORDINATE THE STORAGE OF MATERIAL AND EQUIPMENT WITH THE ENGINEER AND THE POLICE DEPARTMENT.

6. ALL TRAFFIC CONTROL AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE M.U.T.C.D. AND MUNICIPAL TRAFFIC ORDINANCES. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE POLICE DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE START OF WORK. TRAFFIC CONTROL PLANS SHALL INCLUDE AT A MINIMUM, THE FOLLOWING SITUATIONS: 1)ROAD CLOSED, 2)LANE CLOSED, 3)SHOULDER CLOSED. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL ON THE PROJECT. ALL REQUESTS FOR POLICE SERVICE FROM THE CITY SHALL BE SUBMITTED 72 HOURS BEFORE BEGINNING CONSTRUCTION OPERATIONS THAT REQUIRE POLICE SERVICES. CONTRACTOR MUST NOTIFY POLICE DEPARTMENT OF CANCELLATIONS 24 HOURS IN ADVANCE OR WILL BE SOLELY RESPONSIBLE FOR A MINIMUM CHARGE OF (4) HOURS. THE CITY OF SUMMIT WILL PAY THE COST DIRECTLY TO THE OFFICERS HIRED FOR ALL SCHEDULED TIME.

7. NO DRAINS ARE TO BE INSTALLED UNDER DRIVEWAY APRONS OR THROUGH DROP CURBS.

8. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ALL UTILITIES TO RAISE OR LOWER MANHOLES, METERS, VALVES, ETC. TO GRADE AS WORK PROGRESSES. THE LOCATIONS OF SUBSURFACE UTILITIES ARE APPROXIMATE AND ARE SHOWN FOR ILLUSTRATIVE PURPOSES. THE CONTRACTOR IS RESPONSIBLE TO CALL FOR A MARK OUT OF UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION.

9. THE CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT OF ANY DAMAGED CONCRETE BEFORE ACCEPTANCE OF THE PROJECT BY THE CITY AT NO ADDITIONAL COST. THIS INCLUDES CONCRETE THAT WAS MARKED, STEPPED IN OR STAMPED ONCE POURED, BUT PRIOR TO SETTING.

10. THE CONTRACTOR IS RESPONSIBLE TO PROTECT ALL TREES WITHIN THE PROJECT DURING CONSTRUCTION, UNLESS A TREE IS NOTED TO BE REMOVED ON THESE PLANS. DAMAGE TO EXISTING TREES WILL BE EVALUATED BY THE CITY FORESTER. THE PROJECT SPECIFICATIONS IMPOSE A PENALTY OF $500 PER INCIDENT OF DAMAGE TO ANY TREE. ALL COSTS RELATED TO TREE PROTECTION ARE TO BE INCLUDED IN THE BID ITEM "MOBILIZATION".

11. NO SEPARATE PAYMENT SHALL BE MADE FOR ANY SAW CUTTING REQUIRED ON THE PROJECT. COSTS FOR SAW CUTTING SHALL BE INCLUDED IN THE VARIOUS ITEMS IN THE BID PROPOSAL.

12. THE CONTRACTOR IS RESPONSIBLE TO REPLACE/RESET ANY SPRINKLERS AND DOG FENCING DAMAGED/DISTURBED DURING CONSTRUCTION. THE COST FOR REPAIR/RESETTING SPRINKLERS AND REPAIRING DOG FENCING SHALL BE INCLUDED IN THE VARIOUS ITEMS IN THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNERS FOR THE LOCATION OF THE SPRINKLERS AND DOG FENCES PRIOR TO THE START OF WORK.

13. NO SEPARATE PAYMENT SHALL BE MADE FOR THE RESETTING OR REPLACEMENT OF ANY WALKWAYS CONSTRUCTED OF GRANITE BLOCK, BRICK, BRICK PAVERS, STONE, SLATE, ETC. ALL PRIVATE WALKWAYS SHALL BE RESET TO MEET FLUSH WITH ANY NEW SIDEWALK PROPOSED. NO SEPARATE PAYMENT SHALL BE MADE FOR THE INSTALLATION OF CURB ALONG DRIVEWAY APRONS AND DRIVEWAYS WHERE CURBING CURRENTLY EXISTS. COST TO BE INCLUDED IN THE VARIOUS BID ITEMS.

14. ALL PAVEMENT STRIPING & MARKINGS SHALL BE THERMOPLASTIC PER NJDOT STANDARDS.

15. THE CONTRACTOR IS RESPONSIBLE FOR THE STAKEOUT AND LAYOUT OF THE PROJECT. THE STAKEOUT AND LAYOUT IS TO BE PERFORMED BY A NEW JERSEY PROFESSIONAL LAND SURVEYOR. ALL COSTS ASSOCIATED WITH THE STAKEOUT AND LAYOUT OF THE PROJECT ARE TO BE INCLUDED IN THE BID ITEM "CONSTRUCTION LAYOUT". ALL GRADES ARE TO BE SET IN THE FIELD BY THE LAND SURVEYOR. THE CONTRACTOR IS TO SUBMIT TO THE ENGINEER A PROFILE WITH THE SET GRADES PRIOR TO THE BEGINNING OF CONSTRUCTION. THE PROFILE IS SUBJECT TO THE APPROVAL OF THE ENGINEER. ADJUSTMENTS CAN BE MADE IN THE FIELD DURING CONSTRUCTION UPON CONSULTATION WITH THE CITY ENGINEER.

16. SHOP DRAWINGS ARE TO BE SUBMITTED FOR ALL PROPOSED DRAINAGE STRUCTURES, SIGNS & POSTS, AND ANY CONCRETE FOOTINGS FOR REVIEW AND APPROVAL BY THE CITY ENGINEER OR THEIR REPRESENTATIVE. ALL DRAINAGE STRUCTURES AND FOOTINGS MUST BE DESIGNED BY A NEW JERSEY PROFESSIONAL ENGINEER.

17. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION FOR THE IMPROVEMENTS SHOWN SHALL BE IN ACCORDANCE WITH THE NEW JERSEY DEPARTMENT OF TRANSPORTATION "2019 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND ALL APPLICABLE AMENDMENTS.

18. EXISTING CLEANOUTS LOCATED WITHIN EXTENTS OF NEW SIDEWALK SHALL BE RESET TO BE FLUSH WITH GRADE OR FINISHED CONCRETE SURFACE AND MUST BE ADA COMPLIANT. CLEANOUTS LOCATED WITHIN THE SIDEWALK SHALL INCLUDE A BRASS CAP. ALL COSTS RELATED TO CLEANOUTS TO BE INCLUDED IN THE BID ITEM "CONCRETE SIDEWALK"

19. EXISTING PIPE DISCHARGES THROUGH CURB SHALL BE MAINTAINED. RECONSTRUCT PIPE DISCHARGES AS NEEDED IF SIDEWALK CONFLICT ARISES. CONTRACTOR MAY USE LOW PROFILE EMITTERS FOR ADDITIONAL CLEARANCE. RECONSTRUCT CURB AT PIPE PENETRATION AS NEEDED. ALL COSTS RELATED TO RECONSTRUCTING AND/OR MODIFYING CURB DISCHARGES TO BE INCLUDED IN THE BID ITEM "CONCRETE SIDEWALK"

20. ANY MATERIALS OR DEBRIS REMOVED FROM THE SITE SHALL BE DONE SO IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL, STATE AND FEDERAL REGULATIONS.

21. NO SEPARATE PAYMENT SHALL BE MADE FOR THE INSTALLATION AND MAINTENANCE OF ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES, UNLESS NOTED OTHERWISE. ALL COSTS ARE TO BE INCLUDED IN THE BID ITEM "MOBILIZATION".

22. SITE SURVEY PROVIDED BY BOSWELL ENGINEERING. PHONE: (201) 641 - 0770.

23. ANY PROPOSED PAVEMENT THICKNESS NOTED HEREIN SHALL BE POST-COMPACTION, UNLESS OTHERWISE NOTED.

24. WHERE SIDEWALK IS PROPOSED AT LOCATIONS WITH EXISTING CURB DISCHARGES, CONTRACTOR SHALL MODIFY CURB DISCHARGES USING LOW PROFILE EMITTERS, AS REQUIRED, TO PROVIDE ADEQUATE COVER FOR SIDEWALK CONSTRUCTION. NO SEPARATE PAYMENT SHALL BE MADE FOR LABOR OR MATERIAL ASSOCIATED SUCH A MODIFICATION. ALL COSTS ASSOCIATED THE MODIFICATION SHALL BE INCLUDED IN THE BID ITEM FOR "CONCRETE SIDEWALK, 4" THICK."

25. CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING TEST PITS AT THE LOCATION OF ANY PROPOSED UTILITY, STORM, OR SANITARY STRUCTURES AND/OR PIPES. ANY POTENTIAL CONFLICTS, RESULTING FROM THE TEST PITS, SHALL BE BROUGHT TO THE ATTENTION OF THE CITY ENGINEER PRIOR TO INSTALLING THE PROPOSED INFRASTRUCTURE. ALL COSTS ASSOCIATED WITH TEST PITS SHALL BE INCLUDED IN THE BID ITEM "EXCAVATION, TEST PIT"

26. NO SEPARATE PAYMENT SHALL BE MADE FOR FLAGGERS. ALL COSTS FOR FLAGGERS SHALL BE INCLUDED IN VARIOUS ITEMS IN THE BID PROPOSAL.

27. NO SEPARATE PAYMENT SHALL BE MADE FOR THE EXCAVATION OF UNCLASSIFIED MATERIAL ASSOCIATED WITH HMA PAVEMENT REPAIR. ALL COSTS ASSOCIATED WITH THE EXCAVATION, UNCLASSIFIED, AND DISPOSAL OF THE EXISTING SUBBASE AND PLACEMENT OF DENSE GRADED AGGREGATE SHALL BE INCLUDED IN THE BID ITEM "HMA PAVEMENT REPAIR."

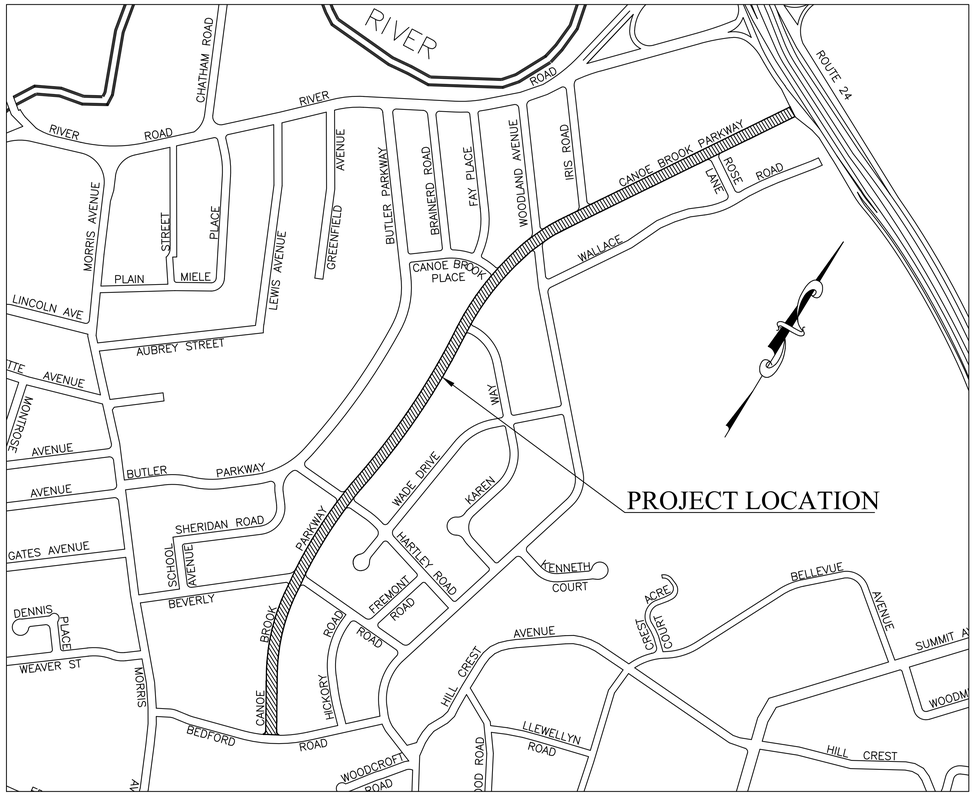
28. NO SEPARATE PAYMENT SHALL BE MADE FOR THE EXCAVATION OF UNCLASSIFIED MATERIAL ASSOCIATED WITH THE INSTALLATION OF NEW OR REPLACEMENT CURBING. ALL COSTS ASSOCIATED WITH EXCAVATION SHALL BE INCLUDED IN THE BID ITEM "GRANITE BLOCK CURB".

29. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION FOR THE IMPROVEMENTS SHOWN SHALL BE IN ACCORDANCE WITH THE NEW JERSEY DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2019" AND ALL APPLICABLE AMENDMENTS.

30. NO SEPARATE PAYMENT SHALL BE MADE FOR HMA PROFILE MILLING. ALL COSTS ASSOCIATED WITH PROFILE MILLING SHALL BE PAID UNDER BID ITEM "HMA MILLING, 2" OR LESS."

31. ANY TYPE 'B' OR TYPE 'D' INLETS IDENTIFIED HEREIN FOR RECONSTRUCTION SHALL INCLUDE NEW NEW TYPE 'N' ECO-HEAD CURB PIECE AND BICYCLE SAFE GRATE. ALL COSTS ARE TO BE INCLUDED IN THE BID ITEM FOR THE RESETTING OR RECONSTRUCTING OF THE INLET.

32. CCTV OF SANITARY AND STORM SEWER PIPES WITHIN THE PROJECT AREA SHALL BE PERFORMED AND FOOTAGE SUBMITTED TO THE CITY ENGINEER FOR REVIEW. REPAIRS SHALL BE MADE TO SEWERS, AT THE DISCRETION OF THE CITY ENGINEER, PRIOR TO MILLING AND PAVING OPERATIONS.



LOCATION MAP
N.T.S.
TOTAL PROJECT LENGTH - 5,300 L.F.

INDEX OF SHEETS

UTILITIES

Public Service Electric & Gas Co.
48 Middle Avenue
Summit, NJ 07901
(908) 522 - 7404
michael.gomes@pseg.com

Jersey Central Power and Light
300 Madison Avenue
Morristown, NJ 07960
(888) 544 - 4877
ralstonsantiago@firstenergycorp.com

Comcast Cablevision of New Jersey
800 Rahway Avenue
Union, NJ 07083
(908) 258 - 8112

Verizon
445 Georges Road
North Brunswick, NJ 08902
(201) 996 - 6610
braxton.plummer@verizon.com

City of Summit
Division of Public Works
41 Chatham Road
Summit, NJ 07901
(908) 273 - 6404
aschrager@cityofsummit.org

New Jersey American Water Co.
167 JFK Parkway
Short Hills, NJ 07078
(973) 564 - 5706
mike.malloy@amwater.com

SUMMARY OF QUANTITIES

BASE BID ITEM	DESCRIPTION	UNIT	QTY
	GENERAL WORK		
1	MOBILIZATION	LS	1
2	CLEARING SITE	LS	1
3	FINAL CLEANUP	LS	1
4	BREAKAWAY BARRICADE	UNIT	25
5	DRUM	UNIT	30
6	TRAFFIC CONE	UNIT	40
7	CONSTRUCTION SIGNS	SF	500
8	CONSTRUCTION IDENTIFICATION SIGN, 48" X 36"	UNIT	5
9	CONSTRUCTION LAYOUT	LS	1
10	UTILITY COORDINATION	LS	1
11	INLET FILTER, TYPE 1	SF	250
12	FUEL PRICE ADJUSTMENT	DOLL	DOLL
13	ASPHALT PRICE ADJUSTMENT	DOLL	DOLL
	ROADWAY, CURBING & ADA		
14	HMA MILLING, 2" OR LESS	SY	15,600
15	HOT MIX ASPHALT PAVEMENT REPAIR	SY	780
16	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	TON	2,150
17	EXCAVATION, TEST PIT	CY	50
18	EXCAVATION, UNCLASSIFIED	CY	50
19	GRANITE BLOCK CURB	LF	1,900
20	REPOINTING EXISTING GRANITE BLOCK CURB	LF	250
21	CONCRETE SIDEWALK, 4" THICK	SY	2,500
22	DETECTABLE WARNING SURFACE	SY	35
23	CONCRETE DRIVEWAY, 6" THICK	SY	360
24	HOT MIX ASPHALT DRIVEWAY 4" THICK	SY	500
25	RESET EXISTING BRICK OR BLOCK	SY	55
26	TRAFFIC STRIPES, 4" THICK	LF	1,500
27	TRAFFIC STRIPES, 12" THICK	LF	350
28	TRAFFIC STRIPES, 24" THICK	LF	1,200
29	TRAFFIC MARKINGS SYMBOLS	SF	250
30	REMOVAL OF TRAFFIC STRIPES	LF	100
31	DECORATIVE HIGH TRAFFIC PAVEMENT SURFACING	SY	645
	UTILITIES		
32	RESET MANHOLE, SANITARY SEWER, USING NEW CASTING	UNIT	20
33	VIDEO INSPECTION OF SEWER	LF	4,000
34	RESET MANHOLE, STORM SEWER, USING NEW CASTING	UNIT	10
35	RESET INLET, TYPE B, USING NEW CASTING	UNIT	24
36	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING	UNIT	1
37	INLET, TYPE B	UNIT	3
38	MANHOLE, DOGHOUSE, 6' DIAMETER	UNIT	3
39	RECONSTRUCTED MANHOLE, SANITARY SEWER, USING NEW CASTING	UNIT	1
40	RECONSTRUCTED MANHOLE, USING NEW CASTING	UNIT	1
41	15" REINFORCED CONCRETE PIPE	LF	70
42	24" REINFORCED CONCRETE PIPE	LF	359
43	24" REINFORCED CONCRETE PIPE, CLASS IV	LF	102
44	36" REINFORCED CONCRETE PIPE	LF	334
45	16" DUCTILE IRON PIPE	LF	92
46	POLYVINYL CHLORIDE SEWER PIPE	LF	50
47	VIDEO INSPECTION OF PIPE	LF	6,500
48	RESET GAS VALVE BOX	UNIT	20
49	RESET WATER VALVE BOX	UNIT	20
50	SEWER REPAIR, IF AND WHERE DIRECTED, 10' LENGTH, 10' DEPTH	UNIT	3
	LANDSCAPING		
51	TOPSOIL SPREADING, 4" THICK	SY	3000
52	FERTILIZING AND SEEDING, TYPE A-3,	SY	3000
53	STRAW MULCHING	SY	3000
54	BORROW TOPSOIL	CY	250
55	TREE REMOVAL, OVER 10" TO 36"	UNIT	14
56	TREE REMOVAL, OVER 36"	UNIT	1
57	SMALL DECIDUOUS TREE, 2"-2.5" CAL.	UNIT	20
	STREET SIGNS & PARKING METERS		
58	REGULATORY AND WARNING SIGN	UNIT	20
59	STREET NAME SIGN & POST	UNIT	8

Project Safety Note:
The contractor(s) working on the project are responsible to ensure that all safety regulations of the Occupational Safety and Health Administration (OSHA) and the requirements of the State of New Jersey Department of Labor and Industry shall be adhered to on this project and that he or she shall instruct his or her personnel to follow these regulations. These regulations include, but are not limited to, the regulations concerning Trench Excavation, Competent Persons and Confined Space Regulations.

Specifications Note:
New Jersey Department of Transportation Standard Specifications for Road and Bridge Construciton 2019 and all of its amendments and Baseline Document Changes are to govern all construction here in.

Funding Note:
This project is funded by the City of Summit and an NJDOT Local Transportation Projects Fund Grant

Survey Note:
The contractor is responsible for stakeout and vertical control of the project. Stakeout is required for the project. AutoCAD drawings are availabe for this project upon request. Cut sheets shall be submitted prior to the start of any work.

CALL 811 BEFORE YOU DIG
811
SAFE DIGGING PARTNER

REVISIONS

NO.	DATE	DESCRIPTION
1	9/25/25	Revised per NJDOT comments dated 9/19/25

CANOE BROOK PARKWAY IMPROVEMENT PROJECT
ENTIRE LENGTH
COVER SHEET

CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SPRINGFIELD AVENUE
SUMMIT NJ 07901
UNION COUNTY

STATE OF NEW JERSEY
Aaron J. Schrager
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

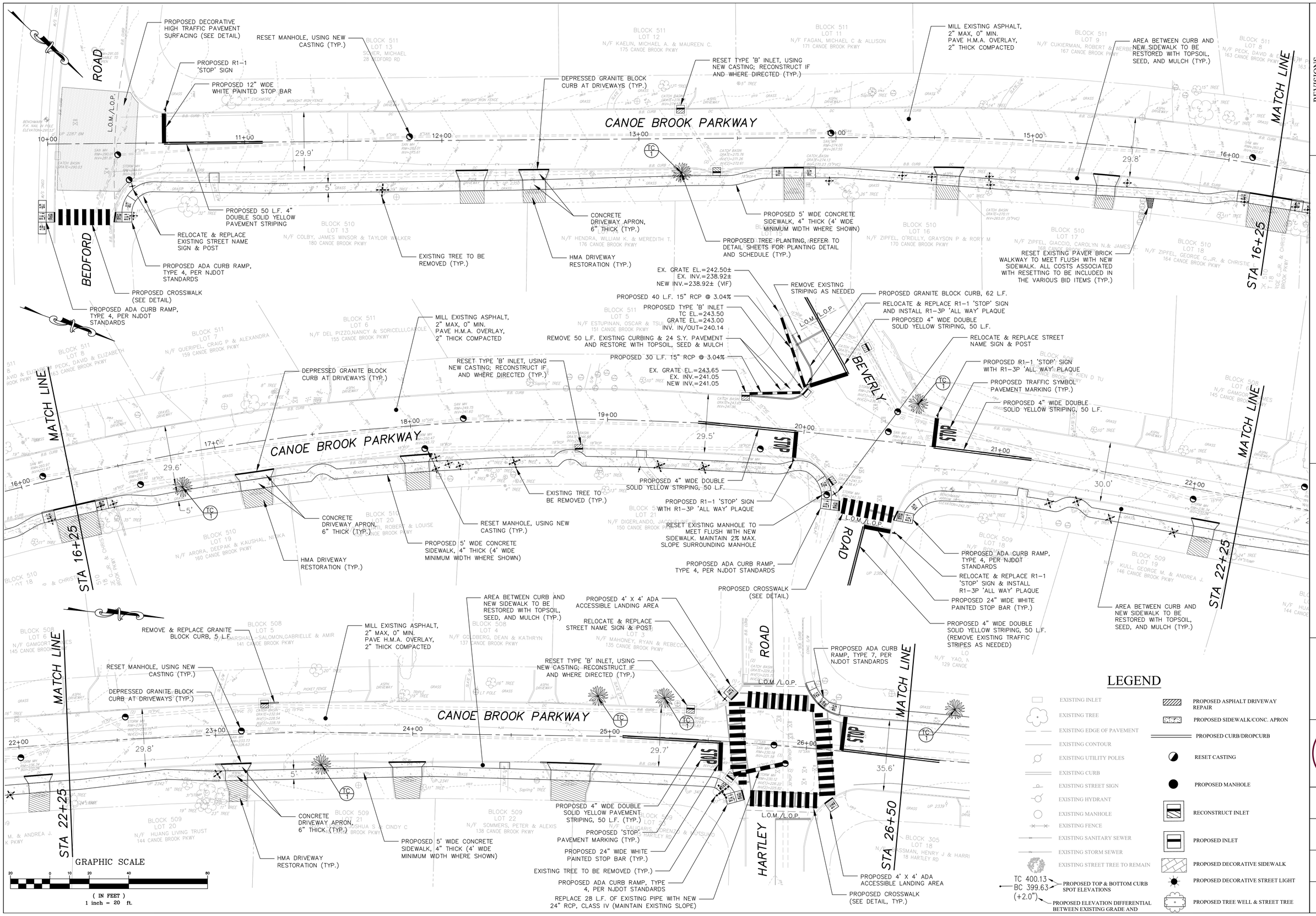
CITY OF SUMMIT
UNION COUNTY NEW JERSEY

DATE: 5/16/2025

DRAWN BY: AJS

SCALE AS SHOWN

G-001



REVISIONS

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CANOE BROOK PARKWAY IMPROVEMENT PROJECT
ENTIRE LENGTH
CONSTRUCTION PLAN

CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SOUTH TRIMBLE AVENUE
SUMMIT, NJ 07901
UNION COUNTY

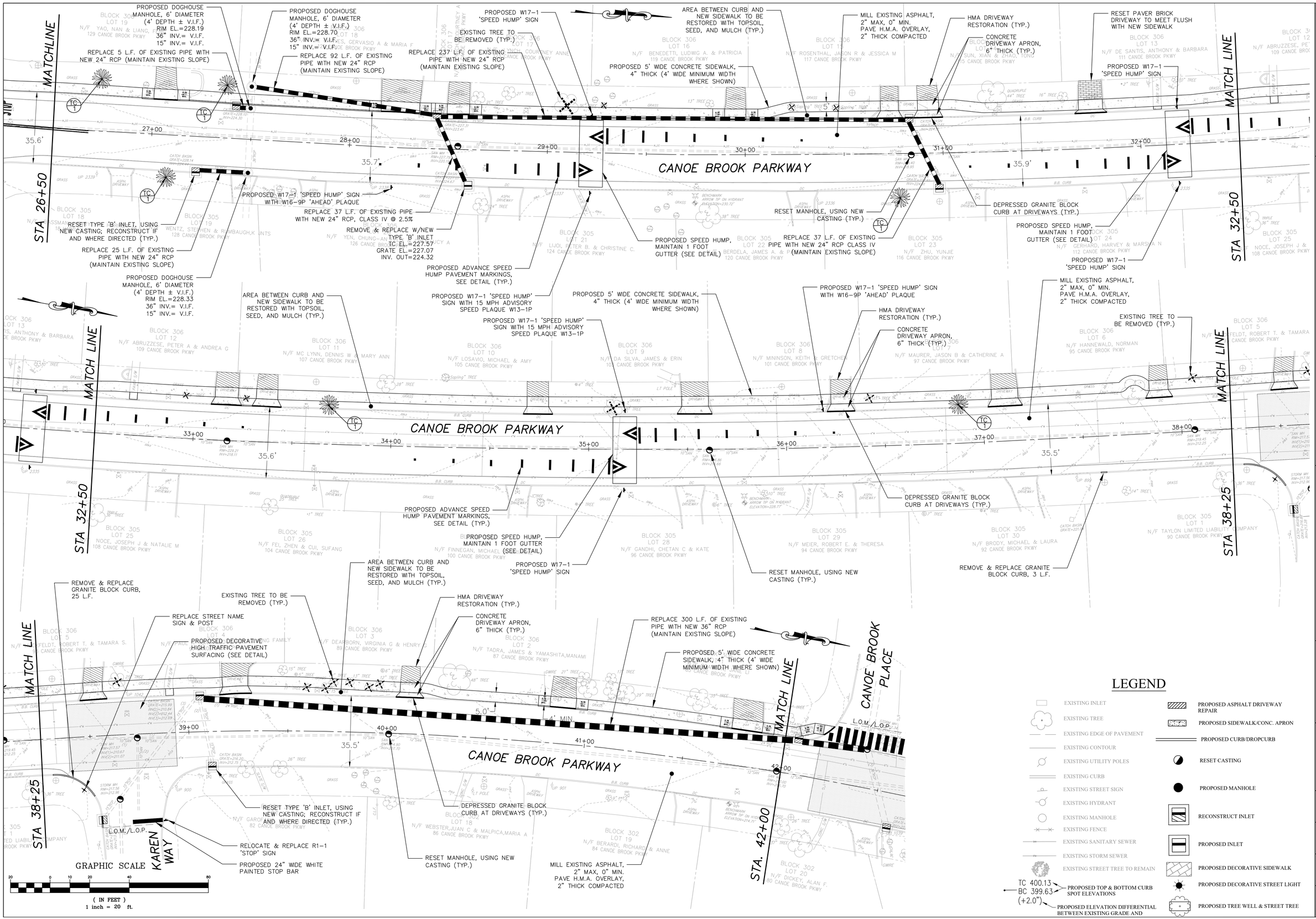
Aaron J. Schrager
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

DATE: 9/12/2025

DRAWN BY: AJS

SCALE 1"=20'

C-001



LEGEND

- EXISTING INLET
- EXISTING TREE
- EXISTING EDGE OF PAVEMENT
- EXISTING CONTOUR
- EXISTING UTILITY POLES
- EXISTING CURB
- EXISTING STREET SIGN
- EXISTING HYDRANT
- EXISTING MANHOLE
- EXISTING FENCE
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING STREET TREE TO REMAIN
- TC 400.13 / BC 399.63 / (+2.0") — PROPOSED TOP & BOTTOM CURB SPOT ELEVATIONS; PROPOSED ELEVATION DIFFERENTIAL BETWEEN EXISTING GRADE AND
- PROPOSED ASPHALT DRIVEWAY REPAIR
- PROPOSED SIDEWALK/CONC. APRON
- PROPOSED CURB/DROPCURB
- RESET CASTING
- PROPOSED MANHOLE
- RECONSTRUCT INLET
- PROPOSED INLET
- PROPOSED DECORATIVE SIDEWALK
- PROPOSED DECORATIVE STREET LIGHT
- PROPOSED TREE WELL & STREET TREE

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ENTIRE LENGTH
CONSTRUCTION PLAN

CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SPRINGFIELD AVENUE
SUMMIT NJ 07901
UNION COUNTY

STATE OF NEW JERSEY
Aaron J. Schrager
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

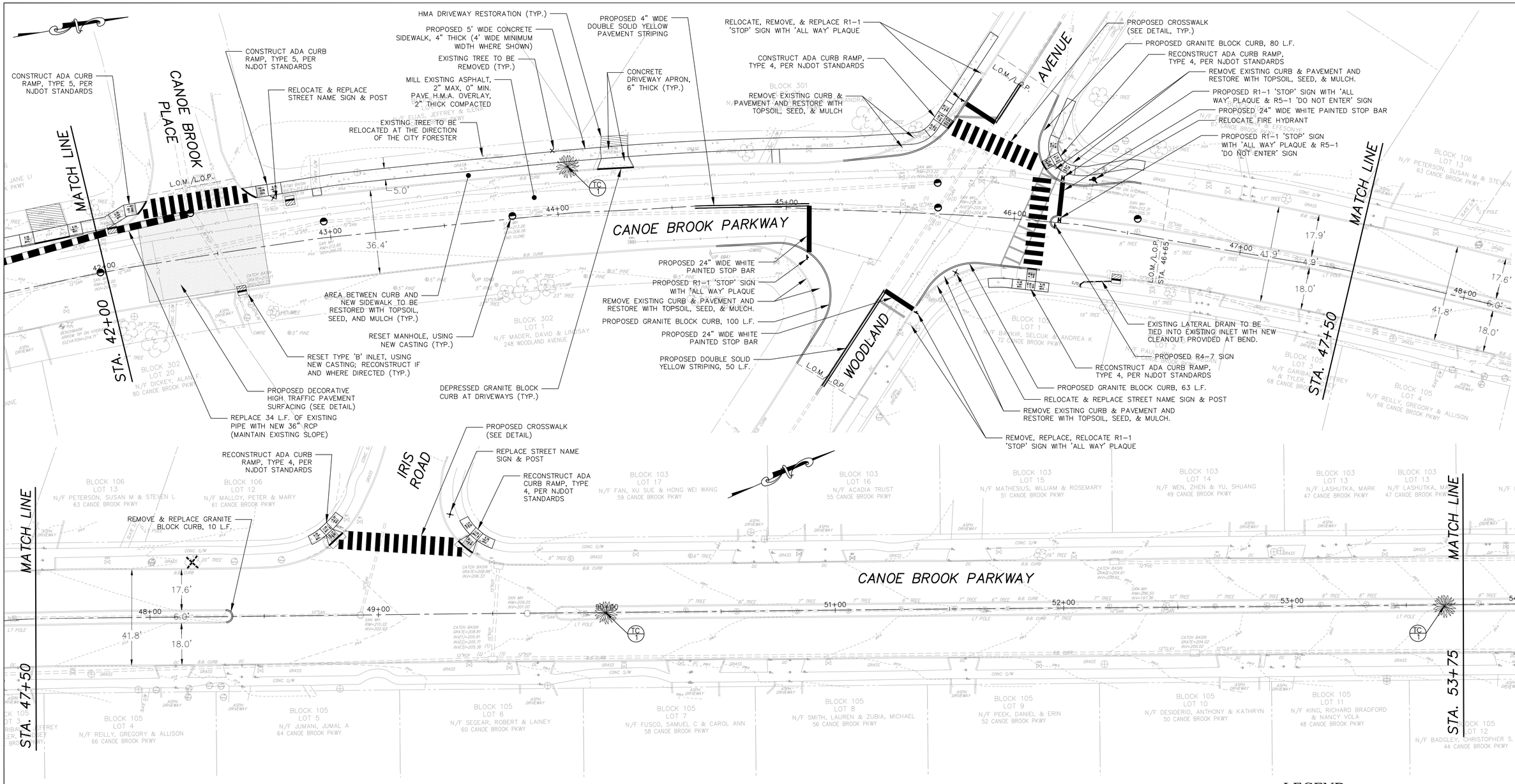
CITY OF SUMMIT
UNION COUNTY NEW JERSEY

DATE: 9/12/2025

DRAWN BY: AJS

SCALE 1"=20'

C-002



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- PROPOSED DECORATIVE STREET LIGHT
- PROPOSED TREE WELL & STREET TREE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SYCAMORE AVENUE
SUMMIT, N.J. 07901
UNION COUNTY

STATE OF NEW JERSEY
AARON J. SCHRAGER
LICENSE NO. 46143
PROFESSIONAL ENGINEER

Aaron J. Schrager
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

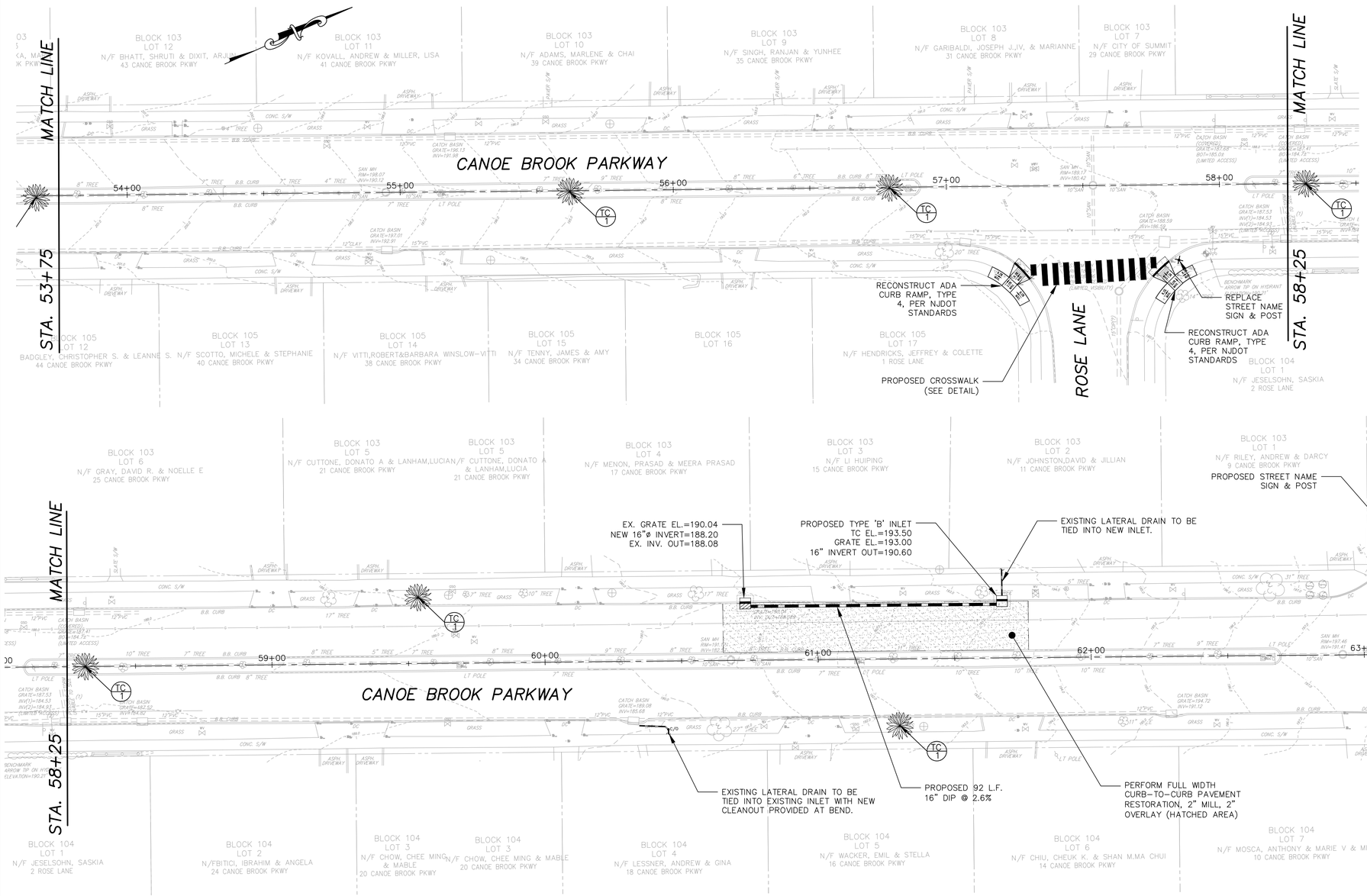
CITY OF SUMMIT
UNION COUNTY, NEW JERSEY

DATE: 9/12/2025

DRAWN BY: AJS

SCALE 1"=20'

C-003



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UNION COUNTY

STATE OF NEW JERSEY
PROFESSIONAL ENGINEER
LICENSE NUMBER 46143

Aaron J. Schrager
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

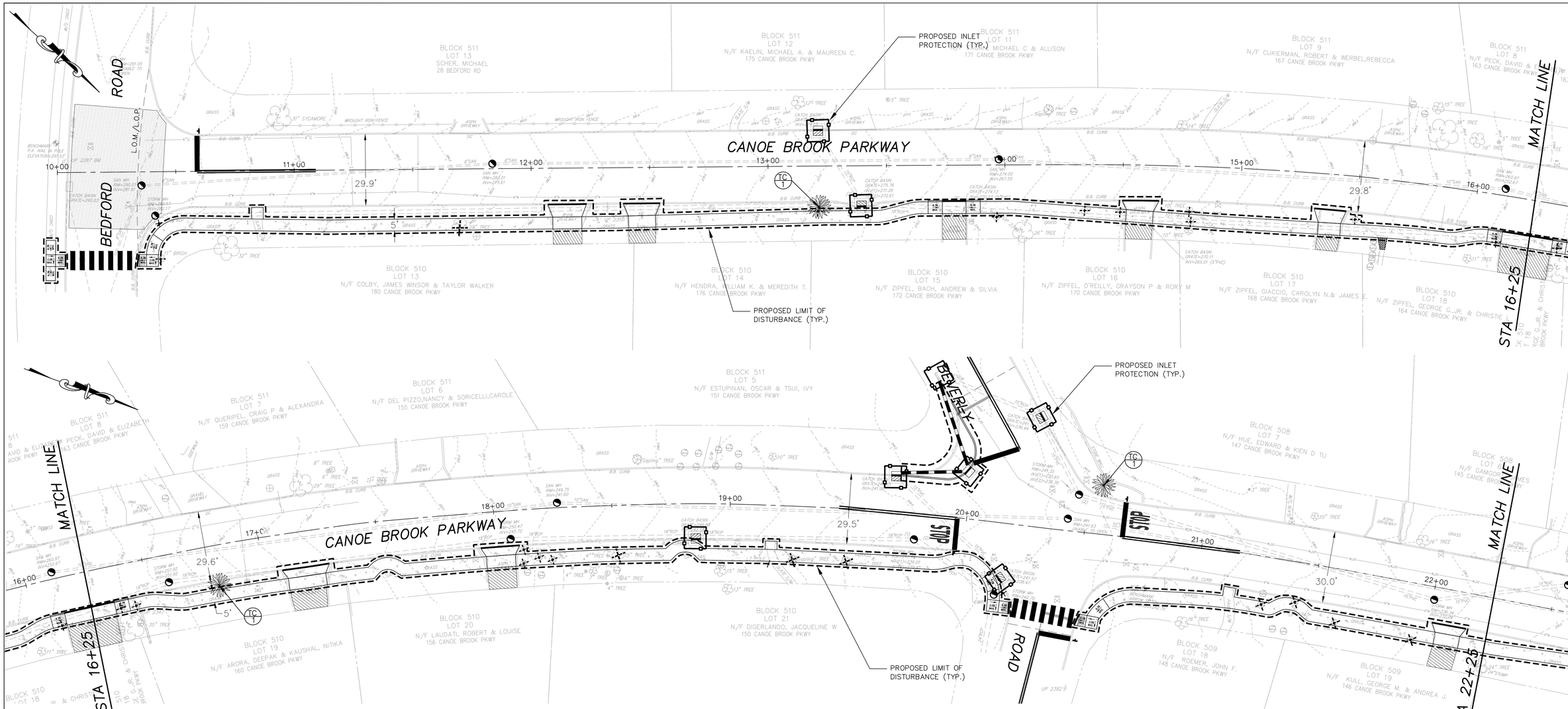
CITY OF SUMMIT
UNION COUNTY NEW JERSEY

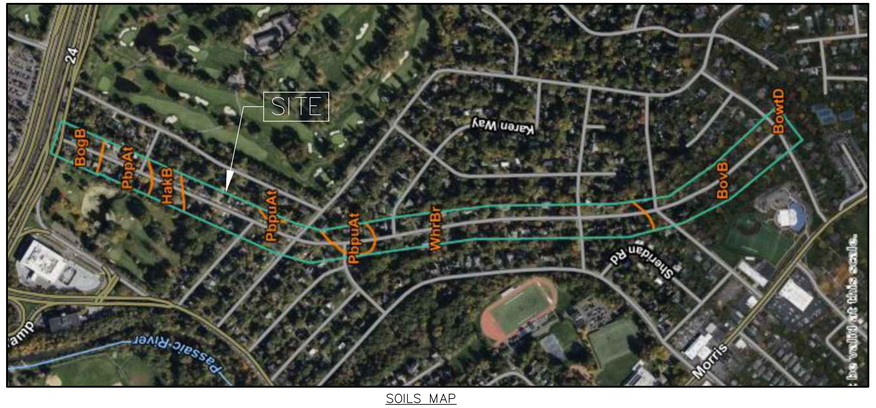
DATE: 9/12/2025

DRAWN BY: AJS

SCALE 1"=20'

C-004





SOILS MAP

SCALE: 1"=500'

MAP SOURCED FROM USDA WEB SOIL SURVEY

THE SITE IS MADE UP OF:

BogB (BOONTON LOAM, 3 TO 8 PERCENT SLOPES)

BovB (BOONTON–URBAN LAND–HALEDON COMPLEX, 0 TO 8 PERCENT SLOPES)

BowtD (BOONTON–URBAN LAND COMPLEX, TERMINAL MORAINE, 15 TO 25 PERCENT SLOPES)

HakB (HALEDON LOAM, 3 TO 8 PERCENT SLOPES)

PbpAt (PARSIPPANY SILT LOAM, 0 TO 3 PERCENT SLOPES, FREQUENTLY FLOODED)

PbpuAt (PARSIPPANY–URBAN LAND COMPLEX, 0 TO 3 PERCENT SLOPES)

WhrBr (WHIPPANY–URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES, RARELY FLOODED)

TOTAL PROJECT AREA OF DISTURBANCE AREA =38,377 SF OR 0.88 ACRES

PROJECT EXEMPTIONS:

1. THIS PROJECT IS EXEMPT FROM SOIL COMPACTION TESTING REQUIREMENTS BECAUSE IT IS WITHIN URBAN REDEVELOPMENT ZONE PA–1 AND IS PREVIOUSLY DEVELOPED.

1. THIS PLAN IS TO BE USED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY.
2. STREET SWEEPING TO BE IMPLEMENTED ON ADJACENT ROAD WAYS IF REQUIRED TO MAINTAIN SOIL AND DUST FREE CONDITION.

SOILS EROSION AND SEDIMENT CONTROL LEGEND

- LIMIT OF DISTURBANCE
- SILT FENCE
- TREE PROTECTION
- INLET PROTECTION

LEGEND

- EXISTING INLET
- EXISTING TREE
- EXISTING EDGE OF PAVEMENT
- EXISTING CONTOUR
- EXISTING UTILITY POLES
- EXISTING CURB
- EXISTING STREET SIGN
- EXISTING HYDRANT
- EXISTING MANHOLE
- EXISTING FENCE
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING STREET TREE TO REMAIN
- TC 400.13 / BC 399.63 / (+2.0") – PROPOSED TOP & BOTTOM CURB SPOT ELEVATIONS; PROPOSED ELEVATION DIFFERENTIAL BETWEEN EXISTING GRADE AND
- PROPOSED ASPHALT DRIVEWAY REPAIR
- PROPOSED SIDEWALK/CONC. APRON
- PROPOSED CURB/DROPCURB
- RESET CASTING
- PROPOSED MANHOLE
- RECONSTRUCT INLET
- PROPOSED INLET
- PROPOSED DECORATIVE SIDEWALK
- PROPOSED DECORATIVE STREET LIGHT
- PROPOSED TREE WELL & STREET TREE

REVISIONS

NO.	DATE	DESCRIPTION
1	9/25/25	Revised per NJDOT comments dated 9/19/25

CANOE BROOK PARKWAY IMPROVEMENT PROJECT
ENTIRE LENGTH
SOIL EROSION & SEDIMENT CONTROL PLAN

CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
51-53 SECOND AVENUE
SUMMIT NJ 07901
UNION COUNTY

STATE OF NEW JERSEY
AARON J. SCHRAGER
LICENSE NO. 46143
PROFESSIONAL ENGINEER

Aaron J. Schrager
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

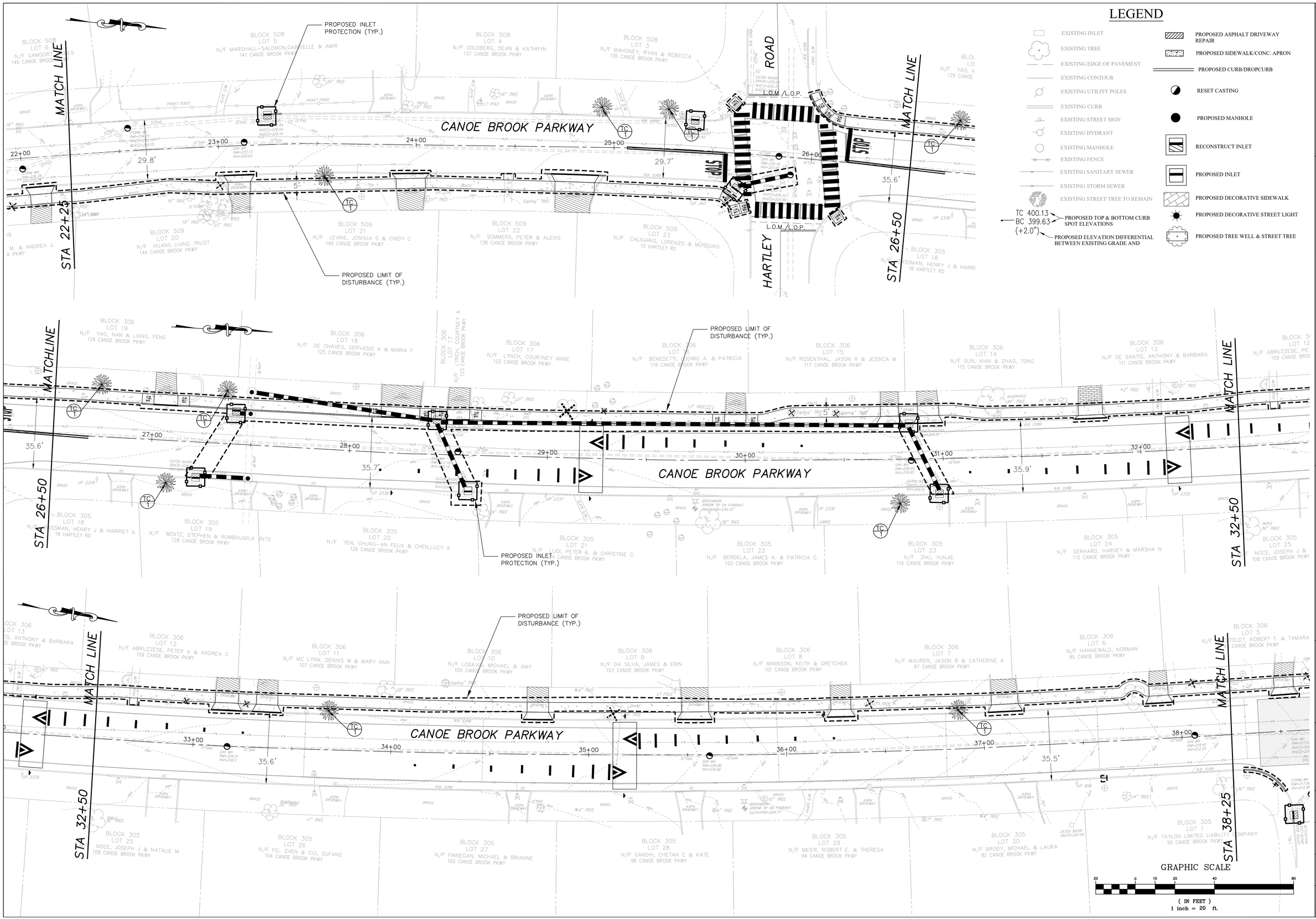
CITY OF SUMMIT
UNION COUNTY NEW JERSEY

DATE: 9/12/2025

DRAWN BY: AJS

SCALE 1"=20'

C-005



LEGEND

- EXISTING INLET
- EXISTING TREE
- EXISTING EDGE OF PAVEMENT
- EXISTING CONTOUR
- EXISTING UTILITY POLES
- EXISTING CURB
- EXISTING STREET SIGN
- EXISTING HYDRANT
- EXISTING MANHOLE
- EXISTING FENCE
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING STREET TREE TO REMAIN
- TC 400.13 / BC 399.63 — PROPOSED TOP & BOTTOM CURB SPOT ELEVATIONS
- (+2.0") — PROPOSED ELEVATION DIFFERENTIAL BETWEEN EXISTING GRADE AND
- PROPOSED ASPHALT DRIVEWAY REPAIR
- PROPOSED SIDEWALK/CONC. APRON
- PROPOSED CURB/DROPCURB
- RESET CASTING
- PROPOSED MANHOLE
- RECONSTRUCT INLET
- PROPOSED INLET
- PROPOSED DECORATIVE SIDEWALK
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- PROPOSED TREE WELL & STREET TREE

REVISIONS

NO.	DATE	DESCRIPTION
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CANOE BROOK PARKWAY IMPROVEMENT PROJECT
ENTIRE LENGTH
SOIL EROSION & SEDIMENT CONTROL PLAN

CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SPRINGFIELD AVENUE
SUMMIT NJ 07901
UNION COUNTY

STATE OF NEW JERSEY
Aaron J. Schrager
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

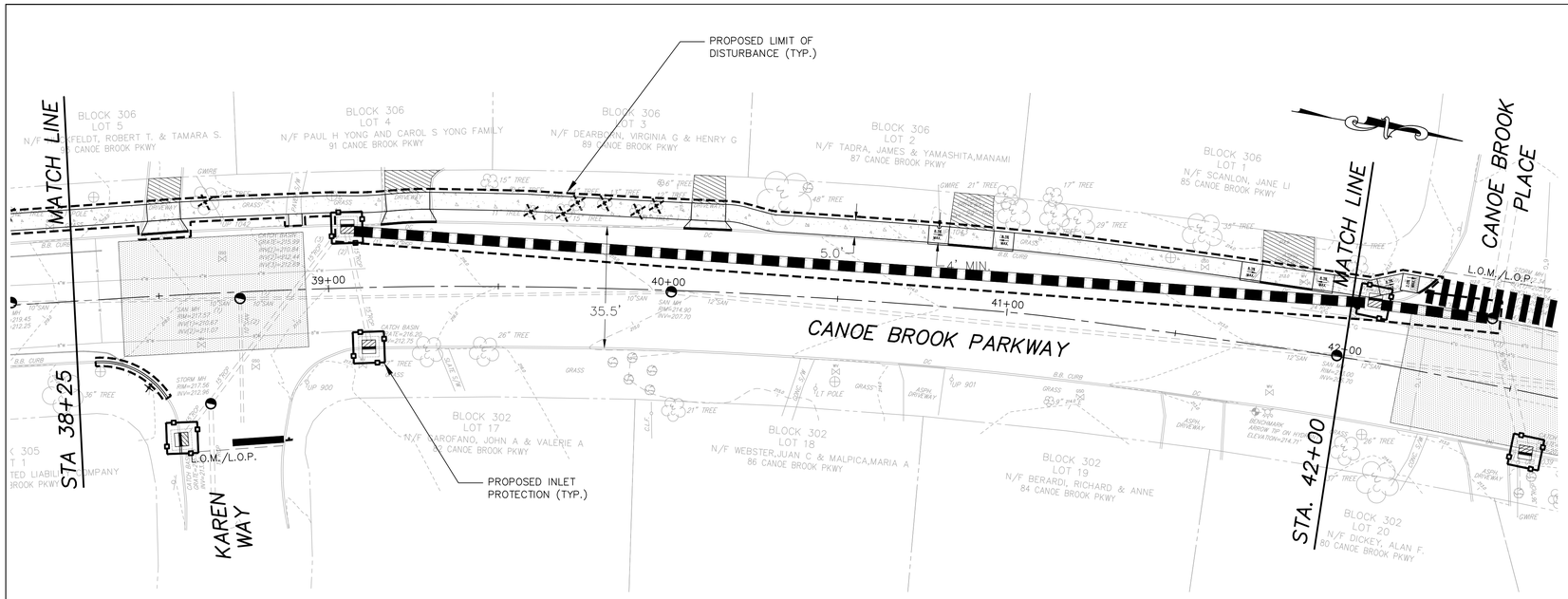
CITY OF SUMMIT
INCORPORATED 1869
UNION COUNTY NEW JERSEY

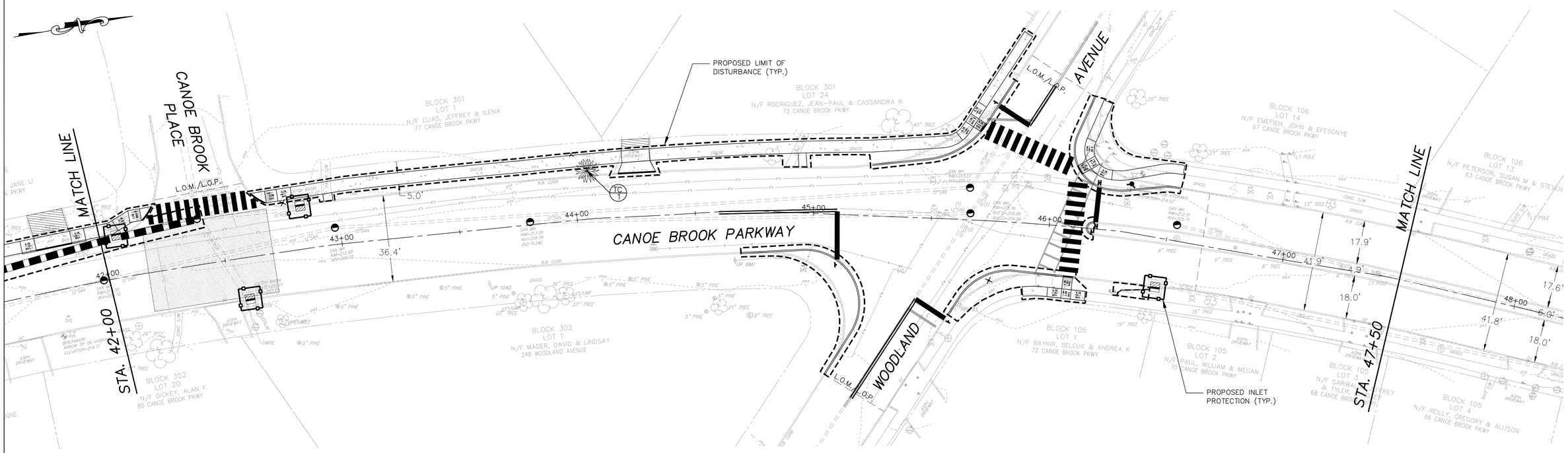
DATE: 9/12/2025

DRAWN BY: AJS

SCALE 1"=20'

C-006





LEGEND

- EXISTING INLET
- EXISTING TREE
- EXISTING EDGE OF PAVEMENT
- EXISTING CONTOUR
- EXISTING UTILITY POLES
- EXISTING CURB
- EXISTING STREET SIGN
- EXISTING HYDRANT
- EXISTING MANHOLE
- EXISTING FENCE
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING STREET TREE TO REMAIN
- TC 400.13 / BC 399.63 — PROPOSED TOP & BOTTOM CURB SPOT ELEVATIONS
- (+2.0") — PROPOSED ELEVATION DIFFERENTIAL BETWEEN EXISTING GRADE AND
- PROPOSED ASPHALT DRIVEWAY REPAIR
- PROPOSED SIDEWALK/CONC. APRON
- PROPOSED CURB/DROPCURB
- RESET CASTING
- PROPOSED MANHOLE
- RECONSTRUCT INLET
- PROPOSED INLET
- PROPOSED DECORATIVE SIDEWALK
- PROPOSED DECORATIVE STREET LIGHT
- PROPOSED TREE WELL & STREET TREE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

REVISIONS

NO.	DATE	DESCRIPTION
1	9/25/25	Revised per NJDOT comments dated 9/19/25

CANOE BROOK PARKWAY IMPROVEMENT PROJECT
ENTIRE LENGTH
SOIL EROSION & SEDIMENT CONTROL PLAN

CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SPRINGFIELD AVENUE
SUMMIT, NJ 07901
UNION COUNTY

STATE OF NEW JERSEY
Aaron J. Schrager
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

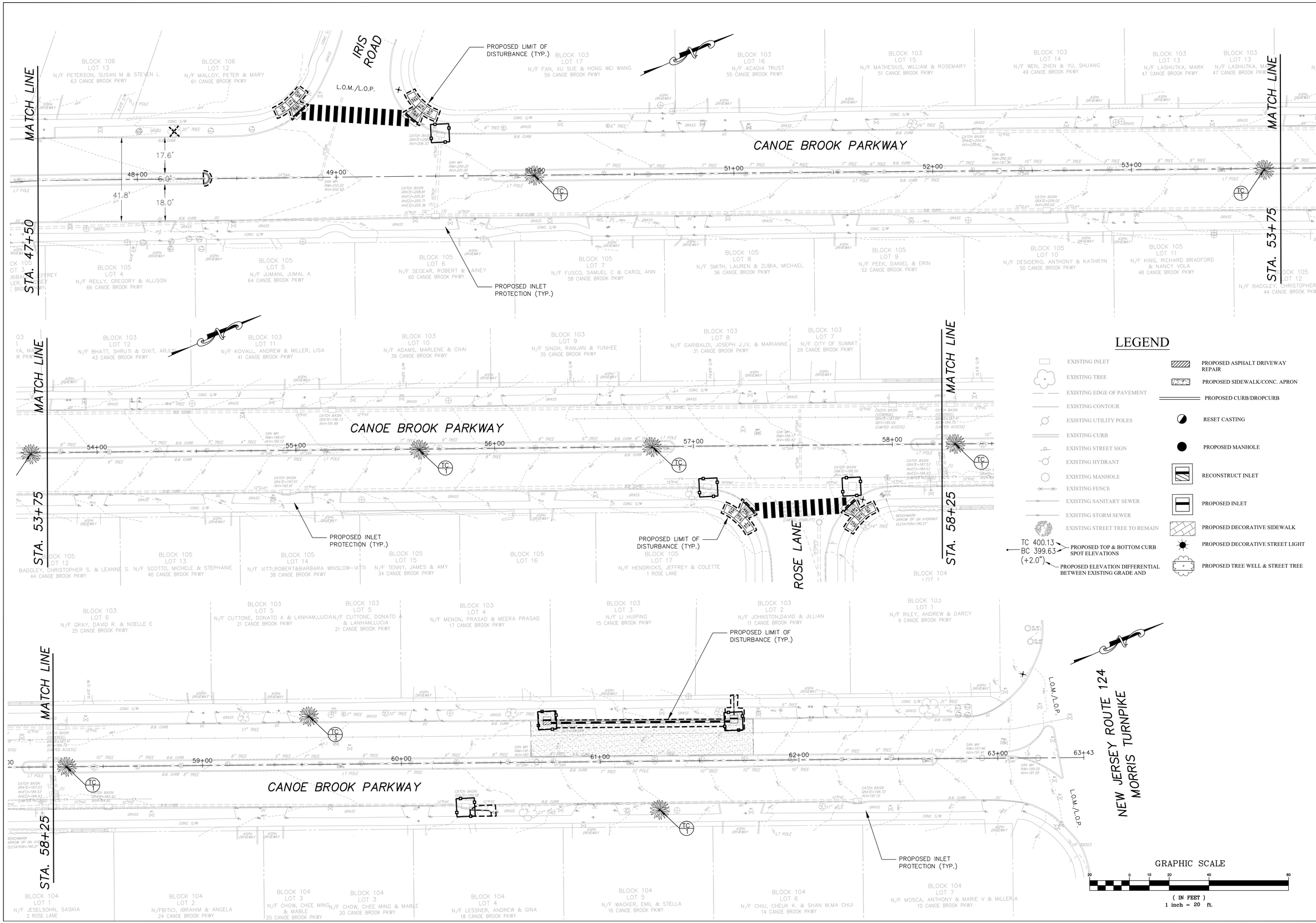
CITY OF SUMMIT
UNION COUNTY NEW JERSEY

DATE: 9/12/2025

DRAWN BY: AJS

SCALE 1"=20'

C-007



REVISIONS

NO.	DATE	DESCRIPTION
1	9/25/25	Revised per NJDOT comments dated 9/19/25

CANOE BROOK PARKWAY IMPROVEMENT PROJECT
ENTIRE LENGTH
SOIL EROSION & SEDIMENT CONTROL PLAN

CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SOUTH TRIMBLE AVENUE
SUMMIT, NJ 07901
UNION COUNTY

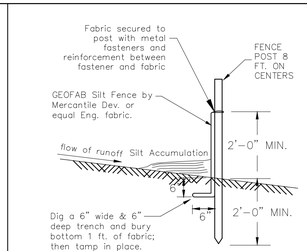
Aaron J. Schrager
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

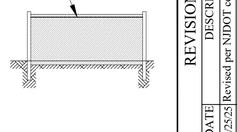
DATE: 9/12/2025

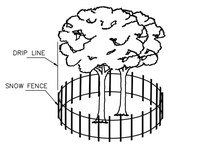
DRAWN BY: AJS

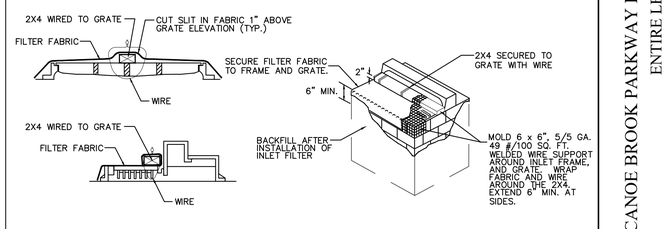
SCALE 1"=20'

C-008









SOIL EROSION AND SEDIMENT CONTROL NOTES

1. The Somerset—Union Soil Conservation District shall be notified in writing 48 hours in advance of any land disturbing activity.

2. All Soil Erosion and Sediment Control practices shall be installed prior to any major soil disturbances, or in their proper sequence and maintained until permanent protection is established.

3. Any Disturbed areas that will be left exposed more than 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 areas will be mulched with straw, or equivalent material, at a rate of two (2) tons per acre, according to NJ State Standards

4. Permanent Vegetation shall be seeded or sodded on all exposed areas within ten (10) days after final grading. Mulch will be used for protection until seeding is established

5. All work shall be done in accordance with the NJ State Standards for Soil Erosion and Sediment Control in New Jersey.

6. A sub—base 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 sub—base shall be installed within 15 days or preliminary grading.

7. 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 the NJ State Standards.

8. Any steep slopes receiving pipeline installation will be backfilled and stabilized daily, as the installation proceeds (i.e.: slopes greater that 3:1)

9. Traffic control Standards require the installation of a 50'x30'x6"pad of 1 1/2"or 2" stone, at all construction driveways, immediately after initial site disturbance.

10. 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. If the removal or treatment of the soil will not provide suitable conditions, non—vegetative means of permanent ground stabilization will have to be employed.

11. In that NJSA 4:24—39 et seq., requires that no Certificate of Occupancy be issued before the provisions of the Certified Plan for Soil Erosion and Sediment Control have been complied with for permanent measures, all site work for site plans and all work around individual lots in subdivisions, will have to be completed prior to the District issuing a Report of Compliance for the issuance of a Certificate of Occupancy by the Municipality.

12. Conduit Outlet Protection must be installed at all required outfalls prior to the drainage system becoming operational.

13. Any changes to the Certified Soil Erosion and Sediment Control Plan will require the submission of revised Soil Erosion and Sediment Control Plans to the District for recertification. The revised plans must meet all current NJ State Soil Erosion & Sediment Control Standards.

14. The Somerset—Union Soil Conservation District shall be notified of any changes in ownership.

15. Mulching to the NJ Standards is required for obtaining a Conditional Report of Compliance. Conditionals are only issued when the season prohibits seeding.

16. Contractor is responsible for keeping all adjacent roads clean during life of construction project.

17. The developer shall be responsible for remediating any erosion or sediment problems that arise as a result of ongoing construction at the request of the Somerset—Union Soil Conservation District.

18. Hydro seeding is a two— step process. The first step includes seed, fertilizer, lime, etc., along with minimal amounts of mulch to promote consistency, good seed to soil contact, and give a visual indication of coverage. Upon completion of seeding operation, hydromulch should be applied at a rate of 1500 lbs. per acre in second step. The use of hydromulch, as opposed to straw, is limited to optimum seeding dates as listed in the NJ Standards.

19. Unfiltered dewatering is not permitted. Necessary precautions must be taken during all dewatering operations to minimize soil transfer. Any dewatering methods used must be in accordance with the Standard for Dewatering.
Revised 5/15/15

PROPOSED SEQUENCE OF DEVELOPMENT

Installation of any silt fence prior to any major soil disturbance. Maintenance until permanent protection is established. Install and maintain inlet protection at any existing storm sewer inlets, as shown on the plans, until project is complete and permanently stabilized.	Week 1
Clear and remove all existing vegetation in those areas where necessary. Any remaining vegetation and trees to be properly protected and to remain in its natural state.	Week 1
Construct new sidewalk and curbing and repair driveway aprons.	Week 2—4
Mill existing roadway	Week 5
Perform full depth pavement reconstruction as required.	Week 6
Construct pavement surface course	Week 7
Fine grading of all lawn and landscape areas.	Week 8
Removal of all temporary sediment and erosion control devices.	upon completion

STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

DEFINITION

Establishment of temporary vegetative cover on soils exposed for periods of two to 6 months which are not being graded, not under active construction or not scheduled for permanent seeding within 60 days.

PURPOSE

To temporarily stabilize the soil and reduce damage from wind and water erosion until permanent stabilization is accomplished.

WATER QUALITY ENHANCEMENT

Provides temporary protection against the impacts of wind and rain, slows the over land movement of stormwater runoff, increases infiltration and retains soil and nutrients on site, protecting streams or other stormwater conveyances.

WHERE APPLICABLE

On exposed soils that have the potential for causing off—site environmental damage.

METHODS AND MATERIALS

SITE PREPARATION

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading, pg. 19—1.

B. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11 through 42.

C. Immediately prior to seeding, the surface should be scarified 6" to 12" where there has been soil compaction. This practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.).

SEEDBED PREPARATION

A. Apply ground limestone and fertilizer according to soil test recommendations such as offered by Rutgers Co—operative Extension. Soil sample mailers are available from the local Rutgers Cooperative Extension offices. Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10—20—10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise. Apply limestone at the rate of 2 tons/acre unless soil testing indicates otherwise. Calcium carbonate is the equivalent and standard for measuring the ability of liming materials to neutralize soil acidity and supply calcium and magnesium to grasses and legumes.

B. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, springtooth harrow, or other suitable equipment. The final harrowing or disking operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.

C. Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be retilled
in accordance with the above.

D. Soils high in sulfides or having a pH of 4 or less refer to Standard for Management of High Acid Producing Soils, pg. 1—1.

SEEDING

A. Select seed from recommendations in Table 7—2.

TABLE 7—2
TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES AND DEPTH.

SEED SELECTIONS	SEEDING RATE[1] (pounds)		OPTIMUM SEEDING DATE[2] Based on Plant Hardiness Zone[3]			OPTIMUM SEEDING DEPTH[4] (inches)
	Per Acre	Per 1000 Sq. Ft.	ZONE 5b,6s	ZONE 6b	ZONE 7a,b	
COLD SEASON GRASSES						
1. Perennial ryegrass	100	1.0	3/15—6/1 8/1—9/15	3/1—5/15 8/15—10/1	2/15—5/1 8/15—10/15	0.5
2. Spring oats	86	2.0	3/15—6/1 8/1—9/15	3/1—5/15 8/15—10/1	2/15—5/1 8/15—10/15	1.0
3. Winter Barley	96	2.2	8/1—9/15	8/15—10/1	8/15—10/15	1.0
4. Annual Ryegrass	100	1.0	3/15—6/1 8/1—9/15	3/1—6/1 8/1—9/15	2/15—5/1 8/15—10/15	0.5
5. Winter Cereal Rye	112	2.8	8/1—11/1	8/1—11/15	8/1—12/15	1.0
WARM SEASON GRASSES						
6. Pearl millet	20	0.5	6/1—8/1	5/15—8/15	5/1—9/1	1.0
7. Millet (German or Hungarian)	30	0.7	6/1—8/1	5/15—8/15	5/1—9/1	1.0

1 Seeding rate for warm season grass, selections 5 — 7 shall be adjusted to reflect the amount of Pure Line Seed (PLS) as determined by a germination test result. No adjustment is required for cool season grasses.
2 May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
3 Plant Hardiness Zone (see figure 7—1, pg. 7—4.)
4 Twice the depth for sandy soils

B. Conventional Seeding. Apply seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil, to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse textured soil.

C. Hydroseeding is a broadcast seeding method usually involving a truck or trailer mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Short fibered mulch may be applied with a hydroseeder following seeding. (also see Section IV Mulching) Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor seed to soil contact occurs reducing seed germination and growth. Hydroseeding may be used for areas too steep for conventional equipment to traverse or too obstructed with rocks, stumps, etc.

D. After seeding, firming the soil with a corrugated roller will assure good seed—to—soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.

MULCHING

Mulching is required on all seeding. Mulch will insure against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.

A. Straw or Hay. Unrotted small grain straw, hay free of seeds, applied at the rate of 1—1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch—binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper—blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed. Application. Spread mulch uniformly by hand or mechanically so that approximately 95% of the soil surface will be covered. For uniform distribution of hand—spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.

1. Peg and Twine. Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a cris—cross and a square pattern. Secure twine around each peg with two or more round turns.

2. Mulch Nettings. Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed. 3. Crimper (mulch anchoring tool). A tractor—drawn implement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.

4. Liquid Mulch—Binders. —May be used to anchor hay or straw mulch.

a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.

b. Use one of the following:

(1) Organic and Vegetable Based Binders —Naturally occurring, powder based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membraned networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turfgrass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.

(2) Synthetic Binders —High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass.

Note: All names give above are registered trade names. This does not constitute a commendation of these products to the exclusion of other products.

B. Wood—fiber or paper—fiber mulch. Shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 ponds per acre (or as recommended by the project manufacturer) and may be applied by a hydroseeder. This mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.

C. Pelletized mulch. Compressed and extruded paper and/or wood fiber product, which may contain co—polymers, tackifiers, fertilizers and coloring agents. The dry pellets, when applied to a seeded area and watered, forma mulch mat. Pelletized mulch shall be applies in accordance with the manufacturers recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60—75 lbs./1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has bee found to be beneficial for use on small lawn or renovation areas, seeded areas where weed—seed free mulch is desired or on sites where straw mulch and tackifier agent are not practical or desirable.

Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

DEFINITION

Establishment of permanent vegetative cover on exposed soils where perennial vegetation is needed for long term protection.

PURPOSE

To permanently stabilize the soil, assuring conservation of soil and water, and to enhance the environment.

WATER QUALITY ENHANCEMENT

Slows the over land movement of stormwater runoff, increases infiltration and retains soil and nutrients on site, protecting streams or other stormwater conveyances.

WHERE APPLICABLE

On exposed soils that have the potential for causing off—site environmental damage.

SITE PREPARATION

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standard for Land Grading.

B. Immediately prior to seeding and topsoil application, the subsoil shall be evaluated for compaction in accordance with the Standard for Land Grading .

C. Topsoil should be handled only when it is dry enough to work without damaging the soil structure. A uniform application to a depth of 5 inches (unsettled) is required on all sites. Topsoil shall be amended with organic matter, as needed, in accordance with the Standard for Topsoiling.

D. Install needed erosion control practices or facilities such as diversions, grade—stabilization structures, channel stabilization measures, sediment basins, and waterways.

SEEDBED PREPARATION

A. Uniformly apply ground limestone and fertilizer to topsoil which has been spread and firmed, according to soil test recommendations such as offered by Rutgers Co—operative Extension Soil sample mailers are available from the local Rutgers Cooperative Extension offices (http://njaes.rutgers.edu/county/). Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10—10—10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one—half the rate described above during seedbed preparation and repeat another one—half rate application of the same fertilizer within 3 to 5 weeks after seeding.

B. Work lime and fertilizer into the topsoil as nearly as practical to a depth of 4 inches witha disc, spring—tooth harrow, or other suitable equipment. The final harrowing or disking operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.

C. High acid producing soil. Soils having a pH of 4 or less or containing iron sulfide shall be covered with a minimum of 12 inches of soil having a pH of 5 or more before initiating seedbed reparation. See Standard for Management of High Acid—Producing Soils for specific requirements.

SEEDING

A. Select a mixture from Table 4—3 or use a mixture recommended by Rutgers Cooperative Extension or Natural Resources Conservation Service which is approved by the Soil Conservation District. Seed germination shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test date more than 12 months old unless retested.

1. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage with the specified seed mixture for the seeded area and mowed once.

2. Warm—season mixtures are grasses and legumes which maximize growth at high temperatures, generally 85o F and above. See Table 4—3 mixtures 1 to 7. Planting rates for warm—season grasses shall be the amount of Pure Live Seed (PLS) as determined by germination testing results.

3. Cool—season mixtures are grasses and legumes which maximize growth at temperatures below 85oF. Many grasses become active at 65oF. See Table 4—3, mixtures 8—20. Adjustment of planting rates to compensate for the amount of PLS is not required for cool season grasses.

B. Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil within 24 hours of seedbed preparation to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse—textured soil.

C. After seeding, firming the soil with a corrugated roller will assure good seed—to—soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.

D. Hydroseeding is a broadcast seeding method usually involving a truck, or trailer—mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Shortfibered mulch may be applied with a hydroseeder following seeding. (also see Section 4—Mulching below). Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. When poor seed to soil contact occurs, there is a reduced seed germination and growth.

MULCHING

Mulching is required on all seeding. Mulch will protect against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.

A. Straw or Hay. Unrotted small grain straw, hay free of seeds, to be applied at the rate of 1—1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch—binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper—blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed.
Application — Spread mulch uniformly by hand or mechanically so that at least 85% of the soil surface is covered. For uniform distribution of hand—spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.
Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.

1. Peg and Twine. Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss—cross and a square pattern. Secure twine around each peg with two or more round turns.

2. Mulch Nettings — Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.

3. Crimper (mulch anchoring coulter tool) — A tractor—drawn implement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.

4. Liquid Mulch—Binders — May be used to anchor salt hay, hay or straw mulch.

a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.

b. Use one of the following:
(1) Organic and Vegetable Based Binders — Naturally occurring, powder—based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membraned networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turf grass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.

(2) Synthetic Binders — High polymer synthetic emulsion, miscible with water when diluted and, following application of mulch, drying and curing, shall no longer be soluble or dispersible in water. Binder shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass.

Note: All names given above are registered trade names. This does not constitute a recommendation of these products to the exclusion of other products.

B. Wood—fiber or paper—fiber mulch — shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 pounds per acre (or as recommended by the product manufacturer) and may be applied by a hydroseeder. Mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.

C. Pelletized mulch — compressed and extruded paper and/or wood fiber product, which may contain co—polymers, tackifiers, fertilizers, and coloring agents. The dry pellets, when applied to a seeded area and watered, form a mulch mat. Pelletized mulch shall be applied in accordance with the manufacturer's recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60—75 lbs/1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has been found to be beneficial for use on small lawn or renovation areas, seeded areas where weedseed free mulch is desired, or on sites where straw mulch and tackifier agent are not practical or desirable. Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.

IRRIGATION (where feasible)

If soil moisture is deficient supply new seeding with adequate water (a minimum of 1/4 inch applied up to twice a day until vegetation is well established). This is especially true when seedings are made in abnormally dry or hot weather or on droughty sites.

TOPDRESSING

Since soil organic matter content and slow release nitrogen fertilizer (water insoluble) are prescribed in Section 2A — Seedbed Preparation in this Standard, no follow—up of topdressing is mandatory. An exception may be made where gross nitrogen deficiency exists in the soil to the extent that turf failure may develop. In that instance, topdress with 10—10—10 or equivalent at 300 pounds per acre or 7 pounds per 1,000 square feet every 3 to 5 weeks until the gross nitrogen deficiency in the turf is ameliorated.

ESTABLISHING PERMANENT VEGETATIVE STABILIZATION

The quality of permanent vegetation rests with the contractor. The timing of seeding, preparing the seedbed, applying nutrients, mulch and other management are essential. The seed application rates in Table 4—3 are required when a Report of Compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in application rates may be used when permanent vegetation is established prior to requesting a Report of Compliance from the district. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative cover (of the seeded species) and mowed once. Note this designation of mowed once does not guarantee the permanency of the turf should other maintenance factors be neglected or otherwise mismanaged.

TABLE 4—2
PERMANENT STABILIZATION MIXTURES FOR VARIOUS USES

Application	PLANTING MIXTURES BY SOIL DRAINAGE CLASS/[1] (see Table 4—3)		
	Excessively Drained	Well to Moderately Well Drained	Somewhat Poorly to Poorly Drained
Residential/commercial lots	10, 12, 15	6, 10, 12, 13, 14, 15	16
Pond and channel banks, dikes, berms, and dams	2, 5, 6, 10	5, 6, 7, 8, 9, 15	2, 8, 16, 17
Drainage ditches, swales, detention basins	2, 9, 11	2, 7, 9, 11, 12, 17	2, 9, 16, 17
Filter Strips	12	11, 12	11, 12
Grasses waterway, spillways	2, 3, 9, 10, 12	6, 7, 9, 10, 11, 12	2, 9, 11, 12
Recreation areas, athletic fields	5, 12, 15, 18	12, 13, 14, 15, 18	16
Special Problem Sites Steep slope and banks, roadsides, borrow areas	2, 3, 4, 6	2, 3, 5, 7, 8, 9, 10, 15, 18	2, 9, 10, 11, 12
Sand and gravel pits, Sanitary landfills	1, 2, 3, 4, 6, 20	1, 2, 3, 4, 5, 6, 8, 15, 20	2, 8
Dredged material, spoilbanks, borrow areas	2, 3, 6, 20	2, 3, 6, 11	2, 8
Streambanks & shorelines[2]	2, 8, 20, 21a	2, 8, 19b, 20, 21a, 21b	2,8,19a, 21a,b,c,d
Utility rights—of—way	3, 7, 180	3, 7	8, 9, 17

1. Refer to Soil Surveys for drainage class descriptions.
2. Refer to Soil Bioengineering Standard for additional seed mixtures.
3. Spillways only
4. See Appendix E for description of turf grasses and cultivars

TABLE 4—3
PERMANENT VEGETATIVE MIXTURES, PLANTING RATES AND PLANTING DATES[1]

SEED MIXTURE[2]	PLANTING RATE/[3]		PLANTING DATES O = Optimal Planting period A = Acceptable Planting period									MAINTENANCE LEVEL/[4]	REMARKS
			PLANT HARDINESS ZONES (see Figure 4—1)										
			Zone 5b, 6a			Zone 6b			Zone 7a, 7b				
	lbs./acre	lbs./1000 sq. ft.	3/15—5/31	6/1—7/31	8/1—10/31	3/1—4/30	5/1—8/14	8/15—10/15	2/1—4/30	5/1—8/14	8/15—10/30		
WARM SEASON SEED MIXTURES													
1A. For pinelands national reserve seed mixtures see table 4—4 page 4—17			O			O			O				
1. Switchgrass and/or Coastal panicgrass plus or Flatpea	15 15 20 20	.35 .35 .45 .45	O			O			O			C—D	
2. Deertongue or Switchgrass Redtop	15 20 1 10	.35 .45 .10 .23	O			O			O			C—D	Use Deertongue if pH < 4.0. Switchgrass is superior wildlife plant. Use for waterways. Redtop provides quick cover.
3. Switchgrass Deertongue Little Bluestem Sheep fescue plus Partridge pea	15 10 20 20 10	.35 .25 .45 .45 .25	O			O			O			C—D	Pinelands mixture.
4. Switchgrass Big Bluestem Little Bluestem Sand lovegrass Coastal panicgrass	10 5 5 4 10	.25 .10 .10 .10 .25	O			O			O			C—D	Native warm — season mixture.
5. Bermudagrass Zoysiagrass(seed) Zoysiagrass (sprigs)	15 30	.35 .70	O			O			O			A—D	Bermudagrass has superior salt tolerance. Zoysia has greater wear tolerance.
COOL SEASON SEED MIXTURES	130	3	A	A[5]	O	A	A[5]	O	A	A[5]	O		General low—maintenance mixture
6. Fine Fescue (Blend) Hard Fescue Chewings fescue Strong Creeping Red Fescue Kentucky Bluegrass Perennial ryegrass plus White clover	45 20 5	.1 .5 .10										B—D	White clover can be removed when establish lawns
7. Strong Creeping red fescue Kentucky bluegrass Perennial ryegrass or Redtop plus White clover	130 50 20 10 5	3 1 .5 .25 .10	A	A[5]	O	A	A[5]	O	A	A[5]	O	B—D	Suitable waterway mix. Canada bluegrass more drought tolerant. Used Redtop for increased drought tolerance.
8. Tall fescue (turf—type) or Strong Creeping red fescue or Perennial ryegrass Flatpea	30 30 30 25	.7 .7 .7 .60	O	A[6]		O	A[6]		O	A[6]	O	B—D	Tall fescue best selected for droughty conditions. Use Creeping red fescue in heavy shade. Use Flatpea to suppress woody vegetation.
9. Deertongue Redtop Wild rye(Elymus) Switchgrass	20 2 15 25	.45 .05 .35 .60	O			O			O			C—D	Native wet mix.
10. Tall fescue (turf—type) Perennial ryegrass or White clover	265 20 10 5	6 5 .25 .10	O	A[5]	A[5]	O	A[5]	A[5]	O	A[5]	A[5]	C—D	White clover can be excluded on lawn sites
11. Kentucky bluegrass Turf—type Tall fescue	15 45 22	0.33 1 5	A	A[5]	O	A	A[5]	O	A	A[5]	O	C—D	Filter strip use for nutrient uptake.
12. Turf—type Tall fescue (Blend of 3 cultivars)	350	8	A	A[5]	O	A	A[5]	O	A	A[5]	O	C—D	Use in a managed filter strip for nutrient uptake.
13. Hard Fescue Chewing fescue and/ or Strong Creeping Red Fescue Perennial ryegrass Ky. bluegrass (blend)	175 45 45	4 1 1	A	A[5]	O	A	A[5]	O	A	A[5]	O	A—C	General lawn/recreation.
14. Tall Fescue Ky. bluegrass (blend) Prn. ryegrass (blend)	265 20 20	6 .50 .50	A	A[5]	O	A	A[5]	O	A	A[5]	O	A—B	Athletic field/Mix 3 cultivars of Kentucky Bluegrass.
15. Hard Fescue Creeping fescue Strong Creeping Red Fescue Perennial ryegrass	130 45 45 10	3 1 1 .25	A	A[5]	O	A	A[5]	O	A	A[5]	O	C—D	Low maintenance fine fescue lawn mix.
16. Rough bluegrass Strong Creeping red fescue	90 130	2.0 3	A	A[5]	O	A	A[5]	O	A	A[5]	O	C—D	Moist shade.
17. Creeping Bentgrass Creeping red fescue Alkali Saltgrass	45 45 45	1 1 1	A	A[5]	O	A	A[5]	O	A	A[5]	O	B—D	Use bentgrass under wetter conditions. Saltgrass will only persistent under daline conditions
18. Hard or Sheeps fescue N.E. wildflower mixture	25 12	0.60 0.35	O	A	O	O	A	O	O	A	O	C—D	regional wildflower mix Hydroseeding not recommended
19. a. Smooth cordgrass b. Saltmeadow cordgrass	veg veg					O	Before 7/1		O	Before 7/1		C—D	Planted in the intertidal zone. Planted above mean high tide.
20. American beachgrass Coastal panicgrass	veg 20	.45				Before 4/1			O			D	Coastal oanicgrass may be interseeded between rows of beachgrass
21. a. Purpleosier willow b. Dwarf willow c. Redosier dogwood d. Silky dogwood	veg veg veg veg		Before 5/10			Before 5/10			Before 5/1			D	Also refer to chapters 16 and 18 of USDA NRCS engineering field handbook

"USE THIS SEED MIXTURE"

Table 4—3 Footnotes:
1. See Appendix B for descriptions of turf grass mixtures and cultivars. The actual amount of warm—season grass mixture used in Table 3 (seed mix 1—7) shall be adjusted to reflect the amount of PLS as determined by germination testing results. No adjustment is required for cool—season grasses (seed mixtures 8—20).

2. Seeding mixtures and/or rates not listed above may be used if recommended by the local Soil Conservation District, Natural Resources Conservation Service; recommendations of Rutgers Cooperative Extension may be used if approved by the Soil Conservation District. Legumes (white clover, flatpea, lespedeza) should be mixed with proper innoculant prior to planting.

3. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage of the seeded area and mowed once. Grass seed mixture checked by the State Seed Analyst, New Jersey Department of Agriculture, Trenton, New Jersey, will assure the purchaser that the mixture obtained is the mixture ordered, pursuant to the N.J.State Seed Law, N.J.S.A. 4:8—17.13 et. seq.

O = optimal planting period A = acceptable planting period

4. Maintenance Level:
A: Intensive mowing, (2—4 days), fertilization, lime, pest control and irrigation (Examples — high—maintenance lawns, commercial and recreation areas, public facilities).

B: Frequent mowing, (4—7 days), occasional fertilization, lime and weed control (Examples — home lawns, commercial sites, school sites).

C: Periodic mowing (7—14 days), occasional fertilization and lime (Examples — home lawns, parks).

D: Infrequent or no mowing, fertilization and lime the first year of establishment (Examples — roadsides, recreation areas, public open spaces)

5. Summer seedings should only be conducted when the site is irrigated. Mixes including white clover require that at least six weeks of growing season remain after seeding to ensure establishment before freezing conditions.

SILT FENCE DETAIL
NTS

TREE PROTECTION DETAIL
NOT TO SCALE

NOTE: TWO TRAFFIC CONES TO BE PLACED ON EACH SIDE OF INLET

1. CONTRACTOR IS TO CLEAN INLET FILTER AFTER EVERY STORM.
2. CONTRACTOR TO REMOVE FABRIC AND MESH JUST PRIOR TO PAVING.
3. IF BOTTOM OF ROADWAY IS BELOW TOP OF INLET GRATE, CONSTRUCT PROPERLY FILTERED OPENING(S) IN INLET WALL TO ALLOW PASSAGE OF WATER.
4. THE PROTECTION DEVICE WILL BE DESIGNED TO CAPTURE OR FILTER RUNOFF FROM THE 1 YEAR, 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO THE STORM SEWER SYSTEM.

INLET FILTER DETAIL
N.T.S.

STANDARD FOR DUST CONTROL

DEFINITION

The control of dust on construction sites and roads.

PURPOSE

To prevent blowing and movement of dust from exposed soil surfaces, reduced on—site and off—site damage and health hazards and improve traffic safety.

CONDITION WHERE PRACTICE APPLIES

This practice is applicable to areas subject to dust blowing and movement where on—site and off—site damage is likely without treatment. Consult with local municipal ordinances on any restrictions.

WATER QUALITY ENHANCEMENT

Sediments deposited as "dust"are often fine colloidal material which is extremely difficult to remove from water once it becomes suspended Use of this standard will help to control the generation of dust from construction sites and subsequent blowing and deposition into local surface water resources.

PLANNING CRITERIA

The following methods should be considered for controlling dust:

Mulches — See Standard of 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 DILLUTION	TYPE OF NOZZLE	APPLY GALLONS/ACRE
Anionic asphalt emulstion	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 spread	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, p. 26—1		
Acidulated Soy Bean Soap Stock	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 spaced about 12 inches apart and spring—toothed harrows are examples of equipment 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 granules or flakes fine enough 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.

REVISIONS

NO.	DATE	DESCRIPTION
1	9/25/25	Revised per NJDOT comments dated 9/19/25

CANOE BROOK PARKWAY IMPROVEMENT PROJECT
ENTIRE LENGTH
SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS

CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SPRINGFIELD AVENUE
SUMMIT NJ 07901
UNION COUNTY

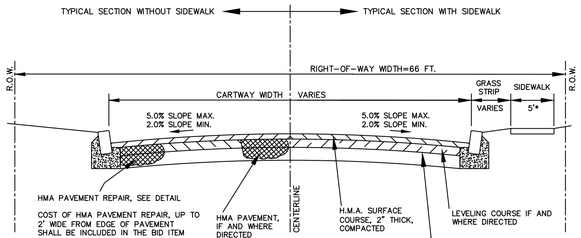
Aaron J. Schrager
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

DATE:
9/12/2025

DRAWN BY: AJS

SCALE
NTS

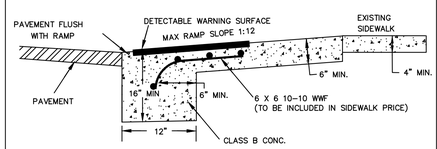
C-009



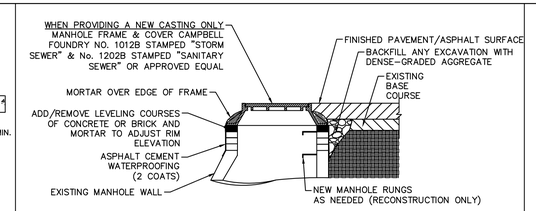
NOTES:
1. ALL NEW PAVEMENT SHALL MEET FLUSH WITH EXISTING PAVEMENT AT PROJECT LIMITS.
2. TACK COAT SHALL BE PLACED BETWEEN ANY TWO LAYERS OF ASPHALT.

*ALL PROPOSED SIDEWALK SHALL HAVE A WIDTH OF 5 FEET, UNLESS NOTED OTHERWISE ON THE PLANS

TYPICAL CROSS SECTION DETAIL
N.T.S.

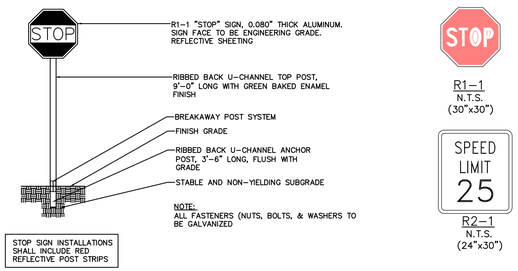


ADA CURB RAMP DETAIL
N.T.S

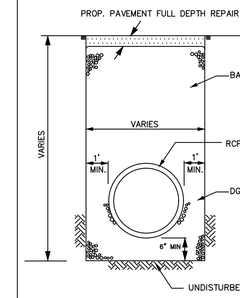


NOTE:
TACK COAT SHALL BE PLACE BETWEEN ASPHALT SURFACE AND BASE COURSES AND ALONG SAWCUTS OF ALL EXISTING PAVEMENT.

RESET/RECONSTRUCT MANHOLE USING EXISTING OR NEW CASTING
NTS

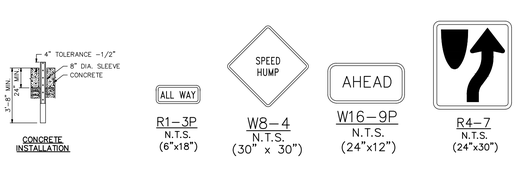


NOTE:
ALL FASTENERS (NUTS, BOLTS, & WASHERS TO BE GALVANIZED



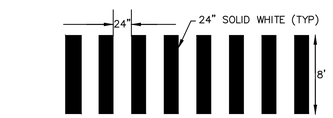
STORM PIPE TRENCH DETAIL
N.T.S.

PIPE ITEM SHALL INCLUDE:
EXCAVATION
REMOVAL/HAULING OF EXCAVATION PIPE
BEDDING/DGA
BACKFILLING
SAWCUTTING
6" BASE HMA REPAIR/FULL DEPTH REPAIR

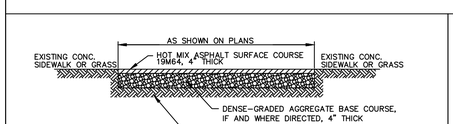


ALL SIGNS TO CONFORM TO THE M.U.T.C.D 2009 EDITION AND ALL PERTINENT M.U.T.C.D REVISIONS

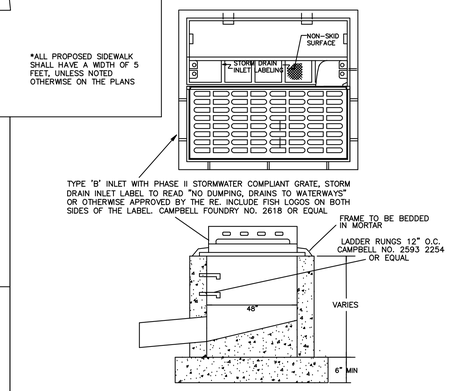
SIGN DETAILS
N.T.S.

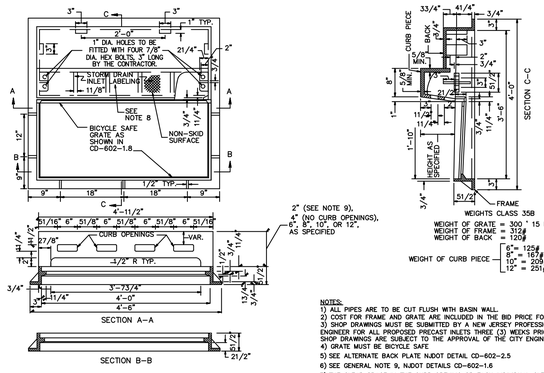


TYPICAL CROSSWALK DETAIL
N.T.S.



HOT MIX ASPHALT DRIVEWAY, 4" THICK
N.T.S.

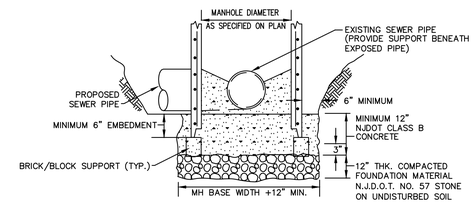




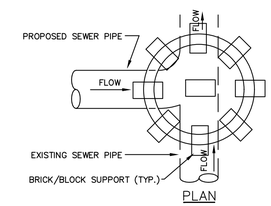
WEIGHT OF GRATE = 300 ~ 15 LBS
WEIGHT OF FRAME = 312#
WEIGHT OF BACK = 120#
WEIGHT OF CURB PIECE = 6" = 125#, 8" = 187#, 10" = 209#, 12" = 251#

NOTES:
1) ALL PIPES ARE TO BE CUT FLUSH WITH BASIN WALL.
2) COST FOR FRAME AND GRATE ARE INCLUDED IN THE BID PRICE FOR THE BASIN.
3) SHOP DRAWINGS MUST BE SUBMITTED BY A NEW JERSEY PROFESSIONALLY LICENSED ENGINEER FOR ALL PROPOSED PRECAST INLETS THREE (3) WEEKS PRIOR TO CONSTRUCTION. SHOP DRAWINGS ARE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.
4) GRATE MUST BE BICYCLE SAFE
5) SEE ALTERNATE BACK PLATE NJDOT DETAIL CD-602-2.5
6) SEE GENERAL NOTE 9, NJDOT DETAILS CD-602-1.6
7) THE CLEAR SPACE IN THE CURB OPENING OR EACH INDIVIDUAL CLEAR SPACE, IF THE CURB OPENING HAS TWO OR MORE CLEAR SPACES, MUST HAVE AN AREA OF NO MORE THAN SEVEN (7.0) SQUARE INCHES, OR BE NO GREATER THAN TWO (2.0) INCHES ACROSS THE SMALLEST DIMENSION.
8) STORM DRAIN INLET LABEL TO READ "NO DUMPING, DRAINS TO WATERWAYS" OR OTHERWISE APPROVED BY THE RE. INCLUDE FISH LOGOS ON BOTH SIDES OF THE LABEL.
9) FOR 2" CURB PIECE, USE DRIVEWAY ACCESS PLATE – SEE NJDOT DETAILS CD-602-2A.1

TYPE 'B' INLET
N.T.S.



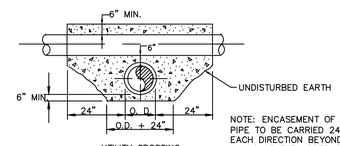
SECTION



PLAN

CONSTRUCTION NOTES:
1. SEE PRECAST STANDARD MANHOLE/INLET DETAIL FOR TYPICAL INSTALLATION/CONSTRUCTION.
2. PRECAST MANHOLE SECTION TO BE IN ACCORDANCE WITH ASTM DESIGNATION C-478

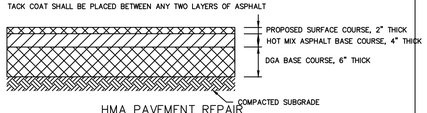
STORM SEWER DOGHOUSE STRUCTURE DETAIL
N.T.S.



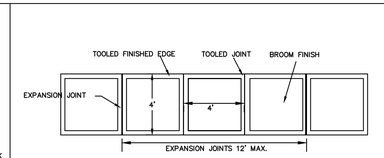
UTILITY CROSSING
N.T.S.

NOTE: ENCASEMENT OF LOWER PIPE TO BE CARRIED 24" IN EACH DIRECTION BEYOND THE WALLS OF THE UPPER CONDUIT.

NOTES
1. REMOVE AND REPLACE ROADWAY BASE SHALL CONSIST OF THE REMOVAL OF UNSUITABLE ROADWAY BASE MATERIAL OF WHATEVER NATURE ENCOUNTERED TO A DEPTH OF AT LEAST 10" UNCOVERED AFTER MILLING OR VISIBLE PRIOR TO MILLING OR RESURFACING AND THE INSTALLATION OF AT LEAST 4" HOT MIX ASPHALT BASE COURSE AND 6" DGA.. THE PERIMETER OF THE REPAIR SHALL BE SAWCUT.
2. THE FOLLOWING ITEMS OF WORK ARE INCLUDED UNDER REMOVE AND REPLACE ROADWAY BASE:
   – SAWCUT
   – HOT MIX ASPHALT BASE COURSE
   – DGA
   – ROADWAY EXCAVATION, UNCLASSIFIED
   – TACK COAT
3. THE SURFACE COURSE SHALL BE INCLUDED IN THE BID ITEM FOR HMA SURFACE COURSE
4. TACK COAT SHALL BE PLACED BETWEEN ANY TWO LAYERS OF ASPHALT

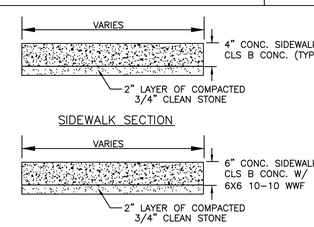


HMA PAVEMENT REPAIR
N.T.S.

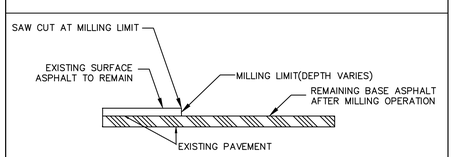


NOTE:
1)CONRETE TO BE POURED OVER 2" LAYER OF COMPACTED CLEAN STONE. COST OF CLEAN STONE, EXCAVATION, AND REMOVAL OF ANY MATERIAL TO BE INCLUDED IN THE BID ITEM FOR CONCRETE SIDEWALK
2)CONCRETE TO BE CLASS B 3500LB MIX.

CONCRETE SIDEWALK DETAIL
N.T.S.

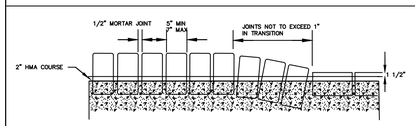


DRIVEWAY APRON SECTION

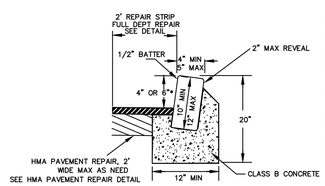


NOTE: TACK COAT SHALL BE PLACED BETWEEN ASPHALT SURFACE AND BASE COURSES AND ALONG SAW CUTS OF ALL EXISTING PAVEMENT.

PAVEMENT JOINT DETAIL
N.T.S.



DEPRESSED GRANITE BLOCK CURB DETAIL
N.T.S.



*MATCH EXISTING CURB REVEAL FOR AREAS WITH EXISTING CURB, UNLESS NOTED OTHERWISE ON THE PLANS OR UNLESS DIRECTED OTHERWISE BY CITY ENGINEER OR PROJECT MANAGER. CURB REVEAL MAY BE VARIED TO AVOID TRAPPING WATER BEHIND CURB.

CURB NOTES

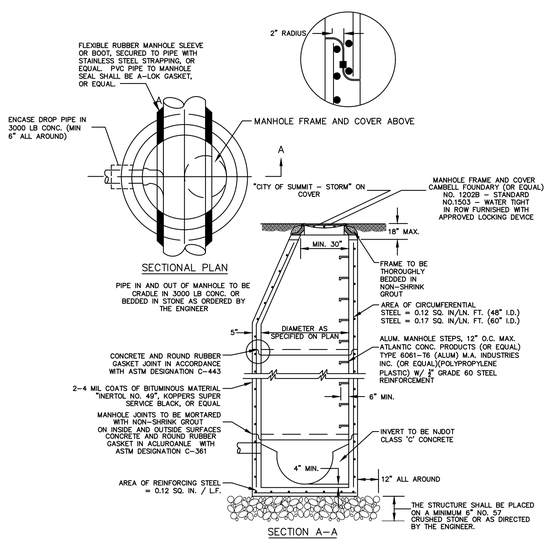
1) 4" THICK, COARSE AGGREGRATE SIZE NO. 57 SHALL BE CONSTRUCTED UNDERNEATH PROPOSED CURB IN WET FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. ALL COSTS FOR 4" THICK, COARSE AGGREGRATE SIZE NO. 57 SHALL BE INCLUDED IN THE VARIOUS ITEMS BID IN THE PROJECT.

2) TOP OF CURB SHALL NOT BE SET HIGHER THAN ADJACENT EXISTING OR PROPOSED SIDEWALK UNDER ANY CONDITION.

3) FULL DEPTH REPAIR TO BE CONSTRUCTED ALONG THE ROAD EDGE OF NEW CURB UP TO 2' WIDE. COST TO BE INCLUDED IN PRICE OF CURB. SEE FULL DEPTH REPAIR DETAIL.

4) SAW CUT 1/2" FOOT IN FRONT OF CURB TO REMOVE CONCRETE CURB AND MONOLITHICALLY POURED CONCRETE CURB PRIOR TO REMOVAL, COST TO BE INCLUDED IN THE VARIOUS BID ITEMS

STANDARD GRANITE BLOCK CURB DETAIL
N.T.S.



CONSTRUCTION NOTES:
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST O.S.H.A STANDARDS
2. PRECAST MANHOLE SECTIONS TO BE IN ACCORDANCE WITH LATEST ASTM DESIGNATION C-478, AND WITH LATEST NJDOT STANDARDS.

STANDARD PRECAST MANHOLE
N.T.S.

ON OR ABOUT
[DAY], [DD/MM/YYYY]
CONSTRUCTION WILL BEGIN
ON [STREET NAME]

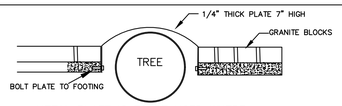
48" WIDE X 36" HIGH

NOTE: 1) THE CONTRACTOR SHALL MOUNT THE SIGN IN ACCORDANCE WITH NJDOT 2019 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION & THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2) EXACT WORDING TO BE APPROVED BY THE CITY ENGINEER

CONSTRUCTION IDENTIFICATION SIGN DETAIL
N.T.S.

NOTES:
1) SIGNS TO BE MOUNTED ON A 2 3/8" OD 10' BLACK POWDER COATED POLE
2) POLE TO HAVE A 18" MIN. DIA. X 4'–0" DEEP CONCRETE FOOTING
3) SIGNS TO BE MOUNTED ON A LYLE SIGNS PLACE HOLDER
4) COST FOR POST, HARDWARE, AND FOOTING TO BE INCLUDED IN "STREET NAME SIGN POST"
5) SIGN WIDTHS MAY VARY
6) WHITE BACKGROUND, BLACK LETTERS, BLOCK BORDER
7) MUST MEET MUTCD REFLECTIVE STANDARDS
8) PROOF MUST BE SUBMITTED FOR APPROVAL PRIOR TO INSTALL
9) ALL SIGNS TO CONFORM TO THE M.U.T.C.D 2009 EDITION AND ALL PERTINENT M.U.T.C.D REVISIONS

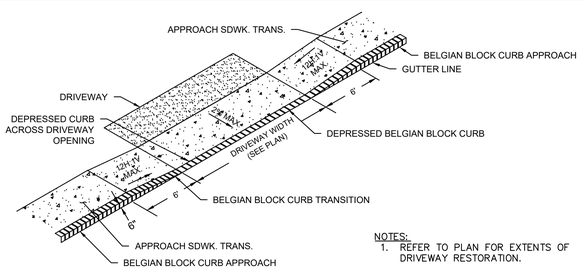
STREET SIGN DETAILS: 9" SIGN (D3-1)
N.T.S.



METAL PLATE IS TO BE USED WHERE CURB CAN NOT BE EXTENDED PAST TREES AS DIRECTED BY THE ENGINEER.

NOTE– NO SEPARATE PAYMENT SHALL BE MADE FOR INSTALLATION OF THE METAL PLATE. ALL COSTS FOR THE PLATE SHALL BE INCLUDED IN THE VARIOUS ITEMS BID IN THE PROJECT.

METAL PLATE CURB DETAIL (IF AND WHERE DIRECTED)
N.T.S.



NOTES:
1. REFER TO PLAN FOR EXTENTS OF DRIVEWAY RESTORATION.

DRIVEWAY APRON DETAIL FOR SIDEWALK ABUTTING CURB
NTS

REVISIONS

NO.	DATE	DESCRIPTION
1	9/25/25	Revised per NJDOT comments dated 9/19/25

CANOE BROOK PARKWAY IMPROVEMENT PROJECT
ENTIRE LENGTH
CONSTRUCTION DETAILS

CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SPRINGFIELD AVENUE
SUMMIT NJ 07901
UNION COUNTY

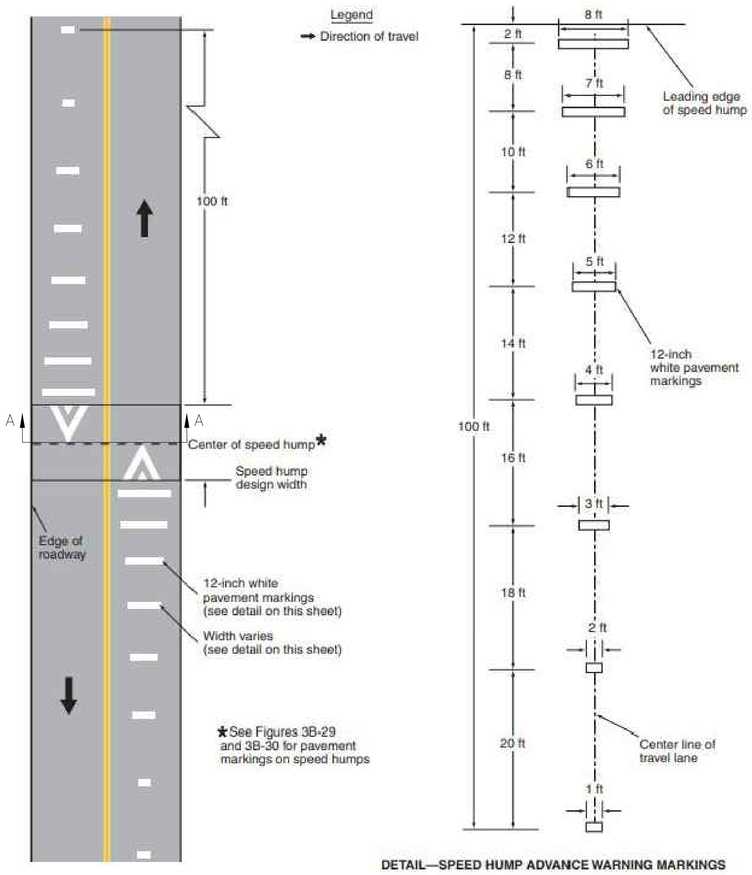
Aaron J. Schrager
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

DATE: 5/16/2025

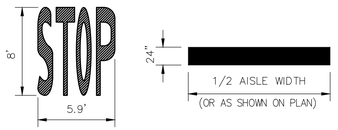
DRAWN BY: AJS

SCALE N.T.S.

C-010

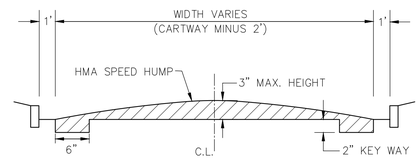


DETAIL OF SPEED HUMP, SPEED HUMP MARKINGS, & ADVANCE MARKINGS
N.T.S.



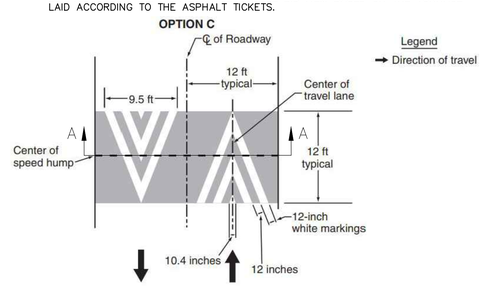
NOTES:
1. WORDS, SYMBOL OR ARROW MARKINGS SHALL BE WHITE UNLESS OTHERWISE NOTED.
2. ALL PAVEMENT STRIPING SHALL BE LONG-LIFE THERMOPLASTIC.

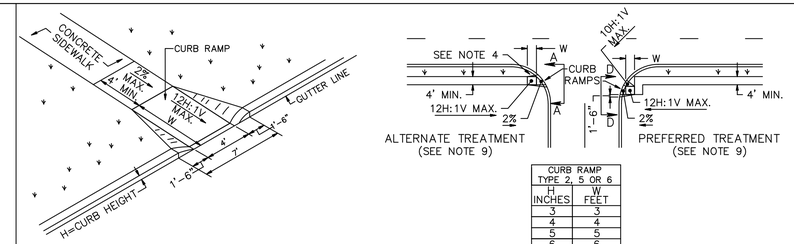
PAVEMENT MARKING DETAILS
N.T.S.



SECTION A–A

NOTES:
1. ALL PAVEMENT STRIPING & MARKINGS SHALL BE LONG-LIFE THERMOPLASTIC.
2. NO SEPARATE PAYMENT SHALL BE MADE FOR THE INSTALLATION OF HMA SPEED HUMPS. ALL COSTS ASSOCIATED WITH SPEED HUMPS SHALL BE INCLUDED IN THE VARIOUS BID ITEMS FOR THE PROJECT WHILE THE COST OF ANY HMA USED SHALL BE PAID UNDER THE HMA SURFACE COURSE BID ITEM BASED ON THE TONNAGE LAID ACCORDING TO THE ASPHALT TICKETS.



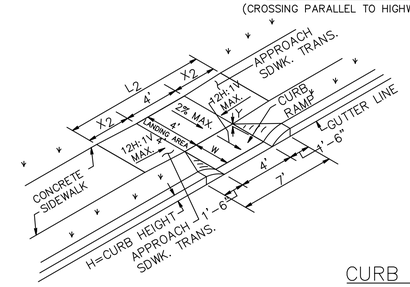


ALTERNATE TREATMENT
(SEE NOTE 9)

PREFERRED TREATMENT
(SEE NOTE 9)

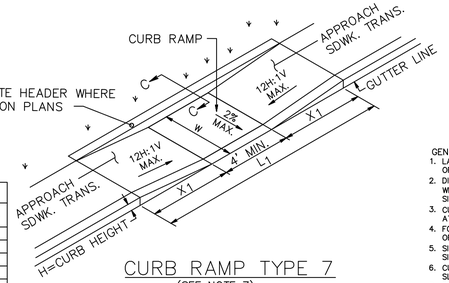
CURB RAMP TYPE 2, 5 OR 6	
H INCHES	W FEET
3	3
4	4
5	5
6	6
7	7
8	8
9	9

CURB RAMP TYPE 5
(CROSSING PARALLEL TO HIGHWAY ONLY)



CURB RAMP TYPE 4				
W FEET	H INCHES	Y INCHES	X2 FEET	L2 FEET
4.0	3	**	**	**
	4	**	**	**
	5	4.0	1	6
	6	4.0	2	8
	7	4.0	3	10
	8	4.0	4	12
	9	4.0	5	14

CURB RAMP TYPE 4
(GRASS BUFFER STRIP WITH LANDING AREA REQUIRED)

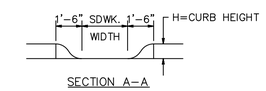


CURB RAMP TYPE 7			
W FEET	H INCHES	X1 FEET	L1 FEET
4 MIN. 6 MAX.	3	3	11
	4	4	13
	5	5	15
	6	6	17
	7	7	19
	8	8	21
	9	9	23

CURB RAMP TYPE 7
(SEE NOTE 7)

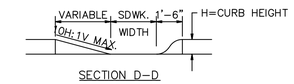
ALT 'A': ADA CURB RAMP DETAILS
N.T.S.

GENERAL NOTES:
1. LANDING AREA, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP SHALL BE KEPT CLEAR OF OBSTRUCTIONS.
2. DIMENSIONS SHOWN IN TABLES ARE FOR RELATIVELY FLAT SIDEWALK AREAS. CARE SHOULD BE TAKEN WHEN DETERMINING CURB RAMP SIZE BASED ON CURB HEIGHT (H) WHERE ELEVATION OF CURB AND SIDEWALK VARY DRASTICALLY IN AREA OF PROPOSED CURB RAMP.
3. CURB (DROPPED CURB) GUTTERLINE TO BE FLUSH WITH ROADWAY PAVEMENT A MINIMUM OF 4 FEET AT ALL CURB RAMPS. DROPPED CURB SHALL BE CONCRETE TO MEET FLUSH WITH PAVEMENT.
4. FOR CURB RAMP TYPES 5 AND 6, IF A GRASS BUFFER DOES NOT EXIST, SLOPE CURB TO EQUAL SLOPE OF ADJACENT CURB RAMP.
5. SIDEWALK AND CURB RAMP WITHIN AREA ENCLOSED BY HEAVY LINES TO BE PAID FOR AS CONCRETE SIDEWALK OF THE APPROPRIATE ADJACENT THICKNESS.
6. CURB AND HEADER WITHIN AREA ENCLOSED BY HEAVY LINES TO BE PAID FOR AS VERTICAL CURB OR SLOPING CURB OF THE APPROPRIATE ADJACENT SIZE AND KIND.
7. WHERE THE DISTANCE FROM THE GUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS, CURB RAMP TYPE 7 SHOULD BE USED, INSTEAD OF CURB RAMP TYPE 1 THROUGH 4.
8. CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED, SEE PLANS.
9. PREFERRED AND ALTERNATE TREATMENTS SHOULD NOT BE INTERMIXED WITHIN THE SAME INTERSECTION.
10. DIMENSIONS SHOWN IN TABLES ARE FOR 3 INCH TO 9 INCH CURB HEIGHTS. WHERE THE CURB HEIGHTS ARE OTHER THAN WHAT IS PROVIDED IN THE TABLES, THE DIMENSIONS OF THE RAMPS WILL HAVE TO BE CALCULATED BASED ON CROSS SLOPES SHOWN.

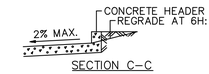


SECTION A–A

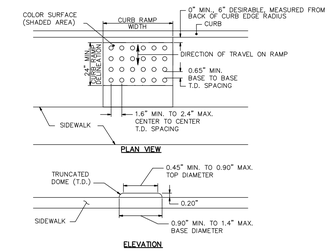
NOTE:
CURB RAMP OPENING TO BE FLUSH WITH ROADWAY PAVEMENT (CURB RAMP TYPES 5 & 6).



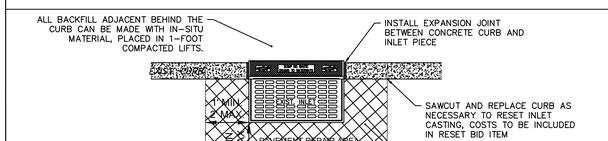
SECTION D–D

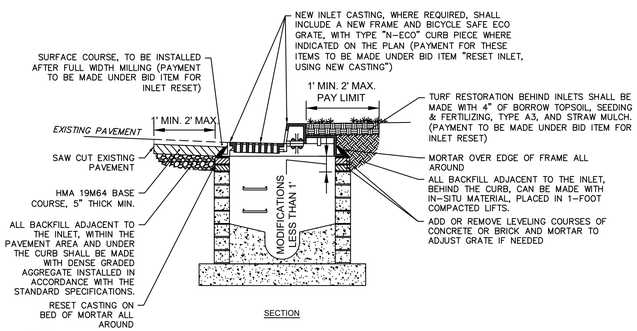


SECTION C–C



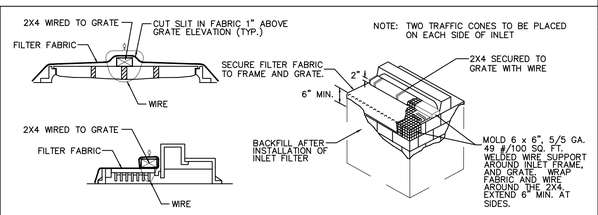
DETECTABLE WARNING SURFACE
N.T.S.





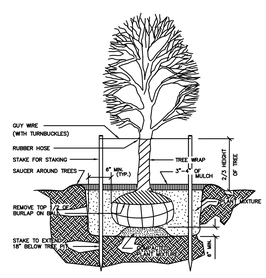
NOTES:
1. WHEN MODIFYING LESS THAN ONE FOOT OF AN INLET, SET OR RESET THE CASTING. WHEN MODIFYING ONE FOOT OR MORE OF AN INLET, RECONSTRUCT THE INLET.
2. ALL COSTS ASSOCIATED FOR INLET REPAIR IN THIS DETAIL SHALL BE CONSIDERED INCLUDED IN THE UNIT PRICE BID FOR "RESET INLET" ITEM IN THE PROPOSAL UNLESS OTHERWISE SPECIFIED.
3. INLETS AND CURB REPAIR SHALL BE REPAIRED BEFORE FULL WIDTH MILLING AND SURFACE COURSE PAVING.
4. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH SECTION 602-DRAINAGE STRUCTURES OF THE 2019 NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE DESIGN AND AS AMENDED BY THE SPECIAL PROVISIONS.

RESET INLET DETAIL
N.T.S.



1. CONTRACTOR IS TO CLEAN INLET FILTER AFTER EVERY STORM.
2. CONTRACTOR TO REMOVE FABRIC AND MESH JUST PRIOR TO PAVING.
3. IF BOTTOM OF ROADWAY IS BELOW TOP OF INLET GRATE, CONSTRUCT PROPERLY FILTERED OPENING(S) IN INLET WALL TO ALLOW PASSAGE OF WATER.
4. THE PROTECTION DEVICE WILL BE DESIGNED TO CAPTURE OR FILTER RUNOFF FROM THE 1 YEAR, 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO THE STORM SEWER SYSTEM.

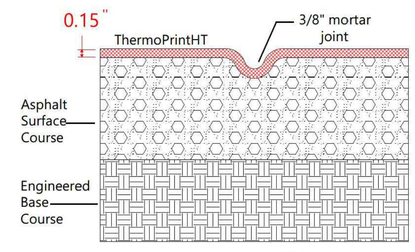
INLET FILTER DETAIL
N.T.S.



NOTES:
1. ALL STREET TREES SHALL BE PLANTED UNDER SUPERVISION OF THE CITY FORESTER. EXACT NUMBER AND LOCATION OF TREES SUBJECT TO CHANGE AT THE DISCRETION OF THE CITY FORESTER.
2. ALL PLANTINGS SHALL BE GUARANTEED FOR A PERIOD OF AT LEAST TWO YEARS FROM THE DATE OF INSTALLATION. ANY TREES FOUND TO BE DEAD OR DYING AT THE END OF THE GUARANTEE PERIOD SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE.

STREET TREE PLANTING DETAIL & SCHEDULE
N.T.S.

NOTES:
1. TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND STANDARDS.
2. PATTERN SHALL BE RUNNINGBOND AND COLOR SHALL BE TERRA COTTA RED. FINAL COLOR & PATTERN MUST BE SUBMITTED TO CITY ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.



ThermoPrintHT
Aggregate Reinforced ThermoPlastic
Decorative Surfacing System

DETAIL OF DECORATIVE HIGH TRAFFIC PAVEMENT SURFACING (THERMOPRINT OR APPROVED EQUAL)
N.T.S.

PROPOSED PLANTING SCHEDULE						
TAG	SYMBOL	QUANTITY	LATIN NAME	COMMON NAME	SIZE	TYPE
TC		20	SYRINGA RETICULATA SUBSP. RETICULATA	JAPANESE TREE LILAC	2"–2.5" CAL.	B & B

REVISIONS

NO.	DATE	DESCRIPTION
1	9/25/25	Revised per NJDOT comments dated 9/19/25

CANOE BROOK PARKWAY IMPROVEMENT PROJECT
ENTIRE LENGTH
CONSTRUCTION DETAILS

CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SPRINGFIELD AVENUE
SUMMIT NJ 07901
UNION COUNTY

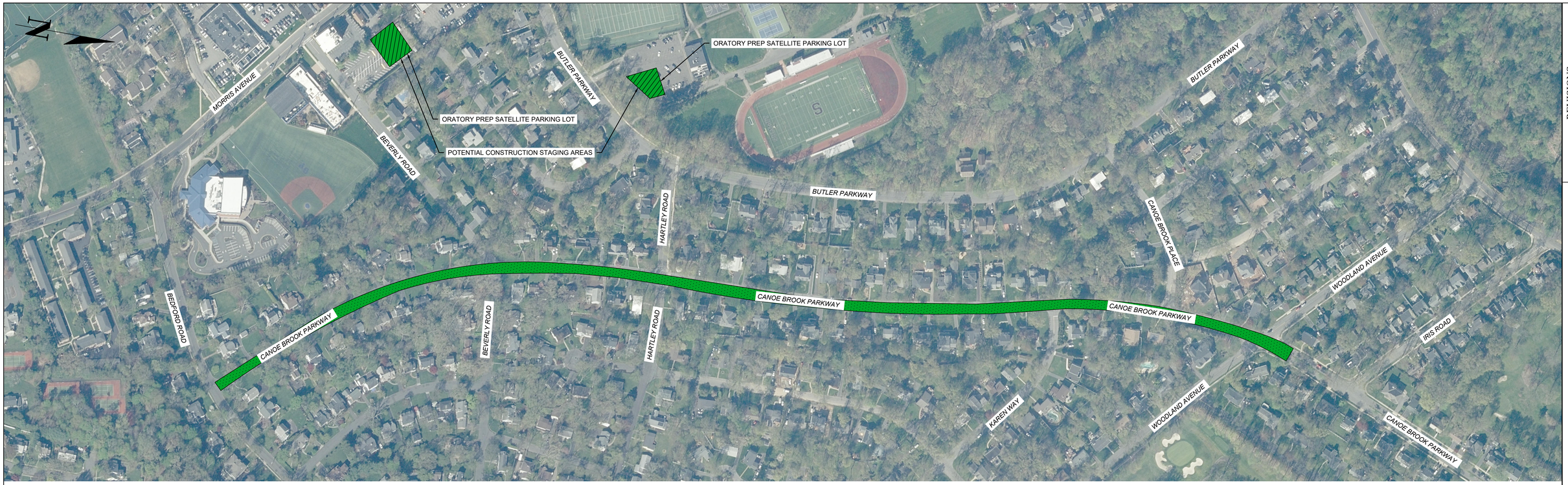
Aaron J. Schrager
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

DATE: 5/16/2025

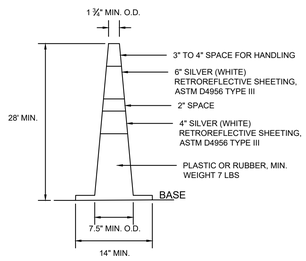
DRAWN BY: AJS

SCALE N.T.S.

C-011

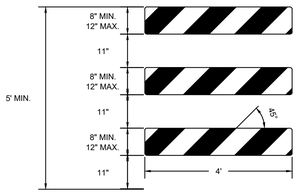


NOTES:
1. CONSTRUCTION STAGING AREAS ARE SUBJECT TO APPROVAL BY THE CITY OF SUMMIT AND INDIVIDUAL PROPERTY OWNER(S).
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING DETOUR PLANS, AS NEEDED, FOR REVIEW AND APPROVAL BY THE CITY OF SUMMIT POLICE DEPARTMENT PRIOR TO THE START OF ANY CONSTRUCTION.



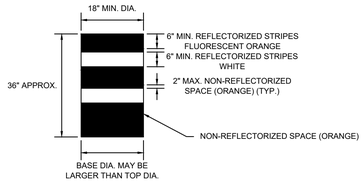
NOTES:
1. TRAFFIC CONES MUST BE PREDOMINATELY ORANGE IN COLOR.
2. BASES MAY BE BREAKAWAY BALLASTED TYPE.
3. MINOR MANUFACTURER'S VARIATIONS MAY BE ACCEPTABLE UPON APPROVAL OF THE RE.

TRAFFIC CONES
N.T.S.



NOTES:
1. ENSURE THE 8" MIN. x 48", TO 12" MAX. x 48" BARRICADE RAILS TO BE ATTACHED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.
2. ENSURE ORANGE AND SILVER (WHITE) STRIPED TO BE RETROREFLECTIVE SHEETING, ASTM D4956 TYPE III. ALTERNATE ORANGE AND SILVER (WHITE) STRIPES 6" WIDE SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION TRAFFIC IS TO PASS.
3. THE FRAMING, RAILS, AND BALLAST FOR BREAKAWAY BARRICADES TO BE NCHRP-350 CRASHED TESTED AND FHWA APPROVED.
4. IF NECESSARY, FABRICATE THE BALLAST AND PLACE ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.

BREAKAWAY BARRICADE TYPE III
N.T.S.



NOTE:
1. ENSURE DRUMS ARE MADE OF ORANGE PLASTIC WITH A MINIMUM OF FOUR ALTERNATE FLUORESCENT ORANGE AND WHITE RETROREFLECTIVE STRIPES. IF THERE ARE NON-REFLECTORIZED SPACES BETWEEN THE STRIPES, THEY ARE TO BE NOMORE THAN 2" WIDE. ENSURE RETROREFLECTIVE SHEETING FOR STRIPES CONFORMS WITH ASTM D4956 TYPE VII OR VIII WITH S2 REQUIREMENTS.
2. ENSURE THE TOP OF THE DRUM IS NOT OPEN. CONSTRUCT DRUMS TO INHIBIT ROLLING IF KNOCKED OVER.
3. ENSURE THE REFLECTORIZED AREA OF DRUMS IS ROUND EXCEPT OTHER SHAPES, WHICH PROVIDE THE SAME VISIBILITY AS AN 18 INCH DIAMETER ROUND DRUM REGARDLESS OF ORIENTATION, MAY BE USED.
4. WHEN BALLAST IS REQUIRED BY THE RE, USE SAND. THE MAXIMUM WEIGHT OF THE BALLAST IS 50 LBS, AND IS TO BE LOCATED APPROXIMATELY AT GROUND LEVEL. ALTERNATE TYPES OF BALLAST MUST BE APPROVED BY THE RE.

DRUMS
N.T.S.

R11 – 2 [48" x 30"]
(10 S.F.)

W20 – 1 [48" x 48"]
(16 S.F.)

GRAPHIC SCALE
150 0 75 150 300 600
(IN FEET)
1 inch = 150 ft.

REVISIONS

NO.	DATE	DESCRIPTION

CANOE BROOK PARKWAY IMPROVEMENT PROJECT
ENTIRE LENGTH
TRAFFIC CONTROL PLAN

CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SPRINGFIELD AVENUE
SUMMIT NJ 07901
UNION COUNTY

STATE OF NEW JERSEY
Aaron J. Schrager
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

CITY OF SUMMIT
UNION COUNTY NEW JERSEY

DATE: 5/16/2025

DRAWN BY: AJS

SCALE 1"=150'

C-012

GENERAL NOTES:

1. ADVANCE WARNING SIGNS DISTANCES, AND TAPER LENGTHS MAY BE EXTENDED, AT DIRECTION OF THE DEPARTMENT, TO ADJUST FOR REDUCED VISIBILITY DUE TO HORIZONTAL AND VERTICAL CURVATURE OF THE ROADWAY.

2. THE APPROXIMATE LOCATIONS OF THE ILLUMINATED FLASHING ARROW BOARDS ARE SHOWN ON THE TRAFFIC CONTROL PLANS. THESE LOCATIONS MAY BE MODIFIED AS APPROVED BY RE 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 CLOSINGS AND AT LOCATIONS SHOWN ON THE TRAFFIC CONTROL PLANS .

3. PRIOR TO ANY ROAD CONSTRUCTION, TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE IN PLACE.

4. RAMPS AND/OR SIDE STREETS ENTERING THE ROADWAY AFTER THE FIRST ADVANCE WARNING SIGN SHALL BE PROVIDED WITH AT LEAST ONE W20-IF SIGN (ROAD WORK AS A MINIMUM.

5. ALL EXISTING ROAD SIGNS, PAVEMENT MARKINGS AND/OR PLOWABLE PAVEMENT REFLECTORS WHICH CONFLICT WITH THE PROPOSED TRAFFIC CONTROL PLAN SHALL BE COVERED, REMOVED OR RELOCATED AS DIRECTED BY THE RE.

6. CONFLICTING OR NON-OPERATING SIGNAL INDICATIONS ON EITHER THE EXISTING, TEMPORARY, OR PROPOSED TRAFFIC SIGNAL SYSTEMS SHALL BE BAGGED OR COVERED.

7. MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES - PART VI 'STANDARDS AND GUIDES FOR TRAFFIC CONTROL FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY, AND INCIDENT MANAGEMENT OPERATIONS", UNLESS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS.

8. CONSTRUCTION SIGN W99-2 (GIVE US A BRAKE) SHALL BE LOCATED 200 FEET IN ADVANCE OF PROJECT LIMITS.

9. A W1-6 (ARROW) SIGN MOUNTED ON A BREAKAWAY BARRICADE AND CENTERED ON THE CLOSED WIDTH SHALL BE LOCATED 100 FEET BEYOND EACH INTERSECTION OR MAIN ACCESS POINT WITHIN THE AREA OF A LANE OR SHOULDER CLOSURE.

10. CONSTRUCTION SIGNS R11-4 (ROAD CLOSED TO THRU TRAFFIC) SHALL BE PLACED AT THE INTERSECTING STREETS WHICH ARE CLOSED TO TRAFFIC BECAUSE OF CONSTRUCTION.

11. CONSTRUCTION SIGNS WB-9A (SYMBOL FOR UNEVEN PAVEMENT) AND W8-14A (GROOVED PAVEMENT) SHALL BE USED WHEN SUCH PAVEMENT CONDITIONS EXIST. THE PLACEMENT OF THESE SIGNS SHALL BE AS DIRECTED BY THE RE.

12. MOVING WORK AREAS IN A LANE CLOSURE REQUIRE A TRAILER MOUNTED ILLUMINATED FLASHING ARROW TO REMAIN AT THE END OF THE TAPER, THE TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION THAT SHALL MOVE WITH THE WORK AREAS TO KEEP A 70 FEET MIN. AND 150 FEET MAX. BUFFER IN ADVANCE OF EACH WORK AREA.

13. 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 RE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

14. ALL EXCAVATED AREAS WITHIN OR ADJACENT TO THE ROADWAY SHALL BE BACKFILLED AND PLACED ON AT LEAST 6H : 1V SLOPE BEFORE THE END OF EACH WORK DAY. OTHER EXCAVATED AREA WITHIN THE CLEAR ZONE SHALL BE BACKFILLED.

15. WHERE REQUIRED, THE CONTRACTOR SHALL MAKE PROVISIONS FOR MAINTAINING PEDESTRIAN CROSSING LOCATIONS AND TYPE AS DIRECTED BY THE RE.

16. BITUMINOUS CONCRETE PLACED DURING THE VARIOUS CONSTRUCTION STAGES SHALL BE TRANSITIONED ON A MINIMUM 20H:1V SLOPE TO MEET THE ADJACENT EXISTING GRADE AT THE LONGITUDINAL AND TRANSVERSE LIMITS OF THE STAGE CONSTRUCTION AREAS UNLESS OTHERWISE NOTED ON THE STAGE CONSTRUCTION PLANS.

17. 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 LANE IN EACH DIRECTION.

18. CONSTRUCTION ZONE SPEED LIMIT WILL BE DETERMINED BY THE TRAFFIC SIGNAL & SAFETY ENGINEERING, REGIONAL TRAFFIC ENGINEER - WORK ZONE, AT THE TIME OF OR DURING CONSTRUCTION, AS REQUESTED BY THE R.E..

19. THE SPEED LIMIT, R2-1 (BLACK ON WHITE) WITH ADDED WORK ZONE PLATE (BLACK ON ORANGE) SIGNS SHALL BE LOCATED THROUGH WORK AREAS AS DIRECTED BY THE TRAFFIC SIGNAL & SAFETY ENGINEERING REGIONAL TRAFFIC ENGINEER - WORK ZONE.

20. THE REDUCED SPEED AHEAD SIGN, W3-5(S) (BLACK ON ORANGE) SHALL BE LOCATED IN ADVANCE OF SPEED LIMIT R2-1 SIGNS WHICH REDUCE THE NORMAL POSTED SPEED LIMIT THROUGH THE CONSTRUCTION ZONE.

21. TRAFFIC FINES DOUBLED IN WORK AREA R(NJ)5-17(S) , 4 FEET BY 2.5 FEET SIGN SHALL BE LOCATED 500 FEET AFTER THE FIRST ADVANCE WARNING SIGN, (W20 SERIES) AT EACH WORK AREA LOCATED WITHIN URBAN AREAS. THIS SIGN SHALL ALSO BE USED ON PROJECTS REQUIRING MOVING OPERATIONS IN WHICH CASE THE SIGN SHALL BE MOUNTED ON A SLOW MOVING CONSTRUCTION VEHICLE.

22. THE FINAL HMA SURFACE PAVEMENT SHALL NOT BE CONSTRUCTED UNTIL THE FINAL STAGE OF THE PROJECT UNLESS OTHERWISE DIRECTED BY THE RE OR INDICATED ON THE PLANS. MANHOLES AND INLETS SHALL BE SET TO FINISHED GRADE AND TEMPORARY PAVEMENT RAMPS ARE TO BE CONSTRUCTED AROUND THEM WITH A MINIMUM 20H : 1V SLOPE IN ALL DIRECTIONS USING HOT MIX ASPHALT PAVEMENT. THIS TEMPORARY MATERIAL WILL BE REMOVED IMMEDIATELY PRIOR TO PLACING THE SURFACE COURSE.

23. TRAFFIC CONTROL DEVICES FOR LANE CLOSURES INCLUDING SIGNS, CONES, BARRICADES, 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.

24. CONES MAY BE SUBSTITUTED FOR DRUMS AND INSTALLED UPON THE APPROVAL OF THE RE.

25. TRAFFIC IMPACT NOTICES AND CHANGES

A. 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 .

B. ADVANCE NOTICES

FOR THE INITIAL START OF WORK THAT REQUIRES "IMPACTS TO NORMAL TRAFFIC FLOW", THE CONTRACTOR SHALL NOTIFY THE R.E. IN WRITING OF THE PROPOSED DATE. THE NOTICE SHALL BE SUBMITTED AT LEAST TWENTY-EIGHT CALENDAR DAYS, BUT NOT MORE THAN SIXTY CALENDAR DAYS, BEFORE THE PROPOSED DATE. START OF WORK THAT IMPACTS NORMAL TRAFFIC FLOW WILL NOT BE PERMITTED PRIOR TO THE DATE STATED IN THE NOTICE. THE CONTRACTOR SHALL CONFIRM, IN WRITING TO THE R.E., THE PROPOSED DATE SEVEN CALENDAR DAYS BEFORE STARTING THE ESTABLISHMENT OF THE TRAFFIC CONTROL MEASURES FOR THE TRAFFIC IMPACT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE R.E. IF THE PROPOSED ESTABLISHMENT CAN NOT BE COMPLETED ON THE PROPOSED DATE.

FOR A "PERMANENT LANE CLOSURE", THE CONTRACTOR SHALL NOTIFY THE RE IN WRITING OF THE PROPOSED DATE A NEW TRAFFIC PATTERN WILL BE ESTABLISHED. THE NOTICE SHALL BE SUBMITTED AT LEAST TWENTY-EIGHT 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 STATED IN THE NOTICE. THE CONTRACTOR SHALL CONFIRM, IN WRITING TO THE RE, THE PROPOSED DATE OF THE NEW TRAFFIC PATTERN SEVEN DAYS BEFORE STARTING TRAFFIC CONTROL MEASURES FOR THE ESTABLISHMENT OF THE NEW PATTERN. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE RE IF THE PROPOSED ESTABLISHMENT CAN NOT BE COMPLETED ON THE PROPOSED DATE.

STARTING THE ESTABLISHMENT OF A NEW PERMANENT TRAFFIC PATTERN SHALL BEGIN NO EARLIER THAN 11:00 PM FRIDAY AND SHALL BE COMPLETED AND READY FOR OPERATIONS BY 6:00 PM THE FOLLOWING DAY. THE ESTABLISHMENT SHALL BE COMPLETED IN ACCORDANCE WITH THE LANE CLOSURE HOURS SPECIFIED IN THE CONTRACT.

ADVANCE NOTICES SENT PRIOR TO THE PRE-CONSTRUCTION MEETING SHALL BE ADDRESSED TO THE CONTACT PERSON AS SPECIFIED IN SUBSECTION 101.04 OF THE SPECIAL PROVISIONS.

C. PROGRESS NOTICES

ALL IMPACTS TO NORMAL TRAFFIC FLOW" SCHEDULED FOR THE SEVEN DAY PERIOD STARTING ON THE FOLLOWING MONDAY SHALL BE SUBMITTED TO THE R.E. IN WRITING BY 9:00 AM OF EACH FRIDAY.

EACH DAY OF "TEMPORARY LANE CLOSURES" SHALL BE SUBMITTED TO THE R.E. IN WRITING BY 9:00 AM THE DAY IN ADVANCE OF THE START OF THOSE OPERATIONS.

"TEMPORARY LANE CLOSURES" FOR WEEKENDS SHALL BE SUBMITTED TO THE R.E. IN WRITING BY 9:00 AM ON THE IMMEDIATELY PRECEDING FRIDAY.

D. CHANGES TO THE SCHEDULED CLOSURES

REQUEST FOR A CHANGE TO THE TRAFFIC CONTROL REQUIREMENTS IN THE CONTRACT DOCUMENTS SHALL BE SUBMITTED IN WRITING TO THE R.E. AS FOLLOWS:

CHANGES TO THE SCHEDULED HOURS FOR "TEMPORARY LANE CLOSURES" SHALL BE SUBMITTED TO THE R.E. AT LEAST SEVEN CALENDAR DAYS IN ADVANCE OF WHEN THE CHANGE IS PROPOSED TO START.

OTHER PROPOSED CHANGES TO "TEMPORARY LANE CLOSURES" AND ALL CHANGES TO "PERMANENT LANE CLOSURES" SHALL BE SUBMITTED TO THE RE AS SPECIFIED IN THE SPECIFICATIONS.

GENERAL NOTES

1. DIMENSIONS, COLORS, AND DETAILS OF VARIOUS SIZE SIGNS AND ACCESSORY PANELS TO FOLLOW STANDARDS IN THE CURRENT "STANDARD HIGHWAY SIGN PUBLICATION" AND THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".

2. (S) REPRESENTS A SPECIAL SIZE SIGN.

3. LETTERS AND NUMERALS TO CONFORM TO THE CURRENT MANUAL, "STANDARD ALPHABETS FOR HIGHWAY SIGNS" U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.

4. OBTAIN RE'S APPROVAL FOR THE DISTANCE TO BE USED ON THE ADVANCE WARNING SIGNS AND FOR THE SPEED LIMIT TO BE USED ON THE R2-1 SIGN.

5. DISTANCE LEGEND: SIGN NUMBER FOLLOWED BY A LETTER AND DISTANCE, ARE THE SIGN PLACEMENTS FOR USE WITH TCD-3 THROUGH TCD-21 AND PROJECT SPECIFIC PLANS. ALL DISTANCES ARE FROM THE TRANSITION OR POINT OF RESTRICTION.

LETTER	DISTANCE
A	1500'
B	1000'
C	500'
D	__ MILE
E	__ MILES AHEAD
F	AHEAD

BACKING MATERIAL

1. USE ALUMINUM FLAT SHEET OF ALLOY AND TEMPER 5052-H38 OR 6061-T6:
   A. 0.10" THICK FOR ALL CONSTRUCTION SIGNS EXCEPT SIGNS SHOWN MOUNTED ON BREAKAWAY BARRICADES.
   B. 0.024" THICK FOR ALL CONSTRUCTION SIGNS SHOWN MOUNTED ON BREAKAWAY BARRICADES.

TEMPORARY SIGN SUPPORTS

1. USE WELL SEASONED LUMBER FOR SIGN SUPPORTS, FREE OF SPLITS, KNOTS AND WARPS, OR OF STEEL COMPONENTS.

2. WOOD POSTS TO HAVE A UNIFORM CROSS-SECTION AND NOT TO EXCEED THE FOLLOWING DIMENSIONS FOR:
   SINGLE POST = 4" x 6"
   TWO POSTS = 3" x 6" OR 4" x 5"
   THREE POSTS = 3" x 5" OR 4" x 4"

3. NO BRACING IS PERMITTED. VERTICAL CLEARANCES FOR SIGNS MOUNTED ON WOOD SUPPORTS TO BE 7 FOOT MINIMUM. EMBEDMENT DEPTH FOR THE WOOD POST NOT TO EXCEED 3.5 FEET.
4. USE STEEL POSTS IN ACCORDANCE WITH THE STANDARD DETAIL FOR U-POST SIGN SUPPORT.

5. TEMPORARY SIGN SUPPORTS NOT MEETING THIS CRITERIA TO BE SHIELDED BY A LONGITUDINAL BARRIER OR CRASH CUSHIONS.

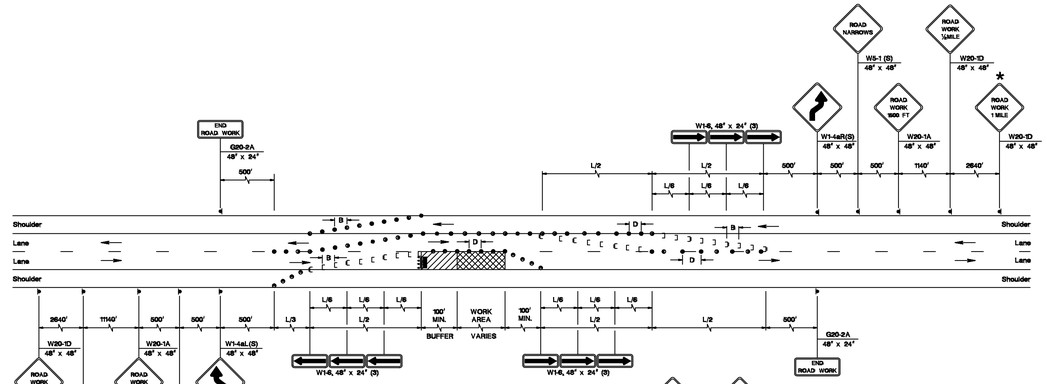
6. USE WOOD POST ONLY ON TEMPORARY SIGN SUPPORT.

SIGN FACES

1. USE SIGN FACES OF ASTM D4956 TYPE VII OR VIII FLUORESCENT ORANGE SHEETING.

FASTENING

1. SECURELY FASTEN ALL SIGNS TO THEIR SUPPORTS WITH BOLTS, NUTS, AND WASHERS, AS SPECIFIED.

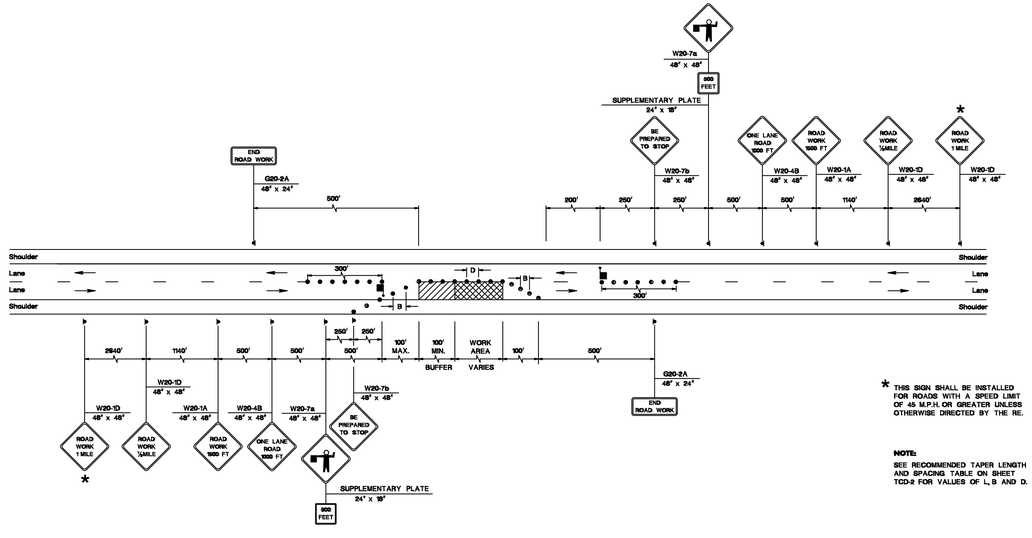


2 LANES, UNDIVIDED, SHOULDER CLOSING

* THIS SIGN SHALL BE INSTALLED FOR ROADS WITH A SPEED LIMIT OF 45 M.P.H. OR GREATER UNLESS OTHERWISE DIRECTED BY THE RE.

NOTE:
SEE RECOMMENDED TAPER LENGTH AND SPACING TABLE ON SHEET TCD-2 FOR VALUES OF L, B AND D.

N.T.S.



2 LANES, UNDIVIDED, LANE & SHOULDER CLOSING W/FLAGGING

* THIS SIGN SHALL BE INSTALLED FOR ROADS WITH A SPEED LIMIT OF 45 M.P.H. OR GREATER UNLESS OTHERWISE DIRECTED BY THE RE.

NOTE:
SEE RECOMMENDED TAPER LENGTH AND SPACING TABLE ON SHEET TCD-2 FOR VALUES OF L, B AND D.

REVISIONS

NO.	DATE	DESCRIPTION

CANOE BROOK PARKWAY IMPROVEMENT PROJECT
ENTIRE LENGTH
TRAFFIC CONTROL NOTES & DETAILS

CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SPRINGFIELD AVENUE
SUMMIT NJ 07901
UNION COUNTY

STATE OF NEW JERSEY
Aaron J. Schrager
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

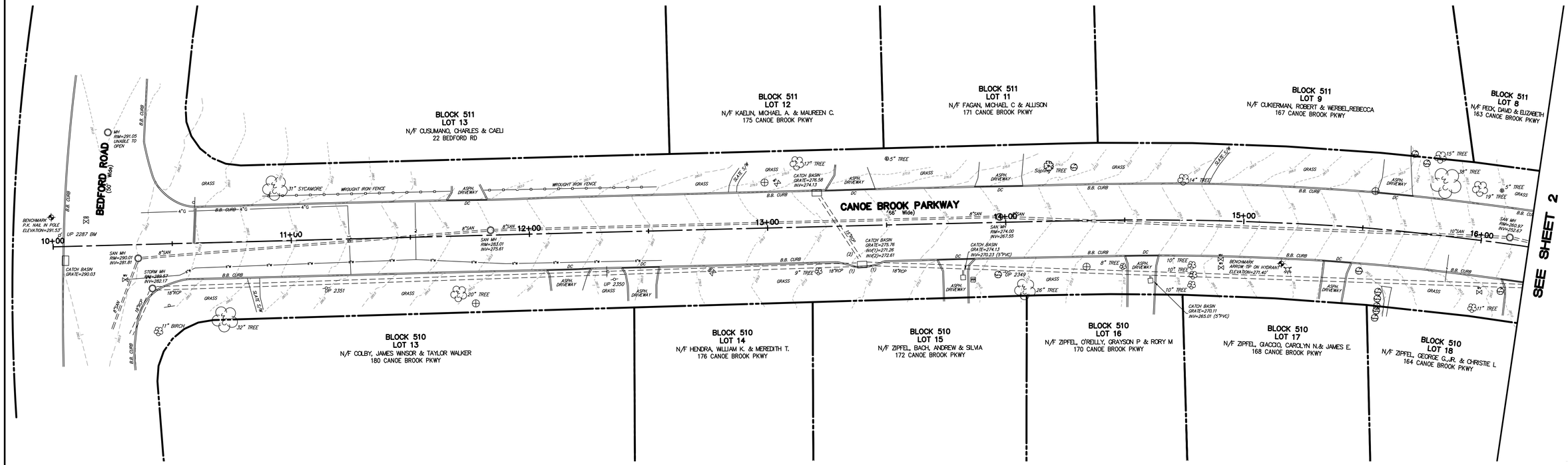
CITY OF SUMMIT
UNION COUNTY, NEW JERSEY

DATE: 5/16/2025

DRAWN BY: AJS

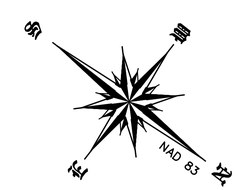
SCALE N.T.S.

C-013



PLAN LEGEND:

DC	DEPRESSED CURB	ELEC MH RIM=5.00	ELECTRIC MANHOLE
	UTILITY POLE	TEL MH RIM=5.00	TELEPHONE MANHOLE
	FIRE HYDRANT		INLET
	WATER VALVE		TREE
	GAS VALVE		SHRUB
	SIGN	IRR	IRRIGATION CONTROL
	LIGHT	x150.00	SPOT GRADE
	CLEAN OUT	EB EB	ELECTRIC JUNCTION BOX
	BENCHMARK		GAS MARKOUT
			WATER MARKOUT
			MAJOR CONTOUR INTERVAL
			MINOR CONTOUR INTERVAL



NOTES:

1. HORIZONTAL DATUM: NAD 1983.

2. VERTICAL DATUM: NAVD 1988 PER CITY OF SUMMIT AERIAL MAPPING CONTROL POINT NO. 2221

3. UNDERGROUND UTILITIES IF DEPICTED ARE BASED ON VISIBLE EVIDENCE AND UTILITY MARK-OUTS OBSERVED DURING THE FIELD SURVEY. THE LACK OF UTILITY INFORMATION DOES NOT DENY THE EXISTENCE OF SAME. REFERENCE TO THE APPROPRIATE UTILITY AUTHORITY SHOULD BE MADE TO VERIFY THE PRESENCE OR ABSENCE OF UTILITIES PRIOR TO ANY EXCAVATION.

4. EXISTING RIGHT OF WAY LINES ALONG CANOE BROOK PARKWAY ARE APPROXIMATE BASED ON A BEST FIT ANALYSIS OF CURB LOCATIONS.

5. EXISTING RIGHT OF WAY LINES ON SIDE STREETS AND PROPERTY LINES ARE APPROXIMATE BASED ON AVAILABLE GIS MAPPING.

NO.	DATE	DESCRIPTION	SURVEYED BY	DRAWN BY	DESIGNED BY	CHECKED BY

BOSWELL ENGINEERING
EST. 1924
ENGINEERS - PLANNERS - SURVEYORS - SCIENTISTS
330 PHILLIPS AVENUE, SOUTH HACKENSACK, NJ 07606
TEL: (201) 641-0770 • FAX: (201) 641-1831
N.J. CERTIFICATE OF AUTHORIZATION No. 24GA27958000

FRANK M. KRUPINSKI

PROFESSIONAL LAND SURVEYOR N.J. LIC. 24GS03719700

EXISTING CONDITIONS PLAN

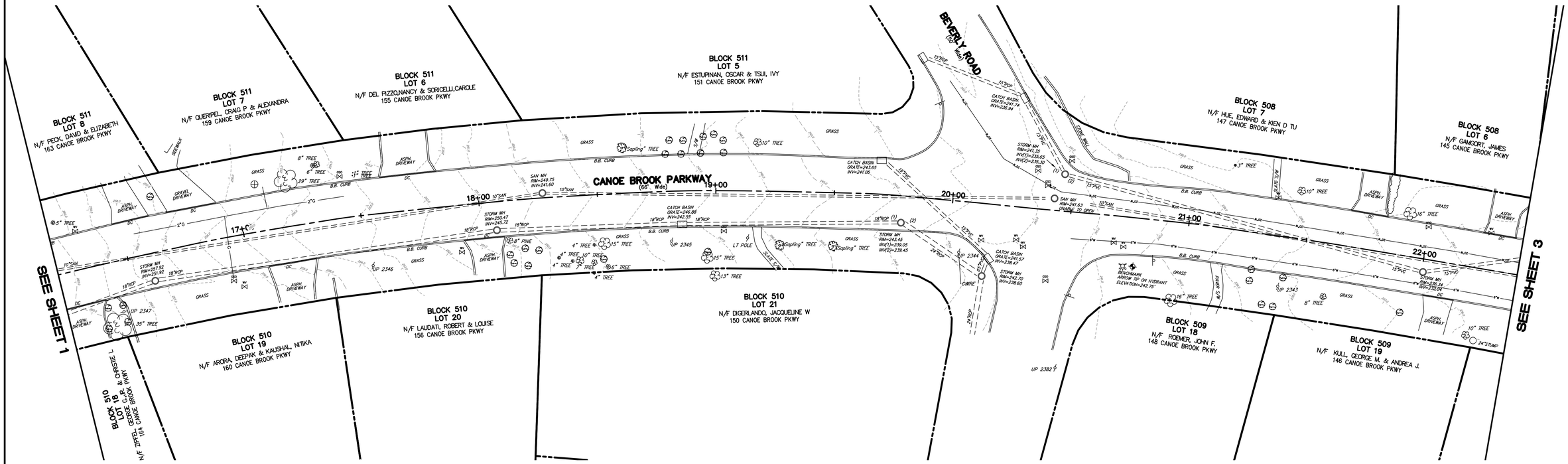
CANOE BROOK PARKWAY

CITY OF SUMMIT

UNION COUNTY NEW JERSEY

SURVEYED BY:R.R.R. DRAWN BY:EAE	DESIGNED BY:--- CHECKED BY:FMK	SCALE: 1"=20'	JOB NO. SU-146	DATE: 10-13-23

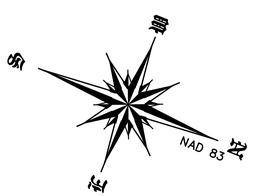
DRAWING NO. SU-146-TS SHEET 1 OF 9



PLAN LEGEND:

DC	DEPRESSED CURB	ELEC MH RIM=5.00	ELECTRIC MANHOLE
	UTILITY POLE	TEL MH RIM=5.00	TELEPHONE MANHOLE
	FIRE HYDRANT		INLET
	WATER VALVE		TREE
	GAS VALVE		SHRUB
	SIGN	IRR	IRRIGATION CONTROL
	LIGHT	×150.00	SPOT GRADE
	CLEAN OUT	EB EB	ELECTRIC JUNCTION BOX
	BENCHMARK		

GAS MARKOUT
WATER MARKOUT
MAJOR CONTOUR INTERVAL
MINOR CONTOUR INTERVAL



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BOSWELL ENGINEERING
EST. 1924
ENGINEERS - PLANNERS - SURVEYORS - SCIENTISTS
330 PHILLIPS AVENUE, SOUTH HACKENSACK, NJ 07606
TEL: (201) 641-0770 • FAX: (201) 641-1831
N.J. CERTIFICATE OF AUTHORIZATION No. 24GA27958000

FRANK M. KRUPINSKI

PROFESSIONAL LAND SURVEYOR N.J. LIC. 24GS03719700

EXISTING CONDITIONS PLAN

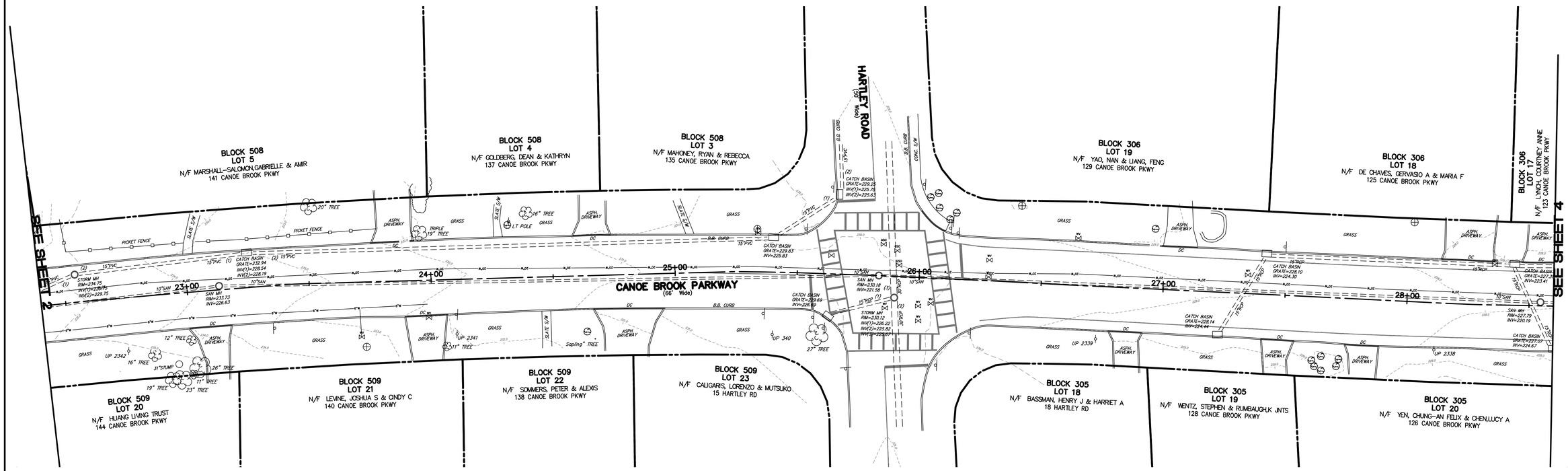
CANOE BROOK PARKWAY

CITY OF SUMMIT

UNION COUNTY NEW JERSEY

SURVEYED BY:R.R.R. DRAWN BY:EAE	DESIGNED BY:--- CHECKED BY:FMK	SCALE: 1"=20'	JOB NO. SU-146	DATE: 10-13-23

DRAWING NO. SU-146-TS SHEET 2 OF 9



PLAN LEGEND:

DC	DEPRESSED CURB		ELECTRIC MANHOLE
	UTILITY POLE		TELEPHONE MANHOLE
	FIRE HYDRANT		INLET
	WATER VALVE		TREE
	GAS VALVE		SHRUB
	SIGN	IRR	IRRIGATION CONTROL
	LIGHT	150.00	SPOT GRADE
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GAS MARKOUT
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MAJOR CONTOUR INTERVAL
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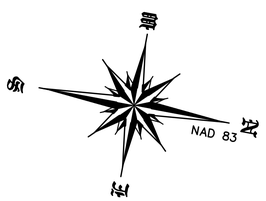

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EXISTING CONDITIONS PLAN

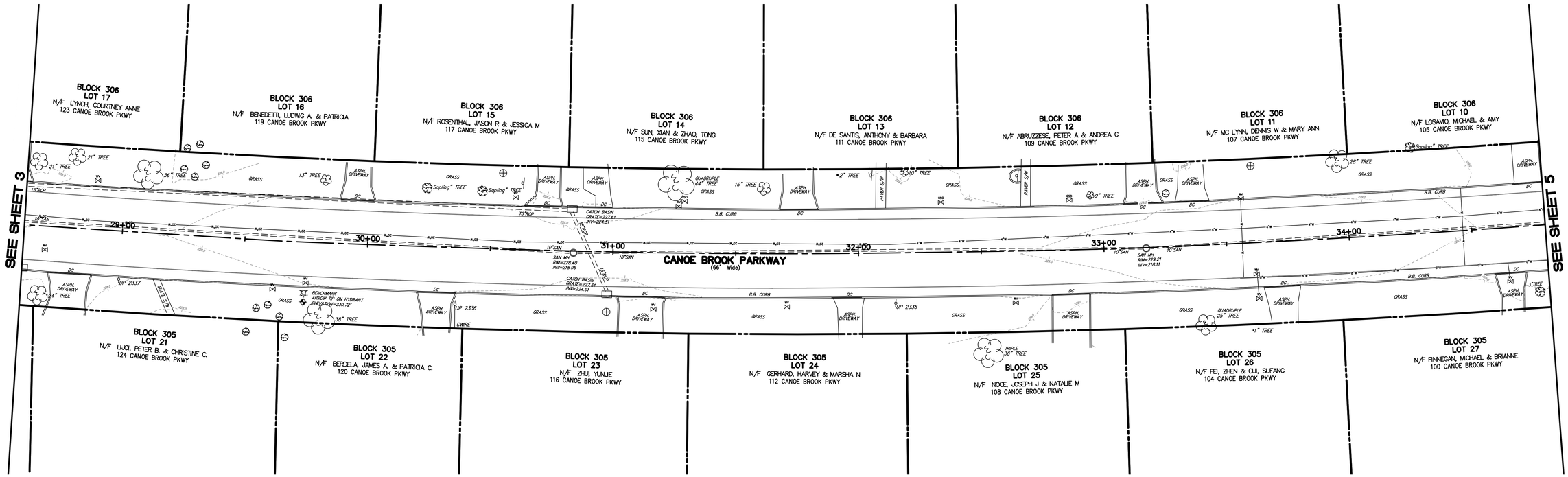
CANOE BROOK PARKWAY

CITY OF SUMMIT

UNION COUNTY NEW JERSEY

SURVEYED BY:R.R.R. DRAWN BY:EAE	DESIGNED BY:--- CHECKED BY:FMK	SCALE: 1"=20'	JOB NO. SU-146	DATE: 10-13-23

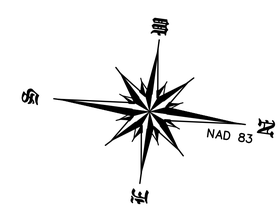
DRAWING NO. SU-146-TS SHEET 3 OF 9



PLAN LEGEND:

DC	DEPRESSED CURB		ELECTRIC MANHOLE
	UTILITY POLE		TELEPHONE MANHOLE
	FIRE HYDRANT		INLET
	WATER VALVE		TREE
	GAS VALVE		SHRUB
	SIGN	IRR	IRRIGATION CONTROL
	LIGHT	150.00	SPOT GRADE
	CLEAN OUT	EB	ELECTRIC JUNCTION BOX
	BENCHMARK		

GAS MARKOUT
WATER MARKOUT
MAJOR CONTOUR INTERVAL
MINOR CONTOUR INTERVAL



NOTES:

1. HORIZONTAL DATUM: NAD 1983.

2. VERTICAL DATUM: NAVD 1988 PER CITY OF SUMMIT AERIAL MAPPING CONTROL POINT NO. 2221

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4. EXISTING RIGHT OF WAY LINES ALONG CANOE BROOK PARKWAY ARE APPROXIMATE BASED ON A BEST FIT ANALYSIS OF CURB LOCATIONS.

5. EXISTING RIGHT OF WAY LINES ON SIDE STREETS AND PROPERTY LINES ARE APPROXIMATE BASED ON AVAILABLE GIS MAPPING.

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BOSWELL ENGINEERING
EST. 1924
ENGINEERS - PLANNERS - SURVEYORS - SCIENTISTS
330 PHILLIPS AVENUE, SOUTH HACKENSACK, NJ 07606
TEL: (201) 641-0770 • FAX: (201) 641-1831
N.J. CERTIFICATE OF AUTHORIZATION No. 24GA27958000

FRANK M. KRUPINSKI

PROFESSIONAL LAND SURVEYOR N.J. LIC. 24GS03719700

EXISTING CONDITIONS PLAN

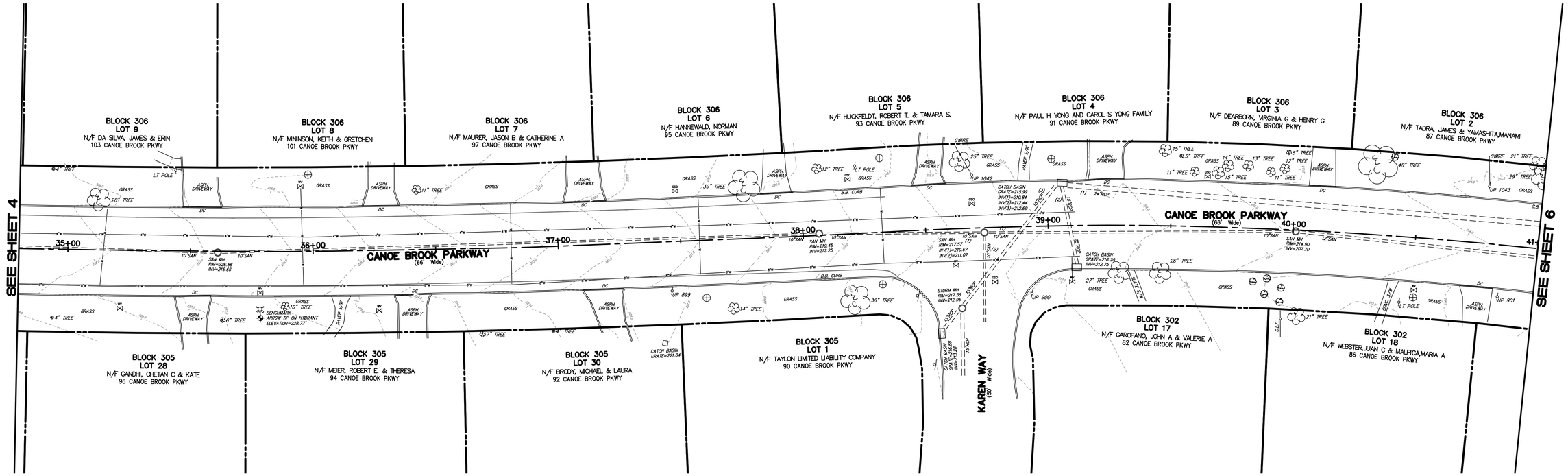
CANOE BROOK PARKWAY

CITY OF SUMMIT

UNION COUNTY NEW JERSEY

SURVEYED BY:R.R.R. DRAWN BY:EAE	DESIGNED BY:--- CHECKED BY:FMK	SCALE: 1"=20'	JOB NO. SU-146	DATE: 10-13-23

DRAWING NO. SU-146-TS SHEET 4 OF 9



PLAN LEGEND:

DC	DEPRESSED CURB		ELECTRIC MANHOLE
	UTILITY POLE		TELEPHONE MANHOLE
	FIRE HYDRANT		INLET
	WATER VALVE		TREE
	GAS VALVE		SHRUB
	SIGN	IRR	IRRIGATION CONTROL
	LIGHT	150.00	SPOT GRADE
	CLEAN OUT		ELECTRIC JUNCTION BOX
	BENCHMARK		

GAS MARKOUT
WATER MARKOUT
MAJOR CONTOUR INTERVAL
MINOR CONTOUR INTERVAL

NOTES:

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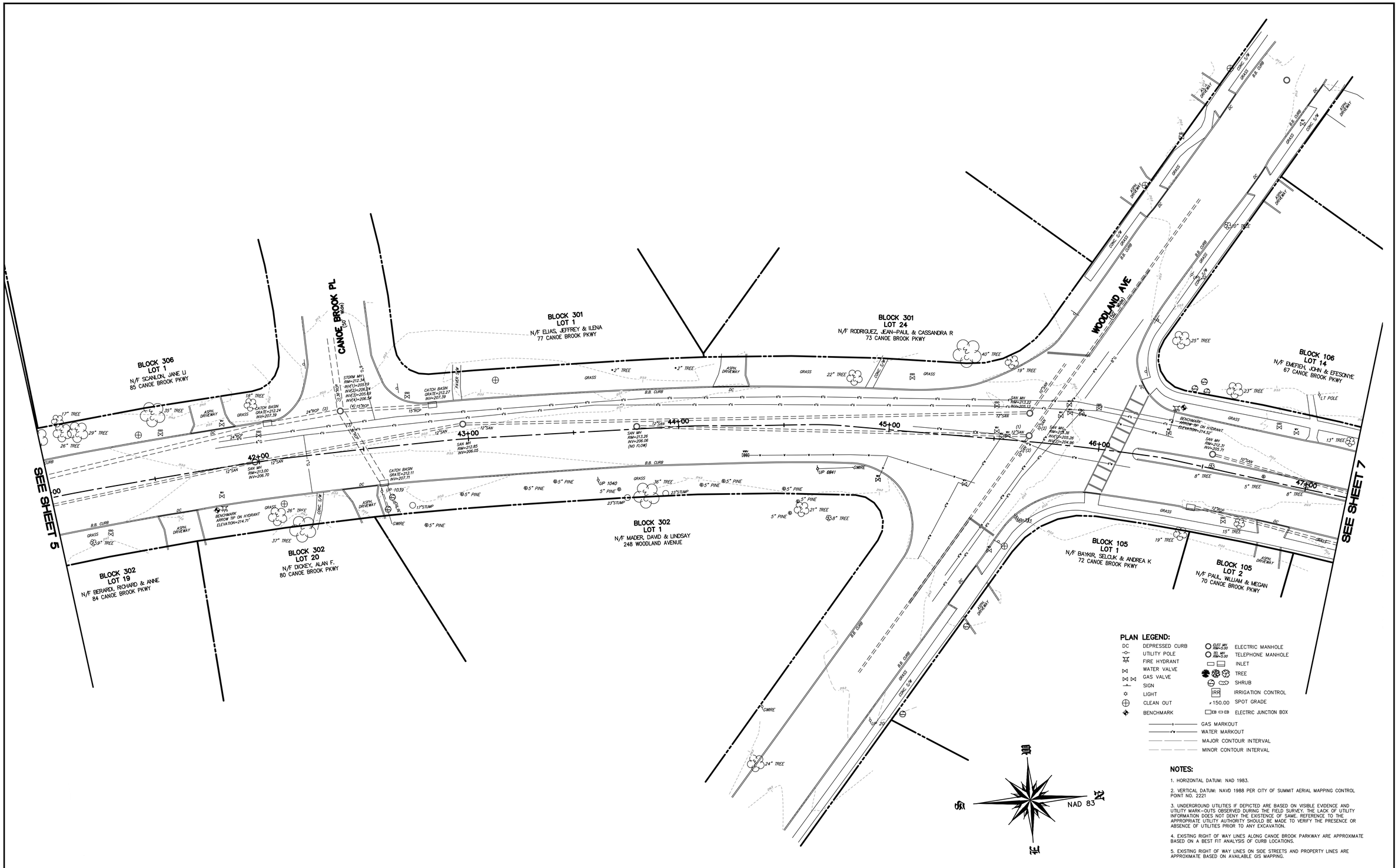
CITY OF SUMMIT

UNION COUNTY NEW JERSEY

SURVEYED BY:R.R.R. DRAWN BY:EAE	DESIGNED BY:--- CHECKED BY:FMK	SCALE: 1"=20'	JOB NO. SU-146	DATE: 10-13-23

DRAWING NO. SU-146-TS SHEET 5 OF 9



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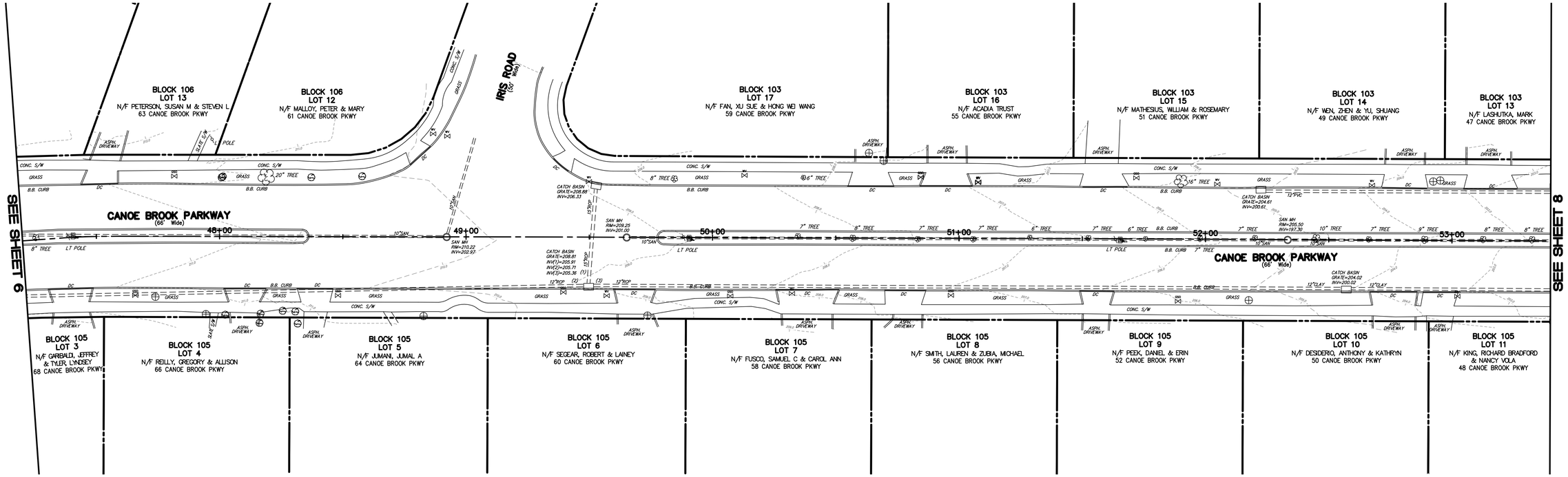
UNION COUNTY NEW JERSEY

SURVEYED BY:R.R.R. DRAWN BY:EAE	DESIGNED BY:--- CHECKED BY:FMK	SCALE: 1"=20'	JOB NO. SU-146	DATE: 10-13-23

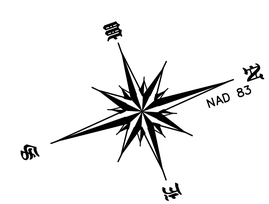
DRAWING NO. SU-146-TS SHEET 6 OF 9



PLAN LEGEND:

DC	DEPRESSED CURB	ELEC MH RIM=5.00	ELECTRIC MANHOLE
	UTILITY POLE	TEL MH RIM=5.00	TELEPHONE MANHOLE
	FIRE HYDRANT		INLET
	WATER VALVE		TREE
	GAS VALVE		SHRUB
	SIGN	IRR	IRRIGATION CONTROL
	LIGHT	150.00	SPOT GRADE
	CLEAN OUT	EB EB	ELECTRIC JUNCTION BOX
	BENCHMARK		

GAS MARKOUT
WATER MARKOUT
MAJOR CONTOUR INTERVAL
MINOR CONTOUR INTERVAL



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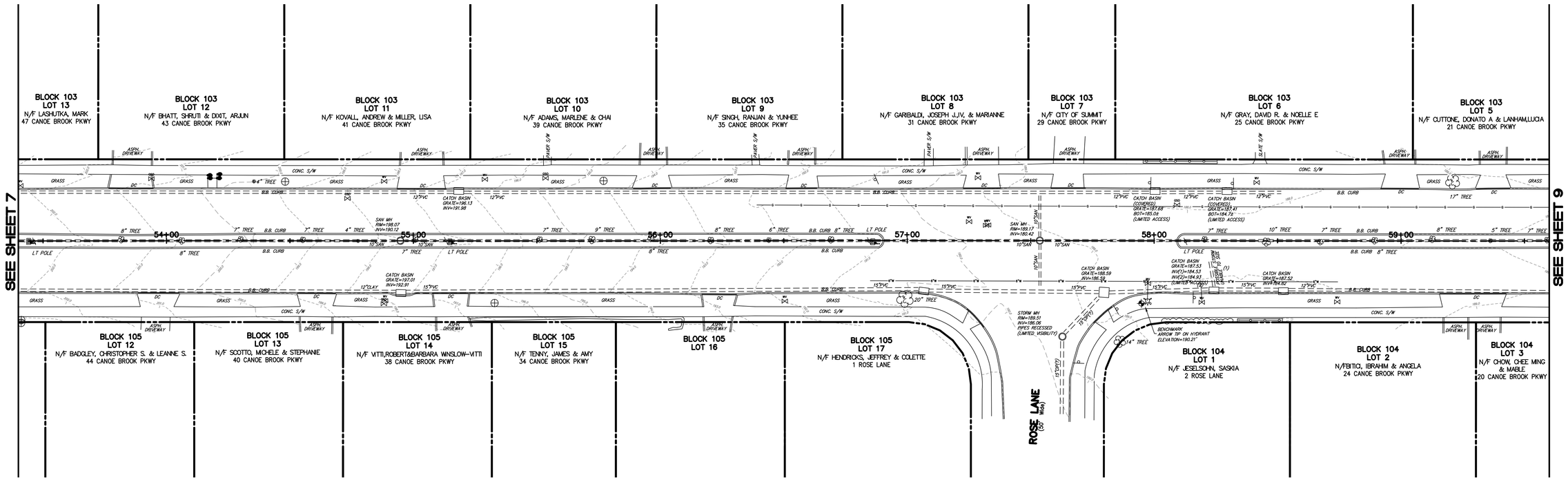
CANOE BROOK PARKWAY

CITY OF SUMMIT

UNION COUNTY NEW JERSEY

SURVEYED BY:R.R.R. DRAWN BY:EAE	DESIGNED BY:--- CHECKED BY:FMK	SCALE: 1"=20'	JOB NO. SU-146	DATE: 10-13-23

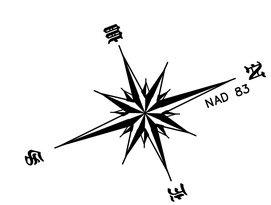
DRAWING NO. SU-146-TS SHEET 7 OF 9



PLAN LEGEND:

DC	DEPRESSED CURB	ELEC MH RIM=5.00	ELECTRIC MANHOLE
	UTILITY POLE	TEL MH RIM=5.00	TELEPHONE MANHOLE
	FIRE HYDRANT		INLET
	WATER VALVE		TREE
	GAS VALVE		SHRUB
	SIGN	IRR	IRRIGATION CONTROL
	LIGHT	150.00	SPOT GRADE
	CLEAN OUT	EB EB	ELECTRIC JUNCTION BOX
	BENCHMARK		

GAS MARKOUT
WATER MARKOUT
MAJOR CONTOUR INTERVAL
MINOR CONTOUR INTERVAL



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EXISTING CONDITIONS PLAN

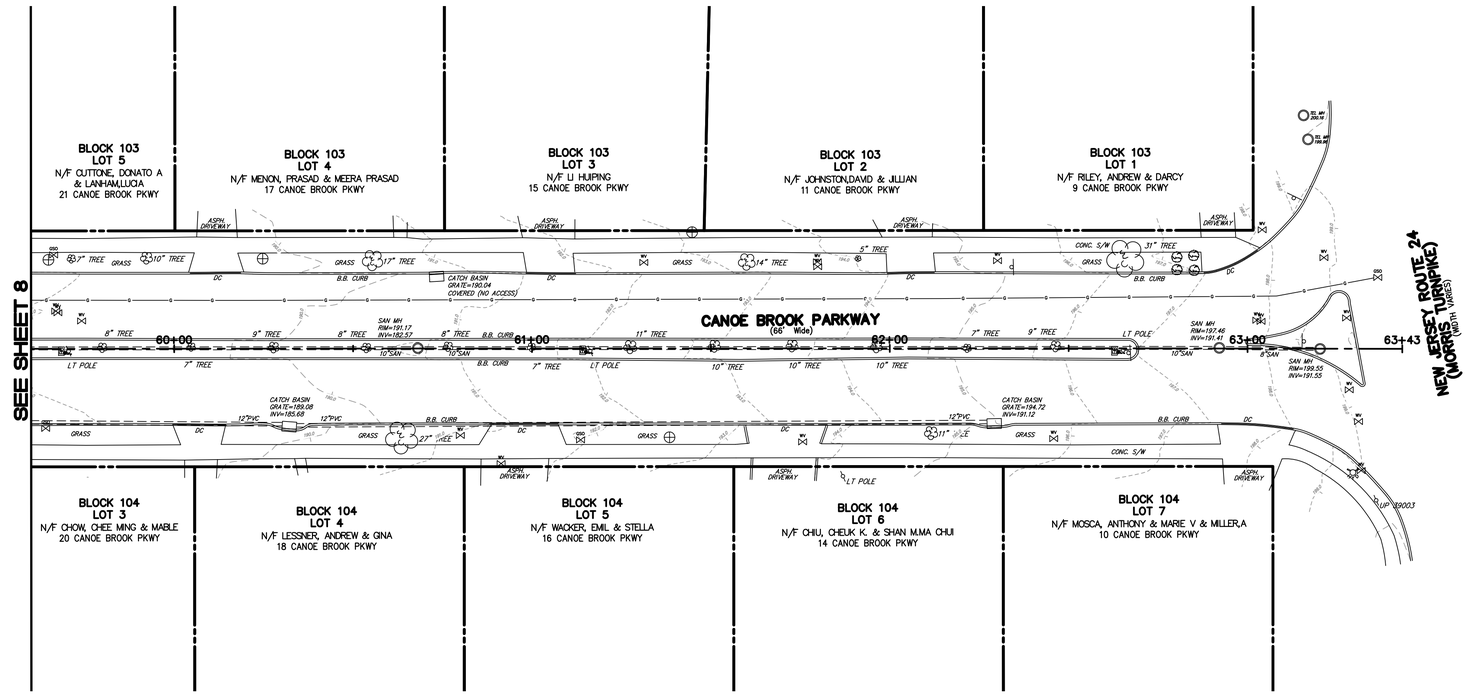
CANOE BROOK PARKWAY

CITY OF SUMMIT

UNION COUNTY NEW JERSEY

SURVEYED BY:R.R.R. DRAWN BY:EAE	DESIGNED BY:--- CHECKED BY:FMK	SCALE: 1"=20'	JOB NO. SU-146	DATE: 10-15-23

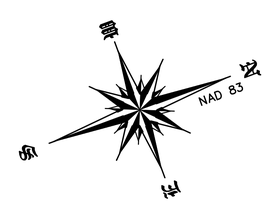
DRAWING NO. SU-146-TS SHEET 8 OF 9



PLAN LEGEND:

DC	DEPRESSED CURB		ELECTRIC MANHOLE
	UTILITY POLE		TELEPHONE MANHOLE
	FIRE HYDRANT		INLET
	WATER VALVE		TREE
	GAS VALVE		SHRUB
	SIGN	IRR	IRRIGATION CONTROL
	LIGHT	150.00	SPOT GRADE
	CLEAN OUT	EB EB	ELECTRIC JUNCTION BOX
	BENCHMARK		

GAS MARKOUT
WATER MARKOUT
MAJOR CONTOUR INTERVAL
MINOR CONTOUR INTERVAL



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DRAWING NO. SU-146-TS SHEET 9 OF 9