

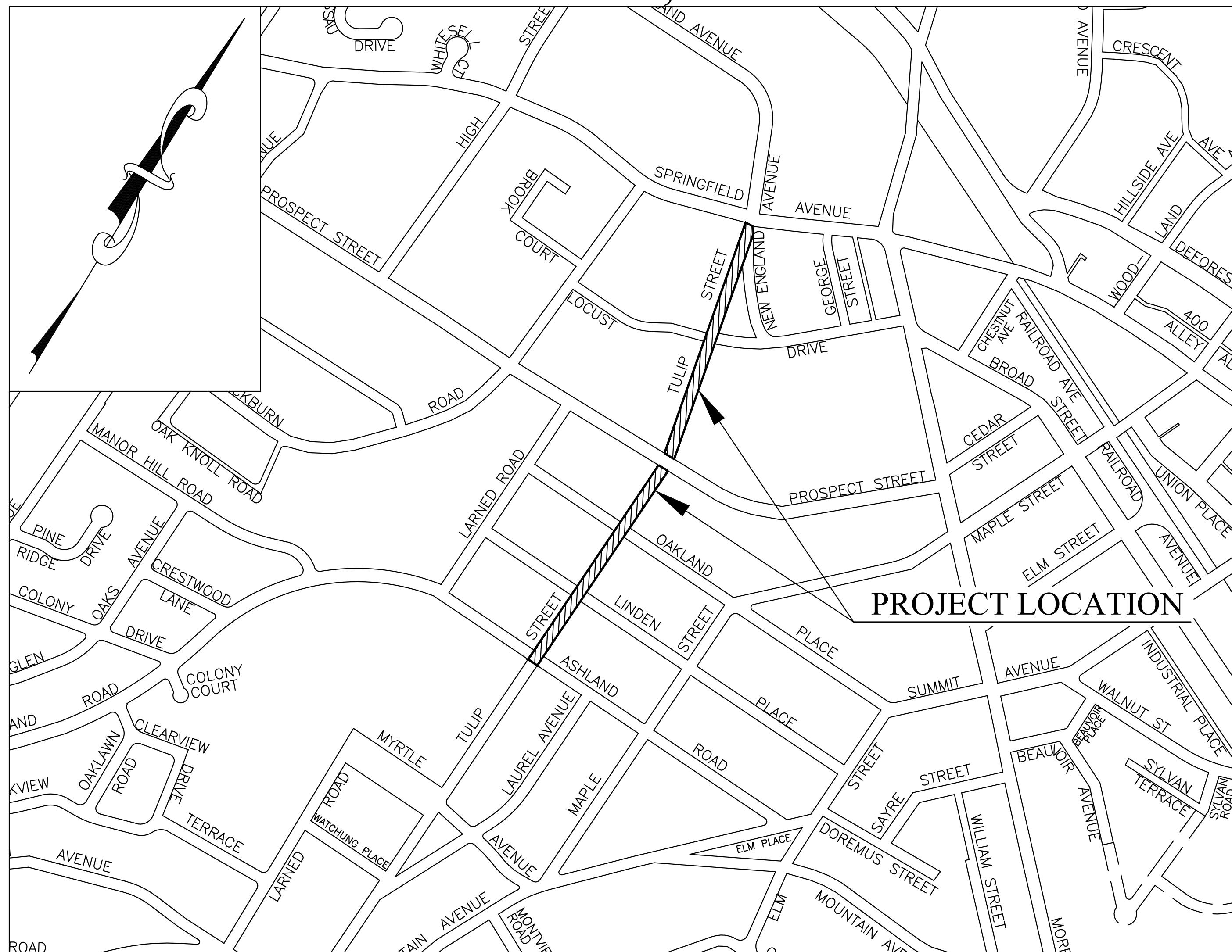
# TULIP STREET IMPROVEMENT PROJECT SECTION 2

## SPRINGFIELD AVENUE TO ASHLAND ROAD 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. NO SEPARATE PAYMENT SHALL BE MADE FOR FLAGGERS. ALL COSTS FOR FLAGGERS SHALL BE INCLUDED IN VARIOUS ITEMS IN THE BID PROPOSAL.
3. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ACCESS TO ALL DRIVEWAYS DURING CONSTRUCTION. THE CONTRACTOR SHALL INSTALL AND MAINTAIN DENSE GRADED AGGREGATE OR HOT MIX ASPHALT TO PROVIDE A RIDING SURFACE FOR VEHICLE ACCESS TO EACH PROPERTY. NO SEPARATE PAYMENT SHALL BE MADE FOR MAINTAINING ACCESS TO DRIVEWAYS. ALL DRIVEWAY ACCESS COSTS SHALL BE INCLUDED IN THE VARIOUS ITEMS IN THE PROJECT.
4. THE ROAD IS TO BE PROOF ROLLED AFTER MILLING IS COMPLETED BUT BEFORE FINAL PAVING. PROOF ROLLING MUST BE COMPLETED WITH A LOADED DUMP TRUCK IN THE PRESENCE OF THE ENGINEER OR PROJECT INSPECTOR. ALL COSTS ASSOCIATED WITH PROOF ROLLING SHALL BE INCLUDED IN BID ITEM FOR MILLING.
5. THE CONTRACTOR SHALL LEAVE THE MILLED ROAD UNPAVED FOR AT LEAST 48 HOURS AND SHALL PROOF ROLL PRIOR TO PAVING. THE CONTRACTOR SHALL INSTALL HOT MIX ASPHALT BASE COURSE AS A TEMPORARY SURFACE IN AREAS DEEMED NECESSARY BY THE ENGINEER. NO SEPARATE PAYMENT SHALL BE MADE FOR TEMPORARY PAVEMENT. ALL TEMPORARY PAVEMENT COSTS SHALL BE INCLUDED IN THE VARIOUS ITEMS IN THE PROJECT.
6. ALLOWABLE HOURS OF WORK ARE 8:00 AM TO 4:30 PM. 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. ALL COSTS FOR MATERIAL AND EQUIPMENT STORAGE SHALL BE INCLUDED IN THE BID ITEM "MOBILIZATION".
7. 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, 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 OF POLICE SERVICES DIRECTLY TO THE OFFICERS HIRED FOR THE SCHEDULED TIMES.
8. NO HOUSE LEADER DRAINS ARE TO BE INSTALLED UNDER DRIVEWAY APRONS OR THROUGH DROP CURBS.
9. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ALL UTILITIES TO RAISE OR LOWER MANHOLES, METERS, VALVES, ETC. TO GRADE AS WORK PROGRESSES. ALL COSTS FOR COORDINATION WITH UTILITY COMPANIES SHALL BE INCLUDED IN THE BID ITEM "UTILITY COORDINATION". 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.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT/RESTORATION OF ANY SIDEWALK, CURB OR PAVEMENT WHICH IS DAMAGED DURING CONSTRUCTION. ALL REPLACEMENT/RESTORATION MUST BE COMPLETED BEFORE ACCEPTANCE OF THE PROJECT BY THE CITY AT NO ADDITIONAL COST.
11. THE CONTRACTOR IS RESPONSIBLE TO PROTECT ALL TREES WITHIN THE PROJECT DURING CONSTRUCTION, UNLESS OTHERWISE NOTED. DAMAGE TO EXISTING TREES WILL BE EVALUATED BY THE CITY FORESTER. THE PROJECT SPECIFICATIONS IMPOSES 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". THE CITY FORESTER SHALL BE CONSULTED TO ASSESS THE CONDITION OF AN EXISTING TREE WHICH MAY BE COMPROMISED BY THE INSTALLATION OF NEW CURBING. IF THE TREE IS DETERMINED TO BE HEALTHY, A METAL PLATE MAY BE USED IN LIEU OF CURBING AT THE DISCRETION OF THE FORESTER OR THE ENGINEER. NO SEPARATE PAYMENT SHALL BE MADE FOR THE INSTALLATION OF ANY METAL PLATES. ALL COSTS FOR METAL PLATES SHALL BE INCLUDED IN THE VARIOUS ITEMS BID IN THE PROJECT.
12. 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.
13. 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.
14. ALL COSTS ASSOCIATED WITH THE RESETTING OR REPLACEMENT OF ANY WALKWAYS CONSTRUCTED OF GRANITE BLOCK, BRICK, BRICK PAVERS, STONE, SLATE, ETC. SHALL BE INCLUDED IN THE BID ITEM FOR "CONCRETE SIDEWALK." NO SEPARATE PAYMENT SHALL BE MADE FOR THE INSTALLATION, RECONSTRUCTION OR RESETTING OF CURB ALONG THE SIDES OF A DRIVEWAY LEADING TO THE SIDEWALK WHERE CURBING CURRENTLY EXISTS.
15. NO SEPARATE PAYMENT SHALL BE MADE FOR THE EXCAVATION OF UNCLASSIFIED MATERIAL ASSOCIATED WITH FULL DEPTH 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 "FULL DEPTH REPAIR, IF AND WHERE DIRECTED."
16. NO SEPARATE PAYMENT SHALL BE MADE FOR THE EXCAVATION OF UNCLASSIFIED MATERIAL BEHIND THE CURB. ALL COSTS ASSOCIATED WITH THE REMOVAL OF ANY EXISTING MATERIAL BEHIND THE PROPOSED CURB SHALL BE INCLUDED IN THE BID ITEM "GRANITE BLOCK CURB".
17. NO SEPARATE PAYMENT SHALL BE MADE FOR THE INSTALLATION AND MAINTENANCE OF ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES. ALL COSTS ARE TO BE INCLUDED IN THE BID ITEM "MOBILIZATION". INLET FILTERS SHALL BE INSTALLED AT ALL EXISTING OR NEW CATCH BASINS AND SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED AND THE SURFACE COURSE IS INSTALLED.
18. 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 CUT SHEET AND ASSOCIATED PLAN PRIOR TO THE BEGINNING OF CONSTRUCTION. CUT SHEETS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
19. SHOP DRAWINGS ARE TO BE SUBMITTED AT A MINIMUM OF THREE (3) WEEKS PRIOR TO CONSTRUCTION FOR ITEMS SUCH AS, BUT NOT LIMITED TO, DRAINAGE STRUCTURES, SIGNS & POSTS, CONCRETE FOOTINGS RRFB SETUPS, ETC. ALL DRAINAGE STRUCTURES AND FOOTINGS MUST BE PREPARED/DESIGNED BY A NEW JERSEY PROFESSIONAL ENGINEER. ALL SHOP DRAWINGS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
20. SITE SURVEY PROVIDED BY BOSWELL ENGINEERING. (201) 641 - 0770
21. 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.
22. ALL REGULATORY, WARNING, AND GUIDE SIGNS, AS WELL AS STREET NAME SIGNS & POSTS, WITHIN PROJECT LIMITS ARE TO BE REPLACED, UNLESS NOTED OTHERWISE. ALL PLAQUES, POSTS, AND MOUNTING SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
23. 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 RECONSTRUCTED INLET.
24. ANY PROPOSED PAVEMENT THICKNESS NOTED HEREIN SHALL BE POST-COMPACTED, UNLESS OTHERWISE NOTED.
25. ALL PAVEMENT STRIPING & MARKINGS SHALL BE THERMOPLASTIC PER NJDOT STANDARDS.



INDEX OF SHEETS	
SHEET	DESCRIPTION
1	COVER SHEET
2-3	CONSTRUCTION PLANS
4-6	SOIL EROSION & SEDIMENT CONTROL PLANS
7	TRAFFIC DETOUR PLAN
8-10	CONSTRUCTION DETAILS
1 OF 4	EXISTING CONDITIONS SURVEY (PROVIDED BY BOSWELL)
2 OF 4	EXISTING CONDITIONS SURVEY (PROVIDED BY BOSWELL)
3 OF 4	EXISTING CONDITIONS SURVEY (PROVIDED BY BOSWELL)
4 OF 4	EXISTING CONDITIONS SURVEY (PROVIDED BY BOSWELL)

#### UTILITIES

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

Jersey Central Power and Light  
300 Madison Avenue  
Morristown, NJ 07960  
(888) 544-4877

Verizon  
445 Georges Road  
North Brunswick, NJ 08902  
(201) 996-6610

City of Summit  
Division of Public Works  
41 Chatham Road  
Summit, NJ 07901  
(908) 273-6404

New Jersey American Water Co.  
167 JFK Parkway  
Short Hills, NJ 07078  
(908) 295-1496

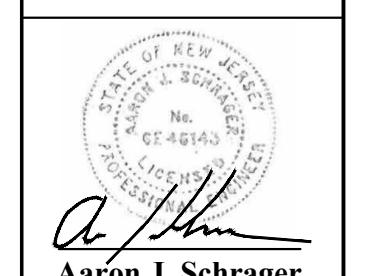
Funding Note:  
This project is funded by the City of Summit and the NJDOT.

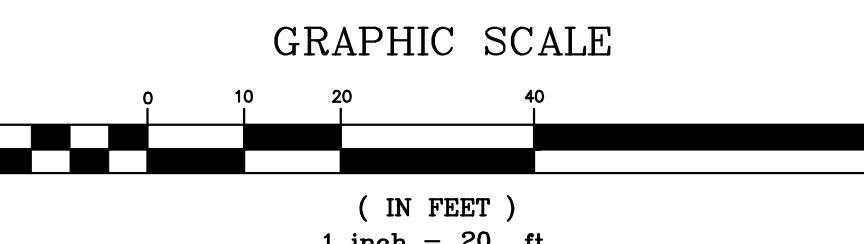
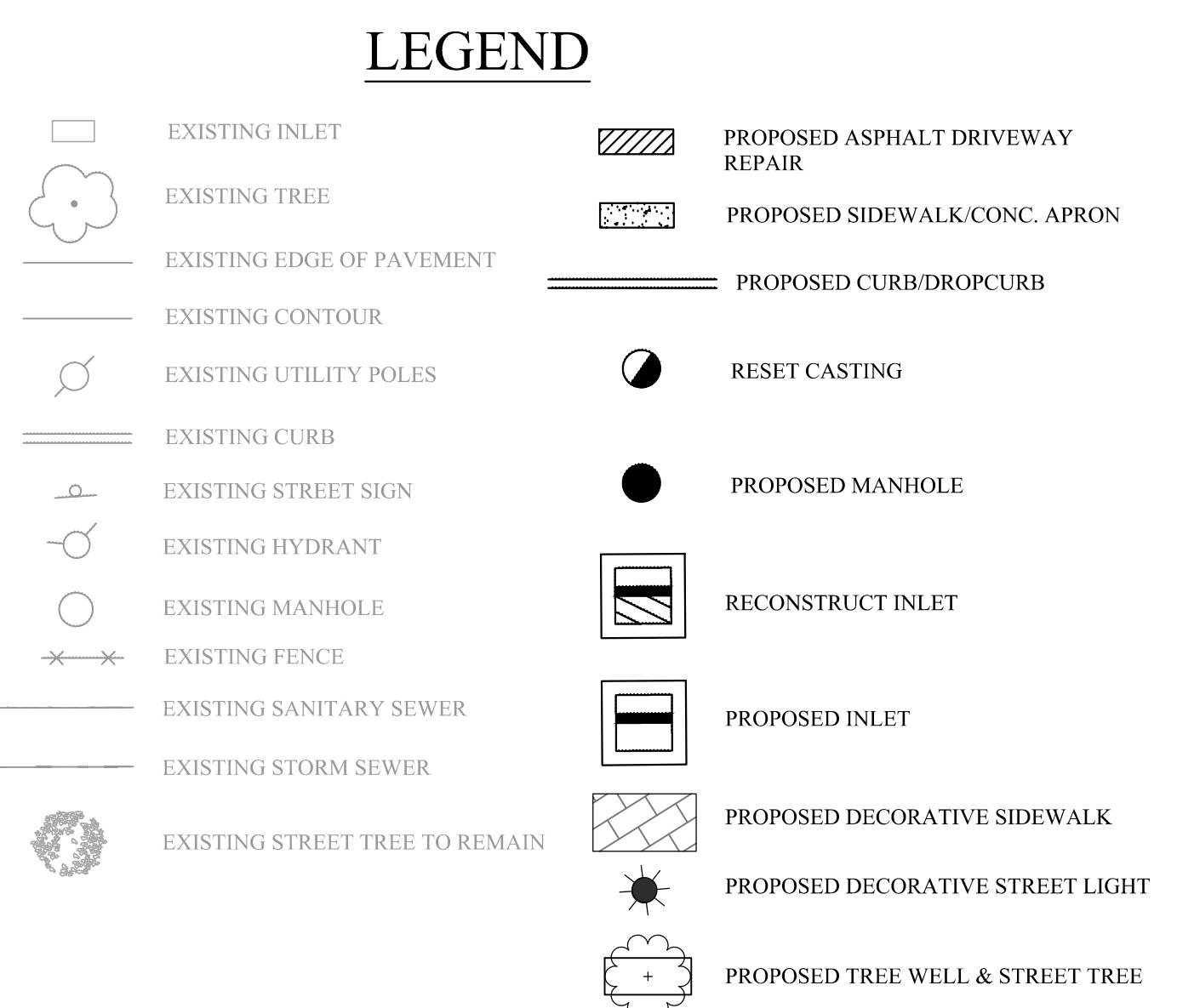
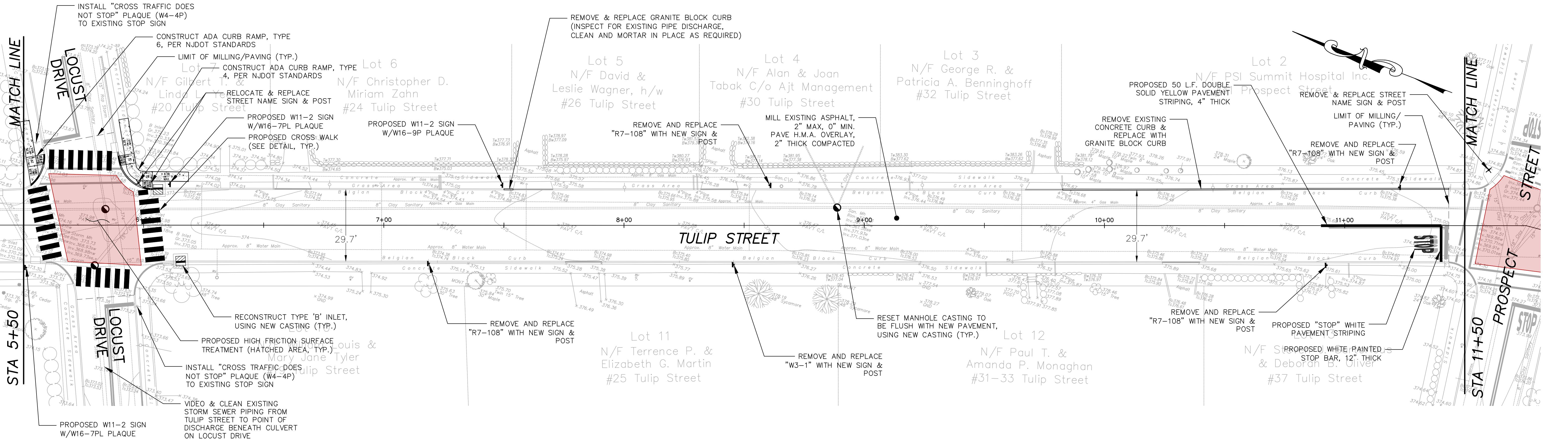
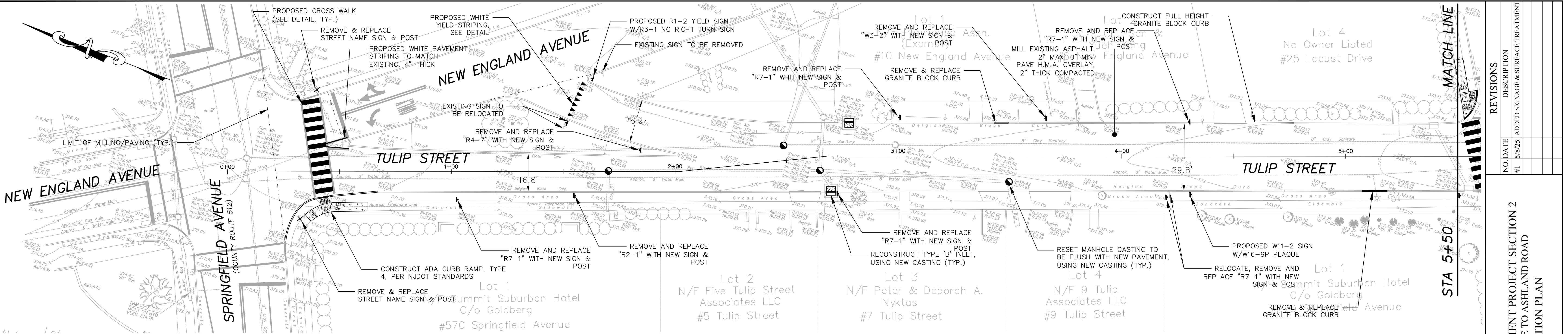
Survey Note:  
The contractor is responsible for stakeout and vertical control of the project. Stakeout is required for the project. AutoCAD drawings are available for this project upon request. Cut sheets shall be submitted prior to the start of any work.

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.

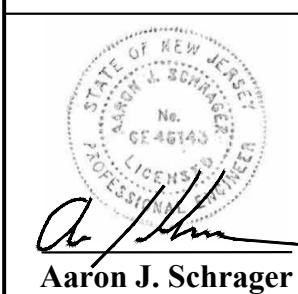
Specifications Note:  
New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction 2019 and all of its amendments and Baseline Document Changes are to govern all construction here in.

REVISIONS	DESCRIPTION	UNIT	QTY
NO. DATE	UPDATED SUMMARY OF QUANTITIES		
#1 5/6/25			
TULIP STREET IMPROVEMENT PROJECT			
SPRINGFIELD AVENUE TO ASHLAND ROAD			
COVER SHEET			
CITY OF SUMMIT, UNION CO., N.J.			
DIVISION OF ENGINEERING			
DEPARTMENT OF COMMUNITY SERVICES			
SUMMIT NJ 07901			
UNION COUNTY, NEW JERSEY			
CITY OF SUMMIT			
UNION COUNTY, NEW JERSEY			
DATE: 9/14/2023			
DRAWN BY: SK			
SCALE AS SHOWN			
1 OF 10			





CITY OF SUMMIT, 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

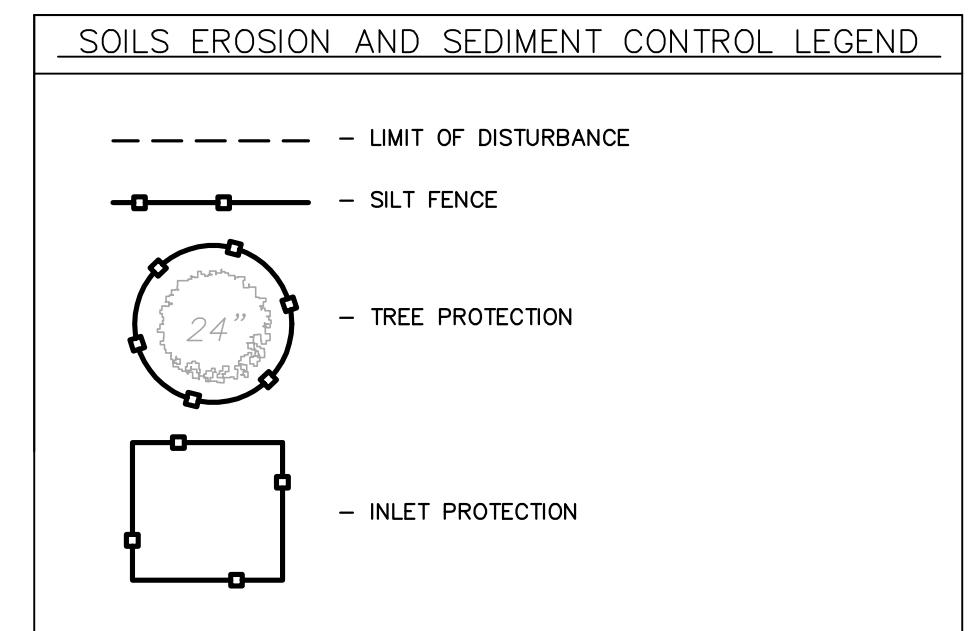
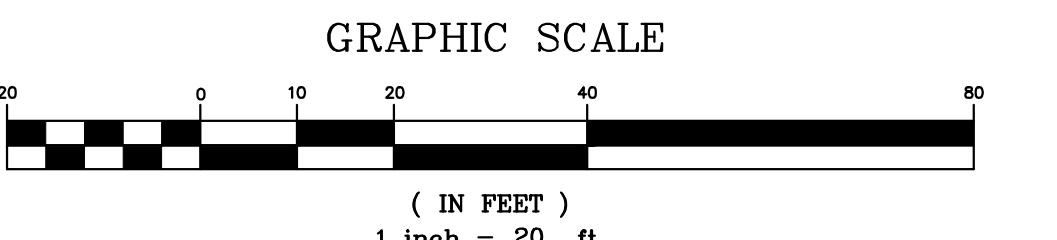
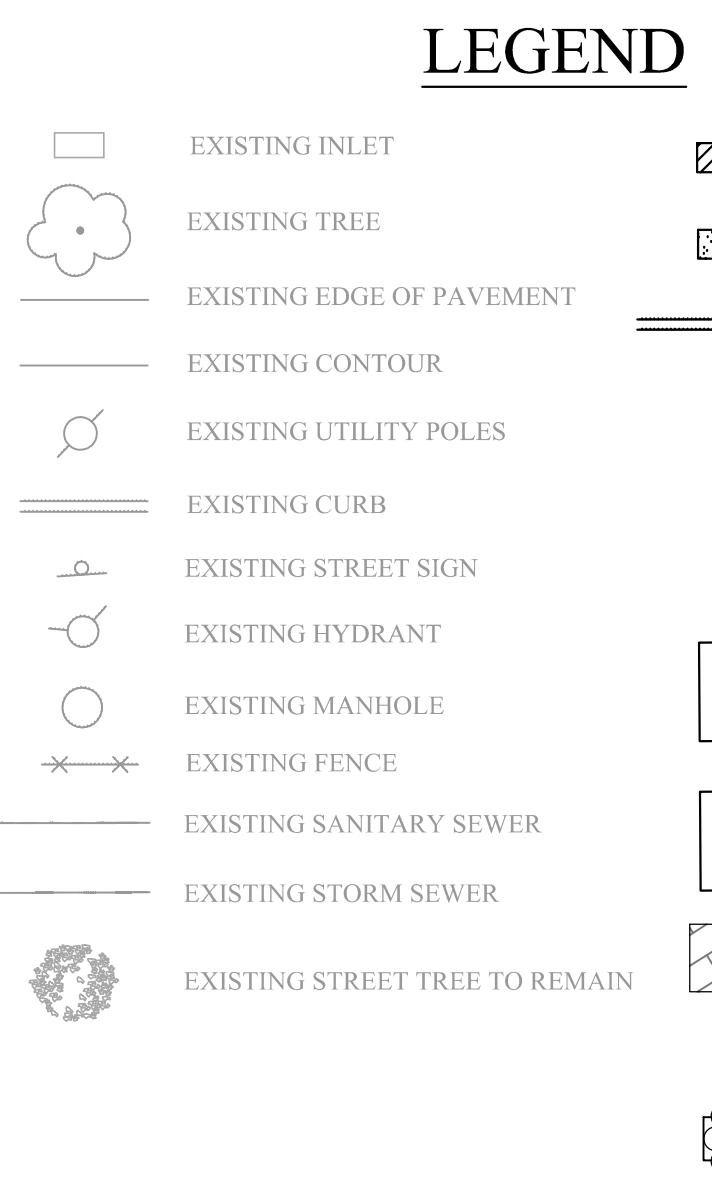
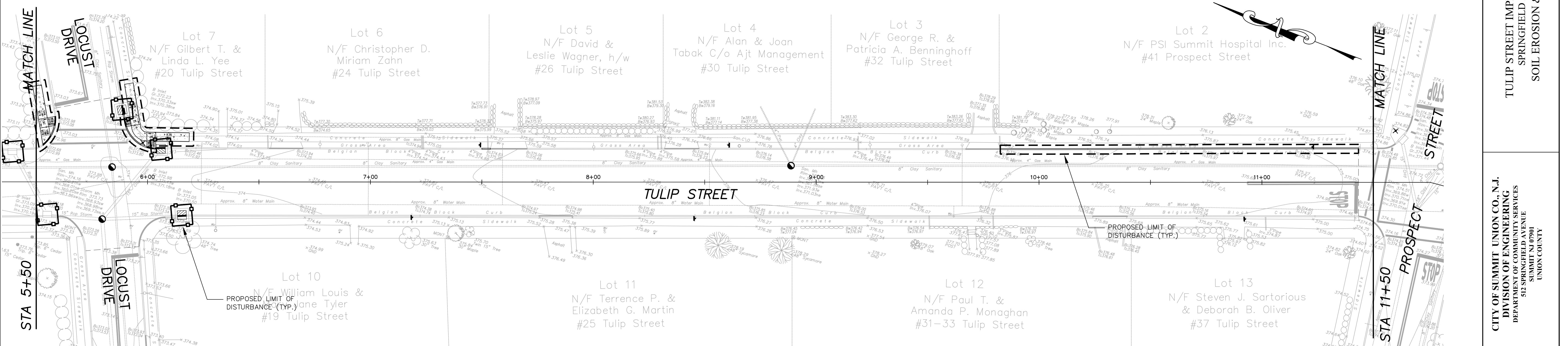
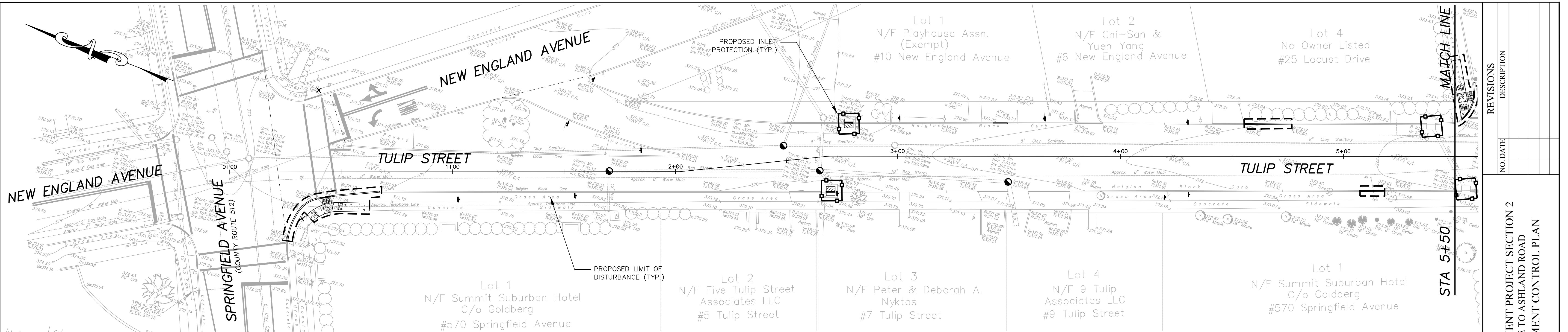


DATE:  
9/14/2023

DRAWN  
BY: SK

SCALE  
1"=20'  
2 OF 10





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

**SOILS MAP**  
SCALE: 1"=150'  
MAP SOURCED FROM USDA WEB SOIL SURVEY  
THE SITE IS MADE UP OF:  
BouD (BOONTON-URBAN LAND COMPLEX, 15 TO 25 PERCENT SLOPES)  
BouB (BOONTON-URBAN LAND-HALEDON COMPLEX, 0 TO 8 PERCENT SLOPES)  
HoTB (HALEDON-URBAN LAND-HASBROOK COMPLEX, 0 TO 8 PERCENT SLOPES)  
UR (URBAN LAND)

**TOTAL PROJECT AREA OF DISTURBANCE AREA = 6,661 SF OR 0.15 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.

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:  
9/14/2023

DRAWN BY: SK

SCALE  
1"=20'

4 OF 10

TULIP STREET IMPROVEMENT PROJECT SECTION 2  
SPRINGFIELD AVENUE TO ASHLAND ROAD  
SOIL EROSION & SEDIMENT CONTROL PLAN



## SOIL EROSION AND SEDIMENT CONTROL NOTES

1. All Soil Erosion and Sediment Control practices shall be installed prior to any major disturbance and shall be in proper sequence and maintained until permanent protection is established.

2. 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.

3. 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.

4. All work shall be done in accordance with the NJ State Standards for Soil Erosion and Sediment Control in New Jersey, 7th Edition last revised January 2014

5. 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.

6. Immediately following initial disturbance or rough grading all critical areas subject to erosion (i.e. steep slopes, roadway shoulders) will receive a temporary seeding. In areas where no utilities are present, a suitable equivalent, at a rate of two (2) tons per acre, according to the NJ State Standards.

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

8. Traffic control Standards require the installation of a 50x30x6 pad of 1 1/2" or 2" stone, at all construction driveways, immediately after initial site disturbance.

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

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 the permanent vegetation will be able to establish. Soil that does not provide suitable conditions, non-vegetative means of permanent ground stabilization will have to be employed. Tackling should be handled only when it is dry enough to work without damaging the structure. A uniform application to a depth of 5 inches (unsettled) is required on all sites.

11. In that NJSA 4:24-39, et seq. requires that a Certificate of Occupancy be issued before the provision of the Soil Erosion and Sediment Control Plan for Soil Erosion and Sediment Control have been completed with permanent measures, all site work for site plans and all work around individual lots in subdivisions, will have to be completed prior to the issuance of a Certificate of Occupancy 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 a Soil Erosion and Sediment Control Plan to the District for re-certification. The revised plan 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 remedying any erosion or sediment problem 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 minimum amounts of mulch to promote germination, good seed to soil contact, and a visual check of the site upon completion of the seeding operation. Hydro-mulch should be applied at a rate of 1500 lbs. per acre in second step. The use of hydro-mulch, as opposed to straw, is limited to optimum seeding dates as listed in the NJ Standards.

## PROPOSED SEQUENCE OF DEVELOPMENT

Installation of all site fence prior to any major soil disturbance. Maintenance of earthmoving protection is established, installed and maintain inlet protection at any existing storm sewer inlets, as shown on the plans, until project is complete and permanently stabilized.

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.

Construct drainage improvements.

Perform spot repairs for underground stormwater and sanitary sewers.

Construct concrete improvements, e.g. curb sidewalk, aprons, etc.

Mill existing roadway

Perform full depth pavement reconstruction as required.

Construct pavement surface course

Fine grading and restoration of all lawn and landscape areas.

Removal of all temporary sediment and erosion control devices.

Week 1

Week 1

Week 2-3

Week 4

Week 5-6

Week 7

Week 8

Week 9

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.

SITE PREPARATION

A. Grade as needed and feasible to permit the use of conventional equipment for seeded 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 no construction activity. It 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 Co-operative Extension office. The lime rate is 100 pounds per 1,000 square feet 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. Apply limestone at the rate of 2 tons/acre unless soil testing indicates otherwise. Calculate the amount and standard for measuring the ability of liming material to neutralize soil acidity and supply calcium and magnesium to grass and legumes.

B. If soil has a pH of 6.5 or less, lime should be applied at a rate of 100 pounds per 1,000 square feet of 10-10-10 or equivalent. Use 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.

METHODS AND MATERIALS

SEEDING

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

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

## 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 <sup>1</sup> (pounds/1,000 sq. ft.)	OPTIMUM SEEDING DATE <sup>2</sup> (see Table 4-1)	OPTIMUM SEEDING DEPTH <sup>4</sup> (inches)	PLANTING DATES, DATES AND DEPTH <sup>3</sup>				
				Per Acre	Per 1000 Sq. Ft.	ZONE 5a 5.0,6	ZONE 6b 6.0,7	ZONE 7a,b 7.0,8
<b>COLD SEASON GRASSES</b>								
1. Perennial ryegrass	100	1.0	3/15-6/1	3/1-5/19	2/15-5/1	0.5		
2. Spring oats	86	2.0	3/15-6/1	3/1-5/10	2/15-5/15	1.0		
3. Winter Barley	96	2.2	8/1-9/15	8/15-10/15	8/15-10/15	1.0		
4. Annual Ryegrass	100	1.0	3/15-6/1	3/1-6/1	2/15-5/1	0.5		
5. Winter Cereal Rye	112	2.8	8/1-11/1	8/1-11/15	8/1-12/15	1.0		
<b>WARM SEASON GRASSES</b>								
6. Perennial 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 Live 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 dry soil.

B. Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) 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 inch to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse-textured soils.

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 soil. Mulch should not be included in the mix with seed. Straw fibers may be applied with hydroseeding, however, straw fibers should not be included in the mix. Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor soil to soil contact occurs reducing seed germination and growth.

E. Mulching 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 soil. Mulch should not be included in the mix with seed. Straw fibers may be applied with hydroseeding, however, straw fibers should not be included in the mix. Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor soil to soil contact occurs reducing seed germination and growth.

F. 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.

G. Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) 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 inch to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse-textured soils.

H. 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 soil. Mulch should not be included in the mix with seed. Straw fibers may be applied with hydroseeding, however, straw fibers should not be included in the mix. Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor soil to soil contact occurs reducing seed germination and growth.

I. 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.

J. Mulching 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 soil. Mulch should not be included in the mix with seed. Straw fibers may be applied with hydroseeding, however, straw fibers should not be included in the mix. Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor soil to soil contact occurs reducing seed germination and growth.

K. 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.

L. Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) 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 inch to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse-textured soils.

M. 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 soil. Mulch should not be included in the mix with seed. Straw fibers may be applied with hydroseeding, however, straw fibers should not be included in the mix. Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor soil to soil contact occurs reducing seed germination and growth.

N. 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.

O. Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) 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 inch to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse-textured soils.

P. 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 soil. Mulch should not be included in the mix with seed. Straw fibers may be applied with hydroseeding, however, straw fibers should not be included in the mix. Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor soil to soil contact occurs reducing seed germination and growth.

Q. 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.

R. Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) 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 inch to 1/2 inch, by raking or dragging. Depth of seed placement may be

4" C

4" C

M4-9N

(36" x 18")

TULIP STREET

CLOSED

FOLLOW DETOUR

TULIP

STREET

ROAD CLOSED  
600 FEET AHEAD  
LOCAL TRAFFIC ONLY

# R11-3

## (60"x30")

4" C  
4" C

**DETOUR  
500 FT**

# SIGN-B

# W20-2C

---

## (48" x 48")

**M4-9N**  
**(36" x 18")**

# SPRINGFIELD AVENUE

**M4-9N**  
**36" x 18")**

**4" C** | **FOLLOW DETOUR**

# TULIP STREET IMPROVEMENT PROJECT SECTION 2 SPRINGFIELD AVENUE TO ASHLAND ROAD

MMIT UNION CO., N.J.  
N OF ENGINEERING  
T OF COMMUNITY SERVICES  
PRINGFIELD AVENUE  
MMIT NJ 07901  
UNION COUNTY

A circular official stamp from the State of New Jersey Board of Medical Examiners. The text "STATE OF NEW JERSEY" is at the top, "BOARD OF MEDICAL EXAMINERS" is in the center, and "LICENSING" is at the bottom. The number "CE 46143" is stamped in the center. A handwritten signature "A. Johnson" is written across the stamp.

DATE  
6/12/20

DRAWN  
BY: KS

## SCAL N T S

7 OF 10

**LANE CLOSURE HOURS**  
Tulip Street (Springfield Avenue to Ashland Road)

**Holiday Shopping Season**  
All Lanes Maintained

Monday to Friday	6:00 AM to 9:00 AM and 3:00 PM to 10:00 PM
Saturday	8:00 AM to 10:00 PM
Sunday	9:00 AM to 10:00 PM

**One lane Maintained - One lane Closed**  
Monday to Thursday

9:00 AM to 3:00 PM and 10:00 PM to 6:00 AM (Next Day)
9:00 AM to 3:00 PM and 10:00 PM to 8:00 AM (Saturday)
10:00 PM to 9:00 AM (Sunday)
10:00 PM to 6:00 AM (Monday)

**All other times of the Year**  
All Lanes Maintained

Monday to Friday	6:00 AM to 9:00 AM and 3:00 PM to 8:00 PM
Saturday	8:00 AM to 8:00 PM
Sunday	9:00 AM to 8:00 PM

**One lane Maintained- One lane Closed**  
Monday to Thursday

9:00 AM to 3:00 PM and 8:00 PM to 6:00 AM (Next Day)
9:00 AM to 3:00 PM and 8:00 PM to 8:00 AM (Saturday)
8:00 PM to 9:00 AM (Sunday)
8:00 PM to 6:00 AM (Monday)

No lane, shoulder, ramp closures, or traffic shifts will be permitted on the following holidays:

- Easter Sunday (including 6:00 AM Saturday until Noon Monday)
- Memorial Day (See Note Below)
- July 4th (See Note Below)
- Labor Day (See Note Below)
- Election Day (6:00 AM until 8:00 PM the day of)
- Thanksgiving Day (See Note Below)
- Christmas Day (See Note Below)
- New Year's Day (See Note Below)

**NOTE:**

If Holiday Falls On	No Lane Closures Permitted
Sunday or Monday	6:00 AM Friday until Noon Tuesday
Tuesday	6:00 AM Friday until Noon Wednesday
Wednesday	6:00 AM Tuesday until Noon Thursday
Thursday	6:00 AM Wednesday until Noon Monday
Friday or Saturday	6:00 AM Thursday until Noon Monday

**Further Traffic Operations Notes:**

1. The proposed work and lane closures must be coordinated with all other projects that are underway at the same time near the project area.
2. Ramps / Turn Lanes / Auxiliary Lanes / Median Openings / Side Streets may be closed between the hours of 10:00 AM and 6:00 AM the next day unless otherwise specified. An approved signed detour is required for all Ramps / Turn Lanes / Auxiliary Lanes / Median Openings / Side Streets closures.
3. Two consecutive Ramps / Turn Lanes / Auxiliary Lanes / Median Openings / Side Streets may not be closed at the same time.
4. Access to all fire & emergency lanes and Driveways must be maintained during business hours. Access to all fire and emergency lanes and at least one driveway must be maintained during non-business hours.
5. The minimum allowable lane width for each travel lane when work is performed shall be 11 feet.
6. The Holiday Shopping Season shall start on Friday 6 AM of the weekend before Thanksgiving, and end after Sunday of the weekend after New Year's Day.

**ON OR ABOUT  
\_\_\_\_ DAY, \_\_\_\_/22  
CONSTRUCTION WILL BEGIN  
ON FERNWOOD ROAD**  
18" x 36"

**NOTE:** THE CONTRACTOR SHALL MOUNT THE SIGN IN ACCORDANCE WITH NJDOT 2019 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. SIGN TO BE INSTALLED AT LEAST ONE (1) WEEK IN ADVANCE OF CONSTRUCTION START.

**CONSTRUCTION IDENTIFICATION SIGN DETAIL**  
N.T.S.

**END DETOUR**  
M4-8a  
N.T.S.  
(30" x 24")

**ROAD CLOSED TO THRU TRAFFIC**   **ROAD CLOSED**   **DETOUR**   **DETOUR**

R11-4      R11-2      M4-9R      M4-9L  
N.T.S.      N.T.S.      N.T.S.      N.T.S.  
(60" x 30")    (48" x 30")    (30" x 24")    (30" x 24")

**TRAFFIC CONTROL SIGNS**  
N.T.S.

**TRAFFIC CONES**

**DRUMS**  
CD-159-1.1

**TYPE III BARRICADE - FRONT VIEW**  
CD-159-1.2

**BREAKAWAY BARRICADES**  
TRAFFIC CONTROL DEVICES  
N.T.S.

**LEGEND**

**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 PLANS. THESE LOCATIONS MAY BE MODIFIED AS APPROVED BY THE RE. THE CONTRACTOR IS TO POSITION THE BOARD AT THE LOCAL CURVATURE OF THE ROADWAY OR TO POSITION AT A SAFER LOCATION. ILLUMINATED FLASHING ARROW BOARDS ARE TO BE USED FOR TEMPORARY LANE CLOSURES AND AT LOCATIONS SHOWN ON THE TRAFFIC CONTROL PLANS.
3. PRIOR TO ANY ROAD CONSTRUCTION, TRAFFIC CONTROL SIGNS AND DEVICES ARE TO BE IN PLACE.
4. RAMPS AND/OR SIDE STREETS ENTERING THE ROADWAY AFTER THE FIRST ADVANCE WARNING SIGN ARE TO BE PROVIDED WITH AT LEAST ONE W20-15 SIGN (ROAD WORK AHEAD) AS A MINIMUM.
5. ALL EXISTING ROAD SIGNS, PAVEMENT MARKINGS, AND / OR PLOWABLE PAVEMENT ARE TO BE MAINTAINED DURING CONSTRUCTION. TRAFFIC CONTROL PLANS ARE TO BE PROVIDED, 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 ARE TO BE BAGGED OR COVERED.
7. MAINTENANCE AND PROTECTION OF TRAFFIC TO BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PART V "STANDARDS AND GUIDES FOR TRAFFIC CONTROL FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY, AND INCIDENT MANAGEMENT OPERATIONS", UNLESS OTHERWISE NOTED IN THE PROPOSED TRAFFIC CONTROL PLANS.
8. CONSTRUCTION SIGN W99-2 (GIVE US A BRAKE) TO BE LOCATED 200 FEET IN ADVANCE OF PROJECT LIMITS.
9. A W1-6 (ARROW) SIGN MOUNTED ON A BREAKAWAY BARRICADE AND CENTERED ON THE CLOSEST WIDTH TO BE LOCATED 100 FEET BEYOND EACH INTERSECTION OR MAJOR ACCESS POINT WITHIN THE AREA OF A LANE OR SHOULDER CLOSURE.
10. CONSTRUCTION SIGNS R11-4 (ROAD CLOSED TO THRU TRAFFIC) TO BE PLACED AT THE POINTS OF CONSTRUCTION, WHICH ARE CLOSED TO THRU TRAFFIC BECAUSE OF CONSTRUCTION.
11. CONSTRUCTION SIGNS W8-24 (SYMBOL FOR UNPAVED PAVEMENT) AND W8-144 (GROOVED PAVEMENT) TO BE USED WHEN SUCH PAVEMENT CONDITIONS EXIST.
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 IS TO BE POSITIONED ON THE ROADWAY IN A POSITION TO KEEP A 70 FEET MIN. AND 150 FEET MAX. BUFFER IN ADVANCE OF EACH WORK AREA.
13. THE CONTRACTOR TO SUBMIT A PLAN FOR THE SAFE ACCESS OF CONSTRUCTION VEHICLES THROUGHOUT THE WORK SITE WHERE SPACE CONSTRAINTS PREVENT THE USE OF LANE CLOSURES. PLAN TO BE SUBMITTED TO THE RE AS SPECIFIED IN THE CONTRACT DOCUMENTS.
14. BACKFILL ALL EXCAVATED AREAS WITHIN OR ADJACENT TO THE ROADWAY AND PLACE ON AT LEAST 6H:1V SLOPE BEFORE THE END OF EACH WORK DAY. OTHER EXCAVATED AREAS ARE TO BE BACKFILLED AS DIRECTED BY THE RE.
15. WHERE REQUIRED, THE CONTRACTOR IS TO MAKE PROVISIONS FOR MAINTAINING PEDESTRIAN CROSSING LOCATIONS AND TYPE AS DIRECTED BY THE RE.
16. BITUMINOUS CONCRETE PLACED DURING THE VARIOUS CONSTRUCTION STAGES TO BE TRANSITIONED ON A MINIMUM 20H:1V SLOPE TO MEET THE ADJACENT EXISTING OR NEW CONCRETE. THE CONTRACTOR IS TO MAINTAIN THE EXISTING CONSTRUCTION AREAS UNLESS OTHERWISE NOTED ON THE STAGE CONSTRUCTION PLANS.
17. THE PLACEMENT AND / OR RELOCATION OF CONSTRUCTION BARRIER CURB TO BE DONE DURING ALLOWABLE LANE CLOSURE HOURS.
18. CONSTRUCTION ZONE SPEED LIMIT WILL BE DETERMINED BY THE BUREAU OF TRAFFIC ENGINEERING AND SET UP AS A CONSTRUCTION ZONE. AT THE TIME OF OR DURING CONSTRUCTION, AS REQUESTED BY THE RE.
19. THE SPEED LIMIT, R2-1 (BLACK ON WHITE) WITH ADDED WORK ZONE PLATE (BLACK ON ORANGE) SIGNS TO BE LOCATED THROUGH WORK AREAS AS DIRECTED BY THE RE. THE CONTRACTOR IS TO USE THE SERVICES OF A REGIONAL TRAFFIC ENGINEER - WORK ZONE.
20. THE REDUCED SPEED AHEAD SIGN W-20-2 (BLACK ON ORANGE) TO BE LOCATED IN ADVANCE OF SPEED LIMIT R2-1 SIGN, WHICH REDUCE THE NORMAL POSTED SPEED LIMIT THROUGH THE CONSTRUCTION ZONE.
21. TRAFFIC LINES DOUBLED IN WORK AREA R11(5-17)51, 4 FEET BY 2.5 FEET SIGN TO BE PLACED IN THE WORK AREA AS DIRECTED BY THE RE. THE SIGN IS TO BE PLACED AT EACH WORK AREA LOCATED WITHIN URBAN AREAS. THIS SIGN IS ALSO TO BE USED ON PROJECTS REQUIRING MOVING OPERATIONS IN WHICH CASE THE SIGN IS TO BE MOVED AS DIRECTED BY THE RE.
22. DO NOT CONSTRUCT THE FINAL PMA SURFACE PAYMENT UNTIL THE FINAL STAGE OF THE PROJECT UNLESS OTHERWISE DIRECTED BY THE RE OR INDICATED ON THE PLANS. SET MANHOLES AND INLETS TO FINISHED GRADE AND CONSTRUCT TEMPORARY PAVEMENT ON THE SURFACE. DO NOT PLACE PMA ON THE SLOPE IN ALL DIRECTIONS USING HOT MIX ASPHALT PAVEMENT. THIS TEMPORARY MATERIAL WILL BE REMOVED IMMEDIATELY PRIOR TO PLACING THE SURFACE COURSE.
23. PLACE TRAFFIC CONTROL DEVICES FOR LANE CLOSURES INCLUDING SIGNS, CONES, BARRICADES, ETC. AS SHOWN ON PLANS. NO SIGNS ARE TO BE PLACED WITHOUT ACTUAL LANE CLOSURES AND REMOVE IMMEDIATELY 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 IS AS FOLLOWS:
    - 1. IMPACTS TO NORMAL TRAFFIC FLOW - WORK THAT REQUIRES A PORTION OF THE PAVED ROADWAY TO BE CLOSED, FULL OR PARTIAL LANE CLOSURES, FULL OR PARTIAL RAMP CLOSURES, SHOULDER SHIFTS, OR ALTERNATING TRAFFIC. THIS APPLIES EVEN WHEN DETOURS ARE PROVIDED.
    - 2. LANE CLOSURE - THE CLOSURE OF A LANE OR SHOULDER.
    - 3. PERMANENT LANE CLOSURES - WORK DESCRIBED UNDER "IMPACTS TO NORMAL TRAFFIC FLOW" WHICH REMAINS IN PLACE CONTINUOUSLY FOR 24 HOURS OR MORE.
26. WHERE FINAL PMA PAVING IS PERFORMED AND THE LANE IS TO BE RE-OPENED TO TRAFFIC AND THE ITEM TRAFFIC STRIPES IS UNABLE TO BE APPLIED, APPLY THE ITEM TRAFFIC STRIPES, LATEX, ENSURE THAT THE ITEM TRAFFIC STRIPES IS APPLIED WITHIN 14 DAYS.

**NOTE TO DESIGNER:**  
THIS SHEET REQUIRES DESIGN SPECIFIC INFORMATION TO BE ADDED AND INCLUDED IN THE CONTRACT PLANS.  
REMOVE THIS NOTE AFTER DESIGN SPECIFIC INFORMATION IS ADDED.

**REVISIONS**

NO. / DATE	DESCRIPTION
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**TULIP STREET IMPROVEMENT PROJECT SECTION 2**  
SPRINGFIELD AVENUE TO ASHLAND ROAD  
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

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

**CITY OF SUMMIT**  
UNION COUNTY, NEW JERSEY

**DATE:**  
6/12/2025

**DRAWN BY:** KS

**SCALE**  
N.T.S.

**8 OF 10**

**REVISIONS**

REVISION	DESCRIPTION
NO DATE	UPDATED SIGN DETAILS
#1	5/8/25

**TULIP STREET IMPROVEMENT PROJECT SECTION 2**  
SPRINGFIELD AVENUE TO ASHLAND ROAD  
CONSTRUCTION DETAILS

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

**NOTES:**

1. REMOVE AND REPLACE ROADWAY BASE SHALL CONSIST OF THE REMOVAL 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

3. FOR DETAIL OF UPPER PART OF MANHOLE, SEE "STANDARD MANHOLE" DETAIL.

4. ACRYLIMIDE GEL GROUT INJECTION SHALL BE USED TO STOP LEAKS, IF ANY, AROUND MANHOLE SEAMS AND PIPES.

5. ALL MORTAR TO BE 1 PART PORTLAND CEMENT TO 2 PARTS CLEAN SAND.

6. RECAST CASTINGS DETAIL IS SUITABLE FOR THE RESETTING OF BOTH INLETS AND MANHOLES.

7. EXTENT OF REPAIRS DEFINED BY NJDOT SPECIFICATION.

**MANHOLE FRAME & COVER**  
CAMPBELL FOUNDRY NO. 1012B STAMPED "STORM SEWER" & NO. 12028 STAMPED "SANITARY SEWER" OR APPROVAL EQUAL

**MORTAR**  
ADJ. OR REMOVE LEVELING COURSE OF CONC. OR BRICK AND MORTAR TO ADJUST RIM

**HOT MIX ASPHALT WATERPROOFING**  
EXIST. PAVEMENT  
EXIST. TACK COAT  
BACKFILL ENTIRE  
WITH DENSE-GRADED AGGREGATE BASE

**RECONSTRUCT MANHOLE USING NEW CASTING**  
N.T.S.

**NOTES:**

1. ALL MORTAR TO BE 1 PART PORTLAND CEMENT TO 2 PARTS CLEAN SAND.

2. RECAST CASTINGS DETAIL IS SUITABLE FOR THE RESETTING OF BOTH INLETS AND MANHOLES.

3. EXTENT OF REPAIRS DEFINED BY NJDOT SPECIFICATION.

**FULL DEPTH REPAIR**  
N.T.S.

**DEPRESSED GRANITE BLOCK CURB DETAIL**  
N.T.S.

**DETECTABLE WARNING SURFACE**  
N.T.S.

**PLANTING DETAIL**  
N.T.S.

**TYPICAL STORM MANHOLE DETAIL**  
(4' OR 7')  
N.T.S.

**GRANITE BLOCK CURB DETAIL**  
N.T.S.

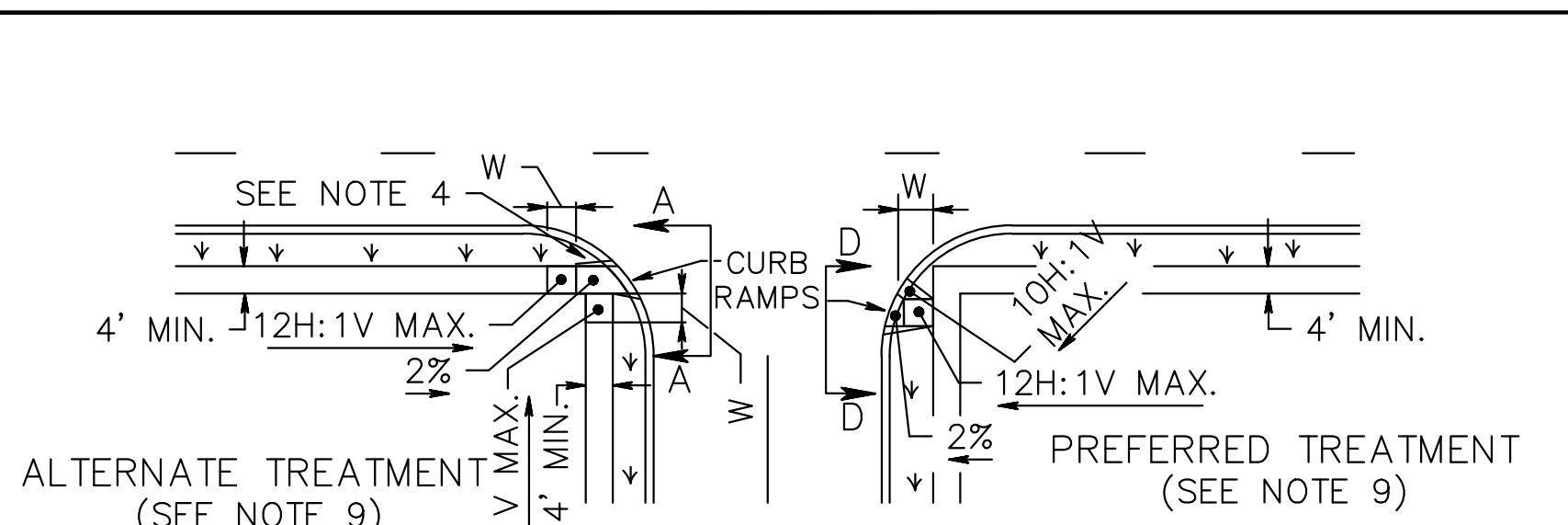
**TYPICAL CROSSWALK DETAIL**  
N.T.S.

**CONCRETE SIDEWALK DETAIL**  
N.T.S.

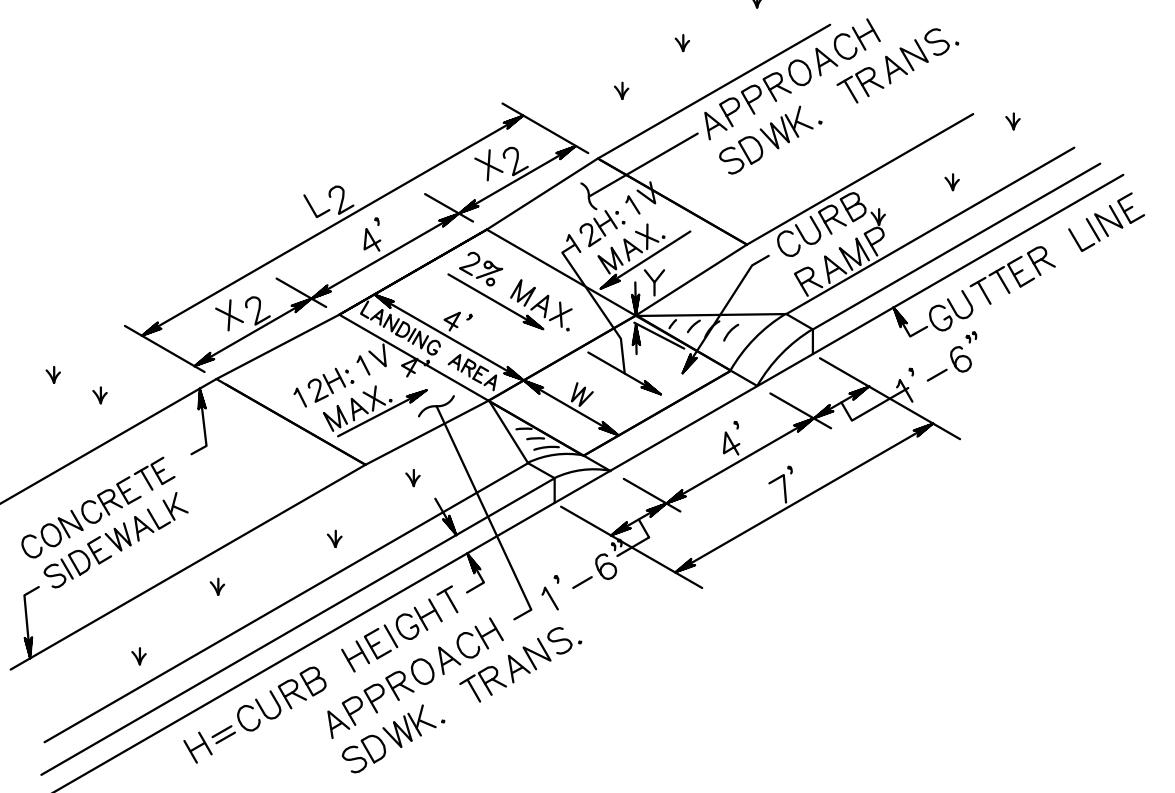
**YIELD LINE PAVEMENT MARKINGS**  
N.T.S.

**MATERIALS**

1. PRECAST RISERS  
2. SUPPORT RISER ON BRICK PRIOR TO POURING CONCRETE  
3. NOTCH TO FIT OVER PIPE  
4. TOP OF PIPE SHALL BE NEATLY CUT AFTER CAST-IN-PLACE CONCRETE BASE AND BENCH HAS SET  
5. 1/2" MORTAR JOINT  
6. 5" MIN. JOINTS NOT TO EXCEED 1" IN TRANSITION  
7. 2" HMA COURSE  
8. 1/2" MORTAR OVER EDGE OF FRAME  
9. ADD OR REMOVE LEVELING COURSE OF CONC. OR BRICK  
10. HOT MIX ASPHALT WATERPROOFING  
11. EXIST. PAVEMENT  
12. EXIST. TACK COAT  
13. BACKFILL ENTIRE  
14. NEW MANHOLE RINGS AS NEEDED  
15. EXIST. MH WALL  
16. HOT MIX ASPHALT  
17. WATERPROOFING  
18. EXIST. PAVEMENT  
19. EXIST. TACK COAT  
20. BACKFILL ENTIRE  
21. NEW MANHOLE RINGS AS NEEDED  
22. EXIST. MH WALL  
23. HOT MIX ASPHALT  
24. WATERPROOFING  
25. EXIST. PAVEMENT  
26. EXIST. TACK COAT  
27. BACKFILL ENTIRE  
28. NEW MANHOLE RINGS AS NEEDED  
29. EXIST. MH WALL  
30. HOT MIX ASPHALT  
31. WATERPROOFING  
32. EXIST. PAVEMENT  
33. EXIST. TACK COAT  
34. BACKFILL ENTIRE  
35. NEW MANHOLE RINGS AS NEEDED  
36. EXIST. MH WALL  
37. HOT MIX ASPHALT  
38. WATERPROOFING  
39. EXIST. PAVEMENT  
40. EXIST. TACK COAT  
41. BACKFILL ENTIRE  
42. NEW MANHOLE RINGS AS NEEDED  
43. EXIST. MH WALL  
44. HOT MIX ASPHALT  
45. WATERPROOFING  
46. EXIST. PAVEMENT  
47. EXIST. TACK COAT  
48. BACKFILL ENTIRE  
49. NEW MANHOLE RINGS AS NEEDED  
50. EXIST. MH WALL  
51. HOT MIX ASPHALT  
52. WATERPROOFING  
53. EXIST. PAVEMENT  
54. EXIST. TACK COAT  
55. BACKFILL ENTIRE  
56. NEW MANHOLE RINGS AS NEEDED  
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59. WATERPROOFING  
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61. EXIST. TACK COAT  
62. BACKFILL ENTIRE  
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69. BACKFILL ENTIRE  
70. NEW MANHOLE RINGS AS NEEDED  
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72. HOT MIX ASPHALT  
73. WATERPROOFING  
74. EXIST. PAVEMENT  
75. EXIST. TACK COAT  
76. BACKFILL ENTIRE  
77. NEW MANHOLE RINGS AS NEEDED  
78. EXIST. MH WALL  
79. HOT MIX ASPHALT  
80. WATERPROOFING  
81. EXIST. PAVEMENT  
82. EXIST. TACK COAT  
83. BACKFILL ENTIRE  
84. NEW MANHOLE RINGS AS NEEDED  
85. EXIST. MH WALL  
86. HOT MIX ASPHALT  
87. WATERPROOFING  
88. EXIST. PAVEMENT  
89. EXIST. TACK COAT  
90. BACKFILL ENTIRE  
91. NEW MANHOLE RINGS AS NEEDED  
92. EXIST. MH WALL  
93. HOT MIX ASPHALT  
94. WATERPROOFING  
95. EXIST. PAVEMENT  
96. EXIST. TACK COAT  
97. BACKFILL ENTIRE  
98. NEW MANHOLE RINGS AS NEEDED  
99. EXIST. MH WALL  
100. HOT MIX ASPHALT  
101. WATERPROOFING  
102. EXIST. PAVEMENT  
103. EXIST. TACK COAT  
104. BACKFILL ENTIRE  
105. NEW MANHOLE RINGS AS NEEDED  
106. EXIST. MH WALL  
107. HOT MIX ASPHALT  
108. WATERPROOFING  
109. EXIST. PAVEMENT  
110. EXIST. TACK COAT  
111. BACKFILL ENTIRE  
112. NEW MANHOLE RINGS AS NEEDED  
113. EXIST. MH WALL  
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116. EXIST. PAVEMENT  
117. EXIST. TACK COAT  
118. BACKFILL ENTIRE  
119. NEW MANHOLE RINGS AS NEEDED  
120. EXIST. MH WALL  
121. HOT MIX ASPHALT  
122. WATERPROOFING  
123. EXIST. PAVEMENT  
124. EXIST. TACK COAT  
125. BACKFILL ENTIRE  
126. NEW MANHOLE RINGS AS NEEDED  
127. EXIST. MH WALL  
128. HOT MIX ASPHALT  
129. WATERPROOFING  
130. EXIST. PAVEMENT  
131. EXIST. TACK COAT  
132. BACKFILL ENTIRE  
133. NEW MANHOLE RINGS AS NEEDED  
134. EXIST. MH WALL  
135. HOT MIX ASPHALT  
136. WATERPROOFING  
137. EXIST. PAVEMENT  
138. EXIST. TACK COAT  
139. BACKFILL ENTIRE  
140. NEW MANHOLE RINGS AS NEEDED  
141. EXIST. MH WALL  
142. HOT MIX ASPHALT  
143. WATERPROOFING  
144. EXIST. PAVEMENT  
145. EXIST. TACK COAT  
146. BACKFILL ENTIRE  
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570. WATERPROOFING  
571. EXIST. PAVEMENT  
572. EXIST. TACK COAT  
5



CURB RAMP TYPE 6  
(CROSSING PARALLEL TO HIGHWAY ONLY)



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

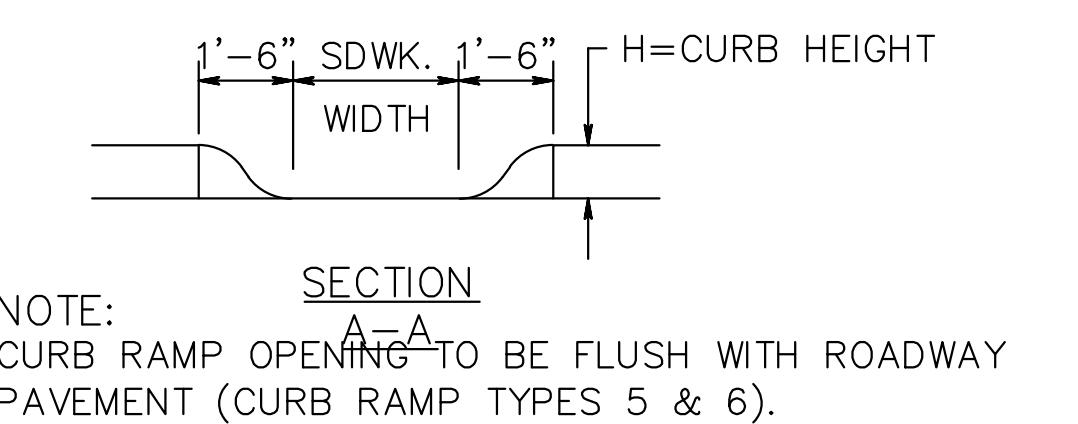
CURB RAMP TYPE 4				
W FEET	H INCHES	Y INCHES	X2 FEET	L2 FEET
2.5	3	2.5	0.5	5
	4	2.5	1.5	7
	5	2.5	2.5	9
	6	2.5	3.5	11
	7	2.5	4.5	13
	8	2.5	5.5	15
	9	2.5	6.5	17
	3	**	**	**
	4	3.0	1	6
3.0	5	3.0	2	8
	6	3.0	3	10
	7	3.0	4	12
	8	3.0	5	14
	9	3.0	6	16
	3	**	**	**
	4	3.5	0.5	5
	5	3.5	1.5	7
	6	3.5	2.5	9
3.5	7	3.5	3.5	11
	8	3.5	4.5	13
	9	3.5	5.5	15
	3	**	**	**
	4	**	**	**
	5	4.0	1	6
	6	4.0	2	8
	7	4.0	3	10
	8	4.0	4	12
4.0	9	4.0	5	14

\* TYPE 3 RAMP IS NOT APPLICABLE, USE TYPE 1.

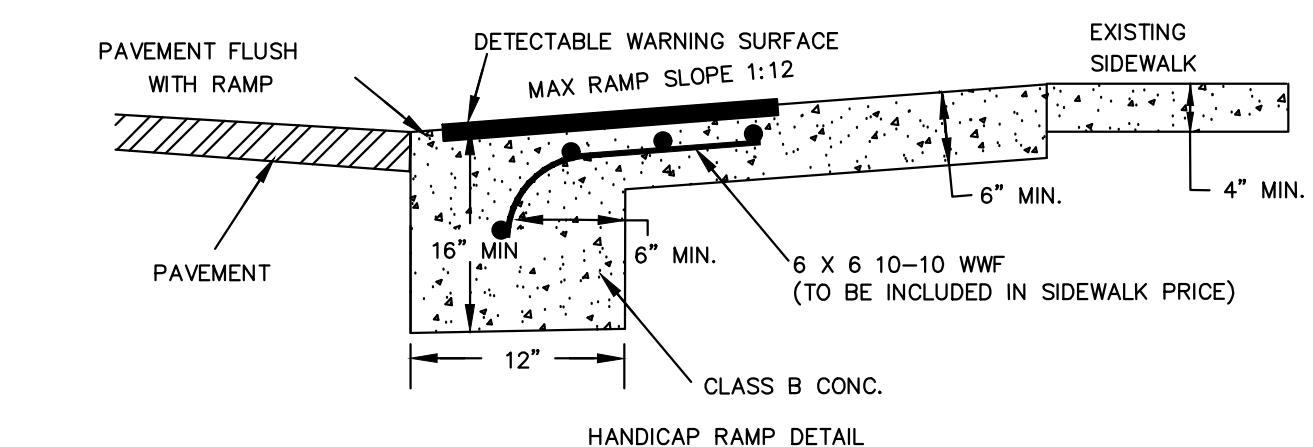
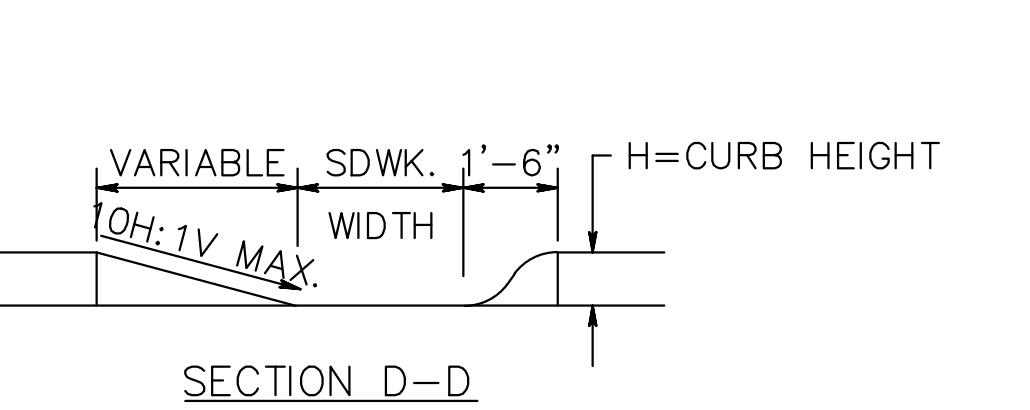
\*\* TYPE 4 RAMP IS NOT APPLICABLE, USE TYPE 2.

GENERAL NOTES:

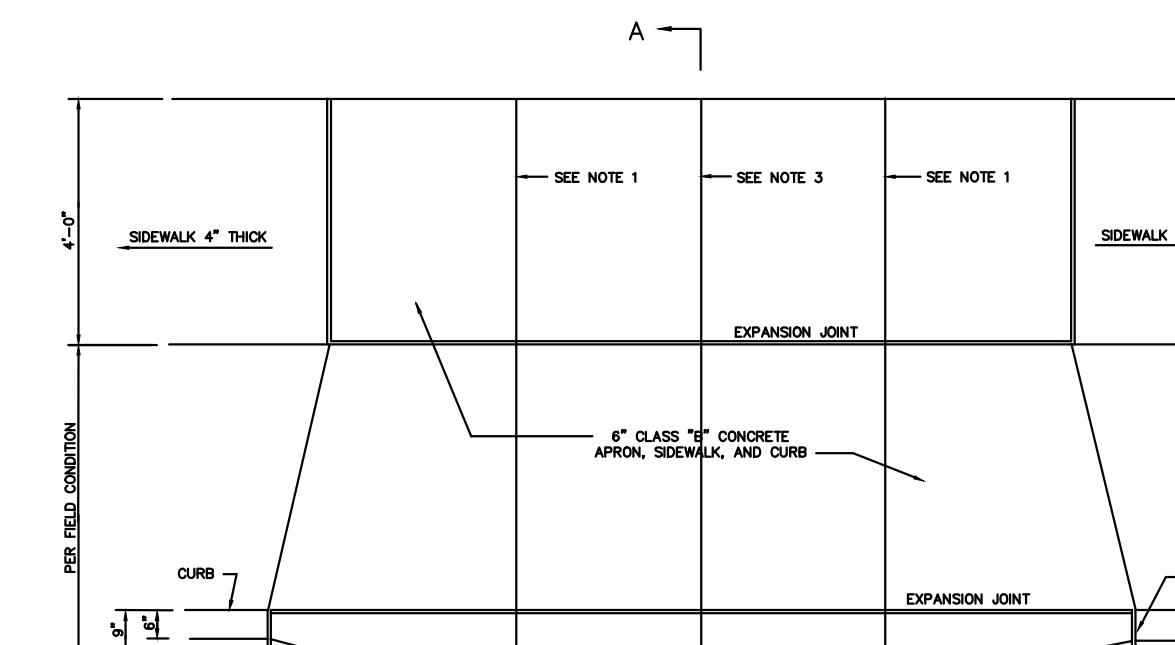
- LANDING AREA, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP SHALL BE KEPT CLEAR OF OBSTRUCTIONS.
- DIMENSIONS SHOWN IN TABLES ARE FOR RELATIVELY FLAT SIDEWALK AREAS. CARE SHOULD BE TAKEN WHEN DETERMINING CURB RAMP SIZE BASED ON CURB HEIGHT (H) WHERE ELEVATION OF CURB AND SIDEWALK VARY DRAMATICALLY IN AREA OF PROPOSED CURB RAMP.
- CURB (DROPPED CURB) GUTTERLINE TO BE FLUSH WITH ROADWAY PAVEMENT A MINIMUM OF 4 FEET AT ALL CURB RAMPS. DROPPED CURB SHALL BE CONCRETE CURB AND SHALL TRANSITION TO FULL HEIGHT GRANITE BLOCK CURB AS SHOWN ON PLANS.
- FOR CURB RAMP TYPES 5 AND 6, IF A GRASS BUFFER DOES NOT EXIST, SLOPE CURB TO EQUAL SLOPE OF ADJACENT CURB RAMP.
- SIDEWALK AND CURB RAMP WITHIN AREA ENCLOSED BY HEAVY LINES TO BE PAID FOR AS CONCRETE SIDEWALK OF THE APPROPRIATE ADJACENT THICKNESS.
- 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.
- 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.
- CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED, SEE PLANS.
- PREFERRED AND ALTERNATE TREATMENTS SHOULD NOT BE INTERMIXED WITHIN THE SAME INTERSECTION.
- 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.



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



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

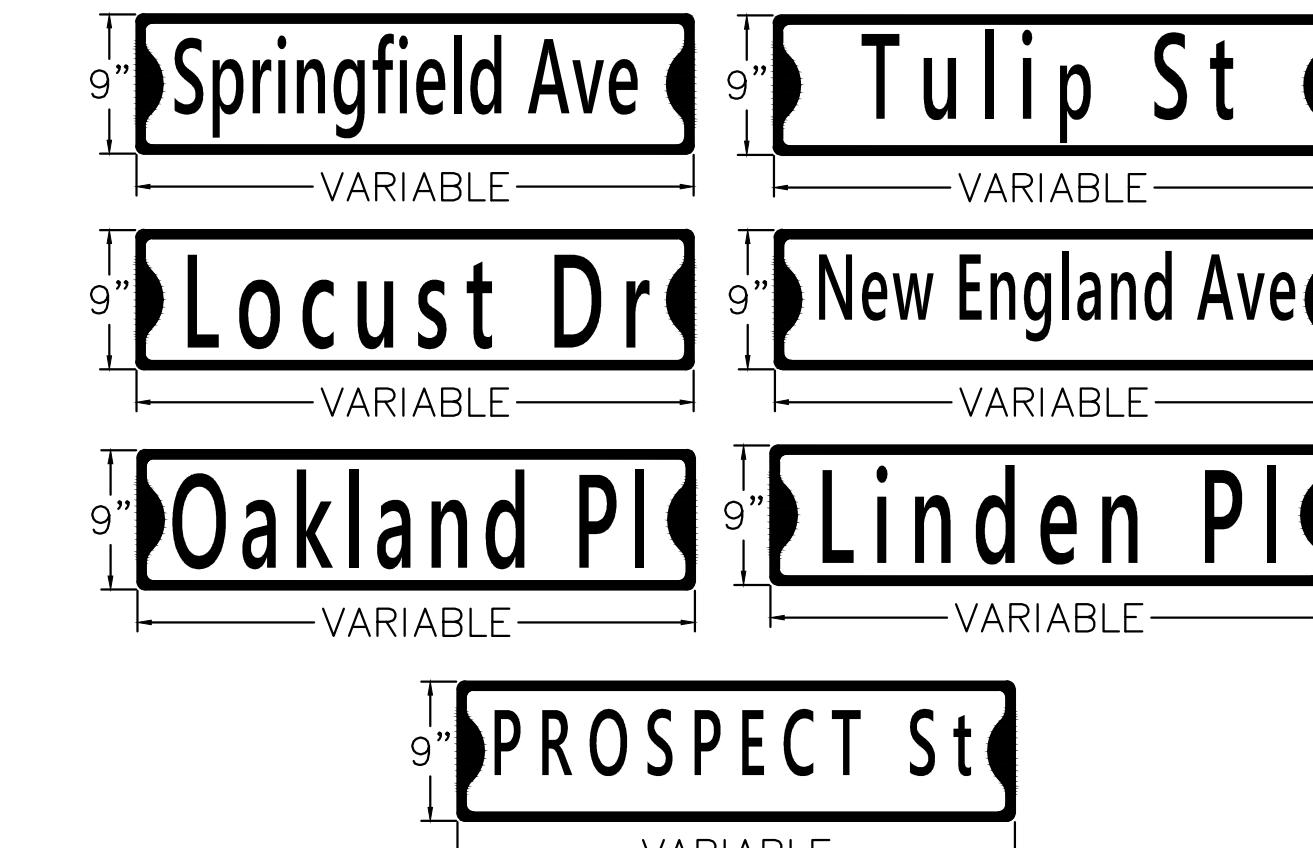


NOTE: CURB RAMP OPENING TO BE FLUSH WITH ROADWAY PAVEMENT (CURB RAMP TYPES 5 & 6).

NOTES:  
1. SURGRADE IS TO BE COMPACTED IN A MANNER SUITABLE TO THE ENGINEER.  
2. EXPANSION JOINTS ARE TO BE 1/2" WIDE AND FILLED WITH PREFORMED HOT MIX ASPHALT TYPE JOINT FILLER. THE TOP OF ALL JOINT FILLER SHOULD BE FLUSH WITH THE TOP OF THE CURB.  
3. BLIND JOINTS ARE TO BE SURFACE GROOVE CUT INTO SIDEWALK 1/2" DEEP.  
4. ALL CONCRETE SURFACES SHALL BE TREATED WITH A CONCRETE CURING AND SEALING COMPOUND.

CONCRETE DRIVEWAY, 6" THICK

N.T.S.



NOTES:  
1) SIGNS TO BE MOUNTED ON A 2" OD X 10' GALVANIZED POLE  
2) POLE TO HAVE A 18" MIN. DIA. X 4"-0" DEEP CONCRETE FOOTING  
3) SIGNS TO BE MOUNTED ON GALVANIZED (OR APPROVED EQUAL) PLACE HOLDER  
4) COST FOR POST, HARDWARE, AND FOOTING TO BE INCLUDED IN "STREET NAME SIGN POST"  
5) SIGN WIDTHS MAY VARY  
6) WHITE RETRO-REFLECTIVE BACKING (3M DIAMOND GRADE™ OR APPROVED EQUAL)  
7) BLACK "YLE" STYLE BORDER (OR APPROVED EQUAL)  
8) BLACK LETTERS (FONT TYPE: "HIGHWAY SERIES C" OR APPROVED EQUAL)  
9) MUST MEET MUTCD REFLECTIVE STANDARDS  
10) PROOF MUST BE SUBMITTED FOR APPROVAL PRIOR TO INSTALL

STREET SIGN DETAILS (CITY OF SUMMIT STANDARD): 9" SIGN (D3-1)

N.T.S.

REVISIONS	DESCRIPTION
NO. DATE #1 5/8/25	UPDATED SIGN DETAILS

TULIP STREET IMPROVEMENT PROJECT SECTION 2  
SPRINGFIELD AVENUE TO ASHLAND ROAD  
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:  
9/14/2023

DRAWN  
BY: SK

SCALE  
N.T.S.

10 OF 10