

The image shows the official seal of the New Jersey Department of Environmental Protection on the left, featuring a shield with a river, a plow, and a sheaf of wheat, surrounded by the words 'NEW JERSEY' and 'DEPARTMENT OF ENVIRONMENTAL PROTECTION'. To the right is a large, bold, black 'APPROVED' stamp. Below the stamp, the following information is printed: 'File No.: 0408-03-0006.2', 'Activity No.: LUP2 5001', and 'Date: 4/22/2025'. At the bottom, the text 'State of New Jersey' and 'Department of Environmental Protection Watershed and Land Management' is displayed.



DATE: Stephanie A. Cuthbert
STEPHANIE A. CUTHBERT
NJ PROFESSIONAL ENGINEER LIC. No. 42136

PLANS WHICH DO NOT BEAR AN EMBOSSED SEAL ARE NOT VALID

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[illegible]

TITLE SHEET	
SOUTH JERSEY PORT CORP	
BROADWAY TERMINAL WATER FIRE MAIN REPLACEMENT	NEW JERSEY
	CAMDEN COUNTY
	CAMDEN CITY

<u>DRAWN BY</u>	<u>DESIGN BY</u>	<u>CHECKED BY</u>	<u>SCALE</u>
G.M.	G.M.	S.C	AS NOTED
<u>DATE</u>		<u>SHEET No.</u>	
9.2024		T-1	
<u>JOB No.</u>			
3965X004			

PROJECT LOCATION MAP
2500 S BROADWAY , CAMDEN, NJ
N.T.S

 ***New Jersey One Call***
CALL BEFORE YOU DIG
811 or 1-800-272-1000
IT'S THE LAW

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT NJ ONE CALL PRIOR TO THE START OF CONSTRUCTION. CALL FOR MARKOUTS THREE (3) FULL BUSINESS DAYS IN ADVANCE AND BEGIN EXCAVATION WITHIN 10 DAYS. ALL CONTRACTORS ON-SITE MUST HAVE THEIR OWN MARKOUT.

CAMDEN COUNTY, NEW JERSEY

NOVEMBER 2024

- (TELEPHONE: 1-609-530-2098)

NOTE: ALL SYMBOLS MAY NOT BE USED



Activity No.: LUP25000

Activity No.: LUP25000

Date: 4/22/2025

State of New Jersey
Department of Environmental Protection
Watershed and Land Management

REMINGTON
& VERNICK
ENGINEERS

2059 SPRINGDALE ROAD
CHERRY HILL, NJ 08003
(856) 795-9595, FAX (856) 795-188
WEB SITE ADDRESS : WWW.RVE.CO

Certification of Authorization: 24 GA 28
-ENGINEERING EXCELLENCE-

DATE: 1-28-2018
STEPHANIE A. CUTHBERT
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[illegible]

LEGEND

BROADWAY TERMINAL WATER FIRE MAIN REPLACEMENT

SCALE	CAMDEN CITY	CAMDEN COUNTY
NOTED		

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
G.M.	G.M.	S.C.	AS NOTED
DATE: 9.2024		SHEET No.:	
JOB No. 3965X004		G-2	

STANDARD LEGEND

NOTE: ALL SYMBOLS MAY NOT BE USED

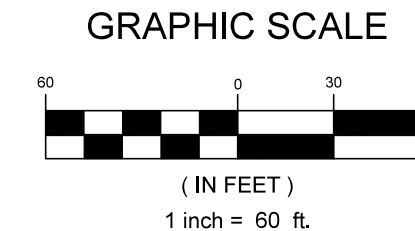
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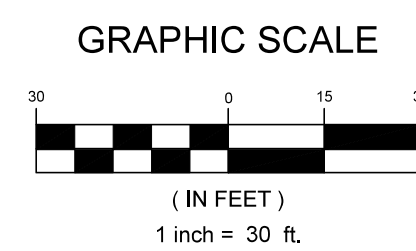
DATE: *Stephanie A. Cuthbert*
STEPHANIE A. CUTHBERT
NJ PROFESSIONAL ENGINEER L.I.C. No. 42136

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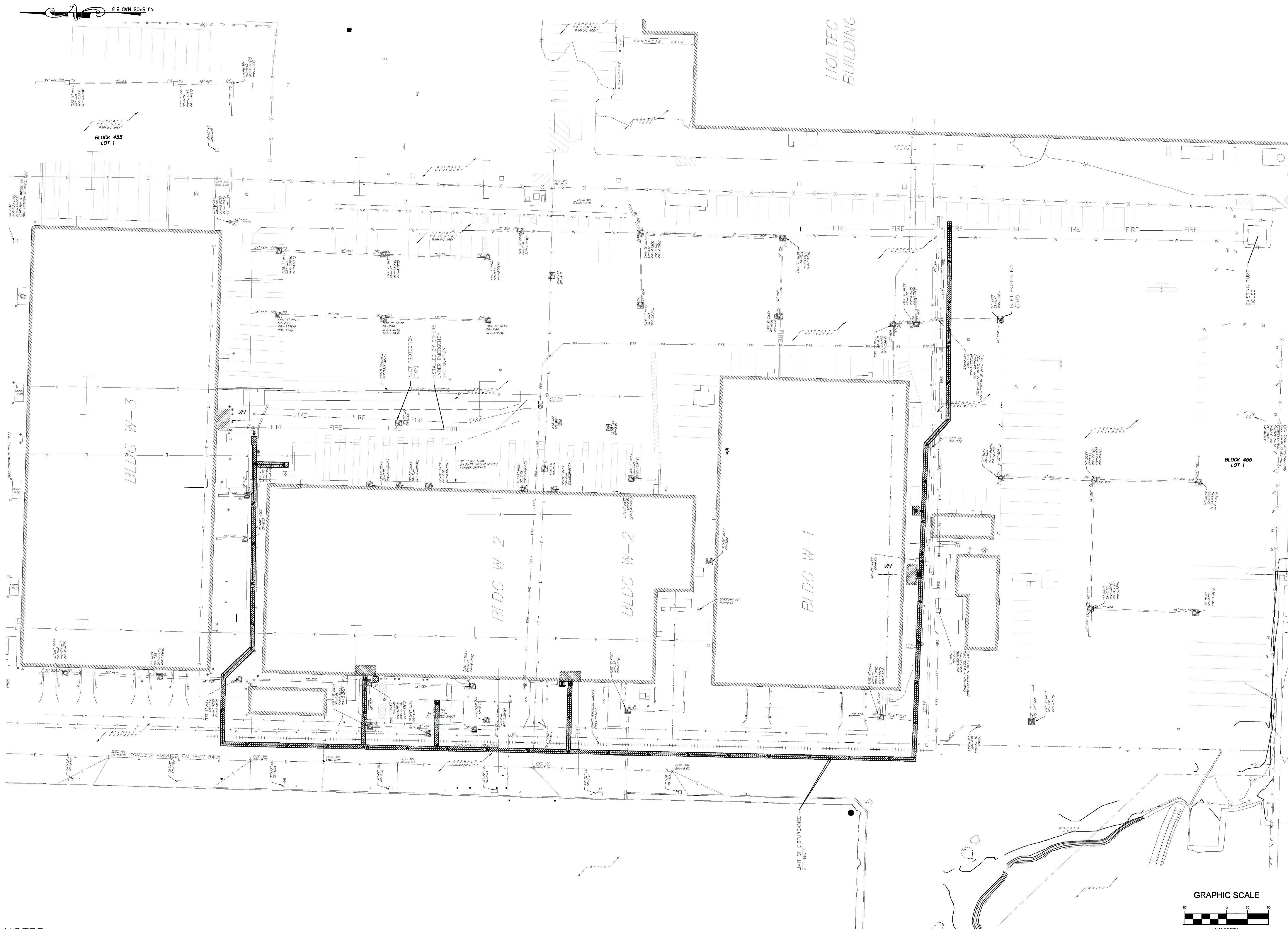
NO.	REVISION	DATE	BY	CHK
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<u>DRAWN BY:</u> G.M.	<u>DESIGN BY:</u> G.M.	<u>CHECKED BY:</u> S.C.	<u>SCALE:</u> AS NOTED
<u>DATE:</u> 9.2024		<u>SHEET No.:</u> C-2.2	
<u>JOB No.:</u> 3965X004			



NOTES:

1. HATCHING SURROUNDING PROPOSED PIPING INDICATES LIMITS OF DISTURBANCE.

RVE

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REMINGTON & VERNICK ENGINEERS

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STATE OF NEW JERSEY
No. 12-156

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NO.	REVISION	DATE	BY	CHK
1	CHANGES REQUESTED BY CLIENT	9/22/24	RG	TM

PROPOSED OVERALL SITE PLAN
AND SESC

SOUTH JERSEY PORT CORP
BROADWAY TERMINAL WATER FIRE MAIN REPLACEMENT

CAMDEN CITY
CAMDEN COUNTY
NEW JERSEY


DRAWN BY: G.M.
DATE: 9.20.24
JOB NO.: 3965X004

DESIGN BY: G.M.

CHECKED BY: S.C.
SHEET NO.: C-5.0

SCALE: AS NOTED

GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.

TO BE CONSTRUCTED					
ITEM	DESCRIPTION			UNIT	QTY
2	RELOCATE/RECONNECT EXISTING FIRE HYDRANTS			UN	1
6	FURNISH AND INSTALL DRY HYDRANT, COMPLETE			UN	1
8	8" MJT RESTRAINED RESILIENT SEAT GATE VALVE, COMPLETE			UN	1
23	8" MJT RESTRAINED END CAP			UN	1
28	6" STEEL BOLLARDS, FILLED WITH CONCRETE AND PLASTIC COVER			UN	4
29	DENSE GRADED AGGREGATE BASE COURSE, 6" THICK			SY	370
32	HOT MIX ASPHALT BASE COURSE, 19M64, 6" THICK			TON	134
33	HOT MIX ASPHALT SURFACE COURSE, 12.5M64, 2" THICK			TON	45
34	TACK COAT			GAL	56
36	UTILITY OFFSET, COMPLETE			UN	2
48	TEST PITS, INCLUDING RESTORATION			UN	1
53	10" CLASS 52 DUCTILE IRON PIPE, WRAPPED IN POLYETHYLENE			LF	803
54	10" MJT RESTRAINED RESILIENT SEAT GATE VALVE, COMPLETE			UN	3
57	10" 90 DEGREE MJT RESTRAINED CLDIP FITTING			UN	3
58	10" X 10" X 6" MJT RESTRAINED CLDIP TEE			UN	1
61	10" 45 DEGREE MJT RESTRAINED CLDIP FITTING			UN	2
62	10" X 10" X 10" MJT RESTRAINED CLDIP TEE			UN	2

SOUTH JERSEY PORT CORP
BROADWAY TERMINAL WATER FIRE MAIN REPLACEMENT

<u>DRAWN BY:</u> G.M.	<u>DESIGN BY:</u> G.M.	<u>CHECKED BY:</u> S.C.	<u>SCALE:</u> AS NOTED
<u>DATE:</u> 9.2024		<u>SHEET No.</u> C-5.1	
<u>JOB No.</u> 3965X004			

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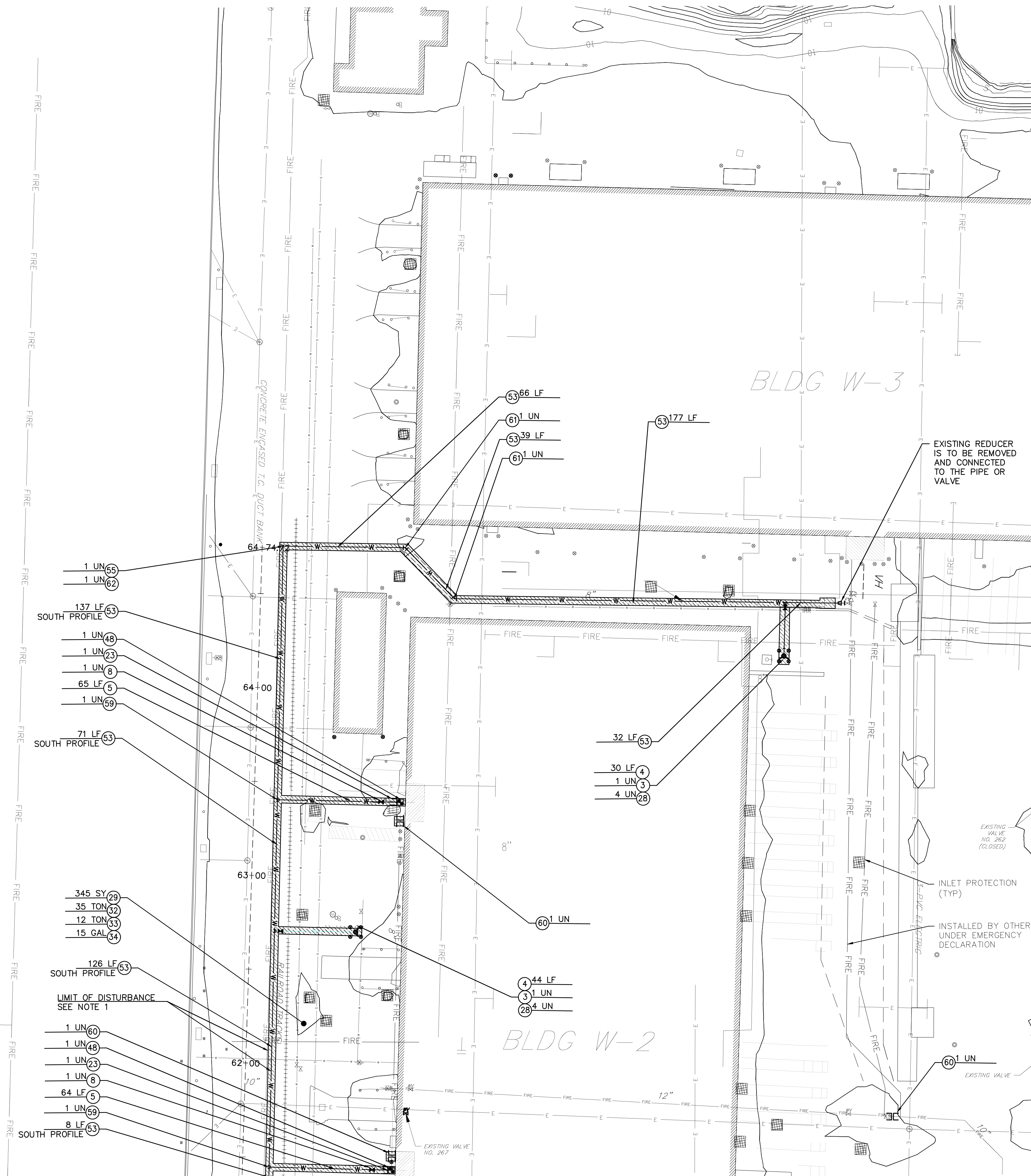
**REMINGTON
& VERNICK
ENGINEERS**

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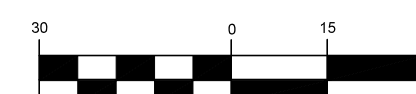


MATCHLINE SHEET C-2.1

NOTES:

1. HATCHING SURROUNDING PROPOSED PIPING INDICATES LIMITS OF DISTURBANCE.

GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.

TO BE CONSTRUCTED

ITEM	DESCRIPTION	UNIT	QTY
3	FURNISH AND INSTALL FIRE HYDRANTS, COMPLETE	UN	2
4	6" CLASS 52 DUCTILE IRON PIPE, WRAPPED IN POLYETHYLENE	LF	74
5	8" CLASS 52 DUCTILE IRON PIPE, WRAPPED IN POLYETHYLENE	LF	129
8	8" MJT RESTRAINED RESILIENT SEAT GATE VALVE, COMPLETE	UN	2
23	8" MJT RESTRAINED END CAP	UN	2
28	6" STEEL BOLLARD, FILLED WITH CONCRETE AND PLASTIC COVER	UN	8
29	DENSE GRADED AGGREGATE BASE COURSE, 6" THICK	SY	345
32	HOT MIX ASPHALT BASE COURSE, 19M64, 6" THICK	TON	35
33	HOT MIX ASPHALT SURFACE COURSE, 12.5M64, 2" THICK	TON	12
34	TACK COAT	GAL	15
48	TEST PITS, INCLUDING RESTORATION	UN	2
53	10" CLASS 52 DUCTILE IRON PIPE, WRAPPED IN POLYETHYLENE	LF	656
55	10" BLIND FLANGE, COMPLETE	UN	1
59	10" X 10" X 8" MJT RESTRAINED CLDIP TEE	UN	2
60	CUT & CAP	UN	3
61	10" 45 DEGREE MJT RESTRAINED CLDIP FITTING	UN	2
62	10" X 10" X 10" MJT RESTRAINED CLDIP TEE	UN	1



REMINGTON & VERNICK ENGINEERS

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No. 12025

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NO.	REVISION	DATE	BY	CHK
1	CHANGES REQUESTED BY CLIENT	8/2/25	RG	TM

PROPOSED ENLARGED SITE PLAN AND SESC

SOUTH JERSEY PORT CORP
BROADWAY TERMINAL WATER FIRE MAIN REPLACEMENT

NEW JERSEY

CAMDEN COUNTY

CAMDEN CITY

DRAWN BY	DESIGN BY	CHECKED BY	SCALE
G.M.	G.M.	S.C.	AS NOTED
DATE			
9.2024			
JOB NO.			
3965X004			
			C-5.2

- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED TO PREVENT FURTHER EROSION WITH THE STATE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
- ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 10 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL BE COVERED WITH 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 2 TONS PER ACRE.
- PERMANENT VEGETATION TO BE SEEDDED OR SOODED ON ALL EXPOSED AREAS WITHIN 10 TO 15 DAYS AFTER FINAL GRADING. MULCH WILL BE USED FOR PROTECTION UNTIL SEEDLING IS ESTABLISHED.
- A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND SOIL IMPROVEMENTS IN ORDER TO PREPARE THE SUB-BASE FOR THE DRIVEWAYS AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT THE SUB-BASE SHALL BE INSTALLED WITHIN 15 DAYS OF PRELIMINARY GRADING.
- IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OF THE SOIL, 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 ALTERNATIVE, AT A RATE OF TWO (2) TONS PER ACRE.
- ANY STEEP SLOPE RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DURING AS THE INSTALLATION PROCEEDS (I.E. SLOPES GREATER THAN 3:1).
- TEMPORARY DISTURBANCES REQUIRE THE INSTALLATION OF A TEMPORARY COVER OF 1-1/2" TO 2" STONE AT ALL CONSTRUCTION DRIVEWAYS IMMEDIATELY AFTER INITIAL SOIL DISTURBANCE. A CRUSHED STONE TIE CLEANING PAD WILL BE INSTALLED WHEREVER CONSTRUCTION ENTRANCE EXISTS. THE STONE SHALL BE 1/2" TO 1" IN LENGTH. THE STONE MUST BE 1.5"-4" IN SIZE, PLACED 12" THICK AND THE FULL WIDTH OF THE ENTRANCE. IT SHOULD BE UNDERLINED WITH A SYNTHETIC FILTER FABRIC AND MAINTAINED.
- IN ACCORDANCE WITH STANDARDS FOR PERMANENT VEGETATIVE COVER FOR SOIL EROSION CONTROL, ANY SOIL HAVING A PH OF 5 OR LESS AND A CATION RATIO OF 15:1 OR GREATER SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR GREATER TO BE SEEDBED PREPARATION.
- THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 72 HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.
- AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE COMPLETED, THE DISTRICT SHALL BE NOTIFIED. THE DISTRICT WILL PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER. SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT WILL NOT BE A HAZARD TO THE CONSTRUCTION OF THE PROJECT. THE DISTRICT SHALL PROVIDE COVER IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITION, MEANS OF GROUND COVER, GROUND STABILIZATION SHALL BE TO BE EMPLOYED.
- CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED CONDUIT OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
- ANY CHANGES TO THE SITE PLAN WILL REQUIRE THE SUBMISSION OF A REVISED SITE PLAN AND EROSION AND SEDIMENT CONTROL PLAN TO THE COUNTY SOIL CONSERVATION DISTRICT FOR RECERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT NEW JERSEY SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
- PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL SOIL EROSION & SEDIMENT CONTROL MEASURES.
- IF THE COUNTY SOIL CONSERVATION DISTRICT, REQUIRES THAT NO CERTIFICATES 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 FOR EROSION AND SEDIMENT MEASURES, SHALL BE STOPPED UNTIL THE DISTRICT HAS ISSUED A REPORT OF COMPLIANCE FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.

1. SITE PREPARATION

A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.

B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.

2. SEEDBED PREPARATION

A. APPLY LIMESTONE AND FERTILIZER. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 114 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT. APPLY LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDES) AS FOLLOWS:

SOIL TEXTURE	TONS/ACRE	LSB./1,000 FT ²
CLAY, CLAY-LOAM, AND HIGH ORGANIC SOIL	3	135
SANDY LOAM, LOAM, SILT LOAM	2	90
LOAMY SAND, SAND	1	45

PULVERIZED DOLOMITE LIMESTONE IS PREFERRED FOR MOST SOILS SOUTH OF THE NEW BRUNSWICK-TENNESSEE LINE.

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 SURFACE CONDITION SHOULD BE ON THE GENERAL CONTOUR, CONTINUE FILLAGE UNLESS A REASONABLY UNIFORM SURFACE IS PREPARED.

C. INSURE SEEDBED, JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED AS ABOVE.

D. SOILS HIGH IN SULFIDES OR HAVING A PH OF 4 OR LESS SHOULD BE MULCHED ONLY.

B. APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DITCH CLIPPER SEEDER, OR HYDROSEDER. MULCH SHALL NOT BE INCLUDED IN A HYDROSEDER OPERATION. SEED SHALL BE PLACED ON THE SURFACE OF THE SOIL BY DRAG OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.

C. AFTER SEEDING, FIRING THE SOIL SHALL BE PERFORMED WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDING EMERGENCE.

4. MULCHING

MULCHING IS REQUIRED ON ALL SEEDING.

A. MULCH MATERIALS SHALL BE UNWEIGHTED SMALL GRAM STRAW, FREE OF SEEDS, OR SALT. MULCH SHALL BE APPLIED AT A RATE OF 1/2 TO 1 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET). EXCEPT THAT WHERE A CROMBER IS USED INSTEAD OF A LIQUID MULCH-SPREADER, THE MULCHING OF ONE ACRE MAY BE COMPLETED WITHIN 10 MINUTES. IT SHALL BE THE LOWER RATE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MATERIAL.

B. SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 75% TO 95% OF THE SEEDS ARE COVERED. SEEDS SHOULD BE UNIFORM DISTRIBUTION OF HAND SPREAD MULCH. DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS OF MULCH EACH SECTION.

C. MULCH ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING ON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND SOIL.

1. DRIVE STAKES - DRIVEN INTO THE SOIL WITHIN 10 TO 15 FEET 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 THE STAKES TO CROSSHATCH THE MULCH SURFACE DISTANCE AROUND EACH STAKE TO 20 FEET OR MORE ROUND TURNS.

2. MULCH NETTING - STRIPS OF NET, COTTON, OR PLASTIC NETTING TO THE SOIL.

3. MULCH TIE - USE A DEGRADABLE NETTING OR PLASTIC TO BE MOWED.

C. MULCH ANCHORING TOOL - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO TIE OR CUT SOME OF THE BROADCAST LUNG MULCH 3 TO 4 FEET FROM THE SEEDS. THE TOOL SHOULD BE USED IN ALL DIRECTIONS, STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR. IT SHOULD OPERATE ON A SLOPE OF 10% OR LESS. MULCH TIE RATE MUST BE 3 TONS PER ACRE. NO TYPING OR ADHESIVE AGENT IS REQUIRED.

D. WOOD-FRIM OR PAPER-FRIM MULCH AT THE RATE OF 1,500 POUNDS PER ACRE MAY BE USED INSTEAD OF HYDROSEDER. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

THIS SEEDING MIXTURE IS COMPOSED OF A SINGLE SPECIES WHICH GERMINATES QUICKLY IN ORDER TO REDUCE SOIL EROSION UNTIL A PERMANENT VEGETATIVE COVER CAN BE ESTABLISHED. A MIXTURE OF EQUAL QUALITY MAY BE SUBSTITUTED IF APPROVED BY OUR OFFICE.

COMMON NAME	BOTANICAL NAME
100% ANNUAL RYE GRASS	LOLIUM FULVUM

THE MINIMUM APPLICATION RATE FOR THIS SEEDING MIXTURE SHALL BE FOUR (4) POUND/1000 SQUARE FEET OR 100 POUNDS/ACRE.

SEEDING SHOULD BE COMPLETED BY APRIL 1-MAY 31 AND AUGUST 16-OCTOBER 15. SUMMER SEEDING SHALL BE PERFORMED ONLY IF ADEQUATE IRRIGATION IS PROVIDED TO ENSURE SUCCESSFUL GERMINATION.

1. SITE PREPARATION

A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDED PREPARATION, SEEDING, MULCH APPLICATION, AND MAINTENANCE.

B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS INVERSION, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.



2. SEEDBED PREPARATION

4. APPLY LIMESTONE AND FERTILIZER. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET (10-10-10 OR EQUIVALENT, ANALYZED TO BE EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDES) AS FOLLOWS:

SOIL TEXTURE	TONS/ACRE	LBs/1,000 SQ. FT.
CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL	4	180
SANDY LOAM, LOAM, SILT LOAM	3	135
LOAMY SAND, SAND	2	90

PULVERIZED DOLOMITIC LIMESTONE IS PREFERRED FOR MOST SOILS SOUTH OF THE NEW BRUNSWICK-TRENTON LINE.

5. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TONGUE HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCOING OPERATION SHOULD BE TO THE GENERAL CONTOUR, CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDBED IS OBTAINED. ALL BUT GRASSY SITES AND COURSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.

6. REMOVE FROM THE SURFACE ALL STONES TWO INCHES OR LARGER IN ANY DIMENSION, ALL OTHER FOREIGN SOLIDS SUCH AS LIMESTONE, TREE ROOTS, PIECES OF CONCRETE, CLOSOS, LUMPS, OR OTHER UNSUITABLE MATERIAL.

7. SEEDING. SEED MUST BE SOWN BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED AND FIRMED AS ABOVE.

8. SEEDING

A. SEE PERMANENT SEED MIXTURE FOR SPECIES AND APPLICATION RATES.

B. APPLY SEED UNIFORMLY BY HAND, CYCLOPS (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL, HYDROSEEDER, OR HYDROSEEDER. MOLTCH SHALL NOT BE INCLUDED IN A HYDROSEEDER DEPTH WITH SEED. EXCEPT FOR DRILLED, HYDROSEEDER OR CUTLIPACKED SEEDING, SEEDS SHALL BE INCORPORATED TO A DEPTH OF 1/2 TO 1 1/2 INCH BY RAKING OR DRAGGING. SEED OF SOIL PLACEMENT MAY BE 1/4 INCH DEEPER ON COURSE TEXTURED SOIL.

C. AFTER SEEDING, FIRING THE SOIL SHALL BE PERFORMED WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE.

9. MULCHING

MULCHING IS REQUIRED ON ALL SEEDING.

- A. **MULCH MATERIALS** SHOULD BE UNFROTTED SMALL GRASS STRAW, WASH FREE OF SEEDS, OR SALT. MULCH SHOULD BE APPLIED AT A RATE OF 10 TO 12 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRUMPER IS USED INSTEAD OF LIQUID MULCH (TRUCKING OR ADHESIVE APPLICATION), THE RATE OF APPLICATION MUST BE DOUBLED. THE 1000 LB CRUMPER CHOPPER MUST BE USED TO CHOP THE MULCH INTO 1/2" TO 1" LENGTHS.
- B. **SPREAD UNIFORMLY** BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 75% TO 95% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, THE MULCH SHOULD BE APPLIED TO 1000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.
- C. **MULCH ANCHORING** SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE WIND-EROSION OF MULCH. WATER, THE BEST, SHOULD 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 SURFACE OF THE MULCH AT 4 FEET INTERVALS. TWINE THE PEGS TOGETHER AT 4 FEET INTERVALS. AFTER APPLYING MULCH, SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN THE PEGS AND CROSS-CROSS AND SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH 2 OR MORE ROUND TWINE.
 - 2. **MULCH NETTING** - STAPLE PLASTER, JUTE, COTTON, OR PLASTIC NETTING TO THE SOIL SURFACE TO FORM A DEGRADABLE MESH.
 - 3. **CRUMPER (MULCH ANCHORING TOOL)** - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LAY MULCH INTO THE SOIL TO 4 TO 10 INCHES DEEP. THE CRUMPER MUST BE OPERATED WITH THE MULCH STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVELABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW TRANSMISSION RATE MUST BE 3 TONS PER ACRE, NO TOLERANCE.
- D. **WOOD-FIBER OR PAPER-FIBER MULCH** IS LIMITED TO RATES OF 1,500 POUNDS PER ACRE MAY BE APPLIED BY A HYDROSEDER. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

IRIGATION

- A. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER (A MINIMUM OF ONE INCH TWICE A WEEK) UNTIL VEGETATION IS ESTABLISHED. BE ESPECIALLY FIRM WHEN SEEDINGS ARE PERFORMED IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.

THIS SEEDING MIXTURE IS COMPOSED OF DROUGHT-TOLERANT SPECIES WHICH CAN THRIVE WITH LOW MAINTENANCE. THE PROPRIETARY NAME OF THE MIXTURE IS RECLAIM CONSERVATION FORMULA. FORMULA IS MANUFACTURED BY LOTUS INC., FORT WORTH, TEXAS (817)526-3890. A MIXTURE OF EQUAL QUALITY MAY BE SUBSTITUTED IF APPROVED BY OUR OFFICE.

	COMMON NAME	BOTANICAL NAME
40	CLEOME HAT FESQUE	FESTUCA ARUNDINACEA "CLEMINE"
40	WEEDING LONGGRASS	ERAGRIS CURVULA
15	RELIANT HARD FESQUE	FESTUCA LONGICA "RELIANT"
10	JAMESTOWN CHEWINGS FESCUE	FESTUCA RUBRA VAR. COMMUTATA "JAMES"
5	PALEER CHEWINGS FESCUE	PHALARIS PERENE "PALMER"
5	WHITE CLOVER	TRIFOLIUM REPENS
5	BLACKBELL SWITCHGRASS	ANCIUM VIRGATUM "BLACKWELL"

THE MINIMUM APPLICATION RATE FOR THIS SEEDING MIXTURE SHALL BE FOUR (4) POUNDS/1000 SQUARE FEET OR 175 POUNDS/ACRE.

RECOMMENDED SEEDING PERIODS ARE APRIL 1-MAY 31 AND AUGUST 1-16 OCTOBER 15.
SUMMER SEEDING SHALL BE PERFORMED ONLY IF ADEQUATE IRRIGATION IS PROVIDED TO ENSURE
SUCCESSFUL GERMINATION.

PERMANENT SEEDING MIXTURE (MIXT)

THE SEEDING MIXTURE IS COMPOSED OF MOISTURE-TOLERANT SPECIES WHICH CAN THRIVE WITH
LOW MAINTENANCE. THE PROPRIETARY NAME OF THE MIXTURE IS REDUCED MAINTENANCE
MIX-MYST[®] FORMULA AS MANUFACTURED BY LOTUS LINC, LINC, BOUND BROOK, NJ. 08803, (800)526-3890
A MIXTURE OF EQUAL QUALITY MAY BE SUBSTITUTED IF APPROVED BY OUR REPRESENTATIVE.

<u>%</u>	<u>COMMON NAME</u>	<u>BOTANICAL NAME</u>
55	CLEMATIS TALL FESCUE	POTENTIAL ARUNDINACEA "CLEMFIN"
15	NASSAU COASTAL BLUEGRASS	POA PRATENSIS "NASSAU"
10	PALMER PERENNIAL RYE	LOLUM PERENNIE "PALMER"
10	LARGE POA TRIVIALIS	POA TRIVIALIS "LARGE"
5	STREAKER GRASS	AGROSTIS ALBA "STREAKER"
5	RED CANARY ROOT	PHALARIS ARUNDINACEA

THE MINIMUM APPLICATION RATE FOR THIS SEEDING MIXTURE SHALL BE FIVE (5) POUNDS/1000
SQUARE FEET OR 220 POUNDS/ACRE.

RECOMMENDED SEEDING PERIODS ARE APRIL 1-MAY 31 AND AUGUST 1-16 OCTOBER 15.
SUMMER SEEDING SHALL BE PERFORMED ONLY IF ADEQUATE IRRIGATION IS PROVIDED TO ENSURE
SUCCESSFUL GERMINATION.

THIS SEEDING MIXTURE IS COMPOSED OF DROUGHT-TOLERANT SPECIES WHICH CAN THRIVE IN DRY AND SOIL CONDITIONS COMMONLY FOUND IN THE PINELANDS. A MIXTURE OF EQUAL QUALITY MAY BE SUBSTITUTED IF APPROVED BY OUR OFFICE.

%	COMMON NAME	BOTANICAL NAME
65	ARD TALL FESCUE	FESTUCA ARAUCANA, "ARD"
20	REILANT HARD FESCUE	FESTUCA LONGIFOLIA "REILANT"
15	JAMESTOWN CHEWINGS FESCUE	FESTUCA RUPEA VAR. COMMUNATA "JAMESTOWN"

THE MINIMUM APPLICATION RATE FOR THIS SEEDING MIXTURE SHALL BE FIVE (5) POUNDS/1000 SQUARE FEET OR 220 POUNDS/ACRE.

RECOMMENDED SEEDING PERIODS ARE APRIL - MAY 31 AND AUGUST 15-OCTOBER 15.

SUMMER SEEDING SHALL BE PERFORMED ONLY IF ADEQUATE IRRIGATION IS PROVIDED TO ENSURE SUCCESSFUL GERMINATION.

THIS SEEDING MIXTURE IS COMPOSED OF SPECIES WITH A HIGH DEGREE OF "WILDLIFE TOLERANCE" AND MAY BE FOUND IN THE ACIDIC SOIL CONDITIONS COMMONLY FOUND IN THE PRAIRIES. A MIXTURE OF EQUAL QUALITY MAY BE SUBSTITUTED IF APPROVED BY OUR OFFICE.

%	COMMON NAME	BOTANICAL NAME
55	REBEL 2 TALL FESCUE	FESTUCA ARUNDINACEA "REBEL 2"
25	STREAKER REDTOP	AGROSTIS ALBA "STREAKER"
25	RED FESCUE	FESTUCA RUBRA
5	SWITCHGRASS	PANICUM VIRGATUM "BLACKWELL"

THE MINIMUM APPLICATION RATE FOR THIS SEEDING MIXTURE SHALL BE FIVE (5) POUNDS/1000 SQUARE FEET OR 220 POUNDS/ACRE.

RECOMMENDED SEEDING PERIODS ARE APRIL 1-MAY 31 AND AUGUST 15-OCTOBER 15.

SUMMER SEEDING SHALL BE APPLIED ONLY IF ADEQUATE IRRIGATION IS PROVIDED TO ENSURE SUCCESSFUL GERMINATION.



TOP SOILING

TOPSOIL SHOULD BE USED WHERE SOILS ARE: SANDS, GRAVELY SOILS, CLAYS, SILTY CLAYS, VERY SHALLOW, OR WHERE THEY ARE EXTREMELY AIDE (LESS THAN 4.0) OR SALTY (CONDUCTIVITY GREATER THAN 0.5 MILLIMOHS PER CENTIMETER), OR WHERE TOPSOIL IS AVAILABLE ON SITE AND ASSURANCE OF IMPROVED VEGETATIVE GROWTH IS DESIRED.

1. MATERIALS

A. TOPSOIL SHOULD BE FRAILO AND LOAMY, FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE THAT MAY BE HARMFUL TO PLANT GROWTH.

B. A RANGE OF 5.0-7.5 IS ACCEPTABLE. SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY LESS THAN 0.5 MILLIMOHS PER CENTIMETER). TOPSOIL HAILED IN FROM OFF SITE SHOULD HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75 PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES.

2. STRIPPING AND STOCKPILING

A. FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND/OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.

B. STRIPPING SHOULD BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA.

C. WHERE FEASIBLE, LIME MAY BE APPLIED BEFORE STRIPPING AT A RATE DETERMINED BY SOIL TESTS TO BRING THE SOIL pH TO 6.5 TO 7.5. SEE LIME RATE GUIDE IN SEEDBED PREPARATION FOR PERMANENT VEGETATIVE COVER.

D. A 4-6 inch STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL.

E. STOCKPILES OF TOPSOIL SHOULD BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.

F. STOCKPILES SHOULD BE VEGETATED IN ACCORDANCE WITH TEMPORARY SEEDING STANDARDS PREVIOUSLY DESCRIBED HEREIN.

1. ALL APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATION AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
2. SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR EROSION CONTROL, IN NEW JERSEY.
3. APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND/OR THE AREA IS STABILIZED.
4. THE CONTRACTOR SHALL PERFORM ALL WORK, FURNISH ALL MATERIALS AND INSTALL ALL MEASURES REQUIRED TO REASONABLY CONTROL SOIL EROSION RESULTING FROM CONSTRUCTION OPERATIONS AND PREVENT EXCESSIVE FLOW OF SEDIMENT FROM THE CONSTRUCTION SITE.
5. ANY DISTURBED AREA THAT IS TO BE LEFT EXPOSED FOR MORE THAN TEN (10) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND FERTILIZATION IN ACCORDANCE WITH THE NEW JERSEY STANDARDS AND THEIR RATES SHOULD BE INCLUDED IN THE NARRATIVE. DISTURBED AREAS THAT ARE NOT TO BE LEFT EXPOSED SHALL BE MULCHED WITH SALT FREE OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS. (E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).
6. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PROVIDE CONFORMANCE OF LIME, FERTILIZER AND COMPOST APPLICATION AND RATES OF APPLICATION AT THE REQUEST OF THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT.
7. ALL CRITICAL AREAS SUBJECT TO EROSION WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH AT A RATE OF 2 TONS PER ACRE, ACCORDING TO THE NEW JERSEY STANDARDS IMMEDIATELY AFTER CONSTRUCTION THROUGH EROSION CONTROL MEASURES.
8. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
9. ALL SEDIMENTATION STRUCTURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
10. A CRUSHED STONE, THE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ACCESS EXISTS. THE STABILIZED PAD WILL BE INSTALLED ACCORDING TO THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS.

- CONSTRUCTION.
12. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
13. ALL CATCH BASIN INLETS WILL BE PROTECTED ACCORDING TO THE CERTIFIED PLAN.
14. ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
15. ALL Dewatering OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA. THE SEDIMENT FILTER SHOULD BE COMPOSED OF A SUITABLE SEDIMENT FILTER FABRIC. (SEE DETAIL) THE BASIN MUST BE DEWATERED TO NORMAL POOL WITHIN 10 DAYS OF THE DESIGN STORM.
16. NJS 4-224-30, ET SEQ., REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE ALL PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES. ALL SITE WORK FOR THE PROJECT MUST BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE AS A PREREQUISITE TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE DISTRICT. MULCHING IS REQUIRED ON ALL SEEDED AREAS TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED TO PROMOTE EARLYER VEGETATION COVER.
17. OFFSITE SEDIMENT DISCHARGE MAY REQUIRE ADDITIONAL CONTROL MEASURES TO BE DETERMINED BY THE EROSION CONTROL INSPECTOR.
18. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE MAINTAINED ON THE PROJECT SITE DURING CONSTRUCTION.
19. THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 72 HOURS PRIOR TO ANY LAND DISTURBANCE.
20. ANY CONVICTION OF THIS PROJECT PRIOR TO ITS COMPLETION WILL TRANSFER FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CERTIFIED PLAN TO ANY SUBSEQUENT OWNERS.
21. IMMEDIATELY AFTER THE COMPLETION OF STRIPPING AND STOCKPILING OF TOPSOIL, THE STOCKPILE MUST BE STABILIZED ACCORDING TO THE STANDARD FOR TEMPORARY VEGETATIVE COVER. STABILIZE TOPSOIL PILE WITH STRAW MULCH FOR PROTECTION IF THE SEASON DOES NOT PERMIT THE APPLICATION AND ESTABLISHMENT OF PERMANENT VEGETATION. STOCKPILES ARE NOT TO BE LOCATED WITHIN 500 FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY AND THE BASE MUST BE PROTECTED WITH A SEDIMENT BARRIER.
22. ANY CHANGES TO THE SITE PLAN WILL REQUIRE THE SUBMISSION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN TO THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT. THE REVISED PLAN MUST BE IN ACCORDANCE WITH THE CURRENT NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.
23. METHODS FOR THE MANAGEMENT OF 11010-I AND AOD PRODUCING SOLS SHALL BE IN ACCORDANCE WITH THE STANDARDS. HIGH AOD PRODUCING SOLS ARE THOSE FOUND TO CONTAIN ION SULPHIDES OR HAVE A pH OF 4 OR LESS.

25. MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT BE CONSTRUCTED STEEPER THAN 3:1 UNLESS OTHERWISE APPROVED BY THE DISTRICT.
26. DUST IS TO BE CONTROLLED BY AN APPROVED METHOD ACCORDING TO THE NEW JERSEY STANDARDS AND MAY INCLUDE WATER.
27. ADJOINING PROPERTIES SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS ON THE PROPOSED SITE.
28. USE STAGED CONSTRUCTION METHODS TO MINIMIZE EXPOSED SURFACES, WHERE APPLICABLE.
29. ALL VEGETATIVE MATERIAL SHALL BE SELECTED IN ACCORDANCE WITH AMERICAN STANDARDS FOR NURSERY STOCK OF THE AMERICAN ASSOCIATION OF THE NURSERYMEN AND IN ACCORDANCE WITH THE NEW JERSEY STANDARDS.
30. NATURAL VEGETATION AND SPECIES SHALL BE RETAINED WHERE SPECIFIED ON THE LANDSCAPE PLAN.
31. THE SOIL EROSION INSPECTOR MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED, AS DIRECTED BY THE DISTRICT INSPECTOR.

LEGEND

SILT FENCE (TYPICAL) ———— SF ———— SF ————

1. TEMPORARY STABILIZATION - ALL EXPOSED AREAS NOT TO BE CONSTRUCTED UNTIL WITHIN 10 DAYS SHOULD RECEIVE TEMPORARY STABILIZATION. THE TEMPORARY SEEDING MIXTURES SHALL BE ANNUAL RYE GRASS AT A RATE OF 4 POUNDS PER 1000 SQ. FT. AND LINED AT A RATE OF 10 POUNDS PER 1000 SQ. FT.
2. PERMANENT STABILIZATION - EXPOSED AREAS WHICH ARE TO BE PERMANENTLY VEGETATED SHOULD BE SEEDED WITHIN 10 DAYS OF FINAL GRADING, ACCORDING TO THE PERMANENT SEEDING SPECIFICATIONS.
3. EVERY EFFORT SHALL BE MADE TO PREVENT AND CORRECT PROBLEMS ASSOCIATED WITH EROSION AND SEDIMENTATION WHICH COULD OCCUR DURING AND AFTER PROJECT CONSTRUCTION AT A MINIMUM OF THE FOLLOWING EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE FOLLOWED:
 4. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATIONS OR CONSTRUCTION OF PROPOSED FACILITIES AND SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE AND THE CONSTRUCTION AREA IS STABILIZED. AFTER RESTORATION IS COMPLETE, TEMPORARY CONTROL MEASURES SHALL BE REMOVED AND DISPOSED OF PROPERLY.
 5. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" PREPARED BY THE NEW JERSEY STATE SOIL CONSERVATION COMMITTEE, 1999, INCORPORATED HEREIN BY REFERENCE, AS AMENDED AND SUPPLEMENTED. COPIES OF THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" ARE AVAILABLE FOR A FEE FROM THE NEW JERSEY DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION COMMISSION, OR FROM THE OFFICE OF ANY OF THE 16 LOCAL CONSERVATION DISTRICTS.

TOTAL AREA OF DISTURBANCE: < 32,000 SQFT

N.T.S.

Diagram illustrating the components of a curb and inlet assembly:

- USHED STONE COLLAR SURROUNDING GRATE PERIMETER
- CURB
- INLET
- WOOD FRAME - 2" x 6" S
- 3/4" PLYWOOD, 3/4" PA
- HINGE (TYP)
- PERFORATIONS TO BE ANY SIZE SMALLER THAN STONE SURROUNDING FRAME, BUT NOT LESS THAN 3/4" DIA.

N.T.S.

THE TOP OF THE STANDPIPE SHOULD EXTEND AT LEAST 12" TO 18" ABOVE THE TOP OF THE PIT OR ABOVE STANDING WATER

CLEAN WATER DISCHARGE

SUCTION LINE TO PUMP

3" MIN.

EXISTING GROUND LINE

STANDPIPE WRAPPED IN 1/2" HARDWARE CLOTH AND GEOTEXTILE

SIDE SLOPE (VARIES)

12"-36" DIA. PERFORATED CORRUGATED METAL OR PVC PIPE

WATERTIGHT CAP OR PLATE

CLEAN GRAVEL

PLACE 12" BASE OF CLEAN STONE BEFORE INSTALLING STANDPIPE

Detailed description: This technical diagram illustrates the installation of a standpipe in a pit. A vertical pipe, labeled '12"-36" DIA. PERFORATED CORRUGATED METAL OR PVC PIPE', is shown wrapped in '1/2" HARDWARE CLOTH AND GEOTEXTILE'. The pipe extends from a 'WATERTIGHT CAP OR PLATE' at the bottom of the pit to a 'CLEAN WATER DISCHARGE' point above the pit. The top of the pipe must extend 'AT LEAST 12" TO 18" ABOVE THE TOP OF THE PIT OR ABOVE STANDING WATER'. A 'SUCTION LINE TO PUMP' is connected to the discharge. The pit is lined with 'SIDE SLOPE (VARIES)' and contains 'CLEAN GRAVEL' at the bottom. A '12" BASE OF CLEAN STONE' is placed before installing the standpipe. The 'EXISTING GROUND LINE' is indicated on the right. A '3" MIN.' dimension is shown for the gravel layer. The drawing is labeled 'N.T.S.' (Not To Scale).

N.T.S.



(SEE PLAN FOR WIDTH)
N.T.S.

N.T.S.

AREA TO BE GRADED AND MATCHED AS REQUIRED

PROP HDPE

PROPOSED CONCRETE HEADWALL OR FLARED END SECTION

10'-0" (TYP)

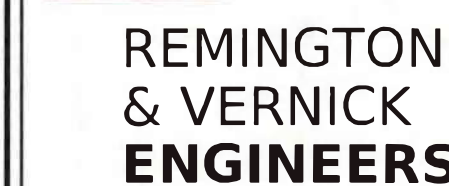
HAY BALE SEDIMENT BARRIER TO BE CONSTRUCTED AT LOCATIONS AS SHOWN ON THE PLAN

Diagram illustrating tree protection during construction. The left side shows a tree with a 4' high snow fence or approved equal installed around its base. The right side shows a top view of the protection circle, indicating a minimum diameter of 10'.

NOTE: TO BE UTILIZED FOR ANY ANTICIPATED DISTURBANCE.

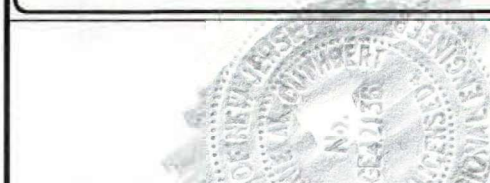
- CONSTRUCTION SPECIFICATIONS:**
1. PIT DIMENSIONS ARE VARIABLE, WITH THE MINIMUM DIAMETER BEING 2 TIMES THE STANDPIPE DIAMETER.
 2. THE STANDPIPE SHOULD BE CONSTRUCTED BY PERFORATING A 12" STANDPIPE DIAMETER PIPE WITH 1/2" HOLES OR PIG PIPE THEN WRAPPING WITH 1/2" HARDWARE CLOTH AND GEOTEXTILE FABRIC. THE PERFORATIONS SHALL BE 1/2"x6" SLITS OR 1" SQUARE HOLES.
 3. A BASE OF FILTER MATERIAL CONSISTING OF CLEAN GRAVEL OR ASTM #35 CSTONE SHOULD BE PLACED IN THE BOTTOM 12" OF THE PIT. AFTER INSTALLING THE STANDPIPE, THE PIT SURROUNDING THE STANDPIPE SHOULD THEN BE BACKFILLED WITH THE SAME FILTER MATERIAL.
 4. THE STANDPIPE SHOULD EXTEND 12" TO 18" ABOVE THE LIP OF THE PIT OR THE RISER CREST ELEVATION (BASELINE DOWNGRADE ONLY) AND THE FILTER MATERIAL SHOULD EXTEND 3" MINIMUM ABOVE THE ANTICIPATED STANDING WATER ELEVATION.
 5. LOCATE AS REQUIRED (REMOVABLE PUMPING STATION)
 6. PITS MAY BE RELOCATED TO OPTIMIZE USE, BUT DISCHARGE LOCATION CHANGES MUST BE COORDINATED WITH CANNON COUNTY SOIL CONSERVATION DISTRICT. SEDIMENT CONTROL BAGS MAY NOT BE REUSED AND MUST BE LOCATED AWAY FROM THE PITS. BAGS MUST BE PROPERLY STORED AND DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

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2059 SPRINGDALE ROAD
CHERRY HILL, NJ 08003
(856) 795-9595, FAX (856) 795-1888
WEB SITE ADDRESS : WWW.RVE.COM
Certification of Authorization: 24 GA 2800330
~ENGINEERING EXCELLENCE~

DATE: Stephanie Cuthbert
STEPHANIE A. CUTHBERT
NJ PROFESSIONAL ENGINEER LIC. No. 42712



PLANS WHICH DO NOT BE
AN EMBOSSED SEAL ARE NOT VAL

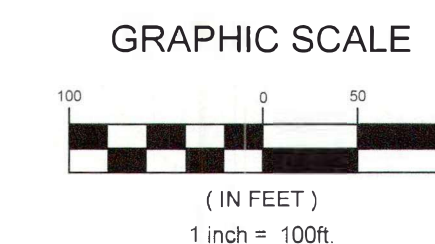
ALL DOCUMENTS PREPARED BY REMINGTON & VERNICK ENGINEERS AND AFFILIATES ARE INSTRUMENTS OF SERVICE. RESPECT OF THE PROJECT, THEY ARE INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON EXTENSIONS OF THE PROJECT, OR ON ANY OTHER PROJECT, ANY REUSE WITH WRITTEN VERIFICATION OR ADAPTATION BY REMINGTON & VERNICK ENGINEERS AND AFFILIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO REMINGTON & VERNICK ENGINEERS AND AFFILIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS REMINGTON & VERNICK ENGINEERS AND AFFILIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

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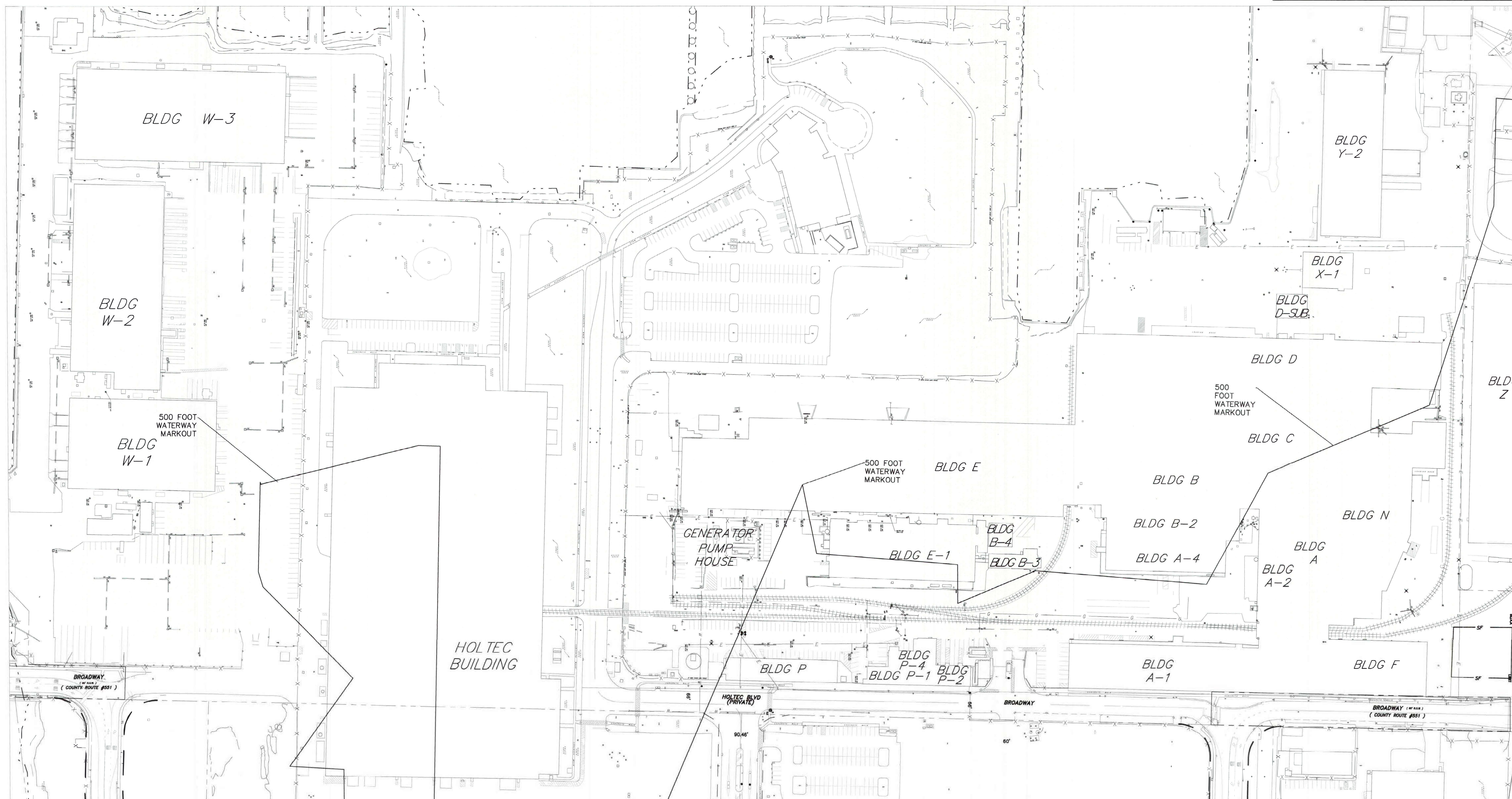
ENVIRONMENTAL

SOUTH JERSEY PORT CORP
BROADWAY TERMINAL WATER FIRE MAIN REPLACEMENT

<u>DRAWN BY</u> G.M.	<u>DESIGN BY</u> G.M.	<u>CHECKED BY</u> S.C.	<u>SCALE</u> AS NOTED
<u>DATE</u> 9.2024		<u>SHEET No.</u> EV-1	
<u>JOB No.</u> 3965X004			



OVERALL
SCALE: 1"=100'



FIRE HYDRANT ASSEMBLY DETAIL

N.T.S

NOTES:

1. WHEN DISTANCES BETWEEN VALVE AND HYDRANT EXCEED TEN LINEAR FEET (10') ALL THREAD RODS ARE NOT REQUIRED.

UTILITY OPENING REPAIR

N.T.S

PAVEMENT RESTORATION

PIPE BOLLARD PLAN VIEW

N.T.

SIZE	T	W	L
6"	8"	16"	16"
8"	8"	18"	18"
12"	10"	20"	20"
16"	12"	26"	26"
20"	14"	28"	28"

VALVE SUPPORT

NTS

VALVE HOUSE CONNECTION DETAIL

N.T.S.

NOTES:

1. TAPPED CONNECTIONS SHALL BE MADE ONLY IN THE PRESENCE OF WATER DEPARTMENT EMPLOYEES OR THEIR DESIGNATED REPRESENTATIVE.
2. CONCRETE THRUST BLOCK UNDER VALVES SHALL HAVE A SOIL BEARING AREA EQUAL TO THAT OF A 45° ELBOW.
3. CONCRETE THRUST BLOCK FOR TAPPING SLEEVE SHALL HAVE A SOIL BEARING AREA EQUAL TO THAT OF A TEE CONNECTION.

PIPE BOLLARD DETAIL

N.T.S.

WATER MAIN OFF-SET DETAIL

NTS

TRENCH DETAIL D.I. PIPE

NTS

ROADWAY TRENCH DETAIL D.I. PIPE

NTS

1. THRUST BLOCKS TO BE USED FOR WATER MAIN AND FORCE MAINS AT ALL BENDS, TEES, REDUCERS AND PLUGS.
2. BEARING AREAS FOR THRUST BLOCKS ARE BASED ON THE UNDISTURBED SOIL WITH BEARING CAPACITY OF 2000 POUNDS PER SQ. FT. FOR OTHER SOILS OF LESS BEARING CAPACITY, THE AREAS SHALL BE ADJUSTED ACCORDINGLY, (FIG. 14, ASCE "PIPELINE DESIGN FOR WATER AND WASTEWATER, 1975")
3. ALL CONCRETE FOR THRUST BLOCKS SHALL BE 3000 PSI COMPRESSIVE STRENGTH WITHIN 28 DAYS.
4. THE THRUST BLOCKS SHALL BE POURED FROM FITTING SUCH THAT THEY BEAR ON THE UNDISTURBED WALL OF THE TRENCH.
5. THE TABULATED CONTACT BEARING AREAS LISTED ARE FOR HORIZONTAL AND DOWNWARD THRUST ONLY AND ARE NOT APPLICABLE FOR UPWARD THRUST.

THRUST BLOCK DETAIL FOR SYSTEMS AT 150 PSI TEST PRESSURE OR LESS

NTS

TAPPING SLEEVE AND VALVE DETAIL

N T S