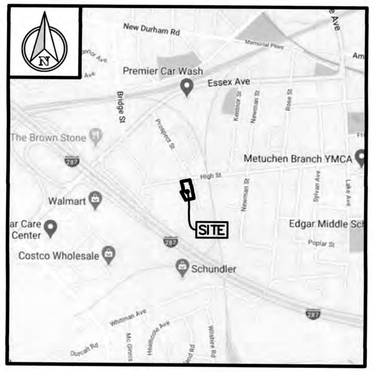
PRELIMINARY/FINAL SITE PLAN
for

100 PROSPECT STREET

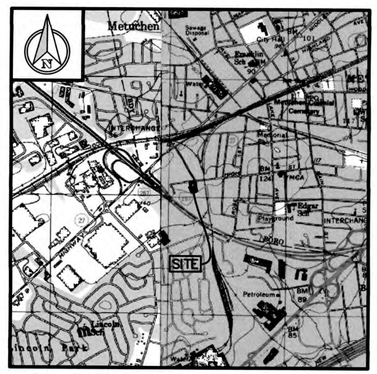
BOROUGH OF METUCHEN
MIDDLESEX COUNTY
NEW JERSEY
BLOCK 152, LOTS 51.01 & 51.02

200' OWNERS LIST

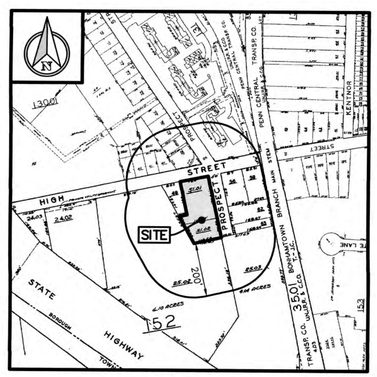
BLOCK	LOT	NAME & ADDRESS
130.01	37, 38.01	Mi S Kim & Jinjun Jiang 65 Prospect Street Metuchen, NJ 08840
130.01	38.02, 39.01	Elinor L. Berrey 69 Prospect Street Metuchen, NJ 08840
130.01	39	Manuel & Rosa Ferreira 9 Ten Eyck Place Edison, NJ 08820
130.01	40	Lisa Hoang 288 High Street Metuchen, NJ 08840
130.01	41	Blance E. Kimler 292 High Street Metuchen, NJ 08840
130.01	42, 42.01	A. Castrillon & E. Castrillon-Pujals 296 High Street Metuchen, NJ 08840
130.01	43, 43.01	Robert Mennuti 300 High Street Metuchen, NJ 08840
130.01	44, 41.01	Barbara B. Jessen 191 East Chestnut Avenue Metuchen, NJ 08840
131	4.01 C5006	Vladimir & Faina Tsipenyuk 43 Clive Hills Road Edison, NJ 08820
131	4.01 C5007	Andrea D. Smith 70-7 Prospect Street Metuchen, NJ 08840
131	4.01 C5008	G. Roger Greiner Trustee 216 Deep Cove Pt. Sunset, SC 29685
131	4.01 C5009	Hyang Ki Yi 70-9 Prospect Street Metuchen, NJ 08840
131	4.01 C5010	Colleen Daddino 70-10 Prospect Street Metuchen, NJ 08840
131	4.01 C5011	Richard D'Andria & Dannielle Boveri 70-11 Prospect Street Metuchen, NJ 08840
131	4.01 C5012	Sheng-En Chang 70-12 Prospect Street Metuchen, NJ 08840
131	4.01 C5013	Amber Hughes 70-13 Prospect Street Metuchen, NJ 08840
152	25.02	Franco Bros Realty % Franco MFG A/P 555 Prospect Street Metuchen, NJ 08840
152	25.03, 62, 65	Prospect Realty Assoc LP % Franco MF 555 Prospect Street Metuchen, NJ 08840
152	49	Fleur De Lis Eatery LLC 289 High Street Metuchen, NJ 08840
152	51.01, 51.2	HES Equity LLC 100 Prospect Street Metuchen, NJ 08840
152	56	George & Barbara Kuhne 267 High Street Metuchen, NJ 08840
152	59	Dolores M. Krive 259 High Street Metuchen, NJ 08840



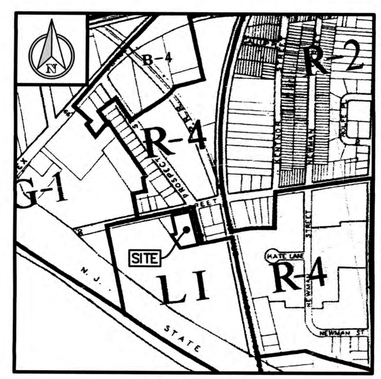
ROAD MAP
1"=1,000'



U.S.G.S. MAP
1"=2,000'



TAX MAP
1"=300'



ZONE MAP
1"=500'

SHEET INDEX

SHEET #	DWG. #	TITLE
SHEET 1	CV-1	COVER SHEET
SHEET 2	EC-1	EXISTING CONDITION/DEMOLITION PLAN
SHEET 3	OP-1	OVERALL PLAN
SHEET 4	GE-1	ENGINEERING SITE PLAN
SHEET 5	LL-1	LANDSCAPE & LIGHTING PLAN
SHEET 6	SE-1	SOIL EROSION & SEDIMENT CONTROL PLAN
SHEET 7	SED-1	SOIL EROSION & SEDIMENT CONTROL DETAILS (1)
SHEET 8	SED-2	SOIL EROSION & SEDIMENT CONTROL DETAILS (2)
SHEET 9	DE-1	CONSTRUCTION DETAILS (1)
SHEET 10	DE-2	CONSTRUCTION DETAILS (2)
SHEET 11	DE-3	CONSTRUCTION DETAILS (3)
SHEET 12	DE-4	CONSTRUCTION DETAILS (4)

OWNER/APPLICANT

Hes Equity LLC
c/o Mr Anthony He
100 Prospect Street
Metuchen, NJ 08840

APPROVED BY

CHAIRMAN DATE

SECRETARY DATE

ENGINEER DATE

METUCHEN PLANNING BOARD DATE

PROJECT NUMBER 2022.004

100 PROSPECT STREET

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100 PROSPECT STREET

BOROUGH OF METUCHEN
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 152
LOTS 51.01 & 51.02
TAX MAP SHEET 51
0.76 ACRES

COVER SHEET

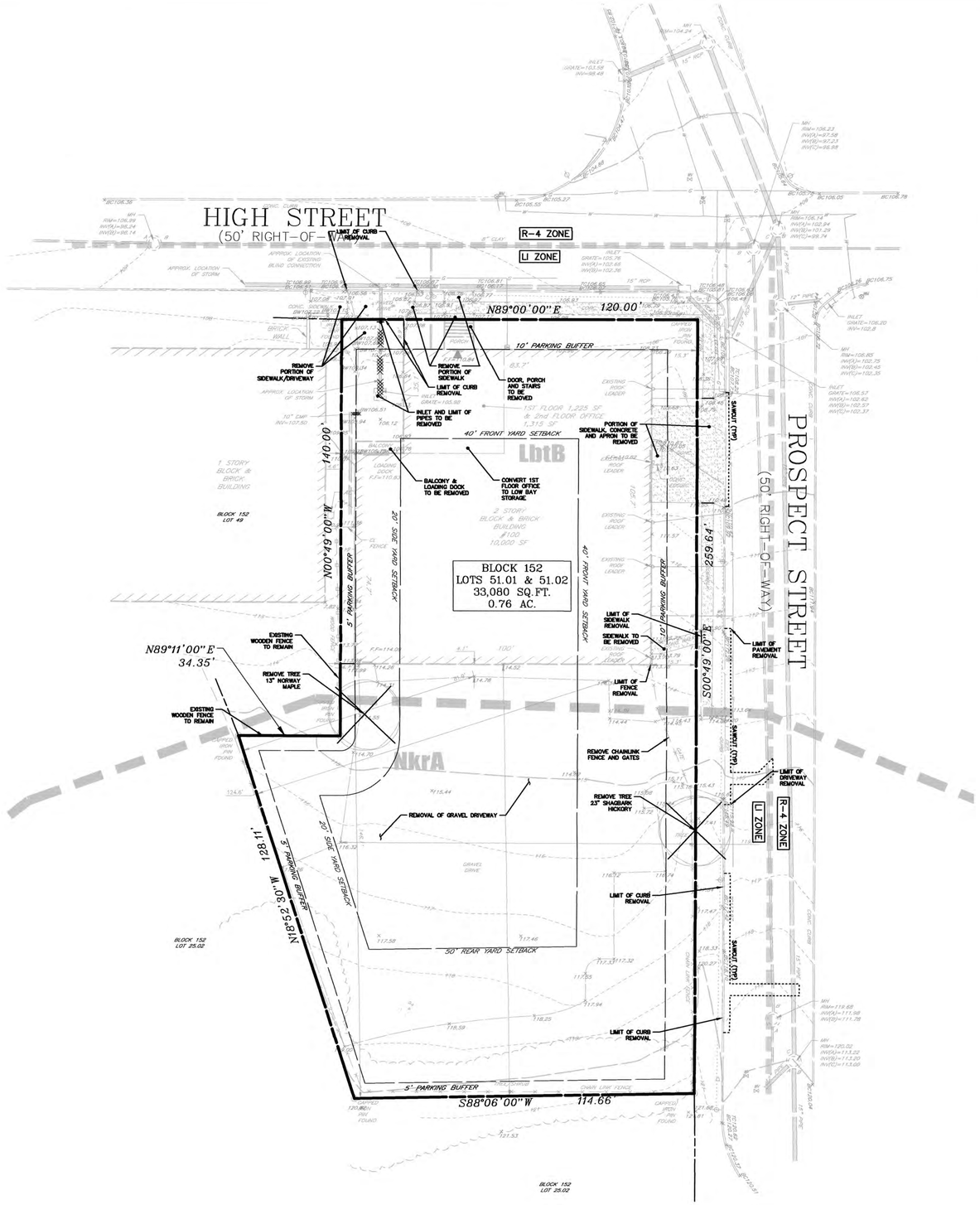
DRAWN BY . . PJ
DESIGNED BY . . WAL
APPROVED BY . . WAL

THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION...

WILLIAM A. LANE
PROFESSIONAL ENGINEER
NJPE# 40262

PROJECT NUMBER	2022.004	CV-1
DATE OF ISSUE	MARCH 14, 2022	1
REVISED THROUGH	MARCH 29, 2023	

C:\JOBS\2022.004-BASE-100 Prospect Street\2022.004-COVER.dwg PLOTTED: 3/28/2023 1:22 PM, BY: JASON DIBENTRAUT



DEMOLITION NOTES:

1. THE CONTRACTOR IS TO COORDINATE THE REMOVAL / ABANDONMENT OF ALL UTILITIES WITH THE RESPECTIVE UTILITY COMPANIES.
2. ALL DEBRIS FROM THE DEMOLISHED STRUCTURES THAT IS NOT REUSED AS FILL IS TO BE DISPOSED OF ACCORDING TO ALL APPLICABLE STANDARDS. DEMOLISHED MATERIALS REUSED AS FILL MATERIAL SHALL BE IN PER THE DIRECTION OF THE SOILS ENGINEER.
3. CONTRACTOR TO HIRE CONSULTANT TO INSPECT ALL EXISTING UTILITIES THAT ARE TO REMAIN. FINDINGS ARE TO BE SUBMITTED TO THE DESIGN ENGINEER PRIOR TO CONSTRUCTION OR ORDERING SO THAT A DETERMINATION CAN BE MADE AS TO THE CONDITION OF THE EXISTING LINES. ANY UTILITIES THAT ARE IN MARGINAL CONDITION WILL NEED TO BE REPLACED.
4. ALL EXISTING RETAINING WALLS THAT ARE TO REMAIN ARE TO BE INSPECTED BY THE SOILS ENGINEER. FINDINGS ARE TO BE SUBMITTED TO THE DESIGN ENGINEER PRIOR TO CONSTRUCTION OR ORDERING SO THAT A DETERMINATION CAN BE MADE AS TO WHETHER THE WALLS SHOULD BE REPLACED.
5. THE EXISTING UTILITY POLE LINE / OVERHEAD WIRES ALONG THE VACATED SECTION OF THE STREET IS TO BE RELOCATED. THE RELOCATION PATH AND CONSTRUCTION IS TO BE COORDINATED WITH THE RESPECTIVE UTILITY COMPANIES.
6. ALL TEST PITS LOCATING THE EXISTING UTILITIES ARE TO BE COMPLETED PRIOR TO CONSTRUCTION OR ORDERING.
7. CONTRACTOR TO HAVE ALL UTILITIES FIELD MARKED AND THEN LOCATED BY THE SURVEYOR. ALL LOCATIONS ARE TO BE REPORTED TO THE DESIGN ENGINEER PRIOR TO CONSTRUCTION OR ORDERING. FOR ADDITIONAL INFORMATION REFER TO GENERAL NOTE #3.
8. ALL DEMOLITION IS TO BE PERFORMED IN STRICT CONFORMANCE WITH ALL APPLICABLE TOWNSHIP, COUNTY & STATE AND/OR OTHER GOVERNING BODIES STANDARDS.
9. DURING DEMOLITION, ANY HAZARDOUS MATERIAL, SUCH AS ASBESTOS, SHALL BE REMOVED AND REMEDIATED IN ACCORDANCE WITH THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION (NJDEP) STANDARDS AND ALL OTHER APPLICABLE STANDARDS.
10. THE REMOVAL AND/OR ABANDONMENT OF ANY SUBSURFACE STRUCTURES, INCLUDING STORAGE TANKS, MANHOLES AND PIPES, SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE STANDARDS.
11. THE CONTRACTOR SHALL PROVIDE THE TOWN WITH WEIGHT RECEIPTS FOR ALL RECYCLED DEMOLITION MATERIALS FOR THE TOWNSHIP'S TONNAGE GRANT APPLICATION TO THE NJDEP.
12. HAULING ROUTES AND DISPOSAL SITES FOR THE DISPOSAL OF THE DEMOLISHED MATERIAL SHALL BE PROVIDED TO THE TOWNSHIP PRIOR TO DEMOLITION.

UTILITY DEMOLITION KEY:

- DENOTES UTILITIES TO BE REMOVED
- DENOTES UTILITIES TO BE ABAANDONED
- DENOTES TEST PIT AREA

TREE REPLACEMENT:

ARTICLE 46 SECTION 110-181.2A:

EXISTING TREES - 12 INCHES UP TO 17 INCHES D.B.H. = 1 TREE REQUIRES 4 TREES
19 INCHES UP TO 23 INCHES D.B.H = 1 TREE REQUIRES 5 TREES

TOTAL REPLACEMENT TREES REQUIRED = 9 TREES

SEE LANDSCAPE PLAN FOR PROPOSED PLANTING LOCATIONS

THE APPLICANT SHALL APPLY FOR A TREE REMOVAL PERMIT PRIOR TO SITE DISTURBANCE, IN ACCORDANCE WITH ARTICLE 46 SECTION 110-181.1

REFERENCES:

1. PLAN ENTITLED "TOPOGRAPHIC SURVEY" PREPARED BY ENGINEERING AND LAND PLANNING ASSOCIATES INC.; JOB NO. 0121532; DATED 11/30/2021 AND REVISED THROUGH 2/17/22.
2. BOROUGH OF METUCHEN TAX MAP SHEET #10.

HORIZONTAL DATUM : SURVEY

GRAPHIC SCALE

0 20 40
10 30

SCALE: 1"=20'

REVISIONS

1) TWP REVS	10/31/22
2) TWP REVS	03/29/23

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BOROUGH OF METUCHEN
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 152
LOTS 51.01 & 51.02
TAX MAP SHEET 51
0.76 ACRES

EXISTING CONDITIONS PLAN

DRAWN BY	DP
DESIGNED BY	MM
APPROVED BY	WAL

THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION...

WILLIAM A. LANE
PROFESSIONAL ENGINEER
NJPE# 40262

PROJECT NUMBER	2022.004	EC-1
DATE OF ISSUE	MARCH 14, 2022	2
REVISION 2	MARCH 29, 2023	

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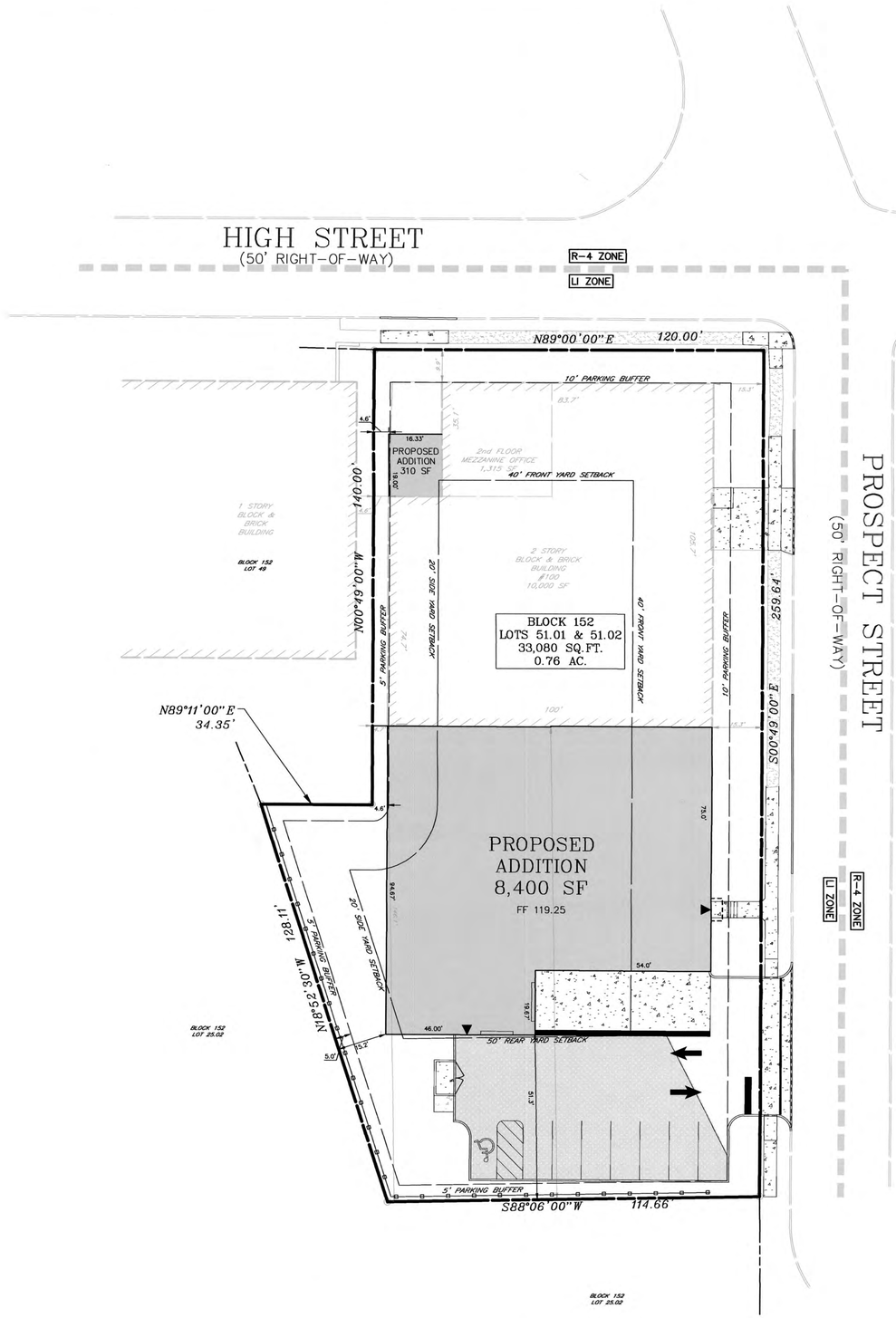

LI ZONE DATA

LIGHT INDUSTRIAL ZONE

SECTION	ITEM	REQUIRED	EXISTING	PROPOSED	CONDITION
ATTACHMENT 1	MINIMUM LOT AREA	40,000 SF	33,080 SF	33,080 SF	EX NON-CONFORMITY
ATTACHMENT 1	MINIMUM LOT WIDTH	200 FT	120.0 FT	120.0 FT	EX NON-CONFORMITY
ATTACHMENT 1	MINIMUM LOT DEPTH	200 FT	260.9 FT	260.9 FT	COMPLIES
	SETBACK REQUIREMENTS:				
ATTACHMENT 1	FRONT YARD SETBACK	40 FT	9.9 FT	9.9 FT	EX NON-CONFORMITY
ATTACHMENT 1	SIDE YARD SETBACK	20 FT	4.6 FT	4.6 FT	EX NON-CONFORMITY
ATTACHMENT 1	REAR YARD SETBACK	50 FT	144.3 FT	51.3 FT	COMPLIES
ATTACHMENT 1	MAXIMUM BUILDING COVERAGE	50%	30.2%	56.6%	VARIANCE
ATTACHMENT 1	MAXIMUM IMPERVIOUS COVERAGE	70%	32.7%	75.3%	VARIANCE
ATTACHMENT 1	MAXIMUM BUILDING HEIGHT	35 FT/3 STORIES	<35 FT	<35 FT	COMPLIES
	PARKING:				
110-154.B	MINIMUM PARKING SPACES WAREHOUSE/STORAGE USE (1/1,000 SF) 2ND FLOOR OFFICE (1/250 SF)	18,710/1,000=18.7 STALLS 1,315/250=5.3 STALLS 24 STALLS	0 STALLS	8 STALLS *INCLUDING 1 EV STATION	EXCEPTION
110-155.B	MINIMUM LOADING BERTHS	4 BERTHS	1 BERTH	1 BERTH	EXCEPTION
110-153.D	STALL SIZE	9'x18'	N/A	9'x18'	COMPLIES
110-153.D	HANDICAPPED STALL SIZE	12'x18'	N/A	16'x18'	COMPLIES
110-153.E	MINIMUM DRIVE ISLE	22 FT	N/A	24 FT	COMPLIES
110-130.C	FRONT YARD PARKING LOT SETBACK	40 FT	N/A	10 FT	EXCEPTION
110-130.F	BUILDING SETBACK TO PARKING AREA	15 FT	N/A	0 FT	EXCEPTION
110-136.A	MASSING -MAXIMUM WALL/ROOF OR FOOTPRINT PLANE	150 FT	105.7 FT	180.7 FT	EXCEPTION
110-136.D	ROOF-FLAT ROOF ON ONE STORY BLDG.	FLAT ROOF PROHIBITED	FLAT ROOF	FLAT ROOF	EXCEPTION
110-151.D	DRIVEWAY WIDTH - 2-WAY TRAFFIC	35 FT	35 FT	41.2 FT	EXCEPTION
110-175.B	PARKING LOT BUFFERING/SCREENING	10 FT	10.2 FT	10 FT	COMPLIES
110-178.A	PARKING LOT LANDSCAPING-DECIDUOUS TREES FOR 11+ PARKING LOT	ONE TREE PER 5 SPACES 11 SPACES = 2 TREES	NONE	2 TREES ALONG PERIMETER OF PARKING LOT	COMPLIES
110-178.B	FOUNDATION LANDSCAPING ALONG PERIMETER OF BUILDING	FOUNDATION PLANTS ALONG HIGH ST. AND PROSPECT ST.	NONE	FOUNDATION PLANTS ALONG HIGH ST. AND PROSPECT ST.	COMPLIES

HORIZONTAL DATUM : SURVEY

GRAPHIC SCALE

0 20 40
10 30
SCALE: 1"=20'

REVISIONS

1.) PARKING TABULATION	08/03/22
2.) TWP REVS	10/31/22
3.) TWP REVS	01/03/23
4) TWP/ARCH REVS	03/29/23

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BOROUGH OF METUCHEN
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 152
LOTS 51.01 & 51.02
TAX MAP SHEET 51
0.76 ACRES

OVERALL PLAN

DRAWN BY . . DP
DESIGNED BY . . MM
APPROVED BY . . WAL

THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION...

WILLIAM A. LANE
PROFESSIONAL ENGINEER
NJPE# 40262

PROJECT NUMBER	2022.004	OP-1
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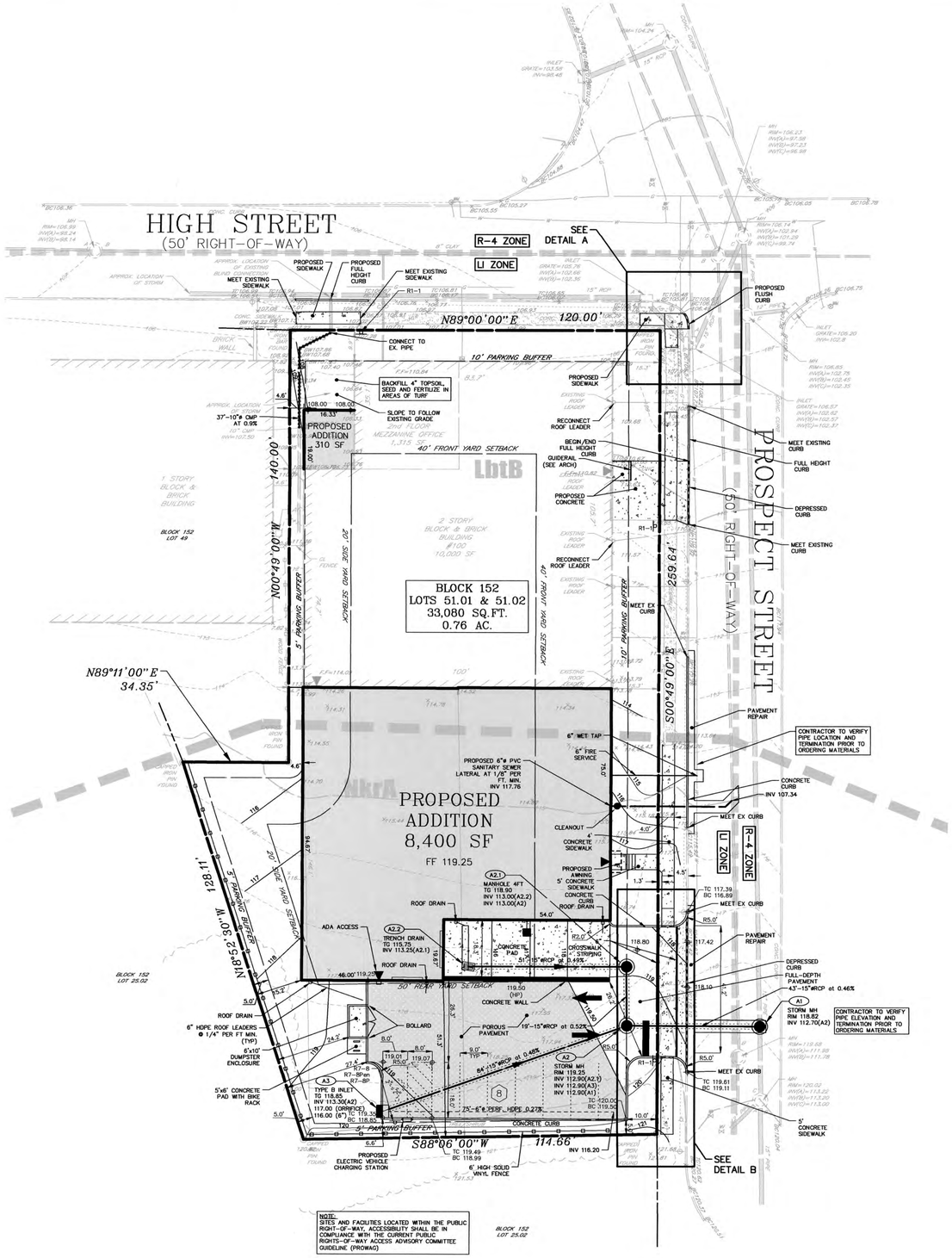
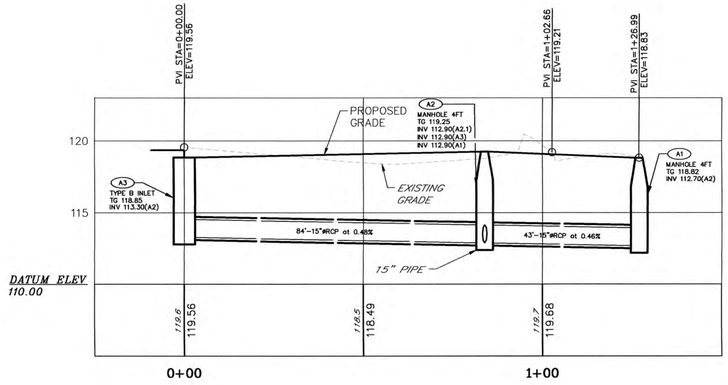
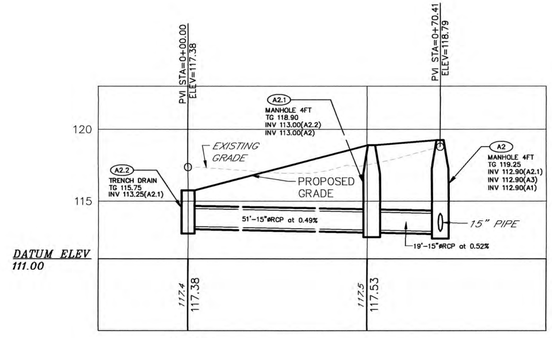
REVISION 4	MARCH 29, 2023	





A1 TO A3 (1) PROFILE
H: 1"=20'
V: 1"= 5'



A2 TO A2.2 PROFILE
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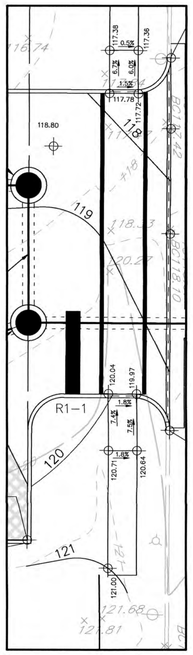
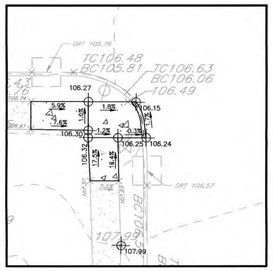
V: 1"= 5'



DETAIL B
SCALE: 1:=10'



DETAIL A
SCALE: 1:=10'

NOTES:
1. EXISTING CURB AND SIDEWALK THAT ARE IN DISREPAIR SHOULD BE REMOVED OR REPAIRED AS DIRECTED BY THE BOROUGH ENGINEER.

HORIZONTAL DATUM : SURVEY

GRAPHIC SCALE
0 20 40
10 30
SCALE: 1"=20'

REVISIONS

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REVISION 2	MARCH 29, 2023	

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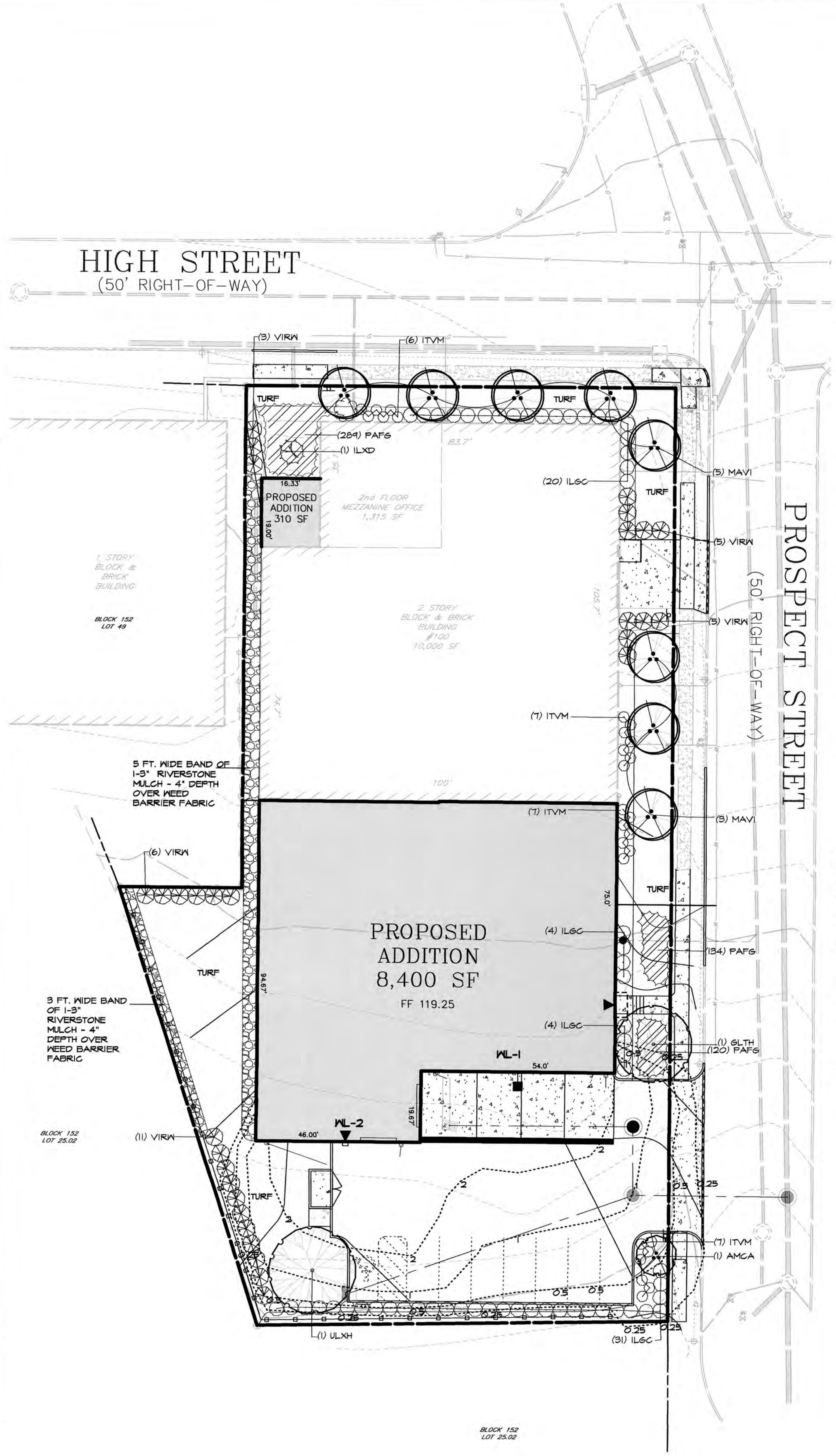


GENERAL LANDSCAPE NOTES:

1. NO SUBSTITUTIONS IN THE PLANT LIST IS TO BE MADE UNLESS AUTHORIZED BY THE LANDSCAPE ARCHITECT AND APPROVED BY THE OWNER AND THE TOWNSHIP.

2. ALL DISTURBED AND PERMANENT TURF AREAS SHALL BE SEEDED WITH A GENERAL PURPOSE MIXTURE SIMILAR TO THE FOLLOWING; SCS SEED MIX #14 (TALL TURF FESCUE, KENTUCKY BLUEGRASS, PERENNIAL RYEGRASS) OR APPROVED EQUAL. SEE SCS DETAIL SHEETS FOR SEEDING SPECIFICATIONS.

3. ALL PLANTING BEDS TO BE MULCHED WITH (3) INCH MINIMUM MULCH (SEE PLANTING NOTE #20). MULCH VOLCANOES (MOUNDS) AROUND TREES ARE PROHIBITED.

4. TOPSOIL PROTECTION: NO TOPSOIL SHALL BE REMOVED FROM THE SITE OR USED AS SPOIL. ALL TOPSOIL MOVED DURING THE COURSE OF CONSTRUCTION SHALL BE REDISTRIBUTED ON ALL REGRADED SURFACES SO AS TO PROVIDE AN EVEN COVER AND SHALL BE STABILIZED BY SEEDING OR PLANTING. ALL REGRADED TURF AREAS SHALL BE COVERED BY A SIX (6) INCH MINIMUM THICKNESS OF TOPSOIL. IF SUFFICIENT TOPSOIL IS NOT AVAILABLE ON THE SITE, TOPSOIL, MEETING OR EXCEEDING THE MINIMUM REQUIREMENTS OF THE NJDOT SPECIFICATIONS, SHALL BE PROVIDED TO RESULT IN A SIX (6) INCH MINIMUM THICKNESS. ANY IMPORTED TOPSOIL OR SUBSOIL SHALL BE NJDEP CERTIFIED FREE OF ANY TOXINS OR HARMFUL CHEMICALS.

5. LAWN AREAS SHALL MAINTAIN A MINIMUM SLOPE OF 2% AND A MAXIMUM OF (3) FEET HORIZONTAL TO (1) FOOT VERTICAL AND COMPACTED AREAS SHALL BE TILLED TO A DEPTH OF EIGHTEEN (18) INCHES.

6. UNACCEPTABLE PLANT MATERIALS: MATERIALS WHICH HAVE DAMAGED OR CROOKED LEADERS, DEFORMED GROWTH HABIT, ABRASIONS OF THE BARK, SUNSCALDS, WINDBURN, DISFIGURING KNOTS, OR FRESH CUTS OF LIMBS OVER 3/4 IN. WHICH HAVE NOT COMPLETELY CALLUSED WILL BE REJECTED. IN ADDITION, TREES HAVING THEIR CENTRAL LEADERS HEADED BACK WILL ALSO BE REJECTED.

7. ALL PLANT MATERIALS LOCATED WITHIN SIGHT TRIANGLES SHALL BE MAINTAINED NOT TO EXCEED A MAXIMUM OF (36) INCHES ABOVE PAVEMENT AND TREES SHALL BE LIMBED TO MAINTAIN A MINIMUM CLEARANCE OF (7) FEET ABOVE THE TOP OF CURB OR SIDEWALK FOR SIGHT VISIBILITY.

8. THE CONTRACT DRAWINGS INDICATE THE APPROXIMATE LOCATION OF EXISTING SUBSURFACE UTILITIES IN THE VICINITY OF THE PROJECT AND ARE NOT GUARANTEED FOR ACCURACY AND/OR COMPLETENESS. CONTRACTOR TO VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. (1-800-272-1000). ANY CONFLICTS WITH PROPOSED CONSTRUCTION ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND THE LANDSCAPE ARCHITECT. ALL EXISTING UTILITIES THAT ARE TO BE RELOCATED OR ALTERED IN ANY MANNER SHALL BE DONE IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANIES STANDARDS. ALL EXISTING UTILITIES EXPOSED DURING CONSTRUCTION SHALL BE SUPPORTED UNTIL BACKFILL IS IN PLACE.

9. SEE DETAIL SHEETS FOR ADDITIONAL PLANTING NOTES AND DETAILS.

10. ALL SHADE TREES, EVERGREENS, AND FLOWERING TREES SHALL BE PROVIDED WITH "GATOR BAGS" tm OR EQUAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING WATER TO ALL PLANTINGS AND LAWN AREAS UNTIL FINAL ACCEPTANCE.

11. PRIOR TO THE INSTALLATION OF ANY PLANT MATERIAL, SEEDING OR SODDING OF LAWN AREAS, THE CONTRACTOR SHALL OBTAIN PHYSICAL, CHEMICAL AND SOIL FERTILITY TESTING AT AN APPROVED LAB TO DETERMINE SOIL COMPOSITION AND SUITABILITY. THE TESTING SHALL BE A RATE OF EITHER ONE TEST PER 500 CUBIC YARDS OF PLANTING MIX OR ONE TEST PER 15,000 SF OF LANDSCAPE SURFACE AREA THE SOILS SHALL BE AMENDED IN ACCORDANCE WITH THE TEST RESULTS FOR OPTIMAL PLANT AND LAWN GROWTH. THE RESULTS OF ALL TESTING SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR REVIEW.

12. METUCHEN LAND USE ORDINANCE REQUIRES THE FOLLOWING PLANTINGS:

-ARTICLE 46 SECTION 110-175.B REQUIRES BUFFER TO PARKING LOT ADJACENT TO RESIDENTIAL - SIX FOOT HEIGHT IMPERVIOUS SCREEN.

-ARTICLE 46 SECTION 110-178.A REQUIRES (1) TREE FOR EVERY FIVE SPACES IN LOTS WITH 11 OR MORE SPACES.

-ARTICLE 46 SECTION 110-178.B REQUIRES FOUNDATION PLANTINGS AT THE BASE OF THE BUILDING, EVERGREEN OR SEMI-EVERGREEN SHRUBS.

-ARTICLE 46 SECTION 110-180 REQUIRES (1) STREET TREE PER 30-35 LF OF LOT FRONTAGE.

-ARTICLE 46 SECTION 110-181.2(A) REQUIRES TREE REPLACEMENT FOR ANY TREE REMOVED FROM A SITE. REFER TO TREE REMOVAL PLAN FOR EXISTING TREES TO REMAIN AND TO BE REMOVED.

TOTAL REPLACEMENT TREES REQUIRED = 9 REPLACEMENT TREES REQUIRED
(SEE EXISTING CONDITIONS PLAN FOR CALCULATION)

PLANT SCHEDULE

DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	MATURE SPREAD	MATURE HT.	CALIPER	PLANTING HT.	TYPE		REMARKS
GLTH	1	GLEDITSIA TRIACANTHOS VAR. INERMIS 'HALKA'	HALKA THORNLESS HONEY LOCUST	30'	60'	2.5-3" CAL.	12-14'	B&B		STRAIGHT, SYMMETRICAL, FULL CROWN, HEAD TO 7'
ULXH	1	ULMUS X HOMESTEAD	HOLMESTEAD ELM	45'	60'	2.5-3" CAL.	12-14'	B&B		STRAIGHT, SYMMETRICAL, FULL CROWN, HEAD TO 7'
EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	MATURE SPREAD	MATURE HT.	CALIPER	PLANTING HT.	TYPE		REMARKS
ILXD	1	ILEX X AQUIPENEYI 'DRAGON LADY'	DRAGON LADY HOLLY	10'	15'		6-7'	B&B		STRAIGHT, SYMMETRICAL, DENSE, LOW BRANCHED
FLOWERING TREES	QTY	BOTANICAL NAME	COMMON NAME	MATURE SPREAD	MATURE HT.	CALIPER	PLANTING HT.	TYPE		REMARKS
AMCA	1	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	15'	20'	(3) STEM CLUMP	9'-10'	B&B		(3) STEM CLUMP, SYMMETRICAL, LOW BRANCHED
MAVI	8	MAGNOLIA VIRGINIANA	SWEET BAY MAGNOLIA	20'	20'	1.75"-2"CAL.	9-10'	B&B		HEAVY, INFORMAL BALANCE, WELL BRANCHED
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	WIDTH	HEIGHT	PLANTING WIDTH	PLANTING HT.	TYPE		REMARKS
ILGC	59	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	6'	6'		18-24"	B&B		WELL FURNISHED, DENSE, LOW BRANCHED, SPACE EVENLY
ITVM	27	ITEA VIRGINICA 'MERLOT'	SWEETSPIRE	4'	5'		24-30"	#5 CAN		HEAVY, DENSE, LOW BRANCHED, SPACE EVENLY
VIRW	30	VIBURNUM X RHYTIDOPHYLLOIDES 'WILLOWWOOD'	WILLOWWOOD VIBURNUM	8'	8'		3.5-4'	B&B		DENSE, WELL FURNISHED, SYMMETRICAL
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONTAINER	MATURE WIDTH	MATURE HT.				
PAFG	543	PACHYSANDRA ALLEGHENY 'FOREST GREEN'	FOREST GREEN PACHYSANDRA	#1 CAN SPACE @ 12"OC WELL FURNISHED	SPREADING	6"			12" o.c.	DENSE, WELL ROOTED

LIGHTING SCHEDULE

LABEL	QUANTITY	TYPE OF MOUNT	WATTAGE / COLOR TEMP / DRIVE CURRENT	MOUNTING HEIGHT	POLE HEIGHT	FOUNDATION HEIGHT	DISTRIBUTION	CATALOG NUMBER	POLE CATALOG NUMBER.
WL-1	1	WALL MOUNTED	93 WATTS LED / 3,000 K / 600mA	19.0' AFF	N/A	N/A	TYPE T4FT	COOPER-MCGRAW-EDISON LIGHTING GALN-SA3A-730-_-T4FT-WM-BK (OR APPROVED EQUAL)	N/A
WL-2	1	WALL MOUNTED	66 WATTS LED / 3,000 K / 615mA	11.0 AFF	N/A	N/A	TYPE T4FT	COOPER-MCGRAW-EDISON LIGHTING GWC-SA2A-730-_-T4FT-BK (OR APPROVED EQUAL)	N/A

* ABOVE PAVEMENT
AFF = ABOVE FINISHED FLOOR
(CONTACT MANUFACTURER FOR EXACT LIGHT FIXTURE AND LIGHT POLE SPECIFICATIONS.)

LIGHTING NOTES:

1. A MINIMUM OF (0.5) FOOTCANDLES, WITH AN AVERAGE OF (2.32) FOOTCANDLES AND AN AVERAGE TO MINIMUM UNIFORMITY RATIO OF (4.64:1) ARE PROVIDED WITHIN PARKING AREAS AND ACCESS AISLES.

2. LIGHT FIXTURES AND POLES TO BE INSTALLED AS PER MANUFACTURERS' SPECIFICATIONS.

3. PARKING AREA LIGHTING CONTROLS SHALL BE PHOTOCELL ACTIVATED AND TIMER DEACTIVATED DURING HOURS OF OPERATION.

4. ALL CIRCUIT DIAGRAMS AND ELECTRICAL PLANS FOR EXTERIOR LIGHTING TO SERVICE PANEL SHALL BE DESIGNED BY INTERIOR LIGHTING CONTRACTOR/ENGINEER.

5. INSTALLATION OF ALL SITE LIGHTING ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, CODES, AND LAWS.

6. THIS PLAN WAS PRODUCED USING LIGHTING ANALYSIS AGI PROGRAM WITH THE APPROPRIATE PHOTOMETRIC FILES SUPPLIED BY COOPER LIGHTING.

7. THE CONTRACTOR SHALL FIELD VERIFY EXISTING OVERHEAD WIRES FOR CLEARANCE REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT/ENGINEER FOR ANY CONFLICTS PRIOR TO ORDERING LIGHTING EQUIPMENT.

8. THE CONTRACT DRAWINGS INDICATE THE APPROXIMATE LOCATION OF EXISTING SUBSURFACE UTILITIES IN THE VICINITY OF THE PROJECT AND ARE NOT GUARANTEED FOR ACCURACY AND/OR COMPLETENESS. CONTRACTOR TO VERIFY THE DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. (1-800-272-1000). ANY CONFLICTS WITH PROPOSED CONSTRUCTION ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER, AND LANDSCAPE ARCHITECT. ALL EXISTING UTILITIES THAT ARE TO BE RELOCATED OR ALTERED IN ANY MANNER SHALL BE DONE IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANIES STANDARDS. ALL EXISTING UTILITIES EXPOSED DURING CONSTRUCTION ARE TO BE SUPPORTED UNTIL BACKFILL IS IN PLACE.

9. ANY LIGHT FIXTURE SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE ACCOMPANIED BY A POINT BY POINT CALCULATION VERIFYING THE SUBSTITUTED FIXTURES PERFORMANCE AND DEMONSTRATING THAT THE REVISED LIGHT LEVELS MATCH THE APPROVED PLANS. MENLO ENGINEERING WILL NOT PERFORM REVISED LIGHTING CALCULATIONS UNLESS AUTHORIZED BY THE OWNER. THE REVISED LIGHT LEVELS MUST BE RESUBMITTED TO THE MUNICIPAL REVIEWING ENGINEER FOR APPROVAL.

10. BUILDING MEP OR ELECTRICAL CONTRACTOR TO DETERMINE REQUIRED VOLTAGES FOR ALL SITE LIGHTING.

HORIZONTAL DATUM : SURVEY

GRAPHIC SCALE

0 10 20 30 40

SCALE: 1"=20'

REVISIONS

1) BORO REVS	10/31/22
2) BORO/ARCH REVS	3/29/23

THIS DRAWING IS FOR PERMIT PURPOSES ONLY

NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED

☐ CHKD BY:____ DATE:______

1-800-272-1000 or 811
STOP CALL BEFORE YOU DIG!

THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

menlo engineering associates
Civil Engineering Consultants
Landscape Architects
Professional Planners
261 Cleveland Avenue
Highland Park, NJ 08904
menloeng.com
732-846-8585 732-846-9439
Certificate of Authorization : 24GA27951900

100 PROSPECT STREET

BOROUGH OF METUCHEN
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 152
LOTS 51.01 & 51.02
TAX MAP SHEET 51
0.76 ACRES

LANDSCAPE & LIGHTING PLAN

DRAWN BY . BGS
DESIGNED BY . BGS
APPROVED BY . KRG

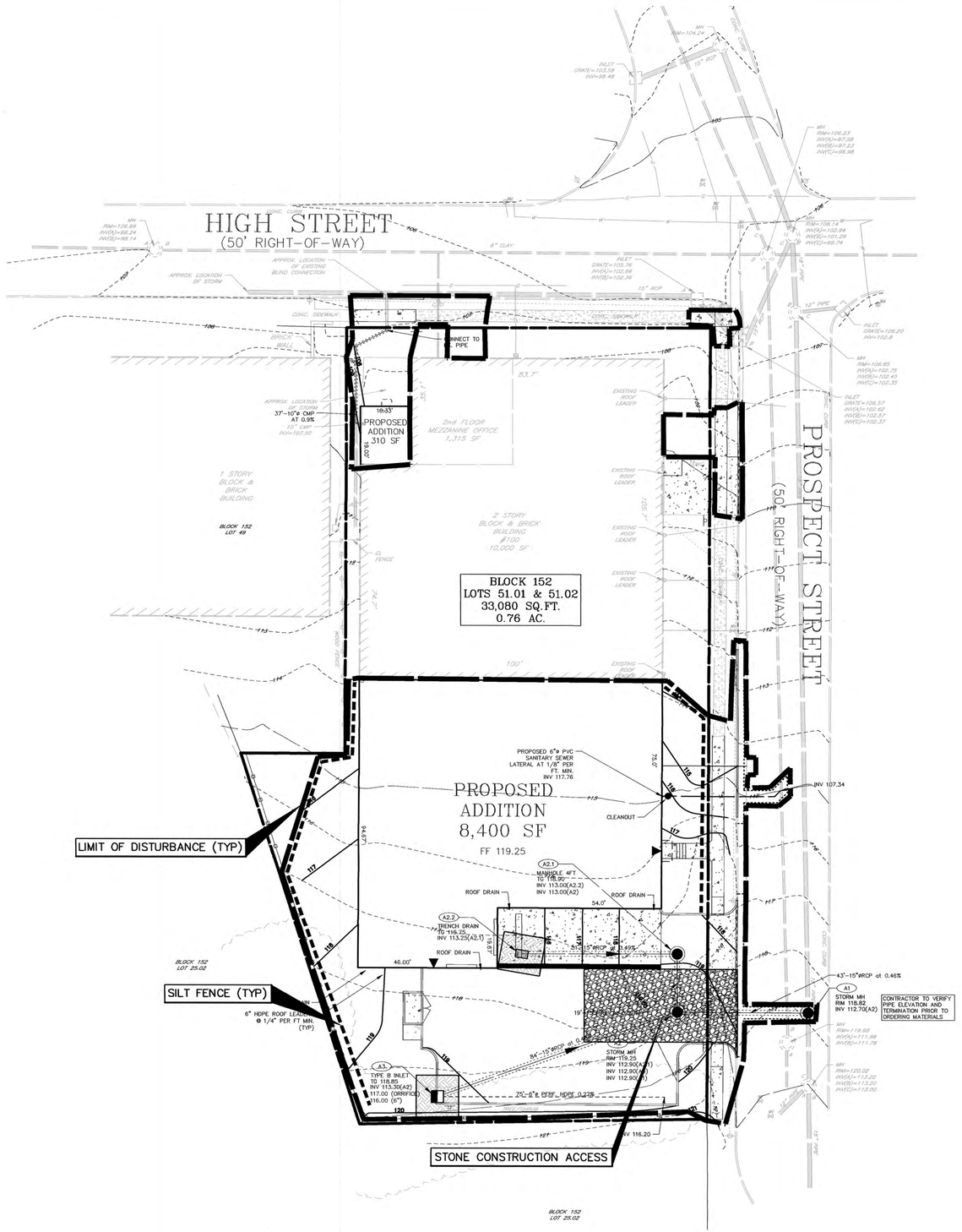
THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION...

[illegible]

KENNETH R. GRISEWOOD
LANDSCAPE ARCHITECT NJ
LICENSE #AS000071

PROJECT NUMBER	2022.004	LL-1
DATE OF ISSUE	MARCH 14, 2022	5
REVISION 2	MARCH 29, 2023	

C:\DWG\2022.004-BASE-100 Prospect Street\2022.004-LA-LI.dwg PLOTTED: 3/28/2023 1:16 PM; BY: JASON ERBENTRAUT



LIMIT OF DISTURBANCE:
22,046 SF (0.51 AC)

HORIZONTAL DATUM : SURVEY

GRAPHIC SCALE

0 20 40
10 30
SCALE: 1"=20'

REVISIONS

1) TWP REVS	10/31/22
2) TWP/ARCH REVS	03/29/23

THIS DRAWING IS FOR PERMIT PURPOSES ONLY

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☐ CHKD BY: ____ DATE: _____

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100 PROSPECT STREET

BOROUGH OF METUCHEN
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 152
LOTS 51.01 & 51.02
TAX MAP SHEET 51
0.76 ACRES

SOIL EROSION & SEDIMENT CONTROL PLAN

DRAWN BY	DP
DESIGNED BY	MM
APPROVED BY	WAL

THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION...

WILLIAM A. LANE
PROFESSIONAL ENGINEER
NJPE# 40262

PROJECT NUMBER	2022.004	SE-1
DATE OF ISSUE	MARCH 14, 2022	6
REVISION 2	MARCH 29, 2023	

STANDARD FOR PERMANENT VEGETATIVE COVER

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. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.

B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING.

C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.

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

2. SEEDBED PREPARATION

A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.

B. WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING-TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL ARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.

C. HIGH ACID PRODUCING SOIL. SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE BEFORE INITIATING SEEDBED REPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.

3. SEEDING

A. SELECT A MIXTURE FROM TABLE 4-2 OR USE A MIXTURE RECOMMENDED BY RUTGERS COOPERATIVE EXTENSION OR NATURAL RESOURCES CONSERVATION SERVICE WHICH IS APPROVED BY THE SOIL CONSERVATION DISTRICT. SEED GERMINATION SHALL HAVE BEEN TESTED WITHIN 12 MONTHS OF THE PLANTING DATE. NO SEED SHALL BE ACCEPTED WITH A GERMINATION TEST DATE MORE THAN 12 MONTHS OLD UNLESS RETESTED.

1. SEEDING RATES SPECIFIED ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO A REPORT OF COMPLIANCE INSPECTION. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVERAGE WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDED AREA AND MOWED ONCE.

2. WARM-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 85°F AND ABOVE. SEE TABLE 4-2 MIXTURES 1 TO 7. PLANTING RATES FOR WARM-SEASON GRASSES SHALL BE THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY GERMINATION TESTING RESULTS.

3. COOL-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 85°F. MANY GRASSES BECOME ACTIVE AT 650F. SEE TABLE 4-2, MIXTURES 8-20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PLS IS NOT REQUIRED FOR COOL SEASON GRASSES.

B. CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 24 HOURS OF SEEDBED PREPARATION TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE-TEXTURED SOIL.

C. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.

D. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK, OR TRAILER-MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT- FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE SECTION 4-MULCHING BELOW). HYDROSEEDING IS NOT A REFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. WHEN POOR SEED TO SOIL CONTACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND GROWTH.

4. MULCHING

MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL PROTECT AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

A. STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

APPLICATION - SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT AT LEAST 85% OF THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.

ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.

1. PEG AND TWINE. DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.

2. MULCH NETTINGS - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.

3. CRIMPER (MULCH ANCHORING COULTER TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.

4. LIQUID MULCH-BINDERS - MAY BE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCH.

(a) APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.

(b) USE ONE OF THE FOLLOWING:

(1) ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER-BASED, HYDROPHILIC MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURF GRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.

(2) SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND, FOLLOWING APPLICATION OF MULCH, DRYING AND CURING, SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.

B. WOOD-FIBER OR PAPER-FIBER MULCH - SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

C. PELLETIZED MULCH - COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS, AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS/1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS, SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED, OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE. APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

5. IRRIGATION (WHERE FEASIBLE)

IF SOIL MOISTURE IS DEFICIENT SUPPLY NEW SEEDING WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH APPLIED UP TO TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.

6. TOPDRESSING

SINCE SOIL ORGANIC MATTER CONTENT AND SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) ARE PRESCRIBED IN SECTION 2A - SEEDBED PREPARATION IN THIS STANDARD, NO FOLLOW-UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 OR EQUIVALENT AT 300 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.

7. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION

THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEED APPLICATION RATES IN TABLE 4-2 ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUESTING A REPORT OF COMPLIANCE FROM THE DISTRICT. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER (OF THE SEEDED SPECIES) AND MOWED ONCE. NOTE THIS DESIGNATION OF MOWED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS BE NEGLECTED OR OTHERWISE MISMANAGED.

STANDARD FOR TEMPORARY VEGETATIVE COVER

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. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, PG. 19-1.

B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

2. SEEDBED PREPARATION

A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.

B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.

C. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED IN ACCORDANCE WITH THE ABOVE.

D. SOILS HIGH IN SULFIDES OR HAVING A PH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, PG. 1-1.

3. SEEDING

A. SELECT SEED FROM RECOMMENDATIONS IN TABLE 7-2.

B. CONVENTIONAL SEEDING. APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL, TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.

C. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE SECTION IV MULCHING) HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.

D. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.

4. MULCHING

MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

A. STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

APPLICATION. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 95% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.

ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.

1. PEG AND TWINE. DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.

2. MULCH NETTINGS - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.

3. CRIMPER (MULCH ANCHORING COULTER TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.

4. LIQUID MULCH-BINDERS - MAY BE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCH.

(a) APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.

(b) USE ONE OF THE FOLLOWING:

(1) ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER-BASED, HYDROPHILIC MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURF GRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.

(2) SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND, FOLLOWING APPLICATION OF MULCH, DRYING AND CURING, SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.

B. WOOD-FIBER OR PAPER-FIBER MULCH - SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

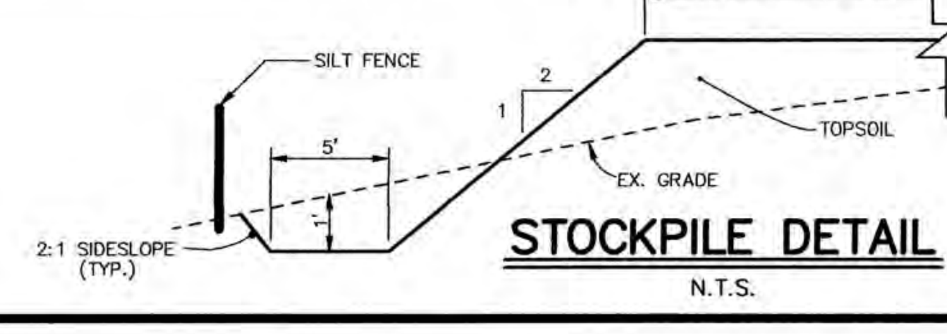
C. PELLETIZED MULCH - COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS, AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS/1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS, SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED, OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE. APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

TABLE 7-2

TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES AND DEPTH.

SEED SELECTIONS	SEEDING RATE 1 (pounds)		OPTIMUM SEEDING DATE 2 Based on Plant Hardiness Zone 3			OPTIMUM SEED DEPTH 4 (inches)
	Per Acre	Per 1000 Sq. Ft.	ZONE 5b, 6s	ZONE 6b	ZONE 7a, b	
COOL SEASON GRASSES						
1. PERENNIAL RYEGRASS	100	1.0	3/15-6/1 8/1-9/15	3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	0.5
2. SPRING OATS	86	2.0	3/15-6/1 8/1-9/15	3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	1.0
3. WINTER BARLEY	96	2.2	8/1-9/15	8/15-10/1	8/15-10/15	1.0
4. ANNUAL RYEGRASS	100	1.0	3/15-6/1 8/1-9/15	3/15-6/1 8/1-9/15	2/15-5/1 8/15-10/15	0.5
5. WINTER CEREAL RYE	112	2.8	8/1-11/1	8/1-11/15	8/15-12/15	1.0
WARM SEASON GRASSES						
6. PEARL MILLET	20	0.5	6/1-8/1	5/15-8/15	5/1-9/1	1.0
7. MILLET (GERMAN OR HUNGARIAN)	30	0.7	6/1-8/1	5/15-8/15	5/1-9/1	1.0

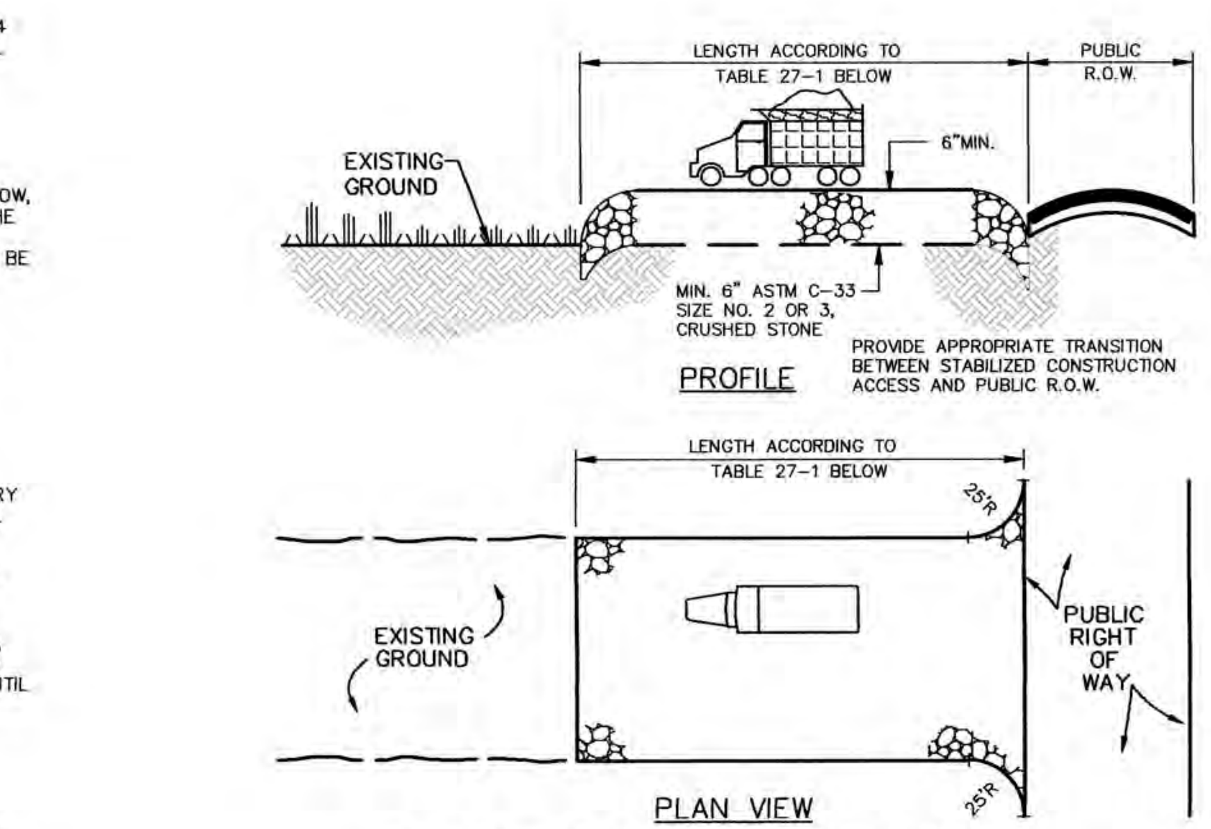


STOCKPILE DETAIL

N.T.S.

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.
2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
3. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
4. N.J.S.A 4:24-39 ET. SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED. UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT-BY-LOT OR SECTION-BY-SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.
5. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN SIXTY (60) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2 ½ TONS PER ACRE, ACCORDING TO THE STANDARD FOR STABILIZATION WITH MULCH ONLY.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. SOIL STOCKPILES, STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.
7. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.
8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION SITE. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ACCESS CONSISTING OF ONE INCH TO TWO INCH (1"-2") STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT ENTRANCE WIDTH. ALL OTHER ACCESS POINTS SHALL BE BLOCKED OFF.
9. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAYS WILL BE REMOVED IMMEDIATELY.
10. PERMANENT VEGETATION IS TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.
11. AT THE TIME THAT 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 IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.
12. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS/ACRE, (OR 450 LBS/1,000 SQ FT OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12" OF SETTLED SOIL WITH A PH OF 5 OR MORE, OR 24" WHERE TREES OR SHRUBS ARE TO BE PLANTED.
13. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
14. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DEWATERING.
15. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.
16. STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET IS DISTURBED.
17. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #6.
18. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.



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

NOTES:
1. AT POORLY DRAINED LOCATIONS, SUBSURFACE DRAINAGE GRAVEL FILTER OR GEOTEXTILE SHALL BE INSTALLED BEFORE INSTALLING THE STABILIZED CONSTRUCTION ENTRANCE.
2. INDIVIDUAL LOT ENTRANCE AND EGRESS- AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOT INGRESS/EGRESS POINTS MAY REQUIRE A STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF No. 3 STONE (1" TO 2") TO PREVENT OR MINIMIZE TRACKING OF SEDIMENTS. WIDTH OF THE STONE INGRESS/EGRESS SHALL BE EQUAL TO LOT ENTRANCE WIDTH AND SHALL BE A MINIMUM OF TEN FEET IN LENGTH.
3. TIRE WASHING- IF SPACE IS LIMITED, VEHICLE TIRES MAY BE WASHED WITH CLEAN WATER BEFORE ENTERING A PAVED AREA. A WASH STATION MUST BE LOCATED SUCH THAT WASH WATER WILL NOT FLOW ONTO PAVED ROADWAYS OR INTO UNPROTECTED STORM DRAINAGE SYSTEMS.
4. WHEN THE CONSTRUCTION ACCESS EXISTS ONTO A MAJOR ROADWAY, A PAVED TRANSITION AREA MAY BE INSTALLED BETWEEN THE MAJOR ROADWAY AND THE STONED ENTRANCE TO PREVENT LOOSE STONES FROM BEING TRANSPORTED OUT ONTO THE ROADWAY BY HEAVY EQUIPMENT ENTERING OR LEAVING THE SITE.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Table 27-1: Lengths of Construction Exits on Sloping Roadbeds

Percent Slope of Roadway	Length of Stone Required	
	Coarse Grained Soils	Fine Grained Soils
0 to 2%	50 ft	100 ft
2 to 5%	100 ft	200 ft
>5%	Entire surface stabilized with FABC base course[1]	

1. As prescribed by local ordinance or other governing authority.

STABILIZED CONSTRUCTION ACCESS

N.T.S.

DUST CONTROL

DEFINITION

THE CONTROL OF DUST ON CONSTRUCTION SITES AND ROADS.

PURPOSE

TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCED ON-SITE AND OFF-SITE DAMAGE AND HEALTH HAZARDS AND IMPROVE TRAFFIC SAFETY.

CONDITION WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON-SITE AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT. CONSULT WITH LOCAL MUNICIPAL ORDINANCES ON ANY RESTRICTIONS.

WATER QUALITY ENHANCEMENT

SEDIMENTS DEPOSITED AS "DUST" ARE OFTEN FINE COLLOIDAL MATERIAL WHICH IS EXTREMELY DIFFICULT TO REMOVE FROM WATER ONCE IT BECOMES SUSPENDED USE OF THIS STANDARD WILL HELP TO CONTROL THE GENERATION OF DUST FROM CONSTRUCTION SITES AND SUBSEQUENT BLOWING AND DEPOSITION INTO LOCAL SURFACE WATER RESOURCES.

PLANNING CRITERIA

THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST:

MULCHES - SEE STANDARD OF STABILIZATION WITH MULCHES ONLY, PG. 5-1

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

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

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

SPRINKLING - SITE IS SPRINKLED UNTIL THE SURFACE IS WET.

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

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

STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

TABLE 16-1 DUST CONTROL MATERIALS

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

'WET TOLERANT' SEEDING SPECIFICATION

SEEDBED PREPARATION: FERTILIZER (10-10-10) 500 LB/AC
LIMESTONE 6,000 LB/AC

FOR UNMAINTAINED AREAS

SEEDING DATES:
ZONE 5b,6a (3/15-5/31); ZONE 6b (3/1-4/30); ZONE 7a,7b (2/1-4/30)
(IF DISTURBANCE IS OUTSIDE OF PLANTING DATES THEN SEED AREA WITH TEMPORARY SEEDING MIX. THE TARGET AREA MUST THEN BE RESEED WITH REQUIRED MIX WITHIN THE REQUIRED PLANTING DATES.)

SCS SEED MIX #9	DEERTONGUE	20 LB/AC
	REDTOP	2 LB/AC
	WILD RYE (ELYMUS)	15 LB/AC
	SWITCHGRASS	30 LB/AC

FOR MAINTAINED AREAS
(POND AND CHANNEL BANKS, BERMS AND DAMS)

SEEDING DATES:
(OPTIMAL) ZONE 5b,6a (8/1-10/1); ZONE 6b (8/15-10/15); ZONE 7a,7b (8/15-10/30)
(SEE TABLE 4-2 OF THE SCS STANDARDS FOR ADDITIONAL PLANTING DATES)

SCS SEED MIX #7	STRONG CREEPING RED FESCUE	130 LB/AC
	KENTUCKY BLUEGRASS	50 LB/AC
	PERENNIAL RYEGRASS	20 LB/AC
	OR REDTOP	10 LB/AC
	W/ WHITE CLOVER	5 LB/AC

FOR MAINTAINED AREAS (DETENTION BASINS AND SWALES)

SEEDING DATES:
(OPTIMAL) ZONE 5b,6a (8/1-10/1); ZONE 6b (8/15-10/15); ZONE 7a,7b (8/15-10/30)
(SEE TABLE 4-2 OF THE SCS STANDARDS FOR ADDITIONAL PLANTING DATES)

SCS SEED MIX #14	TURF-TYPE TALL FESCUE (3 CULTIVAR BLEND)	350 LB/AC
	KENTUCKY BLUEGRASS (BLEND)	30 LB/AC
	PERENNIAL RYEGRASS (BLEND)	30 LB/AC

MULCHING:
UNROTTED SALT HAY OR APPROVED EQUAL 1 1/2 to 2 TONS/AC

MULCH ANCHORING:
HYDROMULCH OR APPROVED EQUAL (USE RATES AS RECOMMENDED BY MANUFACTURER)

NOTES:
1) FOR ADDITIONAL REQUIREMENTS REFER TO THE SCS STANDARD FOR PERMANENT VEGETATIVE COVER.
2) THE FERTILIZER AND LIMESTONE RATES REPRESENT THE UNTESTED SCS REQUIRED RATES. FINAL RATES SUBJECT TO SOIL FERTILITY, pH ANALYSIS AND LAB RECOMMENDATIONS.

CONDITION OF ACCEPTANCE
1) NO EROSION SHALL EXIST.
2) BARE OR THIN SPOTS IN EXCESS OF 5 PERCENT OF ANY AREA WILL NOT BE ACCEPTABLE.
3) ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATED COVER (OF THE SEEDED SPECIES) AND MOWED ONCE.

STANDARD FOR STABILIZATION WITH MULCH ONLY

DEFINITION

STABILIZING EXPOSED SOILS WITH NON-VEGETATIVE MATERIALS EXPOSED FOR PERIODS LONGER THAN 14 DAYS

PURPOSE

TO PROTECT EXPOSED SOIL SURFACES FROM EROSION DAMAGE AND TO REDUCE OFFSITE ENVIRONMENTAL DAMAGE.

WATER QUALITY ENHANCEMENT

PROVIDES TEMPORARY MECHANICAL PROTECTION AGAINST WIND OR RAINFALL INDUCED SOIL EROSION UNTIL PERMANENT VEGETATIVE COVER MAY BE ESTABLISHED.

WHERE APPLICABLE

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO EROSION, WHERE THE SEASON AND OTHER CONDITIONS MAY NOT BE SUITABLE FOR GROWING AN EROSION-RESISTANT COVER OR WHERE STABILIZATION IS NEEDED FOR A SHORT PERIOD UNTIL MORE SUITABLE PROTECTION CAN BE APPLIED.

METHODS AND MATERIALS

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. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING
   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.
2. PROTECTIVE MATERIALS
   A. UNROTTED SMALL-GRAIN STRAW, AT 2.0 TO 2.5 TONS PER ACRE, IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING TIE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. THE APPROVED RATES ABOVE HAVE BEEN MET WHEN THE MULCH COVERS THE GROUND COMPLETELY UPON VISUAL INSPECTION, I.E. THE SOIL CANNOT BE SEEN BELOW THE MULCH.
   C. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER.
   D. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE (OR ACCORDING TO THE MANUFACTURER'S REQUIREMENTS) MAY BE APPLIED BY A HYDROSEEDER.
   E. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON, OR PLASTIC, MAY BE USED.
   F. WOODCHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES MAY BE USED. WOODCHIPS WILL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WASH THEM INTO AN INLET AND PLUG IT.
   G. GRAVEL, CRUSHED STONE, OR SLAG AT THE RATE OF 9 CUBIC YARDS PER 1,000 SQ. FT. APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM C-33) IS RECOMMENDED.
3. MULCH ANCHORING - SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA AND STEEPNESS OF SLOPES.
   A. PEG AND TWINE - DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
   B. MULCH NETTINGS - STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER MULCH. USE DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG.
   C. CRIMPER MULCH ANCHORING COULTER TOOL - A TRACTOR-DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. SOIL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES. ON SLOPING LAND, THE OPERATION SHOULD BE ON THE CONTOUR.
   D. LIQUID MULCH-BINDERS
      1. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.
      2. USE ONE OF THE FOLLOWING:
         a. ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS THAT MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTO-TOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. VEGETABLE BASED GELS SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER.
         b. SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

FOR CLARIFICATIONS AND ADDITIONAL INFORMATION SEE THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, 7TH EDITION, JANUARY 2014, REVISED JULY 2017

CONSTRUCTION DETAIL NOTES

1. ALL TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. ALL CONSTRUCTION DETAILS SHALL BE SUPERCEDED BY APPLICABLE MUNICIPAL, COUNTY OR STATE DETAILS UNLESS OTHERWISE NOTED.
3. STRUCTURAL DETAILS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. SHOP DRAWINGS SHALL BE PROVIDED TO THE TOWNSHIP ENGINEER FOR ALL WALLS AND STRUCTURAL ELEMENTS PRIOR TO CONSTRUCTION.
4. SHOP DRAWINGS SHALL BE PROVIDED FOR ALL PRECAST STRUCTURES PRIOR TO THE ORDERING OF MATERIALS.
5. DETAILS ASSUME APPROPRIATE LOAD BEARING CAPACITY AND COMPACTION OF SOILS. ACTUAL FIELD CONDITIONS SHALL BE CONFIRMED BY ON-SITE GEOTECHNICAL ENGINEER.
6. RESIDENTIAL DEVELOPMENTS SHALL CONFORM TO DETAILS WITHIN THE CURRENT EDITION OF THE RESIDENTIAL SITE IMPROVEMENT STANDARDS (R.S.I.S.).
7. ALL CONSTRUCTION DETAILS ARE NOT TO SCALE (N.T.S.) UNLESS OTHERWISE NOTED.

REVISIONS

THIS DRAWING IS FOR PERMIT PURPOSES ONLY

NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED

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SOIL EROSION & SEDIMENT CONTROL DETAILS (1)

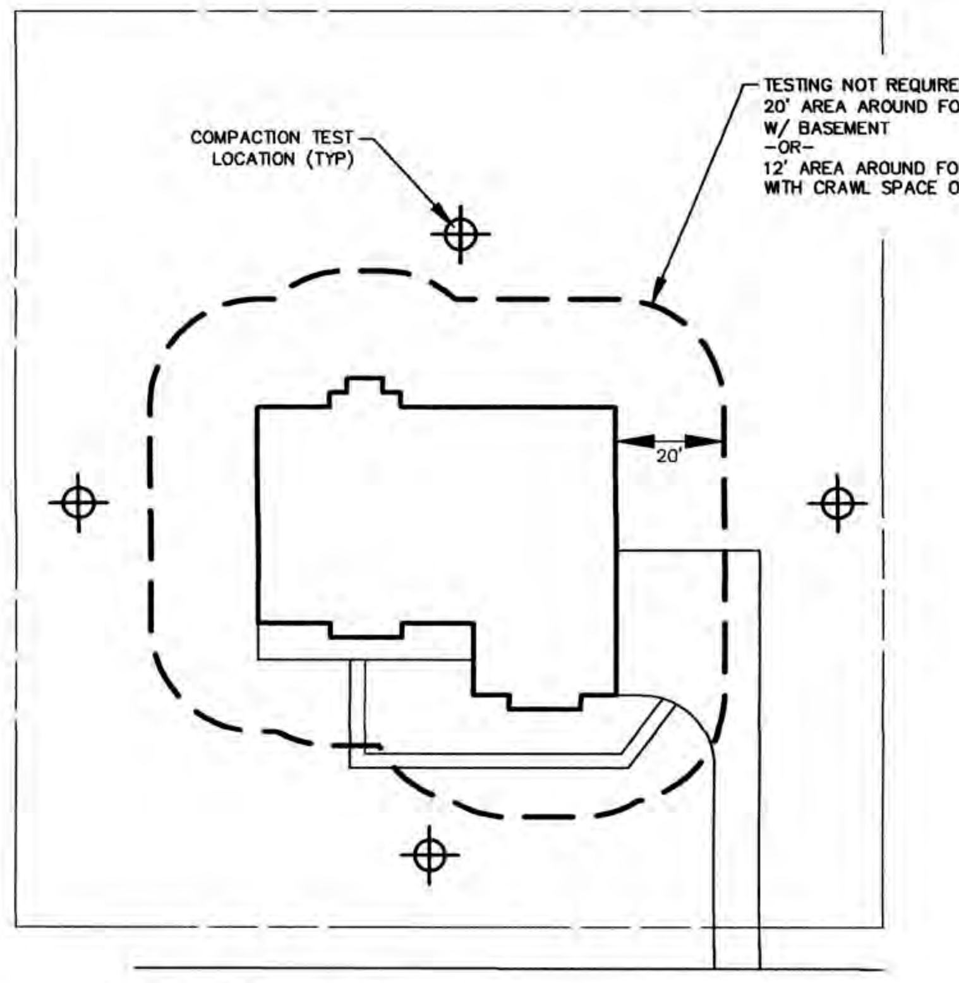
DRAWN BY .... DP
DESIGNED BY .... MM
APPROVED BY .... WAL

THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION.

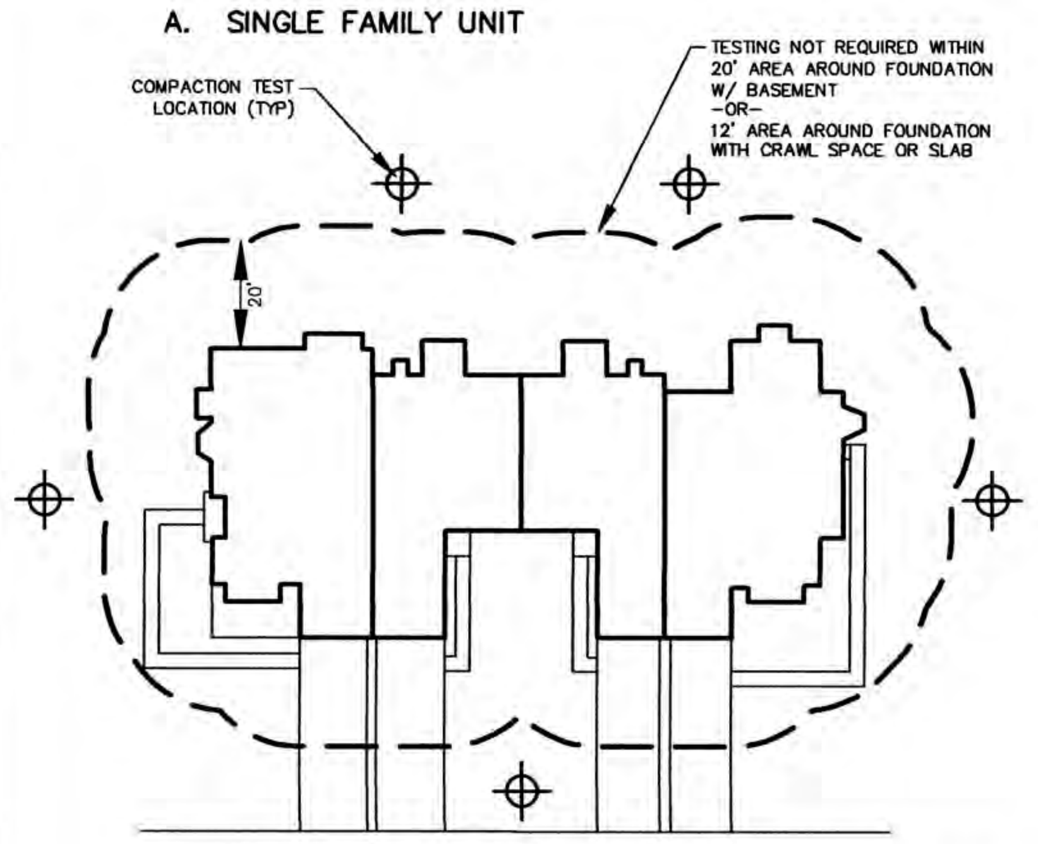
WILLIAM A. LANE
PROFESSIONAL ENGINEER
NJPE# 40262

PROJECT NUMBER	2022.004	SED-1
DATE OF ISSUE	MARCH 14, 2022	7
REVISION	-	

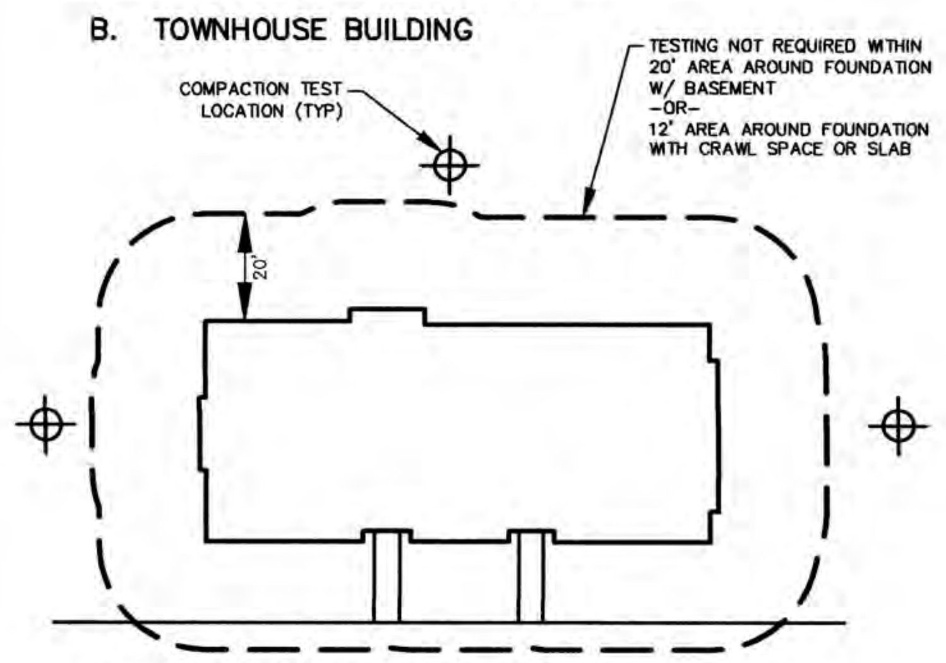
C:\DWG\2022.004-BASE-100 Prospect Street\2022.004-DETAILS.dwg PLOTTED: 3/28/2023 1:12 PM; BY: JASON ERBENTRAUT



A. SINGLE FAMILY UNIT



B. TOWNHOUSE BUILDING



C. MULTIFAMILY HOUSING OR OTHER NON-RESIDENTIAL BUILDING/STRUCTURE

NOTE: SOIL COMPACTION TESTING LOCATIONS IDENTIFIED ARE RECOMMENDED LOCATIONS FOR GRADED/DISTURBED AREAS WITHIN THE VICINITY OF BUILDINGS AND STRUCTURES OR ON INDIVIDUAL LOTS. FOR GRADED/DISTURBED AREAS WITHIN OPEN OR COMMON SPACES, SOIL COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE FREQUENCY LISTED IN THE LEGEND (SEE PLAN SHEETS).

TYPICAL SOIL COMPACTION TESTING LOCATIONS

N.T.S.

SOIL DE-COMPACTION AND TESTING REQUIREMENTS

SOIL COMPACTION TESTING REQUIREMENTS

1. SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL (SEE PERMANENT SEEDING AND STABILIZATION NOTES FOR TOPSOIL REQUIREMENTS) SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
2. AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION ARE GRAPHICALLY DENOTED ON THE CERTIFIED SOIL EROSION CONTROL PLAN.
3. COMPACTION TESTING LOCATIONS ARE DENOTED ON THE PLAN. A COPY OF THE PLAN OR PORTION OF THE PLAN SHALL BE USED TO MARK LOCATIONS OF TESTS, AND ATTACHED TO THE COMPACTION REMEDIATION FORM, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.
4. IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE SIMPLIFIED TESTING METHODS (SEE DETAILS BELOW), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL, MORE DETAILED TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DETAILED TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

COMPACTION TESTING METHODS

A. PROBING WIRE TEST (SEE DETAIL)
B. HAND-HELD PENETROMETER TEST (SEE DETAIL)
C. TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED
D. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)

NOTE: ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.

SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

PROCEDURES FOR SOIL COMPACTION MITIGATION

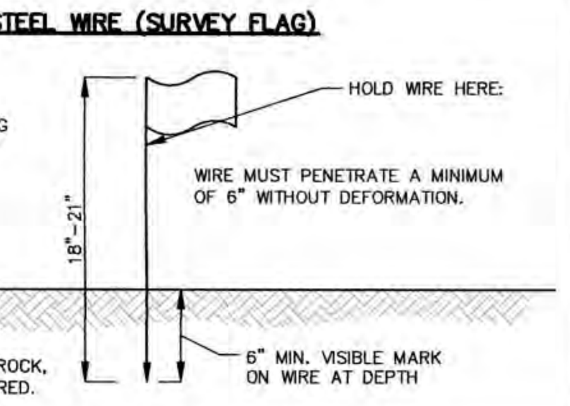
PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.). IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAYBE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

SIMPLIFIED TESTING METHODS

PROBLING WIRE TEST-15.5 GA STEEL WIRE (SURVEY FLAG)

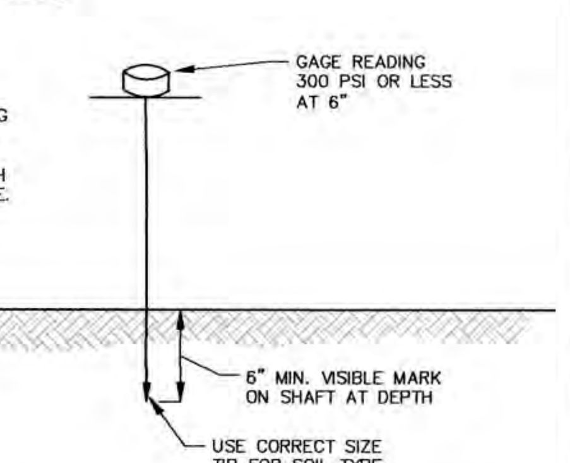
NOTE: SOIL SHOULD BE MOIST BUT NOT SATURATED. DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEADY DOWNWARD PRESSURE USED TO ADVANCE THE WIRE.



WIRE MAY BE RE-INSERTED IF/WHEN AN OBSTRUCTION (ROCK, ROOT, DEBRIS) IS ENCOUNTERED.

HANDHELD SOIL PENETROMETER TEST

NOTE: SOIL SHOULD BE MOIST BUT NOT SATURATED. DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEADY DOWNWARD PRESSURE USED TO ADVANCE THE PROBE. PROBE MUST PENETRATE AT LEAST 6" WITH LESS THAN 300 PSI READING ON THE GAGE.



PENETROMETER MAY BE RE-INSERTED IF/WHEN AN OBSTRUCTION (ROCK, ROOT, DEBRIS) IS ENCOUNTERED.

NOTE:
"SOIL COMPACTION MITIGATION VERIFICATION FORM" MUST BE FILLED OUT COMPLETELY AND SUBMITTED TO THE LOCAL SOIL CONSERVATION DISTRICT PRIOR TO THE DISTRICT PERFORMING A REPORT OF COMPLIANCE INSPECTION.

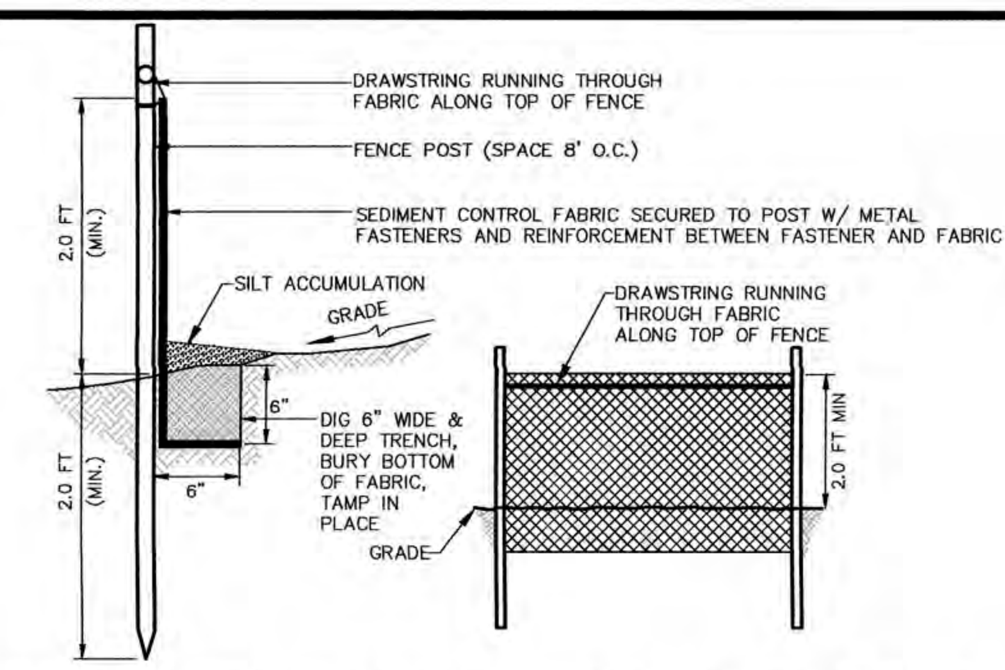
CONSTRUCTION SEQUENCE

CONSTRUCTION COMMENCEMENT DATE: ______________

1.	INSTALLATION OF SILT FENCE ALONG LIMIT OF DISTURBANCE LINE AT SECTION DELINEATED ON "SOIL EROSION CONTROL PLANS" –	_ DAY(S)
	INSTALLATION OF STONE AT CONSTRUCTION ENTRANCES –	_ DAY(S)
2.	CLEARING AND GRUBBING –	_ DAY(S)
3.	ROUGH GRADING AND TEMPORARY SEEDING – INSTALLATION OF DETENTION FACILITIES	– WEEK(S)
4.	INSTALLATION OF UTILITIES AND FOUNDATIONS WITH EROSION CONTROL DEVICES (RIP-RAP OUTFALL, TEMPORARY SEEDING, INLET PROTECTION AND TEMPORARY STABILIZATION). –	– WEEK(S)
5.	CURBING –	– WEEK(S)
6.	PAVEMENT SUB-BASE –	– WEEK(S)
7.	FINISHED GRADING AND LIGHTING –	– WEEK(S)
8.	FINAL PAVEMENT –	– WEEK(S)
9.	LANDSCAPING WITH PERMANENT SEEDING –	– WEEK(S)

NOTE: AS C.O.'S FOR INDIVIDUAL BUILDING ARE APPLIED FOR, ALL SITE WORK AROUND THE BUILDING TO BE COMPLETED (No. 10 SUBJECT TO WEATHER CONDITIONS AND TO BE COMPLETED WITHIN 6 MONTHS).

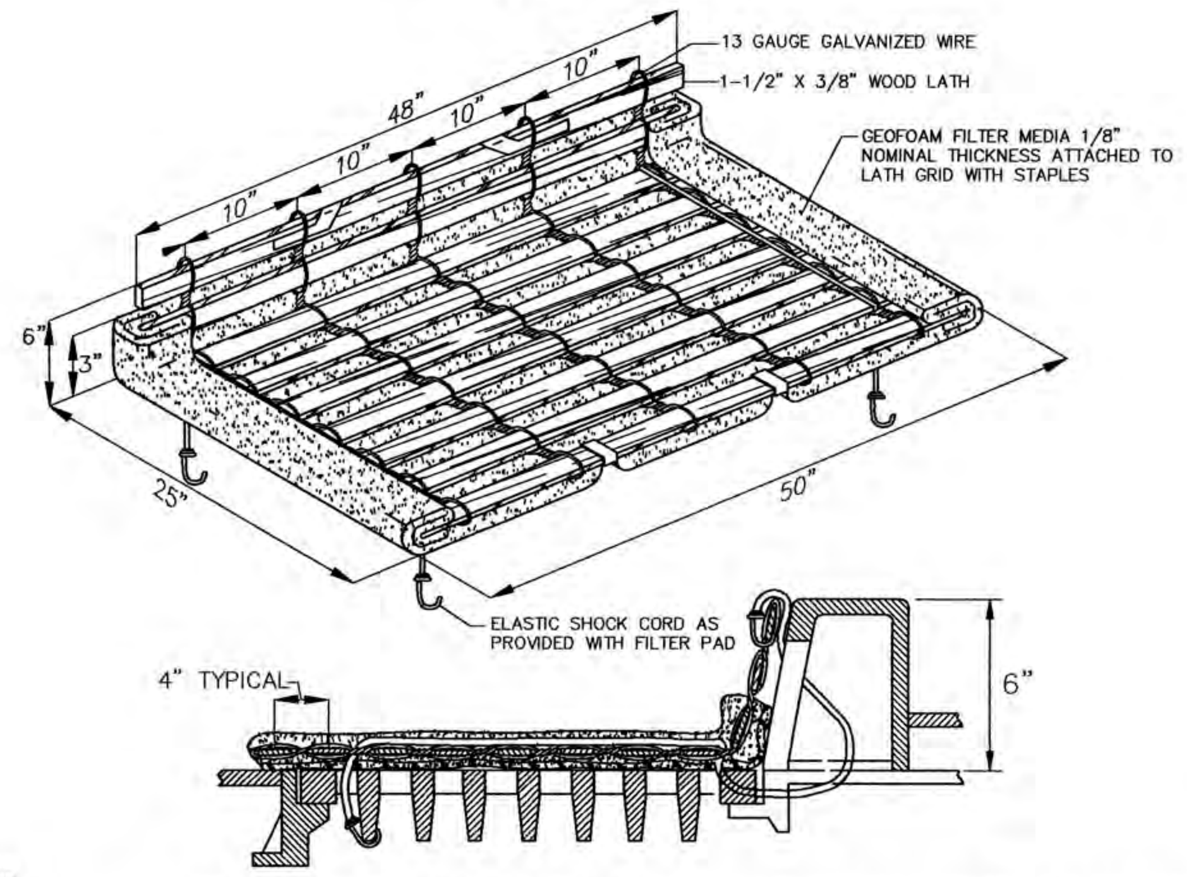
THE ABOVE SCHEDULE SUBJECT TO WEATHER CONDITIONS AND MATERIAL AVAILABILITY.



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

SILT FENCE

N.T.S.

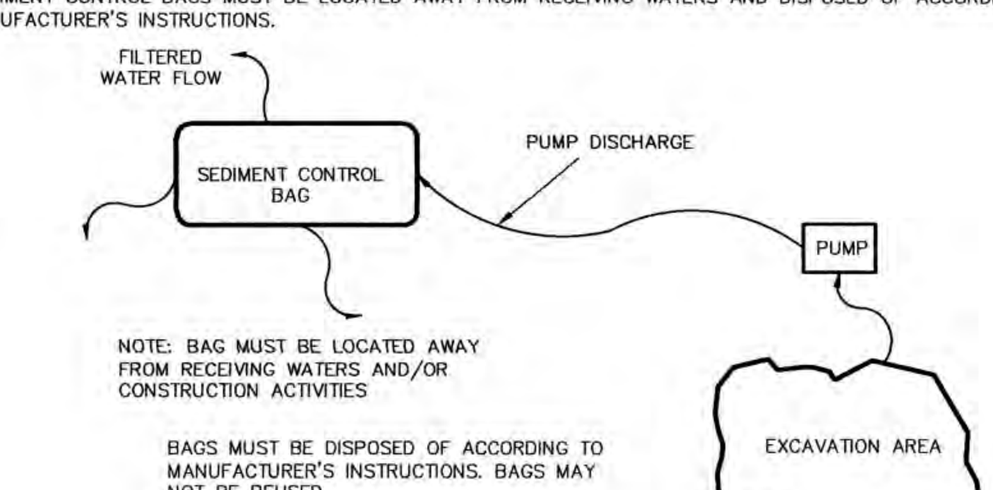


NOTES:
1. FURNISH AND INSTALL INLET FILTER PADS AS MANUFACTURED BY R.B.S. ENTERPRISES, OR APPROVED EQUAL. INSTALL IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. PAD SHALL CONSIST OF 3/8" NORMAL THICKNESS GEOFOAM FILTER MEDIA ATTACHED TO FRAMEWORK. FRAMEWORK SHALL BE COMPRISED ON 1-1/2" x 3/8" x 48" WOOD LATH ON 4" CENTERS FOR A 5 WIRE GRID. FOAM SHALL BE ATTACHED TO LATH GRID WITH STAPLES. PAD SHALL BE ATTACHED TO GRATE WITH THE ELASTIC SHOCK CORD AND HOOKS.
2. THE PROTECTION DEVICE WILL BE DESIGNED TO CAPTURE OR FILTER RUNOFF FROM THE 1 YEAR, 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO THE STORM SEWER SYSTEM.

INLET PROTECTION DETAIL

N.T.S.

1. SILT CONTROL BAGS ARE CONTAINERS THROUGH WHICH SEDIMENT LADEN WATER IS PUMPED TO TRAP AND RETAIN THE SEDIMENT. A SILT CONTROL BAG IS TO BE USED ON SITES WERE EXCAVATIONS ARE DEEP, AND SPACES IS LIMITED AND WHERE DIRECT DISCHARGE OF SEDIMENT LADEN WATER TO STREAM AND STORM DRAINAGE SYSTEM IS TO BE AVOIDED.
2. CONTAINERS (BAGS) SHALL BE LOCATED FOR EASE OF CLEAN-OUT AND DISPOSAL OF THE TRAPPED SEDIMENT AND TO MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES AND PEDESTRIAN TRAFFIC. BAGS SHALL NOT BE PLACED DIRECTLY INTO RECEIVING WATERS.
3. SEDIMENT CONTROL BAGS MUST BE LOCATED AWAY FROM RECEIVING WATERS AND DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS.



SEDIMENT CONTROL BAG FOR DEWATERING

N.T.S.

SEEDING RATES

SEEDBED PREPARATION: FERTILIZER (10-10-10) 500 LB/AC
LIMESTONE 6,000 LB/AC

TEMPORARY SEEDING (NOT FOR ACIDIC SOILS HAVING A PH OF 4 OR LESS)

SEED MIX: PERENNIAL RYEGRASS 200 LB/AC

PERMANENT SEEDING (NOT FOR ACIDIC SOILS HAVING A PH OF 4 OR LESS)

SEEDING DATES:
(OPTIMAL) ZONE 5b,6a (8/1-10/1); ZONE 6b (8/15-10/15);ZONE 7a,7b (8/15-10/30)
(SEE TABLE 4-2 OF THE SCS STANDARDS FOR ADDITIONAL PLANTING DATES)

SCS SEED MIX #14	TURF-TYPE TALL FESCUE (3 CULTIVAR BLEND)	350 LB/AC
	KENTUCKY BLUEGRASS (BLEND)	30 LB/AC
	PERENNIAL RYEGRASS (BLEND)	30 LB/AC

MULCHING:
UNROTTED SALT HAY OR APPROVED EQUAL 1 1/2 to 2 TONS/AC

MULCH ANCHORING:
HYDROMULCH OR APPROVED EQUAL (USE RATES AS RECOMMENDED BY MANUFACTURER)

NOTES:
1) FOR ADDITIONAL REQUIREMENTS REFER TO THE SCS STANDARD FOR PERMANENT VEGETATIVE COVER.
2) THE FERTILIZER AND LIMESTONE RATES REPRESENT THE UNTESTED SCS REQUIRED RATES. FINAL RATES SUBJECT TO SOIL FERTILITY, pH ANALYSIS AND LAB RECOMMENDATIONS.

CONDITION OF ACCEPTANCE
1) NO EROSION SHALL EXIST.
2) BARE OR THIN SPOTS IN EXCESS OF 5 PERCENT OF ANY AREA WILL NOT BE ACCEPTABLE.
3) ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATED COVER (OF THE SEEDED SPECIES) AND MOWED ONCE.

STANDARD FOR TOPSOILING

DEFINITION

TOPSOILING ENTAILS THE DISTRIBUTION OF SUITABLE QUALITY SOIL ON AREAS TO BE VEGETATED.

PURPOSE

TO IMPROVE THE SOIL MEDIUM FOR PLANT ESTABLISHMENT AND MAINTENANCE.

WATER QUALITY ENHANCEMENT

GROWTH AND ESTABLISHMENT OF A VIGOROUS VEGETATIVE COVER IS FACILITATED BY TOPSOIL, PREVENTING SOIL LOSS BY WIND AND RAIN OFFSITE AND INTO STREAMS AND OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE

TOPSOIL SHALL BE USED WHERE SOILS ARE TO BE DISTURBED AND WILL BE REVEGETATED.

METHODS AND MATERIALS

1. MATERIALS

A. TOPSOIL SHOULD BE FRIABLE[1], LOAMY[2], FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE OR ADVERSE CHEMICAL OR PHYSICAL CONDITION THAT MAY BE HARMFUL TO PLANT GROWTH. SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY LESS THAN 0.5 MILLIMHOS PER CENTIMETER. MORE THAN 0.5 MILLIMHOS MAY DESICCATE SEEDLINGS AND ADVERSELY IMPACT GROWTH). IMPORTED TOPSOIL SHALL HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75 PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES.

B. TOPSOIL SUBSTITUTE IS A SOIL MATERIAL WHICH MAY HAVE BEEN AMENDED WITH SAND, SILT, CLAY, ORGANIC MATTER, FERTILIZER OR LIME AND HAS THE APPEARANCE OF TOPSOIL. TOPSOIL SUBSTITUTES MAY BE UTILIZED ON SITES WITH INSUFFICIENT TOPSOIL FOR ESTABLISHING PERMANENT VEGETATION. ALL TOPSOIL SUBSTITUTE MATERIALS SHALL MEET THE REQUIREMENTS OF TOPSOIL NOTED ABOVE. SOIL TESTS SHALL BE PERFORMED TO DETERMINE THE COMPONENTS OF SAND, SILT, CLAY, ORGANIC MATTER, SOLUBLE SALTS AND PH LEVEL.

2. STRIPPING AND STOCKPILING

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

B. STRIPPING SHALL 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 APPROXIMATELY 6.5.

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 STANDARDS PREVIOUSLY DESCRIBED HEREIN; SEE STANDARDS FOR PERMANENT (PG. 4-1) OR TEMPORARY (PG. 7-1) VEGETATIVE COVER FOR SOIL STABILIZATION. WEEDS SHOULD NOT BE ALLOWED TO GROW ON STOCKPILES.

3. SITE PREPARATION

A. GRADE AT THE ONSET OF THE OPTIMAL SEEDING PERIOD SO AS TO MINIMIZE THE DURATION AND AREA OF EXPOSURE OF DISTURBED SOIL TO EROSION. IMMEDIATELY PROCEED TO ESTABLISH VEGETATIVE COVER IN ACCORDANCE WITH THE SPECIFIED SEED MIXTURE. TIME IS OF THE ESSENCE

B. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE. SEE THE STANDARD FOR LAND GRADING, PG. 19-1.

C. AS GUIDANCE FOR IDEAL CONDITIONS, SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT. LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL TO A PH OF APPROXIMATELY 6.5 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.

D. PRIOR TO TOPSOILING, THE SUBSOIL SHALL BE IN COMPLIANCE WITH THE STANDARD FOR LAND GRADING, PG. 19-1.

E. EMPLOY NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENTATION BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

4. APPLYING TOPSOIL

A. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE; I.E., LESS THAN FIELD CAPACITY (SEE GLOSSARY).

B. A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 5.0 INCHES, MINIMUM OF 4 INCHES, FIRMED IN PLACE IS REQUIRED. ALTERNATIVE DEPTHS MAY BE CONSIDERED WHERE SPECIAL REGULATORY AND/OR INDUSTRY DESIGN STANDARDS ARE APPROPRIATE SUCH AS ON GOLF COURSES, SPORTS FIELDS, LANDFILL CAPPING, ETC.. SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM DEPTH OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE, IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOIL (PG. 1-1).

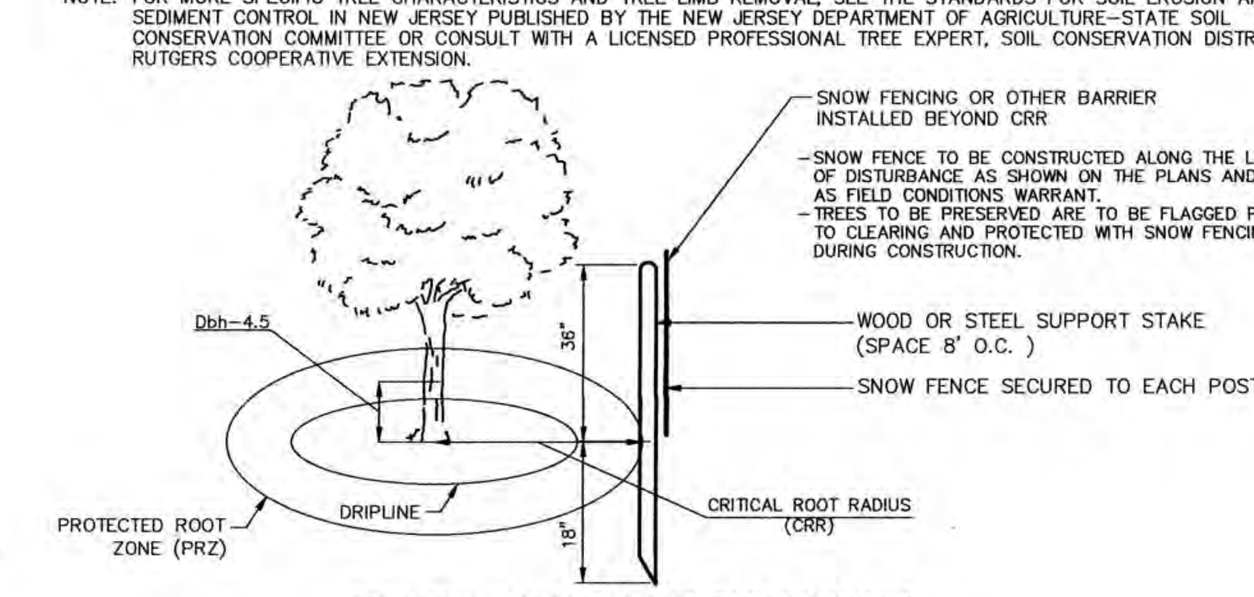
C. PURSUANT TO THE REQUIREMENTS IN SECTION 7 OF THE STANDARD FOR PERMANENT VEGETATIVE STABILIZATION, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT PERMANENT VEGETATIVE COVER BECOMES ESTABLISHED ON AT LEAST 80% OF THE SOILS TO BE STABILIZED WITH VEGETATION. FAILURE TO ACHIEVE THE MINIMUM COVERAGE MAY REQUIRE ADDITIONAL WORK TO BE PERFORMED BY THE CONTRACTOR TO INCLUDE SOME OR ALL OF THE FOLLOWING: SUPPLEMENTAL SEEDING, RE-APPLICATION OF LIME AND FERTILIZERS, AND/OR THE ADDITION OF ORGANIC MATTER (I.E. COMPOST) AS A TOP DRESSING. SUCH ADDITIONAL MEASURES SHALL BE BASED ON SOIL TESTS SUCH AS THOSE OFFERED BY RUTGERS COOPERATIVE EXTENSION SERVICE OR OTHER APPROVED LABORATORY FACILITIES QUALIFIED TO TEST SOIL SAMPLES FOR AGRONOMIC PROPERTIES.

[1] FRIABLE MEANS EASILY CRUMBLES IN THE FINGERS, AS DEFINED IN MOST SOILS TEXTS.
[2] LOAMY MEANS TEXTURE GROUPS CONSISTING OF COARSE LOAMY SANDS, SANDY LOAM, FINE AND VERY FINE SANDY LOAM, LOAM, SILT LOAM, CLAY LOAM, SANDY CLAY LOAM AND SILTY CLAY LOAM TEXTURES AND HAVING LESS THAN 35% COARSE FRAGMENTS (PARTICLES LESS THAN 2MM IN SIZE) AS DEFINED IN THE GLOSSARY OF SOIL SCIENCE TERMS, 1996, SOIL SCIENCE SOCIETY OF AMERICA.

CRITERIA FOR PROTECTING REMAINING TREES:

1. GENERAL MECHANICAL DAMAGE – SEE BELOW FOR CORRECT ROOT ZONE CALCULATION AND PLACEMENT OF TREE PROTECTION.
2. BOX TREES WITHIN 25 FEET OF A BUILDING SITE TO PREVENT MECHANICAL INJURY. FENCING OR OTHER BARRIER SHOULD BE INSTALLED BEYOND THE CRITICAL ROOT RADIUS. TREE ROOT SYSTEMS COMMONLY EXTEND WELL BEYOND THE DRIP LINE.
3. BOARDS WILL NOT BE NAILED TO TREES DURING BUILDING OPERATIONS.
4. FEEDER ROOTS SHOULD NOT BE CUT IN AN AREA INSIDE THE PROTECTED ROOT ZONE (PRZ).
5. DAMAGED TRUNKS OR EXPOSED ROOTS SHOULD HAVE DAMAGED BARK REMOVED IMMEDIATELY AND NO PAINT SHALL BE APPLIED. EXPOSED ROOTS SHOULD BE COVERED WITH TOPSOIL IMMEDIATELY AFTER EXCAVATION IS COMPLETE. ROOTS SHALL BE PRUNED TO GIVE A CLEAN, SHARP SURFACE AMENABLE TO HEALING. ROOTS EXPOSED DURING HOT WEATHER SHOULD BE IRRIGATED TO PREVENT PERMANENT TREE INJURY. CARE FOR SERIOUS INJURY SHOULD BE PRESCRIBED BY A PROFESSIONAL FORESTER OR LICENSED TREE EXPERT.

NOTE: FOR MORE SPECIFIC TREE CHARACTERISTICS AND TREE LIMB REMOVAL, SEE THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY PUBLISHED BY THE NEW JERSEY DEPARTMENT OF AGRICULTURE-STATE SOIL CONSERVATION COMMITTEE OR CONSULT WITH A LICENSED PROFESSIONAL TREE EXPERT, SOIL CONSERVATION DISTRICT OR RUTGERS COOPERATIVE EXTENSION.



ESTIMATE A TREE'S PROTECTED ROOT ZONE (PRZ) BY CALCULATING THE CRITICAL ROOT RADIUS (CRR).

1. MEASURE THE DBH (DIAMETER OF TREE AT BREAST HEIGHT, 4.5 FEET ABOVE GROUND ON THE UPHILL SIDE OF TREE) IN INCHES.
2. MULTIPLY MEASURED DBH BY 1.5 OR 1.0. EXPRESS THE RESULT IN FEET.

DBH X 1.5: CRITICAL ROOT RADIUS FOR OLDER, UNHEALTHY, OR SENSITIVE SPECIES.

DBH X 1.0: CRITICAL ROOT RADIUS FOR YOUNGER, HEALTHY OR TOLERANT SPECIES

TREE PROTECTION

STANDARD FOR PERMANENT STABILIZATION WITH SOD

DEFINITION

ESTABLISHING PERMANENT VEGETATION USING SOD.

PURPOSE

TO PERMANENTLY STABILIZE TOPSOIL WITH AN IMMEDIATE AESTHETIC COVERING, THUS ASSURING CONSERVATION OF SOIL AND WATER, AND TO ENHANCE THE ENVIRONMENT.

WATER QUALITY ENHANCEMENT

PROVIDES AN IMMEDIATE, PERMANENT VEGETATIVE COVER TO THE SOIL FROM THE IMPACTS OF WIND OR RAIN AND PREVENTS SOIL AND NUTRIENT LOSSES TO STREAMS AND OTHER STORMWATER CONVEYANCES FROM STORMWATER RUNOFF.

WHERE APPLICABLE

ON EXPOSED SOILS THAT HAVE A POTENTIAL FOR CAUSING OFF-SITE ENVIRONMENTAL DAMAGE WHERE AN IMMEDIATE, PERMANENT, VEGETATIVE COVER IS DESIRED. WATER (RAIN OR IRRIGATION) IS REQUIRED FOR SUCCESS; ACCESS TO IRRIGATION IS ESSENTIAL DURING DROUGHT.

METHODS AND MATERIALS

1. HIGH QUALITY CULTIVATED SOD IS PREFERRED OVER NATIVE OR PASTURE SOD.
2. SOD SHOULD BE FREE OF BROADLEAF WEEDS AND UNDESIRABLE COARSE AND FINE WEED GRASSES.
3. SOD SHOULD BE OF UNIFORM THICKNESS, TYPICALLY 5/8 INCH, PLUS OR MINUS 1/4 INCH, AT TIME OF CUTTING (EXCLUDES TOP GROWTH.).
4. SOD SHOULD BE VIGOROUS AND DENSE AND BE ABLE TO RETAIN ITS OWN SHAPE AND WEIGHT WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP FROM THE UPPER 10 PERCENT OF THE STRIP. BROKEN PADS AND ROLLS OR TORN AND UNEVEN ENDS WILL NOT BE ACCEPTABLE.
5. FOR DROUGHTY SITES, A SOD OF TURF-TYPE TALL FESCUE OR TURF-TYPE TALL FESCUE MIXED WITH KENTUCKY BLUEGRASS IS PREFERRED OVER A 100% KENTUCKY BLUEGRASS SOD. ALTHOUGH NOT WIDELY AVAILABLE, A SOD OF FINE FESCUE IS ALSO ACCEPTABLE FOR DROUGHTY SITES.
6. ONLY MOIST, FRESH, UNHEATED SOD SHOULD BE USED. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 24 HOURS OR LESS DURING SUMMER MONTHS.

1. SITE PREPARATION

A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR LIMING, FERTILIZING, INCORPORATION OF ORGANIC MATTER, AND OTHER SOIL PREPARATION PROCEDURES. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.

B. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES.

SEE THE STANDARD FOR TOPSOILING FOR TOPSOIL AND AMENDMENT REQUIREMENTS.

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

2. SOIL PREPARATION

A. UNIFORMLY APPLY GROUND LIMESTONE, AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET USING 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ½ THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ½ RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRE UNLESS SOIL TESTING INDICATES OTHERWISE. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.

B. WORK LIME, AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED.

C. REMOVE FROM THE SURFACE ALL OBJECTS THAT WOULD PREVENT GOOD SOD TO TOPSOIL CONTACT AND REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIAL.

D. INSPECT SITE JUST BEFORE SODDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED AND FIRMED IN ACCORDANCE WITH THE ABOVE.

3. SOD PLACEMENT

A. SOD STRIPS SHOULD BE LAID ON THE CONTOUR, NEVER UP AND DOWN THE SLOPE, STARTING AT THE BOTTOM OF THE SLOPE AND WORKING UP. ON STEEP SLOPES, THE USE OF LADDERS WILL FACILITATE THE WORK AND PREVENT DAMAGE TO THE SOD. DURING PERIODS OF HIGH TEMPERATURE, LIGHTLY IRRIGATE THE SOIL IMMEDIATELY PRIOR TO LAYING THE SOD.

B. PLACE SOD STRIPS WITH SNUG, EVEN JOINTS (SEAMS) THAT ARE STAGGERED. OPEN SPACES INVITE EROSION.

C. LIGHTLY ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT TO INSURE SOLID CONTACT OF ROOT MAT AND SOIL SURFACE. DO NOT OVERLAP SOD. ALL JOINTS SHOULD BE BUTTED TIGHTLY TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS AND INVASION OF WEEDS.

D. ON SLOPES GREATER THAN 3 TO 1, SECURE SOD TO SURFACE SOIL WITH WOOD PEGS, WIRE STAPLES BIODEGRADABLE PLASTIC SPIKES, OR SPLIT SHINGLES (8 TO 10 INCHES LONG BY 3/4 INCH WIDE).

E. SURFACE WATER CANNOT ALWAYS BE DIVERTED FROM FLOWING OVER THE FACE OF THE SLOPE, BUT A CAPPING STRIP OF HEAVY JUTE OR PLASTIC NETTING, PROPERLY SECURED, ALONG THE CROWN OF THE SLOPE AND EDGES WILL PROVIDE EXTRA PROTECTION AGAINST LIFTING AND UNDERCUTTING OF SOD. THE SAME TECHNIQUE CAN BE USED TO ANCHOR SOD IN WATER-CARRYING CHANNELS AND OTHER CRITICAL AREAS. WIRE STAPLES MUST BE USED TO ANCHOR NETTING IN CHANNEL WORK.

F. IMMEDIATELY FOLLOWING INSTALLATION, SOD SHOULD BE WATERED UNTIL WATER PENETRATES THE SOIL LAYER BENEATH SOD TO A DEPTH OF 1 INCH. MAINTAIN OPTIMUM WATER FOR AT LEAST TWO WEEKS.

4. TOPDRESSING – SINCE SOIL ORGANIC MATTER AND SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) ARE PRESCRIBED IN SECTIONS 1 AND 2IN THIS STANDARD, A FOLLOW-UP TOPDRESSING IS NOT MANDATORY, EXCEPT WHERE GROSS NITROGEN DEFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP, TOPDRESSING SHALL THEN BE APPLIED. TOPDRESS WITH 10-0-10 OR EQUIVALENT AT 400 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.

FOR CLARIFICATIONS AND ADDITIONAL INFORMATION SEE THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, 7TH EDITION, JANUARY 2014, REVISED JULY 2017

CONSTRUCTION DETAIL NOTES

1. ALL TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. ALL CONSTRUCTION DETAILS SHALL BE SUPERCEDED BY APPLICABLE MUNICIPAL, COUNTY OR STATE DETAILS UNLESS OTHERWISE NOTED.
3. STRUCTURAL DETAILS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. SHOP DRAWINGS SHALL BE PROVIDED TO THE TOWNSHIP ENGINEER FOR ALL WALLS AND STRUCTURAL ELEMENTS PRIOR TO CONSTRUCTION.
4. SHOP DRAWINGS SHALL BE PROVIDED FOR ALL PRECAST STRUCTURES PRIOR TO THE ORDERING OF MATERIALS.
5. DETAILS ASSUME APPROPRIATE LOAD BEARING CAPACITY AND COMPACTION OF SOILS. ACTUAL FIELD CONDITIONS SHALL BE CONFIRMED BY ON-SITE GEOTECHNICAL ENGINEER.
6. RESIDENTIAL DEVELOPMENTS SHALL CONFORM TO DETAILS WITHIN THE CURRENT EDITION OF THE RESIDENTIAL SITE IMPROVEMENT STANDARDS (R.S.I.S.).
7. ALL CONSTRUCTION DETAILS ARE NOT TO SCALE (N.T.S.) UNLESS OTHERWISE NOTED.

REVISIONS

THIS DRAWING IS FOR PERMIT PURPOSES ONLY

NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED

☐ CHKD BY:____ DATE:__________

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100 PROSPECT STREET

BOROUGH OF METUCHEN MIDDLESEX COUNTY NEW JERSEY

BLOCK 152 LOTS 51.01 & 51.02 TAX MAP SHEET 51 0.76 ACRES

SOIL EROSION & SEDIMENT CONTROL DETAILS (2)

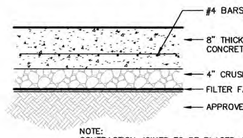
DRAWN BY .... DP
DESIGNED BY .... MM
APPROVED BY .... WAL

THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION...

WILLIAM A. LANE
PROFESSIONAL ENGINEER
NJPE# 40262

PROJECT NUMBER	2022.004	SED-2
DATE OF ISSUE	MARCH 14, 2022	8
REVISION –	–	

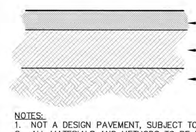
C:\DWG\2022.004-BASE-100 Prospect Street\2022.004-DETAILS.dwg PLOTTED: 3/28/2023 1:10 PM; BY: JASON ERBENTRAUT



NOTE:
CONTRACTION JOINTS TO BE PLACED AT 60 FT O.C.
SAW CUT JOINTS AT 20 FT O.C. EACH WAY

CONCRETE SLAB DETAIL

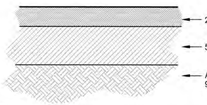
N.T.S.



NOTES:
1. NOT A DESIGN PAVEMENT, SUBJECT TO ON-SITE SOILS TESTING.
2. ALL MATERIALS AND METHODS TO BE IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS.

(DRIVEWAY)
PAVEMENT SECTION

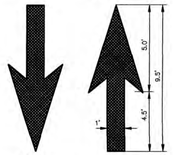
N.T.S.



NOTES:
1) NOT A DESIGN PAVEMENT, SUBJECT TO ONSITE SOILS TESTING.
2) ALL MATERIALS AND METHODS TO BE IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS.

(ROADWAY)
PAVEMENT SECTION

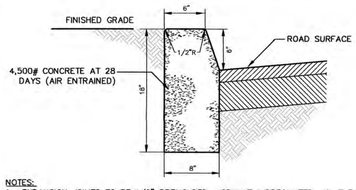
N.T.S.



NOTE:
FOR PROPORTIONS SEE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS." FHWA

DOUBLE STRAIGHT ARROW DETAIL

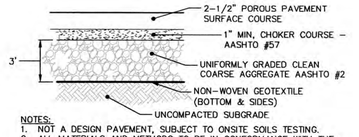
N.T.S.



NOTES:
1. EXPANSION JOINTS TO BE 1/2" PREMOLDED, ASPHALT IMPREGNATED, JOINT FILLER MATERIAL, CUT TO FIT CROSS SECTION, RECESSED 1/4" FROM EXPOSED FACES AND ARE TO BE PLACED; IN TRAVERSE JOINTS 20' O.C. MAX; BETWEEN CURB AND CONCRETE SIDEWALK OR PAVEMENT; AT ALL STRUCTURES; AND AT THE END OF EACH WORK DAY.
2. ALL MATERIALS AND METHODS TO BE IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS.

(8"WIDE / 6"REVEAL)
STANDARD CONCRETE CURB (18")

N.T.S.



NOTES:
1. NOT A DESIGN PAVEMENT, SUBJECT TO ONSITE SOILS TESTING.
2. ALL MATERIALS AND METHODS TO BE IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS.

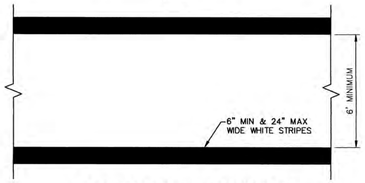
POROUS PAVEMENT SECTION

N.T.S.

R1-1
30"x30"

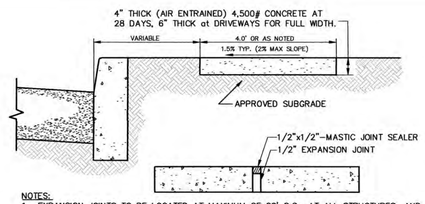
SIGN DETAIL

N.T.S.



CROSSWALK STRIPING

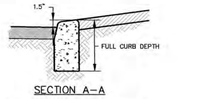
N.T.S.



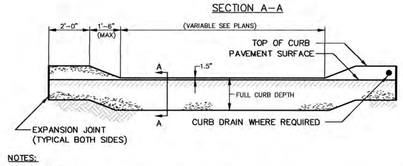
NOTES:
1. EXPANSION JOINTS TO BE LOCATED AT MAXIMUM OF 20' O.C.; AT ALL STRUCTURES; AND WHERE SIDEWALK ABUTS THE CURB.
2. EXPANSION MATERIALS TO BE 1/2" PREMOLDED, ASPHALT IMPREGNATED, JOINT FILLER.
3. TOOLED JOINTS TO BE SPACED EQUAL TO THE SIDEWALK WIDTH (6' MAX).
4. ALL MATERIALS AND METHODS TO BE IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS.

CONCRETE SIDEWALK

N.T.S.



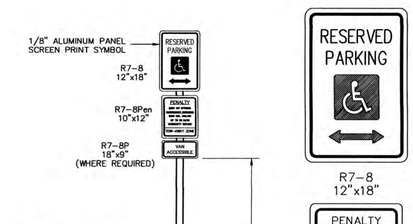
SECTION A-A



NOTES:
1. ALL MATERIALS AND METHODS TO BE IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS.

DEPRESSED CURB

N.T.S.



RESERVED PARKING

R7-8
12"x18"

PENALTY
$250 1ST OFFENSE
SUBSEQUENT OFFENSES
$250 MIN. AND/OR
UP TO 90 DAYS
COMMUNITY SERVICE
TOW-AWAY ZONE

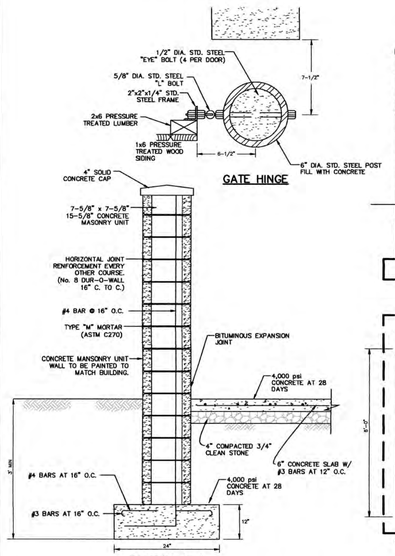
R7-8Pen
10"x12"

VAN ACCESSIBLE

R7-8P
18"x9"

ACCESSIBLE SIGN DETAIL

N.T.S.

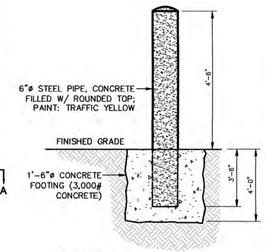


SECTION A-A

DUMPSTER PAD

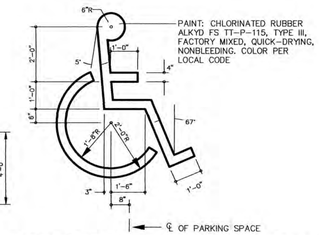
DUMPSTER ENCLOSURE DETAIL

N.T.S.



PIPE BOLLARD

N.T.S.

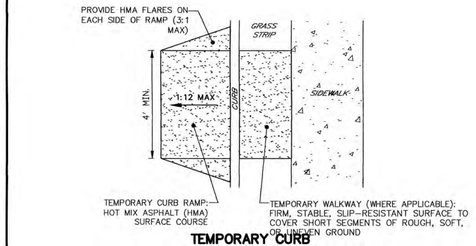


ACCESSIBLE PARKING DETAIL

N.T.S.

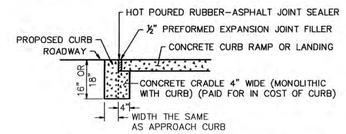
GENERAL ADA NOTES

1. PEDESTRIAN CURBS
   - PEDESTRIAN CURBS ARE PERMITTED WHEN ADJACENT TO NON-WALK AREAS OR ELEVATION DIFFERENCES WHICH CANNOT BE ACCOMMODATED BY FLARES OR GRADING.
2. CROSSWALKS
   - FOR CURB RAMPS THAT LEAD TO A SINGLE CROSSWALK, THE RAMP (EXCLUDING FLARES) TO BE FULLY INSIDE OF MARKED CROSSWALK LINES.
   - SHOULD BE PLACED A MINIMUM DISTANCE OF 4'-0" FROM STOP AND YIELD LINES.
   - FOR UN-SIGNALIZED AREAS, CROSSWALKS SHOULD BE PLACED A MINIMUM DISTANCE OF 20'-0" AWAY FROM ON ROAD PARKING ZONES. FOR SIGNALIZED AREAS, CROSSWALKS SHOULD BE PLACED A MINIMUM DISTANCE OF 30'-0" FROM ON ROAD PARKING ZONES.
   - PEDESTRIAN CROSSWALKS ARE 6'-0" MINIMUM MEASURED FROM INSIDE THE PAINTED EDGE TO INSIDE PAINTED EDGE AND THE INSIDE LINES MUST BE OUTSIDE THE PROJECTED CURB LINES.
   - AVOID USING THE PARALLEL LINE CROSSWALK DESIGN. INSTEAD USE THE LONGITUDINAL, LADDER-STYLE, LINES AT 6'-0" LONG AND 1'-2" WIDE WITH A SPACING OF 1'-2" APART. SPACING SHOULD BE DESIGNED SO THE PAINTED AREAS AVOID THE WHEEL PATHS.
3. CURB RAMPS
   - CONSTRUCT CURB RAMPS WITH A MINIMUM 4'-0" X 4'-0" CLEAR SPACE BEFORE THE CURB FACE, WITHIN THE WIDTH OF THE CROSSWALK.
   - SLOPES THAT EXCEED 5.00%, OR CONTRACT DOCUMENTS AS APPLICABLE, WILL NOT BE ACCEPTED AND WILL BE RECONSTRUCTED.
   - PROVIDE SLIP RESISTANT TEXTURE ON CURB RAMP BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB RAMP INCLUDING FLARED SIDE RAMPS.
   - TO AVOID CHASING GRADE INDEFINITELY WHEN TRAVERSING THE HEIGHT OF CURB, RAMP LENGTH NOT TO EXCEED 15'-0". ADJUST RAMP SLOPE AS NEEDED TO PROVIDE ACCESS TO THE MAXIMUM EXTENT FEASIBLE.
   - FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE POSSIBLE.
   - FOR NEW CONSTRUCTION, ATTEMPT TO KEEP THE CROSS SLOPE AS FLAT AS POSSIBLE. DO NOT EXCEED 2.00% CROSS SLOPE ON THE CURB RAMP OR PEDESTRIAN ACCESSIBLE ROUTE (MEASURED PERPENDICULAR TO THE DIRECTION OF TRAVEL).
   - CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE.
   - CURB RAMP WIDTH IS 4'-0" MINIMUM.
   - AVOID CURB RAMP DESIGNS WHERE THE WIDTH OF THE CROSSWALK WILL NEED TO BE GREATER THAN 10'-0" WIDE.
   - ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF RAMP IS NOT SOLELY DEPENDANT ON THE HEIGHT OF CURB. (FOR EXAMPLE, A 6" CURB DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 6'-0" FOR A 12:1 SLOPE.
   - THE CHANGE IN GRADE AT THE BOTTOM OF THE CURB RAMP AND ADJOINING ROAD SURFACE IS NOT TO EXCEED AN ALGEBRAIC DIFFERENCE OF 11.00% THE COUNTER SLOPE OF THE GUTTER OR ROAD AT THE FOOT OF A CURB RAMP, LANDING OR BLENDED TRANSITION IS NOT TO EXCEED 8.00% AND IT IS NOT NECESSARY TO HAVE THE LENGTH GREATER THAN 15'-0".
   - WHEN TWO CROSSWALKS LEAD TO A SINGLE CURB RAMP, THE MAXIMUM RUNNING SLOPE IS 5% WITH A MAXIMUM 2% CROSS SLOPE. THESE TYPES OF RAMPS REQUIRE THE ENGINEERING DEPARTMENT'S APPROVAL AS THEY ARE NOT PREFERRED.
4. DEPRESSED CURBS
   - CONSTRUCT TOP OF PLAIN CEMENT CONCRETE DEPRESSED CURB TO BE FLUSH WITH ADJACENT SURFACES (RAMPS, SIDEWALKS, FLARES).
   - CONSTRUCT DEPRESSED CURB FOR CURB RAMPS FLUSH TO ADJACENT ROADWAY. GRADE EDGE OF ROAD ELEVATIONS AT THE FLOW LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT PONDING. FOR LEVEL LANDINGS BEHIND DEPRESSED CURB, ADJUST SLOPES TO PROVIDE POSITIVE DRAINAGE. THE VERTICAL ALIGNMENT OF A CURB RAMP, EXCLUDING FLARES, SHALL BE PLANAR. GRADE BREAKS SHALL BE FLUSH AND PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN. RAMP TRANSITIONS BETWEEN WALKS, GUTTERS, LANDINGS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT VERTICAL CHANGES (1/4" MAXIMUM).
   - WHEN TWO CROSSWALKS LEAD TO A SINGLE CURB RAMP, THE DEPRESSED CURB MUST EXTEND FROM THE OUTER MOST EDGE OF EACH CROSSWALK.
5. DETECTABLE WARNING SURFACES
   - NO SEPARATION BETWEEN DETECTABLE WARNING SURFACES FOR MEDIANS LESS THAN 4'-0" BETWEEN BACK OF CURBS.
   - PROVIDE DETECTABLE WARNING SURFACES (DWS) 24" MINIMUM (IN THE DIRECTION OF PEDESTRIAN TRAVEL) ACROSS FULL WIDTH OF RAMP AT THE GRADE BREAK NEAR STREET EDGE. PROVIDE DWS THAT CONTRAST VISUALLY WITH ADJACENT WALKWAY SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT FOR THE FULL WIDTH OF RAMP.
   - ALIGN DETECTABLE WARNING SURFACE TRUNCATED DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF THE RAMP AND PERPENDICULAR TO CURB WHEN APPROPRIATE.
   - DETECTABLE WARNING SURFACES SHALL BE SAFETY RED COLOR, EXCEPT IF THE MUNICIPALITIES HAVE ESTABLISHED AN ALTERNATIVE COLOR SCHEME.
   - FOR TWO CROSSWALKS LEADING TO A SINGLE CURB RAMP, THE DETECTABLE WARNING SURFACE MUST BE PLACED ALONG THE ENTIRE DEPRESSED CURB AND THE DOMES MUST BE PLACED IN SUCH A WAY THAT THE DIRECTION OF TRAVEL IS ORIENTED INTO THE CROSSWALK.
6. DRIVEWAYS
   - 5.00% MAXIMUM SLOPE FOR THE DRIVEWAY APRON.
   - 1 1/2" MAXIMUM VERTICAL CHANGE IN HEIGHT BETWEEN THE ROAD SURFACE AND THE DEPRESSED CURB AT THE DRIVEWAY APRON.
7. JOINTS
   - PROVIDE EXPANSION JOINT MATERIAL 1/2" THICK WHERE CURB RAMP ADJOINS ANY RIGID PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETE SURFACE.
   - SEAL JOINTS WITH AN APPROVED SEALING MATERIAL.
8. LANDINGS (AKA TURNING SPACE)
   - LANDING AREA, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP SHALL BE KEPT CLEAR OF OBSTRUCTIONS, UNLESS AN EXCEPTION IS GRANTED.
   - DO NOT EXCEED 2.00% SLOPE IN ALL DIRECTIONS.
   - LANDING AREA SHOULD BE 4'-0" X 4'-0" MINIMUM CLEAR SPACE. IF THE TURNING SPACE IS CONSTRAINED ON 2 OR MORE SIDES, IT MUST BE 4'x5' WITH THE 5' LENGTH ALONG THE UNOBSTRUCTED SIDE. FOR TWO CROSSWALKS LEADING TO A SINGLE CURB, THE LANDING AREA MUST HAVE A MINIMUM OF A 5'-0" DEPTH (INCLUDING THE DETECTABLE WARNING SURFACE) ALONG THE DEPRESSED CURB/ROADWAY.
   - ENGINEERING DEPARTMENT APPROVAL IS REQUIRED IF LANDING FOR TURNING MANEUVER IS NOT ON THE SIDEWALK, I.E. IF THE LANDING AREA "CLEAR SPACE" IS IN THE ROADWAY.
   - 4'x4' LANDINGS ARE REQUIRED AT EVERY ACCESSIBLE PEDESTRIAN SIGNAL/PUSHBUTTON LOCATION.
9. NON-WALK SURFACES
   - NON-WALK AREA IS AN OBSTRUCTION OR GRASS/NON-PAVED AREA ADJACENT TO THE PEDESTRIAN ACCESS ROUTE THAT IS NOT USED BY THE PEDESTRIAN FOR ACCESS.
10. PEDESTRIAN PUSHBUTTONS
    - THE DETAILS DEPICT PEDESTRIAN PUSHBUTTON POLES TO ILLUSTRATE THE RECOMMENDED PLACEMENT OF PEDESTRIAN PUSHBUTTONS. FOR ALTERATION PROJECTS, PROVIDE ACCESS TO EXISTING PEDESTRIAN PUSHBUTTONS TO THE MAXIMUM EXTENT FEASIBLE. INSTALL PEDESTRIAN PUSHBUTTON STUB POLES, WHERE APPLICABLE, SO AS NOT TO CREATE PEDESTRIAN OBSTRUCTIONS.
    - NEW CONSTRUCTION MUST COMPLY WITH RECOMMENDED LOCATIONS FOR ALTERATION PROJECTS LOCATE PEDESTRIAN PUSHBUTTONS, TO THE MAXIMUM EXTENT FEASIBLE (SEE 2009 MUTCD FIG 4E-3)
    - ADJACENT TO A LEVEL NON-SLIP SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS A NON-SLIP WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP
    - WITHIN 5'-0" OF THE CROSSWALK EXTENDED
    - BETWEEN 1'-6" AND 10'-0" OF THE EDGE OF CURB, SHOULDER OR PAVEMENT
    - PARALLEL TO THE CROSSWALK TO BE USED
    - MOUNT PEDESTRIAN PUSHBUTTON 42" ABOVE THE SIDEWALK OR FINISHED GRADE TO THE CENTER OF THE PUSHBUTTON AND 10" MAXIMUM LATERALLY FROM LANDING.
11. SIDE FLARES
    - ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF RAMP IS NOT SOLELY DEPENDANT ON THE HEIGHT OF CURB. (FOR EXAMPLE, A 6" CURB DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 6'-0" FOR A 12:1 SLOPE.
    - SIDE FLARES 10.00% MAXIMUM SLOPE WHERE THE PEDESTRIAN PATH CROSSES THE CURB RAMP
    - SIDE FLARES MUST BE PARALLEL TO THE CURB LINE
    - CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE
    - GRADE GRASS AREAS OR OTHER NON-WALK AREAS AT 3:1 (1:3) MAXIMUM. DO NOT INSTALL CHEEK WALLS THAT INTERSECT THE PEDESTRIAN ACCESS ROUTE
    - SIDE FLARE WIDTH IS TYPICALLY 24" AND A MINIMUM OF 12".
12. SIDEWALKS
    - NOTE THE AREA CONSIDERED TO BE THE "PEDESTRIAN ACCESSIBLE ROUTE"
    - THE MAXIMUM SIDEWALK CROSS SLOPE IS 2.00% (MEASURED PERPENDICULAR TO THE DIRECTION OF TRAVEL). THE MAXIMUM GRADE IS 5.00%. FOR SIDEWALKS ALONG STREETS; HOWEVER, THE LONGITUDINAL GRADE OF THE SIDEWALK SHOULD BE CONSISTENT WITH THE GRADE OF THE ADJACENT ROADWAY. IF THE 5.00% GRADE IS NOT FEASIBLE DUE TO TOPOGRAPHY AND OTHER PHYSICAL CONSTRAINTS, THE LOWEST PRACTICAL GRADE GREATER THAN 5.00% SHOULD BE USED
    - SIDEWALK WIDTH MAY BE REDUCED TO 4'-0", WHEN PASSING AREAS 5'-0" X 5'-0" ARE PROVIDED EVERY 200'.
13. TRAVEL LANES
    - THE TRAVEL LANE IS DEFINED BY THE OUTSIDE EDGE OF THE WHITE PAVEMENT MARKING LINE. IF A WHITE PAVEMENT MARKING LINE DOES NOT EXIST, THE TRAVEL LANE IS DEFINED BY THE CONTRACT DOCUMENTS.
14. MODIFY CONSTRUCTION DETAILS TO ADAPT DIMENSIONS TO EXISTING CURB HEIGHTS WHERE THE CURB IS LESS OR MORE THAN THE STANDARD 6" HEIGHT.
15. CONSTRUCTION MUST MEET THE STANDARDS CONTAINED HEREIN UNLESS OTHERWISE NOTED OR DIRECTED.
16. PREFERRED AND ALTERNATE TREATMENTS SHOULD NOT BE INTERMIXED WITHIN THE SAME INTERSECTION.
17. ALL HANDICAP RAMPS CONSTRUCTED IN THIS CONTRACT SHALL MEET ACCESSIBILITY REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
18. THE CONTRACTOR IS REQUIRED TO CONTACT THE TRAFFIC ENGINEERING DEPARTMENT ABOUT THE CONSTRUCTION OF ALL HANDICAP CURB RAMPS AT SIGNALIZED INTERSECTIONS AND VERIFY THE STRIPING PLAN IS IN ACCORDANCE WITH THE MOST RECENT NO PASSING ZONE PLAN.
19. GRADE BREAKS
    - GRADE BREAKS AT THE TOP AND BOTTOM OF THE CURB RAMP SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN.
    - GRADE BREAKS ARE NOT PERMITTED ON THE SURFACE OF RAMP RUNS OR LANDING AREAS.
    - SURFACE SLOPES THAT MEET AT THE GRADE BREAKS SHALL BE FLUSH.
20. FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE POSSIBLE.
21. ALL VERTICAL SURFACE DISCONTINUITIES SHALL NOT EXCEED 1/4" IN HEIGHT. ANY VERTICAL SURFACE DISCONTINUITY BETWEEN 1/4" AND 1/2" SHALL BE BEVELED AT A SLOPE NO GREATER THAN 50% ACROSS THE ENTIRE DISCONTINUITY.
22. HORIZONTAL OPENINGS IN GRATES AND JOINTS SHALL NOT EXCEED 1/2" IN DIAMETER AND THE GRATES SHALL BE PLACED SO THE LONG DIMENSION IS PERPENDICULAR TO THE DIRECTION OF TRAVEL.

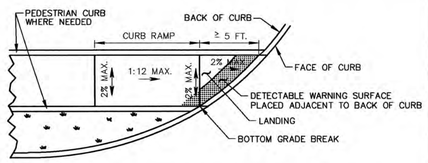


TEMPORARY CURB RAMP (HOT MIX ASPHALT)

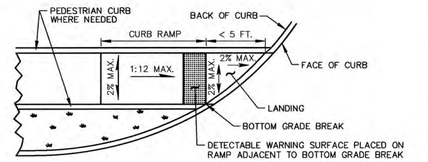
N.T.S.



DROPPED CURB AND CRADLE



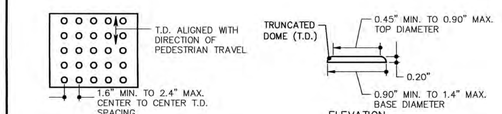
CONDITION 1
FOR RAMPS INTERSECTING A CURB RADIUS AT A SKEWED ANGLE WHERE AT LEAST ONE END OF BOTTOM GRADE BREAK IS GREATER THAN OR EQUAL TO 5 FEET FROM BACK OF CURB: DETECTABLE WARNING SURFACE SHALL BE PLACED ADJACENT TO BACK OF CURB.



CONDITION 2
FOR RAMPS INTERSECTING A CURB RADIUS AT A SKEWED ANGLE WHERE BOTH ENDS OF BOTTOM GRADE BREAK ARE LESS THAN 5 FEET FROM BACK OF CURB: DETECTABLE WARNING SURFACE SHALL BE PLACED ON THE RAMP ADJACENT TO BOTTOM GRADE BREAK.

PLACEMENT OF DETECTABLE WARNING SURFACE ON CURB RADIUS

N.T.S.



NOTES:
1. DETECTABLE WARNING SURFACE (DWS) SHALL EXTEND FULL WIDTH OF CURB RAMP (EXCLUSIVE OF FLARES) OR FULL WIDTH OF LANDING/TURNING SPACE.
2. DWS SHALL EXTEND 2 FEET MINIMUM IN THE DIRECTION OF PEDESTRIAN TRAVEL.
3. DWS SHOULD BE COLORED AS FOLLOWS:
   a. WITHIN TOWNSHIP/COUNTY RIGHT OF WAY, COLOR SHALL CONTRAST VISUALLY WITH ADJACENT SURFACES, EITHER LIGHT ON DARK OR DARK ON LIGHT, OR AS PER SPECIFIED REQUIREMENTS.
   b. WITHIN STATE RIGHT OF WAY, USE A SURFACE OR A COATING MATERIAL THAT IS SAFETY RED IN COLOR ACCORDING TO FED-STD-595B COLOR CHIP NO. 31350 AND HAS A 35 BPM MINIMUM SLIP RESISTANCE WHEN TESTED ACCORDING TO ASTM R 303. ENSURE THAT THE FINISHED PRODUCT IS STABILIZED AGAINST UV DEGRADATION AND ADHERES TO THE SUBSTRATE WITHOUT PEELING OR BLISTERING.
4. TYPICALLY, DWS SHALL BE PLACED ADJACENT TO BACK OF CURB. SEE "PLACEMENT OF DETECTABLE WARNING SURFACE ON CURB RADIUS" FOR EXCEPTIONS.

DETECTABLE WARNING SURFACE

N.T.S.

CONSTRUCTION DETAIL NOTES

1. ALL TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. ALL CONSTRUCTION DETAILS SHALL BE SUPERCEDED BY APPLICABLE MUNICIPAL, COUNTY OR STATE DETAILS UNLESS OTHERWISE NOTED.
3. STRUCTURAL DETAILS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. SHOP DRAWINGS SHALL BE PROVIDED TO THE TOWNSHIP ENGINEER FOR ALL WALLS AND STRUCTURAL ELEMENTS PRIOR TO CONSTRUCTION.
4. SHOP DRAWINGS SHALL BE PROVIDED FOR ALL PRECAST STRUCTURES PRIOR TO THE ORDERING OF MATERIALS.
5. DETAILS ASSUME APPROPRIATE LOAD BEARING CAPACITY AND COMPACTION OF SOILS. ACTUAL FIELD CONDITIONS SHALL BE CONFIRMED BY ON-SITE GEOTECHNICAL ENGINEER.
6. RESIDENTIAL DEVELOPMENTS SHALL CONFORM TO DETAILS WITHIN THE CURRENT EDITION OF THE RESIDENTIAL SITE IMPROVEMENT STANDARDS (R.S.I.S.).
7. ALL CONSTRUCTION DETAILS ARE NOT TO SCALE (N.T.S.) UNLESS OTHERWISE NOTED.

REVISIONS

1) TWP REVS	10/31/22
2) TWP/ARCH REVS	03/29/23

THIS DRAWING IS FOR PERMIT PURPOSES ONLY

NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED

☐ CHKD BY: ____ DATE: ____

THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

menlo engineering associates
Civil Engineering Consultants
Landscape Architects
Professional Planners
281 Cleveland Avenue
Highland Park, NJ 08904
menloeng.com
732-846-8585 732-846-9439
Certificate of Authorization : 24GA27951900

100 PROSPECT STREET

BOROUGH OF METUCHEN
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 152
LOTS 51.01 & 51.02
TAX MAP SHEET 51
0.76 ACRES

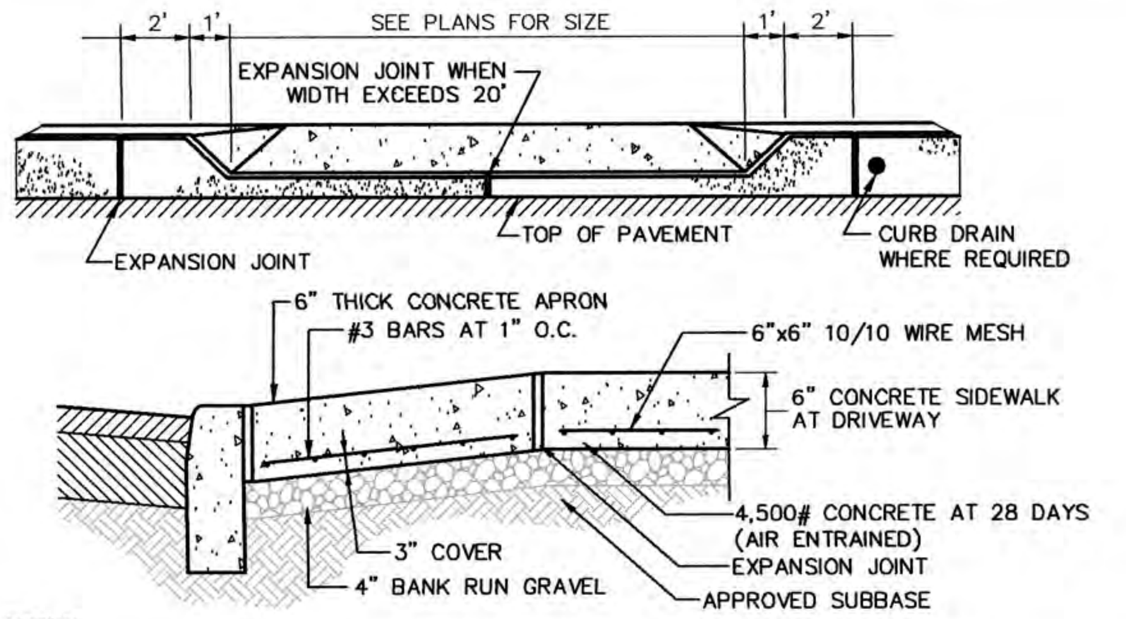
CONSTRUCTION DETAILS (1)

DRAWN BY	DP
DESIGNED BY	MM
APPROVED BY	WAL

THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION...

WILLIAM A. LANE
PROFESSIONAL ENGINEER
NJPE# 40262

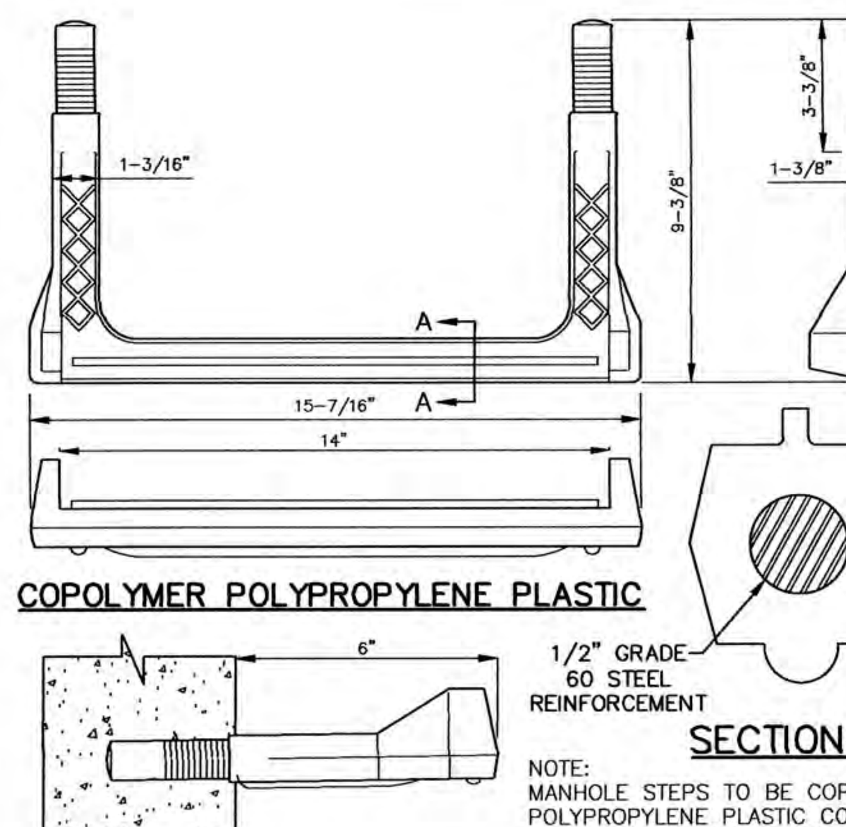
PROJECT NUMBER	2022.004	DE-1
DATE OF ISSUE	MARCH 14, 2022	9
REVISION 2	MARCH 29, 2023	



NOTES:
1. EXPANSION JOINTS TO BE 1/2" PREMOLDED, ASPHALT IMPREGNATED, JOINT FILLER MATERIAL, CUT TO FIT CROSS SECTION, RECESSED 1/4" FROM EXPOSED FACES AND ARE TO BE PLACED: IN TRAVERSE JOINTS 20' O.C. MAX; BETWEEN CURB AND CONCRETE (SIDEWALK OR PAVEMENT); AT ALL STRUCTURES; BETWEEN APRON AND SIDEWALK; AND AT THE END OF EACH WORK DAY.
2. CURB DRAIN OPENING FOR CAST IRON, DIP OR BITUMINOUS PIPE.
3. ALL MATERIALS AND METHODS TO BE IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS.

CONCRETE APRON DETAIL

N.T.S.

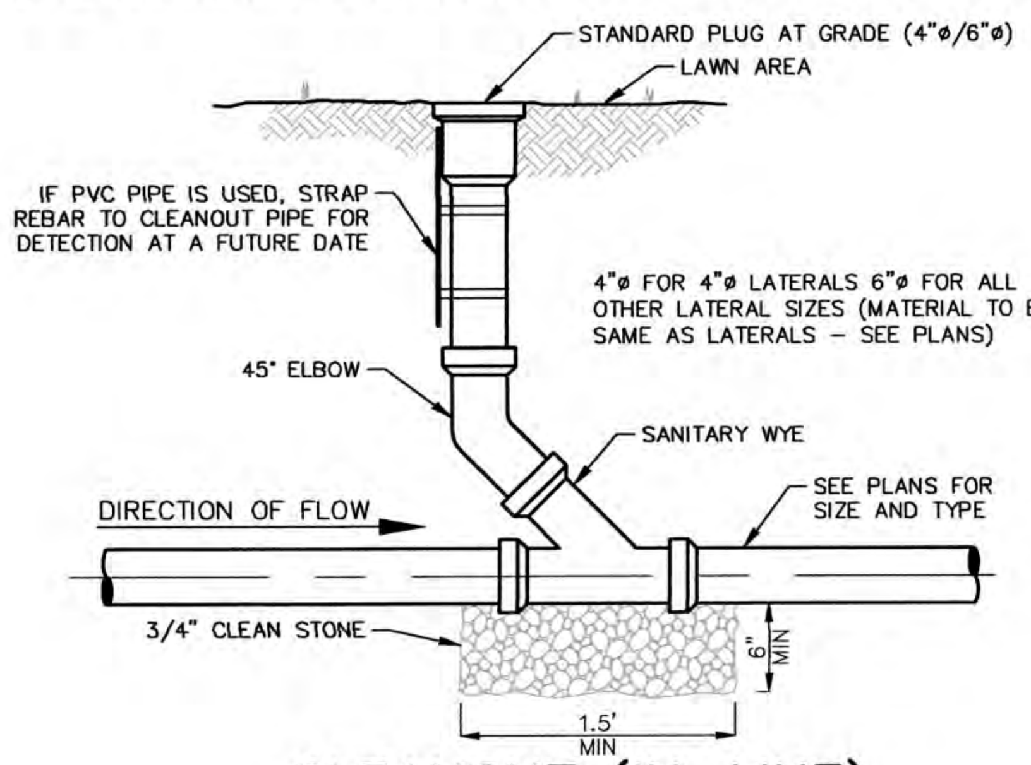


NOTE:
MANHOLE STEPS TO BE COPOLYMER POLYPROPYLENE PLASTIC COATED STEEL BY M.A. INDUSTRIES, INC. OR APPROVED EQUAL.

MANHOLE STEP DETAIL

N.T.S.

NOTES:
1. ALL CONSTRUCTION SHALL MEET STANDARD SPECIFICATIONS, THE LATEST EDITION.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST OSHA STANDARDS.

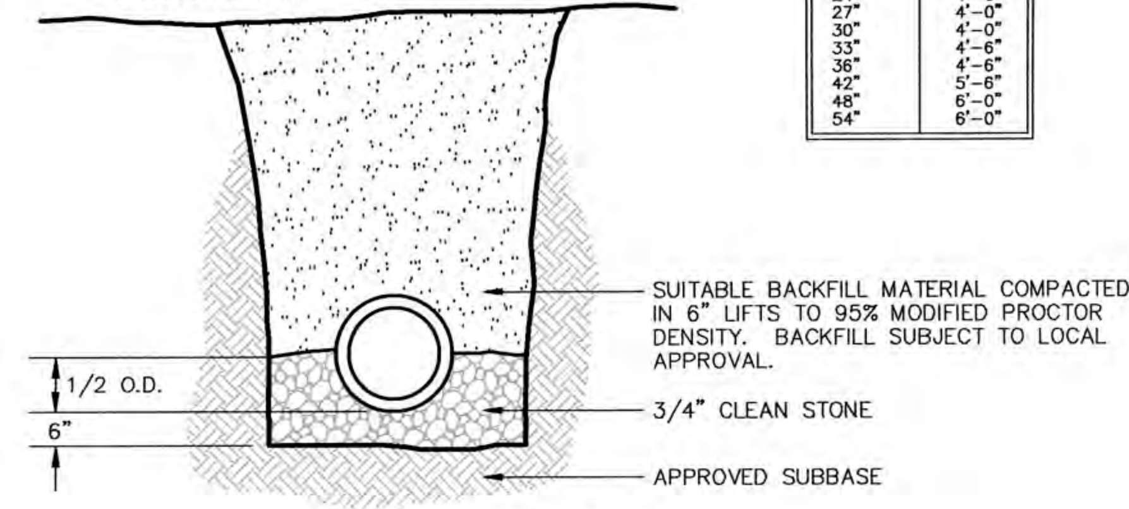


CLEANOUT (IN-LINE)

N.T.S.

GENERAL NOTES:
1) ALL CONSTRUCTION SHALL MEET STANDARD DOT SPECIFICATIONS, THE LATEST EDITION.
2) ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST OSHA STANDARDS.
3) TRENCHES IN EX./PROP. ROADWAY & PAVEMENT AREAS ARE TO BE BACKFILLED WITH DENSE GRADED AGGREGATE (PER DOT SPECS.) COMPACTED IN 6" LIFTS TO 95% MODIFIED PROCTOR DENSITY.

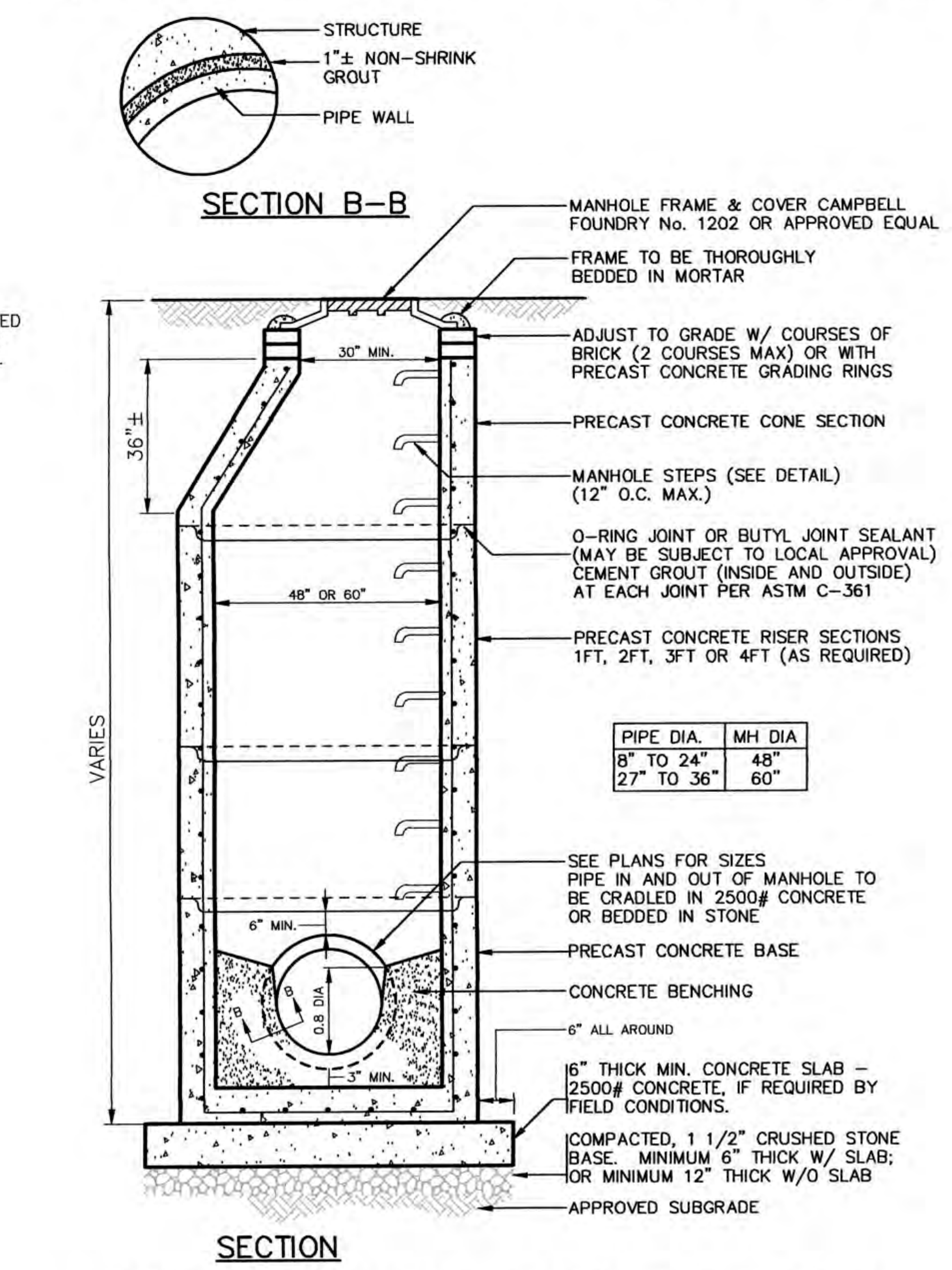
PIPE DIAMETER	TRENCH WIDTH
4"	2'-0"
6"	2'-0"
8"	2'-6"
10"	3'-0"
12"	3'-0"
15"	3'-6"
18"	3'-6"
21"	4'-0"
24"	4'-0"
27"	4'-0"
30"	4'-0"
33"	4'-6"
36"	4'-6"
42"	5'-6"
48"	6'-0"
54"	6'-0"



(STORM SEWER)
TRENCH DETAIL 'A'

N.T.S.

MANHOLE NOTES:
1) ALL CONSTRUCTION SHALL MEET STANDARD SPECIFICATIONS, THE LATEST EDITION.
2) ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST OSHA STANDARDS.
3) EXTERIOR SURFACES SHALL BE PAINTED WITH TWO (2) COATS OF BITUMINOUS WATERPROOFING MATERIAL.
4) CONCRETE AND REINFORCEMENT TO BE IN ACCORDANCE WITH ASTM C478, THE LATEST EDITION.
5) DETAILED SHOP DRAWINGS TO BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO ORDERING.

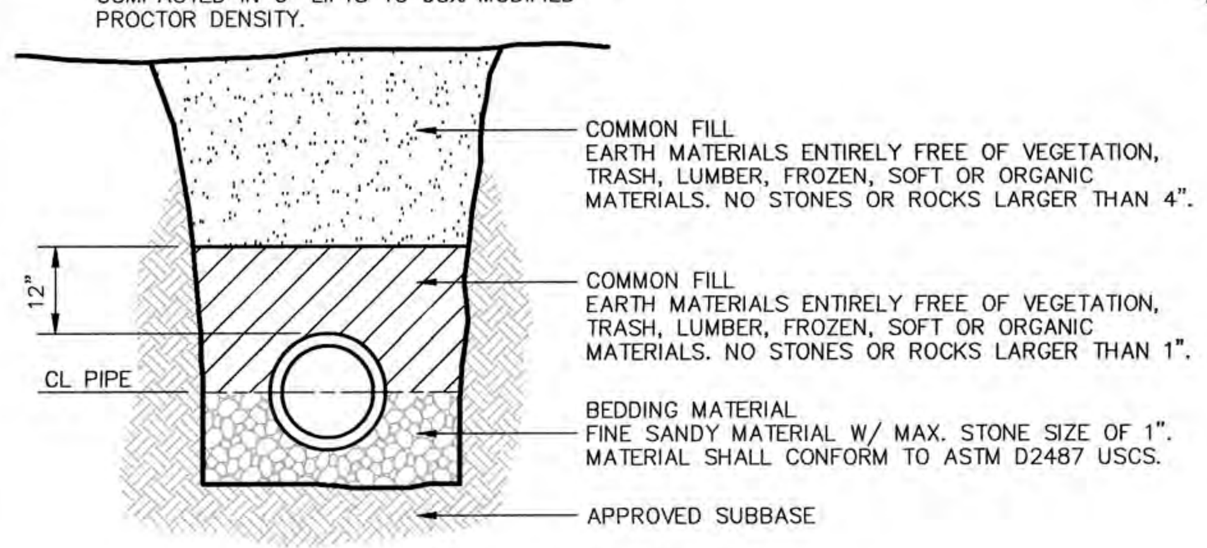


PIPE DIA.	MH DIA
8" TO 24"	48"
27" TO 36"	60"

CONCRETE MANHOLE (4'ø/5'ø STORM)

N.T.S.

GENERAL NOTES:
1) ALL CONSTRUCTION SHALL MEET STANDARD DOT SPECIFICATIONS, THE LATEST EDITION.
2) ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST OSHA STANDARDS.
3) TRENCHES IN EX./PROP. ROADWAY & PAVEMENT AREAS ARE TO BE BACKFILLED WITH DENSE GRADED AGGREGATE (PER DOT SPECS.) COMPACTED IN 6" LIFTS TO 95% MODIFIED PROCTOR DENSITY.



(FIRE SERVICE)
TRENCH DETAIL

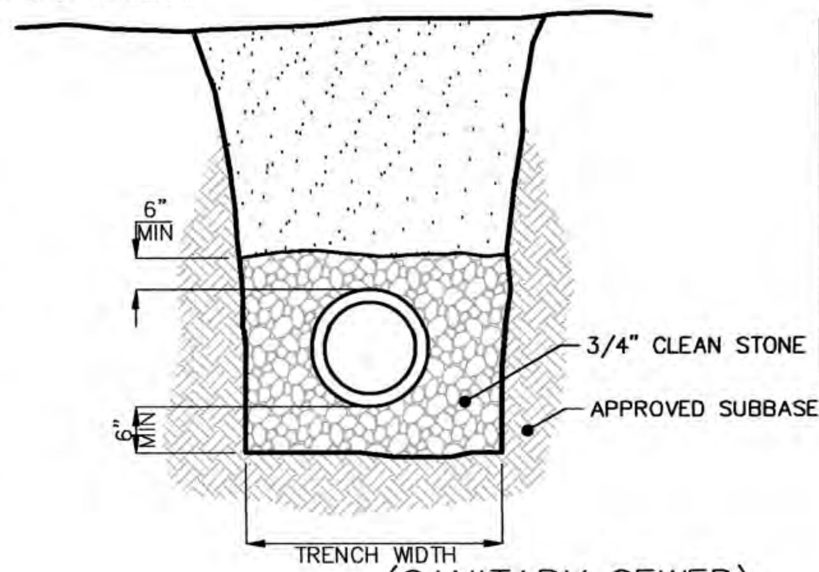
N.T.S.

– TRENCHES IN EX./PROP. ROADWAY & PAVEMENT AREAS ARE TO BE BACKFILLED WITH DENSE GRADED AGGREGATE (PER DOT SPECS.) COMPACTED IN 6" LIFTS TO 95% MODIFIED PROCTOR DENSITY.

– TRENCHES IN UNIMPROVED AREAS TO BE BACKFILLED WITH SUITABLE MATERIAL UNLESS OTHERWISE ORDERED BY THE ENGINEER.

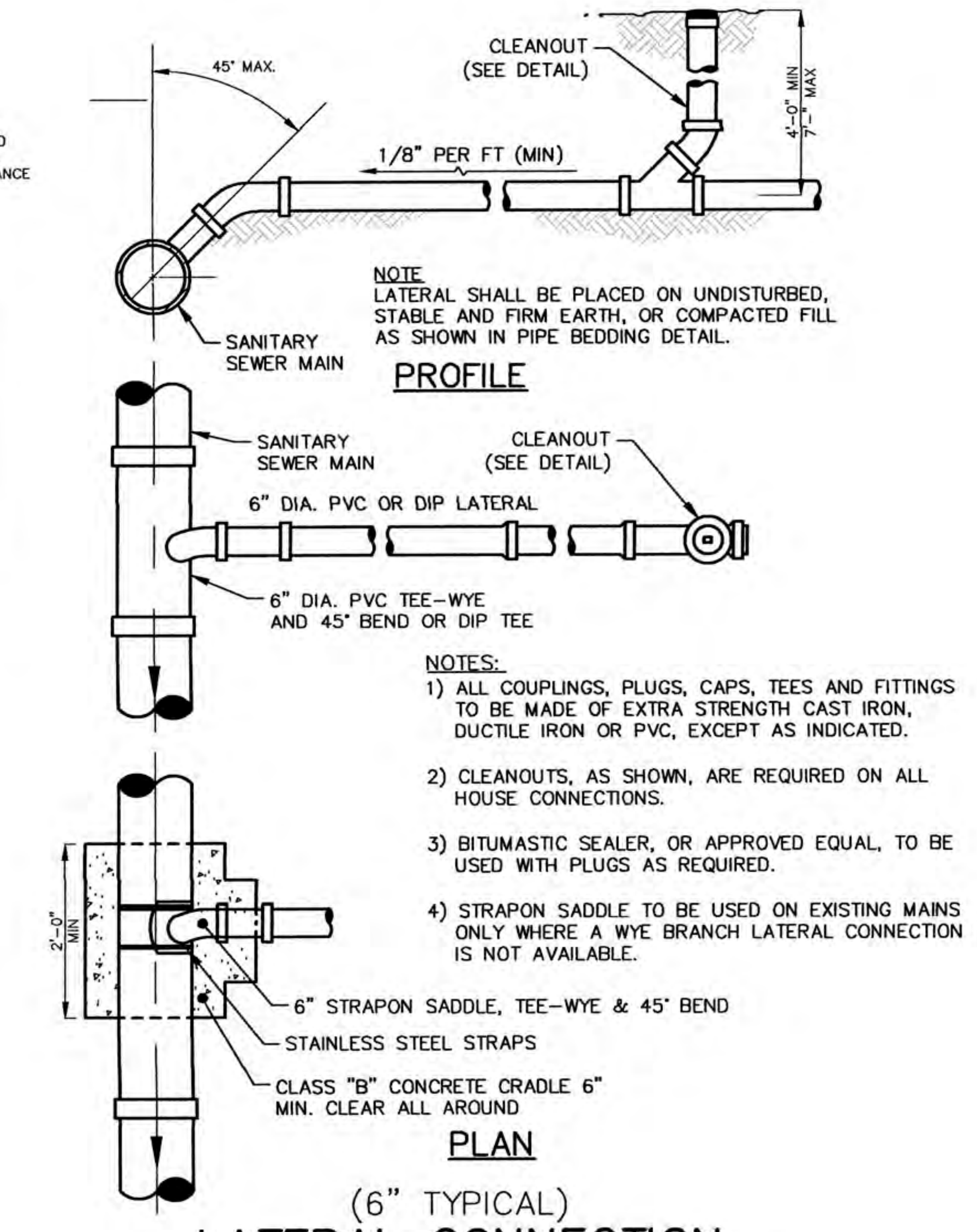
GENERAL NOTES:
1) ALL CONSTRUCTION SHALL MEET STANDARD DOT SPECIFICATIONS, THE LATEST EDITION.
2) ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST OSHA STANDARDS.

PIPE DIAMETER	TRENCH WIDTH
4"	2'-0"
6"	2'-0"
8"	2'-6"
10"	3'-0"
12"	3'-0"
15"	3'-6"
18"	3'-6"
21"	4'-0"
24"	4'-0"
27"	4'-0"
30"	4'-0"
33"	4'-6"
36"	4'-6"
42"	5'-6"
48"	6'-0"
54"	6'-0"



(SANITARY SEWER)
TRENCH DETAIL 'B'

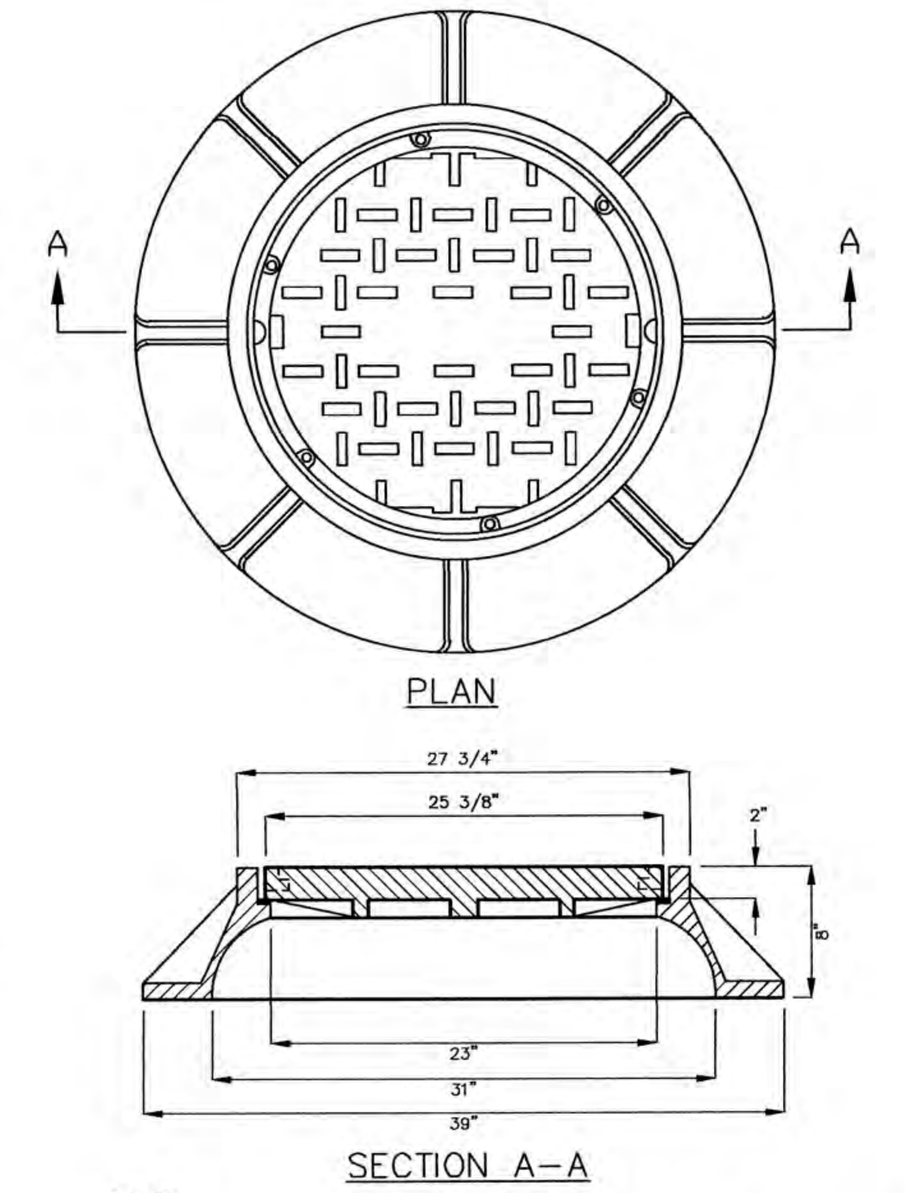
N.T.S.



NOTES:
1) ALL COUPLINGS, PLUGS, CAPS, TEES AND FITTINGS TO BE MADE OF EXTRA STRENGTH CAST IRON, DUCTILE IRON OR PVC, EXCEPT AS INDICATED.
2) CLEANOUTS, AS SHOWN, ARE REQUIRED ON ALL HOUSE CONNECTIONS.
3) BITUMASTIC SEALER, OR APPROVED EQUAL, TO BE USED WITH PLUGS AS REQUIRED.
4) STRAPON SADDLE TO BE USED ON EXISTING MAINS ONLY WHERE A WYE BRANCH LATERAL CONNECTION IS NOT AVAILABLE.

(6" TYPICAL)
LATERAL CONNECTION

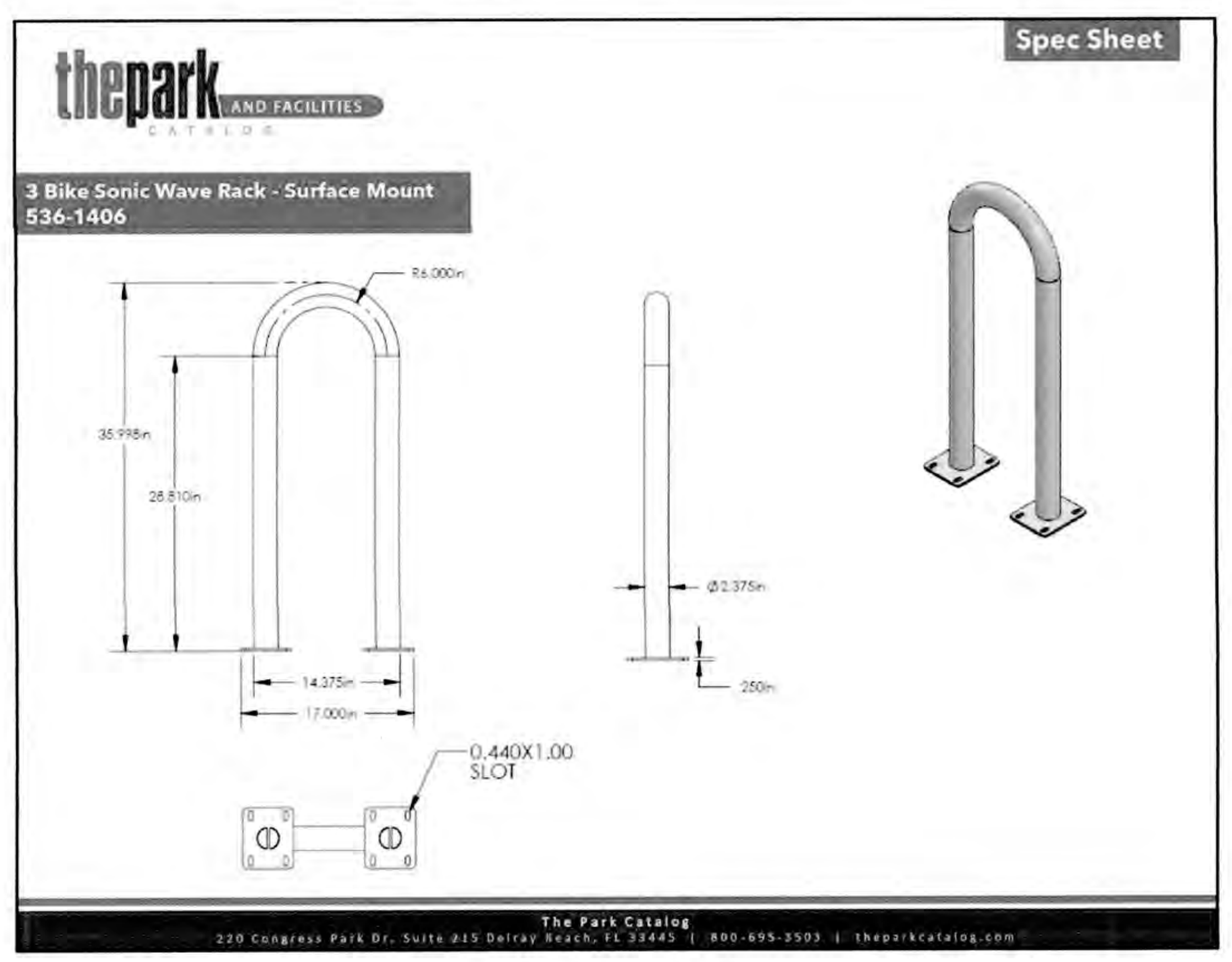
N.T.S.



NOTES:
1. MANHOLE FRAME & COVER CAMPBELL FOUNDRY No. 1202
2. THE TOWNSHIP, THE WORDS "SANITARY SEWER" AND CURRENT YEAR OF INSTALLATION SHALL BE EMBOSSED ON THE TOP OF COVER.
3. FRAME TO BE THOROUGHLY BEDDED IN MORTAR

MANHOLE FRAME AND COVER

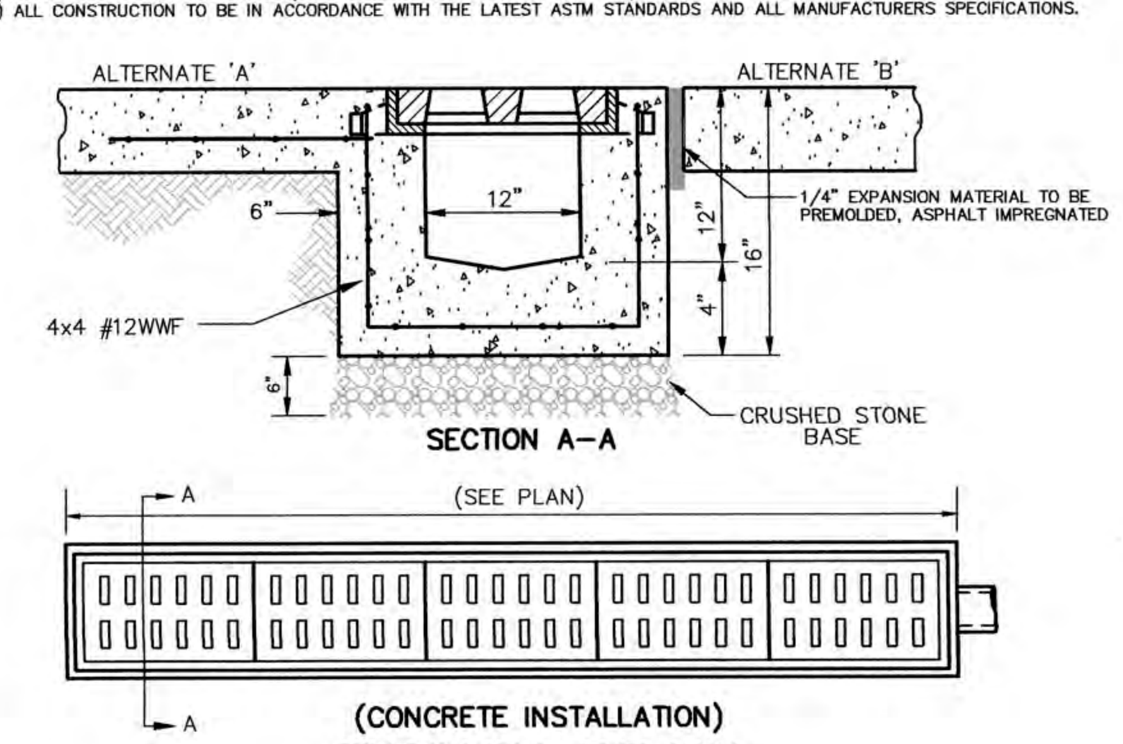
N.T.S.



BIKE RACK

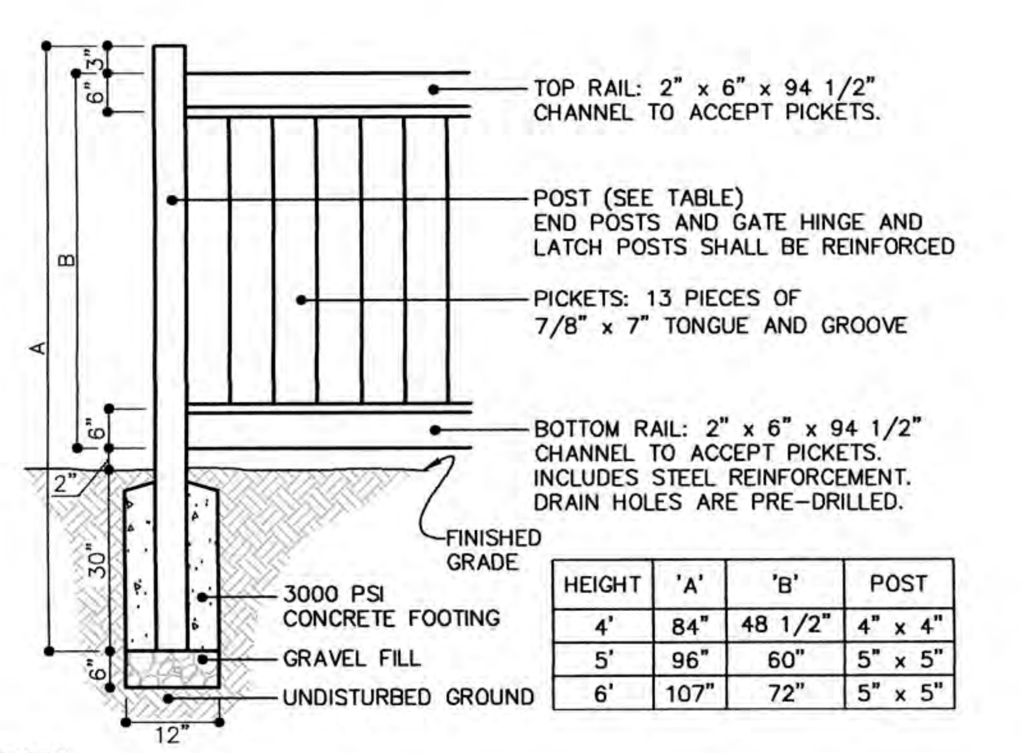
N.T.S.

NOTES:
1) CONCRETE TO BE 4500#.
2) HEAVY DUTY FRAME AND GRATE TO BE CAMPBELL MODEL #4526A OR APPROVED EQUAL.
3) LIGHT DUTY FRAME AND GRATE (FOR PEDESTRIAN TRAFFIC AREAS ONLY) TO BE CAMPBELL MODEL #4577 OR EQUIVALENT.
4) ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE LATEST ASTM STANDARDS AND ALL MANUFACTURERS SPECIFICATIONS.



(CONCRETE INSTALLATION)
TRENCH DRAIN

N.T.S.

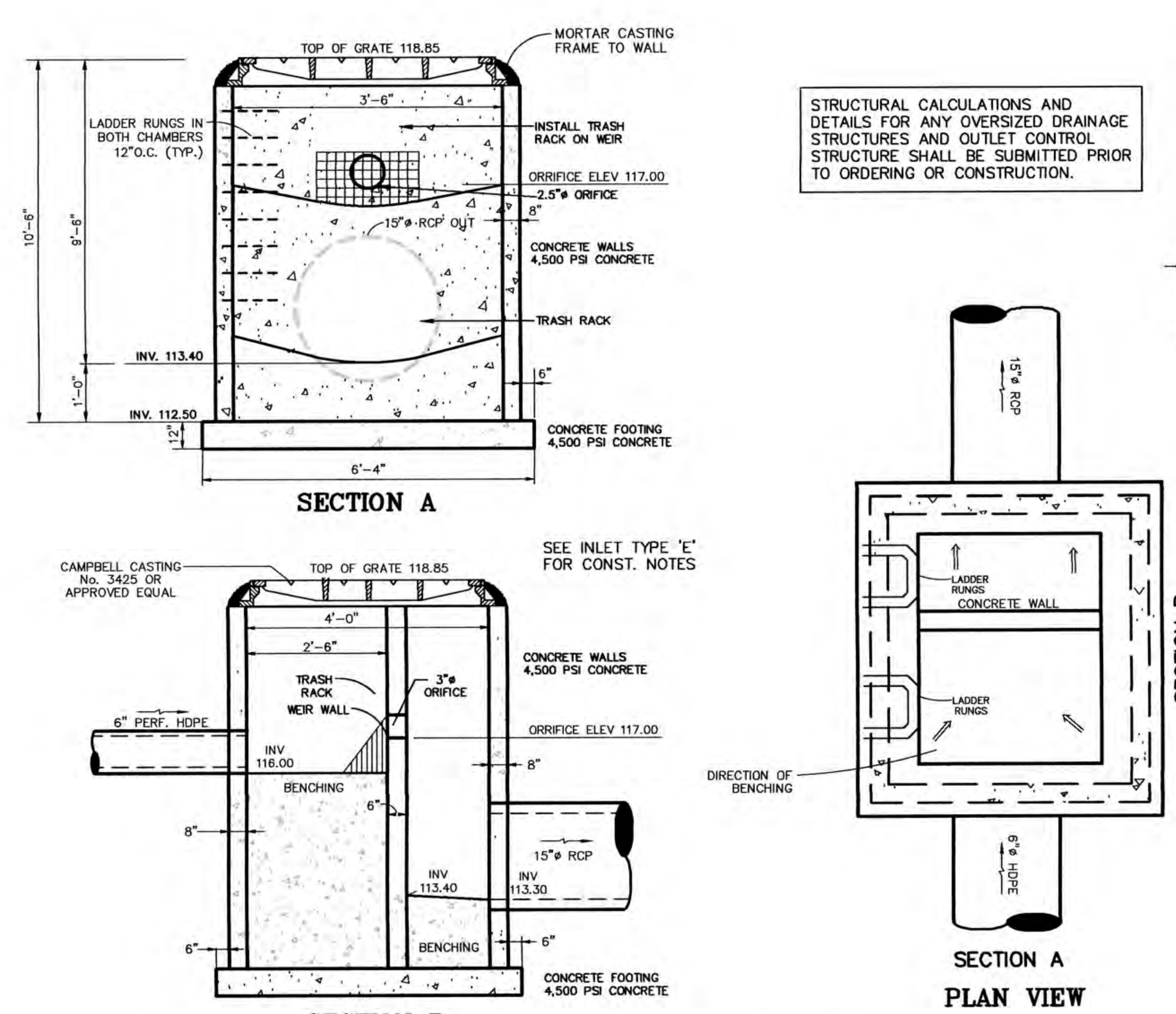


HEIGHT	'A'	'B'	POST
4'	84"	48 1/2"	4" x 4"
5'	96"	60"	5" x 5"
6'	107"	72"	5" x 5"

NOTES:
1. INSTALLATION TO BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. CERTAINTEED CORPORATION STYLE: 'CHESTERFIELD VINYL FENCING' OR APPROVED EQUAL. (800) 333-0569.
2. ALL FASTENERS AND HARDWARE TO BE STAINLESS STEEL. ALL FASTENERS TO BE CONCEALED OR COLORED HEADS TO MATCH.
3. POSTS, RAILS, PICKETS, GATE UPRIGHTS, POST CAPS AND ACCESSORIES SHALL BE OF HIGH IMPACT, ULTRA VIOLET (U.V.) RESISTANT, RIGID PVC AND SHALL COMPLY WITH ASTM D 1784, CLASS 14344B.
4. POSTS TO BE SPACED 96 1/8" O.C., 8 FOOT STRINGERS BETWEEN POSTS.
5. END POSTS AND GATE HINGE AND LATCH POSTS SHALL BE REINFORCED WITH ALUMINUM GATE POST STIFFENERS OR WITH CONCRETE AND REBAR PER MANUFACTURER'S SPECIFICATIONS.

SOLID VINYL FENCE DETAIL

N.T.S.

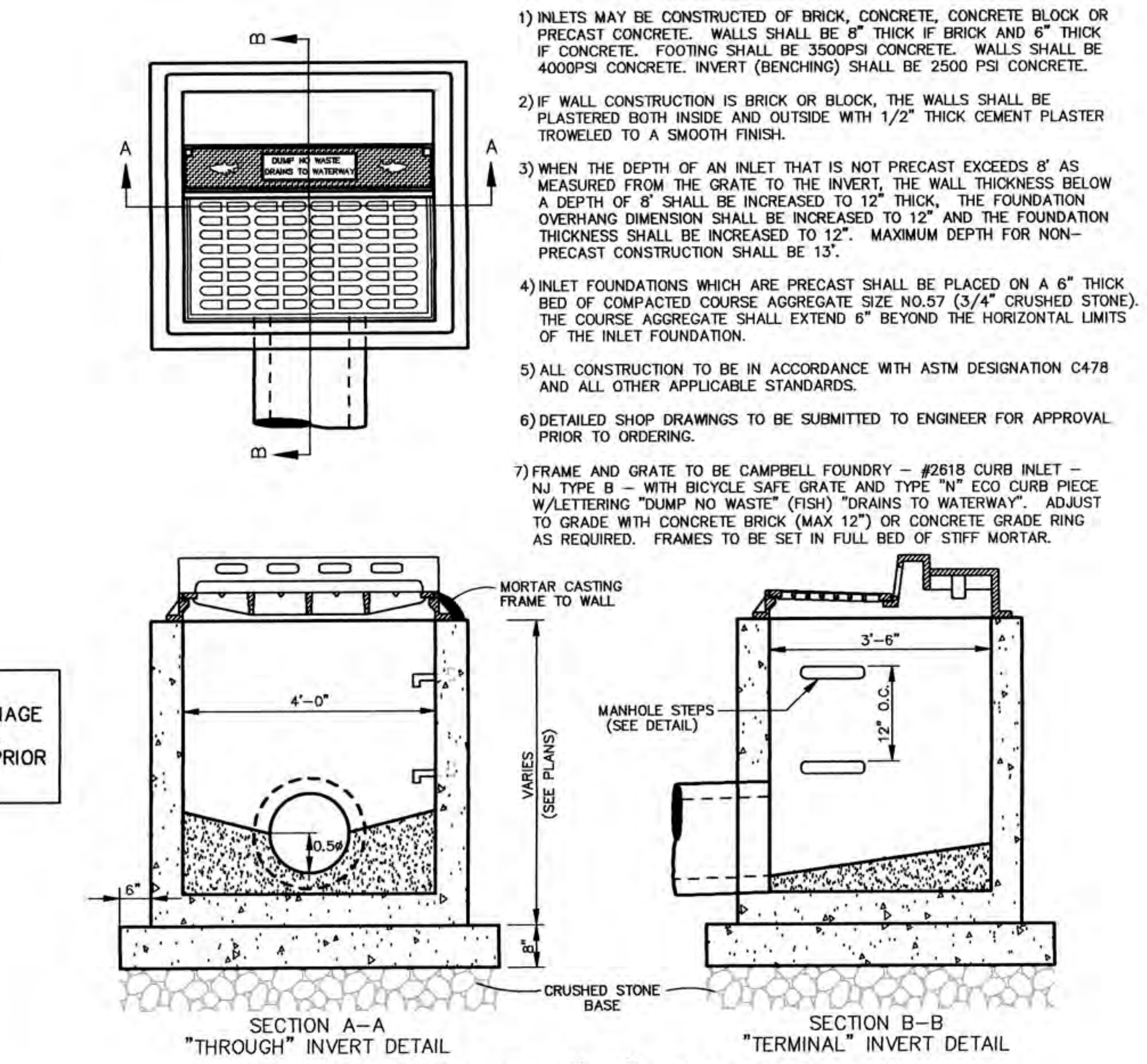


STRUCTURAL CALCULATIONS AND DETAILS FOR ANY OVERSIZED DRAINAGE STRUCTURES AND OUTLET CONTROL STRUCTURE SHALL BE SUBMITTED PRIOR TO ORDERING OR CONSTRUCTION.

OUTLET CONTROL STRUCTURE DETAIL

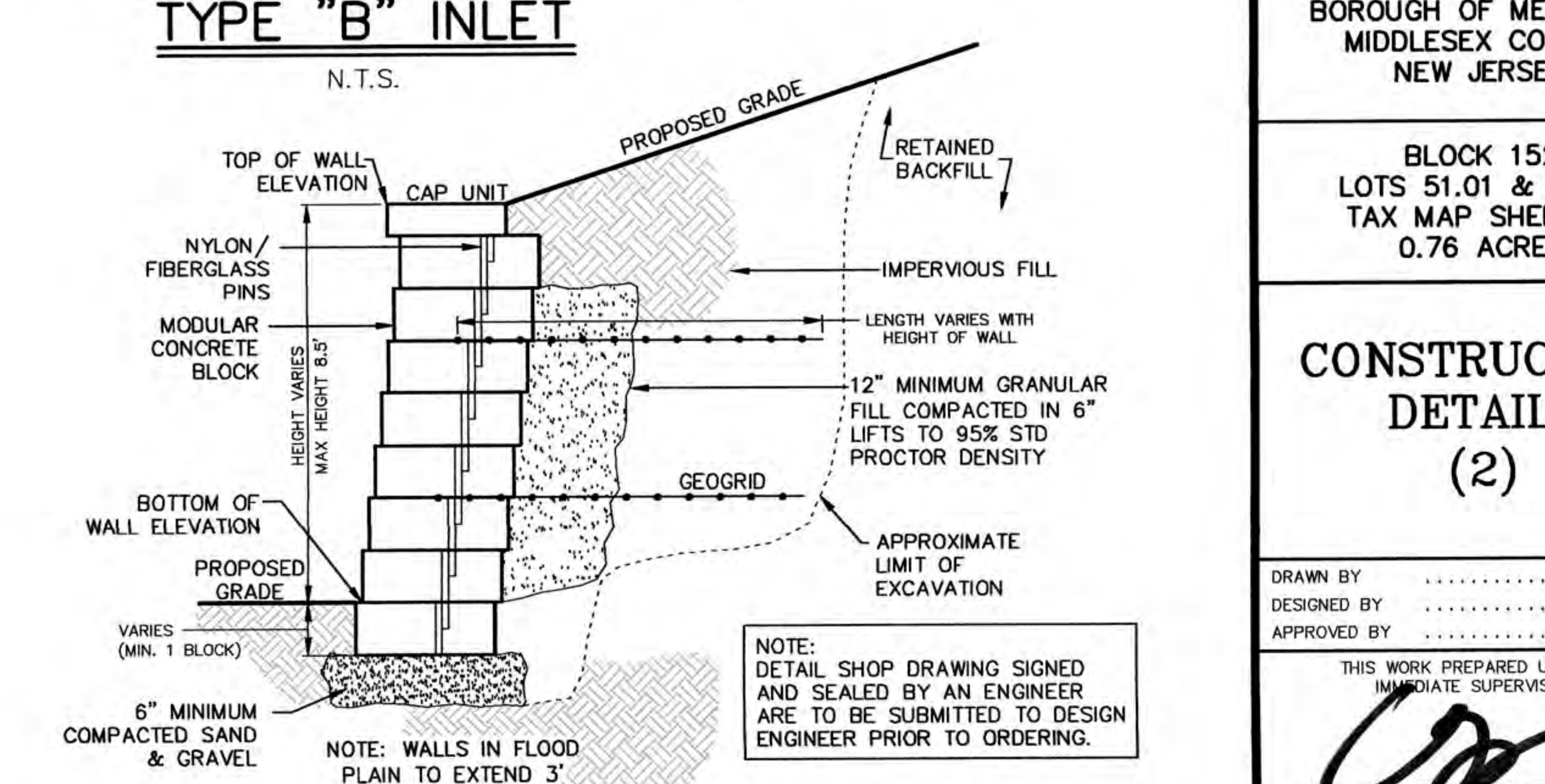
N.T.S.

GENERAL NOTES:
1) INLETS MAY BE CONSTRUCTED OF BRICK, CONCRETE, CONCRETE BLOCK OR PRECAST CONCRETE. WALLS SHALL BE 8" THICK IF BRICK AND 6" THICK IF CONCRETE. FOOTING SHALL BE 3500PSI CONCRETE. WALLS SHALL BE 4000PSI CONCRETE. INVERT (BENCHING) SHALL BE 2500 PSI CONCRETE.
2) IF WALL CONSTRUCTION IS BRICK OR BLOCK, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER TROWELED TO A SMOOTH FINISH.
3) WHEN THE DEPTH OF AN INLET THAT IS NOT PRECAST EXCEEDS 8' AS MEASURED FROM THE GRATE TO THE INVERT, THE WALL THICKNESS BELOW A DEPTH OF 8' SHALL BE INCREASED TO 12" THICK, THE FOUNDATION OVERHANG DIMENSION SHALL BE INCREASED TO 12" AND THE FOUNDATION THICKNESS SHALL BE INCREASED TO 12". MAXIMUM DEPTH FOR NON-PRECAST CONSTRUCTION SHALL BE 13'.
4) INLET FOUNDATIONS WHICH ARE PRECAST SHALL BE PLACED ON A 6" THICK BED OF COMPACTED COURSE AGGREGATE SIZE NO.57 (3/4" CRUSHED STONE). THE COURSE AGGREGATE SHALL EXTEND 6" BEYOND THE HORIZONTAL LIMITS OF THE INLET FOUNDATION.
5) ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ASTM DESIGNATION C478 AND ALL OTHER APPLICABLE STANDARDS.
6) DETAILED SHOP DRAWINGS TO BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO ORDERING.
7) FRAME AND GRATE TO BE CAMPBELL FOUNDRY – #2618 CURB INLET – NJ TYPE B – WITH BICYCLE SAFE GRATE AND TYPE "N" ECO CURB PIECE W/LETTERING "DUMP NO WASTE" (FISH) "DRAINS TO WATERWAY". ADJUST TO GRADE WITH CONCRETE BRICK (MAX 12") OR CONCRETE GRADE RING AS REQUIRED. FRAMES TO BE SET IN FULL BED OF STIFF MORTAR.



TYPE "B" INLET

N.T.S.



NOTE:
DETAIL SHOP DRAWING SIGNED AND SEALED BY AN ENGINEER ARE TO BE SUBMITTED TO DESIGN ENGINEER PRIOR TO ORDERING.

MODULAR CONCRETE BLOCK RETAINING WALL

N.T.S.

CONSTRUCTION DETAIL NOTES
1. ALL TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. ALL CONSTRUCTION DETAILS SHALL BE SUPERCEDED BY APPLICABLE MUNICIPAL, COUNTY OR STATE DETAILS UNLESS OTHERWISE NOTED.
3. STRUCTURAL DETAILS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. SHOP DRAWINGS SHALL BE PROVIDED TO THE TOWNSHIP ENGINEER FOR ALL WALLS AND STRUCTURAL ELEMENTS PRIOR TO CONSTRUCTION.
4. SHOP DRAWINGS SHALL BE PROVIDED FOR ALL PRECAST STRUCTURES PRIOR TO THE ORDERING OF MATERIALS.
5. DETAILS ASSUME APPROPRIATE LOAD BEARING CAPACITY AND COMPACTION OF SOILS. ACTUAL FIELD CONDITIONS SHALL BE CONFIRMED BY ON-SITE GEOTECHNICAL ENGINEER.
6. RESIDENTIAL DEVELOPMENTS SHALL CONFORM TO DETAILS WITHIN THE CURRENT EDITION OF THE RESIDENTIAL SITE IMPROVEMENT STANDARDS (R.S.I.S.).
7. ALL CONSTRUCTION DETAILS ARE NOT TO SCALE (N.T.S.) UNLESS OTHERWISE NOTED.

C:\DWG\2022.004-BASE-100 Prospect Street\2022.004-DETAILS.dwg PLOTTED: 3/28/2023 1:09 PM; BY: JASON ERBENTRAUT

REVISIONS	
1) TWP REVS	10/31/22
2) TWP/ARCH REVS	03/29/23

THIS DRAWING IS FOR PERMIT PURPOSES ONLY

NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED

☐ CHKD BY:____ DATE:________

STOP CALL BEFORE YOU DIG! 1-800-272-1000 or 811

THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

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100 PROSPECT STREET

BOROUGH OF METUCHEN
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 152
LOTS 51.01 & 51.02
TAX MAP SHEET 51
0.76 ACRES

CONSTRUCTION DETAILS (2)

DRAWN BY .... DP
DESIGNED BY .... MM
APPROVED BY .... WAL

THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION...

[illegible]

WILLIAM A. LANE
PROFESSIONAL ENGINEER
NJPE# 40262

PROJECT NUMBER	2022.004	DE-2
DATE OF ISSUE	MARCH 14, 2022	10
REVISION 2	MARCH 29, 2023	

Project		Catalog #		Type	
Prepared by		Notes		Date	

McGraw-Edison

GALN Galleon II

Area / Site Luminaire

Product Features

Light ARchitect™

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Optical Distributions page 5
- Product Specifications page 5
- Energy and Performance Data page 6
- Control Options page 10

Product Certifications

Quick Facts

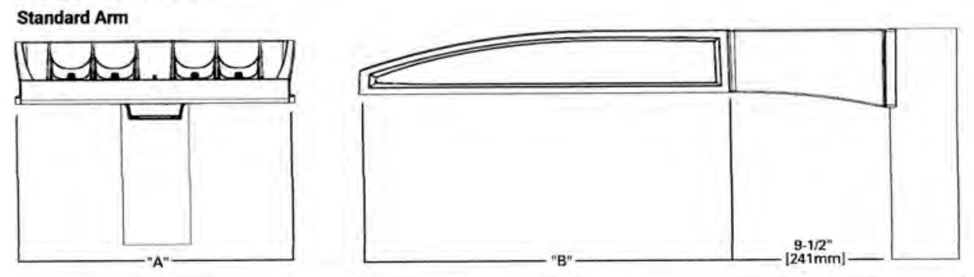
- Lumen packages range from 3,300 - 73,500 (33W - 552W)
- 16 optical distributions
- Efficacy up to 159 lumens per watt

Connected Systems

- WaveLinx Lite
- WaveLinx

Dimensional Details

Standard Arm



Number of Light Squares	Width 'A'	Housing Length 'B'	Weight with Standard or QM Arm	EPA with Standard or QM Arm
1-4	16"	22"	29 lb	0.95
5-6	22"	22"	39 lb	0.95
7-9	22"	28-1/8"	48 lb	1.1

NOTES:
For arm selection requirements and additional line art, see Mounting Details section.

NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

WL-1 LIGHT FIXTURE DETAIL-1

N.T.S.

McGraw-Edison GALN Galleon II

Ordering Information

SAMPLE NUMBER: GALN-SA4C-740-U-T4FT-GM

Product Family	Light Engine: Configuration	Light Engine: Drive Current	Color Temperature	Voltage	Distribution	Mounting	Finish
GALN=Galleon II BAA-GALN=Galleon II Buy American Act Compliant [27] TAA-GALN=Galleon II Trade Agreements Act Compliant [27]	SA1=1 Square SA2=2 Squares SA3=3 Squares SA4=4 Squares SA5=5 Squares SA6=6 Squares SA7=7 Squares SA8=8 Squares SA9=9 Squares	A=600mA B=800mA C=1000mA D=1200mA [4,17]	722=70CRI, 2200K 727=70CRI, 2700K 730=70CRI, 3000K 735=70CRI, 3500K 740=70CRI, 4000K 750=70CRI, 5000K 760=70CRI, 6000K 827=80CRI, 2700K 830=80CRI, 3000K AMB=Amber, 590nm [15,17]	U=120-277V H=347V-480V [7,30] 1=120V 2=208V 3=240V 4=277V 8=480V [7] 9=347V [7,30] DV=277V-480V DuraVolt Drivers [29,30,31]	T2=Type II T2R=Type II Roadway T3=Type III T3R=Type III Roadway T4FT=Type IV Forward Throw T4W=Type IV Wide 5NQ=Type V Narrow 5MQ=Type V Square Medium 5WQ=Type V Square Wide SL2=Type II w/Spill Control SL3=Type III w/Spill Control SL4=Type IV w/Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right RW=Rectangular Wide Type I AFL=Automotive Frontline	[Blank]=Standard Pole Mount Arm QM=Standard Pole Mount Arm with Quick Mount Adaptor PA=Pole Mount, Adjustable SP=Slipfitter, Adjustable [8] MA=Mast Arm, Fixed WM=Wall Mount, Fixed WA=Wall Mount, Adjustable UP=Upswept Arm	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White RALXX=Custom Color

Options (Add as Suffix)	Controls and Systems Options (Add as Suffix)	Accessories (Order Separately)
DIM=External 0-10V Dimming Leads [20] F=Single Fuse (120, 277 or 347V Specify Voltage) FF=Double Fuse (208, 240 or 480V Specify Voltage) 20K=20kV UL 1449 fused surge protective device [16] 2L=Two Circuits [18] HA=50°C High Ambient HSS=Installed House Side Shield [18] GRSBK=Glare Reducing Shield, Black [23] GRSWH=Glare Reducing Shield, White [23] LCF=Light Square Trim Painted to Match Housing [26] TH=Tool-less Door Hardware [5] CC=Coastal Construction finish [3] L90=Optics Rotated 90° Left R90=Optics Rotated 90° Right AHD145=After Hours Dim, 5 Hours [22] AHD245=After Hours Dim, 6 Hours [22] AHD255=After Hours Dim, 7 Hours [22] AHD355=After Hours Dim, 8 Hours [22] DALI=DALI Drivers	BPC=Button Type Photocontrol [6] PR=NEMA 3-PIN Photocontrol Receptacle PR7=NEMA 7-PIN Photocontrol Receptacle [21] SPB2=Dimming Motion Sensor, 9'-20' mounting [24] SPB4=Dimming Motion Sensor, 21'-40' mounting [24] SPB2/X=Dimming Motion Sensor, limited square count, 9'-20' mounting [24] SPB4/X=Dimming Motion Sensor, limited square count, 21'-40' mounting [24] ZW=WaveLinx Module and 4-PIN Receptacle [19] ZD=WaveLinx Module with DALI driver and 4-PIN Receptacle [19] ZW-SWPD4XX=WaveLinx Sensor Only, 7-15ft [19,12,13] ZW-SWPD5XX=WaveLinx Sensor Only, 15-40ft [19,12,13] ZW-WOBXX=WaveLinx Sensor with Bluetooth, 7-15ft [19,12,13] ZW-WOFXX=WaveLinx Sensor with Bluetooth, 15-40ft [19,12,13] ZD-SWPD4XX=WaveLinx Sensor Only, 7-15ft [19,12,13] ZD-SWPD5XX=WaveLinx Sensor Only, 15-40ft [19,12,13] ZD-WOBXX=WaveLinx Sensor with Bluetooth, 7-15ft [19,12,13] ZD-WOFXX=WaveLinx Sensor with Bluetooth, 15-40ft [19,12,13] DIM10-MS/DIM-L20=Synapse Occupancy Sensor (9'-20' Mounting) [19] DIM10-MS/DIM-L40=Synapse Occupancy Sensor (21'-40' Mounting) [19]	OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V OA/RA1013=Photocontrol Shorting Cap OA/RA1014=120V Photocontrol MA1252=10kV Surge Module Replacement MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1037-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1190-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon SRA238=Adapter kit for mounting to 2-3/8" O.D. Tenon LS/HSS=Field Installed House Side Shield [9,18] LS/GRSBK=Glare Reducing Shield, Black [9,23] LS/GRSWH=Glare Reducing Shield, White [9,23] LS/PFS=Perimeter Shield, Black [16] WOLC-7P-10A=WaveLinx Outdoor Control Module [11,19] WOA-XX=WaveLinx Wireless Sensor, 7'-15' Mounting Height [12,13,14,19] WOE-XX=WaveLinx Wireless Sensor, 15'-40' Mounting Height [12,13,14,19]

NOTES:
1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
2. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
3. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654. Not available with TH option.
4. Drive current 1200mA not available with color temperatures 722, 727 or 830 when either HA or HSS options are selected.
5. TH option not 3G rated. Not available with Coastal Construction (CC) option.
6. Not available with voltage options H, 8 or 9.
7. Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A.
8. Adjustable Slipfitter arm limited to vertical 3" tenon. For mounting to 2-3/8" O.D. tenons, order accessory SRA238.
9. One required for each Light Square.
10. 2L is not available with SPB at 347V or 480V. Not available with WaveLinx or Enlighted sensors, or 20kV surge option.
11. Requires PR7.
12. Replace XX with sensor color (WH, BZ or BK.)
13. WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed. WAC not required for LC Bluetooth sensors.
14. Requires ZW or ZD receptacle.
15. Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only. Exact luminaire wattage available in IES files. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option.
16. Set of 4 pcs. One set required per Light Square.
17. Not available with HA option.
18. Not for use with 5NQ, 5MQ, 5WQ or RW optics. A black trim plate is used when HSS is selected.
19. Cannot be used with other control options.
20. Low voltage control lead brought out 18" outside fixture. Not available with DALI or integrated controls options
21. Not available if any SPB, LWR, or WaveLinx sensor is selected. Motion sensor has an integral photocell.
22. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory.
23. Not for use with T4FT, T4W or SL4 optics. See IES files for details.
24. Sensor configuration mobile application required for configuration. See controls page for details.
25. Replace X with number of Light Squares controlled by the SPB, referencing the "SPB/X Availability Table" on the controls page.
26. Not available with HSS, GRSWH or GRSBK.
27. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
28. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
29. DuraVolt drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Visit www.signify.com/duravolt for more information.
30. 480V not to be used with ungrounded or impedance grounded systems.
31. Not available in 1 square configuration at 800mA or below. Not available with any control option except SPB.

LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul	
L=LumenSafe Technology	D=Standard Dome Camera H=Hi-Res Dome Camera Z=Remote PTZ Camera	C=Cellular, No SIM A=Cellular, AT&T V=Cellular, Verizon S=Cellular, Sprint	R=Cellular, Rogers W=Wi-Fi Networking w/ Omni-Directional Antenna E=Ethernet Networking

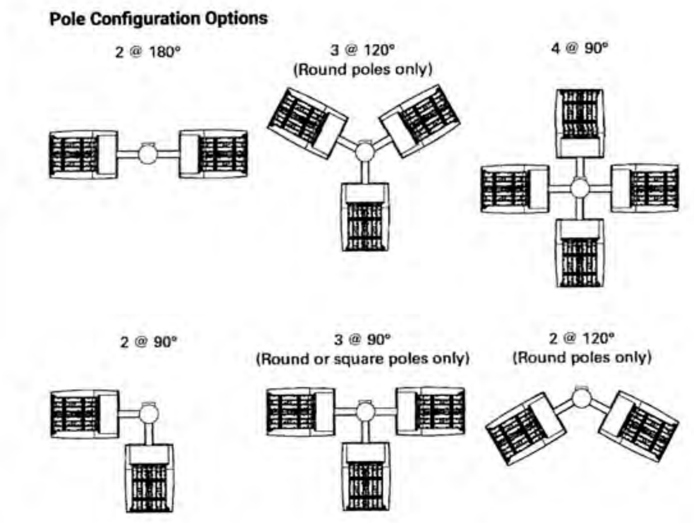
WL-1 LIGHT FIXTURE DETAIL-2

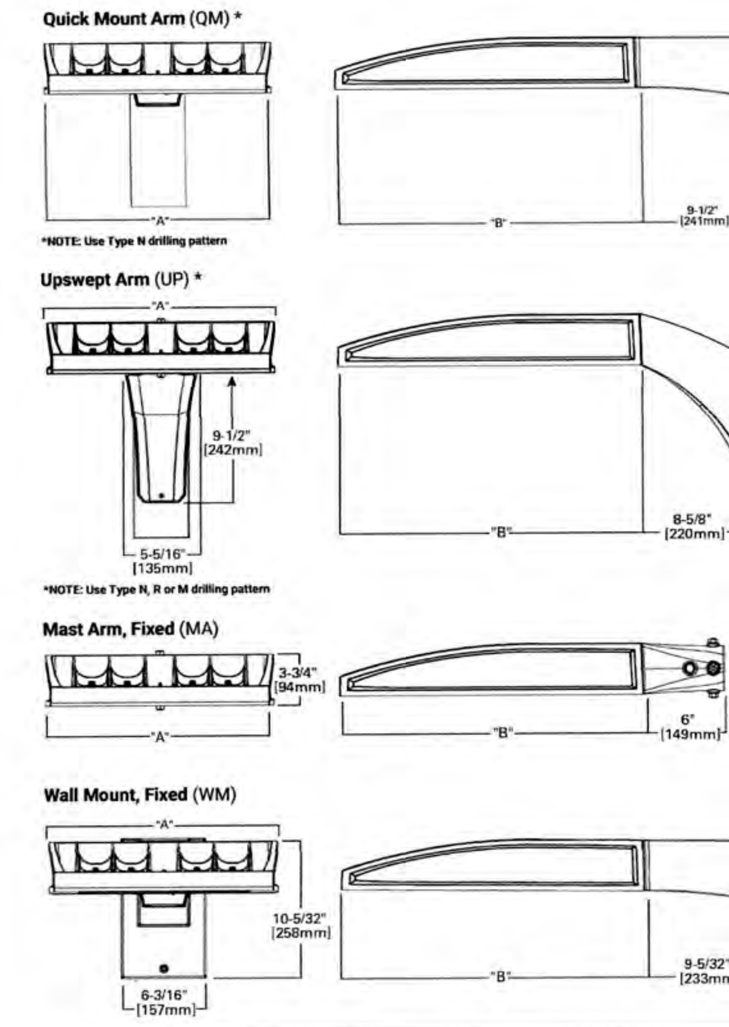
N.T.S.

McGraw-Edison GALN Galleon II

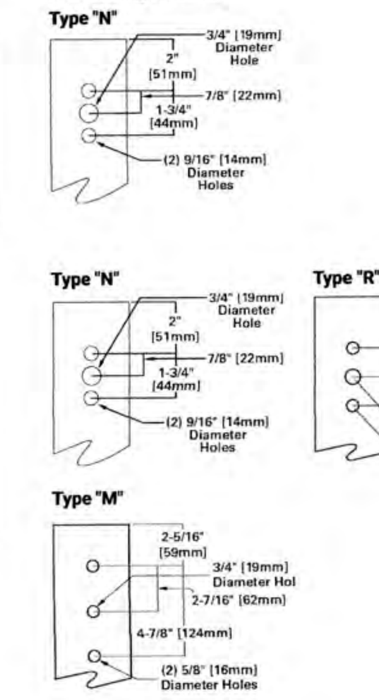
Mounting Details

Pole Configuration Options





Pole Drilling Patterns

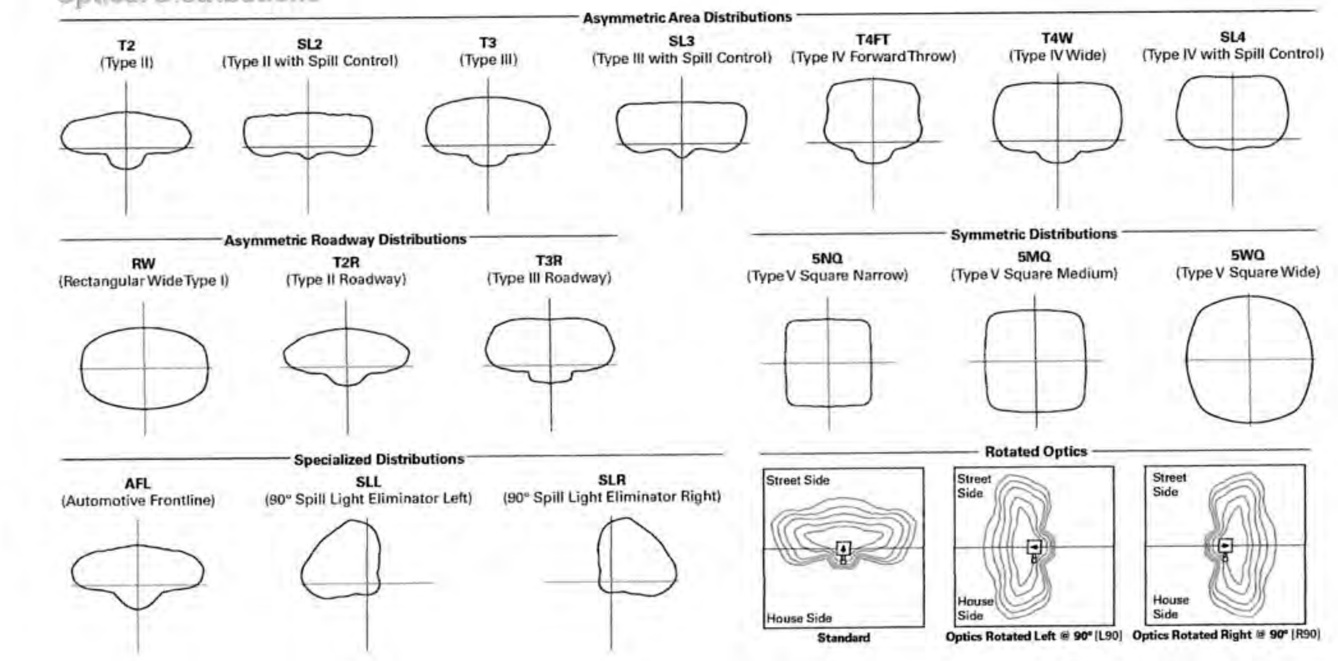


WL-1 LIGHT FIXTURE DETAIL-3

N.T.S.

McGraw-Edison GALN Galleon II

Optical Distributions



Product Specifications

Construction
- Die-cast aluminum housing and heat sink
- Three housing sizes, using 1 to 9 light squares

Optics
- High-efficiency injection-molded AccuLED Optics technology
- 16 optical distributions for area site and roadway applications
- 3 shielding options include HSS, GRS and PFS
- IDA certified (3000K CCT and warmer only, arms at 0° tilt)

Electrical
- Removable power tray assembly includes drivers, surge modules and control modules for ease of maintenance and serviceability
- Standard with 0-10V dimming
- Standard with 10kV surge module, optional 20kV surge module
- Suitable for operation in -40°C to 40°C ambient environments. Optional 50°C high ambient (HA) configuration

Mounting
- Arms are factory installed, enabling closed-housing installation
- All arms suitable for round or square pole installation
- All arms provide clearance for multiple fixture installations at 90°

Finish
- 6 standard finishes use super durable TGIC polyester powder coat paint, providing 2.5 mil nominal thickness and salt-spray tested to 3,000 hours per ASTM B117
- RAL and custom color matches available
- Coastal Construction (CC) option salt-spray tested to 5,000 hours per ASTM B117, achieving a scribe rating of 9 per ASTM D1654

Typical Applications
- Outdoor, Parking Lots, Walkways, Roadways, Building Areas

Warranty
- Five year limited warranty

Energy and Performance Data

Lumen Maintenance (TM-21)

Drive Current	Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours**	Theoretical L70 hours**
Up to 1A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.7%	98.3%	98.1%	97.4%	> 1.9M
	50°C	98.2%	97.2%	96.8%	95.2%	> 851,000
1.2A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.5%	97.9%	97.7%	96.7%	> 1.3M

* Supported by IES TM-21 standards
** Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, explaining proper use of IES TM-21 and LM-80.

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

WL-1 LIGHT FIXTURE DETAIL-4

N.T.S.

Project		Catalog #		Type	
Prepared by		Notes		Date	

McGraw-Edison

GWC Galleon Wall

Wall Mount Luminaire

Product Features

Light ARchitect™

Interactive Menu

- Ordering Information page 2
- Product Specifications page 2
- Optical Configurations page 3
- Energy and Performance Data page 4
- Control Options page 6

Product Certifications

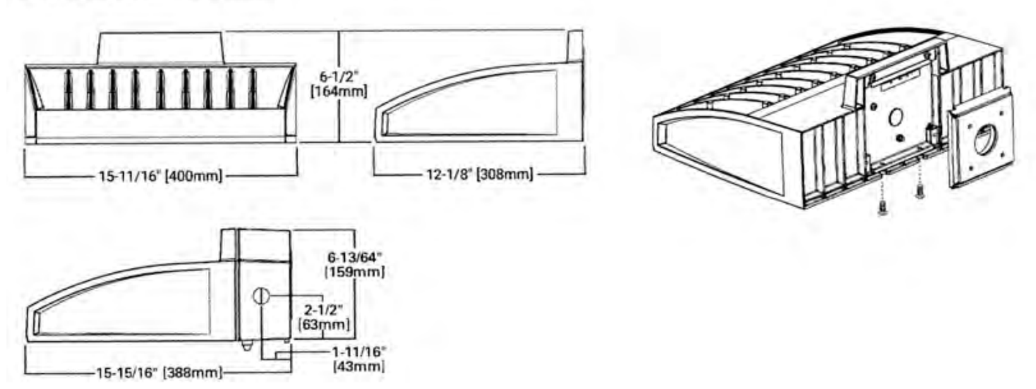
Quick Facts

- Choice of thirteen high-efficiency, patented AccuLED Optics™
- Downward and inverted wall mounting configurations
- Eight lumen packages from 3,215 up to 17,056
- Efficacies up to 154 lumens per watt

Connected Systems

- WaveLinx
- Enlighted

Dimensional Details



NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

WL-2 LIGHT FIXTURE DETAIL-1

N.T.S.

McGraw-Edison GWC Galleon Wall

Ordering Information

SAMPLE NUMBER: GWC-SA2C-740-U-T4FT-GM

Product Family	Light Engine: Configuration	Light Engine: Drive Current	Color Temperature	Voltage	Distribution	Finish
GWC=Galleon Wall BAA-GWC=Galleon Wall, Buy American Act Compliant [35] TAA-GWC=Galleon Wall, Trade Agreements Act Compliant [35]	SA1=1 Square SA2=2 Squares [2]	A=615mA B=800mA C=1000mA D=1200mA [4]	722=70CRI, 2200K 727=70CRI, 2700K 730=70CRI, 3000K 735=70CRI, 3500K 740=70CRI, 4000K 750=70CRI, 5000K 760=70CRI, 6000K 827=80CRI, 2700K 830=80CRI, 3000K AMB=Amber, 590nm [3,4]	U=120-277V 1=120V 2=208V 3=240V 4=277V 8=480V [6,7] 9=347V [6] DV=277-480V DuraVolt Drivers [7,8,37]	T2=Type II T3=Type III T4FT=Type IV Forward Throw T4W=Type IV Wide SL2=Type II w/Spill Control SL3=Type III w/Spill Control SL4=Type IV w/Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right RW=Rectangular Wide Type I 5NQ=Type V Square Narrow 5MQ=Type V Square Medium 5WQ=Type V Square Wide	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White

Options (Add as Suffix)	Controls and Systems Options (Add as Suffix)	Accessories (Order Separately)
F=Single Fused (120, 277 or 347V. Must Specify Voltage) FF=Double Fused (208, 240 or 480V. Must Specify Voltage) 10K=10kV Surge Module 20K=Series 20kV UL 1449 Surge Protective Device 2L=Two-Circuit Light Engine [38] DIM=External 0-10V Dimming Leads [9,10] CBP=Battery Pack with Back Box, Cold Weather Rated [2,4,14,33] CBP-CEC=Battery Pack with Back Box, Cold Weather Rated, CEC compliant [2,4,14] L90=Optics Rotated 90° Left R90=Optics Rotated 90° Right HSS=Factory Installed House Side Shield [22] GRSBK=Factory Installed Glare Shield, BK [4,27] GRSWH=Factory Installed Glare Shield, WH [4,27] UPL=Uplight Housing [13] HA=50°C High Ambient [12] LCF=Light Square Trim Plate Painted to Match Housing [22] MT=Factory Installed Mesh Top CC=Coastal Construction finish [5] CE=CE Marking and Small Terminal Block [24] AHD145=After Hours Dim, 5 Hours [16] AHD245=After Hours Dim, 6 Hours [16] AHD255=After Hours Dim, 7 Hours [16] AHD355=After Hours Dim, 8 Hours [16] DALI=DALI Driver [11]	BPC=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) PR=NEMA 3-PIN Twistlock Photocontrol Receptacle PR7=NEMA 7-PIN Twistlock Photocontrol Receptacle [15] SPB1=Dimming Occupancy Sensor with Bluetooth Interface, <8' Mounting [19,34] SPB2=Dimming Occupancy Sensor with Bluetooth Interface, 8'-20' Mounting [19,34] SPB4=Dimming Occupancy Sensor with Bluetooth Interface, 21'-40' Mounting [19,34] MS-LXX=Motion Sensor for On/Off Operation [17,18,19] MS/DIM-LXX=Motion Sensor for Dimming Operation [17,18,19] ZW=WaveLinx-enabled 4-PIN Twistlock Receptacle [29,30] ZD=WaveLinx Module with DALI driver and 4-PIN Receptacle [29,30] SWPD4XX=WaveLinx Sensor Only, 7'-15' [31,32] SWPD5XX=WaveLinx Sensor Only, 15'-40' [31,32] WOBXX=WaveLinx Sensor with Bluetooth, 7'-15' [31,32] WOFXX=WaveLinx Sensor with Bluetooth, 15'-40' [31,32] LWR-LW=Enlighted Wireless Sensor, Wide Lens for 8'-16' Mounting Height [19,20,21] LWR-LN=Enlighted Wireless Sensor, Narrow Lens for 16'-40' Mounting Height [19,20,21]	OA/RA1013=Photocontrol Shorting Cap [28] OA/RA1016=NEMA Photocontrol - Multi-Tap 105-285V [28] OA/RA1201=NEMA Photocontrol - 347V [28] OA/RA1027=NEMA Photocontrol - 480V [28] MA1252=10kV Circuit Module Replacement MA1059XX=Thru-branch Back Box (Must Specify Color) LS/HSS=Field Installed House Side Shield [23,25] LS/GRSBK=Glare Shield, Black [4,25,27] LS/GRSWH=Glare Shield, White [4,25,27] LS/PFS=Perimeter Shield, Black FSIR-100=Wireless Configuration Tool for Occupancy Sensor [17] WOLC-7P-10A=WaveLinx Outdoor Control Module (7-pin) [26,29] SWPD4-XX=Wavelinx Wireless Sensor, 7' – 15' Mounting Height [29,30,31,32] SWPD5-XX=Wavelinx Wireless Sensor, 15' – 40' Mounting Height [29,30,31,32]

NOTES:
1. DesignLight Consortium® Qualified. Refer to www.designlights.org, Qualified Products List under Family Models for details.
2. Two light squares with CBP options limited to 25°C. CBP not available in combination with sensor options at 1200mA.
3. Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option.
4. Not available with HA option.
5. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654.
6. Require the use of a step down transformer. Not available in combination with sensor options at 1200mA.
7. 480V not to be used with ungrounded or impedance grounded systems.
8. DuraVolt drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Visit www.signify.com/duravolt for more information.
9. Cannot be used with other control options.
10. Low voltage control leads extended 18" from fixture.
11. Not available in 1200mA. When used with CBP or HA options, only available with single light square.
12. Not available in 1200mA, UPL or CBP options. Available with single light square.
13. Not available with SL2, SL3, SL4, HA, CBP, PR or PR7 options.
14. Operates a single light square only. Operates at -20°C to +40°C. Backbox is non-IP rated. Control option limited to BPC.
15. Compatible with standard 3-PIN photocontrols, 5-PIN or 7-PIN ANSI controls.
16. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
17. The FSIR-100 configuration tool is required to adjust parameters such as high and low modes, sensitivity, time delay and cutoff. Consult your lighting representative at Cooper Lighting Solutions for more information.
18. Replace LXX with L08 (<8' mounting), L20 (8'-20' mounting) or L40W (21'-40' mounting.)
19. Includes integral photosensor.
20. Enlighted wireless sensors are factory installed requiring network components in appropriate quantities.
21. White sensor shipped on all housing color options.
22. Not available with HSS or GRS options.
23. Not for use with 5NQ, 5MQ, 5WQ or RW optics. The light square trim plate is painted black when the HSS option is selected.
24. CE is not available with the 1200, DALI, LWR, MS, MS/DIM, BPC, PR or PR7 options. Available in 120-277V only.
25. One required for each light square.
26. Requires PR7.
27. Not for use with T4FT, T4W or SL4 optics.
29. Cannot be used in conjunction with additional photocontrol or other controls systems (BPC, PR, PR7, MS, LWR).
30. WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed.
31. Requires ZW or ZD receptacle.
32. Replace XX with sensor color (WH, BZ, or BK).
33. Specify 120V or 277V.
34. Smart device with mobile application required to change system defaults. See controls section for details.
35. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
36. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
37. Not available in 1 square configuration at 800mA or below. Not available with any control option except SPB.
38. 2L not available with FF, AHD or DALI options. Controls and/or battery packs operate only one of the two circuits when 2L is specified. 2L with controls options not available with 347V or 480V.

Product Specifications

Construction
- Driver enclosure thermally isolated from optics for optimal thermal performance
- Die-cast aluminum heat sinks
- IP66 rated housing
- 1.5G vibration rated

Optics
- Patented, high-efficiency injection-molded AccuLED Optics technology
- 13 optical distributions
- IDA Certified (3000K CCT and warmer only)

Electrical
- LED driver assembly mounted for ease of maintenance
- Standard with 0-10V dimming
- Optional 10kV or 20kV surge module
- Suitable for operation in -40°C to 40°C ambient environments; Optional 50°C high ambient (HA) configuration

Mounting
- Gasketed and zinc plated rigid steel mounting attachment
- "Hook-N-Lock" mechanism for easy installation

Finish
- Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Heat sink is powder coated black
- RAL and custom color matches available
- Coastal Construction (CC) option available

Typical Applications
- Exterior Wall, Walkway

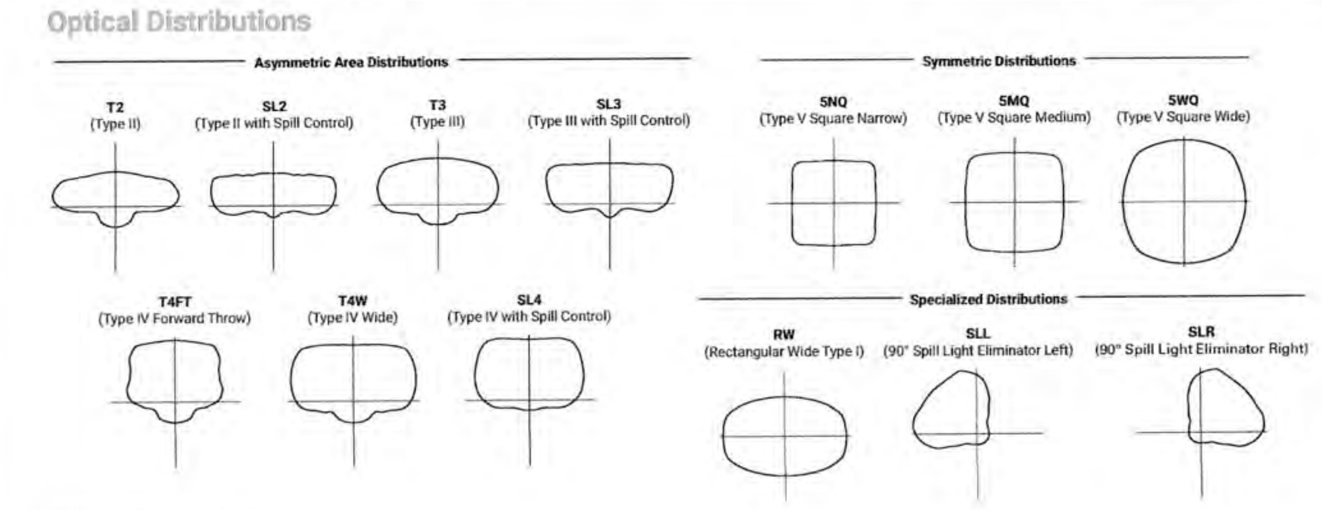
Warranty
- Five-year warranty

WL-2 LIGHT FIXTURE DETAIL-2

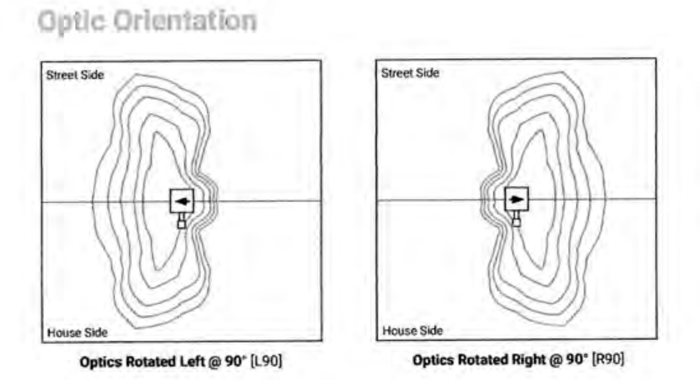
N.T.S.

McGraw-Edison GWC Galleon Wall

Optical Distributions



Optic Orientation



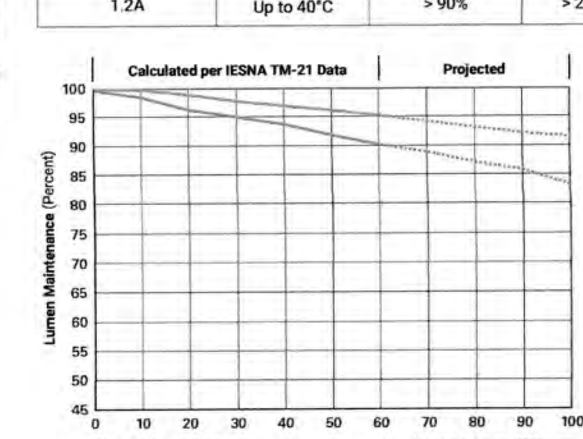
Energy and Performance Data

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

Lumen Maintenance

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	> 416,000
1.2A	Up to 40°C	> 90%	> 205,000



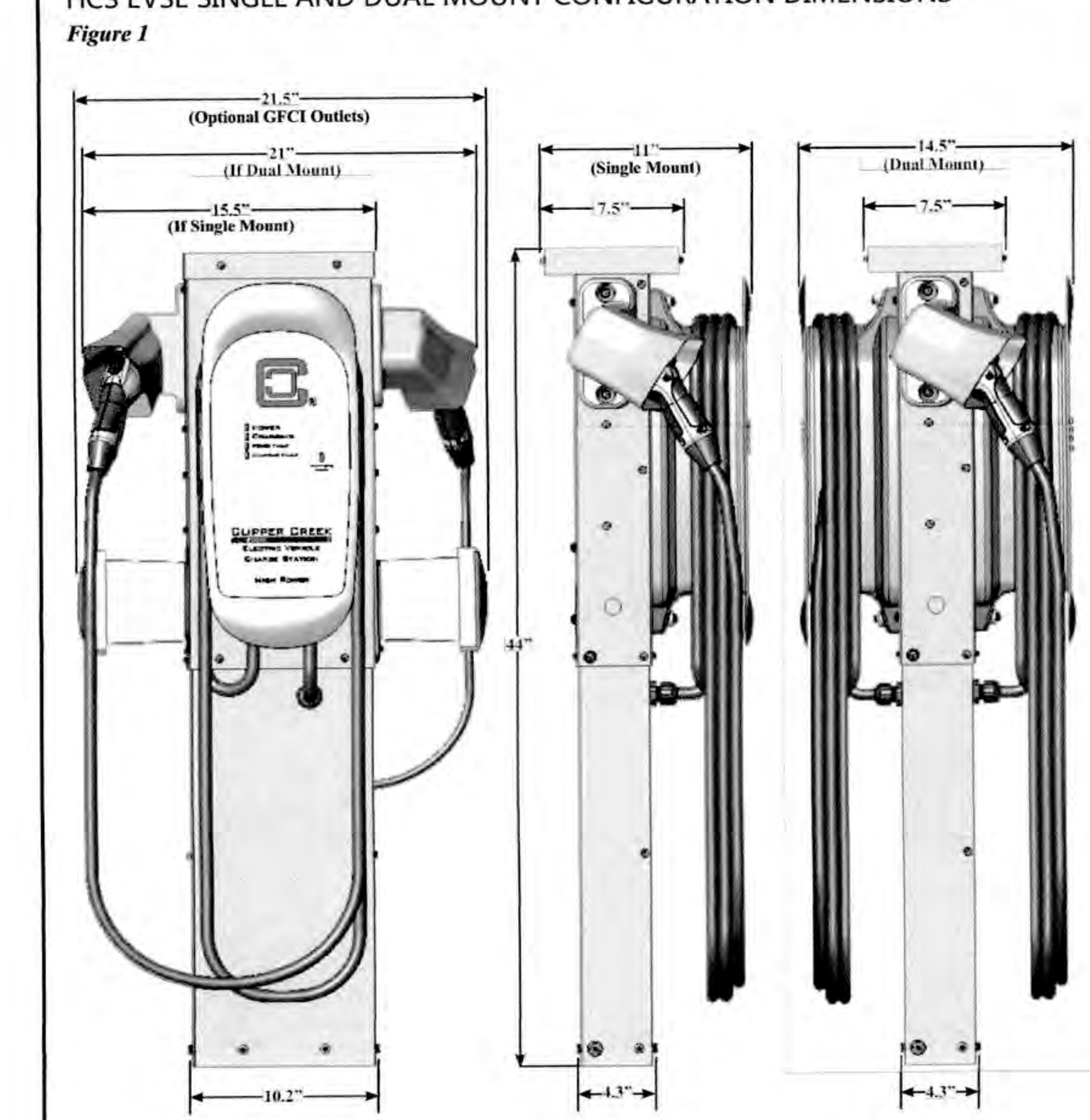
WL-2 LIGHT FIXTURE DETAIL-3

N.T.S.

ProMountDuo™ PEDESTAL INSTALLATION GUIDE

HCS EVSE SINGLE AND DUAL MOUNT CONFIGURATION DIMENSIONS

Figure 1



ELECTRIC VEHICLE CHARGING STATION

N.T.S.

CONSTRUCTION DETAIL NOTES

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4. SHOP DRAWINGS SHALL BE PROVIDED FOR ALL PRECAST STRUCTURES PRIOR TO THE ORDERING OF MATERIALS.
5. DETAILS ASSUME APPROPRIATE LOAD BEARING CAPACITY AND COMPACTION OF SOILS. ACTUAL FIELD CONDITIONS SHALL BE CONFIRMED BY ON-SITE GEOTECHNICAL ENGINEER.
6. RESIDENTIAL DEVELOPMENTS SHALL CONFORM TO DETAILS WITHIN THE CURRENT EDITION OF THE RESIDENTIAL SITE IMPROVEMENT STANDARDS (R.S.I.S.).
7. ALL CONSTRUCTION DETAILS ARE NOT TO SCALE (N.T.S.) UNLESS OTHERWISE NOTED.

C:\DWG\2022.004-BASE-100 Prospect Street\2022.004-DETAILS.dwg PLOTTED: 3/28/2023 1:08 PM; BY: JASON ERBENTRAUT

REVISIONS

1) TWP/ARCH REVS	03/29/23

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☐ CHKD BY: _____ DATE: _______

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Professional Planners

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Highland Park, NJ 08904

menloeng.com

732-846-8585 732-846-9439

Certificate of Authorization : 24GA27951900

100 PROSPECT STREET

BOROUGH OF METUCHEN
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 152
LOTS 51.01 & 51.02
TAX MAP SHEET 51
0.76 ACRES

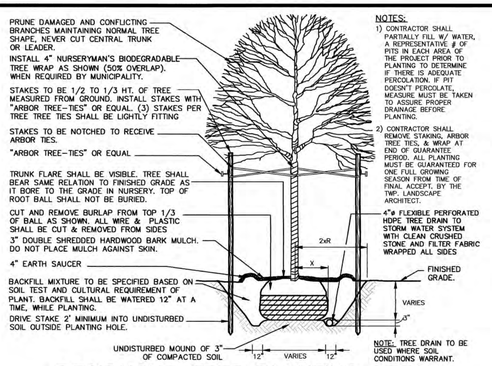
CONSTRUCTION DETAILS (3)

DRAWN BY .... DP
DESIGNED BY .... MM
APPROVED BY .... WAL

THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION...

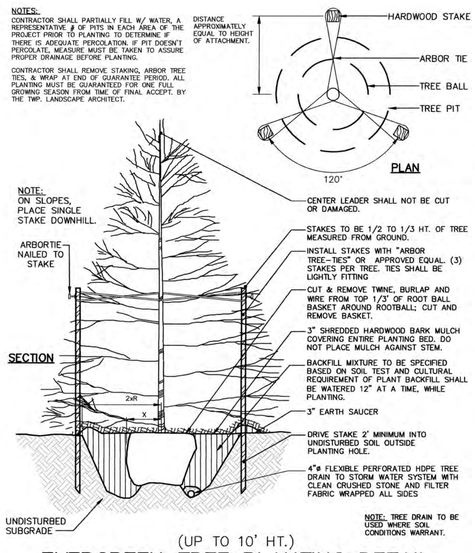
WILLIAM A. LANE
PROFESSIONAL ENGINEER
NJPE# 40262

PROJECT NUMBER	2022.004	DE-3
DATE OF ISSUE	MARCH 14, 2022	11
REVISION 1	MARCH 29, 2023	



DECIDUOUS TREE PLANTING DETAIL

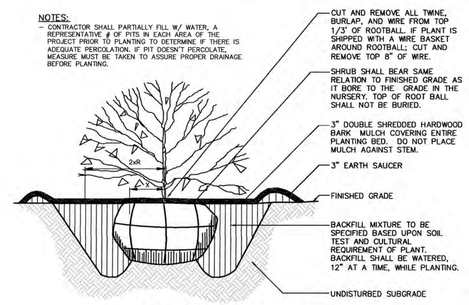
N.T.S.



(UP TO 10' HT.)

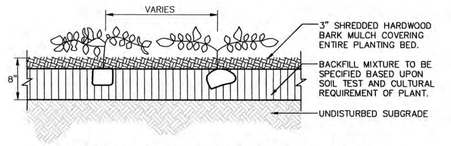
EVERGREEN TREE PLANTING DETAIL

N.T.S.



SHRUB PLANTING DETAIL

N.T.S.



GROUNDCOVER PLANTING DETAIL

N.T.S.

PLANTING NOTES

THE FOLLOWING RECOMMENDED PLANTING PERIODS SHOULD BE ADHERED TO WHENEVER POSSIBLE: 1) BROADLEAF AND CONIFEROUS EVERGREEN TREES, SHRUBS, VINES AND GROUND COVERS SHALL BE PLANTED BETWEEN AUGUST 15th AND SEPTEMBER 15th AND BETWEEN APRIL 15th AND MAY 15th. DECIDUOUS TREES, SHRUBS, VINES, GROUND COVERS AND PERENNIALS SHALL BE PLANTED BETWEEN OCTOBER 15th AND NOVEMBER 15th AND BETWEEN MARCH 15th AND MAY 15th. THESE PLANTING SEASONS MAY BE EXTENDED OR SHORTENED ACCORDING TO PREVAILING WEATHER CONDITIONS, SOIL CONDITIONS, AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE.

2) THE PLANTING OPERATION INCLUDES ALL LABOR, MATERIALS, PLANTS, EQUIPMENT, SHIPPING, INCIDENTALS AND CLEAN-UP BY THE CONTRACTOR FOR THE INSTALLATION OF THE ENTIRE LANDSCAPE PLAN.

3) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT CORRECT GRADES AND ALIGNMENT.

4) THE CONTRACTOR WILL EXAMINE ALL FIELD CONDITIONS FOR EXACT LOCATIONS OF UTILITIES, DRAINAGE SYSTEMS AND IRRIGATION SYSTEMS AND ADJUST PROPOSED PLANTINGS ACCORDINGLY. THE LANDSCAPE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER DEPTH OF TOPSOIL IN ALL AREAS AND THE PROVISION OF POSITIVE DRAINAGE. THE CONTRACTOR SHALL NOTIFY THE CLIENT, ENGINEER, AND/OR LANDSCAPE ARCHITECT OF ANY DETRIMENTAL DRAINAGE HAZARD, INCLUDING BUT NOT LIMITED TO INSUFFICIENT TOPSOIL, ETC. PRIOR TO THE INSTALLATION OF ANY MATERIALS, INCLUDING LAWN AREAS.

5) THE CONTRACTOR WILL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING OF ALL SOIL OR DRAINAGE CONDITIONS WHICH THE CONTRACTOR CONSIDERS DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. STATE CONDITION AND SUBMIT A PROPOSAL FOR CORRECTION IF FEASIBLE.

6) PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS; WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE FROM DEFECTS AND INJURIES. QUALITY AND SIZE OF PLANTS, SPREAD OR ROOTS, AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH THE MOST RECENT ANSI Z60 "AMERICAN STANDARD FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.

7) PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE BALL ONLY.

8) GUARANTEE OF PLANT GROWTH: ALL PLANTS AND TREES SHALL BE GUARANTEED BY THE CONTRACTOR TO BE IN VIGOROUS GROWING CONDITION. PROVISION SHALL BE MADE FOR A GROWTH GUARANTEE OF AT LEAST ONE (1) YEAR FOR TREES AND SHRUBS FROM THE DATE OF FINAL ACCEPTANCE OR AS REQUIRED BY TOWNSHIP. REPLACEMENTS SHALL BE MADE AT THE BEGINNING OF THE FIRST SUCCEEDING PLANTING SEASON. ALL REPLACEMENTS SHALL HAVE A GUARANTEE EQUAL TO THE ABOVE STATED.

9) INSOFAR AS IT IS PRACTICAL, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT STOCK NOT PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE (3) DAY PERIOD AFTER DELIVERY.

10) IF PLANT AVAILABILITY IS RESTRICTED, SUBSTITUTIONS MAY BE MADE WITHIN PLANT TYPE TO MAINTAIN SIMILAR GROWTH AND ORNAMENTAL QUALITIES UPON NOTIFICATION AND APPROVAL BY THE LANDSCAPE ARCHITECT.

11) PLANT LOCATIONS SHOWN ARE DIAGRAMMATIC. ALL PLANTS SHOWN SEMI-MATURE SIZE ON PLANS. THE STAKING LAYOUT OF ALL PLANTINGS WILL BE INSPECTED BY THE LANDSCAPE ARCHITECT PRIOR INSTALLATION AS REQUESTED BY OWNER.

12) AREAS DISTURBED BY LANDSCAPE OPERATIONS SHALL BE GRADED TO MATCH EXISTING. TOPSOIL AND SEED OR SOD AS REQUIRED.

13) NO PLANT, EXCEPT GROUND COVERS AND FOUNDATIONS PLANTS SHALL BE PLANTED LESS THAN TWO (2) FEET FROM EXISTING STRUCTURES AND SIDEWALKS.

14) ALL PLANTS SHALL BE PLANTED IN TOPSOIL THAT IS THOROUGHLY WATERED AND TAMPED AS BACKFILLING PROGRESSES. NOTHING BUT SUITABLE TOPSOIL FREE OF DRY SOD, STIFF CLAY, LITTER, STONES IN EXCESS OF 1"ø, ETC., SHALL BE USED FOR PLANTING.

15) SET ALL PLANTS PLUMB AND STRAIGHT. SET AT SUCH LEVEL THAT, AFTER SETTLEMENT, A NORMAL OR NATURAL RELATIONSHIP TO THE CROWN OF THE PLANT WITH THE GROUND SURFACE WILL BE ESTABLISHED. LOCATE PLANT THE CENTER OF THE PIT.

16) IT IS ADVISABLE TO PRUNE APPROXIMATELY 1/3 OF THE GROWTH OF LARGE TREES (2" CALIPER AND OVER) BY THE REMOVAL OF SUPERFLUOUS BRANCHES, THOSE WHICH CROSS, THOSE WHICH RUN PARALLEL, ETC. MAIN LEADER TO TREES MUST NOT BE CUT BACK. LONG SIDE BRANCHES, HOWEVER, MUST BE SHORTENED. TREES WITH THE CENTRAL LEADER PRUNED WILL BE REJECTED.

17) EACH TREE AND SHRUB SHALL BE PRUNED IN ACCORDANCE WITH STANDARD HORTICULTURAL PRACTICE TO PRESERVE NATURAL CHARACTER OF PLANT. PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS.

18) ALL TREES SHALL BE SUPPORTED IMMEDIATELY AFTER PLANTING. ALL TREES SIX (6) INCHES AND OVER IN CALIPER SHALL BE TIED, WHILE SMALLER TREES SHALL BE STAKED. ARBOR TREE TIES AND STAKES SHALL BE INSTALLED AS INDICATED. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ARBOR TREE TIES ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE.

19) THE TRUNKS OF ALL TREES SHALL BE WRAPPED AS SOON AS POSSIBLE AFTER PLANTING ACCORDING TO STANDARD PROCEDURES AND IF REQUIRED BY TOWNSHIP.

20) MULCH FOR PLANTING BEDS SHALL BE DOUBLE SHREDDED HARDWOOD BARK MULCH UNLESS OTHERWISE SPECIFIED ON THE PLANS AND SHALL HAVE NO LEAVES, YOUNG GREEN GROWTH, BRANCHES, TWIGS GREATER IN DIAMETER OF 1/2", WEEDS, SHAVINGS OR FOREIGN MATERIAL SUCH AS STONES, ETC. SHALL BE MIXED WITH THE MULCH. ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS WITH A COMPACTED DEPTH OF 3". NO MULCH SHALL BE PLACED AGAINST PLANT STEMS.

21) WATER APPLIED TO SEEDED OR SODDED AREAS, PLANTS OR PLANTED AREAS SHALL BE FREE FROM IMPURITIES INJURIOUS TO VEGETATION AND APPLIED AT A RATE OF FIVE GALLONS OF WATER PER SQUARE YARD OF PLANT PIT.

22) FALL PLANTING HAZARDS:
IT IS VERY RISKY TO TRANSPLANT THE FOLLOWING LIST OF TREES BARE ROOT OR B&B IN THE FALL:

PLATANUS ACERIFOLIA
PRUNUS-ALL STONE FRUITS
CARPINUS VARIETIES
CORNUS FLORIDA & VARS
CRATAEGUS VARIETIES
HALESIA
KOELREUTERIA
LIQUIDAMBAR STYRACIFLUA
BETULA VARIETIES
PYRUS-ALL PEARS
QUERCUS-ALL OAKS
SALIX-WEEPING VARS
STYRAX JAPONICA
TILIA TOMENTOSA
ZELKOVA VARIETIES
LIRIODENDRON TULIPIFERA

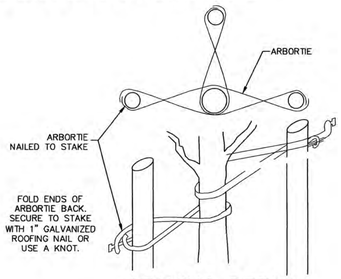
THE CONTRACTOR ASSUMES RESPONSIBILITY FOR PLANT SURVIVAL OF THESE MATERIALS IF MOVED DURING THE FALL SEASON.

23) TREES TO REMAIN ON-SITE TO BE SELECTIVELY THINNED AND PRUNED REMOVING ALL DEAD AND DISEASED LIMBS WHILE PROTECTED BY FENCING DURING CONSTRUCTION (SEE DETAIL). FENCE TO BE MAINTAINED DURING CONSTRUCTION BY CONTRACTOR.

24) THE PLANTING PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT QUANTITY DISCREPANCIES OCCUR.

25) ALL STREET TREES AND SHADE TREES PLANTED NEAR PEDESTRIAN OR VEHICULAR ACCESS SHOULD NOT BE BRANCHED LOWER THAN 7'-0" ABOVE GRADE. ALL PLANT MATERIAL LOCATED WITHIN ANY SIGHT TRIANGLE EASEMENTS SHALL NOT EXCEED A MATURE HEIGHT OF 30" ABOVE THE ELEVATION OF THE ADJACENT CURB. ALL STREET TREES PLANTED IN ANY SIGHT TRIANGLE SHALL BE PRUNED AS MENTIONED ABOVE.

26) SEE DETAIL DRAWINGS FOR TYPICAL PLANTING DETAILS.



STAKING DETAIL

N.T.S.

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REVISIONS

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100 PROSPECT STREET

BOROUGH OF METUCHEN
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 152
LOTS 51.01 & 51.02
TAX MAP SHEET 51
0.76 ACRES

CONSTRUCTION DETAILS (4)

DRAWN BY	DP
DESIGNED BY	MM
APPROVED BY	KRG

THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION...

KENNETH R. GRISEWOOD
LANDSCAPE ARCHITECT NJ
LICENSE #AS000071

PROJECT NUMBER	2022.004	DE-4
DATE OF ISSUE	MARCH 14, 2022	12
REVISION	-	

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