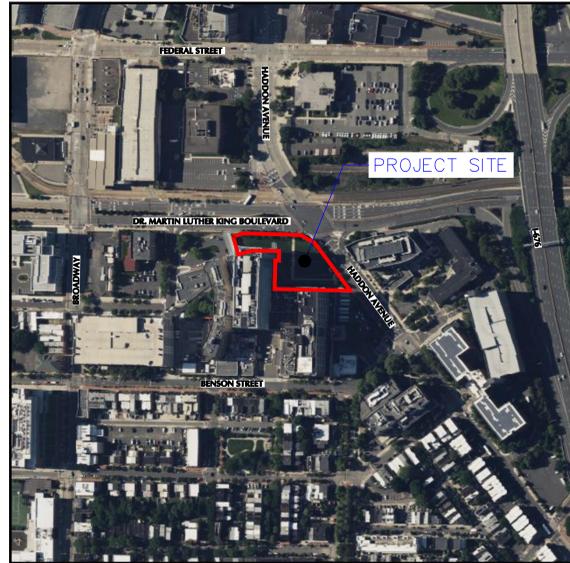


COOPER UNIVERSITY HEALTH CARE COOPER UNIVERSITY HOSPITAL TOWER A PRELIMINARY AND FINAL SITE PLAN APPLICATION 1 COOPER PLAZA, CAMDEN, CAMDEN COUNTY, NEW JERSEY BLOCK 1402 LOT 1

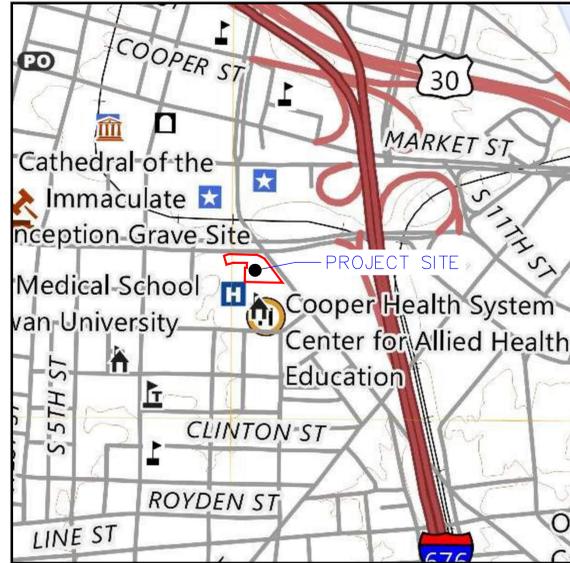
GENERAL NOTES

- THESE PLANS REPRESENT THE OVERALL SITEWORK IMPROVEMENTS REQUIRED FOR PROJECT CONSTRUCTION. THE CONTRACTOR SHALL FURNISH, INSTALL, TEST AND COMPLETE ALL WORK TO THE SATISFACTION OF THE ENGINEER AND OWNER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION. AS SUCH, THESE PLANS DO NOT COMPLETELY REPRESENT, NOR ARE THEY INTENDED TO REPRESENT, ALL SPECIFIC INSTRUCTIONS REQUIRED FOR SITEWORK CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONSTRUCT ALL IMPROVEMENTS DEPICTED ON THESE PLANS IN ACCORDANCE WITH ALL APPLICABLE RULES, REGULATIONS AND LAWS IN EFFECT AT THE TIME OF CONSTRUCTION.
- THE CONTRACTOR SHALL ACCEPT THE SITE AS IS. THE CONTRACTOR SHALL ASSESS CONDITIONS, AND THE KIND, QUALITY AND QUANTITY OF WORK REQUIRED. THE OWNER MAKES NO GUARANTEE IN REGARD TO THE ACCURACY OF ANY AVAILABLE INFORMATION WHICH WAS OBTAINED DURING INVESTIGATIONS. THE CONTRACTOR SHALL MAKE A THOROUGH SITE INSPECTION IN ORDER TO FIELD CHECK EXISTING SITE CONDITIONS, CORRELATE CONDITIONS WITH THE DRAWINGS AND RESOLVE ANY POSSIBLE CONSTRUCTION CONFLICTS WITH THE OWNER AND ENGINEER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL MAKE ADDITIONAL TOPOGRAPHIC SURVEYS IF DEEMED NECESSARY, PROVIDED THEY ARE COORDINATED WITH THE OWNER. ANY CONDITIONS DETERMINED BY THE CONTRACTOR THAT DIFFER FROM THE INFORMATION SHOWN ON THE DRAWINGS THAT ARE NOT BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER PRIOR TO THE START OF WORK SHALL NOT BE CONSIDERED GROUNDS FOR ADDITIONAL PAYMENT OR CHANGES TO THE CONTRACT DURATION, OR ANY OTHER CLAIMS AGAINST THE OWNER OR OWNER'S ENGINEER.
- THE CONTRACTOR SHALL, WHEN THEY DEEM NECESSARY, PROVIDE WRITTEN REQUESTS FOR INFORMATION (RFI) TO THE OWNER AND ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK ITEM. THE (RFI) SHALL BE IN A FORM ACCEPTABLE TO OWNER AND ENGINEER AND SHALL ALLOW FOR A MINIMUM OF TWO WORK DAYS OR ADDITIONAL REASONABLE TIME FOR A WRITTEN REPLY. RFIS SHALL BE NUMBERED CONSECUTIVELY BY DATE SUBMITTED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITEWORK ITEMS CONSTRUCTED DIFFERENTLY THAN INTENDED OR AS DEPICTED ON THE PLANS.
- INFORMATION RELATED TO ELEVATIONS AND PROPOSED UTILITIES (SUCH AS ROADWAY GRADES, INVERT ELEVATIONS, RIM ELEVATIONS, GRATE ELEVATIONS, BUILDING FINISHED FLOOR ELEVATIONS, ETC.) MAY BE FOUND IN MORE THAN ONE LOCATION IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL THOROUGHLY REVIEW ALL PLANS, PROFILES AND ANY OTHER INFORMATION IN THE CONTRACT DOCUMENTS FOR CONSISTENCY PRIOR TO CONSTRUCTION. ANY INCONSISTENCIES OR DISCREPANCIES THAT ARE FOUND BY THE CONTRACTOR OR HIS ASSIGNS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER IN WRITING, IN THE FORMAT OF AN RFI PRIOR TO CONSTRUCTION.
- CONSTRUCTION INFORMATION AND REQUIREMENTS ARE LOCATED IN NUMEROUS PROJECT DOCUMENTS SUCH AS DRAWINGS, SPECIFICATIONS, DETAILS, NOTES, ORDINANCES, CODES, PERMITS, STANDARDS, GUIDELINES AND MANUFACTURER DOCUMENTS. MOST STRINGENT CRITERIA SHALL APPLY.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING COPIES, UNDERSTANDING AND IMPLEMENTING THE REFERENCED PROJECT STANDARDS (I.E. ASTM, AWWA, ASSHTO, ETC.), PROJECT PERMIT REQUIREMENTS, REGULATORY CODES AND REGULATIONS, AND MANUFACTURER GUIDELINES AND REQUIREMENTS.



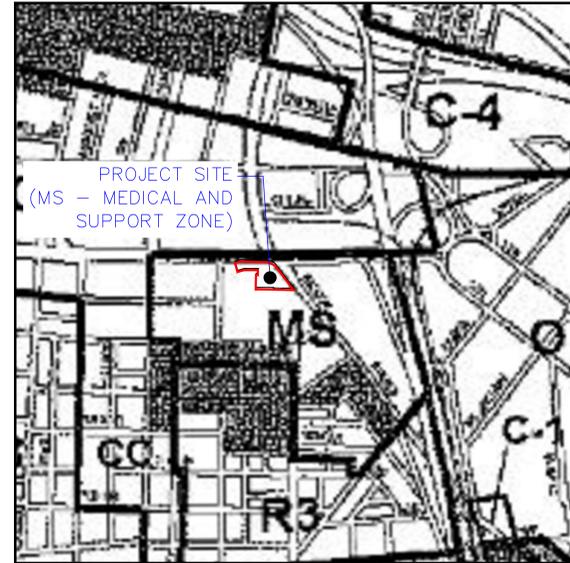
MAP REFERENCE : bing

PROJECT LOCATION
SCALE: 1" = 250'



MAP REFERENCE : USGS

USGS MAP
SCALE: 1" = 500'



MAP REFERENCE : CITY OF CAMDEN

ZONING MAP
SCALE: 1" = 500'

PROJECT CONTACTS	
APPLICANT:	COOPER UNIVERSITY HEALTH CARE 1 COOPER PLAZA, CAMDEN, NJ
OWNER:	COOPER UNIVERSITY HEALTH CARE 1 COOPER PLAZA, CAMDEN, NJ
CIVIL ENGINEER:	LANGAN 1 UNIVERSITY SQUARE DRIVE, SUITE 110 PRINCETON, NJ 08540 TEL: (609) 282-8000 NJ Certificate of Authorization No: 24GA27996400
APPROVED BY CITY OF CAMDEN PLANNING BOARD PRELIMINARY & FINAL SITE PLAN	
CHAIRMAN OF THE PLANNING BOARD	
SECRETARY OF THE PLANNING BOARD	
ZONING OFFICER/ADMINISTRATIVE OFFICER	
PLANNING BOARD ENGINEER	

RESERVE FOR DCA STAMP



ARCHITECT
HKS, P.C.
1250 I (EYE) STREET NW, SUITE 600
WASHINGTON, DC 20005

ASSOCIATE ARCHITECT / INTERIOR DESIGNER
ARRAY
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CONSHOHOCKEN, PA 19428

INTERIOR DESIGNER
DCD DESIGN GROUP
2 MILL ST RD, SUITE 103
WILMINGTON, DE 19806

MEP-FP / LOW VOLTAGE ENGINEER
BRVA CONSULTING ENGINEERS
2401 WALNUT ST SUITE 701
PHILADELPHIA, PA 19103

CODE CONSULTANT
JENSEN HUGHES
30 S 15TH STREET, FLOOR 15
PHILADELPHIA, PA 19102

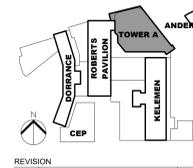
ELEVATOR CONSULTANT
ST. ONGE
1400 WILLIAMS RD
YORK, PA 17402



OWNER
COOPER UNIVERSITY HEALTHCARE
1 COOPER PLAZA
CAMDEN, NJ 08103

PROJECT MANAGER
HAMMES
2700 S. QUINCY STREET, SUITE 540
ARLINGTON, VA 22206

CIVIL/ENVIRONMENTAL/ GEOTECHNICAL/LANDSCAPE ARCHITECT/TRAFFIC/SURVEY
LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, INC.
1 UNIVERSITY SQUARE DRIVE, SUITE 100
PRINCETON, NJ 08540
NJ CERTIFICATE OF AUTHORIZATION NO. 24GA27996400
KEY PLAN



REVISION (NO.) DESCRIPTION DATE

KYLE MACGEORGE
PROFESSIONAL ENGINEER
NJ Lic. No. 24GE05751600
HKS PROJECT NUMBER

DATE
20 MARCH, 2024
ISSUE

SHEET TITLE
CIVIL COVER SHEET

SHEET NO.
GI001

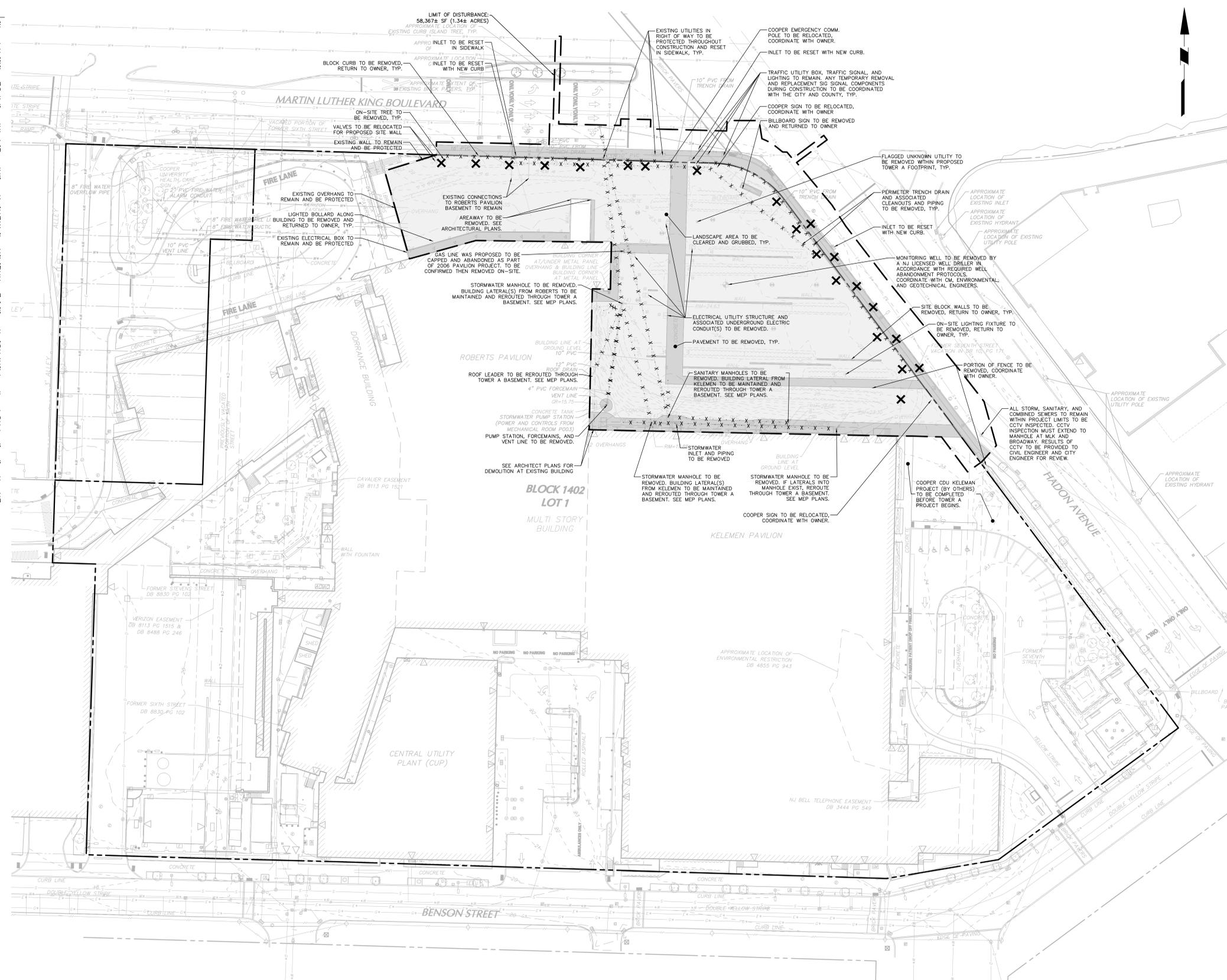
SHEET INDEX			
LAST DATED	SHEET NO.	DRAWING NO.	TITLE
20 MARCH 2024	1	GI001	CIVIL COVER SHEET
20 MARCH 2024	2	CD101	SITE DEMOLITION PLAN
20 MARCH 2024	3	CS101	SITE PLAN
20 MARCH 2024	4	CS501	SITE DETAILS
20 MARCH 2024	5	CG101	OVERALL GRADING AND DRAINAGE PLAN
20 MARCH 2024	6	CG102	DETAILED GRADING AND DRAINAGE PLAN
20 MARCH 2024	7	CG501	GRADING AND DRAINAGE DETAILS
20 MARCH 2024	8	CU101	UTILITY PLAN
20 MARCH 2024	9	CU501	UTILITY DETAILS
20 MARCH 2024	10	CE101	SOIL EROSION AND SEDIMENT CONTROL PLAN
20 MARCH 2024	11	CE501	SOIL EROSION AND SEDIMENT CONTROL DETAILS
20 MARCH 2024	12	LS101	LANDSCAPE MATERIALS PLAN
20 MARCH 2024	13	LP101	LANDSCAPE PLAN
20 MARCH 2024	14	LP501	LANDSCAPE NOTES AND DETAILS

ZONING TABLE FOR COOPER UNIVERSITY HOSPITAL - TOWER A CITY OF CAMDEN, CAMDEN COUNTY, NEW JERSEY					
MS - MEDICAL AND SUPPORT ZONE					
PERMITTED USES:	COMPLY / WILL COMPLY				
Hospitals, medical clinics, and health care facilities.	Comply				
Outpatient care facilities, including surgical centers.	Comply				
ACCESSORY USES	-				
Off-street parking.	Comply				
Multi-level parking structures.	Comply				
Fences and walls.	Comply				
Signs.	Comply				
AREA REGULATIONS FOR MS - MEDICAL AND SUPPORT ZONE - NON-RESIDENTIAL					
APPLICABLE REGULATION	REQUIRED / ALLOWABLE	EXISTING BLOCK NO. 1402 LOT 1, EXISTING BLOCK NO. 1400 LOTS 55-65	Tower A	COMPLY / WILL COMPLY	VARIANCE REQUIRED
Minimum Lot Area	2,500 SF	339,870 SF	339,870 SF	Comply	
Maximum Lot Area	N/A	339,870 SF	339,870 SF	Comply	
Minimum Lot Width	10 FT per City Ordinance / 25 FT per Cooper Plaza Redevelopment Plan	480.3 FT	480.3 FT	Comply	
Minimum Lot Depth	N/A	N/A	N/A	N/A	
Maximum Building Coverage	80%	51.7% (175,621SF)*	62.6% (212,916 SF)**	Comply	
Maximum Lot Impervious Coverage	90%	82.5% (280,510 SF)	92.8% (315,536 SF)		VARIANCE REQUIRED
Minimum Setbacks	N/A per City Ordinance / 5 FT per Cooper Plaza Redevelopment Plan	0 FT	Existing to remain: 0 FT Proposed Building: 5 FT	Comply	
-Rear Yard	10 FT	N/A (Corner Lot)	N/A (Corner Lot)	N/A	
-Side Yard	N/A	N/A (Corner Lot)	N/A (Corner Lot)	N/A	
Minimum Building Height	2 Stories OR 30 FT	1 Story	Existing to remain: 1 Story Proposed Building: 10 Stories	Comply	
Maximum Building Height***	10 Stories OR 145 FT per City Ordinance / 10 Stories or 150 FT per Cooper Plaza Redevelopment Plan	1-10 Stories, Existing max building height to remain (158'-8")	10 Stories	Comply	
Maximum Floor Area Ratio	10.0	2.68 (915,716 SF)	3.66 (1,248,685 SF)	Comply	
PARKING AND LOADING REGULATIONS					
APPLICABLE REGULATION	REQUIRED / ALLOWABLE	EXISTING BLOCK NO. 1402 LOT 1, EXISTING BLOCK NO. 1400 LOTS 55-65	Tower A	COMPLY / WILL COMPLY	VARIANCE REQUIRED
Hospitals/health care facilities:	1 parking space for each 2 beds, plus 1 parking space for each 2 employees or staff members, including nurses, on shift of largest employment, plus 1 parking space per doctor.	Campus-wide parking approach - No change	Existing to remain. 125 add'l beds → 63 spaces 50 add'l employees (largest shift) → 25 spaces 4 add'l doctors → 4 spaces 92 new parking spaces to be leased in existing off-site garage****		
ADA Parking (per ADA Standards):	76-100 spaces provided: 3 ADA, 1 ADA van	Campus-wide parking approach - No change	Existing to remain. ADA parking spaces exist in each off-site parking garage as appropriate.		
Electric Charging Facilities (per Municipal Land Use Law and DCA Model Ordinance):	76-100 off-street spaces: 3 make-ready	Campus-wide parking approach - No change	No new spaces constructed, so no new chargers proposed		
	In lieu of installing Make-Ready parking spaces, a parking lot or garage may install EVSE to satisfy the requirements of this subsection.	Campus-wide parking approach - No change	No new spaces constructed, so no new chargers proposed		
Bike Parking:	Shall be provided at a rate of 10% of the first one hundred required automobile parking spaces as specified above, plus 2% of any amount thereafter.	Campus-wide parking approach - No change	No new spaces constructed, so no new bicycle parking proposed		
Loading space:	Buildings not with dominant use of handling and selling retail goods and buildings not with manufacturing, repair, wholesale, or warehouse use—including but not limited to offices, hotels, hospitals and mortuaries: 1 loading space at least 12'Wx50'Lx14'H	Existing to remain: min. 12'Wx50'Lx14'H	Existing to remain. No additional proposed	Existing Loading Complies	
NOTES:					
*Existing building area includes aboveground structures (Existing Roberts, Kelemen, and Dorrance Buildings, Building 85 Expansion (Combined Heat and Power Addition Project), Kelemen ED Expansion, CDU Kelemen Expansion, and Canopies).					
**Proposed building area includes aboveground structures (existing building areas; proposed Tower A).					
***Height excludes necessary and customary roof-top structures such as HVAC compressors, air handling units, cooling towers, elevator mechanical rooms, antennae and satellite dishes, and other utility-type roof					
****The proposed expansion will house, at most, a maximum of 125 additional beds and 50 additional employees during the shift of largest employment, as well as 4 new doctors. If CUHC chooses a design that results in the maximum increase of beds and employees, the parking demand would increase by no more than 92 spaces, which CUHC plans to address by leasing spaces in the garage sites near the hospital.					

BUILDING PERMIT NUMBER: 41111

SITE DEMOLITION NOTES

- BOUNDARY INFORMATION AND EXISTING FEATURES SHOWN HEREON ARE BASED ON "TOPOGRAPHIC SURVEY (SHOWING UTILITIES)" DATED 09/08/2023 PREPARED BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC.
- THE MERIDIAN OF THE PLAN IS REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATE SYSTEM (NAD 83) 2011 DERIVED USING SURVEY-GRADE GNSS EQUIPMENT.
- ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) DERIVED USING SURVEY-GRADE GNSS EQUIPMENT.
- CONVERSION FROM NAVD 1988 TO NVD IS AS FOLLOWS: EL. 17.00 (NAVD 88) + 1.09 = EL. 18.09 (NVD 29)
- TOPOGRAPHIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC. DURING JULY 2023.
- STREET NAMES, RIGHT OF WAY WIDTHS, BLOCK AND LOT NUMBERS ARE SHOWN IN ACCORDANCE WITH TOWNSHIP TAX MAPS.
- OFFSETS (IF SHOWN) ARE FOR SURVEY REFERENCES ONLY AND SHOULD NOT BE USED IN CONSTRUCTION OF ANY TYPE. LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC. RECOMMENDS THE PLACEMENT OF SURVEY MARKERS.
- THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO THEIR SATISFACTION PRIOR TO THE EXECUTION OF CONTRACTS OR COMMENCING WORK. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER OF RECORD.
- THE CONTRACTOR SHALL DEMOLISH ALL BUILDINGS, PAVEMENT, ETC. WHERE INDICATED WITHIN THE LIMIT OF DISTURBANCE. EDGES OF PAVEMENT DEMOLITION SHALL BE SAW CUT. DEMOLISHED CONCRETE AND ASPHALT SHALL BE CRUSHED TO THE DIMENSIONS INDICATED IN THE PROJECT GEOTECHNICAL REPORT AND STOCKPILED FOR REUSE. AS SITE FILL, ALL DEMOLITION AND MATERIAL REUSE SHALL BE IN ACCORDANCE WITH ENVIRONMENTAL REQUIREMENTS FOR THE SITE.
- THE CONTRACTOR MUST ACCEPT THE SITE AS IS AND SHALL BE DEEMED TO HAVE INSPECTED THE SITE AND REVIEWED ALL CONTRACT DOCUMENTS PRIOR TO SUBMITTING A BID. THE CONTRACTOR SHALL INSPECT THE SITE THOROUGHLY AND FIELD VERIFY THE LOCATION AND DEPTH OF ALL APPLICABLE EXISTING UTILITIES. SOME UNDERGROUND UTILITIES MAY BE LOCATED DIFFERENT THAN SHOWN ON THIS PLAN. ALL CONTRACTORS USING THESE PLANS FOR DEMOLITION OR CONSTRUCTION SHALL CONFIRM ALL UTILITIES IN THE FIELD TO ESTABLISH LOCATIONS, SIZES, MATERIALS AND ELEVATIONS. ANY DISCREPANCIES SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE CONSTRUCTION MANAGER. THE CONTRACTOR SHALL PROTECT AND MAINTAIN UTILITIES AS NOTED.
- THE CONTRACTOR SHALL CARRY OUT THE WORK OF THIS CONTRACT PLACING THE SAFETY AND PROTECTION OF THE SURROUNDING COMMUNITY AND PROPERTY AT THE HIGHEST PRIORITY. THE CONTRACTOR SHALL ENSURE FREE AND SAFE PASSAGE OF PERSONS AROUND THE AREA OF THE DEMOLITION AS DIRECTED BY THE GOVERNING AGENCIES AND THE OWNER. ALL OPERATIONS SHALL BE CONDUCTED SO AS TO PREVENT DAMAGE TO ADJACENT BUILDINGS, STRUCTURES, AND OTHER FACILITIES AND INJURY TO PERSONS, BOTH PEDESTRIAN AND WORKERS ALIKE. THE CONSULTANT DOES NOT HAVE THE RIGHT TO STOP DEMOLITION ACTIVITIES. SUCH DIRECTION MUST COME FROM THE OWNER.
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION SIGNAGE AND ASSOCIATED TRAFFIC MEASURES. THE CONTRACTOR SHALL FOLLOW THE WORK ZONE SAFETY GUIDELINES FOR CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS REQUIRED BY LOCAL JURISDICTION.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING THE SECURITY OF THE PROJECT SITE AT ALL TIMES.
- THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL UTILITIES, WHETHER SHOWN OR NOT ON THE CONTRACT DRAWING, AND SHALL ABANDON, REMOVE, OR PROTECT THE UTILITIES AS INDICATED HEREON OR AS DIRECTED BY THE OWNER, SUBCONSULTANT, OR INTERESTED UTILITY COMPANY.
- THE CONTRACTOR SHALL VERIFY THAT A SOIL EROSION AND SEDIMENT CONTROL PERMIT HAS BEEN OBTAINED FOR DEMOLITION ACTIVITIES. CONTRACTOR SHALL COMPLY WITH THE CONDITIONS THEREON BY INSTALLING AND MAINTAINING ALL SES MEASURES AND MAKING THE REQUIRED NOTIFICATIONS.
- PRIOR TO DEMOLITION, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL CONTENTS OF THE BUILDINGS TO BE DEMOLISHED INCLUDING, BUT NOT NECESSARILY LIMITED TO, FURNISHINGS, MECHANICAL EQUIPMENT, RESERVOIR TANKS, PLUMBING FIXTURES, FURNITURE, CABINETS, ETC. IN ACCORDANCE WITH ENVIRONMENTAL REQUIREMENTS FOR THE SITE.
- PRIOR TO DEMOLITION, THE CONTRACTOR SHALL VERIFY THAT THE UTILITY SERVICES TO BE DEMOLISHED WILL NOT AFFECT OTHER SERVICES OUTSIDE THE CONTRACT LIMIT.
- PRIOR TO DEMOLITION, THE CONTRACTOR SHALL DISCONNECT AND CAP/TERMINATE AT THE UTILITY MAIN ALL BUILDING SERVICES, E.G. WATER, SEWER, GAS, ELECTRIC, TELEPHONE, ETC. (UNLESS OTHERWISE NOTED) IN ACCORDANCE WITH ALL LOCAL REGULATION AND UTILITY COMPANY REQUIREMENTS. THIS WORK SHALL INCLUDE COORDINATION WITH UTILITY COMPANIES AND OBTAINING AND PAYING FEES FOR ALL STREET AND SIDEWALK OPENING PERMITS.
- THE CONTRACTOR SHALL DEMOLISH AND REMOVE THE BUILDINGS WHERE INDICATED, INCLUDING ALL FLOOR SLABS, PITS, WALLS, FOOTINGS, GRADE BEAMS, COLUMNS, UTILITIES ETC. ALL VOIDS REMAINING FROM THE REMOVAL OF SUBSURFACE ELEMENTS SHALL BE BACKFILLED WITH COMPACTED MATERIAL AS PER THE FINAL GEOTECHNICAL ENGINEERING REPORT.
- ALL EXISTING SITE ELEMENTS SLATED FOR DEMOLITION SHALL BE REMOVED IN THEIR ENTIRETY INCLUDING, BUT NOT LIMITED TO, ASPHALT, BUSHES, TREES, PLANTERS, ETC. WITHIN THE CONTRACT LIMITS UNLESS OTHERWISE NOTED.
- CONTRACTOR TO VERIFY THAT ALL ENVIRONMENTAL CONCERNS (ASBESTOS, LEAD BASED PAINT, HAZMAT MATERIALS, UNDERGROUND STORAGE TANKS, TRANSFORMERS, ETC.) HAVE BEEN REMOVED PRIOR TO COMMENCEMENT OF DEMOLITION ACTIVITIES. THESE POTENTIAL CONCERNS ARE NOT SHOWN ON THIS PLAN. THE CONTRACTOR SHALL REFER TO THE ENVIRONMENTAL REPORTS AND DOCUMENTS FOR ENVIRONMENTAL CONCERN LOCATIONS AND DISPOSAL PROCEDURES.
- CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ADJACENT RIGHT-OF-WAYS AND ADJACENT PROPERTIES CLEAN DURING DEMOLITION.
- CONTRACTOR SHALL STOCKPILE REMOVED ASPHALT AND CONCRETE IN SEPARATE PILES. REMOVED MATERIAL MAY BE REUSED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND ENVIRONMENTAL REQUIREMENTS.
- CONTRACTOR TO PROVIDE DUST CONTROL MEASURES DURING DEMOLITION AND CONSTRUCTION ACTIVITIES.
- CONTRACTOR TO WASH TRUCK TIRES BEFORE EXITING THE CONSTRUCTION SITE.
- EXISTING IRRIGATION WELLS ONSITE SHALL BE DECOMMISSIONED BY NJ LICENSED WELL DRILLER.
- PER CITY ORDINANCE ALL UTILITY SERVICES TO BE ABANDONED ARE TO BE DISCONNECTED AT THE MAIN AND REMOVED FROM THE GROUND.



- LEGEND**
- PROPERTY LINE
 - x - x - x - UTILITY/DRAINAGE TO BE REMOVED
 - LIMIT OF DISTURBANCE
 - ▒ PAVEMENT, SITE WALLS, AND STAIRS TO BE REMOVED
 - ▒ LANDSCAPE TO BE REMOVED
 - ✕ EXISTING FEATURE TO BE REMOVED



RESERVE FOR DCA STAMP



ARCHITECT
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1250 I (EVE) STREET NW, SUITE 600
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CONSHOHOCKEN, PA 19428

INTERIOR DESIGNER
DCO DESIGN GROUP
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WILMINGTON, DE 19806

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BR+A CONSULTING ENGINEERS
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HIGHLAND ASSOCIATES
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CLARKS SUMMIT, PA 18411

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ARLINGTON, VA 22206

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LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, INC.
1 UNIVERSITY SQUARE DRIVE, SUITE 100
PRINCETON, NJ 08540
NJ CERTIFICATE OF AUTHORIZATION NO. 24GA27996400

KEY PLAN



REVISION
NO. | DESCRIPTION | DATE

DATE
20 MARCH, 2024
ISSUE

SHEET TITLE
SITE DEMOLITION PLAN

SHEET NO.
CD101

DATE
20 MARCH, 2024
ISSUE

SHEET TITLE
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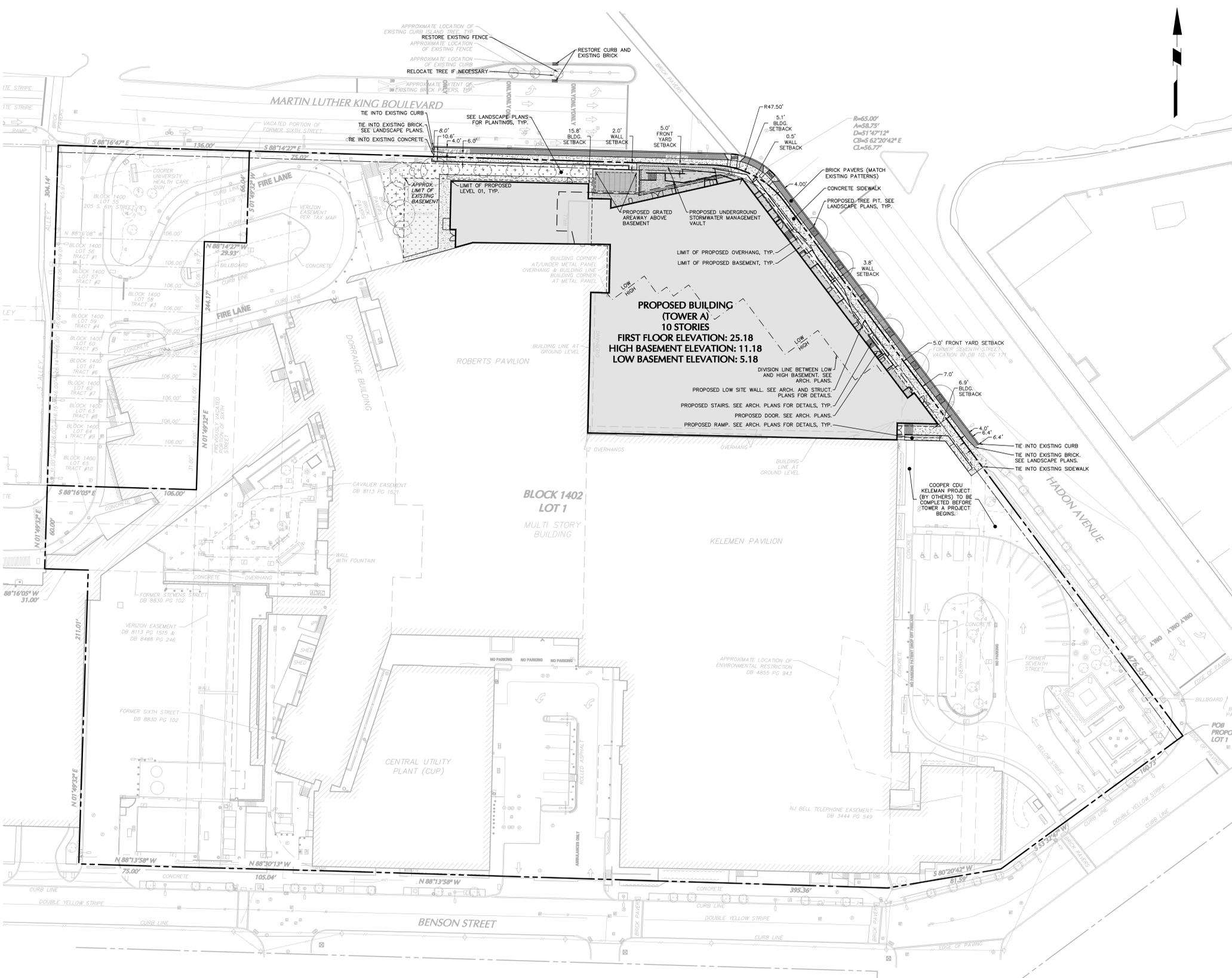
DATE
20 MARCH, 2024
ISSUE

CITY OF CAMDEN REGULATORY REQUIREMENT NOTES

- ALL TELEPHONE, ELECTRIC, TELEVISION, AND OTHER COMMUNICATION SERVICE FACILITIES, BOTH MAIN AND SERVICE LINES, ARE TO BE INSTALLED UNDERGROUND.
- THE OWNER, OR THEIR REPRESENTATIVE, IS TO DESIGNATE AN INDIVIDUAL RESPONSIBLE FOR CONSTRUCTION SITE SAFETY DURING THE COURSE OF SITE IMPROVEMENTS PURSUANT TO N.J.A.C. 5:23-2.21 (a) OF THE N.J. UNIFORM CONSTRUCTION CODE AND CFR 1926.32 (1) (OSHA COMPETENT PERSON).
- ALL SITE WORK CONSTRUCTION AND DETAILS MUST CONFORM TO THE STANDARDS OF THE CITY OF CAMDEN.
- THE CONTRACTOR (NOT CITY) SHALL BE RESPONSIBLE FOR ANY AND ALL COSTS (LABOR, MATERIAL AND EQUIPMENT) RELATED TO ANY WATER MAIN ISOLATION AND BY-PASSING OF THE SEWER TO MAKE A PROPOSED CONNECTION.
- THE CITY ENGINEER AND AMERICAN WATER ENTERPRISES MUST BE GIVEN 48 HOURS ADVANCE NOTICE OF SANITARY SEWER/WATER MAIN WORK, AND THE REPRESENTATIVES MUST WITNESS THE WORK AND CONNECTION.
- THE APPLICANT AND CONTRACTOR (NOT CITY) ARE RESPONSIBLE FOR THE PROPER ABANDONMENT OF ALL WATER/SEWER LATERAL DISCOVERED IN THE FIELD/SITE. ALL EXISTING WATER SERVICE LINES TO BE ABANDONED SHALL BE CUT AND CAPPED AT THE MAIN, IN ACCORDANCE WITH CAPITAL IMPROVEMENTS AND PROJECT MANAGEMENT (CP) STANDARDS, AND INSPECTED WITHIN 24 HOURS AFTER INSTALLATION OF NEW TAP. THE MAXIMUM OF ONE (1) TAP SHALL BE MADE FOR BOTH DOMESTIC AND FIRE SERVICE PER FACILITY. THE TAP SHALL BE THE MAXIMUM OF ONE (1) SIZE SMALLER THAN THE CITY'S WATER MAIN.
- THE INSTALLATION OF ALL WATER AND SEWER MAINS SHALL COMPLY WITH CITY ORDINANCES.
- ALL WATER/SEWER MAIN INSTALLATIONS AND TESTING SHALL BE WITNESSED/OBSERVED BY AN INSPECTOR OF THE CITY ENGINEER OR AMERICAN WATER, OR PLANNING BOARD ENGINEER.
- ALL WATER/SEWER SERVICES SHALL BE INSTALLED ON APPLICANT'S PROPERTY (AND NOT WITHIN CITY RIGHT-OF-WAY), EXCEPT WHEN MAKING CONNECTIONS TO THE EXISTING WATER AND/OR SEWER MAIN FROM THE VALVE BOX AND SEWER CLEANOUT RESPECTIVELY.
- THE OWNER/APPLICANT SHALL OWN, OPERATE AND MAINTAIN ALL WATER, SANITARY AND STORM SEWER MAINS AND APPURTENANCES OUTSIDE OF THE CITY RIGHT-OF-WAY.
- ALL WATER PIPES, FITTINGS AND VALVES SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH AWWA REQUIREMENTS.
- THRUST BLOCKS AND RESTRAINTS SHALL BE INSTALLED AT ALL BENDS AND FITTINGS. THRUST BLOCKS SHALL HAVE A 28-DAY STRENGTH OF 4,500 PSI.
- AIR RELEASE VALVES SHALL BE INSTALLED AT HIGH POINTS IN THE WATER MAIN.
- A SOLID DUCTILE IRON TAPPING SLEEVE SUCH AS MUELLER H-815 SLEEVE OR APPROVED EQUAL SHALL BE UTILIZED FOR TAPS 2" AND LARGER. THE TAPPING SLEEVE SHALL PASS PRESSURE TESTING BASED ON AWWA STANDARDS BEFORE TAP IS MADE.
- FOR ALL SERVICES REQUIRED HEREIN, TWO (2) GATE VALVES ARE REQUIRED THAT ARE TO BE INSTALLED BY THE APPLICANT. A TAPPING VALVE LOCATED AT THE TAP, AND A CURB VALVE LOCATED IN THE SIDEWALK BEFORE THE METER. TAPPING GATES SHALL BE FURNISHED OPENED RIGHT, ALL TAPPING AND CURB VALVES SHALL BE DOUBLE DISC GATE VALVES AND MEET AWWA STANDARDS.
- FOR TAPS OFF MAINS 2-INCHES AND LARGER, THE APPLICANT SHALL FURNISH AND INSTALL AN ADDITIONAL GATE VALVE ADJACENT TO THE TAPPING VALVE. NO TAPS SHALL BE PERMITTED ON MAINS LARGER THAN 20-INCHES UNLESS THERE IS NO ALTERNATE WATER SOURCE, AND A SPECIAL WRITTEN APPROVAL IS ISSUED BY THE CIP.
- VALVE BOX PARTS FOR ALL VALVES SHALL BE PROVIDED BY THE CONTRACTOR (NOT CITY). ALL TAPPING GATE VALVES LARGER THAN 2-INCHES AND ALL CURB VALVES/STOPS REGARDLESS OF SIZE REQUIRE A VALVE BOX WITH THE WORD "WATER" CAST IN THE COVER. BURIED CORPORATION VALVES/STOPS SHALL BE USED AT THE TAP FOR CLASS K COPPER SERVICES 2-INCHES AND SMALLER.
- ALL METERS SIZES 2 INCHES THROUGH 6 INCHES SHALL BE SINGLE COMPOUND METERS AND 8 INCH METERS 8 INCHES AND LARGER SHALL BE DUPLEX COMPOUND MANIFOLD METERS.
- ALL METERS SHALL BE ADEQUATELY RESTRAINED WITH METAL BRACKETS FASTENED TO THE FLOOR OR WALL OF OTHER APPROVED MEANS SUCH AS UNFANCES WHERE INTERNAL PIPE PRESSURE AND FLOW WARRANT SUCH RESTRAINTS. METERS, DETECTOR CHECKS, AND VALVES MAY BE SEATED ON CONCRETE BLOCK AND TAPPED SIMS TO PROVIDE ADEQUATE SUPPORT. METERS SHALL BE INSTALLED APPROXIMATELY 36" ABOVE FLOOR GRADE.
- ALL METER INSTALLATIONS IN METER PIT OR VAULT SHALL BE PRE-APPROVED BY CIP AND HAVE PROPER ACCESS OPENINGS FOR METER READING AND REPLACEMENT.

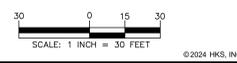
SITE NOTES

- THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO THEIR SATISFACTION PRIOR TO THE EXECUTION OF CONTRACTS, OR COMMENCING WORK. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER OF RECORD.
- BOUNDARY INFORMATION AND EXISTING FEATURES SHOWN HEREON ARE BASED ON "TOPOGRAPHIC SURVEY (SHOWING UTILITIES)" DATED 09/08/2023 PREPARED BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC.
- THE MERIDIAN OF THE PLAN IS REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATE SYSTEM (NAD 83) 2011 DERIVED USING SURVEY-GRADE GNSS EQUIPMENT.
- CONVERSION FROM NAVD 1988 TO NGVD IS AS FOLLOWS: EL. 17.00 (NAVD 88) + 1.09 = EL. 18.09 (NGVD 29)
- AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAPS TITLED, CAMDEN COUNTY, NEW JERSEY, COMMUNITY PANEL 28 OF 305, MAP NUMBER 34007C0028F, LAST REVISED, 08/17/2016, THE PROPERTY PRIMARILY LIES IN "OTHER AREAS", NOT WITHIN FLOOD AREA.
- ALL CURBS ON MLK BLVD TO BE 6-INCH REVEAL. CITY OF CAMDEN VERTICAL CURBS, AND ALL CURBS ON HADDON AVE TO BE 6-INCH REVEAL. CAMDEN COUNTY CURBS, UNLESS OTHERWISE NOTED, REGARDLESS OF WIDTH FROM FACE OF CURB TO BACK OF CURB SHOWN ON PLAN.
- FINAL EGRESS DOOR LOCATIONS TO BE COORDINATED WITH ARCHITECT.
- REFER TO ARCHITECTURAL DOCUMENTS FOR DETAILED BUILDING DIMENSIONS, MECHANICAL SYSTEMS, ROOF LEADERS, AND UTILITY CONNECTIONS AT BUILDING. MECHANICALS WILL BE PROVIDED AT THE TIME OF BUILDING PERMIT.
- ALL REGULATORY SIGNS AND TRAFFIC MARKINGS SHALL COMPLY WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.



LEGEND

- MAN DOOR
- STAIRS
- SIGN
- PROPOSED BUILDING (LEVEL 01)
- PROPOSED BASEMENT EXTENT
- PROPOSED DIVISION BETWEEN LOW AND HIGH BASEMENT
- PROPOSED BUILDING OVERHANG
- PROPOSED UNDERGROUND STORMWATER MANAGEMENT VAULT
- PROPOSED CURB
- PROPERTY LINE



RESERVE FOR DCA STAMP



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1250 (EVE) STREET NW, SUITE 600
WASHINGTON, DC 20005

ASSOCIATE ARCHITECT / INTERIOR DESIGNER
ARRAY
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CONSHOHOCKEN, PA 19428

INTERIOR DESIGNER
DCC DESIGN GROUP
2 MILL ST RD, SUITE 103
WILMINGTON, DE 19806

MEP/FP / LOW VOLTAGE ENGINEER
BR+ CONSULTING ENGINEERS
2401 WALNUT ST SUITE 701
PHILADELPHIA, PA 19103

CODE CONSULTANT
JENSEN HUGHES
102 HIGHLAND AVE
CLARKES SUMMIT, PA 18411

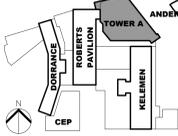
ELEVATOR CONSULTANT
ST. ONGE
1400 WILLIAMS RD
YORK, PA 17402



OWNER
COOPER UNIVERSITY HEALTHCARE
1 COOPER PLAZA
CAMDEN, NJ 08103

PROJECT MANAGER
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LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, INC.
1 UNIVERSITY SQUARE DRIVE, SUITE 100
PRINCETON, NJ 08540
NJ CERTIFICATE OF AUTHORIZATION NO. 24GA2798400



REVISION	NO.	DESCRIPTION	DATE

KYLE MACGEORGE
PROFESSIONAL ENGINEER
NJ Lic. No. 24GE0571600
HKS PROJECT NUMBER

DATE
20 MARCH, 2024
ISSUE

SHEET TITLE
SITE PLAN

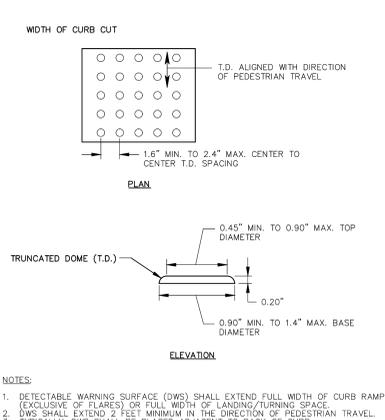
SHEET NO.
CS101

BUILDING PERMIT NUMBER: 41111

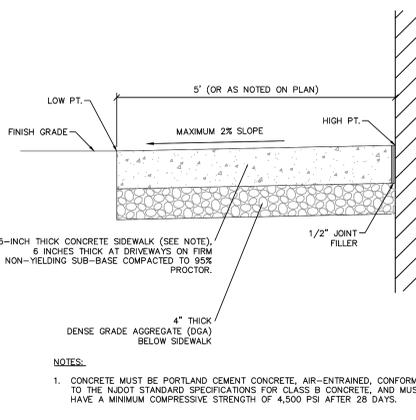
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MODEL
TEMPLATE VERSION
PRINT DATE

CAMDEN CITY ORDINANCE SPECIFICATIONS PER CITY SIDEWALK APPLICATION NOTES.

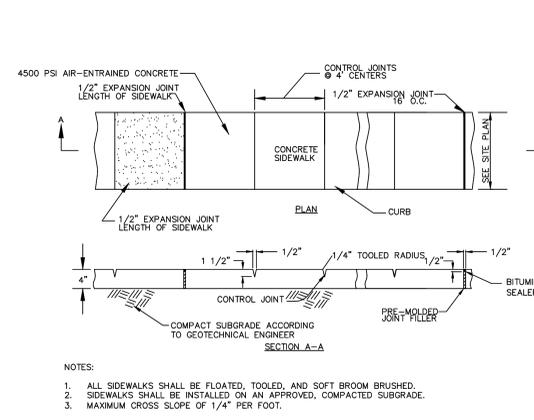
- A. CONCRETE MUST BE PORTLAND CEMENT CONCRETE, AIR-ENTRAINED, CONFORM TO THE NJDOT STANDARD SPECIFICATIONS FOR CLASS B CONCRETE, AND MUST HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AFTER 28 DAYS.
- B. INSTALL EXPANSION JOINT PAPER AGAINST EXISTING CONCRETE AND EVERY 20 FT.
- C. GRADES AND CROSS SLOPES: THE MAXIMUM SIDEWALK CROSS SLOPE IS 2%. THE MAXIMUM GRADE IS 12:1 (8.33%). HOWEVER, THE LONGITUDINAL GRADE OF THE SIDEWALK SHOULD BE CONSISTENT WITH THE GRADE OF THE ADJACENT ROADWAY. IF THE 12:1 GRADE IS NOT FEASIBLE DUE TO TOPOGRAPHY AND OTHER PHYSICAL CONSTRAINTS, THEN THE GRADE SHOULD BE DEVELOPED TO THE EXTENT FEASIBLE. WHEN SIDEWALK GRADES ARE STEEPER THAN 12:1 FOR A MAXIMUM DISTANCE OF 30 FEET ARE UNAVOIDABLE, A LEVEL 4 FOOT LONG LANDING SHOULD BE INCLUDED IF FEASIBLE (OR AT A DISTANCE THAT IS PRACTICABLE). SIDEWALK DEPTH: 5 IN. NOTE: NOT EXCEED 2% APRON DEPTH. ADA GUIDELINES: 8% HANDICAP RAMP DEPTH 6 IN., HANDICAP RAMPS SHALL BE INSTALLED UNDER ADA GUIDELINES. PLEASE REFER TO A LICENSED SURVEYOR AS NEEDED.
- D. TWO INSPECTIONS WILL BE PERFORMED PRIOR OF APPROVING WORK: 1) FORM INSPECTION, 2) POUR INSPECTION.
- E. CONTRACTOR OR UTILITY CO. RESPONSIBLE TO SUPPLY A CONCRETE SLIP.
- F. CURB INSTALLATION: MATCH EXISTING (PROVIDING AREAS ARE SMALL). PLEASE CONTACT INSPECTOR CARDI TO VERIFY APPROVED ADJUSTMENTS.
- G. CURB INSTALLATION: CURB DIMENSION 18 IN. VERTICAL, 7" WIDE (TOP), 8" WIDE (BOTTOM) (LARGE AREAS).
- H. CONTRACTOR OR UTILITY CO. MUST USE WATER WHEN SAW CUTTING CONCRETE OR ASPHALT TO PREVENT DUST IN THE AIR. CONTRACTOR/UTILITY CO. RESPONSIBLE TO CALL IN FOR MARKOUTS '811'.
- I. STREET RESTORATION: EXISTING CONCRETE BASE AND ASPHALT TOP. INSTALL 6 IN. CONCRETE BASE AND NJDOT ASPHALT TOP 2 IN. NOTE: EXISTING ASPHALT MUST BE SAW CUT SQUARE AT LEAST FOUR IN. BACK FROM EXISTING OPENING AROUND PERIMETER.
- J. STREET RESTORATION: ASPHALT STREET, NJDOT ASPHALT BASE, 6 IN., 2 IN. ASPHALT TOP, HOT TACK SEAMS INNER AND OUTER SEAM. GOLD TACK IS NOT ACCEPTED.
- K. STREET RESTORATION: CONCRETE STREET: 8 IN. DEPTH (CITY)
- L. WAITING TIME FOR CONCRETE SETTING UP IN THE STREET, WAITING PERIOD SHOULD BE A MINIMUM OF THREE DAYS PRIOR OF INSTALLING ASPHALT. STEEL PLATES SHOULD BE IN PLACE FOR THE SAFETY OF THE RESIDENTS OF THE CITY OF CAMDEN.
- M. ROAD RESTORATION: CONCRETE ROAD: 9 TO 10 IN. DEPTH AND INSTALL DOWEL RODS IN EXISTING SLAB. UTILITY CO. OR CONTRACTOR MUST REMOVE WHOLE SLAB (JOINT TO JOINT).
- N. PLEASE PROVIDE 95% TO 98% COMPACTION. COMPACT IN 12 IN. LIFTS. CONTRACTOR OR UTILITY CO. MUST USE NJDOT CERTIFIED CLEAN FILL (D04).
- O. INSPECTION SCHEDULING: PLEASE CALL MRS. WALKER AT (856) 757-7680
- P. CONTRACTOR OR UTILITY CO. RESPONSIBLE TO CLEAN AREA AND SECURE ALL EQUIPMENT PRIOR OF DEPARTING WORK AREA. CITY OF CAMDEN ACCEPTS NO LIABILITY.
- Q. CONTRACTOR/UTILITY CO. RESPONSIBLE TO PROVIDE TEMPORARY TRAFFIC CONTROL PLAN IN COMPLIANCE WITH MUTCD REQUIREMENTS IF NEEDED. REFER TO CAMDEN COUNTY POLICE DEPT. TRAFFIC CONTROL OFFICER LT. MOFFA AT (856) 757-7280. NOTE: MUST BE PRE-APPROVED PRIOR OF WORKING IN THE STREET OR SIDEWALK (IF RESTRICTING TRAFFIC). NOTE: SIDEWALK CLOSED: PLEASE INSTALL PEDESTRIAN SIDEWALK CLOSED SIGNS WITH ARROW DIRECTING ACROSS THE STREET OR PROVIDE OTHER OPTIONS IN COMPLIANCE WITH MUTCD REQUIREMENTS.



1 DETECTABLE WARNING SURFACE NOT TO SCALE

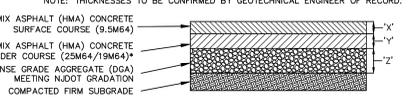


2 CITY OF CAMDEN CONCRETE SIDEWALK NOT TO SCALE

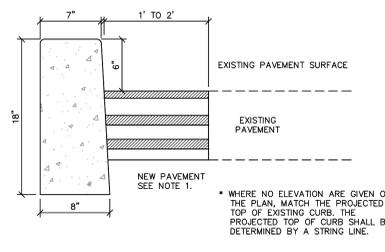


3 ON-SITE CONCRETE SIDEWALK NOT TO SCALE

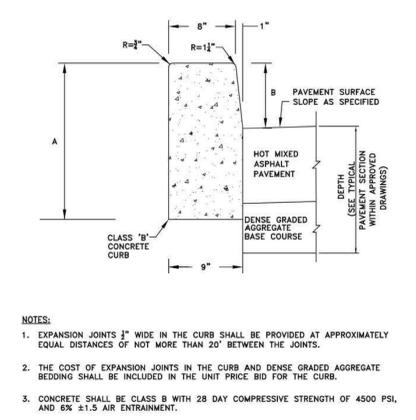
ASPHALT SECTION	SURFACE COURSE - "X"	BASE COURSE - "Y"	SUBBASE - "Z"
STANDARD DUTY	1.5 INCHES	2.5 INCHES	4 INCHES
HEAVY DUTY	1.5 INCHES	4 INCHES	6 INCHES
PUBLIC RIGHT-OF-WAY	2 INCHES	4 INCHES	6 INCHES



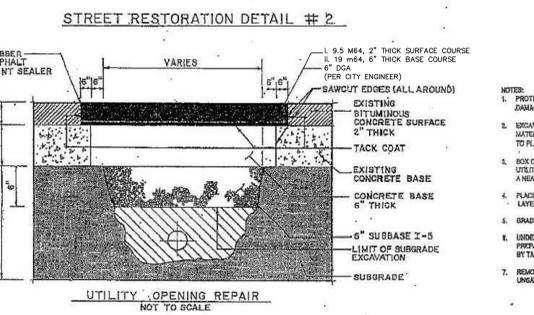
- NOTES:
1. PRIOR TO ANY ASPHALT PAVING ACTIVITIES, THE CONTRACTOR SHALL PROVIDE ASPHALT DESIGN MIX SUBMITTAL TO THE OWNER'S ENGINEER FOR REVIEW AND APPROVAL.
 2. PRIOR TO ANY ASPHALT PAVING ACTIVITIES, THE PAVEMENT SUBGRADE AND SUBBASE SHALL BE PROPERLY PREPARED AND ADEQUATELY COMPACTED AS REQUIRED BY GEOTECHNICAL ENGINEER OF RECORD RECOMMENDATION.
 3. ALL AREAS TO BE PAVED SHALL BE PRODFOLLED WITH A SMOOTH ROLLER HAVING A MINIMUM STATIC DRUM WEIGHT OF 6-7 TONS AND A FULLY LOADED TRI-AXLE DUMP TRUCK. ANY SOFT AREAS SHALL BE REMOVED AND REPLACED WITH APPROVED, COMPACTED FILL. FILL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 12-INCHES AND SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557.
 4. THE ASPHALT MIXTURE, AFTER BEING SPREAD, SHALL BE THOROUGHLY COMPACTED BY ROLLING AS SOON AS IT WILL BEAR THE WEIGHT OF THE ROLLERS WITHOUT UNDUE DISPLACEMENT. THE NUMBER, WEIGHT, AND TYPES OF ROLLERS AND SEQUENCES OF ROLLING OPERATIONS SHALL BE SUCH THAT THE REQUIRED DENSITY AND SURFACE ARE CONSISTENTLY ATTAINED WHILE THE MIXTURE IS IN A WORKABLE CONDITION.
 5. ASPHALT SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM THEORETICAL DENSITY ACCORDING TO ASTM D2041 FOR THE 9.5M64 AND 19M64 COURSES. FOR THE 25M64 COURSE, THE ASPHALT SHALL BE COMPACTED TO A MINIMUM OF 92% OF THE MAXIMUM THEORETICAL DENSITY, OR IN ACCORDANCE WITH GEOTECHNICAL ENGINEER OF RECORD RECOMMENDATION.
 6. A TESTING AGENCY SHALL PERFORM IN PLACE DENSITY TESTS AS PART OF THE CONSTRUCTION TESTING REQUIREMENTS USING THE NUCLEAR METHOD IN ACCORDANCE WITH ASTM D-2922 METHOD B DIRECT TRANSMISSION.
 7. APPLY TACK COAT TO ASPHALT CONCRETE BASE COURSE PRIOR TO PLACING SURFACE COURSE. APPLY EMULSIFIED ASPHALT TACK COAT BETWEEN EACH LIFT OR LAYER OF FULL DEPTH ASPHALT CONCRETE BASES, WHERE APPLICABLE.
 8. ASPHALT PAVING OPERATIONS SHALL ONLY OCCUR WHEN ATMOSPHERIC TEMPERATURE IS ABOVE 40F. DO NOT PLACE ASPHALT ON FROZEN GROUND OR IN STANDING WATER. DO NOT PAVE IN THE RAIN.



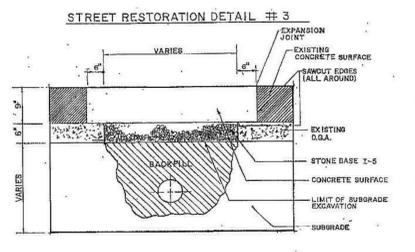
5 CITY OF CAMDEN 7' x 8' x 18' VERTICAL CONCRETE CURB NOT TO SCALE



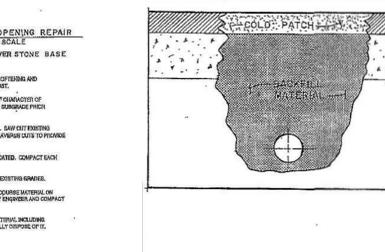
6 CAMDEN COUNTY 8' x 9' x 18' VERTICAL CONCRETE CURB NOT TO SCALE



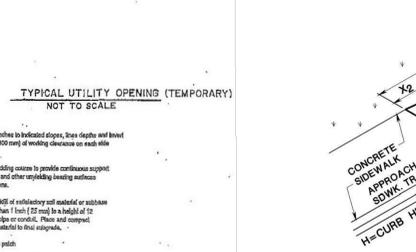
7 CITY OF CAMDEN STREET RESTORATION DETAIL #2 NOT TO SCALE



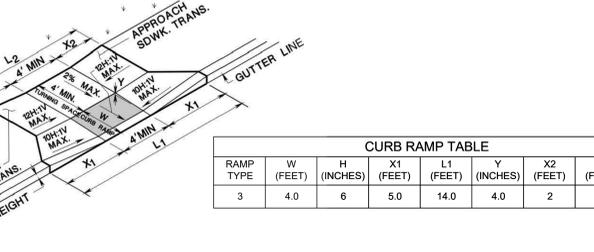
8 CITY OF CAMDEN STREET RESTORATION DETAIL #3 NOT TO SCALE



9 CITY OF CAMDEN STREET RESTORATION DETAIL #4 NOT TO SCALE



10 NJDOT CURB RAMP TYPE 3 NOT TO SCALE



RAMP TYPE	W (FEET)	H (INCHES)	X1 (FEET)	L1 (FEET)	Y (INCHES)	X2 (FEET)	L2 (FEET)
3	4.0	6	5.0	14.0	4.0	2	8

NOTE: CURB RAMP DETAIL PROVIDED FOR GENERAL REFERENCE. SEE SITE SPECIFIC GRADING PLAN ON DRAWING CG102.

RESERVE FOR DCA STAMP



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HKS, P.C.
12501 (EYE) STREET NW, SUITE 600
WASHINGTON, DC 20005

ASSOCIATE ARCHITECT / INTERIOR DESIGNER
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CONSHOHOCKEN, PA 19428

INTERIOR DESIGNER
DCC DESIGN GROUP
2 MILL ST. RD, SUITE 103
WILMINGTON, DE 19806

MEP-FP / LOW VOLTAGE ENGINEER
BRVA CONSULTING ENGINEERS
2401 WALNUT ST SUITE 701
PHILADELPHIA, PA 19103

HIGHLAND ASSOCIATES
102 HIGHLAND AVE
CLARIS SUMMIT, PA 18411

CODE CONSULTANT
JENSEN-HUGHES
30 S 15TH STREET, FLOOR 15
PHILADELPHIA, PA 19102

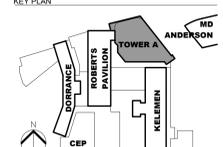
ELEVATOR CONSULTANT
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1 COOPER PLAZA
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PRINCETON, NJ 08540
NJ CERTIFICATE OF AUTHORIZATION NO. 24GA27996400



REVISION
NO. DESCRIPTION DATE

KYLE MACGEORGE
PROFESSIONAL ENGINEER
NJ Lic. No. 24GE05751600
HKS PROJECT NUMBER

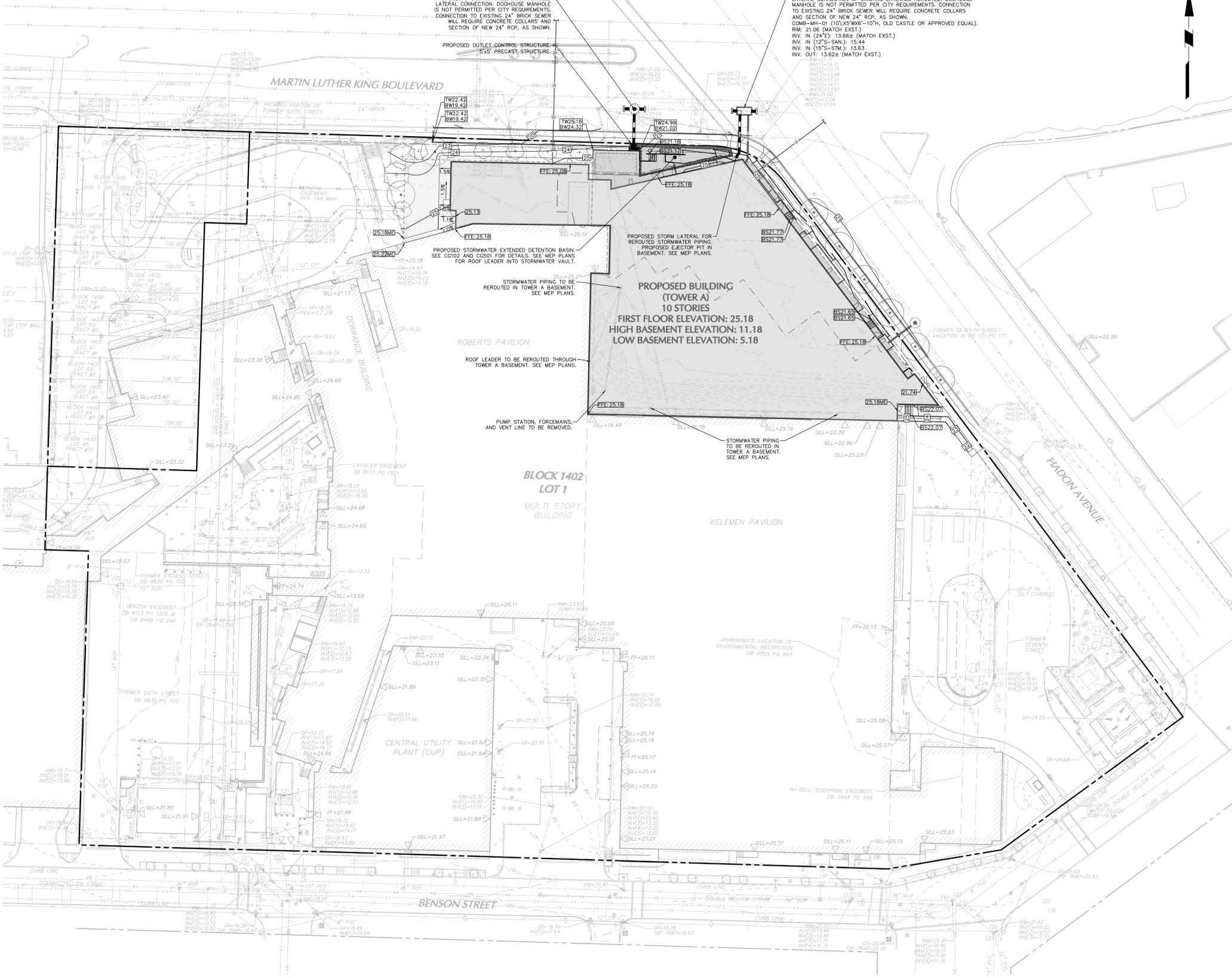
DATE
20 MARCH, 2024
ISSUE

SHEET TITLE
SITE DETAILS

SHEET NO.
CS501

CITY OF CAMDEN REGULATORY REQUIREMENT NOTES

- 1. ALL TELEPHONE, ELECTRIC, TELEVISION, AND OTHER COMMUNICATION SERVICE FACILITIES, BOTH MAIN AND SERVICE LINES, ARE TO BE INSTALLED UNDERGROUND.
2. THE OWNER OR THEIR REPRESENTATIVE IS TO DESIGNATE AN INDIVIDUAL RESPONSIBLE FOR CONSTRUCTION SITE SAFETY DURING THE COURSE OF THE SITE IMPROVEMENTS PURSUANT TO N.J.A.C. 5:23-2.21 (a) OF THE N.J. UNIFORM CONSTRUCTION CODE AND CFR 1926.32 (f) (OSHA COMPETENT PERSON).
3. ALL SITE WORK CONSTRUCTION AND DETAILS MUST CONFORM TO THE STANDARDS OF THE CITY OF CAMDEN.
4. THE CONTRACTOR (NOT CITY) SHALL BE RESPONSIBLE FOR ANY AND ALL COST (LABOR, MATERIAL, AND EQUIPMENT) RELATED TO ANY WATER MAIN ISOLATION AND BY-PASSING OF THE SEWER TO MAKE A PROPOSED CONNECTION.
5. THE CITY ENGINEER AND AMERICAN WATER ENTERPRISES MUST BE GIVEN 48 HOURS ADVANCE NOTICE OF SANITARY SEWER/WATERMAIN WORK, AND THE REPRESENTATIVES MUST WITNESS THE WORK AND CONNECTION.
6. THE APPLICANT AND CONTRACTOR (NOT CITY) ARE RESPONSIBLE FOR THE PROPER ABANDONMENT OF ALL WATER/SEWER LATERAL DISCOVERED IN THE FIELD/SITE. ALL EXISTING WATER SERVICE LINES TO BE ABANDONED SHALL BE CUT AND CAPPED AT THE MAIN IN ACCORDANCE WITH CAPITAL IMPROVEMENTS AND PROJECT MANAGEMENT (CIP) STANDARDS, AND INSPECTED WITHIN 24 HOURS AFTER INSTALLATION OF NEW TAP. THE MAXIMUM OF ONE (1) TAP SHALL BE MADE FOR BOTH DOMESTIC AND FIRE SERVICE PER FACILITY. THE TAP SHALL BE THE MAXIMUM OF ONE (1) SIZE SMALLER THAN THE CITY'S WATER MAIN.
7. THE INSTALLATION OF ALL WATER AND SEWER MAINS SHALL COMPLY WITH CITY ORDINANCES.
8. ALL WATER/SEWER MAIN INSTALLATIONS AND TESTING SHALL BE WITNESSED/OBSERVED BY AN INSPECTOR OF THE CITY ENGINEER OR AMERICAN WATER, OR PLANNING BOARD ENGINEER.
9. ALL WATER/SEWER SERVICES SHALL BE INSTALLED ON APPLICANT'S PROPERTY (AND NOT WITHIN CITY RIGHT-OF-WAY), EXCEPT WHEN MAKING CONNECTIONS TO THE EXISTING WATER AND/OR SEWER MAIN FROM THE VALVE BOX AND SEWER CLEANOUT RESPECTIVELY.
10. THE OWNER/APPLICANT SHALL OWN, OPERATE AND MAINTAIN ALL WATER, SANITARY AND STORM SEWER MAINS AND APPURTENANCES OUTSIDE OF THE CITY RIGHT-OF-WAY.
11. ALL WATER PIPES, FITTINGS AND VALVES SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH AWWA REQUIREMENTS.
12. THRUST BLOCKS AND RESTRAINTS SHALL BE INSTALLED AT ALL BENDS AND FITTINGS. THRUST BLOCKS SHALL HAVE A 28-DAY STRENGTH OF 4,500 PSI.
13. AIR RELEASE VALVES SHALL BE INSTALLED AT HIGH POINTS IN THE WATER MAIN.
14. A SOLID DUCTILE IRON TAPPING SLEEVE SUCH AS MUELLER H-615 SLEEVE OR APPROVED EQUAL SHALL BE UTILIZED FOR TAPS 2" AND LARGER. THE TAPPING SLEEVE SHALL PASS PRESSURE TESTING BASED ON AWWA STANDARDS BEFORE TAP IS MADE.
15. FOR ALL SERVICES INCLUDED HEREIN, TWO (2) GATE VALVES ARE REQUIRED THAT ARE TO BE INSTALLED BY THE APPLICANT. A TAPPING VALVE LOCATED AT THE TAP, AND A CURB VALVE LOCATED IN THE SIDEWALK BEFORE THE METER. TAPPING GATES SHALL BE FURNISHED OPENED RIGHT, ALL TAPPING AND CURB VALVES SHALL BE DOUBLE DISC GATE VALVES AND MEET AWWA STANDARDS.
16. FOR TAPS OFF MAINS 2-INCHES AND LARGER, THE APPLICANT SHALL FURNISH AND INSTALL AN ADDITIONAL GATE VALVE ADJACENT TO THE TAPPING VALVE. NO TAPS SHALL BE PERMITTED ON MAINS LARGER THAN 20-INCHES UNLESS THERE IS NO ALTERNATIVE WATER SOURCE, AND A SPECIAL WRITTEN APPROVAL IS ISSUED BY THE CIP.
17. VALVE BOX PARTS FOR ALL VALVES SHALL BE PROVIDED BY THE CONTRACTOR (NOT CITY). ALL TAPPING GATE VALVES LARGER THAN 2-INCHES AND ALL CURB VALVES/STOPS REGARDLESS OF SIZE REQUIRE A VALVE BOX WITH THE WORDS 'CAST IN THE COVER. BURIED CORPORATION VALVES/STOPS SHALL BE USED AT THE TAP FOR CLASS K COPPER SERVICES 2-INCHES AND SMALLER.
18. ALL METERS SIZES 2 INCHES THROUGH 6 INCHES SHALL BE SINGLE COMPOUND METERS AND ALL METERS 8 INCHES AND LARGER SHALL BE DUPLEX COMPOUND MANHOLE METERS.
19. ALL METERS SHALL BE ADEQUATELY RESTRAINED WITH METAL BRACKETS FASTENED TO THE FLOOR OR WALL OF OTHER RESTRAINTS SUCH AS UNFLANGES WHERE INTERNAL PIPE PRESSURE AND FLOW WARRANT. SUCH RESTRAINTS SHALL BE SEATED ON CONCRETE BLOCKS AND TAPERED SHIMS TO PROVIDE ADEQUATE SUPPORT. METERS SHALL BE INSTALLED APPROXIMATELY 36" ABOVE FLOOR GRADE.
20. ALL METER INSTALLATIONS IN METER PIT OR VAULT SHALL BE PRE-APPROVED BY CIP AND HAVE PROPER ACCESS OPENINGS FOR METER READING AND REPLACEMENT.
21. UPON COMPLETION OF ALL WATER/SEWER INSTALLATION, THREE (3) SETS OF 'AS-BUILT' DRAWINGS SHALL BE SUBMITTED TO THE CIP AND AMERICAN WATER ENTERPRISES. THE CIP WILL AUTHORIZE SUPPLY WATER UPON ACCEPTANCE OF THE 'AS-BUILT' DRAWINGS. SUBMISSION OF RECORD DRAWINGS IS REQUIRED IN ACCORDANCE WITH ORDINANCE FOR WATER SERVICES LINES AND SEWER LATERALS. 'AS-BUILT' PLANS SHALL BE PROVIDED BY THE CONTRACTOR AND SHALL BE PERFORMED BY A NEW JERSEY LICENSED PROFESSIONAL LAND SURVEYOR. AN ELECTRONIC FORMAT OF THE SAME IN COMPLIANCE WITH THE CITY ORDINANCE SHALL BE ALSO SUBMITTED.
22. ALL SEWER INSTALLATION SHALL CONFORM TO THE REQUIREMENT OF THE PROCEDURE MANUAL OF THE CITY OF CAMDEN.
23. ALL NECESSARY REPAIRS TO EXISTING MANHOLE AT SEWER CONNECTION AND RELINING OF THE MANHOLE WITH A LINER BY TERRES HILL COMPOSITE OR APPROVED EQUAL SHALL BE COMPLETED BY THE CONTRACTOR.
24. IT SHALL BE THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR TO RELOCATE ALL IMPACTED UTILITIES AT NO COST TO THE CITY.
25. TELEVISION INSPECTION OF THE NEW OFF-SITE AND ON-SITE STORM SYSTEM IS REQUIRED PRIOR TO FINAL ACCEPTANCE BY THE CITY.
26. A CCTV OF THE SANITARY/STORM SEWER ON DR MARTIN LUTHER KING BLVD AND HADDON AVE SHALL BE PERFORMED AND SUBMITTED TO THE CITY ENGINEER FOR REVIEW PRIOR TO ISSUING APPROVALS TO CONNECT TO THE CAMDEN CITY WATER AND SEWER SYSTEM.
27. VIDEO SEWER INSPECTIONS, INFILTRATION/EXFILTRATION TESTING AND PIPE ALIGNMENT TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY SEWER MANUAL ON ALL NEW PUBLIC SEWERS (PVC AND RCP) AT THE COMPLETION OF THE PROJECT, BUT PRIOR TO ACCEPTANCE AND/OR DEDICATION OF THE SAME TO THE CITY. THE MAXIMUM RATE OF INFILTRATION/EXFILTRATION SHALL NOT EXCEED THE ORDINANCE REQUIREMENT.
28. SELECT FILL FOR WATER/SEWER TRENCH INSTALLATION WITHIN THE CITY RIGHT OF WAY SHALL BE DENSE GRADED AGGREGATE 1-1/2" IN ACCORDANCE WITH THE SPECIFICATION SUBSECTION 901.08 OF THE NDOT STANDARD SPECIFICATION AND CONFORM TO THE TABLE A SECTION 077-229.2 OF THE ORDINANCE.
29. ALL PROPOSED PVC FOR SANITARY SEWER SHALL HAVE AN SDR CLASSIFICATION OF 35.
30. ALL CONCRETE STORMWATER PIPE SHALL BE MANUFACTURED AND SUPPLIED WITHOUT LIFTING HOLES.
31. ALL RCP FROM 24 INCHES UP TO AND INCLUDING 72 INCHES DIAMETER SHALL CONFORM TO ASTM C76, MINIMUM PIPE CLASS IV, WALL B (SECTION 577-229).
32. ALL PUBLIC CONCRETE STORM DRAIN PIPE IS TO EITHER HAVE RUBBER GASKETED OR BUTYL TAPED JOINTS. ALL LIFT HOLES AND BUTYL TAPED JOINTS SHALL BE WRAPPED AND MORTARED ON THE OUTSIDE.
33. EACH MANHOLE BASE AND INLET SHALL BE PROVIDED WITH CIRCULAR OPENINGS AT THE REQUIRED LOCATIONS AND ELEVATIONS FOR PROPER CONNECTION OF THE PIPES. THE FLEXIBLE CONNECTION SHALL BE A-LOK FLEXIBLE CONNECTOR, APPROVED EQUAL, AND SHALL BE CAST INTEGRALLY IN THE MANHOLE/INLET WALL FOR PIPE CONNECTIONS. NO PIPE PENETRATIONS SHALL BE LOCATED WITHIN 12" OF A JOINT.
34. ALL NEW MANHOLES AND CATCH BASINS SHALL HAVE AN EXTERIOR COATING OF CARBAMIDE TAR EPOXY JOOM, OR APPROVED EQUAL. TWO COATS. ALL REINFORCED CONCRETE PIPES SHALL BE LINED ON THE INTERIOR WITH A COAT OF TAR EPOXY SEAL WITH A MINIMUM OF 4 MIL IN THICKNESS (DFT) (SECTION 577-229).
35. ALL STORM INLETS WHICH ARE CONNECTED TO THE CITY COMBINED SEWER SHALL BE FURNISHED WITH A SUMP AND TRAP PER CITY STANDARDS.
36. PROPOSED MANHOLES CONSTRUCTED IN THE PUBLIC RIGHT-OF-WAY ON EXISTING OR PROPOSED CITY SEWERS SHALL BE FURNISHED WITH CONCENTRIC MANHOLES APPROVED BY THE CITY.
37. MANHOLE FRAMES AND COVERS ARE TO PROVIDE FOR A MINIMUM OF THIRTY INCH CLEAR OPENING AT THE COVER IN ORDER TO ALLOW EASY ACCESS UNDER CONFINED SPACE ENTRY REQUIREMENTS. CAMPBELL FOUNDRY PATTERN NUMBER 1012B OR NDOT APPROVED EQUAL. THE MINIMUM DIAMETER MANHOLE SHALL BE 48-INCHES. A MINIMUM ACCESS DIAMETER OF 30-INCHES SHALL BE PROVIDED.
38. MANHOLE COVERS SHALL BE A SOLID TYPE MARKED WITH SEWER.
39. A DROP MANHOLE CONNECTION SHALL BE USED WHERE THERE IS A DIFFERENCE IN ELEVATION OF TWO FEET OR GREATER BETWEEN THE PIPE INVERT AND THE MANHOLE INVERT ELEVATION. REFER TO CITY DETAILS.
40. ALL CONCRETE SHALL BE 4,500 PSI MINIMUM DESIGN MIX.
41. STRUCTURES SHOWN ON THESE DRAWINGS INCLUDE, BUT ARE NOT LIMITED TO: DRAINAGE STRUCTURES (INLETS, CATCH BASINS AND MANHOLES), SANITARY MANHOLES, METER PITS AND UNDERGROUND VAULTS ARE NOT STRUCTURALLY DESIGNED. THE DETAILS PROVIDED ARE FOR INFORMATION ONLY. LOCATIONS OF PENETRATIONS, INVERTS, AND GROUND ELEVATIONS AT THE STRUCTURE RM OR GRATE ONLY. THE STRUCTURAL DESIGN INCLUDING WALL AND SLAB THICKNESS AS WELL AS REINFORCING SHALL BE THE RESPONSIBILITY OF THE PRECAST MANUFACTURER TO MEET STATE DEPARTMENT OF TRANSPORTATION STANDARDS AND HS-20 OR HS-25 LOADING REQUIREMENTS WHEN POSITIONED IN TRAVELWAYS.
42. ALL GRADING, DRAINAGE, AND UTILITY INSTALLATION AND/OR CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS OR LOCAL REQUIREMENTS. SHOULD A DIFFERENCE IN REQUIREMENTS OCCUR, THE STRICTER OF THE TWO REGULATIONS WILL APPLY.
43. GRADE ALL AREAS OTHER THAN PAVED GRADED AREAS AND BUILDINGS INCLUDING EXCAVATED AREAS, FILLED AND TRANSITION AREAS, AND LANDSCAPED AREAS TO FINISH GRADE ELEVATIONS OR CONTOURS AS INDICATED ON DRAWINGS. FINISHED SUBGRADE SURFACE SHALL BE UNIFORM AND SMOOTH, FREE FROM ROCK, DEBRIS, OR IRREGULAR SURFACE CHANGES. SITE SHALL BE GRADED TO ALLOW FOR PROPER DRAINAGE WITHOUT FLOODING AND IN A MANNER THAT WILL MINIMIZE EROSION POTENTIAL.
44. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC LOADING AND BE INSTALLED ACCORDINGLY.
45. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL WATER TIGHT AND BE INSTALLED ACCORDINGLY.
46. SITE GRADING SHALL NOT PROCEED UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
47. LENGTHS OF STORM PIPES SHOWN ARE CENTER-TO-CENTER LENGTHS BETWEEN DRAINAGE STRUCTURES.
48. CONTRACTOR SHALL REVIEW ALL DRAINAGE CONNECTIONS TO MANHOLES AND CATCH BASINS AND ALL PIPING IS TO PROMOTE POSITIVE DRAINAGE AWAY FROM THE BUILDING.
49. EACH INLET BOX SHALL BE PROVIDED WITH CIRCULAR OPENINGS AT THE REQUIRED LOCATIONS AND ELEVATIONS FOR THE PROPER CONNECTION OF ALL PIPES. CIRCULAR CONNECTIONS SHALL BE SEALED WITH A FLEXIBLE SEAL ASSEMBLY SUCH AS A-LOK FLEXIBLE CONNECTOR BY A-LOK PRODUCTS, INC. OR APPROVED EQUAL.
50. REPORTED GROUNDWATER ELEVATIONS ARE BASED ON HIGHEST REPORTED VALUE FROM VARIOUS PRIOR SUBSURFACE EXPLORATIONS (B) OTHERS) GEOTECHNICAL REPORT TO BE PROVIDED UNDER SEPARATE COVER.
51. PROPOSED LANDSCAPE GRADING MUST NOT EXCEED 3:1.



STORMWATER MAINTENANCE NOTES

- 1. TO THE EXTENT PERMITTED BY LAW, THE CITY WILL AT ALL REASONABLE TIMES HAVE A RIGHT OF INGRESS AND EGRESS OVER THE EASEMENT AREA AND THE RIGHT TO ENTER THE EASEMENT AREA VIA ANY ROAD OR PARKING LOT LOCATED WITHIN ANY COMMON AREA OWNED BY THE GRANITOR TO INSPECT THE SYSTEM LOCATED IN THE EASEMENT AREA.
2. EXCEPT IN THE CASE OF AN EMERGENCY, THE CITY WILL PROVIDE NOT LESS THAN SEVEN (7) DAYS PRIOR NOTICE TO THE PERFORMING ANY INSPECTION OR MONITORING OF THE SYSTEM IN ACCORDANCE WITH APPROVED PLAN. THE APPLICANT AGREES THAT THE FAILURE TO TIMELY OBJECT AFTER RECEIVING NOTICE FROM THE CITY CONSTITUTES CONSENT TO INSPECTION OF THE PROPERTY WITHIN THE TIMEFRAME SPECIFIED IN THE NOTICE.
3. AFTER REASONABLE NOTICE BY THE CITY, THE APPLICANT FAILS TO MAINTAIN THE SYSTEM IN ACCORDANCE WITH THE APPROVED MANUAL AND THE MAINTENANCE PLAN, THE CITY MAY PERFORM ANY MAINTENANCE NEEDED TO CORRECT A CONDITION THAT IMPACTS THE EFFECTIVENESS OF ROUTINE MAINTENANCE AND OPERATIONS OF THE SYSTEM AND COLLECT ANY COSTS INCURRED AS A RESULT FROM EACH OWNER OF THE SYSTEM AND IN THE SAME MANNER AS REAL PROPERTY TAXES ARE COLLECTED. IN ADDITION, THE CITY MAY SEEK REIMBURSEMENT FOR ANY OTHER METHOD LEGALLY AVAILABLE TO COLLECT DEBTS OWED.
4. THE APPLICANT AGREES TO INDEMNIFY AND SAVE THE CITY HARMLESS FROM ANY AND ALL CLAIMS FOR DIRECT DAMAGES TO PERSONS OR PROPERTY ARISING FROM INSPECTIONS PERFORMED BY THE CITY.

GRADING AND DRAINAGE NOTES

- 1. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO THEIR SATISFACTION PRIOR TO THE EXECUTION OF CONTRACTS OR COMMENCING WORK. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER OF RECORD.
2. BOUNDARY INFORMATION AND EXISTING FEATURES SHOWN HEREON ARE BASED ON 'TOPOGRAPHIC SURVEY (SHOWING UTILITIES)' DATED 09/08/2023 PREPARED BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC.
3. THE MERIDIAN OF THE PLAN IS REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATE SYSTEM (NAD 83) 2011 DERIVED USING SURVEY-GRADE GNSS EQUIPMENT.
4. TOPOGRAPHIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC. DURING JULY 2023.
5. ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) DERIVED USING SURVEY-GRADE GNSS EQUIPMENT.
6. CONVERSION FROM NAVD 1988 TO NVD IS AS FOLLOWS: EL. 17.00 (NAVD 88) + 1.09 = EL. 18.09 (NVD 22)
7. AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAPS TITLED, CAMDEN COUNTY, NEW JERSEY, COMMUNITY PANEL 28 OF 305, MAP NUMBER 340020028, LAST REVISED 08/17/2016, THE PROPERTY PRIMARILY LIES IN 'OTHER AREAS', NOT WITHIN FLOOD AREA.
8. EXISTING FRAMES, COVERS, AND GRATES IN AREAS WHERE GRADES WILL BE REVISED BY FILLING OR CUTTING, OR PAVEMENT OVERLAY, MUST BE RESET TO MATCH FINAL GRADE (THIS INCLUDES MANHOLES, HANDHOLES, VALVE BOXES, INLETS, ETC) IN AREAS OF CUT. CONTRACTOR SHALL PROVIDE REQUIRED COVERAGE OF UTILITY AND STORMWATER LINES AS SPECIFIED BY THE UTILITY PURVEYOR.
9. PROPOSED STORMWATER PIPING TRENCHES MAY REQUIRE OVER EXCAVATION IN AREAS NOT CAPABLE OF SUPPORTING THE PROPOSED SYSTEMS. STABILIZATION WITH APPROVED BEDDING MATERIALS WILL BE REQUIRED. OWNERS GEOTECHNICAL ENGINEER MUST APPROVE BEDDING MATERIALS USED FOR STABILIZATION AND THE DEPTH OF THE OVER EXCAVATION.
10. CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITY CROSSINGS AND PROVIDING UTILITY DROPS AS REQUIRED. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF CROSSING CONFLICT OCCURS.
11. GRADING FOR ADA ACCESSIBLE ROUTES, RAMPS, PARKING AND LOADING SHALL BE IN ACCORDANCE WITH THE NEW JERSEY AMERICAN WITH DISABILITIES ACT ARCHITECTURAL BARRIER REMOVAL AND COMPLIANCE MANUAL. MAXIMUM SLOPES INCLUDE (1) RAMPS = 1:12, (2) WALKWAYS = 1:20, (3) ROUTES CROSS-SLOPE = 1:50 AND (4) PARKING AND LOADING AREAS = 1:50.
12. TEST PITS WILL BE REQUIRED TO CONFIRM ADEQUATE CLEAR DISTANCES BETWEEN PROPOSED AND EXISTING UTILITIES. TEST PITS SHALL BE PERFORMED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.

CALL BEFORE YOU DIG
1-800-272-1000
FOR FREE INFORMATION TO LOCATE UNDERGROUND UTILITIES
IT'S THE LAW TO CALL BEFORE YOU DIG
GARDEN STATE UNDERGROUND PLANT LOCATION SERVICE, INC.

RESERVE FOR DCA STAMP
1250 (EVE) STREET NW, SUITE 600
WASHINGTON, DC 20005



ARCHITECT
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HOSPITAL - TOWER A

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CIVIL/ENVIRONMENTAL/SCAPE ARCHITECT/TRAFFIC/SURVEY
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PRINCETON, NJ 08540



REVISION table with columns for NO., DESCRIPTION, and DATE.

DATE
20 MARCH, 2024
ISSUE

KYLE MACGEORGE
PROFESSIONAL ENGINEER
NJ Lic. No. 24GE05751600
HKS PROJECT NUMBER

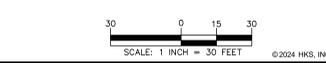
SHEET TITLE
OVERALL GRADING AND DRAINAGE PLAN

SHEET NO.
CG101

LEGEND

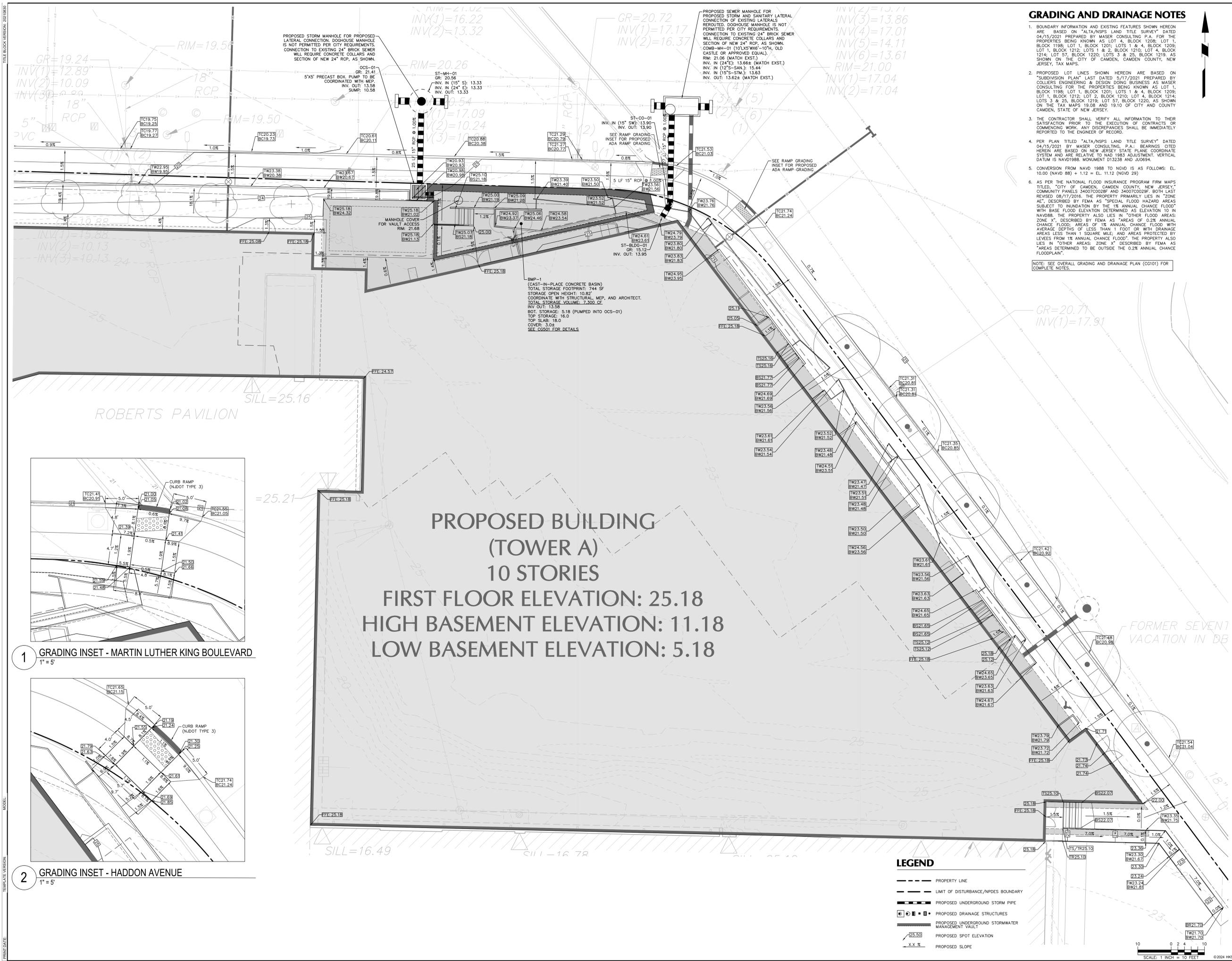
- PROPERTY LINE
--- LIMIT OF DISTURBANCE/MPDES BOUNDARY
--- PROPOSED UNDERGROUND STORM PIPE
--- PROPOSED DRAINAGE STRUCTURES
--- PROPOSED UNDERGROUND STORMWATER
--- PROPOSED SPOT ELEVATION
--- PROPOSED SLOPE
--- PROPOSED 1 FOOT CONTOUR LINE

NOTE: SEE C6102 FOR DETAILED GRADING AND DRAINAGE DESIGN.



BUILDING PERMIT NUMBER: 41111

TITLE BLOCK VERSION: 20210820
MATERIAL
PRINT DATE



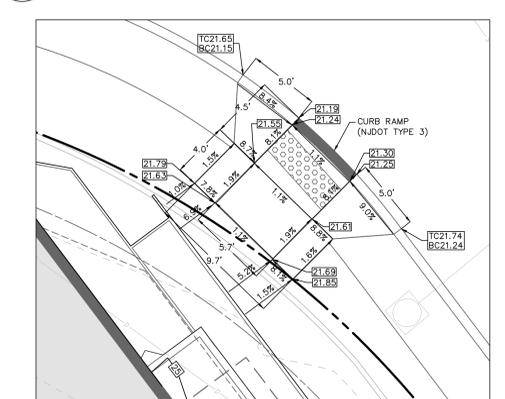
GRADING AND DRAINAGE NOTES

- BOUNDARY INFORMATION AND EXISTING FEATURES SHOWN HEREON ARE BASED ON "ALTA/NSPS LAND TITLE SURVEY" DATED 04/15/2021 PREPARED BY MASER CONSULTING, P.A. FOR THE PROPERTIES BEING KNOWN AS LOT 4, BLOCK 1208; LOT 1, BLOCK 1198; LOT 1, BLOCK 1201; LOTS 1 & 4, BLOCK 1209; LOT 1, BLOCK 1212; LOTS 1 & 2, BLOCK 1210; LOT 4, BLOCK 1214; LOT 57, BLOCK 1220; LOTS 3 & 25, BLOCK 1219. AS SHOWN ON THE CITY OF CAMDEN, CAMDEN COUNTY, NEW JERSEY, TAX MAPS.
- PROPOSED LOT LINES SHOWN HEREON ARE BASED ON "SUBDIVISION PLAN" LAST DATED 5/17/2021 PREPARED BY COLLIER ENGINEERING & DESIGN DOING BUSINESS AS MASER CONSULTING FOR THE PROPERTIES BEING KNOWN AS LOT 1, BLOCK 1198; LOT 1, BLOCK 1201; LOTS 1 & 4, BLOCK 1209; LOT 1, BLOCK 1212; LOT 2, BLOCK 1210; LOT 4, BLOCK 1214; LOTS 3 & 25, BLOCK 1219; LOT 57, BLOCK 1220. AS SHOWN ON THE TAX MAPS 19/08 AND 19/10 OF CITY AND COUNTY CAMDEN, STATE OF NEW JERSEY.
- THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO THEIR SATISFACTION PRIOR TO THE EXECUTION OF CONTRACTS OR COMMENCING WORK. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER OF RECORD.
- PER PLAN TITLED "ALTA/NSPS LAND TITLE SURVEY" DATED 04/15/2021 BY MASER CONSULTING, P.A.; BEARINGS CITED HEREIN ARE BASED ON NEW JERSEY STATE PLANE COORDINATE SYSTEM AND ARE RELATIVE TO NAD 1983 ADJUSTMENT. VERTICAL DATUM IS NAVD98. MONUMENT D13238 AND J0694.
- CONVERSION FROM NAVD 1988 TO NGVD IS AS FOLLOWS: EL. 10.00 (NAVD 88) + 1.12 = EL. 11.12 (NGVD 29)
- AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAPS TITLED "CITY OF CAMDEN, CAMDEN COUNTY, NEW JERSEY" COMMUNITY PANELS 340070028F AND 340070028F, BOTH LAST REVISED 08/17/2016, THE PROPERTY PRIMARILY LIES IN "ZONE X", DESCRIBED BY FEMA AS "SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD" WITH BASE FLOOD ELEVATION DETERMINED AS ELEVATION 10 IN NAVD88. THE PROPERTY ALSO LIES IN "OTHER FLOOD AREAS: ZONE X", DESCRIBED BY FEMA AS "AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE, AND AREAS PROTECTED BY LEAVES FROM 1% ANNUAL CHANCE FLOOD". THE PROPERTY ALSO LIES IN "OTHER AREAS: ZONE X" DESCRIBED BY FEMA AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN".

NOTE: SEE OVERALL GRADING AND DRAINAGE PLAN (CG101) FOR COMPLETE NOTES.

PROPOSED BUILDING (TOWER A)
10 STORIES
FIRST FLOOR ELEVATION: 25.18
HIGH BASEMENT ELEVATION: 11.18
LOW BASEMENT ELEVATION: 5.18

1 GRADING INSET - MARTIN LUTHER KING BOULEVARD
1" = 5'

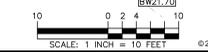


2 GRADING INSET - HADDON AVENUE
1" = 5'



LEGEND

- PROPERTY LINE
- - - LIMIT OF DISTURBANCE/NPDES BOUNDARY
- PROPOSED UNDERGROUND STORM PIPE
- PROPOSED DRAINAGE STRUCTURES
- PROPOSED UNDERGROUND STORMWATER MANAGEMENT VAULT
- PROPOSED SPOT ELEVATION
- PROPOSED SLOPE



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1 UNIVERSITY SQUARE DRIVE, SUITE 100
PRINCETON, NJ 08540
NJ CERTIFICATE OF AUTHORIZATION NO. 24GA2798400

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

DATE: **20 MARCH, 2024**
ISSUE

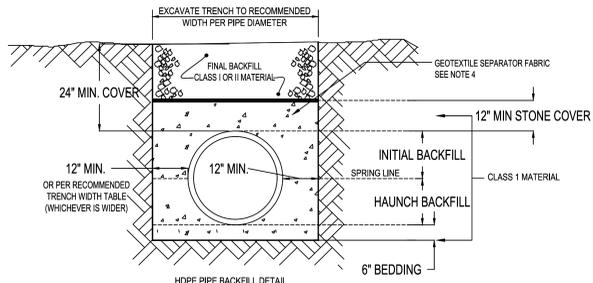
DATE: **20 MARCH, 2024**
ISSUE

SHEET TITLE: **DETAILED GRADING AND DRAINAGE PLAN**

SHEET NO.: **CG102**

DATE: 3/19/2024 Time: 10:26 User: mkozub Style Table: Langan.stb Layout: CG102 Document Code: 220187001-0301-CG101-0102

TITLE BLOCK VERSION: 20210820
 TEMPLATE VERSION: 20210820
 MODEL: 41111
 PRINT DATE:



- NOTES:**
1. BEDDING, HAUNCH, INITIAL BACKFILL, AND COVER SHALL BE CLASS 1 MATERIAL. CLASS 1 MATERIAL MUST BE EVENLY SPREAD INTO THE HAUNCH AND BETWEEN CORRUGATIONS. IF CLASS 1A MATERIAL IS USED, THE CLASS 1B MATERIAL SHOULD BE SPREAD IN 6-INCH THICK LIFTS AND COMPACTED TO AT LEAST 95% OF THE MATERIALS MAX DRY DENSITY.
 2. FINAL BACKFILL MATERIAL SHALL BE EITHER CLASS 1A OR B OR CLASS 1 MATERIAL. THESE MATERIALS CAN EITHER BE IMPORTED OR PROCESSED FROM ONSITE MATERIAL GENERATED DURING ROCK EXCAVATION.
 3. FINAL BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY A MODIFIED PROCTOR COMPACTION TEST (ASTM D1557).
 4. THE SEPARATOR FABRIC IS REQUIRED UNLESS OTHERWISE DIRECTED BY THE GEOTECHNICAL ENGINEER. THE NEED FOR A SEPARATOR FABRIC TO PREVENT SOIL PARTICLE MIGRATION SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER ONCE GRADATION DATA IS PROVIDED FOR ALL PROPOSED BACKFILL MATERIALS.

CLASSES OF EMBEDMENT AND BACKFILL MATERIALS

CLASS (PER ASTM D2222)	TYPE	SOIL GROUP SYMBOL ASTM D 2487	DESCRIPTION	PERCENTAGE PASSING SIEVE SIZES		
				1 1/2 IN (40 MM)	NO. 4 (4.75 MM)	NO. 200 (0.075 MM)
IA	MANUFACTURED AGGREGATES OPEN-GRADED, CLEAN.	NONE	ANGULAR, CRUSHED STONE OR ROCK, CRUSHED GRAVEL, BROKEN, CRUSHED SLAG, CONCRETE OR SHELLS, LARGE VOID CONTENT, CONTAIN LITTLE OR NO FINES.	100%	< 10%	< 5%
			ANGULAR, CRUSHED STONE (OR OTHER CLASS 1 MATERIALS) AND STONE/SAND MIXTURES WITH GRADATIONS SELECTED TO MINIMIZE MIGRATION OF ADJACENT SOILS. CONTAIN LITTLE OR NO FINES (SEE 11.1).	100%	< 50%	< 5%
II	COARSE-GRAINED SOILS, CLEAN.	GW	WELL-GRADED GRAVELS AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.	100%	< 50%	< 5%
			POORLY-GRADED GRAVELS AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.	< 50% OF "COARSE FRACTION"		
			WELL-GRADED SANDS AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.	< 50% OF "COARSE FRACTION"		
			POORLY-GRADED SANDS AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.	< 50% OF "COARSE FRACTION"		
			E.G. GW-GC, SP-SM.	SANDS AND GRAVELS WHICH ARE BORDERLINE BETWEEN CLEAN AND WITH FINES.	100%	VARIABLE
III	COARSE-GRAINED SOILS, WITH FINES.	GM	SILTY GRAVELS, GRAVEL-SAND MIXTURES.	100%	< 50% OF "COARSE FRACTION"	12% TO 50%
			CLAYEY GRAVELS, GRAVEL-SAND MIXTURES.	< 50% OF "COARSE FRACTION"		
			SILTY SANDS, SAND-SILT MIXTURES.	< 50% OF "COARSE FRACTION"		
			CLAYEY SANDS, SAND-CLAY MIXTURES.	< 50% OF "COARSE FRACTION"		

- GENERAL NOTES:**
1. MATERIALS UNLESS OTHERWISE SPECIFIED ON THE PLANS OR HEREIN, CORRUGATED POLYETHYLENE PIPE SHALL CONFORM TO ASHFTO M-204, LATEST EDITION, STANDARD SPECIFICATION FOR CORRUGATED POLYETHYLENE PIPE.
 2. RESINS: CORRUGATED POLYETHYLENE PIPE SHALL BE MANUFACTURED FROM HIGH DENSITY POLYETHYLENE VIRGIN COMPOUNDS, AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-3350 FOR THE CELL CLASSIFICATION 33540C.
 3. COUPLING BANDS: EXCEPT AS OTHERWISE REQUIRED HEREIN, COUPLING BANDS AND OTHER HARDWARE FOR CORRUGATED POLYETHYLENE PIPE SHALL EXHIBIT PROPERTIES THAT MEET THE SOIL TIGHTNESS REQUIREMENTS OF ASHFTO SECTION 29 STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
 4. COUPLING BANDS SHALL LAP EQUALLY ON EACH OF THE PIPES BEING CONNECTED TO FORM A TIGHTLY CLOSED JOINT AFTER INSTALLATION.
 5. THE CORRUGATIONS IN THE BAND SHALL INDEX THE CORRUGATIONS IN THE PIPE ENDS TO ENGAGE AT LEAST TWO FULL CORRUGATIONS FROM THE END OF EACH PIPE.
 6. WHEN INFILTRATION OR EXFILTRATION IS A CONCERN, THE COUPLING BANDS MAY BE REQUIRED TO HAVE GASKETS. THE GASKET MATERIAL SHALL BE CLOSED-CELL EXPANDED RUBBER OR NEOPRENE.
 7. OTHER COUPLINGS MAY BE BELL & SPIGOT AND CONFORM TO THE REQUIREMENTS OF ASHFTO M204.
 8. DESIGNATION OF TYPE: THE PIPE MAY BE ONE OR BOTH OF THE FOLLOWING TYPE:
 - TYPE S: THIS PIPE SHALL HAVE A FULL CIRCULAR CROSS-SECTION, WITH AN OUTER CORRUGATED PIPE WALL AND A SMOOTH INNER LINER.
 - TYPE D: THIS PIPE SHALL CONSIST OF AN ESSENTIALLY SMOOTH WATERWAY BRACED CIRCUMFERENTIALLY WITH CIRCULAR RIBS WHICH ARE FORMED SIMULTANEOUSLY WITH A SMOOTH OUTER WALL.
 9. INSTALLATION: CORRUGATED POLYETHYLENE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH TABLE 1 AND ASTM D-0221, LATEST EDITION, STANDARD PRACTICES FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE PER DESIGN AND OTHER GRAVITY FLOW APPLICATIONS.

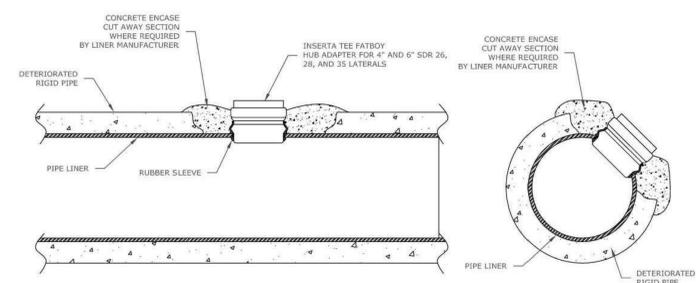
HIGH DENSITY CORRUGATED POLYETHYLENE PIPE

NOMINAL DIAMETER (IN. / MM)	HEIGHT OF COVER		RECOMMENDED TRENCH WIDTH	
	12"	18"	DIAMETER	TRENCH WIDTH
12 (300)	12 (300)	12 (300)	12"	14.63"
15 (375)	12 (300)	12 (300)	15"	17.62"
18 (450)	12 (300)	12 (300)	18"	21.10"
24 (600)	12 (300)	12 (300)	24"	28.30"
30 (750)	12 (300)	12 (300)	30"	36.10"
36 (900)	12 (300)	12 (300)	36"	42.25"
42 (1050)	12 (300)	12 (300)	42"	47.00"
48 (1200)	12 (300)	12 (300)	48"	53.00"
60 (1500)	12 (300)	12 (300)	60"	66.50"

The trench width must be wide enough to accommodate construction equipment.

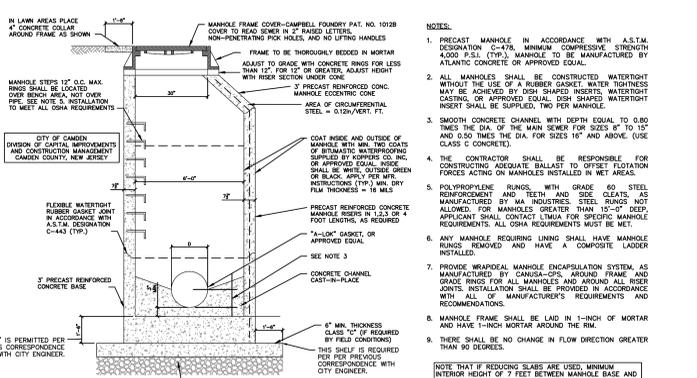
APPROXIMATE MAXIMUM COVER FOR HOPE PIPES (PER ASTM F2408, F1704). REFERENCE FROM ASD LITERATURE.

DIAMETER OF PIPE (IN. / MM)	CLASS 1		CLASS 2		CLASS 3	
	FT. (M)	80%	FT. (M)	80%	FT. (M)	80%
12 (300)	27 (8.2)	21 (6.4)	14 (4.3)	12 (3.6)		
15 (375)	27 (8.2)	21 (6.4)	14 (4.3)	13 (3.9)		
18 (450)	27 (8.2)	21 (6.4)	14 (4.3)	13 (3.9)		
24 (600)	22 (6.7)	16 (4.8)	11 (3.3)	12 (3.6)		
30 (750)	16 (4.8)	12 (3.6)	8 (2.4)	8 (2.4)		
36 (900)	12 (3.6)	10 (3.0)	7 (2.1)	7 (2.1)		
42 (1050)	12 (3.6)	10 (3.0)	9 (2.7)	10 (3.0)		
48 (1200)	10 (3.0)	10 (3.0)	9 (2.7)	10 (3.0)		
60 (1500)	20 (6.0)	15 (4.5)	10 (3.0)	10 (3.0)		

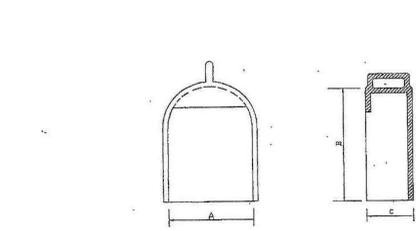


- INSTALLATION INSTRUCTIONS:**
1. MARK AREA TO BE TAPPED ON SURFACE OF RIGID PIPE. WORKING AREA SHOULD BE 2-INCHES WIDER THAN DIAMETER OF INSERTA TEE.
 2. BREAK AWAY RIGID PIPE SECTION TO BE TAPPED AND EXPOSE NEW LINER SECTION.
 3. BRUSH AND CLEAN PIPE LINER SURFACE AND REMOVE DAMAGED SECTIONS OF RIGID PIPE.
 4. CORE HOLE INTO LINER WITH APPROPRIATE INSERTA TEE HOLE SAW.
 5. INSTALL INSERTA TEE PATROY @ TAP CONNECTION PER PROVIDED INSTALLATION INSTRUCTIONS.
 6. ENCASE CUT OUT SECTION OF RIGID PIPE WITH CONCRETE WHERE REQUIRED BY LINER MANUFACTURER.

2 INSERTA-TEE SEWER CONNECTION
NOT TO SCALE

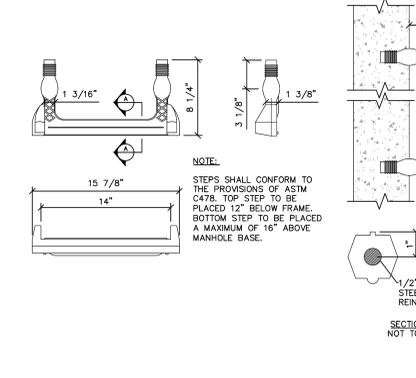


4 CITY OF CAMDEN STANDARD PRECAST MANHOLE
NOT TO SCALE



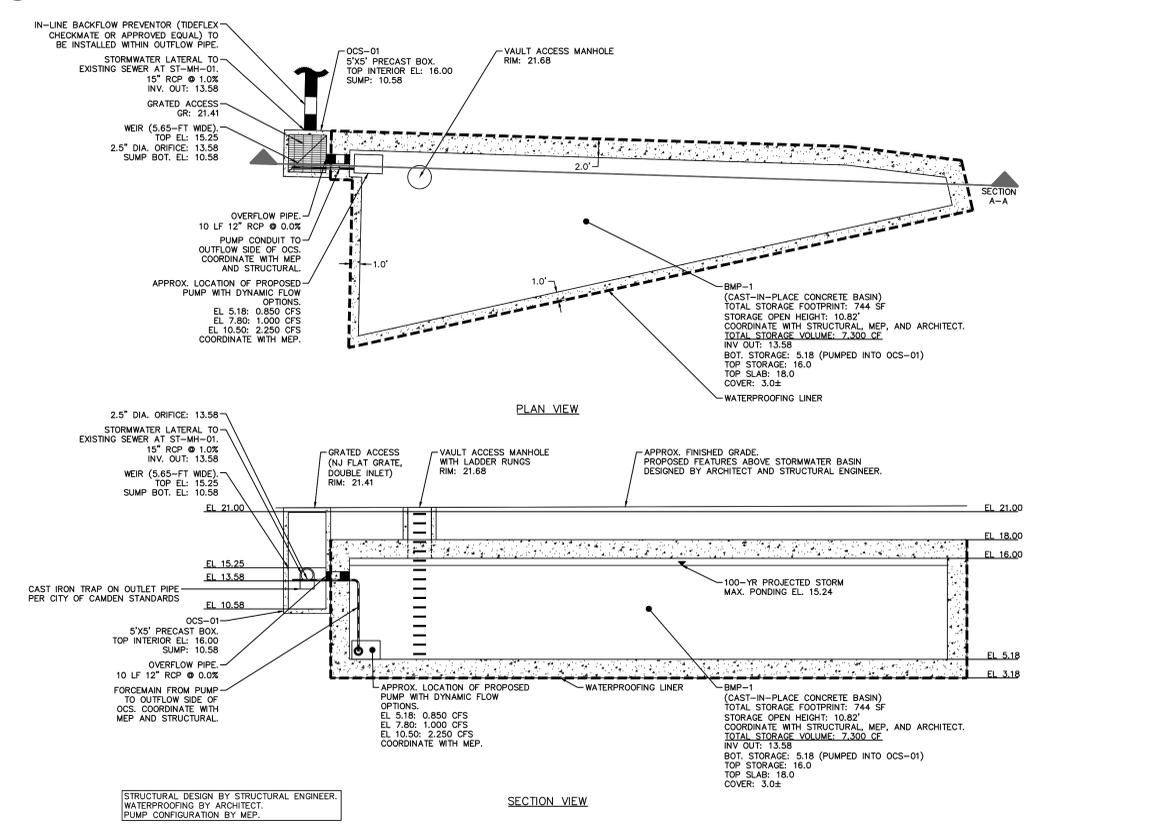
PATTERN NUMBER	A	B	C	PIPE SIZE
ES00	9 1/2"	26"	4 3/4"	6"
ES01	11 1/2"	28 1/2"	5 1/2"	8"
ES02	13 3/4"	30 1/2"	6 1/2"	10"
ES03	15 3/4"	32 1/2"	7 1/2"	12"
ES04	18"	37"	9"	15"
ES05	19"	37"	9"	18"
ES06	25 1/4"	50"	11 1/4"	24"

3 CITY OF CAMDEN STANDARD CAST IRON TRAP
NOT TO SCALE



5 CITY OF CAMDEN COPOLYMER POLYPROPYLENE PLASTIC STEEL REINFORCED MANHOLE STEP
NOT TO SCALE

1 HOPE PIPE INSTALLATION DETAIL
NOT TO SCALE



6 SCHEMATIC DETAIL OF PROPOSED UNDERGROUND EXTENDED DETENTION BASIN (BMP-1) AND OUTLET CONTROL STRUCTURE (OCS-01)
1" = 7.5'



RESERVE FOR DCA STAMP

HKS

ARRAY architects

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Cooper University Health Care

COOPER UNIVERSITY HOSPITAL - TOWER A

PROJECT ADDRESS: 1 COOPER PLAZA, CAMDEN, NJ 08103

OWNER
COOPER UNIVERSITY HEALTHCARE
1 COOPER PLAZA
CAMDEN, NJ 08103

PROJECT MANAGER
HAMMES
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ARLINGTON, VA 22206

CIVIL/ENVIRONMENTAL/GEOTECHNICAL/LANDSCAPE ARCHITECT/TRAFFIC/SURVEY
LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, INC.
1 UNIVERSITY SQUARE DRIVE, SUITE 100
PRINCETON, NJ 08540
NJ CERTIFICATE OF AUTHORIZATION NO. 24GA27996400

KEY PLAN

REVISION

DATE
20 MARCH, 2024

ISSUE

SHEET TITLE
GRADING AND DRAINAGE DETAILS

SHEET NO.
CG501

OWNER
COOPER UNIVERSITY HEALTHCARE
1 COOPER PLAZA
CAMDEN, NJ 08103

PROJECT MANAGER
HAMMES
2700 S. QUINCY STREET, SUITE 540
ARLINGTON, VA 22206

CIVIL/ENVIRONMENTAL/GEOTECHNICAL/LANDSCAPE ARCHITECT/TRAFFIC/SURVEY
LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, INC.
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KEY PLAN

REVISION

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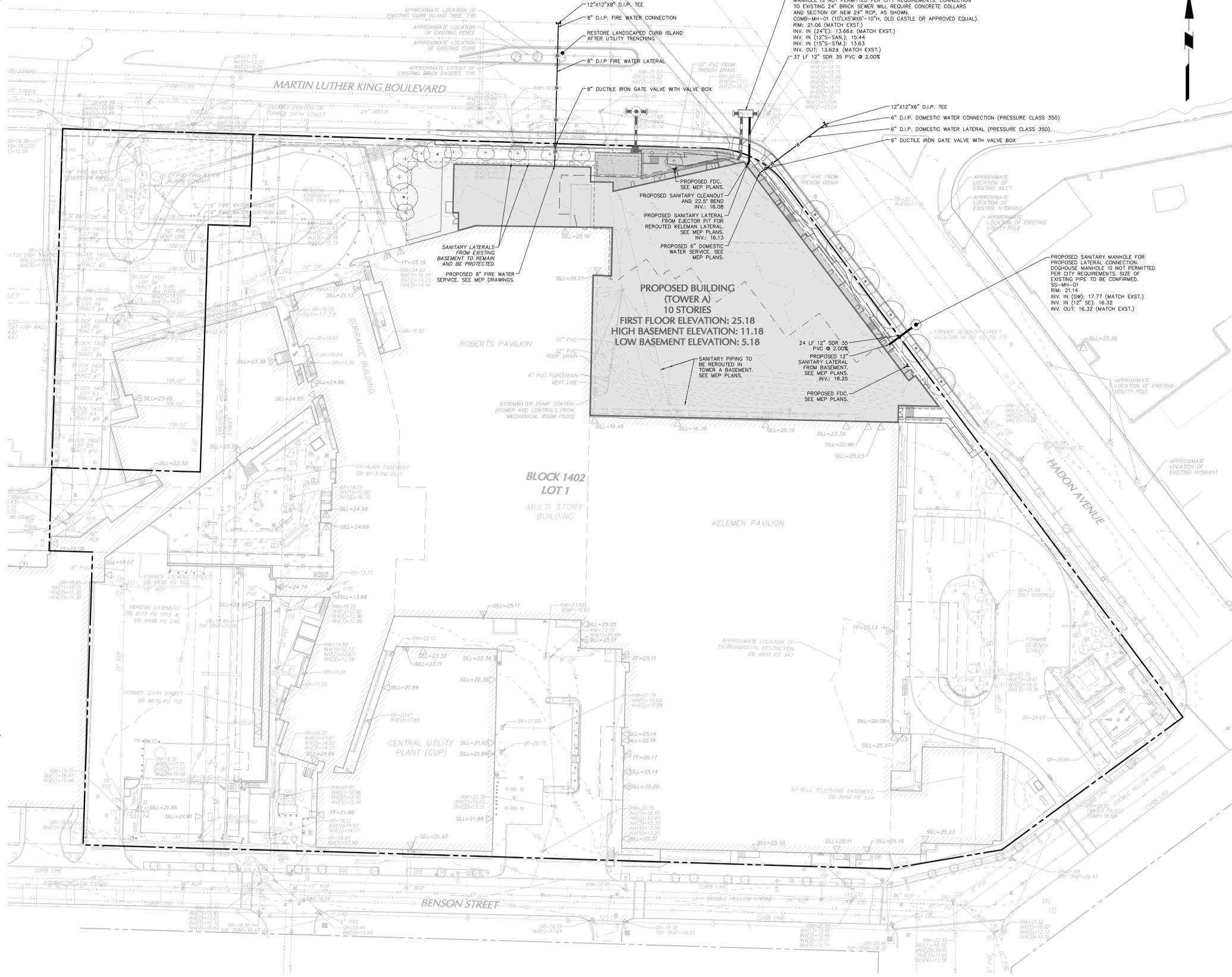
SHEET TITLE
GRADING AND DRAINAGE DETAILS

SHEET NO.
CG501

DATE: 3/19/2024 Time: 10:26 User: mkazub Style: Langan.stb Layout: CG501 Document Code: 220187001-0301-CU501-01-02

CITY OF CAMDEN REGULATORY REQUIREMENT NOTES

- 1. ALL TELEPHONE, ELECTRIC, TELEVISION, AND OTHER COMMUNICATION SERVICE FACILITIES, BOTH MAIN AND SERVICE LINES, ARE TO BE INSTALLED UNDERGROUND.
2. THE OWNER, OR THEIR REPRESENTATIVE, IS TO DESIGNATE AN INDIVIDUAL RESPONSIBLE FOR CONSTRUCTION SITE SAFETY DURING THE COURSE OF SITE IMPROVEMENTS PURSUANT TO N.J.A.C. 5:23-2.21 (e) OF THE N.J. UNIFORM CONSTRUCTION CODE AND CFR 1926.32 (f) (OSHA COMPETENT PERSON).
3. ALL SITE WORK CONSTRUCTION AND DETAILS MUST CONFORM TO THE STANDARDS OF THE CITY OF CAMDEN.
4. THE CONTRACTOR (NOT CITY) SHALL BE RESPONSIBLE FOR ANY AND ALL COST LABOR MATERIAL AND EQUIPMENT RELATED TO ANY WATER MAIN ISOLATION AND BY-PASSING OF THE SEWER TO MAKE A PROPOSED CONNECTION.
5. THE CITY ENGINEER AND AMERICAN WATER ENTERPRISES MUST BE GIVEN 48 HOURS ADVANCE NOTICE OF SANITARY SEWER INTERFERE WORK, AND THE REPRESENTATIVES MUST WITNESS THE WORK AND CONNECTION.
6. THE APPLICANT AND CONTRACTOR (NOT CITY) ARE RESPONSIBLE FOR THE PROPER ALIGNMENT OF ALL WATER/SEWER LATERAL DISCOVERED IN THE FIELD/SITE. ALL EXISTING WATER SERVICE LINES TO BE ABANDONED SHALL BE CUT AND CAPPED AT THE MAIN, IN ACCORDANCE WITH CAPITAL IMPROVEMENTS AND PROJECT MANAGEMENT (CIP) STANDARDS, AND INSPECTED WITHIN 24 HOURS AFTER INSTALLATION OF NEW TAP. THE MAXIMUM OF ONE (1) TAP SHALL BE MADE FOR BOTH DOMESTIC AND SEWER SERVICE PER FACILITY. THE TAP SHALL BE THE MAXIMUM OF ONE (1) SIZE SMALLER THAN THE CITY'S WATER MAIN.
7. THE INSTALLATION OF ALL WATER AND SEWER MAINS SHALL COMPLY WITH CITY ORDINANCES.
8. ALL WATER/SEWER MAIN INSTALLATIONS AND TESTING SHALL BE WITNESSED/OBSERVED BY AN INSPECTOR OF THE CITY ENGINEER OR AMERICAN WATER, OR PLANNING BOARD ENGINEER.
9. ALL WATER/SEWER SERVICES SHALL BE INSTALLED ON APPLICANT'S PROPERTY (AND NOT WITHIN CITY RIGHT-OF-WAY). EXCEPT WHEN MAKING CONNECTIONS TO THE EXISTING WATER AND SEWER MAIN FROM THE VALVE BOX AND SEWER CLEANOUT RESPECTIVELY.
10. THE OWNER/APPLICANT SHALL OWN, OPERATE AND MAINTAIN ALL WATER, SANITARY AND STORM SEWER MAINS AND APPURTENANCES OUTSIDE OF THE CITY RIGHT-OF-WAY.
11. ALL WATER PIPES, FITTINGS AND VALVES SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH AWWA REQUIREMENTS.
12. THRUST BLOCKS AND RESTRAINTS SHALL BE INSTALLED AT ALL BENDS AND FITTINGS. THRUST BLOCKS SHALL HAVE A 28-DAY STRENGTH OF 4,500 PSI.
13. AIR RELEASE VALVES SHALL BE INSTALLED AT HIGH POINTS IN THE WATER MAIN.
14. A SOLID DUCTILE IRON TAPPING SLEEVE SUCH AS MUELLER H-815 SLEEVE OR APPROVED EQUAL SHALL BE UTILIZED FOR TAPS 2" AND LARGER. THE TAPPING SLEEVE SHALL PASS PRESSURE TESTING BASED ON AWWA STANDARDS BEFORE TAP IS MADE.
15. FOR ALL SERVICES INCLUDED HEREIN, TWO (2) GATE VALVES ARE REQUIRED THAT ARE TO BE INSTALLED BY APPLICANT. TAPPING VALVES LOCATED AT THE TAP, AND A CURB VALVE LOCATED IN THE SIDEWALK BEFORE THE METER. TAPPING GATES SHALL BE FURNISHED OPENED RIGHT. ALL TAPPING AND CURB VALVES SHALL BE DOUBLE DISC GATE VALVES AND MEET AWWA STANDARDS.
16. FOR TAPS OFF MAINS 2-INCHES AND LARGER, THE APPLICANT SHALL FURNISH AND INSTALL AN ADDITIONAL GATE VALVE ADJACENT TO THE TAPPING VALVE. NO TAPS SHALL BE PERMITTED ON MAINS LARGER THAN 20-INCHES UNLESS THERE IS NO ALTERNATIVE WATER SOURCE, AND A SPECIAL WRITTEN APPROVAL IS ISSUED BY THE CIP.
17. VALVE BOX PARTS FOR ALL VALVES SHALL BE PROVIDED BY THE CONTRACTOR (NOT CITY). ALL TAPPING GATE VALVES LARGER THAN 2-INCHES AND ALL CURB VALVES/TAPS REGARDLESS OF SIZE REQUIRE A VALVE BOX WITH THE WORD "WATER" CAST IN THE COVER. BURIED CORPORATION VALVES/STOPS SHALL BE USED AT THE TAP FOR CLASS K COPPER SERVICES 2-INCHES AND SMALLER.
18. ALL METERS SIZES 2 INCHES THROUGH 6 INCHES SHALL BE SINGLE METERS AND ALL METERS 8 INCHES AND LARGER SHALL BE DUPLEX COMPOUND MANIFOLD METERS.
19. ALL METERS SHALL BE ADEQUATELY RESTRAINED WITH METAL BRACKETS FASTENED TO THE SEWER OR WALL OF OTHER APPROVED MEANS SUCH AS UNFLANGES WHERE INTERNAL PIPE PRESSURE AND FLOW WARRANT SUCH RESTRAINTS. METERS, DETECTOR CHECKS, AND VALVES MAY BE SEATED ON CONCRETE BLOCK AND TAPERED SHOULD PROVIDE ADEQUATE SUPPORT. METERS SHALL BE INSTALLED APPROXIMATELY 36" ABOVE FLOOR GRADE.
20. ALL METER INSTALLATIONS IN METER PIT OR VAULT SHALL BE PRE-APPROVED BY CIP AND HAVE PROPER ACCESS OPENINGS FOR METER READING AND REPLACEMENT.
21. UPON COMPLETION OF ALL WATER/SEWER INSTALLATION, THREE (3) SETS OF "AS-BUILT" PLANS SHALL BE SUBMITTED TO THE CIP AND AMERICAN WATER ENTERPRISES. THE CIP WILL AUTHORIZE SUPPLY WATER UPON ACCEPTANCE OF THE "AS-BUILT" DRAWINGS. SUBMISSION OF RECORD DRAWINGS IS REQUIRED IN ACCORDANCE WITH ORDINANCE FOR WATER SERVICES LINES AND SEWER LATERALS. NEW "AS-BUILT" PLANS SHALL BE PROVIDED BY THE CONTRACTOR AND SHALL BE PERFORMED BY A NEWLY LICENSED PROFESSIONAL LAND SURVEYOR. AN ELECTRONIC FORMAT OF THE SAME IN COMPLIANCE WITH THE CITY ORDINANCE SHALL ALSO BE SUBMITTED.
22. ALL SEWER INSTALLATION SHALL CONFORM TO THE REQUIREMENT OF THE PROCEDURE MANUAL OF THE CITY OF CAMDEN.
23. ALL NECESSARY REPAIRS TO EXISTING MANHOLE AT SEWER CONNECTION AND RELINING OF THE MANHOLE WITH A LINER BY TERRES WILL COMPOSITE OR APPROVED EQUAL SHALL BE COMPLETED BY THE CONTRACTOR.
24. IT SHALL BE THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR TO RELOCATE ALL IMPACTED UTILITIES AT NO COST TO THE CITY.
25. TELEVISION INSPECTION OF THE NEW OFF-TAPE AND ON-TAPE STORM SYSTEM IS REQUIRED PRIOR TO FINAL ACCEPTANCE BY THE CITY.
26. A CCTV OF THE SANITARY/STORM SEWER ON DR MARTIN LUTHER KING BLVD AND HADDON AVE SHALL BE PERFORMED AND SUBMITTED TO THE CITY ENGINEER FOR REVIEW PRIOR TO ISSUING APPROVALS FOR CONSTRUCTION. THE PROJECT MUST BE IN ACCEPTANCE AND/OR DEDICATION OF THE SAME TO THE CITY. THE MAXIMUM INFLTRATION RATE OF INFILTRATION/EXFILTRATION SHALL NOT EXCEED THE ORDINANCE REQUIREMENT.
27. VIDEO SEWER INSPECTIONS, INFILTRATION/EXFILTRATION TESTING AND PIPE ALIGNMENT TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY SEWER MANUAL ON ALL NEW PUBLIC SEWERS (PVC AND RCP) AT THE COMPLETION OF THE PROJECT, BUT PRIOR TO ACCEPTANCE AND/OR DEDICATION OF THE SAME TO THE CITY. THE MAXIMUM INFLTRATION RATE OF INFILTRATION/EXFILTRATION SHALL NOT EXCEED THE ORDINANCE REQUIREMENT.
28. SELECT FILL FOR WATER/SEWER TRENCH INSTALLATION WITHIN THE CITY RIGHT-OF-WAY SHALL BE DENSE GRADED AGGREGATE I-5, IN ACCORDANCE WITH THE SPECIFICATION SUBSECTION 901.08 OF THE NDOT STANDARD SPECIFICATION AND CONFORM TO THE TABLE IN SECTION 577-229.H OF THE ORDINANCE.
29. ALL PROPOSED PVC FOR SANITARY SEWER SHALL HAVE AN CLASSIFICATION OF 35.
30. ALL CONCRETE STORMWATER PIPE SHALL BE MANUFACTURED AND SUPPLIED WITHOUT LIFTING HOLES.
31. ALL RCP FROM 24 INCHES UP TO AND INCLUDING 72 INCHES DIAMETER SHALL CONFORM TO ASTM 075, MINIMUM PIPE CLASS IV, WALL B (SECTION 577-229).
32. ALL PUBLIC CONCRETE STORM DRAIN PIPE IS TO EITHER HAVE RUBBER GASKETED OR BUTYL TAPED JOINTS. ALL LIFT HOLES AND BUTYL TAPED JOINTS SHALL BE WRAPPED AND MORTARED ON THE OUTSIDE.
33. EACH MANHOLE BASE AND INLET SHALL BE PROVIDED WITH CIRCULAR OPENINGS AT THE REQUIRED LOCATIONS AND ELEVATIONS FOR PROPER CONNECTION OF THE PIPES. THE FLEXIBLE CONNECTION SHALL BE A-LOCK FLEXIBLE CONNECTOR, OR APPROVED EQUAL, AND SHALL BE CAST INTEGRALLY IN THE MANHOLE/INLET WALL FOR ALL PIPE CONNECTIONS. NO PIPE PENETRATIONS SHALL BE LOCATED WITHIN 12" OF A JOINT.
34. ALL NEW MANHOLES AND CATCH BASINS SHALL HAVE AN EXTERIOR COATING OF CARBOLINE COAL TAR EPOXY JOINT, OR APPROVED EQUAL, TWO COATS. ALL REINFORCED CONCRETE PIPES SHALL BE LINED ON THE INTERIOR WITH A COAT OF TAR EPOXY SEAL WITH A MINIMUM OF 4 MILS IN THICKNESS (DFT) (SECTION 577-229).
35. ALL STORM INLETS WHICH ARE CONNECTED TO THE CITY COMBINED SEWER SHALL BE FURNISHED WITH A SUMP AND TRAP PER CITY STANDARDS.
36. PROPOSED MANHOLES CONSTRUCTED IN THE PUBLIC RIGHT-OF-WAY ON EXISTING OR PROPOSED CITY SEWERS SHALL BE FURNISHED WITH CONCENTRIC MANHOLES APPROVED BY THE CITY.
37. MANHOLE FRAMES AND COVERS ARE TO PROVIDE FOR A MINIMUM OF THIRTY INCH CLEAR OPENING AT THE COVER IN ORDER TO ALLOW EASY ACCESS UNDER CONFINED SPACE. ENTRY REQUIREMENTS, CAMPBELL FOUNDRY PATTERN NUMBER 1012B OR NDOT APPROVED EQUAL. THE MINIMUM DIAMETER MANHOLE SHALL BE 48-INCHES. A MINIMUM ACCESS DIAMETER OF 30-INCHES SHALL BE PROVIDED.
38. MANHOLE COVERS SHALL BE A SOLID TYPE MARKED WITH SEWERS.
39. A DROP MANHOLE CONNECTION SHALL BE USED WHERE THERE IS A DIFFERENCE IN ELEVATION OF TWO FEET OR GREATER BETWEEN THE PIPE INVERT IN AND THE MANHOLE INVERT ELEVATION. REFER TO CITY DETAILS.
40. ALL CONCRETE SHALL BE 4,500 PSI MINIMUM DESIGN MIX.
41. WATER SYSTEM SHALL BE PROVIDED WITH WATER METER AND DOUBLE CHECK VALVE BACKFLOW DEVICES PER UTILITY PURVEYOR AND LOCAL JURISDICTION REQUIREMENTS.
42. PROPOSED WATER SERVICE PIPE SHALL BE CEMENT LINED DUCTILE IRON PIPE (DIP) - CLASS 52.
43. PRIVATE FIRE MAINS SHALL CONFORM WITH NFPA24. CONCRETE ENCASUREMENT SHALL BE PROVIDED, AS REQUIRED.
44. WHERE APPLICABLE, HYDRANTS SHALL BE INSTALLED AT A MINIMUM OF 2.5 FEET FROM BACK OF CURB.
45. FINAL FIRE DESIGN WILL BE BASED ON FIRE PROTECTION DRAWINGS BY FIRE PROTECTION ENGINEER.
46. ALL SANITARY SEWERS SHALL BE POLYVINYL CHLORIDE (PVC).
47. ALL STORM AND SANITARY/COMBINED SEWER SERVICE OVER 6 INCH DIAMETER SHALL TIE INTO THE SEWER MAIN WITH A MANHOLE.
48. CONTRACTOR SHALL PERFORM PRESSURE TESTING OF ALL SANITARY SEWERS IN ACCORDANCE WITH THE CITY MANUAL.
49. THRUST BLOCKS AND RESTRAINTS SHALL BE INSTALLED AT ALL BENDS AND FITTINGS. THRUST BLOCKS SHALL HAVE 28 DAY STRENGTH OF 4,500 PSI.
50. EACH BUILDING CONNECTION REQUIRES A CURB CLEANOUT.
51. CONTRACTOR MUST FIELD VERIFY THE SIZE, MATERIAL, DEPTH, CONDITION, DIRECTION OF FLOW, AND ANY OTHER RELEVANT CONDITIONS OF THE EXISTING CITY SEWER TO WHICH THEY WILL CONNECT TO DETERMINE IF SAID CONNECTION IS PHYSICALLY POSSIBLE AND PRACTICAL.
52. PIPELINES SHALL BE NO CLOSER THAN 10 FEET TO EXISTING OR PROPOSED TREES.
53. GAS AND ELECTRIC NETWORKS ARE SHOWN FOR SCHEMATIC PURPOSES ONLY. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER, ARCHITECT, AND MEP ENGINEER TO DETERMINE ACTUAL LOCATION AND SERVICE SIZE. CONCRETE ENCASUREMENT SHALL BE PROVIDED, AS REQUIRED.
54. ALL RCP SHALL BE LINED ON THE INTERIOR WITH A COAT OF TAR EPOXY SEAL COAT WITH A MINIMUM OF FOUR (4) MILS IN THICKNESS (DFT).
55. THERE SHALL BE A MINIMUM VERTICAL SEPARATION DISTANCE OF 18 INCHES BETWEEN WATER LINES AND SANITARY OR STORM SEWERS.
56. IN AREAS WHERE PROPOSED WATER LINES CROSS SANITARY SEWER LINES (EXISTING AND PROPOSED), THE SANITARY SEWER PIPE SHALL BE ENCASED IN CONCRETE IF VERTICAL SEPARATION IS LESS THAN 18 INCHES OR IF HORIZONTAL SEPARATION IS LESS THAN 10 FEET.
57. CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITY CROSSINGS AND PROVIDING UTILITY DROPS AS REQUIRED. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF CROSSING CONFLICT OCCURS.
58. WATER SERVICE LINES SHALL HAVE A MINIMUM COVER OF 4 FEET AND MAXIMUM COVER OF 5 FEET.
59. A SHUTOFF VALVE SHALL BE PROVIDED AHEAD OF WATER METER ON ALL SERVICE LINES.
60. CONTRACTOR TO COORDINATE WITH CAMDEN ENVIRONMENTAL AND CONSTRUCTION ENGINEERING FOR REGULATORY REQUIREMENTS AND COMPLIANCE.



UTILITY NOTES

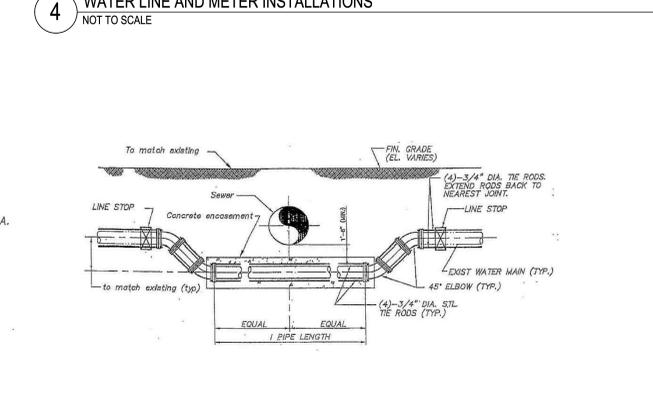
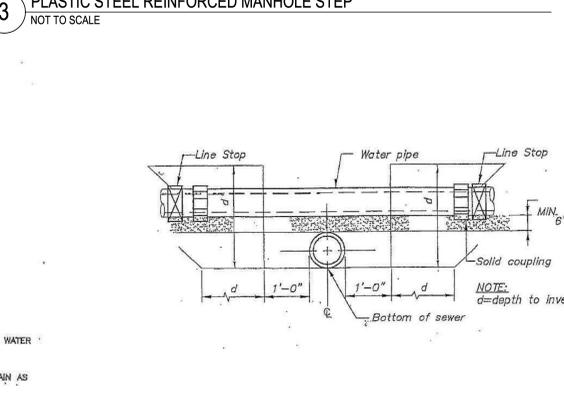
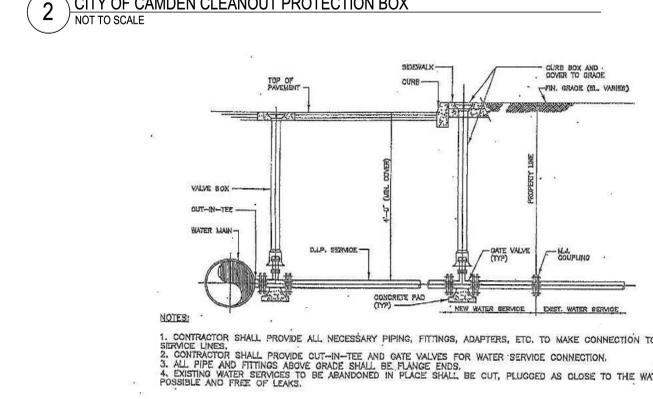
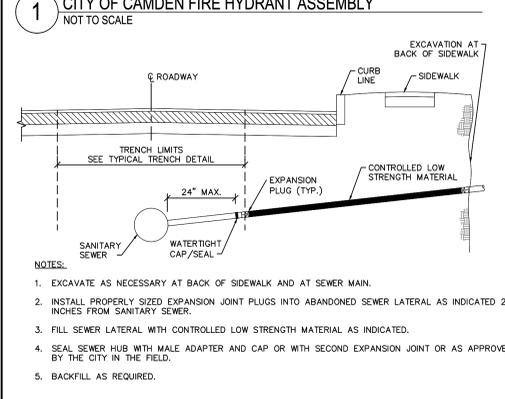
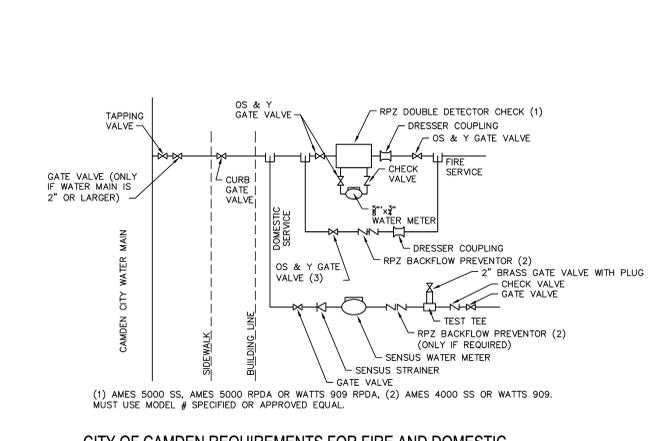
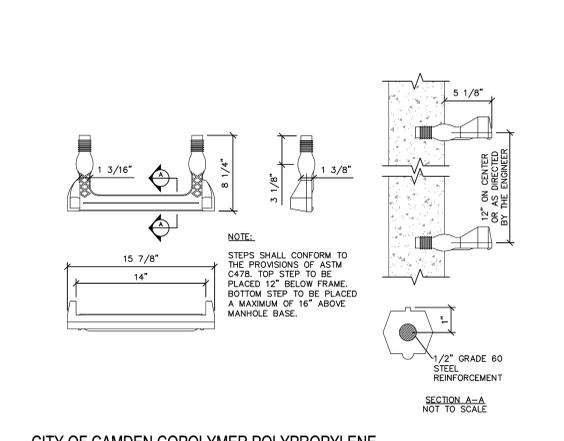
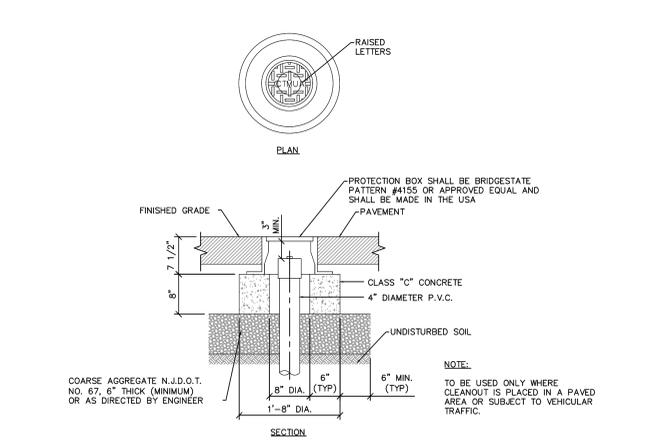
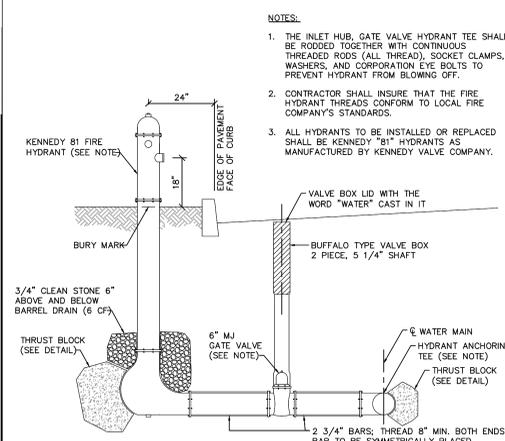
- 1. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO THEIR SATISFACTION PRIOR TO THE EXECUTION OF CONTRACTS OR COMMENCING WORK. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER OF RECORD.
2. BOUNDARY INFORMATION AND EXISTING FEATURES SHOWN HEREON ARE BASED ON TOPOGRAPHIC SURVEY (SHOWING UTILITIES) DATED 09/08/2023 PREPARED BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC..
3. THE MERIDIAN OF THE PLAN IS REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATE SYSTEM (NAD 83) 2011 DERIVED USING SURVEY-GRADE GNSS EQUIPMENT.
4. TOPOGRAPHIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC. DURING JULY 2023.
5. ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) DERIVED USING SURVEY-GRADE GNSS EQUIPMENT.
6. COLLISION FROM NAVD 1988 TO NAVD IS AS FOLLOWS: EL 17.00 (NAVD 88) + 1.09 = EL 18.09 (NGVD 29)
7. AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAPS TITLED, CAMDEN COUNTY, NEW JERSEY, COMMUNITY PANEL 28 OF 205, MAP NUMBER 3400700028F, LAST REVISED 08/17/2016, THE PROPERTY PRIMARILY LIES IN "OTHER AREAS", NOT WITHIN FLOOD AREA.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO REPLACEMENT OF ALL DAMAGE.
9. EXISTING FRAMES, COVERS, AND GRATES IN AREAS WHERE GRADES WILL BE REVISED BY FILLING, OR PAVEMENT OVERLAY, MUST BE RESET TO MATCH FINA GRADE (THIS INCLUDES MANHOLES, HANDHOLES, VALVE BOXES, INLETS, ETC.). IN AREAS OF CUT, CONTRACTOR SHALL PROVIDE REQUIRED COVERAGE OF UTILITY AND STORMWATER LINES AS SPECIFIED BY THE UTILITY PURVEYOR AND LOCAL JURISDICTION. LIMITED RELOCATION OF UTILITY AND STORMWATER LINES MAY BE REQUIRED.
10. WATER SERVICE LINES SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED DRAIN OR SEWER LINE.
11. THERE SHALL BE A MINIMUM VERTICAL SEPARATION DISTANCE OF 18 INCHES BETWEEN WATER LINES AND SANITARY OR STORM SEWERS.
12. IN AREAS WHERE PROPOSED WATER LINES CROSS SANITARY SEWER LINES (EXISTING AND PROPOSED), THE SANITARY SEWER PIPE SHALL BE ENCASED IN CONCRETE IF VERTICAL SEPARATION IS LESS THAN 18 INCHES OR IF HORIZONTAL SEPARATION IS LESS THAN 10 FEET.
13. CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITY CROSSINGS AND PROVIDING UTILITY DROPS AS REQUIRED. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF CROSSING CONFLICT OCCURS.
14. WATER SERVICE LINES SHALL HAVE A MINIMUM COVER OF 4 FEET AND MAXIMUM COVER OF 5 FEET.
15. A SHUTOFF VALVE SHALL BE PROVIDED AHEAD OF WATER METER ON ALL SERVICE LINES.
16. WATER SYSTEM SHALL BE PROVIDED WITH WATER METER AND DOUBLE CHECK VALVE BACKFLOW DEVICES PER UTILITY PURVEYOR AND LOCAL JURISDICTION REQUIREMENTS.
17. PROPOSED WATER SERVICE PIPE SHALL BE CEMENT LINED DUCTILE IRON PIPE (DIP) - CLASS 52.
18. PRIVATE FIRE MAINS SHALL CONFORM WITH NFPA24. CONCRETE ENCASUREMENT SHALL BE PROVIDED, AS REQUIRED.
19. WHERE APPLICABLE, HYDRANTS SHALL BE INSTALLED AT A MINIMUM OF 2.5 FEET FROM BACK OF CURB.
20. FINAL FIRE DESIGN WILL BE BASED ON FIRE PROTECTION DRAWINGS BY FIRE PROTECTION ENGINEER.
21. ALL SANITARY SEWERS SHALL BE POLYVINYL CHLORIDE (PVC).
22. ALL STORM AND SANITARY/COMBINED SEWER SERVICE OVER 6 INCH DIAMETER SHALL TIE INTO THE SEWER MAIN WITH A MANHOLE.
23. CONTRACTOR SHALL PERFORM PRESSURE TESTING OF ALL SANITARY SEWERS IN ACCORDANCE WITH THE CITY MANUAL.
24. THRUST BLOCKS AND RESTRAINTS SHALL BE INSTALLED AT ALL BENDS AND FITTINGS. THRUST BLOCKS SHALL HAVE 28 DAY STRENGTH OF 4,500 PSI.
25. EACH BUILDING CONNECTION REQUIRES A CURB CLEANOUT.
26. CONTRACTOR MUST FIELD VERIFY THE SIZE, MATERIAL, DEPTH, CONDITION, DIRECTION OF FLOW, AND ANY OTHER RELEVANT CONDITIONS OF THE EXISTING CITY SEWER TO WHICH THEY WILL CONNECT TO DETERMINE IF SAID CONNECTION IS PHYSICALLY POSSIBLE AND PRACTICAL.
27. PIPELINES SHALL BE NO CLOSER THAN 10 FEET TO EXISTING OR PROPOSED TREES.
28. GAS AND ELECTRIC NETWORKS ARE SHOWN FOR SCHEMATIC PURPOSES ONLY. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER, ARCHITECT, AND MEP ENGINEER TO DETERMINE ACTUAL LOCATION AND SERVICE SIZE. CONCRETE ENCASUREMENT SHALL BE PROVIDED, AS REQUIRED.
29. ALL RCP SHALL BE LINED ON THE INTERIOR WITH A COAT OF TAR EPOXY SEAL COAT WITH A MINIMUM OF FOUR (4) MILS IN THICKNESS (DFT).
30. THERE SHALL BE A MINIMUM VERTICAL SEPARATION DISTANCE OF 18 INCHES BETWEEN WATER AND SANITARY OR STORM SEWERS.
31. TYPICALLY, ALL PROPOSED UTILITIES AND RELATED APPURTENANCES ON THE SITE SHALL BE LOCATED UNDERGROUND OR LOCATED IN THE BUILDING, WHERE OVERHEAD ELECTRIC OR TELEPHONE DISTRIBUTION SUPPLY LINES AND SERVICE CONNECTIONS HAVE BEEN INSTALLED FROM THOSE OVERHEAD LINES. THE CONNECTIONS FROM THE UTILITIES OVERHEAD LINES MUST BE INSTALLED UNDERGROUND. OWNER TO COORDINATE WITH CITY AND PLANNING BOARD ENGINEER IF ALTERNATE ROUTING IS REQUESTED.
32. ALL SEWER MANHOLES SHALL BE WATER TIGHT AND BE INSTALLED ACCORDINGLY.

CONTRACTOR TO COORDINATE WITH CAMDEN ENVIRONMENTAL AND CONSTRUCTION ENGINEERING FOR REGULATORY REQUIREMENTS AND COMPLIANCE.

LEGEND
PROPOSED HYDRANT
PROPOSED WATER VALVE
PROPOSED EXPANDER
PROPOSED WATER LINE
PROPOSED MANHOLE
PROPOSED SANITARY CLEANOUT
PROPOSED SANITARY SEWER LINE
PROPOSED ELECTRICAL CONDUIT
PROPOSED GAS PIPE
PROPOSED TELECOM CONDUIT
PROPERTY LINE
SCALE: 1 INCH = 30 FEET

RESERVE FOR DCA STAMP
HKS
ARRAY architects
ARCHITECT
ASSOCIATE ARCHITECT / INTERIOR DESIGNER
INTERIOR DESIGNER
MEP/FP / LOW VOLTAGE ENGINEER
OWNER: COOPER UNIVERSITY HEALTHCARE
PROJECT MANAGER: HAMES
CIVIL/ENVIRONMENTAL/GEOTECHNICAL/LANDSCAPE ARCHITECT/TRAFFIC/SURVEY
KEY PLAN
REVISION
DATE: 20 MARCH, 2024
SHEET TITLE: UTILITY PLAN
SHEET NO.: CU101

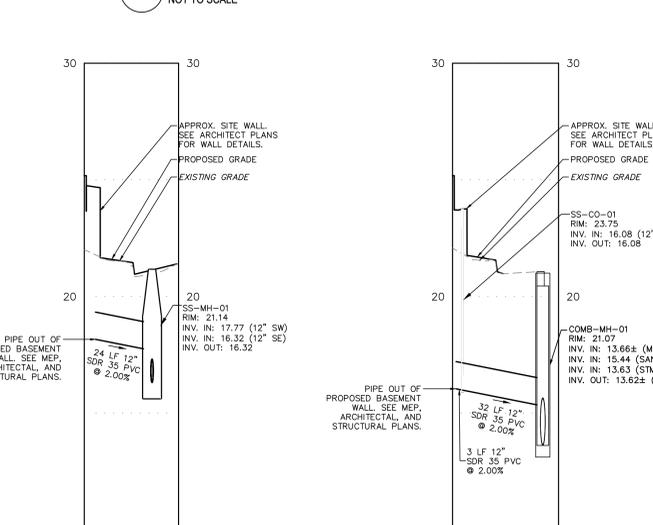
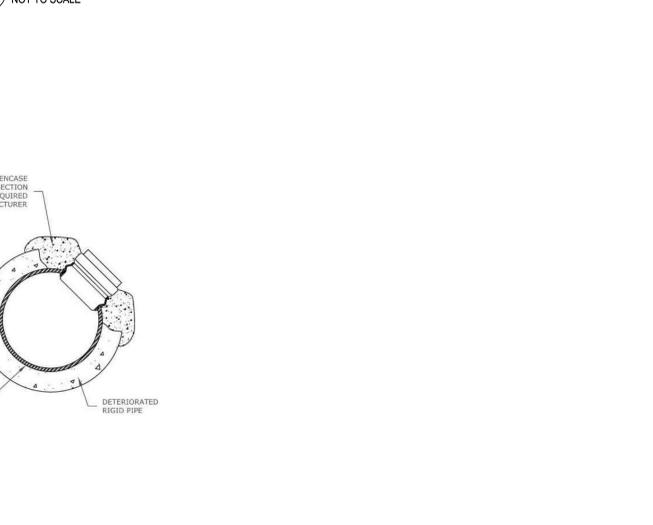
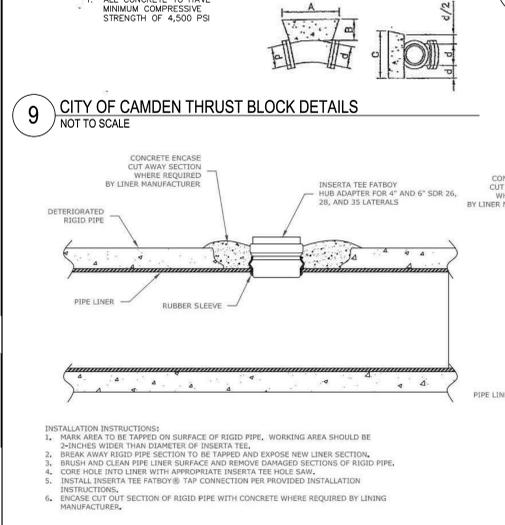
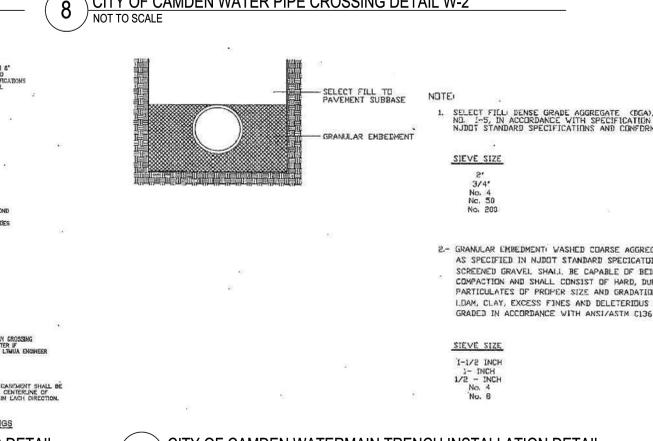
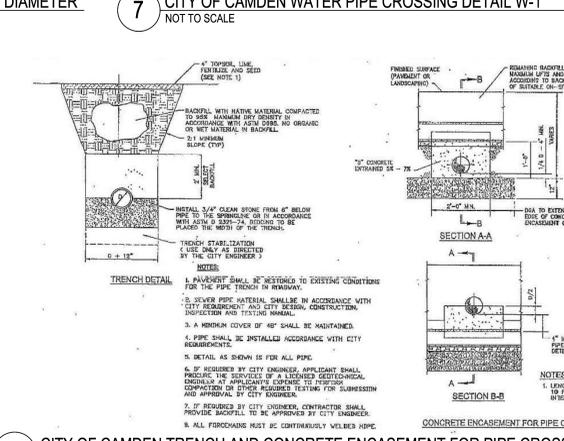
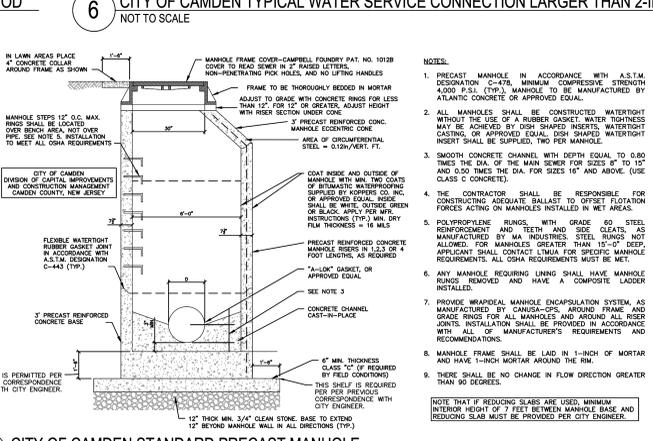
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9. CITY OF CAMDEN THRUST BLOCK DETAILS
NOT TO SCALE

MINIMUM SIZE OF CONCRETE THRUST BLOCKS				
d	6"	8"	10"	12"
TEES & CROSSES				
A	2'-0"	2'-6"	3'-0"	3'-6"
B	8"	8"	10"	10"
C	1'-3"	1'-9"	2'-0"	2'-6"
90° BENDS				
A	2'-6"	3'-0"	3'-6"	3'-9"
B	8"	8"	10"	10"
C	1'-3"	1'-9"	2'-0"	2'-6"
45° BENDS				
A	1'-6"	1'-6"	1'-6"	2'-3"
B	8"	8"	10"	10"
C	1'-3"	1'-9"	2'-0"	2'-6"
22.5° & 11.25° BENDS				
A	1'-6"	1'-6"	1'-6"	1'-6"
B	8"	8"	10"	10"
C	1'-3"	1'-9"	2'-0"	2'-6"
REDUCERS				
dxd	6"x4"	8"x4"	10"x8"	10"x8"
A	1'-6"	2'-0"	2'-4"	2'-6"
B	1'-0"	1'-0"	1'-3"	1'-6"

1. ALL CONCRETE TO HAVE MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI



RESERVE FOR DCA STAMP

HKS
ARCHITECT

ARRAY
ARCHITECT

ASSOCIATE ARCHITECT / INTERIOR DESIGNER
1 WEST ELM STREET, SUITE 500
CONSHOHOCKEN, PA 19428

INTERIOR DESIGNER
DCO DESIGN GROUP
2 MILL ST, SUITE 103
WILMINGTON, DE 19806

MEP-FP / LOW VOLTAGE ENGINEER
BRVA CONSULTING ENGINEERS
2401 WALNUT ST SUITE 701
PHILADELPHIA, PA 19103

CODE CONSULTANT
JENSEN HUGHES
30 S 15TH STREET, FLOOR 15
PHILADELPHIA, PA 19102

ELEVATOR CONSULTANT
ST. ONGE
1400 WILLIAMS RD
YORK, PA 17402

Cooper University Health Care
COOPER UNIVERSITY HOSPITAL - TOWER A

OWNER
COOPER UNIVERSITY HEALTHCARE
1 COOPER PLAZA
CAMDEN, NJ 08103

PROJECT MANAGER
HAMMES
2700 S. QUINCY STREET, SUITE 540
ARLINGTON, VA 22206

CIVIL/ENVIRONMENTAL/SCAPE ARCHITECT/TRAFFIC/SURVEY
LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, INC.
1 UNIVERSITY SQUARE DRIVE, SUITE 100
PRINCETON, NJ 08540
NJ CERTIFICATE OF AUTHORIZATION NO. 24GA27996400

KEY PLAN

REVISION

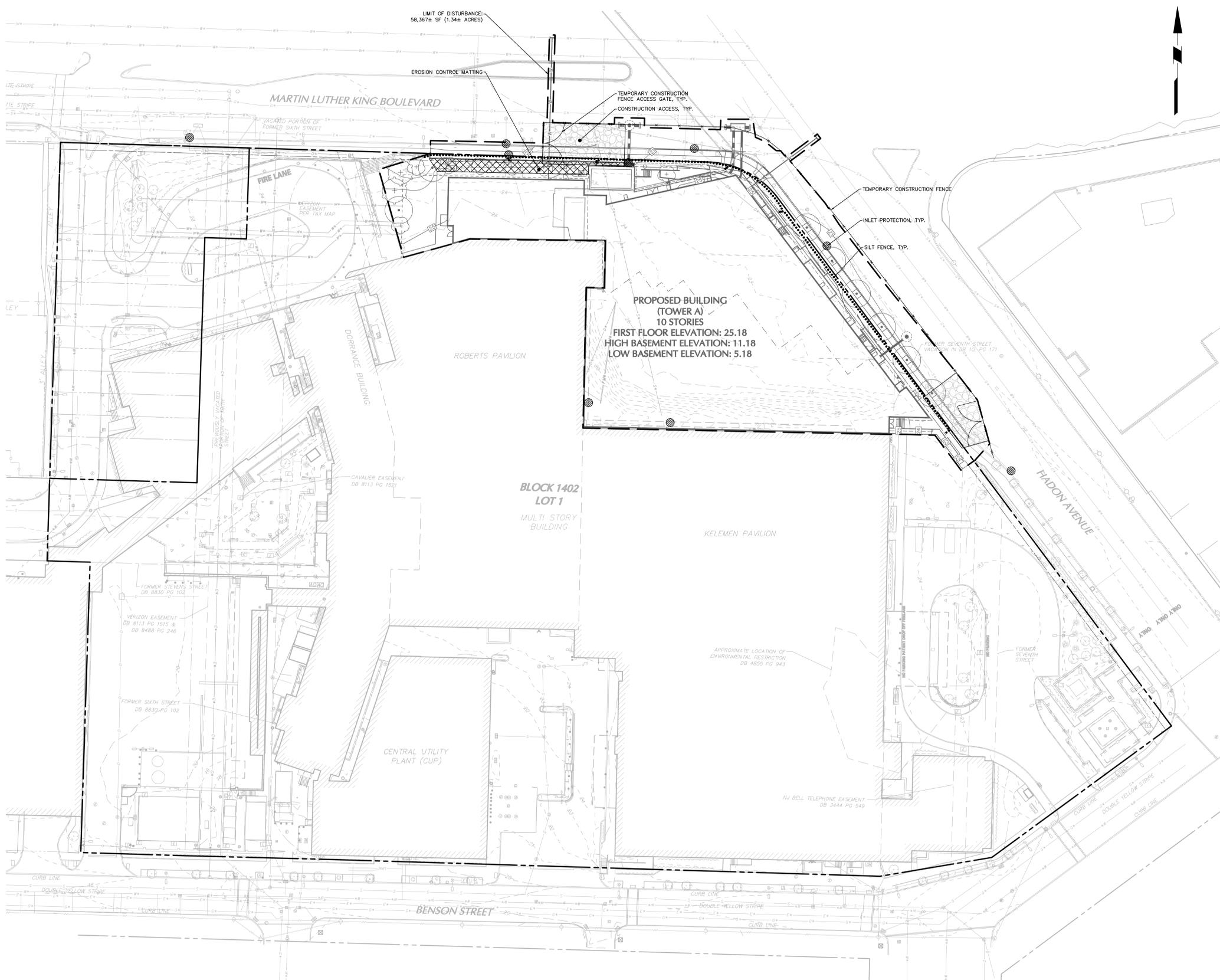
DATE: **20 MARCH, 2024**

SHEET TITLE: **UTILITY DETAILS**

SHEET NO.: **CU501**

EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO THEIR SATISFACTION PRIOR TO THE EXECUTION OF CONTRACTS OR COMMENCING WORK. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER OF RECORD.
2. BOUNDARY INFORMATION AND EXISTING FEATURES SHOWN HEREON ARE BASED ON "TOPOGRAPHIC SURVEY (SHOWING UTILITIES)" DATED 09/08/2023 PREPARED BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC..
3. THE MERIDIAN OF THE PLAN IS REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATE SYSTEM (NAD 83) 2011 DERIVED USING SURVEY-GRADE GNSS EQUIPMENT.
4. TOPOGRAPHIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC. DURING JULY 2023.
5. ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88) DERIVED USING SURVEY-GRADE GNSS EQUIPMENT.
6. CONVERSION FROM NAVD 1988 TO NAVD IS AS FOLLOWS: EL. 17.00 (NAVD 88) + 1.09 = EL. 18.09 (NGVD 29)
7. AS AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAPS TITLED, CAMDEN COUNTY, NEW JERSEY, COMMUNITY PANEL 28 OF 305, MAP NUMBER 3400700028F, LAST REVISED 08/17/2016, THE PROPERTY PRIMARILY LIES IN "OTHER AREAS", NOT WITHIN FLOOD AREA.



- LEGEND**
- PROPERTY LINE
 - LIMIT OF DISTURBANCE
 - SILT FENCE
 - ▨ EROSION CONTROL MATTING
 - INLET PROTECTION
 - CONSTRUCTION ENTRANCE
 - TEMPORARY CONSTRUCTION FENCE
 - PROPOSED 1 FOOT CONTOUR LINE



RESERVE FOR DCA STAMP



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BRVA CONSULTING ENGINEERS
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PHILADELPHIA, PA 19103

HIGHLAND ASSOCIATES
102 HIGHLAND AVE
CLARK'S SUMMIT, PA 18411

CODE CONSULTANT
JENSEN HUGHES
30 S 15TH STREET, FLOOR 15
PHILADELPHIA, PA 19102

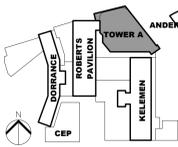
ELEVATOR CONSULTANT
ST. ONGE
1400 WILLIAMS RD
YORK, PA 17402



OWNER
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1 COOPER PLAZA
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PRINCETON, NJ 08540
NJ CERTIFICATE OF AUTHORIZATION NO. 24GA2798400



REVISION NO.	DESCRIPTION	DATE

KYLE MACGEORGE
PROFESSIONAL ENGINEER
NJ Lic. No. 24GE05751600
HKS PROJECT NUMBER

DATE
20 MARCH, 2024
ISSUE

SHEET TITLE
SOIL EROSION AND SEDIMENT CONTROL PLAN

SHEET NO.
CE101

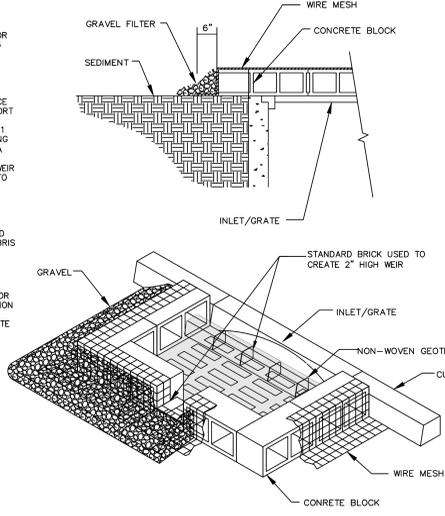
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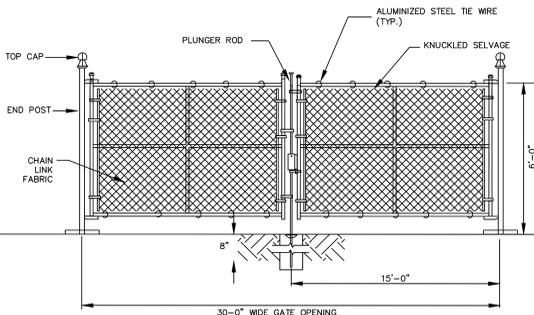
CONSTRUCTION SPECIFICATIONS

- 1. LAY CONCRETE BLOCKS ON SIDES ALONG OUTER EDGE OF GRATE FOR CURB INLET LAY BLOCKS ALONG 3 SIDES AND BUTT BLOCKS UP AGAINST CURB BENCH.
2. PLACE 1/2" WIRE MESH ALONG BLOCK OPENINGS, WRAPPED OVER TOP OF BLOCKS AND EXTEND A MINIMUM OF SIX INCHES FROM FACE OF BLOCKS, AS SHOWN, TO SUPPORT STONE.
3. USE CLEAN CRUSHED GRAVEL - 1 INCH IN DIAMETER PLACED 4 ALONG WIRE MESH/BLOCK OPENINGS AT A WIDTH OF AT LEAST 12 INCHES.
4. USING STANDARD BRICK CREATE WEIR ALONG FRONT FACE, AS SHOWN, TO ALLOW FLOW FROM SIGNIFICANT STORM EVENTS TO PASS FREELY, CLEAN SEDIMENT DEPOSITS AFTER EVERY STORM.
5. AFTER SITE HAS BEEN STABILIZED, INLET STRUCTURES TO BE CLEANED OF ALL ROCK, SEDIMENT, AND DEBRIS FOLLOWING REMOVAL OF FILTER FABRIC.

- 1. DETAIL PREPARED SPECIFICALLY FOR CAMDEN COUNTY SOIL CONSERVATION DISTRICT BY LANGAN DESIGN GROUP.
2. FLAT GRATES TO RECEIVE CONCRETE BLOCKS ON ALL FOUR SIDES.

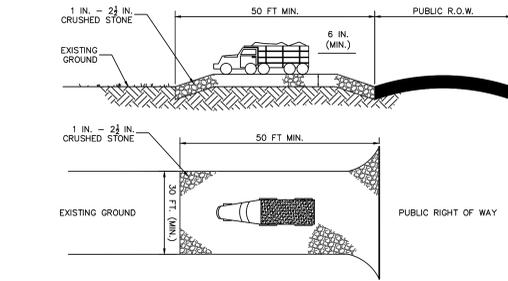


1 INLET PROTECTION NOT TO SCALE

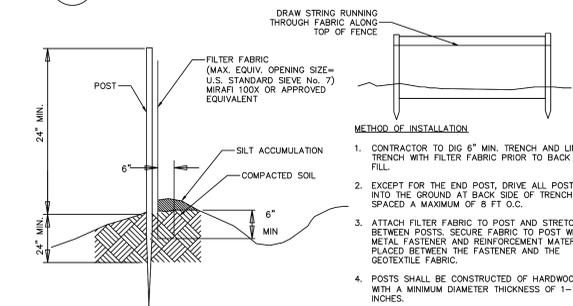


NOTE: GATE AND FENCE DETAILS PROVIDED PER REFERENCE. CONTRACTOR SHALL COORDINATE SITE SPECIFIC SECURITY REQUIREMENTS WITH FENCE PROVIDER AND ENSURE THAT FENCES ARE ADEQUATELY SUPPORTED FOR WIND LOADS.

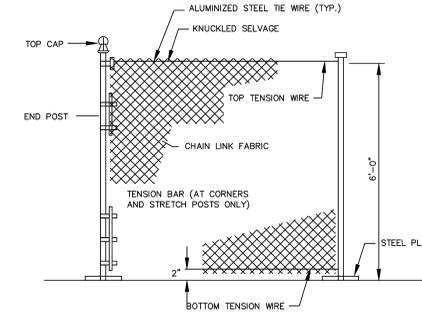
4 TEMPORARY CONSTRUCTION FENCE ACCESS GATE NOT TO SCALE



2 STABILIZED CONSTRUCTION ENTRANCE NOT TO SCALE

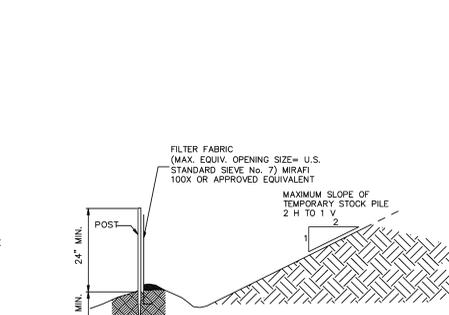


3 SILT FENCE NOT TO SCALE



NOTE: GATE AND FENCE DETAILS PROVIDED PER REFERENCE. CONTRACTOR SHALL COORDINATE SITE SPECIFIC SECURITY REQUIREMENTS WITH FENCE PROVIDER AND ENSURE THAT FENCES ARE ADEQUATELY SUPPORTED FOR WIND LOADS.

5 TEMPORARY CONSTRUCTION FENCE NOT TO SCALE



6 TEMPORARY STOCKPILE NOT TO SCALE

CAMDEN COUNTY SOIL EROSION AND SEDIMENT CONTROL NOTES

- 1. ALL APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATION AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
2. SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
3. APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND/OR THE AREA IS STABILIZED.
4. THE CONTRACTOR SHALL PERFORM ALL WORK, FURNISH ALL MATERIALS AND INSTALL ALL MEASURES REQUIRED TO REASONABLY CONTROL SOIL EROSION RESULTING FROM CONSTRUCTION OPERATIONS AND PREVENT EXCESSIVE FLOW OF SEDIMENT FROM THE CONSTRUCTION SITE.
5. ANY DISTURBED AREA THAT IS TO BE LEFT EXPOSED FOR MORE THAN THIRTY (30) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND FERTILIZATION IN ACCORDANCE WITH THE NEW JERSEY STANDARDS AND THEIR RATES SHOULD BE INCLUDED IN THE NARRATIVE. IF THE SEASON PREVENTS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).
6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE CONFIRMATION OF LIME, FERTILIZER AND SEED APPLICATION AND RATES OF APPLICATION AT THE REQUEST OF THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT.
7. ALL CRITICAL AREAS SUBJECT TO EROSION WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH AT A RATE OF 2 TONS PER ACRE, ACCORDING TO THE NEW JERSEY STANDARDS IMMEDIATELY FOLLOWING ROUGH GRADING.
8. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
9. ALL SEDIMENTATION STRUCTURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
10. A CRUSHED STONE, TIRE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ACCESS EXISTS. THE STABILIZED PAD WILL BE INSTALLED ACCORDING TO THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS.
11. ALL DRIVEWAYS MUST BE STABILIZED WITH 2 1/2" CRUSHED STONE OR SUBBASE PRIOR TO INDIVIDUAL LOT CONSTRUCTION.
12. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
13. ALL CATCH BASIN INLETS WILL BE PROTECTED ACCORDING TO THE CERTIFIED PLAN.
14. ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
15. N.J.S.A. 4:24-39, ET SEQ. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE ALL PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES. ALL SITE WORK FOR THIS PROJECT MUST BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE AS A PREREQUISITE TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.
16. MULCHING IS REQUIRED ON ALL SEEDED AREAS TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED TO PROMOTE EARLIER VEGETATION COVER.
17. OFFSITE SEDIMENT DISTURBANCE MAY REQUIRE ADDITIONAL CONTROL MEASURES TO BE DETERMINED BY THE EROSION CONTROL INSPECTOR.
18. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE MAINTAINED ON THE PROJECT SITE DURING CONSTRUCTION.
19. THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY LAND DISTURBANCE.
20. ANY CONVEYANCE OF THIS PROJECT PRIOR TO ITS COMPLETION WILL TRANSFER FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CERTIFIED PLAN TO ANY SUBSEQUENT OWNERS.
21. IMMEDIATELY AFTER THE COMPLETION OF STRIPPING AND STOCKPILING OF TOPSOIL, THE STOCKPILE MUST BE STABILIZED ACCORDING TO THE STANDARD FOR TEMPORARY VEGETATIVE COVER. STABILIZE TOPSOIL PILE WITH STRAW MULCH FOR PROTECTION IF THE SEASON DOES NOT PERMIT THE APPLICATION AND ESTABLISHMENT OF TEMPORARY SEEDING. ALL SOIL STOCKPILES MUST BE LOCATED WITHIN FIFTY (50) FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY AND THE BASE MUST BE PROTECTED WITH A SEDIMENT BARRIER.
22. ANY CHANGES TO THE SITE PLAN WILL REQUIRE THE SUBMISSION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN TO THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT. THE REVISED PLAN MUST BE IN ACCORDANCE WITH THE CURRENT NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.
23. METHODS FOR THE MANAGEMENT OF HIGH ACID PRODUCING SOILS SHALL BE IN ACCORDANCE WITH THE STANDARDS, HIGH ACID PRODUCING SOILS ARE THOSE FOUND TO CONTAIN IRON SULFIDES OR HAVE A PH OF 4 OR LESS.
24. TEMPORARY AND PERMANENT SEEDING MEASURES MUST BE APPLIED ACCORDING TO THE NEW JERSEY STANDARDS, AND MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).
25. MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT BE CONSTRUCTED STEEPER THAN 3:1 UNLESS OTHERWISE APPROVED BY THE DISTRICT.
26. DUST IS TO BE CONTROLLED BY AN APPROVED METHOD ACCORDING TO THE NEW JERSEY STANDARDS AND INCLUDE WATERING WITH A SOLUTION OF CALCIUM CHLORIDE AND WATER.
27. ADJOINING PROPERTY SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS ON THE PROPOSED SITE.
28. USE STAGED CONSTRUCTION METHODS TO MINIMIZE EXPOSED SURFACES, WHERE APPLICABLE.
29. ALL VEGETATIVE MATERIAL SHALL BE SELECTED IN ACCORDANCE WITH AMERICAN STANDARDS FOR NURSERY STOCK OF THE AMERICAN ASSOCIATION OF THE NURSERYMEN AND IN ACCORDANCE WITH THE NEW JERSEY STANDARDS.
30. NATURAL VEGETATION AND SPECIES SHALL BE RETAINED WHERE SPECIFIED ON THE LANDSCAPE PLAN.
31. THE SOIL EROSION INSPECTOR MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED, AS DIRECTED BY THE DISTRICT INSPECTOR.

SOIL STABILIZATION NOTES

- PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION
PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY"
THE FOLLOWING SEEDING SCHEDULE SHOULD BE USED FOR PERMANENT SEEDING (UNLESS OTHERWISE NOTED):
A. APPLY TOPSOIL TO A DEPTH OF 5".
B. 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 CO-OPERATIVE EXTENSION OFFICES. 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 NO INCORPORATED INTO THE SUBSTRATE. 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.
C. 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 DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.
D. SEED - LAWN AREAS - STANDARD SEED MIX 15;
HARD FESCUE - 2.70 lbs/1,000 sf
PERENNIAL RYEGRASS - 0.70 lbs/1,000 sf
KENTUCKY BLUEGRASS - 0.90 lbs/1,000 sf
OPTIMAL PLANTING PERIOD BETWEEN MARCH 1 AND MAY 31
E. SEED - MEADOW AREAS - STANDARD SEED MIX 5
SWITCHGRASS - 0.35 lbs/1,000 sf
BIG BLUESTEM - 0.10 lbs/1,000 sf
LITTLE BLUESTEM - 0.10 lbs/1,000 sf
SAND LOVEGRASS - 0.10 lbs/1,000 sf
COASTAL PANICGRASS - 0.25 lbs/1,000 sf
& WILDFLOWER MIX 605 BY APPLEWOOD OR APPROVED EQUAL & WILDFLOWER MIX 605 - 10 lbs/acre
F. SEED - DETENTION BASINS & SPILLWAYS - STANDARD SEED MIX 9; STRONG CREEPING RED FESCUE - 2.8 lbs/1,000 sf; KENTUCKY BLUEGRASS - 1.8 lbs/1,000 sf; PERENNIAL RYEGRASS - 0.5 lbs/1,000 sf; OR; REDTOP - 0.25 lbs/1,000 sf; PLUS WHITE CLOVER - 0.25 lbs/1,000 sf; OPTIMAL PLANTING PERIOD BETWEEN MARCH 1 AND APRIL 30; OR BETWEEN AUGUST 15 AND NOVEMBER 15. ACCEPTABLE PLANTING PERIOD BETWEEN MAY 1 AND AUGUST 14.
G. MULCH - SALT HAY OR SMALL GRAIN STRAW AT A RATE OF 70 TO 90 LBS/1,000 SF; TO BE APPLIED ACCORDING TO NEW JERSEY STANDARDS. MULCH SHALL BE SECURED BY APPROVED METHODS (I.E. PEG AND TWINE, MULCH NETTING, OR LIQUID MULCH BINDER).

TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

- DISTURBED AREAS SHALL BE MAINTAINED IN A ROUGH GRADED CONDITION AND SEEDED AND HAY MULCHED (OR HYDROSEDED) UNTIL PROPER WEATHER EXISTS FOR THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER. THE FOLLOWING SEEDING SCHEDULE SHALL BE USED FOR TEMPORARILY SEEDING:
A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS CO-OPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRE UNLESS SOIL TESTING INDICATES OTHERWISE. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.
B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.
C. SEED - PERENNIAL RYEGRASS - 100 lbs/acre PLANT BETWEEN MARCH 1 AND MAY 15 OR BETWEEN AUGUST 15 AND OCTOBER 1.
D. MULCH - SALT HAY OR SMALL GRAIN STRAW AT A RATE OF 70 TO 90 LBS/1,000 SF; TO BE APPLIED ACCORDING TO NEW JERSEY STANDARDS. MULCH SHALL BE SECURED BY APPROVED METHODS (I.E. PEG AND TWINE, MULCH NETTING, OR LIQUID MULCH BINDER).

STABILIZATION WITH MULCH ONLY

NON-GROWING STABILIZATION MEASURES SHALL BE USED WHERE THE SEASON & 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.
SALT HAY OR SMALL GRAIN STRAW AT A RATE OF 90 TO 115 LBS/1,000 SF TO BE APPLIED ACCORDING TO THE NEW JERSEY STANDARDS. MULCH SHALL BE SECURED BY APPROVED METHODS (I.E. PEG AND TWINE, LIQUID MULCH BINDER, OR MULCH NETTING).

SCHEDULE OF CONSTRUCTION OPERATIONS

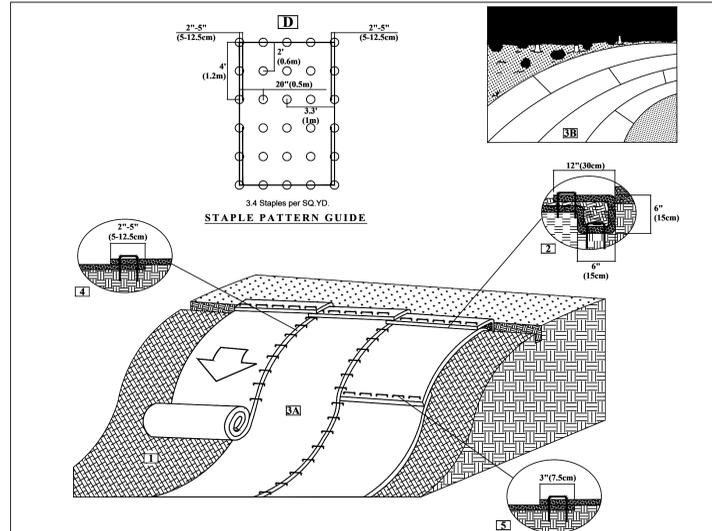
Table with columns: Activity, Duration, and Description. Lists various construction tasks like inlet protection, silt fence, and stabilization measures with their respective durations.

DUST CONTROL NOTES

Table with columns: Material, Water Dilution, Type of Nozzle, and Apply Gallons/Acre. Lists dust control materials like asphalt emulsion, latex emulsion, and polyacrylamide with application rates.

DISTRICT CONTACT INFORMATION

CAMDEN COUNTY SOIL CONSERVATION DISTRICT
423 COMMERCE LANE, SUITE 1
WEST BELLEVILLE, NJ 08091
PHONE: (856) 767-6299
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SLOPE INSTALLATION DETAIL

- 1. Prepare soil before installing rolled erosion control products (RECPS), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the slope by anchoring the RECPS in a 6"(15cm) deep X 6"(15cm) wide trench with approximately 12" (30cm) of RECPS extended beyond the up-slope portion of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12"(30cm) portion of RECPS back over the seed and compacted soil. Secure RECPS over compacted soil with a row of staples/stakes spaced approximately 12"(30cm) apart across the width of the RECPS.
3. Roll the RECPS (A) down or (B) horizontally across the slope. RECPS will unroll with appropriate side against the soil surface. All RECPS must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
4. The edges of parallel RECPS must be stapled with approximately 2" - 5" (5-12.5cm) overlap depending on the RECPS type.
5. Consecutive RECPS spliced down the slope must be end over end (Single style) with an approximate 3"(7.5cm) overlap. Staple through overlapped areas, approximately 12"(30cm) apart across entire RECPS width.

NOTE: In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the RECPS.

Disclaimer: The information presented herein is general design information only. For specific applications, consult an independent professional for further design guidance.
5401 St. Wendel - Cynthia Rd. PH: 800-772-2040
Poseyville, IN 47633 www.nagrcon.com

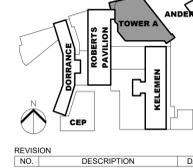
7 EROSION CONTROL MATTING NOT TO SCALE

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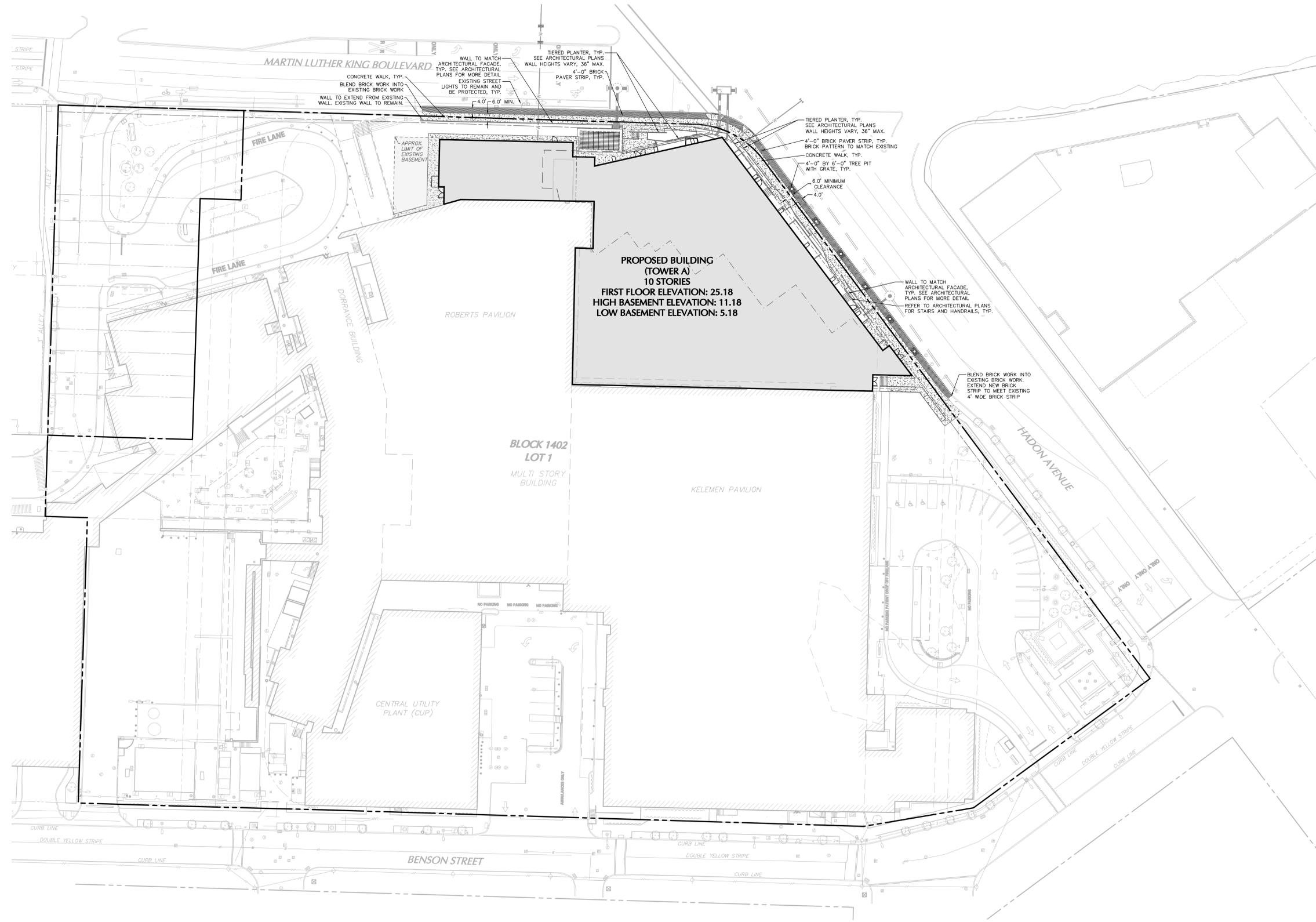


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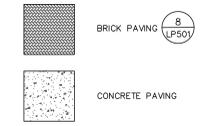
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ISSUE

SHEET TITLE
SOIL EROSION AND SEDIMENT CONTROL DETAILS
SHEET NO.
CE501

TITLE BLOCK VERSION: 20240302
MODEL
TEMPLATE VERSION
PRINT DATE



MATERIALS LEGEND



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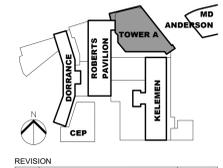
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KEY PLAN

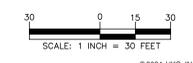
REVISION	NO.	DESCRIPTION	DATE

JAYNE O. SPECTOR
LANDSCAPE ARCHITECT NJ Lic. No. 21AS00045700
HKS PROJECT NUMBER

DATE
20 MARCH, 2024
ISSUE

SHEET TITLE
LANDSCAPE MATERIALS PLAN

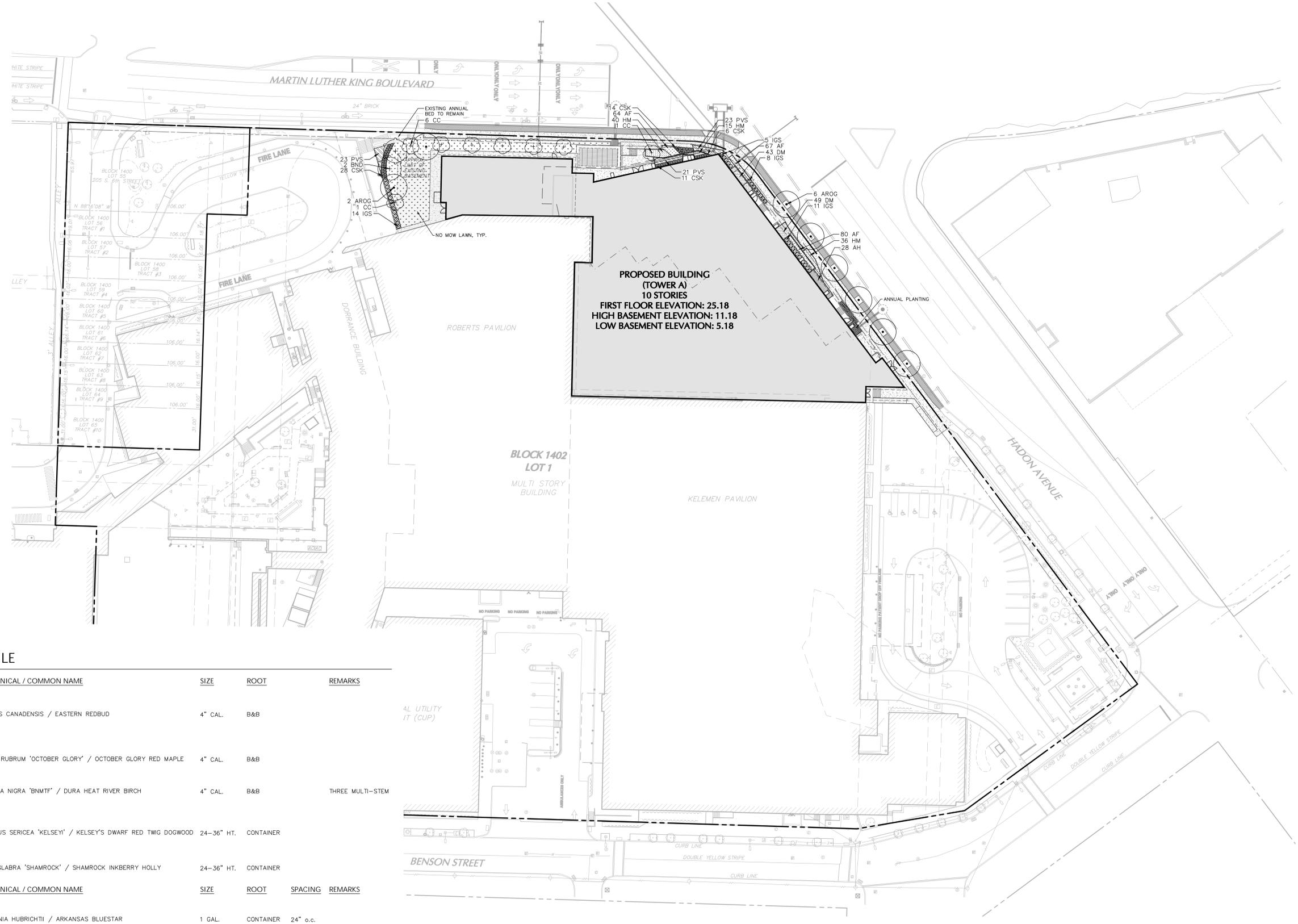
SHEET NO.
LS101



BUILDING PERMIT NUMBER: 11111
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TITLE BLOCK VERSION: 20240302
 MODEL
 TEMPLATE VERSION
 PRINT DATE

LEGEND



PROPOSED BUILDING (TOWER A)
 10 STORIES
 FIRST FLOOR ELEVATION: 25.18
 HIGH BASEMENT ELEVATION: 11.18
 LOW BASEMENT ELEVATION: 5.18

PLANT SCHEDULE

SYMBOL	KEY	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT	REMARKS	
ORNAMENTAL TREES							
+	CC	8	CERCIS CANADENSIS / EASTERN REDBUD	4" CAL.	B&B		
SHADE TREES							
•	AROG	8	ACER RUBRUM 'OCTOBER GLORY' / OCTOBER GLORY RED MAPLE	4" CAL.	B&B		
+	BND	2	BETULA NIGRA 'BNMTF' / DURA HEAT RIVER BIRCH	4" CAL.	B&B	THREE MULTI-STEM	
DECIDUOUS SHRUBS							
+	CSK	59	CORNUS SERICEA 'KELSEY' / KELSEY'S DWARF RED TWIG DOGWOOD	24-36" HT.	CONTAINER		
EVERGREEN SHRUBS							
•	IGS	38	ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY HOLLY	24-36" HT.	CONTAINER		
SYMBOL	KEY	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT	SPACING	REMARKS
GROUND COVERS							
■	AH	28	AMSONIA HUBRICHII / ARKANSAS BLUESTAR	1 GAL.	CONTAINER	24" o.c.	
■	AF	211	ASTILBE X ARENDSI 'FANAL' / FANAL ASTILBE	1 GAL.	CONTAINER	12" o.c.	
■	DM	92	DRYOPTERIS MARGINALIS / MARGINAL SHIELD FERN	1 GAL.	CONTAINER	18" o.c.	
■	HM	91	HAKONECHLOA MACRA / JAPANESE FOREST GRASS	1 GAL.	CONTAINER	18" o.c.	
■	PVS	67	PANICUM VIRGATUM 'SHENANDOAH' / SHENANDOAH SWITCH GRASS	1 GAL.	CONTAINER	24" o.c.	

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KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

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 HKS PROJECT NUMBER

DATE: **20 MARCH, 2024**
 ISSUE

SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
LP101

11111
 BUILDING PERMIT NUMBER

SCALE: 1" INCH = 30 FEET

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FILE NUMBER: 20210308
DATE: 2024
PROJECT: COOPER UNIVERSITY HEALTHCARE
SHEET: LANDSCAPE NOTES AND DETAILS
SCALE: AS SHOWN
DATE: 2024

GENERAL LANDSCAPE PLANTING NOTES:

- PLANTING MATERIALS**
- NAMES OF PLANTS AS DESCRIBED ON THIS PLAN CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES", 1942 EDITION PREPARED BY THE AMERICAN JURY COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF PLANT VARIETIES NOT INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE.
 - STANDARDS FOR TYPE, SPREAD, HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN. PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION.
 - NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE SET PLUMB AND SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING. PLANT MATERIAL OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR AND HABIT. THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REJECT PLANT MATERIAL THAT DOES NOT CONFORM TO THE TYPICAL OR SPECIFIED HABIT OF THAT SPECIES.
 - THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS IF THE SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, THE CONTRACTOR SHALL SUBMIT PROOF OF NON-AVAILABILITY TO THE LANDSCAPE ARCHITECT AND OWNER TOGETHER WITH A WRITTEN PROPOSAL FOR USE OF AN EQUIVALENT MATERIAL.
 - THE LANDSCAPE ARCHITECT MAY REVIEW PLANT MATERIALS AT THE SITE, BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURTHER REVIEW PLANT MATERIALS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEM, INSECTS, INJURIES, AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. THE CONTRACTOR SHALL REMOVE REJECTED PLANT MATERIALS IMMEDIATELY FROM PROJECT SITE AS DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER.

- PLANTING SOILS**
- REUSE SURFACE SOILS STOCKPILED ON SITE, VERIFYING COMPLIANCE WITH PLANTING SOIL AND TOPSOIL CRITERIA IN THIS SPECIFICATION. THROUGH TESTING, CLEAN SURFACE SOIL OF ALL ROOTS, PLANTS, SOIL, AND GRAVEL OVER 1" IN DIAMETER AND DELETERIOUS MATERIALS, IF ON-SITE SOILS ARE TO BE USED FOR PROPOSED PLANTING, THE CONTRACTOR SHALL DEMONSTRATE, THROUGH SOIL TESTING, THAT ON-SITE SOILS MEET THE SAME CRITERIA AS INDICATED IN NOTES PLANS AND SPECIFICATIONS.
 - SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF SITE SOURCES WHEN TOPSOIL AND PLANTING SOIL QUANTITIES ARE INSUFFICIENT. OBTAIN SOIL DISPLACED FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4" DEEP. DO NOT OBTAIN FROM AGRICULTURAL LAND, BODS, MARSHES, OR CONTAMINATED SITES.
 - IF DEPTH OF PLANTING SOILS AND TOPSOIL IS NOT INDICATED IN PLANS OR DETAILS, A MINIMUM 18" DEPTH SHALL BE PROVIDED FOR ALL TREES AND LARGE SHRUBS; MINIMUM 12" DEPTH SHALL BE PROVIDED FOR GROUNDCOVERS, HERBACEOUS AND MEADOW OR ORNAMENTAL GRASS AREAS AND A MINIMUM 6" LAYER SHALL BE INSTALLED IN ALL LAWN AREAS. TOPSOIL AND PLANTING SOIL DEPTH INDICATED ON PLANS AND PLANTING DETAILS AND NARRATIVE SPECIFICATIONS SHALL GOVERN DEPTH WHEN PROVIDED.
 - WHERE PLANTING AREAS ARE PROPOSED FOR FORMER PAVED OR GRAVEL AREAS, BEDS SHALL BE EXCAVATED TO A MINIMUM 30" DEPTH AND, AT A MINIMUM, BE BACKFILLED WITH BOTTOM LAYER OF SANDY LOAM (ORGANIC CONTENT LESS THAN 2%) OVER WHICH TOPSOIL AND PLANTING SOILS WILL BE PLACED AT DEPTHS INDICATED IN PLANS, DETAILS AND NOTES.
 - IF THE QUANTITY OF SOILS FROM THE SITE IS NOT ADEQUATE TO FILL PLANTING AREAS TO A DEPTH INDICATED IN PLANS AND DETAILS, TOPSOIL AND PLANTING SOILS TO DETERMINE IF THE MATERIALS ARE CONDUIVE. SUSTAINING PROPOSED PLANTINGS SHOULD BE FURNISHED BY THE CONTRACTOR. TOPSOIL AND PLANTING SOILS SHALL BE FREE OF BROKEN GLASS, PAINT CHIPS, PLASTIC, DELETERIOUS MATERIALS, ROOTS, WEEDS, BOULDERS, COBBLES AND GRAVEL OVER 1" IN DIAMETER AND COMPLY WITH THE FOLLOWING CRITERIA:
 - SOILS SHALL MEET ALL APPLICABLE SOIL REMEDIATION STANDARDS
 - ORGANIC CONTENT: 2-8% IN NATIVE SOILS; UP TO 10% IN AMENDED SOILS
 - SOLUBLE SALTS: LESS THAN 0.5 MM HOS/CM
 - SOIL PH: 4.5-7.8 TO BE AMENDED PER SOIL TEST RESULTS
 - PHYSICAL (SIEVE) ANALYSIS: SOIL TEXTURE
 - SAND: 40-60% SILT: 15-30% CLAY: 5-20%
 - NOT MORE THAN 1% OF MATERIAL SHALL BE RETAINED BY A #4 SIEVE.

- ALL PLANTING SOILS SHALL BE SUBMITTED FOR TESTING TO THE STATE COOPERATIVE EXTENSION SERVICE, OR APPROVED EQUAL, PRIOR TO DELIVERY TO THE SITE. CONTRACTOR SHALL FURNISH SOIL SAMPLES AND SOIL TEST RESULTS TO LANDSCAPE ARCHITECT OR OWNER AT A RATE OF ONE SAMPLE PER 500 CUBIC YARDS TO ENSURE CONSISTENCY ACROSS THE TOTAL VOLUME OF PLANTING AREAS. TEST RESULTS SHALL EVALUATE FOR ALL CRITERIA LISTED IN THIS SPECIFICATION. IF TESTING AGENCY DETERMINES THAT THE SOILS ARE DEFICIENT IN ANY MANNER AND MAY BE CORRECTED BY ADDING AMENDMENTS, THE CONTRACTOR SHALL FOLLOW STATED RECOMMENDATIONS FOR SOIL IMPROVEMENT AND FURNISH SUBMITTALS FOR ALL AMENDMENTS PRIOR TO DELIVERY OF SOIL TO THE PROJECT SITE.
- IF SOIL ORGANIC CONTENT IS INADEQUATE, SOIL SHALL BE AMENDED WITH COMPOST OR ACCEPTABLE, WEED FREE, ORGANIC MATTER. ORGANIC AMENDMENT SHALL BE WELL COMPOSTED, PH RANGE OF 6-8, MOISTURE CONTENT 35-55% BY WEIGHT (DRIED PASSING THROUGH 1" SIEVE), SOLUBLE SALT CONTENT LESS THAN 0.5 MM HOS/CM, MEETING ALL APPLICABLE ENVIRONMENTAL CRITERIA FOR CLEAN FILL. FREE OF BROKEN GLASS, PAINT CHIPS, PLASTIC, DELETERIOUS MATERIALS, ROOTS, WEEDS, BOULDERS, COBBLES AND GRAVEL OVER 1" IN DIAMETER.
- SCAFFY AND/OR TILL ALL COMPACTED SUBSOILS PRIOR TO ADDING PLANTING SOIL OR TOPSOIL. PLANTING SOILS AND TOPSOIL SHALL BE PLACED IN 12-18" LIFTS AND WATER THOROUGHLY BEFORE INSTALLING NEXT LIFT. NO SOILS SHALL BE PLACED IN A FROZEN OR MUDDY CONDITION.

- DELIVERY, STORAGE, AND HANDLING**
- PACKAGED MATERIALS: PACKAGED MATERIALS SHALL BE DELIVERED IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. MATERIALS SHALL BE PROTECTED FROM DETERIORATION DURING DELIVERY AND WHILE STORED AT SITE.
 - TREES AND SHRUBS: THE CONTRACTOR SHALL PROVIDE TREES AND SHRUBS DIG FOR THE GROWING SEASON FOR WHICH THEY WILL BE PLANTED. DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. DO NOT BEND OR BIND-THE TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING TRANSPORT. DO NOT DROP OR BREAK BALLED STOCK DURING DELIVERY OR HANDLING.
 - ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT BALL WRAPPING AND BINDING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED FROM THE TOP OF THE ROOT BALL AT THE TIME OF PLANTING. IF THE PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, THE WIRE BASKET SHALL BE CUT AND FOLDED DOWN 8" INTO THE PLANTING HOLE. WITH CONTAINER-GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE ROOT BALL SHALL BE CUT THROUGH THE SURFACE IN TWO LOCATIONS.
 - THE CONTRACTOR SHALL HAVE TREES AND SHRUBS DELIVERED TO SITE AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, THE CONTRACTOR SHALL SET TREES AND SHRUBS IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE AND KEEP ROOTS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.

- INSTALLATION**
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY AND SEWER LINES PRIOR TO THE START OF EXCAVATION ACTIVITIES. NOTIFY THE PROJECT ENGINEER AND OWNER IMMEDIATELY OF ANY CONFLICTS WITH PROPOSED PLANTING LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE.
 - THE CONTRACTOR TO STAKE OUT PLANTING LOCATIONS, FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR OWNER BEFORE PLANTING WORK BEGINS. THE LANDSCAPE ARCHITECT AND/OR OWNER SHALL DIRECT THE CONTRACTOR IN THE FINAL PLACEMENT OF ALL PLANT MATERIAL AND LOCATION OF PLANTING BEDS TO ENSURE COMPLIANCE WITH DESIGN INTENT UNLESS OTHERWISE INSTRUCTED.
 - NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR PROJECT ENGINEER.
 - ALL LANDSCAPED AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE HAND RAKED SMOOTH ELIMINATING ANY CLUMPS AND UNEVEN SURFACES PRIOR TO PLANTING OR MULCHING.
 - ALL PLANT MATERIAL SHALL BE INSTALLED AS PER DETAILS, NOTES AND CONTRACT SPECIFICATIONS. THE LANDSCAPE ARCHITECT MAY REVIEW INSTALLATION AND MAINTENANCE PROCEDURES.
 - THE CONTRACTOR SHALL KEEP AREA CLEAN DURING DELIVERY AND INSTALLATION OF PLANT MATERIALS. REMOVE AND DISPOSE OF OFF-SITE ANY ACCUMULATED DEBRIS OR UNUSED MATERIALS. REPAIR DAMAGE TO ADJACENT AREAS CAUSED BY LANDSCAPE INSTALLATION OPERATIONS.
 - AFTER PLANT IS PLACED IN TREE PIT LOCATION, ALL TWINE HOLDING ROOT BALL TOGETHER SHOULD BE COMPLETELY REMOVED AND THE BURLAP SHOULD BE PULLED DOWN SO 1/3 OF THE ROOT BALL IS EXPOSED. SYNTHETIC BURLAP SHOULD BE COMPLETELY REMOVED AFTER INSTALLATION.
 - MULCH SHOULD NOT BE PILED UP AROUND THE TRUNK OF ANY PLANT MATERIAL. NO MULCH OR TOPSOIL SHOULD BE TOUCHING THE BASE OF THE TRUNK ABOVE THE ROOT COLLAR.
 - ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR AS REQUIRED BY SITE AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH.
 - AFTER COMPLETION OF A PROJECT, ALL EXPOSED GROUND SURFACES THAT ARE NOT PAVED WITHIN THE CONTRACT LIMIT LINE, AND THAT ARE NOT COVERED BY LANDSCAPE PLANTING OR SEEDING AS SPECIFIED, SHALL BE COVERED BY A SHREDED HARDWOOD BARK OR APPROVED EQUAL MULCH THAT WILL PREVENT SOIL EROSION AND THE EMANATION OF DUST.
 - TREES MAY BE STAKED AT LANDSCAPE CONTRACTOR'S DISCRETION. CURRENT HORTICULTURAL PRACTICE DOES NOT RECOMMEND STAKING TREES EXCEPT IN CONDITIONS WHERE TREES ARE SUBJECT TO BLOW DOWNS DUE TO SOIL CONDITIONS, HEAVY PREVAILING WINDS OR A HIGH RATIO OF TOP GROWTH TO ROOT BALL. IF STAKING IS DEEMED NECESSARY BY CONTRACTOR, STAKE AND GUYS SHOULD BE LOCATED AND FLAGGED IN A MANNER TO PREVENT TRIPPING HAZARDS. WRES OR GUYS SHALL BE LOCATED AND COVERED SO AS NOT TO PULL OR DAMAGE BRANCHES AND SHALL BE REMOVED AT THE END OF THE GUARANTEE PERIOD.

- GUARANTEE**
- NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF ONE YEAR FOLLOWING ACCEPTANCE BY THE OWNER. PLANT MATERIAL FOUND TO BE UNHEALTHY, DYING OR DEAD DURING THIS PERIOD, SHALL BE REMOVED AND REPLACED IN KIND BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.

LANDSCAPE MAINTENANCE NOTES

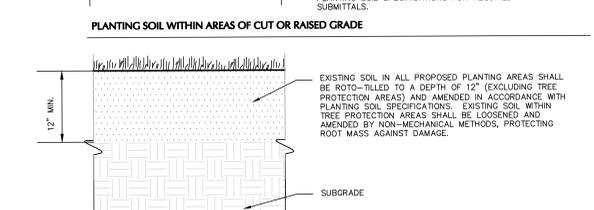
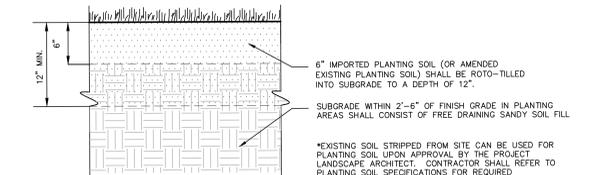
- MAINTENANCE OPERATIONS BEFORE APPROVAL:**
 - PLANT CARE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS SATISFACTORILY INSTALLED AND SHALL CONTINUE THROUGHOUT THE LIFE OF THE CONTRACT UNTIL FINAL ACCEPTANCE OF THE PROJECT.
 - CARE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR OTHER MEANS, REPAIRING AND RESHAPING WATER RINGS OR SAUCERS, MAINTAINING STAKES AND GUYS AS ORIGINALLY INSTALLED, WATERING WHEN NEEDED OR DIRECTED, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.
 - CONTRACTOR SHALL REMOVE AND REPLACE ALL DEAD, DEFECTIVE AND/OR REJECTED PLANTS AS REQUIRED BEFORE FINAL ACCEPTANCE.
- MAINTENANCE DURING CONSTRUCTION:**
 - MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING. PLANTS SHALL BE WATERED, MULCHED, WEEDED, PRUNED, SPRAYED, FERTILIZED, CULTIVATED, AND OTHERWISE MAINTAINED AND PROTECTED UNTIL PROVISIONAL ACCEPTANCE. SETTLING PLANTS SHALL BE RESET TO PROPER GRADE AND POSITION. PLANTING SAUCER RESTORED AND DEAD MATERIAL REMOVED. STAKES AND WRES SHALL BE TIGHTENED AND REPAIRED. DEFECTIVE WORK SHALL BE CORRECTED AS SOON AS POSSIBLE AFTER IT BECOMES APPARENT AND WEATHER AND SEASON PERMIT.
 - IF A SUBSTANTIAL NUMBER OF PLANTS ARE SICKLY OR DEAD AT THE TIME OF INSPECTION, ACCEPTANCE SHALL NOT BE GRANTED AND THE CONTRACTOR'S RESPONSIBILITY FOR MAINTENANCE OF ALL PLANTS SHALL BE EXTENDED FROM THE TIME REPLACEMENTS ARE MADE OR EXISTING PLANTS ARE DEEMED ACCEPTABLE BY THE LANDSCAPE ARCHITECT.
 - ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE SPECIFIED ON THE PLANT LIST OR THAT WHICH WAS TO REMAIN OR BE RELOCATED. THEY SHALL BE FURNISHED AND PLANTED AS SPECIFIED. THE COST SHALL BE BORNE BY THE CONTRACTOR. REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC., AND LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
 - PLANTS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER INSPECTION AND PROVISIONAL ACCEPTANCE.
 - AT THE END OF THE ESTABLISHMENT PERIOD, INSPECTION SHALL BE MADE AGAIN. ANY PLANT REQUIRED UNDER THIS CONTRACT THAT IS DEAD OR UNSATISFACTORY TO THE LANDSCAPE ARCHITECT OR OWNER SHALL BE REMOVED FROM THE SITE AND REPLACED DURING THE NORMAL PLANTING SEASON.
- LAWN MAINTENANCE:**
 - BEGIN MAINTENANCE IMMEDIATELY AFTER EACH PORTION OF LAWN IS PLANTED AND CONTINUE FOR 8 WEEKS AFTER ALL LAWN PLANTING IS COMPLETED.
 - WATER TO KEEP SURFACE SOIL MOIST, REPAIR WASHED OUT AREAS BY FILLING WITH TOPSOIL, LIMING, FERTILIZING AND RE-SEEDING.
 - IN NOW-MOW LAWN AREAS, MOW TO A FOUR INCH HEIGHT DURING THE FIRST SEASON. IN THE SECOND SEASON, MOWING MAY BE REQUIRED TWICE OR THREE TIMES A YEAR IN MIDSUMMER, WHEN GRASS SEEDHEADS APPEAR. ONCE THE LAWN IS ESTABLISHED, MOWING MAY BE REQUIRED ONLY IN THE FALL TO REMOVE THE SEASON'S DENSE LEAF GROWTH AND FALLEN LEAVES, ENCOURAGING THICK REGROWTH IN THE SPRING.

NO-MOW LAWN SEED MIX:

- PRAIRIE NURSERY'S "NO MOW LAWN SEED MIX" OR APPROVED EQUAL.

GENERAL NOTE:

DUE TO GENERAL CONSTRUCTION ACTIVITIES AND ADJACENT SITE COMPACTION REQUIREMENTS, SUBGRADE SOILS WITHIN PROPOSED PLANTING AREAS TEND TO BECOME HIGHLY COMPACTED. IN ORDER TO CREATE A HEALTHY GROWING MEDIUM TO ALLOW PROPOSED PLANTINGS TO ESTABLISH A WOODRUS ROOT MASS, THIS SUBGRADE SOIL MUST UNDERGO A RESTORATION PROCESS. IN ADDITION, IMPORTED OR AMENDED EXISTING SOILS SHALL BE MIXED WITH SUBGRADE SOILS WHERE THEY MEET IN ORDER TO CREATE A TRANSITIONAL GRADIENT TO ALLOW FOR PROPER DRAINAGE.



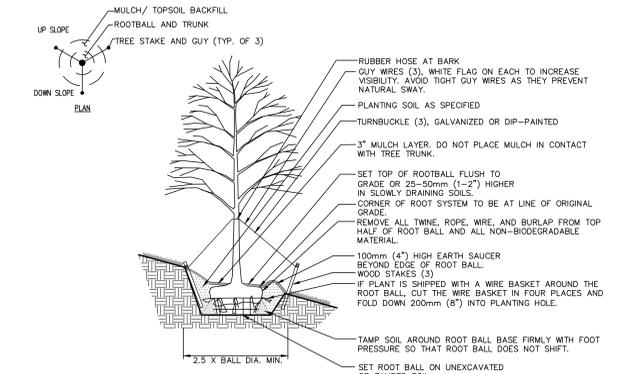
- NOTES:**
- CONTRACTOR IS RESPONSIBLE TO SEND SAMPLES OF EXISTING SOILS INTENDED FOR USE IN PLANTING AREAS (1 PER 500 CY) TO TESTING LABORATORY OR UNIVERSITY COOPERATIVE EXTENSION FOR TESTING. ALL TESTING COSTS ARE AT THE CONTRACTOR'S EXPENSE.
 - RECYCLED CRUSHED CONCRETE AND ASPHALT MILLINGS SHALL NOT BE PLACED WITHIN 2'-6" OF FINISH GRADE IN PROPOSED LANDSCAPE AREAS.
 - IMPORTED FILL SHALL CONTAIN NO CONTAMINATION IN EXCESS OF THE APPLICABLE STATE ENVIRONMENTAL STANDARDS AND MEET THE ENVIRONMENTAL REQUIREMENTS FOR THE PROJECT. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION OF COMPLIANCE PRIOR TO DELIVERY OF ANY FILL TO THE SITE.
 - CONTRACTOR TO LIGHTLY COMPACT ALL PLACED PLANTING SOILS AND RAISE GRADES ACCORDINGLY TO ALLOW FOR FUTURE SETTLEMENT OF PLANTING SOILS (TYP.).
 - NO STONES, WOOD CHIPS, OR DEBRIS LARGER THAN 1/2" SHALL BE ACCEPTABLE WITHIN PLANTING AREAS.

1 PLANTING SOIL

NTS

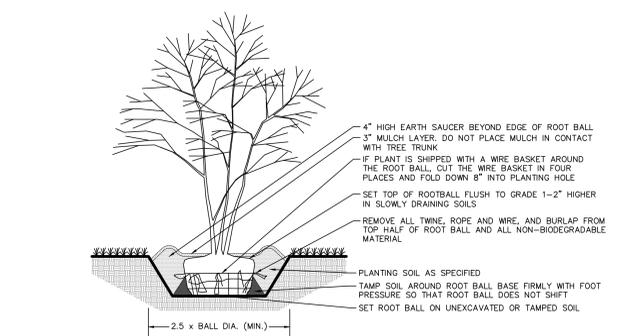
3 TREE PIT PLANTING

NTS



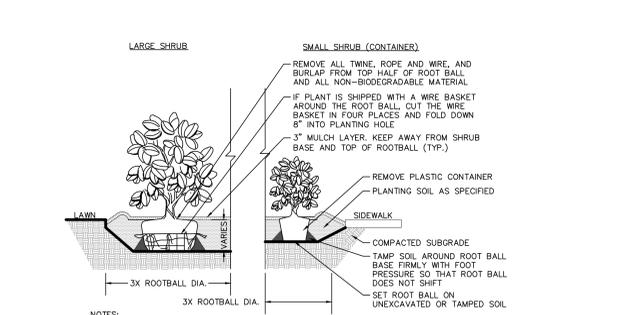
4 TREE PLANTING ON SLOPE > 3:1

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5 ORNAMENTAL TREE PLANTING

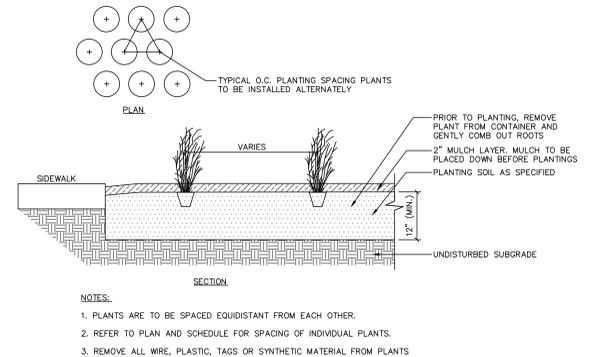
NTS



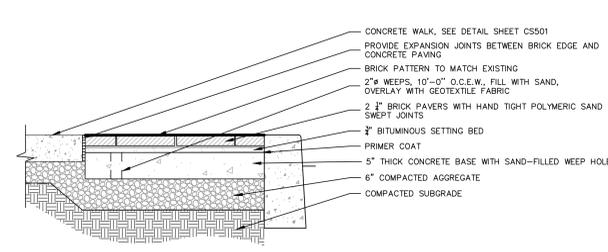
- NOTES:**
- ALL SHRUBS TO BE SET PLUMB.
 - REFER TO LANDSCAPE PLAN FOR SPACING OF INDIVIDUAL PLANTS.
 - REMOVE ALL WIRE, PLASTIC, TAGS OR SYNTHETIC MATERIAL FROM PLANTS PRIOR TO PLANTING.

6 SHRUB PLANTING

NTS



- NOTES:**
- PLANTS ARE TO BE SPACED EQUIDISTANT FROM EACH OTHER.
 - REFER TO PLAN AND SCHEDULE FOR SPACING OF INDIVIDUAL PLANTS.
 - REMOVE ALL WIRE, PLASTIC, TAGS OR SYNTHETIC MATERIAL FROM PLANTS PRIOR TO PLANTING.



8 BRICK PAVERS ON CONCRETE BASE

NTS

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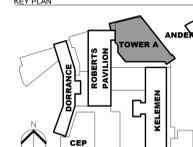
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REVISION	NO.	DESCRIPTION	DATE

JAYNE O. SPECTOR
LANDSCAPE ARCHITECT NJ Lic. No. 21A500045700
HKS PROJECT NUMBER

DATE
20 MARCH, 2024
ISSUE

SHEET TITLE
LANDSCAPE NOTES AND DETAILS

SHEET NO.
LP501