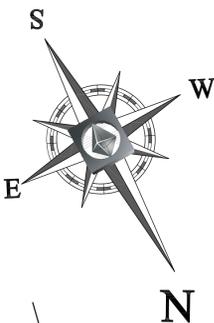


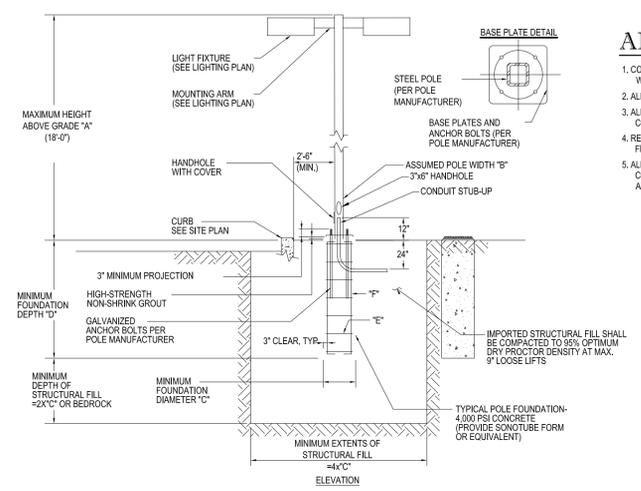
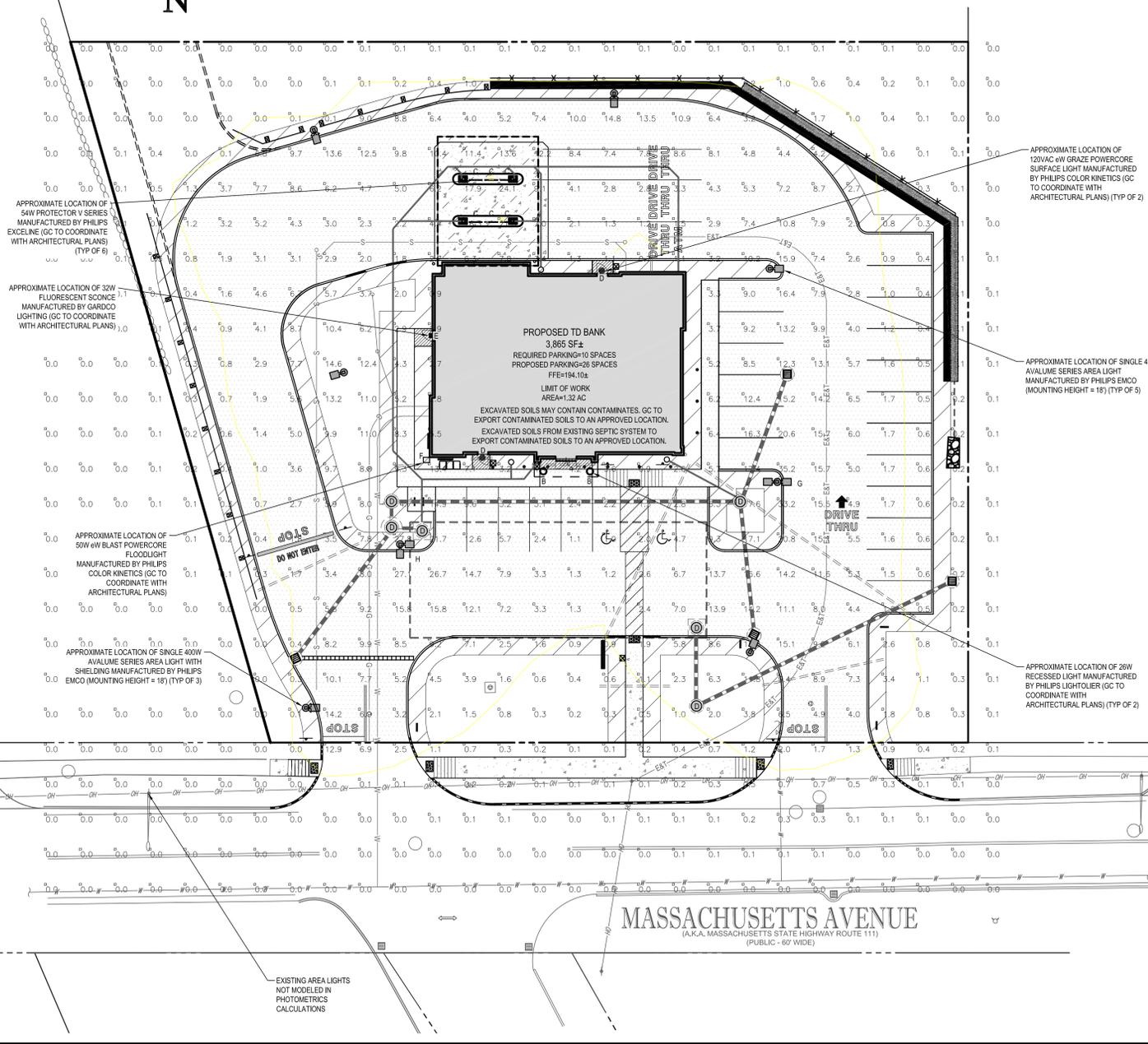
**LUMINAIRE SCHEDULE**

Symbol	Qty	Label	Mounting Height	Arrangement	Lumens	LLF	Description	Lamps	Manufacturer	Model Number	Comments
■	6	A	18'	SINGLE	4000	0.720	400W AREA LIGHT TYPE 3		PHILIPS EMCO	AVA-3-400P	
■	1	G	18'	SINGLE	4000	0.720	400W AREA LIGHT TYPE 3		PHILIPS EMCO	AVA-3-400P	
■	1	H	18'	SINGLE	4000	0.720	400W AREA LIGHT TYPE 3		PHILIPS EMCO	AVA-3-400P	
○	2	B	10'	SINGLE	1800	0.720	28W RECESSED COMPACT FLUORESCENT DOWNLIGHT 6" APERTURE	(1) OSRAM SYLVANIA CF2607E/IN835/ECO	PHILIPS LIGHTOLIER	8031CCD/WS132BU	
—	6	C	11'-2"	SINGLE	2850	0.720	54W PROTECTOR V SERIES LINEAR FLUORESCENT T8HO SURFACE MOUNTED DAMP LOCATION	(2) OSRAM SYLVANIA FP54835HP/ECO	PHILIPS EXCELINE	PVNT-Q-2-54-8-SGY-8	DRIVE-THRU CANOPY
●	2	D	10'	SINGLE	384	0.720	120VAC 1" W GRAZE POWERCORE LINEAR LED SURFACE LIGHT WALL WASHING & GRAZING	INTEGRAL 2700K LED	PHILIPS COLOR KINETICS	523-000030-04	DIMMING CAPABLE
■	1	E	10'	SINGLE	384	0.720	32W EXTERIOR WET LOCATION FLUORESCENT SCIENCE	(1) OSRAM SYLVANIA CF32DTE/IN835/ECO	GARDCO LIGHTING	11EMC-MT-32TRF-120-NP	
□	1	F	AT GRADE	SINGLE	1366	0.720	50W W BLAST POWERCORE EXTERIOR WET LOCATION LED FLOODLIGHT	INTEGRAL 2700K LED	PHILIPS COLOR KINETICS	523-000029-03	GREEN FACADE STRIP

\* GC TO CONFIRM WITH ARCHITECTURAL PLANS



NOTE: THIS LIGHTING PLAN ILLUSTRATES ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATION IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.



**AREA LIGHT FOUNDATION NOTES:**

- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS WITH A MINIMUM CEMENT CONTENT OF 600 POUNDS PER CUBIC YARD.
- ALL CONCRETE SHALL HAVE A SLUMP NO GREATER THAN 4" TO WITHIN A TOLERANCE OF 1".
- ALL EXPOSED CONCRETE SHALL BE AIR ENTRAINED, 6% (WITHIN 1% TOLERANCE), CONFORMING TO ASTM C260.
- REINFORCING STEEL BARS SHALL BE MINIMUM ASTM A615, GRADE 60, AND SHALL BE FIELD WROUGHT IN PLACE (IF APPLICABLE).
- ALL FORM WORK AND PLACEMENT OF CONCRETE SHALL COMPLY WITH GOOD CONSTRUCTION PRACTICES AND BE IN ACCORDANCE WITH ALL LOCAL GOVERNING CODES AND REGULATIONS AS WELL AS THE ACI, NY, AND IBC CODES.

AREA LIGHT FOUNDATION SCHEDULE	
MAXIMUM HEIGHT ABOVE GRADE "A"	18'-0"
ASSUMED AVERAGE POLE WIDTH "B"	4"
MINIMUM FOUNDATION DIAMETER "C"	18"
MINIMUM FOUNDATION DEPTH "D"	4'-6"
REINFORCING TIES "E"	6 TIES @ 12" C
VERTICAL HOOKED REINFORCEMENT "F"	(5) #4 BARS EVENLY SPACED

**DESIGN CRITERIA**

MINIMUM ALLOWABLE BEARING PRESSURE = 3,000 PSF - ASSUMED (TO BE VERIFIED IN FIELD)  
 SOIL FRICTION ANGLE = 30 DEG - ASSUMED (TO BE VERIFIED IN FIELD)  
 SOIL DRY UNIT WEIGHT = 120 PCF - ASSUMED (TO BE VERIFIED IN FIELD)

**GENERAL LIGHTING STANDARDS**

- NOTE: GENERAL CONTRACTOR TO ENSURE COMPLIANCE WITH THE FOLLOWING ACCEPTED LIGHTING STANDARDS WITH LIGHTING MANUFACTURER/SUPPLIER PRIOR TO ORDERING/INSTALLING LIGHTS AND PERFORM MEASUREMENTS OF LIGHT LEVELS UPON INSTALLATION OF THE LIGHTS.
- 8 CANDLEFOOT MINIMUM AT ATM OR AFTER HOUR DEPOSITORY AND EXTENDING 5 FEET IN ALL DIRECTIONS.
  - 2 CANDLEFOOT MINIMUM AT ATM OR AFTER HOUR DEPOSITORY AND EXTENDING 50 FEET IN ALL DIRECTIONS.
  - 2 CANDLEFOOT MINIMUM IN PARKING AREAS WITHIN 60 FEET OF ATM OR AFTER HOUR DEPOSITORY.
  - 2 CANDLEFOOT MINIMUM IN THE EMPLOYEE ENTRANCE/EXIT AREA AND EMPLOYEE PARKING AREA.
  - ALL LIGHTING MEASUREMENTS ARE TO BE TAKEN AT 36 INCHES ABOVE THE GROUND ON A HORIZONTAL PLANE.
  - CONTRACTOR TO ADJUST LIGHTING FIXTURE LOCATIONS, QUANTITIES AND SHIELDING METHODS TO ACHIEVE COMPLIANCE WITH THESE STANDARDS AND SUPPLY OWNER WITH A MARK-UP PLAN IDENTIFYING AS-BUILT ILLUMINATION LEVELS BASED ON FIELD MEASUREMENTS OF SAME.
  - TYPICAL APPLICATION AREAS INCLUDE ATM AND AFTER HOUR DEPOSITORY LOCATIONS.

**GENERAL LIGHTING NOTES**

- FOUNDATION DESIGN AND CONSTRUCTION FOR LIGHT POLES/FIXTURES ARE BY THE CONTRACTOR.
- MAINTAINED FOOTCANDLE LEVELS AT GRADE USING A .72 TOTAL LIGHT LOSS FACTOR.
- CONTRACTOR/LIGHT SUPPLIER TO SHIELD AREA LIGHTS IN SUCH A MANNER AS TO ACHIEVE THE FOOT-CANDLE LIMITS SHOWN.

**SECTION 10.6.3.2**

- NOTES:
- POWER IS CALCULATED FOR THE LOT
  - THERE SHALL BE NO OVERLAPPING ACTIVITY AREAS
  - ONLY IMPERVIOUS AREAS SHALL BE COUNTED TOWARD ACTIVITY AREAS
  - ACTIVITY AREAS SHALL BE CLEARLY LABELED ON THE SITE PLAN
  - A LUMINAIRE MUST BE WITHIN 100' TO BE COUNTED TOWARD AN ACTIVITY AREA

PARKING LOTS, DRIVEWAYS, BIKEWAYS (INCLUDES 5' MARGIN OF GRADE OR LANDSCAPE) @ 0.1 WATTS PER SF  
 0.1 WATTS/SF x 28,906 SF = 2,891 WATTS ALLOWED

DOORS @ 13 WATTS / LF WIDTH OF ALL DOORS + 6 LF PER DOOR  
 13 WATTS/SF x 6 DOORS x (3 LF OF DOOR WIDTH PER DOOR + 6 LF PER DOOR) = 702 WATTS ALLOWED

RETAIL SALES CANOPY @ 0.9 WATTS PER SF OF CANOPY  
 0.9 WATTS/SF x 1,062 SF = 956 WATTS ALLOWED

**TOTAL = 4,549 WATTS ALLOWED**

AREA LIGHTS	WATTS	NUMBER	TOTAL
AREA LIGHTS	400	10	4,000
MAIN DOOR	26	2	52
DRIVE THRU CANOPY	6	54	324
CUSTOMER DOORS	2	15	30
EMERGENCY EXIT DOOR	1	32	32
FLOODLIGHT	1	50	50
			<b>4,488 PROPOSED</b>



**AREA LIGHT FIXTURE DETAIL**  
NOT TO SCALE

PAVING ACTIVITY AREA	22,716 SF
5' BUFFER STRIP AREA	6,188 SF
RETAIL SALES CANOPY ACTIVITY AREA	1,062 SF
DOOR ACTIVITY AREA	SF N/A
UNCOUNTED AREA	SF N/A

NOTE: GENERAL CONTRACTOR TO PROVIDE A MINIMUM OF TWO LIGHT POLES WITH ELECTRICAL OUTLETS TO PROVIDE POWER FOR TD BANK GRAND OPENING FUNCTION. GENERAL CONTRACTOR TO COORDINATE LOCATIONS WITH OWNER TO IDENTIFY SPECIFIC SITE LIGHT POLES THAT ARE TO BE FURNISHED WITH OUTLETS. GENERAL CONTRACTOR TO REVIEW THE ELECTRICAL REQUIREMENTS FOR SAME IN OTHER SECTIONS OF THE BID DOCUMENTS INCLUDING, BUT NOT LIMITED TO, THE ARCHITECTURAL & ELECTRICAL PLANS, SPECIFICATIONS & THE OWNER'S SCOPE OF WORK

NOTE: LIGHTING LEVELS ARE REPRESENTATIVE OF AN APPROXIMATION UTILIZING LABORATORY DATA FOR SIMILAR FIXTURES AND/OR ACTUAL FIELD MEASUREMENTS TAKEN WITH A LIGHT METER DUE TO FACTORS SUCH AS FIXTURE MAINTENANCE, EQUIPMENT TOLERANCES, WEATHER CONDITIONS, ETC. ACTUAL LIGHTING LEVELS MAY DIFFER AND LIGHTING LEVELS ON THE PLAN SHOULD BE CONSIDERED APPROXIMATE.

THIS PLAN TO BE UTILIZED FOR LIGHTING LAYOUT PURPOSES ONLY

**BOHLER ENGINEERING**

CORPORATE OFFICE:  
 WARREN, NJ

OFFICES:  
 SOUTHBOROUGH, MA  
 BOWNE, MD  
 PHILADELPHIA, PA  
 ALBANY, NY  
 RICHMOND, VA  
 FORT LAUDERDALE, FL  
 CENTER VALLEY, PA

CIVIL & CONSULTING ENGINEERS  
 SURVEYORS  
 PROJECT MANAGERS  
 ENVIRONMENTAL CONSULTANTS  
 LANDSCAPE ARCHITECTS

**REVISIONS**

REV	DATE	COMMENT	BY
1	06/21/10	REVS PER TOWN COMMENT	EGD
2			
3			
4			
5			
6			
7			
8			
9			

THE FOLLOWING STATES REQUIRE NOTIFICATION BY EXAMINATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE:  
 MA, ME, NH, RI, VT - 688-344-7233  
 NY - 1-800-922-4655  
 NY - 1-800-462-7962

**PERMIT SET**

PROJECT No.: W081068  
 DRAWN BY: KBS  
 CHECKED BY: JGS/MM  
 DATE: 5/24/10  
 SCALE: AS NOTED  
 CAD I.D.: w081068s1

**SITE PLAN DOCUMENTS**

FOR

**TD Bank**

408 MASSACHUSETTS AVENUE  
 MIDDLESEX COUNTY  
 ACTON, MASSACHUSETTS

**BOHLER ENGINEERING**

352 TURNPIKE ROAD  
 SOUTHBOROUGH, MA 01772  
 Phone: (508) 480-9900  
 Fax: (508) 480-9980  
[www.BohlerEngineering.com](http://www.BohlerEngineering.com)

**W.D. GOEBEL**

PROFESSIONAL ENGINEER  
 MASSACHUSETTS LICENSE No. 42644  
 RHODE ISLAND LICENSE No. 7268  
 CONNECTICUT LICENSE No. 21854  
 NEW HAMPSHIRE LICENSE No. 10290  
 MAINE LICENSE No. 9490

SHEET TITLE:  
**LIGHTING PLAN**

SHEET NUMBER:  
**11**  
 OF 1

REV. 1 - 06-21-10

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