

DESIGN REVIEW BOARD

Monday, Dec. 6, 2021

7:30 p.m.

Virtual Meeting using Zoom

Meeting ID: 845-1987-6965

(Instructions for accessing below)

Under Governor Baker's Act "Extending Certain COVID-10 Measures Adopted During the State of Emergency", extending the "Executive Order Suspending Certain Provisions of the Open Meeting Law G.L. c. 30A, S20," issued June 16, 2021, and in effect until April 1, 2022, meeting of public bodies may be conducted virtually provided that adequate access is provided to the public.

To view and participate in this virtual meeting on your phone, download the "Zoom Cloud Meetings" app in any app store or at www.zoom.us. At the above date and time, click on "Join a Meeting" and enter the following Meeting ID: 845-1987-6965

Link: <https://us02web.zoom.us/j/84519876965>

To view and participate in this virtual meeting on your computer, at the above date and time, go to www.zoom.us click "Join a Meeting" and enter the following ID: 845-1987-6965

APPLICANTS:

Vanessa Schwede or Steve Schwede, Fast Signs representing Michael Tedoldi development at 15 Oak Street and applying for signage.

Joey Fonseca, Project Manager, Bohler Engineering representing Chase Bank at 173 Chestnut Street and applying for façade work, signage and landscaping.

REVIEW

No minutes will be available for review till the 12/20/21 meeting.

Next Public Meeting – December 20, 2021 at 7:30pm via Zoom Webinar



TOWN OF NEEDHAM

DESIGN REVIEW BOARD

Public Service Administration Building

500 Dedham Avenue

Needham, MA 02492

Application and Report

Location: 15 Oak Street Date: 11.30.21

Owner: 57 Dedham Ave LLC

Address: PO BOX 920298 Needham MA 02492
Street City State Zip

Telephone: 781.760.7461

Applicant: Fuller Brook

Address: 15 Oak Street Needham MA 02492
Street City State Zip

Telephone: 781.760.7461

Designer/Installer: Fastsigns of Needham

Address: 15 Kearney Road Needham MA 02494
Street City State Zip

Telephone: 781.444.4889

Type of Application
☒ Sign
☐ Minor Project
☐ Exterior Alterations
Major Project
☐ - preliminary
☐ - final
☐ Flexible Subdivision
☐ Planned Residential Development
☐ Residential Compound

Brief description of sign or project:

3D Metal Letters - Naming the building: Betsy M. Tedoldi Memorial Building

Primary Signage

Tel 781-444-4889 Fax 781-444-8577 • 310@fastsigns.com

Fuller Brook

3-Dimensional Flat Cut Metal Letters

15 Oak Street

Needham, MA

02492



COLORS:

- Benjamin Moore Blue 2066-10
- Black

STYLE:

3-Dimensional 1/2" Thick Flat Cut Out Metal Letters Painted with Gloss Finish,
Mounted with Flush to Wall with Studs

Betsy "B" Height = 9.8in

Memorial "M" Height = 3.3in

Sign Height = 18.74in

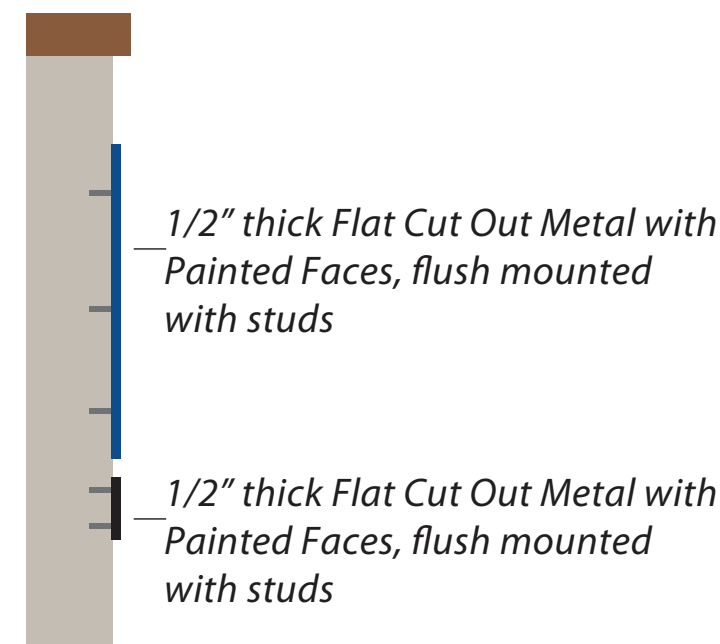
Sign Width = 72.32in

Square Footage = 9.4sq'

Top of Sign to Grade = 123.76in



Left Side Mounting Detail



Proposed Signage

Top of Sign to Grade = 123.76"

*Graphics not to scale but are proportionate.

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Primary Signage

Tel 781-444-4889 Fax 781-444-8577 • 310@fastsigns.com

Fuller Brook
3-Dimensional Flat Cut Metal Letters
15 Oak Street
Needham, MA
02492



Reference Page 1 for Details

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Neighborhood View

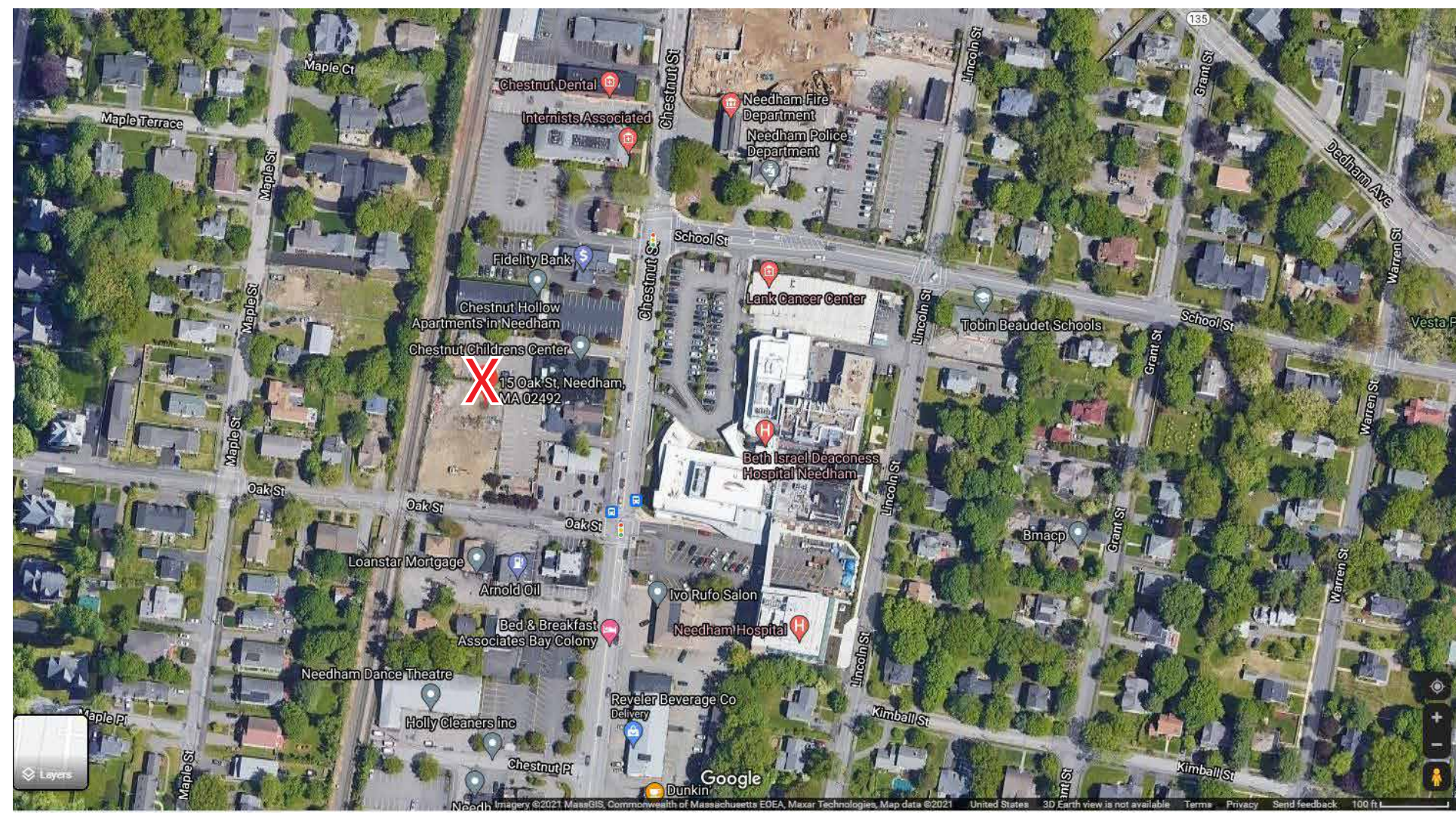
Fuller Brook
 3-Dimensional Flat Cut Metal Letters
 15 Oak Street
 Needham, MA
 02492



15 Oak Street, Needham MA

Aerial View

Fuller Brook
3-Dimensional Flat Cut Metal Letters
15 Oak Street
Needham, MA
02492



Existing Signage

15 Oak Street, Needham MA

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TOWN OF NEEDHAM

DESIGN REVIEW BOARD

Public Service Administration Building
500 Dedham Avenue
Needham, MA 02492

Application and Report

Property Location: 173 Chestnut Street, Needham, MA, 02492 **Date:** 11/22/2021

Owner: 173 Chestnut Street, LLC

Address: 12 Eaton Road, Needham MA 02492
Street City State Zip

Telephone: _____

Applicant: Core States Group (c/o Bohler)

Address: 201 S. Maple Avenue Suite 300 Ambler PA 19002
Street City State Zip

Telephone: 215-962-7647

Designer/Installer: Bohler (c/o Joey Fonseca)

Address: 352 Turnpike Road Southborough MA 01772
Street City State Zip

Telephone: (508) 480-9900

Type of Application
☒ Sign
☐ Minor Project
☐ Exterior Alterations
Major Project (Site Plan Review)
☐ - preliminary
☐ - final
☐ Flexible Subdivision
☐ Planned Residential Development
☐ Residential Compound

Brief description of sign or project:

The project will propose a conversion of the existing vacant 7-Eleven building to a Chase Bank. A wall mounted logo sign is being proposed on the south building elevation. The sign includes an illuminated branding logo having dimensions of 4'w by 4' h and projects 1-1/2" from the building facade. Details shown on page 7 of the included sign package prepared by Philadelphia Sign.

Please email completed application to elitchman@needhamma.gov



TOWN OF NEEDHAM

DESIGN REVIEW BOARD

Public Service Administration Building
500 Dedham Avenue
Needham, MA 02492

Application and Report

Property Location: 173 Chestnut Street, Needham, MA, 02492 **Date:** 11/22/2021

Owner: 173 Chestnut Street, LLC

Address: 12 Eaton Road, Needham MA 02492
Street City State Zip

Telephone: _____

Applicant: Core States Group (c/o Bohler)

Address: 201 S. Maple Avenue Suite 300 Ambler PA 19002
Street City State Zip

Telephone: 215-962-7647

Designer/Installer: Bohler (c/o Joey Fonseca)

Address: 352 Turnpike Road Southborough MA 01772
Street City State Zip

Telephone: (508) 480-9900

Type of Application
☒ Sign
☐ Minor Project
☐ Exterior Alterations
Major Project (Site Plan Review)
☐ - preliminary
☐ - final
☐ Flexible Subdivision
☐ Planned Residential Development
☐ Residential Compound

Brief description of sign or project:

The project will propose a conversion of the existing vacant 7-Eleven building to a Chase Bank. A wall mounted sign is being proposed on the east building elevation. The sign includes channel letters and branding that is illuminated having dimensions of 11'-8-1/2" long, 20" high and projects 4-1/2" from the building facade. Details shown on page 8 of the included sign package by Philadelphia Sign.

Please email completed application to elitchman@needhamma.gov



TOWN OF NEEDHAM

DESIGN REVIEW BOARD

Public Service Administration Building
500 Dedham Avenue
Needham, MA 02492

Application and Report

Property Location: 173 Chestnut Street, Needham, MA, 02492 **Date:** 11/22/2021

Owner: 173 Chestnut Street, LLC

Address: 12 Eaton Road, Needham MA 02492
Street City State Zip

Telephone: _____

Applicant: Core States Group (c/o Bohler)

Address: 201 S. Maple Avenue Suite 300 Ambler PA 19002
Street City State Zip

Telephone: 215-962-7647

Designer/Installer: Bohler (c/o Joey Fonseca)

Address: 352 Turnpike Road Southborough MA 01772
Street City State Zip

Telephone: (508) 480-9900

Type of Application
☐ Sign
☒ Minor Project (Landscaping)
☐ Exterior Alterations
Major Project (Site Plan Review)
☐ - preliminary
☐ - final
☐ Flexible Subdivision
☐ Planned Residential Development
☐ Residential Compound

Brief description of sign or project:

The project will proposes a conversion of the existing vacant 7-Eleven building to a Chase Bank. The existing landscaped areas will be replanted with proposed vegetation as shown on Sheet C-701 of the included Site Development Plans prepared by Bohler.

Please email completed application to elitchman@needhamma.gov



TOWN OF NEEDHAM

DESIGN REVIEW BOARD

Public Service Administration Building
500 Dedham Avenue
Needham, MA 02492

Application and Report

Property Location: 173 Chestnut Street, Needham, MA, 02492 **Date:** 11/22/2021

Owner: 173 Chestnut Street, LLC

Address: 12 Eaton Road, Needham MA 02492
Street City State Zip

Telephone: _____

Applicant: Core States Group (c/o Bohler)

Address: 201 S. Maple Avenue Suite 300 Ambler PA 19002
Street City State Zip

Telephone: 215-962-7647

Designer/Installer: Bohler (c/o Joey Fonseca)

Address: 352 Turnpike Road Southborough MA 01772
Street City State Zip

Telephone: (508) 480-9900

Type of Application
☐ Sign
☒ Minor Project (Facade & Lighting)
☐ Exterior Alterations
Major Project (Site Plan Review)
☐ - preliminary
☐ - final
☐ Flexible Subdivision
☐ Planned Residential Development
☐ Residential Compound

Brief description of sign or project:

The project will propose a conversion of the existing vacant 7-Eleven building to a Chase Bank. The facade changes, color palette and materials are shown on the included architectural plans entitled "Exterior Elevations" prepared by Core States Group.

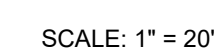
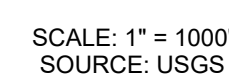
A lighting plan has also been prepared and shown on Sheet C-703 of the Site Development plan set prepared by Bohler. The two existing parking lot lighting poles will remain and only the LED fixture will be replaced. The south facing door will contain recessed lighting within the overhang and a wall mounted unit will be installed over the basement access door on the west side of the building. Please refer to the included lighting cut sheets for the lighting specifications.

Please email completed application to elitchman@needhamma.gov

FOR

CHASE

LOCATION OF SITE:
173 CHESTNUT STREET, TOWN OF NEEDHAM
NORFOLK COUNTY, MASSACHUSETTS
MAP #199, BLOCK #47, LOT #84



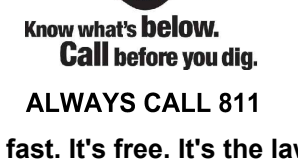
<i>DRAWING SHEET INDEX</i>	
SHEET TITLE	SHEET NUMBER
COVER SHEET	C-101
GENERAL NOTES SHEET	C-102
DEMO PLAN	C-201
SITE PLAN	C-301
GRADING PLAN	C-401
LANDSCAPE PLAN	C-701
LANDSCAPE NOTES AND DETAILS	C-702
LIGHTING PLAN	C-703
DETAIL SHEET	C-901
ALTA/SPNS LAND TITLE SURVEY (BY OTHERS)	1 SHEET

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING

LAND SURVEYING
 PROGRAM MANAGEMENT
 LANDSCAPE ARCHITECTURE
 SUSTAINABLE DESIGN
 PERMITTING SERVICES
 TRANSPORTATION SERVICES

REVISIONS

[illegible]**PERMIT SET**

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY
REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION
DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	W211148
DRAWN BY:	AGF
CHECKED BY:	JNF
DATE:	11/01/2021
CAD I.D.:	W211148-CVL-0

PROJECT:

PROPOSED SITE PLAN DOCUMENTS

FOR _____

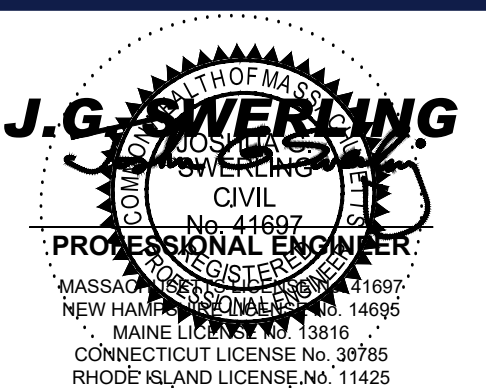


**MAP #199, BLOCK #47, LOT #84
173 CHESTNUT STREET
TOWN OF NEEDHAM
NORFOLK COUNTY,
MASSACHUSETTS**

BOHLER //

352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900

www.BohlerEngineering.com



SHEET TITLE:

COVER SHEET

SHEET NUMBER:

C-101

ORG. DATE - 11/01/2021

GENERAL NOTES

CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE NOTES AND SPECIFICATIONS CONTAINED HEREIN. CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL SUBCONTRACTORS FULLY AND COMPLETELY CONFORM TO AND COMPLY WITH THESE REQUIREMENTS.

1. THE FOLLOWING DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THIS SITE PLAN:

• "ALTANSPS LAND TITLE SURVEY", PREPARED BY CONTROL POINT ASSOCIATES, INC., DATED 11/11/2021.

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST VERIFY THAT HE/SHE HAS THE LATEST EDITION OF THE DOCUMENTS REFERENCED ABOVE. THIS IS CONTRACTOR'S RESPONSIBILITY.

2. ALL ACCESSIBLE (AKIA ADA) PARKING SPACES MUST BE CONSTRUCTED TO MEET, AT A MINIMUM, THE MORE STRINGENT OF THE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT" (ADA CODE 42 U.S.C. § 12101 et seq. AND 42 U.S.C. § 4151 et seq.) OR THE REQUIREMENTS OF THE JURISDICTION WHERE THE PROJECT IS TO BE CONSTRUCTED, AND ANY AND ALL AMENDMENTS TO BOTH WHICH ARE IN EFFECT WHEN THESE PLANS ARE COMPLETED.

3. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED, NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED THE COMMENTS TO ALL PLANS AND OTHER DOCUMENTS REVIEWED AND APPROVED BY THE PERMITTING AUTHORITIES AND CONFIRMED THAT ALL NECESSARY OR REQUIRED PERMITS HAVE BEEN OBTAINED. CONTRACTOR MUST HAVE COPIES OF ALL PERMITS AND APPROVALS ON SITE AT ALL TIMES.

4. THE OWNER/CONTRACTOR MUST BE FAMILIAR WITH AND RESPONSIBLE FOR THE PROCUREMENT OF ANY AND ALL CERTIFICATIONS REQUIRED FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

5. ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND CONDITIONS OF APPROVAL, AND ALL APPLICABLE REQUIREMENTS, RULES, REGULATIONS, STATUTORY REQUIREMENTS, CODES, LAWS AND STANDARDS OF ALL GOVERNMENTAL ENTITIES WITH JURISDICTION OVER THIS PROJECT.

6. THE GEOTECHNICAL REPORT AND RECOMMENDATIONS SET FORTH HEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND, IN CASE OF CONFLICT, DISCREPANCY OR AMBIGUITY, THE MORE STRINGENT REQUIREMENTS AND/OR RECOMMENDATIONS CONTAINED IN THE PLANS AND THE GEOTECHNICAL REPORT AND RECOMMENDATIONS SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR MUST NOTIFY THE ENGINEER, IN WRITING, OF ANY SUCH CONFLICT, DISCREPANCY OR AMBIGUITY BETWEEN THE GEOTECHNICAL REPORTS AND PLANS AND SPECIFICATIONS PRIOR TO PROCEEDING WITH ANY FURTHER WORK.

7. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO BOHLER ENGINEERING BY THE OWNER AND OTHERS PRIOR TO THE TIME OF PLAN PREPARATION. CONTRACTOR MUST FIELD VERIFY EXISTING CONDITIONS AND NOTIFY BOHLER ENGINEERING, IN WRITING, IMMEDIATELY IF ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, OR IF THE PROJECT CONDITIONS WITHIN THE PLANS ARE NOT AS SHOWN.

8. ALL DIMENSIONS SHOWN ON THE PLANS MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR MUST NOTIFY ENGINEER, IN WRITING, IF ANY CONFLICT, DISCREPANCY, OR AMBIGUITY EXISTS PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR WORK WHICH HAS TO BE REDONE OR REPAIRED DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS PRIOR TO CONSTRUCTION GIVING ENGINEER WRITTEN NOTIFICATION OF SAME AND ENGINEER, THEREAFTER, PROVIDING CONTRACTOR WITH WRITTEN AUTHORIZATION TO PROCEED WITH SUCH ADDITIONAL WORK.

9. CONTRACTOR MUST REFER TO THE ARCHITECTURAL/BUILDING PLANS "OF RECORD" FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY LOCATIONS.

10. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST COORDINATE THE BUILDING LAYOUT BY CAREFUL REVIEW OF THE ENTIRE SITE PLAN AND THE LATEST ARCHITECTURAL PLANS (INCLUDING, BUT NOT LIMITED TO, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE SUPPRESSION PLAN, WHERE APPLICABLE). CONTRACTOR MUST IMMEDIATELY NOTIFY OWNER, ARCHITECT AND SITE ENGINEER, IN WRITING, OF ANY CONFLICTS, DISCREPANCIES OR AMBIGUITIES WHICH EXIST.

11. DEBRIS MUST NOT BE BURIED ON THE SUBJECT SITE AND ALL UNSUITABLE EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) MUST BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ANY AND ALL GOVERNMENTAL AUTHORITIES WHICH HAVE JURISDICTION OVER THIS PROJECT OR OVER CONSTRUCTION.

12. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING WHEN SHORING IS REQUIRED AND FOR INSTALLING ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PRECAUTIONS TO BE TAKEN TO ASSURE THE STABILITY OF ADJACENT, NEARBY AND CONTIGUOUS STRUCTURES AND PROPERTIES.

13. THE CONTRACTOR IS TO EXERCISE EXTREME CARE WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. WHICH ARE TO REMAIN EITHER OF AN INITIAL PURPOSE OR FOR THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR TAKING ALL NECESSARY PRECAUTIONS TO ENSURE THE STABILITY OF ADJACENT, NEARBY AND CONTIGUOUS STRUCTURES AND PROPERTIES.

14. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO ANY NEW OR EXISTING CONSTRUCTION OR PROPERTY DURING THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. AND SHALL BEAR ALL COSTS ASSOCIATED WITH SAME TO INCLUDE, BUT NOT BE LIMITED TO, DESIGN, CONSTRUCTION, REPAIRING AND RESTORATION. THE CONTRACTOR IS RESPONSIBLE FOR AND MUST REPLACE ALL SIGNAL INTERSECTION CABLE, WIRING COUNDS, AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION AND MUST BEAR ALL COSTS ASSOCIATED WITH THE REPAIR OF ANY SUCH DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY SUCH DAMAGE TO PROPERTY TO A CONDITION EQUIVALENT TO OR BETTER THAN THE CONDITIONS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION, AND IN CONFORMANCE WITH APPLICABLE CODES, LAWS, RULES, REGULATIONS, STATUTORY REQUIREMENTS AND STATUTES. CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH SAME. CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL EXISTING DAMAGE AND TO NOTIFY THE OWNER AND THE CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.

15. ALL CONCRETE MUST BE AIR ENTRAINED AND HAVE THE MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT.

16. THE ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION METHODS, MEANS, TECHNIQUES OR PROCEDURES, GENERALLY OR FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES OR PROCEDURES FOR COMPLETION OF THE WORK DESCRIBED BOTH ON THESE PLANS, AND FOR ANY CONFLICTS/SCOPE REVISIONS WHICH RESULT FROM SAME. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE MEANS/METHODS FOR COMPLETION OF THE WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

17. THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR JOB SITE SAFETY. THE ENGINEER OF RECORD HAS NOT BEEN RETAINED TO PERFORM OR BE RESPONSIBLE FOR JOB SITE SAFETY, SAME BEING WHOLLY OUTSIDE OF ENGINEER'S SERVICES AS RELATED TO THE PROJECT. THE ENGINEER OF RECORD IS NOT RESPONSIBLE TO IDENTIFY OR REPORT ANY JOB SITE SAFETY ISSUES, AT ANY TIME.

18. ALL CONTRACTORS MUST CARRY THE SPECIFIED STATUTORY WORKERS' COMPENSATION INSURANCE, EMPLOYERS' LIABILITY INSURANCE AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE. ALL CONTRACTORS MUST HAVE THEIR COI POLICIES ENDORSED TO NAME BOHLER ENGINEERING, AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AS ADDITIONAL NAMED INSURED AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUPERIOR TO INSURE THIS HOLD HARMLESS AND INDEMNITY OBLIGATIONS ASSUMED BY THE CONTRACTORS. ALL CONTRACTORS MUST FURNISH BOHLER ENGINEERING WITH CERTIFICATIONS OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE PRIOR TO COMMENCING WORK AND UPON RENEWAL OF THE POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION AND FOR ONE YEAR AFTER THE COMPLETION OF CONSTRUCTION. IN ADDITION, ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, INDEMNIFY, DEFEND AND HOLD HARMLESS BOHLER ENGINEERING AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS FROM AND AGAINST ANY DAMAGES, INJURIES, CLAIMS, ACTIONS, PENALTIES, EXPENSES, PUNITIVE DAMAGES, TORT DAMAGES, STATUTORY CLAIMS, STATUTORY CAUSES OF ACTION, LOSSES, CAUSES OF ACTION, LIABILITIES OR COSTS INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEY'S FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH OR TO THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTORS, ALL CLAIMS BY THIRD PARTIES AND ALL CLAIMS RELATED TO THE PROJECT. CONTRACTOR MUST NOTIFY ENGINEER, IN WRITING, AT LEAST THIRTY (30) DAYS PRIOR TO ANY TERMINATION, SUSPENSION OR CHANGE OF ITS INSURANCE HEREUNDER.

19. BOHLER ENGINEERING WILL REVIEW OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH THE DESIGN INTENT AND THE INFORMATION SHOWN IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONSTRUCTION MEANS AND/OR METHODS AND/OR TECHNIQUES OR PROCEDURES, COORDINATION OF THE WORK WITH OTHER TRADES, AND CONSTRUCTION SAFETY PRECAUTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR HAS NO LIABILITY FOR SAME HEREUNDER. BOHLER ENGINEERING'S SHOP DRAWING REVIEW WILL BE CONDUCTED WITH REASONABLE PROMPTNESS WHILE ALLOWING SUFFICIENT TIME TO PERMIT ADEQUATE REVIEW. REVIEW OF A SPECIFIC ITEM MUST NOT INDICATE THAT BOHLER ENGINEERING HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. BOHLER ENGINEERING WILL NOT BE RESPONSIBLE FOR ANY DELAY OR FOR THE CONSTRUCTION DOCUMENTS AND FOR ONE YEAR AFTER THE COMPLETION OF CONSTRUCTION. BY THE CONTRACTOR, BOHLER ENGINEERING WILL NOT BE REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.

20. NEITHER THE PROFESSIONAL ACTIVITIES OF BOHLER ENGINEERING, NOR THE PRESENCE OF BOHLER ENGINEERING AND/OR ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AT A CONSTRUCTION/PROJECT SITE, SHALL RELIEVE THE GENERAL CONTRACTOR OF ITS OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, OVERSIGHT, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND COMPLIANCE WITH ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES WITH JURISDICTION OVER THE PROJECT AND/OR PROPERTY. BOHLER ENGINEERING AND ITS PERSONNEL HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY HEALTH OR SAFETY PROGRAMS OR PROCEDURES. THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY. BOHLER ENGINEERING SHALL BE INDEMNIFIED BY THE GENERAL CONTRACTOR AND MUST BE NAMED AN ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR'S POLICY OF GENERAL LIABILITY INSURANCE AS DESCRIBED ABOVE IN NOTE 19 FOR JOB SITE SAFETY.

21. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED HEREIN, WITHOUT FIRST OBTAINING THE PRIOR WRITTEN AUTHORIZATION OF THE ENGINEER OF RECORD, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PAYMENT OF ALL COSTS INCURRED IN CORRECTING ANY WORK DONE WHICH DEVIATES FROM THE PLANS, ALL FINES AND/OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND, FURTHER, SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS THE ENGINEER, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, IN ACCORDANCE WITH PARAGRAPH 19 HEREIN, FOR AND FROM ALL FEES, ATTORNEY'S FEES, DAMAGES, COSTS, JUDGMENTS, PENALTIES AND THE LIKE RELATED TO SAME.

22. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND PROTECTION OF TRAFFIC PLAN FOR ALL WORK THAT AFFECTS PUBLIC TRAVEL EITHER IN THE R.O.W. OR ON SITE. THE COST FOR THIS ITEM MUST BE INCLUDED IN THE CONTRACTOR'S PRICE.

23. ALL SIGNING AND PAVEMENT STRIPING MUST CONFORM TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OR LOCALLY APPROVED SUPPLEMENT.

24. ENGINEER IS NOT RESPONSIBLE FOR ANY INJURY OR DAMAGES RESULTING FROM CONTRACTORS FAILURE TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH THE APPROVED PLANS. IF CONTRACTOR AND/OR OWNER FAIL TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH APPROVED PLANS, THEY AGREE TO JOINTLY AND SEVERALLY INDEMNIFY AND HOLD ENGINEER HARMLESS FOR ALL INJURIES AND DAMAGES THAT ENGINEER SUFFERS AND COSTS THAT ENGINEER INCURS.

25. OWNER MUST MAINTAIN AND PRESERVE ALL PHYSICAL SITE FEATURES AND DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, IN STRICT ACCORDANCE WITH THE APPROVED PLANS (S) AND DESIGN AND, FURTHER ENGINEER IS NOT RESPONSIBLE FOR ANY FAILURE TO SO MAINTAIN OR PRESERVE SITE AND/OR DESIGN FEATURES. IF OWNER FAILS TO MAINTAIN AND/OR PRESERVE ALL PHYSICAL SITE FEATURES AND/OR DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, OWNER AGREES TO INDEMNIFY AND HOLD ENGINEER HARMLESS FOR ALL INJURIES AND DAMAGES THAT ENGINEER SUFFERS AND COSTS THAT ENGINEER INCURS AS A RESULT OF SAID FAILURE.

26. ALL DIMENSIONS MUST BE TO FACE OF CURB, EDGE OF PAVEMENT, OR EDGE OF BUILDING, UNLESS NOTED OTHERWISE.

27. ALL CONSTRUCTION AND MATERIALS MUST COMPLY WITH AND CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, LAWS, ORDINANCES, RULES AND CODES, AND ALL APPLICABLE OSHA REQUIREMENTS.

28. CONTRACTOR AND OWNER MUST INSTALL ALL ELEMENTS AND COMPONENTS IN STRICT COMPLIANCE WITH AND ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDED INSTALLATION CRITERIA AND SPECIFICATIONS. IF CONTRACTOR AND/OR OWNER FAIL TO DO SO, THEY AGREE TO JOINTLY AND SEVERALLY INDEMNIFY AND HOLD ENGINEER HARMLESS FOR ALL INJURIES AND DAMAGES THAT ENGINEER SUFFERS AND COSTS THAT ENGINEER INCURS AS A RESULT OF SAID FAILURE.

29. CONTRACTOR IS RESPONSIBLE TO MAINTAIN ON-SITE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN COMPLIANCE WITH EPA REQUIREMENTS FOR SITES WHERE ONE (1) ACRE OR MORE (UNLESS THE LOCAL JURISDICTION REQUIRES FEWER) IS DISTURBED BY CONSTRUCTION ACTIVITIES. CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL ACTIVITIES, INCLUDING THOSE OF SUBCONTRACTORS, ARE IN COMPLIANCE WITH THE SWPPP, INCLUDING BUT NOT LIMITED TO LOGGING ACTIVITIES (MINIMUM ONCE PER WEEK AND AFTER RAINFALL EVENTS) AND CORRECTIVE MEASURES, AS APPROPRIATE.

30. AS CONTAINED IN THESE DRAWINGS AND ASSOCIATED APPLICATION DOCUMENTS PREPARED BY THE SIGNATORY PROFESSIONAL ENGINEER, THE USE OF THE WORDS CERTIFY OR CERTIFICATION CONSTITUTES AN EXPRESSION OF "PROFESSIONAL OPINION" REGARDING THE INFORMATION WHICH IS THE SUBJECT OF THE UNDERSIGNED PROFESSIONAL'S KNOWLEDGE OR BELIEF AND IN ACCORDANCE WITH COMMON ACCEPTED PROCEDURE CONSISTENT WITH THE APPLICABLE STANDARDS OF PRACTICE, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EITHER EXPRESSED OR IMPLIED.

GENERAL GRADING & UTILITY PLAN NOTES

1. LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE INDEPENDENTLY CONFIRMED WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTIONS MUST BE INDEPENDENTLY CONFIRMED BY THE CONTRACTOR IN THE FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES MUST IMMEDIATELY BE REPORTED, IN WRITING, TO THE ENGINEER. CONSTRUCTION MUST COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROCEEDS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.

2. CONTRACTOR MUST VERTICALLY AND HORIZONTALLY LOCATE ALL UTILITIES AND SERVICES INCLUDING, BUT NOT LIMITED TO, GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE OR WORK SPACE, WHICHEVER IS GREATER. THE CONTRACTOR MUST USE, REFER TO, AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION, AT NO COST TO THE OWNER. CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION.

3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL CONSTRUCTION CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION AND COMMENCEMENT OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT AND/OR DISCREPANCY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD, IN WRITING, OF SAID CONFLICT AND/OR DISCREPANCY PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR'S FAILURE TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE CONTRACTOR'S FULL AND COMPLETE ACCEPTANCE OF ALL RESPONSIBILITIES TO THE SCOPE OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DRAWINGS AND IN FULL COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, LAWS, STATUTES, ORDINANCES AND CODES AND, FURTHER, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH SAME.

4. THE CONTRACTOR MUST LOCATE AND CLEARLY AND UNAMBIGUOUSLY DEFINE VERTICALLY AND HORIZONTALLY ALL ACTIVE AND INACTIVE UTILITY AND/OR SERVICE SYSTEMS THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE AND INACTIVE SYSTEMS THAT ARE NOT BEING REMOVED/RELOCATED DURING SITE ACTIVITY.

5. THE CONTRACTOR MUST FAMILIARIZE ITSELF WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AS IDENTIFIED OR REQUIRED FOR THE PROJECT. THE CONTRACTOR MUST PROVIDE THE OWNER WITH WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH THE JURISDICTION AND UTILITY COMPANY REQUIREMENTS AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.

6. THE CONTRACTOR MUST INSTALL ALL STORM SEWER AND SANITARY SEWER COMPONENTS WHICH FUNCTION BY GRAVITY PRIOR TO THE INSTALLATION OF ALL OTHER UTILITIES.

7. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SITE PLAN DOCUMENTS AND ARCHITECTURAL DESIGN FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS, GREASE TRAP REQUIREMENTS/DETAILS, DOOR ACCESS, AND EXTERIOR GRADING. THE ARCHITECT WILL DETERMINE THE UTILITY SERVICE SIZES. THE CONTRACTOR MUST COORDINATE INSTALLATION OF ALL UTILITIES WITHIN THE PLAN, OR AS PART OF THE PROJECT, TO BE ACHIEVED. THE CONTRACTOR MUST COORDINATE THE INSTALLATION OF ALL UTILITIES WITHIN THE PLAN, OR AS PART OF THE PROJECT, TO BE ACHIEVED. THE CONTRACTOR MUST ENSURE THAT INSTALLATION OF ALL IMPROVEMENTS COMPLIES WITH ALL UTILITY REQUIREMENTS WITH JURISDICTION AND/OR CONTROL OF THE SITE, AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES, AND, FURTHER, IS RESPONSIBLE FOR COORDINATING THE UTILITY TIE-IN/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY SERVICE, WHERE A CONFLICT(S) EXISTS BETWEEN THESE SITE PLANS AND THE ARCHITECTURAL PLANS, OR WHERE ARCHITECTURAL PLAN UTILITY CONNECTION POINTS DIFFER, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER, IN WRITING, AND PRIOR TO CONSTRUCTION, RESOLVE SAME.

8. WATER SERVICE MATERIALS, BURIAL DEPTH, AND COVER REQUIREMENTS MUST BE SPECIFIED BY THE LOCAL UTILITY COMPANY. CONTRACTOR'S PRICE FOR WATER SERVICE MUST INCLUDE ALL FEES, COSTS AND APPURTENANCES REQUIRED BY THE UTILITY TO PROVIDE FULL AND COMPLETE WORKING SERVICE. CONTRACTOR MUST CONTACT THE APPLICABLE MUNICIPALITY TO CONFIRM THE PROPER WATER METER AND VALVE, PRIOR TO COMMENCING CONSTRUCTION.

9. ALL NEW UTILITIES/SERVICES, INCLUDING ELECTRIC, TELEPHONE, CABLE, TV, ETC. ARE TO BE INSTALLED UNDERGROUND. ALL NEW UTILITIES/SERVICES MUST BE INSTALLED IN ACCORDANCE WITH THE UTILITY SERVICE PROVIDER INSTALLATION SPECIFICATIONS AND STANDARDS.

10. SITE GRADING MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT REFERENCED IN THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING UNSUITABLE MATERIALS WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. ALL EXCAVATED OR FILLED AREAS MUST BE COMPACTED AS OUTLINED IN THE GEOTECHNICAL REPORT. MOISTURE CONTENT AT TIME OF PLACEMENT MUST BE SUBMITTED IN A COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES. SUBBASE MATERIAL FOR SIDEWALKS, CURBS, OR ASPHALT MUST BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE BY OWNER/DEVELOPER, OR OWNER/DEVELOPER'S REPRESENTATIVE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL COMPACTED AS DIRECTED BY THE GEOTECHNICAL REPORT. EARTHWORK ACTIVITIES INCLUDING, BUT NOT LIMITED TO, EXCAVATION, BACKFILL, AND COMPACTING MUST COMPLY WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES. EARTHWORK ACTIVITIES MUST COMPLY WITH THE STANDARD STATE DOT SPECIFICATIONS FOR ROADWAY CONSTRUCTION (LATEST EDITION) AND ANY AMENDMENTS OR REVISIONS THERETO.

11. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION MUST BE AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND MUST BE COORDINATED WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS. WHEN THE PROJECT DOES NOT HAVE GEOTECHNICAL RECOMMENDATIONS, FILL AND COMPACTION MUST, AT A MINIMUM, COMPLY WITH THE STATE DOT REQUIREMENTS AND SPECIFICATIONS. CONTRACTOR SHALL HAVE NO LIABILITY OR RESPONSIBILITY FOR OR AS RELATED TO FILL, COMPACTION AND BACKFILL. FURTHER, CONTRACTOR IS FULLY RESPONSIBLE FOR EARTHWORK BALANCE.

12. THE CONTRACTOR MUST COMPLY, TO THE FULLEST EXTENT, WITH THE LATEST OSHA STANDARDS AND REGULATIONS, AND/OR ANY OTHER AGENCY WITH JURISDICTION FOR EXCAVATION, AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA AS WELL AS ANY OTHER AGENCY WITH JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES AND CONSULTANT SHALL HAVE NO RESPONSIBILITY FOR OR AS RELATED FOR OR AS RELATED TO EXCAVATION AND TRENCHING PROCEDURES.

13. PAVEMENT MUST BE SAW CUT IN STRAIGHT LINES, AND EXCEPT FOR EDGE OF BUILT JOINTS, MUST EXTEND TO THE FULL DEPTH OF THE EXISTING PAVEMENT. ALL DEBRIS FROM REMOVAL OPERATIONS MUST BE REMOVED FROM THE SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS WILL NOT BE PERMITTED.

14. THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT TOPS MUST BE ADJUSTED, AS NECESSARY, TO MATCH PROPOSED GRADES IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, REGULATIONS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.

15. DURING THE INSTALLATION OF SANITARY SEWER, STORM SEWER, AND ALL UTILITIES, THE CONTRACTOR MUST MAINTAIN A CONTEMPORANEOUS AND THOROUGH RECORD OF CONSTRUCTION TO IDENTIFY THE AS-INSTALLED LOCATIONS OF ALL UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR MUST CAREFULLY NOTE ANY INSTALLATIONS THAT DEViate FROM THE INFORMATION CONTAINED IN THE UTILITY PLAN. THIS RECORD MUST BE KEPT ON A CLEAN COPY OF THE DRAINAGE OR UTILITY PLAN, WHICH CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER AT THE COMPLETION OF WORK.

16. WHEN THE SITE IMPROVEMENT PLANS INVOLVE MULTIPLE BUILDINGS, SOME OF WHICH MAY BE BUILT AT A LATER DATE, THE CONTRACTOR MUST EXTEND ALL LINES, INCLUDING BUT NOT LIMITED TO STORM SEWER, SANITARY SEWER, UTILITIES, AND IRRIGATION LINE, TO A POINT AT LEAST FIVE (5) FEET BEYOND THE PAVED AREAS FOR WHICH THE CONTRACTOR IS RESPONSIBLE. CONTRACTOR MUST MARK LOCATIONS WITH A 2X4, AND MUST NOTE THE LOCATION OF ALL OF THE ABOVE ON A CLEAN COPY OF THE DRAINAGE OR UTILITY PLAN, WHICH CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER UPON COMPLETION OF THE WORK.

17. THE CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHY INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION. CONTRACTOR MUST CONFIRM AND ENSURE 0.75% MINIMUM SLOPE AGAINST ALL ISLANDS, GUTTERS, AND CURBS, 1.0% ON ALL CONCRETE SURFACES, AND 1.5% MINIMUM ON ASPHALT (EXCEPT WHERE ADA REQUIREMENTS OR EXISTING TOPOGRAPHY LIMIT GRADES), TO PREVENT ponding. CONTRACTOR MUST IMMEDIATELY NOTIFY, IN WRITING, TO THE ENGINEER, ANY DISCREPANCIES THAT MAY OR COULD AFFECT THE PUBLIC SAFETY, HEALTH OR GENERAL WELFARE, OR PROJECT COST. IF CONTRACTOR PROCEEDS WITH CONSTRUCTION WITHOUT PROVIDING PROPER NOTIFICATION, MUST BE AT THE CONTRACTOR'S OWN RISK AND, FURTHER, CONTRACTOR SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS THE DESIGN ENGINEER FOR ANY DAMAGES, COSTS, INJURIES, ATTORNEY'S FEES AND THE LIKE WHICH RESULT FROM SAME.

18. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 1' ABOVE EXISTING LOCAL ASPHALT GRADES UNLESS OTHERWISE NOTED. FIELD ADJUST TO CREATE A MINIMUM OF 0.75% GUTTER GRADE ALONG CURB FACE. IT IS CONTRACTOR'S OBLIGATION TO ENSURE THAT DESIGN ENGINEER APPROVES FINAL CURBING CUT SHEETS PRIOR TO INSTALLATION OF SAME.

19. IN THE EVENT OF DISCREPANCIES AND/OR CONFLICTS BETWEEN PLANS OR RELATIVE TO OTHER PLANS, THE SITE PLAN WILL TAKE PRECEDENCE AND CONTROL. CONTRACTOR MUST IMMEDIATELY NOTIFY THE DESIGN ENGINEER, IN WRITING, OF ANY DISCREPANCIES AND/OR CONFLICTS.

20. CONTRACTOR IS REQUIRED TO SECURE ALL NECESSARY AND/OR REQUIRED PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. CONTRACTOR MUST SUPPLY A COPY OF APPROVALS TO ENGINEER AND OWNER PRIOR TO INITIATING ANY WORK.

21. WHERE RETAINING WALLS (WHETHER OR NOT THEY MEET THE JURISDICTIONAL DEFINITION) ARE IDENTIFIED ON PLANS, ELEVATIONS IDENTIFIED ARE FOR THE EXPOSED PORTION OF THE WALL. WALL FOOTING/FOUNDATION ELEVATIONS ARE NOT IDENTIFIED HEREIN AND ARE TO BE SET DETERMINED BY THE CONTRACTOR BASED ON FINAL STRUCTURAL DESIGN SHOP DRAWINGS PREPARED BY THE APPROPRIATE PROFESSIONAL LICENSED IN THE STATE WHERE THE CONSTRUCTION OCCURS.

22. STORM DRAINAGE PIPE UNLESS INDICATED OTHERWISE, ALL STORM SEWER PIPE MUST BE REINFORCED CONCRETE PIPE (RCP) CLASS III WITH SILT TIGHT JOINTS. WHEN HIGH-DENSITY POLYETHYLENE PIPE (HDPE) IS CALLED FOR ON THE PLANS, IT MUST CONFORM TO AASHITO M84 AND TYPE 8 SMOOTH INTERIOR WITH ANGULAR CORRUGATIONS WITH GASKET FOR SILT TIGHT JOINT. PVC PIPE FOR FOOT DRAIN CONNECTION MUST BE SDR 26 OR SCHEDULE 40 UNLESS INDICATED OTHERWISE.

- UNLESS INDICATED OTHERWISE ON THE DRAWINGS, SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
- FOR PIPES LESS THAN 12 FT. DEEP: POLYVINYL CHLORIDE (PVC) SDR 35 PER ASTM D3034
 - FOR PIPES MORE THAN 12 FT. DEEP: POLYVINYL CHLORIDE (PVC) SDR 35 PER ASTM D3034
 - FOR PIPE WITH 18" OF BUILDING PREPARED MATERIAL SHALL COMPLY WITH APPLICABLE BUILDING AND PLUMBING CODES. CONTRACTOR TO VERIFY WITH LOCAL OFFICIALS.

23. STORM AND SANITARY SEWER PIPE LENGTHS INDICATED ARE NOMINAL AND MEASURED CENTER OF INLET AND/OR MANHOLES STRUCTURE TO CENTER OF STRUCTURE.

24. STORMWATER ROOF DRAIN LOCATIONS ARE BASED ON PRELIMINARY ARCHITECTURAL PLANS. CONTRACTOR IS RESPONSIBLE TO AND FOR VERIFYING LOCATIONS OF SAME BASED ON FINAL ARCHITECTURAL PLANS.

25. SEWERS CROSSING STREAMS AND/OR LOCATION WITHIN 10 FEET OF THE STREAM EMBANKMENT, OR WHERE SITE CONDITIONS SO INDICATE, MUST BE CONSTRUCTED OF STEEL. REINFORCED CONCRETE, DUCTILE IRON OR OTHER SUITABLE MATERIAL. SEWERS CONVEYING SANITARY FLOW COMBINED SANITARY AND STORMWATER FLOW OR INDUSTRIAL FLOW MUST BE SEPARATED FROM WATER MAINS BY A DISTANCE OF AT LEAST 10 FEET HORIZONTALLY. IF SUCH LATERAL SEPARATION IS NOT POSSIBLE, THE PIPES MUST BE IN SEPARATE TRENCHES WITH THE SEWER AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN, OR SUCH OTHER SEPARATION AS APPROVED BY THE GOVERNMENT AGENCY WITH JURISDICTION OVER SAME.

- WHERE APPROPRIATE SEPARATION FROM A WATER MAIN IS NOT POSSIBLE, THE SEWER MUST BE ENCASED IN CONCRETE, OR CONSTRUCTED OF DUCTILE IRON PIPE USING MECHANICAL OR SLIP-ON JOINTS FOR A DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE CROSSING. IN ADDITION, ONE FULL LENGTH OF SEWER PIPE SHOULD BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER MUST BE PROVIDED.

26. WATER MAIN PIPING MUST BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE LOCAL WATER PURVEYOR. IN THE ABSENCE OF SUCH REQUIREMENTS, WATER MAIN PIPING MUST BE CEMENT-UNED DUCTILE IRON (DIP) MINIMUM CLASS 50 THICKNESS, ALL PIPE AND APPURTENANCES MUST COMPLY WITH THE APPLICABLE AWWA STANDARDS IN EFFECT AT THE TIME OF APPLICATION.

27. CONTRACTOR MUST ENSURE THAT ALL UTILITY TRENCHES LOCATED IN EXISTING PAVED ROADWAYS INCLUDING SEWER, WATER AND STORM SYSTEMS, MUST BE REPAIRED IN ACCORDANCE WITH REFERENCED MUNICIPAL, COUNTY AND/OR DOT DETAILS AS APPLICABLE. CONTRACTOR MUST COORDINATE INSPECTION AND APPROVAL OF COMPLETED WORK WITH THE AGENCY WITH JURISDICTION OVER SAME.

28. LOCATION OF PROPOSED UTILITY POLE RELLOCATION IS AT THE SOLE DISCRETION OF UTILITY COMPANY.

29. CONSULTANT IS NEITHER LIABLE NOR RESPONSIBLE FOR ANY SUBSURFACE CONDITIONS AND THEREFORE, SHALL HAVE NO LIABILITY FOR ANY HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES, OR POLLUTANTS ON, ABOUT OR UNDER THE PROPERTY.

GENERAL DEMOLITION NOTES

1. THIS PLAN REFERENCES DOCUMENTS AND INFORMATION BY:

- "ALTANSPS LAND TITLE SURVEY", PREPARED BY CONTROL POINT ASSOCIATES, INC., DATED 11/11/2021.

2. CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, (29 U.S.C. 651 et seq.), AS AMENDED AND ANY MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.

3. BOHLER ENGINEERING HAS NO CONTRACTUAL, LEGAL, OR OTHER RESPONSIBILITY FOR JOB SITE SAFETY OR JOB SITE SUPERVISION, OR ANYTHING RELATED TO SAME.

4. THE DEMOLITION PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION, ONLY, REGARDING ITEMS TO BE DEMOLISHED AND/OR REMOVED. THE CONTRACTOR MUST ALSO REVIEW THE OTHER SITE PLAN DRAWINGS AND INCLUDE IN DEMOLITION ACTIVITIES ALL INCIDENTAL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW SITE IMPROVEMENTS.

5. CONTRACTOR MUST RAISE ANY QUESTIONS CONCERNING THE ACCURACY OR INTENT OF THESE PLANS OR SPECIFICATIONS, CONCERNS REGARDING THE APPLICABLE SAFETY STANDARDS OR THE SAFETY OF THE CONTRACTOR OR THIRD PARTIES IN PERFORMANCE OF THE WORK ON THIS PROJECT, WITH BOHLER ENGINEERING, IN WRITING, AND RESPONDED TO BY BOHLER, IN WRITING, PRIOR TO THE INITIATION OF ANY SITE ACTIVITY AND ANY DEMOLITION ACTIVITY. ALL DEMOLITION ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, RULES, REGULATIONS, STATUTES, ORDINANCES AND CODES.

6. PRIOR TO STARTING ANY DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR/TO:

A. OBTAINING ALL REQUIRED PERMITS AND MAINTAINING THE SAME ON SITE FOR REVIEW BY THE ENGINEER AND OTHER PUBLIC AGENCIES WITH JURISDICTION THROUGHOUT THE DURATION OF THE PROJECT, SITE WORK, AND DEMOLITION WORK.

B. NOTIFYING, AT A MINIMUM, THE MUNICIPAL ENGINEER, DESIGN ENGINEER, AND LOCAL SOIL CONSERVATION DISTRICT, 72 HOURS PRIOR TO THE START OF WORK.

C. INSTALLING THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE.

D. IN ACCORDANCE WITH STATE LAW, THE CONTRACTOR MUST CALL THE STATE ONE-CALL DAMAGE PROTECTION SYSTEM FOR UTILITY MARKOUT, IN ADVANCE OF ANY EXCAVATION.

E. LOCATING AND PROTECTING ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN AND ADJACENT TO THE LIMITS OF PROJECT ACTIVITIES. THE CONTRACTOR MUST USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES.

F. PROTECTING AND MAINTAINING IN OPERATION, ALL ACTIVE UTILITIES AND SYSTEMS THAT ARE NOT BEING REMOVED DURING ALL DEMOLITION ACTIVITIES.

G. ARRANGING FOR AND COORDINATING WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) FOR THE TEMPORARY OR PERMANENT TERMINATION OF SERVICE REQUIRED BY THE PROJECT PLANS AND SPECIFICATIONS. THE CONTRACTOR MUST PROVIDE THE UTILITY ENGINEER AND OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTIONAL AND UTILITY COMPANY REQUIREMENTS.

H. COORDINATION WITH UTILITY COMPANIES REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS MAY BE REQUIRED TO MINIMIZE THE IMPACT ON THE AFFECTED PARTIES. WORK REQUIRED TO BE DONE "OFF-PEAK" IS TO BE DONE AT NO ADDITIONAL COST TO THE OWNER.

I. IN THE EVENT THE CONTRACTOR DISCOVERS ANY HAZARDOUS MATERIAL, THE REMOVAL OF WHICH IS NOT ADDRESSED IN THE PROJECT PLANS AND SPECIFICATIONS, THE CONTRACTOR MUST IMMEDIATELY CEASE ALL WORK AND IMMEDIATELY NOTIFY THE OWNER AND ENGINEER OF THE DISCOVERY OF SUCH MATERIALS.

7. THE FIRM OR ENGINEER OF RECORD IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. CONTRACTOR MUST PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL THE OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY.

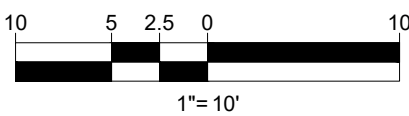
8. THE CONTRACTOR MUST PROVIDE ALL "MEANS AND METHODS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN. CONTRACTOR MUST USE NEW MATERIAL FOR ALL REPAIRS. CONTRACTOR'S REPAIR MUST INCLUDE THE RESTORATION OF ANY ITEMS REPAIRED TO THE PRE-DEMOLITION CONDITION, OR BETTER. CONTRACTOR SHALL PERFORM ALL REPAIRS AT THE CONTRACTOR'S SOLE EXPENSE.

9. THE CONTRACTOR MUST NOT PERFORM ANY EARTH MOVEMENT ACTIVITIES, DEMOLITION OR REMOVAL OF FOUNDATION WALLS, FOOTINGS, OR OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE UNLESS SAME IS IN STRICT ACCORDANCE AND CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, AND/OR UNDER THE WRITTEN DIRECTION OF THE OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.

10. CONTRACTOR MUST BACKFILL ALL EXCAVATION RESULTING FROM, OR INCIDENTAL TO, DEMOLITION ACTIVITIES. BACKFILL MUST BE ACCOMPLISHED WITH APPROVED SUBBASE MATERIALS, AND MUST BE SUPERIOR TO THAT CONTRACTED TO SUPPORT ADJACENT RAILS AND LEVEL. LANDINGS ON EACH END THAT ARE CROSSED SHOULD BE ENTERING THE EXCAVATION. FINISHED SURFACES MUST BE GRADED TO PROMOTE POSITIVE DRAINAGE.

11. EXPLOSIVES MUST NOT BE USED WITHOUT PRIOR WRITTEN CONSENT OF BOTH THE OWNER AND ALL APPLICABLE GOVERNMENTAL AUTHORITIES. ALL THE REQUIRED PERMITS AND EXPOSIVE CONTROL MEASURES THAT ARE REQUIRED BY THE FEDERAL, STATE, AND LOCAL GOVERNMENTS MUST BE IN PLACE PRIOR TO CONTRACTOR STARTING AN EXPLOSIVE PROGRAM AND/OR ANY DEMOLITION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES.

12. CONTRACTOR MUST PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE P



ORG. DATE - 11/01/2021



ZONING ANALYSIS TABLE			
ZONING DISTRICT	CHESTNUT STREET BUSINESS (CSB)		
OVERLAY DISTRICT	LOWER CHESTNUT STREET OVERLAY (LC)		
REQUIRED PERMIT	N/A		
ZONE CRITERIA	REQUIRED	EXISTING	PROPOSED
MIN. LOT AREA	10,000 SF	10,000 SF	NO CHANGE
MAX. FAR	0.7	0.21	NO CHANGE
MIN. FRONT SETBACK	20'	64.2'	NO CHANGE
MIN. SIDE SETBACK	N/A	-	-
MIN. REAR SETBACK	N/A	-	-
MAX. BUILDING HEIGHT	35' / 2.5 STORIES	< 35'	NO CHANGE
PARKING SPACES	8 SPACES	14 SPACES	NO CHANGE
ACCESS. PARKING SPACES	1 SPACE	1 SPACE	NO CHANGE
PARKING STALL CRITERIA STANDARD: 9 FT x 18 FT COMPACT: 8 FT x 16 FT	USE/CATEGORY: OFFICES, OFFICE BUILDINGS, AND BANKS REQUIRED PARKING: 1 SPACE PER 300 SF OF FLOOR AREA CALCULATION: 2,145 SF / 300 = 7.15 = 8 SPACES		
ACCESSIBLE PARKING CRITERIA STANDARD: 8 FT x 16 FT STALL (MIN.) 5 FT x 16 FT AISLE (MIN.) VAN: 8 FT x 16 FT STALL (MIN.) 8 FT x 16 FT AISLE (MIN.)	1-25 SPACES = 1 MIN. ACCESSIBLE SPACE		

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PROJECT NO.:

W211148

DRAWN BY:

AGF

CHECKED BY:

JNF

DATE:

11/01/2021

CAD I.D.:

W211148-CVL-0

PROJECT:

PROPOSED SITE
PLAN DOCUMENTS

FOR

CHASE

PROPOSED BANK

MAP #199, BLOCK #47, LOT #84
173 CHESTNUT STREET
TOWN OF NEEDHAM
NORFOLK COUNTY,
MASSACHUSETTS

BOHLER

352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
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J.G. SWERLING

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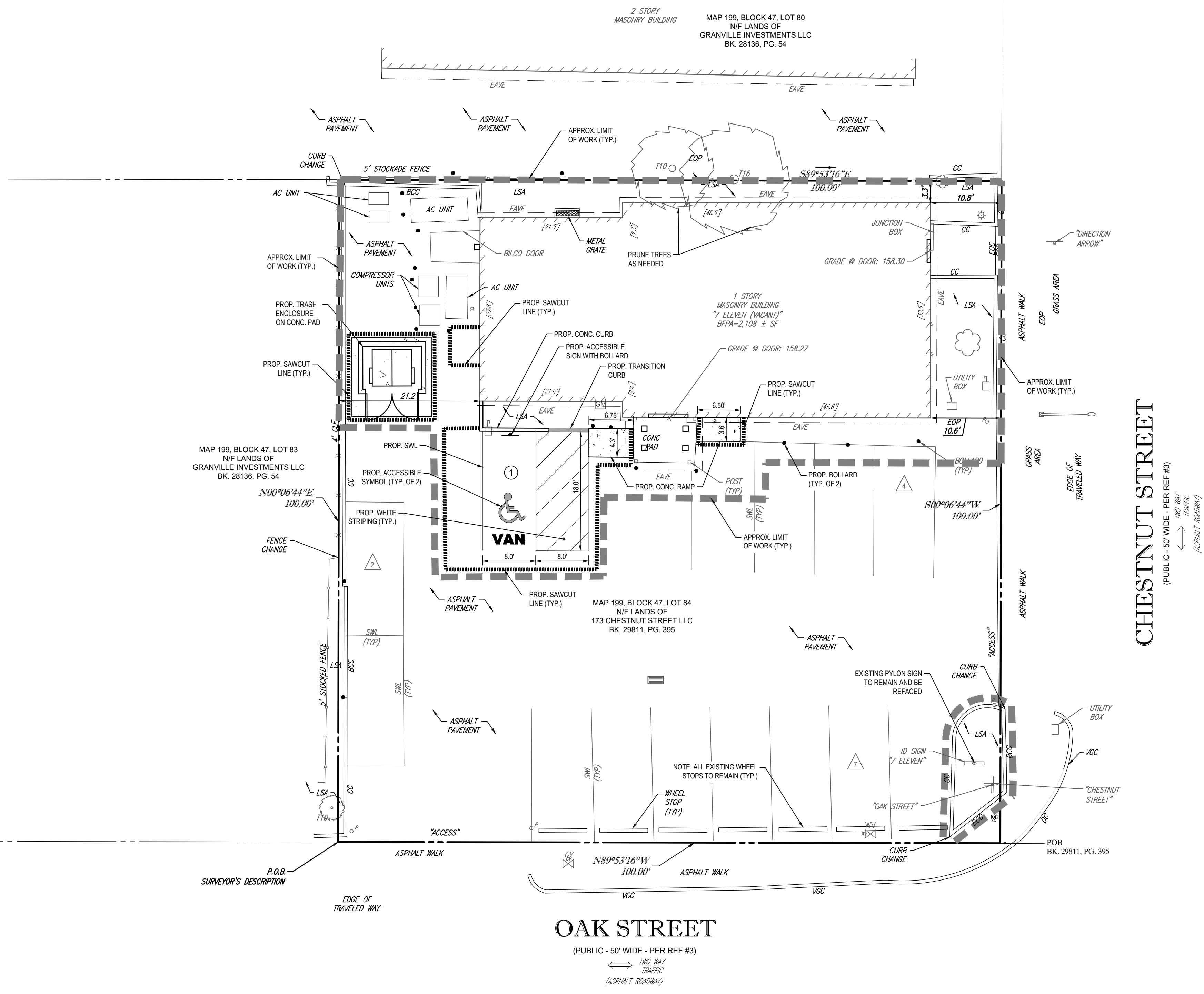
SHEET TITLE:

SITE
LAYOUT
PLAN

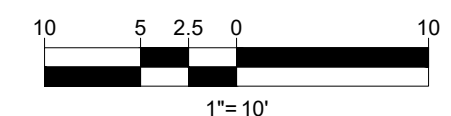
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C-301

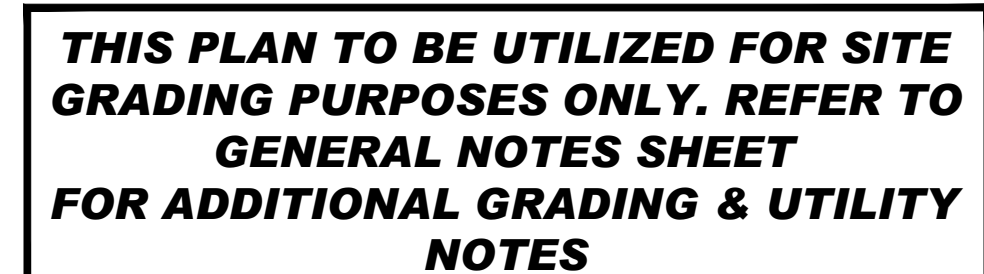
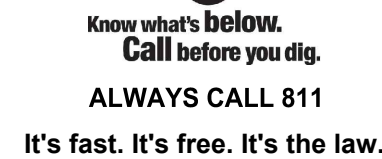
ORG. DATE - 11/01/2021



THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY. REFER TO GENERAL NOTES SHEET FOR ADDITIONAL NOTES



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PROJECT No.: W2111
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CHECKED BY: J
DATE: 11/01/20
CAD I.D.: W211148-CVL

PROJECT:

— FOR —

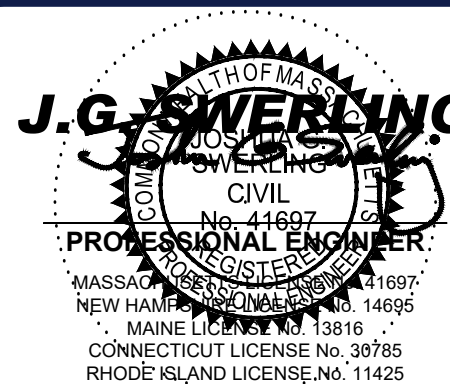
**PROPOSED BANK**

MAP #199, BLOCK #47, LOT #84
173 CHESTNUT STREET
TOWN OF NEEDHAM
NORFOLK COUNTY,
MASSACHUSETTS

BOHLER//

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SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900

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SHEET TITLE:

GRADING AND DRAINAGE PLAN

SHEET NUMBER:

C-401

ORG. DATE - 11/01/2021



ORG. DATE - 11/01/2021

THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION, PERMANENT SEEDING OR SOODING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.	
2.	MATERIALS
2.1.	GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATIONS SPECIFICATIONS.
2.2.	TOPSOIL - NATURAL, FRIABLE, LOAMY SILT SOIL, HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOODS, ROOTS, VEGETABLE MATTER AND CLAY CLOS.
2.3.	LAWN - ALL DISTURBED AREAS ARE TO BE TREATED WITH A MINIMUM 6" THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT AND SEEDED OR SOODED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED ON THE LANDSCAPE PLAN
2.3.1.	LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.
2.3.2.	SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE-FREE WITH A UNIFORM THICKNESS. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.
2.4.	MULCH - ALL PLANTING BEDS SHALL BE MULCHED WITH A 3" THICK LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN AND/OR LANDSCAPE PLAN NOTES (DETAILS).
2.5.	FERTILIZER
2.5.1.	FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.
2.5.2.	FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY.
2.6.	PLANT MATERIAL
2.6.1.	ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (FORMERLY THE AMERICAN ASSOCIATION OF NURSERYMEN).
2.6.2.	IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.
2.6.3.	PLANTS SHALL BE LOGICALLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION.
2.6.4.	TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 1 1/2", WHICH HAVE NOT BEEN COMPLETELY CALLEDUS, SHALL BE REJECTED. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
2.6.5.	ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH; WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE.
2.6.6.	CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE. IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER, THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE.
2.6.7.	TREES SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.
2.6.8.	SHRUBS AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.
3.	GENERAL WORK PROCEDURES
3.1.	CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.
3.2.	WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.
4.	SITE PREPARATIONS
4.1.	BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.
4.2.	ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE BRANCH COLLAR. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN, SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDER OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE.
4.3.	CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK.
5.	TREE PROTECTION
5.1.	CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DROP LINE OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.
5.2.	A FORTY-EIGHT (48") HIGH WOODEN SNOU FENCE OR ORANGE COLORED HIGH-DENSITY VIS-FENCE, OR APPROVED EQUIV. MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.
5.3.	WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE LANDSCAPE CONTRACTOR.
5.4.	AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.
6.	SOIL MODIFICATIONS
6.1.	CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY.
6.2.	LANDSCAPE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERING DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS, AS SPECIFIED HEREIN, MAY NEED TO BE CONDUCTED BY THE LANDSCAPE CONTRACTOR DEPENDING ON SITE CONDITIONS.
6.3.	THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY. COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TROPICAL ANALYSIS PERFORMED BY A CERTIFIED SOIL LABORATORY.
6.3.1.	TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6"-12". USE COMPOSED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. ALL PRODUCTS SHALL BE COMPOSTED TO A DARK COLOR AND BE FREE OF VOLUMES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.5.
6.3.2.	TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT MORE THAN 40% CLAY OR SILT BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. SUBSURFACE DRAINAGE LINES MAY NEED TO BE USED TO INCREASE DRAINAGE.
6.3.3.	MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.
7.	FINISHED GRADING
7.1.	UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE SITE.
7.2.	LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS (T _{PS}).
7.3.	ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER AND/OR LANDSCAPE ARCHITECT.
7.4.	ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.
8.	TOPSOILING
8.1.	CONTRACTOR SHALL PROVIDE A 3" THICK MINIMUM LAYER OF TOPSOIL OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT. IN ALL PLANTING AREAS, TOPSOIL SHOULD BE SPREAD TO A PREDESIGNED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS.
8.2.	ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO ANALYSIS.
8.3.	CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN CONSTRUCTION OF BOTH IMPROVED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE.
8.4.	ALL LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA - FOR BID PURPOSES ONLY (SEE SPECIFICATION 6.A.1)).
8.4.1.	20 POUNDS GRO-POWER OR APPROVED SOIL CONDITIONER/FERTILIZER
8.4.2.	20 POUNDS NITRO-FORM (COARSE) 38-0-0 BLUE CHLOR OR APPROVED NITROGEN FERTILIZER
8.5.	THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUD OR FROZEN CONDITIONS.
9.	PLANTING
9.1.	INSOFAE THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEADED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.
9.2.	PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.
9.3.	ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL BE REMOVED.
9.4.	

PLANT SHALL BE PLANTED SO THAT THE POINT AT WHICH THE ROOT FLARE BEGINS IS SET LEVEL WITH GRADE. CUT AND REMOVE BURLAP FROM TOP ONE-THIRD OF ROOT BALL AS SHOWN. PLANTING MIX: 1 PART PEAT MOSS 1 PART COW MANURE 3 PARTS TOPSOIL (SEE SOIL MODIFICATION CHART) BEFORE PLANTING, ADD 3" TO 4" OF WELL-COMPOSTED LEAVES AND RECYCLED YARD WASTE TO BED AND TILL INTO TOP 6" OF PREPARED SOIL. SOIL SURFACE ROUGHENED TO BIND WITH NEW SOIL. FOR CONTAINER-GROWN SHRUBS, PLANT SHALL BE TRANSPLANTED AT THE SAME GRADE AS IN THE CONTAINER. REMOVE THE CONTAINER, USE FINGER OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL, THEN CUT OR PULL APART ANY ROOTS THAT CLING THE PERIMETER OF THE CONTAINER. 3" DOUBLE-SHREDDED HARDWOOD BARK MULCH (DO NOT PUT MULCH AGAINST THE BASE OF THE PLANT). LANDSCAPE FABRIC AS SPECIFIED FINISHED GRADE PLACE SHRUB ON FIRM SOIL IN BOTTOM OF HOLE. UNDISTURBED SUBGRADE WHEN APPROPRIATE, PLANT MULTIPLE SHRUBS IN CONTINUOUS PLANTING HOLE.	N.T.S.
SHRUB PLANTING DETAIL INCORPORATE 2" OF PEAT INTO 6" OF PLANTING MIXTURE, AS SPECIFIED 1" DOUBLE SHREDDED HARDWOOD BARK MULCH EDGING (AS SPECIFIED) FINISHED GRADE TOPSOIL	N.T.S.

Diagram illustrating the cross-section of a tree pit installation. The diagram shows a tree planted in a pit. The layers and components are labeled as follows:

- 18" STAKE INTO UNDISTURBED GROUND EVERY 30" O.C. LAP JOINTS AS PER MANUFACTURERS RECOMMENDATION.** (Pointing to the vertical stake)
- 3/16" x 4" BLACK ALUMINUM EDGING** (Pointing to the edging material)
- LAWN OR GRAVEL AREA** (Pointing to the area outside the pit)
- FINISH GRADE** (Pointing to the top surface of the pit)
- MULCH AS SPECIFIED** (Pointing to the mulch layer around the tree)
- UNDISTURBED SUBGRADE** (Pointing to the bottom layer of the pit)
- PREPARED TOPSOIL** (Pointing to the soil layer inside the pit)

REVISIONS



PERMIT SET

PROJECT No.:	W211148
DRAWN BY:	AGF
CHECKED BY:	JNF
DATE:	11/01/2021
CAD I.D.:	W211148-LND-0

PROPOSED SITE PLAN DOCUMENTS



MAP #199, BLOCK #47, LOT #84
173 CHESTNUT STREET
TOWN OF NEEDHAM
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MASSACHUSETTS

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352 TURNPIKE ROAD
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LANDSCAPE NOTES AND DETAILS

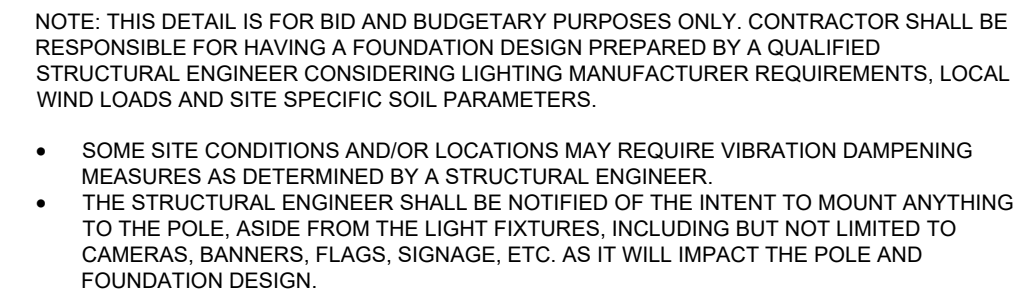
C-702

ORG. DATE - 11/01/2021



1. THIS LIGHTING PLAN DEPICTS PROPOSED SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER(S). ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL, VOLTAGE, TYPICAL LAMP LIFE, SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
2. THE LIGHT LOSS FACTORS USED IN THESE LIGHTING CALCULATIONS ARE 0.90 FOR ALL LED LUMINAIRES, 0.80 FOR ALL HIGH PRESSURE SODIUM LUMINAIRES OR 0.72 FOR ALL METAL HALIDE LUMINAIRES UNLESS OTHERWISE SPECIFIED. THESE FACTORS ARE INDICATIVE OF TYPICAL LIGHTING INDUSTRY MODELING STANDARDS.
3. THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ALL ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT ELEVATION ZERO (GROUND LEVEL) UNLESS OTHERWISE NOTED. THE VALUES DEPICTED ON THIS PLAN ARE IN FOOT-CANDLES.
4. THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT NOT BE LIMITED TO, FREQUENT VISUAL INSPECTION OF LENSES, AND REPLACING (IF NECESSARY) AT LEAST ONCE EVERY SIX (6) MONTHS. FAILURE TO FOLLOW THE ABOVE STEPS COULD CAUSE THE LUMINAIRES, LAMPS AND LENSES TO FAIL PROPERLY TO FUNCTION.
5. WHERE APPLICABLE, THE EXISTING CONDITION LIGHT LEVELS ILLUSTRATED ARE REPRESENTATIVE OF AN APPROXIMATION UTILIZING LABORATORY DATA FOR SIMILAR FIXTURES. UNLESS ACTUAL FIELD MEASUREMENTS ARE TAKEN WITH A LIGHT METER AND ARE, CONSEQUENTLY, APPROXIMATIONS ONLY. DUE TO FACTORS SUCH AS FUTURE MAINTENANCE, EQUIPMENT TOLERANCE, WEATHER CONDITIONS, ETC. ACTUAL LIGHT LEVELS MAY DIFFER. EXISTING LIGHT LEVELS DEPICTED ON THIS PLAN SHOULD BE CONSIDERED APPROXIMATE.
6. THIS LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES, ONLY. POWER SYSTEM, CONDUTING, WIRING, VOLTAGES AND OTHER ELECTRICAL COMPONENTS ARE THE RESPONSIBILITY OF THE ARCHITECT, MEP AND/OR LIGHTING CONTRACTOR, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. LIGHTING POLE BASES, THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR INSTALLING LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES AND ALL OTHER APPLICABLE RULES, REGULATIONS, LAWS AND STATUTES.
7. CONTRACTOR MUST BRING TO DESIGNER'S ATTENTION, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURES.
8. IT IS THE LIGHTING CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE PROJECT ARCHITECT OR OWNER REGARDING THE POWER SOURCE(S) FROM WITHIN THE BUILDING, AND TIMING DEVICES NECESSARY TO MEET THE DESIGN INTENT.
9. THE LIGHTING CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CONTRACT REQUIREMENTS INDICATED IN THE SITE PLAN, INCLUDING BUT NOT LIMITED TO, GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL GOVERNMENTAL, RULES, LAWS, ORDINANCES, REGULATIONS AND THE LIKE.
10. THE CONTRACTOR MUST VERIFY THAT INSTALLATION OF LIGHTING FIXTURES COMPLIES WITH THE REQUIREMENTS FOR SEPARATION FROM OVERHEAD ELECTRICAL WIRES PER STATE REGULATIONS.
11. UPON OWNER'S ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS, TO ENSURE ADEQUATE LIGHTING LEVELS ARE PRESENT AND FUNCTIONAL FOR ALL.

LUMINAIRE SCHEDULE					
SYMBOL	QTY	ARRANGEMENT	LUMENS	LLF	DESCRIPTION
A	2	SINGLE	42517	0.90	McGRAW-EDISON GLEON GALLEON FORWARD THROW LED AREA LIGHT MOUNTED @ 20'; GLEON-SAGD-730-U-T4FT



10 5 2.5 0 1

1" = 10'



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THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY
REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION
DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	W211148
DRAWN BY:	AGF
CHECKED BY:	JNF
DATE:	11/01/2021
CAD I.D.:	W211148-CVL-0

PROJECT:

- FOR _____



**MAP #199, BLOCK #47, LOT #84
173 CHESTNUT STREET
TOWN OF NEEDHAM
NORFOLK COUNTY,
MASSACHUSETTS**

**352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772**
Phone: (508) 480-9900

www.BohlerEngineering.com



SHEET TITLE

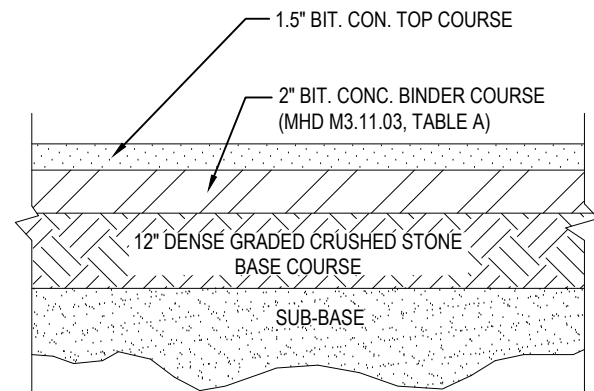
SHEET NUMBER

C-703

ORG. DATE - 11/01/2021

\\BOHLER\ENG\NET\SHARES\MA\PROJECTS\21\W21148\DRAWINGS\PLAN SETS\REV\W21148-CVL-0.dwg-----LAYOUT: C-901 DETL

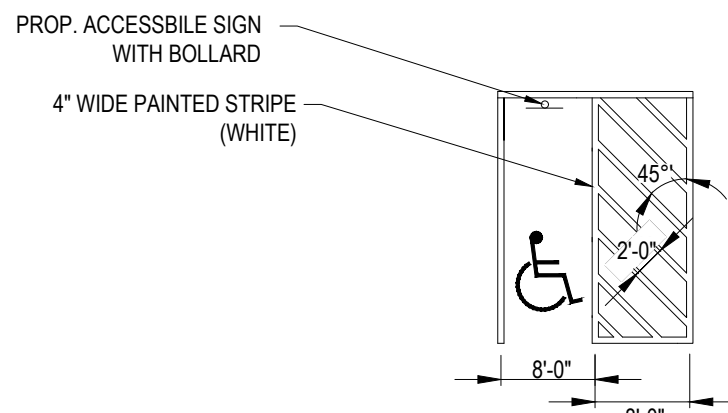
AF



NOTE:
PAVEMENT BASE AND SUBBASE COURSES TO CONFORM TO ALL
MASSDOT DEPARTMENT SPECIFICATIONS.
GC TO REFER TO GEOTECHNICAL
REPORT FOR PAVEMENT
SPECIFICATIONS.

SECTION DETAIL: ASPHALT PAVEMENT

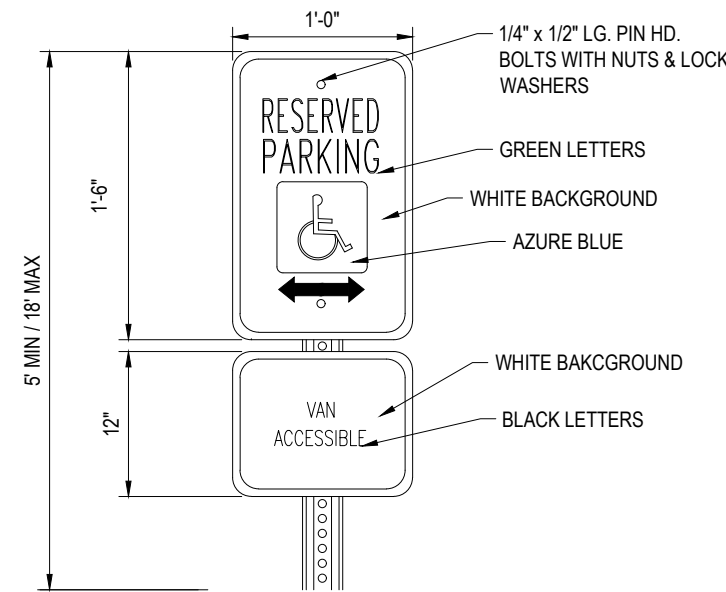
N.T.S.



- NOTES:
1. UTILIZE STRIPING ONLY AS REQUIRED BY LOCAL MUNICIPALITIES (I.E. MINIMALLY)
 2. MARKINGS SHOULD BE WHITE EXCEPT AS ACCESSIBLE PARKING SPACES.
 3. INSTALL WHEEL STOPS AT ALL PARKING SPACES AGAINST BUILDING.

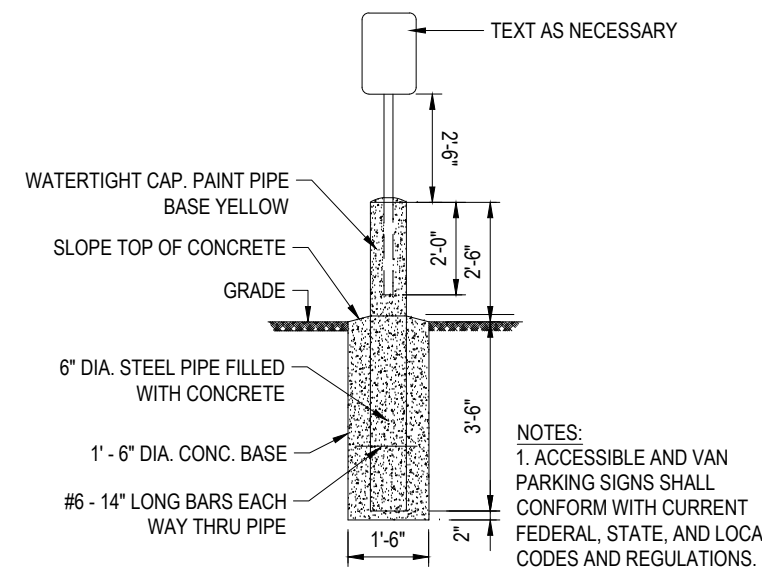
ACCESSIBLE STALL MARKINGS & PARKING LOT STRIPING DETAIL

N.T.S.



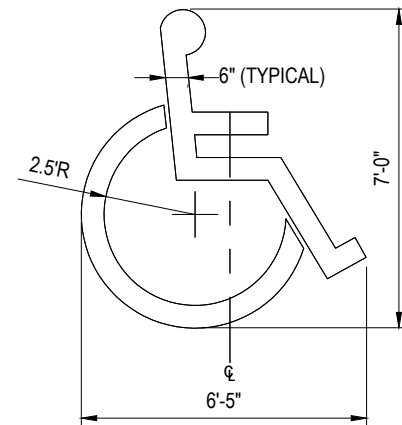
ACCESSIBLE PARKING SIGN

N.T.S.



SIGN BOLLARD DETAIL

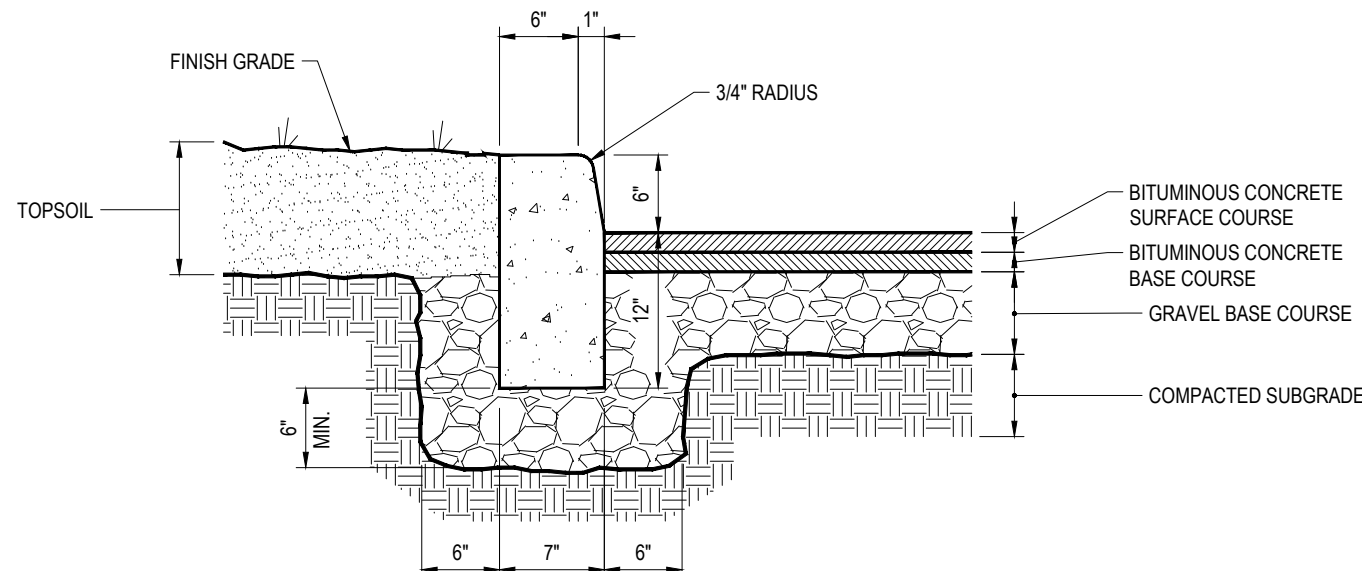
N.T.S.



LOCATE AT EDGE OF PARKING SPACE
UNLESS ACCOMPANIED BY "VAN" LETTERING

ACCESSIBLE PARKING SYMBOL

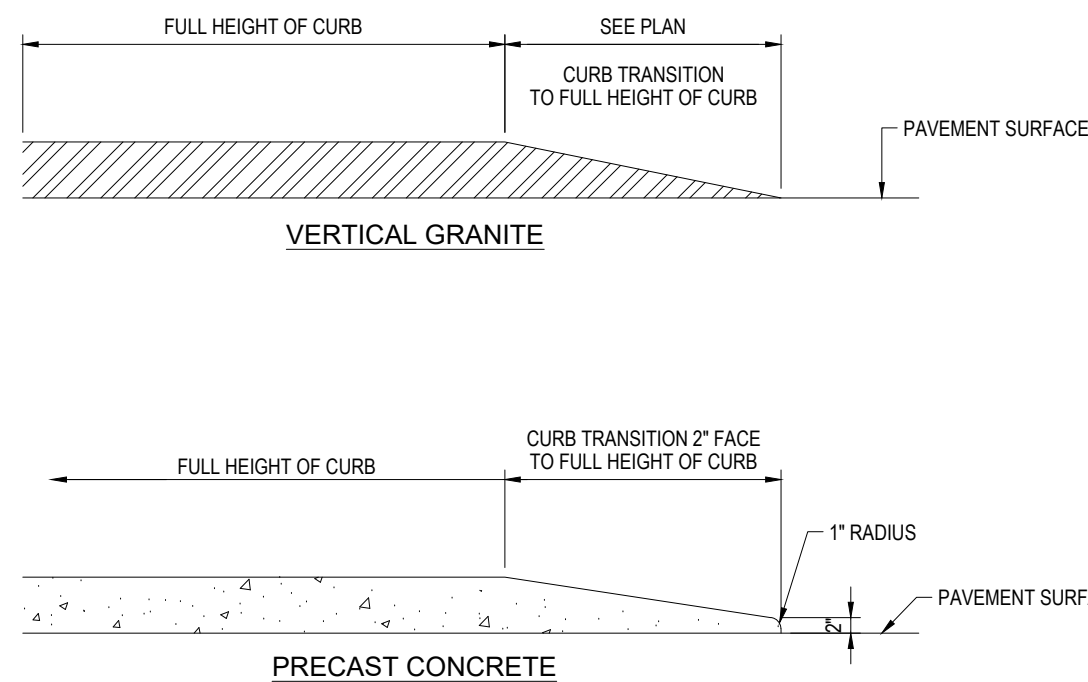
N.T.S.



- NOTE:
1. CURB SHALL CONSIST OF 4,000 PSI AIR ENTRAINED CONCRETE. EXPOSED EDGES TO HAVE RUBBED FINISH AND SURFACE SHALL BE TREATED WITH A CONCRETE PENETRANT/SEALER.
 2. THE ENDS OF CURB SECTIONS SHALL BE CHAMFERED 1/4 INCH.
 3. THE CORNERS OF CURB SECTIONS SHALL MATCH THE ADJACENT CURB IN SIZE, COLOR AND FINISH.
 4. CURBS, CURB CORNERS OR EDGING SHALL BE FITTED TOGETHER AS CLOSELY AS POSSIBLE.
 5. EXPANSION JOINTS SHALL BE INSTALLED AT A MAXIMUM OF TWENTY FEET (20') ON CENTER USING PREFORMED EXPANSION JOINT FILLER HAVING A THICKNESS OF 1/2 INCH.

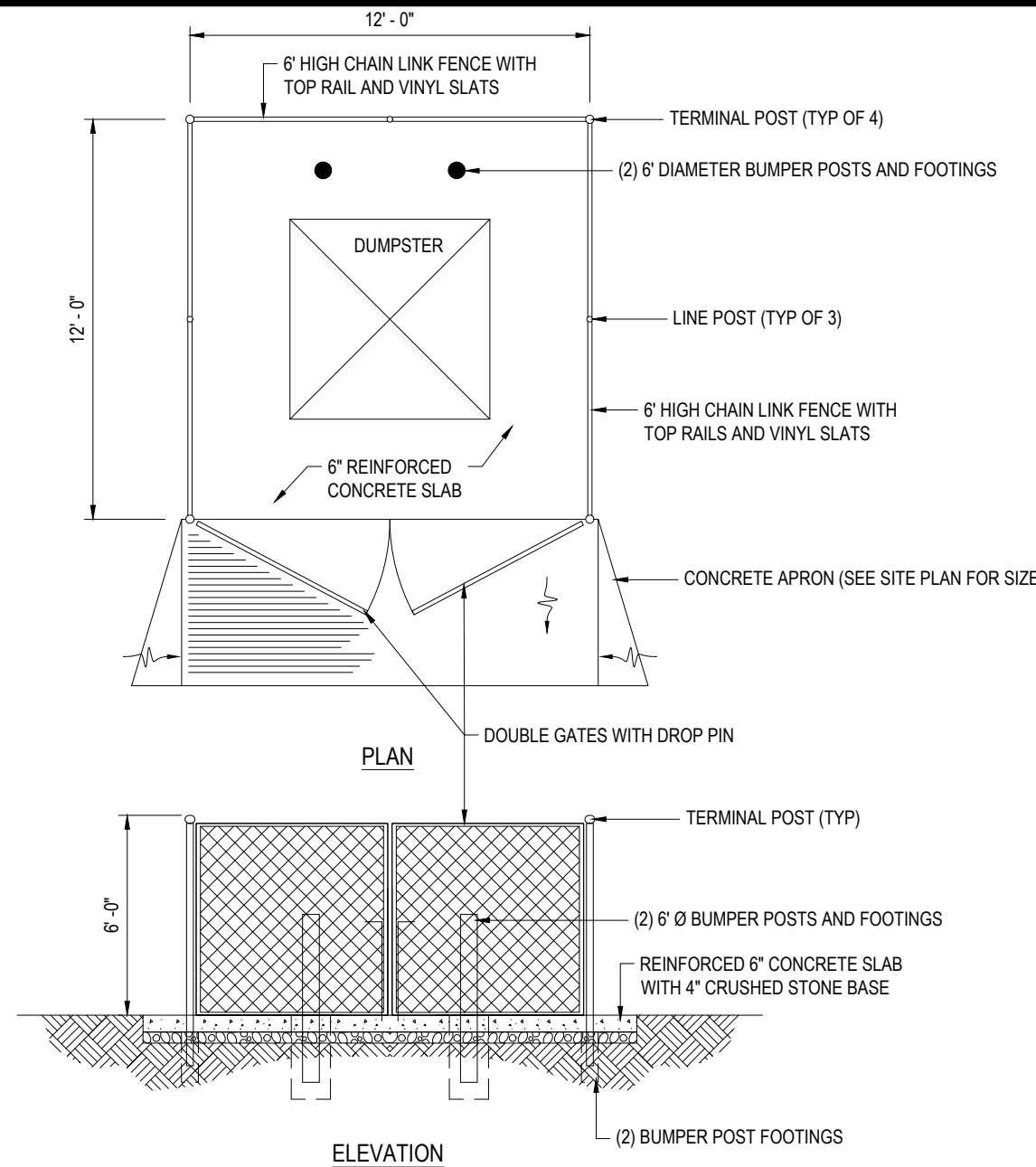
PRECAST CONCRETE CURB

N.T.S.



TRANSITION CURB

N.T.S.



TRASH ENCLOSURE CHAIN LINK FENCE WITH VINYL SLATS

N.T.S.

TM

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

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REVISIONS

REV	DATE	COMMENT	DRAWN BY	CHECKED BY



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PERMIT SET

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PROJECT No.: W211148
DRAWN BY: AGF
CHECKED BY: JNF
DATE: 11/01/2021
CAD I.D.: W211148-CVL-0

PROJECT:

PROPOSED SITE PLAN DOCUMENTS

FOR



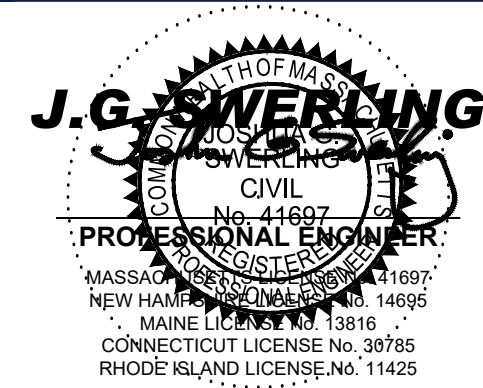
PROPOSED BANK

MAP #199, BLOCK #47, LOT #84
173 CHESTNUT STREET
TOWN OF NEEDHAM
NORFOLK COUNTY,
MASSACHUSETTS



352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900

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SHEET TITLE:

DETAIL SHEET

SHEET NUMBER:

C-901

ORG. DATE - 11/01/2021

EXHIBIT A:

THE LAND WITH THE BUILDINGS THEREON SITUATED IN NEEDHAM, NORFOLK COUNTY, MASSACHUSETTS, LOCATED AT THE CORNER OF OAK AND CHESTNUT STREETS, BOUNDED AND DESCRIBED AS FOLLOWS:

SOUTHERLY: BY OAK STREET, ONE HUNDRED (100) FEET

EASTERLY: BY CHESTNUT STREET, ONE HUNDRED (100) FEET

NORTHERLY: BY LAND NOW OR FORMERLY OF CATHERINE A. DURBIN, ONE HUNDRED FEET

WESTERLY: BY LAND NOW OR FORMERLY OF FREDERICK A. AND WILLA L. JEFFERY, ONE HUNDRED (100) FEET

NOTE: ACTUAL SQUARE FOOTAGE IS NOT INSURED

REFERENCES:

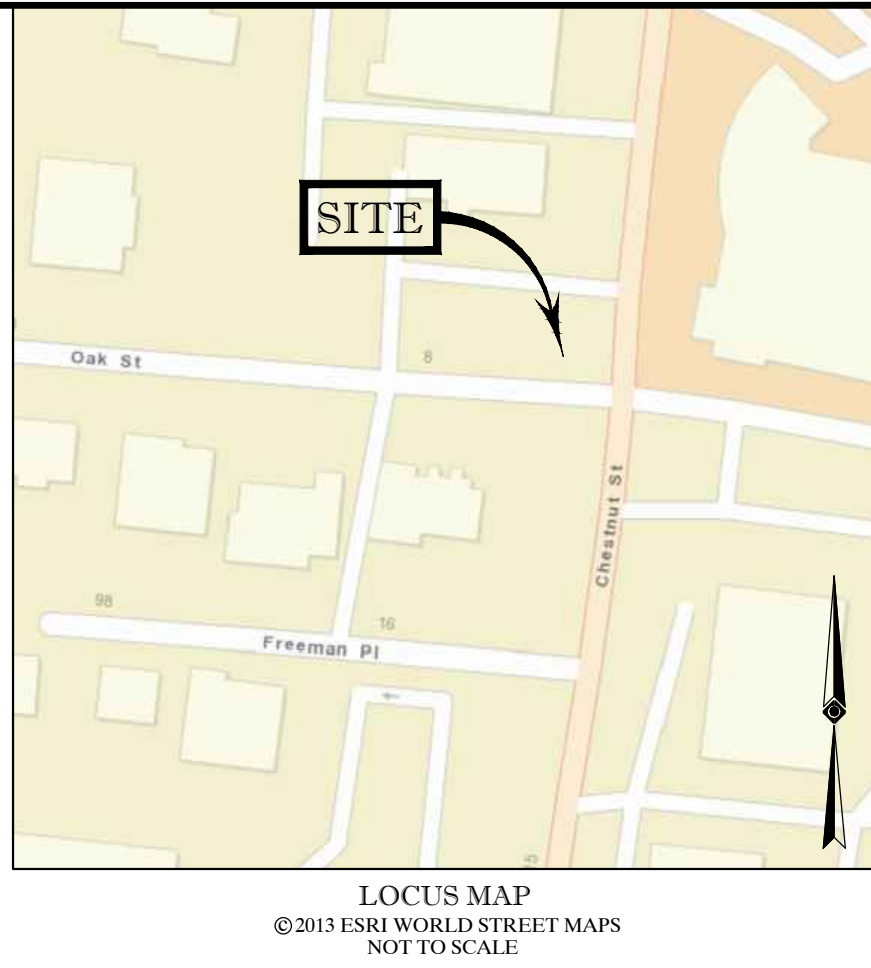
- THE TAX ASSESSOR'S MAP OF TOWN OF NEEDHAM, NORFOLK COUNTY, MAP 199.
- MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FIRM, FLOOD INSURANCE RATE MAP, NORFOLK COUNTY, MASSACHUSETTS (ALL JURISDICTIONS), PANEL 38 OF 430," MAP NUMBER 250210038E, EFFECTIVE DATE: JULY 17, 2012.
- MAP ENTITLED "ALTA/ACSM LAND TITLE SURVEY PREPARED FOR FREEZE OPERATIONS HOLDING CORP., C/O SUN CAPITAL PARTNERS GROUP V, INC. FRIENDLY'S STORE #238", PREPARED BY: MILLMAN SURVEYING, INC., DATED: JULY 24, 2007, LAST REVISED: SEPTEMBER 18, 2007, PROVIDED BY CLIENT.
- MAP ENTITLED "173 CHESTNUT STREET, NEDHAM, MA", PREPARED BY: CONTROL POINT ASSOCIATES, INC., DATED: JULY 27, 2021.
- PLAN SET ENTITLED "THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS TOPICS PROJECT IN THE TOWN OF NEEDHAM NORFOLK COUNTY FEDERAL AID PROJECT NUMBER M-0005(006)", DATED: JUNE 1974, ON FILE WITH THE DEPARTMENT OF TRANSPORTATION AS FILE NO. 7529.
- MAP ENTITLED "PLAN OF LAND IN NEEDHAM, MASS. OWNED BY MARTHA H. BURRAGE", PREPARED BY: W.W. WRIGHT, CIVIL ENGINEER, DATED: OCTOBER 1910, AND RECORDED IN THE NORFOLK COUNTY REGISTRY OF DEEDS IN BOOK OF PLANS VOLUME 1158, PAGE 262.
- MAP ENTITLED "CHESTNUT ST. NEEDHAM, MASS. PLOT PLAN FRIENDLY ICE CREAM CORPORATION", DATED: NOVEMBER 5, 1968, LAST REVISED: DECEMBER 30, 1968, PROVIDED BY THE TOWN OF NEEDHAM PLANNING DEPARTMENT.
- SEWER AND WATER TIE CARD INFORMATION PROVIDED BY THE TOWN OF NEEDHAM SEWER DEPARTMENT.

SURVEYORS DESCRIPTION
METES AND BOUNDS DESCRIPTION
MAP 199, BLOCK 47, LOT 84
TOWN OF NEEDHAM, NORFOLK COUNTY
COMMONWEALTH OF MASSACHUSETTS

BEGINNING AT A POINT ALONG THE NORTHERLY LINE OF OAK STREET (PUBLIC - 50' WIDE), SAID POINT BEING THE SOUTHWESTERLY CORNER OF THE PARCEL DESCRIBED HEREIN, AND A CORNER IN COMMON WITH MAP 199, BLOCK 47, LOT 83 (N/F GRANVILLE INVESTMENTS, LLC), THENCE:

- DEPARTING SAID NORTHERLY LINE, RUNNING ALONG THE DIVIDING LINE WITH SAID LOT 83, NORTH 06 DEGREES - 18 MINUTES - 14 SECONDS EAST, A DISTANCE OF 100.00 FEET, THENCE;
- ALONG THE DIVIDING LINE WITH MAP 199, BLOCK 47, LOT 80 (N/F GRANVILLE INVESTMENTS, LLC), SOUTH 83 DEGREES - 41 MINUTES - 46 SECONDS EAST, A DISTANCE OF 100.00 FEET TO A POINT ALONG THE WESTERLY LINE OF CHESTNUT STREET (PUBLIC - 55' WIDE), THENCE;
- ALONG SAID WESTERLY LINE, SOUTH 06 DEGREES - 18 MINUTES - 14 SECONDS EAST, A DISTANCE OF 100.00 FEET TO THE POINT OF INTERSECTION BETWEEN THE WESTERLY LINE OF CHESTNUT STREET AND THE NORTHERLY LINE OF OAK STREET, THENCE;
- ALONG SAID NORTHERLY LINE OF OAK STREET, NORTH 83 DEGREES - 41 MINUTES - 46 SECONDS WEST, A DISTANCE OF 100.00 FEET TO THE POINT AND PLACE OF BEGINNING.

CONTAINING 10,000 SQUARE FEET OR 0.230 ACRES.



NOTES:

- PROPERTY KNOWN AS LOT 84, BLOCK 47 AS SHOWN ON THE TOWN OF NEEDHAM, NORFOLK COUNTY, COMMONWEALTH OF MASSACHUSETTS MAP NO. 199.
- AREA = 10,000 SQUARE FEET OR 0.230 ACRES
- THE LOCATION OF UNDERGROUND UTILITIES SHOWN ARE BASED UPON MARKOUT PROVIDED BY CONTROL POINT ASSOCIATES, INC. LOCATIONS AND SIZES ARE BASED ON UTILITY MARK-OUTS, ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD, AND THE MAPS AS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE, AND TYPE BY THE PROPER UTILITY COMPANIES. CONTROL POINT ASSOCIATES, INC. DOES NOT GUARANTEE THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED.

THE SOURCE OF UNDERGROUND UTILITIES ARE SHOWN UTILIZING A QUALITY LEVEL SYSTEM:

- QUALITY LEVEL D - UTILITIES SHOWN BASED UPON REFERENCE MAPPING OR ORAL HISTORY. NOT FIELD VERIFIED.
- QUALITY LEVEL C - LOCATION OF UTILITY SURFACE FEATURES SUPPLEMENTS REFERENCE MAPPING. INCLUDES MARKOUT BY OTHERS.
- QUALITY LEVEL B - UTILITY LOCATION DATA IS COLLECTED THROUGH GEOPHYSICAL SENSING TECHNOLOGY TO SUPPLEMENT SURFACE FEATURES AND OR REFERENCE MAPPING. INCLUDES MARKOUT BY CONTROL POINT ASSOCIATES, INC.
- QUALITY LEVEL A - HORIZONTAL AND VERTICAL LOCATION OF UTILITIES ARE OBTAINED USING VACUUM EQUIPMENT EXCAVATION OR OTHER METHODS TO EXPOSE THE UTILITY. LOCATION SHOWN AT SINGLE POINT WHERE EXCAVATION OCCURRED UNLESS UTILITY WAS LOCATED PRIOR TO FILLING.

- THIS PLAN IS BASED ON INFORMATION PROVIDED BY A SURVEY PREPARED IN THE FIELD BY CONTROL POINT ASSOCIATES, INC. AND OTHER REFERENCE MATERIAL AS LISTED HEREON.
- THIS SURVEY WAS PREPARED WITH REFERENCE TO A TITLE REPORT PREPARED BY CHICAGO TITLE INSURANCE COMPANY, HAVING A COMMITMENT NO. BLC-28246, WITH AN EFFECTIVE DATE OF JUNE 18, 2021 AT 4:00 PM, WHERE THE FOLLOWING SURVEY RELATED EXCEPTIONS APPEAR IN SCHEDULE B - SECTION 2:

GENERAL EXCEPTIONS 1 THROUGH 5, 8 & 10 ARE NOT SURVEY RELATED AND HAVE NOT BEEN COMMENTED ON AS A PART OF THIS SURVEY.

- TITLE TO AND RIGHTS OF THE PUBLIC AND OTHERS ENTITLED THERETO IN AND TO THOSE PORTIONS OF THE PREMISES LYING WITHIN THE BOUNDS OF CHESTNUT AND OAK STREET - **PUBLIC WAYS SHOWN HEREON.**
- LICENSE AGREEMENT TO BOSTON EDISON COMPANY DATED AUGUST 2, 1991 AND RECORDED IN BOOK 9019, PAGE 498 - **ELECTRIC LINE EASEMENT SHOWN HEREON.**
- MEMORANDUM OF LEASE BY AND BETWEEN 172 CHESTNUT STREET, LLC AS LANDLORD AND 7-11, INC., DATED JUNE 13, 2012 AND RECORDED IN BOOK 31154, PAGE 586 - **BLANKET IN NATURE.**
- BY GRAPHIC PLOTTING ONLY PROPERTY IS LOCATED IN FLOOD HAZARD ZONE "X-UNSHADED" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) PER REF. #2
- ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), BASED ON GPS OBSERVATIONS UTILIZING THE KEYSTONE VRS NETWORK (KEYNETGPS) TAKEN AT THE TIME OF THE FIELD SURVEY.

TEMPORARY BENCHMARKS SET:

- TBM-A: MAG NAIL SET IN ASPHALT WALK ALONG NORTHERLY LINE OF OAK STREET AT ELEVATION 157.12'
- TBM-B: MAG NAIL SET IN ASPHALT WALK ALONG WESTERLY LINE OF CHESTNUT STREET AT ELEVATION 157.81'
- PRIOR TO CONSTRUCTION IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE BENCHMARKS ILLUSTRATED ON THIS SKETCH HAVE NOT BEEN DISTURBED AND THEIR ELEVATIONS HAVE BEEN CONFIRMED. ANY CONFLICTS MUST BE REPORTED PRIOR TO CONSTRUCTION.
- THE OFFSETS SHOWN ARE NOT TO BE USED FOR THE CONSTRUCTION OF ANY STRUCTURE, FENCE, PERMANENT ADDITION, ETC.
 - PROPERTY HAS DIRECT ACCESS TO CHESTNUT STREET AND OAK STREET.
 - PARKING COUNT: REGULAR = 13 SPACES
RESERVED = 1 SPACES
TOTAL = 14 SPACES
 - SURVEYOR'S DESCRIPTION PREPARED PER CLIENT REQUEST.

THIS SURVEY IS CERTIFIED TO:
JPMORGAN CHASE BANK, NA
CHICAGO TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT WAS BASED WERE MADE IN ACCORDANCE WITH THE "2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS". JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 7(a), 7(b)(1), 7(c), 8, 9, 11(b), 13 & 14 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON AUGUST 24, 2021.

NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED WITH RAISED IMPRESSION OR STAMPED WITH A BLUE INK SEAL

GERRY L. HOLDRIGHT, PLS
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211

11-11-21

DATE

1	ADDITIONAL SPOT GRADES ADDED AT DOOR	-	ELOC	GLH	11-11-21
No.	DESCRIPTION OF REVISION		FIELD CREW	DRAWN	APPROVED
FIELD DATE	08-24-21				
FIELD BOOK NO.	100				
FIELD BOOK PGS.	34-35				
FIELD CREW	S.S.W.				
DRAWN	M.R.D.				
REVIEWED	B.A.V.				
APPROVED	G.L.H.				
DATE	9-20-2021				
SCALE	1" = 10'				
FILE NO.	03-210279-00				
DWG. NO.	1 OF 1				

ALTA/NSPS LAND TITLE SURVEY
CHASE BANK

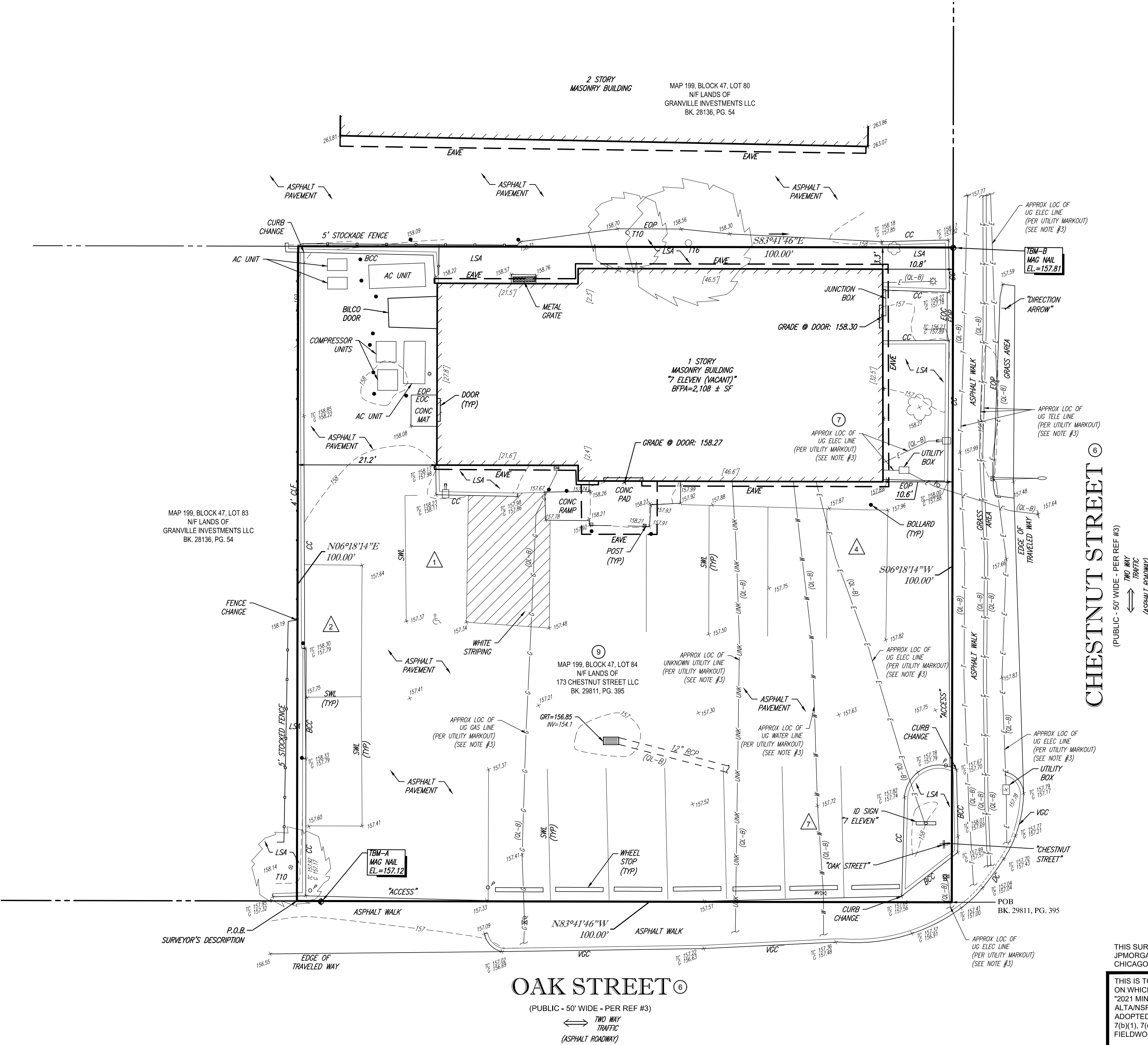
173 CHESTNUT STREET
LOT 84, BLOCK 47, MAP 199
TOWN OF NEEDHAM, NORFOLK COUNTY
COMMONWEALTH OF MASSACHUSETTS

CONTROL POINT ASSOCIATES, INC.

352 TURNPIKE ROAD
SOUTH BOKROUCH, MA 01772
508.948.3000 - 508.948.3003 FAX

ALBANY, NY 518-217-5010
CHALFONT, PA 215-712-9800
HAUPPAUGE, NY 631-580-2645
MANHATTAN, NY 646-780-0411
MIT LAUREL, NJ 609-857-2999
WARREN, NJ 908-668-0999

LEGEND	
--- 124 ---	EXISTING CONTOUR
--- 125 ---	EXISTING SPOT ELEVATION
X 123.45	EXISTING TOP OF CURB ELEVATION
X TC 123.45	EXISTING GUTTER ELEVATION
X G 122.85	EXISTING GUTTER ELEVATION
EM	GAS METER
G	APPROX. LOC. UNDERGROUND GAS LINE
E	APPROX. LOC. UNDERGROUND ELECTRIC LINE
T	APPROX. LOC. UNDERGROUND TELEPHONE LINE
W	APPROX. LOC. UNDERGROUND WATER LINE
STREET LIGHT	STREET LIGHT
TRAFFIC SIGNAL	TRAFFIC SIGNAL
AREA LIGHT	AREA LIGHT
MAIL BOX	MAIL BOX
BOLLARD	BOLLARD
CC	CONCRETE CURB
BCC	BITUMINOUS CONCRETE CURB
CLF	CHAIN LINK FENCE
DC	DEPRESSED CURB
EDC	EDGE OF CONCRETE
EOP	EDGE OF PAVEMENT
LSA	LANDSCAPED AREA
MC	METAL COVER
(TYP)	TYPICAL
(QL-B)	QUALITY LEVEL INDICATOR
CB	CATCH BASIN OR INLET
TREE & TRUNK SIZE	TREE & TRUNK SIZE
SHRUBS	SHRUBS
PARKING SPACE COUNT	PARKING SPACE COUNT
DEPRESSED CURB	DEPRESSED CURB
BLDG	BUILDING
BTPA	BUILDING FOOTPRINT AREA
INV	INVERT ELEVATION
10	TITLE REPORT EXCEPTION

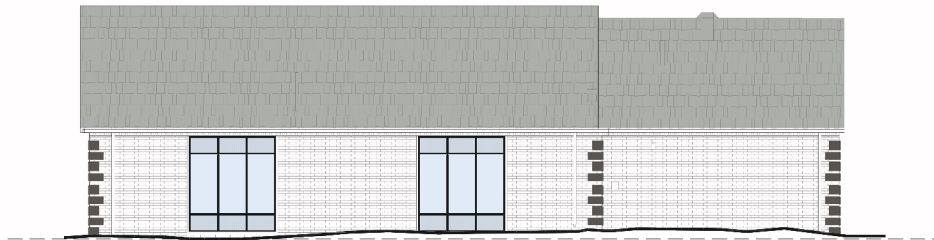




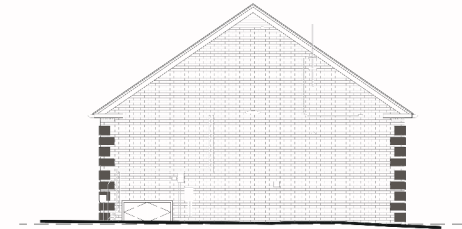
SOUTH ELEVATION (OAK STREET & PARKING)



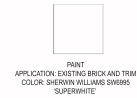
EAST ELEVATION (CHESTNUT STREET)



NORTH ELEVATION



WEST ELEVATION



CHASE
NEEDHAM
173 CHESTNUT ST.
NEEDHAM, MA 02492

PROPOSED EXTERIOR ELEVATIONS

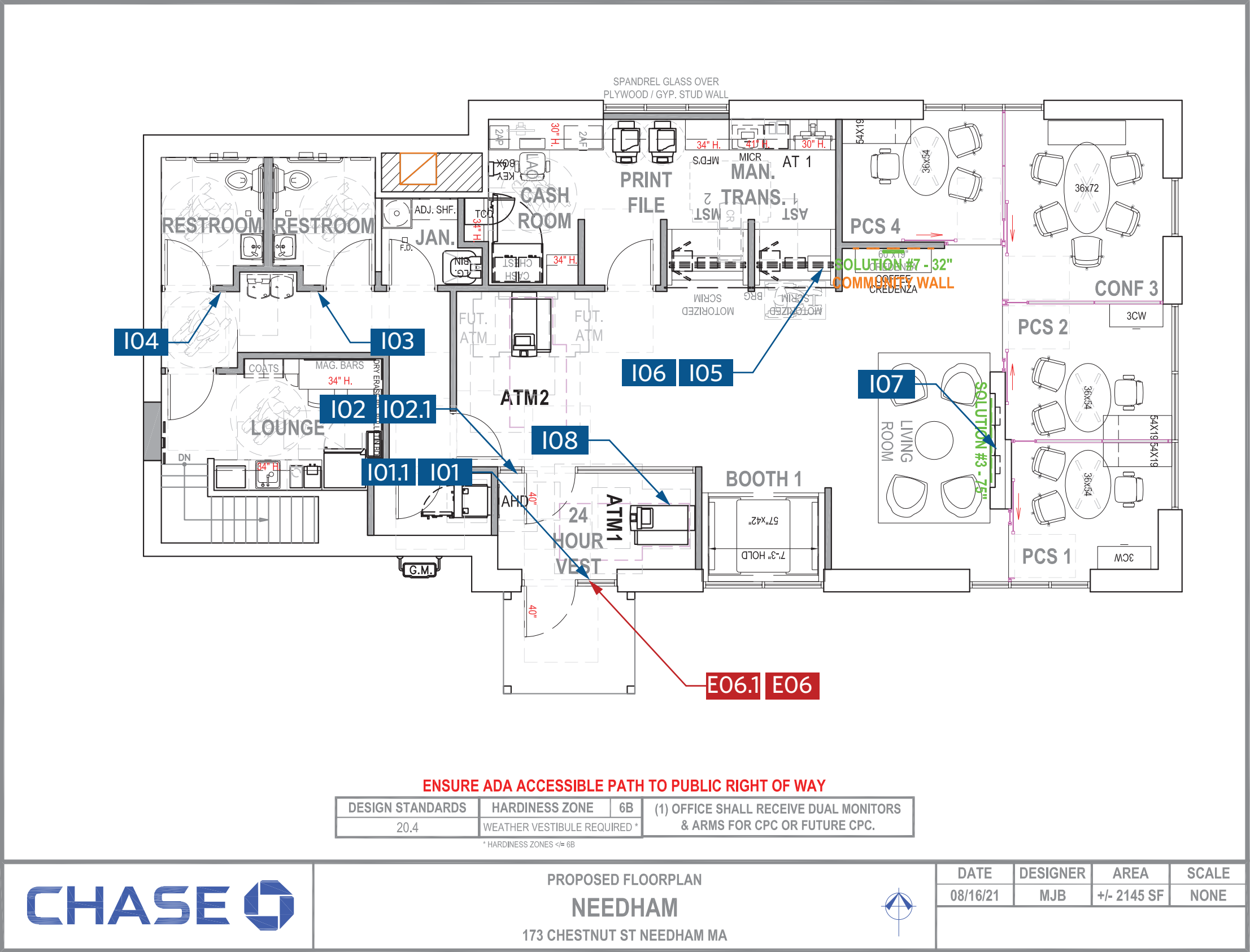
SEPTEMBER 15, 2021
SCALE: 3/16" = 1'-0"

9 GALEN STREET
SUITE 117
WATERTOWN, MA 02472
CONTACT: MARC SIDES
MSIDES@CORE-STATES.COM

CORE STATES
GROUP

Floor Plan

Interior Scope of Work			
I01	ADA-EX	ADA HANDICAPPED EXIT PLAQUE	.25SF
I01.1	CUST-VIN	MATCHING BRONZE VINYL BACKER	
I02	ADA-EX	ADA HANDICAPPED EXIT PLAQUE	.25SF
I02.1	CUST-VIN	MATCHING BRONZE VINYL BACKER	
I03	ADA-RRAG-A-G	ADA ALL GENDER RESTROOM SIGN - ACCESSIBLE	1.4SF
I04	ADA-RRAG-A-G	ADA ALL GENDER RESTROOM SIGN - ACCESSIBLE	1.4SF
I05	ADA-TW	ADA TELLER WALL SIGN	.1SF
I06	ADA-TW-ALS	ADA TELLER WINDOW - ASSISTIVE LISTENING SYSTEM	.1SF
I07	TPL-BTR-B-24	24" THIN PROFILE ILLUMINATED INTERIOR BLUE OCTAGON	4SF
I08	eATM-PANEL-SINGLE-SIDE-CAR	BRANDING PANEL FOR SINGLE SIDE CAR eATM 3.0	
E06	ADA-EP	ADA HANDICAPPED ENTRANCE PLAQUE	.25SF
E06.1	CUST-VIN	MATCHING BLUE VINYL BACKER	



CHS.NB.980 - Needham
173 Chestnut Street
Needham, MA 02492

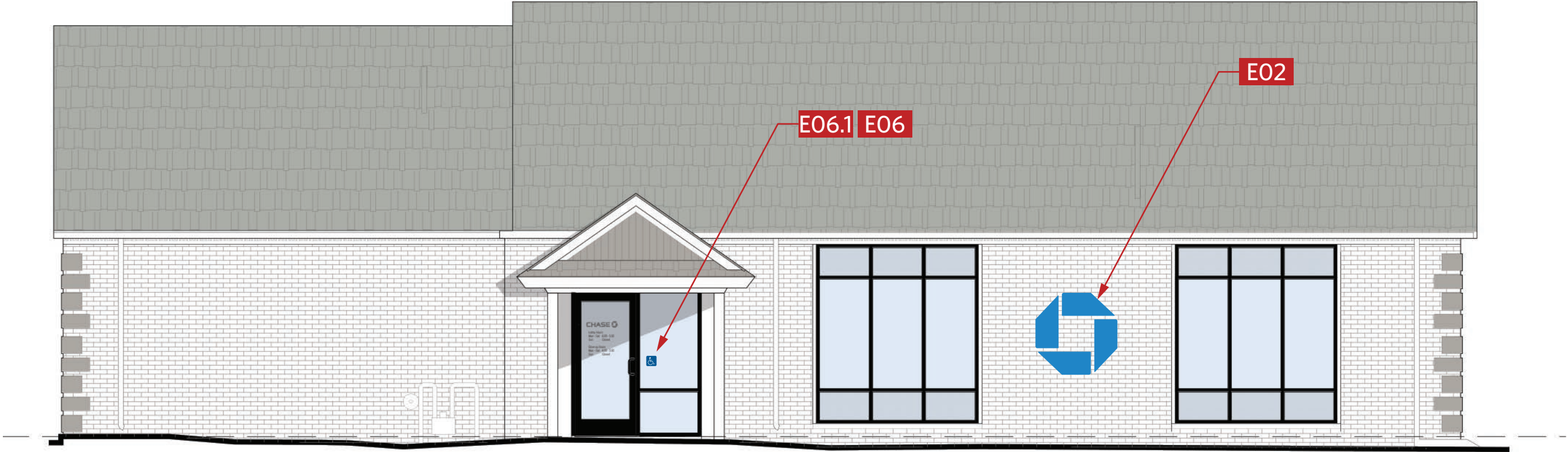
DESIGNER - JM
CREATED - 09.24.21
DRAWING - B97258



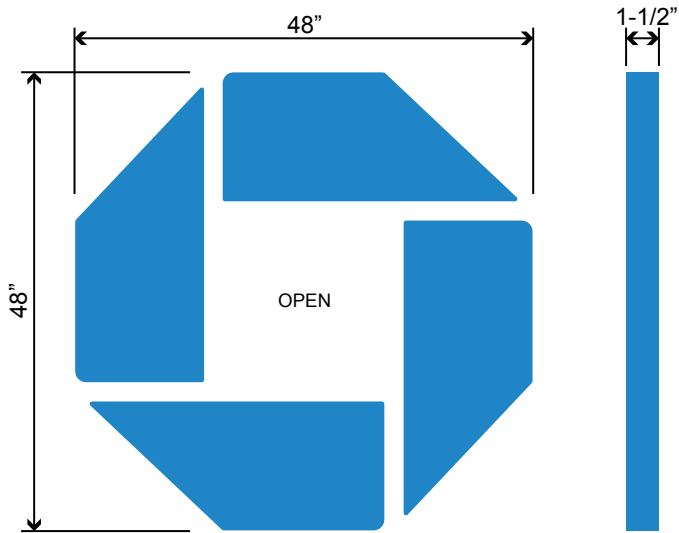
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BRINGING THE WORLD'S BRANDS TO LIFE

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P: 856-829-1460 • F: 856-829-8549 • WEB: <http://www.philadelphiasign.com>

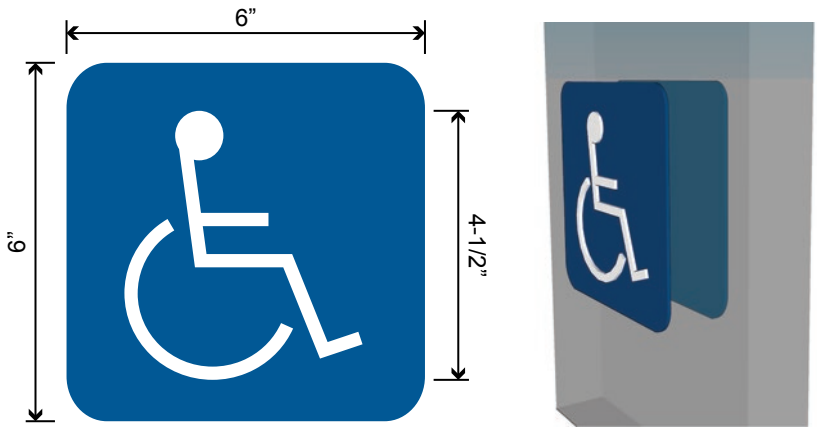
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South Elevation (Oak Street and Parking)



TPL-BTR-B-48-E
48" THIN PROFILE ILLUMINATED EXTERIOR BLUE OCTAGON - 16SF
SCALE: NTS
NOTE: Octagon to be Purchased from Bitro.



ADA-EP
HANDICAPPED ENTRANCE PLAQUE
SCALE: NTS
CUST-VIN
MATCHING BLUE VINYL BACKER
SCALE: NTS

**SIGN E06 MOUNTS
BACK-TO-BACK WITH
SIGN I01.**



CHS.NB.980 - Needham
173 Chestnut Street
Needham, MA 02492

DESIGNER - JM
CREATED - 09.24.21
DRAWING - B97258

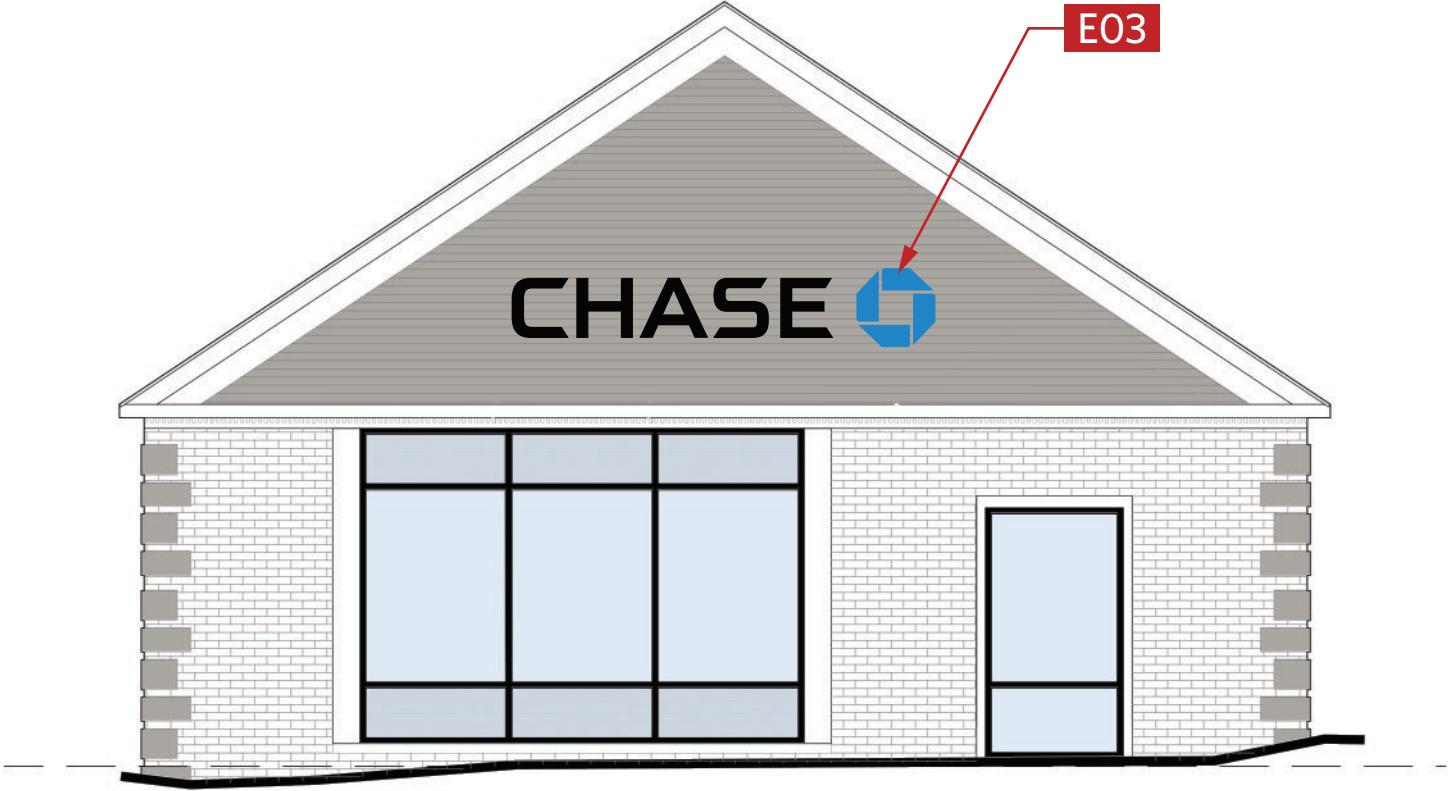


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East Elevation (Chestnut Street)



LIF-BLK-20-LED
BLACK W/ BLUE OCTAGON ILLUM CHANNEL LETTERS - 25.6sf
SCALE: NTS



CHS.NB.980 - Needham
173 Chestnut Street
Needham, MA 02492

DESIGNER - JM
CREATED - 09.24.21
DRAWING - B97258

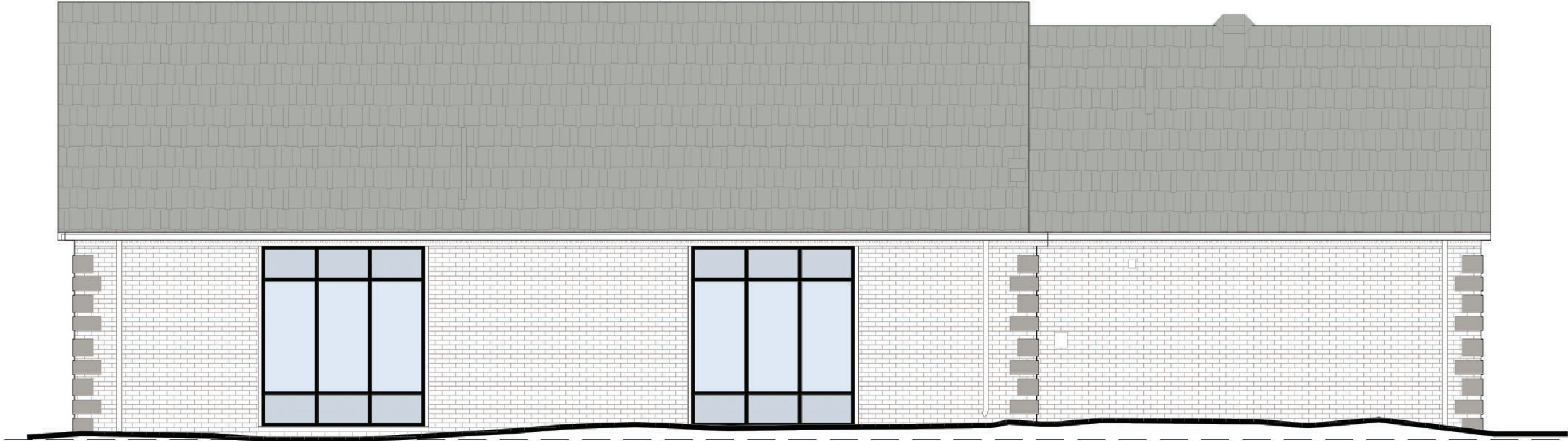


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North Elevation

NO SIGNAGE



CHS.NB.980 - Needham
173 Chestnut Street
Needham, MA 02492

DESIGNER - JM
CREATED - 09.24.21
DRAWING - B97258

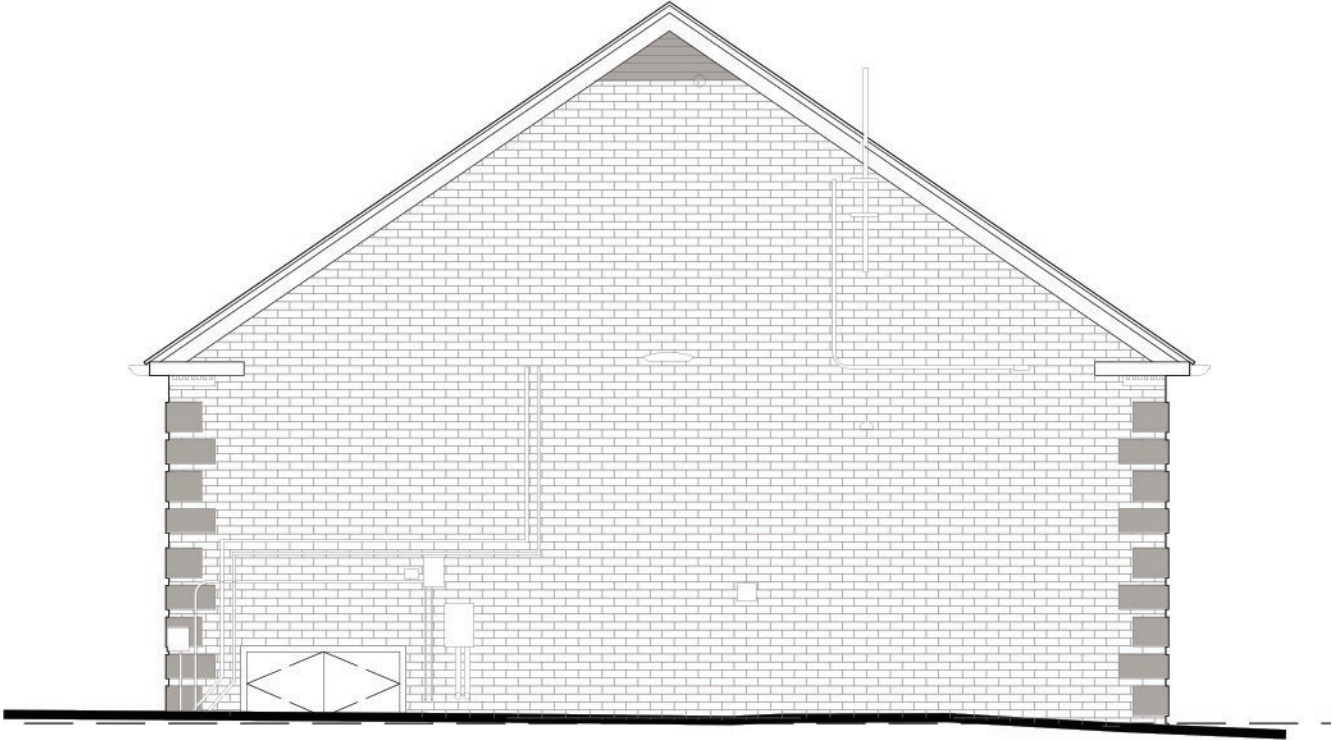


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West Elevation

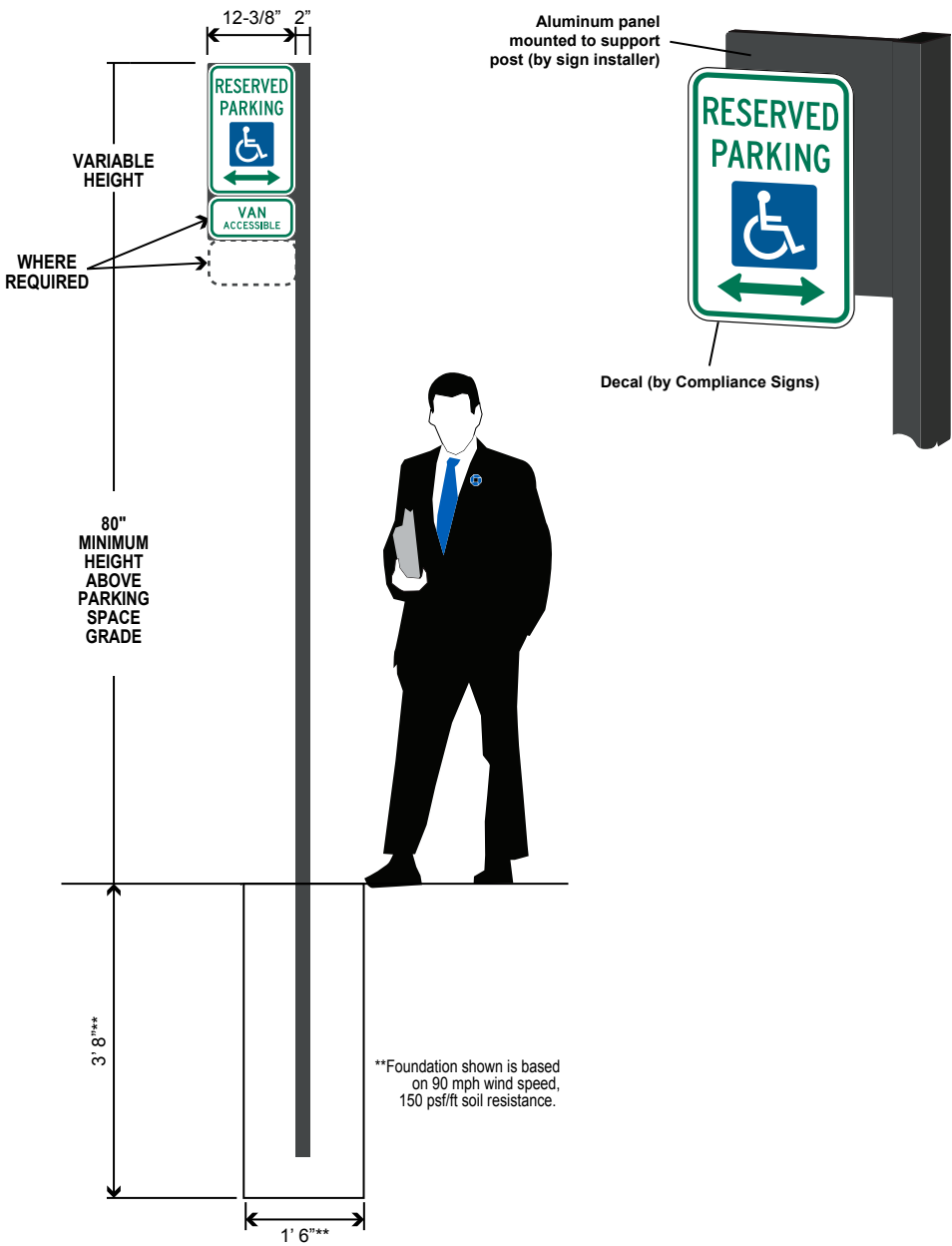
NO SIGNAGE



TC-P-ADA-V-RE-MA
POLE MOUNTED ADA PARKING REGULATORY
SIGN W/ VAN ACCESS (RE-ENGINEERED)
SCALE: NTS



TC-P-ADA-RE-MA
POLE MOUNTED ADA PARKING REGULATORY
SIGN (RE-ENGINEERED)
SCALE: NTS



**Foundation shown is based on 90 mph wind speed, 150 psf/ft soil resistance.

Survey Photos



CHS.NB.980 - Needham
173 Chestnut Street
Needham, MA 02492

DESIGNER - JM
CREATED - 09.24.21
DRAWING - B97258



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Survey Photos



CHS.NB.980 - Needham
173 Chestnut Street
Needham, MA 02492

DESIGNER - JM
CREATED - 09.24.21
DRAWING - B97258



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Approach Photos



CHS.NB.980 - Needham
173 Chestnut Street
Needham, MA 02492

DESIGNER - JM
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DESCRIPTION

The patented Lumark Crosstour™ MAXX LED wall pack series of luminaires provides low-profile architectural style with super bright, energy-efficient LEDs. The rugged die-cast aluminum construction, back box with secure lock hinges, stainless steel hardware along with a sealed and gasketed optical compartment make Crosstour impervious to contaminants. The Crosstour MAXX wall luminaire is ideal for wall/surface, inverted mount for facade/canopy illumination, perimeter and site lighting. Typical applications include pedestrian walkways, building entrances, multi-use facilities, industrial facilities, perimeter parking areas, storage facilities, institutions, schools and loading docks.

SPECIFICATION FEATURES

Construction

Low-profile LED design with rugged one-piece, die-cast aluminum back box and hinged removable door. Matching housing styles incorporate both a full cutoff and refractive lens design. Full cutoff and refractive lens models are available in 58W, 81W and 102W. Patent pending secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes four 1/2" NPT threaded conduit entry points. The back box is secured by four lag bolts (supplied by others). External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Not recommended for car wash applications.

Optical

Silicone sealed optical LED chamber incorporates a custom engineered reflector providing high-efficiency illumination. Full cutoff models integrate an impact-resistant molded refractive prism optical lens assembly meeting requirements for Dark Sky compliance. Refractive lens models incorporate a molded lens

assembly designed for maximum forward throw. Solid state LED Crosstour MAXX luminaires are thermally optimized with eight lumen packages in cool 5000K, neutral 4000K, or warm 3000K LED color temperature (CCT).

Electrical

LED driver is mounted to the die-cast aluminum housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 58W, 81W and 102W models operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C [122°F] models available in 58W and 81W models only. Crosstour MAXX luminaires maintain greater than 89% of initial light output after 72,000 hours of operation. Four half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz, 480V 60Hz, or 347V 60Hz electrical operation. 480V is compatible for use with 480V Wye systems only.

Emergency Egress

Optional integral cold weather battery emergency egress includes emergency operation test switch (available in 58W and 81W models only), an AC-ON indicator light and a premium extended rated sealed maintenance-free nickel-metal hydride battery pack. The separate emergency lighting LEDs are wired to provide redundant emergency lighting. Listed to UL Standard 924, Emergency Lighting.

Area and Site Pole Mounting

Optional extruded aluminum 6-1/2" arm features internal bolt guides for supplied twin support rods, allowing for easy positioning of the fixture during installation to pole. Supplied with round plate adapter plate. Optional tenon adapter fits 2-3/8" or 3-1/2" O.D. Tenon.

Finish

Crosstour MAXX is protected with a super TGIC carbon bronze or summit white polyester powder coat paint. Super TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty

Five-year warranty.



XTOR CROSSTOUR MAXX LED

APPLICATIONS:
WALL / SURFACE
INVERTED
SITE LIGHTING



CERTIFICATION DATA

UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
NOM Compliant Models
3G Vibration Tested
UL924 Listed (CBP Models)
IP66 Rated
DesignLights Consortium® Qualified*

TECHNICAL DATA

40°C Ambient Temperature
External Supply Wiring 90°C Minimum

EPA

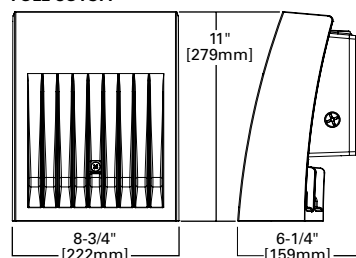
Effective Projected Area (Sq. Ft.):
XTOR6B, XTOR8B, XTOR12B=0.54
With Pole Mount Arm=0.98

SHIPPING DATA:

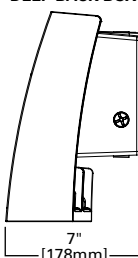
Approximate Net Weight:
12-15 lbs. [5.4-6.8 kgs.]

DIMENSIONS

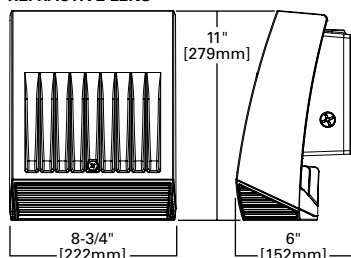
FULL CUTOFF



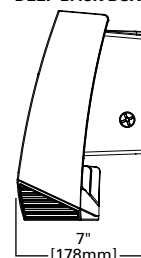
DEEP BACK BOX



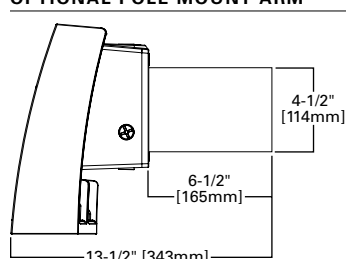
REFRACTIVE LENS



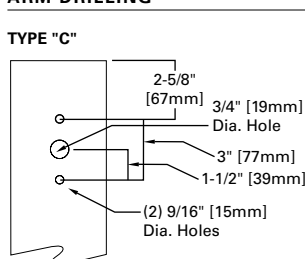
DEEP BACK BOX



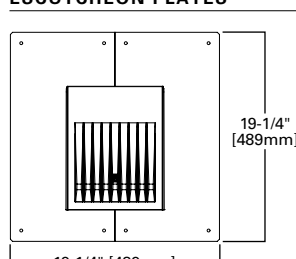
OPTIONAL POLE MOUNT ARM



ARM DRILLING



ESCUTCHEON PLATES

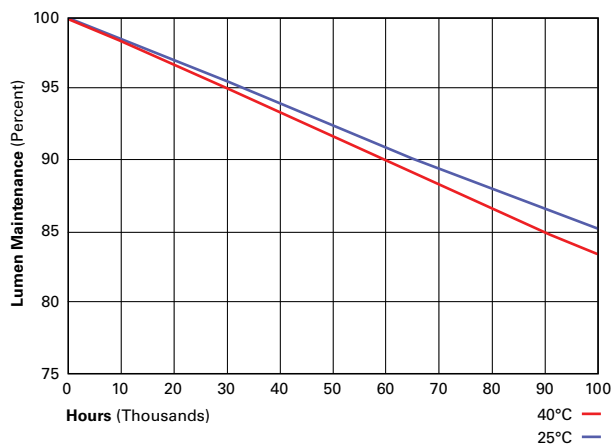


POWER AND LUMENS BY FIXTURE MODEL

58W Series						
LED Information	XTOR6B	XTOR6BRL	XTOR6B-W	XTOR6BRL-W	XTOR6B-Y	XTOR6BRL-Y
Delivered Lumens	6,129	6,225	6,038	6,133	5,611	5,826
B.U.G. Rating	B1-U0-G1	B2-U4-G3	B1-U0-G1	B2-U4-G3	B1-U0-G1	B2-U4-G3
CCT (Kelvin)	5000K	5000K	4000K	4000K	3000K	3000K
CRI (Color Rendering Index)	70	70	70	70	70	70
Power Consumption (Watts)	58W	58W	58W	58W	58W	58W
81W Series						
LED Information	XTOR8B	XTOR8BRL	XTOR8B-W	XTOR8BRL-W	XTOR8B-Y	XTOR8BRL-Y
Delivered Lumens	8,502	8,635	8,373	8,504	7,748	8,079
B.U.G. Rating	B2-U0-G1	B2-U4-G3	B2-U0-G1	B2-U4-G3	B2-U0-G1	B2-U4-G3
CCT (Kelvin)	5000K	5000K	4000K	4000K	3000K	3000K
CRI (Color Rendering Index)	70	70	70	70	70	70
Power Consumption (Watts)	81W	81W	81W	81W	81W	81W
102W Series						
LED Information	XTOR12B	XTOR12BRL	XTOR12B-W	XTOR12BRL-W	XTOR12B-Y	XTOR12BRL-Y
Delivered Lumens	12,728	13,458	12,539	13,258	11,861	12,595
B.U.G. Rating	B2-U0-G1	B2-U4-G3	B2-U0-G1	B2-U4-G3	B2-U0-G1	B2-U4-G3
CCT (Kelvin)	5000K	5000K	4000K	4000K	3000K	3000K
CRI (Color Rendering Index)	70	70	70	70	70	70
Power Consumption (Watts)	102W	102W	102W	102W	102W	102W
EGRESS Information	XTOR6B, XTOR8B and XTOR12B Full Cutoff CBP Egress LED			XTOR6B, XTOR8B and XTOR12B Refractive Lens CBP Egress LED		
Delivered Lumens	509			468		
B.U.G. Rating	N.A.			N.A.		
CCT (Kelvin)	4000K			4000K		
CRI (Color Rendering Index)	65			65		
Power Consumption (Watts)	1.8W			1.8W		

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
XTOR6B Model		
25°C	> 90%	246,000
40°C	> 88%	217,000
50°C	> 88%	201,000
XTOR8B Model		
25°C	> 89%	219,000
40°C	> 87%	195,000
50°C	> 86%	181,000
XTOR12B Model		
25°C	> 89%	222,000
40°C	> 87%	198,000



CURRENT DRAW

Voltage	Model Series				
	XTOR6B	XTOR8B	XTOR12B	XTOR6B-CBP (Fixture/Battery)	XTOR8B-CBP (Fixture/Battery)
120V	0.51	0.71	0.94	0.60/0.25	0.92/0.25
208V	0.25	0.39	0.52	--	--
240V	0.25	0.35	0.45	--	--
277V	0.22	0.31	0.39	0.36/0.21	0.50/0.21
347V	0.19	0.25	0.33		--
480V	0.14	0.19	0.24		--

ORDERING INFORMATION

Sample Number: XTOR6B-W-WT-PC1

Series ¹	LED Kelvin Color	Housing Color	Options (Add as Suffix)
Full Cutoff XTOR6B=58W XTOR8B=81W XTOR12B=102W Refractive Lens XTOR6BRL=58W XTOR8BRL=81W XTOR12BRL=102W	[Blank]=Bright White (Standard) 5000K W=Neutral, 4000K Y=Warm, 3000K	[Blank]=Carbon Bronze (Standard) WT=Summit White BK=Black BZ=Bronze AP=Grey GM=Graphite Metallic DP=Dark Platinum	347V=347V^{2,3,4,5} 480V=480V^{2,3,4,5,6} PC1=Photocontrol 120V⁷ PC2=Photocontrol 208-277V^{7,8} PMA=Pole Mount Arm (C Drilling) with Round Adapter^{3,9} MS-L20=Motion Sensor for ON/OFF Operation^{2,3,10,11} MS/DIM-L20=Motion Sensor for Dimming Operation^{2,3,10,11,12,13,14} CBP=Cold Weather Battery Pack^{2,3,15,16,17} HA=50°C High Ambient¹⁷
Accessories (Order Separately)			
WG-XTORMX=Crosstour MAXX Wire Guard PB120V=Field Installed 120V Photocontrol PB277V BUTTON PC=Field Installed 208-277V Photocontrol⁸ VA1040-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon¹⁸ VA1041-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon¹⁸ VA1042-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon¹⁸ VA1043-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon¹⁸ VA1044-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon¹⁸ VA1045-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon¹⁸ VA1046-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon¹⁸		VA1033-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon¹⁸ VA1034-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon¹⁸ VA1035-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon¹⁸ VA1036-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon¹⁸ VA1037-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon¹⁸ VA1038-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon¹⁸ VA1039-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon¹⁸ EWP/XTORMX=Escutcheon Wall Plate, Carbon Bronze EWP/XTORMX-WT=Escutcheon Wall Plate, Summit White FSIR-100=Wireless Configuration Tool for Occupancy Sensor¹⁴	

NOTES:

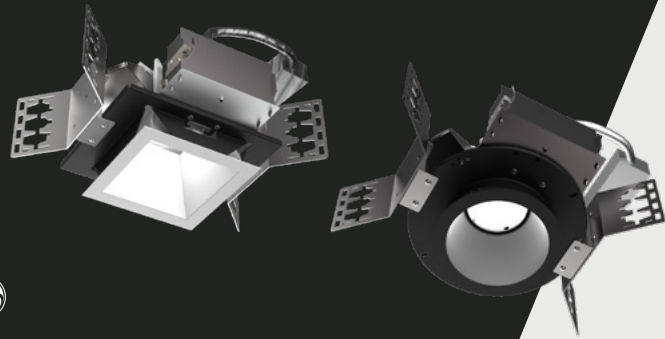
- DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
- Not available with HA option.
- Deep back box is standard for 347V, 480V, CBP, PMA, MS-L20 and MS/DIM-L20.
- Not available with CBP option.
- Thru-branch wiring not available with HA option or with 347V.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Not available with MS-L20 and MS/DIM-L20 options.
- Use PC2 with 347V or 480V option for photocontrol. Factory wired to 208-277V lead.
- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
- For use in downlight orientation only. Optimal coverage at mounting heights of 9'-20'.
- 120V thru 277V only.
- Factory set to 50% power reduction after 15-minutes of inactivity. Dimming driver included.
- Includes integral photo sensor.
- The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff, and more. Consult your lighting representative at Eaton for more information.
- 120V or 277V operation only.
- Operating temperatures -20°C to 25°C.
- Not available in XTOR12B or XTOR12BRL models.
- Replace XX with housing color.

STOCK ORDERING INFORMATION

58W Series	81W Series	102W Series
Full Cutoff		
XTOR6B=58W, 5000K, Carbon Bronze	XTOR8B=81W, 5000K, Carbon Bronze	XTOR12B=102W, 5000K, Carbon Bronze
XTOR6B-PC1=58W, 5000K, 120V PC, Carbon Bronze	XTOR8B-PC1=81W, 5000K, 120V PC, Carbon Bronze	XTOR12B-PC1=102W, 5000K, 120V PC, Carbon Bronze
XTOR6B-WT= 58W, 5000K, Summit White	XTOR8B-WT=81W, 5000K, Summit White	XTOR12B-WT=102W, 5000K, Summit White
XTOR6B-W=58W, 4000K, Carbon Bronze	XTOR8B-PC2=81W, 5000K, 208-277V PC, Carbon Bronze	XTOR12B-PC2=102W, 5000K, 208-277V PC, Carbon Bronze
XTOR6B-PMA= 58W, 5000K, Pole Mount Arm, Carbon Bronze	XTOR8B-PMA=81W, 5000K, Pole Mount Arm, Carbon Bronze	XTOR12B-PMA=102W, 5000K, Pole Mount Arm, Carbon Bronze
XTOR6B-W-PMA=58W, 4000K, Pole Mount Arm, Carbon Bronze	XTOR8B-W=81W, 4000K, Carbon Bronze	XTOR12B-W=102W, 4000K, Carbon Bronze
XTOR6B-PC2= 58W, 5000K, 208-277V PC, Carbon Bronze	XTOR8B-W-PC1=81W, 4000K, 120V PC, Carbon Bronze	XTOR12B-W-PC1=102W, 4000K, 120V PC, Carbon Bronze
XTOR6B-W-PC2=58W, 4000K, 208-277V PC, Carbon Bronze	XTOR8B-W-PC2=81W, 4000K, 208-277V PC, Carbon Bronze	XTOR12B-W-PC2=102W, 4000K, 208-277V PC, Carbon Bronze
XTOR6B-W-PC1=58W, 4000K, 120V PC, Carbon Bronze	XTOR8B-W-PMA=81W, 4000K, Pole Mount Arm, Carbon Bronze	XTOR12B-W-PMA=102W, 4000K, Pole Mount Arm, Carbon Bronze
Refractive Lens		
XTOR6BRL=58W, 5000K, Refractive Lens, Carbon Bronze	XTOR8BRL=81W, 5000K, Refractive Lens, Carbon Bronze	XTOR12BRL=102W, 5000K, Refractive Lens, Carbon Bronze
XTOR6BRL-PC1=58W, 5000K, Refractive Lens, 120V PC, Carbon Bronze	XTOR8BRL-PC1=81W, 5000K, Refractive Lens, 120V PC, Carbon Bronze	XTOR12BRL-PC1=102W, 5000K, Refractive Lens, 120V PC, Carbon Bronze
XTOR6BRL-WT=58W, 5000K, Refractive Lens, Summit White	XTOR8BRL-WT=81W, 5000K, Refractive Lens, Summit White	XTOR12BRL-WT=102W, 5000K, Refractive Lens, Summit White
XTOR6BRL-W=58W, 4000K, Refractive Lens, Carbon Bronze	XTOR8BRL-PC2=81W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze	XTOR12BRL-PC2=102W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze
XTOR6BRL-PMA=58W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	XTOR8BRL-PMA=81W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	XTOR12BRL-PMA=102W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze
XTOR6BRL-W-PMA=58W, 4000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	XTOR8BRL-W=81W, 4000K, Refractive Lens, Carbon Bronze	XTOR12BRL-W=102W, 4000K, Refractive Lens, Carbon Bronze
XTOR6BRL-PC2=58W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze	XTOR8BRL-W-PC1=81W, 4000K, Refractive Lens, 120V PC, Carbon Bronze	XTOR12BRL-W-PC1=102W, 4000K, Refractive Lens, 120V PC, Carbon Bronze
XTOR6BRL-W-PC2=58W, 4000K, Refractive Lens, 208-277V PC, Carbon Bronze	XTOR8BRL-W-PC2=81W, 4000K, Refractive Lens, 208-277V PC, Carbon Bronze	XTOR12BRL-W-PC2=102W, 4000K, Refractive Lens, 208-277V PC, Carbon Bronze
XTOR6BRL-W-PC1=58W, 4000K, Refractive Lens, 120V PC, Carbon Bronze	XTOR8BRL-W-PMA=81W, 4000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	XTOR12BRL-W-PMA=102W, 4000K, Refractive Lens, Pole Mount Arm, Carbon Bronze

Lumination® LED Luminaires

LDX New Construction Architectural Downlight



CUSTOMER NAME _____

Project Name _____

Date _____ Type _____

Catalog Number _____

The next generation **Lumination®** LDX Series is an architectural downlight, leveraging an advanced LED optical system combined with superior color rendering to achieve premium performance and aesthetics. Designed for both new construction and retrofit applications, the LDXB offers long life, high efficiency, and enhanced CRI/R9 thanks to included TriGain® technology. Available in 4-inch and 6-inch round and square, LDX offers multiple color temperatures, lumen packages, and distribution patterns, including wall wash.

CONSTRUCTION

Housing:	Galvanized steel
Lens:	Non-conductive polycarbonate
Paint:	Powdercoat painted reflector options
Weight:	7.0lbs (3.18kg) Standard Option
Optical Assembly:	High efficiency reflector and optical diffuser

OPTICAL SYSTEM

Lumens:	1000- 4000lm
Distribution:	Round Reflector: Narrow (42°), Wide (59°), Very Wide (70°), Wall Wash Square Reflector: Medium (47.5°), Wide (59°), Wall Wash
Efficacy:	Up to 118 LPW
CCT:	3000K, 3500K, 4000K
CRI (Min):	TriGain® 90 CRI

ELECTRICAL

Input Voltage:	120-277V, 347V
Input Frequency:	50/60Hz
Standard Dimming Control:	0-10V, 1% Daintree® Wireless compatible
Power Factor (PF)*:	> 90%
Total Harmonic Distortion (THD)*:	<20%

* System PF and THD specified at rated watts

CONTROLS

Dimming:	Standard - 0-10V, 1%
Sensors:	Daintree Compatible w/ Controls Kit (see Ordering for additional info)

LUMEN AMBIENT TEMPERATURE

Product ID	OPERATING TEMPERATURE
LDXB	-20° TO +35° C

LUMEN MAINTENANCE

Projected Lxx per IES TM-21 at max 25°C

LXX(10K) @ Hours
50,000 HR
L85

MOUNTING

- New Construction, interior applications - drywall or T-Grid
- Housing comes with adjustable butterfly brackets and hanger bars

DESIGN LIFE & WARRANTY

- Damp Location rated, Wet rated lens option (round only)
- Current's ENERGY STAR® Limited 5-year Warranty:
Please refer to document **IND499** for more information.



TriGain®
Technology



Lumination® LDX Series

LDX New Construction
Architectural Downlight

Catalog Logic

CUSTOMER NAME

Project Name _____

Date _____ Type _____

Catalog Number _____

Ordering Information:

A complete fixture consists of a **Configured Housing + Reflector**

Configured Housing:

LDXB

T

FAMILY	FIXTURE TYPE	VOLTAGE	NOMINAL LUMEN	CRI	CCT	CONTROLS	OPTIONS
LDXB = Lumination® LDX Series Architectural Downlight, 2 nd Generation	4R= 4" Round	0= Universal 120V-277V D= 347V	10 = 1000lm	T = TriGain® 90 CRI	30=3000K	V1 ⁵ = 0-10V, 1% dimming	(BLANK) = None
	4S= 4" Square		15 = 1500lm		35=3500K	TQ = Daintree® compatible (Module G)	EL ⁵ = EMBB
	4RW= 4" Round Wall Wash		20 = 2000lm		40=4000K	TS = Daintree® compatible (WFA100)	
	4SW= 4" Square Wall Wash		30 = 3000lm				
	6R= 6" Round		40 = 4000lm				
	6S= 6" Square		*See Performance Section for delivered lumens				
	6RW= 6" Round Wall Wash						
	6SW= 6" Square Wall Wash						

Round Reflector:

R DI R

REFLECTOR	HOUSING TYPE	BEAM SPREAD	REFLECTOR FINISH	REFLECTOR COLOR	FLANGE COLOR	OPTIONS
R= Reflector	DI4R ¹ = 4" Round	N= Narrow 42°	SD ⁴ = Semi-Diffuse	(BLANK)= None	MR ⁴ =Match Reflector	(BLANK)= None
	DI6R ¹ = 6" Round	W ^{1,4} = Wide 59°	DF= Diffuse	WT ^{2,4} = White Paint	WT ² = White Paint	WR ⁴ = Wet Rated
		V ⁸ = Very Wide 70°	SP= Specular	Custom colors available. See Ordering Note 6	XT ³ = Trimless	
		WW ¹ = Wall Wash	PT ^{2,4} =Painted (white reflector color only)			

Additional Ordering Notes:

1. RD14R and RD14S reflectors only available in **W** and **WW** beam spread.
2. White painted (**WT**) reflectors only available in **PT** reflector finish and **WT** or **XT** flange finish
3. Trimless (**XT**) only available in selected combinations. Please refer to page 3 for more information.
4. Wet rated (**WR**) only available in 4in and 6in wide round reflectors and semi-diffuse (**SD**) or painted (**PT**) reflector finishes.
5. Emergency battery (**EL**) compatible only with 0-10V (**VQ**) and not available for 347V (**D**).
6. Custom Colors available. Contact factory representative for quote using the following code information:
 - Wheat (**WE**), Pewter (**PW**), and Gold (**GO**) anodized reflector colors available in:
 - SD** = Semi-Diffused reflector finish only
 - Black (**BL**) painted reflectors available in:
 - DF** = Diffused finish only
 - White painted (WT) reflectors only available in **PT**= Painted reflector finish & **WT** = White Paint flange finish
 - 7. Wall Wash (**WW**) reflectors are not Energy Star rated
 - 8. Very Wide available in 6" reflector only

Square Reflector:

R DI S

REFLECTOR	HOUSING TYPE	BEAM SPREAD	REFLECTOR FINISH	REFLECTOR COLOR	FLANGE COLOR	OPTIONS
R= Reflector	DI4S ¹ = 4" Square	M= Narrow 42°	SD= Semi-Diffuse	(BLANK)= None	MR=Match Reflector	(BLANK)= None
	DI6S ¹ = 6" Square	W ¹ = Wide 59°	DF= Diffuse	WT ² = White Paint	WT ² = White Paint	
		WW ¹ = Wall Wash	SP= Specular	Custom colors available. See Ordering Note 6	XT ³ = Trimless	
			PT ² =Painted (white reflector color only)			

*Refer to next page for additional reflector information

Lumination® LDX Series

LDX New Construction
Architectural Downlight

Accessories

CUSTOMER NAME

Project Name _____

Date _____ Type _____

Catalog Number _____

HANGER BARS

MATERIAL	MATERIAL DESCRIPTION	PRODUCT DESCRIPTION
93110306	BH3 - 2 bars required per fixture	HANGER BARS, C-CHANNEL - 25 1/4" (BOXED PAIR)

STOCKED REFLECTORS

MATERIAL	MATERIAL DESCRIPTION	PRODUCT DESCRIPTION
93984	RD14RWSDMR	4" ROUND REFLECTOR, WIDE, SEMI-DIFFUSED, CLEAR REFLECTOR AND TRIM
93985	RD14RWSDWT	4" ROUND REFLECTOR, WIDE, SEMI-DIFFUSED, CLEAR REFLECTOR, WHITE TRIM
93986	RD14RWSDMR	4" SQUARE REFLECTOR, WIDE, SEMI-DIFFUSED, CLEAR REFLECTOR, TRIM
93987	RD14SWSDWT	4" SQUARE REFLECTOR, WIDE, SEMI-DIFFUSED, CLEAR REFLECTOR, WHITE TRIM
93988	RD16RNSDMR	6" ROUND REFLECTOR, NARROW, SEMI-DIFFUSED, CLEAR REFLECTOR AND TRIM
93989	RD16RNSDWT	6" ROUND REFLECTOR, NARROW, SEMI-DIFFUSED, CLEAR REFLECTOR, WHITE TRIM
93990	RD16RWSDMR	6" ROUND REFLECTOR, WIDE, SEMI-DIFFUSED, CLEAR REFLECTOR AND TRIM
93991	RD16RWSDWT	6" ROUND REFLECTOR, WIDE, SEMI-DIFFUSED, CLEAR REFLECTOR, WHITE TRIM
93992	RD16SMSDMR	6" SQUARE REFLECTOR, MEDIUM, SEMI-DIFFUSED, POLISHED FLANGE
93993	RD16SMSDWT	6" SQUARE REFLECTOR, MEDIUM, SEMI-DIFFUSED, WHITE TRIM
93994	RD16SWSDMR	6" SQUARE REFLECTOR, WIDE, SEMI-DIFFUSED, POLISHED FLANGE
93995	RD16SWSDWT	6" SQUARE REFLECTOR, WIDE, SEMI-DIFFUSED, WHITE FLANGE

TRIMLESS REFLECTOR OPTIONS

MATERIAL	MATERIAL DESCRIPTION	PRODUCT DESCRIPTION
93055787	RD14RWSDXT	4" ROUND REFLECTOR, WIDE, SEMI-DIFFUSED, CLEAR REFLECTOR, FLANGELESS
93068237	RD14RWPTWTXT	4" ROUND REFLECTOR, WIDE, PAINTED, WHITE REFLECTOR, FLANGELESS
93068243	RD14RWDFBLXT	4" ROUND REFLECTOR, WIDE, DIFFUSED, BLACK REFLECTOR, FLANGELESS
93067885	RD16RWSDXT	6" ROUND REFLECTOR, WIDE, SEMI-DIFFUSED, CLEAR REFLECTOR, FLANGELESS
93068239	RD16RWPTWTXT	6" ROUND REFLECTOR, WIDE, PAINTED, WHITE REFLECTOR, FLANGELESS
93068241	RD16RWDFBLXT	6" ROUND REFLECTOR, WIDE, DIFFUSED, BLACK REFLECTOR, FLANGELESS

Lumination® LDX Series

LDX New Construction
Architectural Downlight

Accessories

CUSTOMER NAME

Project Name _____

Date _____ Type _____

Catalog Number _____

REPLACEMENT LIGHT ENGINE KIT

SKU	DESCRIPTION	CAT
93984	RK-LDX-B-LE-PFS-30 Light Engine 3000K CCT	LDXB****T30**
93985	RD14RWSDWT Light Engine 3500K CCT	LDXB****T35**
93986	RD14RWSDMR Light Engine 4000K CCT	LDXB****T40**

REPLACEMENT LIGHT ENGINE KIT

SKU	DESCRIPTION	CAT
93136735	RK-LDX-B-PS-25-280-0-VQ Power Supply Unit - 1000lm, 0-10V, 120-277V	LDXB**010***VQ
93136746	RK-LDX-B-PS-25-420-0-VQ Power Supply Unit - 1500lm, 0-10V, 120-277V	LDXB**015***VQ
93136747	RK-LDX-B-PS-25-560-0-VQ Power Supply Unit - 2000lm, 0-10V, 120-277V	LDXB**020***VQ
93136748	RK-LDX-B-PS-55-840-0-VQ Power Supply Unit - 3000lm, 0-10V, 120-277V	LDXB**030***VQ
93136749	RK-LDX-B-PS-55-1120-0-VQ Power Supply Unit - 4000lm, 0-10V, 120-277V	LDXB**040***VQ
93136750	RK-LDX-B-PS-25-280-D-VQ Power Supply Unit - 1000lm, 0-10V, 347V	LDXB**D10***VQ
93136751	RK-LDX-B-PS-25-420-D-VQ Power Supply Unit - 1500lm, 0-10V, 347V	LDXB**D15***VQ
93136752	RK-LDX-B-PS-25-560-D-VQ Power Supply Unit - 2000lm, 0-10V, 347V	LDXB**D20***VQ
93136753	RK-LDX-B-PS-40-840-D-VQ Power Supply Unit - 3000lm, 0-10V, 347V	LDXB**D30***VQ
93136754	RK-LDX-B-PS-40-1120-D-VQ Power Supply Unit - 4000lm, 0-10V, 347V	LDXB**D40***VQ
93136755	RK-LDX-B-PS-25-280-0-TQ Power Supply Unit - 1000lm, TQ option	DXB**010***TQ
93136756	RK-LDX-B-PS-25-420-0-TQ Power Supply Unit - 1500lm, TQ option	DXB**015***TQ
93136757	RK-LDX-B-PS-25-560-0-TQ Power Supply Unit - 2000lm, TQ option	DXB**020***TQ
93136758	RK-LDX-B-PS-55-840-0-TQ Power Supply Unit - 3000lm, TQ option	DXB**030***TQ
93136759	RK-LDX-B-PS-55-1120-0-TQ Power Supply Unit - 4000lm, TQ option	DXB**040***TQ
93136760	RK-LDX-B-PS-25-280-0-TS Power Supply Unit - 1000lm, TS option	LDXB**010***TS
93136761	RK-LDX-B-PS-25-420-0-TS Power Supply Unit - 1500lm, TS option	LDXB**015***TS
93136762	RK-LDX-B-PS-25-560-0-TS Power Supply Unit - 2000lm, TS option	LDXB**020***TS
93136763	RK-LDX-B-PS-55-840-0-TS Power Supply Unit - 3000lm, TS option	LDXB**030***TS
93136764	RK-LDX-B-PS-55-1120-0-TS Power Supply Unit - 4000lm, TS option	LDXB**040***TS
93136765	RK-LDX-B-EMBB-25-280-0-VQ Power Supply Unit - 1000lm, 0-10V, 120-277V, EL	LDXB**010***VQEL
93136766	RK-LDX-B-EMBB-25-420-0-VQ Power Supply Unit - 1500lm, 0-10V, 120-277V, EL	LDXB**015***VQEL
93136767	RK-LDX-B-EMBB-25-560-0-VQ Power Supply Unit - 2000lm, 0-10V, 120-277V, EL	LDXB**020***VQEL
93136768	RK-LDX-B-EMBB-55-840-0-VQ Power Supply Unit - 3000lm, 0-10V, 120-277V, EL	LDXB**030***VQEL
93136769	RK-LDX-B-EMBB-55-1120-0-VQ Power Supply Unit - 4000lm, 0-10V, 120-277V, EL	LDXB**040***VQEL

Lumination® LDX Series

LDX New Construction
Architectural Downlight

Dimensions

CUSTOMER NAME

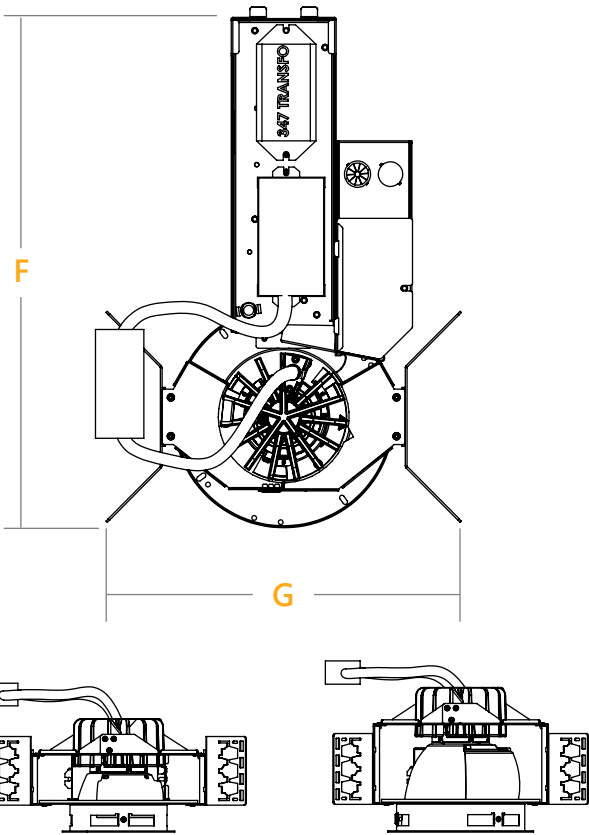
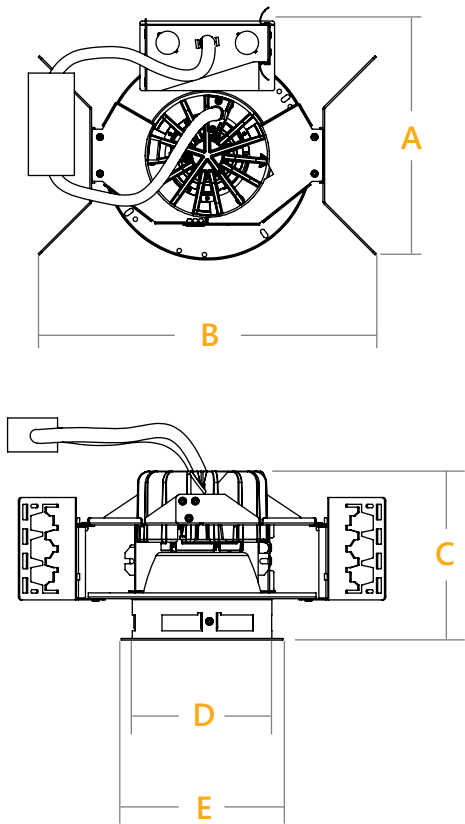
Project Name _____

Date _____ Type _____

Catalog Number _____

Round

Weight: 4.5 lbs to 8 lbs



4" ROUND	4" ROUND EXTENSIONS	6" ROUND	6" ROUND EXTENSIONS
A = 9" (223mm)	F = 19" (473mm)	A = 9" (241mm)	A = 9" (241mm)
B = 13" (323mm)	G = 13" (323mm)	B = 13" (323mm)	B = 13" (323mm)
C = 6" (148mm)		C = 6" (184mm)	C = 6" (184mm)
D = 5" (123mm)		D = 5" (162mm)	D = 5" (162mm)
E = 6" (142mm)		E = 6" (184mm)	E = 6" (184mm)

NOTE: Wall wash and non-wall wash have the same dimensions

Lumination® LDX Series

LDX New Construction
Architectural Downlight

Dimensions

CUSTOMER NAME

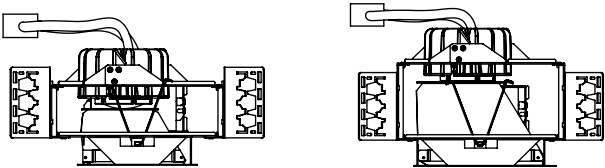
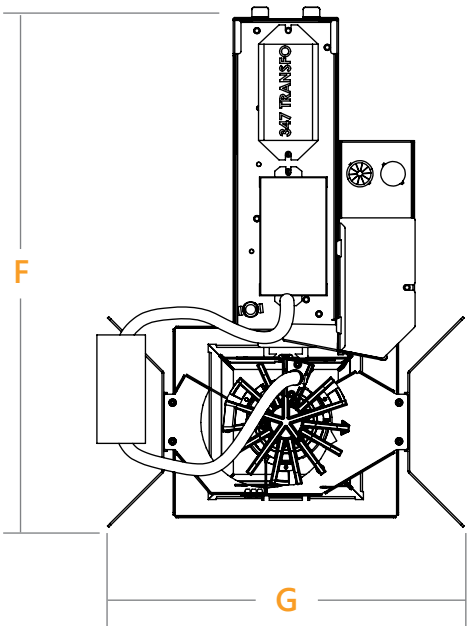
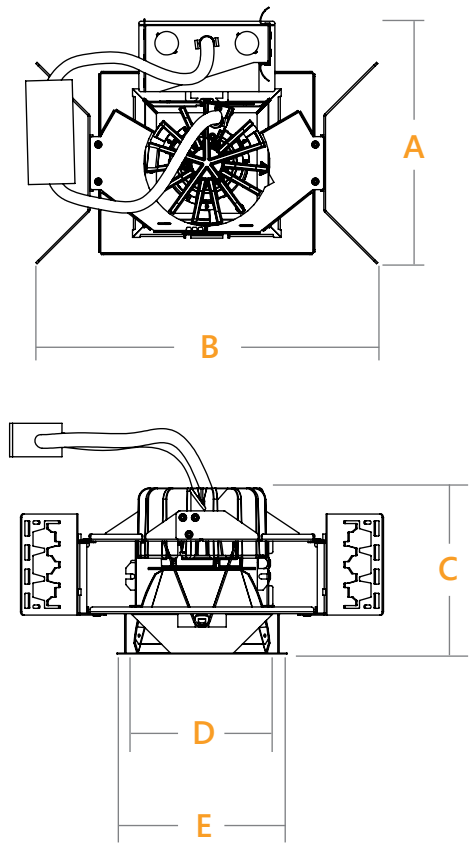
Project Name _____

Date _____ Type _____

Catalog Number _____

Square

Weight: 4.5 lbs to 8 lbs



4" SQUARE	4" SQUARE EXTENSIONS	6" SQUARE	6" SQUARE EXTENSIONS
A = 9" (229mm)	F = 19" (473mm)	A = 10" (245mm)	F = 19" (473mm)
B = 13" (323mm)	G = 13" (323mm)	B = 13" (323mm)	G = 13" (323mm)
C = 6" (148mm)		C = 7" (183mm)	
D = 5" (137mm)		D = 7" (168mm)	
E = 6" (154mm)		E = 7" (188mm)	

NOTE: Wall wash and non-wall wash have the same dimensions

Lumination® LDX Series

LDX New Construction
Architectural Downlight

Nominal Lumens

CUSTOMER NAME

Project Name _____

Date _____ Type _____

Catalog Number _____

TriGain®
Technology

PERFORMANCE TABLE

NOMINAL LUMENS	1000	1500	2000	3000	4000
Fixture Delivered Lumens	1100	1650	2150	3100	4000
System Input Power (W)	9.4	14.0	18.5	27.5	37.5
System Efficacy (LPW)	117	118	116	113	107
CRI			90		
R9			96		

Configuration Notes:

1. Table based on 3500K/4000K CCT using semi-diffused finish with 120V Input

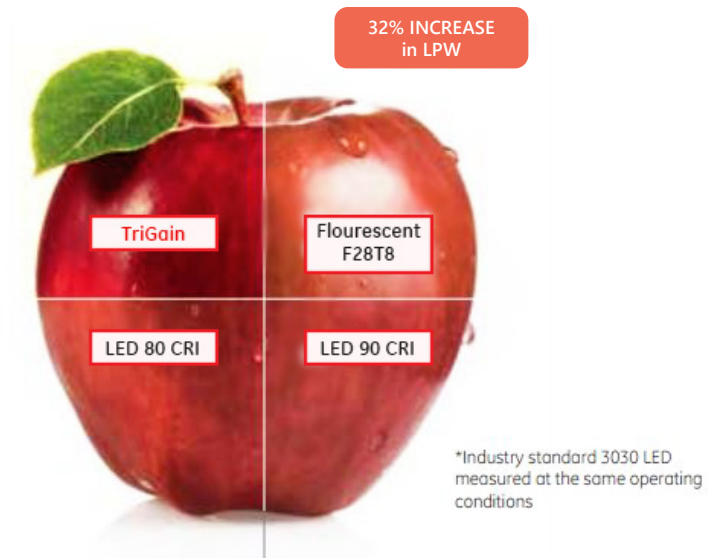
TRIGAIN® SCALING TABLE

CCT	SCALING FACTOR
3000K	0.96
3500K	1
4000K	1

COLOR WITHOUT COMPROMISE

Current's TriGain® technology, is perfect for bringing out the beauty of merchandising, fabrics, architectural details and objects. With 90 CRI, a R9 greater than 96 and 118 LPW (lumens per watt), ultimate color quality and minimal energy usage come together in a complete line of Lumination® LED fixtures. With TriGain®, colors and patterns appear more vivid, allowing for creation of sharper, clearer and more comfortably illuminated environments.

It's all the best of money-saving LED technology and a sophisticated design aesthetic. Why settle for anything less? With TriGain® technology, you get color without compromise.



DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

SPECIFICATION FEATURES

Construction

Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested and rated. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics

Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 3000K, 5000K and 6000K CCT.

Electrical

LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Cooper Lighting Solutions proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 600mA, 800mA and 1200mA drive currents (nominal).

Mounting

STANDARD ARM MOUNT: Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during mounting. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm

may be required. Refer to the arm mounting requirement table. Round pole adapter included. For wall mounting, specify wall mount bracket option. **QUICK MOUNT ARM:** Adapter is bolted directly to the pole. Quick mount arm slide into place on the adapter and is secured via two screws, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

Finish

Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard housing colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

Warranty

Five-year warranty.



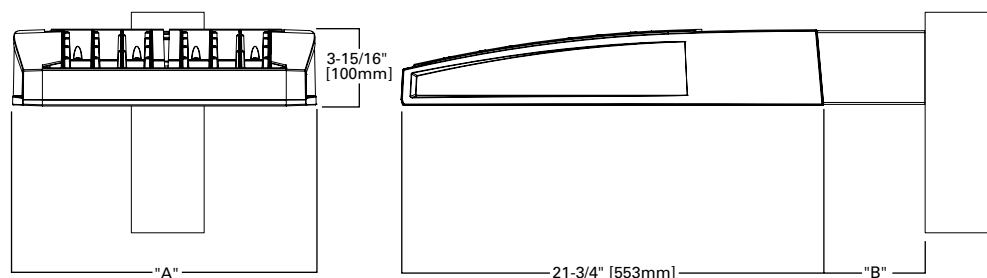
GLEON GALLEON LED

1-10 Light Squares

Solid State LED

AREA/SITE LUMINAIRE

DIMENSIONS

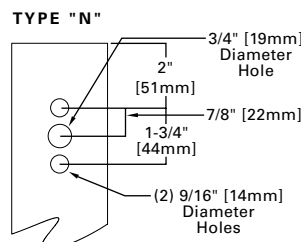


DIMENSION DATA

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length ¹	Weight with Arm (lbs.)	EPA with Arm ² (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. 2. EPA calculated with optional arm length.

DRILLING PATTERN



CERTIFICATION DATA

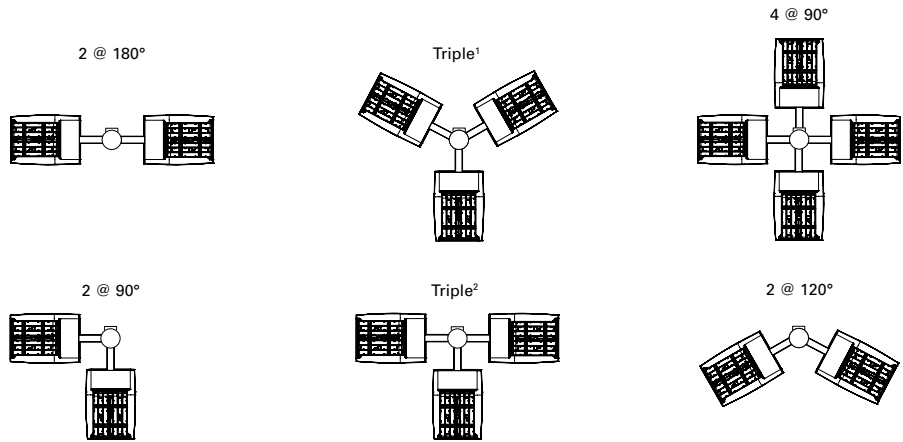
3G Vibration Rated
DesignLights Consortium® Qualified*
Dark Sky Approved (3000K CCT and warmer only)
IP66 Rated
ISO 9001
LM79 / LM80 Compliant
UL/cUL Wet Location Listed

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120V-277V 50/60Hz
347V, 480V 60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

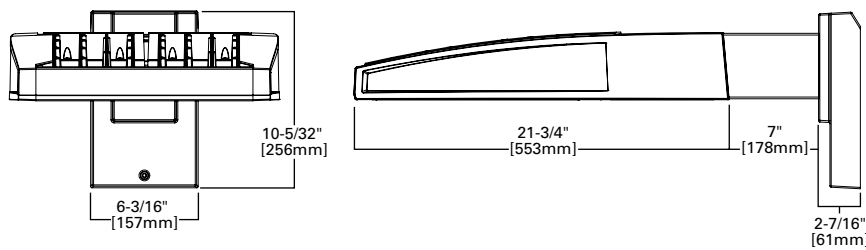
ARM MOUNTING REQUIREMENTS

Configuration	90° Apart	120° Apart
GLEON-AF-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AF-10	16" Extended Arm (Required)	16" Extended Arm (Required)

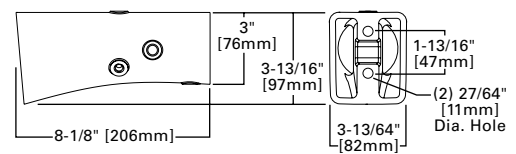


NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. 2 Round poles are 3 @ 90°.

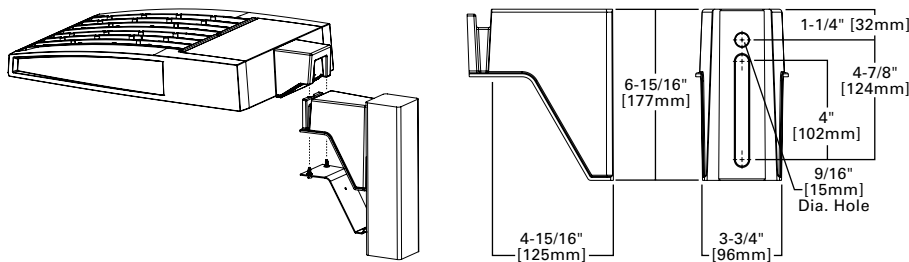
STANDARD WALL MOUNT



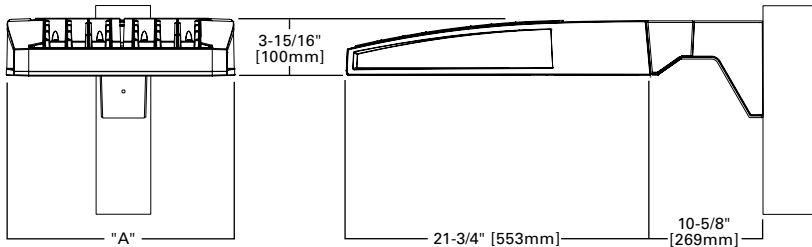
MAST ARM MOUNT



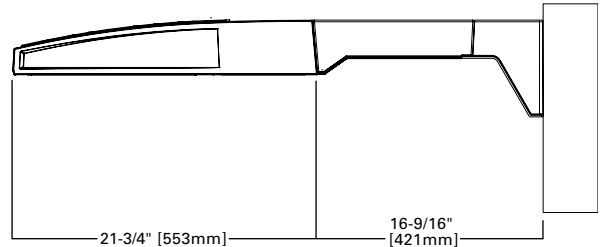
QUICK MOUNT ARM (INCLUDES FIXTURE ADAPTER)



QM Quick Mount Arm (Standard)



QMEA Quick Mount Arm (Extended)

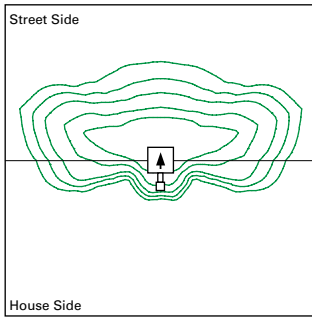


QUICK MOUNT ARM DATA

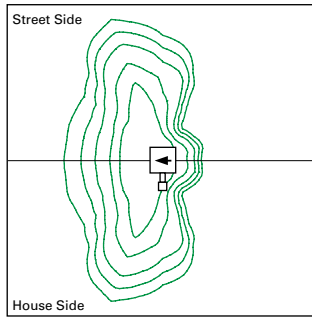
Number of Light Squares ^{1,2}	"A" Width	Weight with QM Arm (lbs.)	Weight with QMEA Arm (lbs.)	EPA (Sq. Ft.)
1-4	15-1/2" (394mm)	35 (15.91 kgs.)	38 (17.27 kgs.)	1.11
5-6 ³	21-5/8" (549mm)	46 (20.91 kgs.)	49 (22.27 kgs.)	
7-8	27-5/8" (702mm)	56 (25.45 kgs.)	N/A	

NOTES: 1 QM option available with 1-8 light square configurations. 2 QMEA option available with 1-6 light square configurations. 3 QMEA arm to be used when mounting two fixtures at 90° on a single pole.

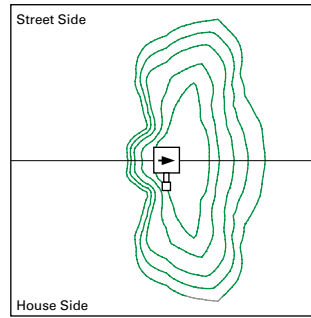
OPTIC ORIENTATION



Standard



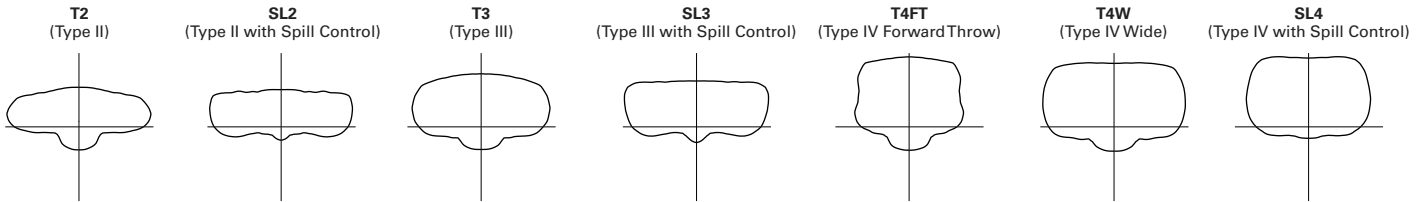
Optics Rotated Left @ 90° [L90]



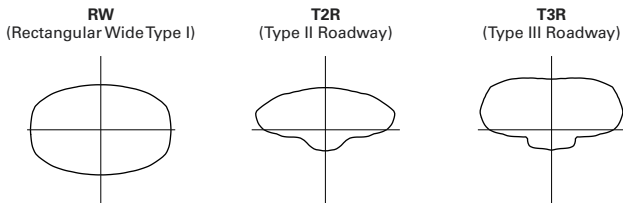
Optics Rotated Right @ 90° [R90]

OPTICAL DISTRIBUTIONS

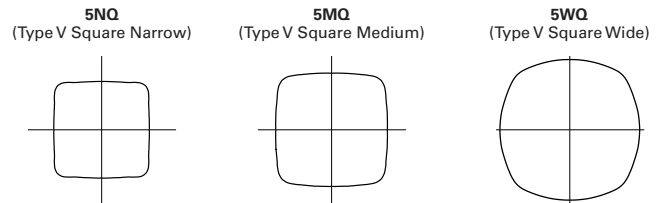
Asymmetric Area Distributions



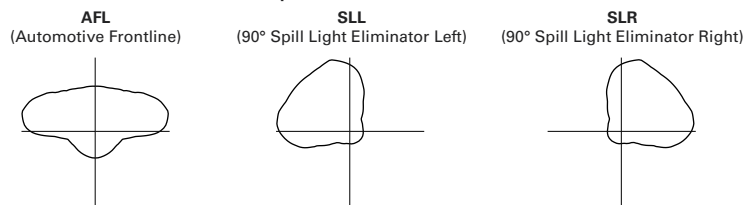
Asymmetric Roadway Distributions



Symmetric Distributions



Specialized Distributions



LUMEN MAINTENANCE

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

LUMEN MULTIPLIER

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

