

PUGH MANAGEMENT

CITY OF MELROSE, MA CONSERVATION COMMISSION - RDA

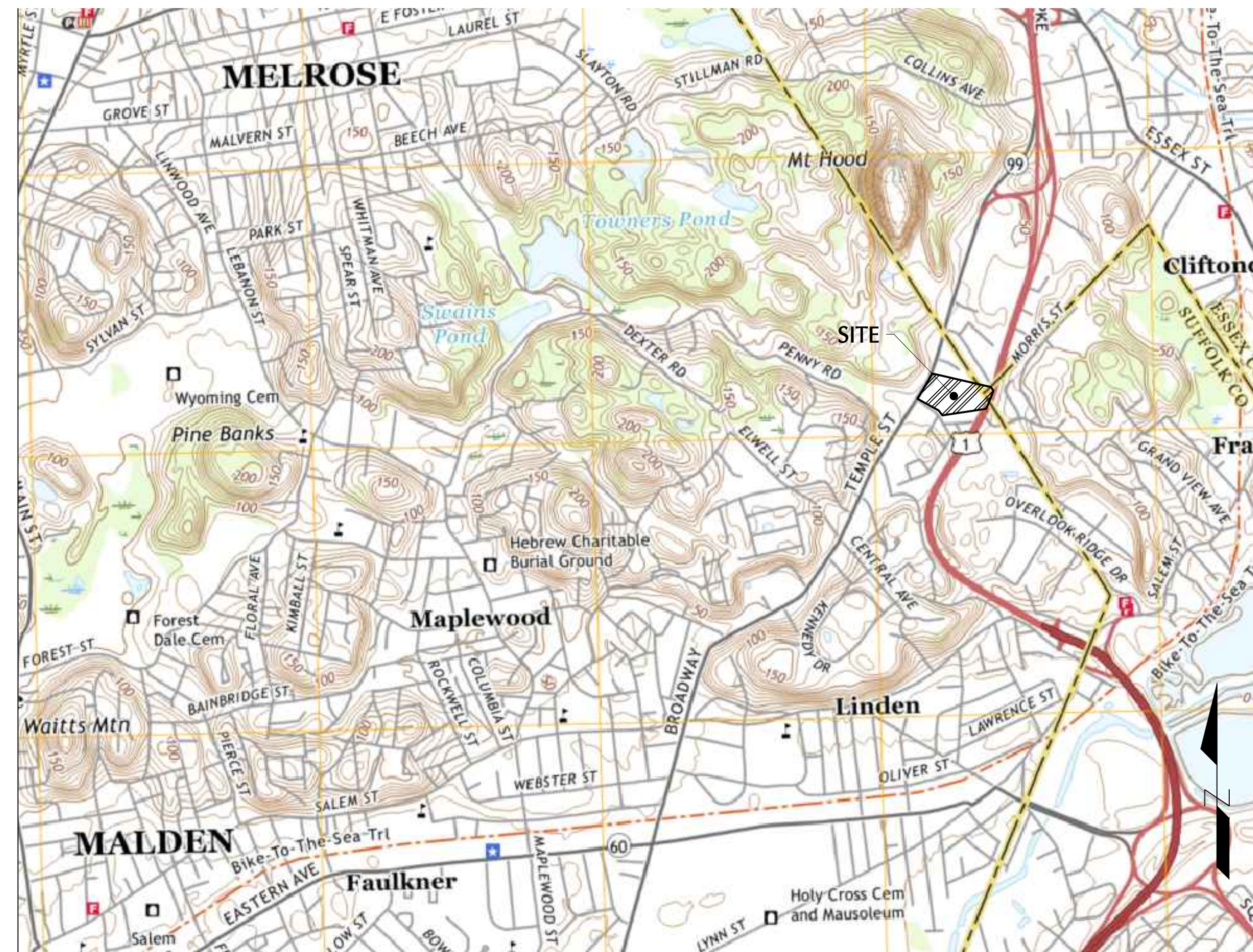
735 NEWBURYPORT TURNPIKE, MELROSE, MA AND 320 STATE HIGHWAY, MALDEN, MA

CITIES OF MALDEN & MELROSE, MIDDLESEX COUNTY, MASSACHUSETTS

CIVIL DRAWING INDEX

NUMBER	DRAWING TITLE	DATE	LAST REVISED
CS001	COVER SHEET	05/06/2021	
CS002	MASTER LEGEND & NOTES	05/06/2021	
VL101	ALTA/NSPS LAND TITLE SURVEY	03/24/2021	
VL102	ALTA/NSPS LAND TITLE SURVEY	03/24/2021	
CS101	SITE PLAN	05/06/2021	
CS501	SITE DETAILS I	05/06/2021	
CS502	SITE DETAILS II	05/06/2021	
CS503	SITE DETAILS III	05/06/2021	
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CG101	GRADING & DRAINAGE PLAN	05/06/2021	
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CG503	GRADING & DRAINAGE DETAILS III	05/06/2021	
CU101	UTILITY PLAN	05/06/2021	
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CU502	UTILITY DETAILS II	05/06/2021	
CE101	SOIL EROSION & SEDIMENT CONTROL PLAN	05/06/2021	
CE501	SOIL EROSION & SEDIMENT CONTROL DETAILS I	05/06/2021	
CE502	SOIL EROSION & SEDIMENT CONTROL DETAILS II	05/06/2021	
LL101	LIGHTING PLAN	05/06/2021	
LL501	LIGHTING DETAILS	05/06/2021	
LP101	LANDSCAPE PLAN	05/06/2021	
LP501	LANDSCAPE NOTES AND DETAILS	05/06/2021	

RELEASE DATES	
DATE	ISSUED FOR
05/06/2021	MELROSE: CONSERVATION COMMISSION - RDA



MAP REFERENCE: USGS BOSTON NORTH QUADRANGLE (7.5-MINUTE SERIES)

LOCATION MAP

SCALE: 1"=1000'

OWNER
 PUGH MANAGEMENT, LLC
 C/O: JOHN T. PUGH, II
 322 WARREN STREET
 NEEDHAM, MA 02492
 (508) 686-6079

CONTRACTOR
 ARCO NATIONAL NEW ENGLAND
 30 SPEEN STREET, SUITE 300
 FRAMINGHAM, MA 01701
 (978) 387-4420

ARCHITECT
 GMA ARCHITECTS
 30 SPEEN STREET, SUITE 300
 FRAMINGHAM, MA 01701
 (617) 899-8750

**LAND SURVEYOR, CIVIL AND TRAFFIC
 ENGINEER & LANDSCAPE ARCHITECT**
 LANGAN ENGINEERING &
 ENVIRONMENTAL SERVICES, INC.
 C/O: JORDAN LOFFREDO
 888 BOYLSTON STREET, SUITE 510
 BOSTON, MA 02115
 (617) 824-9121

ATTORNEY
 RUBERTO, ISRAEL & WEINER
 C/O: MICHAEL DANA ROSEN
 255 STATE STREET, 7TH FLOOR
 BOSTON, MA 02109
 (617) 742-4200

FOR PERMIT ONLY - NOT FOR CONSTRUCTION

NOTES

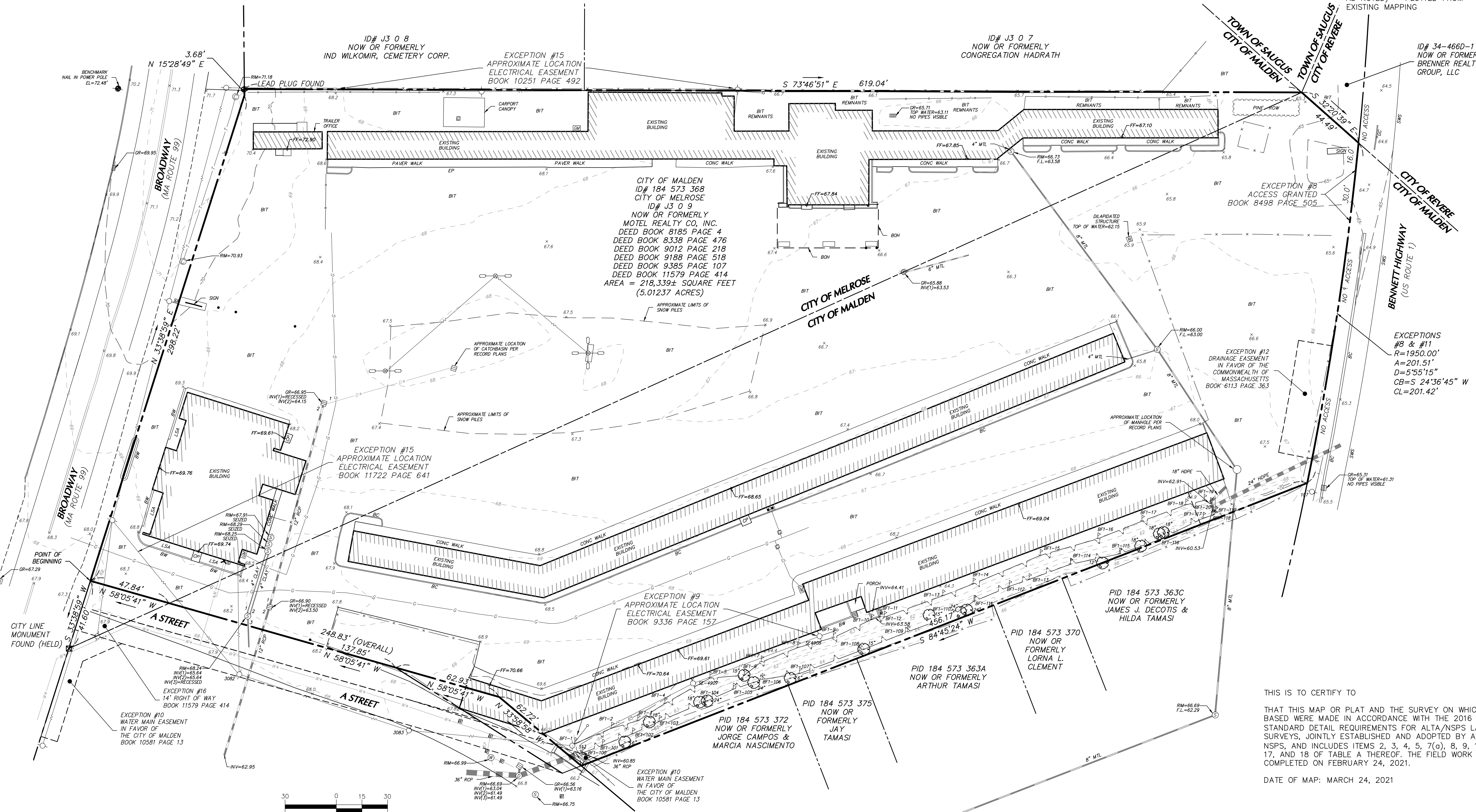
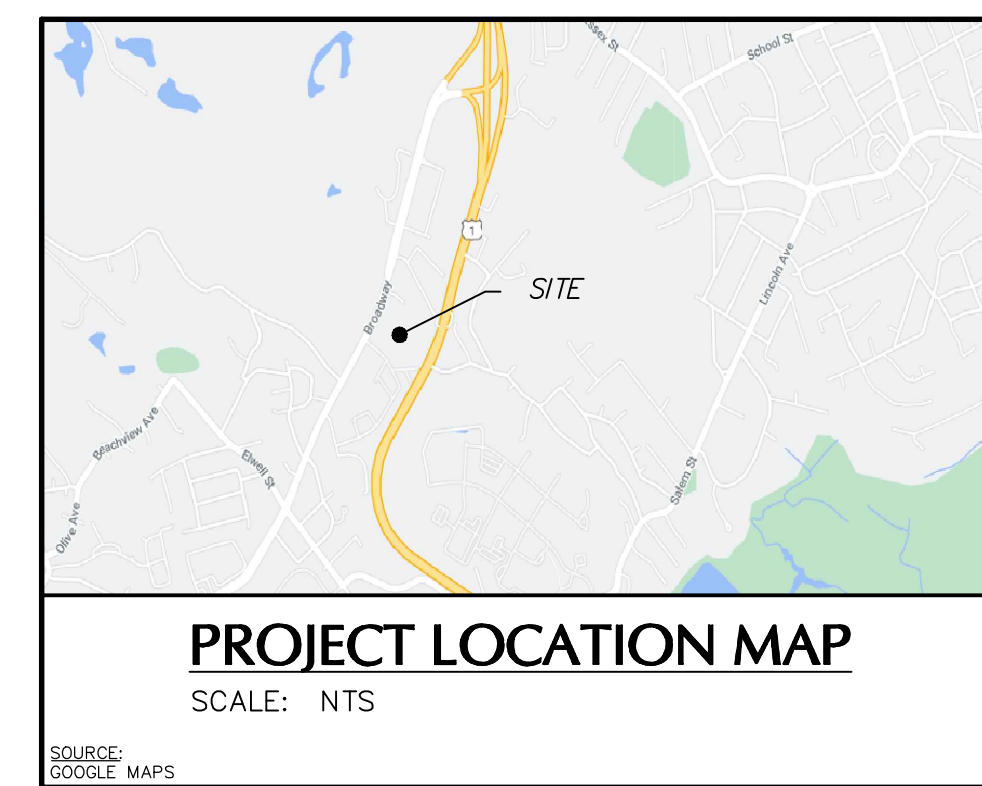
- THIS SURVEY IS BASED UPON EXISTING PHYSICAL CONDITIONS FOUND AT THE SUBJECT SITE, DEED INFORMATION AND THE FOLLOWING REFERENCES:
 - MAP TITLED: "EXHIBIT PLAN OF LAND DEPICTING AT 735 BROADWAY MELROSE AND MALDEN MASS," EASTERN LAND SURVEY ASSOCIATES, SCALE: 1"=40', JANUARY 15, 2021.
 - MAP TITLED "PLAN OF LAND IN MALDEN & MELROSE," HAYES ENGINEERING, SCALE: 1"=40', JULY 24, 1968.
 - MAP TITLED "SUBDIVISION PLAN OF LAND IN MALDEN, MASS," HAYES ENGINEERING, SCALE: 1"=40', OCTOBER 26, 2011.
 - MAP TITLED "PLAN SHOWING EASEMENT TAKEN TO LAY AND MAINTAIN WATER PIPES IN LEONARDO AVE AND PRIVATE LAND IN MALDEN MASS," SCALE: 1"=40', JUNE 25, 1964.
 - MAP TITLED "PLAN OF LAND IN MELROSE & SAUGUS," COASTAL SURVEY, SCALE 1"=40', AUGUST 23, 1995.
- THE MERIDIAN OF THIS SURVEY IS REFERENCED TO MASSACHUSETTS STATE PLANE COORDINATE SYSTEM NAD 83 (EPOCH 2001). POSITION WAS DETERMINED BY GLOBAL NAVIGATION SATELLITE SYSTEMS (GNSS) AS PROVIDED BY HXGN SMARTNET CONTINUOUSLY OPERATED REFERENCE STATIONS (CORS).
- ELEVATIONS SHOWN ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) (GEOID 12B) AS DETERMINED BY GNSS
- PLANIMETRIC AND TOPOGRAPHIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENVIRONMENTAL AND ENGINEERING SERVICES. FIELD WORK COMPLETED DURING THE MONTH OF FEBRUARY 2021.

- AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP ENTITLED "MIDDLESEX COUNTY, MASSACHUSETTS PANEL 434 OF 656, MAP NUMBER 2501700434E, EFFECTIVE DATE JUNE 4, 2010" THE PROJECT AREA IS IN ZONE X (UNSHADED).
- UNLESS SPECIFICALLY NOTED HEREON, STORM AND SANITARY SEWER INFORMATION (INCLUDING PIPE INVERT, PIPE MATERIAL, AND PIPE SIZE) WAS OBSERVED AND MEASURED AT FIELD LOCATED STRUCTURES (MANHOLES/CATCH BASINS, ETC.). CONDITIONS CAN VARY FROM THOSE ENCOUNTERED AT THE TIMES WHEN AND LOCATIONS WHERE DATA IS OBTAINED. DESPITE MEETING THE REQUIRED STANDARD OF CARE, THE SURVEYOR CANNOT, AND DOES NOT WARRANT THAT PIPE MATERIAL AND/OR PIPE SIZE THROUGHOUT THE PIPE RUN ARE THE SAME AS THOSE OBSERVED AT EACH STRUCTURE, OR THAT THE PIPE RUN IS STRAIGHT BETWEEN THE LOCATED STRUCTURES.
- ADDITIONAL UTILITY (WATER, GAS, ELECTRIC ETC.) DATA IS SHOWN FROM FIELD LOCATED SURFACE MARKINGS (BY OTHERS), EXISTING STRUCTURES, AND/OR FROM EXISTING DRAWINGS.
- UNLESS SPECIFICALLY NOTED HEREON, THE SURVEYOR HAS NOT EXCAVATED TO PHYSICALLY LOCATE THE UNDERGROUND UTILITIES. THE SURVEYOR MAKES NO GUARANTEES THAT THE SHOWN UNDERGROUND UTILITIES ARE EITHER IN SERVICE, ABANDONED OR SUITABLE FOR USE, NOR ARE IN THE EXACT LOCATION OR CONFIGURATION INDICATED HEREON.
- ALL BUILDINGS AND STRUCTURES WERE LOCATED AND MEASURED AT GROUND LEVEL. THE SURVEYOR MAKES NO DETERMINATIONS OR GUARANTEES AS TO THE ABSENCE, EXISTENCE OR LOCATION OF UNDERGROUND STRUCTURES, FOUNDATIONS, FOOTINGS, PROJECTIONS, WALLS, TANKS, SEPTIC SYSTEMS, ETC. NO TEST PITS, EXCAVATIONS OR GROUND PENETRATING RADAR WERE PERFORMED AS PART OF

- THIS SURVEY.
- PRIOR TO ANY DESIGN OR CONSTRUCTION, THE PROPER UTILITY AGENCIES MUST BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATIONS.
 - NO EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDINGS ADDITIONS WAS OBSERVED ON THE SUBJECT PREMISES.
 - NO EVIDENCE OF STREET RIGHT OF WAY LINE CHANGES OR OBSERVED EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS WAS OBSERVED.
 - WETLANDS DELINEATED BY ALL-POINTS TECHNOLOGY CORPORATION ON MARCH 3, 2021. ALL FLAGS WERE FIELD LOCATED ON MARCH 10, 2021.
 - THIS SURVEY IS NOT VALID WITHOUT THE EMBOSSED OR INKED SEAL OF THE PROFESSIONAL.

LEGEND (NOT SHOWN TO SCALE)

- BOLLARD
- MAILBOX
- ⊕ MONITORING WELL
- SIGN
- TREE
- WETLAND FLAG
- CATCH BASIN
- CLEANOUT
- ELECTRIC BOX
- ELECTRIC METER
- FILLER VALVE
- FIRE HYDRANT
- COMMUNICATION BOX
- GAS METER
- GAS VALVE
- GUY WIRE
- LIGHT POLE
- MANHOLE (TYPE AS LABELED)
- POWER POLE
- ROOF DRAIN
- STANDPIPE
- WATER VALVE
- SPOT ELEVATION
- BITUMINOUS
- CONCRETE
- CONCRETE PAD
- LANDSCAPED AREA
- BUILDING OVERHANG
- BOTTOM OF WALL
- EP — EDGE OF PAVEMENT
- DW — DETECTABLE WARNING
- BC — BITUMINOUS CURB
- CC — CONCRETE CURB
- SWS — SINGLE WHITE STRIPE
- BWS — BROKEN WHITE STRIPE
- SYS — SINGLE YELLOW STRIPE
- DYS — DOUBLE YELLOW STRIPE
- — METAL GUARD RAIL
- — STOCKADE FENCE
- — CHAINLINK FENCE
- — IRON FENCE
- — TREE LINE
- — OVERHEAD WIRE
- — WETLAND LINE
- — EASEMENT LINE
- — PROPERTY LINE
- — RIGHT-OF-WAY LINE
- — CONTOUR LINE
- D — DRAINAGE MARK OUT LINE
- E — ELECTRIC MARK OUT LINE
- C — COMMUNICATION MARK OUT LINE
- G — GAS MARK OUT LINE
- S — SANITARY SEWER MARK OUT LINE
- W — WATER MARK OUT LINE
- UNK — UNKNOWN MARK OUT LINE
- R* — REFERENCE UTILITY LINE (TYPE AS NOTED) — PLOTTED FROM EXISTING MAPPING



Date	Description	No.
REVISIONS		

LANGAN

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Project **735 NEWBURYPORT TURNPIKE - MELROSE & 320 STATE HIGHWAY MALDEN**

MIDDLESEX COUNTY MASSACHUSETTS

Drawing Title **ALTA/NSPS LAND TITLE SURVEY EXISTING CONDITIONS/ TOPOGRAPHIC SURVEY**

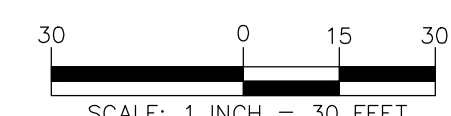
Project No.	Drawing No.
151018201	VL101
Date	Drawn By
MARCH 24, 2021	JC
Checked By	Sheet 1 of 2
AGI	

THIS IS TO CERTIFY TO

THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 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(o), 8, 9, 11(o), 13, 16, 17, AND 18 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON FEBRUARY 24, 2021.

DATE OF MAP: MARCH 24, 2021

ANDREW G. IVES, P.L.S. #50679 DATE



TITLE REFERENCE

1. THIS SURVEY IS WAS COMPLETED REFERENCING THE FOLLOWING TITLE INFORMATION:
 - A. COMMITMENT FOR TITLE INSURANCE ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NUMBER: 2021-0020, EFFECTIVE DATE FEBRUARY 19, 2021. SCHEDULE B SECTION II:
 1. NOT SURVEY RELATED
 2. SURVEY PROVIDED
 - 3-7. NOT SURVEY RELATED
 8. A TAKING BY THE COMMONWEALTH OF MASSACHUSETTS FOR THE FRANK P. BENNETT HIGHWAY AS DEFINED IN BOOK 8498 PAGE 505. THE WESTERLY NON-ACCESS HIGHWAY LINE IS DEPICTED AS THE EASTERLY PROPERTY LINE OF THE CURRENT PROPERTY CONFIGURATION ON THE SURVEY. A SPECIFIC AREA OF ACCESS TO FRANK P. BENNETT HIGHWAY IS DEFINED AND DEPICTED ON THE SURVEY.
 9. UTILITY EASEMENT TO SUBURBAN ELECTRIC COMPANY AS DEFINED IN BOOK 9366 PAGE 157. APPROXIMATE LOCATION DEPICTED ON SURVEY. EXACT LOCATION NOT DEFINED.
 10. AN EASEMENT TAKEN BY THE CITY OF MALDEN TO LAY AND MAINTAIN WATER PIPES AS DEFINED IN BOOK 10581 PAGE 13. A SMALL PORTION OF THE EASEMENT PERTAINS TO THE SUBJECT PROPERTY ALONG THE NORTHERLY SIDE OF A STREET AND IS DEPICTED ON SURVEY. THE REMAINDER OF THE EASEMENT DOES NOT PERTAIN TO THE SUBJECT PROPERTY.
 11. A TAKING BY THE COMMONWEALTH OF MASSACHUSETTS FOR THE FRANK P. BENNETT HIGHWAY AS DEFINED IN BOOK 6060 PAGE 184. THE WESTERLY NON-ACCESS HIGHWAY LINE IS DEPICTED AS THE EASTERLY PROPERTY LINE OF THE CURRENT PROPERTY CONFIGURATION ON THE SURVEY.
 12. A TAKING BY THE COMMONWEALTH OF MASSACHUSETTS FOR DRAINAGE AND CULVERT PURPOSES IN CONNECTION WITH FRANK P. BENNETT HIGHWAY AS DEFINED IN BOOK 6113 PAGES 361, 363, AND 365. THE EASEMENT DEFINED IN PAGE 363 IS DEPICTED ON THE SURVEY. THE EASEMENTS DEFINED IN PAGES 361 & 365 DO NOT PERTAIN TO THE SUBJECT PROPERTY.
 13. A GRANT TO RELOCATE AN EXISTING BROOK AND THE RIGHT TO CONSTRUCT AND TIE INTO CULVERTS, HEADWALLS, AND DRAINS AS DEFINED IN BOOK 7363 PAGE 184. THIS GRANT AND RIGHTS DO NOT PERTAIN TO THE SUBJECT PROPERTY. THEY ARE SOUTH OF THE SOUTHWEST CORNER OF THE SUBJECT PROPERTY ALONG BROADWAY.
 14. A TAKING FOR THE LOCATION OF A GAS LINE TRANSMISSION EASEMENT BY NORTHEASTERN GAS TRANSMISSION COMPANY AS DEFINED IN BOOK 7784 PAGE 80. DOES NOT PERTAIN TO THE SUBJECT PROPERTY. LOCATED SOUTH OF THE SUBJECT PROPERTY.
 15. EASEMENTS TO MASSACHUSETTS ELECTRIC COMPANY FOR TRANSMISSION PURPOSES AS DEFINED IN 10251 PAGE 492 AND 11722 PAGE 641. THE APPROXIMATE LOCATIONS OF BOTH EASEMENTS ARE DEPICTED ON THE SURVEY. EXACT LOCATIONS NOT DEFINED.
 16. SUBJECT TO A 14 FOOT WIDE EXISTING WAY AS DEFINED IN BOOK 11579 PAGE 414. DOES NOT PERTAIN TO THE SUBJECT PROPERTY. ON THE SOUTHERLY SIDE OF A STREET.

RECORD DESCRIPTION

BEING BOUNDED AND DESCRIBED AS FOLLOWS:

NORTHWESTERLY: BY BROADWAY ON TWO COURSES,

295.22' AND 3.66';

NORTHERLY: BY THE CEMETERY 619.04';

NORTHEASTERLY: BY LAND OF OTHERS AND THE MUNICIPAL

BOUNDARY BETWEEN MALDEN AND REVERE, 44.49';

EASTERLY: BY A CURVED LINE ALONG U.S. RT. 1 (BENNETT

HIGHWAY) 201.49';

SOUTHERLY: BY LAND OF VARIOUS OWNERS 453.73';

SOUTHWESTERLY: BY LEONARDO AVE ("A" STREET) AS SAME IS

TO BE WIDENED 62.29'; SOUTHWESTERLY: AGAIN BY LEONARDO

AVE. ("A" STREET) AS SAME IS TO BE WIDENED 22.93'; AND

SOUTHWESTERLY AGAIN BY LEONARDO AVE ("A" STREET) ON TWO

COURSES 137.85' AND 47.84'. CONTAINING APPROXIMATELY

218,342 SF +/-

MEANING AND INTENDING TO REFLECT THE EXCLUSION OF ANY LAND LYING WITHIN THE BOUNDS OF LEONARDO AVE/AKA "A" STREET AS SAME IS PROPOSED TO BE WIDENED AND LAID OUT IN THE FUTURE AS SHOWN ON A "PLOT PLAN OF LAND" DATED JAN. 13, 2021 BY EASTERN LAND SURVEY ASSOCIATES, INC. ATTACHED HERETO.

SPECIFICALLY EXCLUDED FROM THIS SALE IS THE RIGHT TO USE LEONARDO AVENUE (ALSO KNOWN AS "A" STREET) AS THE SAME NOW EXISTS OR AS IT MAY EXIST IN THE FUTURE FOR PURPOSES OF ACCESS AND EGRESS TO THE WITHIN DESCRIBED PARCEL OR FOR ANY OTHER PURPOSE.

UNLESS SPECIFICALLY SET FORTH HEREIN NO EASEMENT OR RIGHT APPURTENANT TO THE LAND DESCRIBED HEREIN IS INCLUDED IN THE WITHIN CONVEYANCE.

SAID PREMISES ARE CONVEYED SUBJECT TO AND WHERE APPLICABLE TOGETHER WITH THE BENEFIT OF THE FOLLOWING MATTER:

a. A TAKING BY THE COMMONWEALTH OF MASSACHUSETTS, DEPT OF PUBLIC WORKS FOR THE LAYOUT OF THE FRANK P. BENNETT HIGHWAY (ROUTE C-1) AS RECORDED WITH SAID REGISTRY IN BOOK 8498, PAGE 505;

b. A UTILITY EASEMENT TO SUBURBAN ELECTRIC COMPANY AS SET FORTH IN SAID REGISTRY IN BOOK 9366, PAGE 157;

c. AN EASEMENT TO MASSACHUSETTS ELECTRIC COMPANY AS SET FORTH IN SAID REGISTRY IN BOOK 10251 PAGE 492.

d. AN EASEMENT TAKEN BY THE CITY OF MALDEN TO LAY AND MAINTAIN WATER PIPES AS SET FORTH IN SAID REGISTRY BOOK 10581, PAGE 013;

e. A TAKING BY THE COMMONWEALTH OF MASSACHUSETTS DEPT. OF PUBLIC WORKS FOR THE ORIGINAL LAYOUT OF THE STATE HIGHWAY AS RECORDED WITH SAID REGISTRY BOOK 6060, PAGE 184;

f. A TAKING BY THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS FOR DRAINAGE AND CULVERT PURPOSES IN CONNECTION WITH THE ORIGINAL LAYOUT REFERRED TO ABOVE, ALL AS RECORDED WITH SAID REGISTRY BOOK 6113, PAGE 361, 363 AND 365;

g. A GRANT OF THE RIGHT TO RELOCATE AN EXISTING BROOK AND THE RIGHT TO CONSTRUCT AND TIE INTO CULVERTS, HEADWALLS AND DRAINS IN SO DOING A SET FORTH IN SAID REGISTRY BOOK 7363, PAGE 184;

h. A TAKING FOR THE LOCATION OF A GAS LINE TRANSMISSION EASEMENT BY NORTHEASTERN GAS TRANSMISSION COMPANY AS SET FORTH IN SAID REGISTRY BOOK 7784, PAGE 80;

i. EASEMENTS TO MASSACHUSETTS ELECTRIC COMPANY FOR TRANSMISSION PURPOSES AS SET FORTH IN SAID REGISTRY BOOK 10251, PAGE 492 AND BOOK 11722, PAGE 641.

FOR TITLE, SEE DEEDS RECORDED WITH SAID REGISTRY IN BOOK 8338, PAGE 476 AS CONFIRMED IN BOOK 9188 PAGE 518 AND DEED RECORDED WITH SAID REGISTRY IN BOOK 9385, PAGE 107. ALSO SEE DEED RECORDED WITH SAID REGISTRY IN BOOK 8185, PAGE 4.

SURVEY DESCRIPTION

COMMENCING AT A TOWN LINE MONUMENT FOUND ALONG THE MUNICIPAL BOUNDARY LINE OF THE TOWN OF MELROSE AND THE TOWN OF MALDEN WITH ITS INTERSECTION WITH THE EASTERLY HIGHWAY LINE OF BROADWAY (MA ROUTE 99):

THENCE N 33° 38' 59" E ALONG THE EASTERLY HIGHWAY LINE OF BROADWAY (MA ROUTE 99) A DISTANCE OF 41.60' TO THE POINT OF BEGINNING;

THENCE N 33° 38' 59" E ALONG THE EASTERLY HIGHWAY LINE OF BROADWAY (MA ROUTE 99) A DISTANCE OF 298.22' TO A POINT;

THENCE N 15° 28' 49" E ALONG THE EASTERLY HIGHWAY LINE OF BROADWAY (MA ROUTE 99) A DISTANCE OF 3.68' TO A POINT;

THENCE S 73° 46' 51" E BOUNDED NORTHERLY IN PART BY LAND NOW OR FORMERLY OF END WILKOMIR, CEMETERY CORP. AND IN PART BY LAND NOW OR FORMERLY OF CONGREGATION HADRATH A DISTANCE OF 619.04' TO A POINT AT THE INTERSECTION OF THE MUNICIPAL TOWN LINES OF THE TOWN OF MELROSE, THE TOWN OF MALDEN, AND THE TOWN OF REVERE;

THENCE S 32° 20' 39" E ALONG THE MUNICIPAL TOWN LINE OF THE TOWN OF REVERE AND THE TOWN OF MALDEN, BOUNDED NORTHERLY BY LAND NOW OR FORMERLY OF BRENNER REALTY GROUP, LLC, A DISTANCE OF 44.49' TO A POINT OF NON-TANGENT CURVATURE IN THE WESTERLY NON-ACCESS HIGHWAY LINE OF BENNETT HIGHWAY (US ROUTE 1);

THENCE ALONG A CURVE, ALONG THE WESTERLY NON-ACCESS HIGHWAY LINE OF BENNETT HIGHWAY (US ROUTE 1), CURVING TO THE RIGHT, WITH AN ARC LENGTH OF 201.51', A RADIUS OF 1950.00', AND INCLUDED ANGLE OF 5° 55' 15", AND A CHORD OF 201.42' WITH A BEARING OF S 24° 36' 45" W TO A POINT;

THENCE S 84° 45' 24" W BOUNDED SOUTHERLY IN PART BY LAND NOW OR FORMERLY OF JAMES J. DECOTIS AND HILDA TAMASI, IN PART BY LAND NOW OR FORMERLY OF LORNA L. CLEMENT; IN PART BY LAND NOW OR FORMERLY OF ARTHUR TAMASI, IN PART BY LAND NOW OR FORMERLY OF JAY TAMASI, AND IN PART BY LAND NOW OR FORMERLY OF JORGE CAMPOS AND MARCIA NASCIMENTO A DISTANCE OF 456.17' TO A POINT;

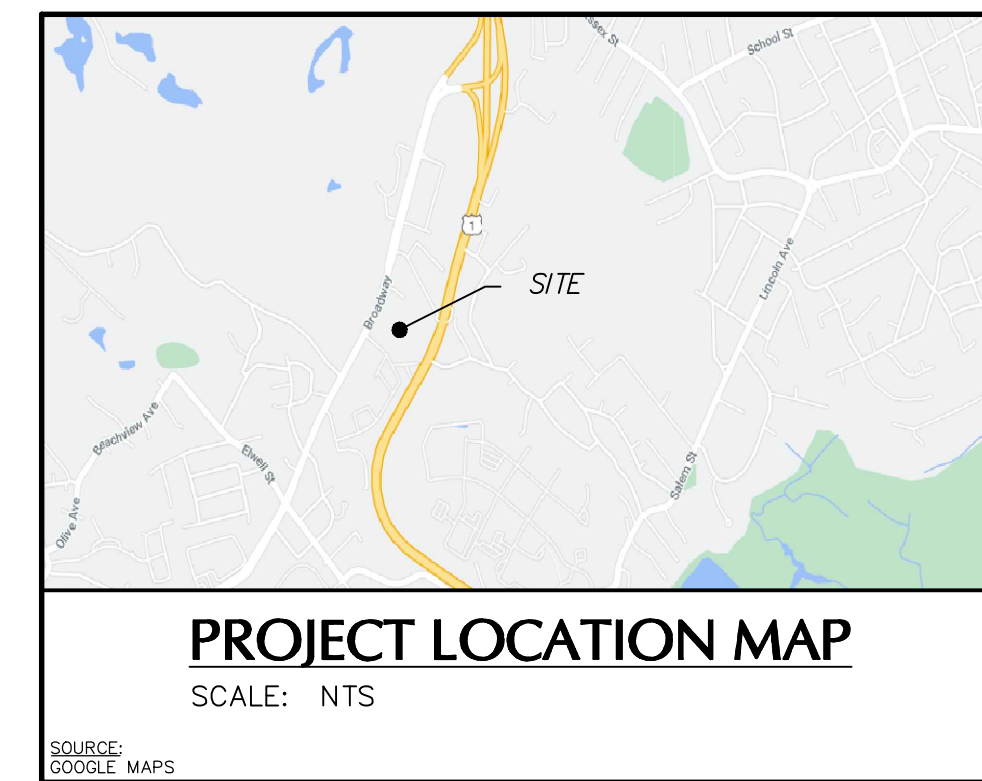
THENCE N 33° 58' 58" W ALONG LAND LYING WITHIN THE BOUNDS OF LEONARDO AVE/AKA "A" STREET AS SAME IS PROPOSED TO BE WIDENED AND LAID OUT IN THE FUTURE AS SHOWN ON A "PLOT PLAN OF LAND" DATED JAN. 13, 2021 BY EASTERN LAND SURVEY ASSOCIATES, INC. A DISTANCE OF 62.72' TO A POINT;

THENCE N 58° 05' 41" W ALONG SAID PROPOSED A STREET WIDENING A DISTANCE OF 62.93' TO A POINT IN THE NORTHERLY SIDE OF THE CURRENT A STREET;

THENCE CONTINUING AT A BEARING OF N 58° 05' 41" W ALONG THE NORTHERLY SIDE OF A STREET A DISTANCE OF 137.85' TO A POINT MARKING THE INTERSECTION OF THE NORTHERLY SIDE OF A STREET AND THE MUNICIPAL TOWN LINE OF THE TOWN OF MELROSE AND THE TOWN OF MALDEN;

THENCE CONTINUING AT A BEARING OF N 58° 05' 41" W ALONG THE NORTHERLY SIDE OF A STREET A DISTANCE OF 47.84' TO THE POINT OF BEGINNING.

CONTAINING APPROXIMATELY 218,339 SQUARE FEET (5.01237 ACRES)



Date	Description	No.
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REVISIONS

LANGAN

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Project
**735 NEWBURYPORT
TURNPIKE - MELROSE
&
320 STATE HIGHWAY
MALDEN**

MIDDLESEX COUNTY MASSACHUSETTS

Drawing Title

ALTA/NSPS LAND TITLE SURVEY EXISTING CONDITIONS/ TOPOGRAPHIC SURVEY

Project No. 151018201	Drawing No. VL102
Date MARCH 24, 2021	
Drawn By JC	
Checked By AGI	Sheet 2 of 2

GENERAL NOTES

- PLANIMETRIC AND TOPOGRAPHIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC. FIELD WORK COMPLETED DURING THE MONTH OF FEBRUARY 2021.
- THE SITE LIES IN ZONE X AS SHOWN ON THE "FLOOD INSURANCE RATE MAP" MIDDLESEX COUNTY, MASSACHUSETTS, FEMA MAP NUMBER 2501700434E EFFECTIVE JUNE 4, 2010.
- WETLANDS DELINEATED BY ALL-POINTS TECHNOLOGY, INC. DURING THE MONTH OF MARCH 2021.
- ON SITE TRASH REMOVAL WILL BE CONTRACTED WITH A LOCAL COMPANY. TRASH WILL BE COLLECTED ON A REGULAR BASES ON A SCHEDULE TO BE DETERMINED WITH THE LOCAL COMPANY.
- PROPOSED SITE WORK IMPROVEMENTS SHALL CONFORM TO THE STANDARD DETAILS AND SPECIFICATIONS OF THE CITY OF MALDEN AND CITY OF MELROSE. IN THE ABSENCE OF LOCAL STANDARDS, SITE WORK SHALL CONFORM TO THE REQUIREMENTS OF MASSACHUSETTS DOT STANDARD DETAILS.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING DIG SAFE (WWW.DIGSAFE.COM), EXCAVATION TEST HOLES, PERFORMING TEST BORINGS, AND PERFORMING WHATEVER ADDITIONAL INVESTIGATION NECESSARY TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES TO REMAIN THROUGHOUT THE CONSTRUCTION PERIOD. ANY CONFLICTS BETWEEN EXISTING UTILITIES AND PROPOSED UTILITIES DISCOVERED DURING CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE PROJECT ENGINEER.
- SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS, DIMENSIONS AND DETAILS OF ALL DOORS, RAMPS, SIDEWALKS AND WALLS ASSOCIATED WITH THE BUILDING.
- ALL IMPROVEMENTS CONSTRUCTED IN THE TOWN PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE CITY OF MALDEN AND CITY OF MELROSE STANDARD DETAILS. IN THE ABSENCE OF LOCAL DETAILS & REQUIREMENTS AND WORK IN THE STATE RIGHT-OF-WAY SHALL COMPLY WITH THE STATE OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, THE MASSACHUSETTS HIGHWAY DEPARTMENT 1988 STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES AND THE MASSACHUSETTS HIGHWAYS DIVISION 2015 SUPPLEMENTAL SPECIFICATIONS.
- ALL EXISTING UTILITIES NOT TO BE REUSED ON SITE ARE TO BE COMPLETELY REMOVED AND NOT ABANDONED IN PLACE.
- FOR AREAS OUTSIDE THE PROPERTY LINES, REPAIR AND/OR REPLACE ALL DAMAGE DONE TO EXISTING ELEMENTS (SIDEWALKS, PAVING, LANDSCAPING, ETC) AS REQUIRED BY OWNER AND/OR GOVERNING AUTHORITY.
- ALL SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD AND MASSACHUSETTS DEPARTMENT OF TRANSPORTATION REGULATIONS.
- CONTRACTOR SHALL PREVENT DUST, SEDIMENT AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS. ADJOINING STREETS AND PROPERTIES TO BE KEPT FREE OF DEBRIS RESULTING FROM DEMOLITION AND SHALL BE CLEANED ON A DAILY BASIS OR AS NEEDED.
- DUST CONTROL TREATMENTS SHALL BE APPLIED AS NECESSARY TO CONTROL AND REDUCE THE AMOUNT OF DUST WHICH MAY CAUSE OFF-SITE DAMAGE, BE A HEALTH HAZARD TO HUMANS, WILDLIFE AND PLANT LIFE, OR POSE A HAZARD TO TRAFFIC SAFETY.
- THE LOCATION OF EXISTING UNDERGROUND UTILITIES SHOWN HEREON IS TAKEN FROM DESIGN PLANS, AS-BUILT SKETCHES, EXISTING UTILITY COMPANY RECORDS, AND OTHER SOURCES OF INFORMATION AND IS NOT TO BE CONSTRUED AS AN ACCURATE "AS-BUILT" SURVEY AND IS SUBJECT TO SUCH CORRECTIONS THAT A MORE ACCURATE SURVEY MAY DISCLOSE.
- THE EXISTING UTILITIES INDICATED HEREON MAY NOT BE LOCATED AS SHOWN. IN ADDITION, OTHER UTILITIES NOT SHOWN HEREON MAY BE PRESENT. ANY DISCREPANCIES DISCOVERED DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE PROJECT ENGINEER.
- ALL UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS/DETAILS OF THE UTILITY COMPANY HAVING AUTHORITY OVER THE PROPOSED WORK. ALL PROPOSED UTILITY WORK SHALL BE PERFORMED WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL ORDINANCES/REQUIREMENTS GOVERNING THE PROPOSED WORK.
- ANY UTILITY EASEMENTS REQUIRED BY ANY OF THE VARIOUS UTILITY COMPANIES SHALL BE OBTAINED, EXECUTED, AND RECORDED PRIOR TO ANY OF THE AFFECTED UTILITY WORK BEING PERFORMED.
- ALL PROPOSED UTILITIES WILL BE LOCATED UNDERGROUND.
- RESET ALL EXISTING SANITARY AND DRAINAGE STRUCTURES TO MASSACHUSETTS STATE STANDARDS AND AS REQUIRED BY REPAIRING, MILLING OR OVERLAYING.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY DISCREPANCIES DISCOVERED DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE PROJECT ENGINEER.
- CLEANOUTS SHALL BE PROVIDED FLUSH TO GRADE AT ALL LOCATIONS OF ROOF DRAIN INTERSECTIONS, BENDS AND UPSTREAM ENDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PAVEMENT REPAIRS REQUIRED AS A RESULT OF ANY UTILITY WORK.
- ALL PAVEMENT STRIPING SHALL BE LONG LIFE EPOXY RESIN PAINT. PAVEMENT GRAPHICS SHALL BE PRE-FORMED THERMOPLASTIC.
- ALL RADII ARE 3 FEET UNLESS OTHERWISE NOTED.
- CONCRETE JOINTS ON SITE ARE TO BE FILLED WITH SILICONE SEALANT, TO INCLUDE CONCRETE PAVEMENTS, MONOLITHIC CURBING AND MONOLITHIC SIDEWALKS.
- BOTTOM AND TOP OF RETAINING WALL ELEVATION SPOT SHOTS REPRESENT THE BASE OF THE WALL AT FINISHED GROUND LEVEL AND THE TOP OF THE FACE OF THE WALL RESPECTIVELY.
- SPOT SHOTS ALONG CURB LINES REPRESENT THE BASE OF THE CURB UNLESS NOTED OTHERWISE.
- ALL ON-SITE CONCRETE TO BE 4,000 PSI WITH 6% AIR ENTRAINED WITH MEDIUM BROOM FINISH UNLESS OTHERWISE NOTED.
- ALL CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MASSDOT HIGHWAY STANDARDS.
- THIS PROJECT DISTURBS MORE THAN ONE (1) ACRE OF LAND AND REQUIRES A PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. AT LEAST 14 DAYS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL FILE AN ELECTRONIC NOTICE OF INTENT (NOI) WITH THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (U.S. EPA) FOR CONSTRUCTION DISCHARGES ASSOCIATED WITH THIS PROJECT AND MAINTAIN A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REGULATIONS.
- THE USE OF FIRE HYDRANTS FOR CONSTRUCTION IS NOT PERMITTED WITHOUT APPROVAL FROM THE CITIES OF MALDEN/MELROSE WATER, SEWER, AND FIRE DEPARTMENT.
- ALL TRENCH EXCAVATION CONTRACTORS SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82A, TRENCH EXCAVATION SAFETY REQUIREMENTS, TO PROTECT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES. TRENCH EXCAVATION PERMITS ARE REQUIRED. THIS APPLIES TO ALL TRENCHES ON PUBLIC AND PRIVATE PROPERTY.
- AS-BUILT SITE PLAN DRAWINGS ARE TO BE SUBMITTED BY THE CONTRACTOR TO THE CITY OF MALDEN PRIOR TO ISSUING OF OCCUPANCY PERMIT.

ACCESSIBILITY NOTES

- WALKWAYS ALONG ACCESSIBLE ROUTES NOT TO EXCEED 5% RUNNING SLOPE OR 2% CROSS SLOPE.
- ALL ADA PARKING SPACES AND PASSENGER LOADING ZONES SHALL NOT EXCEED 2% IN ANY DIRECTION.
- ALL ADA EGRESSES SHALL BE FLUSH WITH ADJOINING MATERIAL UNLESS NOTED OTHERWISE.
- ALL RAMPS SHALL NOT EXCEED 1:12 RUNNING SLOPE OR 2% CROSS SLOPE.
- CONTRACTOR SHALL CONFIRM FIELD CONDITIONS ARE CONSISTENT WITH CONSTRUCTION DOCUMENTS AND NOTIFY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, INC. OF ANY COMPLIANCE ISSUES PRIOR TO CONSTRUCTION.

CONTRACTOR NOTES

- THESE PLANS REPRESENT THE OVERALL SITING IMPROVEMENTS REQUIRED FOR PROJECT CONSTRUCTION. THE CONTRACTOR SHALL FURNISH, INSTALL, TEST AND COMPLETE ALL WORK TO THE SATISFACTION OF THE ENGINEER AND OWNER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION; AS SUCH, THESE PLANS DO NOT COMPLETELY REPRESENT, NOR ARE THEY INTENDED TO REPRESENT, ALL SPECIFIC INSTRUCTIONS REQUIRED FOR SITING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO CONSTRUCT ALL IMPROVEMENTS DEPICTED ON THESE PLANS IN ACCORDANCE WITH ALL APPLICABLE RULES, REGULATIONS AND LAWS IN EFFECT AT THE TIME OF CONSTRUCTION.
- THE CONTRACTOR SHALL ACCEPT THE SITE AS IS. THE CONTRACTOR SHALL ASSESS CONDITIONS, AND THE KIND, QUALITY AND QUANTITY OF WORK REQUIRED. THE OWNER AND ENGINEER MAKES NO GUARANTEE IN REGARD TO THE ACCURACY OF ANY INFORMATION THAT WAS OBTAINED DURING INVESTIGATIONS. THE CONTRACTOR SHALL MAKE A THOROUGH SITE INSPECTION IN ORDER TO FIELD CHECK EXISTING SITE CONDITIONS; CORRELATE CONDITIONS WITH THE DRAWINGS; AND, RESOLVE ANY POSSIBLE CONSTRUCTION CONFLICTS WITH THE OWNER AND ENGINEER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL PERFORM ADDITIONAL TOPOGRAPHIC SURVEYS HE/SHE DEEMS NECESSARY, PROVIDED THEY ARE COORDINATED WITH THE OWNER. ANY CONDITIONS DETERMINED BY THE CONTRACTOR THAT DIFFER FROM THE INFORMATION SHOWN ON THE DRAWINGS THAT ARE NOT BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER PRIOR TO THE START OF WORK SHALL NOT BE CONSIDERED GROUNDS FOR ADDITIONAL PAYMENT OR CHANGES TO THE CONTRACT DURATION, OR ANY OTHER CLAIMS AGAINST THE OWNER OR OWNER'S ENGINEER.
- THE CONTRACTOR SHALL, WHEN HE/SHE DEEMS NECESSARY, PROVIDE A WRITTEN REQUESTS FOR INFORMATION (RFI) TO THE OWNER AND/OR OWNER'S DESIGNATED REPRESENTATIVE, AND ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITING ITEM. THE (RFI) SHALL BE IN A FORM ACCEPTABLE TO OWNER AND/OR OWNER'S DESIGNATED REPRESENTATIVE, AND ENGINEER AND SHALL ALLOW FOR A MINIMUM OF THREE WORK DAYS FOR A WRITTEN REPLY. RFIS SHALL BE NUMBERED CONSECUTIVELY BY DATE SUBMITTED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITING ITEMS CONSTRUCTED DIFFERENTLY THAN INTENDED OR AS DEPICTED ON THE PLANS.
- INFORMATION RELATED TO ELEVATIONS AND PROPOSED UTILITIES (SUCH AS ROADWAY GRADES, INVERT ELEVATIONS, RIM ELEVATIONS, GRATE ELEVATIONS, BUILDING FINISHED FLOOR ELEVATIONS, ETC.) MAY BE FOUND IN MORE THAN ONE LOCATION IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL SUFFICIENTLY REVIEW ALL PLANS, PROFILES AND ANY OTHER INFORMATION IN THE CONTRACT DOCUMENTS FOR CONSISTENCY PRIOR TO BID. ANY INCONSISTENCIES OR DISCREPANCIES THAT ARE FOUND BY THE CONTRACTOR OR HIS ASSIGNS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER IN WRITING, IN THE FORMAT OF AN RFI PRIOR TO BID.
- THERE ARE ADDITIONAL NOTES, SPECIFICATIONS AND REQUIREMENTS CONTAINED THROUGHOUT THE PLAN SET AS WELL AS REFERENCES TO SPECIFICATIONS FROM APPLICABLE GOVERNING AUTHORITIES AND INDUSTRY STANDARDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN, REVIEW AND ADHERE TO ALL THESE DOCUMENTS.
- CONTRACTOR IS SPECIFICALLY CAUTIONED THAT ALL CONSTRUCTION STAKEOUT FOR THIS PROJECT MUST BE COMPLETED FROM THE SITE SPECIFIC SURVEY CONTROL (HORIZONTAL AND VERTICAL) UPON WHICH THE DESIGN IS BASED. THE CONTRACTOR SHOULD NOT RELY ON OR RE-ESTABLISH SURVEY CONTROL BY GPS OR OTHER METHODS FOR USE IN CONSTRUCTION STAKEOUT OR ANY OTHER PURPOSE FOR THIS PROJECT. ANY DISCREPANCIES BETWEEN THE EXISTING HORIZONTAL OR VERTICAL DATA SHOWN ON THESE DRAWINGS AND THAT ENCOUNTERED IN THE FIELD MUST BE REPORTED TO THE DESIGN TEAM PRIOR TO CONSTRUCTION FOR RESOLUTION.

GRADING & DRAINAGE NOTES

- ALL PROPOSED STORM DRAINAGE PIPING TO UTILIZE SOIL-TIGHT JOINTS.
- CLEANOUTS SHALL BE PROVIDED FLUSH TO GRADE AT ALL LOCATIONS OF ROOF DRAIN INTERSECTIONS, BENDS AND UPSTREAM ENDS.
- ALL REQUIRED STORM LATERALS SERVING THE BUILDINGS SHALL BE COORDINATED AND CONSTRUCTED TO WITHIN TEN FEET OF EACH BUILDING LATERAL ENTRANCE LOCATION AT THE INVERTS NOTED. ANY NECESSARY EXTENSIONS, RELOCATIONS, OR CORRECTIONS WITHIN TEN FEET OF THE BUILDING NECESSARY TO COMPLETE CONNECTION OF LATERALS TO THE BUILDINGS SHALL BE MADE BY THE BUILDING CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE APPROPRIATE SIZES OF THE DRAINAGE STRUCTURES (CATCH BASINS, MANHOLES, YARD DRAINS, ETC.) TO ACCOMMODATE THE PIPING SHOWN.
- STORM DRAINAGE PIPING INSTALLATION SHALL COMMENCE AT THE FURTHEST DOWNSTREAM POINT AND PROCEED UPSTREAM "IN THE DRY".
- CONTRACTOR SHALL CONNECT ALL NEW ROOF DRAINS TO THE DRAINAGE SYSTEM. LOCATIONS AND ELEVATIONS OF ROOF LEADERS SHOULD BE COORDINATED WITH MEP AND ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR WILL BE REQUIRED TO CLEAN THE ENTIRE DRAINAGE SYSTEM OF ALL DEBRIS AND OBSTRUCTIONS BOTH DURING CONSTRUCTION AND AT THE END OF CONSTRUCTION PRIOR TO ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, REMOVAL OF ALL FORMWORK FROM STRUCTURES, CONCRETE AND MORTAR DROPPINGS, CONSTRUCTION DEBRIS, AND DIRT. THE SYSTEM SHALL BE THOROUGHLY FLUSHED CLEAN AND THE CONTRACTOR SHALL FURNISH ALL NECESSARY HOSE, PUMPS, PIPE, AND OTHER EQUIPMENT THAT MAY BE REQUIRED FOR THIS PURPOSE. NO DEBRIS SHALL BE FLUSHED INTO EXISTING STORM DRAINS, WETLANDS, OR WATERCOURSES. ALL DEBRIS SHALL BE REMOVED FROM THE SYSTEM AND DISPOSED OF IN ACCORDANCE WITH ALL GOVERNING AGENCIES.
- ALL MANHOLE COVERS, GRATES, INLETS, AND RIMS TO REMAIN SHALL BE ADJUSTED TO PROPOSED GRADE.
- CONTRACTOR TO PROVIDE ALL FITTINGS AND BENDS NECESSARY TO ACCOMPLISH WORK.
- REFER TO THE "STORMWATER MANAGEMENT REPORT FOR 735 NEWBURYPORT TURNPIKE 320 STATE HIGHWAY APPENDIX F OPERATION AND MAINTENANCE PLAN" FOR OPERATION OF THE STORMWATER MANAGEMENT SYSTEM.

ABBREVIATIONS

ARCH.	ARCHITECTURAL
BC	BOTTOM OF CURB
BIT.	BITUMINOUS
BOW	BUILDING OVERHANG
BW	BOTTOM OF WALL
CB	CURE CATCH-BASIN
CC	CONCRETE CURB
CLCB	CURBLESS CATCH BASIN
CO	CLEAN OUT
CONC.	CONCRETE
CP	CONCRETE PAD
CPY	CANOPY DRAIN
DIP	DUCTILE IRON PIPE
DW	DETECTABLE WARNING
DYL	DOUBLE YELLOW LINE
EL	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
FES	FLARED END SECTION
FFE	FINISHED FLOOR ELEVATION
GR	GRADE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGHPOINT
INV	INVERT
LA	LANDSCAPED AREA
LF	LINEAR FEET
MH	MANHOLE
N.T.S.	NOT TO SCALE
OCS	OUTLET CONTROL STRUCTURE
PROPOSED	PROPOSED
PVC	POLYVINYL CHLORIDE PIPE (SDR-35)
RCP	REINFORCED CONCRETE PIPE
RET.	RETAINING
RL	ROOF LEADER
R.O.W	RIGHT OF WAY
R&D	REMOVE & DISPOSE
R&R	REMOVE & REPLACE
SAN MH	SANITARY SEWER MANHOLE
SD	STORM DRAIN
SWL	SINGLE WHITE LINE
SYL	SINGLE YELLOW LINE
TC	TOP OF CURB
TD	TRENCH DRAIN
TF	TOP OF FRAME
TW	TOP OF WALL
TYP.	TYPICAL
WOU	WATER QUALITY UNIT
YD	YARD DRAIN

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE	---	---
YARD SETBACK LINE	---	---
MUNICIPAL LINE	---	---
EASEMENT BOUNDARY	---	---
WETLAND LIMITS	---	---
100 FT BANK BUFFER	---	---
BUILDING LINE	---	---
PEDESTRIAN DOOR LOCATION	---	---
LOADING BAY DOOR LOCATION	---	---
6" CURB LINE	---	---
SIGN	---	---
BOLLARD	---	---
CHAINLINK FENCE	---	---
METAL GUARDRAIL	---	---
RETAINING WALL	---	---
TREELINE	---	---
TREE	---	---
PARKING ROW COUNT	---	---
PAVEMENT MARKING	---	---
DIRECTION OF TRAVEL ARROW	---	---
CONTOUR	---	---
SPOT ELEVATION	---	---
MANHOLES	---	---
STORM MANHOLE	---	---
STORM CATCH BASIN	---	---
STORM YARD DRAIN	---	---
STORM FLARED END SECTION	---	---
STORM DRAINAGE LINE	---	---
STORMWATER MANAGEMENT FEATURE	---	---
SEWER MANHOLE	---	---
CLEANOUT	---	---
SANITARY SEWER LINE	---	---
WATER LINE	---	---
FIRE PROTECTION LINE	---	---
FIRE HYDRANT	---	---
GATE VALVE	---	---
FIRE DEPARTMENT CONNECTION	---	---
ELECTRIC LINE	---	---
TRANSFORMER	---	---
OVERHEAD WIRE	---	---
POWER POLE	---	---
GUY WIRE	---	---
LIGHT POLE	---	---
TELECOMMUNICATION LINE	---	---
GAS LINE	---	---
LIMIT OF DISTURBANCE	---	---
SILT FENCE	---	---
FIBER ROLL AND SILT FENCE	---	---
TEMPORARY STOCKPILE AREA	---	---
INLET PROTECTION	---	---
CONCRETE SIDEWALK	---	---
HEAVY DUTY CONCRETE	---	---
SNOW STORAGE AREA	---	---

Date	Description	No.
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REVISIONS

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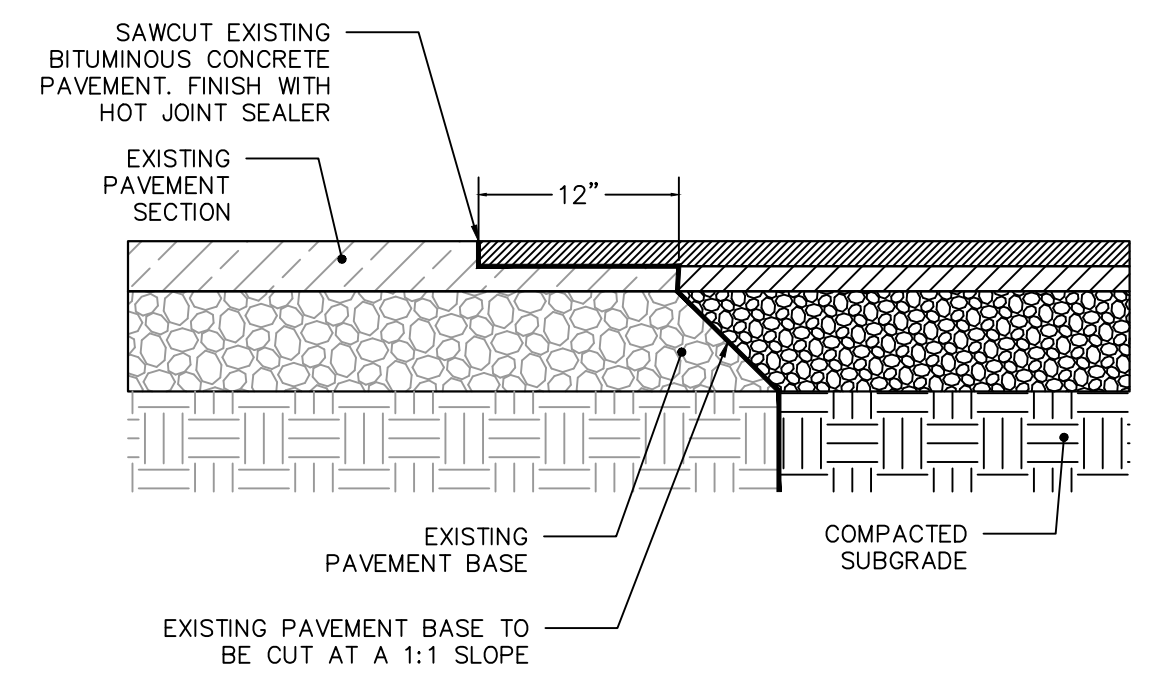
Project
**735 NEWBURYPORT
TURNPIKE/ 320 STATE
HIGHWAY**

MALDEN / MELROSE
MIDDLESEX COUNTY MASSACHUSETTS
Drawing Title

MASTER LEGEND & NOTES

Project No.	151018201	Drawing No. CS002
Date	05/06/2021	
Drawn By	OOE	
Checked By	JEL	

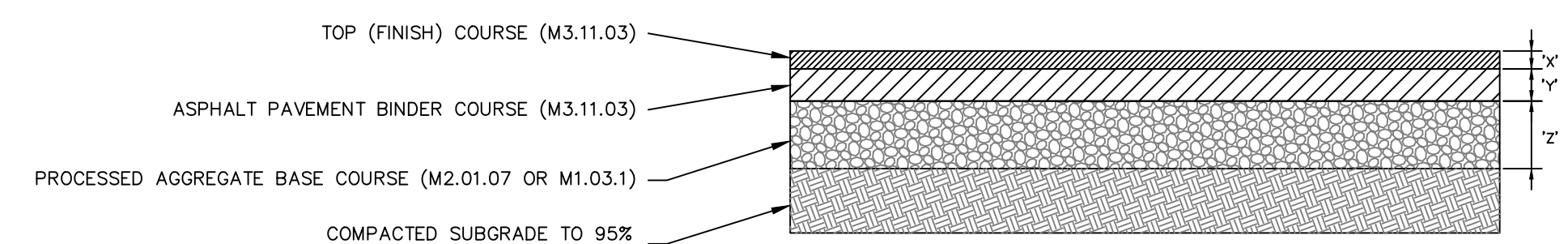
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NOTES:
1. CONTRACTOR TO INSTALL TACK COAT ON ALL BUTT EDGES OF EXISTING PAVEMENT

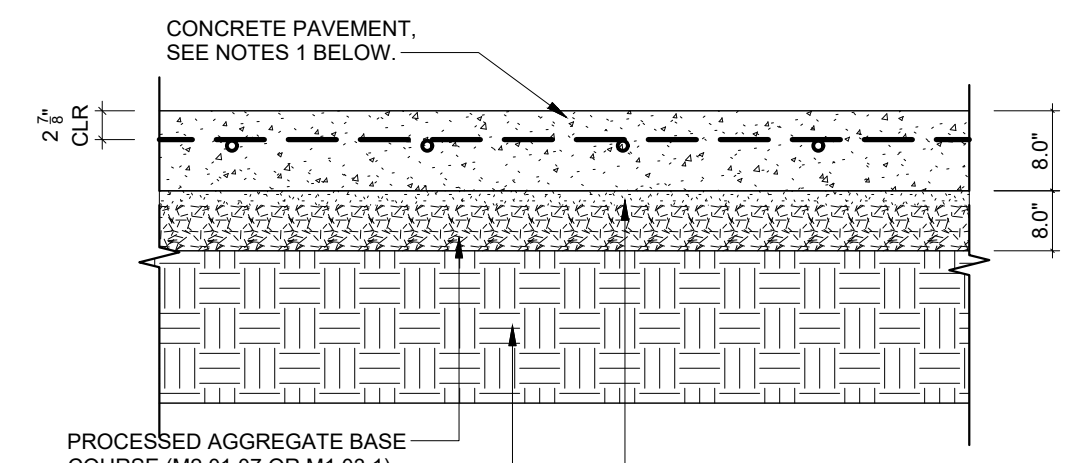
1 SAW CUT PAVEMENT SECTION
N.T.S.

ASPHALT SECTION	SURFACE COURSE - 'X'	BINDER COURSE - 'Y'	SUBBASE - 'Z'
STANDARD DUTY (CAR AND VAN PARKING AREAS AND DRIVE AISLES)	1.5 INCHES	1.5 INCHES	6 INCHES
HEAVY DUTY (TRUCK DRIVE AISLES & TRUCK AREAS)	1.5 INCHES	2.5 INCHES	8 INCHES



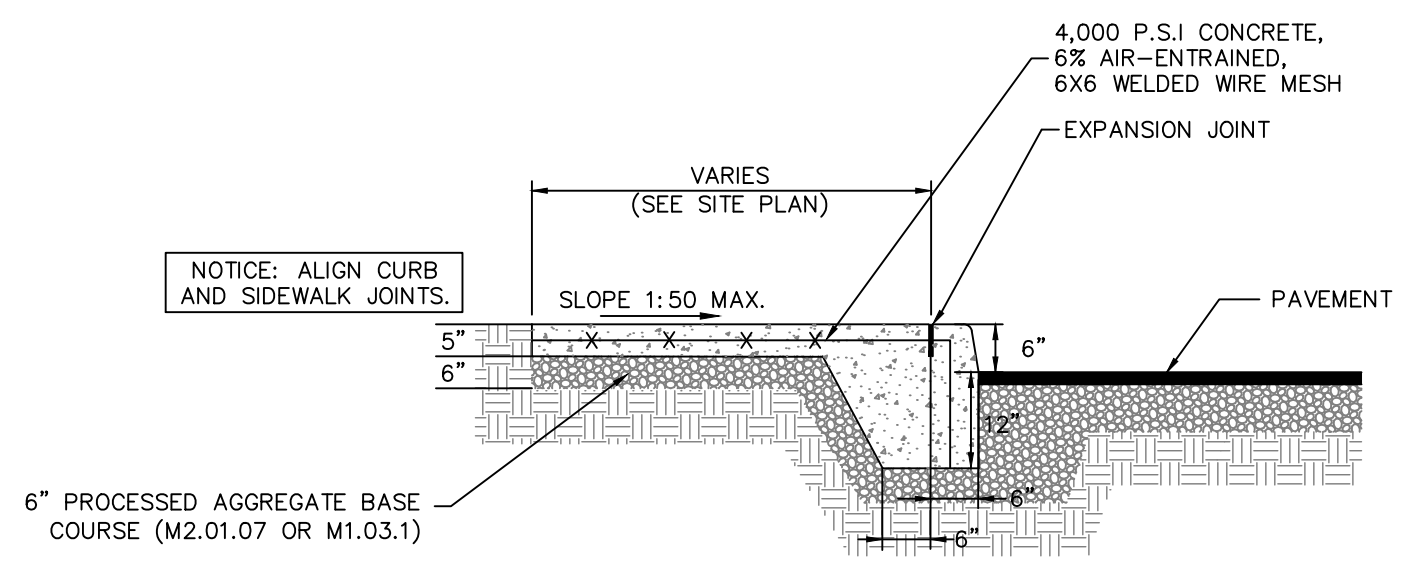
NOTES:
1. PAVING COURSES SHALL BE CONSTRUCTED IN LAYERS NOT LESS THAN 1.5 INCHES THICK PER LIFT.
2. ALL AREAS TO BE PAVED SHALL BE PROFFROLLED WITH AT LEAST 4 PASSES OF A SMOOTH ROLLER HAVING A MINIMUM STATIC DRUM WEIGHT OF 10 TONS. ANY SOFT AREAS SHALL BE REMOVED AND REPLACED WITH CLEAN, GRANULAR, FREE-DRAINING SOIL. FILL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 12-INCHES AND SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY THE GEOTECHNICAL REPORT.
3. PAVEMENT CLASSES REFER TO MASSACHUSETTS, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION (MDOT SS) M3.11.03. PROCESSED AGGREGATE SHALL REFER TO M2.01.07 OR M1.03.1.
4. REFER TO GEOTECHNICAL REPORT TITLED, "GEOTECHNICAL ENGINEERING FEASIBILITY STUDY," BY MCPHAIL ASSOCIATES, INC. FOR FURTHER DETAIL.

2 BITUMINOUS ASPHALT PAVEMENT
N.T.S.

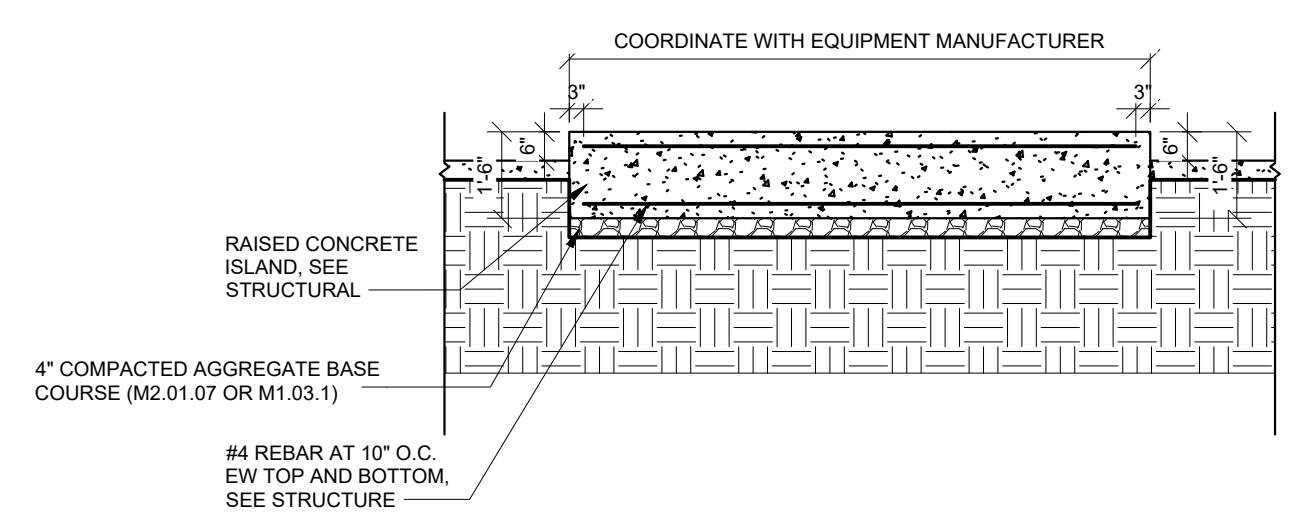


NOTE:
1. SLABS TO BE TREATED WITH ONE (1) PENETRATING SEALER BELOW:
A. BARRICADE WB244, EUCLID CHEMICAL CO
B. SS HARDEN X SI, SEALSOURCE INTERNATIONAL, LLC
2. FC=4,000 PSI MIN.

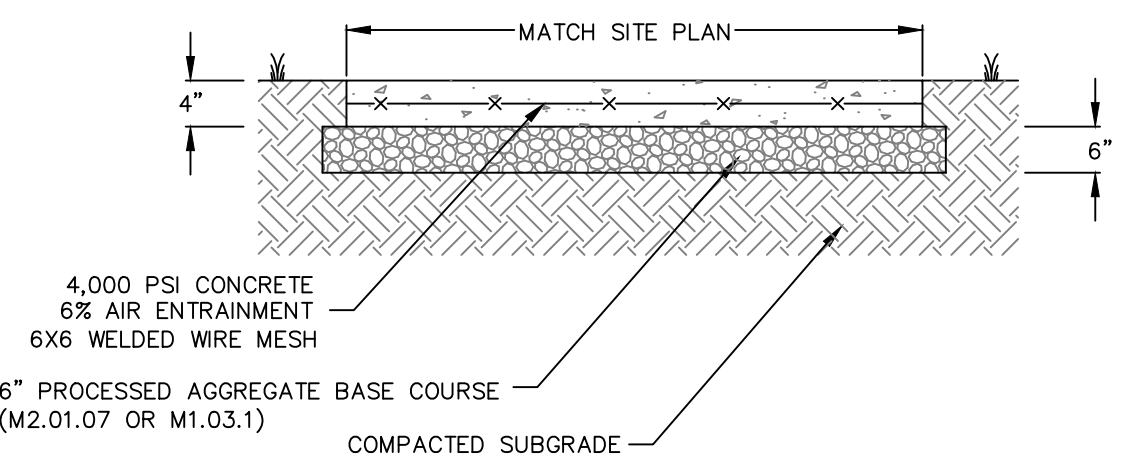
3 HEAVY DUTY CONCRETE PAVEMENT
N.T.S.



4 MONOLITHIC CURB/SIDEWALK
N.T.S.

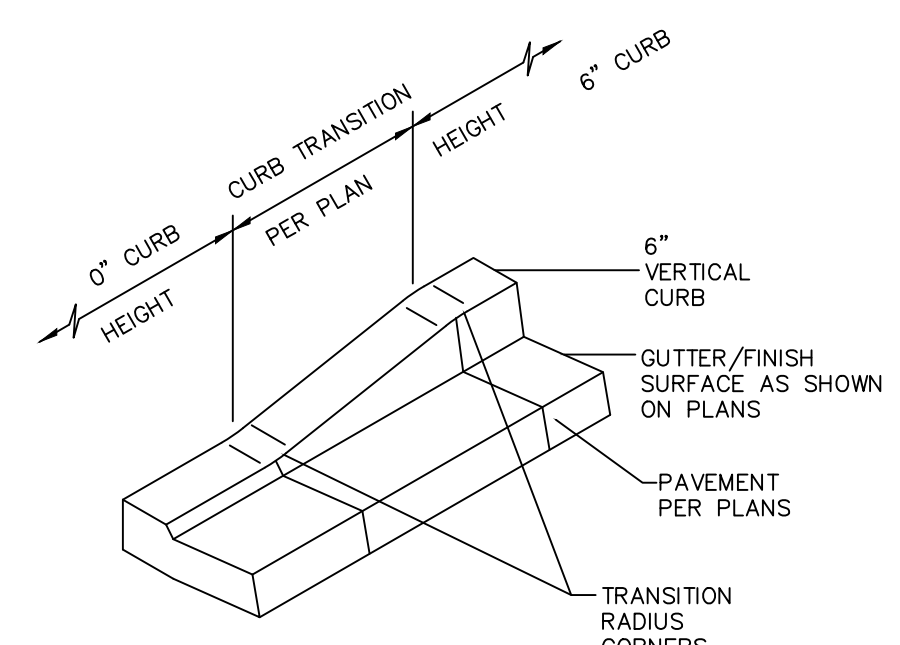


5 EQUIPMENT PAD DETAIL
N.T.S.

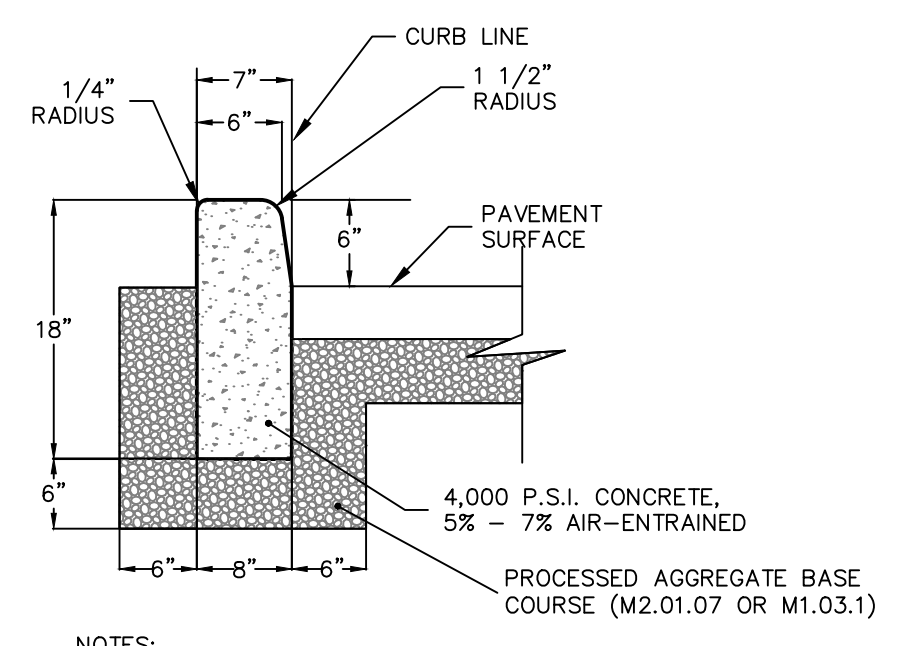


NOTES:
1. ALL CONTROL JOINTS TO BE SAWCUT TO 1/4 THE DEPTH OF SLAB.
2. SIDEWALKS TO COMPLY WITH CITY STANDARDS WHERE APPLICABLE.
3. EXPANSION AND CONTROL JOINTS SHALL BE INSTALLED PER LAYOUT AND DIMENSIONING PLANS. IF NOT SPECIFICALLY DETAILED MAXIMUM SPACING OF JOINTS SHALL BE AS FOLLOWS:
EXPANSION - 30 FT. O.C.
CONTROL - 10 FT. O.C.
4. CONTRACTION JOINTS SHALL BE SPACED EQUAL TO THE WIDTH BUT SHALL NOT EXCEED 10 FT. CARE SHALL BE TAKEN TO ASSURE UNIFORM GRADE, FREE OF SAGS AND SHORT GRADE CHANGES.
5. SURFACE TEXTURE SHALL BE A MEDIUM BROOM FINISH, TRANSVERSE TO THE LENGTH OF THE WALK.

6 CONCRETE SIDEWALK
N.T.S.

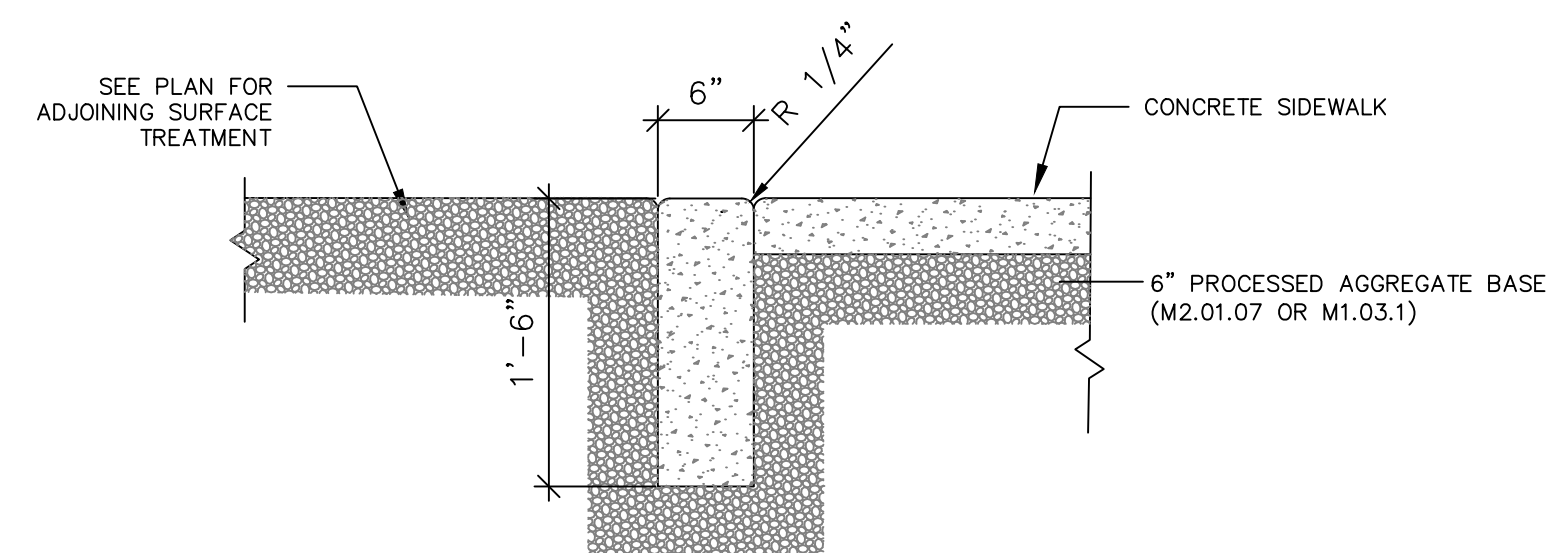


7 TRANSITION CURB
N.T.S.



NOTES:
1. TRANSVERSE JOINTS 1/2\"/>

8 6-INCH CONCRETE CURB
N.T.S.



9 FLUSH CURB
N.T.S.

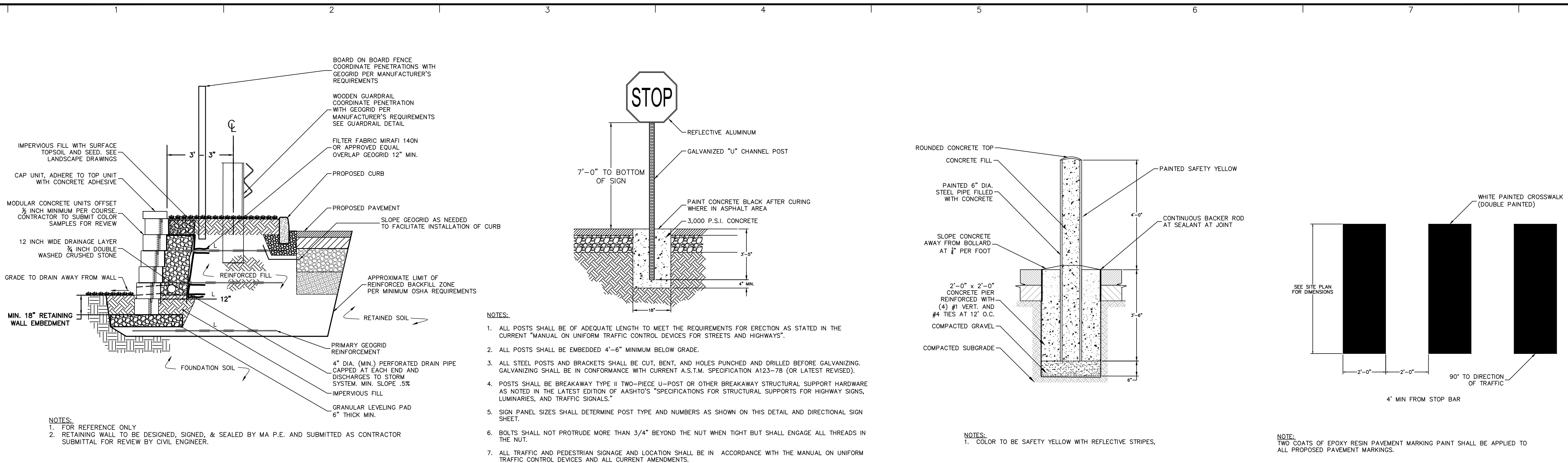
Date	Description	No.
REVISIONS		

LANGAN
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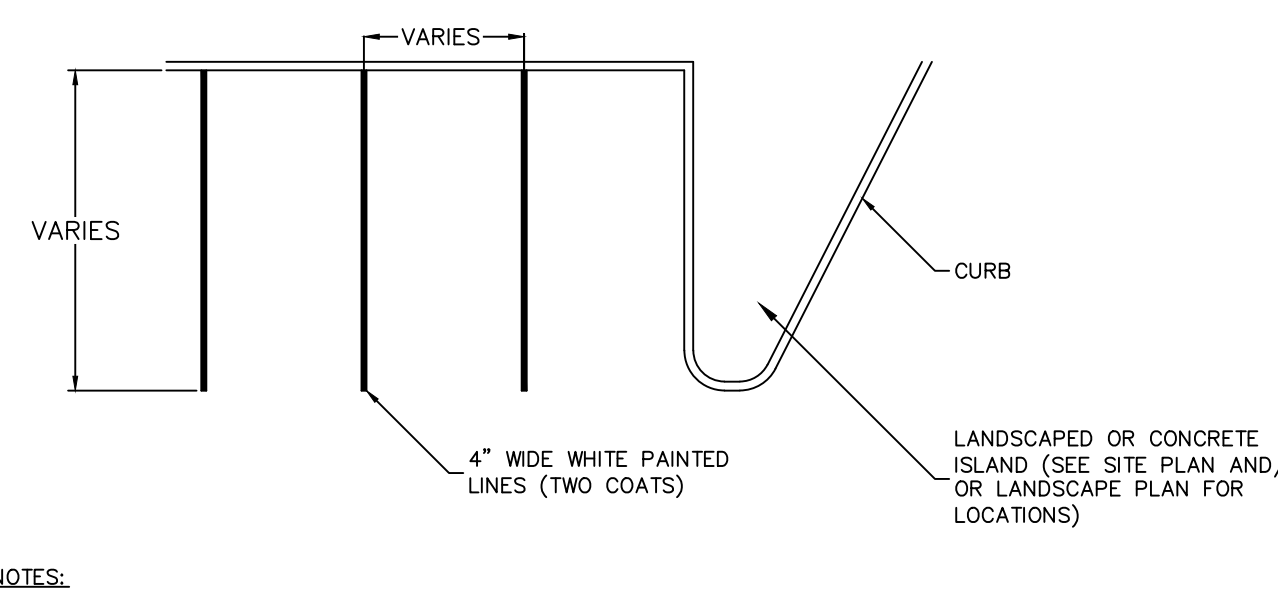
Project
735 NEWBURYPORT TURNPIKE/ 320 STATE HIGHWAY
MALDEN / MELROSE
MIDDLESEX COUNTY MASSACHUSETTS
Drawing Title

SITE DETAILS I

Project No. 151018201	Drawing No. CS501
Date 05/06/2021	
Drawn By OOE	
Checked By JEL	

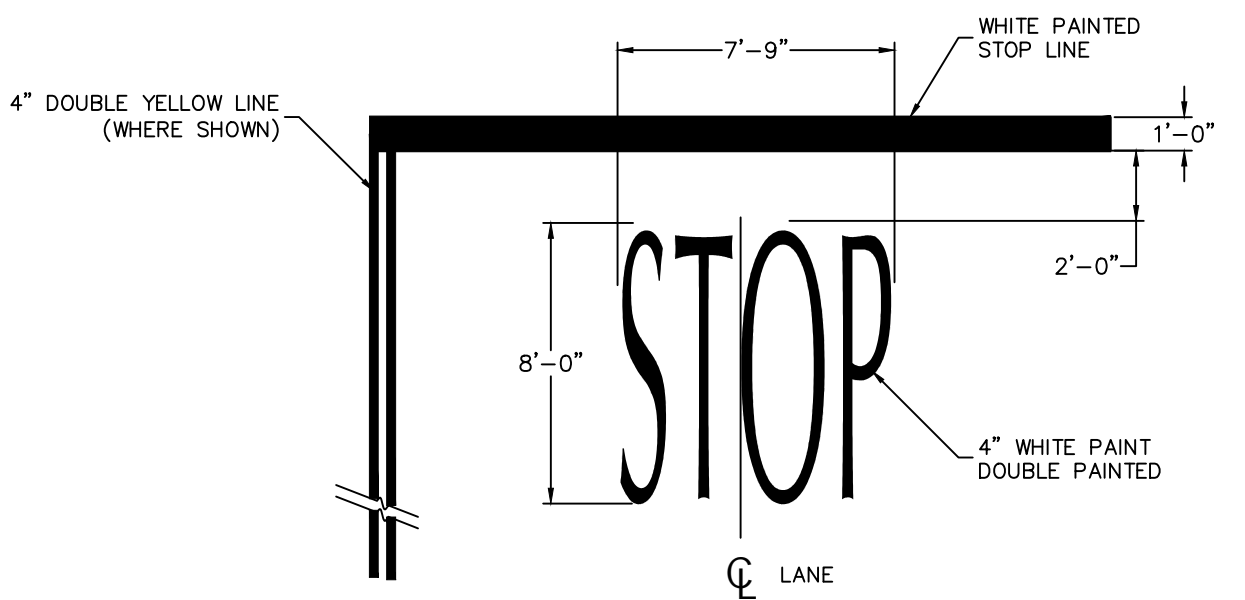


1 RETAINING WALL N.T.S. 2 SIGN DETAIL N.T.S. 3 BOLLARD N.T.S. 4 CROSSWALK N.T.S.



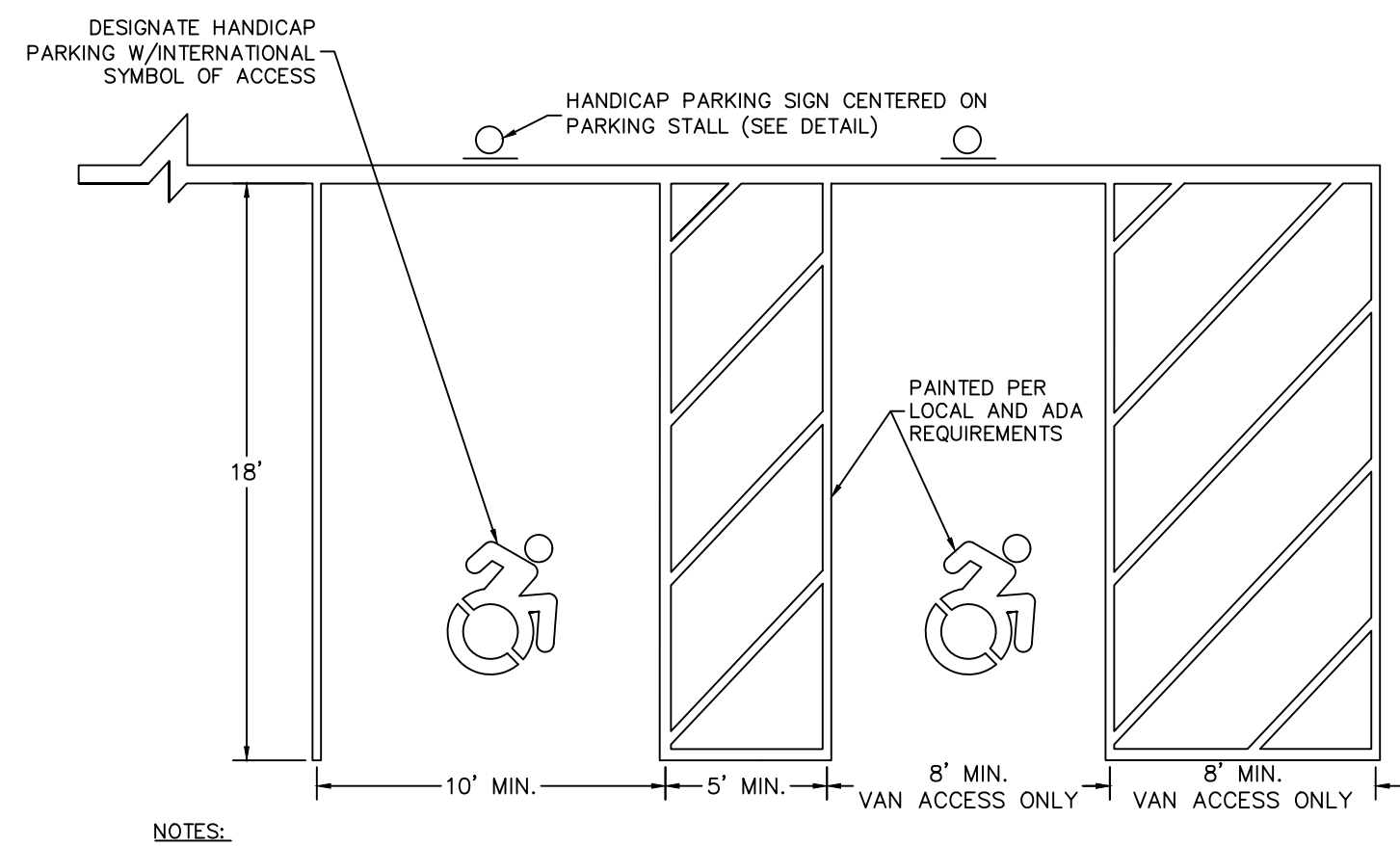
NOTES:
 1. ALL PAINT SHALL BE SHERWIN-WILLIAMS "SETFAST" PAINT. #TM2160 - WHIT.
 2. APPLY 2 COATS OF TRAFFIC TYPE PAINT. APPLY THE FIRST COAT NOT LESS THAN 5 DAYS AFTER THE PLACING OF BITUMINOUS PAVEMENT APPLY SECOND COAT JUST PRIOR TO BUILDING OPENING.
 3. APPLY "COMPACT" STRIPING WHERE SHOWN ON SITE PLAN

5 PARKING STALL STRIPING N.T.S.



NOTES:
 1. PAVEMENT MARKING TO BE INSTALLED AT EACH STOP BAR LOCATION SHOWN ON THE PLANS, EXCLUDING ROADWAYS.

6 STOP BAR N.T.S.

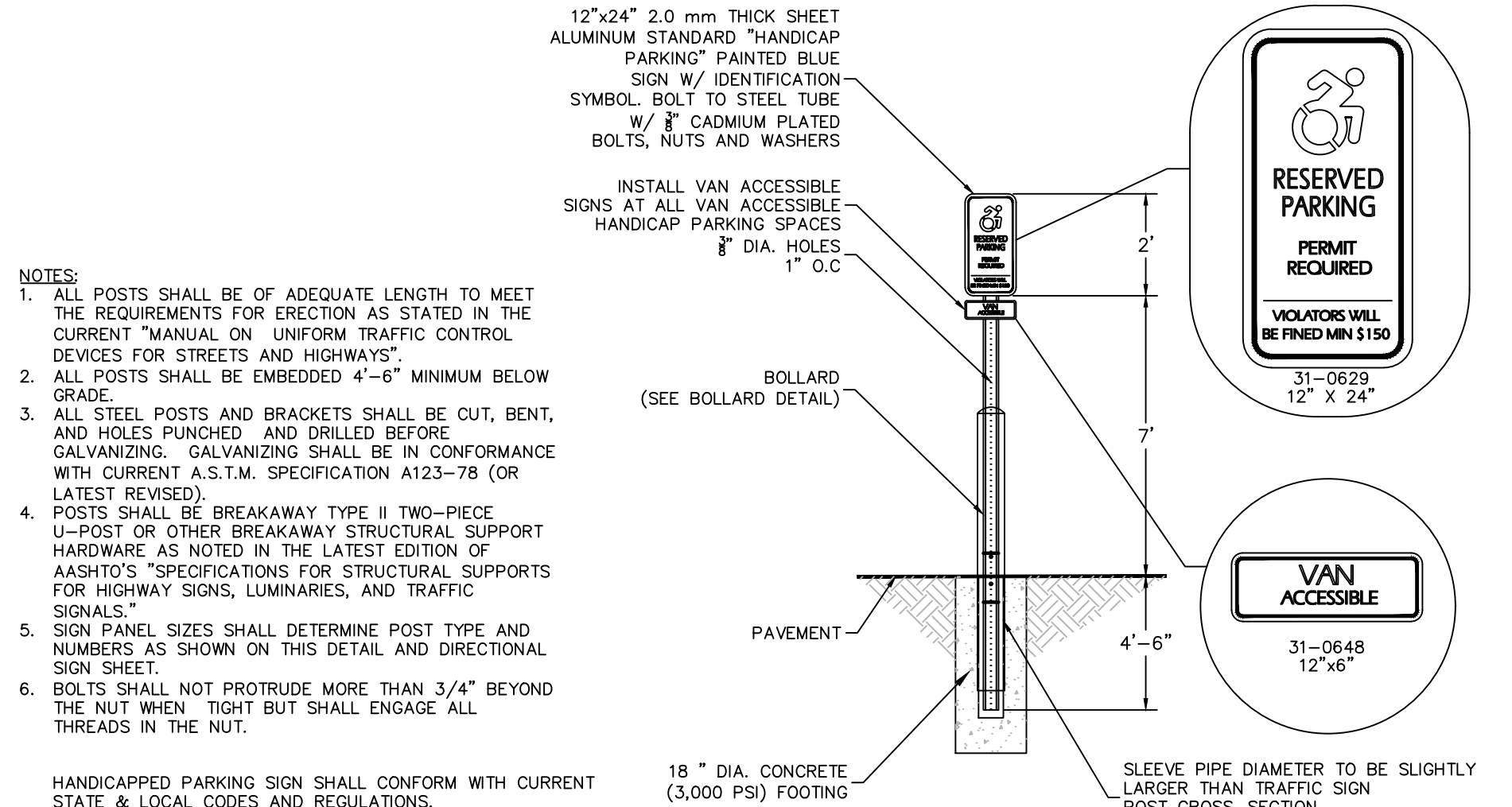


NOTES:
 1. ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE F, PAINT SHALL BE APPLIED AS SPECIFIED BY THE MANUFACTURER.
 2. SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN DISABILITIES ACT (ADA) AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION
 3. APPLY TWO COATS OF TRAFFIC PAINT. ALLOW FOR A MINIMUM CURE TIME OF 24 HOURS BETWEEN APPLICATIONS.

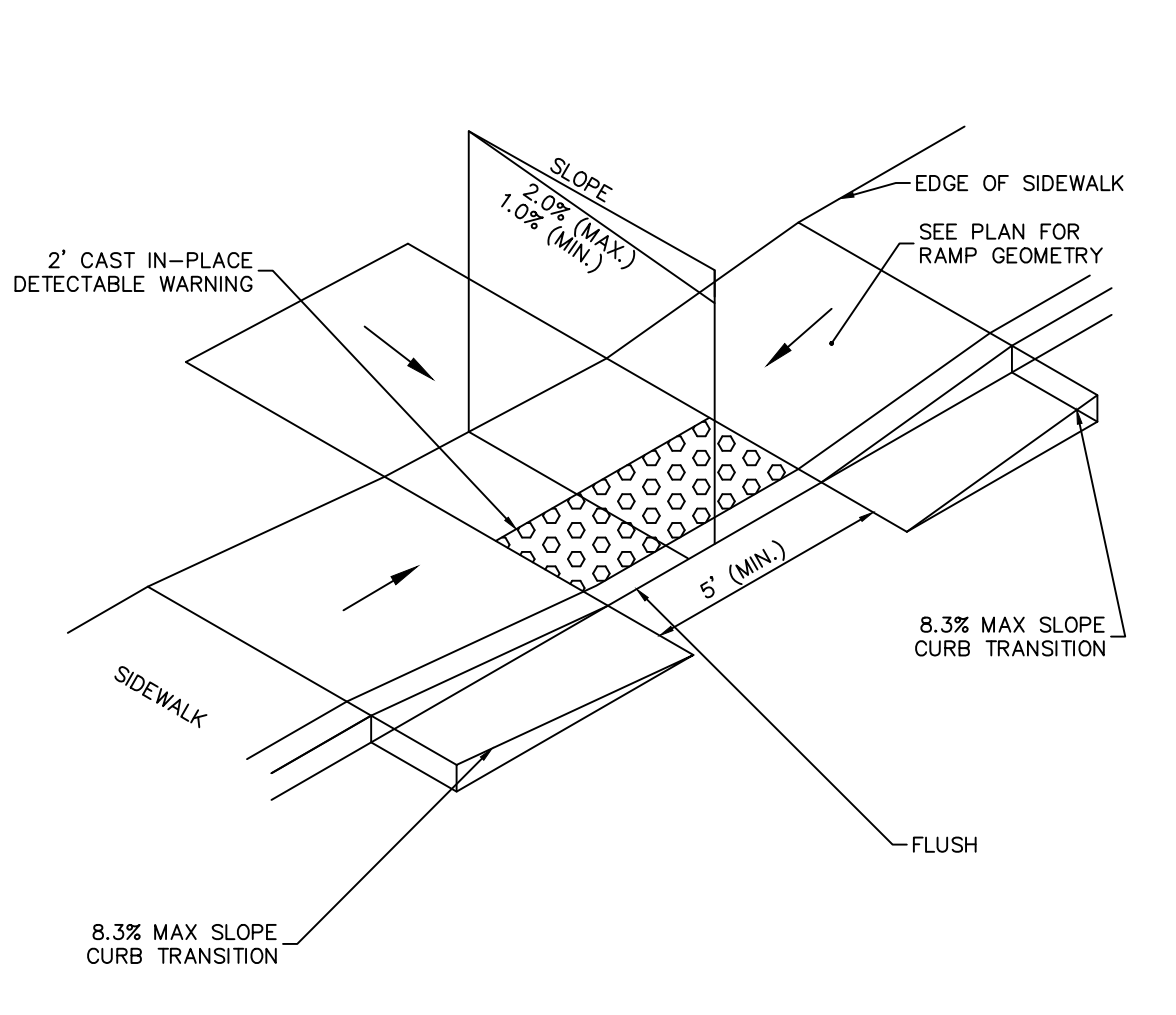
7 HANDICAP PARKING STALL STRIPING N.T.S.



8 R5-2 SIGN N.T.S.



9 ADA SIGN BOLLARD N.T.S.



10 ADA ACCESSIBLE RAMP N.T.S.

NOTES:
 1. MAXIMUM SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE SIDEWALK RAMP OR ACCESSIBLE ROUTE SHOULD NOT EXCEED 20:1.
 2. CARE SHALL BE TAKEN TO ASSURE UNIFORM GRADE ON THE RAMP, FREE OF SAGS AND ABRUPT GRADE CHANGES.
 3. ALL RAMP SHALL BE CONSTRUCTED OF CLASS "1" CONCRETE IN ACCORDANCE WITH MASSACHUSETTS STANDARD SPECIFICATIONS ARTICLE M.03.01.
 4. SIDEWALK RAMP SHALL HAVE A COARSE BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.
 5. DIAGONAL SIDEWALK RAMP AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.
 6. REMOVAL OF EXISTING SIDEWALK FOR NEW RAMP INSTALLATIONS SHALL BE TO THE NEAREST EXPANSION / CONTRACTION JOINT OR DUMMY JOINT. 12:1 MAY NOT BE ACHIEVABLE DUE TO SIDEWALK GRADE. IN RECOGNITION OF THIS, A MINIMUM LIMIT OF 15' (4.57m) FOR A PARALLEL RAMP SHALL BE USED. REMOVAL SHALL NOT BE FURTHER THAN 2' (610) FROM THE PROPOSED RAMP UNLESS DIRECTED BY THE ENGINEER. SAW CUT REQUIRED FOR DUMMY JOINTS SHALL BE INCLUDED IN THE COST OF "CONCRETE SIDEWALK".
 7. EXPANSION JOINTS IN CONCRETE SHALL MATCH THOSE IN ADJACENT SIDEWALKS BUT IN NO CASE SHALL THE SPACING BETWEEN EXPANSION JOINTS EXCEED 12' (3.66m) UNLESS OTHERWISE NOTED.
 8. RAISED MEDIAN ISLANDS IN MARKED CROSSINGS SHALL HAVE SIDEWALK RAMP AT BOTH SIDES AND A LEVEL AREA AT LEAST 4' (1219) LONG BETWEEN THE RAMP. IF THIS CAN NOT BE ACHIEVED, THE RAISED ISLAND SHALL BE CUT THROUGH LEVEL WITH THE ROADWAY AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
 9. SIDEWALK RAMP, WHEN CONSTRUCTED IN CONJUNCTION WITH SIDEWALK, SHALL BE PAID FOR UNDER THE ITEM "CONCRETE SIDEWALK", INCLUDING CURBING WITHIN THE LIMITS OF THE NEW SIDEWALK RAMP AND DETECTABLE WARNING STRIPS WHEN JUST A SIDEWALK RAMP IS CONSTRUCTED, IT SHALL BE PAID FOR UNDER THE ITEM "SIDEWALK RAMP" INCLUDING CURBING WITHIN THE LIMITS OF THE NEW SIDEWALK AND DETECTABLE WARNING STRIP.
 10. CURBING WITHIN THE LIMITS OF THE NEW SIDEWALK RAMP SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE REQUIREMENTS OF FORM 816 SECTIONS 8.11 AND 8.13.
 11. TRANSITION TO FULL HEIGHT CURB, INSTALL STONE CURBING IF ADJACENT CURBING IS STONE. INSTALL CONCRETE CURBING IF ADJACENT CURBING IS CONCRETE OR BITUMINOUS.
 12. DETECTABLE WARNING STRIPS ARE NOT REQUIRED, IF INCLUDED, INSTALL THE EDGE OF THE DETECTABLE WARNING STRIP 6" (152) FROM THE EDGE OF ROAD.
 13. TO PERMIT WHEELCHAIR WHEELS TO ROLL BETWEEN DOMES, ALIGN DOMES ON A SQUARE GRID IN THE DIRECTION OF PEDESTRIAN TRAVEL.
 14. THE MAXIMUM HEIGHT OF ANY RAMP WITHOUT HANDRAILS SHALL BE 6".

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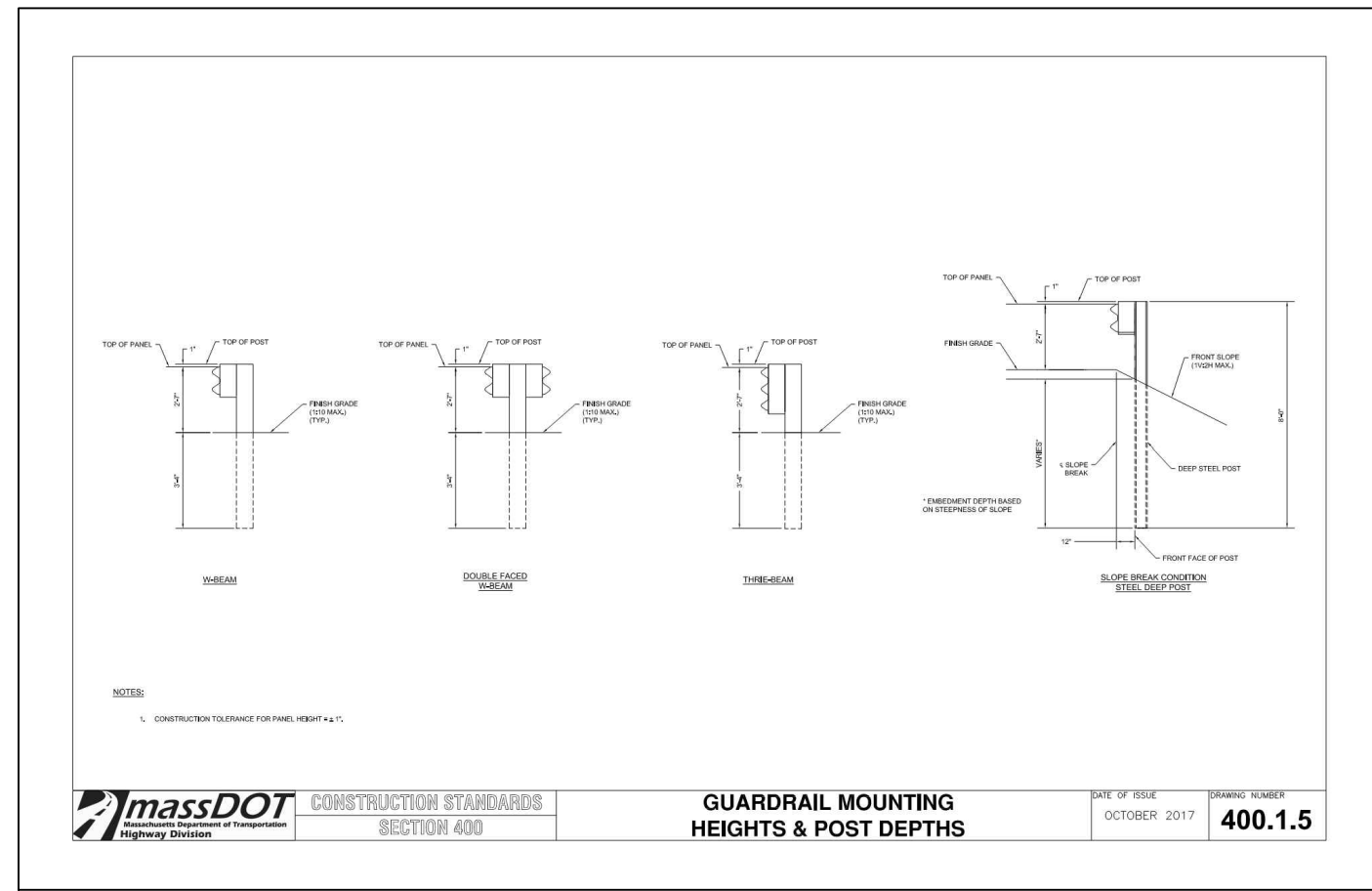
Date	Description	No.
REVISIONS		

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Project
735 NEWBURYPORT TURNPIKE/ 320 STATE HIGHWAY
 MALDEN / MELROSE
 MIDDLESEX COUNTY MASSACHUSETTS
 Drawing Title

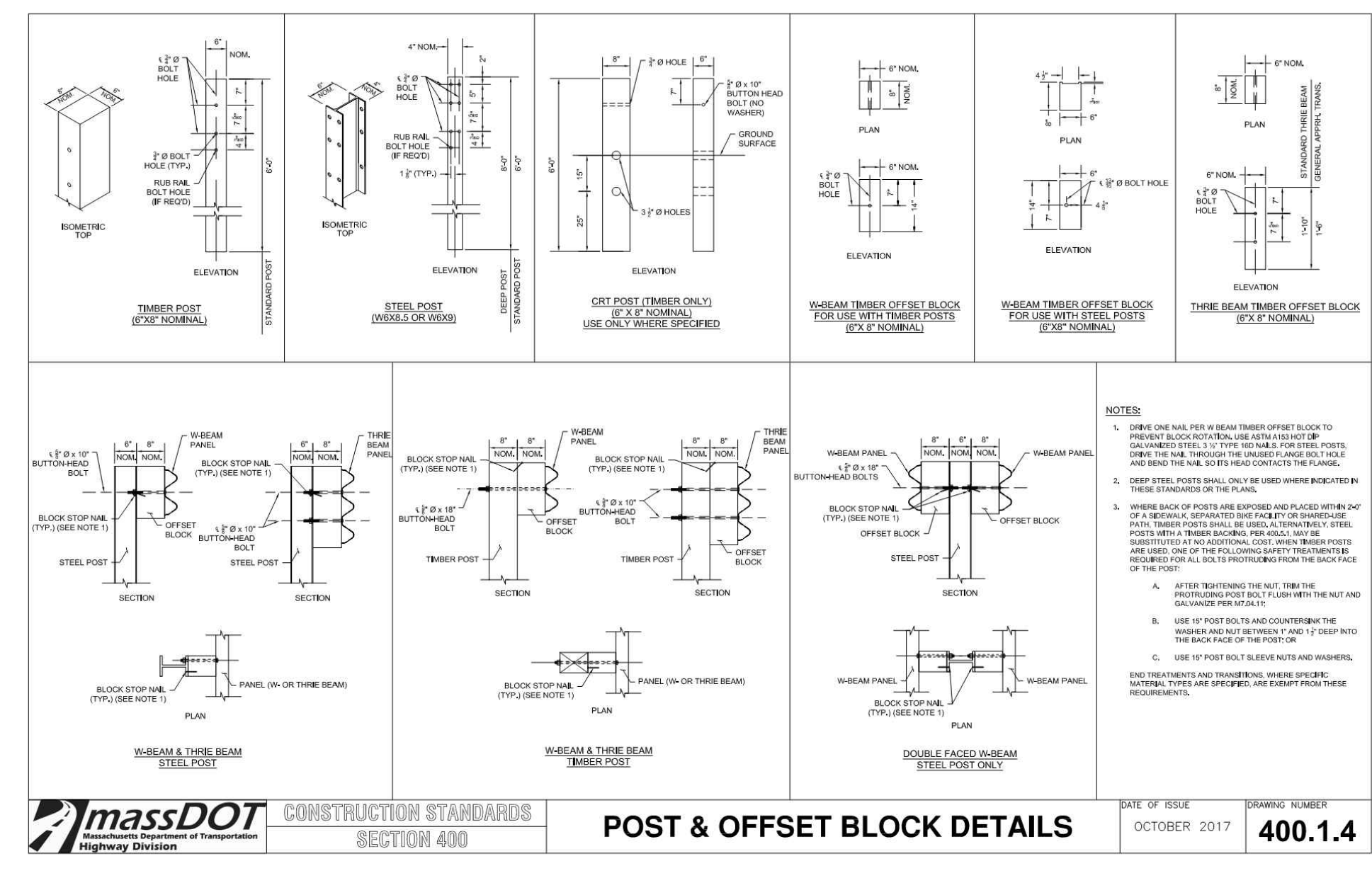
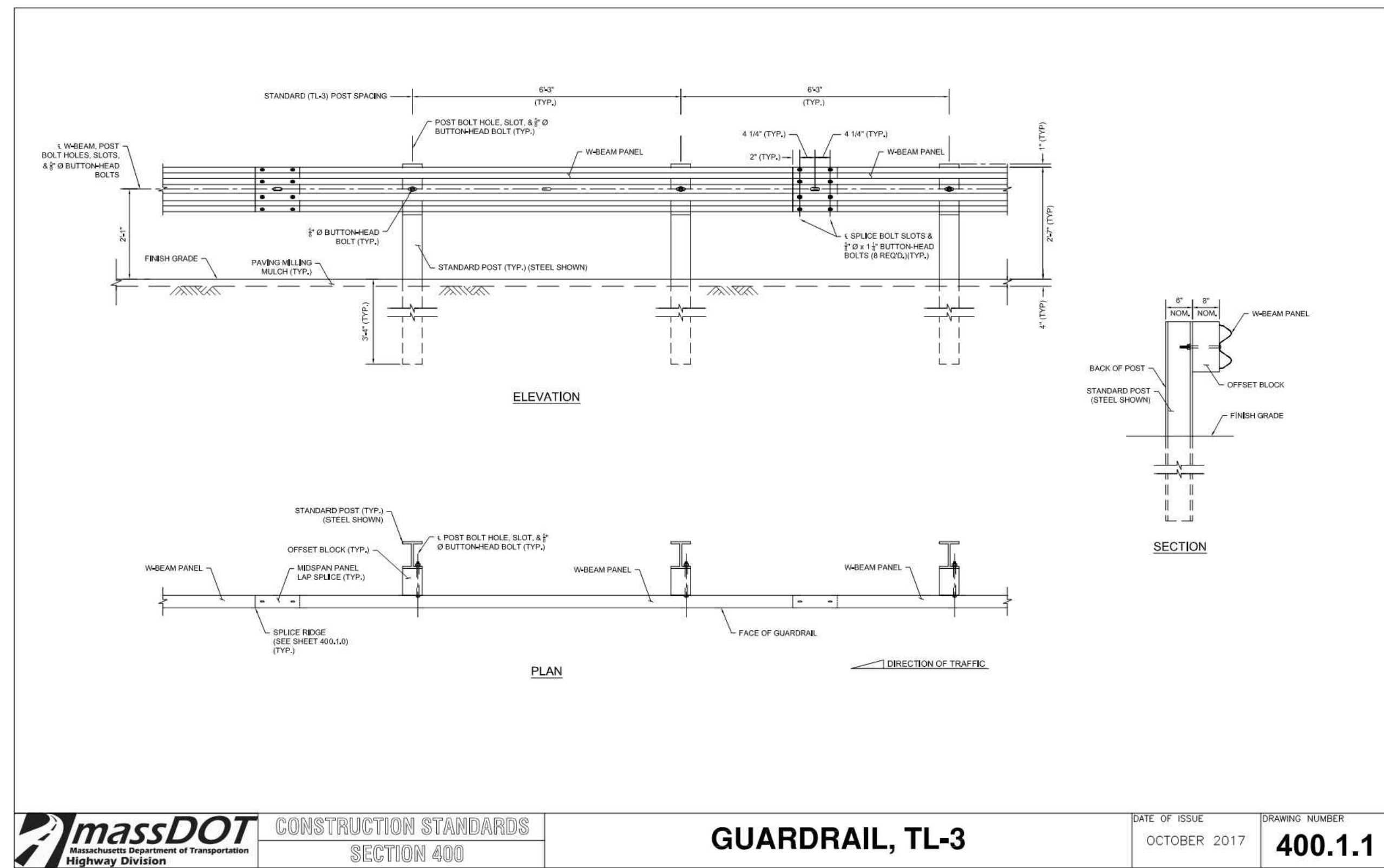
SITE DETAILS II	
Project No. 151018201	Drawing No. CS502
Date 05/06/2021	
Drawn By OOE	
Checked By JEL	

LANEAM PROJECT NO. 151018201



- NOTES:**
1. ALL DIMENSIONS OF STANDARD GUARDRAIL COMPONENTS, INCLUDING PANELS, POSTS, OFFSET BLOCKS, BOLTS, NUTS, WASHERS AND HOLES, ARE BASED UPON ENGLISH UNIT CONVERSIONS OF THE AASHTO-ARTBA/AGC JOINT COMMITTEE TASK FORCE 13 REPORT: A GUIDE TO STANDARDIZING HIGHWAY BARRIER HARDWARE (<http://www.aashtot13.org/Barker-4hardware.php>).
 2. ALL GUARDRAIL MATERIALS SHALL CONFORM TO M8.07.0 UNLESS OTHERWISE INDICATED.
 3. APPROVAL BY THE ENGINEER IS REQUIRED WHERE A DIFFERING GUARDRAIL CONFIGURATION IS REQUIRED FOR CONSTRUCTABILITY BEYOND THE OPTIONS SHOWN IN THESE STANDARDS OR THE PLANS.
 4. THE BEGIN OR END STATION LABELS SHOWN IN THESE STANDARDS CORRESPOND TO THE STATION AND OFFSET CALLOUTS SPECIFIED IN THE PLANS.
 5. USE 12'-0" NOMINAL LENGTH PANELS UNLESS OTHERWISE INDICATED IN THESE STANDARDS OR THE PLANS.
 6. ALL LAP SPICES SHALL BE MIDSPAN UNLESS OTHERWISE SHOWN.
 7. LAP SPICES SHALL BE CONSTRUCTED WITH THE SPICE RIDGE ORIENTED DOWNSTREAM OF THE FINAL DIRECTION OF TRAFFIC IN THE NEAREST TRAVEL LANE. REORIENTING LAP SPICES FOR TEMPORARY TRAFFIC CONTROL IS NOT REQUIRED.
 8. STANDARD POSTS SHALL BE STEEL OR TIMBER, UNLESS OTHERWISE INDICATED IN THE PLANS, FABRICATED TO THE DIMENSIONS SHOWN ON 400.1.4. POSTS OF A SINGLE MATERIAL TYPE SHALL BE USED THROUGHOUT AN ENTIRE RUN OF GUARDRAIL; EXCEPTIONS ARE ALLOWED ONLY WHEN SPECIFIC MATERIAL TYPES ARE REQUIRED FOR TRANSITIONS, END TREATMENTS, AND/OR ANCHORAGES.
 9. DEEP POST SHALL ONLY BE USED WHERE INDICATED IN THESE STANDARDS OR THE PLANS.
 10. OFFSET BLOCKS, WHERE REQUIRED, SHALL BE TIMBER AND FABRICATED TO THE NOMINAL DIMENSIONS SHOWN ON 400.1.4. PLASTIC OR COMPOSITE OFFSET BLOCKS OF THE SAME NOMINAL DIMENSIONS THAT ARE LISTED ON THE QUALIFIED CONSTRUCTION MATERIALS LIST MAY BE SUBSTITUTED. OFFSET BLOCKS OF A SINGLE MATERIAL TYPE SHALL BE USED THROUGHOUT AN ENTIRE RUN OF GUARDRAIL; EXCEPTIONS ARE ALLOWED ONLY WHEN SPECIFIC MATERIAL TYPES ARE REQUIRED FOR TRANSITIONS, END TREATMENTS, AND/OR ANCHORAGES.
 11. PAVEMENT MILLING MULCH, WHERE CALLED FOR IN THE STANDARDS, SHALL CONFORM TO SECTION 739.
 12. GUARDRAIL DELINEATORS, CONFORMING TO SECTION 601, SHALL BE INSTALLED AT 2' INTERVALS WITHIN 100' OF AN END TREATMENT OR TRAILING ANCHORAGE AND AT 100' INTERVALS IN ALL OTHER AREAS UNLESS OTHERWISE SHOWN IN THE PLANS.
 13. MINIMUM OFFSET DISTANCE FROM FACE OF W-BEAM PANEL TO A FIXED (NON-BREAKAWAY) OBJECT SHALL BE 48" FOR TL-2 AND 60" FOR TL-3.

massDOT CONSTRUCTION STANDARDS SECTION 400 GENERAL NOTES DATE OF ISSUE OCTOBER 2017 DRAWING NUMBER 400.1.0



WOODEN BEAM GUARDRAIL (MASSDOT STANDARD DETAIL)

N.T.S.

Date	Description	No.
REVISIONS		

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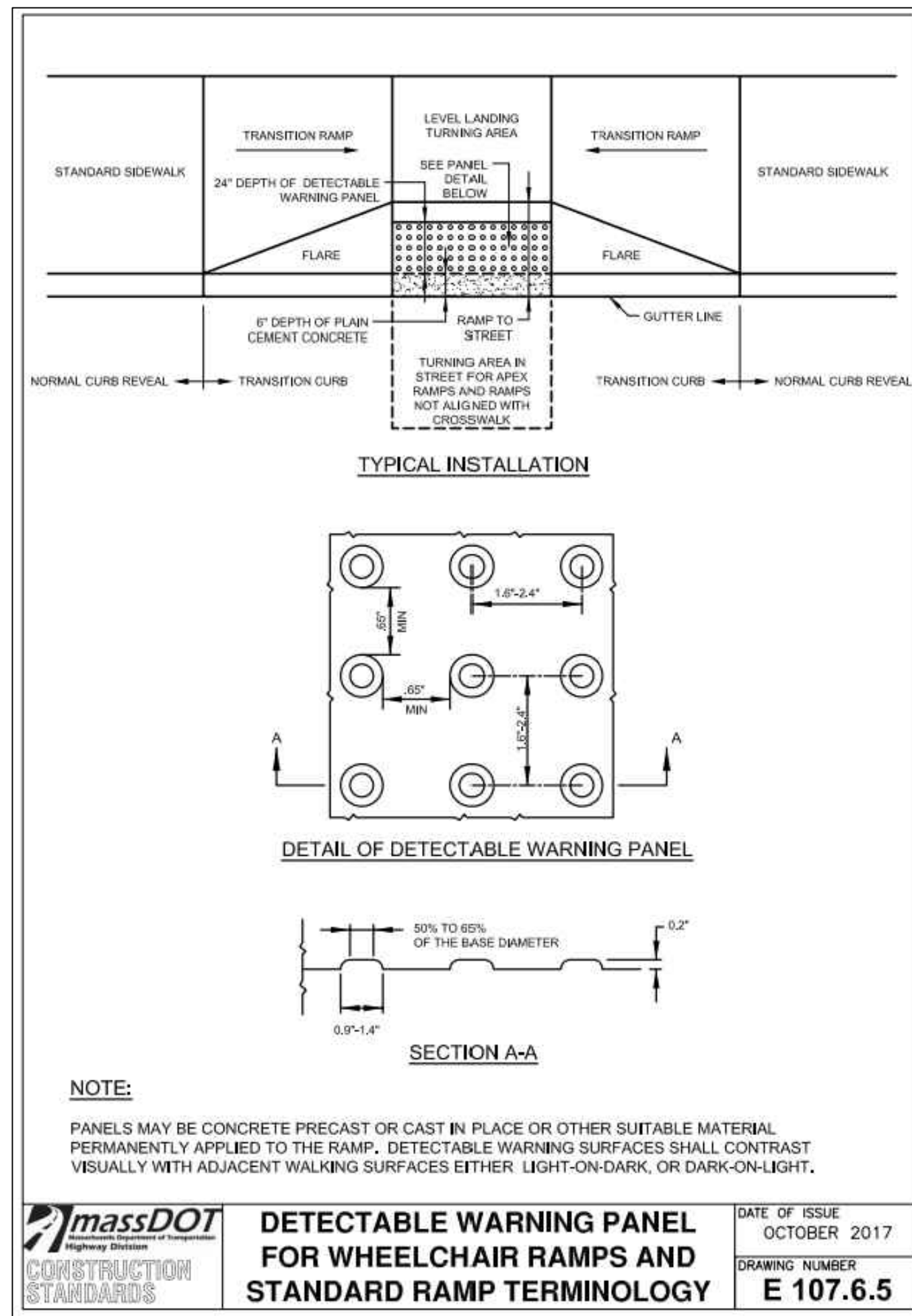
MALDEN / MELROSE
MIDDLESEX COUNTY MASSACHUSETTS

Drawing Title
SITE DETAILS III

Project No. 151018201	Drawing No. CS503
Date 05/06/2021	
Drawn By OOE	
Checked By JEL	

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LANEAM PROJECT NO. 151018201



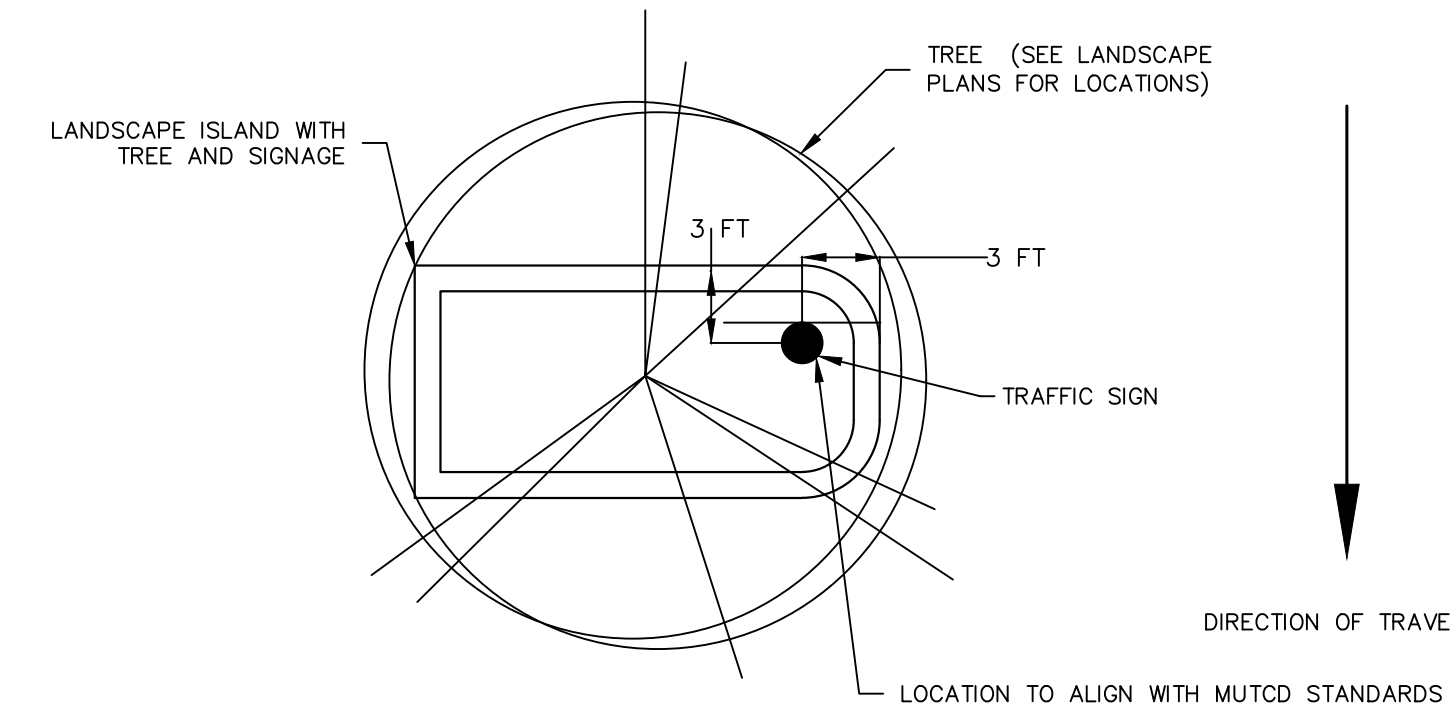
1 DETECTABLE ADA PANEL
N.T.S.

ROADWAY PROFILE GRADE	* HIGH SIDE TRANSITION LENGTH
%	ENGLISH UNITS
=0%	6'-6"
>0% TO 1%	7'-8"
>1% TO 2%	9'-0"
>2% TO 3%	11'-0"
>3% TO 4%	14'-0"
>4% TO 5%	15'-0" MAX.

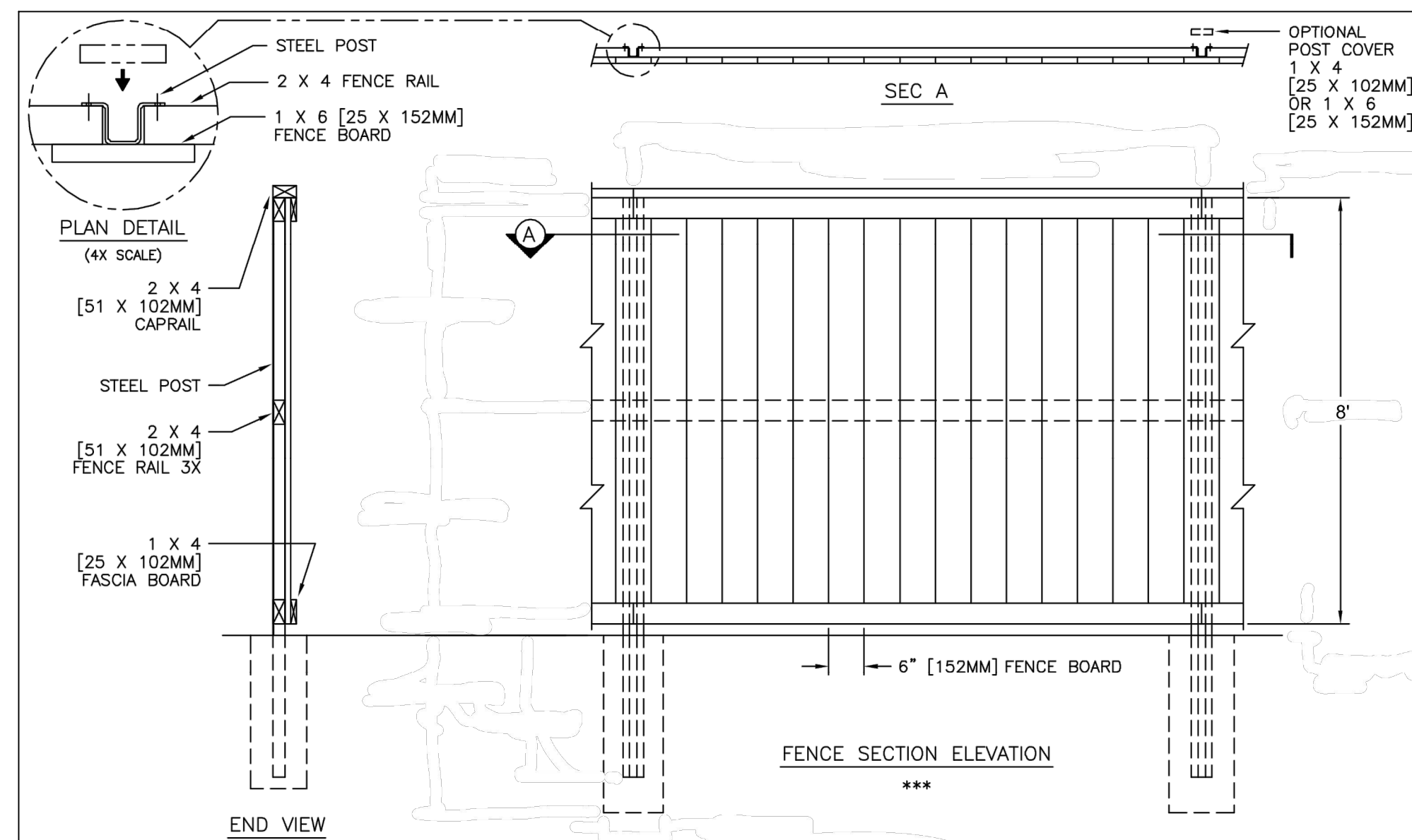
NOTE:
1. * BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6"

E107.9R

2 TRANSITION LENGTH FOR CURB RAMPS
N.T.S. SOURCE: MASSACHUSETTS DEPARTMENT OF TRANSPORTATION



3 SIGNAGE LOCATION AT LANDSCAPED ISLAND
N.T.S.



4 WOOD BOARD ON BOARD FENCE
N.T.S.

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REVISIONS		
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<p>Project 735 NEWBURYPORT TURNPIKE/ 320 STATE HIGHWAY MALDEN / MELROSE MIDDLESEX COUNTY MASSACHUSETTS</p>		
<p>Drawing Title SITE DETAILS IV</p>		
Project No.	Drawing No.	
151018201	CS504	
Date		
05/06/2021		
Drawn By		
Checked By	<p>Checked By JEL</p>	

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LANEAM PROJECT NO. 151018201

VILKOMIR CEMETERY

BUILDING
94,095± SF
459' X 205' (DIMENSIONS TO BE REVIEWED)
107 CAR PARKING STALLS
(60 STALLS IN MALDEN, 47 STALLS IN MELROSE)
16 TRAILER PARKING STALLS
7 BOX TRUCK PARKING STALLS
1 DRIVE-IN DOOR
FFE=69.70

MELROSE CITY LINE
MALDEN CITY LINE

PEABODY MOBILE
ESTATES
(1 STORY BUILDINGS)

NEW ENGLAND
TELEPHONE &
TELEGRAPH CO.

Date	Description	No.
REVISIONS		

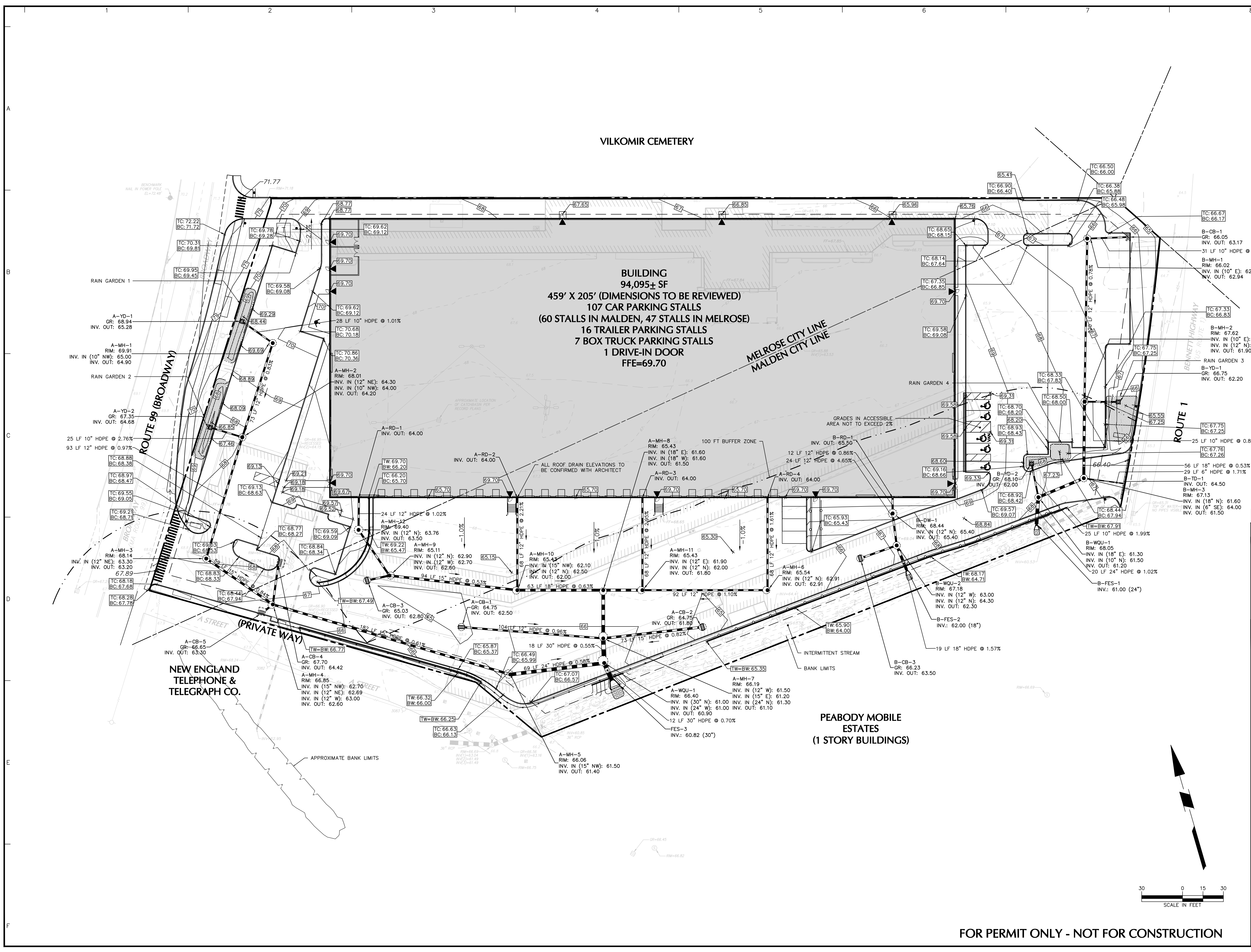
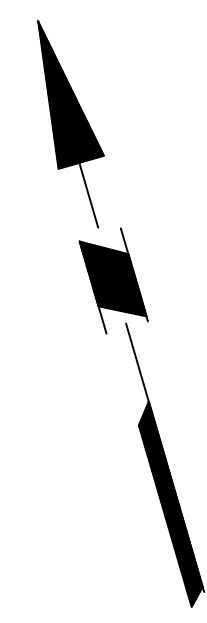
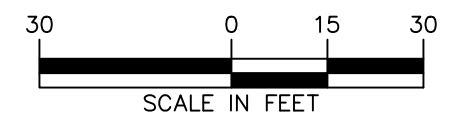
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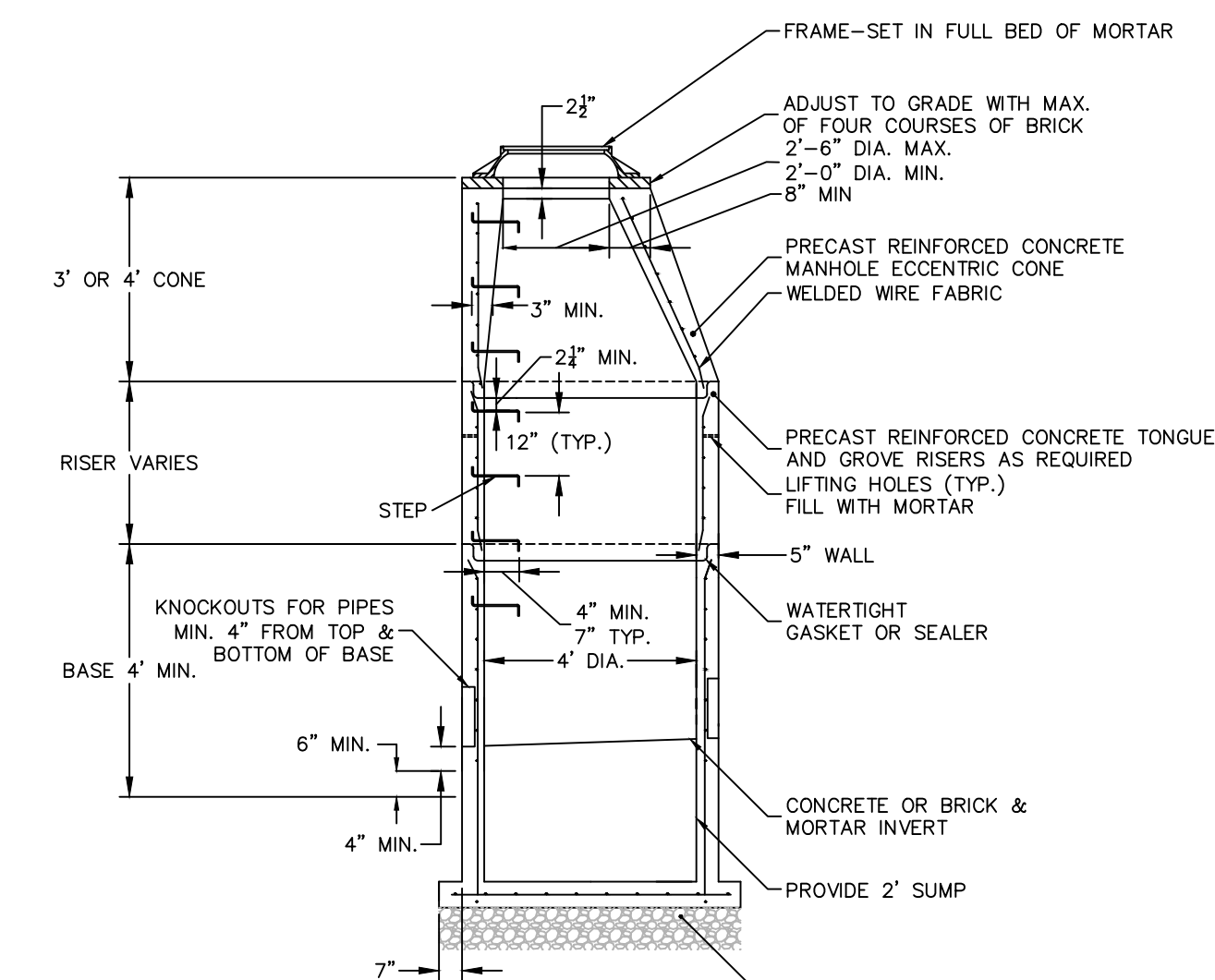
Project
**735 NEWBURYPORT
TURNPIKE/ 320 STATE
HIGHWAY**
MALDEN / MELROSE
MIDDLESEX COUNTY MASSACHUSETTS
Drawing Title

**GRADING &
DRAINAGE PLAN**

Project No. 151018201	Drawing No. CG101
Date 08/09/2021	
Drawn By HES	
Checked By JEL	

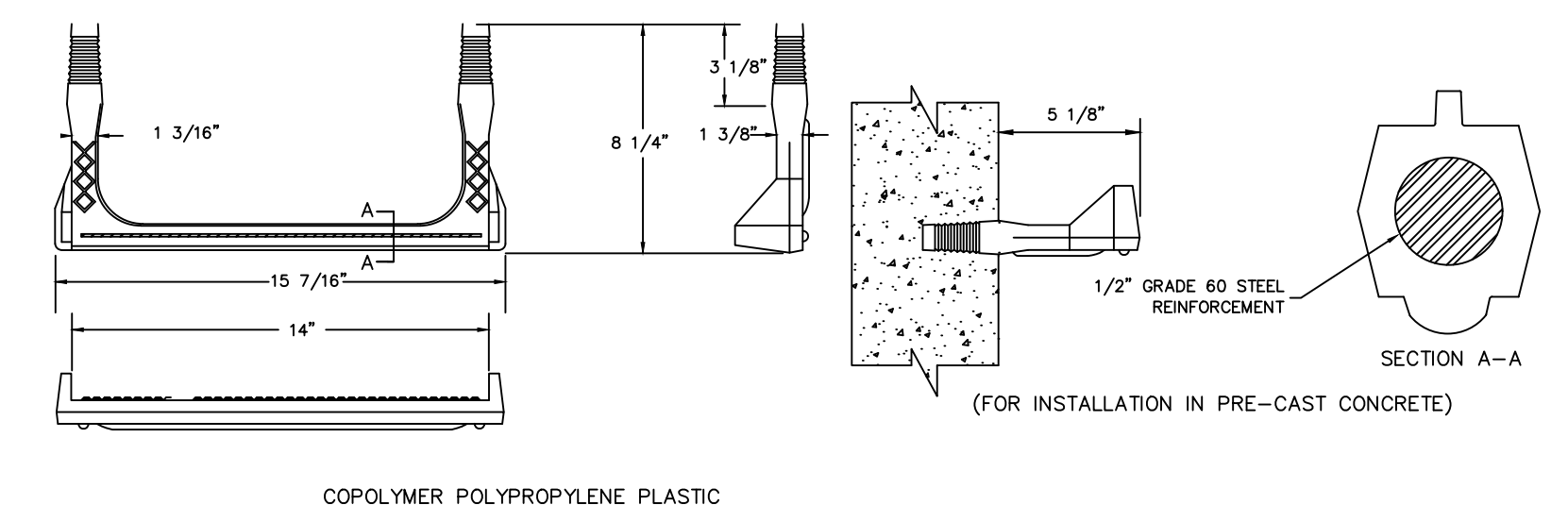
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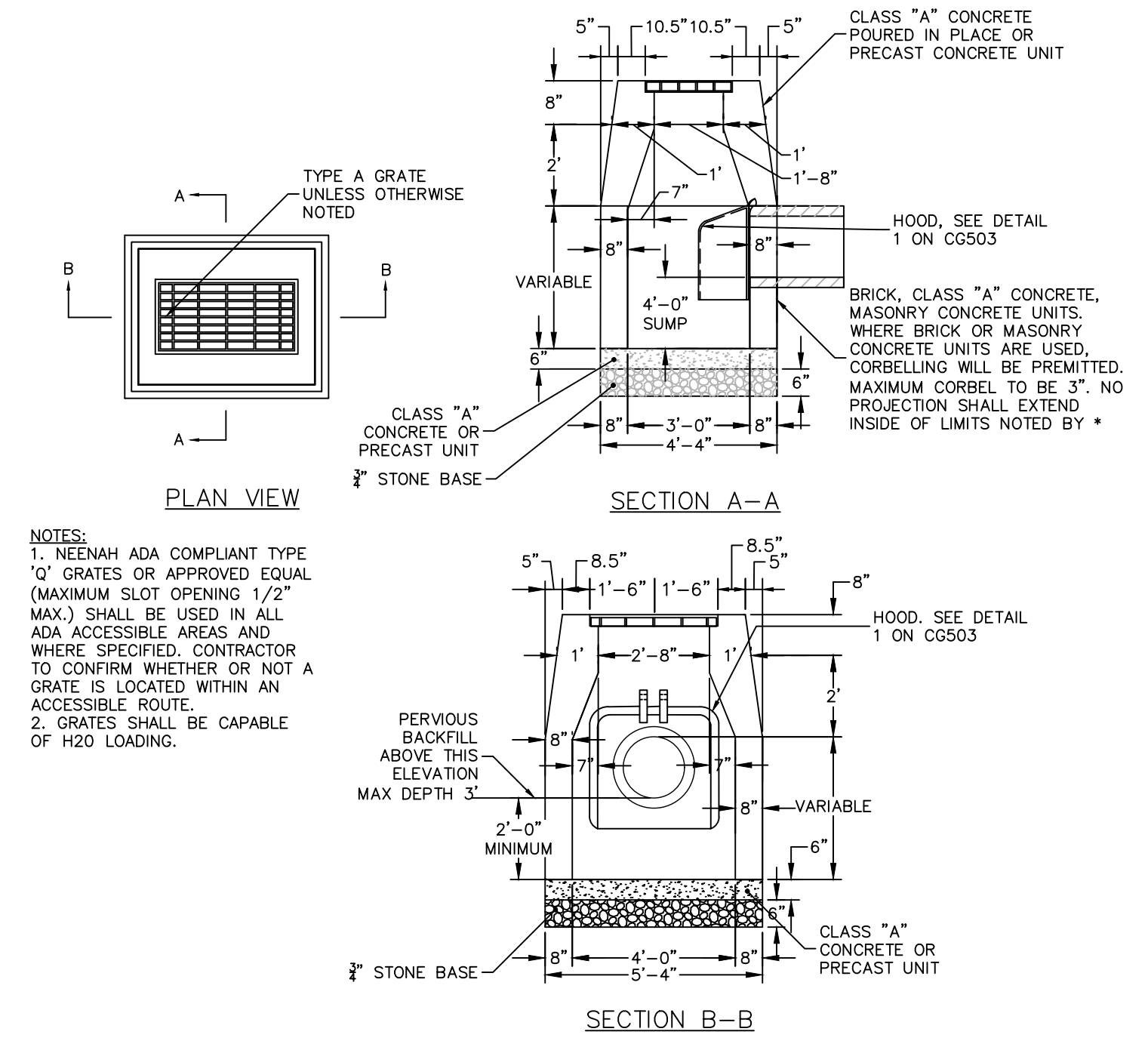


NOTES:
 1. 5' OR 6' DIA. PRECAST BASES MAY BE USED WHEN REQUIRED DUE TO SIZE OR NUMBER OF PIPES AT THE MANHOLE. PRECAST REDUCERS WILL BE PLACED ABOVE THE 5' OR 6' BASES AS DIRECTED BY THE ENGINEER. WALL THICKNESS TO INCREASE 1" FOR EACH 1' OF INSIDE DIAMETER INCREASE. MINIMUM 6" WALL DIMENSION SHOULD BE PROVIDED BETWEEN ALL PIPES.
 2. FRAME DIAMETER OF 3'-3" WITH 4" FLANGE MUST BE USED WHEN THE TOP DIA. OF THE PRECAST CONE IS LESS THAN 3'-6". ALL OTHER FRAME DIMENSIONS ARE TO REMAIN THE SAME.
 3. MINIMUM CONCRETE COMPRESSIVE STRENGTH OF $F_c = 4000$ PSI SHALL BE OBTAINED PRIOR TO SHIPPING.

1 STORM MANHOLE
N.T.S.

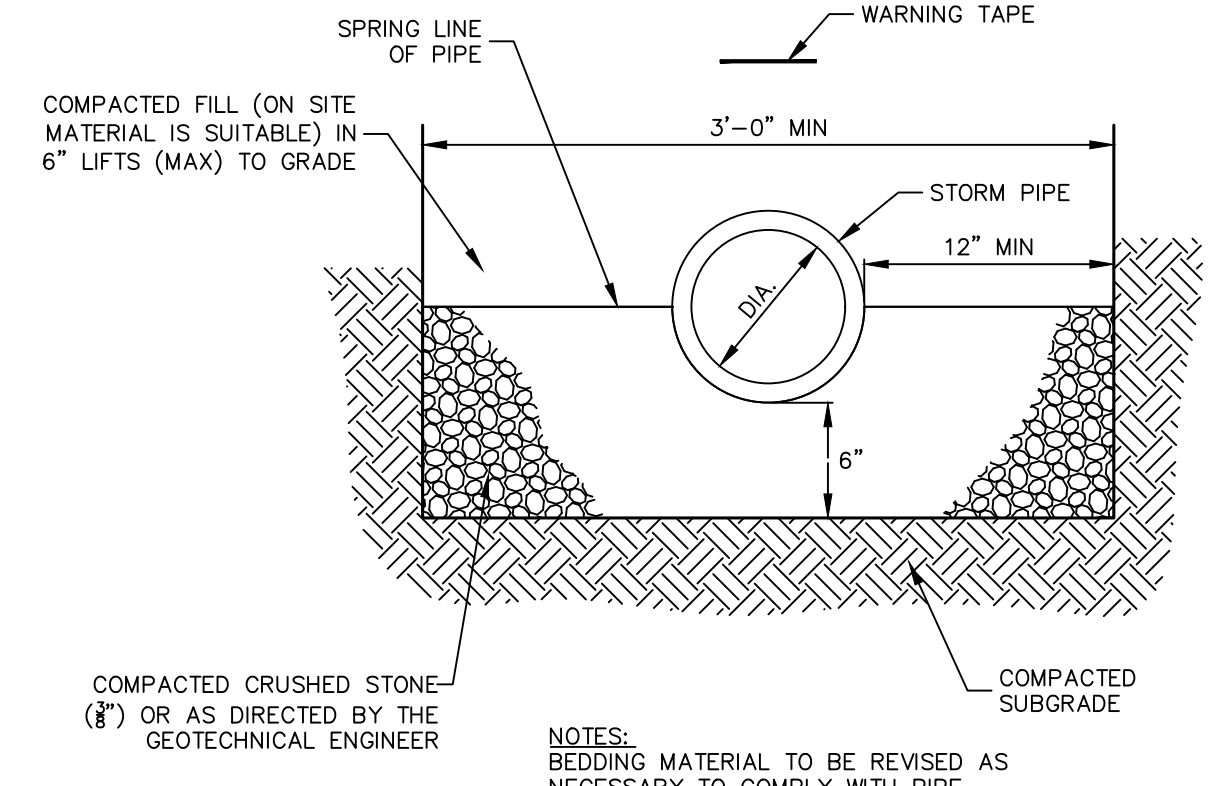


2 PLASTIC MANHOLE STEP
N.T.S.

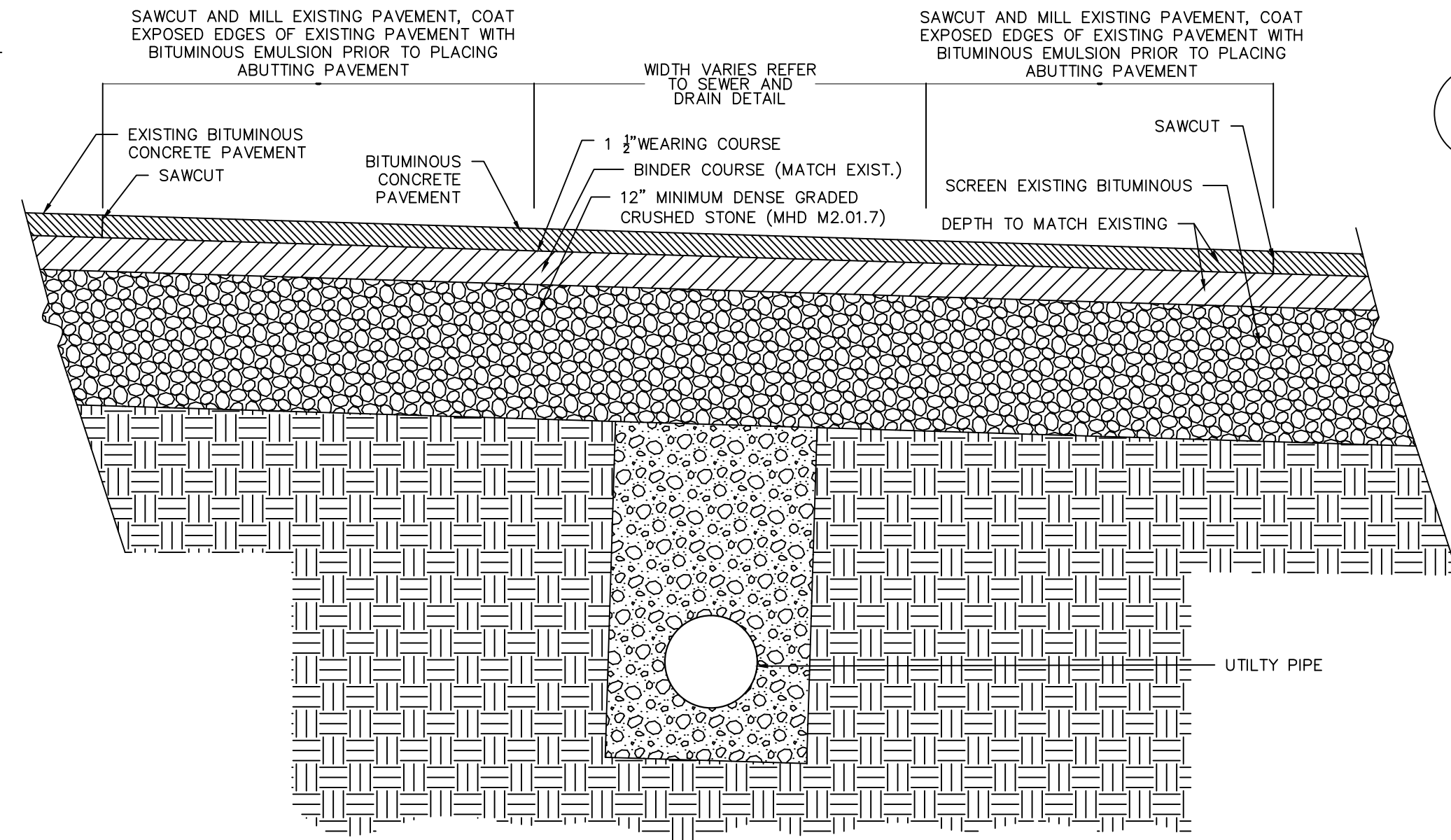


NOTES:
 1. NEENAH ADA COMPLIANT TYPE "D" GRATES OR APPROVED EQUAL (MAXIMUM SLOT OPENING 1/2" MAX.) SHALL BE USED IN ALL ADA ACCESSIBLE AREAS AND WHERE SPECIFIED, CONTRACTOR TO CONFIRM WHETHER OR NOT A GRATE IS LOCATED WITHIN AN ACCESSIBLE ROUTE.
 2. GRATES SHALL BE CAPABLE OF H2O LOADING.

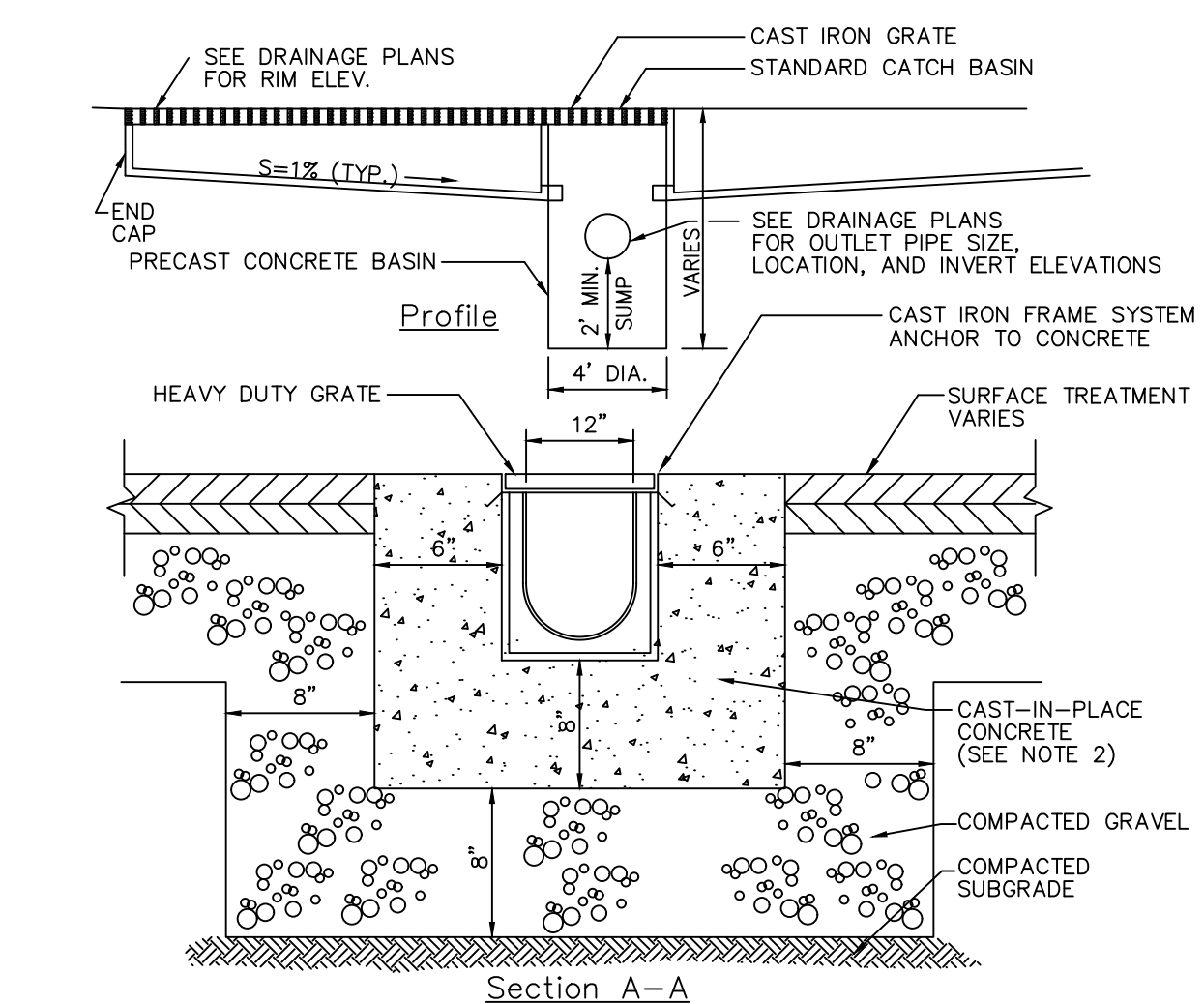
3 CATCH BASIN WITH HOOD
N.T.S.



4 STORM PIPE BEDDING
N.T.S.

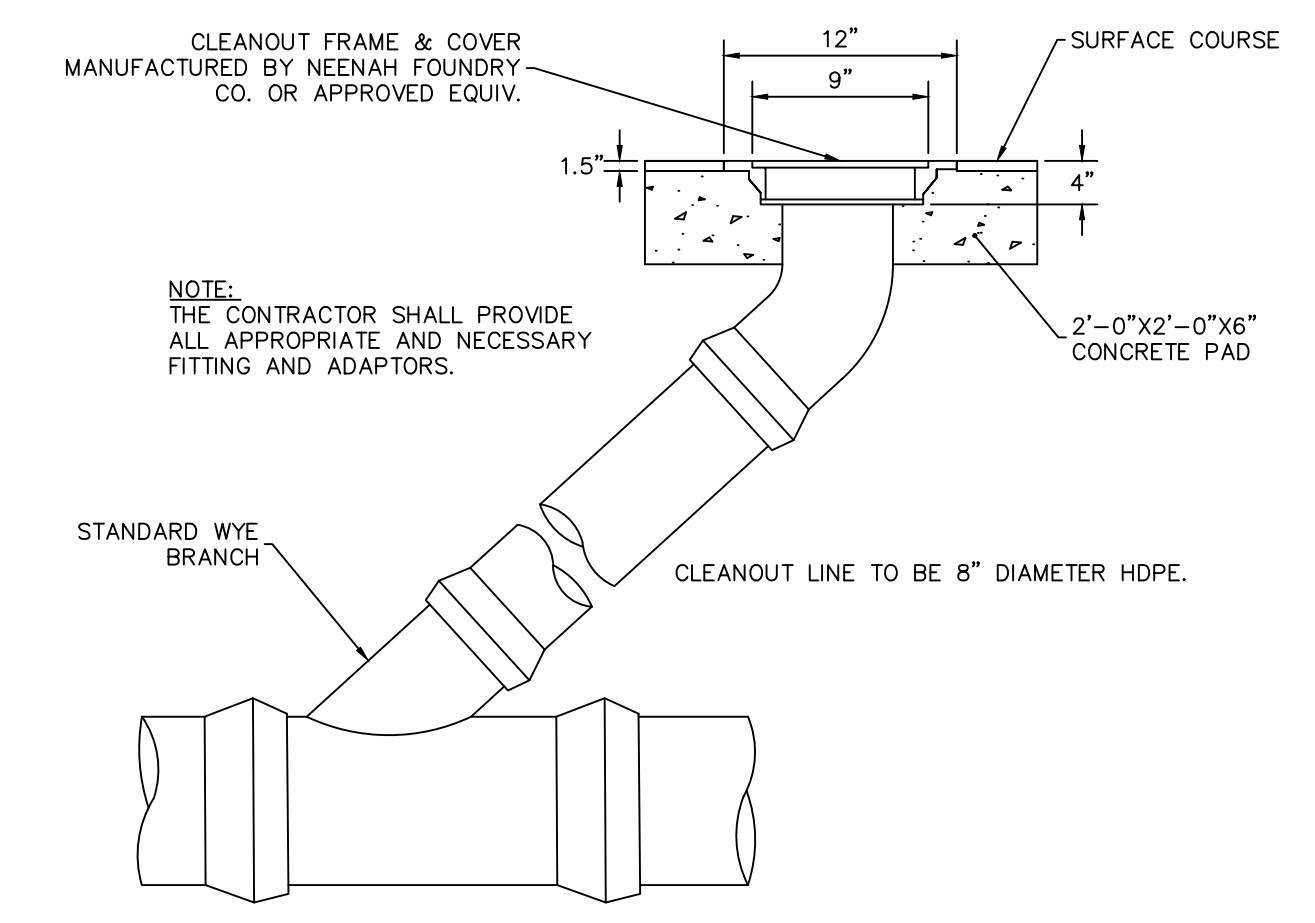


5 PAVEMENT PATCH
N.T.S.

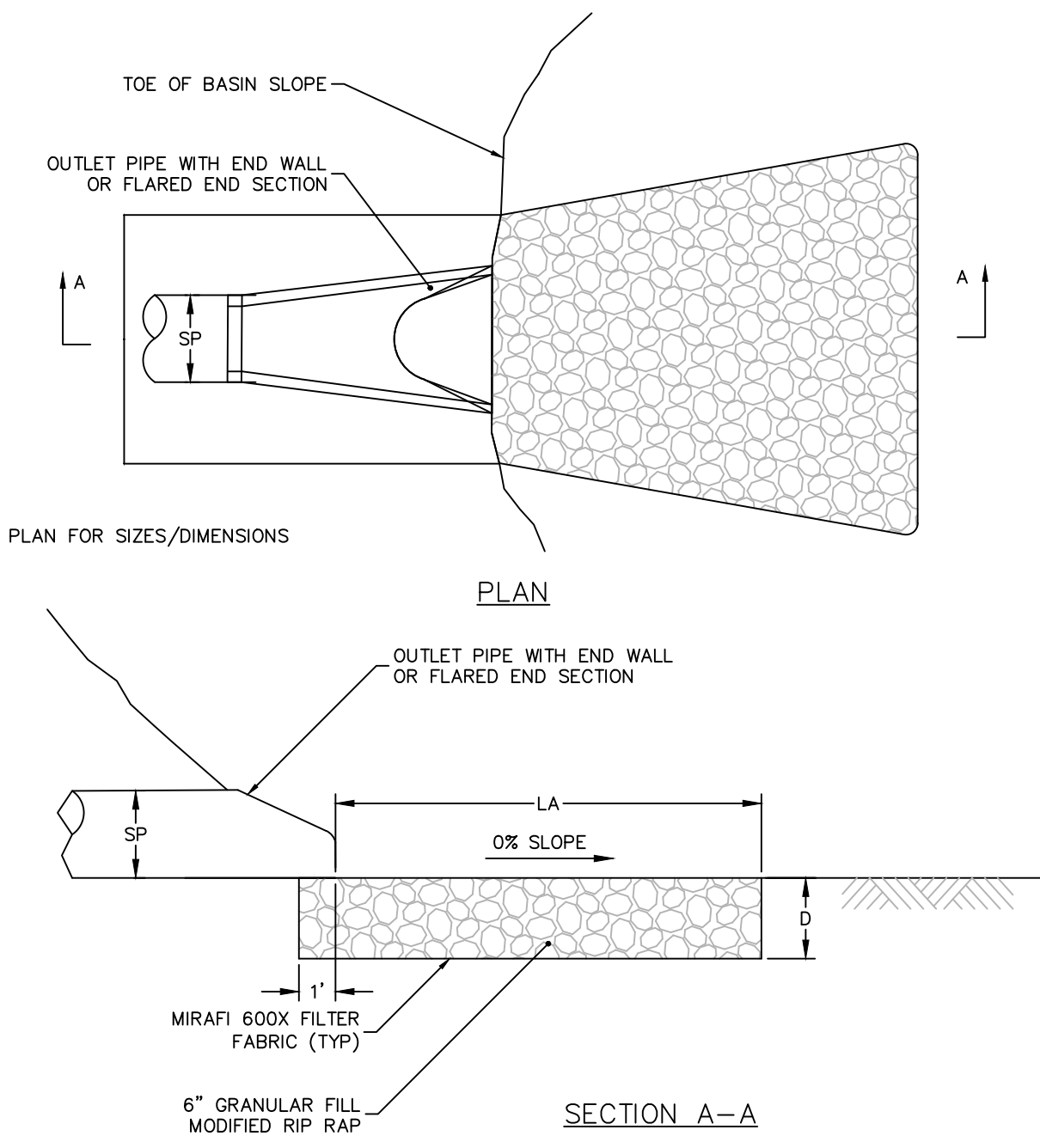


NOTES:
 1. TRENCH DRAIN SHALL BE HEAVY DUTY TYPE DESIGNED FOR HL-93 LOADING.
 2. CONCRETE SHALL BE COMPRESSIVE STRENGTH 4500 PSI, TYPE II CEMENT.
 3. TRENCH DRAIN GRATE SHALL MEET AMERICANS WITH DISABILITY ACT (ADA) REGULATIONS WHEN PLACED IN ACCESSIBLE ROUTES.
 4. ACO USA TRENCH DRAINS OR APPROVED EQUAL SHALL BE USED. SEE PLAN FOR OUTLET LOCATION AND SHALL BE COORDINATED WITH DRAIN MANUFACTURER.

6 TRENCH DRAIN
N.T.S.



7 CLEANOUT (C.O.)
N.T.S.

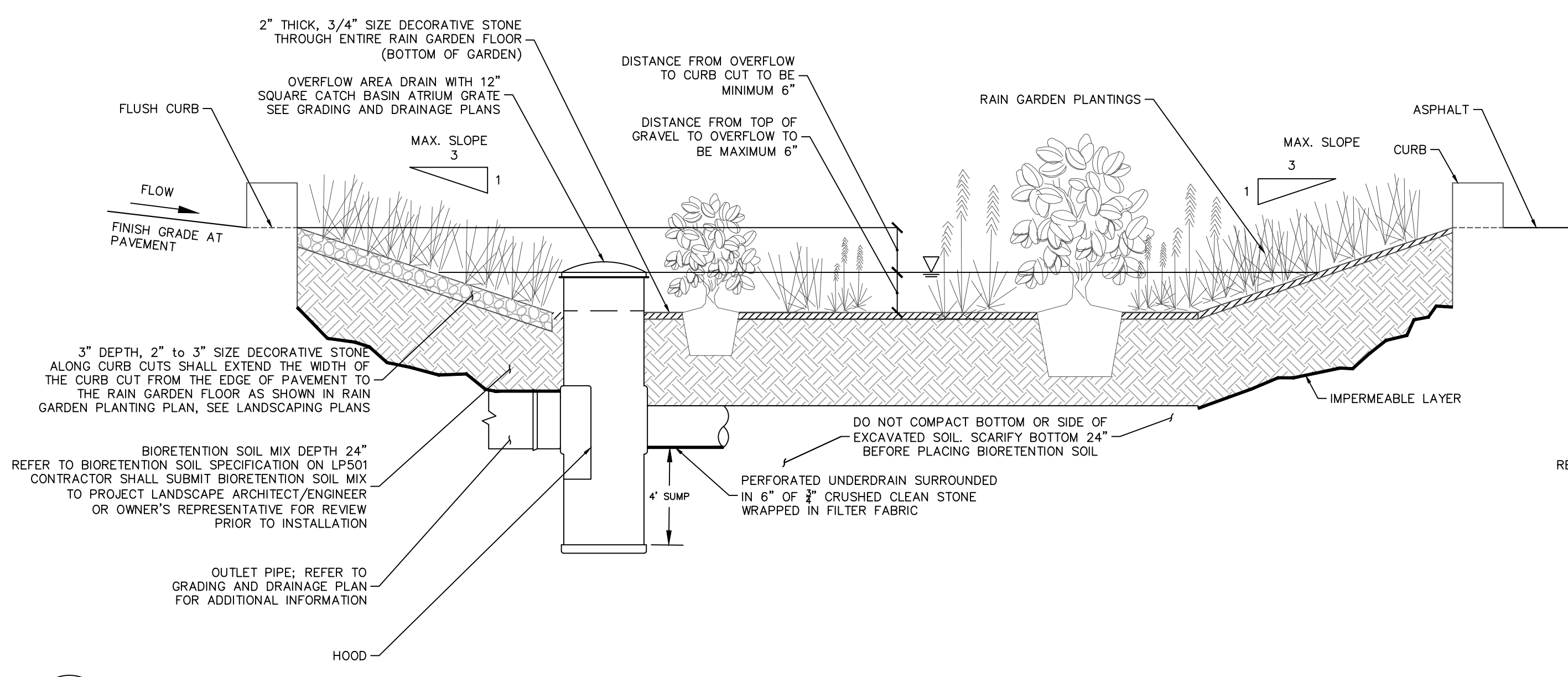


NOTES:
 1. SEE GRADING AND DRAINAGE PLAN FOR SIZES/DIMENSIONS

8 FLARED END SECTION
N.T.S.

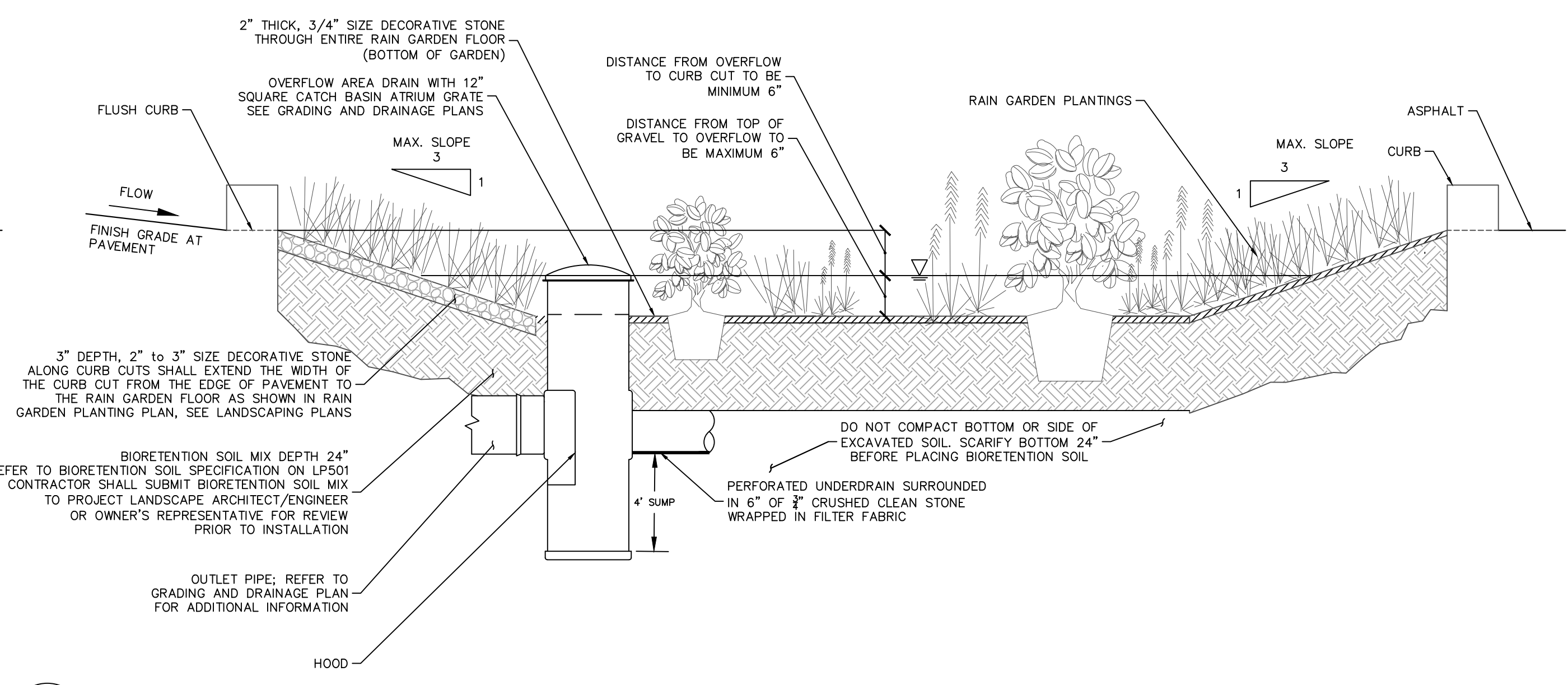
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Project 735 NEWBURYPORT TURNPIKE/ 320 STATE HIGHWAY MALDEN / MELROSE MIDDLESEX COUNTY MASSACHUSETTS		
<p>GRADING & DRAINAGE DETAILS I</p>		
Project No.	Drawing No.	
151018201	CG501	
Date	05/06/2021	
Drawn By	MCP	
Checked By	JEL	



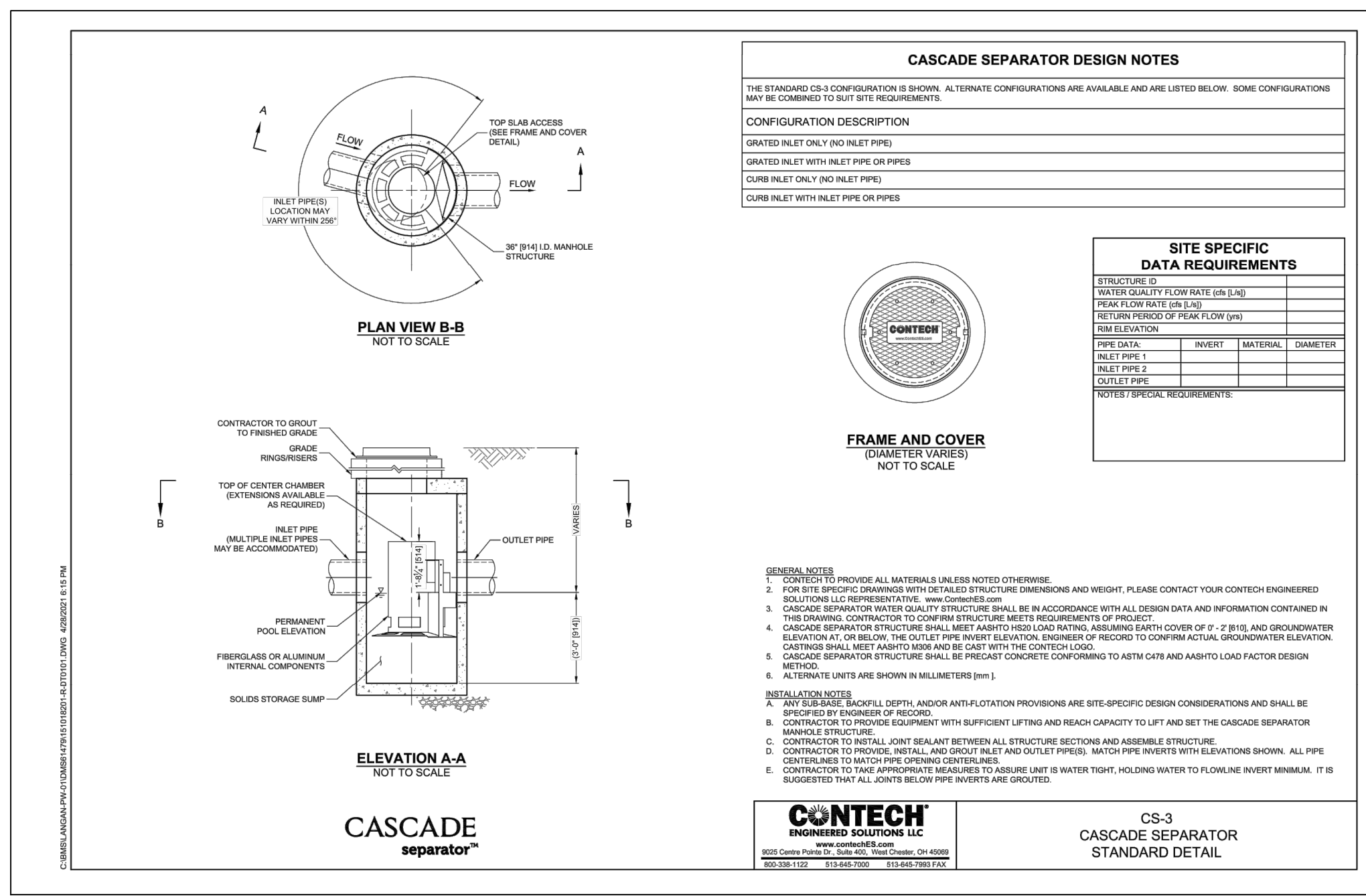
RAIN GARDEN 1 N.T.S.

1



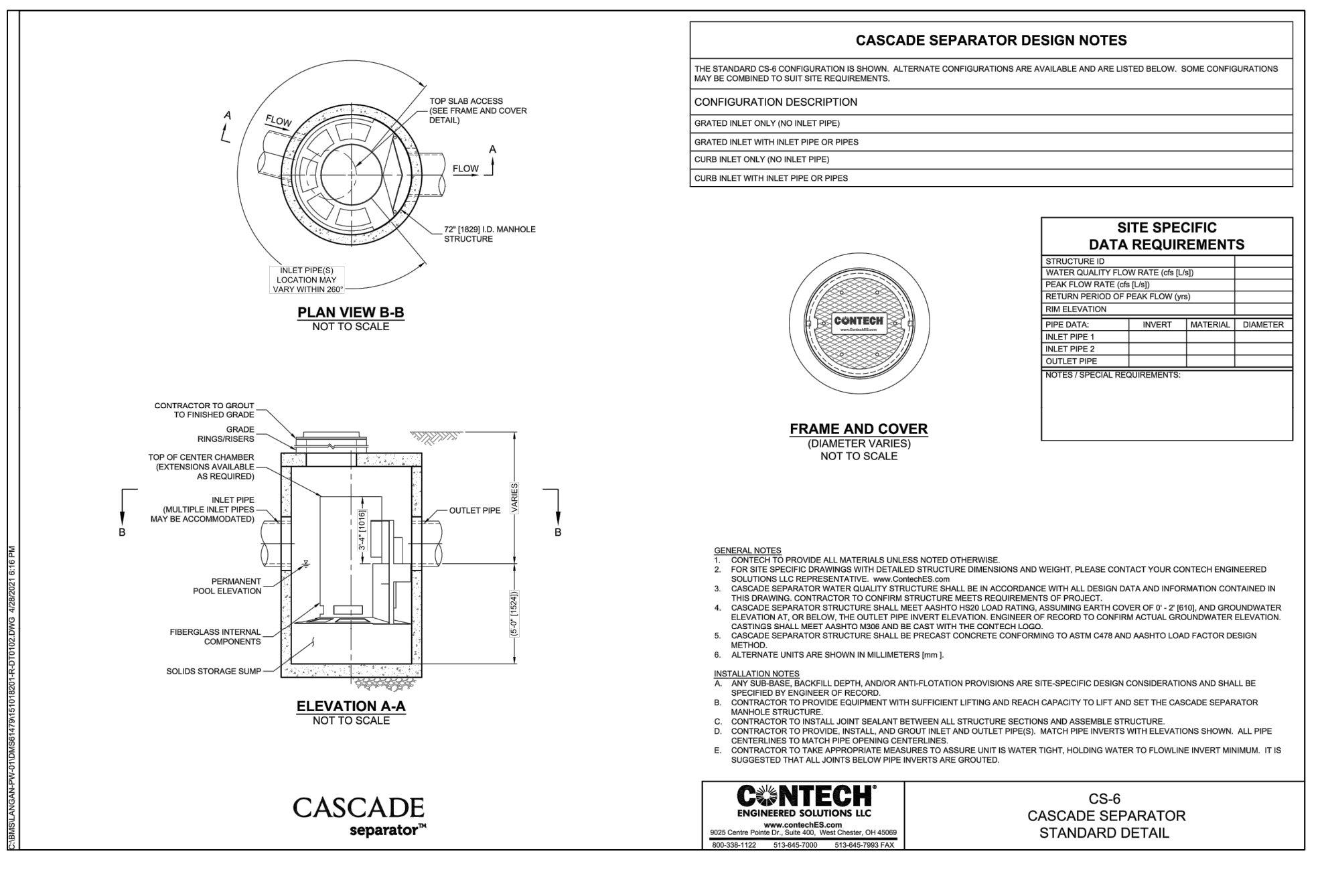
RAIN GARDEN 2, 3, & 4 N.T.S.

2



WATER QUALITY UNIT - CASCADE CS-3 N.T.S.

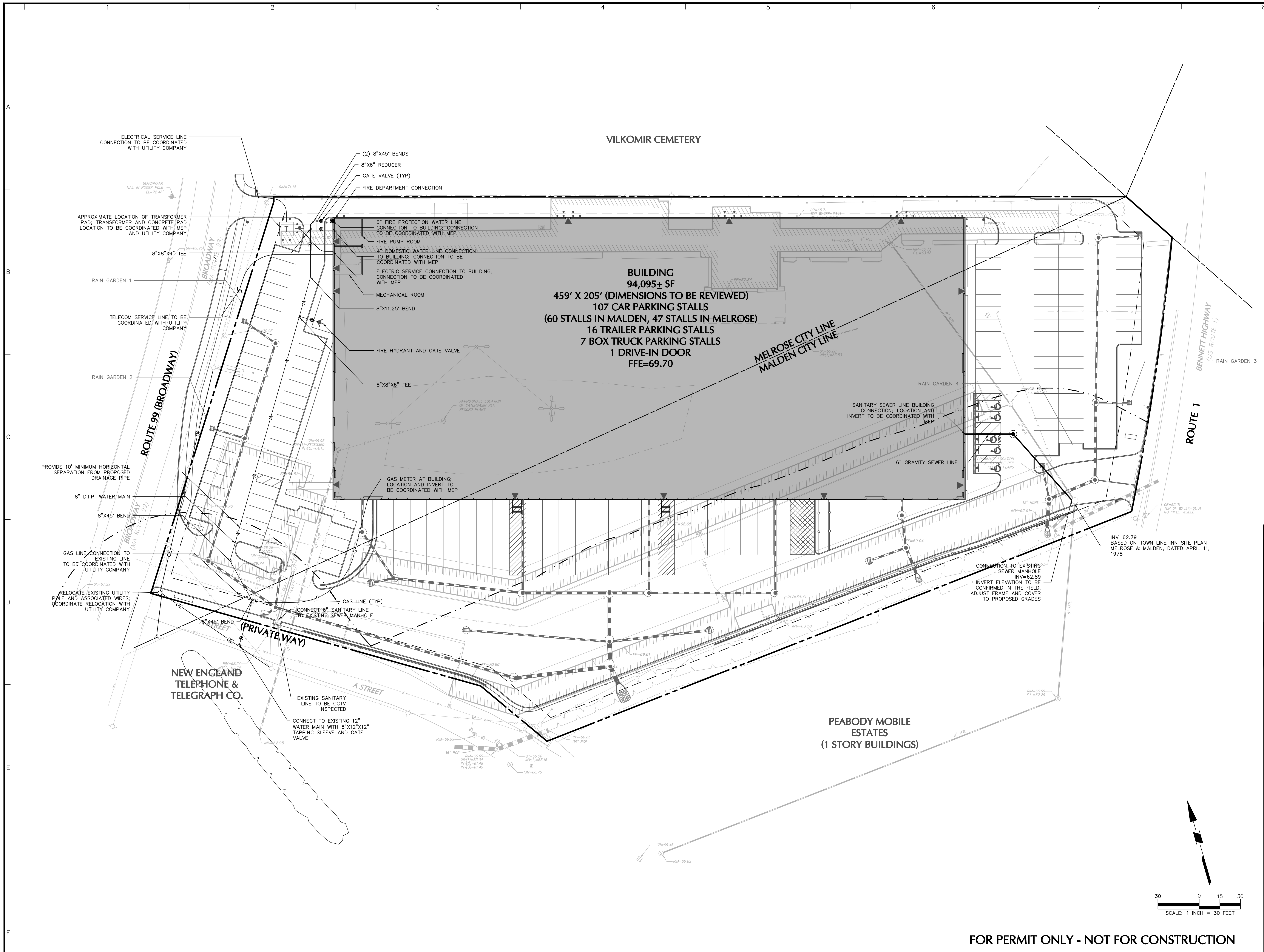
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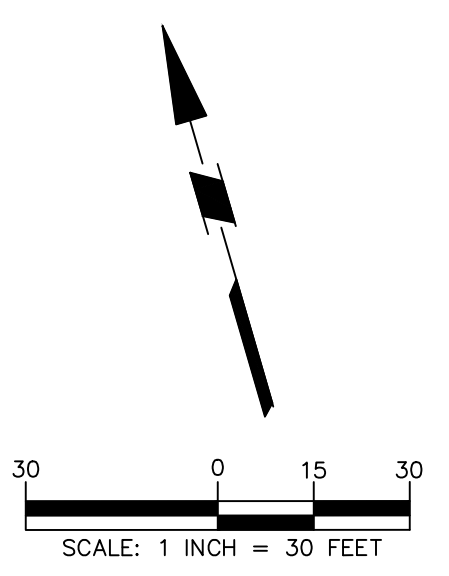
WATER QUALITY UNIT - CASCADE CS-6 N.T.S.

4

Date	Description	No.
REVISIONS		
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735 NEWBURYPORT TURNPIKE/ 320 STATE HIGHWAY		
MALDEN / MELROSE		
MIDDLESEX COUNTY MASSACHUSETTS		
Drawing Title		
GRADING & DRAINAGE DETAILS II		
Project No.	Drawing No.	
151018201	CG502	
Date	05/06/2021	
Drawn By	MCP	
Checked By	JEL	

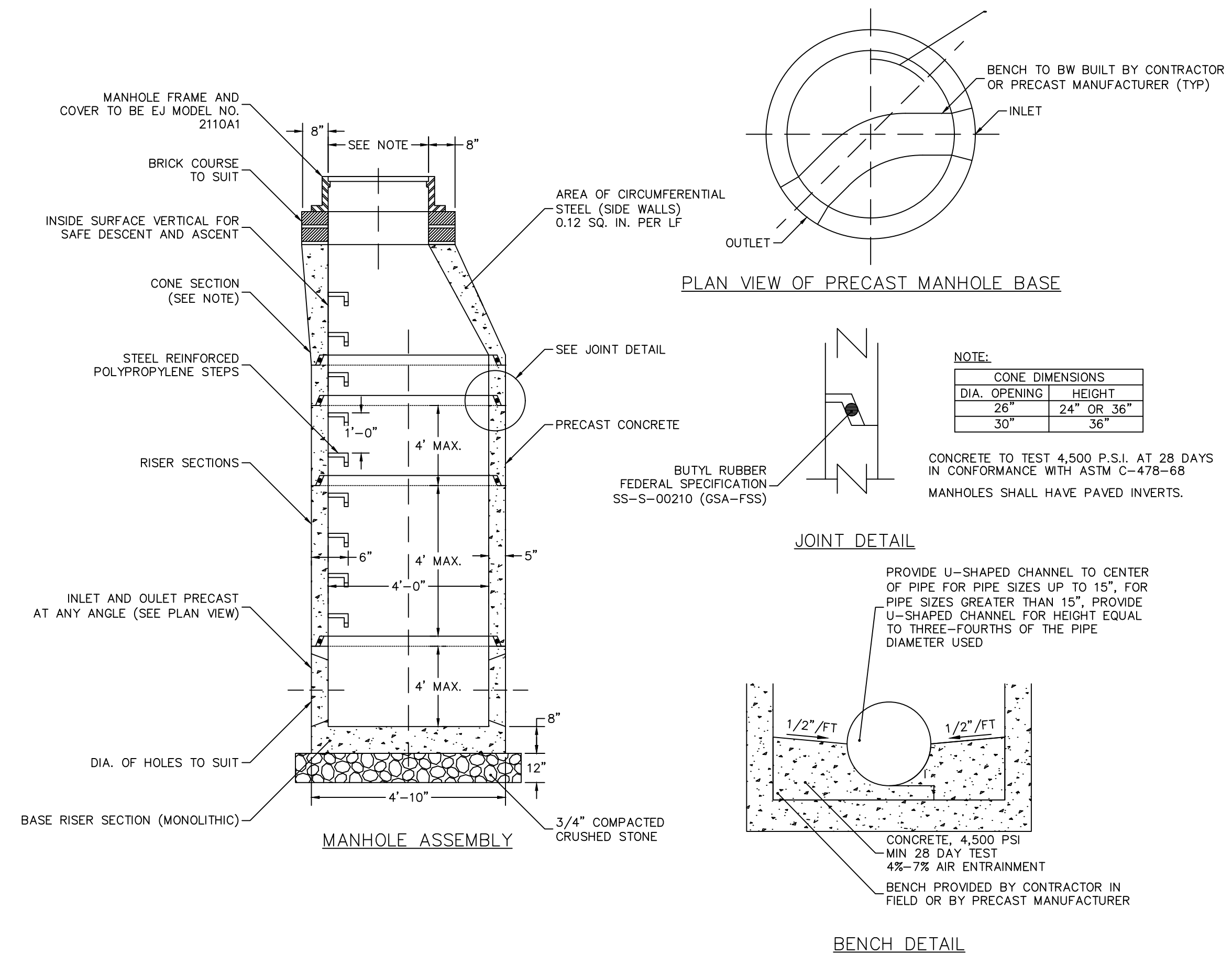


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735 NEWBURYPORT TURNPIKE/ 320 STATE HIGHWAY			
MALDEN / MELROSE			
MIDDLESEX COUNTY MASSACHUSETTS			
Drawing Title			
OVERALL UTILITY PLAN			
Project No.	Drawing No.		
151018201	CU101		
Date			05/06/2021
Drawn By			OOE
Checked By			JEL

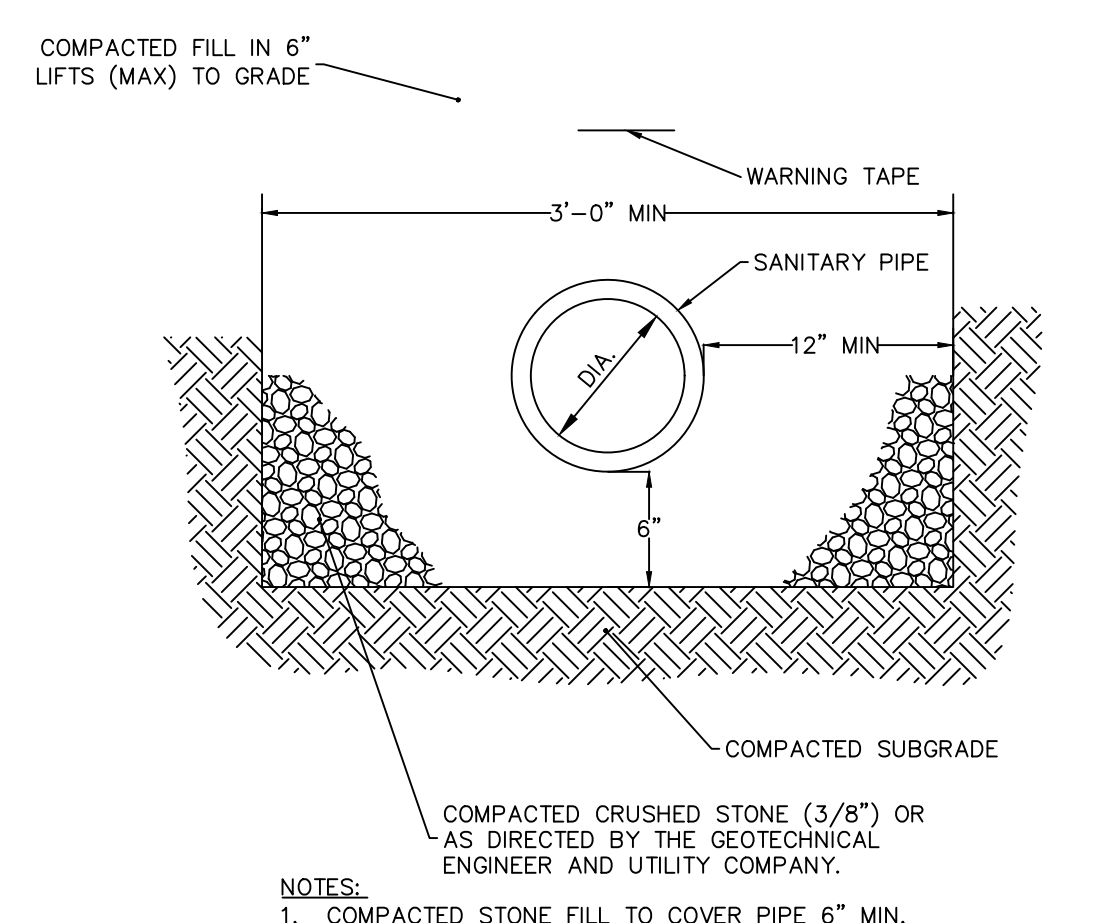


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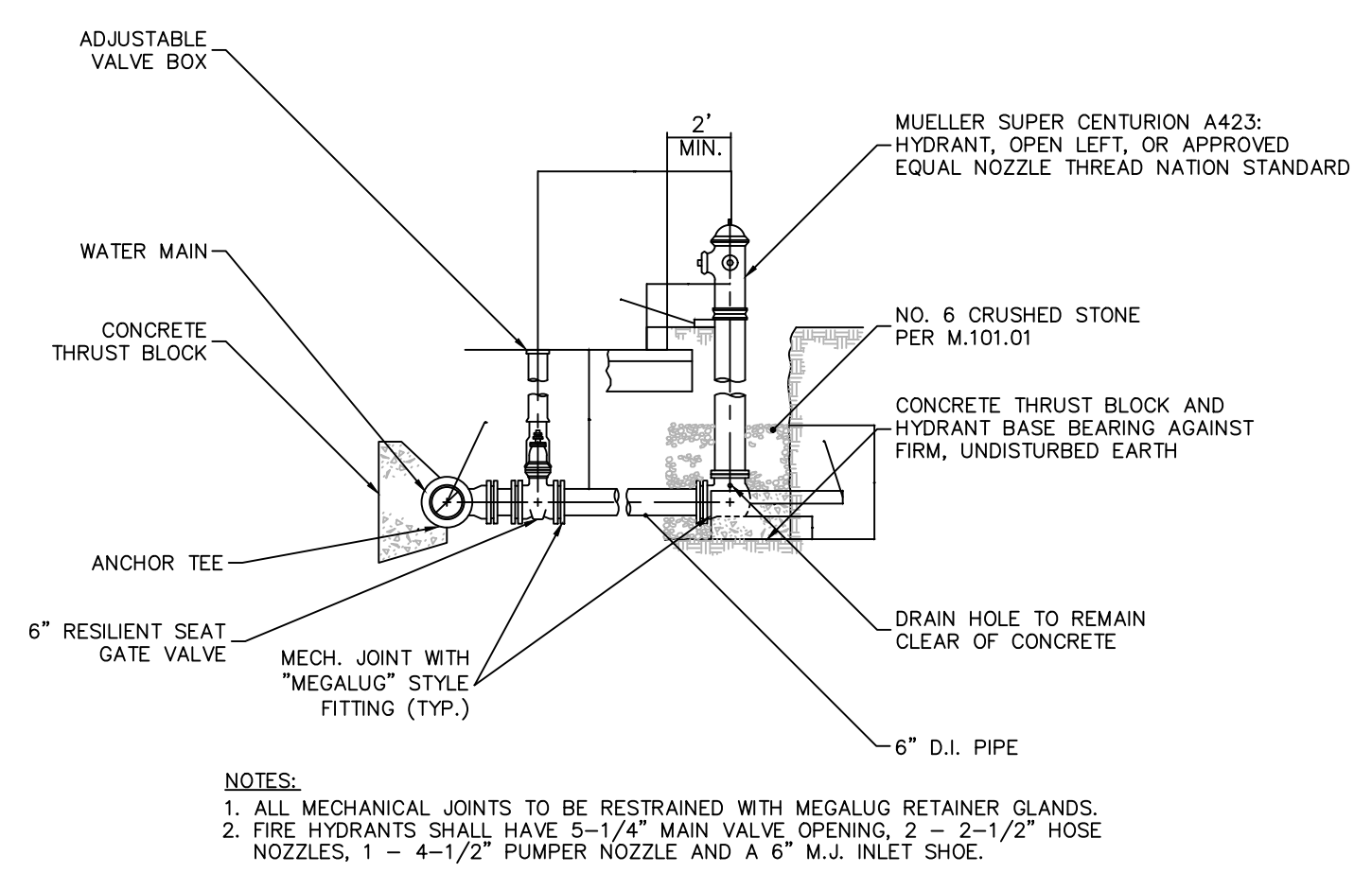
LANEAW PROJECT NO. 151018201



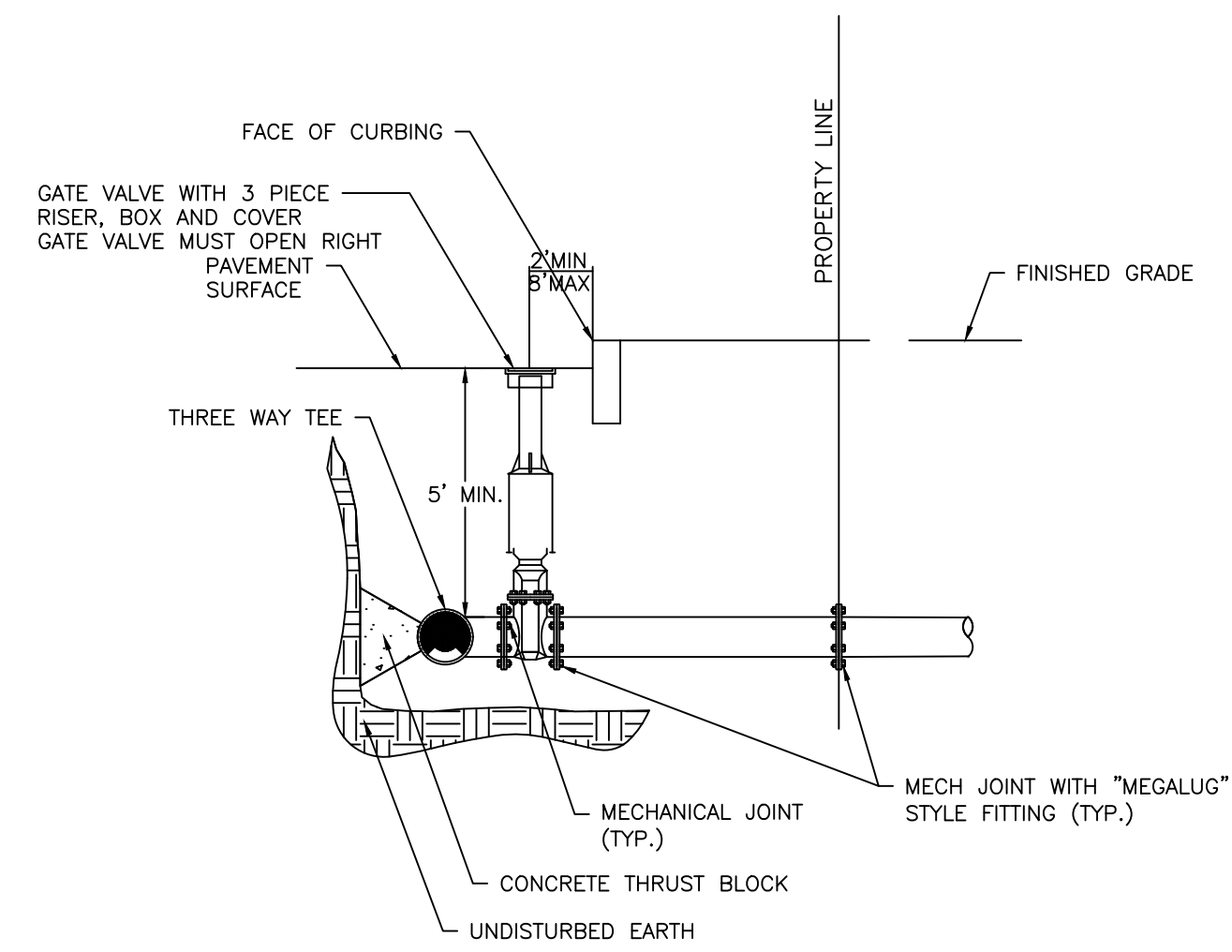
1 SANITARY MANHOLE
N.T.S.



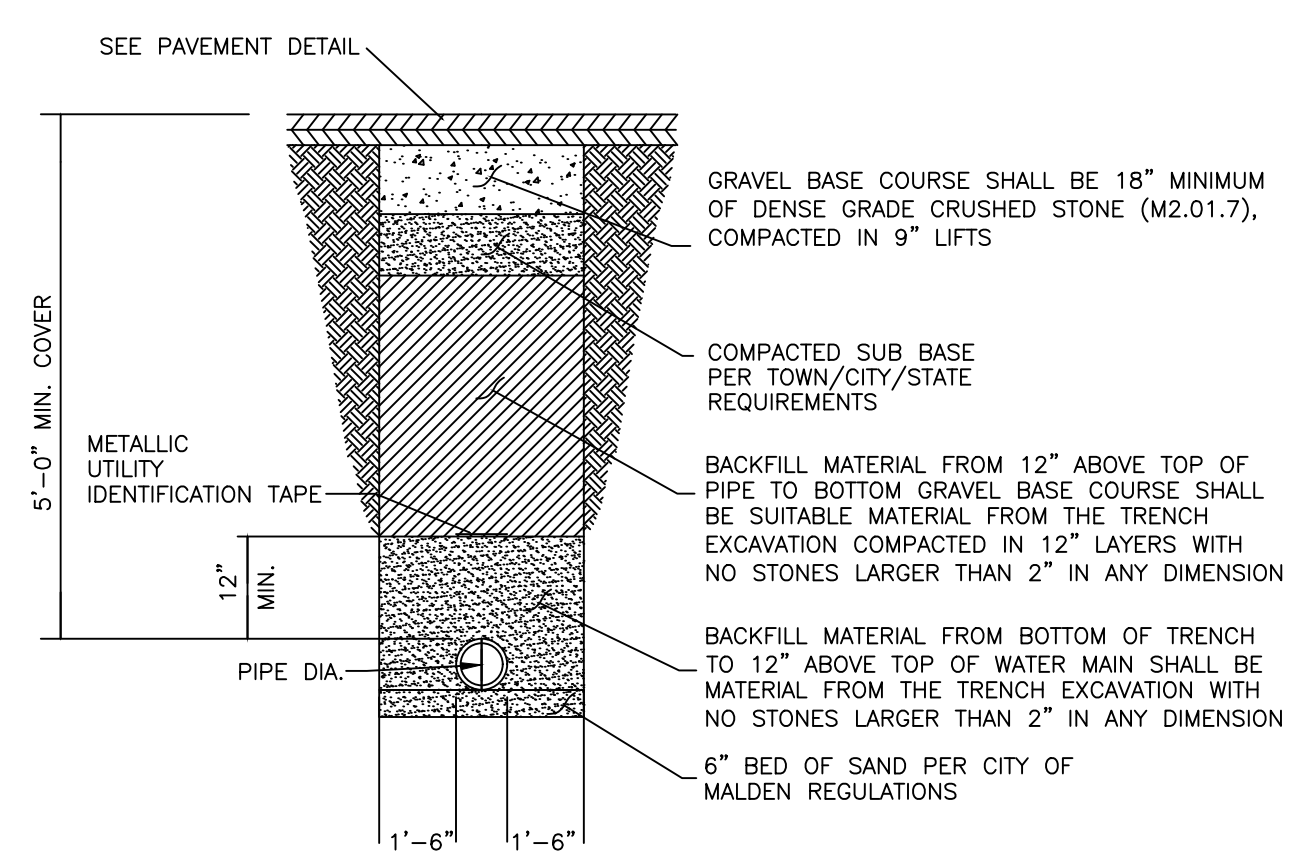
2 SANITARY GRAVITY PIPE BEDDING
N.T.S.



3 FIRE HYDRANT
N.T.S.

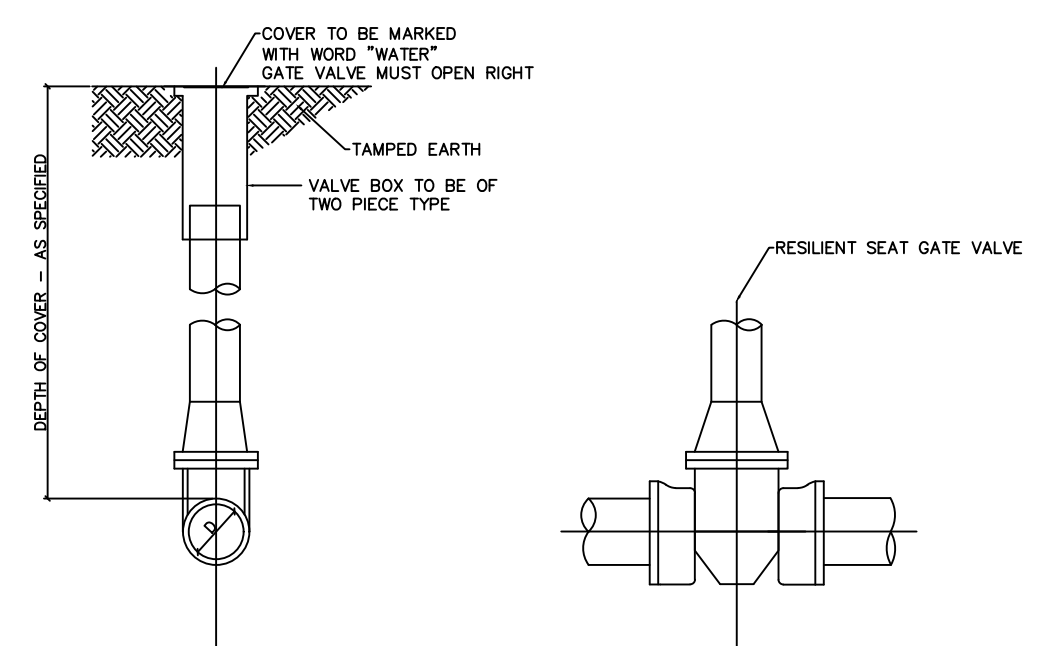


5 WATER SERVICE CONNECTION
N.T.S. SOURCE: BOSTON WATER AND SEWER COMMISSION



6 TYPICAL WATER MAIN TRENCH
N.T.S. CITY OF MALDEN

4 GATE VALVE
N.T.S.



CONCRETE AGAINST UNDISTURBED MATERIAL
 WATER MAIN
 CONCRETE AGAINST UNDISTURBED MATERIAL
BEND-PLAN

WATER MAIN
 CONCRETE AGAINST UNDISTURBED MATERIAL
PLUG ELEVATION

WATER MAIN
 CONCRETE AGAINST UNDISTURBED MATERIAL
TEE-PLAN

Size	Dead End	90 Bend	45 Bend	22.5 Bend	11.25 Bend
4"	2715	3838.5	2077.5	1059	532.5
6"	5608.5	7932	4293	2188.5	1099.5
8"	9649.5	13645.5	7384.5	3765	1891.5
10"	14515.5	20527.5	11109	5664	2845.5
12"	20527.5	29029.5	15711	8010	4024.5
16"	35668.5	50442	27298.5	13917	6991.5
4"	1.4	1.9	1.0	0.5	0.3
6"	2.8	4.0	2.1	1.1	0.5
8"	4.8	6.8	3.7	1.9	0.9
10"	7.3	10.3	5.6	2.8	1.4
12"	10.3	14.5	7.9	4.0	2.0
16"	17.8	25.2	13.6	7.0	3.5

Notes:
 1. Thrust forces per DIPRA 'Installation Guide for Ductile Iron Pipe', Table 7
 2. Calculations completed using DIPRA design guidelines, sand-silt soils with bearing capacity of 3,000 lb/sf, 150 psi test pressure, and safety factor of 1.5.
 Minimum 4 SF bearing area per thrust block.
 3. Table to be used for horizontal bends ONLY.
 4. Provide 10' minimum pipe length on either side of tee.

7 THRUST BLOCKING
N.T.S.

CONCRETE AGAINST UNDISTURBED MATERIAL
 WATER MAIN
 CONCRETE AGAINST UNDISTURBED MATERIAL
BEND-PLAN

WATER MAIN
 CONCRETE AGAINST UNDISTURBED MATERIAL
PLUG ELEVATION

WATER MAIN
 CONCRETE AGAINST UNDISTURBED MATERIAL
TEE-PLAN

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16"	35668.5	50442	27298.5	13917	6991.5
4"	1.4	1.9	1.0	0.5	0.3
6"	2.8	4.0	2.1	1.1	0.5
8"	4.8	6.8	3.7	1.9	0.9
10"	7.3	10.3	5.6	2.8	1.4
12"	10.3	14.5	7.9	4.0	2.0
16"	17.8	25.2	13.6	7.0	3.5

Notes:
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 Minimum 4 SF bearing area per thrust block.
 3. Table to be used for horizontal bends ONLY.
 4. Provide 10' minimum pipe length on either side of tee.

4 PIPE RESTRAINTS
N.T.S.

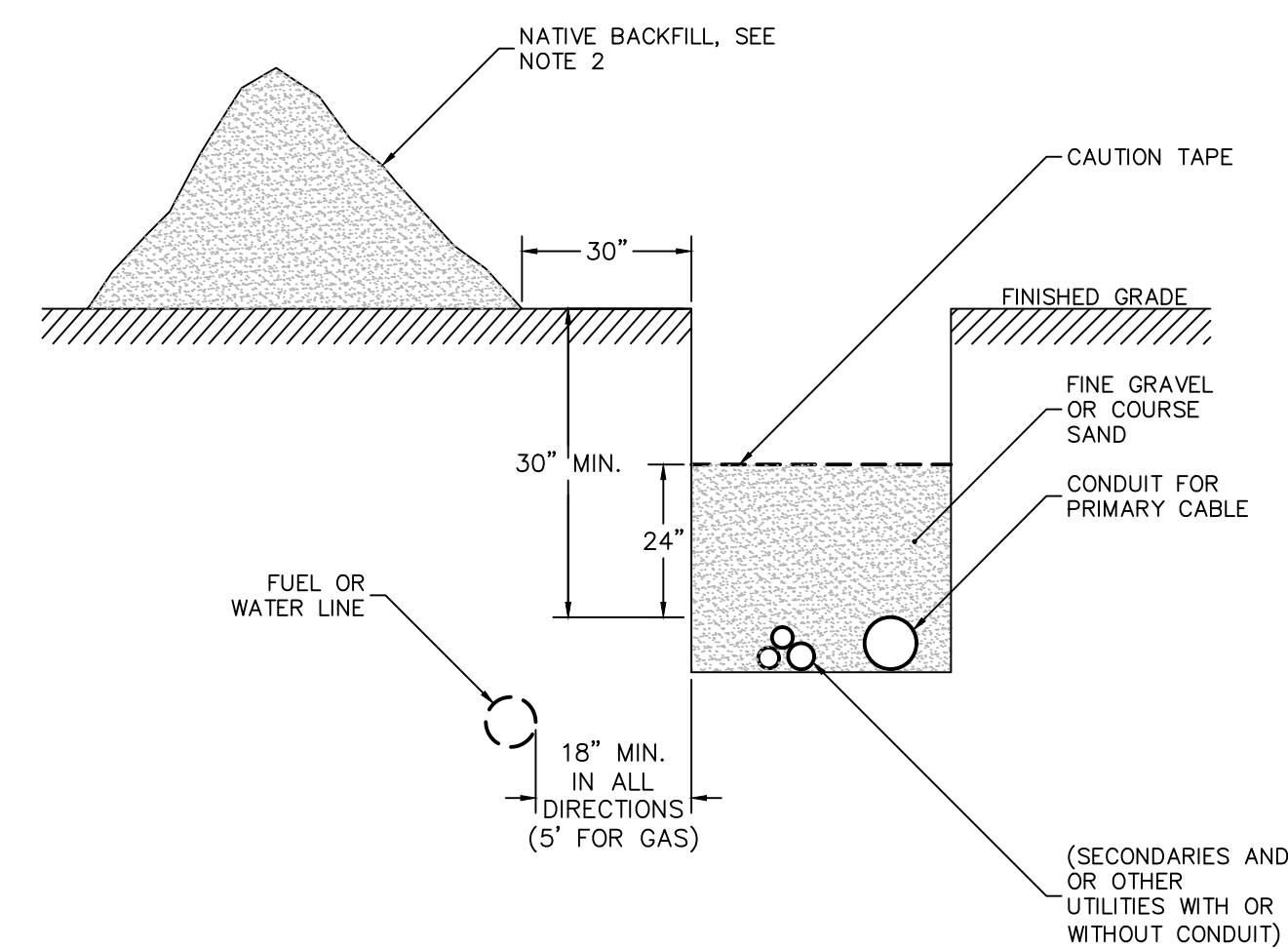
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 MIDDLESEX COUNTY MASSACHUSETTS
 Drawing Title

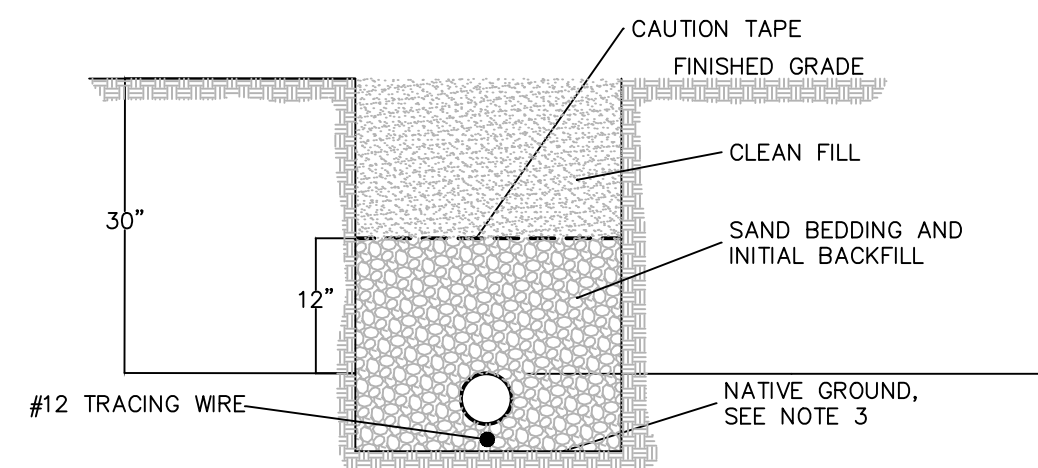
UTILITY DETAILS I

Project No.	151018201	Drawing No.	CU501
Date	08/08/2021	Checked By	
Drawn By	MCP	Checked By	
Checked By	JEL		



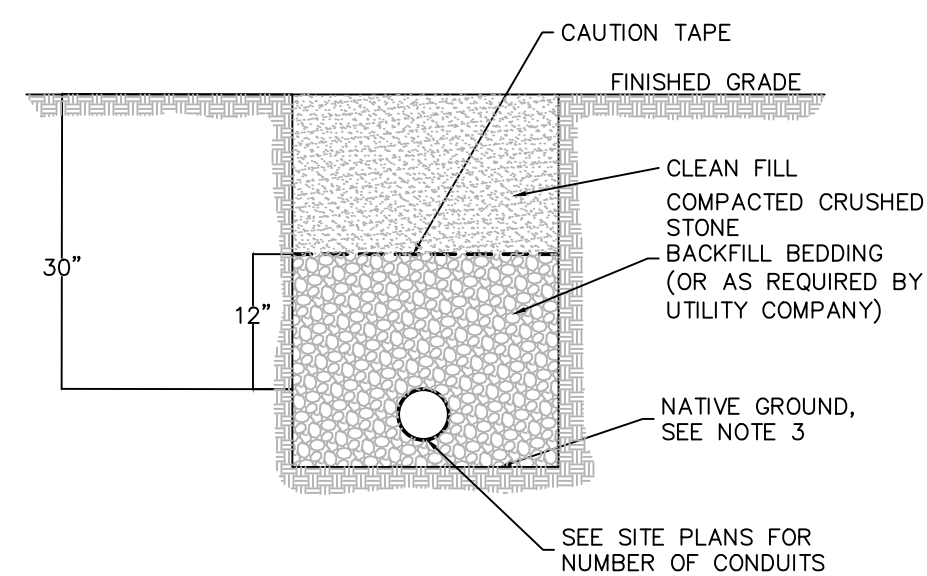
- NOTES:**
- ALL DIRECT-BURIED CABLES SHALL BE INSTALLED AT A DEPTH OF AT LEAST 30 INCHES IN THE FOLLOWING ORDER:
 - ENSURE THAT THE BOTTOM OF THE TRENCH IS WELL-TAMPED AND FREE OF ROCKS.
 - INSTALL THE CONDUIT, GLUING ALL COUPLINGS.
 - INSTALL SECONDARIES AND OTHER UTILITY CABLES OR CONDUITS LARGER THAN 2 INCHES IN MAXIMUM DIAMETER.
 - BACKFILL WITH 12 INCHES CLEAN FILL NOT TO CONTAIN STONES LARGER THAN 2 INCHES IN MAXIMUM DIAMETER.
 - INSTALL CABLE WARNING TAPE 12 INCHES OVER THE CONDUIT.
 - FILL IN THE REMAINDER OF THE TRENCH WITH NATIVE BACKFILL.
 - THE TRENCH SHALL BE BACKFILLED IMMEDIATELY FOLLOWING PLACEMENT OF THE CONDUIT.
 - 1/4-INCH NYLON ROPE AND PLASTIC CONDUIT PLUG TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.

4 ELECTRICAL UTILITY TRENCH
N.T.S.



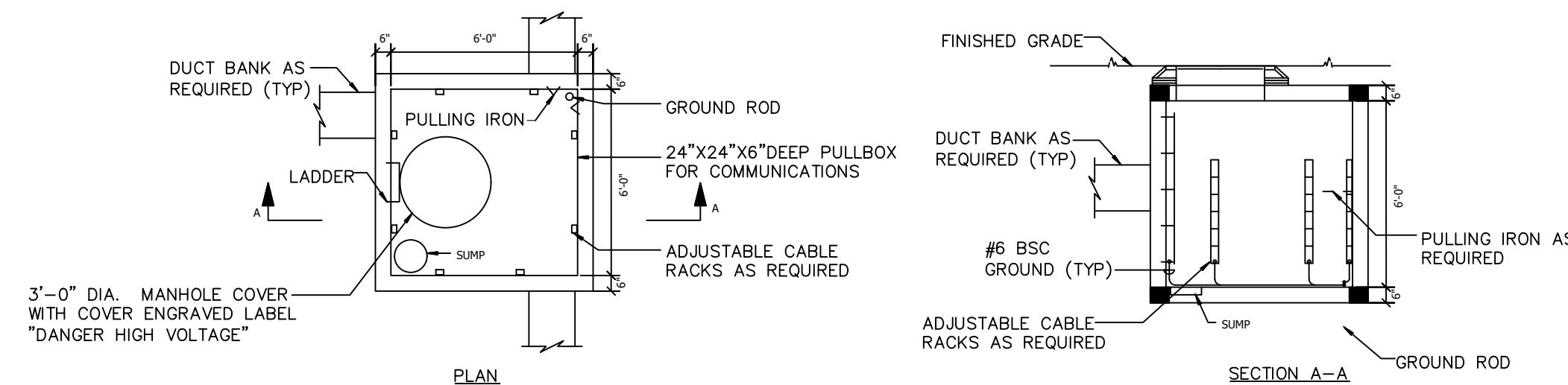
- NOTES:**
- TRENCHES IN STABLE SOIL OVER 5 FT DEEP SHALL BE REINFORCED BY APPROVED OSHA METHODS.
 - TRENCHES SHALL BE COMPACTED.
 - IF NATIVE GROUND IS NOT SUITABLE, THE CONTRACTOR SHALL EXCAVATE TO AN ACCEPTABLE DEPTH AND INSTALL MATERIALS AS APPROVED BY ENGINEERS AND UTILITY COMPANY.
 - CONTRACTOR TO PROVIDE EXCAVATION, BEDDING, SAND BACKFILL AND FIND BACKFILL. GAS COMPANY TO PROVIDE INSTALLATION OF ALL GAS PIPING AND SERVICES.

6 GAS MAIN TRENCH DETAIL
N.T.S.



- NOTES:**
- TRENCHES IN STABLE SOIL OVER 5 FT DEEP SHALL BE REINFORCED BY APPROVED OSHA METHODS.
 - TRENCHES SHALL BE COMPACTED.
 - IF NATIVE GROUND IS NOT SUITABLE, THE CONTRACTOR SHALL EXCAVATE TO AN ACCEPTABLE DEPTH AND INSTALL MATERIALS AS APPROVED BY ENGINEERS AND UTILITY COMPANY.

2 TELEPHONE TRENCH DETAIL
N.T.S.



- NOTES:**
- MANHOLE SHALL BE RATED T8 FOR USE IN GRASSY AREAS NOT SUBJECT TO VEHICULAR TRAFFIC, OR RATED T22 FOR USE IN SIDEWALKS OR PARKING LOTS SUBJECT TO OCCASIONAL NON-DELIBERATE HEAVY VEHICULAR TRAFFIC.
 - MANHOLES TO BE USED IN ROADWAYS OR AREAS FREQUENTLY SUBJECT TO HEAVY VEHICULAR TRAFFIC SHALL BE SUBMITTED TO EOR FOR APPROVAL.
 - PROVIDE 12" CRUSHED STONE BENEATH MANHOLE.
 - CONDUITS SHALL ENTER ON SIDES. MINIMUM BURIAL DEPTHS OF CONDUIT IS 24" BELOW FINISHED GRADE. CONDUIT KNOCKOUTS SHALL BE DRILLED OR PUNCHED ON SITE, QUANTITIES AND SIZES TO MATCH PLANS.
 - MANHOLE SIZE SHALL BE BASED ON QUANTITY OF CONDUITS AND VOLTAGE SERVED AS DEFINED IN NEC.

3 TYPICAL ELECTRIC MANHOLE DETAIL
N.T.S.

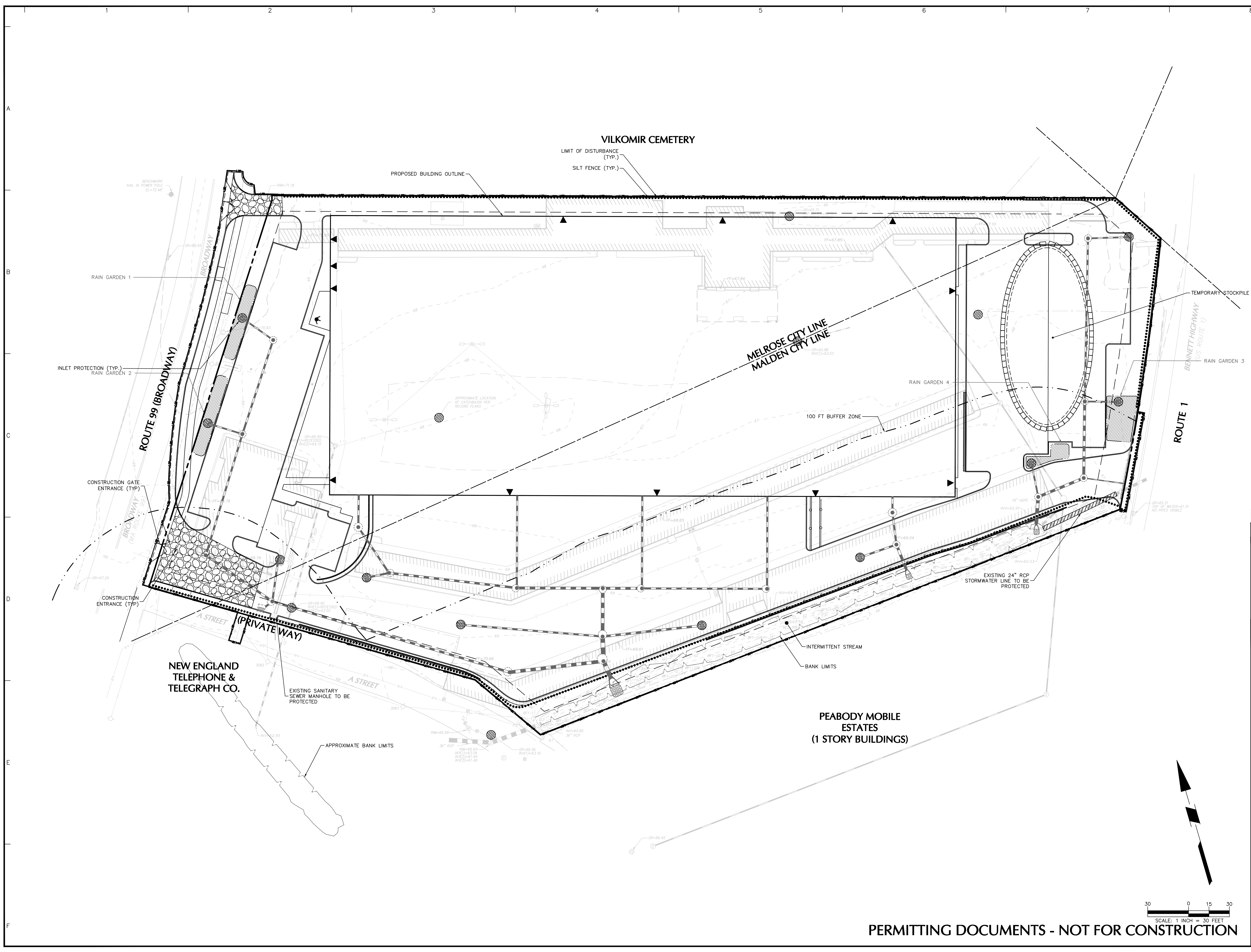
Date	Description	No.
REVISIONS		

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Project
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TURNPIKE/ 320 STATE
HIGHWAY**
MALDEN / MELROSE
MIDDLESEX COUNTY MASSACHUSETTS

Drawing Title
UTILITY DETAILS II

Project No. 151018201	CU502
Date 08/09/2021	
Drawn By MCP	
Checked By JEL	



Date	Description	No.
REVISIONS		

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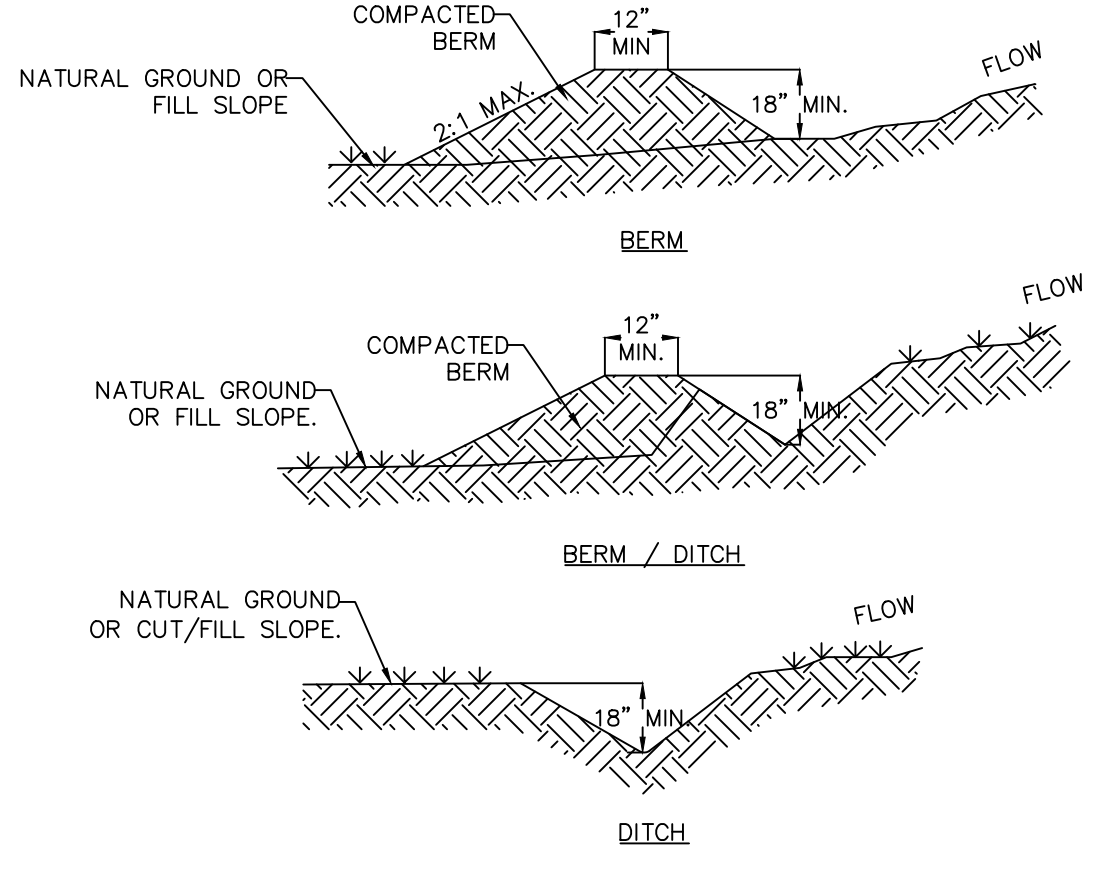
Project
735 NEWBURYPORT TURNPIKE/ 320 STATE HIGHWAY
 MALDEN / MELROSE
 MIDDLESEX COUNTY MASSACHUSETTS

Drawing Title
SOIL EROSION & SEDIMENT CONTROL PLAN

Project No. 151018201	Drawing No. CE101
Date 05/05/2021	
Drawn By MCP	
Checked By JEL	

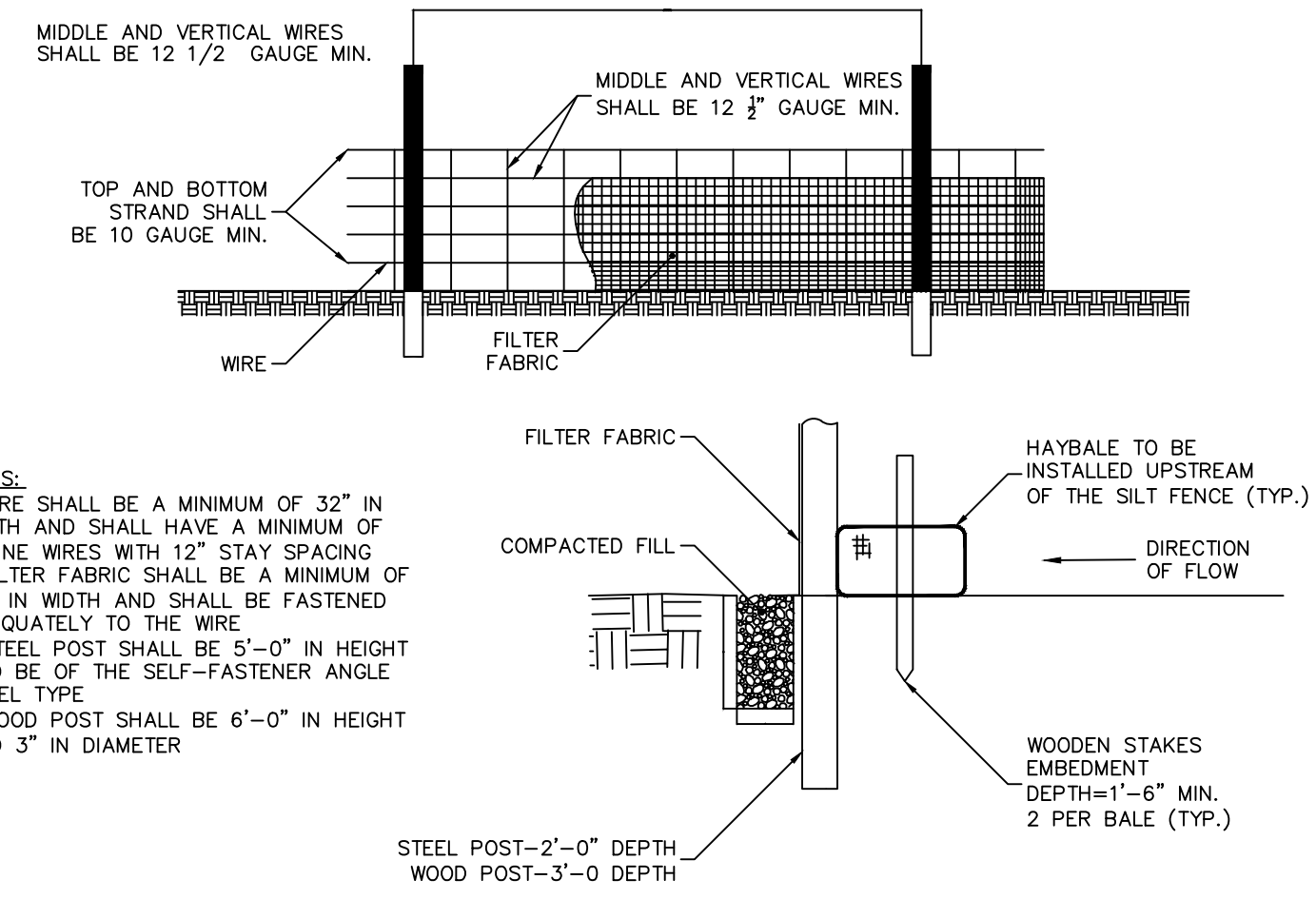


PERMITTING DOCUMENTS - NOT FOR CONSTRUCTION



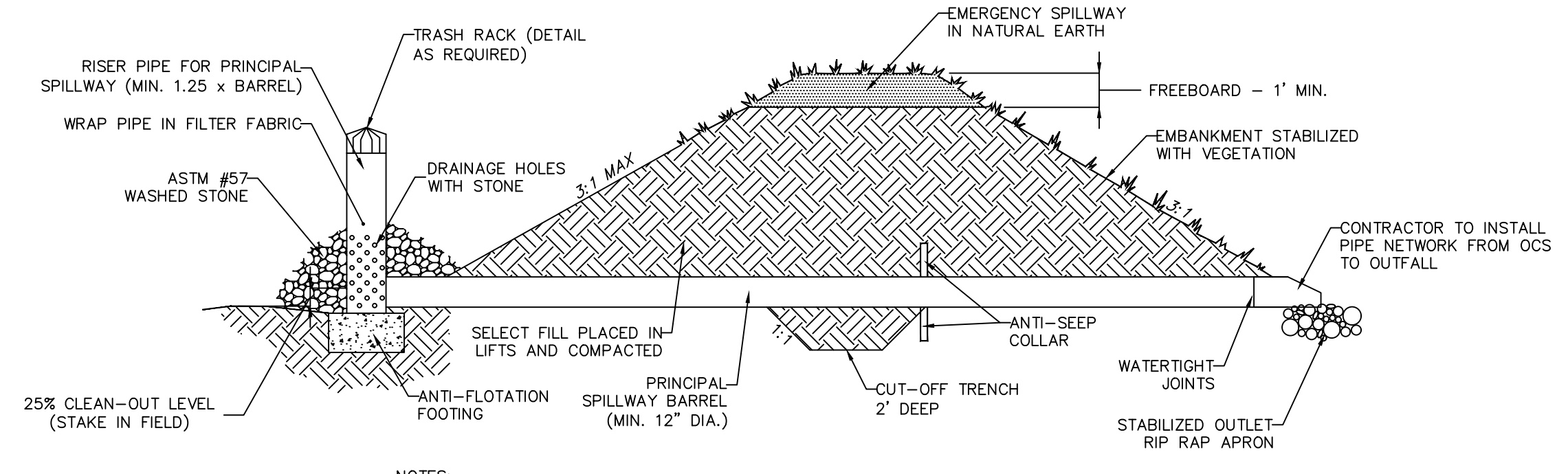
- NOTES:**
- POSITIVE GRADE MUST BE PROVIDED TO ASSURE DRAINAGE. 2:1 MAX. SIDE SLOPE. IF SLOPE EXCEEDS 2% OR CHANNEL IS CONSTRUCTED IN FILL, PROVIDE CHANNEL LINER PER DETAIL, EC 5, TRY NOT TO EXCEED 5% (HIGH RUNOFF VELOCITIES RESULT). MAXIMUM DRAINAGE AREA IS 5.00 ACRES WITHOUT SUPPORTING CALCULATIONS FOR PERMANENT CHANNEL. DIVERSIONS AT THE TOPS OF SLOPES MUST EMPTY INTO AN APPROVED SLOPE DRAIN (SEE DETAILS). THE BERM/DITCH IS THE MOST COMMONLY USED DIVERSION.
 - MACHINE COMPACTING OF ALL FILL IS REQUIRED.
 - DIVERSIONS SUFFICIENT TO DIRECT ALL SEDIMENT-LADEN STORMWATER INTO SEDIMENT CONTROL DEVICE MUST BE INSTALLED PRIOR TO CLEARING AND GRUBBING OF AREA (OR IN CONJUNCTION WITH THIS OPERATION IF SEDIMENT CONTROLS AND DIVERSIONS ARE INSTALLED AT EACH CRITICAL POINT AS INDICATED).
 - DIVERSIONS SHOULD BE LOCATED AS SHOWN ON THE PLANS AND TO MINIMIZE DAMAGES BY CONSTRUCTION OPERATIONS.
 - DIVERSIONS SHOULD BE SEEDED AND LINED WITH STRAW MAT IF THEY ARE TO REMAIN IN PLACE OVER 14 DAYS.
 - CHECK DIVERSIONS AFTER EACH RAIN, AND ONCE PER SEVEN CALENDAR DAYS OR MORE FREQUENTLY IF REQUIRED BY REGULATORY AGENCY. REPAIR AS NEEDED TO MAINTAIN FUNCTION.

1 TEMPORARY DIVERSION BERM/DITCH
N.T.S.



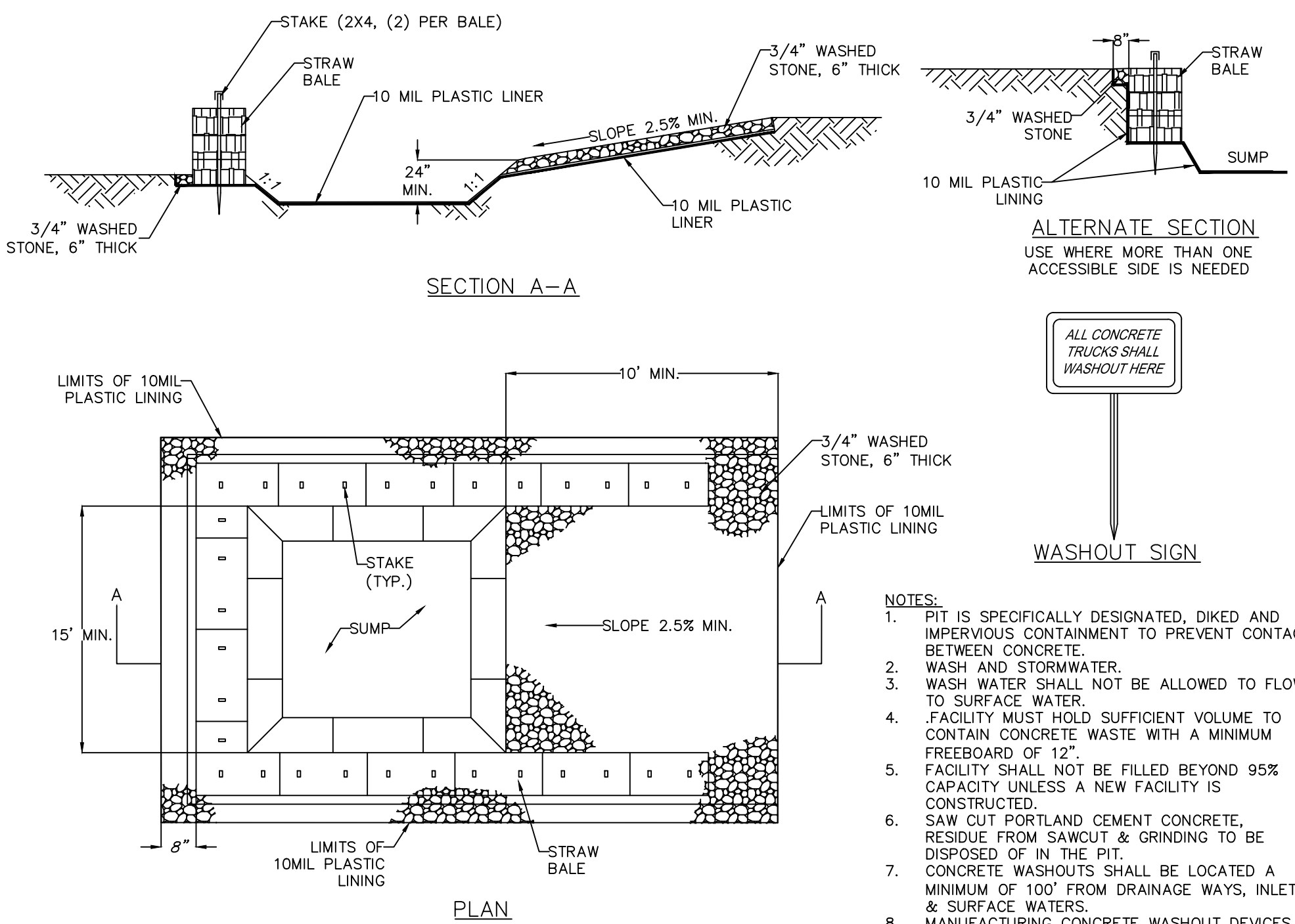
- NOTES:**
- WIRE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
 - FILTER FABRIC SHALL BE A MINIMUM OF 36" IN WIDTH AND SHALL BE FASTENED ADEQUATELY TO THE WIRE.
 - STEEL POST SHALL BE 5'-0" IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
 - WOOD POST SHALL BE 6'-0" IN HEIGHT AND 3" IN DIAMETER.

2 SILT FENCE
N.T.S.



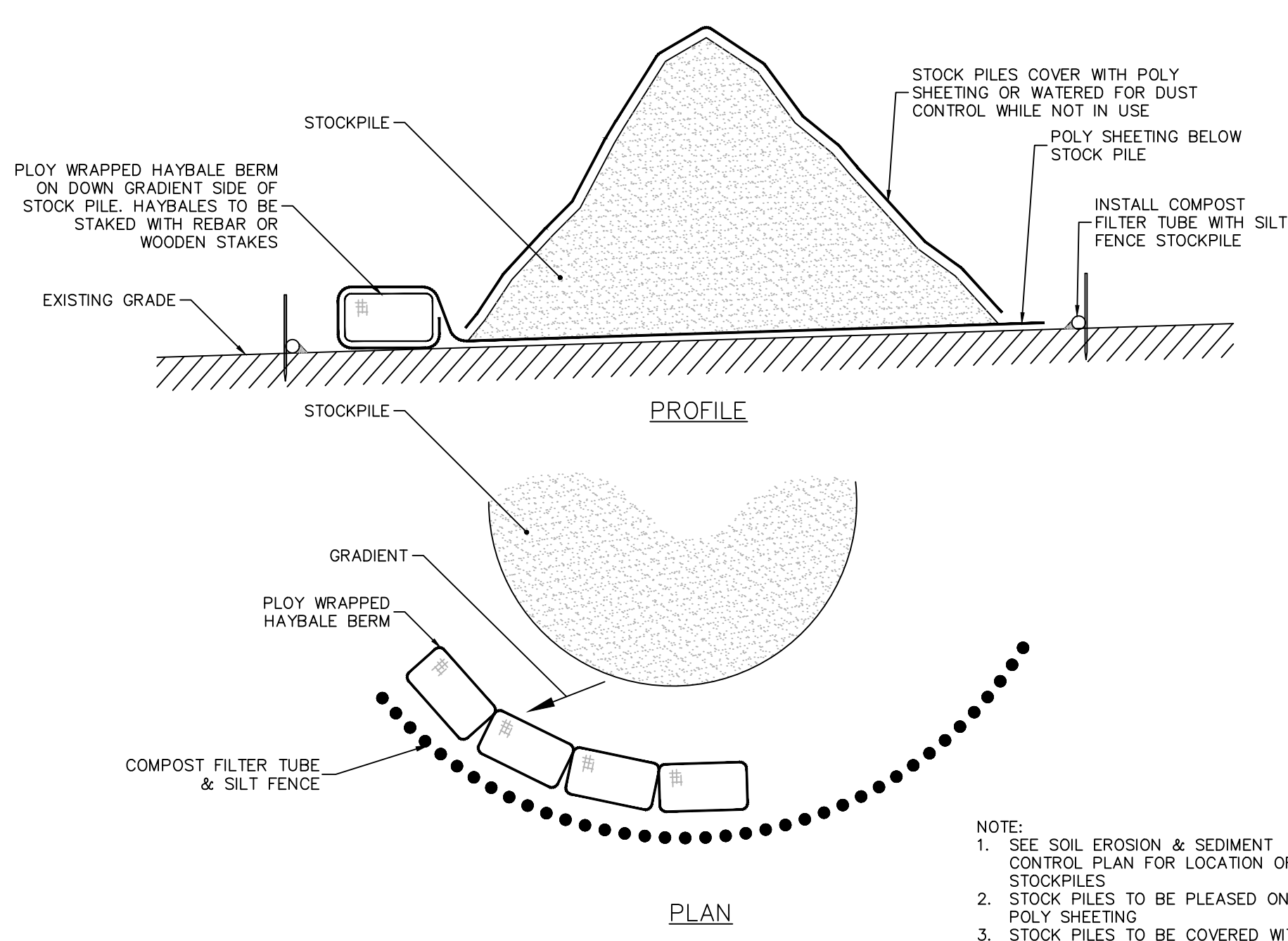
- NOTES:**
- Basin dewatering must occur within 24 to 72 hours.
 - Inlet protection must be provided at riser. Washed stone on perforated pipe, gravel horseshoe, skimmer or alternative method of dewatering basin must be implemented.
 - If riser holes are greater than 1" remove wire mesh.

3 TEMPORARY SEDIMENT BASIN DETAIL
N.T.S.



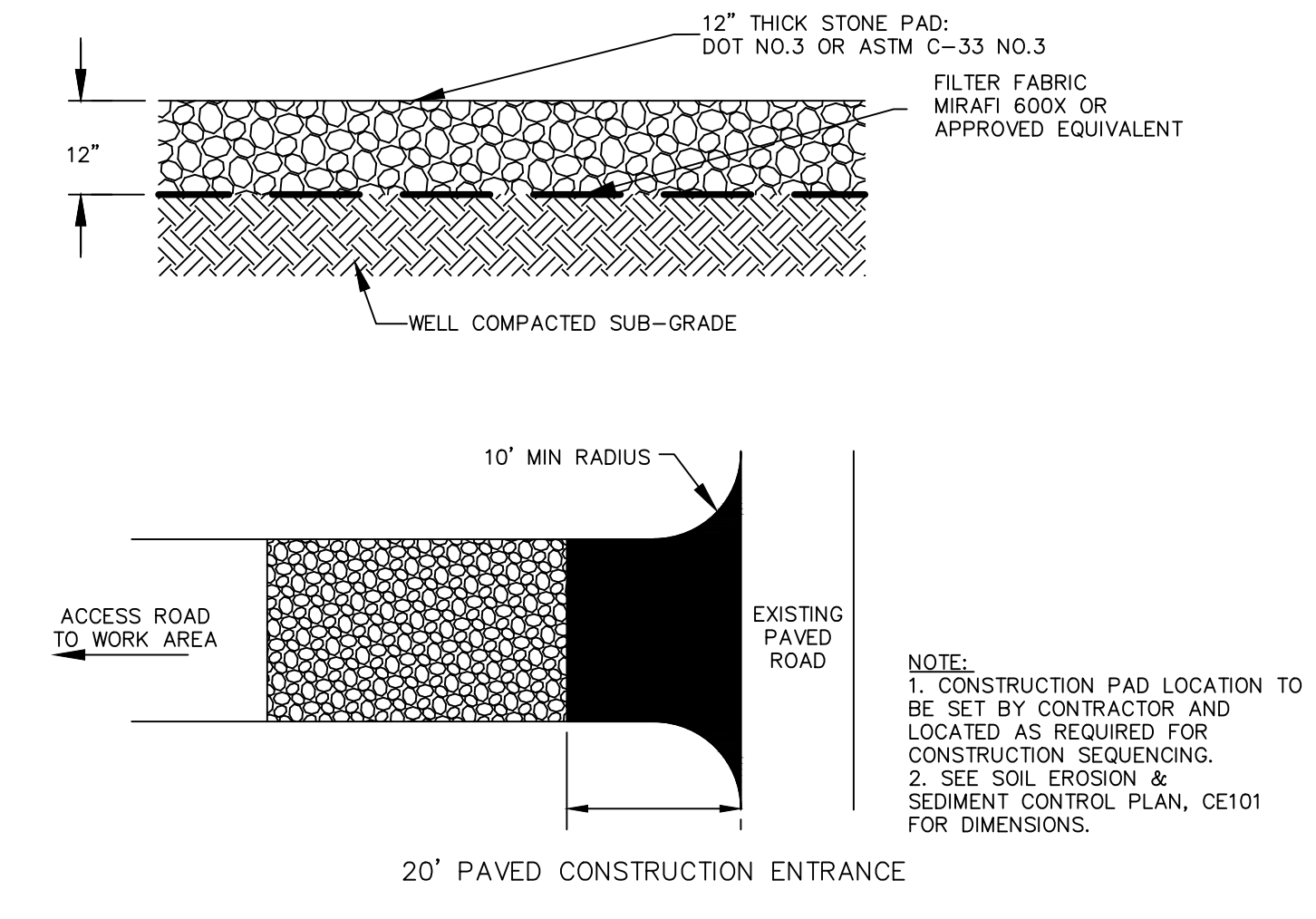
- NOTES:**
- PIT IS SPECIFICALLY DESIGNATED, DIKED AND IMPERVIOUS CONTAINMENT TO PREVENT CONTACT BETWEEN CONCRETE.
 - WASH AND STORMWATER.
 - WASH WATER SHALL NOT BE ALLOWED TO FLOW TO SURFACE WATER.
 - FACILITY MUST HOLD SUFFICIENT VOLUME TO CONTAIN CONCRETE WASTE WITH A MINIMUM FREEBOARD OF 12".
 - FACILITY SHALL NOT BE FILLED BEYOND 95% CAPACITY UNLESS A NEW FACILITY IS CONSTRUCTED.
 - SAW CUT PORTLAND CEMENT CONCRETE RESIDUE FROM SAWCUT & GRINDING TO BE DISPOSED OF IN THE PIT.
 - CONCRETE WASHOUTS SHALL BE LOCATED A MINIMUM OF 100' FROM DRAINAGE WAYS, INLETS, & SURFACE WATERS.
 - MANUFACTURING CONCRETE WASHOUT DEVICES MAY BE USED IF REMOVED FROM THE SITE WHEN 95% FULL CAPACITY.

4 CONCRETE WASHOUT AREA
N.T.S.



- NOTE:**
- SEE SOIL EROSION & SEDIMENT CONTROL PLAN FOR LOCATION OF STOCKPILES
 - STOCK PILES TO BE PLEASD ON POLY SHEETING
 - STOCK PILES TO BE COVERED WITH POLY SHEETING WHILE NOT IN USE

5 TEMPORARY SOIL/CONCRETE STOCKPILE
N.T.S.



- NOTE:**
- CONSTRUCTION PAD LOCATION TO BE SET BY CONTRACTOR AND LOCATED AS REQUIRED FOR CONSTRUCTION SEQUENCING.
 - SEE SOIL EROSION & SEDIMENT CONTROL PLAN, CE101 FOR DIMENSIONS.

6 STABILIZED CONSTRUCTION PAD
N.T.S.

Date	Description	No.
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MIDDLESEX COUNTY MASSACHUSETTS

SOIL EROSION & SEDIMENT CONTROL DETAILS I

Project No. 151018201	Drawing No. CE501
Date 08/08/2021	
Drawn By MCP	
Checked By JEL	

SOIL EROSION-SEDIMENT CONTROL NOTES

PROPOSED DEVELOPMENT

- CONSTRUCTION WILL INCLUDE EARTHWORK, CURBING, PAVING, UTILITY INSTALLATION, LANDSCAPING AND BUILDING CONSTRUCTION. ALL DEMOLITION DEBRIS AND SOIL REMOVAL RELATED TO CONSTRUCTION SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL LAWS GOVERNING SUCH ACTIVITIES.
- THE DETAILED EROSION AND SEDIMENT CONTROL MEASURES ARE SHOWN ON DRAWING C4.00. THE PROPOSED MEASURES HAVE BEEN DESIGNED TO PREVENT THE MIGRATION OF SOIL SEDIMENT FROM THE SITE.

SOIL EROSION AND SEDIMENT CONTROL NOTES

- THE SOIL AND SEDIMENT CONTROL PRACTICES MUST BE INSTALLED IN ACCORDANCE WITH THE LOCAL GOVERNING AUTHORITY, THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES AND THE MASSACHUSETTS STORMWATER STANDARDS.
- EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO START OF DEMOLITION AND CONSTRUCTION AND DISTURBANCE OF SITE CONTRIBUTORY DRAINAGE AREAS. THE OWNER OR ITS CONTRACTOR SHALL INSPECT, REPAIR AND REMOVE ALL SEDIMENT AND EROSION CONTROL DEVICES, AS INDICATED HEREIN. ALL EARTH CHANGES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED IN SUCH A MANNER SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST POSSIBLE PERIOD OF TIME.
- DISPOSAL OF COLLECTED SEDIMENT SHALL BE MADE TO AREA DESIGNATED BY THE OWNER'S SOIL ENGINEER.
- FILTER FABRIC/SILT FENCE WILL BE INSTALLED ALONG THE TOE OF ALL CRITICAL CUT AND FILL SLOPES.
- ALL TOPSOIL NOT TO BE USED FOR FINAL GRADING/LANDSCAPED AREAS SHALL BE REMOVED FROM THE SITE IMMEDIATELY, IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL LAW. ALL TOPSOIL TO BE USED IN LANDSCAPED AREAS SHALL BE STORED/STOCKPILED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL LAW STANDARDS.
- ALL AREAS WITHIN 500 FEET OF AN INHABITED DWELLING SHALL BE WETTED AS NECESSARY TO PROVIDE DUST CONTROL.
- PAVEMENT BASE COURSE MUST BE PLACED IN ALL NEW ROADWAY AREAS UPON COMPLETION OF FINE GRADING.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL PAVED ROADWAYS, ON AND OFF-SITE, WHICH MUST BE KEPT FREE OF SITE GENERATED SEDIMENT AT ALL TIMES. DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHOD.
- ALL STORM DRAINAGE OUTLETS MUST BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
- SILT FENCES AND BARRIERS MUST BE CLEANED OR REPLACED PERIODICALLY TO REMOVE BUILT-UP SILT.
- SEDIMENT TRAPS MUST BE CLEANED WHEN CAPACITY HAS BEEN REDUCED BY AN AVERAGE OF 2'-0" OVER ITS TOTAL AREA OR TO 70% OF ITS DESIGN VOLUMES, WHICHEVER OCCURS FIRST.
- ALL EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSPECTED ON A DAILY BASIS AND CLEANED IMMEDIATELY AFTER EACH STORM.
- ANY TEMPORARY OR PERMANENT FACILITY DESIGNED FOR THE CONVEYANCE OF WATER AROUND, THROUGH, OR FROM THE EARTH CHANGE AREA SHALL BE DESIGNED TO LIMIT THE WATER FLOW TO A NON-EROSIVE VELOCITY.
- THE CONTRACTOR SHALL CORRECT ANY OMISSIONS, ERRORS, OR FIELD OPERATIONS IMMEDIATELY AND IN ACCORDANCE WITH THE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
- ANY CONVEYANCE OF THIS PROJECT PRIOR TO ITS COMPLETION WILL TRANSFER FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CERTIFIED PLAN TO ANY SUBSEQUENT OWNERS.
- SOIL EROSION AND SEDIMENT CONTROLS MUST BE INSPECTED BY THE ZONING ENFORCEMENT OFFICER BEFORE WORK MAY COMMENCE.

- THE PROPERTY OWNER AND/OR HIS/HER AGENTS MUST MAINTAIN (REPAIR/REPLACE), WHEN NECESSARY, THE SILTATION CONTROL UNTIL ALL DEVELOPMENT ACTIVITY IS COMPLETED AND ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.

TEMPORARY STABILIZATION

SEDIMENT DISPOSAL AREAS AND TOPSOIL STOCKPILES NOT SCHEDULED FOR CONSTRUCTION ACTIVITIES WITHIN THIRTY (30) DAYS OF DISTURBANCE SHALL BE STABILIZED AS FOLLOWS:

- SOIL AMENDMENTS AS NECESSARY.
- ANNUAL RYE GRASS SEEDING APPLIED AT A RATE OF NOT LESS THAN 1 LB. PER 1,000 SF.
- MULCH ALL NEWLY SEEDED AREAS WITHIN 80 LBS. OF SALT HAY OR SMALL GRAIN STRAW PER 1,000 SF.
- WHEN DISTURBED AREAS ARE SCHEDULED FOR IMMEDIATE LANDSCAPING THEY MAY BE MULCHED AND SEEDED PER ITEM C ABOVE.

PERMANENT STABILIZATION

REFER TO PLANS FOR PERMANENT STABILIZATION METHODS + PROPOSED SEED MIXES.

- PERMANENT VEGETATION IS TO BE SEEDED OR SODDED ON ALL DISTURBED LAND AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADING. MULCH AS NECESSARY FOR SEED PROTECTION AND ESTABLISHMENT. AMEND SOIL AS NEEDED PRIOR TO PERMANENT SEEDING. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER COMPLETION OF AN EARTH CHANGE OR WHEN SIGNIFICANT EARTH CHANGE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED. ALL DISTURBED AREAS, STOCKPILES OF FILL OR EXCAVATED MATERIAL SHALL BE STABILIZED IN SUCH A MANNER AS NOT TO CAUSE UNREASONABLE HAZARD TO PERSONS OR PROPERTY.
- MATERIALS SPECIFICATION: LAWN + MEADOW AREAS
 - ANY SOIL HAVING A pH OF FOUR OR LESS CONTAINING IRON SULFIDES SHALL BE COVERED WITH A MINIMUM OF TWELVE INCHES OF SOIL HAVING A pH OF FIVE OR MORE PRIOR TO SEED BED PREPARATION.
- MULCHING SHALL BE DONE AT THE RATE OF SEVENTY TO NINETY POUNDS (70-90 LBS) PER 1,000 SQUARE FEET WITH UNROTTED SALT HAY.
 - APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH IN VALLEYS AND AT CREATED BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.
 - USE ONE OF THE FOLLOWING: SYNTHETIC OR ORGANIC BINDERS, BINDERS SUCH AS CURASOL DCA-70, PETRO SET, TERRA TACH, HYDRO MULCH AND AEROSPRAY MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER OF ANCHOR MULCH MATERIALS. BINDERS CONTAINING PETROLEUM PRODUCTS SHALL NOT BE USED.

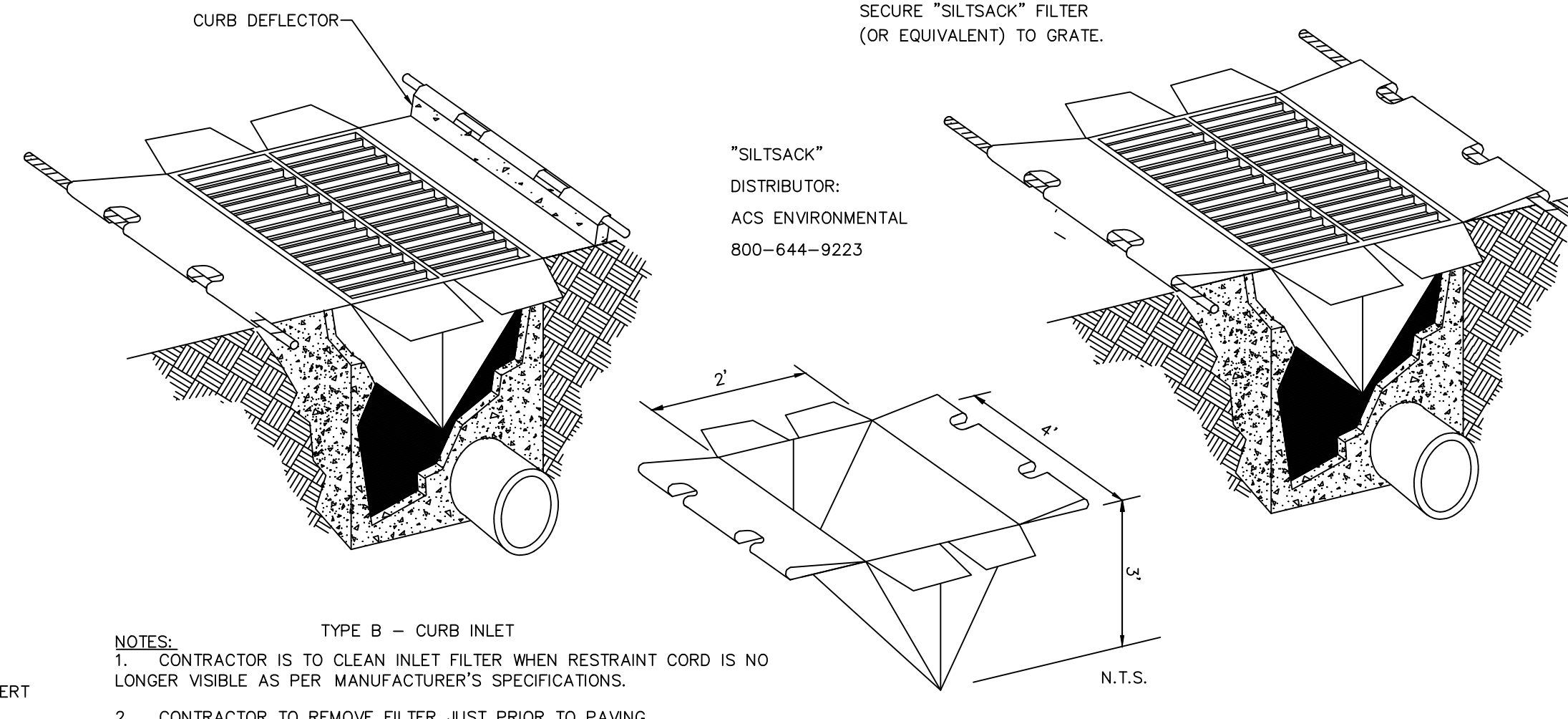
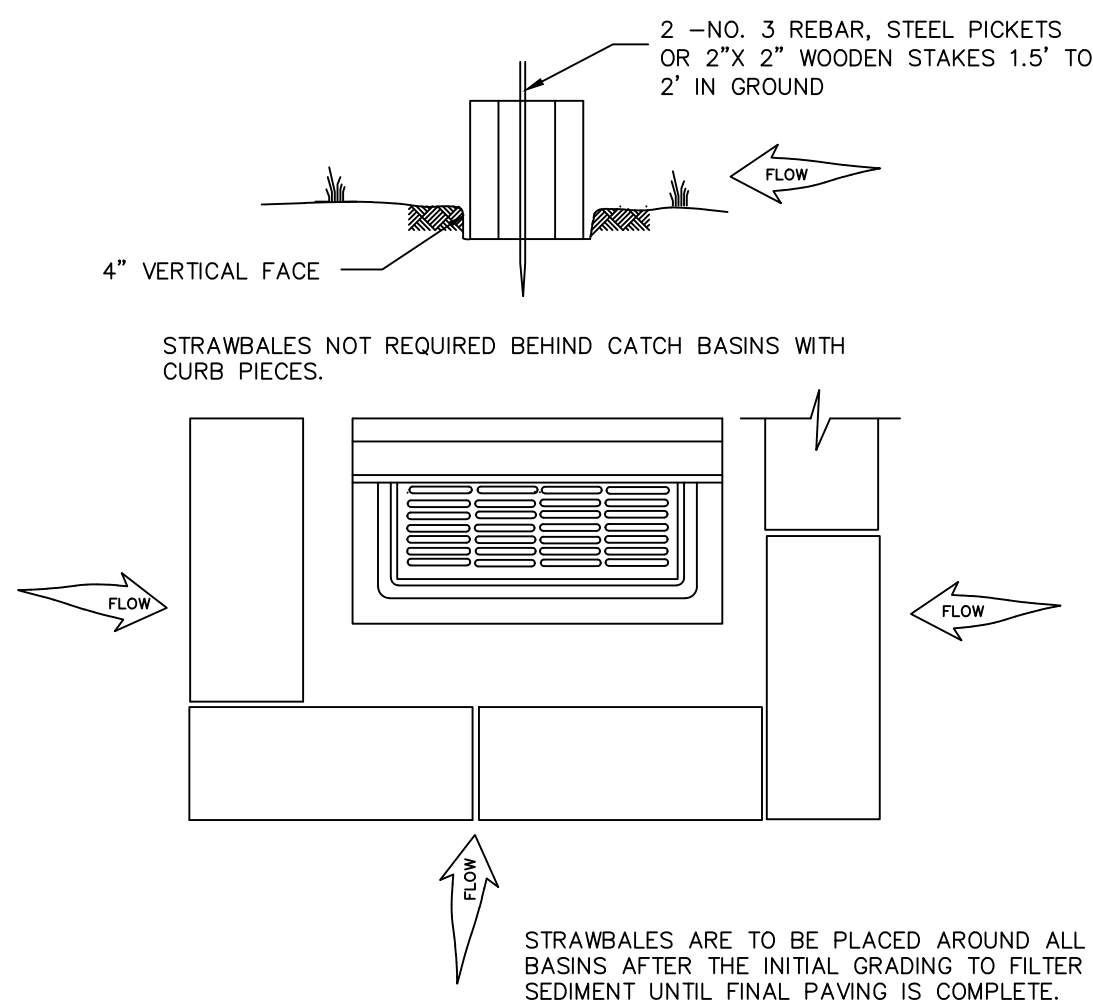
NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE TO THE EXCLUSION OF OTHER PRODUCTS.
- FILL MATERIAL SHALL BE FREE FROM DEBRIS, PERISHABLE OR COMBUSTIBLE MATERIAL AND FROZEN OR WET EARTH OR STONES LARGER THAN THREE INCHES IN MAXIMUM DIMENSION.
- CONSTRUCTION AREAS SHALL BE PERIODICALLY SPRAYED WITH WATER UNTIL THE SURFACE IS WET TO CONTROL THE GENERATION OF DUST.
- ALL REVISIONS AFTER APPROVAL HAS BEEN GRANTED SHALL BE FORWARDED TO THE APPROPRIATE DISTRICT FOR REVIEW.
- THE LOCAL GOVERNING AUTHORITY SHALL RECEIVE WRITTEN NOTIFICATION SEVENTY TWO HOURS BEFORE THE START OF ANY CONSTRUCTION.

H. SEEDBED PREPARATION:

- TOPSOIL SHOULD BE A MINIMUM OF SIX INCHES DEEP (LIGHTLY COMPACTED) BEFORE SEEDING.
- TOPSOIL SHALL BE TESTED PRIOR TO SEEDING.
- WORK SOIL AMENDMENTS INTO SOIL AS NECESSARY AS NEARLY AS PRACTICAL TO A DEPTH OF FOUR INCHES WITH A DISC, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE ALL CLAY OR SILTY SOIL AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEED BED WHEREVER FEASIBLE.
- REMOVE FROM THE SURFACE ALL STONES ONE INCH OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIAL.
- INSPECT SEED BED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT SOIL COMPACT, THE AREA MUST BE RETILLED AND FIRMED AS ABOVE.

CONTINGENCY SOIL EROSION AND SEDIMENT CONTROL NARRATIVE

- THE GENERAL CONTRACTOR WILL DESIGNATE PERSONNEL FOR 24 HOUR EMERGENCY RESPONSE IN THE EVENT OF SEVERE WEATHER AND INCREASED POTENTIAL FOR SEVERE EROSION.
- THE GENERAL CONTRACTOR IS REQUIRED TO MAINTAIN ON SITE OR HAVE THE ABILITY TO RETRIEVE WITHIN 12 HOURS THE FOLLOWING MATERIALS IN THE EVENT THAT THERE ARE DEFICIENCIES IN THE SESC MEASURES:
 - 25% OF THE INSTALLED LENGTH OF SILT FENCE
 - EQUIVALENT TONNAGE OF STONE FOR STABILIZATION OF 2 STABILIZATION ENTRANCES. STONE COULD BE USED FOR SLOPE REPAIRS, ENERGY DISSIPATER ENHANCEMENTS, ETC.
 - HEAVY EQUIPMENT CAPABLE OF TRENCHING/EXCAVATING LARGE AREAS TO DIVERT AND CONTROL RUNOFF IN A CONTROLLED MANNER.
 - HAVE DESIGNATED A HYDRO-SEED CONTRACTOR CAPABLE OF RESPONDING TO THE SITE WITHIN 12 HOURS
- ANY STUMP GRINDINGS OR WOOD CHIPS GENERATED ON-SITE SHOULD BE RETAINED FOR USE TO BACK UP SILT FENCES.



TYPE B - CURB INLET
 NOTES:
 1. CONTRACTOR IS TO CLEAN INLET FILTER WHEN RESTRAINT CORD IS NO LONGER VISIBLE AS PER MANUFACTURER'S SPECIFICATIONS.
 2. CONTRACTOR TO REMOVE FILTER JUST PRIOR TO PAVING.

INLET PROTECTION

N.T.S.

1

Date	Description	No.
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SOIL EROSION & SEDIMENT CONTROL DETAILS II

Project No. 151018201	CE502
Date 08/08/2021	
Drawn By MCP	
Checked By JEL	

FOR PERMIT ONLY - NOT FOR CONSTRUCTION

LANEAM PROJECT NO. 151018201

SITE LIGHTING SCHEDULE

SYMBOL	KEY	QTY.	FIXTURE MANUFACTURER	FIXTURE MODEL	FIXTURE DESCRIPTION	FIXTURE MOUNTING HEIGHT	LAMP	COLOR TEMPERATURE	OPTICS	LUMENS	LF	FIXTURE CATALOGUE NO.	POLE MANUFACTURER	POLE DESCRIPTION	POLE LENGTH	POLE CATALOGUE NO.	REMARKS
☐	A	8	COOPER LIGHTING	GALLEON LED	SINGLE POLE MOUNTED AREA FIXTURE; COLOR: BLACK	18'	125W LED	4000K	TYPE 4 FORWARD THROW	23,831	0.90	GLEON-SA3C-740-U-14FT-BK-HSS	HAPCO	ROUND TAPERED STEEL POLE; COLOR: BLACK	20'	RTS20866-4-D190-BA	POLE TO BE FACTORY CUT TO LENGTH OF 15'; MOUNTED ON 3" HEIGHT EXPOSED CONCRETE BASE
☐	B	4	COOPER LIGHTING	GALLEON LED	SINGLE POLE MOUNTED AREA FIXTURE WITH HOUSE-SIDE SHIELD; COLOR: BLACK	18'	124W LED	4000K	TYPE 3 WITH SPILL CONTROL	23,690	0.90	GLEON-SA3C-740-U-SL3-BK-HSS	HAPCO	ROUND TAPERED STEEL POLE; COLOR: BLACK	20'	RTS20866-4-D190-BA	POLE TO BE FACTORY CUT TO LENGTH OF 15'; MOUNTED ON 3" HEIGHT EXPOSED CONCRETE BASE
☐	C	1	COOPER LIGHTING	GALLEON LED	SINGLE POLE MOUNTED AREA FIXTURE WITH HOUSE-SIDE SHIELD; COLOR: BLACK	18'	119W LED	4000K	TYPE 2	7,972	0.90	GLEON-SA1C-740-U-12-BK	HAPCO	ROUND TAPERED STEEL POLE; COLOR: BLACK	20'	RTS20866-4-D190-BA	POLE TO BE FACTORY CUT TO LENGTH OF 15'; MOUNTED ON 3" HEIGHT EXPOSED CONCRETE BASE
☐	D	5	COOPER LIGHTING	GALLEON LED	WALL MOUNTED AREA FIXTURE; COLOR: BLACK	18' (ABOVE FFE)	122W LED	4000K	TYPE 4 FORWARD THROW	31,488	0.90	GLEON-SA4C-740-U-14FT-WM-BK	-	-	-	-	-
☐	E	7	COOPER LIGHTING	MCRRAW-EDISON IMPACT ELITE LED	WALL MOUNTED AREA FIXTURE; COLOR: BLACK	10' (ABOVE FFE)	136W LED	4000K	TYPE 2 WITH SPILL CONTROL	2,730	0.90	IST-SA1A-740-U-SL2-BK-HSS	-	-	-	-	-

NOTES:
1. REFER TO ELECTRICAL DRAWINGS FOR SITE LIGHTING VOLTAGES

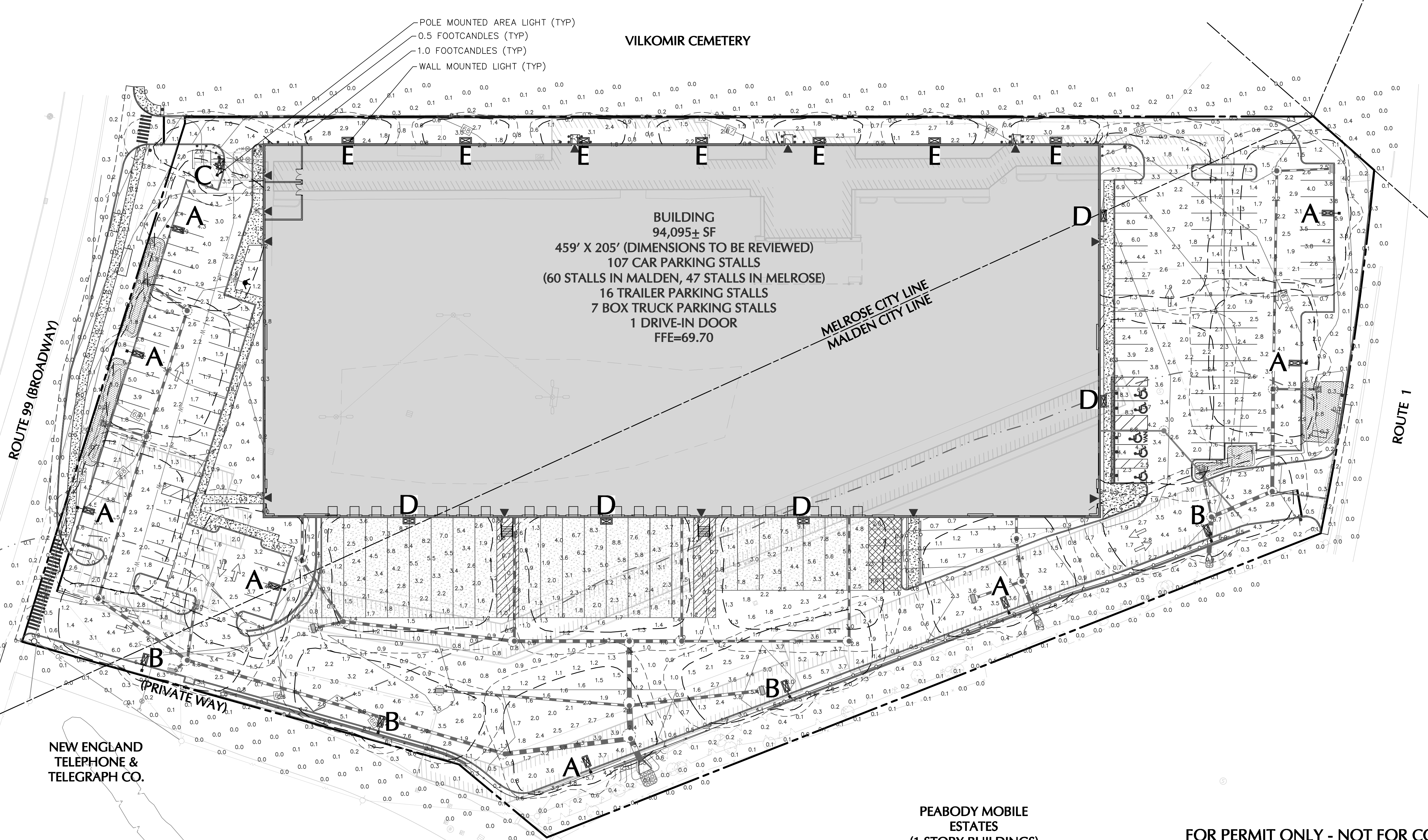
STATISTICS

DESCRIPTION	AVG.	MAX.	MIN.	MAX./MIN.	AVG./MIN.
WEST FRONT PARKING	2.54fc	5.4fc	0.8fc	6.75:1	3.18:1
WEST FRONT SIDEWALK	1.39fc	3.5fc	0.6fc	5.83:1	2.32:1
EAST REAR PARKING	2.69fc	8.3fc	0.7fc	11.86:1	3.84:1
EAST REAR SIDEWALK	3.17fc	7.0fc	0.9fc	7.78:1	3.52:1
REAR ACCESS DRIVE	1.48fc	3.5fc	0.5fc	7.0:1	2.96:1
LOADING DOCK	2.94fc	9.1fc	0.6fc	15.17:1	4.90:1
SOUTH CIRCULATION	2.38fc	8.6fc	0.5fc	17.2:1	4.76:1

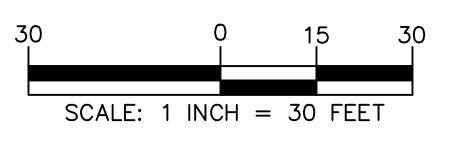
NOTE: LIGHT PHOTOMETRY AND CALCULATIONS FOR EXISTING LIGHTING ARE NOT INCLUDED IN THE ABOVE STATISTICS.

ORDINANCE COMPLIANCE CHART

Section	Required/ Permitted	Provided/Proposed	Compliance
CITY OF MALDEN			
500.2.9 Lighting	Lights used to illuminate parking areas and driveways shall be arranged to reflect light away from adjoining residential areas and away from all ways or streets.	Lighting was designed to reflect away from adjoining properties	Complies
CITY OF MELROSE			
Site Lighting 235-71.1.G.6	a. Parking lot pole lighting shall not exceed a height of 18 feet. d. Luminaires, regardless of lumen rating, shall be equipped with whatever additional shielding, lenses, or cutoff devices are required to eliminate light trespass onto any abutting lot or parcel and to eliminate glare perceptible to persons on abutting land.	Fixtures mounted at 18 feet max. All fixtures along property line receive a shield	Complies Complies



Date	Description	No.
REVISIONS		
<p>LANGAN Langan Engineering and Environmental Services, Inc. 888 Boylston Street, Ste 510 Boston, MA 02199 T: 617.824.9100 F: 617.824.9101 www.langan.com</p>		
<p>Project 735 NEWBURYPORT TURNPIKE/ 320 STATE HIGHWAY MALDEN / MELROSE MIDDLESEX COUNTY MASSACHUSETTS Drawing Title</p>		
<p>LIGHTING PLAN</p>		
Project No.	Drawing No.	
151018201	LL101	
Date	04/19/2021	
Drawn By	KK	
Checked By	MH	



PEABODY MOBILE ESTATES (1 STORY BUILDINGS)

FOR PERMIT ONLY - NOT FOR CONSTRUCTION

PROJECT NO. 151018201

LANGAN

LIGHTING NOTES:

GENERAL

1. POINT-BY-POINT CALCULATIONS PROVIDED WITHIN HAVE BEEN PREPARED IN ACCORDANCE TO IESNA STANDARDS AND IN CONSIDERATION OF THE VARIABLES WITHIN THESE NOTES AND SITE LIGHTING SCHEDULE. THE VALUES SHOWN ON THE PLANS ARE NOT AN INDICATION OF THE INITIAL LIGHT INTENSITIES OF THE LAMPS. THESE VALUES ARE AN APPROXIMATION OF THE MAINTAINED INTENSITIES DELIVERED TO THE GROUND PLANE USING INDUSTRY STANDARD LIGHT LOSS FACTORS (LLF) WHICH COVER LAMP DEGRADATION AND NATURAL BUILDUP / DIRT DEGRADATION ON THE FIXTURE LENS. THE LIGHTING PLAN IS DESIGNED WITH AN INDUSTRY STANDARD LLF IN ACCORDANCE WITH GUIDANCE AS PROVIDED BY IESNA. MINOR VARIATIONS IN TOPOGRAPHY, PHYSICAL OBSTRUCTIONS, AMBIENT OR ADJACENT LIGHT SOURCES AND/OR OTHER POTENTIAL IMPACTS HAVE NOT BEEN INCLUDED IN THESE CALCULATIONS. THEREFORE, AS-BUILT LIGHT INTENSITIES MAY VARY, IN EITHER DIRECTION FROM WHAT IS EXPLICITLY PORTRAYED WITHIN THESE DRAWINGS. NO GUARANTEE OF LIGHT LEVELS IS EXPRESSED OR IMPLIED BY THE POINT BY POINT CALCULATIONS SHOWN ON THESE PLANS.

2. LIGHT LEVEL POINT SPACING IS 10 FT. LEFT TO RIGHT AND 10 FT. TOP TO BOTTOM. POINT BY POINT CALCULATIONS ARE BASED ON THE LIGHT LOSS FACTOR AS STATED IN THE LIGHTING SCHEDULE.

3. ALL LIGHTING IS TO BE FULL CUT-OFF.

COMPLIANCE

3. ALL SITE LIGHTING RELATED WORK AND MATERIALS SHALL COMPLY WITH CITY, COUNTY, AND OTHER APPLICABLE GOVERNING AUTHORITY REQUIREMENTS.

4. LIGHTING LAYOUT COMPLIES WITH THE ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) SAFETY STANDARDS FOR LIGHT LEVELS.

COORDINATION

5. CONTRACTOR TO COORDINATE POWER SOURCE WITH LIGHT FIXTURES TO ENSURE ALL SITE LIGHTING IS OPERATING EFFECTIVELY, EFFICIENTLY AND SAFELY.

6. REFER TO ELECTRIFICATION PLAN FOR PROVIDING ADEQUATE POWER FOR SITE LIGHTING.

7. CONTRACTOR TO COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES AND DRAINAGE BEFORE DRILLING POLE BASES.

8. INSTALLATION OF ALL LIGHTING FIXTURES, POLES, FOOTINGS, AND FEEDER CABLE TO BE COORDINATED WITH ALL SITE WORK TRADES TO AVOID CONFLICT WITH FINISHED AND PROPOSED WORK.

9. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND FEEDER CABLE FOR EXTERIOR LIGHTING WITH EXISTING AND PROPOSED UTILITIES, SITE DRAINAGE SYSTEMS, AND PAVING. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE SHOULD ANY UTILITIES, NOT SHOWN ON THE PLANS, BE FOUND DURING EXCAVATIONS.

POLES AND FOOTINGS

10. PROVIDE A CONCRETE BASE FOR EACH LIGHT POLE AT THE LOCATIONS INDICATED ON THE CONSTRUCTION DRAWINGS AND/OR IN ACCORDANCE WITH PROJECT PLANS AND SPECIFICATIONS RELATING DIRECTLY TO CAST-IN-PLACE CONCRETE. THE USE OF ALTERNATIVE LIGHTING FOUNDATIONS, SUCH AS PRECAST, MAY CHANGE THE SIZING AND REINFORCEMENT REQUIREMENTS FROM THOSE SHOWN ON THESE PLANS. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO ORDERING ANY SUBSTITUTED PRODUCTS.

11. CONTRACTOR SHALL EXAMINE AND VERIFY THAT SOIL CONDITIONS ARE SUITABLE TO SUPPORT LOADS EXERTED UPON THE FOUNDATIONS DURING EXCAVATION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNSATISFACTORY CONDITIONS.

12. POLE FOUNDATIONS SHALL NOT BE POURED IF FREE STANDING WATER IS PRESENT IN EXCAVATED AREA.

13. ALL POLES HIGHER THAN 25 FT. SHALL BE EQUIPPED WITH FACTORY INSTALLED VIBRATION DAMPENERS.

WALL MOUNTED FIXTURES

14. CONTRACTOR TO COORDINATE INSTALLATION OF ALL THE WALL MOUNTED FIXTURES AND ELECTRICAL CONNECTIONS TO SITE STRUCTURE(S) WITH BUILDING MEP, ARCHITECT, AND/OR OWNER.

15. INSTALLATION AND ELECTRICAL CONNECTIONS FOR WALL MOUNTED FIXTURES TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, UTILITY AND SITE PLANS AND TO BE IN ACCORDANCE WITH ALL APPLICABLE CODES.

ADJUSTMENT AND INSPECTION

16. CONTRACTOR TO OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION. INSPECT FOR IMPROPER CONNECTIONS AND OPERATION.

17. CONTRACTOR TO AIM AND ADJUST ALL LUMINAIRES TO PROVIDE ILLUMINATION LEVELS AND DISTRIBUTION AS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT AND/OR OWNER.

18. CONTRACTOR TO CONFIRM THAT LIGHT FIXTURES, TILT ANGLE AND AIMING MATCH SPECIFICATIONS ON THE PLANS.

REQUIREMENTS FOR ALTERNATES

19. ALL LIGHTING SUBSTITUTIONS MUST BE MADE WITHIN 14 DAYS PRIOR TO THE BID DATE TO PROVIDE AMPLE TIME FOR REVIEW AND TO ISSUE AN ADDENDUM INCORPORATING THE SUBSTITUTION WITH THE FOLLOWING REQUIREMENTS:

A. ANY SUBSTITUTION TO LIGHTING FIXTURES, POLES, ETC. MUST BE APPROVED BY THE OWNER, ENGINEER AND TENANTS. ANY COST ASSOCIATED WITH REVIEW AND/OR APPROVAL OF THE SUBSTITUTIONS SHALL BE ENTIRELY BORNE BY THE CONTRACTOR.

B. COMPUTER PREPARED PHOTOMETRIC LAYOUT OF THE PROPOSED LIGHTED AREA WHICH INDICATES, BY ISOPHOTOCANDLE, THE SYSTEM'S PERFORMANCE.

C. A PHOTOMETRIC REPORT FROM A NATIONAL INDEPENDENT TESTING LABORATORY WITH REPORT NUMBER, DATE, FIXTURE CATALOG NUMBER, LUMINAIRE AND LAMP SPECIFICATIONS; IES CALCULATIONS, POINT BY POINT FOOT CANDLE PLAN, STATISTIC ZONES SHOWING AVERAGE, MAXIMUM, MINIMUM AND UNIFORMITY RATIOS, SUMMARY, ISOLUX PLOT, AND CATALOGUE CUTS. CATALOGUE CUTS MUST IDENTIFY OPTICS, LAMP TYPE, DISTRIBUTION TYPE, REFLECTOR, LENS, BALLASTS, WATTAGE, VOLTAGE, FINISH HOUSING DESCRIPTION AND ALL OTHER PERTINENT INFORMATION.

D. POLE MANUFACTURER AASHTO CALCULATIONS INDICATING THE POLE AND ANCHOR BOLTS BEING SUBMITTED ARE CAPABLE OF SUPPORTING THE POLE AND FIXTURE SYSTEMS BEING UTILIZED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

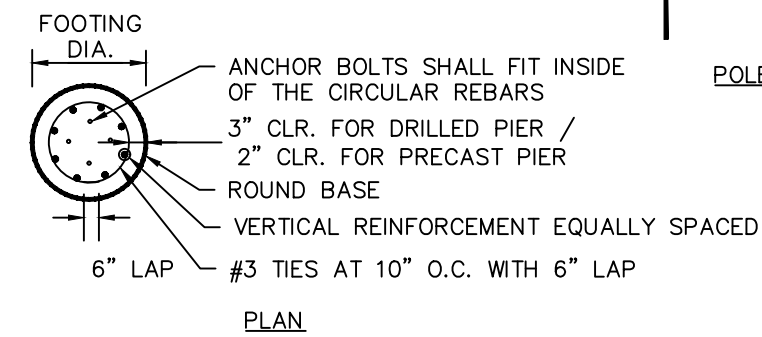
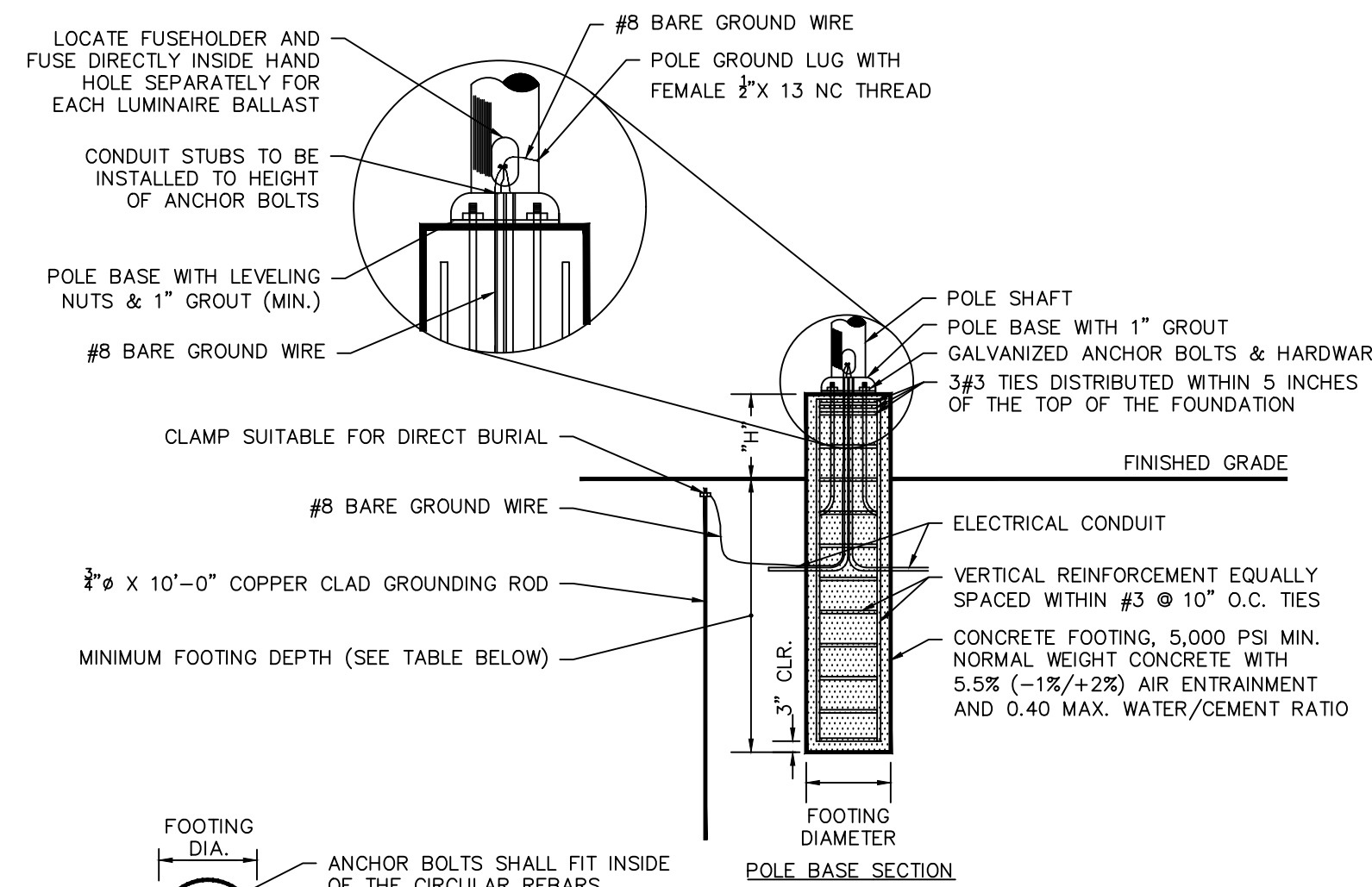
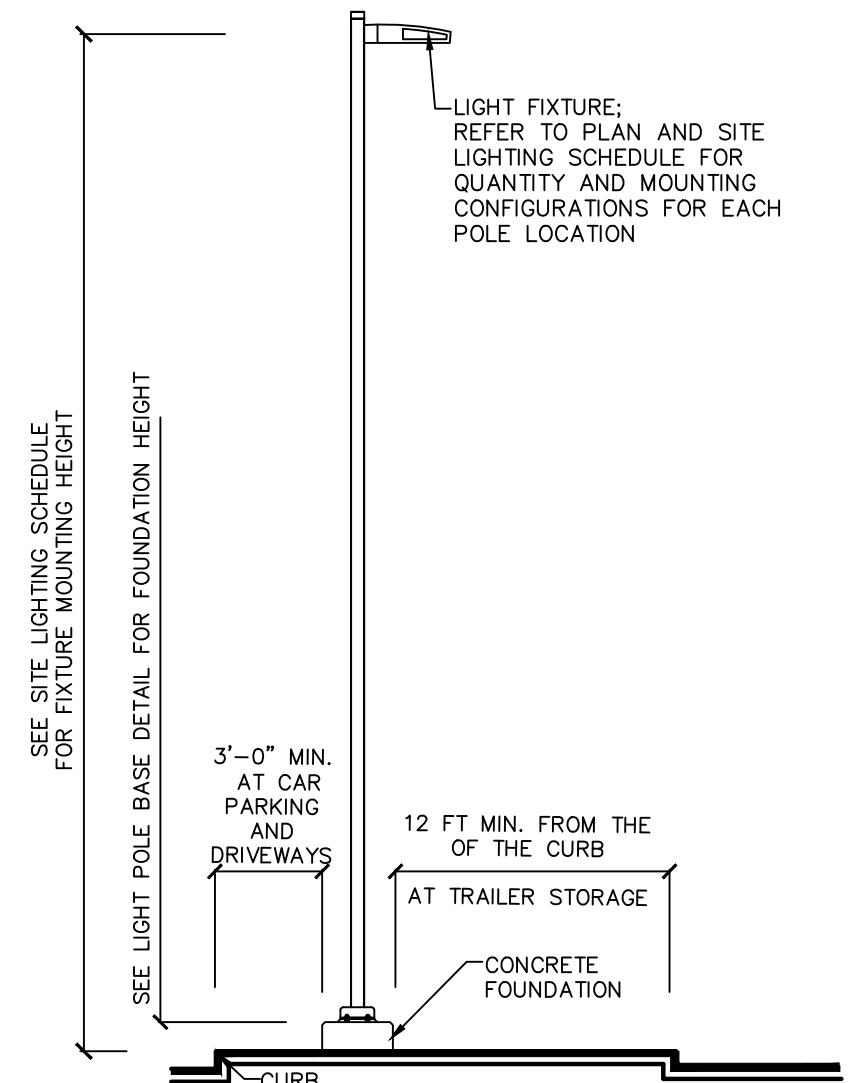
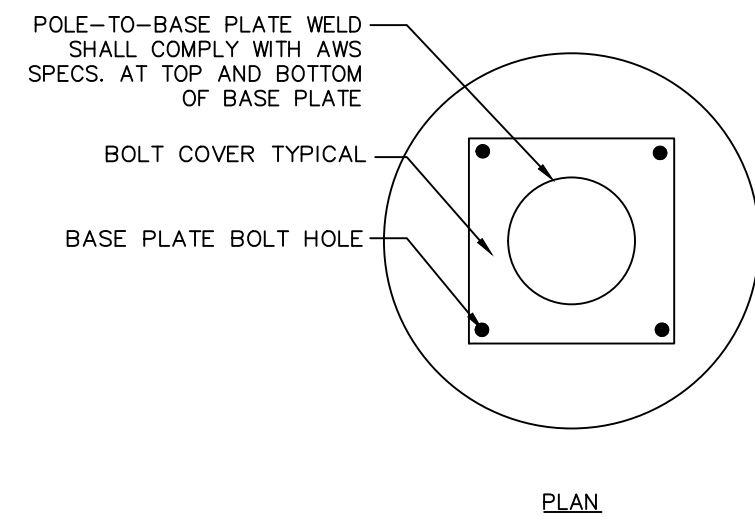
E. THE UNDERWRITERS LABORATORY LISTING AND FILE NUMBER FOR THE SPECIFIC FIXTURE(S) TO BE UTILIZED.

F. A COLOR PHOTOGRAPH THAT CLEARLY SHOWS THE REPLACEMENT FIXTURE POLE MOUNTED, THE FIXTURE'S COLOR, FINISH, AND PHYSICAL CHARACTERISTICS.

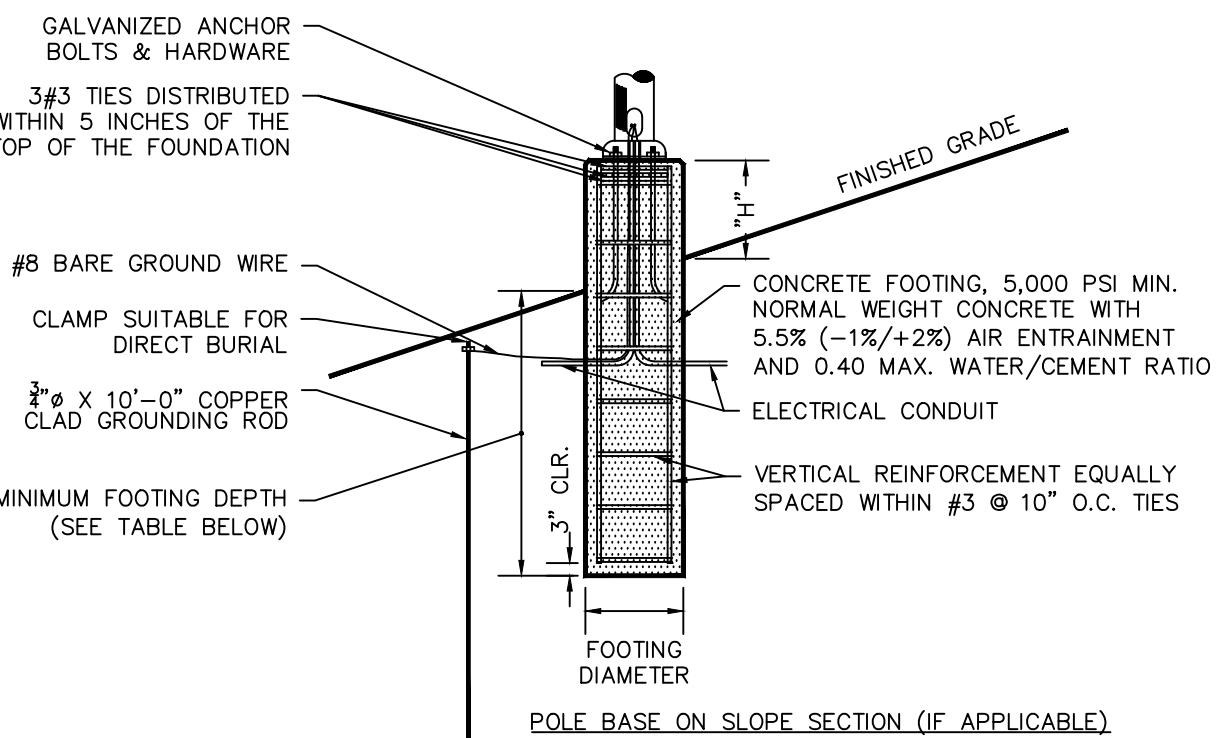
PHOTOMETRIC LIGHTING LEGEND:



NOTE: THE PHOTOMETRIC TEMPLATE REPRESENTS LIGHT THROW FOR EACH INDIVIDUAL FIXTURE AND DOES NOT REPRESENT LIGHT COMING FROM OTHER SOURCES.



MOUNTING HEIGHT	FOOTING DEPTH	FOOTING DIAMETER	VERTICAL REINFORCEMENT	'H'
18'-0"	5'-6"	2'-0"	# 6 BARS	3' EXPOSED CONCRETE BASE



NOTES:

- SHAFT CAP, ARMS, BASE FLANGE, ANCHOR BOLTS, LEVELING NUTS, CONNECTION HARDWARE, BOLT COVERS, HANDHOLE COVER, AND BOLT CIRCLE TEMPLATE SHALL BE FURNISHED BY POLE MANUFACTURER.
- EACH STANDARD TO BE PROTECTED AGAINST LIGHTNING WITH AN INTERCONNECTED GROUND ROD. THIS ROD SHALL BE BONDED PER SECTION NUMBER 250-86, N.E.C.
- CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENT OF ACI 318. CAST-IN-PLACE SHALL HAVE UNCONFINED COMPRESSIVE STRENGTH OF AT LEAST 5,000 PSI AT 28-DAYS. DEFORMED REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60.
- CONTRACTOR TO ENSURE CONCRETE POLE BASES ARE POURED / PLACED ABSOLUTELY VERTICAL & LEVEL.
- IF POLE BASE IS CAST-IN-PLACE, POLE BASE SHALL BE ONE CONTINUOUS POUR. EXPOSED PORTION OF BASE SHALL BE HAND-RUBBED SMOOTH.
- CONTRACTOR TO COMPACT SUBGRADE AROUND POLE BASE PER EARTHWORK SPECIFICATIONS / GEOTECH REPORT.
- THE INFORMATION ILLUSTRATED IN THE LIGHT POLE FOUNDATION DETAIL HAS BEEN PROVIDED FOR GENERAL REFERENCE AND PRELIMINARY COST ESTIMATE PURPOSES. LIGHT POLE FOUNDATIONS SHOULD BE DESIGNED AND DETAILED BY A LICENSED STRUCTURAL ENGINEER BASED ON EXISTING SOIL CONDITIONS, LOCAL DESIGN STANDARDS AND MANUFACTURERS RECOMMENDATIONS.
- CONTRACTOR TO CONFIRM GROUNDING DESIGN WITH MEP.

1 LIGHT FIXTURE AND POLE 2 LIGHT POLE FOOTING

Project	Catalog #	Type
Prepared by	Notes	Date

McGraw-Edison
GLEON Galleon
 Area / Site Luminaire
 Typical Applications: Outdoor • Parking Lots • Walkways • Roadways • Building Areas

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Optical Distributions page 4
- Product Specifications page 4
- Energy and Performance Data page 4
- Control Options page 3

Quick Facts

- Lumen packages range from 4200 - 80,800 (34W - 640W)
- Efficacy up to 156 lumens per watt

Dimensional Details

Number of Light Fixtures	1" Min. Spacing	Standard Arm Length	10' Extended Arm Length	Quick Mount Arm Length	1" Min. Spacing Extended Arm Length
1-4	15'-1/2"	7'	10'	10'-6"	16'-9"/10'
5-6	21'-5/8"	7'	10'	10'-6"	16'-9"/10'
7-8	27'-5/8"	7'	13'	10'-6"	-
9-10	33'-3/4"	7'	16'	-	-

COOPER Lighting Solutions
 P15000025EN page 1
 APRIL 12, 2021 1:40:74

Project	Catalog #	Type
Prepared by	Notes	Date

McGraw-Edison
Impact Elite LED
 Wall Mount Luminaire

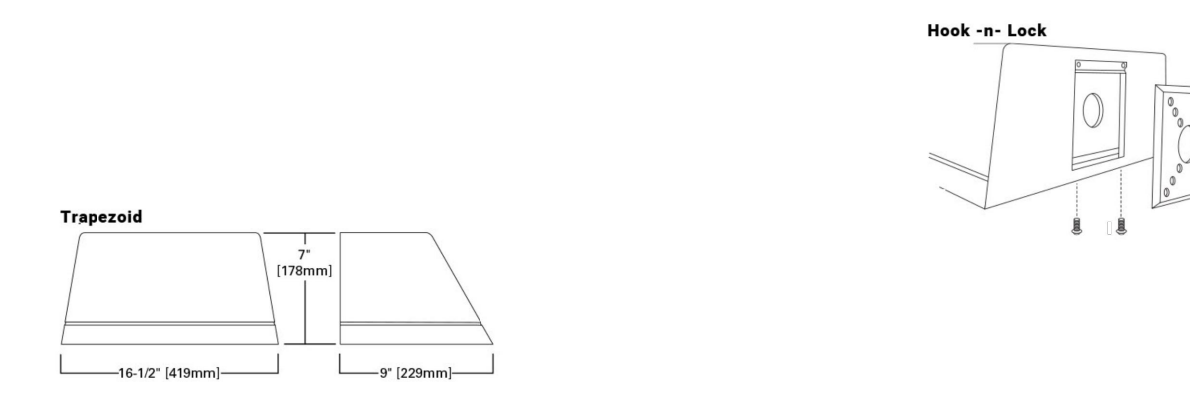
Interactive Menu

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

Quick Facts

- 10 Optical Distributions
- Lumen packages range from 2,459 to 8,123 (20W - 66W)
- Efficacy up to 143 lumens per watt

Dimensional Details



COOPER Lighting Solutions
 P15000025EN page 1
 APRIL 12, 2021 1:29:04

3 FIXTURE TYPE A-D

4 FIXTURE TYPE E

RTS Round Tapered Steel Pole
 No Arm - 4-Bolt Base

Anchorages
 4-Bolt Steel Base Plate of fabricated hot rolled carbon steel conforming to ASTM A36 or equivalent. OR An alternative design with 2-piece Base Cover and anchoring hardware. Base Cover will be fabricated from metal materials.

Handhole
 Up to 8" Bolt Diameter - Handhole: 2" x 2" Handhole with cover, stainless steel screw and backnut. A grommet providing necessary support 1/2" - 1 3/8" Hole will be provided.

Base Cover
 Square metal powder coated Base Cover as standard on all RTS poles.

Vibration Damper
 If determined necessary by Nipco, or if specified by the customer, a vibration damper is required and will be provided.

Height	Top Dia.	Bottom Dia.	Weight	Top Dia.	Bottom Dia.	Weight
4.5	7.5-8.5	6	3.75	7.5	17 x 3	
6.5	8.5-10.5	8	5.25	8.5	17 x 3	
8.5	10.5-12.5	10	7.75	10.5	17 x 3	
10.5	12.5-14.5	12	10.25	12.5	17 x 3	
12.5	14.5-16.5	14	12.75	14.5	17 x 3	
14.5	16.5-18.5	16	15.25	16.5	17 x 3	
16.5	18.5-20.5	18	17.75	18.5	17 x 3	

RTS - Round Tapered Steel Pole	RTS - Square Tapered Steel Pole																																																																
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5 POLE TYPE A-C

FOR PERMIT ONLY - NOT FOR CONSTRUCTION

REVISIONS

Date	Description	No.
REVISIONS		

LANGAN
 Langan Engineering and Environmental Services, Inc.
 888 Boylston Street, Ste 510
 Boston, MA 02199
 T: 617.824.9100 F: 617.824.9101 www.langan.com

735 NEWBURYPORT TURNPIKE/ 320 STATE HIGHWAY

MIDDLESEX COUNTY MASSACHUSETTS
 Drawing Title

LIGHTING DETAILS

Project No.	151018201	Drawing No.	LL501
Date	04/19/2021	Drawn By	KK
Checked By	MH		

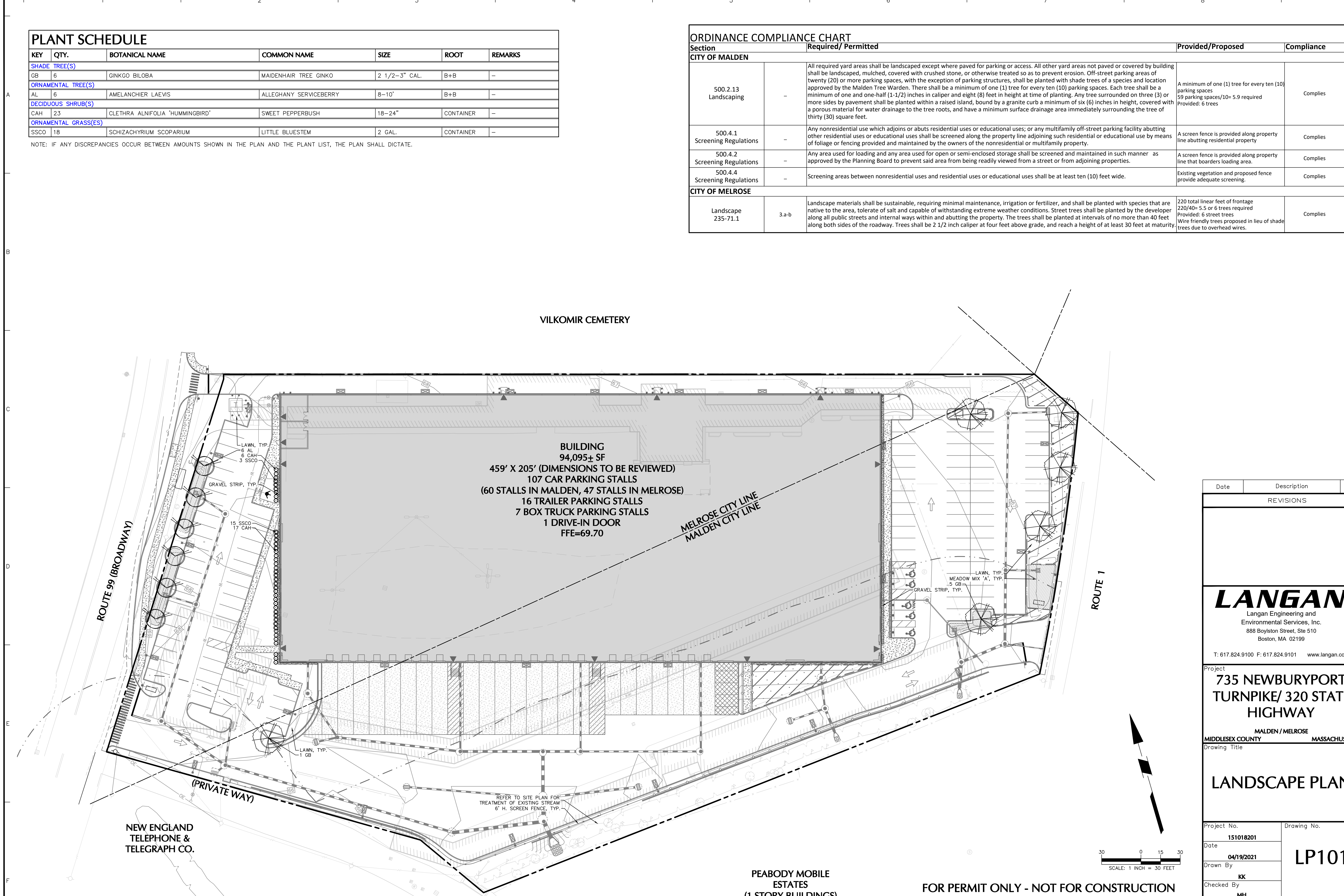
PLANT SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
SHADE TREE(S)						
GB	6	GINKGO BILOBA	MAIDENHAIR TREE GINKO	2 1/2-3" CAL.	B+B	-
ORNAMENTAL TREE(S)						
AL	6	AMELANCHIER LAEVIS	ALLEGHANY SERVICEBERRY	8-10'	B+B	-
DECIDUOUS SHRUB(S)						
CAH	23	CLETHRA ALNIFOLIA "HUMMINGBIRD"	SWEET PEPPERBUSH	18-24"	CONTAINER	-
ORNAMENTAL GRASS(ES)						
SSCO	18	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	2 GAL.	CONTAINER	-

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN IN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE.

ORDINANCE COMPLIANCE CHART

Section	Required/ Permitted	Provided/Proposed	Compliance	
CITY OF MALDEN				
500.2.13 Landscaping	-	All required yard areas shall be landscaped except where paved for parking or access. All other yard areas not paved or covered by building shall be landscaped, mulched, covered with crushed stone, or otherwise treated so as to prevent erosion. Off-street parking areas of twenty (20) or more parking spaces, with the exception of parking structures, shall be planted with shade trees of a species and location approved by the Malden Tree Warden. There shall be a minimum of one (1) tree for every ten (10) parking spaces. Each tree shall be a minimum of one and one-half (1-1/2) inches in caliper and eight (8) feet in height at time of planting. Any tree surrounded on three (3) or more sides by pavement shall be planted within a raised island, bound by a granite curb a minimum of six (6) inches in height, covered with a porous material for water drainage to the tree roots, and have a minimum surface drainage area immediately surrounding the tree of thirty (30) square feet.	A minimum of one (1) tree for every ten (10) parking spaces 59 parking spaces/10= 5.9 required Provided: 6 trees	Complies
500.4.1 Screening Regulations	-	Any nonresidential use which adjoins or abuts residential uses or educational uses; or any multifamily off-street parking facility abutting other residential uses or educational uses shall be screened along the property line adjoining such residential or educational use by means of foliage or fencing provided and maintained by the owners of the nonresidential or multifamily property.	A screen fence is provided along property line abutting residential property	Complies
500.4.2 Screening Regulations	-	Any area used for loading and any area used for open or semi-enclosed storage shall be screened and maintained in such manner as approved by the Planning Board to prevent said area from being readily viewed from a street or from adjoining properties.	A screen fence is provided along property line that borders loading area.	Complies
500.4.4 Screening Regulations	-	Screening areas between nonresidential uses and residential uses or educational uses shall be at least ten (10) feet wide.	Existing vegetation and proposed fence provide adequate screening.	Complies
CITY OF MELROSE				
Landscape 235-71.1	3.a-b	Landscape materials shall be sustainable, requiring minimal maintenance, irrigation or fertilizer, and shall be planted with species that are native to the area, tolerate of salt and capable of withstanding extreme weather conditions. Street trees shall be planted by the developer along all public streets and internal ways within and abutting the property. The trees shall be planted at intervals of no more than 40 feet along both sides of the roadway. Trees shall be 2 1/2 inch caliper at four feet above grade, and reach a height of at least 30 feet at maturity.	220 total linear feet of frontage 220/40= 5.5 or 6 trees required Provided: 6 street trees Wire friendly trees proposed in lieu of shade trees due to overhead wires.	Complies



BUILDING
 94,095± SF
 459' X 205' (DIMENSIONS TO BE REVIEWED)
 107 CAR PARKING STALLS
 (60 STALLS IN MALDEN, 47 STALLS IN MELROSE)
 16 TRAILER PARKING STALLS
 7 BOX TRUCK PARKING STALLS
 1 DRIVE-IN DOOR
 FFE=69.70

Date	Description	No.
REVISIONS		
Langan Engineering and Environmental Services, Inc. 888 Boylston Street, Ste 510 Boston, MA 02199 T: 617.824.9100 F: 617.824.9101 www.langan.com		
Project 735 NEWBURYPORT TURNPIKE/ 320 STATE HIGHWAY MALDEN / MELROSE MIDDLESEX COUNTY MASSACHUSETTS Drawing Title LANDSCAPE PLAN		
Project No.	151018201	
Date	04/19/2021	
Drawn By	KK	
Checked By	MH	
Drawing No.	LP101	



FOR PERMIT ONLY - NOT FOR CONSTRUCTION

PEABODY MOBILE ESTATES (1 STORY BUILDINGS)

LANEAM PROJECT NO. 151018201

GENERAL LANDSCAPE PLANTING NOTES

- INVOICES FOR ALL PLANTING WITHIN WETLAND AND WETLAND BUFFER SHALL BE PROVIDED AND APPROVED BY CONSERVATION COMMISSION PRIOR TO INSTALLATION.
- NAMES OF PLANTS AS DESCRIBED ON THIS PLAN CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES" 1942 EDITION, PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF PLANT VARIETIES NOT INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE.
- ALL EXPOSED GROUND SURFACES THAT ARE NOT PAVED WITHIN THE CONTRACT LIMIT LINE, AND THAT ARE NOT COVERED BY LANDSCAPE PLANTING OR SEEDING AS SPECIFIED, SHALL BE COVERED BY A NATURAL MULCH THAT WILL PREVENT SOIL EROSION AND THE EMANATION OF DUST.
- NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR PROJECT ENGINEER.
- STANDARDS FOR TYPE, SPREAD, HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN. PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION.
- NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE SET PLUMS AND SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANTS ORIGINAL GRADE BEFORE DIGGING. PLANT MATERIAL OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR AND HABIT. THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REJECT PLANT MATERIAL THAT DOES NOT CONFORM TO THE TYPICAL OR SPECIFIED HABIT OF THAT SPECIES.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY AND SEWER LINES PRIOR TO THE START OF EXCAVATION ACTIVITIES. NOTIFY THE PROJECT ENGINEER AND OWNER IMMEDIATELY OF ANY CONFLICTS WITH PROPOSED PLANTING LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE.
- THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS. IF THE SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, THE CONTRACTOR SHALL SUBMIT PROOF OF NON-AVAILABILITY TO THE LANDSCAPE ARCHITECT AND OWNER, TOGETHER WITH A WRITTEN PROPOSAL FOR USE OF AN EQUIVALENT MATERIAL.
- LANDSCAPE CONTRACTOR TO STAKE OUT PLANTING LOCATIONS, FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR OWNER BEFORE PLANTING WORK BEGINS. THE LANDSCAPE ARCHITECT AND/OR OWNER SHALL DIRECT THE CONTRACTOR IN THE FINAL PLACEMENT OF ALL PLANT MATERIAL AND LOCATION OF PLANTING BEDS TO ENSURE COMPLIANCE WITH DESIGN INTENT UNLESS OTHERWISE INSTRUCTED.
- THE LANDSCAPE ARCHITECT MAY REVIEW PLANT MATERIAL AT THE SITE, BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURTHER REVIEW PLANT MATERIALS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEM, INSECTS, INJURIES, AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. THE CONTRACTOR SHALL REMOVE REJECTED PLANT MATERIALS IMMEDIATELY FROM PROJECT SITE AS DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER.
- DELIVERY, STORAGE, AND HANDLING
 - PACKAGED MATERIALS SHALL BE DELIVERED IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. MATERIALS SHALL BE PROTECTED FROM DETERIORATION DURING DELIVERY AND WHILE STORED AT SITE.
 - TREES AND SHRUBS - THE CONTRACTOR SHALL PROVIDE TREES AND SHRUBS DUG FOR THE GROWING SEASON FOR WHICH THEY WILL BE PLANTED. DO NOT BRING PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. DO NOT BEND OR BRUISE TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING TRANSPORT AND NOT CRUSH BALLED OR BURLAPPED STOCK DURING DELIVERY OR HANDLING.
 - ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOTBALL WRAPPING AND BINDING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED FROM THE TOP OF THE BALL AT THE TIME OF PLANTING. IF THE PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, THE WIRE BASKET SHALL BE CUT AND FOLDED DOWN 8 INCHES INTO THE PLANTING HOLE. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE ROOT BALL SHALL BE CUT THROUGH THE SURFACE IN TWO LOCATIONS.
 - DO NOT CONTRIBUTE TREES AND SHRUBS DELIVERED TO SITE AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS, THE CONTRACTOR SHALL SET TREES AND SHRUBS IN SHADY LOCATIONS, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.
- ALL LANDSCAPED AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE HAND RAKED SMOOTH UNLESS OTHERWISE SPECIFIED AND UNEVEN SURFACES PRIOR TO PLANTING OR MULCHING.
- ALL PLANT MATERIAL SHALL BE INSTALLED AS PER DETAILS, NOTES AND CONTRACT SPECIFICATIONS. THE LANDSCAPE ARCHITECT MAY REVIEW INSTALLATION AND MAINTENANCE PROCEDURES.
- NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF TWO YEARS FOLLOWING ACCEPTANCE BY THE OWNER. PLANT MATERIAL SHOULD BE UNHEALTHY, DYING OR DEAD DURING THIS PERIOD, SHALL BE REMOVED AND REPLACED IN KIND BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
- THE CONTRACTOR SHALL KEEP AREA CLEAN DURING DELIVERY AND INSTALLATION OF PLANT MATERIALS. REMOVE AND DISPOSE OF OFF-SITE ANY ACCUMULATED DEBRIS OR UNUSED MATERIALS. REPAIR DAMAGE TO ADJACENT AREAS CAUSED BY LANDSCAPE INSTALLATION OPERATIONS.
- ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR AS REQUIRED BY SITE AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH.
- THE BACKFILL MIXTURE AND SOIL MIXES TO BE INSTALLED PER THE SPECIFICATIONS.
- AFTER PLANT IS PLACED IN TREE PIT LOCATION, ALL TWINE HOLDING ROOT BALL TOGETHER SHOULD BE COMPLETELY REMOVED AND THE BURLAP SHOULD BE PULLED DOWN SO 1/3 OF THE ROOT BALL IS EXPOSED. SYNTHETIC BURLAP SHOULD BE COMPLETELY REMOVED AFTER INSTALLATION.
- MULCH SHOULD NOT BE PILED UP AROUND THE TRUNK OF ANY PLANT MATERIAL. NO MULCH OR TOPSOIL SHOULD BE TOUCHING THE BASE OF THE TRUNK ABOVE THE ROOT COLLAR.
- ALL FENCE INSTALLATION SHALL BE COMPLETED PRIOR TO COMMENCEMENT OF ANY LANDSCAPE PLANTING, LAWN AND GRASSES, OR IRRIGATION WORK.
- FOR ANY DISCREPANCIES BETWEEN THE PLANT SCHEDULE AND PLANTING PLAN THE GRAPHIC QUANTITY SHOWN SHALL GOVERN.
- PLANT MATERIALS SHALL NOT BE PLANTED UNTIL THE FINISHED GRADING HAS BEEN COMPLETED.
- ALL PLANT INSTALLATIONS SHALL BE COMPLETED EITHER BETWEEN APRIL 1 - JUNE 15 OR AUGUST 15 - NOVEMBER 1, UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT. SEE LAWN SEEDING DATES IN SEEDING NOTES.

LANDSCAPE MAINTENANCE NOTES

- MAINTENANCE OPERATIONS BEFORE APPROVAL:**
 - PLANT CARE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS SATISFACTORILY INSTALLED AND SHALL CONTINUE THROUGHOUT THE LIFE OF THE CONTRACT UNTIL FINAL ACCEPTANCE OF THE PROJECT.
 - CARE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR OTHER MEANS; REPAIRING AND RESHAPING WATER RINGS OR SAUCERS; MAINTAINING STAKES AND GUYS AS ORIGINALLY INSTALLED; WATERING WHEN NEEDED OR DIRECTED; AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.
 - CONTRACTOR SHALL REMOVE AND REPLACE ALL DEAD, DEFECTIVE AND/OR REJECTED PLANTS AS REQUIRED BEFORE FINAL ACCEPTANCE.
- MAINTENANCE DURING CONSTRUCTION:**
 - MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING. PLANTS SHALL BE WATERED, MULCHED, WEEDED, PRUNED, SPRAYED, FERTILIZED, CULTIVATED, AND OTHERWISE MAINTAINED AND PROTECTED UNTIL PROVISIONAL ACCEPTANCE. SETTLED PLANTS SHALL BE RESET TO PROPER GRADE AND POSITION, PLANTING SAUCER RESTORED AND DEAD MATERIAL REMOVED. STAKES AND GUYS SHALL BE TIGHTENED AND REPAIRED. DETECTIVE WORK SHALL BE CORRECTED AS SOON AS POSSIBLE AFTER IT BECOMES APPARENT AND WEATHER AND SEASON PERMIT.
 - IF A SUBSTANTIAL NUMBER OF PLANTS ARE SICKLY OR DEAD AT THE TIME OF INSPECTION, ACCEPTANCE SHALL NOT BE GRANTED AND THE CONTRACTOR'S RESPONSIBILITY FOR MAINTENANCE OF ALL PLANTS SHALL BE EXTENDED FROM THE TIME REPLACEMENTS ARE MADE OR EXISTING PLANTS ARE DEEMED ACCEPTABLE BY THE LANDSCAPE ARCHITECT.
 - ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE SPECIFIED ON THE PLANT LIST OR THAT WHICH WAS TO REMAIN OR BE RELOCATED. THEY SHALL BE FURNISHED AND DELIVERED AS SPECIFIED. THE COST SHALL BE BORNE BY THE CONTRACTOR. REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC., AND LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
 - PLANTS SHALL BE GUARANTEED FOR A PERIOD OF TWO YEARS AFTER INSPECTION AND PROVISIONAL ACCEPTANCE.
 - AT THE END OF THE ESTABLISHMENT PERIOD, INSPECTION SHALL BE MADE AGAIN. ANY PLANT REQUIRED UNDER THIS CONTRACT THAT IS DEAD OR UNSATISFACTORY TO THE LANDSCAPE ARCHITECT OR OWNER SHALL BE REMOVED FROM THE SITE AND REPLACED DURING THE NORMAL PLANTING SEASON.
- LAWN MAINTENANCE:**
 - BEGIN MAINTENANCE IMMEDIATELY AFTER EACH PORTION OF LAWN IS PLANTED AND CONTINUE FOR 8 WEEKS AFTER ALL LAWN PLANTING IS COMPLETED.
 - WATER TO KEEP SURFACE SOIL MOSTLY, REPAIR WASHED OUT AREAS BY FILLING WITH TOPSOIL, LIMING, FERTILIZING AND RE-SEEDING; MOW TO 2 1/2 - 3 INCHES AFTER GRASS REACHES 3 1/2 INCHES IN HEIGHT, AND MOW FREQUENTLY ENOUGH TO MAINTAIN GRASS FROM EXCEEDING 3 1/2 INCHES; WEED BY LOCAL SPOT APPLICATION OF SELECTIVE HERBICIDE ONLY AFTER GRASS IS WELL-ESTABLISHED.

PLANTING SOIL SPECIFICATIONS

- PLANTING SOIL, ALTERNATELY MAY BE REFERRED TO AS TOPSOIL, SHOULD BE FRIABLE, FERTILE, WELL DRAINED, FREE OF DEBRIS, TOXINS, TRASH AND STONES OVER 1/2" DIA., IT SHOULD HAVE A HIGH ORGANIC CONTENT SUITABLE TO SUSTAIN HEALTHY PLANT GROWTH AND SHOULD LOOK AESTHETICALLY PLEASING HAVING NO NOXIOUS ODORS.
- PLANTING SOIL:**

REUSE SURFACE SOILS STOCKPILED ON SITE, VERIFYING COMPLIANCE WITH PLANTING SOIL AND TOPSOIL CRITERIA IN THIS SPECIFICATION THROUGH TESTING. CLEAN SURFACE SOIL OF ALL ROOTS, PLANTS, SOIL, AND GRAVEL OVER 1" IN DIAMETER AND DELETERIOUS MATERIALS. IF ON-SITE SOILS ARE TO BE USED FOR PROPOSED PLANTING, THE CONTRACTOR SHALL DEMONSTRATE THROUGH SOIL TESTING, THAT ON-SITE SOILS MEET THE SAME CRITERIA AS INDICATED IN NOTES PLANS AND SPECIFICATIONS.

SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF SITE SOURCES WHEN TOPSOIL AND PLANTING SOIL QUANTITIES ARE INSUFFICIENT. OBTAIN SOIL DISPLACED FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4" DEEP. DO NOT OBTAIN FROM AGRICULTURAL LAND, BODIES, MARSHES OR CONTAMINATED SITES.

CONTRACTOR SHALL TEST SOILS AND FURNISH SAMPLES UPON REQUEST. PACKAGED MATERIALS SHALL BE UNOPENED BAGS OR CONTAINERS, EACH BEARING A NAME, GUARANTEE, AND TRADEMARK OF THE PRODUCER, MATERIAL COMPOSITION, MANUFACTURER'S CERTIFIED ANALYSIS, AND THE WEIGHT OF THE MATERIALS. SOIL OR AMENDMENT MATERIALS SHALL BE STORED ON SITE TEMPORARILY IN STOCKPILES PRIOR TO PLACEMENT AND SHALL BE PROTECTED FROM INTRUSION OF CONTAMINANTS AND EROSION. AFTER MIXING, SOIL MATERIALS SHALL BE COVERED WITH A TARP/PAULI UNTIL TIME OF ACTUAL USE.

ALL PLANTING SOILS SHALL BE SUBMITTED FOR TESTING TO THE STATE COOPERATIVE EXTENSION SERVICE, OR APPROVED EQUAL, PRIOR TO DELIVERY TO THE SITE. CONTRACTOR SHALL FURNISH SOIL SAMPLES AND SOIL TEST RESULTS TO LANDSCAPE ARCHITECT OR OWNER AT A RATE OF ONE SAMPLE PER 500 CUBIC YARDS TO ENSURE CONSISTENCY ACROSS THE TOTAL VOLUME OF PLANTING SOIL REQUIRED. TEST RESULTS SHALL EVALUATE FOR ALL CRITERIA LISTED IN THIS SPECIFICATION. IF TESTING AGENCY DETERMINES THAT THE SOILS ARE DEFICIENT IN ANY MANNER AND WILL BE CORRECTED BY ADDING AMENDMENTS, THE CONTRACTOR SHALL FOLLOW STATED RECOMMENDATIONS FOR SOIL IMPROVEMENT AND FURNISH SUBMITTALS FOR ALL AMENDMENTS PRIOR TO DELIVERY OF SOIL TO THE PROJECT SITE.

- THE FOLLOWING TESTING SHOULD BE PERFORMED AND RESULTS GIVEN TO THE LANDSCAPE ARCHITECT FOR APPROVAL BEFORE INSTALLATION:
 - PARTICLE SIZE ANALYSIS - LOAMY SAND: 60-75% SAND, 25-40% SILT, AND 5-15% CLAY.
 - FERTILITY ANALYSIS: pH (5.5-6.5), SOLUBLE SALTS (LESS THAN 2 MMH/CM), NITRATE, PHOSPHATE, POTASSIUM, CALCIUM AND AMMONIUM
 - ORGANIC MATTER CONTENT: 2.5-5% IN NATIVE SOILS; UP TO 10% IN AMENDED SOILS
 - CATION EXCHANGE CAPACITY: 10-20 CMH/CM
 - MATERIAL DRAINAGE RATE: 60% PASSING IN 2 MINUTES, 40% RETAINED
 - NOT MORE THAN 1% OF MATERIAL SHALL BE RETAINED BY A #4 SIEVE
- SOIL AMENDMENT FOR PLANT MATERIAL:**

IF SOIL ORGANIC CONTENT IS INADEQUATE, SOIL SHALL BE AMENDED WITH COMPOST OR ACCEPTABLE, WEED FREE, ORGANIC MATTER. ORGANIC AMENDMENT SHALL BE WELL COMPOSTED, PH RANGE OF 6-8, MOISTURE CONTENT 30-50% BY WEIGHT 100% PASSING THROUGH 1" SIEVE, SOLUBLE SALT CONTENT LESS THAN 0.5 MM MDS/CM, MEETING ALL APPLICABLE ENVIRONMENTAL CRITERIA FOR CLEAN FILL.

A. ORGANIC MATTER AS A SOIL AMENDMENT: LEAF MULD WITH 60-90% ORGANIC CONTENT BY WEIGHT, SHREDED LEAF LITTER, COMPOSTED FOR A MINIMUM OF 1 YR. SHOULD BE FREE OF DEBRIS, STONES OVER 1/2", WOOD CHIPS OVER 1".

B. SOIL IN BEDS AND PLANTING ISLANDS OTHER THAN BACKFILL MATERIAL AND TOPSOIL, SHOULD BE FRIABLE, WELL DRAINED, AND FREE OF DEBRIS, INCLUDING STONES AND TRASH.

C. AMENDMENTS FOR BACK FILL IN TREE AND SHRUB PIT:

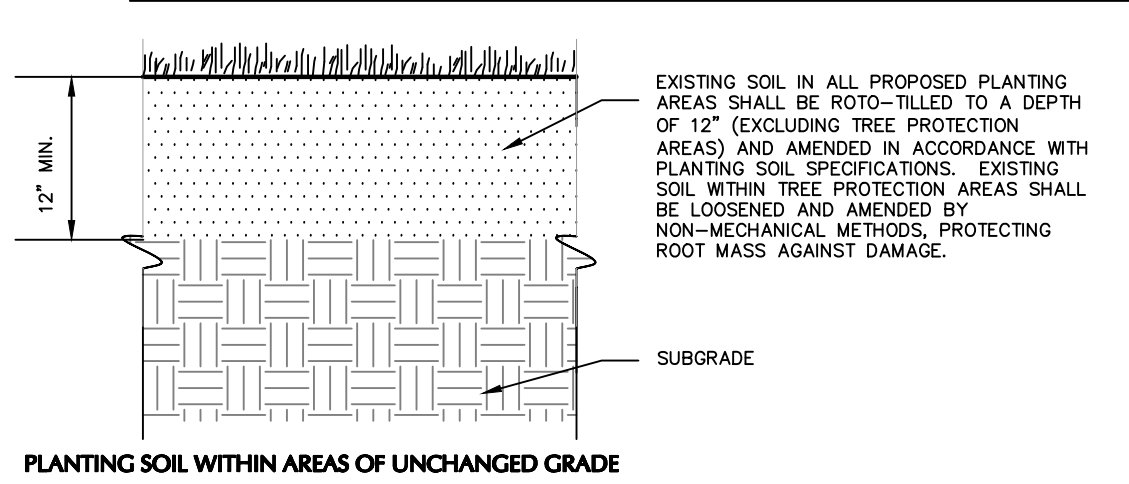
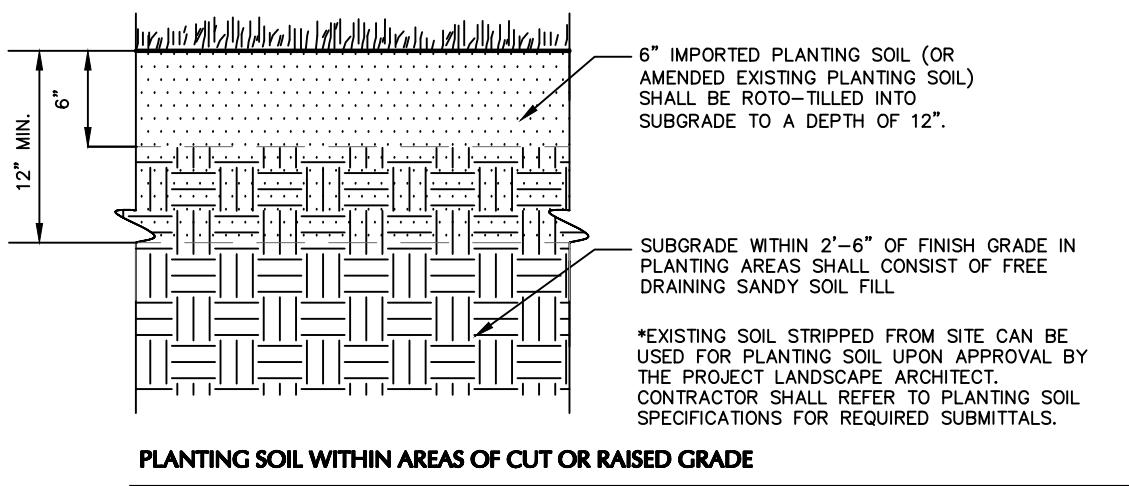
 - GROUND LIMESTONE (WITH A MAX OF 6% OF CALCIUM AND MAGNESIUM CARBONATES) USING PENDING RESULTS OF SOIL ANALYSIS.
 - BIRD SPRINKLES TO 5.5 MIN. TO 6.5 FOR NON-ERICACEOUS PLANTS
 - BIRD SPRINKLES TO 4.5 MIN. TO 5.5 FOR ERICACEOUS PLANTS
 - TERRA-SORB BY PLANT HEALTH CARE 800-421-9051 (SEE MANUFACTURER RECOMMENDATIONS) USED IN PLANTER BACKFILL MIXTURE WITH TREES AND SHRUBS.
 - MYCOR-RHIZO SAYER BY PLANT HEALTH CARE 800-421-9051 (SEE MANUFACTURER RECOMMENDATIONS) USED IN BACKFILL MIXTURE WITH TREES.

- WHERE PLANTING AREAS ARE PROPOSED FOR FORMER PAVED OR GRAVEL AREAS, BEDS SHALL BE EXCAVATED TO A MINIMUM 30" DEPTH AND, AT A MINIMUM, BE BACKFILLED WITH BOTTOM LAYER OF SANDY LOAM (ORGANIC CONTENT LESS THAN 2%) OVER WHICH TOPSOIL AND PLANTING SOILS WILL BE PLACED AT DEPTHS INDICATED IN PLANS, DETAILS AND NOTES.
- CLEAN SOIL FILL IN LANDSCAPE AREAS:**

LANDSCAPE FILL MATERIAL, BELOW PLANTING SOILS, SHALL HAVE THE PHYSICAL PROPERTIES OF A SANDY LOAM WITH AN ORGANIC CONTENT OF LESS THAN 2% AND A PH BETWEEN 5 - 7.
- SOIL PLACEMENT:**
 - CONTRACTOR TO PROVIDE SIX INCHES (6") MINIMUM DEPTH PLANTING SOIL LAYER IN LAWN AREAS, TWELVE INCHES (12") MINIMUM DEPTH PLANTING SOIL LAYER IN GROUNDCOVER AND PERENNIAL AREAS, EIGHTEEN INCHES (18") MINIMUM DEPTH PLANTING SOIL LAYER IN SHRUB AREAS, AND THIRTY-SIX INCHES (36") MINIMUM DEPTH PLANTING SOIL LAYER IN TREE PLANTING AREAS.
 - SCARIFY AND/OR TILL COMPACTED SUBSOILS TO A MINIMUM DEPTH OF 6 INCHES. THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOIL INTO THE SUBSOIL PRIOR TO PLACING PLANTING SOIL AT THE DEPTHS INDICATED ABOVE. PLANTING SOIL SHALL BE PLACED IN 12-18" LIFTS AND WATER THOROUGHLY BEFORE INSTALLING NEXT LIFT. REPEAT UNTIL DEPTHS AND FINISH GRADES HAVE BEEN ACHIEVED. NO SOILS SHALL BE PLACED IN A FROZEN OR MUDDY CONDITION.
 - PLANTING SOIL PRESENT AT THE SITE, IF ANY, MAY BE USED TO SUPPLEMENT TOTAL AMOUNT REQUIRED. CONTRACTOR TO FURNISH AN ANALYSIS OF ON-SITE PLANTING SOIL UTILIZED IN ALL PLANTING AREAS.
- SOIL CONDITIONING:**
 - ADJUST PH AND NUTRIENT LEVELS AS REQUIRED TO ENSURE AN ACCEPTABLE GROWING MEDIUM. LOWER PH USING ELEMENTAL SULFUR ONLY. PEAT MOSS OR COPPER SULFATE MAY NOT BE USED. GROUND LIMESTONE AS A SOIL AMENDMENT MATERIAL WILL ONLY BE USED PENDING RESULTS OF SOIL ANALYSIS. PROVIDE WITH MINIMUM 80% CALCIUM AND MAGNESIUM CARBONATES AND SHALL HAVE TOTAL 100% PASSING THE 10 MESH SIEVE, MINIMUM 80% PASSING 20 MESH SIEVE, AND MINIMUM 60% PASSING 100 MESH SIEVE.
 - ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
- SOIL MODIFICATIONS (PENDING RESULTS OF SOIL ANALYSIS):**
 - THOROUGHLY TILL ORGANIC MATTER (LEAF COMPOST) INTO THE TOP 6 TO 12 IN. OF MOST PLANTING SOILS TO IMPROVE THE SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.0. PEAT MOSS MAY NOT BE USED AS ORGANIC MATTER AMENDMENT.
 - MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR COMPOST. COARSE SAND MAY BE USED IF FINISH GRADE IS TO BE MAINTAINED AT A DEPTH OF MORE THAN 6" OF THE TOTAL MIX. IMPROVE DRAINAGE IN HEAVY SOILS BY PLANTING ON RAISED MOUNDS OR BEDS AND INCLUDING SUBSURFACE DRAINAGE LINES.
 - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDED CLAY LOAM UP TO 50% OF THE TOTAL MIX.

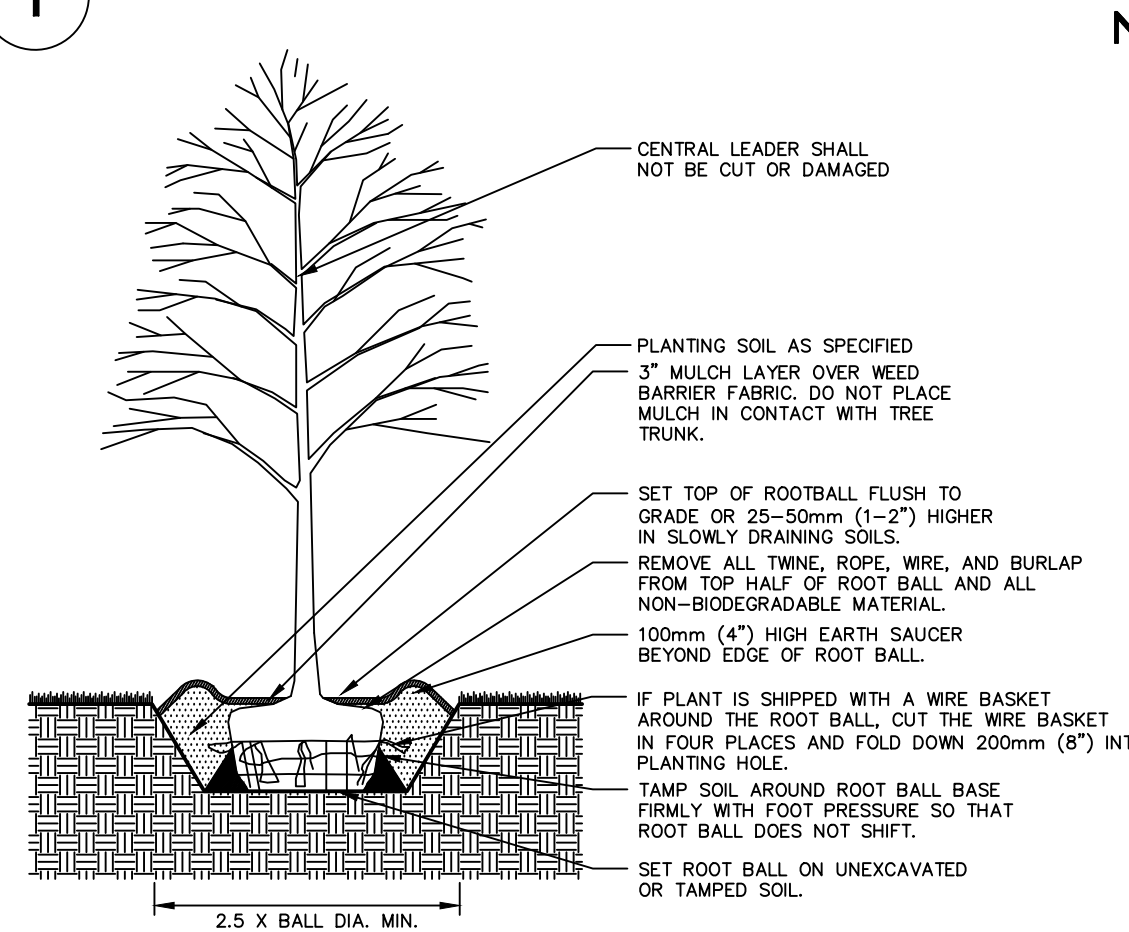
GENERAL NOTE:

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

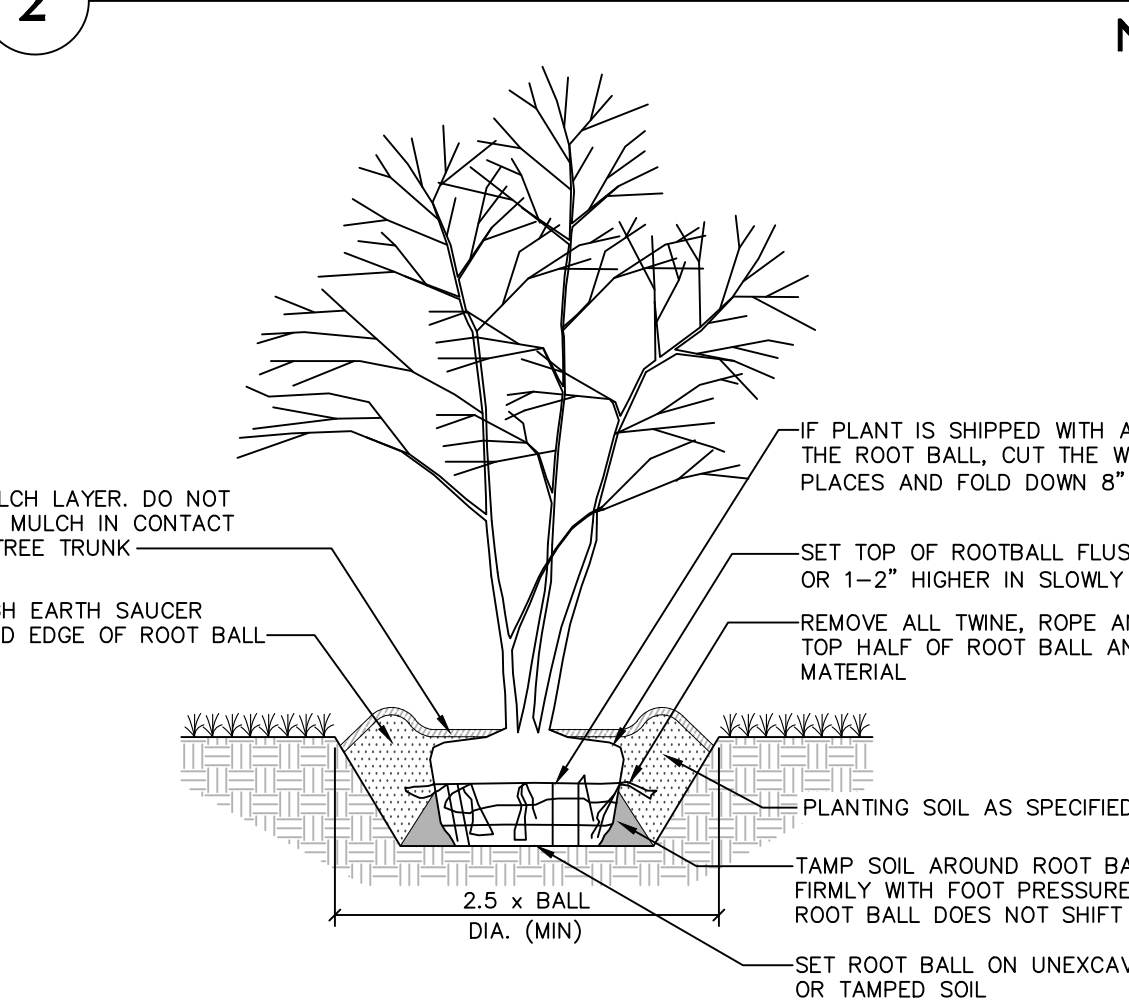


- CONTRACTOR IS RESPONSIBLE TO SEND SAMPLES OF EXISTING SOILS INTENDED FOR USE IN PLANTING AREAS (1 PER 500 CY) TO TESTING LABORATORY OR UNIVERSITY COOPERATIVE EXTENSION FOR TESTING. TESTING COSTS ARE AT THE CONTRACTOR'S EXPENSE.
- RECYCLED CRUSHED CONCRETE AND ASPHALT MILLINGS SHALL NOT BE PLACED WITHIN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

1 PLANTING SOIL



2 TREE PLANTING

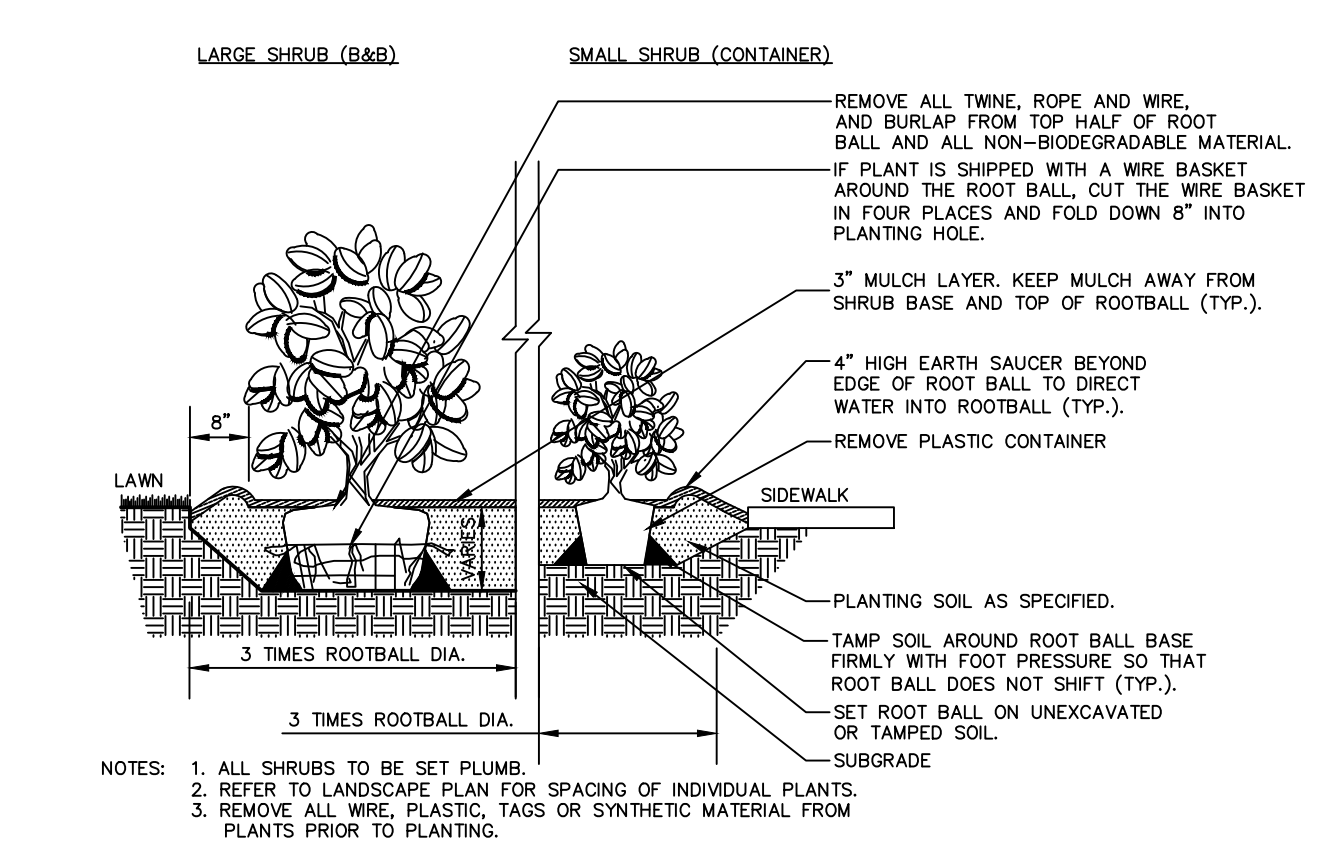


3 ORNAMENTAL PLANTING

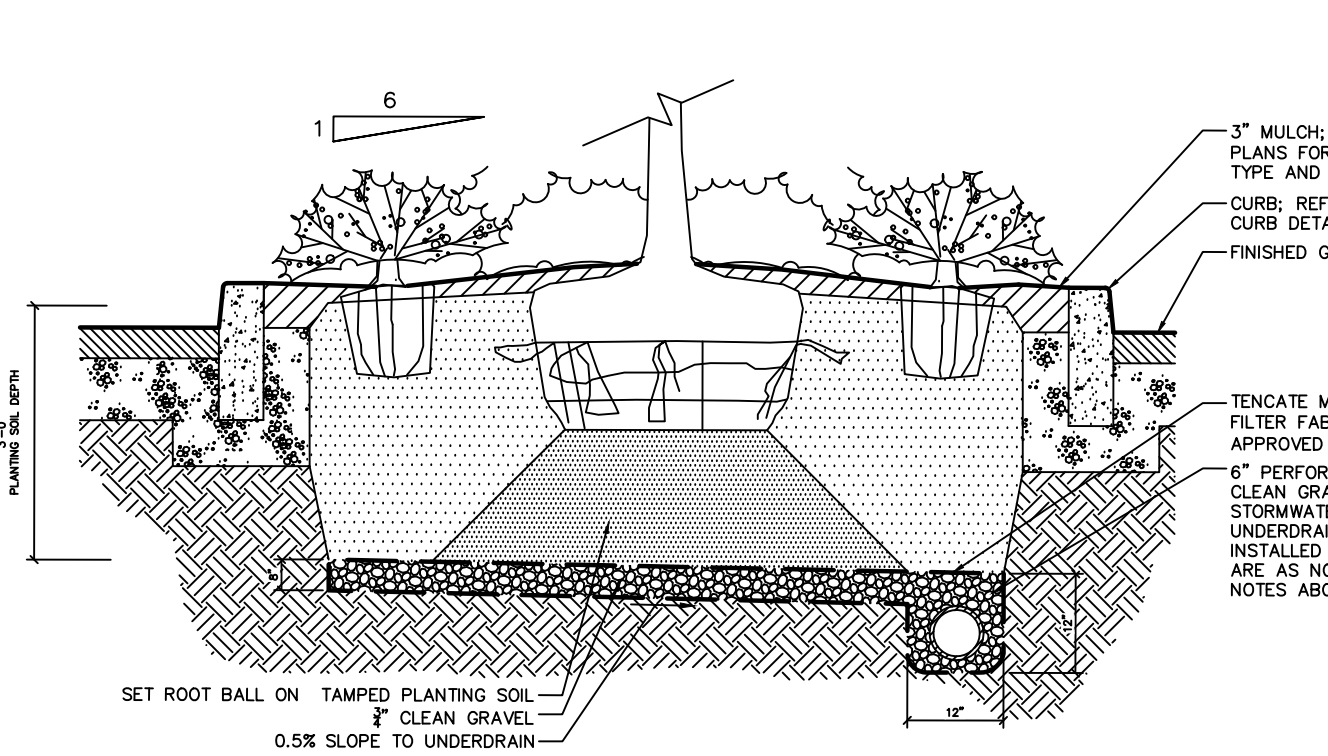
- LAWN SEED MIX:** LESCO GRASS SEED - ALL PRO TRANSITION MIX (3 TURF-TYPE TALL-FESCUE GRASSES)

NOTES:

 - SEED RATE:
 - NEW ESTABLISHMENT: SEED AT A RATE OF 6-8 LBS/1000 SQ FT
 - RENOVATION: 20-50% EXISTING COVER: 5-7 LBS/1000 SQ FT
 - 50-75% EXISTING COVER: 4-6 LBS/1000 SQ FT
- GENERAL SEEDING NOTES:**
 - SEEDING SHALL TAKE PLACE IN THE SPRING (APRIL 1 TO JUNE 1) OR THE FALL (SEPTEMBER 1 TO OCTOBER 1).
 - ELIMINATE UNWANTED VEGETATION PRIOR TO SEEDING USING A BROAD-SPECTRUM NON-SELECTIVE HERBICIDE PER MANUFACTURER'S SPECIFICATIONS.
 - IT IS RECOMMENDED THAT CONTRACTOR INSTALL SEED MIXTURE USING A NO-TILL TRUAX-TYPE DRILL WHERE APPLICABLE.
 - CONTINUOUS MOISTURE FOR 4-6 WEEKS MUST BE INSURED TO ALLOW PROPER GERMINATION.
- WEED CONTROL/MAINTENANCE NOTES:**
 - DURING THE ESTABLISHMENT YEAR, CONTRACTOR SHALL MOW SEEDING IF WEED HEIGHT EXCEEDS MEADOW MIX HEIGHT. MOW AT A HEIGHT OF 6"-10". DO NOT MOW CLOSER, AS SOME OF THE MEADOW MIX MAY BE DAMAGED.
 - AT THE END OF THE FIRST GROWING SEASON, AND IF MEADOW MIX IS WELL ESTABLISHED, THE MEADOW MIX SHALL BE MOWED ONLY ONCE ANNUALLY. ANNUAL MAINTENANCE MOWING SHALL BE DONE IN LATE WINTER DURING THE MONTH OF MARCH.
 - MOW IN WETLAND AND WETLAND TRANSITION AREAS DURING DRIER SITE CONDITIONS WHEN SOIL DISTURBANCE WILL NOT OCCUR. MAINTENANCE FOR WETLAND AND WETLAND TRANSITION AREAS SHALL OCCUR DURING LATE SUMMER (MAY 1 TO AUGUST 15) WHEN THE WATER TABLE IS USUALLY AT ITS LOWEST POINT OF THE YEAR. DO NOT MOW IN WETLAND OR WETLAND TRANSITION AREAS ESTABLISHMENT OF MEADOW MIX.

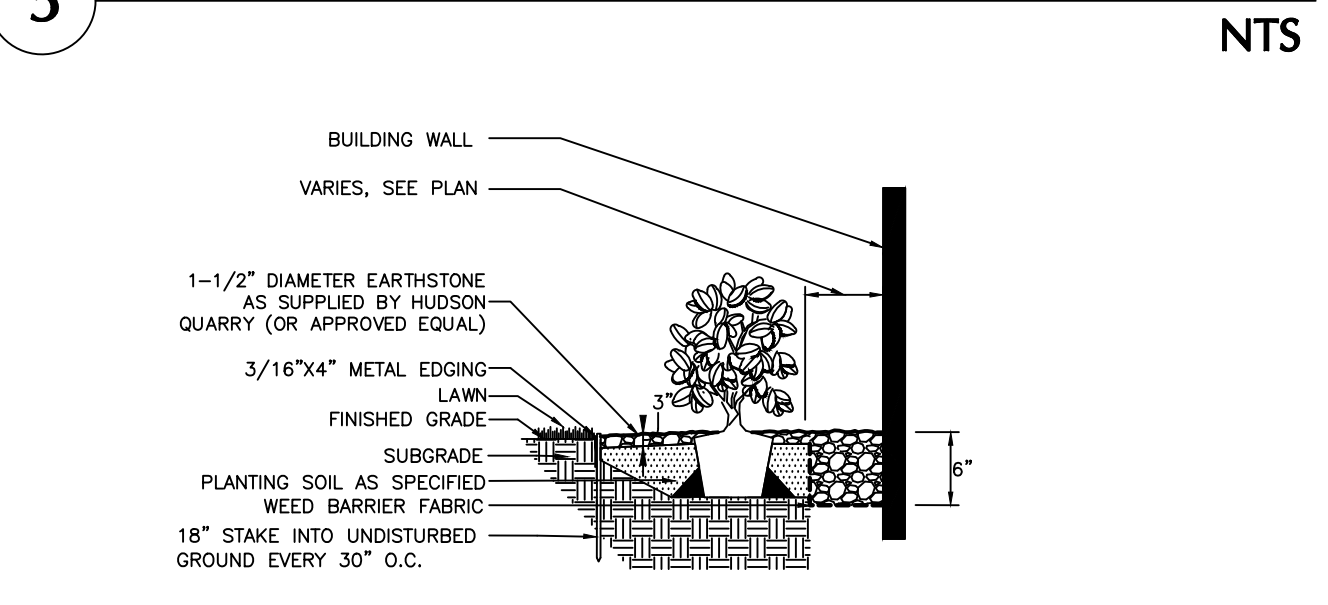


4 SHRUB AND ORNAMENTAL GRASS PLANTING



- CONTRACTOR SHALL BECOME FAMILIAR WITH THE SITE AND SUBGRADE DRAINAGE OR PERCOLATION CHARACTERISTICS. WHETHER THE SUBGRADE SOILS ARE EXISTING TO REMAIN OR IMPORTED AND PLACED, CONTRACTOR TO ENSURE POSITIVE VERTICAL DRAINAGE THROUGHOUT PLANTING AREAS. DISCREPANCIES SHALL BE ADDRESSED WITH THE PROJECT LANDSCAPE ARCHITECT PRIOR TO COMPLETION OF STORMWATER SYSTEM, PAVEMENT INSTALLATION, AND PLACEMENT OF PLANTING SOILS.
- ISLAND AREAS TO BE FREE OF DEBRIS AND RUBBLE PRIOR TO PLANTING OPERATION.
- MOUND PARKING ISLAND AS SHOWN.
- PLANTING SOIL IS TO BE INSTALLED THROUGHOUT EXTENT OF PARKING LOT ISLANDS AT DEPTH SHOWN.

5 PARKING LOT ISLAND PLANTING



- LANDSCAPE STEEL EDGE IS REQUIRED BETWEEN RIVERSTONE AND LAWN.
- DO NOT INSTALL STEEL EDGE BETWEEN PLANTING AREA AND CONCRETE.
- RIVERSTONE TO BE INSTALLED ON BUS STOP PLANTING ISLAND, WHERE PLANTINGS OR LAWN MEET BUILDING WALLS, AND UNDER BUILDING OVERHANGS WHERE SHOWN ON THE LANDSCAPE PLANS.

6 DECORATIVE RIVERSTONE

- LANDSCAPED AREAS BETWEEN THE BUILDING AND THE PARKING LOT CURB SHALL BE MULCHED WITH 3" DECORATIVE RIVERSTONE.
- DECORATIVE STONE MULCH DEPTH AT PLANTINGS SHALL BE 3" DEPTH WITH WEED BLOCK FABRIC BENEATH.
- REFER TO PLANS FOR EXACT LOCATIONS.

DECORATIVE STONE MULCH NOTES

Date	Description	No.
REVISIONS		
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MALDEN / MELROSE
MIDDLESEX COUNTY MASSACHUSETTS
Drawing Title

LANDSCAPE NOTES AND DETAILS

Project No.	Drawing No.	
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