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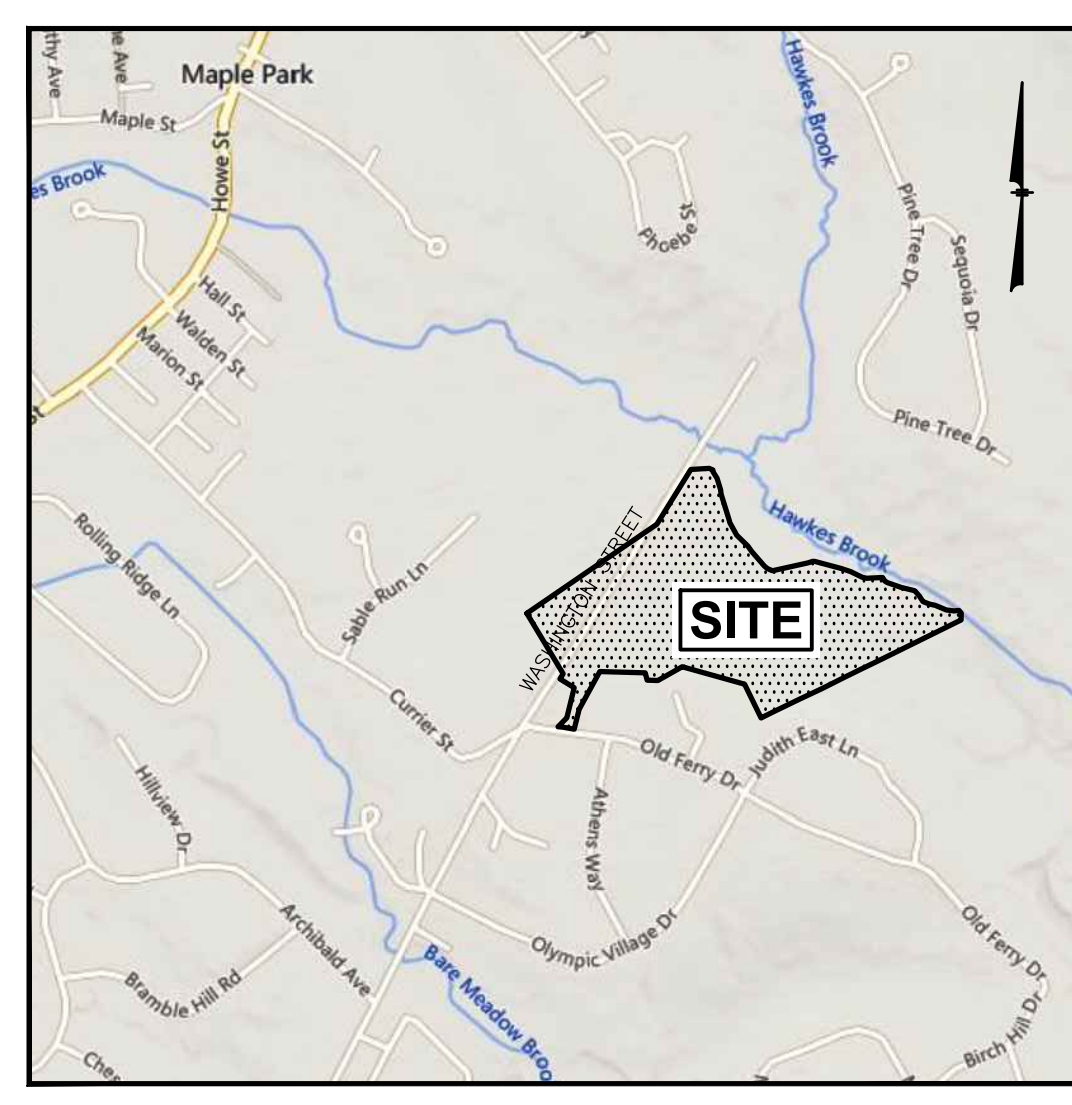
- 1. TITLE SHEET
- 2. GENERAL NOTES
- 3. EXISTING CONDITIONS PLAN
- 4. DEFINITIVE SUBDIVISION PLAN (1"=100')
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PERMITS & APPROVALS

| TYPE | APPROVAL NO. | DATE APPROVED |
|-------------------------|--------------|---------------|
| DEP ORDER OF CONDITIONS | | |
| MCC ORDER OF CONDITIONS | | |

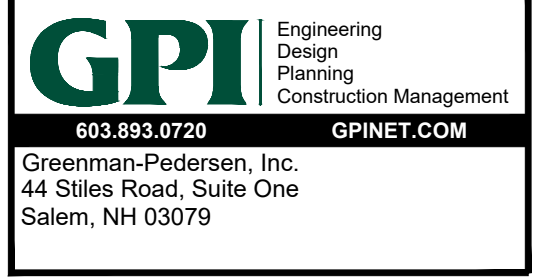
WAIVERS

DEFINITIVE SUBDIVISION PLANS
BROOKVIEW HEIGHTS
PARCEL 908-78E-67E, 908-78E-66D, 908-78E-66B,
& 908-76-53C
WASHINGTON STREET
METHUEN, MASSACHUSETTS



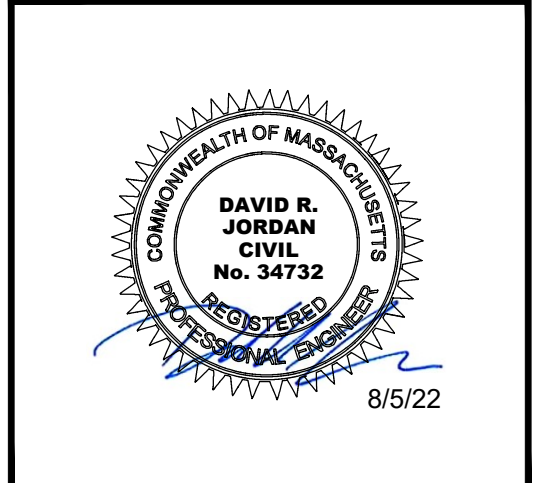
LOCATION MAP
(NOT TO SCALE)

Prepared for:
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053



PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS



REVISIONS

| NO. | REVISION | DATE |
|-----|-----------------------------------|--------|
| 2 | REV. ALL SHEETS PER CITY COMMENTS | 8/2/24 |
| 1 | REV. SHEETS 12-15 & 17-20 | 4/3/24 |

MARCH 6, 2024
DRAWN/DESIGN BY: GMP
CHECKED BY: DRJ

METHUEN COMMUNITY DEVELOPMENT BOARD

DATE OF FILING _____

DATE OF HEARING _____

DATE OF APPROVAL _____

TITLE SHEET

SCALE: AS SHOWN

PROJECT NO. NEX-2200136

1 OF 32

LEGEND

- Legend items: SLOPED GRANITE CURB, VERTICAL GRANITE CURB, SLOPED CONCRETE CURB, VERTICAL CONCRETE CURB, CAPE COD BERM, DOUBLE SOLID LINE YELLOW, DOUBLE DASHED LINE YELLOW, SINGLE DASHED LINE YELLOW, SINGLE SOLID LINE YELLOW, SINGLE SOLID LINE WHITE, SINGLE DASHED LINE WHITE, GAS LINE, UNDERGROUND TELEPHONE, WATER LINE, UNDERGROUND ELECTRIC, WOOD GUARDRAIL, METAL GUARDRAIL, CHAIN LINK FENCE, STOCKADE FENCE, POST & RAIL FENCE, WIRE FENCE, CONTOUR ELEVATION, TREE, UTILITY POLE, GUY WIRE, OVERHEAD WIRE, TREELINE, PULL BOX, SIGN, SPOT ELEVATION, DRAIN MANHOLE, CATCH BASIN, ROOF DRAIN, CLEANOUT, VENT, SEWER MANHOLE, TELEPHONE MANHOLE, ELECTRIC MANHOLE, WATER MANHOLE, MANHOLE, GAS VALVE, GAS SHUT OFF, WATER VALVE, WATER SHUT OFF, FIRE HYDRANT, BOLLARD, GAS METER, ELECTRIC METER, MONITORING WELL, LIGHT POLE, BORING, WETLAND LINE, WATER FEATURE, UNDERGROUND COMM, DITCH LINE, EASEMENT LINE, PROPERTY LINE, ABUTTER PROPERTY LINE, BUILDING SETBACK, SOIL TYPE LINE, ZONE LINE, FLOOD ZONE LINE, TO BE REMOVED, NUMBER OF PARKING SPACES, TIP DOWN CURB, PROP. BIT. CONCRETE CURB (BCC), PROP. VERTICAL GRANITE CURB (VGC), PROP. XXXX CURB (XXX), PROP. XXXX CURB (XXX), PROP. CLEANOUT, PROP. CATCH BASIN, PROP. DRAIN MANHOLE, MEET EXISTING GRADE, PROP. SPOT ELEVATION, PROP. CONTOUR ELEVATION, TOP OF WALL ELEV., BOTTOM OF WALL ELEV., GRADE BREAK, CASCADE GRATE, FIRST DEFENSE UNIT, TEST PIT, PROP. GATE VALVE, PROP. SEDIMENT CONTROL FENCE

PROJECT NOTES:

- 1) THE PURPOSE OF THIS PLAN IS TO SHOW A 29 LOT SINGLE FAMILY RESIDENTIAL DEVELOPMENT ON PARCELS 908-78E-66B, 908-78E-66D, 908-78E-67E, AND 908-76-53C. THE PLANS ALSO SHOW A LOT LINE ADJUSTMENT FOR PARCEL 908-78E-67.
2) OWNER OF RECORD:
PARCEL 908-78E-66B THE McALLISTER SISTERS TRUST WASHINGTON STREET HOLDINGS, LLC 16 KAYLA AVENUE SALEM, NH 03079
PARCEL 908-78E-67E THE McALLISTER SISTERS TRUST GAYLE McALLISTER, BEVERLY WARD, AND SANUS DEMERS, TRUSTEES 7376 SW 98TH STREET OCALA, FL 34481
PARCEL 908-76-53C KAREN FITZPATRICK 240B WASHINGTON STREET METHUEN, MA 01844
PARCEL 908-78E-67 ETHAN CONLEY PO BOX 1489 SALEM, NH 03079
3) THIS PLAN IS THE RESULT OF AN ON-THE-GROUND FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN APRIL 8, 2022 AND OCTOBER 17, 2023.
4) BEARINGS SHOWN HEREON ARE BASED ON NAD83 PER GPS OBSERVATIONS PERFORMED BY THIS OFFICE ON APRIL 11, 2022.
5) ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88 PER AND OBTAINED FROM NOAA.GOV "2021 USGS LIDAR- CENTRAL EASTERN MASSACHUSETTS" DATA SET. THE ELEVATION DATA WAS VERIFIED AND CHECKED VIA GPS OBSERVATIONS PERFORMED BY THIS OFFICE IN APRIL 2022. SUPPLEMENTAL TOPOGRAPHIC DETAIL WAS OBTAINED ALONG OLD FERRY DRIVE AND WASHINGTON STREET THROUGH AN ON-THE-GROUND FIELD SURVEY PERFORMED BY THIS OFFICE ON OR BETWEEN APRIL 8, 2022 AND OCTOBER 17, 2023.
6) LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE ONLY. ADDITIONAL UNDERGROUND UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED. INVERTS ARE LISTED IN A CLOCKWISE DIRECTION ENDING WITH THE INVERT OUT (UNLESS OTHERWISE NOTED).
7) A PORTION OF THE SURVEY TRACT IS LOCATED IN SPECIAL FLOOD HAZARD AREA ZONE AE (1% ANNUAL CHANCE FLOOD) AND IN A FLOODWAY AREA PER FLOOD INSURANCE RATE MAP NUMBER 25069C0069F, WITH AN EFFECTIVE DATE OF JULY 3, 2012.
8) EDGE OF WETLANDS DELINEATED BY TIMOTHY FERWERDA OF FERWERDA MAPPING LLC IN APRIL AND JULY, 2022. SEE ORDER OF RESOURCE AREA DELINEATION DATED OCTOBER 7, 2022, DEP FILE NO. 21-1275.
9) EASEMENTS, RIGHTS AND RESTRICTIONS SHOWN OR IDENTIFIED ARE THOSE WHICH WERE FOUND DURING RESEARCH AT THE REGISTRY OF DEEDS. OTHER RIGHTS, RESTRICTIONS AND EASEMENTS MAY EXIST WHICH A TITLE EXAMINATION OF THE SUBJECT PARCEL(S) WOULD DETERMINE.

WAIVERS:

THE FOLLOWING WAIVERS FROM THE CITY OF METHUEN SUBDIVISION REGULATIONS ARE REQUESTED:

- 1) SECTION 4.2.2.8 DEAD ENDS - TO PERMIT A DEAD END STREET.
2) SECTION 4.2.3.2 DEAD ENDS - STREET GREATER THAN 500' (WASHINGTON STREET 1,300', EDGEWATER DRIVE 1,500').
3) SECTION 4.2.4.1 CENTERLINE GRADES - TO PERMIT THE CENTERLINE GRADE OF WASHINGTON STREET IS A PUBLIC WAY AND THAT THE GRADE PROPOSED MATCHES WHAT CURRENTLY EXISTS.
4) SECTION 5.3.1 STREETS AND ROADWAYS - GENERAL - 26' PAVEMENT WIDTH REQUIRED, 24' WIDTH PROPOSED FOR WASHINGTON STREET AND 22' WIDTH PROPOSED FOR EDGEWATER DRIVE.
5) SECTION 5.3.7 CURBS AND BERMS - SLOPED GRANITE CURBING REQUIRED, BITUMINOUS CONCRETE CURBING PROPOSED.
6) SECTION 5.7.1 SIDEWALK LOCATION - 5' WIDE SIDEWALKS ALONG BOTH SIDES REQUIRED, SIDEWALK ON ONLY ONE SIDE OF EDGEWATER DRIVE PROPOSED.
7) SECTION 5.3.8 GRANITE CURB INLETS - NONE PROPOSED.

CONSTRUCTION NOTES:

- 1) ELEVATIONS ARE BASED ON NAVD88 DATUM.
2) ANY UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER OF RECORD AND COORDINATED WITH THE APPROPRIATE LOCAL UTILITY COMPANY.
3) THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4) ALL CONSTRUCTION SHALL CONFORM TO MUNICIPAL DPW AND ALL APPLICABLE STATE AND FEDERAL STANDARDS.
5) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIG-SAFE (DIAL 811) PRIOR TO COMMENCING ANY EXCAVATION.
6) THIS SITE WILL REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE SITE CONSTRUCTION SINCE THE DISTURBANCE EXCEEDS ONE ACRE (ACTUAL DISTURBANCE = 737,900 SF±). THE CONSTRUCTION SITE OPERATOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN (SWPPP), WHICH SHALL REMAIN ON SITE AND MADE ACCESSIBLE TO THE PUBLIC. A NOTICE OF INTENT (NOI) SHALL BE FILED WITH THE EPA AT LEAST 14 CALENDAR DAYS PRIOR TO CONSTRUCTION. A COMPLETED NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO THE EPA WITHIN 30 DAYS AFTER EITHER OF THE FOLLOWING CONDITIONS HAVE BEEN MET: FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE; OR ANOTHER OPERATOR/PERMITTEE HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
7) ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE TO MASSDOT AND THE CITY DEPARTMENT OF PUBLIC WORKS, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.
8) ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS AND OUTLETS EQUIPPED WITH "ELIMINATOR" OIL HOODS OR APPROVED EQUAL.
9) ALL PIPE DATA IS CALCULATED TO CENTER OF STRUCTURE, TYP.
10) CONTRACTOR TO REFER TO THE OPERATION & MAINTENANCE (O&M) MANUAL FOR STORMWATER MANAGEMENT SYSTEMS & SITE MAINTENANCE DURING AND AFTER CONSTRUCTION.
11) THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES.
12) ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
13) THE CONTRACTOR SHALL STABILIZE ALL DITCHES, SWALES, AND PONDS PRIOR TO DIRECTING STORMWATER RUN-OFF TO THEM.
14) PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONFIRM WITH THE ENGINEER THAT HE HAS THE MOST RECENT SET OF PLANS. SITE WORK SHALL BE CONSTRUCTED FROM A COMPLETE SET OF PLANS, NOT ALL FEATURES ARE DETAILED ON EVERY PLAN. THE ENGINEER IS TO BE NOTIFIED OF ANY CONFLICT WITHIN THIS PLAN SET.
15) CONTRACTOR SHALL CONFIRM WITH ENGINEER ALL LAYOUT ITEMS NOT SHOWN OR ANNOTATED. THE LOCATION OF ALL STRUCTURES AND UTILITIES SHALL BE CONFIRMED PRIOR TO LAYOUT OF PAVED AREAS. EXACT LOCATION OF PAVEMENT SHALL BE CONFIRMED WITH ENGINEER PRIOR TO PLACEMENT OF BINDER COURSE PAVEMENT.
16) SEE CONSTRUCTION DETAIL SHEETS FOR ADDITIONAL INFORMATION.
17) ROOF RUNOFF FROM ALL HOMES SHALL BE COLLECTED BY GUTTERS AND DOWNSPOUTS CONNECTED TO STORMTECH CHAMBERS (SEE DETAIL SHEET 29). THE ROOF INFILTRATION UNITS SHALL BE MAINTAINED BY THE HOMEOWNER.
18) ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF METHUEN, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
19) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN IN THE PLANS THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH APPLICABLE STANDARDS. THE DETAILS PROVIDED SERVE AS A GUIDE ONLY.
20) CONTRACTOR SHALL VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION.
21) THE CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES, AND ARRANGE FOR ALL INSPECTIONS.
22) THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIG SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE DIGGING.
23) CONTRACTOR SHALL DISPOSE OF ANY UNSUITABLE MATERIAL ONSITE (I.E. TRASH, STUMPS, ETC.) IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
24) STORM DRAINAGE SYSTEM SHALL BE CONSTRUCTED TO LINE AND GRADE AS SHOWN ON THE PLANS. CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO CITY OF METHUEN STANDARDS.
25) ALL RIMS AND GRATES TO BE SET AT FINISH PAVEMENT GRADE REGARDLESS OF STATED RIM ELEVATIONS.
26) IN ACCORDANCE WITH THE CITY OF METHUEN SUBDIVISION RULES AND REGULATION SECTION 4.7, SHADE TREES SHALL BE PLANTED ALONG BOTH SIDES OF EDGEWATER DRIVE AT INTERVALS NO GREATER THAN 75'. TREES SHALL BE 2"-6" CALIPER AND NOT LESS THAN 12' HIGH AT THE TIME OF PLANTING. THE TREE TYPE SHALL BE A SHADE VARIETY BUT SHALL NOT INCLUDE LOCUST, WILLOW, OR POPULAR TREES, NOR SHALL IT INCLUDE ANY CONIFEROUS TREES.

TEMPORARY EROSION CONTROL MEASURES:

- 1) SEDIMENT TRAPS SHALL BE INSTALLED AS REQUIRED. BARRIERS AND TRAPS ARE TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.
2) MULCH SHALL BE MOWINGS OF ACCEPTABLE HERBACEOUS GROWTH, FREE FROM NOXIOUS WEEDS OR WOODY STEMS, AND SHALL BE DRY. NO SALT HAY SHALL BE USED.
3) FILL MATERIAL SHALL BE FREE FROM STUMPS, WOOD, ROOTS, ETC.
4) STOCKPILED MATERIALS SHALL BE PLACED ONLY IN AREAS SHOWN ON THE PLANS. STOCKPILES SHALL BE PROTECTED BY SEDIMENT CONTROL FENCE AND SEEDED TO PREVENT EROSION. THESE MEASURES SHALL REMAIN UNTIL ALL MATERIAL HAS BEEN PLACED OR DISPOSED OFF SITE.
5) ALL DISTURBED AREAS SHALL BE LOAMED AND SEEDED. A MINIMUM OF 6 INCHES OF LOAM SHALL BE INSTALLED WITH NOT LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA.
6) SEED MIX SHALL BE EQUAL PARTS OF RED FESCUE (CREEPING), KENTUCKY BLUEGRASS, REDTOP, PERENNIAL RYEGRASS.
7) AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED THE TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED.
8) PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES. PROVIDE SWEEPING ON A DAILY BASIS OR AS DIRECTED BY THE CITY.
9) ALL CATCH BASIN INLETS WILL BE PROTECTED WITH INLET PROTECTION - SEE DETAIL.
10) ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA.

CONSTRUCTION SEQUENCE:

- 1) INSTALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AS REQUIRED.
2) CUT AND STUMP AREAS OF PROPOSED CONSTRUCTION.
3) REMOVE AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE SEEDED TO PREVENT EROSION.
4) CONSTRUCT CLOSED DRAINAGE SYSTEM. PROTECT CULVERT INLETS AND CATCH BASINS WITH SEDIMENTATION BARRIERS.
5) PERFORM SITE GRADING, PLACING SEDIMENT CONTROLATION FENCES AS REQUIRED TO CONTROL SOIL EROSION.
6) INSTALL UNDERGROUND UTILITIES.
7) BEGIN TEMPORARY AND PERMANENT SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED OR MULCHED IMMEDIATELY AFTER THEIR CONSTRUCTION.
8) DAILY, OR AS REQUIRED, CONSTRUCT, INSPECT, AND IF NECESSARY, RECONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SEDIMENT CONTROL FENCES AND SEDIMENT TRAPS INCLUDING MULCHING AND SEEDING. REFER TO OPERATION AND MAINTENANCE PLAN FOR ADDITIONAL REQUIREMENTS AND INFORMATION. COPIES OF ALL INSPECTION REPORTS ARE TO BE PROVIDED TO THE CONSERVATION COMMISSION DURING CONSTRUCTION AND AVAILABLE UPON REQUEST AFTER CONSTRUCTION IS COMPLETED.
9) BEGIN EXCAVATION FOR AND CONSTRUCTION OF HOMES.
10) FINISH PAVING ALL ROADWAYS.
11) COMPLETE PERMANENT SEEDING AND LANDSCAPING.
12) AFTER GRASS HAS BEEN FULLY GERMINATED IN ALL SEEDED AREAS, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.

OPERATIONS/MAINTENANCE PLAN FOR STORMWATER SYSTEM:

CONSTRUCTION PHASE:

- 1) THE CONTRACTOR IS TO INSTALL AND MAINTAIN DRAINAGE FACILITIES AS SHOWN ON THE SITE PLANS BY GREENMAN-PEDERSEN, INC.
2) PRIOR TO CONSTRUCTION, ALL EROSION/SEDIMENT CONTROL CONTROL DEVICES SHOWN ON ABOVE PLAN ARE TO BE INSTALLED. TO PREVENT SEDIMENT CONTROL INTRUSION INTO SURROUNDING AREAS DURING CONSTRUCTION, THE CONTRACTOR IS TO SET SEDIMENT CONTROL FENCING AT ALL SLOPES WHICH MAY ERODE IN THE DIRECTION OF ANY OPEN DRAINAGE FACILITIES OR ABUTTING PROPERTY. SUCH PREVENTIVE MEASURES ARE TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.
3) ALL CONSTRUCTION OF DRAINAGE FACILITIES IS TO BE INSPECTED BY INSPECTORS FROM THE CITY OF METHUEN AND BY AN AUTHORIZED AGENT TO VERIFY CONFORMANCE TO THE DESIGN PLAN.
4) THE SEQUENCE OF DRAINAGE CONSTRUCTION SHALL BE AS FOLLOWS:
A) CLEAR, GRUB, EXCAVATE AREAS FOR STORMWATER BASINS.
B) INSTALL CATCH BASINS, PIPES AND MANHOLES.
5) EROSION CONTROLS ARE TO BE INSPECTED AND MAINTAINED ON A DAILY BASIS. UPON DISCOVERY OF SEDIMENT CONTROLATION BUILD-UP IN ANY CATCH BASIN SUMP OR ANY OTHER STRUCTURE, CLEANING SHALL BE PERFORMED WITHIN 24 HOURS.
6) ALL EXPOSED SOILS SHALL BE IMMEDIATELY STABILIZED WITH A LAYER OF MULCH HAY.
7) UPON INSTALLATION OF CATCH BASINS, INLET PROTECTION - AS DESCRIBED ON AFOREMENTIONED PLAN - SHALL BE INSTALLED AND MAINTAINED UNTIL READY FOR PAVING.
8) PRIOR TO CONSTRUCTION OF IMPERVIOUS AREAS, ALL DRAINAGE STRUCTURES AND PIPES SHALL BE INSTALLED AND INSPECTED FOR PROPER FUNCTION. DURING CONSTRUCTION OF OTHER SITE FEATURES, ALL DRAINAGE FACILITIES SHALL BE INSPECTED ON A DAILY BASIS AND CLEANED/REPAIRED IMMEDIATELY UPON DISCOVERY OF SEDIMENT BUILD-UP OR DAMAGE.
9) AFTER PAVING IS INSTALLED, IT SHALL BE SWEEP CLEAN AS NEEDED.
10) INSPECTIONS ARE TO BE PERFORMED AND INSPECTION LOGS FILLED OUT IN ACCORDANCE WITH US EPA O&P REQUIREMENTS FROM THE START OF CONSTRUCTION THROUGH FINAL STABILIZATION. THE START OF CONSTRUCTION MEANS THE INITIAL DISTURBANCE OF SOILS ASSOCIATED WITH CONSTRUCTION. FINAL STABILIZATION MEANS 70% VEGETATIVE GROWTH FOR UNPAVED AREAS.

POST CONSTRUCTION PHASE:

SEE "OPERATION & MAINTENANCE PLAN AND LONG TERM POLLUTION PREVENTION PLAN FOR STORMWATER MANAGEMENT SYSTEMS".



PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
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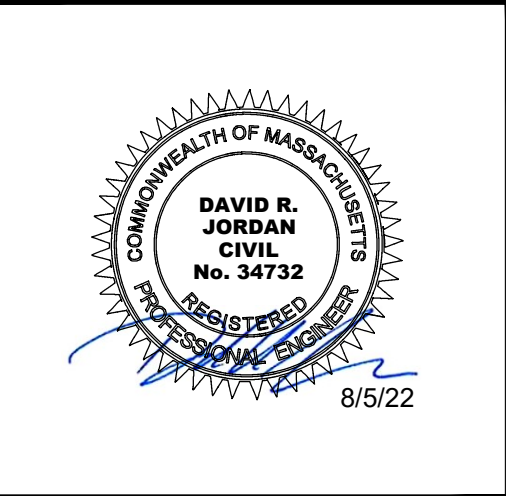
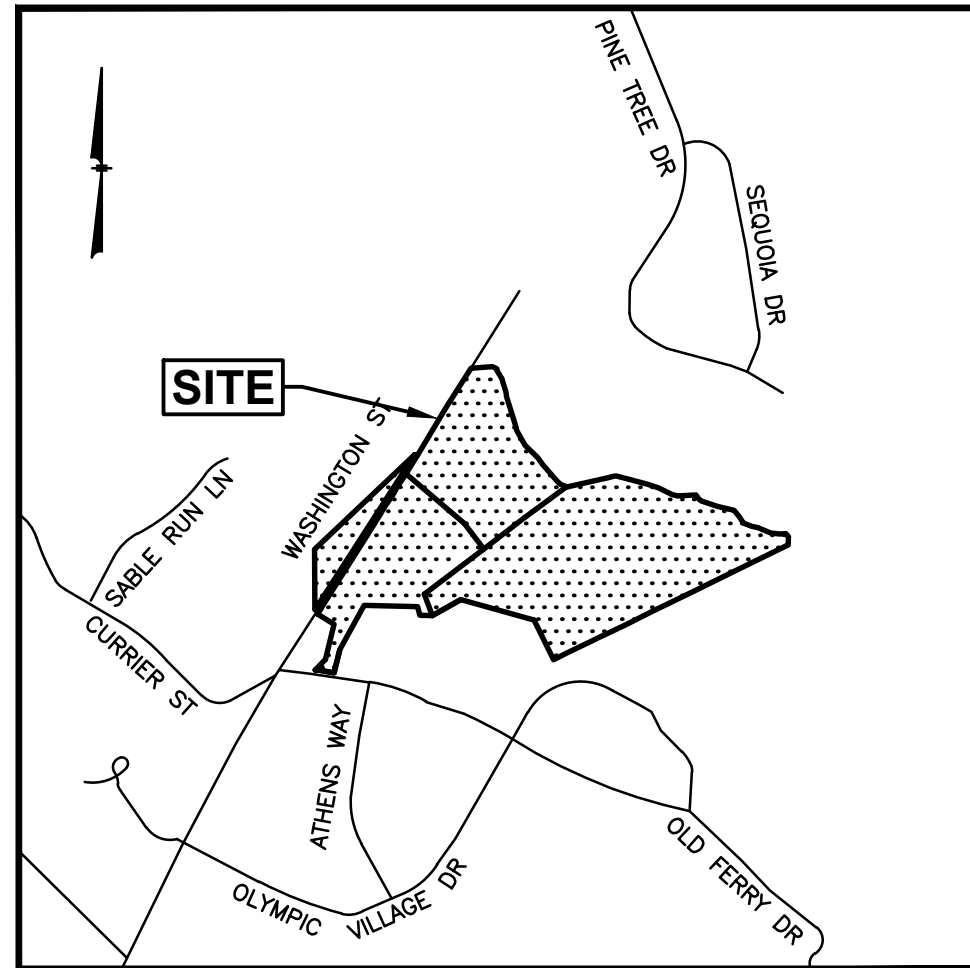
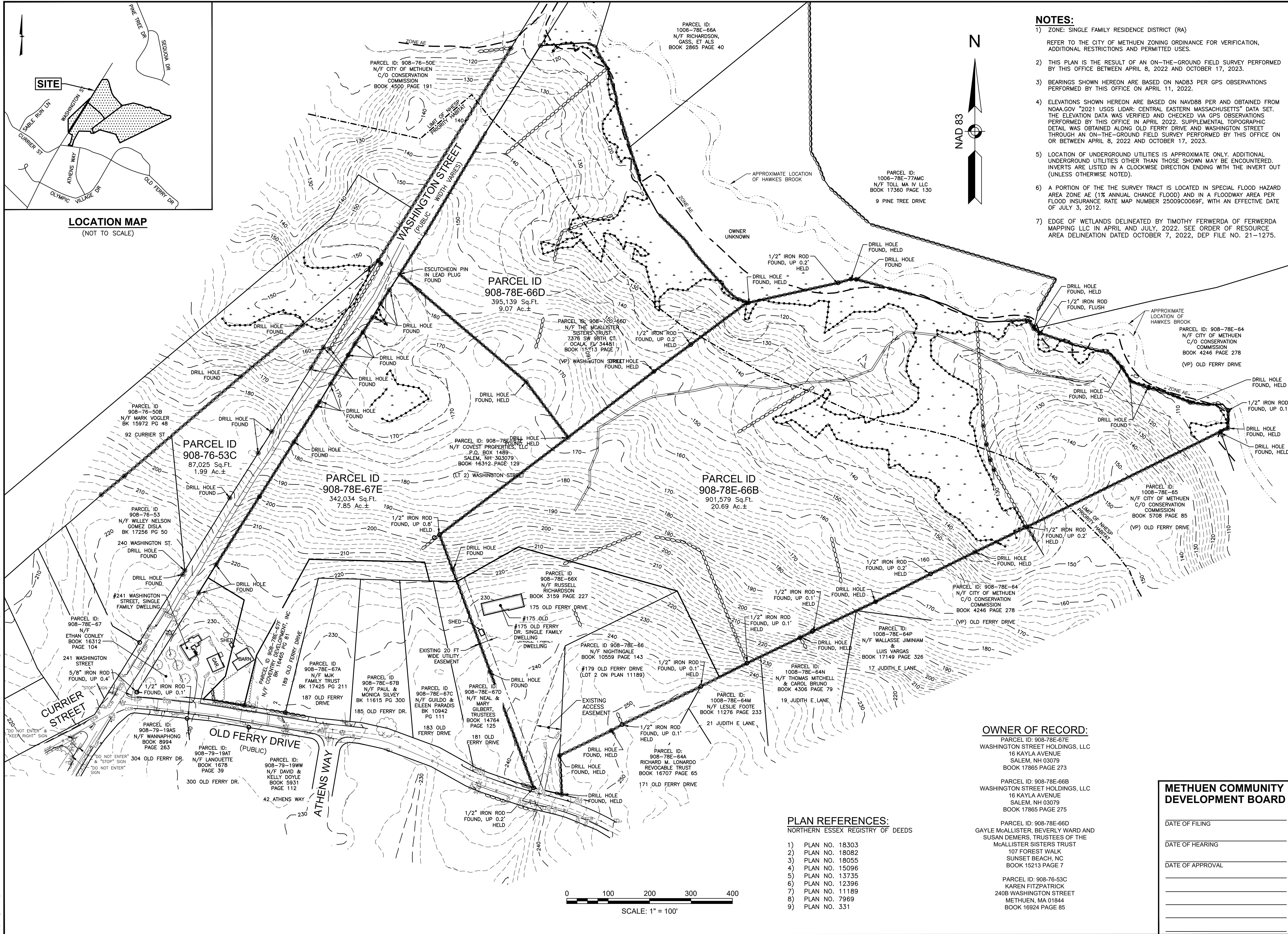


Table with 3 columns: NO., REVISION, DATE. Includes entry 1: REVISE PER CITY COMMENTS, 8/2/24.

METHUEN COMMUNITY DEVELOPMENT BOARD
DATE OF FILING
DATE OF HEARING
DATE OF APPROVAL
SCALE: AS SHOWN
PROJECT NO. NEX-2200136
2 OF 32

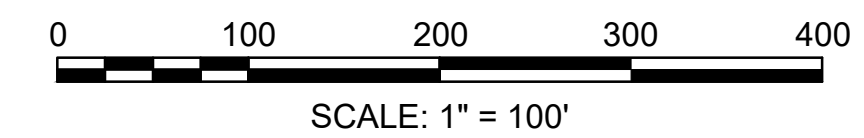
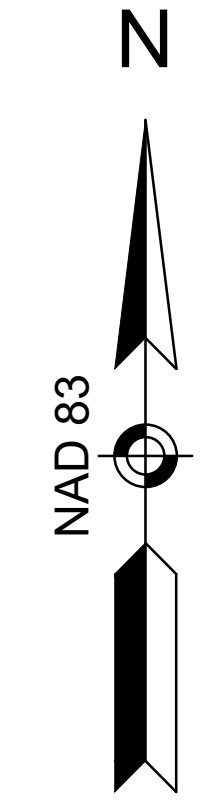


LOCATION MAP
(NOT TO SCALE)



NOTES:

- 1) ZONE: SINGLE FAMILY RESIDENCE DISTRICT (RA)
REFER TO THE CITY OF METHUEN ZONING ORDINANCE FOR VERIFICATION, ADDITIONAL RESTRICTIONS AND PERMITTED USES.
- 2) THIS PLAN IS THE RESULT OF AN ON-THE-GROUND FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN APRIL 8, 2022 AND OCTOBER 17, 2023.
- 3) BEARINGS SHOWN HEREON ARE BASED ON NAD83 PER GPS OBSERVATIONS PERFORMED BY THIS OFFICE ON APRIL 11, 2022.
- 4) ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88 PER AND OBTAINED FROM NOAA.GOV "2021 USGS LIDAR: CENTRAL EASTERN MASSACHUSETTS" DATA SET. THE ELEVATION DATA WAS VERIFIED AND CHECKED VIA GPS OBSERVATIONS PERFORMED BY THIS OFFICE IN APRIL 2022. SUPPLEMENTAL TOPOGRAPHIC DETAIL WAS OBTAINED ALONG OLD FERRY DRIVE AND WASHINGTON STREET THROUGH AN ON-THE-GROUND FIELD SURVEY PERFORMED BY THIS OFFICE ON OR BETWEEN APRIL 8, 2022 AND OCTOBER 17, 2023.
- 5) LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE ONLY. ADDITIONAL UNDERGROUND UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED. INVERTS ARE LISTED IN A CLOCKWISE DIRECTION ENDING WITH THE INVERT OUT (UNLESS OTHERWISE NOTED).
- 6) A PORTION OF THE THE SURVEY TRACT IS LOCATED IN SPECIAL FLOOD HAZARD AREA ZONE AE (1% ANNUAL CHANCE FLOOD) AND IN A FLOODWAY AREA PER FLOOD INSURANCE RATE MAP NUMBER 25009C0069F, WITH AN EFFECTIVE DATE OF JULY 3, 2012.
- 7) EDGE OF WETLANDS DELINEATED BY TIMOTHY FERWERDA OF FERWERDA MAPPING LLC IN APRIL AND JULY, 2022. SEE ORDER OF RESOURCE AREA DELINEATION DATED OCTOBER 7, 2022, DEP FILE NO. 21-1275.



PLAN REFERENCES:
NORTHERN ESSEX REGISTRY OF DEEDS

- 1) PLAN NO. 18303
- 2) PLAN NO. 18082
- 3) PLAN NO. 18055
- 4) PLAN NO. 15096
- 5) PLAN NO. 13735
- 6) PLAN NO. 12396
- 7) PLAN NO. 11189
- 8) PLAN NO. 7969
- 9) PLAN NO. 331

OWNER OF RECORD:

PARCEL ID: 908-78E-87E
WASHINGTON STREET HOLDINGS, LLC
16 KAYLA AVENUE
SALEM, NH 03079
BOOK 17865 PAGE 273

PARCEL ID: 908-78E-66B
WASHINGTON STREET HOLDINGS, LLC
16 KAYLA AVENUE
SALEM, NH 03079
BOOK 17865 PAGE 275

PARCEL ID: 908-78E-66D
GAYLE McALLISTER, BEVERLY WARD AND
SUSAN DEMERS, TRUSTEES OF THE
McALLISTER SISTERS TRUST
107 FOREST WALK
SUNSET BEACH, NC
BOOK 15213 PAGE 7

PARCEL ID: 908-76-53C
KAREN FITZPATRICK
240B WASHINGTON STREET
METHUEN, MA 01844
BOOK 16924 PAGE 85

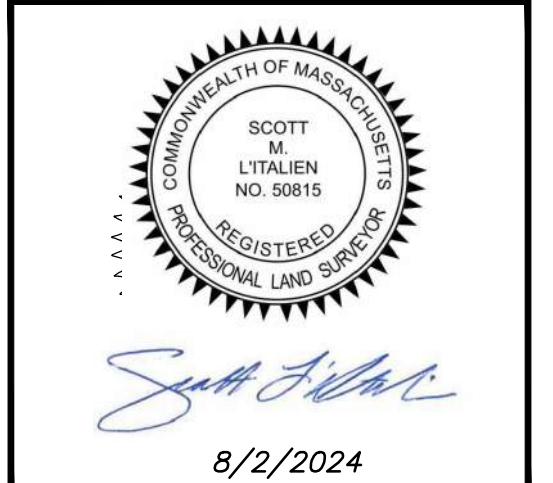
METHUEN COMMUNITY DEVELOPMENT BOARD

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PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



REVISIONS

| NO. | REVISION | DATE |
|-----|-----------------------------|----------|
| 1. | REVISED PER REVIEW COMMENTS | 08/02/24 |

MARCH 6, 2024
DRAWN/DESIGN BY: SML
CHECKED BY: DRJ

EXISTING CONDITIONS PLAN

SCALE: 1"=100'
PROJECT NO. NEX-2200136
3 OF 32

| TABLE OF ZONING REGULATIONS - METHUEN, MA | | |
|---|--|----------------------|
| ZONE: RA SINGLE FAMILY RESIDENCE DISTRICT | | |
| DESCRIPTION | REQUIRED | PROVIDED |
| MINIMUM LOT AREA Sq. Ft. | 40,000 SF | 40,000 SF MIN. |
| MINIMUM LOT FRONTAGE | 100' (MAY BE REDUCED TO 50' ON CUL-DE-SAC) | 100' MIN. (50' MIN.) |
| MINIMUM LOT WIDTH | 100' | 100' MIN. |
| MINIMUM FRONT YARD BUILDING SETBACK | 25' | TBD (25' MIN.) |
| MINIMUM REAR YARD BUILDING SETBACK | 20' | TBD (20' MIN.) |
| MINIMUM SIDE YARD BUILDING SETBACK | 20' | TBD (20' MIN.) |
| MAXIMUM BUILDING HEIGHT | 35' (3 STORIES) | 35' MAX. |
| MAXIMUM LOT COVERAGE | 25% | LESS THAN 25% |
| MINIMUM OPEN SPACE | 40% | GREATER THAN 40% |

PARCEL ID: 908-76-50E
N/F CITY OF METHUEN
C/O CONSERVATION
COMMISSION
BOOK 4500 PAGE 191

PARCEL ID:
1006-78E-66A
N/F RICHARDSON,
GASS, ET ALS
BOOK 2865 PAGE 40

PARCEL ID:
1006-78E-77AMC
N/F TOLL MA IV LLC
BOOK 17360 PAGE 130
9 PINE TREE DRIVE

PARCEL ID: 908-78E-64
N/F CITY OF METHUEN
C/O CONSERVATION
COMMISSION
BOOK 4246 PAGE 278
(VP) OLD FERRY DRIVE

PARCEL ID:
1008-78E-65
N/F CITY OF METHUEN
C/O CONSERVATION
COMMISSION
BOOK 5708 PAGE 85
(VP) OLD FERRY DRIVE

PARCEL ID: 908-78E-64
N/F CITY OF METHUEN
C/O CONSERVATION
COMMISSION
BOOK 4246 PAGE 278
(VP) OLD FERRY DRIVE

PARCEL ID:
1008-78E-64P
N/F WALLASSE JIMINIAM
&
LUIS VARGAS
BOOK 17149 PAGE 326
17 JUDITH E LANE

PARCEL ID:
1008-78E-64N
N/F THOMAS MITCHELL
& CAROL BRUNO
BOOK 4306 PAGE 79
19 JUDITH E LANE

PARCEL ID:
908-78E-64A
RICHARD M. LONARDO
REVOCABLE TRUST
BOOK 16707 PAGE 65
171 OLD FERRY DRIVE

OWNER OF RECORD:
PARCEL ID: 908-78E-67E
WASHINGTON STREET HOLDINGS, LLC
16 KAYLA AVENUE
SALEM, NH 03079
BOOK 17865 PAGE 273

PARCEL ID: 908-78E-66B
WASHINGTON STREET HOLDINGS, LLC
16 KAYLA AVENUE
SALEM, NH 03079
BOOK 17865 PAGE 275

PARCEL ID: 908-78E-66D
GAYLE McALLISTER, BEVERLY WARD AND
SUSAN DEMERS, TRUSTEES OF THE
McALLISTER SISTERS TRUST
107 FOREST WALK
SUNSET BEACH, NC
BOOK 15213 PAGE 7

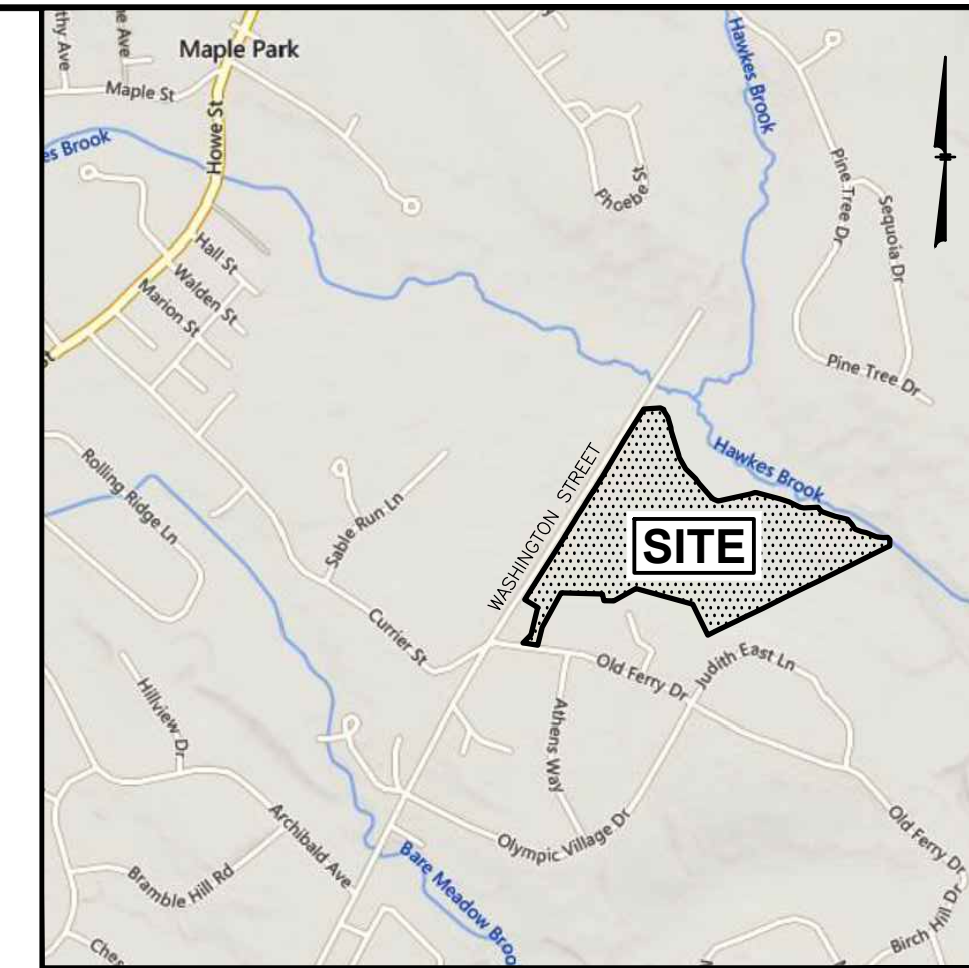
PARCEL ID: 908-76-53C
KAREN FITZPATRICK
240B WASHINGTON STREET
METHUEN, MA 01844
BOOK 16924 PAGE 85

PLAN REFERENCES:
NORTHERN ESSEX REGISTRY OF DEEDS

- 1) PLAN NO. 18303
- 2) PLAN NO. 18082
- 3) PLAN NO. 18055
- 4) PLAN NO. 15096
- 5) PLAN NO. 13735
- 6) PLAN NO. 12396
- 7) PLAN NO. 11189
- 8) PLAN NO. 7969
- 9) PLAN NO. 331

NOTES:

- 1) THE PURPOSE OF THIS PLAN IS TO SHOW A 29 LOT SINGLE FAMILY RESIDENTIAL DEVELOPMENT ON PARCELS 908-78E-66B, 908-78E-66D, 908-78E-67E, AND 908-76-53C. THE PLANS ALSO SHOW A LOT LINE ADJUSTMENT FOR PARCEL 908-78E-67.
- 2) TOTAL AREA OF PARCELS = 39.6 Ac.±
- 3) A PORTION OF THE THE SURVEY TRACT IS LOCATED IN SPECIAL FLOOD HAZARD AREA ZONE AE (1% ANNUAL CHANCE FLOOD) AND IN A FLOODWAY AREA PER FLOOD INSURANCE RATE MAP NUMBER 2509C0069F, WITH AN EFFECTIVE DATE OF JULY 3, 2012.
- 4) EDGE OF WETLANDS DELINEATED BY TIMOTHY FERWERDA OF FERWERDA MAPPING LLC IN APRIL AND JULY, 2022. SEE ORDER OF RESOURCE AREA DELINEATION DATED OCTOBER 7, 2022, DEP FILE NO. 21-1275.
- 5) ALL LOTS TO BE SERVICED BY MUNICIPAL WATER AND SEWER.

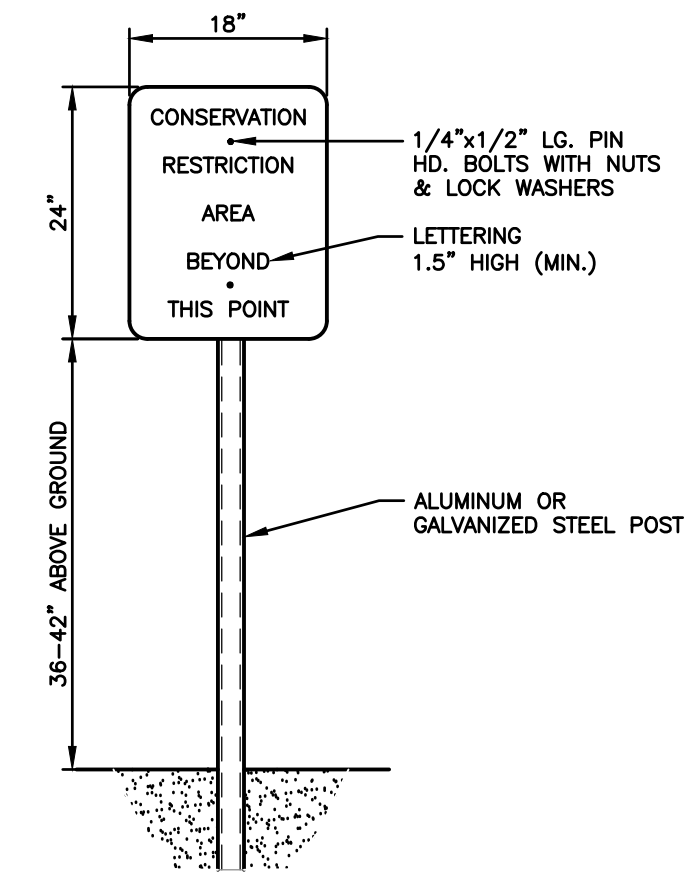


LOCATION MAP
(NOT TO SCALE)

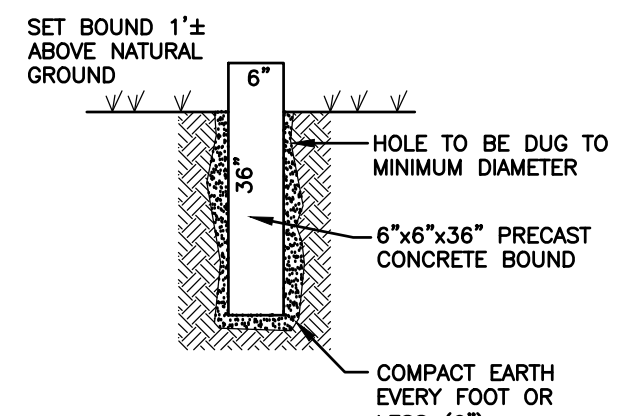
GPI Engineering Design Planning Construction Management
603.893.0720
GPINET.COM
Greenman-Pedersen, Inc.
44 Siles Road, Suite One
Salem, NH 03079

PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



**CONSERVATION RESTRICTION
SIGN DETAIL**
NOT TO SCALE



**CONCRETE BOUND
DETAIL**
NOT TO SCALE

LEGEND

- STONE WALL
- EDGE OF WETLANDS
- STONE BOUND W/ DRILL HOLE TO BE SET
- CONCRETE BOUND W/ DRILL HOLE TO BE SET
- IRON PIN TO BE SET
- CONSERVATION RESTRICTION SIGN TO BE SET

REVISIONS

| NO. | REVISION | DATE |
|-----|-----------------------------|----------|
| 1. | REVISED PER REVIEW COMMENTS | 08/02/24 |

MARCH 6, 2024
DRAWN/DESIGN BY: KAC
CHECKED BY: SML/DRJ

**METHUEN COMMUNITY
DEVELOPMENT BOARD**

DATE OF FILING _____
DATE OF HEARING _____
DATE OF APPROVAL _____

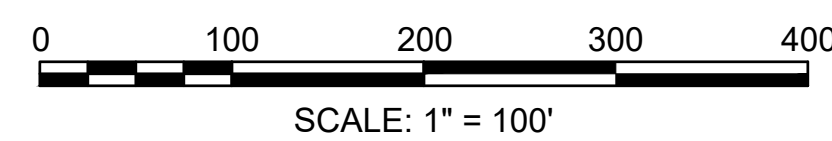
**DEFINITIVE
SUBDIVISION
OVERVIEW
PLAN**

SCALE: 1"=100'
PROJECT NO. NEX-2200136
4 OF 32

CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF MASSACHUSETTS



8/2/2024
REGISTERED PROFESSIONAL LAND SURVEYOR

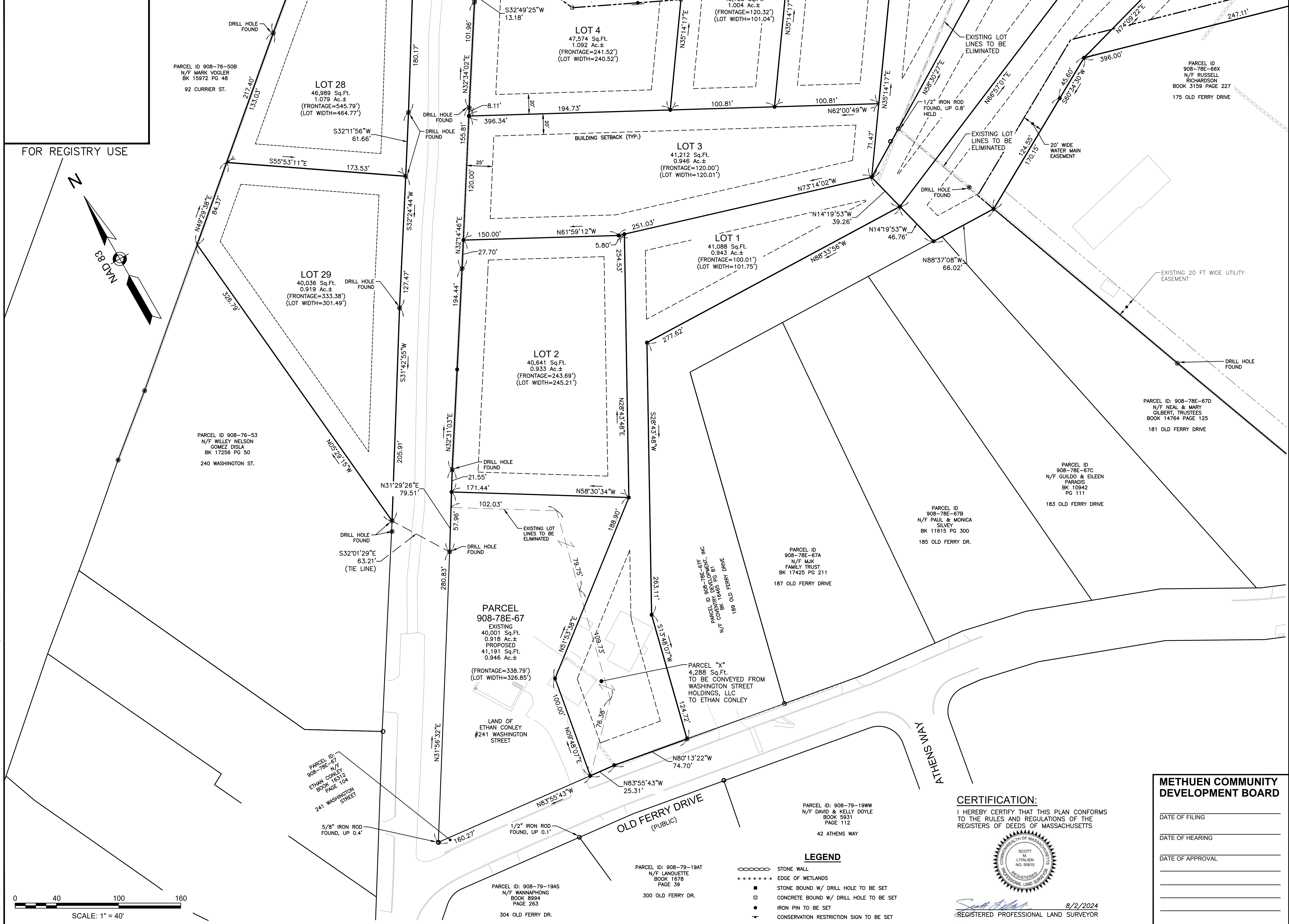


SCALE: 1" = 100'

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25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



REVISIONS

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DRAWN/DESIGN BY: KAC
CHECKED BY: SML/DRJ

METHUEN COMMUNITY DEVELOPMENT BOARD

DATE OF FILING _____
DATE OF HEARING _____
DATE OF APPROVAL _____

DEFINITIVE SUBDIVISION PLAN

SCALE: 1"=40'
PROJECT NO. NEX-2200136
5 OF 32

CERTIFICATION:
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8/2/2024
REGISTERED PROFESSIONAL LAND SURVEYOR

- LEGEND**
- STONE WALL
 - - - - - EDGE OF WETLANDS
 - STONE BOUND W/ DRILL HOLE TO BE SET
 - CONCRETE BOUND W/ DRILL HOLE TO BE SET
 - IRON PIN TO BE SET
 - ⊖ CONSERVATION RESTRICTION SIGN TO BE SET

SCALE: 1" = 40'

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**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**

REVISIONS

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| | | | DATE |
| 1. | | | |

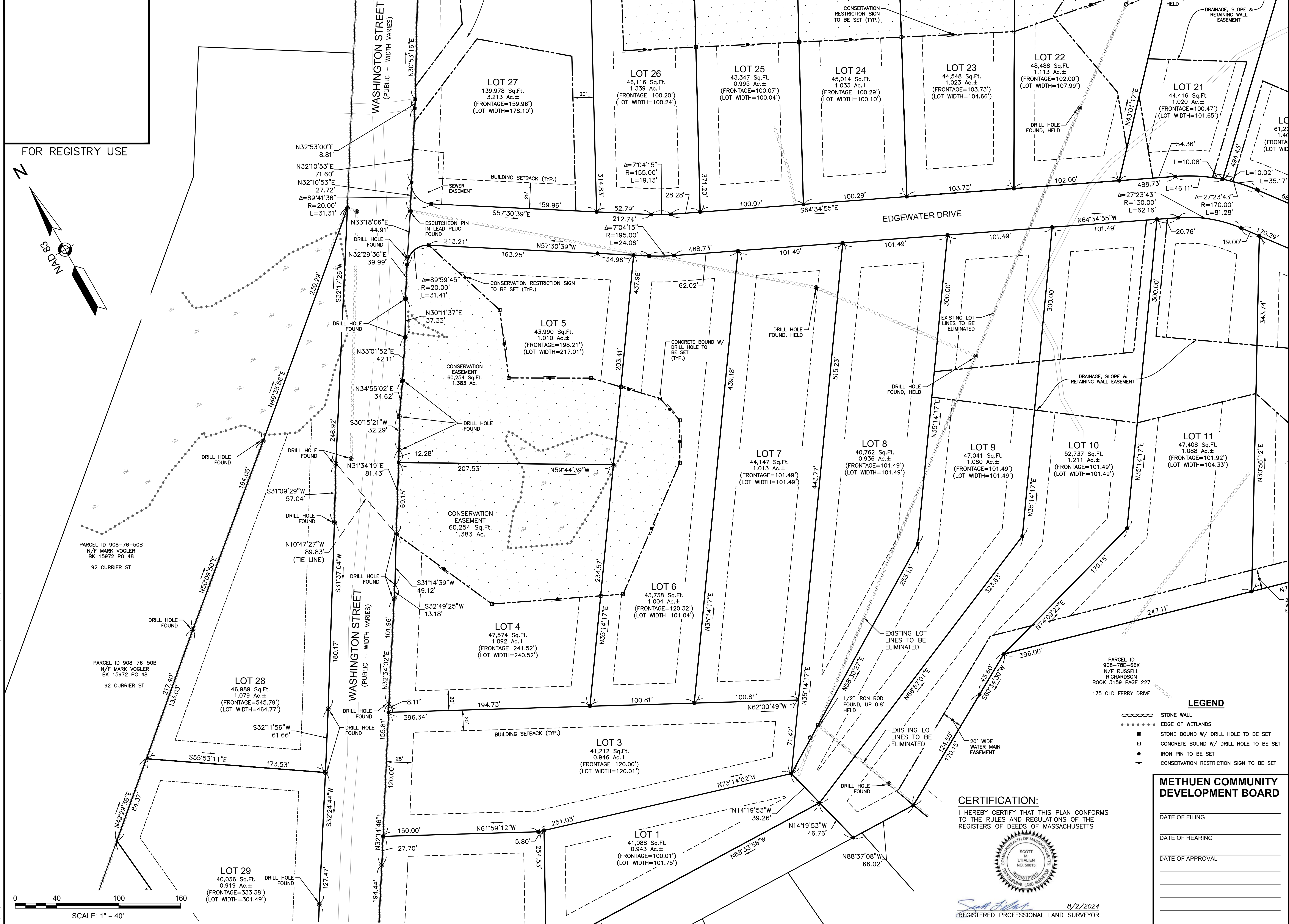
MARCH 6, 2024

DRAWN/DESIGN BY: **KAC** CHECKED BY: **SML/DRJ**

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DATE OF HEARING _____
DATE OF APPROVAL _____

SCALE: 1"=40'
PROJECT NO. NEX-2200136



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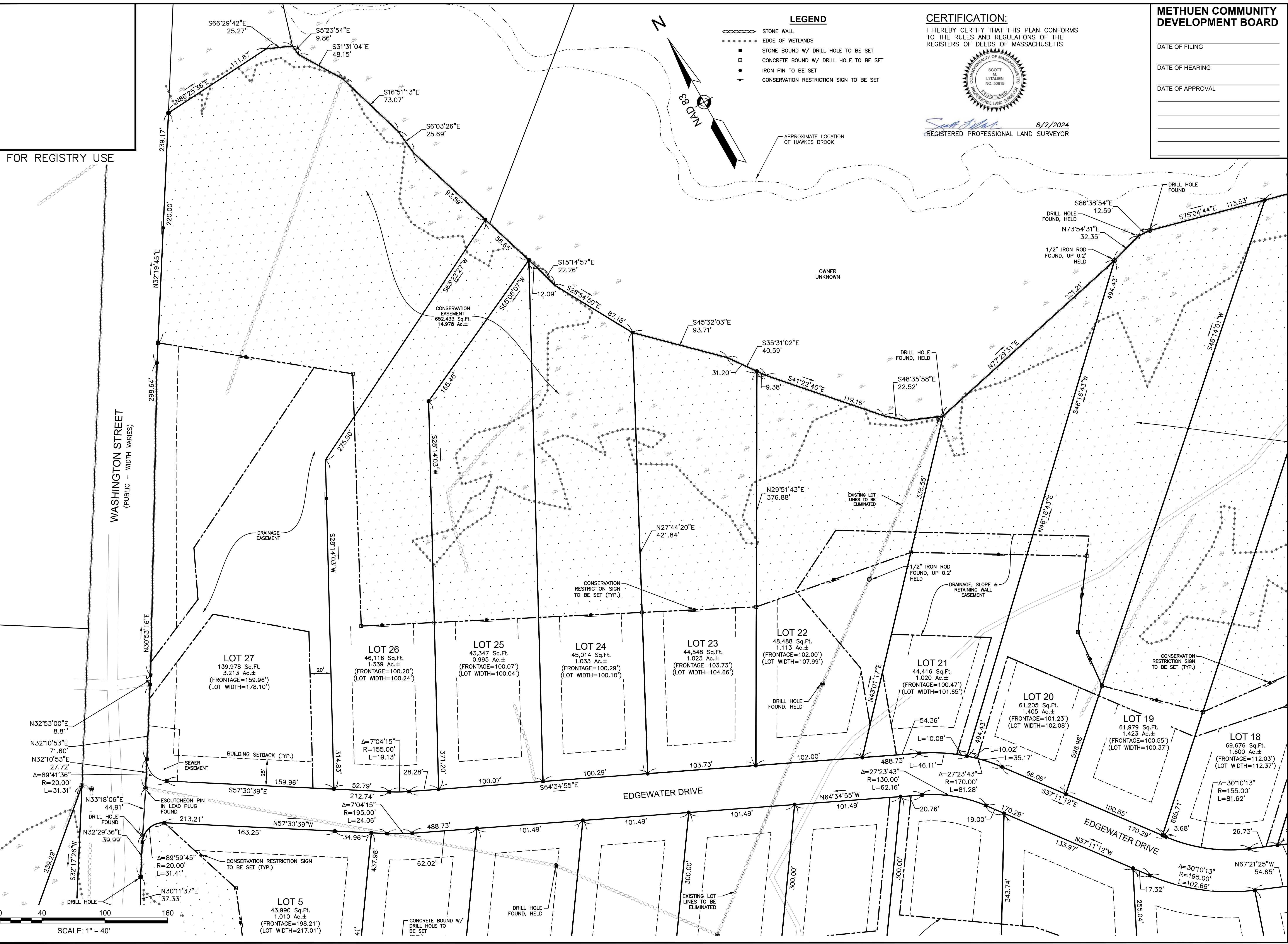
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FOR REGISTRY USE

WASHINGTON STREET
(PUBLIC - WIDTH VARIES)

EDGEWATER DRIVE

EDGEWATER DRIVE



LEGEND

- STONE WALL
- EDGE OF WETLANDS
- STONE BOUND W/ DRILL HOLE TO BE SET
- CONCRETE BOUND W/ DRILL HOLE TO BE SET
- IRON PIN TO BE SET
- ┆ CONSERVATION RESTRICTION SIGN TO BE SET

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8/2/2024
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METHUEN COMMUNITY DEVELOPMENT BOARD

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DATE OF APPROVAL _____

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GPINET.COM

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**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**

| REVISIONS | | |
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| 1. | REVISED PER REVIEW COMMENTS | 08/02/24 |
| MARCH 6, 2024 | | |
| DRAWN/DESIGN BY | | CHECKED BY |
| KAC | | SML/DRJ |

DEFINITIVE SUBDIVISION PLAN

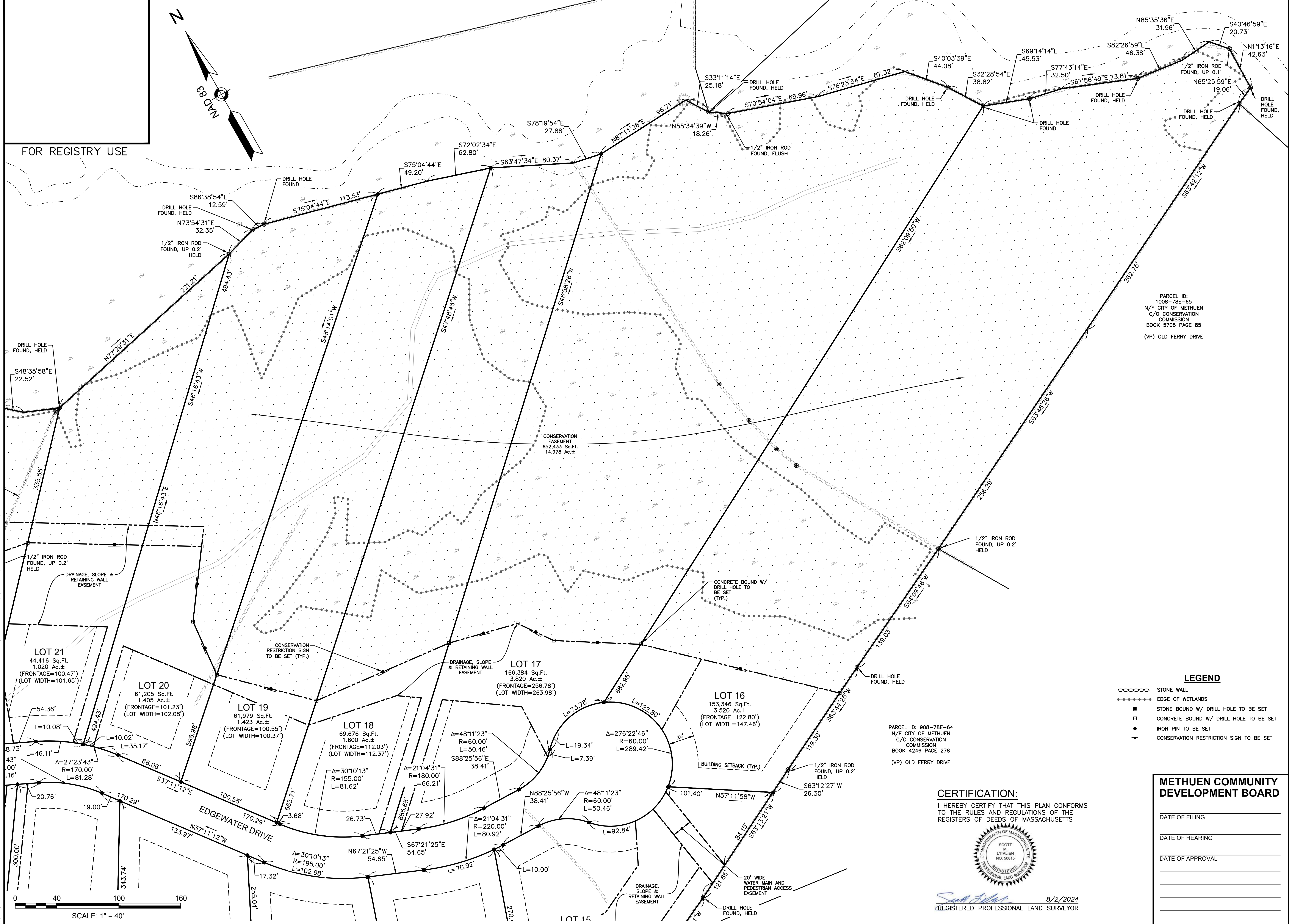
SCALE: 1" = 40'

PROJECT NO. NEX-2200136

7 OF 32

PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



PARCEL ID:
1008-78E-65
N/F CITY OF METHUEN
C/O CONSERVATION
COMMISSION
BOOK 5708 PAGE 85
(VP) OLD FERRY DRIVE

PARCEL ID: 908-78E-64
N/F CITY OF METHUEN
C/O CONSERVATION
COMMISSION
BOOK 4248 PAGE 278
(VP) OLD FERRY DRIVE

LEGEND

- ○ ○ ○ ○ STONE WALL
- ● ● ● ● EDGE OF WETLANDS
- STONE BOUND W/ DRILL HOLE TO BE SET
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MARCH 6, 2024
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8/2/2024
REGISTERED PROFESSIONAL LAND SURVEYOR

METHUEN COMMUNITY DEVELOPMENT BOARD

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DATE OF HEARING _____
DATE OF APPROVAL _____

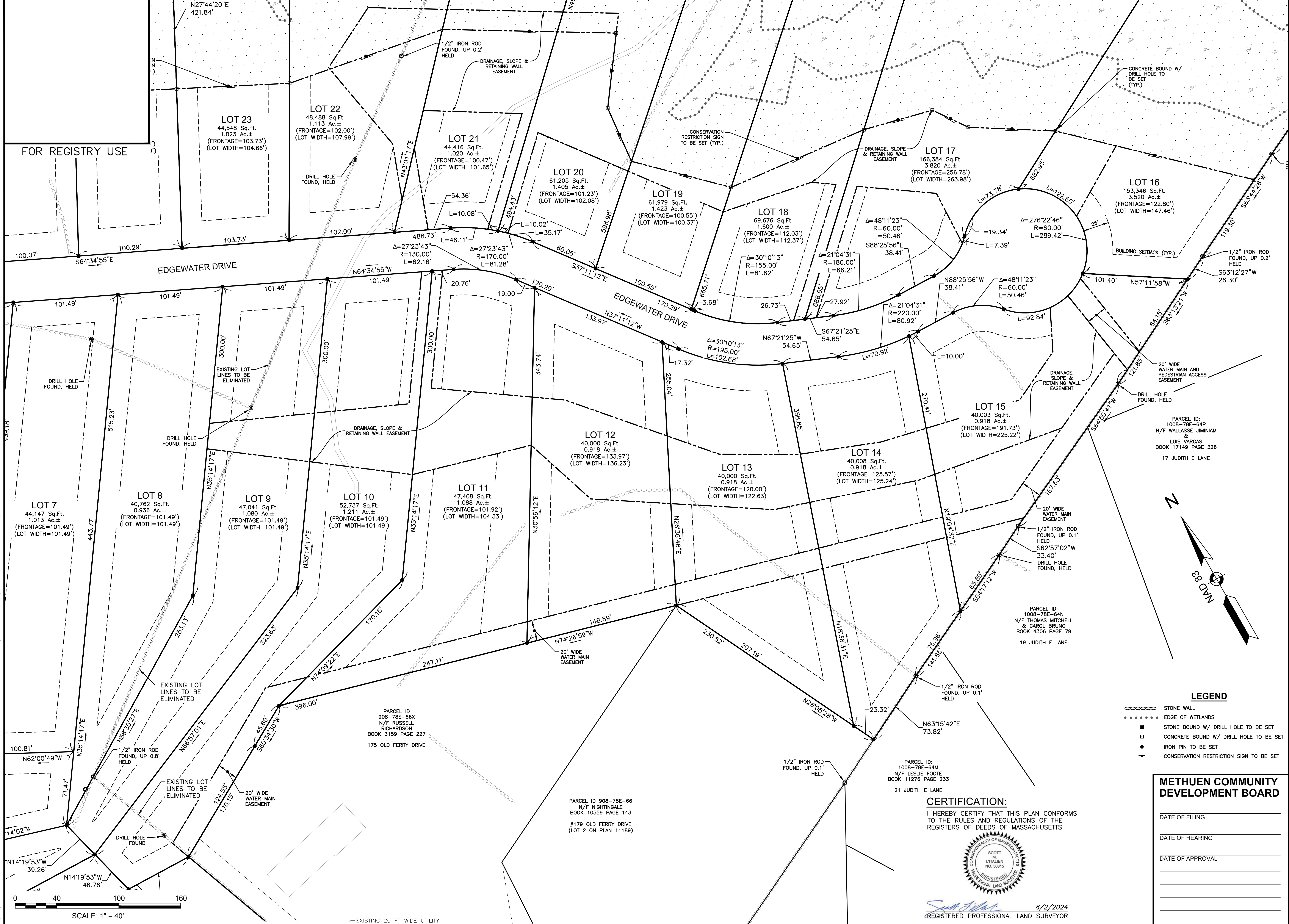
DEFINITIVE SUBDIVISION PLAN

SCALE: 1"=40'
PROJECT NO. NEX-2200136
8 OF 32

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LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



REVISIONS

| NO. | REVISION | DATE |
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| 1. | REVISED PER REVIEW COMMENTS | 08/02/24 |

MARCH 6, 2024

| NO. | REVISION | DATE |
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| 1. | REVISED PER REVIEW COMMENTS | 08/02/24 |

DRAWN/DESIGN BY: KAC
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LEGEND

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METHUEN COMMUNITY DEVELOPMENT BOARD

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DATE OF APPROVAL _____

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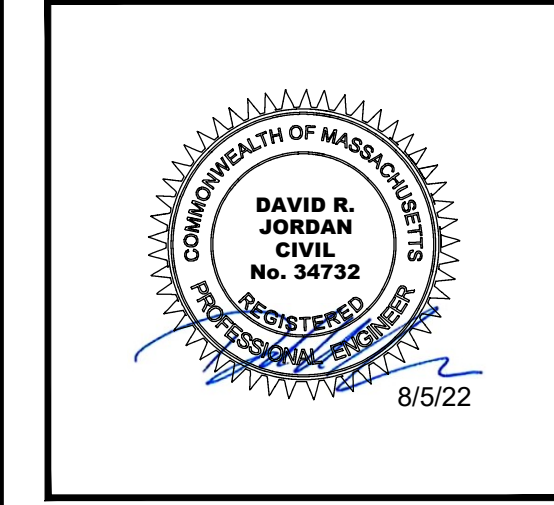
8/2/2024
REGISTERED PROFESSIONAL LAND SURVEYOR

DEFINITIVE SUBDIVISION PLAN

SCALE: 1"=40'
PROJECT NO. NEX-2200136
9 OF 32

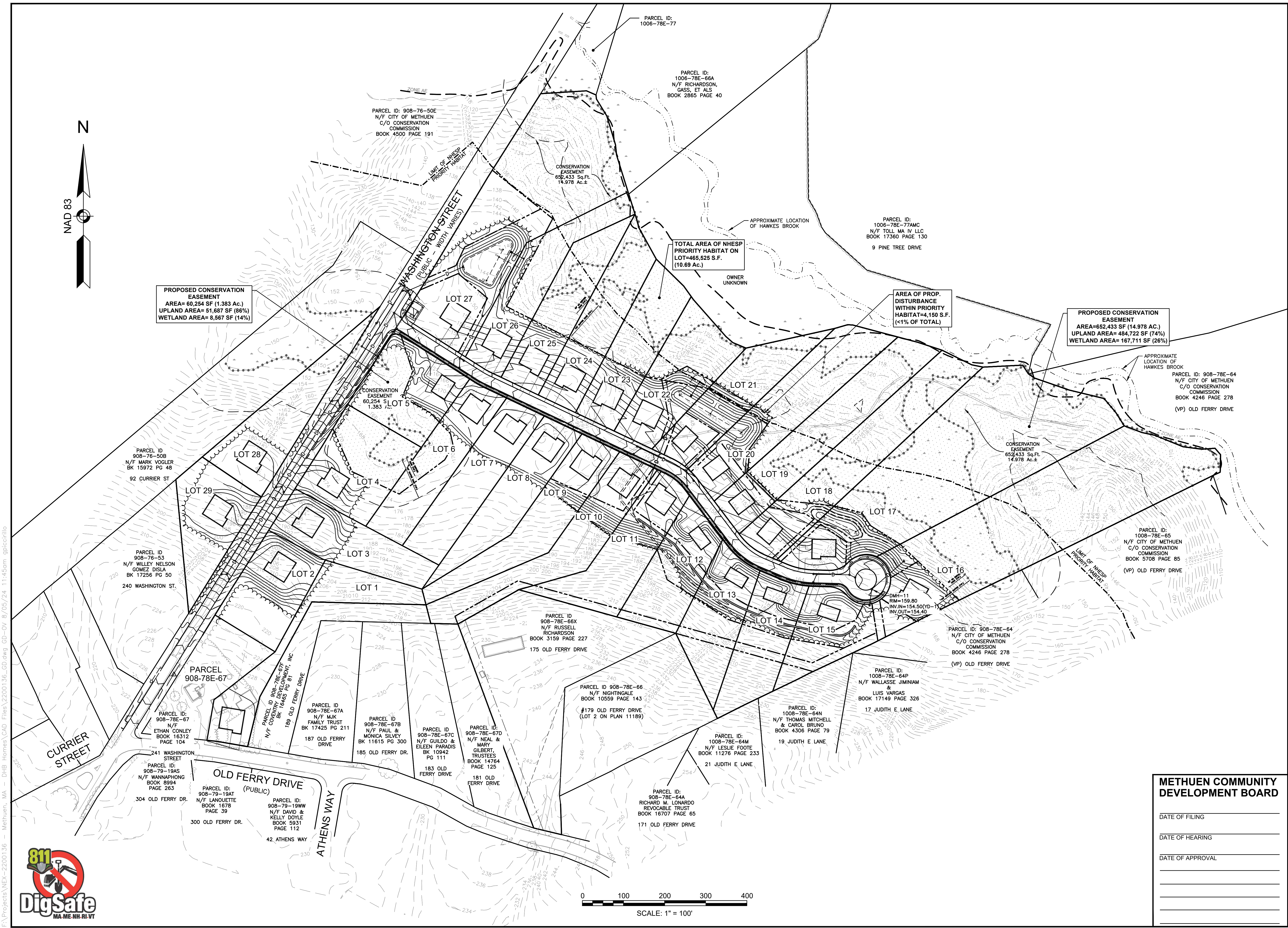
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**BROOKVIEW HEIGHTS
 DEFINITIVE SUBDIVISION PLAN
 DHB HOMES, LLC
 LAND OFF WASHINGTON STREET
 METHUEN, MASSACHUSETTS**

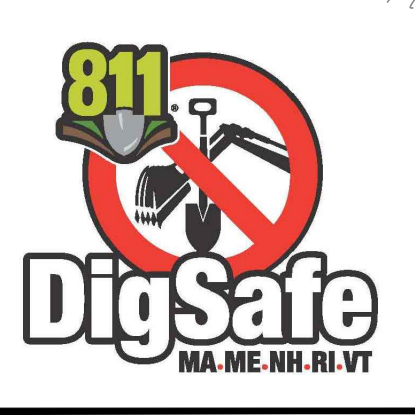


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| NO. | REVISION | DATE |
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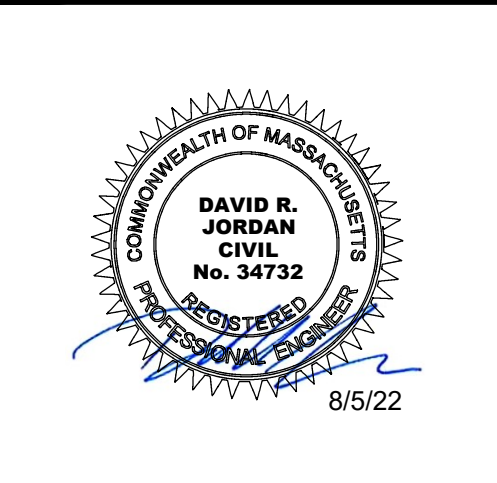
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 DRAWN/DESIGN BY: GMP CHECKED BY: DRJ



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**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



| REVISIONS | | |
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| 1 | REVISE PER CITY COMMENTS | 8/2/24 |
| MARCH 6, 2024 | | |
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| GMP | | DRJ |

METHUEN COMMUNITY DEVELOPMENT BOARD

DATE OF FILING _____

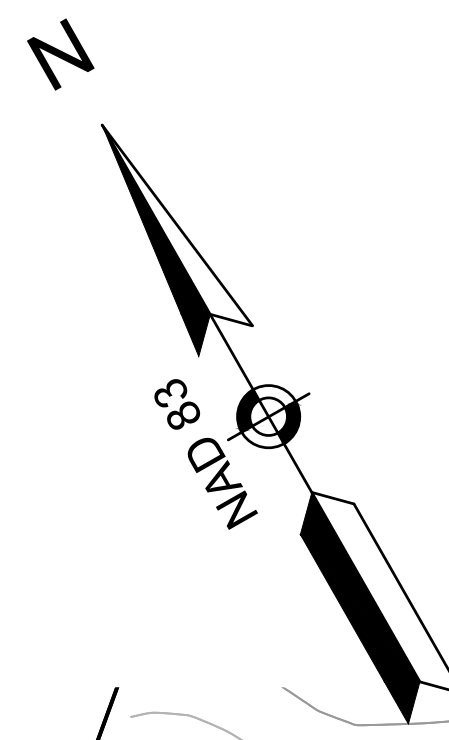
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DATE OF APPROVAL _____

SCALE: 1"=40'

PROJECT NO. NEX-2200136

11 OF 32



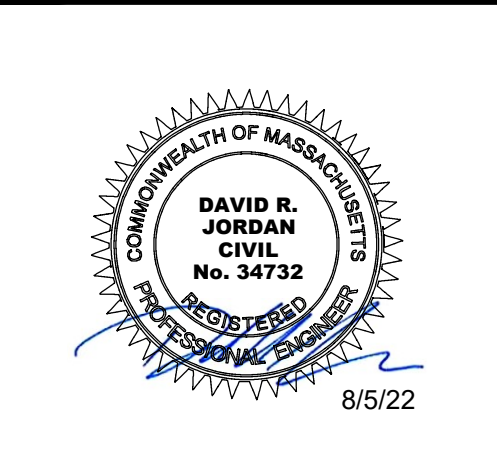
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PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



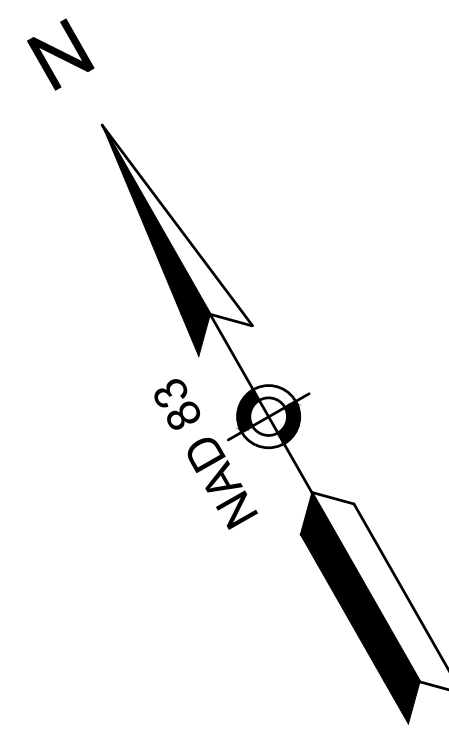
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| NO. | REVISION | DATE |
| 2 | REVISE PER CITY COMMENTS | 8/2/24 |
| 1 | ADD 100' WETLAND BUFFER | 4/3/24 |

MARCH 6, 2024
DRAWN/DESIGN BY: GMP
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METHUEN COMMUNITY DEVELOPMENT BOARD

DATE OF FILING _____
DATE OF HEARING _____
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SCALE: 1"=40'
PROJECT NO. NEX-2200136
12 OF 32



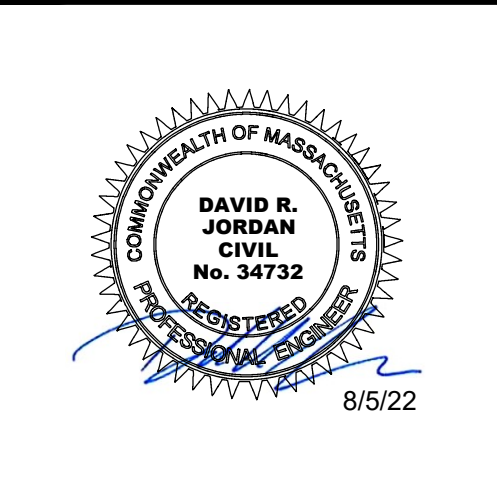
PARCEL ID 908-76-50B
N/F MARK VOGLER
BK 15972 PG 48
92 CURRIER ST.

SCALE: 1" = 40'

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**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



| REVISIONS | | |
|-----------|--------------------------|--------|
| NO. | REVISION | DATE |
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| 1 | ADD 100' WETLAND BUFFER | 4/3/24 |

MARCH 6, 2024
DRAWN/DESIGN BY: GMP
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METHUEN COMMUNITY DEVELOPMENT BOARD

DATE OF FILING _____
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DATE OF APPROVAL _____

SCALE: 1"=40'
PROJECT NO. NEX-2200136
13 OF 32



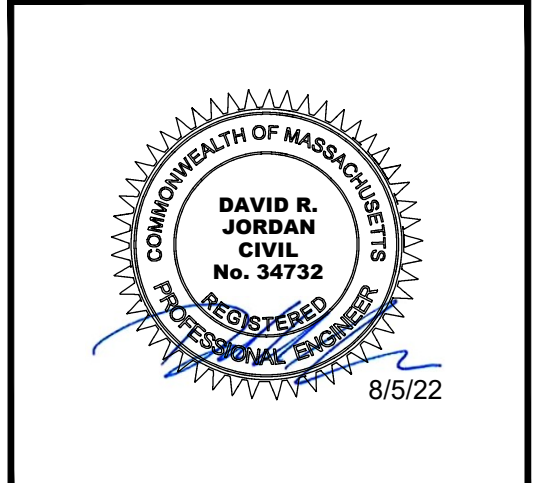
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SCALE: 1" = 40'

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LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



| REVISIONS | | |
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MARCH 6, 2024
DRAWN/DESIGN BY: GMP CHECKED BY: DRJ

METHUEN COMMUNITY DEVELOPMENT BOARD

DATE OF FILING _____

DATE OF HEARING _____

DATE OF APPROVAL _____

GRADING & DRAINAGE PLAN

SCALE: 1"=40'

PROJECT NO. NEX-2200136

14 OF 32

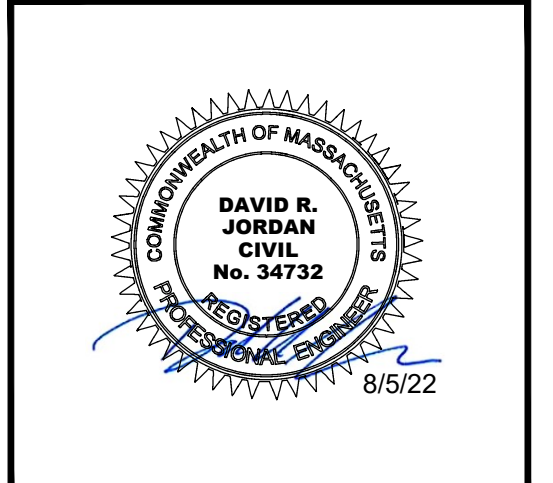


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LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



| REVISIONS | | |
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MARCH 6, 2024
DRAWN/DESIGN BY: GMP
CHECKED BY: DRJ

METHUEN COMMUNITY DEVELOPMENT BOARD

DATE OF FILING _____
DATE OF HEARING _____
DATE OF APPROVAL _____

GRADING & DRAINAGE PLAN

SCALE: 1"=40'
PROJECT NO. NEX-2200136

15 OF 32

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PARCEL ID 908-76-50B
N/E MARK VOGLER
BK 15972 PG 48
92 CURRIER ST.

SILT FENCE
(TYP.)

SILT FENCE
(TYP.)

EROSION CONTROL
BLANKET (TYP.)

CATCH BASIN
INLET
PROTECTION
(TYP.)

TEMPORARY
STABILIZED
CONSTRUCTION
EXIT (TYP.)

WASHINGTON STREET
(PUBLIC - WIDTH VARIES)

OLD FERRY DRIVE
(PUBLIC)

ATHENS WAY

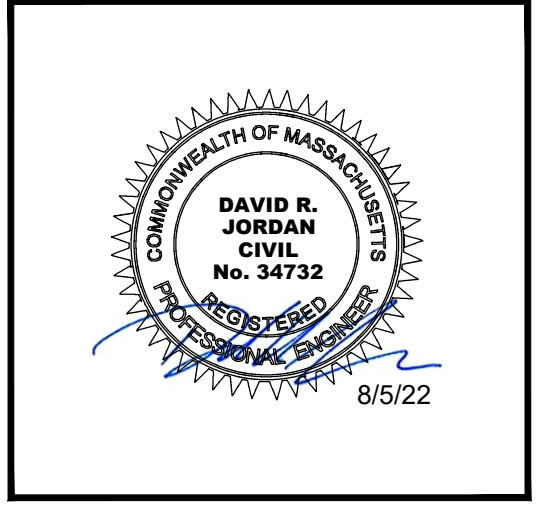
PROP. SAWCUT

0 40 100 160
SCALE: 1" = 40'

GPI Engineering
Design
Planning
Construction Management
403.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Siles Road, Suite One
Salem, NH 03079

PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



| REVISIONS | | |
|-----------|--------------------------|--------|
| NO. | REVISION | DATE |
| 1 | REVISE PER CITY COMMENTS | 8/2/24 |

MARCH 6, 2024

| | |
|------------------------|-------------------|
| DRAWN/DESIGN BY GMP | CHECKED BY DRJ |
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METHUEN COMMUNITY DEVELOPMENT BOARD

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DATE OF HEARING _____

DATE OF APPROVAL _____

EROSION & SEDIMENT CONTROL PLAN

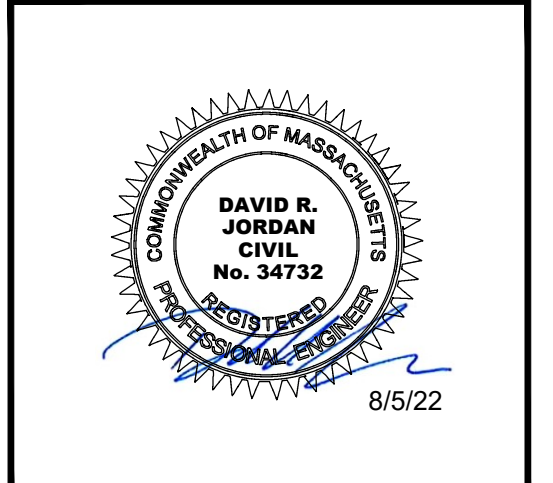
SCALE: 1"=40'

PROJECT NO. NEX-2200136

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**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



| REVISIONS | | |
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| NO. | REVISION | DATE |
| 2 | REVISE PER CITY COMMENTS | 8/2/24 |
| 1 | ADD 100' WETLAND BUFFER | 4/3/24 |

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METHUEN COMMUNITY DEVELOPMENT BOARD

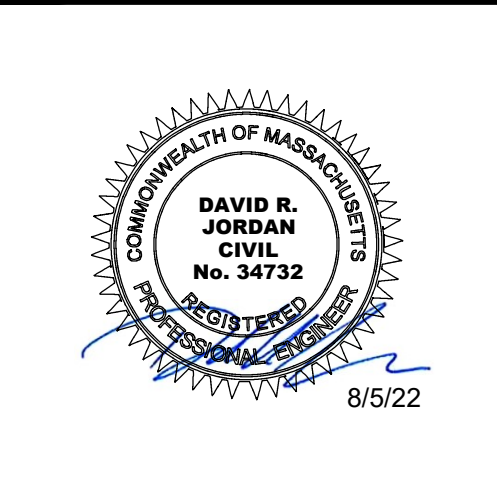
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DATE OF HEARING _____

DATE OF APPROVAL _____

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DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



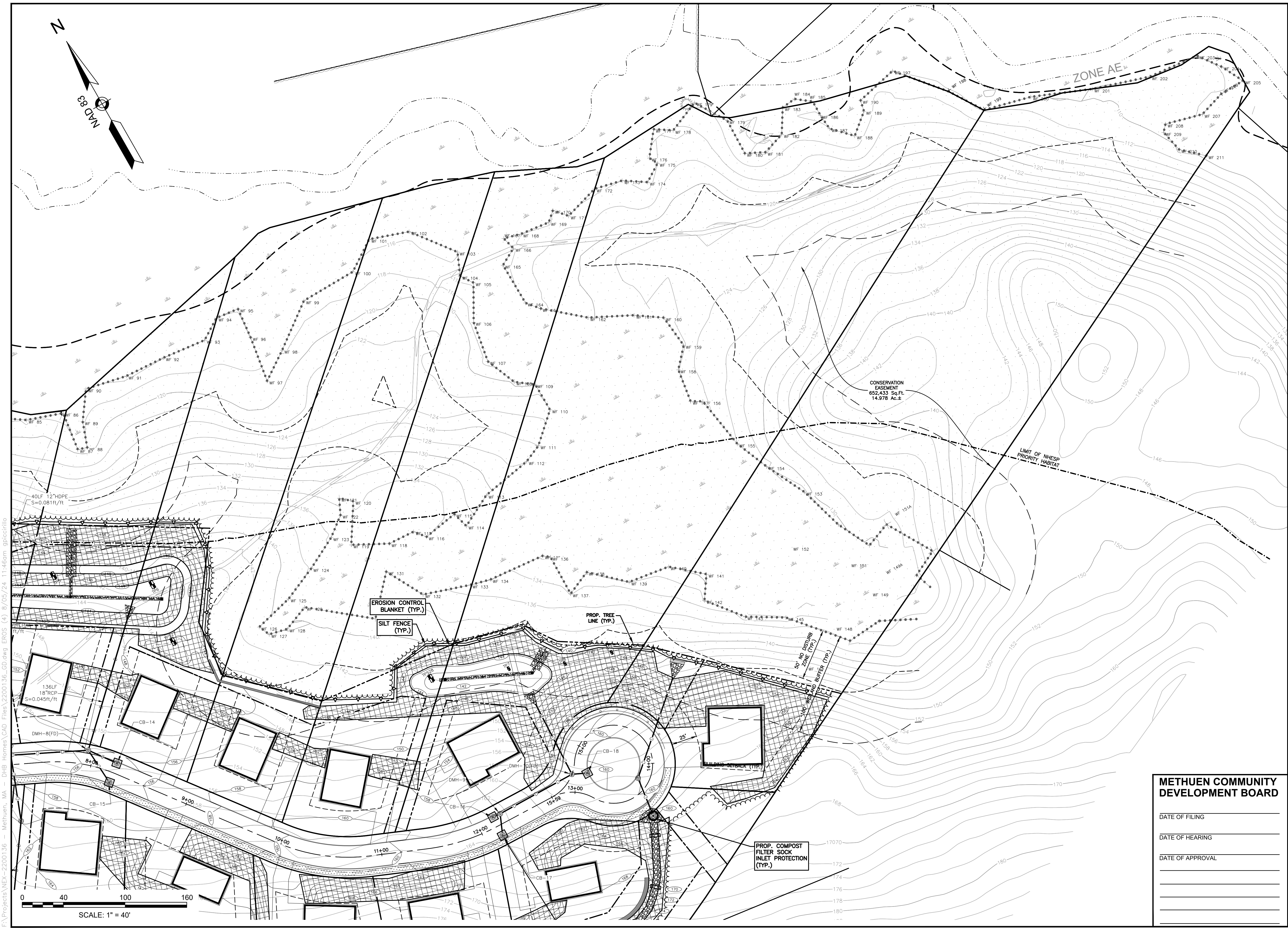
| REVISIONS | | |
|-----------------|--------------------------|--------|
| NO. | REVISION | DATE |
| 2 | REVISE PER CITY COMMENTS | 8/2/24 |
| 1 | ADD 100' WETLAND BUFFER | 4/3/24 |
| MARCH 6, 2024 | | |
| DRAWN/DESIGN BY | CHECKED BY | |
| GMP | DRJ | |

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| DATE OF HEARING | _____ |
| DATE OF APPROVAL | _____ |
| SCALE: | 1"=40' |
| PROJECT NO. | NEX-2200136 |
| 18 OF 32 | |



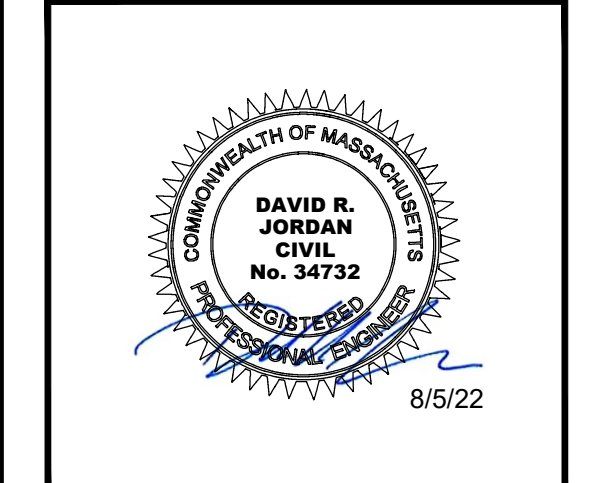
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SCALE: 1" = 40'



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METHUEN, MASSACHUSETTS**



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DATE OF APPROVAL _____

EROSION & SEDIMENT CONTROL PLAN

SCALE: 1"=40'

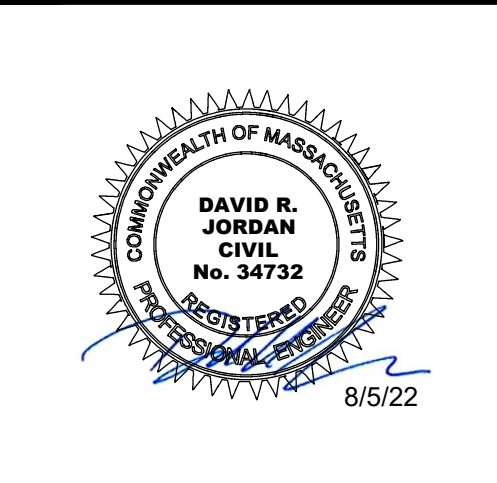
PROJECT NO. NEX-2200136

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**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



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EROSION & SEDIMENT CONTROL PLAN

SCALE: 1"=40'
PROJECT NO. NEX-2200136
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DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



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| NO. | REVISION | DATE |
| 1 | REVISE PER CITY COMMENTS | 8/2/24 |

MARCH 6, 2024

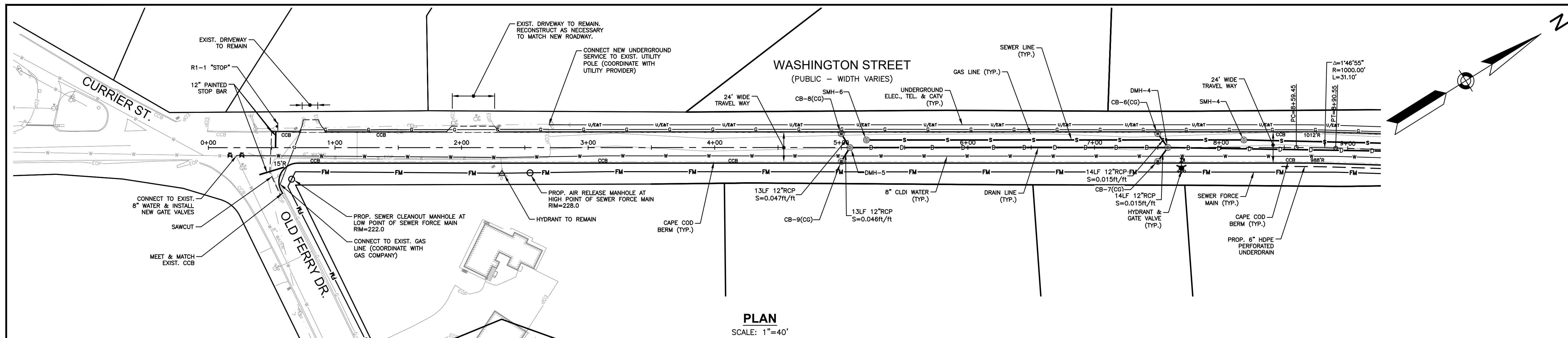
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**WASHINGTON STREET
PLAN &
PROFILE**

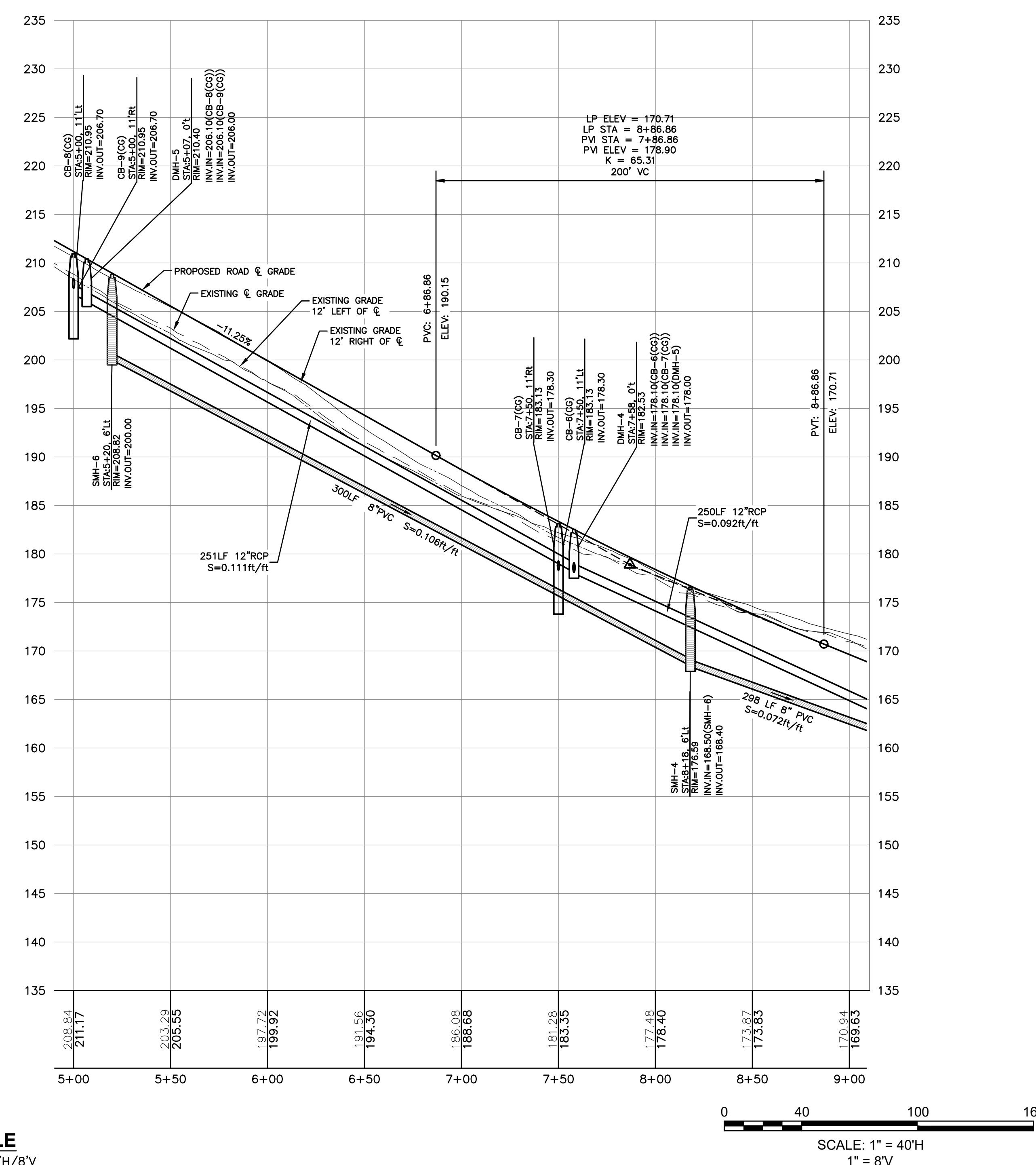
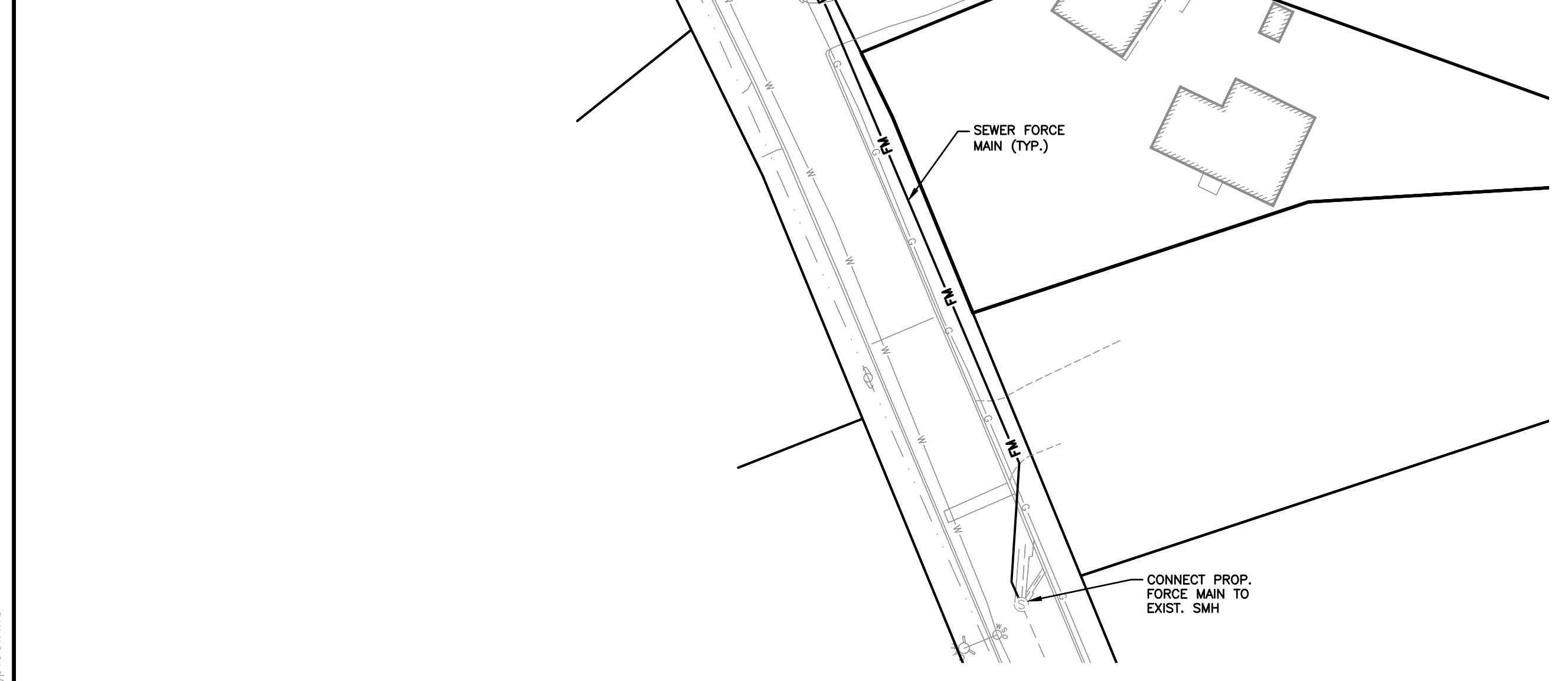
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PROJECT NO.
NEX-2200136

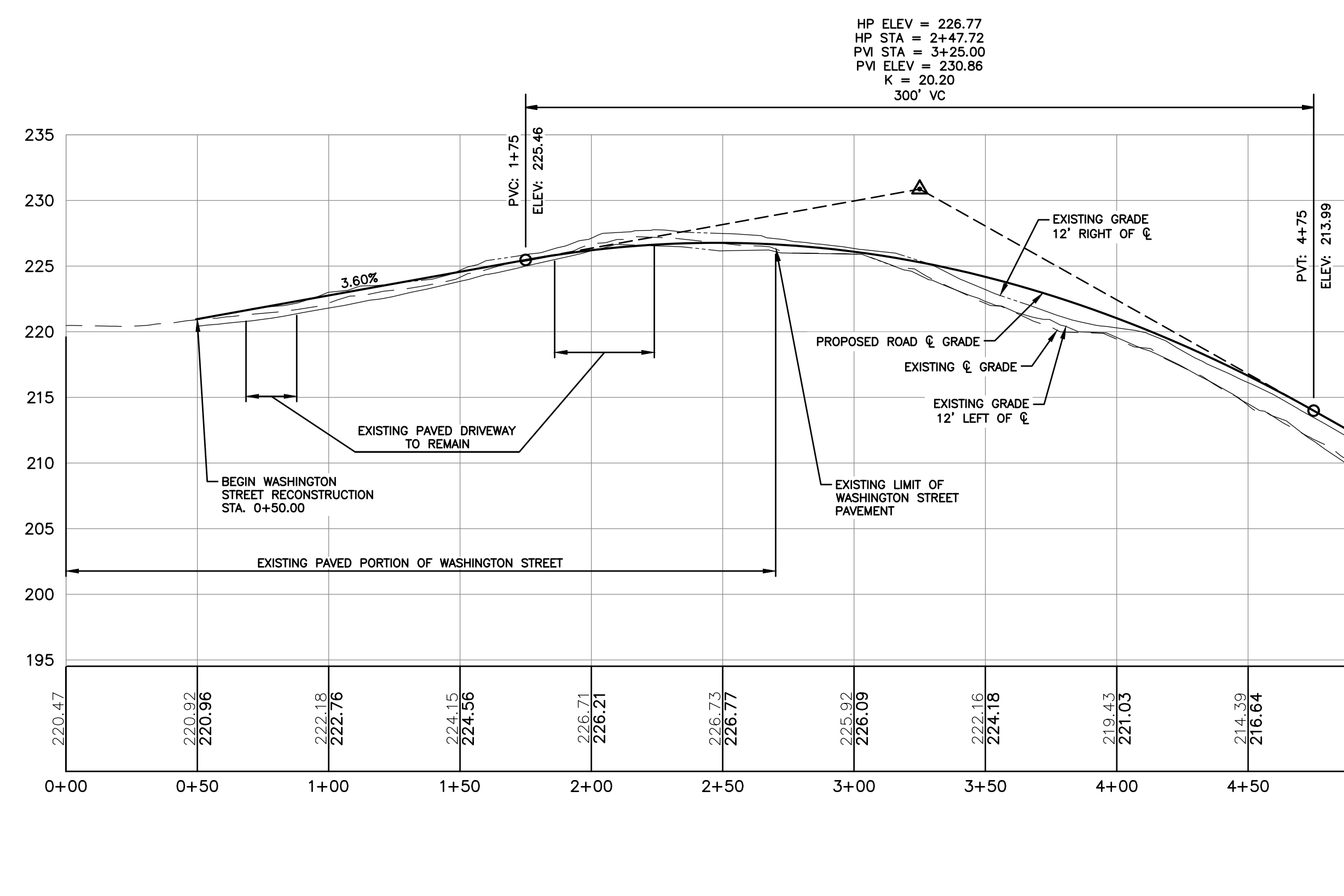
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PLAN
SCALE: 1"=40'

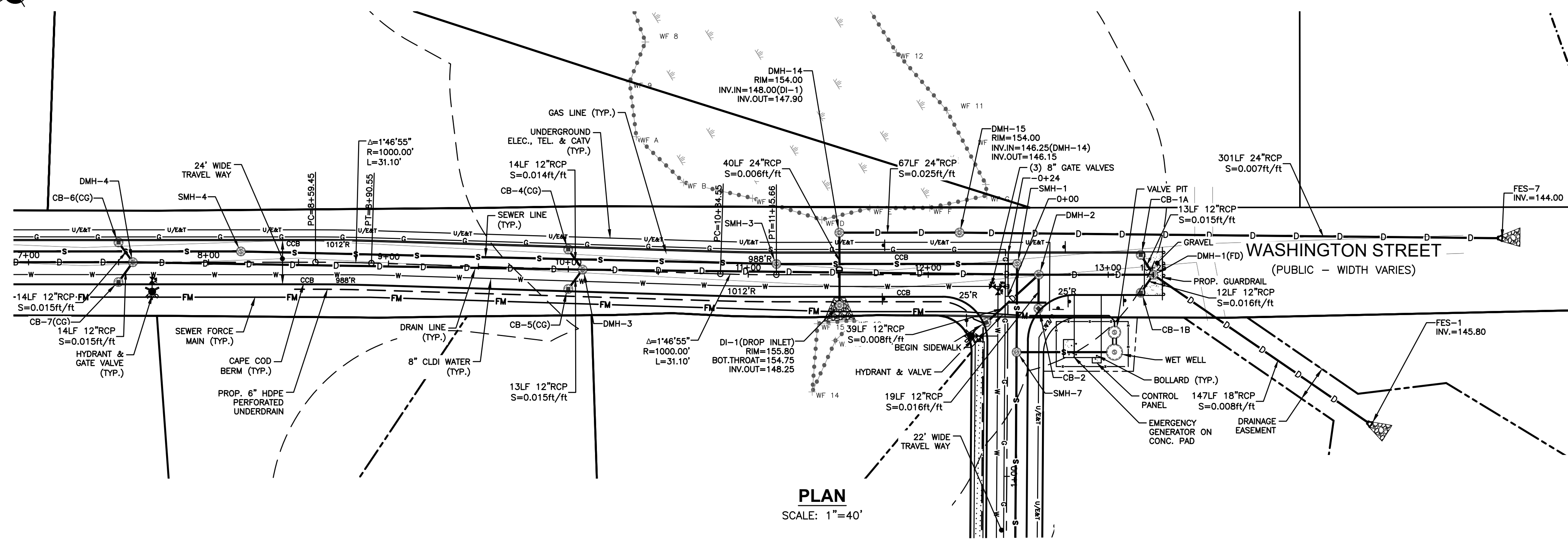
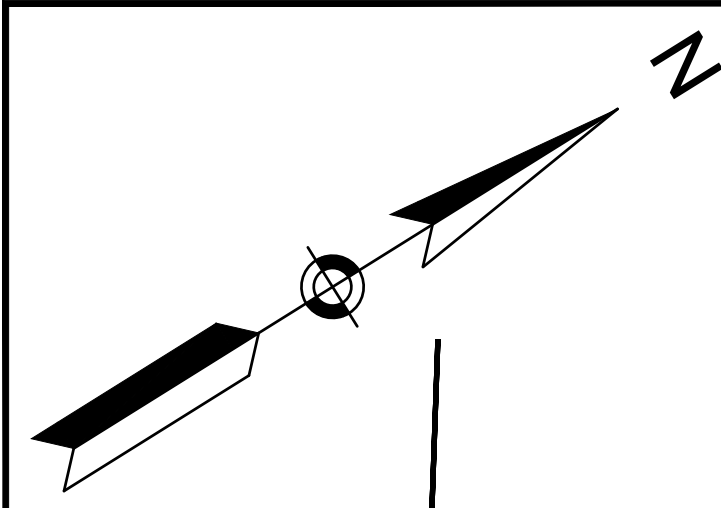


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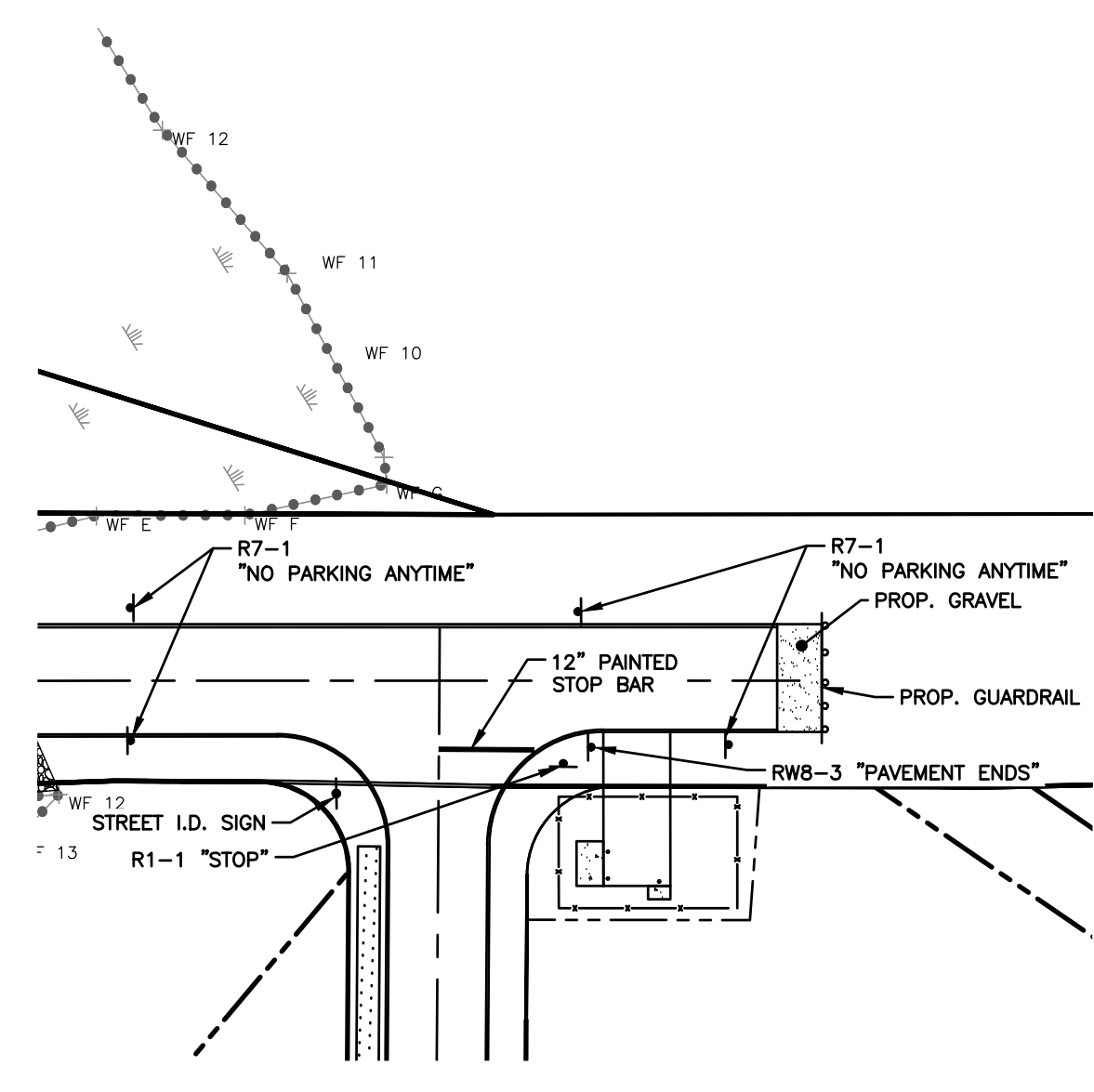


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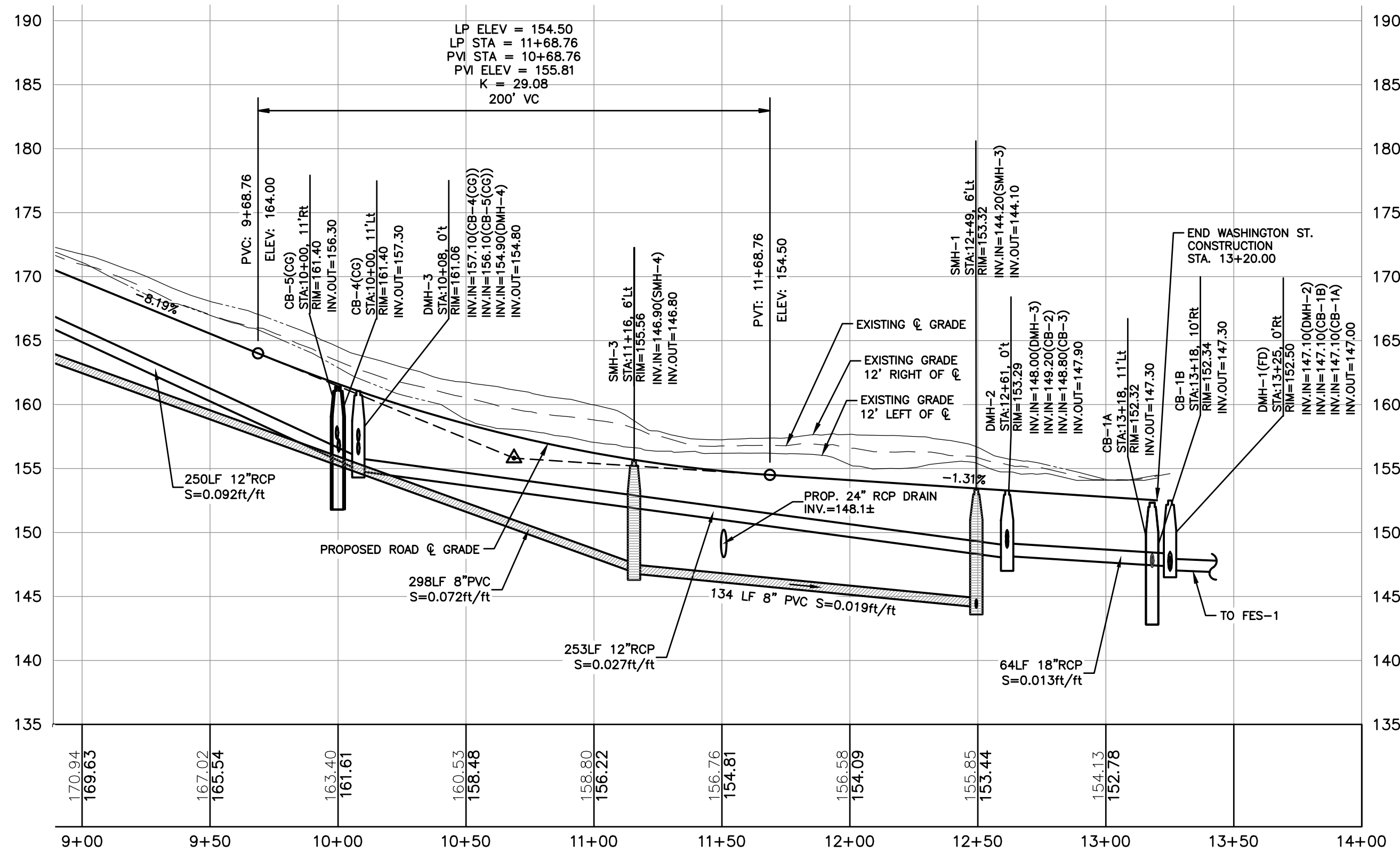




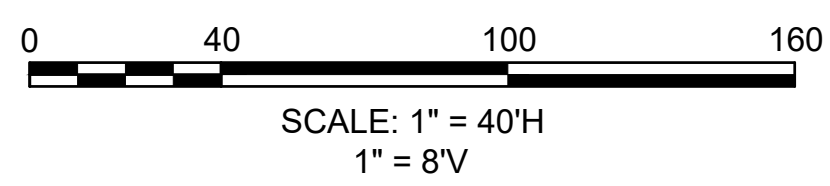
PLAN
SCALE: 1"=40'



SIGNAGE, & STRIPING PLAN
SCALE: 1"=40'



PROFILE
SCALE: 1"=40'H/8"V



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LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



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MARCH 6, 2024

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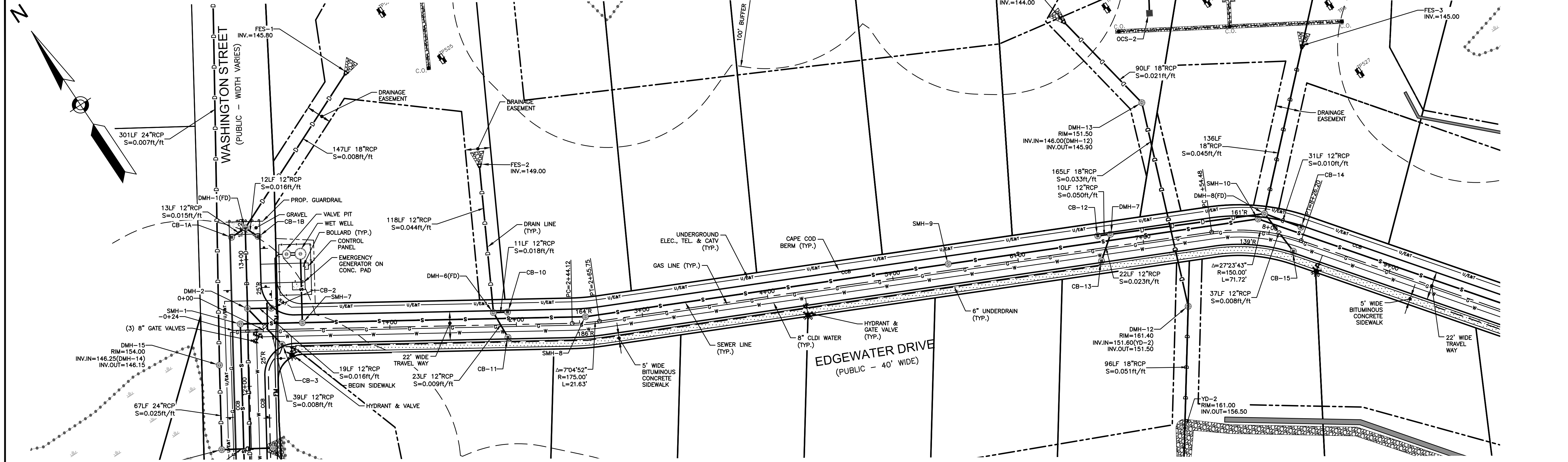
**WASHINGTON STREET
PLAN &
PROFILE**

SCALE: 1"=40' HORIZ.
1"=8' VERT.

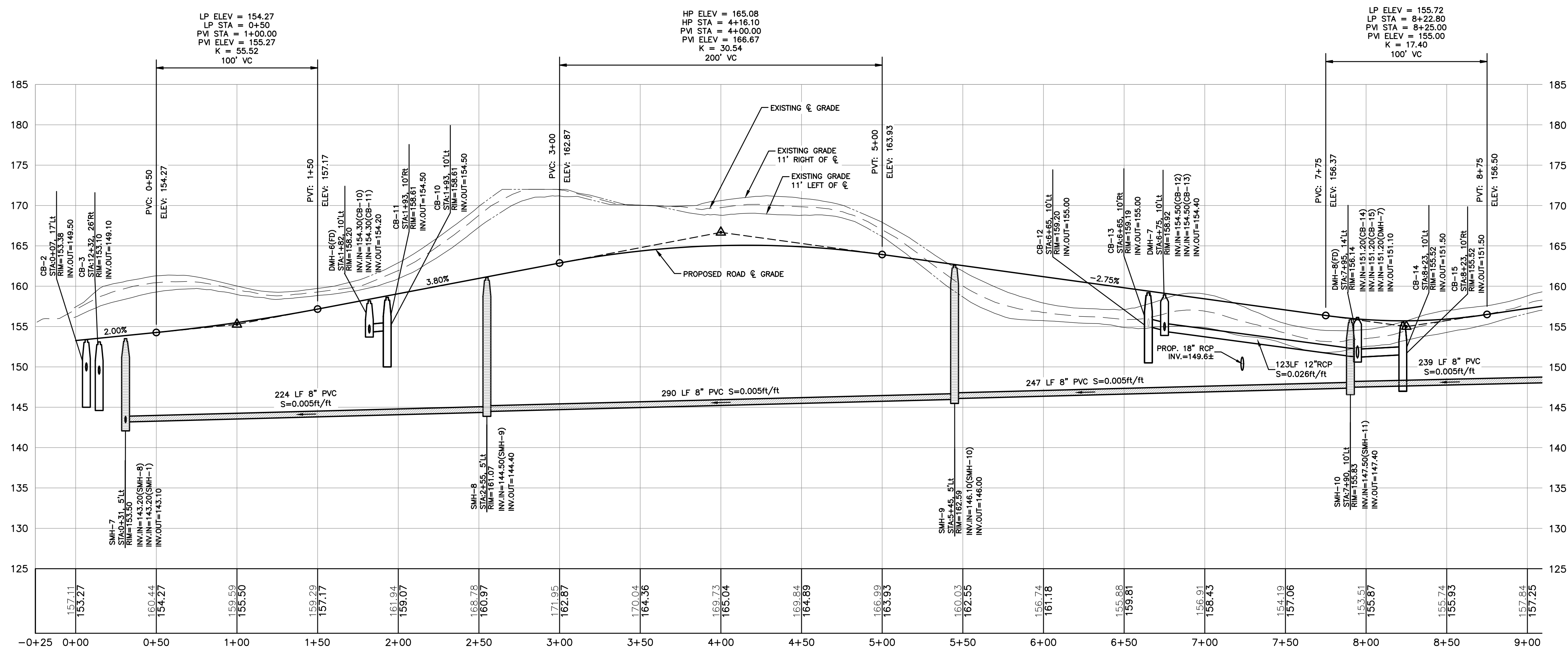
PROJECT NO.
NEX-2200136

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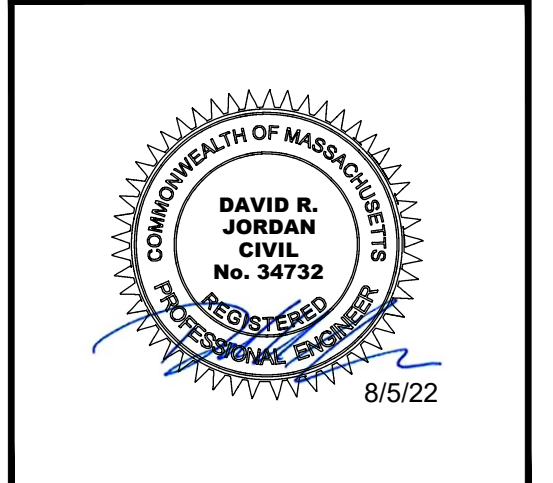
PLAN
SCALE: 1"=40'



PROFILE
SCALE: 1"=40'H/8"V

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| NO. | REVISION | DATE |
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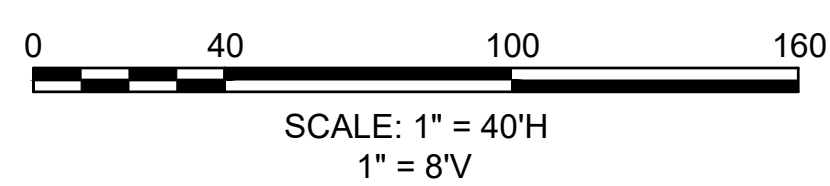
MARCH 6, 2024
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**EDGEWATER DRIVE
PLAN &
PROFILE**

SCALE: 1"=40' HORIZ.
1"=8' VERT.
PROJECT NO. NEX-2200136

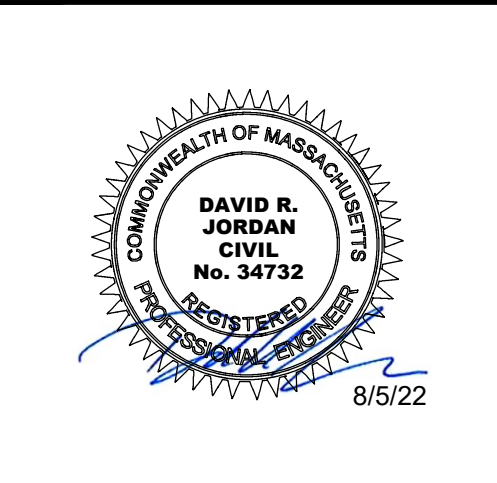
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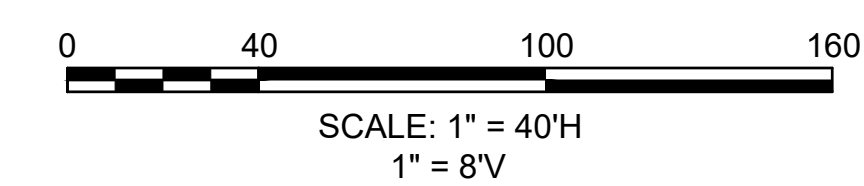
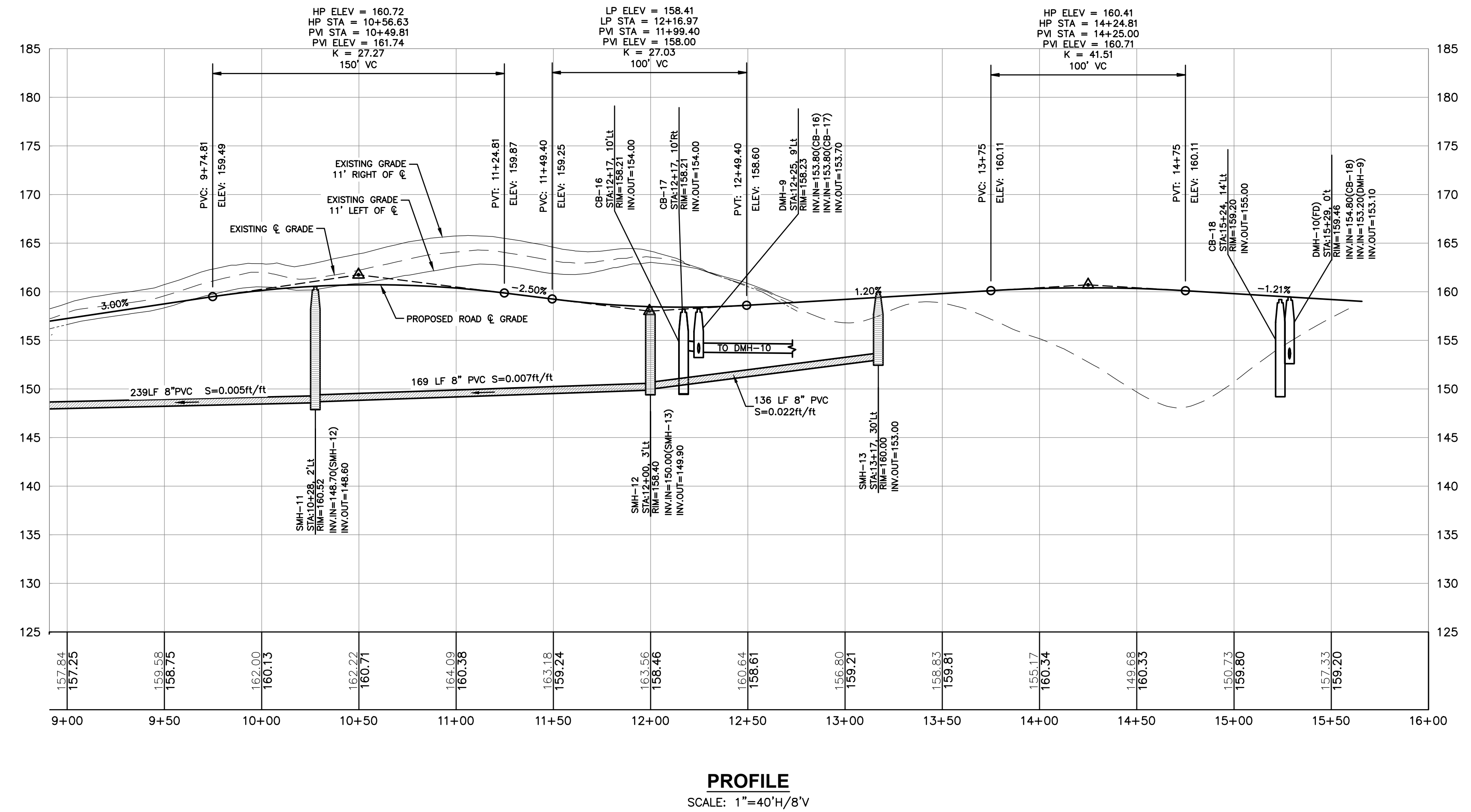
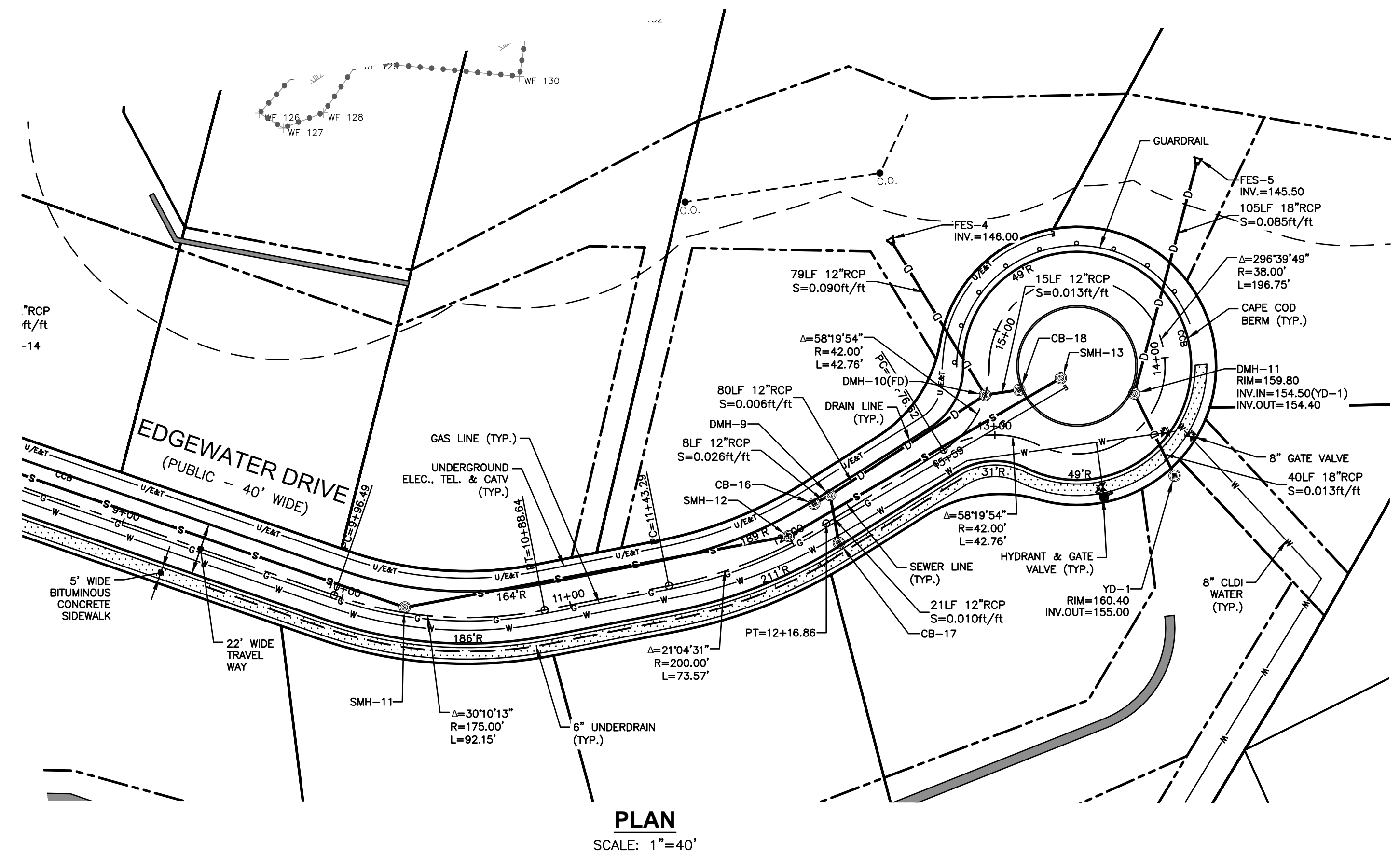
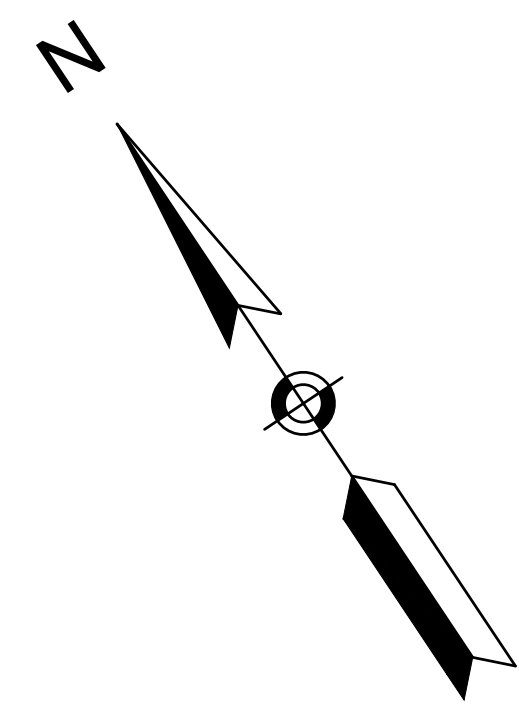
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METHUEN, MASSACHUSETTS**



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**EDGEWATER DRIVE
PLAN &
PROFILE**
SCALE: 1"=40'
PROJECT NO. NEX-2200136
24 OF 32

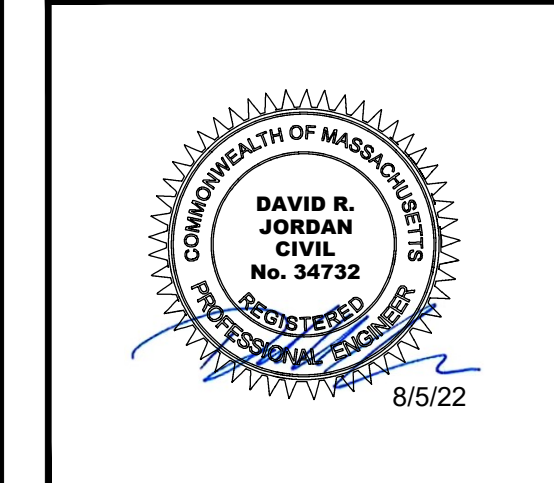


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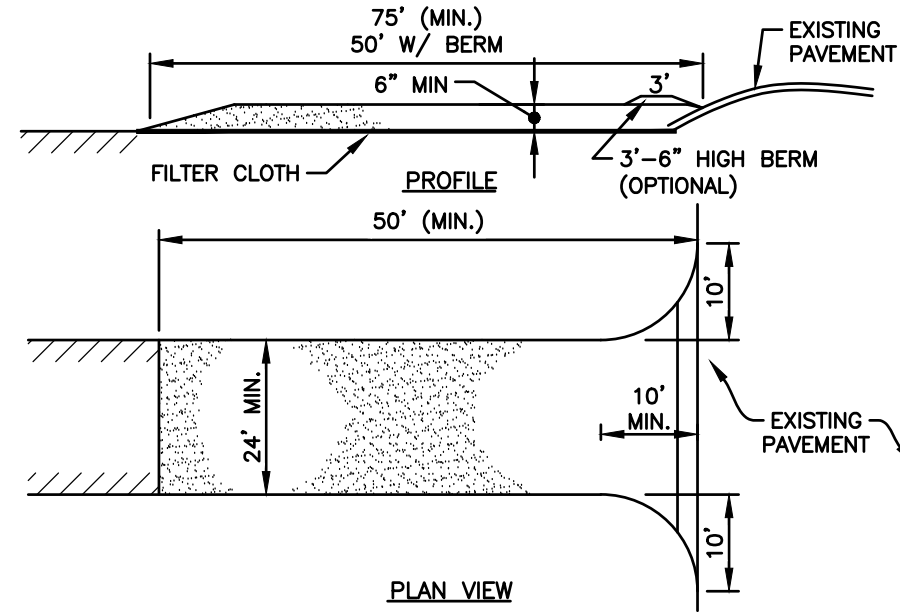
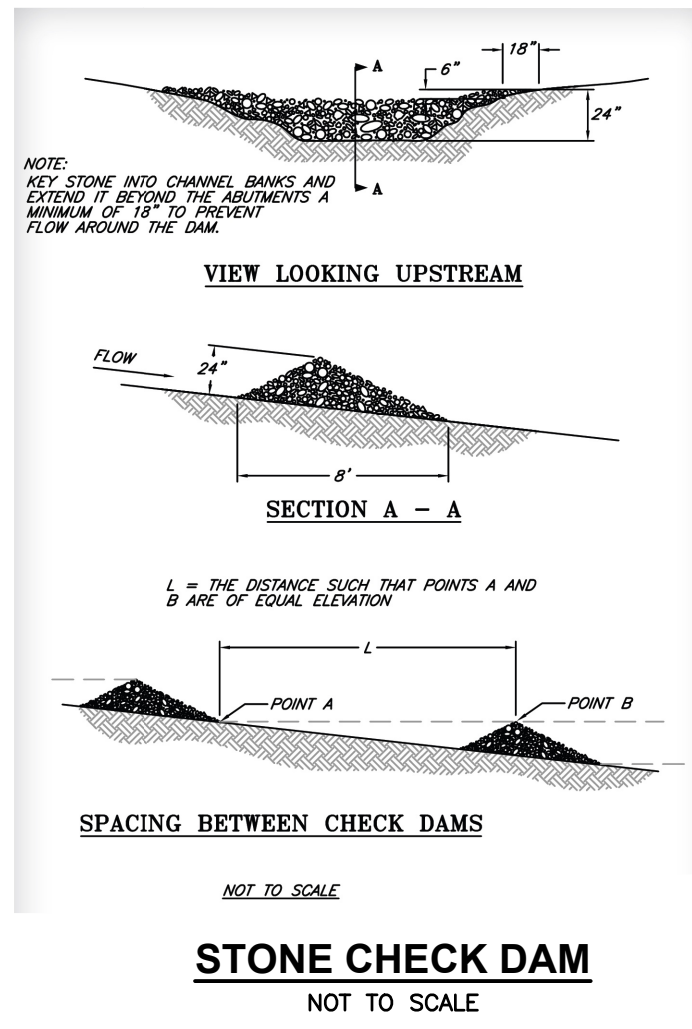
MARCH 6, 2024
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CROSS COUNTRY WATER MAIN PLAN

SCALE: 1"=40'
PROJECT NO. NEX-2200136
25 OF 32

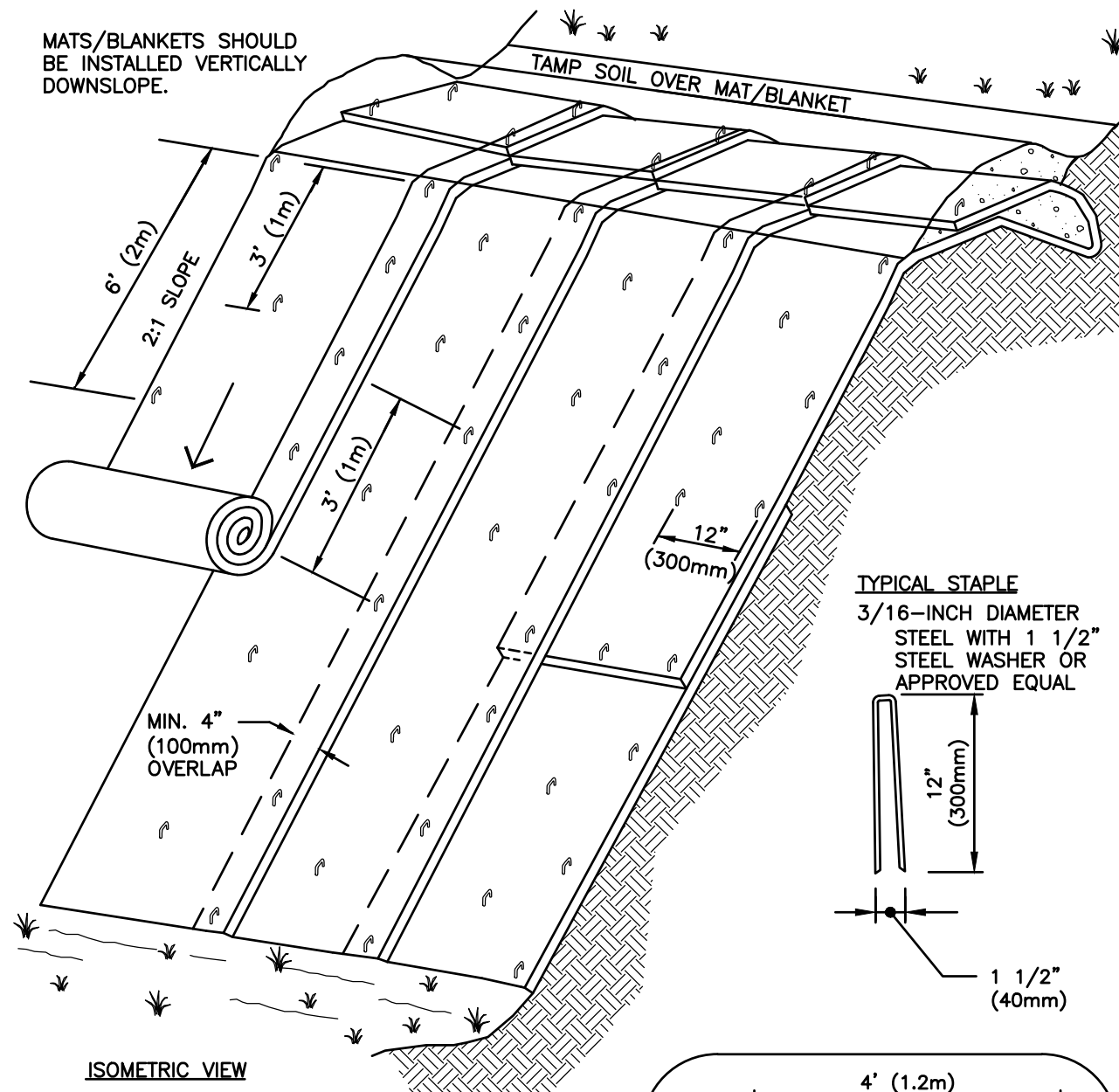


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- STONE FOR A STABILIZED CONSTRUCTION EXIT SHALL BE 3 INCH COARSE AGGREGATE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
- THE LENGTH OF THE STABILIZED EXIT SHALL NOT BE LESS THAN 50 FEET.
- THE THICKNESS OF THE STONE FOR THE STABILIZED EXIT SHALL NOT BE LESS THAN 6 INCHES.
- THE WIDTH OF THE EXIT SHALL NOT BE LESS THAN 24' WHERE INGRESS OCCURS.
- GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
- ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION EXIT SHALL BE PIPED BENEATH THE EXIT. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
- THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.
- WHEELS SHALL BE CLEARED TO REMOVE MUD PRIOR TO EXIT ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

STABILIZED CONSTRUCTION EXIT
NOT TO SCALE

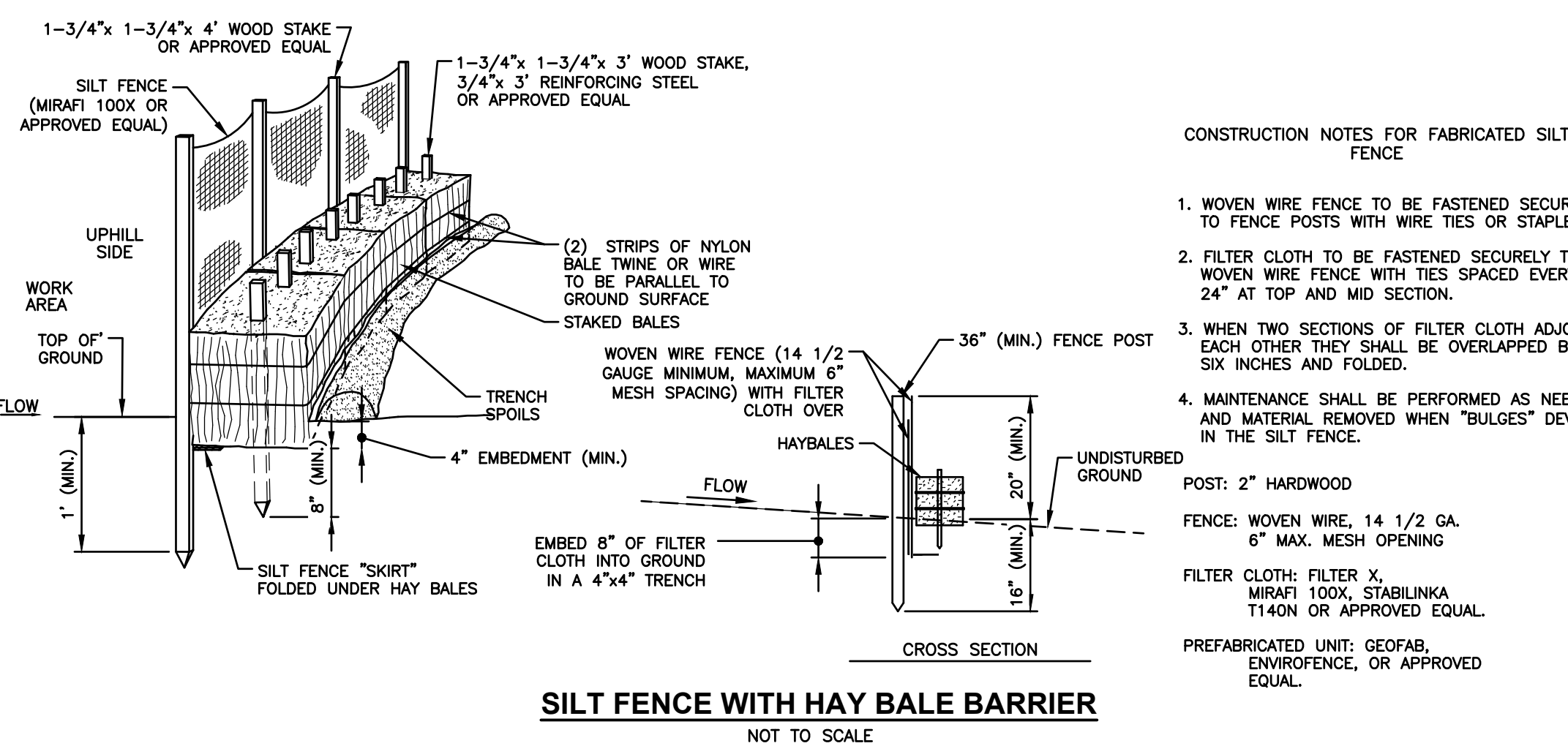


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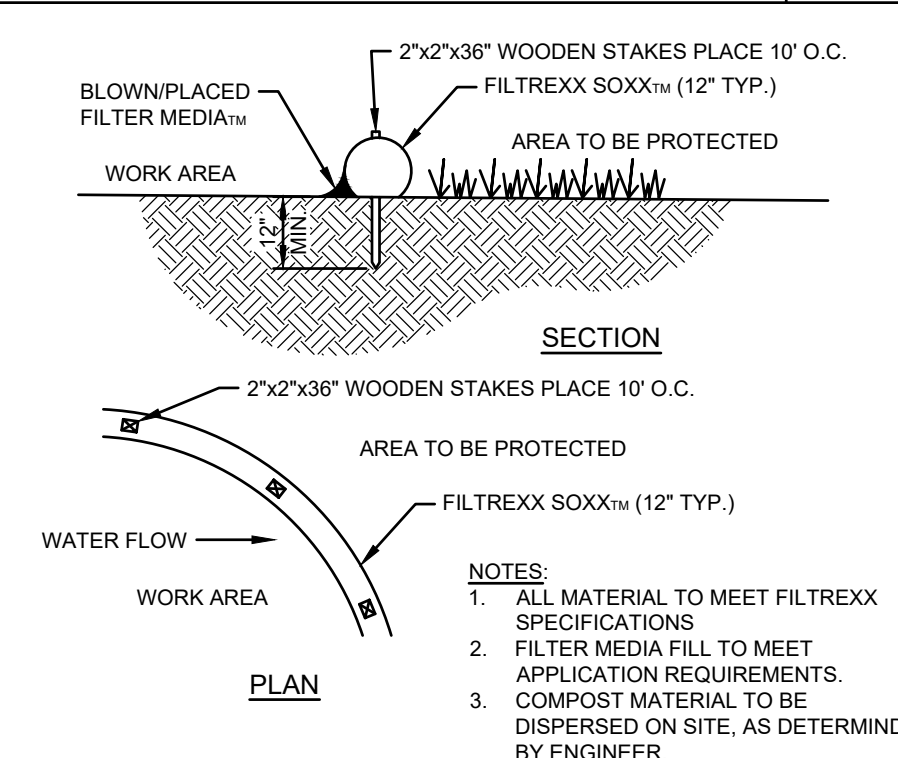
- BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" DEEP TRENCH, BACKFILL AND COMPACT TRENCH AFTER STAPLING.
 - ROLL THE BLANKET DOWN THE SWALE IN THE DIRECTION OF THE WATER FLOW. LAY BLANKETS LOOSELY & MAINTAIN DIRECT CONTACT WITH SOIL - DO NOT STRETCH.
 - THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4 INCH OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
 - WHEN BLANKETS MUST BE SPLICED DOWN THE SWALE, PLACE BLANKET END OVER END WITH 6 INCH (MIN.) OVERLAP AND ANCHOR DOWN SLOPE BLANKET IN A 6 INCH DEEP TRENCH.
 - BLANKETS SHALL BE STAPLED ENOUGH TO ANCHOR BLANKET WHILE MAINTAINING CONTACT WITH SOIL. STAPLES SHALL BE PLACED DOWN THE CENTER & STAGGERED WITH THE STAPLES PLACED ALONG EDGES. PATTERN & AMOUNT OF STAPLES VARIES BY MANUFACTURER, SO FOLLOW MANUFACTURER'S RECOMMENDATIONS.
 - BLANKET SHALL BE NORTH AMERICAN GREEN SC-150 OR APPROVED EQUAL.
- MAINTENANCE & MATS**
- BLANKETS SHALL BE INSPECTED WEEKLY DURING CONSTRUCTION & AFTER A RAINFALL IN EXCESS OF 1/2" IN A 24-HOUR PERIOD.
 - FAILURES SHALL BE REPAIRED IMMEDIATELY. IF ANY OF THE FOLLOWING OCCUR: SLOPE WASHOUT, MAT DISPLACEMENT, DAMAGE TO MAT, THE AFFECTED AREA SHALL BE REPAIRED & RESEDED & MAT SHALL BE REPLACED OR RE-INSTALLED.
- NOTE: DO NOT USE PRODUCTS THAT CONTAIN WELDED PLASTIC OR THAT ARE "PHOTODEGRADABLE". USE PRODUCTS WITH BIODEGRADABLE NETTING AND NATURAL FIBER MATERIAL (I.E. STRAW OR COCONUT FIBER).**

BLANKET SLOPE PROTECTION FOR EROSION CONTROL
NOT TO SCALE

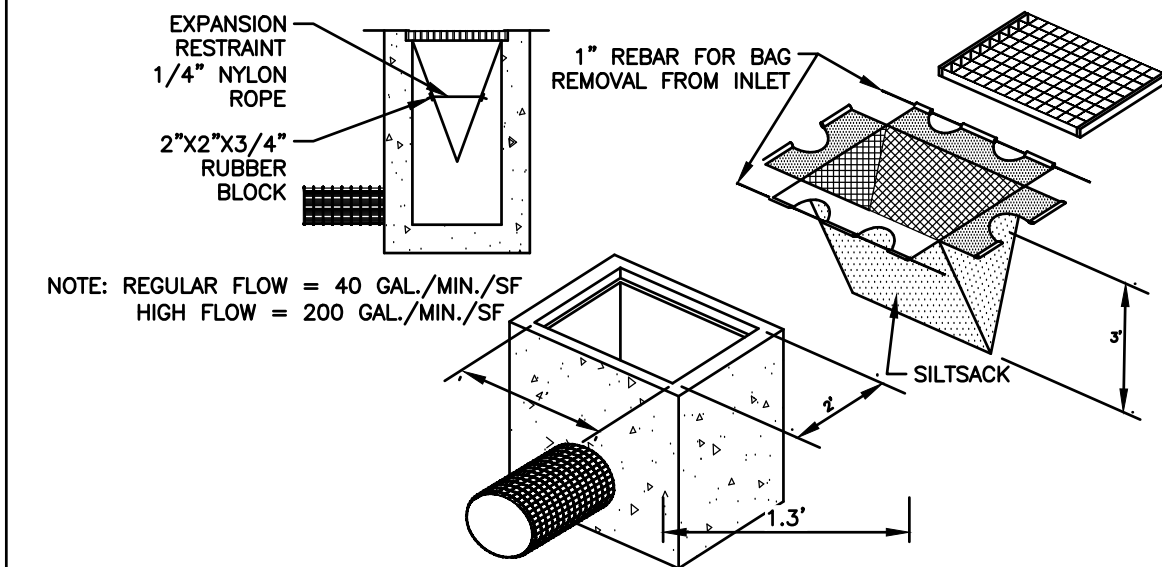
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|---------------|----------------|---------|--------------|----------|-------------|------------------------------|--------------|----------------|---------|--------------|-------|-------------|------------------------|
| Test Pit No. | Depth | Horizon | Soil Texture | Color | Consistence | Layer Description | Test Pit No. | Depth | Horizon | Soil Texture | Color | Consistence | Layer Description |
| 1 | 30" | | | | | Canton Fine Sandy Loam | 5 | 24" | | | | | Sutton Fine Sandy Loam |
| | 30"-100" | | | | | None | | 24" | | | | | 48" |
| | ESHWT: 30" | | | | | Standing Water: None | | ESHWT: 24" | | | | | 36" |
| | Refusal: >100" | | | | | Roots: 36" | | Refusal: >112" | | | | | 36" |
| 2 | 0-8" | A | Loamy Sand | 10yr 3/2 | FR | | 6 | 16" | | | | | Sutton Fine Sandy Loam |
| | 8-36" | B | Loamy Sand | 10yr 5/6 | FR | | | 16" | | | | | 18" |
| | 36-112" | C | Loamy Sand | 2.5y 6/3 | FR | Stones, Cobbles and Boulders | | ESHWT: >114" | | | | | 20" |
| | ESHWT: 36" | | | | | Standing Water: None | | Refusal: >110" | | | | | 36" |
| 3 | 0-13" | A | Loamy Sand | 10yr 3/2 | FR | | 7 | 36" | | | | | Sutton Fine Sandy Loam |
| | 13-29" | B | Loamy Sand | 10yr 5/6 | FR | | | 36" | | | | | 48" |
| | 29-110" | C | Loamy Sand | 2.5y 6/3 | FR | Stones, Cobbles and Boulders | | ESHWT: >110" | | | | | 36" |
| | ESHWT: 36" | | | | | Standing Water: 112" | | Refusal: >114" | | | | | 36" |
| 4 | 0-14" | A | Loamy Sand | 10yr 3/2 | FR | | 8 | 20" | | | | | Sutton Fine Sandy Loam |
| | 14-30" | B | Loamy Sand | 10yr 5/6 | FR | | | 20" | | | | | 36" |
| | 30-114" | C | Loamy Sand | 2.5y 6/3 | FR | | | ESHWT: >111" | | | | | 24" |
| | ESHWT: 30" | | | | | Standing Water: None | | Refusal: >111" | | | | | 24" |
| 5 | 0-7" | A | Loamy Sand | 10yr 3/2 | FR | | 9 | 12" | | | | | Sutton Fine Sandy Loam |
| | 7-26" | B | Loamy Sand | 10yr 5/6 | FR | | | 12" | | | | | 16" |
| | 26-105" | C | Loamy Sand | 2.5y 6/4 | FR | | | ESHWT: >116" | | | | | 24" |
| | ESHWT: 30" | | | | | Standing Water: None | | Refusal: >116" | | | | | 24" |



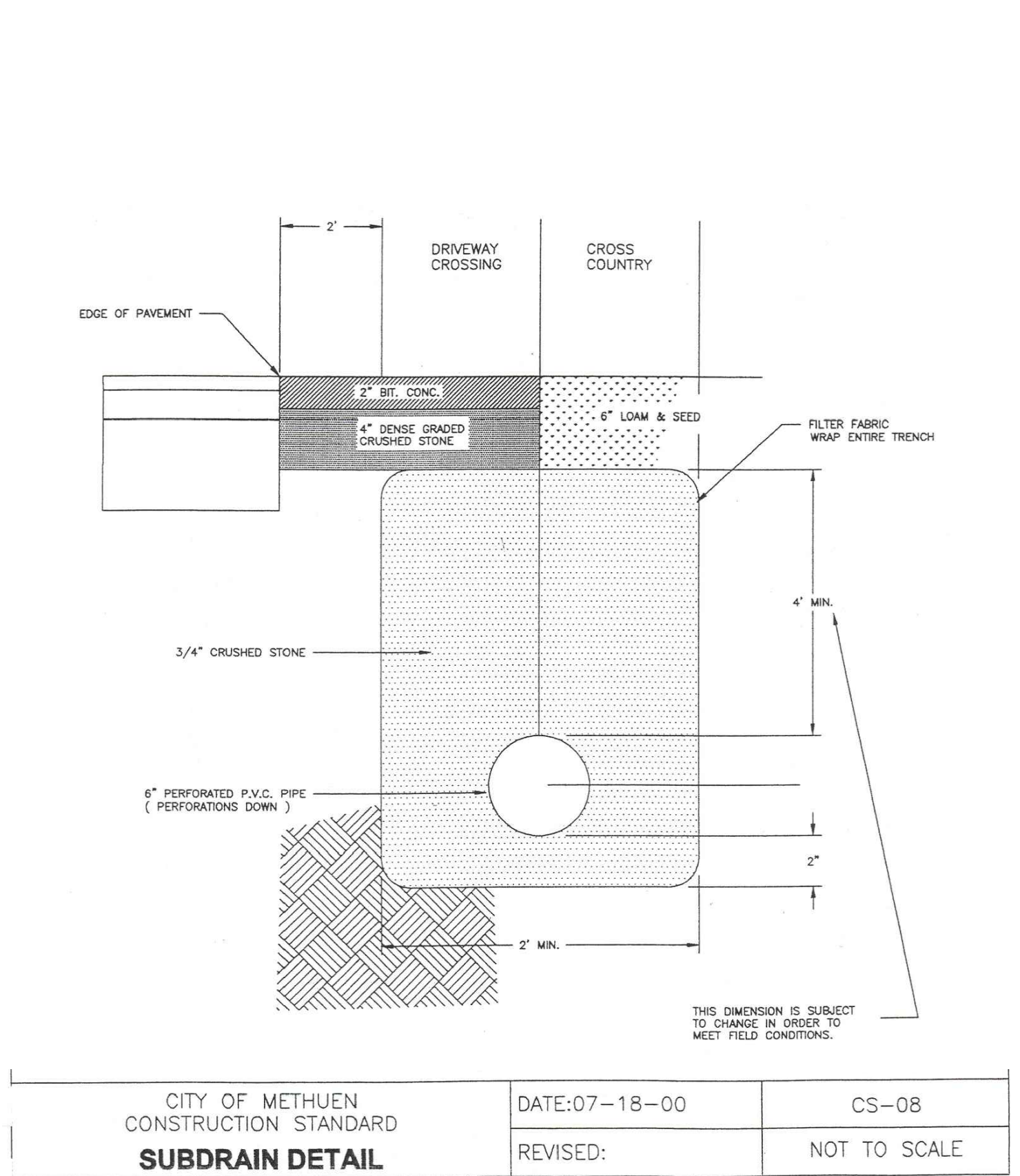
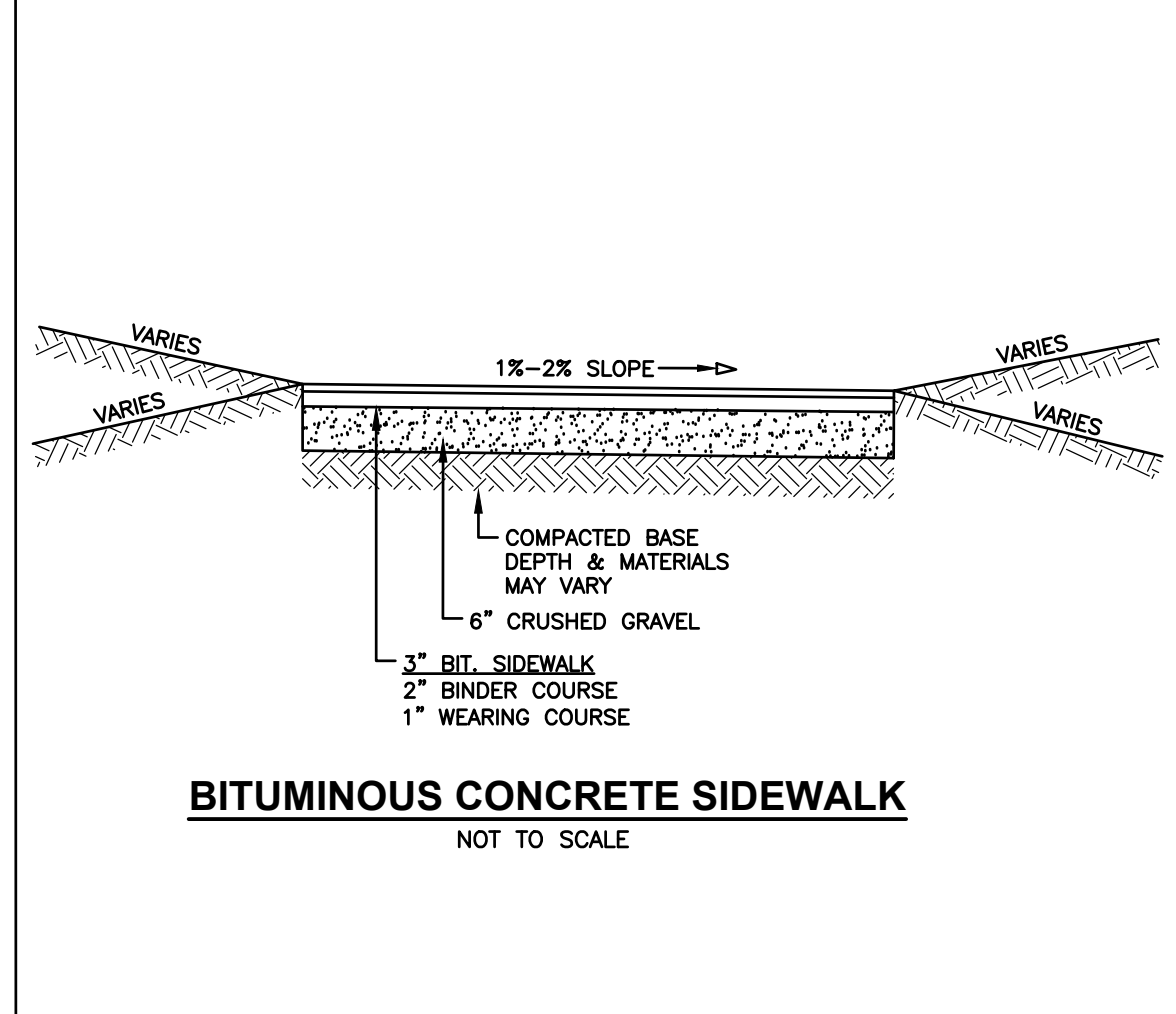
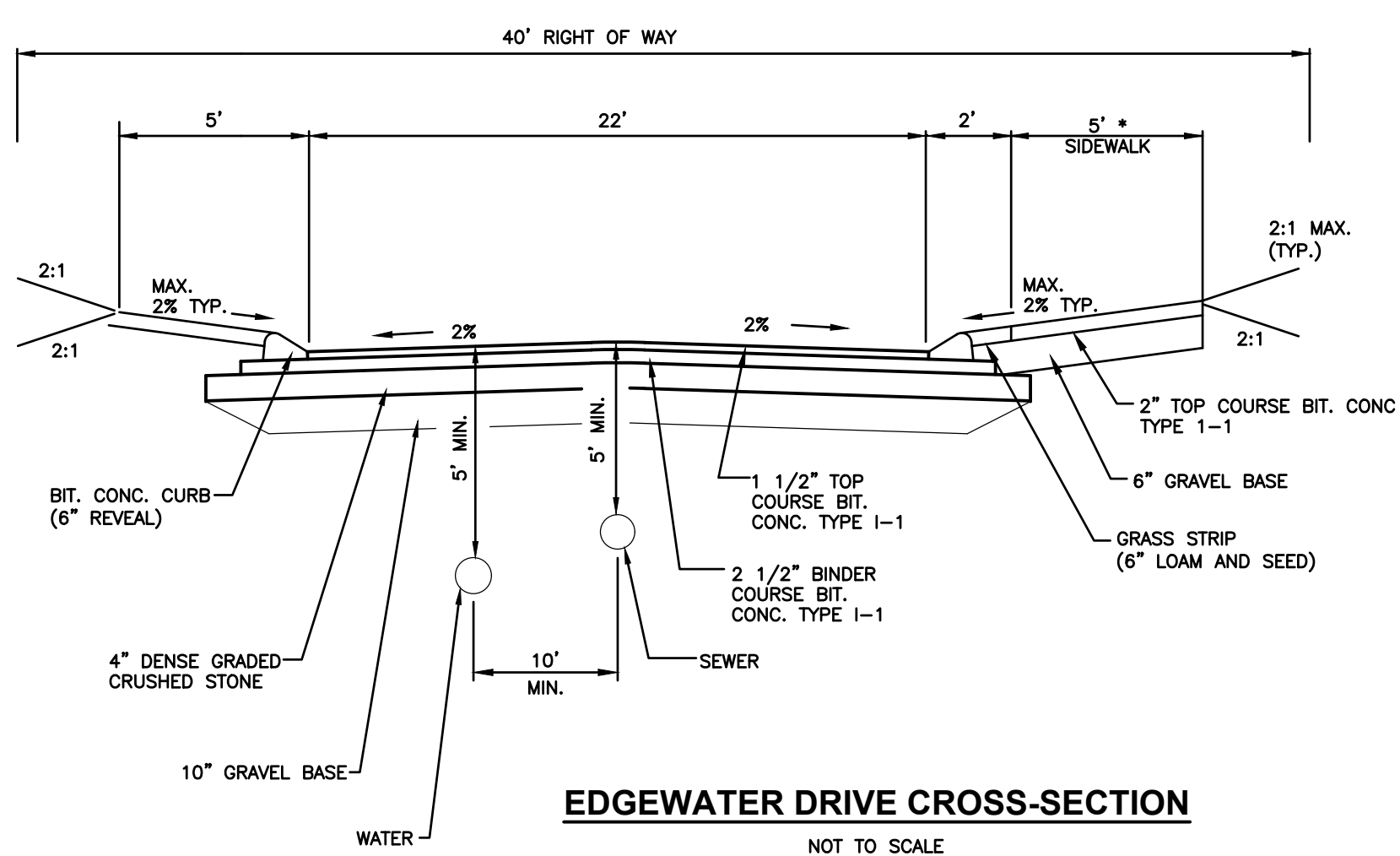
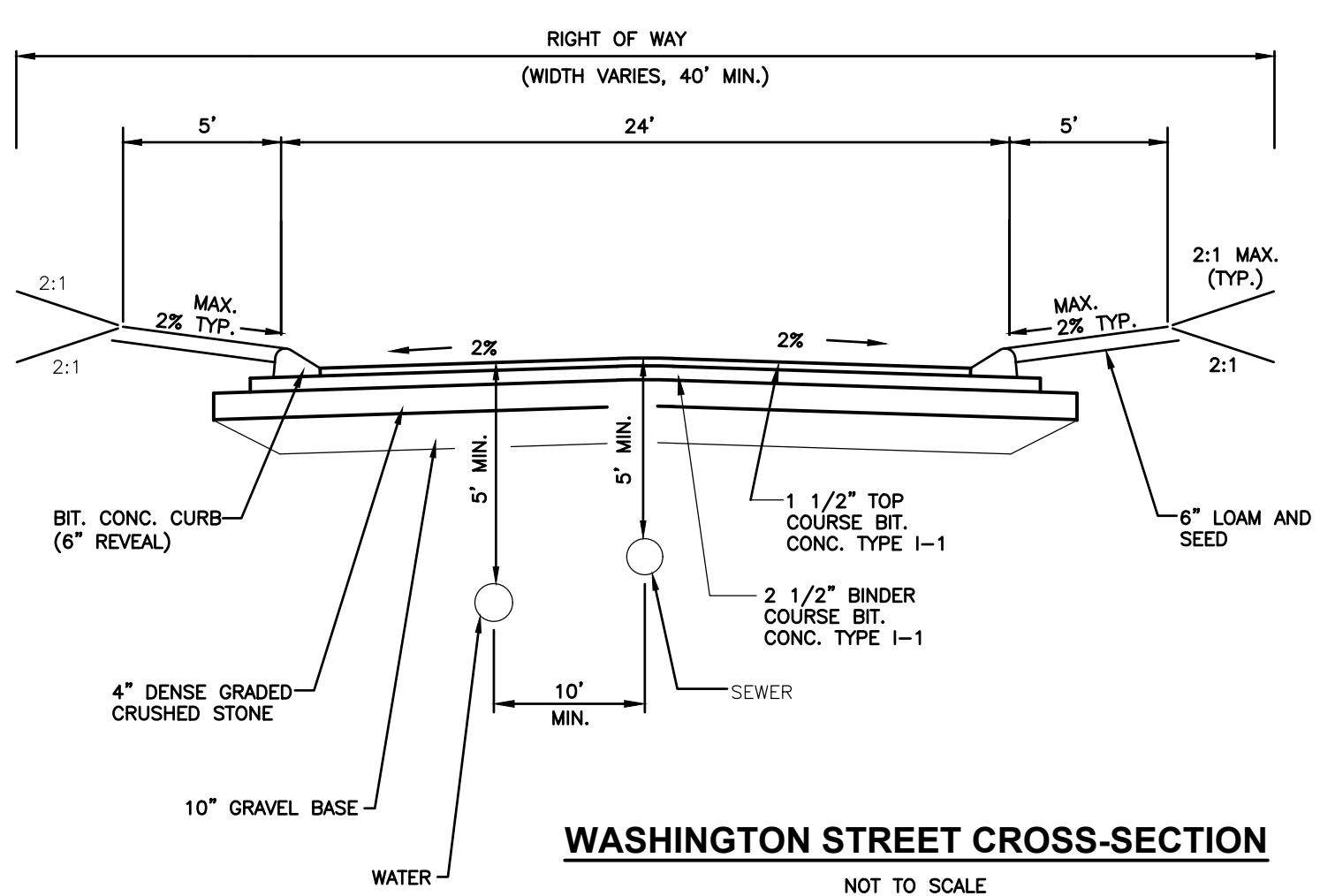
SILT FENCE WITH HAY BALE BARRIER
NOT TO SCALE



COMPOST FILTER SOCK
NOT TO SCALE

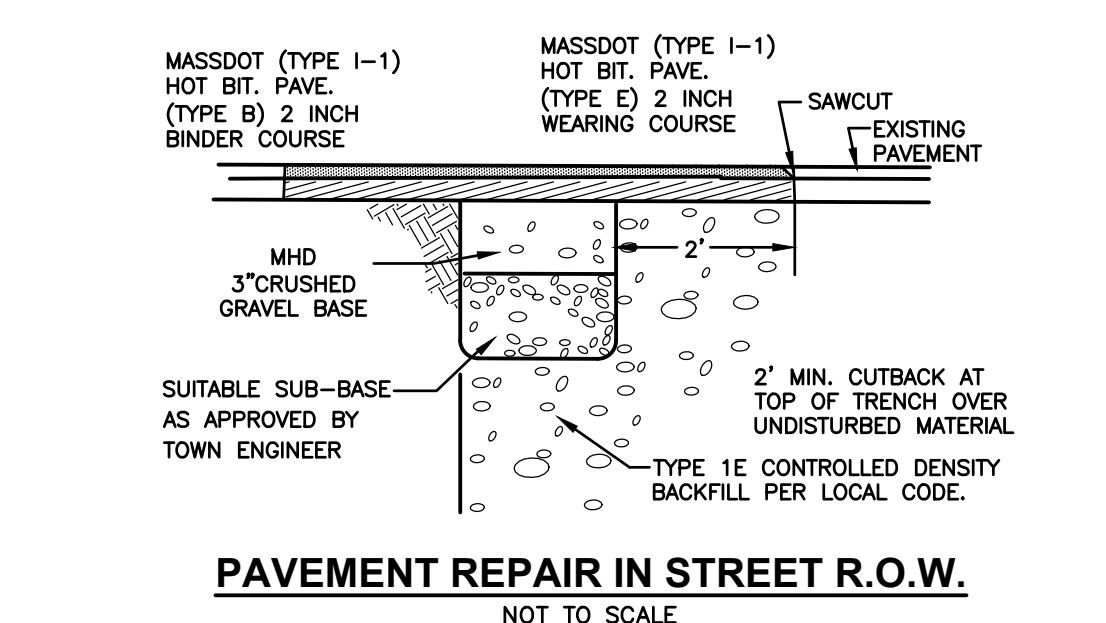
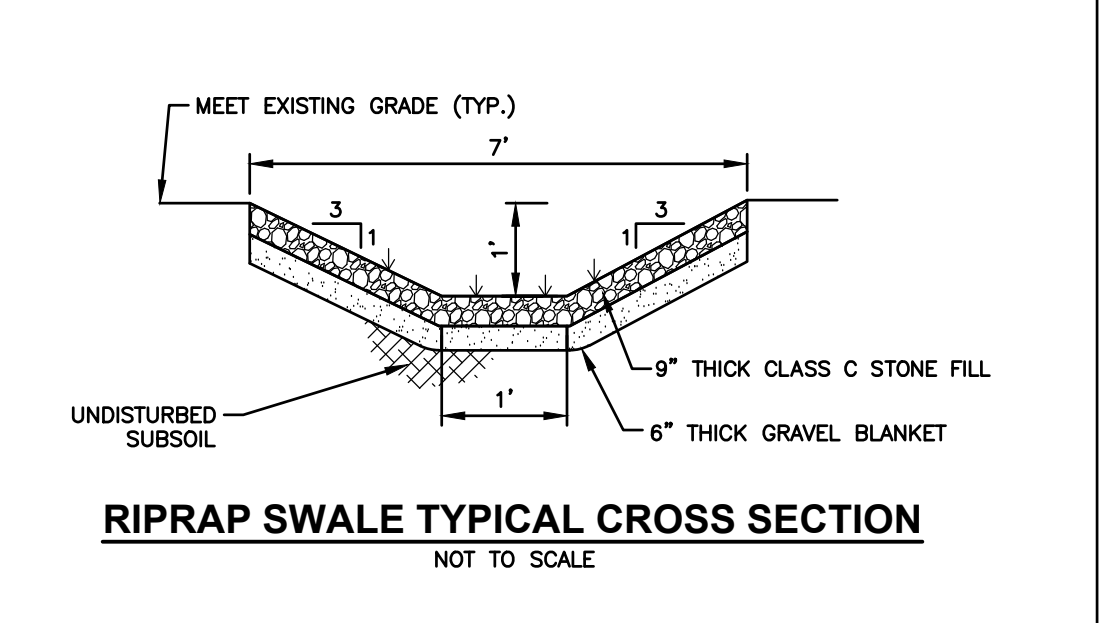
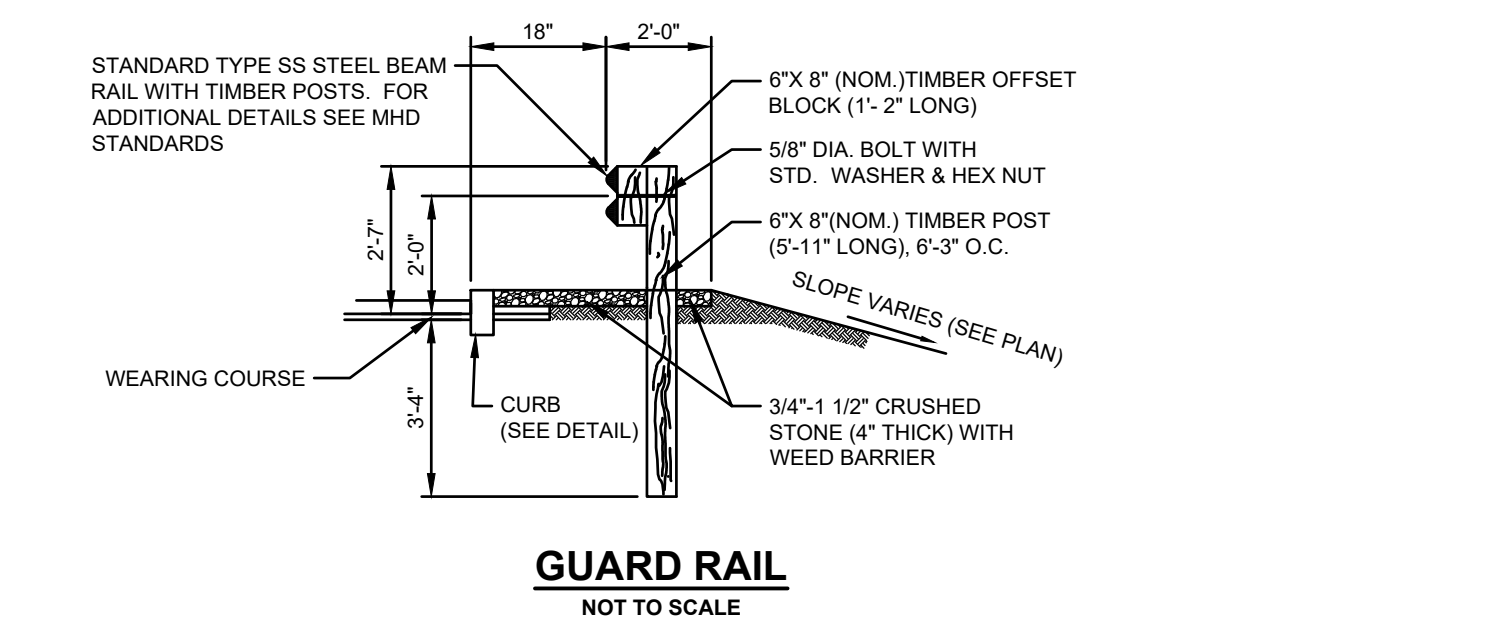


SILT SACK
NOT TO SCALE



CITY OF METHUEN CONSTRUCTION STANDARD SUBDRAIN DETAIL

| | |
|----------------|--------------|
| DATE: 07-18-00 | CS-08 |
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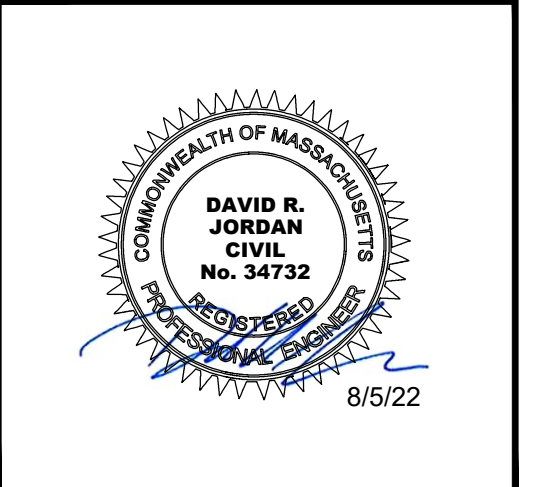
DATE OF HEARING _____

DATE OF APPROVAL _____



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DHB HOMES, LLC
25 BUNTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

BROOKVIEW HEIGHTS DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET METHUEN, MASSACHUSETTS



| REVISIONS | | |
|-----------|--------------------------|--------|
| NO. | REVISION | DATE |
| 1 | REVISE PER CITY COMMENTS | 8/2/24 |

MARCH 6, 2024

DRAWN/DESIGN BY: GMP CHECKED BY: DRJ

CONSTRUCTION DETAILS

SCALE: AS SHOWN

PROJECT NO. NEX-2200136

26 OF 32

PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**

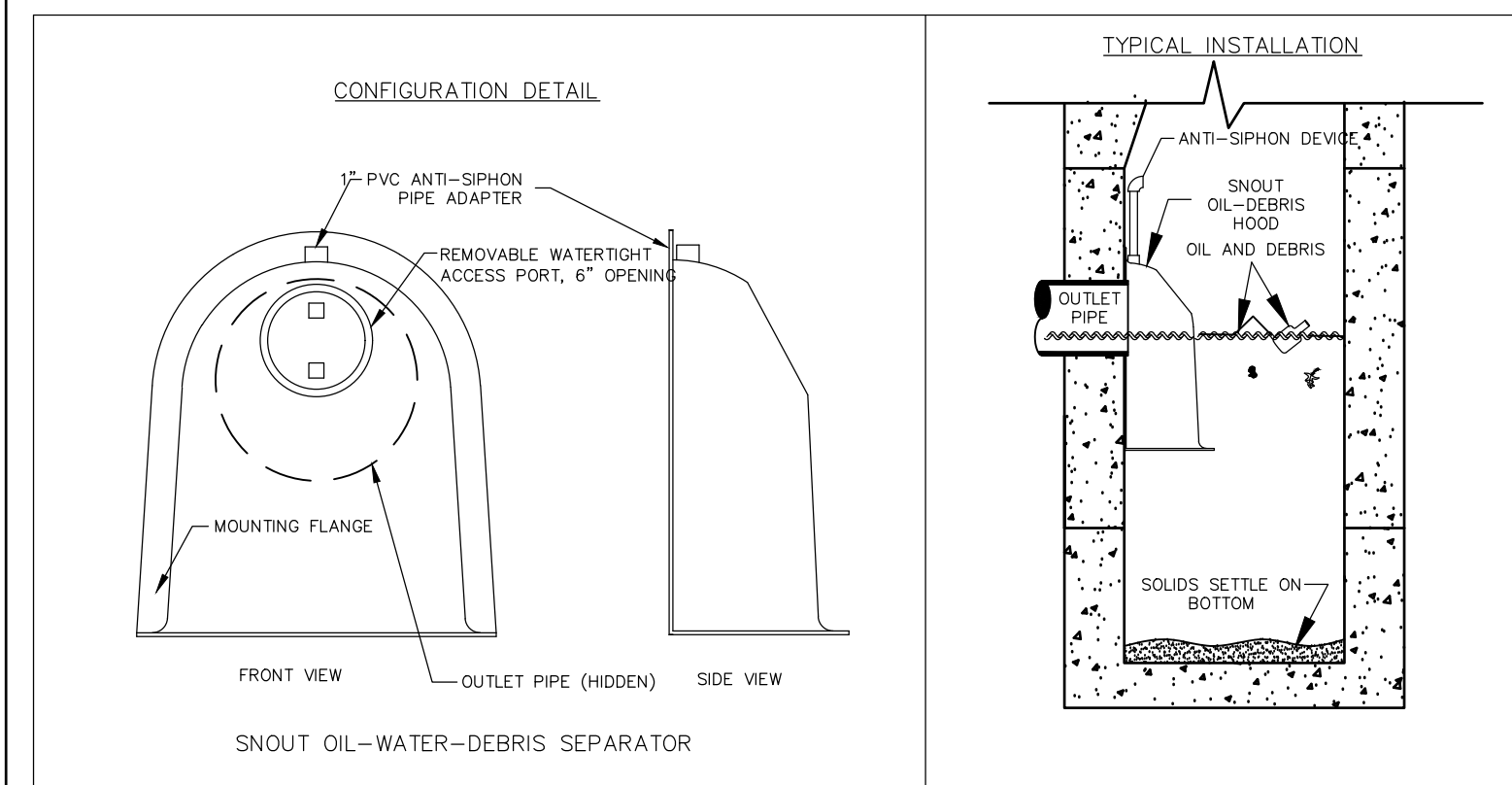


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MARCH 6, 2024
DRAWN/DESIGN BY: GMP
CHECKED BY: DRJ

METHUEN COMMUNITY DEVELOPMENT BOARD
CONSTRUCTION DETAILS

SCALE: AS SHOWN
PROJECT NO. NEX-2200136
28 OF 32



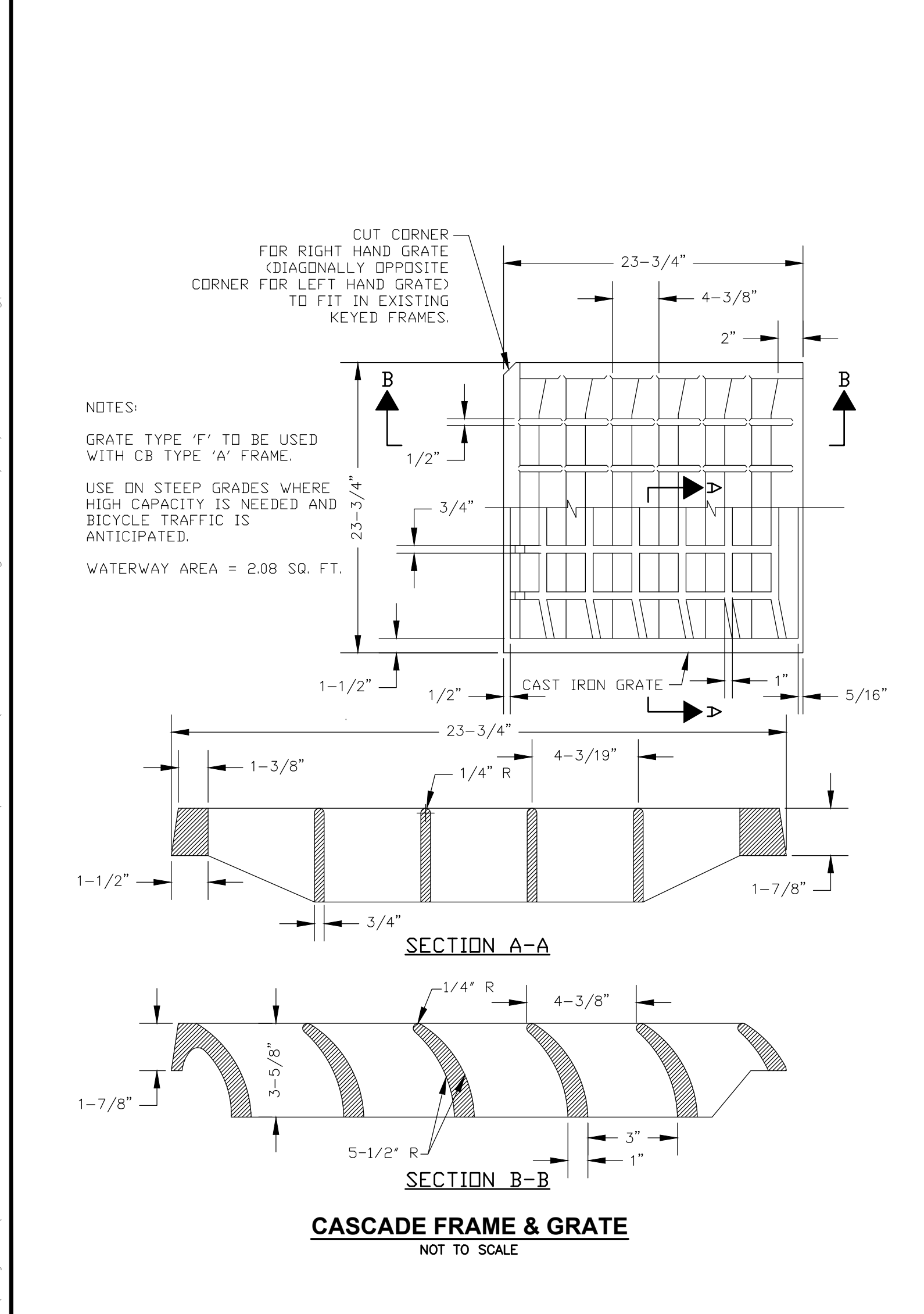
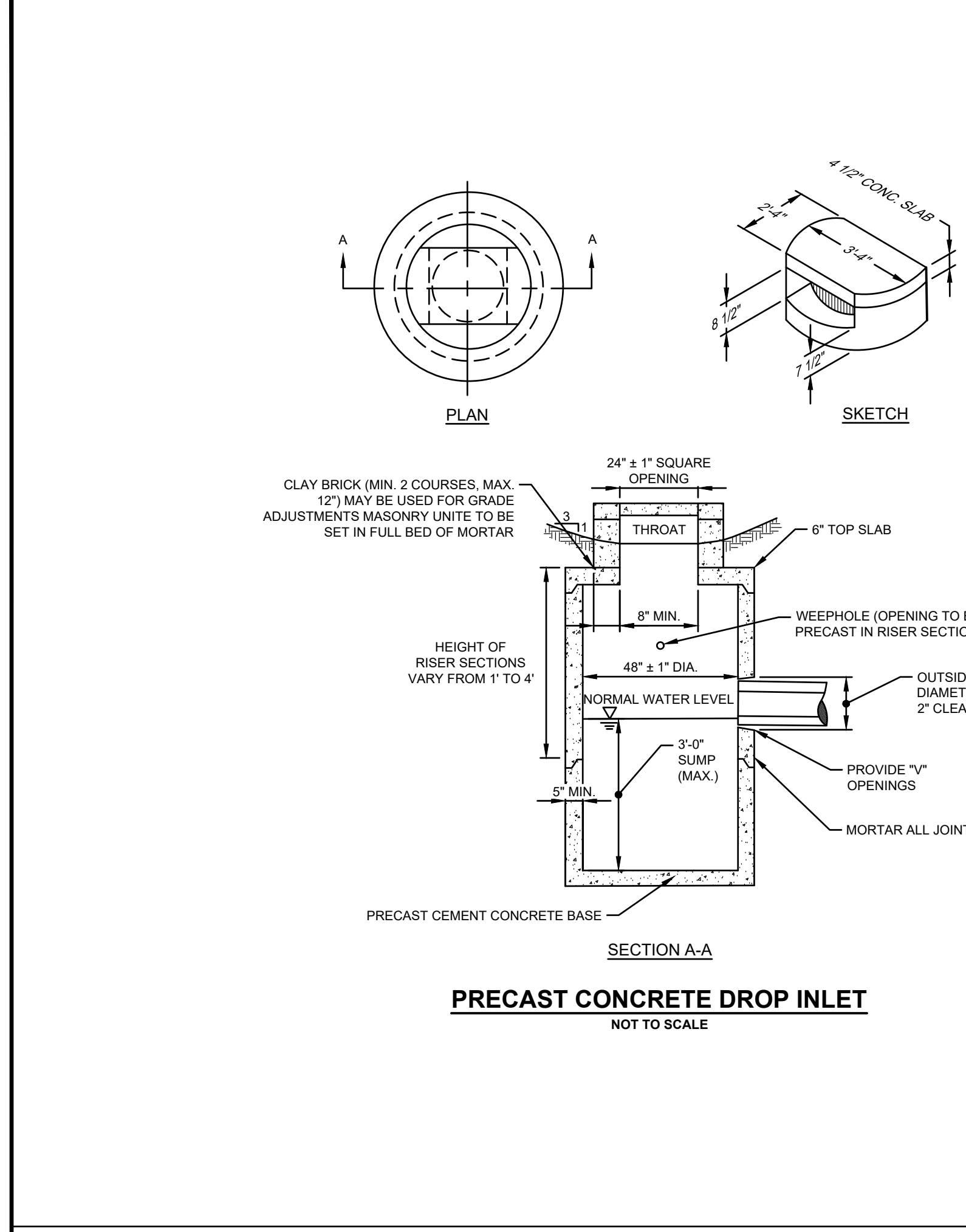
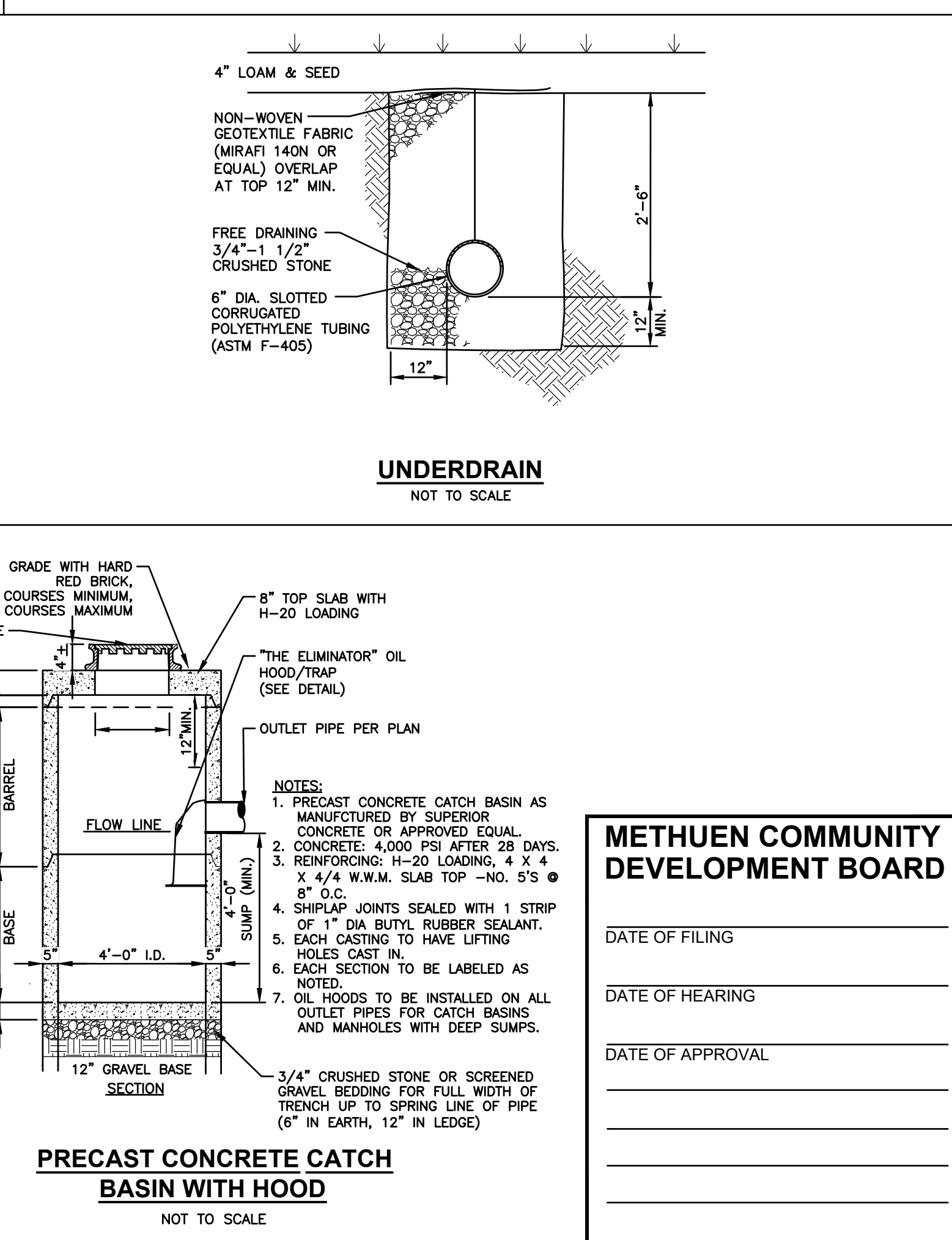
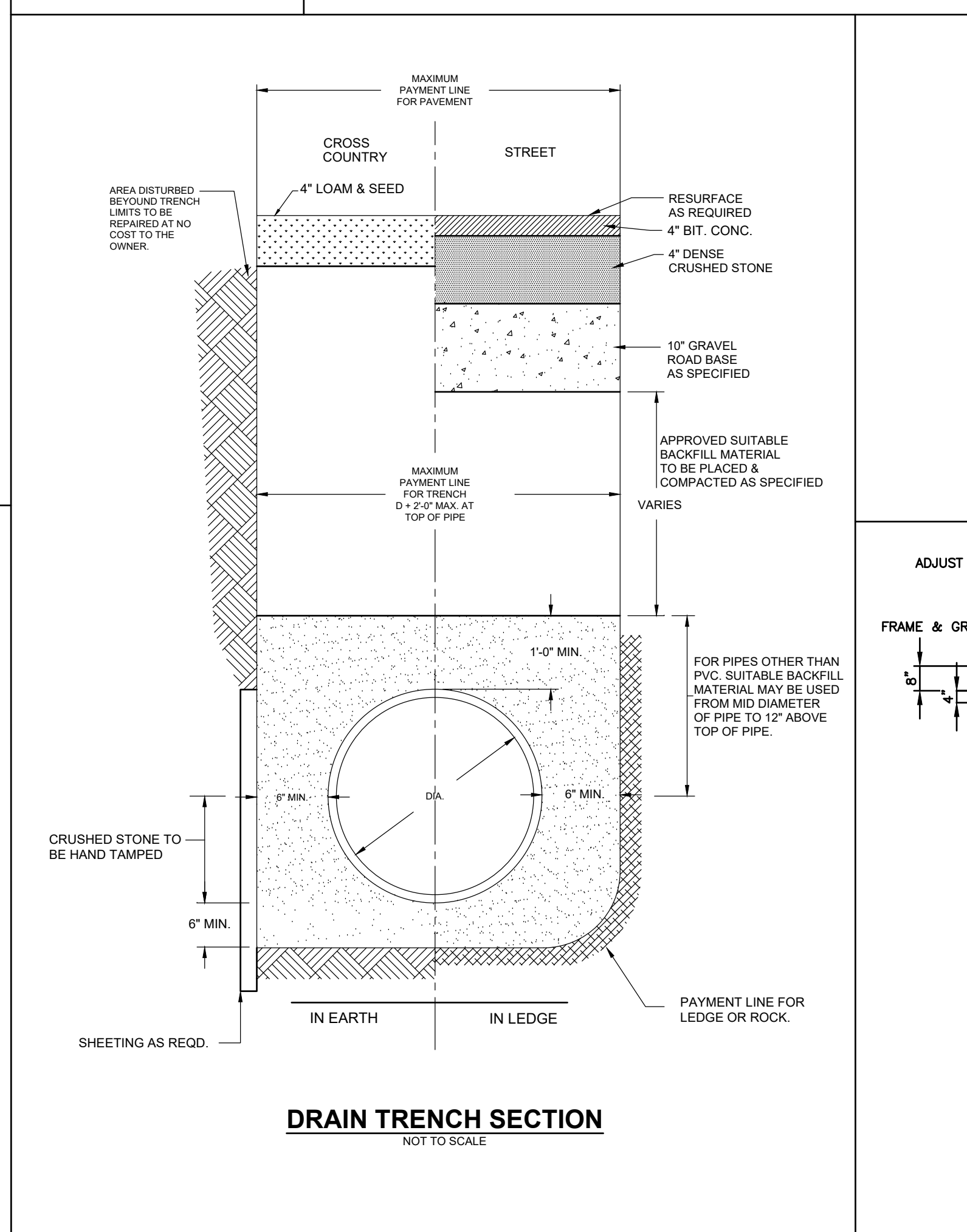
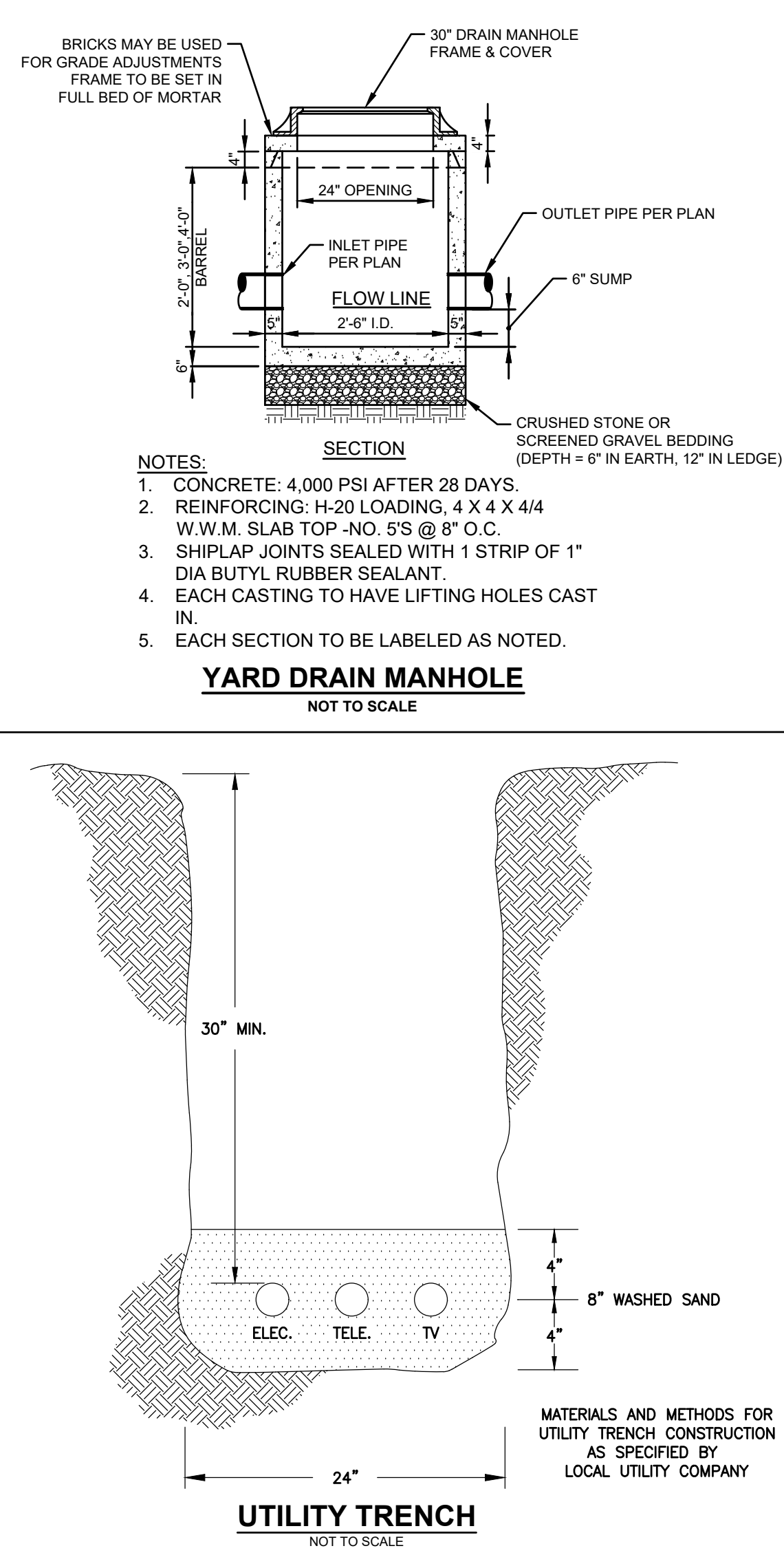
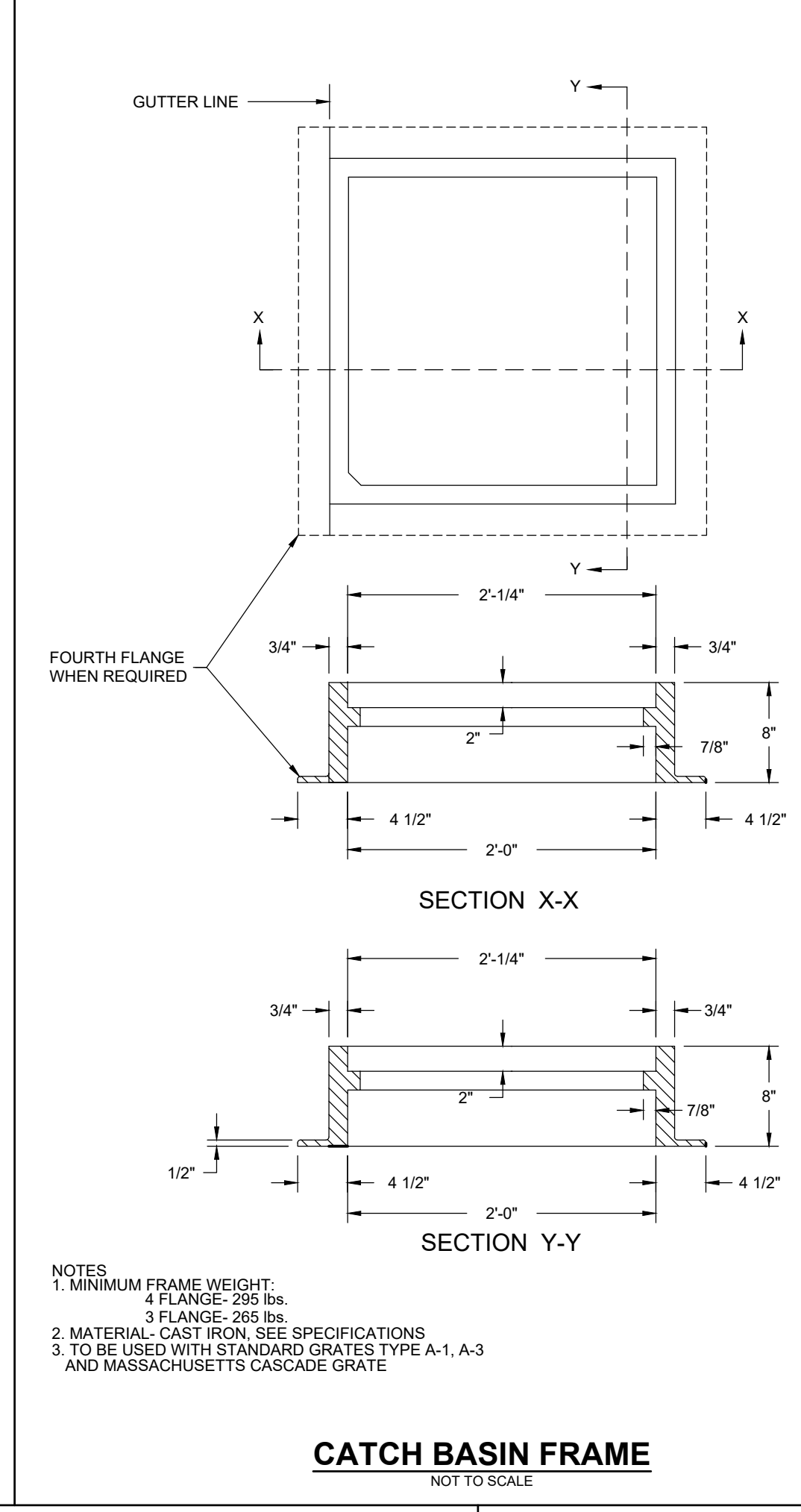
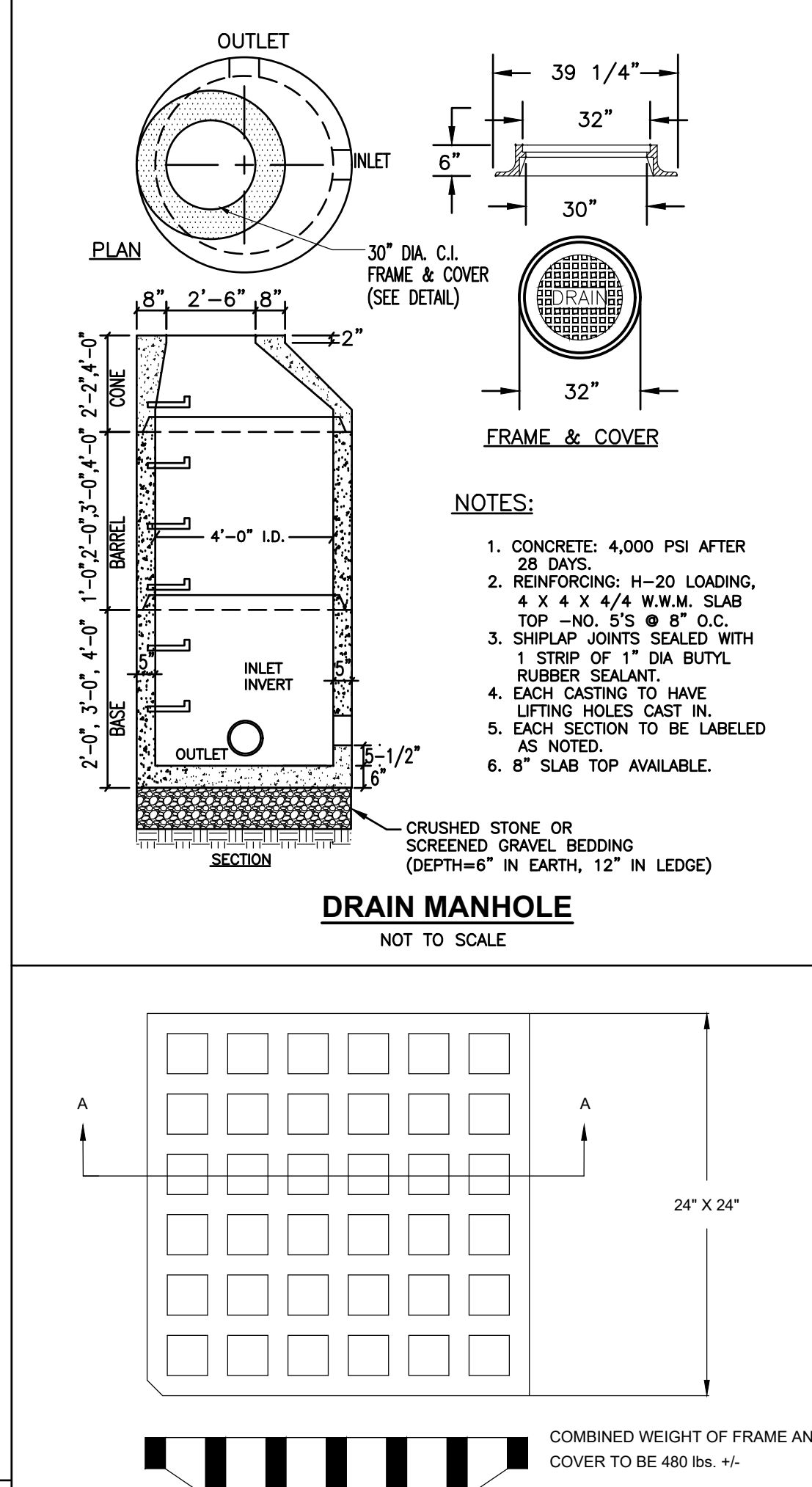
SNOUT OIL-DEBRIS HOOD
NOT TO SCALE

NOTES:

- ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY: BEST MANAGEMENT PRODUCTS, INC. 53 MT. ARCHER RD. LYME, CT 06251 (860) 434-0277, (860) 434-3195 FAX TOLL FREE: (800) 504-8008 OR (888) 354-7585 WEB SITE: www.bestmp.com
- ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
- ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL).
- THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
- THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 4" FOR PIPES $3/4$" I.D.
- THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
- THE SURFACE OF THE HOOD WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
- THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL).
- INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT SHALL INCLUDE:
A. INSTALLATION INSTRUCTIONS
B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
D. 3/8" STAINLESS STEEL BOLTS
E. ANCHOR SHIELDS

US Patent # 6126817

| | | |
|--|----------|-------|
| DESCRIPTION | DATE | SCALE |
| OIL-DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL) | 09/08/00 | NONE |
| DRAWING NUMBER | SP-SN | |



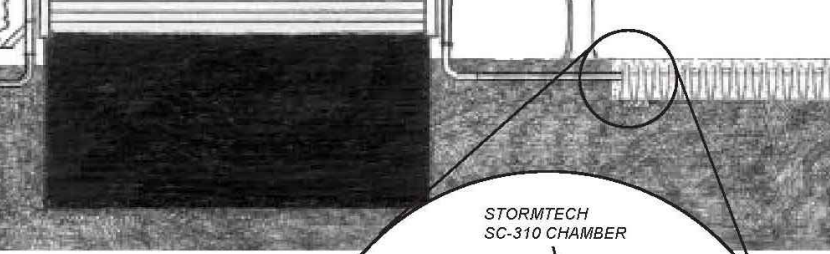
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StormTech Chambers For Residential Downspout Drainage Systems.



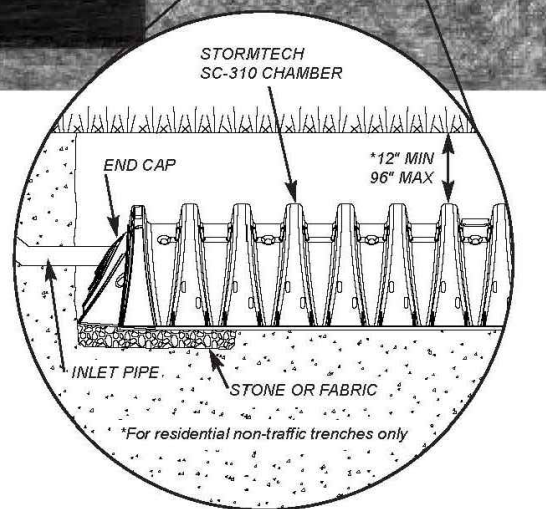
Solve Your Puddle Problems Today!

Keep your yard free from puddles and ponding during heavy rain storms with StormTech chambers. The chambers can store water from roofs or other problem areas underground, eliminating water logged or slippery frozen water conditions. Constructed of polypropylene plastic, StormTech chambers are light weight and inherently resistant to environmental stress cracking and chemicals typically found in stormwater runoff.



The StormTech Downspout Drainage System.

StormTech offers two chamber sizes to manage water from downspouts or ponded areas. Residential gutters gather rainwater and deliver it to the chambers via the downspout or other inlet pipe. To prevent soil erosion, either a small amount of stone or filter fabric along the bottom of the trench is needed.



StormTech Drainage Benefits.

Installation. StormTech chambers can easily be hand-carried into position and installed without the use of heavy construction equipment. StormTech chambers require an excavated area, piping material and filter fabric.

Aesthetics. Runoff can be diverted away and stored safely and neatly underground. No more ponding water, frozen walkways or soil erosion contributing to the negative aesthetics of your yard.

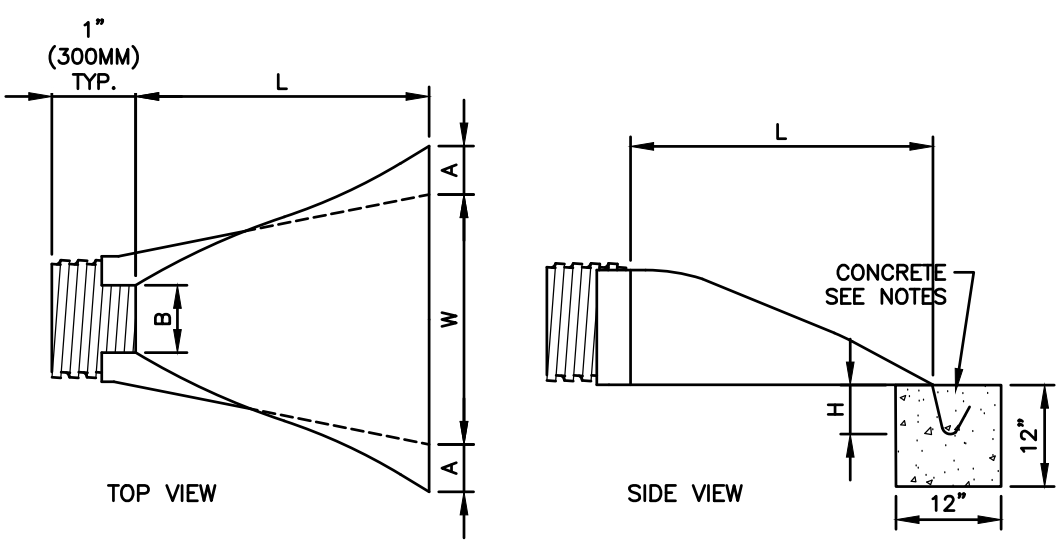
Safety. Because the chambers are underground, they eliminate erosion ditches and potential hazards caused by conventional roof drains and ice build-up in the winter.

Environmental. The chambers help recharge groundwater resources by replicating nature's own process of infiltration.

Versatility. StormTech chambers are ideal for storing water from residential rooftops, driveways, tennis courts or ponded areas in the yard.

- NOTE: 1) PROVIDE ONE STORMTECH SC-310 CHAMBER FOR EVERY 220 SF OF ROOF AREA
2) THE INSTALLATION AND MAINTENANCE OF THE ROOF INFILTRATION UNITS IS A REQUIREMENT PURSUANT TO THE ALTERATION OF TERRAIN PERMIT.
3) EACH ROW OF CHAMBERS SHALL BE SET ON A 6 INCH STONE BASE WITH 12 INCHES OF STONE ON ALL SIDES AND 6 INCHES OF STONE OVER THE TOP OF THE CHAMBERS.
4) THE BASE STONE SHALL BE INSTALLED ABOVE THE SEASONAL HIGH WATER TABLE.

STORMTECH ROOF RECHARGE NOT TO SCALE



| PIPE DIAMETER | PART NO. | A, ±1 (25) | B MAX | H, ±1 (25) | L, ±1/2 (13) | W, ±2 (50) |
|--------------------|----------|------------|----------|------------|--------------|------------|
| 12", 15" (300,375) | 1210 NP | 6.5 (165) | 10 (254) | 6.5 (165) | 25 (635) | 29 (736) |
| 18" (450) | 1810 NP | 7.5 (190) | 15 (380) | 6.5 (168) | 32 (812) | 35 (890) |
| 24" (600) | 2410 NP | 7.5 (190) | 18 (450) | 6.5 (165) | 38 (900) | 45 (1140) |
| 30" (750) | 3010 NP | 10.5 (266) | NA | 7.0 (178) | 53 (1346) | 68 (1725) |
| 36" (900) | 3610 NP | 10.5 (266) | NA | 7.0 (178) | 53 (1346) | 68 (1725) |

CONSTRUCTION SPECIFICATIONS:

PREPARE BEDDING:
BACKFILL MATERIAL AROUND THE END SECTION MAY BE THE SAME AS THE MATERIAL AROUND THE PIPE. PLACE A FEW INCHES OF BACKFILL MATERIAL IN THE TRENCH OR DITCH WHERE THE END SECTION WILL BE PLACED. COMPACT AND CONTOUR THIS BEDDING MATERIAL TO GENERALLY MATCH THE END SECTION. EXCAVATE AN AREA IN THE BEDDING WHERE THE TOE TROUGH WILL SEAT SO THAT THE END SECTION WILL BE LEVEL WITH THE BOTTOM OF THE TRENCH OR DITCH IN THE FINISHED INSTALLATION.

PLACE END SECTION OF PIPE:
OPEN THE END SECTION COLLAR AND SEAT IT OVER THE TWO PIPE CONNECTIONS. ONCE THE END SECTION IS POSITIONED, CHECK TO MAKE SURE THAT THE INVERT OF THE END SECTION MATCHES THE INVERT OF THE PIPE AND THAT THE END SECTION IS LEVEL WITH THE TRENCH OR DITCH BOTTOM.

SECURE THE END SECTION:
SLIP THE STAINLESS STEEL ROD THROUGH THE PRE-DRILLED HOLES AT THE TOP OF THE COLLAR. THE ROD SHOULD BE BETWEEN THE CROWNS OF THE TWO PIPE CONNECTIONS. PLACE A WASHER ON EITHER END OF THE ROD. PLACE A NUT ON EITHER END OF THE ROD AND TIGHTEN WITH A WRENCH.

SECURE THE TOE TROUGH:
TO PREVENT WASHOUTS FROM HIGH VELOCITY FLOW, IT IS RECOMMENDED THAT THE TROUGH BE SECURED WITH CONCRETE. POUR CONCRETE IN THE TROUGH UP TO THE LEVEL OF THE TRENCH OR DITCH BOTTOM AND ALONG THE ENTIRE LENGTH OF THE TROUGH.

FINISH BACKFILL:
SHOVEL BACKFILL AROUND THE END SECTION IN 6 TO 9 INCH LAYERS EQUALLY ON BOTH SIDES, KNIFING IT TO ELIMINATE VOIDS. TAMP WITH A SMALL-FACED COMPACTOR OR OTHER EQUIPMENT SUITABLE FOR SMALL AREAS. CONTINUE PLACING, KNIFING, AND COMPACTING BACKFILL LAYERS TO THE TOP OF THE END SECTION TO SEAT IT WELL INTO THE BACKFILL.

FLARED END SECTION HIGH DENSITY POLYETHYLENE (HDPE) NOT TO SCALE

| PIPE DIAM. | MIN. TRENCH WIDTH |
|------------|-------------------|
| 4" | 21" |
| 6" | 23" |
| 8" | 26" |
| 10" | 28" |
| 12" | 30" |
| 15" | 34" |
| 18" | 38" |
| 24" | 48" |
| 30" | 56" |
| 36" | 64" |
| 42" | 72" |
| 48" | 80" |
| 54" | 88" |
| 60" | 96" |

NOTES:
1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D3321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm), 6" (150mm) FOR 30"-60" (750mm-1500mm).
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 8" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D3321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 18" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60"-60" DIAMETER PIPE. MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
*E-80 COVER REQUIREMENTS, ARE ONLY APPLICABLE TO ASTM F 2808 PIPE.

RECOMMENDED MINIMUM TRENCH WIDTHS

| PIPE DIAM. | H-25 | HEAVY CONSTRUCTION (75T AXLE LOAD)* |
|------------|------|-------------------------------------|
| 12"-48" | 12" | 48" |
| 54"-60" | 24" | 60" |

*VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

MINIMUM RECOMMENDED COVER BASED ON SURFACE LIVE LOADING CONDITION OR RAILWAY LOADING CONDITION

| PIPE DIAM. | COOPER E-50** |
|------------|---------------|
| UP TO 24" | 24" |
| 30"-36" | 36" |
| 42"-50" | 48" |

** COVER IS MEASURED FROM TOP OF PIPE TO BOTTOM OF RAILWAY TIE.
*** E-80 COVER REQUIREMENTS, ARE ONLY APPLICABLE TO ASTM F 2808 PIPE.

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ADVANCED DRAINAGE SYSTEMS, INC. HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO BE USED AS A GENERAL REFERENCE. ADS HAS NOT PROVIDED ANY WARRANTY OR GUARANTEE FOR THIS PROJECT. ADS HAS NOT BEEN ADVISED OF ANY REGULATORY REQUIREMENTS THAT MAY BE APPLICABLE TO THIS PROJECT. THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR VERIFYING ALL APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO INSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

ADS 480 TELEMAN BLVD
MILWAUKEE, WISCONSIN 53219
TEL: 414.354.7400 FAX: 414.354.7401
WWW.ADS-INC.COM

**HDPE PIPE TRENCH
NOT TO SCALE**

**INFILTRATION BASIN - TYP. CROSS SECTION
NOT TO SCALE**

| Basin | Top Berm Elevation | Bot. Berm Elevation |
|-------|--------------------|---------------------|
| #1 | 145.00 | 150.00 |
| #2 | 144.00 | 148.00 |
| #3 | 142.00 | 145.00 |

1) DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
2) AFTER THE INFILTRATION SYSTEM AREA IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHOULD BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.
3) DO NOT PLACE INFILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.

**CONSTRUCTION STANDARDS
REINFORCED CONCRETE FLARED END
BELL AND SPIGOT PIPE
DATE: 07-18-00
CS-25
NOT TO SCALE**

**STONE DRIP EDGE
NOT TO SCALE**

**ROOF DRAIN DETAIL WITH OVERFLOW
NOT TO SCALE**

**STONE OUTLET APRON
NOT TO SCALE**

**CONSTRUCTION STANDARDS
REINFORCED CONCRETE FLARED END
BELL AND SPIGOT PIPE
DATE: 07-18-00
CS-25
NOT TO SCALE**

**CONSTRUCTION STANDARDS
REINFORCED CONCRETE FLARED END
BELL AND SPIGOT PIPE
DATE: 07-18-00
CS-25
NOT TO SCALE**

Particulate List

| ITEM | SIZE (in) | DESCRIPTION |
|------|-----------|------------------------------------|
| 1 | 12 | 12" I.D. PRECAST MANHOLE |
| 2 | 12 | LEDDER SUPPORT |
| 3 | 12 | SEPARATION MODULE |
| 4 | 30 | INLET PIPE (BY OTHERS) |
| 5 | 30 | OUTLET PIPE (BY OTHERS) |
| 6 | 30 | FRAME AND COVER (OR GRATE) (ROUND) |

**"FIRST DEFENSE" UNIT - FD-6HC
(OR APPROVED EQUAL)
NOT TO SCALE**

NOTE: CONTRACTOR SHOULD CONFIRM SYSTEM PARTS AND OBTAIN SHOP DRAWINGS FROM MANUFACTURER PRIOR TO CONSTRUCTION.

| DATE | W | A | B | C | D | E | BD | K | L | P | DA-1" | R1 | R2 | S | O | SLOPE |
|------|--------|--------|-----------|-----------|-----------|-------|-----|------------|-------------|-----------|-------|-----------|-----|----|--------|-------|
| 12" | 2" | 4" | 2'-0" | 4'-0 7/8" | 6'-1 3/8" | 2'-0" | 20" | 4'-6 1/8" | 6'-6 1/8" | 19 15/16" | 13" | 10 1/8" | 9" | 4" | 2 1/2" | 3:1 |
| 15" | 2 1/4" | 6" | 2'-3" | 5'-10" | 6'-1 1/2" | 2'-6" | 24" | 4'-3 7/8" | 6'-8 11/16" | 24 5/16" | 16" | 12 1/2" | 11" | 4" | 2 1/2" | 3:1 |
| 18" | 2 1/2" | 9" | 2'-3" | 5'-10" | 6'-1 1/2" | 2'-0" | 28" | 4'-3 7/8" | 6'-8 7/8" | 29" | 19" | 15 1/2" | 12" | 4" | 2 1/2" | 3:1 |
| 21" | 2 3/4" | 9" | 2'-11" | 5'-2" | 6'-1 1/2" | 3'-6" | 32" | 3'-8 5/16" | 6'-7 5/16" | 31 5/8" | 22" | 16 1/8" | 13" | 4" | 2 3/4" | 3:1 |
| 24" | 3" | 9 1/2" | 5'-7 1/2" | 2'-4" | 6'-1 1/2" | 4'-0" | 36" | 3'-0 1/2" | 6'-4" | 33 3/16" | 25" | 18 13/16" | 14" | 4" | 3" | 3:1 |

NOTE:
1. SEE SPECIFICATIONS FOR THE TYPE OF PIPE TO BE USED (BELL SPIGOT OR TONGUE AND GROOVE)
2. SEE SPECIFICATIONS FOR THE TYPE AND PLACING OF STEEL REINFORCEMENT
3. THE JOINTS ARE TO BE COMPATIBLE WITH THE MAIN RUN OF PIPE.

**CONSTRUCTION STANDARDS
REINFORCED CONCRETE FLARED END
BELL AND SPIGOT PIPE
DATE: 07-18-00
CS-25
NOT TO SCALE**

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GPI Engineering
Design
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Greenman-Pedersen, Inc.
44 Siles Road, Suite One
Salem, NH 03079

PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**

COMMONWEALTH OF MASSACHUSETTS
DAVID R. JORDAN
CIVIL
No. 34732
REGISTERED PROFESSIONAL ENGINEER
8/5/22

REVISIONS

| NO. | REVISION | DATE |
|-----|--------------------------|--------|
| 1 | REVISE PER CITY COMMENTS | 8/2/24 |

MARCH 6, 2024
DRAWN/DESIGN BY: GMP
CHECKED BY: DRJ

**METHUEN COMMUNITY
DEVELOPMENT BOARD**

DATE OF FILING: _____
DATE OF HEARING: _____
DATE OF APPROVAL: _____

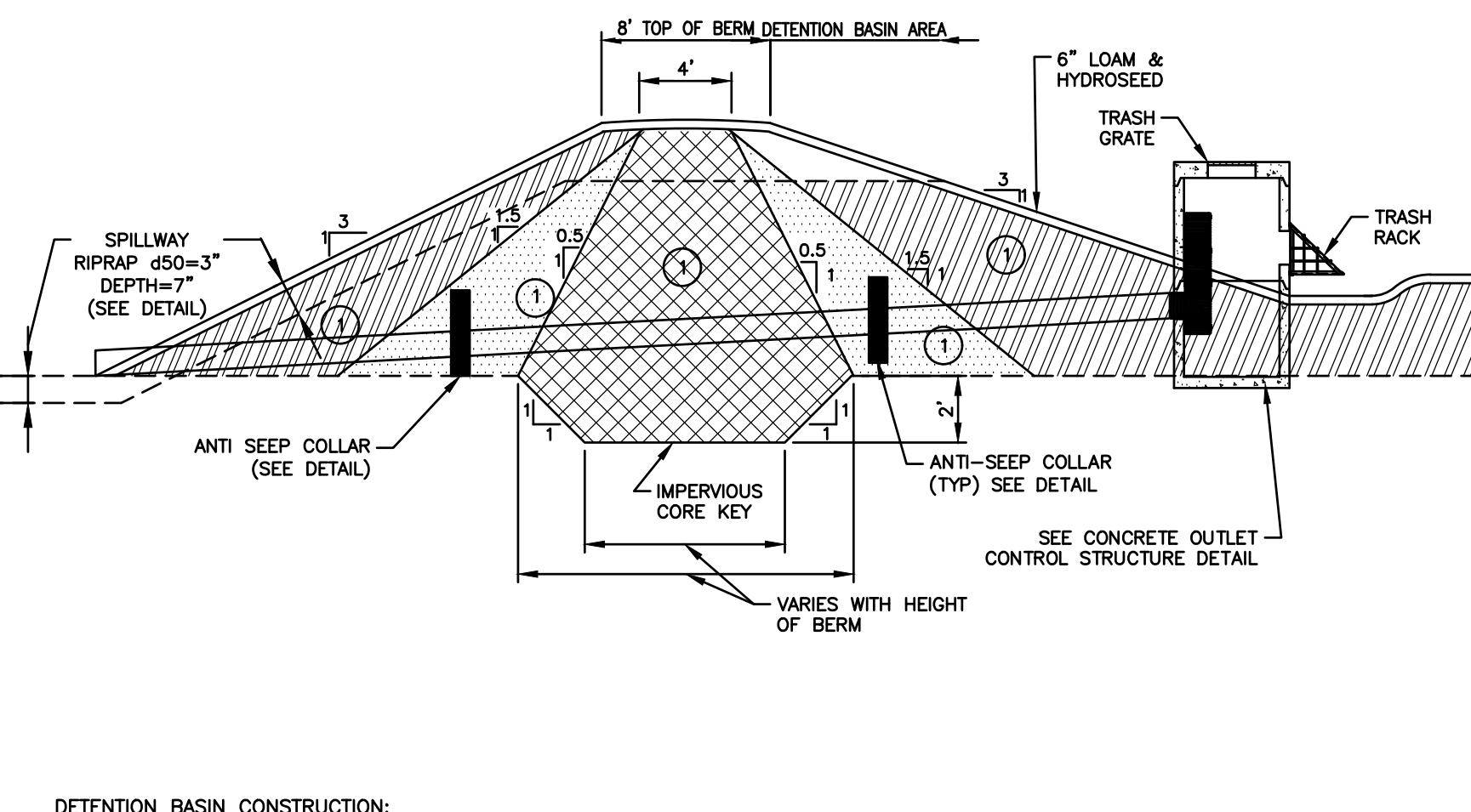
SCALE: AS SHOWN
PROJECT NO. INEX-2200136
29 OF 32

SAFETY
PONDS THAT ARE EASILY ACCESSIBLE IN POPULATED AREAS SHOULD INCORPORATE ALL POSSIBLE SAFETY PRECAUTIONS. STEEP SLOPE SLOPES SHOULD BE AVOIDED. IT IS RECOMMENDED THAT SIDE SLOPES OF 4:1 (HORIZONTAL TO VERTICAL) OR FLATTER SHOULD BE USED WHERE THE TOPOGRAPHY PERMITS. IF THE TOPOGRAPHY WILL NOT ALLOW SUCH SLOPES THEN THE PERIMETER OF THE BASIN SHOULD BE FENCED. WARNING SIGNS AND LIFESAVING EQUIPMENT SHOULD BE AVAILABLE AT EACH STRUCTURE.

MAINTENANCE
MAINTENANCE IS NECESSARY IF DETENTION/RETENTION BASINS ARE TO CONTINUE TO FUNCTION AS ORIGINALLY DESIGNED. A LOCAL GOVERNMENT, A DESIGNATED GROUP SUCH AS A HOMEOWNERS ASSOCIATION OR SOME INDIVIDUAL MUST BE ASSIGNED RESPONSIBILITY FOR MAINTAINING THE STRUCTURE AND THE BASIN AREA. A MAINTENANCE PLAN SHOULD BE DEVELOPED THAT OUTLINES THE MAINTENANCE OPERATIONS AND A SCHEDULE FOR CARRYING OUT THE PROCEDURES.

THE FOLLOWING ARE SOME ITEMS WHICH SHOULD BE CONSIDERED IN FORMULATING A MAINTENANCE PLAN:

1. EMBANKMENT - THE EMBANKMENT SHOULD BE INSPECTED ANNUALLY TO DETERMINE IF ROOTS BURROWS, WET AREAS, OR EROSION OF THE FILL IS TAKING PLACE.
2. VEGETATION - THE VEGETATED AREAS OF THE STRUCTURE SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRUBBING, TRIMMING, AND DENSE WOOD GROWTH. LIME AND FERTILIZER SHOULD BE APPLIED AS NECESSARY AS DETERMINED BY SOIL TESTS. TREES AND SHRUBS SHOULD BE KEPT OFF THE EMBANKMENT AND EMERGENCY SPILLWAY AREAS.
3. INLETS - PIPE INLETS AND SPILLWAY STRUCTURES SHOULD BE INSPECTED ANNUALLY AND AFTER EVERY MAJOR STORM. ACCUMULATED DEBRIS AND SEDIMENT SHOULD BE REMOVED. IF PIPES ARE COATED, THE COATING SHOULD BE CHECKED AND REPAIRED AS NECESSARY.
4. OUTLETS - PIPE OUTLETS SHOULD BE INSPECTED ANNUALLY AND AFTER EACH MAJOR STORM. THE CONDITION OF THE PIPES SHOULD BE NOTED AND REPAIRS MADE AS NECESSARY. IF EROSION IS TAKING PLACE THEN MEASURES SHOULD BE TAKEN TO STABILIZE AND PROTECT THE AFFECTED AREA OF THE OUTLET.
5. SEDIMENT - SEDIMENT SHOULD BE CONTINUALLY CHECKED IN THE BASIN WHEN SEDIMENT ACCUMULATIONS REACH THE PREDETERMINED DESIGN ELEVATION. THEN THE SEDIMENT SHOULD BE REMOVED AND PROPERLY DISPOSED OF.



BERM MATERIALS

- 1) IMPERVIOUS CORE (CLAY, SILT, & SAND) SHALL CONFORM TO AASHTO T27 HAVING A COEFFICIENT OF PERMEABILITY OF 1×10^{-10} CM/SEC AND MEET THE GRADATION AS FOLLOWS:
ROLLED TO 6" LAYERS (95% COMPACTION)

| PERCENT FINER | SIEVE SIZE |
|---------------|------------|
| 100 | #4 |
| 30 TO 85 | #40 |
| 20 TO 50 | #200 |
- 2) FILTER LAYER #1 (SAND & FINE GRAVEL)

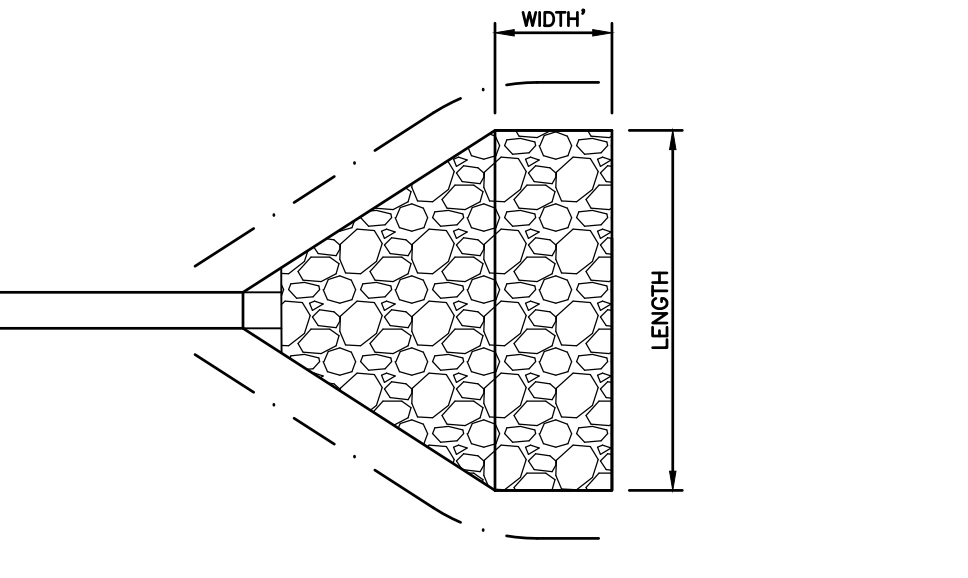
| PERCENT FINER | SIEVE SIZE |
|---------------|------------|
| 100 | 1/2 IN. |
| 40 TO 85 | #4 |
| 30 TO 50 | #10 |
| 0 TO 5 | #200 |
- 3) FILTER LAYER #2 EMBANKMENT MATERIAL SHALL CONFORM TO AASHTO M57 AND MEET THE FOLLOWING GRADATION:

| PERCENT FINER | SIEVE SIZE |
|---------------|------------|
| 100 | 3 IN. |
| 95-100 | 2 IN. |
| 55-85 | 1 IN. |
| 27-52 | #4 |
| 50 MAX. | #40 |
| 25 MAX. | #200 |

DETENTION BASIN CONSTRUCTION:

- 1) CLEAR AND GRUB THE AREA WHERE THE BASIN IS TO BE LOCATED. STOCKPILE LOAM FOR REUSE ON SLOPES.
- 2) THE FOUNDATION AREA SHALL BE SCARIFIED PRIOR TO PLACING FILL. ALL UNSUITABLE MATERIAL UNDER THE EMBANKMENT SHALL BE REMOVED AND REPLACED WITH SUITABLE FOUNDATION MATERIAL.
- 3) FILL MATERIAL SHALL BE FREE OF ORGANICS, FROZEN SOIL AND ROCKS GREATER THAN 6" IN DIAMETER.
- 4) SELECT MATERIALS SHALL BE PLACED AROUND STRUCTURES, PIPES, AND FILTER DIAPHRAGMS. PLACE SELECT MATERIAL IN MAXIMUM 8" LIFTS COMPACTED TO 95% MAXIMUM PROCTOR DENSITY.
- 5) THE EMBANKMENT SHALL BE CONSTRUCTED BEGINNING FROM THE LOWEST POINT UNIFORMLY ALONG ITS ENTIRE LENGTH. PLACE MAXIMUM 8" LIFTS COMPACTED TO 95% MAXIMUM PROCTOR DENSITY.

TYPICAL DETENTION/INFILTRATION BASIN PRINCIPAL SPILLWAY PROFILE
NOT TO SCALE

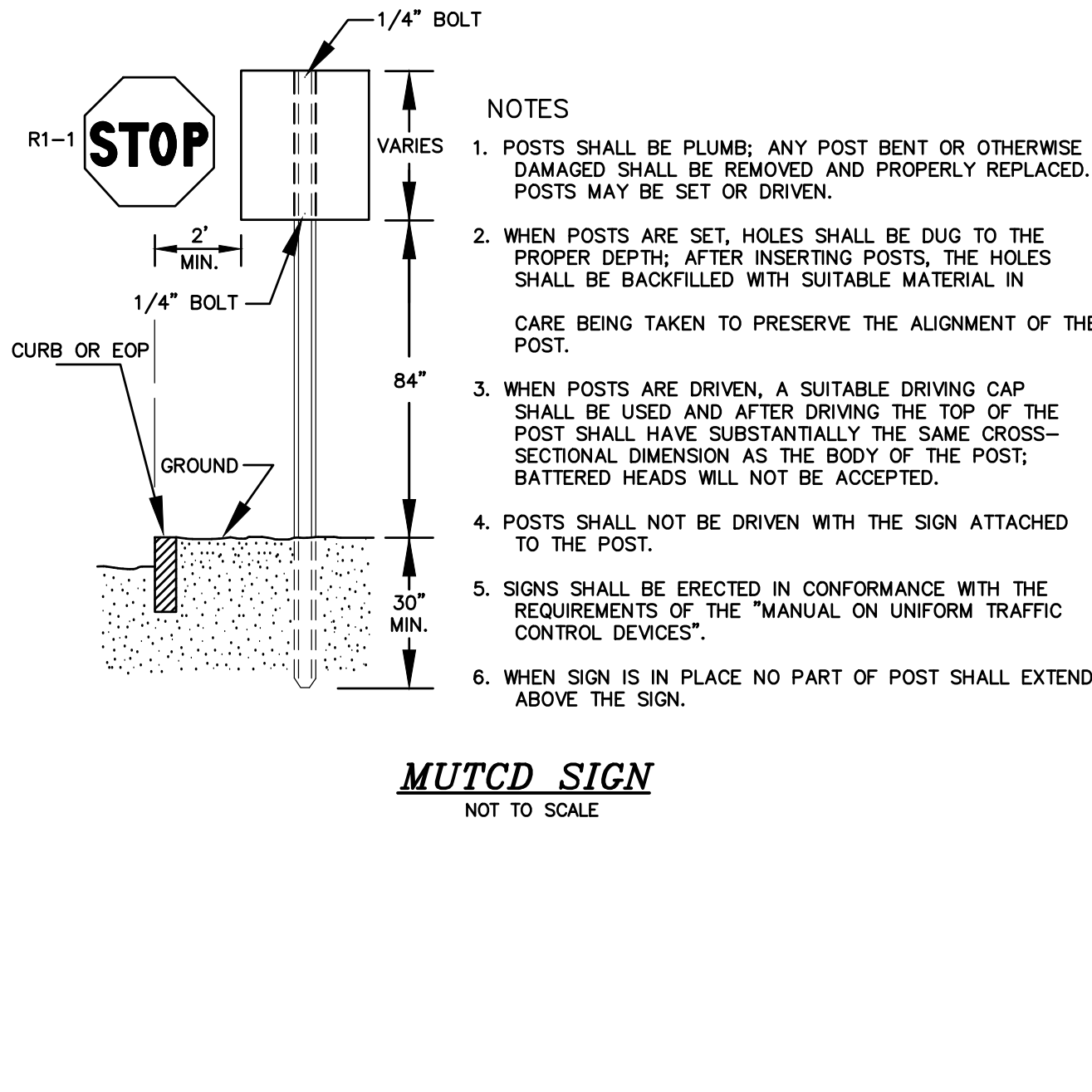
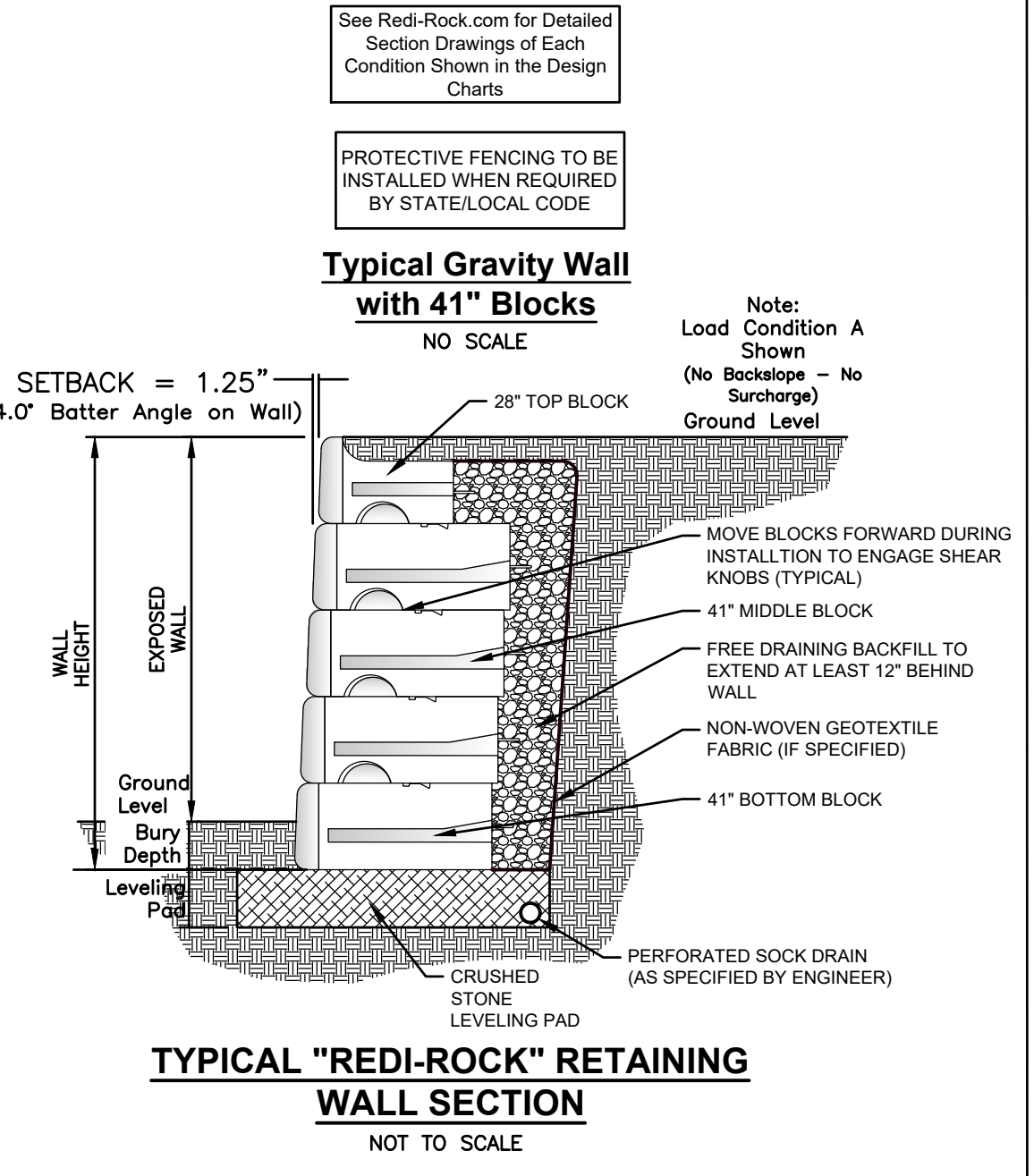


- MAINTENANCE**
1. INSPECT AT LEAST ONCE ANNUALLY FOR ACCUMULATION OF SEDIMENT AND DEBRIS AND FOR SIGNS OF EROSION WITHIN APPROACH CHANNEL, SPREADER CHANNEL OR DOWN-SLOPE OF THE SPREADER.
 2. REMOVE DEBRIS WHENEVER OBSERVED DURING INSPECTION.
 3. REMOVE SEDIMENT WHEN ACCUMULATION EXCEEDS 2% OF SPREADER CHANNEL DEPTH.
 4. MOW AS REQUIRED BY LANDSCAPING DESIGN. AT A MINIMUM, MOW ANNUALLY TO CONTROL WOODY VEGETATION WITHIN THE SPREADER.
 5. SNOW SHOULD NOT BE STORED WITHIN OR DOWN-SLOPE OF THE LEVEL SPREADER OR ITS APPROACH CHANNEL.
 6. REPAIR ANY EROSION AND RE-GRADE OR REPLACE STONE BERM MATERIAL, AS WARRANTED BY INSPECTION.
 7. RECONSTRUCT THE SPREADER IF DOWN-SLOPE CHANNELIZATION INDICATES THAT THE SPREADER IS NOT LEVEL OR THAT DISCHARGE HAS BECOME CONCENTRATED, AND CORRECTIONS CANNOT BE MADE THROUGH MINOR RE-GRAVING.

STONE GRADATION FOR LEVEL STONE BERM LEVEL LIP SPREADER

| SIEVE SIZE | % WEIGHT PASSING SQUARE MESH SIEVE |
|------------|------------------------------------|
| 12" | 100% |
| 6" | 84-100% |
| 3" | 68-84% |
| 1" | 42-55% |
| No. 4 | 8-12% |

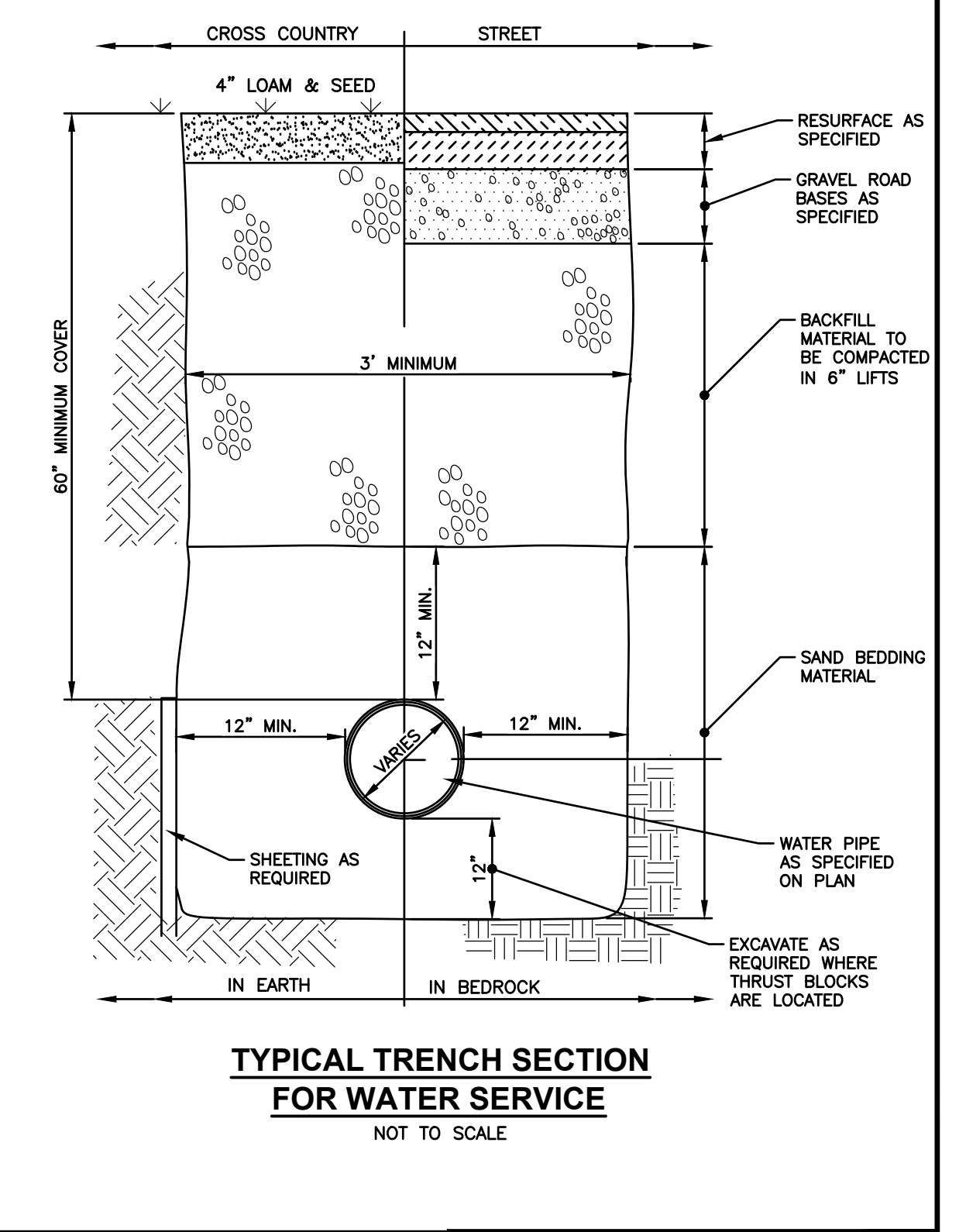
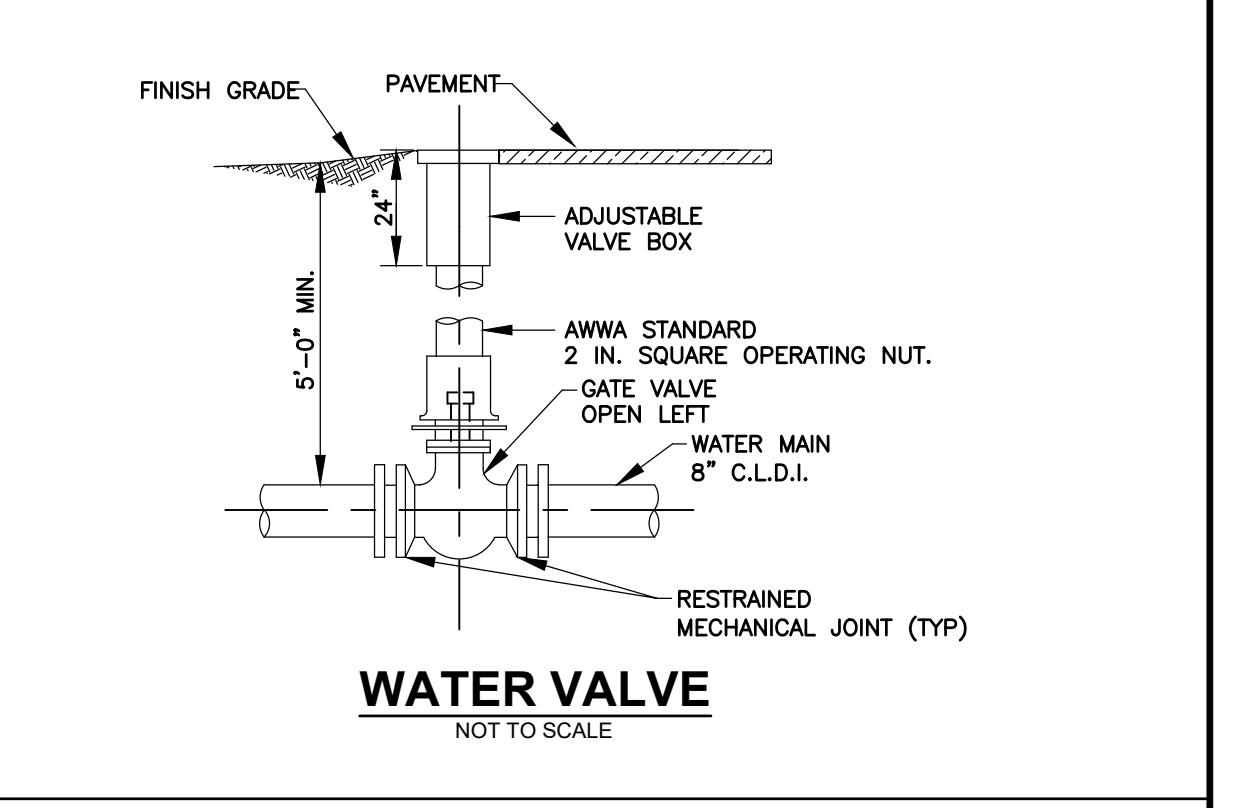
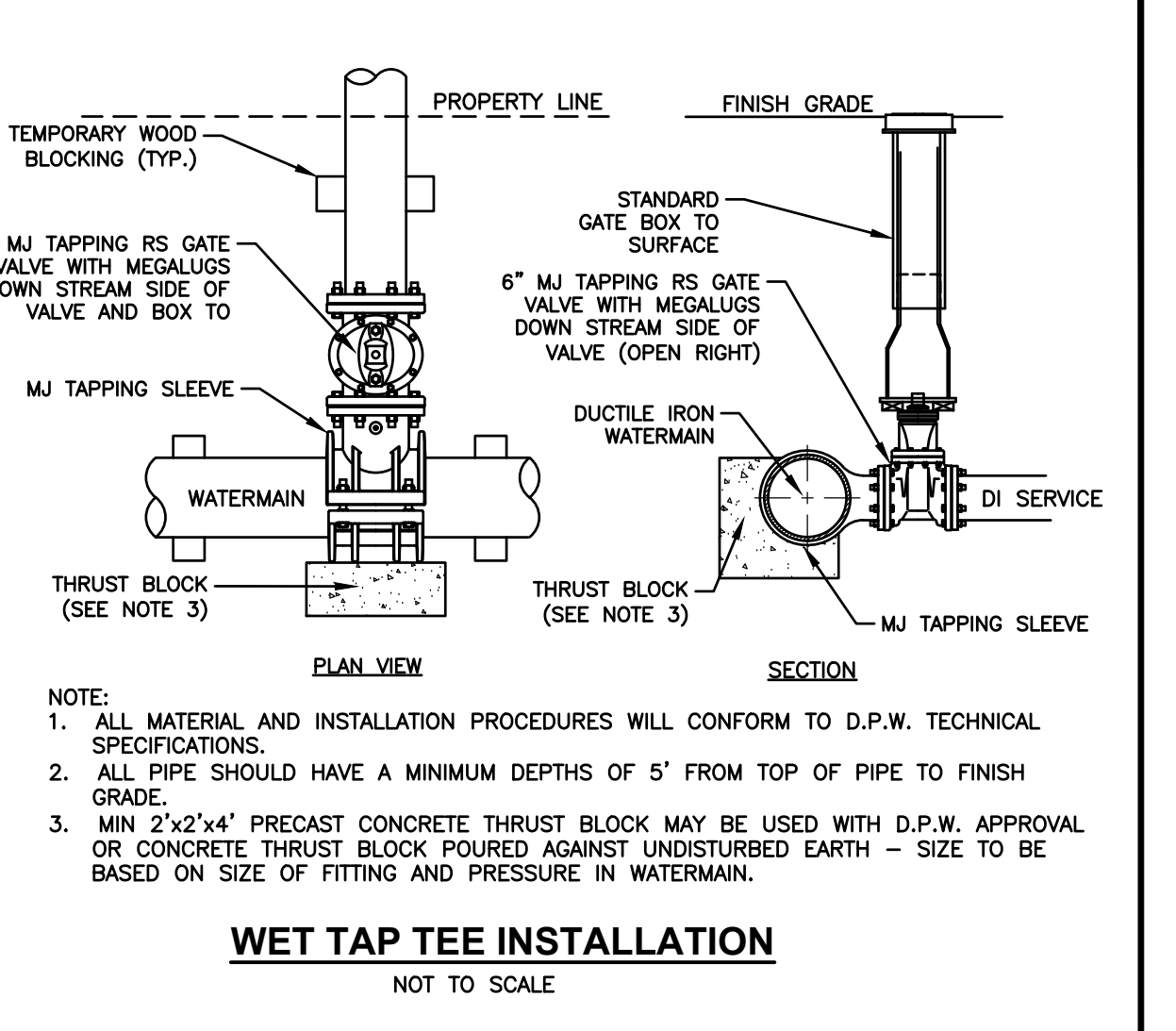
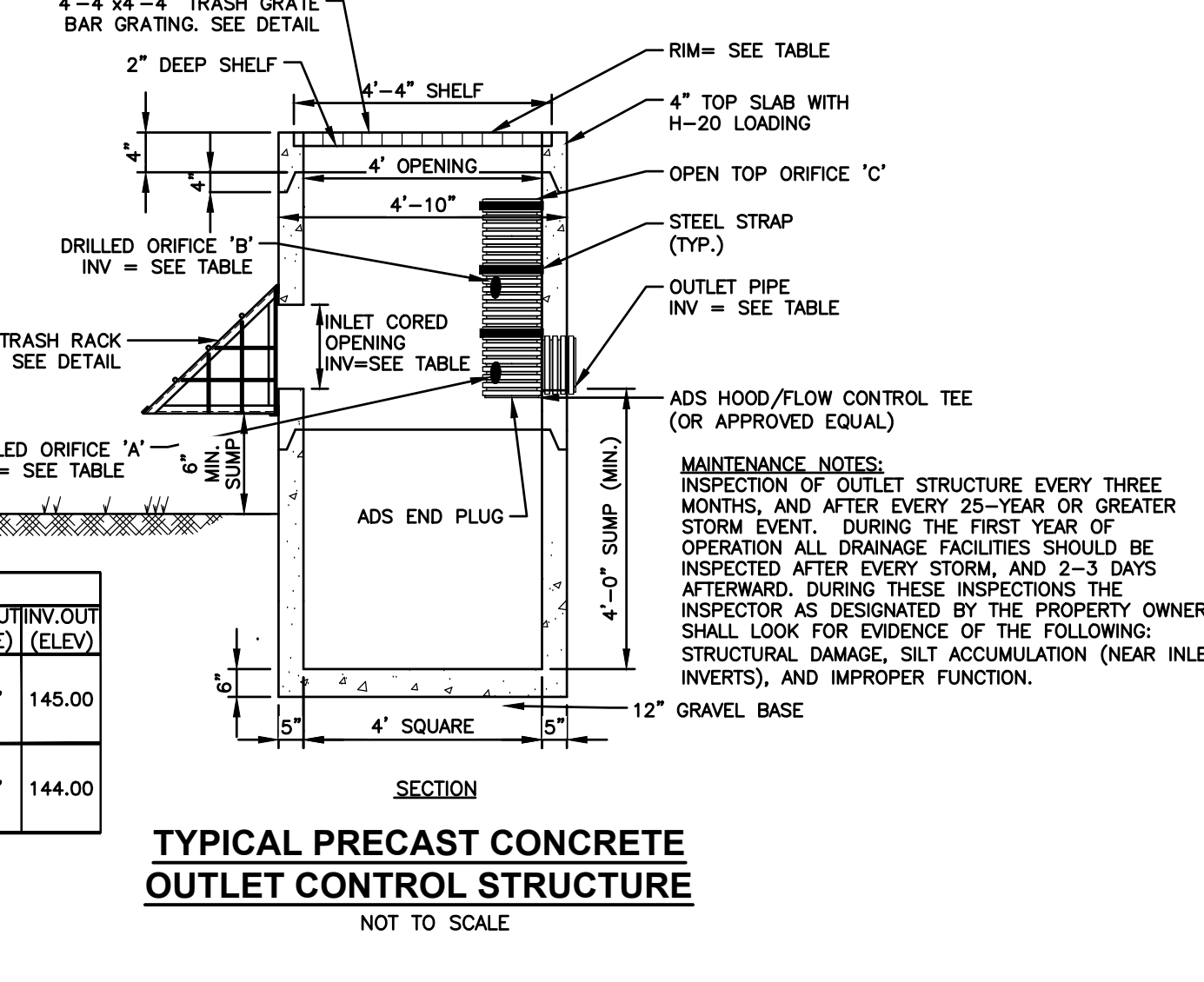
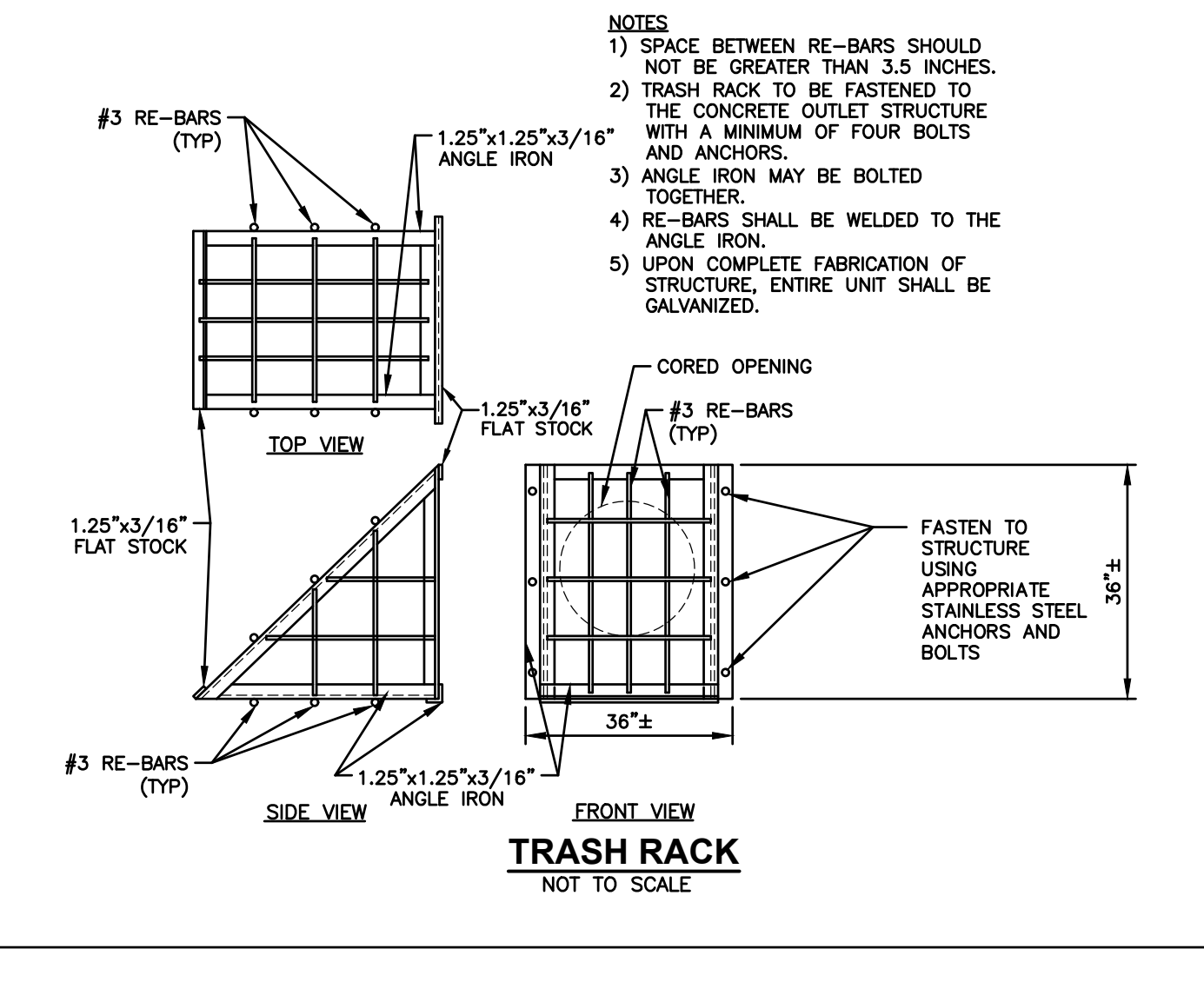
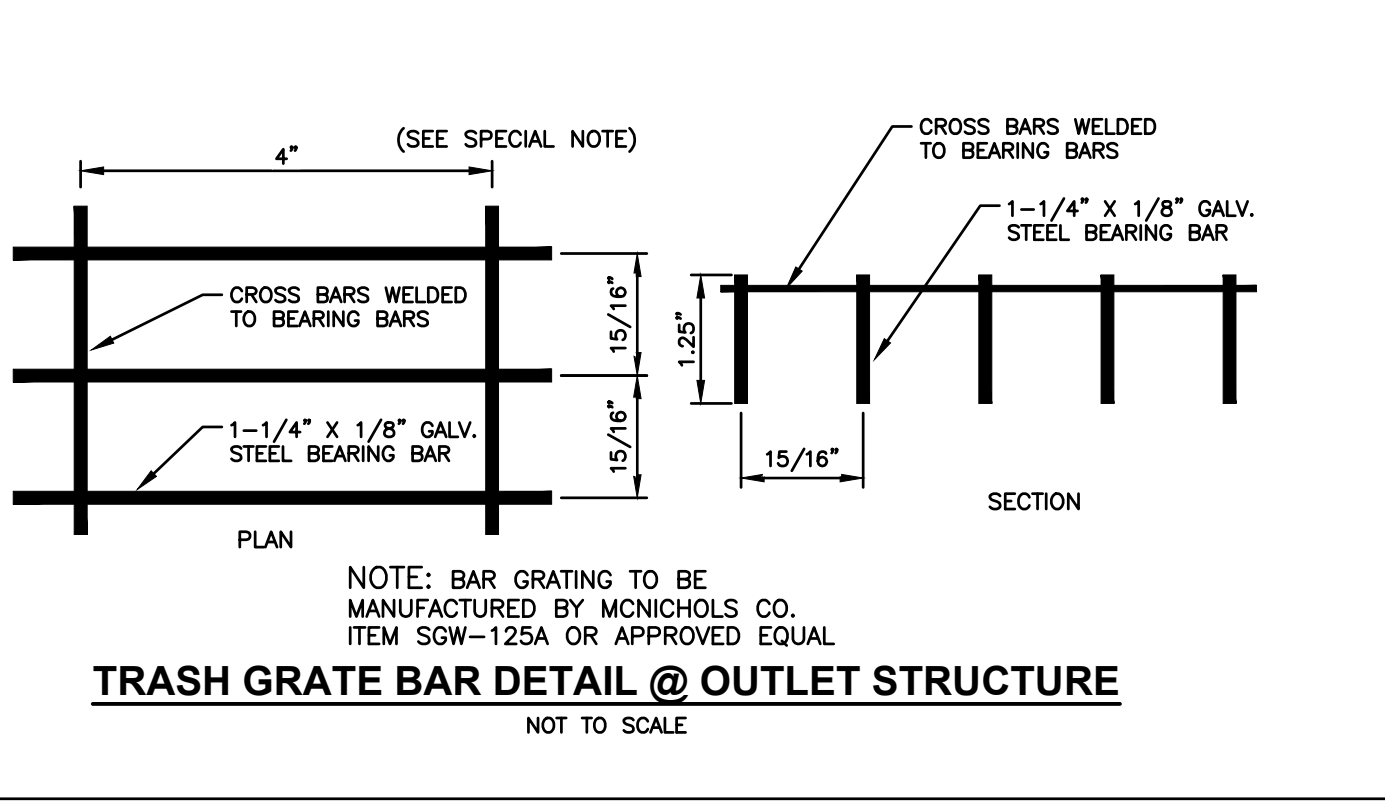
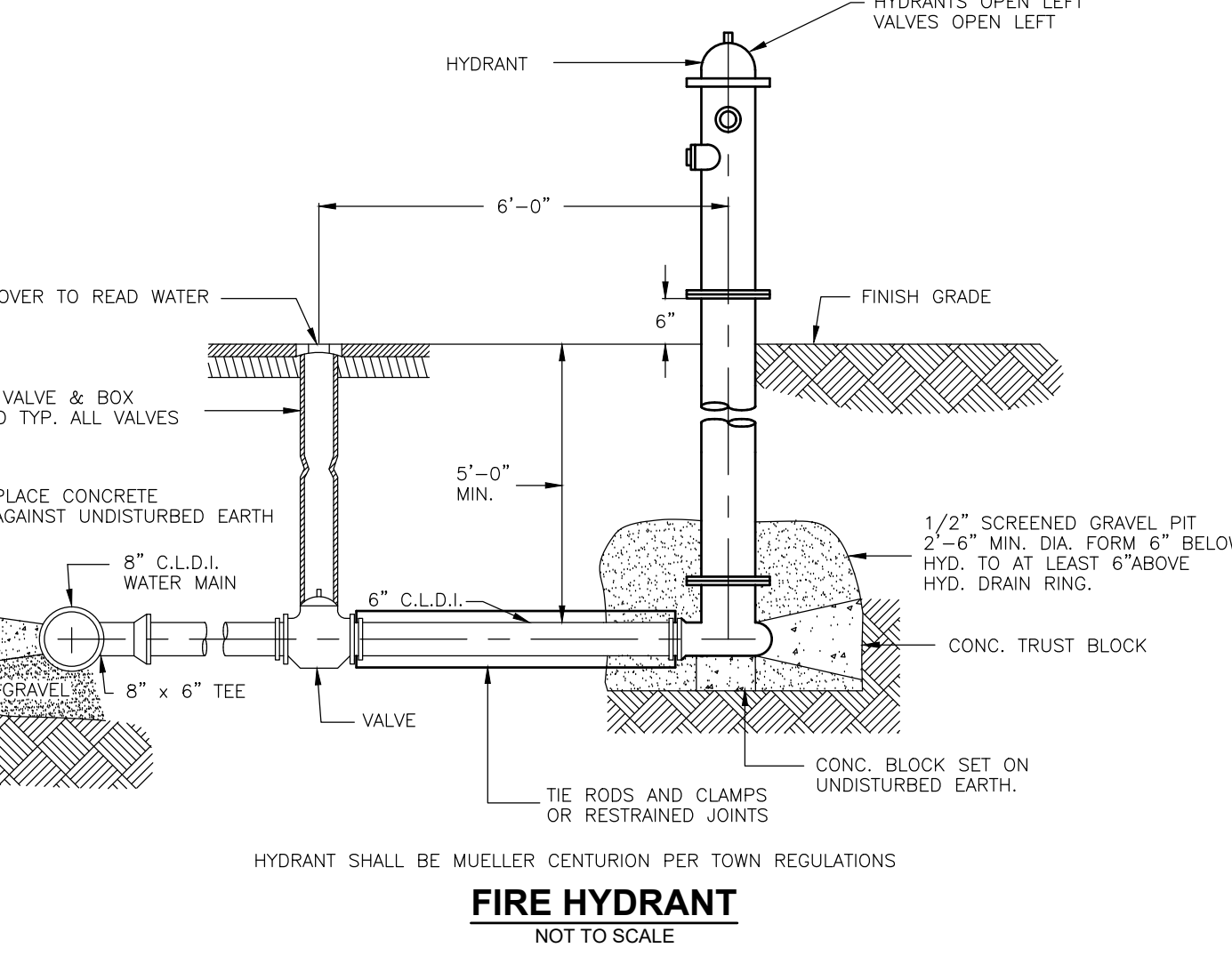
THE CONTRACTOR SHALL SUBMIT FOR APPROVAL PRIOR TO START OF CONSTRUCTION A RETAINING WALL DESIGN UTILIZING THE "REDI-ROCK" WALL. PREPARED BY AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER CONFORMING TO LOCAL, STATE AND FEDERAL REQUIREMENTS.



- NOTES:**
1. PRECAST CONCRETE MAN HOLE AS MANUFACTURED BY SUPERIOR CONCRETE OR APPROVED EQUAL.
 2. CONCRETE: 4,000 PSI AFTER 28 DAYS.
 3. REINFORCING: H-20 LOADING, 4 X 4/4 X 4 W.W.M. SLAB TOP - NO. 5'S @ 8" O.C.
 4. SHUPLAP JOINTS SEALED WITH 1 STRIP OF 1" DIA BUTYL RUBBER SEALANT.
 5. EACH CASTING TO HAVE LIFTING HOLES CAST IN.
 6. LENGTH AND DIAMETER OF TEE VARIES WITH PIPE.

OUTLET CONTROL STRUCTURE TABLE

| OCS | RIM | ORIFICE SIZE (IN.) | ELEV. (SIZE) (ELEV.) | INV. IN. (SIZE) (ELEV.) | INV. OUT. (SIZE) (ELEV.) |
|-----|-----|--------------------|----------------------|-------------------------|--------------------------|
| #1 | A | 6" DIA. | 148.00 | 24" | 145.50 |
| | B | 12" DIA. | 148.00 | | 12" |
| | C | 12" DIA. | 148.00 | | 144.00 |
| #2 | A | 6" DIA. | 148.00 | 24" | 144.50 |
| | B | 12" DIA. | 148.00 | | 12" |
| | C | 12" DIA. | 148.00 | | 144.00 |



METHUEN COMMUNITY DEVELOPMENT BOARD

DATE OF FILING _____

DATE OF HEARING _____

DATE OF APPROVAL _____

SCALE: AS SHOWN

PROJECT NO. NEX-2200136

PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**

COMMONWEALTH OF MASSACHUSETTS
DAVID R. JORDAN
CIVIL
No. 34732
REGISTERED PROFESSIONAL ENGINEER
8/5/22

REVISIONS

| NO. | REVISION | DATE |
|-----|--------------------------|--------|
| 1 | REVISE PER CITY COMMENTS | 8/2/24 |
| | | |
| | | |
| | | |

MARCH 6, 2024

DRAWN/DESIGN BY: GMP CHECKED BY: DRJ

CONSTRUCTION DETAILS

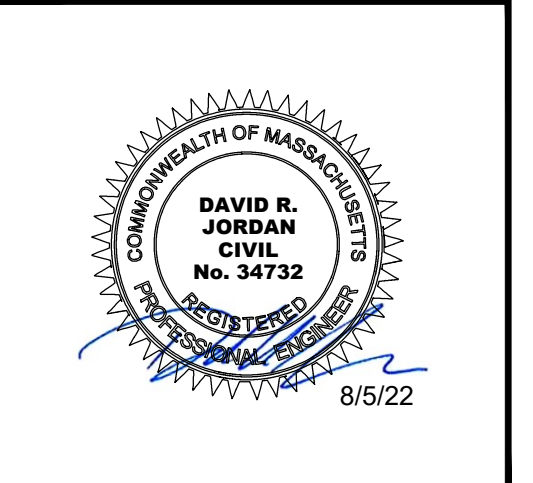
SCALE: AS SHOWN

PROJECT NO. NEX-2200136

30 OF 32

PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



GENERAL NOTES:

1. ANY DISCREPANCIES OR UNUSUAL CONDITIONS SHALL BE REPORTED TO THE DESIGNER BEFORE CONTINUING WITH THE INSTALLATION.
2. DO NOT SCALE FROM DRAWING. IF A REQUIRED DIMENSION IS NOT GIVEN, CONSULT THE ENGINEER.
3. FORCE MAIN TO BE DUCTILE IRON (D.I.).
4. PUMP STATION TO BE 8'Ø MANHOLE WITH PRECAST COVER PLACED AT FINISH GRADE TO ACCEPT DOOR.
5. PUMP STATION AND ALL JOINTS TO BE SEALED AGAINST GROUND WATER INFILTRATION.
6. EMERGENCY GENERATOR TO BE PROVIDED. CONTRACTOR TO COORDINATE SPECIFICATIONS WITH ENGINEER.

DESIGN CALCULATIONS:

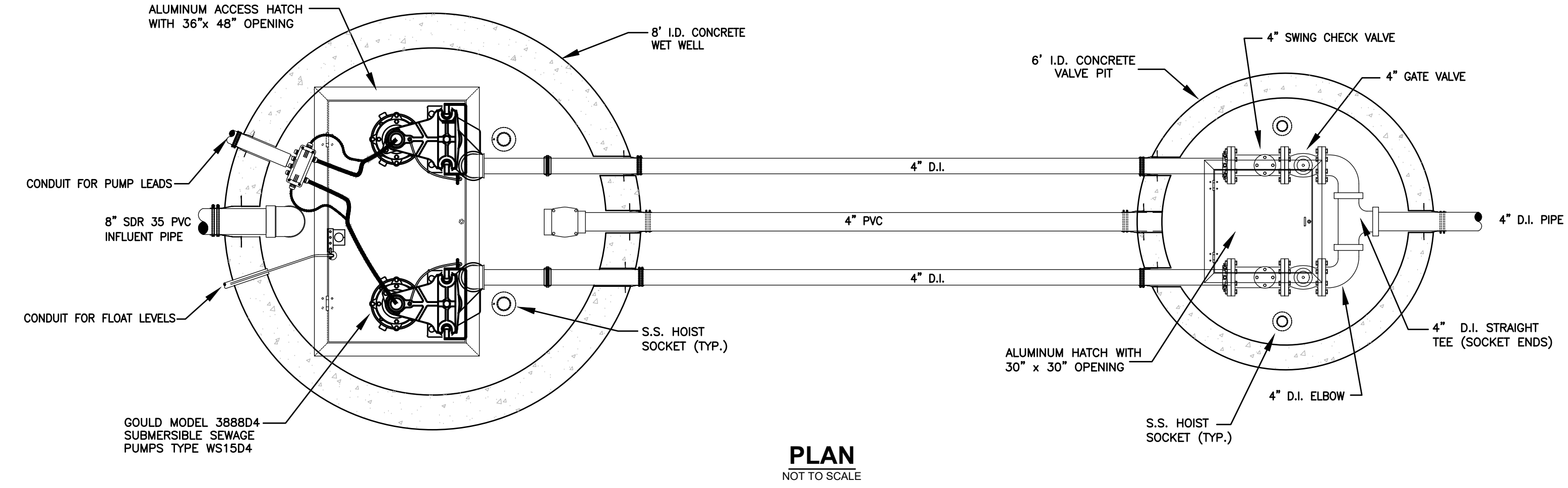
DAILY FLOW:
30 4-BEDROOM DWELLINGS (110GPD/BEDROOM) = 13,200 GPD

PUMP SYSTEM SPECIFICATIONS:

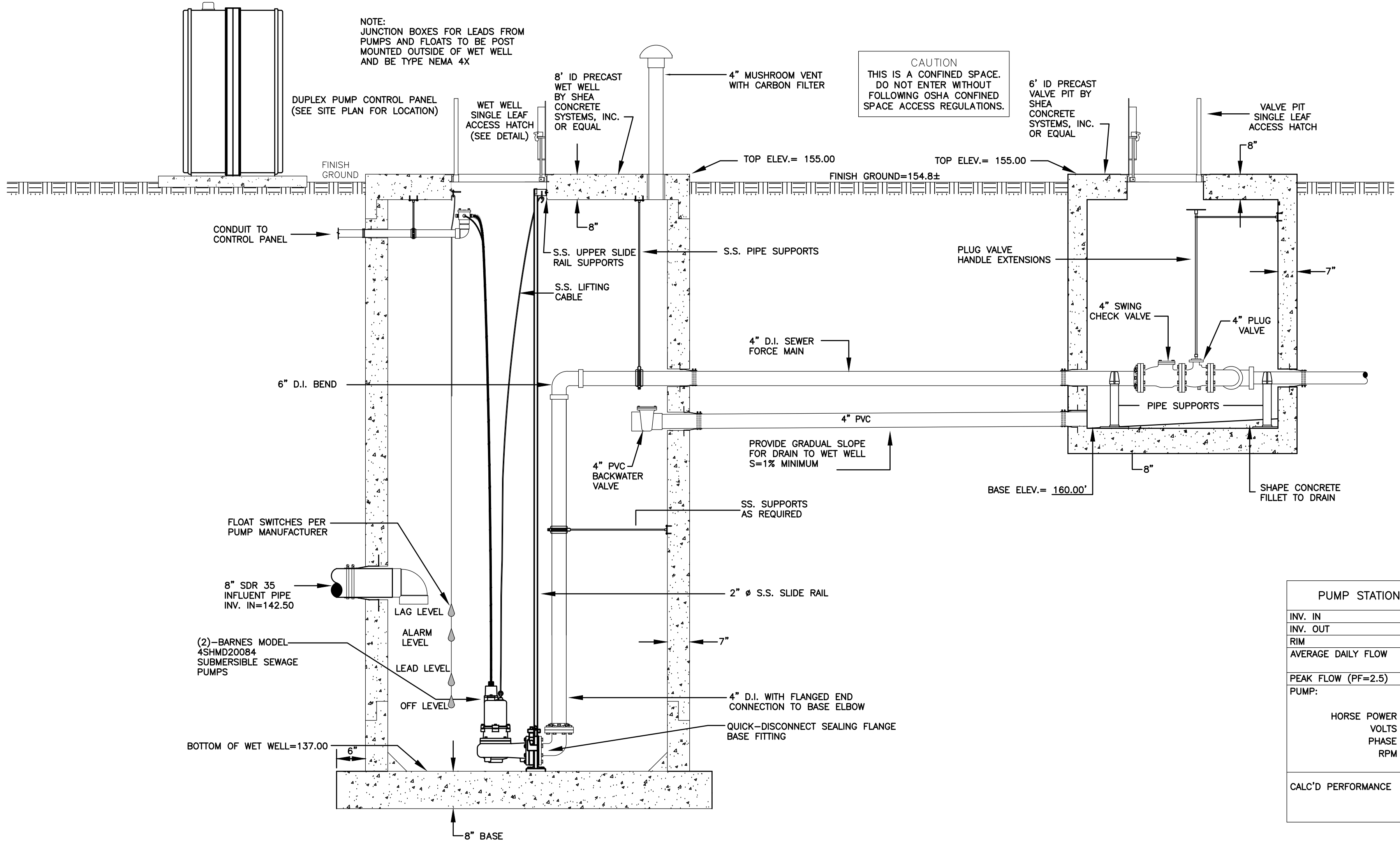
1. USE PUMP MANUFACTURER'S RECOMMENDED FLOAT SWITCHED AND CONTROLS TO CONTROL DUPLEX PUMP OPERATION AS FOLLOWS:
1) PUMP OFF
2) LEAD PUMP ON
3) ALARM ON
4) LAG PUMP ON
THE LEAD/LAG PUMPS SHALL AUTOMATICALLY SWITCH OPERATION. AUDIO AND VISUAL ALARM TO BE INSTALLED AT CONTROL PANEL. CONTROLS AND DUPLEX PANEL SHALL BE RATED AS NEMA 4.
2. PUMP STATION POWER, CONTROLS, ALARM & VENT LOCATIONS TO BE COORDINATED WITH THE ENGINEER.
3. POWER FOR THE PUMPS AND ALARMS IS TO BE PROVIDED ON SEPARATE CIRCUITS.
4. CONTRACTOR TO FURNISH OWNER WITH TWO (2) OPERATION AND MAINTENANCE MANUALS PER PUMP MANUFACTURERS SPECIFICATIONS.

GENERAL CONSTRUCTION NOTES:

1. CONTRACTOR TO VERIFY INVERT OF INFLUENT SEWER LINE PRIOR TO CONSTRUCTION.
2. OSHA CONFINED SPACE REGULATIONS TO BE ADHERED TO PRIOR TO ENTERING PUMP STATION.
3. STAINLESS STEEL GUIDE RAIL SYSTEM TO HAVE INTERMEDIATE SUPPORTS LOCATED APPROXIMATELY 6' O.C. OR AS RECOMMENDED BY PUMP MANUFACTURER TO MAINTAIN STRAIGHT & RIGID ALIGNMENT.
4. PRECAST CONCRETE WET WELL AND VALVE PIT TO MEET OR EXCEED:
A. REQUIREMENTS OF ASTM C-478 AND H620-44 LOADING.
B. CONCRETE COMPRESSIVE STRENGTH = 4,000PSI @ 28 DAYS
C. JOINTS SEALED WITH BUTYL RUBBER.
D. OUTSIDE SURFACE TO BE BITUMINOUS COATED.
E. STRUCTURE TO BE PLACED ON 12" MINIMUM COMPACTED LAYER OF 3/4" CRUSHED STONE OR GRAVEL (MIN 95% MODIFIED PROCTOR).
F. SUBGRADE MATERIAL TO BE FIRM AND FREE OF ORGANIC AND OTHER DELETERIOUS MATERIAL.
5. CHECK VALVES TO BE SWING-FLEX VALVE WITH DUCTILE IRON BODY AS MANUFACTURED BY VALMATIC OR APPROVED EQUAL. SWING CHECK TO HAVE TOP MOUNTED ACCESS PORT FOR MAINTENANCE PURPOSES. PLUG VALVES TO BE CAST IRON ECCENTRIC PLUG VALVES CONFORMING TO AWWA C509 AS MANUFACTURED BY VALMATIC OR APPROVED EQUAL. BOTH CHECK VALVE AND PLUG VALVE TO BE FLANGED IN ACCORDANCE WITH ANSI B16.1 CLASS 125 AS WELL AS UL/FM APPROVED.
6. ALL PIPE CONNECTIONS TO PRECAST CONCRETE STRUCTURE TO BE KOR-N-SEAL FLEXIBLE BOOTS OR EQUAL AS APPROVED BY ENGINEER.
7. PIPE SUPPORTS IN VALVE PIT TO BE SADDLE TYPE (MODEL C92) SUPPORTS WITH NEOPRENE LINER TO ENSURE TIGHT FIT AS MANUFACTURED BY MATERIAL RESOURCES INC. OF HILLSBORO, OREGON OR APPROVED EQUAL.
8. USE NON-SHRINK GROUT BETWEEN BOOT AND 4" D.I. DRAIN AT WET WELL AND VALVE PIT LOCATIONS.
9. A NATURAL GAS FIRED EMERGENCY GENERATOR WITH AN AUTOMATIC TRANSFER SWITCH SHALL BE PROVIDED.
10. RUN TIME METERS SHALL BE INSTALLED ON THE MOTOR CONTROL OF EACH PUMP.
11. ALL ELECTRICAL EQUIPMENT IN THE WETWELL SHALL BE EXPLOSION PROOF AND CORROSION RESISTANT.



PLAN
NOT TO SCALE



SECTION
NOT TO SCALE

| PUMP STATION SPECS | |
|--------------------|---------------------------------|
| INV. IN | 142.05 |
| INV. OUT | 149.00 |
| RIM | 155.00 |
| AVERAGE DAILY FLOW | 13,200 GPD (9 GPM) |
| PEAK FLOW (PF=2.5) | 23 GPM |
| PUMP: | BARNES 4SHW20082 |
| HORSE POWER | 20 |
| VOLTS | 230 |
| PHASE | 3 |
| RPM | 3,450 |
| CALC'D PERFORMANCE | 100 GPM @ 98' TDH V=2.55 FT/SEC |

| REVISIONS | | |
|-----------|--------------------------|--------|
| NO. | REVISION | DATE |
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MARCH 6, 2024
DRAWN/DESIGN BY: GMP CHECKED BY: DRJ

METHUEN COMMUNITY DEVELOPMENT BOARD

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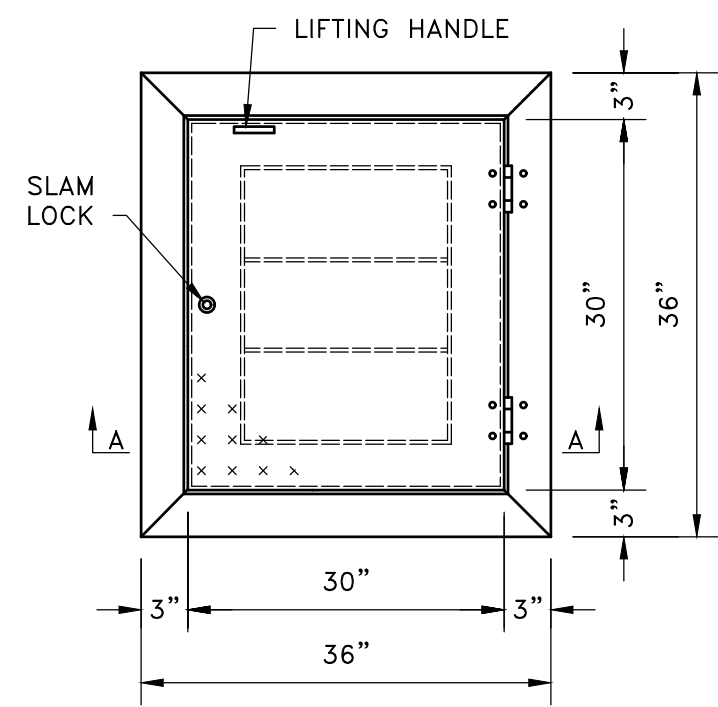
DATE OF APPROVAL _____

PUMP STATION DETAILS

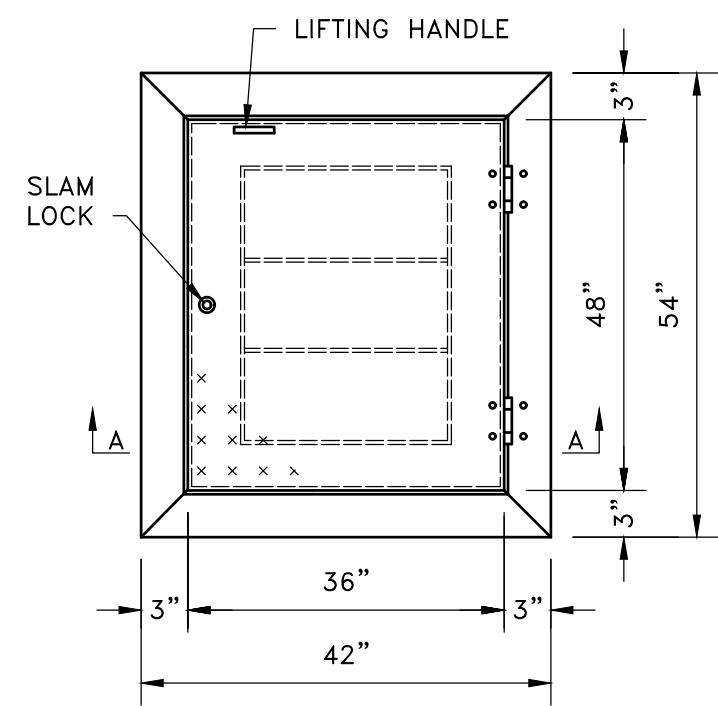
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PROJECT NO. NEX-2200136

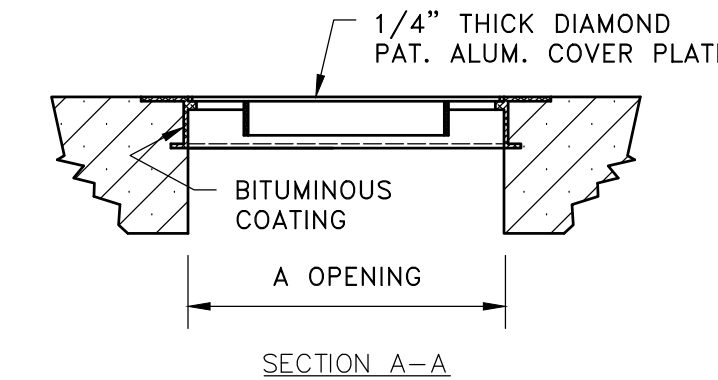
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VALVE PIT



WET WELL

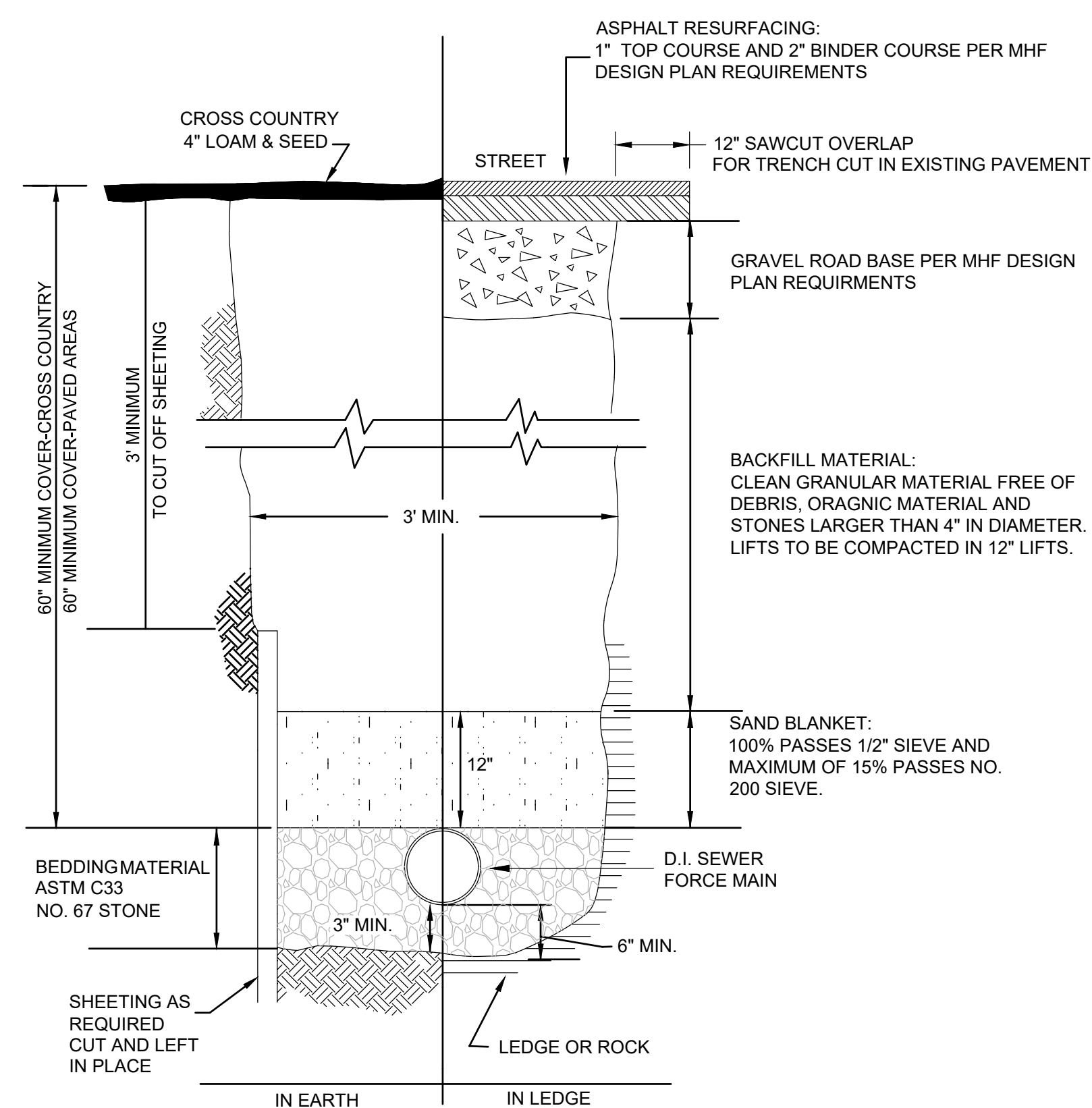
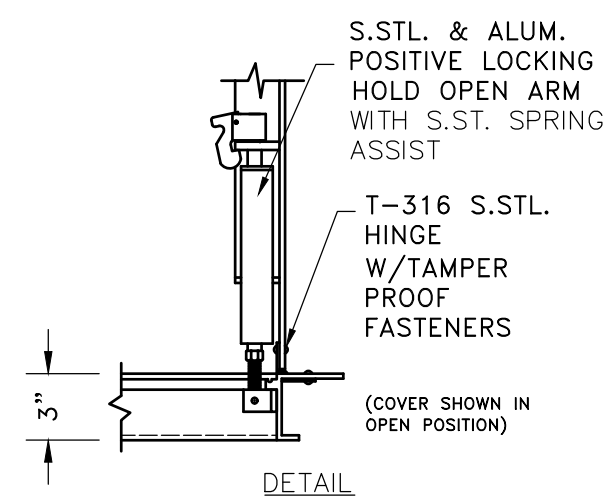


ALUMINUM HATCH DETAILS
NOT TO SCALE

**WET WELL: MODEL S1S3648
VALVE PIT: MODEL S1S3648
SERIES S1S ACCESS DOOR**

- STANDARD FEATURES:**
1. AUTO-LOCK T-316 STAINLESS STEEL HOLD OPEN ARM WITH RELEASE HANDLE
 2. T-316 STAINLESS STEEL HINGES AND ATTACHING HARDWARE
 3. T-316 STAINLESS STEEL SLAM LOCK W/REMOVABLE KEY
 4. STAINLESS STEEL COMPRESSION SPRING ASSIST
 5. BUILT-IN NEOPRENE CUSHION/GASKET
 6. NON-OZONE DEPLETING BITUMINOUS COATING
 7. SINGLE LEAF CONSTRUCTION
 8. 300 LBS. PER SQ. FT. LOAD RATING
 9. EXTRUDED ALUMINUM FRAME
 10. RECESSED LIFTING HANDLE

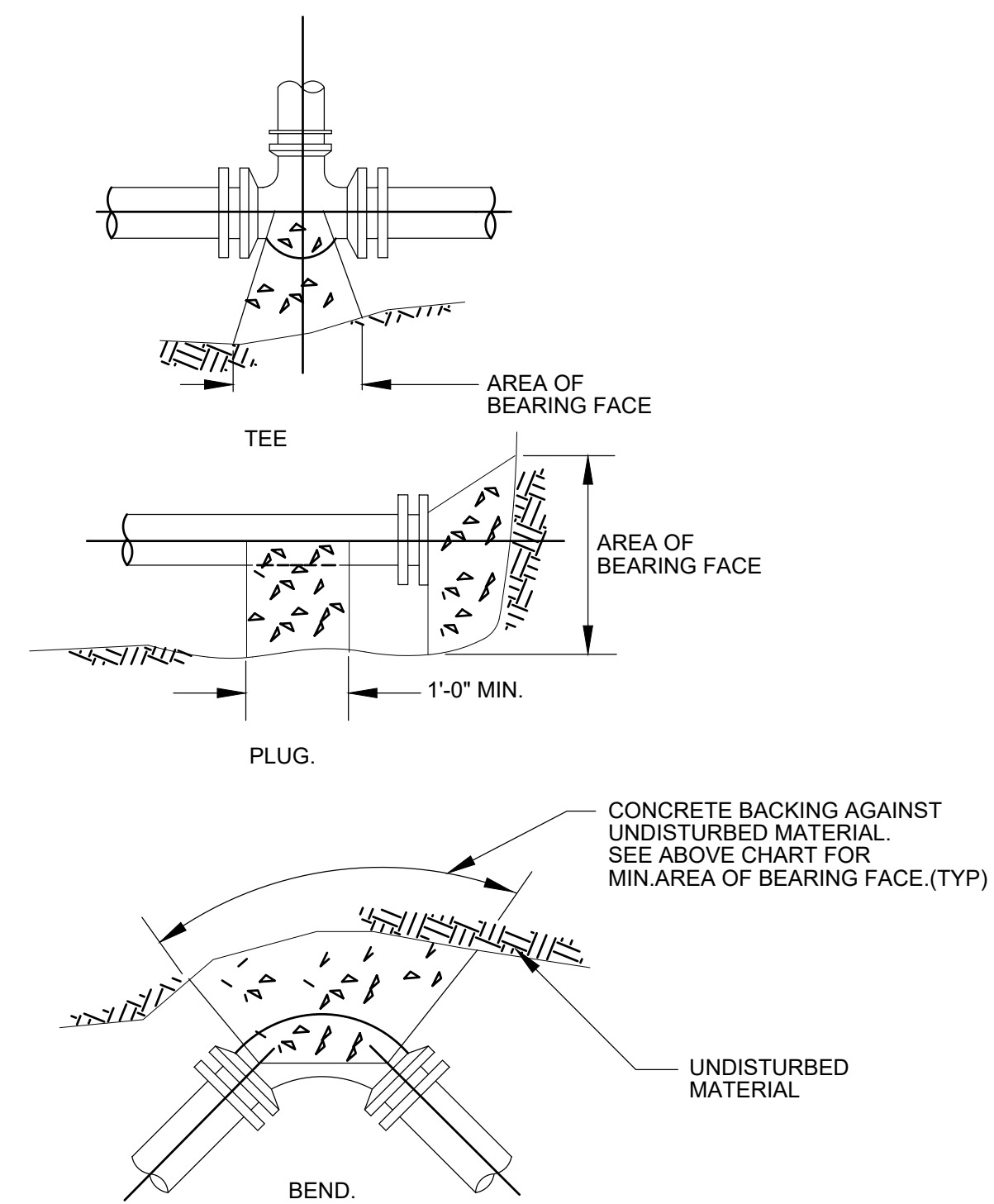
NOTE:
ACCESS HATCH TO BE SUPPLIED BY:
HALLIDAY PRODUCTS
6401 EDGEWATER DRIVE
ORLANDO, FLORIDA 32810
(OR APPROVED EQUAL)



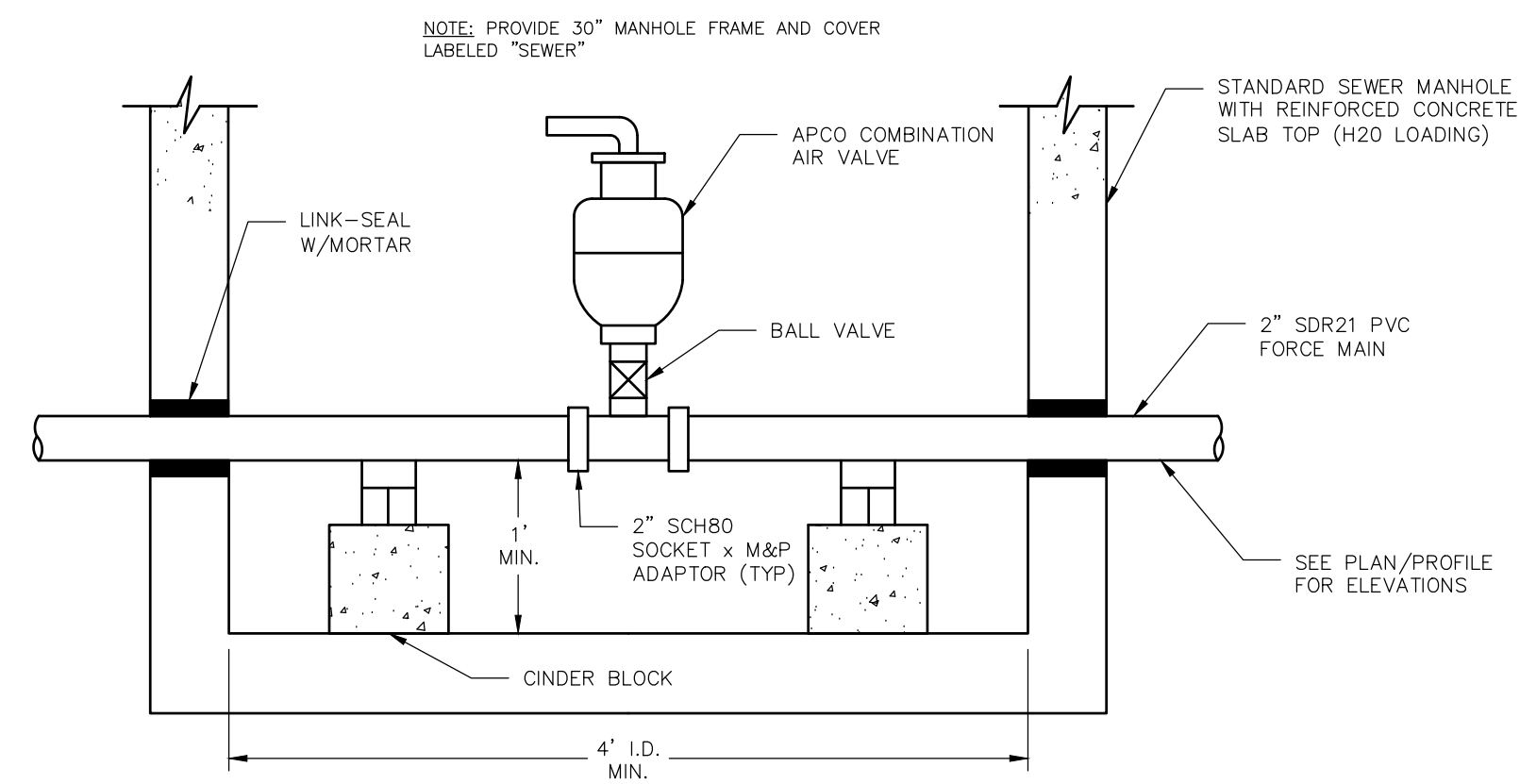
FORCE MAIN TRENCH SECTION
NOT TO SCALE

AREA OF BEARING FACE OF CONCRETE THRUST BLOCKS IN SQUARE FEET BASED ON 450 P.S.I. & TON/S.F. ALLOWABLE SOIL BEARING CAPACITY

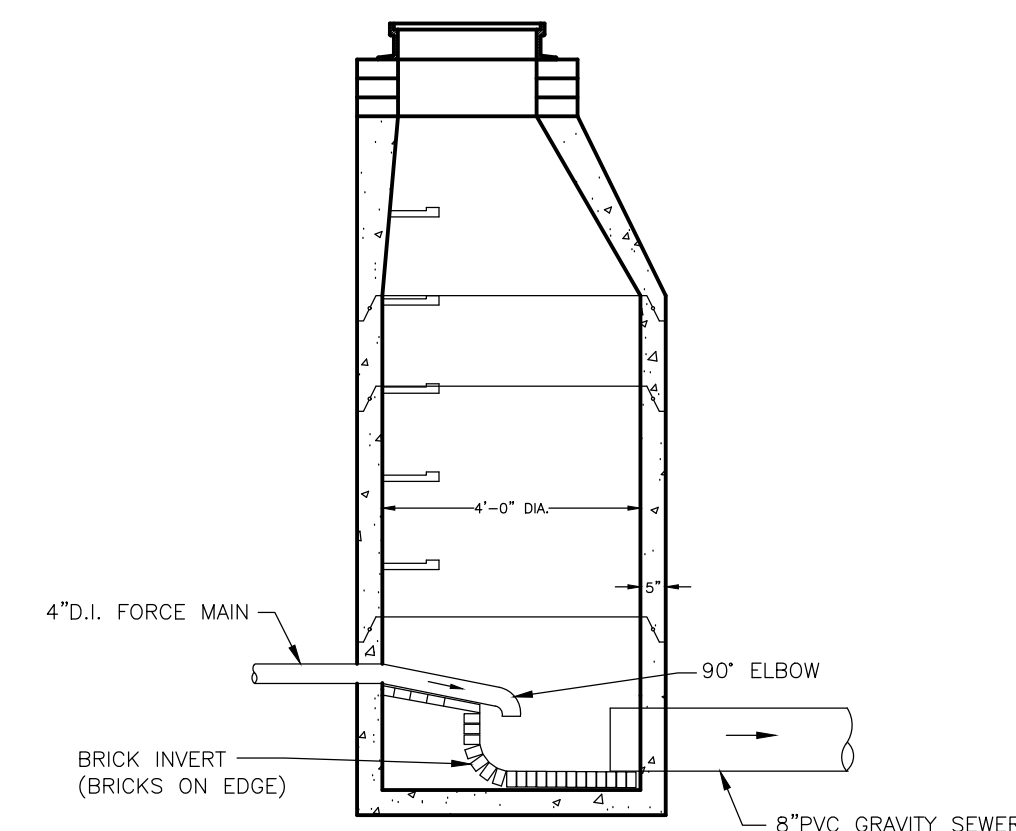
| PIPE SIZE IN. | 1/4 BEND | 1/8 BEND | PLUS & TEE |
|---------------|----------|----------|------------|
| 4, 6, 8 | 8 | 4 | 6 |
| 10 | 13 | 7 | 9 |
| 12 | 18 | 9 | 13 |
| 16 | 32 | 16 | 23 |



TYPICAL CONCRETE BACKING
NOT TO SCALE



TYPICAL AIR RELEASE MANHOLE
NOT TO SCALE



FORCE MAIN CONNECTION TO GRAVITY SEWER
NOT TO SCALE

PREPARED FOR
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PUMP STATION DETAILS

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