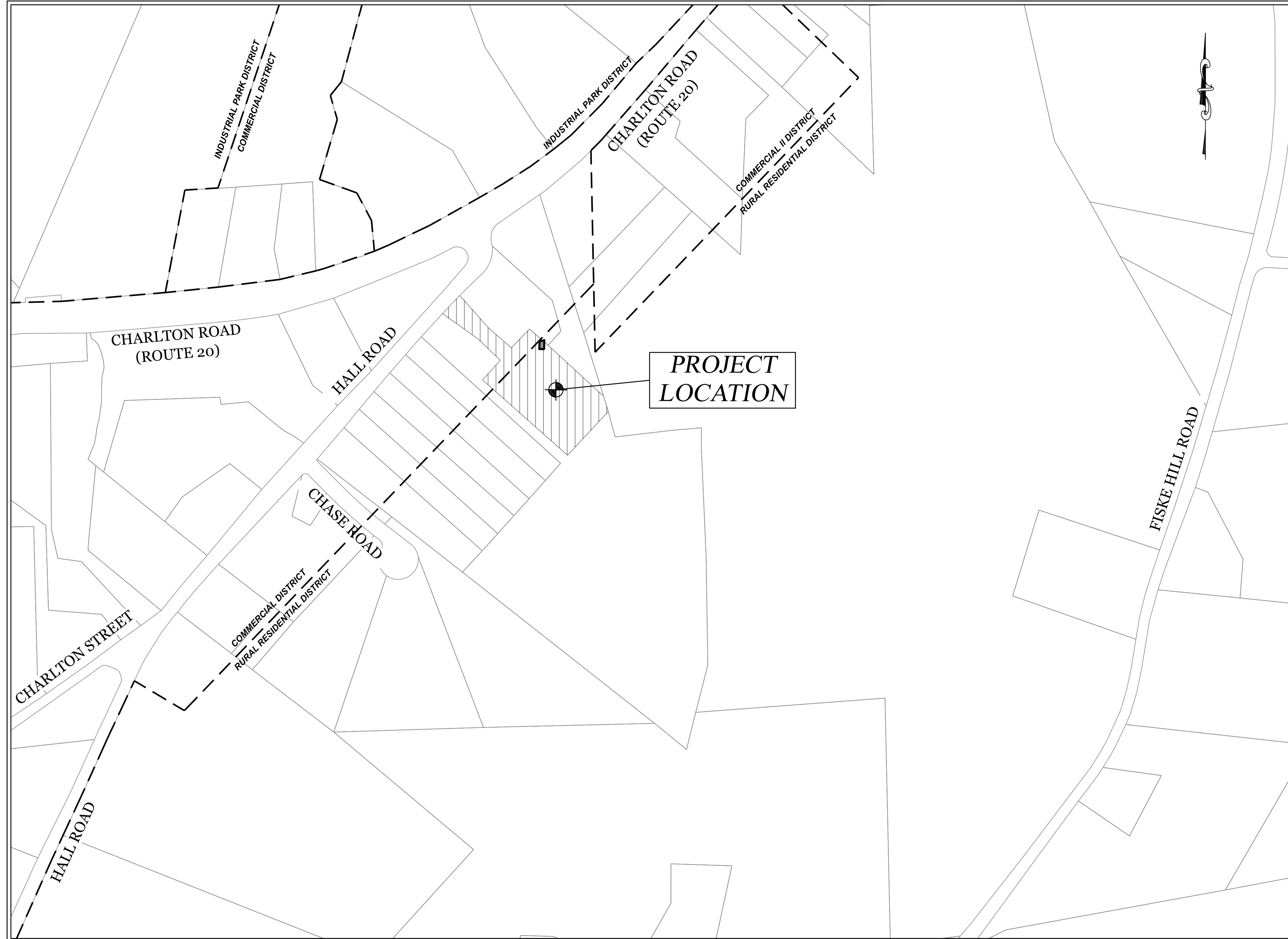


CULVERT MODIFICATION PLAN STURBRIDGE MEADOWS

92 & 94 HALL ROAD
STURBRIDGE, MA 01566
PREPARED FOR
STURBRIDGE DHC, LLC



SITE LOCUS

1" = 200'

DRAWING INDEX

C-1	TITLE SHEET
C-2	EXISTING CONDITIONS PLAN
C-3	DRAINAGE PLAN
C-4	EROSION AND SEDIMENTATION CONTROL PLAN
C-5	CONSTRUCTION DETAILS

APPLICANT / PROPERTY INFORMATION:

APPLICANT:
STURBRIDGE DHC, LLC
MS. JESSE ALBERT
20 CORPORATE WOODS BLVD.
ALBANY, NY 12211

OWNER:
STURBRIDGE DHC, LLC
MS. JESSE ALBERT, OWNER
20 CORPORATE WOODS BLVD.
ALBANY, NY 12211

ASSESSORS ID: 315-02631-092 & 315-02631-094

DEED REFERENCE: WORCESTER COUNTY REGISTRY OF DEEDS

DEED BOOK 44691 PAGE 0090
PLAN BOOK 526 PAGE 120
PLAN BOOK 603 PAGE 66

PROJECT ENGINEER:

PETER ENGLE, P.E.
MCCLURE ENGINEERING, INC.
119 WORCESTER ROAD
CHARLTON, MA 01507
PHONE: (508)-248-2005

PROJECT SURVEYOR:

MARK LAPRAD, P.L.S.
MCCLURE ENGINEERING, INC.
119 WORCESTER ROAD
CHARLTON, MA 01507
PHONE: (508)-248-2005

PROJECT ENVIRONMENTAL CONSULTANT:

SCOTT M. MORRISON, PWS
ECOTEC, INC.
102 GROVE STREET
WORCESTER, MA 01605
PHONE: (508) 752-9666

GENERAL NOTES:

1. THE BASE PLAN FOR THIS DESIGN WAS COMPILED FROM AN ON THE GROUND SURVEY CONDUCTED BY MCCLURE ENGINEERING ON DATE AND SUPPLEMENTED WITH TOPOGRAPHY TAKEN FROM 2013-2014 USGS LIDAR: POST SANDY (MA, NH, RI) TAKEN FROM NOAA ON LINE DATA ACCESS VIEWER.
2. ELEVATIONS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988.
3. HORIZONTAL CONTROL IS BASED UPON THE NORTH AMERICAN DATUM OF 1983.
4. PROPERTY IS LOCATED WITHIN TWO DISTRICTS COMMERCIAL AND RURAL RESIDENTIAL

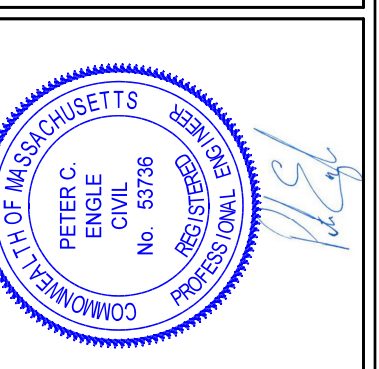
COMMERCIAL DISTRICT HAS THE FOLLOWING DIMENSIONAL REQUIREMENTS:
MINIMUM LOT AREA: 43,560 S.F.
MINIMUM LOT FRONTAGE: 150' FEET
MINIMUM YARD SETBACKS (FRONT/SIDE/REAR): 25'/10'/10'
MAXIMUM BUILDING HEIGHT: 35'
MAXIMUM STORIES: 3
MAXIMUM COVERAGE: 30%
MAXIMUM IMPERVIOUS SURFACE 70%

RURAL RESIDENTIAL DISTRICT HAS THE FOLLOWING DIMENSIONAL REQUIREMENTS:
MINIMUM LOT AREA: 43,560 S.F.
MINIMUM LOT FRONTAGE: 150' FEET
MINIMUM YARD SETBACKS (FRONT/SIDE/REAR): 30'/20'/20'
MAXIMUM BUILDING HEIGHT: 35'
MAXIMUM STORIES: 2
MAXIMUM COVERAGE: 15%
5. PROPERTY DOES NOT LIE WITHIN THE SPECIAL FLOOD HAZARD AREA. FOR REFERENCE SEE THE NATIONAL FLOOD INSURANCE PROGRAM RATE MAP NO. 25027C0927F FOR COMMUNITY NO. 250337 AND DATED JUNE 21, 2023.
6. THIS PLAN IS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO ANY MATTERS THAT SUCH A REPORT MAY DISCLOSE.

HOR. SCALE IN FEET: 1"=200'

REV	DATE	DESCRIPTION	MADE (APVD)

PETER C. ENGLE, P.E.
PROFESSIONAL ENGINEER
MA LIC. NO. 53736



McCLURE ENGINEERING, INC
119 Worcester Road
Charlton, MA 01507
Tel: (508) 248-2005
Fax (508) 248-4887
Email: pengle@mcclureengineers.com

CULVERT MODIFICATION PLAN
92 & 94 HALL ROAD
STURBRIDGE, MA 01566
PREPARED FOR
STURBRIDGE DHC, LLC
MS. JESSE ALBERT
20 CORPORATE WOODS BLVD.
ALBANY, NY 12211

DRAWN BY: KP
DATE: 8/24/2023
CHK BY: PE
SCALE: 1"=200'
PROJ. NO. 287-2585-M

TITLE SHEET

C-1

DIG-SAFE (1-888-344-7233) NOTE:
CONTRACTOR REQUIRED TO NOTIFY "DIG SAFE" 72 HOURS PRIOR TO ANY ON-SITE EXCAVATION OR CONSTRUCTION AT 1-888-344-7233. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER AND SEWER DEPARTMENTS TO MARK OUT THEIR UTILITIES.

N/F
CHARLES E. TAYLOR TRUSTEE
183 CHARLTON ROAD
BOOK: 45633, PAGE: 0109
ASSESSORS REFERENCE: 208-02632-183

N/F
SCOTT CONNER
(PERSONAL REPRESENTATIVE)
201A CHARLTON ROAD
BOOK: 60404, PAGE: 267
ASSESSORS REFERENCE: 208-02622-201A

N/F
SCOTT CONNER
(PERSONAL REPRESENTATIVE)
201 CHARLTON ROAD
BOOK: 60404, PAGE: 267
ASSESSORS REFERENCE: 208-02622-201

N/F
STURBRIDGE DHC LLC
C/O DAWN HOMES CAPITAL LLC
98 HALL ROAD
BOOK: 44691, PAGE: 0090
ASSESSORS REFERENCE: 315-02631-098

NORTH AMERICAN
DATUM OF 1983

N/F
STURBRIDGE DHC LLC
C/O DAWN HOMES CAPITAL LLC
94 HALL ROAD
BOOK: 44691, PAGE: 0090
ASSESSORS REFERENCE: 315-02631-094

N/F
STURBRIDGE DHC LLC
C/O DAWN HOMES CAPITAL LLC
90 HALL ROAD
BOOK: 44691, PAGE: 0090
ASSESSORS REFERENCE: 315-02631-090

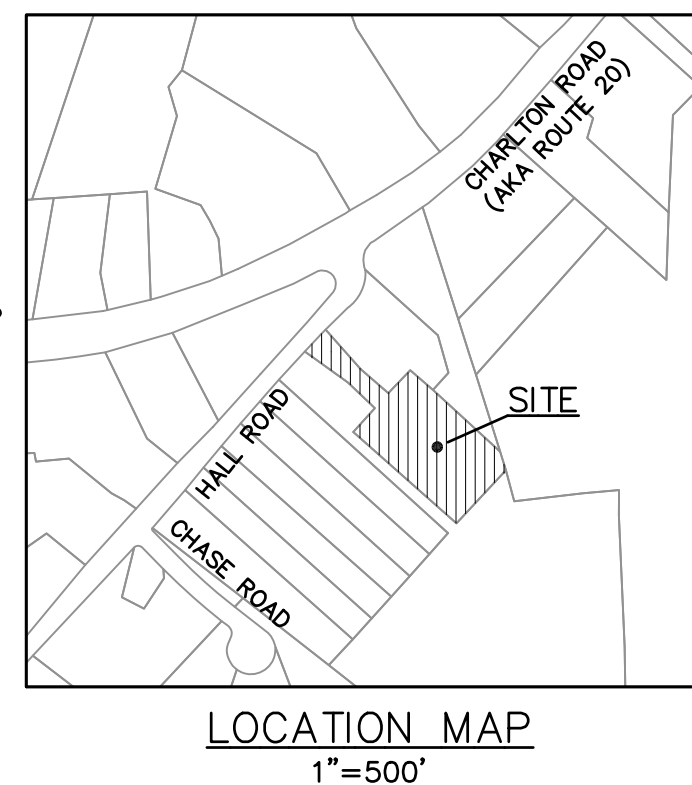
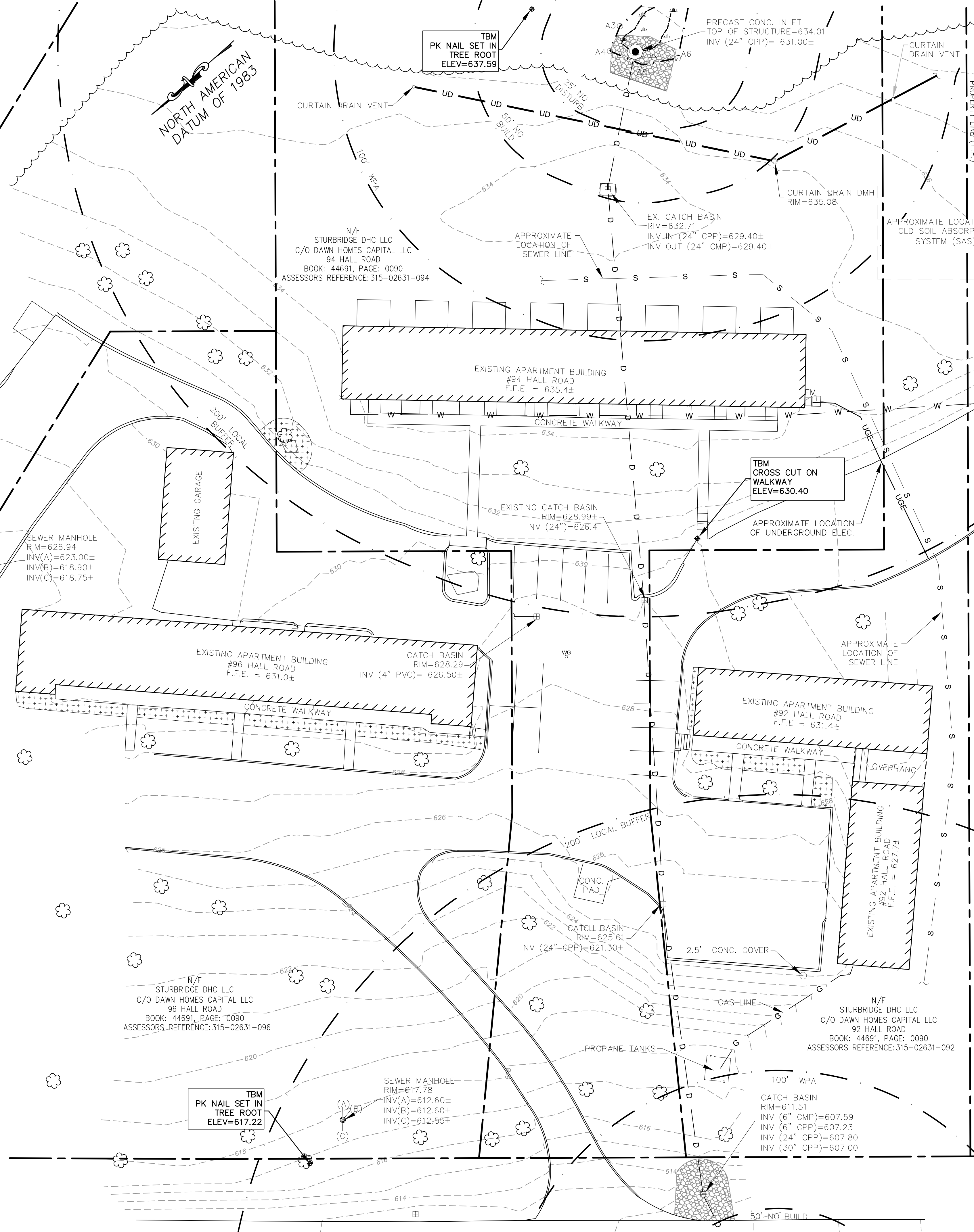
N/F
STURBRIDGE DHC LLC
C/O DAWN HOMES CAPITAL LLC
88 HALL ROAD
BOOK: 44691, PAGE: 0090
ASSESSORS REFERENCE: 315-02631-088

LEGEND:

BIT.	BITUMINOUS	IP	IRON PIN
CB	CATCH BASIN	*	LIGHT POLE
CO	CLEAN OUT	R=	PROPERTY LINE
CONC.	CONCRETE	RCP	RIM ELEVATION
CPP	CORRUGATED PLASTIC PIPE	RC	REINFORCED CONCRETE PIPE
DH	DRILL HOLE	SMH	SANITARY SEWER MANHOLE
DMH	DRAIN MANHOLE	S	SEWER LINE
EM	ELECTRIC METER	T/	TOP OF
EXIST.	EXISTING	TR	TREE
	EXISTING CONTOURS	TR	TREELINE
	TYPICAL	UD	UNDER DRAIN
F.F.E.	FIRST FLOOR ELEVATION	UGE	UNDERGROUND ELECTRIC
FH	FIRE HYDRANT	W	WATER LINE
FES	FLARED END SECTION	WG	WATER GATE
FND	FOUND		WETLANDS
G	GAS LINE		
GM	GAS METER		

EXISTING UTILITY LINES SHOWN ON THIS DRAWING ARE FROM AVAILABLE INFORMATION AND ARE APPROXIMATE LOCATIONS. THERE MAY BE EXISTING LINES OTHER THAN THOSE INDICATED. WE ASSUME NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER PUBLIC UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED.

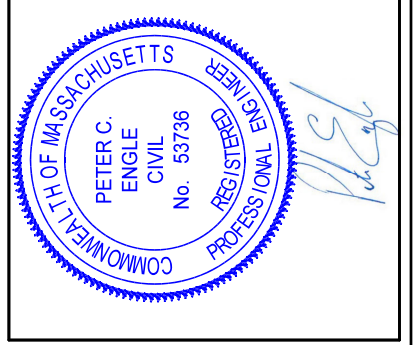
DIG-SAFE (1-888-344-7233) NOTE:
CONTRACTOR REQUIRED TO NOTIFY "DIG SAFE" 72 HOURS PRIOR TO ANY ON-SITE EXCAVATION OR CONSTRUCTION AT 1-888-344-7233. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER AND SEWER DEPARTMENTS TO MARK OUT THEIR UTILITIES.



HOR. SCALE IN FEET: 1"=50'

REV	DATE	REVISIONS	MADE (APVD)

PETER C. ENGLE, P.E.
PROFESSIONAL ENGINEER
MA LIC. NO. 53736



McCLURE ENGINEERING, INC
119 Worcester Road
Charlton, MA 01507
Tel: (508) 248-2005
Fax: (508) 248-4887
Email: pengle@mcclureengineers.com

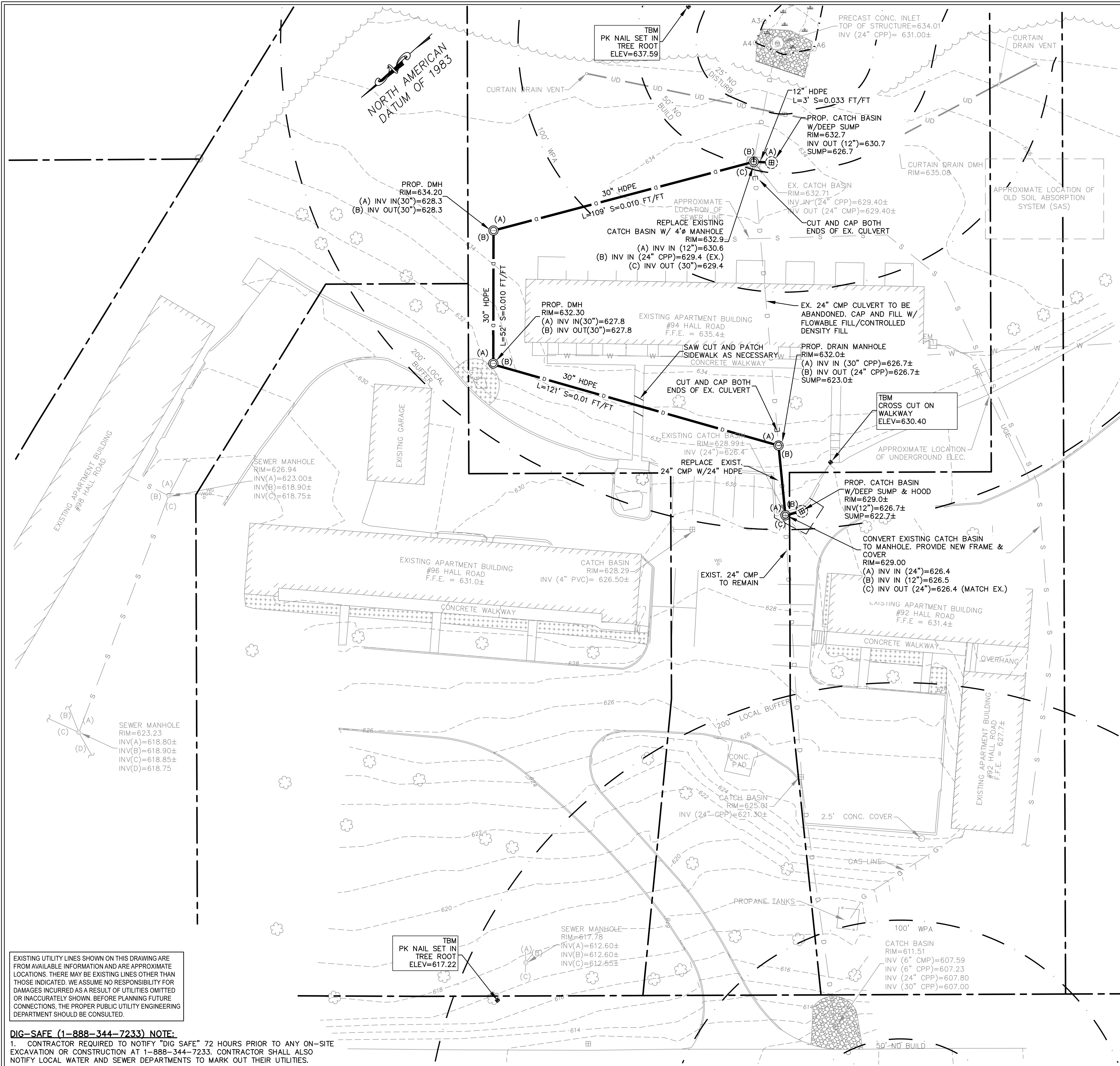
GENERAL NOTES:

- PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS AT 92 & 94 HALL ROAD, STURBRIDGE, MA OWNED BY STURBRIDGE DHC LLC, ALBANY, NY 12211.
 - SITE EXISTING CONDITIONS ARE BASED ON A GROUND SURVEY CONDUCTED BY MCCLURE ENGINEERING, INC. BETWEEN 04/25/2023-5/03/2023. HORIZONTAL DATUM IS NAD OF 1983. ELEVATIONS SHOWN HEREIN ARE BASED UPON NGVD 1988 DATUM.
 - NO PROPERTY LINE SURVEY PERFORMED AT THIS TIME, PROPERTY LINES AS SHOWN ARE APPROXIMATE ONLY AND ARE BASED UPON A "TITLE SURVEY PLAN", PREPARED BY JALBERT ENGINEERING, INC, DATED SEPTEMBER 26, 1994, PREPARED FOR STURBRIDGE MEADOWS REALTY TRUST.
 - PROPERTY IS LOCATED WITHIN TWO DISTRICTS COMMERCIAL AND RURAL RESIDENTIAL
- COMMERCIAL DISTRICT HAS THE FOLLOWING DIMENSIONAL REQUIREMENTS:
- | | |
|--|-----------------|
| MINIMUM LOT AREA: | 43,560 S.F. |
| MINIMUM LOT FRONTAGE: | 150' FEET |
| MINIMUM YARD SETBACKS (FRONT/SIDE/REAR): | 25' / 10' / 10' |
| MAXIMUM BUILDING HEIGHT: | 35' |
| MAXIMUM STORIES: | 3 |
| MAXIMUM COVERAGE: | 30% |
| MAXIMUM IMPERVIOUS SURFACE | 70% |
- RURAL RESIDENTIAL DISTRICT HAS THE FOLLOWING DIMENSIONAL REQUIREMENTS:
- | | |
|--|-----------------|
| MINIMUM LOT AREA: | 43,560 S.F. |
| MINIMUM LOT FRONTAGE: | 150' FEET |
| MINIMUM YARD SETBACKS (FRONT/SIDE/REAR): | 30' / 20' / 20' |
| MAXIMUM BUILDING HEIGHT: | 35' |
| MAXIMUM STORIES: | 2 |
| MAXIMUM COVERAGE: | 15% |
- THE WETLANDS WERE DELINEATED BY ECOTEC, INC. ON APRIL 21, 2023
 - SITE DOES NOT LIE WITHIN THE 100-YEAR FLOOD ZONE ACCORDING TO FEMA FIRM MAP NO. 25027C0927F, EFFECTIVE JUNE 6, 2023.
 - THIS PLAN IS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO ANY MATTERS THAT SUCH A REPORT MAY DISCLOSE.

CULVERT MODIFICATION PLAN
92 & 94 HALL ROAD
STURBRIDGE, MA 01566
PREPARED FOR
STURBRIDGE DHC, LLC
MS. JESSE ALBERT
20 CORPORATE WOODS BLVD.
ALBANY, NY 12211

DRAWN BY: KJ
DATE: 8/24/2023
CHK BY: PE
SCALE: 1"=20'
PROJ. NO. 287-2585-M

EXISTING CONDITIONS
C-2



LEGEND:

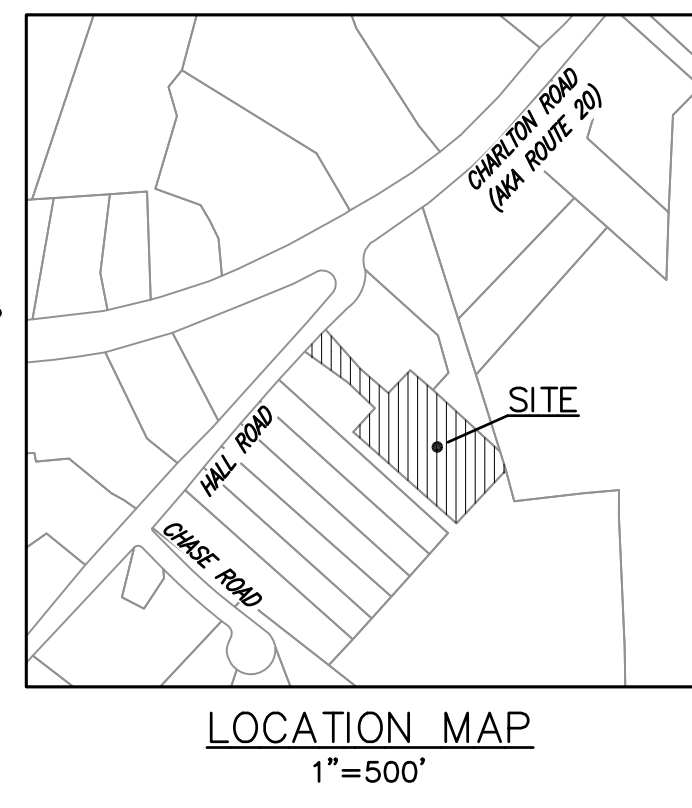
- BIT. BITUMINOUS
- CB CATCH BASIN
- CO CLEAN OUT
- CONC. CONCRETE
- CPP CORRUGATED PLASTIC PIPE
- DH DRILL HOLE
- DMH DRAIN MANHOLE
- D DRAINAGE LINE
- EM ELECTRIC METER
- EXIST. EXISTING
- 100- EXISTING CONTOURS
- F.F.E. FIRST FLOOR ELEVATION
- FY FIRE HYDRANT
- FES FLARED END SECTION
- FND FOUND
- G GAS LINE
- GM GAS METER
- IP IRON PIN
- * LIGHT POLE
- R- PROPERTY LINE
- RIM RIM ELEVATION
- RCP REINFORCED CONCRETE PIPE
- SMH SANITARY SEWER MANHOLE
- S SEWER LINE
- T/ TOP OF
- TR TREE
- TREELINE
- TYP. TYPICAL
- UD UNDER DRAIN
- UGE UNDERGROUND ELECTRIC
- W WATER LINE
- WG WATER GATE
- WETLANDS

HYDRAULIC ANALYSIS

PROP. 30" HDPE
 L=296'
 S=0.01 FT/FT
 PEAK CAPACITY = 41.3 C.F.S.

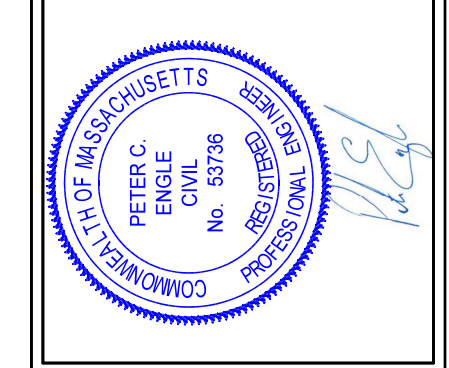
EXIST. 24" CMP
 L=146'
 S=0.02 FT/FT
 PEAK CAPACITY = 20.1 C.F.S.

USGS STREAM STATS
 2-YR FLOW = 8.1 C.F.S.
 10-YR FLOW = 19.3 C.F.S.
 25-YR FLOW = 27.1 C.F.S.
 50-YR FLOW = 33.7 C.F.S.
 100-YR FLOW = 40.9 C.F.S.



HOR. SCALE IN FEET: 1"=20'	0	20	40	60
REV	DATE	DESCRIPTION	REVISIONS	MADE (APVD)

PETER C. ENGLE, P.E.
 PROFESSIONAL ENGINEER
 MA LIC. NO. 53736

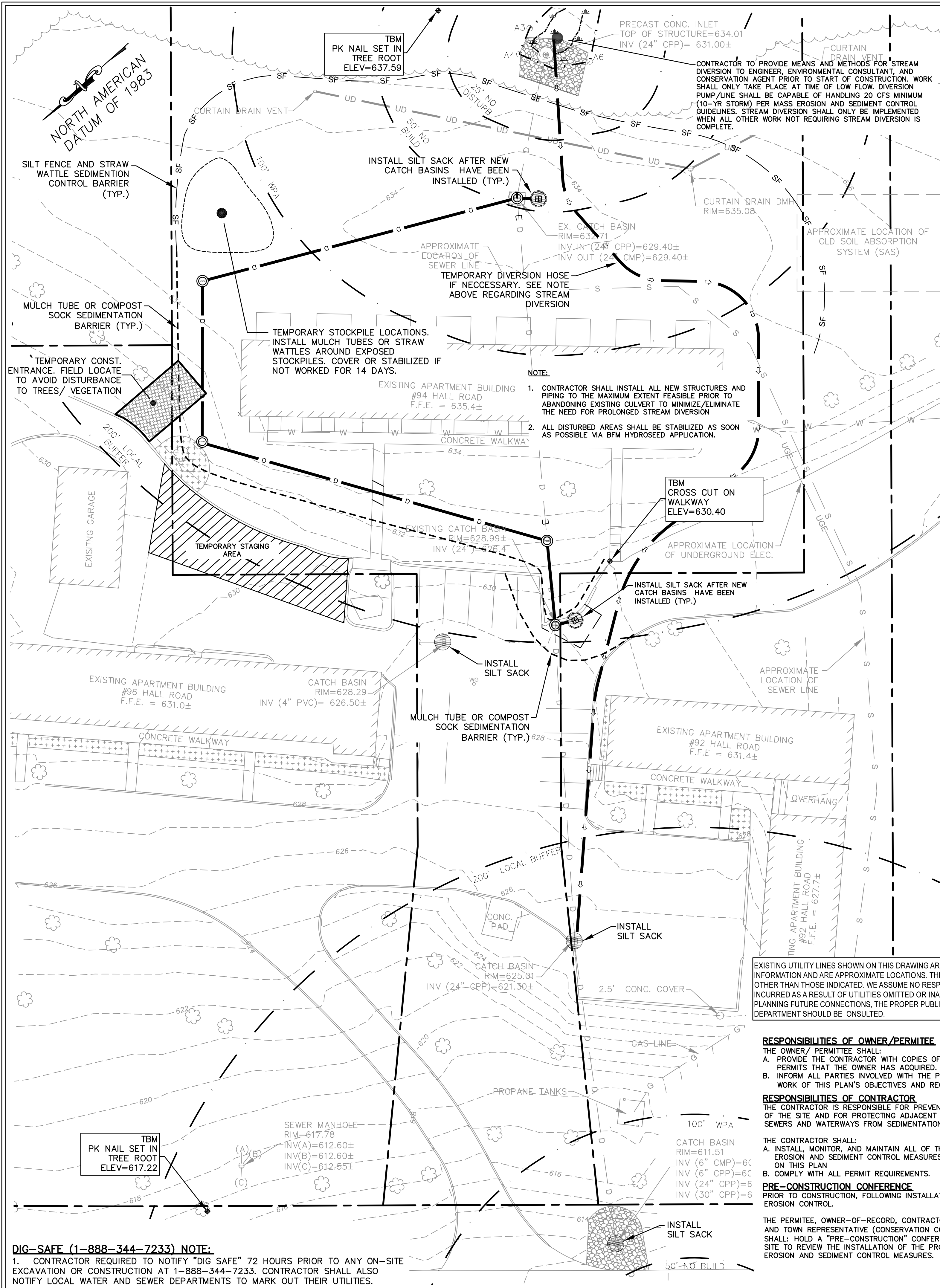


McCLURE ENGINEERING, INC.
 119 Worcester Road
 Charlton, MA 01507
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CULVERT MODIFICATION PLAN
 92 & 94 HALL ROAD
 STURBRIDGE, MA 01566
 PREPARED FOR
 STURBRIDGE DHC, LLC
 MS. JESSE ALBERT
 20 CORPORATE WOODS BLVD.
 ALBANY, NY 12211

DRAWN BY: KP
 DATE: 8/24/2023
 CHK BY: PE
 SCALE: 1"=20'
 PROJ. NO. 287-2585-N

DRAINAGE PLAN
C-3



GENERAL CONTROLS

- CLEANING OF STORMWATER STRUCTURES:** CLEAN ALL STORMWATER STRUCTURES INCLUDING, BUT NOT LIMITED TO, PIPES, SWALES AND RIPRAP APRONS OF SEDIMENT UPON COMPLETION OF THE PROJECT.
- PAVEMENT MAINTENANCE:** THE CONTRACTOR SHALL SWEEP PAVED ROADWAYS ADJACENT TO THE SITE ON A ROUTINE BASIS TO PREVENT TRACKING OF MUD ONTO PUBLIC ROADWAYS AND WASHING OF MUD INTO WATERWAYS. IF THE CONTRACTOR'S SCHEDULE FOR CLEANING THE PAVEMENT IS FOUND TO BE INADEQUATE BY THE OWNER, OWNER'S REPRESENTATIVE, OR TOWN, THE CONTRACTOR SHALL INCREASE THE FREQUENCY AT NO ADDITIONAL COST TO THE OWNER.
- WASTE DISPOSAL:** THE CONTRACTOR SHALL PROVIDE AN ADEQUATE NUMBER OF COVERED WASTE CONTAINERS TO ENSURE THAT NO LITTER, DEBRIS, BUILDING MATERIALS, OR SIMILAR MATERIALS ARE DISCHARGED TO WETLANDS OR WATERCOURSES. THE CONTRACTOR SHALL INSTRUCT SUBCONTRACTORS TO USE THE CONTAINERS FOR WASTE MATERIAL. THE CONTAINERS SHALL BE PROMPTLY EMPTIED WHEN FULL.

GENERAL CONDITIONS

- IF EROSION CONTROL MEASURES ARE DAMAGED BY CONSTRUCTION VEHICLES, ACTS OF VANDALISM, OR SEVERE WEATHER CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY REMOVE SEDIMENT IN THE VICINITY OF THE EROSION CONTROL MEASURES AND REPAIR THESE MEASURES TO A FUNCTIONAL CONDITION.
- IF DURING OR AFTER CONSTRUCTION, IT BECOMES APPARENT THAT EXISTING EROSION CONTROL MEASURES ARE INCAPABLE OF CONTROLLING EROSION, THE ENGINEER OR THE TOWN MAY REQUIRE ADDITIONAL CONTROL MEASURES, INCLUDING BUT NOT LIMITED TO: ADDITIONAL STRAW WATTLES, HAYBALES, SILT FENCES, SEDIMENT BASINS, MECHANICALLY ANCHORED MULCH, OR ENHANCED DEWATERING FILTRATION.
- NO CONSTRUCTION SHALL PROCEED UNTIL A WRITTEN PROPOSAL OF METHODS TO PREVENT CONSTRUCTION DEBRIS, PAINT, OR OTHER SUCH CONTAMINATED MATERIALS FROM ENTERING A STORM SEWER, THE WETLAND, OR WATERCOURSE HAS BEEN SUBMITTED BY THE CONTRACTOR TO THE OWNER, APPROVED BY THE OWNER AND SUCH METHODS HAVE BEEN IMPLEMENTED AS THE OWNER DIRECTS. THESE MATERIALS SHALL BE COLLECTED AND DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER IN ACCORDANCE WITH ALL APPLICABLE FEDERAL AND STATE LAWS AND REGULATIONS. THE OWNER MAY ORDER THE CONTRACTOR TO CEASE SUCH ACTIVITY TEMPORARILY IF, IN THE JUDGMENT OF THE OWNER, WIND OR STORM CONDITIONS THREATEN TO CAUSE THE DEPOSIT OF SUCH MATERIAL IN A WATERWAY.

PERMANENT STABILIZATION MEASURES

- ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
 - INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
 - ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RE-SEEDED AS NEEDED.
 - SILT FENCES AND MULCH TUBES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED, SEDIMENT SHALL BE REMOVED FROM THE EROSION CONTROL BARRIERS WHEN IT REACHES ONE-HALF THE HEIGHT OF BARRIER.
 - THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

MAINTENANCE:

ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

DESCRIPTION AND MAINTENANCE OF EROSION CONTROL MEASURES

TEMPORARY STABILIZATION MEASURES

EROSION CONTROL BARRIERS: INSTALL EROSION CONTROL BARRIERS AT VARIOUS LOCATIONS AS SHOWN ON THE PLANS AND DETAILS. EMBED THE EROSION CONTROL BARRIER INTO THE GROUND AND FIRMLY ANCHOR IT AS SHOWN IN THE DETAILS. REMOVE SEDIMENT ONCE LEVELS HAVE REACHED 1/4 OF THE EFFECTIVE HEIGHT. REPAIR AND/OR REPLACE THE SILT FENCE/HAYBALES IMMEDIATELY IF DAMAGED OR DETERIORATED.

STOCKPILING OR STORAGE OF EXCAVATED MATERIALS: COMPLETELY SURROUND TEMPORARY MATERIAL STOCKPILES WITH STRAW WATTLES TO PREVENT TRANSPORTATION OF SEDIMENT. NO STOCKPILES SHALL BE KEPT WITHIN 100' WETLAND BUFFER ZONES.

DUST CONTROL: TAKE PRECAUTIONS TO PREVENT DUST FROM BECOMING A NUISANCE TO ADJUTING PROPERTY OWNERS. BROOM OFF PAVEMENT AREAS ADJOINING THE EXCAVATION ON A DAILY BASIS. COVER AND/OR KEEP MOIST ALL EARTH STOCKPILES AT ALL TIMES. USE CALCIUM CHLORIDE TO CONTROL DUST OVER CERTAIN AREAS OF THE SITE AS NEEDED AND/OR AS DIRECTED BY THE ENGINEER. CALCIUM CHLORIDE SHALL CONFORM TO ASTM D-98, TYPE I. THE CONTRACTOR SHALL MAINTAIN AND INSPECT, ON A DAILY BASIS, THE ADEQUACY OF DUST CONTROL MEASURES AND CORRECT ANY DEFICIENCIES IMMEDIATELY.

DEWATERING: IF DEWATERING IS REQUIRED, WATER SHOULD BE DISCHARGED TO DEWATERING BAGS OR OTHER SEDIMENT REMOVAL DEVICES PRIOR TO DISCHARGE TO RESOURCE AREA. WATER MAY ALSO BE USED FOR DUST CONTROL AND/OR VEGETATION WATERING.

PERMANENT STABILIZATION MEASURES

DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LANDSCAPED AREAS. IF TOPSOIL, SEED, AND/OR MULCH IS WASHED AWAY BY RAINFALL, THE CONTRACTOR SHALL RESTORE THE AREA.

CONSTRUCTION ENTRANCE DETAIL

OVERLAP/JOINT DETAIL

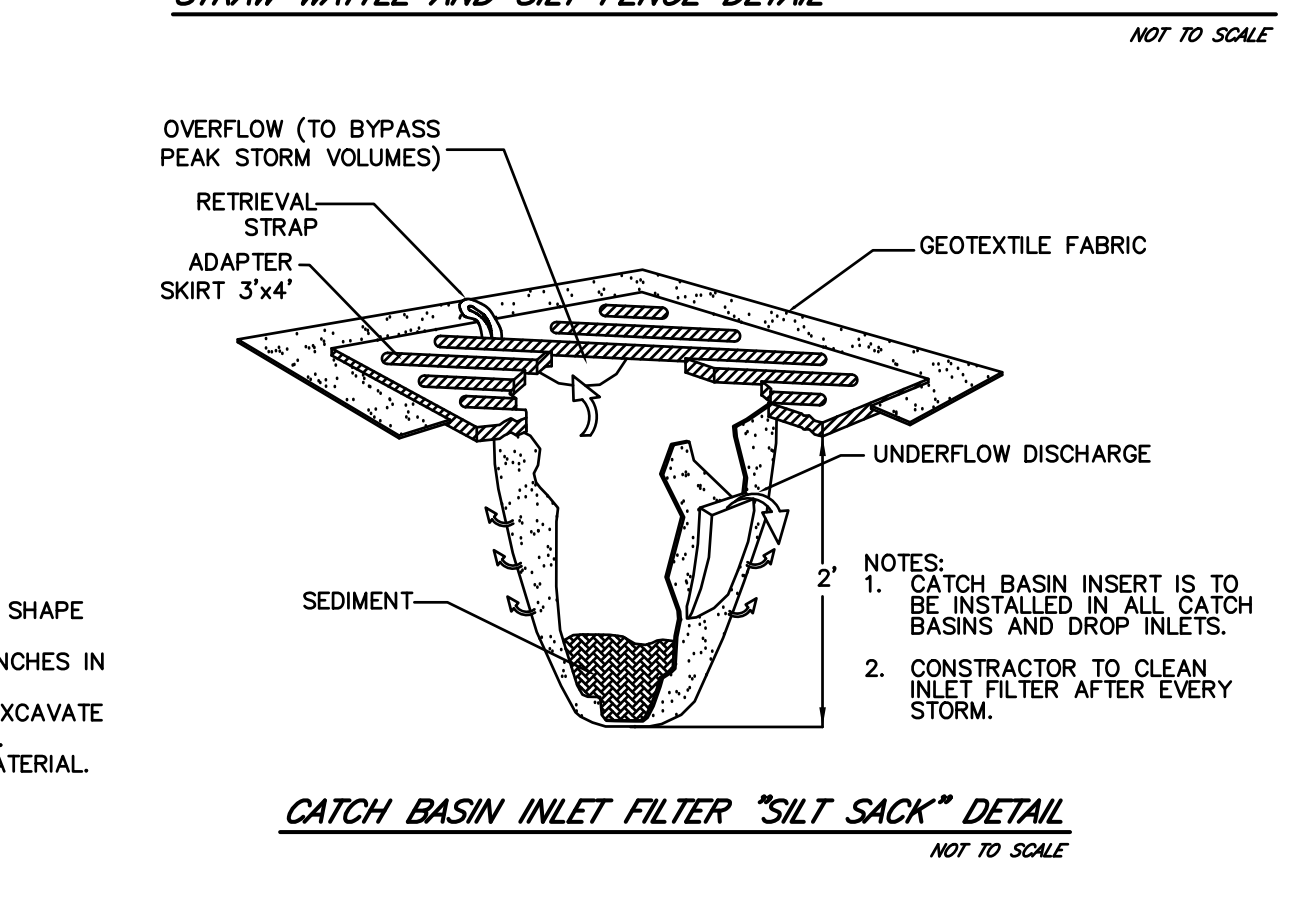
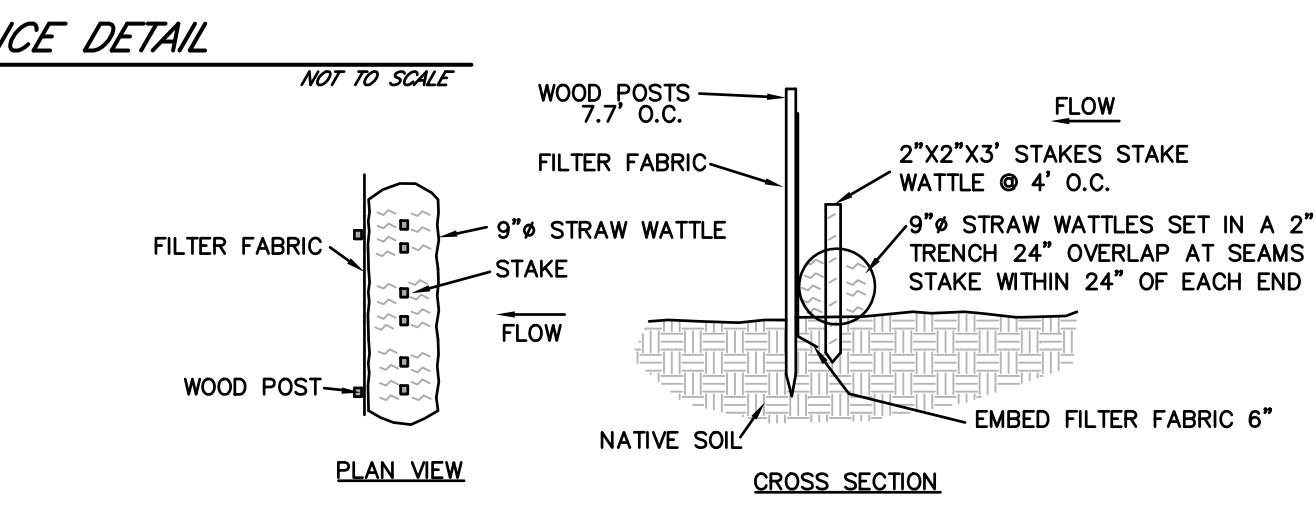
MULCH TUBES/COMPOST SOCK DETAIL

CATCH BASIN INLET FILTER "SILT SACK" DETAIL

CONSTRUCTION SCHEDULE AND EROSION & SEDIMENTATION CONTROL CHECKLIST	
92 & 94 HALL ROAD	
WORK DESCRIPTION	
SEQUENCE OF CONSTRUCTION	
THE FOLLOWING NARRATIVE DESCRIBES THE PLANNED CONSTRUCTION SEQUENCE WITH AN EMPHASIS ON THE TIMING AND SEQUENCE OF EROSION/SEDIMENTATION CONTROL MEASURES:	
THE FOLLOWING CONSTRUCTION SEQUENCE WILL BE REQUIRED TO INSURE THE EFFECTIVENESS OF THE EROSION/SEDIMENTATION CONTROL MEASURES IS OPTIMIZED.	
<ol style="list-style-type: none"> INSTALL EROSION CONTROL BARRIERS ON THE ENTIRE SITE (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL SILT FENCE, STRAW WATTLES AND MULCH TUBES). EROSION CONTROL INSPECTION WILL BE CONDUCTED AFTER INSTALLATION OF EROSION CONTROL BARRIERS. PREPARE TEMPORARY STAGING AND STORAGE AREA UPON IMPLEMENTATION AND INSTALLATION OF BARRIERS. DENOTE THEM ON THE SITE MAPS IMMEDIATELY AND NOTE ANY CHANGES IN THE LOCATIONS AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. BEGIN CLEARING AND GRUBBING THE SITE. START INSTALLATION OF DRAINAGE SYSTEM. INSTALL TEMPORARY STREAM DIVERSION (ONLY WHEN NECESSARY). TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DENUEDED AREAS THAT WILL BE INACTIVE FOR 15 DAYS OR MORE. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE COMPLETED. 	
FINAL PHASE	
<ol style="list-style-type: none"> PERMANENTLY STABILIZE ANY REMAINING EXPOSED AREAS. REPAIR ALL SIDEWALK, CURBING AND PARKING AREAS. TEMPORARY STREAM DIVERSION MATERIALS TO BE REMOVED AND STABILIZED. ONCE ENTIRE SITE IS STABILIZED, CALL FOR FINAL INSPECTION FROM SITE MONITOR. 	
NOTES:	
<ol style="list-style-type: none"> ONCE CONSTRUCTION IS COMPLETED, ALL DISTURBED AREAS ARE TO BE STABILIZED WITH LOAM AND SEED UNLESS OTHERWISE SPECIFIED. INSPECTIONS WILL BE CONDUCTED WEEKLY AND AFTER 0.25 INCH RAIN EVENTS. COPIES OF WEEKLY REPORTS AND RAIN EVENT REPORTS SHALL BE KEPT ON RECORD AND PROVIDED TO THE TOWN AND ENGINEER AT THEIR REQUEST. EXTRA EROSION CONTROL MATERIALS (STRAW WATTLES, SILT FENCE, AND MULCH TUBES) EQUAL TO 100 LF SHALL BE KEPT ON SITE FOR EMERGENCY REPAIRS. THESE MATERIALS SHALL BE KEPT COVERED. 	
NOTE: APPLICANT AND/OR LANDOWNER SHALL NOTIFY THE TOWN OF STURBRIDGE IN WRITING AT LEAST FIVE (5) BUSINESS DAYS PRIOR TO COMMENCING ANY WORK.	

LEGEND:

BIT.	BITUMINOUS
CB	CATCH BASIN
CO	CLEAN OUT
CONC.	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
DH	DRILL HOLE
DMH	DRAIN MANHOLE
D	DRAINAGE LINE
EM	ELECTRIC METER
EXIST.	EXISTING
-100-	EXISTING CONTOURS
F.F.E.	FIRST FLOOR ELEVATION
FH	FIRE HYDRANT
FES	FLARED END SECTION
FND	FOUND
G	GAS LINE
GM	GAS METER
IP	IRON PIN
*	LIGHT POLE
R=	PROPERTY LINE
RCP	REINFORCED CONCRETE PIPE
SMH	SANITARY SEWER MANHOLE
S	SEWER LINE
T/	TOP OF TREE
TR	TRAILLINE
TYP.	TYPICAL
UD	UNDER DRAIN
UGE	UNDERGROUND ELECTRIC
W	WATER LINE
WG	WATER GATE
W	WETLANDS



DIG-SAFE (1-888-344-7233) NOTE:

1. CONTRACTOR REQUIRED TO NOTIFY "DIG SAFE" 72 HOURS PRIOR TO ANY ON-SITE EXCAVATION OR CONSTRUCTION AT 1-888-344-7233. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER AND SEWER DEPARTMENTS TO MARK OUT THEIR UTILITIES.

HOR. SCALE IN FEET: 1"=20'	MADE (APVD)
REV. DATE	REVISIONS DESCRIPTION
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MA LIC. NO. 53736

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CULVERT MODIFICATION PLAN
92 & 94 HALL ROAD
STURBRIDGE, MA 01566

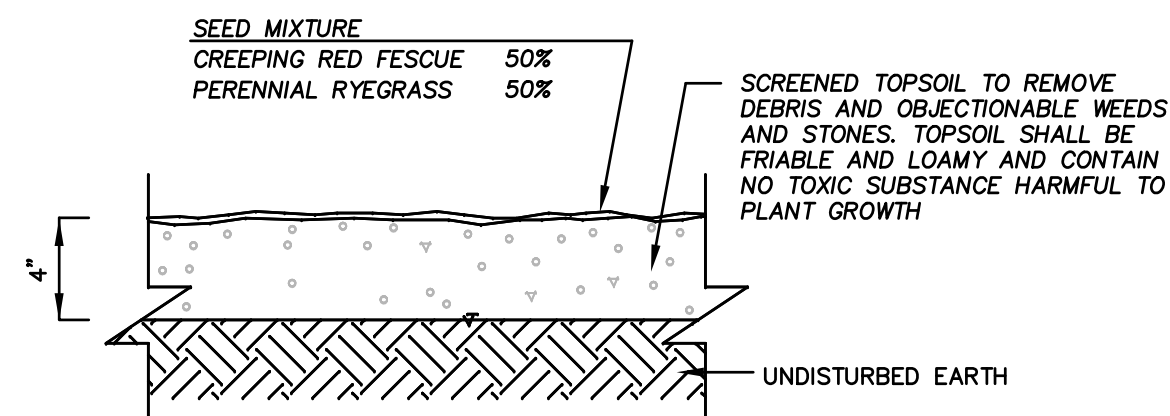
PREPARED FOR:
STURBRIDGE DHC, LLC
MS. JESSE ALBERT
20 CORPORATE WOODS BLVD.
ALBANY, NY 12211

DRAWN BY: KP
DATE: 8/24/2023
CHK BY: PE
SCALE: 1"=20'
PROJ. NO. 287-2586-M

EROSION AND SEDIMENTATION CONTROL PLAN

C-4

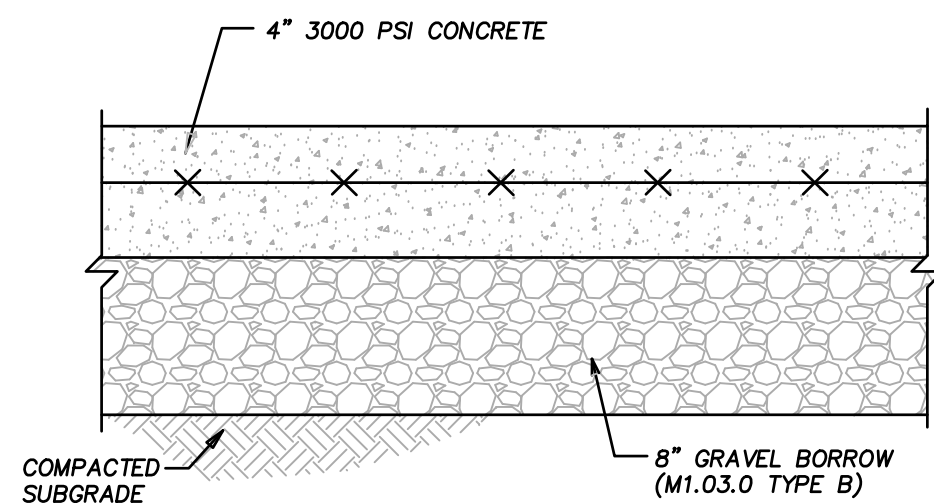
NOTE:
GRASS SEED SHALL BE SPREAD DURING THE GROWING SEASON AT THE RATE OF FOUR (4) POUNDS PER ONE THOUSAND (1,000) SQUARE FEET. IT SHALL BE A MIXTURE OF CREEPING RED FESCUE AND PERENNIAL RYE GRASS. IT SHALL BE PROPERLY FERTILIZED, LIMED AND WATERED.



LOAM & SEED DETAIL

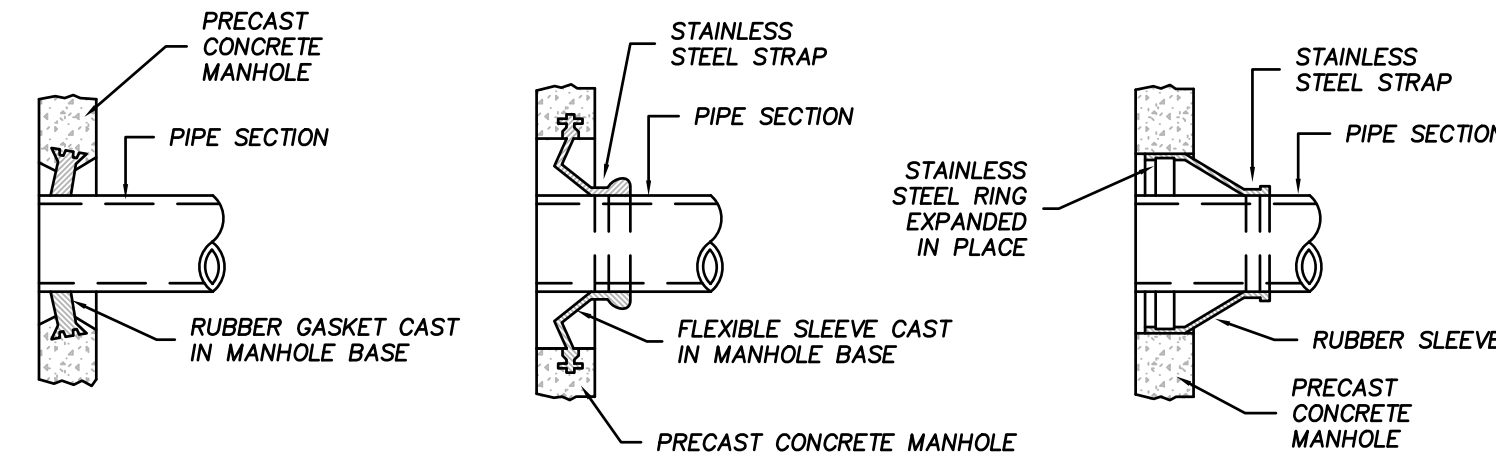
NOT TO SCALE

A FOUR-INCH-THICK CLASS A (3,000) PSI CONCRETE SHALL BE APPLIED TO THE PREPARED GRAVEL BASE. THE SLUMP SHALL VARY BETWEEN TWO AND FOUR INCHES. THE CONCRETE SHALL BE A PLANT MIX, PLACED, FLOATED, TROWELED AND THEN FINISHED WITH A BROOM. CURING AND SEALING COMPOUND SHALL BE APPLIED. PREFORMED EXPANSION JOINTS SHALL BE INSTALLED EIGHTEEN (18) FEET ON CENTER. TROWELED JOINTS SHALL BE INSTALLED SIX (6) FEET ON CENTER. PLANT MIX DESIGN DATA AND DELIVERY SLIPS SHALL BE SUBMITTED FOR REVIEW. ALL CONSTRUCTION AND CONCRETE REPAIR (IF NECESSARY) SHALL BE IN ACCORDANCE WITH MASSACHUSETTS HIGHWAY DEPARTMENT STANDARDS.



CONCRETE SIDEWALK DETAIL

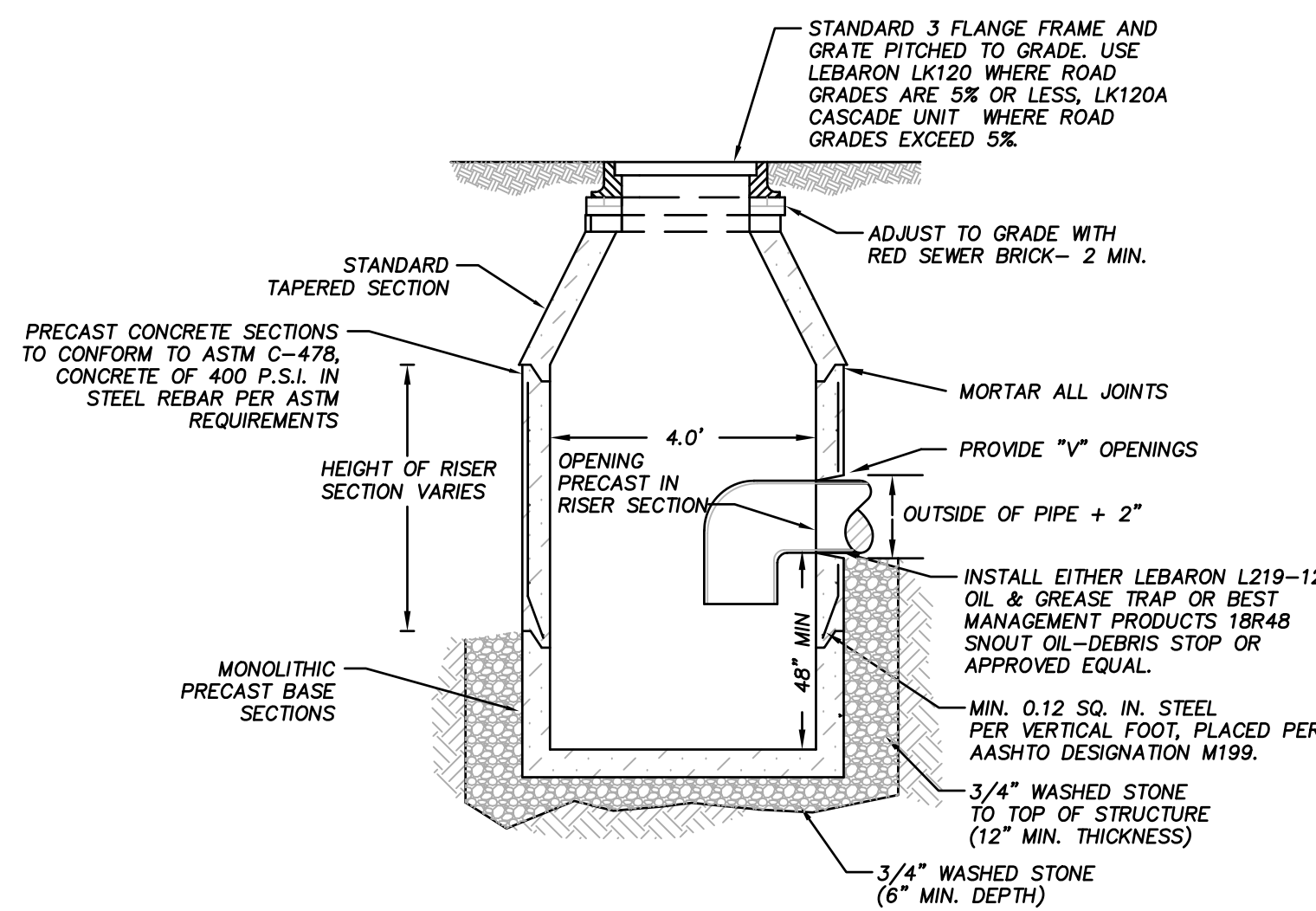
NOT TO SCALE



NOTE:
1) CONTRACTOR SHALL BE REQUIRED TO MAKE ALL PIPE PENETRATIONS WATER TIGHT.
2) THE PIPE TO MANHOLE CONNECTION SHALL BE A FLEXIBLE RUBBER PIPE SLEEVE EITHER CAST IN PRECAST MANHOLE SECTION OR HELD IN PLACE BY STAINLESS STEEL RINGS EXPANDED IN PLACE TO MEET SPECIFICATIONS OF ASTM C923.

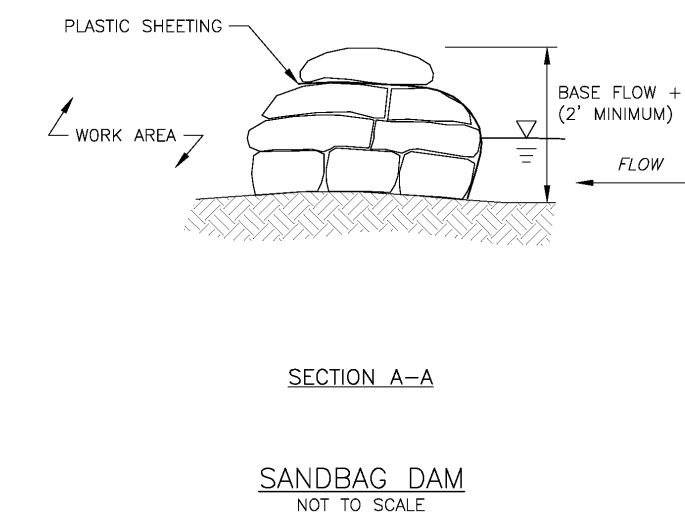
MANHOLE SEAL DETAILS

NOT TO SCALE



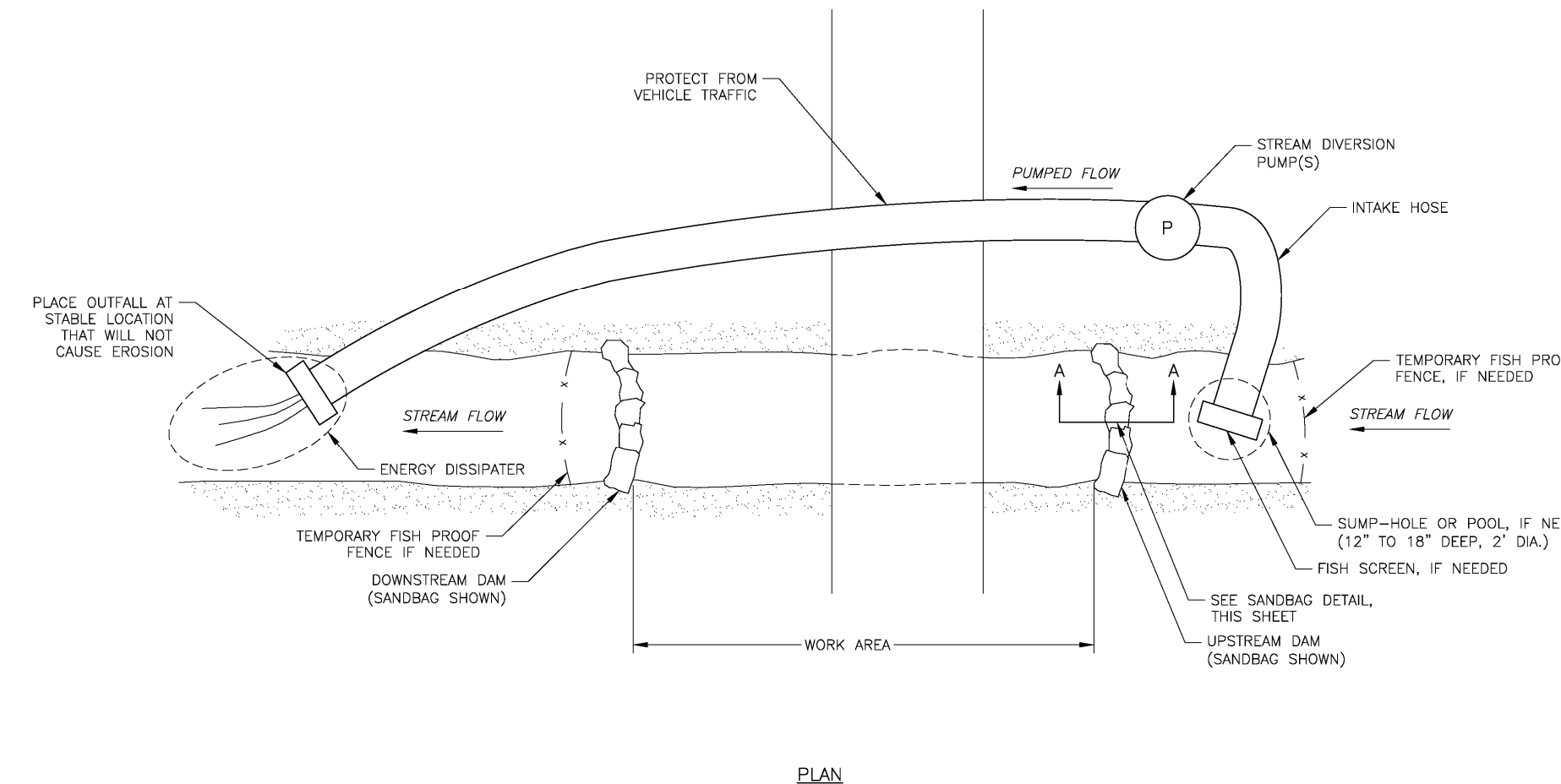
TYPICAL PRECAST CATCH BASIN DETAIL

NOT TO SCALE



SANDBAG DAM

NOT TO SCALE



PUMPED STREAM DIVERSION

NOT TO SCALE

PUMPED STREAM DIVERSION NOTES:
MATERIALS
DAM MATERIAL: SANDBAGS COVERED WITH PLASTIC SHEETING (50 MIL OR 2 OR MORE LAYERS OF 10 MIL), RIPRAP, STEEL PIPE PLATE, SHEETPILE, INFLATABLE BLADDERS, OR EQUIVALENT.
PUMPS: SIZED FOR DESIGN FLOW IN CONTRACT, WITH INTAKE LINE, FITTINGS, AND NOZZLES.
ENERGY DISSIPATER: RIPRAP, SANDBAGS, T-BAR SPREADER, OR EQUIVALENT.
FISH BARRIER: FENCE OR SCREEN, IF NEEDED.
SPILL PREVENTION BMPs:
INSTALLATION
1. COORDINATE WITH DEPARTMENT FOR INSTALLATION OF FISH FENCE, IF NEEDED.
2. INSTALL A CONVEYANCE, SUMP (IF NEEDED), AND INTAKE HOSE.
3. INSTALL THE UPSTREAM AND DOWNSTREAM DAM.
4. PLACE THE PUMP IN AN AREA DESIGNED FOR ITS USE AND OPERATION WITH SPILL PREVENTION MEASURES.
5. INSTALL THE ENERGY DISSIPATER.

INSPECTION
1. WHEN PUMPING, MONITOR PUMPS, INTAKE AND DISCHARGE POINTS. ENSURE THAT PUMPS ARE ADEQUATELY SIZED.
2. INSPECT UPSTREAM AND DOWNSTREAM DAMS FOR OVERTOPPING, BYPASS, UNDERCUTTING, OR OTHER DEFECTS.
3. INSPECT THE CONVEYANCE STRUCTURE FOR LEAKS, EROSION, OR OTHER DEFECTS.
4. INSPECT DISCHARGE POINT FOR EROSION OR FAILURE OF THE ENERGY DISSIPATION MATERIAL.
5. INSPECT THE EQUIPMENT AREA FOR PROPERLY STORED FUEL AND OTHER POTENTIALLY HAZARDOUS SUBSTANCES.

REMOVAL
1. ENSURE STREAM BANKS AND SUMP ARE STABLE BEFORE REMOVAL.
2. REMOVE THE DOWNSTREAM DAM FIRST, THEN THE UPSTREAM DAM.
3. REMOVE THE ENERGY DISSIPATER.
4. REMOVE THE INTAKE HOSE.
5. REMOVE THE TEMPORARY CONVEYANCE STRUCTURE. BACKFILL OR REGRADE AND RESTORE TO ORIGINAL CONTOURS.
6. REGRADE AND SEED OR PERMANENTLY STABILIZE ALL DISTURBED AREAS.

REV	DATE	DESCRIPTION	MADE	APVD

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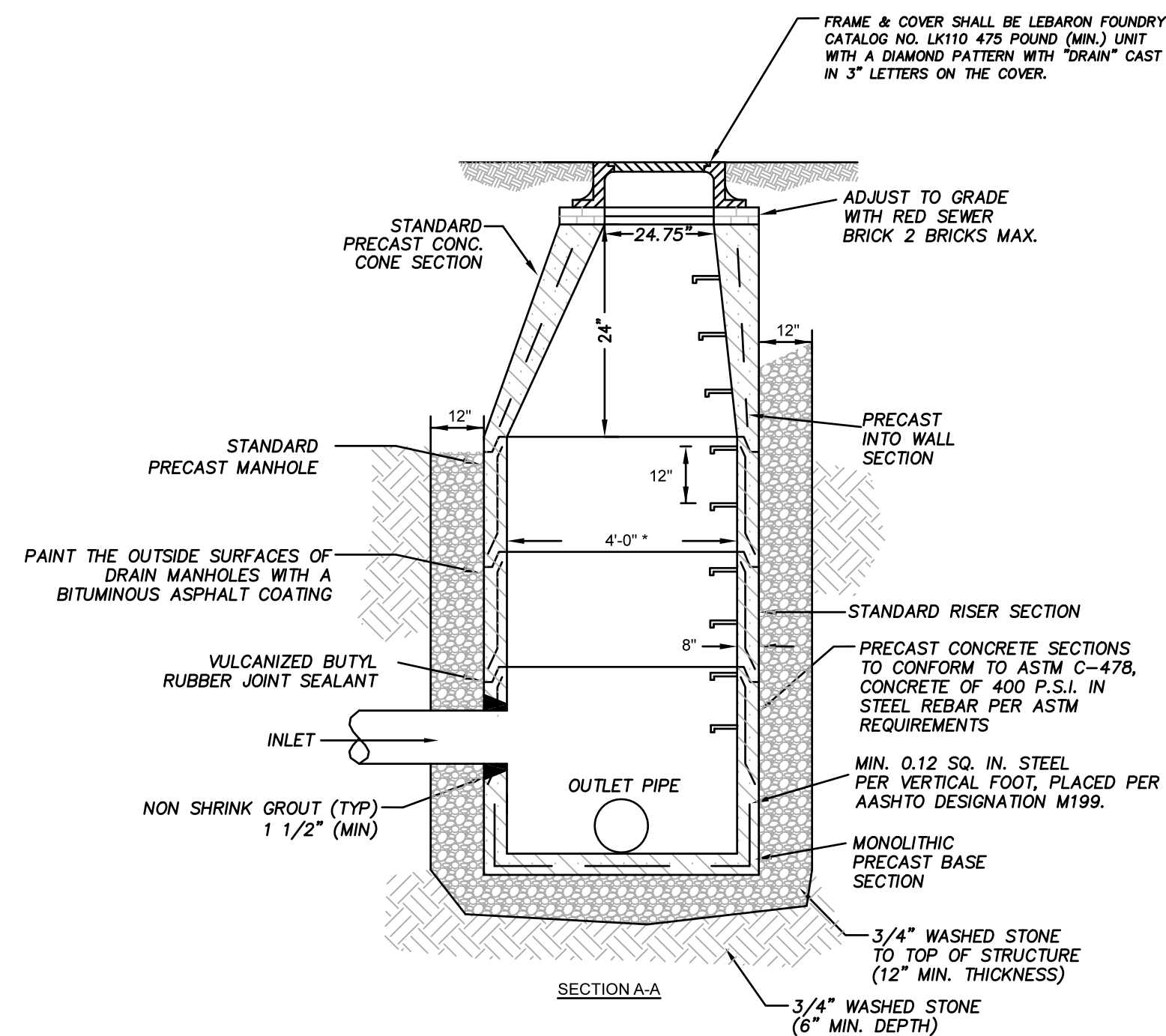
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DRAWN BY: KP
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SCALE: AS NOTED
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CONSTRUCTION
DETAILS

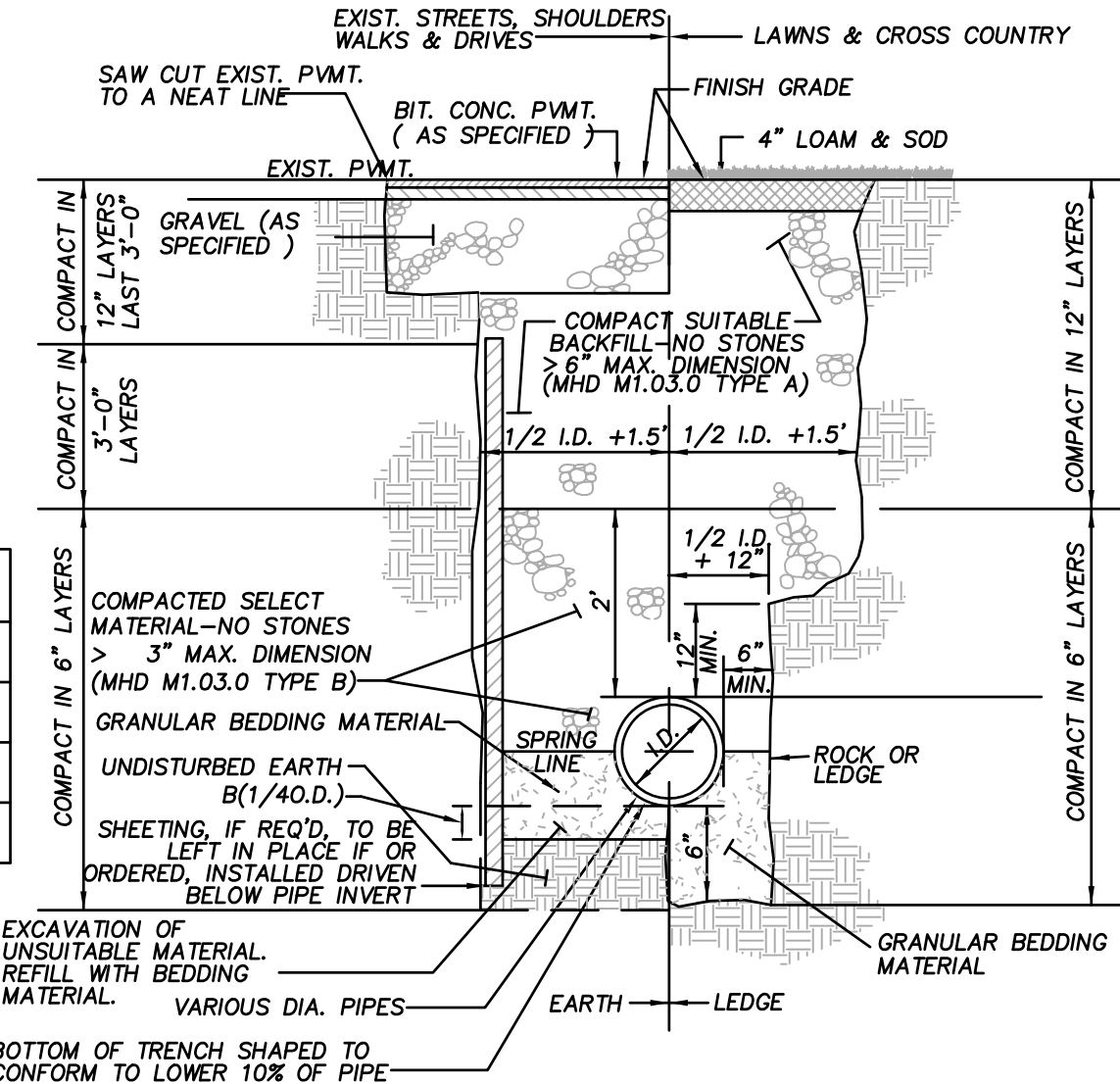
C-5



TYPICAL PRE-CAST DRAIN MANHOLE

NOT TO SCALE

TYPICAL BEDDING DIMENSIONS PIPE MATERIAL - PVC (SDR 35)	I.D.	O.D.	B(1/4 O.D.)
4"	4.215"	4.425"	1.05"
6"	6.275"	6.485"	1.57"
8"	8.400"	8.610"	2.10"



TYPICAL DRAINAGE TRENCH DETAIL

NOT TO SCALE

NOTES:
1. GRANULAR BEDDING MATERIAL SHALL CONSIST OF 3/4" CRUSHED STONE (MHD M2.01.4) OR COMPACTED GRAVEL BORROW (MHD M1.03.0 TYPE C)
2. TRENCH BEDDING & BACKFILL FOR SANITARY SEWERS SHALL BE CLASS B AS DEFINED