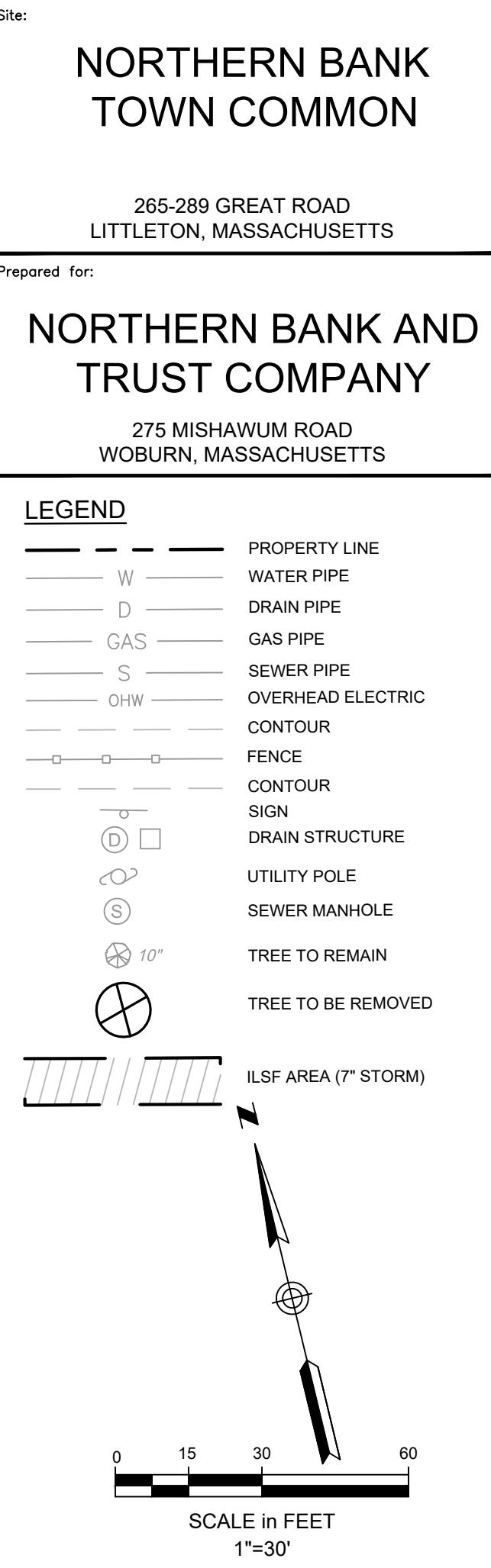
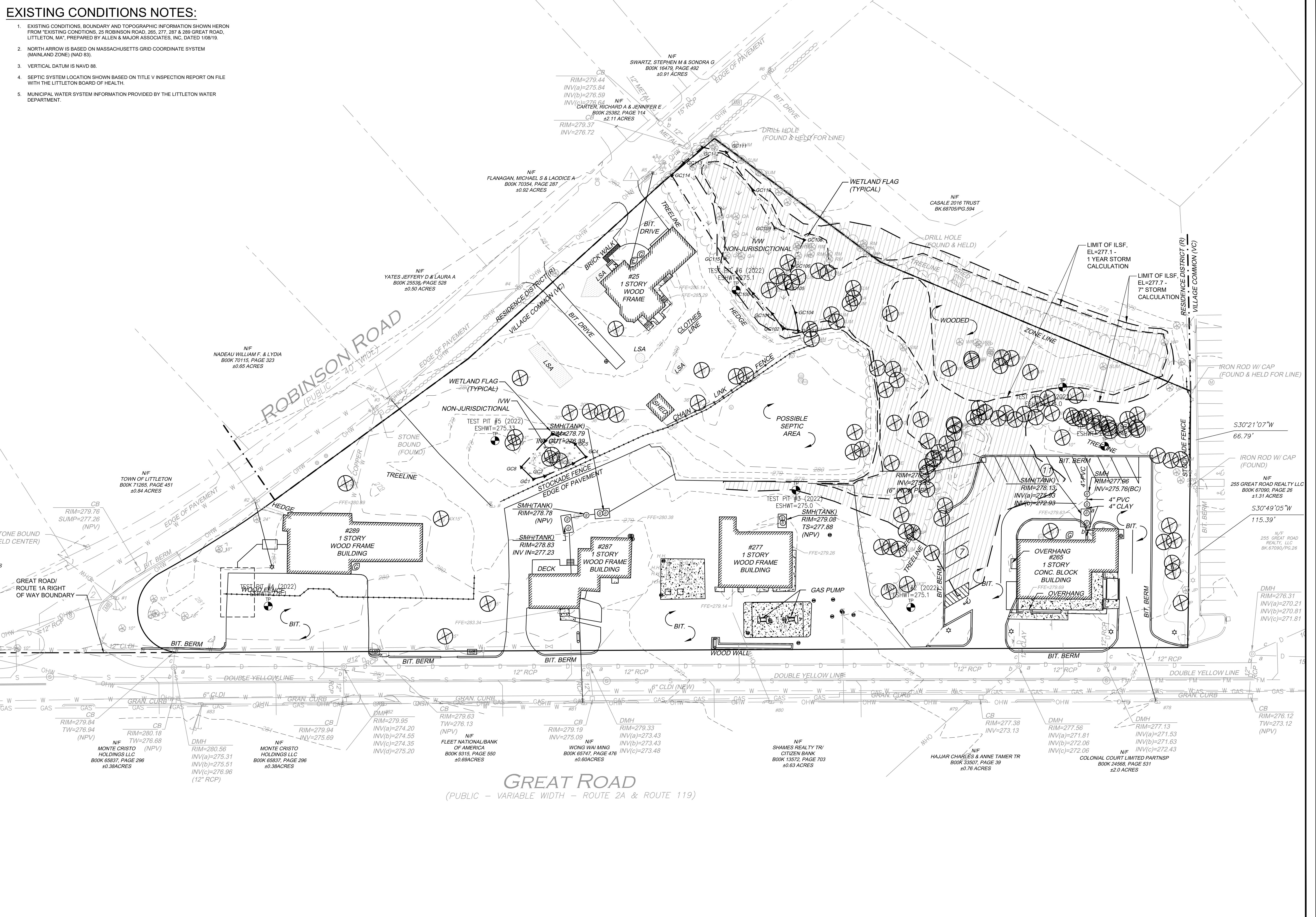


EXISTING CONDITIONS NOTES:

- EXISTING CONDITIONS, BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HERON FROM "EXISTING CONDITIONS, 25 ROBINSON ROAD, 265, 277, 287 & 289 GREAT ROAD, LITTLETON, MA", PREPARED BY ALLEN & MAJOR ASSOCIATES, INC. DATED 1/08/19.
- NORTH ARROW IS BASED ON MASSACHUSETTS GRID COORDINATE SYSTEM (MAINLAND ZONE) (NAD 83).
- VERTICAL DATUM IS NAVD 88.
- SEPTIC SYSTEM LOCATION SHOWN BASED ON TITLE V INSPECTION REPORT ON FILE WITH THE LITTLETON BOARD OF HEALTH.
- MUNICIPAL WATER SYSTEM INFORMATION PROVIDED BY THE LITTLETON WATER DEPARTMENT.



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Newburyport, MA 01950
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EXISTING CONDITIONS PLAN

No.	Revision/Issue	Date
2	Revised per peer review	12/21/22
1	Revised per peer review	11/14/22
Design by:	Checked by:	
SPM	SPM	
Drawn by:	Approved by:	
SPM	SPM	
Project:	Date:	
18017	September 7, 2022	
Sheet:		

C-100

ZONING COMPLIANCE CHECKLIST:

PROPERTY ID:	MAP 7: LOTS 20, 22, 23, 24, 25
ZONE:	VC - VILLAGE COMMON
USE:	COMMERCIAL
FRONT SETBACK (MINIMUM)	10 FEET
FRONT SETBACK (MAXIMUM)	20 FEET
SIDE SETBACK (MINIMUM)	10 FEET
SIDE SETBACK (ABUT RES.)	10 FEET
REAR SETBACK (MINIMUM)	10 FEET
REAR SETBACK (ABUT RES.)	10 FEET
BUILDING HEIGHT	2.5 STORIES
MAX BLDG + PAVE COVER	80%
FAÇADE BUILD OUT (MIN)	60%
PARKING SETBACK	20 FEET
REQUIRED	PROPOSED
10 FEET	±10 FEET
20 FEET	±19 FEET
10 FEET	±10.6 FEET
10 FEET	±44 FEET
10 FEET	±34 FEET
10 FEET	±38 FEET
2.5 STORIES	2.0 STORIES
80%	±65%
60%	62%
20 FEET	20 FEET

PARKING CALCULATION:

USE	MINIMUM REQUIRE RATE
RETAIL	1 PER 250 SF LEASABLE AREA
RESTAURANT	1 PER 250 SF LEASABLE AREA
OFFICE	1 PER 333 SF LEASABLE AREA
	GFA
RETAIL	3,336 SF
NORTHERN BANK BRANCH	6,574 SF
BUILDING B	7,400 SF
BUILDING C (FIRST FLOOR)	3,000 SF
BUILDING D (FIRST FLOOR)	3,000 SF
TOTAL RETAIL SPACE =	20,310 SF @ 1 SPACE/250 SF = 82 SPACES REQUIRED
RESTAURANT (BUILDING E)	3,500 SF @ 1 SPACE/250 SF = 14 SPACES REQUIRED
OFFICE	14,070 SF @ 1 SPACE/333 SF = 43 SPACES REQUIRED
NORTHERN BANK (SECOND FLOOR)	670 SF
BUILDING B (SECOND FLOOR)	3,000 SF
BUILDING C (SECOND FLOOR)	7,400 SF
BUILDING D (SECOND FLOOR)	3,000 SF
TOTAL OFFICE SPACE =	14,070 SF @ 1 SPACE/333 SF = 43 SPACES REQUIRED
ADA SPACES REQUIRED (151-200 TOTAL SPACES)	= 6
ADA SPACES PROVIDED	= 7
TOTAL SPACES REQUIRED = 139	
TOTAL SPACES PROVIDED = 156	

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CONSTRUCT SLOPED GRANITE CURB (TYP)	

ROBINSON RD	(PUBLIC - 40' WID)

CONSTRUCT SLOPED GRANITE CURB (TYP)	

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ROBINSON RD	(PUBLIC - 40' WID)

CONSTRUCT SLOPED GRANITE CURB (TYP)	

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GRADING AND DRAINAGE NOTES:

1. FOR ALL DISTURBED AREAS NOT OTHERWISE TREATED INSTALL 4" MIN SCREENED LOAM AND HYDROSEED.
2. ALL STORM DRAIN PIPE SHALL BE HIGH DENSITY POLYETHYLENE UNLESS OTHERWISE NOTED (HANCOR "HQ", ADS "N-12", OR APPROVED EQUAL).
3. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE TOWN AND STATE CODES.
4. ADJUST ALL MANHOLES, CATCHBASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
5. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE AND EXIT RAMPS AND LOADING AREAS ADJACENT TO THE BUILDING.
6. ALL CATCHBASINS AND DRAIN LINES SHALL BE THOROUGHLY CLEANED OF ALL SEDIMENT AND DEBRIS AFTER THE UPSTREAM AREA IS STABILIZED.
7. COORDINATE ALL GRADING AROUND BUILDING AND BUILDING DOOR ELEVATIONS WITH ARCHITECTURAL PLANS.
8. THE PROPOSED CATCHBASINS AND STORMWATER TREATMENT UNITS MUST BE CLEANED OF ANY SEDIMENT AND/OR DEBRIS AFTER ALL UPSTREAM AREAS HAVE BEEN STABILIZED.

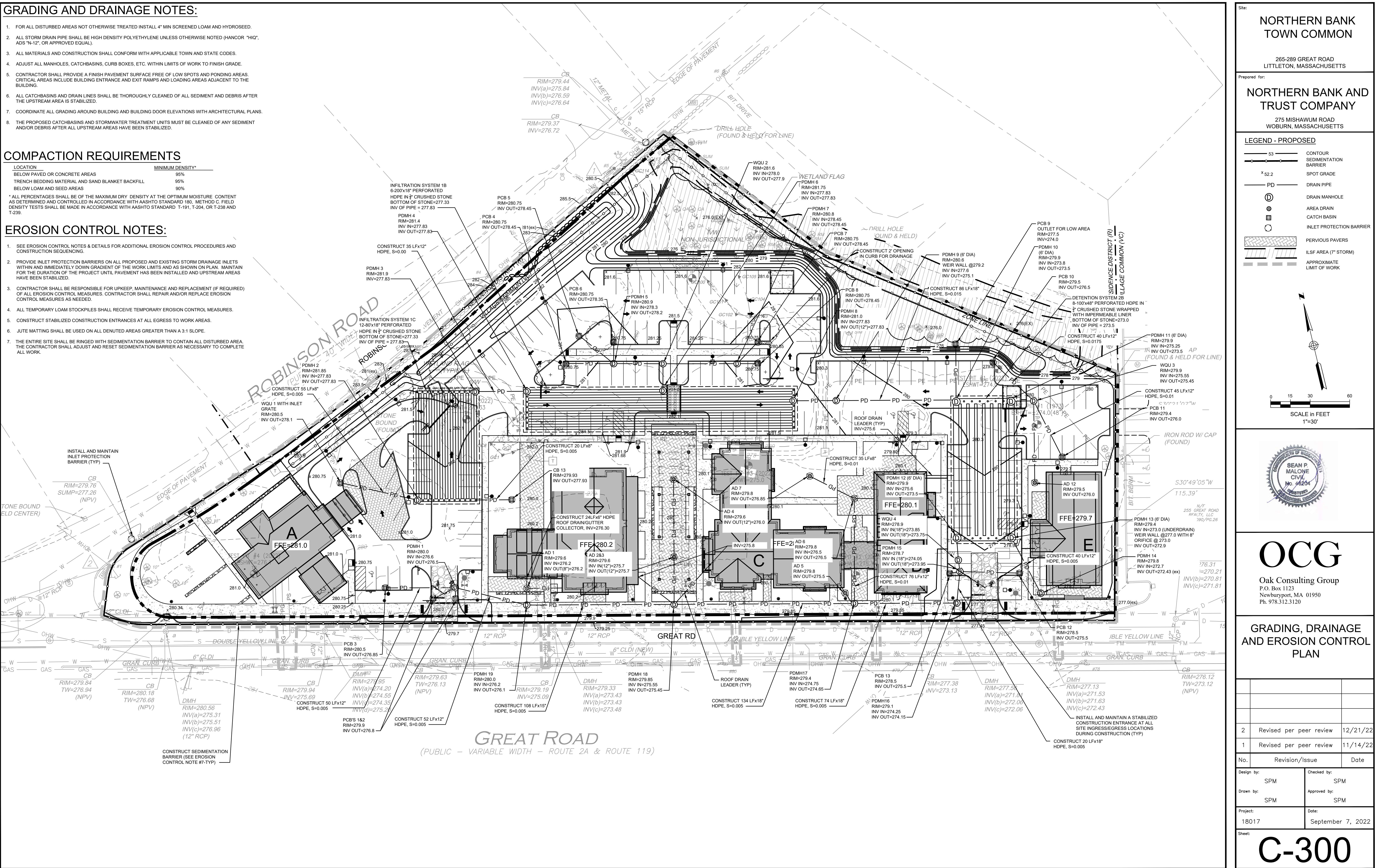
COMPACTION REQUIREMENTS

LOCATION	MINIMUM DENSITY*
BELOW PAVED OR CONCRETE AREAS	95%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%

* ALL PERCENTAGES SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH AASHTO STANDARD T-180, METHOD C. FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH AASHTO STANDARD T-191, T-204, OR T-238 AND T-239.

EROSION CONTROL NOTES:

1. SEE EROSION CONTROL NOTES & DETAILS FOR ADDITIONAL EROSION CONTROL PROCEDURES AND CONSTRUCTION SEQUENCING.
2. PROVIDE INLET PROTECTION BARRIERS ON ALL PROPOSED AND EXISTING STORM DRAINAGE INLETS WITHIN AND IMMEDIATELY DOWN GRADIENT OF THE WORK LIMITS AND AS SHOWN ON PLAN. MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED AND UPSTREAM AREAS HAVE BEEN STABILIZED.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR UPKEEP, MAINTENANCE AND REPLACEMENT (IF REQUIRED) OF ALL EROSION CONTROL MEASURES. CONTRACTOR SHALL REPAIR AND/OR REPLACE EROSION CONTROL MEASURES AS NEEDED.
4. ALL TEMPORARY LOAM STOCKPILES SHALL RECEIVE TEMPORARY EROSION CONTROL MEASURES.
5. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES AT ALL EGRESS TO WORK AREAS.
6. JUTE MATTING SHALL BE USED ON ALL DENUDED AREAS GREATER THAN A 3:1 SLOPE.
7. THE ENTIRE SITE SHALL BE RINGED WITH SEDIMENTATION BARRIER TO CONTAIN ALL DISTURBED AREA. THE CONTRACTOR SHALL ADJUST AND RESET SEDIMENTATION BARRIER AS NECESSARY TO COMPLETE ALL WORK.



UTILITIES NOTES:

- THE CONTRACTOR SHALL CONTACT "DIGSAFE" 72 HOURS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL HAVE THE "DIG-SAFE" NUMBER ON-SITE AT ALL TIMES.
- THE LOCATION OF UNDERGROUND UTILITIES ARE APPROPRIATE AND THE LOCATION IS NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS THAT MAY AFFECT THE COMPLETION OF WORK.
- ALL ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND, UNLESS OTHERWISE INDICATED.
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE CITY AND STATE CODES.
- WATER LINES SHALL HAVE A MINIMUM OF 5' COVER OR PER WATER DEPARTMENT STANDARDS, WHICH EVER IS MORE STRINGENT.
- ALL WATER VALVES TO OPEN RIGHT PER WATER DEPARTMENT STANDARDS.
- FINAL NUMBER AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY UTILITY COMPANY.
- SEE EXISTING CONDITIONS PLANS FOR BENCHMARK INFORMATION.
- UNDERGROUND ELECTRICAL CONDUIT MATERIAL AND INSTALLATION SHALL CONFORM TO POWER COMPANY STANDARDS. SEE SITE ELECTRICAL PLANS FOR ALL ELECTRIC AND COMMUNICATIONS SERVICE DETAILS.
- ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
- COORDINATE LEAKAGE AND DISINFECTION TESTING OF WATER CONSTRUCTION WITH WATER DEPARTMENT.
- CONFIRM LOCATIONS, NUMBER AND TRENCH SECTION OF PROPOSED ELECTRIC AND COMMUNICATIONS CONDUITS AND STRUCTURES WITH SITE ELECTRICAL DRAWINGS.
- COORDINATE ALL BUILDING UTILITY SERVICES SIZE AND LOCATIONS WITH BUILDING DRAWINGS.
- ALL WATER AND SEWER PIPES SHALL HAVE A MINIMUM 10' HORIZONTAL SEPARATION. IF A WATER LINE CROSSES A SEWER LINE, THERE SHALL BE A MINIMUM 18" VERTICAL SEPARATION. ENCASEMENT OF THE SEWER SERVICE IS REQUIRED IN THE FORM OF A 10' SLEEVE ON EITHER SIDE OF THE ADJACENT STRUCTURE IN THE FOLLOWING CASES:
 - THE TOP OF THE SEWER BELL IS LESS THAN 3 FEET FROM THE BOTTOM OF THE WATER LINE.
- A SEWER MAIN CONNECTION IS ABOVE THE WATER MAIN OR CONNECTION.
- THE SLEEVE SHALL CONSIST OF A LARGER PIPE SURROUNDING THE UTILITY PIPE WITH FILL BETWEEN THE PIPES AND CEMENT AT THE ENDS.
- ALL PVC PIPE SHALL BE SDR 35 COLOR CODED OR LABELED TO INDICATE SEWER UNLESS OTHERWISE SPECIFIED.
- COORDINATE THE TIMING OF ALL UTILITY SHUTDOWNS WITH OWNER AND UTILITY SUPPLIER. CONSTRUCT NEW UTILITIES IN A MANNER TO MINIMIZE THE DURATION OF SHUTDOWNS AND DISRUPTION OF UTILITY SERVICES TO THE PROPERTY AND SURROUNDING PROPERTIES.
- COORDINATE ALL WATER AND SEWER WORK WITH THE TOWN OF LITTLETON DEPARTMENT OF PUBLIC WORKS. ALL WATER AND SEWER CONSTRUCTION SHALL BE PER THE TOWN OF LITTLETON CONSTRUCTION STANDARDS.
- THE PROPOSED BUILDING IS PLANNED TO USE THE NEW MUNICIPAL SEWER SYSTEM AND WATER MAIN INSTALLATION CURRENTLY BEING DESIGNED BY THE TOWN OF LITTLETON. THE SITE SEWER AND WATER SERVICES WILL BE COORDINATED WITH THE TOWN WATER AND SEWER DEPARTMENT.
- SITE LIGHTS SHALL BE DARK SKY COMPLIANT DOWNWARD DIRECTED FIXTURES. LIGHTING SHALL BE WIRED TO THE PROPOSED BUILDING AND COORDINATED WITH BUILDING DRAWINGS.

ROBINSON ROAD
(PUBLIC - 40' WIDE)

CUT AND CAP EXISTING BUILDING
WATER SERVICE. COORDINATE
WITH WATER DEPARTMENT (TYP)

NON-JURISDICTIONAL

PROJECT NAME AND LOCATION

NORTHERN BANK
GREAT ROAD
LITTLETON, MA
LAT: 42°32'43"N
LON: 71°28'11"W

DESCRIPTION

THE PROJECT CONSISTS OF CONSTRUCTING A NEW STAND ALONE BANK AND MIXED USE COMMERCIAL DEVELOPMENT WITH SUPPORTING INFRASTRUCTURE ON PREVIOUSLY DEVELOPED LAND.

SOIL CHARACTERISTICS

EXISTING SITE SOILS ARE GENERALLY COMPRISED PREVIOUSLY DISTURBED URBAN LAND

DISTURBED AREA

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 4.0 ACRES (176,100 SF).

SEQUENCE OF MAJOR ACTIVITIES

1. INSTALL EROSION CONTROLS, CLEAR AND GRUB SITE.
2. STRIP AND STOCKPILE SOILS.
3. ROUGH GRADE SITE/CONSTRUCT BUILDING PAD.
4. CONSTRUCT UTILITIES AND DRAINAGE.
5. CONSTRUCT PAVEMENT AND FINAL STABILIZATION OF THE SITE.
6. CONSTRUCT LANDSCAPING AND SIGNAGE.
7. REMOVE EROSION CONTROLS.

EROSION AND SEDIMENT CONTROLS AND STABILIZATION PRACTICES

STABILIZATION: AN AREA SHALL BE CONSIDERED STABILIZED WHEN ONCE ONE OF THE FOLLOWING HAS OCCURRED:

1. A MINIMUM OF 85% VEGETATIVE GROWTH HAS BEEN ESTABLISHED;
2. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED; OR
3. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES AND DISTURBED AREAS WHERE CONSTRUCTION ACTIVITY WILL NOT OCCUR FOR MORE THAN THIRTY (30) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 60 DAYS OF INITIAL DISTURBANCE. ALL CUT AND FILL SLOPES AND ROADWAYS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING GRADE. STABILIZATION MEASURES TO BE USED INCLUDE:

1. TEMPORARY SEEDING;
2. MULCHING;
3. STONE RIP-RAP; OR
4. JUTE MATTING.

DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH HAY BAILE BARRIERS AND/OR SILT FENCES. ALL STORM DRAIN INLETS SHALL BE PROVIDED WITH BARRIER FILTERS.

OFF-SITE VEHICLE TRACKING

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL EGRESSES TO THE ACTIVE WORK AREAS ON THE SITE AND MAINTAINED FOR THE DURATION OF CONSTRUCTION.

TIMING OF CONTROLS/MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES THE EROSION AND SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO COMMENCING ANY CLEARING OR GRADING OF THE SITE. STRUCTURAL CONTROLS SHALL BE INSTALLED CONCURRENTLY WITH THE APPLICABLE ACTIVITY. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN THIRTY (30) DAYS WILL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN FOURTEEN (14) DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, SILT FENCES AND HAY BAILE BARRIERS AND ANY EARTH/DIKES WILL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES OF EROSION AND SEDIMENT CONTROLS**A. GENERAL – THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING:**

INSPECTION
1. ALL CONTROL MEASURES WILL BE INSPECTED DAILY;

2. A MAINTENANCE INSPECTION REPORT WILL BE MADE WEEKLY; AND

3. THE CONTRACTOR'S SITE SUPERINTENDENT WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.

MAINTENANCE

1. STABILIZATION OF ALL SWALES, DITCHES IS REQUIRED PRIOR TO DIRECTING FLOW TO THEM.
2. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.
3. BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE OR HAY BAILE BARRIERS WHEN IT HAS REACHED ONE THIRD THE HEIGHT OF THE FENCE OR BALE.
4. ALL DIVERSION DIKES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.
5. TEMPORARY SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND UNHEALTHY GROWTH.

B. SEDIMENTATION BARRIERS**1. PRODUCTS**

SEDIMENTATION BARRIERS SHALL BE AS SPECIFIED ON THESE DRAWINGS AND PROJECT SPECIFICATIONS.

2. INSTALLATION

SEDIMENTATION BARRIERS SHALL BE INSTALLED PER MANUFACTURE'S SPECIFICATIONS AND RECOMMENDATIONS. SEDIMENTATION BARRIERS SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE PLANS AND IN ALL OTHER LOCATIONS REQUIRED TO PREVENT THE MIGRATION OF SEDIMENT FROM THE ACTIVE CONSTRUCTION SITE.

3. SEQUENCE OF INSTALLATION

SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.

4. MAINTENANCE

SEDIMENTATION BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. THEY SHALL BE REPAIRED IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM.

SHOULD THE FABRIC ON A SEDIMENTATION BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.

SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.

ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SEDIMENTATION BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

C. MULCHING**1. TIMING**

IN ORDER FOR THE MULCH TO BE EFFECTIVE IT MUST BE IN PLACE PRIOR TO MAJOR STORM EVENTS. THERE ARE TWO TYPES OF STANDARDS WHICH SHALL BE USED:

APPLY MULCH PRIOR TO ANY STORM EVENT

THIS STANDARD IS APPLICABLE WHEN WORKING WITHIN 100 FEET OF WETLANDS. IT WILL BE NECESSARY TO CLOSELY MONITOR WEATHER PREDICTIONS, USUALLY BY CONTACTING THE NATIONAL WEATHER SERVICE TO HAVE ADEQUATE WARNING OF SIGNIFICANT STORMS.

REQUIRED MULCHING WITHIN A SPECIFIED TIME PERIOD

THE TIME PERIOD CAN RANGE FROM 14 TO 21 DAYS OF INACTIVITY ON AN AREA, THE LENGTH OF TIME VARYING WITH SITE CONDITIONS. PROFESSIONAL JUDGMENT SHALL BE USED TO EVALUATE THE INTERACTION OF SITE CONDITIONS (SOIL ERODIBILITY, SEASON OF YEAR, EXTENT OF DISTURBANCE, PROXIMITY TO SENSITIVE RESOURCES, ETC.) AND THE POTENTIAL IMPACT OF EROSION ON ADJACENT AREAS TO CHOOSE AN APPROPRIATE TIME RESTRICTION.

2. GUIDELINES FOR WINTER MULCH APPLICATION

WHEN MULCH IS APPLIED TO PROVIDE PROTECTION OVER THE WINTER (PAST THE GROWING SEASON) IT SHALL BE AT A RATE OF 6,000 POUNDS OF HAY OR STRAW PER ACRE. A TACKIFIER MAY BE ADDED TO THE MULCH.

3. MAINTENANCE

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAIN STORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE APPLIED.

A. VEGETATIVE PRACTICES

FOR PERMANENT MEASURES AND PLANTINGS FROM EARLY SPRING TO SEPTEMBER 30:

AFTER ROUGH GRADING OF THE SUBGRADE HAS BEEN COMPLETED AND APPROVED, THE SUBGRADE SURFACE SHALL BE SCARIFIED TO A DEPTH OF FOUR INCHES. THEN FURNISH AND INSTALL A LAYER OF LOAM PROVIDING A ROLLED FOUR INCH THICKNESS. ANY DEPRESSIONS WHICH MAY OCCUR DURING ROLLING SHALL BE FILLED WITH ADDITIONAL LOAM, REGRADED AND REROLLED UNTIL THE SURFACE IS TRUE TO THE FINISHED LINES AND GRADES. ALL LOAM NECESSARY TO COMPLETE THE WORK UNDER THIS SECTION SHALL BE SUPPLIED BY THE SITE SUBCONTRACTOR.

ALL LARGE STIFF CLODS, LUMPS, BRUSH, ROOTS, DEBRIS, GLASS, STUMPS, LITTER AND OTHER FOREIGN MATERIAL AS WELL AS STONES OVER ONE INCH IN DIAMETER SHALL BE REMOVED FROM THE LOAM AND DISPOSED OF OFF SITE, AND THE LOAM SHALL BE RAKED SMOOTH AND EVEN.

THE LOAM SHALL BE PREPARED TO RECEIVE SEED BY REMOVING STONES, FOREIGN OBJECTS AND GRADE TO ELIMINATE WATER POCKETS AND IRREGULARITIES PRIOR TO PLACING SEED. FINISH GRADING SHALL RESULT IN STRAIGHT UNIFORM GRADES AND SMOOTH, EVEN SURFACES WITHOUT IRREGULARITIES TO LOW POINTS.

SHAPE THE AREAS TO THE LINES AND GRADES REQUIRED. THE SITE SUBCONTRACTOR'S ATTENTION IS DIRECTED TO THE SCHEDULING OF LOAMING AND SEEDED OF GRADED AREAS TO PERMIT SUFFICIENT TIME FOR THE STABILIZATION OF THESE AREAS. IT SHALL BE THE SITE SUBCONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE AREAS DURING THE CONSTRUCTION PERIOD AND REGRADE, LOAM AND RESEED ANY DAMAGED AREAS.

ALL AREAS DISTURBED BY CONSTRUCTION WITHIN THE PROPERTY LINES AND NOT COVERED BY STRUCTURES, PAVEMENT, OR MULCH SHALL BE LOAMED AND SEEDED.

LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF 2 TONS PER ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5.

IF REQUIRED, FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 500 POUNDS PER ACRE OF 10-20-20 FERTILIZER. USE OF FERTILIZER SHOULD BE AVOIDED IN INFILTRATION AREAS.

SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTION TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4 1/2 POUNDS AND 5 1/2 POUNDS PER INCH OF WIDTH.

SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN. IMMEDIATELY BEFORE SEEDED, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH.

HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDED AT A RATE OF 1.5 TO 2 TONS PER ACRE. MULCH THAT BLOWS OR WASHES AWAY SHALL BE REPLACED IMMEDIATELY AND ANCHORED USING APPROPRIATE TECHNIQUES FROM THE EROSION AND SEDIMENT CONTROL HANDBOOK.

THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED.

THE SITE SUBCONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED, INCLUDING CUTTING, AS SPECIFIED HEREIN AFTER UNDER MAINTENANCE AND PROTECTION. UNLESS OTHERWISE APPROVED, SEEDED SHALL BE DONE DURING THE APPROXIMATE PERIODS OF EARLY SPRING TO SEPTEMBER 30, WHEN SOIL CONDITIONS AND WEATHER ARE SUITABLE FOR SUCH

WORK. A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE:

GENERAL COVER	POUNDS/ACRE	MIN. GERMINATION	MIN. PURITY
CREEPING RED FESCUE	50	85%	96%
KENTUCKY BLUE GRASS	50	85%	97%
	100		
SLOPE SEED (USED ON SLOPES GREATER THAN OR EQUAL TO 3:1)			
CREEPING RED FESCUE	20	85%	96%
TALL FESCUE	20	85%	97%
RED TOP	2	80%	95%
	42		

IN NO CASE SHALL THE WEED CONTENT EXCEED 1 PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL LAW.

FOR TEMPORARY PLANTINGS AFTER SEPTEMBER TO EARLY SPRING AND FOR TEMPORARY PROTECTION OF DISTURBED AREAS:

- FOLLOW ABOVE SLOPE, LOAM DEPTH AND GRADING REQUIREMENTS.
- FERTILIZER SHALL BE SPREAD AND WORKED INTO THE SURFACE AT A RATE OF 300 POUNDS PER ACRE.
- MULCHING AND SEEDED SHALL BE APPLIED AT THE FOLLOWING RATES:

WINTER RYE (FALL SEEDED)	2.5 LBS/1,000 SF
OATS (SPRING SEEDED)	2 LBS/1,000 SF
MULCH	1.5 TONS/ACRE

STABILIZED CONSTRUCTION ENTRANCE**A. SPECIFICATIONS**

1. AGGREGATE SIZE: USE TWO (2) INCHES STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT
2. AGGREGATE THICKNESS: NOT LESS THAN SIX (6) INCHES.
3. WIDTH: TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH OF THE POINTS WHERE INGRESS OR EGRESS OCCURS.
4. LENGTH: AS REQUIRED BUT NOT LESS THAN 50 FEET.

B. MAINTENANCE

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

WASTE DISPOSAL**A. WASTE MATERIALS**

ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN A DUMPSTER. NO CONSTRUCTION WASTE MATERIALS WILL BE BURIED ON SITE. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.

B. HAZARDOUS WASTE

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.

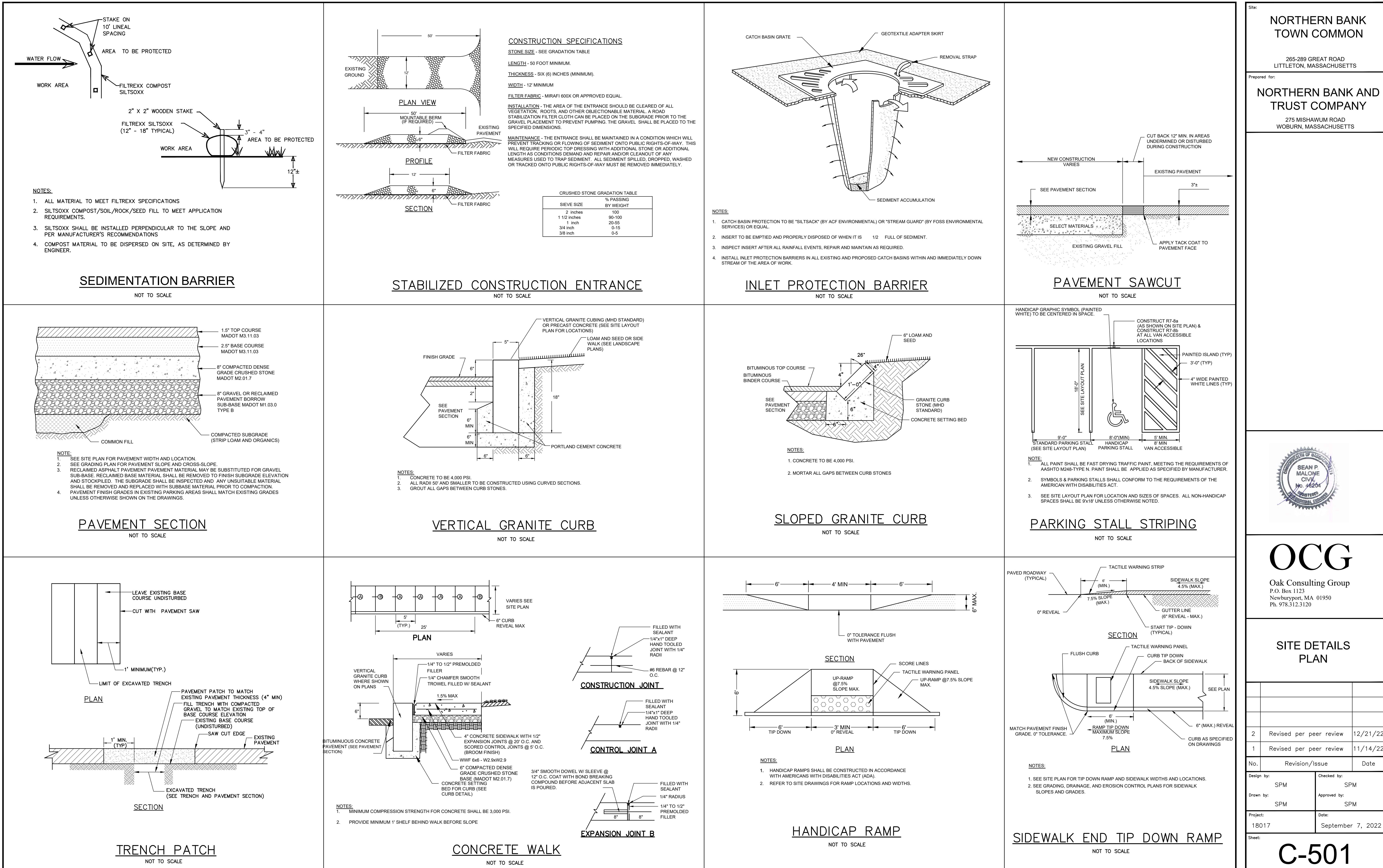
C. SANITARY WASTE

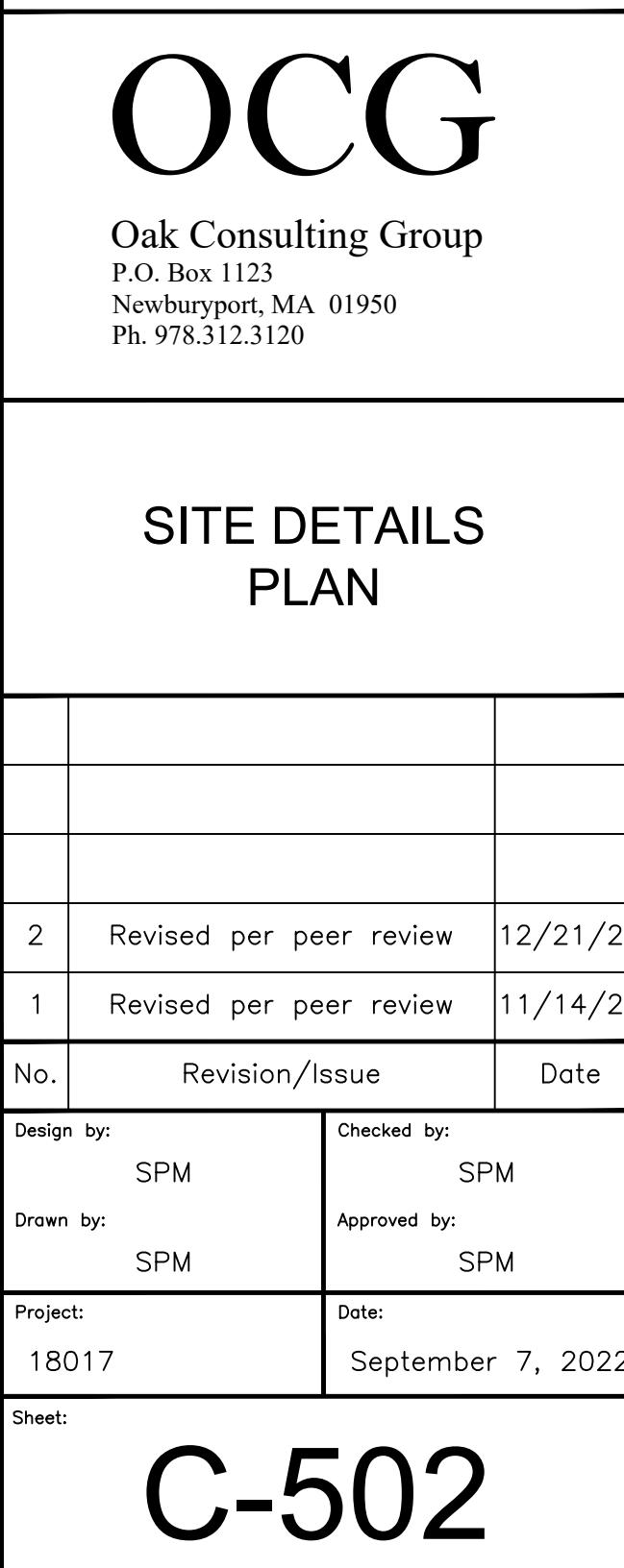
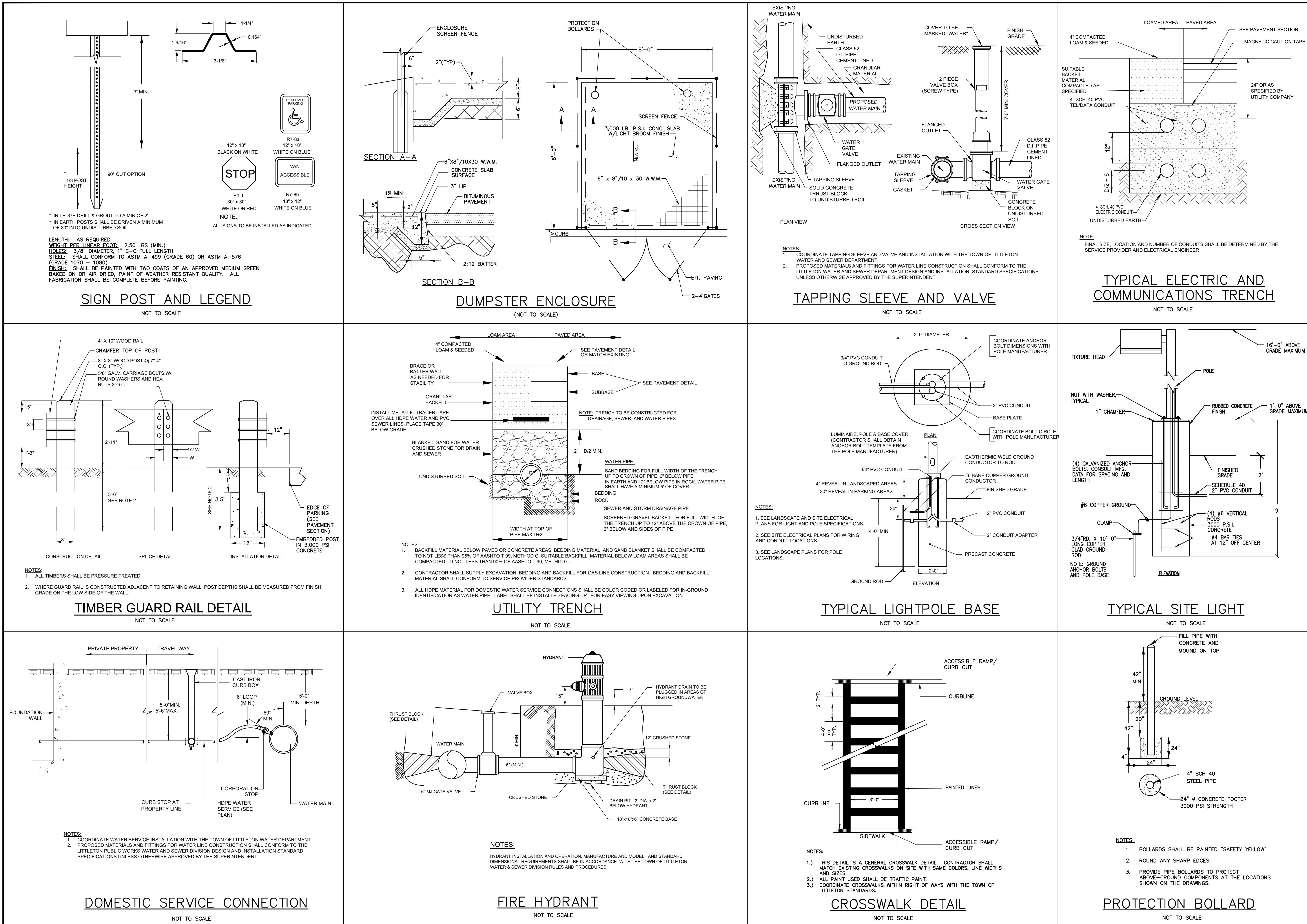
ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

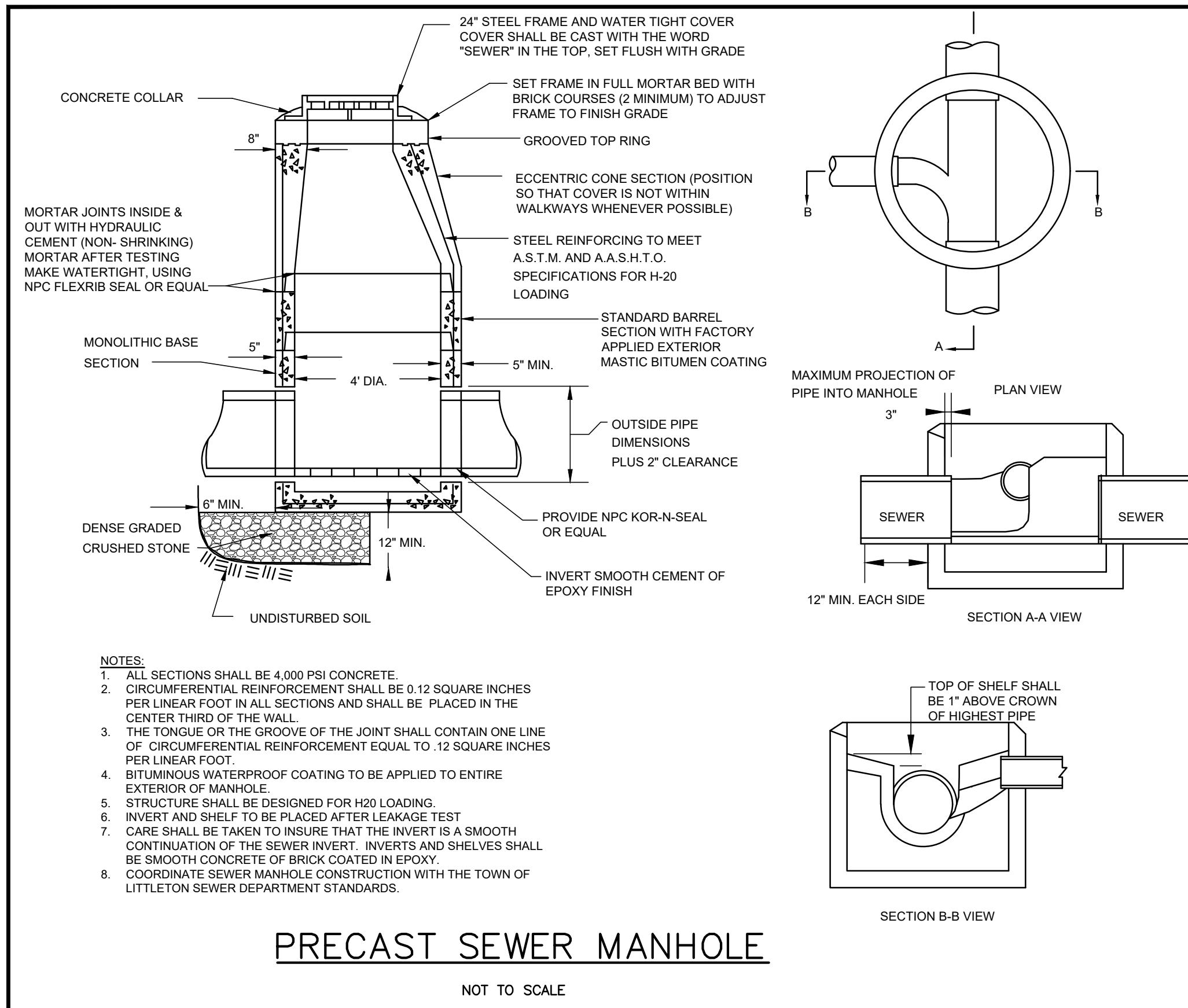
ADDITIONAL NOTES FOR WINTER CONSTRUCTION

- A. ALL PROPOSED POST-DEVELOPMENT LANDSCAPED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY NOVEMBER 15TH, OR WHICH ARE DISTURBED AFTER NOVEMBER 15TH, SHALL BE STABILIZED BY SEEDED AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 4:1 AND SEEDED AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE PLACEMENT OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR FROZEN GROUND.
- B. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY NOVEMBER 15TH, OR WHICH ARE DISTURBED AFTER NOVEMBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
- C. AFTER NOVEMBER 15TH, ALL TRAVEL SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3-INCHES OF CRUSHED GRAVEL OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOWFALL AFTER EACH STORM EVENT

DUST CONTROL</

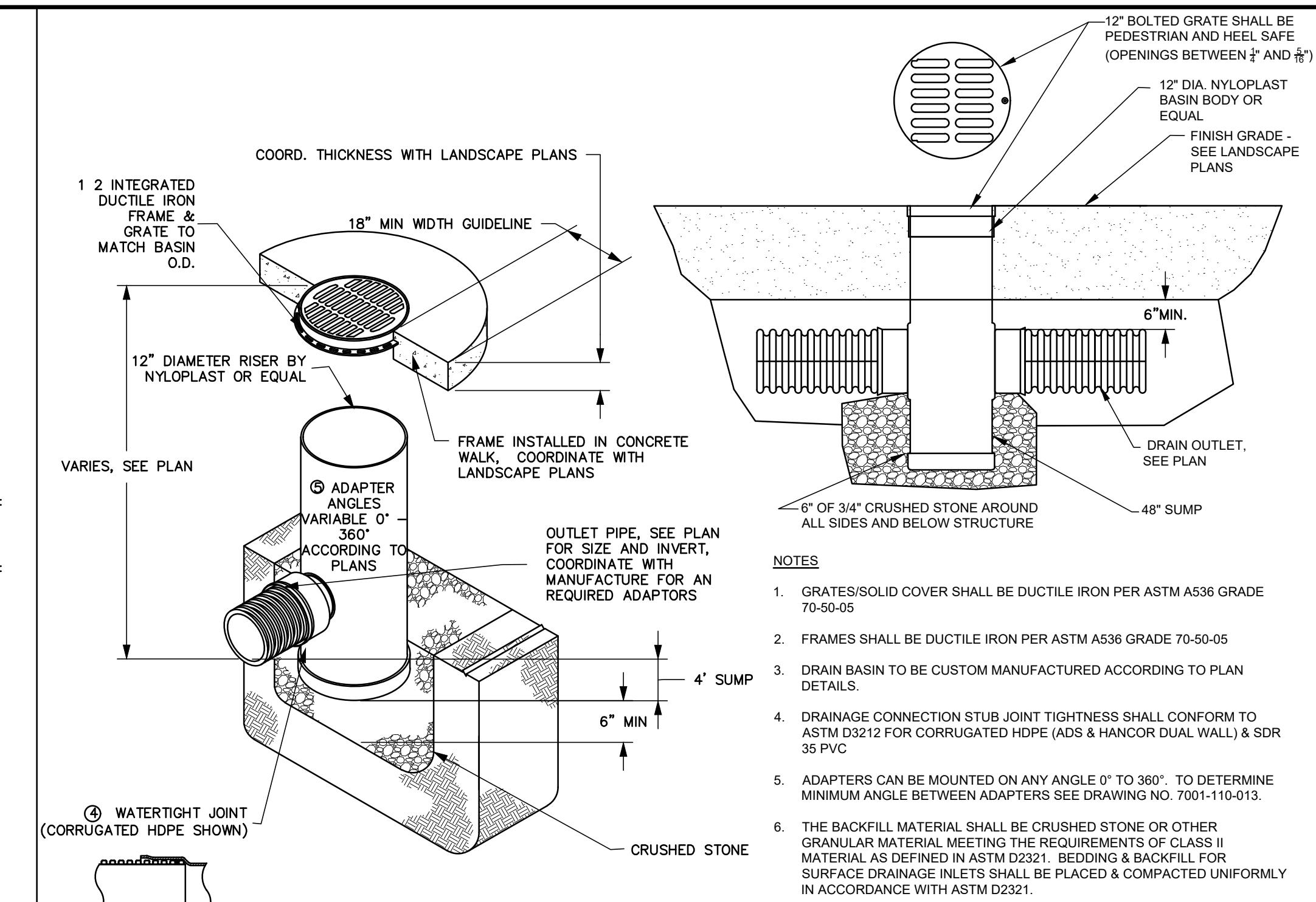






PRECAST SEWER MANHOLE

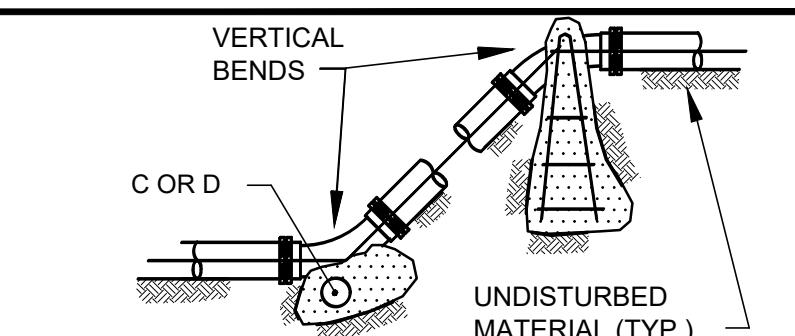
NOT TO SCALE



AREA DRAIN

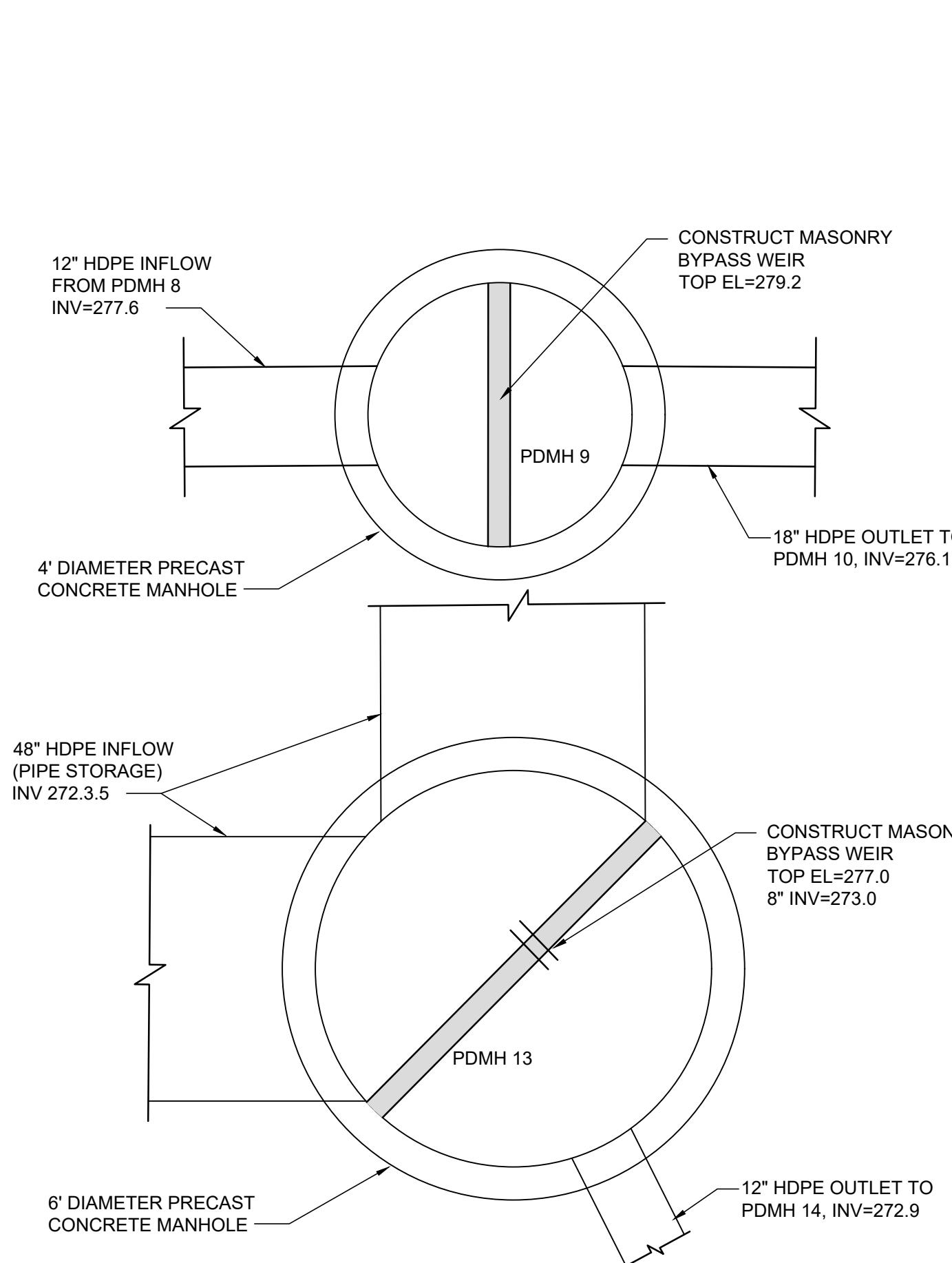
NOT TO SCALE

TEST PRESSURE = 200psi		SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL				
REACTION TYPE	PIPE SIZE					
		4"	6"	8"	10"	12"
A 90°	0.89	2.19	3.82	11.14	17.24	
B 180°	0.65	1.55	2.78	8.38	12.00	
C 45°	0.48	1.19	2.12	6.02	9.32	
D 22-1/2°	0.25	0.60	1.06	3.08	4.74	
E 11-1/4°	0.13	0.30	0.54	1.54	2.38	



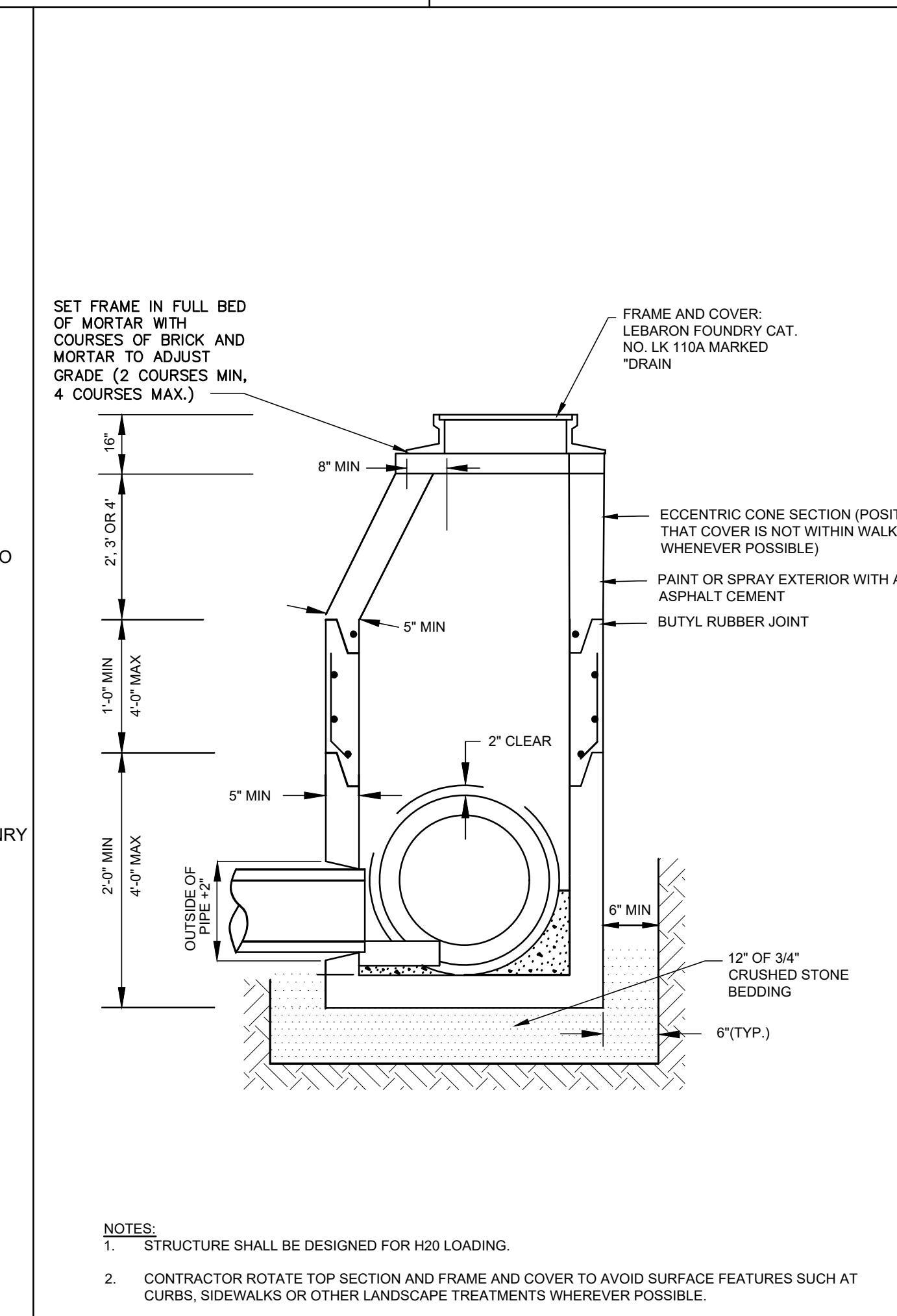
Site:	NORTHERN BANK TOWN COMMON	
	265-289 GREAT ROAD, LITTLETON, MASSACHUSETTS	
Prepared for:	NORTHERN BANK AND TRUST COMPANY	
	275 MISHAWUM ROAD, WOBURN, MASSACHUSETTS	

NOT TO SCALE



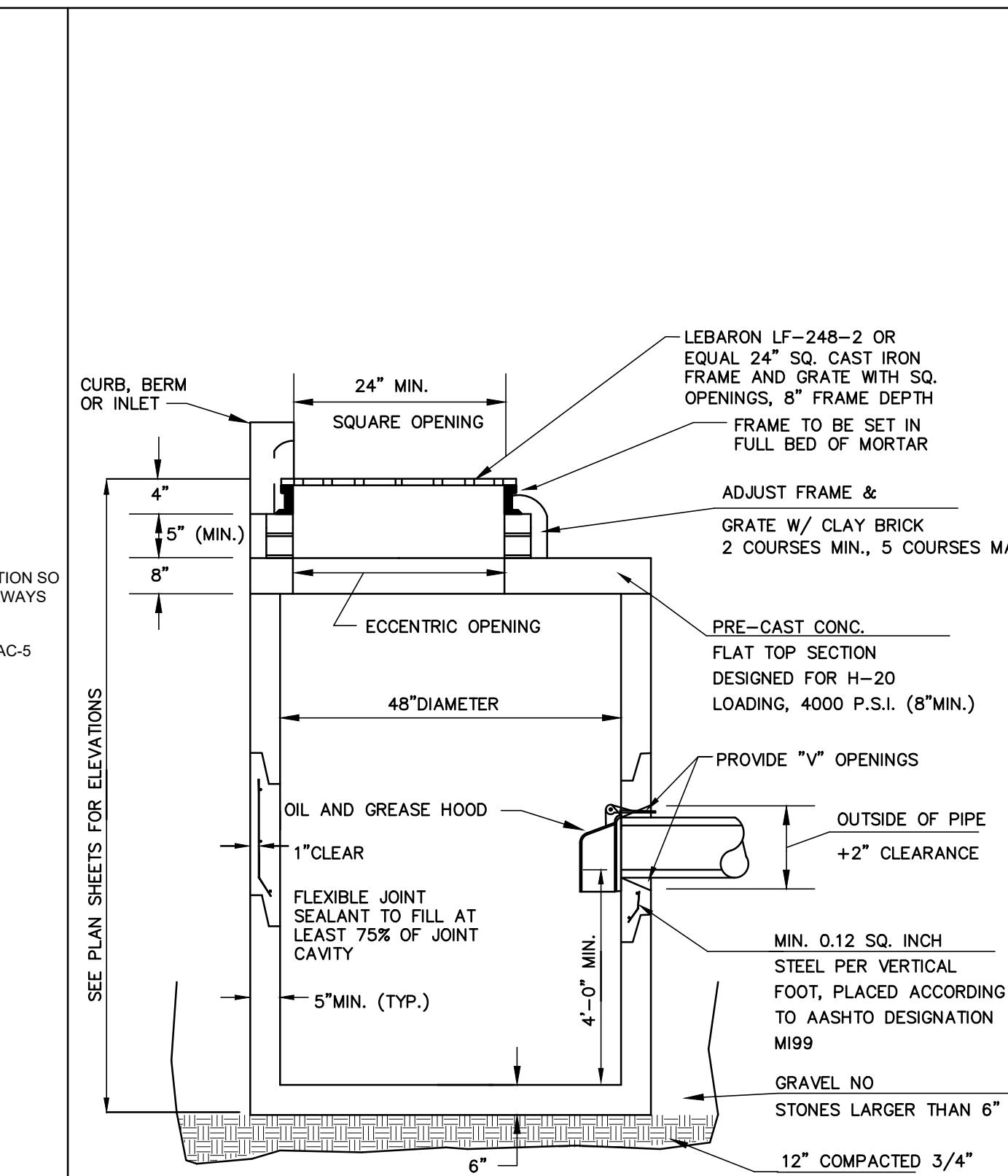
SPECIAL MANHOLE DETAILS

NOT TO SCALE



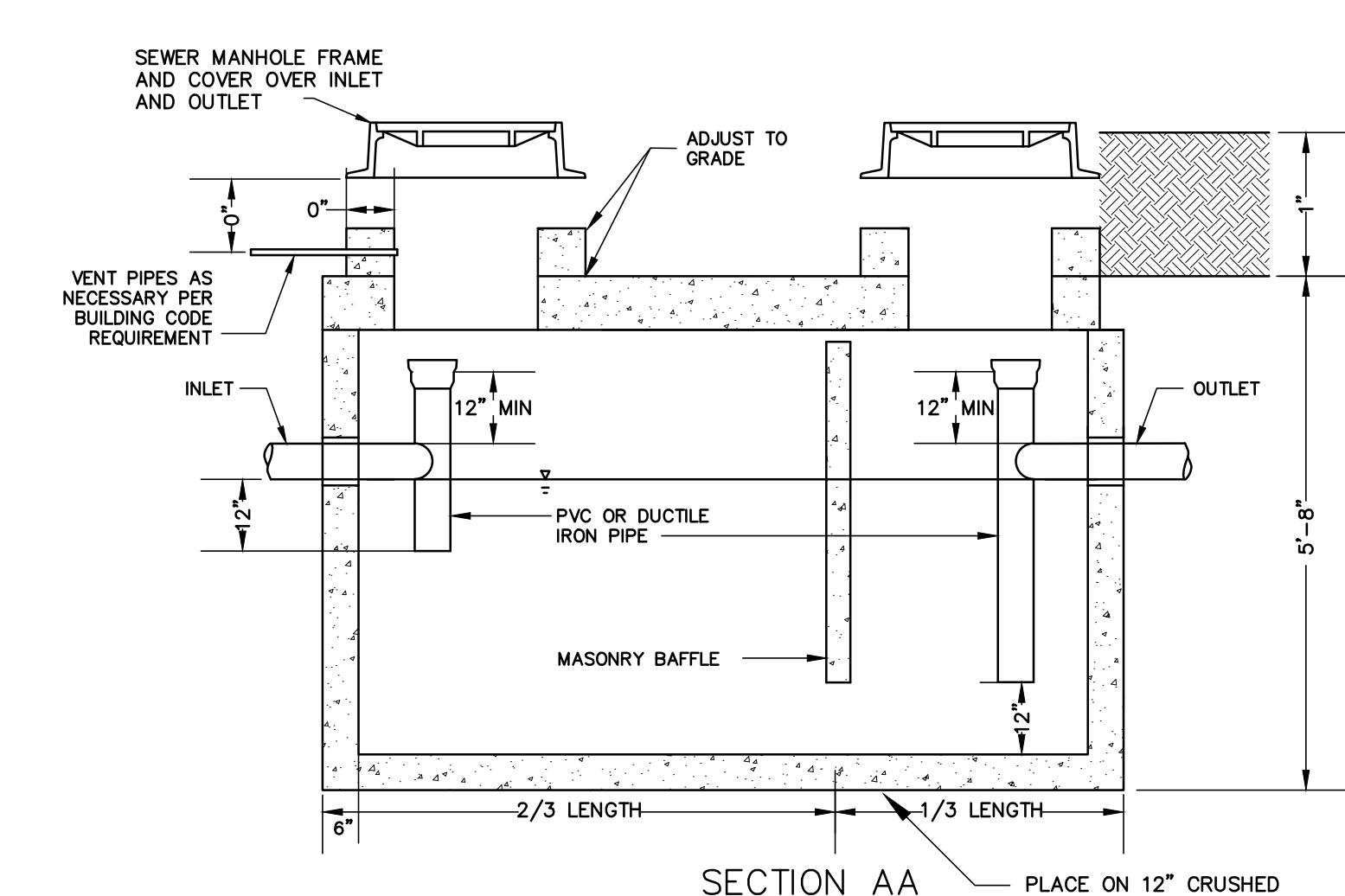
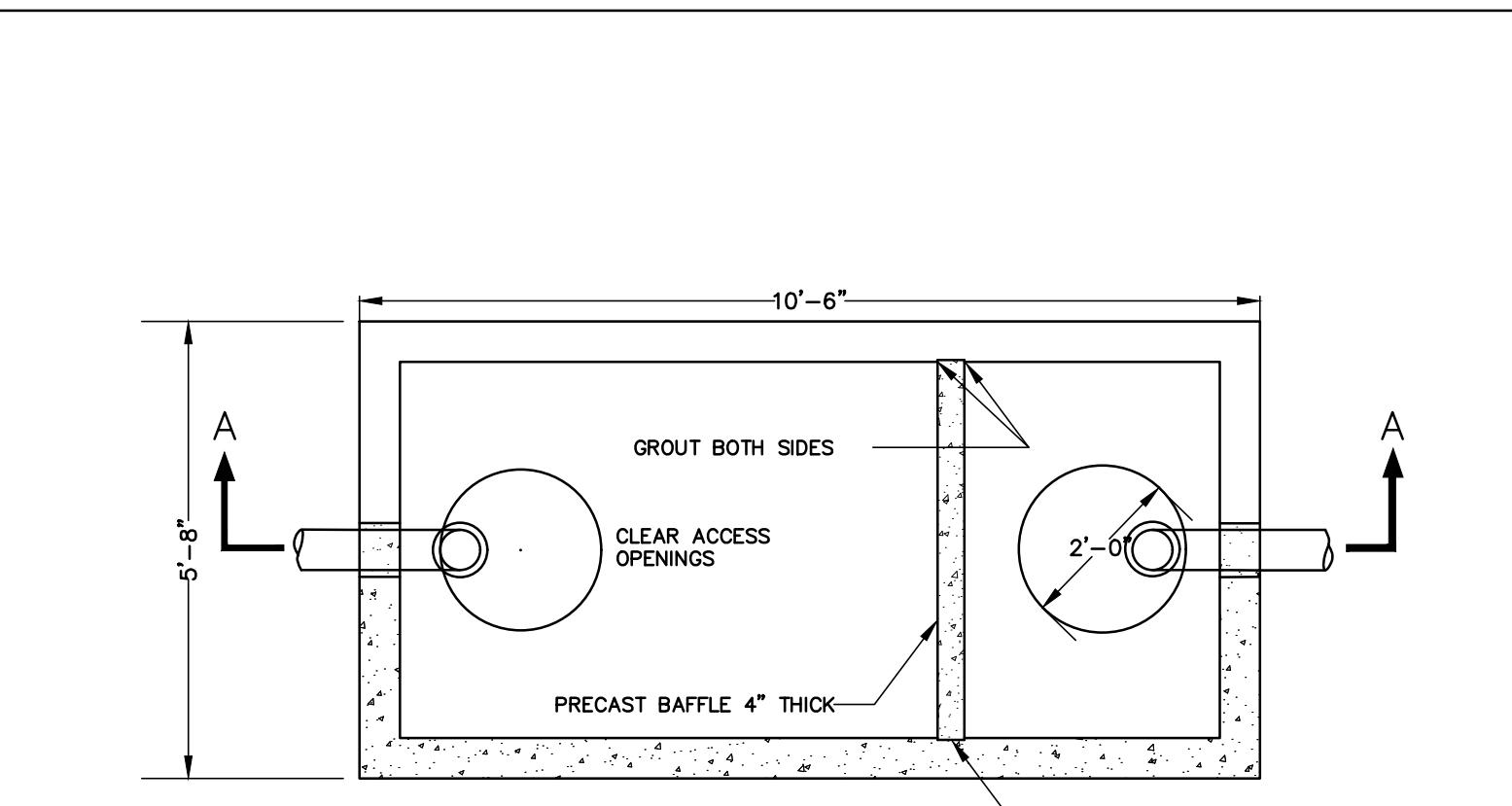
DRAIN MANHOLE

NOT TO SCALE



CATCHBASIN

NOT TO SCALE



NOTE:

1. GREASE TRAP AND ACCESS COVER SHALL BE DESIGNED FOR H2O LOADING.
2. GREASE TRAP SHALL BE SIZED TO MEET PLUMBING CODE. COORDINATE WITH PLUMBING ENGINEER. 1,500 GALLON GREASE TRAP SHOWN

GREASE TRAP

NOT TO SCALE



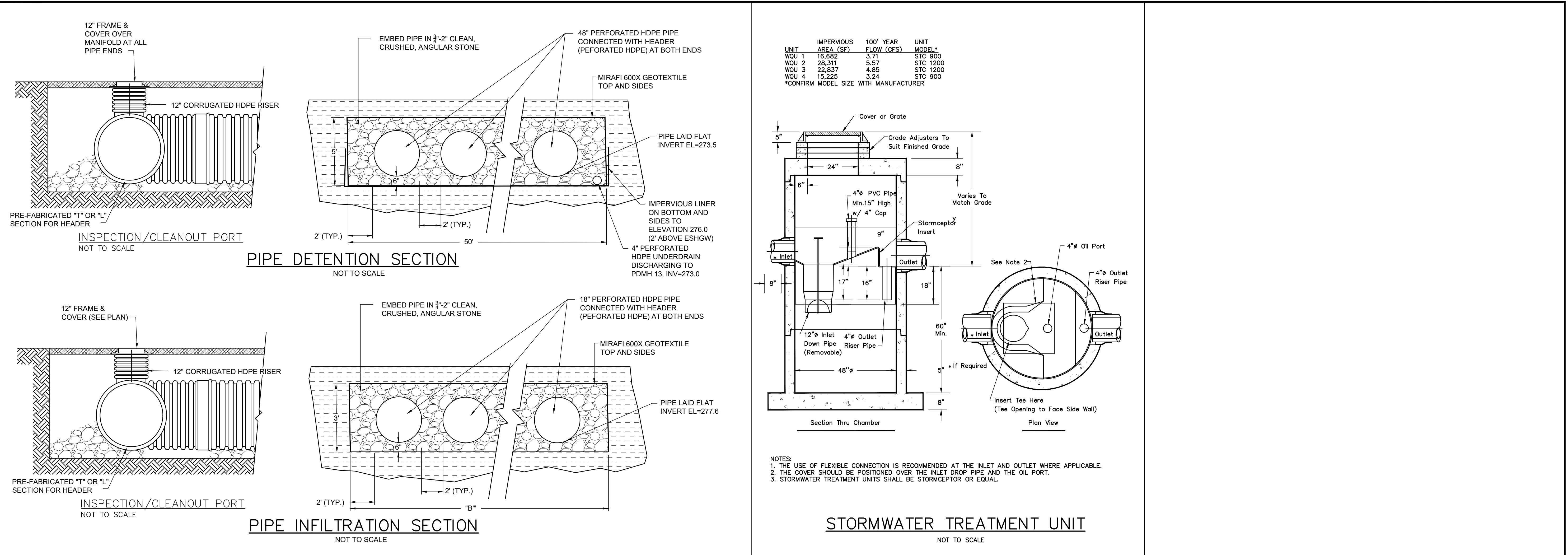
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Newburyport, MA 01950
Ph. 978.312.3120

SITE DETAILS PLAN

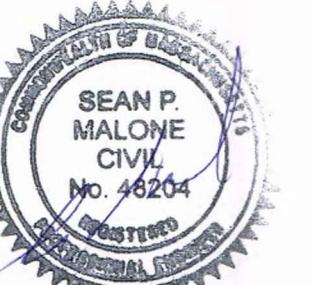
2	Revised per peer review	12/21/22
1	Revised per peer review	11/14/22
No.	Revision/Issue	Date
Design by:	SPM	Checked by:
Drawn by:	SPM	Approved by:
Project:	18017	Date:
Sheet:	September 7, 2022	

C-503



Site:
NORTHERN BANK TOWN COMMON
265-289 GREAT ROAD
LITTLETON, MASSACHUSETTS

Prepared for:
NORTHERN BANK AND TRUST COMPANY
275 MISHAWUM ROAD
WOBURN, MASSACHUSETTS



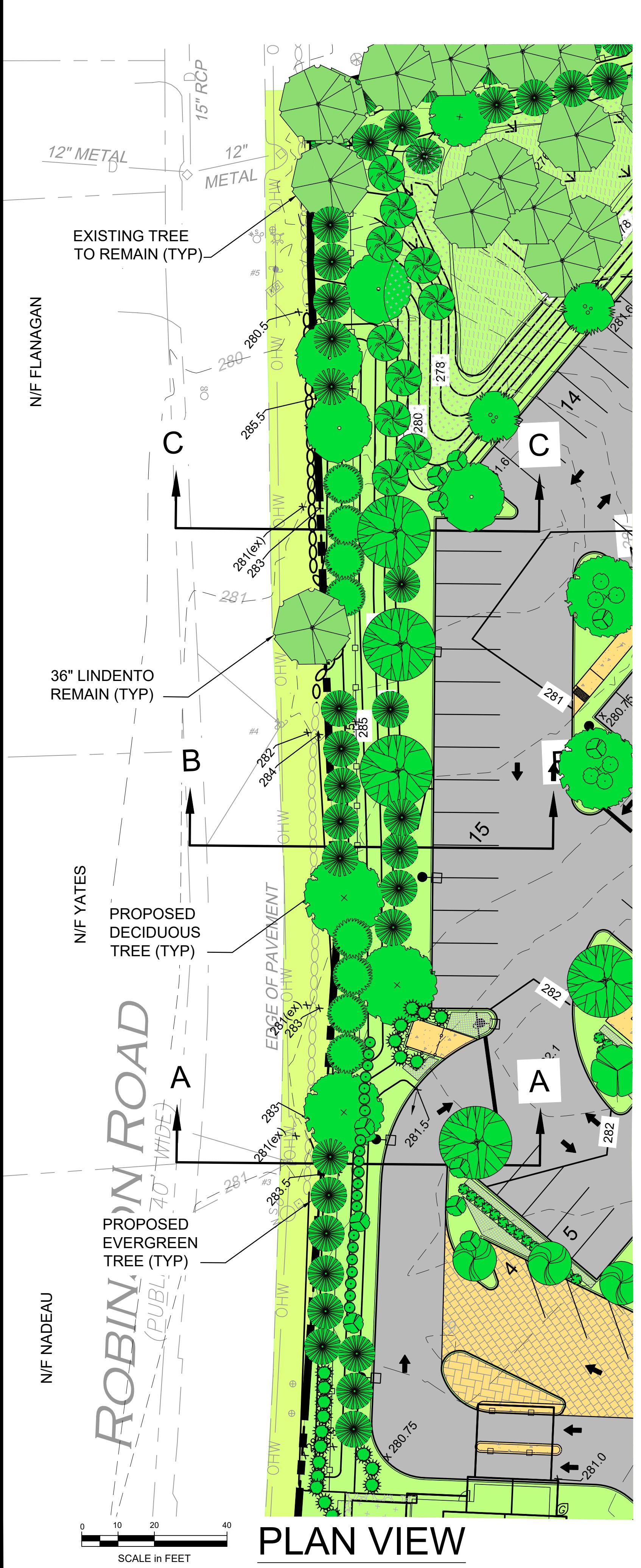
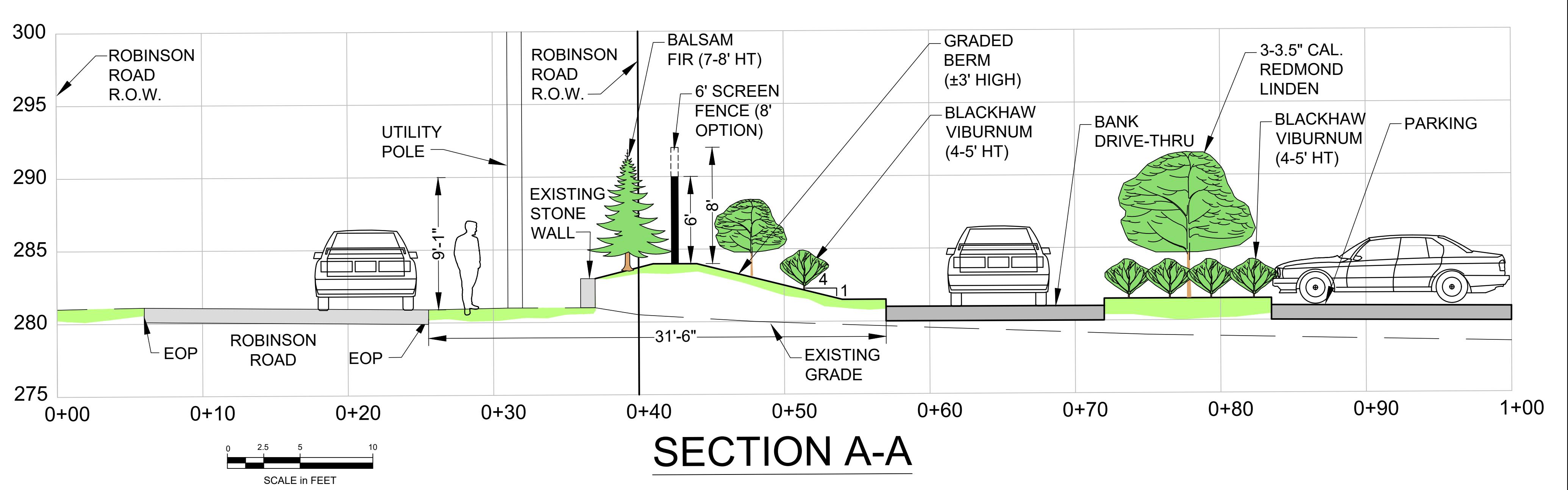
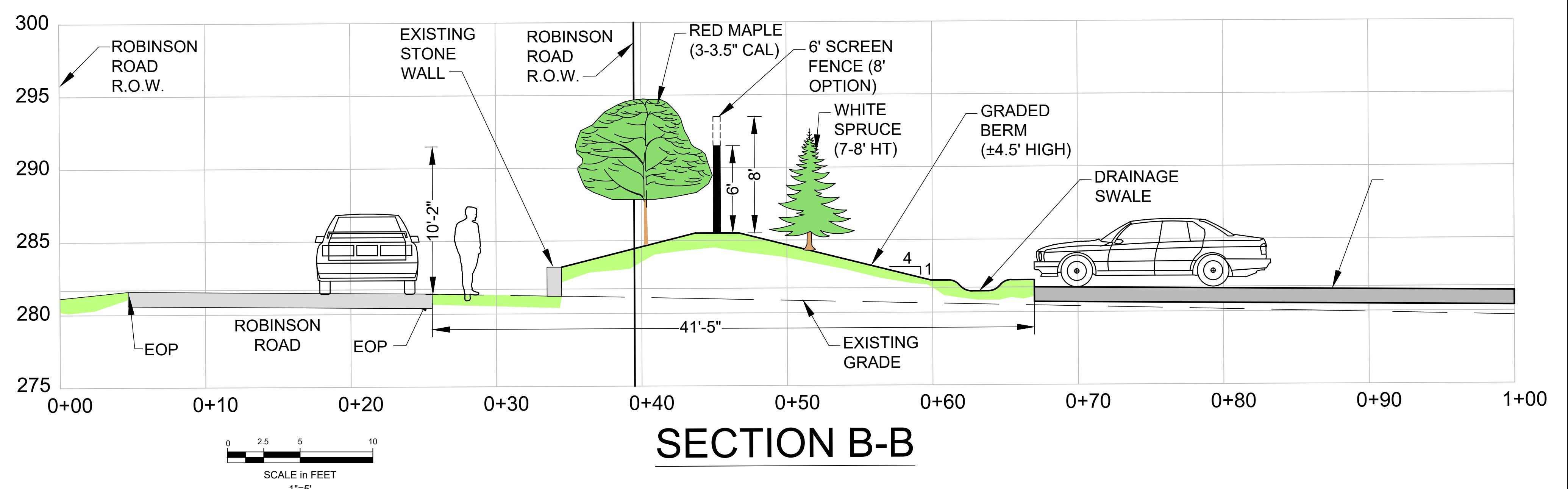
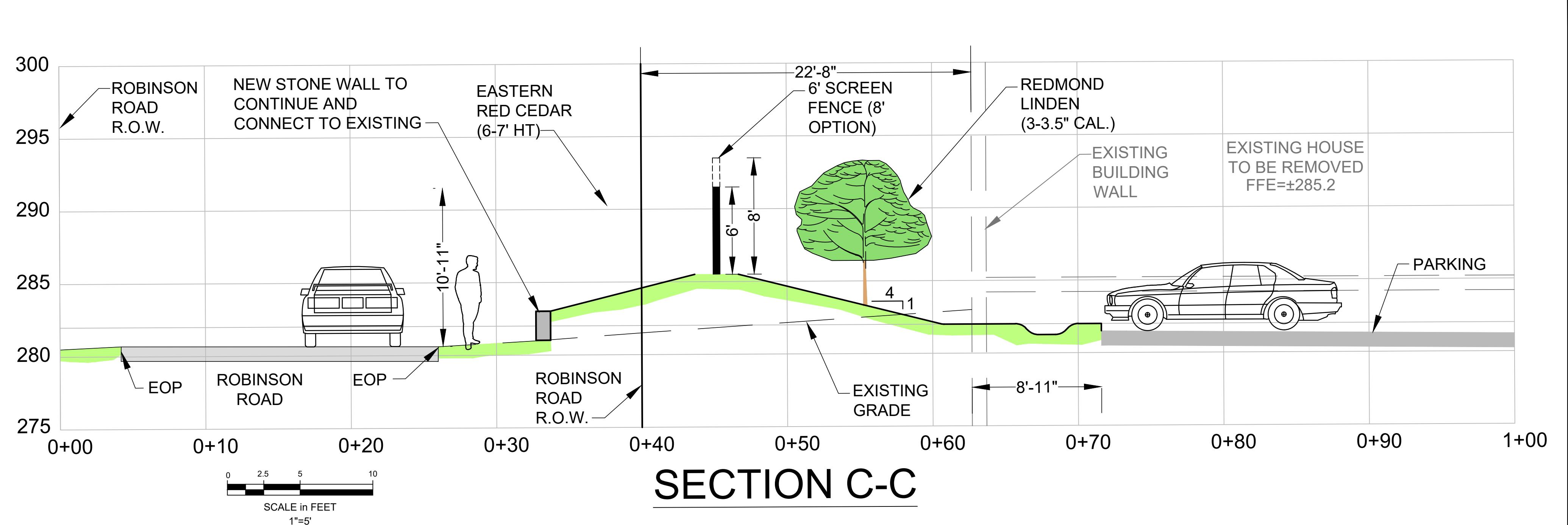
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SITE DETAILS PLAN

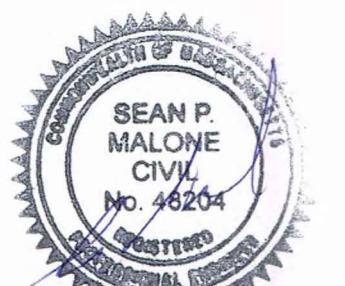
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Design by:	Checked by:	
SPM	SPM	
Drawn by:	Approved by:	
SPM	SPM	
Project:	Date:	
18017	September 7, 2022	
Sheet:		

C-504



Site:
**NORTHERN BANK
TOWN COMMON**
265-289 GREAT ROAD
LITTLETON, MASSACHUSETTS
Prepared for:

**NORTHERN BANK AND
TRUST COMPANY**
275 MISHAWUM ROAD
WOBURN, MASSACHUSETTS



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**ROBIN ROAD
SECTIONS**

2 Revised per peer review 12/21/22

1 Revised per peer review 11/14/22

No. Revision/Issue Date

Design by: SPM Checked by: SPM

Drawn by: SPM Approved by: SPM

Project: 18017 Date: September 7, 2022

Sheet: **C-505**