

"SETTLER'S GLEN"

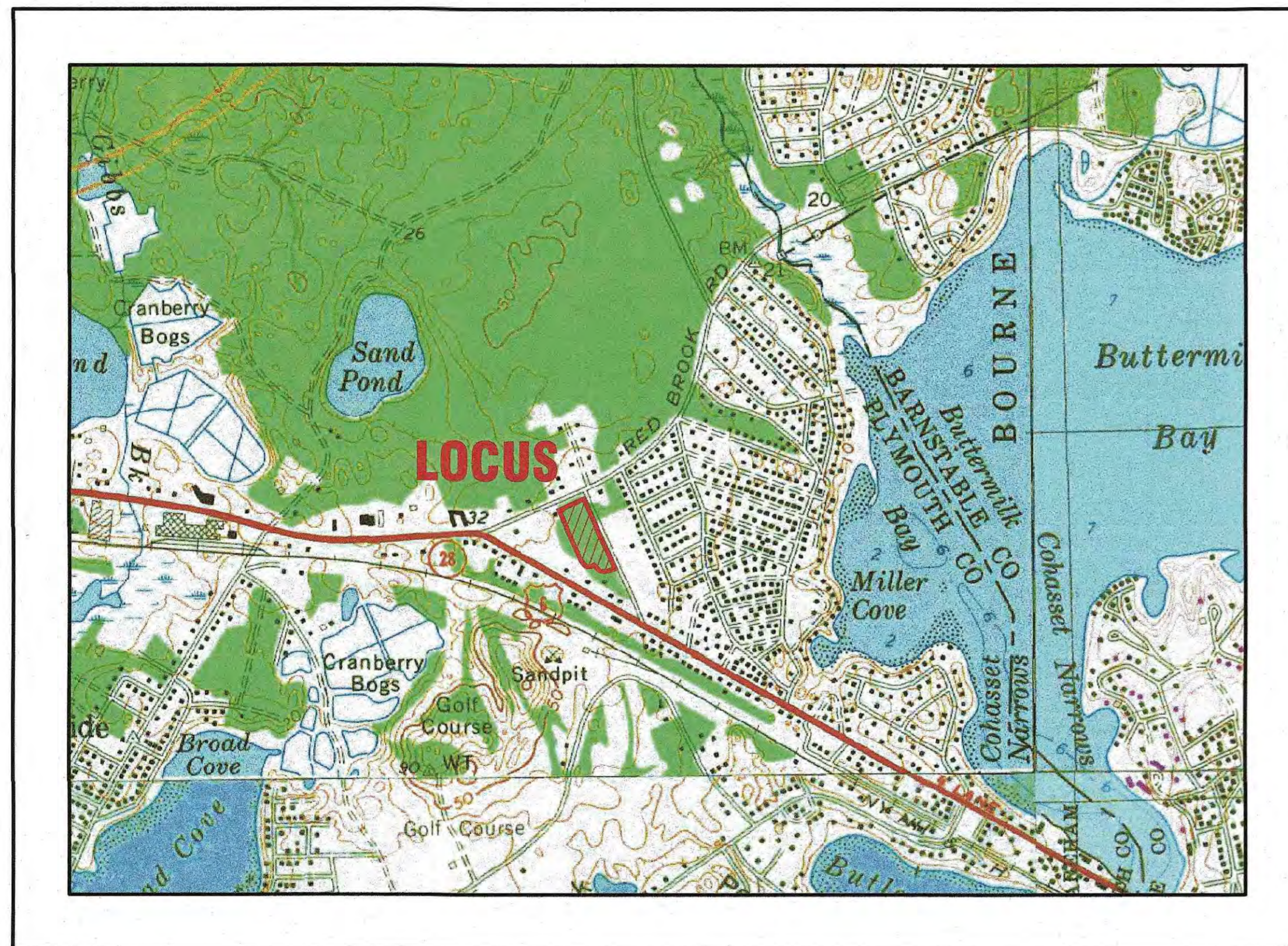
COMPREHENSIVE PERMIT PLAN

RED BROOK ROAD

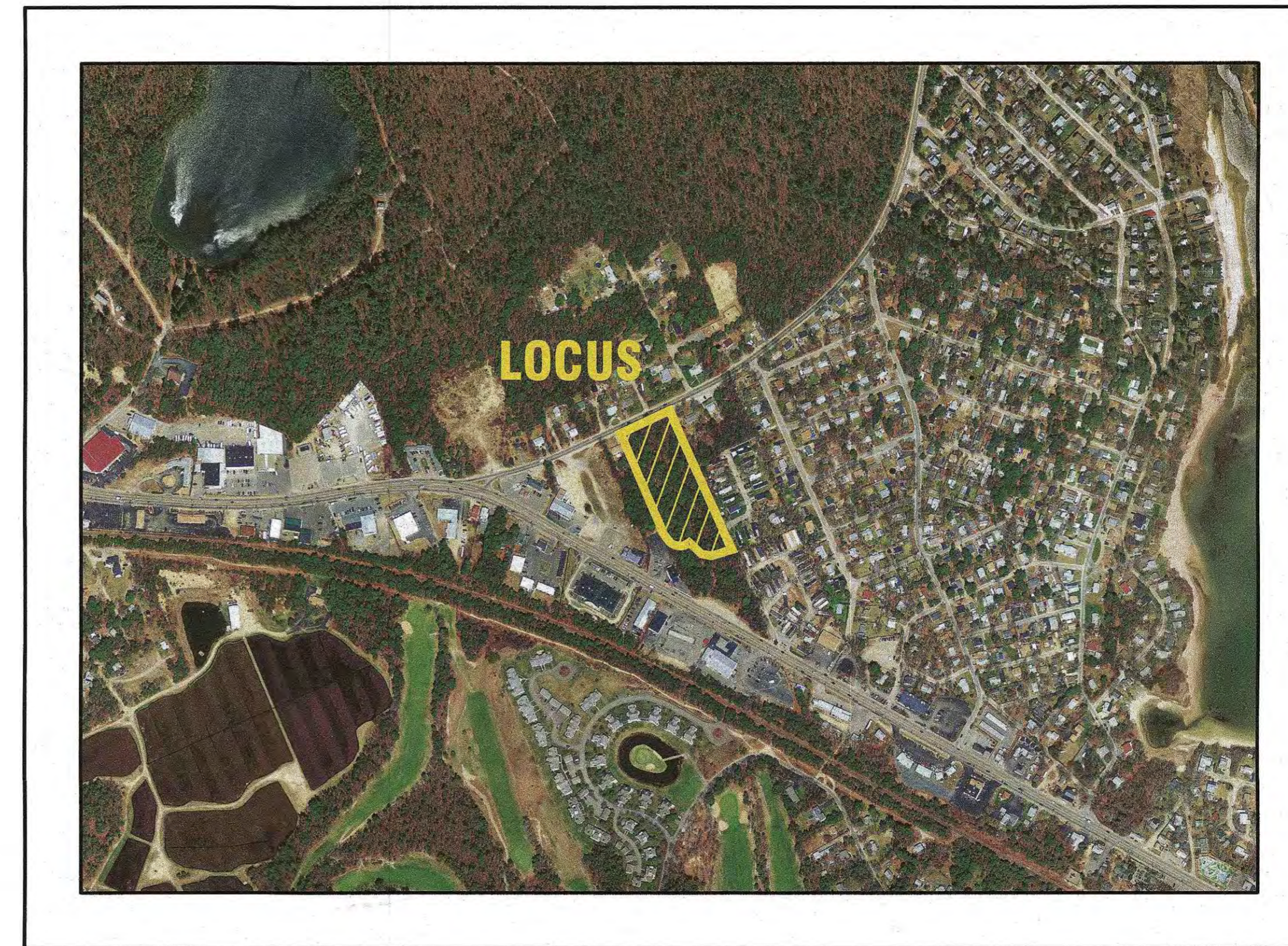
WAREHAM, MASSACHUSETTS

OWNER: SETTLER'S GLEN, LLC
 20 NORTH PARK AVE., SUITE 4
 PLYMOUTH, MA 02360

APPLICANT: SETTLER'S GLEN, LLC
 20 NORTH PARK AVE., SUITE 4
 PLYMOUTH, MA 02360



— U.S.G.S. LOCUS PLAN —
 SCALE: 1"=1000'



— AERIAL OVERVIEW —
 SCALE: 1"=500'

SITE DATA:

ASSESSORS MAP: 8 / LOT 1007C
 ADDRESS: RED BROOK ROAD

ZONING DISTRICT: MULTIPLE RESIDENCE 30 (MR-30)

OVERLAY DISTRICT: GROUND WATER PROTECTION OVERLAY DISTRICT

WATER SUPPLY: TOWN WATER
 SANITARY SEWER: TOWN SEWER

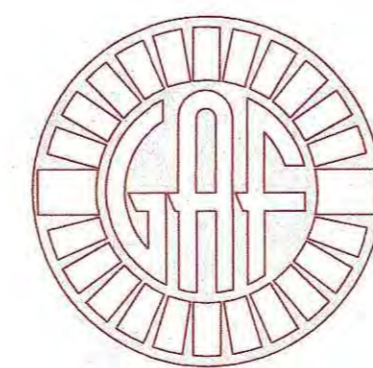
ZONING DATA:

ZONING DISTRICT	MR-30	MR-30	PROVIDED
	(1 FAMILY DWELLING)	(2 FAMILY DWELLING)	
MIN. LOT AREA:	30,000 S.F.*	45,000 S.F.*	156,708 S.F.
MIN. FRONTAGE:	150'	200'	247.66'
MIN. FRONT SETBACK:	20'	20'	21'
MIN. SIDE SETBACK:	10'	10'	16'
MIN. REAR SETBACK:	10'	10'	110'
MAX. BLDG. HEIGHT:	35'	35'	REFER TO PLANS BY OTHERS
MAX. BLDG. COVERAGE:	25%	25%	19.9%
MAX. IMPERV. COVERAGE:	NR	NR	43.2%

* (80% OF THE MINIMUM REQUIRED LOT AREA MUST BE CONTIGUOUS UPLAND)

FLOOD ZONE DATE:

THE PROJECT IS LOCATED WITHIN FLOOD ZONE X. REFER TO THE F.E.M.A. FLOOD INSURANCE RATE MAP PANEL NUMBER 25023C0494J, DATED JULY 17, 2012.



G. A. F. ENGINEERING, INC.
 PROFESSIONAL ENGINEERS & LAND SURVEYORS
 266 MAIN STREET, WAREHAM, MA 02571
 TEL: (508) 295-6600 FAX: (508) 295-6634
 E-MAIL: info@gafenginc.com

JANUARY 12, 2021

PLAN INDEX:

SHEET NO.:	DESCRIPTION:
1	COVER SHEET
2	GENERAL NOTES & LEGEND
3	EXISTING CONDITIONS PLAN
4	OVERVIEW PLAN
5	LAYOUT & UTILITIES
6	GRADING & DRAINAGE
7	PLAN & ROADWAY PROFILE-1
8	PLAN & ROADWAY PROFILE-2
9	DETAIL SHEET 1
10	DETAIL SHEET 2
11	LANDSCAPE PLAN
LSP-1	

PARKING DATA:

REQUIRED: 2 PARKING SPACES FOR EACH DWELLING UNIT
 20 DWELLING UNITS=40 PARKING SPACES
 TOTAL REQUIRED=40 PARKING SPACES

PROVIDED:
 40 PARKING SPACES
 20 (2) CAR GARAGES=40 PARKING SPACES
 TOTAL PROVIDED=80 PARKING SPACES

DATE:	DATE	REV.	DESCRIPTION
JAN. 12, 2021	5/10/22	6	NO CHANGE
DRAWN BY: JMP	2/22/22	5	NO CHANGES THIS SHEET
CHECKED BY: WFM	12/1/21	4	NO CHANGES WATER DEPARTMENT COMMENTS
JOB NO.: 18-9247	8/31/21	3	OWNER & STREET NAME CHANGE
SCALE: AS NOTED	5/11/21	2	NO CHANGES THIS SHEET
	4/26/21	1	PER TOWN & PEER REVIEW COMMENTS

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"SETTLER'S GLEN"
 COMPREHENSIVE PERMIT PLAN
 COVER SHEET
 WAREHAM, MA
 PREPARED FOR:
 SETTLER'S GLEN, LLC
 20 NORTH PARK AVE., SUITE 4
 PLYMOUTH, MA

PERMIT SET
 (NOT FOR CONSTRUCTION)
 DWG. 1 OF 11

GENERAL NOTES:

- 1. ALL UNDERGROUND UTILITIES SHOWN OR NOT SHOWN WERE COMPILED ACCORDING TO AVAILABLE RECORD PLANS AND IN PART FROM FIELD SURVEY AND ARE APPROXIMATE ONLY. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD BEFORE EXCAVATING, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION, OR REPAIRING, ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE CONTACTED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN. SEE MGL CHAPTER 370, ACTS OF 1963. CONTRACTORS MUST CALL DIG-SAFE AT (1-888-DIG-SAFE OR 811) G.A.F. ENGINEERING, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.

CONSTRUCTION NOTES:

- 1. IN GENERAL, THE PLANS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW EVERY FITTING, CHANGE IN DIRECTION OR DETAIL OF CONSTRUCTION.
2. THE LOCATION OF UTILITIES WERE OBTAINED FROM VARIOUS SOURCES OF INFORMATION. THE EXACT LOCATION AND COMPLETENESS IS NOT GUARANTEED. THE CONTRACTOR MUST NOTIFY DIG SAFE PRIOR TO THE START OF CONSTRUCTION (1-888-DIG-SAFE OR 811). G.A.F. ENGINEERING, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
3. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF PERSONNEL AND PROTECTION OF PROPERTY AT THE SITE OR ADJACENT THERETO INCLUDING TREES, SHRUBS, LAWNS, PAVEMENTS, ROADWAYS, STRUCTURES AND UNDERGROUND UTILITIES NOT DESIGNED FOR REMOVAL, RELOCATION, OR REPLACEMENT.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION REQUIRED FOR THE INSTALLATION OF THIS WORK.
5. ALL MATERIALS SHALL BE NEW AND FREE FROM DEFECTS AND OF GOOD QUALITY.
6. THE CONTRACTOR SHALL KEEP THE PREMISES FREE FROM THE ACCUMULATION OF WASTE MATERIAL AND OTHER DEBRIS RESULTING FROM THIS WORK.
7. ALL PAVEMENT MARKINGS DISTURBED BY CONSTRUCTION SHALL BE RESTORED AS PART OF THIS WORK.
8. THE CONTRACTOR SHALL INSTITUTE ALL SAFETY MEASURES NECESSARY TO PROTECT THE PUBLIC SAFETY. THIS SHALL INCLUDE, BUT NOT LIMITED TO, BARRICADES, SIGNS, LIGHTING, FENCES, POLICE DETAILS, AND ANY OTHER MEANS AS DIRECTED. NO TRENCHES ARE TO REMAIN OPEN OVERNIGHT.
9. ELEVATIONS ARE IN FEET AND TENTHS AND ARE BASED ON THE DATUM OF NAVD-88.
10. SIDE SLOPE GRADING SHALL BE AS NOTED ON THE SITE PLANS.
11. ALL SIDE SLOPES SHALL BE DRESSED WITH 4 INCHES OF TOPSOIL. WHERE SIDE SLOPES EXCEED 3:1, PROVIDE AN EROSION CONTROL BLANKET OVER THE PLANTED SEED BED. SEE PLAN FOR LOCATIONS.
12. PERMANENT SEEDING (BEFORE SEPTEMBER 15) LIME TO PH OF 6.5 ACCORDING TO SOIL TEST OR APPLY AT THE RATE OF 100 TO 150 LBS. PER 1,000 SQUARE FEET. APPLY 10-20-20 FERTILIZER AT 1,000 LBS. PER ACRE. INCORPORATE LIME AND FERTILIZER IN TOP 4 INCHES OF SOIL. SEED 100 LBS. PER ACRE OF THE FOLLOWING SEED MIX.

Table with 2 columns: PURE PERCENT, SEED. Lists seed mix percentages for creeping red fescue, perennial ryegrass, and kentucky bluegrass.

EROSION CONTROL NOTES:

- 1. THE SITE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SUITABLE EROSION AND SEDIMENTATION CONTROL DEVICES ON SITE DURING CONSTRUCTION AS REQUIRED TO PREVENT SILT FROM LEAVING THE SITE. SILT WILL NOT BE ALLOWED BEYOND CONSTRUCTION LIMITS. ADDITIONAL PROTECTION: ON-SITE PROTECTION MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNFORESEEN CONDITIONS OR ACCIDENTS.
2. EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLANS DOES NOT PROVIDE SUFFICIENT EROSION AND SEDIMENT CONTROL, ADDITIONAL CONTROL MEASURES SHALL BE IMPLEMENTED. CONTRACTOR IS RESPONSIBLE FOR REPAIRING OR REPLACING EROSION CONTROL DEVICES WHICH BECOME INEFFECTIVE.
3. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR ALL GRADING AND OTHER LAND DISTURBING ACTIVITIES PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE CLEANUP AND REMOVAL OF ANY BUILDUP OF SEDIMENT WHICH ESCAPES FROM THE SITE.
5. CONTRACTOR IS RESPONSIBLE FOR CLEANING SILT AND DEBRIS OUT OF ALL STORM DRAINAGE STRUCTURES UPON THE COMPLETION OF CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TEMPORARY EROSION CONTROL MEASURES AFTER CONSTRUCTION IS COMPLETE AND ALL DISTURBED AREAS HAVE BEEN STABILIZED.
7. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ANY FINES LEVIED AGAINST THE SITE FOR VIOLATIONS OF EROSION CONTROL REGULATIONS.
8. CONTRACTOR SHALL PROVIDE TEMPORARY GROUND COVER FOR ALL AREAS WITH EXPOSED SOIL WHICH WILL NOT BE DISTURBED BY GRADING OPERATIONS FOR A PERIOD OF THIRTY DAYS OR MORE.
9. IF WORK ON THIS PROJECT IS SUSPENDED FOR ANY REASON, THE CONTRACTOR SHALL MAINTAIN THE SOIL EROSION AND SEDIMENTATION CONTROL FACILITIES IN GOOD CONDITION DURING THE SUSPENSION OF WORK.
10. SPRINKLE OR APPLY DUST SUPPRESSERS TO MINIMIZE DUST AT THE CONSTRUCTION SITE. MAINTAIN DUST CONTROL MEASURES UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
11. THE CONTRACTOR WILL ALSO NEED TO COMPLY TO ANY ORDER OF CONDITIONS THAT MAY BE ISSUED BY THE TOWN OF WAREHAM CONSERVATION COMMISSION.

DRAINAGE OPERATION AND MAINTENANCE SCHEDULE:

THE OPERATION AND MAINTENANCE (O&M) SCHEDULE DURING THE CONSTRUCTION PERIOD IS THE RESPONSIBILITY OF THE CONTRACTOR. THE OUTLINE BELOW SHALL BE FOLLOWED TO ENSURE THE PROPER CONSTRUCTION AND FUNCTION OF THE DRAINAGE FACILITIES.

- 1. IN CONJUNCTION WITH THE SITE CONSTRUCTION, ALL DRAINAGE STRUCTURES SHALL BE INSTALLED AND THE AFFECTED AREAS STABILIZED (LOAM AND SEED, HYDROSEED, PLANTED, RIP-RAP, ETC.). PERMANENT STABILIZATION OF THESE AREAS SHALL BE STARTED AS SOON AS POSSIBLE.
2. EROSION CONTROL SHALL BE PLACED ALONG THE LIMITS OF WORK WHERE SHOWN ON THE PLAN.
3. ALL CATCH BASINS SHALL HAVE TEMPORARY SILT SACKS OR AN APPROVED EQUAL INSTALLED IN THEM AS SOON AS THE STRUCTURE IS SET. CONTRACTOR SHALL REMOVE AND DISPOSE OF THEM AT THE COMPLETION OF CONSTRUCTION. THE CATCH BASINS SHALL BE INSPECTED WEEKLY DURING CONSTRUCTION. IF THERE IS ANY SEDIMENT BUILDUP, THE AFFECTED STRUCTURES SHALL BE CLEANED IMMEDIATELY, AND ALL MATERIAL REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS.
4. THE LEACHING GALLEYS AND WATER QUALITY DRAIN MANHOLES BE INSPECTED WEEKLY DURING CONSTRUCTION. IF THERE IS ANY SEDIMENT BUILDUP, THE AFFECTED STRUCTURES SHALL BE CLEANED IMMEDIATELY, AND ALL MATERIAL REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS.
5. ALL AREAS SHALL BE INSPECTED WEEKLY, AND AFTER LARGE STORMS. IF THERE IS EVIDENCE OF EROSION, THE ERODED AREA SHALL BE RE-STABILIZED, AND MEASURES SHALL BE TAKEN TO PREVENT REOCCURRENCE. THIS SCHEDULE MUST BE ADHERED TO BY THE CONTRACTOR UNTIL THE PROJECT IS ACCEPTED BY THE OWNER.

POST-CONSTRUCTION OPERATION AND MAINTENANCE PLAN:

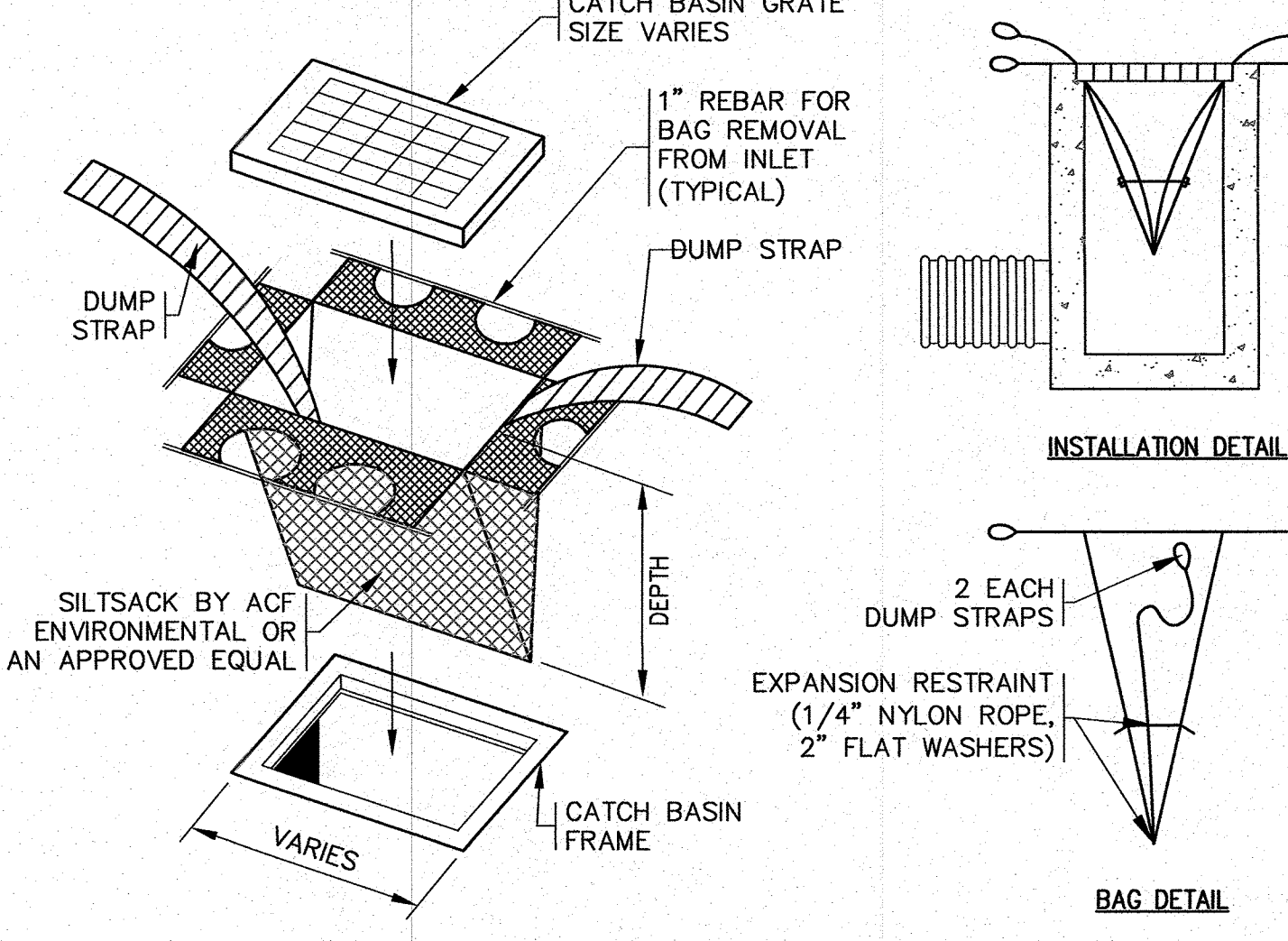
UPON THE COMPLETION OF CONSTRUCTION, MAINTENANCE SHALL BE CONDUCTED BY THE OWNER OR OWNER'S AGENT ON THE SITE. THE FOLLOWING SHALL BE CARRIED OUT BY THE RESPONSIBLE PARTY AND SHALL BE ADHERED TO ENSURE THE PROPER OPERATION OF THE DRAINAGE FACILITIES.

- 1. STREET SWEEPING IS AN EFFECTIVE NONSTRUCTURAL SOURCE CONTROL THAT WILL REMOVE SEDIMENT FROM PAVED SURFACES. STREET SWEEPING SHOULD BE DONE BY THE USE OF A HIGH EFFICIENCY VACUUM SWEEPER OR REGENERATIVE AIR SWEEPER. STREET SWEEPING SHALL BE DONE TWICE PER YEAR, ONCE REMOVED FROM PAVED SURFACES, THE SWEEPINGS MUST BE HANDLED AND DISPOSED OF PROPERLY IN ONE OF THE WAYS APPROVED BY MASSDEP (SEE POLICY # BA-18-001: REUSE & DISPOSAL OF STREET SWEEPINGS).
2. DEEP SUMP CATCH BASINS ARE UNDERGROUND RETENTION SYSTEMS DESIGNED TO REMOVE TRASH, DEBRIS AND COARSE SEDIMENT FROM STORMWATER RUNOFF AND SERVE AS TEMPORARY SPILL CONTAINMENT DEVICES FOR FLOATABLES SUCH AS OILS AND GREASE. INSPECT CATCH BASINS MONTHLY AND CLEAN AT LEAST TWO TIMES PER YEAR AND AT THE END OF THE FOLIAGE AND SNOW-REMOVAL SEASONS. SEDIMENTS MUST ALSO BE REMOVED WHENEVER THE DEPTH OF DEPOSITS IS GREATER THAN OR EQUAL TO ONE HALF THE DEPTH FROM THE BOTTOM OF THE INVERT. SEDIMENT SHALL BE REMOVED THROUGH THE USE OF A VACUUM TRUCK. SEDIMENT MUST BE HANDLED AND DISPOSED OF PROPERLY IN ONE OF THE WAYS ALREADY APPROVED BY MASSDEP (SEE MASSDEP POLICY ON MANAGEMENT OF CATCH BASIN CLEANINGS). IF THERE IS EVIDENCE THAT THEY HAVE BEEN CONTAMINATED BY A SPILL OR OTHER MEANS, THE CLEANINGS MUST BE EVALUATED IN ACCORDANCE WITH THE MASSDEP HAZARDOUS WASTE REGULATIONS, 310 CMR 30.00 AND HANDLED AS HAZARDOUS WASTE.
3. PROPRIETARY MANHOLES (WATER QUALITY DRAIN MANHOLES) ARE UNDERGROUND RETENTION SYSTEMS DESIGNED TO REMOVE TRASH, DEBRIS AND COARSE SEDIMENT FROM STORMWATER RUNOFF AND SERVE AS TEMPORARY SPILL CONTAINMENT DEVICES FOR FLOATABLES SUCH AS OILS AND GREASE. INSPECT THE UNITS MONTHLY AND CLEAN AT LEAST TWO TIMES PER YEAR AND AT THE END OF THE FOLIAGE AND SNOW-REMOVAL SEASONS. SEDIMENTS MUST ALSO BE REMOVED WHENEVER THE DEPTH OF DEPOSITS IS GREATER THAN OR EQUAL TO ONE HALF THE DEPTH FROM THE BOTTOM OF THE INVERT. SEDIMENT SHALL BE REMOVED THROUGH THE USE OF A VACUUM TRUCK. SEDIMENT MUST BE HANDLED AND DISPOSED OF PROPERLY IN ONE OF THE WAYS ALREADY APPROVED BY MASSDEP (SEE MASSDEP POLICY ON MANAGEMENT OF CATCH BASIN CLEANINGS). IF THERE IS EVIDENCE THAT THEY HAVE BEEN CONTAMINATED BY A SPILL OR OTHER MEANS, THE CLEANINGS MUST BE EVALUATED IN ACCORDANCE WITH THE MASSDEP HAZARDOUS WASTE REGULATIONS, 310 CMR 30.00 AND HANDLED AS HAZARDOUS WASTE.
4. LEACHING GALLEYS SHALL BE INSPECTED AFTER EVERY MAJOR STORM EVENT IN THE FIRST FEW MONTHS AFTER CONSTRUCTION TO ENSURE PROPER STABILIZATION AND FUNCTION. THEREAFTER, THE LEACHING GALLEYS SHALL BE INSPECTED AT LEAST ONCE PER YEAR. WATER DEPTH IN THE LEACHING GALLEYS SHOULD BE OBSERVED AND MEASURED AT 0, 24, AND 48-HOUR INTERVALS AFTER A MAJOR STORM EVENT AT LEAST ONCE PER YEAR. EXFILTRATION RATES ARE CALCULATED BY DIVIDING THE DROP IN THE WATER LEVEL (INCHES) BY THE ELAPSED TIME (HOUR). A COMPARISON OF EXFILTRATION RATE MEASUREMENTS TAKEN OVER THE YEARS PROVIDE A USEFUL TOOL TRACKING ANY CLOGGING PROBLEMS WITH THE UNDERGROUND INFILTRATION SYSTEM.

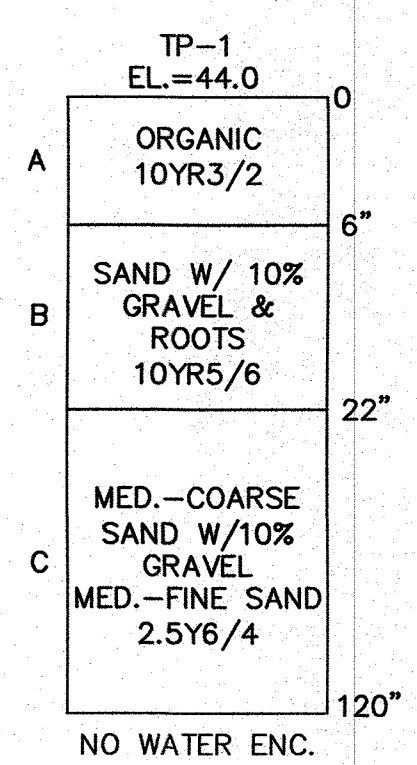
DRAINAGE INSTALLATION NOTES:

- 1. ALL DRAINAGE PIPES, UNLESS OTHERWISE NOTED, ARE TO BE ADS N-12 PIPE WITH SOIL TIGHT JOINTS AND FITTINGS. REFER TO PLAN FOR LOCATION, SIZES AND SLOPES.
2. ALL ROOF DRAIN PIPES, UNLESS OTHERWISE NOTED, ARE TO BE 4" ADS N-12 PIPE WITH SOIL TIGHT JOINTS AND FITTINGS. MINIMUM SLOPE TO BE 1.00% REFER TO PLAN FOR LOCATION.
3. MIN. COVER ON PIPES SHALL NOT BE LESS THAN 1.5 FEET.
4. WHERE REQUIRED ALL PIPE PERFORATIONS SHALL BE AASHTO CLASS II.
5. ALL WORK AND MATERIAL SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF WAREHAM MUNICIPAL MAINTENANCE DEPARTMENT.
6. WHERE REQUIRED CONTRACTOR TO REMOVE ALL UNSUITABLE SOILS AND REPLACE WITH CLEAN SAND AND GRAVEL APPROVED BY DESIGN ENGINEER.
7. IF THE TOP COURSE OF PAVEMENT IS NOT INSTALLED IMMEDIATELY AFTER THE BASE COURSE, CATCH BASIN RIMS SHALL BE SET TO THE BASE COURSE OF PAVEMENT AND THEN RAISED WHEN THE TOP COURSE OF PAVEMENT IS INSTALLED.

WATER INSTALLATION NOTES:

- 1. ALL WATER MAINS, SERVICES, GATE VALVES/GATE BOX, CURB STOPS, HYDRANTS, FITTINGS, ETC. & METHOD OF INSTALLATION SHALL CONFORM TO THE ONSET FIRE DISTRICT AND ONSET WATER DEPARTMENTS RULES & REGULATIONS.
2. WATER MAIN SHALL BE PRESSURE TESTED, FLUSHED & DISINFECTED IN ACCORDANCE WITH THE ONSET FIRE DISTRICT AND ONSET WATER DEPARTMENTS REQUIREMENTS.
3. CONTRACTOR TO COORDINATE WITH THE ONSET FIRE DISTRICT AND THE ONSET WATER DEPARTMENT FOR THE INSPECTIONS OF THE WATER MAIN INSTALLATION.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO COMPLETE THE INSTALLATION OF THE WATER SYSTEM.
5. THE CONTRACTOR SHALL OBTAIN A COPY OF THE "ONSET FIRE DISTRICT, WATER DEPARTMENT GENERAL PROCEDURES, CONSTRUCTION SPECIFICATIONS & MATERIAL SPECIFICATIONS" FROM THE ONSET WATER DEPARTMENT BEFORE PROCEEDING WITH THE INSTALLATION OF THE WATER SYSTEM.
6. ALL WATER MAINS SHALL BE RESTRAINED JOINT 8" CLASS 52 DOUBLE CEMENT LINED DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND MECHANICAL JOINT FITTINGS OR APPROVED EQUAL.
7. ALL WATER SERVICE LINES SHALL BE INSTALLED A MINIMUM OF 10' FROM SEWER SERVICE LINES.


TEST PIT DATA table with columns: DATE OF TESTING, PERFORMED BY, REFER TO THE EXISTING CONDITIONS PLAN FOR TEST PIT LOCATIONS.



ABBREVIATIONS

Table listing abbreviations and their corresponding full names, such as AC ADS APPROX., BC BIT. CONCR., BLDRS BOLTERS, etc.

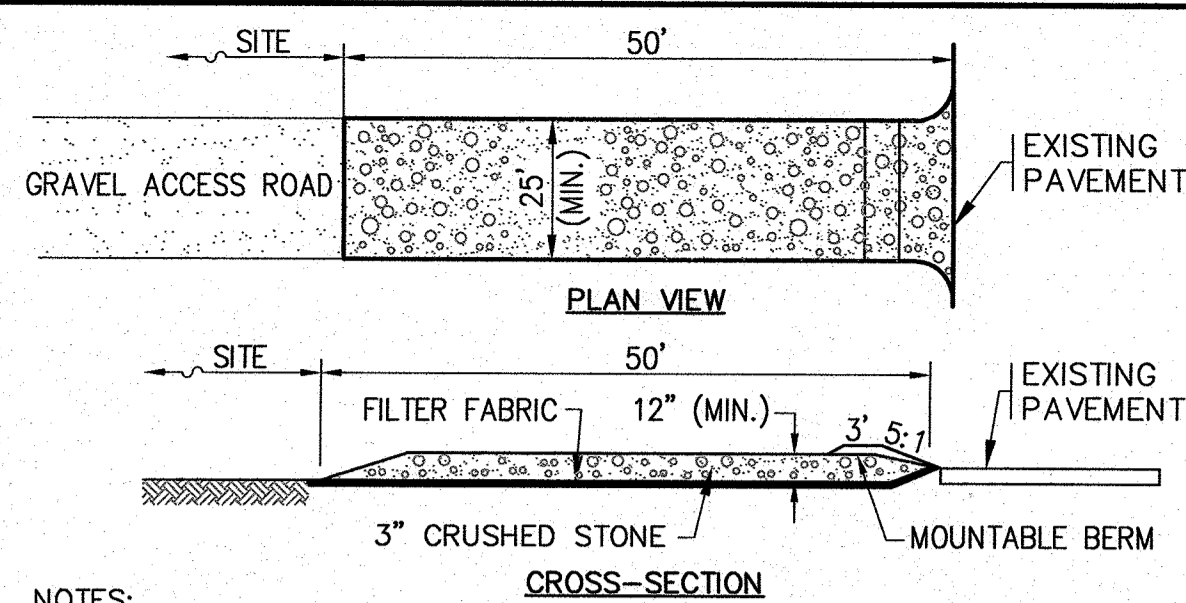
Approval and revision table with columns: NO CHANGE, DATE, DRAWN BY, CHECKED BY, JOB NO., SCALE, REV., DESCRIPTION.

LEGEND table with columns: EXISTING, DESC., PROPOSED. Lists symbols for contours, spot grades, wetlands, flood zones, drain lines, manholes, utilities, and various structures.

Professional stamps for G.A.F. ENGINEERING, INC. and SETTLER'S GLEN, LLC, including contact information and project details.

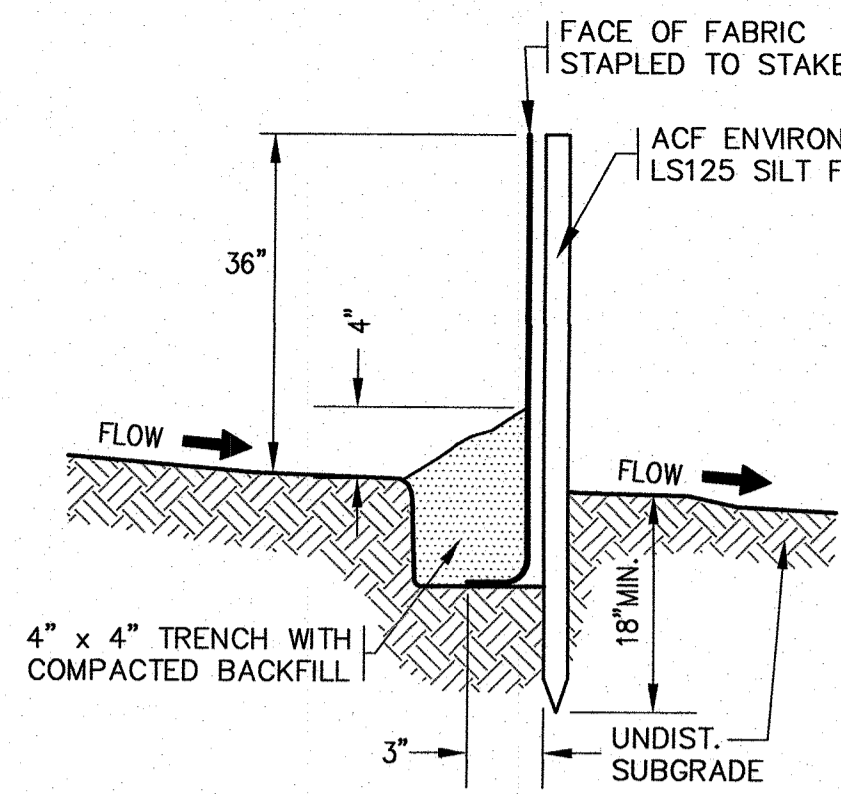
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1/24/2022 9:20 AM (G:\DRAWINGS\2022\18-9247-SETTLER'S GLEN, LLC\18-9247.dwg) (APPROVED) 408 PLAN_REV-6.dwg



- NOTES:**
- ENTRANCE WIDTH SHALL BE 25 FEET MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.

TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
N.T.S.

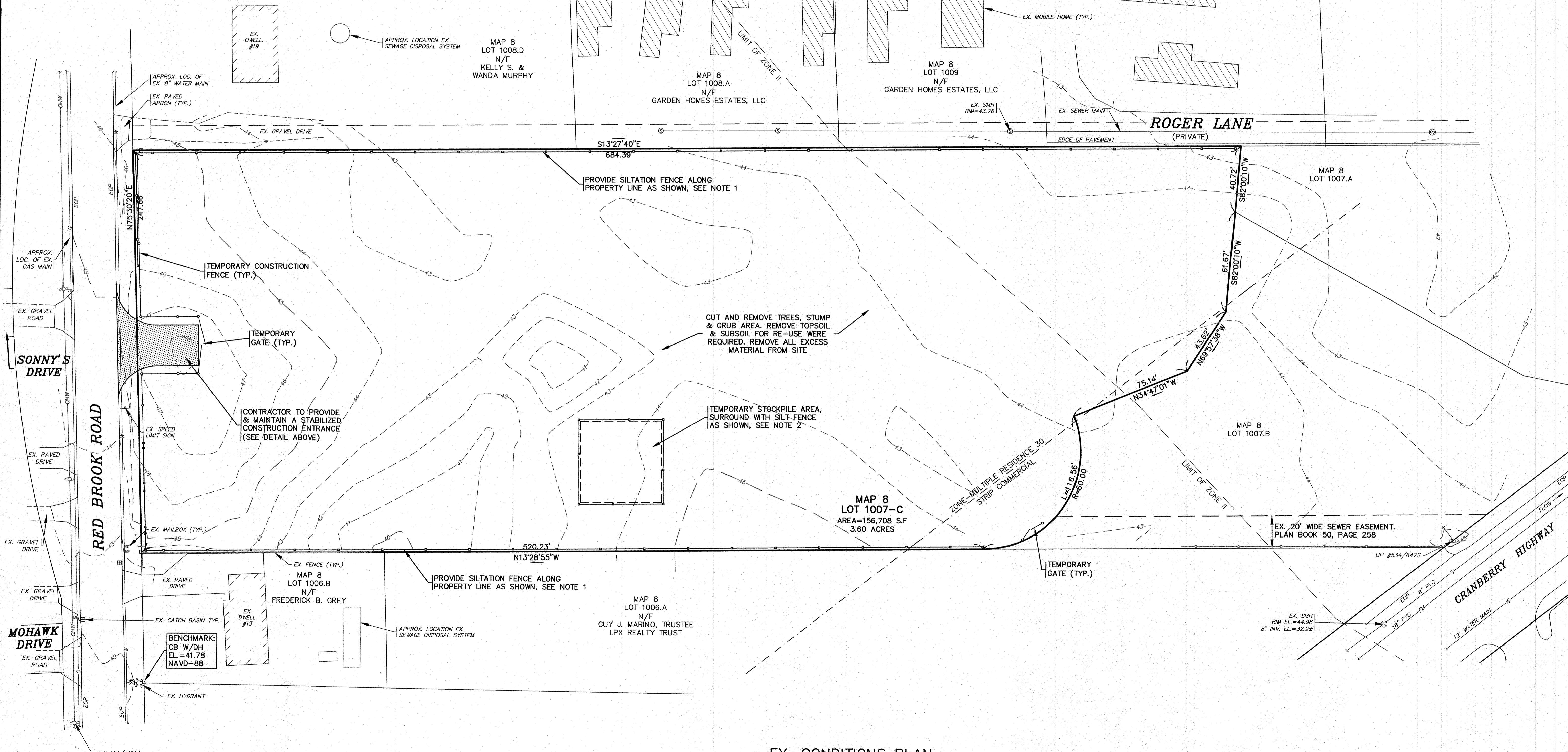


EROSION CONTROL BARRIER
N.T.S.

- NOTES:**
- SILTATION FENCE SHALL BE ACF ENVIRONMENTAL LS125 SILT FENCE OR AN APPROVED EQUAL.
 - SILTATION FENCING SHALL BE INSTALLED DOWNSLOPE OF ALL PROPOSED AND EXISTING DISTURBED AREAS, OR AS SHOWN ON THE PLANS.
 - EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL VEGETATIVE OR STABILIZED COVER HAS BEEN FIRMLY ESTABLISHED.
 - EROSION CONTROL MEASURES SHALL FOLLOW THE PERFORMANCE STANDARDS OF THE USDA SOIL CONSERVATION SERVICE, AND ANY APPLICABLE STATE/LOCAL CONSERVATION AUTHORITY.

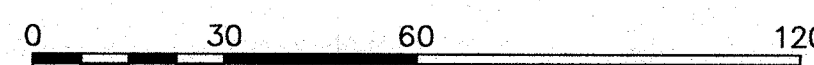
NOTES:

- CONTRACTOR SHALL PROVIDE AND MAINTAIN STAKED SILTATION FENCING EROSION CONTROL BARRIER AS SHOWN ON THE PLANS. SEE DETAIL.
- FINAL LOCATION OF STOCKPILE AREA SHALL BE DETERMINED BY THE CONTRACTOR AT TIME OF CONSTRUCTION. CONTRACTOR SHALL RELOCATE STOCKPILE AREA DURING CONSTRUCTION NEEDED.
- FINAL LOCATIONS AND DETAILS OF TEMPORARY CONSTRUCTION FENCE AND GATES SHALL BE DETERMINED BY THE CONTRACTOR AND ENGINEER.



EX. CONDITIONS PLAN

SCALE: 1"=30'



DATE: JAN. 12, 2021	APPROVED BY:	NO CHANGE	NO CHANGES THIS SHEET
DRAWN BY: JMP		5/10/22	JMP
CHECKED BY: WFM		2/22/22	JMP
JOB NO.: 18-9247		12/1/21	JMP
SCALE: 1" = 30'		8/31/21	JMP
		5/11/21	JMP
	4/26/21	JMP	BY
	REV.	DATE	DESCRIPTION

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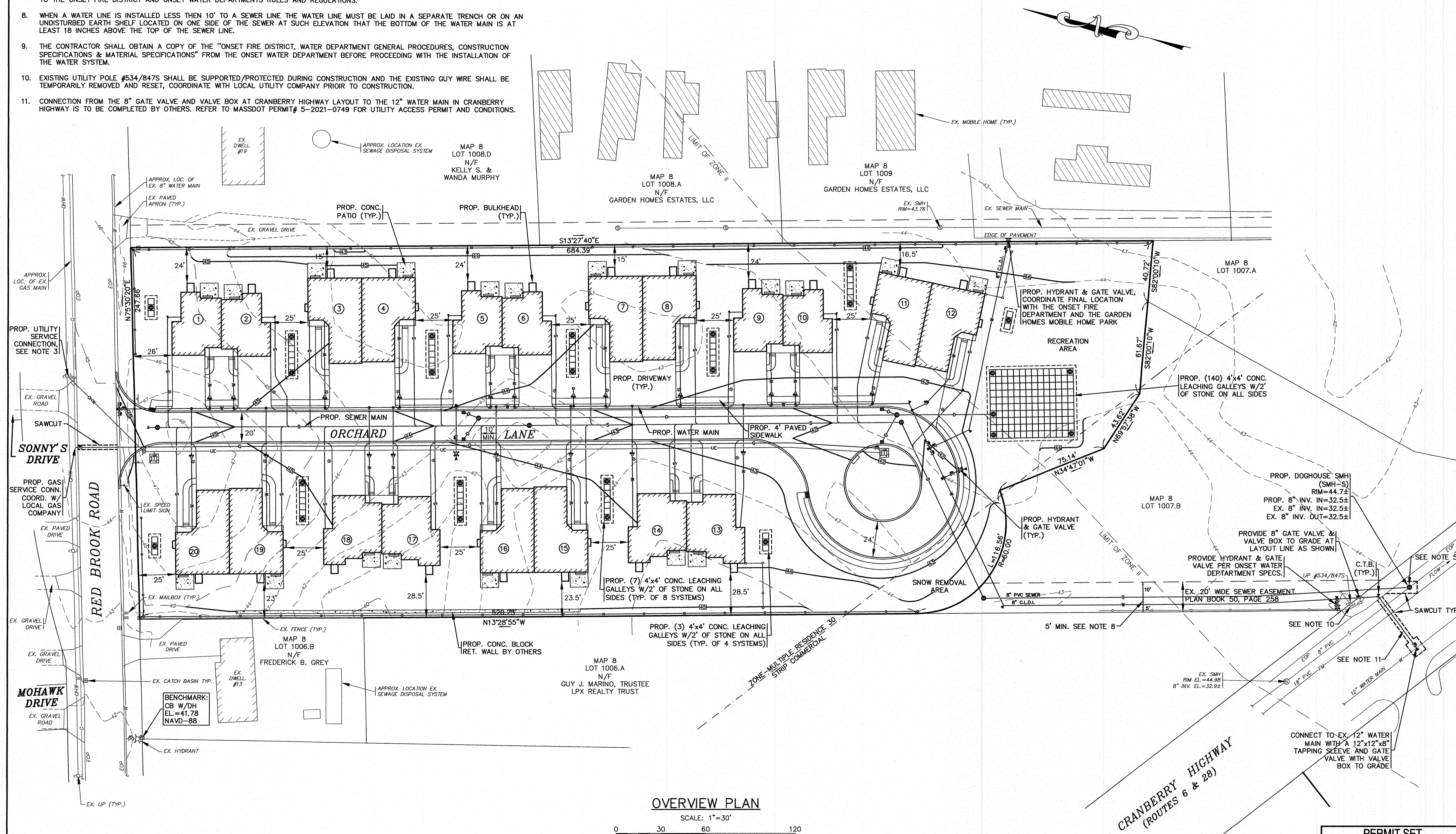
PREPARED FOR:
"SETTLER'S GLEN" COMPREHENSIVE PERMIT PLAN EXISTING CONDITIONS PLAN
 RED BROOK ROAD
SETTLER'S GLEN, LLC
 20 NORTH PARK AVE., SUITE 4
 PLYMOUTH, MA

JOB NO.: 18-9247
 DWG. 3 OF 11

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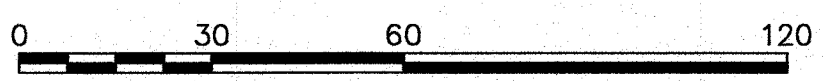
NOTES:

- REFER TO ARCHITECTURAL PLANS PREPARED BY OTHERS FOR ALL PROPOSED DWELLING DIMENSIONS, CONSTRUCTION NOTES AND DETAILS.
- ALL SEWER WORK SHALL BE DONE IN ACCORDANCE WITH THE TOWN OF WAREHAM SEWER COMMISSIONERS RULES AND REGULATIONS.
- CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY PRIOR TO CONNECTION.
- REFER TO PAVEMENT SAWCUT/TRENCH REPAIR DETAIL ON SHEET 10.
- CONTRACTOR SHALL CONFIRM EXISTING SEWER ELEVATION PRIOR TO CONSTRUCTION. COORDINATE WITH WAREHAM SEWER DEPARTMENT. REFER TO MASSDOT PERMIT# 5-2021-0748 FOR UTILITY ACCESS PERMIT AND CONDITIONS.
- WHEN A WATER LINE CROSSES ABOVE THE SEWER LINE, THE WATER LINE SHALL BE A MINIMUM OF 18" ABOVE THE SEWER LINE. AT THE CROSSING, ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. BOTH THE WATER AND SEWER PIPES SHALL BE CONSTRUCTED OF CLASS 150 PRESSURE RATED PIPE MEETING LATEST AWWA STANDARDS. FOR COMPLETE DETAILS REFER TO THE ONSET FIRE DISTRICT AND ONSET WATER DEPARTMENTS RULES AND REGULATIONS.
- WHEN A WATER LINE CROSSES BELOW A SEWER LINE, THE WATER LINE SHALL BE A MINIMUM OF 18" BELOW THE SEWER LINE AND THE WATER LINE SHALL BE ENCASED 10' IN BOTH DIRECTIONS AND SEALED AT BOTH ENDS WITH CONCRETE. AT THE CROSSING, THE SEWER LINE SHALL BE CONSTRUCTED OF CLASS 150 PRESSURE RATED PIPE MEETING LATEST AWWA STANDARDS. FOR COMPLETE DETAILS REFER TO THE ONSET FIRE DISTRICT AND ONSET WATER DEPARTMENTS RULES AND REGULATIONS.
- WHEN A WATER LINE IS INSTALLED LESS THEN 10' TO A SEWER LINE THE WATER LINE MUST BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AT SUCH ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER LINE.
- THE CONTRACTOR SHALL OBTAIN A COPY OF THE "ONSET FIRE DISTRICT, WATER DEPARTMENT GENERAL PROCEDURES, CONSTRUCTION SPECIFICATIONS & MATERIAL SPECIFICATIONS" FROM THE ONSET WATER DEPARTMENT BEFORE PROCEEDING WITH THE INSTALLATION OF THE WATER SYSTEM.
- EXISTING UTILITY POLE #534/8475 SHALL BE SUPPORTED/PROTECTED DURING CONSTRUCTION AND THE EXISTING GUY WIRE SHALL BE TEMPORARILY REMOVED AND RESET, COORDINATE WITH LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION.
- CONNECTION FROM THE 8" GATE VALVE AND VALVE BOX AT CRANBERRY HIGHWAY LAYOUT TO THE 12" WATER MAIN IN CRANBERRY HIGHWAY IS TO BE COMPLETED BY OTHERS. REFER TO MASSDOT PERMIT# 5-2021-0749 FOR UTILITY ACCESS PERMIT AND CONDITIONS.



OVERVIEW PLAN

SCALE: 1"=30'

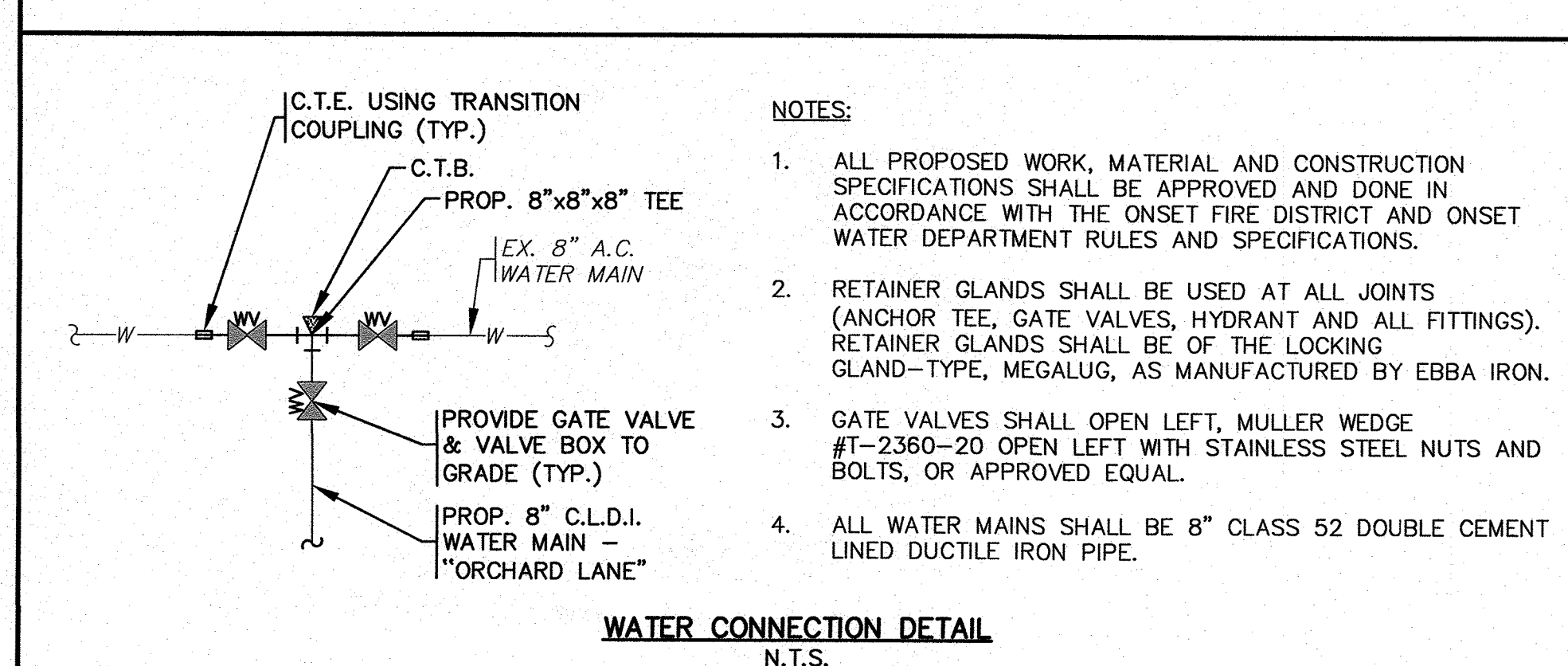
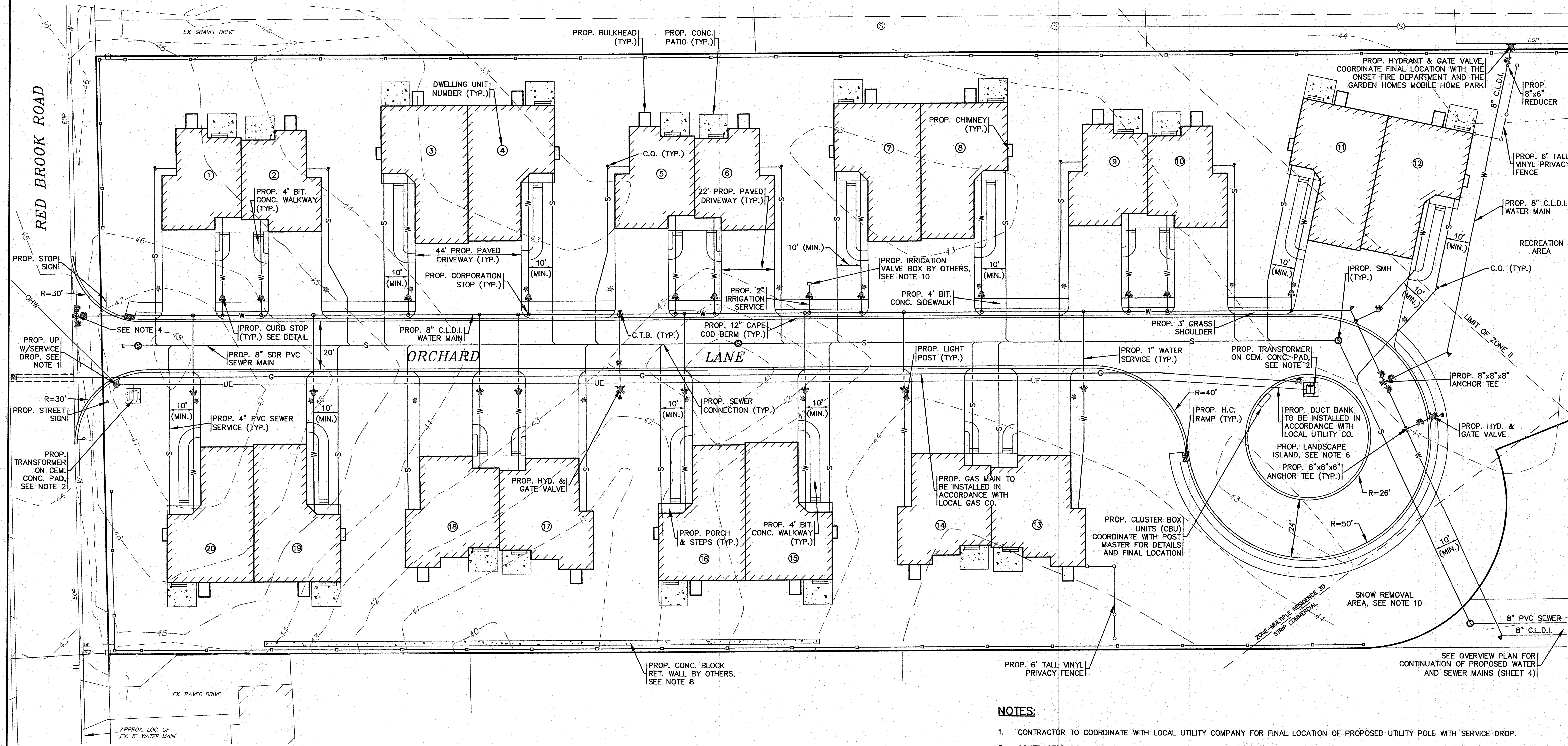
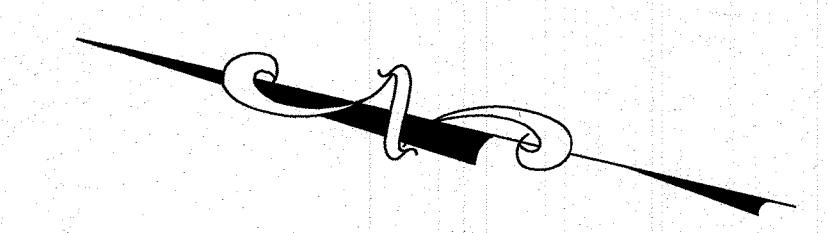


REV.	DATE	BY	APP'D	DESCRIPTION
6	5/10/22	JMP	WFM	WATER MAIN CONNECTION, NOTES
5	2/22/22	JMP	WFM	PER ZBA PETITION #2-21
4	12/1/21	JMP	WFM	ONSET WATER DEPARTMENT COMMENTS
3	8/31/21	JMP	WFM	OWNER & STREET NAME CHANGE
2	5/11/21	JMP	WFM	PER 2ND PEER REVIEW LETTER
1	4/28/21	JMP	WFM	PER TOWN & PEER REVIEW COMMENTS

DATE: JAN. 12, 2021	APPROVED BY:
DRAWN BY: JMP	
CHECKED BY: WFM	
JOB NO.: 18-9247	
SCALE: 1" = 30'	

<p>G.A.F. ENGINEERING, INC. PROFESSIONAL ENGINEERS & LAND SURVEYORS 266 MAIN STREET - WAREHAM, MA 02571 TEL: (508) 295-6600 FAX: (508) 295-6634 E-MAIL: info@gafenginc.com</p>	<p>"SETTLER'S GLEN" COMPREHENSIVE PERMIT PLAN OVERVIEW PLAN</p>
<p>PREPARED FOR: SETTLER'S GLEN, LLC RED BROOK ROAD WAREHAM, MA 20 NORTH PARK AVE., SUITE 4 PLYMOUTH, MA</p>	<p>JOB NO.: 18-9247 DWG. 4 OF 11</p>

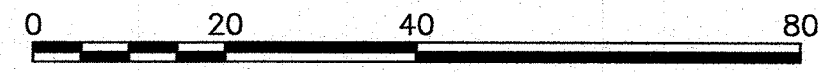
H:\G.F. DRAWINGS\2021 DRAWINGS\21-0126 - SETTLER'S GLEN, LLC\9/22/21\DWG\APPROVED 408 PLAN REV. 4.dwg



- NOTES:**
1. ALL PROPOSED WORK, MATERIAL AND CONSTRUCTION SPECIFICATIONS SHALL BE APPROVED AND DONE IN ACCORDANCE WITH THE ONSET FIRE DISTRICT AND ONSET WATER DEPARTMENT RULES AND SPECIFICATIONS.
 2. RETAINER GLANDS SHALL BE USED AT ALL JOINTS (ANCHOR TEE, GATE VALVES, HYDRANT AND ALL FITTINGS). RETAINER GLANDS SHALL BE OF THE LOCKING GLAND-TYPE, MEGALUG, AS MANUFACTURED BY EBBA IRON.
 3. GATE VALVES SHALL OPEN LEFT, MULLER WEDGE #T-2360-20 OPEN LEFT WITH STAINLESS STEEL NUTS AND BOLTS, OR APPROVED EQUAL.
 4. ALL WATER MAINS SHALL BE 8" CLASS 52 DOUBLE CEMENT LINED DUCTILE IRON PIPE.

LAYOUT & UTILITIES

SCALE: 1"=20'



NOTES:

1. CONTRACTOR TO COORDINATE WITH LOCAL UTILITY COMPANY FOR FINAL LOCATION OF PROPOSED UTILITY POLE WITH SERVICE DROP.
2. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY FOR FINAL LOCATION, SIZE AND CONFIGURATION OF TRANSFORMERS WITH BOLLARDS.
3. FINAL LOCATIONS, DEPTHS AND CONSTRUCTION OF UNDERGROUND ELECTRIC AND GAS SERVICES SHALL BE DETERMINED BY THEIR RESPECTIVE UTILITIES COMPANY.
4. CONNECT TO THE EXISTING 8" WATER MAIN WITH AN 8"x8"x8" TEE AND PROVIDE GATE VALVES WITH VALVE BOXES TO GRADE AS SHOWN, SEE WATER CONNECTION DETAIL TO THE LEFT. ALL WORK SHALL BE DONE IN ACCORDANCE TO THE ONSET FIRE DISTRICT AND ONSET WATER DEPARTMENTS RULES AND REGULATIONS.
5. ALL WATER MAINS SHALL BE 8" CLASS 52 DOUBLE LINED DUCTILE IRON PIPE.
6. REFER TO ARCHITECTURAL PLANS PREPARED BY OTHERS FOR ALL PROPOSED DWELLING DIMENSIONS, CONSTRUCTION NOTES AND DETAILS.
7. REFER TO LANDSCAPE PLANS PREPARED BY OTHERS FOR ALL PROPOSED PLANTING LOCATIONS, DETAILS AND SPECIFICATIONS.
8. CONTRACTOR SHALL PROVIDE CEMENT CONCRETE WASHOUT AREA. WASHOUT AREA SHALL BE A RING OF DOUBLE STAKED HAY BALES WITH SILTATION FENCE AND LINED WITH A 40 MIL. POLYETHYLENE BARRIER. SEE DETAIL. FINAL WASHOUT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AT TIME OF CONSTRUCTION.
9. PROPOSED CONCRETE BLOCK RETAINING WALLS DESIGNED BY OTHERS, CONTRACTOR SHALL COORDINATE WITH OWNER. RETAINING WALL SHALL BE PROVIDED WITH SAFETY GUARDRAILS/HANDRAILS PER 780 CMR AND OSHA REGULATIONS AND SPECIFICATIONS. CONTRACTOR SHALL SUBMIT STAMPED SHOP DRAWINGS FOR RETAINING WALL CONSTRUCTION TO BUILDING DEPARTMENT FOR APPROVAL PRIOR TO CONSTRUCTION.
10. CONTRACTOR SHALL COORDINATE WITH OWNER FOR DESIGN, LOCATION AND ALL DETAILS ON THE IRRIGATION SYSTEM.
11. CONFIRM FINAL SNOW REMOVAL AREA WITH OWNER.
12. ALL SEWER SERVICE LINES SHALL BE INSTALLED A MINIMUM OF 10' FROM WATER SERVICE LINES.

NO CHANGE	DATE: JAN. 12, 2021	APPROVED BY:	
WFM	WFM	WFM	
JMP	JMP	JMP	
WFM	WFM	WFM	
WFM	WFM	WFM	
WFM	WFM	WFM	

G.A.F. ENGINEERING, INC.
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266 MAIN STREET - WAREHAM, MA 02571
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E-MAIL: info@gafeng.com

"SETTLER'S GLEN" COMPREHENSIVE PERMIT PLAN LAYOUT & UTILITIES
WAREHAM, MA
RED BROOK ROAD

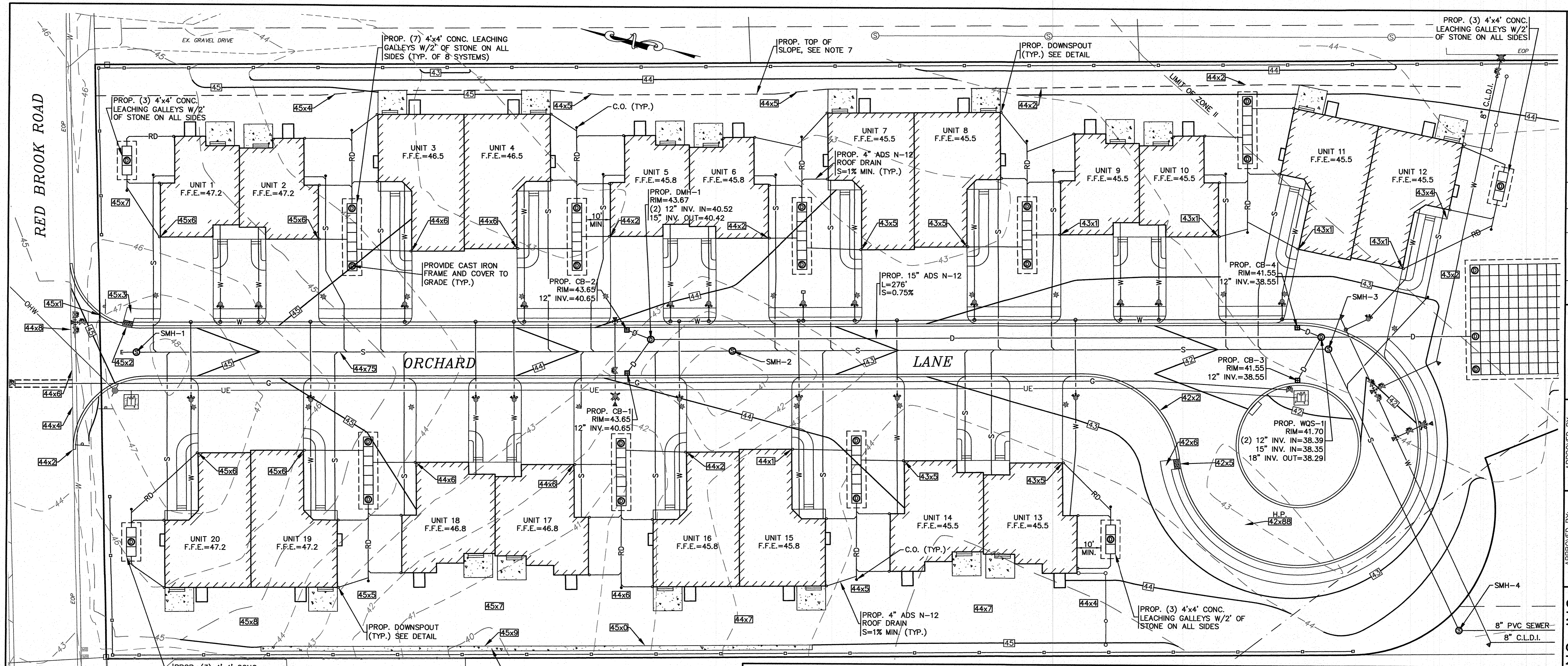
SETTLER'S GLEN, LLC
PLYMOUTH, MA
20 NORTH PARK AVE., SUITE 4

DATE: JAN. 12, 2021
DRAWN BY: JMP
CHECKED BY: WFM
JOB NO.: 18-9247
SCALE: 1" = 20'

DATE: 5/10/22
REV. 1
DATE: 2/22/22
REV. 2
DATE: 12/1/21
REV. 3
DATE: 8/31/21
REV. 4
DATE: 5/11/21
REV. 5
DATE: 4/26/21
REV. 6

DESCRIPTION: NO CHANGE
PER ZBA PETITION #2-21
ONSET WATER DEPARTMENT COMMENTS
OWNER & STREET NAME CHANGE
PER 2ND PEER REVIEW LETTER
PER TOWN & PEER REVIEW COMMENTS

JOB NO.: 18-9247
DWG. 5 OF 11



NOTES:

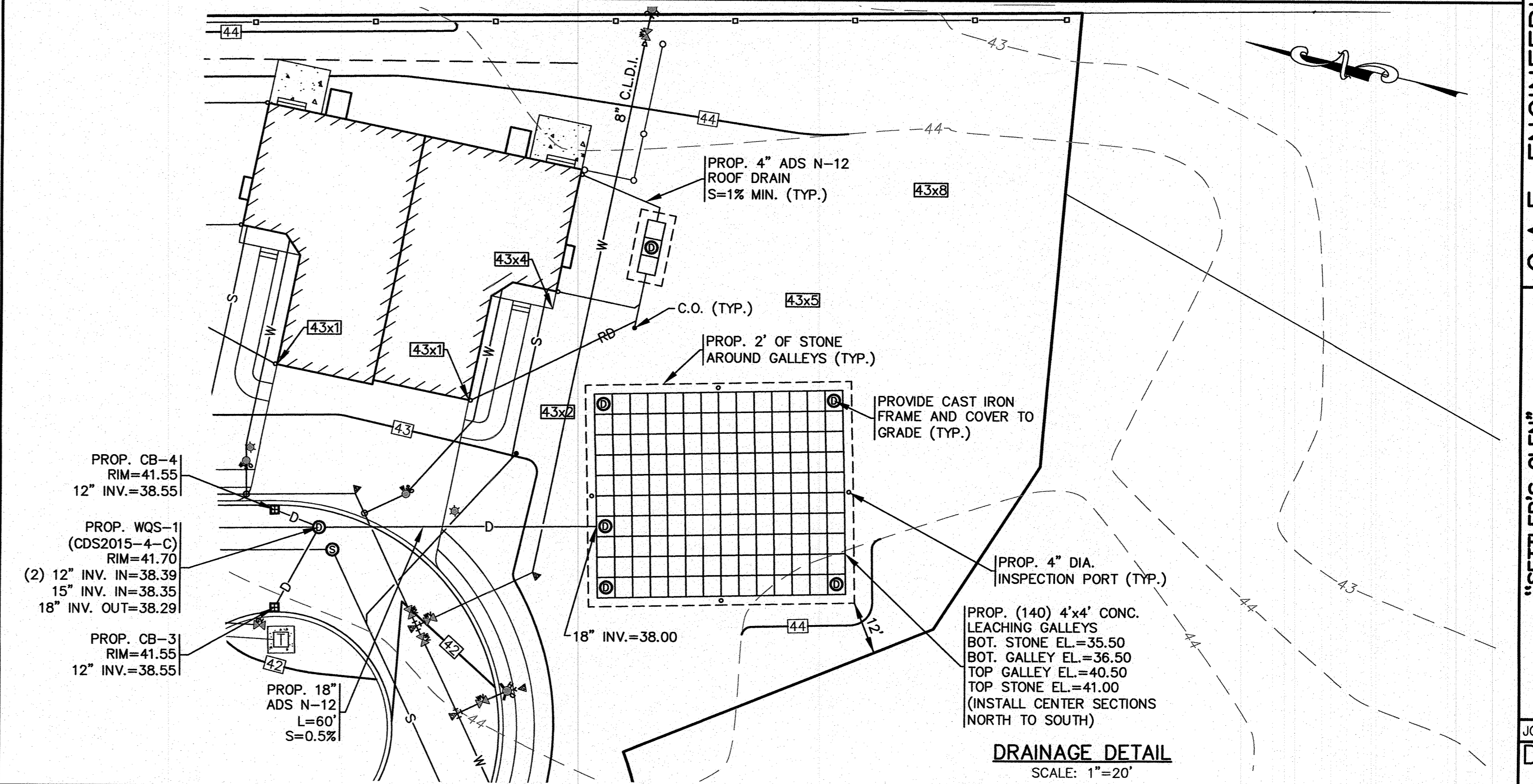
- ALL PROPOSED CATCH BASINS SHALL HAVE A TEMPORARY SILT SACK OR AN APPROVED EQUAL INSTALLED IN THEM AS SOON AS THE STRUCTURE IS SET. CONTRACTOR SHALL REMOVE AND DISPOSE OF THE SILT SACKS AT THE COMPLETION OF CONSTRUCTION.
- WATER MAIN/SERVICES SHALL BE INSTALLED A MINIMUM OF 18" BELOW ALL PROPOSED DRAINAGE LINES.
- PROPOSED WQS-1 SHALL BE A CDS2015-4-C UNIT FROM CONTECH ENGINEERED SOLUTIONS LLC.
- PROPOSED CONCRETE BLOCK RETAINING WALLS DESIGNED BY OTHERS, CONTRACTOR SHALL COORDINATE WITH OWNER. RETAINING WALL SHALL BE PROVIDED WITH SAFETY GUARDRAILS/HANDRAILS PER 780 CMR AND OSHA REGULATIONS AND SPECIFICATIONS. CONTRACTOR SHALL SUBMIT STAMPED SHOP DRAWINGS FOR RETAINING WALL CONSTRUCTION TO BUILDING DEPARTMENT FOR APPROVAL PRIOR TO CONSTRUCTION.
- FOR COMPLETE DRAINAGE OPERATION AND MAINTENANCE NOTES SEE SHEET 2.
- ALL DWELLING UNITS TO BE PROVIDED WITH DOWNSPOUTS AND 4" ADS ROOF DRAIN PIPING TO GALLEY SYSTEMS. REFER TO ARCHITECTURAL PLANS FOR FINAL DOWNSPOUT LOCATIONS AND DETAILS.
- THE INTENT OF THE GRADING DESIGN IS TO DIRECT ALL YARD RUNOFF TO ORCHARD LANE.
- FINAL BUILDING FOUNDATION GRADES SHALL BE COORDINATED IN THE FIELD WITH CONTRACTOR, ARCHITECT AND ENGINEER.

SANITARY SEWER STRUCTURE SCHEDULE:

STRUCTURE	RIM EL.	INV. (IN)	INV. (OUT)
SMH-1	45.32	38.46	38.36
SMH-2	43.52	36.52	36.42
SMH-3	41.80	34.57	34.47
SMH-4	43.2±	33.84	33.74
SMH-5	44.7±	32.5±	32.5±

GRADING & DRAINAGE

SCALE: 1"=20'



DRAINAGE DETAIL
SCALE: 1"=20'

NO CHANGE
 PER ZBA PETITION #2-21
 ONSET WATER DEPARTMENT COMMENTS
 OWNER & STREET NAME CHANGE
 PER 2ND PEER REVIEW LETTER
 PER TOWN & PEER REVIEW COMMENTS

DATE: JAN. 12, 2021
 DRAWN BY: JMP
 CHECKED BY: WFM
 JOB NO.: 18-9247
 SCALE: 1" = 20'

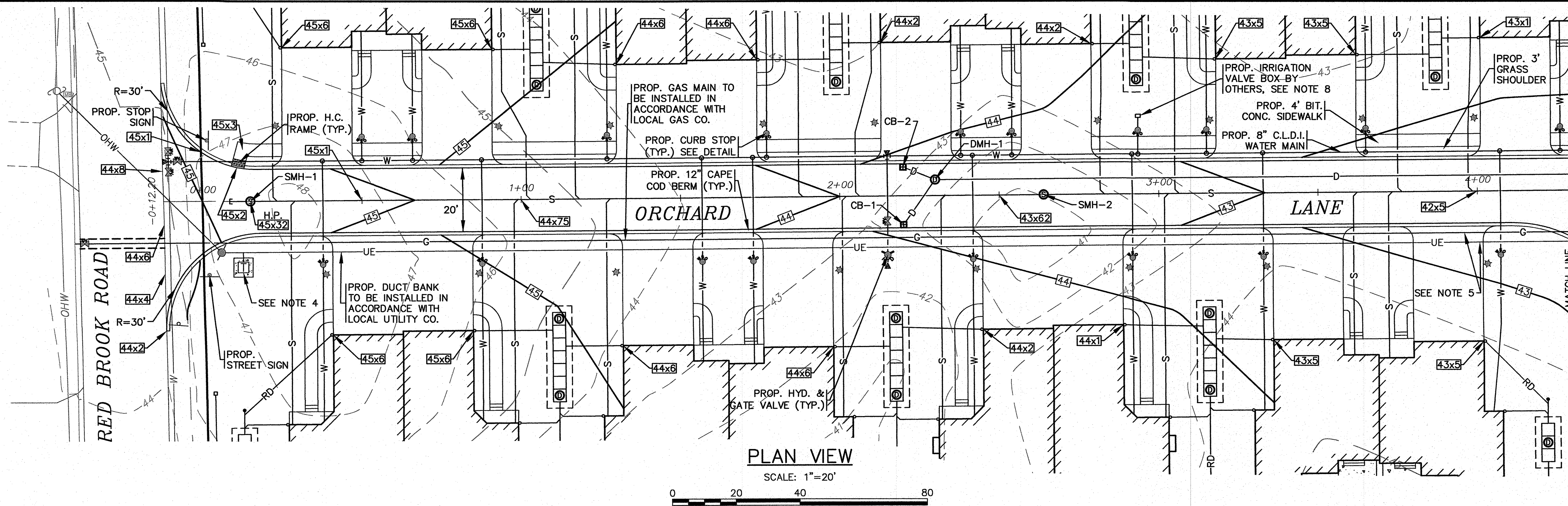
APPROVED BY: [Signature]

G.A.F. ENGINEERING, INC.
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 266 MAIN STREET - WAREHAM, MA 02571
 TEL: (508) 295-6600 FAX: (508) 295-6634
 E-MAIL: info@gafeng.com

"SETTLER'S GLEN" COMPREHENSIVE PERMIT PLAN GRADING & DRAINAGE
 WAREHAM, MA
 RED BROOK ROAD
 PREPARED FOR:
SETTLER'S GLEN, LLC
 20 NORTH PARK AVE., SUITE 4
 PL. WYOUTH, MA

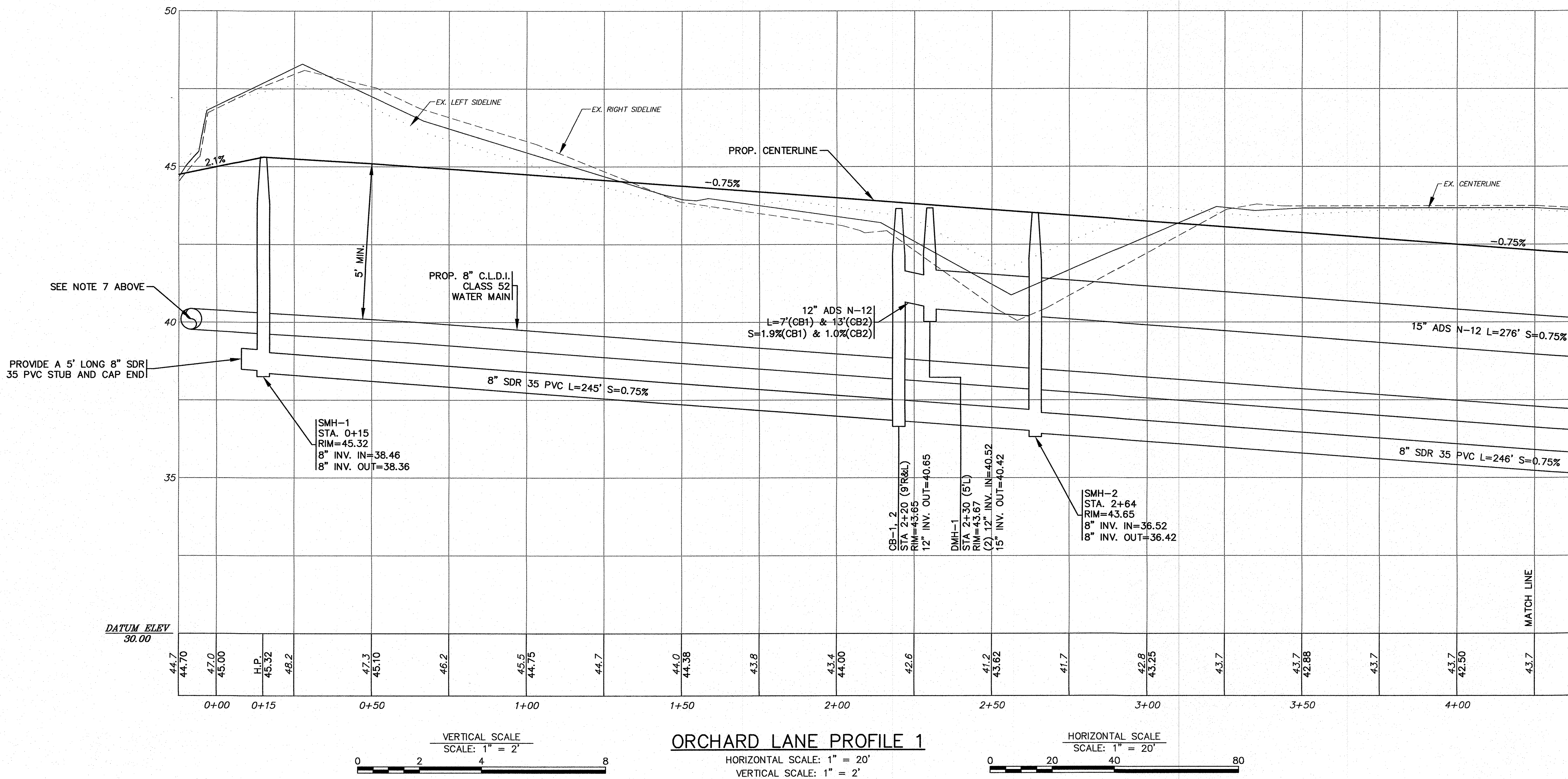
JOB NO.: 18-9247
 DWG. 6 OF 11

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- NOTES:**
- ALL PROPOSED CATCH BASINS SHALL HAVE A TEMPORARY SILT SACK OR AN APPROVED EQUAL INSTALLED IN THEM AS SOON AS THE STRUCTURE IS SET. CONTRACTOR SHALL REMOVE AND DISPOSE OF THE SILT SACKS AT THE COMPLETION OF CONSTRUCTION.
 - SEPARATION BETWEEN DRAINAGE LINES AND WATER MAINS AND WATER SERVICES SHALL BE A MINIMUM OF 18".
 - FOR COMPLETE DRAINAGE OPERATION AND MAINTENANCE NOTES SEE SHEET 2.
 - CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY FOR FINAL LOCATION, SIZE AND CONFIGURATION OF TRANSFORMERS. PROTECT TRANSFORMERS WITH BOLLARDS.
 - FINAL LOCATIONS, DEPTHS AND CONSTRUCTION OF UNDERGROUND ELECTRIC AND GAS SERVICES SHALL BE DETERMINED BY THEIR RESPECTIVE UTILITIES COMPANY.
 - REFER TO LANDSCAPE PLANS PREPARED BY OTHERS FOR ALL PROPOSED PLANTING LOCATIONS, DETAILS AND SPECIFICATIONS.
 - CONNECT TO THE EXISTING 8" WATER MAIN WITH AN 8"x8"x8" TEE AND PROVIDE GATE VALVES WITH VALVE BOXES TO GRADE AS SHOWN, SEE WATER CONNECTION DETAIL ON SHEET 5. ALL WORK SHALL BE DONE IN ACCORDANCE TO THE ONSET FIRE DISTRICT AND ONSET WATER DEPARTMENTS RULES AND REGULATIONS.
 - CONTRACTOR SHALL COORDINATE WITH OWNER FOR DESIGN, LOCATION AND ALL DETAILS ON THE IRRIGATION SYSTEM.

DATE: JAN. 12, 2021	NO CHANGE	DESCRIPTION
DRAWN BY: JMP	PER ZBA PETITION #2-21	
CHECKED BY: WFM	ONSET WATER DEPARTMENT COMMENTS	
JOB NO.: 18-9247	OWNER & STREET NAME CHANGE	
SCALE: 1" = 20'	PER 2ND PEER REVIEW LETTER	
	PER TOWN & PEER REVIEW COMMENTS	
	DATE	BY
	REV.	APP'D
	6	5/10/22
	5	2/22/22
	4	12/1/21
	3	8/31/21
	2	5/11/21
	1	4/26/21



APPROVED BY: *[Signature]*

G.A.F. ENGINEERING, INC.
 PROFESSIONAL ENGINEERS & LAND SURVEYORS
 266 MAIN STREET - WAREHAM, MA 02571
 TEL: (508) 295-6600 FAX: (508) 295-6634
 E-MAIL: info@gafengrnc.com

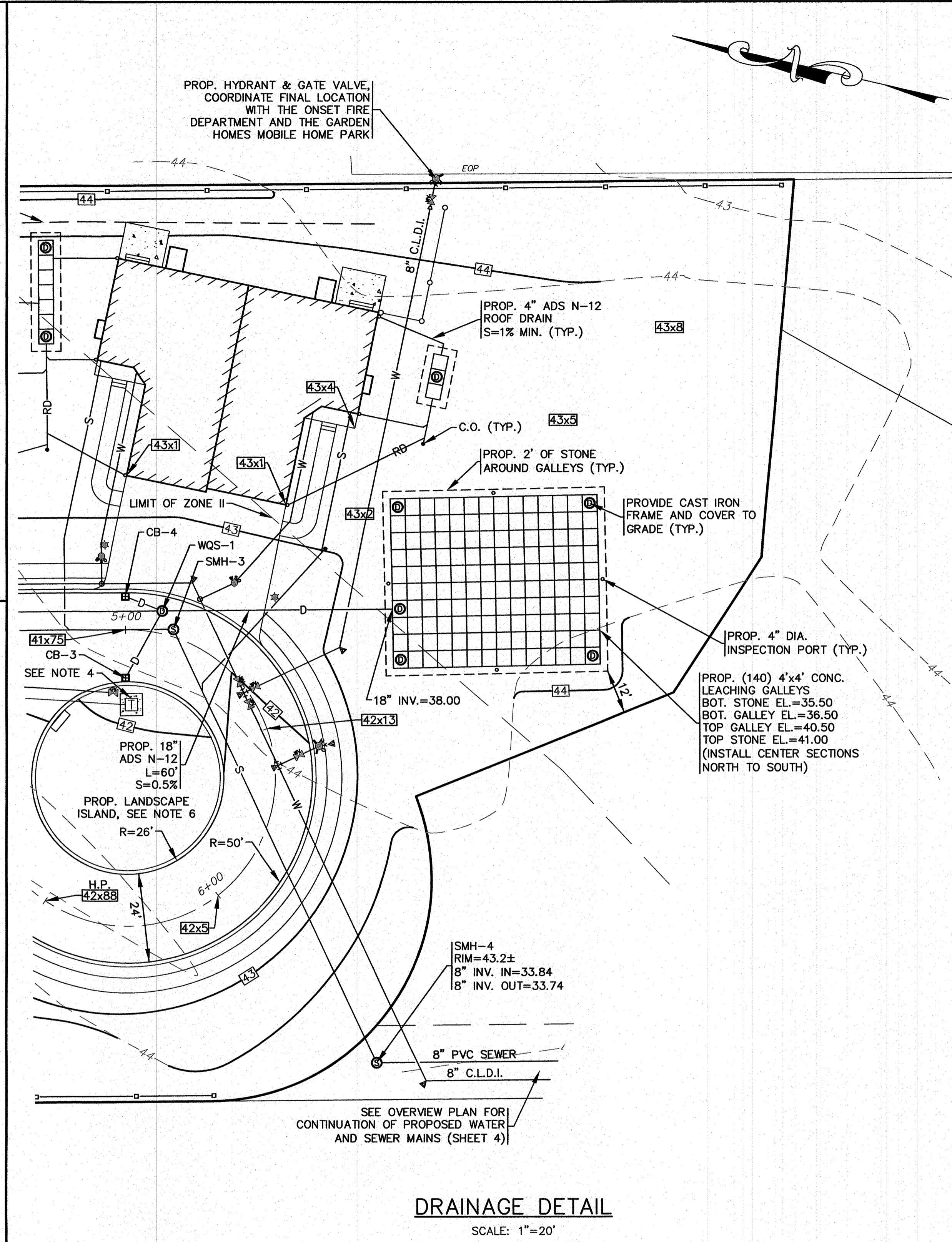
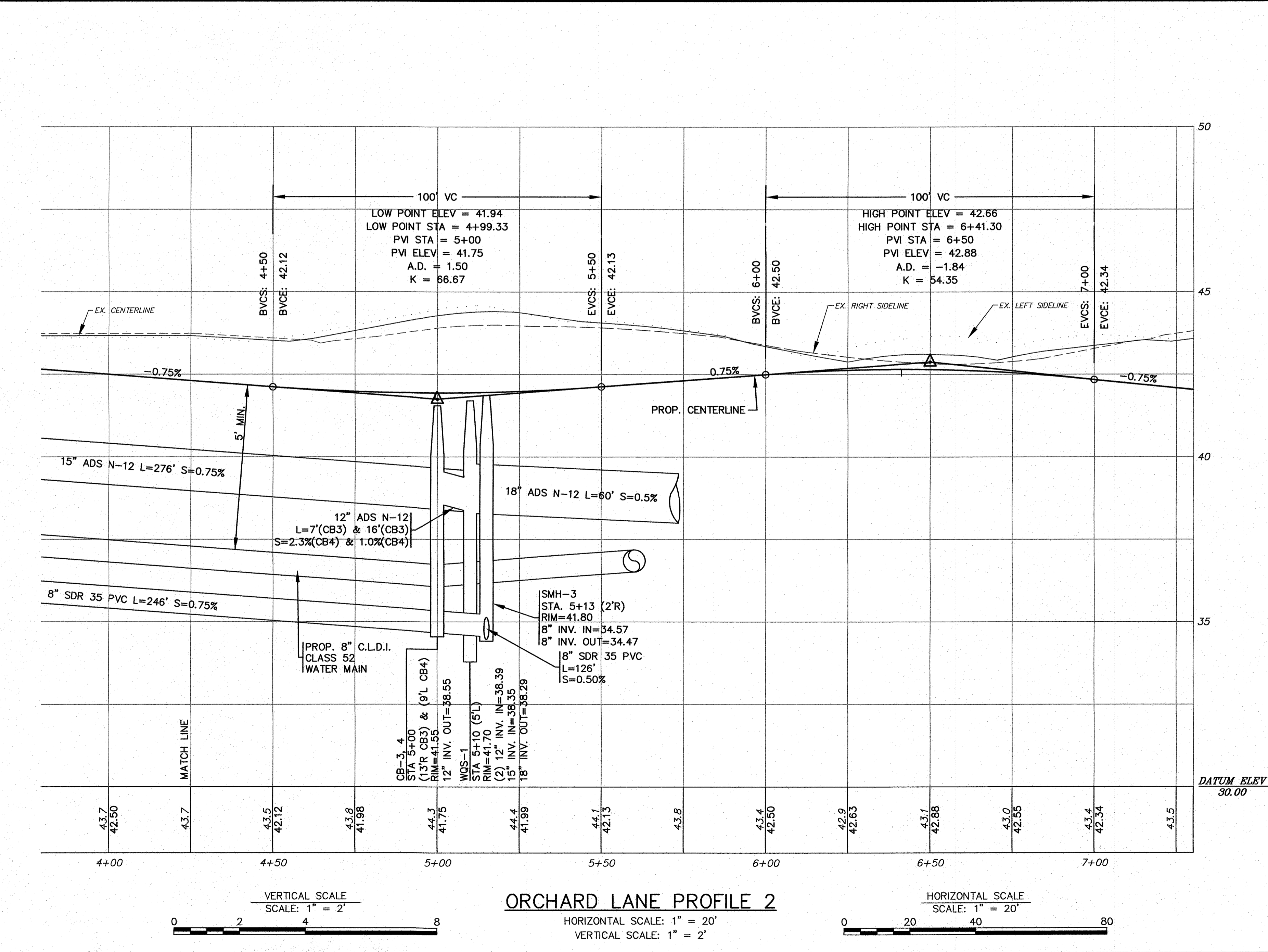
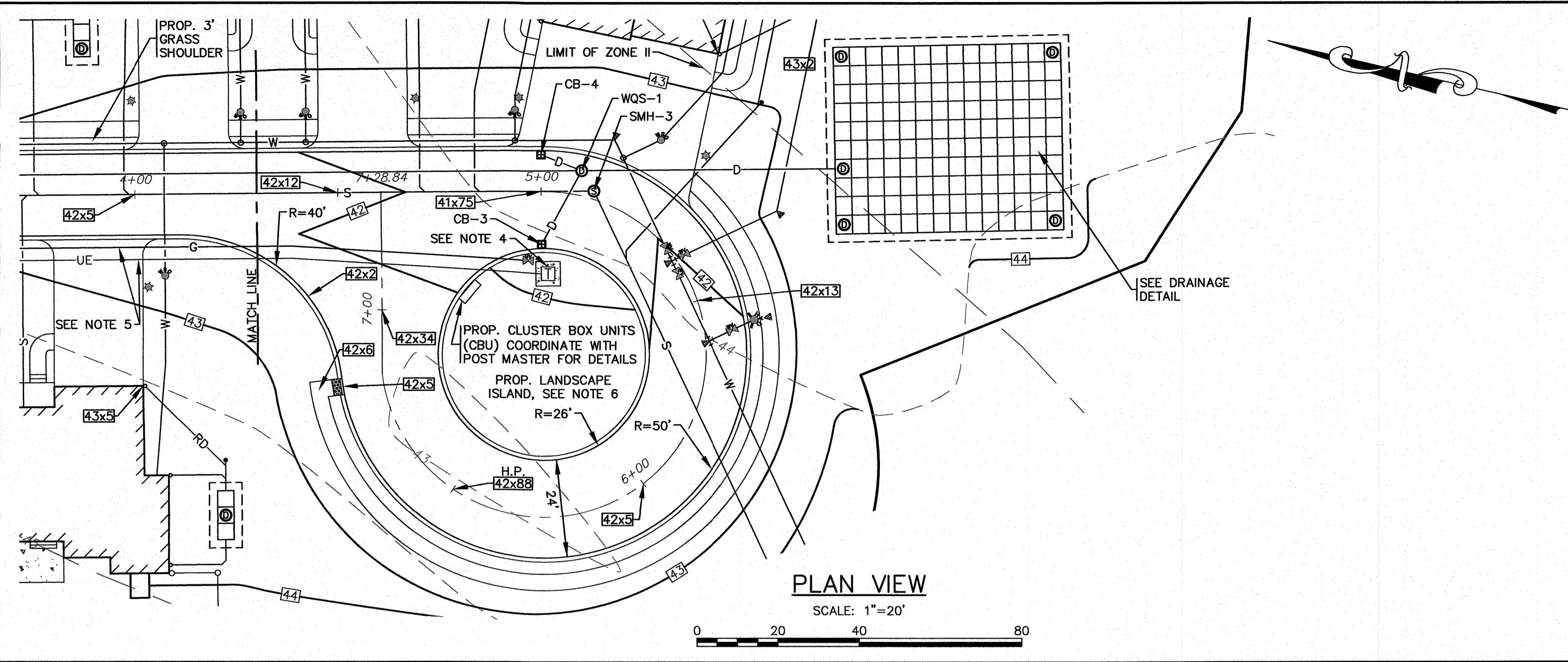
"SETTLER'S GLEN" COMPREHENSIVE PERMIT PLAN PLAN & ROADWAY PROFILE SHEET-1
 RED BROOK ROAD WAREHAM, MA

PREPARED FOR:
SETTLER'S GLEN, LLC
 20 NORTH PARK AVE., SUITE 4 PLYMOUTH, MA

JOB NO.: 18-9247

PERMIT SET (NOT FOR CONSTRUCTION)
 DWG. 7 OF 11

H:\GAF\DRAWINGS\2021\DRAWINGS\21-9736 (SETTLER'S GLEN, LLC)\9736.dwg APPROVED 408 PLAN REV - 6.dwg



NOTES:

- ALL PROPOSED CATCH BASINS SHALL HAVE A TEMPORARY SILT SACK OR AN APPROVED EQUAL INSTALLED IN THEM AS SOON AS THE STRUCTURE IS SET. CONTRACTOR SHALL REMOVE AND DISPOSE OF THE SILT SACKS AT THE COMPLETION OF CONSTRUCTION.
- WATER MAIN/SERVICES SHALL BE INSTALLED A MINIMUM OF 18" BELOW ALL PROPOSED DRAINAGE LINES.
- FOR COMPLETE DRAINAGE OPERATION AND MAINTENANCE NOTES SEE SHEET 2.
- CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY FOR FINAL LOCATION, SIZE AND CONFIGURATION OF TRANSFORMERS. PROTECT TRANSFORMERS WITH BOLLARDS.
- FINAL LOCATIONS, DEPTHS AND CONSTRUCTION OF UNDERGROUND ELECTRIC AND GAS SERVICES SHALL BE DETERMINED BY THEIR RESPECTIVE UTILITIES COMPANY.
- REFER TO LANDSCAPE PLANS PREPARED BY OTHERS FOR ALL PROPOSED PLANTING LOCATIONS, DETAILS AND SPECIFICATIONS.
- PROPOSED WQS-1 SHALL BE A CDS2015-4-C UNIT FROM CONTECH ENGINEERED SOLUTIONS LLC.

DATE: JAN. 12, 2021	APPROVED BY:	NO CHANGE
DRAWN BY: JWP	DATE: 5/10/22	JWP
CHECKED BY: WFM	DATE: 2/22/22	JWP
JOB NO.: 18-9247	DATE: 12/1/21	JWP
SCALE: 1" = 20'	DATE: 8/31/21	JWP
	DATE: 5/11/21	JWP
	DATE: 4/26/21	JWP
	REV.	DESCRIPTION
	1	PER TOWN & PEER REVIEW COMMENTS
	2	PER TOWN & PEER REVIEW LETTER
	3	OWNER & STREET NAME CHANGE
	4	ONSET WATER DEPARTMENT COMMENTS
	5	PER ZBA PETITION #2-21
	6	NO CHANGE

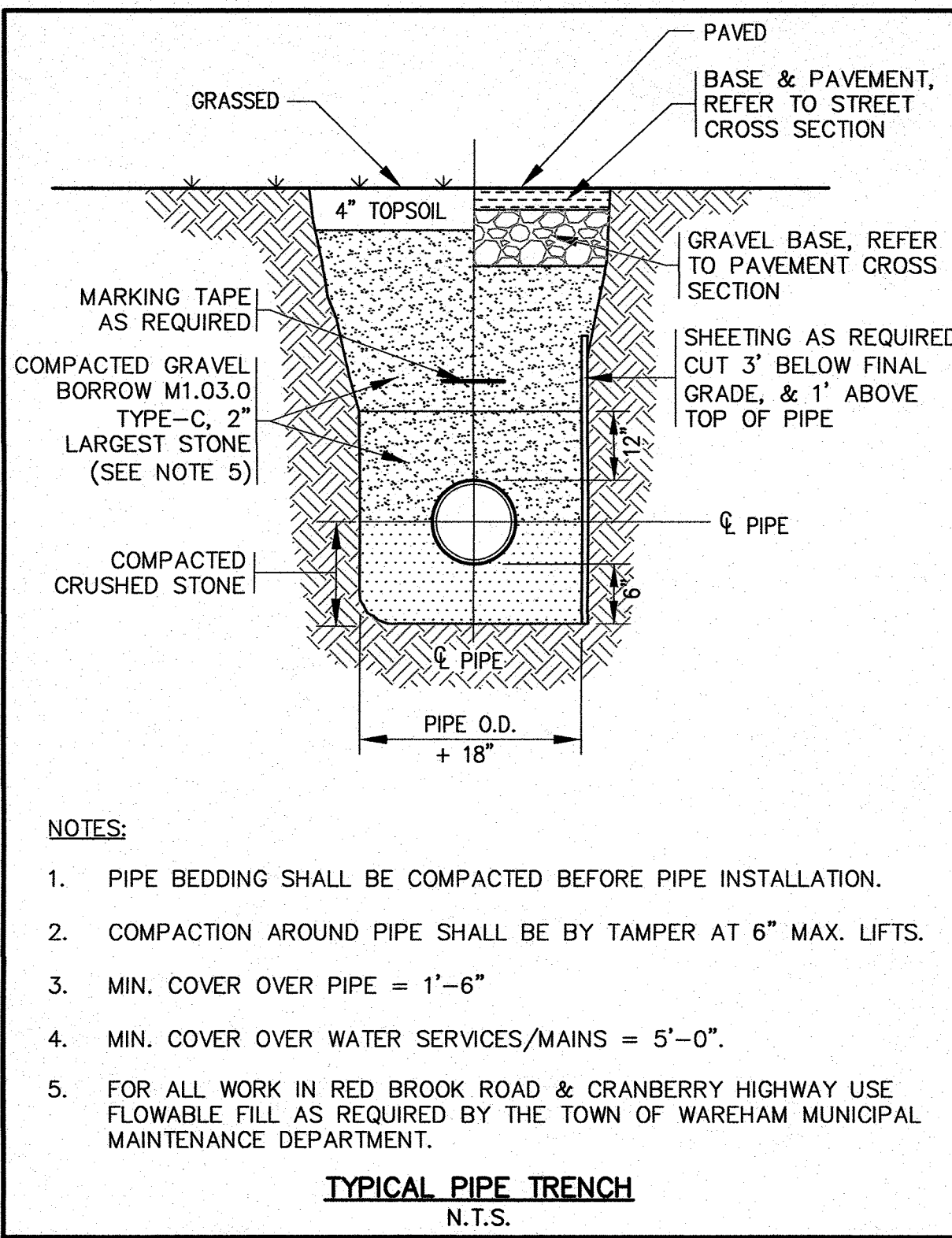
G.A.F. ENGINEERING, INC.
 PROFESSIONAL ENGINEERS & LAND SURVEYORS
 286 MAIN STREET - WAREHAM, MA 02571
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"SETTLER'S GLEN"
 COMPREHENSIVE PERMIT PLAN
 PLAN & ROADWAY PROFILE SHEET-2
 RED BROOK ROAD WAREHAM, MA

PREPARED FOR:
 SETTLER'S GLEN, LLC
 20 NORTH PARK AVE., SUITE 4 PLYMOUTH, MA

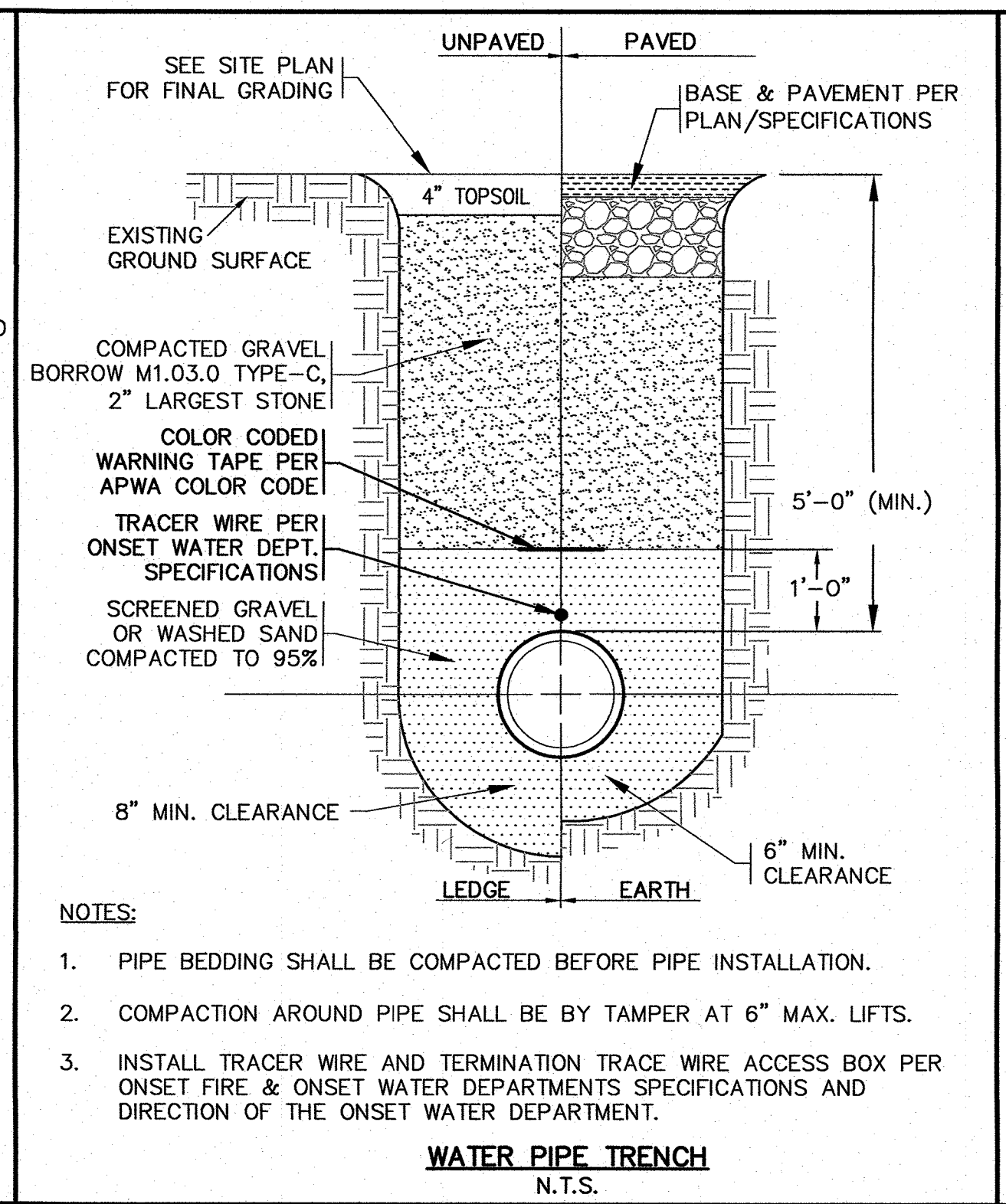
JOB NO.: 18-9247
 DWG. 8 OF 11

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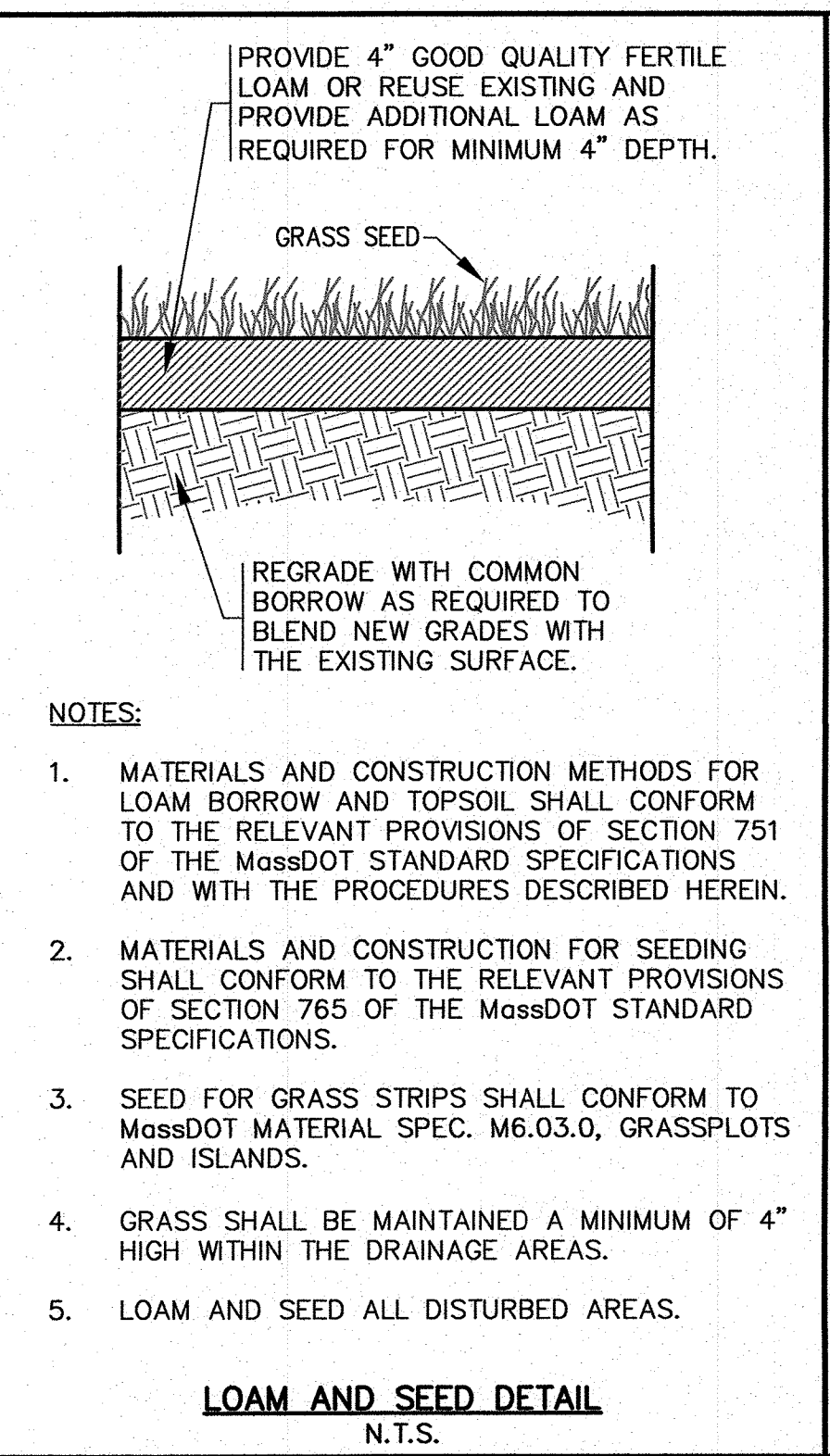
- NOTES:**
- PIPE BEDDING SHALL BE COMPACTED BEFORE PIPE INSTALLATION.
 - COMPACTION AROUND PIPE SHALL BE BY TAMPER AT 6" MAX. LIFTS.
 - MIN. COVER OVER PIPE = 1'-6"
 - MIN. COVER OVER WATER SERVICES/MAINS = 5'-0"
 - FOR ALL WORK IN RED BROOK ROAD & CRANBERRY HIGHWAY USE FLOWABLE FILL AS REQUIRED BY THE TOWN OF WAREHAM MUNICIPAL MAINTENANCE DEPARTMENT.

TYPICAL PIPE TRENCH
N.T.S.



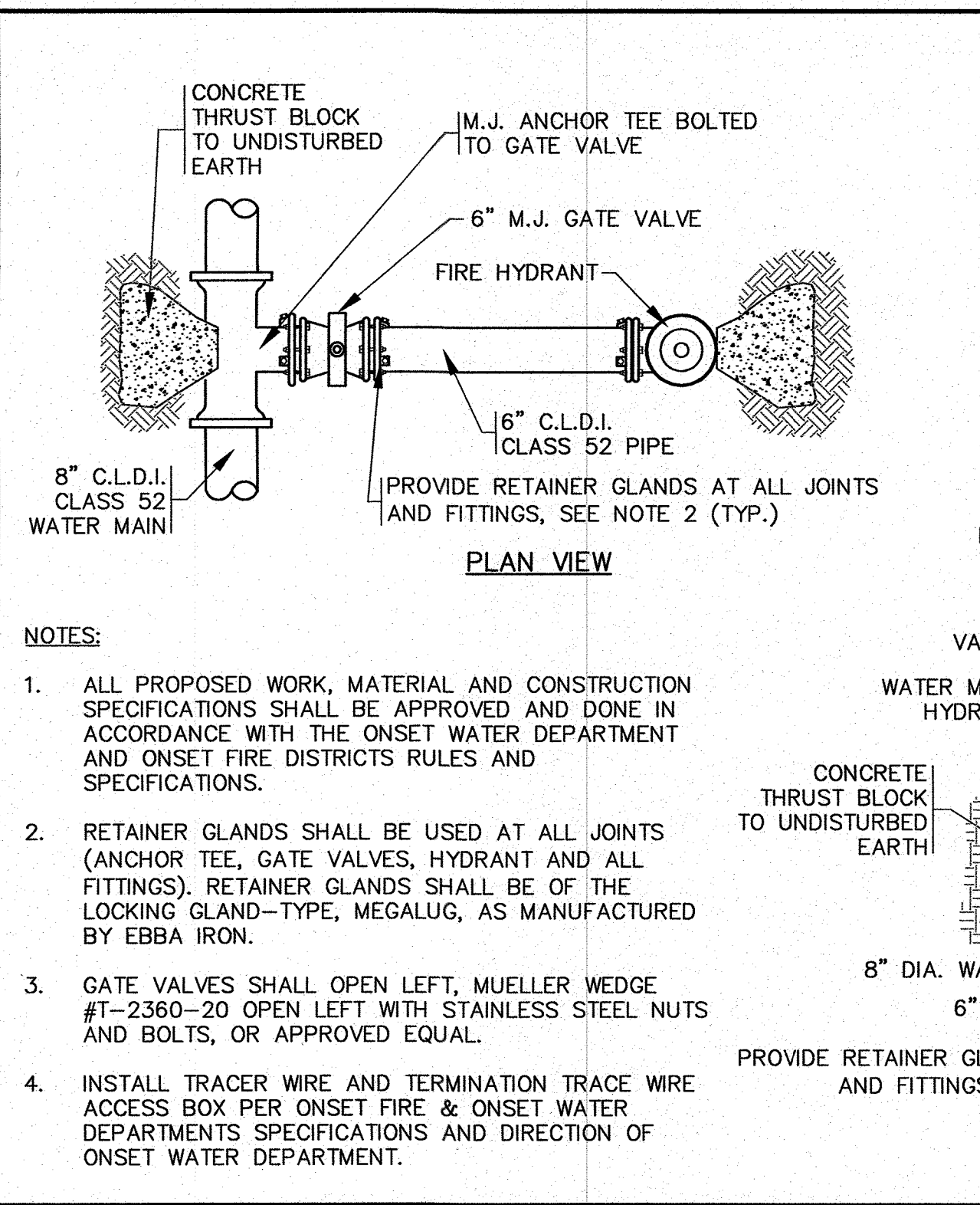
- NOTES:**
- PIPE BEDDING SHALL BE COMPACTED BEFORE PIPE INSTALLATION.
 - COMPACTION AROUND PIPE SHALL BE BY TAMPER AT 6" MAX. LIFTS.
 - INSTALL TRACER WIRE AND TERMINATION TRACE WIRE ACCESS BOX PER ONSET FIRE & ONSET WATER DEPARTMENTS SPECIFICATIONS AND DIRECTION OF THE ONSET WATER DEPARTMENT.

WATER PIPE TRENCH
N.T.S.



- NOTES:**
- MATERIALS AND CONSTRUCTION METHODS FOR LOAM BORROW AND TOPSOIL SHALL CONFORM TO THE RELEVANT PROVISIONS OF SECTION 751 OF THE MASSDOT STANDARD SPECIFICATIONS AND WITH THE PROCEDURES DESCRIBED HEREIN.
 - MATERIALS AND CONSTRUCTION FOR SEEDING SHALL CONFORM TO THE RELEVANT PROVISIONS OF SECTION 765 OF THE MASSDOT STANDARD SPECIFICATIONS.
 - SEED FOR GRASS STRIPS SHALL CONFORM TO MASSDOT MATERIAL SPEC. M6.03.0, GRASSPLOTS AND ISLANDS.
 - GRASS SHALL BE MAINTAINED A MINIMUM OF 4" HIGH WITHIN THE DRAINAGE AREAS.
 - LOAM AND SEED ALL DISTURBED AREAS.

LOAM AND SEED DETAIL
N.T.S.

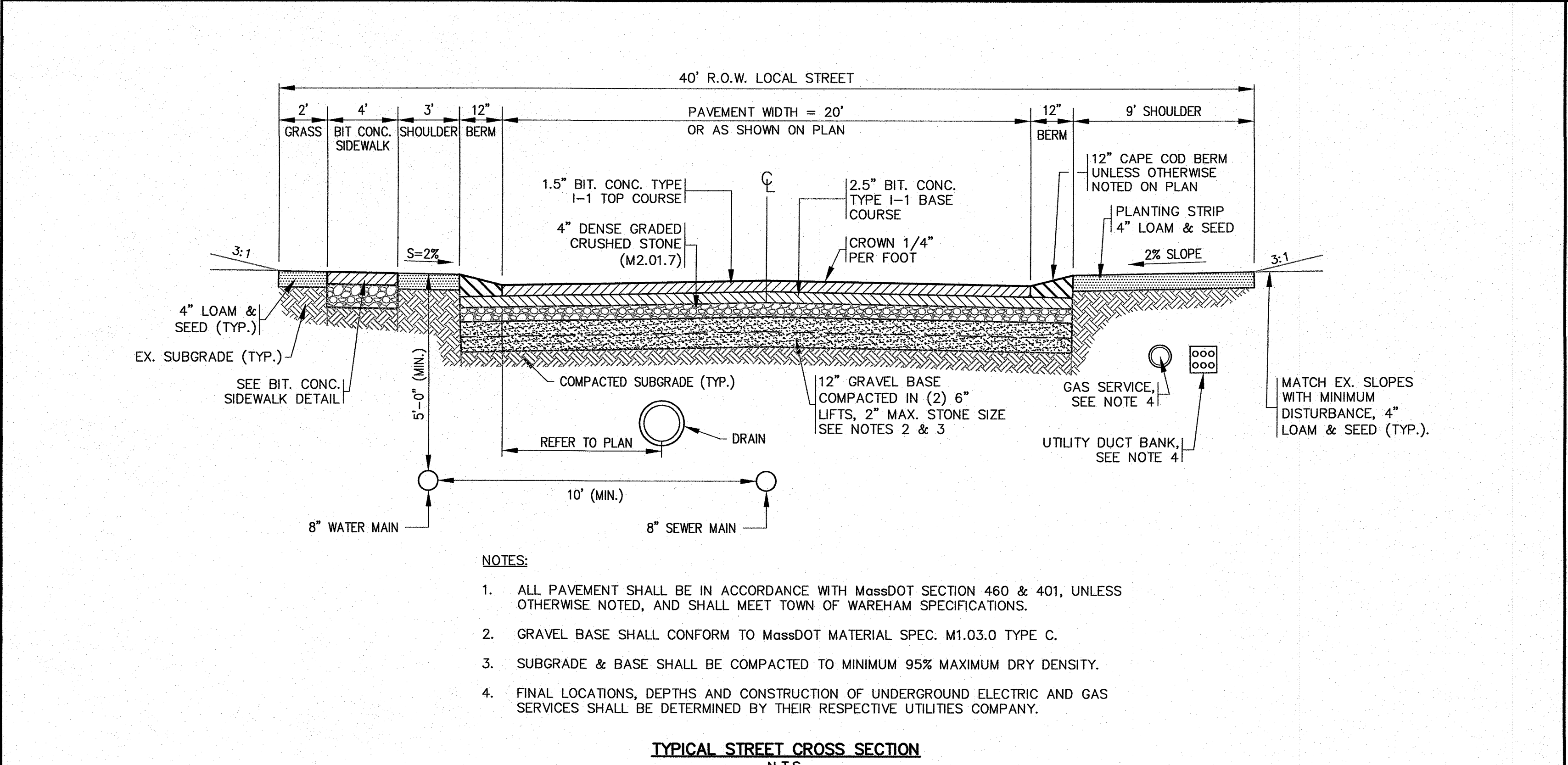


- NOTES:**
- ALL PROPOSED WORK, MATERIAL AND CONSTRUCTION SPECIFICATIONS SHALL BE APPROVED AND DONE IN ACCORDANCE WITH THE ONSET WATER DEPARTMENT AND ONSET FIRE DISTRICTS RULES AND SPECIFICATIONS.
 - RETAINER GLANDS SHALL BE USED AT ALL JOINTS (ANCHOR TEE, GATE VALVES, HYDRANT AND ALL FITTINGS). RETAINER GLANDS SHALL BE OF THE LOCKING GLAND-TYPE, MEGALUG, AS MANUFACTURED BY EBBA IRON.
 - GATE VALVES SHALL OPEN LEFT, MUELLER WEDGE #T-2360-20 OPEN LEFT WITH STAINLESS STEEL NUTS AND BOLTS, OR APPROVED EQUAL.
 - INSTALL TRACER WIRE AND TERMINATION TRACE WIRE ACCESS BOX PER ONSET FIRE & ONSET WATER DEPARTMENTS SPECIFICATIONS AND DIRECTION OF ONSET WATER DEPARTMENT.

HYDRANT DETAIL
N.T.S.

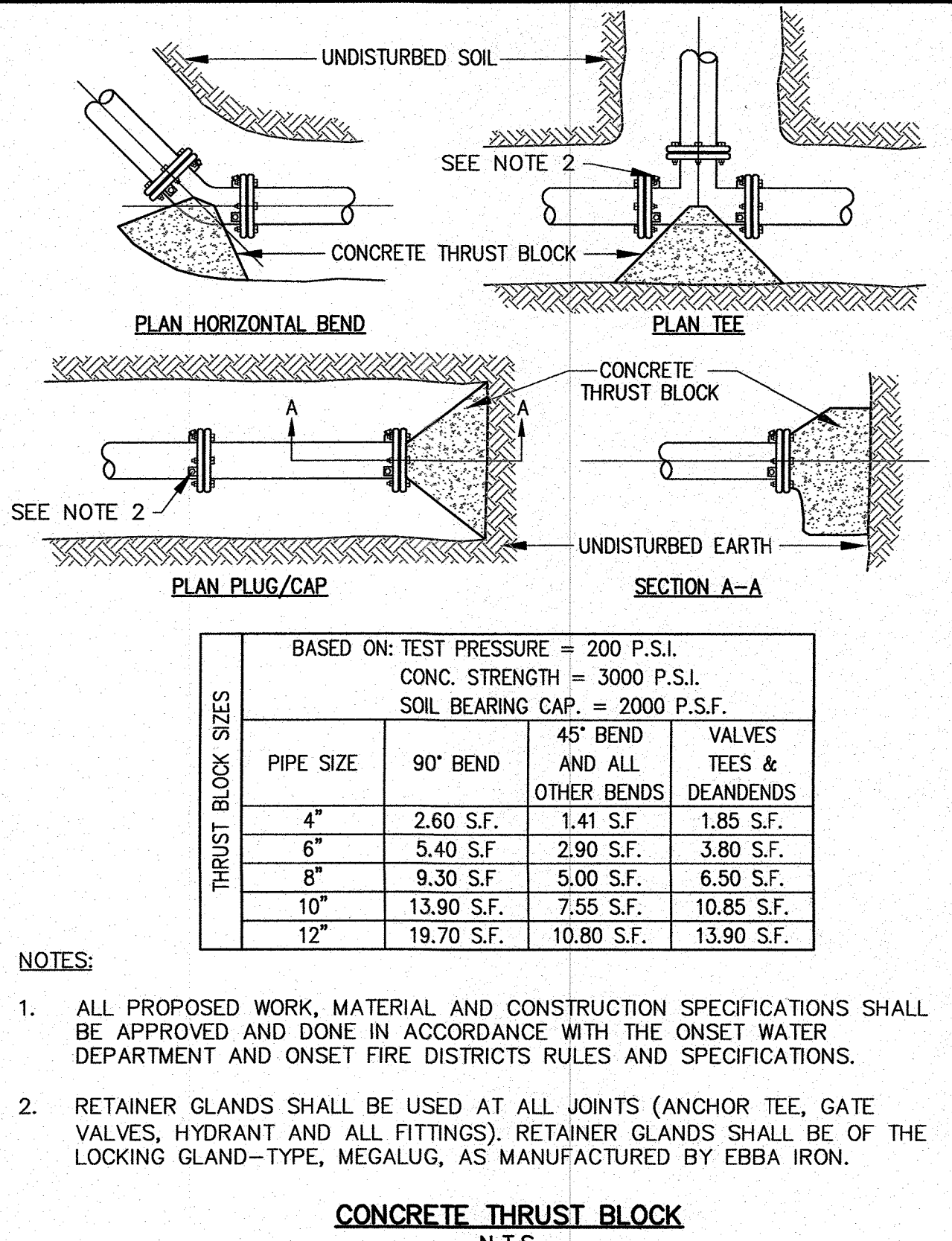
PERMIT SET
(NOT FOR CONSTRUCTION)

DATE: JAN. 12, 2021	NO CHANGES THIS SHEET	NO CHANGES THIS SHEET	NO CHANGES THIS SHEET	NO CHANGES THIS SHEET	NO CHANGES THIS SHEET	NO CHANGES THIS SHEET	NO CHANGES THIS SHEET
DRAWN BY: J.M.P.	WFM	J.M.P.	WFM	J.M.P.	WFM	J.M.P.	WFM
CHECKED BY: WFM	J.M.P.	J.M.P.	J.M.P.	J.M.P.	J.M.P.	J.M.P.	J.M.P.
JOB NO.: 18-9247	5/10/22	2/22/22	12/1/21	8/31/21	5/11/21	4/26/21	REV.
SCALE: N.T.S.	DATE	BY	APP'D	DESCRIPTION	PER TOWN & PEER REVIEW COMMENTS	ONSET WATER DEPARTMENT COMMENTS	OWNER & STREET NAME CHANGE, DETAILS



- NOTES:**
- ALL PAVEMENT SHALL BE IN ACCORDANCE WITH MASSDOT SECTION 460 & 401, UNLESS OTHERWISE NOTED, AND SHALL MEET TOWN OF WAREHAM SPECIFICATIONS.
 - GRAVEL BASE SHALL CONFORM TO MASSDOT MATERIAL SPEC. M1.03.0 TYPE C.
 - SUBGRADE & BASE SHALL BE COMPACTED TO MINIMUM 95% MAXIMUM DRY DENSITY.
 - FINAL LOCATIONS, DEPTHS AND CONSTRUCTION OF UNDERGROUND ELECTRIC AND GAS SERVICES SHALL BE DETERMINED BY THEIR RESPECTIVE UTILITIES COMPANY.

TYPICAL STREET CROSS SECTION
N.T.S.

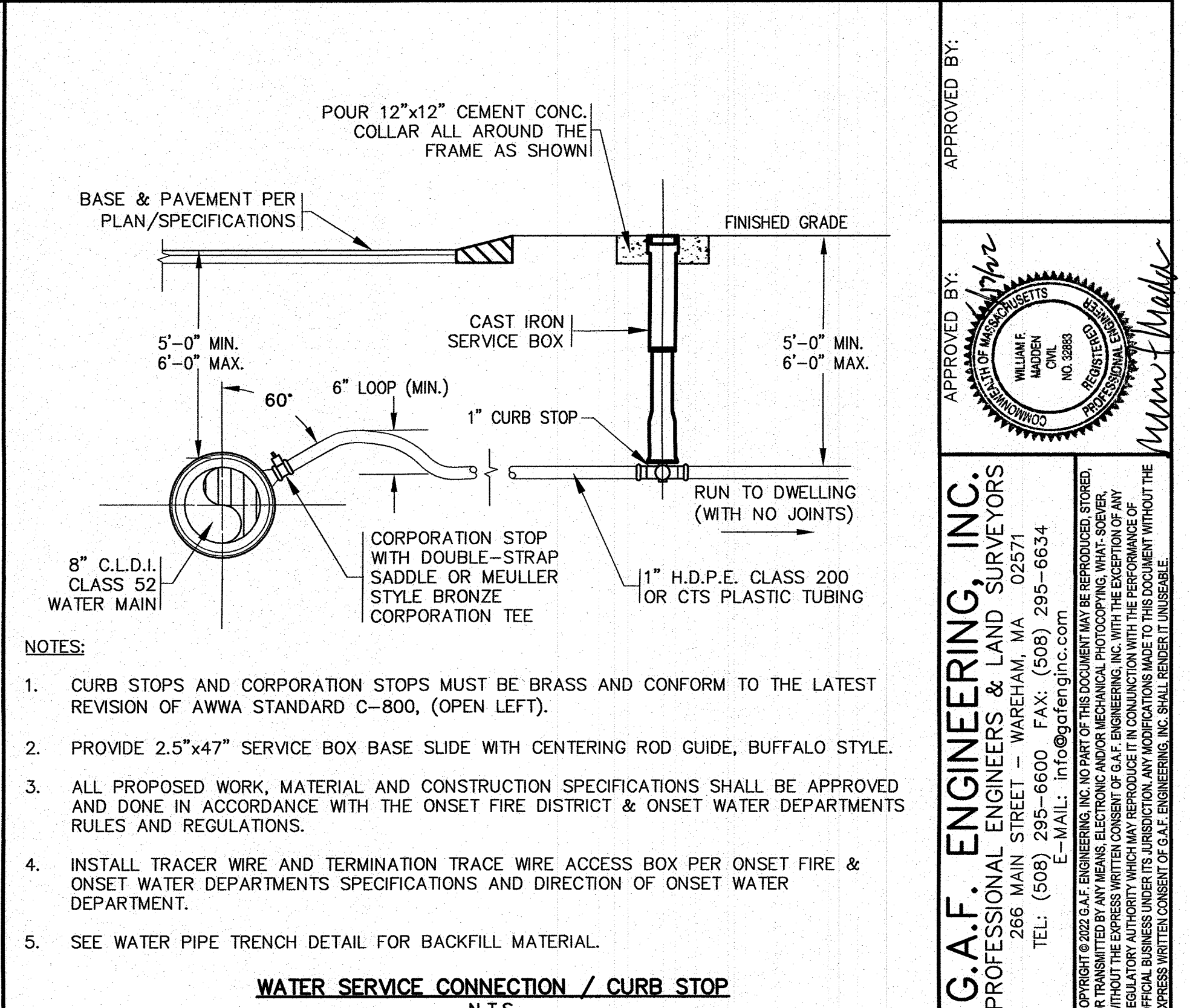


BASED ON: TEST PRESSURE = 200 P.S.I.
CONC. STRENGTH = 3000 P.S.I.
SOIL BEARING CAP. = 2000 P.S.F.

THRUST BLOCK SIZES	PIPE SIZE	90° BEND	45° BEND AND ALL OTHER BENDS	VALVES TEES & DEANDENDS
	4"	2.60 S.F.	1.41 S.F.	1.85 S.F.
	6"	5.40 S.F.	2.90 S.F.	3.80 S.F.
	8"	9.30 S.F.	5.00 S.F.	6.50 S.F.
	10"	13.90 S.F.	7.55 S.F.	10.85 S.F.
	12"	19.70 S.F.	10.80 S.F.	13.90 S.F.

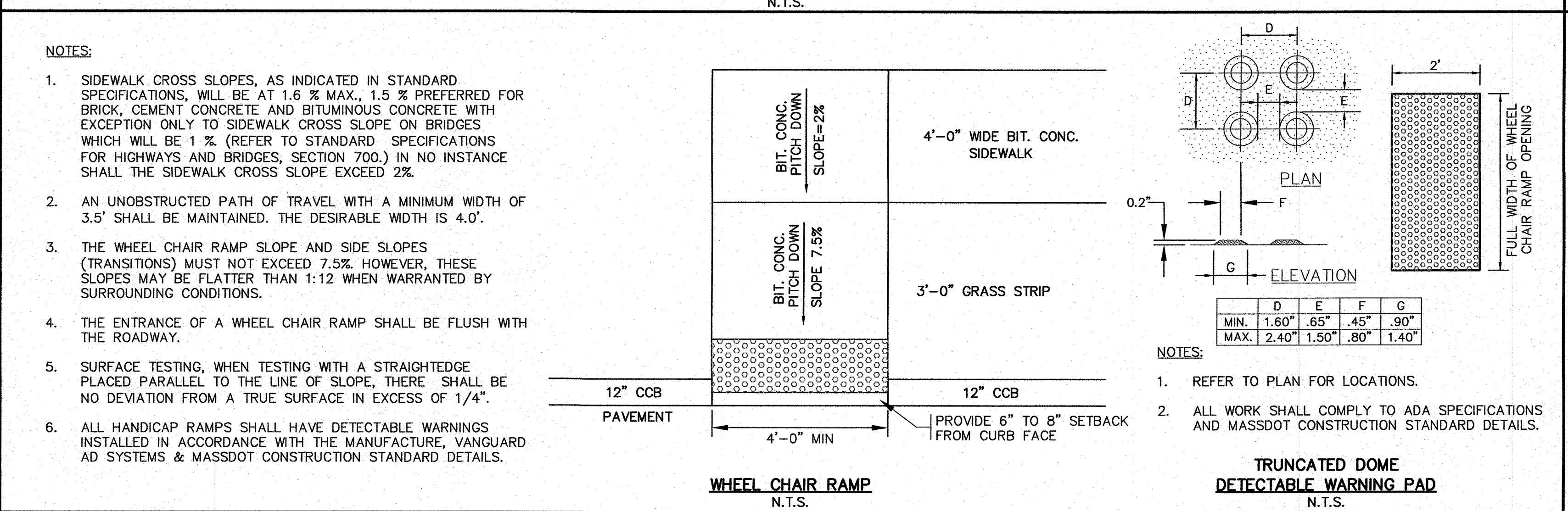
- NOTES:**
- ALL PROPOSED WORK, MATERIAL AND CONSTRUCTION SPECIFICATIONS SHALL BE APPROVED AND DONE IN ACCORDANCE WITH THE ONSET WATER DEPARTMENT AND ONSET FIRE DISTRICTS RULES AND SPECIFICATIONS.
 - RETAINER GLANDS SHALL BE USED AT ALL JOINTS (ANCHOR TEE, GATE VALVES, HYDRANT AND ALL FITTINGS). RETAINER GLANDS SHALL BE OF THE LOCKING GLAND-TYPE, MEGALUG, AS MANUFACTURED BY EBBA IRON.

CONCRETE THRUST BLOCK
N.T.S.



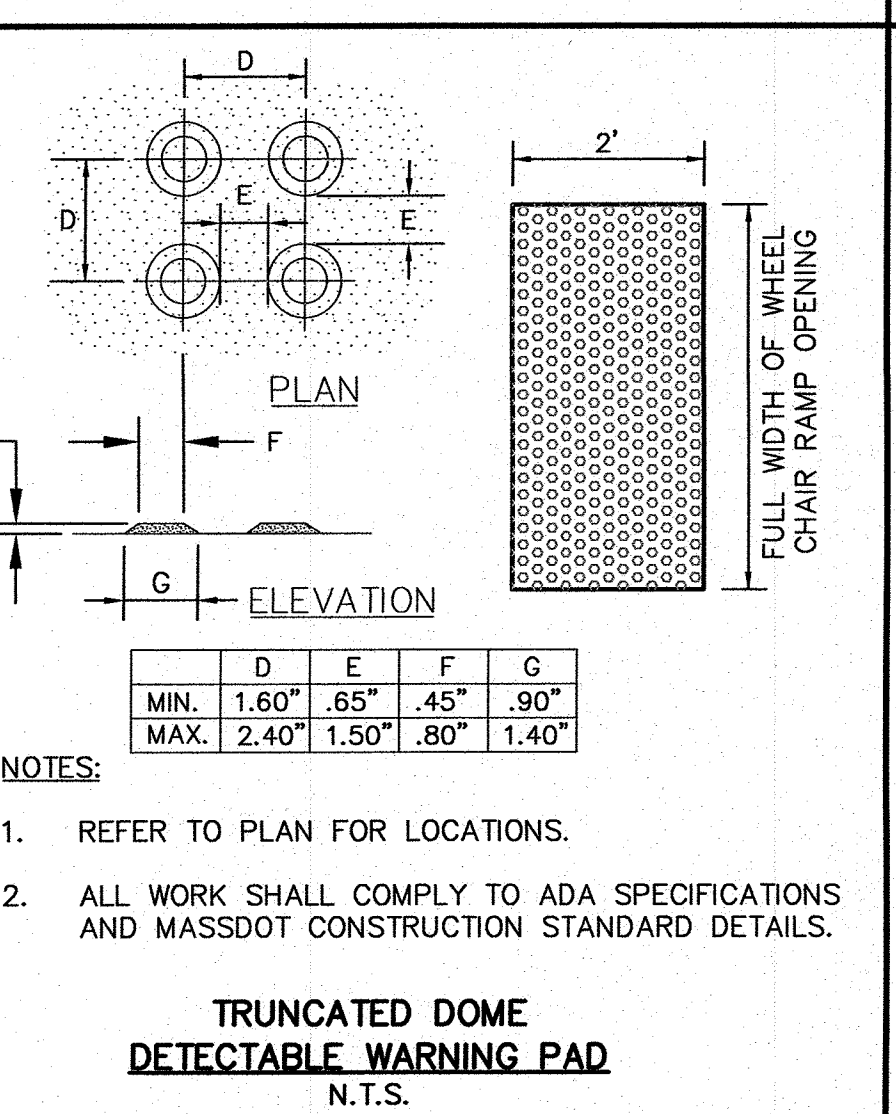
- NOTES:**
- CURB STOPS AND CORPORATION STOPS MUST BE BRASS AND CONFORM TO THE LATEST REVISION OF AWWA STANDARD C-800, (OPEN LEFT).
 - PROVIDE 2.5"x47" SERVICE BOX BASE SLIDE WITH CENTERING ROD GUIDE, BUFFALO STYLE.
 - ALL PROPOSED WORK, MATERIAL AND CONSTRUCTION SPECIFICATIONS SHALL BE APPROVED AND DONE IN ACCORDANCE WITH THE ONSET FIRE DISTRICT & ONSET WATER DEPARTMENTS RULES AND REGULATIONS.
 - INSTALL TRACER WIRE AND TERMINATION TRACE WIRE ACCESS BOX PER ONSET FIRE & ONSET WATER DEPARTMENTS SPECIFICATIONS AND DIRECTION OF ONSET WATER DEPARTMENT.
 - SEE WATER PIPE TRENCH DETAIL FOR BACKFILL MATERIAL.

WATER SERVICE CONNECTION / CURB STOP
N.T.S.



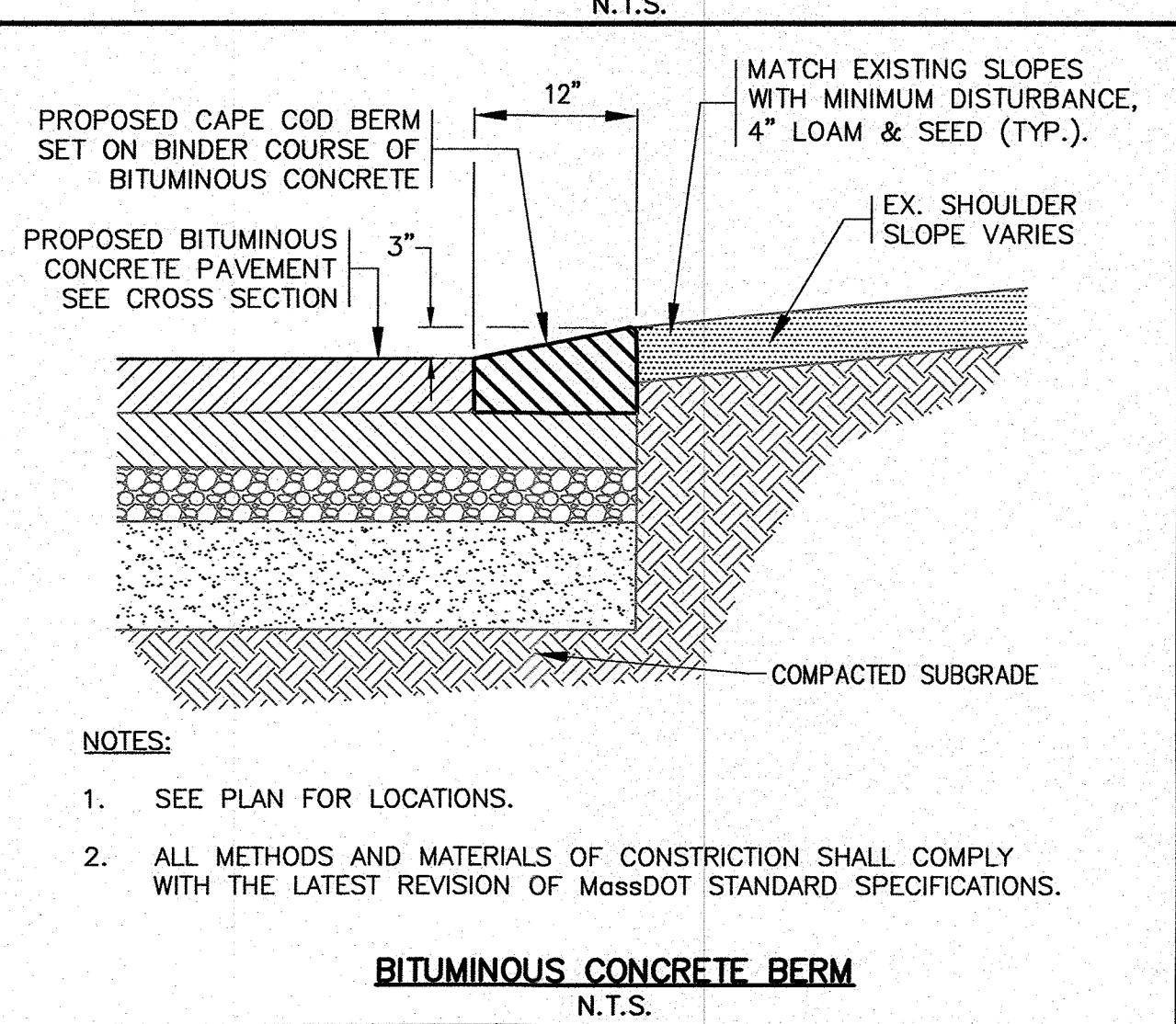
- NOTES:**
- SIDEWALK CROSS SLOPES, AS INDICATED IN STANDARD SPECIFICATIONS, WILL BE AT 1.6% MAX., 1.5% PREFERRED FOR BRICK, CEMENT CONCRETE AND BITUMINOUS CONCRETE WITH EXCEPTION ONLY TO SIDEWALK CROSS SLOPE ON BRIDGES WHICH WILL BE 1% (REFER TO STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, SECTION 700.) IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 2%.
 - AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3.5' SHALL BE MAINTAINED. THE DESIRABLE WIDTH IS 4.0'.
 - THE WHEEL CHAIR RAMP SLOPE AND SIDE SLOPES (TRANSITIONS) MUST NOT EXCEED 7.5%. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
 - THE ENTRANCE OF A WHEEL CHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
 - SURFACE TESTING, WHEN TESTING WITH A STRAIGHTEDGE PLACED PARALLEL TO THE LINE OF SLOPE, THERE SHALL BE NO DEVIATION FROM A TRUE SURFACE IN EXCESS OF 1/4".
 - ALL HANDICAP RAMP SHALL HAVE DETECTABLE WARNINGS INSTALLED IN ACCORDANCE WITH THE MANUFACTURE, VANGUARD AD SYSTEMS & MASSDOT CONSTRUCTION STANDARD DETAILS.

WHEEL CHAIR RAMP
N.T.S.



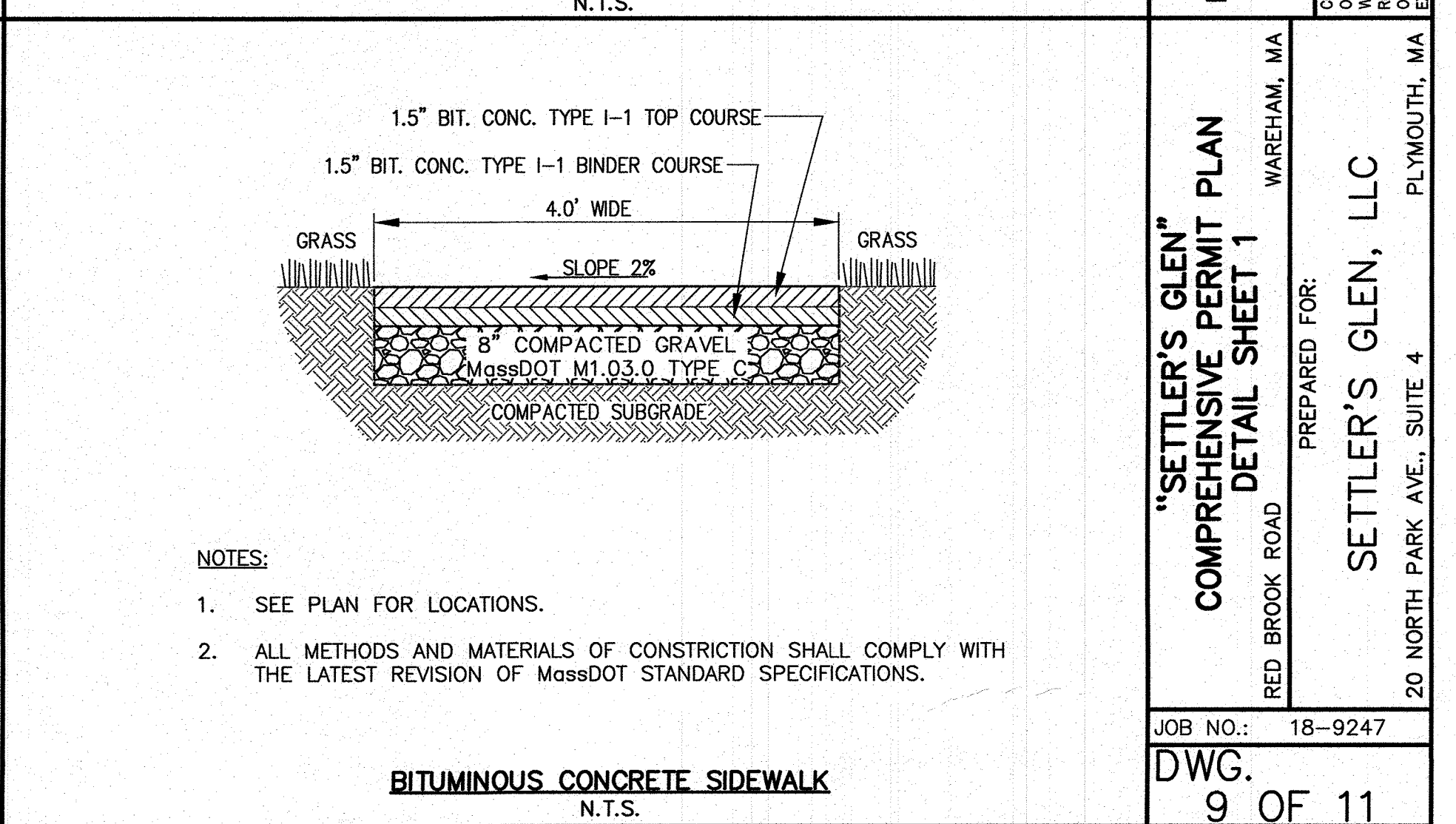
- NOTES:**
- REFER TO PLAN FOR LOCATIONS.
 - ALL WORK SHALL COMPLY TO ADA SPECIFICATIONS AND MASSDOT CONSTRUCTION STANDARD DETAILS.

TRUNCATED DOME DETECTABLE WARNING PAD
N.T.S.



- NOTES:**
- SEE PLAN FOR LOCATIONS.
 - ALL METHODS AND MATERIALS OF CONSTRUCTION SHALL COMPLY WITH THE LATEST REVISION OF MASSDOT STANDARD SPECIFICATIONS.

BITUMINOUS CONCRETE BERM
N.T.S.



- NOTES:**
- SEE PLAN FOR LOCATIONS.
 - ALL METHODS AND MATERIALS OF CONSTRUCTION SHALL COMPLY WITH THE LATEST REVISION OF MASSDOT STANDARD SPECIFICATIONS.

BITUMINOUS CONCRETE SIDEWALK
N.T.S.

APPROVED BY:

G.A.F. ENGINEERING, INC.
PROFESSIONAL ENGINEERS & LAND SURVEYORS
286 MAIN STREET - WAREHAM, MA 02571
TEL: (508) 295-6600 FAX: (508) 295-6634
E-MAIL: info@gafenginc.com

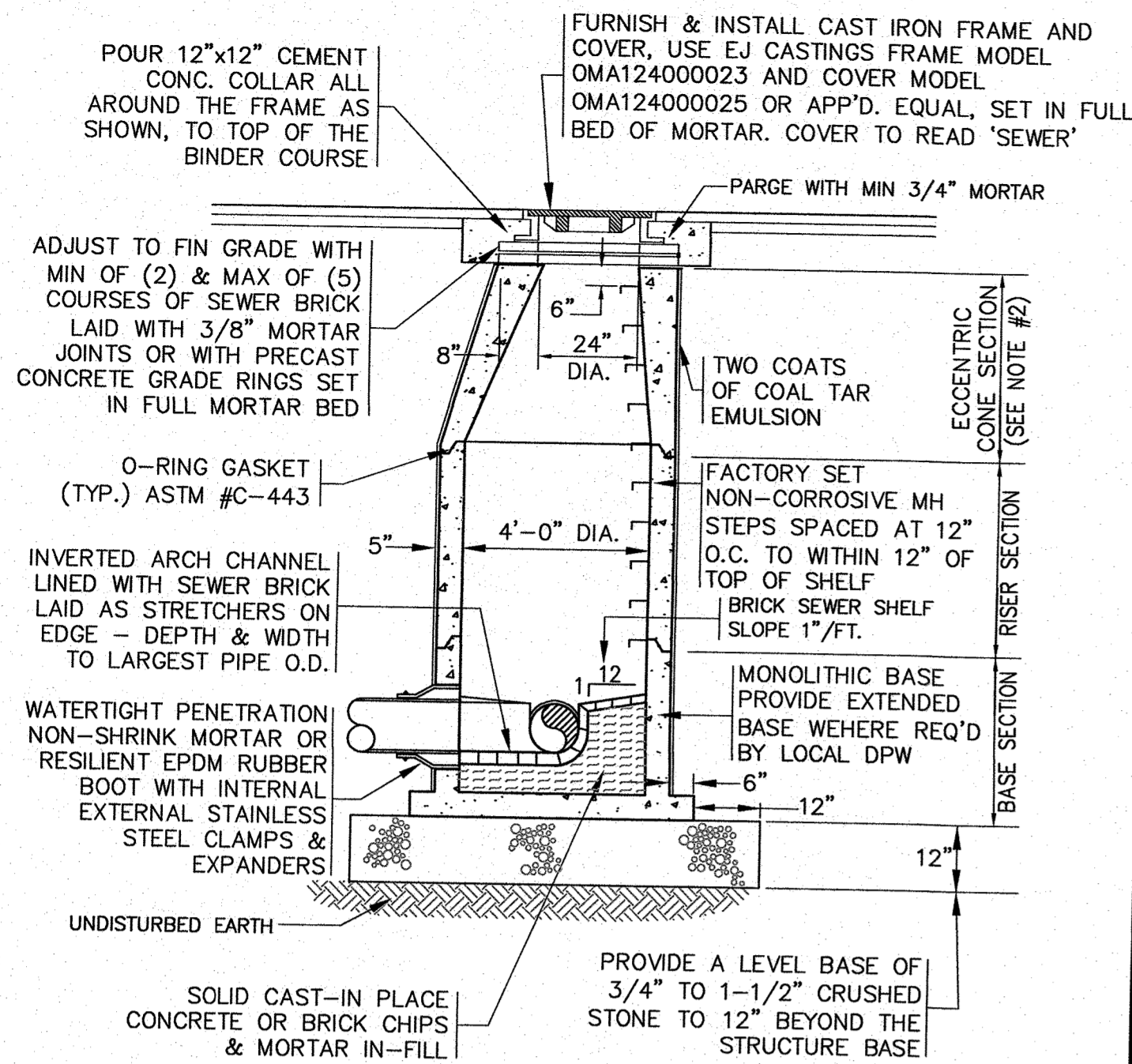
PREPARED FOR:
SETTLER'S GLEN, LLC
20 NORTH PARK AVE., SUITE 4
PLYMOUTH, MA

JOB NO.: 18-9247

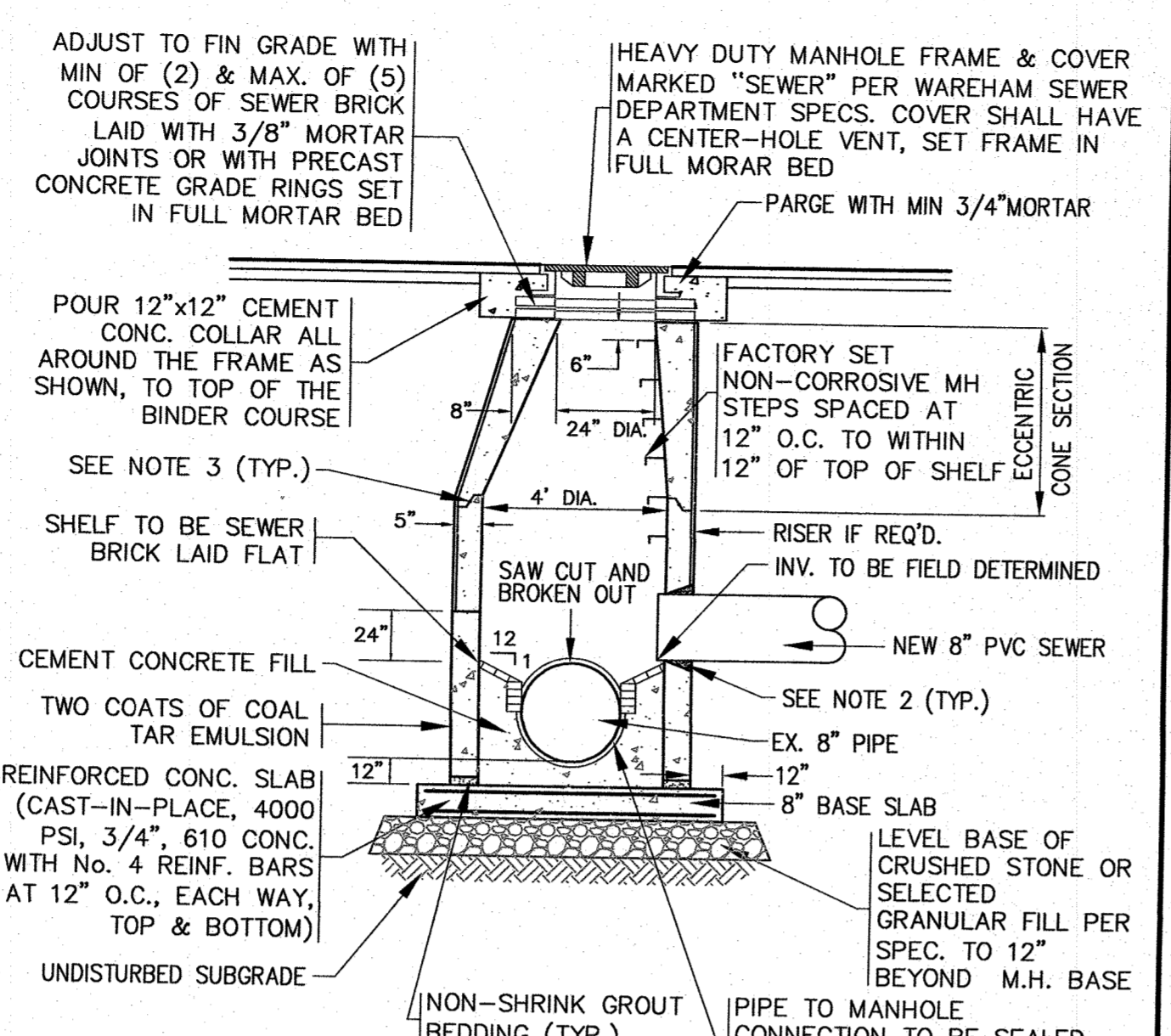
"SETTLER'S GLEN" COMPREHENSIVE PERMIT PLAN DETAIL SHEET 1

DWG. 9 OF 11

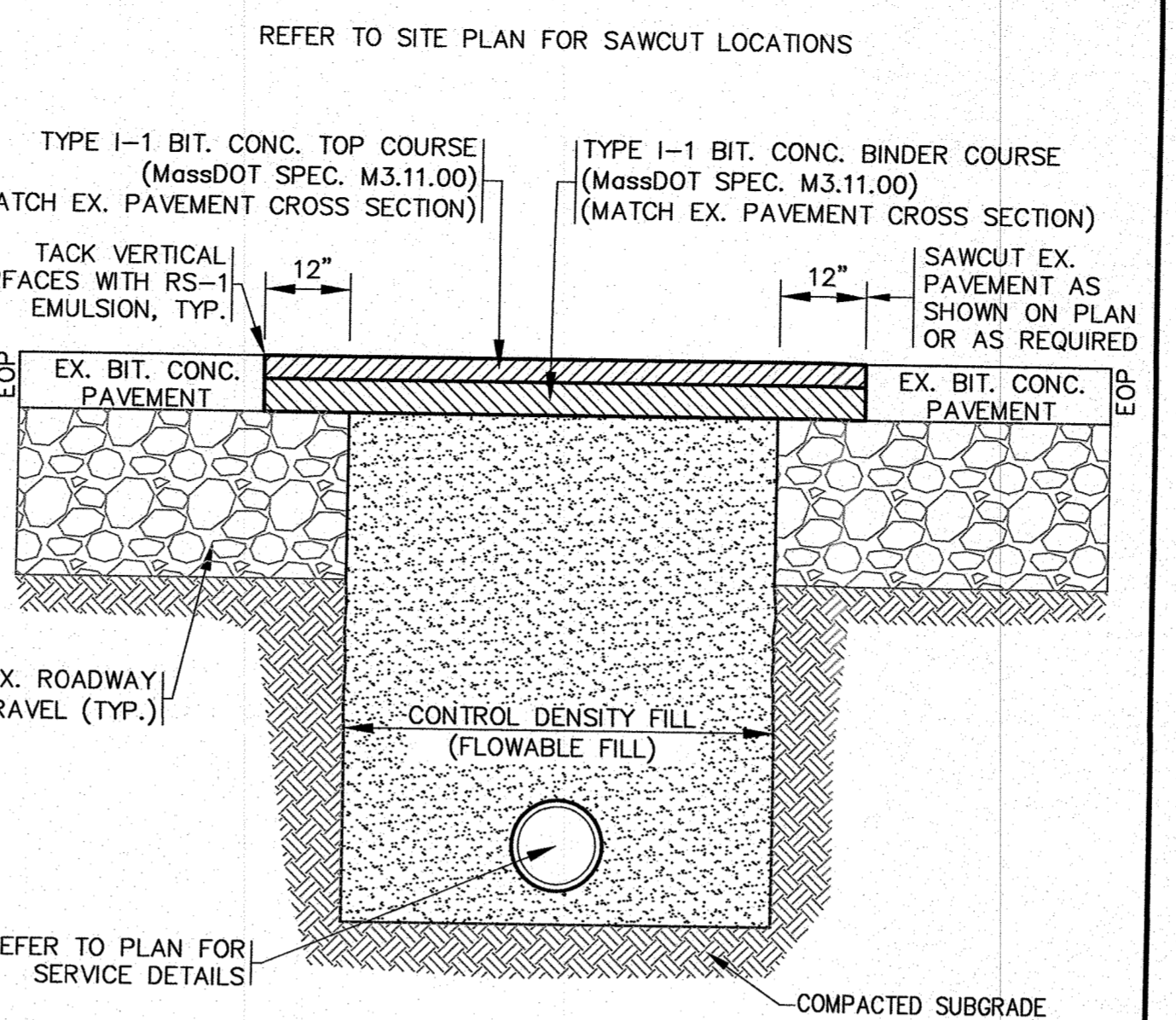
18-9247-001 (REVISED) 01-2021 (SETTLER'S GLEN) 01/20/21 (REVISED) 408 PLAN REV - 6.dwg



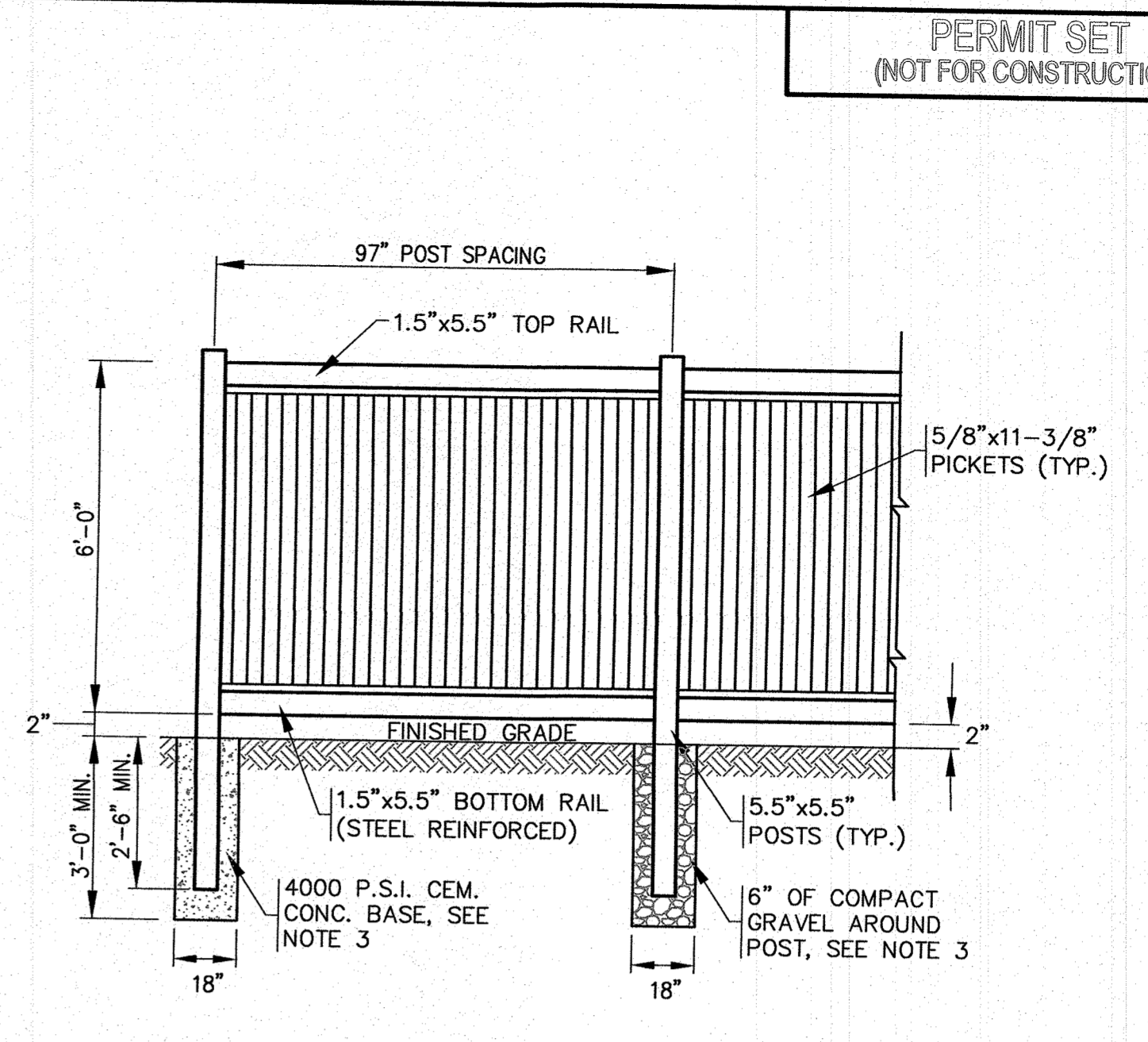
- NOTES:**
1. ALL STRUCTURES SHALL BE PRECAST CONC. IN ACCORDANCE WITH ASTM C-478 WITH H-20 LOADING. SECTION HEIGHTS VARY.
 2. FOR SHALLOW INSTALLATION AND WHEN APPROVED BY THE ENGINEER, FLAT TOP H-20 SLAB ALLOWED, SUBMIT SHOP DWGS.
 3. ALL STRUCTURE JOINTS AND PENETRATIONS SHALL BE WATER TIGHT.
 4. REFER TO PLANS FOR PIPE SIZES, INVERTS, RIMS AND LOCATIONS.



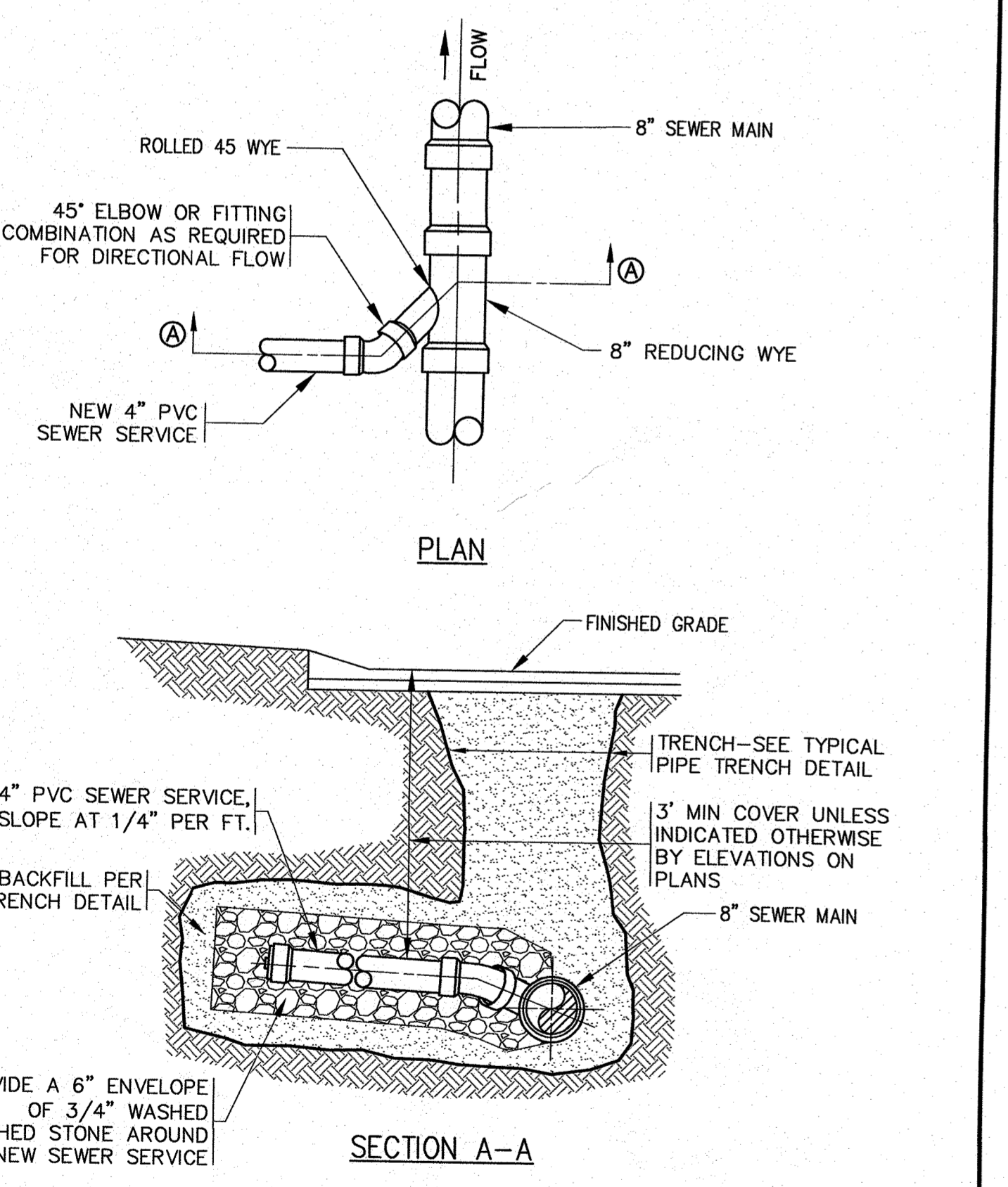
- NOTES:**
1. ALL STRUCTURES SHALL BE PRECAST CONCRETE AND BE DESIGNED FOR HS-20 LOADING. SECTION HEIGHTS VARY.
 2. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS (NON-SHRINK GROUT).
 3. ALL STRUCTURE JOINTS AND PENETRATIONS SHALL BE WATER TIGHT. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
 4. REFER TO PLANS FOR PIPE SIZES, INVERTS, RIMS AND LOCATIONS.



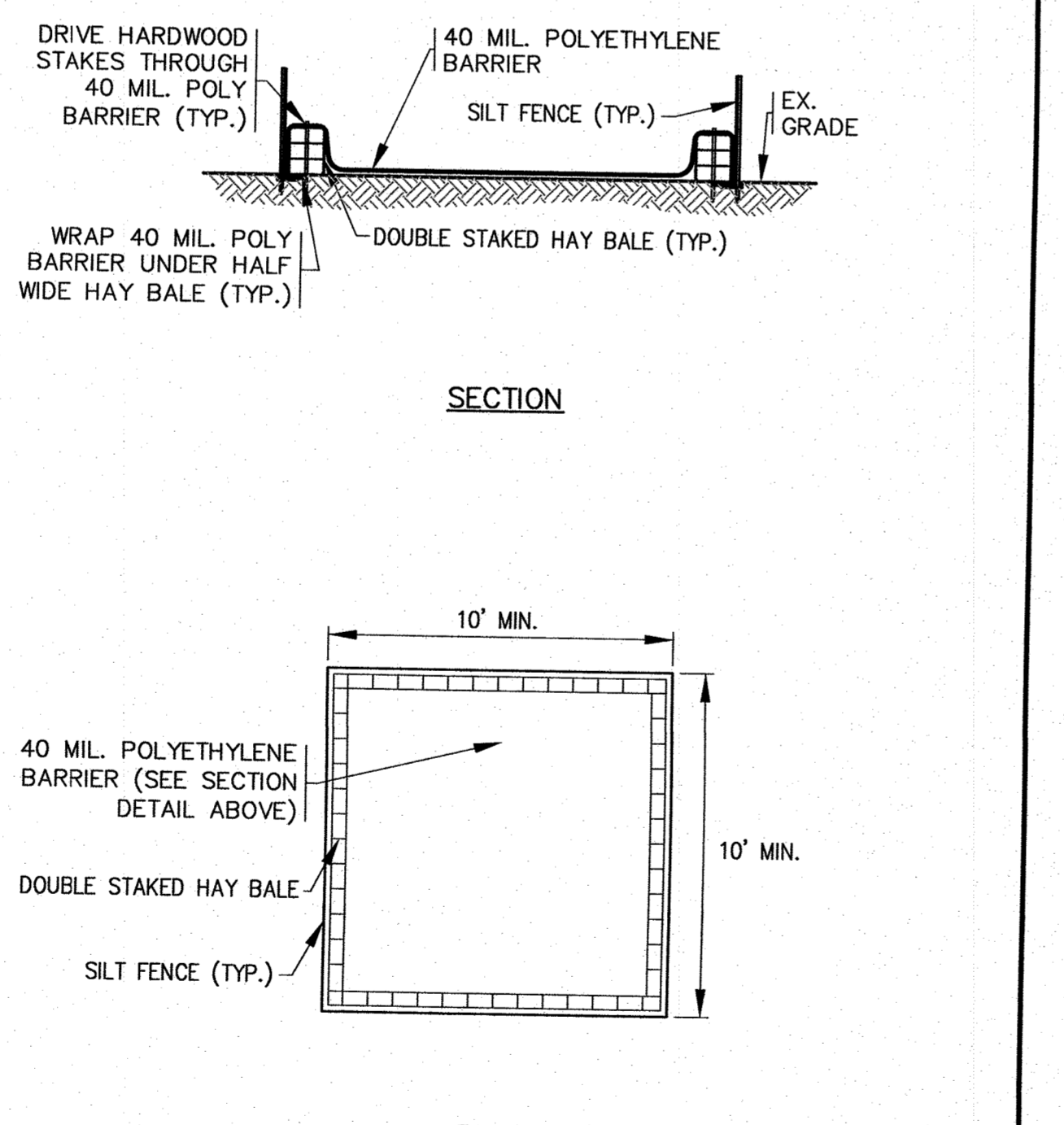
- NOTES:**
1. ALL PAVEMENT SHALL BE IN ACCORDANCE WITH MassDOT SECTION 460 & 401, UNLESS OTHERWISE NOTED.
 2. SUBGRADE & BASE SHALL BE COMPACTED TO MINIMUM 95% MAXIMUM DRY DENSITY.
 3. CONTROL DENSITY FILL (FLOWABLE FILL) SHALL CONFORM TO MassDOT M4.08.0 TYPE 1E OR TYPE 2E.
 4. ALL WORK IN THE STATE HIGHWAY LAYOUT SHALL CONFORM TO MassDOT SPECIFICATIONS AND DETAILS, REFER TO THE LATEST REVISIONS OF THE MassDOT STANDARD SPECIFICATIONS AND DETAILS FOR HIGHWAY AND BRIDGES.



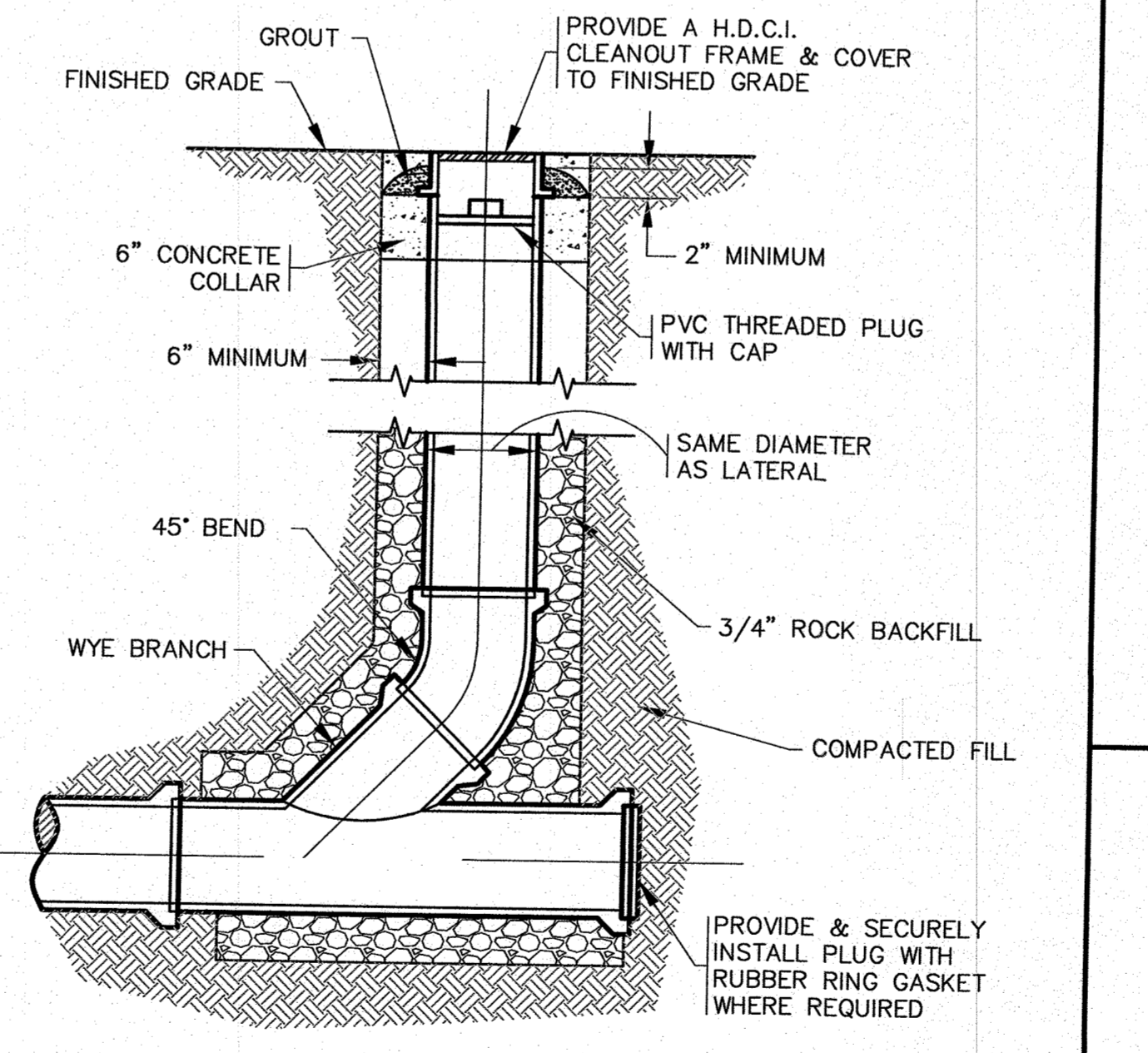
- NOTES:**
1. REFER TO MANUFACTURERS SPECIFICATIONS FOR COMPLETE DETAILS AND INSTALLATION GUIDELINES.
 2. REFER TO PLAN FOR LOCATIONS.
 3. CEMENT CONCRETE BASE SHALL BE USED AT ALL ENDS, ANGLE POINTS AND GATE POSTS. POSTS SHALL BE INSTALLED TO A DEPTH OF 2'-6" MIN. OR TO A DEPTH AS REQUIRED FOR FROST ADEQUATE PROTECTION.



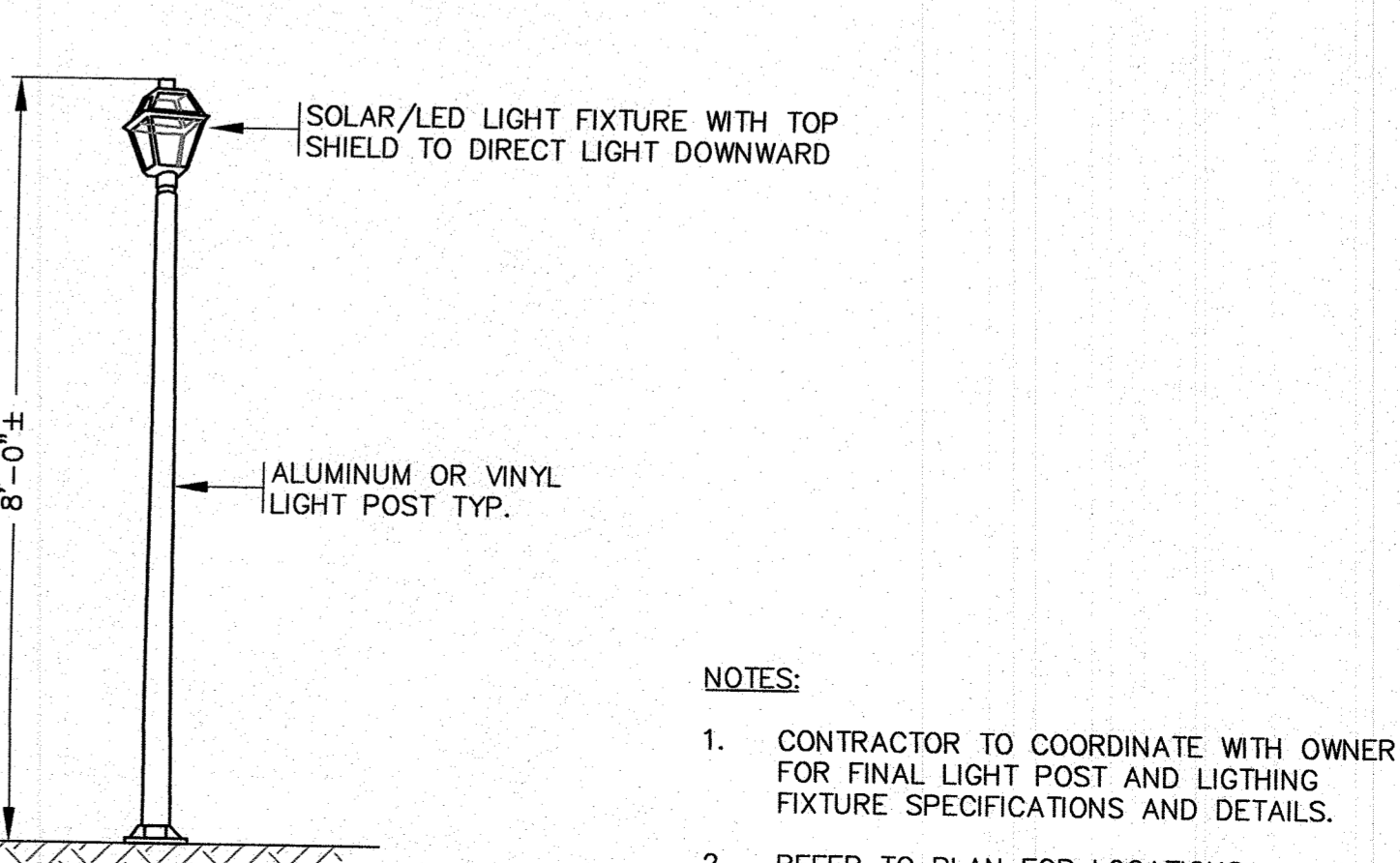
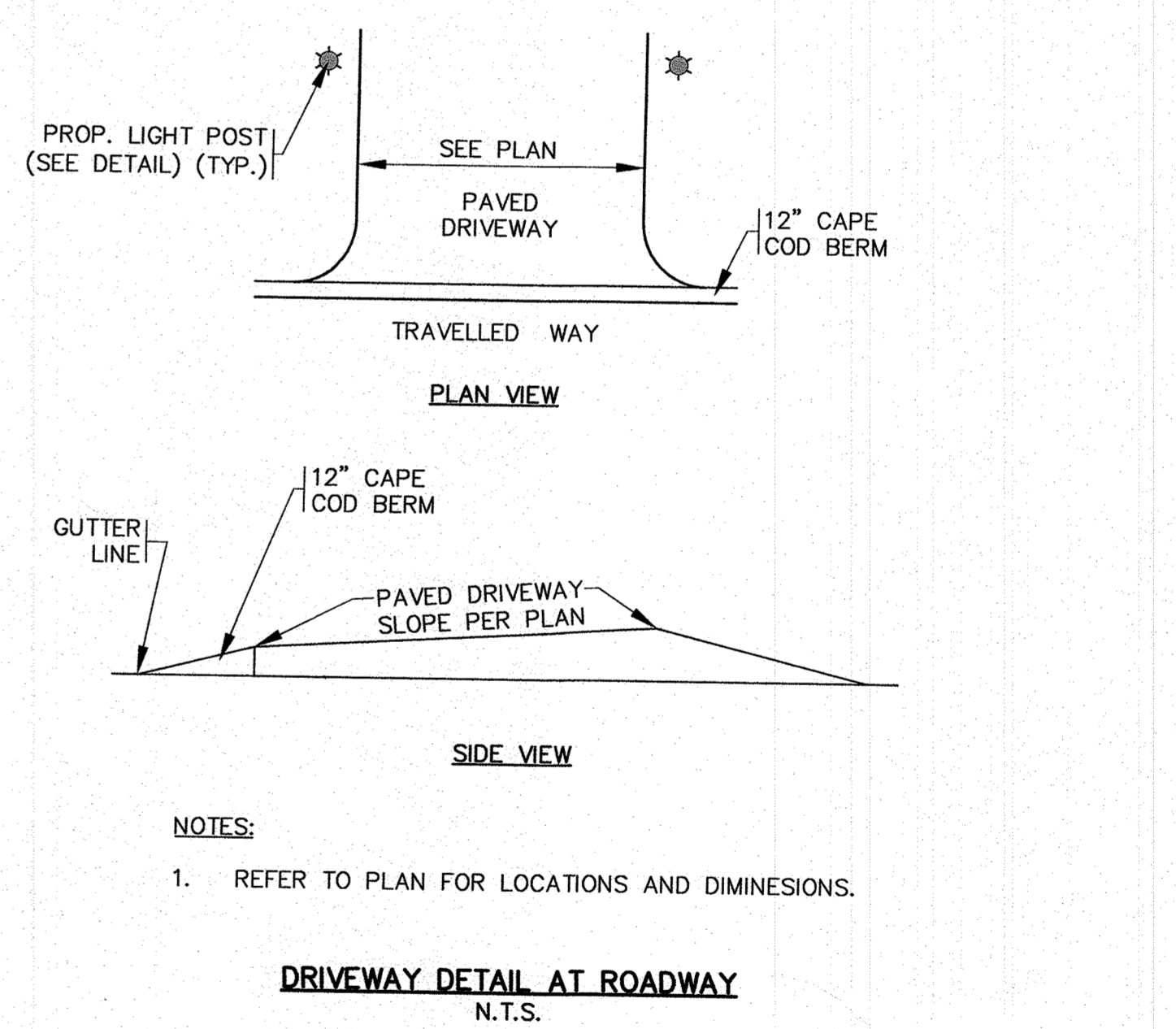
- NOTES:**
1. REFER TO PLAN FOR LOCATIONS.
 2. EXISTING SANITARY SEWER MAIN SHALL BE SAWCUT AND REDUCING WYE SHALL BE INSTALLED AT PROPER ANGLE TO ALLOW 1% OR GREATER SLOPE TO THE NEW SANITARY SEWER SERVICE PIPE.
 3. ALL SEWER WORK SHALL BE DONE IN ACCORDANCE WITH THE TOWN OF WAREHAM SEWER COMMISSIONERS RULES AND REGULATIONS.
 4. CONTRACTOR TO COORDINATE WITH THE TOWN OF WAREHAM SEWER DEPARTMENT PRIOR TO CONSTRUCTION.
 5. A SERVICE CHIMNEY MAY BE SUBSTITUTED AS REQUIRED. CONTRACTOR SHALL COORDINATE WITH THE WAREHAM SEWER DEPARTMENT AND ENGINEER.



- NOTES:**
1. CONTRACTOR SHALL PROVIDE AND MAINTAIN CONCRETE WASHOUT AREA WHERE NECESSARY TO COMPLETE THE WORK.
 2. FINAL LOCATION FOR CONCRETE WASHOUT SHALL BE FIELD DETERMINED BY CONTRACTOR AT TIME OF CONSTRUCTION.
 3. CONTRACTOR SHALL REPAIR OR REPLACE 40 MIL. POLY BARRIER OR STAKED HAY BALES AS REQUIRED.

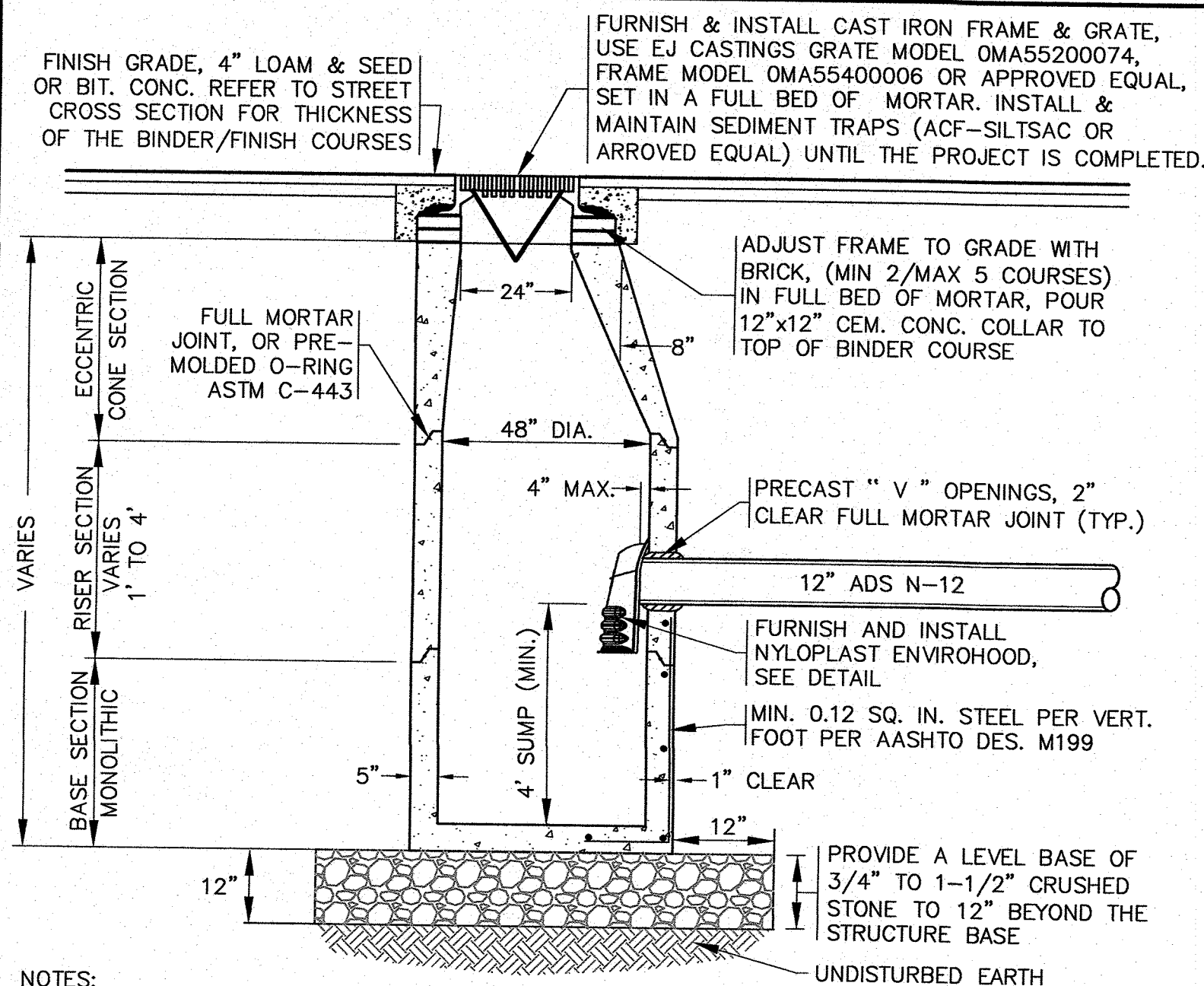


- NOTES:**
1. REFER TO PLAN FOR LOCATIONS.
 2. ALL SEWER WORK SHALL BE DONE IN ACCORDANCE WITH THE TOWN OF WAREHAM SEWER COMMISSIONERS RULES AND REGULATIONS.



PERMIT SET
(NOT FOR CONSTRUCTION)

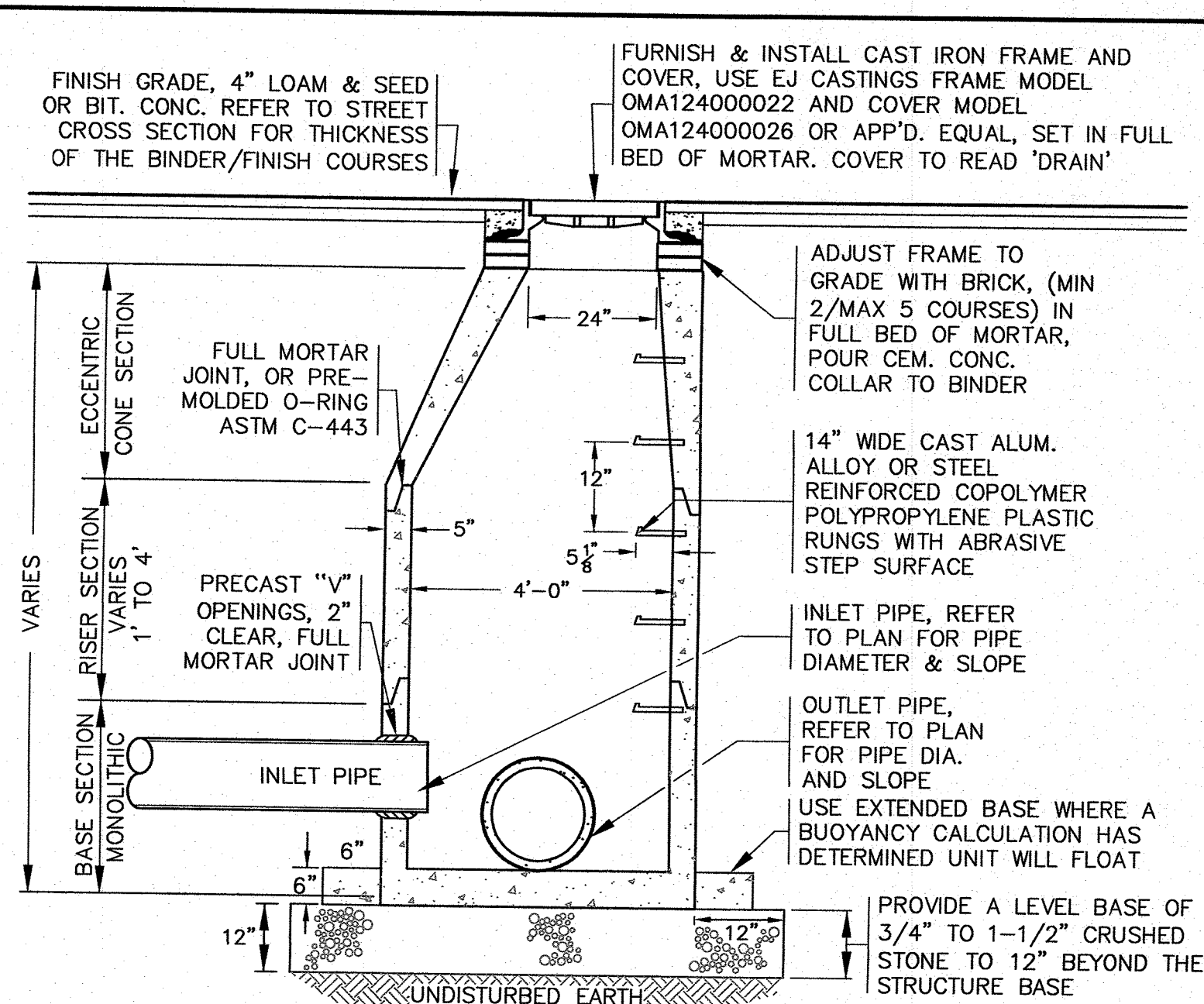
NO CHANGE	NO CHANGES THIS SHEET	DATE: JAN. 12, 2021	APPROVED BY:		
WFM	WFM	DRAWN BY: JMP	C.A.F. ENGINEERING, INC. PROFESSIONAL ENGINEERS & LAND SURVEYORS 266 MAIN STREET - WAREHAM, MA 02571 TEL: (508) 295-6600 FAX: (508) 295-6634 E-MAIL: info@cafenginc.com		
JMP	JMP	CHECKED BY: WFM			
JMP	JMP	JOB NO.: 18-9247			
JMP	JMP	SCALE: N.T.S.			
JMP	JMP	REV. DATE BY APP'D			
WFM	WFM	ONSET WATER DEPARTMENT COMMENTS	OWNER & STREET NAME CHANGE	SETTLER'S GLEN, LLC RED BROOK ROAD WAREHAM, MA PREPARED FOR:	
WFM	WFM	OWNER & STREET NAME CHANGE	PER 2ND PEER REVIEW LETTER		20 NORTH PARK AVE., SUITE 4 PLYMOUTH, MA
WFM	WFM	PER 2ND PEER REVIEW LETTER	PER TOWN & PEER REVIEW COMMENTS		
WFM	WFM	PER TOWN & PEER REVIEW COMMENTS			
WFM	WFM				
WFM	WFM				
JOB NO.: 18-9247	DWG. 10 OF 11				



PRECAST CONCRETE CATCH BASIN
N.T.S.

NOTES:

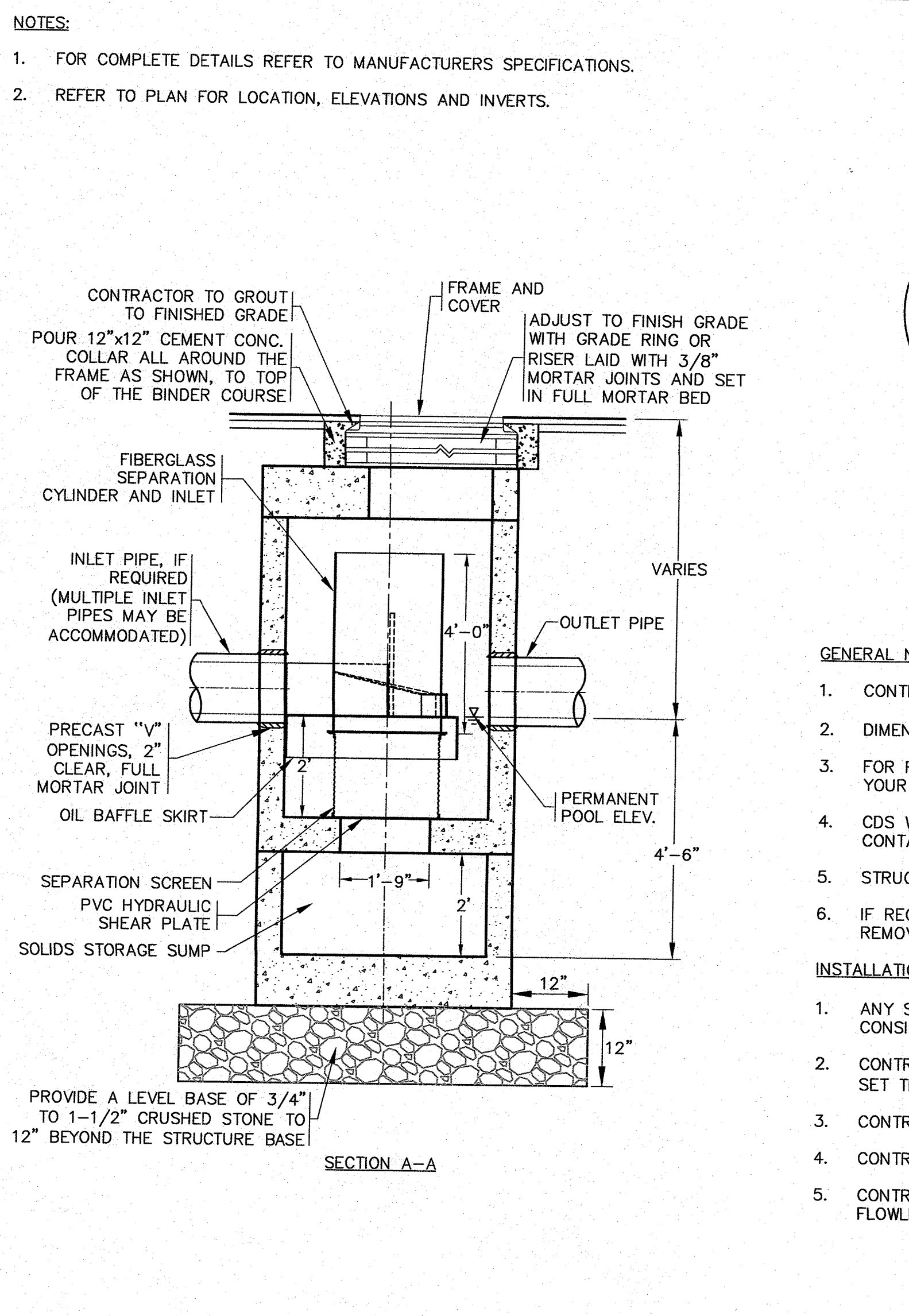
- STRUCTURES SHALL BE PRECAST CONCRETE IN ACCORDANCE WITH ASTM C-478, WITH H-20 LOADING, SECTION HEIGHTS VARY. CONCRETE STRENGTH 4000 PSI @ 28 DAYS.
- FOR SHALLOW INSTALLATION AND WHEN APPROVED BY THE ENGINEER, A FLAT TOP H-20 SLAB WITH A 24" OPENING CAST ECCENTRICALLY MAY BE USED. CONTRACTOR TO SUBMIT SHOP DRAWINGS.
- ALL STRUCTURE JOINTS AND PENETRATIONS SHALL BE WATER TIGHT.
- REFER TO PLANS FOR PIPE SIZES, INVERTS, RIMS AND LOCATIONS.
- IF THE TOP COURSE OF PAVEMENT IS NOT INSTALLED IMMEDIATELY AFTER THE BASE COURSE, CATCH BASIN RIMS SHALL BE SET TO THE BASE COURSE OF PAVEMENT AND THEN RAISED WHEN THE TOP COURSE OF PAVEMENT IS INSTALLED.



PRECAST CONCRETE DRAIN MANHOLE
N.T.S.

NOTES:

- STRUCTURES SHALL BE PRECAST CONCRETE IN ACCORDANCE WITH ASTM C-478, WITH H-20 LOADING, SECTION HEIGHTS VARY. CONCRETE STRENGTH 4000 PSI @ 28 DAYS.
- FOR SHALLOW INSTALLATION AND WHEN APPROVED BY THE ENGINEER, A FLAT TOP H-20 SLAB WITH A 24" OPENING CAST ECCENTRICALLY MAY BE USED, REFER TO SEPARATE DETAIL HEREON.
- ALL STRUCTURE JOINTS AND PENETRATIONS SHALL BE WATER TIGHT.
- REFER TO PLANS FOR PIPE SIZES, INVERTS, RIMS AND LOCATIONS.
- WHERE REQUIRED PROVIDE 'U' SHAPED BRICK INVERT, OR FOR STRAIGHT LINES RUN PIPE THROUGH THE MANHOLE AND CUT THE TOP OF THE PIPE OFF.



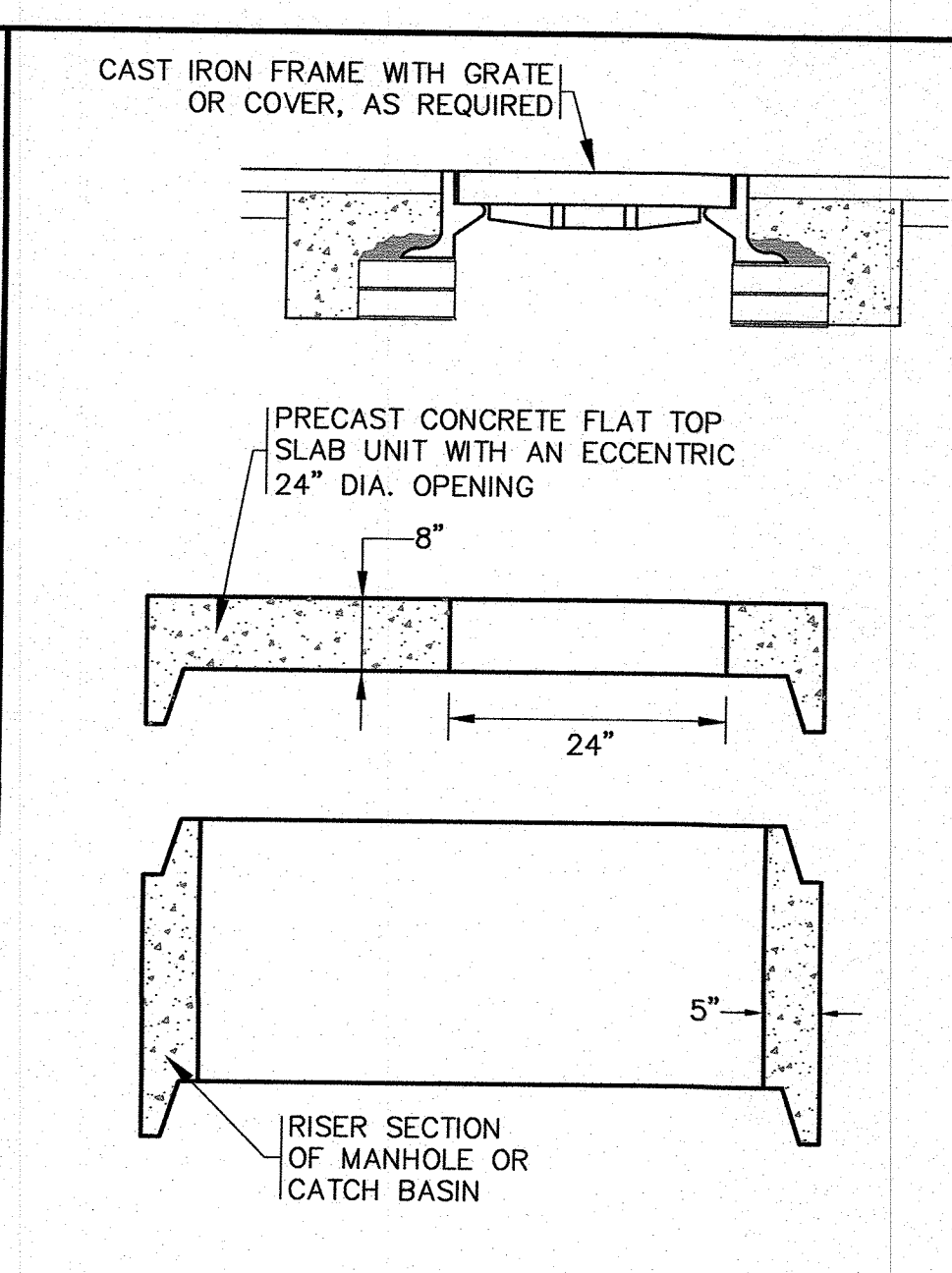
PRECAST CONCRETE WATER QUALITY STRUCTURE-1 (CDS2015-4-C)
N.T.S.

GENERAL NOTES:

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH STORMWATER SOLUTIONS REPRESENTATIVE. www.contechstormwater.com
- CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE AND CASTINGS SHALL MEET AASHTO HS20 LOAD RATING.
- IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES:

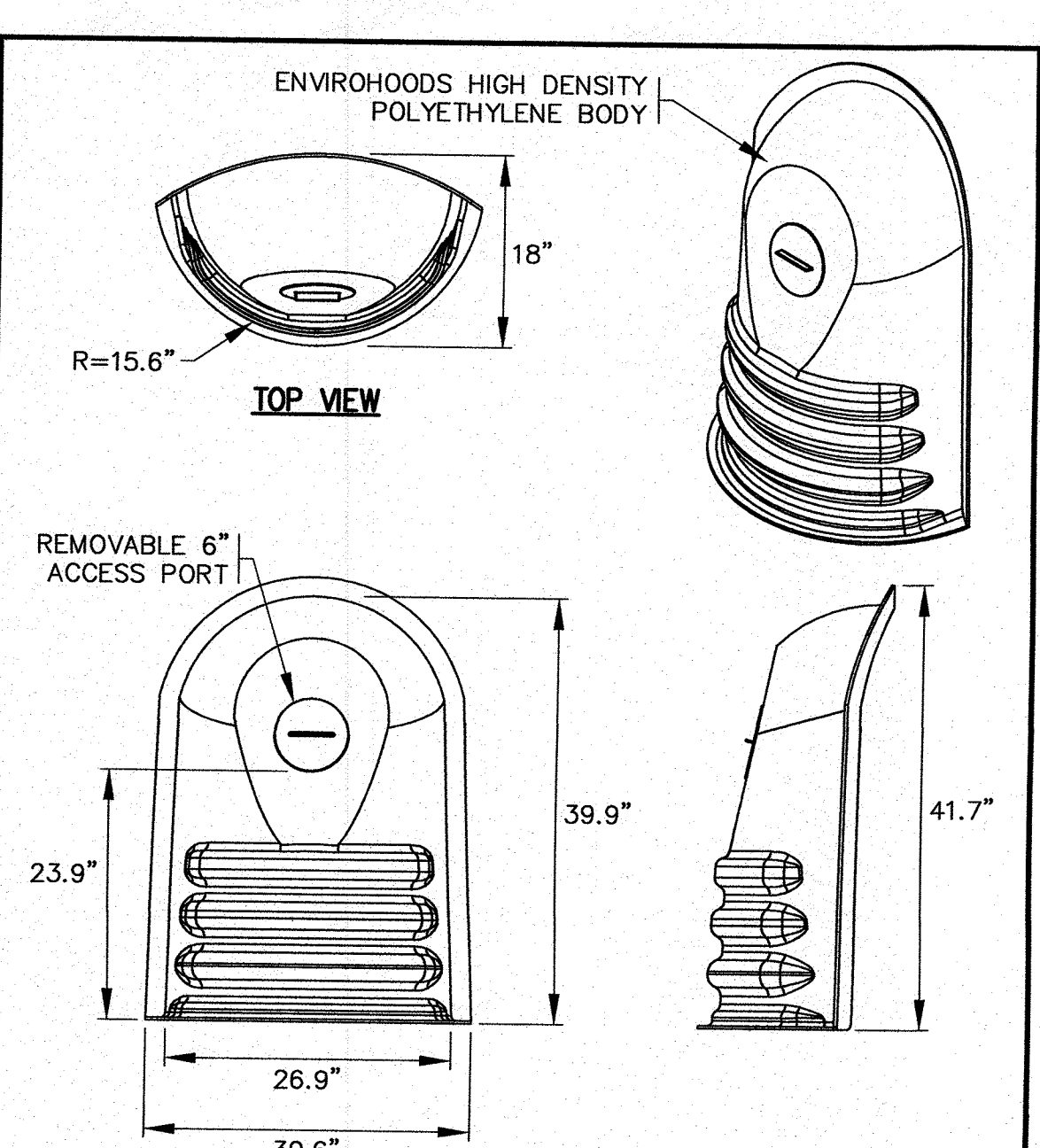
- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
- CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
- CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.



FLAT TOP SLAB
N.T.S.

NOTES:

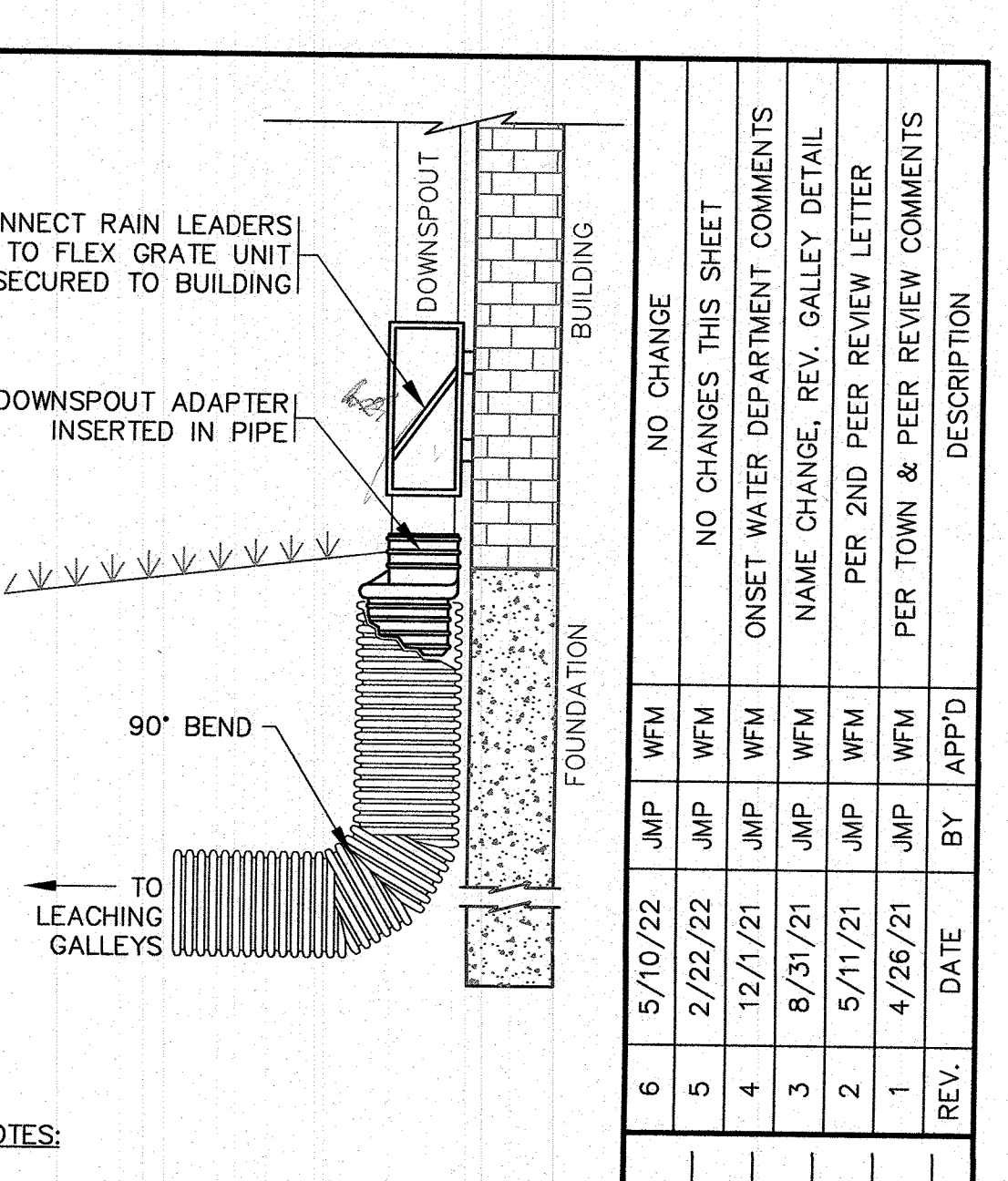
- FOR COMPLETE DETAILS REFER TO MANUFACTURERS SPECIFICATIONS.
- CONTRACTOR TO SUBMIT SHOP DRAWINGS.



NYLOPLAST ENVIROHOOD
N.T.S.

NOTES:

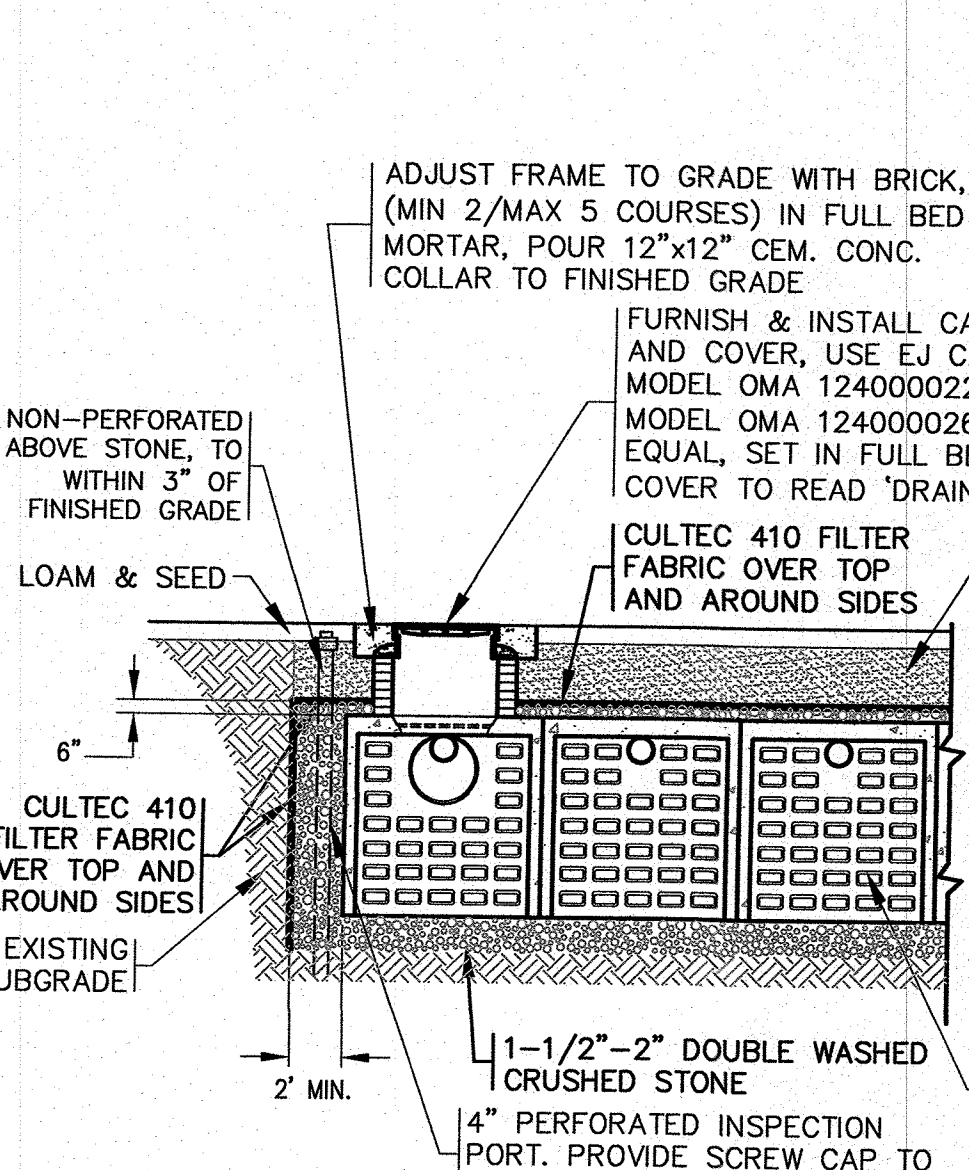
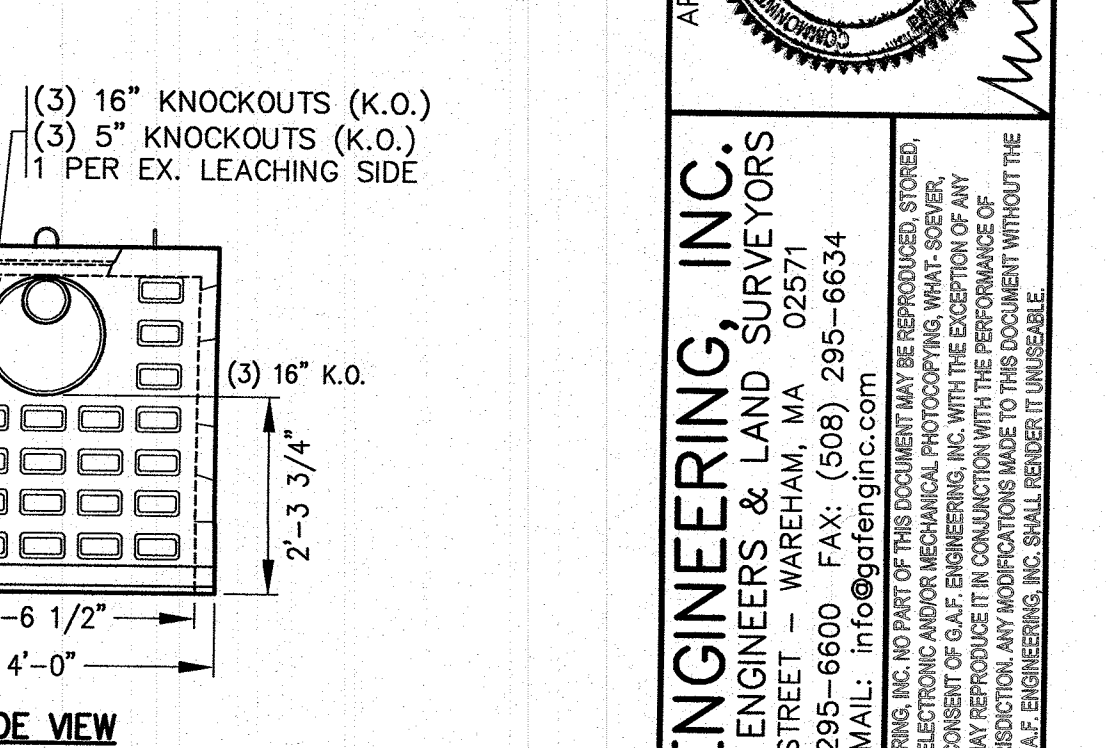
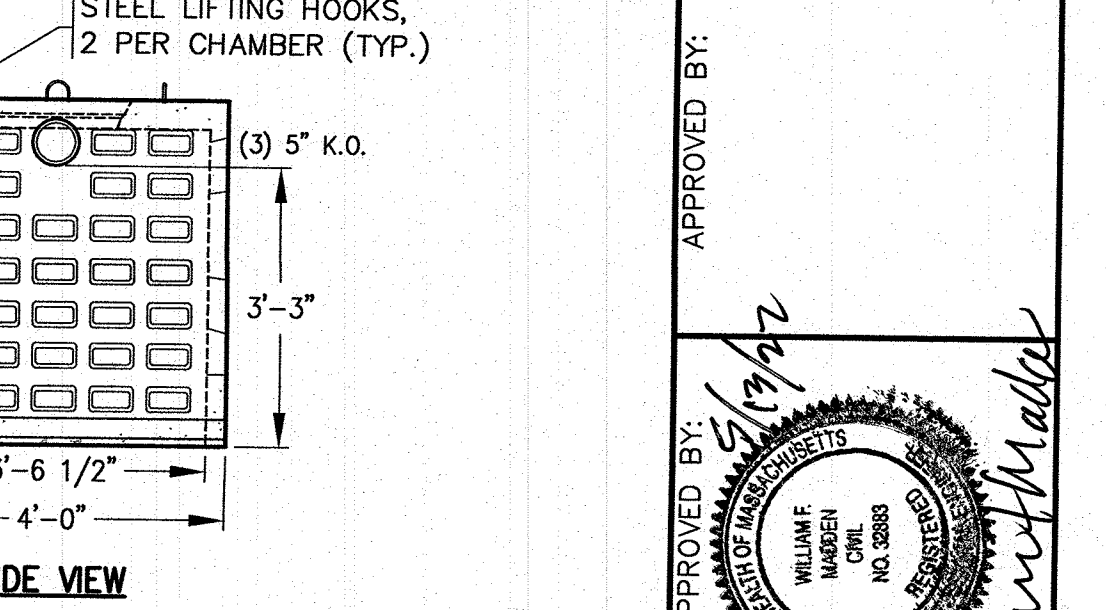
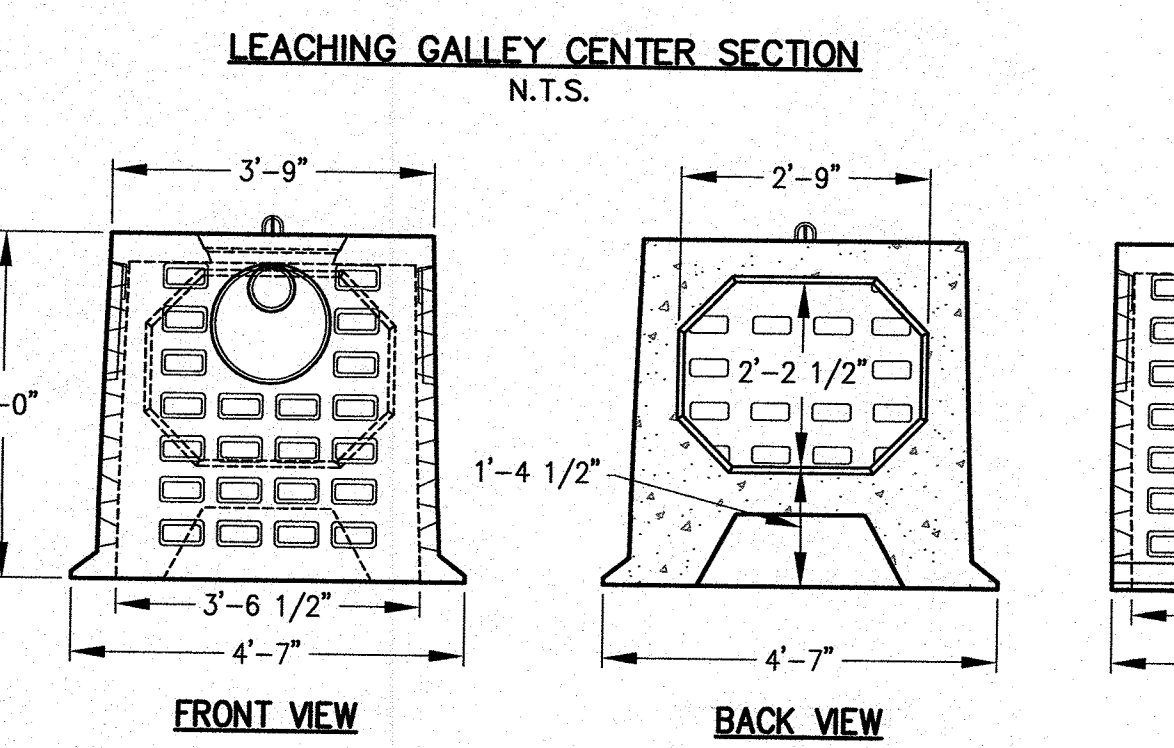
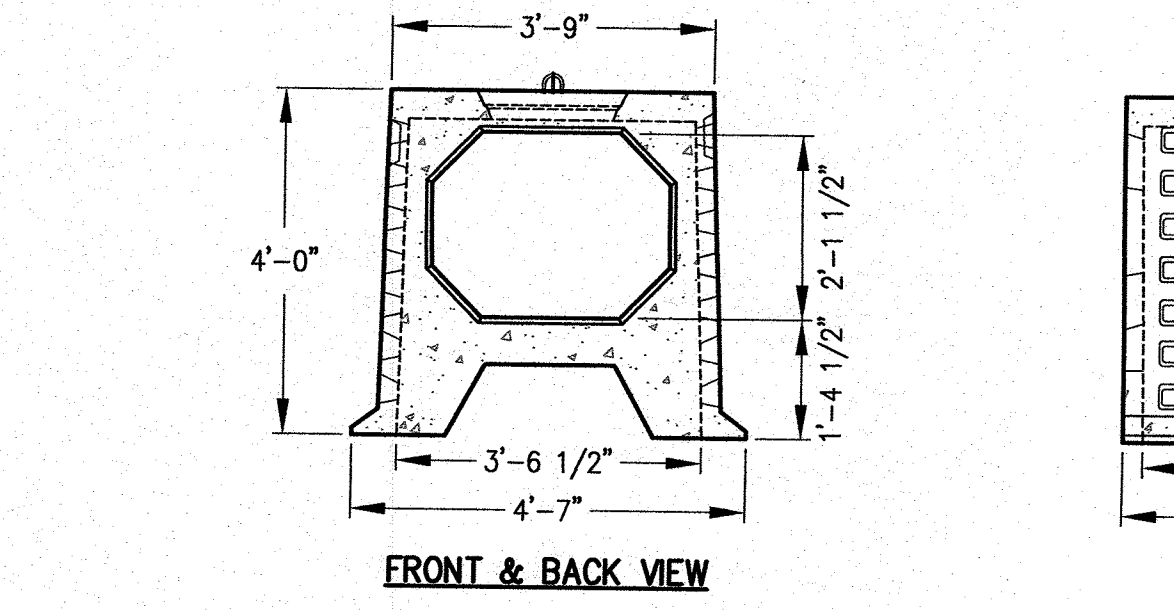
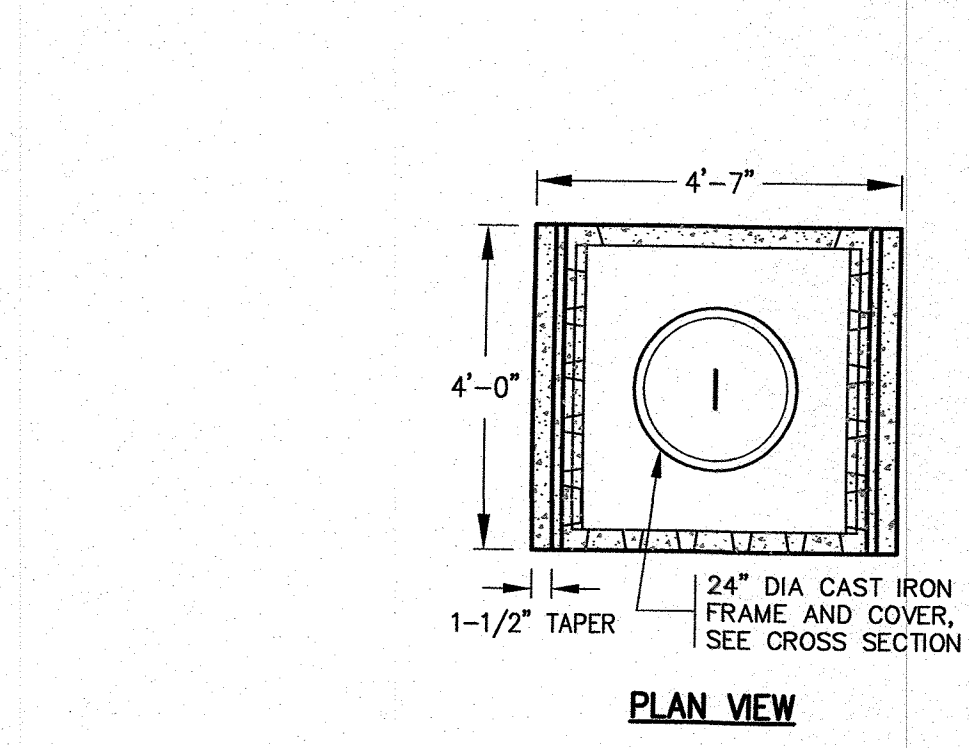
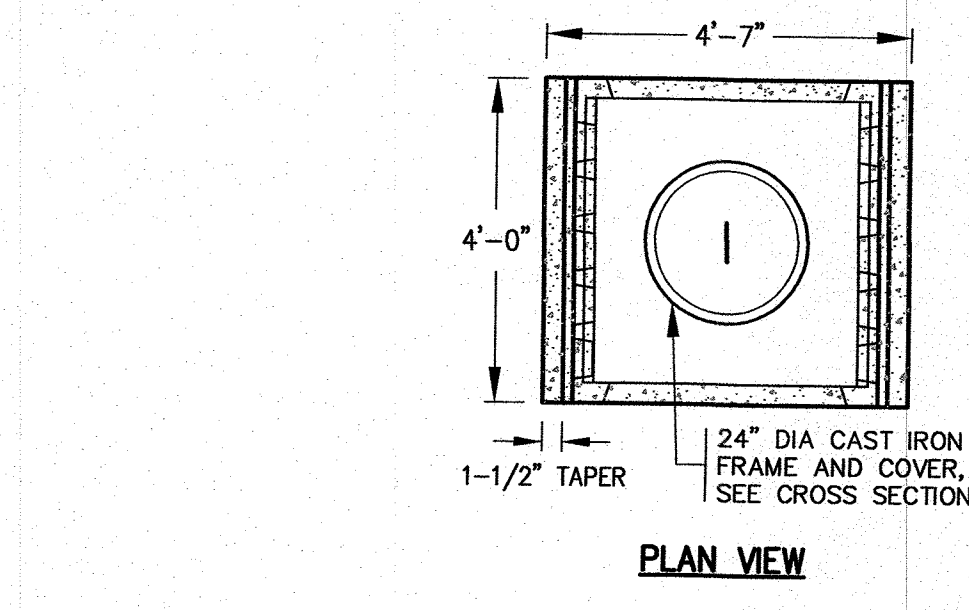
- FOR COMPLETE DETAILS REFER TO MANUFACTURERS SPECIFICATIONS.
- CONTRACTOR TO SUBMIT SHOP DRAWINGS. PART NO. 5824AGR.



DOWNSPOUT DETAIL
N.T.S.

NOTES:

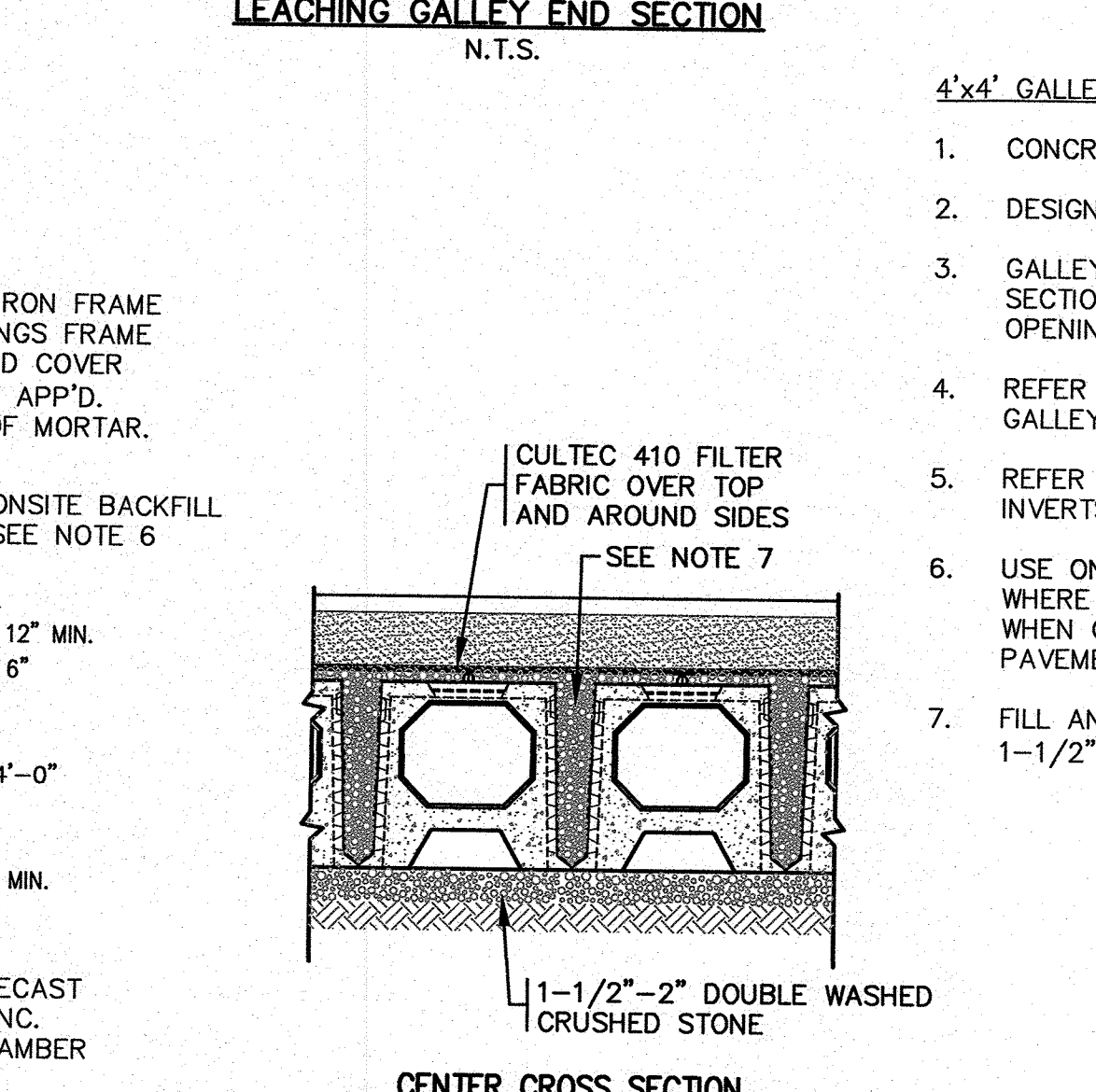
- REFER TO SITE PLAN FOR LOCATIONS, PIPE SIZES, INVERTS, ETC.
- REFER TO ARCHITECTURAL PLANS FOR DOWNSPOUT SIZES AND LOCATIONS.



PRECAST CONCRETE LEACHING GALLEYS
N.T.S.

4'x4' GALLEY NOTES:

- CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
- DESIGNED FOR HS-20 LOADING.
- GALLEY AVAILABLE IN BOTH END AND CENTER SECTIONS. CENTER SECTIONS HAVE LARGE OPENING IN BOTH THE BACK AND FRONT SIDES.
- REFER TO GRADING AND DRAINAGE SHEET FOR GALLEY AND STONE ELEVATIONS.
- REFER TO GRADING AND DRAINAGE SHEET FOR INVERTS.
- USE ON SITE BACKFILL OVER CONC. GALLEYS WHERE GALLEYS ARE NOT UNDER PAVEMENT. WHEN GALLEYS ARE UNDER PAVEMENT REFER TO PAVEMENT CROSS SECTION.
- FILL ANY GAPS BETWEEN GALLEY CHAMBERS WITH 1-1/2"-2" DOUBLE WASHED CRUSHED STONE.

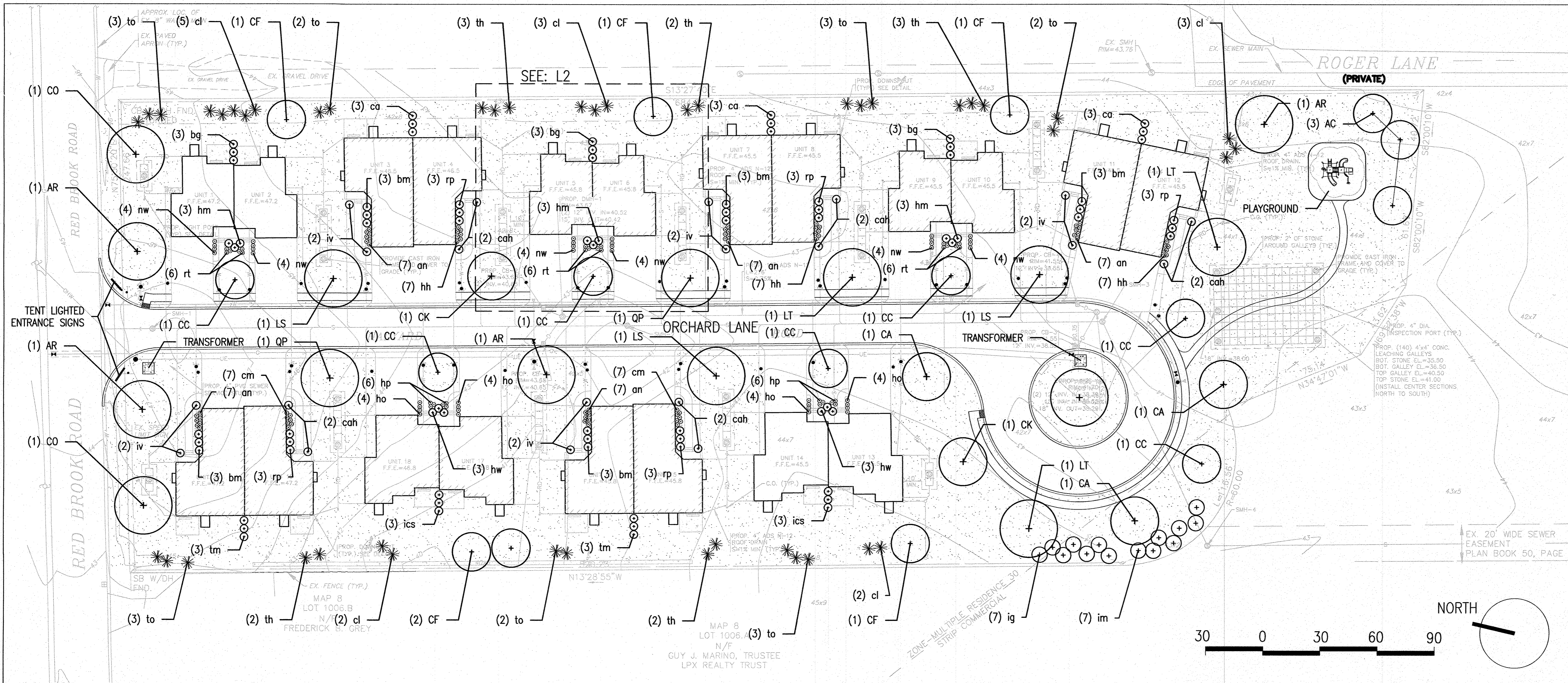


PRECAST CONCRETE LEACHING GALLEYS
N.T.S.

DATE:	JAN. 12, 2021	NO CHANGES THIS SHEET	NO CHANGES THIS SHEET
DRAWN BY:	JMP	ONSET WATER DEPARTMENT COMMENTS	ONSET WATER DEPARTMENT COMMENTS
CHECKED BY:	WFM	NAME CHANGE, REV. GALLEY DETAIL	NAME CHANGE, REV. GALLEY DETAIL
JOB NO.:	18-9247	PER TOWN & PEER REVIEW LETTER	PER TOWN & PEER REVIEW LETTER
SCALE:	N.T.S.	REV.	DATE
APPROVED BY:		DESCRIPTION	DESCRIPTION
G.A.F. ENGINEERING, INC. PROFESSIONAL ENGINEERS & LAND SURVEYORS 266 MAIN STREET - WAREHAM, MA 02571 TEL: (508) 295-6600 FAX: (508) 295-6634 E-MAIL: info@gafenginc.com		"SETTLER'S GLEN" COMPREHENSIVE PERMIT PLAN DETAIL SHEET 3	
PREPARED FOR: SETTLER'S GLEN, LLC 20 NORTH PARK AVE., SUITE 4 PLYMOUTH, MA		JOB NO.: 18-9247	
DWG. 11 OF 11		PERMIT SET (NOT FOR CONSTRUCTION)	

WAREHAM HOUSING PROJECT

WAREHAM, MASSACHUSETTS
SETTLERS GLEN, LLC



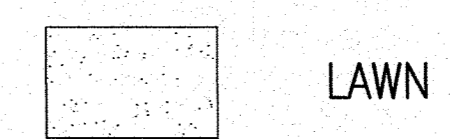
PLANT SCHEDULE

MAIN AREA TREES		SHRUBS	
KEY	QTY.	KEY	QTY.
AR	3	bg	9
AC	3	ca	9
CA	3	cl	15
CO	2	ics	6
CC	7	ig	7
CK	2	im	7
CF	6	th	12
LS	4	tm	6
LT	3	to	18
QB	1		
QP	2		

PLANT SCHEDULE

ENTRIES SHRUBS		PERNNIALS	
KEY	QTY.	KEY	QTY.
bm	15	an	35
cah	10	cm	14
hw	6	hh	21
hm	9	hp	12
iv	10	ho	16
rp	15	nw	24
		rt	18

LEGEND



NO.	REVISION	DATE

kzla
 Kyle Zick Landscape Architecture, Inc.
 36 Bromfield Street Suite 202
 Boston, MA 02108
 617 451-1018 Tel
 www.kylezick.com

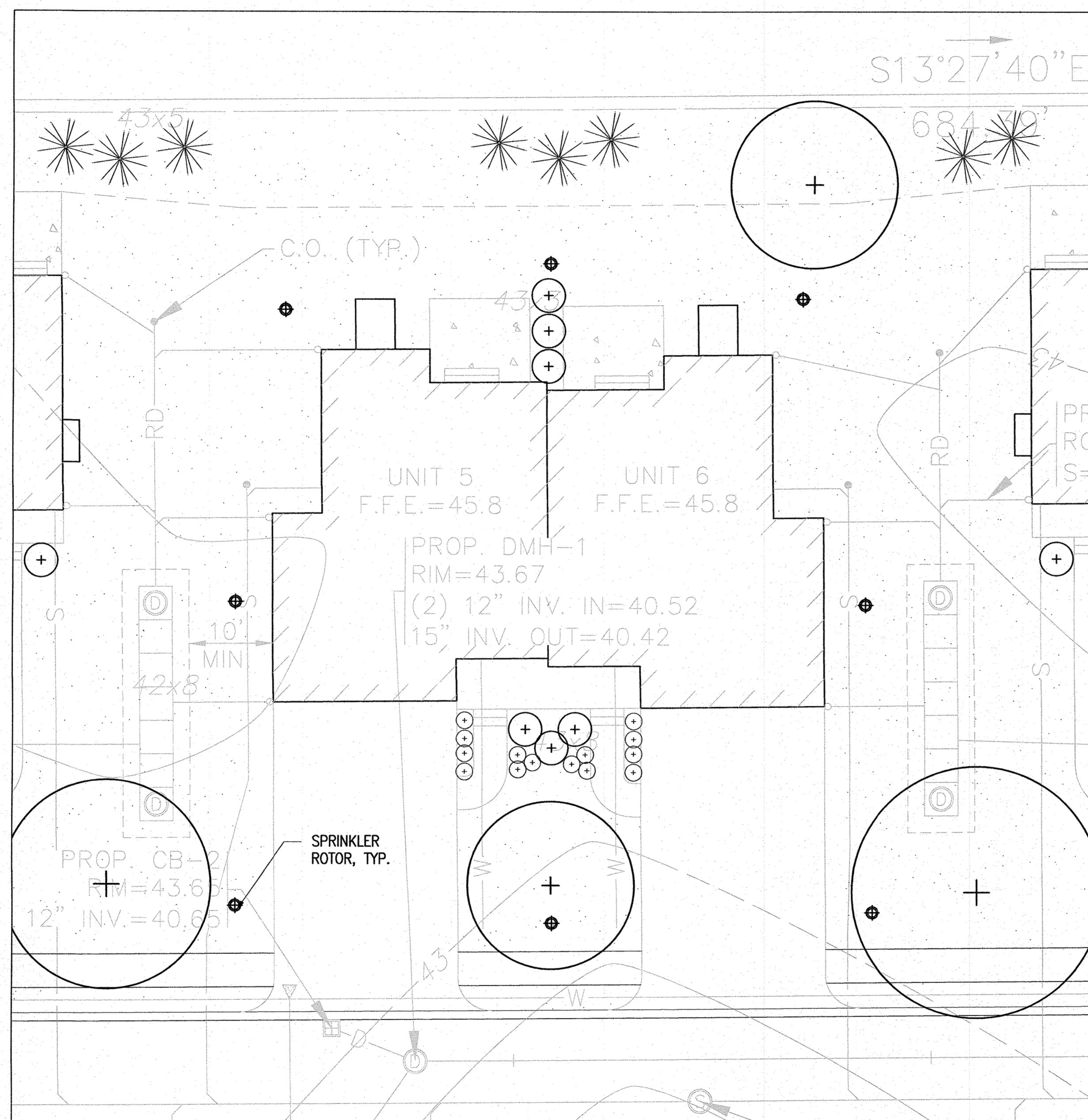
Job Number:
 Project:
 Drawn By: MD Checked By: KZ
 Date: MAY 5, 2022
 Scale: 1" = 30'-0"
 Drawing Title:

PLANTING PLAN PERMIT SET

**WAREHAM
HOUSING PROJECT**

WAREHAM, MASSACHUSETTS

SETTLERS GLEN, LLC



NOTES:

1. TYPICAL IRRIGATION HEAD LAYOUT TO BE FINALIZED BY OWNER
2. COMMON AREAS TO HAVE DROUGHT RESISTANT PLANTINGS PER OWNER
3. THE IRRIGATION SYSTEM WILL REQUIRE A MINIMUM OF 50 GPM @ 65 PSI WITH AN APPROXIMATE 6 HOUR WATERING WINDOW
4. THE USE IS 16-20 GPM WHEN THE SYSTEM IS RUNNING

NO.	REVISION	DATE

kz|a
 Kyle Zick Landscape Architecture, Inc.
 36 Bromfield Street Suite 202
 Boston, MA 02108
 617 451-1018 Tel
 www.kylezick.com

Job Number:
 Project:
 Drawn By: MD Checked By: KZ
 Date: MAY 5, 2022
 Scale: 1" = 10'-0"

Drawing Title:

IRRIGATION
DIAGRAM