

GENERAL NOTES:

- 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.
- EXISTING CONDITIONS INFORMATION IS BASED ON ACTUAL FIELD SURVEY, PRIVATE UTILITY PLANS, AND OTHER AVAILABLE SOURCES. FIELD SURVEY WAS PERFORMED BY G.A.F. ENGINEERING, INC., ON VARIOUS DATES AND MOST RECENTLY IN SEPTEMBER OF 2019.
- THE CONTRACTOR SHALL COORDINATE AND OBTAIN ALL REQUIRED PERMITS, GIVE ALL NOTICES, COMPLY WITH ALL LAWS AND REGULATIONS, AND PAY ALL FEES ASSOCIATED WITH THE INSTALLATION OF THIS WORK.
- THE CONTRACTOR SHALL FIELD VERIFY, PRIOR TO CONSTRUCTION ALL EXISTING UNDERGROUND UTILITY LOCATIONS AND POINTS OF INTERCONNECTION.
- THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, SUPERVISION, TOOLS, EQUIPMENT, FUEL, POWER, SANITARY FACILITIES AND INCIDENTALS NECESSARY FOR THE FURNISHING, PERFORMANCE, TESTING, START-UP AND COMPLETION OF THIS WORK.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER OF ANY CONFLICTS DISCOVERED IN THE FIELD.
- ANY CHANGES TO THESE SITE PLANS THAT ARE MADE IN THE FIELD DURING CONSTRUCTION SHALL BE RECORDED BY THE CONTRACTOR ON RECORD DOCUMENTS AND REPORTED TO THE OWNER AND ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AN EXCAVATION AND TRENCH PERMIT PURSUANT TO 520 CMR 14.00 AS APPLICABLE PRIOR TO THE START OF CONSTRUCTION.

CONSTRUCTION NOTES:

- IN GENERAL, THE PLANS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW EVERY FITTING, CHANGE IN DIRECTION OR DETAIL OF CONSTRUCTION.
- 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.
- 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.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION REQUIRED FOR THE INSTALLATION OF THIS WORK.
- ALL MATERIALS SHALL BE NEW AND FREE FROM DEFECTS AND OF GOOD QUALITY.
- THE CONTRACTOR SHALL KEEP THE PREMISES FREE FROM THE ACCUMULATION OF WASTE MATERIAL AND OTHER DEBRIS RESULTING FROM THIS WORK.
- ALL PAVEMENT MARKINGS DISTURBED BY CONSTRUCTION SHALL BE RESTORED AS PART OF THIS WORK.
- 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.
- ELEVATIONS ARE IN FEET AND TENTHS AND ARE BASED ON THE DATUM OF NAVD-88.
- SIDE SLOPE GRADING SHALL BE AS NOTED ON THE SITE PLANS.
- 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.
- 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.

PURE PERCENT	SEED
30-35%	CREeping RED FESCUE
30-35%	PERENNIAL RYEGRASS
20-25%	KENTUCKY BLUEGRASS
10-15%	ANNUAL RYEGRASS

HYDRO SEEDING IS AN ALTERNATIVE FOR THIS APPLICATION. A MIXTURE OF SEED WATER AND MULCH IS SPRAYED ON THE SEED BED COMBINING THREE (3) SEPARATE ACTIONS INTO ONE (1) OPERATION

- ALL SEWER AND PLUMBING WORK SHALL CONFORM WITH 248 CMR 10.00 UNIFORM STATE PLUMBING CODE AND THE TOWN OF WAREHAM SEWER DEPARTMENTS SPECIFICATIONS.
- ALL METHODS AND MATERIALS SHALL CONFORM WITH MassDOT STANDARDS AND SPECIFICATIONS, AND THE REQUIREMENTS OF THE TOWN OF WAREHAM MUNICIPAL MAINTENANCE DEPARTMENT.
- ALL UTILITY INSTALLATIONS SHALL BE IN CONFORMANCE WITH ALL APPLICABLE TOWN, STATE AND FEDERAL REQUIREMENTS & REGULATIONS.
- DEWATERING IF REQUIRED SHALL BE DIRECTED TO A 5' MIN. DIAMETER RING OF HAYBALES OR A DIRTBAG. CONTRACTOR SHALL PROVIDE AND MAINTAIN DEWATERING EQUIPMENT FOR THE CONTROL, COLLECTION AND DISPOSAL OF GROUND AND SURFACE WATER WHERE NECESSARY TO COMPLETE THE WORK.

EROSION CONTROL NOTES:

- 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.
- 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.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR ALL GRADING AND OTHER LAND DISTURBING ACTIVITIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR THE CLEANUP AND REMOVAL OF ANY BUILDUP OF SEDIMENT WHICH ESCAPES FROM THE SITE.
- CONTRACTOR IS RESPONSIBLE FOR CLEANING SILT AND DEBRIS OUT OF ALL STORM DRAINAGE STRUCTURES UPON THE COMPLETION OF CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TEMPORARY EROSION CONTROL MEASURES AFTER CONSTRUCTION IS COMPLETE AND ALL DISTURBED AREAS HAVE BEEN STABILIZED.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ANY FINES LEVIED AGAINST THE SITE FOR VIOLATIONS OF EROSION CONTROL REGULATIONS.
- 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.
- 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.
- SPRINKLE OR APPLY DUST SUPPRESSERS TO MINIMIZE DUST AT THE CONSTRUCTION SITE. MAINTAIN DUST CONTROL MEASURES UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
- 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.

- 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.
- EROSION CONTROL SHALL BE PLACED ALONG THE LIMITS OF WORK WHERE SHOWN ON THE PLAN.
- 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.
- 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.
- 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.

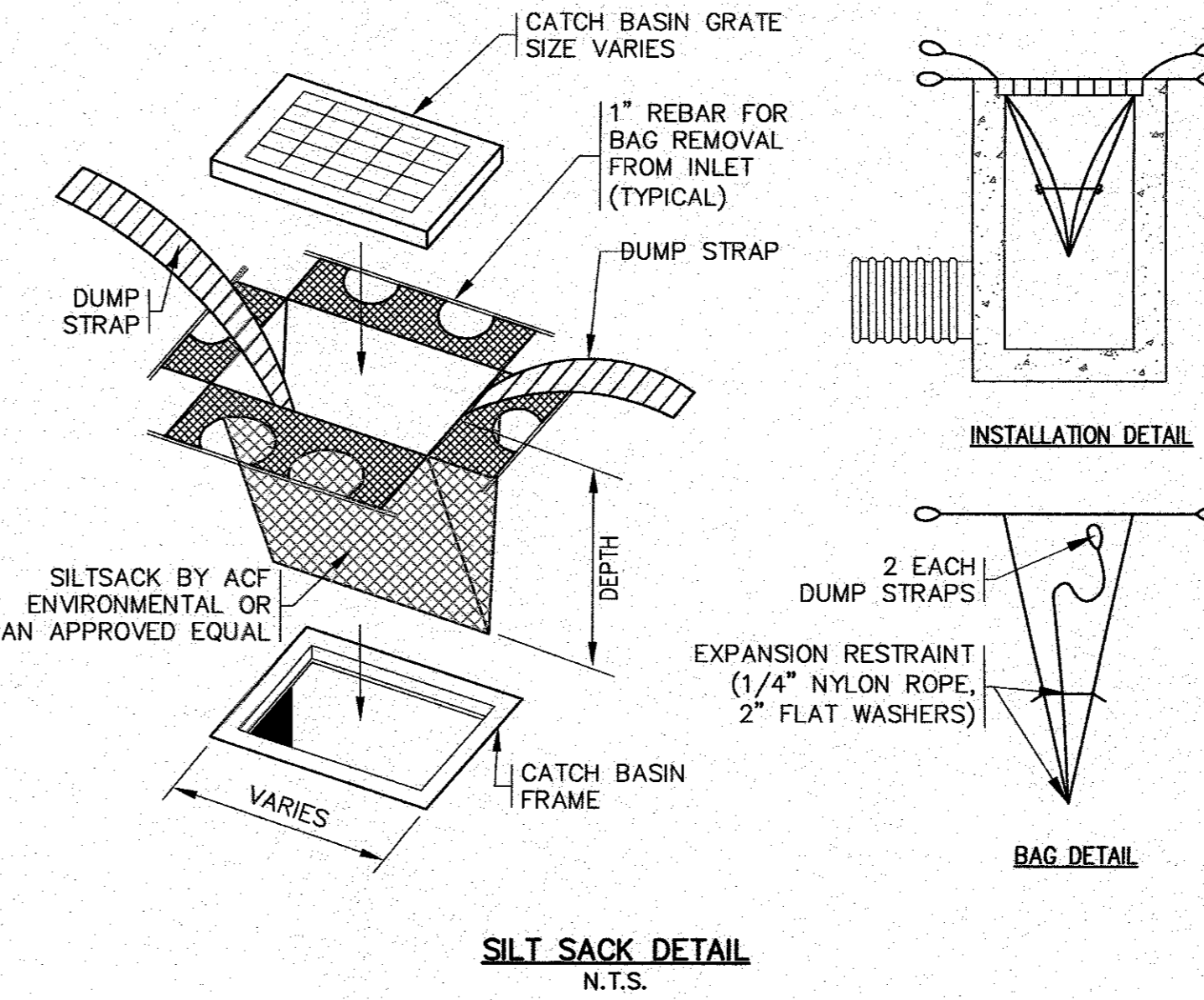
- STREET SWEEPING IS AN EFFECTIVE NONSTRUCTURAL SOURCE CONTROL THAT WILL REMOVE SEDIMENT FROM PAVED SURFACES. STREET SWEEPING SHOULD BE DONE BY THE USE OF A HIGH EFFICIENCY VACUUM SWEEPER OR REGENERATIVE AIR SWEEPER. STREET SWEEPING SHALL BE DONE TWICE PER YEAR. ONCE REMOVED FROM PAVED SURFACES, THE SWEEPINGS MUST BE HANDLED AND DISPOSED OF PROPERLY IN ONE OF THE WAYS APPROVED BY MASSDEP (SEE POLICY # BAW-18-001: REUSE & DISPOSAL OF STREET SWEEPINGS).
- 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.
- 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.
- 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:

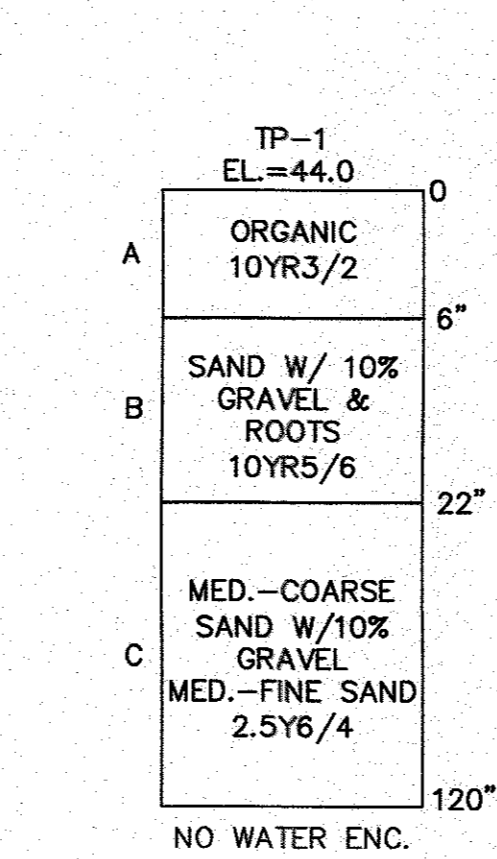
- ALL DRAINAGE PIPES, UNLESS OTHERWISE NOTED, ARE TO BE ADS N-12 PIPE WITH SOIL TIGHT JOINTS AND FITTINGS. REFER TO PLAN FOR LOCATION, SIZES AND SLOPES.
- ALL ROOF DRAIN PIPES, UNLESS OTHERWISE NOTED, ARE TO BE 4" ADS N-12 PIPE WITH SOIL TIGHT JOINTS AND FITTINGS. MINIMUM SLOPE TO BE 1.00%. REFER TO PLAN FOR LOCATION.
- MIN. COVER ON PIPES SHALL NOT BE LESS THAN 1.5 FEET.
- WHERE REQUIRED ALL PIPE PERFORATIONS SHALL BE AASHTO CLASS II.
- ALL WORK AND MATERIAL SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF WAREHAM MUNICIPAL MAINTENANCE DEPARTMENT.
- WHERE REQUIRED CONTRACTOR TO REMOVE ALL UNSUITABLE SOILS AND REPLACE WITH CLEAN SAND AND GRAVEL APPROVED BY DESIGN ENGINEER.
- 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:

- 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.
- WATER MAIN SHALL BE TESTED & DISINFECTED IN ACCORDANCE WITH THE ONSET FIRE DISTRICT REQUIREMENTS.
- CONTRACTOR TO COORDINATE WITH THE ONSET FIRE DISTRICT FOR THE INSPECTIONS OF THE WATER MAIN INSTALLATION.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO COMPLETE THE INSTALLATION OF THE WATER SERVICE.
- THE CONTRACTOR SHALL OBTAIN A COPY OF THE REGULATIONS FROM THE ONSET FIRE DISTRICT BEFORE PROCEEDING WITH THE INSTALLATION OF THE WATER SERVICE.



TEST PIT DATA
 DATE OF TESTING: AUGUST 25, 2020
 PERFORMED BY: BRIAN GRADY, G.A.F. ENGINEERING INC.
 REFER TO THE EXISTING CONDITIONS PLAN FOR TEST PIT LOCATIONS



ABBREVIATIONS

AC	ASBESTIC CONCRETE
ADS	ADVANCED DRAINAGE SYSTEM
APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BIT. CONC.	BITUMINOUS CONCRETE
BLDRS	BOULDERS
BW	BOTTOM OF WALL
BWV	BORDERING VEGETATED WETLANDS
CB	CATCH BASIN
CB/DH	CONCRETE BOUND/DRILL HOLE
CCB	CAPE COD BERM
CEM.	CEMENT
C.I.	CAST IRON
CONC.	CONCRETE
C.O.	CLEANOUT
C.L.D.I.	CEMENT LINED DUCTILE IRON
CMF	CORRUGATED METAL PIPE
CP	CORRUGATED PLASTIC PIPE
C.T.B.	CONCRETE THRUST BLOCK
DIA	DIAMETER
DMH	DRAIN MANHOLE
D.I.	DUCTILE IRON
DCS	DRAINAGE CONTROL STRUCTURE
E	ELECTRIC
ELEV., EL.	ELEVATION
EOP	EDGE OF PAVEMENT
EX.	EXISTING
F.D.C.	FIRE DEPARTMENT CONNECTION
F.E.S.	FLARED END SECTION
F.F.E.	FINISHED FLOOR ELEVATION
FND	FOUND
FP	FIRE PROTECTION
G	GAS
GG, GV	GAS GATE, GAS VALVE
H.C.	HANDICAP PARKING
H.D.P.E.	HIGH DENSITY POLYETHYLENE
HYD	HYDRANT
INV.	INVERT
MAX	MAXIMUM
MED	MEDIUM
MIN.	MINIMUM
N./S.	NOT TO SCALE
N/F	NOW OR FORMERLY
OHW	OVERHEAD WIRE
PCC	PRECAST CONCRETE CURBING
PVC	POLYVINYL CHLORIDE PIPE
PROP.	PROPOSED
RAP	RECYCLED ASPHALT PRODUCT
RCP	REINFORCED CONCRETE PIPING
R	RADIUS
R&D	REMOVE AND DISPOSE
R&S	REMOVE AND STOCK
SB/DH	STONE BOUND/DRILL HOLE
S	SEWER
SGC	SLOPED GRANITE CURBING
SMH	SEWER MANHOLE
STA	STATION
TC	TOP OF CURB
TW	TOP OF WALL
TY.	TOP
T/O/F	TOP OF FOUNDATION
UP	UTILITY POLE
UE	UNDERGROUND ELECTRIC
VGC	VERTICAL GRANITE CURB
W	WATER
WG, WV	WATER GATE, WATER VALVE
WQS	WATER QUALITY STRUCTURE

DATE: JAN. 12, 2021
 DRAWN BY: JMP
 CHECKED BY: WFM
 JOB NO.: 18-9247
 SCALE: AS NOTED

APPROVED BY: [Signature]

DATE: 5/11/21
 WFM
 PER 2ND PIER REVIEW LETTER

DATE: 4/26/21
 WFM
 PER TOWN & PIER REVIEW COMMENTS

REV. DATE BY APP'D DESCRIPTION

1 18-9247 WFM

2 5/11/21 WFM

EXISTING	DESC.	PROPOSED
55	CONTOURS	55
53x5	SPOT GRADES	52x5
	WETLANDS	
	50' NO ACTIVITY ZONE	
	100' BUFFER ZONE	
	200' RIVERFRONT AREA	
	F.E.M.A. FLOOD ZONE	
D	DRAIN LINE	D
RD	ROOF DRAIN LINE	RD
CB	CATCH BASIN (CB)	CB
DMH	DRAIN MANHOLE (DMH)	DMH
EMH	ELECTRIC MANHOLE (EMH)	EMH
UE	UNDERGROUND UTILITIES	UE
OHW	OVERHEAD WIRES	OHW
UP	UTILITY POLE	UP
GV	WATER GATE VALVE	GV
CS	WATER SHUTOFF/CURB STOP	CS
HYD	HYDRANT	HYD
PIV	POST INDICATOR VALVE	PIV
W	WATER LINE	W
FP	FIRE PROTECTION LINE	FP
SMH	SEWER MANHOLE (SMH)	SMH
S	SEWER LINE	S
TBL	TREE/BRUSH LINE	TBL
LP	LIGHT POST	LP
G	GAS LINE	G
GV	GAS GATE/VALVE	GV
GS	GAS SHUTOFF	GS
GM	GAS METER	GM
SIG	SIGN	SIG
F	FENCE	F
B	BOUND	B
TP	TEST PIT/PERC TEST	TP
SF	SILT FENCE	SF
GR	GUARD RAIL	GR
FES	FLARED END SECTION	FES
SW	STONE WALL	SW
W	WELL	W

G.A.F. ENGINEERING, INC.
 PROFESSIONAL ENGINEERS & LAND SURVEYORS
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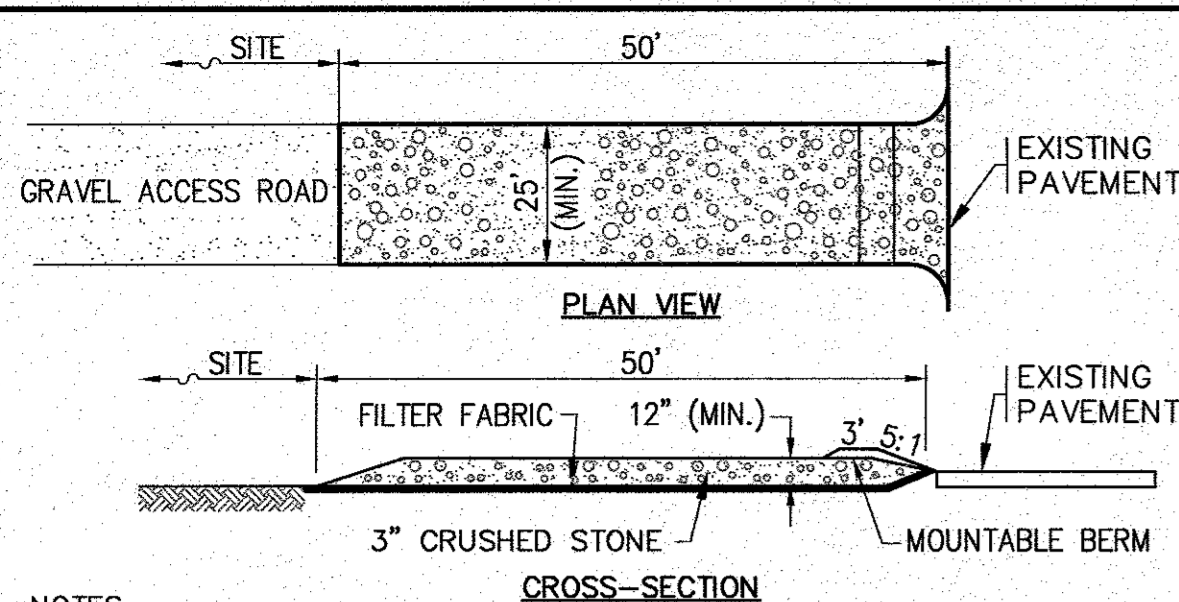
"SETTLER'S GLEN" COMPREHENSIVE PERMIT PLAN GENERAL NOTES & LEGEND

PREPARED FOR: TCCI EMNACA, LLC
 1266 FURNACE BROOK PARKWAY QUINCY, MA

JOB NO.: 18-9247
 DWG. 2 OF 11

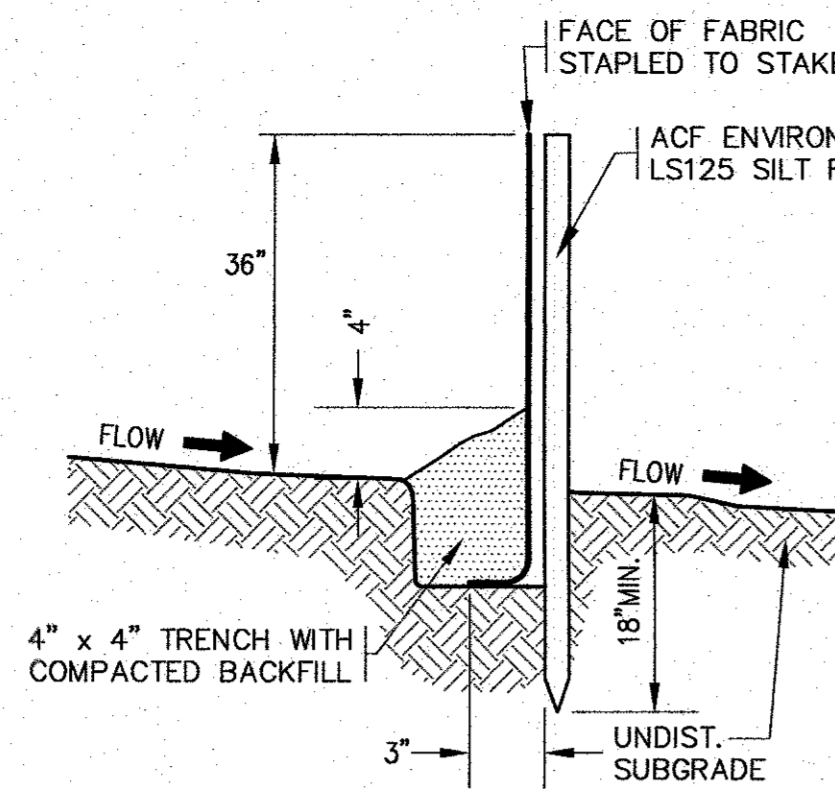
PERMIT SET
 (NOT FOR CONSTRUCTION)

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- 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.



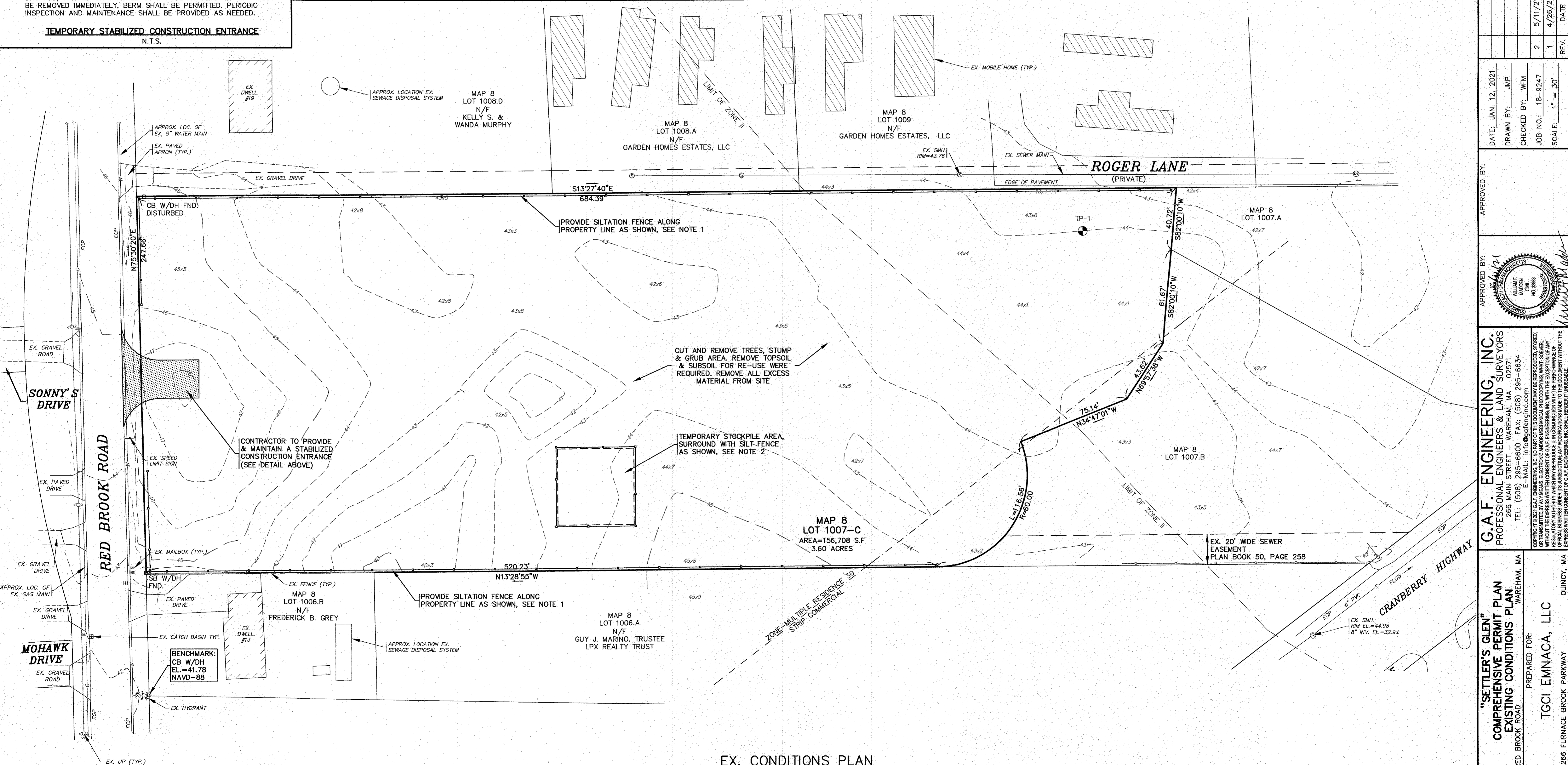
EROSION CONTROL BARRIER
N.T.S.

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.



EX. CONDITIONS PLAN

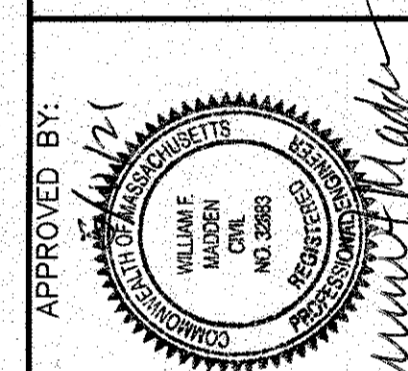
SCALE: 1"=30'



REV	DATE	BY	APP'D	DESCRIPTION
2	5/11/21	JMP	WFM	NO CHANGES THIS SHEET
1	4/26/21	JMP	WFM	PER TOWN & PEER REVIEW COMMENTS

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

APPROVED BY:



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"SETTLER'S GLEN" PERMIT PLAN
EXISTING CONDITIONS PLAN
 RED BROOK ROAD WAREHAM, MA
 PREPARED FOR:
TGCI EMNACA, LLC
 1268 FURNACE BROOK PARKWAY QUINCY, MA

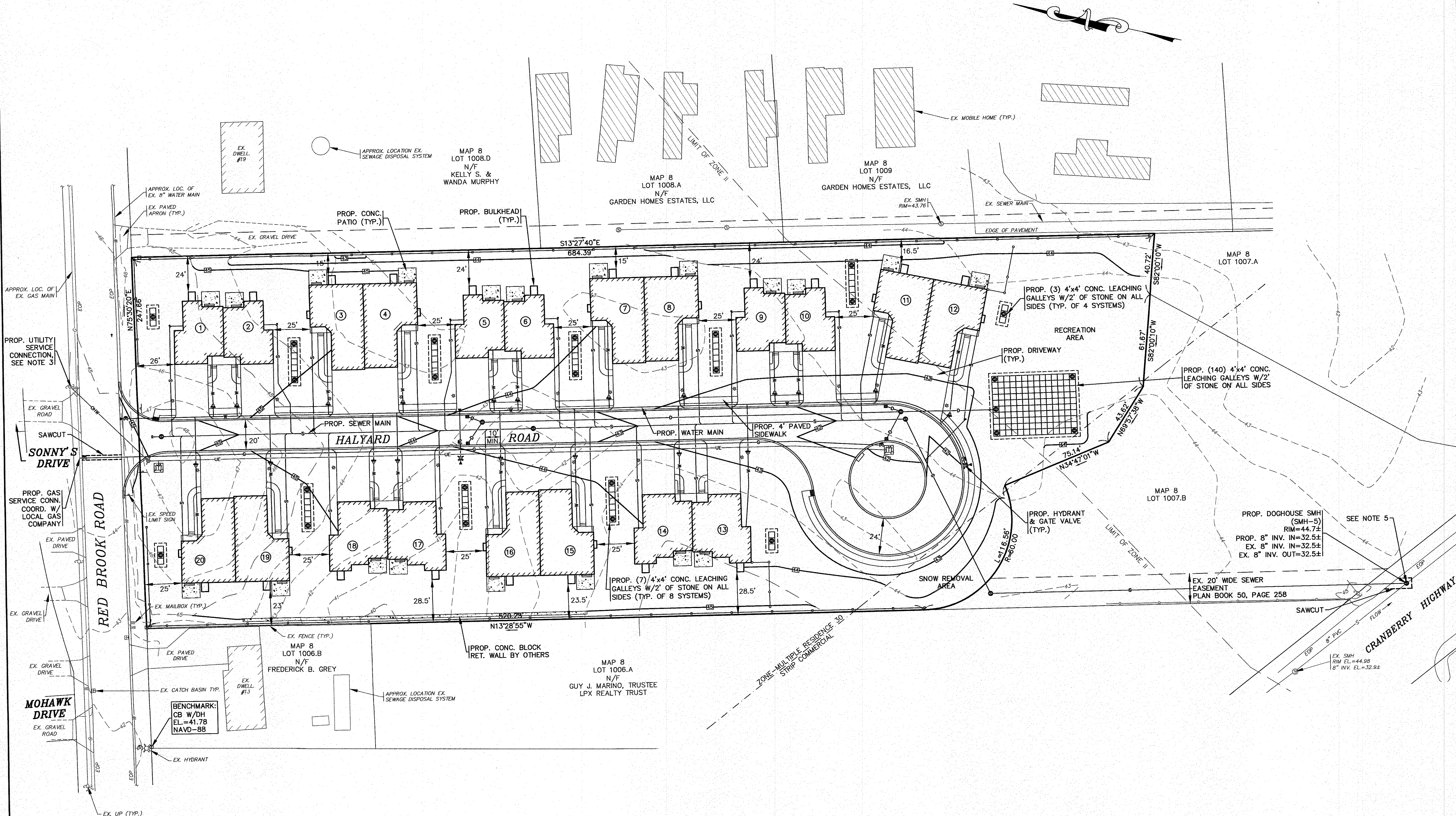
JOB NO.: 18-9247

PERMIT SET (NOT FOR CONSTRUCTION) DWG. 3 OF 11

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NOTES:

1. REFER TO ARCHITECTURAL PLANS PREPARED BY OTHERS FOR ALL PROPOSED DWELLING DIMENSIONS, CONSTRUCTION NOTES AND DETAILS.
2. ALL SEWER WORK SHALL BE DONE IN ACCORDANCE WITH THE TOWN OF WAREHAM SEWER COMMISSIONERS RULES AND REGULATIONS.
3. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY PRIOR TO CONNECTION.
4. REFER TO PAVEMENT SAWCUT/TRENCH REPAIR DETAIL ON SHEET 10.
5. CONTRACTOR SHALL CONFIRM EXISTING SEWER ELEVATION PRIOR TO CONSTRUCTION.



OVERVIEW PLAN

SCALE: 1"=30'



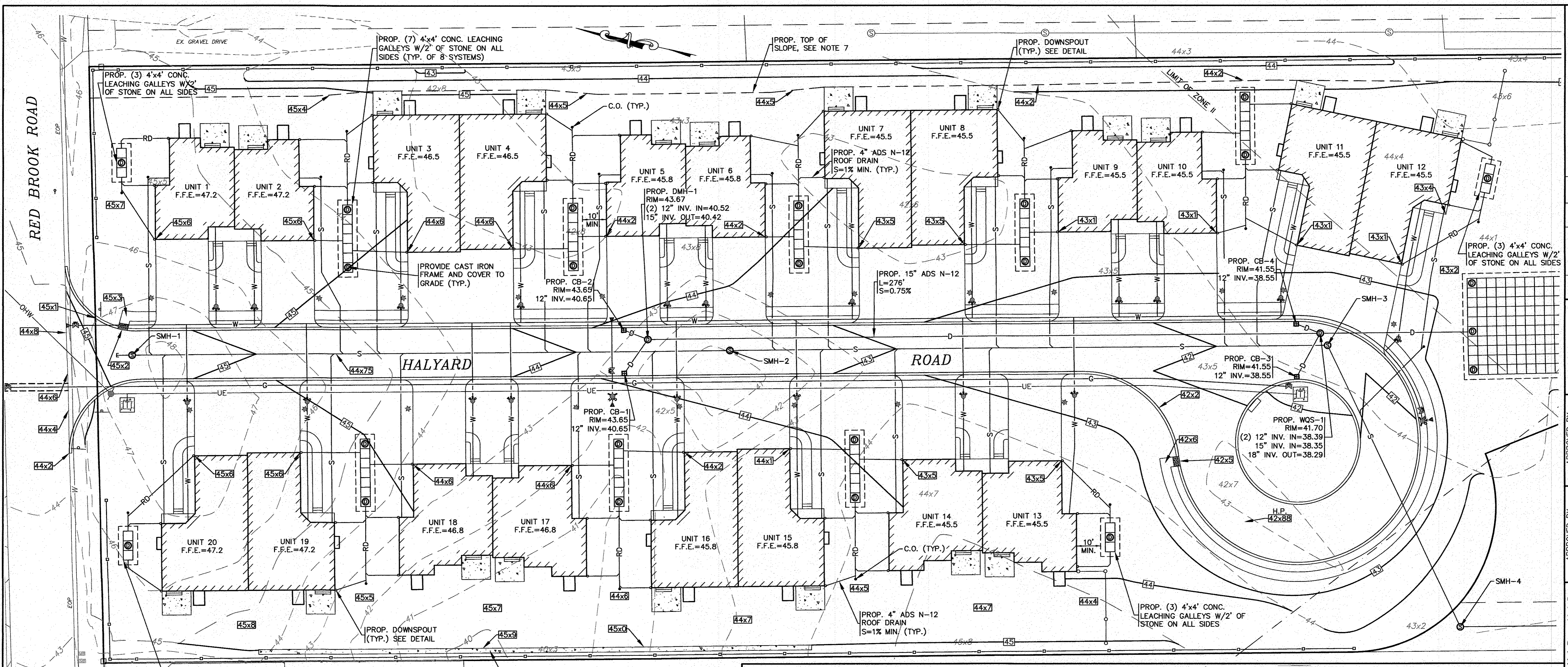
DATE: JAN. 12, 2021		APPROVED BY:		
DRAWN BY: JMP		G.A.F. ENGINEERING, INC.		
CHECKED BY: WFM		PROFESSIONAL ENGINEERS & LAND SURVEYORS		
JOB NO.: 18-9247		266 MAIN STREET - WAREHAM, MA 02571		
SCALE: 1" = 30'		TEL: (508) 295-6600 FAX: (508) 295-6634		
REV. DATE BY APPD.		E-MAIL: info@gafenginc.com		
2	5/11/21	JMP	WFM	PER 2ND PEER REVIEW LETTER
1	4/28/21	JMP	WFM	PER TOWN & PEER REVIEW COMMENTS
				DESCRIPTION

"SETTLER'S GLEN" COMPREHENSIVE PERMIT PLAN OVERVIEW PLAN
 PREPARED FOR: TCCI EMINACA, LLC
 1266 FURNACE BROOK PARKWAY QUINCY, MA

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JOB NO.: 18-9247
 DWG. 4 OF 11



NOTES:

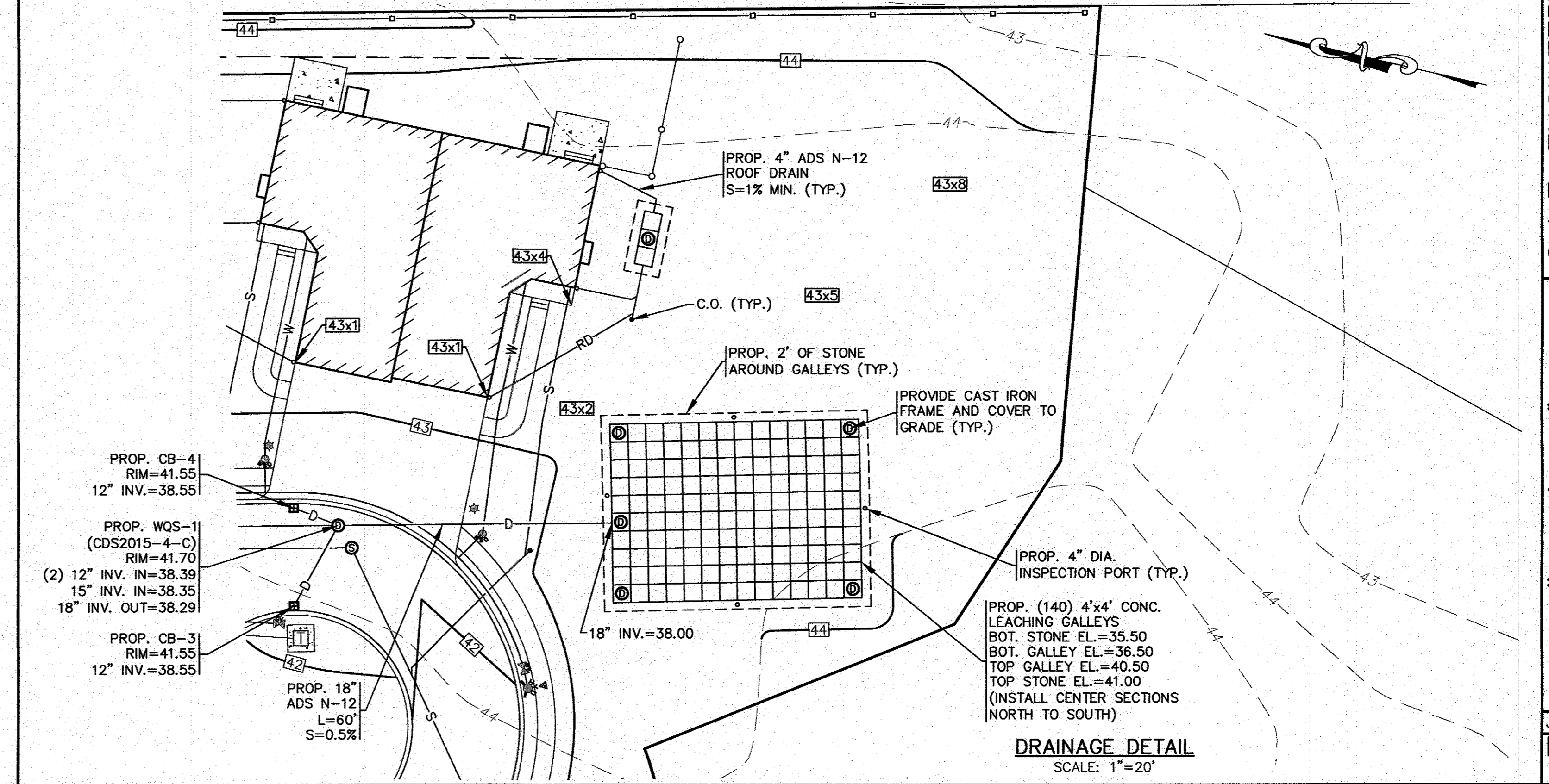
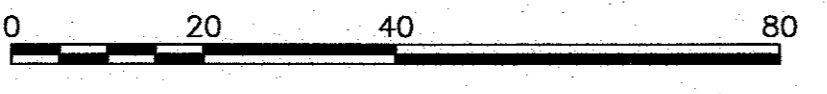
- ALL PROPOSED CATCH BASINS SHALL HAVE A TEMPORARY SILT SACK OR AN APPROVED EQUAL INSTALLED IN THEM AS SOON AS THE STRUCTURE IS SET. CONTRACTOR SHALL REMOVE AND DISPOSE OF THE SILT SACKS AT THE COMPLETION OF CONSTRUCTION.
- WATER MAIN/SERVICES SHALL BE INSTALLED A MINIMUM OF 1' BELOW ALL PROPOSED DRAINAGE 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 THE STREET.

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'

PERMIT SET
(NOT FOR CONSTRUCTION)

H:\DWG\DRAWINGS\2018 DRAWINGS\18-9247-R (PROSSMAN)\DWG\18-9247-R-LL-4-REV-1.dwg

G.A.F. ENGINEERING, INC.
 PROFESSIONAL ENGINEERS & LAND SURVEYORS
 266 MAIN STREET WAREHAM, MA 02571
 TEL: (508) 941-6100 FAX: (508) 295-6634
 E-MAIL: gaf@gafe.com

"SETTLER'S GLEN" COMPREHENSIVE PERMIT PLAN GRADING & DRAINAGE
 WAREHAM, MA

PREPARED FOR:
TGCI EMMACA, LLC
 1266 FURNACE BROOK PARKWAY
 QUINCY, MA

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

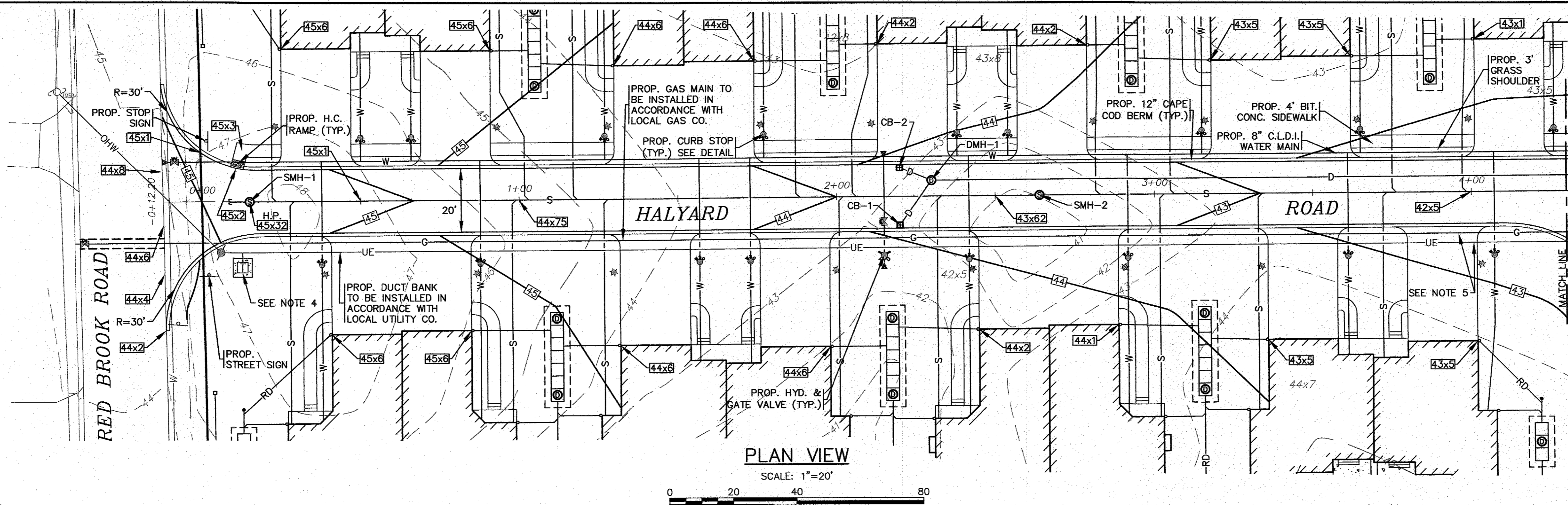
REV.	DATE	BY	DESCRIPTION
2	5/11/21	JMP	PER 2ND PEER REVIEW LETTER
1	4/26/21	JMP	PER TOWN & PEER REVIEW COMMENTS

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APPROVED BY: [Signature]

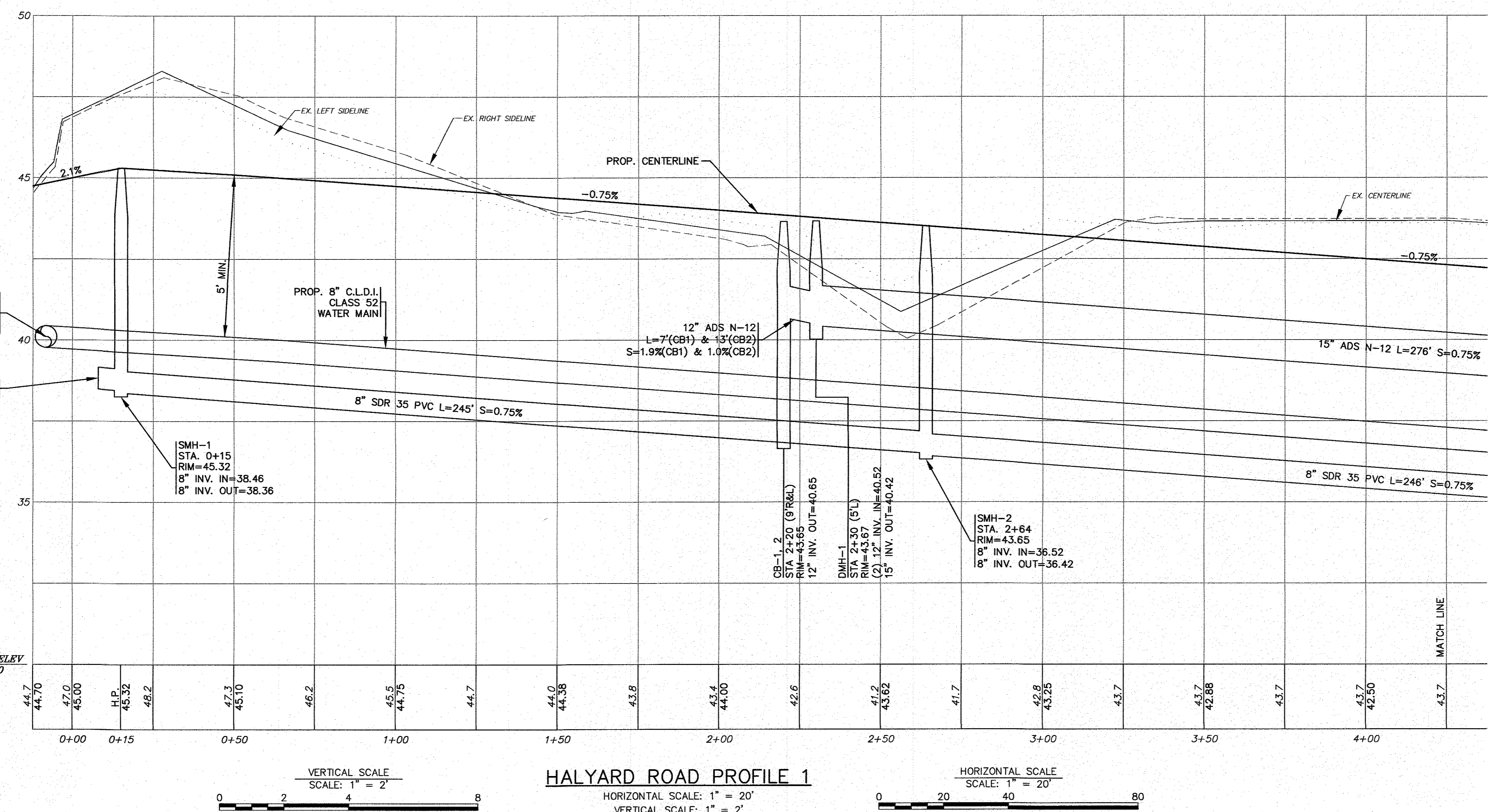
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APPROVED BY: [Signature]



- NOTES:**
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 - 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.

DATE: JAN. 12, 2021	PER TOWN & PEER REVIEW COMMENTS
DRAWN BY: JMP	PER TOWN & PEER REVIEW LETTER
CHECKED BY: WFM	WFM
JOB NO.: 18-9247	JMP
SCALE: 1" = 20'	DATE
	BY
	APP'D



APPROVED BY:

Wm. F. Madsen
REGISTERED PROFESSIONAL ENGINEER
NO. 3383

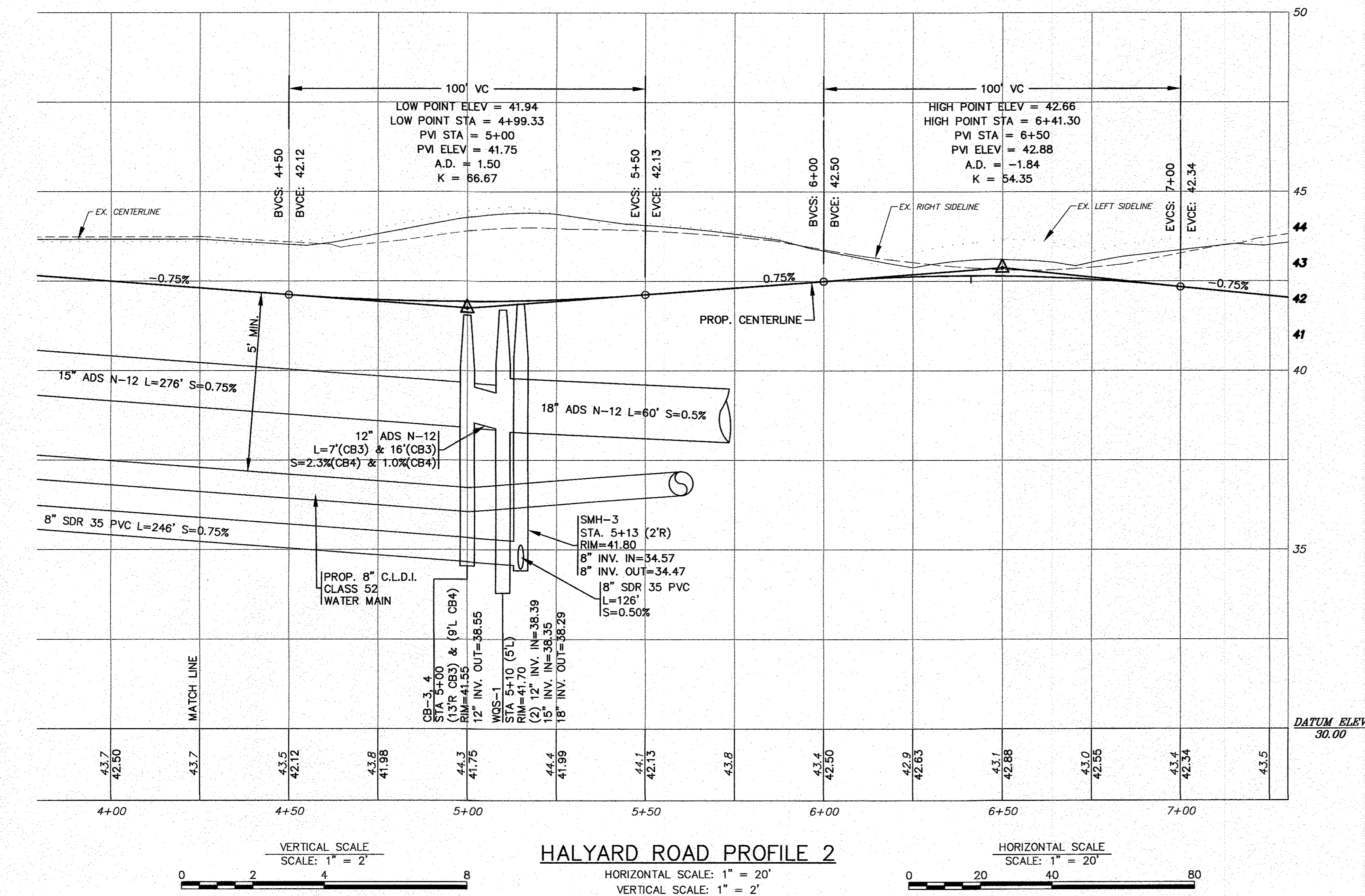
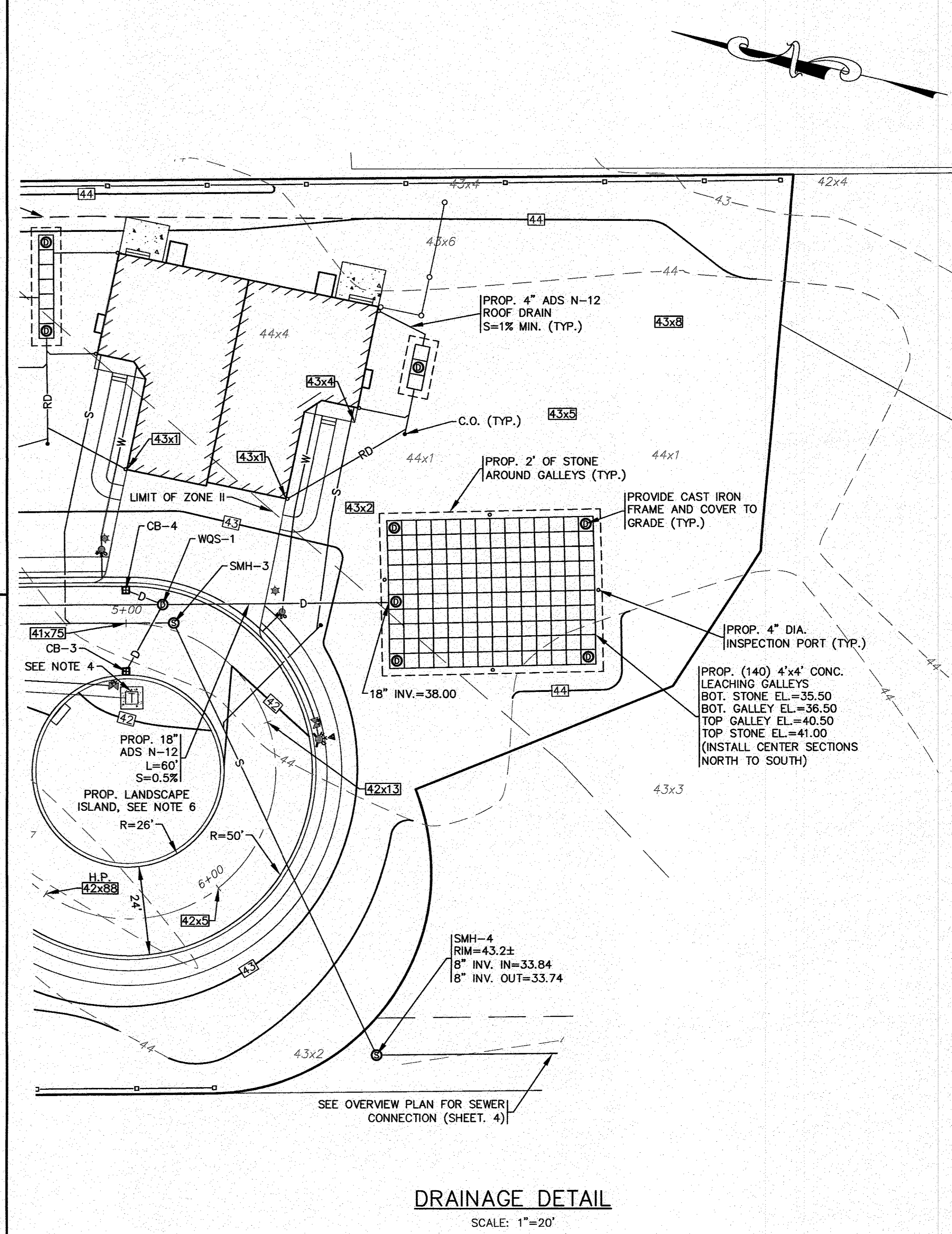
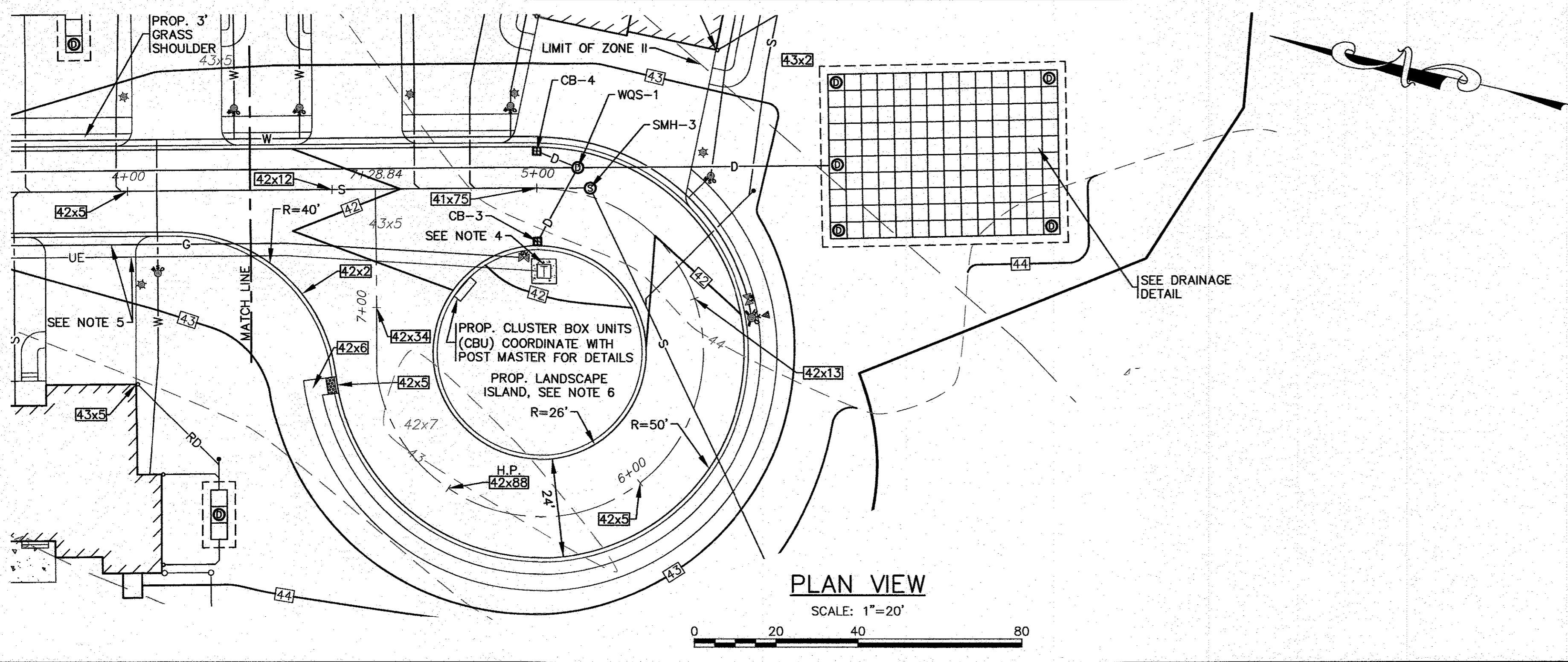
G.A.F. ENGINEERING, INC.
PROFESSIONAL ENGINEERS & LAND SURVEYORS
286 MAIN STREET - WAREHAM, MA 02571
TEL: (508) 295-6600 FAX: (508) 295-6634
E-MAIL: info@gafengrinc.com

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

PREPARED FOR:
TGCI EMNACA, LLC
1266 FURNACE BROOK PARKWAY QUINCY, MA

H:\GAF DRAWINGS\2018 DRAWINGS\18-9247-11 (GROSSMAN)\2018\18-9247-11.dwg



- NOTES:**
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DATE: JAN. 12, 2021	DRAWN BY: JMP	CHECKED BY: WFM	JOB NO.: 18-9247	SCALE: 1" = 20'
APPROVED BY:				
REV.	DATE	BY	APP'D	DESCRIPTION
2	5/11/21	JMP	WFM	PER 2ND PEER REVIEW LETTER
1	4/26/21	JMP	WFM	PER TOWN & PEER REVIEW COMMENTS

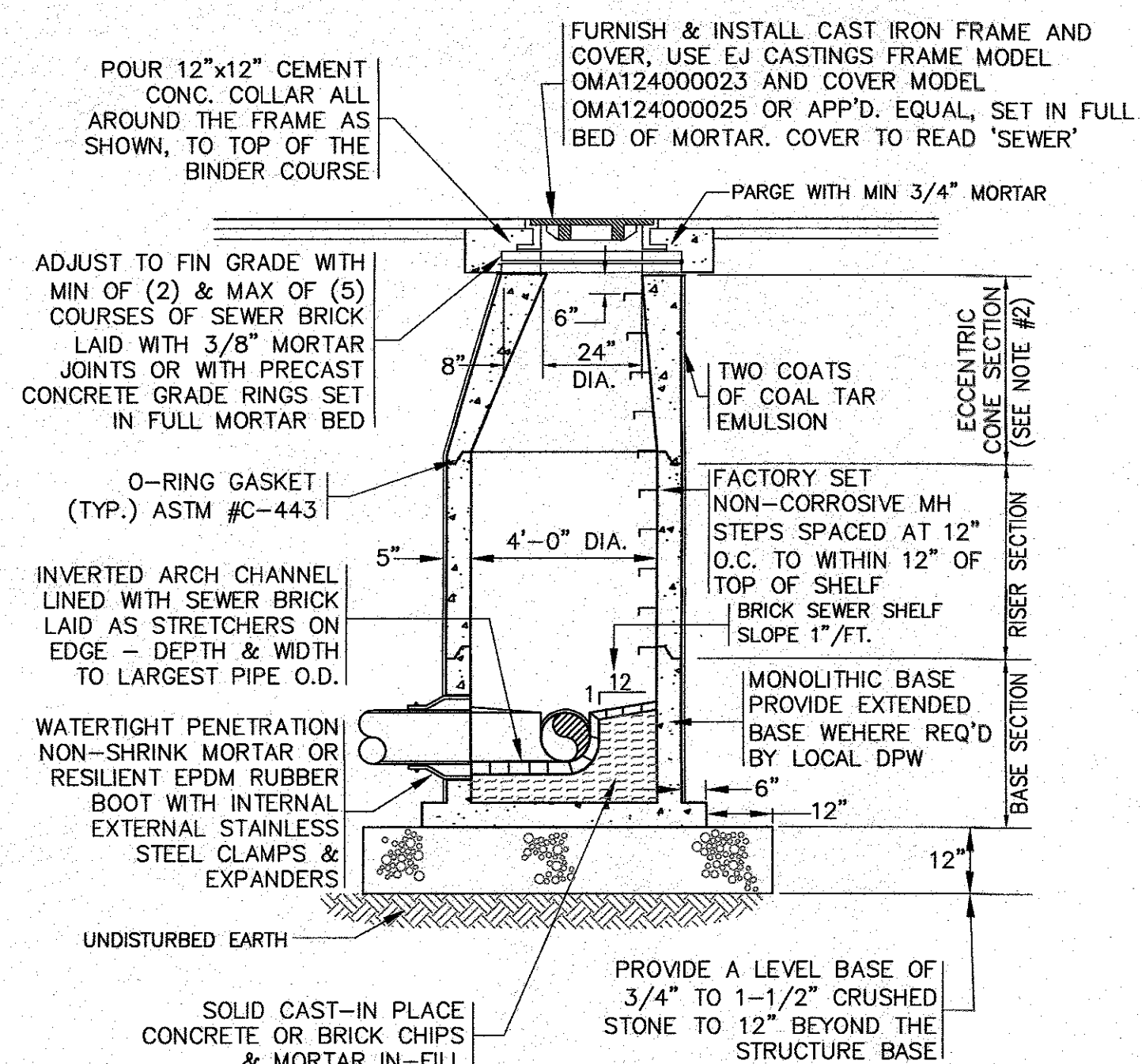
G.A.F. ENGINEERING, INC.
 PROFESSIONAL ENGINEERS & LAND SURVEYORS
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 TEL: (508) 430-6600 FAX: (508) 295-6634
 E-MAIL: info@gafeng.com

"SETTLER'S GLEN" COMPREHENSIVE PERMIT PLAN PLAN & ROADWAY PROFILE SHEET-2
 RED BROOK ROAD WAREHAM, MA

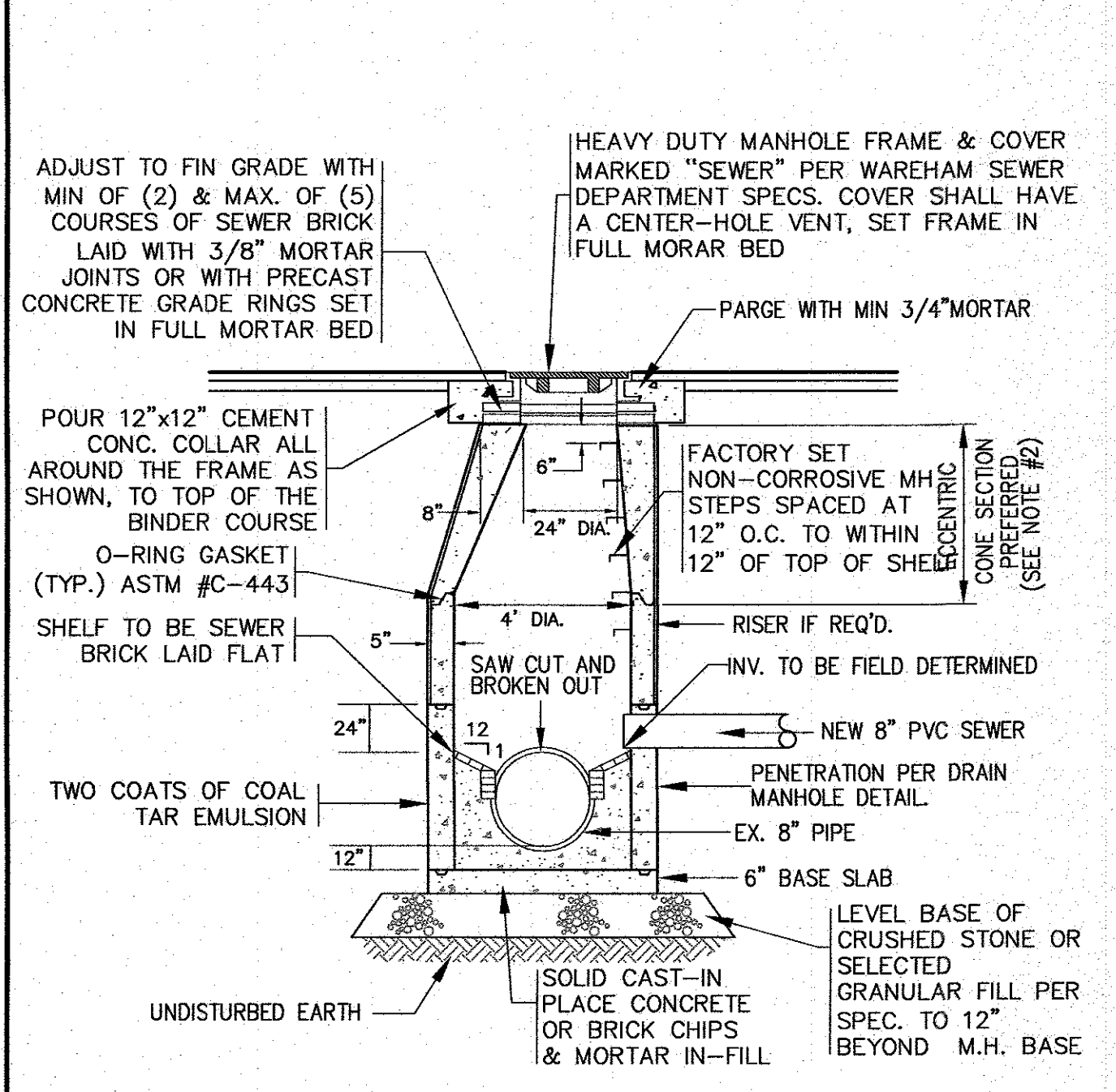
PREPARED FOR:
TGCI ENNACA, LLC
 1266 FURNACE BROOK PARKWAY QUINCY, MA

JOB NO.: 18-9247

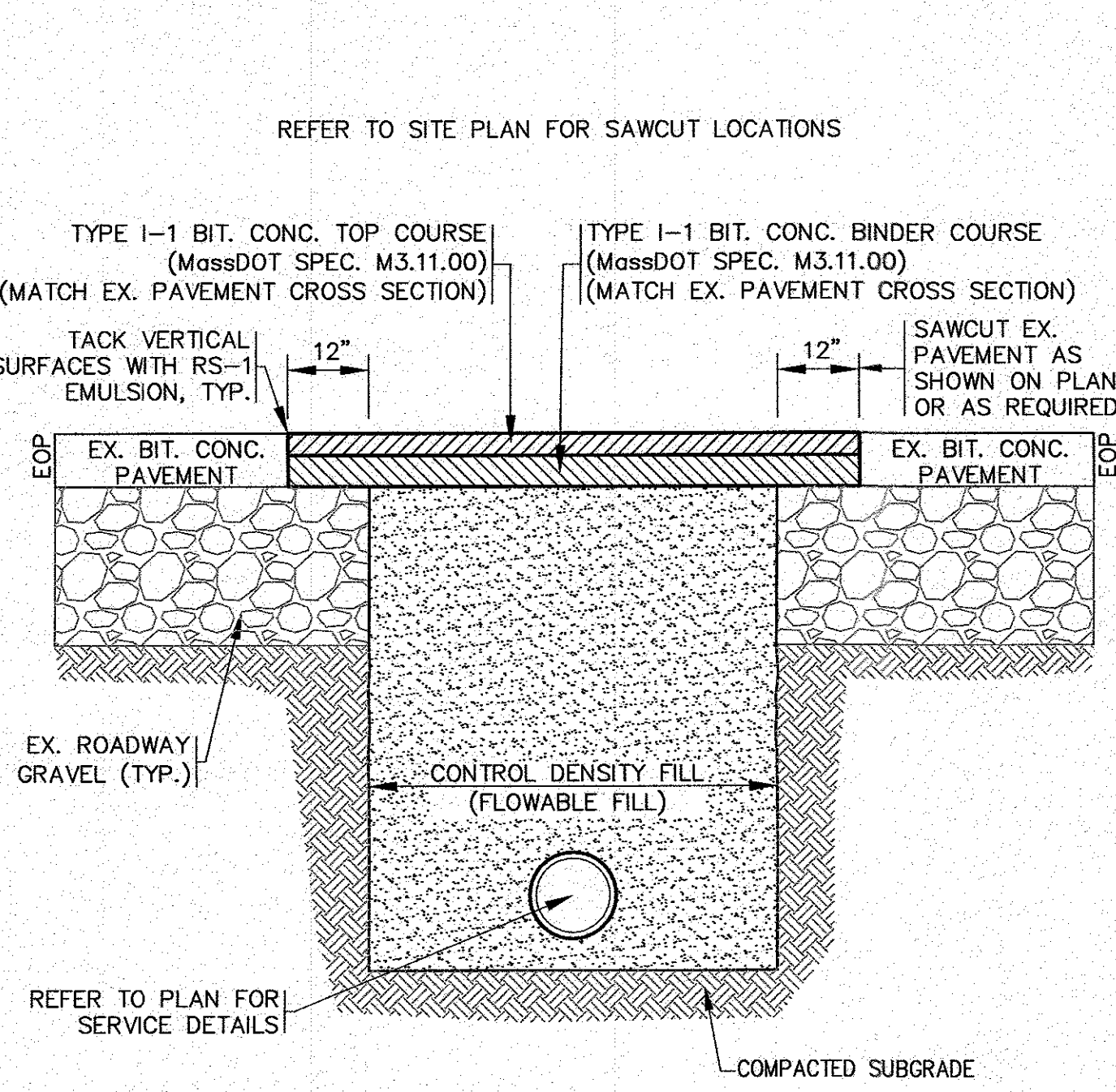
PERMIT SET (NOT FOR CONSTRUCTION) DWG. 8 OF 11



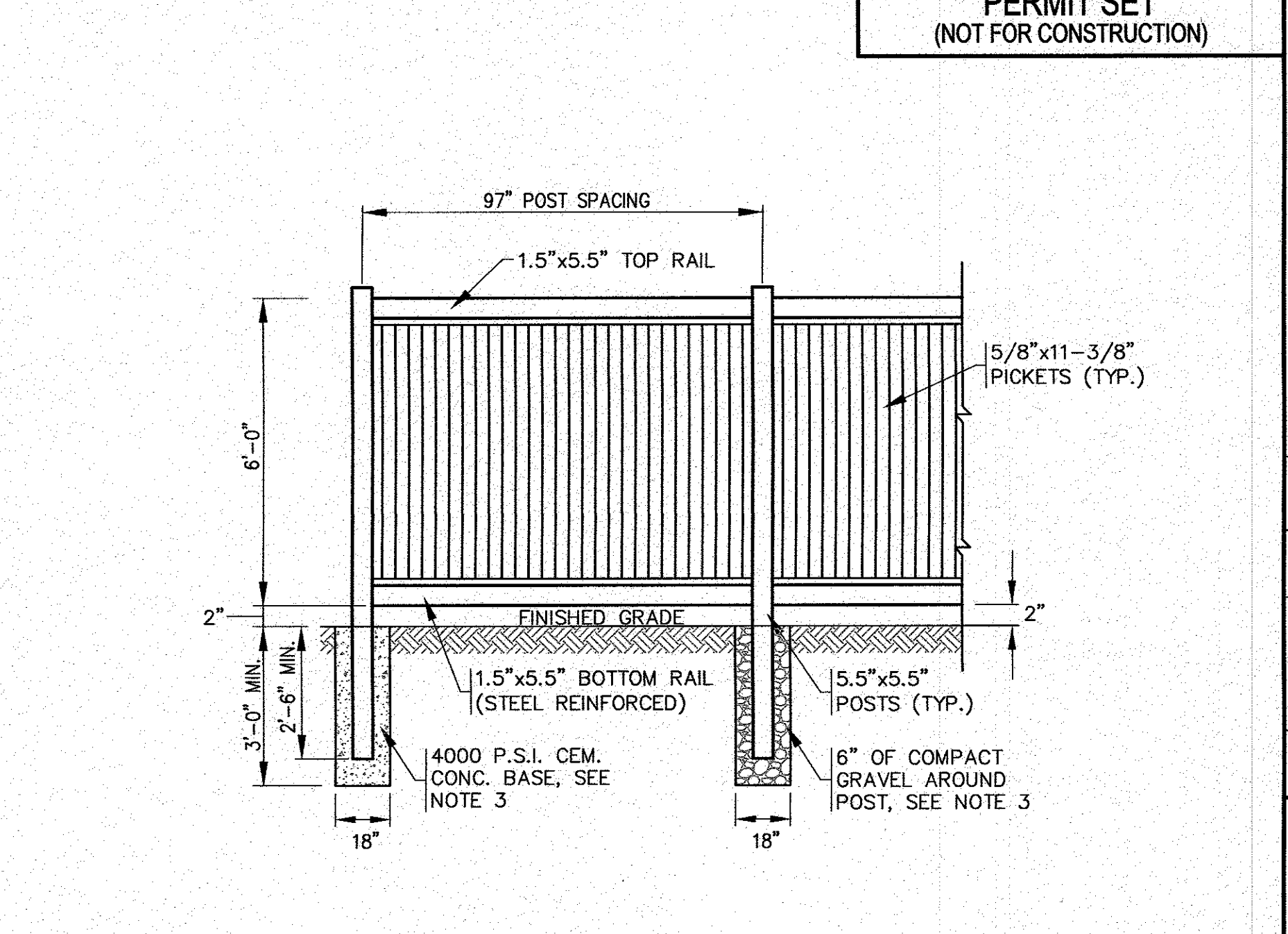
SEWER MANHOLE
N.T.S.



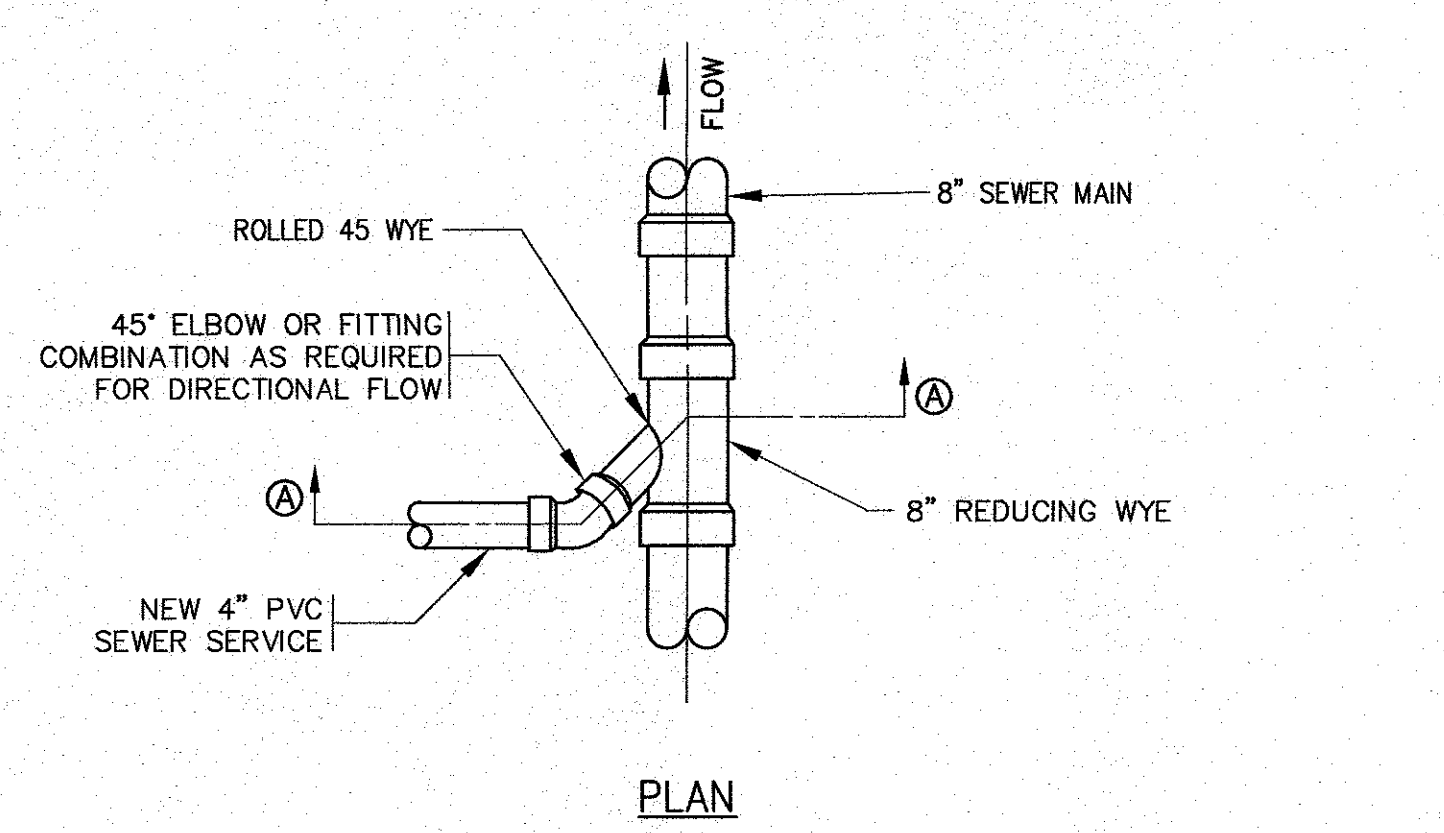
DOGHOUSE SEWER MANHOLE
N.T.S.



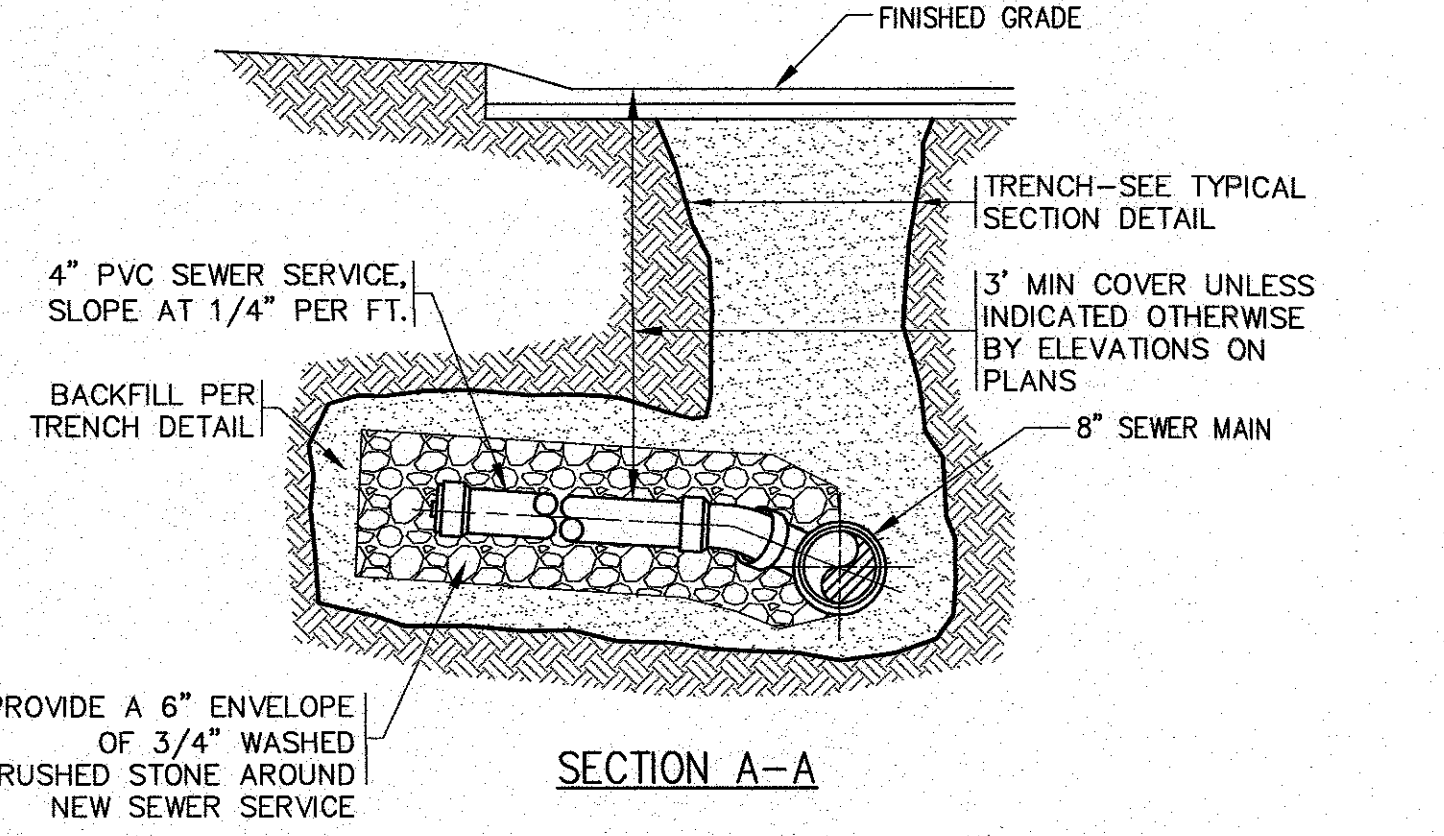
PAVEMENT SAWCUT / TRENCH REPAIR DETAIL
N.T.S.



VINYL FENCE DETAIL
N.T.S.



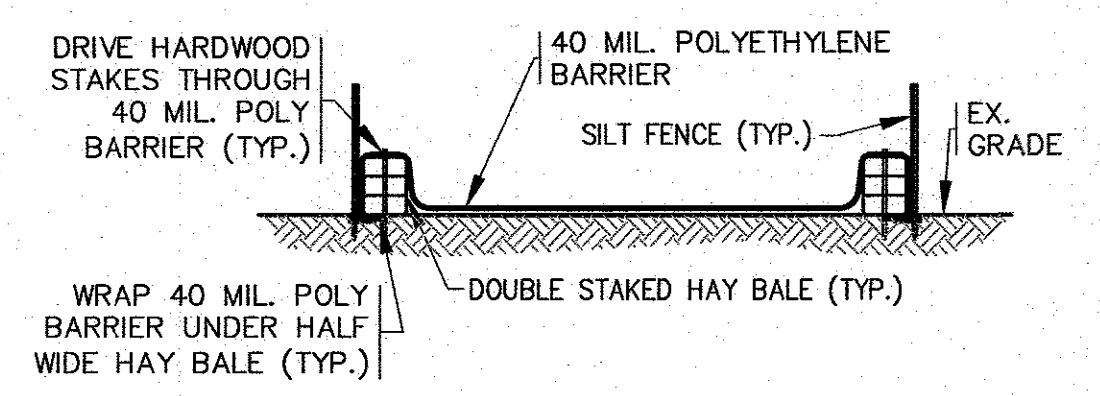
PLAN



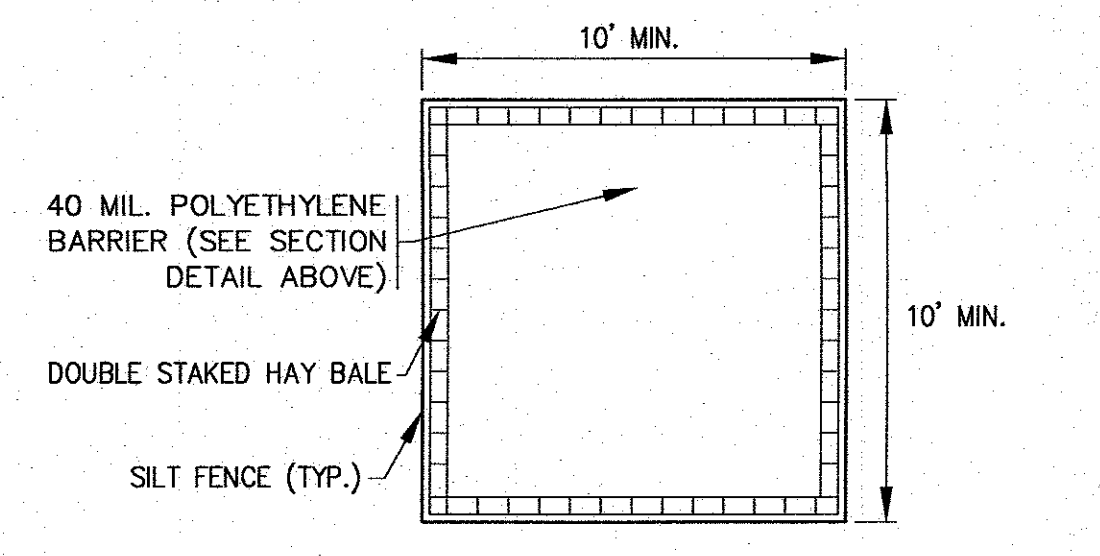
SECTION A-A

- NOTES:**
- REFER TO PLAN FOR LOCATIONS.
 - 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.
 - ALL SEWER WORK SHALL BE DONE IN ACCORDANCE WITH THE TOWN OF WAREHAM SEWER COMMISSIONERS RULES AND REGULATIONS.
 - CONTRACTOR TO COORDINATE WITH THE TOWN OF WAREHAM SEWER DEPARTMENT PRIOR TO CONSTRUCTION.

WYE SANITARY SEWER CONNECTION DETAIL
N.T.S.



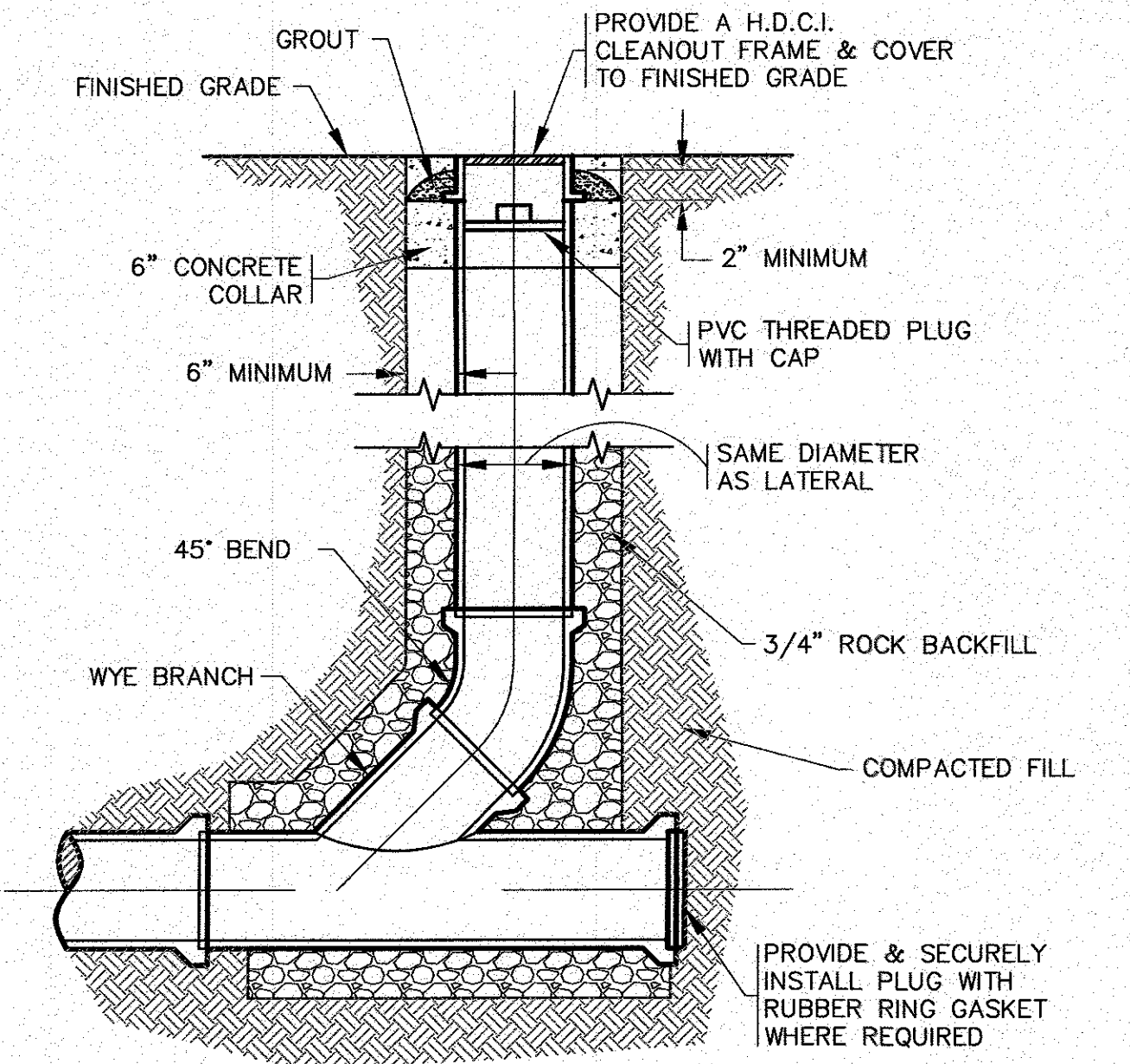
SECTION



PLAN

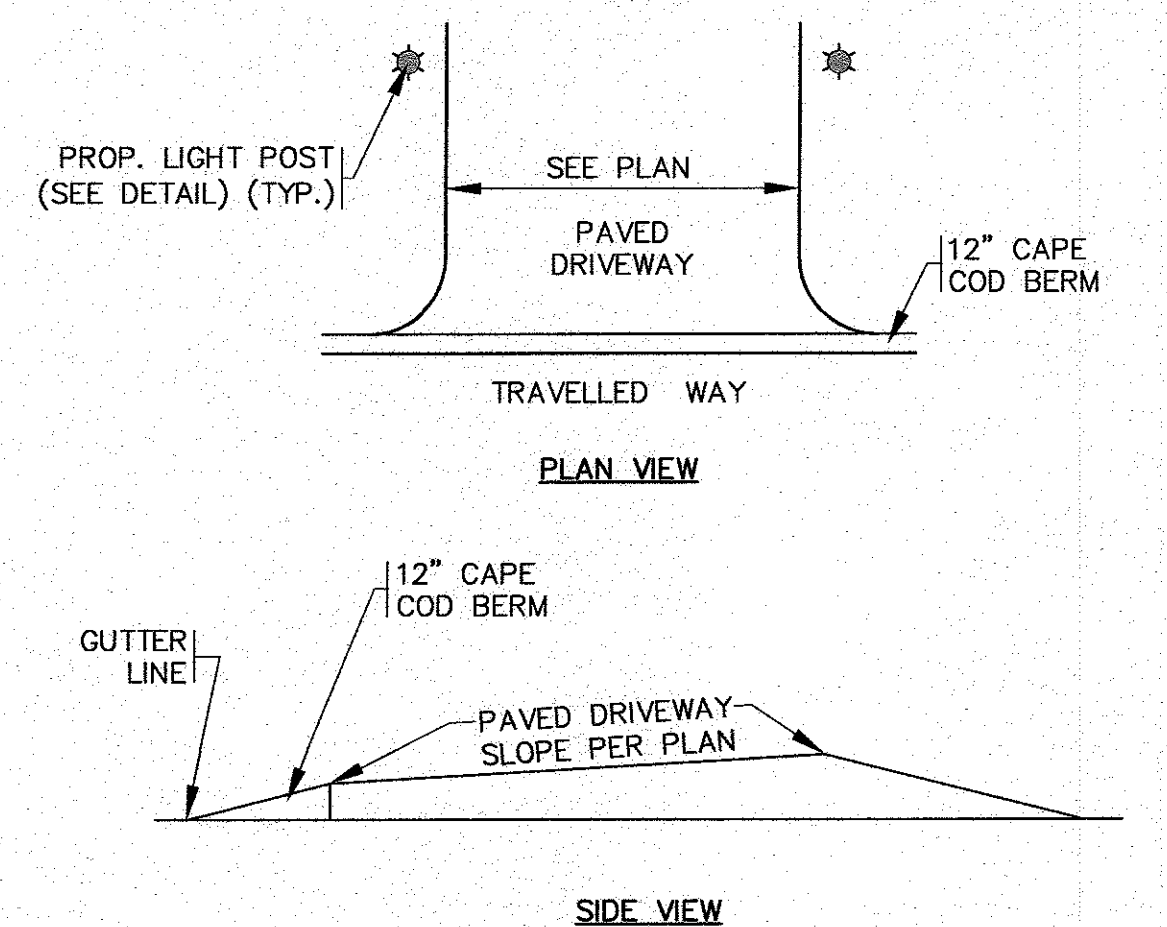
- NOTES:**
- CONTRACTOR SHALL PROVIDE AND MAINTAIN CONCRETE WASHOUT AREA WHERE NECESSARY TO COMPLETE THE WORK.
 - FINAL LOCATION FOR CONCRETE WASHOUT SHALL BE FIELD DETERMINED BY CONTRACTOR AT TIME OF CONSTRUCTION.
 - CONTRACTOR SHALL REPAIR OR REPLACE 40 MIL. POLY BARRIER OR STAKED HAY BALES AS REQUIRED.

CONCRETE WASHOUT DETAIL
N.T.S.



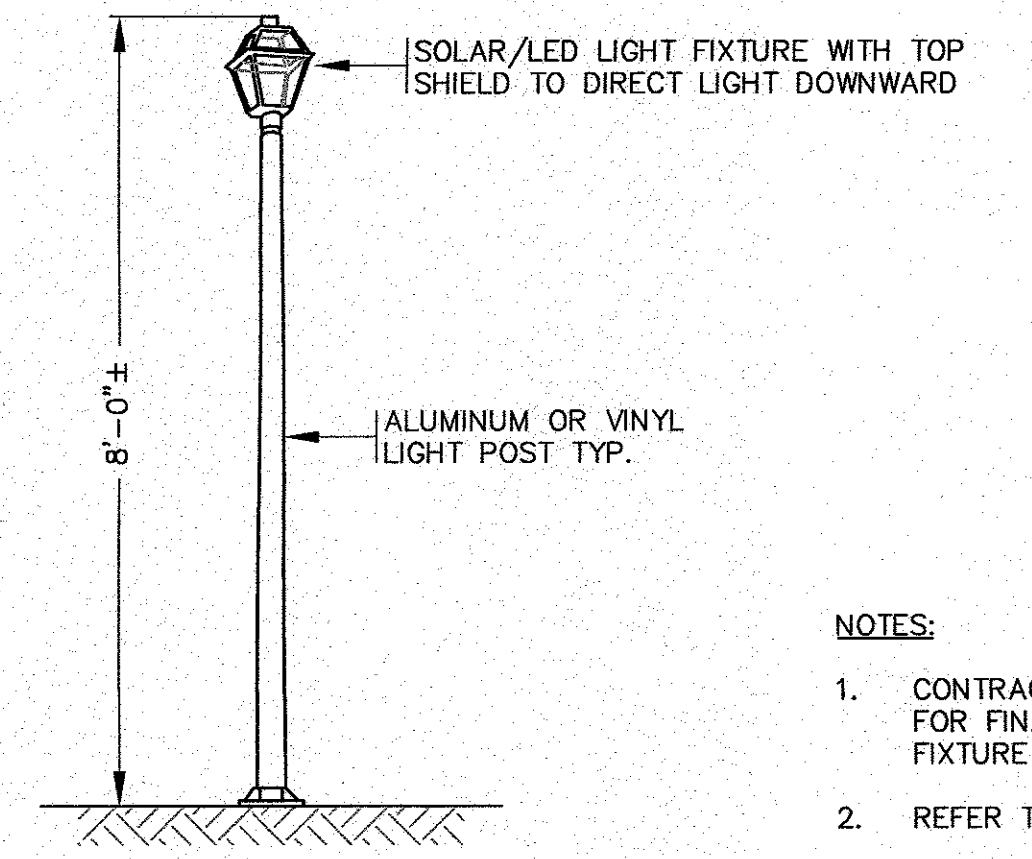
- NOTES:**
- REFER TO PLAN FOR LOCATIONS.
 - ALL SEWER WORK SHALL BE DONE IN ACCORDANCE WITH THE TOWN OF WAREHAM SEWER COMMISSIONERS RULES AND REGULATIONS.

STANDARD CLEANOUT
N.T.S.



DRIVEWAY DETAIL AT ROADWAY
N.T.S.

- NOTES:**
- REFER TO PLAN FOR LOCATIONS AND DIMENSIONS.

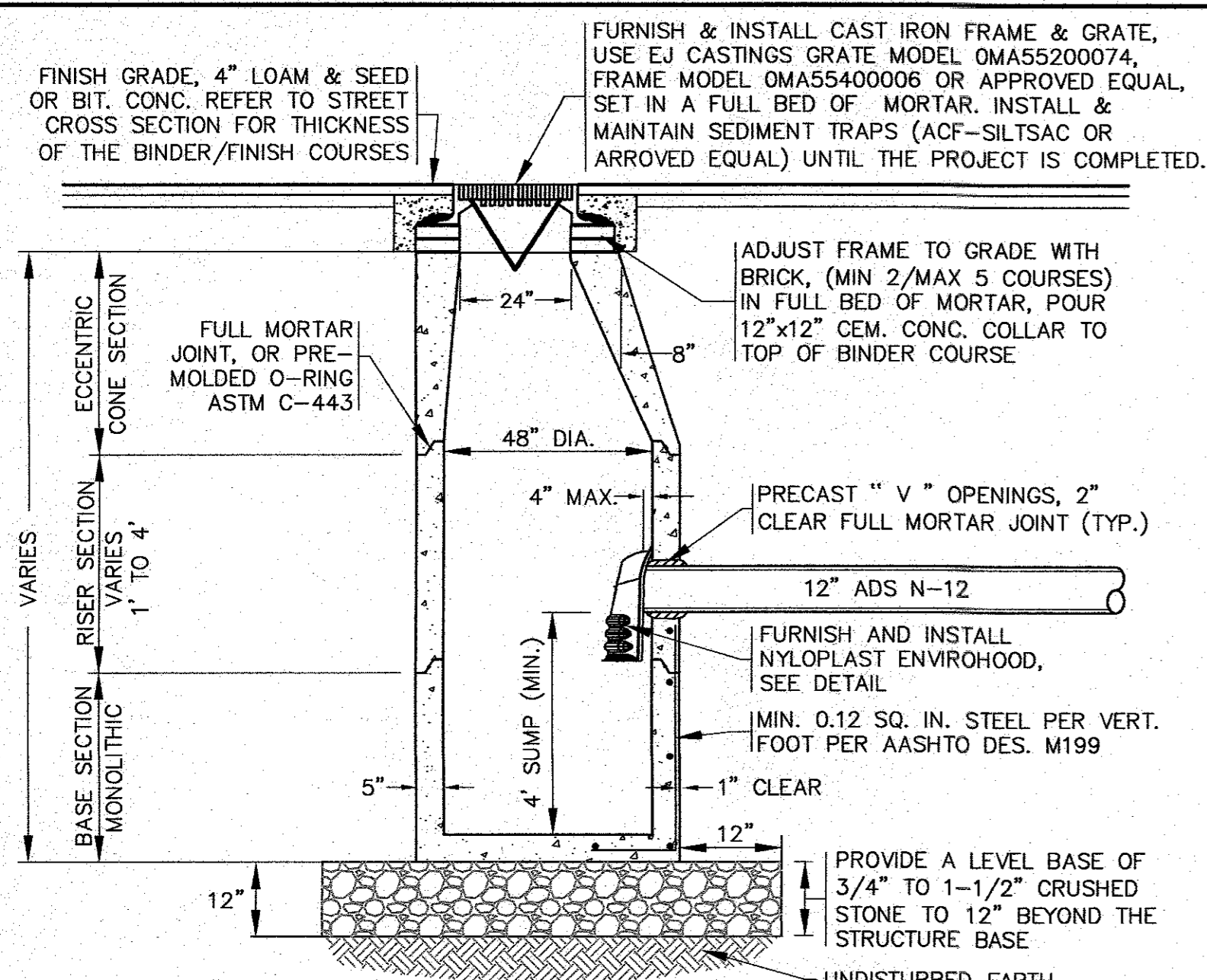


TYPICAL LIGHT POST
N.T.S.

- NOTES:**
- CONTRACTOR TO COORDINATE WITH OWNER FOR FINAL LIGHT POST AND LIGHTING FIXTURE SPECIFICATIONS AND DETAILS.
 - REFER TO PLAN FOR LOCATIONS.

PERMIT SET
(NOT FOR CONSTRUCTION)

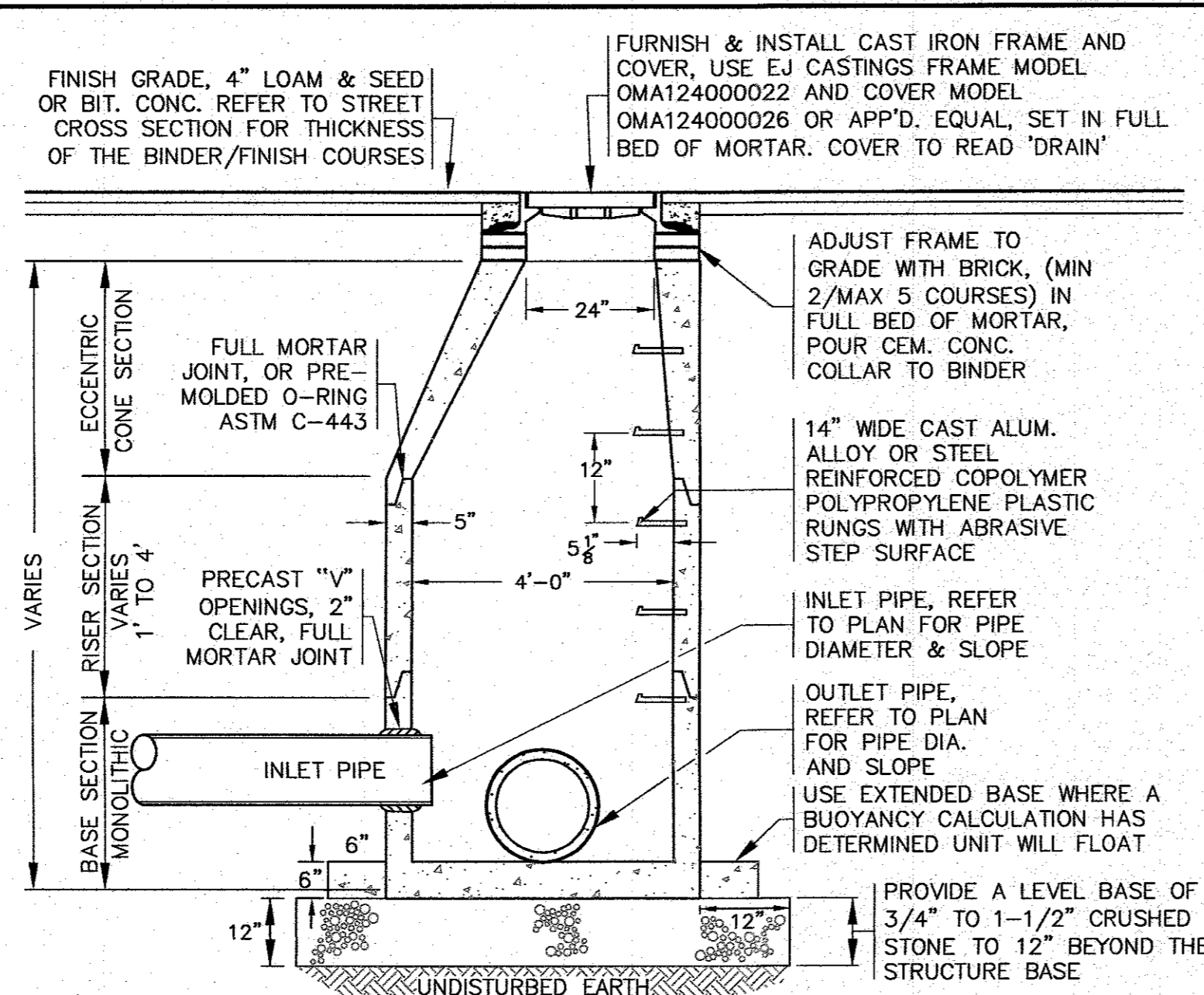
DATE: JAN. 12, 2021	DATE: 5/11/21	DATE: 4/26/21	DATE: N.T.S.
DRAWN BY: JWP	CHECKED BY: WFM	JOB NO.: 18-9247	SCALE: N.T.S.
APPROVED BY:	APPROVED BY:	APPROVED BY:	APPROVED BY:
G.A.F. ENGINEERING, INC. PROFESSIONAL ENGINEERS & LAND SURVEYORS 266 MAIN STREET - WAREHAM, MA 02571 TEL: (508) 295-6600 FAX: (508) 295-6634 E-MAIL: info@gafengrnc.com			
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"SETTLER'S GLEN" COMPREHENSIVE PERMIT PLAN DETAIL SHEET 2	WAREHAM, MA RED BROOK ROAD	TCCI EMNACA, LLC 1266 FURNACE BROOK PARKWAY QUINCY, MA	PREPARED FOR: JOB NO.: 18-9247 DWG. 10 OF 11



PRECAST CONCRETE CATCH BASIN
N.T.S.

NOTES:

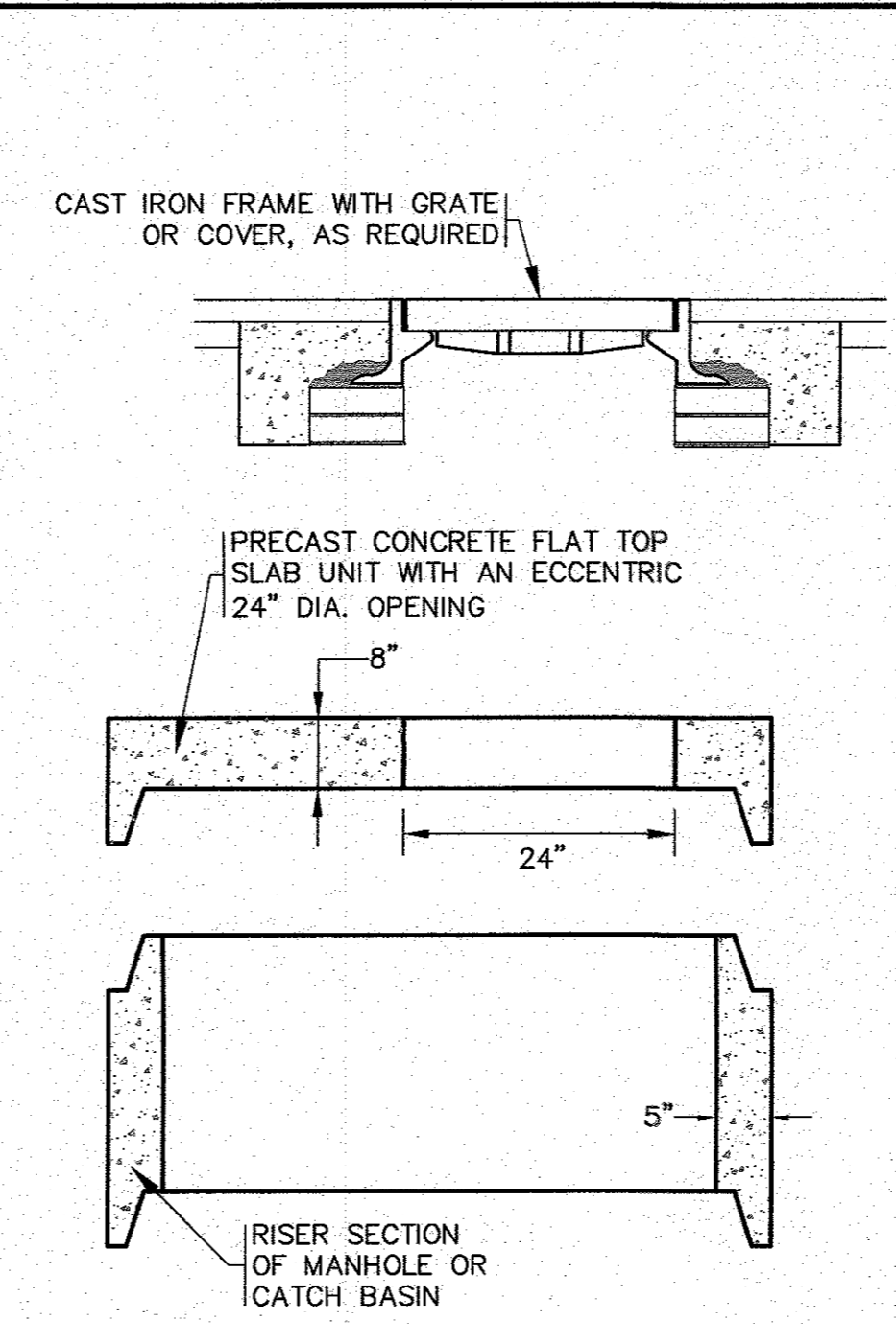
- STRUCTURES SHALL BE PRECAST CONCRETE IN ACCORDANCE WITH ASTM C-478, WITH H-20 LOADING, SECTION HEIGHTS VARY. CONCRETE STRENGTH 4000 PSI @ 28 DAYS.
- FOR SHALLOW INSTALLATION AND WHEN APPROVED BY THE ENGINEER, A FLAT TOP H-20 SLAB WITH A 24" OPENING CAST ECCENTRICALLY MAY BE USED. CONTRACTOR TO SUBMIT 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:

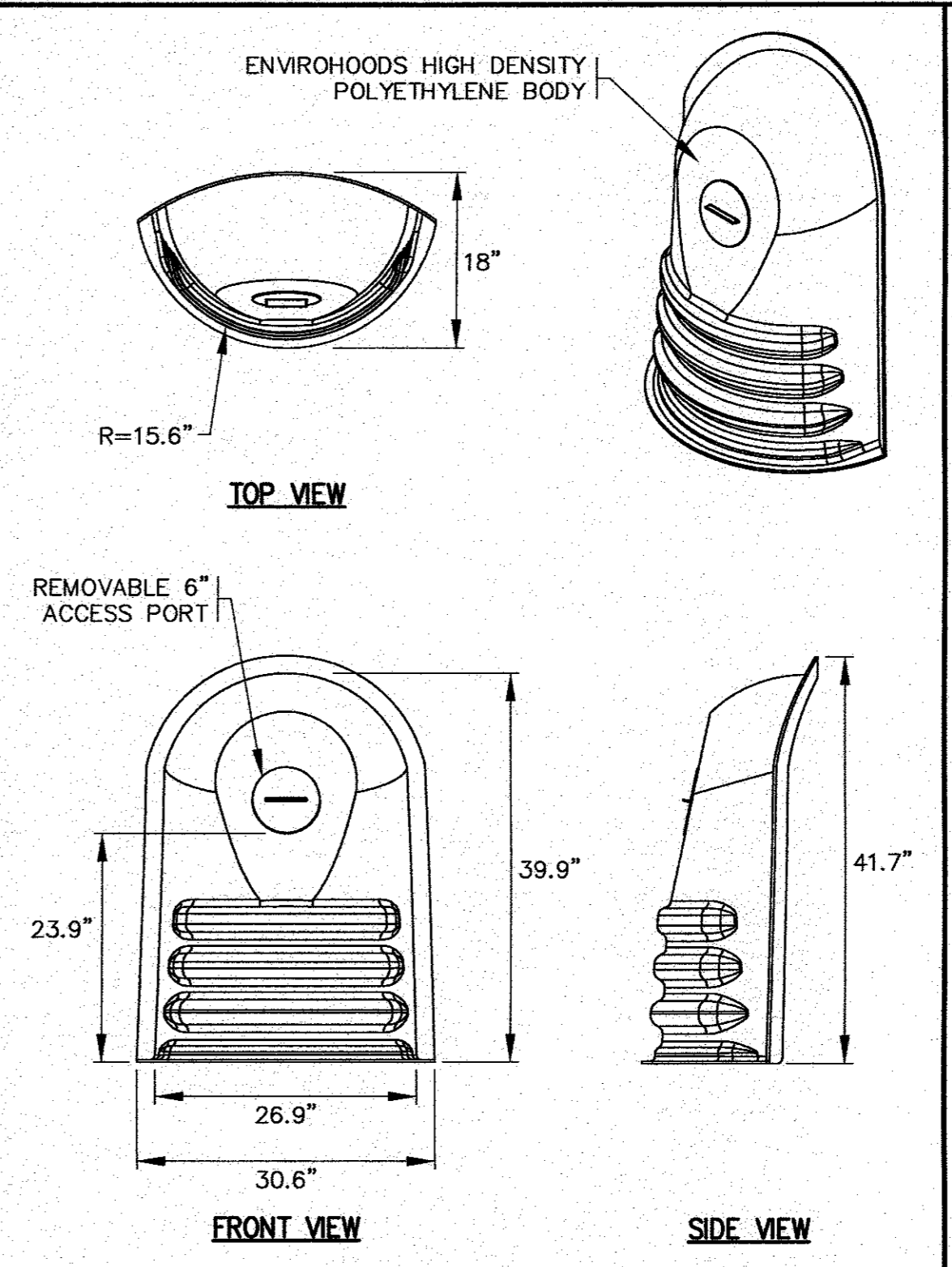
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- FOR SHALLOW INSTALLATION AND WHEN APPROVED BY THE ENGINEER, A FLAT TOP H-20 SLAB WITH A 24" OPENING CAST ECCENTRICALLY MAY BE USED, REFER TO SEPARATE DETAIL HEREON.
- ALL STRUCTURE JOINTS AND PENETRATIONS SHALL BE WATER TIGHT.
- REFER TO PLANS FOR 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.



FLAT TOP SLAB
N.T.S.

NOTES:

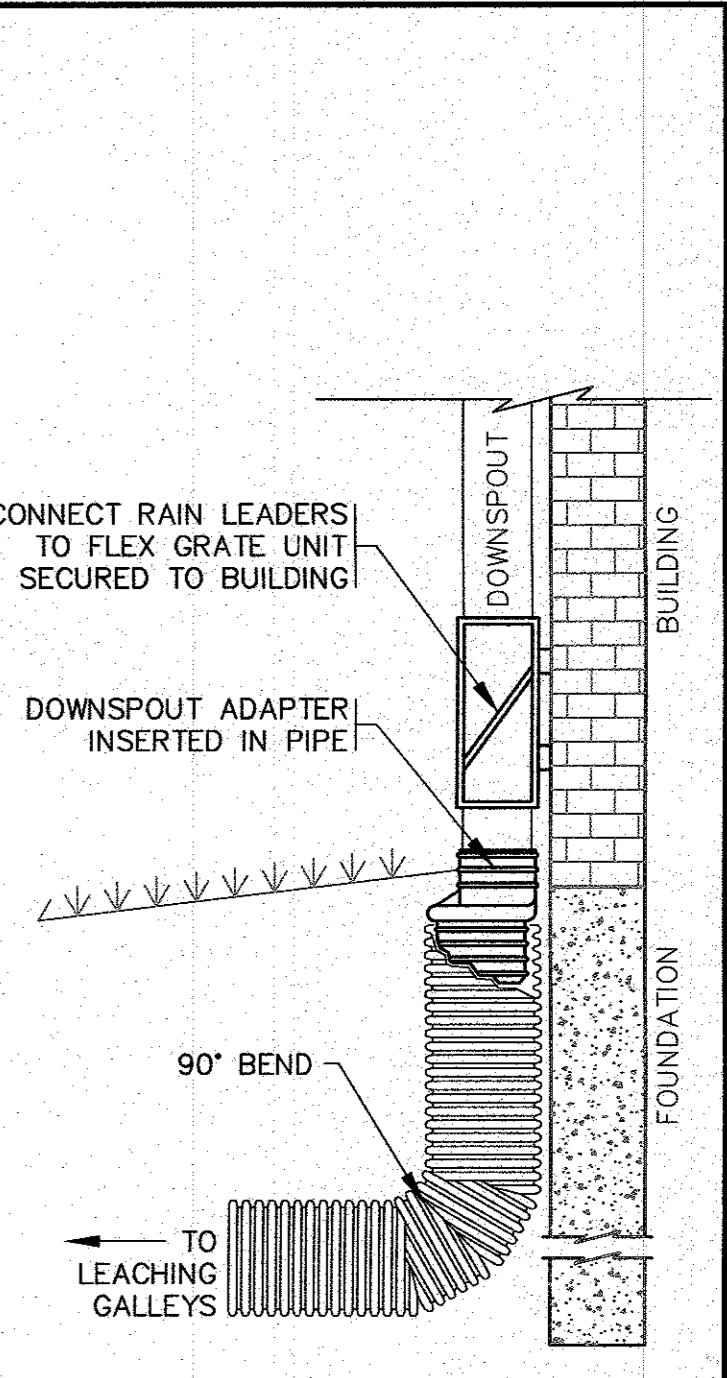
- FOR COMPLETE DETAILS REFER TO MANUFACTURERS SPECIFICATIONS.
- CONTRACTOR TO SUBMIT SHOP DRAWINGS.



NYLOPLAST ENVIROHOOD
N.T.S.

NOTES:

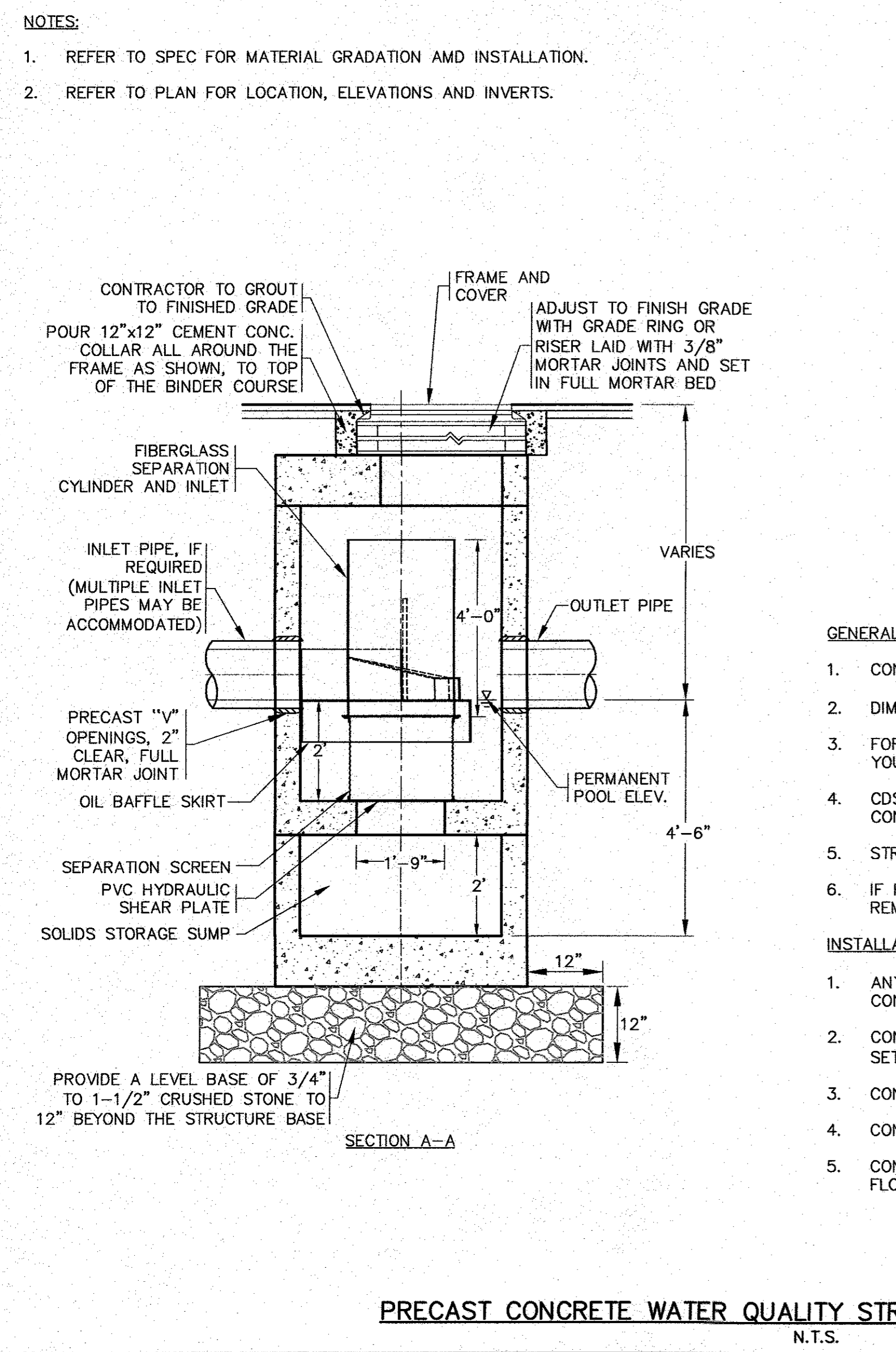
- FOR COMPLETE DETAILS REFER TO MANUFACTURERS SPECIFICATIONS.
- CONTRACTOR TO SUBMIT SHOP DRAWINGS. PART NO. 5824AGR.



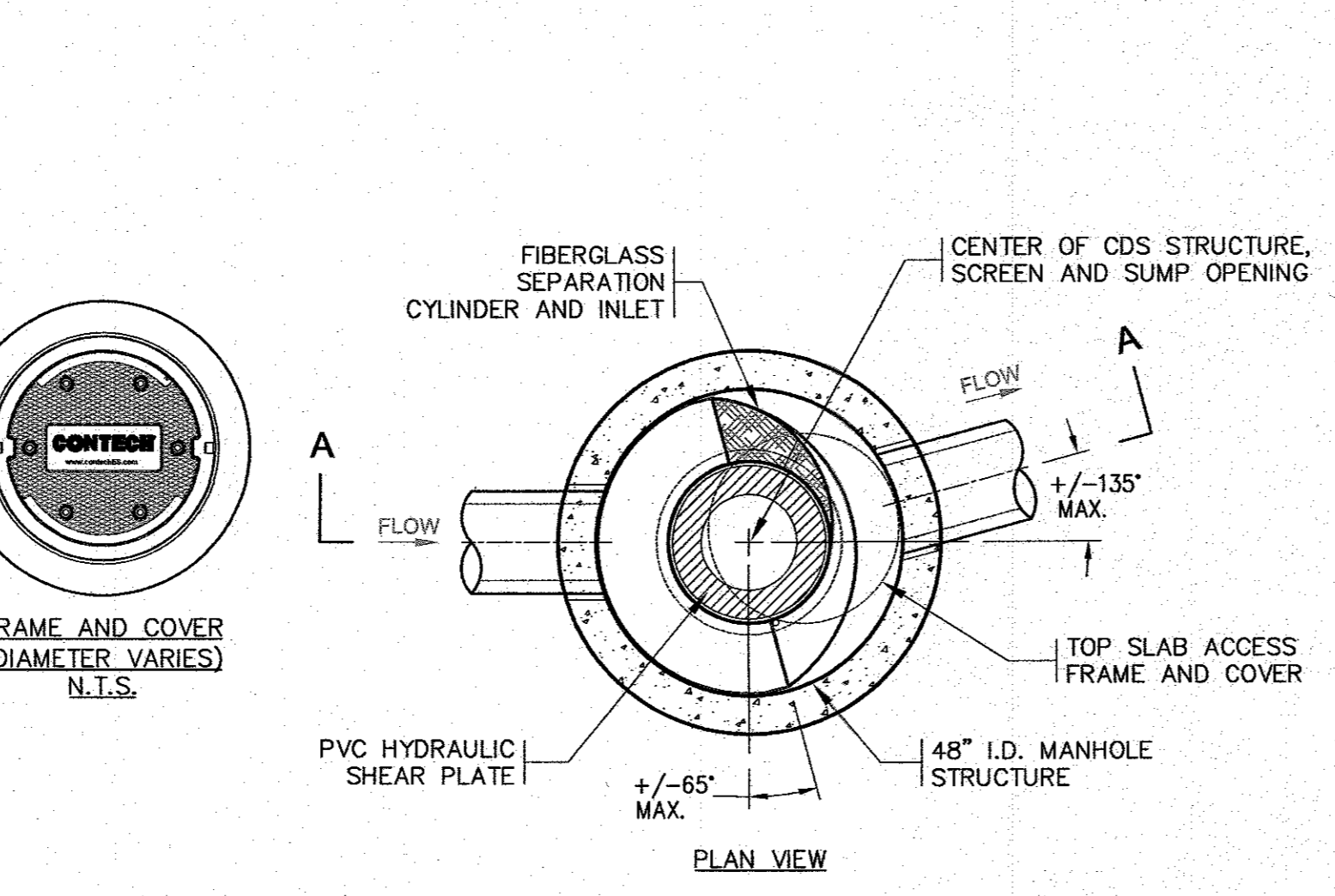
DOWNSPOUT DETAIL
N.T.S.

NOTES:

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



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

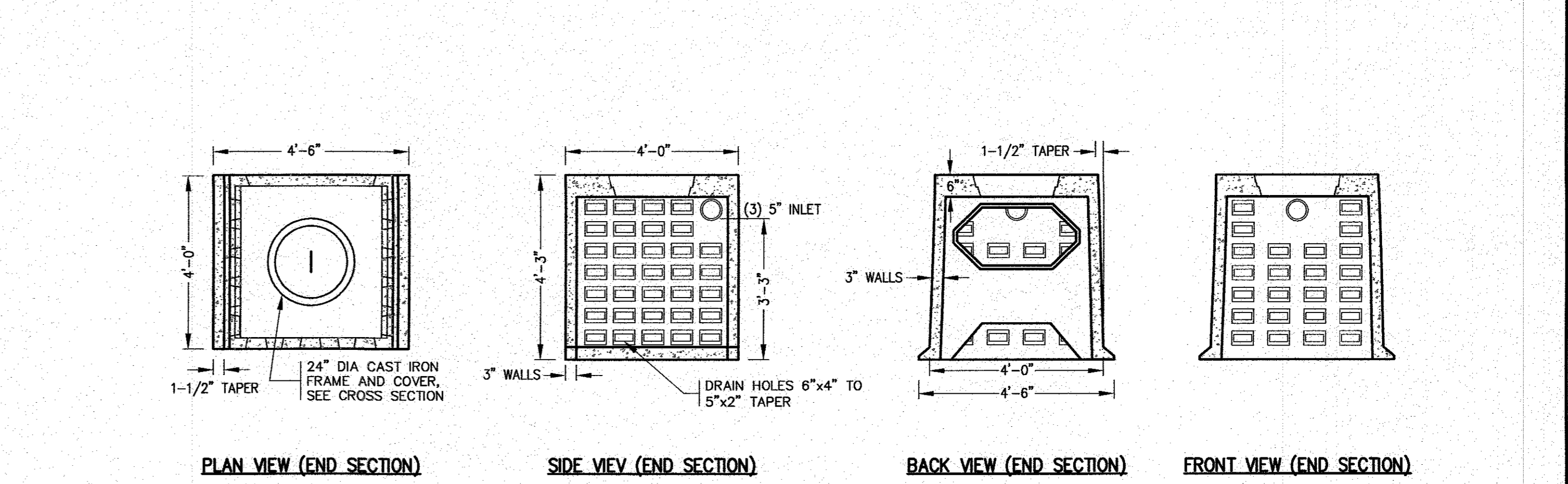


GENERAL NOTES:

- 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.



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.

CROSS SECTION

ADJUST FRAME TO GRADE WITH BRICK, (MIN 2/MAX 5 COURSES) IN FULL BED OF MORTAR, POUR 12"x12" CEM. CONC. COLLAR TO FINISHED GRADE.

FURNISH & INSTALL CAST IRON FRAME AND COVER, USE EJ CASTINGS FRAME MODEL OMA124000022 AND COVER MODEL OMA124000026 OR APP'D. EQUAL, SET IN FULL BED OF MORTAR. COVER TO READ 'DRAIN'

CULTEC 410 FILTER FABRIC OVER TOP AND AROUND SIDES

ONSITE BACKFILL SEE NOTE 6

NON-PERFORATED ABOVE STONE, TO WITHIN 3" OF FINISHED GRADE

4" LOAM & SEED

EXISTING SUBGRADE

4" PERFORATED INSPECTION PORT. PROVIDE SCREW CAP TO WITHIN 3" OF FINISHED GRADE

1-1/2"-2" DOUBLE WASHED CRUSHED STONE

PRECAST CONC. CHAMBER, SEE NOTE 3

G.A.F. ENGINEERING, INC.
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TEL: (508) 295-6600 FAX: (508) 295-6634
E-MAIL: info@gafenginc.com

"SETTLER'S GLEN" COMPREHENSIVE PERMIT PLAN DETAIL SHEET 3

PREPARED FOR: **TCCI EMNACA, LLC**
1266 FURNACE BROOK PARKWAY QUINCY, MA

DATE: JAN. 12, 2021
DRAWN BY: J.M.P.
CHECKED BY: W.F.M.
JOB NO.: 18-9247
SCALE: N.T.S.

APPROVED BY: *[Signature]*

DATE: 5/11/21
REV: 1
BY: J.M.P.
DESCRIPTION: PER TOWN & PEER REVIEW COMMENTS

DATE: 4/26/21
REV: 2
BY: W.F.M.
DESCRIPTION: PER TOWN & PEER REVIEW COMMENTS

DATE: 11/11/20
REV: 3
BY: W.F.M.
DESCRIPTION: PER TOWN & PEER REVIEW COMMENTS

DATE: 10/15/20
REV: 4
BY: W.F.M.
DESCRIPTION: PER TOWN & PEER REVIEW COMMENTS

DATE: 10/15/20
REV: 5
BY: W.F.M.
DESCRIPTION: PER TOWN & PEER REVIEW COMMENTS

DATE: 10/15/20
REV: 6
BY: W.F.M.
DESCRIPTION: PER TOWN & PEER REVIEW COMMENTS

DATE: 10/15/20
REV: 7
BY: W.F.M.
DESCRIPTION: PER TOWN & PEER REVIEW COMMENTS

DATE: 10/15/20
REV: 8
BY: W.F.M.
DESCRIPTION: PER TOWN & PEER REVIEW COMMENTS

DATE: 10/15/20
REV: 9
BY: W.F.M.
DESCRIPTION: PER TOWN & PEER REVIEW COMMENTS

DATE: 10/15/20
REV: 10
BY: W.F.M.
DESCRIPTION: PER TOWN & PEER REVIEW COMMENTS

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REV: 11
BY: W.F.M.
DESCRIPTION: PER TOWN & PEER REVIEW COMMENTS

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DATE: 10/15/20
REV: 100
BY: W.F.M.
DESCRIPTION: PER TOWN & PEER REVIEW COMMENTS