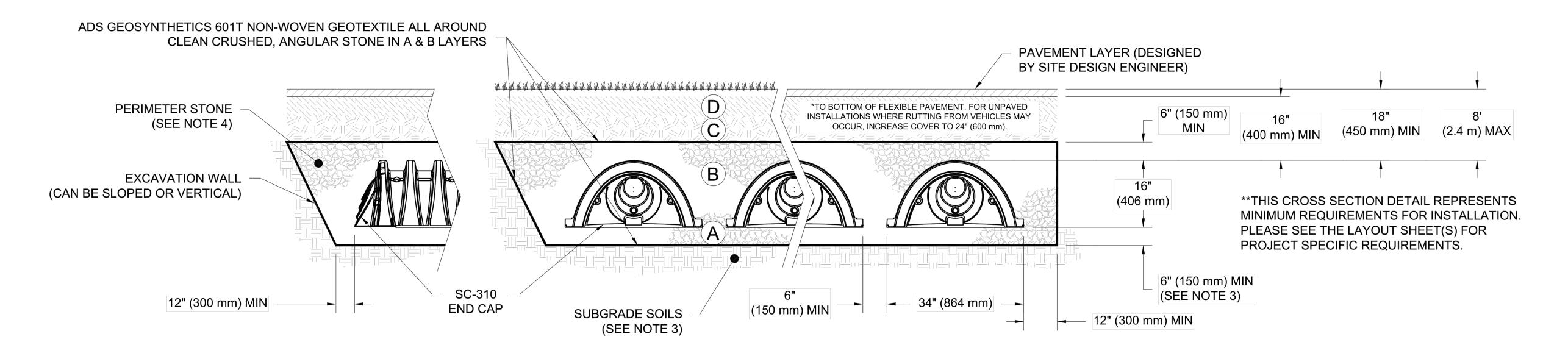
# ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	3.25	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
С	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE.  MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2-4, A-3  OR  AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
В	<b>EMBEDMENT STONE:</b> FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE⁵	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
Α	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE <sup>5</sup>	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

## PLEASE NOTE:

- 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
- 4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
- 5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".

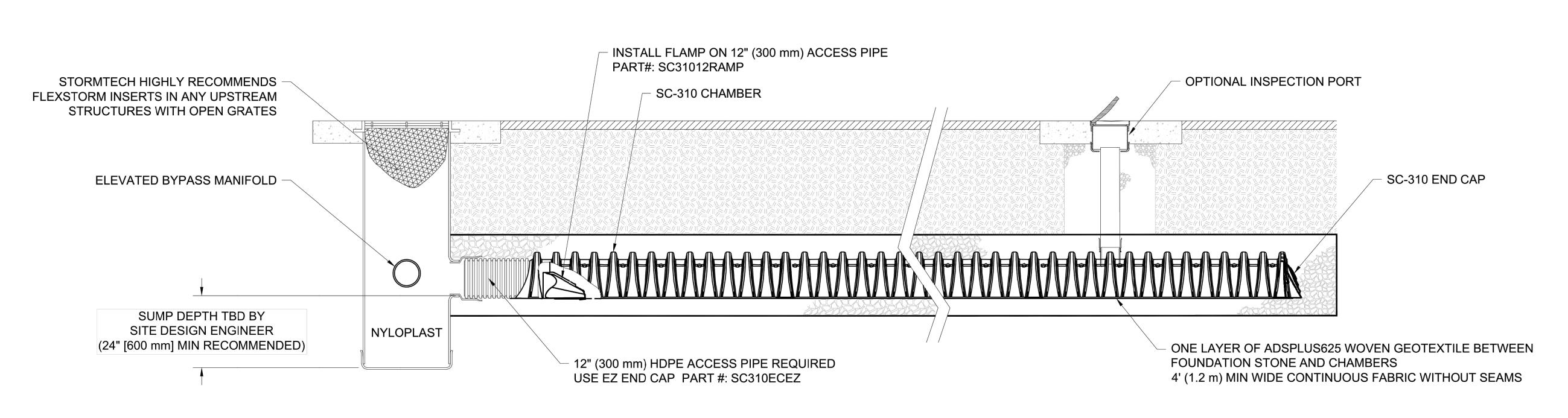


# NOTES:

- 1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
- 4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- 5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2922 SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

						OAKWOOD SOLITH RETAIL
		GAO TELIEMANI BLVD				
	S	HILLIARD, OH 43026				SHOPPING CENTER
SH						HOLLYWOOD, FL
lEE			Chamber System	08/30/24 DHC	REVISED SYSTEM LAYOUTS	DATE: 07/02/24 DRAWN: MPV
ΞT				08/28/24 DHC	INCREASED VOLUME	
			1-800-821-6710   WWW.STORMTECH.COM	DATE DRWN	DRWN CHKD DESCRIPTION	PROJECT #: S420513 CHECKED:
_	THIS DRAWING HAS BEEN PREPA	RED BASED ON INFORMATION PROVIDED	TO ADS/STORMTECH UNDER THE DIRECTION OF THE PROJECT'S ENGINE	EER OF RECORD ("EC	OR OTHER PROJECT REPRESENTATIVE. THIS DRAWING IS N	RECORD ("EOR") OR OTHER PROJECT'S ENGINEER OF RECORD ("EOR") OR OTHER PROJECT'S ENGINEER OF RECORD ("EOR") OR OTHER PROJECT'S ENGINEER OF SECOND ("EOR") OR OTHER PROJECT OR OTHER PROJECT OF SECOND ("EOR") OR OTHER PROJECT OR OTH

6 OF



# **SC-310 ISOLATOR ROW PLUS DETAIL**

## **INSPECTION & MAINTENANCE**

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT

- A. INSPECTION PORTS (IF PRESENT)
- A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
- A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
- A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
- A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
- A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
- B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
- B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
  - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
- B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
  - A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
  - B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
  - C. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

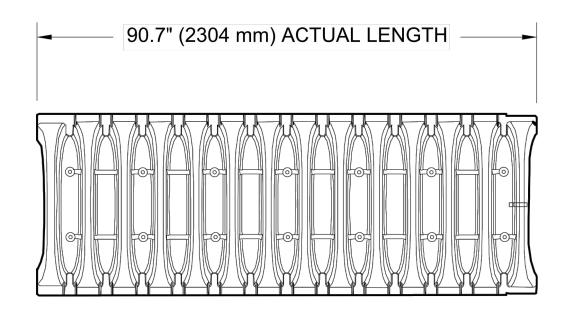
## **NOTES**

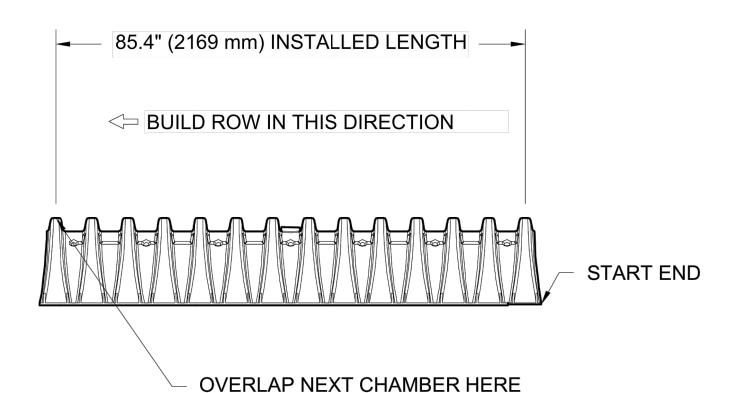
- 1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- 2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

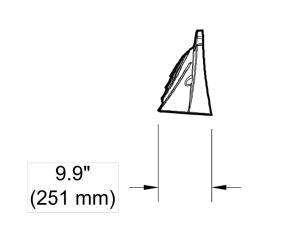
7		4640 TRUEMAN BLVD					
•		HILLIARD, OH 43026					SHOPPING CENTER
SH							HOLLYWOOD, FL
)F			Chamber System	08/30/24 DHC	l	REVISED SYSTEM LAYOUTS	DATE: 07/02/24 DRAWN: MPV
				08/28/24	DHC INCRE	INCREASED VOLUME	0102/24
			1-800-821-6710   WWW.STORMTECH.COM	DATE	DATE DRWN CHKD	DESCRIPTION	PROJECT #: S420513 CHECKED:
8	THIS DRAWING HAS BEEN PREP PRIOR APPROVAL. EOR SHALL R	ARED BASED ON INFORMATION PROVIDED TEVIEW THIS DRAWING PRIOR TO BIDDING A	TO ADS/STORMTECH UNDER THE DIRECTION OF THE PROJECT'S ENGINE NND/OR CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE EC	ER OF RECOF R TO ENSURE	RD ("EOR") OR OTHER THAT THE PRODUCT	PROJECT REPRESENTATIVE. THIS DRAWING IS NO (S) DEPICTED AND ALL ASSOCIATED DETAILS MEET	HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS/STORMTECH UNDER THE DIRECTION OF THE PROJECT'S ENGINEER OF RECORD ("EOR") OR OTHER PROJECT REPRESENTATIVE. THIS DRAWING PRIOR TO BIDDING AND PROJECT REQUIREMENTS.  SOURCE SHALL REVIEW THIS DRAWING PRIOR TO BIDDING AND/OR CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE EOR TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

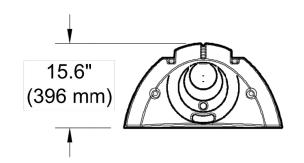
# **SC-310 TECHNICAL SPECIFICATION**

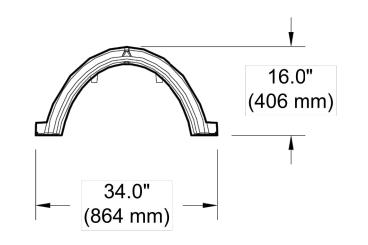
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(OVER SMALL CORRUGATION)

## NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH) CHAMBER STORAGE MINIMUM INSTALLED STORAGE\* WEIGHT

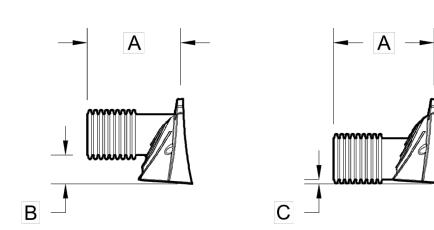
14.7 CUBIC FEET 31.0 CUBIC FEET

35.0 lbs.

34.0" X 16.0" X 85.4" (864 mm X 406 mm X 2169 mm)  $(0.42 \text{ m}^3)$ 

(0.88 m³) (16.8 kg)

\*ASSUMES 6" (152 mm) ABOVE, BELOW, AND BETWEEN CHAMBERS



PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B" PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T" PRE CORED END CAPS END WITH "PC"

PART #	STUB	Α	В	С
SC310EPE06T / SC310EPE06TPC	6" (150 mm)	9.6" (244 mm)	5.8" (147 mm)	
SC310EPE06B / SC310EPE06BPC	0 (130 11111)	9.0 (244 11111)		0.5" (13 mm)
SC310EPE08T / SC310EPE08TPC	8" (200 mm)	11.9" (302 mm)	3.5" (89 mm)	
SC310EPE08B / SC310EPE08BPC	0 (200 111111)	11.9 (302 11111)		0.6" (15 mm)
SC310EPE10T / SC310EPE10TPC	10" (250 mm)	12.7" (323 mm)	1.4" (36 mm)	
SC310EPE10B / SC310EPE10BPC	10 (230 11111)	12.7 (323 11111)		0.7" (18 mm)
SC310ECEZ*	12" (300 mm)	13.5" (343 mm)		0.9" (23 mm)

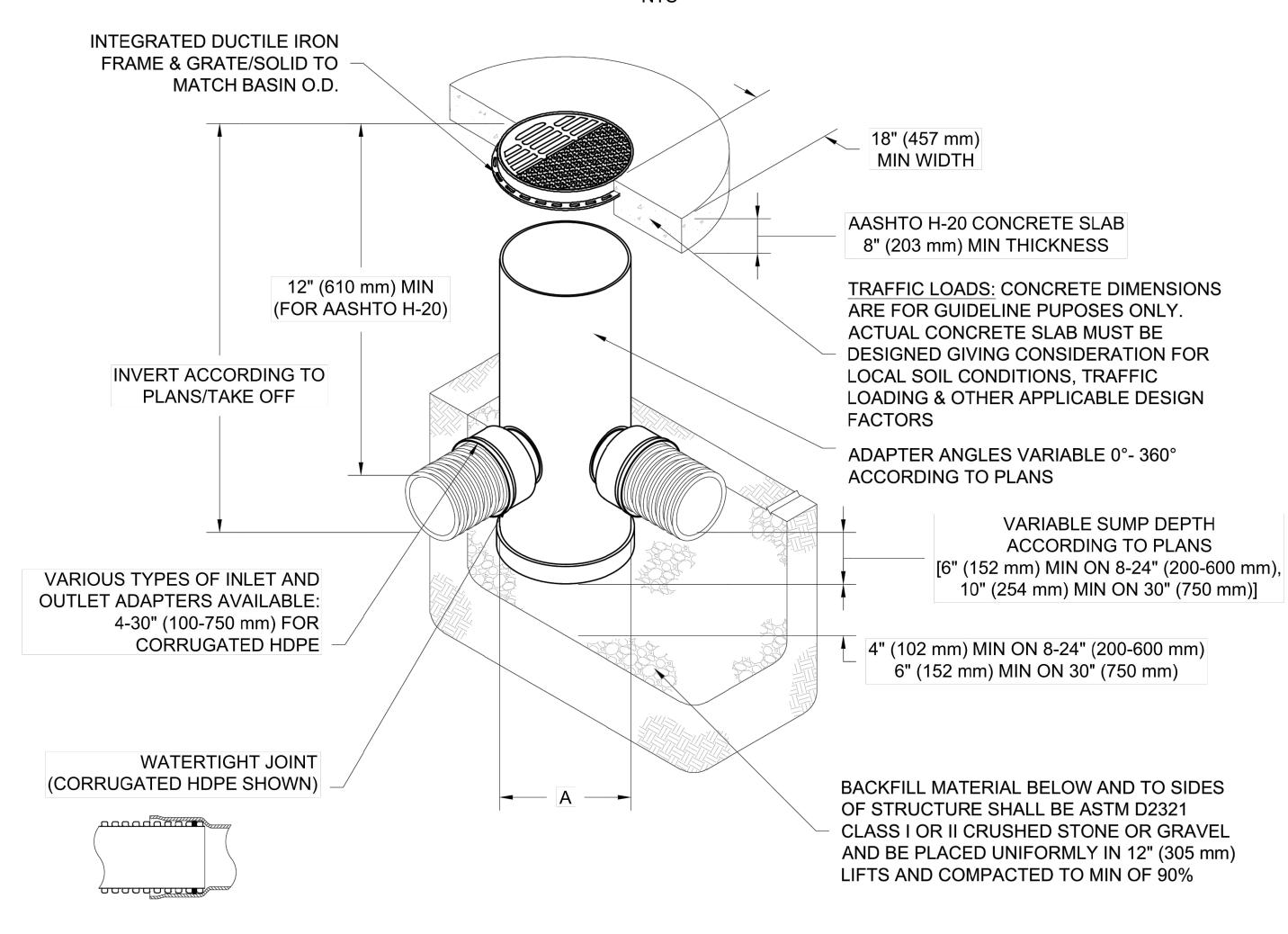
ALL STUBS, EXCEPT FOR THE SC310ECEZ ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

\* FOR THE SC310ECEZ THE 12" (300 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" (6 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

# **NYLOPLAST DRAIN BASIN**

NTS



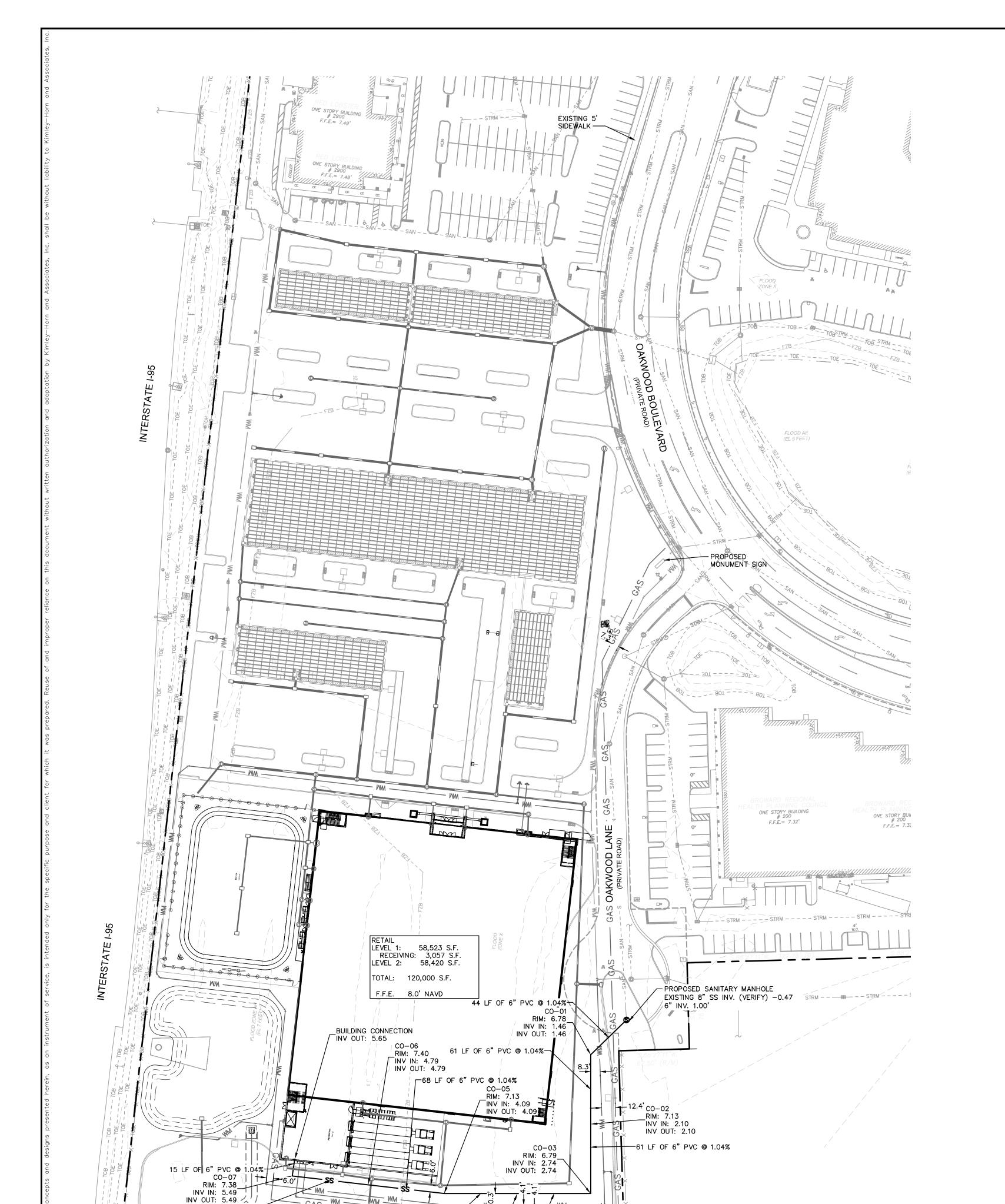
# **NOTES**

- 1. 8-30" (200-750 mm) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
- 2. 12-30" (300-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
- 3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
- 4. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
- 5. FOR COMPLETE DESIGN AND PRODUCT INFORMATION: WWW.NYLOPLAST-US.COM
- 6. TO ORDER CALL: **800-821-6710**

А	PART#	GRATE/S	SOLID COVER (	OPTIONS
8" (200 mm)	2808AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
10" (250 mm)	2810AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
12"	2812AG	PEDESTRIAN	STANDARD AASHTO	SOLID
(300 mm)		AASHTO H-10	H-20	AASHTO H-20
15"	2815AG	PEDESTRIAN	STANDARD AASHTO	SOLID
(375 mm)		AASHTO H-10	H-20	AASHTO H-20
18"	2818AG	PEDESTRIAN	STANDARD AASHTO	SOLID
(450 mm)		AASHTO H-10	H-20	AASHTO H-20
24"	2824AG	PEDESTRIAN	STANDARD AASHTO	SOLID
(600 mm)		AASHTO H-10	H-20	AASHTO H-20
30"	2830AG	PEDESTRIAN	STANDARD AASHTO	SOLID
(750 mm)		AASHTO H-20	H-20	AASHTO H-20

							OAKWOOD 8	OAKWOOD SOUTH RETAIL	
	8	4640 I RUEMAIN BLVD HILLIARD, OH 43026					SHOPPIN	SHOPPING CENTER	
SH							HOLLY	HOLLYWOOD, FL	
IEE				08/30/24 D	DHC	REVISED SYSTEM LAYOUTS	DATE: 07/02/24	NDAWN: MDV	
— :Т				08/28/24	DHC	INCREASED VOLUME			
			770-932-2443   WWW.NYLOPLAST-US.COM	DATE	DRWN CHKD	DESCRIPTION	PROJECT #: \$420513	CHECKED:	
	THIS DRAWING HAS BEEN PREP⊅ PRIOR APPROVAL. EOR SHALL RE	RED BASED ON INFORMATION PROVIDED TO BENEW THIS DRAWING PRIOR TO BIDDING A	DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS/STORMTECH UNDER THE DIRECTION OF THE PROJECT'S ENGINEER OF RECORD ("EOR") OR OTHER PROJECT REPRESENTATIVE. THIS DRAWING PRIOR TO BIDDING AND/OR CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE EOR TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.	EER OF RECORI	J ("EOR") OR ( THAT THE PR	OTHER PROJECT REPRESENTATIVE. THIS DRAWING IS N (ODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEI	NOT INTENDED FOR USE IN BIDDING OR EET ALL APPLICABLE LAWS, REGULATIO	R CONSTRUCTION WITHOUT THANS, AND PROJECT REQUIREM	EOR'S NTS.

8 OF 8



INV IN: 3.41

INV OUT: 3.41

65 LF OF 6" PVC @ 1.04%—

68 LF OF 6" PVC @ 1.04%-

PROPOSED CONNECTION
TO EXISTING RISER POLE



GRAPHIC SCALE IN FEET
25 50 100

## UTILITY LEGEND

		PROPERTY LINE
		UTILITY EASEMENT
	- WM	WATER MAIN (WM)
SAN-		SANITARY MAIN
ELEC -		ELECTRIC
GAS -		GAS
		STORM PIPE
~		FDC
M		GATE VALVE
띡		90° BEND
4		45° BEND
$\leftarrow$		22.5° BEND
$\vdash$		11.25° BEND
171		TEE
8		SEWER MANHOLE
Т		TRANSFORMER
<u> </u>		EXISTING SEWER MANHOLE

POTABLE WAT	POTABLE WATER IMPACT				
	Use	Calculation	Total		
		4 GPD per seat (4 GPD/seat x			
Existing	Regal Cinemas Movie Theater	2,504 seats)	10,016 GPD		
		0.1 GPD per SF			
Proposed	Retail (Commercial) 120,000 SF	(120,000 s.f. x0.1 GPD)	12,000 GPD		
	Total Existing and Proposed		(-) 1,984 GPD		

SANITARY SEW	/ER IMPACT		
	Use	Calculation	Total
		4 GPD per seat (4 GPD/seat x	
Existing	Regal Cinemas Movie Theater	2,504 seats)	10,016 GPD
		0.1 GPD per SF	
Proposed	Retail (Commercial) 120,000 SF	(120,000 s.f. x0.1 GPD)	12,000 GPD
	Total Existing and Proposed	*	(-) 1,984 GPD

### UTILITY NOTES

- 1. ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED
- 2. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE
- CONNECTING TO ANY EXISTING LINE.
  3. SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
- 8" PVC SDR35 PER ASTM D 3034, FOR PIPES LESS THAT 12' DEEP 8" PVC SDR26 PER ASTM D 3034, FOR PIPES MORE THAN 12' DEEP
- 6" PVC SCHEDULE 40 DUCTILE IRON PIPE PER AWWA C150
- WATER LINES SHALL BE AS FOLLOWS:
   6" AND LARGER, PVC C-900 PER ASTM D 2241 CLASS 200 UNDER COUNTY ROADS, OTHERWISE CLASS 150
- 6" AND LARGER DUCTILE IRON PIPE PER AWWA C150 SMALLER THAN 6" EITHER COPPER TUBE TYPE "L" (SOFT) PER ANSI 816.22 OR PVC, 200 P.S.I., PER ASTM D1784 AND D2241.
- 5. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.

21.11 (AWWA C-151) (CLASS 50).

- 6. ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH THRUST BLOCKING AS CALLED OUT
- IN SPECIFICATIONS.

  7. ALL UTILITIES SHOULD BE KEPT TEN (10') APART (PARALLEL) OR WHEN CROSSING 18" VERTICAL
- CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).

  8. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 4'-0" COVER ON ALL WATERLINES.

  9. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATER LINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED). THE SANITARY LINE SHALL BE DUCTH FIRON.
- LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING, THE WATER LINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE. MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI
- UNDERGROUND LINES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
- TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS WITHIN PAVED AREAS, AND TO BE ONE FOOT ABOVE FINISHED GROUND ELEVATIONS WITH WATER TIGHT LIDS WITHIN LANDSCAPED AREAS.
   ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH
- AT 3000 P.S.I.
  13. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
- REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.
   CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES (ANY CITY) WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER
- AND SEWER LINES.

  16. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE
- RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

  17. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES. THIS AND THE FINAL CONNECTIONS OF THE SERVICE SHALL BE COMPLETED 30 DAYS PRIOR TO STORE
- POSSESSION.
  18. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION
- REQUIREMENTS AND SPECIFICATIONS.

  19. REFER TO BUILDING PLANS FOR SITE LIGHTING ELECTRICAL PLAN.
- 20. UNDERGROUND UTILITY LINES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.21. REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.
- 22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING WATER MAINS, FORCE MAINS, SANITARY SEWER AND STORM MAINS AND MAINTAIN MINIMUM CLEARANCES BETWEEN WATER MAINS AND OTHER UTILITIES AT ALL POINTS ALONG THEIR LENGTH AS REQUIRED IN THE PLANS, DETAILS AND SPECIFICATIONS.
- 23. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES. THIS AND THE FINAL CONNECTIONS OF THE SERVICE SHALL BE COMPLETED 30 DAYS PRIOR TO STORE POSSESSION.
  24. THE ENTIRE FIRE SERVICE FROM BUILDING TO CONNECTION POINT IS TO BE INSTALLED BY A
- LICENSED UTILITY CONTRACTOR HOLDING A "CONTRACTOR V" LICENSE IN ACCURATE Y
  CH. 489 OF THE FLORIDA STATUTES.
  25. ALL UTILITY MAIN LENGTHS SHOWN ARE APPROXIMATE.

Digitally signed by GREGORY D WILL ONG CENSON: cn=GREGORY D WILL ONG DN: cn=GREGORY DWILL ONG DN: cn=GREGORY DWILL ONG CENSON: Cn=GR

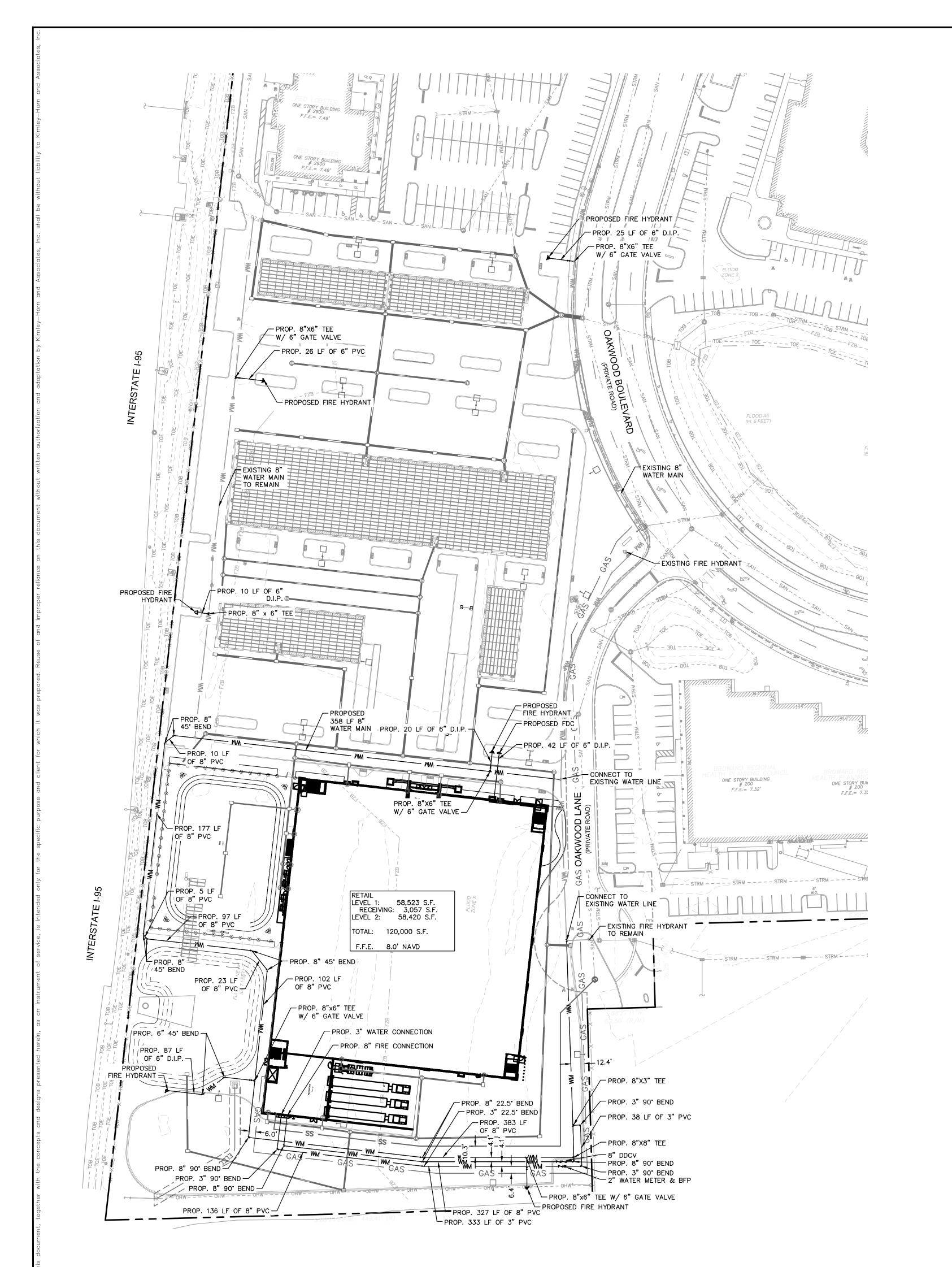
DATE
9/3/2024
ALE AS SHOWN
SIGNED BY SHB

9/ SCALE DESIGN

SEWER PLA

OAKWOOD SOUTH RETAIL SHOPPING

SHEET NUMBER
C-400





### UTILITY LEGEND

PROPERTY LINE
UTILITY EASEMENT
WATER MAIN (WM)
SANITARY MAIN
ELECTRIC
GAS
STORM PIPE
FDC
GATE VALVE
90° BEND
45° BEND
22.5° BEND
11.25° BEND
TEE
SEWER MANHOLE
TRANSFORMER
EXISTING SEWER MANHOLE
FIRE HYDRANT

#### FIRE UTILITY NOTE

- ALL UNDERGROUND FIRE MAIN WORK MUST BE COMPLETED BY FIRE
- THAT MINIMUM RADIO SIGNAL STRENGTH FOR FIRE DEPARTMENT COMMUNICATIONS SHALL BE MAINTAINED AT A LEVEL DETERMINED BY THE AHJ FOR ALL NEW AND EXISTING BUILDINGS. —- IF AT ANY TIME (INCLUDING THE CONSTRUCTION PHASE), FIRE DEPARTMENT PERSONNEL DETERMINE THAT THE MINIMUM RADIO SIGNAL STRENGTH IS NOT BEING MET, A TWO-WAY RADIO COMMUNICATION ENHANCEMENT SYSTEM MAY BE REQUIRED TO BE INSTALLED AS DETERMINED BY THE AHJ.

PROTECTION CONTRACTOR HOLDING A CLASS I, II, OR V LICENSE PER

WATER SUPPLY AND ANY NEW HYDRANTS SHALL BE IN PLACE PRIOR TO ACCUMULATION OF COMBUSTIBLE MATERIALS PER NFPA 1 (2021 ED.) SECTION 16.5.3.1.1.

BE ADVISED THAT NFPA 1 (2021 EDITION) SECTION 11.10.2 REQUIRES

	Use	Calculation	Total
		4 GPD per seat (4 GPD/seat x	
Existing	Regal Cinemas Movie Theater	2,504 seats)	10,016 GPD
		0.1 GPD per SF	
Proposed	Retail (Commercial) 120,000 SF	(120,000 s.f. x0.1 GPD)	12,000 GPD
	Total Existing and Proposed		(-) 1,984 GPD

	Use	Calculation	Total
		4 GPD per seat (4 GPD/seat x	
Existing	Regal Cinemas Movie Theater	2,504 seats)	10,016 GPD
		0.1 GPD per SF	
Proposed	Retail (Commercial) 120,000 SF	(120,000 s.f. x0.1 GPD)	12,000 GPD

## **UTILITY NOTES**

- 1. ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED
- 2. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE
- CONNECTING TO ANY EXISTING LINE. 3. SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
- 8" PVC SDR35 PER ASTM D 3034, FOR PIPES LESS THAT 12' DEEP
- 8" PVC SDR26 PER ASTM D 3034, FOR PIPES MORE THAN 12' DEEP 6" PVC SCHEDULE 40
- DUCTILE IRON PIPE PER AWWA C150 4. WATER LINES SHALL BE AS FOLLOWS:
- 6" AND LARGER, PVC C-900 PER ASTM D 2241 CLASS 200 UNDER COUNTY ROADS, OTHERWISE CLASS 150
- 6" AND LARGER DUCTILE IRON PIPE PER AWWA C150 SMALLER THAN 6" EITHER COPPER TUBE TYPE "L" (SOFT) PER ANSI
- 816.22 OR PVC, 200 P.S.I., PER ASTM D1784 AND D2241. 5. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
- 6. ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH THRUST BLOCKING AS CALLED OUT
- IN SPECIFICATIONS. 7. ALL UTILITIES SHOULD BE KEPT TEN (10') APART (PARALLEL) OR WHEN CROSSING 18" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).
- 8. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 4'-0" COVER ON ALL WATERLINES. 9. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATER LINES, SANITARY LINES. STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING, THE WATER

LINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED

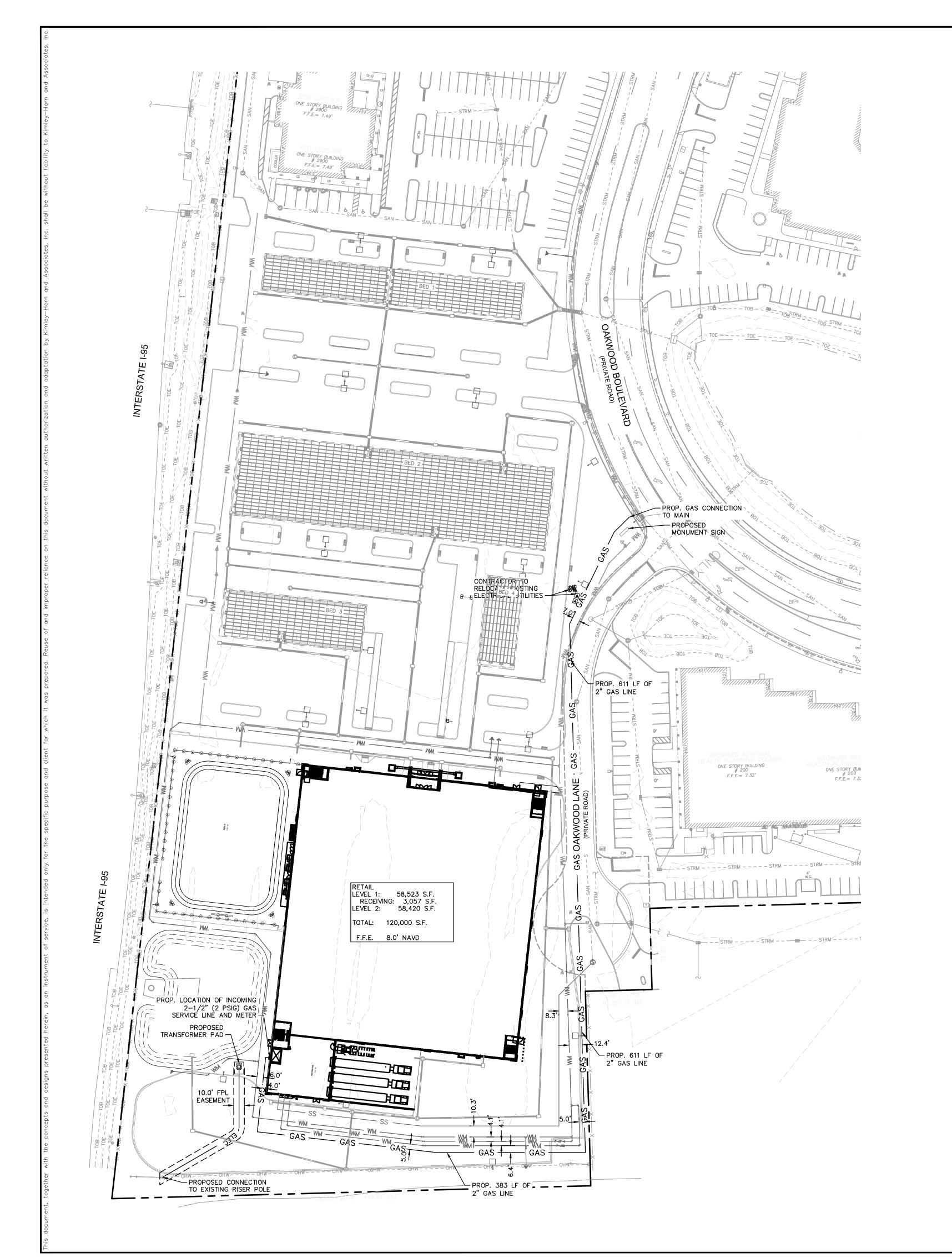
- TO PROVIDE A MINIMUM OF 18" CLEARANCE. MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11 (AWWA C-151) (CLASS 50). 10. UNDERGROUND LINES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE
- BACKFILLING.
- 11. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS WITHIN PAVED AREAS, AND TO BE ONE FOOT ABOVE FINISHED GROUND ELEVATIONS WITH WATER TIGHT LIDS WITHIN LANDSCAPED AREAS.
- 12. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
- 13. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES. 14. REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.
- 15. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES (ANY CITY) WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
- 16. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- 17. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES. THIS AND THE FINAL CONNECTIONS OF THE SERVICE SHALL BE COMPLETED 30 DAYS PRIOR TO STORE POSSESSION.
- 18. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
- 19. REFER TO BUILDING PLANS FOR SITE LIGHTING ELECTRICAL PLAN. 20. UNDERGROUND UTILITY LINES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE
- BACKFILLING. 21. REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES. 22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING WATER MAINS, FORCE MAINS, SANITARY SEWER AND STORM MAINS AND MAINTAIN MINIMUM CLEARANCES BETWEEN WATER MAINS AND OTHER UTILITIES AT ALL POINTS ALONG THEIR LENGTH AS REQUIRED IN
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- 24. THE ENTIRE FIRE SERVICE FROM BUILDING TO CONNECTION POINT IS TO BE INSTALLED BY A LICENSED UTILITY CONTRACTOR HOLDING A "CONTRACTOR V" LICENSE IN ACCORDANCE WITH CH. 489 OF THE FLORIDA STATUTES.
- 25. ALL UTILITY MAIN LENGTHS SHOWN ARE APPROXIMATE.



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SOUTH OPPING OAKWOOD RETAIL SHO

SHEET NUMBER C-401





## UTILITY LEGEND

PROPERTY LINE
UTILITY EASEMENT
WATER MAIN (WM)
SANITARY MAIN
ELECTRIC
GAS
STORM PIPE
FDC
GATE VALVE
90° BEND
45° BEND
22.5° BEND
11.25° BEND
TEE
SEWER MANHOLE
TRANSFORMER
EXISTING SEWER MANHOLE

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o=KIMLEY-HORN A ASSOCIATES, WILFONG email=greg.wilfong@khorn.com Date: 2025.01.22 18:

 
 Image: Control of the DRY

SOUTH OPPING OAKWOOD RETAIL SHO

SHEET NUMBER C-402

