

- GENERAL NOTES**
- LOCATIONS OF THE EXISTING UTILITIES ARE BASED ON RECORDS FROM SAID UTILITY COMPANIES AND ARE HORIZONTALLY FIELD LOCATED ONLY. THE CONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING ACTUAL LOCATION.
 - CONTRACTOR TO UNCOVER AND MARK UTILITY LINES BEFORE CONSTRUCTION.
 - CONTRACTOR SHALL BEAR ALL RESPONSIBILITY AND COST OF REPAIR OR REPLACEMENT OF EXISTING UTILITIES, DAMAGED OR INTERRUPTED AS A RESULT OF THIS CONSTRUCTION PROJECT.
 - CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE OWNER OF ANY DAMAGED OR INTERRUPTED UTILITIES IMMEDIATELY.
 - ALL WATER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL WATER STANDARD PIPELINE MATERIALS AND CONSTRUCTION SPECIFICATIONS, LATEST EDITION.
 - EXISTING UTILITIES TO REMAIN ARE TO BE ADJUSTED TO MATCH PROPOSED GRADE.
 - CONTRACTOR SHALL NOTIFY PROJECT ENGINEER PRIOR TO BEGINNING WORK.
 - ALL AREAS WITHIN THE PAVED AREAS ARE TO RECEIVE A GRAVEL BASE TO PROVIDE EROSION CONTROL IF WORK IS NOT PROGRESSING IN AN ORDERLY MANNER. A RATE OF 135 TONS/ACRE IS TO BE APPLIED WITHIN TWO WEEKS OF FINAL GRADING.
 - ALL AREAS NOT WITHIN THE PAVED AREA ARE TO RECEIVE LOOSE STRAW TO PROVIDE EROSION CONTROL IF WORK IS NOT PROGRESSING IN AN ORDERLY MANNER. A RATE OF 1.5 TONS/ACRE IS TO BE APPLIED WITHIN TWO WEEKS OF FINAL GRADING.
 - AFTER NEW INLETS ARE CONSTRUCTED, INSTALL INLET PROTECTION PER DETAIL.
 - CONTRACTOR WILL CONTROL AND PREVENT OFF-SITE TRACKING OF CONSTRUCTION RUNOFF AND SEDIMENT TO ADJACENT PROPERTY AND PUBLIC ROADS.
 - CONTRACTOR IS TO PROTECT EXISTING STORM DRAINAGE SYSTEM.
 - CONTRACTOR TO CONFORM TO ALL CONSTRUCTION STORM WATER AND EROSION CONTROL PERMITTING REQUIREMENTS BY EPA PHASE II STORM WATER REGULATIONS AS ADMINISTERED BY THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY. WHERE PERMITTING IS REQUIRED, A COPY OF THE NOTICE OF INTENT SHALL BE PROVIDED TO THE LOCAL MUNICIPAL AUTHORITY.
 - CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES IN ACCORDANCE WITH THE TEXAS UNDERGROUND FACILITIES DAMAGE PREVENTION ACT. THIS LAW REQUIRES THAT THE CONTRACTOR MAKE A TELEPHONE CALL TO THE TEXAS ONE-CALL SYSTEM AT 1-800-344-3377 (811) AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION TO ENSURE THAT ANY EXISTING UTILITIES CAN BE LOCATED.
 - CONTRACTOR TO CONSTRUCT ALL ACCESS RAMPS AND PAVING TO ADA STANDARDS. VERIFY.
 - TREES TO REMAIN ARE TO BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.
 - EXCESS EXPORTS SHALL BE STOCKPILED AT LOCATION APPROVED BY OWNER AND CONFIRMED BY ENGINEER OF RECORD.

ROOF DRAIN NOTE:

CONTRACTOR TO CONNECT ALL DOWNSPOUTS TO THE NEAREST UNDERGROUND STORM SEWER.

CONTRACTOR TO PROVIDE CONCRETE SPLASH BLOCK FOR EACH ROOF DRAIN NOT CONNECTED DIRECTLY TO STORM SEWER PIPING.

- GRADING PLAN NOTES**
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASE OF THE PROJECT. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGES TO ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASE OF THE PROJECT.
 - THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. PLACEMENT OF THESE DEVICES SHALL BE APPROVED BY THE OWNER PRIOR TO PLACEMENT.
 - IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
 - CONSTRUCTION REVIEW, INSPECTION, AND OBSERVATION OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED AS A REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, OR NEAR THE CONSTRUCTION SITE.
 - THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN ALL PERMITS FROM AUTHORITIES AND REGULATORY AGENCIES HAVING JURISDICTION OVER THIS SITE, AS REQUIRED, PRIOR TO BEGINNING WORK.
 - BEFORE BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL COMPLY WITH THE EROSION CONTROL PLAN AND/OR PERMIT.
 - THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR VARIATIONS FROM THE PLANS.
 - DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION.
 - PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY OWNER OR AUTHORITIES HAVING JURISDICTION.
 - DO NOT CONDUCT WORK ON ADJOINING PROPERTY UNLESS DIRECTED BY ENGINEER.
 - DO NOT COMMENCE EARTH-MOVING OPERATIONS UNTIL TEMPORARY EROSION- AND SEDIMENTATION-CONTROL MEASURES ARE IN PLACE.
 - INSTALL DETECTABLE WARNING TAPE ABOVE CONSTRUCTED UTILITIES. DETECTABLE WARNING TAPE IS DEFINED AS: ACID- AND ALKALI-RESISTANT, POLYETHYLENE FILM WARNING TAPE MANUFACTURED FOR MARKING AND IDENTIFYING UNDERGROUND UTILITIES, A MINIMUM OF 6 INCHES WIDE AND 4 MILS THICK, CONTINUOUSLY INSCRIBED WITH A DESCRIPTION OF THE UTILITY, WITH METALIC INK IN A PROTECTIVE JACKET FOR CORROSION PROTECTION, DETECTABLE BY METAL DETECTOR WHEN TAPE IS BURIED UP TO 30 INCHES DEEP, COLORED AS FOLLOWS:
 - RED: ELECTRIC.
 - YELLOW: GAS, OIL, STEAM, AND DANGEROUS MATERIALS.
 - ORANGE: TELEPHONE AND OTHER COMMUNICATIONS
 - BLUE: WATER SYSTEMS.
 - GREEN: SEWER SYSTEMS.
 - PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EARTH MOVING OPERATIONS.
 - PROTECT AND MAINTAIN EROSION AND SEDIMENTATION CONTROLS DURING EARTH MOVING OPERATIONS.
 - PROTECT SUBGRADES AND FOUNDATION SOILS FROM FREEZING TEMPERATURES AND FROST. REMOVE TEMPORARY PROTECTION BEFORE PLACING SUBSEQUENT MATERIALS.
 - IF EXCAVATED MATERIALS INTENDED FOR FILL AND BACKFILL INCLUDE UNSATISFACTORY SOIL MATERIALS AND ROCK, REPLACE WITH SATISFACTORY SOIL MATERIALS.
 - EXCAVATE TO INDICATED ELEVATIONS AND DIMENSIONS WITHIN A TOLERANCE OF PLUS OR MINUS 1 INCH, IF APPLICABLE. EXTEND EXCAVATIONS A SUFFICIENT DISTANCE FROM STRUCTURES FOR PLACING AND REMOVING CONCRETE FORMWORK, FOR INSTALLING SERVICES AND OTHER CONSTRUCTION, AND FOR INSPECTIONS.
 - EXCAVATIONS FOR FOOTINGS AND FOUNDATIONS: DO NOT DISTURB BOTTOM OF EXCAVATION. EXCAVATE BY HAND TO FINAL GRADE JUST BEFORE PLACING CONCRETE REINFORCEMENT. TRIM BOTTOMS TO REQUIRED LINES AND GRADES TO LEAVE SOLID BASE TO RECEIVE OTHER WORK.
 - EXCAVATION FOR UNDERGROUND TANKS, BASINS, AND MECHANICAL OR ELECTRICAL UTILITY STRUCTURES: EXCAVATE TO ELEVATIONS AND DIMENSIONS INDICATED WITHIN A TOLERANCE OF PLUS OR MINUS 1 INCH. DO NOT DISTURB BOTTOM OF EXCAVATIONS INTENDED AS BEARING SURFACES.
 - EXCAVATIONS AT EDGES OF TREE- AND PLANT-PROTECTION ZONES:
 - EXCAVATE BY HAND TO INDICATED LINES, CROSS SECTIONS, ELEVATIONS, AND SUBGRADES. USE NARROW-TINE SPADING FORKS TO COMB SOIL AND EXPOSE ROOTS. DO NOT BREAK, TEAR, OR CHOP EXPOSED ROOTS. DO NOT USE MECHANICAL EQUIPMENT THAT RIPS, TEARS, OR PULLS ROOTS.
 - GENERAL: UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE OF IRREGULAR SURFACE CHANGES. COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO CROSS SECTIONS, LINES, AND ELEVATIONS INDICATED.
 - PROVIDE A SMOOTH TRANSITION BETWEEN ADJACENT EXISTING GRADES AND NEW GRADES.
 - CUT OUT SOFT SPOTS, FILL LOW SPOTS, AND TRIM HIGH SPOTS TO COMPLY WITH REQUIRED SURFACE TOLERANCES.
 - SITE ROUGH GRADING: SLOPE GRADES TO DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING.

ISSUE FOR:
FOR INTER REVIEW ONLY
BID ONLY
PERMITS SET
CONSTRUCTION SET

REVISIONS:

NO.	DATE	DESCRIPTION

MAKMO DESIGN
14231 FM 1464 RD # 5000 SUGAR LAND, TX 77498
PH # 832-231-7047
TFPE FIRM # 21226

PROPOSED C-STORE & GAS CANOPY
LOCATED AT
605 N MAIN ST., SWEENEY, TX 77480



FLOODPLAIN INFORMATION
According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Map No. 48039C0565K, with the effective date of December 30, 2020, the property is located in Flood Zone "X". Areas determined to be outside of the regulated floodway. All Floodplain information noted in the plat reflects the status per the FEMA FIRM map that is effective at the time that the plat is recorded. Floodplain and Floodway status is subject to change as FEMA FIRM maps are updated.

NORTH

SCALE
0 10 20 40

SEAL :

DATE: 05/16/2021

PROJECT NUMBER : 21-063
SCALE :
DRAWN BY : A.B
CHECKED BY : A.B
SHEET TITLE :

GRADING & DRAINAGE PLAN

DRAWING NUMBER:
C-2.0

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	



C-STORE & GAS CANOPY

SWEENEY, TX

SC-740 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. 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 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. 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.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

1. STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

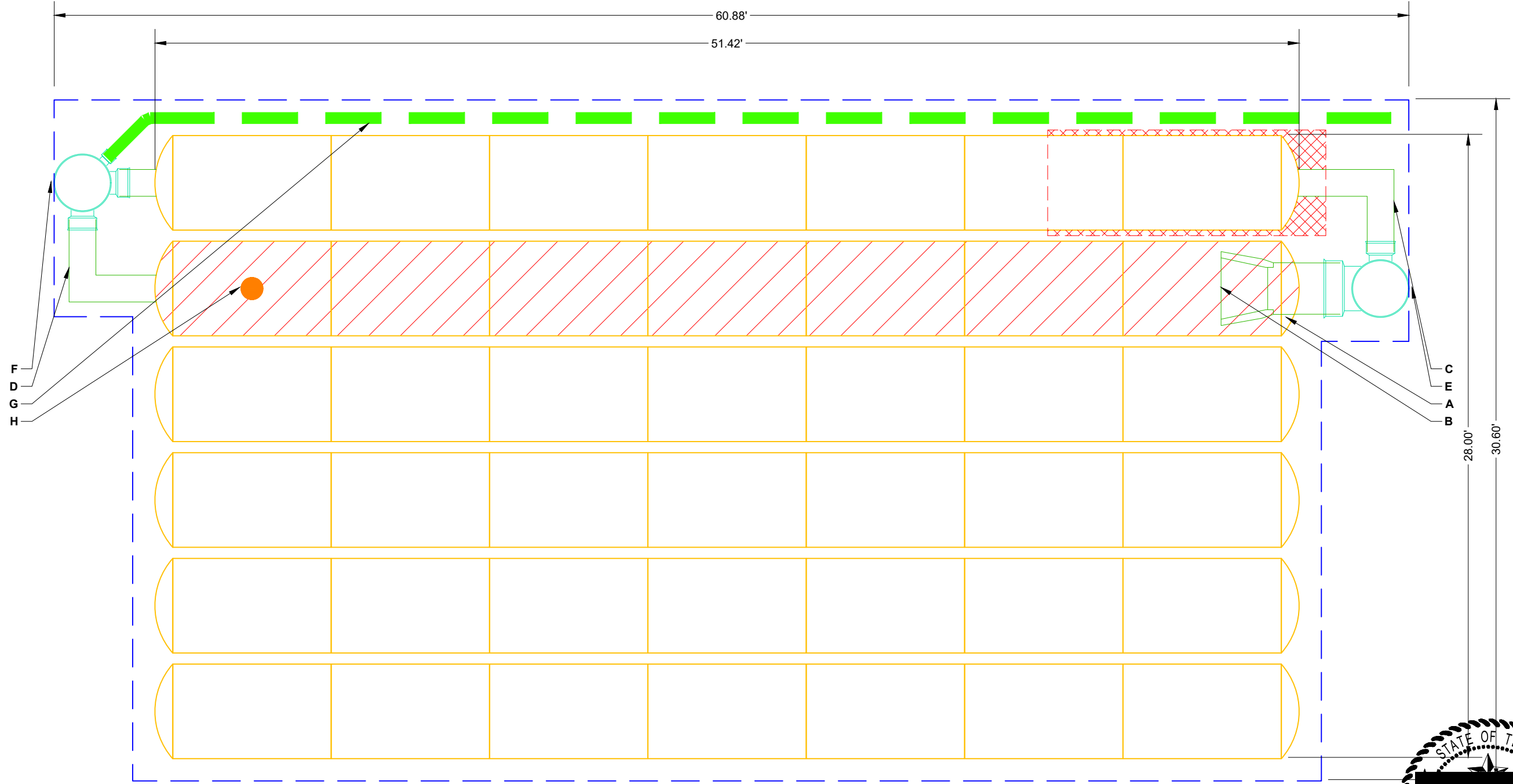
1. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



PROPOSED LAYOUT		PROPOSED ELEVATIONS		*INVERT ABOVE BASE OF CHAMBER				
				PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
42	STORMTECH SC-740 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	39.00					
12	STORMTECH SC-740 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	33.00					
6	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	32.50	PREFABRICATED EZ END CAP	A	24" BOTTOM PREFABRICATED EZ END CAP, PART#: SC740ECEZ / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	0.10"	
9	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	32.50	FLAMP	B	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: SC74024RAMP		
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	32.50	MANIFOLD	C	12" x 12" TOP MANIFOLD, ADS N-12	12.50"	
3725	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	31.50	MANIFOLD	D	12" x 12" BOTTOM MANIFOLD, ADS N-12	1.20"	
		TOP OF SC-740 CHAMBER:	31.00	NYLOPLAST (INLET W/ ISO PLUS ROW)	E	30" DIAMETER (24.00" SUMP MIN)		2.3 CFS IN
		12" x 12" TOP MANIFOLD INVERT:	29.54	NYLOPLAST (OUTLET)	F	30" DIAMETER (DESIGN BY ENGINEER)		4.0 CFS OUT
1712	SYSTEM AREA (SF)	12" BOTTOM CONNECTION INVERT:	28.60	UNDERDRAIN	G	6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN		
183.0	SYSTEM PERIMETER (ft)	24" ISOLATOR ROW PLUS INVERT:	28.51	INSPECTION PORT	H	4" SEE DETAIL		
		BOTTOM OF SC-740 CHAMBER:	28.50					
		UNDERDRAIN INVERT:	27.75					
		BOTTOM OF STONE:	27.75					



- ISOLATOR ROW PLUS (SEE DETAIL)
- PLACE MINIMUM 12.50' OF ADSPLUS125 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS
- BED LIMITS

C-STORE & GAS CANOPY

SWEENEY, TX

DATE: _____

PROJECT #: _____

DRAWN: EC

CHECKED: N/A

DESCRIPTION

DATE

DRW

CHK

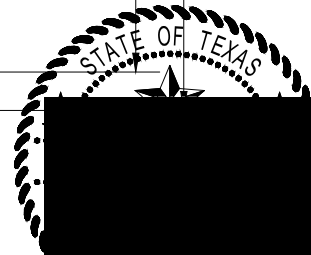
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Chamber System

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HILLIARD, OH 43026
1-800-733-7473

888-892-2694 | WWW.STORMTECH.COM

10'

5'



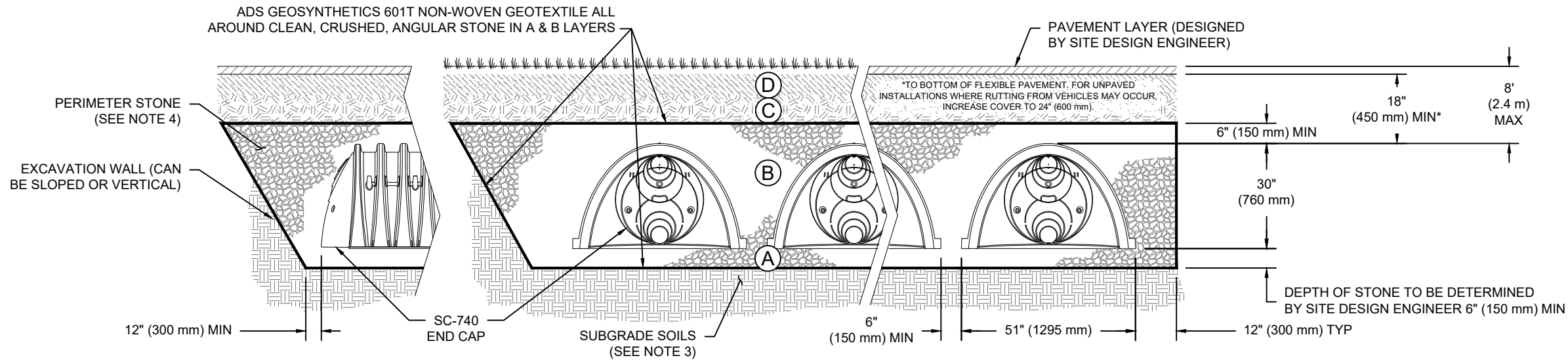
PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 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.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	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.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 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).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

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.



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 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.
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 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. 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.



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C-STORE & GAS CANOPY

SWEENEY, TX

DATE:

DRAWN: EC

CHECKED: N/A

PROJECT #:

DESCRIPTION

CHK

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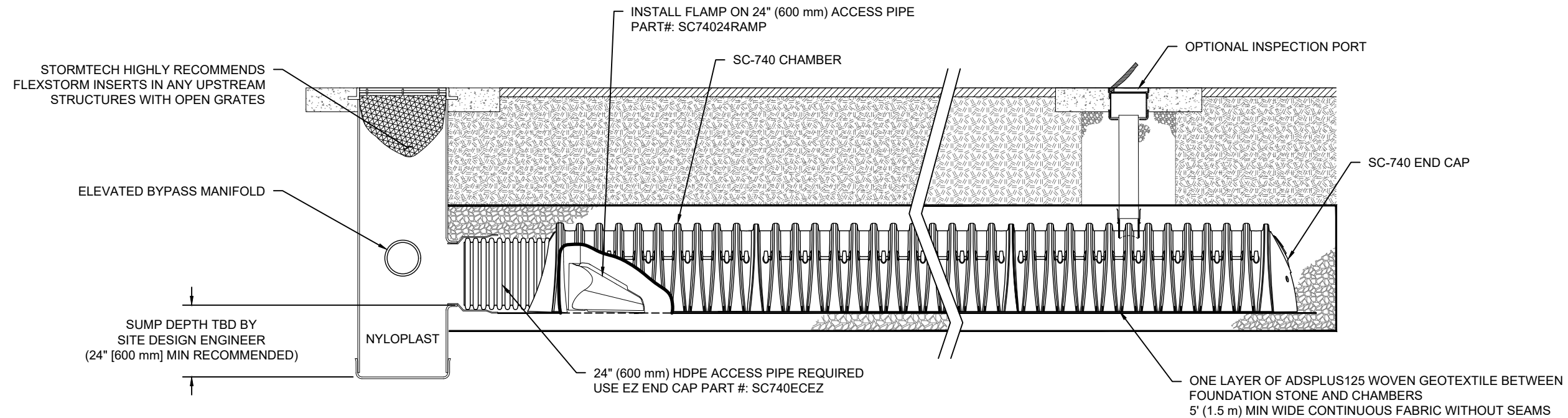
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DATE

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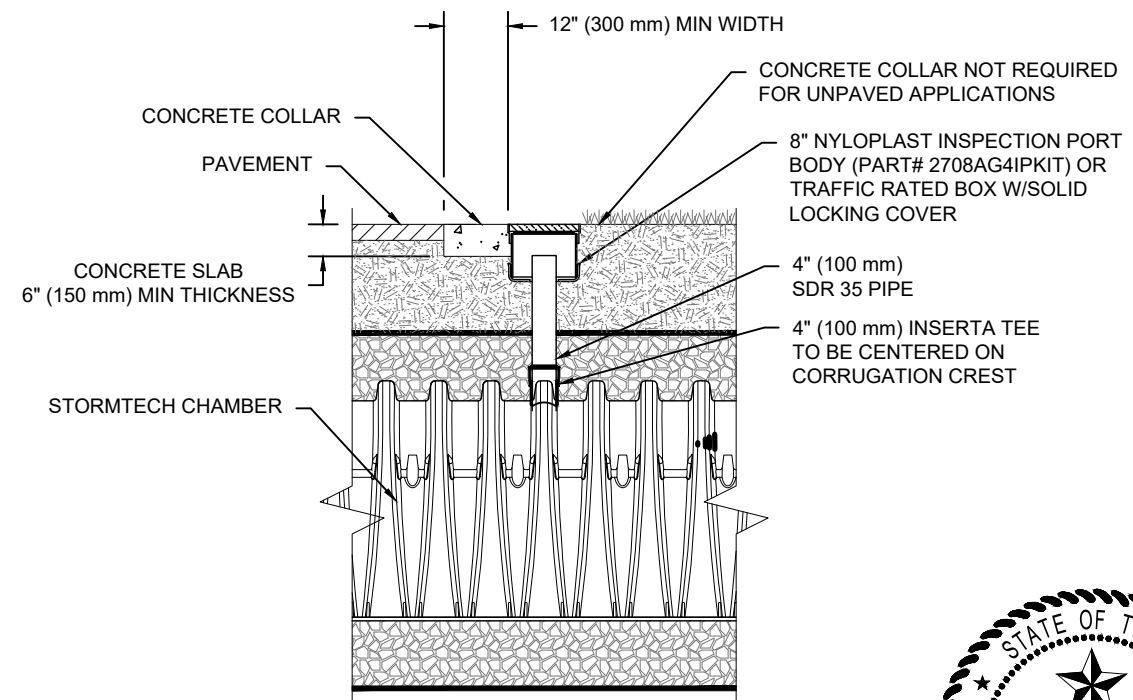
SC-740 ISOLATOR ROW PLUS DETAIL
NTS

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.



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION

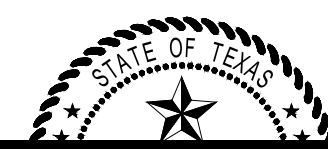
4" PVC INSPECTION PORT DETAIL
(SC SERIES CHAMBER)
NTS

C-STORE & GAS CANOPY	
SWEENEY, TX	DATE:
DRAWN: EC	PROJECT #:
CHECKED: N/A	DESCRIPTION:
	CHK
	DRW
	DATE

StormTech®
Chamber System

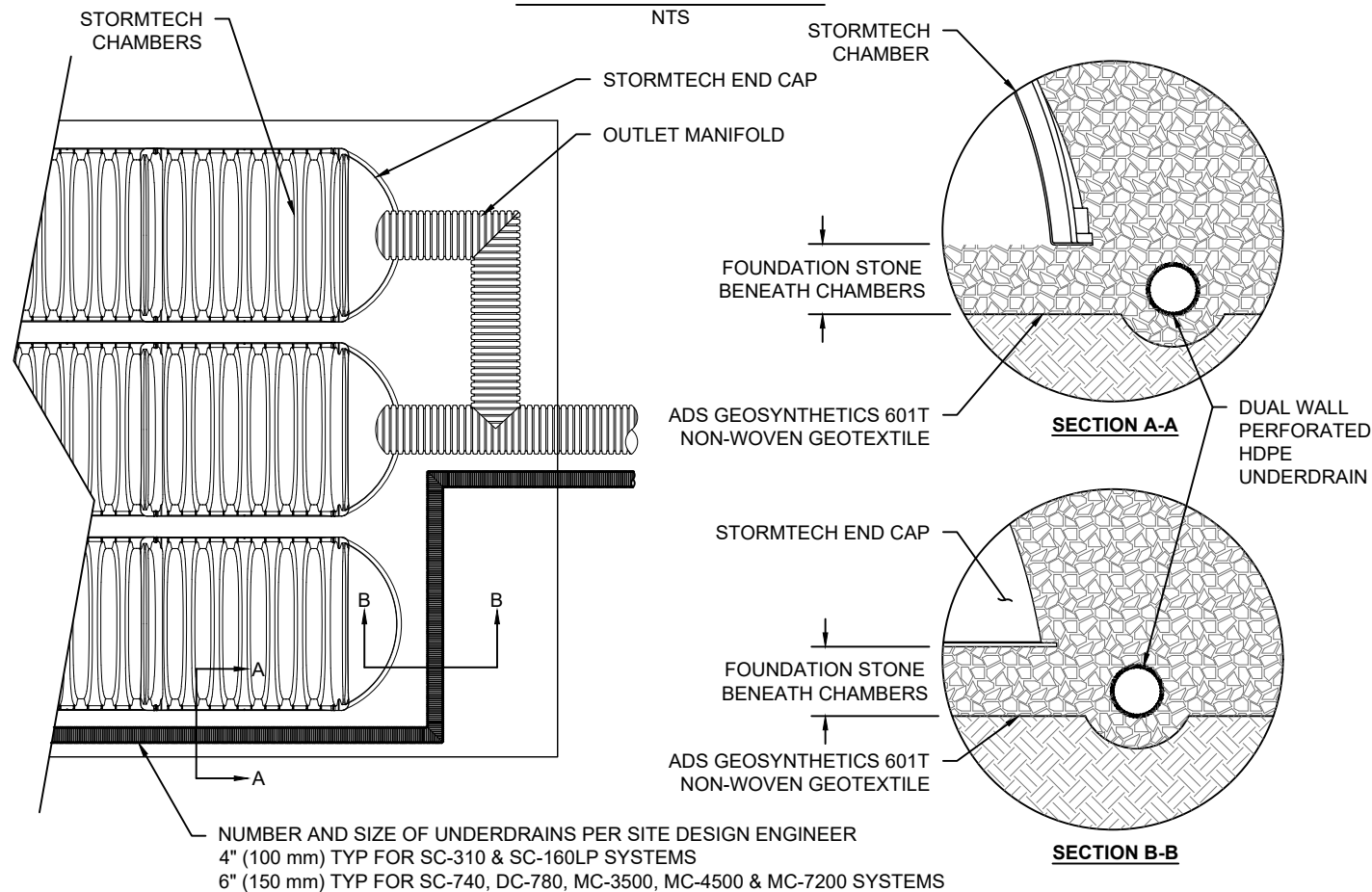
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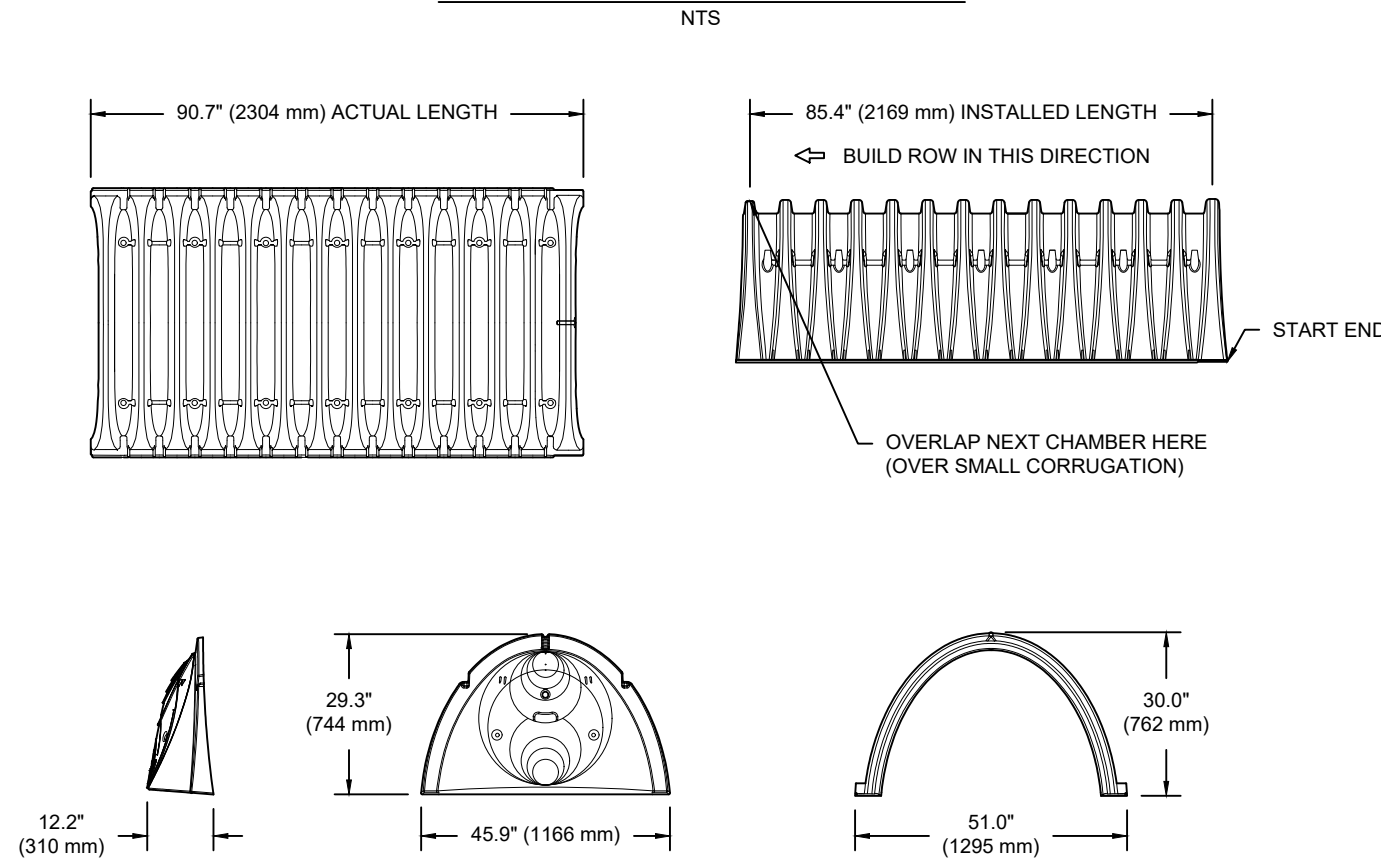


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UNDERDRAIN DETAIL



SC-740 TECHNICAL SPECIFICATION

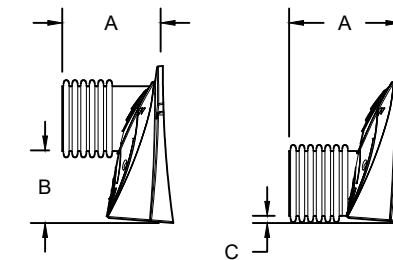


NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4"	(1295 mm X 762 mm X 2169 mm)
CHAMBER STORAGE	45.9 CUBIC FEET	(1.30 m ³)
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET	(2.12 m ³)
WEIGHT	75.0 lbs.	(33.6 kg)

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

PRE-FAB STUB AT BOTTOM OF END CAP WITH FLAMP END WITH "BR"
 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	A	B	C
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	---
SC740EPE06B / SC740EPE06BPC	---	---	---	0.5" (13 mm)
SC740EPE08T / SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	---
SC740EPE08B / SC740EPE08BPC	---	---	---	0.6" (15 mm)
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	---
SC740EPE10B / SC740EPE10BPC	---	---	---	0.7" (18 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	---
SC740EPE12B / SC740EPE12BPC	---	---	---	1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740EPE15B / SC740EPE15BPC	---	---	---	1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	---
SC740EPE18B / SC740EPE18BPC	---	---	---	1.6" (41 mm)
SC740ECEZ*	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740ECEZ 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 SC740ECEZ THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

C-STORE & GAS CANOPY
 SWEENEY, TX
 DATE: _____ DRAWN: EC
 PROJECT #: _____ CHECKED: N/A

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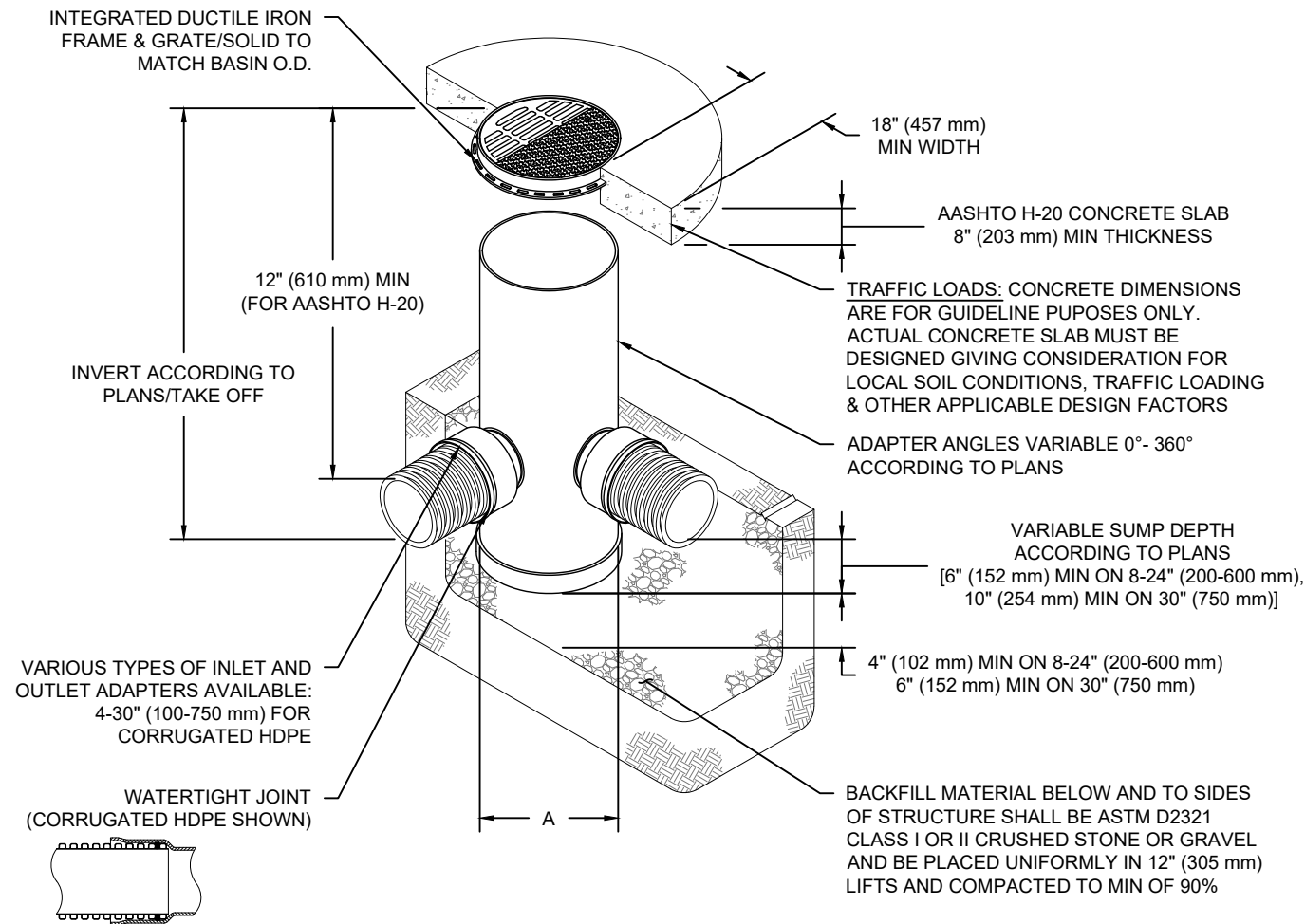
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SHEET
5 OF 6

NYLOPLAST DRAIN BASIN

NTS



NOTES

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

A	PART #	GRATE/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" (300 mm)	2812AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
15" (375 mm)	2815AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
18" (450 mm)	2818AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
24" (600 mm)	2824AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
30" (750 mm)	2830AG	PEDESTRIAN AASHTO H-20	STANDARD AASHTO H-20	SOLID AASHTO H-20

C-STORE & GAS CANOPY
SWEENEY, TX

DATE:

PROJECT #:

DESCRIPTION

CHK

DATE

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