

# JENSEN PRECAST HIGH VELOCITY INTERCEPTOR/ HORIZONTAL FLOW CLARIFIER; MODEL JPHV-30000-IB

## HYDRAULICS AND TREATMENT:

OPTIMUM DESIGN STORMWATER QUALITY DESIGN FLOW (SQDF)	5.88-CFS
STORM DRAIN DESIGN CONVEYANCE FLOW	X.XX-CFS
RETURN FREQUENCY/PERIOD OF PEAK DESIGN CONVEYANCE FLOW	XX-YRS

## TREATMENT PERFORMANCE NOTES:

- THIS STORMWATER QUALITY DESIGN FLOW (SQDF) RATE CORRESPONDS TO A 6-GPM/FT<sup>2</sup> SURFACE LOADING RATE, TARGETING THE REMOVAL OF THE 60-MICRON, FINE SILT SIZE PARTICLE FROM STORMWATER RUNOFF.
- THIS JPHV HORIZONTAL FLOW CLARIFIER WHEN SUBJECTED TO THE STORMWATER QUALITY DESIGN FLOW (SQDF) RATE LISTED IN THE TABLE ABOVE CORRESPONDS TO 6-GPM/FT<sup>2</sup> OR LESS SURFACE LOADING RATE, WHICH IS FOUR (4X) TIMES MORE CONSERVATIVE THAN THE MAXIMUM ALLOWABLE VALUE OF 24-GPM/FT<sup>2</sup> FOR HYDRODYNAMIC SEPARATORS. THIS ALLOWS FOR A MORE CONSISTENT REMOVAL EFFICIENCY AS WELL AS A SAFETY FACTOR IN CONSIDERING LARGER STORM EVENTS. THE 24-GPM/FT<sup>2</sup> SIZING GUIDANCE IS EXPLICITLY SET FORTH IN SECTION MP-51 OF THE BEST MANAGEMENT PRACTICE HANDBOOK, NEW DEVELOPMENT AND REDEVELOPMENT ADOPTED BY ALL NINE (9) OF THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARDS PUBLISHED BY THE CALIFORNIA STORMWATER QUALITY ASSOCIATION (CASQA).
- AT ALL FLOW RATES LESS THAN OR EQUAL TO THE SQDF LISTED IN THE TABLE, THIS JPHV PROVIDES:
  - FLOATING DEBRIS RETENTION
  - SEDIMENTATION WITH SCOUR PROTECTION
  - OIL & GREASE ABSORPTION
  - ORIFICE OUTLET FLOW CONTROL

## DESIGN GUIDANCE NOTES:

- THE IDEAL VERTICAL PLACEMENT OF THE INLET AND OUTLET PIPES OF A JPHV HORIZONTAL FLOW CLARIFIER MAXIMIZES THE USE OF AS MUCH THE TANK'S DEAD POOL VOLUME AS POSSIBLE. TO ACHIEVE THIS, PLACE TOP EXTERIOR OF THE INLET PIPE APPROXIMATELY 3-INCHES BELOW THE SOFFIT OF THE TOP SLAB. ESTABLISH THE INLET INVERT ELEVATION AFTER THIS PLACEMENT. SET THE DISCHARGE OUTLET PIPE INVERT APPROXIMATELY 2-INCHES BELOW THE INLET INVERT. THIS IS A BEST DESIGN GUIDELINE PRACTICE. SETTING THE INLET PIPE INVERT MORE THAN 3" BELOW THE SOFFIT IS ACCEPTABLE, THOUGH THE TANK DEAD POOL VOLUME WILL NOT BE MAXIMIZED.
- A STANDARD JENSEN PRECAST INTERNAL FLOW CONTROL ORIFICE PLATE RESTRICTS OUTLET FLOW TO THE SQDF RATE AND THEREBY ACCUMULATED FLOATABLES AND FINE SEDIMENTS ARE RETAINED DURING LARGER STORM EVENTS.

## GENERAL NOTES:

- THIS LAYOUT SKETCH IS PROVIDED IN A SCHEMATIC FORMAT. DETAIL OF JENSEN DIVERSION MANHOLE/BYPASS STRUCTURE WITH ADJUSTABLE WEIR AND OPTION FORMED BASE CHANNELS NOT SHOWN. THIS SHEET IS IN ENGINEERING & CONSTRUCTION FORMATTED DETAIL. ENGINEERING & CONSTRUCTION DETAIL READILY AVAILABLE. CONTACT JENSEN PRECAST.
- PLAN VIEW TOP SLAB WITH FRAMES AND COVERS ARE NOT SHOWN FOR CLARITY.
- INLET/OUTLET PIPE STUBS PROVIDED BY JENSEN PRECAST, PIPE TYPE ADAPTORS PROVIDED BY CUSTOMER.
- OIL SORBENT MATS TO BE EQUIPPED WITH RETAINING CORD AND RING, SECURED TO OR UNDER FRAME AND COVER, FOR HAND ACCESS BY OTHERS.
- DESIGN LOAD: H-20 TRAFFIC FROM 1' TO 6' OF COVER PER ASTM C890 & C915 AND ASSHTO LOADING METHODS.
- CONTACT JENSEN PRECAST FOR OTHER INSTALLATION DEPTHS, INLET/OUTLET CONFIGURATIONS, AND/OR LOADING CONDITIONS FOR STRUCTURAL DESIGN REVISION TO MEET PROJECT SPECIFIC NEEDS.

## CONSTRUCTION NOTES:

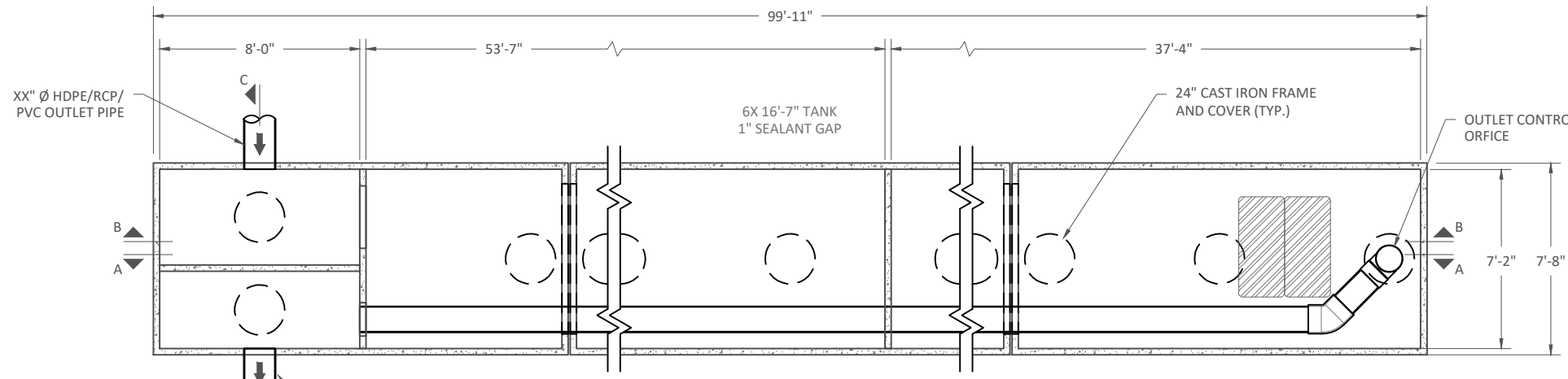
- CONTRACTOR TO VERIFY VERTICAL DIMENSIONS OF ALL PRECAST PIECES IN FIELD.
- PRECAST MATERIALS AND MANUFACTURING METHODS SHALL CONFORM TO ASTM C-857 & C-478.
- APPLY BUTYL MASTIC AND/OR GROUT TO SEAL JOINTS OF MANHOLE STRUCTURE.
- APPLY LOAD TO MASTIC SEAL IN JOINTS OF TANK SECTIONS TO COMPRESS SEALANT IF NECESSARY. UNIT MUST BE WATER TIGHT, HOLDING WATER UP TO FLOWLINE INVERT (MINIMUM).
- ALL INTERNAL COMPONENTS INSTALLED BY MANUFACTURER.

## MATERIALS:

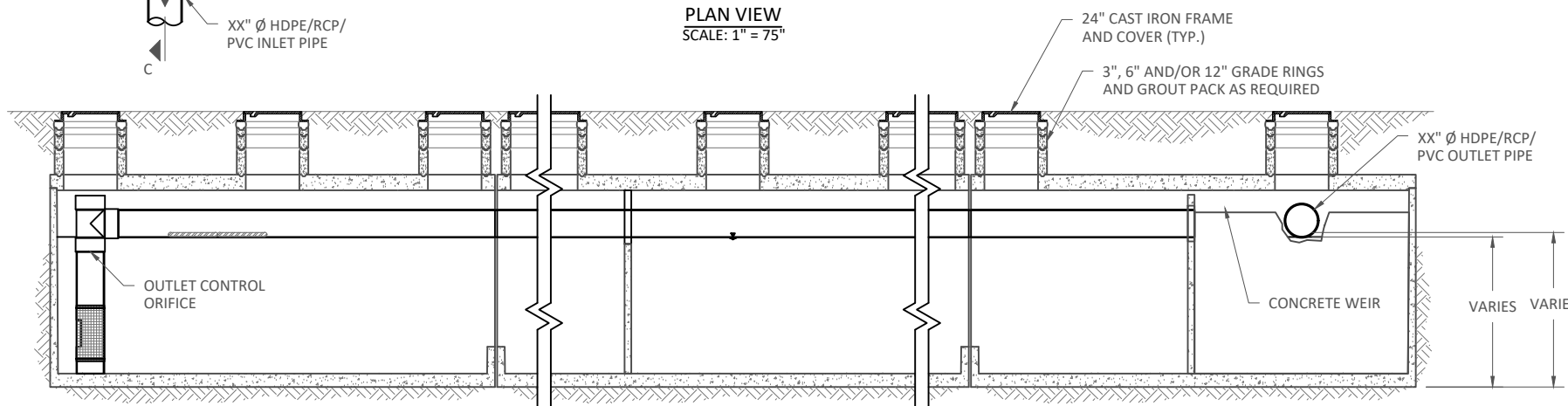
- ALL DIMENSIONS ARE IN FEET AND/OR DECIMAL INCHES.
- PRECAST MATERIALS AND MANUFACTURING METHODS SHALL CONFORM TO ASTM C-857 & C-478.
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH F'c = 5,000-psi AT 28-DAYS.
- THE PORTLAND CEMENT USED IN THE PRECAST SECTION SHALL MEET THE REQUIREMENTS OF TYPE II/V HIGH SULFATE RESISTANT CEMENT IN ACCORDANCE WITH ASTM CLASS M C-150.

## LIFTING WEIGHTS:

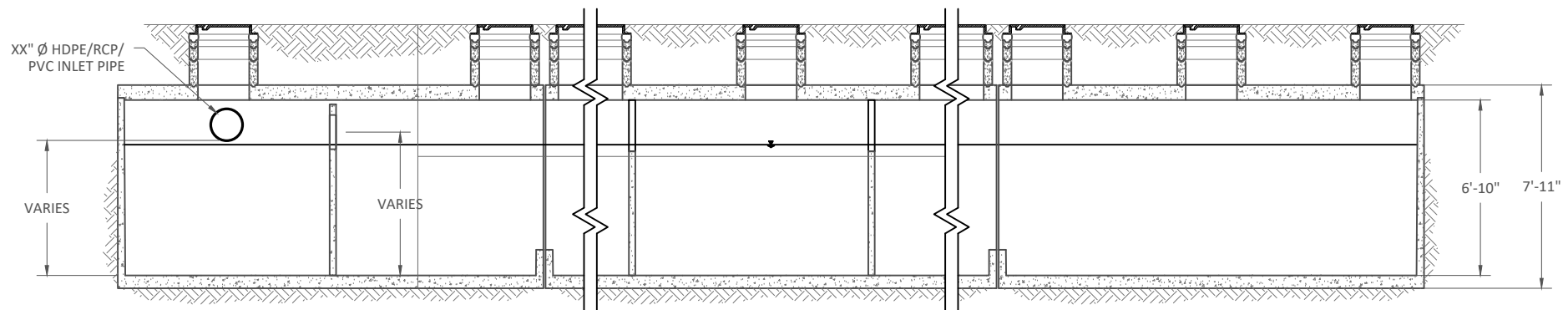
- HEAVIEST PICK WEIGHT IS 24,500-LBS.
- JENSEN CRANE TRUCK CAN SET A MAXIMUM OF 25,000-LBS AT 15-FT OFFSET DISTANCE FROM CENTER OF CRANE TRUNNION.



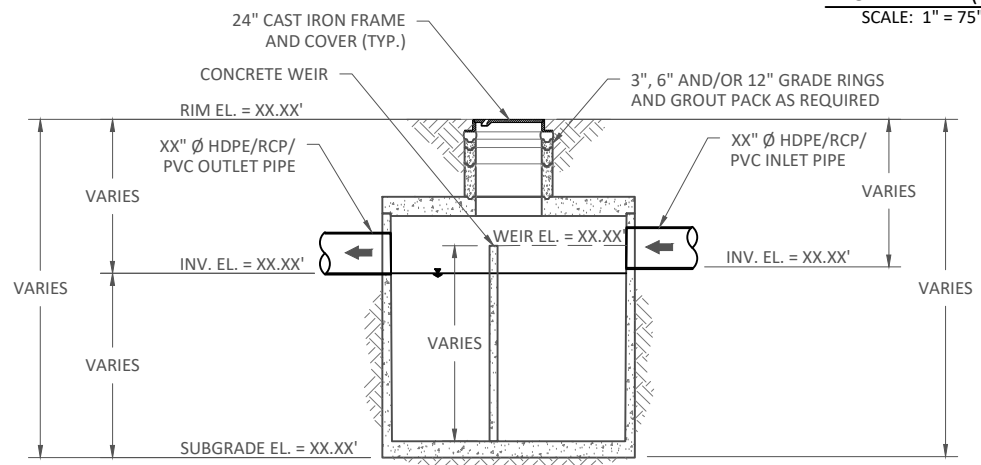
PLAN VIEW  
SCALE: 1" = 75"



PROFILE VIEW (A-A)  
SCALE: 1" = 75"



PROFILE VIEW (B-B)  
SCALE: 1" = 75"



SECTION VIEW (C-C)  
SCALE: 1" = 70"

## MATERIALS LIST - PROVIDED WITH UNIT:

QTY	COMPONENT DESCRIPTION	MATERIAL PROVIDER	RESPONSIBLE INSTALLER
2	XX" Ø PVC INLET AND OUTLET PIPE STUB	CONTRACTOR	CONTRACTOR
1	12" Ø PVC TEE, ORIFICE PLATE AND VERTICAL PIPE	JENSEN	JENSEN
1	OUTLET SCREEN	JENSEN	JENSEN
2	OIL & GREASE ABSORPTION PAD	JENSEN	CONTRACTOR
15	24" Ø CAST IRON FRAME AND COVER, H20 RATED	JENSEN	CONTRACTOR
XX	3", 6" AND/OR 12" GRADE RINGS	JENSEN	CONTRACTOR

MODEL: <b>JPHV-30000-IB</b> HORIZONTAL FLOW CLARIFIER LAMINAR SEDIMENTATION		PROJECT: PROJECT NAME, CITY, STATE			
Sedimentation, Oil & Grease, Floatable Debris		ORG. DWG. DATE 04/15/2020	REV. DWG. DATE XX/XX/XXXX	SCALE: AS SHOWN	SHEET SIZE 11" X 17"
			DRAWN BY R. L.	SHEET NUMBER JPHV-30000-IB	

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