

# JENSEN PRECAST HIGH VELOCITY INTERCEPTOR/ HORIZONTAL FLOW CLARIFIER; MODEL JPHV-20000-IB

## HYDRAULICS AND TREATMENT:

OPTIMUM DESIGN STORMWATER QUALITY DESIGN FLOW (SQDF)	4.58-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:

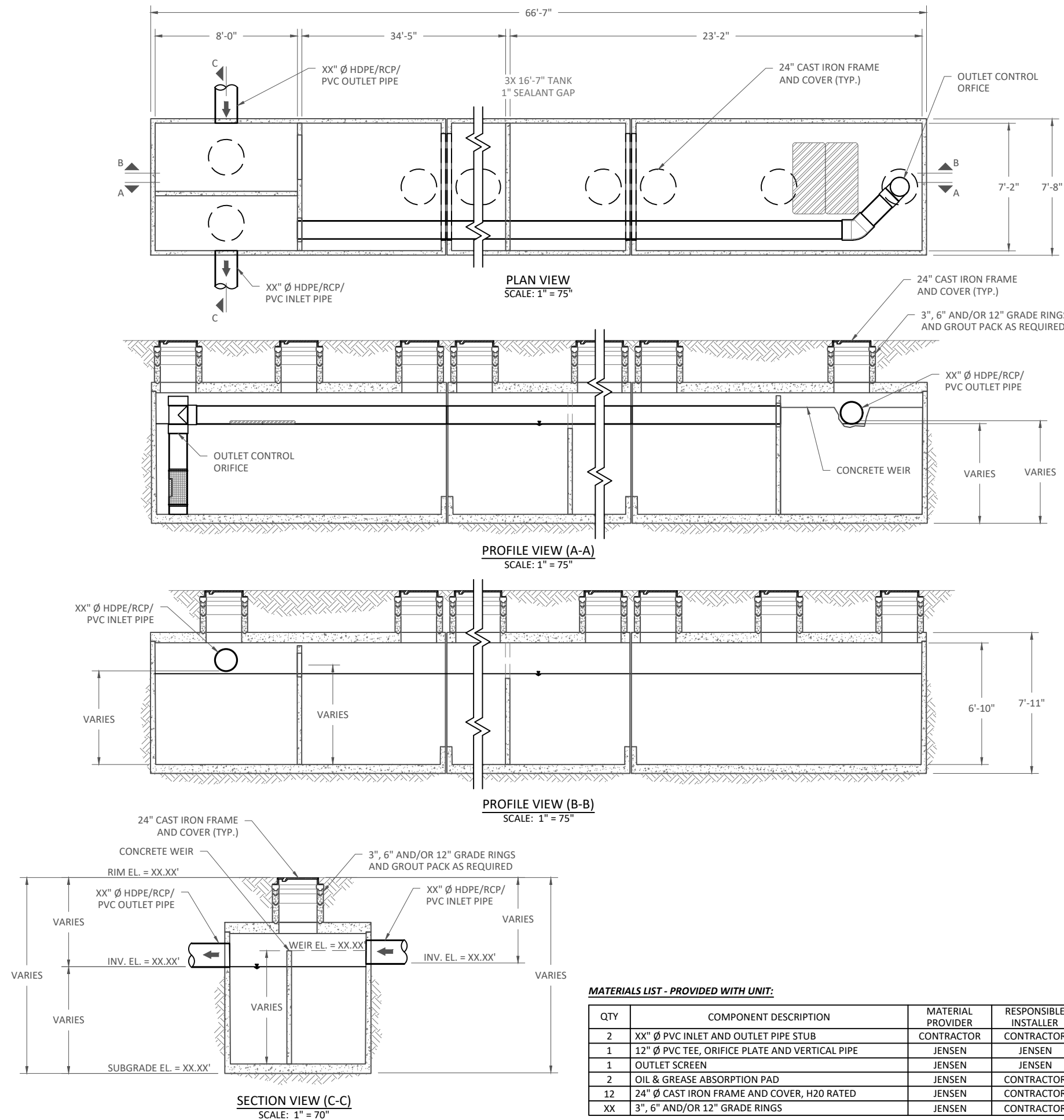
- CONTRACTOR TO VERIFY VERTICAL DIMENSIONS OF ALL PRECAST PIECES IN FIELD.
- VERIFY BASE MATERIAL ELEVATIONS BEFORE PLACING PRECAST COMPONENTS OR BACKFILLING.
- APPLY BUTYL MASTIC AND/OR GROUT TO SEAL JOINTS OF MANHOLE STRUCTURE.
- APPLY LOAD TO MASTIC SEAL IN JOINTS OF TANK SECTIONS TO COMPRESS SEALANT 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'<sub>c</sub> = 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.



## 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
12	24" Ø CAST IRON FRAME AND COVER, H20 RATED	JENSEN	CONTRACTOR
XX	3", 6" AND/OR 12" GRADE RINGS	JENSEN	CONTRACTOR

<b>MODEL:</b> <b>JPHV-2000-IB</b> HORIZONTAL FLOW CLARIFIER LAMINAR SEDIMENTATION		<b>PROJECT:</b> PROJECT NAME, CITY, STATE		<b>JENSEN WATER RESOURCES</b> 521 DUNN CIRCLE, SPARKS, NV 89431-6312 (877) 649-0095 FAX (775) 440-2013	
<b>Sedimentation, Oil &amp; Grease, Floatable Debris</b>	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-20000-IB	

Copyright Information © 2011 Jensen Precast All Rights Reserved. All materials appearing as Jensen Precast documents and the like are proprietary work product and are protected under U.S. copyright and other laws. Unless in conjunction with business conducted with Jensen Precast, any use of Jensen Precast work product without express, written consent is prohibited and recipient is prohibited from distributing any and all work product to non-approved third parties under penalty of civil action.