

VIRGINIA GRAEME BAKER POOL & SPA SAFETY ACT IMPROVEMENTS FOR: VILLAGE OF ORLAND PARK CENTENNIAL PARK FAMILY AQUATIC CENTER

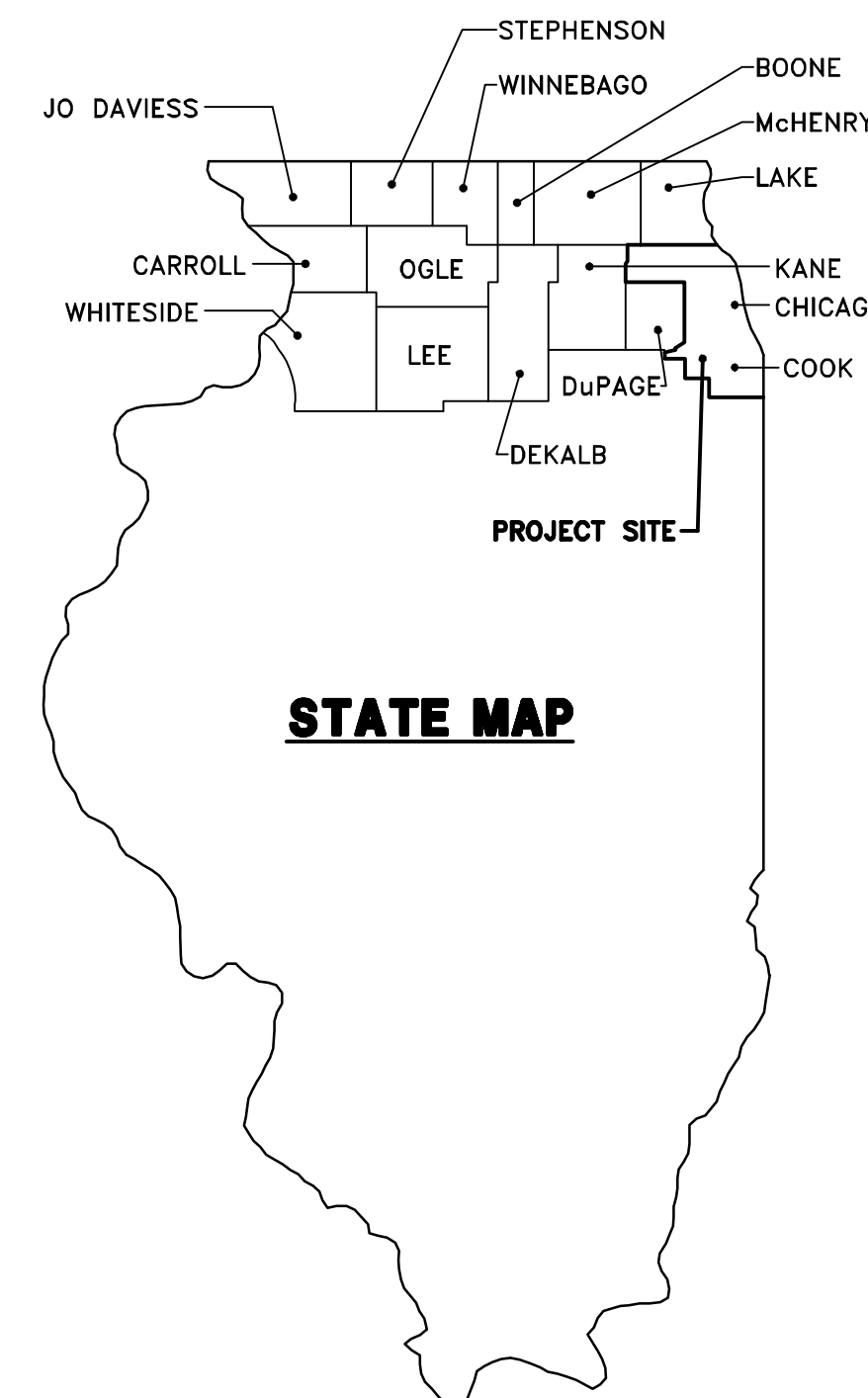
15600 WEST AVENUE
ORLAND PARK, IL 60462
(708) 349-4386

FOR:

VILLAGE OF ORLAND PARK
14700 RAVINIA AVE.
ORLAND PARK, IL 60462

DRAWING INDEX

SHEET NUMBER	DESCRIPTION
COVER SHEET	
PSK-1	SITE PLAN - EXISTING - PLUMBING
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PSK-3	MAIN POOL LAP & PLUNGE AREA - NEW WORK - PLUMBING
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CERTIFICATION: LICENSE #: 062-33310 SEAL EXPIRES: NOVEMBER 30, 2011

SHEET	ISSUED	REVISED	REVISED	REVISED	REVISED
G-1	04/19/10		11-12-10	1-28-11	3-14-11
PSK-1	04/19/10				
PSK-2	04/19/10				
PSK-3	04/19/10				3-14-11
PSK-4	04/19/10				3-14-11
PSK-5	04/19/10				
PSK-6	04/19/10	06/28/10		1-28-11	3-14-11
PSK-7	04/19/10	06/28/10	11-12-10	1-28-11	3-14-11
PSK-8	04/19/10				

METRO DESIGN ASSOCIATES, INC.
MECHANICAL/ELECTRICAL/PLUMBING ENGINEERS
1707 N. Randall Road Suite 390 Elgin, Illinois 60123-7820
Voice: (224) 629-4444 Fax: (847) 622-7485
WWW.METRODGN.COM

APRIL 19, 2010
PROJECT #: 1034-A-2

ISSUED FOR PERMIT

EXISTING SWIMMING POOL DATA:

PLUNGE POOL & LAZY RIVER:

POOL CHARACTERISTICS:

PLUNGE POOL:
 SURFACE AREA: 1200 SQ. FT.
 WATER DEPTHS: 2'-6" to 3'-6"
 CAPACITY: 29,892 GALLONS
 TURNOVER RATE: 60 MIN.
 FLOW RATE: 498 GPM

EXISTING DRAINS: (2) 18"x18" SUMP TO REMAIN, GRATE TO BE REPLACED.

LAZY RIVER:
 TOTAL SURFACE AREA: 10,434 S.F.
 WATER DEPTHS: 1'-0" to 2'-5"
 CAPACITY: 194,135 GALLONS
 ENTRY TURNOVER RATE: 60 MIN.
 LAZY RIVER TURNOVER RATE: 180 MINS.
 LAZY RIVER FLOW RATE: 1,036 GPM
 ENTRY FLOW RATE: 129 GPM
 TOTAL FLOW RATE: 1,165 GPM

EXISTING DRAINS: (1) 3"x5", (1) 3"x7", (1) 3"x10" SUMP TO REMAIN, GRATE TO BE REPLACED.

FILTER:
 (1) NEPTUNE BENSON SDC/DDC SERIES # 102SDC-10, 102" DUAL CELL STEEL TANK, 113.5 S.F. OF SURFACE AREA, 14.7 GPM/S.F. FILTER AREA, AUTO BACKWASH.

FILTER PUMP:
 (1) AURORA PUMP 340-ES, 6x6x11, 1663 GPM @ 70' TDH, 40 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, TEFC MOTOR END SUCTION, CLOSE COUPLED, BRONZE FITTED, EPOXY COATED VOLUTE.

PUMP MAXIMUM FLOW CAPACITY: 2,150 GPM

ADDITIONAL PUMPS:

PROPULSION PUMP #1:
 VERT-LINE PUMP, VLH10 HEAD, #13EH BOWL, 2,200 GPM @ 45' TDH, 40 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, WP-1 MOTOR, BRONZE FITTED.

PUMP MAXIMUM FLOW CAPACITY: 2,800 GPM

PROPULSION PUMP #2:
 VERT-LINE PUMP, VLH10 HEAD, #12FHL BOWL, 1,600 GPM @ 45' TDH, 425 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, WP-1 MOTOR, BRONZE FITTED.

PUMP MAXIMUM FLOW CAPACITY: 2,125 GPM

PROPULSION PUMP #3:
 VERT-LINE PUMP, VLH12 HEAD, #14FHM BOWL, 3,000 GPM @ 45' TDH, 75 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, WP-1 MOTOR, BRONZE FITTED.

PUMP MAXIMUM FLOW CAPACITY: 4,750 GPM

TUBE SLIDE PUMP:
 VERT-LINE PUMP, VLH10 HEAD, #15EH BOWL, 3,000 GPM @ 45' TDH, 50 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, WP-1 MOTOR, BRONZE FITTED.

PUMP MAXIMUM FLOW CAPACITY: 3,600 GPM

BODY SLIDE PUMP:
 VERT-LINE PUMP, VLH10 HEAD, #15FHL BOWL, 1,500 GPM @ 45' TDH, 25 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, WP-1 MOTOR, BRONZE FITTED.

PUMP MAXIMUM FLOW CAPACITY: 2,125 GPM

MAIN POOL:

POOL CHARACTERISTICS:

TOTAL SURFACE AREA: 17,220 S.F.
 WATER DEPTHS: 0'-0" to 5'-0"
 MAIN AREA CAPACITY: 255,082 GALLONS
 SLIDE AREA CAPACITY: 25,100 GALLONS
 TOTAL POOL CAPACITY: 280,182 GALLONS
 MAIN POOL AREA TURNOVER RATE: 3 HOURS
 SLIDE AREA TURNOVER RATE: 1 HOUR
 TOTAL POOL FLOW RATE: 1,156 GPM

EXISTING DRAINS: (5) 18"x18" SUMP TO REMAIN, GRATE TO BE REPLACED.

FILTER:
 (2) NEPTUNE BENSON 84" DUAL CELL, MODEL 84-SDC, HIGH RATE SAND WITH AUTO BACKWASH.

FILTER PUMP:
 VERT-LINE, 1156 GPM @ 70' TDH, 25 HP, 460V, 3 PH.
 PUMP MAXIMUM FLOW CAPACITY: 2000 GPM

ADDITIONAL PUMPS:

BODY FLUME PUMP:
 VERT-LINE, 1200 GPM @ 30' TDH, 15HP, 460V, 3 PH.
 PUMP MAXIMUM FLOW CAPACITY: 1300 GPM

WATER WORKS PUMP:
 VERT-LINE, 575 GPM @ 35' TDH, 7.5 HP, 460V, 3 PH.
 PUMP MAXIMUM FLOW CAPACITY: 640 GPM

ACTIVITY POOL:

POOL CHARACTERISTICS:

TOTAL SURFACE AREA: 5,110 S.F.
 CAPACITY: 239,520 GALLONS
 TURNOVER RATE: 240 MIN.
 FLOW RATE: 998 GPM

EXISTING DRAINS: (2) 18"x18" SUMP TO REMAIN, GRATE TO BE REPLACED.

FILTER:

(1) NEPTUNE BENSON SDC/DDC SERIES, 84SDC-8, 84" DUAL CELL STEEL TANK, 77 S.F. OF SURFACE AREA, 12.96 GPM/S.F. FILTER AREA, AUTO BACKWASH.

FILTER PUMP:
 AURORA PUMP 340-ES 5x6x11, 998 GPM @ 70' TDH, 25 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, TEFC MOTOR END SUCTION, CLOSE COUPLED, BRONZE FITTED, EPOXY COATED VOLUTE.

PUMP MAXIMUM FLOW CAPACITY: 1550 GPM

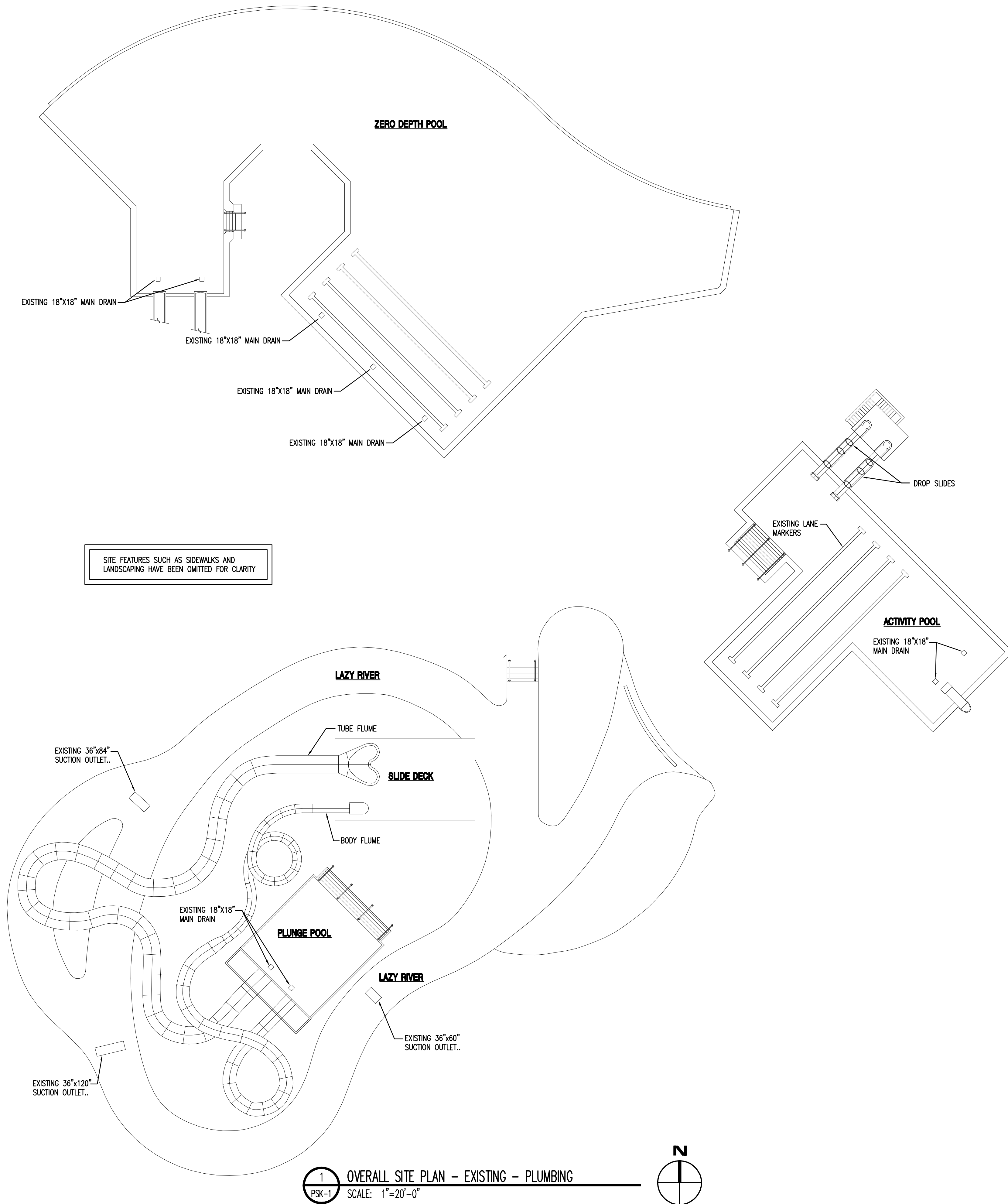
ADDITIONAL PUMPS:

DROPSLIDE PUMP #1:
 AURORA PUMP 340-ES 6x6x12, 2000 GPM @ 35' TDH, 50 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, TEFC MOTOR END SUCTION, CLOSE COUPLED, BRONZE FITTED, EPOXY COATED VOLUTE.

PUMP MAXIMUM FLOW CAPACITY: 2500 GPM

DROPSLIDE PUMP #2:
 AURORA PUMP 340-ES 5x6x11, 1000 GPM @ 35' TDH, 5 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, TEFC MOTOR END SUCTION, CLOSE COUPLED, BRONZE FITTED, EPOXY COATED VOLUTE.

PUMP MAXIMUM FLOW CAPACITY: 1400 GPM



1 OVERALL SITE PLAN - EXISTING - PLUMBING
 PSK-1 SCALE: 1"=20'-0"

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Virginia Graeme Baker Pool & Spa Safety Act Improvements for:
VILLAGE OF ORLAND PARK
CENTENNIAL PARK FAMILY AQUATIC CENTER
16600 WEST AVENUE, ORLAND PARK, IL 60462

PROJECT NUMBER:	004-A-2	REVISION DATES:
PROJECT MANAGER:	METRO	
DRAWN BY:	METRO	
DATE:	04-19-2010	

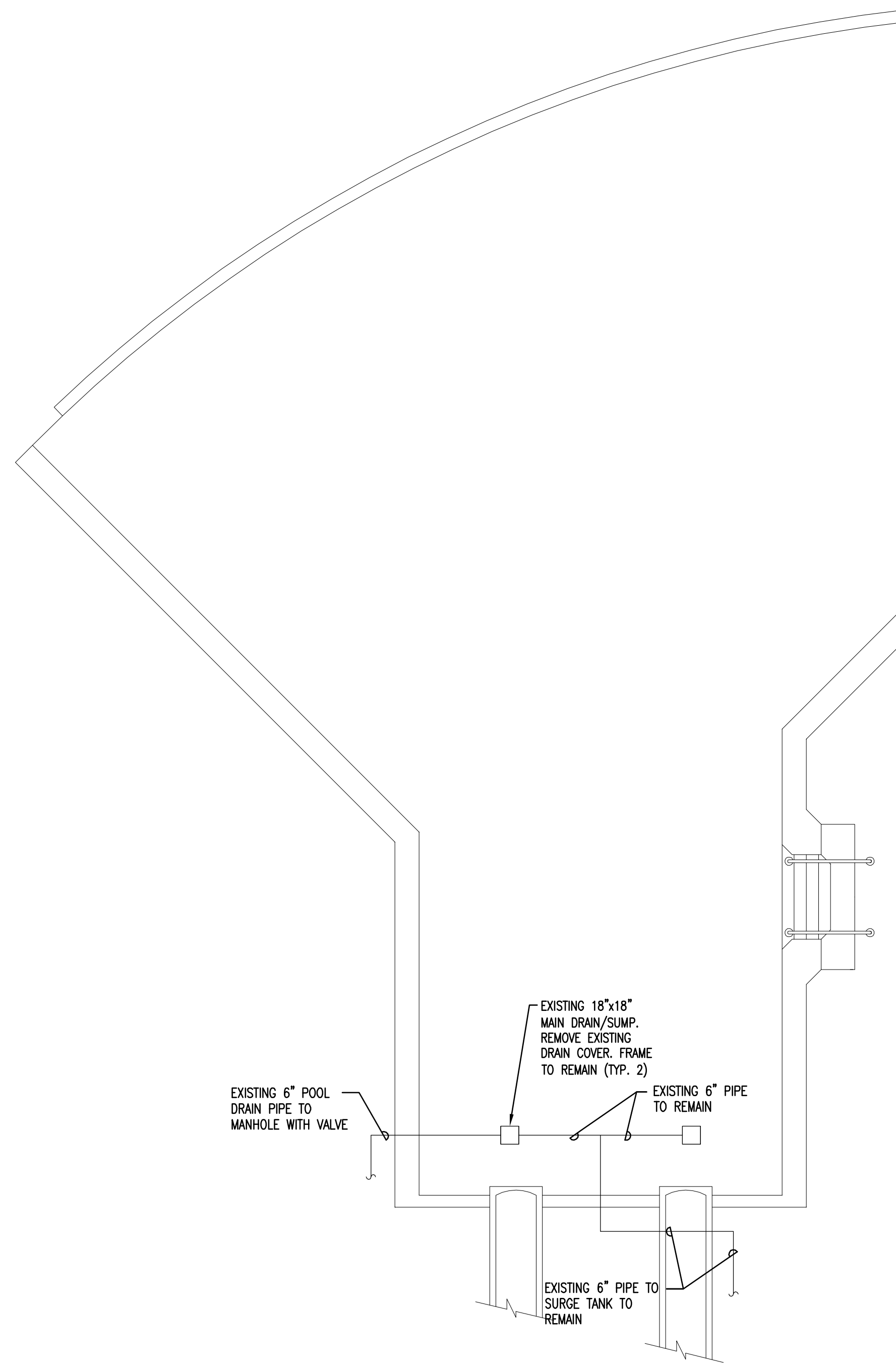
SITE PLAN
 EXISTING
 PLUMBING

PSK-1

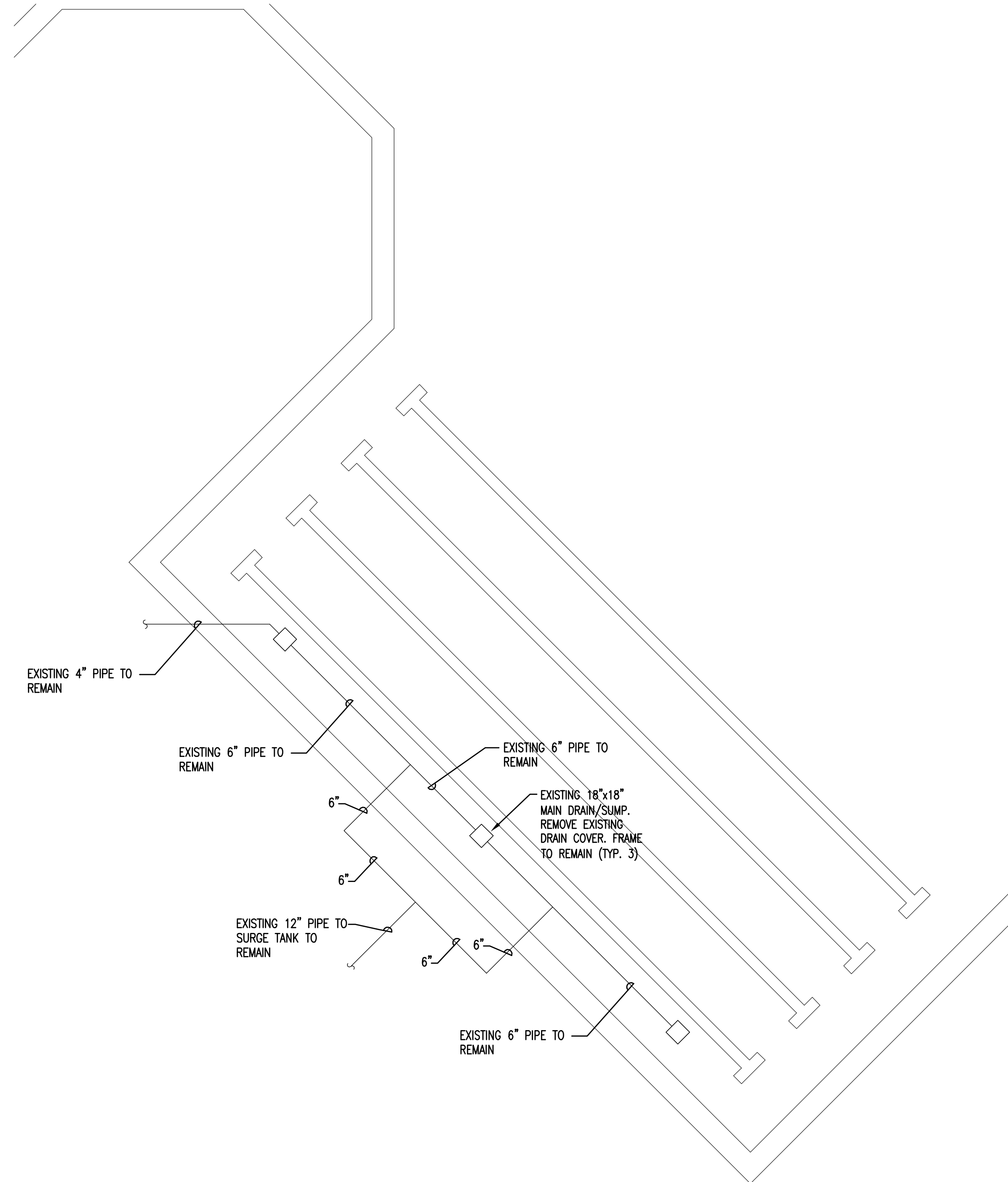
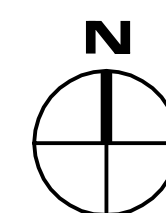
PERMIT / BID ISSUE - FOR CONSTRUCTION

EXISTING SWIMMING POOL DATA:

MAIN POOL:
 EXISTING DRAINS: (5) 18"x18" SUMP TO REMAIN. GRATE TO BE REPLACED.
 FILTER:
 (2) NEPTUNE BENSON 84" DUAL CELL, MODEL 84-SDC, HIGH RATE SAND WITH AUTO BACKWASH.
 FILTER PUMP:
 VERTILINE, 1156 GPM @ 70' TDH, 25 HP, 460V, 3 PH.
 PUMP MAXIMUM FLOW CAPACITY: 2,000 GPM
ADDITIONAL PUMPS:
BODY FLUME PUMP:
 VERTILINE, 1200 GPM @ 30' TDH, 15HP, 460V, 3 PH
 PUMP MAXIMUM FLOW CAPACITY: 1,300 GPM
WATER WORKS PUMP:
 VERTILINE, 575 GPM @35' TDH, 7.5 HP, 460V, 3 PH
 PUMP MAXIMUM FLOW CAPACITY: 640 GPM



1 MAIN POOL PLUNGE AREA - EXISTING - PLUMBING
 PSK-2 SCALE: 1/8" = 1'-0"



1 MAIN POOL LAP AREA - EXISTING - PLUMBING
 PSK-2 SCALE: 1/8" = 1'-0"



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PROJECT MANAGER:	METRO	
DRAWN BY:	METRO	
DATE:	04-19-2010	

MAIN POOL PLUNGE & LAP AREA
 EXISTING
 PLUMBING

PSK-2

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NEW WORK SWIMMING POOL DATA:

MAIN POOL:

PROPOSED MAIN DRAINS:
 FURNISH AND INSTALL (3) BEE SAFE 1'-46" DIA. GRATE COVERS WITH MANUFACTURER'S HARDWARE AND (2) NEPTUNE BENSON AEGIS GRATE COVERS WITH MANUFACTURER'S HARDWARE.

TOTAL FLOW CAPACITY: 792 GPM / BEE SAFE COVER AND 1432 GPM/AEGIS COVER 5240 GPM.

FILTER:
 (2) NEPTUNE BENSON 84" DUAL CELL, MODEL 84-SDC, HIGH RATE SAND WITH AUTO BACKWASH.

FILTER PUMP:
 VERTILINE, 1156 GPM @ 70' TDH, 25 HP, 460V, 3 PH.

PUMP MAXIMUM FLOW CAPACITY: 2,000 GPM

ADDITIONAL PUMPS:

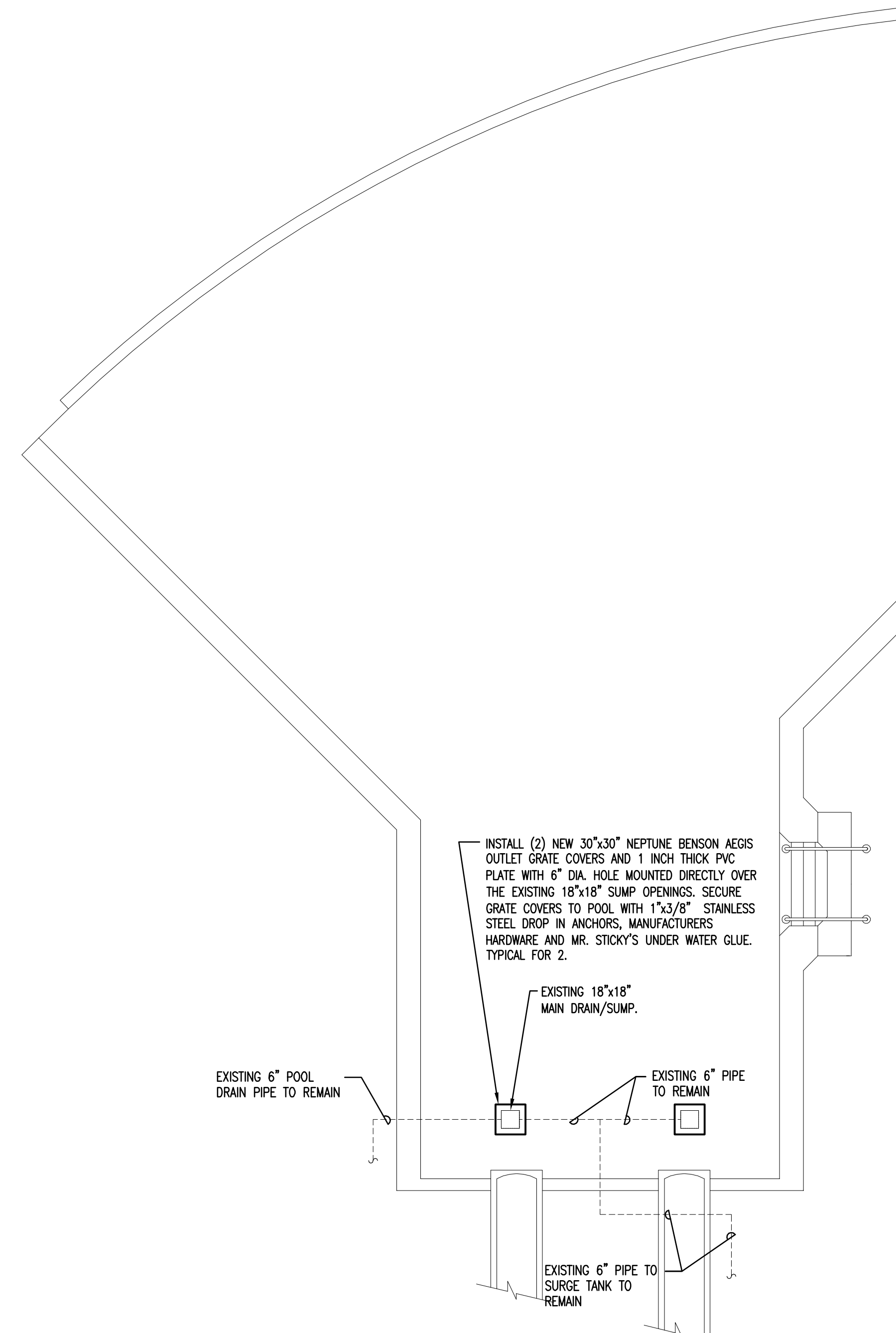
BODY FLUME PUMP:
 VERTILINE, 1200 GPM @ 30' TDH, 15HP, 460V, 3 PH

PUMP MAXIMUM FLOW CAPACITY: 1,300 GPM

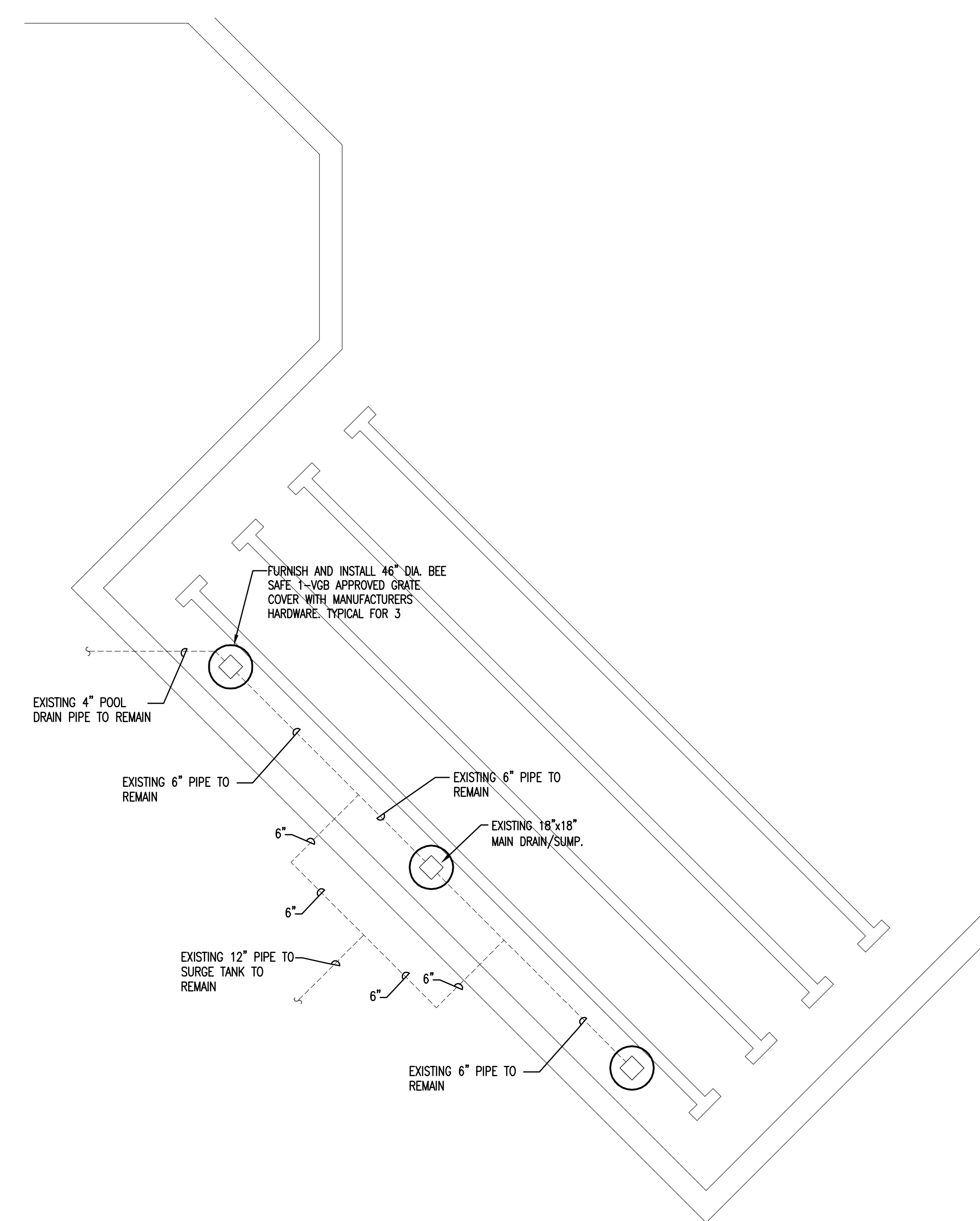
WATER WORKS PUMP:
 VERTILINE, 575 GPM @ 35' TDH, 7.5 HP, 460V, 3 PH

PUMP MAXIMUM FLOW CAPACITY: 640 GPM

TOTAL PUMP CAPACITY: 3,940 GPM.



1 MAIN POOL PLUNGE AREA - NEW WORK - PLUMBING
 PSK-3 SCALE: 1/8" = 1'-0" 



1 MAIN POOL LAP AREA - NEW WORK - PLUMBING
 PSK-3 SCALE: 1/8" = 1'-0" 

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PROJECT NUMBER:	1004-A-2	REVISION DATES:	
PROJECT MANAGER:	METRO	REVISIONS:	3-14-2011
DRAWN BY:	METRO		
DATE:	04-19-2010		

MAIN POOL PLUNGE & LAP AREA
 NEW WORK
 PLUMBING

PSK-3

PERMIT / BID ISSUE - FOR CONSTRUCTION

EXISTING ACTIVITY POOL DATA:

EXISTING DRAINS: (2) 18"x18" SUMP TO REMAIN, GRATE TO BE REMOVED; (6) 30"x30" WALL GRATES TO BE REMOVED.

FILTER:
 (1) NEPTUNE BENSON SDC/DDC SERIES, 84SDC-8, 84" DUAL CELL STEEL TANK, 77 S.F. OF SURFACE AREA, 12.96 GPM/S.F. FILTER AREA, AUTO BACKWASH.

FILTER PUMP:
 AURORA PUMP 340-ES 5x6x11, 998 GPM @70 TDH, 25 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, TEFC MOTOR END SUCTION, CLOSE COUPLED, BRONZE FITTED, EPOXY COATED VOLUTE.

PUMP MAXIMUM FLOW CAPACITY: 1,600 GPM

ADDITIONAL PUMPS:

DROPSLIDE PUMP #1
 AURORA PUMP 340-ES 6x6x12, 2000 GPM @35' TDH, 50 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, TEFC MOTOR END SUCTION, CLOSE COUPLED, BRONZE FITTED, EPOXY COATED VOLUTE.
PUMP MAXIMUM FLOW CAPACITY: 1,300 GPM

DROPSLIDE PUMP #2
 AURORA PUMP 340-ES 6x6x11, 1000 GPM @ 35' TDH, 15 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, TEFC MOTOR END SUCTION, CLOSE COUPLED, BRONZE FITTED, EPOXY COATED VOLUTE.
PUMP MAXIMUM FLOW CAPACITY: 2,700 GPM

NEW WORK ACTIVITY POOL DATA:

PROPOSED MAIN DRAINS:
 FURNISH AND INSTALL 30"x30" NEPTUNE BENSON AEGIS GRATE COVERS. 1,120 GPM / COVER (WALL), 1,432 GPM / COVER (FLOOR)

TOTAL FLOW: 9,584 GPM

FILTER:
 (1) NEPTUNE BENSON SDC/DDC SERIES, 84SDC-8, 84" DUAL CELL STEEL TANK, 77 S.F. OF SURFACE AREA, 12.96 GPM/S.F. FILTER AREA, AUTO BACKWASH.

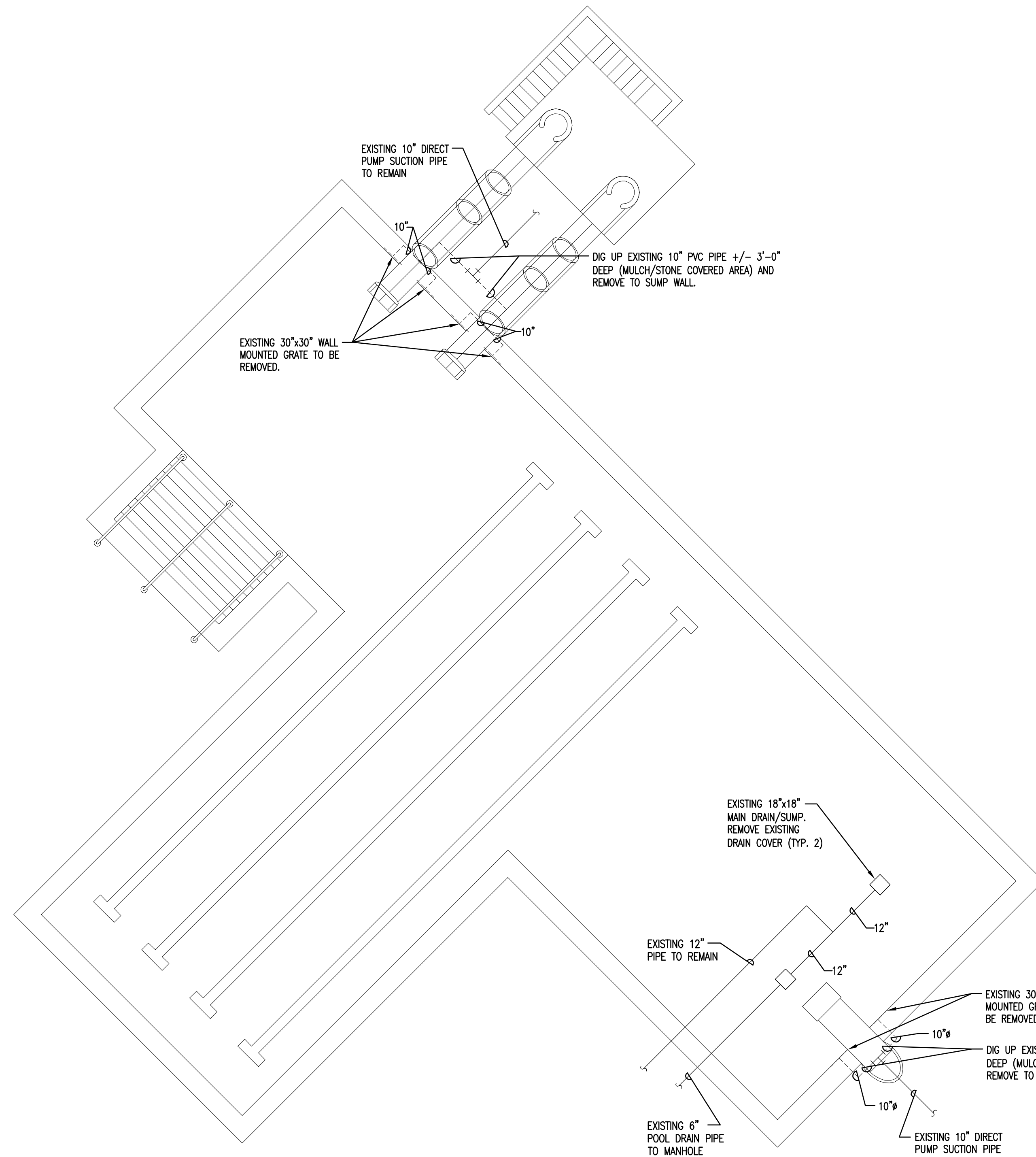
FILTER PUMP:
 AURORA PUMP 340-ES 5x6x11, 998 GPM @70 TDH, 25 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, TEFC MOTOR END SUCTION, CLOSE COUPLED, BRONZE FITTED, EPOXY COATED VOLUTE.

PUMP MAXIMUM FLOW CAPACITY: 1,600 GPM

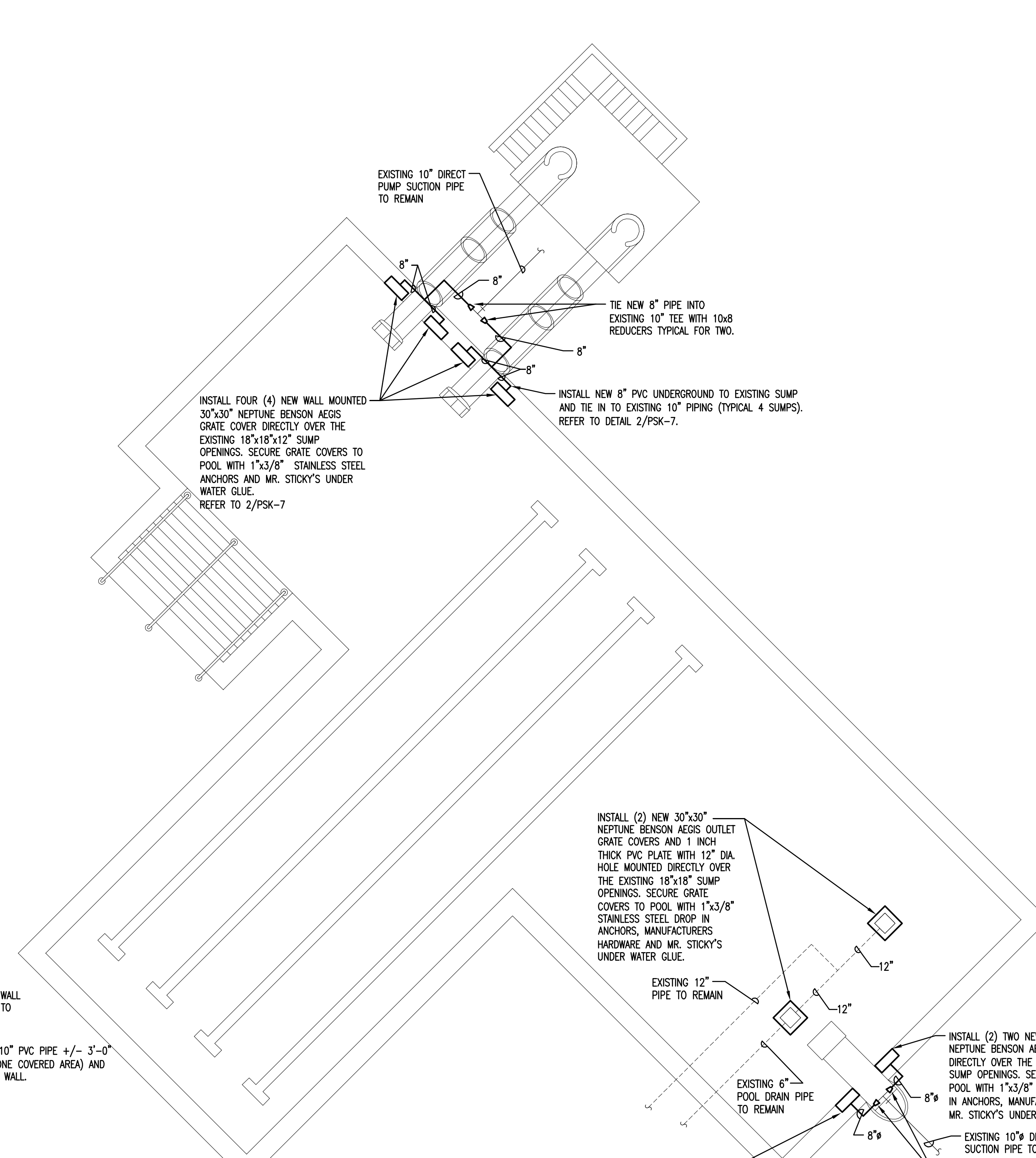
ADDITIONAL PUMPS:

DROPSLIDE PUMP #1
 AURORA PUMP 340-ES 6x6x12, 2000 GPM @35' TDH, 50 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, TEFC MOTOR END SUCTION, CLOSE COUPLED, BRONZE FITTED, EPOXY COATED VOLUTE.
PUMP MAXIMUM FLOW CAPACITY: 1,300 GPM

DROPSLIDE PUMP #2
 AURORA PUMP 340-ES 6x6x11, 1000 GPM @ 35' TDH, 15 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, TEFC MOTOR END SUCTION, CLOSE COUPLED, BRONZE FITTED, EPOXY COATED VOLUTE.
PUMP MAXIMUM FLOW CAPACITY: 2,700 GPM



1 ACTIVITY POOL - EXISTING - PLUMBING
 PSK-4 SCALE: 1/8" = 1'-0"



1 ACTIVITY POOL - NEW WORK - PLUMBING
 PSK-4 SCALE: 1/8" = 1'-0"

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CENTENNIAL PARK FAMILY AQUATIC CENTER
16600 WEST AVENUE, ORLAND PARK, IL 60462

PROJECT NUMBER: 1004-A-2	REVISION DATES:
PROJECT MANAGER: METRO	REVISION #3: 3-14-2011
DRAWN BY: METRO	
DATE: 04-19-2010	
ACTIVITY POOL DEMO & NEW WORK PLAN PLUMBING	

PSK-4

EXISTING SWIMMING POOL DATA:

PLUNGE POOL & LAZY RIVER:

PLUNGE POOL:
EXISTING DRAINS: (2) 18"x18" SUMP TO REMAIN, GRATE TO BE REPLACED.

LAZY RIVER:
EXISTING DRAINS: (1) 3"x5": (1) 3"x7": (1) 3"x10": SUMP TO REMAIN, GRATE TO BE REPLACED.

FILTER:
(1) NEPTUNE BENSON SDC/DDC SERIES # 102SDC-10, 102" DUAL CELL STEEL TANK, 113.5 S.F. OF SURFACE AREA, 14.7 GPM/S.F. FILTER AREA, AUTO BACKWASH.

FILTER PUMP:
(1) AURORA PUMP 340-ES, 6x6x11, 1663 GPM @ 70 TDH, 40 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, TEFC MOTOR END SUCTION, CLOSE COUPLED, BRONZE FITTED, EPOXY COATED VOLUTE.

PUMP MAXIMUM FLOW CAPACITY: 2,150 GPM

ADDITIONAL PUMPS:

PROPULSION PUMP #1:
VERTI-LINE PUMP, VLH10 HEAD, #13EH BOWL, 2,200 GPM @ 45' TDH, 40 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, WP-1 MOTOR, BRONZE FITTED.

PUMP MAXIMUM FLOW CAPACITY: 2,800 GPM

PROPULSION PUMP #2:
VERTI-LINE PUMP, VLH10 HEAD, #12FHL BOWL, 1,600 GPM @ 45' TDH, 425 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, WP-1 MOTOR, BRONZE FITTED.

PUMP MAXIMUM FLOW CAPACITY: 2,125 GPM

PROPULSION PUMP #3:
VERTI-LINE PUMP, VLH12 HEAD, #14FHM BOWL, 3,000 GPM @ 45' TDH, 75 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, WP-1 MOTOR, BRONZE FITTED.

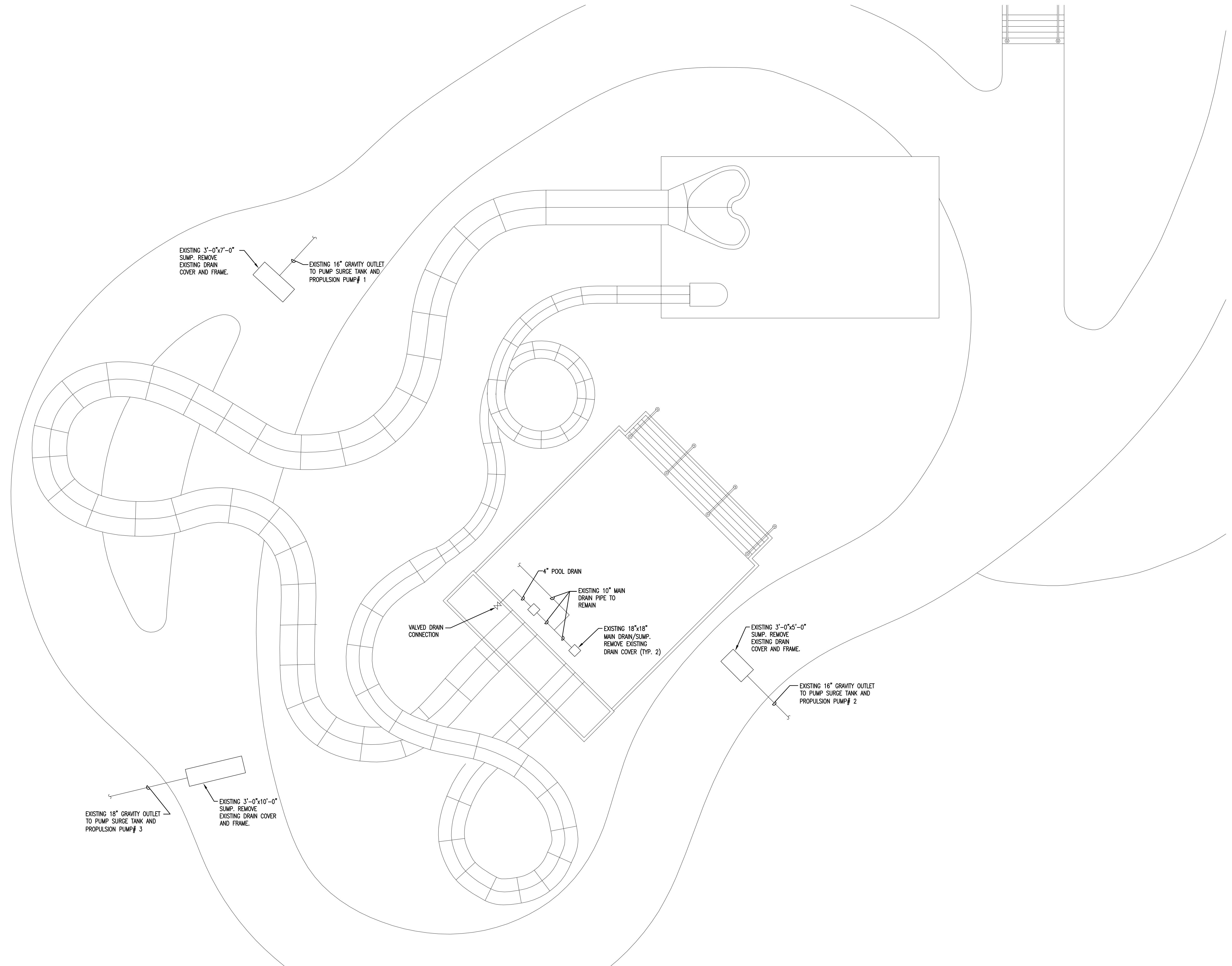
PUMP MAXIMUM FLOW CAPACITY: 4,750 GPM

TUBE SLIDE PUMP:
VERTI-LINE PUMP, VLH10 HEAD, #15EH BOWL, 3,000 GPM @ 45' TDH, 50 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, WP-1 MOTOR, BRONZE FITTED.

PUMP MAXIMUM FLOW CAPACITY: 3,600 GPM

BODY SLIDE PUMP:
VERTI-LINE PUMP, VLH10 HEAD, #15FHL BOWL, 1,500 GPM @ 45' TDH, 25 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, WP-1 MOTOR, BRONZE FITTED.

PUMP MAXIMUM FLOW CAPACITY: 2,125 GPM



1 PLUNGE POOL & LAZY RIVER - EXISTING - PLUMBING
PSK-6 SCALE: 1/8" = 1'-0"

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PROJECT NUMBER: 1004-A-2	REVISION DATES:
PROJECT MANAGER: METRO	
DRAWN BY: METRO	
DATE: 04-19-2010	
PLUNGE POOL & LAZY RIVER EXISTING PLUMBING	

PSK-5

PERMIT / BID ISSUE - FOR CONSTRUCTION

EXISTING SWIMMING POOL DATA:

PLUNGE POOL & LAZY RIVER:

PLUNGE POOL PROPOSED MAIN DRAINS:
 FURNISH AND INSTALL (2) NEPTUNE BENSON AEGIS
 GRATE COVERS OVER EXISTING 18"x18" SUMPS WITH
 MANUFACTURERS HARDWARE. FLOW IS 1,432 GPM/
 GRATE

TOTAL FLOW FOR THIS AREA: 2,864 GPM

LAZY RIVER PROPOSED DRAINS:
 FURNISH AND INSTALL WITH MANUFACTURERS
 HARDWARE. (6) 24"x24" GRATES OVER EXISTING 36"x60"
 SUMP. (8) 24"x24" GRATES OVER EXISTING 36"x64"
 SUMP. (10) 24"x24" GRATES OVER EXISTING 36"x120"
 SUMP. GRATES MANUFACTURED BY PADDOCK
 INDUSTRIES

997.92 GPM PER GRATE

FILTER:

(1) NEPTUNE BENSON SDC/DDC SERIES # 102SDC-10,
 102" DUAL CELL STEEL TANK, 1135 S.F. OF SURFACE
 AREA, 14.7 GPM/S.F. FILTER AREA, AUTO BACKWASH.

FILTER PUMP:

(1) AURORA PUMP 340-ES, 6x6x11, 1663 GPM @ 70' TDH,
 40 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, TEFC MOTOR
 END SUCTION, CLOSE COUPLED, BRONZE FITTED,
 EPOXY COATED VOLUTE.

MAX PUMP CAPACITY: 2,200 GPM

ADDITIONAL PUMPS:

PROPULSION PUMP #1:
 VERT-LINE PUMP, VLH10 HEAD, #13EH BOWL, 2,200 GPM
 @ 45' TDH, 40 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, WP-1
 MOTOR, BRONZE FITTED.

MAX PUMP CAPACITY: 2,800 GPM

PROPULSION PUMP #2:
 VERT-LINE PUMP, VLH10 HEAD, #12FHL BOWL, 1,600
 GPM @ 45' TDH, 425 HP, 230/460 V, 3 PH, 60 HZ, 1750
 RPM, WP-1 MOTOR, BRONZE FITTED.

MAX PUMP CAPACITY: 2,125 GPM

PROPULSION PUMP #3:
 VERT-LINE PUMP, VLH12 HEAD, #14FHM BOWL, 3,000
 GPM @ 45' TDH, 75 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM,
 WP-1 MOTOR, BRONZE FITTED.

MAX PUMP CAPACITY: 4,750 GPM

TUBE SLIDE PUMP:

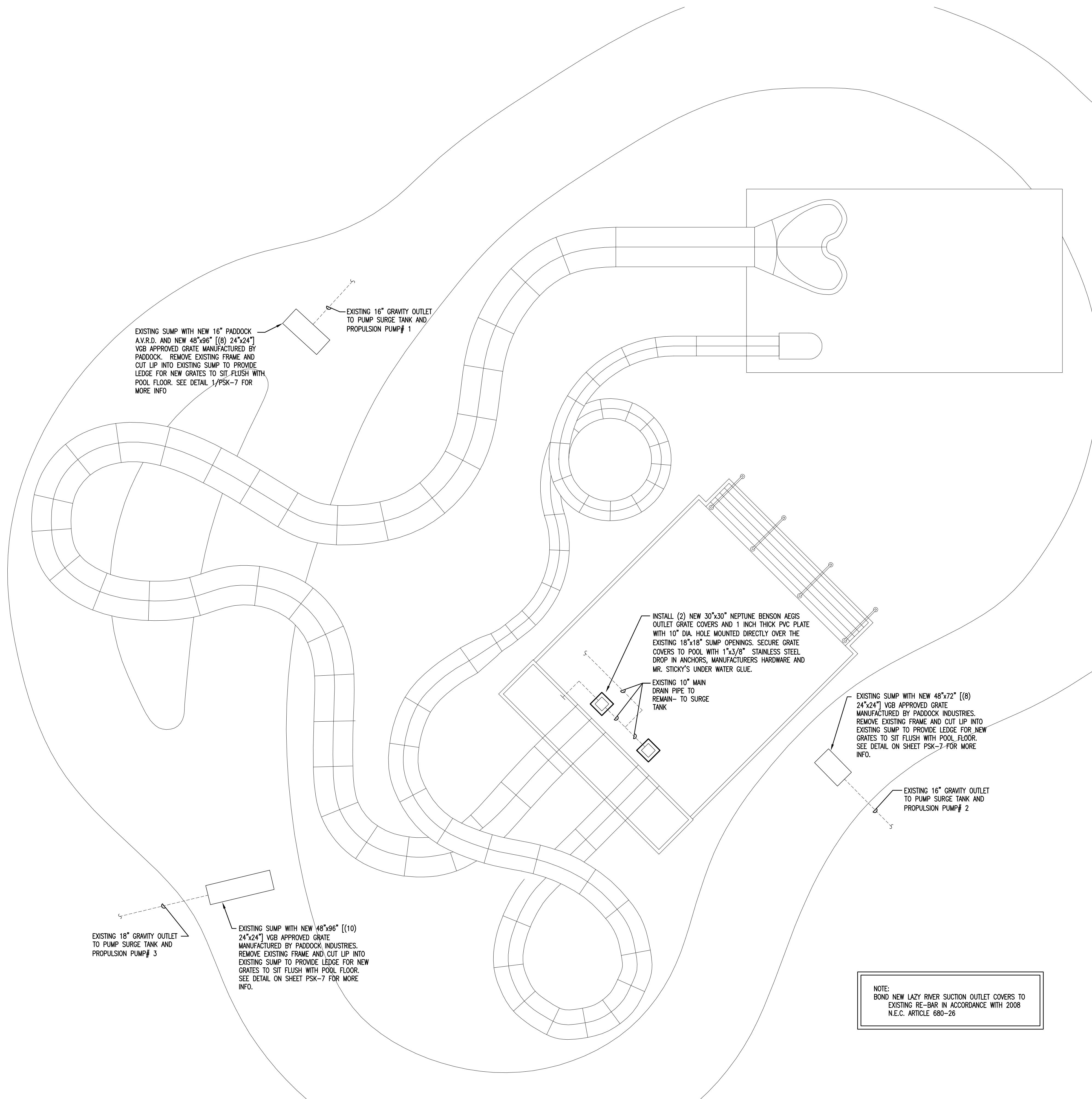
VERT-LINE PUMP, VLH10 HEAD, #15EH BOWL, 3,000 GPM
 @ 45' TDH, 50 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM, WP-1
 MOTOR, BRONZE FITTED.

MAX PUMP CAPACITY: 3,600 GPM

BODY SLIDE PUMP:

VERT-LINE PUMP, VLH10 HEAD, #15FH BOWL, 1,500
 GPM @ 45' TDH, 25 HP, 230/460 V, 3 PH, 60 HZ, 1750 RPM,
 WP-1 MOTOR, BRONZE FITTED.

MAX PUMP CAPACITY: 2,125 GPM



EXISTING SUMP WITH NEW 16" PADDOCK
 A.V.R.D. AND NEW 48"x96" [(8) 24"x24"]
 VGB APPROVED GRATE MANUFACTURED BY
 PADDOCK. REMOVE EXISTING FRAME AND
 CUT LIP INTO EXISTING SUMP TO PROVIDE
 LEDGE FOR NEW GRATES TO SIT FLUSH WITH
 POOL FLOOR. SEE DETAIL 1/PSK-7 FOR
 MORE INFO

EXISTING 18" GRAVITY OUTLET
 TO PUMP SURGE TANK AND
 PROPULSION PUMP # 1

INSTALL (2) NEW 30"x30" NEPTUNE BENSON AEGIS
 OUTLET GRATE COVERS AND 1 INCH THICK PVC PLATE
 WITH 10" DIA. HOLE MOUNTED DIRECTLY OVER THE
 EXISTING 18"x18" SUMP OPENINGS. SECURE GRATE
 COVERS TO POOL WITH 1"x3/8" STAINLESS STEEL
 DROP IN ANCHORS, MANUFACTURERS HARDWARE AND
 MR. STICKY'S UNDER WATER GLUE.

EXISTING 10" MAIN
 DRAIN PIPE TO
 REMAIN - TO SURGE
 TANK

EXISTING SUMP WITH NEW 48"x72" [(8)
 24"x24"] VGB APPROVED GRATE
 MANUFACTURED BY PADDOCK INDUSTRIES.
 REMOVE EXISTING FRAME AND CUT LIP INTO
 EXISTING SUMP TO PROVIDE LEDGE FOR NEW
 GRATES TO SIT FLUSH WITH POOL FLOOR.
 SEE DETAIL ON SHEET PSK-7 FOR MORE
 INFO.

EXISTING 16" GRAVITY OUTLET
 TO PUMP SURGE TANK AND
 PROPULSION PUMP # 2

EXISTING 18" GRAVITY OUTLET
 TO PUMP SURGE TANK AND
 PROPULSION PUMP # 3

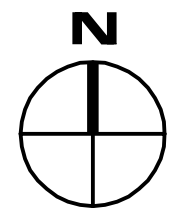
EXISTING SUMP WITH NEW 48"x96" [(10)
 24"x24"] VGB APPROVED GRATE
 MANUFACTURED BY PADDOCK INDUSTRIES.
 REMOVE EXISTING FRAME AND CUT LIP INTO
 EXISTING SUMP TO PROVIDE LEDGE FOR NEW
 GRATES TO SIT FLUSH WITH POOL FLOOR.
 SEE DETAIL ON SHEET PSK-7 FOR MORE
 INFO.

NOTE:
 BOND NEW LAZY RIVER SUCTION OUTLET COVERS TO
 EXISTING RE-BAR IN ACCORDANCE WITH 2008
 N.E.C. ARTICLE 680-26

THE DESIGN OF THE FIELD FABRICATED OUTLETS FOR
 THIS DESIGN IS IN ACCORDANCE WITH ASME STANDARD
 A112.19.8-2007, SECTION 2.3.1.7, BASED UPON THE
 FOLLOWING CRITERIA:

- REQUIRE TOOLS TO OPEN - YES; EXISTING FRAME
 WILL BE DRILLED AND TAPPED TO ALIGN WITH THE
 SCREW HOLES ON THE GRATES. THE INSERTS WILL
 BE THREADED AND BE THE MANUFACTURER'S
 HARDWARE.
- THE PADDOCK SUBMERGED SUCTION OUTLET
 COVERS SPECIFIED WERE NSF TESTED AND
 APPROVED UNDER THE ASME A112.19.8A-2008
 AND FEBRUARY 16, 2009. THEY PASSED ALL
 TESTS FOR ULTRA-VIOLET, BODY ENTRAPMENT,
 VERTICAL LOAD, HORIZONTAL LOAD, EXCESS LOAD,
 SHEAR TEST, VACUUM TEST, PULL TEST AND
 FINGER TEST. THEY ARE APPROVED FOR
 INSTALLATION ON FIELD FABRICATED SUMPS AND
 ARE EXEMPT FROM THE HAIR TEST IN
 ACCORDANCE WITH SECTION 4.1.4 OF THE ASME
 A112 STANDARD. DOCUMENTATION AND APPROVAL
 OF THESE SAFETY COVERS IS LISTED ON THE NSF
 WEBSITE AND HAS BEEN SUPPLIED TO THE
 DEPARTMENT BY THE MANUFACTURER.
- THE SUMPS ARE TO BE MADE COMPLIANT TO THE
 DIMENSIONS FOR CONSTRUCTION CONFORM TO
 ASME STANDARD A112, SECTION 2.3.4, FIGURE 2
 BY INSTALLING AVRD DEVICE OR BLANK-OFF
 PLATES ON THE SUCTION OUTLET PIPES. AVRD
 WILL PROVIDE 1.5 TIMES DISTANCE IN ALL CASES.
- THE MAXIMUM FLOW THRU EACH 24"x24" COVER IS
 997 GPM.

1 PLUNGE POOL & LAZY RIVER - NEW WORK - PLUMBING
 PSK-7 SCALE: 1/8" = 1'-0"



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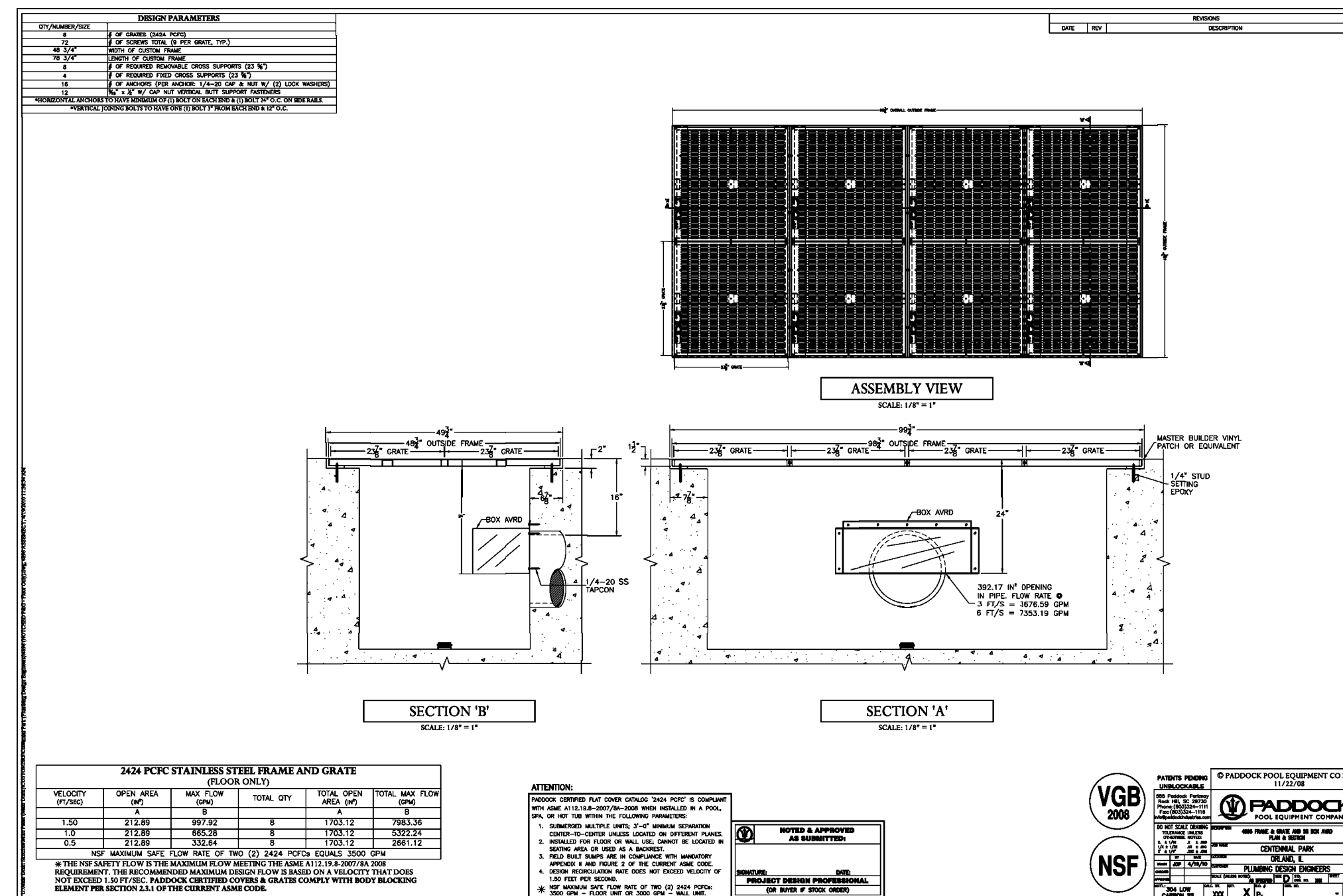
Virginia Graeme Baker Pool & Spa Safety Act Improvements for:
VILLAGE OF ORLAND PARK
CENTENNIAL PARK FAMILY AQUATIC CENTER
16600 WEST AVENUE, ORLAND PARK, IL 60462

PROJECT NUMBER:	1004-1-2	REVISION DATES:
PROJECT MANAGER:	METRO	
DRAWN BY:		
DATE:	04-19-2010	

PLUNGE POOL & LAZY RIVER
 NEW WORK
 PLUMBING

PSK-6

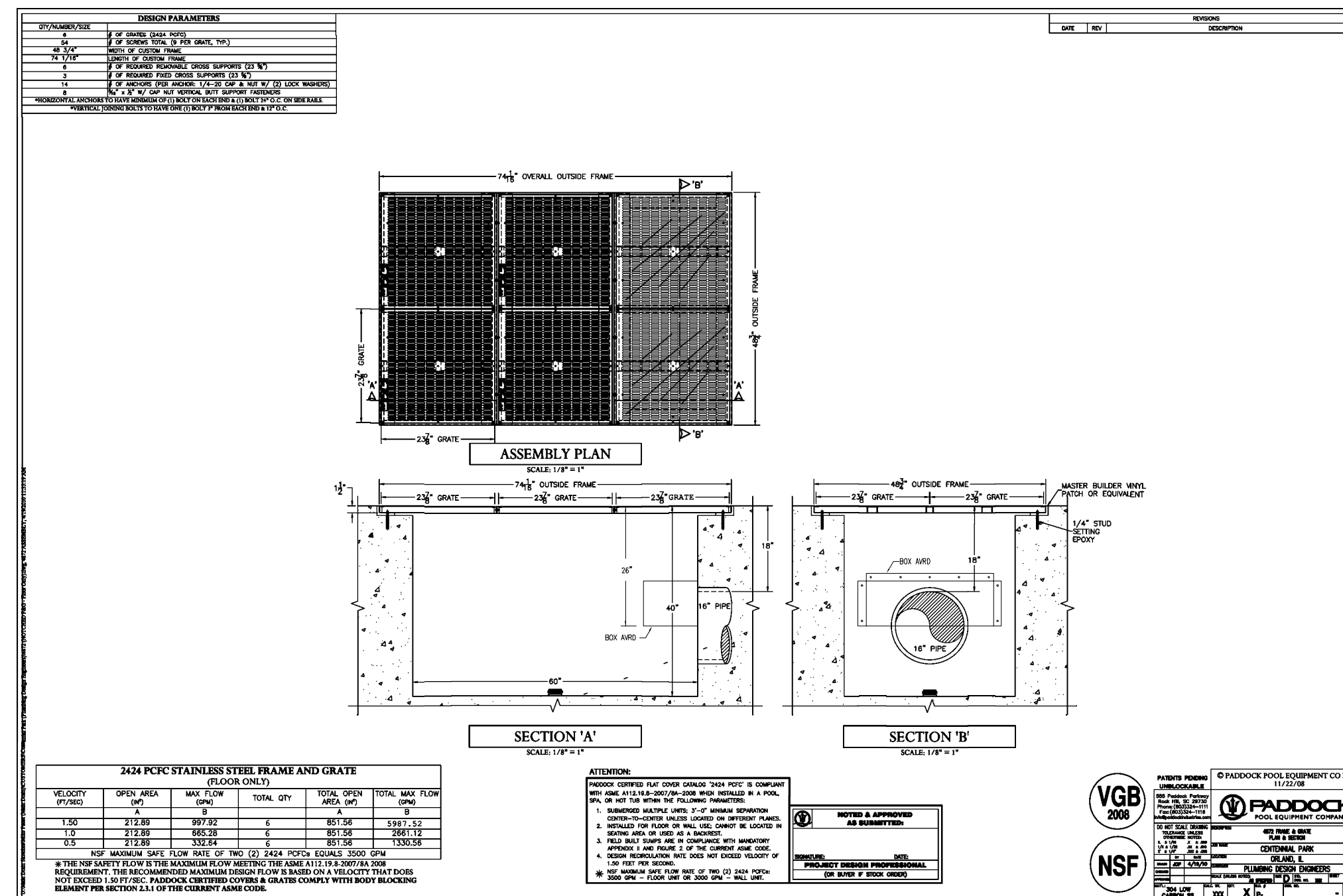
PUMP #1



THE DESIGN OF THE FIELD FABRICATED OUTLETS FOR THIS DESIGN IS IN ACCORDANCE WITH ASME STANDARD A112.19.8-2007, SECTION 2.3.1.7, BASED UPON THE FOLLOWING CRITERIA:

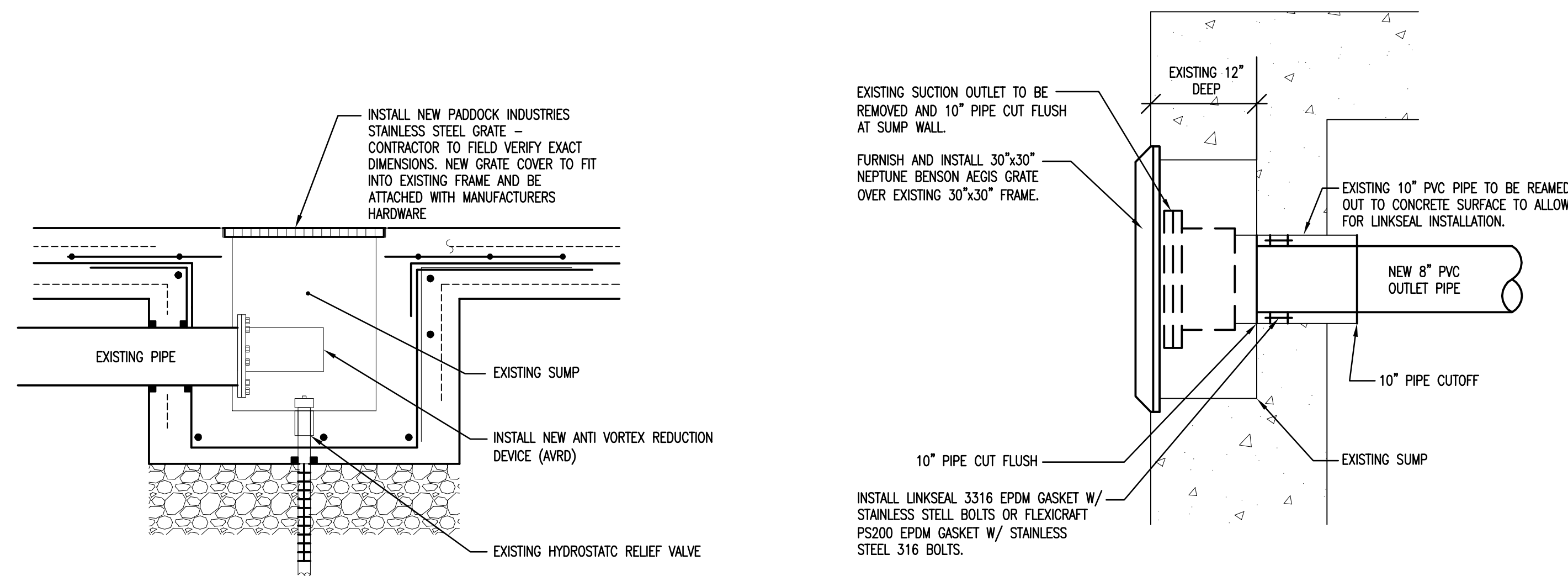
- REQUIRE TOOLS TO OPEN - YES; EXISTING FRAME WILL BE DRILLED AND TAPPED TO ALIGN WITH THE SCREW HOLES ON THE GRATES. THE INSERTS WILL BE THREADED AND BE THE MANUFACTURER'S HARDWARE.
- THE PADDOCK SUBMERGED SUCTION OUTLET COVERS SPECIFIED WERE NSF TESTED AND APPROVED UNDER THE ASME A112.19.8A-2008 AND FEBRUARY 16, 2009. THEY PASSED ALL TESTS FOR ULTRA-VIOLET, BODY ENTRAPMENT, VERTICAL LOAD, HORIZONTAL LOAD, EXCESS LOAD, SHEAR TEST, VACUUM TEST, PULL TEST AND FINGER TEST. THEY ARE APPROVED FOR INSTALLATION ON FIELD FABRICATED SUMPS AND ARE EXEMPT FROM THE HAIR TEST IN ACCORDANCE WITH SECTION 4.1.4 OF THE ASME A112 STANDARD. DOCUMENTATION AND APPROVAL OF THESE SAFETY COVERS IS LISTED ON THE NSF WEBSITE AND HAS BEEN SUPPLIED TO THE DEPARTMENT BY THE MANUFACTURER.
- THE SUMPS ARE TO BE MADE COMPLIANT TO THE DIMENSIONS FOR CONSTRUCTION CONFORM TO ASME STANDARD A112, SECTION 2.3.4, FIGURE 2 BY INSTALLING AVRD DEVICE OR BLANK-OFF PLATES ON THE SUCTION OUTLET PIPES. AVRD WILL PROVIDE 1.5 TIMES DISTANCE IN ALL CASES.
- THE MAXIMUM FLOW THRU EACH 24"x24" COVER IS 997 GPM. TOTAL CERTIFIED FLOW 7983.36 GPM
- CERTIFIED FOR MULTIPLE DRAIN USE
- ESTIMATED LIFE OF GRATES IS 20 YEARS
- GRATE POSITION IS FLOOR MOUNTED

PUMP #2



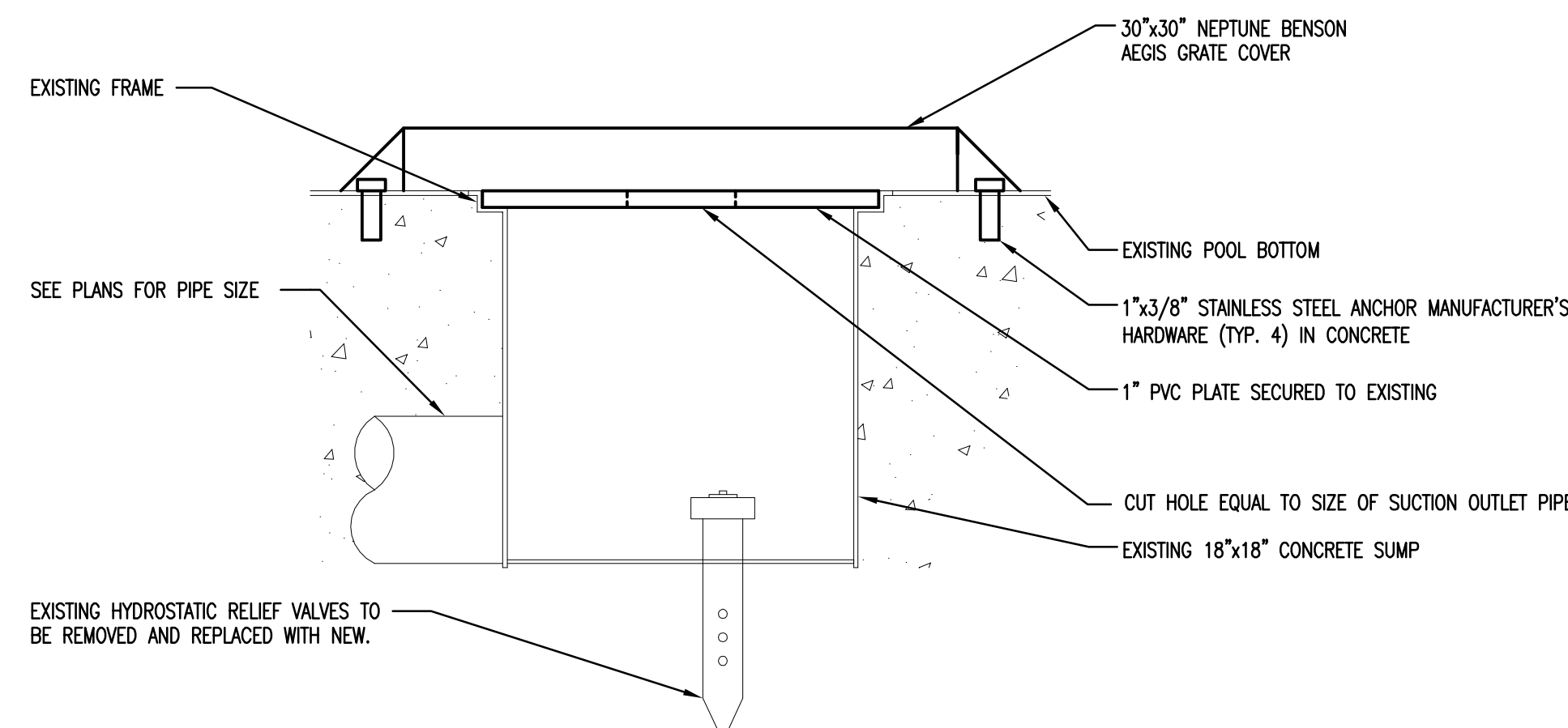
THE DESIGN OF THE FIELD FABRICATED OUTLETS FOR THIS DESIGN IS IN ACCORDANCE WITH ASME STANDARD A112.19.8-2007, SECTION 2.3.1.7, BASED UPON THE FOLLOWING CRITERIA:

- REQUIRE TOOLS TO OPEN - YES; EXISTING FRAME WILL BE DRILLED AND TAPPED TO ALIGN WITH THE SCREW HOLES ON THE GRATES. THE INSERTS WILL BE THREADED AND BE THE MANUFACTURER'S HARDWARE.
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- THE SUMPS ARE TO BE MADE COMPLIANT TO THE DIMENSIONS FOR CONSTRUCTION CONFORM TO ASME STANDARD A112, SECTION 2.3.4, FIGURE 2 BY INSTALLING AVRD DEVICE OR BLANK-OFF PLATES ON THE SUCTION OUTLET PIPES. AVRD WILL PROVIDE 1.5 TIMES DISTANCE IN ALL CASES.
- THE MAXIMUM FLOW THRU EACH 24"x24" COVER IS 997 GPM. TOTAL CERTIFIED FLOW: 5987.52 GPM
- CERTIFIED FOR MULTIPLE DRAIN USE
- ESTIMATED LIFE OF GRATES IS 20 YEARS
- GRATE POSITION IS FLOOR MOUNTED

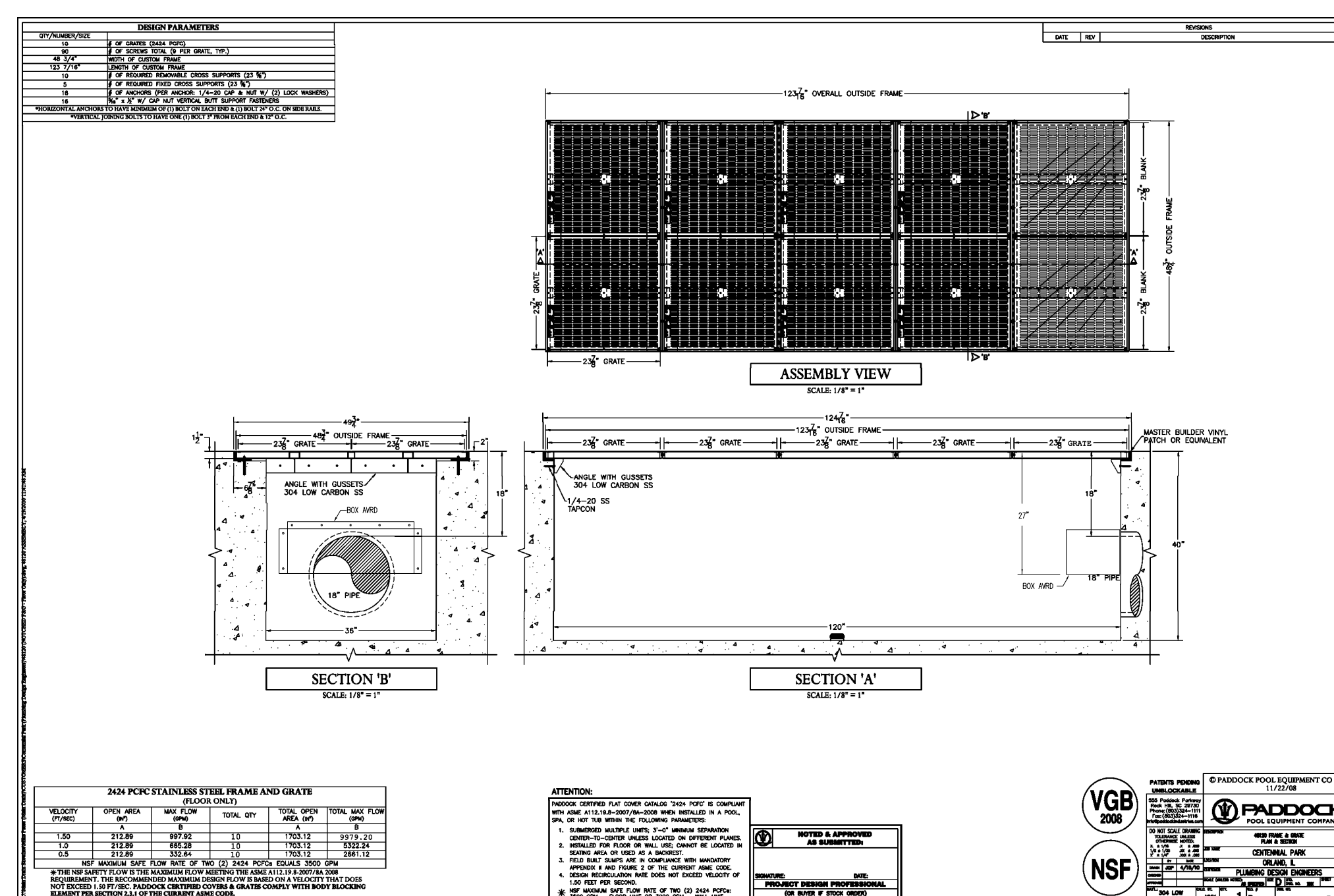


1 A.V.R.D. DETAIL
PSK-7 NOT TO SCALE

2 NEPTUNE BENSON AEGIS GRATE WALL MOUNTED GRATE DETAIL
PSK-7 NOT TO SCALE



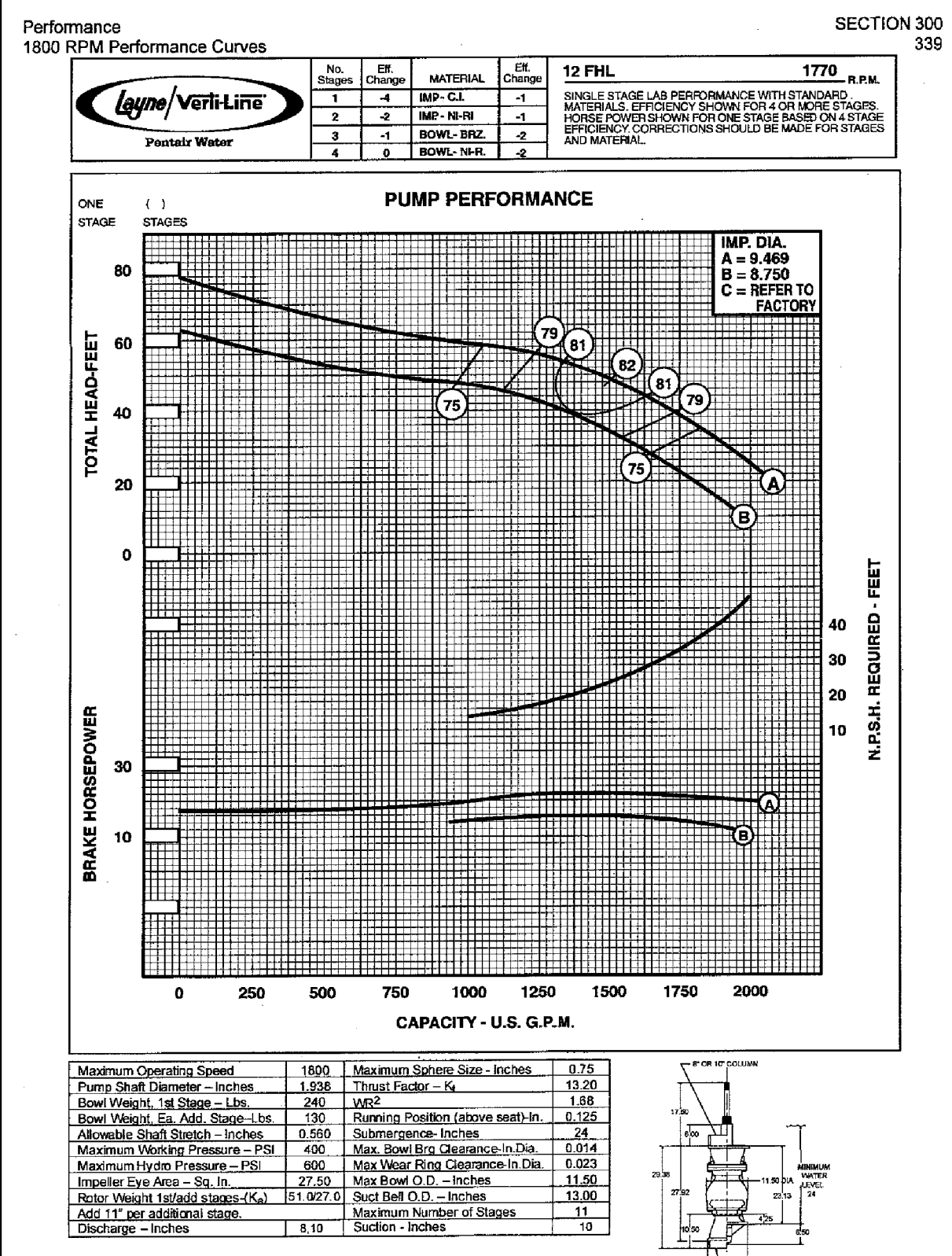
3 NEPTUNE AEGIS FLOOR MOUNTED GRATE DETAIL
PSK-7 NOT TO SCALE



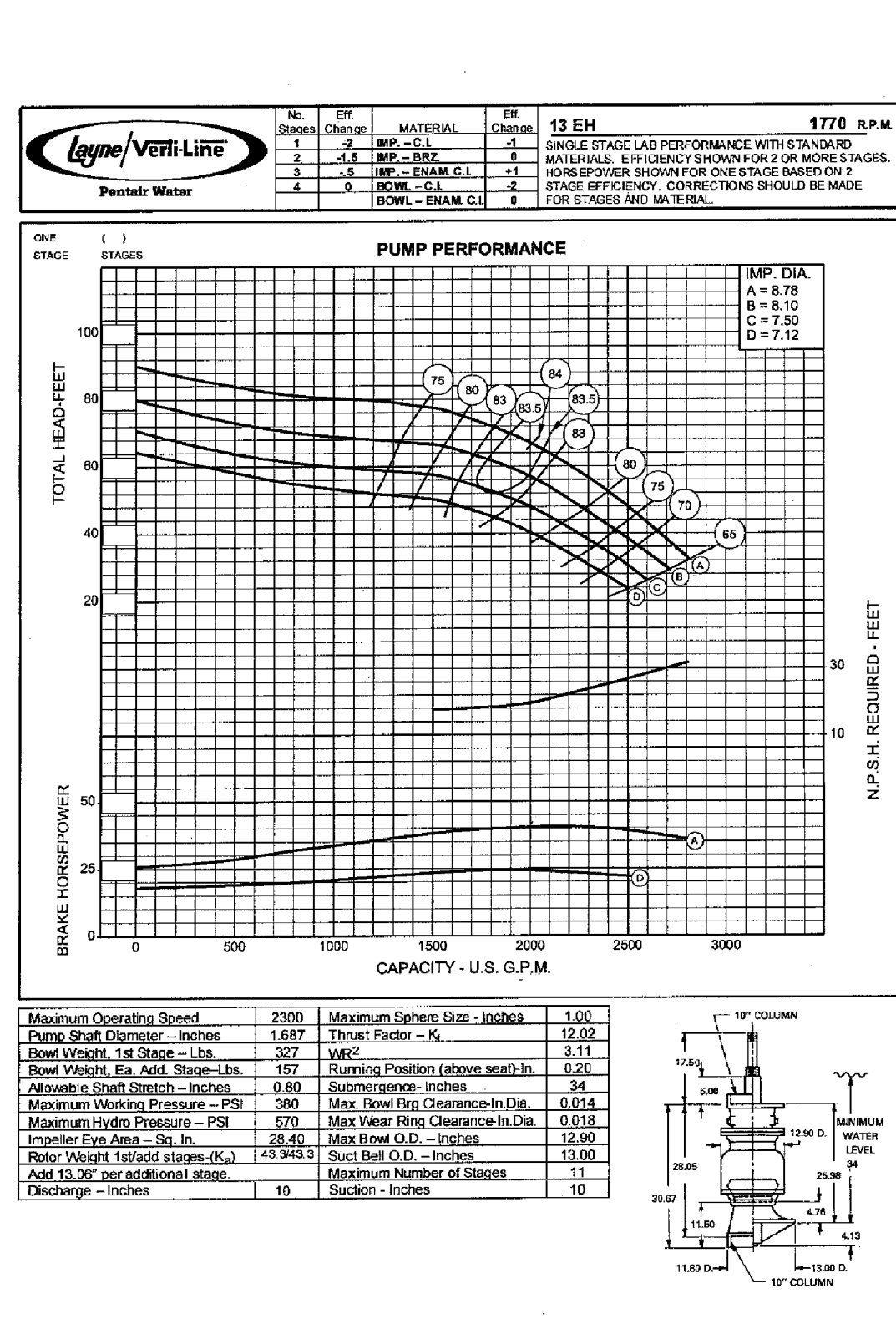
THE DESIGN OF THE FIELD FABRICATED OUTLETS FOR THIS DESIGN IS IN ACCORDANCE WITH ASME STANDARD A112.19.8-2007, SECTION 2.3.1.7, BASED UPON THE FOLLOWING CRITERIA:

- REQUIRE TOOLS TO OPEN - YES; EXISTING FRAME WILL BE DRILLED AND TAPPED TO ALIGN WITH THE SCREW HOLES ON THE GRATES. THE INSERTS WILL BE THREADED AND BE THE MANUFACTURER'S HARDWARE.
- THE PADDOCK SUBMERGED SUCTION OUTLET COVERS SPECIFIED WERE NSF TESTED AND APPROVED UNDER THE ASME A112.19.8A-2008 AND FEBRUARY 16, 2009. THEY PASSED ALL TESTS FOR ULTRA-VIOLET, BODY ENTRAPMENT, VERTICAL LOAD, HORIZONTAL LOAD, EXCESS LOAD, SHEAR TEST, VACUUM TEST, PULL TEST AND FINGER TEST. THEY ARE APPROVED FOR INSTALLATION ON FIELD FABRICATED SUMPS AND ARE EXEMPT FROM THE HAIR TEST IN ACCORDANCE WITH SECTION 4.1.4 OF THE ASME A112 STANDARD. DOCUMENTATION AND APPROVAL OF THESE SAFETY COVERS IS LISTED ON THE NSF WEBSITE AND HAS BEEN SUPPLIED TO THE DEPARTMENT BY THE MANUFACTURER.
- THE SUMPS ARE TO BE MADE COMPLIANT TO THE DIMENSIONS FOR CONSTRUCTION CONFORM TO ASME STANDARD A112, SECTION 2.3.4, FIGURE 2 BY INSTALLING AVRD DEVICE OR BLANK-OFF PLATES ON THE SUCTION OUTLET PIPES. AVRD WILL PROVIDE 1.5 TIMES DISTANCE IN ALL CASES.
- THE MAXIMUM FLOW THRU EACH 24"x24" COVER IS 997 GPM. TOTAL CERTIFIED FLOW: 5979.20 GPM
- CERTIFIED FOR MULTIPLE DRAIN USE
- ESTIMATED LIFE OF GRATES IS 20 YEARS
- GRATE POSITION IS FLOOR MOUNTED

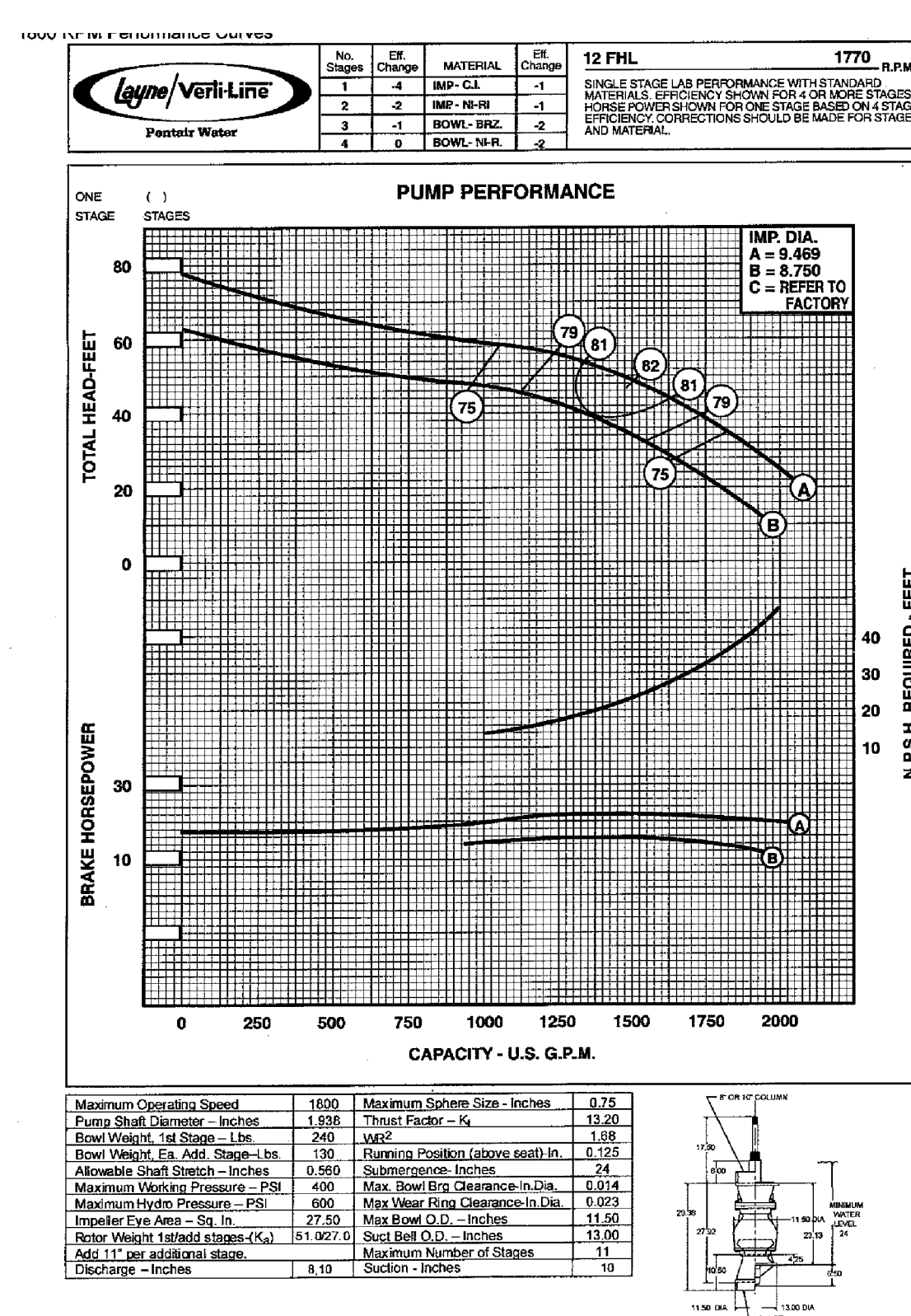
PROJECT NUMBER:	104-A-2	REVISION DATES:	
PROJECT MANAGER:	METRO	REVISIONS:	3-14-2011
DRAWN BY:			
DATE:	04-19-2010		
REV:	11-12-10		



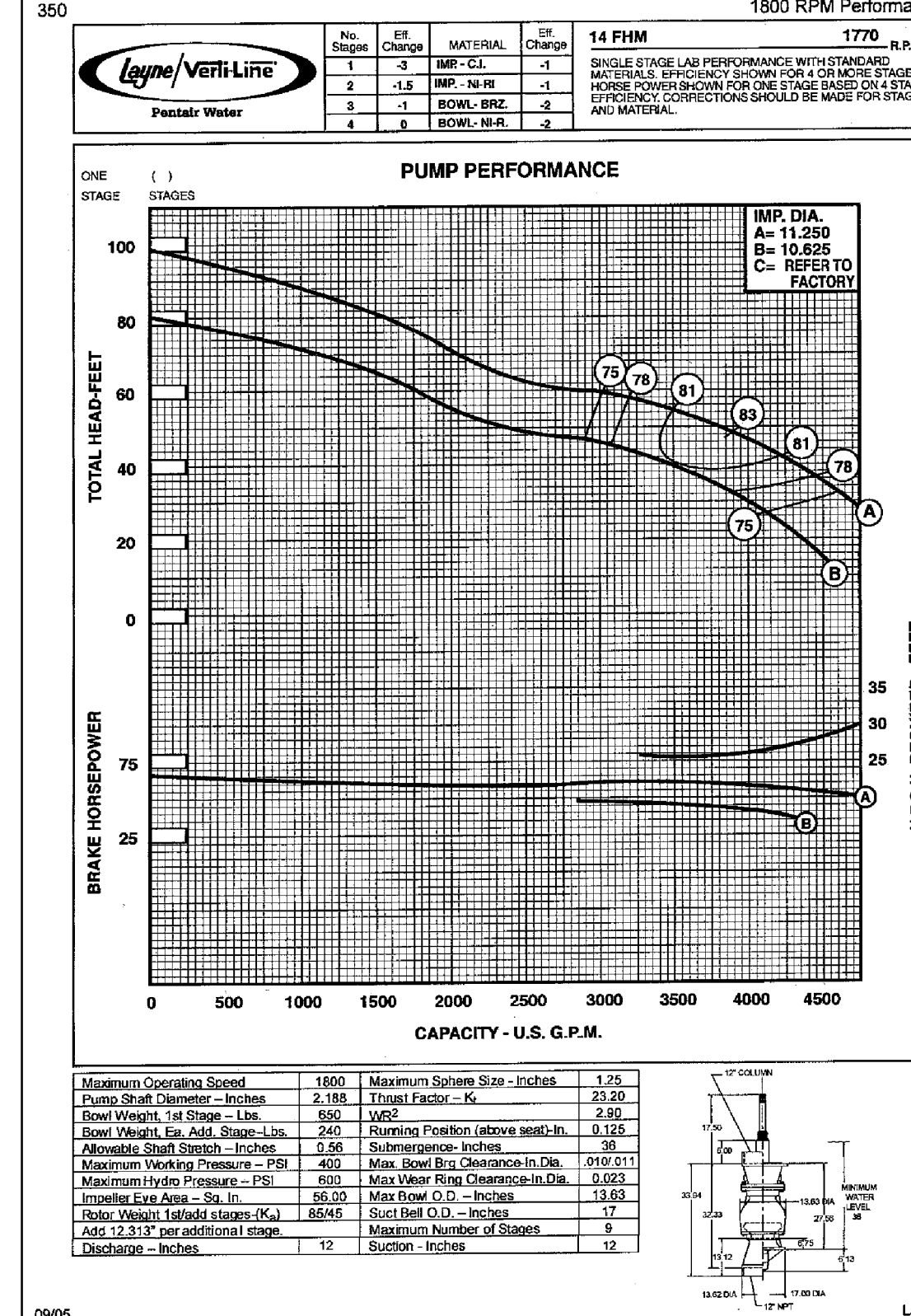
LAZY RIVER/PLUNGE POOL BODY SLIDE PUMP



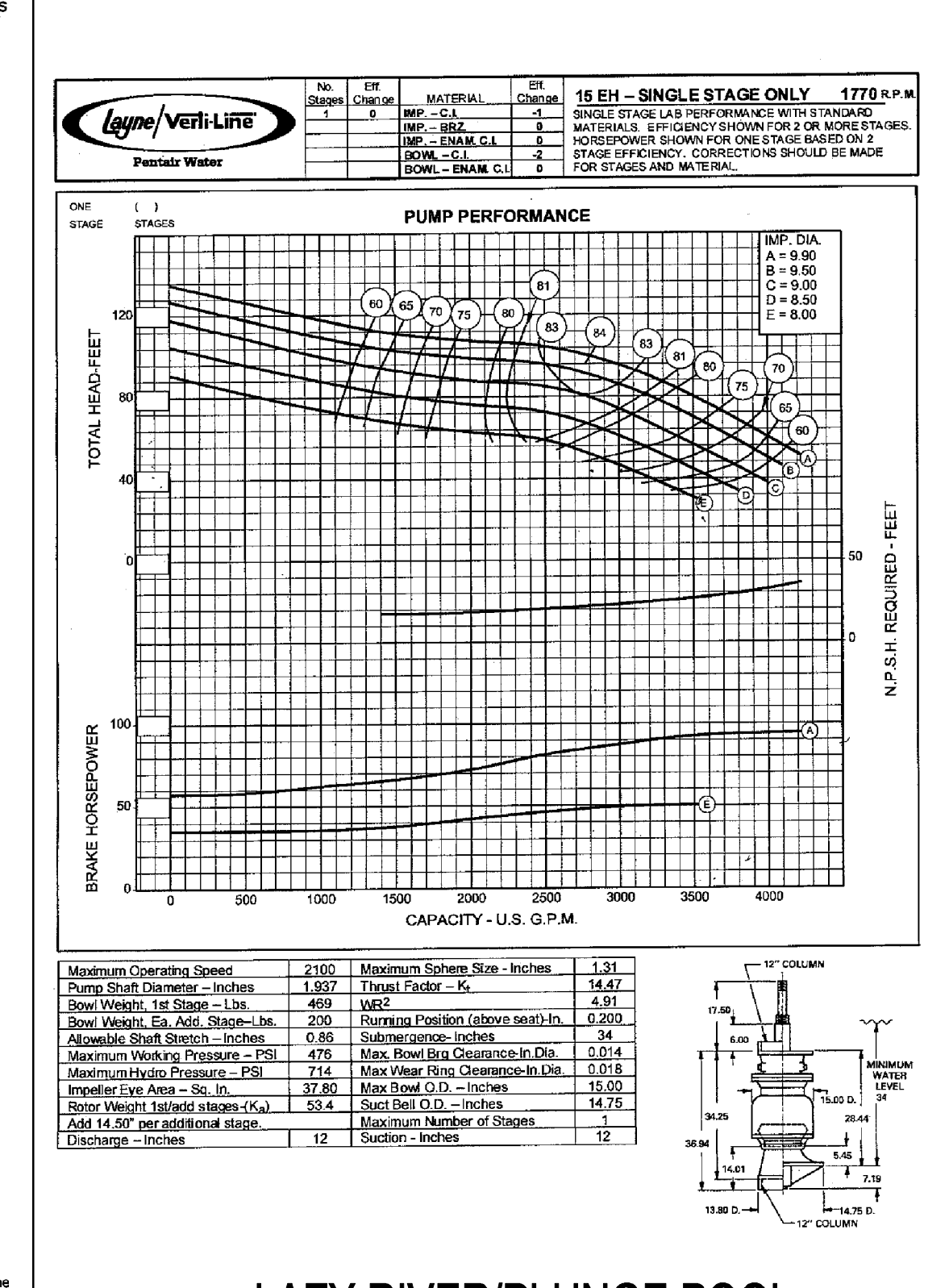
LAZY RIVER/PLUNGE POOL PROPULSION PUMP #1



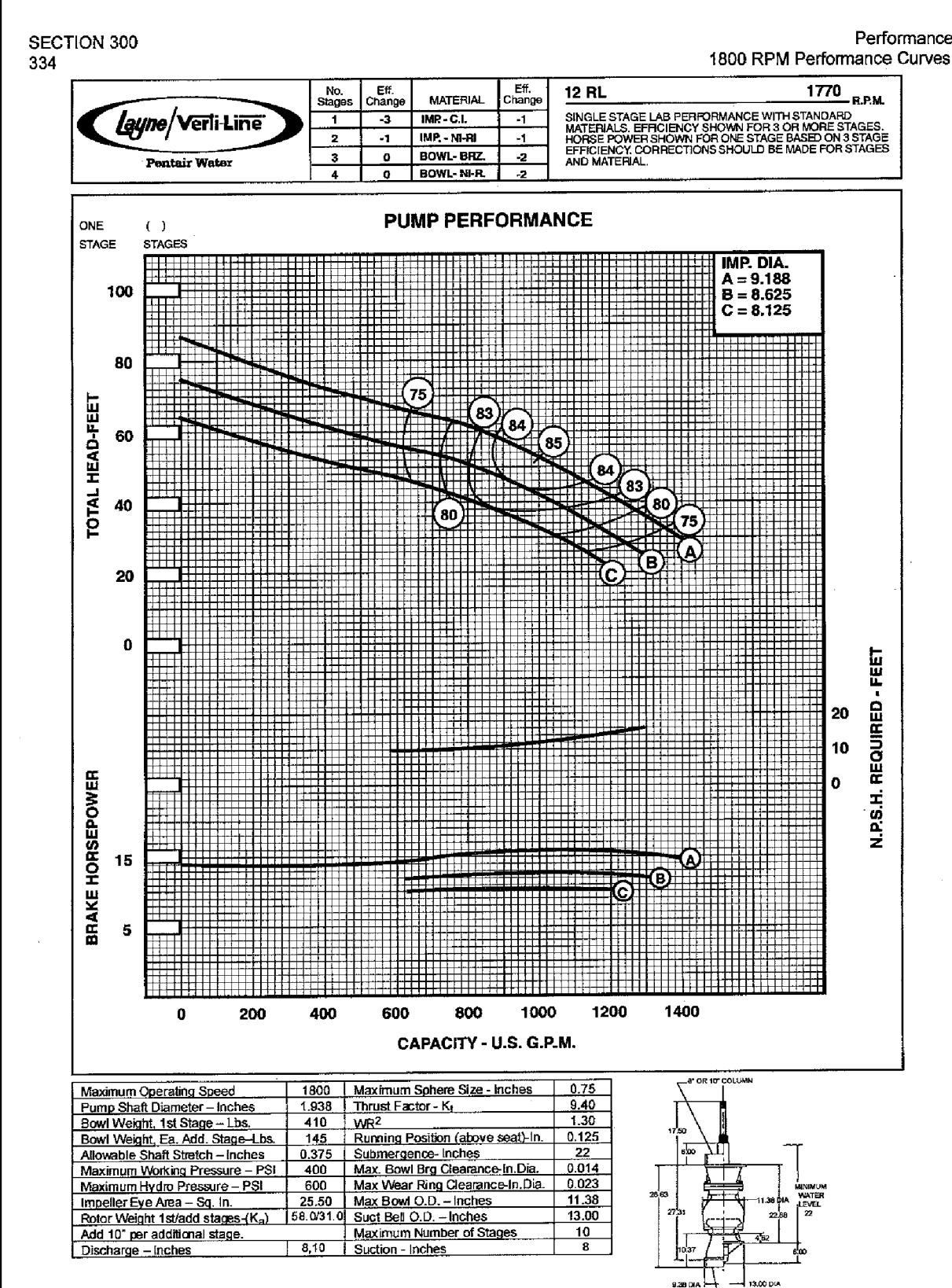
LAZY RIVER/PLUNGE POOL PROPULSION PUMP #2



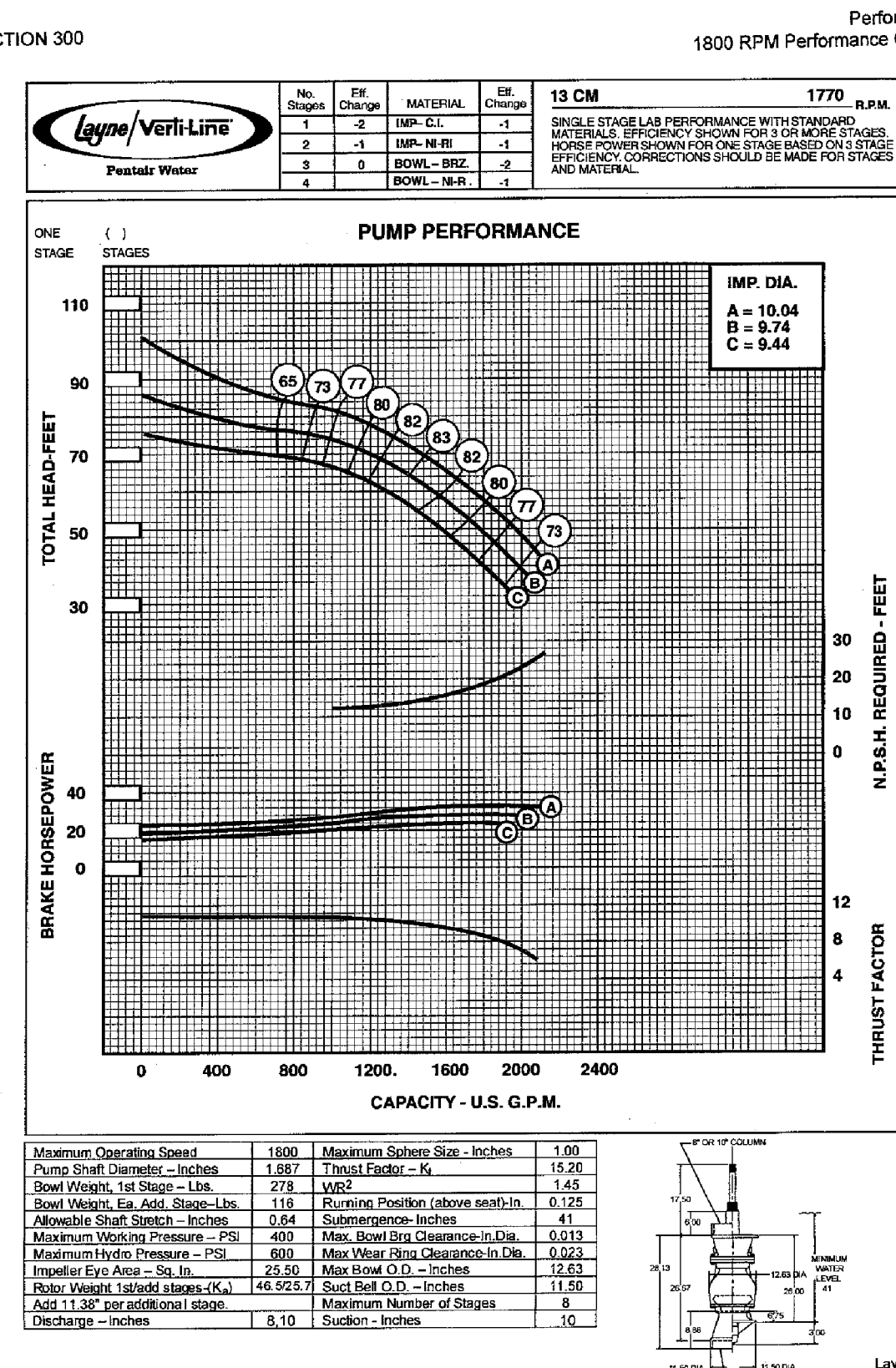
LAZY RIVER/PLUNGE POOL PROPULSION PUMP #3



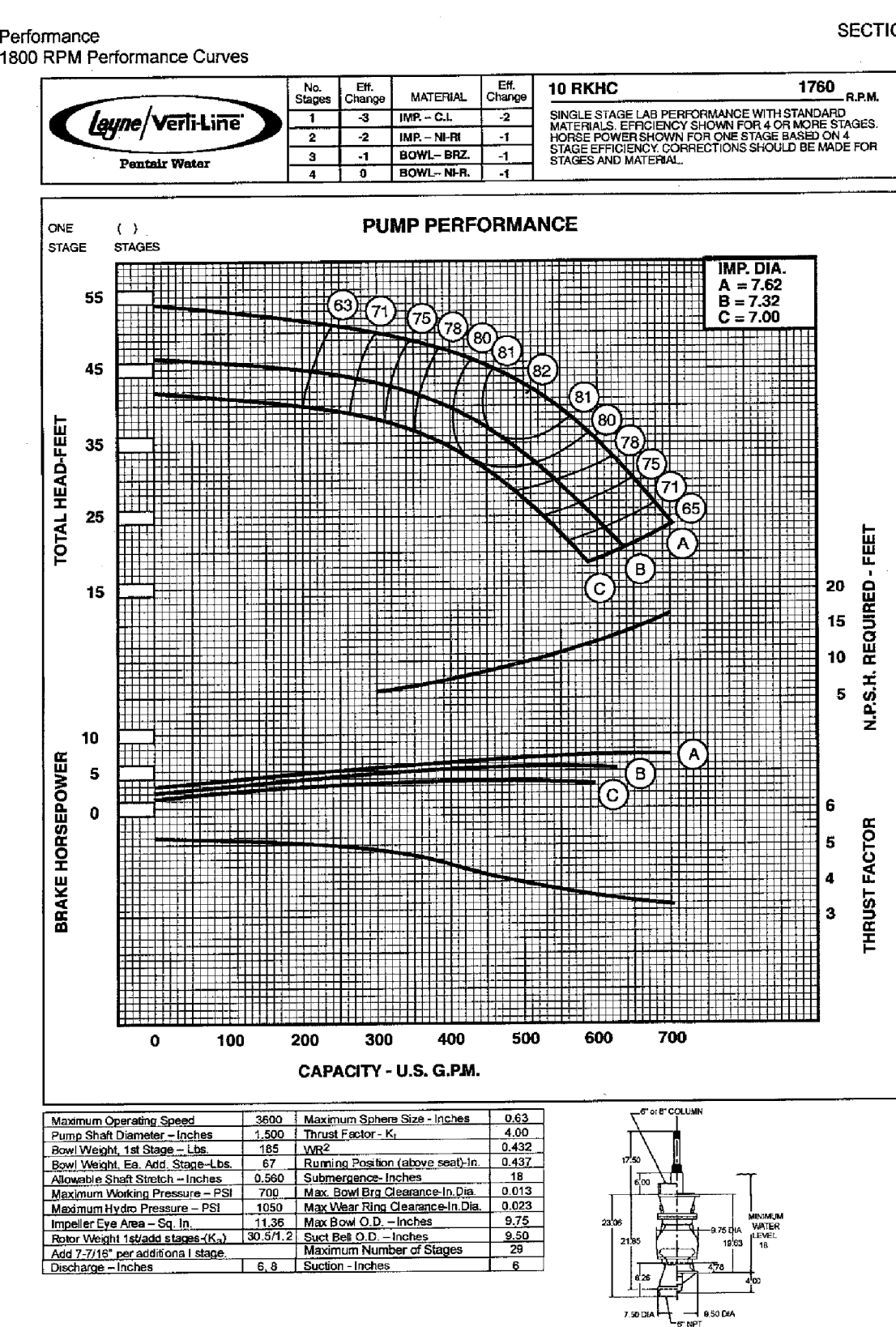
LAZY RIVER/PLUNGE POOL TUBE SLIDE PUMP



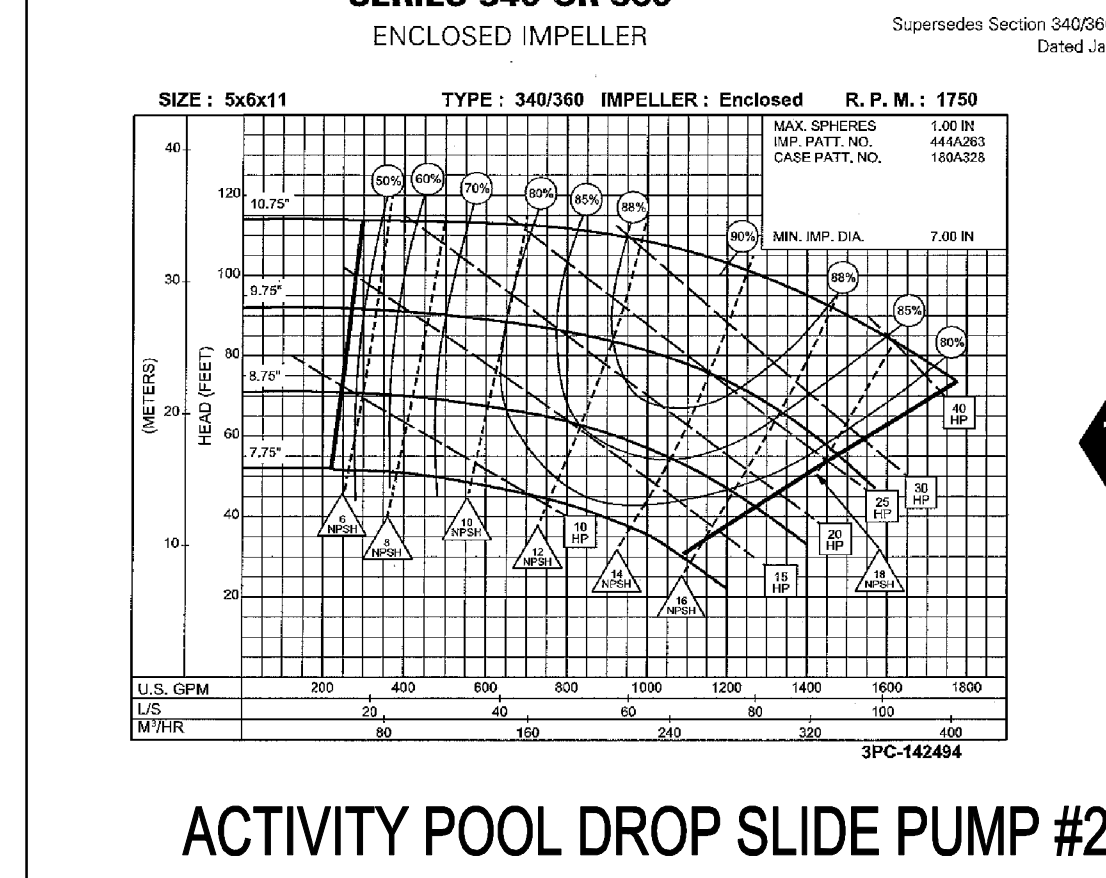
MAIN POOL BODY FLUME PUMP



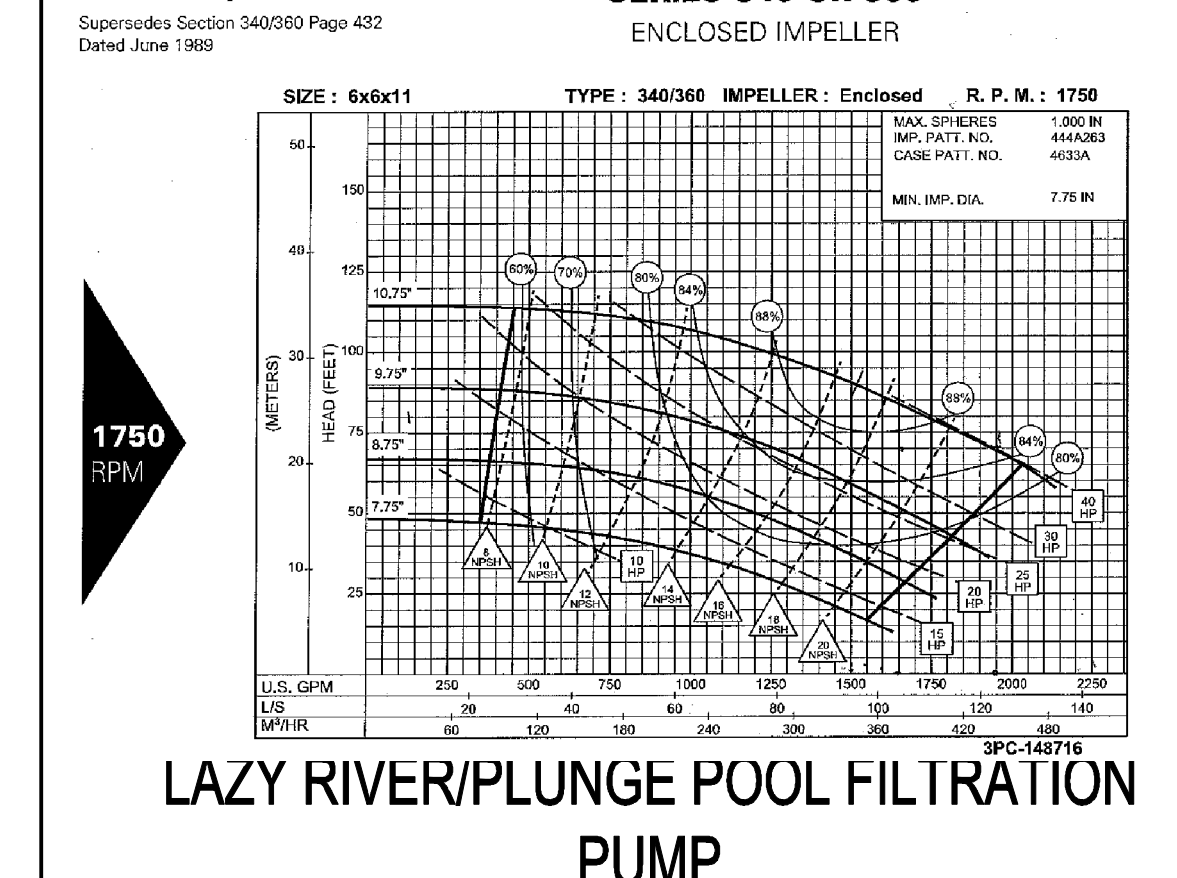
MAIN POOL FILTRATION PUMP



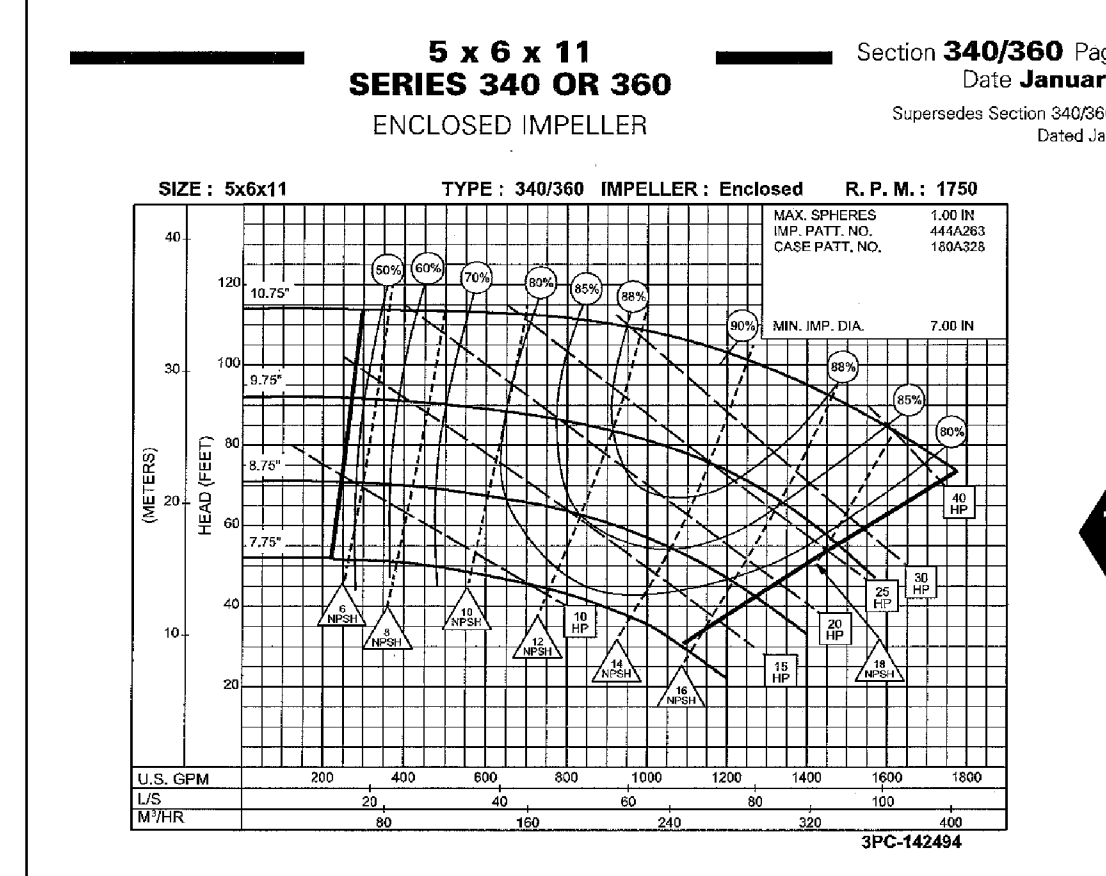
MAIN POOL WATER WORKS PUMP



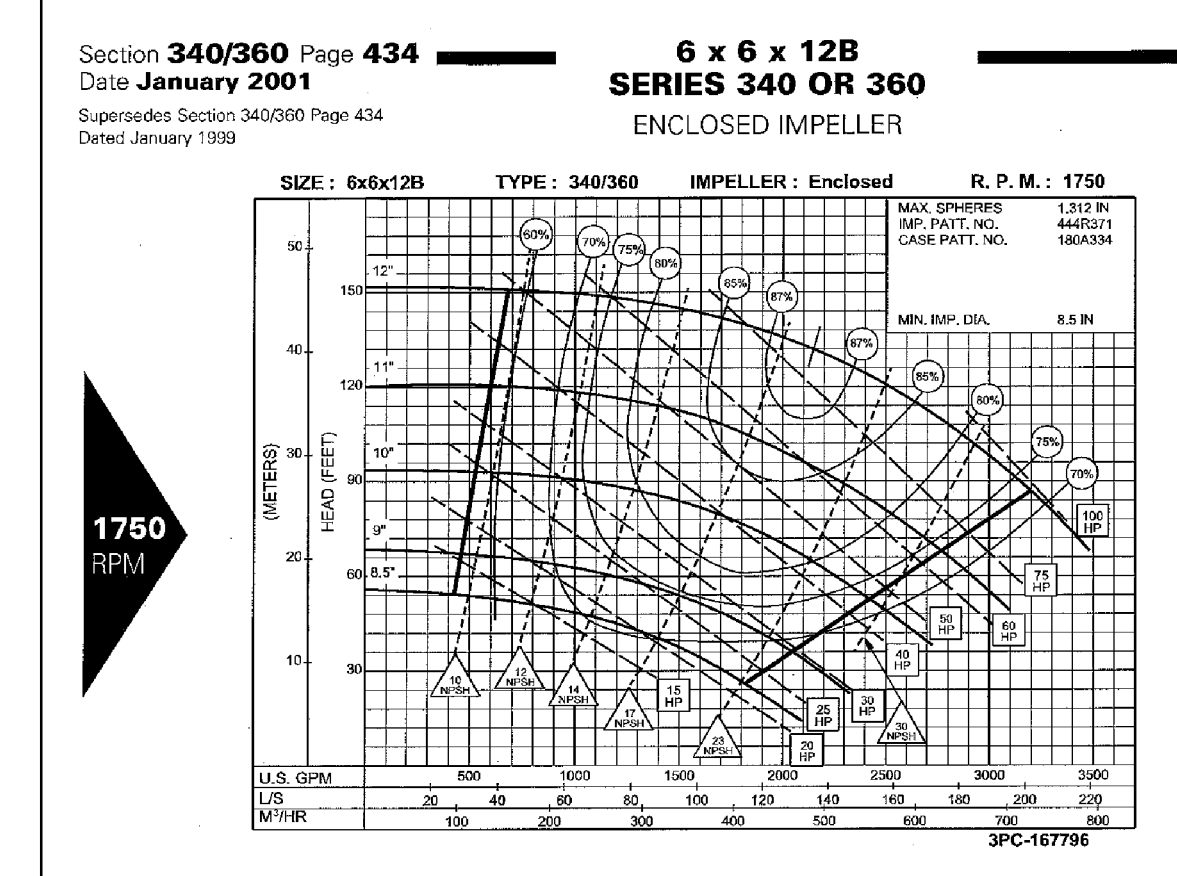
ACTIVITY POOL DROP SLIDE PUMP #2



LAZY RIVER/PLUNGE POOL FILTRATION PUMP



ACTIVITY POOL FILTRATION PUMP



ACTIVITY POOL DROP SLIDE PUMP #1

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Virginia Graeme Baker Pool & Spa Safety Act Improvements for:
VILLAGE OF ORLAND PARK
CENTENNIAL PARK FAMILY AQUATIC CENTER
16600 WEST AVENUE, ORLAND PARK, IL 60462

REVISION DATES:
PROJECT NUMBER: 03-01-2
PROJECT MANAGER: METRO
DRAWN BY: METRO
DATE: 04-19-2010
PUMP CURVES
PSK-8