CITY OF ALBUQUERQUE

December 12, 2006

Dennis A. Lorenz, P.E.
Brasher & Lorenz, Inc.
2201 San Pedro NE
Albuquerque, NM 87110

Re: Sun Valley Office Park Grading and Drainage Plan
Engineer's Stamp dated 12-7-06 (E15/D12)

Dear Mr. Lorenz,

Based upon the information provided in your submittal received 12-7-06, the above referenced plan is approved for Site Development Plan for Subdivision and Site Development for Building Permit action by the DRB.

Before submitting for Building Permit please address the following comment:

- The sidewalk (86.0) between the two southern buildings is too low to drain.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne, E.I.
Engineering Associate, Planning Dept.
Development and Building Services

C: file
Brad Bingham

P.O. Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

CONCEPTUAL DRAINAGE REPORT

FOR

SUN VALLEY OFFICE PARK

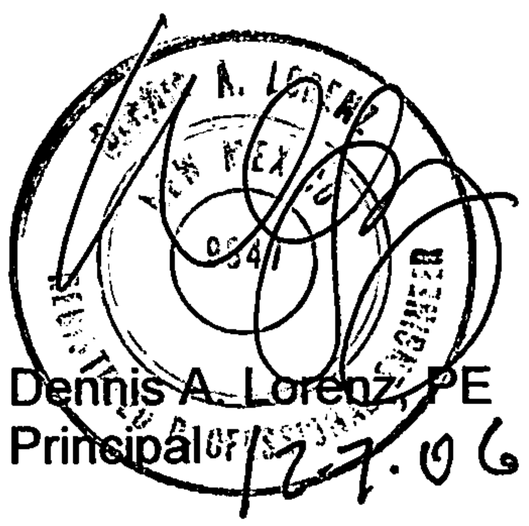
Albuquerque, New Mexico

Prepared For:

Claudio Vigil Architects
1801 Rio Grande Boulevard NW
Albuquerque, New Mexico 87104

Prepared by:

BRASHER AND LORENZ, INC.
Consulting Engineers
2201 San Pedro NE, Building 1, Suite 1200
Albuquerque, New Mexico 87110



Dennis A. Lorenz, PE
Principal 12.7.06

December 2006

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MAPS

DRAINAGE BASIN MAP, DEVELOPED CONDITIONS, FIGURE 1

CALCULATIONS

UNDERGROUND STORAGE
AHYMO OUTPUT FILES

EXHIBITS (Located in back pocket)

CONCEPTUAL GRADING & DRAINAGE PLAN
DRAINAGE MASTERPLAN

CONCEPTUAL GRADING AND DRAINAGE PLAN

PROJECT DESCRIPTION

Pursuant to the Drainage Ordinance for the City of Albuquerque and the Development Process Manual, this Drainage Report outlines the drainage management criteria for controlling developed runoff from the project site. The project consists of the development of the property into **Sun Valley Office Park**. Paving, landscaping, utility, grading, and drainage improvements will be provided to support the project. This plan is prepared to support Site Development Plan approval and is not to be used for construction.

SITE DESCRIPTION

The project site is approximately 3.5 acres in size and located on Osuna Road NE west of Edith Boulevard NE. The site is presently described as Lots 3A, 4, 5, 6 and 7A, Zia Trading Company. The site is bounded on the north by Osuna Road, on the east by developed office buildings, on the south by partially developed property, and on the west by AT & SF Railroad right-of-way. The property is presently partially developed. Lots1 and 2 are developed as office properties. Public water, sewer and dry utilities exist on the property. A private retention pond is also located at the northwest corner of the site. On-site topography slopes from east to west at approximately 1 percent.

EXISTING CONDITIONS

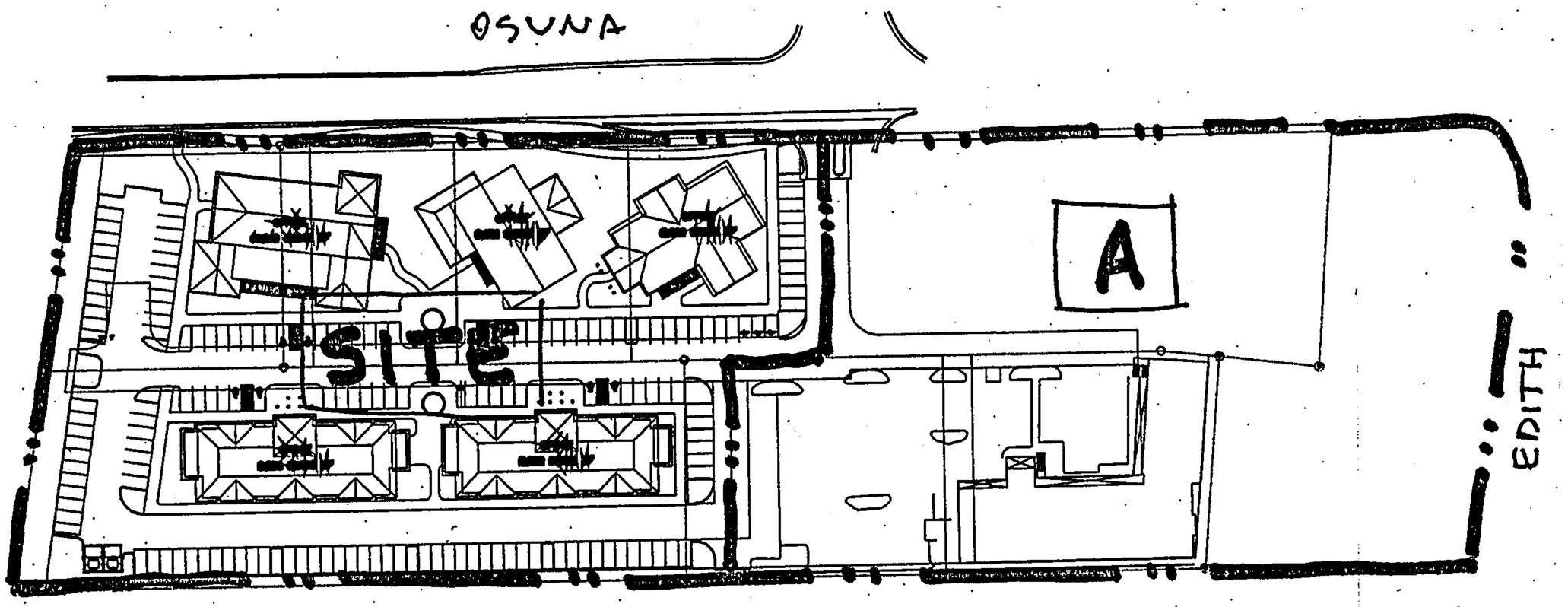
The site is partially developed and drains westerly within an improved swale to the retention pond mentioned above. The retention pond has a storage volume of 1.933 acre feet and is equipped with a sump pump. The sump pump discharges to the median channel within Osuna Road NE. The retention pond was sized to accept the 100 year, 10 day storm from the developed contributing drainage basins. As shown by the following FIRM panel (Figure 2), the project site is not located within a designated 100-year flood hazard zone.

PROPOSED CONDITIONS

As shown by the Plan, the project consists of the development of the property into an office complex. Paving, landscaping, and drainage improvements will be constructed as necessary to support the project. The Plan shows the elevations required to properly grade and construct the recommended improvements. The direction of the drainage flows are given by flow arrows. All recommended storm drainage improvements are detailed to assist construction. As shown by the Plan, the existing retention pond will be replaced with an underground storage system consisting of 120 inch pipes. The underground storage system will be equipped with a 1.0 HP sump pump. All flows will discharge to the median channel within Osuna Road NE.

APPENDIX

MAPS



N

DRAINAGE BASIN MAP

FIGURE 1

CALCULATIONS

PROJECT HYDROLOGY

AHYMO

ZONE:	2
P_{6HOUR}	2.35"
$P_{10\ DAY}$	3.95"

SUN VALLEY OFFICE PARK

UNDEVELOPED:

BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	E	Q (cfs)	VOL (ac ft)
SITE	3.50	0.00	0.00	3.50	0.00	1.13	11.0	0.330
A	3.53	0.00	0.22	0.28	3.03	1.96	13.2	0.577

DEVELOPED (PROPOSED):

BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	E	Q (cfs)	VOL (ac ft)
SITE	3.50	0.00	0.21	0.28	3.03	1.13	13.1	0.572
A	3.53	0.00	0.22	0.28	3.03	1.96	13.2	0.577

VOL (10DAY) = 0.1.149 AF + 6.06 AC(3.95-2.35)/12 = 1.933 AF

15.60

14.43 cfs

ZONE 1

$\frac{3.03 \text{ ac} \times 1.97 \text{ in}}{\text{ac}} = .497 \text{ in}$

① DEVELOPED SITE

$\Sigma A = 3.52 > 3.50$

.28 x .99 =	.077
.21 x .672 =	.072
	.915

②

SUN VALLEY OFFICE PARK | 12.7.06

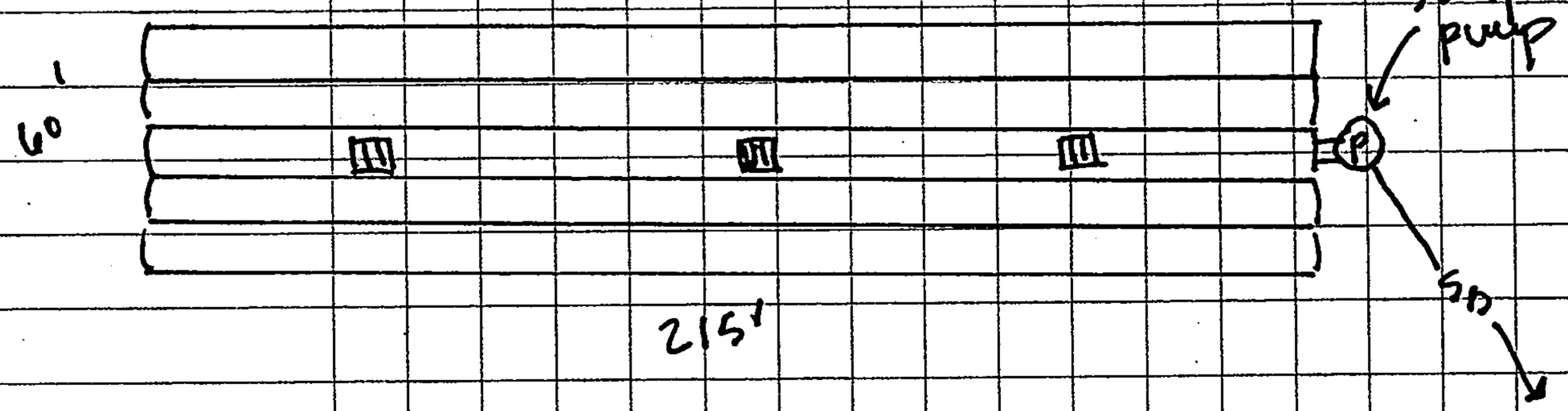
① UNDERGROUND STORAGE

VOLUME = 1.933 AC FT
= 84,201 CF

USE 120" CMP's

A = 78.5 SF

LENGTH PIPE = 84,201 / 78.5 = 1073 LF



⇒ 5 - 120" CMP x 215 LF = 84,388 CF

SUMP PUMP TO EXIST DISCHARGE LINE OSUNA MEDIAN CHANNEL. (CONN TO 60" Ø)

BRASHER & LORENZ
CONSULTING ENGINEERS
2201 San Pedro NE Building 1 Suite 220
Albuquerque, New Mexico 87110
Ph: 505-888-6088 Fax: 505-888-6188

(2) POND VOLUME

PROVIDE RETENTION STORAGE FOR SITE PLUS OFF-SITE BASIN OS-1 (EXIST COND.)

PER ATHYMO:

$V_{100} = 1.140$ AF

PROVIDE 10-DAY VOLUME

$A_b = 5.95$ Ac
$P_{360} = 2.35"$
$P_{10D} = 3.95"$

$V_{10\text{-DAY}} = 1.140 + A_b(P_{10D} - P_{360})/12$
$= \underline{1.933 \text{ AF}}$

(3) POND DISCHARGE

POND IS TO DRAIN W/IN 96 HRS.

PROVIDE SUMP PUMP

$Q_{OUT}\ (MIN) = V_{10DAY}/96 \text{ HRS} = \underline{0.24 \text{ CFS}}$

PROVIDE PUMP W/ COMPLETE CONTROLS TO DISCHARGE AT 110 GPM MINIMUM.

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Albuquerque, New Mexico 87110
Ph: 505-888-6088 Fax: 505-888-6188

○ SUMP PUMP DESIGN

POND VOL = 1.933 AF

96 HR DRAIN TIME = 0.24 CFS
= 110 GPM

USE 4" PVC DISCHARGE LINE TO EXIST POND @ OSUNA RD MEDIAN.

L = 200'

C = 114 HAZEN-WILLIAMS

METRIC/ENGL CONVERSION = 0.0103

$$\Rightarrow h_L = \left[\frac{Q}{0.0103\, C\, d^{2.63}}\right]^{1.852} \ell \quad = 2.34 \text{ Ft} = 1.0 \text{ psi}$$

Δ ELEV = POND BOT - DISCHARGE = 15 FT

TOTAL DISCHG H = 16 FT

$$\Rightarrow h_p = \frac{Q\, \gamma_w\, H}{e\, 550}$$

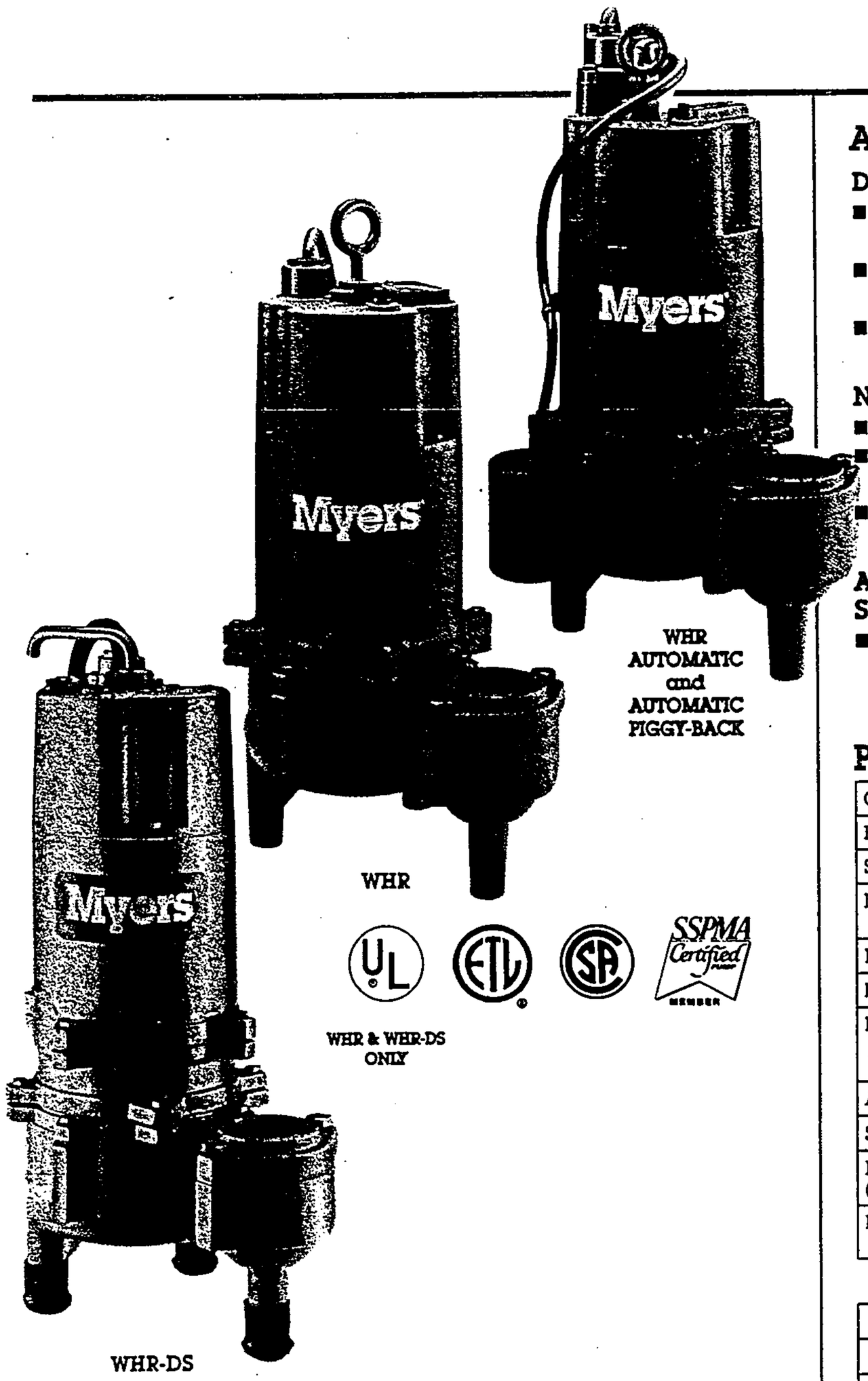
$h_p = \underline{0.62}$

Q = 0.24 CFS
γ_w = 62.4
H = 16'
e = EFFICENCY = 70%

USE MYERS WITH - 1HP 2" SUMP PUMP W/ 4" DISCHARGE LINE. SEE ATTACHED SHOP DWGS.

WHR and WHR-DS

2" Solids Handling Sewage Pumps,
Single and Double Seal



WHR AUTOMATIC and AUTOMATIC PIGGY-BACK

WHR

WHR & WHR-DS ONLY

WHR-DS

ADVANTAGES BY DESIGN

DURABLE MOTOR.

- Oil-filled for cooler operation and constant bearing lubrication.
- Single phase PSC motors have no starting switch to fail.
- Recessed impeller reduces radial bearing loads, increases bearing life.

NON-CLOG OPERATION.

- Recessed vortex impeller passes 2" solids.
- Impeller operates completely out of volute passage.
- Passes stringy trash and other solids which conventional semi-open impellers can't.

AVAILABLE WITH AUTOMATIC PIGGY-BACK SWITCH FOR MAINTENANCE-FREE OPERATION.

- Piggy-backed mechanical float switch allows pump to operate automatically or can be unplugged for manual operation.

PRODUCT CAPABILITIES

Capacities To	175 gpm	662 lpm
Heads To	33 ft.	10.1 m
Solids Handling Capacity (dia.)	2 in.	50.8 mm
Liquids Handling	raw, domestic and light commercial sewage	
Intermittent Liquid Temp.	up to 140°F	60°C
Motor	1/2, 3/4, and 1 HP, 1750 rpm	
Electrical	1/2 HP, 115V, 1Ø, 60 Hz, PSC 1/2, 3/4, 1 HP, 230V, 1Ø, 60 Hz, PSC 208/230/460/575V, 3Ø, 60 Hz	
Acceptable pH Range	6-9	
Specific Gravity	.9-1.1	
Discharge, NPT (Optional)	2 in. 3 in.	50.8 mm 76.2 mm
Minimum Sump Dia. (Simplex) (Duplex)	24 in. 30 in.	609.6 mm 762 mm

Construction Materials		
Motor Housing	cast iron	
Volute Case	cast iron	
Impeller	cast iron, vortex	
Power Cord	Single Seal 16/3, 20 ft., 1Ø 16/4, 15 ft., 3Ø SJOW/SJOWA	Double Seal 14/4, 15 ft., 1Ø 14/3, 20 ft., 1Ø L/D 16/4, 15 ft., 3Ø L/D
Mechanical Seal (Optional)	single type 1, carbon and ceramic or double tandem, carbon and ceramic	
Pump Shaft and Motor Shaft	416 SST	

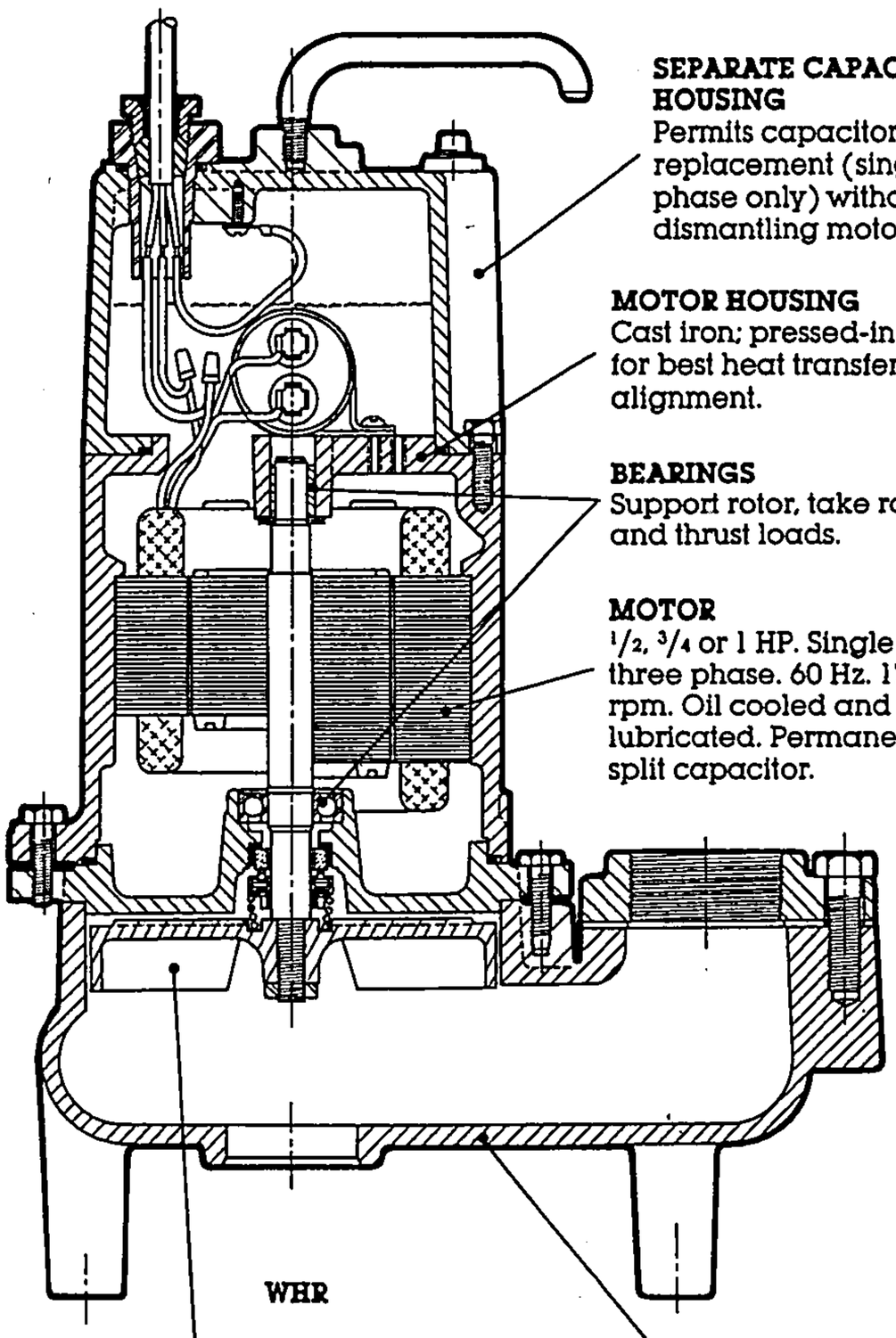
THE WHR SERIES PUMPS ARE DESIGNED FOR USE IN LIGHT COMMERCIAL AND RESIDENTIAL RAW SEWAGE APPLICATIONS. WHR pumps will pass a full 2-inch sphere. The recessed vortex impeller provides an unobstructed passage in the volute case which allows these pumps to handle stringy, trashy solids without plugging the impeller. The vortex impeller also greatly extends the pumps' bearing life. Available in double seal configuration for extended motor life. For more information, call your Myers distributor, or the Myers Ohio sales office at 419/289-1144.

WHERE INNOVATION MEETS TRADITION

Myers®

WHR and WHR-DS

2" Solids Handling Sewage Pumps,
Single and Double Seal



SEPARATE CAPACITOR HOUSING
Permits capacitor replacement (single phase only) without dismantling motor.

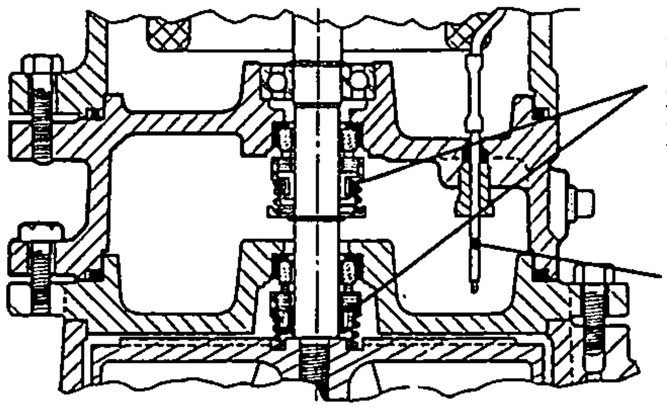
MOTOR HOUSING
Cast iron; pressed-in stator for best heat transfer and alignment.

BEARINGS
Support rotor, take radial and thrust loads.

MOTOR
1/2, 3/4 or 1 HP. Single or three phase. 60 Hz. 1750 rpm. Oil cooled and lubricated. Permanent split capacitor.

IMPELLER
Recessed completely out of volute passage.

VOLUTE CASE
Cast iron with support legs. Passes 2" solids.

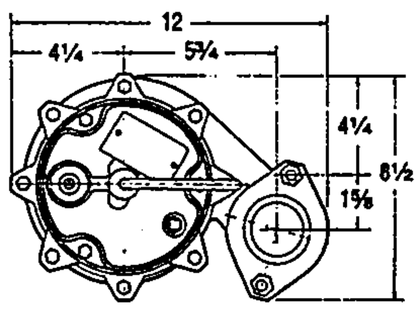


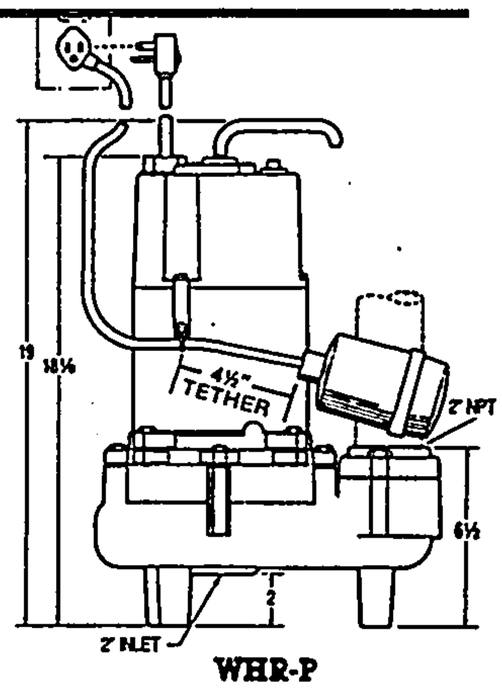
WHR-DS

SHAFT SEAL(S)
Carbon and ceramic faces. Second seal extends motor life.

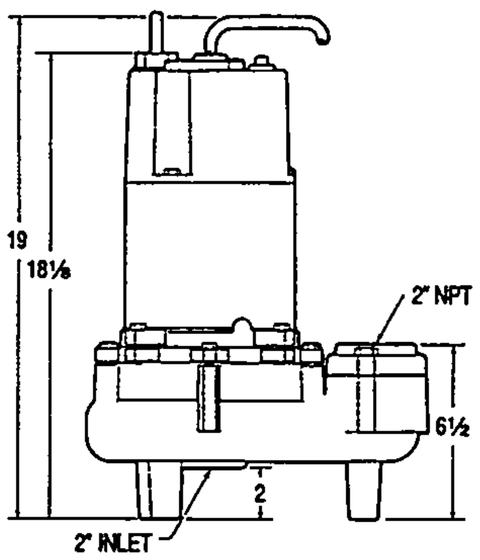
OPTIONAL SEAL LEAK PROBE (single phase only)
Detects water in seal housing, activates red light in control panel.

DIMENSIONS

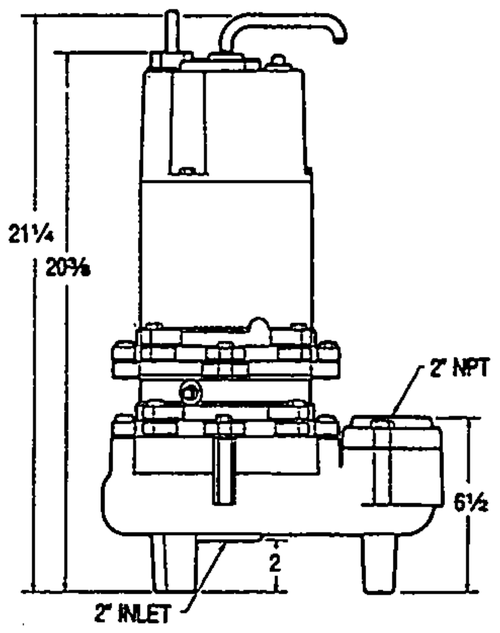




WHR-P

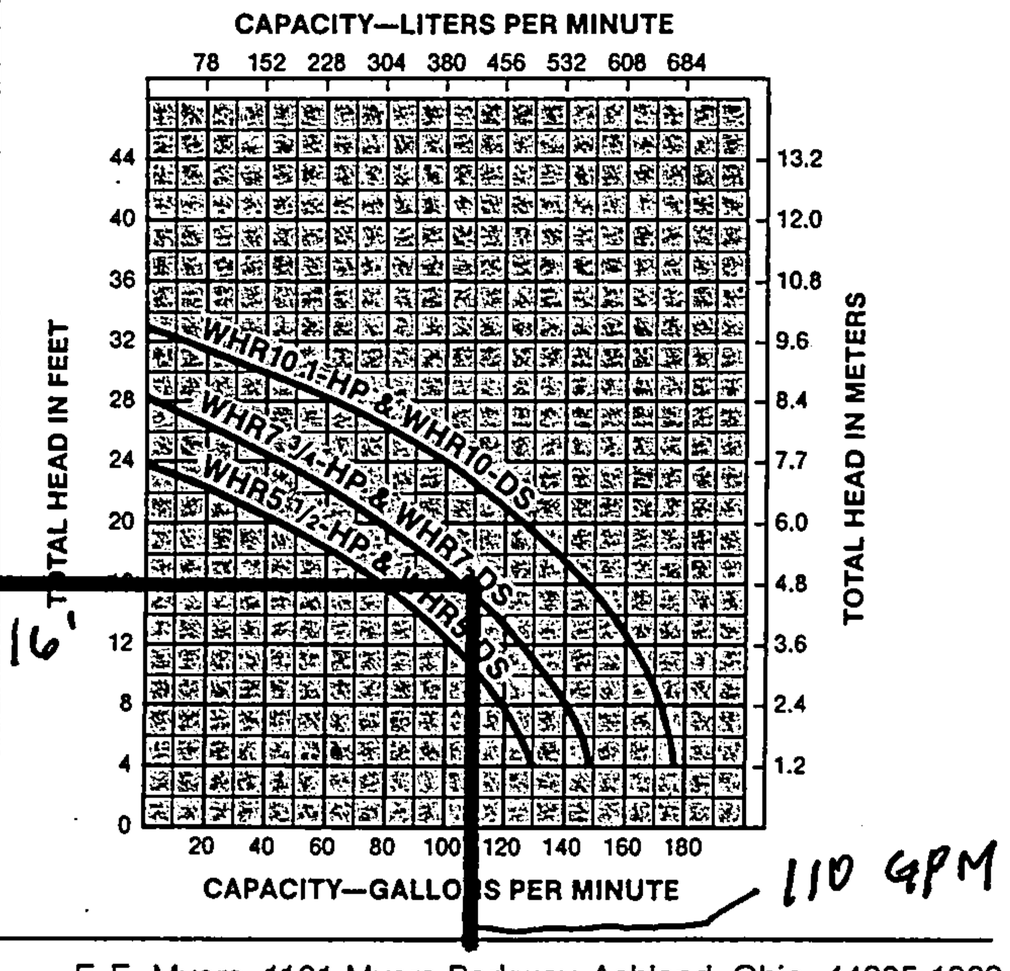


WHR



WHR-DS

PERFORMANCE CURVE



K3242 9/95
Printed in U.S.A.

Myers®

F. E. Myers, 1101 Myers Parkway, Ashland, Ohio 44805-1969
419/289-1144, FAX: 419/289-6658, TLX: 98-7443

Myers (Canada), 269 Trillium Drive, Kitchener, Ontario N2G 4W5
519/748-5470, FAX: 519/748-2553

PUMP AND MOTOR SPECIFICATIONS
WHR SINGLE SEAL SEWAGE PUMPS
SOLIDS HANDLING SIZE - 2 INCH

OPERATING CONDITIONS: Each pump shall have a capacity of 175 GPM at a total head of 33 feet and motor size shall be 1.0 horsepower, 1 phase 60 Hz for operation at 230 volts and complete performance as shown on curve sheet.

PUMP: The sewage pump shall be WHR series as manufactured by F. E. Myers, Ashland, Ohio or equal. Pump shall be of the submersible type with recessed Myers impeller to give complete unobstructed volute opening for passing of solids. Pump shall pass 2" diameter solids.

Discharge of pump shall be provided with bolt on 2" NPT flange or optional 3" NPT flange so that 2" or 3" pipe size may be used.

MOTOR: Pump motor shall be of the submersible type rated 1/2, 3/4, or 1 horsepower as required. Motor shall operate at 1750 RPM and shall be for 208 or 230 volts single phase or 208, 230, 460, or 575 volts three phase. Single phase motors shall be of the permanent split capacitor type with no relays or starting switches.

Stator winding shall be of the open type with Class A (105 degrees C) insulation for operating in clean dielectric oil that lubricates bearings and seals and cools the winding.

Stator shall be pressed into housing for the best alignment and heat transfer.

Common motor pump shaft shall be of 416 stainless steel and shall be heat shrunk into the die cast motor rotor. Rotor shaft shall be supported by a lower ball bearing to take thrust and radial loads and by an upper bronze sleeve bearing to take radial load only.

Single phase motor shall have an overload element embedded in the winding to protect the motor against overcurrent and overheating conditions. Overload element shall automatically reset when motor cools.

Three phase motor shall be protected by 3 leg overload element in control box. Overload shall be of the quick trip ambient compensated type and shall have a manual reset button.

Motor to be a completely assembled unit with end plate for mounting in volute case. Complete motor and pump impeller to be removable as a unit from the volute casing.

CORROSION PROTECTION: All iron castings shall be pre-treated with phosphate and chromic rinse and shall be painted with a high quality, lead free, alkyd enamel air dry paint. All fasteners to be 302 stainless steel.

SHAFT SEALS: Motor shall be protected by a rotating mechanical seal. Seal face shall be carbon and ceramic and lapped to a flatness of one light band.

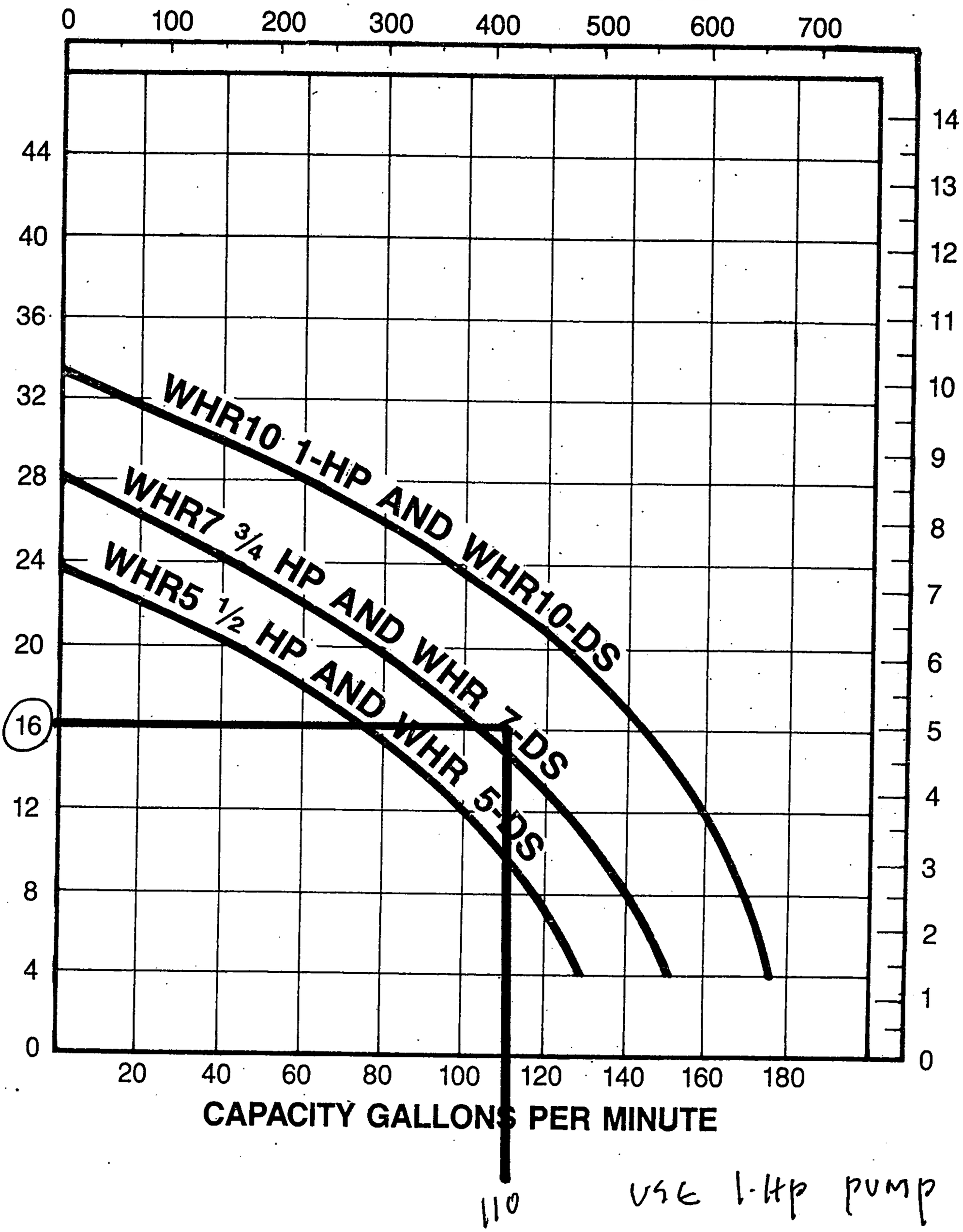
IMPELLER: Shall be bronze and of the recess type. Pump-out vane shall be used on back shroud. Impeller shall be dynamically balanced. Impeller to be threaded on shaft and held in position with locknut.

Impeller and motor shall have top lift-out of case so that the assembly can be removed without disturbing any piping.

PUMP CASE: The volute case shall be of cast iron and shall be provided with bolt-on flange so the 2" pipe size may be used.

CORD SEAL: The cord shall be potted into a steel connector with polyurethane resin for leak proof seal. A cord nut and rubber grommet shall clamp the cord into the bushing. Cords shall withstand a pull of 100 pounds.

PERFORMANCE CURVE
WHR AND WHR-DS SERIES WASTE HANDLING PUMPS



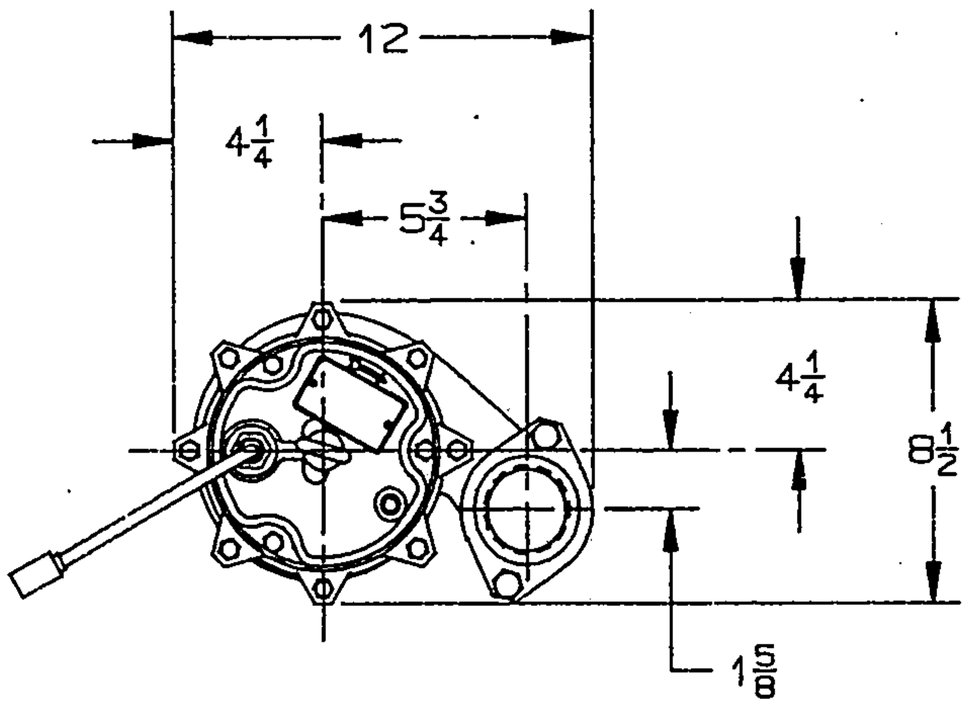
use 1-hp pump

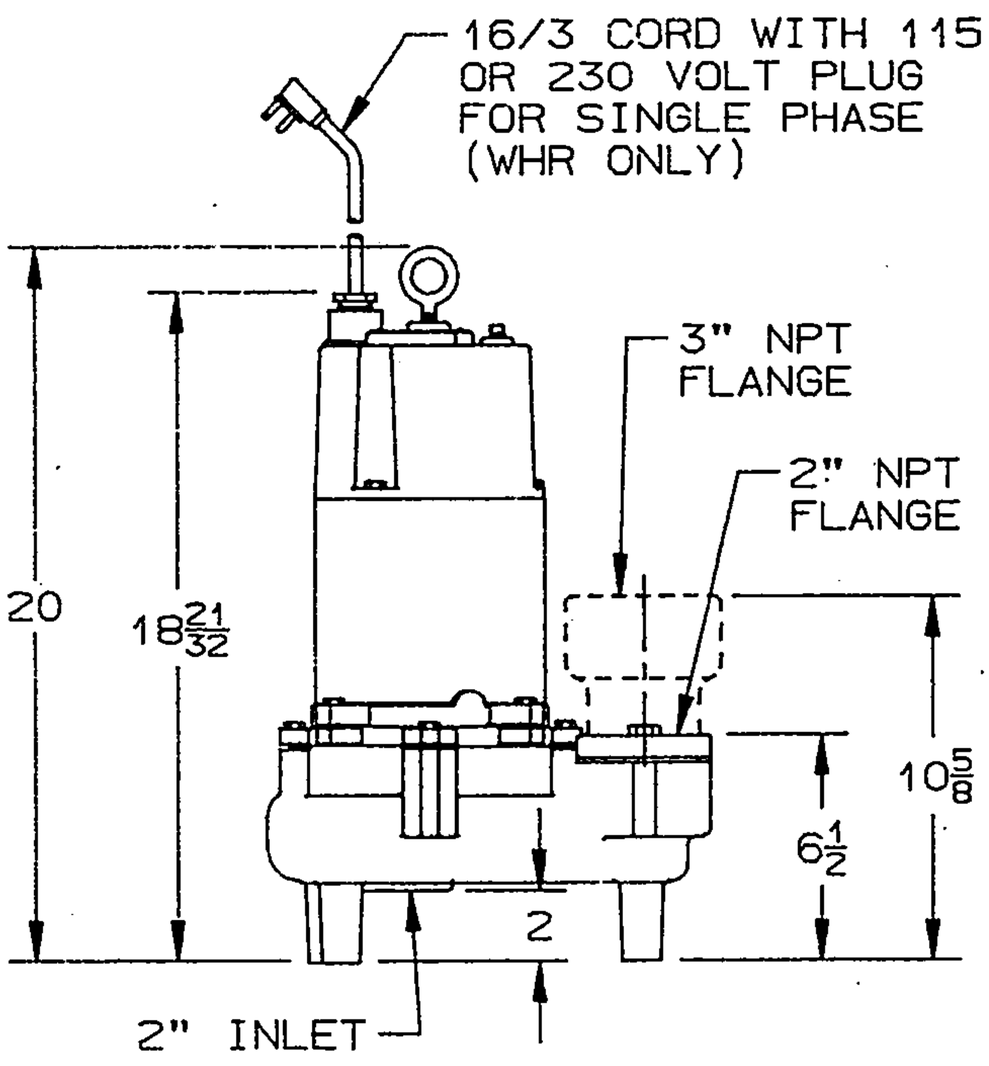
Myers®

: 1101 Myers Parkway, Ashland, Ohio 44805-1923 • 419/289-1144 • FAX: 419/289-6658, TLX: 98-7443

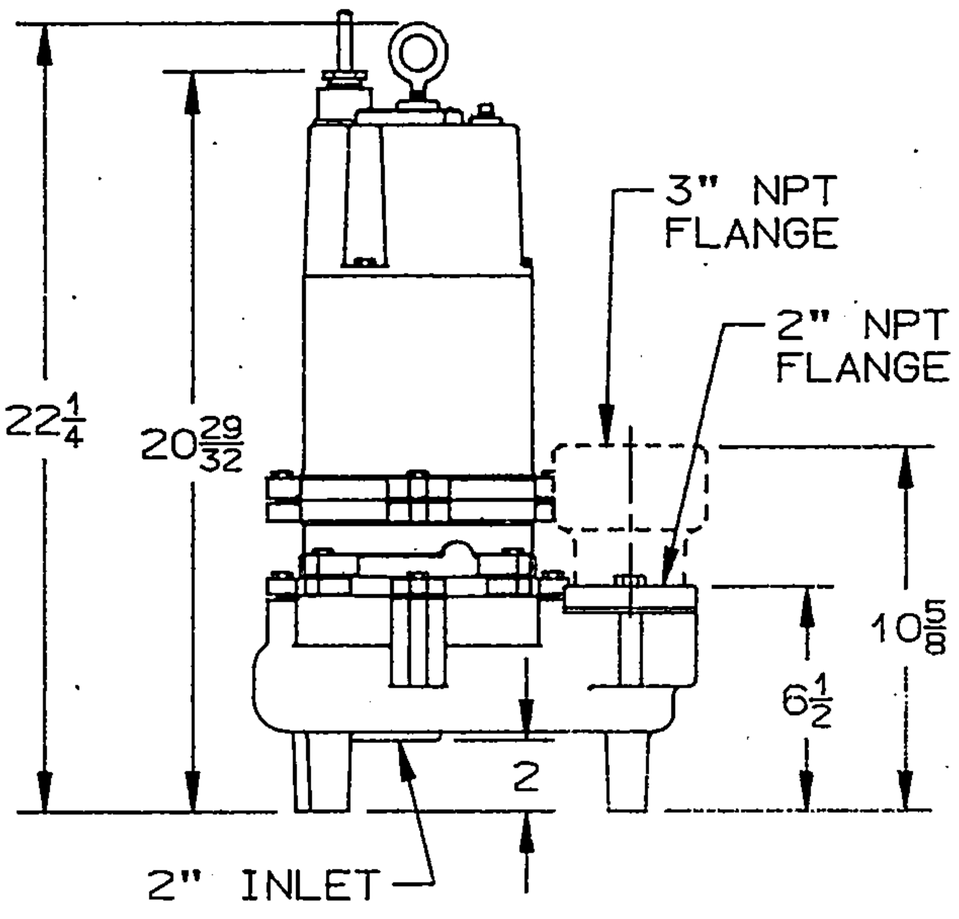
Myers

ES-184





WHR



WHR-DS

Myers Environmental Systems

WHR, WHR-DS WASTE HANDLING PUMP

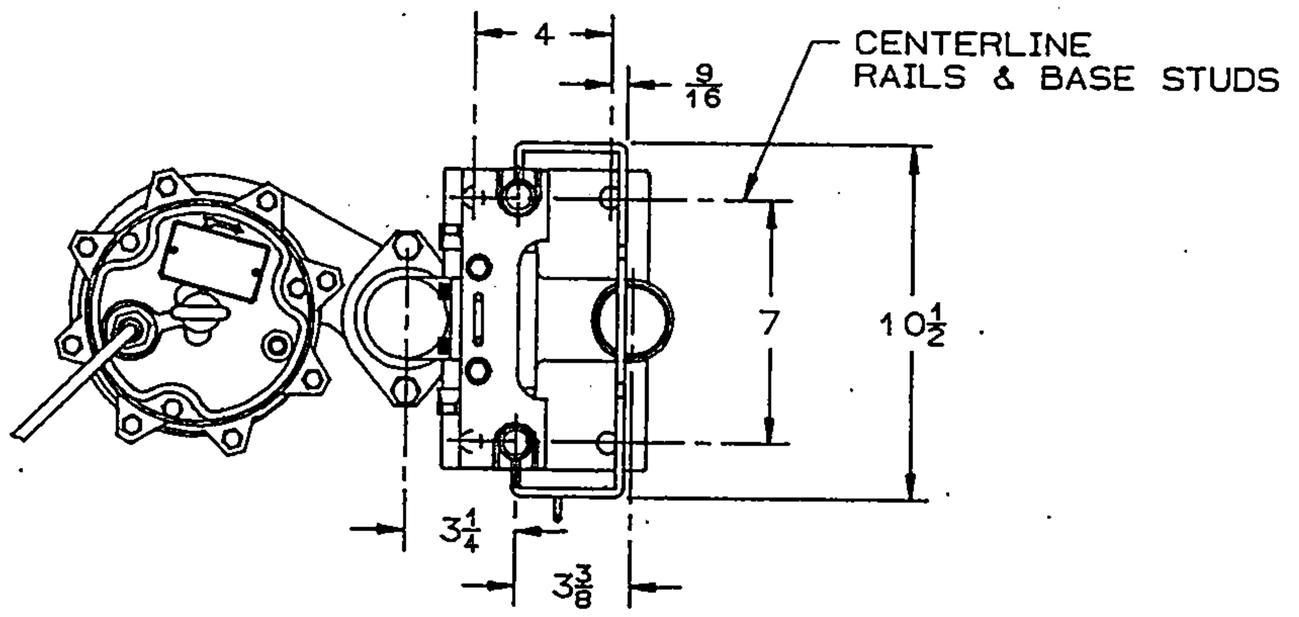
SE	2-95		ES-184

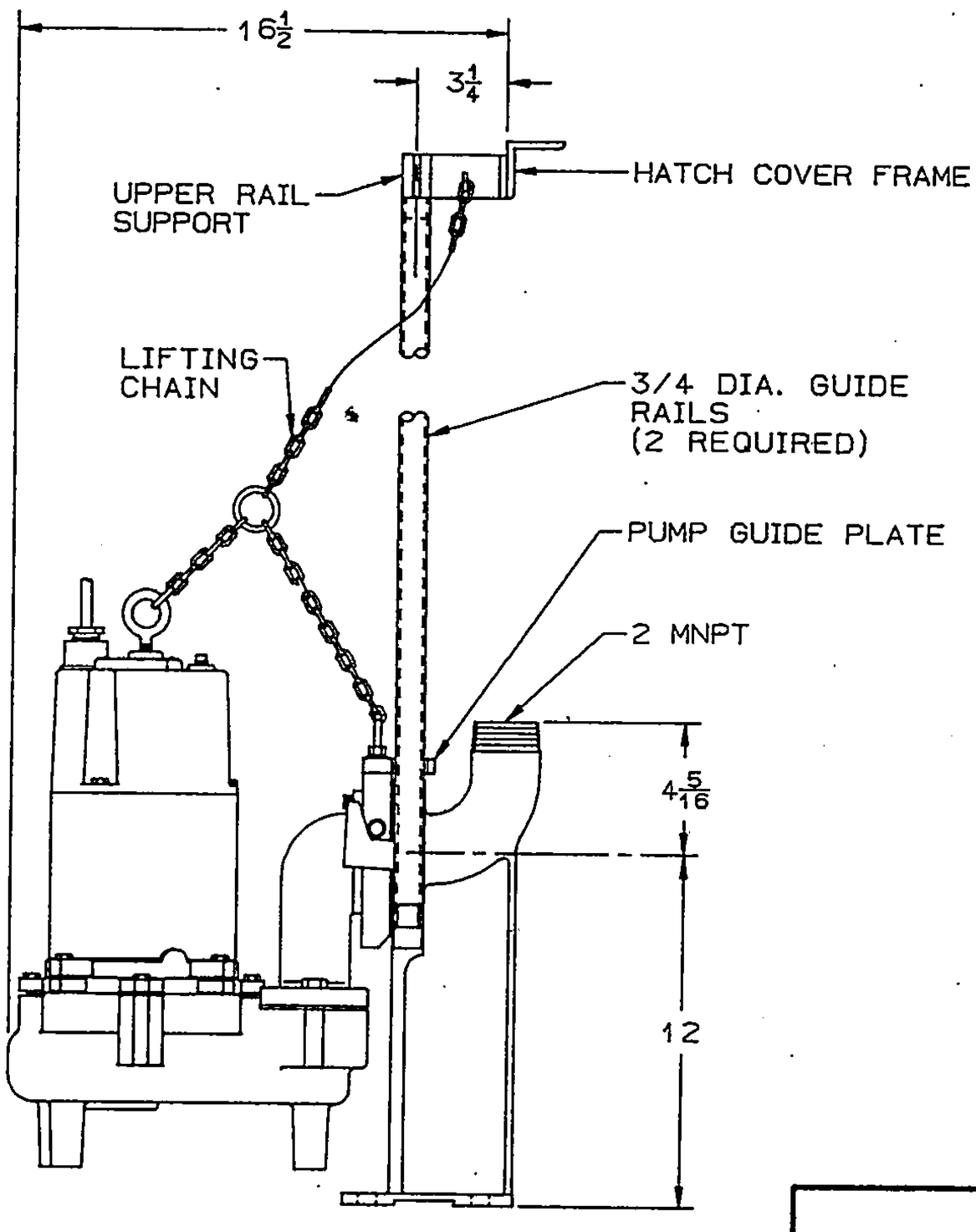
Myers

WHR

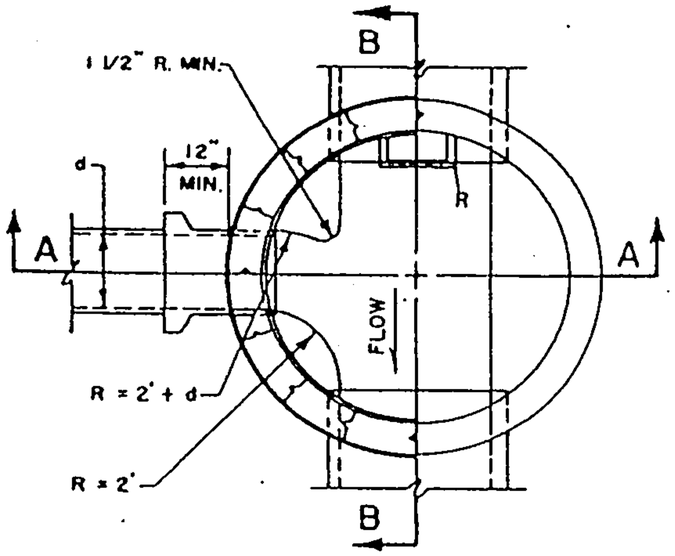
1/2 - 1 HP SUBMERSIBLE NON-CLOG
2" DISCHARGE WASTEWATER PUMP

SLIDE RAIL DIMENSIONS
(SRA-200 SHOWN)

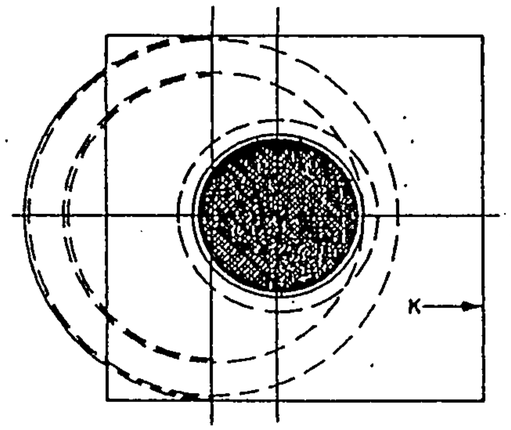




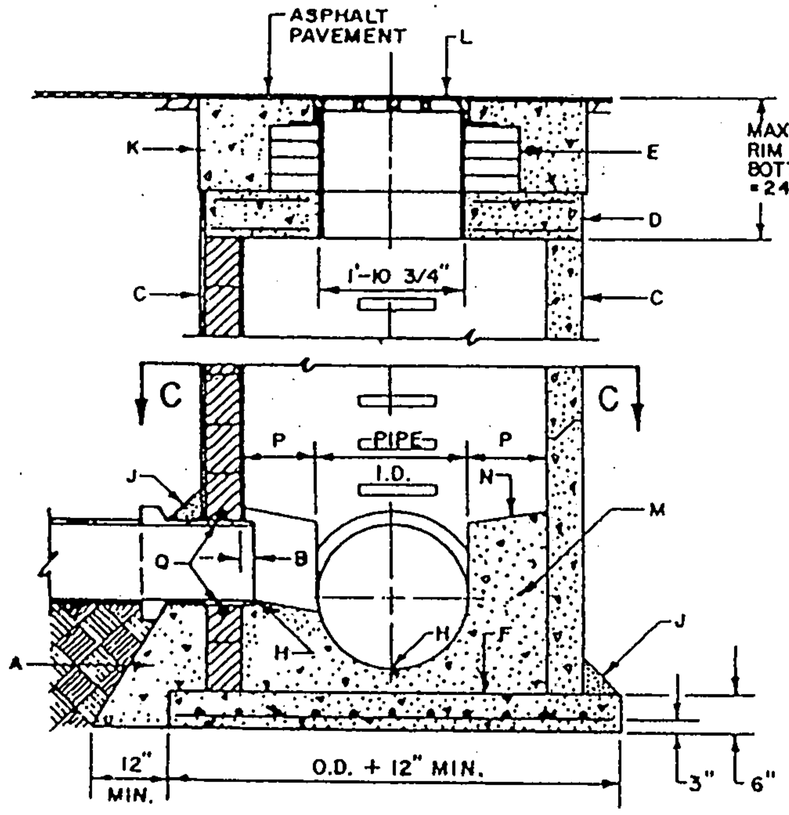
ES-WHR



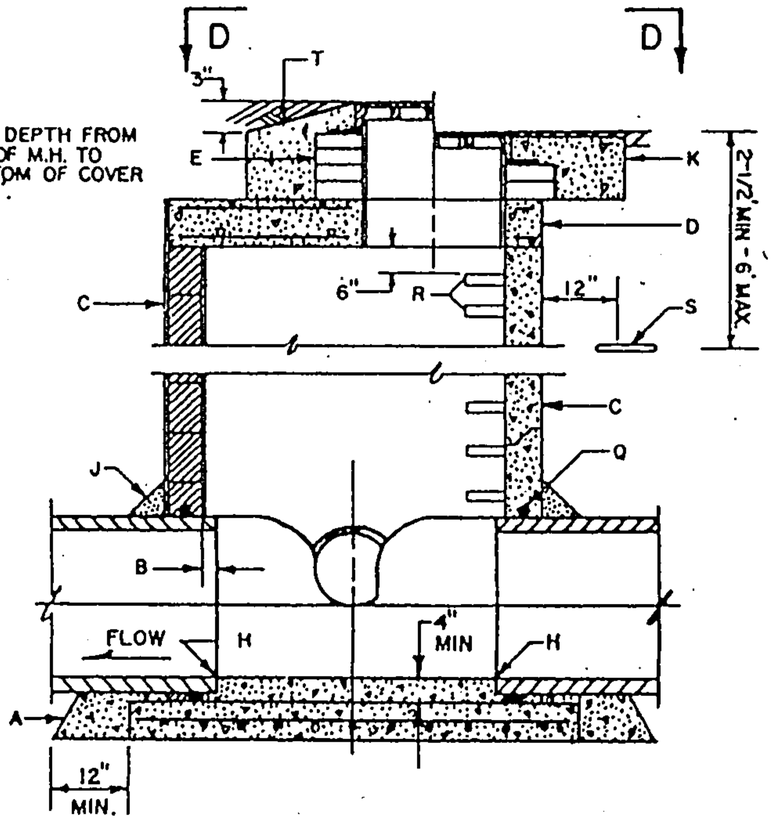
PLAN AT C-C



PLAN AT D-D



CROSS SECTION A-A



CROSS SECTION B-B

GENERAL NOTES

1. USE TYPE "C" MANHOLE FOR DEPTHS OF LESS THAN 6' MEASURED FROM INVERT TO RIM.
2. CONTRACTOR HAS OPTION TO CONSTRUCT TYPE "C" MANHOLE IN LIEU OF TYPE "E" MANHOLE FOR DEPTHS OF 6' OR MORE.
3. DESIGN APPLIES TO 4' TO 6' I.D. MANHOLES.
4. MANHOLE GREATER THAN 18' IN DEPTH SHALL ONLY BE CONSTRUCTION PRECAST CONCRETE SECTIONS.
5. USE NON-SHRINK GROUT FOR JOINTS, FILLETS AND PENETRATIONS.
6. COMPACT ALL BACKFILL AROUND MANHOLE TO 95%.
7. POSITION MANHOLE OPENING OVER THE UPSTREAM SIDE OF MAIN LINE.

CONSTRUCTION NOTES

A. CONCRETE PIPE SUPPORTS SHALL EXTEND OUTSIDE OF MANHOLE TO BELL OF FIRST JOINT AND SHALL CRADLE PIPE TO SPRING LINE NOT APPLICABLE FLEXIBLE PIPE.
B. PIPE PENETRATION INTO MANHOLE SHALL BE FLUSH TO 2" MAX., MEASURED AT SPRINGLINE OF PIPE.
C. MANHOLE MAY BE CONSTRUCTED OF CONCRETE BLOCK, GR. MS BRICK, POURED CONCRETE OR PRECAST REINFORCED CONCRETE IF BLOCK OR BRICK PLASTER INSIDE AND OUT WITH 1/2" MORTAR. SEE DWG. 2118 FOR DETAILS.
D. PRECAST CONCRETE COVER, SEE DWG. 2107.
E. USE MAX., 4 COURSES GR. MS BRICK ON UNPAVED STREET FOR FUTURE ADJUSTMENT OF MANHOLE FRAME TO PAVEMENT GRADE PLASTER INSIDE WITH 1/2" MORTAR.
F. CONCRETE BASE TO BE POURED IN PLACE USING NO. 4 BARS AT 6" O.C. EA. WAY FOR MANHOLE DEPTH OF 16' OR GREATER. NO. 4 BARS AT 12" O.C. EA. WAY FOR MANHOLE LESS THAN 16' IN DEPTH.
H. INVERT ELEVATION OF STUB OR LATERAL AS SHOWN ON PLANS.
J. 6" GROUT FILLET ON UPPER HALF OF PIPE AND AROUND BASE.
K. USE A 5' X 5' CONCRETE PAD IN ALL AREAS.
L. FRAME AND COVER, SEE DWG. 2110.
M. CONCRETE, SEE SECTION 101.
N. SLOPE 1" PER FT. FROM PIPE CROWN.
P. SHELF TO BE 9" WIDE MIN.
Q. APPROVED WATERSTOP TO BE COMPATIBLE WITH TYPE OF PIPE.
R. STEPS TO BE INSTALLED AS PER SPEC. SECTION 920.
S. END (IN UNPAVED AREAS).
T. IN UNPAVED AREAS SET FRAME TO GRADE AND SLOPE TOP OF PAD.

CITY OF ALBUQUERQUE

REVISIONS
11-14-91

SEWER
MANHOLE TYPE "C"

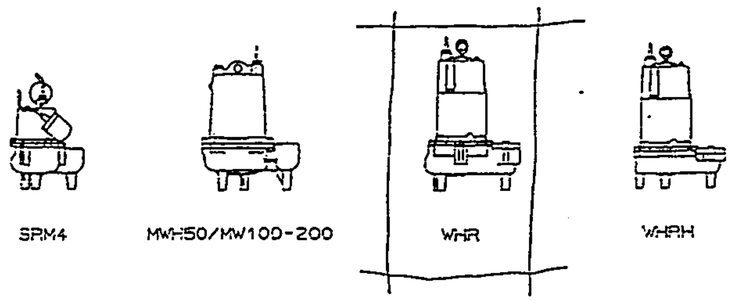
DWG. 2101 AUG. 1986

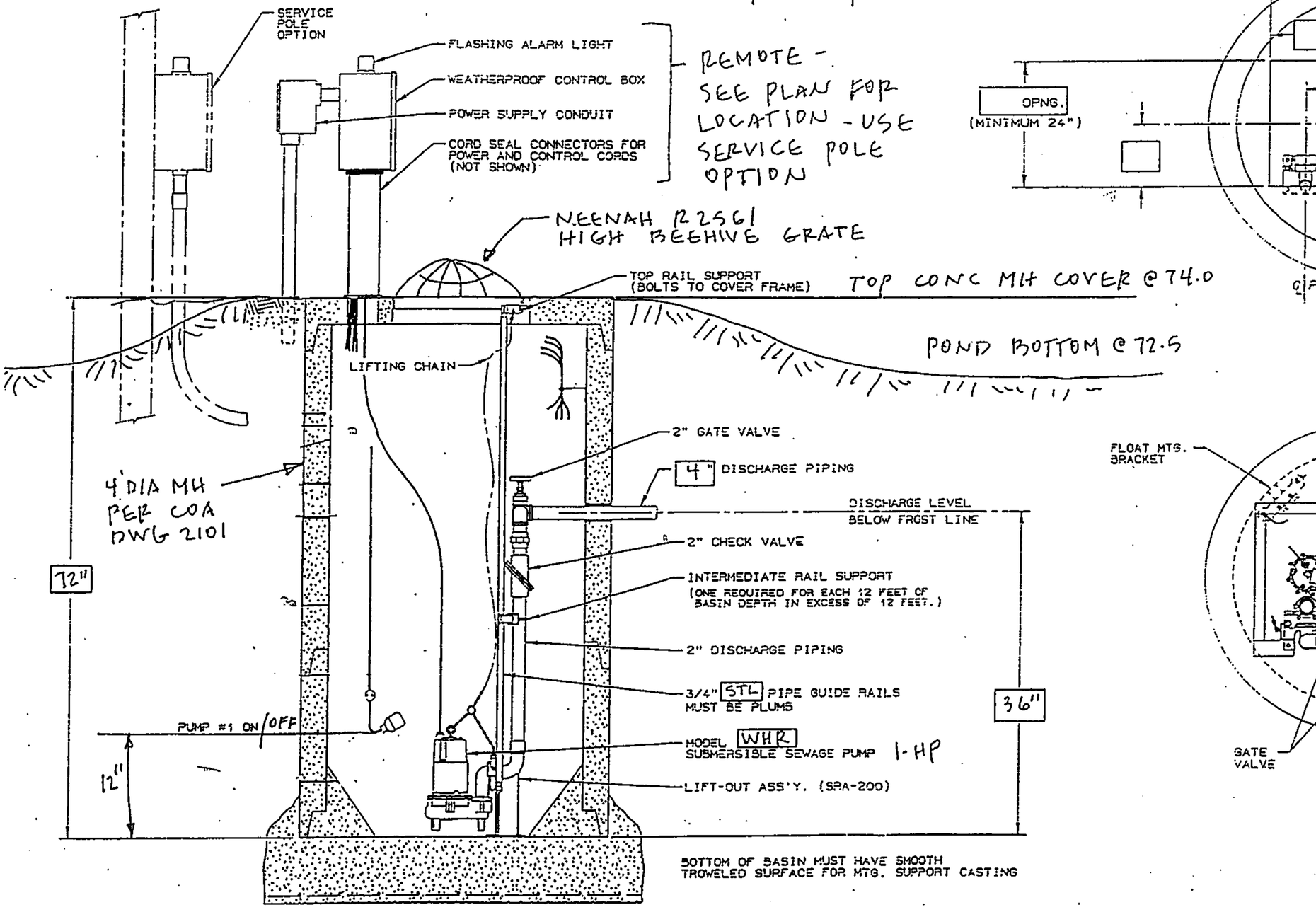
TYPICAL INSTALLATION

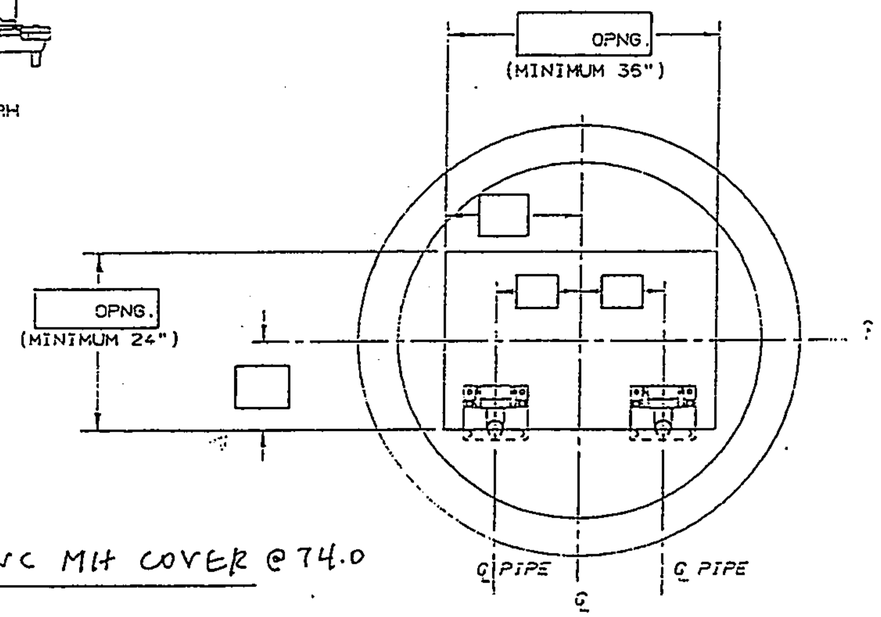
DUPLEX SUBMERSIBLE SEWAGE PUMP

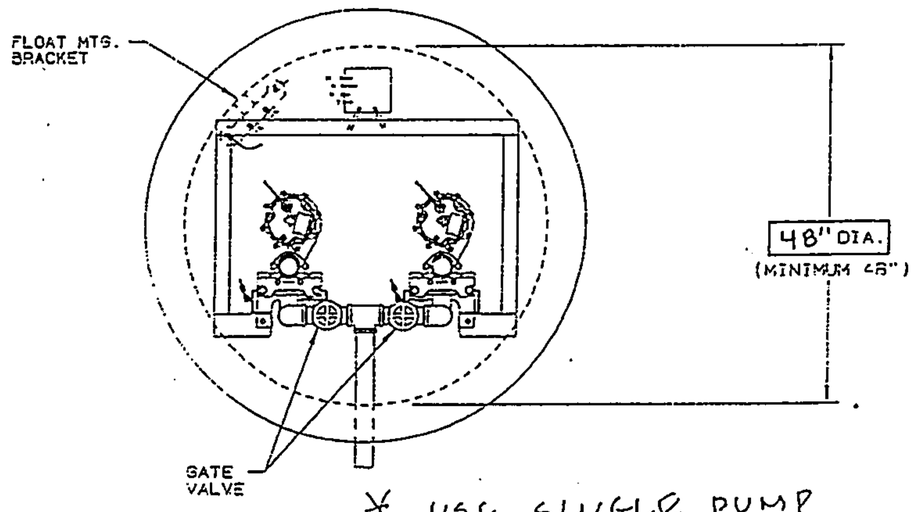
PUMP SERIES: SRM4, MWH50, MW100-200 WHR, WHRH

LIFT OUT MODELS: SRA-200









* USE SINGLE PUMP ASSEMBLY

CITY OF ALBUQUERQUE

December 09, 2011

Sheldon Greer, P.E.
GND LLC
5643 Paradise Blvd. NW
Albuquerque, NM 87114

Re: Sun Valley Commercial Center Bldg. # 4, 316 OsunaNE,
Request for Permanent C.O. - Approved
Engineer's Stamp dated: 03-24-08 (E-15/D012)
Certification dated: 11-22-11

Dear Mr. Greer,

Based upon the information provided in the Certification received 12-09-11, the above referenced Certification is approved for a release of a Permanent Certificate of Occupancy by Hydrology.

Hydrology is asking for and electronic copy, in .pdf format, of this certification for our records. This certification can be e-mailed to me at: tsims@cabq.gov.

If you have any questions, you can contact me at 924-3982.

Sincerely,

Timothy E. Sims,
Plan Checker—Hydrology Section
Development and Building Services

C: CO Clerk—Katrina Sigala
File

Originals

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 12/2005)

PROJECT TITLE: SUN VALLEY COMMERCIAL BLDG # 4 ZONE MAP: E-15/D12

DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: _____

CITY ADDRESS: 3160 SUNA

ENGINEERING FIRM: G & D LLC CONTACT: _____

ADDRESS: 5643 PARADISE BLVD N W PHONE: 499-6182

CITY, STATE: _____ ZIP CODE: _____

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

TYPE OF SUBMITTAL:

_____ DRAINAGE REPORT
_____ DRAINAGE PLAN 1st SUBMITTAL
_____ DRAINAGE PLAN RESUBMITTAL
_____ CONCEPTUAL G & D PLAN
_____ GRADING PLAN
_____ EROSION CONTROL PLAN
__X__ ENGINEER'S CERT (HYDROLOGY)
_____ CLOMR/LOMR
_____ TRAFFIC CIRCULATION LAYOUT
_____ ENGINEER'S CERT (TCL)
_____ ENGINEER'S CERT (DRB SITE PLAN)
_____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL SOUGHT:

_____ SIA/FINANCIAL GUARANTEE RELEASE
_____ PRELIMINARY PLAT APPROVAL
_____ S. DEV. PLAN FOR SUB'D APPROVAL
_____ S. DEV. FOR BLDG. PERMIT APPROVAL
_____ SECTOR PLAN APPROVAL
_____ FINAL PLAT APPROVAL
_____ FOUNDATION PERMIT APPROVAL
_____ BUILDING PERMIT APPROVAL
__X__ CERTIFICATE OF OCCUPANCY (PERM)
_____ CERTIFICATE OF OCCUPANCY (TEMP)
_____ GRADING PERMIT APPROVAL
_____ PAVING PERMIT APPROVAL
_____ WORK ORDER APPROVAL
_____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

_____ YES
_____ NO
_____ COPY PROVIDED

DATE SUBMITTED: MATT CORDOVA Contracting BY: _____

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The extent of this submittal will depend on the proposed nature, location, and scope to the proposed development defines the degree of drainage detail. One of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.

RECEIVED
DEC 09 2011
HYDROLOGY SECTION

CITY OF ALBUQUERQUE

Planning Department
Transportation Development Services Section

August 11, 2008

Claudio A. Vigil, Registered Architect
1801 Rio Grande Blvd. NW
Albuquerque, NM 87104

Re: Certification Submittal for Final Building Certificate of Occupancy for Sun Valley Office Park (Building 1), [E-15 / D012]
316 Osuna NE
Architect's Stamp Dated 08/08/08

Dear Mr. Vigil:

The TCL / Letter of Certification submitted on August 8, 2008 is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to the Building and Safety Section.

Sincerely,

Nilo E. Salgado-Fernandez, P.E.
Senior Traffic Engineer
Development and Building Services
Planning Department

c: Engineer
Hydrology file
CO Clerk

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

CLAUDIO VIGIL ARCHITECTS

August 8, 2008

Nilo Salgado-Fernandez
Development & Building Services Division
600 2nd St. NW
Albuquerque, New Mexico

RE: Traffic Certification
Sun Valley Office Park
Building 1
316 Osuna Road NE

Dear Mr. Salgado-Fernandez:

On August 8, 2008, this office inspected the site of the above-mentioned project. All work necessary to support the facility has been completed, and the site work is in substantial compliance with the DRB approved Site Plan dated March 5, 2007. The site as built reflects what is shown on the attached DRB site plan.

The work is complete and ready for a Final Certificate of Occupancy.

Sincerely,

Claudio Vigil
Architect

RECEIVED
AUG 0 8 2008
HYDROLOGY
SECTION

CITY OF ALBUQUERQUE

Planning Department
Transportation Development Services Section

July 22, 2008

Claudio A. Vigil, Registered Architect
1801 Rio Grande Blvd. NW
Albuquerque, NM 87104

Re: Certification Submittal for Final Building Certificate of Occupancy for
Sun Valley Office Park (Building 2), [E-15 / D012]
316 Osuna NE
Architect's Stamp Dated 07/21/08

Dear Mr. Vigil:

The TCL / Letter of Certification submitted on July 21, 2008 is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to the Building and Safety Section.

Sincerely,

Nilo E. Salgado-Fernandez, P.E.
Senior Traffic Engineer
Development and Building Services
Planning Department

c: Engineer
Hydrology file
CO Clerk

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

CITY OF ALBUQUERQUE

April 6, 2011

Hugh Floyd, P.E.
Easterling Consultants, LLC.
3613 NM 528 NW Ste E-2
Albuquerque, NM 87114

Re: Sun Valley Bldg # 5, 316 Osuna NE,
Permanent Certificate of Occupancy - Approved
Engineer's Stamp dated: 03-24-08 (E-15/D012)
Certification dated: 04-06-11

Dear Mr. Floyd,

Based upon the information provided in the Certification received 4/06/11, the above referenced Certification is approved for a release of a Permanent Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3982.

Sincerely,

Timothy E. Sims,
Plan Checker—Hydrology Section
Development and Building Services

C: CO Clerk—Katrina Sigala
File

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 12/2005)

E-15/D012
E-15

PROJECT TITLE: Sun Valley Bldg #5 ZONE MAP: _____

DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: _____

CITY ADDRESS: 316 D Sunn NE Bldg 5.

ENGINEERING FIRM: Eisering Consulting CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

TYPE OF SUBMITTAL:

_____ DRAINAGE REPORT
_____ DRAINAGE PLAN 1st SUBMITTAL
_____ DRAINAGE PLAN RESUBMITTAL
_____ CONCEPTUAL G & D PLAN
_____ GRADING PLAN
_____ EROSION CONTROL PLAN
__X__ ENGINEER'S CERT (HYDROLOGY)
_____ CLOMR/LOMR
_____ TRAFFIC CIRCULATION LAYOUT
_____ ENGINEER'S CERT (TCL)
_____ ENGINEER'S CERT (DRB SITE PLAN)
_____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL SOUGHT:

_____ SIA/FINANCIAL GUARANTEE RELEASE
_____ PRELIMINARY PLAT APPROVAL
_____ S. DEV. PLAN FOR SUB'D APPROVAL
_____ S. DEV. FOR BLDG. PERMIT APPROVAL
_____ SECTOR PLAN APPROVAL
_____ FINAL PLAT APPROVAL
_____ FOUNDATION PERMIT APPROVAL
_____ BUILDING PERMIT APPROVAL
__X__ CERTIFICATE OF OCCUPANCY (PERM)
_____ CERTIFICATE OF OCCUPANCY (TEMP)
_____ GRADING PERMIT APPROVAL
_____ PAVING PERMIT APPROVAL
_____ WORK ORDER APPROVAL
_____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

_____ YES
_____ NO
_____ COPY PROVIDED

OK Perm
4-6-11
gs

DATE SUBMITTED: _____ BY: _____

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.

RECEIVED
APR 06 2011
HYDROLOGY SECTION

CITY OF ALBUQUERQUE

June 30, 2008

Sheldon Greer, P.E.
GND LLC
5643 Paradise Blvd. NW
Albuquerque, NM 87114

Re: Sun Valley Commercial Center—Bldgs. 1 & 2, 316 Osuna Rd, (E-15/D012)
Approval of Permanent Certificate of Occupancy, P-ROFG 457082
Engineer's Stamp Date 03/24/2008
Certification dated: 6-27-08

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Mr. Greer:

Based upon the information provided in your submittal received 6/27/08, the above referenced certification is approved for release of Permanent Certificate of Occupancy by Hydrology for Buildings 1 & 2 only.

If you have any questions, you can contact me at 924-3982.

Sincerely,

Timothy E. Sims
Plan Checker-Hydrology, Planning Dept
Development and Building Services

C: CO Clerk—Katrina Sigala
file

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 12/2005)

E-15/D012

PROJECT TITLE: Sun Valley Commercial Center BLDGS 1 & 2 ZONE MAP: ~~E-15-Z~~

DRB#: 1000351 EPC#: 06EPC-01709 WORK ORDER#: 657082

LEGAL DESCRIPTION: SEE GRADING PLAN FOR LEGAL DESCRIPTION

CITY ADDRESS: 316 Osuna Rd, Building 2

ENGINEERING FIRM:	GND, LLC	CONTACT:	Sheldon Greer
ADDRESS:	5643 Paradise Blvd	PHONE:	899-6182
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87114
OWNER:	Zia Trading	CONTACT:	Same as above
ADDRESS:	316 Osuna Rd, Building 2	PHONE:	899-6182
CITY, STATE:	Albuquerque, NM	ZIP CODE:	
ARCHITECT:	Claudio Vigil Architects	CONTACT:	Louise Hollesen
ADDRESS:	1801 Rio Grande Blvd	PHONE:	842-1113
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87104
SURVEYOR:	Cartesian	CONTACT:	Will Plotner
ADDRESS:	2104 Southern Blvd	PHONE:	896-3050
CITY, STATE:	Rio Rancho, NM	ZIP CODE:	87124
CONTRACTOR:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	

TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN 1st SUBMITTAL
- ____ DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL G & D PLAN
- ____ GRADING PLAN
- ____ EROSION CONTROL PLAN
- X ENGINEER'S CERT (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT
- ____ ENGINEER'S CERT (TCL)
- ____ ENGINEER'S CERT (DRB SITE PLAN)
- ____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL SOUGHT:

- X SIA/FINANCIAL GUARANTEE RELEASE
- ____ PRELIMINARY PLAT APPROVAL
- ____ S. DEV. PLAN FOR SUB'D APPROVAL
- ____ S. DEV. FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- ____ BUILDING PERMIT APPROVAL
- X CERTIFICATE OF OCCUPANCY (PERM)
- ____ CERTIFICATE OF OCCUPANCY (TEMP)
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ OTHER – Rough Grading Permit Approval

RECEIVED
JUN 27 2008
HYDROLOGY SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- X NO
- ____ COPY PROVIDED

DATE SUBMITTED: 6/27/08 BY: SHELDON GREER

Requests for approvals of Site Development Plans and/or Subdivision Plats sha[illegible]be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage [illegible]il. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site D[illegible]elopment Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans**: Required for building permits, grading permits, paving per[illegible]its and site plans less than five (5) acres.
3. **Drainage Report**: Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.

CITY OF ALBUQUERQUE

Planning Department
Transportation Development Services Section

October 27, 2011

Claudio A. Vigil, Registered Architect
Claudio Vigil Architects
1801 Rio Grande Blvd. NW
Albuquerque, NM 87104

Re: Certification Submittal for Final Building Certificate of Occupancy for
Sun Valley Office Park (Building 4 and 5), [E-15 / D012]
316 Osuna NE
Architect's Stamp Dated 10/26/11

Dear Mr. Vigil:

Based upon the information provided in your submittal received 10-26-11, Transportation Development has no objection to the issuance of a Permanent Certificate of Occupancy. This letter serves as a "green tag" from Transportation Development for a Permanent Certificate of Occupancy to be issued by the Building and Safety Division.

If you have any questions, please contact me at (505)924-3630.

Sincerely,

Nilo E. Salgado-Fernandez, P.E.
Senior Traffic Engineer
Development and Building Services
Planning Department

c: Engineer
Hydrology file
CO Clerk

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET E-15/D012

Commercial (REV 12/2005)

15

PROJECT TITLE: Sun Valley Office Park (Bldg 4 & 5) ZONE MAP: E-~~16~~

DRB#: 07DRB-70140 EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: Lot 4A, lands of Zia Trading Center

CITY ADDRESS: 310 Osuna Rd NE

ENGINEERING FIRM: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

ARCHITECT: Claudio Vigil Architects CONTACT: Louise

ADDRESS: 1801 Rio Grande Blvd NW PHONE: 842-1113

CITY, STATE: Abq, NM ZIP CODE: 87104

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

TYPE OF SUBMITTAL:

_____ DRAINAGE REPORT
_____ DRAINAGE PLAN 1st SUBMITTAL
_____ DRAINAGE PLAN RESUBMITTAL
_____ CONCEPTUAL G & D PLAN
_____ GRADING PLAN
_____ EROSION CONTROL PLAN
_____ ENGINEER'S CERT (HYDROLOGY)
_____ CLOMR/LOMR
__X__ TRAFFIC CIRCULATION LAYOUT
_____ ENGINEER'S CERT (TCL)
_____ ENGINEER'S CERT (DRB SITE PLAN)
_____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL SOUGHT:

_____ SIA/FINANCIAL GUARANTEE RELEASE
_____ PRELIMINARY PLAT APPROVAL
_____ S. DEV. PLAN FOR SUB'D APPROVAL
_____ S. DEV. FOR BLDG. PERMIT APPROVAL
_____ SECTOR PLAN APPROVAL
_____ FINAL PLAT APPROVAL
_____ FOUNDATION PERMIT APPROVAL
_____ BUILDING PERMIT APPROVAL
__X__ CERTIFICATE OF OCCUPANCY (PERM)
_____ CERTIFICATE OF OCCUPANCY (TEMP)
_____ GRADING PERMIT APPROVAL
_____ PAVING PERMIT APPROVAL
_____ WORK ORDER APPROVAL
_____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

_____ YES
_____ NO
_____ COPY PROVIDED

DATE SUBMITTED: 10/26/11

RECEIVED
OCT 26 2011
HYDROLOGY SECTION
BY: Heather Clever

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.

CLAUDIO VIGIL ARCHITECTS

October 26, 2011

Kristal Metro
Development & Building Services Division
600 2nd St. NW
Albuquerque, New Mexico

Re: Traffic Certification
Office buildings 4 and 5
Sun Valley Office Park
Osuna Road NE

Dear Ms. Metro:

I, Claudio Vigil, NMRA 1236, of the firm Claudio Vigil Architects, hereby certify that this project is in substantial compliance with and in accordance with the design intent of the approved DRB plan dated July 12, 2007. No new information has been recorded onto the original design document. I further certify that I have personally visited the project site on October 26, 2011 and have determined by visual inspection that the survey data provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for a Certificate of Occupancy.

The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the traffic aspects of this project. Those relying on the record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

Signature of engineer or architect

10/26/11
Date

STATE OF NEW MEXICO
CLAUDIO ANTONIO VIGIL 1236
REGISTERED ARCHITECT

RECEIVED
OCT 26 2011
HYDROLOGY SECTION

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Building & Development Services

April 25, 2008

Jason Woodruff, P.E.
GND, LLC
5643 Paradise Blvd NW
Albuquerque, NM 87114

RE: **Sun Valley Commercial Center – Office Buildings 1 & 2** **(E15-D012)**
***Revised* Grading and Drainage Plan** (PE Stamped 03-24-08)

Dear Mr. Wooduff:

Based upon the information provided in your submittal received 3/25/08, the above referenced Grading and Drainage Plan is approved for Foundation Permit, Building Permit, and Paving Permit, conditioned upon compliance with the NPDES/SWPPP requirements discussed below. (Note that the Drainage Basins are not reflected on this plan, but remain as shown on the Grading and Drainage Plan stamped 7-13-07, which was approved for Site Plan for Building Permit.)

Please attach a copy of this approved plan to the Building Permit plan sets prior to requesting sign-off by Hydrology.

SWPPP: This project requires a National Pollutant Discharge Elimination System (NPDES) permit. You are required to send a copy of the P.E. certified Storm Water Pollution Prevention Plan (SWPPP) on a CD to City of Albuquerque, Storm Drainage Division at:

Department of Municipal Development, Storm Drainage Division
P.O. Box 1293, One Civic Plaza, Rm. 301, Albuquerque, NM 87103

If you have any question concerning the SWPPP, please contact Kathy Verhage 768-3654.

Prior to Certificate of Occupancy approval, an Engineer's Certification of compliance with this plan is required per the DPM. Certification for CO must include certification of the Detention Pond and Lift Station construction required by the infrastructure list for platting.

If I can be of further assistance, please feel free to contact me at 924-3981.

Sincerely,

4/25/08

Gregory R. Olson, P.E.

XC: Brad Bingham
Kathy Verhage, COA/DMD-Storm Drainage
file E15-D012

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

CITY OF ALBUQUERQUE

July 25, 2007

Dennis A. Lorenz, P.E.
Brasher & Lorenz
2201 San Pedro NE
Albuquerque, NM 87110

Re: Sun Valley Office Park, Engineer's Stamp Dated 7-13-07, (E15/D12)

Dear Mr. Lorenz,

Based on the information contained in your submittal received on July 13, 2007, the above referenced plan is approved DRB action on the proposed Site Plan for Subdivision, Site Plan for Building Permit, and Preliminary Plat.

If you have any questions or need additional information, feel free to contact me at 924-3990.

Sincerely,

Jeremy Hoover, P.E.
Senior Engineer
Hydrology Section
Development and Building Services

cc: file E15/D12

Condition of CO:
Provide proof of vacation of NW Detention Pond Esmt & the addition of a storm drain easement in this area

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

CITY OF ALBUQUERQUE

July 25, 2007

Jason Woodruff, PE
GND Engineering
5643 Paradise Blvd NW
Albuquerque, NM 87114

Re: Sun Valley Commercial Center Grading and Drainage Plan
Engineer's Stamp report dated 7-13-07, (E15/D12)

Dear Mr. Woodruff,

Based upon the information provided in your submittal dated 7-13-07, the above referenced site is approved for Site Development Plan for Building Permit, and Site Development Plan for Subdivision and Preliminary Plat action by the DRB. A site-specific grading plan will be required for each Building Permit approval.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham, PE
Principal Engineer, Planning Dept.
Development and Building Services

C: file

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

DRAINAGE REPORT

FOR

SUN VALLEY COMMERCIAL CENTER

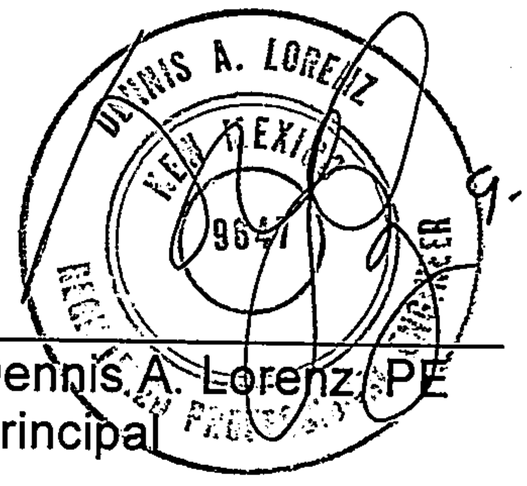
Albuquerque, New Mexico

Prepared for:

DEL SOL PROPERTIES
320 Osuna Road NE
Albuquerque, New Mexico 87113

Prepared by:

BRASHER AND LORENZ, INC.
Consulting Engineers
2201 San Pedro NE, Building 1, Suite 220
Albuquerque, New Mexico 87110



9-27-01

Dennis A. Lorenz, PE
Principal

UPDATED
September 2001

PROJECT DESCRIPTION

Pursuant to the Drainage Ordinance for the City of Albuquerque and the Development Process Manual, this Drainage Report outlines the drainage management criteria for controlling developed runoff from the project site. The project consists of the development of the property into **Sun Valley Commercial Center**, a commercial office/warehouse facility. Paving, landscaping, utility, grading, and drainage improvements will be provided to support the project.

SITE DESCRIPTION

The project site is approximately 6.4 acres in size and located on Osuna Road NE at Edith Boulevard NE (Figure 1). The site is presently described as Lots 1 through 8, Del Sol Properties. The site is bounded on the north by Osuna Road, on the east by Edith Boulevard NE, on the south by partially developed property, and on the west by AT & SF Railroad right-of-way. The property is presently partially developed. The site once functioned as a landscape retail outlet, with associated buildings, site improvements and landscape inventory areas. Lot 2 is developed as office property. The remaining acreage is re-developing. On-site topography slopes from east to west at approximately 1 percent.

EXISTING CONDITIONS

The site is partially developed and drains westerly in sheet flow fashion to a depression located along the AT & SF right-of-way. The site is affected by one off-site basin from the east. Basin A (Figure 3) is a 0.6-acre off-site basin that encompasses Lots A and B, Lands of Delia H. Swanson, and drains through the site as sheet flow. Osuna Road and Edith Blvd drain by means of public storm drainage systems and do not contribute runoff to the site. The property located to the south drains southwesterly away from the site.

As shown by the following FIRM panel (Figure 2), the project site is not located within a designated 100-year flood hazard zone.

SUMMARY OF EXISTING DRAINAGE PLANS

The Grading and Drainage Plan for Del Sol Properties, prepared by this office, dated February 23, 2001, outlines the drainage management criteria for the site. Per the plan, a 1.933 ac-ft permanent retention pond is to be constructed near the southwest corner of the property to provide storage for runoff received from the developed site,

as well as off-site Basin "OS-1". The pond will be privately owned and maintained. Private drainage easements are to be granted by replat for conveyance of runoff to the pond. The pond will be placed in a permanent ponding easement benefiting all lots within the master plan area.

UPDATE

This report is updated to document revisions to the approved Drainage Report and illustrate as-built conditions. The following revisions are made:

1. The permanent retention pond has been moved to the northwest corner of the site.
2. The sump pump design has been modified to consider a 96-hour drain time, as allowed by the DPM, Chapter 22, Section 5.H.8.
3. The Plan exhibits, drainage basins and project hydrology have been revised to reflect as-constructed conditions.

As a result of this update, a Site Development Plan Amendment will be submitted to DRB to document the proposed site revisions. This document and the Site Development Plan Amendment will support a subsequent replat of the property that will be required to vacated and grant new drainage easements.

PROPOSED CONDITIONS

As shown by the Plan, the project consists of the development of the property into a commercial office/warehouse facility. Paving, landscaping, and drainage improvements will be constructed as necessary to support the project. The Plan shows the elevations required to properly grade and construct the recommended improvements. The direction of the drainage flows are given by flow arrows. All recommended storm drainage improvements are detailed to assist construction. As shown by the basin map (Figure 3) the site consists of 9 sub-basins and is impacted by off-site drainage Basin "os-1". Since no drainage outfall exists for this property, all excess runoff will be routed overland through paved parking lots and drainage channels to the permanent retention pond located near the northwest corner of the project. The pond is to be privately owned and maintained. Agreements and covenants will be filed as required to ensure proper maintenance. The owners will also be required to drain the pond with a sump pump within 96 hours of a major storm event.

FUTURE BUILDING PERMIT APPLICATIONS

Future building permit applications are required to comply with this Masterplan. If site plan or field conditions change, a Drainage Plan Update that addresses overall Masterplan revisions and provides site specific detail, shall be required to prior to building permit approval.

TEMPORARY EROSION CONTROL PLAN

1. Temporary Erosion Control is required to limit the discharge of sediment into the public street and/or storm drainage system and to protect adjacent properties from excess runoff during construction. After the initial site clearing, the temporary erosion control facilities should be constructed to direct excess runoff and sediment to the on-site retention pond.

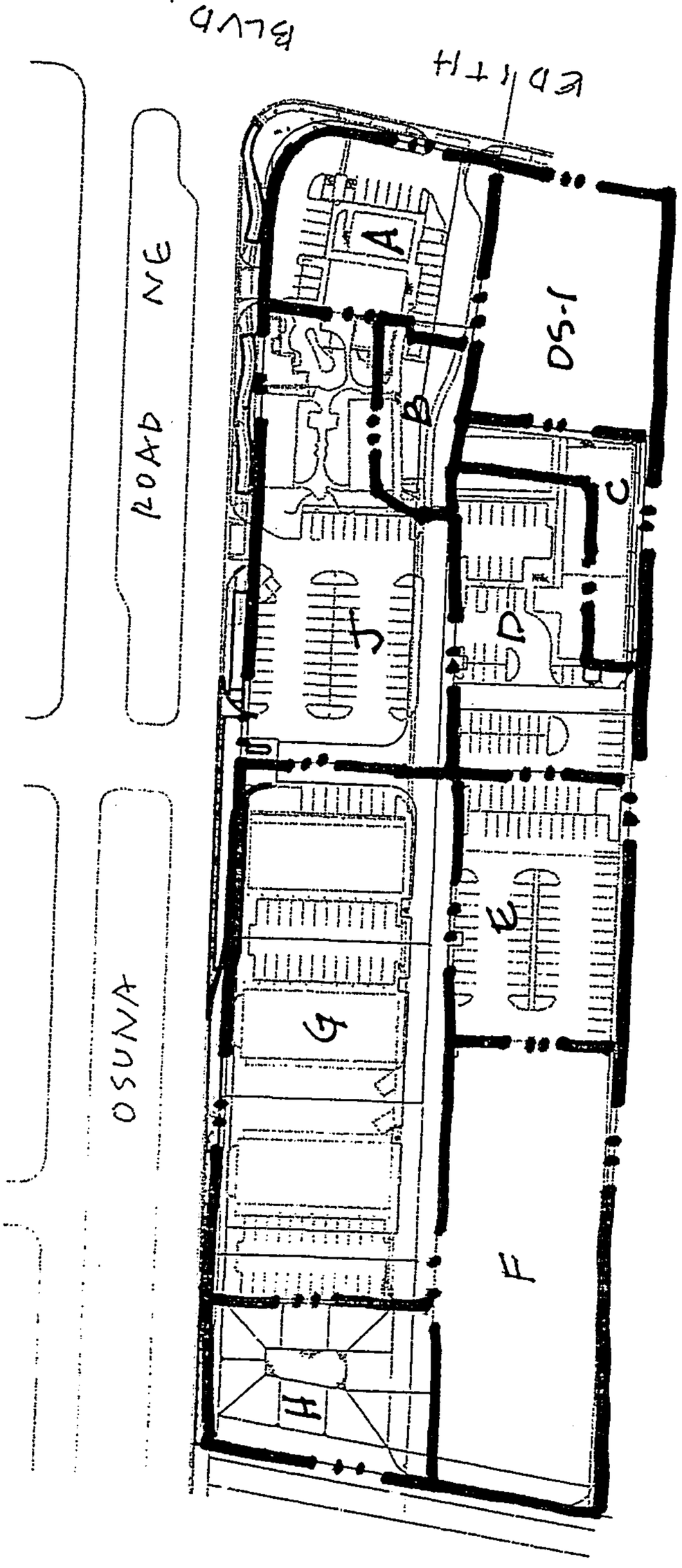
2. Earthen erosion control berms or silt fencing should then be placed along the downstream project boundaries to direct runoff to the ponding area.

3. The contractor is required to obtain a Topsoil Disturbance Permit from Environmental Health prior to beginning any earthwork operations.

4. It is the contractor's responsibility to properly maintain all temporary erosion control facilities during the construction phase of the project.

CALCULATIONS

The calculations contained herein define the 100-year/6-hour design storm falling within the project area under existing and developed conditions. They hydrology is per "Chapter 22, Development Process Manual, Vol. 2", 1997 revision. Calculations are provided to demonstrate the capacity and function of all proposed storm drainage infrastructures.



DRAINAGE BASINS MAP
Figure 3

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PROJECT SUN VALLEY
DATE 2.23.01 PAGE 1
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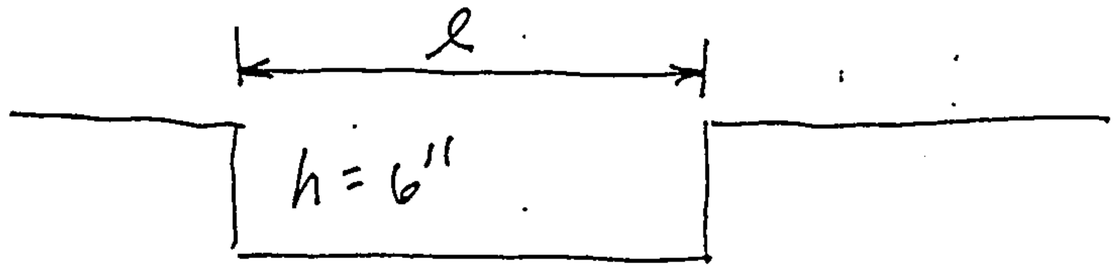
(1) SIDEWALK CULVERTS

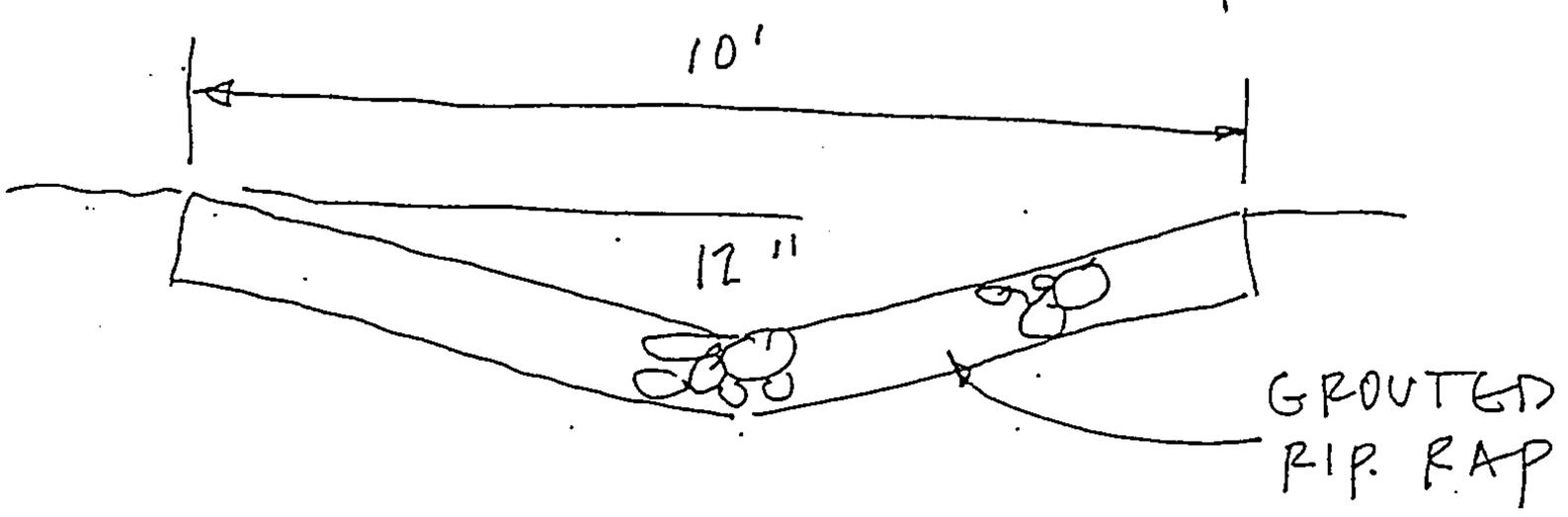


WEIRS

Enter up to 10 weirs.
Enter <Return> only for flowrate and length to end.

FLOWRATE (CFS)	LENGTH (FT)	COEFF (-)	HEAD (FT)	BASIN	ℓ PLAN
2.50	2.8	2.500	0.50	A	3'

(2) BASIN B CHANNEL - AP-1



NATURAL CHANNELS

VARIABLES LIST:
Y - FLOW ELEVATION Q - FLOWRATE S - CHANNEL SLOPE

VARIABLE TO BE SOLVED (Y,Q OR S) ? Y

Q (CFS) ? 3.6
S (FT/FT) ? .005

Enter up to 20 cross-section points.
Enter <Return> only for distance to end.

CROSS-SECTION POINTS

DIST	ELEV	COEFF	DIST	ELEV	COEFF
0	101	.03			
5	100	.03			
10	101	.03			

RESULTS
==========
Y= 100.66 FT
A= 2.18 SF
P= 6.73 FT
V= 1.65 FPS
F= 0.51 SUB-CRITICAL FLOW

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PROJECT SUN VALLEY
DATE 2-23-01 PAGE 2
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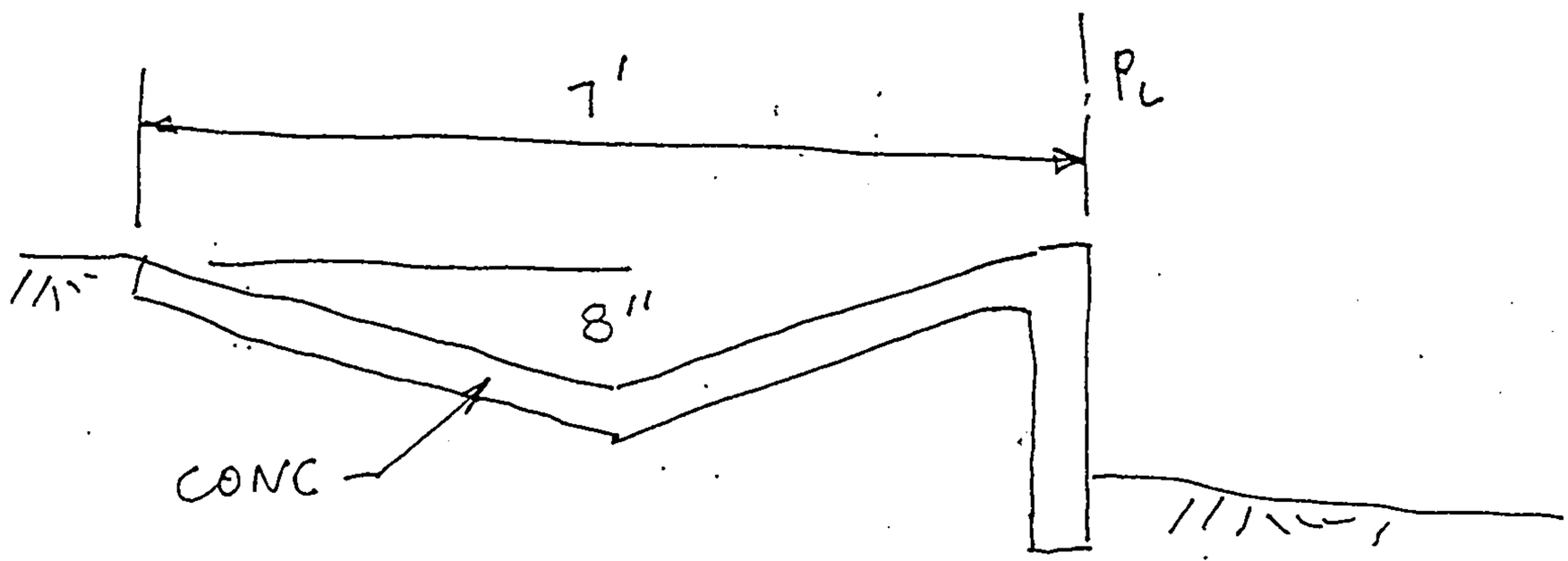
(3) BASINS C + OS-1 CHANNEL - AP. 4



NATURAL CHANNELS

VARIABLES LIST:
Y - FLOW ELEVATION Q - FLOWRATE S - CHANNEL SLOPE

VARIABLE TO BE SOLVED (Y,Q OR S) ? Y

Q (CFS) ? 3.8
S (FT/FT) ? .006

Enter up to 20 cross-section points.
Enter <Return> only for distance to end.

CROSS-SECTION POINTS

DIST	ELEV	COEFF	DIST	ELEV	COEFF
0	100.67	.013			
3.5	100	.013			
7	100.67	.013			

RESULTS

Y=	100.47	FT
A=	1.14	SF
P=	4.98	FT
V=	3.32	FPS
F=	1.21	SUPER-CRITICAL FLOW

(4) BASINS C + OS-1 SD . AP. 4

PROVIDE SD ALONG SOUTH SIDE BLDG "G" W/IN 7' SD EASEMENT. THIS IS REQ'D DUE TO UTILITY CONFLICTS

SEWER PIPES

Enter up to 10 pipes.
Enter <Return> only for flowrate and diameter to end.

FLOWRATE (CFS)	DIAMETER (IN)	FRICTION (FT^1/6)	SLOPE (%)	VELOCITY (FPS)
3.80	13.22	0.0130	0.68	3.99

USE 15" SD

90.70 (24) 90.60 (8) 93.00 93.55 93.75 (16) 94.45 (10) B/3 94.70
90.50 (12) 92.80 (12) 94.40 94.50
3.6 CFS .0% .66 FT 89.80 90.15 (9) 92.30 93.40
93.20 Q = 3.6 CFS S = 0.5% d = 0.66 FT
90.30 (16) 90.50 93.30 94.10 (14) 93.75
(8) 90.62 90.70 90.36 90.65 91.65 92.80 92.60 93.00 93.40 94.00
91.15 92.90
AP-1 Q = 6.1 CFS S = 0.6% d = 0.27 FT
20' PRIVATE DRAINAGE EASEMENT
92.70 92.80 (10) (12) (8) 92.50 92.60 (9) (8)
BUILDING "H" ONE STORY FF 94.10
7' PRIVATE DRAINAGE EASEMENT
90.55 90.95 91.50 91.80 (22) (12) (17)
91.63 92.70 92.95 93.15
E/3 (8) 92.70 93.30 (10) A/3
(8) 91.55 92.10 90.75 92.10 93.50 93.35 93.30 93.40 93.35
92.80 94.10 94.10 94.10 94.10 93.50 92.50
90.75 91.15 92.00 (10)
90.90 (13) BUILDING "G-1" 1ST FLR. FF 94.10
BUILDING "G-2" 2ND FLR. FF 94.10
CONSTR HEADWALL @ PIPE EXIT 91.25 92.80 CONSTR INLET SEE DETAILS INV 91.70
91.50 90.44 92.15 92.10 15"SD CONNECT DOWNSPOUTS TO SD - TYP. 15"SD 93.00
92.20 OHE
Q = 3.8 CFS (17) CHAINLINK FENCE 92.00
7' PUE & PRIVATE DRAINAGE EASEMENT

3.

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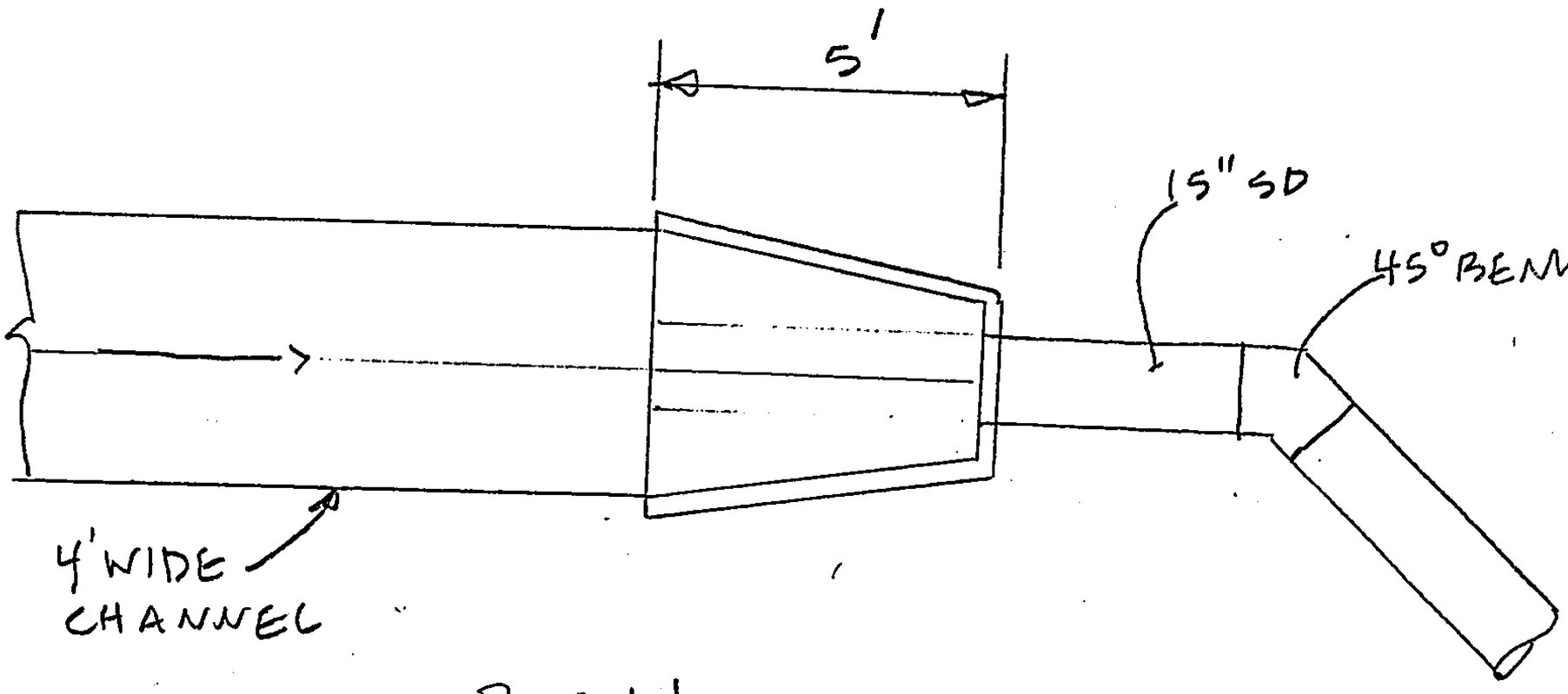
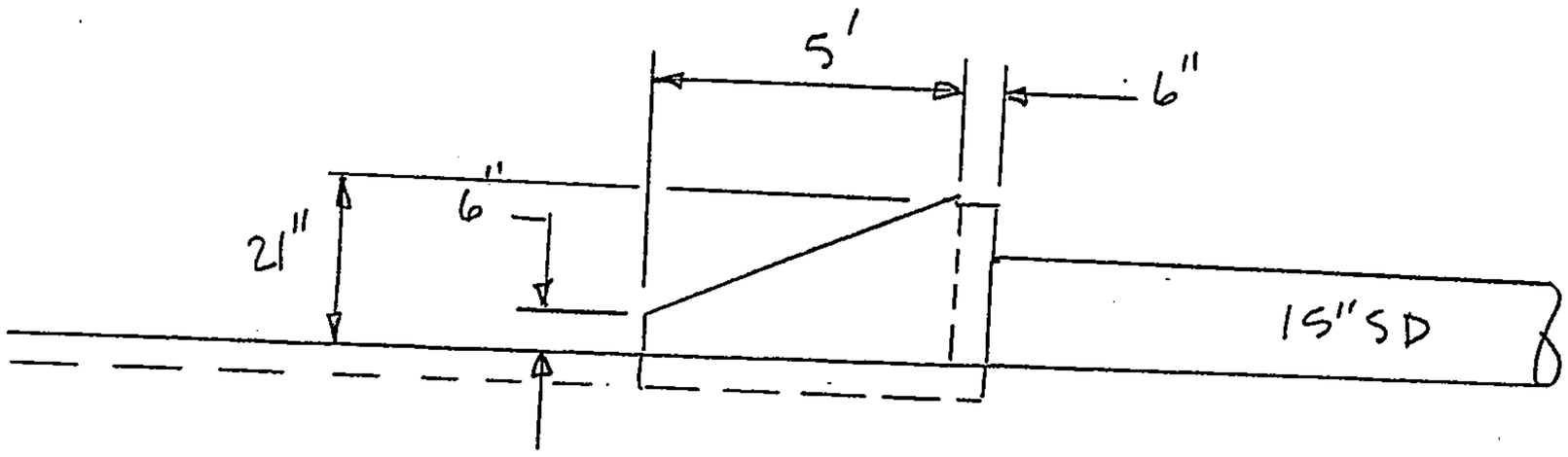
DATE 6-20-01 PAGE 4



PLAN



PROFILE

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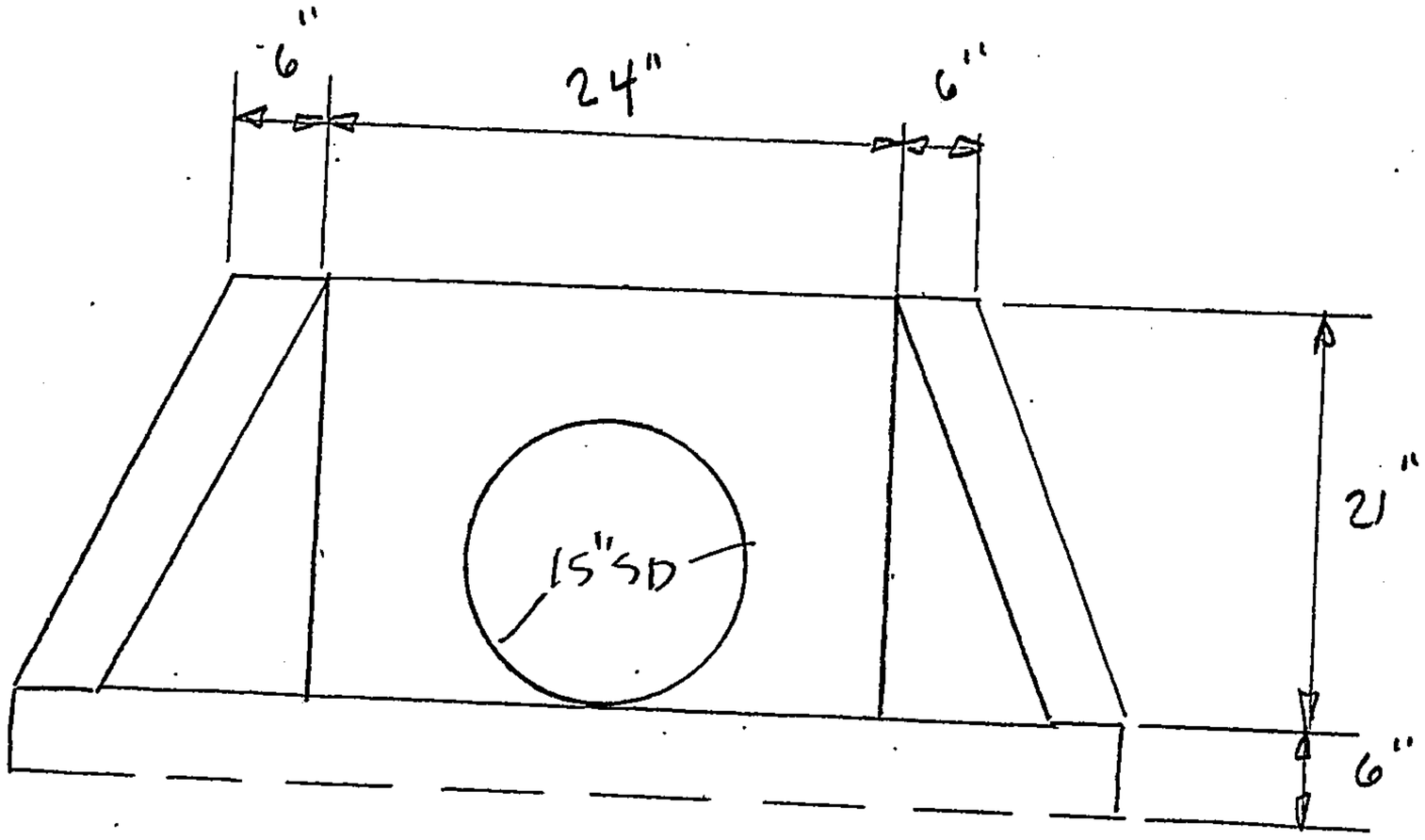
PROJECT SUN VALLEY
DATE 6.20.01 PAGE 5



ELEVATION

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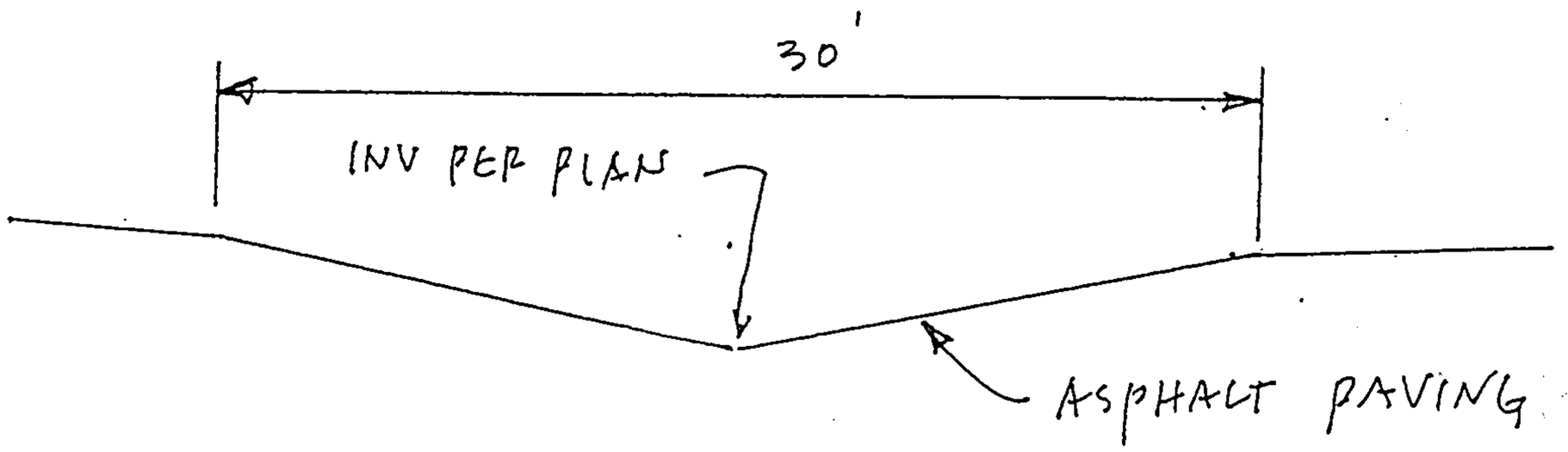
PROJECT SUN VALLEY
DATE 9-27-01 PAGE 6

(5) PARKING / ACCESS / SD EASEMENTS



AP-2

NATURAL CHANNELS

VARIABLES LIST:
Y - FLOW ELEVATION Q - FLOWRATE S - CHANNEL SLOPE

VARIABLE TO BE SOLVED (Y,Q OR S) ? Y

Q (CFS) ? 15.2
S (FT/FT) ? .013

Enter up to 20 cross-section points.
Enter <Return> only for distance to end.

CROSS-SECTION POINTS

DIST	ELEV	COEFF	DIST	ELEV	COEFF
0	100.5	.017			
15	100	.017			
30	100.5	.017			

RESULTS

Y=	100.39	FT
A=	4.54	SF
P=	23.36	FT
V=	3.35	FPS
F=	1.34	SUPER-CRITICAL FLOW

<Shift> <Prt Sc> print <Return> repeat <Space Bar> back to menu

---

AP.3

NATURAL CHANNELS

VARIABLES LIST:
Y - FLOW ELEVATION Q - FLOWRATE S - CHANNEL SLOPE

VARIABLE TO BE SOLVED (Y,Q OR S) ? Y

Q (CFS) ? 31
S (FT/FT) ? .01

Enter up to 20 cross-section points.
Enter <Return> only for distance to end.

CROSS-SECTION POINTS

DIST	ELEV	COEFF	DIST	ELEV	COEFF
0	100.67	.017			
15	100	.017			
30	100.67	.017			

RESULTS

Y=	100.60	FT
A=	7.95	SF
P=	26.72	FT
V=	3.90	FPS
F=	1.26	SUPER-CRITICAL FLOW

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(6) POND VOLUME

PROVIDE RETENTION STORAGE FOR SITE PLUS OFF-SITE BASIN OS-1 (EXIST COND.)

PER ATHYMO:

$V_{100} = 1.140$ AF

PROVIDE 10-DAY VOLUME

$A_b = 5.95$ Ac
$P_{360} = 2.35"$
$P_{10D} = 3.95"$

$$V_{10\text{-DAY}} = 1.140 + A_b(P_{10D} - P_{360})/12$$
$$= \underline{1.933 \text{ AF}}$$

(7) POND DISCHARGE

POND IS TO DRAIN W/IN 96 HRS.

PROVIDE SUMP PUMP

$$Q_{OUT\ (MIN)} = V_{10DAY}/96 \text{ HRS} = \underline{0.24 \text{ CFS}}$$

PROVIDE PUMP W/ COMPLETE CONTROLS TO DISCHARGE AT 110 GPM MINIMUM.

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PROJECT SUN VALLEY
DATE 9-27-01 PAGE 8

(8) SUMP PUMP DESIGN

POND VOL = 1.933 AF

96 HR DRAIN TIME = 0.24 CFS
= 110 GPM

USE 4" PVC DISCHARGE LINE TO EXIST POND @ OSUNA RD MEDIAN.

L = 200'

C = 114 HAZEN-WILLIAMS

METRIC/ENGL CONVERSION = 0.0103

$$\Rightarrow h_L = \left[\frac{Q}{0.0103\, C\, d^{2.63}}\right]^{1.852} \ell \quad = 2.34 \text{ Ft} = 1.0 \text{ psi}$$

Δ ELEV = POND BOT - DISCHARGE = 15 FT

TOTAL DISCHG H = 16 FT

$$\Rightarrow h_p = \frac{Q\, \gamma_w\, H}{e\, 550}$$

$h_p = 0.62$

Q = 0.24 CFS
γ_w = 62.4
H = 16'
e = EFFICENCY = 70%

USE MYERS WITH - 1HP 2" SUMP PUMP W/ 4" DISCHARGE LINE. SEE ATTACHED SHOP DWGS.

PUMP AND MOTOR SPECIFICATIONS
WHR SINGLE SEAL SEWAGE PUMPS
SOLIDS HANDLING SIZE - 2 INCH

OPERATING CONDITIONS: Each pump shall have a capacity of 175 GPM at a total head of 33 feet and motor size shall be 1.0 horsepower, 1 phase 60 Hz for operation at 230 volts and complete performance as shown on curve sheet.

PUMP: The sewage pump shall be WHR series as manufactured by F. E. Myers, Ashland, Ohio or equal. Pump shall be of the submersible type with recessed Myers impeller to give complete unobstructed volute opening for passing of solids. Pump shall pass 2" diameter solids.

Discharge of pump shall be provided with bolt on 2" NPT flange or optional 3" NPT flange so that 2" or 3" pipe size may be used.

MOTOR: Pump motor shall be of the submersible type rated 1/2, 3/4, or 1 horsepower as required. Motor shall operate at 1750 RPM and shall be for 208 or 230 volts single phase or 208, 230, 460, or 575 volts three phase. Single phase motors shall be of the permanent split capacitor type with no relays or starting switches.

Stator winding shall be of the open type with Class A (105 degrees C) insulation for operating in clean dielectric oil that lubricates bearings and seals and cools the winding.

Stator shall be pressed into housing for the best alignment and heat transfer.

Common motor pump shaft shall be of 416 stainless steel and shall be heat shrunk into the die cast motor rotor. Rotor shaft shall be supported by a lower ball bearing to take thrust and radial loads and by an upper bronze sleeve bearing to take radial load only.

Single phase motor shall have an overload element embedded in the winding to protect the motor against overcurrent and overheating conditions. Overload element shall automatically reset when motor cools.

Three phase motor shall be protected by 3 leg overload element in control box. Overload shall be of the quick trip ambient compensated type and shall have a manual reset button.

Motor to be a completely assembled unit with end plate for mounting in volute case. Complete motor and pump impeller to be removable as a unit from the volute casing.

CORROSION PROTECTION: All iron castings shall be pre-treated with phosphate and chromic rinse and shall be painted with a high quality, lead free, alkyd enamel air dry paint. All fasteners to be 302 stainless steel.

SHAFT SEALS: Motor shall be protected by a rotating mechanical seal. Seal face shall be carbon and ceramic and lapped to a flatness of one light band.

IMPELLER: Shall be bronze and of the recess type. Pump-out vane shall be used on back shroud. Impeller shall be dynamically balanced. Impeller to be threaded on shaft and held in position with locknut.

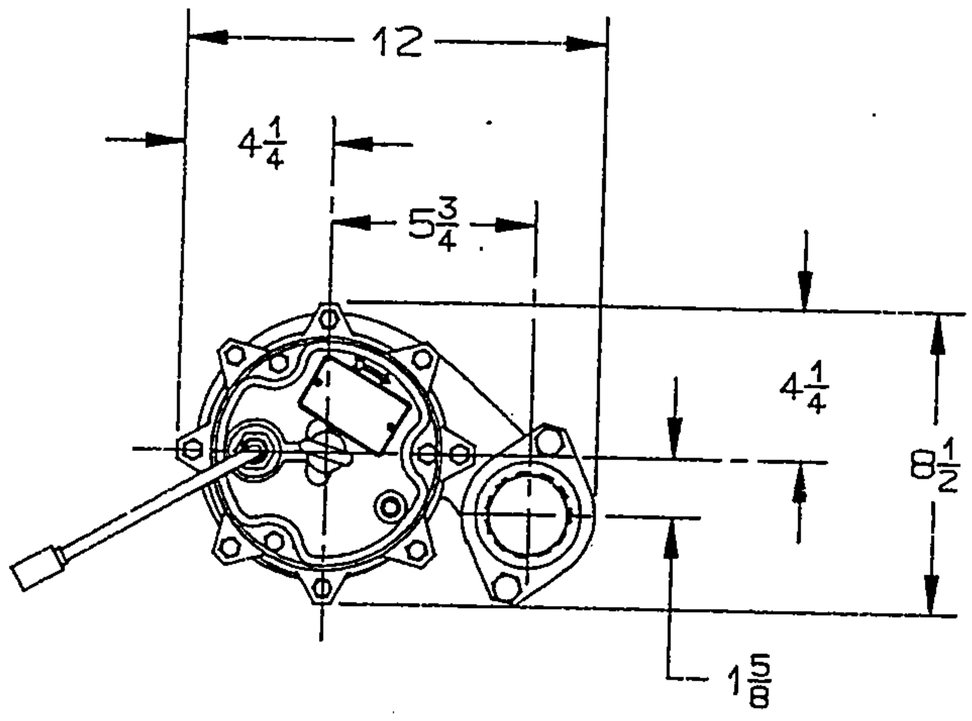
Impeller and motor shall have top lift-out of case so that the assembly can be removed without disturbing any piping.

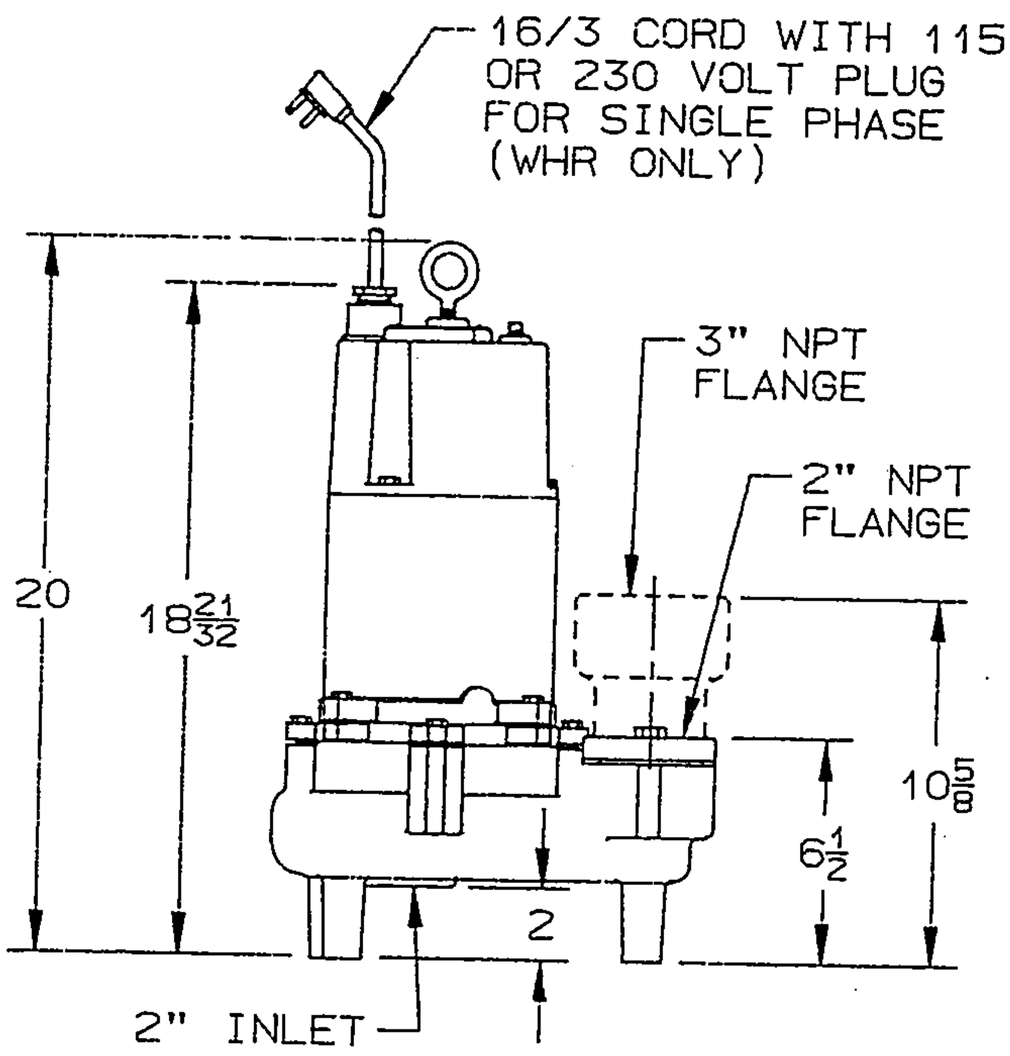
PUMP CASE: The volute case shall be of cast iron and shall be provided with bolt-on flange so the 2" pipe size may be used.

CORD SEAL: The cord shall be potted into a steel connector with polyurethane resin for leak proof seal. A cord nut and rubber grommet shall clamp the cord into the bushing. Cords shall withstand a pull of 100 pounds.

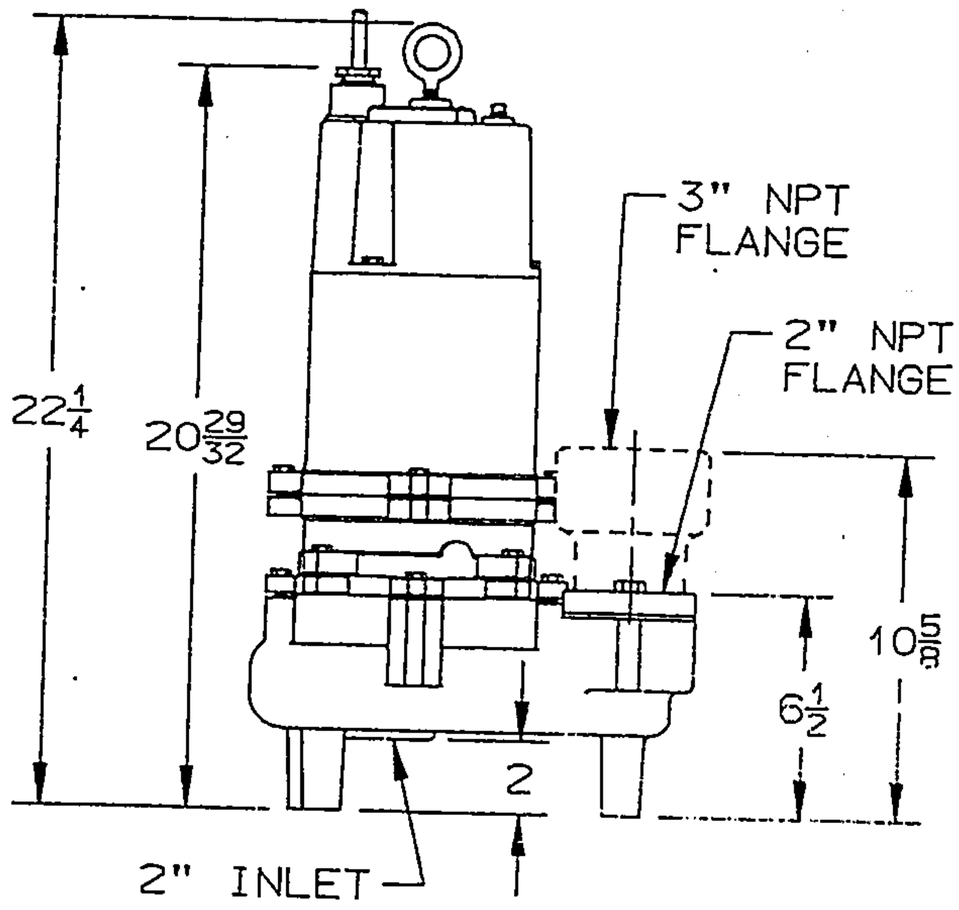
Myers

ES-184





WHR



WHR-DS

Myers Environmental Systems

WHR, WHR-DS WASTE HANDLING PUMP

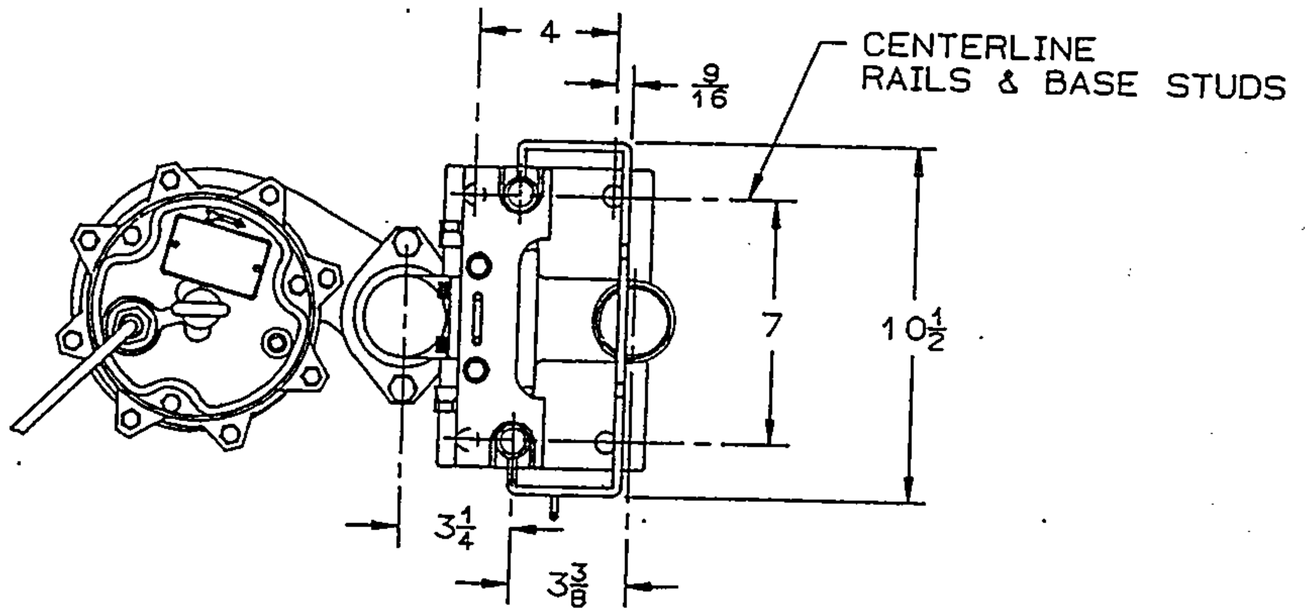
SE	2-95		ES-184

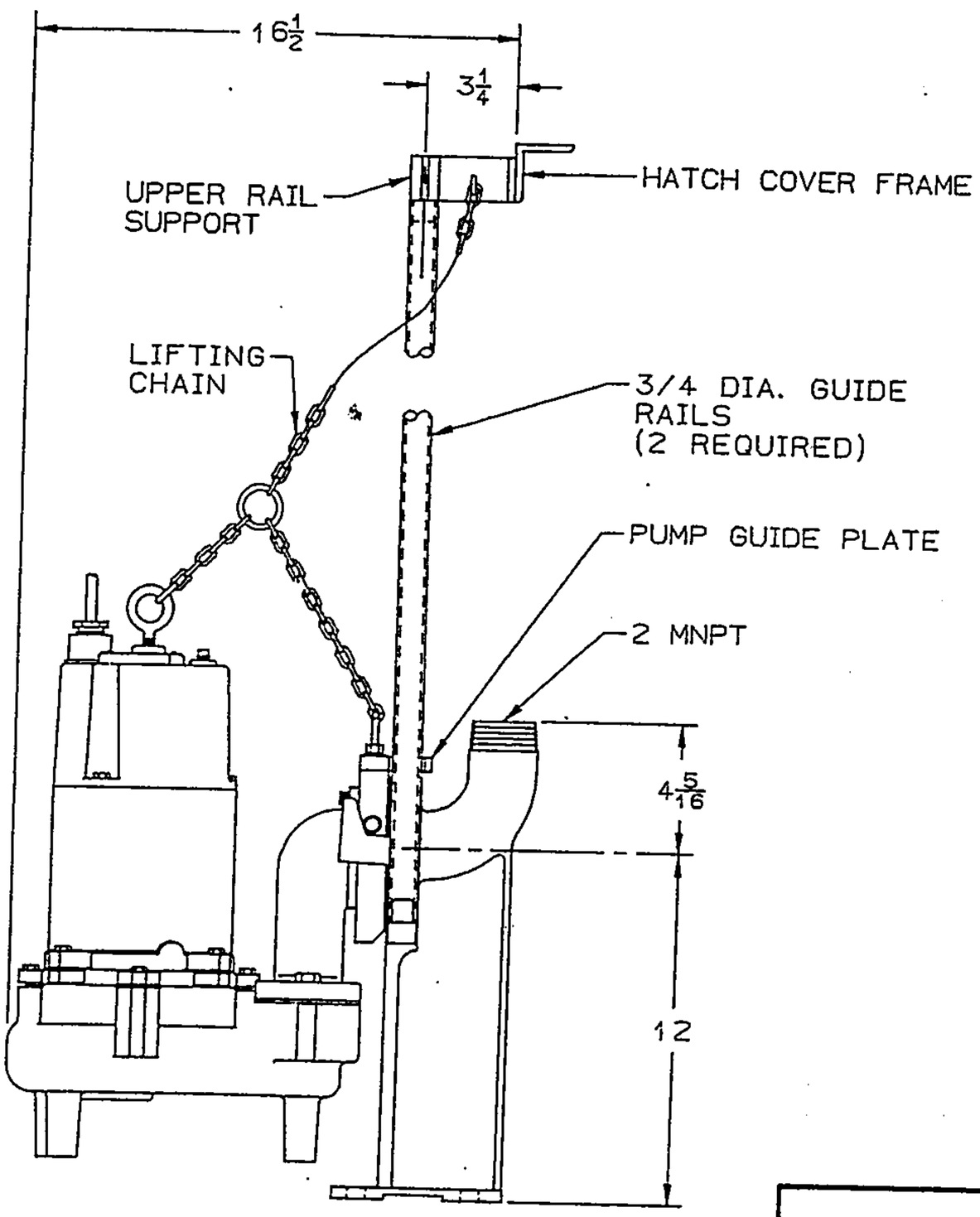
Myers

WHR

1/2 - 1 HP SUBMERSIBLE NON-CLOG
2" DISCHARGE WASTEWATER PUMP

SLIDE RAIL DIMENSIONS
(SRA-200 SHOWN)





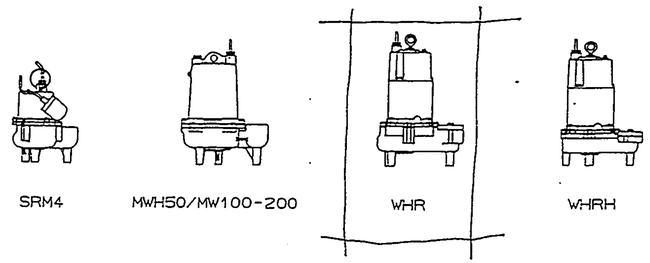
ES-WHR

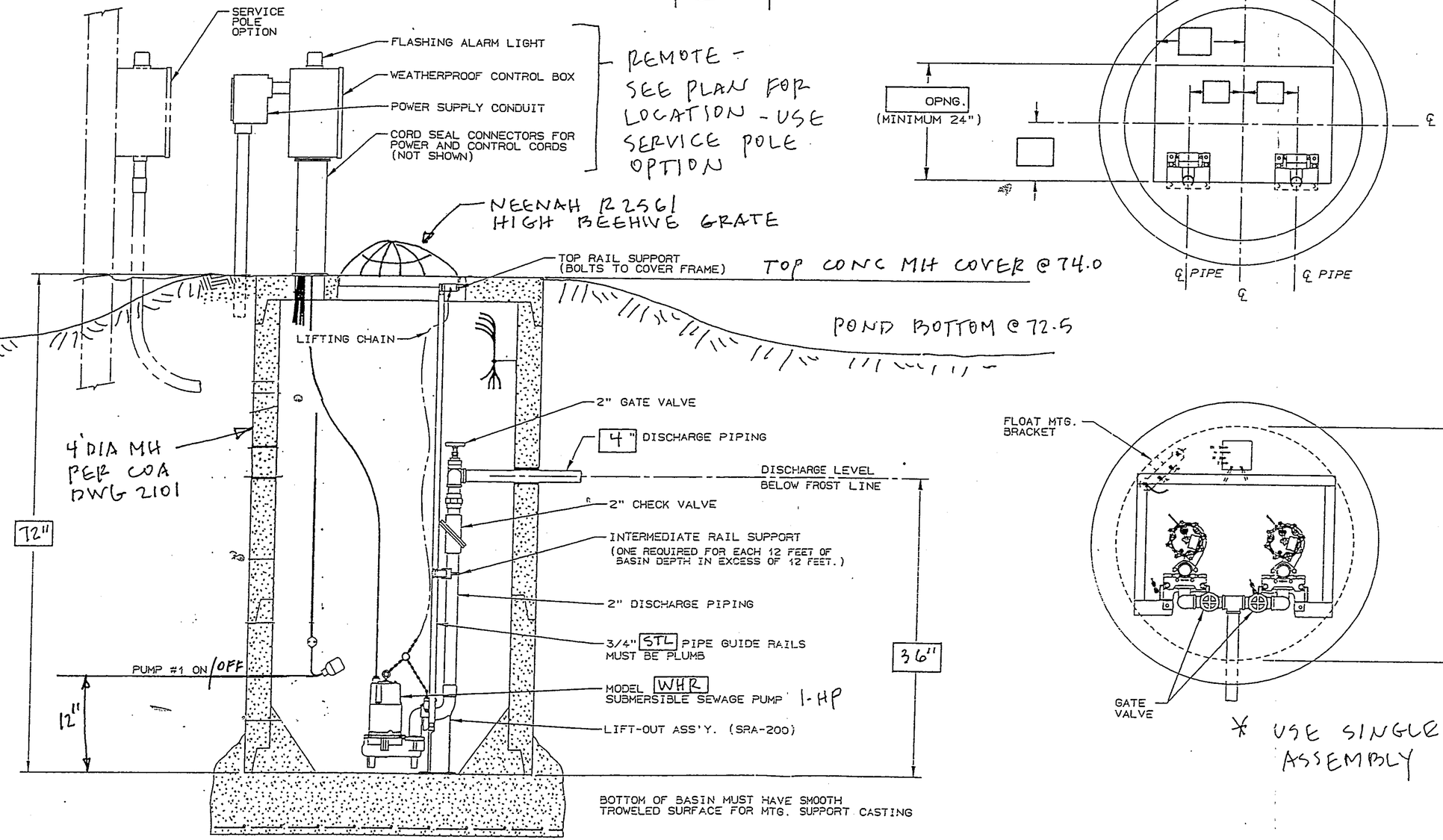
TYPICAL INSTALLATION

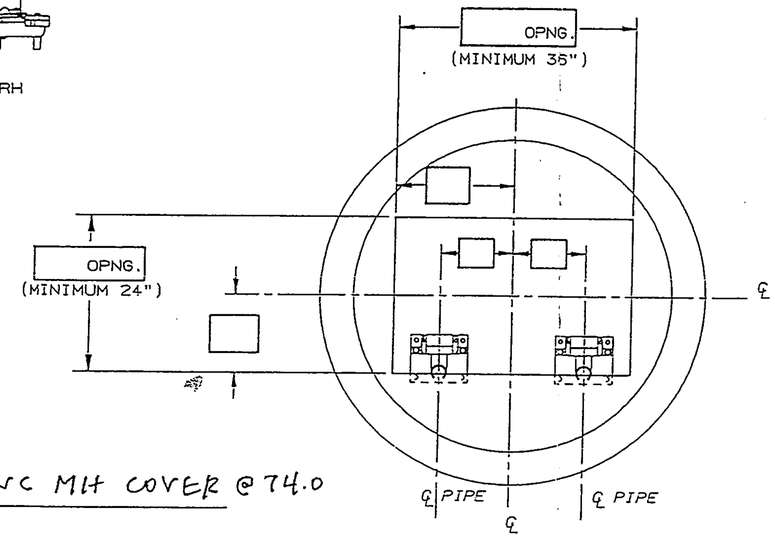
DUPLEX SUBMERSIBLE SEWAGE PUMP

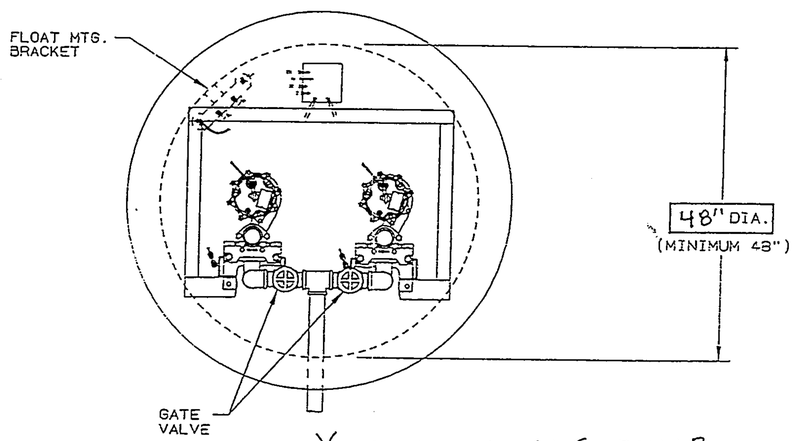
PUMP SERIES: SRM4, MWH50, MW100-200 WHR, WHRH

LIFT OUT MODELS: SRA-200









* USE SINGLE PUMP ASSEMBLY

ES-23505 16MAR95

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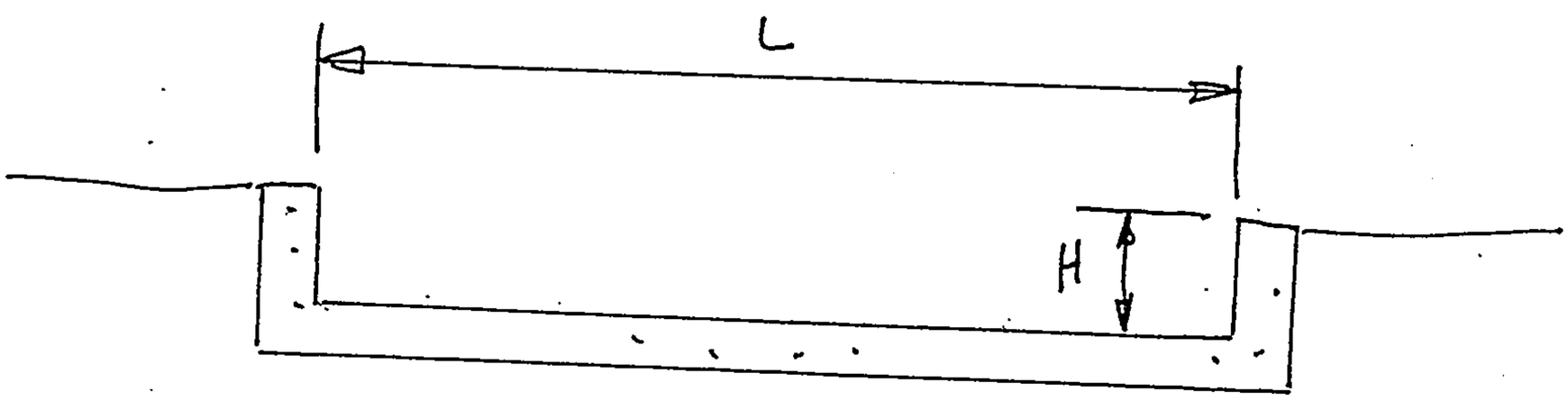
DATE 9.27.01 PAGE 18

(9) POND INLET



$Q_{100} = 31$ CFS

RUNDOWN SECTION

Enter up to 10 weirs.
Enter <Return> only for flowrate and length to end.

FLOWRATE (CFS)	LENGTH (FT)	COEFF (-)	HEAD (FT)
31.00	29.2	3.000	0.50

USE 30 FT

Table 5-5. Values of C in the Formula $Q = CLH^{3/2}$ for Broad-crested Weirs with Crests Inclined Slightly Downward

(a)

Crest	Energy head = H_e								
	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.5
Level	2.78	2.79	2.80	2.81	2.82	2.83	2.85	2.85	2.85
Slope = 0.004	2.95	2.94	2.93	2.92	2.91	2.90	2.88	2.87	2.87
Slope = 0.026	3.07	3.06	3.05	3.04	3.03	3.02	3.00	2.99	

AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) - - VERSION: 1997.02d RUN DATE (MON/DAY/YR) =09/27/2001
INPUT FILE = C:\AHYMO\00508.DAT USER NO.= AHYMO-I-9702c01000T35-AH

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
START										
RAINFALL TYPE= 1										TIME= .00
										RAIN6= 2.350
COMPUTE NM HYD	EX.SITE	-	1	.01000	10.91	.313	.58730	1.533	1.704	PER IMP= .00
COMPUTE NM HYD	EX.OS-1	-	2	.00094	2.82	.098	1.95451	1.500	4.700	PER IMP= 85.00
COMPUTE NM HYD	DEV.SITE	-	3	.01000	29.89	1.042	1.95451	1.500	4.671	PER IMP= 85.00
COMPUTE NM HYD	DEV.OS-1	-	4	.00094	2.82	.098	1.95451	1.500	4.700	PER IMP= 85.00
COMPUTE NM HYD	DEV.A	-	5	.00084	2.54	.088	1.95451	1.500	4.703	PER IMP= 85.00
COMPUTE NM HYD	DEV.B	-	6	.00034	1.05	.036	1.95451	1.500	4.755	PER IMP= 85.00
COMPUTE NM HYD	DEV.C	-	7	.00033	1.00	.034	1.95451	1.500	4.760	PER IMP= 85.00
COMPUTE NM HYD	DEV.D	-	8	.00095	2.87	.099	1.95451	1.500	4.698	PER IMP= 85.00
COMPUTE NM HYD	DEV.E	-	9	.00100	3.01	.104	1.95451	1.500	4.698	PER IMP= 85.00
COMPUTE NM HYD	DEV.F	-	10	.00167	5.01	.174	1.95451	1.500	4.686	PER IMP= 85.00
COMPUTE NM HYD	DEV.G	-	11	.00247	7.39	.257	1.95451	1.500	4.680	PER IMP= 85.00
COMPUTE NM HYD	DEV.H	-	12	.00073	2.21	.077	1.95451	1.500	4.708	PER IMP= 85.00
COMPUTE NM HYD	DEV.J	-	13	.00166	4.97	.173	1.95451	1.500	4.686	PER IMP= 85.00
ADD HYD	DEV.AB	5& 6	15	.00119	3.59	.124	1.95407	1.500	4.718	
ADD HYD	DEV.C+EX.OS-	2& 7	16	.00127	3.82	.132	1.95408	1.500	4.716	
ADD HYD	DEV.CD+OS-1	16& 8	17	.00222	6.68	.231	1.95413	1.500	4.708	
ADD HYD	DEV.ABJ	15&13	18	.00284	8.55	.296	1.95423	1.500	4.699	
ADD HYD	DEV.ABCDJ+OS	17&18	19	.00506	15.24	.528	1.95418	1.500	4.703	
ADD HYD	DEV.EF	9&10	20	.00267	8.02	.278	1.95428	1.500	4.690	
ADD HYD	DEV.EG	11&20	21	.00514	15.42	.536	1.95433	1.500	4.685	
ADD HYD	DEV.A-GJ+OS-	19&21	22	.01020	30.65	1.063	1.95426	1.500	4.694	
ADD HYD	DEV.SITE+OS-	12&22	23	.01094	32.87	1.140	1.95424	1.500	4.695	
FINISH										

#4
(NOT DEVELOPER OWNED PROPERTY)

E-15/D012

PRIVATE FACILITY
DRAINAGE COVENANT AND
RESERVATION OF PRIVATE DRAINAGE EASEMENT

This Drainage Covenant, between [state the name of the present real property owner exactly as shown on the real estate document conveying title to the present owner and state the legal status of the owner, for example, single person, husband and wife, corporation of the State of _____,
CAÑON DEL OSO INVESTMENTS, LLC OF NM
(Owner), whose address is P.O. BOX 10290, ALAMEDA, NM 87184 ;
[state the name of the developer or subdivider required to construct the drainage facility and state the legal status of the developer, for example, single person, husband and wife, corporation of the State of _____,
partnership:] CAÑON DEL OSO INVESTMENTS, LLC OF NM ,
(Developer), whose address is P.O. BOX 10290, ALAMEDA, NM 87174
and the City of Albuquerque, a New Mexico municipal corporation (City) whose address is P.O. Box 1293, Albuquerque, New Mexico 87103, is made in Albuquerque, Bernalillo County, New Mexico and is entered into as of the date Owner and Developer sign this Covenant.

1. Recital. The Owner is the owner of the following described real property located at [give legal description, and street address:
320 OSUNA RD NE, ALBUQUERQUE, NM
LOT 7, LANDS OF ZIA TRADING COMPANY, BOOK 2001C, PAGE 75, 3/12/01
in Bernalillo County, New Mexico (the Property).

Pursuant to City ordinances, regulations and other applicable laws, the Developer is required to construct and maintain certain drainage facilities and the Owner, for good and valuable consideration received from the Developer, is willing to allow construction and maintenance of the Drainage Facility on its Property, and the parties wish to enter into this Covenant to establish the obligations and responsibilities of the parties.

2. Description and Construction of Drainage Facility. The Developer shall construct the following Drainage Facility within the Property at the Developer's sole expense in accordance with the standards, plans and specifications approved by

Mary Herrera Bern. Co. COV R 17.00
2002010560
5617593
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the City:

STORMWATER DETENTION POND AS SHOWN IN CONSTRUCTION DRAWINGS FOR COA PROJECT #657C61 AND GRADING AND DRAINAGE PLAN #E15/D12 DATED 9/19/01.

The Drainage Facility is more particularly described in Exhibit A attached hereto and made a part hereof.

3. Reservation of Easement. The Owner, for itself, its heirs, successors and assigns, jointly and severally, hereby grants to Developer, its heirs, successors and assigns, jointly and severally, a perpetual easement over and across a portion of the Owner's property for the benefit of [describe the lots, parcels or tracts which are to be benefited by the Drainage Facility and easement]

LOTS 1-8, LANDS OF ZIA TRADING COMPANY, BK 200IC, PAGE 75, 3/12/01 AND TRACTS A AND B, LANDS OF DELIA H SWANSON, A9-10, 9/24/80.

for the purpose of permitting the flow, conveyance, and discharge of storm water runoff and for the purpose of permitting ingress and egress for the construction, maintenance and repair of the drainage facility. The land affected by the grant of this easement is more particularly described as:

THE WESTERN 135 FEET OF LOT 7, ZIA TRADING COMPANY, (200IC-75, 3/12/01)

.

4. Maintenance of Drainage Facility. The Developer shall maintain the Drainage Facility and Easement at the Developer's sole cost in accordance with the approved Drainage Report and plans. In the event the Developer fails to maintain the Drainage Facility, Owner agrees that it shall be responsible for maintenance of the Drainage Facility and Easement in accordance with the approved Drainage Report and plans.

5. Benefit to Property. The Developer and Owner acknowledge and understand that the Drainage Facility required herein to be constructed is for the private benefit and protection of the Developer's property and that failure to maintain such facility could result in damage or loss to the Owners Property and to the property of Developer.

6. Inspection of Drainage Facility. The City shall have no duty or obligation whatsoever to perform any inspection, maintenance or repair of the Drainage Facility, it being the duty of the Developer, its heirs, successors and assigns to construct and maintain the facility in accordance with approved plans and

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specifications.

7. Liability of City. The Developer and Owner understand and agree that the City shall not be liable to the Developer or the Owner, or their respective heirs, successors or assigns, or to any third parties for any damages resulting from the Developer's or Owner's failure to construct, maintain or repair the Drainage Facility.

8. Indemnification. The Developer owns and controls the Drainage Facility and shall not permit the Drainage Facility to constitute a hazard to the health or safety of the general public. The Developer agrees to indemnify, defend and hold harmless the City, its officials, agents and employees, and the Owner, its heirs, successors and assigns from any claims, actions, suits or other proceedings arising from or out of the negligent acts or omissions of the Developer, its agents, negligent acts or omissions of the Developer, its agents, representatives, contractors or subcontractors or arising from the failure of the Developer, its agents, representatives, contractors or subcontractors to perform any act or duty required of the Developer herein; provided, however, to the extent, if at all, Section 56-7-1 NMSA 1978 is applicable to this Agreement, this Agreement to indemnify will not extend to liability, claims, damages, losses or expense, including attorney's fees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications by the respective indemnitee, or the agents or employees of the respective indemnitee; or (2) the giving of or the failure to give direction or instructions by the respective indemnitee, where such giving or failure to give directions or instructions is the primary cause of bodily injury to persons or damage to property.

9. Assessment. Nothing in this Easement and Covenant shall be construed to relieve the Owner or Developer, or their respective heirs, assigns and successors from an assessment against the Owner's or Developer's property for improvements under a duly authorized and approved Special Assessment District. The parties specifically agree that the value of the Drainage Facility will not reduce the amount assessed by the City.

10. Binding on Owner's Property. The easement, covenants and obligations of the Owner and Developer set forth herein shall be binding on the Owner and Developer, and their respective heirs, assigns and successors and on the Owner's Property and constitute covenants running with the Owner's Property until released by the City's Chief Administrative Officer as approved by the City

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Engineer.

11. Entire Covenant. This Covenant contains the entire agreement of the parties and supersedes any and all other agreements or understandings, oral or written, whether previous to the execution hereof or contemporaneous herewith.

12. Changes to Covenant. Changes to this Covenant are not binding unless made in writing, signed by all parties.

13. Effective Date of Covenant. This Covenant shall be effective as of the date of signature of the Owner and Developer.

DEVELOPER: CAÑON DEL OSO INVESTMENTS, LLC

By: Bob D. Ritts
Title: Member

Dated: 1-24-02

OWNER: CAÑON DEL OSO INVESTMENTS, LLC

By Bob D. Ritts
Title: Member

Dated: 1-24-02

CITY OF ALBUQUERQUE:
ACCEPTED:

Director, Public Works Dept. 01/22/02

Dated: 1-24-02 Upl. 1/24/02

DEVELOPER'S ACKNOWLEDGMENT

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on January 24th, 2002

Maru Herrera Bern. Co. COV R 17.00

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___, by Peter D. Kelly Member, on behalf of Town Del Rio Investments LLC.

Notary Public

My Commission Expires: 4-2-2002

OWNER'S ACKNOWLEDGMENT

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on January 24, 2002
___, by Peter D. Kelly, _____, on behalf of Town Del Rio
= Investments LLC

Notary Public

My Commission Expires: 4-2-2002

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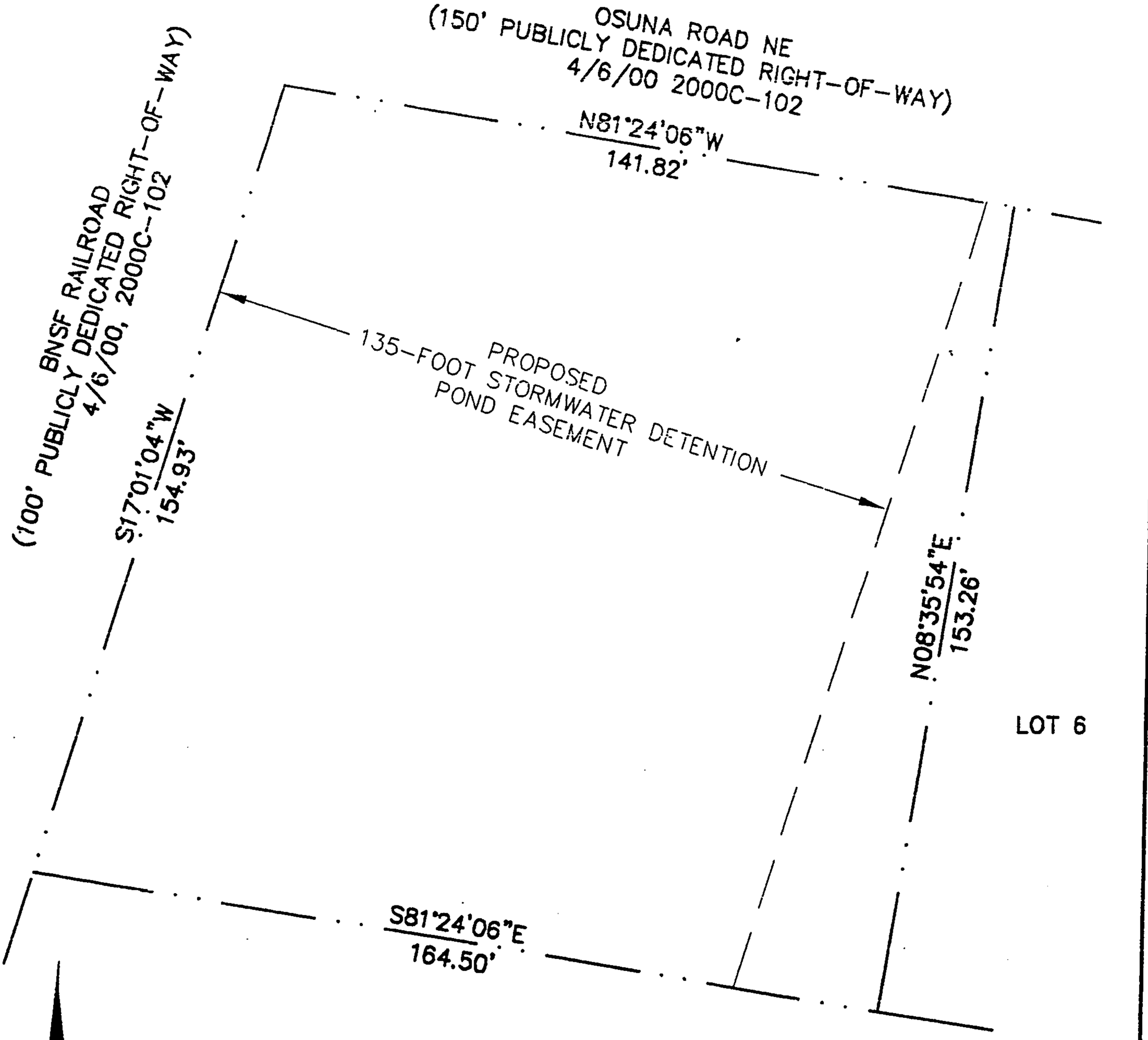
EXHIBIT A

LEGAL DESCRIPTION

The western 135 feet of Lot 7, Lands of Zia Trading Company, Book 2001C, Page 75, Bernalillo County, New Mexico.



1/22/02

BRASHER & LORENZ
CONSULTING ENGINEERS
2201 San Pedro NE Building 1 Suite 220
Albuquerque, New Mexico 87110
Ph: 505-888-6088 Fax: 505-888-6188

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City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 28, 2001

Steve Morrow, P.E.
Brasher & Lorenz, Inc.
2201 San Pedro NE Building 1 Suite 220
Albuquerque, New Mexico 87110

RE: SUN VALLEY COMMERCIAL CENTER LOT 3 (E-15/D12)
(320 Osuna Rd NE)
ENGINEERS CERTIFICATION FOR RELEASE OF FINANCIAL GUARANTY
AND CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 9/19/2001
ENGINEERS CERTIFICATION DATED 12/24/2001

Dear Mr. Morrow:

Based upon the information provided in your Engineers Certification submittal dated 12/28/2001, the above referenced plan is adequate to satisfy the Grading and Drainage Certification requirements for Release of Financial Guaranty for the above project.

Also, based upon the information provided in this same Engineers Certification submittal, the above referenced site is approved for a Permanent Certificate of Occupancy for Lot 3.

If I can be of further assistance, please contact me at 924-3981.

Sincerely,

Teresa A. Martin
Teresa A. Martin
Hydrology Plan Checker
Public Works Department
BLB

C: Arlene Portillo, COA
Vickie Chavez, COA
approval file
drainage file

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 24, 2001

Dennis Lorenz, P.E.
Brasher & Lorenz, Engineers
2201 San Pedro NE, Bldg. 1, Ste 220
Albuquerque, NM 87110

RE: DRAINAGE PLAN SUBMITTAL FOR PUMP STATION FOR SUN VALLEY COMMERCIAL CENTER (formally DEL SOL PROPERTIES) (E15/D12), ENGINEER'S STAMP DATED 5/23/01.

Dear Mr. Lorenz,

The referenced plan and data submitted for the pump station for the detention basin is sufficient for the drainage requirement to drain the pond within 24 hours. The following items need to be addressed prior to construction of the pump station.

1. The plan shows a slotted grate for water to enter the pump wet well. The design needs to consider debris clogging, and I suggest a sloping grate entrance for the water or other system that will tend to not clog.
2. Show elevations for "off", "turn-on", and "high-water" on the plan.
3. During on-site construction, provide straw bale berming or other system to prevent sediment from entering pond area.

Please note that building permit has been issued for Buildings on Lot 3. Per previous correspondence, prior to Issuance of Certificate of Occupancy, Engineer's Certification for completion of final site grading and drainage including the pump station per the plan and per Work Order is required for final approval by Hydrology.

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

No additional building or foundation permits will be issued until completion of all Work Order construction for the site.

Also, if the project is to be developed in phases, please submit a phasing plan to assist processing of certifications for the phased construction.

If you have any questions, please call me at 924-3980.

Sincerely,

Loren D. Meinz, P.E.
Hydrology Division

c: Terri Martin
File

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 13, 2001

Dennis Lorenz
Brasher & Lorenz, Engineers
2201 San Pedro NE, Bldg. 1, Ste 220
Albuquerque, NM 87110

RE: GRADING & DRAINAGE PLAN FOR SUN VALLEY COMMERCIAL CENTER (formally DEL SOL PROPERTIES) (E15/D12), ENGINEER'S STAMP DATED 2/23/01.

Dear Mr. Lorenz,

The referenced plan is approved for Building Permit for buildings G-1, G-2, and H, located on proposed Lot 3 only.

The plan is also approved for Rough Grading of the entire project site.

Prior to Issuance of Certificate of Occupancy for the above buildings, Engineer's Certification for completion of final site grading and drainage per the plan and per Work Order is required for final approval by Hydrology.

No additional building or foundation permits will be issued until completion of all Work Order construction for the site. If you have any questions, please call me at 924-3980.

Sincerely,

Loren D. Meinz, P.E.
Hydrology Division

c: Terri Martin
File

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

SUMP PUMP DESIGN

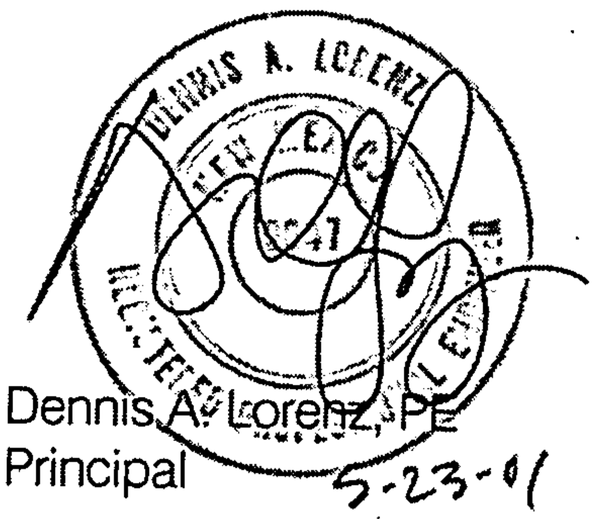
FOR

SUN VALLEY COMMERCIAL CENTER

Albuquerque, New Mexico

Prepared By:

BRASHER & LORENZ, INC.
Consulting Engineers
2201 San Pedro NE, Building No. 1, Suite 220
Albuquerque, New Mexico 87110



Dennis A. Lorenz, PE
Principal 5-23-01

May 2001

BRASHER & LORENZ
CONSULTING ENGINEERS
2201 San Pedro NE Building 1 Suite 220
Albuquerque, New Mexico 87110
Ph: 505-888-6288 Fax: 505-888-6188

PROJECT SUN VALLEY
DATE 5-23-01 PAGE 1

SUMP PUMP DESIGN

POND VOL = 85,000 CF
= 1.95 AF

24 HR DRAIN TIME = 0.97 CFS ✓ ok.
= 438 GPM ✓

USE 4" SD:

$$h_L = \left(\frac{0.97 \text{ cfs}}{(0.0103)(114)(0.33')^{2.63}} \right)^{1.852} (350) = 51.8' \longleftarrow$$
$$= 22.5 \text{ psi}$$

Δ ELEV = (POND BOTTOM − DISCHG ELEV)
= 13'±

TOTAL DISCHG H = 64.8'

$$Hp = \frac{(0.97)(62.4)(64.8)}{0.7\,(550)} = 10.2 \text{ Hp} - 3\phi$$

$$V = \frac{Q}{A} = \frac{0.97}{\pi\left(\frac{0.33}{12}\right)^2/4} = \frac{0.97}{0.0855} = 11.34 \text{ fps.}$$

for C = 100, $h_L/1000' \approx 210 \Rightarrow h_L = \frac{350'}{1000'}(210) = 73'$

for C = 130, $h_L = \frac{100}{130}(73) \approx 56$ close to 52 ok