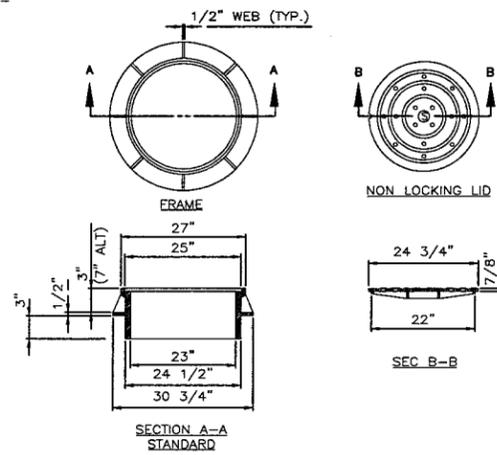
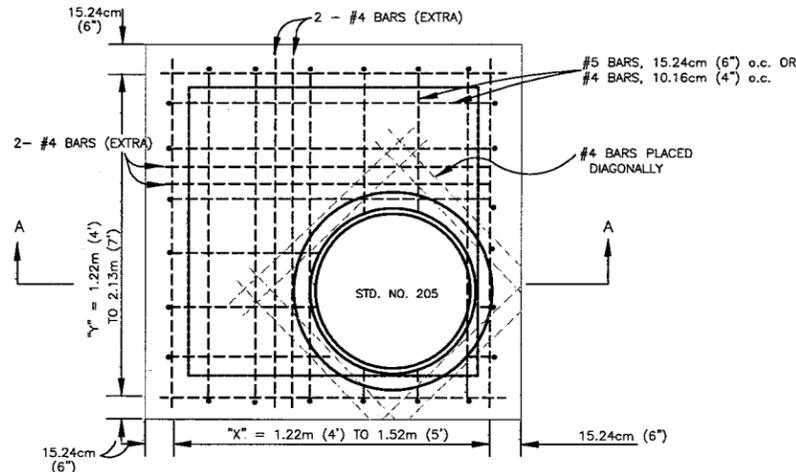


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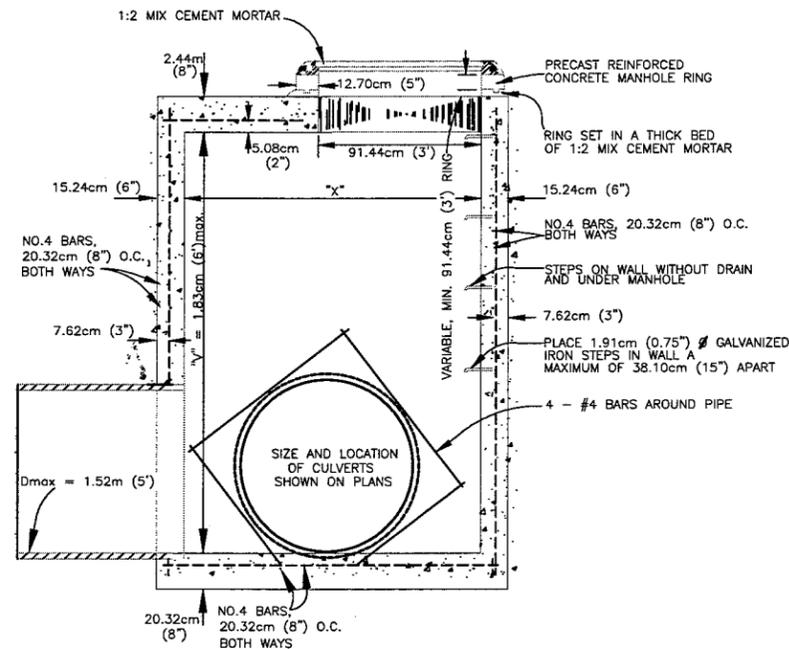
MANHOLE FRAME AND COVER DETAIL
N.T.S. (1)



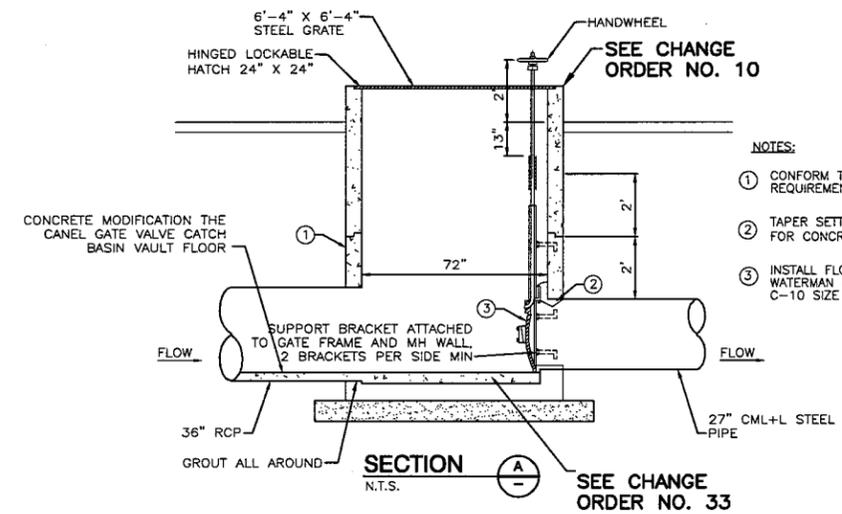
"X": SHOWN ON PLANS.
"Y": SHOWN ON PLANS.
"V": SHOWN ON PLANS.

- NOTES:
1. STORM DRAIN CLEANOUT SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE.
 2. CLEARANCE FROM I.D. OF PIPE TO CLEANOUT WALL SHALL BE 10.16cm (4") MIN.
 3. APPROVED PRECAST CONCRETE MANHOLE SHAFT RINGS WILL BE ACCEPTED IN LIEU OF CAST-IN-PLACE SHAFT

STORM DRAIN CLEANOUT
N.T.S. (2)

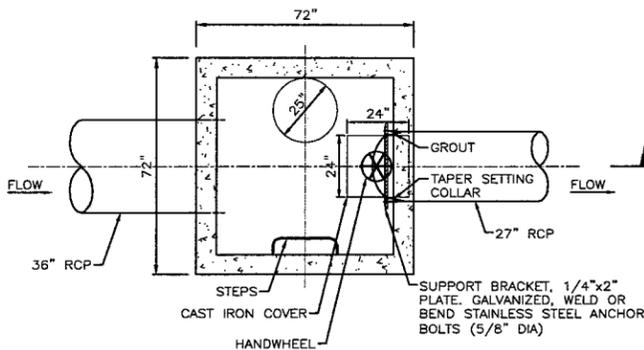


SECTION A-A

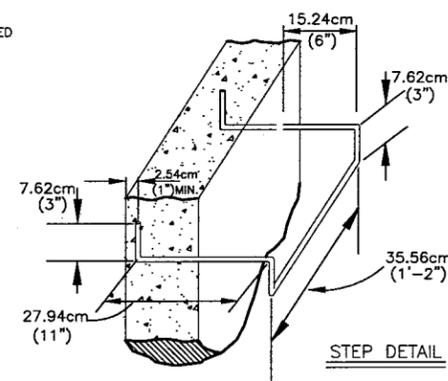


- NOTES:
1. CONFORM TO STANDARD MANHOLE REQUIREMENTS AS SHOWN ON DETAIL (2)
 2. TAPER SETTING COLLAR FOR CONCRETE PIPE (6)
 3. INSTALL FLOW CONTROL DEVICE WATERMAN CANAL GATE MODEL C-10 SIZE 30 OR EQUAL

SECTION A-A
N.T.S.



SPENT BACKWASH FLOW CONTROL MANHOLE
N.T.S. (5)



STEP DETAIL

IF SHEET IS LESS THAN 24" x 36" IT IS A REDUCED PRINT. SCALE REDUCED ACCORDINGLY.

RECORD DRAWINGS

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1	11/05	RECORD REVISION			

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DRAWN BY: LOB
CHECKED BY: DHD

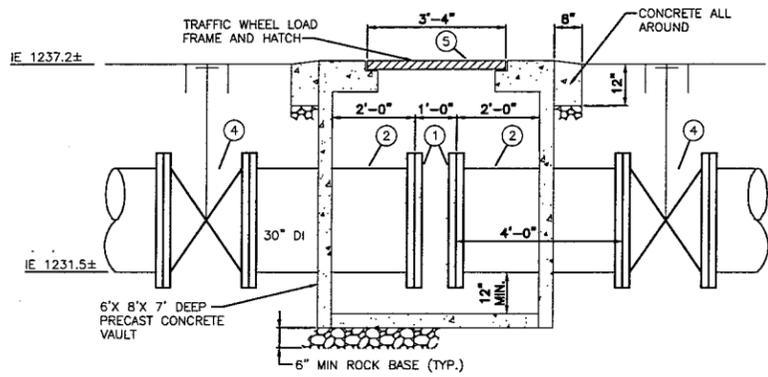
DESIGNED BY: PAS
DRAWN BY: LOB
CHECKED BY: DHD



MUSCOY OU REMEDIAL DESIGN
19th STREET PLANT & ENCANTO PARK PUMPING PLANT
NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

19TH STREET PLANT
SPENT BACKWASH SYSTEM DETAILS

SCALE: AS NOTED	DATE: 8/14/03	DWG. FILE: C9.DWG	SHEET NO: C9
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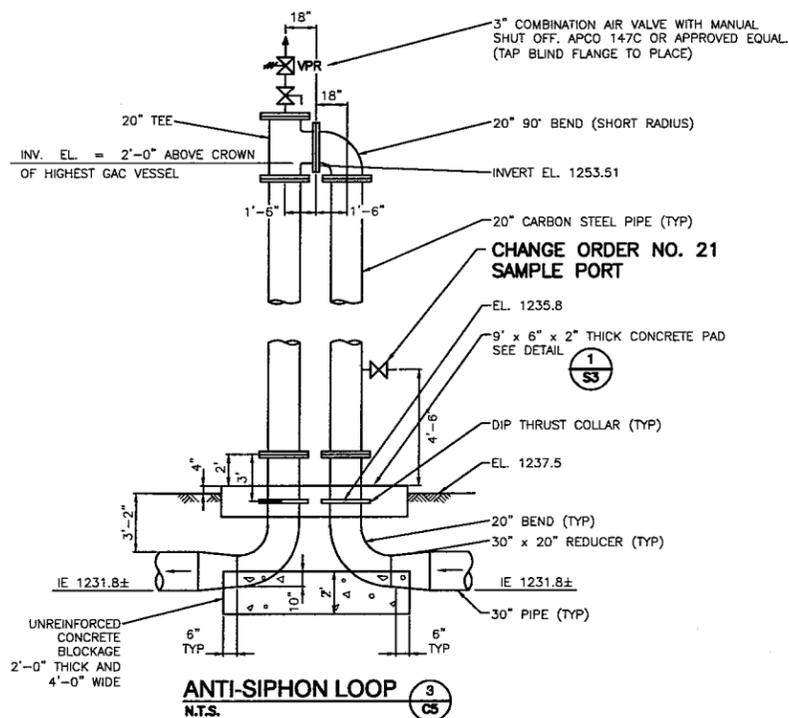
BY-PASS VAULT
1/2" = 1'-0" CS

NOTES:
1. USE UTILITY VAULT 6'x8'x7' OR APPROVED EQUAL.

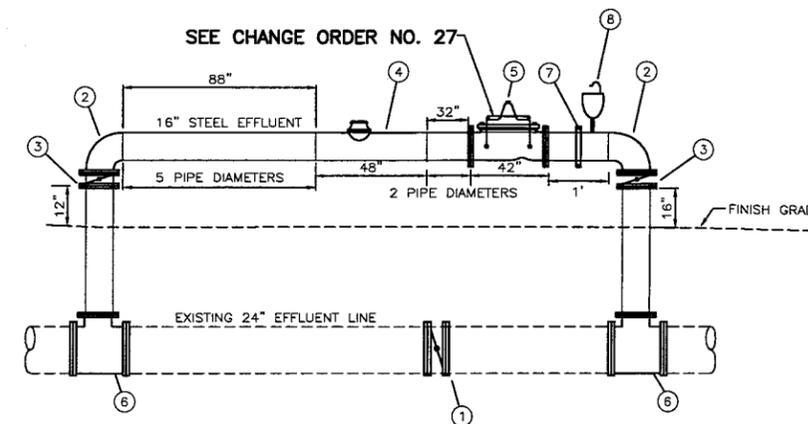
2. CONTRACTOR SHALL PROVIDE A 2' SPOOL FLGxFLG FOR FUTURE CONNECTION. MATERIAL ITEM ③.

MATERIALS LIST:

- ① 30" BLIND FLANGE
- ② 30" 4 LF SPOOL FLGxFLG
- ③ 30" 2 LF SPOOL FLGxFLG
- ④ 30" BUTTERFLY VALVE FLG
- ⑤ USE UTILITY VAULT HATCH NO. 332AL



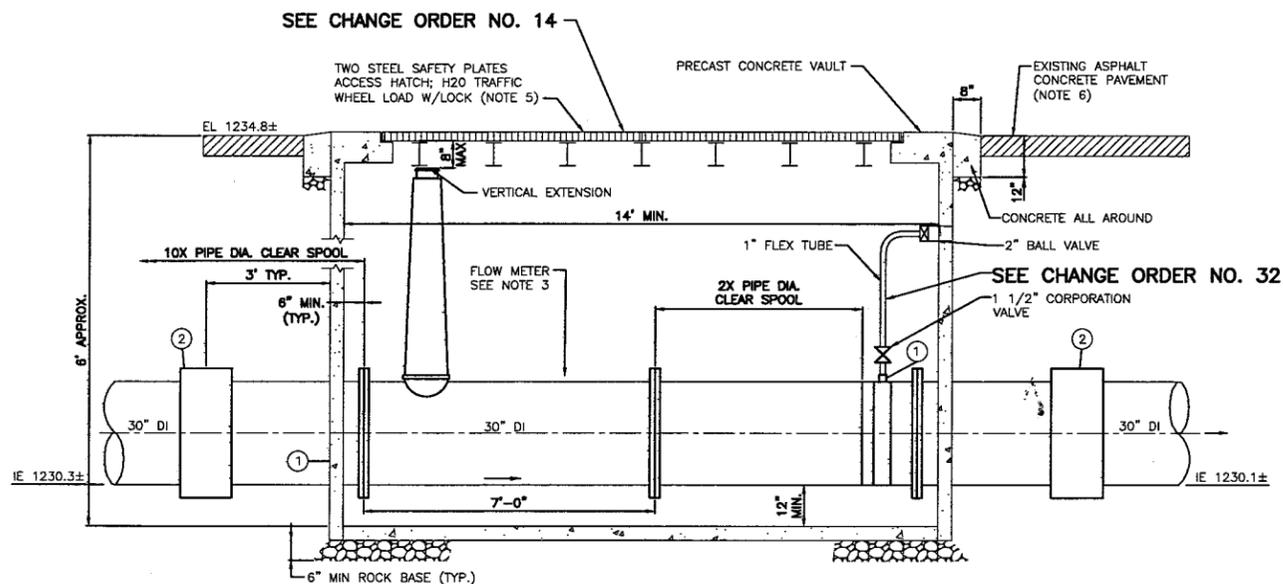
ANTI-SIPHON LOOP
N.T.S. CS



MATERIALS LIST:

- ① 24" FLANGED BUTTERFLY VALVE
- ② 16" 90° ELL (WELD X FLG)
- ③ 16" BUTTERFLY VALVE
- ④ 16" WELDED FLOWMETER W/FLOW STRAIGHTENERS WATER SPECIALTIES MLO4D OR APPROVED EQUAL
- ⑤ 16" PRESSURE SUSTAINING VALVE CLA-VAL 50-011650.01
- ⑥ 24"x16" TEE
- ⑦ VICTAULIC COUPLING W/2 FLG X GROVE ADAPTOR
- ⑧ 1" AIR RELEASE VALVE

16" PRESSURE SUSTAINING VALVE AND FLOW METER
1/4" = 1'-0" CS



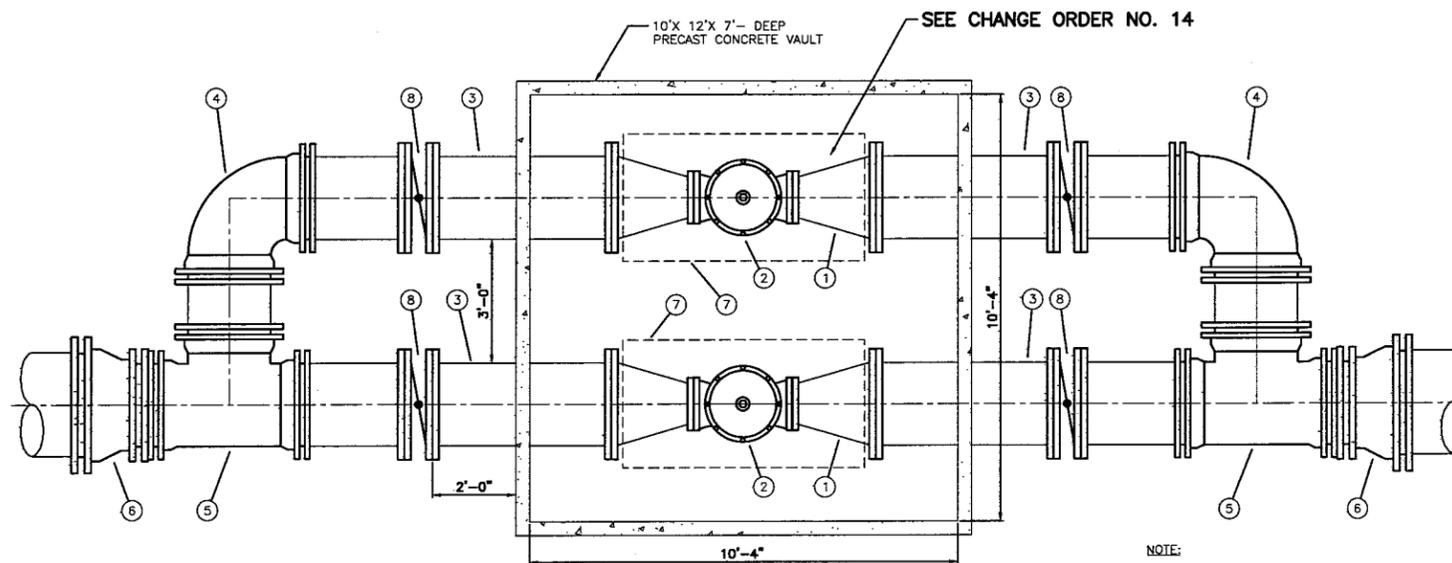
CHLORINE INJECTION VAULT SECTION
1/2" = 1'-0" CS

NOTES:

- 1. USE UTILITY VAULT 6'x14'x8' OR APPROVED EQUAL 8' DEEP.
- 2. TAPS IN PIPE SHALL BE WITH A SERVICE SADDLE ON CLASS 53 DI.
- 3. WATER SPECIALTIES MLO4D MAINLINE METER OR APPROVED EQUAL.
- 4. FOR CHLORINE TAP SEE ③/12
- 5. STANDARD STEEL 4'x4' HATCH
- 6. CONTRACTOR SHALL SET TOP OF VAULT ABOVE EXISTING GRADE TO PREVENT RUNOFF INTO VAULT. REPAIR A/C AS NEEDED.

MATERIALS LIST:

- ① 1 1/2" TAP CHLORINE PORT
- ② FLEXIBLE COUPLING



PRESSURE SUSTAINING VALVE VAULT
N.T.S. CS

MATERIALS LIST:

- ① 24"x16" ECCENTRIC REDUCER, FLG
- ② 16" PRESSURE SUSTAINING VALVE, FLG USE CLA-VAL CO. MODEL NO. 50-011650.01
- ③ 24" PIPE SPOOL FLGxPE (LENGTH AS NECESSARY)
- ④ 24"-90° BEND
- ⑤ 24" MJ TEE
- ⑥ 30"x24" CONCENTRIC REDUCER
- ⑦ UTILITY VAULT HATCH NO. 2-332AL
- ⑧ 24" BUTTERFLY VALVE

NOTE:

- 1. USE UTILITY VAULT 10'x12'x7' OR APPROVED EQUAL.
- 2. 6" MIN. BASE ROCK (TYP.)

IF SHEET IS LESS THAN 24" x 36" IT IS A REDUCED PRINT. SCALE REDUCED ACCORDINGLY.

RECORD DRAWINGS

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DRAWN BY:	CAS				
CHECKED BY:	DHD				
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	11/05	RECORD REVISION			
REVISIONS					

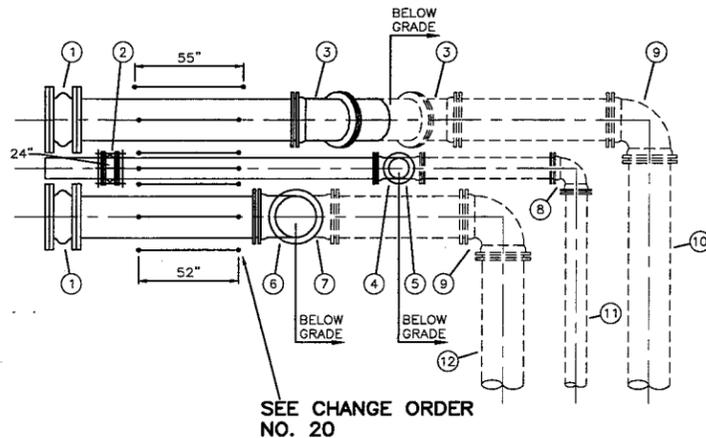


MUSCOY OU REMEDIAL DESIGN
19th STREET PLANT & ENCANTO PARK PUMPING PLANT
NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

19TH STREET PLANT
MISCELLANEOUS DETAILS

SCALE:	DATE:	DWG. FILE:	SHEET NO.:
AS NOTED	8/14/03	C10.DWG	C10

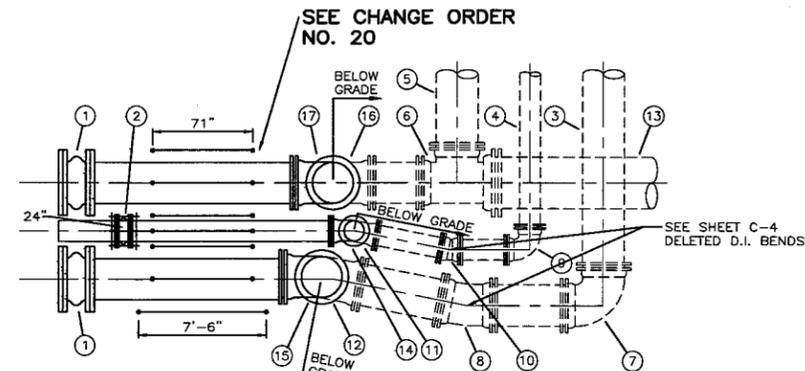
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SEE CHANGE ORDER NO. 20

DETAIL 1
1/4"=1'-0"

- MATERIALS LIST:**
- ① 24" INSULATING COUPLING CONNECT TO HEADER PIPING
 - ② 12" INSULATING COUPLING CONNECT TO HEADER PIPING
 - ③ 24" 45° MJ VERTICAL BEND
 - ④ 12" 90° FLG VERTICAL BEND
 - ⑤ 12" 90° MJ VERTICAL BEND
 - ⑥ 24" 90° FLG VERTICAL BEND
 - ⑦ 24" 90° MJ VERTICAL BEND
 - ⑧ 12" 90° MJ HORIZONTAL BEND
 - ⑨ 24" 90° MJ HORIZONTAL BEND
 - ⑩ 24" DI MJ INFLUENT PIPELINE
 - ⑪ 12" DI MJ BACKWASH SUPPLY LINE
 - ⑫ 24" DI MJ EFFLUENT PIPELINE

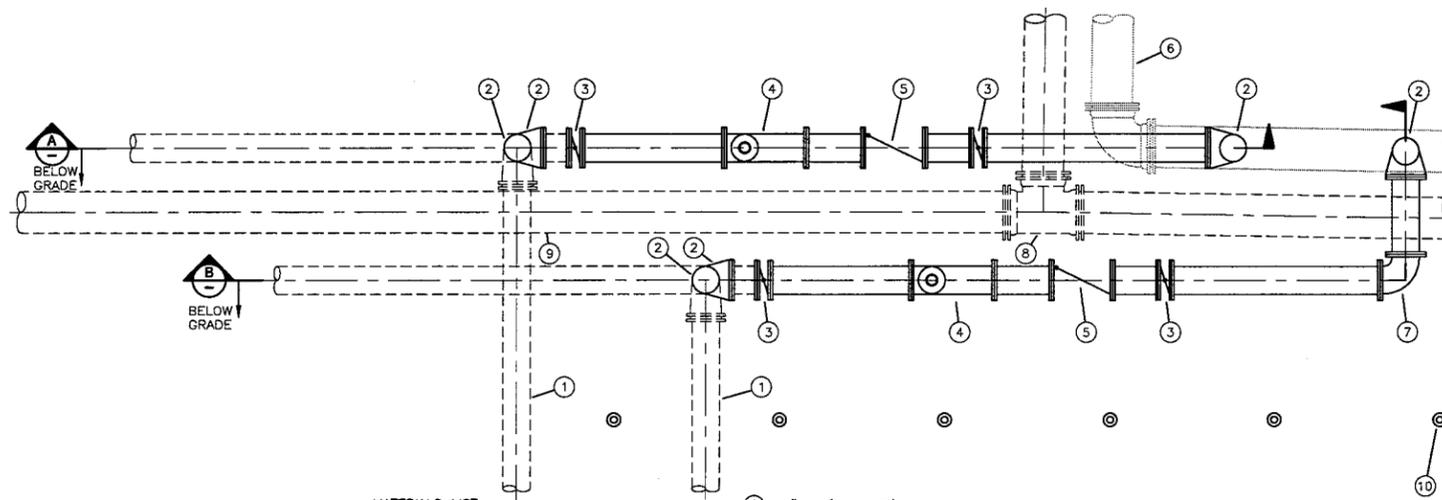


SEE CHANGE ORDER NO. 20

SEE SHEET C-4 DELETED D.I. BENDS

DETAIL 2
1/4"=1'-0"

- MATERIALS LIST:**
- ① 24" INSULATING COUPLING CONNECT TO HEADER PIPING
 - ② 12" INSULATING COUPLING CONNECT TO HEADER PIPING
 - ③ 24" DI MJ INFLUENT PIPELINE
 - ④ 12" DI MJ BACKWASH SUPPLY LINE
 - ⑤ 24" DI MJ EFFLUENT PIPELINE
 - ⑥ 30"x24" MJ TEE
 - ⑦ 24" 90° MJ HORIZONTAL BEND
 - ⑧ 24" 11 1/4" MJ HORIZONTAL BEND
 - ⑨ 12" 90° MJ HORIZONTAL BEND
 - ⑩ 12" 11 1/4" MJ HORIZONTAL BEND
 - ⑪ 12" 90° MJ VERTICAL BEND
 - ⑫ 24" 90° MJ VERTICAL BEND
 - ⑬ 30" DI MJ EFFLUENT PIPELINE
 - ⑭ 12" 90° FLG VERTICAL BEND, ROTATE 11 1/4°
 - ⑮ 24" 90° FLG VERTICAL BEND, ROTATE 11 1/4°
 - ⑯ 24" 90° FLG VERTICAL BEND
 - ⑰ 24" 90° FLG VERTICAL BEND

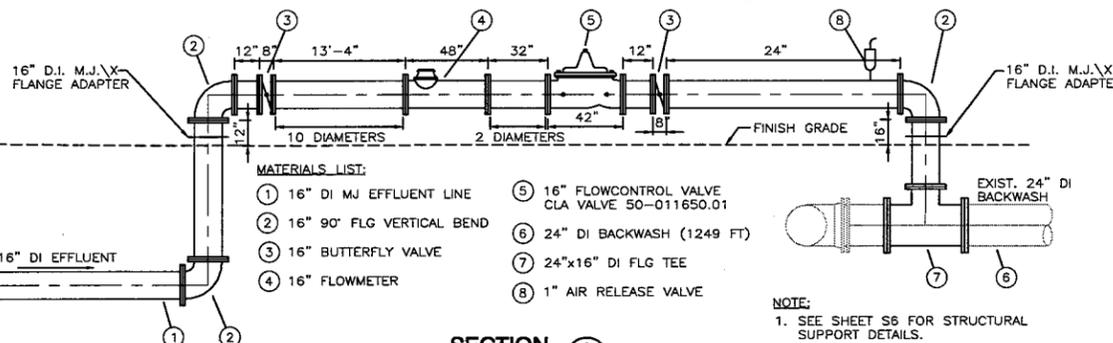


- MATERIALS LIST:**
- ① 16" DI MJ EFFLUENT LINE
 - ② 16" 90° FLG VERTICAL BEND
 - ③ 16" BUTTERFLY VALVE
 - ④ 16" FLOWMETER
 - ⑤ 16" FLOWCONTROL VALVE CLA VALVE 133-02/633/-02

- ⑥ 24" DI (1249 FT)
- ⑦ 16" 90° FLG HORIZONTAL BEND
- ⑧ 24"x24" TEE
- ⑨ 24" DI MJ BACKWASH SUPPLY LINE
- ⑩ TRAFFIC BOLLARDS (TYP. OF 8). SEE SHEET C-32. ENGINEER TO FIELD LOCATE.
- ⑪ 1" AIR RELEASE VALVE (NOT SHOWN FOR CLARITY) SEE SECTION

NOTE:
1. SEE SHEET S6 FOR STRUCTURAL SUPPORT DETAILS.

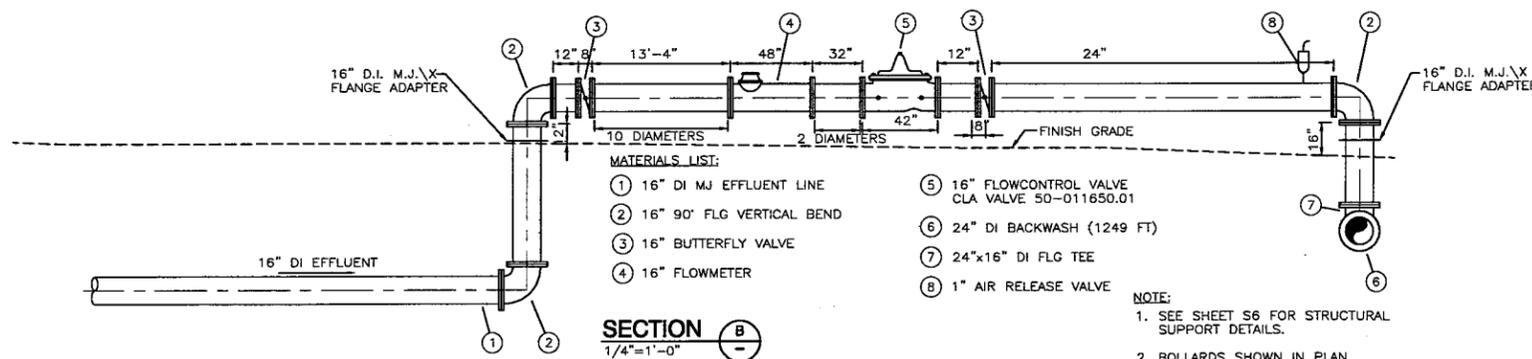
EFFLUENT TO EXISTING 1249 FT PRESSURE ZONE PIPELINE CONNECTION
1/4"=1'-0"



MATERIALS LIST:

- ① 16" DI MJ EFFLUENT LINE
- ② 16" 90° FLG VERTICAL BEND
- ③ 16" BUTTERFLY VALVE
- ④ 16" FLOWMETER
- ⑤ 16" FLOWCONTROL VALVE CLA VALVE 50-011650.01
- ⑥ 24" DI BACKWASH (1249 FT)
- ⑦ 24"x16" DI FLG TEE
- ⑧ 1" AIR RELEASE VALVE

NOTE:
1. SEE SHEET S6 FOR STRUCTURAL SUPPORT DETAILS.
2. BOLLARDS SHOWN IN PLAN ONLY.



MATERIALS LIST:

- ① 16" DI MJ EFFLUENT LINE
- ② 16" 90° FLG VERTICAL BEND
- ③ 16" BUTTERFLY VALVE
- ④ 16" FLOWMETER
- ⑤ 16" FLOWCONTROL VALVE CLA VALVE 50-011650.01
- ⑥ 24" DI BACKWASH (1249 FT)
- ⑦ 24"x16" DI FLG TEE
- ⑧ 1" AIR RELEASE VALVE

NOTE:
1. SEE SHEET S6 FOR STRUCTURAL SUPPORT DETAILS.
2. BOLLARDS SHOWN IN PLAN ONLY.

IF SHEET IS LESS THAN 24" x 36" IT IS A REDUCED PRINT. SCALE REDUCED ACCORDINGLY.

RECORD DRAWINGS

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CHECKED BY: DHD

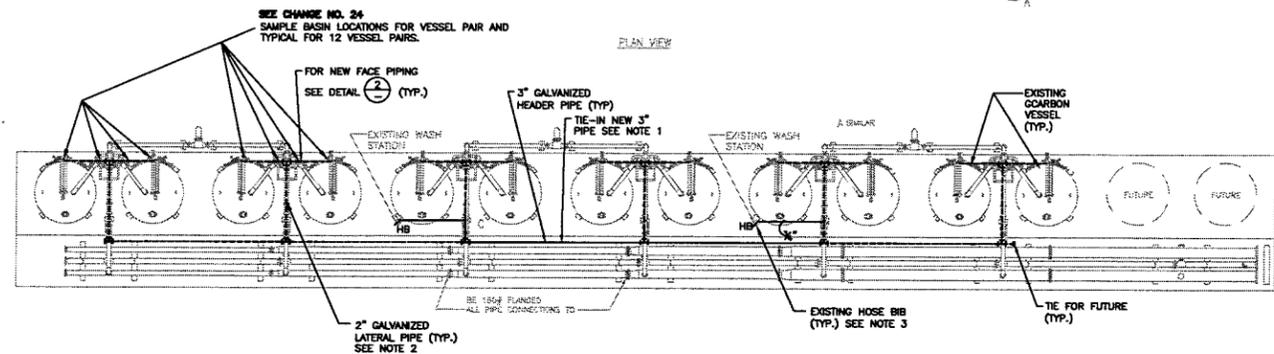
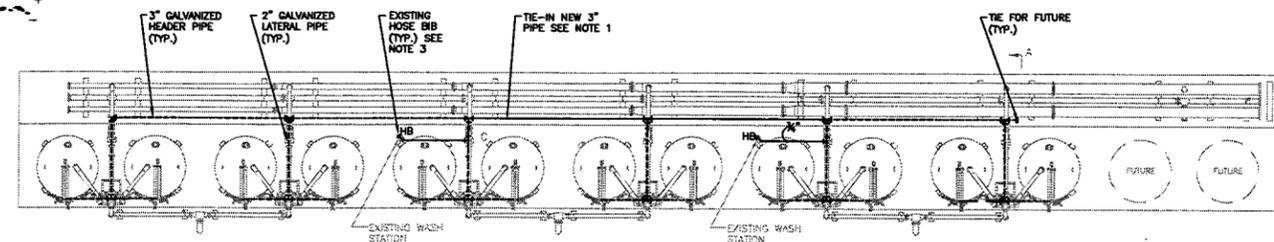


MUSCOY OU REMEDIAL DESIGN
19th STREET PLANT & ENCANTO PARK PUMPING PLANT
NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

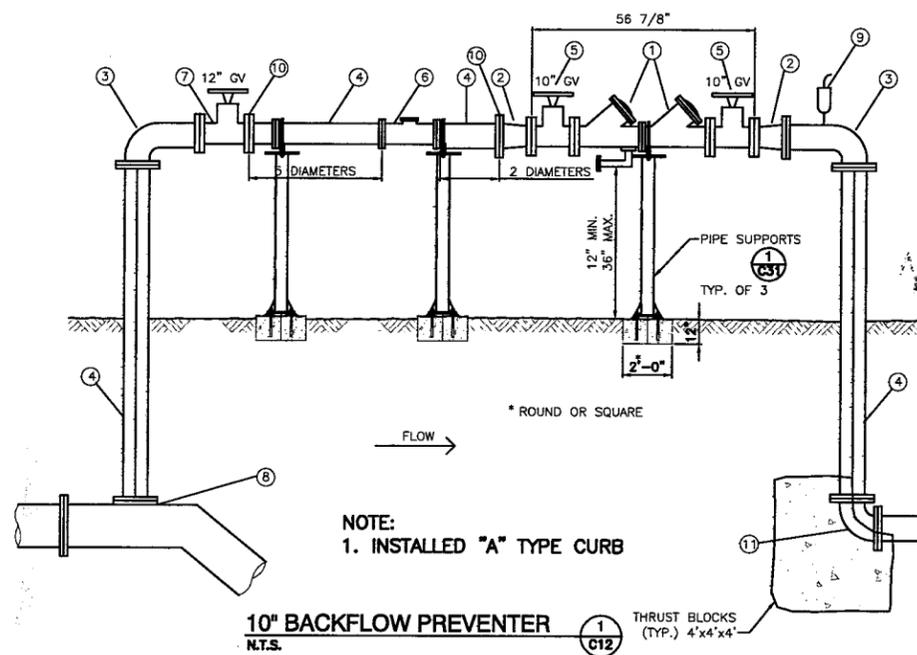
19TH STREET PLANT
MISCELLANEOUS DETAILS

SCALE: AS NOTED	DATE: 8/14/03	DWG. FILE: C11.DWG	SHEET NO: C11
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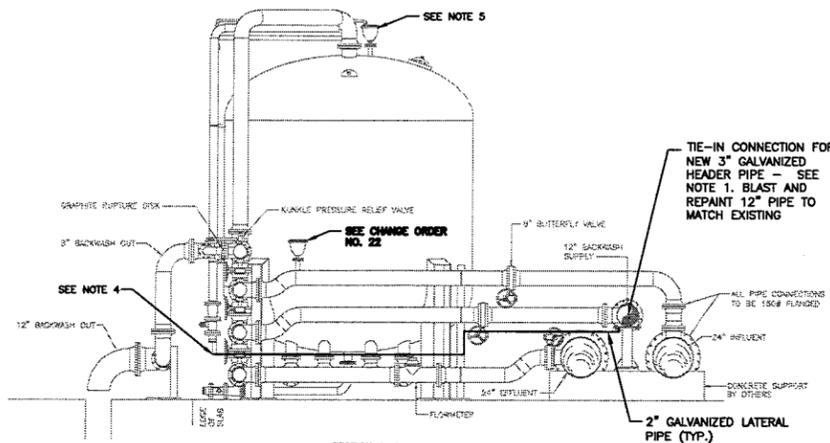


CONCRETE PAD PLAN
SCALE: 1"=16'-0"



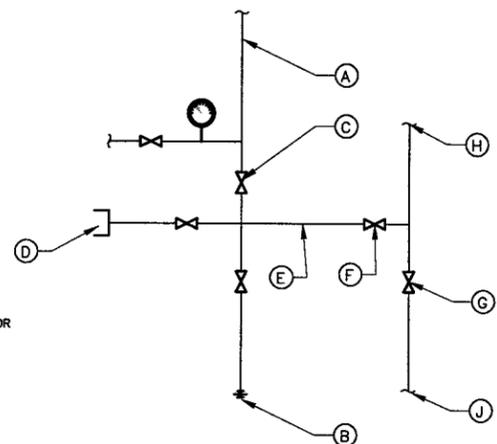
- MATERIAL SCHEDULE:**
- ① 10" REDUCED PRESSURE BACKFLOW PREVENTER
 - ② 12" x 10" REDUCER FLG
 - ③ 90° BEND FLG
 - ④ 12" DI FLG X PE SPOOL
 - ⑤ 10" GATE VALVE
 - ⑥ WATER SPECIALTIES MLOAD MAINLINE METER W/ STRAIGHTENING VANES
 - ⑦ 12" GATE VALVE
 - ⑧ 24" x 12" TEE D.I. M.J. PER S.B. WATER DEPT.
 - ⑨ 1" AIR RELEASE VALVE
 - ⑩ VICTAULIC COUPLING W/ 2 FLG X GROVE ADAPTER
 - ⑪ 12" 90° BEND MJ

10" BACKFLOW PREVENTER
N.T.S.



SECTION A-A
SCALE: 1"=16'-0"

- NOTES:**
1. CONNECT 3" GALVANIZED THREADED HEADER PIPE TO EXISTING 12" BACKWASH SUPPLY HEADER USING 14" TO 10" BY 3" CL 300/S10 FLEX-O-LET WELDED TO EXISTING 12" BACKWASH SUPPLY HEADER, THREADED USING U-BOLTS AND EXISTING PIPES SUPPORTS.
 2. RUN 2" GALVANIZED LATERALS TO EACH VESSEL PAIR. SUPPORT USING U-BOLTS AND EXISTING PIPE SUPPORTS (TYP. OF 12).
 3. RUN 3/4" GALVANIZED LINE FROM 2" LATERAL TO EXISTING US FILTER HOSE BIBBS. MAKE CONNECTION TO HOSE BIBBS USING BRONZE THREADED BY COMPRESSION FITTING. DRESSER 3/4" COUPLING OR EQUAL (TYP. OF 4).
 4. CONNECT NEW 2" GALVANIZED LATERALS TO EXISTING WASHDOWN PIPING ON FACE OF EACH VESSEL. SEE DETAIL 1. (TYP. OF 24).
 5. INSTALL NEW 1" BRASS GATE VALVE WITH HAND WHEEL TO ISOLATE APCO AIR VALVE FOR MAINTENANCE. (TYP. OF 24)



- NOTES:**
- A 2" EXISTING GALVANIZED WASHDOWN LINE.
 - B TIE NEW 2" GALVANIZED WATER SUPPLY INTO EXISTING 2" GALVANIZED WASHDOWN LINE ON VESSEL.
 - C ADD NEW 2" BRONZE CHROME BALL VALVE TO ISOLATE WASHDOWN WHEN FILLING CARBON TRUCK WITH WATER.
 - D REPLACE EXISTING 2" WASHDOWN FEMALE CAMLOCK AND COVER WITH 4" FEMALE CAMLOCK AND COVER (CARBON TRUCK WATER SUPPLY).
 - E TIE IN NEW 1" GALVANIZED PIPE TO EXISTING 2" GALVANIZED PIPE.
 - F ADD NEW 1" BRONZE CHROME BALL VALVE TO ISOLATE FLUSHING WATER TO APCO AIR VALVE.
 - G RELOCATE EXISTING 1" BRONZE CHROME BALL VALVE.
 - H TIE NEW 1" GALVANIZED PIPE TO EXISTING 1" GALVANIZED TO PROVIDE FLUSHING WATER TO APCO AIR VALVE ON TOP OF VESSEL.
 - J TIE NEW 1" GALVANIZED PIPE TO 8" BACKWASH EFFLUENT PIPE OR RUN TO CATCH BASIN (TO ROUTE FLUSH WATER AND VENTED AIR TO DRAIN).

PIPING ON CARBON VESSEL ①
N.T.S.

LEGEND
— URS REQUESTED
--- CITY REQUESTED

IF SHEET IS LESS THAN 24" x 36" IT IS A REDUCED PRINT. SCALE REDUCED ACCORDINGLY.

RECORD DRAWINGS

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DRAWN BY: CAS
CHECKED BY: DHD

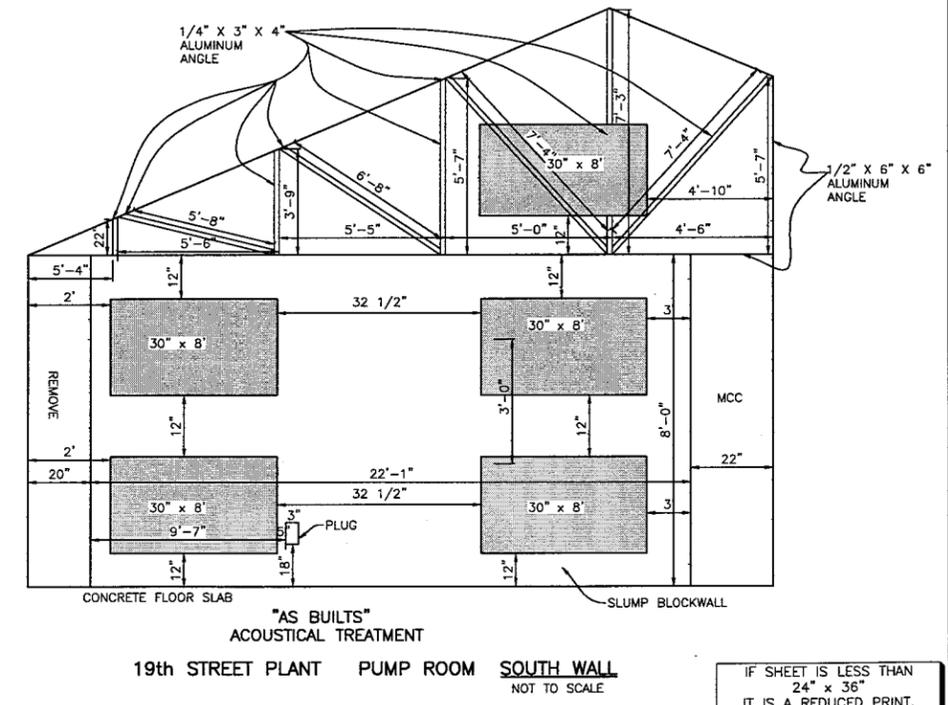
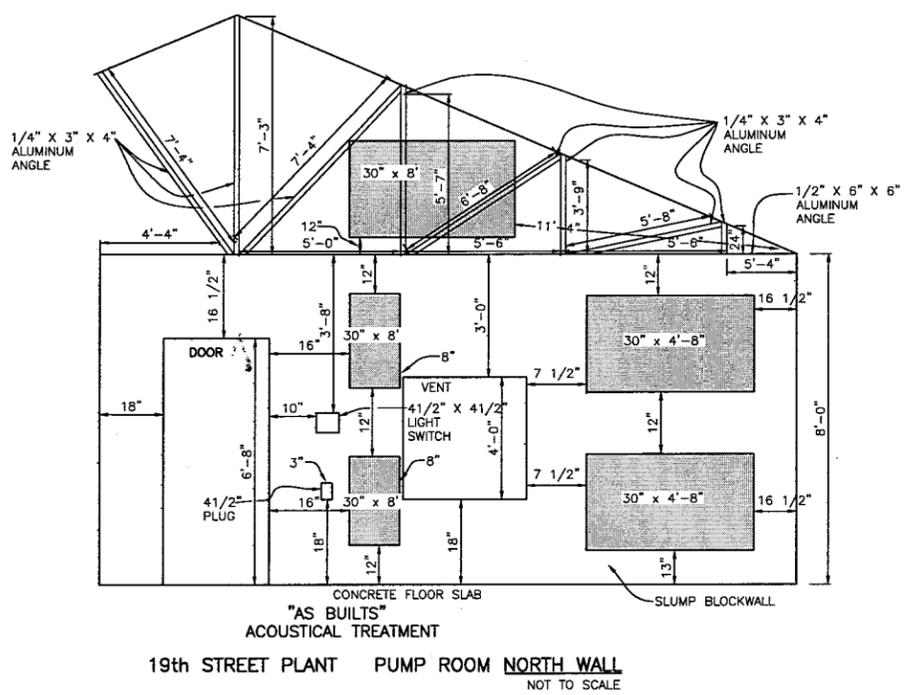
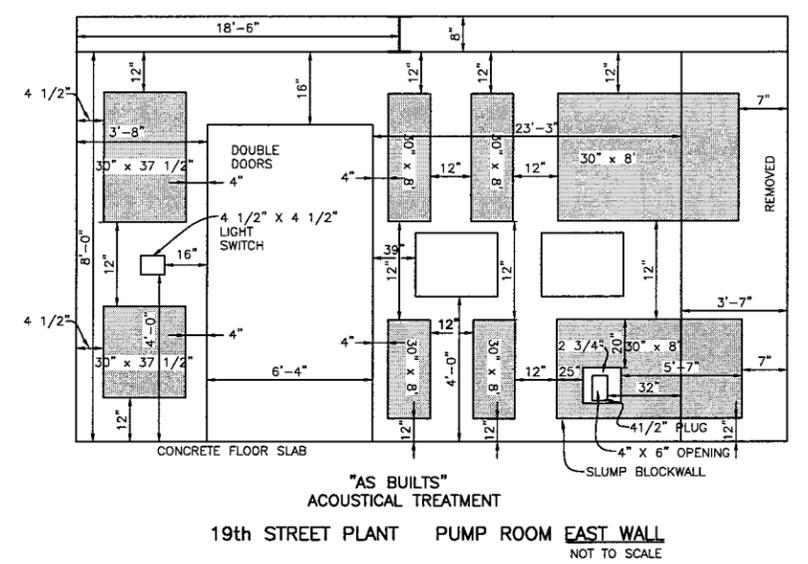
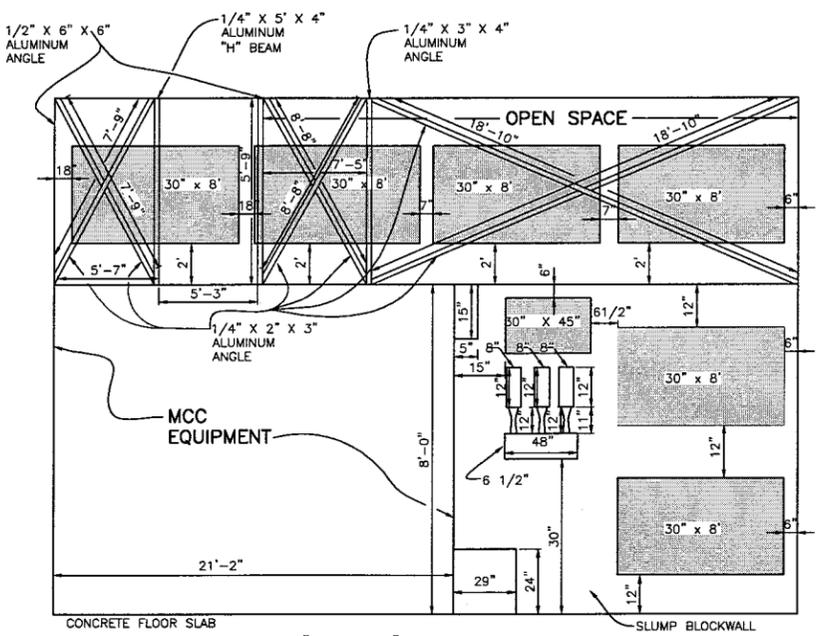
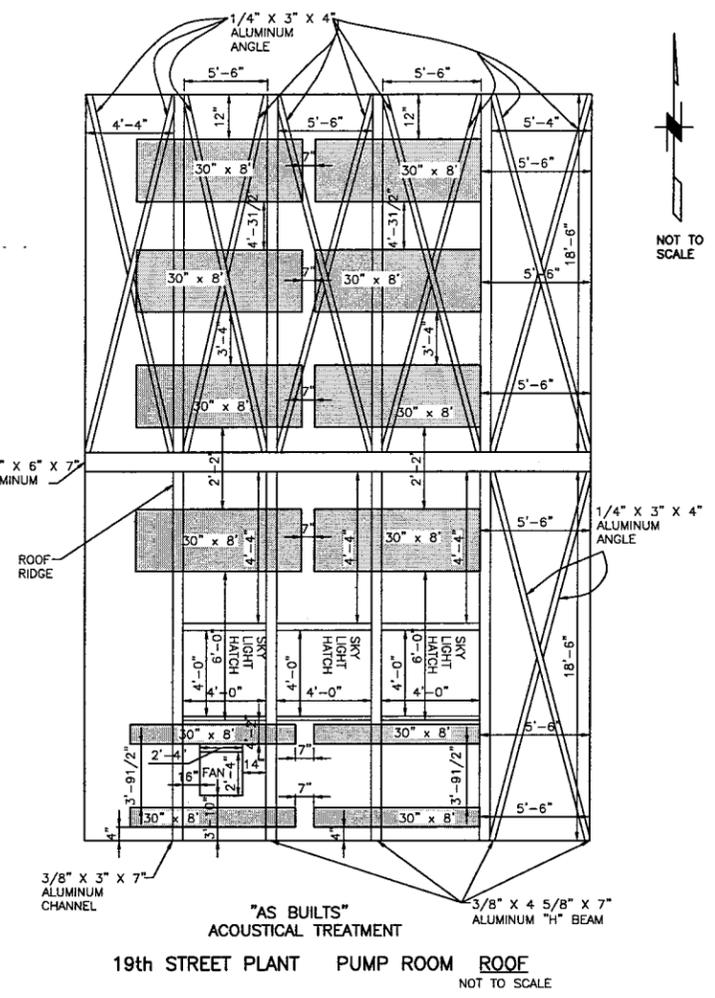


MUSCOY OU REMEDIAL DESIGN
19th STREET PLANT & ENCANTO PARK PUMPING PLANT
NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

19TH STREET PLANT MISCELLANEOUS DETAILS

SCALE: AS NOTED	DATE: 8/14/03	DWG FILE: C12.DWG	SHEET NO: C12
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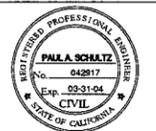
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 IT IS A REDUCED PRINT.
 SCALE REDUCED ACCORDINGLY.

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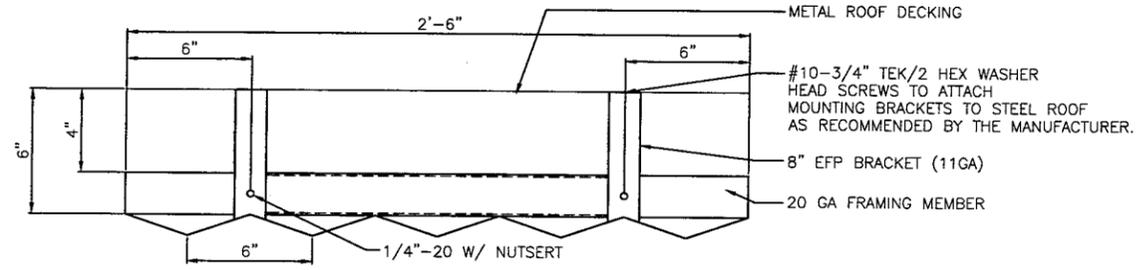
REVISIONS

DESIGNED BY: SDJ
 DRAWN BY: LQB
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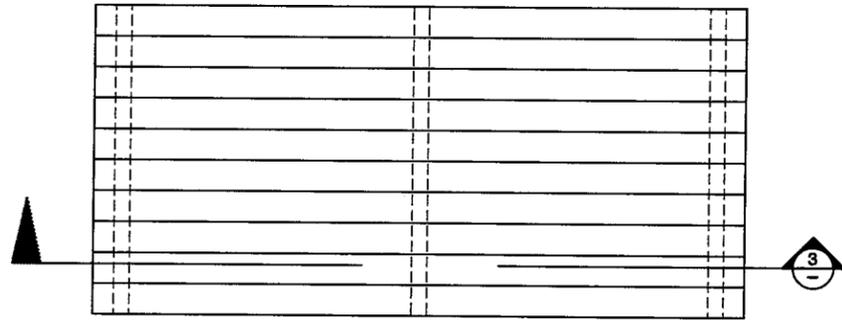


MUSCOY OU REMEDIAL DESIGN
 19th STREET PLANT & ENCANTO PARK PUMPING PLANT
 NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

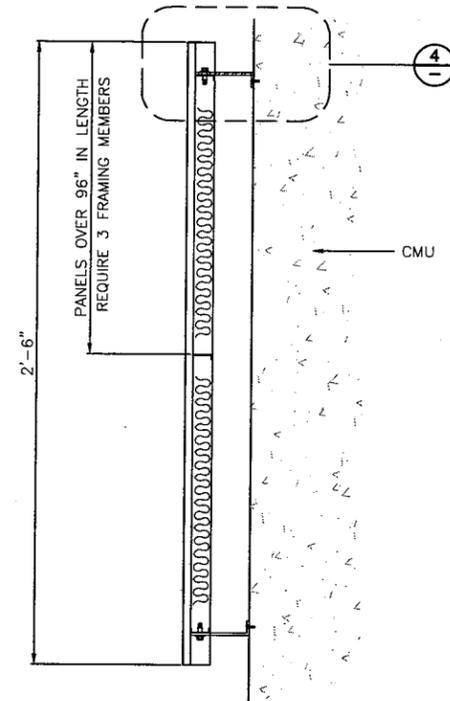
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SCALE	DATE	DWG FILE	SHEET NO.
NOT TO SCALE	8/14/03	C13.DWG	C13



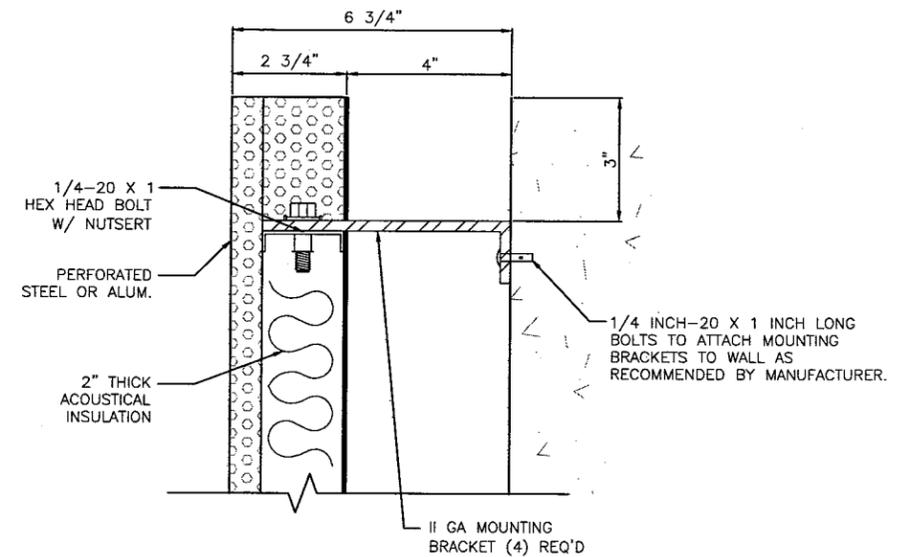
CROSS SECTION
6"=1'-0" (1)
C13



PANEL ELEVATION
3"=1'-0" (2)
13



VERTICAL SECTION
3"=1'-0" (3)



DETAIL
6"=1'-0" (4)

IF SHEET IS LESS THAN
24" x 36"
IT IS A REDUCED PRINT.
SCALE REDUCED ACCORDINGLY.

RECORD
DRAWINGS

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DRAWN BY: LCB
CHECKED BY: DHD

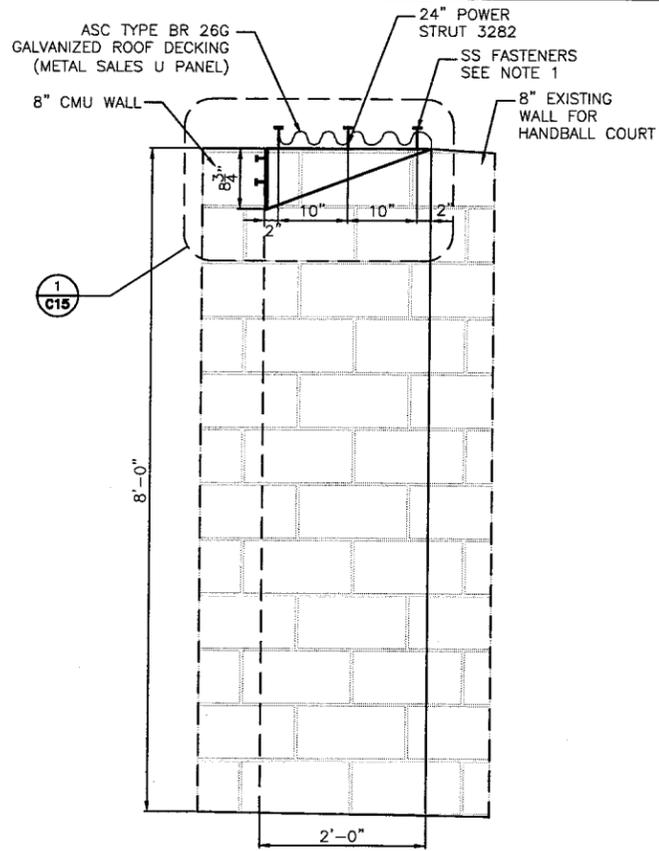


MUSCOY OU REMEDIAL DESIGN
19th STREET PLANT & ENCANTO PARK PUMPING PLANT
NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

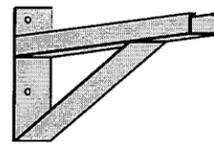
19TH STREET BOOSTER PUMP STATION
PLAN AND ELEVATIONS

SCALE: NOT TO SCALE	DATE: 8/14/03	DWG. FILE: C14.DWG	SHEET NO: C14
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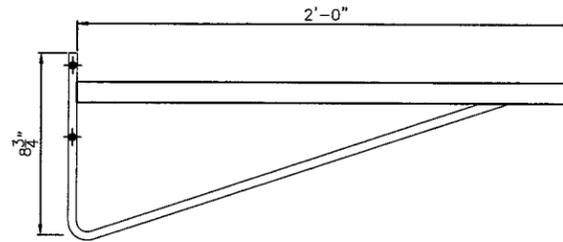
H:\CADD\Current\ENV-INFRA\Muscoy\Final Design_A4 Bulita\C15.dwg User:mateffinger Plotted: May 24, 2006 - 10:18am Lost Save: May 24, 2006 - 9:37am



ELEVATION VIEW

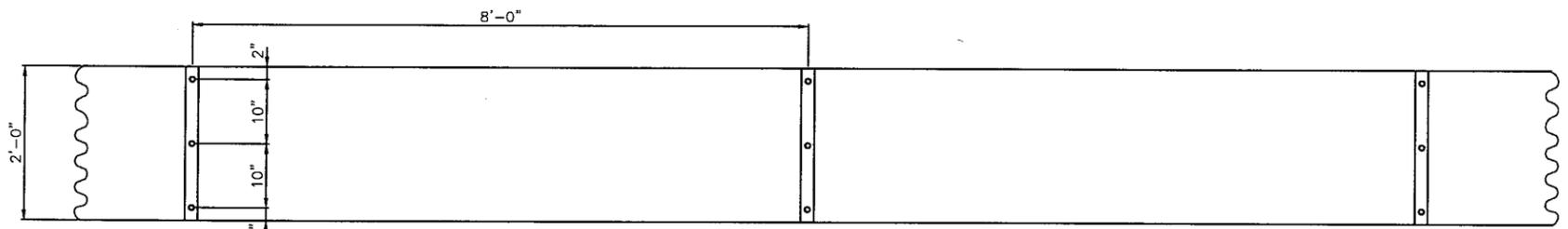


FRONT VIEW



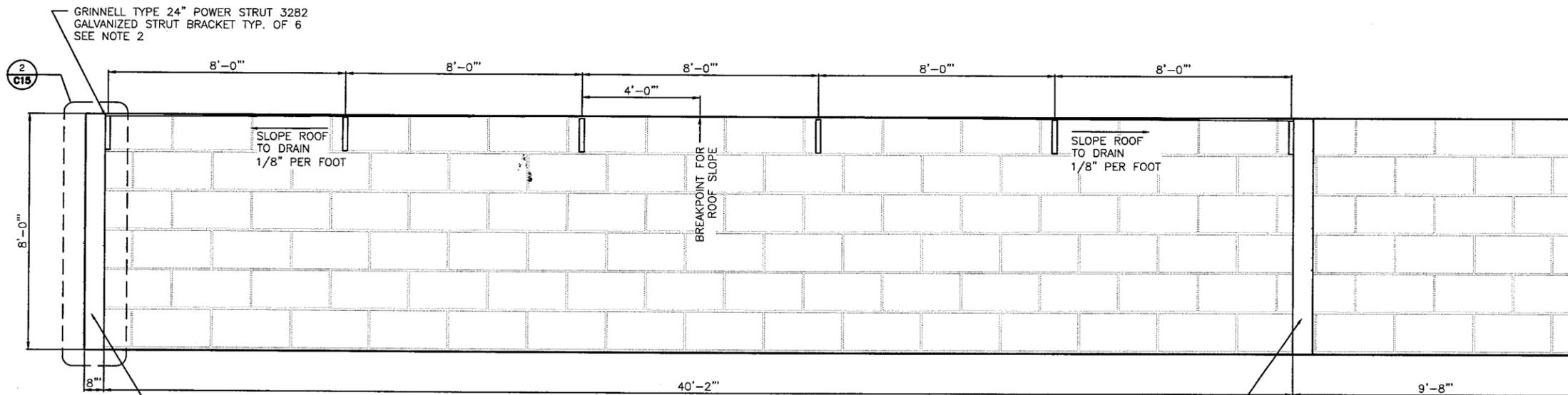
SIDE VIEW

24" GRINNELL POWER STRUT 3282
 $\frac{3}{8}'' = 1'-0''$



PARTIAL PLAN VIEW

ROOF CONNECTION
 $1'' = 1'-0''$



ELEVATION VIEW
 $\frac{1}{2}'' = 1'-0''$

NOTES:

- ASC TYPE BR DECKING SHALL BE FASTENED AT SEAMS WITH #12/14" X 3/4" STAINLESS STEEL FASTENERS WITH 3-DOME BONDED NEOPRENE WASHERS AS SHOWN.
- ATTACH BRACKET TO 8" CMU WALL USING 1/2" EXPANSION ANCHORS IN FILLED CELLS.

8" CMU WALL
 SEE GENERAL NOTES, DWG S1

8" CMU WALL
 SEE GENERAL NOTES, DWG S1

IF SHEET IS LESS THAN 24" x 36" IT IS A REDUCED PRINT. SCALE REDUCED ACCORDINGLY.

RECORD DRAWINGS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	11/05	RECORD REVISION			

DESIGNED BY: SDJ
 DRAWN BY: LOB
 CHECKED BY: DHD

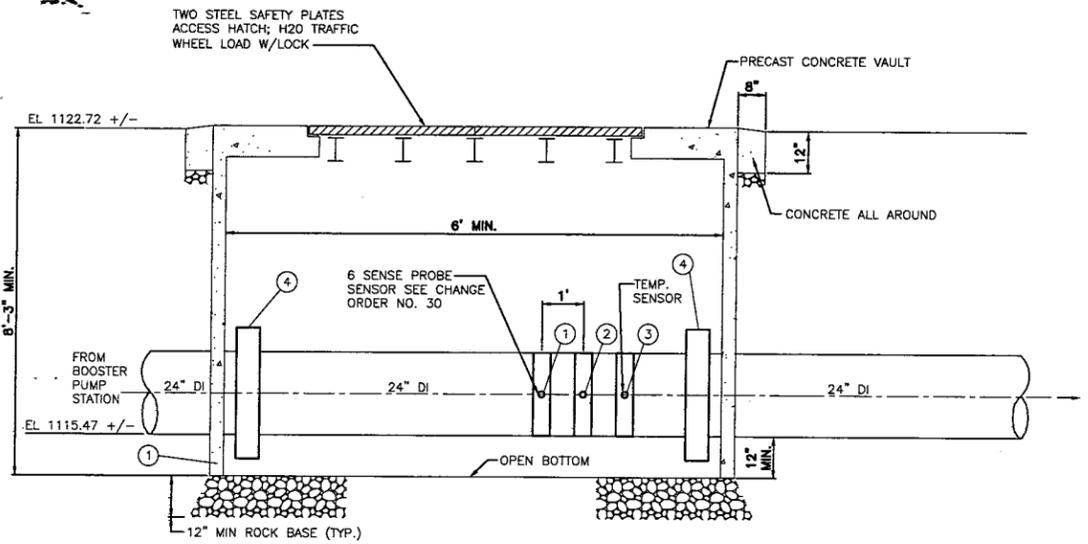


MUSCOY OU REMEDIAL DESIGN
 19th STREET PLANT & ENCANTO PARK PUMPING PLANT
 NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

GALVANIZED ROOF DECKING
 PLAN AND ELEVATIONS

SCALE	DATE	DWG. FILE	SHEET NO.
NOT TO SCALE	8/14/03	C15.DWG	C15

H:\CADD\Current\ENV-INFRA\Muscovy\Final Design\As Bult\C20.dwg User:mstefinger Plotted:May 24, 2006 - 10:18am Last Save:May 24, 2006 - 9:38am



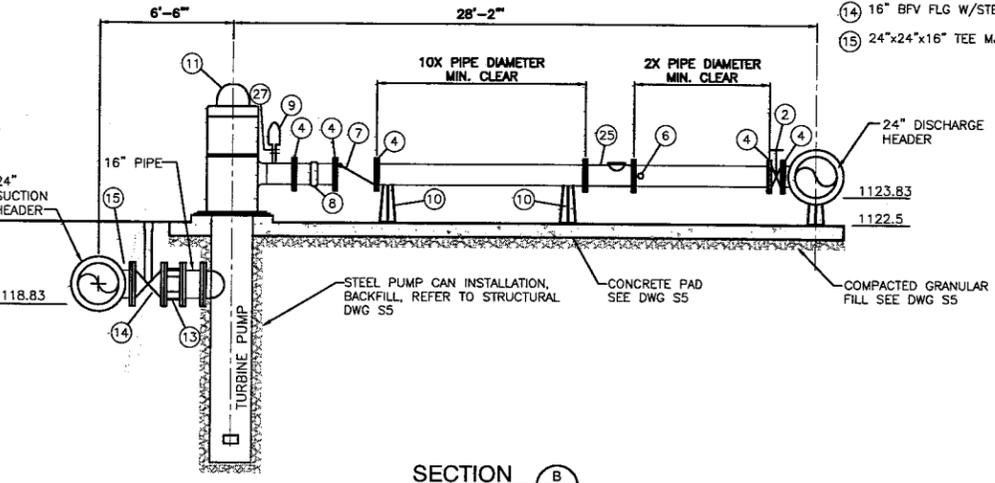
- NOTES:**
1. USE UTILITY VAULT 8' x 10' x 8' OR APPROVED EQUAL.
 2. TAPS IN PIPE SHALL BE WITH A SERVICE SADDLE ON CLASS 52 DI.

- MATERIALS LIST:**
- 1 2" TAP HAS 6 SENSE PROBE SENSOR PH PORT
 - 2 1" TAP CHLORINE PORT- 1" CORP ONLY
 - 3 1" TAP TEMPERATURE, PRESSURE PORT- 1" CORP W/ TEMPERATURE SENSOR
 - 4 FLEX COUPLING

**BOOSTER PUMP STATION
METER VAULT SECTION**
1/2'-1'-0"

- SITE MATERIAL LIST:**
- 1 24" WELD FLG
 - 2 12" BFV FLG
 - 3 24"x10" FLG ECCENTRIC REDUCER
 - 4 12" WELD FLG
 - 5 NOT USED
 - 6 3/4" WATER SAMPLING PORT W/BALL VALVE
 - 7 12" CHECK VALVE FLG (EXTERNAL SWING TYPE SPRING AND LEVER) MUELLER #A-2600-6-02 OR APPROVED EQUAL
 - 8 12" VICTAULIC COUPLING
 - 9 2" COMBINATION AIR/VACUUM VALVE
 - 10 FABRICATED STAND
 - 11 VERTICAL TURBINE PUMP
 - 12 NOT USED
 - 13 INSULATING COUPLING
 - 14 16" BFV FLG W/STEM EXTENSION
 - 15 24"x24"x16" TEE MxMxFLG

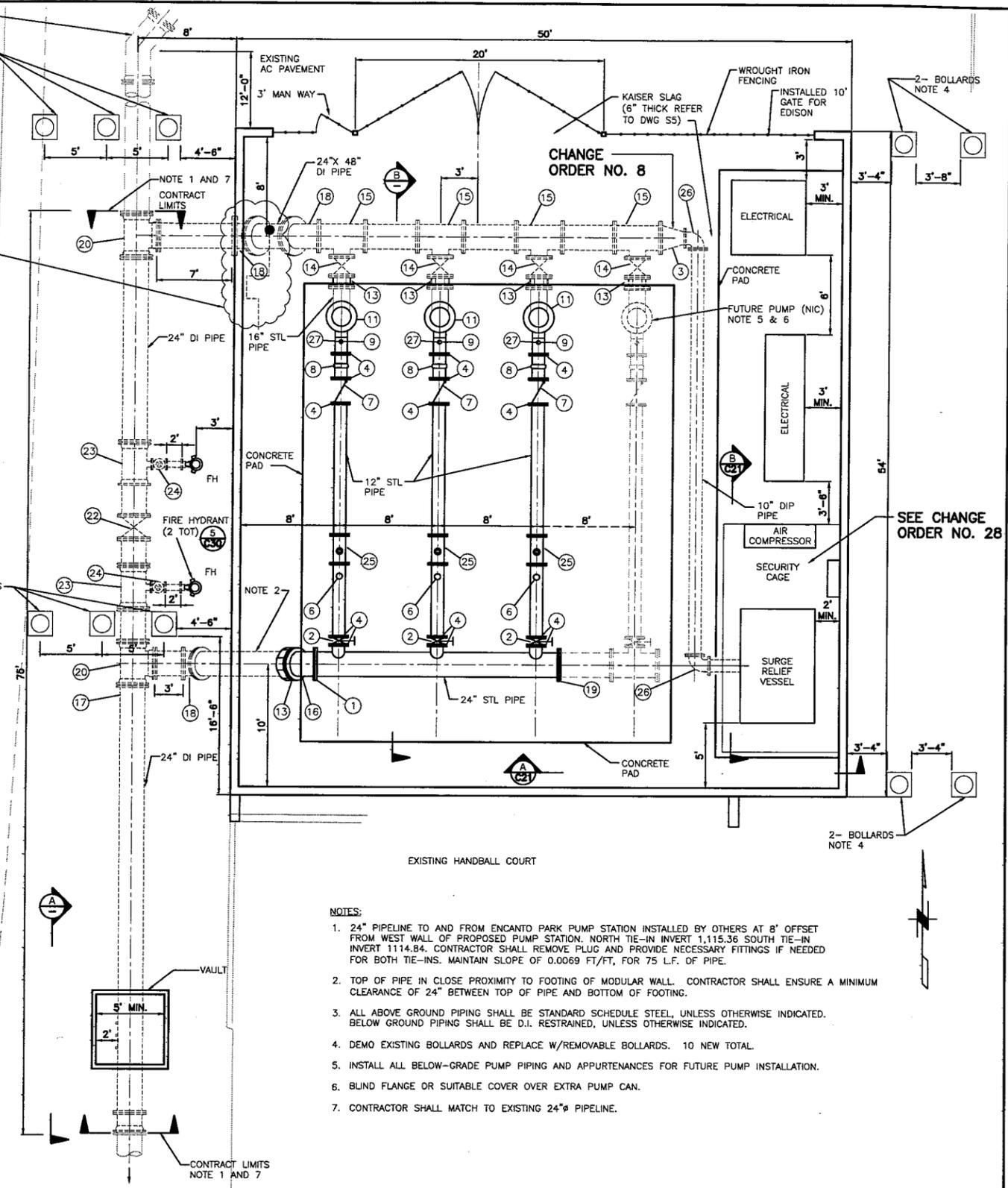
- 16 24" DI FLG 45° BEND
- 17 24" MxFLG ADAPTER
- 18 24" MJ 45° BEND
- 19 24" BLIND FLG
- 20 24" MJ TEE
- 21 24" BFV FLG
- 22 24" BFV FLG W/STEM EXTENTION
- 23 24"x24"x6" TEE MxMxFLG
- 24 6" GATE VALVE FLG
- 25 WATER SPECIALTIES ML04D MAINLINE METER OR APPROVED EQUAL
- 26 10" D.I.M.J. 90° BEND
- 27 2" GATE VALVE



SECTION B
1'-4'-0"

**SEE CHANGE ORDER NO. 16
LANDSCAPING IRRIGATION
MODIFICATIONS**

SEE CHANGE ORDER NO. 4
3- BOLLARDS
NOTE 4



NOTES:

1. 24" PIPELINE TO AND FROM ENCANTO PARK PUMP STATION INSTALLED BY OTHERS AT 8" OFFSET FROM WEST WALL OF PROPOSED PUMP STATION. NORTH TIE-IN INVERT 1,115.36 SOUTH TIE-IN INVERT 1114.84. CONTRACTOR SHALL REMOVE PLUG AND PROVIDE NECESSARY FITTINGS IF NEEDED FOR BOTH TIE-INS. MAINTAIN SLOPE OF 0.0069 FT/FT, FOR 75 L.F. OF PIPE.
2. TOP OF PIPE IN CLOSE PROXIMITY TO FOOTING OF MODULAR WALL. CONTRACTOR SHALL ENSURE A MINIMUM CLEARANCE OF 24" BETWEEN TOP OF PIPE AND BOTTOM OF FOOTING.
3. ALL ABOVE GROUND PIPING SHALL BE STANDARD SCHEDULE STEEL, UNLESS OTHERWISE INDICATED. BELOW GROUND PIPING SHALL BE D.I. RESTRAINED, UNLESS OTHERWISE INDICATED.
4. DEMO EXISTING BOLLARDS AND REPLACE W/REMOVABLE BOLLARDS. 10 NEW TOTAL.
5. INSTALL ALL BELOW-GRADE PUMP PIPING AND APPURTENANCES FOR FUTURE PUMP INSTALLATION.
6. BLIND FLANGE OR SUITABLE COVER OVER EXTRA PUMP CAN.
7. CONTRACTOR SHALL MATCH TO EXISTING 24" PIPELINE.

SITE PLAN
1'-5"

RECORD DRAWINGS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	11/05	RECORD REVISION			

DESIGNED BY: PAS
 DRAWN BY: CAS
 CHECKED BY: DHD

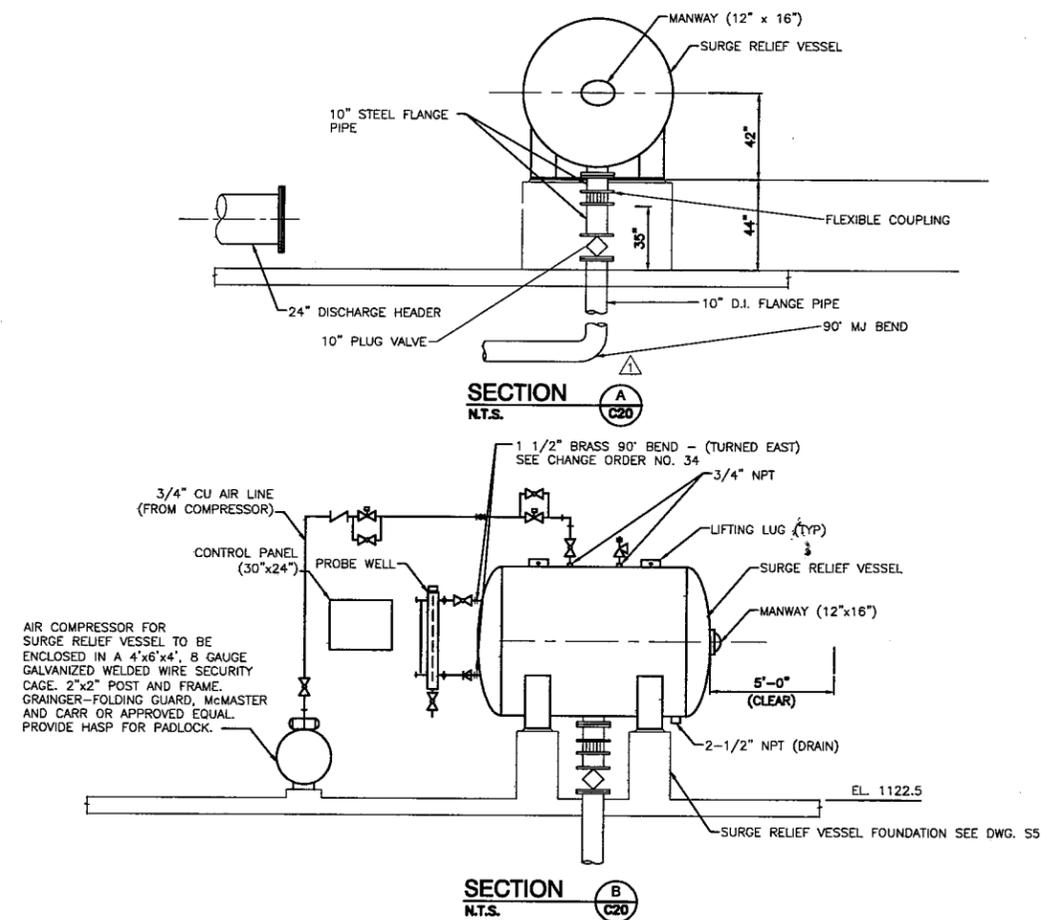


MUSCOY OU REMEDIAL DESIGN
19th STREET PLANT & ENCANTO PARK PUMPING PLANT
NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

ENCANTO PARK BOOSTER PUMP STATION
SITE PLAN AND DETAILS

SCALE:	DATE:	DWG. FILE:	SHEET NO.:
AS NOTED	8/14/03	C20.DWG	C20

H:\CADD\Current\ENV-INFRA\Muscoy\Final Design_Ae Bulits\C21.DWG User:metefinger Plotted: May 24, 2006 - 10:18am Last Save: May 24, 2006 - 9:39am



IF SHEET IS LESS THAN
24" x 36"
IT IS A REDUCED PRINT.
SCALE REDUCED ACCORDINGLY.

RECORD
DRAWINGS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
2	11/05	RECORD REVISION			
1	5/04	REVISE TANK CONNECTION LOCATION			

REVISIONS

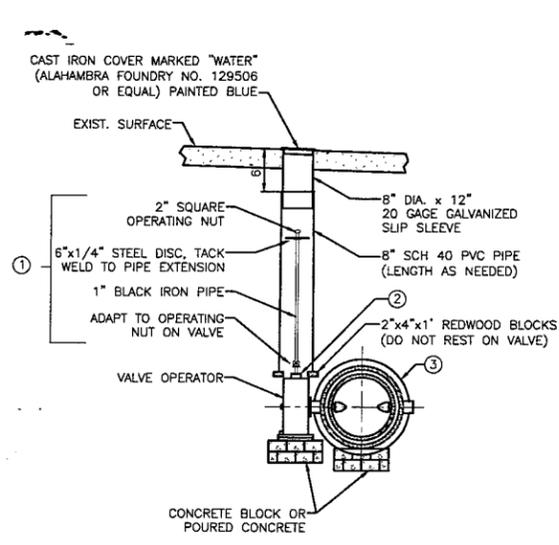
DESIGNED BY: PAS
DRAWN BY: CAS
CHECKED BY: DHD



MUSCOY OU REMEDIAL DESIGN
19th STREET PLANT & ENCANTO PARK PUMPING PLANT
NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

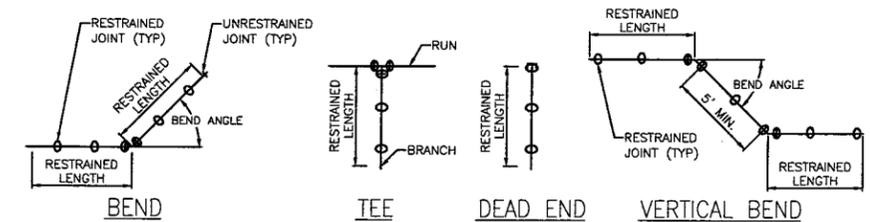
ENCANTO PARK BOOSTER PUMP STATION
SURGE TANK AND MISCELLANEOUS DETAILS

SCALE AS NOTED	DATE 8/14/03	DWG FILE C21.DWG	SHEET NO. C21
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- NOTES:**
- PROVIDE VALVE STEM EXTENSION AS SHOWN IF VALVE NUT BURY DEPTH EXCEEDS 5.0 FEET.
 - BACKFILL VALVE WITH SAND UP TO PACKING
 - VALVE SHALL BE A RUBBER SEATED BUTTERFLY VALVE FURNISHED WITH FLANGED ENDS, A CAST IRON BODY AND DISC, AND MOLDED RUBBER SEAT. THE INTERIOR SHALL BE CLASS 150 UNLESS OTHERWISE SPECIFIED AND SHALL CONFORM TO AWWA C504 SPECS.

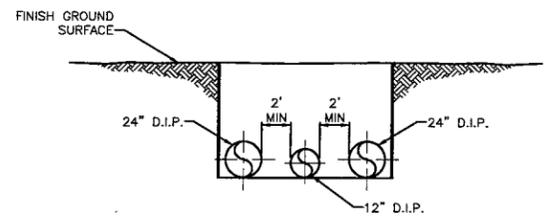
TYPICAL BUTTERFLY VALVE INSTALLATION (1)
N.T.S.



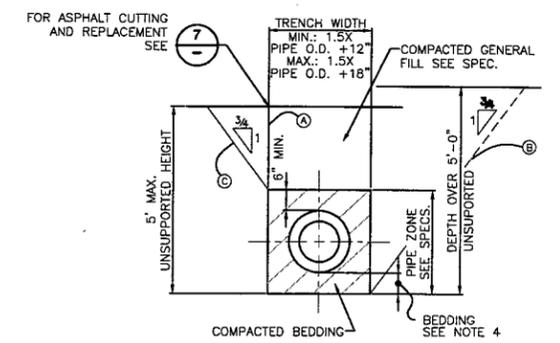
PIPE SIZE	VERTICAL BENDS								
	11° BEND	22° BEND	45° BEND	90° BEND	TEE	DEAD END	11° BEND UP	22° BEND UP	45° BEND UP
12"	4'	8'	17'	40'	52'	60'	4'	9'	18'
16"	5'	10'	22'	52'	70'	78'	5'	11'	23'
20"	6'	13'	26'	64'	88'	97'	6'	14'	28'
24"	7'	15'	31'	75'	106'	115'	7'	17'	33'
30"	9'	18'	38'	91'	132'	141'	9'	20'	41'

- NOTES:**
- USE THE FOLLOWING GUIDELINES WHEN OTHER PIPE JOINTS ARE WITHIN 10 FEET OF THE JOINT BEING RESTRAINED:
 - USE THE "DEAD END" LENGTH FOR CONNECTIONS TO ANY MATERIAL EXCEPT DUCTILE IRON AND CAST IRON.
 - USE THE "DEAD END" LENGTH WHEN ANOTHER PIPE JOINT IS WITHIN 10 FEET OF A BEND BEING RESTRAINED.
 - USE THE "90° BEND" LENGTH WHEN ANOTHER PIPE JOINT IS WITHIN 10 FEET OF A TEE BEING RESTRAINED.
 - DIVIDE RESTRAINED LENGTH BY 0.85 FOR SILTY SOIL.
 - THIS TABLE IS BASED ON THE ASSUMPTION THAT THE TRENCH IS BACKFILLED TO A MINIMUM DEPTH OF 5 FEET WITH A COHESIVE GRANULAR SOIL WHICH HAS BEEN LIGHTLY COMPACTED.
 - RESTRAINED LENGTH ON TEES ASSUMES THE SAME SIZE BRANCH AND RUN. TEES WHICH HAVE BRANCH DIAMETERS LESS THAN THE DIAMETER OF THE RUN MAY REQUIRE A SHORTER RESTRAINED LENGTH. JOINTS ON THE RUN WITHIN 4' OF THE TEE SHALL BE RESTRAINED.

RESTRAINED JOINT DETAIL (2)
N.T.S.

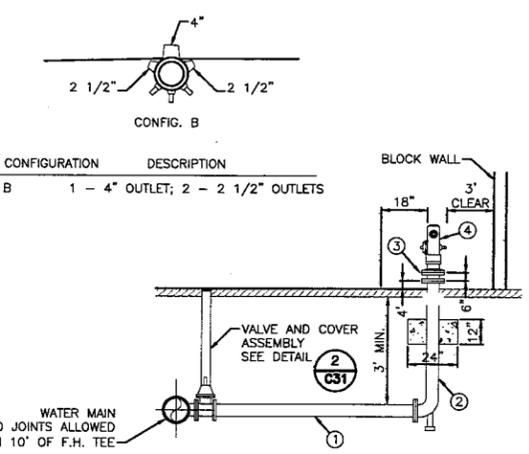


MULTIPLE PIPE INSTALLATION (3)
N.T.S.



- ALTERNATIVE TRENCH SECTIONS (A, B, AND C) ARE FOR USE ONLY WHERE STABLE, COMPACT SOIL CONDITIONS EXIST. WHERE BOULDERS OR LARGE CONSTRUCTIONS ARE ENCOUNTERED, THE TRENCH SECTIONS MAY BE WIDER & DEEPER THAN THAT SHOWN:
 - VERTICAL TRENCH WALLS - SECTION
 - FOR DEPTHS UP TO 5 FEET, NO TRENCH SUPPORT IS REQUIRED.
 - FOR DEPTHS EXCEEDING 5 FEET, SHORING OR SOLID SHEATHING IS REQUIRED.
 - SLOPING TRENCH WALLS - SECTION
 - SLOPING TRENCH WALL SECTION SHALL NOT BE USED WITHOUT APPROVAL OF ENGINEER, UNLESS SPECIFICALLY DESIGNATED ON PLANS OR SPECIFICATIONS.
 - EXCEPT AS APPROVED BY ENGINEER, UNSUPPORTED SLOPING TRENCH WALL SHALL NOT BE STEEPER THAN 3/4 HORIZ. TO 1 VERT. OR AS SHOWN IN SOILS REPORT WHICH SHALL CONTROL.
 - COMBINATION OF VERTICAL AND SLOPING TRENCH WALLS - SECTION
 - TRENCH DEPTHS NOT EXCEEDING 5 FEET SHALL HAVE VERTICAL WALLS IN PIPE ZONE UNLESS OTHERWISE APPROVED, BY ENGINEER, OR WHERE SPECIFIED.
 - FOR TRENCHES WITH COMBINED WALLS AND ANY DEPTH EXCEEDING 5 FEET, DESIGN CALCULATIONS BY A REGISTERED CIVIL ENGINEER AND APPROVAL BY GOVERNING AGENCY OF SUPPORTED METHODS ARE REQUIRED.
- WHERE WET, UNSTABLE OR RUNNING SOIL IS ENCOUNTERED, SOLID SHEATHING IS REQUIRED FOR ALL VERTICAL TRENCH WALLS.
- ASPHALT PAVEMENT SHALL BE A MINIMUM THICKNESS EQUAL TO THE EXISTING SECTION. NOTE: TRENCH SECTIONS SHOWN DO NOT DESIGNATE PAY LINES.
- 6" MIN. BEDDING REQUIRED FOR FLEXIBLE PIPE. RIGID PIPE MAY BE PLACED WITHOUT BEDDING DEPENDENT OF SITE CONDITIONS AND AT DISCRETION OF ENGINEER.

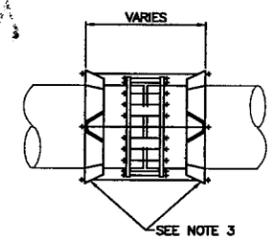
TYPICAL TRENCH SECTION (4)
N.T.S.



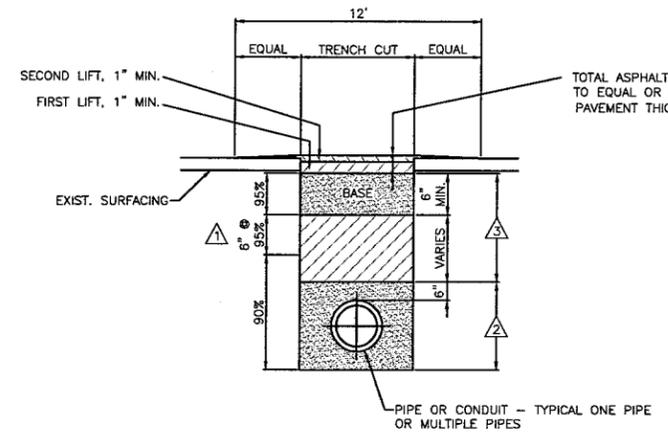
NOTE: INSTALL BLUE DOT PAVEMENT MARKERS PER SBMWD STD. W 6.3

ITEM	QTY	DESCRIPTION
1	1.5 LF	6" CLASS 350 DUCTILE IRON PIPE RESTRAINED WITH MEGALUG OR EQUAL
2	1 EA	6" FIRE HYDRANT BURY WITH RETAINED MJ INLET AND FLANGE OUTLET, PAINT EXPOSED PORTION TO MATCH FIRE HYDRANT
3	1 EA	6" FLANGED BREAKAWAY EXTENSION SPOOL, MORTAR LINED AND PAINTED TO MATCH FIRE HYDRANT (INCLUDE HOLLOW BREAKAWAY BOLTS).
4	1 EA	HYDRANT CONFIGURATION 1 - 4" OUTLET; 2 - 2 1/2" OUTLET
5	1 EA	TEE WITH RESTRAINED BRANCH AND RUN

6" FIRE HYDRANT INSTALLATION (5)
N.T.S.

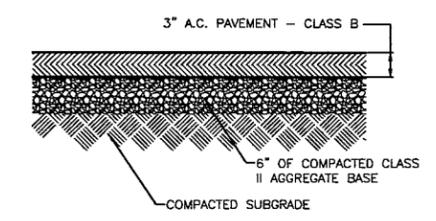


- NOTES:**
- PROVIDE COUPLING WHERE NOTED ON DRAWINGS.
 - DESIGN HARNESSES IN ACCORDANCE WITH AWWA M-11 MANUAL STEEL PIPE. DESIGN PRESSURE = 100 PSI
 - LUGS FOR PIPE < 24-INCH AND HARNESSES RINGS FOR PIPE > 24-INCH.
- *HARNESSED MECHANICAL COUPLING DETAIL** (6)
N.T.S.



- THE TOP 6" OF SUBGRADE SHALL BE COMPACTED TO 95% RELATIVE DENSITY.
- SAND EQUIVALENT AND PERMEABILITY SHALL COMPLY WITH SPECIFICATIONS.
- TRENCH BACKFILL SHALL BE PER STANDARD SPECIFICATION
- ALL WORK AREA PROTECTION SHALL BE IN ACCORDANCE WITH THE STATE MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES.

TRENCH REPAIR AC PAVEMENT (7)
N.T.S.



- NOTE:**
- MATERIALS IN ACCORDANCE WITH THE LATEST "CALTRANS STANDARD SPECIFICATIONS"

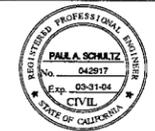
AC PAVEMENT SECTION (8)
N.T.S.

IF SHEET IS LESS THAN 24" x 36" IT IS A REDUCED PRINT. SCALE REDUCED ACCORDINGLY.

RECORD DRAWINGS

User: mstefinger Plotted: May 24, 2006 - 10:18am Last Save: May 24, 2006 - 9:40am H:\CADD\Current\ENV-IFRA\Muscoy\Final_Buills\C30.dwg

DESIGNED BY: PAS
DRAWN BY: LOB
CHECKED BY: DHD



MUSCOY OU REMEDIAL DESIGN
19th STREET PLANT & ENCANTO PARK PUMPING PLANT
NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

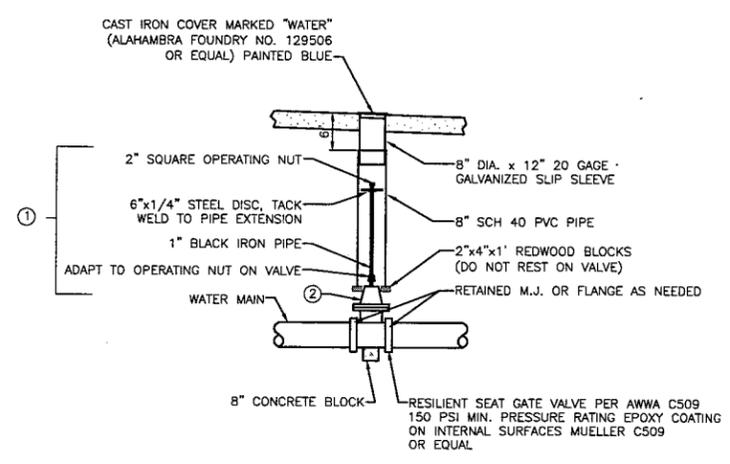
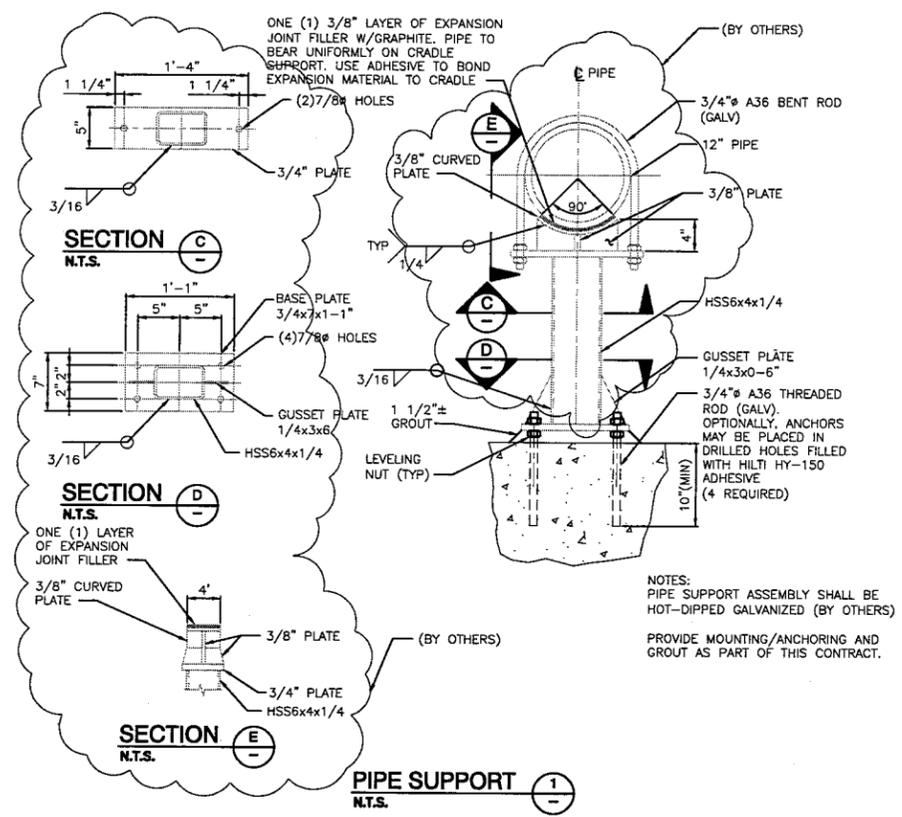
19TH STREET PLANT
STANDARD DETAILS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	11/05	RECORD REVISION			

REVISIONS

SCALE	DATE	DWG. FILE	SHEET NO.
AS NOTED	8/14/03	C30.DWG	C30

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IF SHEET IS LESS THAN 24" x 36" IT IS A REDUCED PRINT. SCALE REDUCED ACCORDINGLY.

RECORD DRAWINGS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	11/05	RECORD REVISION			

REVISIONS

DESIGNED BY: PAS
DRAWN BY: LOB
CHECKED BY: DHD

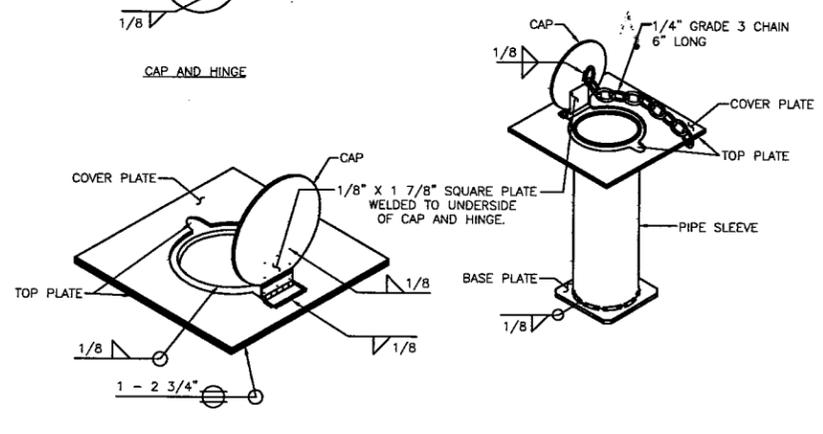
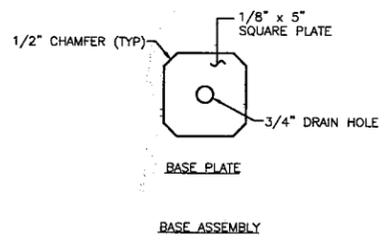
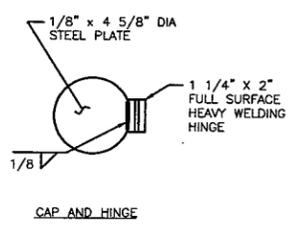
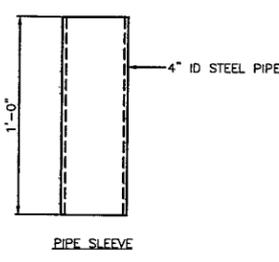
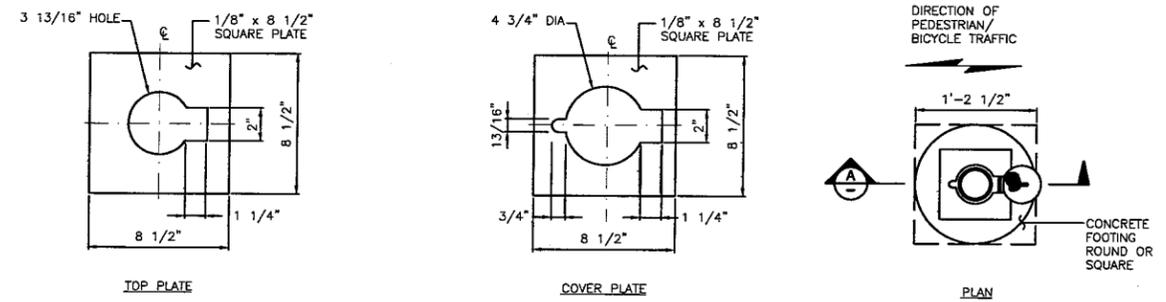
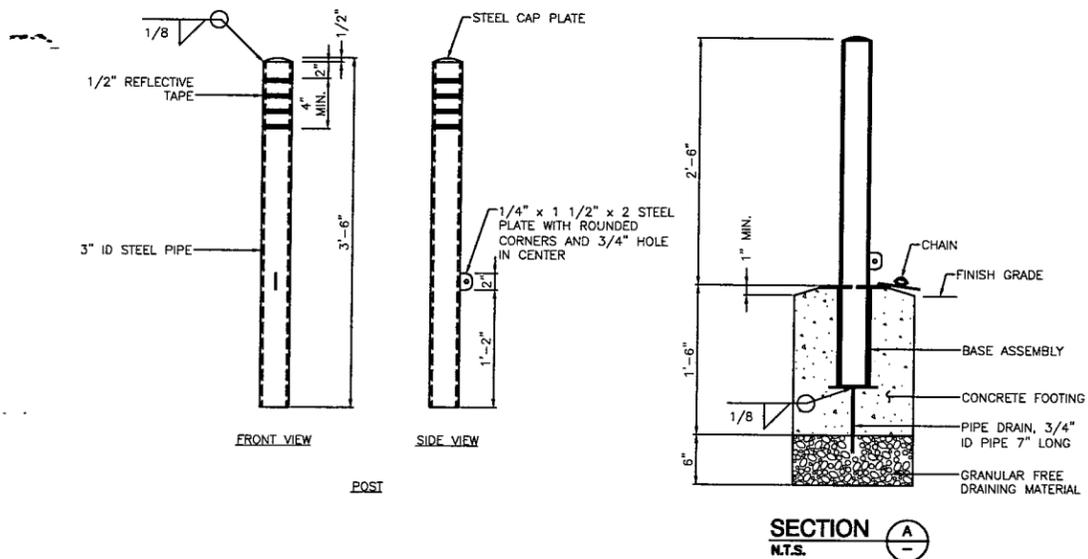


MUSCOY OU REMEDIAL DESIGN
19th STREET PLANT & ENCANTO PARK PUMPING PLANT
NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

19TH STREET PLANT
STANDARD DETAILS

SCALE	DATE	DWG. FILE	SHEET NO.
AS NOTED	8/14/03	C31.DWG	C31

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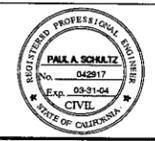


IF SHEET IS LESS THAN
24" x 36"
IT IS A REDUCED PRINT.
SCALE REDUCED ACCORDINGLY.

RECORD
DRAWINGS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	11/05	RECORD REVISION			
REVISIONS					

DESIGNED BY: PAS
DRAWN BY: LOB
CHECKED BY: DHD

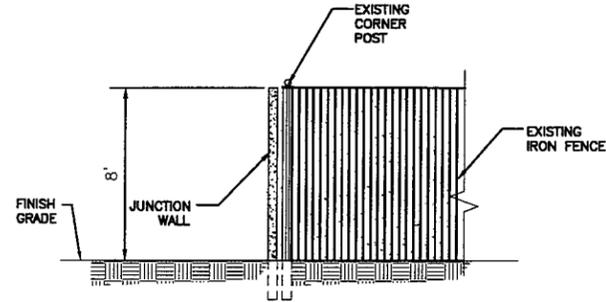


MUSCOY OU REMEDIAL DESIGN
19th STREET PLANT & ENCANTO PARK PUMPING PLANT
NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

19TH STREET PLANT
STANDARD DETAILS

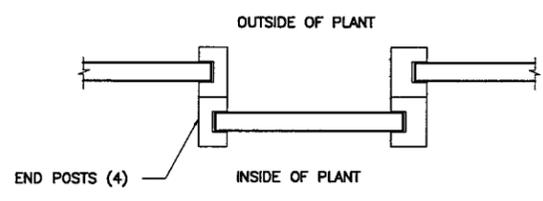
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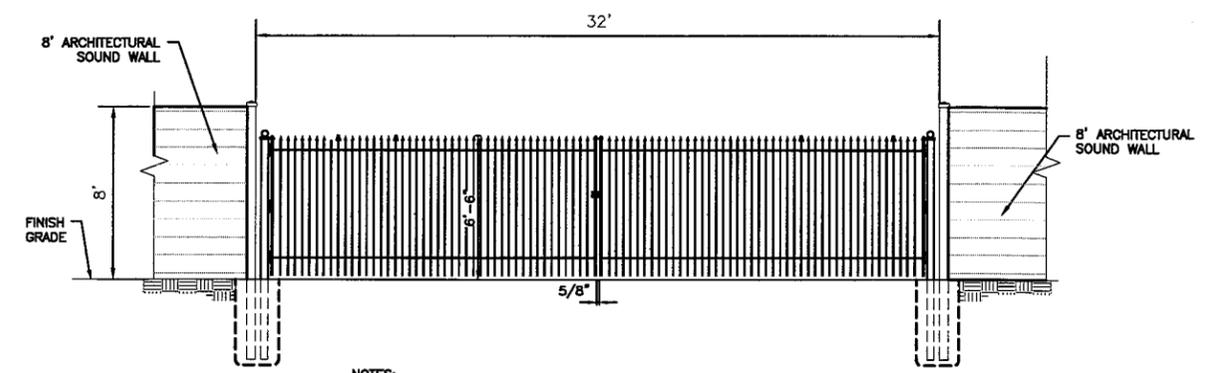
- NOTES:
- FOR ADDITIONAL GATE AND FENCE DETAILS SEE SAN BERNARDINO MUNICIPAL WATER DEPT. STANDARD DRAWING W6.12A AND W6.12B
 - WROUGHT IRON COATINGS SHALL BE: PRIMER, DEYGAURD-4160 MULTI PURPOSE TANK & STRUCTURAL PRIMER. FINISH, DEVSHIELD 4328 INT/EXT ALKYD URETHANE GLOSS ENAMEL-X72 ADOBE-(COLOR ON FILE AT ICI DELUX PAINT CENTER SAN BERNARDINO)
 - GAP BETWEEN NEW LINE POST FOR ARCHITECTURAL SOUND WALL AND EXISTING CORNER POST NOT TO EXCEED FOUR INCHES.

JUNCTION WALL AND IRON FENCE
SCALE: 1/4"=1'-0"



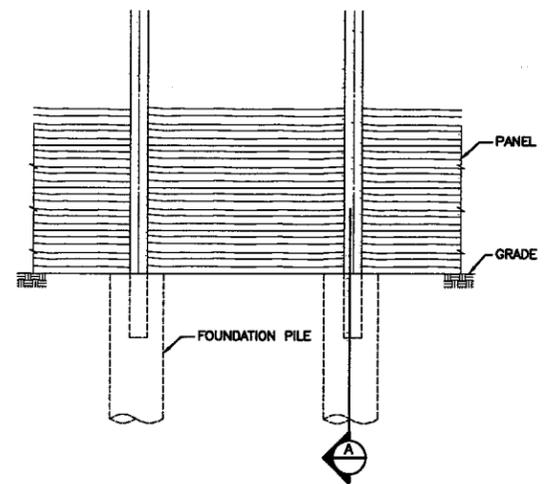
* SEE NOTE ③

FENCE RELIEF DETAIL PLAN
N.T.S.

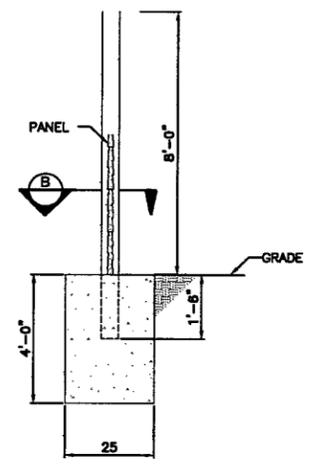


- NOTES:
- FOR ADDITIONAL GATE AND FENCE DETAILS SEE SAN BERNARDINO MUNICIPAL WATER DEPT. STANDARD DRAWING W6.12A AND W6.12B
 - WROUGHT IRON COATINGS SHALL BE: PRIMER, DEYGAURD-4160 MULTI PURPOSE TANK & STRUCTURAL PRIMER. FINISH, DEVSHIELD 4328 INT/EXT ALKYD URETHANE GLOSS ENAMEL-X72 ADOBE-(COLOR ON FILE AT ICI DELUX PAINT CENTER SAN BERNARDINO)

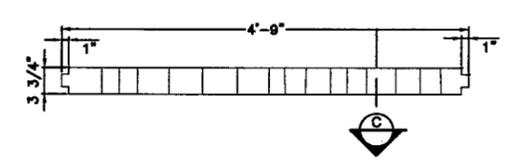
AUTOMATIC 32' DOUBLE LEAF IRON GATE
SCALE: 1/4"=1'-0"



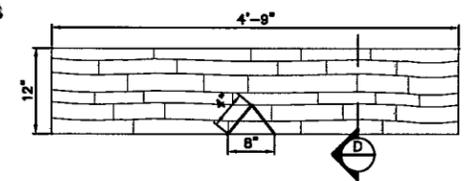
WALL ELEVATION
N.T.S.



SECTION A
N.T.S.

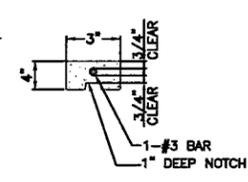


PANEL CAP
N.T.S.

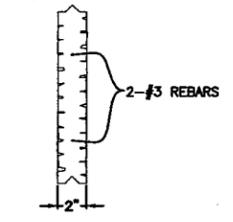


PANEL ELEVATION *
N.T.S.

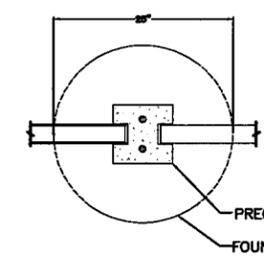
* NOTCH IN BOTTOM PANEL ONLY. SEE NOTE ⑥



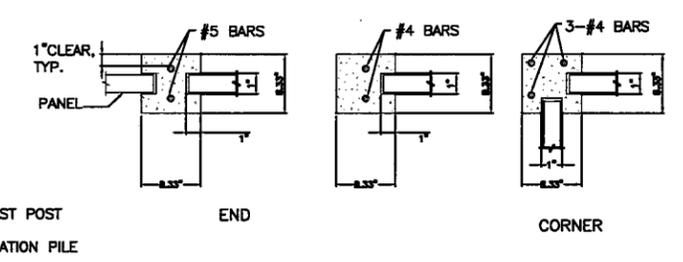
SECTION C
N.T.S.



SECTION D
N.T.S.



SECTION "B" PLAN VIEW AT PILE
N.T.S.



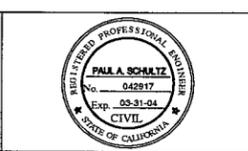
POST DETAIL
N.T.S.

- ALL CONSTRUCTION TO CONFORM TO THE LOCAL BUILDING CODES AND/OR U.B.C.
- FACTORY CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. POURED IN PLACE CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS.
- ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A615, GRADE 40 FOR #4 BARS, GRADE 60 FOR #5 BARS. WELDED WIRE FABRIC SHALL CONFORM TO A.S.T.M. A82 AND A185, GRADE 80.
- FENCE DESIGNED FOR A WIND FORCE OF 80 MPH WIND EXP. C
- APPROVAL OF THE ENGINEER IS REQUIRED WHEN THE WALL IS TO BE USED IN A CONDITION WHERE THE SPECIFICATIONS ARE DIFFERENT AND REQUIRE CHANGE.
- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE JOB SITE WITH APPROVED PLANS.
- ALL PILE FOUNDATIONS ARE TO BE LOCATED IN UNDISTURBED SOIL OR 90% COMPACTED FILL.
- PROVIDE 4" HIGH X 8" WIDE V-NOTCH AT CENTER OF BOTTOM PANEL OF EACH SECTION TO ACCOMMODATE DRIP IRRIGATION LINE(S)
- CONSTRUCT FENCE RELIEF PATTERN AT 100' INTERVALS ALONG STRAIGHT RUNS OF FENCING ALL AROUND PLANT. DO NOT CONSTRUCT FENCE RELIEF PATTERN WITHIN 15 FEET OF FENCE CORNERS OR JUNCTIONS OR IN LOCATIONS THAT INTERFERE WITH HORIZONTAL OR VERTICAL ACCESS TO PLANT CONTROLS OR INSTRUMENTATION.

RECORD DRAWINGS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1.	11/05	RECORD REVISION			

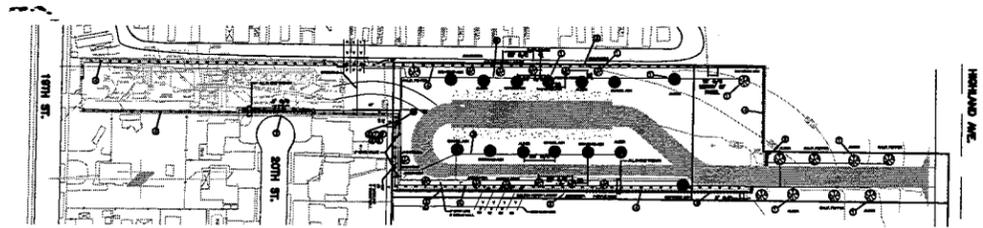
DESIGNED BY: PAS
DRAWN BY: LOB
CHECKED BY: DHD



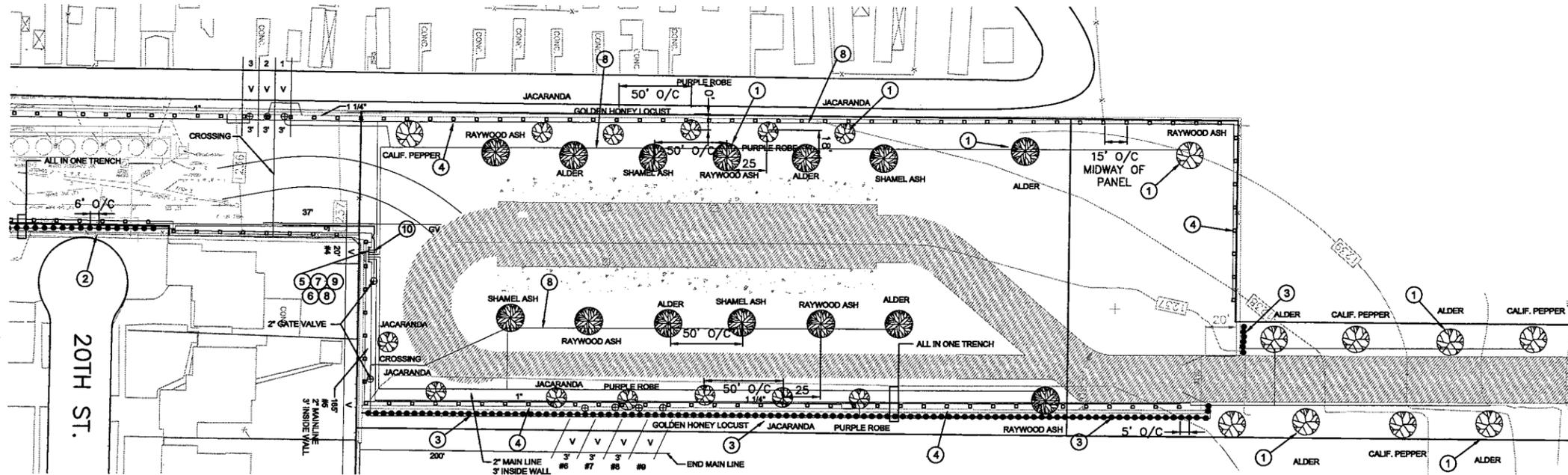
MUSCOY OU REMEDIAL DESIGN
19th STREET TREATMENT PLANT & ENCANTO PARK PUMPING PLANT
NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

**19TH STREET PLANT
SOUND WALLS AND IRON GATE DETAILS**

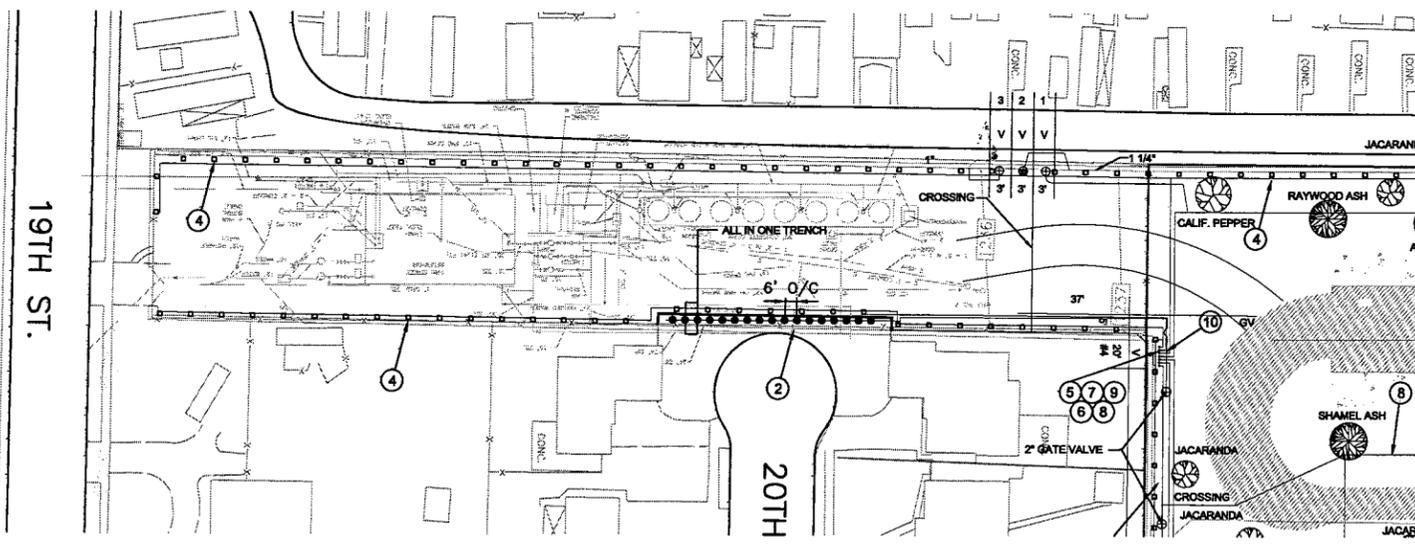
SCALE: 1/4" = 1'
DATE: 8/14/03
DWG. FILE: C33.DWG
SHEET NO.: C33



PROJECT OVERVIEW



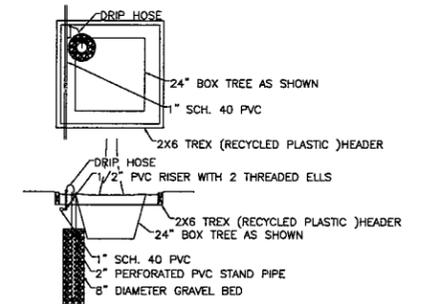
19TH STREET PLANT EXPANSION PLANTING PLAN



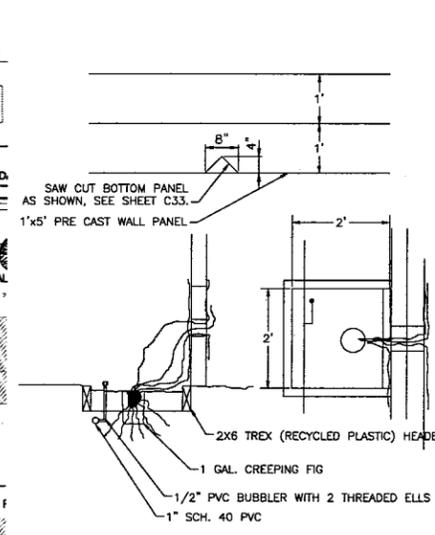
EXISTING 19TH STREET PLANT PLANTING PLAN

CONSTRUCTION NOTES:

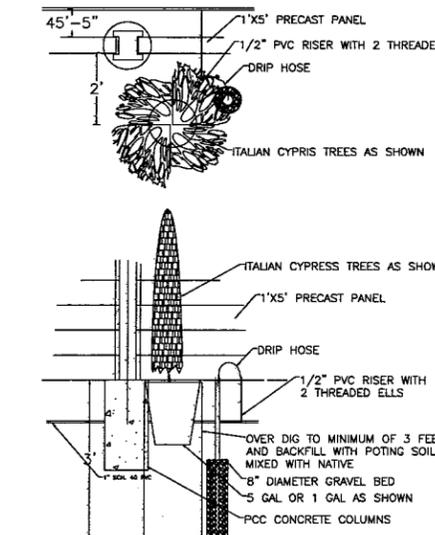
- ① INSTALL 24" BOX TREE OF TYPE NOTED PER DETAIL THIS SHEET
- ② INSTALL 5 GAL ITALIAN CYPRESS PER DETAIL THIS SHEET
- ③ INSTALL 5 GAL SHRUB (MIX RED LEAF FOTENIA AND PRIVET) PER DETAIL THIS SHEET
- ④ INSTALL 1 GAL CREEPING FIG PER DETAIL THIS SHEET
- ⑤ INSTALL 1" AUTOMATIC CONTROL VALVE
- ⑥ INSTALL 2" GLUED SCHEDULE 40 PVC (SUPPLY TO AUTOMATIC CONTROL VALVE MANIFOLD)
- ⑦ INSTALL 1"x2" TEE (AS REQUIRED)
- ⑧ INSTALL 1" GLUED SCHEDULE 40 PVC (SEE DETAILS BELOW)
- ⑨ INSTALL IRRIGATION CONTROL WIRES WITHIN 3/4" CONDUIT (AS REQUIRED)
- ⑩ INSTALL 12 STATION CONTROLLER TYPE IRRITROL SYSTEMS 512PR OR EQUAL PLACED IN A HOFFMAN NEMA 12 ELECTRICAL ENCLOSURE (OR EQUAL) MOUNTED ON THE NORTH SIDE OF THE PERIMETER WALL ABOVE THE CONTROL VALVES. INSTALL 20 AMP 125 VOLT DUPLEX OUTLET IN ELECTRICAL CONTROL BOX.



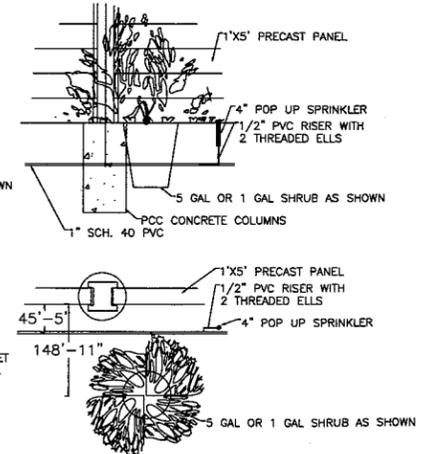
BOX TREE DETAIL



CREEPING FIG DETAIL



ITALIAN CYPRESS DETAIL



SHRUB DETAIL

RECORD DRAWINGS

H:\CADD\Current\ENV-INFRA\Muscoy\Final Design_As Builts\C35.dwg User: msterfinger Plotted: May 24, 2006 - 10:19am Last Save: May 24, 2006 - 9:45am

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	11/05	RECORD REVISION			

DESIGNED BY: JSD
 DRAWN BY: JSD
 CHECKED BY: DHD



MUSCOY OU REMEDIAL DESIGN
 19th STREET PLANT & ENCANTO PARK PUMPING PLANT
 NEWMARK GROUNDWATER CONTAMINATION SUPERFUND SITE

19TH STREET PLANT
 LANDSCAPE PLAN
 NEWMARK SUPERFUND REMEDIAL ACTION

SCALE: N.T.S. DATE: 8/14/03 DWG. FILE: C35.DWG SHEET NO.: C35