CITY OF MANTECA

MANTECA WASTEWATER QUALITY CONTROL FACILITY PHASE III EXPANSION

CONSULTANTS

NOLTE ASSOCIATES, INC.
1215 WEST CENTER STREET, SUITE 201
MANTECA, CA. 95337
(209) 239-9080

ELECTRICAL ENGINEERING AND TESTING SERVICES
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APPROVALS

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1001 WEST CENTER STREET
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MARK HOUGHTON
DIRECTOR OF PUBLIC WORKS, RCE 53316
DATE APPROVED _____

NOLTE ASSOCIATES, INC.
1215 WEST CENTER STREET, SUITE 201
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DAVID RICHARD
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PROJECT ENGINEER, RCE 61456

DAN GAGNE
PROJECT ENGINEER, RCE 63095

RECORD DRAWINGS

VOLUME 3 OF 4 (MECHANICAL, PLUMBING, AND HVAC)

SEPTEMBER 2011

PROJECT NO. SA1224

SCH-CG101.DWG
N:\SA1224\EXPANSION\SCHEDULE-C\Cadd\General\
10:38 a.m.
11/01/2007

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G1.04	DRAWING INDEX – 3
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G1.06	DRAWING INDEX – 5
G1.07	DRAWING INDEX – 6
G1.08	DRAWING INDEX – 7
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G1.10	DRAWING INDEX – 9
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G1.16	PIPING SYSTEM DESIGNATION AND SECTION/DETAIL DESIGNATION
G1.17	ABBREVIATIONS – 1
G1.18	ABBREVIATIONS – 2
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DRAWING NUMBER	SHEET TITLE
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DRAWING NUMBER	SHEET TITLE
	CIVIL
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C2.404	EXISTING SITE PIPING AND PIPE DEMOLITION – 4
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RECORD SET

KEY TO DRAWING NUMBERS

DISCIPLINES

- G – GENERAL
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PROCESS AREAS

1. GENERAL
2. WASTEWATER TREATMENT PLANT – SITE
3. INFLUENT PUMP STATION–HEADWORKS
4. GRIT REMOVAL / PRIMARY SEDIMENTATION
5. AERATION BASIN (NORTHSIDE)
6. AERATION BASIN (SOUTHSIDE)
7. SECONDARY CLARIFIERS / RAS / WAS
8. UV DISINFECTION / EFFLUENT PUMPING
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11. CHLORINE BUILDING MODIFICATIONS
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19. FILTER FEED PUMP STATION
20. RAPID MIXING, FLOCCULATION, & FILTRATION
21. CHEMICAL HANDLING BUILDING
22. RECYCLED WATER SYSTEM

EXAMPLE NUMBER: C 2.01
- C — DISCIPLINE
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE:	XXXXXX
PROJECT NO.:	SA1224
DRAWN BY:	K.C. HAYES
CHECKED BY:	D. RICHARD
PROJ. MGR.:	D. RICHARD
PROJ. ENGR.:	A.G. CALCIANO

REDUCED RECORD SET
NOT TO SCALE

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2	SEM	09/11	RECORD SET
1	SEM	02/09	ADDENDUM #1

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

GENERAL

DRAWING INDEX - 1

SCALE: NOT TO SCALE

DRAWING NUMBER: **G1.02**

SHEET NUMBER: OF SHEETS

SCH-CG102.DWG NONE
\\SAS\PROJECT\N:\SA1224\EXPANSION\SCHEDULE-C\Cadd\General\
08/16/06 4:59 p.m.

DRAWING INDEX

DRAWING NUMBER	SHEET TITLE
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C2.709	18" SANITARY DRAIN PIPELINE – PLAN AND PROFILE – 2
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C2.711	60" NORTH MANTECA SANITARY SEWER TRUNK – PLAN AND PROFILE
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DRAWING NUMBER	SHEET TITLE
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A3.22	INFLUENT PUMP STATION – HEADWORKS ROOF PLAN
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A3.42	INFLUENT PUMP STATION – HEADWORKS EXTERIOR ELEVATIONS
A06.21	SOUTHSIDE MCC/GENERATOR BUILDING FLOOR PLAN
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A12.23	LABORATORY BUILDING ROOF PLAN
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A12.31	WAITING ROOM BUILDING SECTION, ENLARGED PLAN AND RECEPTION DESK ELEVATIONS
A12.41	LABORATORY BUILDING EXTERIOR ELEVATIONS
A12.42	LABORATORY BUILDING EXTERIOR ELEVATIONS
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A12.52	ADMINISTRATION/LABORATORY BUILDING INTERIOR ELEVATIONS
A12.53	ADMINISTRATION/LABORATORY BUILDING INTERIOR ELEVATIONS
A12.54	ADMINISTRATION/LABORATORY BUILDING INTERIOR ELEVATIONS
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A13.91	LOCKER BUILDING – DOOR/FRAME/WINDOW/FINISH SCHEDULES

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A90.01B	DOOR AND FRAME SCHEDULES – DOOR TYPES/HARDWARE
A90.02A	FINISH SCHEDULE – INTERIOR WINDOW SCHEDULE
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A90.03	DETAIL SHEET
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A90.05	DETAIL SHEET
A90.06	DETAIL SHEET
A90.06A	DETAIL SHEET
A90.07	DETAIL SHEET
A90.08	DETAIL SHEET
A90.09	DETAIL SHEET
A90.10	DETAIL SHEET
A90.11	DETAIL SHEET
A90.12	DETAIL SHEET
A90.13	DETAIL SHEET
A90.14	DETAIL SHEET
A90.15	DETAIL SHEET
A90.16	DETAIL SHEET
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A90.18	DETAIL SHEET
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A90.23	TYPICAL INTERIOR METAL STUD FRAMING DETAILS
T24–1.0	TITLE 24

RECORD SET

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REGISTERED PROFESSIONAL ENGINEER – David Richard – No. 33479 EXP. CIVIL – STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
5			
4			
3			
2	SEM	09/11	RECORD SET
1	SEM	02/09	ADDENDUM #1

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

GENERAL

DRAWING INDEX - 2

SCALE: NOT TO SCALE
DRAWING NUMBER: **G1.03**
SHEET NUMBER: OF SHEETS

SCH-CG102.DWG NONE
\\SAS1\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-C\Cadd\General\
4:59 p.m.
08/16/06

DRAWING INDEX

VOLUME 2

DRAWING NUMBER	SHEET TITLE
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S1.02	STANDARD STRUCTURAL NOTES II
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S1.04	STANDARD STRUCTURAL DETAILS II
S1.05	STANDARD STRUCTURAL DETAILS III
S1.06	STANDARD STRUCTURAL DETAILS IV
S1.07	STANDARD STRUCTURAL DETAILS V
S1.08	STANDARD STRUCTURAL DETAILS VI
S1.09	STANDARD STRUCTURAL DETAILS VII
S1.10	STANDARD STRUCTURAL DETAILS VIII
S1.11	STANDARD STRUCTURAL DETAILS IX
S1.12	STANDARD STRUCTURAL DETAILS X
S1.13	STANDARD STRUCTURAL DETAILS XI
S1.14	STANDARD STRUCTURAL DETAILS XII
S1.15	STANDARD STRUCTURAL DETAILS XIII
S1.16	STANDARD STRUCTURAL DETAILS XIV
S1.17	STANDARD STRUCTURAL DETAILS XV
S1.18	STANDARD STRUCTURAL DETAILS XVI
S1.19	STANDARD STRUCTURAL DETAILS XVII
S1.20	STANDARD STRUCTURAL DETAILS XVIII
S1.21	STANDARD STRUCTURAL DETAILS XIX
S1.22	STANDARD STRUCTURAL DETAILS XX
S1.23	STANDARD STRUCTURAL DETAILS XXI
S1.30	STANDARD ROOF DETAILS
S1.31	STANDARD ROOF DETAILS
S1.32	STANDARD ROOF DRAIN PIPE DETAILS
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S1.35	DOOR AND FRAME DETAILS
S1.36	DOOR AND LOUVER DETAILS
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S3.02	INFLUENT PUMP STATION–HEADWORKS – FOUNDATION PLAN II – EL. –15.00
S3.03	INFLUENT PUMP STATION–HEADWORKS – INTERMEDIATE PLAN I – EL. 1.00
S3.04	INFLUENT PUMP STATION–HEADWORKS – INTERMEDIATE PLAN II – EL. 1.00
S3.05	INFLUENT PUMP STATION–HEADWORKS – INTERMEDIATE PLAN I – EL. 15.00
S3.06	INFLUENT PUMP STATION–HEADWORKS – INTERMEDIATE PLAN II – EL. 15.00
S3.07	INFLUENT PUMP STATION–HEADWORKS – TOP DECK PLAN I – EL. 25.00
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S3.09	INFLUENT PUMP STATION–HEADWORKS – INFLUENT AREA PARTIAL PLAN
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S3.11	INFLUENT PUMP STATION–HEADWORKS – STRUCTURE SECTION B
S3.12	INFLUENT PUMP STATION–HEADWORKS – STRUCTURE SECTION C
S3.13	INFLUENT PUMP STATION–HEADWORKS – STRUCTURE SECTION D & E
S3.14	INFLUENT PUMP STATION–HEADWORKS – STRUCTURE SECTION F
S3.15	INFLUENT PUMP STATION–HEADWORKS – STRUCTURE SECTION G
S3.16	INFLUENT PUMP STATION–HEADWORKS – MISCELLANEOUS STRUCTURE SECTIONS
S3.17	INFLUENT PUMP STATION–HEADWORKS – STRUCTURE WALL DETAILS
S3.18	INFLUENT PUMP STATION–HEADWORKS – COUNTERFORT DETAILS I
S3.19	INFLUENT PUMP STATION–HEADWORKS – COUNTERFORT DETAILS II
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S3.28	INFLUENT PUMP STATION–HEADWORKS – MISCELLANEOUS CONCRETE DETAILS II
S3.29	INFLUENT PUMP STATION–HEADWORKS – MISCELLANEOUS DETAILS I
S3.30	INFLUENT PUMP STATION–HEADWORKS – MISCELLANEOUS DETAILS II
S3.31	INFLUENT PUMP STATION–HEADWORKS – STAIR DETAILS I
S3.32	INFLUENT PUMP STATION–HEADWORKS – STAIR DETAILS II
S3.33	INFLUENT PUMP STATION–HEADWORKS – COVER PLATE DETAILS
S3.34	INFLUENT PUMP STATION–HEADWORKS – LINE G COUNTERFORT DETAILS
S3.50	INFLUENT PUMP STATION–HEADWORKS – CONTROL BUILDING PLAN – EL. 25.00
S3.51	INFLUENT PUMP STATION–HEADWORKS – CONTROL BUILDING ROOF FRAMING PLAN
S3.52	INFLUENT PUMP STATION–HEADWORKS – CONTROL BUILDING SECTIONS C & D
S3.53	INFLUENT PUMP STATION–HEADWORKS – CONTROL BUILDING SECTIONS E & F
S3.54	INFLUENT PUMP STATION–HEADWORKS – CONTROL BUILDING DETAILS I
S3.55	INFLUENT PUMP STATION–HEADWORKS – CONTROL BUILDING DETAILS II
S3.60	INFLUENT PUMP STATION–HEADWORKS – SCREENINGS PROCESS AREA – PLAN AND SECTIONS
S4.01	PRIMARY SEDIMENTATION BASINS – FOUNDATION PLAN
S4.02	PRIMARY SEDIMENTATION BASINS – TOP DECK PLAN
S4.03	PRIMARY SEDIMENTATION BASINS – SECTION A
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S4.12	PRIMARY SEDIMENTATION BASINS – SECTION G
S4.13	PRIMARY SEDIMENTATION BASINS – SECTION H
S4.14	PRIMARY SEDIMENTATION BASINS – STRUCTURE SECTIONS & DETAILS I
S4.15	PRIMARY SEDIMENTATION BASINS – STRUCTURE SECTIONS & DETAILS II
S4.16	PRIMARY SEDIMENTATION BASINS – STRUCTURE SECTIONS & DETAILS III
S4.17	PRIMARY SEDIMENTATION BASINS – WALL DETAILS I
S4.18	PRIMARY SEDIMENTATION BASINS – WALL DETAILS II
S4.19	PRIMARY SEDIMENTATION BASINS – TOP DECK DETAILS
S4.20	PRIMARY SEDIMENTATION BASINS – STAIR DETAILS
S4.21	PRIMARY SEDIMENTATION BASINS – MISCELLANEOUS DETAILS 1
S4.30	NORTHSIDE PRIMARY SEDIMENTATION BASIN – COVER PLAN
S4.31	SOUTHSIDE PRIMARY SEDIMENTATION BASIN – COVER PLAN
S4.32	PRIMARY SEDIMENTATION BASINS – SAFETY CHAIN AND CORE DRILL DETAILS
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S5.02	AERATION BASINS – NORTHSIDE – TOP DECK DEMOLITION PLAN
S5.03	AERATION BASINS – NORTHSIDE – PARTIAL DEMOLITION PLANS
S5.04	AERATION BASINS – NORTHSIDE – DEMOLITION SECTIONS AND DETAILS I
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S5.08	AERATION BASINS – NORTHSIDE – FOUNDATION IMPROVEMENTS PLAN
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S5.10	AERATION BASINS – NORTHSIDE – PARTIAL IMPROVEMENTS PLANS
S5.11	AERATION BASINS – NORTHSIDE – SECTION A
S5.12	AERATION BASINS – NORTHSIDE – SECTION A
S5.13	AERATION BASINS – NORTHSIDE – SECTION A
S5.14	AERATION BASINS – NORTHSIDE – SECTION B
S5.15	AERATION BASINS – NORTHSIDE – SECTION C
S5.16	AERATION BASINS – NORTHSIDE – SECTION D
S5.17	AERATION BASINS – NORTHSIDE – SECTION E
S5.18	AERATION BASINS – NORTHSIDE – SECTION F
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RECORD SET

KEY TO DRAWING NUMBERS

DISCIPLINES

- G – GENERAL
- C – CIVIL
- L – LANDSCAPE
- A – ARCHITECTURAL
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PROCESS AREAS

1. GENERAL
2. WASTEWATER TREATMENT PLANT – SITE
3. INFLUENT PUMP STATION–HEADWORKS
4. GRIT REMOVAL / PRIMARY SEDIMENTATION
5. AERATION BASIN (NORTHSIDE)
6. AERATION BASIN (SOUTHSIDE)
7. SECONDARY CLARIFIERS / RAS / WAS
8. UV DISINFECTION / EFFLUENT PUMPING
9. ANAEROBIC DIGESTER
10. SEPTAGE RECEIVING
11. CHLORINE BUILDING MODIFICATIONS
12. LABORATORY
13. TRAINING / LOCKER ROOM BUILDING
14. MAINTENANCE SHOP / STORAGE BUILDING
15. DEWATERING
16. ODOR CONTROL
17. PLANT WATER SYSTEM
18. IRRIGATION STRUCTURE
19. FILTER FEED PUMP STATION
20. RAPID MIXING, FLOCCULATION, & FILTRATION
21. CHEMICAL HANDLING BUILDING
22. RECYCLED WATER SYSTEM

EXAMPLE NUMBER: C 2.01
- C – DISCIPLINE
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REGISTERED PROFESSIONAL ENGINEER – David Richard – No. 33479 EXP. – CIVIL – STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2	SEM	09/11	RECORD SET
1	SEM	02/09	ADDENDUM #1

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

GENERAL

DRAWING INDEX - 3

SCALE: NOT TO SCALE
DRAWING NUMBER: **G1.04**
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\ N:\X_MANTECA WQCF AS-BUILTS\CADD\AS-BUILTS_COMBINED\GENERAL G1.04.DWG NONE
08/16/06 4:59 p.m.

DRAWING INDEX

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	STRUCTURAL
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S5.30	AERATION BASINS – NORTHSIDE – TOP DECK – DETAILS I
S5.31	AERATION BASINS – NORTHSIDE – TOP DECK – DETAILS II
S5.32	AERATION BASINS – NORTHSIDE – MISCELLANEOUS – DETAILS I
S5.33	AERATION BASINS – NORTHSIDE – MISCELLANEOUS – DETAILS II
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S6.09	SOUTHSIDE AERATION BASINS SECTION C
S6.10	SOUTHSIDE AERATION BASINS CONCRETE BAFFLE WALL SECTIONS AND DETAILS
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S6.13	SOUTHSIDE AERATION BASINS SECTION D
S6.14	SOUTHSIDE AERATION BASINS SECTION E
S6.15	SOUTHSIDE AERATION BASINS SECTION F
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S6.19	SOUTHSIDE AERATION BASINS SECTIONS J & K
S6.20	SOUTHSIDE AERATION BASINS SECTIONS L & M
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S6.24	SOUTHSIDE AERATION BASINS EFFLUENT CHANNEL DETAILS
S6.25	SOUTHSIDE AERATION BASINS INLET BOX PLANS
S6.26	SOUTHSIDE AERATION BASINS INLET BOX SECTIONS
S6.27	SOUTHSIDE AERATION BASINS MIXED LIQUOR BOX DETAILS AND SECTIONS
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S6.30	SOUTHSIDE AERATION BASINS MISCELLANEOUS DETAILS
S6.31	SOUTHSIDE AERATION BASINS MONORAIL DETAILS
S6.32	SOUTHSIDE AERATION BASINS FRP BAFFLE SECTIONS AND DETAILS
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S6.34	SOUTHSIDE AERATION BASINS STAIR DETAILS
S6.50	SOUTHSIDE MCC/GENERATOR BUILDING FOUNDATION PLAN
S6.51	SOUTHSIDE MCC/GENERATOR BUILDING ROOF FRAMING PLAN
S6.52	SOUTHSIDE MCC/GENERATOR BUILDING BUILDING SECTIONS
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DRAWING NUMBER	SHEET TITLE
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S7.04	SECONDARY CLARIFIERS SPLITTER BOX PLANS
S7.05	SECONDARY CLARIFIERS SPLITTER BOX PLAN AND SECTION
S7.06	SECONDARY CLARIFIER SPLITTER BOX SECTIONS AND DETAILS
S7.07	SECONDARY CLARIFIER – RAS PLANS, SECTIONS AND DETAILS
S7.08	SECONDARY CLARIFIER – STAIR DETAILS
S8.01	UV DISINFECTION / EFFLUENT PUMPING – FOUNDATION PLAN
S8.02	UV DISINFECTION / EFFLUENT PUMPING – TOP DECK PLAN
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S8.11	UV DISINFECTION / EFFLUENT PUMPING – SECTION B
S8.12	UV DISINFECTION / EFFLUENT PUMPING – SECTION C
S8.13	UV DISINFECTION / EFFLUENT PUMPING – SECTION D
S8.20	UV DISINFECTION / EFFLUENT PUMPING – STAIR DETAIL
S8.30	UV DISINFECTION /CHECKER PLATE LAYOUT PLAN
S8.31	UV DISINFECTION /CHECKER PLATE DETAILS I
S8.32	UV DISINFECTION /CHECKER PLATE DETAILS II
S8.40	UV DISINFECTION/EFFLUENT PUMPING – STRUCTURAL DETAILS I
S8.41	UV DISINFECTION/EFFLUENT PUMPING – STRUCTURAL DETAILS II
S8.42	UV DISINFECTION/EFFLUENT PUMPING – STRUCTURAL DETAILS III
S8.43	UV DISINFECTION/EFFLUENT PUMPING – STRUCTURAL DETAILS IV
S8.50	EFFLUENT MCC BUILDING – FOUNDATION PLAN
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S8.52	EFFLUENT MCC BUILDING – BUILDING SECTIONS
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S10.02	SEPTAGE RECEIVING FACILITY – STRUCTURE SECTIONS
S10.03	SEPTAGE RECEIVING FACILITY – DETAILS
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S11.20	SODIUM HYPOCHLORITE STORAGE STRUCTURAL DETAILS
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S12.02	LABORATORY/OPERATIONS BUILDING – ROOF FRAMING PLAN
S12.03	LABORATORY/OPERATIONS BUILDING – RECEPTION AREA PLANS AND DETAILS
S12.04	LABORATORY/OPERATIONS BUILDING – SECTIONS AND DETAILS I
S12.05	LABORATORY/OPERATIONS BUILDING – SECTIONS AND DETAILS II
S12.06	LABORATORY/OPERATIONS BUILDING – SECTIONS AND DETAILS III
S12.07	LABORATORY/OPERATIONS BUILDING – SECTIONS AND DETAILS IV
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DRAWING NUMBER	SHEET TITLE
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S13.10	LOCKER ROOM BUILDING – SECTIONS
S13.20	LOCKER ROOM BUILDING – DETAILS – I
S13.21	LOCKER ROOM BUILDING – DETAILS – II
S13.30	LOCKER ROOM BUILDING – WOOD NOTES AND DETAILS
S13.31	LOCKER ROOM BUILDING – WOOD DETAILS
S13.32	LOCKER ROOM BUILDING – CEILING FRAMING DETAILS
S14.00	SHOP / MAINTENANCE BUILDING – FOUNDATION PLAN
S14.01	SHOP / MAINTENANCE BUILDING – FLOOR PLAN
S14.02	SHOP / MAINTENANCE BUILDING – ROOF PLAN
S14.10	SHOP / MAINTENANCE BUILDING – SECTION I
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S14.30	SHOP / MAINTENANCE BUILDING – DETAILS
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S15.02	MECHANICAL DEWATERING BUILDING – MEZZANINE PLAN – EL. +8'–10"
S15.03	MECHANICAL DEWATERING BUILDING – ROOF PLAN
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S15.06	MECHANICAL DEWATERING BUILDING – SECTION III
S15.07	MECHANICAL DEWATERING BUILDING – SECTIONS AND DETAILS I
S15.08	MECHANICAL DEWATERING BUILDING – SECTIONS AND DETAILS II
S15.09	MECHANICAL DEWATERING BUILDING – SECTIONS AND DETAILS III
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S15.19	MECHANICAL DEWATERING BUILDING – ELEVATIONS II
S15.20	MECHANICAL DEWATERING BUILDING – ROOF DRAINAGE PLAN
S16.01	ODOR CONTROL BIOFILTER PLAN
S16.02	ODOR CONTROL BIOFILTER – SECTION AND DETAILS

RECORD SET

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15. DEWATERING
16. ODOR CONTROL
17. PLANT WATER SYSTEM
18. IRRIGATION STRUCTURE
19. FILTER FEED PUMP STATION
20. RAPID MIXING, FLOCCULATION, & FILTRATION
21. CHEMICAL HANDLING BUILDING
22. RECYCLED WATER SYSTEM

EXAMPLE NUMBER: C 2.01
- C – DISCIPLINE
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REGISTERED PROFESSIONAL ENGINEER – David Richard – No. 33479 EXP. – CIVIL – STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			REDUCED RECORD SET NOT TO SCALE
2	SEM	09/11	RECORD SET
1	SEM	02/09	ADDENDUM #1

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

GENERAL

DRAWING INDEX - 4

SCALE: NOT TO SCALE
DRAWING NUMBER: G1.05
SHEET NUMBER: OF SHEETS

\\SAS\PROJECT\N:\X_MANTECA WQCF AS-BUILTS\CADD\AS-BUILTS_COMBINED\GENERAL G1.05.DWG NONE
08/16/06 4:59 p.m.

DRAWING INDEX

DRAWING NUMBER	SHEET TITLE
	STRUCTURAL
S20.01	RAPID MIXING, FLOCCULATION, AND FILTERS – FOUNDATION PLAN
S20.02	RAPID MIXING, FLOCCULATION, AND FILTERS – TOP DECK PLAN
S20.03	RAPID MIXING, FLOCCULATION, AND FILTERS – CANOPY PLAN
S20.10	RAPID MIXING, FLOCCULATION, AND FILTERS – SECTION A
S20.11	RAPID MIXING, FLOCCULATION, AND FILTERS – SECTION B
S20.12	RAPID MIXING, FLOCCULATION, AND FILTERS – SECTION C
S20.13	RAPID MIXING, FLOCCULATION, AND FILTERS – SECTION D
S20.14	RAPID MIXING, FLOCCULATION, AND FILTERS – SECTIONS E & F
S20.20	RAPID MIXING, FLOCCULATION, AND FILTERS – STAIR DETAIL
S20.30	RAPID MIXING, FLOCCULATION, AND FILTERS – STRUCTURAL DETAILS I
S20.31	RAPID MIXING, FLOCCULATION, AND FILTERS – STRUCTURAL DETAILS II
S20.32	RAPID MIXING, FLOCCULATION, AND FILTERS – STRUCTURAL DETAILS III
S21.01	CHEMICAL HANDLING BUILDING – MAT FOUNDATION PLAN
S21.02	CHEMICAL HANDLING BUILDING – FOUNDATION PLAN
S21.03	CHEMICAL HANDLING BUILDING – ROOF FRAMING PLAN
S21.10	CHEMICAL HANDLING BUILDING – BUILDING SECTIONS I
S21.11	CHEMICAL HANDLING BUILDING – BUILDING SECTIONS II
S21.20	CHEMICAL HANDLING BUILDING – DETAILS
S21.30	CHEMICAL HANDLING BUILDING – EXTERIOR ELEVATIONS
S21.31	CHEMICAL HANDLING BUILDING – ROOF DRAINAGE PLAN
S22.01	CHLORINE CONTACT TANK DEMOLITION PLAN
S22.02	CHLORINE CONTACT TANK CONVERSION PLAN
S22.10	CHLORINE CONTACT TANK – SECTIONS
S22.20	CHLORINE CONTACT TANK – DETAILS

VOLUME 3

DRAWING NUMBER	SHEET TITLE
	MECHANICAL
M0.1	EQUIPMENT NUMBERING AND EQUIPMENT PREFIXES
M0.2	STANDARD PIPE SUPPORTS – 1
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M0.4	STANDARD STRUCTURAL PIPE ATTACHMENTS AND MISC. DETAILS
M0.5	PIPE GUIDES, SEISMIC BRACING AND MISCELLANEOUS DETAILS
M0.6	PIPE PENETRATIONS AND MISCELLANEOUS DETAILS
M0.7	GATE SCHEDULE – 1
M0.8	GATE SCHEDULE – 2
M0.9	GATE SCHEDULE – 3
M0.11	TYPICAL GATE DETAILS
M0.12	SLIDE AND STOP GATE SECTIONS AND DETAILS
M0.13	CLEANOUT AND MISCELLANEOUS DETAILS
M0.14	CLEANOUT AND MISCELLANEOUS DETAILS
M3.00	INFLUENT PUMP STATION–HEADWORKS – GENERAL PLAN
M3.01	INFLUENT PUMP STATION–HEADWORKS – LOWER PLAN I AT EL. –15.0
M3.02	INFLUENT PUMP STATION–HEADWORKS – LOWER PLAN II AT EL. –15.0
M3.03	INFLUENT PUMP STATION–HEADWORKS – INTERMEDIATE PLAN I AT EL. +1.0
M3.04	INFLUENT PUMP STATION–HEADWORKS – INTERMEDIATE PLAN II AT EL. +1.0
M3.05	INFLUENT PUMP STATION–HEADWORKS – INTERMEDIATE PLAN I AT EL. +15.0
M3.06	INFLUENT PUMP STATION–HEADWORKS – INTERMEDIATE PLAN II AT EL. +15.0
M3.07	INFLUENT PUMP STATION–HEADWORKS – UPPER PLAN I AT EL. +25.0
M3.08	INFLUENT PUMP STATION–HEADWORKS – UPPER PLAN II AT EL. +25.0
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M3.10	INFLUENT PUMP STATION–HEADWORKS – SECTION
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M5.07	NORTHSIDE AERATION BASIN EXPANSION – SECTIONS
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RECORD SET

KEY TO DRAWING NUMBERS

DISCIPLINES

- G – GENERAL
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PROCESS AREAS

1. GENERAL
2. WASTEWATER TREATMENT PLANT – SITE
3. INFLUENT PUMP STATION–HEADWORKS
4. GRIT REMOVAL / PRIMARY SEDIMENTATION
5. AERATION BASIN (NORTHSIDE)
6. AERATION BASIN (SOUTHSIDE)
7. SECONDARY CLARIFIERS / RAS / WAS
8. UV DISINFECTION / EFFLUENT PUMPING
9. ANAEROBIC DIGESTER
10. SEPTAGE RECEIVING
11. CHLORINE BUILDING MODIFICATIONS
12. LABORATORY
13. TRAINING / LOCKER ROOM BUILDING
14. MAINTENANCE SHOP / STORAGE BUILDING
15. DEWATERING
16. ODOR CONTROL
17. PLANT WATER SYSTEM
18. IRRIGATION STRUCTURE
19. FILTER FEED PUMP STATION
20. RAPID MIXING, FLOCCULATION, & FILTRATION
21. CHEMICAL HANDLING BUILDING
22. RECYCLED WATER SYSTEM

EXAMPLE NUMBER: C 2.01
- C – DISCIPLINE
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REGISTERED PROFESSIONAL ENGINEER – David Richard – No. 33479 EXP. – CIVIL – STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2	SEM	09/11	RECORD SET
1	SEM	02/09	ADDENDUM #1

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

GENERAL

DRAWING INDEX - 5

SCALE: NOT TO SCALE
DRAWING NUMBER: **G1.06**
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\ N:\X_MANTECA WQCF AS-BUILTS\CADD\AS-BUILTS_COMBINED\GENERAL G1.06.DWG NONE
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DRAWING INDEX

DRAWING NUMBER	SHEET TITLE
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M9.02	DIGESTER EFFLUENT TRANSFER STRUCTURE FLOW SCHEMATIC
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M11.11	SODIUM HYPOCHLORITE SYSTEM ISOMETRIC DIAGRAM
M15.01	MECHANICAL DEWATERING BUILDING – PLAN
M15.02	MECHANICAL DEWATERING BUILDING – PARTIAL PLAN
M15.03	MECHANICAL DEWATERING BUILDING – SECTIONS
M15.04	MECHANICAL DEWATERING BUILDING – DETAILS AND SECTIONS
M15.05	ISOMETRIC VIEW OF POLYMER DILUTION SYSTEM
M15.06	SLUDGE BLENDING TANK – PLAN AND SECTIONS
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M16.04	ODOR CONTROL BIOFILTER – SECTION AND DETAILS
M16.05	NORTHSIDE BIOFILTER – PLAN AND SECTION
M16.06	SOUTHSIDE BIOFILTER – PLAN AND SECTION
M16.07	BIOFILTER DETAILS
M17.01	3W SYSTEM PUMP STATION – PLAN AND SECTION
M18.01	EXISTING IRRIGATION PUMP STATION – PLAN AND SECTIONS
M19.00	FILTER FEED PUMP STATION – PLAN
M19.01	FILTER FEED PUMP STATION – SECTION
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M20.12	RAPID MIXING, FLOCCULATION, AND FILTERS– SECTION III
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P3.01	INFLUENT PUMP STATION UPPER PLAN PLUMBING
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P12.01	LABORATORY BUILDING – PLUMBING PLAN
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H1.04	HVAC DETAILS
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H3.03	INFLUENT PUMP STATION INTERMEDIATE PLAN AT EL. +15.0 HVAC
H3.04	INFLUENT PUMP STATION INTERMEDIATE PLAN AT EL. +1.0 HVAC
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H6.01	SOUTHSIDE MCC/GENERATOR BUILDING – HVAC PLAN
H8.01	EFFLUENT MCC BUILDING – HVAC PLAN
H12.01	LABORATORY BUILDING – HVAC PLAN
H12.02	ADMINISTRATION BUILDING – HVAC PLANS
H13.01	LOCKER ROOM BUILDING – HVAC PLAN
H13.02	LOCKER ROOM BUILDING – HVAC ROOF PLAN
H14.01	SHOP / MAINTENANCE BUILDING – HVAC PLAN
H15.01	MECHANICAL DEWATERING BUILDING – HVAC PLAN
H16.01	ODOR CONTROL BIOFILTER – PLANS AND SECTIONS HVAC
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RECORD SET

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EXAMPLE NUMBER: C 2.01
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PROCESS AREAS

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REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2	SEM	09/11	RECORD SET
1	SEM	02/09	ADDENDUM #1

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

GENERAL

DRAWING INDEX - 6

SCALE: NOT TO SCALE
DRAWING NUMBER: **G1.07**
SHEET NUMBER: OF SHEETS

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DRAWING INDEX

DRAWING NUMBER	SHEET TITLE
VOLUME 4	
	ELECTRICAL
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E1.03	FACILITY MAIN SERVICE – MEDIUM VOLTAGE SWITCHGEAR "MVSG-01-01" 17kV ONE LINE DIAGRAM
E1.04	FACILITY MAIN SERVICE – MEDIUM VOLTAGE SWITCHGEAR "MVSG-01-01" DETAILS AND PLAN VIEWS
E1.05	FACILITY MAIN SERVICE – MEDIUM VOLTAGE SWITCHGEAR "MVSG-01-01" 17kV ELECTRICAL SCHEMATICS
E1.06	PROGRAMMABLE LOGIC CONTROLLER (PLC) & HUMAN-MACHINE INTERFACE (HMI) NETWORK DIAGRAM
E1.07	EMERGENCY GENERATION PROGRAMMABLE LOGIC CONTROLLER (PLC) & LOAD SHARING NETWORK DIAGRAM
E1.08	FIXTURE SCHEDULE
E1.09	SCHEMATIC DETAILS
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E1.12	CO-GEN TIE-IN WIRING DIAGRAM
E1.13	PLANT PROCESS FLOW DIAGRAM
E1.14	FIBER OPTIC BLOCK DIAGRAM
E2.01	SOUTHSIDE FACILITES AREA LIGHTING AND CONDUIT ROUTING PLAN
E2.02	INFLUENT AREA LIGHTING
E2.03	DIGESTER AREA LIGHTING
E2.04	DIGESTER AREA LIGHTING
E2.05	SOUTHSIDE FACILITES POWER, CONTROL, INSTRUMENTATION AND TELEPHONE CONDUIT ROUTING PLAN
E2.06	DETAIL POWER, CONTROL, INSTRUMENTATION AND TELEPHONE CONDUIT ROUTING PLAN
E2.07	INFLUENT PUMP STATION POWER, CONTROL, INSTRUMENTATION & TELEPHONE CONDUIT ROUTING PLAN
E2.08	EFFLUENT – POWER, CONTROL, INSTRUMENTATION AND TELEPHONE CONDUIT ROUTING PLAN
E2.09	POWER, CONTROL, INSTRUMENTATION AND TELEPHONE CONDUIT ROUTING PLAN
E2.10	POWER, CONTROL, INSTRUMENTATION AND TELEPHONE CONDUIT ROUTING PLAN
E2.11	SITE 600V AND BELOW CONDUIT AND PULLBOX SCHEDULE
E2.11A	SITE 600V AND BELOW CONDUIT AND PULLBOX SCHEDULE
E2.12	MEDIUM VOLTAGE ELECTRICAL SITE IMPROVEMENTS – 12
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E2.14	MEDIUM VOLTAGE ELECTRICAL SITE IMPROVEMENTS – 14
E2.15	MEDIUM VOLTAGE ELECTRICAL SITE IMPROVEMENTS – 15
E2.16	MEDIUM VOLTAGE ELECTRICAL SITE IMPROVEMENTS – 16
E2.17	MEDIUM VOLTAGE ELECTRICAL SITE IMPROVEMENTS – 17
E2.18	MEDIUM VOLTAGE ELECTRICAL SITE IMPROVEMENTS – 18
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E2.23	EFFLUENT FACILITES DETAILS – POWER, CONTROL, INSTR., & TELEPHONE CONDUIT ROUTING PLAN
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E2.28	PLANT WATER WELL – INSTRUMENTATION LOOP
E3.01	INFLUENT PUMP STATION-HEADWORKS – LOWER PLAN I AT EL. -15.0
E3.02	INFLUENT PUMP STATION-HEADWORKS – LOWER PLAN II AT EL. -15.0
E3.03	INFLUENT PUMP STATION-HEADWORKS – INTERMEDIATE PLAN I AT EL. +1.0
E3.04	INFLUENT PUMP STATION-HEADWORKS – INTERMEDIATE PLAN II AT EL. +1.0
E3.05	INFLUENT PUMP STATION-HEADWORKS – INTERMEDIATE PLAN I AT EL. +15.0
E3.06	INFLUENT PUMP STATION-HEADWORKS – INTERMEDIATE PLAN II AT EL. +15.0
E3.07	INFLUENT PUMP STATION-HEADWORKS – UPPER PLAN I AT EL. +25.0
E3.08	INFLUENT PUMP STATION-HEADWORKS – UPPER PLAN II AT EL. +25.0
E3.09	INFLUENT PUMP STATION-HEADWORKS – UPPER PLAN I LIGHTING
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E3.20	INFLUENT PUMP STATION / HEADWORKS – PIPING AND INSTRUMENTATION DIAGRAM
E3.21	INFLUENT PUMP STATION – INSTRUMENTATION LOOP DIAGRAMS
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E4.05	PRIMARY SEDIMENTATION BASINS – ELECTRICAL DETAILS
E4.06	SOUTHSIDE FACILITIES – PRIMARY SEDIMENTATION BASINS CONTROL SCHEMATICS
E4.07	SOUTHSIDE FACILITIES – PRIMARY SEDIMENTATION BASINS CONTROL SCHEMATICS
E4.08	SOUTHSIDE FACILITIES – PRIMARY SEDIMENTATION BASINS CONTROL SCHEMATICS
E4.09	SOUTHSIDE FACILITIES – PRIMARY SEDIMENTATION BASINS CONTROL SCHEMATICS
E4.10	SOUTHSIDE FACILITIES – PRIMARY SEDIMENTATION BASINS PIPING AND INSTRUMENTATION DIAGRAM
E4.11	SOUTHSIDE FACILITIES – PRIMARY SEDIMENTATION BASINS INSTRUMENTATION LOOP DIAGRAMS
E4.12	SOUTHSIDE FACILITIES – PRIMARY SEDIMENTATION BASINS AI / DI – INSTRUMENTATION LIST
E4.13	SOUTHSIDE FACILITIES – PRIMARY SEDIMENTATION BASINS DI / DO – INSTRUMENTATION LIST
E4.14	SOUTHSIDE FACILITIES – PRIMARY SEDIMENTATION BASINS CONTROL PANEL AND PLC DETAILS
E4.15	SOUTHSIDE FACILITIES – PRIMARY SEDIMENTATION BASINS LOGIC DIAGRAM
E4.16	SOUTHSIDE FACILITIES – PRIMARY SEDIMENTATION BASINS LOGIC DIAGRAM
E4.17	SOUTHSIDE FACILITIES – PRIMARY SEDIMENTATION BASINS CONDUIT SCHEDULE
E4.18	PRIMARY SEDIMENTATION BASINS – MCC ELEVATION VIEW CONDUIT SCHEDULE AND PANEL SCHEDULE
E4.19	SOUTHSIDE BIOFILTRATION – SYSTEM SCHEMATICS AND LOGIC DETAILS

RECORD SET

KEY TO DRAWING NUMBERS

DISCIPLINES

- G – GENERAL
- C – CIVIL
- L – LANDSCAPE
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PROCESS AREAS

1. GENERAL
2. WASTEWATER TREATMENT PLANT – SITE
3. INFLUENT PUMP STATION-HEADWORKS
4. GRIT REMOVAL / PRIMARY SEDIMENTATION
5. AERATION BASIN (NORTHSIDE)
6. AERATION BASIN (SOUTHSIDE)
7. SECONDARY CLARIFIERS / RAS / WAS
8. UV DISINFECTION / EFFLUENT PUMPING
9. ANAEROBIC DIGESTER
10. SEPTAGE RECEIVING
11. CHLORINE BUILDING MODIFICATIONS
12. LABORATORY
13. TRAINING / LOCKER ROOM BUILDING
14. MAINTENANCE SHOP / STORAGE BUILDING
15. DEWATERING
16. ODOR CONTROL
17. PLANT WATER SYSTEM
18. IRRIGATION STRUCTURE
19. FILTER FEED PUMP STATION
20. RAPID MIXING, FLOCCULATION, & FILTRATION
21. CHEMICAL HANDLING BUILDING
22. RECYCLED WATER SYSTEM

EXAMPLE NUMBER: C 2.01
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REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
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REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

GENERAL

DRAWING INDEX - 7

SCALE: NOT TO SCALE
DRAWING NUMBER: G1.08
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\N:\X_MANTECA WQCF AS-BUILTS\CADD\AS-BUILTS_COMBINED\GENERAL G1.08.DWG NONE
08/16/06 4:59 p.m.

DRAWING INDEX

DRAWING NUMBER	SHEET TITLE
	ELECTRICAL
E5.01	NORTHSIDE BIOFILTRATION CONDUIT PLAN
E5.02	NORTHSIDE FACILITIES – AERATION BASIN – DECK ELEVATION
E5.04	AERATION GALLERY PLAN VIEW
E5.06	NORTHSIDE FACILITIES – AERATION BASIN DETAILS
E5.07	NORTHSIDE FACILITIES – AERATION BASIN MCC–05–01 ONE–LINE DRAWING
E5.08	NORTHSIDE FACILITIES – AERATION BASIN – PANEL ELEVATION VIEWS
E5.09	NORTHSIDE FACILITIES – AERATION BASIN – CONTROL SCHEMATICS
E5.11	NORTHSIDE FACILITIES – AERATION BASIN – CONTROL SCHEMATICS
E5.12	NORTHSIDE FACILITIES – AERATION BASIN – CONTROL SCHEMATICS
E5.13	NORTHSIDE FACILITIES – AERATION BASIN PIPING AND INSTRUMENTATION DIAGRAM
E5.15	NORTHSIDE FACILITIES – AERATION BASIN – AI / DI LIST
E5.16	NORTHSIDE FACILITIES – AERATION BASIN – DI / DO LIST
E5.17	NORTHSIDE FACILITIES – AERATION BASIN CONTROL PANEL AND PLC DETAILS
E5.18	NORTHSIDE FACILITIES – AERATION BASIN – LOGIC DIAGRAM
E5.19	NORTHSIDE FACILITIES – AERATION BASIN – LOGIC DIAGRAM
E5.20	NORTHSIDE FACILITIES – AERATION BASIN – CONDUIT SCHEDULE
E5.21	NORTHSIDE FACILITIES – AERATION BASIN CONDUIT SCHEDULE AND PANEL SCHEDULE
E5.22	NORTHSIDE FACILITIES – BIOFILTRATION SYSTEM SCHEMATICS AND LOGIC DETAILS
E6.00	SOUTHSIDE FACILITIES – LIGHTING PLAN
E6.01	SOUTHSIDE AERATION BASINS – PLAN
E6.02	BLOWER ROOM PARTIAL – LIGHTING AND CONDUIT PLAN
E6.03	SOUTHSIDE AERATION BASINS – CONTROL BUILDING POWER CONDUITS
E6.04	SOUTHSIDE AERATION BASINS – CONTROL BUILDING CONTROL CONDUITS
E6.05	SOUTHSIDE AERATION BASINS – CONTROL BUILDING LIGHTING PLAN
E6.07	SOUTHSIDE FACILITIES – ONE–LINE DRAWING
E6.08	SOUTHSIDE FACILITIES – AERATION BASINS – ONE–LINE DRAWING
E6.09	SOUTHSIDE FACILITIES – GENERATOR BREAKER – CONTROL SCHEMATICS
E6.10	SOUTHSIDE FACILITIES – AERATION BASINS SWITCHBOARD AND MCC ELEVATION VIEWS
E6.11	SOUTHSIDE FACILITIES – AERATION BASINS – CONTROL SCHEMATICS
E6.12	SOUTHSIDE FACILITIES – AERATION BASINS – CONTROL SCHEMATICS
E6.13	SOUTHSIDE FACILITIES – AERATION BASINS – CONTROL SCHEMATICS
E6.14	SOUTHSIDE FACILITIES – AERATION BASINS – CONTROL SCHEMATICS
E6.15	SOUTHSIDE FACILITIES – AERATION BASINS PIPING AND INSTRUMENTATION DIAGRAM
E6.16	SOUTHSIDE FACILITIES – AERATION BASINS INSTRUMENTATION LOOP DIAGRAMS
E6.16A	SOUTHSIDE FACILITIES – AERATION BASINS INSTRUMENTATION LOOP DIAGRAMS
E6.17	SOUTHSIDE FACILITIES – AERATION BASINS – AI / DI LIST
E6.18	SOUTHSIDE FACILITIES – AERATION BASINS – DI / DO LIST
E6.19	SOUTHSIDE FACILITIES – AERATION BASINS CONTROL PANEL AND PLC DETAILS
E6.20	SOUTHSIDE FACILITIES – AERATION BASINS CONTROL PANEL AND PLC DETAILS
E6.21	SOUTHSIDE FACILITIES – AERATION BASINS – LOGIC DIAGRAM
E6.22	SOUTHSIDE FACILITIES – AERATION BASINS – LOGIC DIAGRAM
E6.23	SOUTHSIDE FACILITIES – AERATION BASINS EMERGENCY GENERATOR PLC DETAILS
E6.24	SOUTHSIDE FACILITIES – AERATION BASINS – CONDUIT SCHEDULE
E6.25	SOUTHSIDE FACILITIES – AERATION BASINS – CONDUIT SCHEDULE
E6.26	SOUTHSIDE FACILITIES – AERATION BASINS PANEL SCHEDULE AND PBOX SCHEDULE
E6.27	SOUTHSIDE FACILITIES – EMERGENCY GENERATOR – DI / DO LIST
E6.28	SOUTHSIDE FACILITIES – AERATION BASINS – DO SENSOR DETAILS
E7.01	SECONDARY CLARIFIER NO. 4 AND NO. 5 – PLAN
E7.02	SECONDARY CLARIFIER NO. 4 AND NO. 5 – PLAN
E7.03	SECONDARY CLARIFIER – RAS PUMP STATION – PLAN VIEW
E7.04	MODIFICATIONS TO EXISTING RAS/WAS BUILDING PLAN SECTION
E7.05	SOUTHSIDE FACILITIES – SECONDARY CLARIFIERS MCC ELEVATION VIEW AND ONE–LINE DIAGRAM
E7.06	MODIFICATIONS TO EXISTING RAS/WAS BUILDING (E) MCC ELEVATION VIEW AND ONE–LINE DIAGRAM
E7.07	MODIFICATIONS TO EXISTING RAS/WAS BUILDING CONTROL SCHEMATICS
E7.08	SECONDARY CLARIFIER, WAS ADDITIONS AND IRRIGATION SLIDE GATE – CONTROL SCHEMATICS
E7.09	SECONDARY CLARIFIER – RAS ADDITIONS – CONTROL SCHEMATICS
E7.10	SECONDARY CLARIFIER – PIPING AND INSTRUMENTATION DIAGRAM
E7.11	(N) RAS PUMP STATION – (E) RAS/WAS PUMP STATION INSTRUMENTATION LOOP DIAGRAMS
E7.12	MODIFICATIONS TO EXISTING RAS/WAS BUILDING WAS CONTROL LOGIC
E7.14	MODIFICATIONS TO EXISTING RAS/WAS BUILDING AI / DI / DO LIST
E7.15	SECONDARY CLARIFIER – RAS – AI / AO / DI / DO LIST
E7.16	RAS / WAS – CONDUIT SCHEDULE
E8.00	UV AREA PLAN CONDUIT ROUTING DETAIL
E8.01	UV DISINFECTION / EFFLUENT PUMPING TOP DECK PLAN
E8.02	UV DISINFECTION / EFFL. PUMPING CONTAINER PLAN
E8.03	EFFLUENT MCC / GENERATOR BUILDING MAIN POWER CONDUIT PLAN
E8.04	EFFLUENT MCC / GENERATOR BUILDING POWER CONDUIT PLAN
E8.05	EFFLUENT MCC / GENERATOR BUILDING POWER CONDUIT PLAN
E8.06	EFFLUENT MCC / GENERATOR BUILDING CONTROL & INSTRUMENTATION CONDUIT PLAN
E8.07	EFFLUENT MCC / GENERATOR BUILDING CONTROL & INSTRUMENTATION CONDUIT PLAN
E8.08	EFFLUENT MCC / GENERATOR BUILDING LIGHTING AND RECEPTACLE PLAN
E8.09	UV DISINFECTION / EFFLUENT PUMPING DISTRIBUTION ONE–LINE DIAGRAM
E8.10	UV DISINFECTION / EFFLUENT PUMPING EMERGENCY DISTRIBUTION ONE–LINE DIAGRAM
E8.11	UV DISINFECTION / EFFLUENT PUMPING MCC–08–01 & (F) MCC–08–02 ONE–LINE DIAGRAM
E8.12	UV DISINFECTION / EFFLUENT PUMPING DISTRIBUTION PANEL ONE–LINE DIAGRAM
E8.13	UV DISINFECTION / EFFLUENT PUMPING THREE–LINE DIAGRAM
E8.14	UV DISINFECTION / EFFLUENT PUMPING SWITCHBOARD AND MCC ELEVATION VIEWS
E8.15	UV DISINFECTION / EFFLUENT PUMPING CONTROL SCHEMATICS
E8.16	UV DISINFECTION / EFFLUENT PUMPING CONTROL SCHEMATICS
E8.17	UV DISINFECTION / EFFLUENT PUMPING CONTROL SCHEMATICS
E8.18	UV DISINFECTION / EFFLUENT PUMPS INSTRUMENTATION LOOP DIAGRAMS
E8.19	UV DISINFECTION / EFFLUENT PUMPS INSTRUMENTATION LIST
E8.20	UV DISINFECTION / EFFLUENT PUMPS INSTRUMENTATION LIST
E8.21	UV DISINFECTION / EFFLUENT PUMPS CONTROL PANEL AND PLC DETAILS
E8.22	UV DISINFECTION / EFFLUENT PUMPS 24V DC SCHEMATICS AND PLC DETAILS
E8.23	EFFLUENT PUMP STATION PLC LOGIC DIAGRAMS
E8.24	UV DISINFECTION / EFFLUENT PUMPS GENERATORS CONTROL DETAILS
E8.25	UV DISINFECTION / EFFLUENT PUMPING CONDUIT SCHEDULE
E8.26	UV DISINFECTION / EFFLUENT PUMPING CONDUIT SCHEDULE
E8.27	UV DISINFECTION / EFFLUENT PUMPING PANEL SCHEDULE
E8.28	MOTOR OPERATED VALVES – LOGIC DIAGRAMS
E8.29	MOTOR OPERATED VALVES – LOGIC DIAGRAMS
E8.30	FILTER FEED PUMP STATION – PLC LOGIC DIAGRAMS
E8.31	UV DISINFECTION/EFFLUENT PUMPING TOP DECK PLAN LIGHTING PLAN

RECORD SET

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EXAMPLE NUMBER: C 2.01
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER – David Richard – No. 33479 EXP. – CIVIL – STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

REDUCED RECORD SET
NOT TO SCALE

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2	SEM	09/11	RECORD SET
1	SEM	02/09	ADDENDUM #1

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

GENERAL

DRAWING INDEX - 8

SCALE: NOT TO SCALE
DRAWING NUMBER: **G1.09**
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\ N:\X_MANTECA WQCF AS-BUILTS\CADD\AS-BUILTS_COMBINED\GENERAL G1.09.DWG NONE
08/16/06 4:59 p.m.

DRAWING INDEX

DRAWING NUMBER	SHEET TITLE
	ELECTRICAL
E11.01	SODIUM HYPOCHLORITE STORAGE SYSTEM CONDUIT PLAN
E12.01	ADMINISTRATION AREA SITE CONDUITS
E12.02	ADMINISTRATION EQUIPMENT ELEVATION VIEW
E12.03	ADMINISTRATION BUILDING MAIN CONTROL BOARD AND OPERATOR'S CONSOLE PLAN VIEW
E12.04	ADMINISTRATION BUILDING MAIN CONTROL BOARD DETAILS
E12.05	ADMINISTRATION LIGHTING, CONDUIT PLAN AND DETAIL
E12.06	LABORATORY – LIGHTING PLAN
E12.07	LABORATORY – RECEPTACLES PLAN
E12.08	LABORATORY EQUIPMENT PLAN
E12.09	ADMINISTRATION AND LABORATORY ONE–LINE DIAGRAM
E12.10	LABORATORY ELECTRICAL ROOM PLAN VIEW AND PANEL SCHEDULES
E12.11	LABORATORY ELECTRICAL ROOM SCHEDULES AND DETAILS
E12.12	LABORATORY ELECTRICAL ROOM ETHERNET CONNECTIONS TO CITY NETWORK
E12.13	LABORATORY ELECTRICAL ROOM ETHERNET CONNECTIONS TO CITY NETWORK
E12.14	ADMINISTRATION BUILDING ONE–LINE DIAGRAM ADDITIONS
E13.01	LOCKER ROOM BUILDING MECHANICAL EQUIPMENT CONDUIT PLAN
E13.02	LOCKER ROOM BUILDING LIGHTING CONDUIT PLAN
E13.03	LOCKER ROOM BUILDING SCHEDULES
E14.01	SHOP / MAINTENANCE BUILDING LIGHTING
E14.02	SHOP / MAINTENANCE BUILDING RECEPTACLE PLAN
E15.01	DEWATERING BUILDING PARTIAL PLAN CONDUIT ROUTING
E15.02	DEWATERING BUILDING CONTROL ROOM CONDUIT PLAN
E15.03	DEWATERING BUILDING PARTIAL PLAN CONDUIT ROUTING ABOVE PLATFORM
E15.03A	DIGESTER EFFLUENT TRANSFER STRUCTURE
E15.04	DEWATERING FACILITY LIGHTING PLAN
E15.05	DEWATERING FACILITY ONE–LINE DIAGRAM
E15.06	DEWATERING FACILITY ELECTRICAL ELEVATION VIEWS
E15.07	DEWATERING FACILITY CONTROL SCHEMATICS
E15.08	DEWATERING FACILITY CONTROL SCHEMATICS
E15.09	DEWATERING FACILITY CONTROL SCHEMATICS
E15.10	DEWATERING FACILITY CONTROL SCHEMATICS
E15.11	DEWATERING FACILITY CONTROL SCHEMATICS
E15.13	DIGESTER FACILTIES CONTROL SCHEMATICS
E15.14	DEWATERING FACILITY CENTRIFUGE CONTROL SCHEMATIC
E15.15	DEWATERING FACILITY PROCESS FLOW SCHEMATIC
E15.16	DEWATERING FACILITY PROCESS FLOW SCHEMATIC
E15.17	DEWATERING FACILITY INSTRUMENTATION LOOP DIAGRAMS 1
E15.18	DEWATERING FACILITY PLC I/O LIST – 1
E15.18A	DEWATERING FACILITY PLC I/O LIST – 2
E15.19	DEWATERING FACILITY PLC DETAILS
E15.20	DEWATERING FACILITY CONTROL LOGIC
E15.21	DEWATERING FACILITY CONTROL LOGIC
E15.22	DEWATERING FACILITY CONTROL LOGIC
E15.22A	DEWATERING FACILITY CONTROL LOGIC
E15.23	DEWATERING FACILITY CABLE CONDUIT SCHEDULE
E15.24	DEWATERING FACILITY CABLE CONDUIT AND PANEL SCHEDULES
E19.01	FILTER FEED PUMP STATION AND FLOW METER VAULT PLAN AND DETAILS
E19.02	FILTER FEED PUMP (FFDP–19–01) CONTROL SCHEMATICS
E19.03	FILTER FEED PUMP FFDP–19–02, FFDP–19–03, & FFDP–19–04 CONTROL SCHEMATICS
E20.01	RAPID MIXING, FLOCCULATION, AND FILTERS – ENLARGED PLAN I
E20.02	RAPID MIXING, FLOCCULATION, AND FILTERS – ENLARGED PLAN II
E20.03	RAPID MIXING, FLOCCULATION, AND FILTERS – FILTERS PARTIAL PLAN
E20.04	RAPID MIXING, FLOCCULATION, AND FILTERS – TURBIDITY PLAN
E20.05	FILTERS LIGHTING PLAN
E20.06	FILTER CONTROL SCHEMATICS
E20.07	FILTERS BACKWASH VALVE SCHEMATIC
E20.08	FLOCCULATOR CONTROL SCHEMATICS
E20.09	RAPID MIXER (RPMX–20–01) CONTROL SCHEMATIC
E20.10	RAPID MIXING, FLOCCULATION, AND FILTERS – CONDUIT SCHEDULE
E20.11	RAPID MIXING, FLOCCULATION, AND FILTERS – CONDUIT SCHEDULE
E20.12	RAPID MIXING, FLOCCULATION, AND FILTERS – CONDUIT SCHEDULE
E20.13	FILTER BACKWASH METER VAULT – PLAN AND SECTION
E20.14	FILTER BACKWASH METER VAULT – PULL BOX SCHEDULE
E21.01	CHEMICAL HANDLING BUILDING – CONDUIT PLAN
E21.02	CHEMICAL HANDLING BUILDING – LIGHTING AND RECEPTACLE PLAN
E21.03	CHEMICAL BUILDING MCC ELEVATION VIEW & ONE–LINE DIAGRAM
E21.04	CHEMICAL MIXERS CONTROL SCHEMATICS
E21.05	CHEMICAL PUMP CONTROL SCHEMATICS
E21.06	CHEMICAL BUILDING ANF FILTER INSTRUMENTATION LOOP DIAGRAMS
E21.07	CHEMICAL PROCESS CONTROL LOGIC DIAGRAMS
E21.08	CHEMICAL PROCESS CONTROL LOGIC DIAGRAMS
E21.09	CHEMICAL BUILDING CONTROL PANEL ELEVATION VIEWS
E21.10	CHEMICAL BUILDING CABLE CONDUIT SCHEDULES
E21.11	CHEMICAL BUILDING PANEL SCHEDULES AND LEVEL TRANSMITTER DETAIL
E21.12	CHEMICAL BUILDING / FILTERS – INSTRUMENTATION LIST
E22.01	RECYCLED WATER PUMP STATION PLAN
E22.02	CHLORINE CONTACT TANK RECYCLED WATER PUMP CONTROL SCHEMATIC

RECORD SET

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EXAMPLE NUMBER: C 2.01
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REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE:	XXXXXX
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DRAWN BY:	K.C. HAYES
CHECKED BY:	D. RICHARD
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NO.	BY	DATE	REVISIONS
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2	SEM	09/11	RECORD SET
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REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

GENERAL

DRAWING INDEX - 9

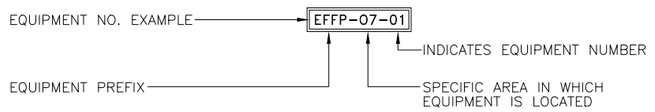
SCALE: NOT TO SCALE
DRAWING NUMBER: **G1.10**
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\N:\X_MANTECA WQCF AS-BUILTS\CADD\AS-BUILTS_COMBINED\GENERAL G1.10.DWG NONE
08/16/06 4:59 p.m.

EQUIPMENT PREFIXES

AAFM	AERATION AIR FLOWMETER
ABBL	AERATION BLOWER
AMXV	AIR MIX VALVE
ASEP	AIR SEPARATOR
ATS	AUTOMATIC TRANSFER SWITCH
BLOW	BIOFILTER BLOWER
BOIL	BOILER
BRDG	BRIDGE CRANE
BTMP	BLENDING TANK MIXING PUMP
BURN	WASTE GAS BURNER
CENP	CENTRIFUGE FEED PUMP
CENT	CENTRIFUGE
CEWP	DILUTE CAKE WASTE PUMP
CGEN	COGENERATION UNIT
CGSB	CO-GENERATOR SWITCHBOARD
CHFL	CHAIN & FLIGHT SLUDGE COLLECTOR DRIVE
CIRP	RECIRCULATION PUMP
CLSC	COALESCING FILTER
CNDT	CONDENSATION TANK
COMP	AIR COMPRESSOR
CONV	CONVEYOR
CSTA	CONTROL STATION
CPNL	CONTROL PANEL
CSTA	CONTROL STATION
DISC	DISCONNECT SWITCH
DMXP	DIGESTER MIXING PUMP
DPTP	DRIP TRAP
DSBE	DISTRIBUTION SWITCHBOARD – EMERGENCY
DSBN	DISTRIBUTION SWITCHBOARD – NORMAL
DSLP	DIGESTED SLUDGE PUMP
DWSP	DEWATERING SUMP PUMP
EFFP	EFFLUENT PUMP
EGSB	EMERGENCY GENERATOR SWITCHBOARD
EORD	ENGINE LUBE OIL DUMP RADIATOR
EQRP	EQUALIZATION RETURN PUMP
EWCP	ENGINE WATER CIRCULATION PUMP
EWRD	HEAT DUMP RADIATOR
FFDP	FILTER FEED PUMP
FBWP	FILTER BACKWASH PUMP
FLMA	FLAME ARRESTER
FLOC	MECHANICAL FLOCCULATOR
GCMP	NATURAL GAS COMPRESSOR
GEN	GENERATOR
GLYC	GLYCOL MAKE-UP PUMP
GRCL	GRIT CLASSIFIER
GRND	GRINDER
HRSL	EXHAUST HEAT RECOVERY SILENCER
HWRP	HOT WATER RECIRCULATION PUMP
HWTP	HOT WATER TRANSFER PUMP
INFP	INFLUENT PUMP
IFLG	INLET FLAP GATE
LT	LIGHT, LEVEL TRASMITTER
LSH	LEVEL FLOAT SWITCH
LXFM	LOW VOLTAGE TRANSFORMER
MBSN	MECHANICAL BAR SCREEN
MCC	MOTOR CONTROL CENTER
MXR	MIXER
MLRP	MIXED LIQUOR RECYCLE PUMP
MOV	MOTORIZED OPERATING VALVE
MSGV	DIVERTER GATE
MSTR	MOTOR STARTER
MVSB	MEDIUM VOLTAGE SWITCHBOARD
MXFM	MEDIUM VOLTAGE TRANSFORMER
PCV	PUMP CONTROL VALVE
PHEX	PLATE HEAT EXCHANGER
PNL	480V AND 120V DISTRIBUTION PANEL
POLY	POLYMER DILUTION UNIT
PRVB	PRESSURE RELIEF AND VACUUM BREAKER VALVE
PSLP	PRIMARY SLUDGE PUMP
PSCP	PRIMARY SCUM PUMP
PURE	DIGESTER GAS PURIFIER
RASP	RAS PUMP
RPMX	RAPID MIXER
SAMP	SAMPLE PUMP
SCCV	SCREENINGS SCREW CONVEYOR
SCLM	SECONDARY CLARIFIER COLLECTOR MECANISM
SCSK	SCUM SKIMMER
SCWC	SCREENINGS WASHER/COMPACTOR
SHEX	SPIRAL HEAT EXCHANGER
SLRP	SLUDGE RECIRCULATION PUMP
SLDG	SLIDE GATE
SOV	SOLENOID OPERATING VALVE
STPG	STOP GATE
STRN	STRAINER
TSHO	THERMAL SHUT-OFF VALVE
UVMG	UV MOTORIZED GATE
UVMW	UV MOTORIZED WEIR
WASP	WAS PUMP
WIRG	WEIR GATE
XPTK	EXPANSION TANK

MECHANICAL EQUIPMENT NUMBERING SYSTEM



CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

RECORD SET

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BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

EQUIPMENT NUMBERING AND EQUIPMENT PREFIXES

SCALE: NOT TO SCALE
DRAWING NUMBER: M0.1
SHEET NUMBER: OF SHEETS

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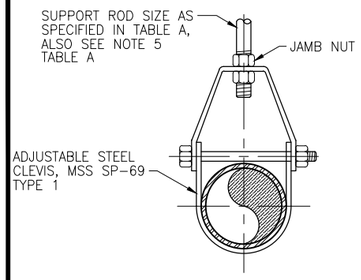
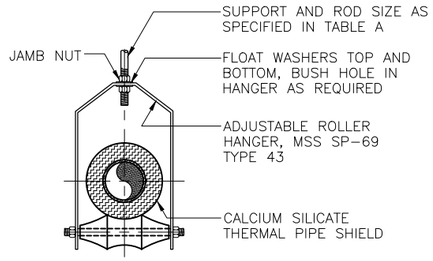


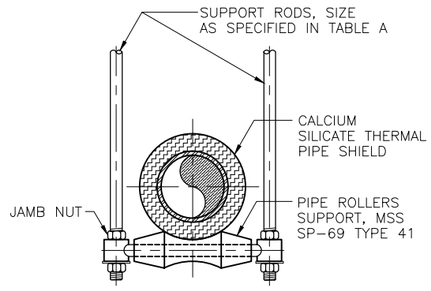
TYPE 1 PIPE HANGER

DETAIL 1 TYP — NOT TO SCALE



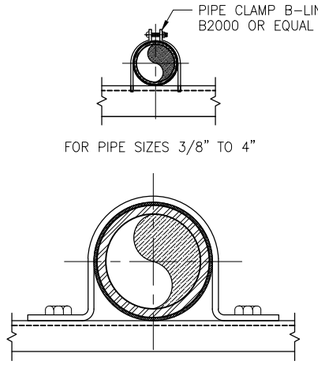
TYPE 4 PIPE HANGER

DETAIL 2 TYP — NOT TO SCALE



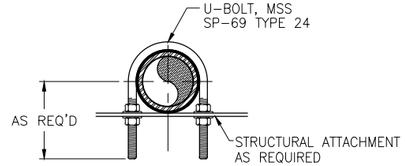
TYPE 5 PIPE HANGER

DETAIL 3 TYP — NOT TO SCALE



TYPE 6 PIPE HANGER

DETAIL 4 TYP — NOT TO SCALE



TYPE 7 PIPE HANGER

DETAIL 5 TYP — NOT TO SCALE

TABLE A

NOMINAL PIPE SIZE	TYPE 1 PIPE HANGER		TYPE 4 PIPE HANGER		TYPE 5 PIPE HANGER		TYPE 8 PIPE HANGER		MAXIMUM PIPE SPAN (FEET)			
	ROD SIZE (INCHES)	DESIGN LOAD (POUNDS)	ROD SIZE (INCHES)	DESIGN LOAD (POUNDS)	ROD SIZE (INCHES)	DESIGN LOAD (POUNDS)	ROD SIZE (INCHES)	DESIGN LOAD (POUNDS)	STEEL SEE NOTE 3	COPPER	PLASTIC SEE NOTE 3	CAST IRON SEE NOTE 4
1/2	3/8	610	--	--	--	--	--	--	5	5	CONTINUOUS	--
3/4	3/8	610	--	--	--	--	--	--	5	5	5	--
1	3/8	610	--	--	--	--	--	--	5	5	5	--
1-1/4	3/8	610	--	--	--	--	--	--	5	5	5	--
1-1/2	3/8	610	--	--	--	--	--	--	5	5	5	--
2	3/8	610	3/8	610	--	--	3/8	600	10	5	5	12 FEET FOR PRESSURE PIPE; 10 FEET FOR SOIL PIPE
2-1/2	3/8	610	1/2	610	--	--	1/2	660	11	10	5	
3	1/2	1130	1/2	610	--	--	1/2	700	12	20	5	
3-1/2	1/2	1130	1/2	610	--	--	1/2	750	--	--	--	
4	5/8	1430	5/8	610	--	--	5/8	750	14	20	5	
5	5/8	1430	--	--	--	--	--	--	--	--	--	
6	3/4	1940	3/4	610	--	--	3/4	1070	17	20	5	
8	7/8	2000	7/8	610	--	--	7/8	1350	19	20	5	
10	--	--	--	--	7/8	1730	7/8	1730	22	--	5	
12	--	--	--	--	7/8	2400	7/8	2400	23	--	10	

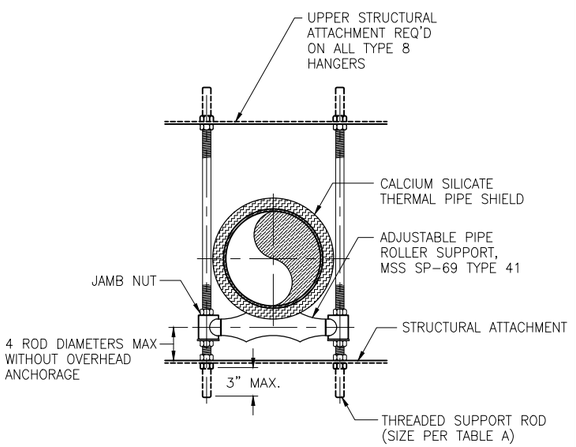
NOTES:

1. DESIGN WEIGHT SHALL BE TWICE THE WEIGHT OF THE PIPE FULL OF WATER. HANGER SYSTEMS SHALL BE DESIGNED USING THIS DESIGN WEIGHT.
2. ROD SIZES AND DESIGN LOADS BASED ON LOAD CALCULATIONS FOR B-LINE HANGERS. THE TOTAL DESIGN LOAD SHALL NOT EXCEED THE MAXIMUM LOADS SHOWN IN THE TABLE ABOVE.
3. SPAN SHOWN IS FOR SCHEDULE 80 PVC PIPE AT 100°F. SPANS FOR OTHER PLASTICS, OTHER PVC PIPE SCHEDULES AND PIPE AT HIGHER TEMPERATURES SHALL BE SHORTENED IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS. "CONTINUOUS" MEANS PIPE SHALL BE IN UNISTRUT OR SIMILAR CHANNEL.
4. AS PER UNIFORM PLUMBING CODE.
5. FOR PIPES SUBJECT TO LONGITUDINAL MOVEMENT, OR HAVING SERVICE TEMPERATURES IN RANGES OF 33°F TO 59°F OR 120°F TO 450°F, SEE TYPICAL SUPPORT ROD FOR PIPES SUBJECT TO HORIZONTAL MOVEMENT.

TABLE B

● INDICATES PIPE HANGERS SUITABLE FOR CONDITIONS LISTED BELOW	PIPE HANGER TYPE										
	1	4	5	6	7	8	9	10	11	12	13
SERVICE TEMPERATURE											
33°F-58°F OR (INSULATED)		●	●			●	●		●	●	●
120°F-450°F (UNINSULATED)	●	●	●	●	●	●	●	●	●	●	●
60°F-119°F	●			●	●		●	●	●	●	●
PIPING MATERIAL											
STEEL	●	●	●	●	●	●	●		●	●	●
COPPER		●		●	●	●					●
PLASTIC	●	●	●	●	●	●			●	●	●
CAST IRON	●	●	●	●	●	●		●	●	●	●

NOTE: FOR SERVICES OTHER THAN THOSE SHOWN IN TABLE B, PIPE ATTACHMENTS SHALL BE THOSE SPECIFIED IN THE PIPE SPEC.



TYPE 8 PIPE HANGER

DETAIL 6 TYP — NOT TO SCALE

GENERAL NOTES:

1. WHERE NO REFERENCE TO PIPE SUPPORT SYSTEM IS GIVEN ON THE DRAWINGS, THE CONTRACTOR SHALL USE AN APPROPRIATE SYSTEM. SEE TABLE B. PIPE AND CONDUIT SUPPORT SYSTEMS SHALL BE DESIGNED BY THE CONTRACTOR TO MEET THE LOAD AND SPANS REQUIREMENTS SPECIFIED.
2. UNLESS OTHERWISE SPECIFIED, HANGERS AND SUPPORTS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION. NUTS, BOLTS AND WASHERS MAY BE ZINC PLATED. HANGERS, SUPPORTS AND FASTENERS SUBJECT TO MOISTURE OR CORROSIVE ATMOSPHERE SHALL BE TYPE 316 STAINLESS STEEL.
3. MSS REFERS TO MANUFACTURERS STANDARIZATION SOCIETY OF THE VALVE FITTING INDUSTRY, STANDARD PRACTICE SP58 AND SP59.
4. CONCRETE INSERTS IN AREAS BELOW WATER SURFACE OR NORMALLY SUBJECT TO SUBMERGING SHALL BE EMBEDDED ANCHOR BOLTS OR EQUAL.
5. PROVIDE PLASTIC OR RUBBER CHANNEL END CAPS AT EXPOSED ENDS OF CHANNELS 7'-0" ABOVE FLOOR AND BELOW.
6. MAXIMUM DESIGN WEIGHTS AND LOADS SHALL BE AS SHOWN IN TABLE A UNLESS OTHERWISE SPECIFIED IN THE DETAILS.
7. WHEN SUPPORTED PIPING REQUIRES HORIZONTAL FLEXIBILITY NORMAL TO A STEEL BEAM AXIS, USE STRUCTURAL ATTACHMENTS C AND D AS SHOWN IN DETAILS 3 & 4/M0.4.
8. ALL PIPING SUPPORTED BY HANGERS AND/OR STRUCTURAL ATTACHMENTS SHALL BE BRACED AGAINST HORIZONTAL, VERTICAL, AXIAL, AND LONGOTUDINAL SWAY.
9. FITTINGS SHALL NOT BE LESS THAN MSS CL B.
10. UNLESS OTHERWISE SPECIFIED, TRAPEZE AND PIPE RACK COMPONENTS SHALL HAVE A MINIMUM STEEL THICKNESS OF 12 GAGE WITH A MAXIMUM DEFLECTION OF 1/240 OF THE SPAN. MINIMUM CHANNEL COMPONENT SIZE SHALL BE 1-5/8" SQUARE AS MANUFACTURED BY SUPERSTRUT, ELCEN OR EQUAL.
11. NOT ALL PIPE HANGERS ARE USED IN THESE CONTRACT DRAWINGS.
12. SECURE ALL NUTS WITH THREAD LOCKING COMPOUND.
13. FOR COPPER PIPE SECURE 10 MIL PVC TAPE HALFLAP WRAP AROUD PIPE.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
6			
5			REDUCED RECORD SET NOT TO SCALE
4			
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

STANDARD PIPE SUPPORTS -1

SCALE: NOT TO SCALE
DRAWING NUMBER: M0.2
SHEET NUMBER: OF SHEETS

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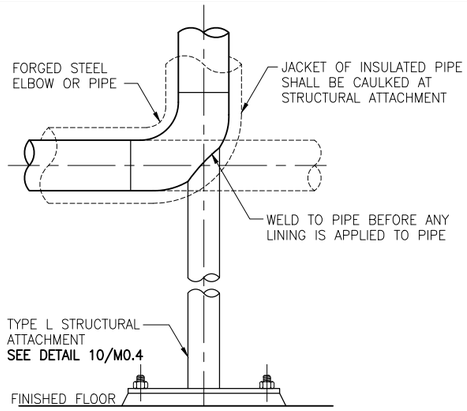
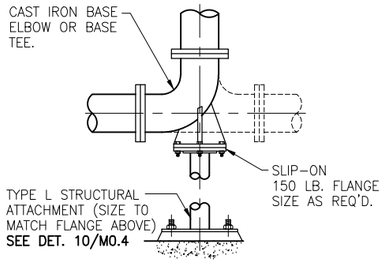
01/22/04 2:51 p.m.



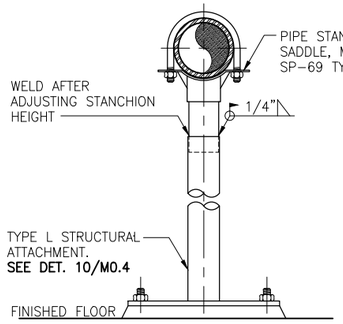
TYPE 9 PIPE SUPPORT

DETAIL 1 TYP — NOT TO SCALE



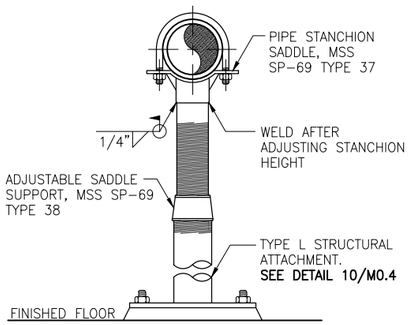
TYPE 10 PIPE SUPPORT

DETAIL 2 TYP — NOT TO SCALE



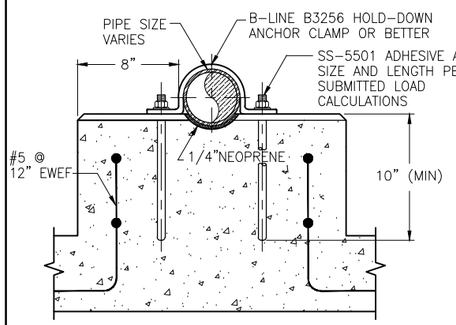
TYPE 11 PIPE SUPPORT

DETAIL 3 TYP — NOT TO SCALE



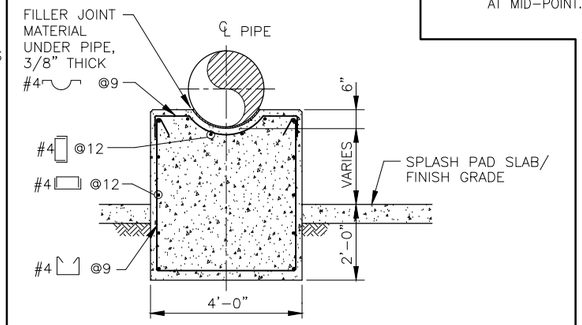
TYPE 12 PIPE SUPPORT

DETAIL 4 TYP — NOT TO SCALE



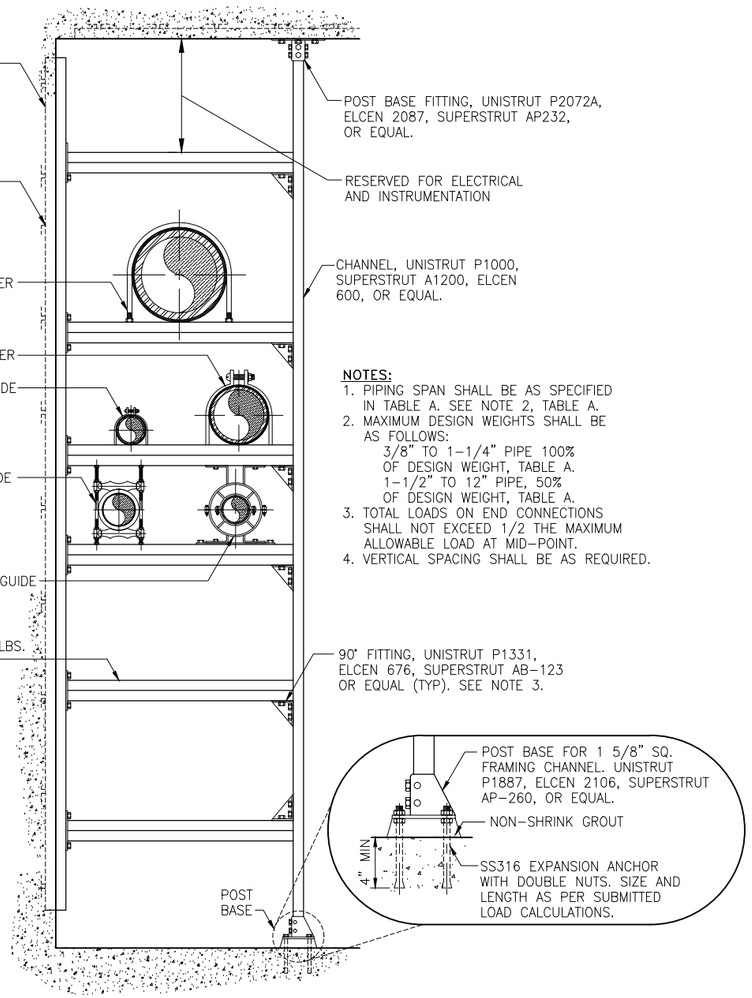
TYPE 13
PIPE SUPPORT

DETAIL 5 TYP — NOT TO SCALE



SADDLE PIPE SUPPORT

DETAIL 6 TYP — NOT TO SCALE



NOTES:
1. PIPING SPAN SHALL BE AS SPECIFIED IN TABLE A. SEE NOTE 2, TABLE A.
2. MAXIMUM DESIGN WEIGHTS SHALL BE AS FOLLOWS:
   3/8" TO 1-1/4" PIPE 100% OF DESIGN WEIGHT, TABLE A.
   1-1/2" TO 12" PIPE, 50% OF DESIGN WEIGHT, TABLE A.
3. TOTAL LOADS ON END CONNECTIONS SHALL NOT EXCEED 1/2 THE MAXIMUM ALLOWABLE LOAD AT MID-POINT.
4. VERTICAL SPACING SHALL BE AS REQUIRED.

TYPICAL PIPE
SUPPORT RACK

DETAIL 7 TYP — NOT TO SCALE

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

STANDARD PIPE SUPPORTS - 2

SCALE: NOT TO SCALE
DRAWING NUMBER: **M0.3**
SHEET NUMBER: OF SHEETS

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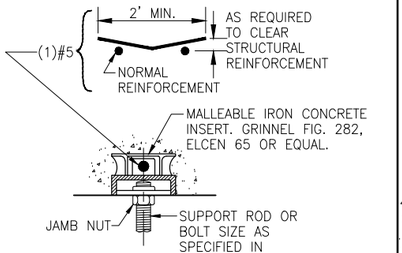
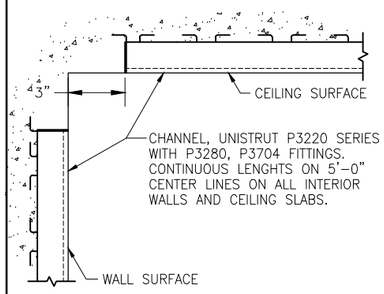


MAXIMUM ALLOWABLE LOAD	
ROD SIZE	LOAD (lbs)
3/8"	610
1/2"	1130
5/8"–7/8"	1140

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A.

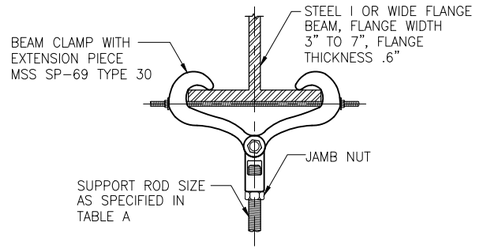
TYPE A
STRUCTURAL ATTACHMENT

DETAIL NOT TO SCALE — 1 TYP



TYPE B
STRUCTURAL ATTACHMENT

DETAIL NOT TO SCALE — 2 TYP

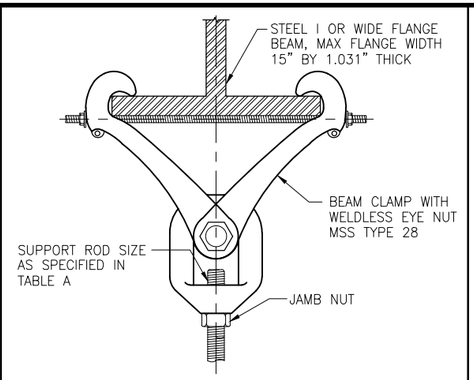


MAXIMUM ALLOWABLE LOAD	
ROD SIZE	LOAD
3/8"	610
1/2"	1130
5/8"–7/8"	1365

SPACING SHALL BE AS REQUIRED BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A.

TYPE C
STRUCTURAL ATTACHMENT

DETAIL NOT TO SCALE — 3 TYP

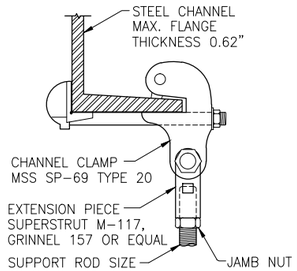


MAXIMUM ALLOWABLE LOAD	
ROD SIZE	LOAD
3/8"	610
1/2"	1130
5/8"	1810
3/4"	2710
7/8"	3770

SPACING SHALL BE AS REQUIRED BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A.

TYPE D
STRUCTURAL ATTACHMENT

DETAIL NOT TO SCALE — 4 TYP

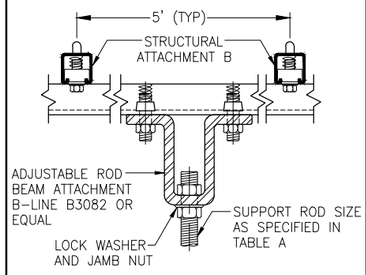


MAXIMUM ALLOWABLE LOAD		
ROD SIZE	JAW SIZE	LOAD (lbs)
3/8"	1 OR 2	390
1/2"	4 OR 5	770
1/2"	7 OR 8	1140

SPACING SHALL BE AS REQUIRED BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A.

TYPE E
STRUCTURAL ATTACHMENT

DETAIL NOT TO SCALE — 5 TYP

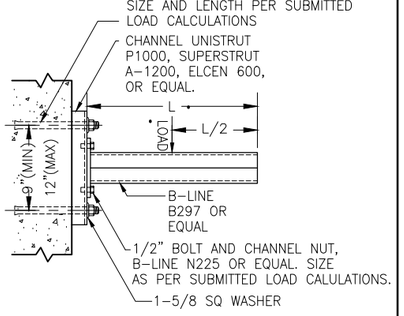


MAXIMUM ALLOWABLE LOAD	
ROD SIZE	LOAD
3/8"	610
1/2"	1130
5/8"	1810
3/4"	• 2710
7/8"	3770

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A.

TYPE G
STRUCTURAL ATTACHMENT

DETAIL NOT TO SCALE — 6 TYP



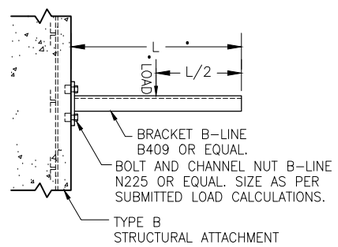
MAXIMUM ALLOWABLE LOAD	
"L"	LOAD (LBS)
12"	2000
18"	1330
24"	1000
30"	• 800
36"	660

SPACING SHALL BE AS REQUIRED BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A

NOTE:
USE STRUCTURAL ATTACHMENT B ON ALL INTERIOR SURFACES.

TYPE H
STRUCTURAL ATTACHMENT

DETAIL NOT TO SCALE — 7 TYP

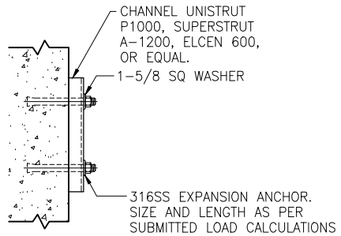


CAPACITY AT MID–POINT	
"L"	LOAD (LBS)
6"	1920
9"	1280
12"	960
14"	• 800

BRACKET MAY BE INSTALL AS SHOWN OR INVERTED, AND USED WITH VARIOUS HANGER, ROLLER, GUIDE AND CLAMP ASSEMBLIES.

TYPE J
STRUCTURAL ATTACHMENT

DETAIL NOT TO SCALE — 8 TYP



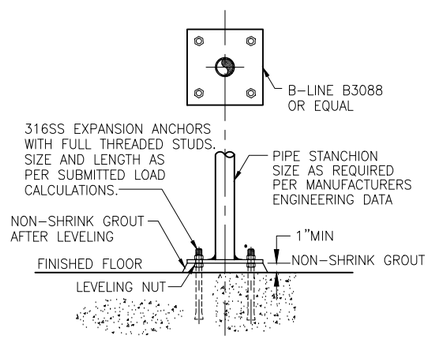
BRACKET MAY BE USED WITH VARIOUS HANGER, GUIDE RACK OR ANCHOR AND SWAY BRACE ASSEMBLIES.

MAXIMUM LOAD CAPACITY SHALL BE AS RECOMMENDED BY THE CHANNEL MANUFACTURER AND ANCHOR PULL–OUT SPECIFICATIONS APPROVED BY ENGINEER.

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A.

TYPE K
STRUCTURAL ATTACHMENT

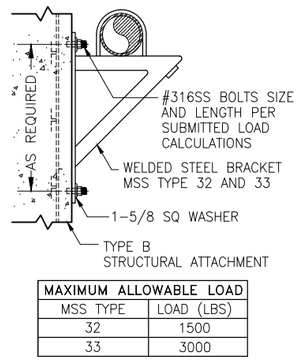
DETAIL NOT TO SCALE — 9 TYP



SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A

TYPE L
STRUCTURAL ATTACHMENT

DETAIL NOT TO SCALE — 10 TYP

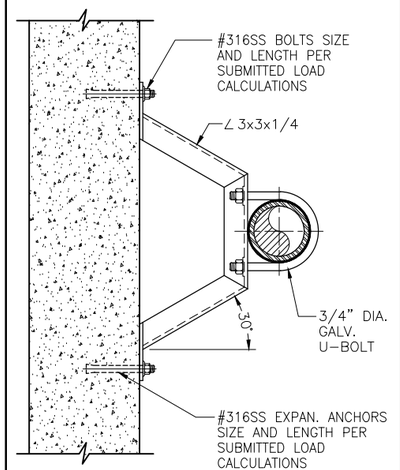


MAXIMUM ALLOWABLE LOAD	
MSS TYPE	LOAD (LBS)
32	1500
33	3000

BRACKET MAY BE INSTALLED AS SHOWN OR INVERTED, AND USED WITH VARIOUS HANGER, ROLLER, GUIDE AND CLAMP ASSEMBLIES.

TYPE M
STRUCTURAL ATTACHMENT

DETAIL NOT TO SCALE — 11 TYP



SPACED @ 5'–0" O.C. (TYP.)

STRUCTURAL ATTACHMENT

DETAIL NOT TO SCALE — 12 TYP

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET NOT TO SCALE~~

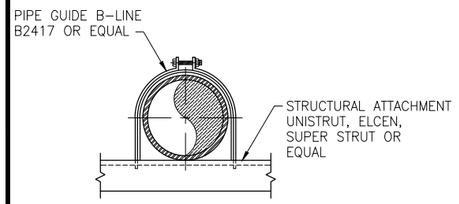
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

STANDARD STRUCTURAL PIPE ATTACHMENTS AND MISCELLANEOUS DETAILS

SCALE: NOT TO SCALE
DRAWING NUMBER: **M0.4**
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-B\Cadd\Mechanical\ SCH-BM04.DWG NONE
01/22/04 2:51 p.m.

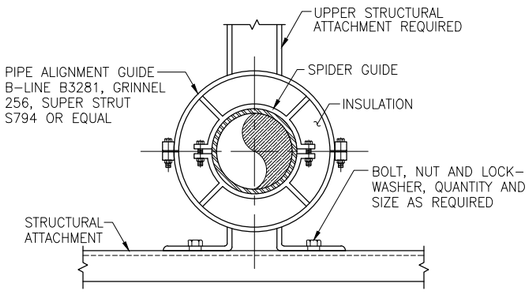


NOTE: THIS GUIDE SHALL NOT BE USED FOR INSULATED PIPE.

TYPE G1 PIPE GUIDE

1/2" THROUGH 4"

DETAIL 1 TYP NOT TO SCALE



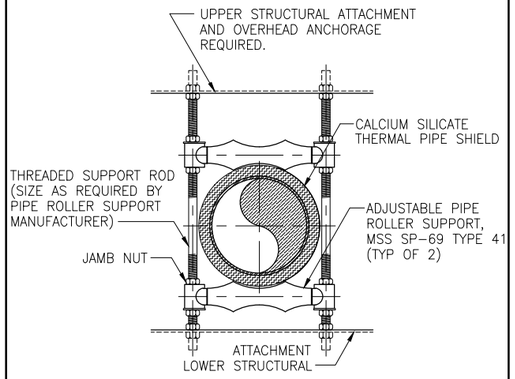
NOTES:

1. SECTIONS OF HOT WATER PIPING BETWEEN ANCHORS AND EXPANSION JOINTS SHALL BE PROVIDED WITH PIPE GUIDES.
2. THE FIRST AND SECOND PIPE GUIDES FROM EXPANSION JOINTS SHALL BE LOCATED AT A MAXIMUM OF FOUR AND EIGHTEEN PIPE DIAMETERS RESPECTIVELY FROM FREE END OF THE EXPANSION JOINT. INTERMEDIATE PIPE GUIDES SHALL BE LOCATED AS RECOMMENDED BY THE EXPANSION JOINT MANUFACTURER.
3. TYPE G2 PIPE GUIDE SHALL BE ADJACENT TO ALL EXPANSION JOINTS. ON INSULATED STRAIGHT PIPE SECTIONS REQUIRING 4 OR MORE GUIDES, EVERY THIRD GUIDE SHALL BE TYPE G2.
4. THIS GUIDE SHALL NOT BE USED FOR CHILLED WATER SUPPLY OR RETURN (CWS, CWR) PIPING.

TYPE G2 PIPE GUIDE

3/4" THROUGH 12" PIPE

DETAIL 2 TYP NOT TO SCALE



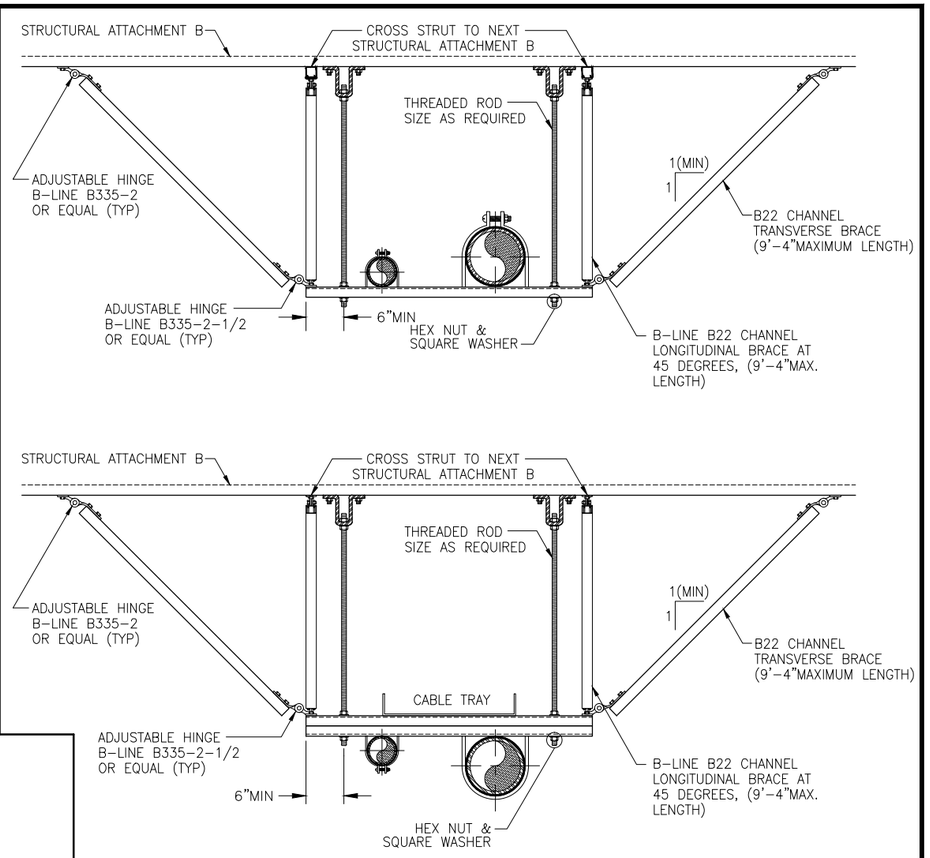
NOTES:

1. SECTIONS OF HOT WATER PIPING BETWEEN ANCHORS AND EXPANSION JOINTS SHALL BE PROVIDED WITH PIPE GUIDES.
2. THE FIRST AND SECOND PIPE GUIDES FROM EXPANSION JOINTS SHALL BE LOCATED AT A MAXIMUM OF FOUR AND EIGHTEEN PIPE DIAMETERS RESPECTIVELY FROM FREE END OF THE EXPANSION JOINT. INTERMEDIATE PIPE GUIDES SHALL BE LOCATED AS RECOMMENDED BY THE EXPANSION JOINT MANUFACTURER.

TYPE G3 PIPE GUIDE

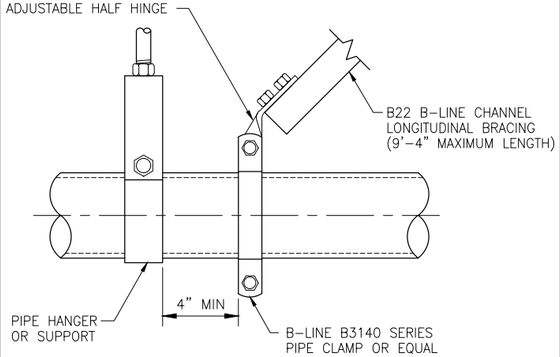
2" THROUGH 12" PIPE

DETAIL 3 TYP NOT TO SCALE



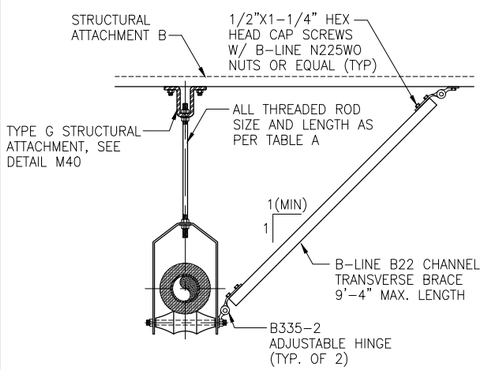
TRAPEZE PIPE HANGER SEISMIC BRACING

DETAIL 4 TYP NOT TO SCALE



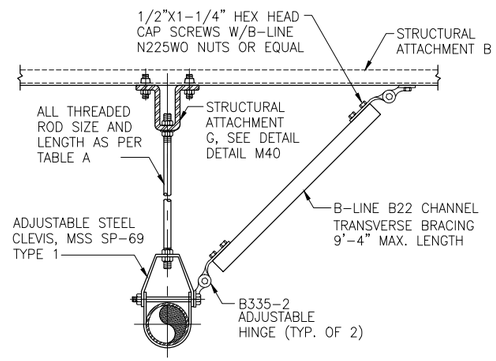
TYPE C SEISMIC LONGITUDINAL BRACING

DETAIL 5 TYP NOT TO SCALE



TYPE 4 PIPE HANGER SEISMIC SUPPORT

DETAIL 6 TYP NOT TO SCALE



TYPE 1 PIPE HANGER SEISMIC SUPPORT

DETAIL 7 TYP NOT TO SCALE

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

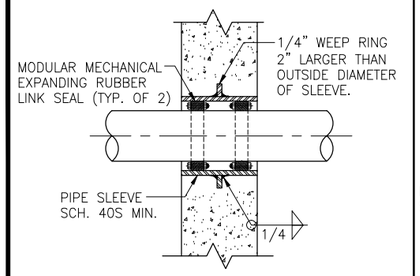
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

PIPE GUIDES, SEISMIC BRACING AND MISCELLANEOUS DETAILS

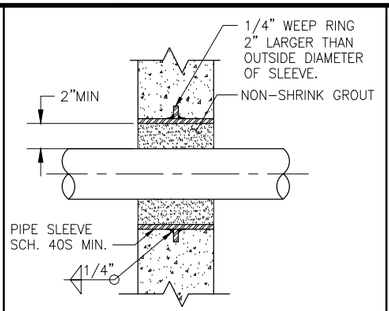
SCALE: NOT TO SCALE
DRAWING NUMBER: M0.5
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\N\SA1224\EXPANSION\SCHEDULE-B\Cadd\Mechanical\ SCH-BM05.DWG NONE
01/22/04 2:51 p.m.



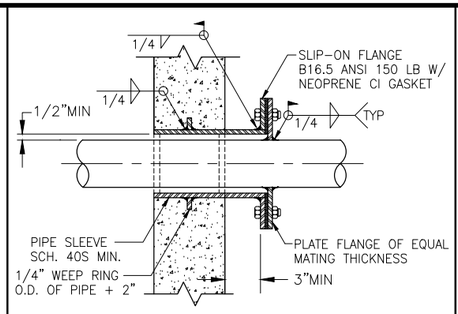
TYPE A
PIPE PENETRATION

DETAIL 1 TYP
NOT TO SCALE



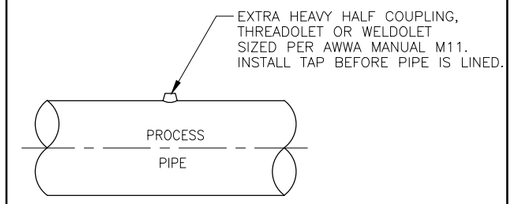
TYPE B
PIPE PENETRATION

DETAIL 2 TYP
NOT TO SCALE



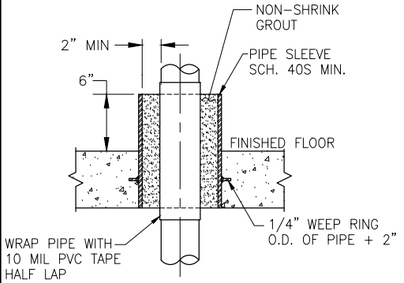
TYPE C PIPE PENETRATION

DETAIL 3 TYP
NOT TO SCALE



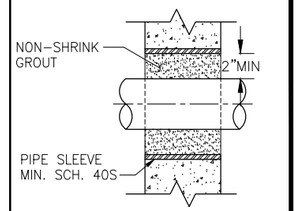
INSTRUMENT TAP

DETAIL 4 TYP
NOT TO SCALE



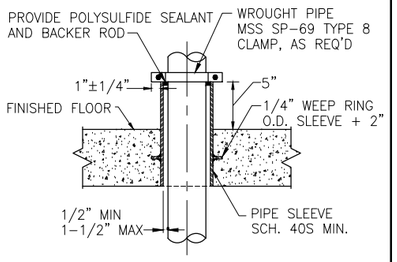
TYPE F
PIPE PENETRATION

DETAIL 5 TYP
NOT TO SCALE



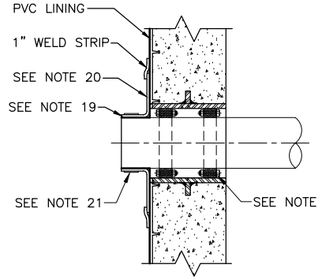
TYPE G
PIPE PENETRATION

DETAIL 6 TYP
NOT TO SCALE



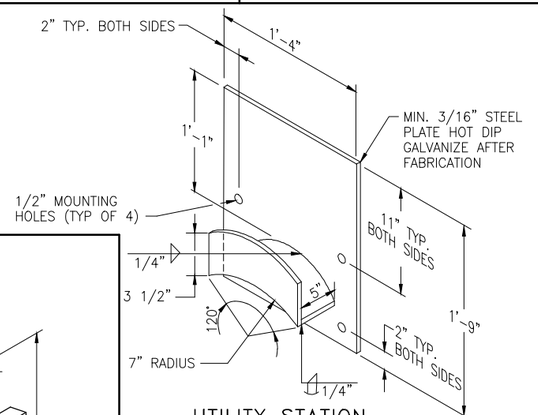
TYPE H PIPE PENETRATION

DETAIL 7 TYP
NOT TO SCALE



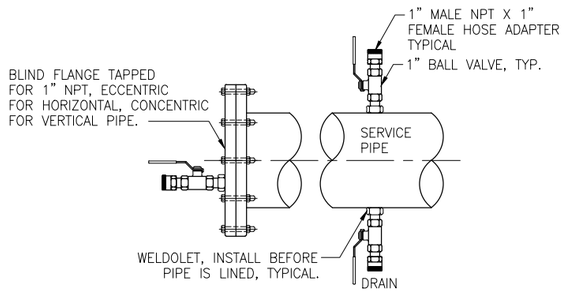
PVC LINING PENETRATION DETAIL

DETAIL 8 TYP
NOT TO SCALE



UTILITY STATION
HOSE RACK

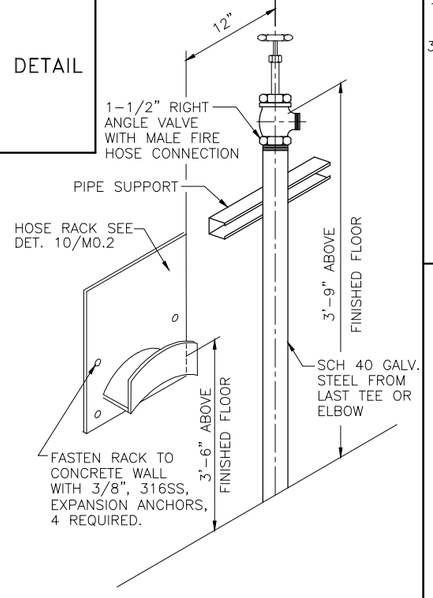
DETAIL 10 TYP
NOT TO SCALE



NOTE:
WHEN SERVICE PIPE IS MORE THAN 6 FEET ABOVE FLOOR, DRAIN (AIR RELEASE) SHALL BE PIPED DOWN TO NEAREST WALL WITH VALVE 4 FEET ABOVE FLOOR.

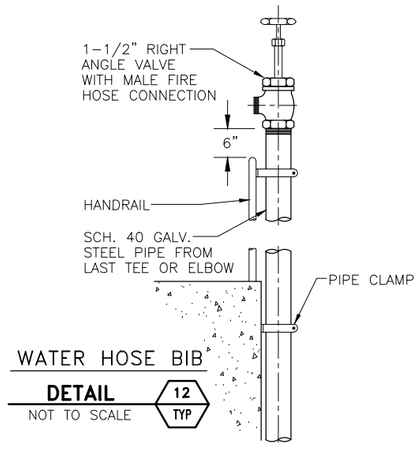
FLUSHING COCK
(FOR VENT OR DRAIN AS REQ'D)

DETAIL 9 TYP
NOT TO SCALE



WALL MOUNT WATER
HOSE BIB AND HOSE RACK

DETAIL 11 TYP
NOT TO SCALE



WATER HOSE BIB

DETAIL 12 TYP
NOT TO SCALE

PIPE PENETRATION TYPES

	CONDITION		TYPE		
	FROM	TO	STEEL PIPE	CAST IRON	PLASTIC PIPE
1	TANK	TANK BELOW WS	A OR B	A OR B	A OR B
2	TANK	TANK BELOW WS	A OR B	A OR B	A OR B
3	PASSAGE	TANK BELOW WS	A,B, OR C	A OR B	A OR B
4	PASSAGE	TANK BELOW WS	A,B OR H	A,B,F OR H	A,B,F OR H
5	PASSAGE	PASSAGE	G OR H	G OR H	G OR H
6	PASSAGE	OUTSIDE WALL	A OR B	A OR B	A OR B
7	PASSAGE	ROOF	AS SHOWN		
8	TANK	OUTSIDE WALL	A OR B	A OR B	A OR B

NOTES:
1. WHERE PIPES PASS THROUGH WALLS, FLOORS OR CEILINGS, PENETRATION SHALL CONFORM TO TABLE UNLESS OTHERWISE SPECIFIED.
2. IN TABLE "TANK" SHALL MEAN ANY PART OF A STRUCTURE CONTANING LIQUID OR IN CONTACT WITH THE EARTH.
3. IN TABLE "PASSAGE" SHALL MEAN ROOM, GALLERY, TUNNEL OR SIMILAR ENCLOSURE.
4. IN TABLE, WATER SURFACE "WS" SHALL MEAN AN ELEVATION 9" ABOVE MAXIMUM WATER SURFACE SHOWN.
5. ALL SLEEVES SHALL BE STEEL HOT DIPPED GALVANIZED AFTER FABRICATION.
6. IN CONDITION 5, DETAIL A,B,C,E OR K SHALL BE USED WHERE ONE SIDE CONTAINS EXPLOSION PROOF EQUIPMENT, WHERE FLOODING IS POSSIBLE OR WHERE SPECIFIED.
7. SEAL FLANGES SHALL BE DRILLED TO 150 POUND STANDARD, EACH JOINT SHALL BE GASKETED. UNLESS OTHERWISE SPECIFIED.
8. WHERE SPECIFIED CAST IRON FLANGES MAY BE INSTALLED FLUSH WITH WALL AND TAPPED FOR STUDS.
9. PROVIDE CURB WHERE PENETRATING FLOOR EXCEPT FOR PENETRATION TYPES F AND H. CURB SHALL BE 4" HIGH BY 3" WIDE.
10. PROVIDE MINIMUM 3" CLEARANCE BETWEEN REINFORCING STEEL AND FERROUS METAL PENETRATIONS.
11. FLEXIBLE JOINTS SHALL BE PROVIDED FOR UNDERGROUND PIPING AS SPECIFIED.
12. RESTRAINED FLEXIBLE COUPLINGS FOR STEEL PIPE SHALL BE DESIGNED FOR 150 PSI LINE TEST PRESSURE SPECIFIED IN SECTION 15060 (PIPE SPEC.) WITH AWWA MANUAL MII.
13. INSULATION SHALL NOT EXTEND THROUGH SLEEVES, UNLESS OTHERWISE SPECIFIED.
14. "TANK SIDE OF WALL" SHALL MEAN SIDE OF WALL NORMALLY EXPOSED TO LIQUID, EARTH, OR OUTSIDE ATMOSPHERE.
15. SEAL WITH POLYSULFIDE WHERE WALL IS EXPOSED TO LIQUID, EARTH OR EXPLOSION HAZARD AREA.
16. NOT ALL PENETRATIONS ARE USED IN THESE CONTRACT DRAWINGS.
17. WHERE PENETRATIONS GO THROUGH WALLS WITH PVC LINING, USE DET. 8/M0.6
18. WITHIN WALL USE TYPE A PIPE PENETRATION
19. PVC LINING BONDED WITH 19Y ADHESIVE MANUFACTURED BY AMERON.
20. SPECIAL FORMED BOOT 3/32" AMER PLATE PLAIN SHEET.
21. SECURE WITH 304 SSTL BOND.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

PIPE PENETRATIONS AND MISCELLANEOUS DETAILS

SCALE: NOT TO SCALE
DRAWING NUMBER: M0.6
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-B\Cadd\Conformed\Mechanical\ SCH-BM06.DWG NONE
05/20/04 11:55 a.m.

EQUIPMENT NUMBER	TYPE	OPENING SIZE (W x H)	GATE HEIGHT	MAXIMUM SEATING HEAD (NOTE 2)	MAXIMUM UNSEATING HEAD (NOTE 2)	MOUNTING	BOTTOM CLOSURE TYPE (NOTE 3,4)	FRAME TYPE	FRAME MATERIAL	SLIDE MATERIAL	OPERATOR OR HANDLE TYPE (NOTE 5)	DIRECTION OF OPENING (NOTE 6)	STEM TYPE (NOTE 7)	LOCATION	DRAWING NUMBER	FRAME ONLY	FRAME & GATE	TRAVEL (NOTE 8)
3 INFLUENT PUMP STATION																		
SLDG-03-01	SLIDE GATE	36" x 98"	7.0 FEET	4 FEET	4 FEET	WALL	FLUSH	SELF CONTAINED	SSTL	SSTL	OFFSET CHAINWHEEL	UPWARD	NON-RISING	INFLUENT PUMP STATION	M3.02	NO	YES	60"
SLDG-03-02	SLIDE GATE	36" x 98"	7.0 FEET	4 FEET	4 FEET	WALL	FLUSH	SELF CONTAINED	SSTL	SSTL	OFFSET CHAINWHEEL	UPWARD	NON-RISING	INFLUENT PUMP STATION	M3.02	NO	YES	60"
SLDG-03-03	SLIDE GATE	36" x 98"	7.0 FEET	4 FEET	4 FEET	WALL	FLUSH	SELF CONTAINED	SSTL	SSTL	OFFSET CHAINWHEEL	UPWARD	NON-RISING	INFLUENT PUMP STATION	M3.02	NO	YES	60"
SLDG-03-04	SLIDE GATE	36" x 98"	7.0 FEET	2.5 FEET	2.5 FEET	WALL	FLUSH	SELF CONTAINED	SSTL	SSTL	OFFSET CHAINWHEEL	UPWARD	NON-RISING	INFLUENT PUMP STATION	M3.02	NO	YES	60"
SLDG-03-05	SLIDE GATE	36" x 98"	7.0 FEET	2.5 FEET	2.5 FEET	WALL	FLUSH	SELF CONTAINED	SSTL	SSTL	OFFSET CHAINWHEEL	UPWARD	NON-RISING	INFLUENT PUMP STATION	M3.02	NO	YES	60"
SLDG-03-06	SLIDE GATE	36" x 98"	7.0 FEET	2.5 FEET	2.5 FEET	WALL	FLUSH	SELF CONTAINED	SSTL	SSTL	OFFSET CHAINWHEEL	UPWARD	NON-RISING	INFLUENT PUMP STATION	M3.02	NO	YES	60"
STPG-03-01	STOP GATE	36" x 98"	7.5 FEET	4 FEET	4 FEET	CHANNEL	FLUSH	NON-SELF CONTAINED	SSTL	AL	N/A	N/A	N/A	INFLUENT PUMP STATION	M3.02	NO	YES	N/A
STPG-03-02	STOP GATE	49" x 98"	7.5 FEET	4 FEET	4 FEET	CHANNEL	FLUSH	NON-SELF CONTAINED	SSTL	AL	N/A	N/A	N/A	INFLUENT PUMP STATION	M3.02	NO	YES	N/A
SLDG-03-07	SLIDE GATE	60" ø	NOTE 1	7.5 FEET	27 FEET	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/MOTOR OPERATOR	UPWARD	RISING	INFLUENT PUMP STATION	M3.02	NO	YES	60"+
SLDG-03-08	SLIDE GATE	60" ø	NOTE 1	7.5 FEET	27 FEET	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/MOTOR OPERATOR	UPWARD	RISING	INFLUENT PUMP STATION	M3.02	NO	YES	60"+
STLG-03-01	STOP LOG	64" x 165"	11 FEET	6 FEET	6 FEET	CHANNEL	FLUSH	N/A	SSTL	SSTL	N/A	N/A	RISING	INFLUENT PUMP STATION	M3.02	NO	YES	N/A
4 GRIT TANK & PRIMARY SEDIMENTATION BASINS																		
SLDG-04-01	SLIDE GATE	36" x 36"	3.5 FEET	2 FEET	2 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	HANDWHEEL	UPWARD	RISING	GRIT INLET CHANNEL	M4.03	NO	YES	36"
SLDG-04-02	SLIDE GATE	36" x 36"	3.5 FEET	2 FEET	2 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	HANDWHEEL	UPWARD	RISING	GRIT INLET CHANNEL	M4.03	NO	YES	36"
STPG-04-01	STOP GATE	48" x 50"	3.5 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	GRIT DIST. CHANNEL	M4.03	NO	YES	N/A
STPG-04-02	STOP GATE	48" x 50"	3.5 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	GRIT DIST. CHANNEL	M4.03	NO	YES	N/A
STPG-04-03	STOP GATE	36" x 57"	4 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	PSB DIST. CHANNEL	M4.03	NO	YES	N/A
STPG-04-04	STOP GATE	21" x 57"	4 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	PSB DIST. CHANNEL	M4.03	NO	YES	N/A
STPG-04-05	STOP GATE	21" x 57"	4 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	PSB DIST. CHANNEL	M4.03	NO	YES	N/A
STPG-04-06	STOP GATE	21" x 57"	4 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	PSB DIST. CHANNEL	M4.03	NO	YES	N/A
STPG-04-07	STOP GATE	21" x 57"	4 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	PSB DIST. CHANNEL	M4.03	NO	YES	N/A
STPG-04-08	STOP GATE	21" x 57"	4 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	PSB DIST. CHANNEL	M4.03	YES	NO	N/A
STPG-04-09	STOP GATE	21" x 57"	4 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	PSB DIST. CHANNEL	M4.03	YES	NO	N/A
STPG-04-10	STOP GATE	21" x 57"	4 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	PSB DIST. CHANNEL	M4.03	YES	NO	N/A
STPG-04-11	STOP GATE	21" x 57"	4 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	PSB DIST. CHANNEL	M4.03	YES	NO	N/A
STPG-04-12	STOP GATE	21" x 57"	4 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	PSB DIST. CHANNEL	M4.03	YES	NO	N/A
STPG-04-13	STOP GATE	21" x 57"	4 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	PSB DIST. CHANNEL	M4.03	YES	NO	N/A
STPG-04-14	STOP GATE	21" x 57"	4 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	PSB DIST. CHANNEL	M4.03	YES	NO	N/A
STPG-04-15	STOP GATE	21" x 57"	4 FEET	2 FEET	2 FEET	CHANNEL	FLUSH	N/A	SSTL	AL	N/A	N/A	N/A	PSB DIST. CHANNEL	M4.03	YES	NO	N/A
STPG-04-16	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	NO	YES	N/A
STPG-04-17	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	NO	YES	N/A
STPG-04-18	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	NO	YES	N/A
STPG-04-19	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	NO	YES	N/A
STPG-04-20	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	NO	YES	N/A
STPG-04-21	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	NO	YES	N/A
STPG-04-22	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	YES	NO	N/A
STPG-04-23	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	YES	NO	N/A
STPG-04-24	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	NO	YES	N/A
STPG-04-25	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	NO	YES	N/A
STPG-04-26	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	NO	YES	N/A
STPG-04-27	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	NO	YES	N/A
STPG-04-28	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	NO	YES	N/A
STPG-04-29	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	YES	NO	N/A
STPG-04-30	STOP GATE	12" x 18"	3 FEET	1.5 FEET	1.5 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	LAUNDER OUTLET	M4.03	YES	NO	N/A
5 NORTHSIDE AERATION BASIN CONVERSION																		
SLDG-05-01	SLIDE GATE	30" x 24"	2.5 FEET	6 FEET	6 FEET	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/CRANK	UPWARD	RISING	AB SELECTOR BOX	M5.04	NO	YES	30"
SLDG-05-02	SLIDE GATE	30" x 24"	2.5 FEET	6 FEET	6 FEET	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/CRANK	UPWARD	RISING	AB SELECTOR BOX	M5.04	NO	YES	30"
SLDG-05-03	SLIDE GATE	30" x 24"	2.5 FEET	6 FEET	6 FEET	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/CRANK	UPWARD	RISING	AB SELECTOR BOX	M5.04	NO	YES	30"
SLDG-05-04	SLIDE GATE	30" x 24"	2.5 FEET	6 FEET	6 FEET	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/CRANK	UPWARD	RISING	AB SELECTOR BOX	M5.04	NO	YES	30"
SLDG-05-05	SLIDE GATE	30" x 24"	2.5 FEET	6 FEET	6 FEET	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/CRANK	UPWARD	RISING	AB SELECTOR BOX	M5.04	NO	YES	30"
SLDG-05-06	SLIDE GATE	30" x 24"	2.5 FEET	6 FEET	6 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	AB SELECTOR BOX	M5.04	NO	YES	30"
SLDG-05-07	SLIDE GATE	30" x 24"	2.5 FEET	6 FEET	6 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	AB SELECTOR BOX	M5.04	NO	YES	30"
SLDG-05-08	SLIDE GATE	30" x 24"	2.5 FEET	6 FEET	6 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	AB SELECTOR BOX	M5.04	NO	YES	30"
SLDG-05-09	SLIDE GATE	30" x 24"	2.5 FEET	6 FEET	6 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	AB SELECTOR BOX	M5.04	NO	YES	30"
SLDG-05-10	SLIDE GATE	30" x 24"	2.5 FEET	6 FEET	6 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	AB SELECTOR BOX	M5.04	NO	YES	30"

NOTES :

1. PROVIDE GATE TO CLOSE OPENING AS SHOWN ON DRAWINGS
2. MAXIMUM SEATING AND UNSEATING HEAD IS MEASURED FROM THE MAXIMUM WATER SURFACE TO THE CENTER OF THE GATE. THE DISTANCES SHOWN IN THE TABLE HAVE BEEN INCREASED AND ROUNDED OFF TO FEET
3. WALL TYPE BOTTOM ENCLOSURES SHALL HAVE BOTTOM SEALS FOR WALL MOUNT GATES
4. FLUSH BOTTOM GATE, **SEE DET. 1/M0.9**
5. GATE MANUFACTURER SHALL PROVIDE GEAR BOX FOR THE OPERATOR AS REQUIRED TO SATISFY A 40 LB. MAXIMUM PULL.
6. FOR DOWNWARD OPENING GATES, **SEE DET. 2/M0.9**
7. MANUFACTURER SHALL PROVIDE SUFFICIENT STEM LENGTH TO RENDER THE GATE OPERABLE ACCORDING TO SPECIFICATIONS AND AS SHOWN IN DRAWINGS
8. DISTANCE FROM CLOSING TO FULLY OPEN POSITION
9. ADDITIONAL GATE DETAILS SHOWN ON DWG. M0.10.
10. GATES, FRAMES, AND WEIRS LOCATED IN AREAS WITH PVC LINING SHALL BE INSTALLED WITH PVC WELD STRIPS AND ADHESIVES. GROUT AND CONCRETE SHALL BE COMPLETELY COVERED AND PROTECTED WITH PVC LINING.

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
BEYOND ENGINEERING
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REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

GATE SCHEDULE - 1

SCALE: NOT TO SCALE
DRAWING NUMBER: **M0.7**
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT N\SA1224\EXPANSION\SCHEDULE-B\Cadd\Conformed\Mechanical\ SCH-BM07.DWG NONE
01/19/04 2:00 p.m.

EQUIPMENT NUMBER	TYPE	OPENING SIZE (W x H)	GATE HEIGHT	MAXIMUM SEATING HEAD (NOTE 2)	MAXIMUM UNSEATING HEAD (NOTE 2)	MOUNTING	BOTTOM CLOSURE TYPE (NOTE 3,4)	FRAME TYPE	FRAME MATERIAL	SLIDE MATERIAL	OPERATOR OR HANDLE TYPE (NOTE 5)	DIRECTION OF OPENING (NOTE 6)	STEM TYPE (NOTE 7)	LOCATION	DRAWING NUMBER	FRAME ONLY	FRAME & GATE	TRAVEL (NOTE 8)
5 NORTHSIDE AERATION BASIN CONVERSION (CONTINUED)																		
SLDG-05-11	SLIDE GATE	12" ø	NOTE 1	6.0 FEET	6.0 FEET	PIPE	PIPE	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	12" ML RECIRC	M5.04	NO	YES	12"
SLDG-05-12	SLIDE GATE	12" ø	NOTE 1	6.0 FEET	6.0 FEET	PIPE	PIPE	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	12" ML RECIRC	M5.04	NO	YES	12"
SLDG-05-13	SLIDE GATE	12" ø	NOTE 1	6.0 FEET	6.0 FEET	PIPE	PIPE	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	12" ML RECIRC	M5.04	NO	YES	12"
SLDG-05-14	SLIDE GATE	12" ø	NOTE 1	6.0 FEET	6.0 FEET	PIPE	PIPE	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	12" ML RECIRC	M5.04	NO	YES	12"
SLDG-05-15	SLIDE GATE	12" ø	NOTE 1	6.0 FEET	6.0 FEET	PIPE	PIPE	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	12" ML RECIRC	M5.04	NO	YES	12"
STPG-05-1	STOP GATE	36" x 96"	90"	7.5 FEET	7.5 FEET	CHANNEL EMBEDDED	FLUSH	N/A	SSTL	ALUMINUM	N/A	N/A	N/A	AB EFFLUENT CHANNEL	M5.05	NO	YES	N/A
STPG-05-2	STOP GATE	36" x 96"	90"	7.5 FEET	7.5 FEET	CHANNEL EMBEDDED	FLUSH	N/A	SSTL	ALUMINUM	N/A	N/A	N/A	AB EFFLUENT CHANNEL	M5.05	NO	YES	N/A
WIRG-05-01	WEIR GATE	48" x 78"	48"	2.5 FEET	4 FEET	WALL & CHANNEL	CROSS RAIL SEAL	SELF-CONTAINED	SSTL	SSTL	HANDWHEEL PEDESTAL	DOWNWARD	RISING	AB NO. 1 INLET	M5.05	NO	YES	24"
WIRG-05-02	WEIR GATE	72" x 78"	66"	2.5 FEET	5.5 FEET	WALL MOUNT	CROSS RAIL SEAL	SELF-CONTAINED	SSTL	SSTL	HANDWHEEL PEDESTAL	DOWNWARD	RISING	AB NO. 2 INLET	M5.05	NO	YES	UP-16" DOWN-28"
WIRG-05-03	WEIR GATE	48" x 78"	48"	2.5 FEET	4 FEET	WALL MOUNT	CROSS RAIL SEAL	SELF-CONTAINED	SSTL	SSTL	YOKE AND BENCHSTAND	DOWNWARD	RISING	AB NO. 3 INLET	M5.05	NO	YES	48"
WIRG-05-04	WEIR GATE	48" x 78"	48"	2.5 FEET	4 FEET	WALL MOUNT	CROSS RAIL SEAL	SELF-CONTAINED	SSTL	SSTL	YOKE AND BENCHSTAND	DOWNWARD	RISING	AB NO. 4 INLET	M5.05	NO	YES	48"
SLDG-05-01	SLIDE GATE	36" x 42"	42"	2.5 FEET	4 FEET	WALL & CHANNEL	CROSS RAIL SEAL	SELF-CONTAINED	SSTL	SSTL	HANDWHEEL PEDESTAL	DOWNWARD	RISING	AB NO. 5 INLET	M5.05	NO	YES	42"
6 AERATION BASINS SOUTHSIDE																		
SLDG-06-01	SLIDE GATE	30" x 30"	2.5 FEET	6.5 FEET	6.5 FEET	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/CRANK	UPWARD	RISING	AB SELECTOR BOX	M6.01	NO	YES	30"
SLDG-06-02	SLIDE GATE	30" x 30"	2.5 FEET	6.5 FEET	6.5 FEET	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/CRANK	UPWARD	RISING	AB SELECTOR BOX	M6.01	NO	YES	30"
SLDG-06-03	SLIDE GATE	30" x 30"	2.5 FEET	6.5 FEET	6.5 FEET	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/CRANK	UPWARD	RISING	AB SELECTOR BOX	M6.01	NO	YES	30"
SLDG-06-04	SLIDE GATE	30" x 30"	2.5 FEET	6.5 FEET	6.5 FEET	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/CRANK	UPWARD	RISING	AB SELECTOR BOX	M6.01	NO	YES	30"
SLDG-06-05	SLIDE GATE	30" x 30"	2.5 FEET	6.5 FEET	6.5 FEET	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/CRANK	UPWARD	RISING	AB SELECTOR BOX	M6.01	NO	YES	30"
SLDG-06-06	SLIDE GATE	30" x 30"	2.5 FEET	6.5 FEET	6.5 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	AB SELECTOR BOX	M6.01	NO	YES	30"
SLDG-06-07	SLIDE GATE	30" x 30"	2.5 FEET	6.5 FEET	6.5 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	AB SELECTOR BOX	M6.01	NO	YES	30"
SLDG-06-08	SLIDE GATE	30" x 30"	2.5 FEET	6.5 FEET	6.5 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	AB SELECTOR BOX	M6.01	NO	YES	30"
SLDG-06-09	SLIDE GATE	30" x 30"	2.5 FEET	6.5 FEET	6.5 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	AB SELECTOR BOX	M6.01	NO	YES	30"
SLDG-06-10	SLIDE GATE	30" x 30"	2.5 FEET	6.5 FEET	6.5 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	AB SELECTOR BOX	M6.01	NO	YES	30"
SLDG-06-11	SLIDE GATE	12" ø	NOTE 1	6.0 FEET	6.0 FEET	PIPE	PIPE	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	12" ML RECIRC	M6.08	NO	YES	12"
SLDG-06-12	SLIDE GATE	12" ø	NOTE 1	6.0 FEET	6.0 FEET	PIPE	PIPE	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	12" ML RECIRC	M6.08	NO	YES	12"
SLDG-06-13	SLIDE GATE	12" ø	NOTE 1	6.0 FEET	6.0 FEET	PIPE	PIPE	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	12" ML RECIRC	M6.08	NO	YES	12"
SLDG-06-14	SLIDE GATE	12" ø	NOTE 1	6.0 FEET	6.0 FEET	PIPE	PIPE	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	12" ML RECIRC	M6.08	NO	YES	12"
SLDG-06-15	SLIDE GATE	12" ø	NOTE 1	6.0 FEET	6.0 FEET	PIPE	PIPE	SELF CONTAINED	SSTL	SSTL	SQUARE NUT	UPWARD	NON-RISING	12" ML RECIRC	M6.08	NO	YES	12"
STPG-06-01	STOP GATE	48" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	NO	YES	N/A
STPG-06-02	STOP GATE	48" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	NO	YES	N/A
STPG-06-03	STOP GATE	48" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	NO	YES	N/A
STPG-06-04	STOP GATE	48" x 58"	4 FEET	2 FEET	2 FEET	WALL	WALL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	NO	YES	N/A
STPG-06-05	STOP GATE	21" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	NO	YES	N/A
STPG-06-06	STOP GATE	21" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	NO	YES	N/A
STPG-06-07	STOP GATE	21" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	NO	YES	N/A
STPG-06-08	STOP GATE	21" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	NO	YES	N/A
STPG-06-09	STOP GATE	21" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	YES	NO	N/A
STPG-06-10	STOP GATE	21" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	YES	NO	N/A
STPG-06-11	STOP GATE	21" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	YES	NO	N/A
STPG-06-12	STOP GATE	21" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	YES	NO	N/A
STPG-06-13	STOP GATE	21" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	YES	NO	N/A
STPG-06-14	STOP GATE	21" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	YES	NO	N/A
STPG-06-15	STOP GATE	21" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	YES	NO	N/A
STPG-06-16	STOP GATE	21" x 58"	4 FEET	2 FEET	2 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	PSB EFFLUENT CHANNEL	M6.01	YES	NO	N/A
STPG-06-37	STOP GATE	36" x 63"	4.5 FEET	3 FEET	3 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	AB EFFLUENT CHANNEL	M6.01	NO	YES	N/A
STPG-06-38	STOP GATE	36" x 63"	4.5 FEET	3 FEET	3 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	AB EFFLUENT CHANNEL	M6.01	NO	YES	N/A
STPG-06-39	STOP GATE	36" x 63"	4.5 FEET	3 FEET	3 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	AB EFFLUENT CHANNEL	M6.01	NO	YES	N/A
STPG-06-40	STOP GATE	36" x 63"	4.5 FEET	3 FEET	3 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	AB EFFLUENT CHANNEL	M6.01	NO	YES	N/A
STPG-06-41	STOP GATE	36" x 63"	4.5 FEET	3 FEET	3 FEET	CHANNEL	CHANNEL	N/A	SSTL	AL	N/A	N/A	N/A	AB EFFLUENT CHANNEL	M6.01	YES	NO	N/A

NOTES :

1. PROVIDE GATE TO CLOSE OPENING AS SHOWN ON DRAWINGS
2. MAXIMUM SEATING AND UNSEATING HEAD IS MEASURED FROM THE MAXIMUM WATER SURFACE TO THE CENTER OF THE GATE. THE DISTANCES SHOWN IN THE TABLE HAVE BEEN INCREASED AND ROUNDED OFF TO FEET
3. WALL TYPE BOTTOM ENCLOSURES SHALL HAVE BOTTOM SEALS FOR WALL MOUNT GATES
4. FLUSH BOTTOM GATE, **SEE DET. 1/M0.9**
5. GATE MANUFACTURER SHALL PROVIDE GEAR BOX FOR THE OPERATOR AS REQUIRED TO SATISFY A 40 LB. MAXIMUM PULL.
6. FOR DOWNWARD OPENING GATES, **SEE DET. 2/M0.9**
7. MANUFACTURER SHALL PROVIDE SUFFICIENT STEM LENGTH TO RENDER THE GATE OPERABLE ACCORDING TO SPECIFICATIONS AND AS SHOWN IN DRAWINGS
8. DISTANCE FROM CLOSING TO FULLY OPEN POSITION
9. ADDITIONAL GATE DETAILS SHOWN ON DWG. M0.10.
10. GATES, FRAMES, AND WEIRS LOCATED IN AREAS WITH PVC LINING SHALL BE INSTALLED WITH PVC WELD STRIPS AND ADHESIVES. GROUT AND CONCRETE SHALL BE COMPLETELY COVERED AND PROTECTED WITH PVC LINING.

\\SAS1\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-B\Cadd\Conformed\Mechanical\ SCH-BM08.DWG NONE
01/19/04 2:00 p.m.

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

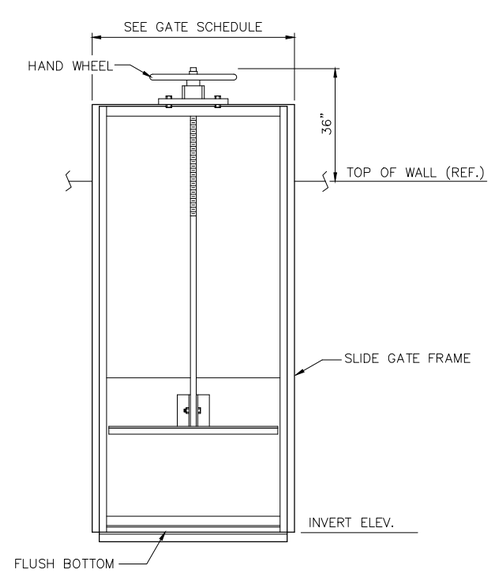
GATE SCHEDULE - 2

SCALE: NOT TO SCALE
DRAWING NUMBER: **M0.8**
SHEET NUMBER: OF SHEETS

EQUIPMENT NUMBER	TYPE	OPENING SIZE (W X H)	GATE HEIGHT	MAXIMUM SEATING HEAD (NOTE 1)	MAXIMUM UNSEATING HEAD (NOTE 1)	SIDE MOUNTING (NOTE 2)	BOTTOM CLOSURE TYPE (NOTE 3)	FRAME TYPE (NOTE 4)	FRAME MATERIAL	SLIDE MATERIAL	OPERATOR OR HANDLE TYPE	DIRECTION OF OPENING (NOTE 6)	STEM TYPE (NOTE 5)	LOCATION	DRAWING NUMBER	INVERT ELEVATION	OPERATOR ELEVATION	TRAVEL (NOTE 7)	FRAME ONLY	FRAME & GATE
7 SPLITTER BOX																				
WIRG-07-01	WEIR GATE	120" x 36"	3 FEET	3 FEET	3 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	HANDWHEEL	DOWNWARD	RISING	SPLITTER BOX	M7.05			36"	NO	YES
WIRG-07-02	WEIR GATE	120" x 36"	3 FEET	3 FEET	3 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	HANDWHEEL	DOWNWARD	RISING	SPLITTER BOX	M7.05			36"	NO	YES
WIRG-07-03	WEIR GATE	120" x 36"	3 FEET	3 FEET	3 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	HANDWHEEL	DOWNWARD	RISING	SPLITTER BOX	M7.05			36"	NO	YES
WIRG-07-04	WEIR GATE	120" x 36"	3 FEET	3 FEET	3 FEET	WALL	WALL	SELF CONTAINED	SSTL	SSTL	HANDWHEEL	DOWNWARD	RISING	SPLITTER BOX	M7.05			36"	NO	YES
8 UV AND EFFLUENT PUMPING																				
UVMG-08-01	SLIDE	10'-11.5" x 4'- 5"	4'-5"	4'-5"	2'-3"	CHANNEL (NORTH SIDE) WALL (SOUTH SIDE)	WALL	SELF CONTAINED	SSTL	SSTL	MOTOR ACTUATOR	UPWARD	DUAL RISING	UV BUILDING	M8.01	31.25'	38.67'	4'-5"		
UVMG-08-02	SLIDE	10'-11.5" x 4'- 5"	4'-5"	4'-5"	2'-3"	CHANNEL (SOUTH SIDE) WALL (NORTH SIDE)	WALL	SELF CONTAINED	SSTL	SSTL	MOTOR ACTUATOR	UPWARD	DUAL RISING	UV BUILDING	M8.01	31.25'	38.67'	4'-5"		
UVMW-08-01	WEIR	10'-11.5" x 4'- 5"	4'-5"	4'-5"	2'-3"	CHANNEL	WALL	SELF CONTAINED	SSTL	SSTL	MOTOR ACTUATOR	DOWNWARD	DUAL RISING	UV BUILDING	M8.01	31.25'	38.67'	4'-5"		
UVMW-08-02	WEIR	10'-11.5" x 4'- 5"	4'-5"	4'-5"	2'-3"	CHANNEL	WALL	SELF CONTAINED	SSTL	SSTL	MOTOR ACTUATOR	DOWNWARD	DUAL RISING	UV BUILDING	M8.01	31.25'	38.67'	4'-5"		
IFLG-08-01	INLET FLAP	42" DIA	42" DIA	1'-9"	6'-2"	WALL	N/A	N/A	SSTL	SSTL	N/A	UPWARD	N/A	UV BUILDING	M8.01	26.0'	N/A	N/A		
18 EXISTING IRRIGATION PUMP STATION																				
WIRG-18-01	WEIR GATE	48" x 36"	36"	3 FEET	3 FEET	WALL	WALL	SELF-CONTAINED	SSTL	SSTL	HANDWHEEL	DOWNWARD	RISING	IRRIGATION PUMP STATION	M18.01			27"	NO	YES
20 RAPID MIXING, FLOCCULATION, AND FILTERS																				
SLDG-20-01	SLIDE GATE	36" DIA.	36"	11'-6"	11'-6"	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/ CRANK	UPWARD	RISING	RAPID MIX TANK	M20.02	23.33'	43.50'	36"		
SLDG-20-02	SLIDE GATE	36" DIA.	36"	11'-6"	11'-6"	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/ CRANK	UPWARD	RISING	FLOC. TANK NO. 1	M20.02	23.33'	43.50'	36"		
SLDG-20-03	SLIDE GATE	36" DIA.	36"	12'-0"	12'-0"	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/ CRANK	UPWARD	RISING	FLOC. TANK NO. 2	M20.02	23.33'	43.50'	36"		
SLDG-20-04	SLIDE GATE	36" DIA.	36"	11'-6"	11'-6"	WALL	WALL	NON-SELF CONTAINED	SSTL	SSTL	PEDESTAL W/ CRANK	UPWARD	RISING	FLOC. TANK NO. 1	M20.02	34.83'	43.50'	36"		
WIRG-20-01	WEIR GATE	48" x 48"	4'	2'-6"	2'-6"	WALL	WALL	SELF CONTAINED	SSTL	SSTL	HAND WHEEL	DOWNWARD	RISING	FLOC. TANK NO. 1	M20.02	34.83'	43.50'	48"		
WIRG-20-03	WEIR GATE	48" x 48"	4'	2'-6"	2'-6"	WALL	WALL	SELF CONTAINED	SSTL	SSTL	HAND WHEEL	DOWNWARD	RISING	FLOC. TANK NO. 2	M20.02	34.83'	43.50'	48"		
WIRG-20-04	WEIR GATE	48" x 48"	4'	2'-6"	2'-6"	WALL	WALL	SELF CONTAINED	SSTL	SSTL	HAND WHEEL	DOWNWARD	RISING	FLOC. TANK NO. 3	M20.02	34.83'	43.50'	48"		
WIRG-20-05	WEIR GATE	42" x 18"	1'-6"	1'-0"	1'-0"	WALL	WALL	SELF CONTAINED	SSTL	SSTL	PEDESTAL W/ CRANK	DOWNWARD	RISING	FILTER INFLUENT CHANNEL	M20.02	37.00'	43.50'	18"		
22 RAPID MIXING, FLOCCULATION, AND FILTERS																				
SLDG-22-01	SLIDE GATE	36" DIA.	36" DIA.	12'-0"	12'-6"	WALL	WALL	SELF CONTAINED	SSTL	SSTL	PEDESTAL W/ CRANK	UPWARD	RISING	CHLORINE CONTACT TANK	M22.04	19.50'	36.00'	36"		

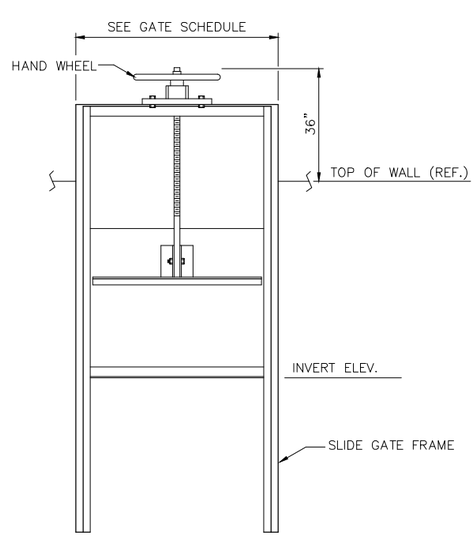
NOTES:

1. MAXIMUM SEATING AND UNSEATING HEAD IS MEASURED FROM THE MAXIMUM WATER SURFACE TO THE CENTER OF THE GATE.
2. FOR WALL MOUNTED FRAME (WALL) MOUNTING SEE DET. 3/M0.8. FOR FLUSH CHANNEL MOUNTED FRAME (CHANNEL) MOUNTING SEE DET. 4/M0.8.
3. FOR WALL MOUNTED FLUSH BOTTOM CLOSURE (WALL) SEE DET. 3/M0.8. FOR CHANNEL EMBEDDED FLUSH BOTTOM CLOSURE (CHANNEL) SEE DET. 4/M0.8. FOR WALL MOUNTED BOTTOM CLOSURE FOR DOWNWARD WEIR GATES (WALL) SEE DET. 5/M0.8.
4. TYPICAL SELF-CONTAINED AND NON-SELF CONTAINED GATE FRAME DETAILS ARE SHOWN ON DWG. M0.8.
5. MANUFACTURER SHALL PROVIDE SUFFICIENT STEM LENGTH TO REND THE GATE OPERABLE ACCORDING TO SPECIFICATIONS AND AS SHOWN IN DRAWINGS.
6. FOR DOWNWARD OPENING GATES, SEE DET. 2/M0.9. OPEN POSITION.
7. DISTANCE TRAVELED BY THE GATE FROM THE CLOSED TO THE FULLY OPEN POSITION.
8. GATES, FRAMES, AND WEIRS LOCATED IN AREAS WITH PVC LINING SHALL BE INSTALLED WITH PVC WELD STRIPS AND ADHESIVES. GROUT AND CONCRETE SHALL BE COMPLETELY COVERED AND PROTECTED WITH PVC LINING.



FLUSH BOTTOM WALL OR CHANNEL MOUNTED SLIDE GATE DETAIL 1

NOT TO SCALE



DOWNWARD OPENING SLIDE GATE DETAIL 2

NOT TO SCALE

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

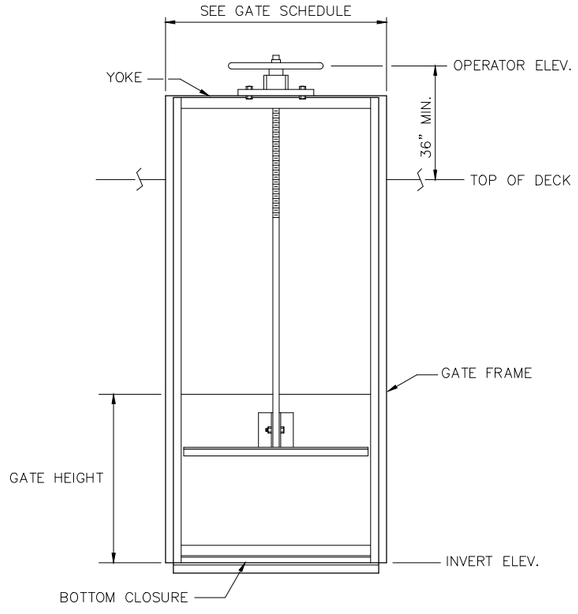
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

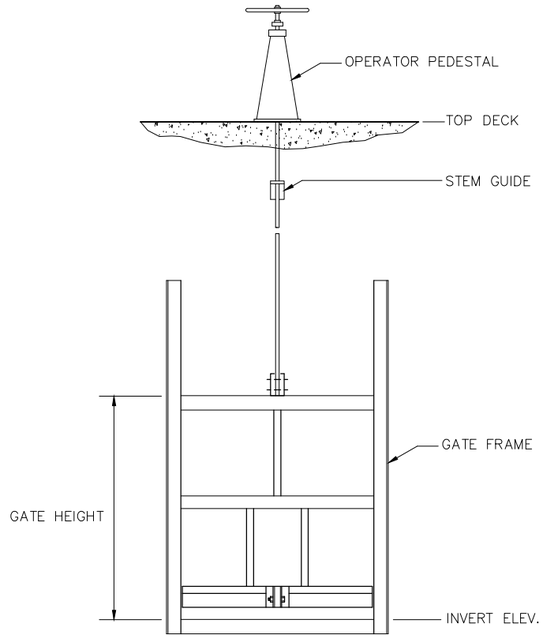
GATE SCHEDULE - 3

SCALE: NOT TO SCALE
DRAWING NUMBER: M0.9
SHEET NUMBER: OF SHEETS

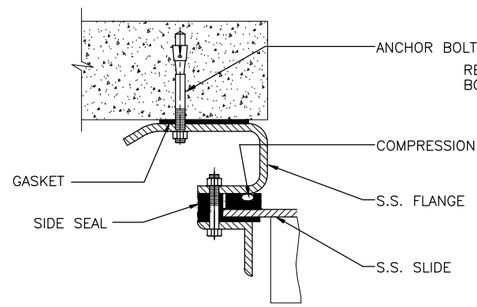
\\SAS1\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-B\Cadd\Mechanical\ SCH-BM09.DWG NONE
01/22/04 2:51 p.m.



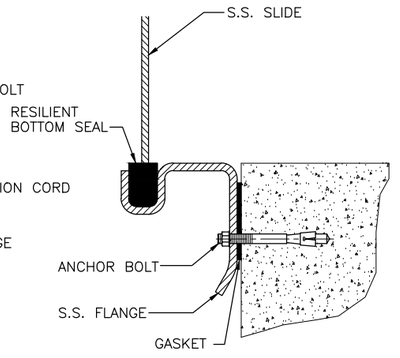
TYPICAL GATE DETAIL SELF-CONTAINED 1/–
NOT TO SCALE



TYPICAL GATE DETAIL NON SELF-CONTAINED 2/–
NOT TO SCALE

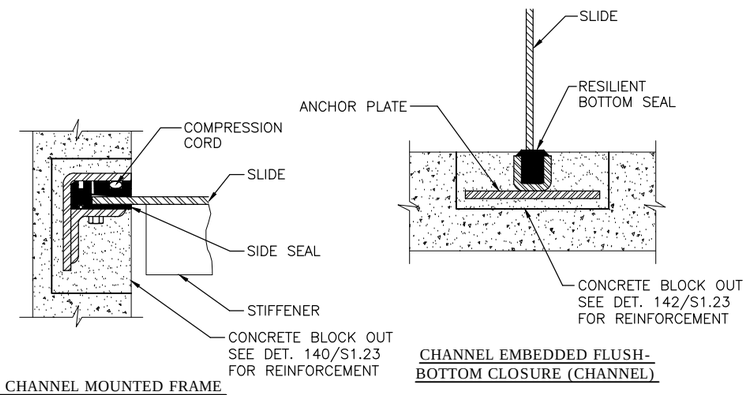


WALL MOUNTED FRAME (WALL)



WALL MOUNTED FLUSH-BOTTOM CLOSURE (WALL)

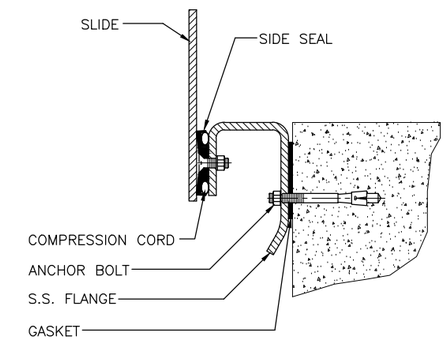
WALL MOUNTED FRAME 3/–
NOT TO SCALE



FLUSH CHANNEL MOUNTED FRAME (CHANNEL)

CHANNEL EMBEDDED FLUSH-BOTTOM CLOSURE (CHANNEL)

CHANNEL MOUNTED FRAME 4/–
NOT TO SCALE



WALL MOUNTED BOTTOM CLOSURE FOR DOWNWARD WEIR GATE (WALL)

DOWNWARD OPENING WEIR GATE 5/–
NOT TO SCALE

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: S.O. OFORI

NO.	BY	DATE	REVISIONS
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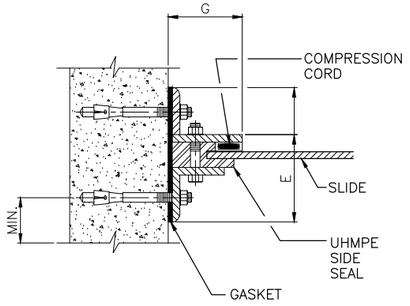
1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
TYPICAL GATE DETAILS

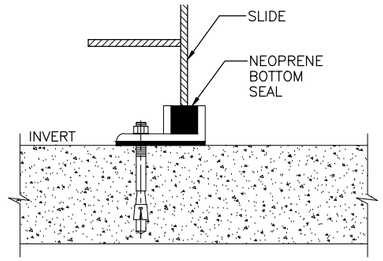
SCALE: NOT TO SCALE
DRAWING NUMBER: **M0.11**
SHEET NUMBER: OF SHEETS

SCH-DM04.DWG NONE
\\SAS1\PROJECT\ N:\SA1224_11\CADD\MECHANICAL\00\
06/13/05 2:11 p.m.



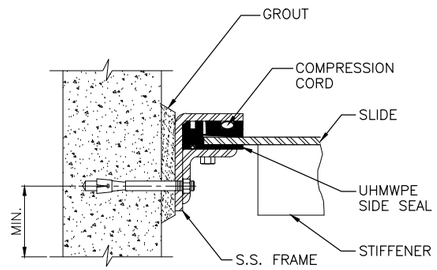
SIDE WALL MOUNTING FOR CHANNEL WALL MOUNTING SLIDE GATES

SECTION DETAIL 1 NOT TO SCALE



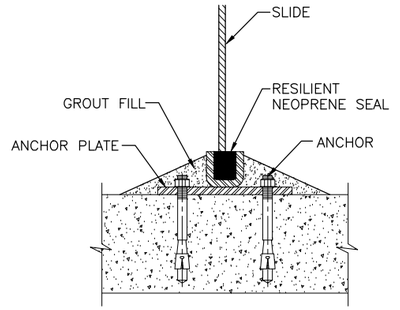
FLUSH BOTTOM CLOSURE FOR SLIDE GATES

SECTION DETAIL 2 NOT TO SCALE



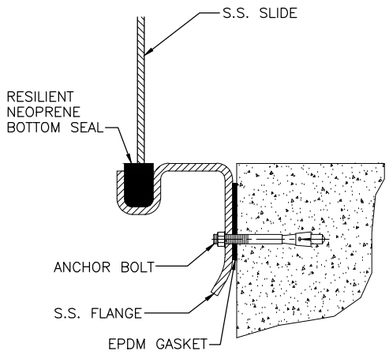
SIDE WALL MOUNTING FOR CHANNEL WALL MOUNTING STOP GATES

SECTION DETAIL 3 NOT TO SCALE



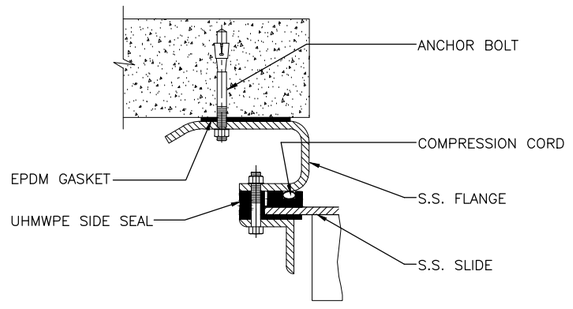
FLUSH BOTTOM CLOSURE FOR STOP GATES

SECTION DETAIL 4 NOT TO SCALE



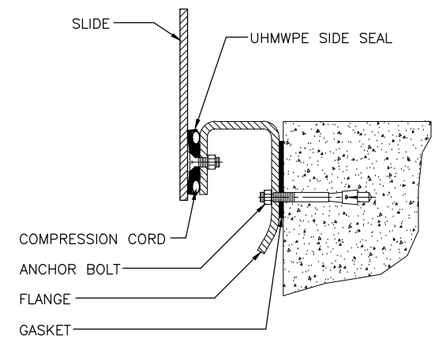
WALL BOTTOM CLOSURE FOR FOR SLIDE AND STOP GATES

SECTION DETAIL 5 NOT TO SCALE



SIDE FRAME SECTION FOR WALL MOUNTING SLIDE GATES

SECTION DETAIL 6 NOT TO SCALE



WEIR GATE BOTTOM SEAL AND DOWNWARD CLOSING SLIDE GATES

SECTION DETAIL 7 NOT TO SCALE

NOTE:

1. GATES, FRAMES, AND WEIRS LOCATED IN AREAS WITH PVC LINING SHALL BE INSTALLED WITH PVC WELD STRIPS AND ADHESIVES. GROUT AND CONCRETE SHALL BE COMPLETELY COVERED AND PROTECTED WITH PVC LINING.

2. MOUNTING DETAILS MAY VARY DEPENDING ON THE EQUIPMENT SUPPLIED. DETAILS SHOULD BE COORDINATED WITH SUPPLIER.

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SLIDE AND STOP GATE SECTIONS AND DETAILS

SCALE: AS NOTED

DRAWING NUMBER: M0.12

SHEET NUMBER: OF SHEETS

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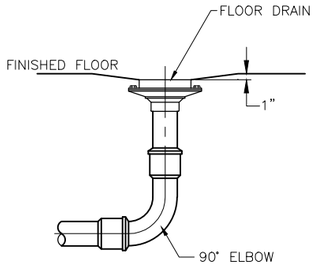
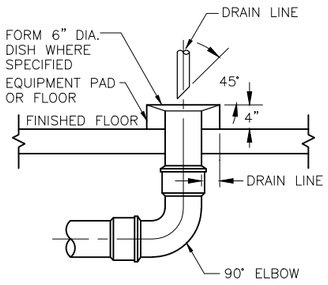


NOTE:

PROVIDE 12" RADIUS SLOPE TO DRAINS WHERE FLOOR DOES NOT SLOPE TO DRAIN.

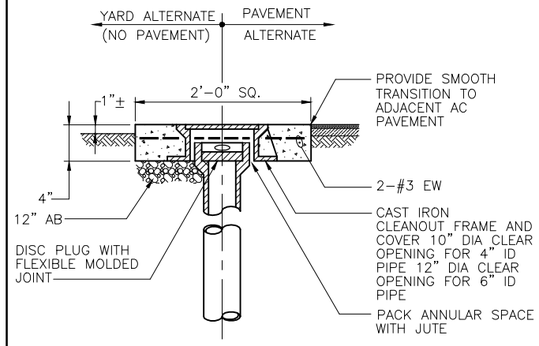
TYPE I FLOOR DRAIN

DETAIL 1 TYP — NOT TO SCALE



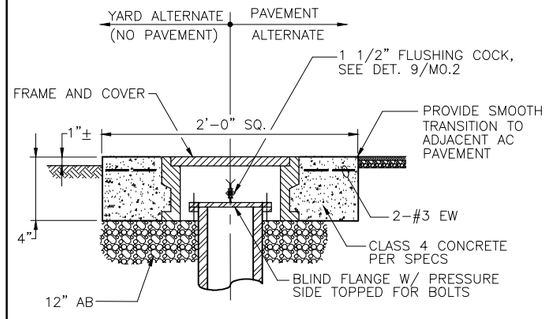
EQUIPMENT DRAIN

DETAIL 2 TYP — NOT TO SCALE



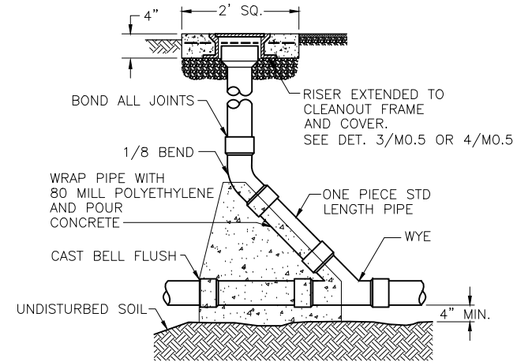
STANDARD CLEANOUT – GRAVITY SYSTEMS

DETAIL 3 TYP — NOT TO SCALE



STANDARD CLEANOUT–PRESSURE SYSTEMS

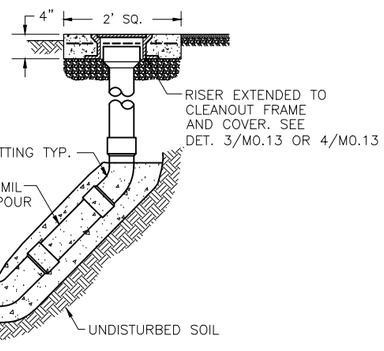
DETAIL 4 TYP — NOT TO SCALE



CLEANOUT TO GRADE

DETAIL 5 TYP — NOT TO SCALE

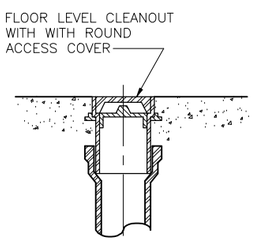
NOTE: POLYETHYLENE WRAP NOT REQUIRED FOR MORTAR COATED STEEL PIPE.



CLEANOUT LINE–END

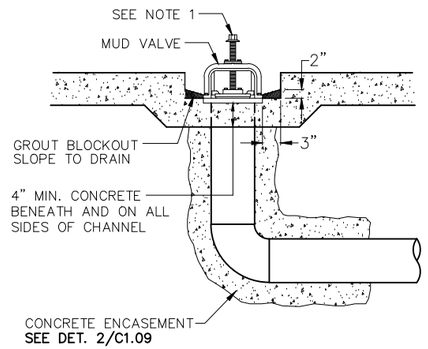
DETAIL 6 TYP — NOT TO SCALE

NOTE: POLYETHYLENE WRAP NOT REQUIRED FOR MORTAR COATED STEEL PIPE.



FLOOR OR WALKWAY CLEANOUT

DETAIL 7 TYP — NOT TO SCALE

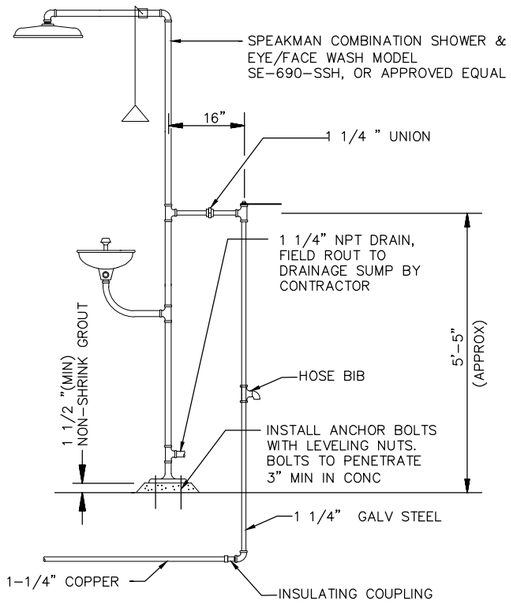


NOTES:

1. FOR ALL MUD VALVES, SUPPLY TYPE 304 STAINLESS STEEL MUD VALVE STEM EXTENSION, SUPPORT, ANCHOR BOLTS, AND ADJUTABLE STEM GUIDE. STEM GUIDE SHALL BE FABRICATED FROM TYPE 304 STAINLESS STEEL AND UHMWPE BUSHED. FOR MUD VALVES BELOW CHECKER PLATE OR GRATING, STAINLESS STEEL NUT OPERATOR SHALL BE INSTALLED 6" BELOW THE CHECKER PLATE OR GRATING. FOR MUD VALVES UNDER CONCRETE DECKS, INSTALL 6" CAST IRON FRAME AND LID IN CONCRETE DECK.

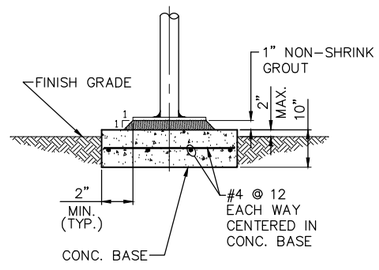
MUD VALVE

DETAIL 8 TYP — NOT TO SCALE



EMERGENCY EYE WASH STATION

DETAIL 9 TYP — NOT TO SCALE



PIPE SUPPORT CONCRETE BASE

DETAIL 10 TYP — NOT TO SCALE

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

CLEANOUT AND MISCELLANEOUS DETAILS

SCALE: NOT TO SCALE
DRAWING NUMBER: M0.13
SHEET NUMBER: OF SHEETS

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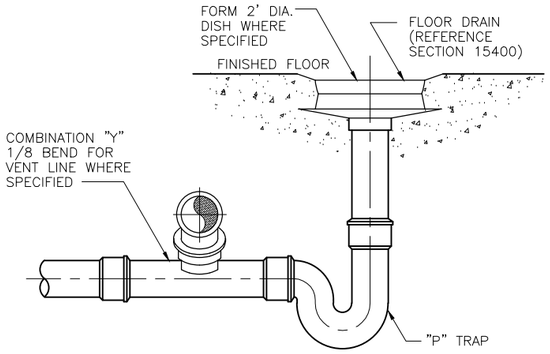
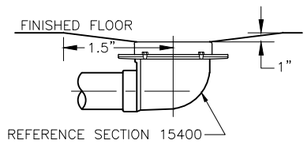
03/30/04 8:56 a.m.



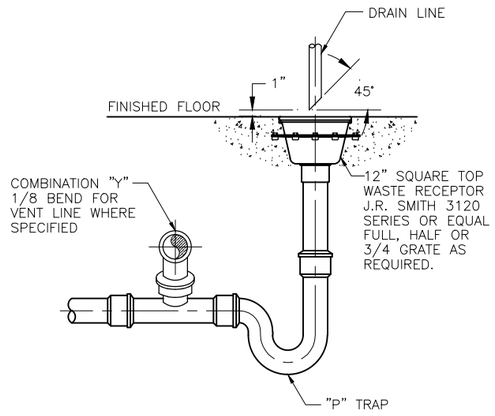
TYPE II FLOOR DRAIN

DETAIL 1 TYP
NOT TO SCALE



TYPE III FLOOR DRAIN

DETAIL 2 TYP
NOT TO SCALE



TYPE II EQUIPMENT DRAIN

DETAIL 3 TYP
NOT TO SCALE

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

CLEANOUT AND MISCELLANEOUS DETAILS

SCALE: AS NOTED
DRAWING NUMBER: **M0.14**
SHEET NUMBER: OF SHEETS

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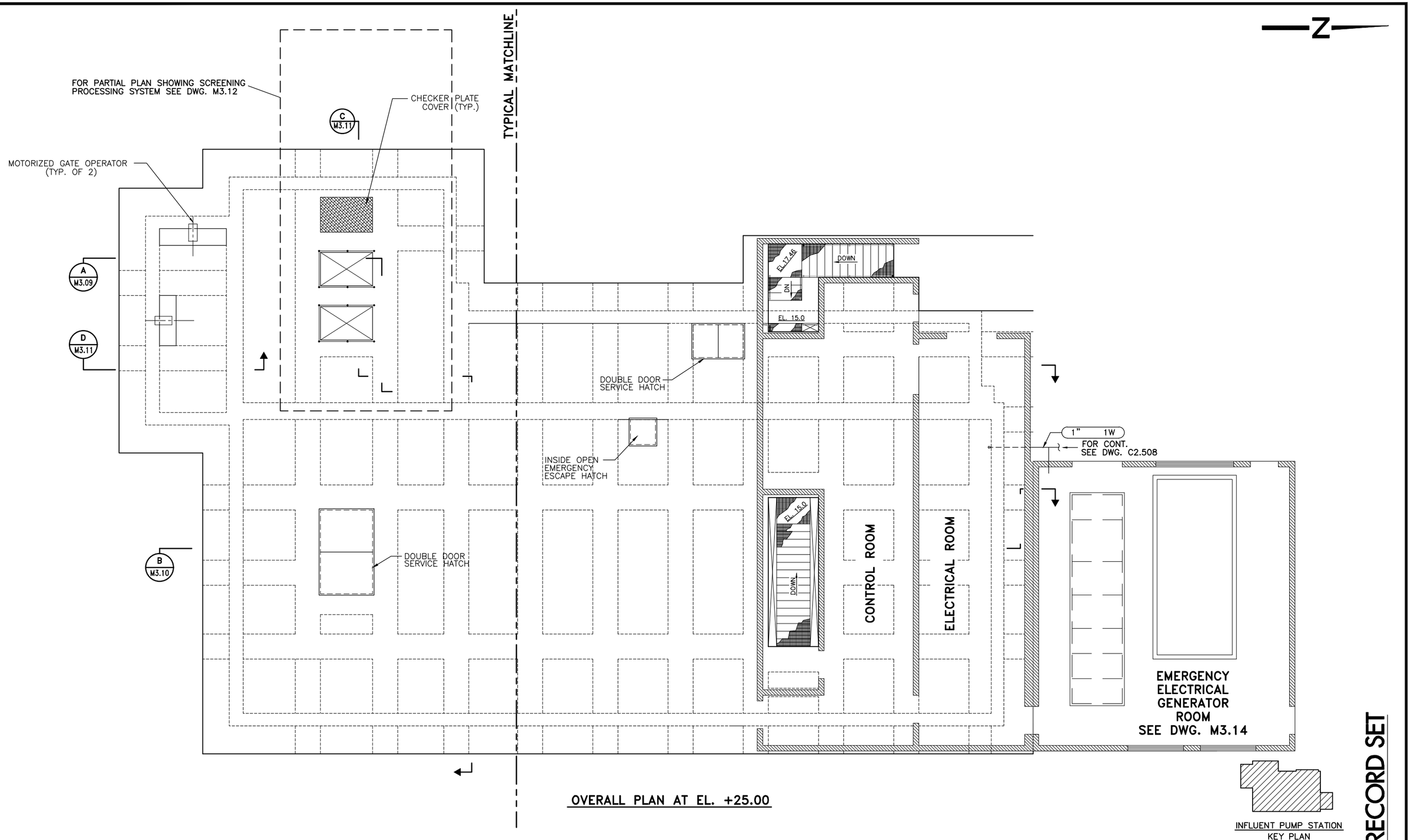

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: V.M. ALANIZ

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

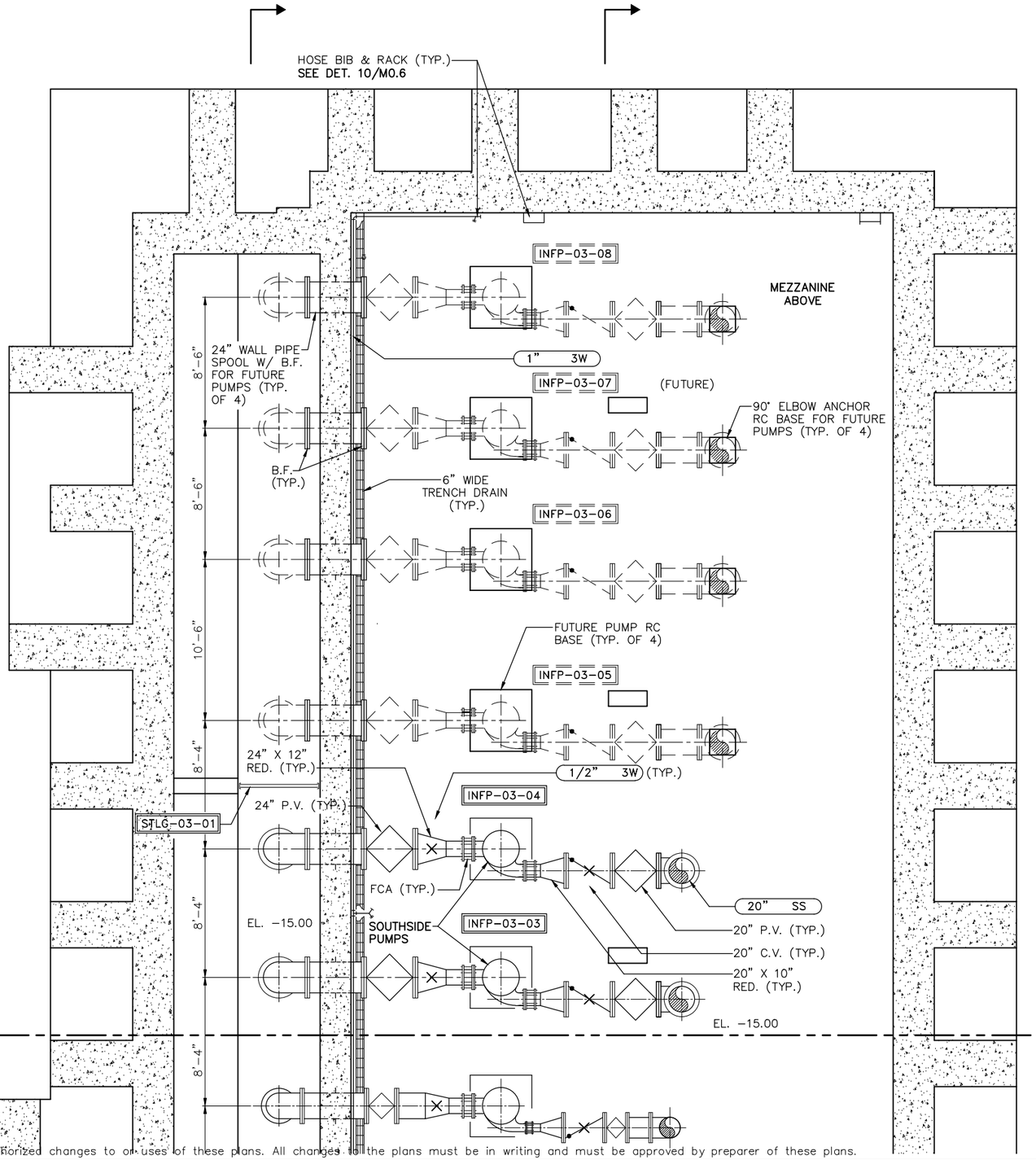
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

INFLUENT PUMP STATION-HEADWORKS
GENERAL PLAN

SCALE 3/16"=1'-0"
DRAWING NUMBER M3.00
SHEET NUMBER OF SHEETS

\\SAS1\PROJECT, N\SA1224\EXPANSION\SCHEDULE-B\Cadd\Mechanical\
01/22/04 3:00 p.m.
SCH-BM300.DWG NONE



N

NOTES:

1. PROVIDE PRESSURE GAUGES ON THE DISCHARGE PIPING OF EVERY PUMP.
2. PROVIDE GAP IN LEDGER AS SHOWN ON DWG. S3.04. FIELD CUTTING OF CHANNEL IS ACCEPTABLE. PROVIDE AN ADDITIONAL ½" DIAMETER THREADED ROD W/ 5" EMBED EA. SIDE OF GATE IF CHANNEL IS FIELD CUT.

INFLUENT PUMP STATION
KEY PLAN

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER
David Richard
No. 33479
EXP.
CIVIL
STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: V.M. ALANIZ

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET~~
~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

INFLUENT PUMP STATION-HEADWORKS LOWER PLAN I AT EL. -15.0

SCALE 1/4"=1'-0"
DRAWING NUMBER M3.01
SHEET NUMBER OF SHEETS

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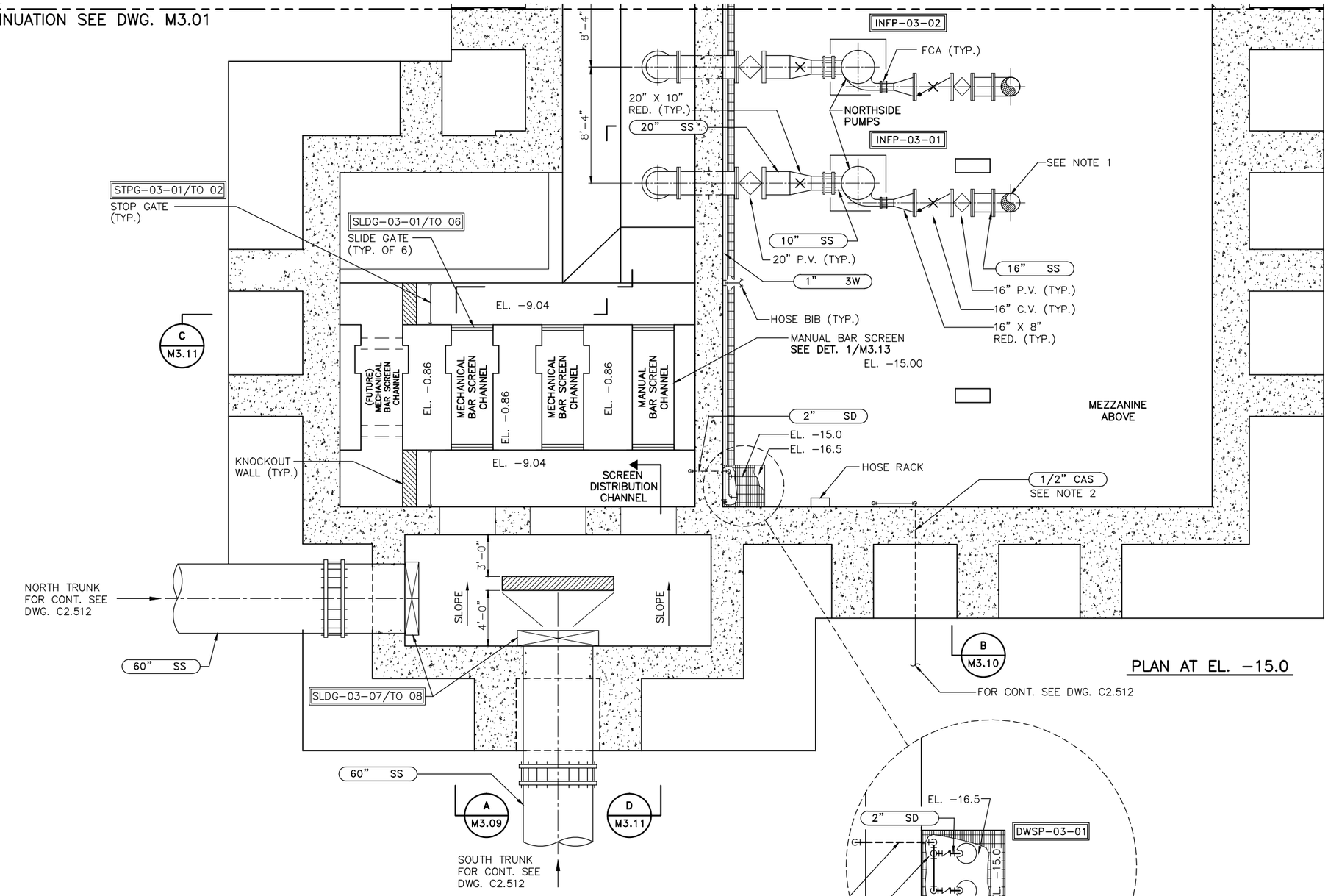
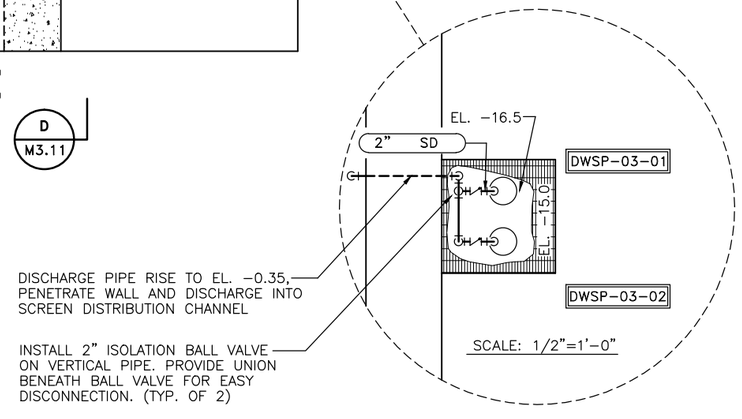
01/19/04 2:00 p.m.

MATCHLINE
FOR CONTINUATION SEE DWG. M3.01

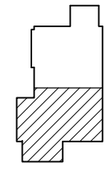


PLAN AT EL. -15.0



NOTES:

1. ORIENTATION OF DISCHARGE PIPING MAY VARY DEPENDING ON PUMP SUPPLIED. REVISE PIPING CONFIGURATION AND SUPPORT LOCATIONS TO ACCOMMODATE PUMP/PIPING ORIENTATION (TYP.)
2. THE 1/2-INCH CAS ENTERS THE PUMP STATION AND SHALL BE ROUTED DOWNWARDS (90 DEGREES). AT ELEVATION -12.00, THE PIPE SHALL TURN 90 DEGREES AND BE ROUTED HORIZONTALLY (WEST) THREE FEET ALONG THE WALL. THE PIPE SHALL TERMINATE WITH A QUICK CONNECT COUPLER SUITABLE FOR COMPRESSED AIR EQUIPMENT.



INFLUENT PUMP STATION
KEY PLAN

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: V.M. ALANIZ

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET~~
~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

INFLUENT PUMP STATION-HEADWORKS LOWER PLAN II AT EL. -15.0

SCALE 1/4"=1'-0"
DRAWING NUMBER M3.02
SHEET NUMBER OF SHEETS

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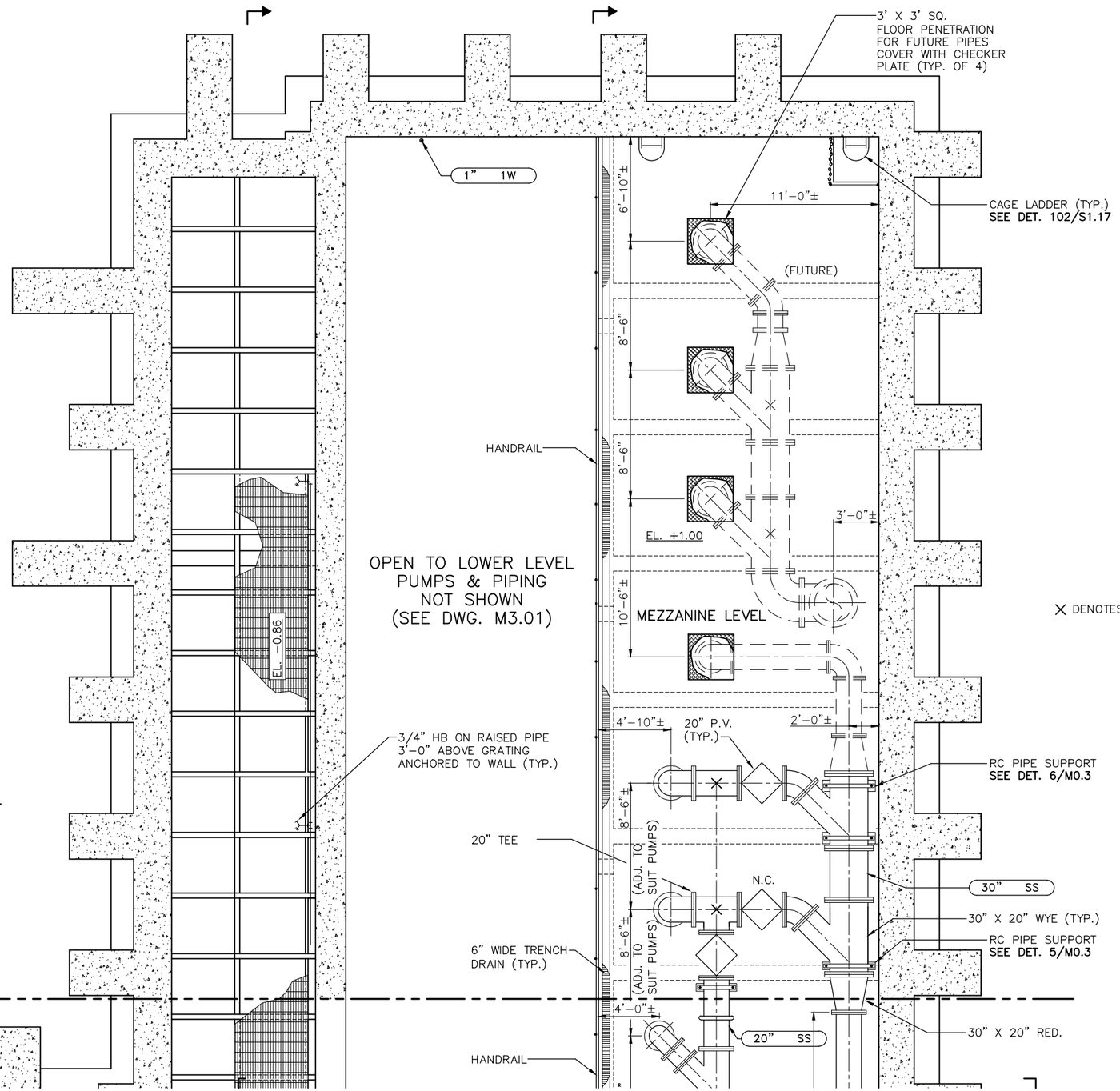
01/19/04 2:00 p.m.



CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: V.M. ALANIZ

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

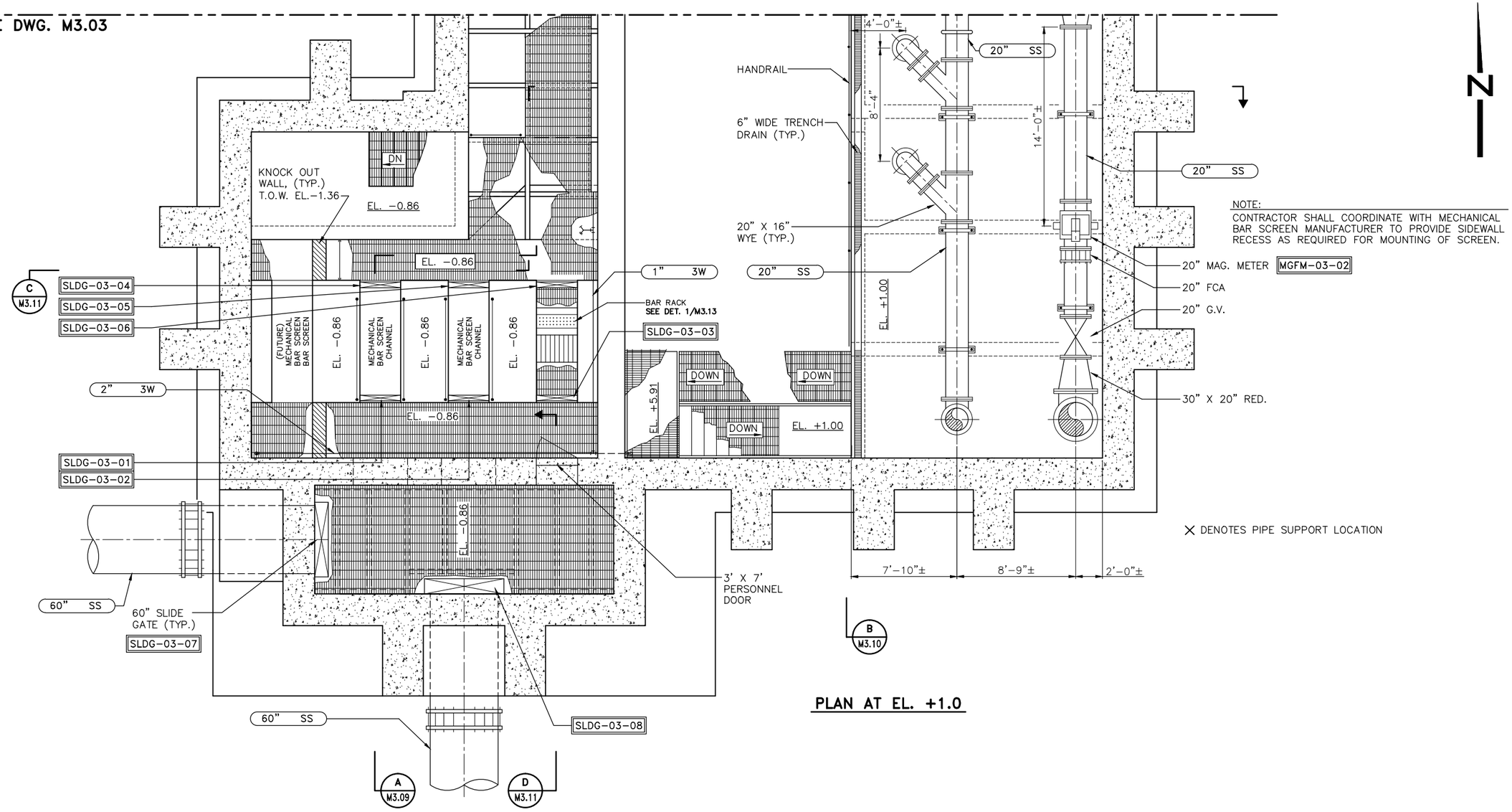
MECHANICAL

INFLUENT PUMP STATION-HEADWORKS INTERMEDIATE PLAN I AT EL. +1.0

SCALE 1/4"=1'-0"
DRAWING NUMBER M3.03
SHEET NUMBER OF SHEETS

\\SAS1\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-B\Cadd\Mechanical\ SCH-BM303.DWG NONE
01/22/04 3:00 p.m.

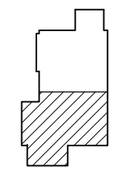
MATCHLINE
FOR CONTINUATION SEE DWG. M3.03



NOTE:
CONTRACTOR SHALL COORDINATE WITH MECHANICAL BAR SCREEN MANUFACTURER TO PROVIDE SIDEWALL RECESS AS REQUIRED FOR MOUNTING OF SCREEN.

X DENOTES PIPE SUPPORT LOCATION

PLAN AT EL. +1.0



INFLUENT PUMP STATION
KEY PLAN

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE:	XXXXXX
PROJECT NO.:	SA1224
DRAWN BY:	K.C. HAYES
CHECKED BY:	D. RICHARD
PROJ. MGR.:	D. RICHARD
PROJ. ENGR.:	V.M. ALANIZ

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

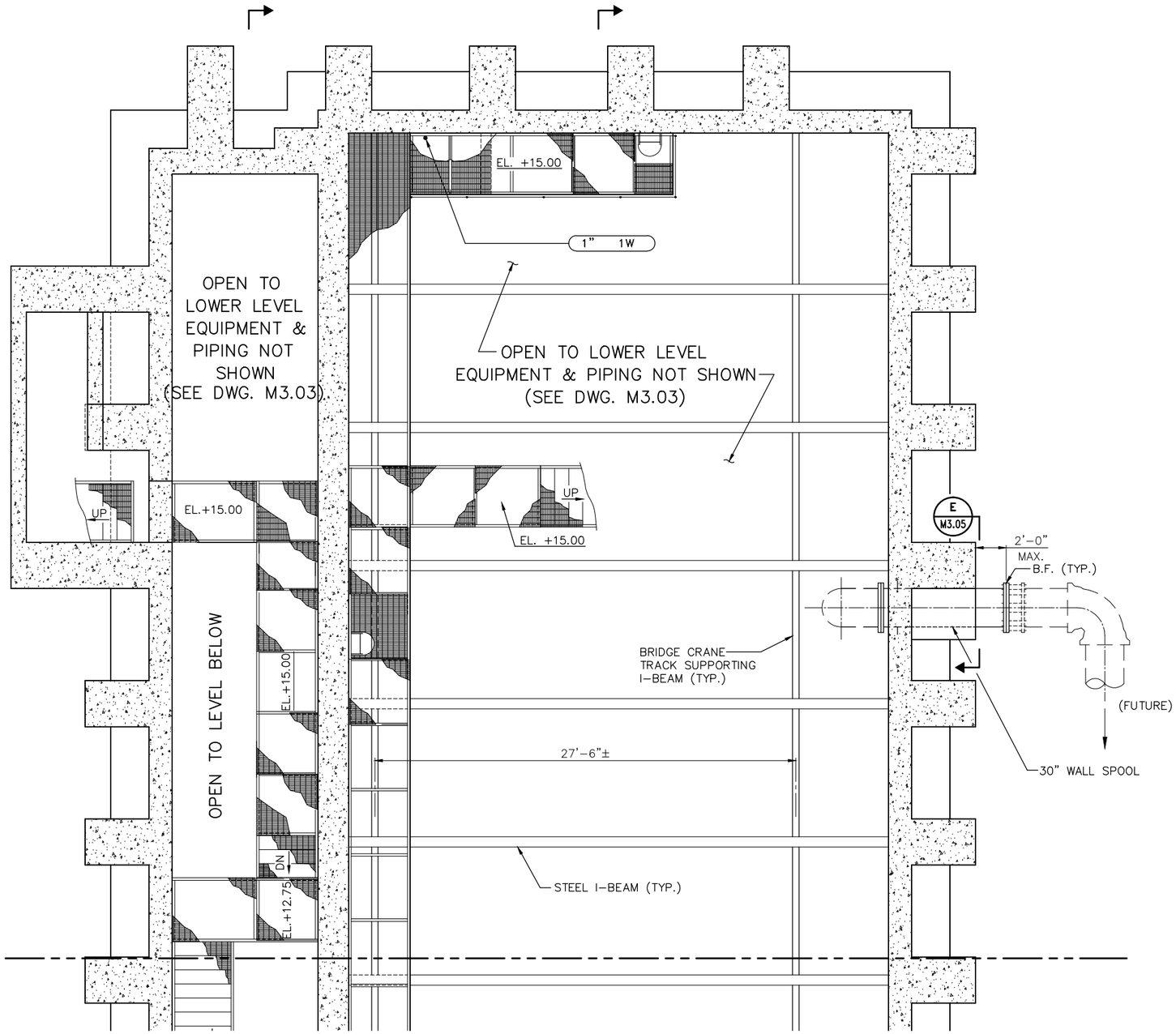
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

INFLUENT PUMP STATION-HEADWORKS INTERMEDIATE PLAN II AT EL. +1.0

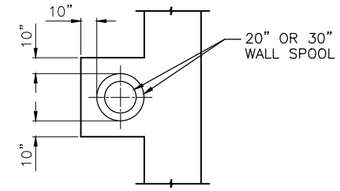
SCALE 1/4"=1'-0"
DRAWING NUMBER M3.04
SHEET NUMBER OF SHEETS

\\SAS\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-B\Cadd\Conformed\Mechanical\ SCH-BM304.DWG NONE
01/19/04 2:00 p.m.



PLAN AT EL. +15.0

MATCHLINE
FOR CONTINUATION SEE DWG. M3.06



SECTION
SCALE: 1/4"=1'-0"
E – E M3.06

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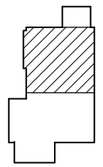

INFLUENT PUMP STATION
KEY PLAN

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: V.M. ALANIZ

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

INFLUENT PUMP STATION-HEADWORKS
INTERMEDIATE PLAN I AT EL. +15.0

SCALE 1/4"=1'-0"
DRAWING NUMBER M3.05
SHEET NUMBER OF SHEETS

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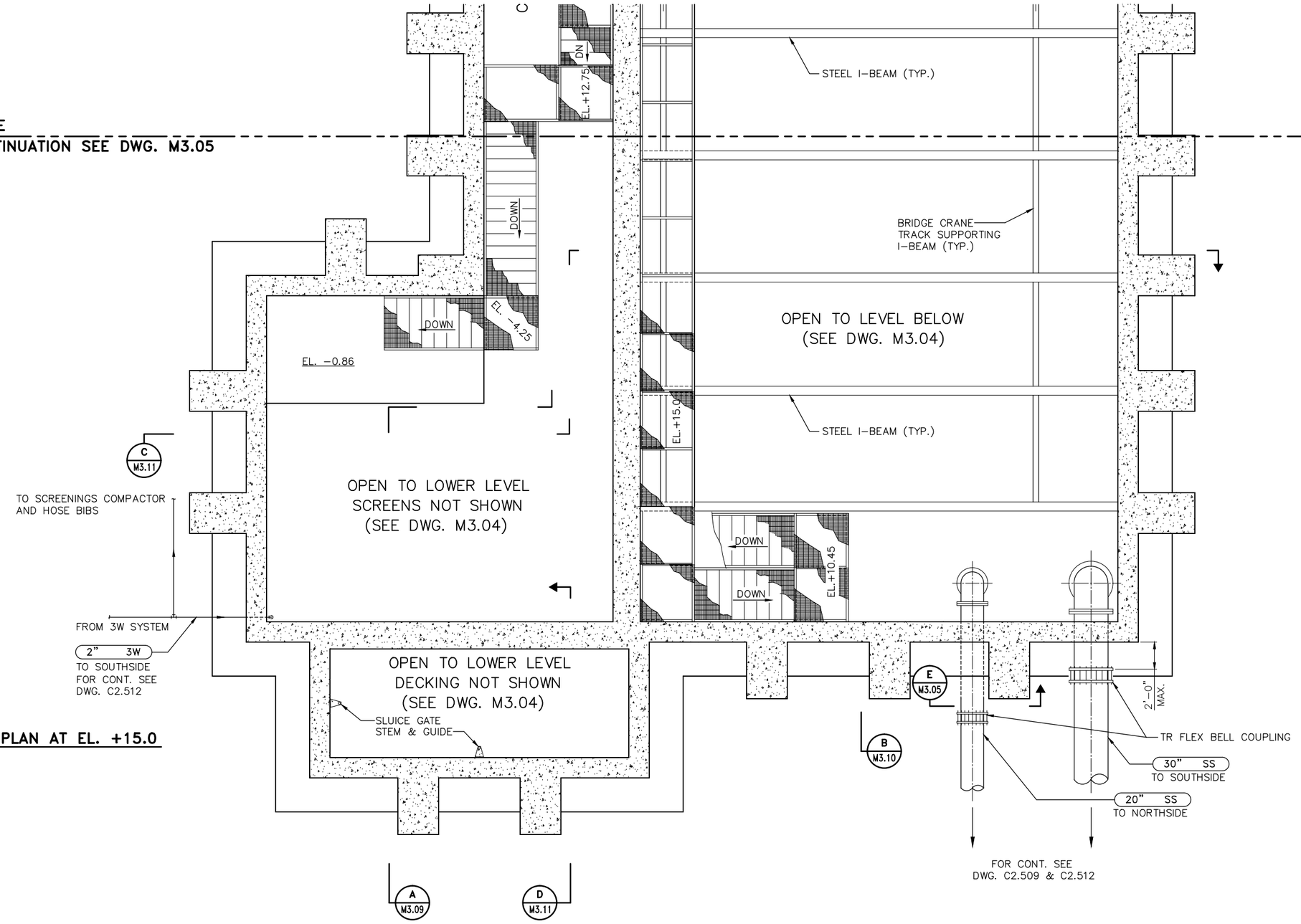
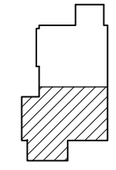
01/22/04 3:01 p.m.



PLAN AT EL. +15.0



INFLUENT PUMP STATION
KEY PLAN

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-1500 ☐ SAN JOSE (408) 287-3400 ☐ SAN DIEGO (619) 378-9382 ☐ WALNUT CREEK (510) 934-8080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: V.M. ALANIZ

REDUCED RECORD SET
NOT TO SCALE

NO.	BY	DATE	REVISIONS
6			
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

INFLUENT PUMP STATION-HEADWORKS
INTERMEDIATE PLAN II AT EL. +15.0

SCALE 1/4"=1'-0"
DRAWING NUMBER M3.06
SHEET NUMBER OF SHEETS

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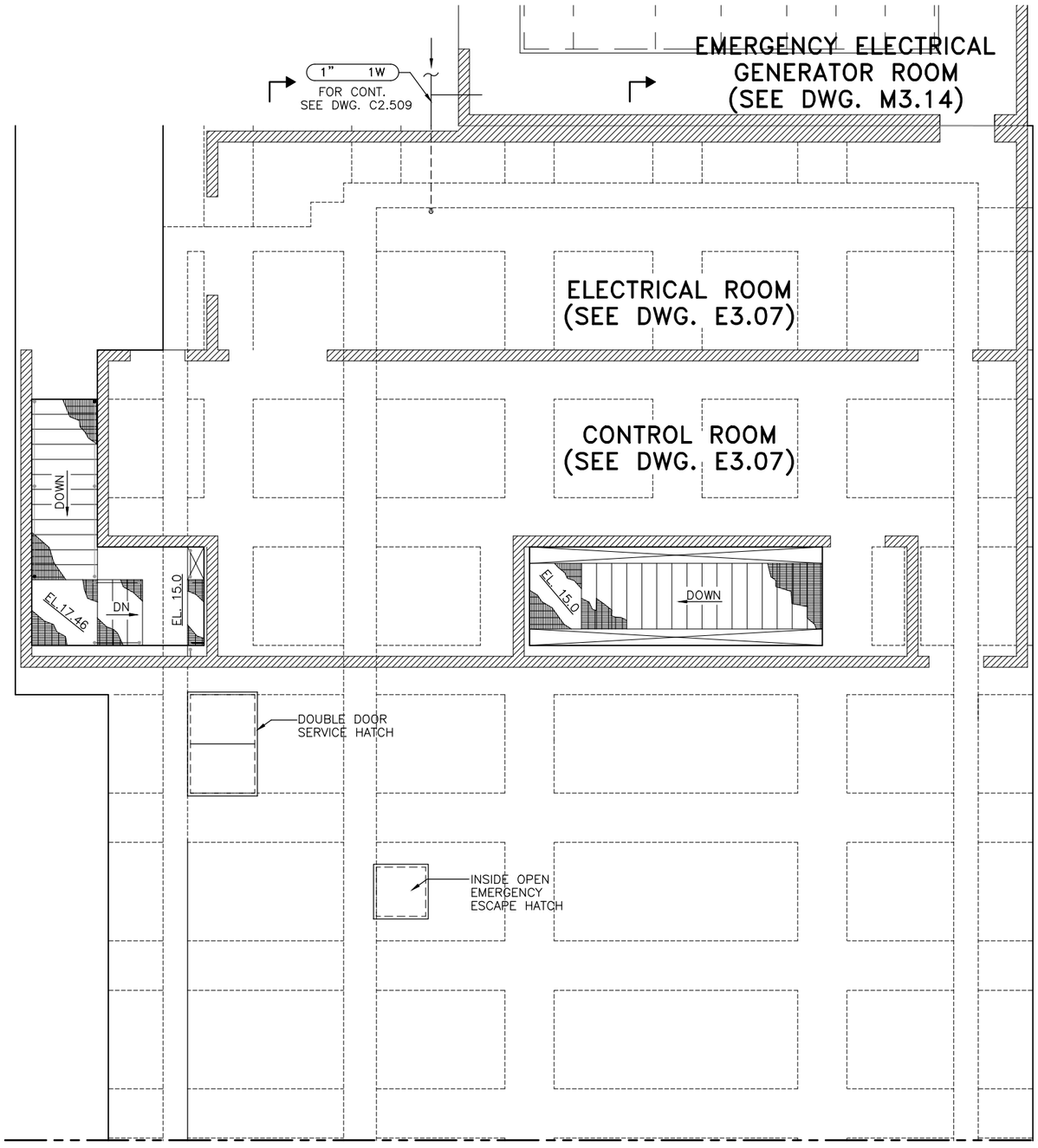
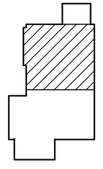
01/22/04 3:01 pm



PLAN AT EL. +25.0

MATCHLINE
FOR CONTINUATION SEE DWG. M3.08

N



INFLUENT PUMP STATION
KEY PLAN

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER
David Richard
No. 33479
EXP.
CIVIL
STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: V.M. ALANIZ

NO.	BY	DATE	REVISIONS
6			
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1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET~~
~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

INFLUENT PUMP STATION-HEADWORKS
UPPER PLAN I AT EL. +25.0

SCALE 1/4"=1'-0"

DRAWING NUMBER **M3.07**

SHEET NUMBER
OF SHEETS

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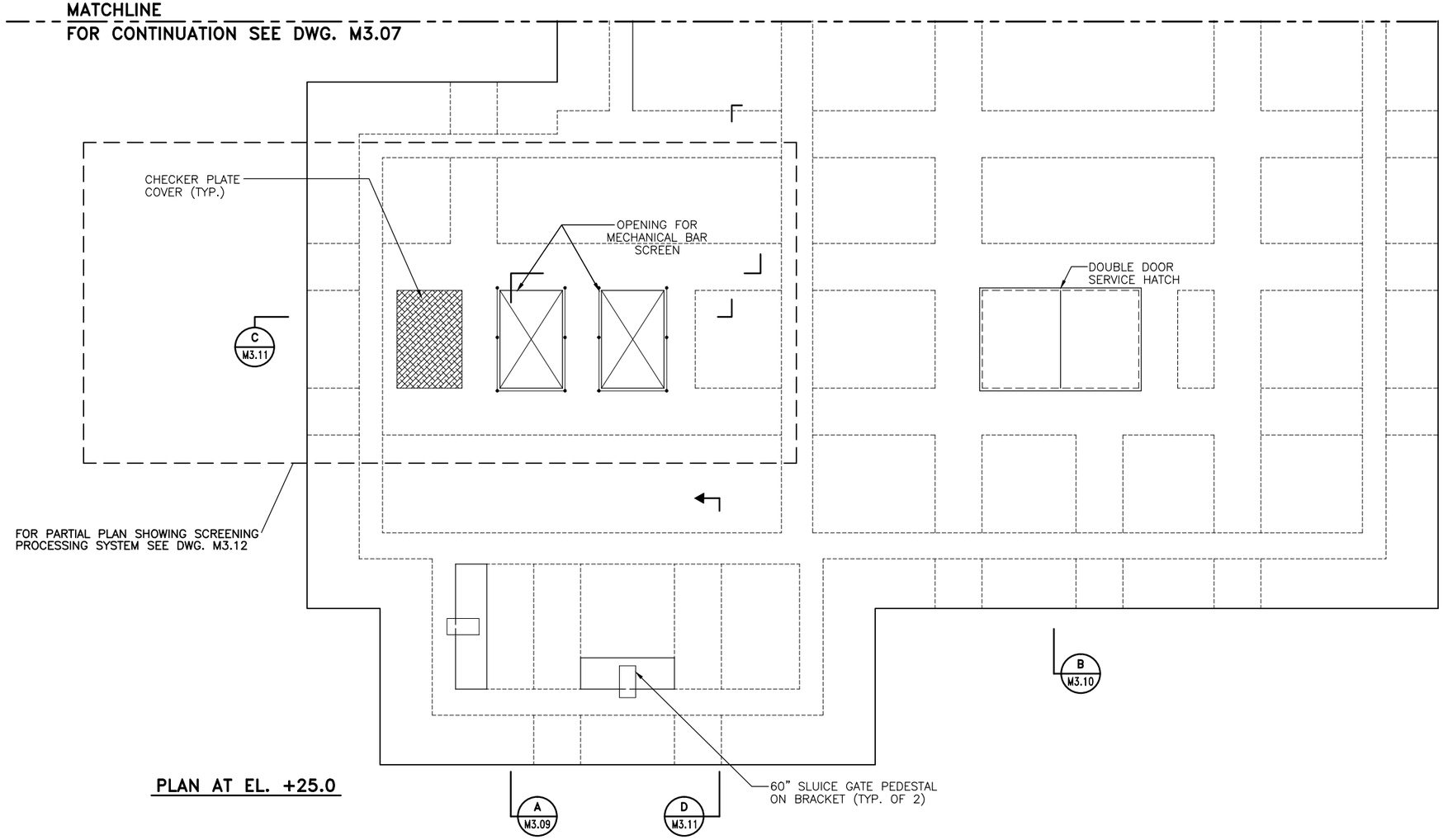
01/22/04 3:01 p.m.

MATCHLINE
FOR CONTINUATION SEE DWG. M3.07

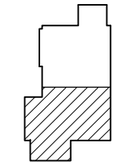


PLAN AT EL. +25.0

N

NOTES:

1. FIELD LOCATE 3W WATER PIPE TO SUIT SUPPLYING 3W WATER TO SCREEN & HOSE BIB.
2. CONTRACTOR SHALL COORDINATE WITH MECHANICAL BAR SCREEN MANUFACTURER TO PROVIDE SIDEWALL RECESS AS REQUIRED FOR MOUNTING OF SCREEN.
3. FOR CLARITY, SCREENING PROCESSING EQUIPMENT NOT SHOWN



INFLUENT PUMP STATION
KEY PLAN

RECORD SET

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NOLTE
BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: V.M. ALANIZ

NO.	BY	DATE	REVISIONS
6			
5			
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2			
1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

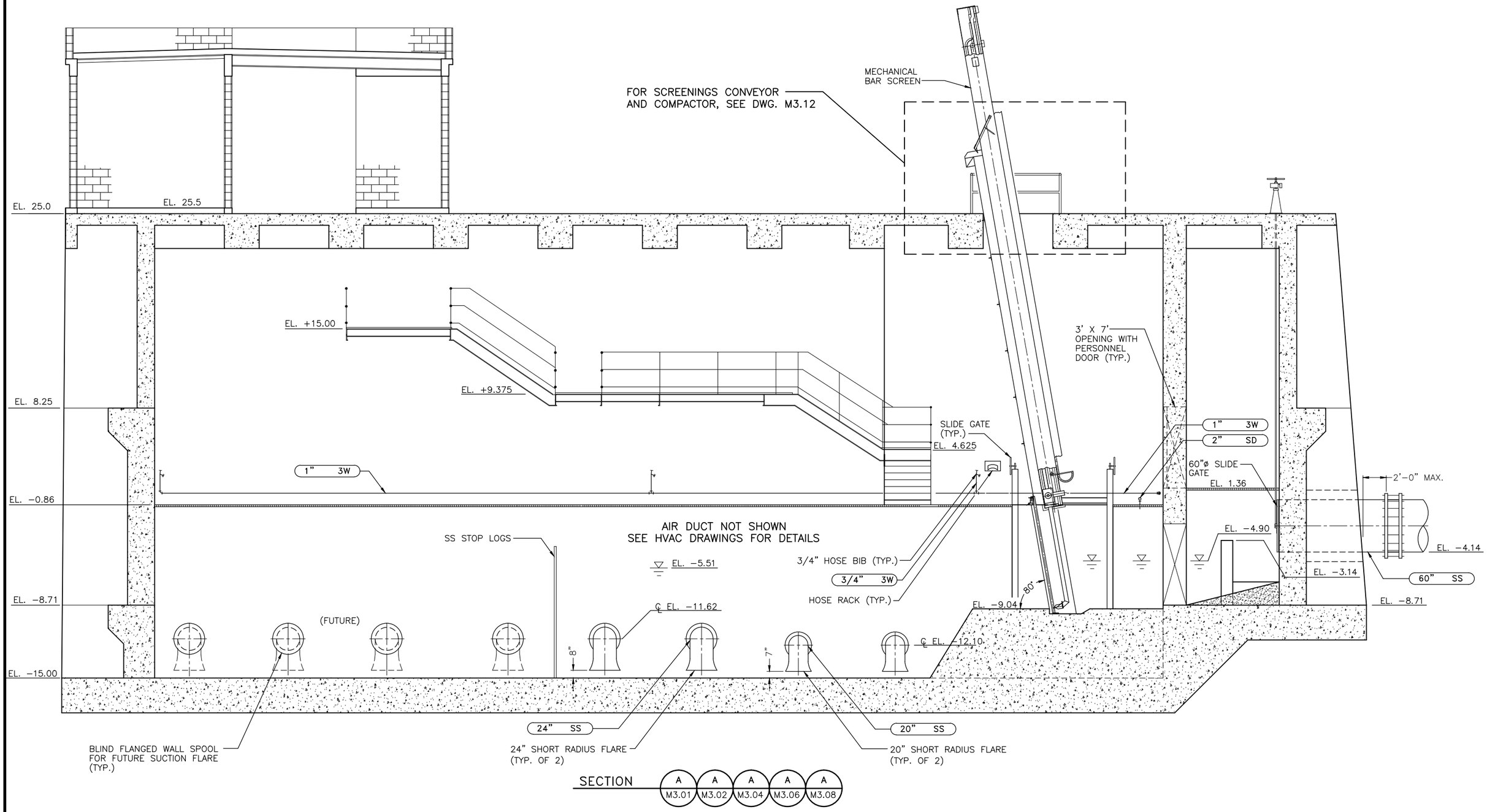
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

INFLUENT PUMP STATION-HEADWORKS
UPPER PLAN AT EL. +25.0

SCALE 1/4"=1'-0"
DRAWING NUMBER M3.08
SHEET NUMBER OF SHEETS

\\SAS1\PROJECT, N\SA1224\EXPANSION\SCHEDULE-B\Cadd\Conformed\Mechanical\ SCH-BM308.DWG NONE
01/19/04 2:00 p.m.



SECTION A M3.01 | A M3.02 | A M3.04 | A M3.06 | A M3.08

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: V.M. ALANIZ

NO.	BY	DATE	REVISIONS
6			
5			REDUCED RECORD SET NOT TO SCALE
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2			
1	SEM	09/11	RECORD SET

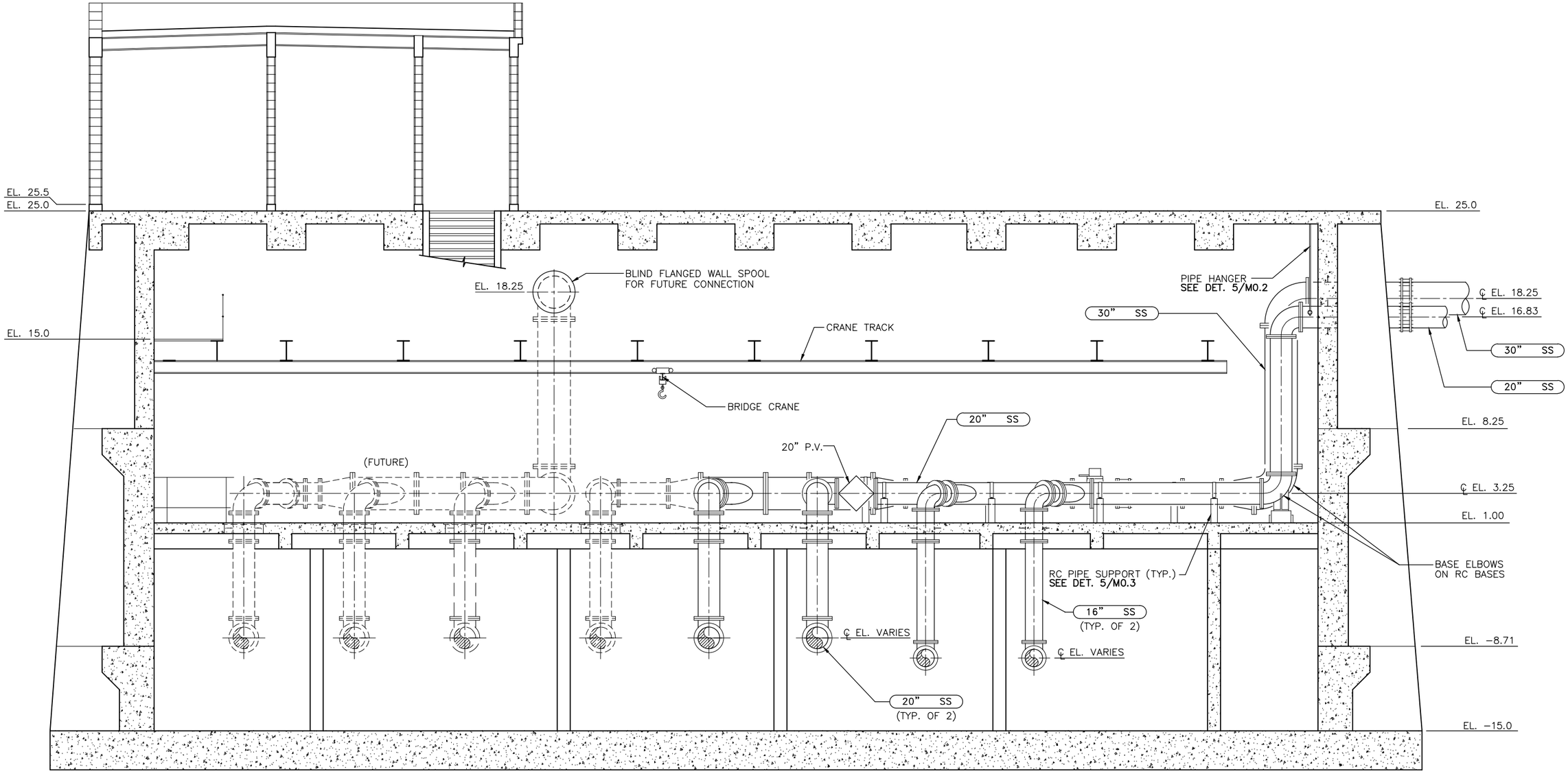
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

INFLUENT PUMP STATION-HEADWORKS SECTION

SCALE 1/4"=1'-0"
DRAWING NUMBER **M3.09**
SHEET NUMBER OF SHEETS

\\SAS1\PROJECT\N:\SA1224\EXPANSION\SCHEDULE-B\Cadd\Conformed\Mechanical\ SCH-BM309.DWG NONE 01/19/04 2:00 p.m.



SECTION B M3.01 | B M3.02 | B M3.04 | B M3.06 | B M3.08

RECORD SET

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NOLTE
BEYOND ENGINEERING
☐ DENVER (720) 781-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 352-1600 ☐ SACRAMENTO (916) 641-1520 ☐ SAN JOSE (408) 287-9400 ☐ SAN DIEGO (619) 374-0382 ☐ WALNUT CREEK (510) 934-0280
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: NONE
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: V.M. ALANIZ

REDUCED RECORD SET
NOT TO SCALE

NO.	BY	DATE	REVISIONS
6			
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

INFLUENT PUMP STATION-HEADWORKS SECTION

SCALE 1/4"=1'-0"

DRAWING NUMBER **M3.10**

SHEET NUMBER OF SHEETS

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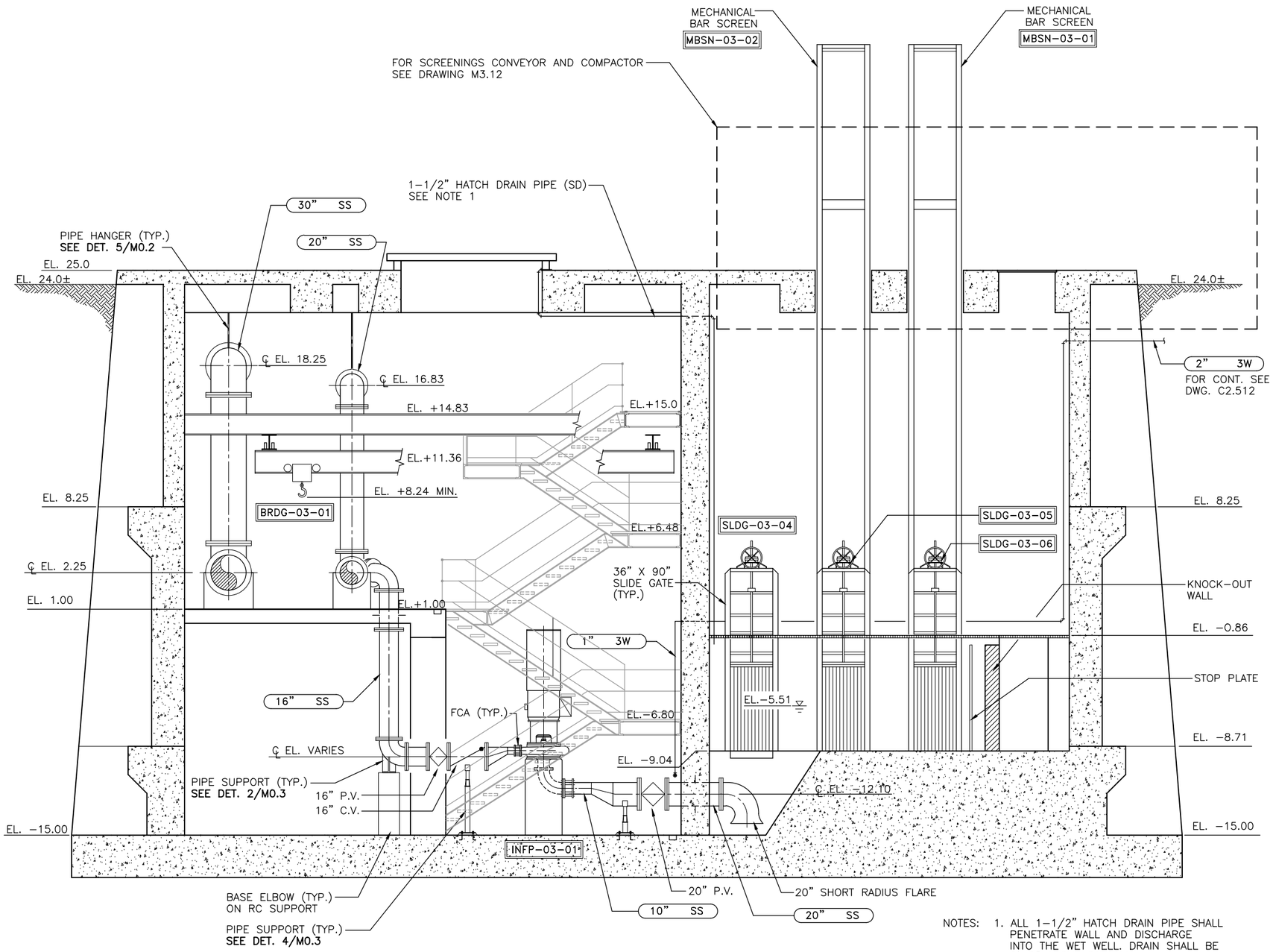
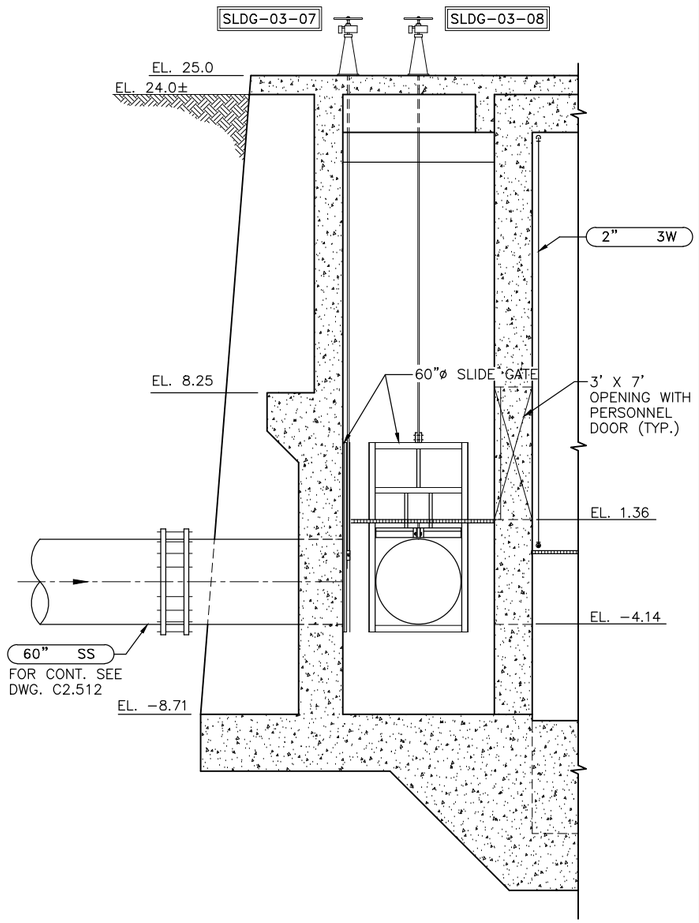


SECTION C M3.02 C M3.04 C M3.06 C M3.08



SECTION D M3.02 D M3.04 D M3.06 D M3.08

NOTES:
1. ALL 1-1/2" HATCH DRAIN PIPE SHALL PENETRATE WALL AND DISCHARGE INTO THE WET WELL. DRAIN SHALL BE 6'-9" ABOVE CATWALK.
2. AT THE INFLUENT PUMP STATION, IN LIEU OF FLEXIBLE COUPLINGS, PROVIDE TWO RCP RUBBER GASKETED JOINTS. ONE JOINT SHALL BE LOCATED 2 FEET FROM THE COUNTERFORT WITH THE SECOND

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: V.M. ALANIZ

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
INFLUENT PUMP STATION-HEADWORKS SECTIONS

SCALE 1/4"=1'-0"
DRAWING NUMBER M3.11
SHEET NUMBER OF SHEETS

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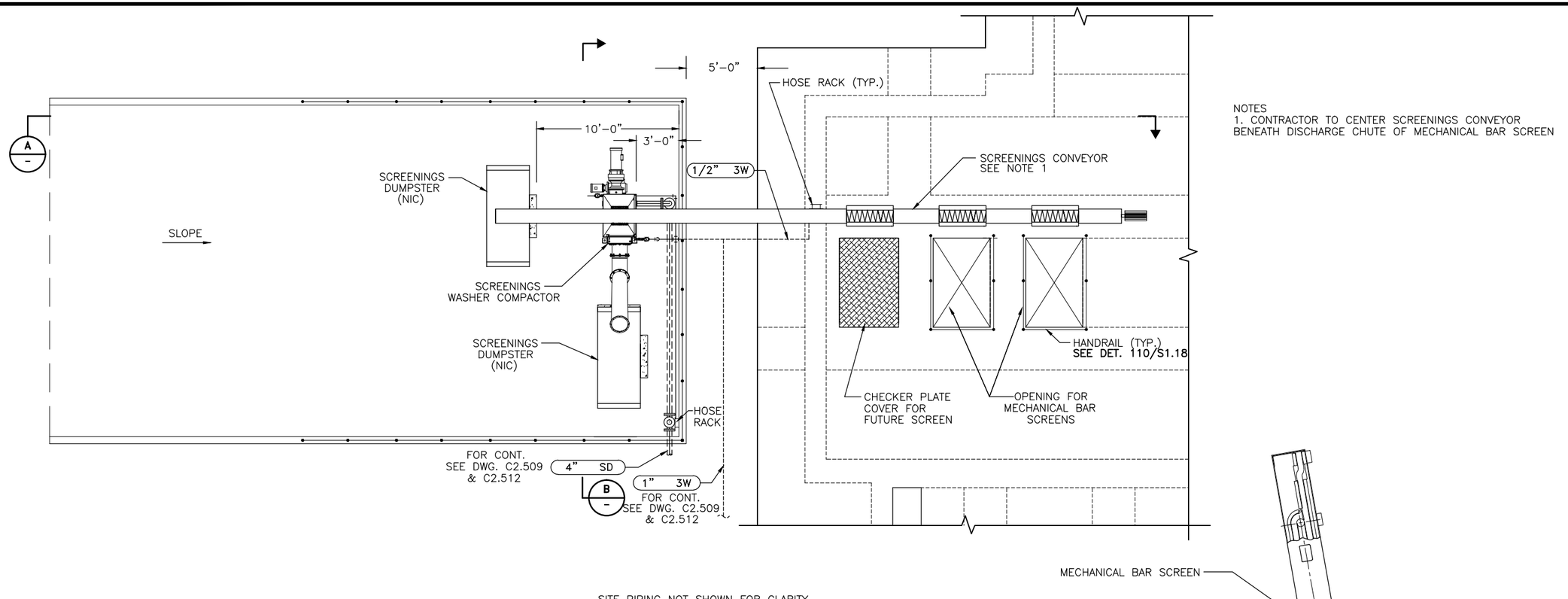
01/19/04 2:00 p.m.

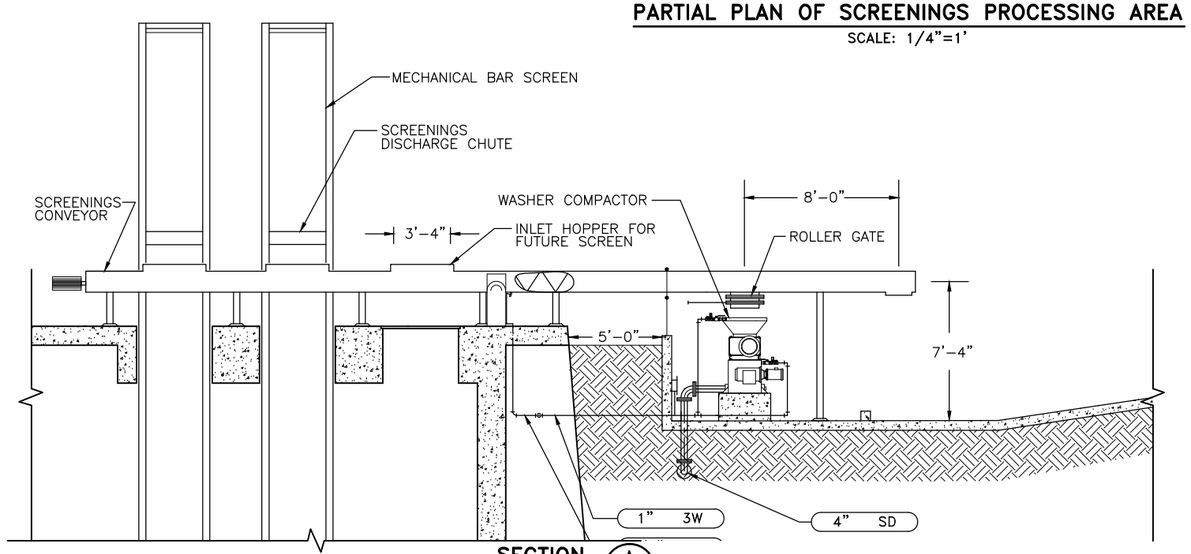


NOTES
1. CONTRACTOR TO CENTER SCREENINGS CONVEYOR BENEATH DISCHARGE CHUTE OF MECHANICAL BAR SCREEN

SITE PIPING NOT SHOWN FOR CLARITY

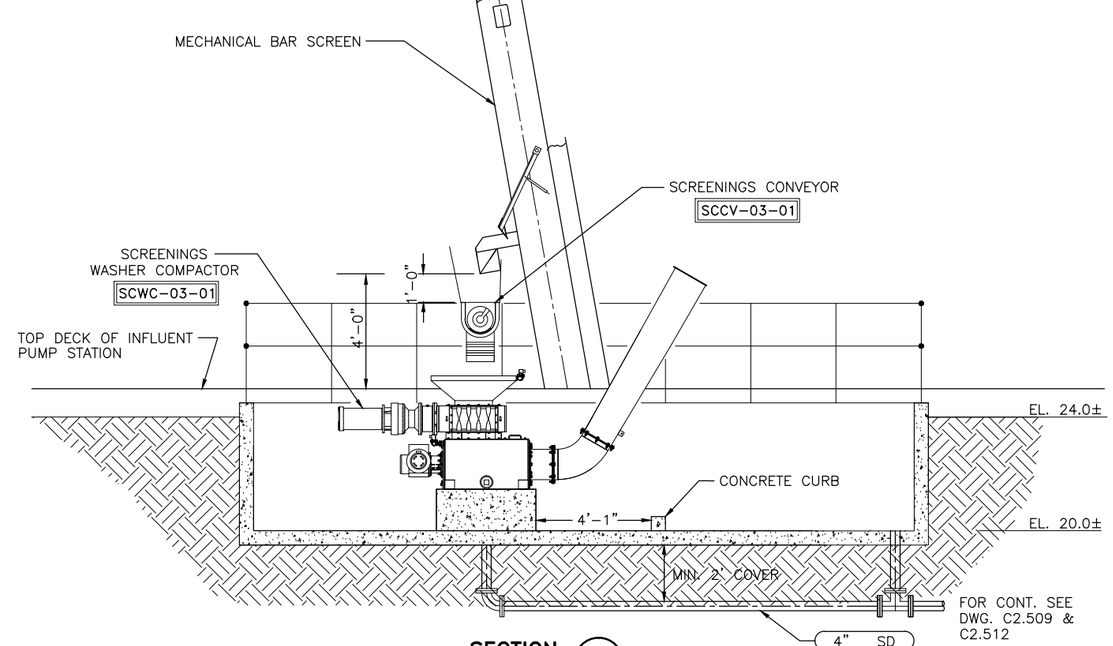
PARTIAL PLAN OF SCREENINGS PROCESSING AREA

SCALE: 1/4"=1'



SECTION A

SCALE: 1/4"=1'



SECTION B

SCALE: 3/8"=1'

RECORD SET

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BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. AIT-LASRI
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

INFLUENT PUMP STATION-HEADWORKS
PLAN AND SECTIONS OF SCREENINGS WASHER/COMPACTOR

SCALE: AS NOTED
DRAWING NUMBER: M3.12
SHEET NUMBER: OF SHEETS

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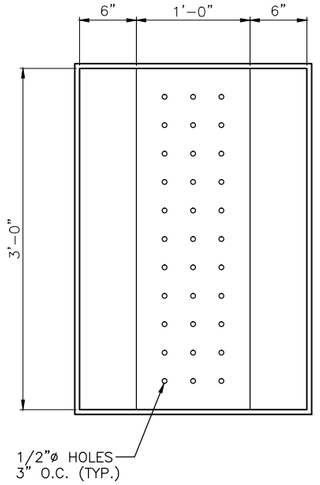
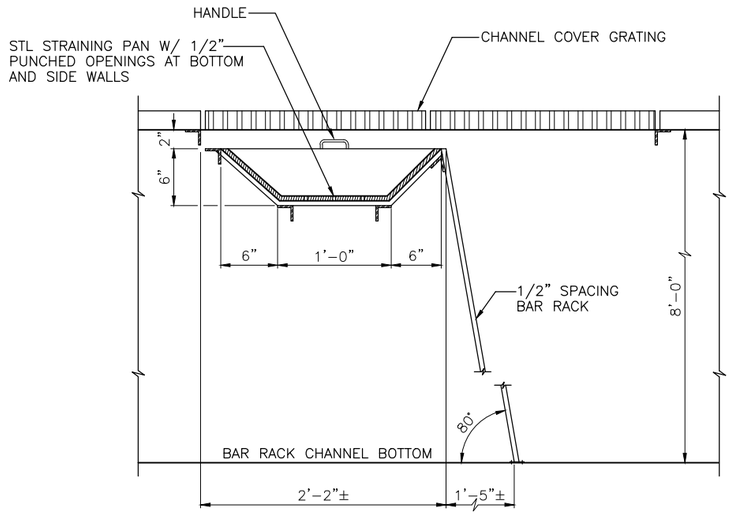


STRAINING PAN PLAN
SCALE: 1-1/2"=1'-0"



BAR RACK DETAIL (1 / M3.04)
NOT TO SCALE

RECORD SET

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BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: V.M. ALANIZ

NO.	BY	DATE	REVISIONS
6			
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4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

INFLUENT PUMP STATION-HEADWORKS SECTIONS AND DETAILS

SCALE: AS NOTED
DRAWING NUMBER: M3.13
SHEET NUMBER: OF SHEETS

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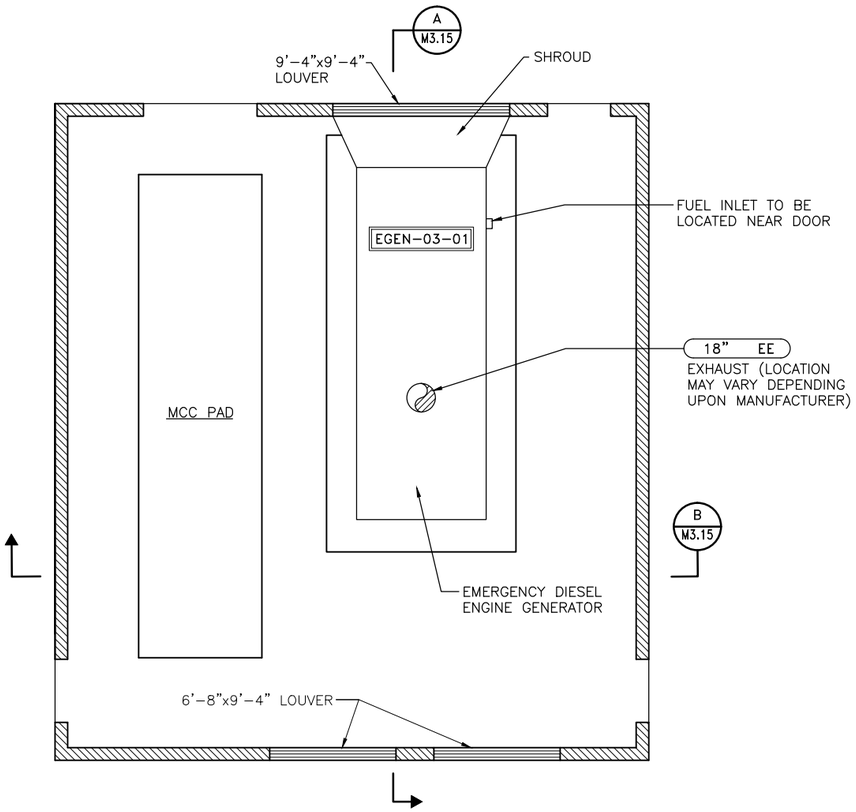
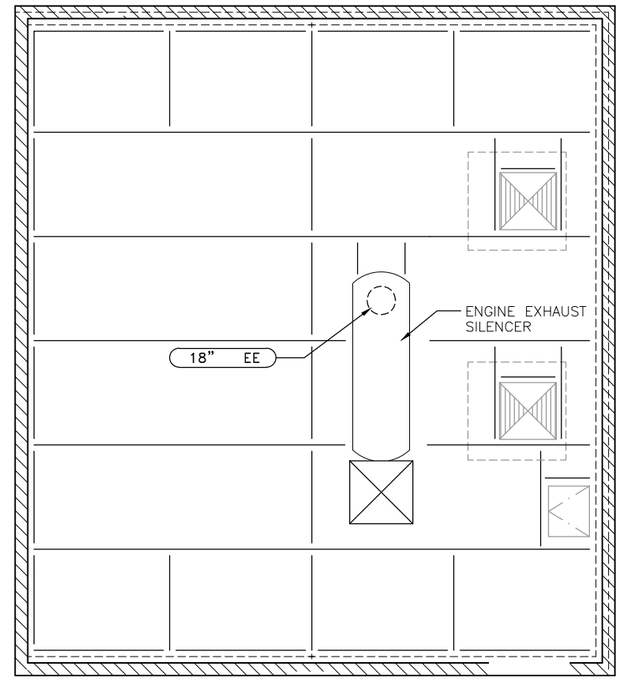


PLAN
SCALE: 1/4"=1'-0"



ROOF PLAN
SCALE: 1/4"=1'-0"

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. AIT-LASRI
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
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2			
1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

INFLUENT PUMP STATION-HEADWORKS
MCC/GENERATOR BUILDING - PLAN AND ROOF PLAN

SCALE: AS NOTED
DRAWING NUMBER: M3.14
SHEET NUMBER: OF SHEETS

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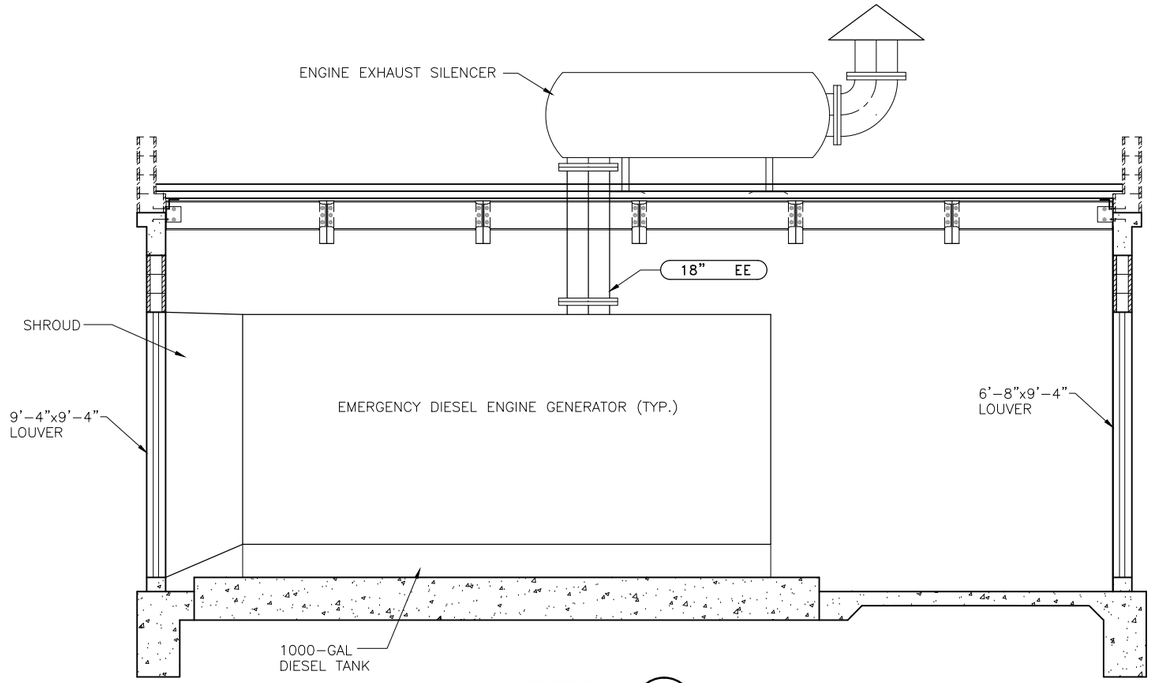

SECTION A / M3.14
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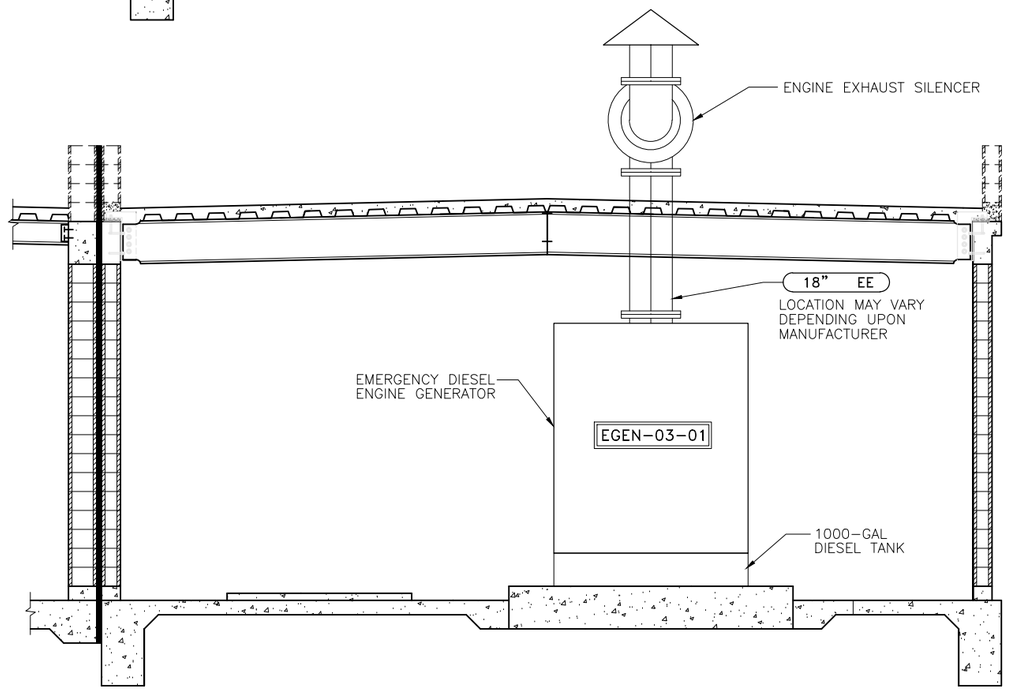

SECTION B / M3.14
SCALE: 3/8"=1'-0"

RECORD SET

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NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-7600 ☐ SACRAMENTO (916) 641-9520 ☐ SAN JOSE (408) 287-3400 ☐ SAN DIEGO (619) 374-9380 ☐ WALNUT CREEK (510) 934-8062
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. AIT-LASRI
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
INFLUENT PUMP STATION-HEADWORKS MCC/GENERATOR BUILDING - SECTIONS

SCALE: AS NOTED
DRAWING NUMBER: M3.15
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-B\Cadd\Mechanical\ SCH-BM315.DWG NONE
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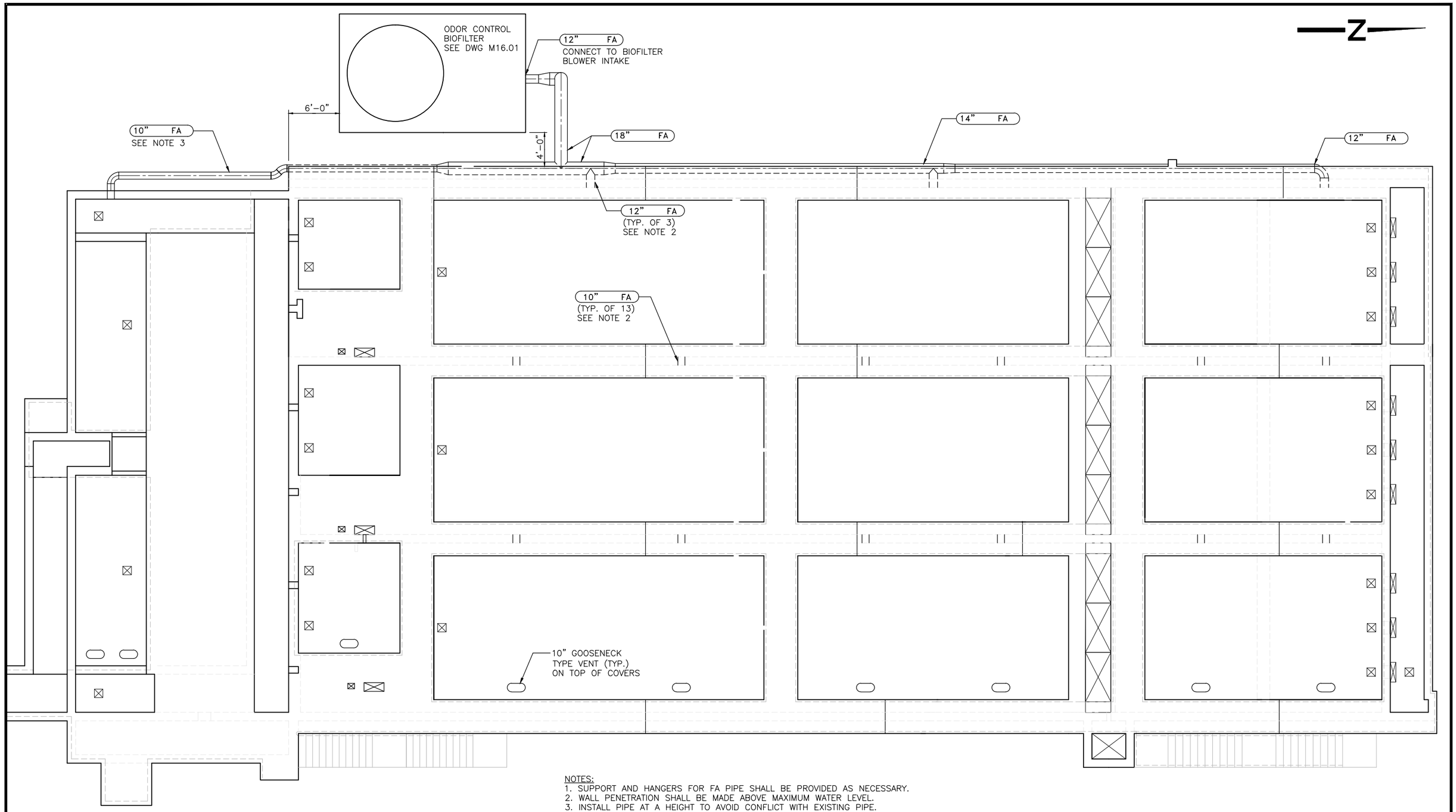

NOTES:
1. SUPPORT AND HANGERS FOR FA PIPE SHALL BE PROVIDED AS NECESSARY.
2. WALL PENETRATION SHALL BE MADE ABOVE MAXIMUM WATER LEVEL.
3. INSTALL PIPE AT A HEIGHT TO AVOID CONFLICT WITH EXISTING PIPE.
4. FA PIPE TO BE INSTALLED UNDER TANK DECK/OVERHANG.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER
David Richard
No. 33479
EXP.
CIVIL
STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: S. OFORI
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
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2			
1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

NORTHSIDE PRIMARY SEDIMENTATION BASIN
FOUL AIR PIPING PLAN

SCALE: AS NOTED
DRAWING NUMBER: M4.01
SHEET NUMBER: OF SHEETS

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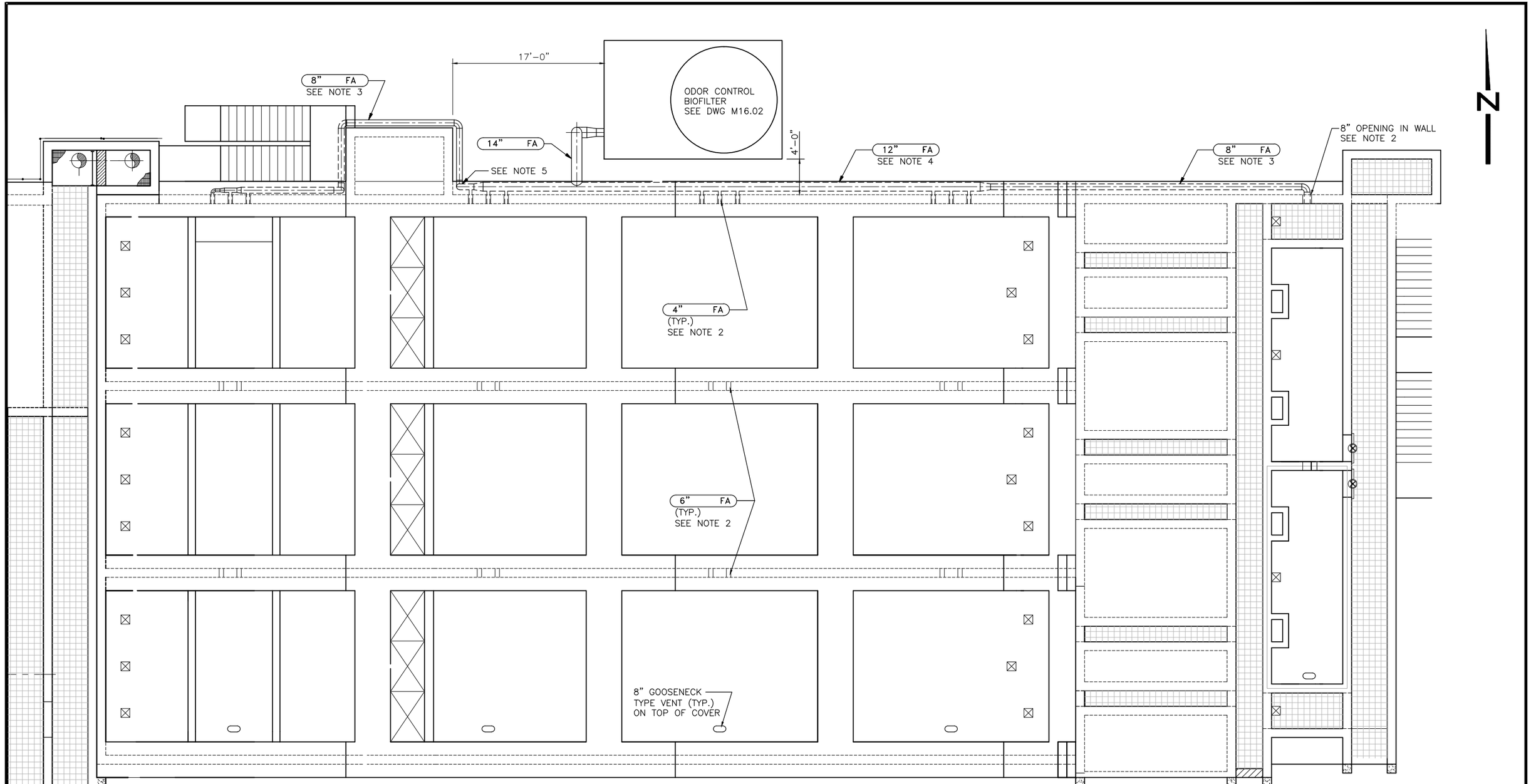

NOTES:
1. SUPPORT AND HANGERS FOR FA PIPE SHALL BE PROVIDED AS NECESSARY.
2. WALL PENETRATION SHALL BE MADE ABOVE MAXIMUM WATER LEVEL.
3. INSTALL PIPE UNDER OVERHANG, AT A HEIGHT TO AVOID CONFLICT WITH EXISTING PIPE.
4. FA PIPE TO BE INSTALLED UNDER THE STAIRS LANDING DECK. FA PIPE TO BE SLOPED TOWARD WEST.
5. INSTALL 1" TAP WITH BALL VALVE ON LOWEST ELBOW TO DRAIN WATER ACCUMULATING IN DUCTING.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: R. AIT-LASRI
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: S. OFORI

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
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1	SRM	8/23/05	ADDENDUM #1

~~REDUCED RECORD SET NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SOUTHSIDE PRIMARY SEDIMENTATION BASIN FOUL AIR PIPING PLAN

SCALE: AS NOTED
DRAWING NUMBER: M4.02
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT N:\SA1224_11\Addendum #1\Mechanical\SCH-DM402.DWG NONE
08/24/05 1:56 pm

NOTE:

1. ℄ OF RETURN RAIL, CHAIN & FLOOR RAIL SHALL BE SET ACCORDING TO RECOMMENDATIONS OF EQUIPMENT MANUFACTURER.
2. LOCATE ALL SPROCKETS IN ACCORDANCE WITH EQUIPMENT MANUFACTURER RECOMMENDATIONS.
3. LOCATE DRIVE UNIT AND PROVIDE OPENING ON WALKWAY FOR DRIVE CHAIN ACCORDING TO EQUIPMENT MANUFACTURER RECOMMENDATION.
4. PIPE SUPPORTS NOT SHOWN FOR CLARITY. PROVIDE ALL NECESSARY PIPE SUPPORTS, AS DIRECTED BY CONSTRUCTION MANAGER.

X DENOTES A PIPE SUPPORT

N

16" OPENING FOR FUTURE CONNECTION COVER WITH CHECKERED PLATE AND BOLT DOWN
16" RAS FOR CONT. SEE DWG. C2.43
4" SC
PSCP-04-02
1" 3W
C M4.04
FOR CONT. SEE DWG. C2.511
6" PS/SC
PRIMARY SCUM PUMP (TYP.)
PSCP-04-01
SCUM PUMP PANEL
2" 3W
GROOVED END, CENTERLINE SPOOL EL. 36.85
F M4.05
6'-0"
DN
DOWN
W
STPG-06-01
SHOWER/EYEWASH
A M4.02 M4.03
12" WIDE FRP EFFLUENT LAUNDER (TYP.)
10" SLOTTED DIPPING WEIR
FAN SPRAY 4' O.C.
3/4" 3W
PRIMARY SEDIMENTATION BASIN NO. 4
MOTORIZED OPERATOR (TYP.)
SCSK-04-01
CHAIN & FLIGHT SLUDGE COLLECTOR DRIVE (TYP.)
CHFL-04-01
CHAIN SPROCKET (TYP.) SEE NOTE 2
PRIMARY SEDIMENTATION BASIN NO. 5
℄ OF RETURN RAIL (TYP.) SEE NOTE 1
SCSK-04-02
REDWOOD BAFFLE
CHFL-04-02
SAMP-06-01
℄ OF CHAIN (TYP.) SEE NOTE 1
PRIMARY SEDIMENTATION BASIN NO. 6
SCUM BAFFLE (TYP.)
SCSK-04-03
CHFL-04-03
BLOWER GALLERY BELOW DECK— SEE DWG. M6.07
STPG-06-04
HOSE BIB (TYP.) SEE DET. 10/M0.6
2" 3W
LAUNDER OUTLET STOP GATES (TYP. OF 15)
STPG-04-16 THRU 30
SLUDGE COLLECTOR DRIVE UNIT. SEE NOTE 3
7'-0"
PRIMARY GALLERY BELOW DECK, SEE DWG. M4.06
PSB DIST. CHANNEL STOP GATES (TYP. OF 12)
STPG-04-04 THRU 15

PRIMARY SLUDGE
10" SD
FOR CONT. SEE DWG. C2.44
B M4.04
GRIT CLASSIFIER SEE DET. 2/M4.05
GRCL-04-01
30" SS
FOR CONT. SEE DWG. C2.
1" 3W
KNOCKOUT WALL
30" OPENING FOR FUTURE CONNECTION COVER WITH CHECKERED PLATE AND BOLT DOWN
D M4.05
FAN SPRAY NOZZLE (TYP.)
2" 3W
BLOWER INTAKE FILTER (TYP. OF 2)
6" A
3/4" 3W
1'-6"
SEE DET. 4/M6.06
CHANNEL AERATION (TYP. ALL CHANNELS)
SEE DET. 1/M4.01
GRIT TANK NO.3
GRIT TANK NO.4
DOWN
SLDG-04-01
SLDG-04-02
STPG-04-02
6" A
2" A
4" A
SEE DET. 2/4.02
GRIT TANK AERATION 2' O.C. (TYP. OF 4)
E M4.05
STPG-04-03

PLAN
SCALE: 1/8"=1'-0"

DETAIL 1 M4.01
SCALE: 1/2"=1'-0"

2" A
2" A
6" A

PRIMARY SCUM PUMP STATION PLAN
SCALE: 3/8"=1'-0"

6" PS/SC
4" SC
2'-0"
6" PS/SC
4" SC
1" 3W
MGFM-04-03
PSCP-04-02
PSCP-04-01
PRIMARY SCUM PUMP (TYP.)
8'-0"
10'-6"
9'-11"
EL. 31.34
TOW EL. 31.34
4" SC
4" SC

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
PRIMARY SEDIMENTATION BASINS AND GRIT TANKS

SCALE: AS NOTED
DRAWING NUMBER: M4.03
SHEET NUMBER: OF SHEETS

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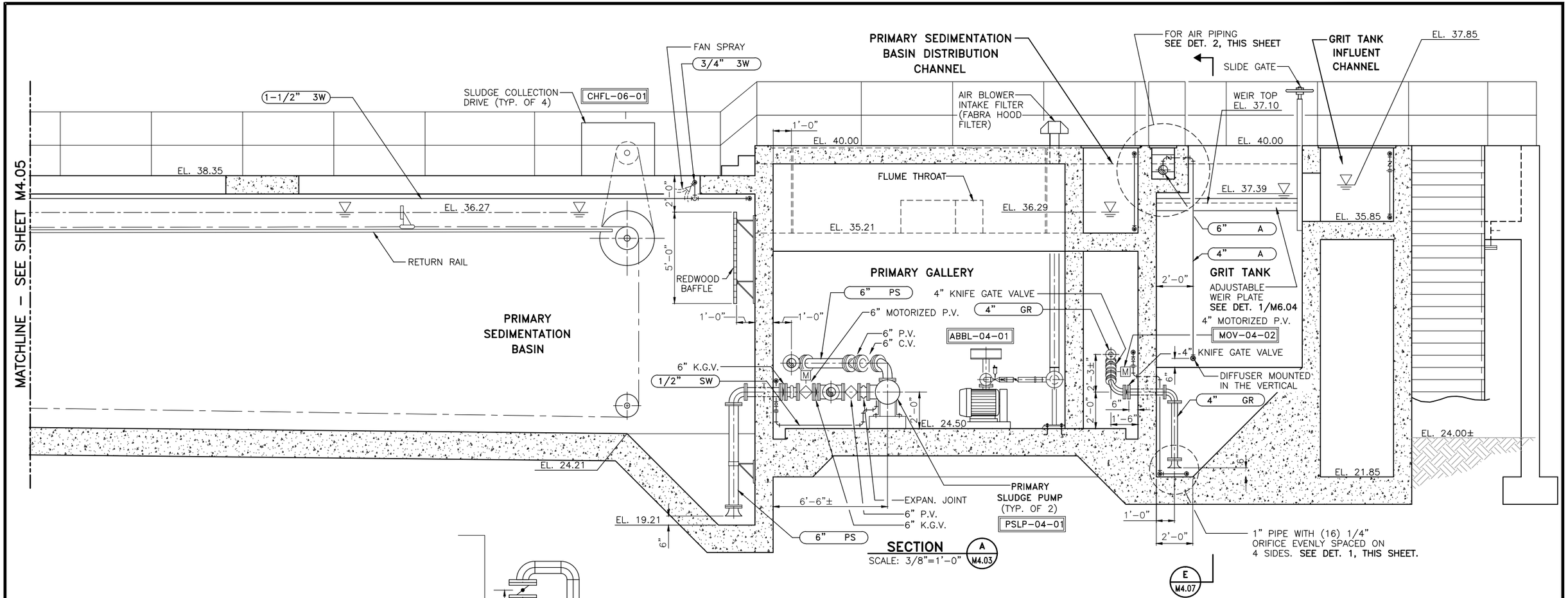
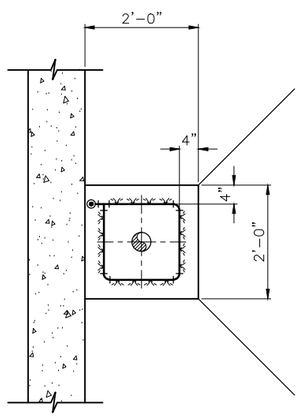
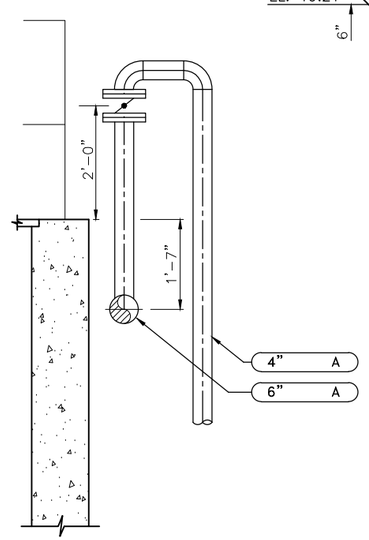




DETAIL 1 M4.04
SCALE: 3/8"=1'-0"



DETAIL 2 –
SCALE: 3/8"=1'-0"

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

GRIT TANK, PRIMARY GALLERY, PRIMARY SEDIMENTATION BASINS SECTION AND DETAILS

SCALE: AS NOTED

DRAWING NUMBER: M4.04

SHEET NUMBER: OF SHEETS

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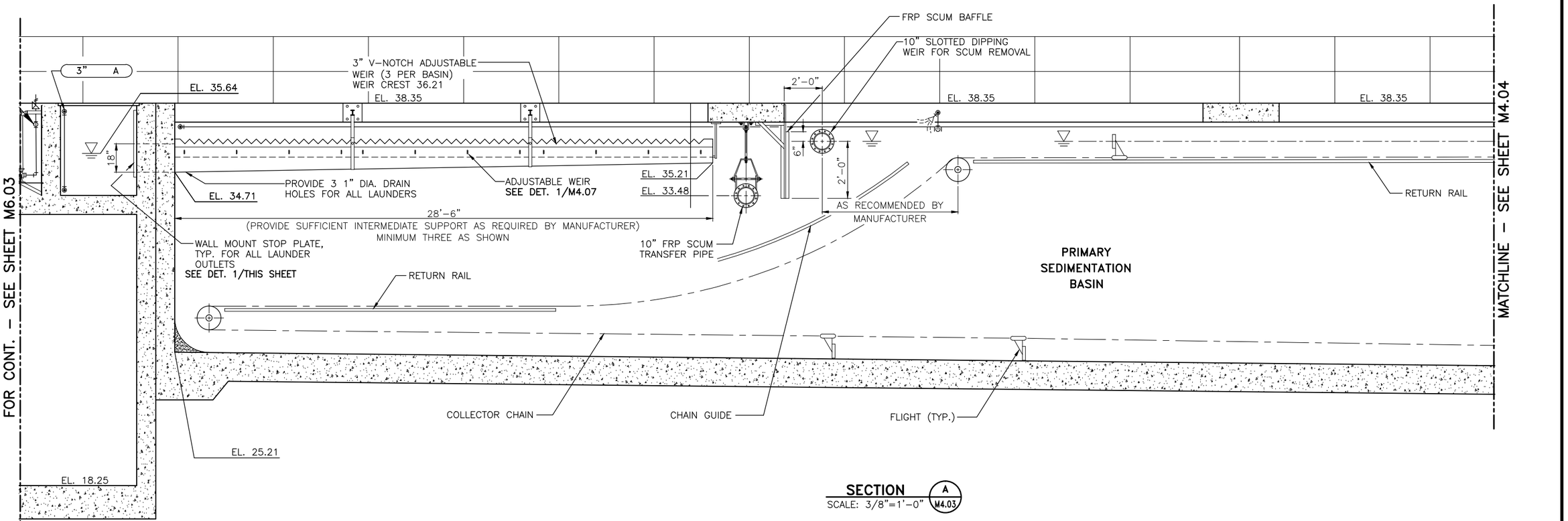

SECTION A M4.03
SCALE: 3/8"=1'-0"

NOTES:

1. 10-INCH SCUM TRANSFER PIPE SHALL BE FRP DESIGNED TO CARRY WASTEWATER. PIPE SHALL BE DESIGNED FOR A MINIMUM PRESSURE RATING OF 25 PSI IN ACCORDANCE WITH ASTM D2992. PIPE MATERIAL SHALL BE VINYL ESTER RESIN WITH A MINIMUM 20-MIL CORROSION BARRIER. FRP PIPE SHALL BE MANUFACTURED BY BELCO MANUFACTURING CO., ERSHIGS INC., SMITH FIBERCAST, OR BONDSTRAND. TO COMPENSATE FOR THE BUOYANT FORCES OF AN EMPTY PIPE, ALL PIPING SHALL BE SUPPORTED AGAINST SAG, LATERAL AND VERTICAL MOVEMENT IN A MANNER THAT WILL PREVENT UNDUE STRAIN ON ANY VALVE, FITTING, PIPE OR EQUIPMENT.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
PRIMARY SEDIMENTATION BASINS SECTION

SCALE: AS NOTED
DRAWING NUMBER: M4.05
SHEET NUMBER: OF SHEETS

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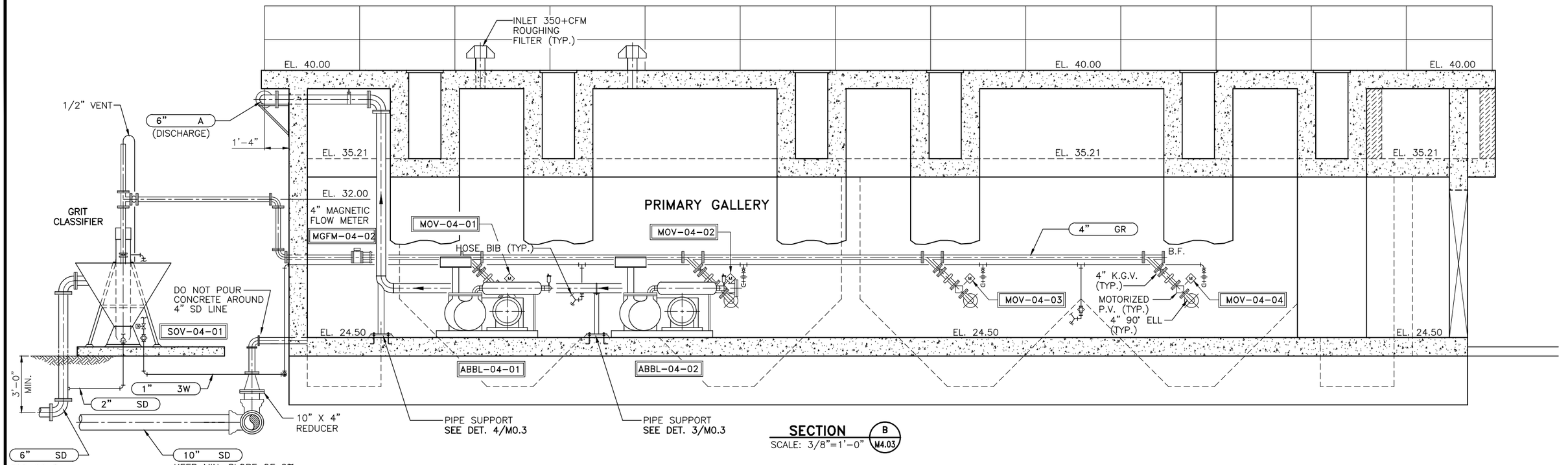

NOTES:

1. 10-INCH SCUM TRANSFER PIPE SHALL BE 80 PVC DESIGNED TO CARRY WASTEWATER. PIPE SHALL BE DESIGNED FOR A MINIMUM PRESSURE RATING OF 25 PSI IN ACCORDANCE WITH ASTM D2992. PIPE MATERIAL SHALL BE VINYL ESTER RESIN WITH A MINIMUM 20-MIL CORROSION BARRIER. PIPE SHALL BE MANUFACTURED BY BELCO MANUFACTURING CO., ERSHIGS INC., SMITH FIBERCAST, OR BONDSTRAND. TO COMPENSATE FOR THE BUOYANT FORCES OF AN EMPTY PIPE, ALL PIPING SHALL BE SUPPORTED AGAINST SAG, LATERAL AND VERTICAL MOVEMENT IN A MANNER THAT WILL PREVENT UNDUE STRAIN ON ANY VALVE, FITTING, PIPE OR EQUIPMENT.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

PRIMARY GALLERY AND PRIMARY SEDIMENTATION BASINS SECTIONS

SCALE: AS NOTED

DRAWING NUMBER: **M4.06**

SHEET NUMBER OF SHEETS

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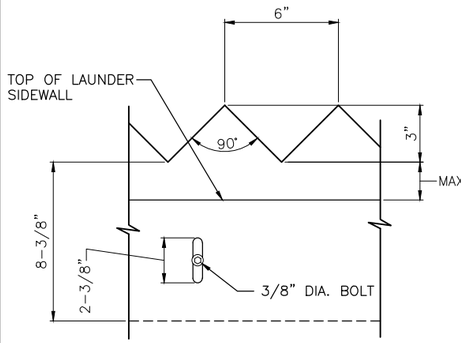
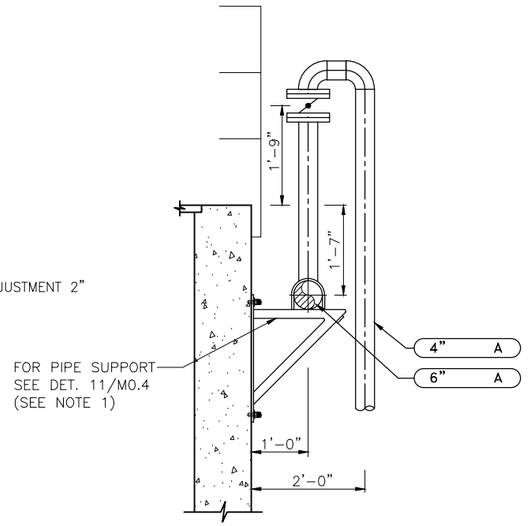


ADJUSTABLE V-NOTCH WEIR DETAIL (1 / M4.05)

SCALE: 3"=1'-0"

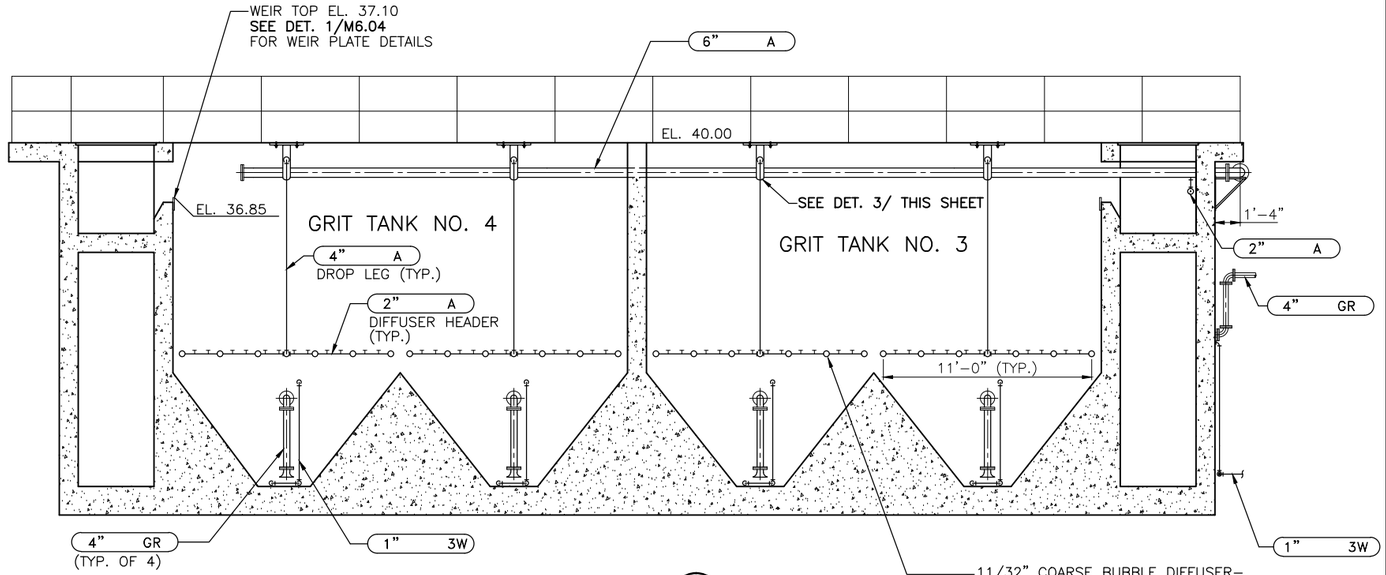


NOTES:

1. DELETE AERATION HEADER BOXES AND SUPPORT AIR PIPING FROM WALL

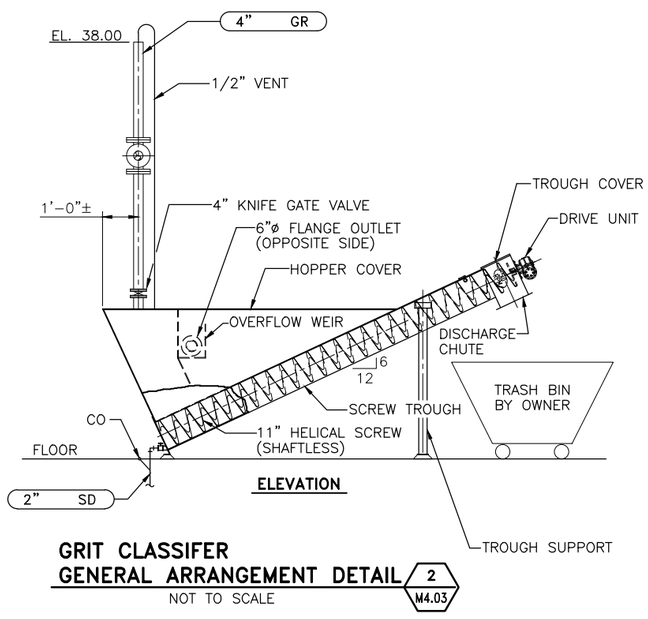
AERATION HEADER DETAIL (3 / –)

NOT TO SCALE



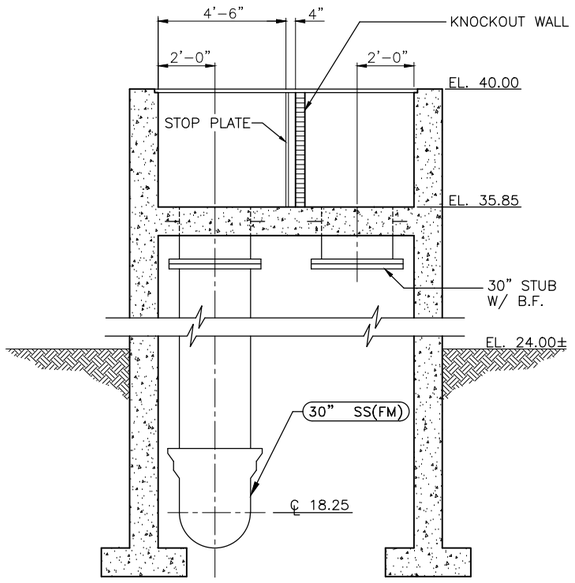
SECTION (E / M4.03)

SCALE: 1/4"=1'-0"



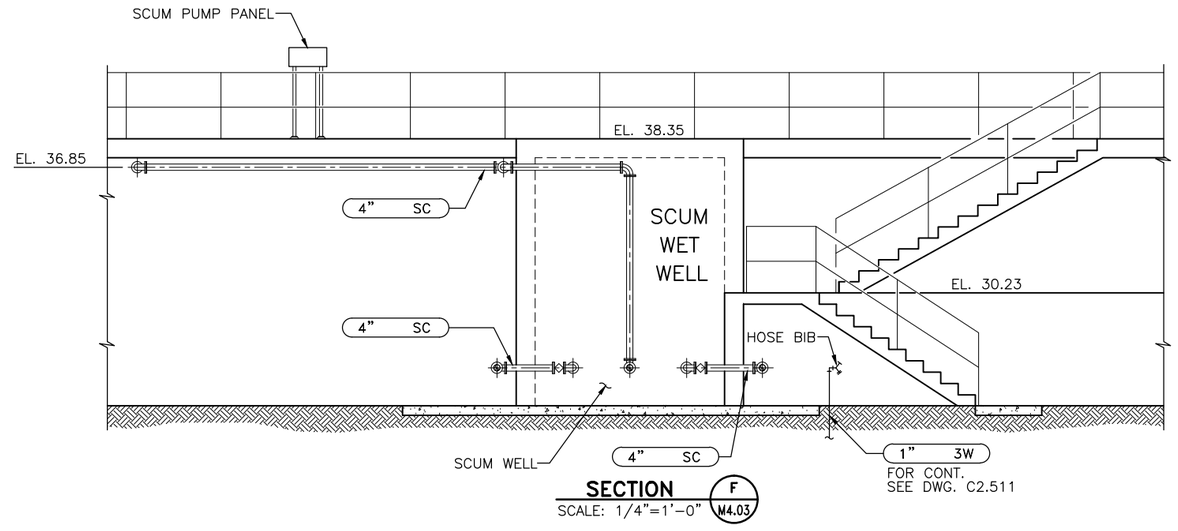
GRIT CLASSIFER GENERAL ARRANGEMENT DETAIL (2 / M4.03)

NOT TO SCALE



SECTION (D / M4.03)

SCALE: 3/8"=1'-0"



SECTION (F / M4.03)

SCALE: 1/4"=1'-0"

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

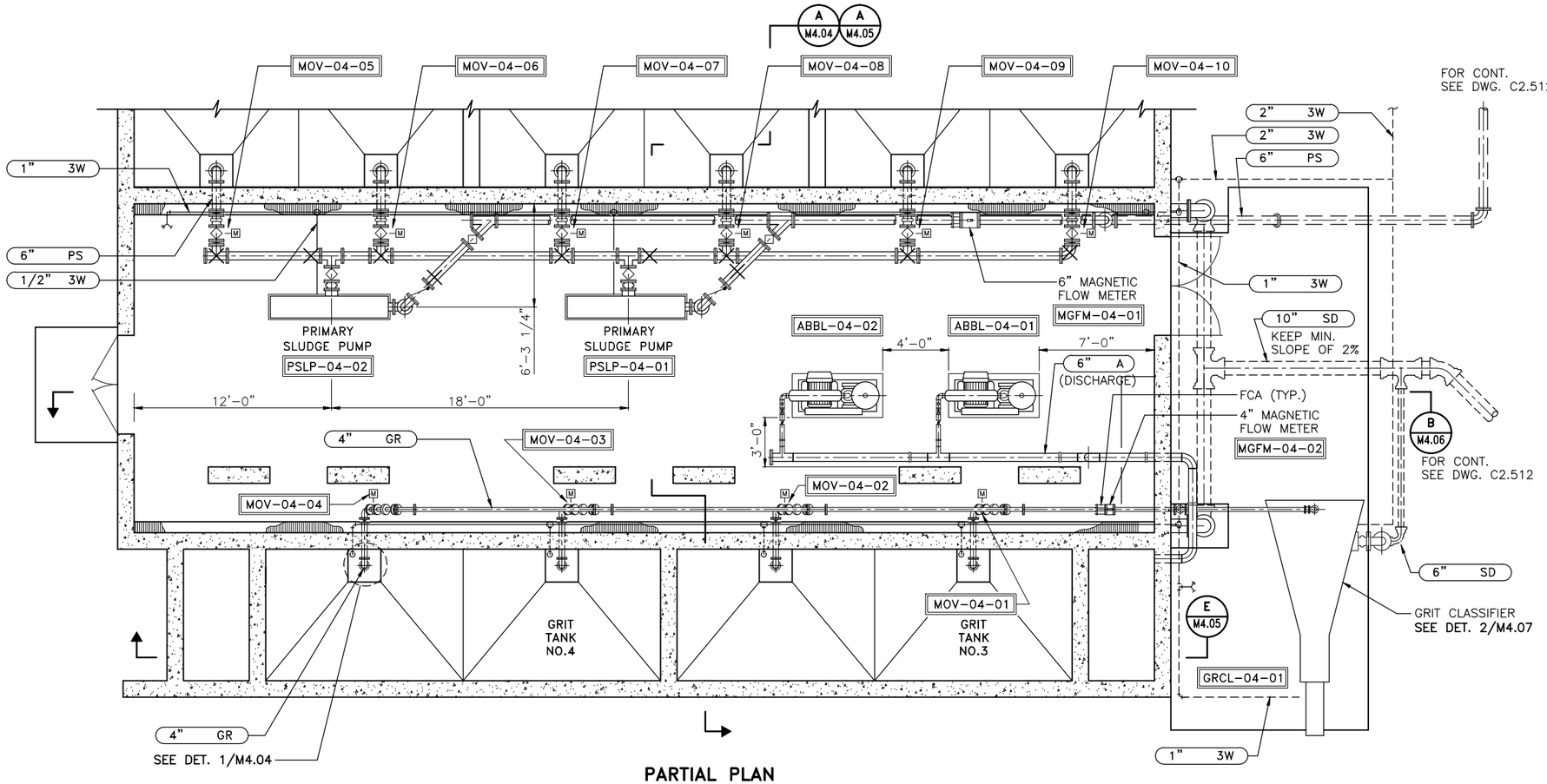
GRIT TANK AND PRIMARY SEDIMENTATION BASINS SECTIONS AND DETAILS

SCALE: AS NOTED

DRAWING NUMBER: **M4.07**

SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-B\Cadd\Conformed\Mechanical\ SCHBM405.DWG NONE 01/19/04 2:00 p.m.



PARTIAL PLAN AT EL. 30.0±

SCALE: 1/4"=1'-0"

RECORD SET

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NOLTE
BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

PRIMARY GALLERY PARTIAL PLAN AT EL. 30.0

SCALE: AS NOTED
DRAWING NUMBER: **M4.08**
SHEET NUMBER: OF SHEETS

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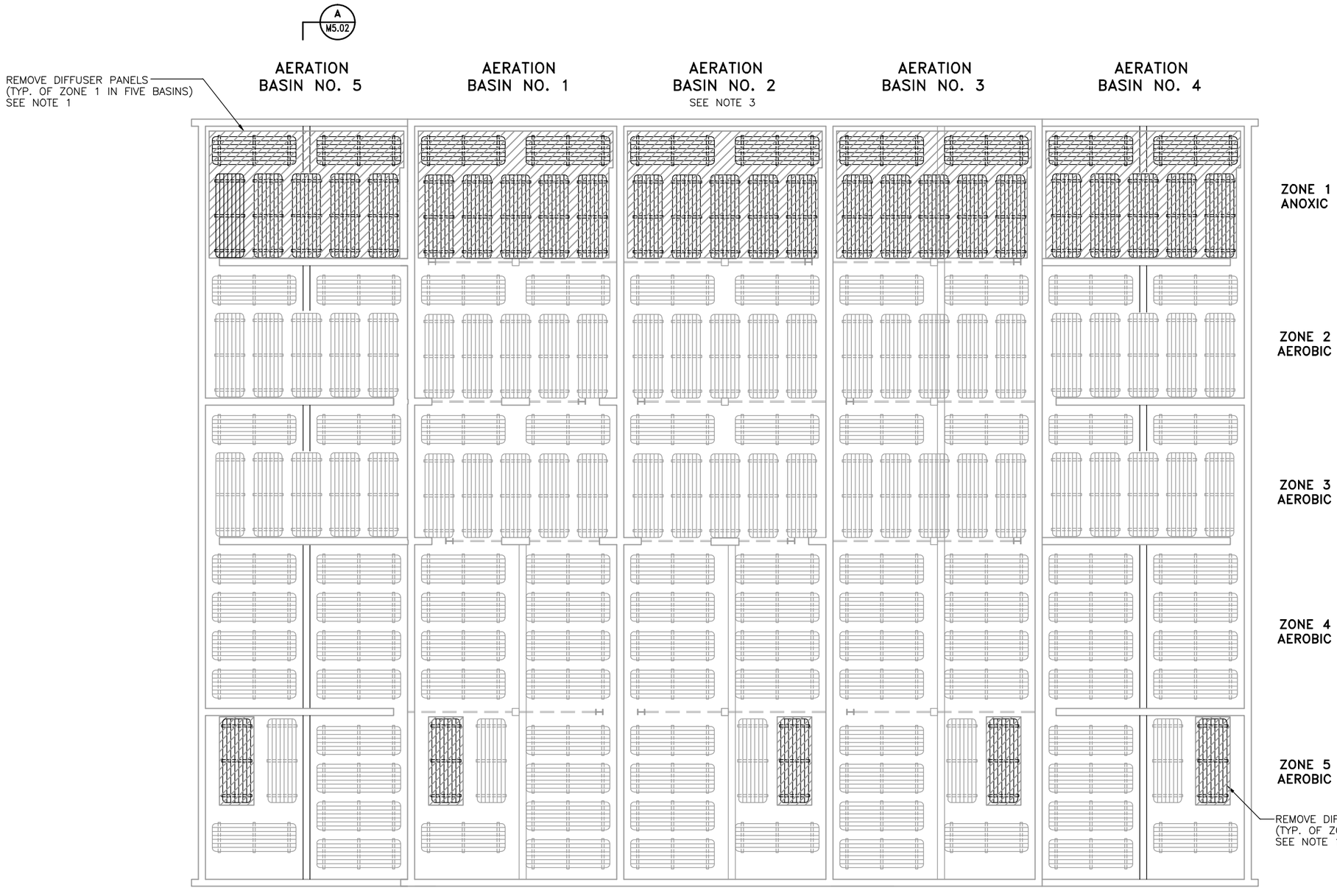
11/23/04 7:37 a.m.



PARTIAL PLAN – DIFFUSER REMOVAL

SCALE: 1/8"=1'-0"

NOTES:

1. REMOVE PANELS, 1-1/2" POLYETHYLENE PIPING, BALL VALVE AND CAP. REMOVE BLIND FLANGE FOR INSTALLATION OF RECIRCULATION REPROPELLER PUMPS.
2. RELOCATE AND INSTALL REMOVED PANELS IN AERATION BASIN #10 WITH NEW 1-1/2" AIR PIPING.
3. EXIST. PIPE SUPPORTS IN THE NORTHSIDE AERATION BASIN #2 SHALL REMAIN IN PLACE.

RECORD SET

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DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
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PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

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1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

NORTHSIDE AERATION BASINS
DIFFUSER REMOVAL PLAN

SCALE: AS NOTED
DRAWING NUMBER: M5.01
SHEET NUMBER: OF SHEETS

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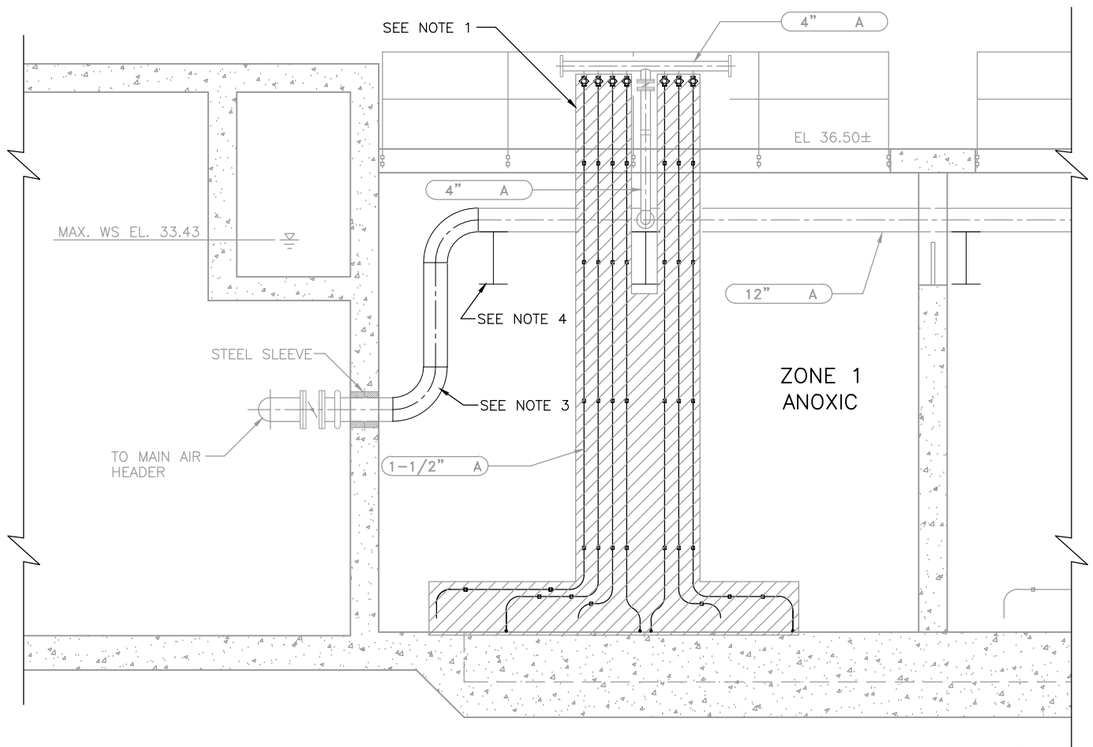

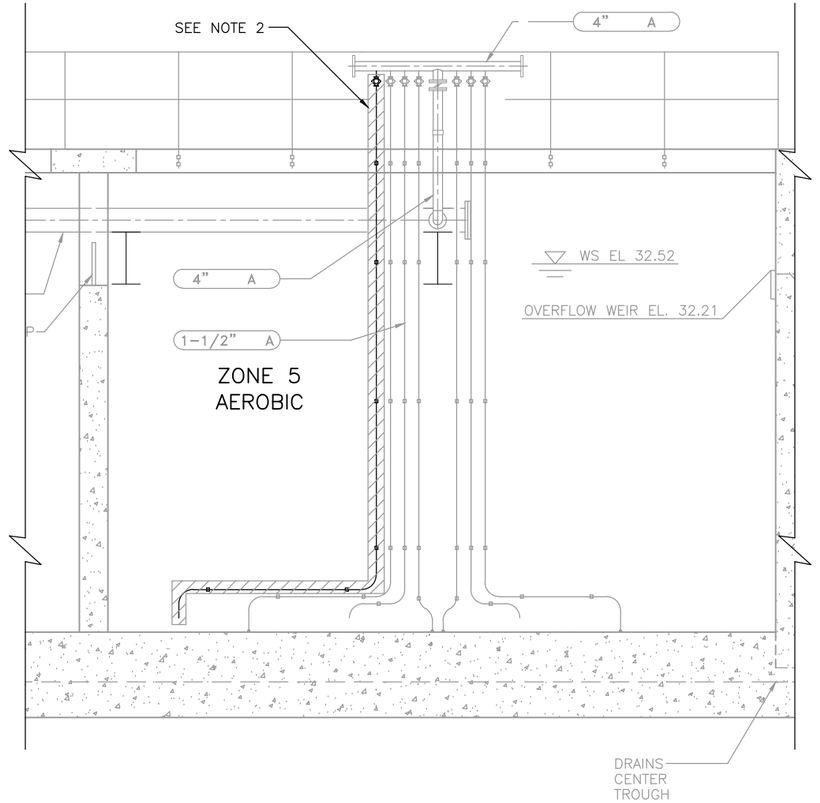

SECTION A / M5.01
SCALE: 3/8"=1'-0"

NOTES:

1. IN ZONE 1 REMOVE 1-1/2" POLYETHYLENE PIPING. CAP EACH NIPPLE FROM THE "T" MANIFOLD. (TYP. OF BASINS 1 THROUGH 5).
2. IN ZONE 5 REMOVE THE 1-1/2" POYETHELENE PIPING CONNECTED TO REMOVED PANELS. CAP EACH NIPPLE FOR EVERY BALL VALVE REMOVED. (TYP. OF BASINS 1 THROUGH 5).
3. REPLACE EXISTING VERTICAL PORTION OF PIPING AND ADJACENT 90 DEGREE ELBOWS WITH NEW STAINLESS STEEL PIPING AS SHOWN. PIPING IN OTHER BASINS SHALL NOT BE REPLACED. IN ADDITION, REPLACE EXISTING WALL PENETRATION WITH NEW STAINLESS STEEL PIPE. ASSUME REPLACEMENT OF PIPE UP TO FIRST VICTUALIC COUPLING WITHIN BLOWER GALLERY. CONTRACTOR SHALL MATCH EXISTING PIPING.
4. MODIFICATIONS COMPLETED IN SCHEDULE B.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
NORTHSIDE AERATION BASINS DIFFUSER REMOVAL SECTION

SCALE: AS NOTED
DRAWING NUMBER: M5.02
SHEET NUMBER: OF SHEETS

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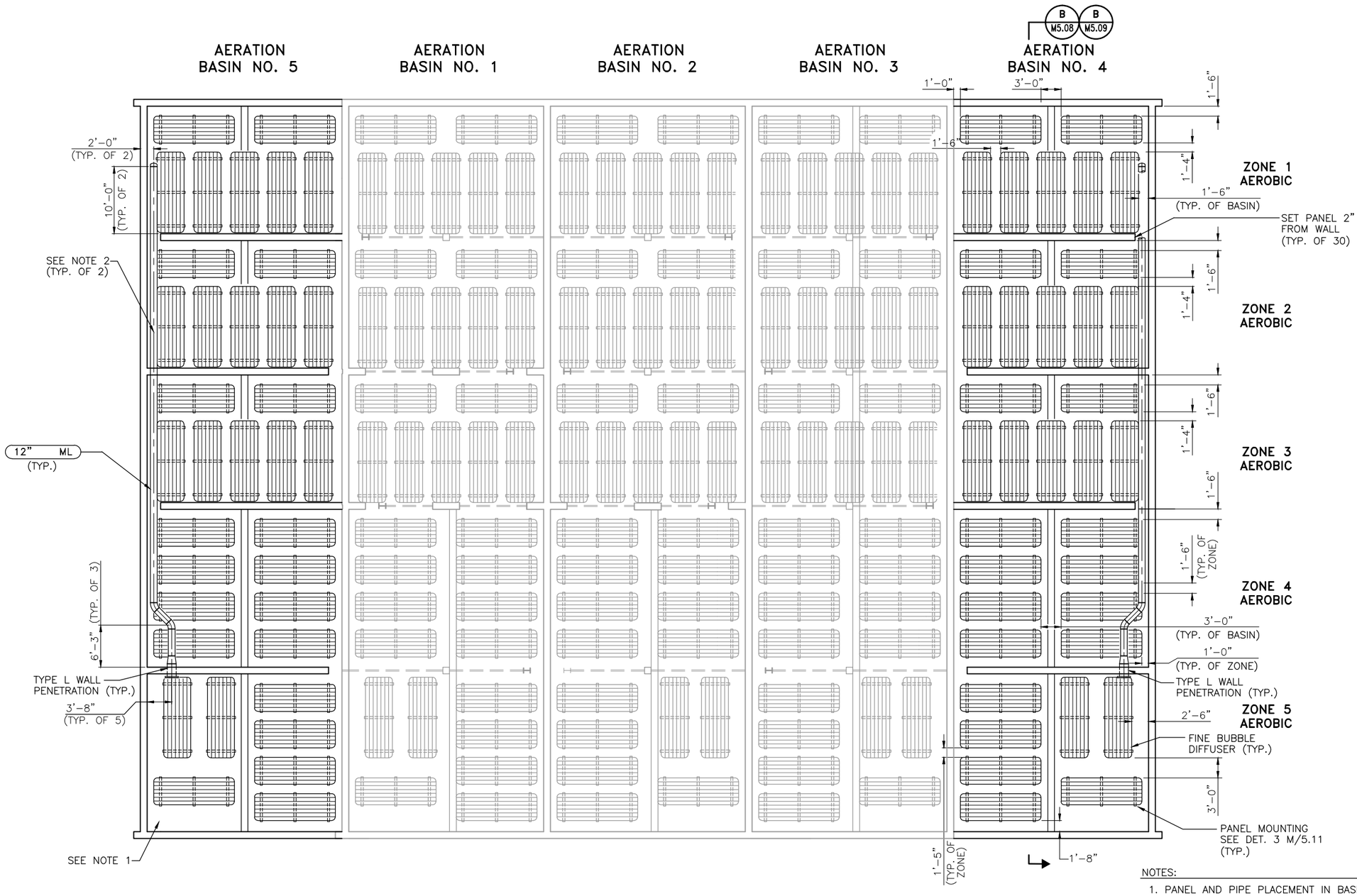

PARTIAL PLAN – DIFFUSER LAYOUT

SCALE: 1/8"=1'-0"

NOTES:

1. PANEL AND PIPE PLACEMENT IN BASIN NO. 5 MIRROR OF AERATION BASIN NO. 4.
2. PIPES WITHIN 2' OF WALL SHALL BE SUPPORTED WITH WALL MOUNTED BRACKETS AND STRAPPED DOWN TO RESTRAIN AGAINST BUOYANT FORCES. PIPES 2' AWAY FROM WALL SHALL HAVE FLOOR MOUNTED PIPE SUPPORTS AND BE STRAPPED DOWN TO RESTRAIN AGAINST BUOYANT FORCES. ALL SUPPORTS AND BRACKETS SHALL BE OF 304 STAINLESS STEEL CONSTRUCTION.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

REDUCED RECORD SET NOT TO SCALE

NO.	BY	DATE	REVISIONS
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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

NORTHSIDE AERATION BASIN EXPANSION DIFFUSER LAYOUT

SCALE: AS NOTED

DRAWING NUMBER: M5.03

SHEET NUMBER: OF SHEETS

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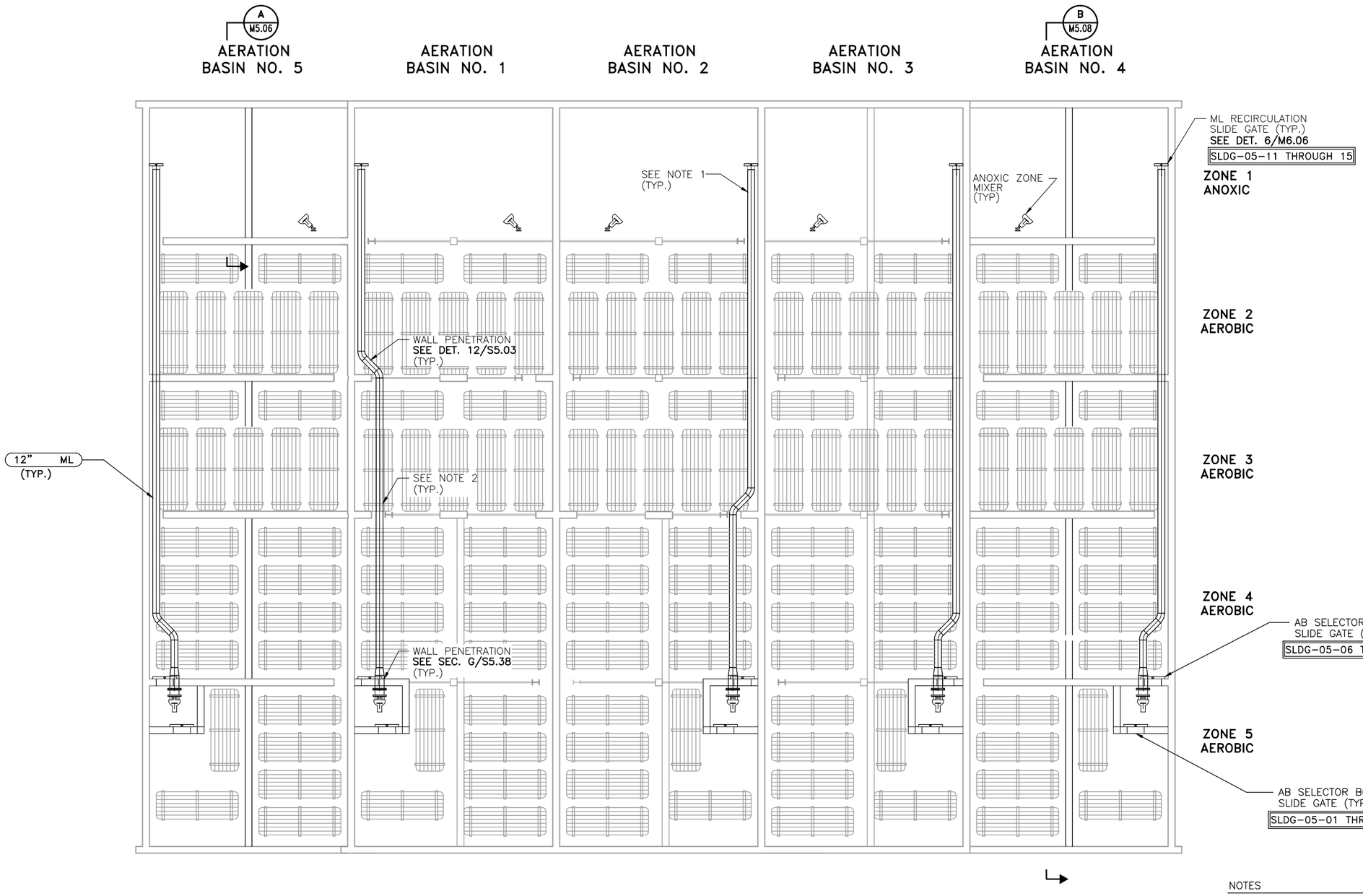

PARTIAL PLAN – MIXER/RECIRCULATION PUMP PLAN

SCALE: 1/8"=1'-0"

NOTES

1. PROVIDE UNISTRUT CROSS BEAM FOR SUPPORT **SEE DET. 7/M0.3 SIMILAR.**

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE:	XXXXXX
PROJECT NO.:	SA1224
DRAWN BY:	K.C. HAYES
CHECKED BY:	J.Y. AU
PROJ. MGR.:	D. RICHARD
PROJ. ENGR.:	A.G. CALCIANO

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

NORTHSIDE AERATION BASIN CONVERSION MIXER/RECIRCULATION PUMP PLAN

SCALE: AS NOTED

DRAWING NUMBER: **M5.04**

SHEET NUMBER: OF SHEETS

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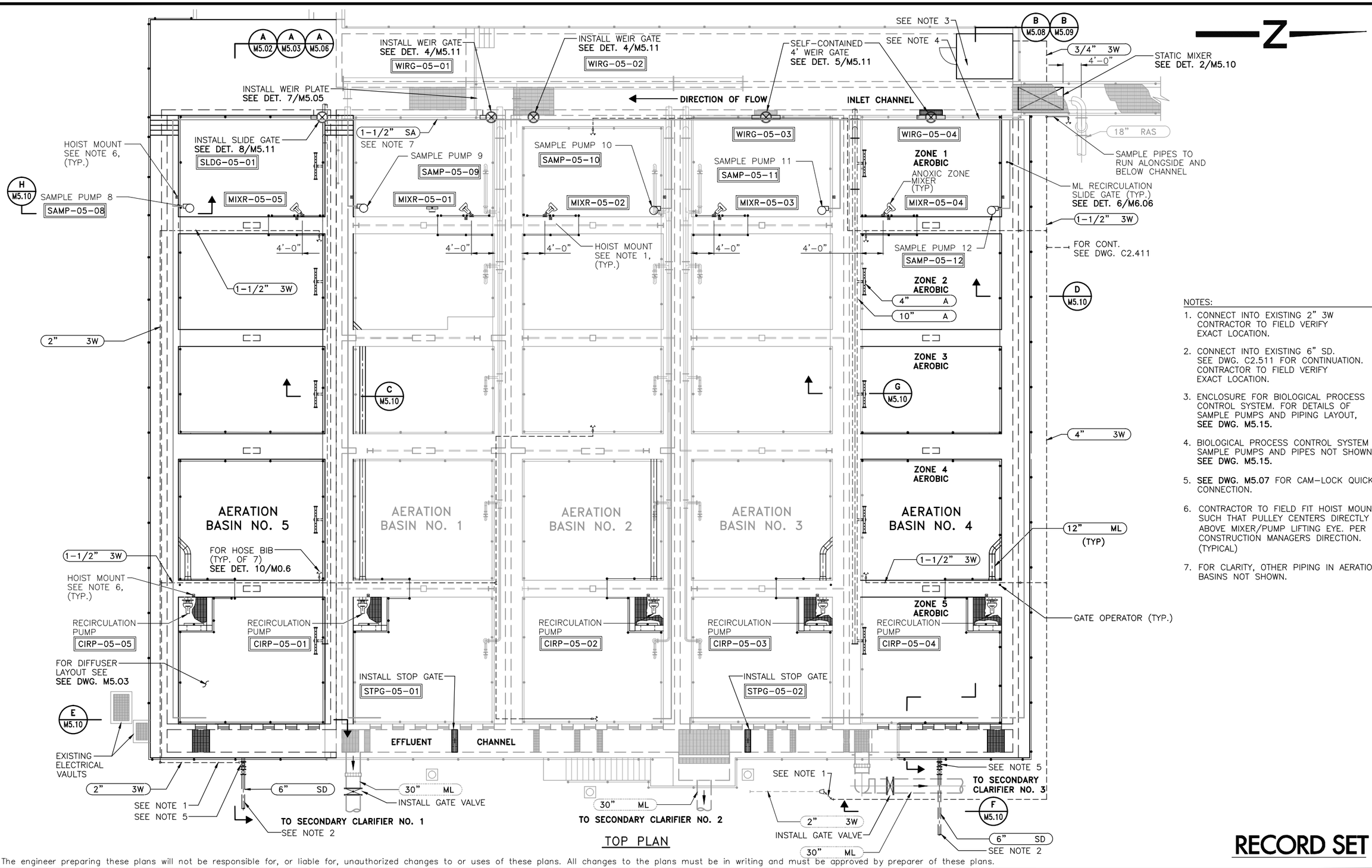

TOP PLAN

NOTES:

1. CONNECT INTO EXISTING 2" 3W CONTRACTOR TO FIELD VERIFY EXACT LOCATION.
2. CONNECT INTO EXISTING 6" SD. SEE DWG. C2.511 FOR CONTINUATION. CONTRACTOR TO FIELD VERIFY EXACT LOCATION.
3. ENCLOSURE FOR BIOLOGICAL PROCESS CONTROL SYSTEM. FOR DETAILS OF SAMPLE PUMPS AND PIPING LAYOUT, **SEE DWG. M5.15.**
4. BIOLOGICAL PROCESS CONTROL SYSTEM SAMPLE PUMPS AND PIPES NOT SHOWN, **SEE DWG. M5.15.**
5. **SEE DWG. M5.07** FOR CAM-LOCK QUICK CONNECTION.
6. CONTRACTOR TO FIELD FIT HOIST MOUNT SUCH THAT PULLEY CENTERS DIRECTLY ABOVE MIXER/PUMP LIFTING EYE. PER CONSTRUCTION MANAGERS DIRECTION. (TYPICAL)
7. FOR CLARITY, OTHER PIPING IN AERATION BASINS NOT SHOWN.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE:	XXXXXX
PROJECT NO.:	SA1224
DRAWN BY:	K.C. HAYES
CHECKED BY:	J.Y. AU
PROJ. MGR.:	D. RICHARD
PROJ. ENGR.:	A.G. CALCIANO

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

NORTHSIDE AERATION BASIN EXPANSION DECK ELEVATION

SCALE 1/8"=1'-0"

DRAWING NUMBER **M5.05**

SHEET NUMBER OF SHEETS

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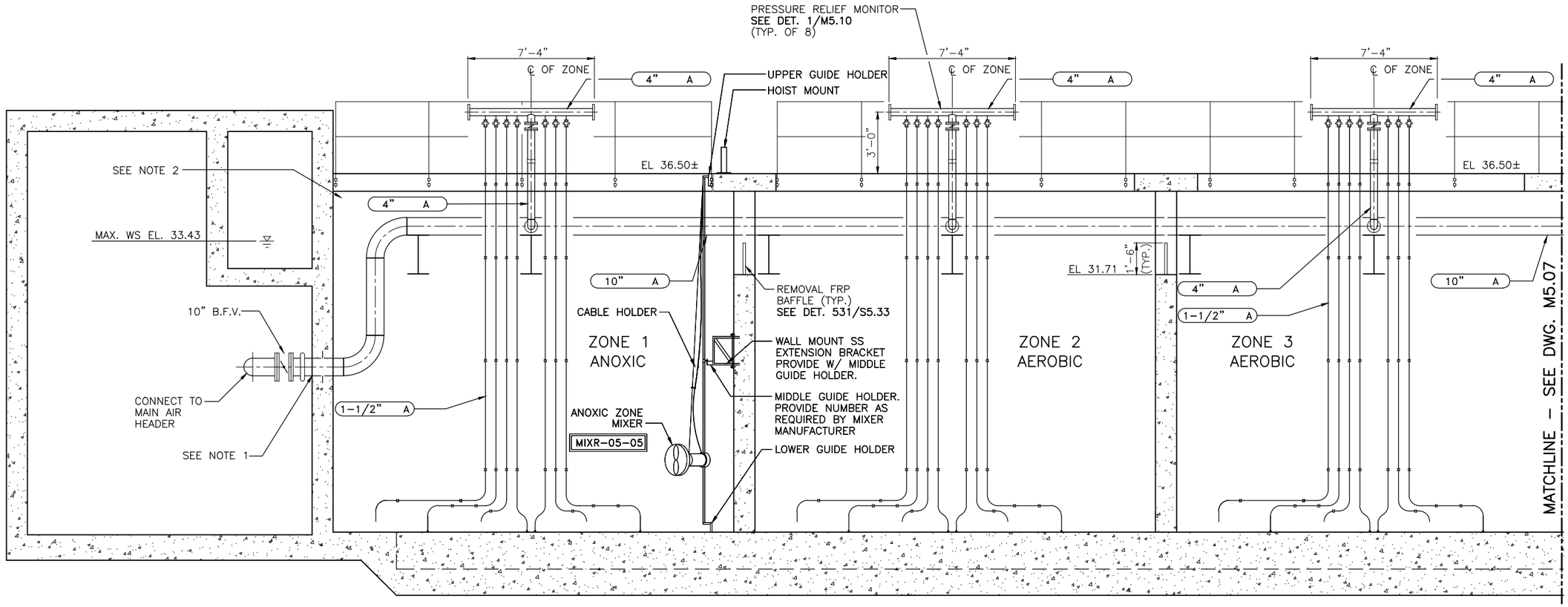
11/13/01 1:28 p.m.

NOTES:

1. CENTERLINE OF PENETRATION SHALL MATCH CENTERLINE OF EXISTING MAIN HEADER. CONTRACTOR TO FIELD VERIFY.
2. BIOLOGICAL PROCESS CONTROL SYSTEM SAMPLE PUMPS AND PIPE NOT SHOWN, **SEE DWG. M5.15.**



SECTION A/M5.04 A/M5.05
SCALE: 3/8"=1'-0"

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

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PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
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2	SEM	09/11	RECORD SET
1	SEM	10/31/01	RECORD SET NO. 2 – OCTOBER 3, 2001

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

NORTHSIDE AERATION BASIN EXPANSION SECTION

SCALE: AS NOTED
DRAWING NUMBER: M5.06
SHEET NUMBER: OF SHEETS

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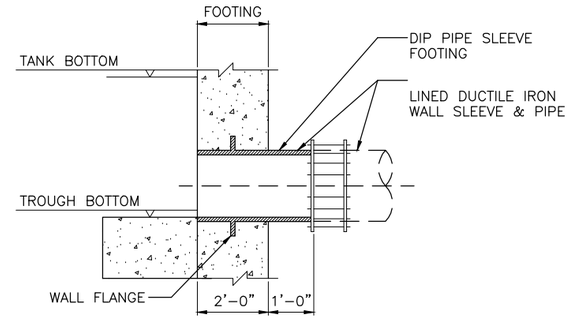
11/13/01 1:28 p.m.

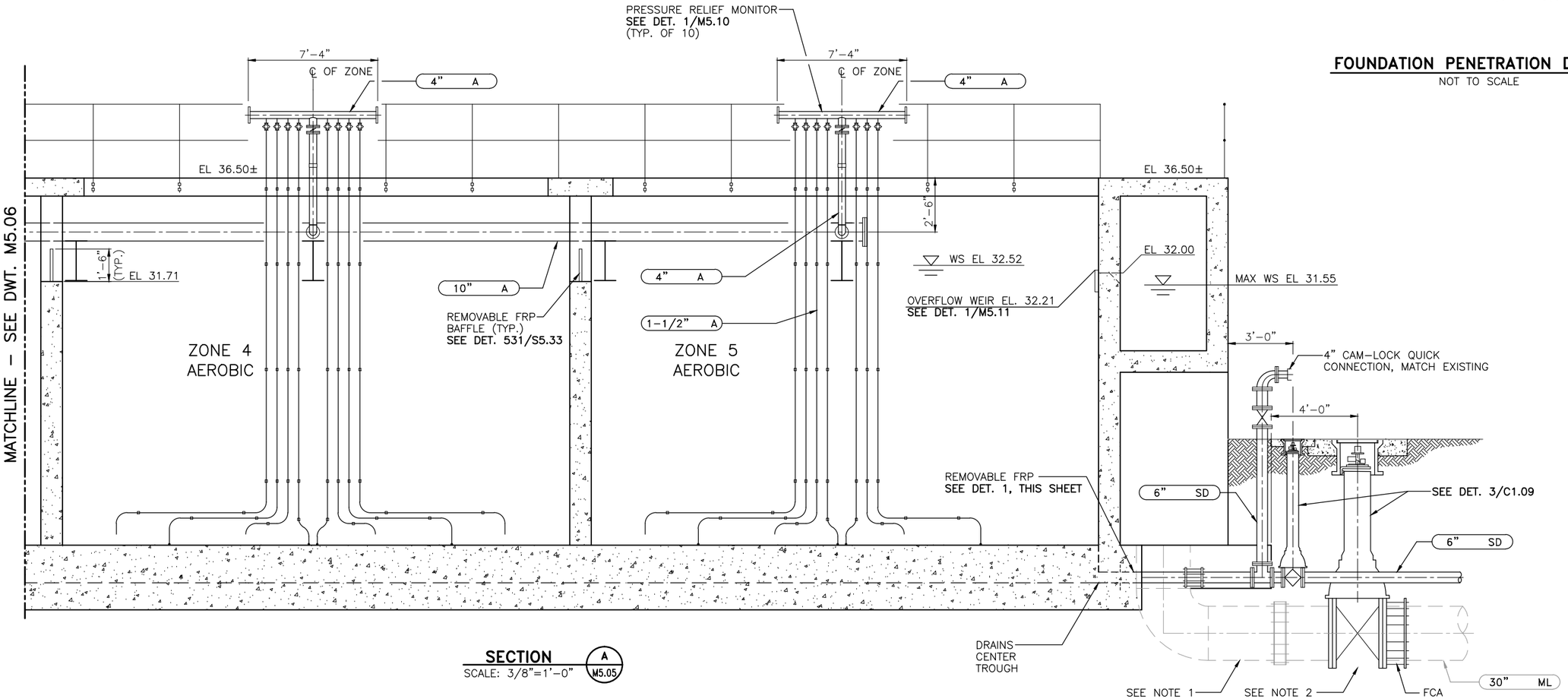
NOTES:

1. CONTRACTOR TO VERIFY THAT INVERT ELEVATION IS 14.50.
2. WELD FLANGE ON UPSTREAM SIDE OF PIPE AND PLACE FCA ON DOWN STREAM SIDE. 30" RESILIENT SEAT GATE VALVE IS TO HAVE A FLANGE–FLANGE CONNECTION.



FOUNDATION PENETRATION DETAIL 1/-

NOT TO SCALE



SECTION A M5.05

SCALE: 3/8"=1'–0"

RECORD SET

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REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

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DRAWN BY: K.C. HAYES
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PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

NORTHSIDE AERATION BASIN EXPANSION SECTION

SCALE: AS NOTED

DRAWING NUMBER: M5.07

SHEET NUMBER OF SHEETS

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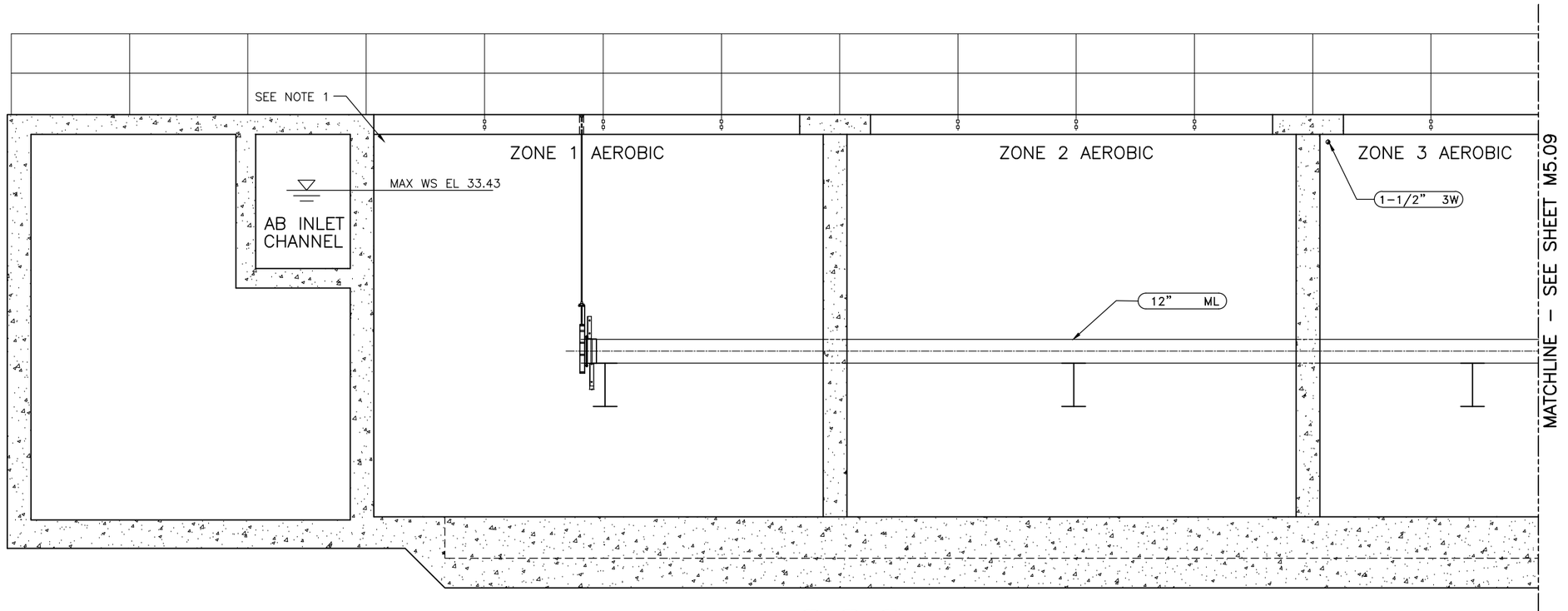
11/13/01 1:28 p.m.

NOTES:

1. BIOLOGICAL PROCESS CONTROL SYSTEM SAMPLE PUMPS AND PIPE NOT SHOWN, **SEE DWG. M5.15.**



SECTION (B M5.03 / B M5.04 / B M5.05)

SCALE: 3/8"=1'-0"

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RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
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DRAWN BY: K.C. HAYES
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PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

NORTHSIDE AERATION BASIN EXPANSION SECTION

SCALE: AS NOTED

DRAWING NUMBER: **M5.08**

SHEET NUMBER: OF SHEETS

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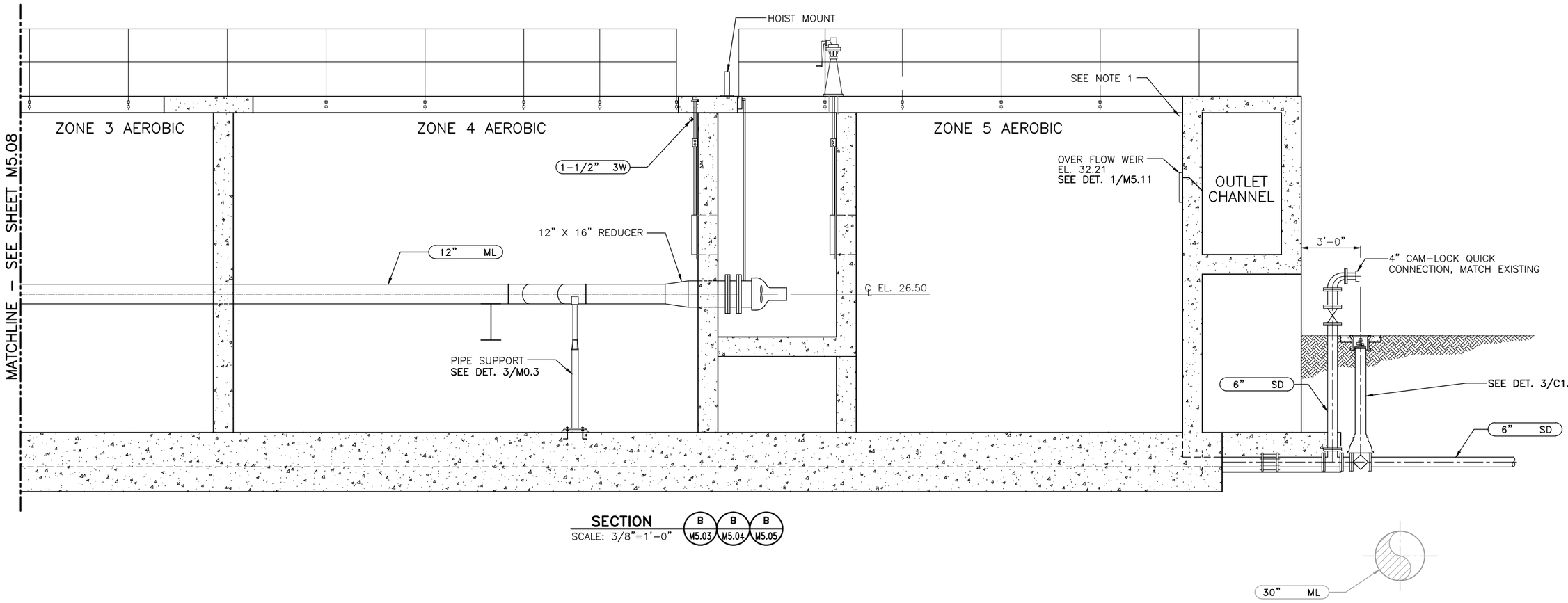
NOTES:

1. BIOLOGICAL PROCESS CONTROL SYSTEM SAMPLE PUMPS AND PIPE NOT SHOWN, **SEE DWG. M5.15.**



SECTION (B M5.03 / B M5.04 / B M5.05)
SCALE: 3/8"=1'-0"

RECORD SET

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REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

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DRAWN BY: K.C. HAYES
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PROJ. ENGR.: A.G. CALCIANO

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1	SEM	09/11	RECORD SET

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

NORTHSIDE AERATION BASIN EXPANSION SECTION

SCALE: AS NOTED
DRAWING NUMBER: **M5.09**
SHEET NUMBER: OF SHEETS

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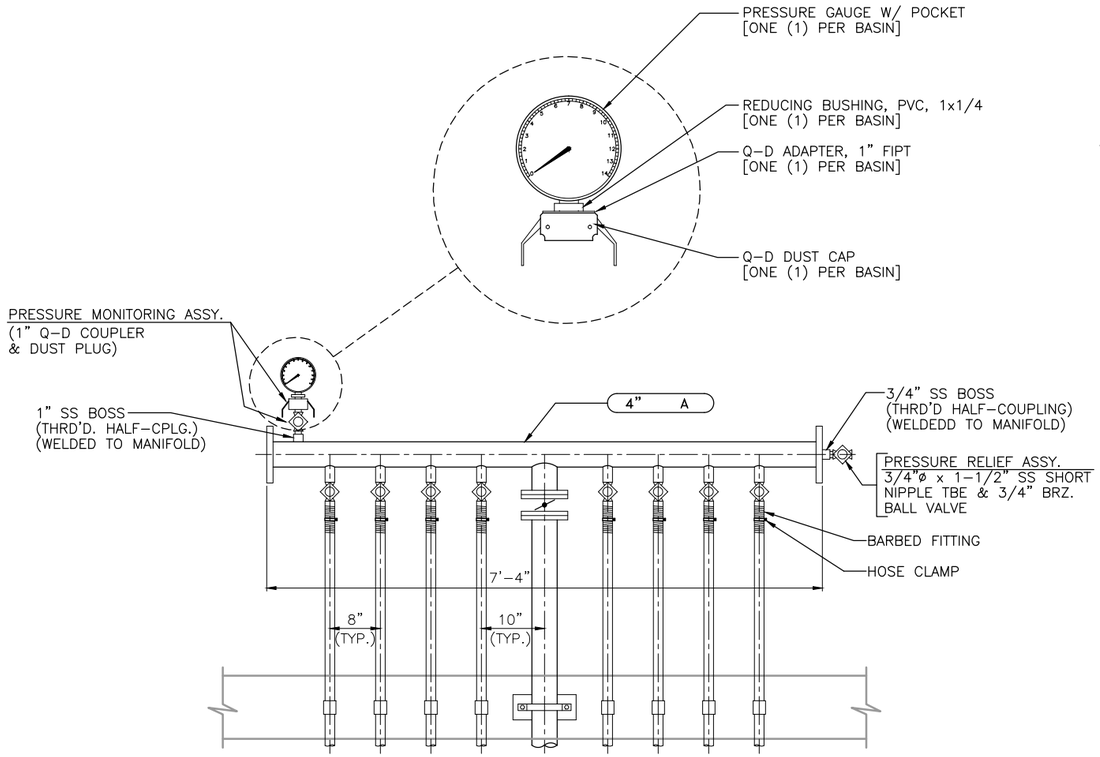
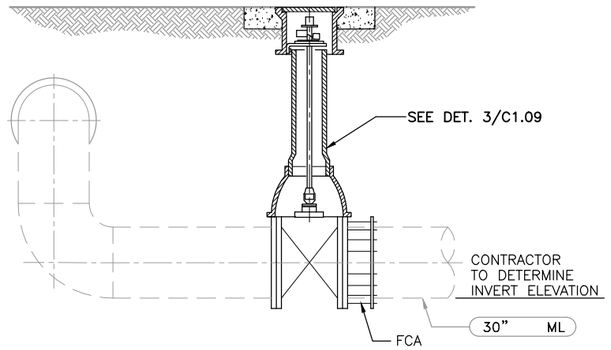


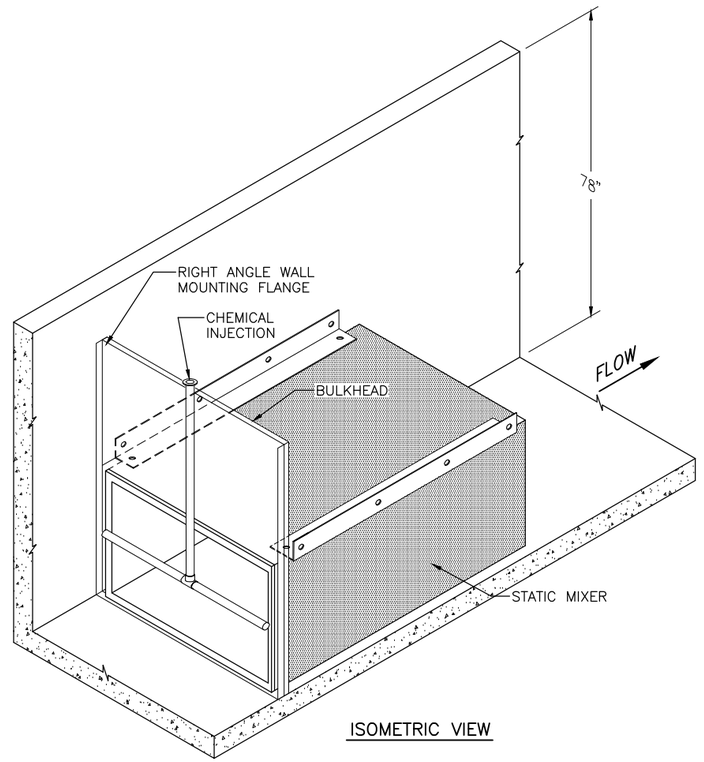
PRESSURE RELIEF MONITOR (1 / M5.06) (1 / M5.07)

SCALE: 1"=1'-0"

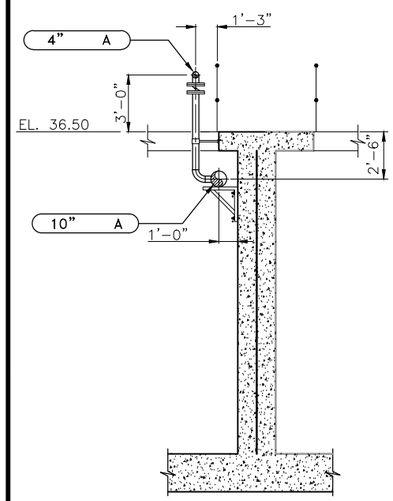


SECTION (F / M5.05)

SCALE: 3/8"=1'-0"

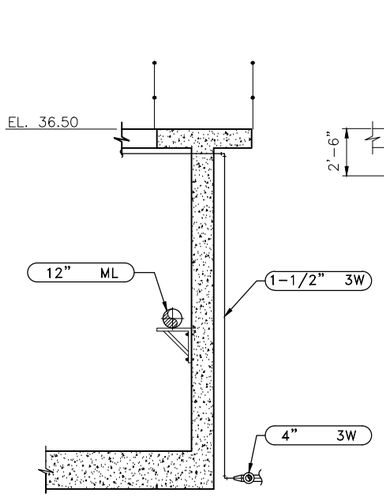


ISOMETRIC VIEW



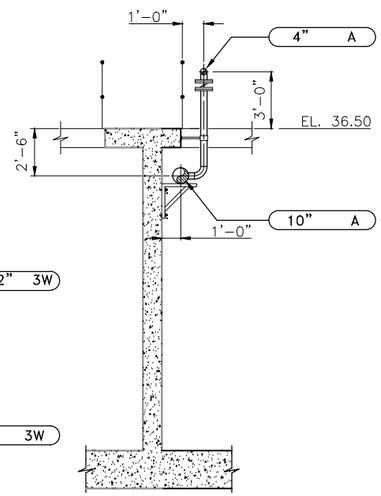
SECTION (C / M5.05)

SCALE: 1/4"=1'-0"



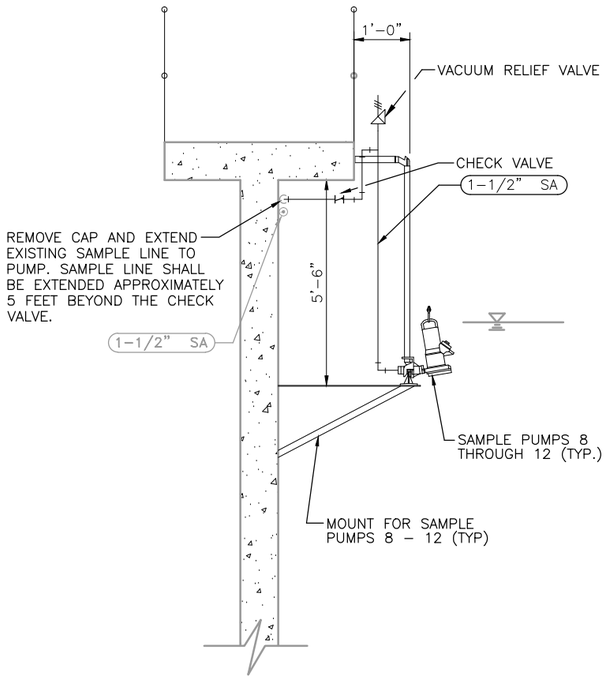
SECTION (D / M5.05)

SCALE: 1/4"=1'-0"



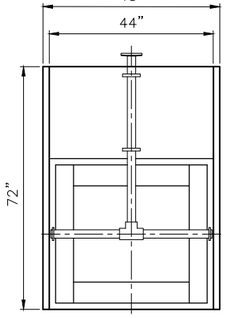
SECTION (G / M5.05)

SCALE: 1/4"=1'-0"

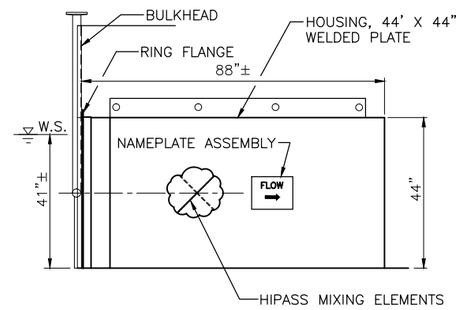


SECTION (H / M5.05)

SCALE: 1/2"=1'-0"



END VIEW



ELEVATION

STATIC MIXER DETAIL (2 / M5.05)

NOT TO SCALE

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			REDUCED RECORD SET NOT TO SCALE
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

NORTHSIDE AERATION BASIN EXPANSION
SECTIONS AND DETAILS

SCALE: AS NOTED
DRAWING NUMBER: M5.10
SHEET NUMBER: OF SHEETS

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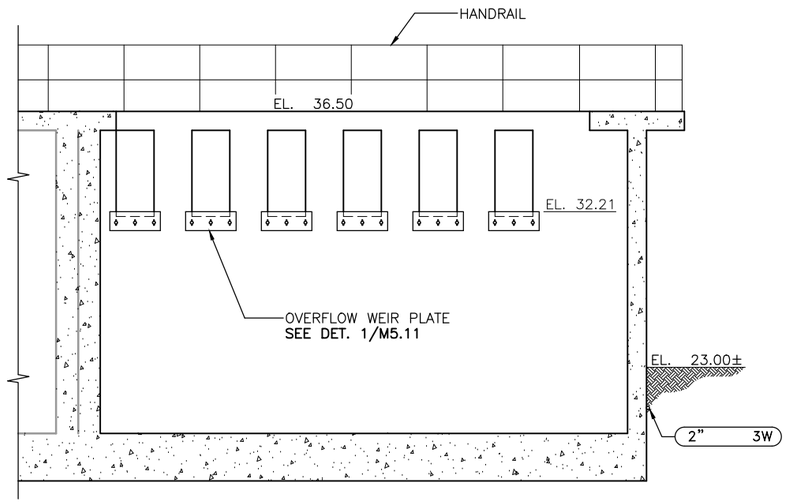
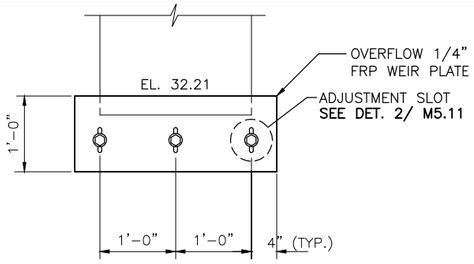
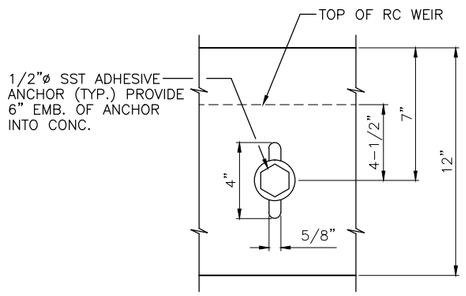


SECTION (E, M5.05)
SCALE: 1/4"=1'-0"



OVERFLOW WEIR PLATE DETAIL (1, M5.07 / 1, M5.11)
SCALE: 1"=1'-0"



ADJUSTMENT SLOT DETAIL (2, M5.11)
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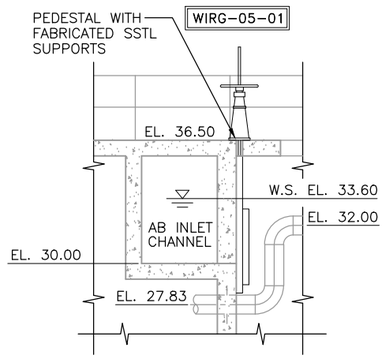
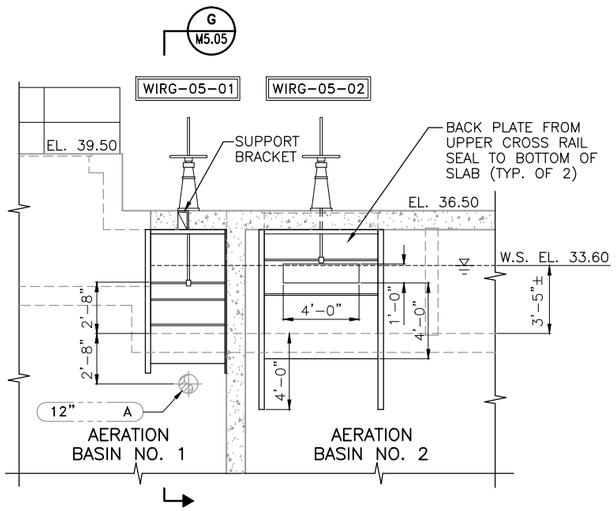


SECTION (G, M5.11)
SCALE: 1/4"=1'-0"



WEIR GATE DETAIL (4, M5.05)
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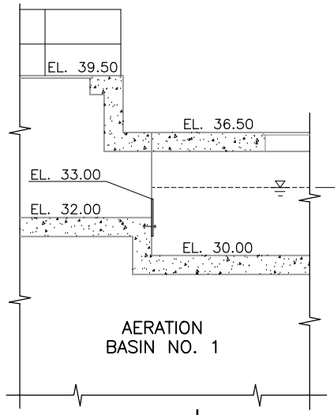
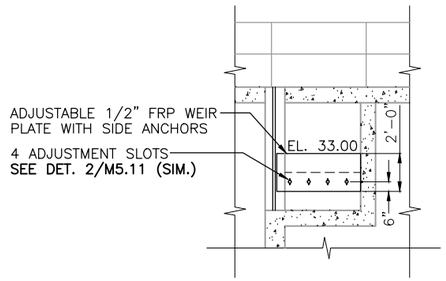
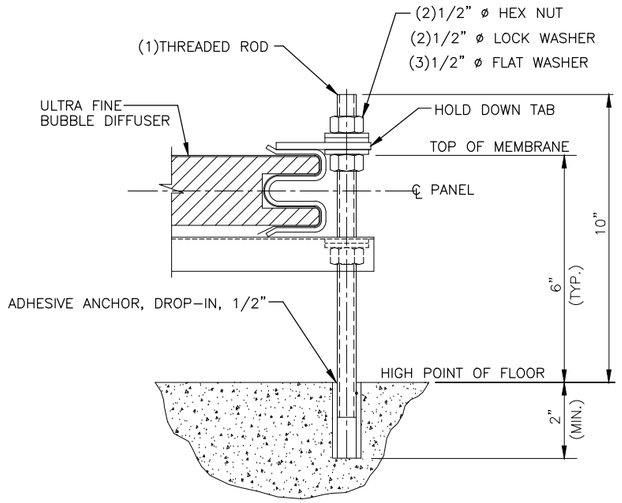


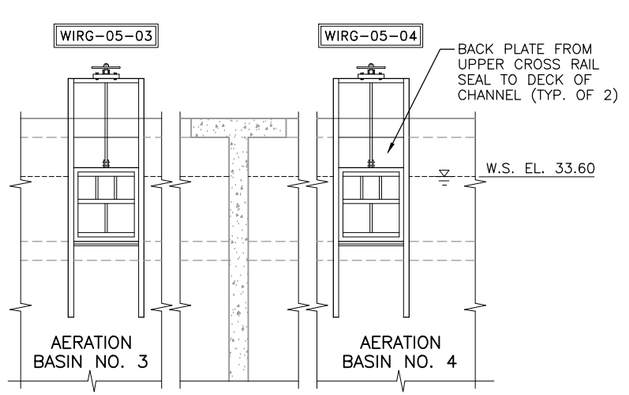
WEIR PLATE DETAIL (7, M5.05)
SCALE: 1/4"=1'-0"



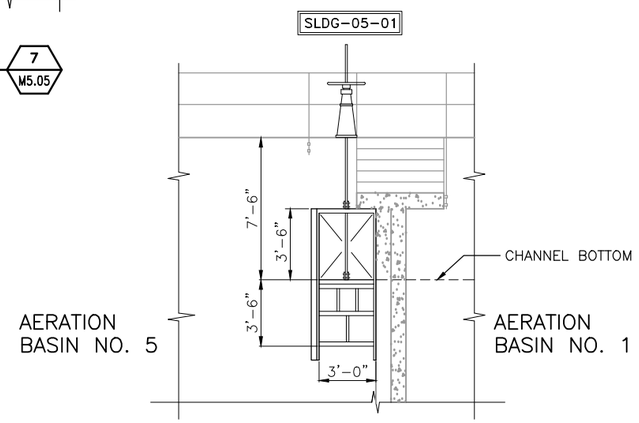
SECTION (H, M5.11)
SCALE: 1/4"=1'-0"



PANEL MOUNTING DETAIL (3, M5.03)
NOT TO SCALE



SELF-CONTAINED 4' WEIR GATE DETAIL (5, M5.05)
SCALE: 1/4"=1'-0"



SLIDE GATE DETAIL (8, M5.05)
SCALE: 1/4"=1'-0"

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
NORTHSIDE AERATION BASIN EXPANSION SECTIONS AND DETAILS

SCALE: AS NOTED
DRAWING NUMBER: M5.11
SHEET NUMBER: OF SHEETS

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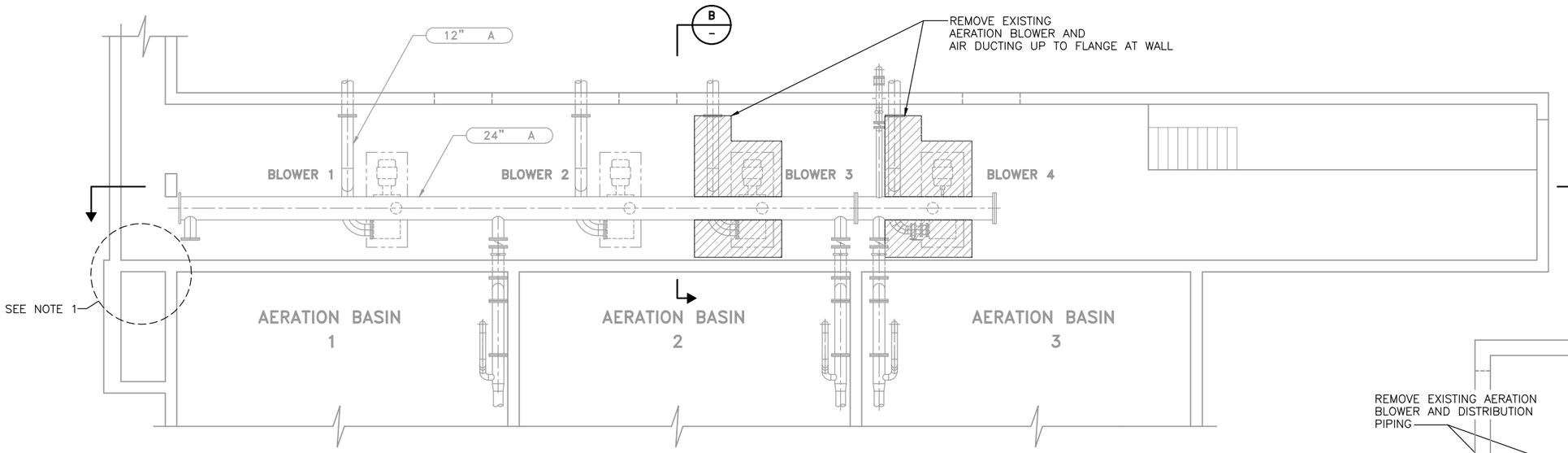
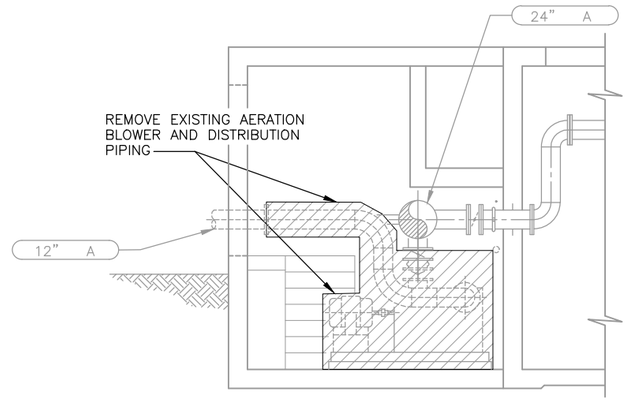
11/13/01 1:28 p.m.



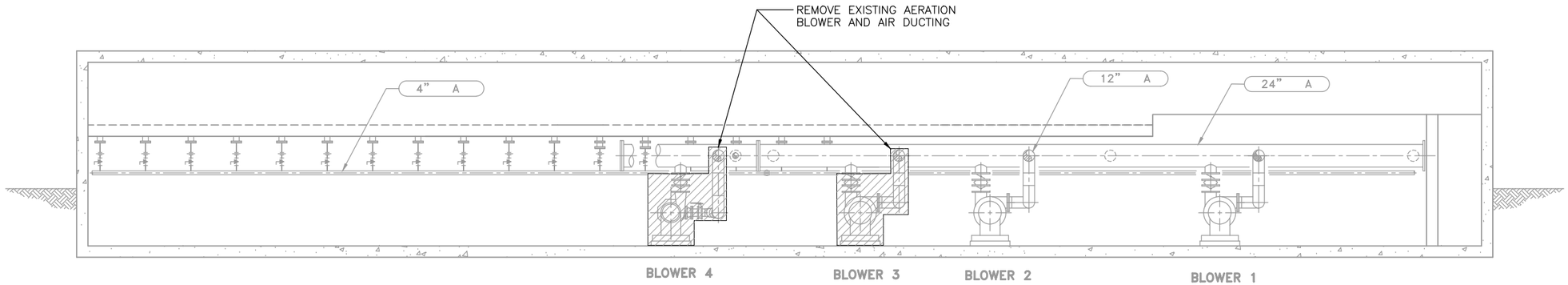
PLAN
SCALE: 3/16"=1'-0"



SECTION B
SCALE: 1/4"=1'-0"

NOTES

1. EXISTING UTILITY PIPING NOT SHOWN. CONTRACTOR SHALL COORDINATE WITH CONSTRUCTION MANAGER WITH REGARD TO UTILITY PIPING CURRENTLY LOCATED ON OR NEAR THE EXISTING EFFLUENT BOX WEST WALL PRIOR TO WALL DEMOLITION AND RECONSTRUCTION. CONTRACTOR MAY CHOOSE TO PROVIDE TEMPORARY SUPPORTS FOR UTILITY PIPING AND CONDUITS OR TO TEMPORARILY CUT AND CAP PIPES (TWO STEAM PIPES) THAT DO NOT NEED TO STAY ACTIVE DURING CONSTRUCTION REROUTING PIPES (ONE EACH– AERATION AIR PIPE, INSTRUMENTATION AIR PIPE, SERVICE AIR PIPE AND 2W WATER PIPE) THAT MUST STAY ACTIVE DURING CONSTRUCTION.



SECTION A
SCALE: 3/16"=1'-0"

RECORD SET

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REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

AERATION GALLERY - DEMOLITION PLAN AND SECTIONS

SCALE: AS NOTED
DRAWING NUMBER: M5.12
SHEET NUMBER: OF SHEETS

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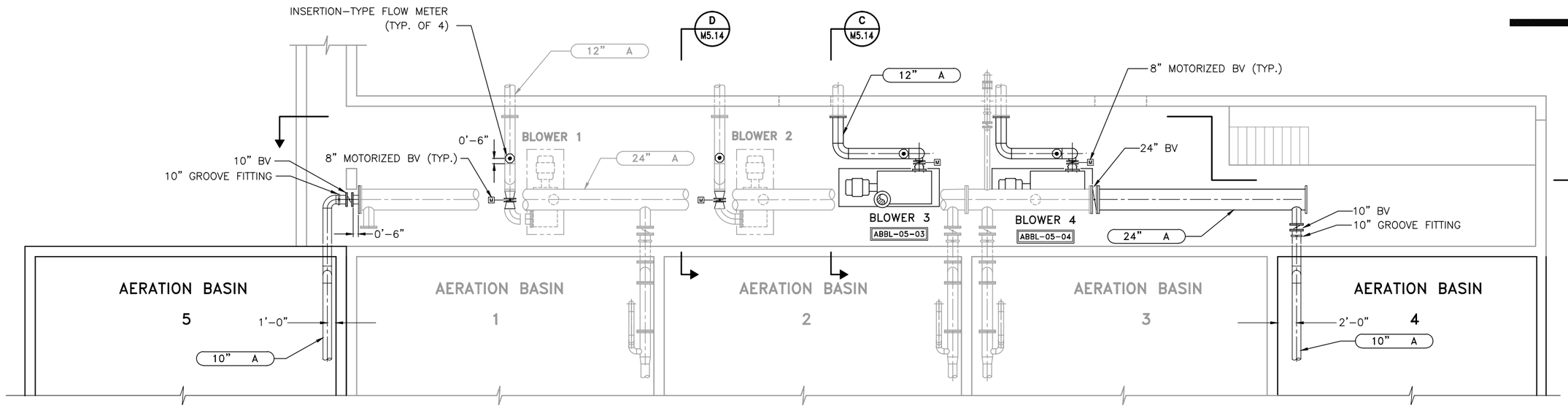
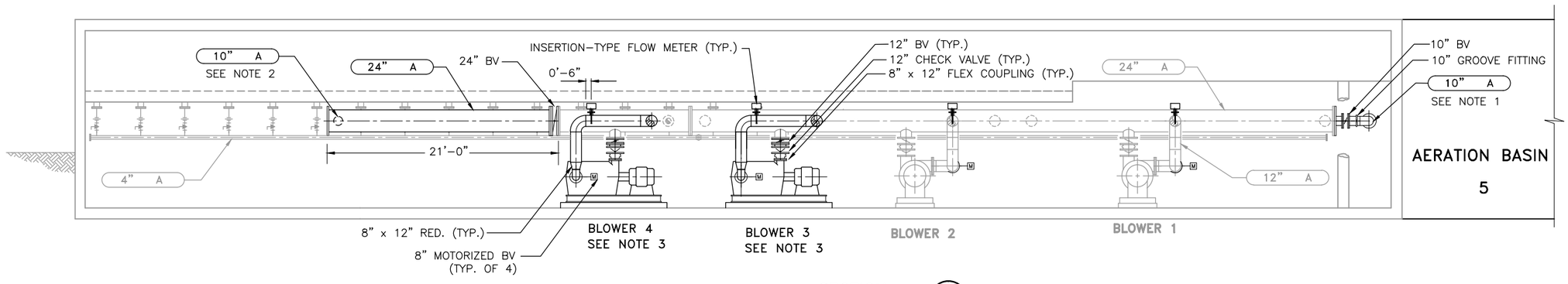


PLAN
SCALE: 3/16"=1'–0"



SECTION A/–
SCALE: 3/16"=1'–0"

NOTES

1. CONTRACTOR MAY HAVE TO RELOCATE EXISTING UTILITIES (NOT SHOWN) TO ACCOMDATE NEW AIR PIPING. SEE NOTE 1 ON DWG. M5.09.
2. CONTRACTOR MAY HAVE TO MODIFY EXISTING CHANNEL AIR PIPING TO ACCOMODATE INSTALLATION OF NEW 10" AIR DUCT.
3. CONTRACTOR TO FIELD FIT BLOWERS BENEATH EXISTING 24" AIR HEADER SO THAT BLOWER DISCHARGE IS ALLIGNED WITH EXISTING 12" HEADER INLETS.

RECORD SET

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REGISTERED PROFESSIONAL ENGINEER
David Richard
No. 33479
EXP.
CIVIL
STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			REDUCED RECORD SET NOT TO SCALE
4			
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
AERATION GALLERY - BLOWER REPLACEMENT

SCALE: AS NOTED
DRAWING NUMBER: M5.13
SHEET NUMBER: OF SHEETS

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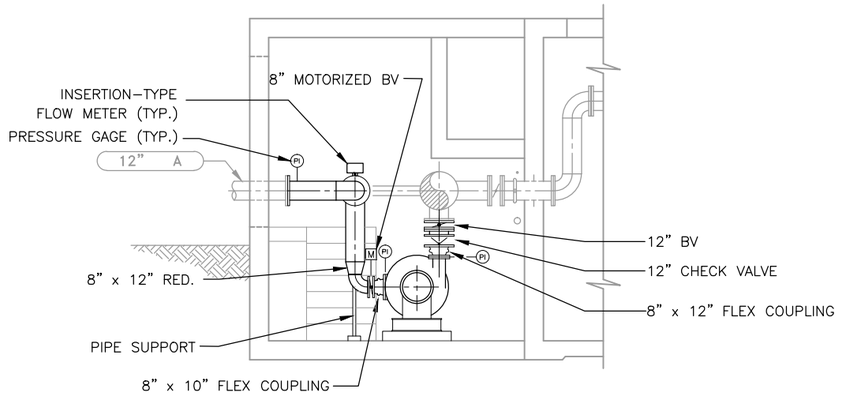
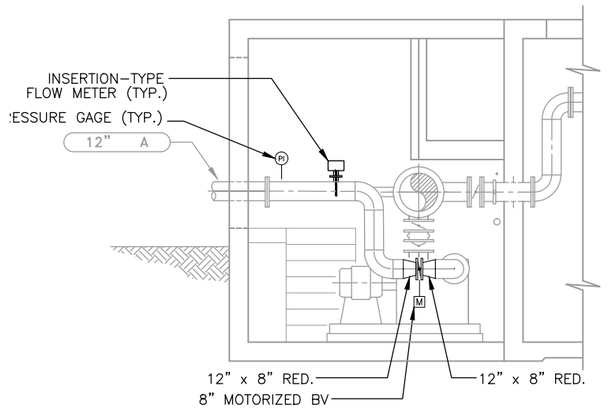


SECTION C
SCALE: 1/4"=1'–0" M5.13



SECTION D
SCALE: 1/4"=1'–0" M5.13

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
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4			
3			
2			
1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

AERATION GALLERY SECTIONS AND DETAILS

SCALE: AS NOTED
DRAWING NUMBER: M5.14
SHEET NUMBER: OF SHEETS

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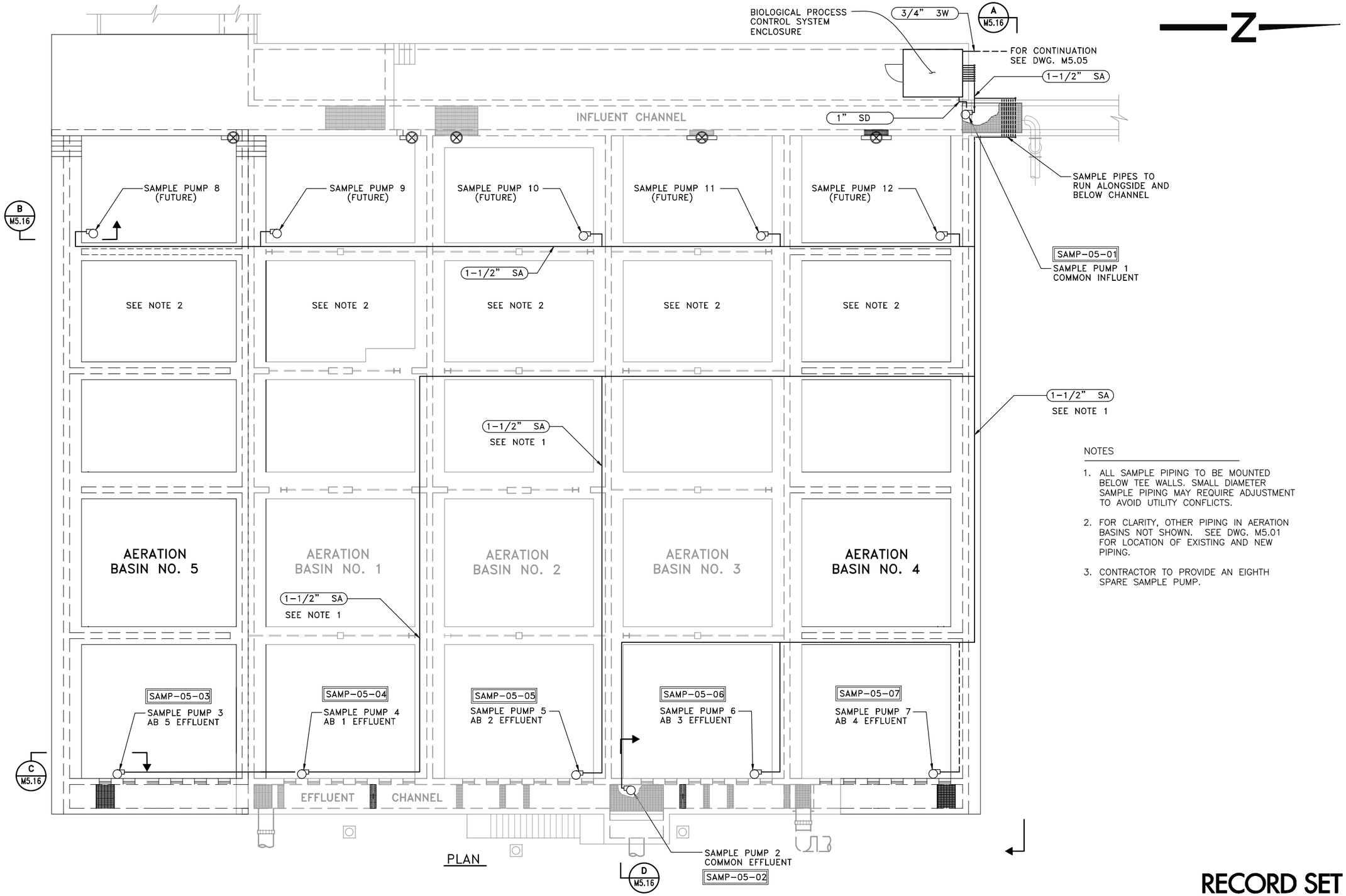

PLAN

NOTES

1. ALL SAMPLE PIPING TO BE MOUNTED BELOW TEE WALLS. SMALL DIAMETER SAMPLE PIPING MAY REQUIRE ADJUSTMENT TO AVOID UTILITY CONFLICTS.
2. FOR CLARITY, OTHER PIPING IN AERATION BASINS NOT SHOWN. SEE DWG. M5.01 FOR LOCATION OF EXISTING AND NEW PIPING.
3. CONTRACTOR TO PROVIDE AN EIGHTH SPARE SAMPLE PUMP.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL

BIOLOGICAL PROCESS CONTROL SYSTEM SAMPLE PUMP AND PIPING LAYOUT

SCALE 1/8"=1'-0"
DRAWING NUMBER M5.15
SHEET NUMBER OF SHEETS

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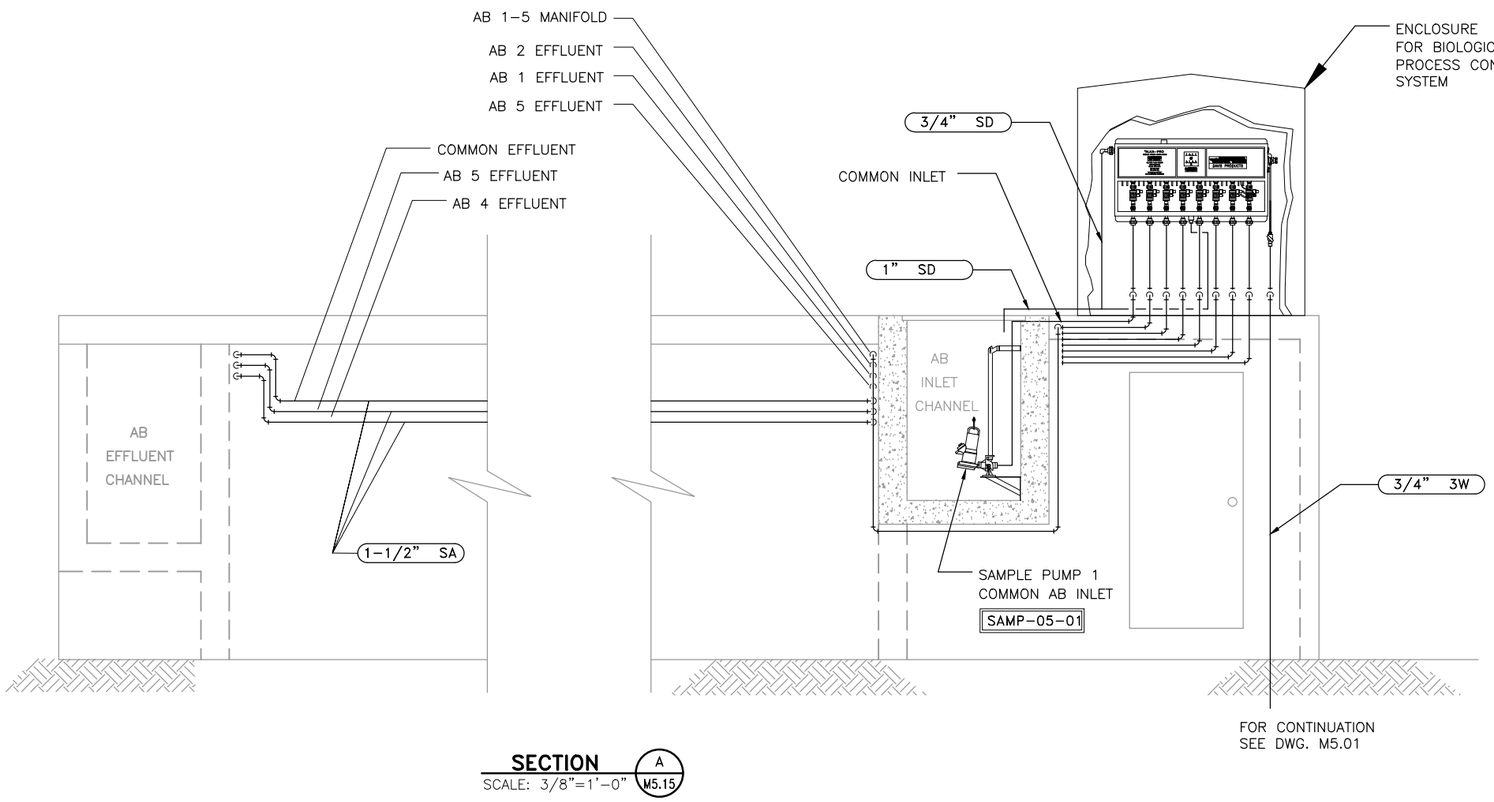
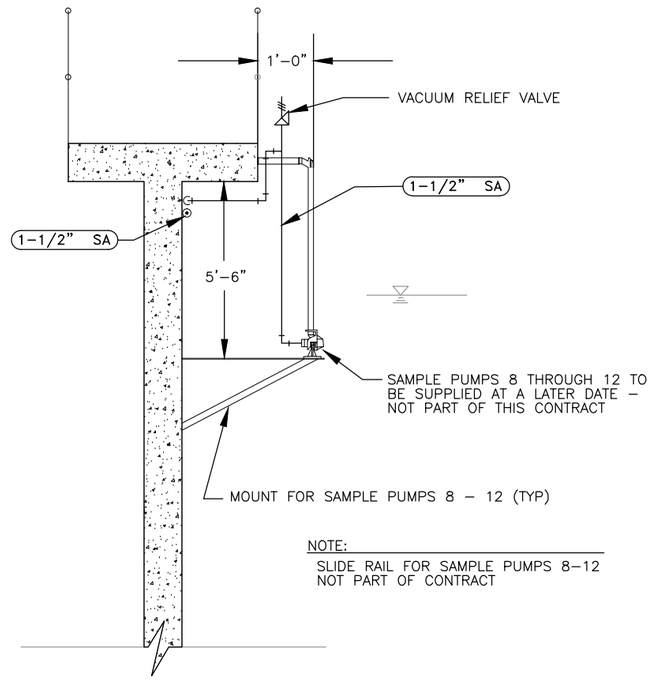
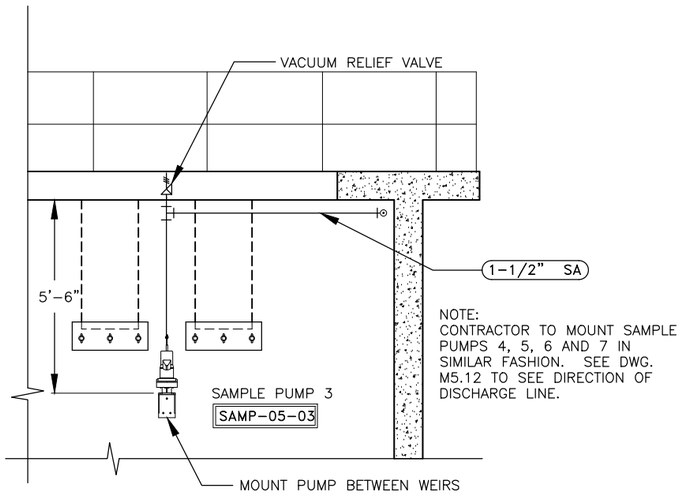


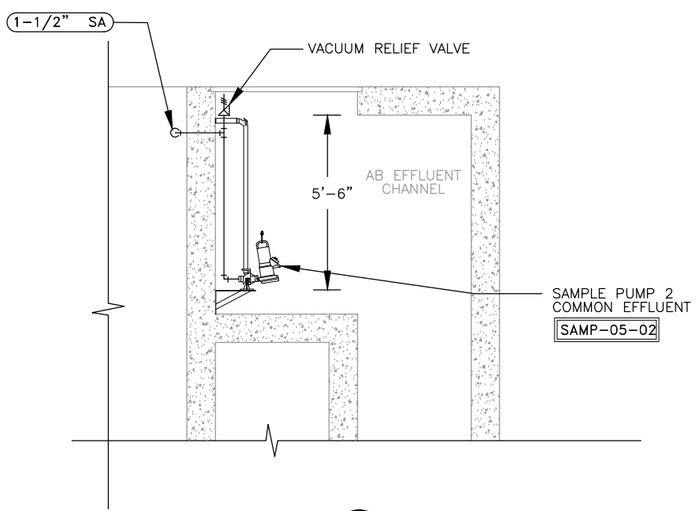
SECTION A
SCALE: 3/8"=1'–0" M5.15



SECTION B
SCALE: 1/2"=1'–0" M5.15



SECTION C
SCALE: 3/8"=1'–0" M5.15



SECTION D
SCALE: 3/8"=1'–0" M5.15

RECORD SET

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□ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 □ ORANGE COUNTY (714) 362-1600 □ SACRAMENTO (916) 641-1500 □ SAN JOSE (408) 287-3433 □ SAN DIEGO (619) 378-0382 □ WALNUT CREEK (510) 934-8080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2	SEM	09/11	RECORD SET
1	RA	11/13/01	ADDENDUM NO. 1 – SEPTEMBER 19, 2001

~~REDUCED RECORD SET NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
BIOLOGICAL PROCESS CONTROL SYSTEM SECTIONS

SCALE: AS NOTED
DRAWING NUMBER: M5.16
SHEET NUMBER: OF SHEETS

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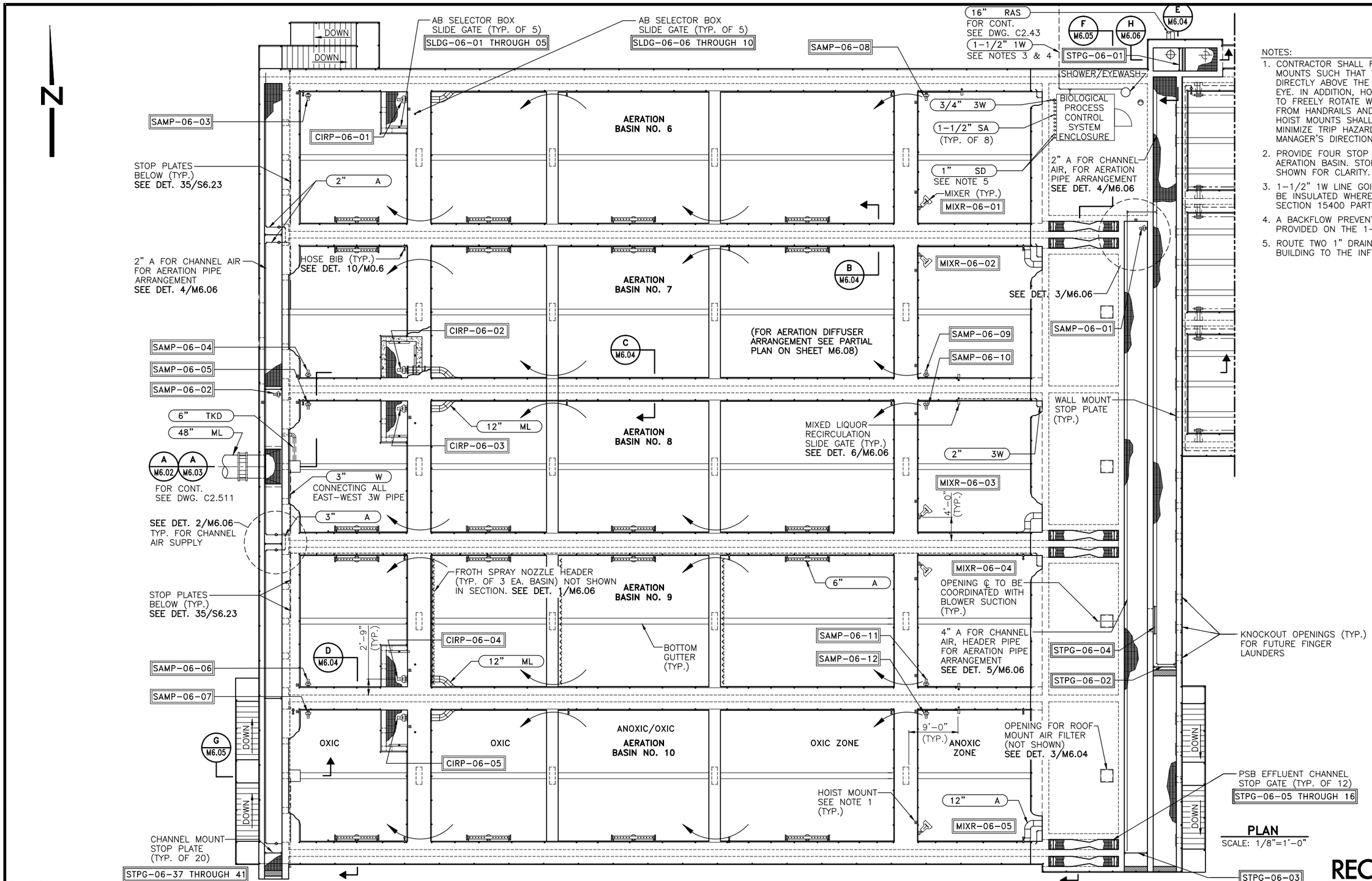

PLAN
SCALE: 1/8"=1'-0"

NOTES:

1. CONTRACTOR SHALL FIELD LOCATE HOIST MOUNTS SUCH THAT THE PULLEY CENTERS DIRECTLY ABOVE THE EQUIPMENT LIFTING EYE. IN ADDITION, HOIST SHALL BE ABLE TO FREELY ROTATE WITHOUT OBSTRUCTION FROM HANDRAILS AND OTHER EQUIPMENT. HOIST MOUNTS SHALL BE LOCATED TO MINIMIZE TRIP HAZARDS PER CONSTRUCTION MANAGER'S DIRECTION.
2. PROVIDE FOUR STOP GATE ASSEMBLIES PER AERATION BASIN. STOP GATE FRAMES NOT SHOWN FOR CLARITY.
3. 1-1/2" 1W LINE GOING TO EYEWASH SHALL BE INSULATED WHEREVER NOT BURIED, PER SECTION 15400 PART 2.21-B.3.
4. A BACKFLOW PREVENTER DEVICE SHALL BE PROVIDED ON THE 1-1/2" 1W LINE.
5. ROUTE TWO 1" DRAIN LINES FROM BPCS BUILDING TO THE INFLUENT CHANNEL.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SOUTHSIDE AERATION BASINS PLAN

SCALE: AS NOTED
DRAWING NUMBER: **M6.01**
SHEET NUMBER: OF SHEETS

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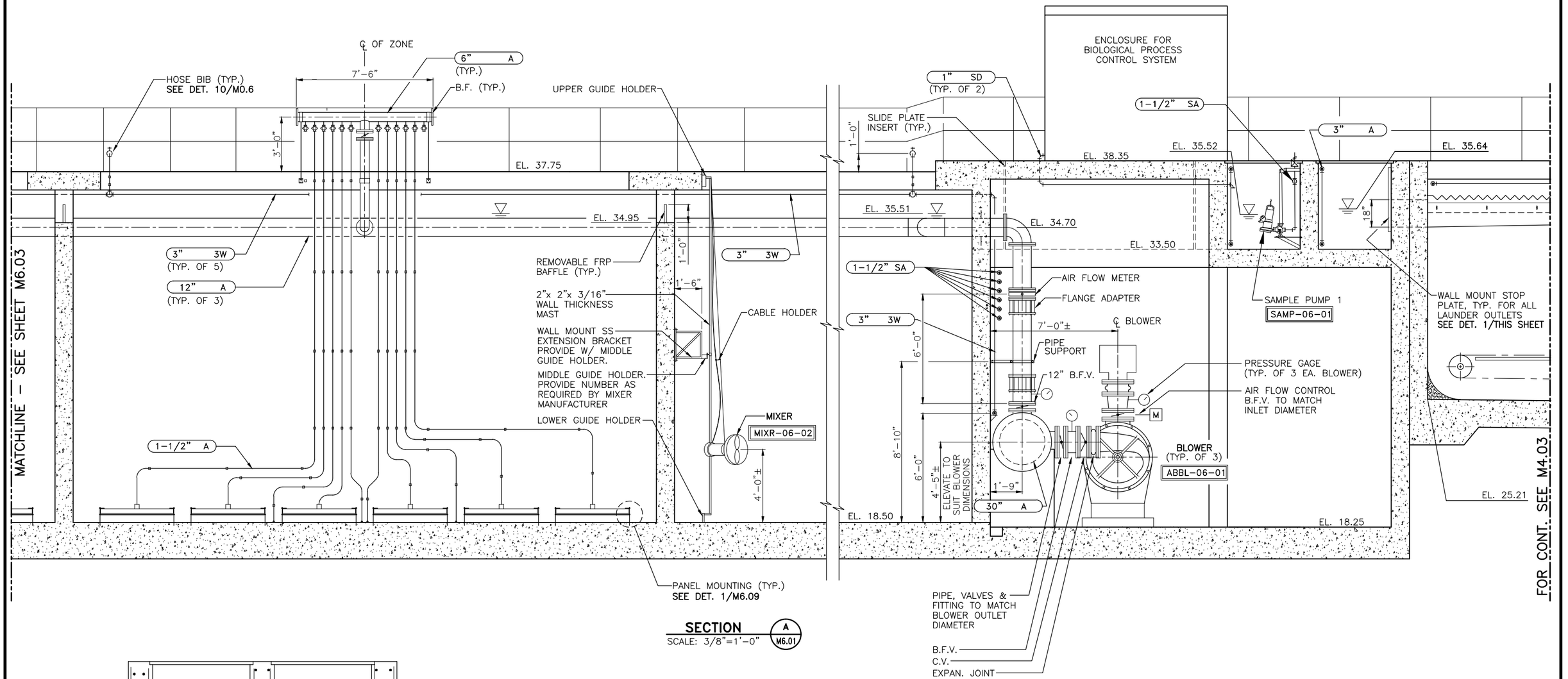
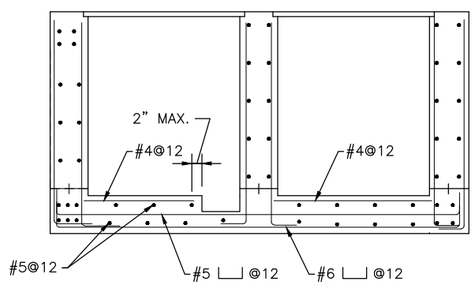


SECTION (A / M6.01)
SCALE: 3/8"=1'-0"



WALL MOUNT BLOCKOUT PLATE DETAIL (1 / –)
NOT TO SCALE

NOTES:
1. LOWER #5 U-BAR AND ROTATE HOOK UPWARDS.
2. PROVIDE ADDITIONAL #4@12 IN EACH CHANNEL AS SHOWN
3. PROVIDE ADDITIONAL #4 x 2'-0" TRIM BARS @ EACH END OF BLOCKOUT (NOT SHOWN)

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
SOUTHSIDE AERATION BASINS SECTION

SCALE: AS NOTED
DRAWING NUMBER: M6.02
SHEET NUMBER: OF SHEETS

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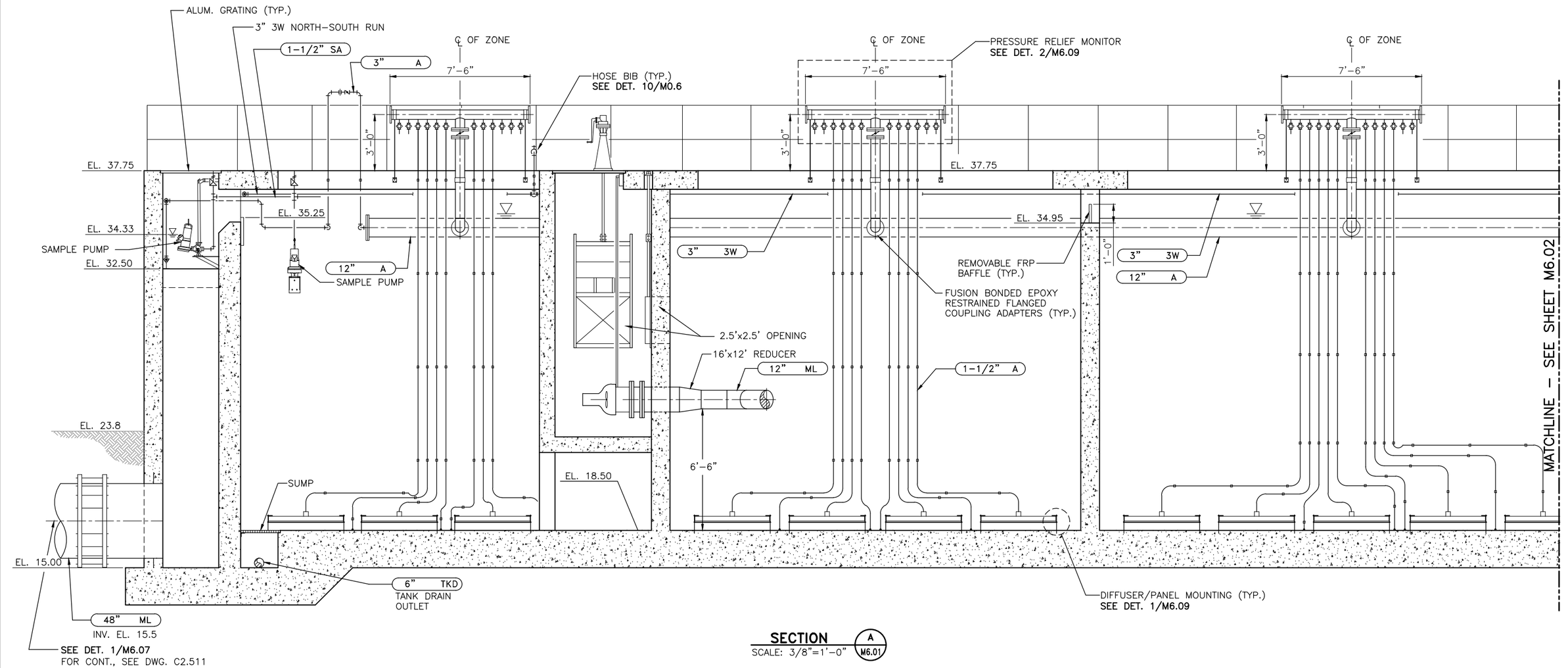

SECTION (A / M6.01)
SCALE: 3/8"=1'-0"

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07/15/04 9:36 a.m.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
6			
5			
4			
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2			
1	SEM	09/11	RECORD SET

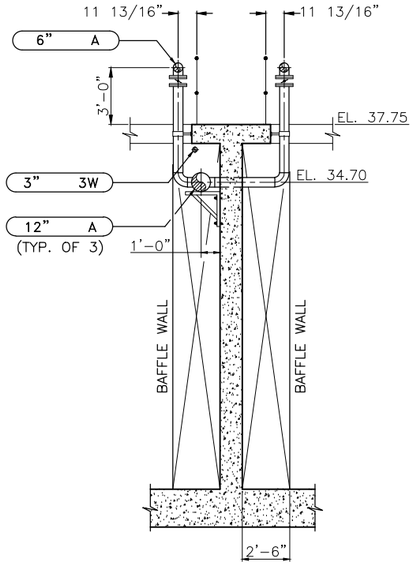
~~REDUCED RECORD SET NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

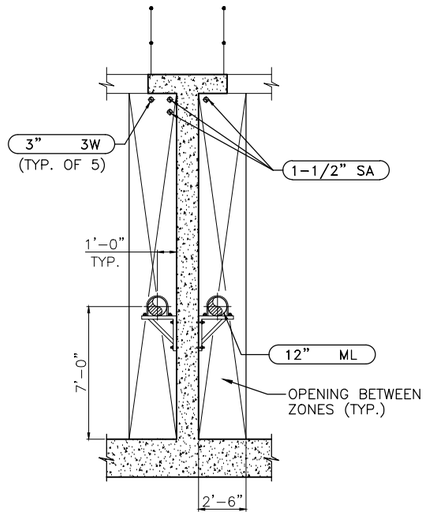
MECHANICAL

SOUTHSIDE AERATION BASINS SECTION

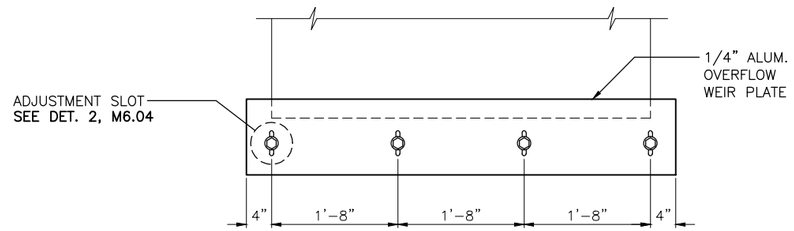
SCALE: AS NOTED
DRAWING NUMBER: **M6.03**
SHEET NUMBER: OF SHEETS



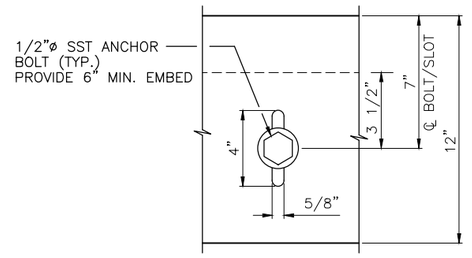
SECTION B M6.01
SCALE: 1/4"=1'-0"



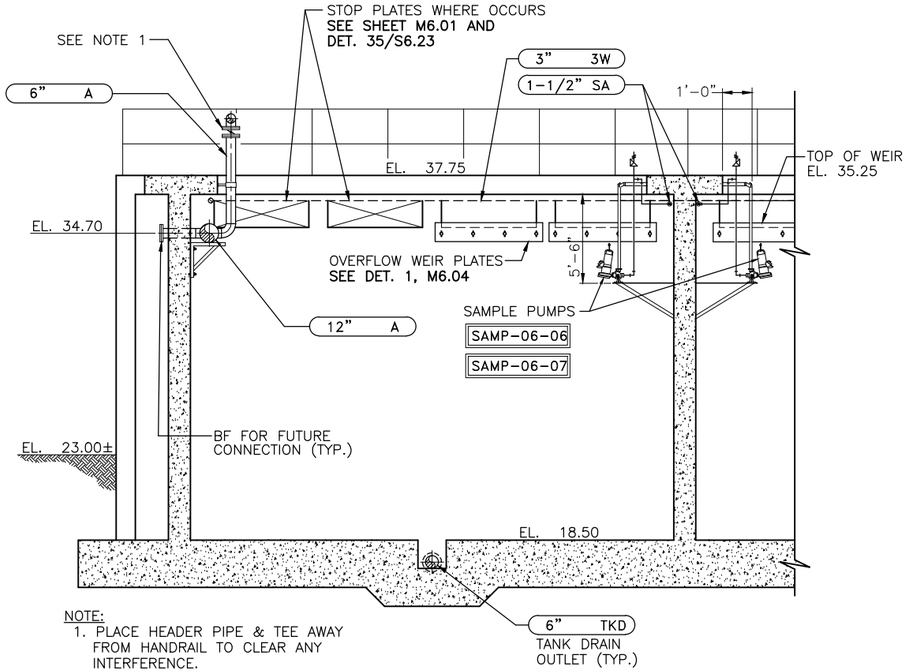
SECTION C M6.01
SCALE: 1/4"=1'-0"



OVERFLOW WEIR PLATE DETAIL 1 –
SCALE: 1"=1'-0"

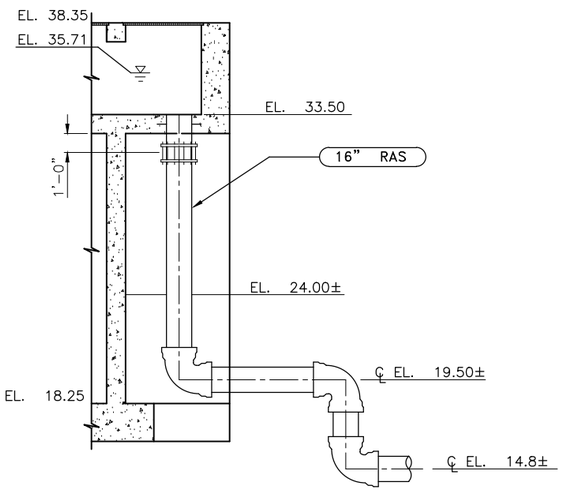


ADJUSTMENT SLOT DETAIL 2 – / 2 M4.07
SCALE: 3"=1'-0"

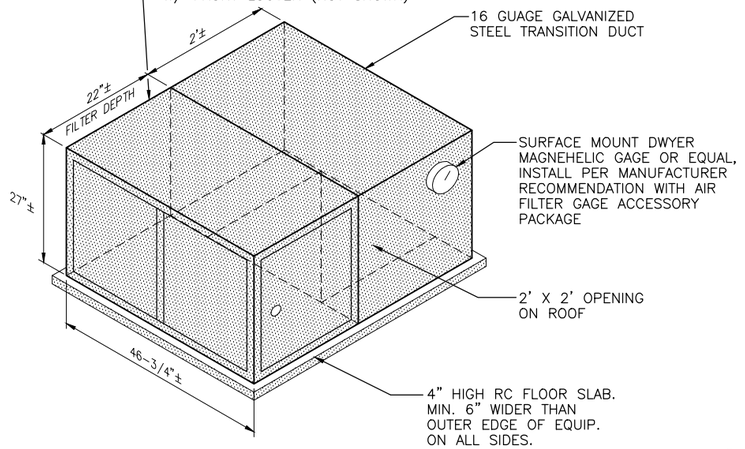


NOTE:
1. PLACE HEADER PIPE & TEE AWAY FROM HANDRAIL TO CLEAR ANY INTERFERENCE.

SECTION D M6.01
SCALE: 1/4"=1'-0"



SECTION E M6.01
SCALE: 1/4"=1'-0"



NOTES:
1. BLOWER ROOM AIR FILTER SHALL BE APPLIED AIR FILTERS OR APPROVED EQUAL. ASHRAE STANDARD HOUSING SHALL BE 1HX2W, 22 INCHES DEEP WITH LOUVERS. PRE-FILTER SHALL BE 24X24X2 MODEL DP40 WITH A 25% EFFICIENCY. BAG FILTER SHALL BE 24X24X15 MODEL CP6-MB WITH A 65% EFFICIENCY. AIR FILTER GAGE ACCESSORY PACKAGE SHALL BE DWYER MAGNEHELIX 2002 AF KIT OR APPROVED EQUAL.

BLOWER ROOM AIR INLET FILTER DETAIL 3 M6.01
SCALE: 3/4"=1'-0"

RECORD SET

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REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SOUTHSIDE AERATION BASINS SECTIONS AND DETAILS

SCALE: AS NOTED
DRAWING NUMBER: M6.04
SHEET NUMBER: OF SHEETS

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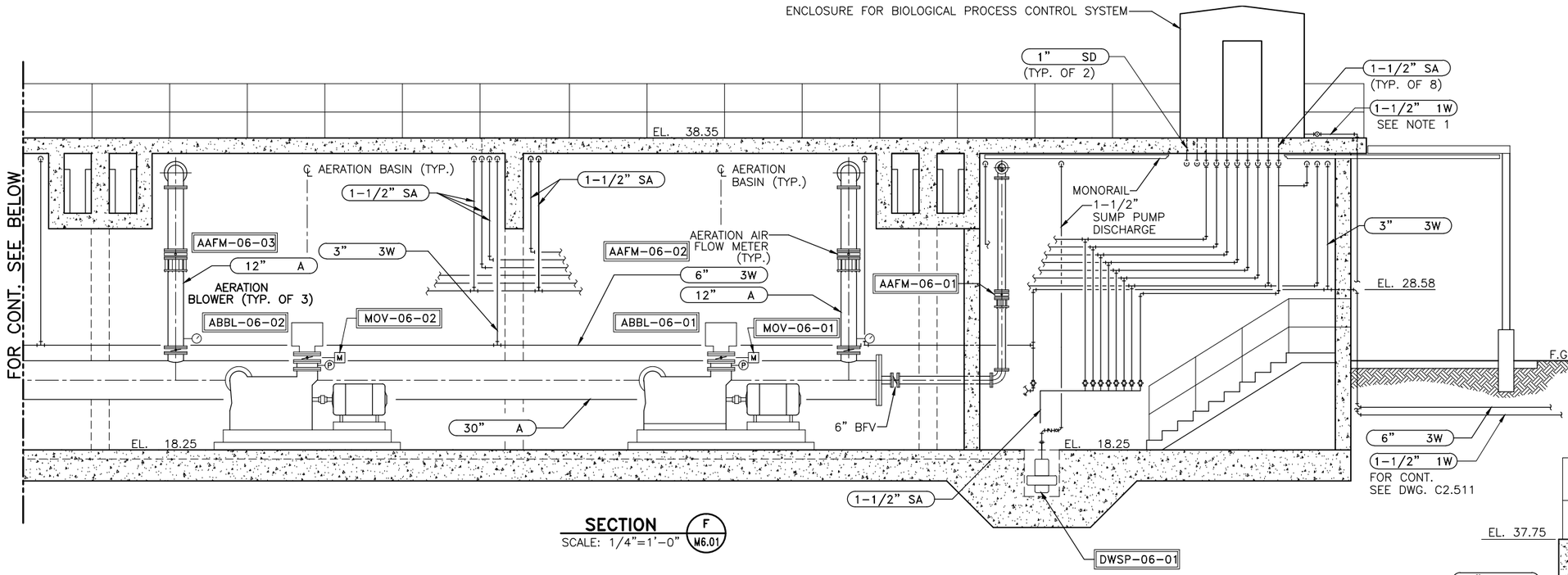
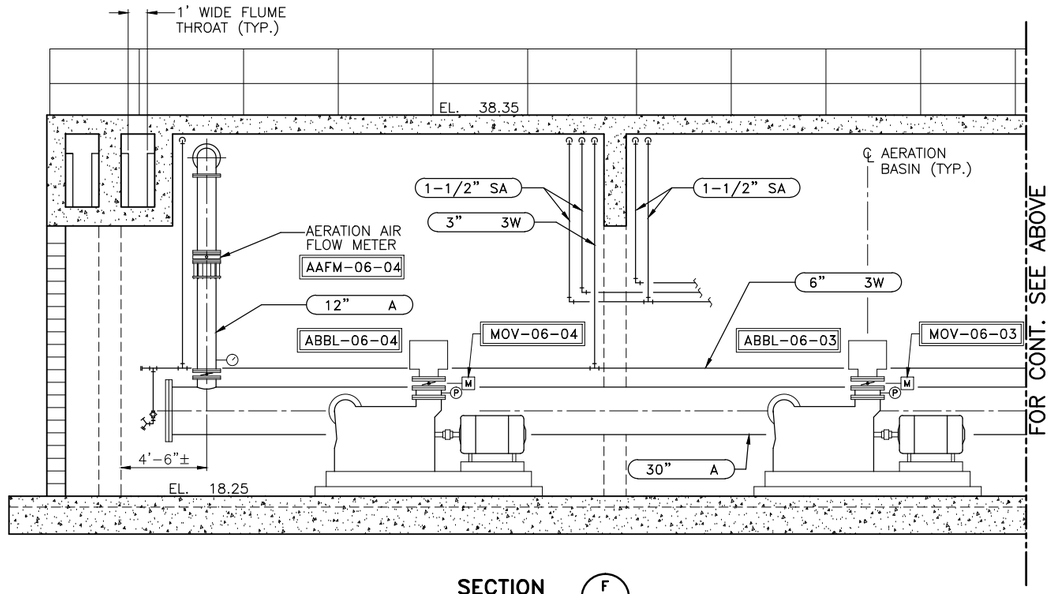


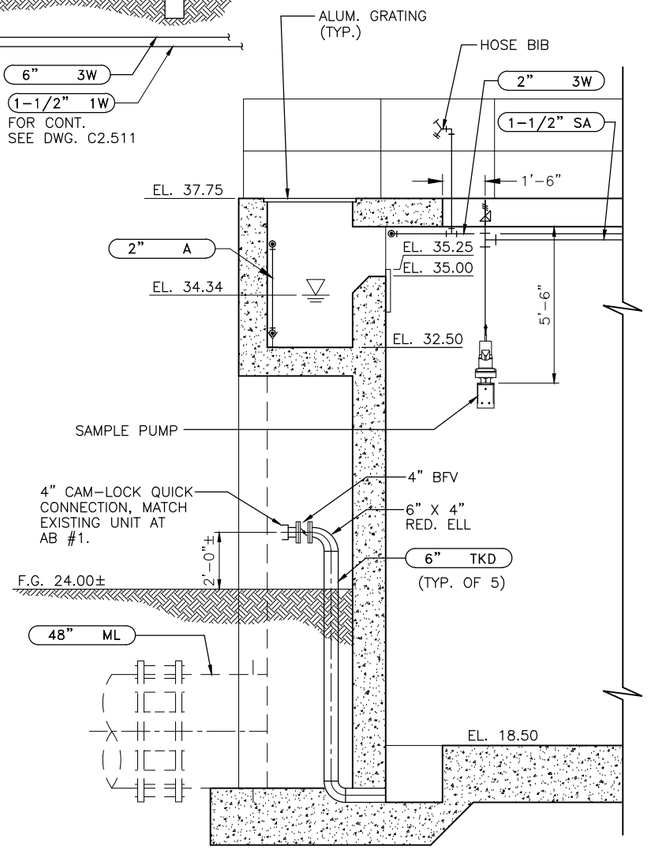
NOTES:

1. ALL EXPOSED PORTIONS OF 1W LINE SHALL BE INSULATED.

SECTION (F / M6.01)
SCALE: 1/4"=1'-0"



SECTION (F / M6.01)
SCALE: 1/4"=1'-0"



SECTION (G / M6.01)
SCALE: 3/8"=1'-0"

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY:
CHECKED BY: J.Y AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
6			
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4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SOUTHSIDE AERATION BASINS SECTIONS

SCALE: AS NOTED
DRAWING NUMBER: M6.05
SHEET NUMBER: OF SHEETS

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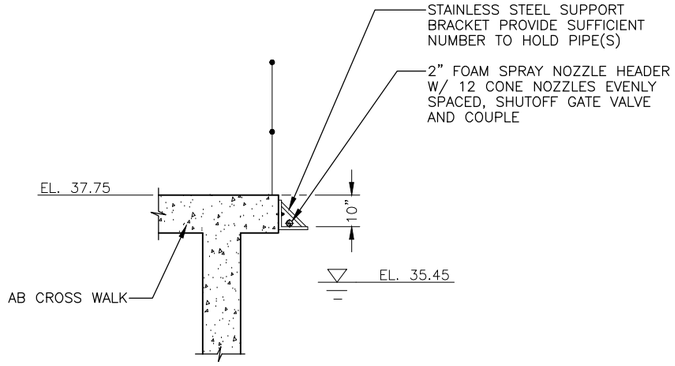

FOAM SPRAY NOZZLE HEADER DETAIL 1 / M6.01
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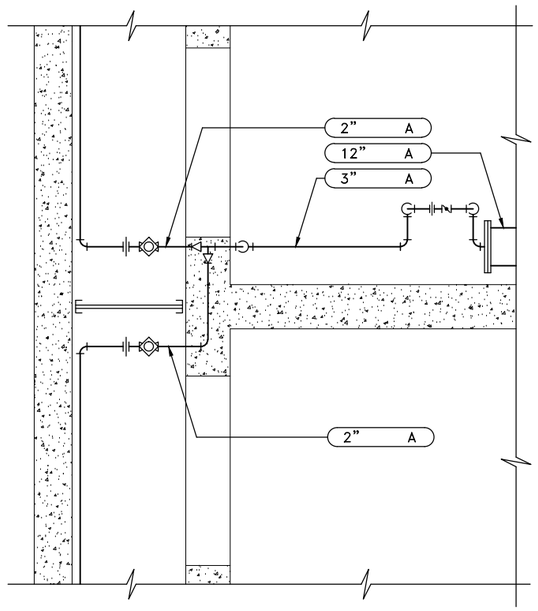

DETAIL 2 / M6.01
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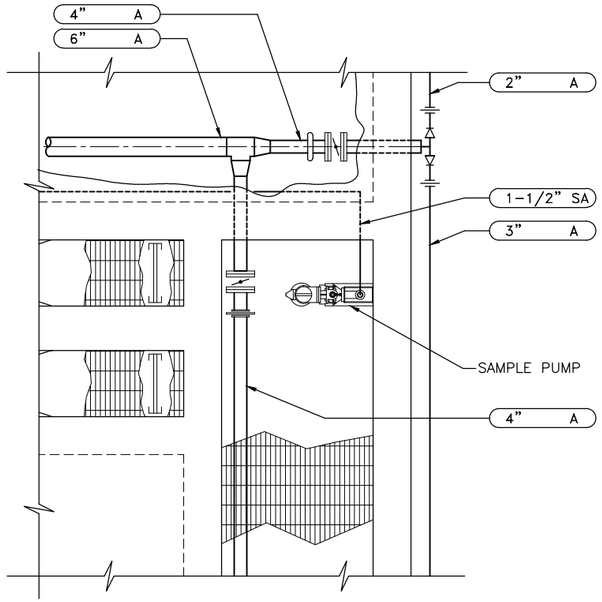

DETAIL 3 / M6.01
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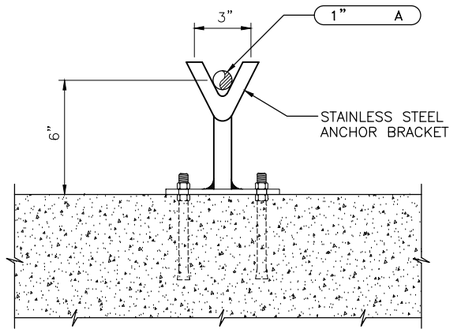
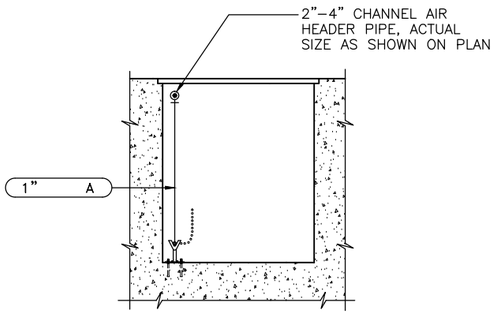
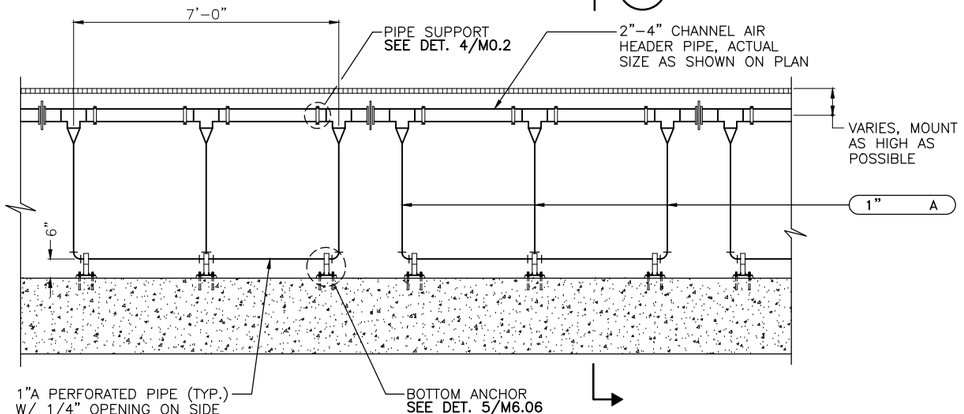


BOTTOM ANCHOR DETAIL 5 / M6.06
SCALE: 3"=1'-0"



SECTION A / M6.06
SCALE: 1/2"=1'-0"

A / M6.06



DETAIL 4 / M6.01
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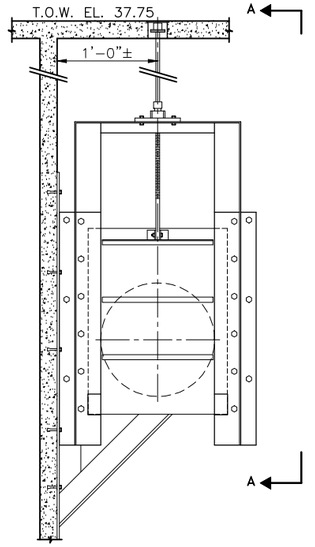
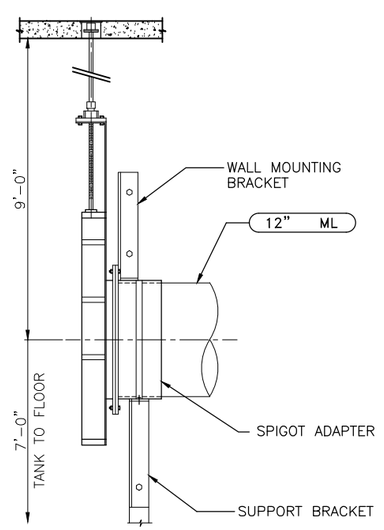


ELEVATION



SECTION A

MIXED LIQUOR RECIRCULATION SLIDE GATE DETAIL 6 / M5.05 · 6 / M5.04 · 6 / M6.01 · 6 / M6.08
NOT TO SCALE

NOTE:
NO AERATION PIPE WITHIN 1 FOOT OF CUT THROAT FLUME ENTRANCE.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER · David Richard · No. 33479 · EXP. · CIVIL · STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

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1	SEM	09/11	RECORD SET

REDUCED RECORD SET
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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SOUTHSIDE AERATION BASINS SECTION AND DETAILS

SCALE: AS NOTED
DRAWING NUMBER: M6.06
SHEET NUMBER: OF SHEETS

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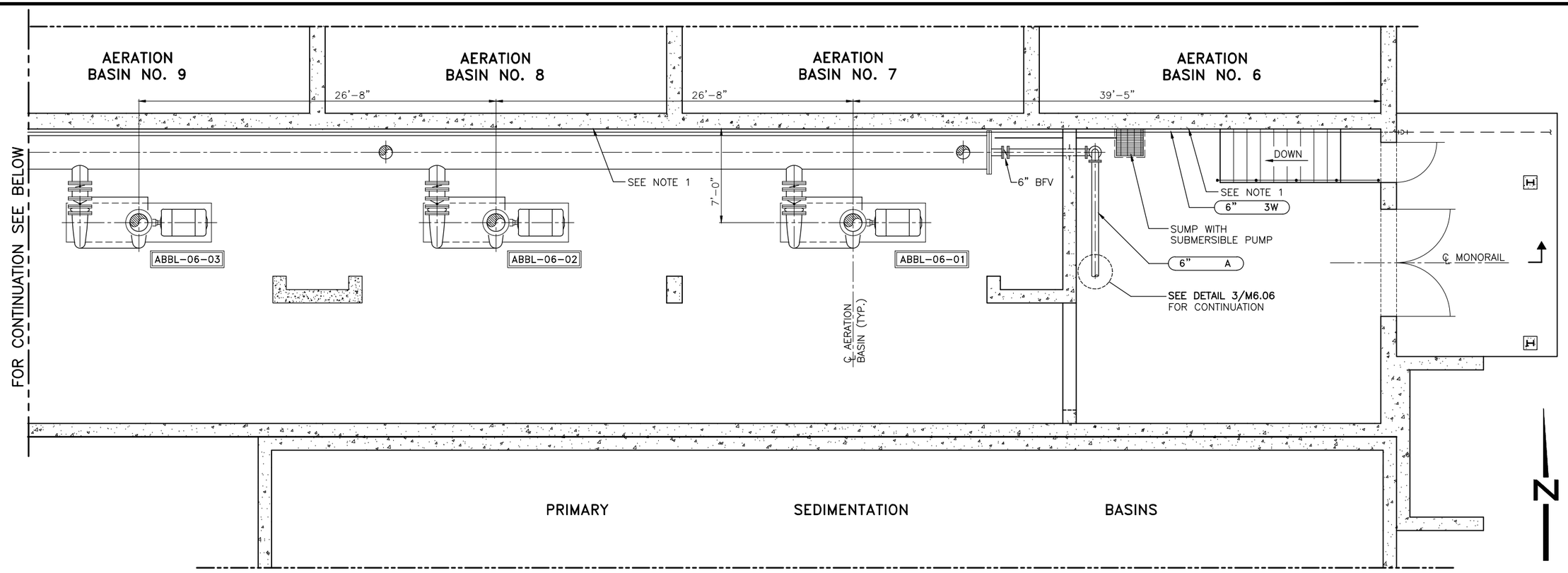
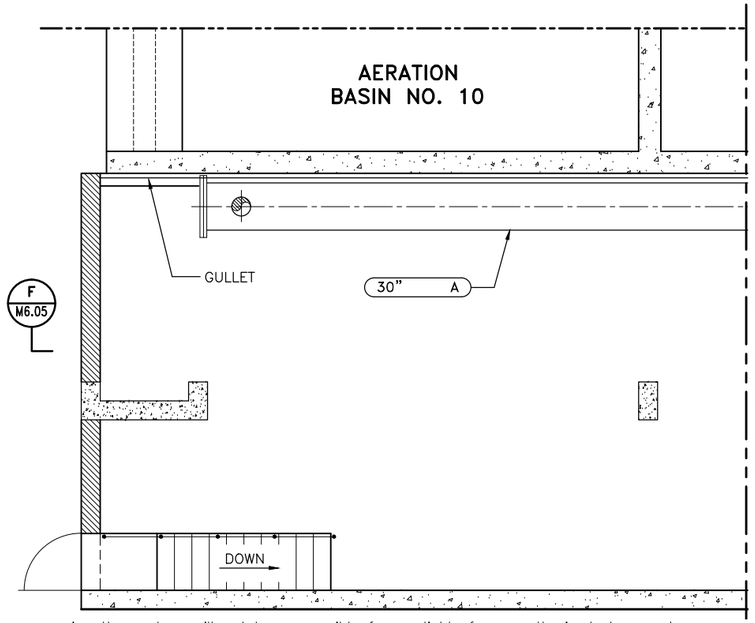
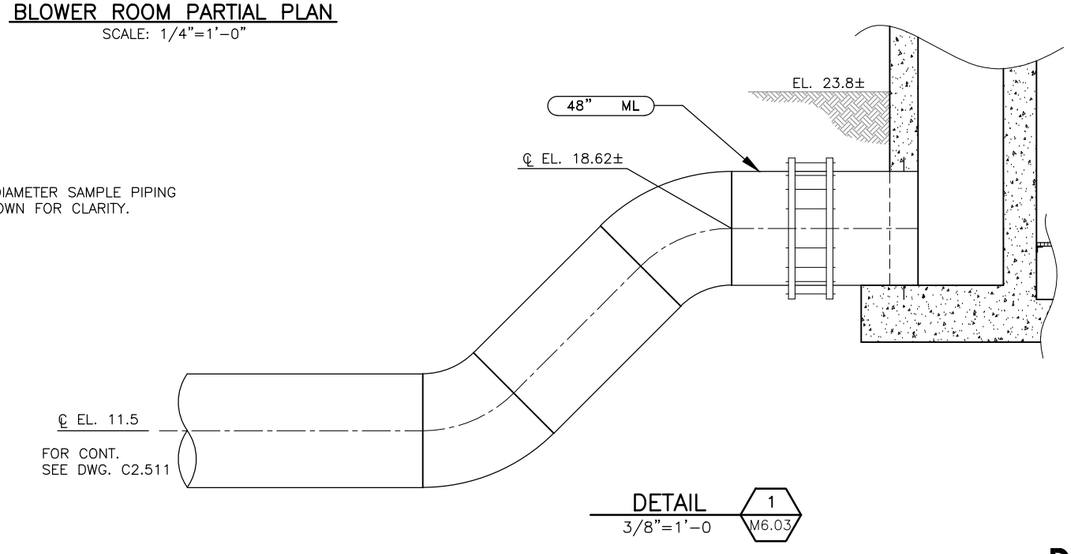




BLOWER ROOM PARTIAL PLAN

SCALE: 1/4"=1'-0"

NOTES:
1. SMALL DIAMETER SAMPLE PIPING NOT SHOWN FOR CLARITY.



DETAIL 1 / M6.03
3/8"=1'-0

RECORD SET

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BEYOND ENGINEERING
☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 382-7600 ☐ SACRAMENTO (916) 641-9100 ☐ SAN JOSE (408) 287-9100 ☐ SAN DIEGO (619) 378-9282 ☐ WALNUT CREEK (925) 934-9080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
BLOWER ROOM PARTIAL PLAN

SCALE: AS NOTED
DRAWING NUMBER: **M6.07**
SHEET NUMBER: OF SHEETS

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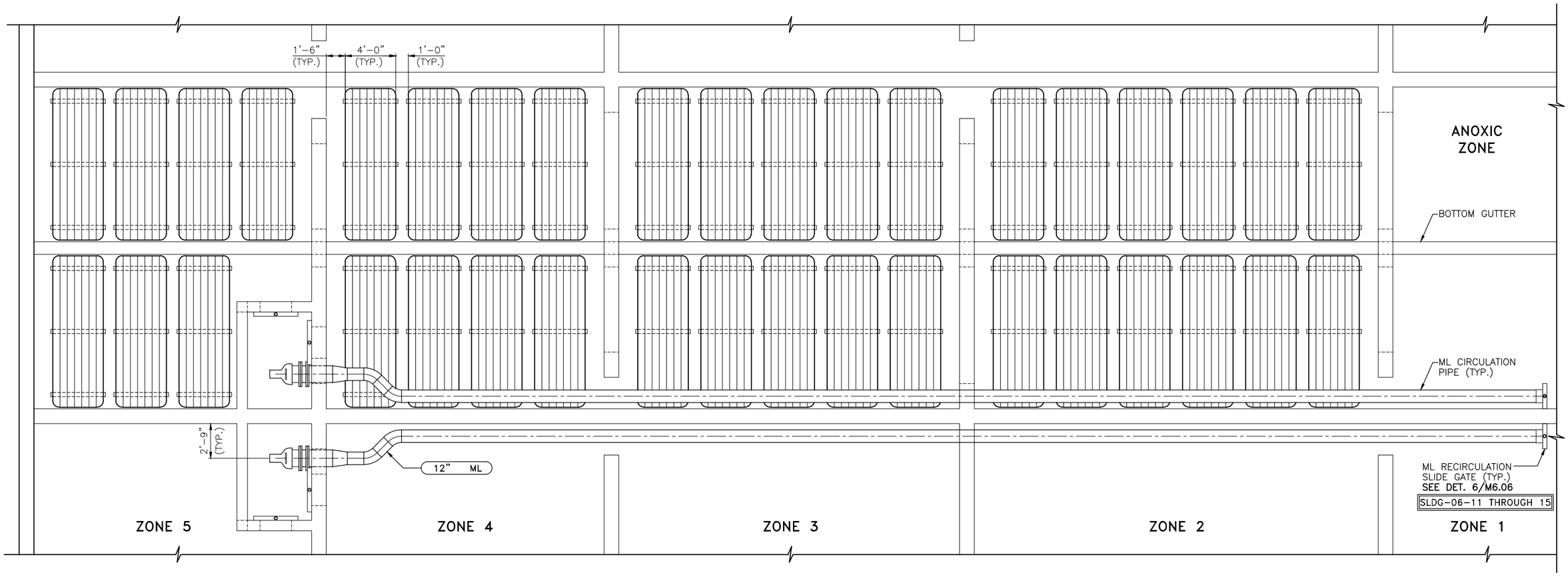

PLAN
SCALE: 1/4"=1'-0"

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL
SOUTHSIDE AERATION BASINS TYPICAL PANEL PLAN

SCALE: AS NOTED
DRAWING NUMBER: M6.08
SHEET NUMBER: OF SHEETS

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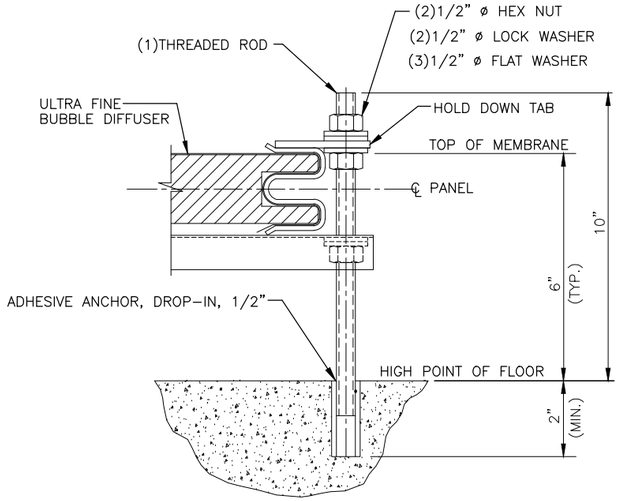
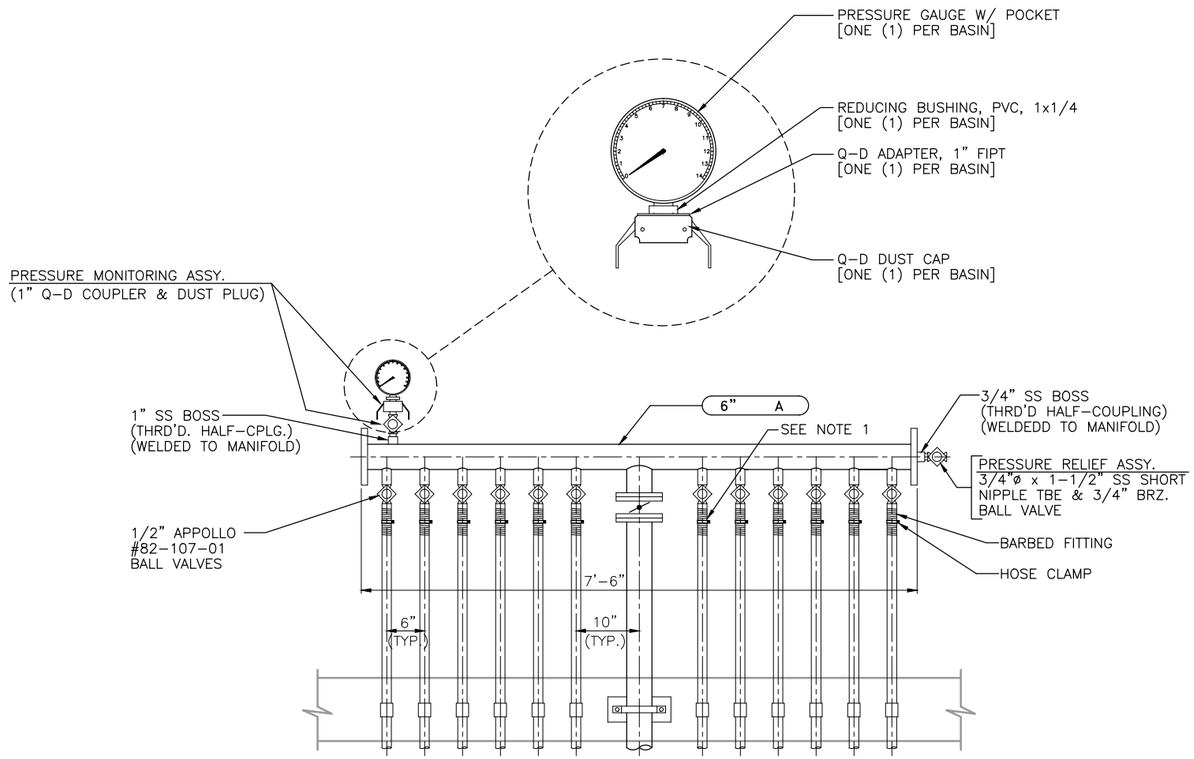


PANEL MOUNTING DETAIL 1/M6.02 1/M6.03
NOT TO SCALE



PRESSURE RELIEF MONITOR 2/M6.02 2/M6.03
SCALE: 1"=1'-0"

NOTES:
1. ROTATE FITTINGS TO AVOID CONFLICT WITH BUTTERFLY VALVE OPERATOR.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

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~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
SOUTHSIDE AERATION BASINS DETAILS

SCALE: AS NOTED
DRAWING NUMBER: M6.09
SHEET NUMBER: OF SHEETS

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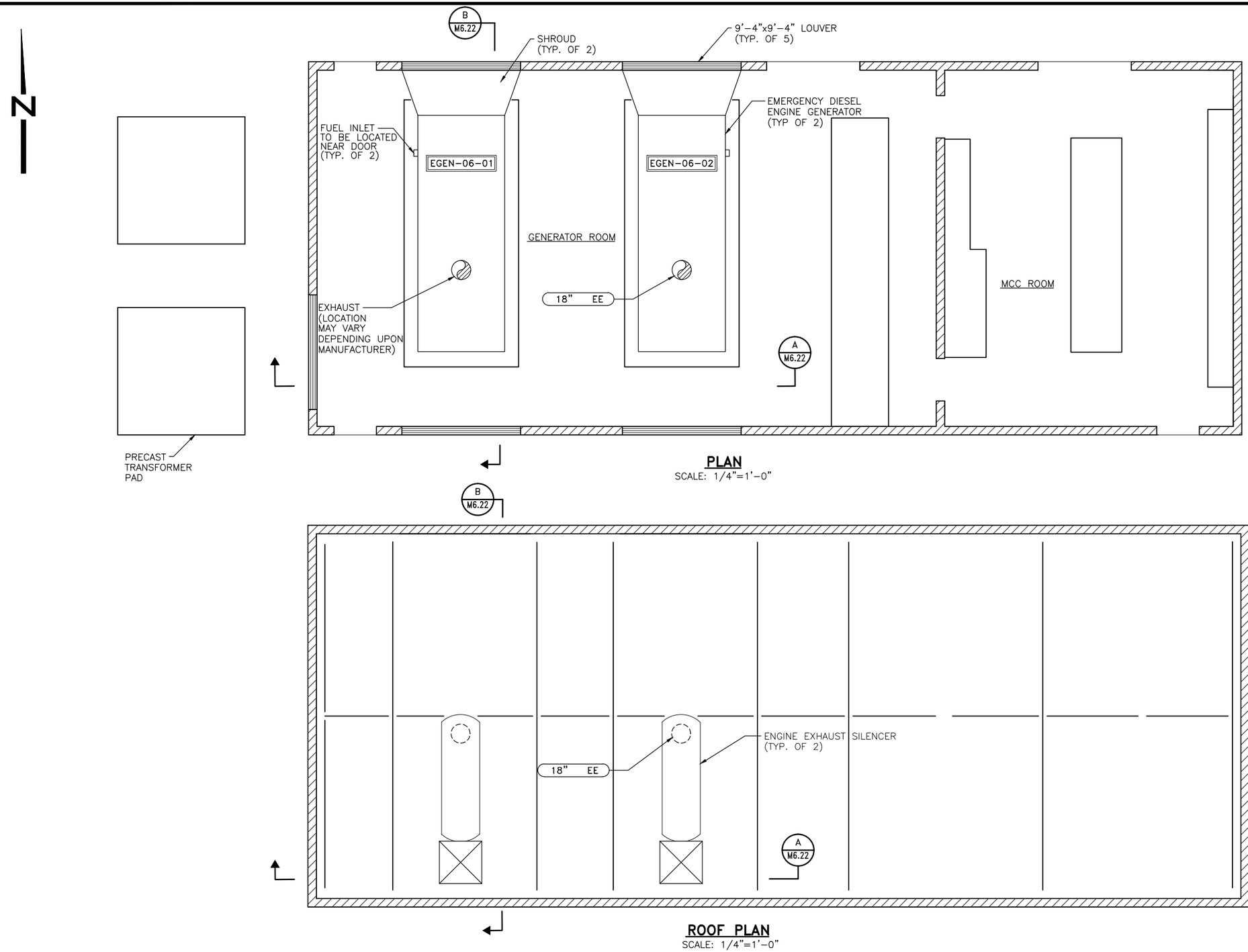

PLAN
SCALE: 1/4"=1'-0"

ROOF PLAN
SCALE: 1/4"=1'-0"

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. AIT-LASRI
CHECKED BY: B.R. TRESAN
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
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4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SOUTHSIDE MCC/GENERATOR BUILDING
PLAN AND ROOF PLAN

SCALE: AS NOTED
DRAWING NUMBER: M6.21
SHEET NUMBER: OF SHEETS

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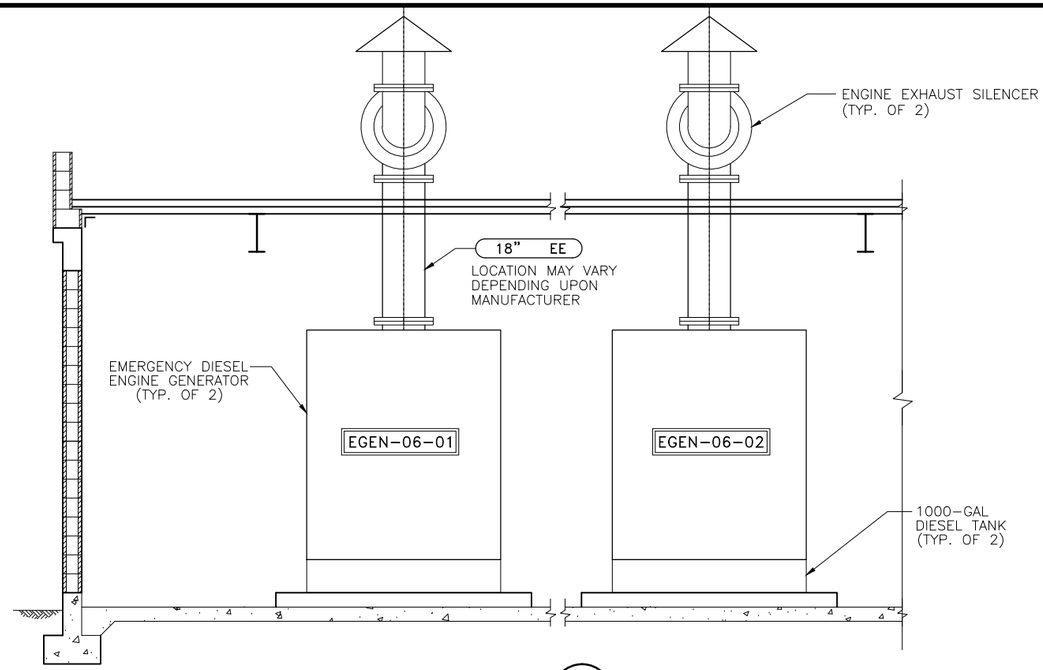
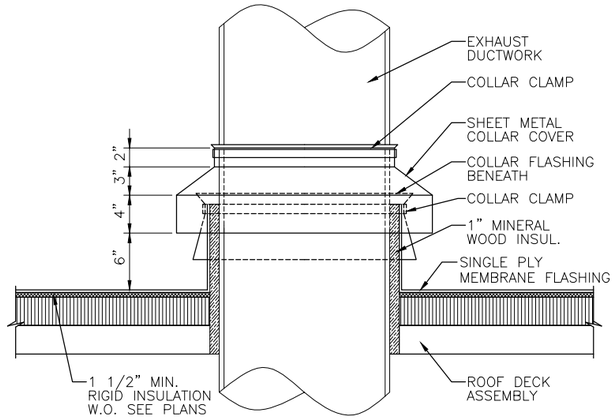
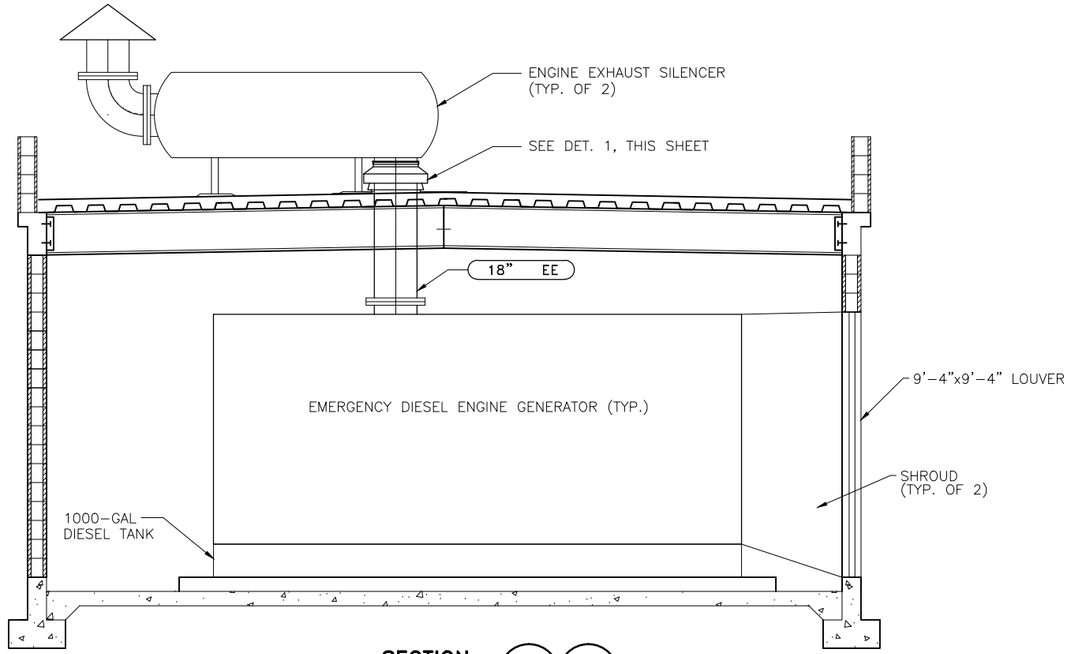


SECTION A / M6.21
SCALE: 3/8"=1'-0"



EXHAUST DUCT PENETRATION 1 / -
SCALE: 1 1/2"=1'-0"



SECTION B / E3.07 — B / M6.21
SCALE: 3/8"=1'-0"

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. AIT-LASRI
CHECKED BY: B.R. TRESAN
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SOUTHSIDE MCC/GENERATOR BUILDING SECTIONS

SCALE: AS NOTED
DRAWING NUMBER: M6.22
SHEET NUMBER: OF SHEETS

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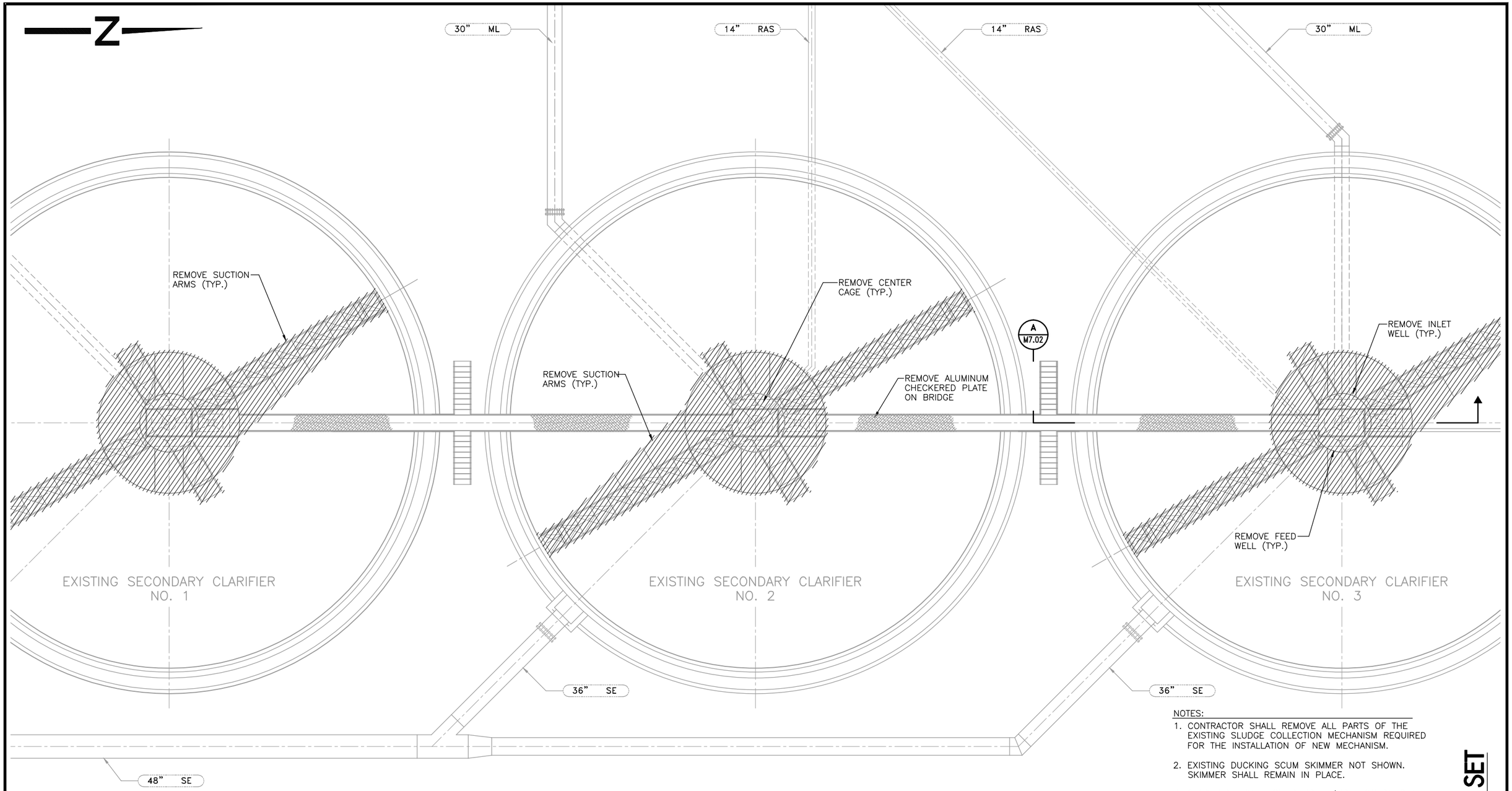

PLAN
SCALE: 1/8"=1'-0"

NOTES:

1. CONTRACTOR SHALL REMOVE ALL PARTS OF THE EXISTING SLUDGE COLLECTION MECHANISM REQUIRED FOR THE INSTALLATION OF NEW MECHANISM.
2. EXISTING DUCKING SCUM SKIMMER NOT SHOWN. SKIMMER SHALL REMAIN IN PLACE.
3. CLARIFIER MECHANISM REMOVAL/MODIFICATION SHALL BE PHASED PER DWG. G1.28, G1.29 AND G1.30.
4. CONTRACTOR SHALL TEMPORARILY REMOVE REMAINING PARTS OF EXISTING MECHANISM TO FACILITATE THE INSTALLATION OF NEW PARTS AS NECESSARY. THEN ALL TEMPORARILY REMOVED PARTS SHALL BE REINSTALLED PROPERLY AS DETERMINED BY THE CONSTRUCTION MANAGER.
5. SEE DWG. M7.07 FOR CLARIFIER PHOTOGRAPHS.

RECORD SET

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BEYOND ENGINEERING
☐ DENVER (303) 781-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-9120 ☐ SAN JOSE (408) 287-3400 ☐ SAN DIEGO (619) 378-9382 ☐ WALNUT CREEK (510) 934-8002
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

EXISTING SECONDARY CLARIFIER MECHANISM MODIFICATION DEMOLITION PLAN

SCALE: AS NOTED
DRAWING NUMBER: M7.01
SHEET NUMBER: OF SHEETS

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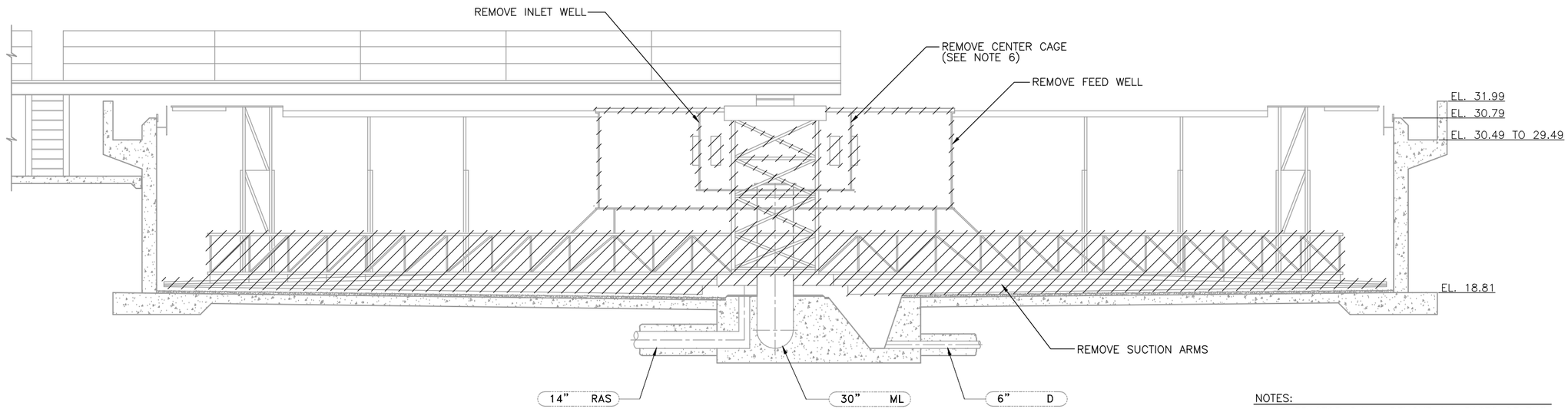
11/13/01 1:06 pm



SECTION (A / M7.01)
SCALE: 1/4"=1'-0"

NOTES:

1. CONTRACTOR SHALL REMOVE ALL PARTS OF THE EXISTING SLUDGE COLLECTION MECHANISM REQUIRED FOR THE INSTALLATION OF NEW MECHANISM.
2. EXISTING DUCKING SCUM SKIMMER NOT SHOWN. SKIMMER SHALL REMAIN IN PLACE.
3. CLARIFIER MECHANISM REMOVAL/MODIFICATION SHALL BE PHASED PER DWG. G1.28 & G1.29.
4. CONTRACTOR SHALL TEMPORARILY REMOVE REMAINING PARTS OF EXISTING MECHANISM TO FACILITATE THE INSTALLATION OF NEW PARTS AS NECESSARY. THEN ALL TEMPORARILY REMOVED PARTS SHALL BE REINSTALLED PROPERLY AS DETERMINED BY THE CONSTRUCTION MANAGER.
5. CONTRACTOR SHALL MOVE ALL DEMOLISHED MATERIAL TO A LOCATION WITHIN THE MANTECA WQCF DESIGNATED BY THE CONSTRUCTION MANAGER.
6. TRIM THE TOP COLUMN FLANGE ON 4 SIDES TO ALLOW FOR CENTER CAGE INSTALLATION OVER THE TOP FLANGE. THE TOP COLUMN FLANGE SHALL BE CUT EQUALLY ON EACH SIDE AND THE SQUARE SHAPE SHALL BE A MIN. OF 47" FLAT TO FLAT.

RECORD SET

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DENVER (303) 781-0444 | MANTECA (209) 239-9080 | ORANGE COUNTY (714) 282-1600 | SACRAMENTO (916) 641-9150 | SAN JOSE (408) 287-3400 | SAN DIEGO (619) 276-6282 | WALNUT CREEK (510) 934-6060
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
6			
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4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

EXISTING SECONDARY CLARIFIER MECHANISM MODIFICATION DEMOLITION SECTION

SCALE: AS NOTED
DRAWING NUMBER: M7.02
SHEET NUMBER: OF SHEETS

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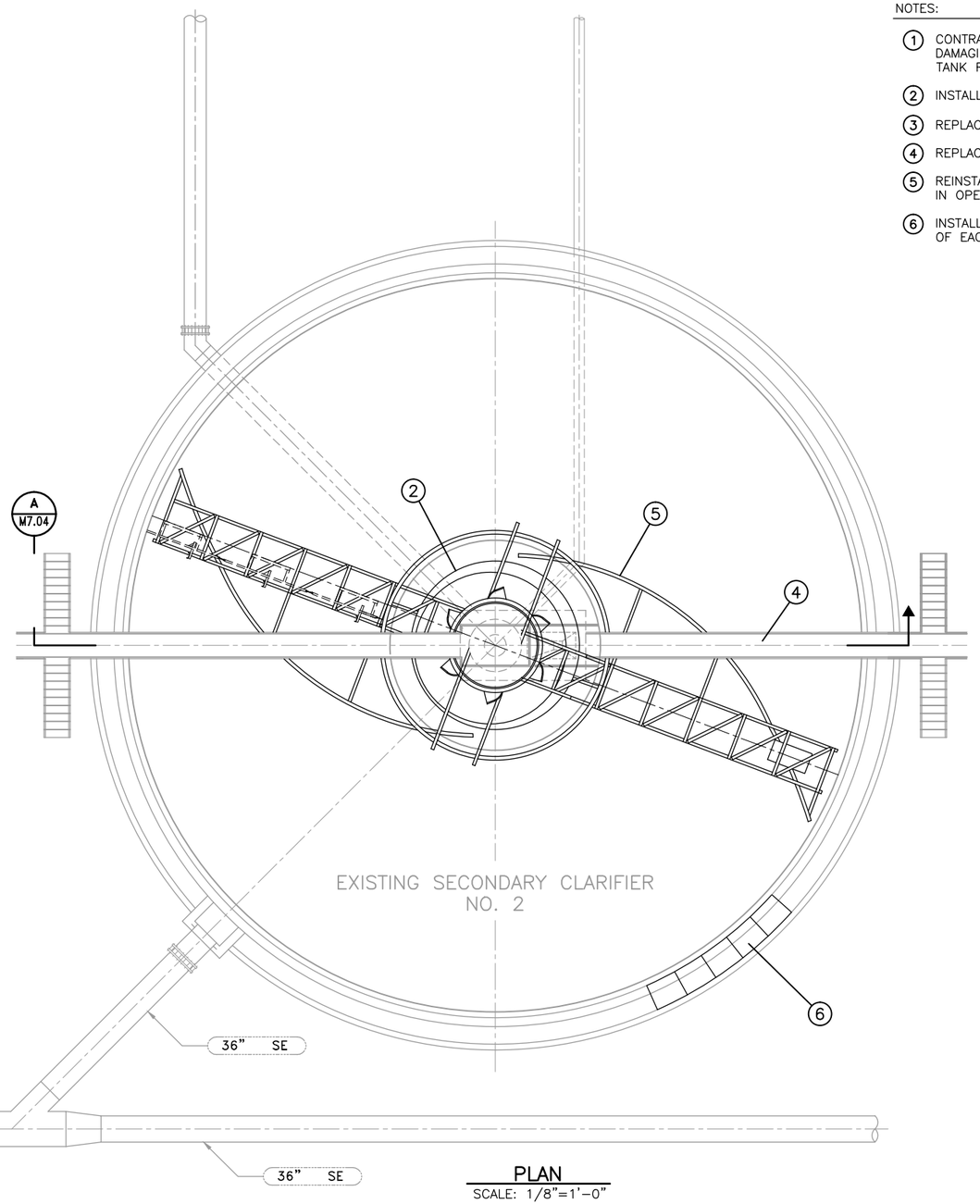

PLAN
SCALE: 1/8"=1'-0"

NOTES:

1. CONTRACTOR SHALL EXERCISE CARE IN DEMOLISHING EXISTING CLARIFIER MECHANISM TO AVOID DAMAGING REMAINING FACILITIES AND THE CONCRETE SURFACES. REPAIR ANY DAMAGE TO CLARIFIER TANK RESULTING FROM CLARIFIER MECHANISM REMOVAL.
2. INSTALL SLUDGE RING PER **DET. 1/M7.05** AND MODIFY CLARIFIER DRAIN PIPE.
3. REPLACE 50" DIAMETER BEARING GASKET OF REMAINING MAIN DRIVE UNIT.
4. REPLACE ALL BRIDGE CHECKERED PLATE WITH ALUMINUM GRATING.
5. REINSTALL MODIFIED CLARIFIER MECHANISM AS STATED IN SPECIFICATION SECTION 11325 AND PLACE IN OPERATION.
6. INSTALL MOLDED FIBERGLASS LAUNDER COVER PANELS TO COVER THE ENTIRE EFFLUENT LAUNDER OF EACH CLARIFIER PER **DET. 2/M7.06.**

RECORD SET

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BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER
David Richard
No. 33479
EXP.
CIVIL
STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

EXISTING SECONDARY CLARIFIER MECHANISM MODIFICATION PLAN

SCALE: AS NOTED
DRAWING NUMBER: **M7.03**
SHEET NUMBER: OF SHEETS

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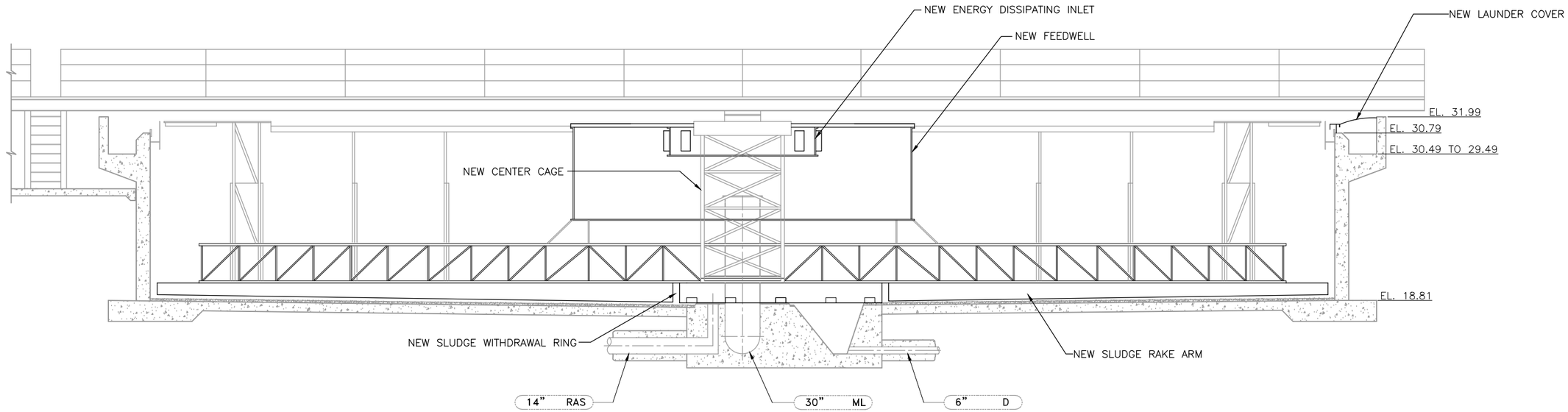

SECTION A / M7.03
SCALE: 1/4"=1'-0"

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
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5			
4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

EXISTING SECONDARY CLARIFIER MECHANISM MODIFICATION SECTION

SCALE: AS NOTED
DRAWING NUMBER: **M7.04**
SHEET NUMBER: OF SHEETS

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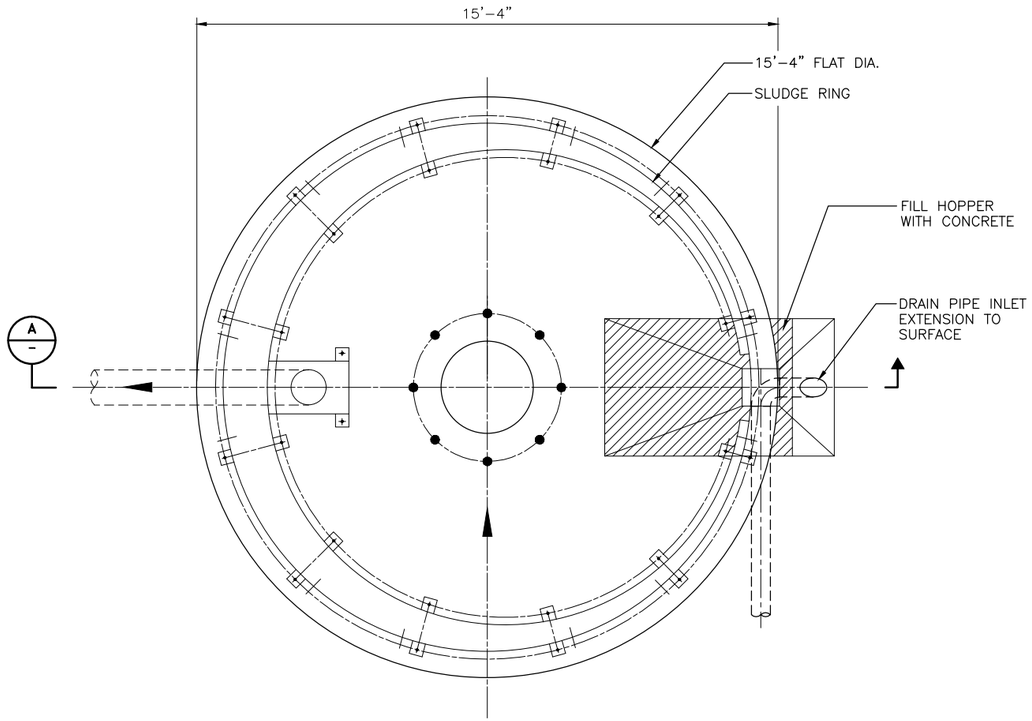
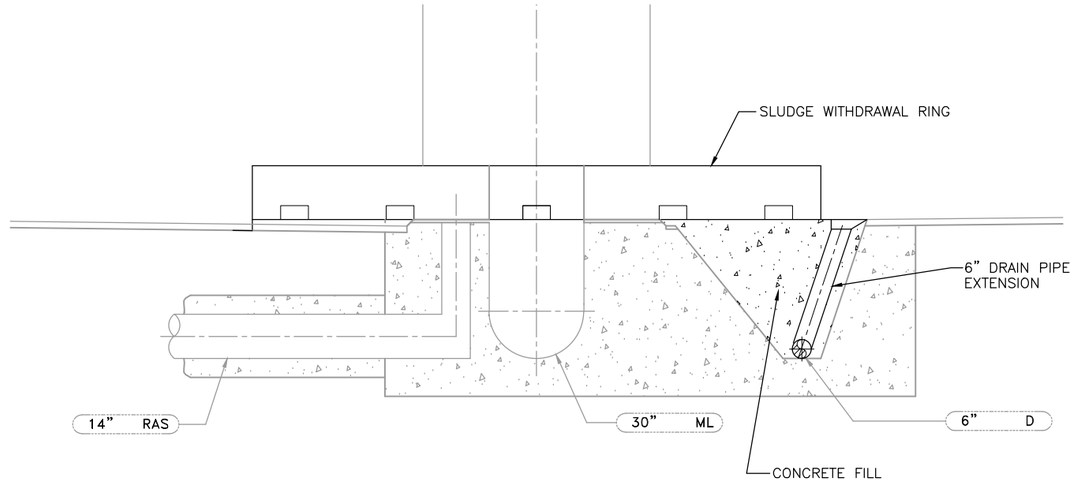


SLUDGE RING SETTING DETAIL 1/–
SCALE: 1/2"=1'-0"



TYPICAL SECTION A/–
SCALE: 1/2"=1'-0"

RECORD SET

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NOLTE
BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

EXISTING SECORDARY CLARIFIER MECHANISM MODIFICATION SECTION AND DETAIL

SCALE: AS NOTED
DRAWING NUMBER: M7.05
SHEET NUMBER: OF SHEETS

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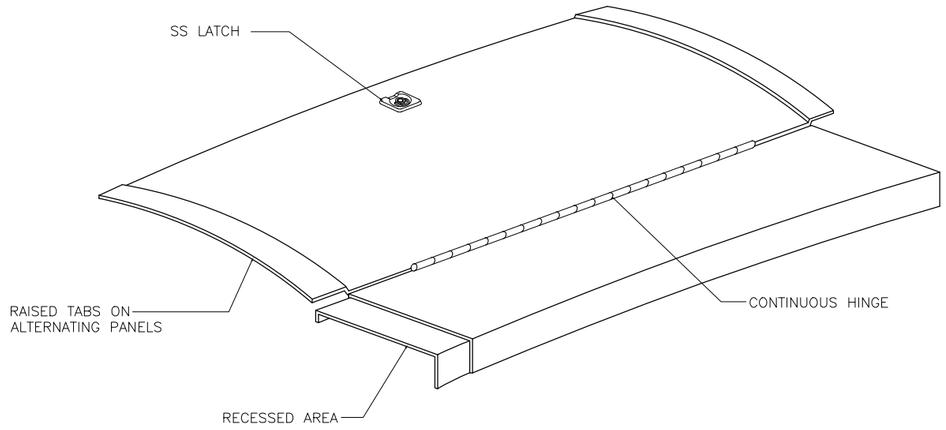

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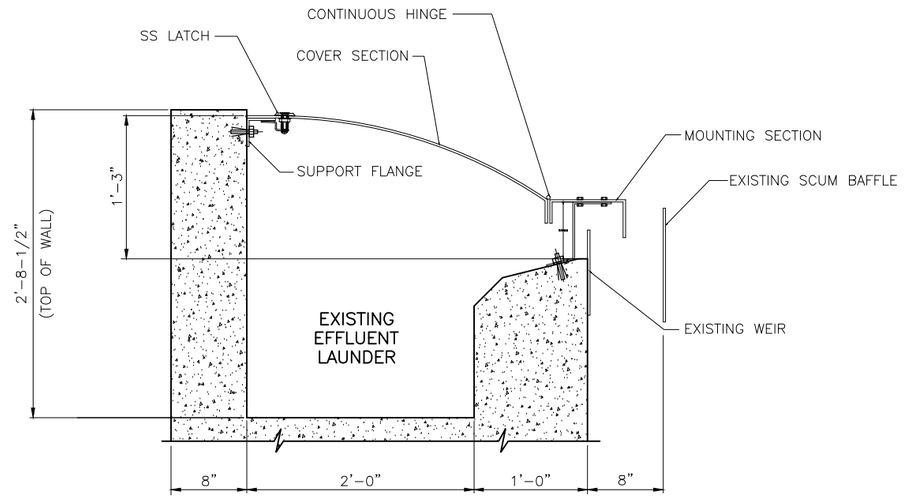

TYPICAL SECTION

EFFLUENT LAUNDER COVER DETAIL 2/M7.03
NOT TO SCALE

NOTES:

1. INDICATED DIMENSIONS OF EXISTING EFFLUENT LAUNDER ARE FOR REFERENCE ONLY. MANUFACTURER SHALL FIELD VERIFY EXISTING LAUNDER DIMENSIONS BEFORE DESIGN AND FABRICATION OF LAUNDER COVER.
2. COVER SHOWN IS FOR ILLUSTRATION ONLY.

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

EXISTING SECONDARY CLARIFIER MECHANISM MODIFICATION EFFLUENT LAUNDER COVER DETAILS

SCALE: AS NOTED
DRAWING NUMBER: M7.06
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\N\sa1224\EXPANSION\SCHEDULE-A\CONFORMED\MECHANICAL\ SCHAM706.DWG NONE
11/13/01 1:06 p.m.

REPLACE CHECKERED PLATE WITH GRATING

EXISTING DUCKING SCUM SKIMMER TO REMAIN

REMOVE INLET WELL AND REPLACE

PROVIDE EFFLUENT LAUNDER COVER

REPLACE BEARING GASKET ON MAIN DRIVE UNIT

REMOVE SUCTION ARMS AND REPLACE

CENTER CAGE TO BE REPLACED

MODIFY SLIDGE HOPPER

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

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PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

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1	SEM	09/11	RECORD SET

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

EXISTING SECONDARY CLARIFIER MECHANISM PHOTOS DEMOLITION NOTES

SCALE: AS NOTED
DRAWING NUMBER: M7.07
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\ N:\sa1224\EXPANSION\SCHEDULE-A\CONFORMED\MECHANICAL\ SCHAM707.DWG NONE
11/13/01 1:06 p.m.

FOR CONTINUATION
SEE DWG. C2.509

FOR CONTINUATION
SEE DWG. C2.510

NOTES
1. 3W WATER LINES ARE TO BE BURIED 3 FT. BELOW FINISHED GRADE.
2. SEE GRADING PLAN FOR WALKWAY AND STAIRWAY DETAIL LAYOUT.

N

36" SE

36x36x36 TEE

PLUG

3" 3W

24" SE

12" SC

TO 18" SD

TERMINATE @ INV. EL. 5.36'

1-1/2" 3W

3" 3W
(SEE NOTE 1)

RAS PUMP STATION
(SEE DWG. M7.13 FOR
PIPING & APPURTENANCES)

N 2112165.69
E 6341820.55

N 2112165.64
E 6341830.80

SLOPE @ 0.5% TOWARD 18" SD

24" SE

C
M7.04

24" SE

1-1/2" 3W

1-1/2" 3W

CLEANOUT (TYP.)
SEE DET. 9/M0.8

LOW POINT
EL. 29.45 (TYP.)

N 2112158.05
E 6341820.55

N 2112159.41
E 6341850.56

N 2112158.05
E 6341830.80

LAUNDER COVER
SEE DWG. M7.14
FOR DETAILS (TYP.)

SECONDARY CLARIFIER NO. 5

3" 3W

B
M7.04

N 2112137.51
E 6341828.65

SECONDARY CLARIFIER NO. 4

16" RAS

HOSE BIB (TYP.)
SEE DET. 10/M0.6

16" RAS

ROTATING
SCUM SKIMMER
ACTUATOR (TYP.)
SCSK-07-01

N 2112106.77
E 6341769.27

45°

N 2112106.79
E 6341882.06

SLUDGE WITHDRAWAL RING
(TYP.)

A
M7.03

3/4" 3W
TO BE MOUNTED
UNDER BRIDGE

3" 3W

45°

10"ø ROTATING
SCUM SKIMMER

45°

SCLM-7-01

36" ML

12" SC

SCLM-7-02

36" ML

MATCHLINE – SEE DWG. M7.02

PLAN
SCALE: 1/8"=1'-0"

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

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David Richard
No. 33479
EXP.
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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SECONDARY CLARIFIERS NO. 4 AND NO. 5
PLAN

SCALE
AS NOTED

DRAWING NUMBER
M7.08

SHEET NUMBER
OF SHEETS

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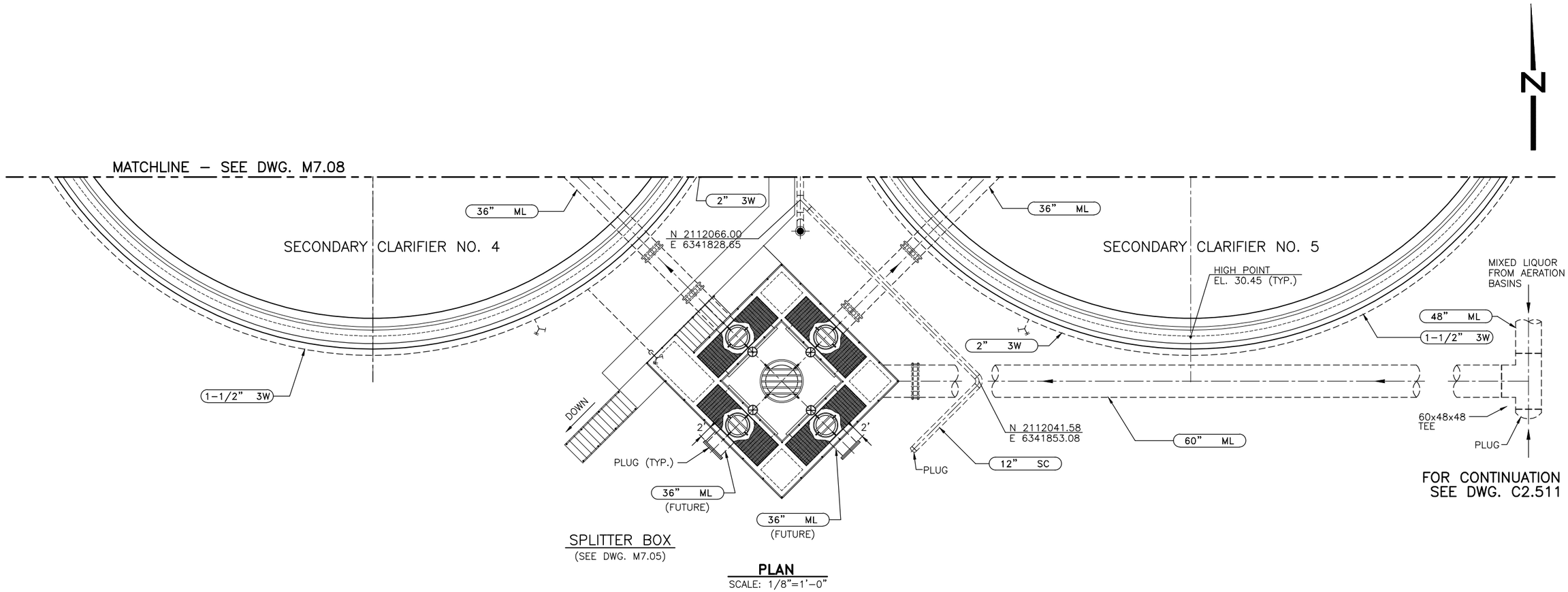

SPLITTER BOX
(SEE DWG. M7.05)

PLAN
SCALE: 1/8"=1'-0"

RECORD SET

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REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

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PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y AU

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2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SECONDARY CLARIFIERS NO. 4 AND NO. 5
PLAN

SCALE: AS NOTED
DRAWING NUMBER: M7.09
SHEET NUMBER: OF SHEETS

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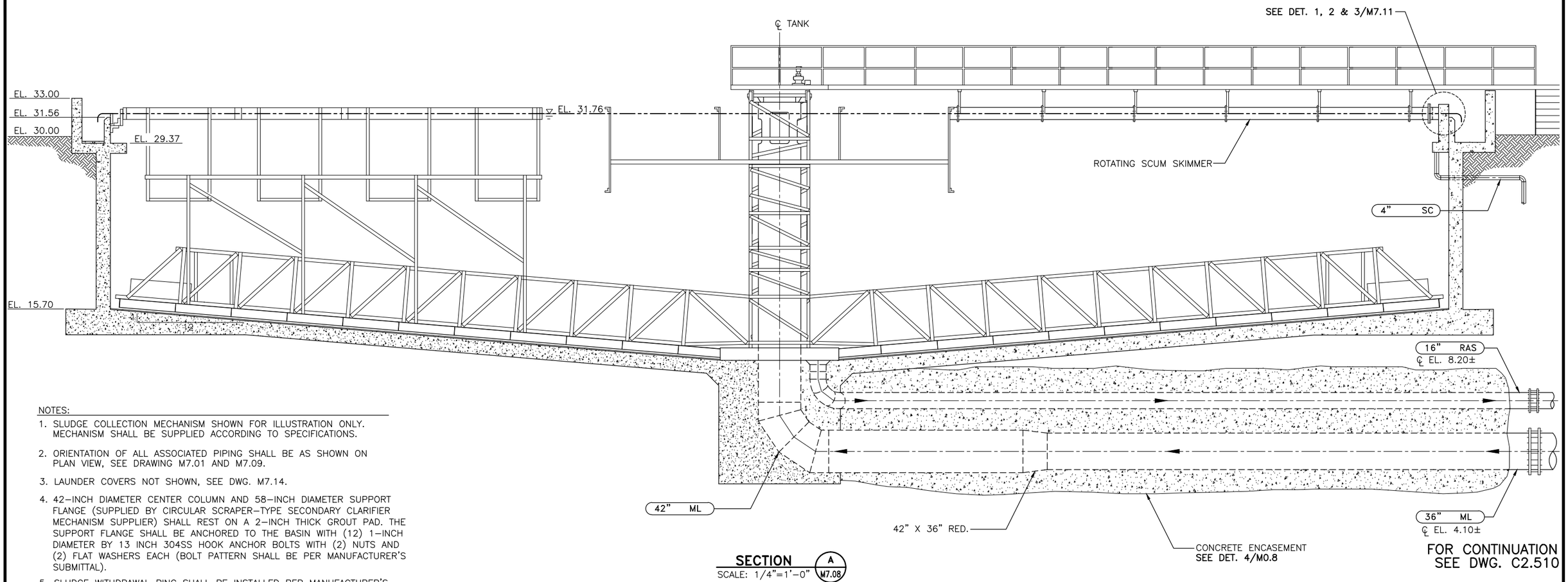

SECTION A / M7.08
SCALE: 1/4"=1'-0"

NOTES:

1. SLUDGE COLLECTION MECHANISM SHOWN FOR ILLUSTRATION ONLY. MECHANISM SHALL BE SUPPLIED ACCORDING TO SPECIFICATIONS.
2. ORIENTATION OF ALL ASSOCIATED PIPING SHALL BE AS SHOWN ON PLAN VIEW, SEE DRAWING M7.01 AND M7.09.
3. LAUNDER COVERS NOT SHOWN, SEE DWG. M7.14.
4. 42-INCH DIAMETER CENTER COLUMN AND 58-INCH DIAMETER SUPPORT FLANGE (SUPPLIED BY CIRCULAR SCRAPER-TYPE SECONDARY CLARIFIER MECHANISM SUPPLIER) SHALL REST ON A 2-INCH THICK GROUT PAD. THE SUPPORT FLANGE SHALL BE ANCHORED TO THE BASIN WITH (12) 1-INCH DIAMETER BY 13 INCH 304SS HOOK ANCHOR BOLTS WITH (2) NUTS AND (2) FLAT WASHERS EACH (BOLT PATTERN SHALL BE PER MANUFACTURER'S SUBMITTAL).
5. SLUDGE WITHDRAWAL RING SHALL BE INSTALLED PER MANUFACTURER'S SUBMITTAL.
6. PIPE ENCASEMENT SHALL BE WITH 2,500 PSI CONCRETE. FOR PIPES WHERE THE TOP OF PIPE IS MORE THAN 1.5 FEET BELOW A FOUNDATION, ENCASEMENT SHALL EXTEND AS FOLLOW:
   - 8 INCHES ABOVE AND BELOW PIPE
   - 6 INCHES FROM OUTSIDE EDGE OF SPRING LINE OF PIPE ON EITHER SIDE OF PIPE.

   FOR PIPES WHERE THE TOP OF PIPE IS LESS THAN 1.5 FEET BELOW A FOUNDATION, ENCASEMENT SHALL EXTEND AS FOLLOW:
   - FROM THE FOUNDATION TO 8 INCHES BELOW PIPE
   - 6 INCHES FROM OUTSIDE EDGE OF SPRING LINE OF PIPE ON EITHER SIDE OF PIPE.

RECORD SET

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DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SECONDARY CLARIFIER SECTION

SCALE: AS NOTED
DRAWING NUMBER: **M7.10**
SHEET NUMBER: OF SHEETS

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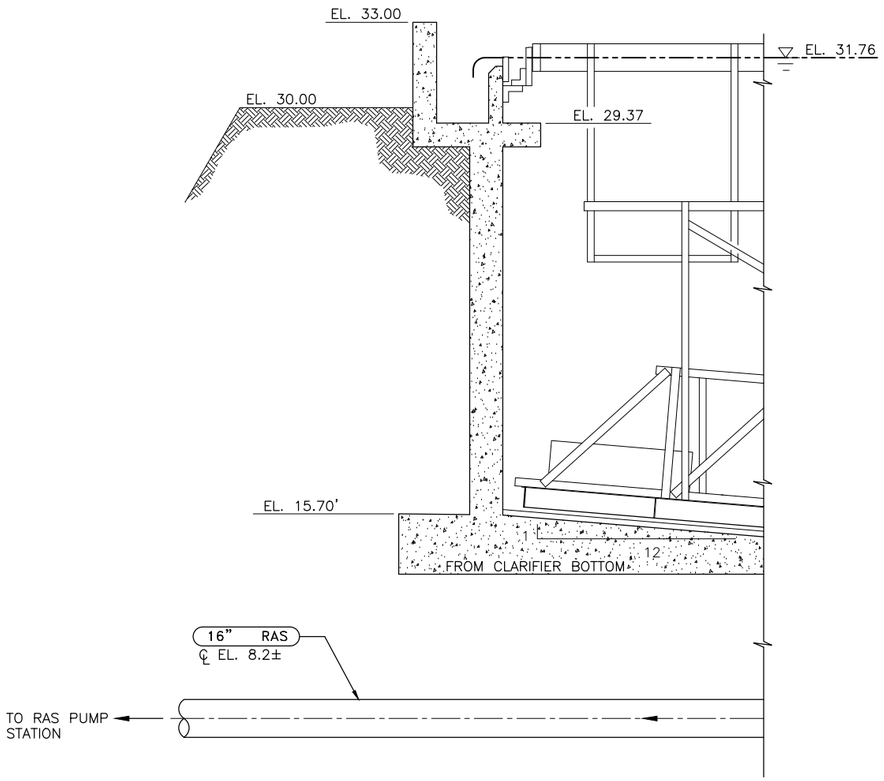
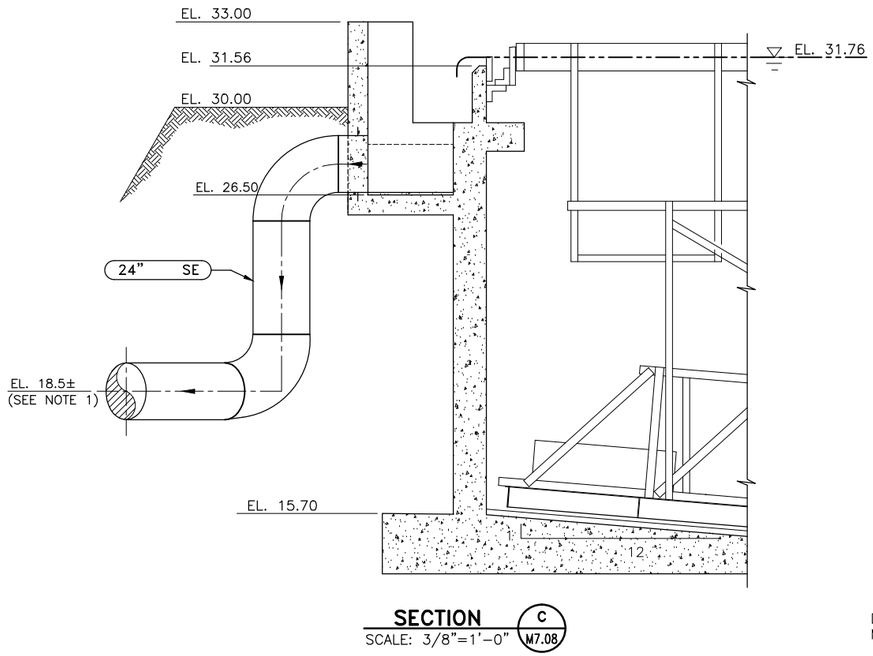
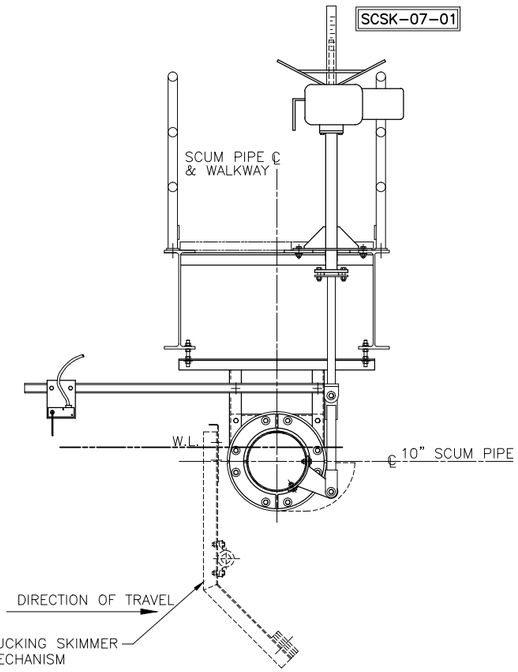
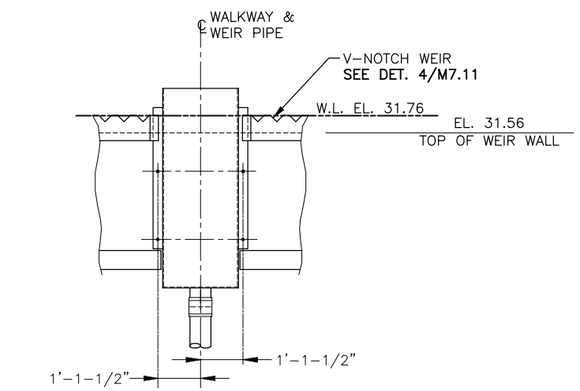




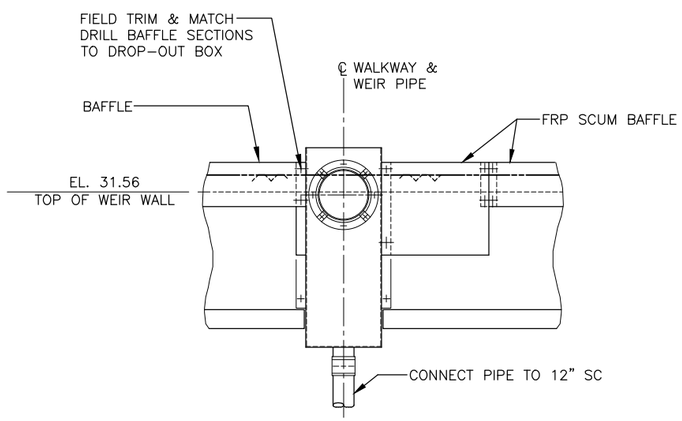
SECTION C M7.08
SCALE: 3/8"=1'-0"



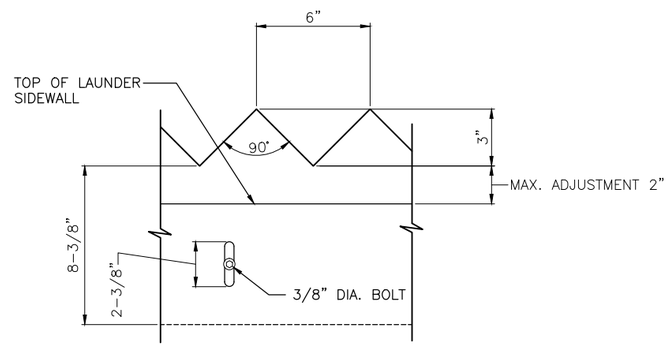
ROTATING SCUM SKIMMER DETAIL 1 M7.10
NOT TO SCALE



DROP-OUT BOX ANCHORAGE & SKIMMER PIPE 2 M7.10
NOT TO SCALE



DROP-OUT BOX BAFFLE MOUNTING DETAIL 3 M7.10
NOT TO SCALE



ADJUSTABLE V-NOTCH WEIR DETAIL 4 M7.11
SCALE: 3"=1'-0"

NOTE
1. ALL 24" SE ℄ EL. SHALL MATCH C EL. OF 36" SE AT CONNECTION POINT.

RECORD SET

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SECONDARY CLARIFIER SECTIONS AND DETAILS

SCALE: AS NOTED
DRAWING NUMBER: M7.11
SHEET NUMBER: OF SHEETS

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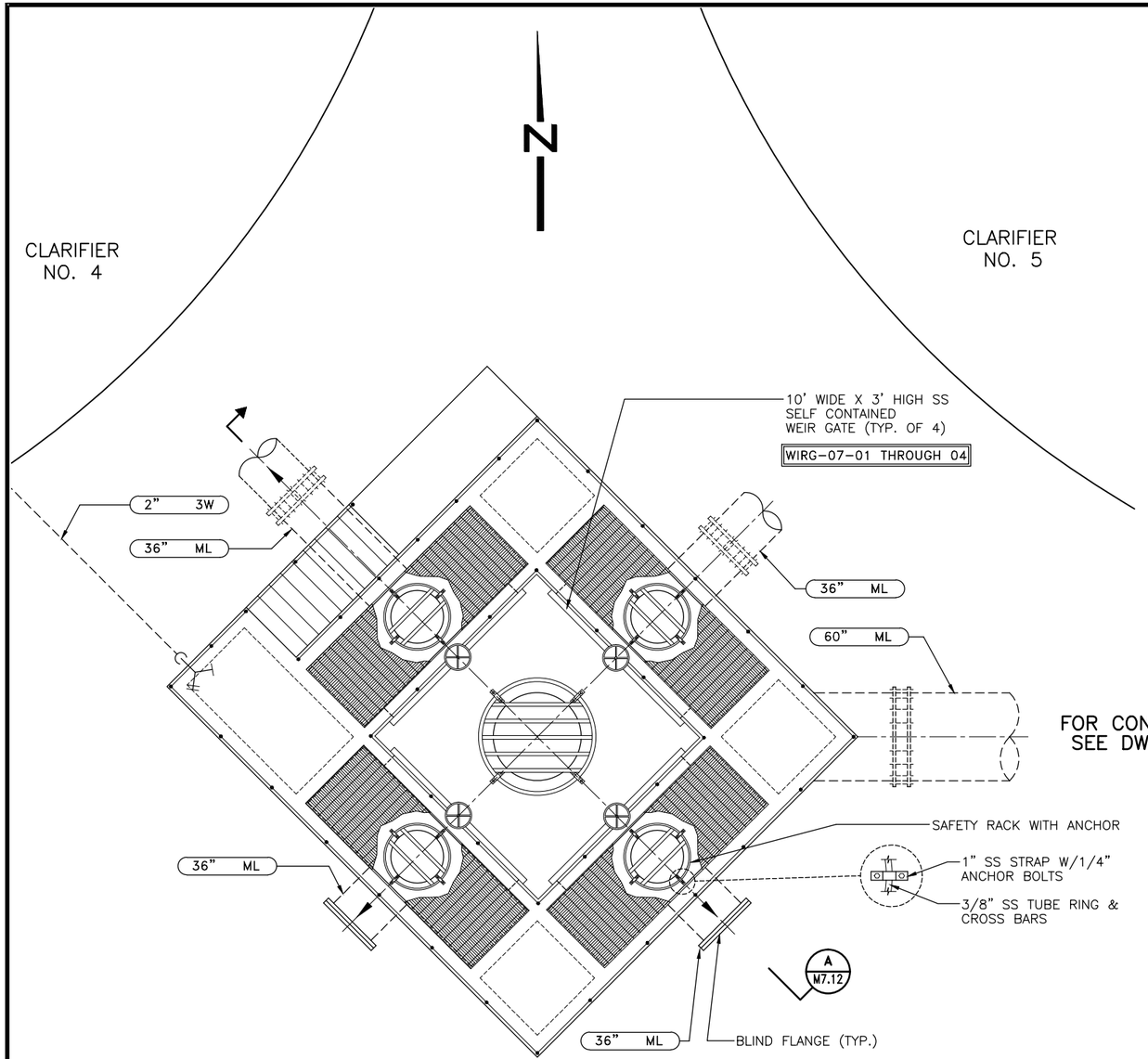
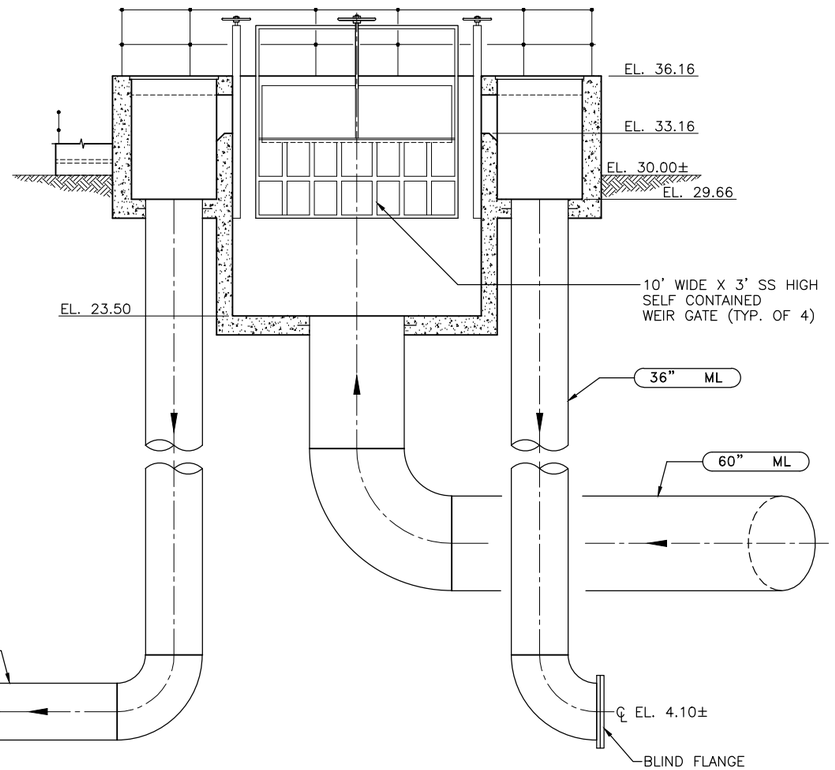
01/22/04 3:49 p.m.



PLAN
SCALE: 1/4"=1'-0"



SECTION A/M7.12
SCALE: 1/4"=1'-0"

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

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David Richard
No. 33479
EXP.
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NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SECONDARY CLARIFIERS
SPLITTER BOX
PLAN AND SECTION

SCALE: AS NOTED
DRAWING NUMBER: M7.12
SHEET NUMBER: OF SHEETS

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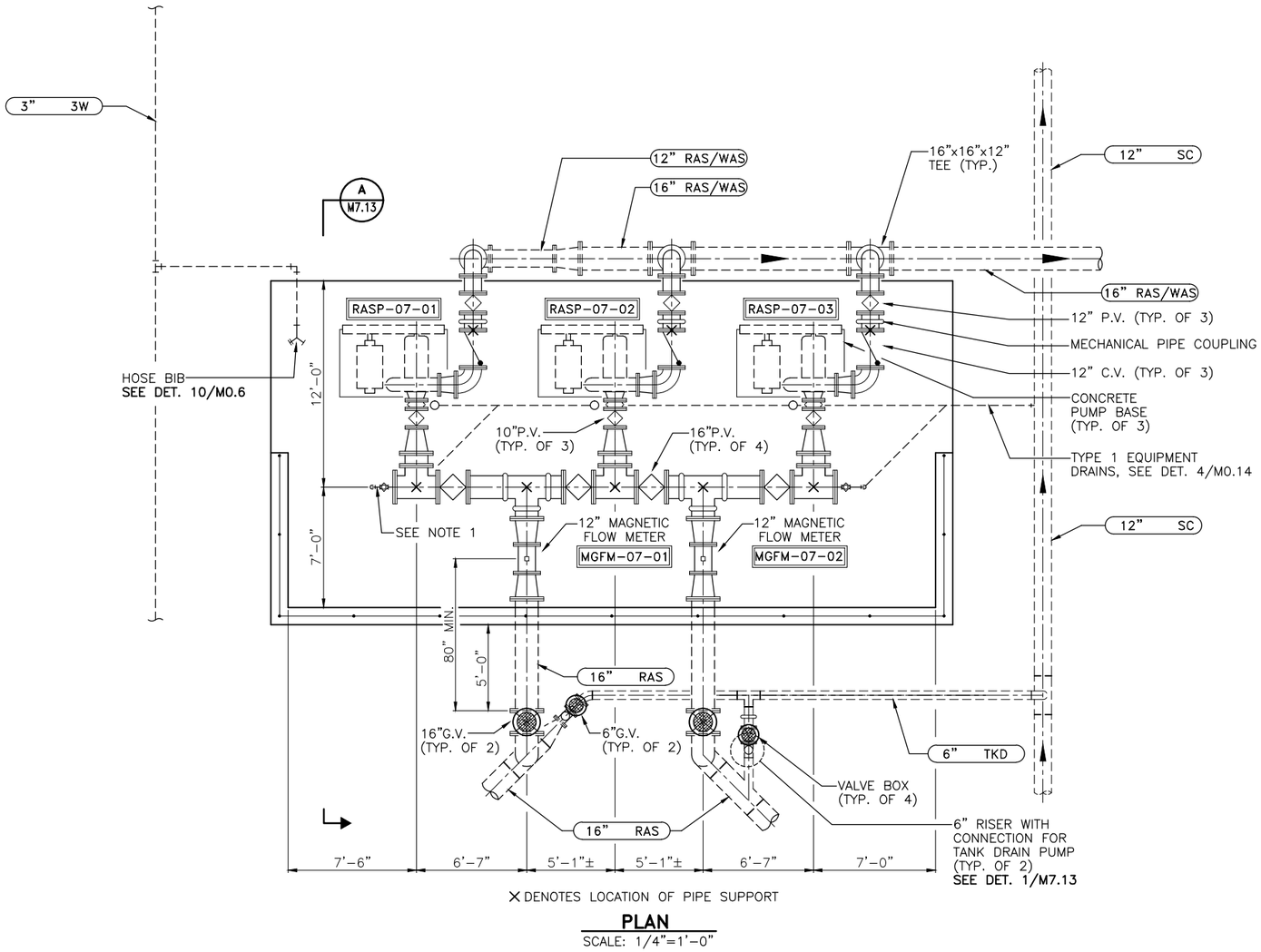
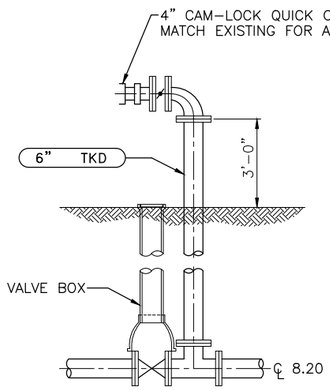
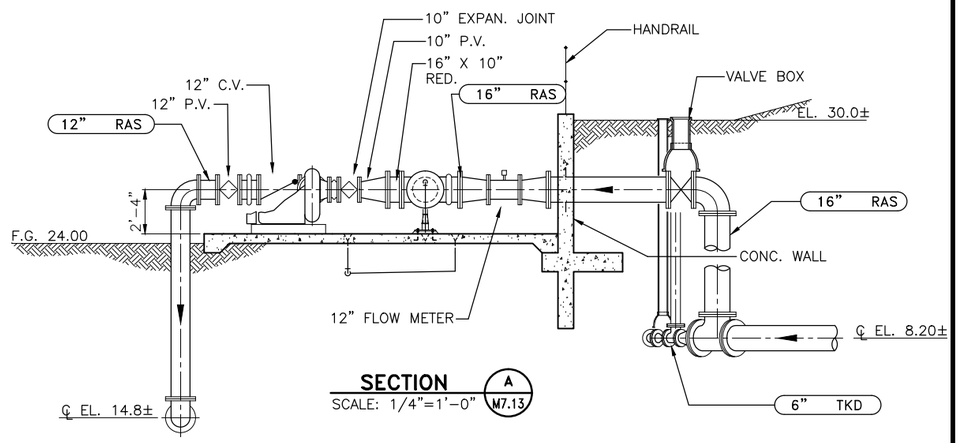


X DENOTES LOCATION OF PIPE SUPPORT

PLAN
SCALE: 1/4"=1'-0"



DETAIL 1/M7.13
SCALE: 1/2"=1'-0"



SECTION A/M7.13
SCALE: 1/4"=1'-0"

NOTES:

1. 1/2" DIA. GALVANIZED STEEL PIPE WITH SHUTOFF VALVE FOR AIR RELEASE. BLOWS INTO 8" SC DRAIN PIPE CONNECTED TO PLANT SEWER.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SECONDARY CLARIFIER RAS PUMP STATION - PLAN AND SECTION

SCALE: AS NOTED
DRAWING NUMBER: M7.13
SHEET NUMBER: OF SHEETS

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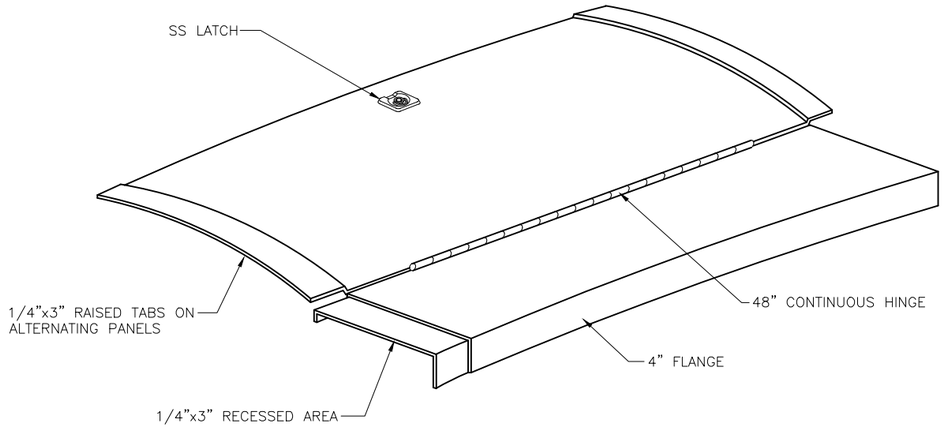
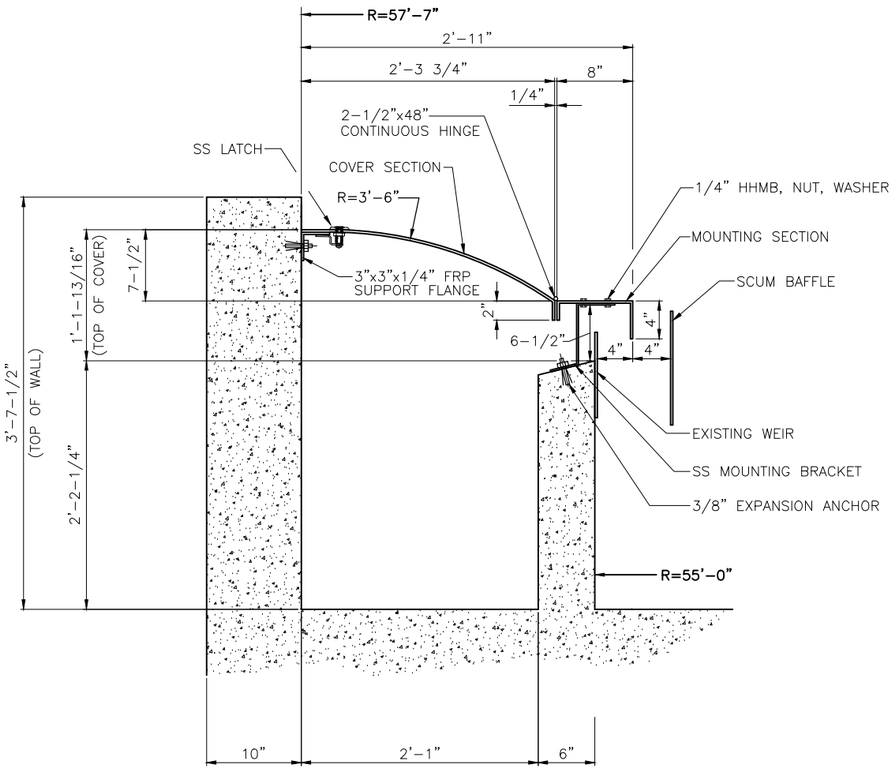


PERSPECTIVE VIEW
SCALE: 1-1/2"=1'-0"



TYPICAL SECTION
SCALE: 1-1/2"=1'-0"

RECORD SET

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1	SEM	09/11	RECORD SET

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
SECONDARY CLARIFIERS
LAUNDER COVER DETAIL

SCALE: AS NOTED
DRAWING NUMBER: M7.14
SHEET NUMBER: OF SHEETS

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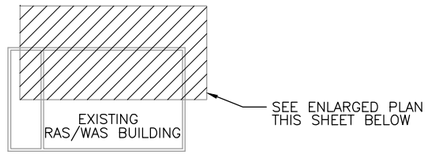
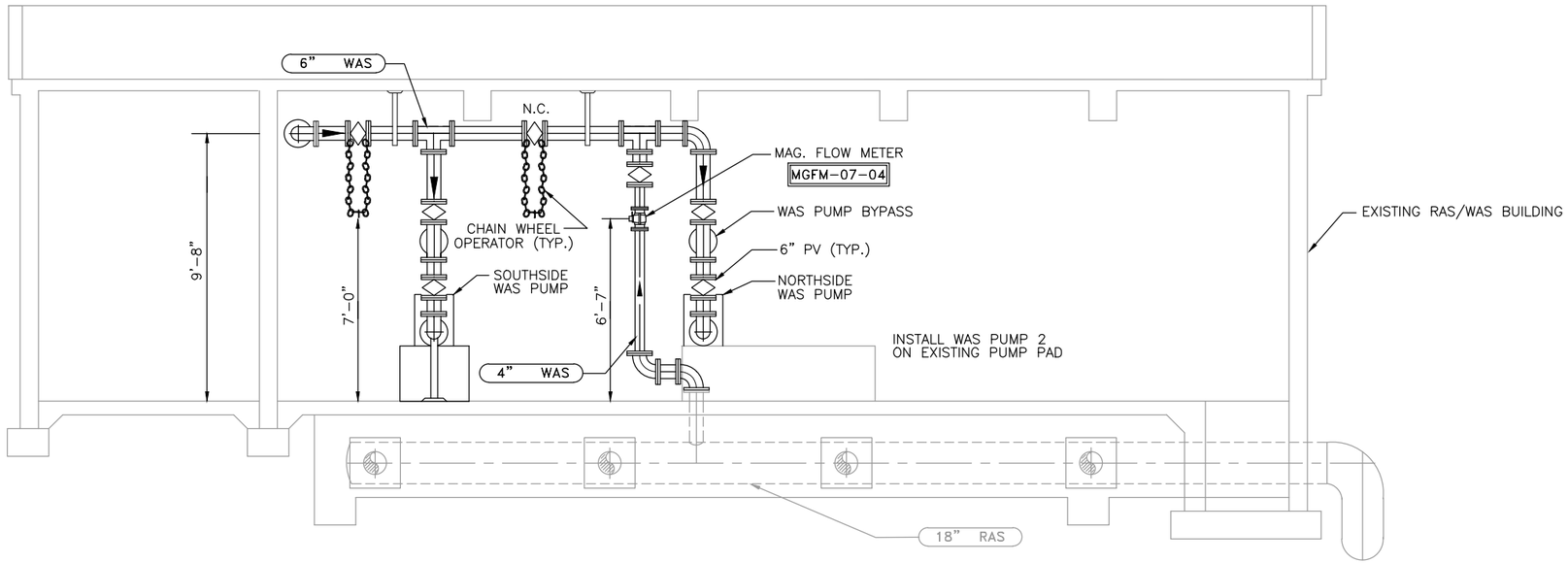
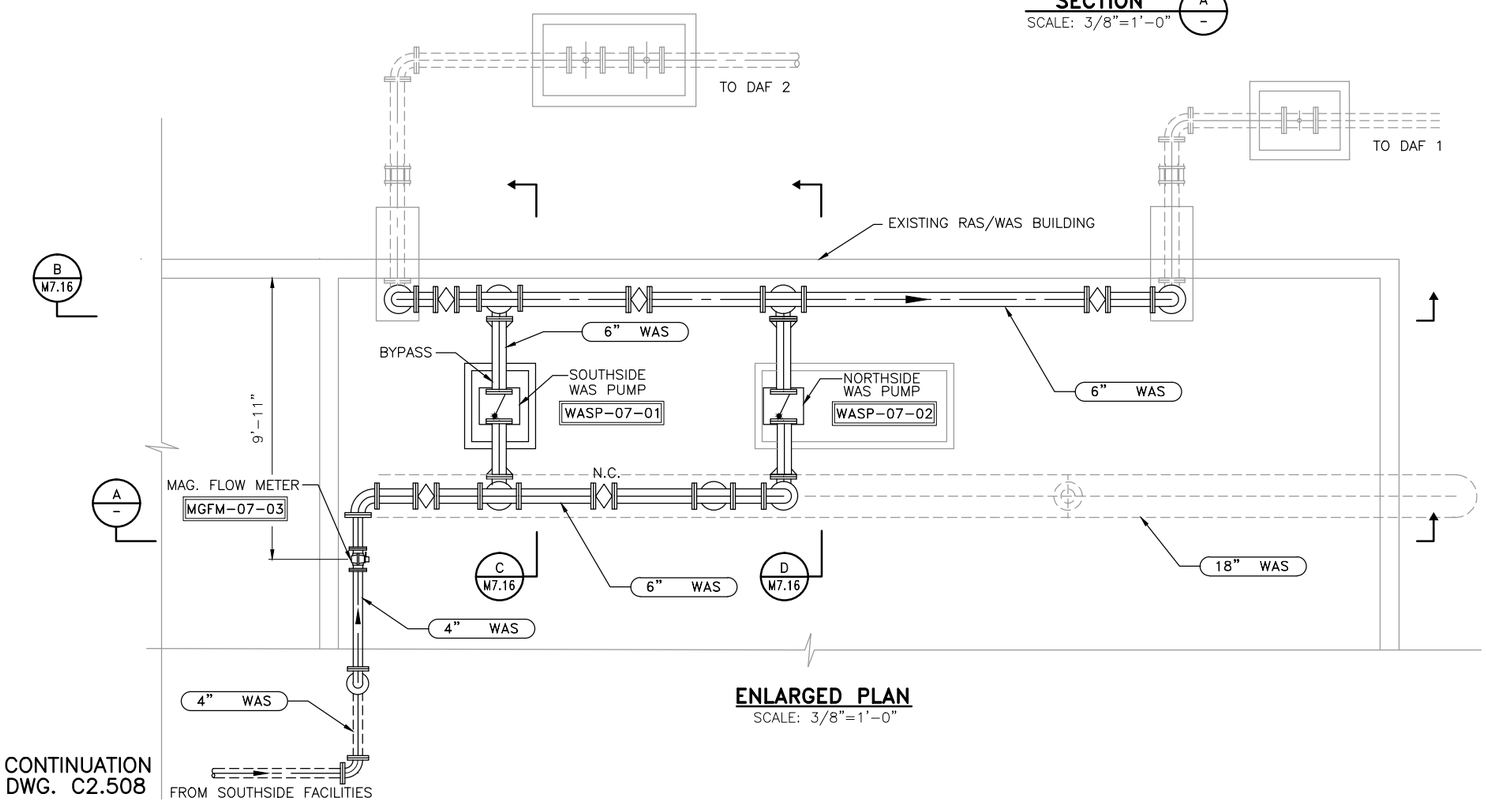
01/22/04 3:49 p.m.



PLAN
SCALE: 1"=20'



SECTION A
SCALE: 3/8"=1'-0"



ENLARGED PLAN
SCALE: 3/8"=1'-0"

FOR CONTINUATION
SEE DWG. C2.508

Z

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 781-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-1500 ☐ SAN JOSE (408) 287-3400 ☐ SAN DIEGO (619) 378-0382 ☐ WALNUT CREEK (510) 934-9060
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. AIT-LASRI
CHECKED BY: B.R. TRESAN
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: B.R. TRESAN

NO.	BY	DATE	REVISIONS
6			
5			
4			
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2			
1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET~~
~~NOT TO SCALE~~

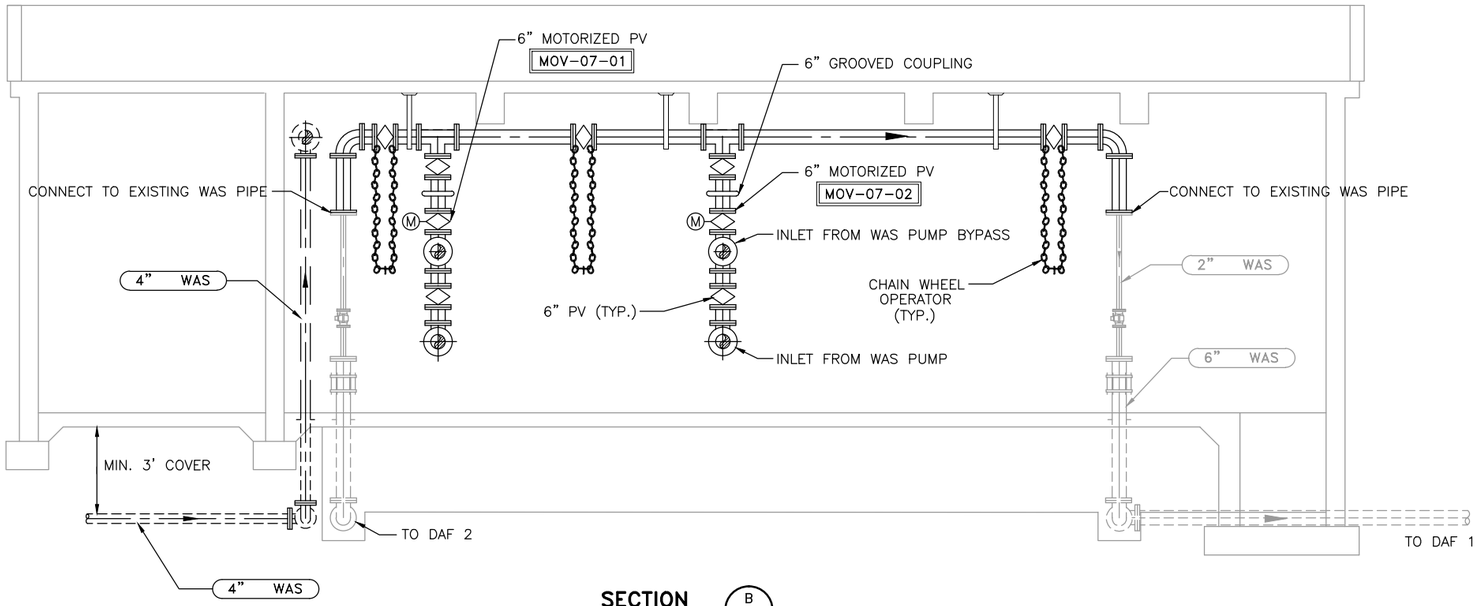
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

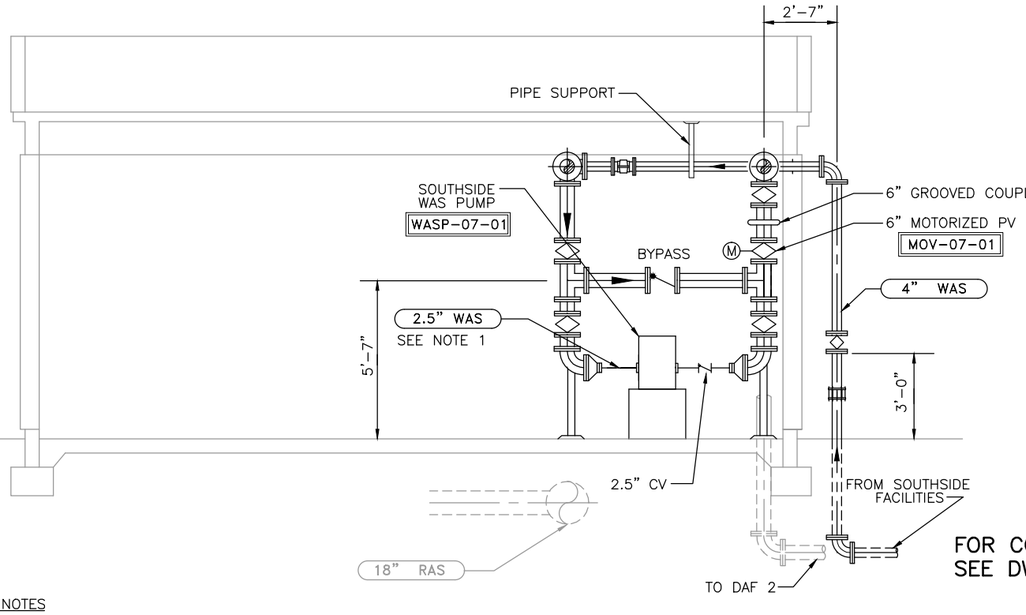
MODIFICATIONS TO EXISTING RAS/WAS BUILDING PLAN AND SECTION

SCALE: AS NOTED
DRAWING NUMBER: M7.15
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-B\Cadd\Conformed\Mechanical\ SCHBM708.DWG
NONE
11/04/04 9:59 a.m.



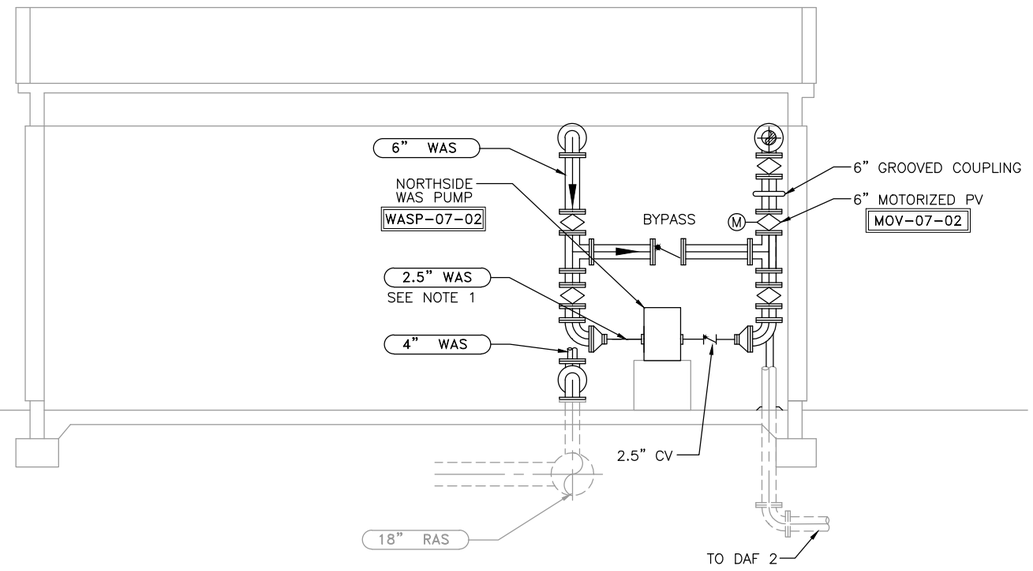
SECTION (B / M7.15)
SCALE: 3/8"=1'-0"



FOR CONTINUATION
SEE DWG. C2.508

NOTES
1. PIPE DIAMETER MAY VARY DEPENDING UPON PUMP MANUFACTURER

SECTION (C / M7.15)
SCALE: 3/8"=1'-0"



SECTION (D / M7.15)
SCALE: 3/8"=1'-0"

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. AIT-LASRI
CHECKED BY: B.R. TRESAN
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: B.R. TRESAN

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

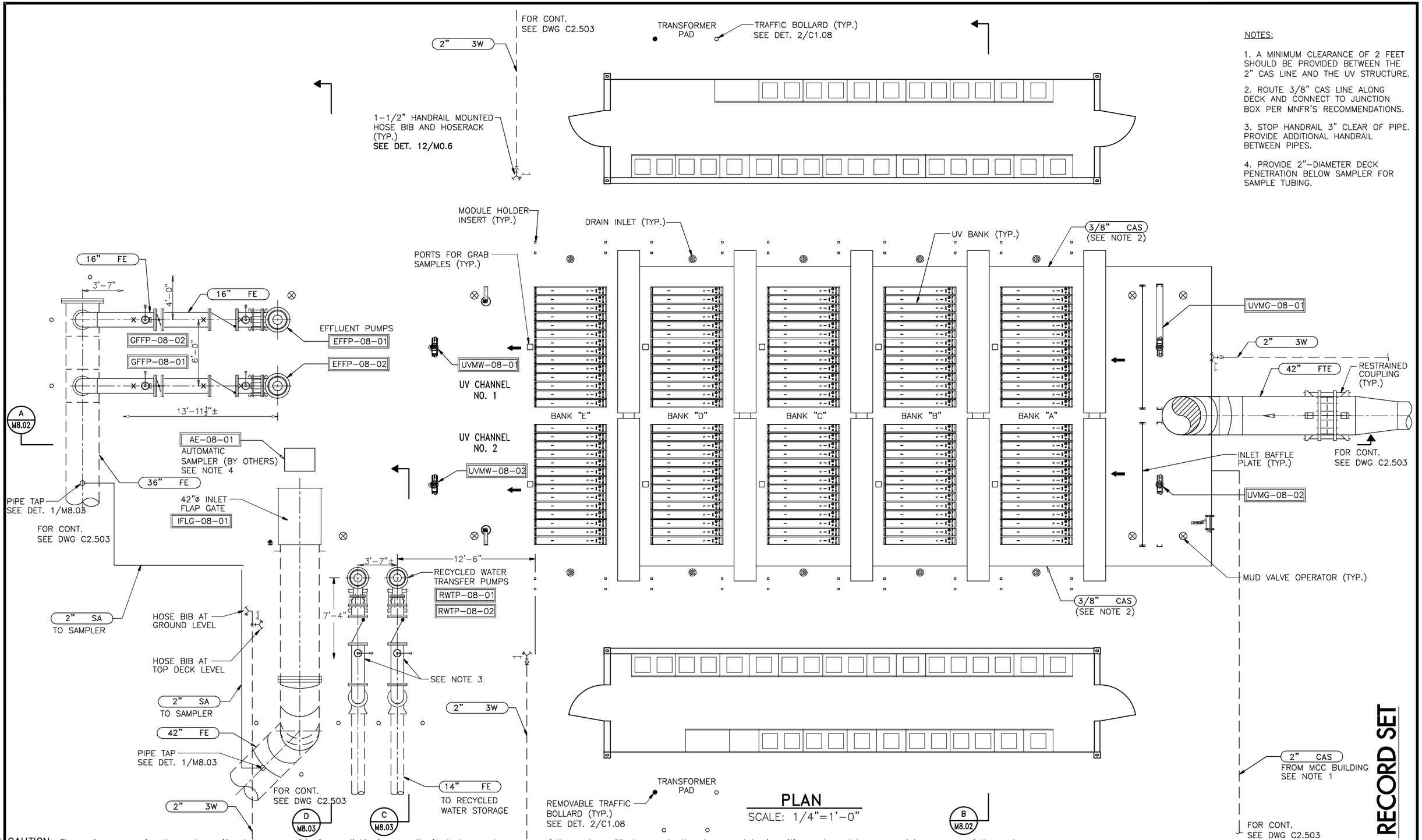
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
MODIFICATIONS TO EXISTING RAS/WAS BUILDING SECTIONS

SCALE: AS NOTED
DRAWING NUMBER: M7.16
SHEET NUMBER: OF SHEETS

NONE
\\SAS1\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-B\Cadd\Conformed\Mechanical\ SCHBM709.DWG
9:59 a.m.
11/04/04

NOTES:

1. A MINIMUM CLEARANCE OF 2 FEET SHOULD BE PROVIDED BETWEEN THE 2" CAS LINE AND THE UV STRUCTURE.
2. ROUTE 3/8" CAS LINE ALONG DECK AND CONNECT TO JUNCTION BOX PER MNFR'S RECOMMENDATIONS.
3. STOP HANDRAIL 3" CLEAR OF PIPE. PROVIDE ADDITIONAL HANDRAIL BETWEEN PIPES.
4. PROVIDE 2"–DIAMETER DECK PENETRATION BELOW SAMPLER FOR SAMPLE TUBING.



PLAN
SCALE: 1/4"=1'–0"

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be approved by preparer of these plans.

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BEYOND ENGINEERING
☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-1500 ☐ SAN JOSE (408) 287-9400 ☐ SAN DIEGO (619) 276-0392 ☐ WALNUT CREEK (510) 934-9080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

UV DISINFECTION / EFFLUENT PUMPING TOP DECK PLAN

SCALE: AS NOTED
DRAWING NUMBER: M8.01
SHEET NUMBER: OF SHEETS

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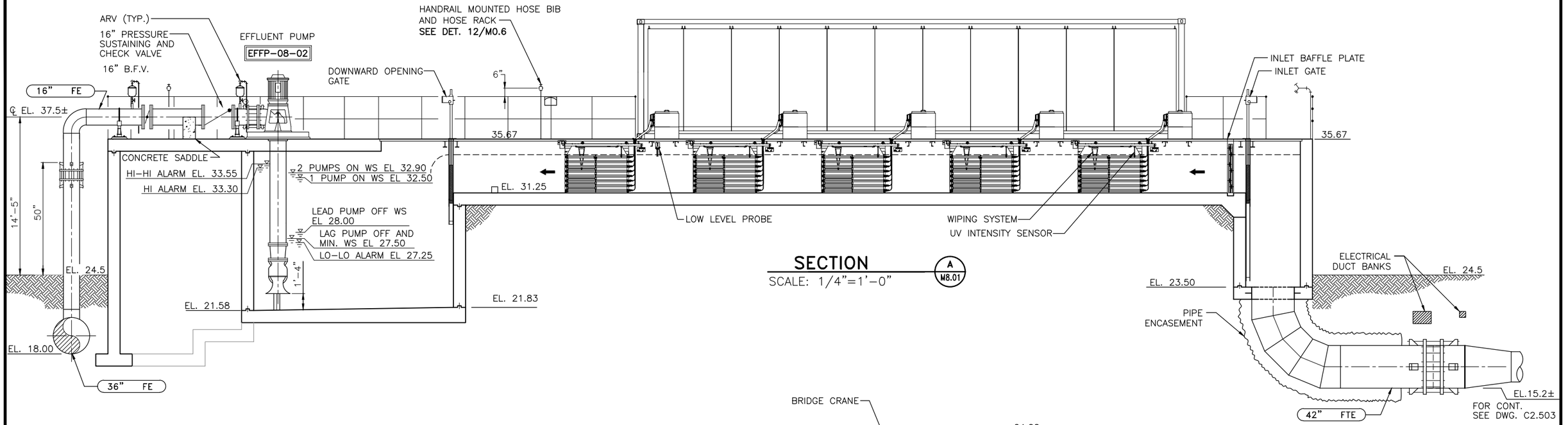
09/06/05 11:50 a.m.
SCH-DM8001.DWG NONE



NOTES:
1. WEDECO SUPPLIED TRANSFORMER LENGTH: 32.25", DEPTH: 24.25", AND HEIGHT: 41.00".

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
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□ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 □ ORANGE COUNTY (714) 382-7600 □ SACRAMENTO (916) 641-9500 □ SAN JOSE (408) 287-3420 □ SAN DIEGO (858) 278-9380 □ WALNUT CREEK (925) 934-8080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

UV DISINFECTION / EFFLUENT PUMPING SECTIONS I

SCALE: AS NOTED
DRAWING NUMBER: **M8.02**
SHEET NUMBER: OF SHEETS

SCH-DM802.DWG NONE
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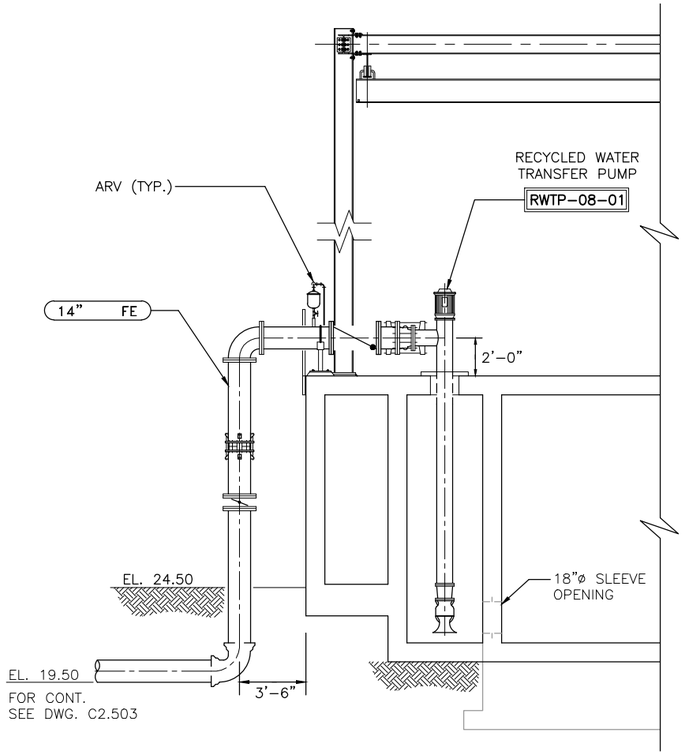
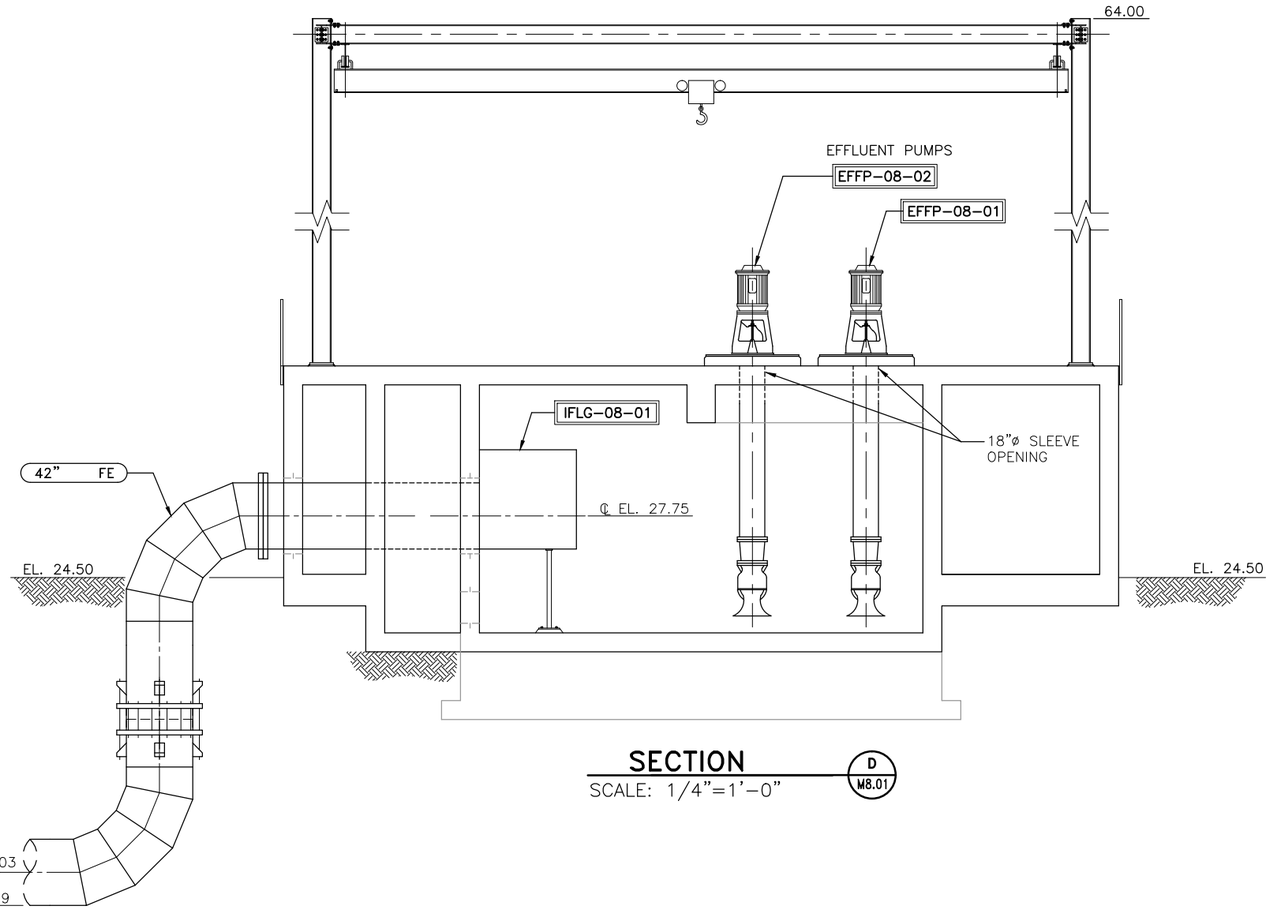
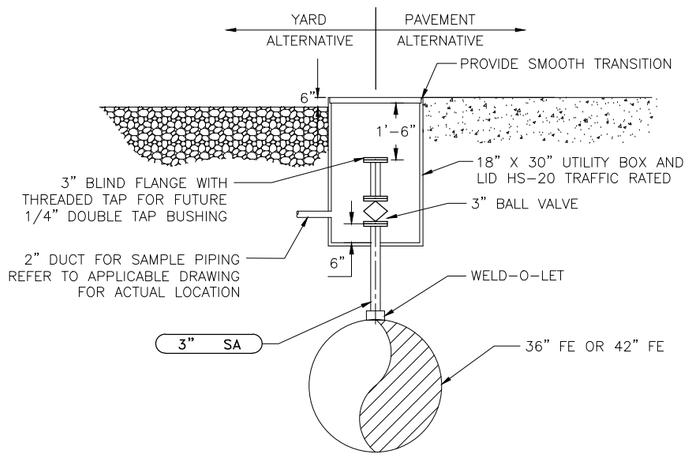
09/06/05 11:50 a.m.



SECTION (C / M8.01)
SCALE: 1/4"=1'-0"



SECTION (D / M8.01)
SCALE: 1/4"=1'-0"



SAMPLE TAP DETAIL (1 / M8.01)
SCALE: 1/2"=1'-0"

NOTE:
THE SEATING HEAD ON THE GATE AND PRESSURE IN THE INLET FLAP GATE BOX SHOULD BE 73-FEET OR 32 PSI.

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER
David Richard
No. 33479
EXP.
CIVIL
STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: S.O. OFORI

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
UV DISINFECTION / EFFLUENT PUMPING SECTIONS II

SCALE: AS NOTED
DRAWING NUMBER: **M8.03**
SHEET NUMBER: OF SHEETS

SCH-DM803.DWG NONE
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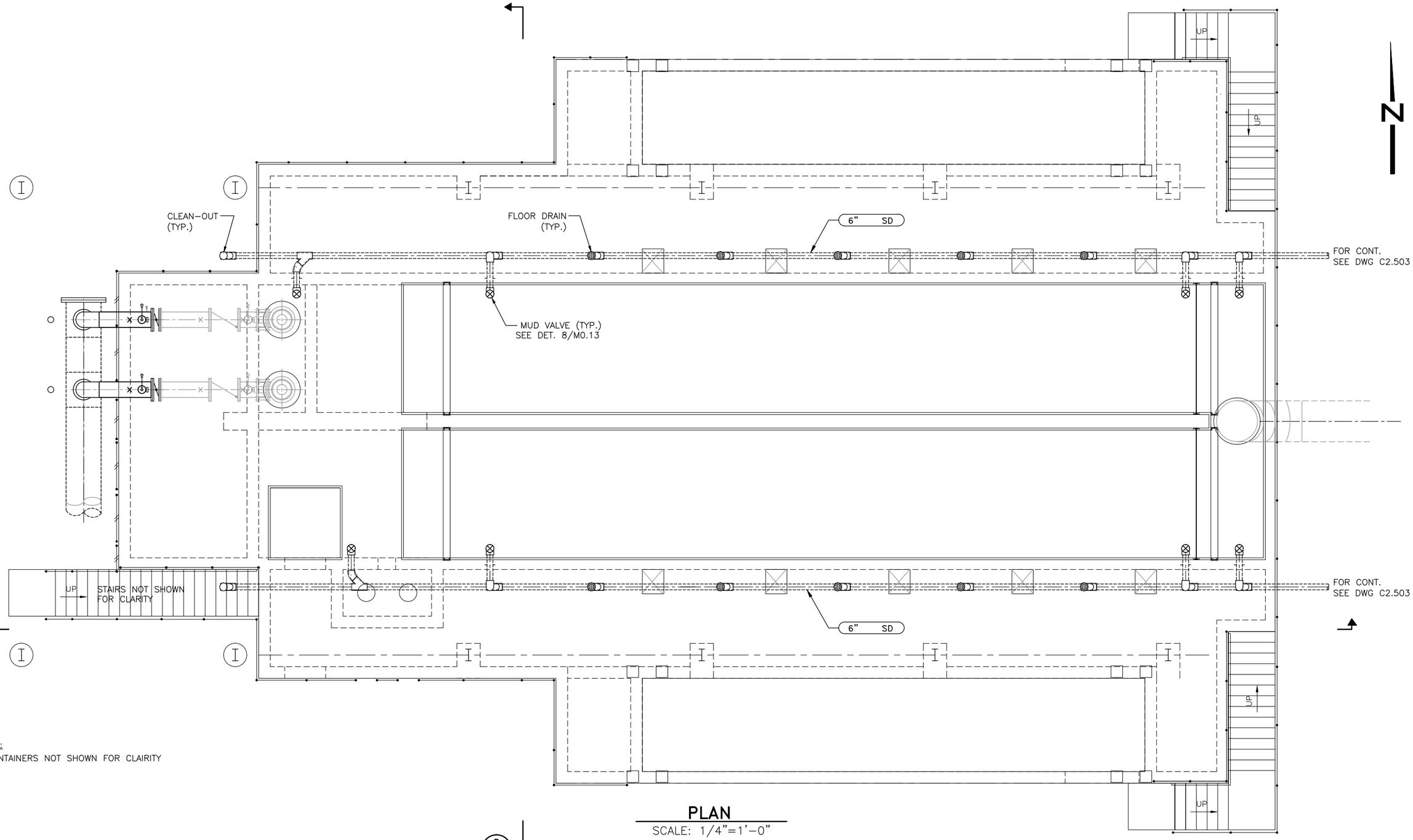
06/10/05 3:07 p.m.



NOTES:
1. CONTAINERS NOT SHOWN FOR CLAIRITY

PLAN
SCALE: 1/4"=1'-0"

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: R. AIT-LASRI
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
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1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

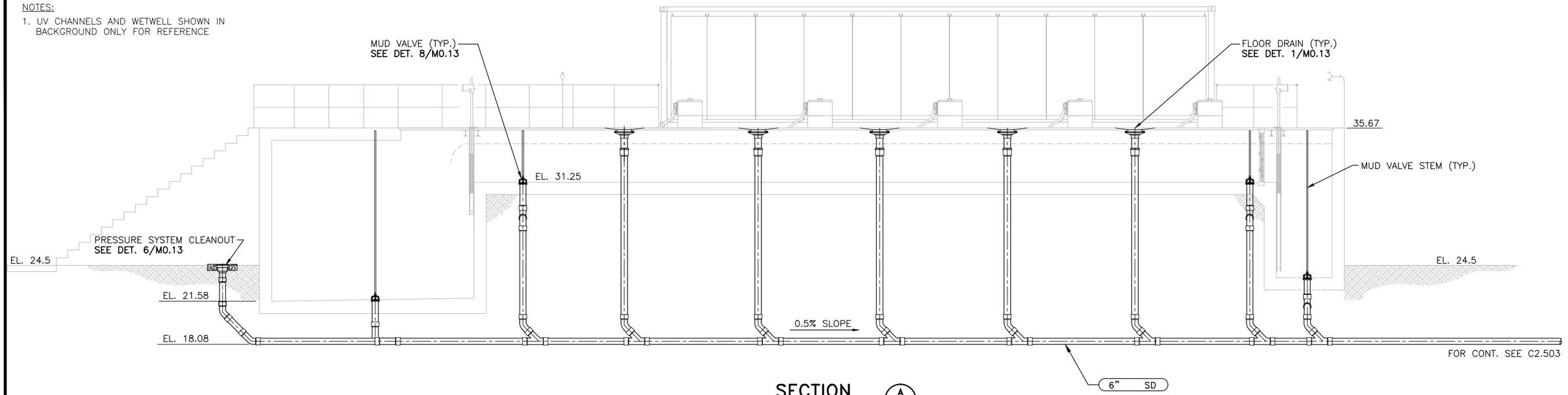
UV DISINFECTION / EFFLUENT PUMPING DRAIN PLAN

SCALE: AS NOTED
DRAWING NUMBER: **M8.04**
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\ N:\SA1224_11\CADD\MECHANICAL\08\
06/09/05 3:33 p.m.
SCH-DM804.DWG NONE

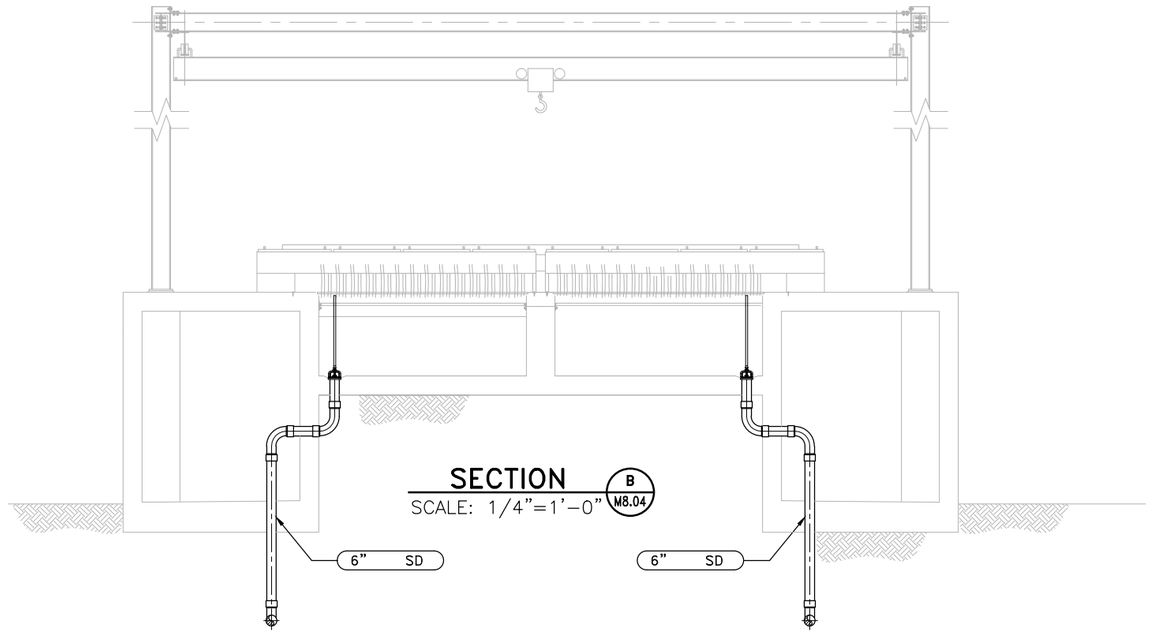
NOTES:

1. UV CHANNELS AND WETWELL SHOWN IN BACKGROUND ONLY FOR REFERENCE



SECTION

SCALE: 1/4"=1'-0" (A / M8.04)



SECTION

SCALE: 1/4"=1'-0" (B / M8.04)

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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☐ DENVER (303) 781-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 282-1600 ☐ SACRAMENTO (916) 641-1930 ☐ SAN JOSE (408) 487-2430 ☐ SAN DIEGO (619) 378-8382 ☐ WALNUT CREEK (510) 934-6060
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
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2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

UV DISINFECTION / EFFLUENT PUMPING DRAIN SYSTEM - SECTIONS

SCALE: AS NOTED

DRAWING NUMBER: M8.05

SHEET NUMBER: OF SHEETS

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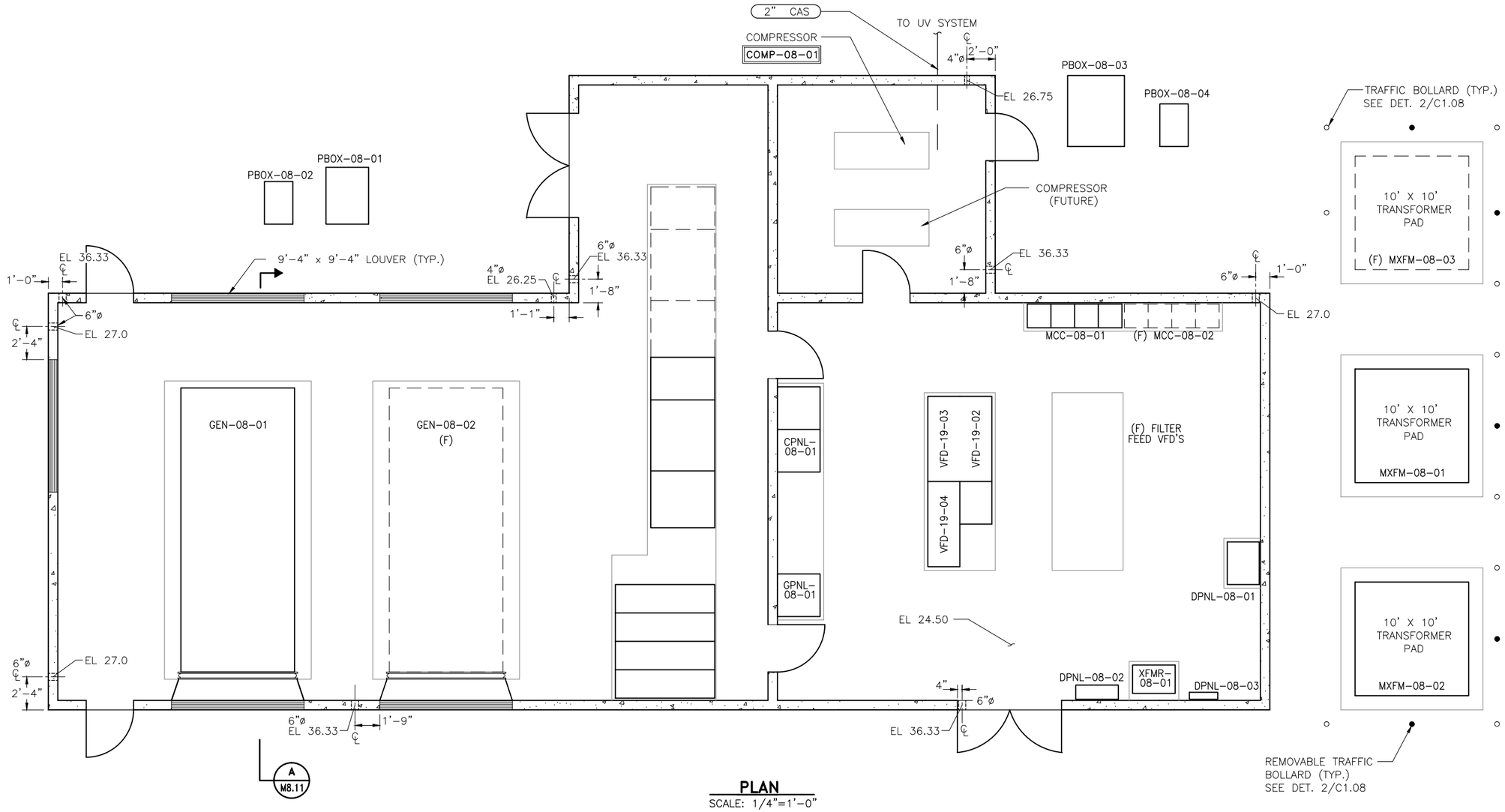

PLAN
SCALE: 1/4"=1'-0"

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. AIT-LASRI
CHECKED BY: B.R. TRESAN
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
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4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

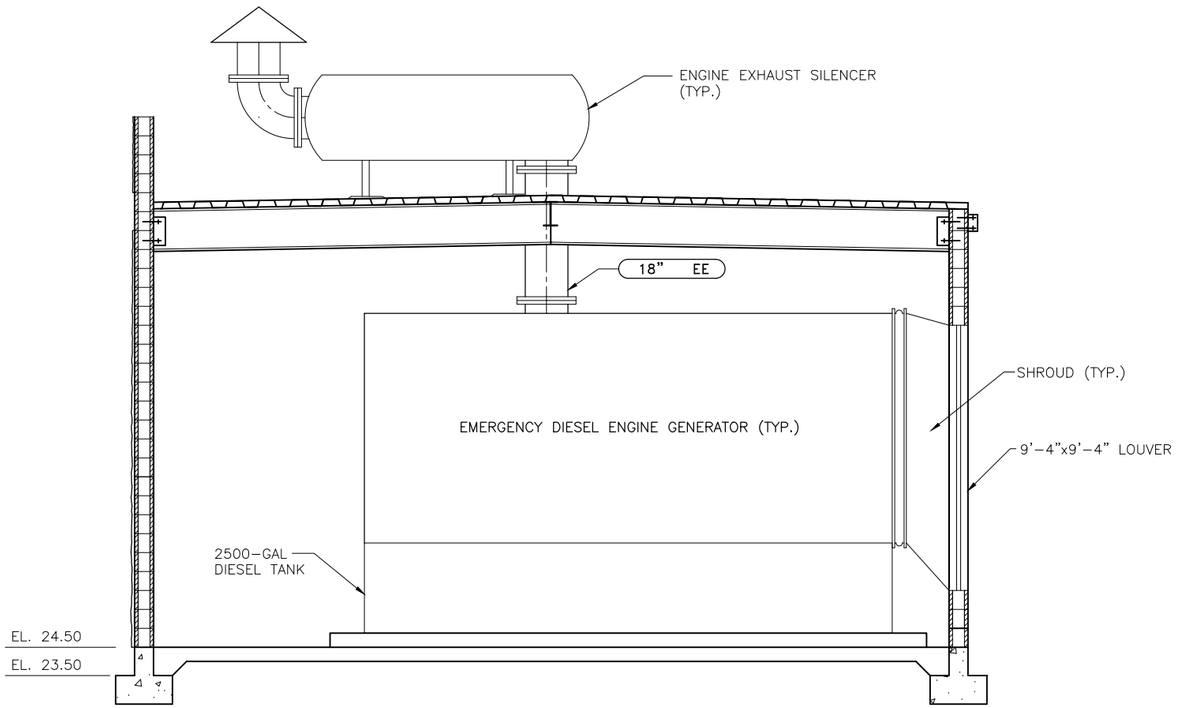
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

EFFLUENT MCC/GENERATOR BUILDING

SCALE: AS NOTED
DRAWING NUMBER: M8.10
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\ N:\SA1224_11\CADD\MECHANICAL\08\ SCH-DM810.DWG NONE
06/09/05 2:37 p.m.



SECTION (A / M8.10)
SCALE: 3/8"=1'-0"

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

RECORD SET

NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-1600 ☐ SAN JOSE (408) 287-2400 ☐ SAN DIEGO (619) 278-9360 ☐ WALNUT CREEK (510) 934-9080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: R. AIT-LASRI
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J. FADDEN

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

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~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

EFFLUENT MCC BUILDING SECTIONS

SCALE: AS NOTED
DRAWING NUMBER: M8.11
SHEET NUMBER: OF SHEETS

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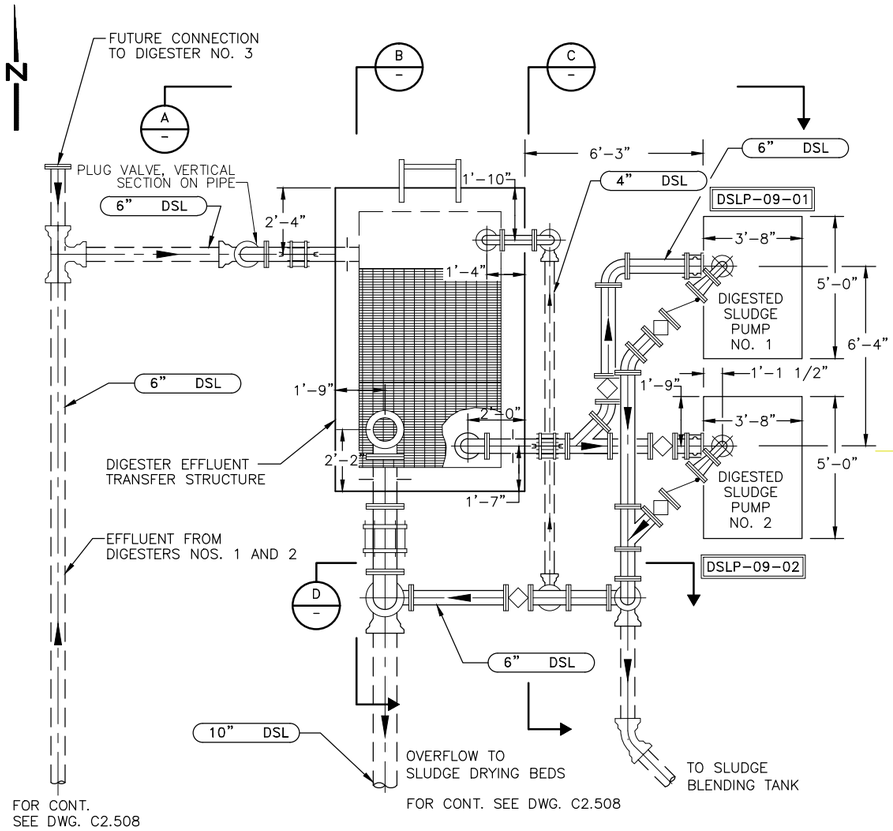
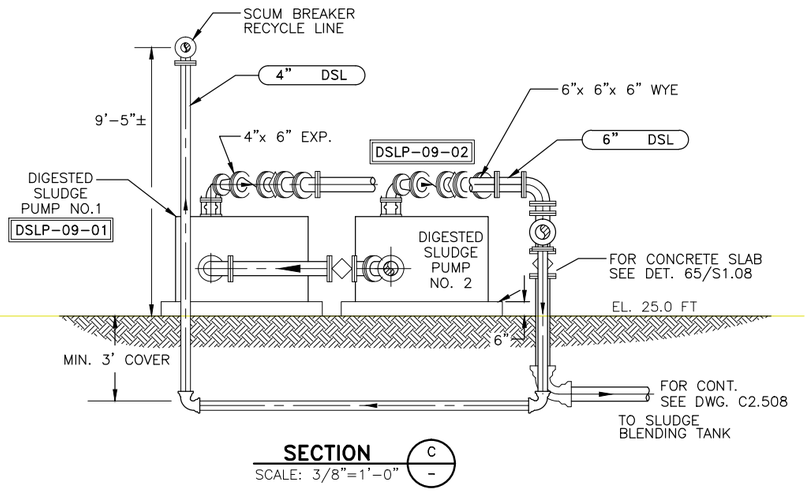
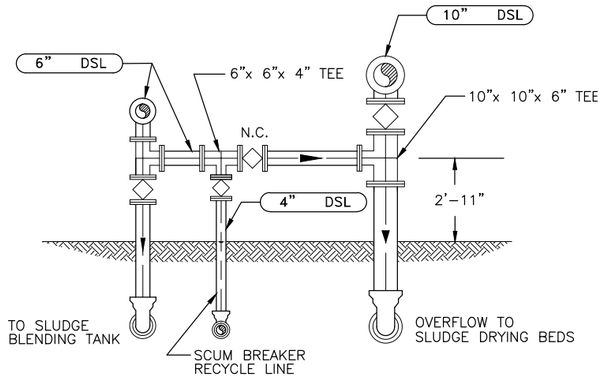




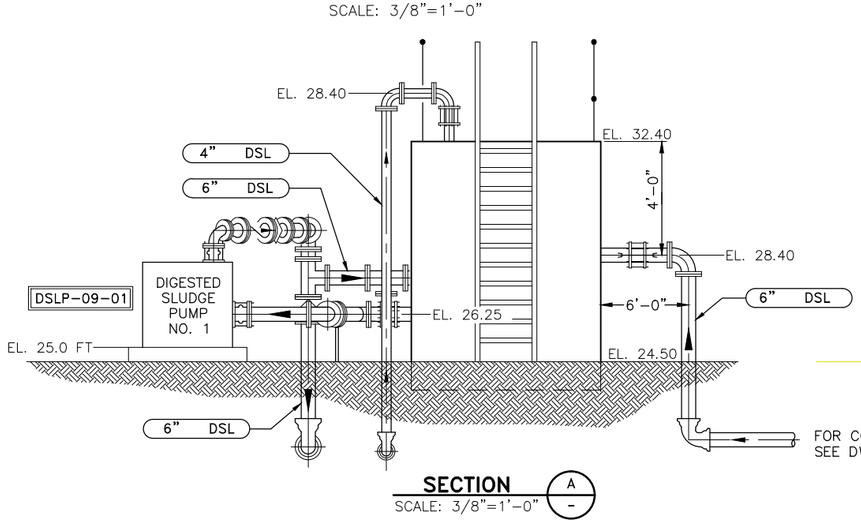
SECTION C
SCALE: 3/8"=1'-0"



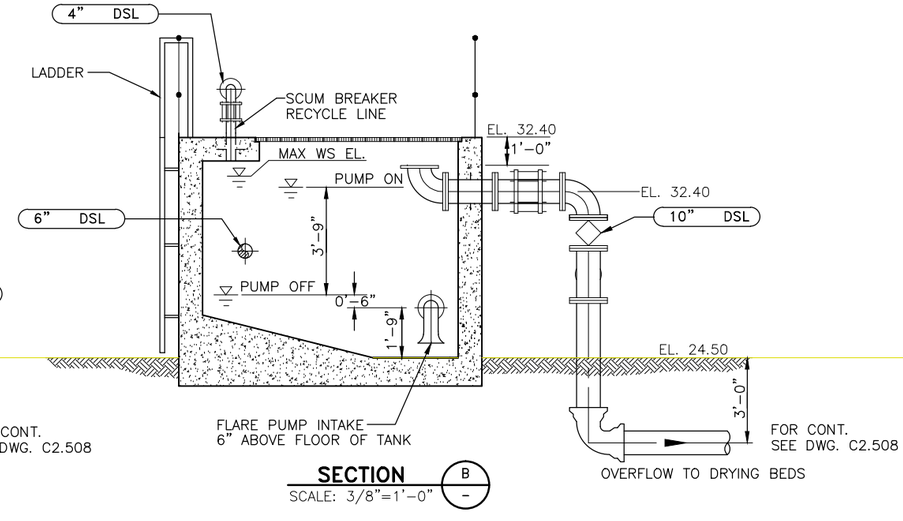
SECTION D
SCALE: 3/8"=1'-0"

DIGESTER EFFLUENT TRANSFER STRUCTURE – ENLARGED PLAN

SCALE: 3/8"=1'-0"



SECTION A
SCALE: 3/8"=1'-0"



SECTION B
SCALE: 3/8"=1'-0"

NOTES:

1. FOR LOCATION OF PRESSURE & TEMPERATURE GAGES, SEE DRAWING E15.03.
2. PIPE SUPPORT REQUIREMENTS ARE LOCATED IN SPEC. SECTION 15140 PIPING SUPPORTS.

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 781-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-9050 ☐ SAN JOSE (408) 487-2600 ☐ SAN DIEGO (619) 278-8280 ☐ WALNUT CREEK (510) 934-0080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

REDUCED RECORD SET NOT TO SCALE

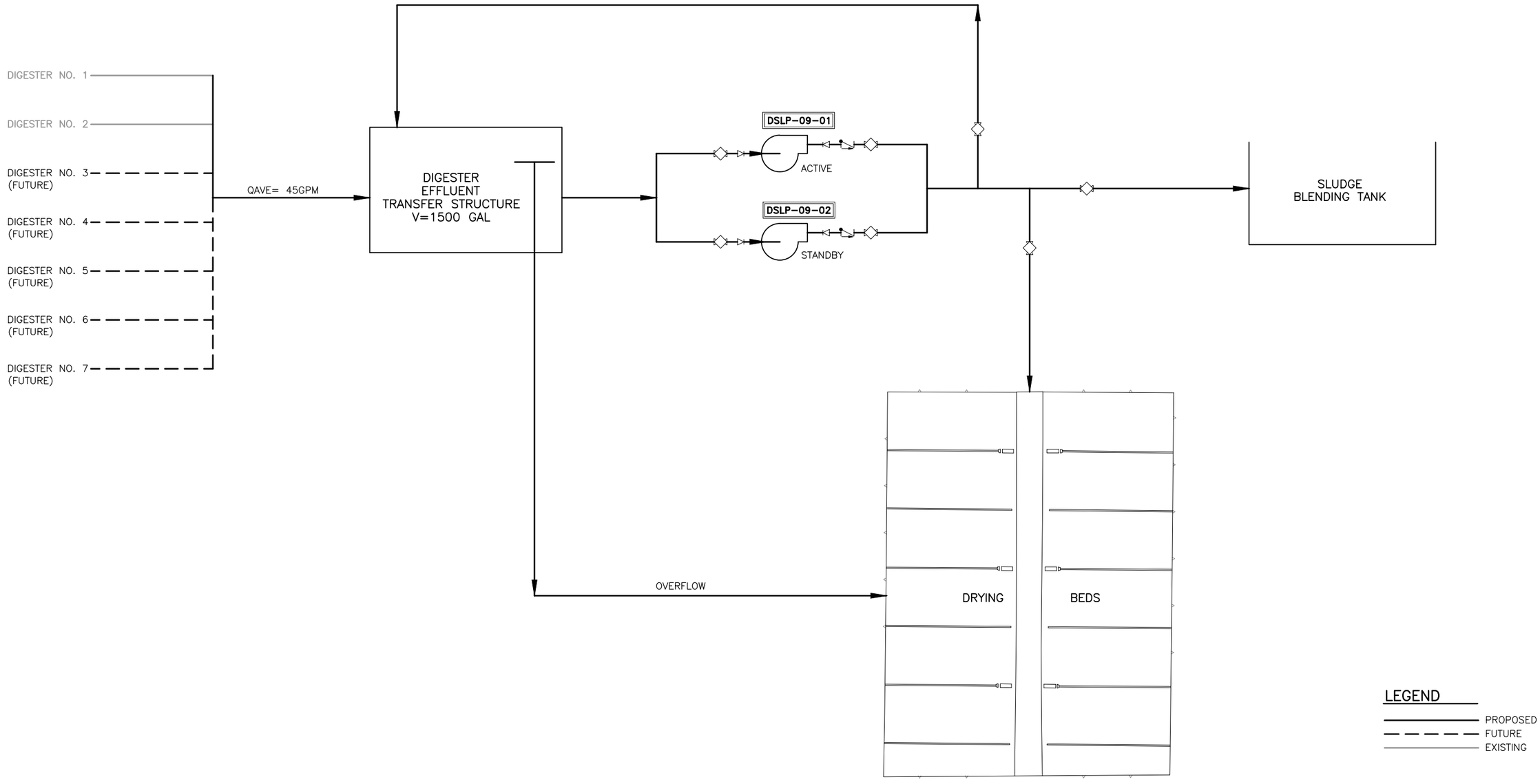
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

DIGESTER EFFLUENT TRANSFER STRUCTURE

SCALE: AS NOTED
DRAWING NUMBER: M9.01
SHEET NUMBER: OF SHEETS

\\SAS\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-C\Cadd\Mechanical\ SCH-CM913.DWG - 02/09/04 4:37 p.m



RECORD SET

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NOLTE
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			
4			
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2			
1	SEM	09/11	RECORD SET

REDUCED RECORD SET NOT TO SCALE

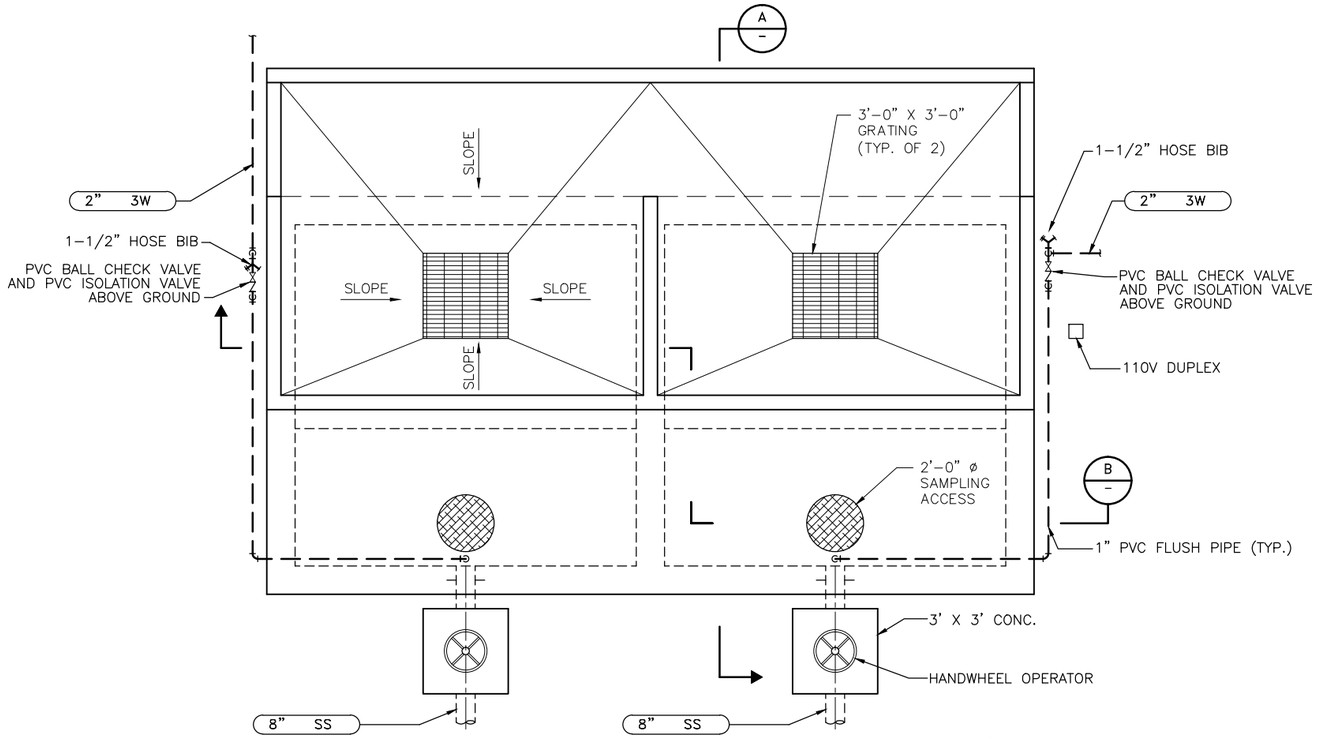
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

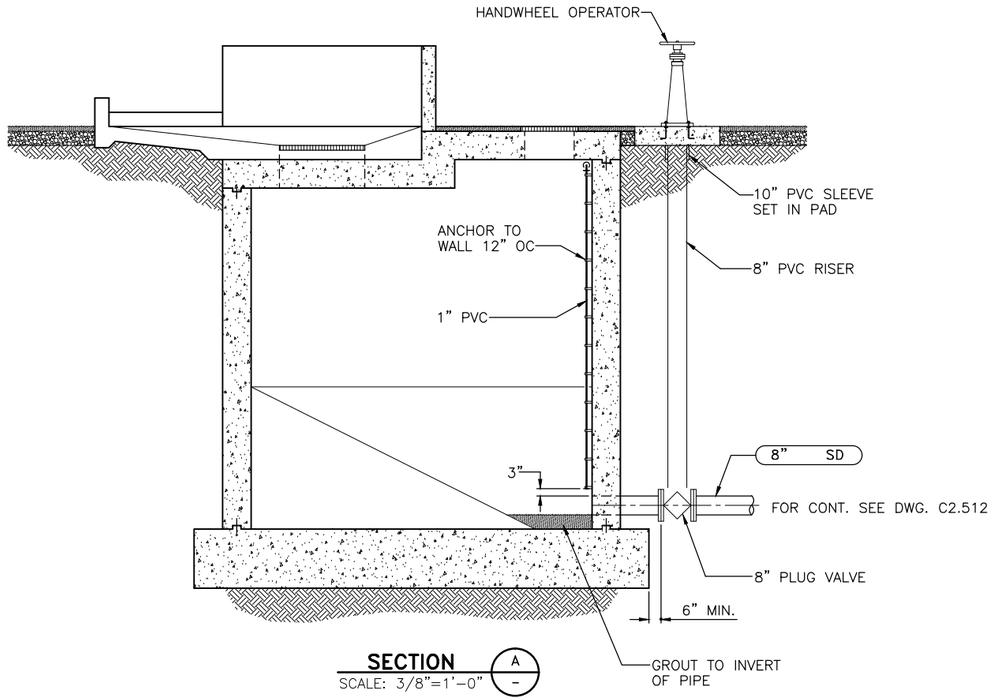
DIGESTER EFFLUENT TRANSFER STRUCTURE FLOW SCHEMATIC

SCALE: NOT TO SCALE
DRAWING NUMBER: M9.02
SHEET NUMBER: OF SHEETS

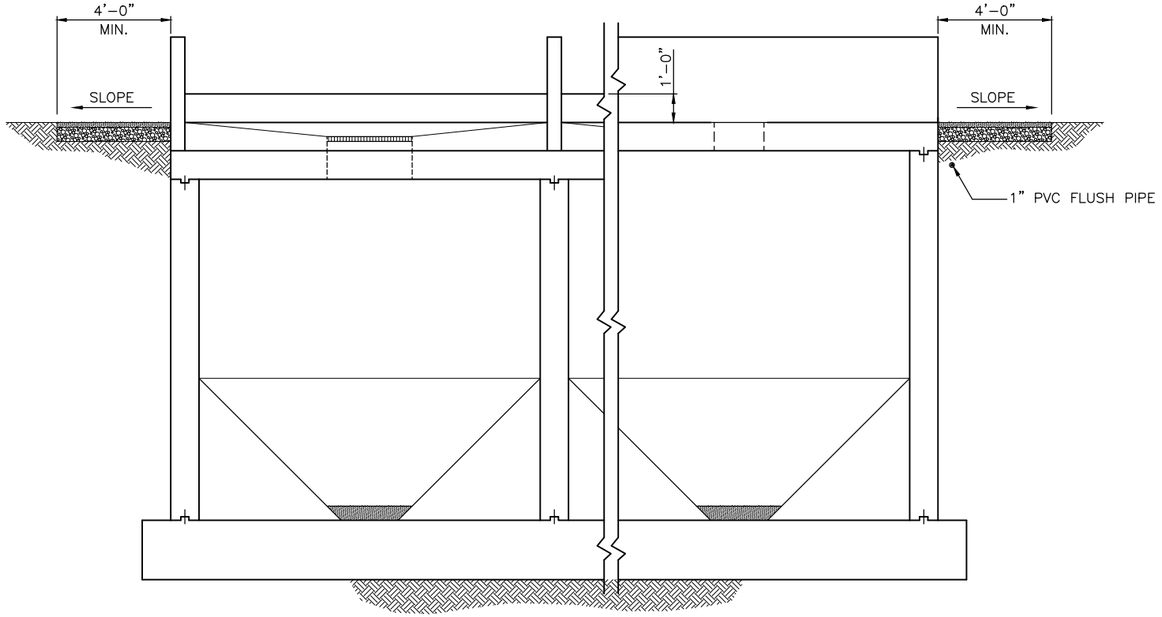
\\SAS\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-C\Cadd\Mechanical\ SCH-CM920.DWG NONE
02/09/04 3:29 p.m.



PLAN
SCALE: 3/8"=1'-0"



SECTION (A)
SCALE: 3/8"=1'-0"



SECTION (B)
SCALE: 3/8"=1'-0"

RECORD SET

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NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 781-0404 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 282-9400 ☐ SACRAMENTO (916) 641-9130 ☐ SAN JOSE (408) 487-9600 ☐ SAN DIEGO (619) 276-4282 ☐ WALNUT CREEK (510) 934-0303
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y. AU

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SEPTAGE RECEIVING FACILITY PLAN AND SECTIONS

SCALE: AS NOTED
DRAWING NUMBER: M10.01
SHEET NUMBER: OF SHEETS

SCH-BM1001.DWG NONE
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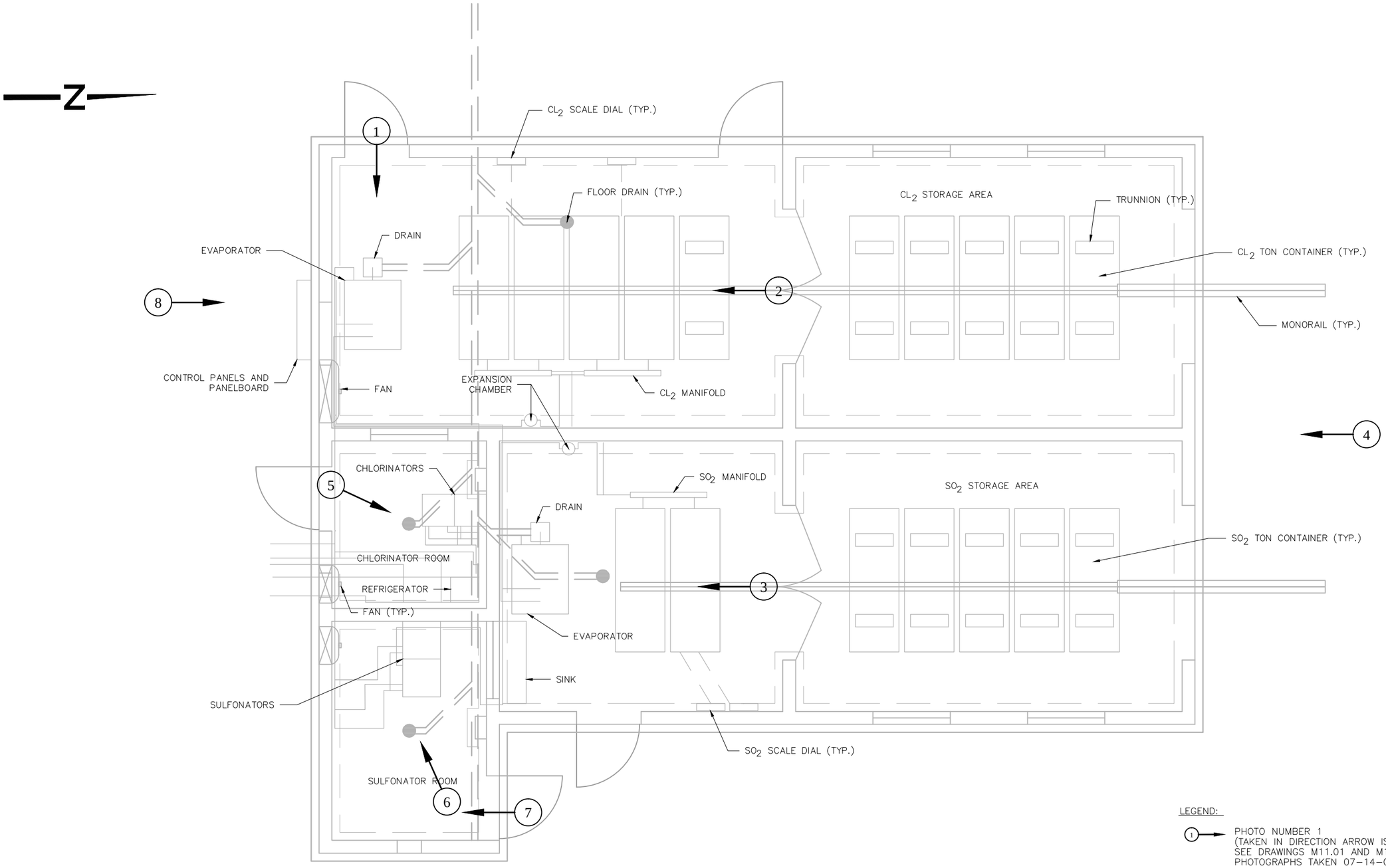
01/22/04 2:57 p.m.



LEGEND:

(1) → PHOTO NUMBER 1
(TAKEN IN DIRECTION ARROW IS POINTING)
SEE DRAWINGS M11.01 AND M11.02
PHOTOGRAPHS TAKEN 07-14-05

PLAN
SCALE: 3/8" = 1'

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
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☐ DENVER (303) 781-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-9500 ☐ SAN JOSE (408) 287-3400 ☐ SAN DIEGO (619) 574-9382 ☐ WALNUT CREEK (510) 934-9060
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
6			
5			REDUCED RECORD SET NOT TO SCALE
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3			
2	SEM	09/11	RECORD SET
1	SO	8.17.05	ADDENDUM #2

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

PHOTO INDEX - CHLORINE-SO2 BUILDING

SCALE: AS NOTED
DRAWING NUMBER: **M11.00**
SHEET NUMBER: OF SHEETS

SCH-DM1100,1101,1102.DWG
\\SAS1\PROJECT\N\SA1224_11\CADD\MECHANICAL\11\
10/11/05 2:02 p.m.

PHOTO 1

CHLORINATION – EVAPORATOR ROOM

PHOTO 2

CHLORINE TON CYLINDERS ROOM

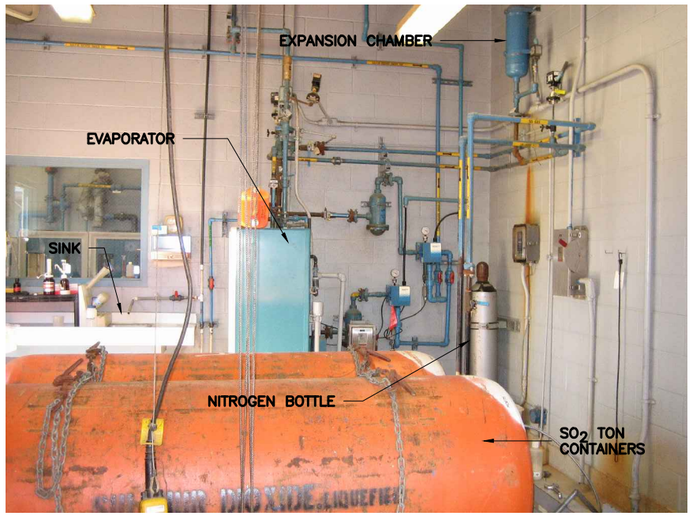

PHOTO 3

SULFUR DIOXIDE TON CYLINDER ROOM

PHOTO 4

CL2–SO2 TON CYLINDER STORAGE

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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BEYOND ENGINEERING
☐ DENVER (303) 791-0444 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-9150 ☐ SAN JOSE (408) 961-3450 ☐ SAN DIEGO (619) 378-9280 ☐ WALNUT CREEK (510) 934-6060
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
6			
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4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

CHLORINE BUILDING PHOTOGRAPHS - 1

SCALE: AS NOTED

DRAWING NUMBER: **M11.01**

SHEET NUMBER: OF SHEETS

SCH-DM1100,1101,1102.DWG
\\SAS1\PROJECT\ N:\SA1224_11\CADD\MECHANICAL\11\
10/11/05 2:02 p.m.

PHOTO 5

CHLORINATOR ROOM

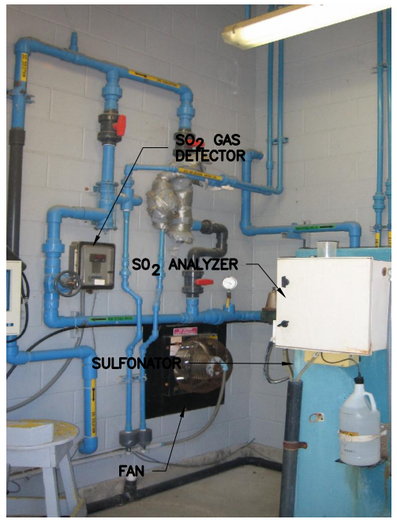

PHOTO 6

SULFONATOR ROOM

PHOTO 7

INSTRUMENTATION – ANALYZERS

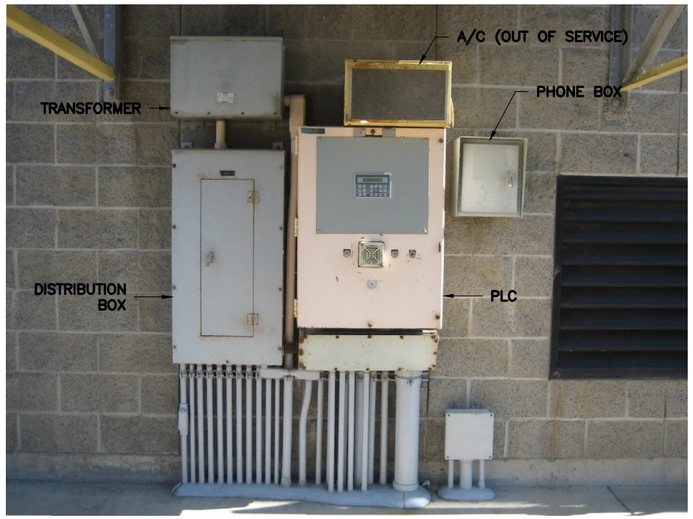

PHOTO 8

ELECTRICAL PANELS

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-7600 ☐ SACRAMENTO (916) 641-9500 ☐ SAN JOSE (408) 287-3400 ☐ SAN DIEGO (619) 378-9382 ☐ WALNUT CREEK (510) 934-8060
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
6			REDUCED RECORD SET NOT TO SCALE
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

CHLORINE BUILDING PHOTOGRAPHS - 2

SCALE: AS NOTED

DRAWING NUMBER: **M11.02**

SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT\N\SA1224_11\CADD\MECHANICAL\11\
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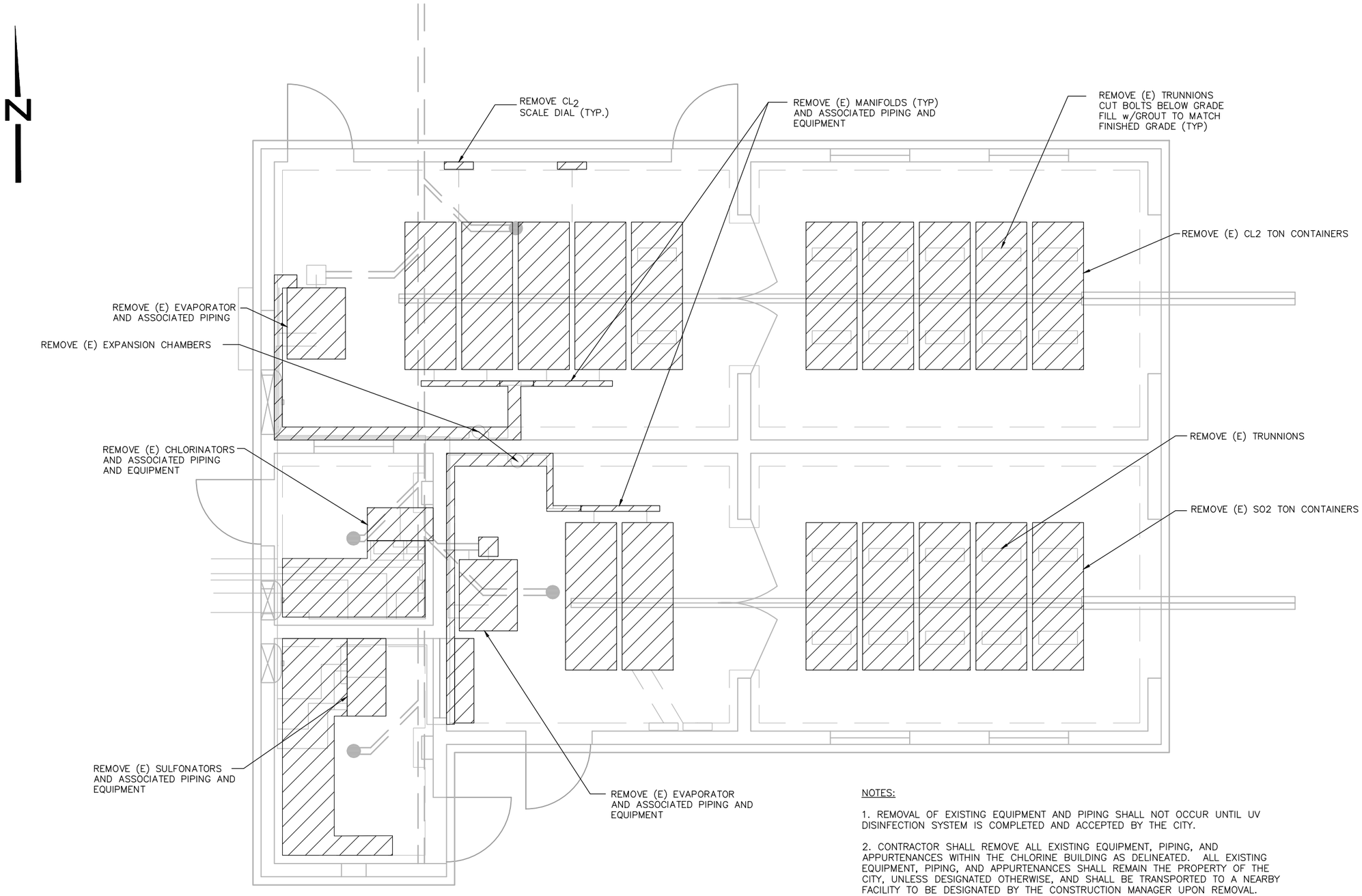

DEMOLITION PLAN

SCALE: 3/8" = 1'

NOTES:

1. REMOVAL OF EXISTING EQUIPMENT AND PIPING SHALL NOT OCCUR UNTIL UV DISINFECTION SYSTEM IS COMPLETED AND ACCEPTED BY THE CITY.

2. CONTRACTOR SHALL REMOVE ALL EXISTING EQUIPMENT, PIPING, AND APPURTENANCES WITHIN THE CHLORINE BUILDING AS DELINEATED. ALL EXISTING EQUIPMENT, PIPING, AND APPURTENANCES SHALL REMAIN THE PROPERTY OF THE CITY, UNLESS DESIGNATED OTHERWISE, AND SHALL BE TRANSPORTED TO A NEARBY FACILITY TO BE DESIGNATED BY THE CONSTRUCTION MANAGER UPON REMOVAL.

3. ALL EXISTING PIPING AND CONDUITS WHICH PENETRATE THE FINISH GRADE SHALL BE CAPPED 2-INCHES ABOVE GRADE.

RECORD SET

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NOLTE
BEYOND ENGINEERING
□ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 □ ORANGE COUNTY (714) 362-7600 □ SACRAMENTO (916) 641-1500 □ SAN JOSE (408) 287-3400 □ SAN DIEGO (619) 378-9380 □ WALNUT CREEK (510) 934-8080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
6			
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1	SDV	8/17/05	ADDENDUM #2

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

CHLORINE BUILDING MODIFICATIONS DEMOLITION PLAN

SCALE: AS NOTED

DRAWING NUMBER: M11.03

SHEET NUMBER: OF SHEETS

SCH-DM1103.DWG
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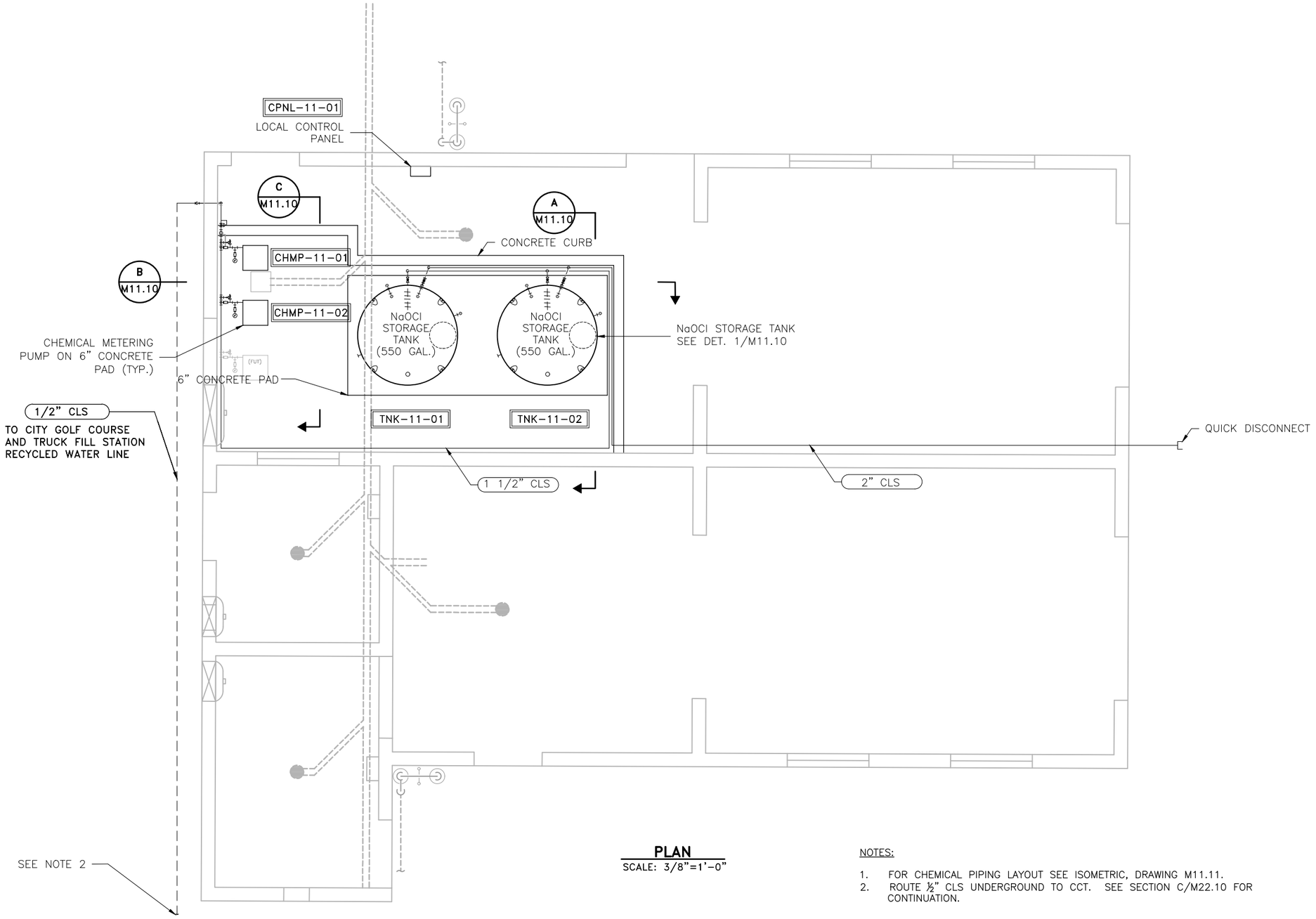

PLAN
SCALE: 3/8"=1'-0"

NOTES:

1. FOR CHEMICAL PIPING LAYOUT SEE ISOMETRIC, DRAWING M11.11.
2. ROUTE ½" CLS UNDERGROUND TO CCT. SEE SECTION C/M22.10 FOR CONTINUATION.

RECORD SET

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☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-7600 ☐ SACRAMENTO (916) 641-9500 ☐ SAN JOSE (408) 287-3400 ☐ SAN DIEGO (619) 378-9280 ☐ WALNUT CREEK (510) 934-8062
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.K. FURUYA
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.G. CALCIANO

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SDM	8/07/05	ADDENDUM #2

REDUCED RECORD SET NOT TO SCALE

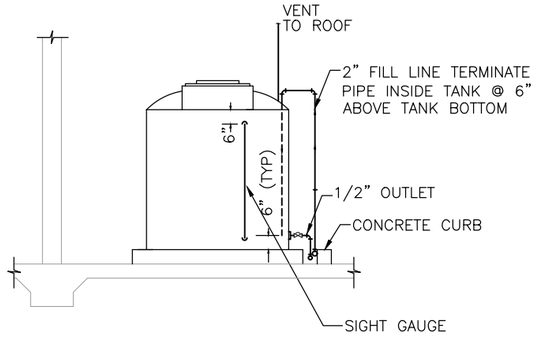
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

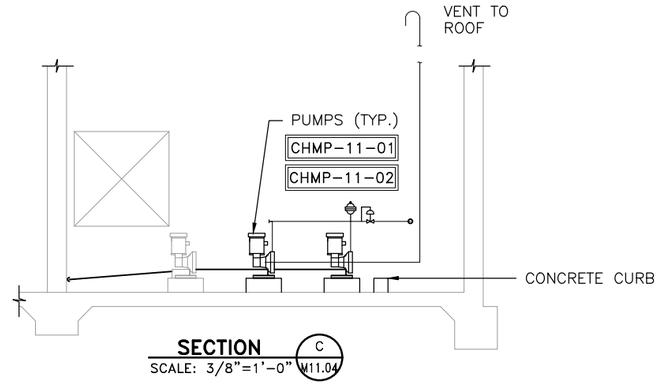
SODIUM HYPOCHLORITE STORAGE PLAN

SCALE: NOT TO SCALE
DRAWING NUMBER: **M11.04**
SHEET NUMBER OF SHEETS

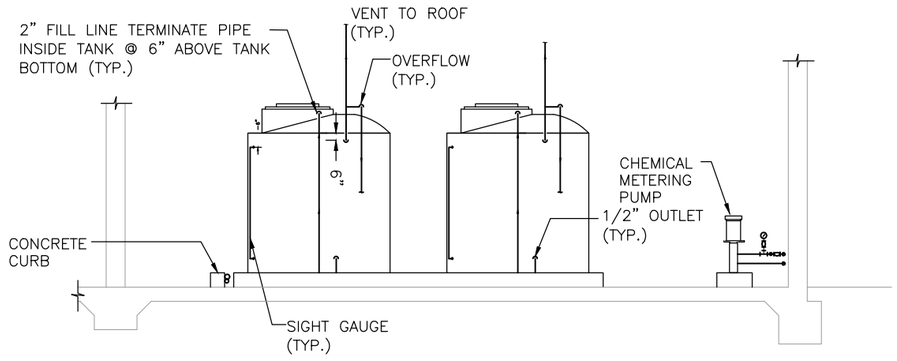
\\SAS1\PROJECT\ N:\SA1224_11\CADD\MECHANICAL\11\ SCH-DM1104.DWG
10/13/05 6:20 a.m.



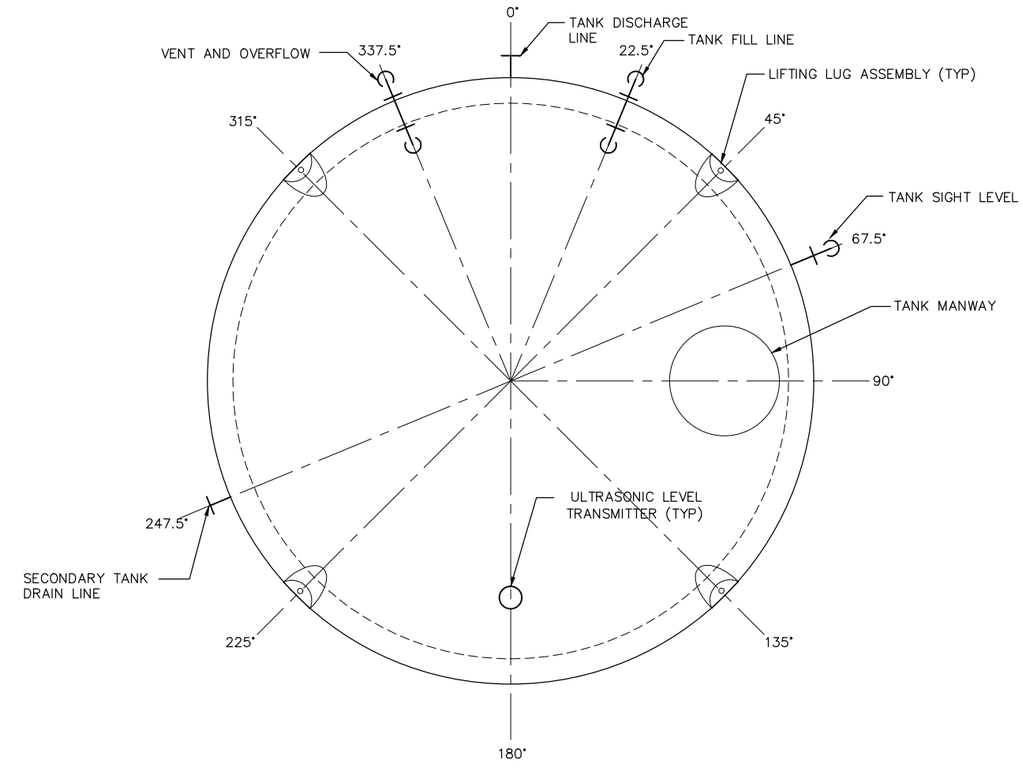
SECTION A
SCALE: 3/8"=1'-0" M11.04



SECTION C
SCALE: 3/8"=1'-0" M11.04



SECTION B
SCALE: 3/8"=1'-0" M11.04



TYPICAL TANK PLAN 1
NOT TO SCALE M11.10

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2	SEM	09/11	RECORD SET
1	SO	8.17.05	ADDENDUM #2

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

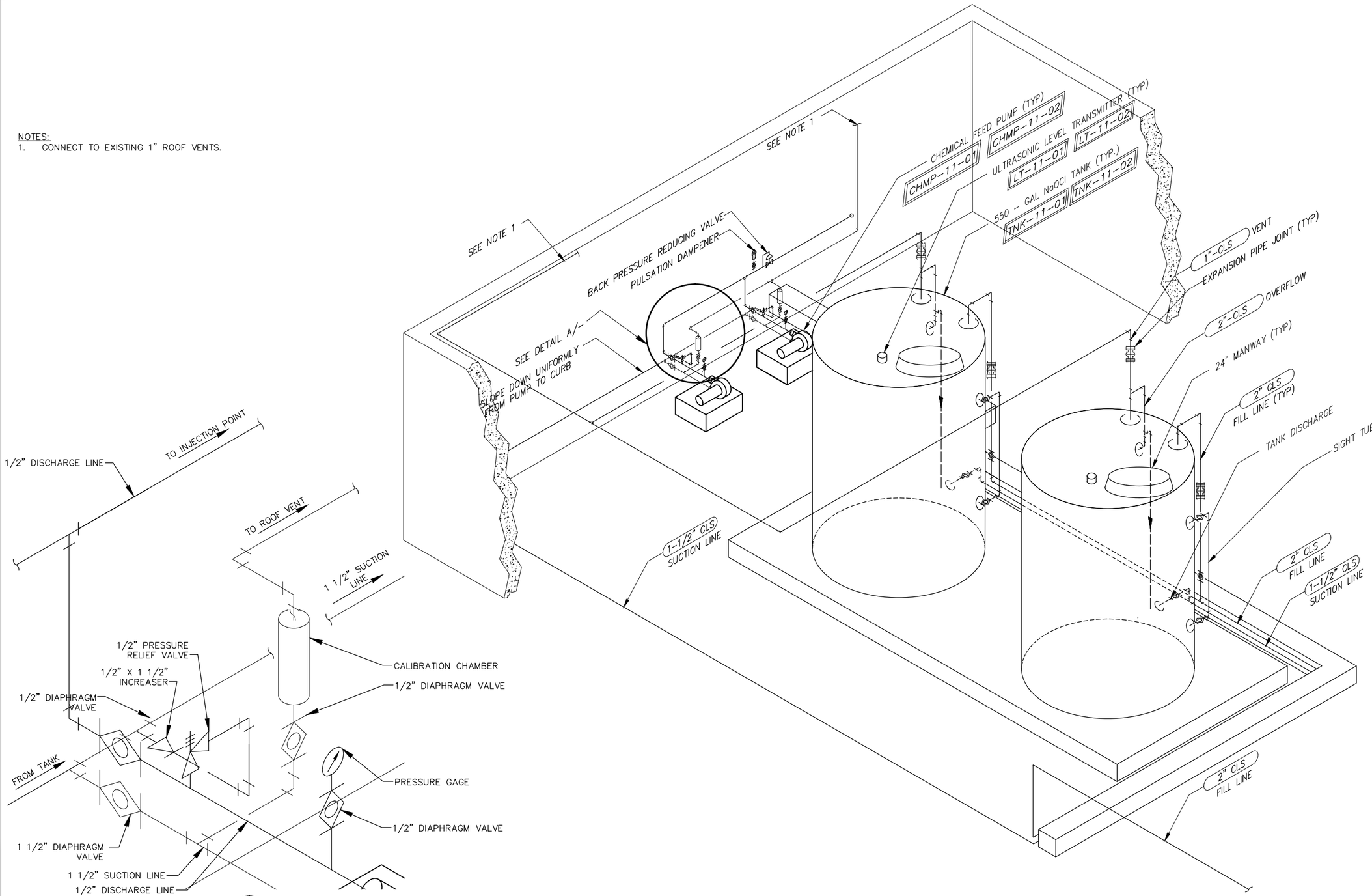
MECHANICAL

SODIUM HYPOCHLORITE SYSTEM SECTIONS AND DETAILS

SCALE: NOT TO SCALE
DRAWING NUMBER: **M11.10**
SHEET NUMBER: OF SHEETS

\\SAS\PROJECT\ N:\SA1224_11\CADD\MECHANICAL\11\SCH-DM1110.DWG
10/13/05 6:22 a.m.

NOTES:
1. CONNECT TO EXISTING 1" ROOF VENTS.



DETAIL A
NTS

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
BEYOND ENGINEERING
DENVER (303) 781-0464 | MANTECA (209) 239-9080 | ORANGE COUNTY (714) 362-1600 | SACRAMENTO (916) 641-9100 | SAN JOSE (408) 487-8100 | SAN DIEGO (619) 678-9280 | WALNUT CREEK (510) 934-6400
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2	SEM	09/11	RECORD SET
1	SO	8.17.05	ADDENDUM #2

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
SODIUM HYPOCHLORITE SYSTEM ISOMETRIC DIAGRAM

SCALE: NTS
DRAWING NUMBER: **M11.11**
SHEET NUMBER: OF SHEETS

SCH-DM1111.DWG NONE
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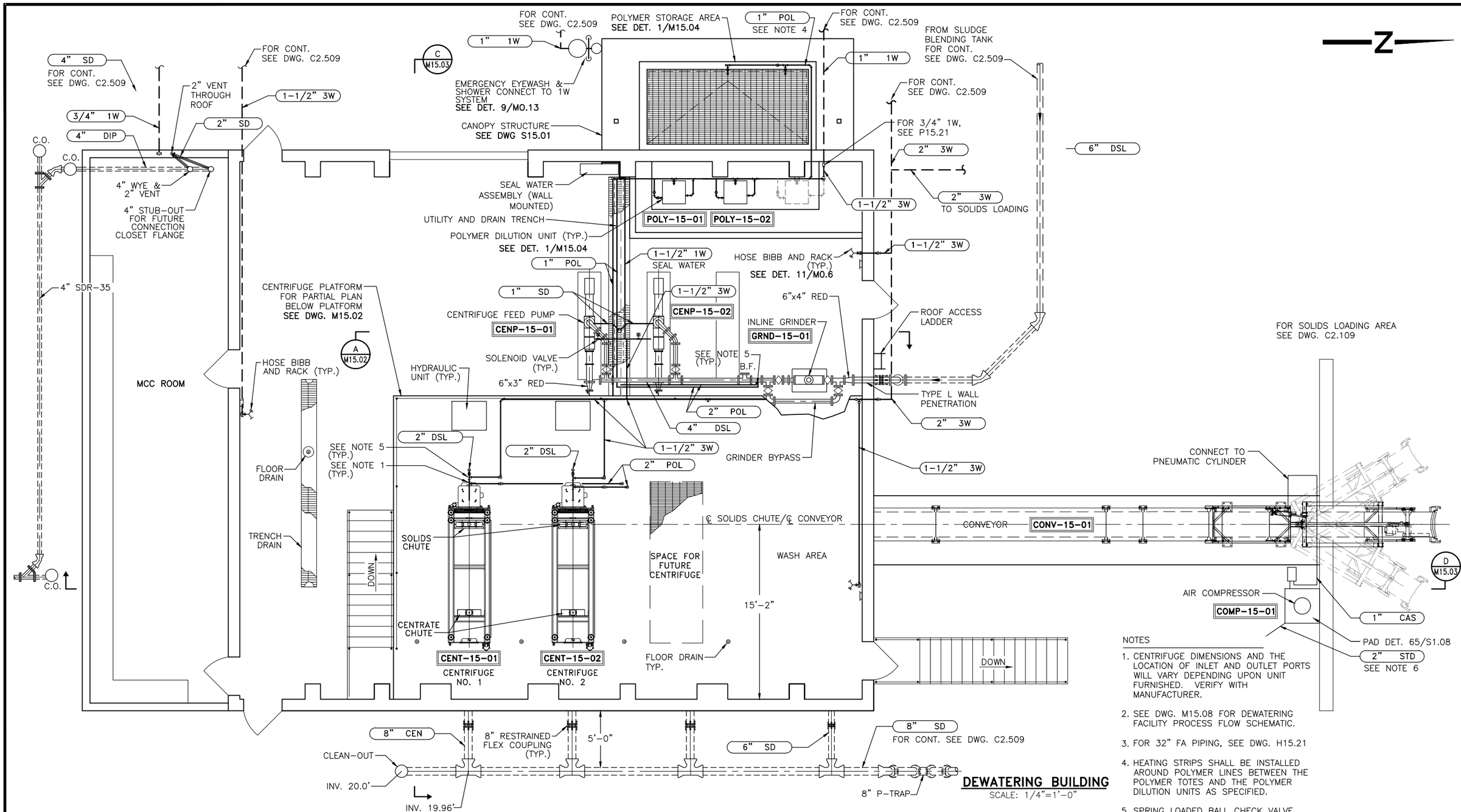
3:10 p.m.
10/13/05



DEWATERING BUILDING
SCALE: 1/4"=1'-0"

NOTES

1. CENTRIFUGE DIMENSIONS AND THE LOCATION OF INLET AND OUTLET PORTS WILL VARY DEPENDING UPON UNIT FURNISHED. VERIFY WITH MANUFACTURER.
2. SEE DWG. M15.08 FOR DEWATERING FACILITY PROCESS FLOW SCHEMATIC.
3. FOR 32" FA PIPING, SEE DWG. H15.21
4. HEATING STRIPS SHALL BE INSTALLED AROUND POLYMER LINES BETWEEN THE POLYMER TOTES AND THE POLYMER DILUTION UNITS AS SPECIFIED.
5. SPRING LOADED BALL CHECK VALVE, ISOLATION BALL VALVE (TYP.).
6. CONNECT ¼" CONDENSATE DRAINS FROM AIR RECEIVER AND AIR DRYER TO A 2" STD LINE W/ P.TRAP. CONNECT 2" STD LINE TO NEAREST 18" STD LINE.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2	SEM	09/11	RECORD SET
1	SEM	03/11	ADDENDUM #2

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

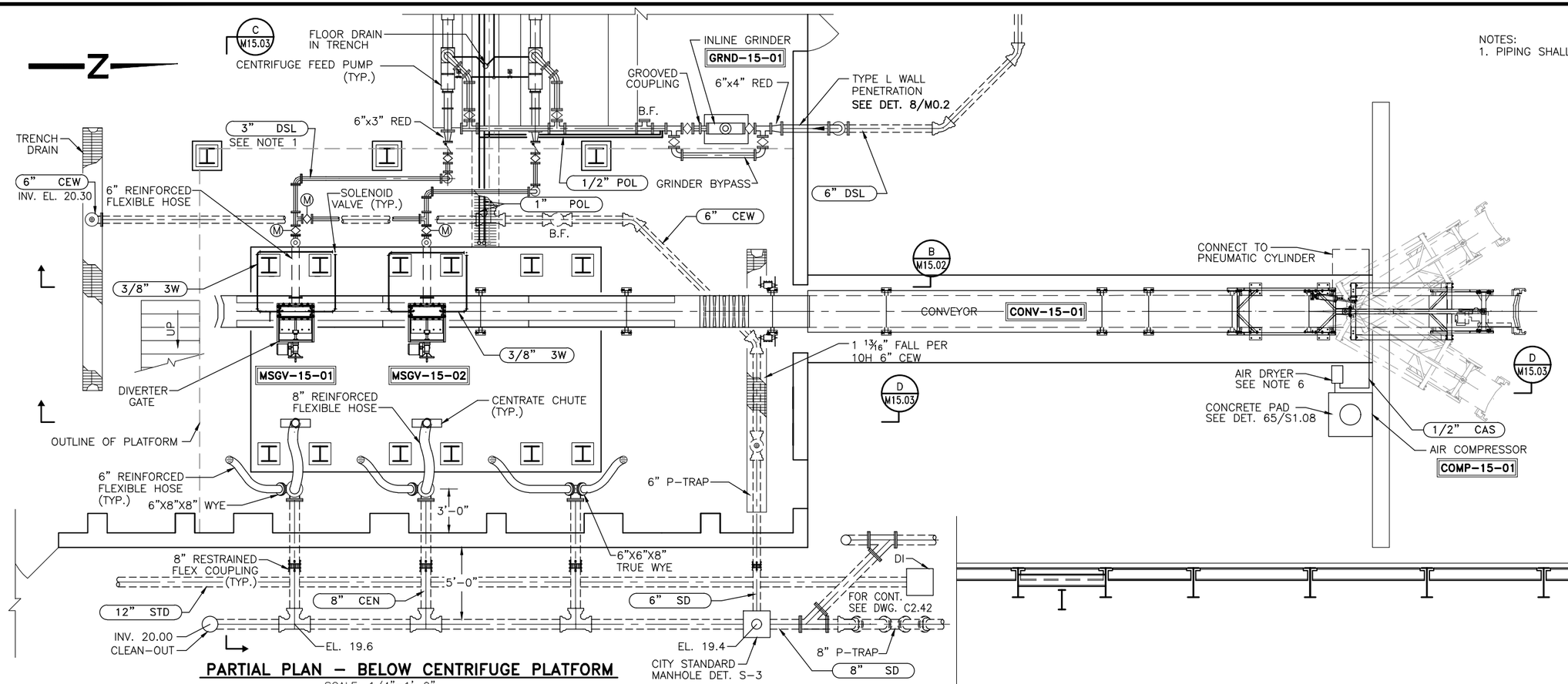
MECHANICAL

MECHANICAL DEWATERING BUILDING PLAN

SCALE 1/4"=1'-0"
DRAWING NUMBER **M15.01**
SHEET NUMBER OF SHEETS

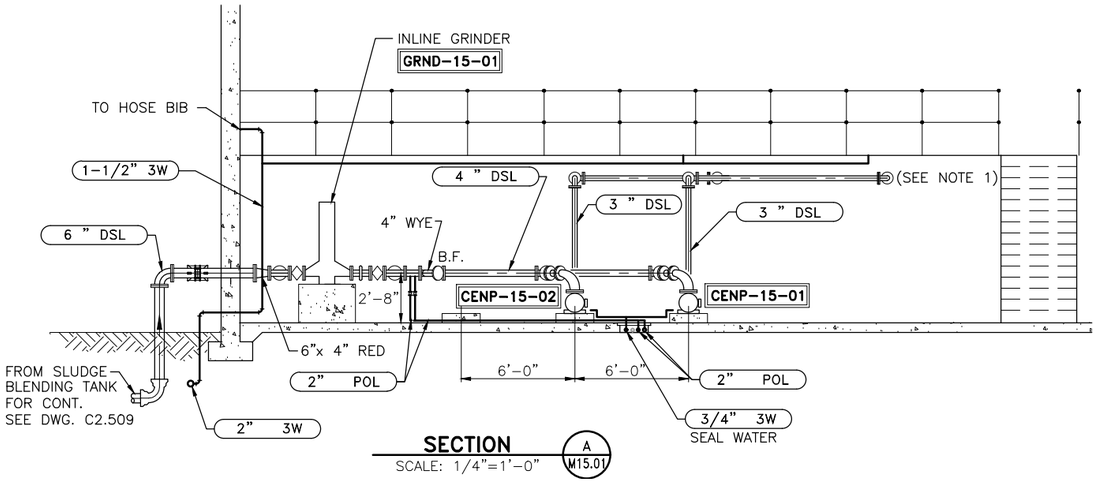
\\SAS1\PROJECT\N:\X_MANTECA WQCF AS-BUILTS\CADD\AS-BUILTS_COMBINED\MECHANICAL\M15.01.DWG 3/6/2009 9:53 AM

NOTES:
1. PIPING SHALL BE SUPPORTED FROM PLATFORM.



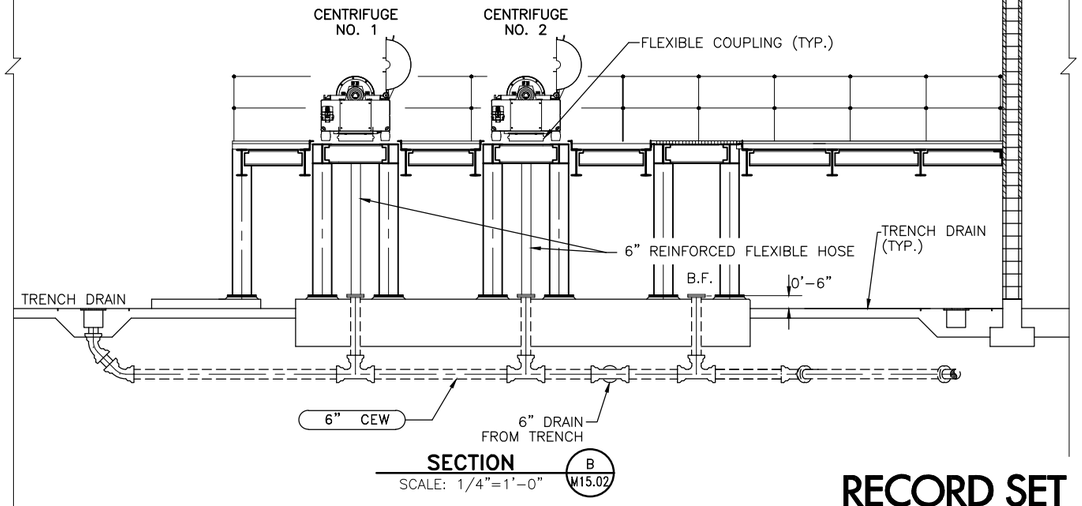
PARTIAL PLAN – BELOW CENTRIFUGE PLATFORM

SCALE: 1/4"=1'-0"



SECTION A M15.01

SCALE: 1/4"=1'-0"



SECTION B M15.02

SCALE: 1/4"=1'-0"

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

REDUCED RECORD SET NOT TO SCALE

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2	SEM	09/11	RECORD SET
1	SEM	05/09	ADDENDUM #2

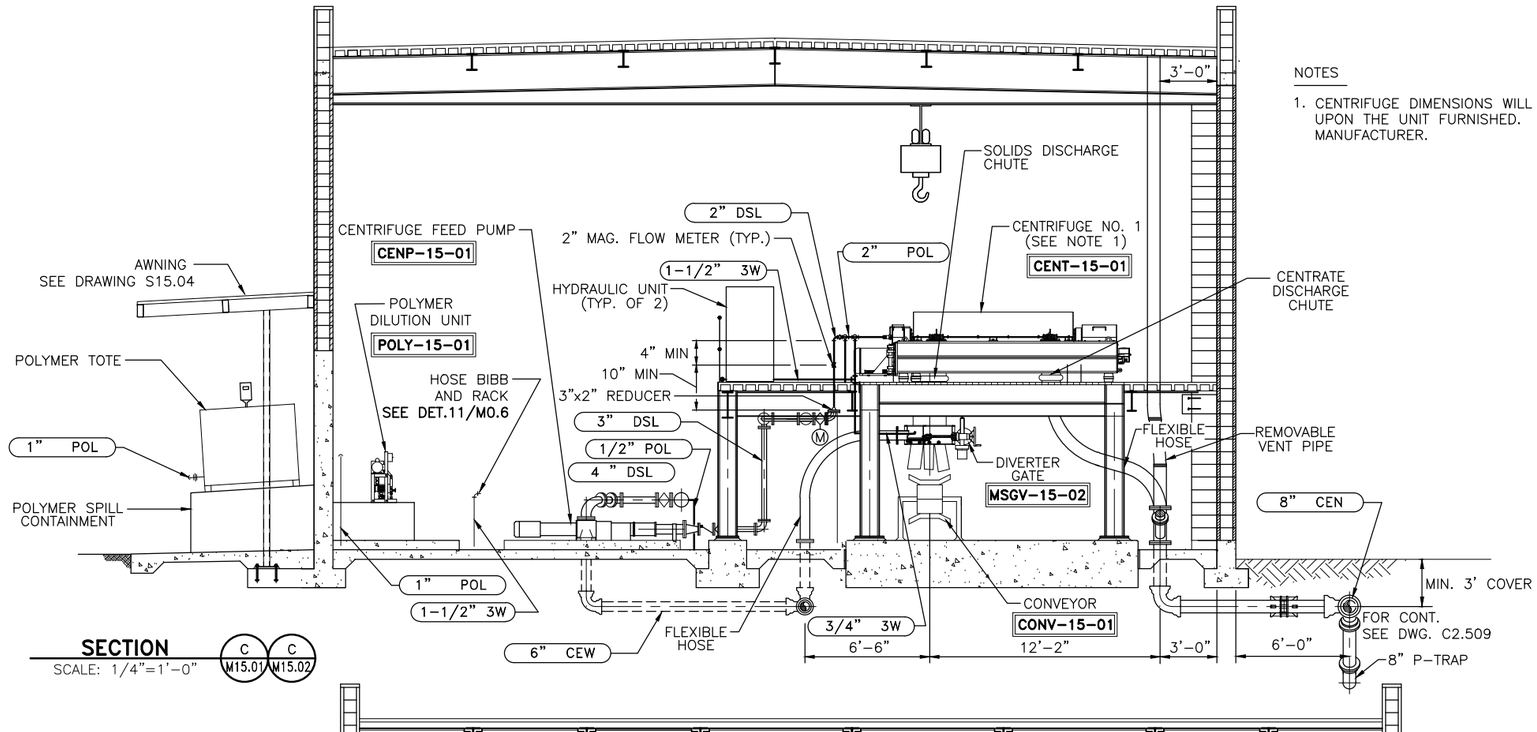
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

MECHANICAL DEWATERING BUILDING PARTIAL PLAN

SCALE 1/4"=1'-0"
DRAWING NUMBER M15.02
SHEET NUMBER OF SHEETS

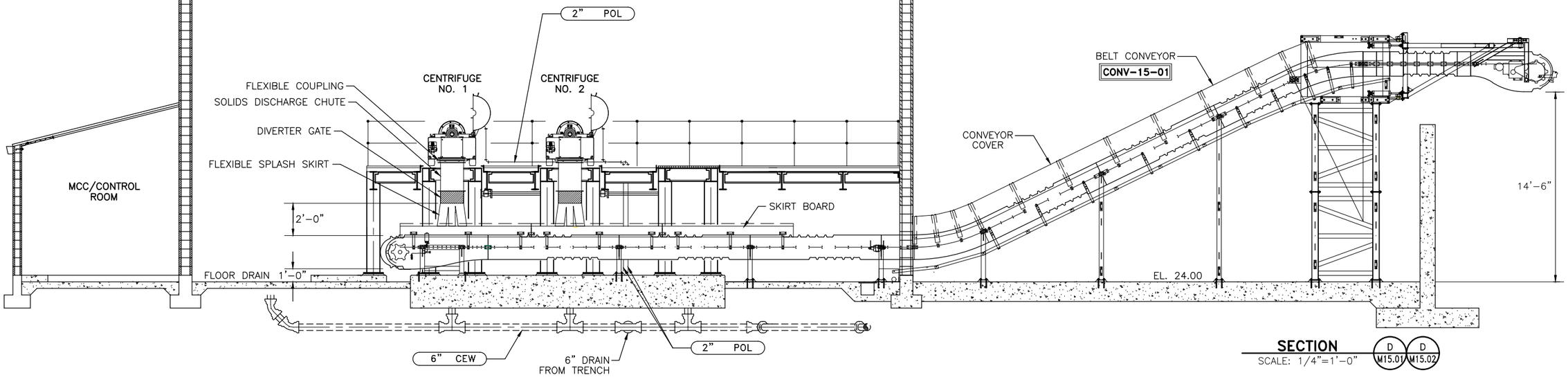
\\SAS\PROJECT\ N:\X_MANTECA WQCF AS-BUILTS\CADD\AS-BUILTS_COMBINED\MECHANICAL\M15.02 NONE
3/6/2009 10:09 AM



SECTION C M15.01 / C M15.02
SCALE: 1/4"=1'-0"

NOTES

1. CENTRIFUGE DIMENSIONS WILL VARY DEPENDING UPON THE UNIT FURNISHED. VERIFY WITH MANUFACTURER.



SECTION D M15.01 / D M15.02
SCALE: 1/4"=1'-0"

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			REDUCED RECORD SET NOT TO SCALE
4			
3			
2	SEM	09/11	RECORD SET
1	SEM	05/09	ADDENDUM #2

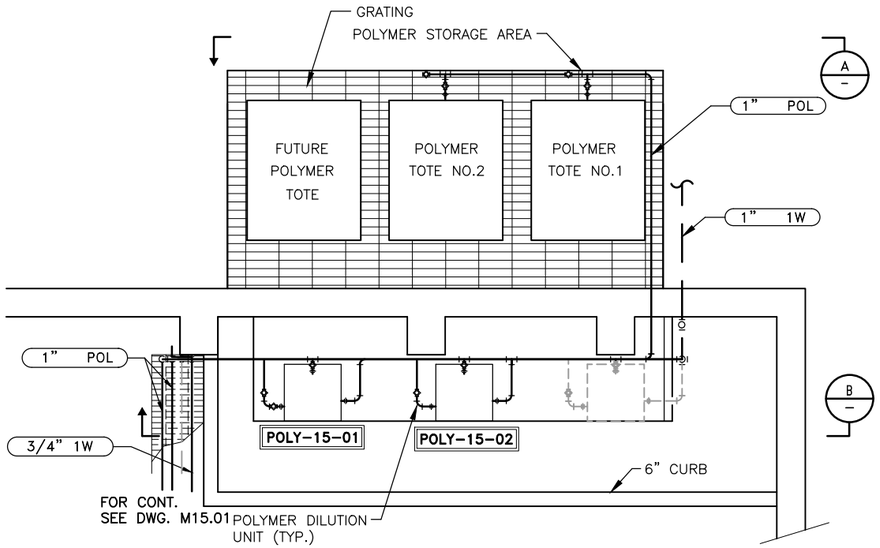
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

MECHANICAL DEWATERING BUILDING SECTIONS

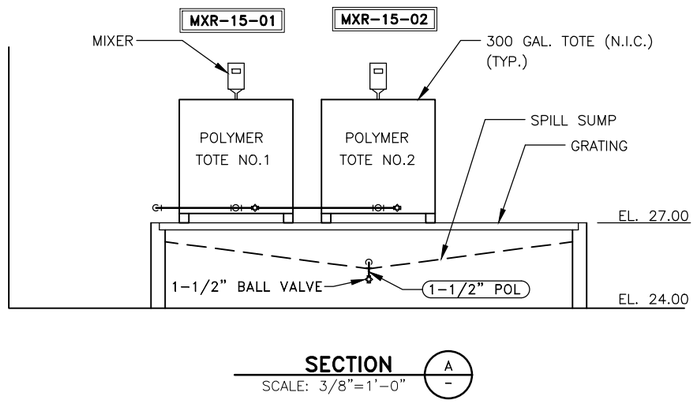
SCALE: 1/4"=1'-0"
DRAWING NUMBER: M15.03
SHEET NUMBER: OF SHEETS

\\SAS\PROJECT\ N:\X_MANTECA WOCF AS-BUILTS\CADD\AS-BUILTS_COMBINED\MECHANICAL\M15.03.DWG
3/6/2009 10:13 AM

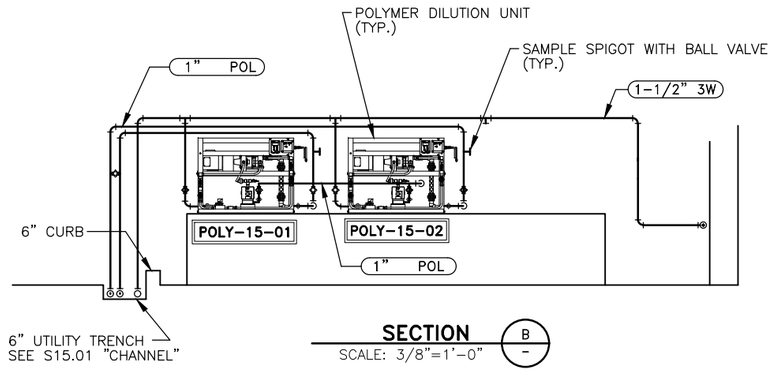


—Z—

POLYMER SYSTEM PLAN DETAIL 1 / M15.01
SCALE: 3/8"=1'-0"



SECTION A / –
SCALE: 3/8"=1'-0"



SECTION B / –
SCALE: 3/8"=1'-0"

NOTES:
1. FOR ISOMETRIC VIEW OF POLYMER SYSTEM, SEE DWG. M15.05.
2. POLYMER TOTE TO BE FURNISHED BY OTHERS.

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			REDUCED RECORD SET NOT TO SCALE
4			
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

MECHANICAL DEWATERING BUILDING DETAILS AND SECTIONS

SCALE: 1/4"=1'-0"
DRAWING NUMBER: M15.04
SHEET NUMBER: OF SHEETS

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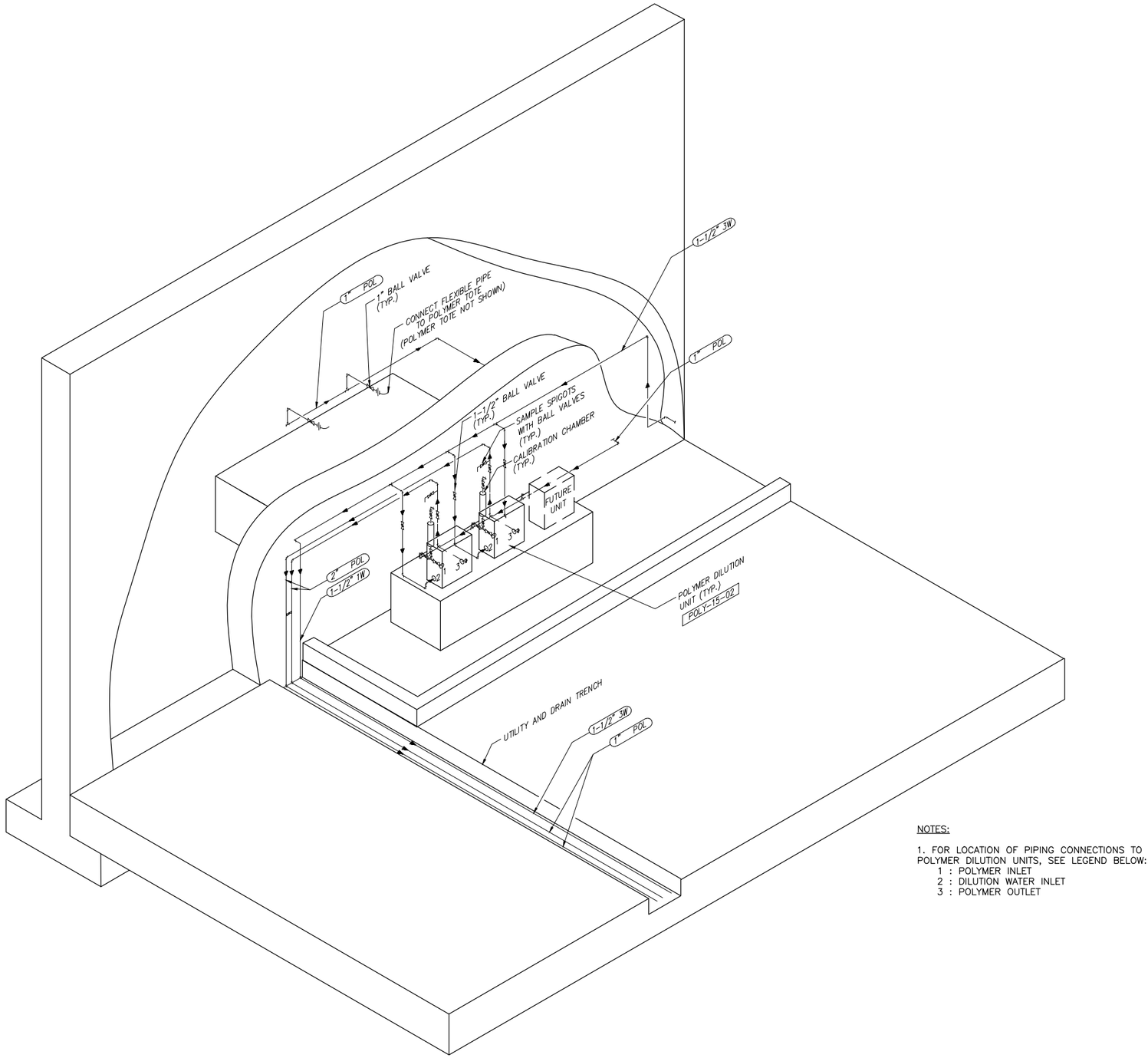

NOTES:

1. FOR LOCATION OF PIPING CONNECTIONS TO POLYMER DILUTION UNITS, SEE LEGEND BELOW:
   1 : POLYMER INLET
   2 : DILUTION WATER INLET
   3 : POLYMER OUTLET

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

ISOMETRIC VIEW OF POLYMER DILUTION SYSTEM

SCALE: AS NOTED
DRAWING NUMBER: M15.05
SHEET NUMBER: OF SHEETS

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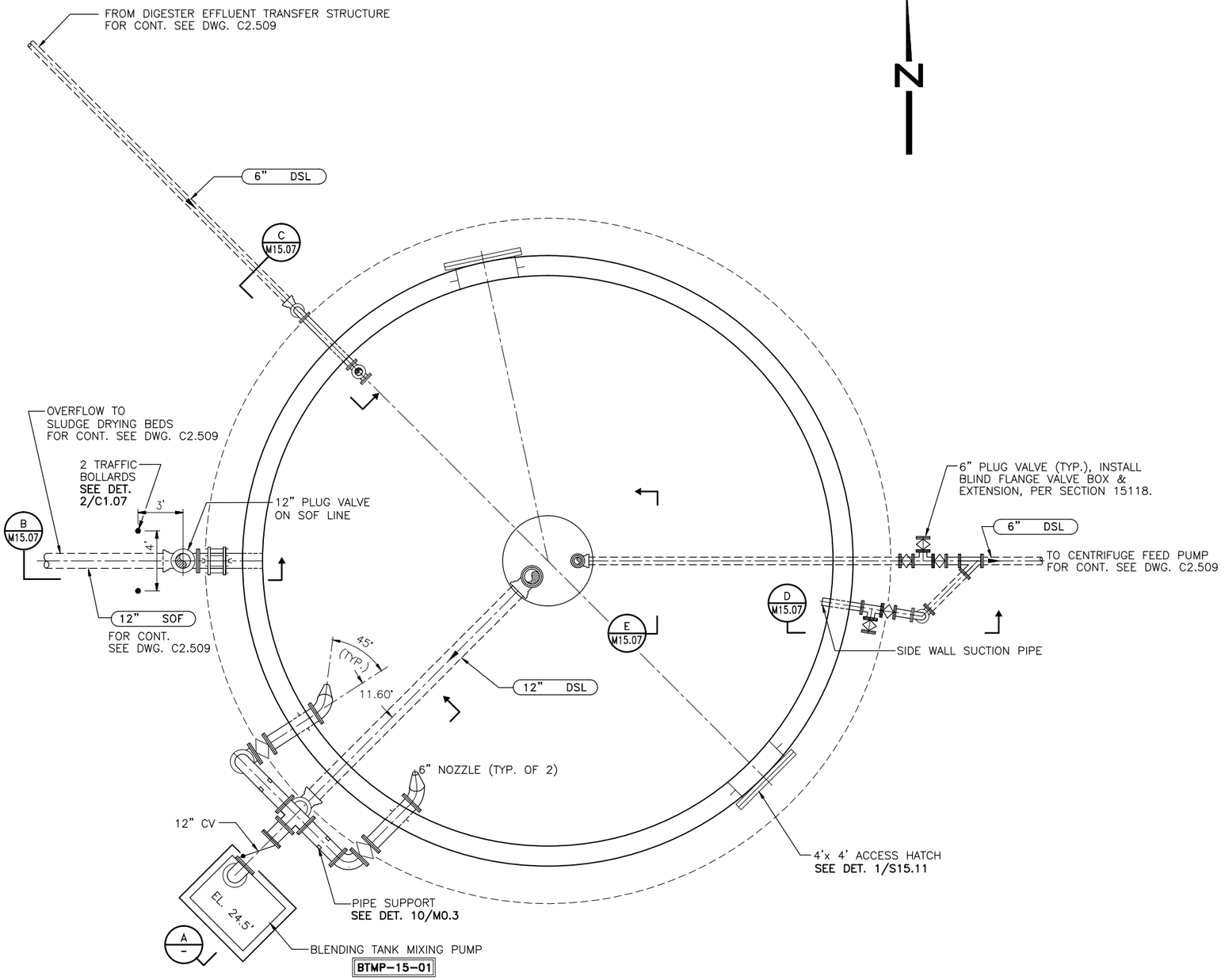

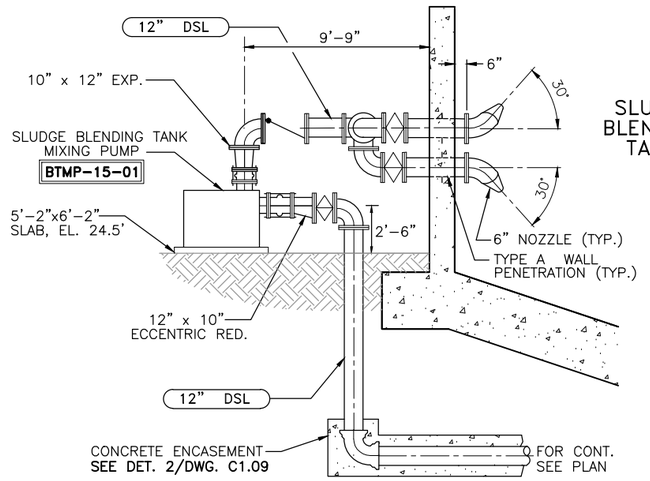

SLUDGE BLENDING TANK

SECTION A –
SCALE: 1/4"=1'-0"

NOTE:
1. ALL WALL PENETRATIONS OF SLUDGE TANK SHOULD BE TYPE A AS SHOWN ON SHEET M0.2.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SLUDGE BLENDING TANK PLAN AND SECTIONS

SCALE 1/4"=1'-0"
DRAWING NUMBER **M15.06**
SHEET NUMBER OF SHEETS

\\SASA\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-C\Cadd\Mechanical\ SCH-GM1506.DWG NONE
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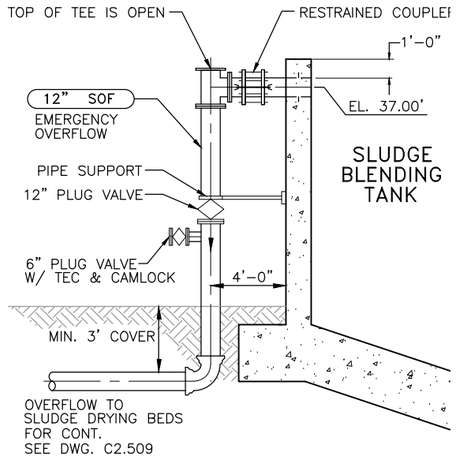
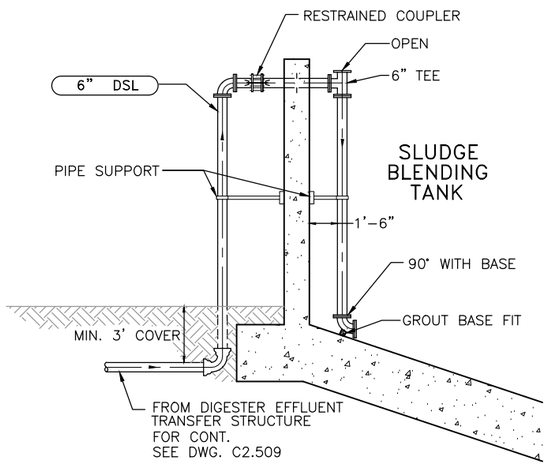
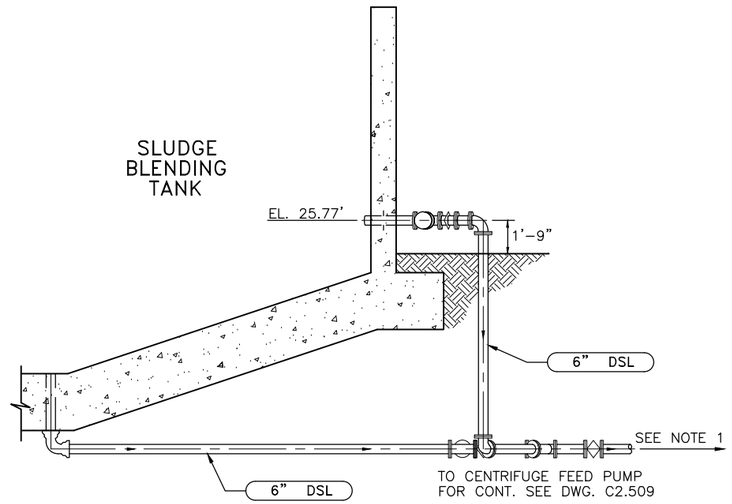


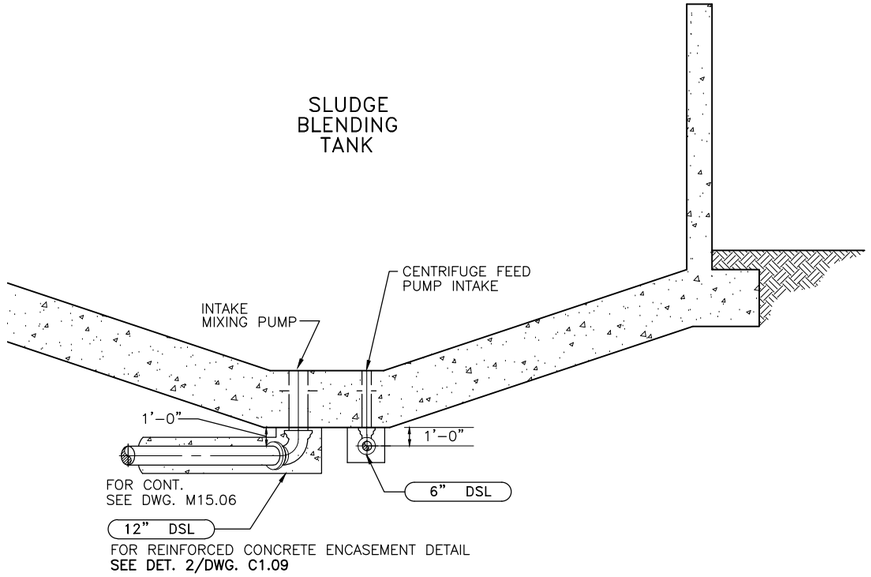
SECTION B
SCALE: 1/4"=1'-0" M15.06



SECTION C
SCALE: 1/4"=1'-0" M15.06



SECTION D
SCALE: 1/4"=1'-0" M15.06



SECTION E
SCALE: 1/4"=1'-0" M15.06

NOTE:
1. ONCE 6" DSL LINE CLEARS THE SLUDGE TANK FOUNDATION, PIPE COVER CAN GRADUALLY TRANSITION TO 5' OR 6' BELOW FINISHED GRADE.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SLUDGE BLENDING TANK SECTIONS

SCALE 1/4"=1'-0"
DRAWING NUMBER **M15.07**
SHEET NUMBER OF SHEETS

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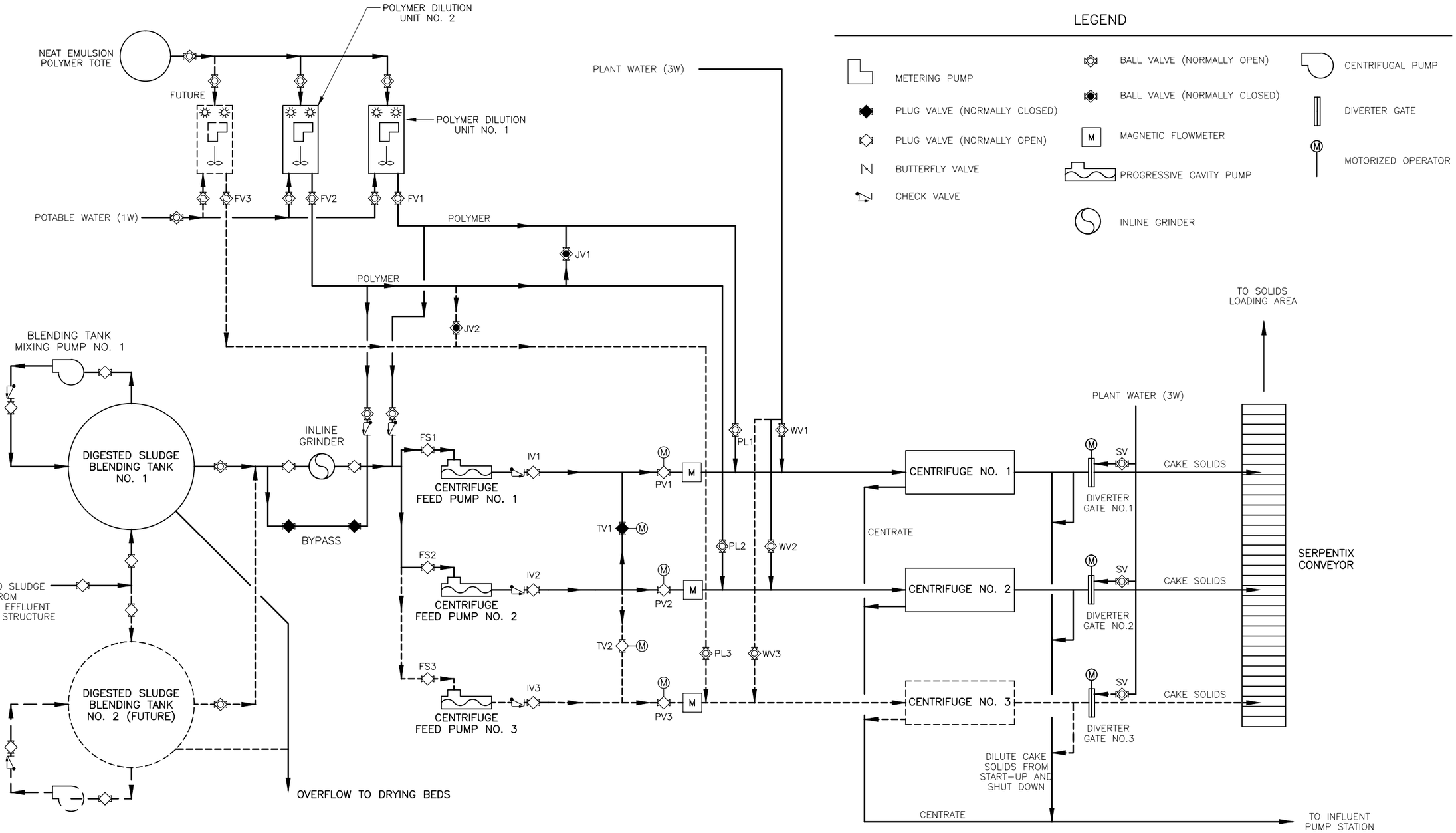

RECORD SET

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BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: D. RICHARD
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2	SEM	09/11	RECORD SET
1	SEM	03/09	ADDENDUM #2

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

DEWATERING FACILITY
PROCESS FLOW SCHEMATIC

SCALE: NOT TO SCALE
DRAWING NUMBER: M15.08
SHEET NUMBER: OF SHEETS

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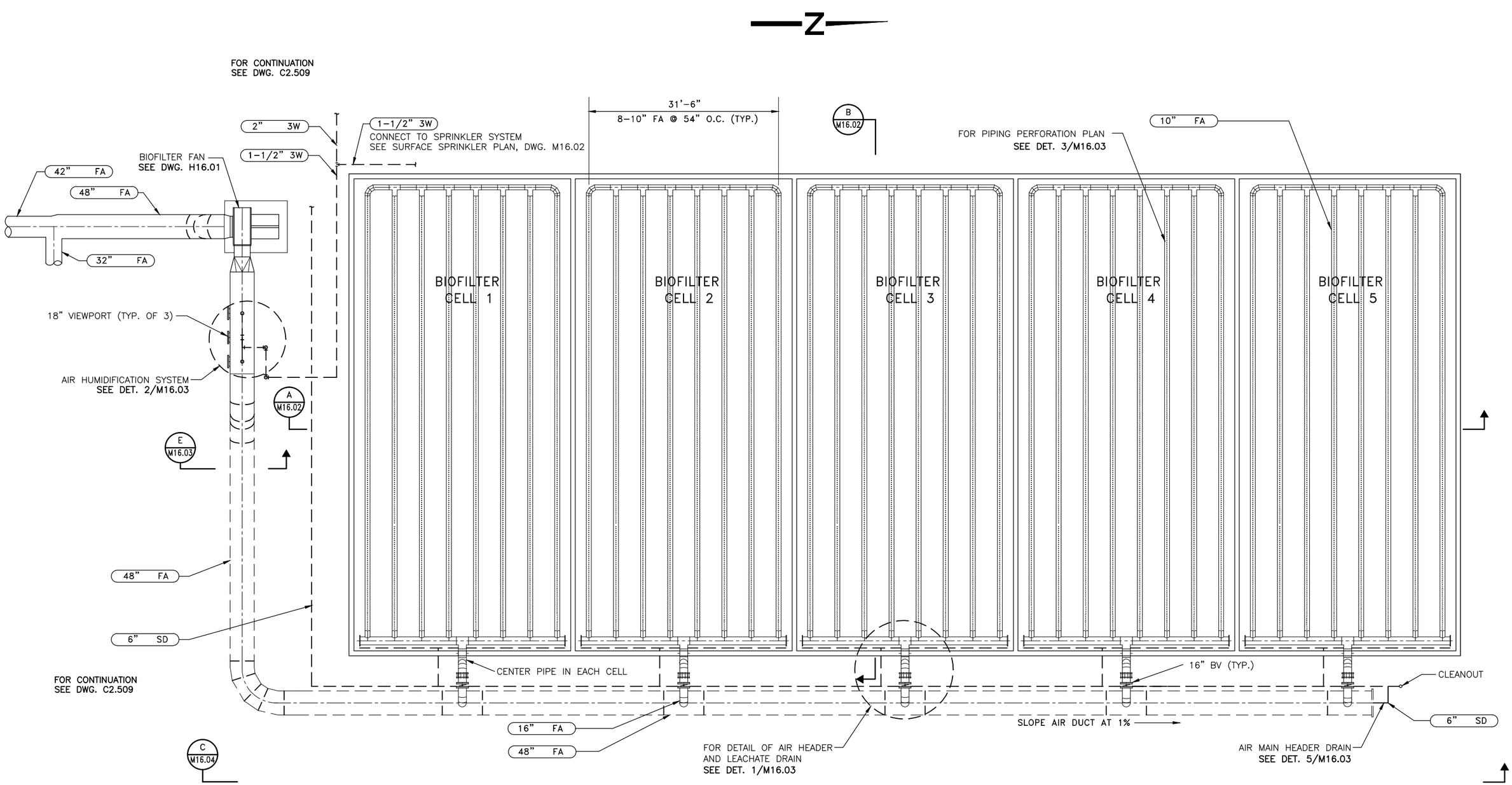
3/6/2009 9:40 AM



FOUL AIR MANIFOLD PLAN

SCALE: 1/8"=1'-0"

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. AIT-LASRI
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

ODOR CONTROL BIOFILTER - PLAN

SCALE: AS NOTED
DRAWING NUMBER: M16.01
SHEET NUMBER: OF SHEETS

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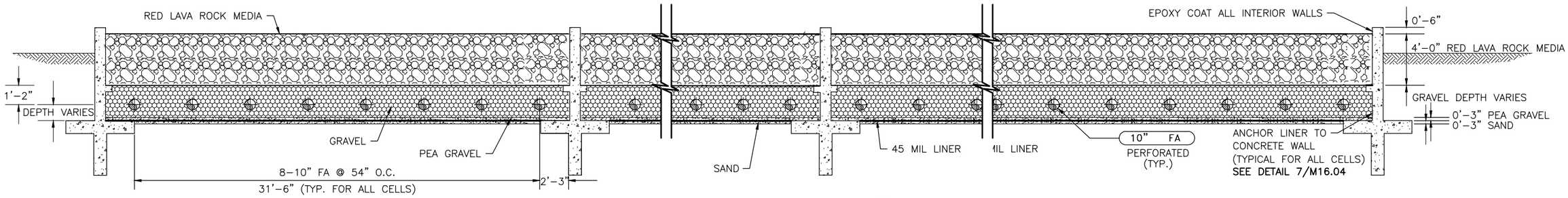
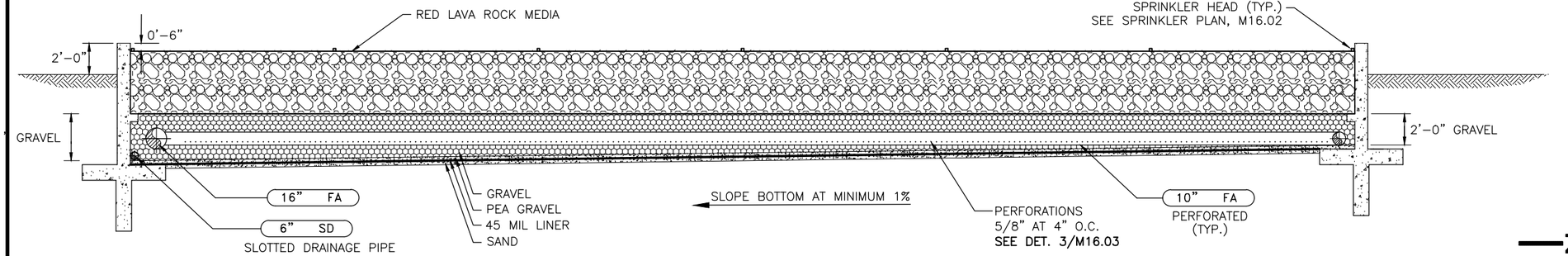
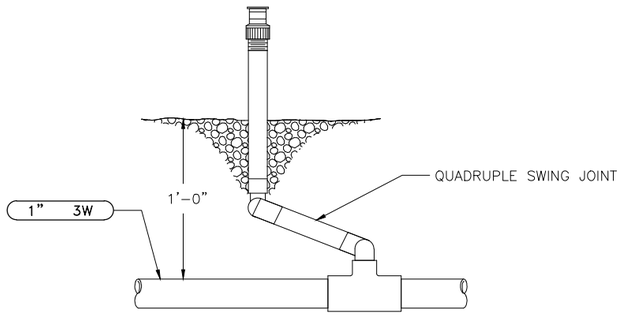


SECTION A
SCALE: 1/4"=1'-0" M16.01



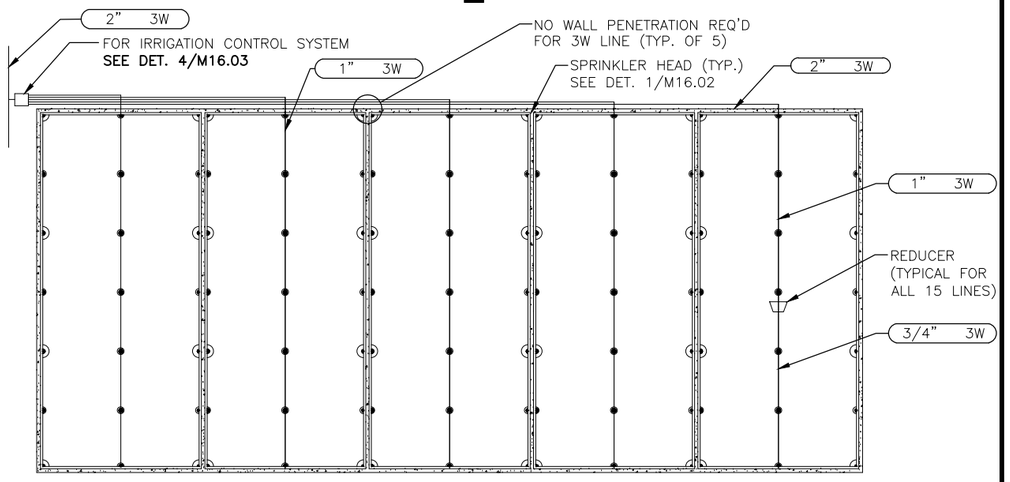
SECTION B
SCALE: 1/4"=1'-0" M16.01



SPRAY HEAD DETAIL 1
NOT TO SCALE

SYMBOL	THROW ANGLE	THROW DISTANCE
	180°	15'
	360°	15'
	90°	25'
	180°	25'

SPRINKLER SHALL BE CONNECTED TO MANIFOLD WITH 1" PIPE



*SEE STRUCTURAL DWG. S16.01 FOR SCALED DIMENSIONS

SURFACE SPRINKLER PLAN
NOT TO SCALE

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. AIT-LASRI
CHECKED BY: B.R. TRESAN
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
ODOR CONTROL BIOFILTER SECTIONS AND PLAN

SCALE: AS NOTED
DRAWING NUMBER: M16.02
SHEET NUMBER: OF SHEETS

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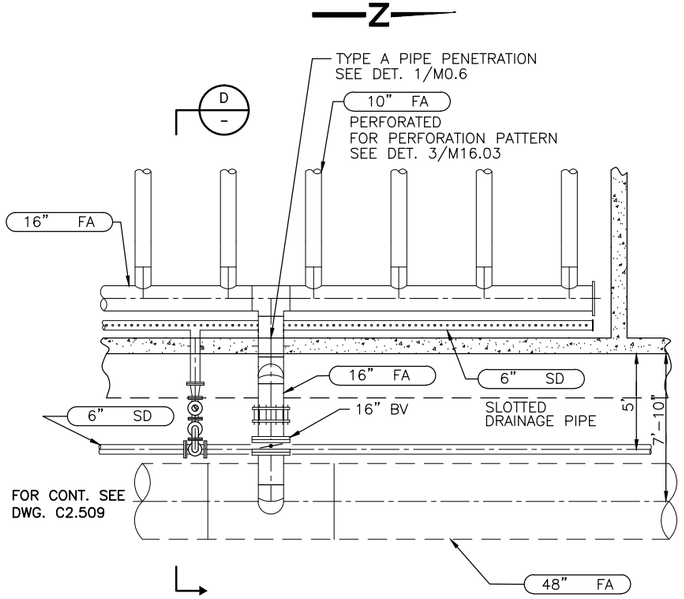
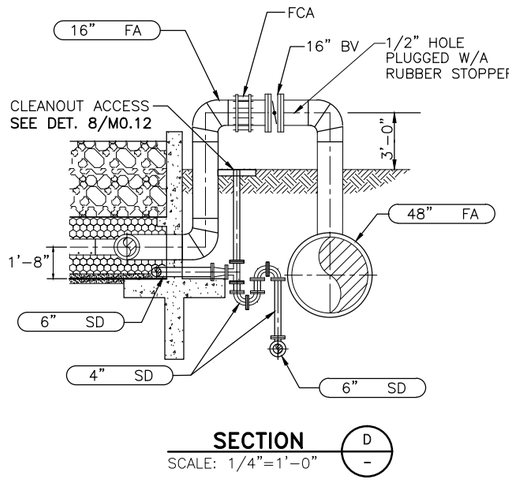
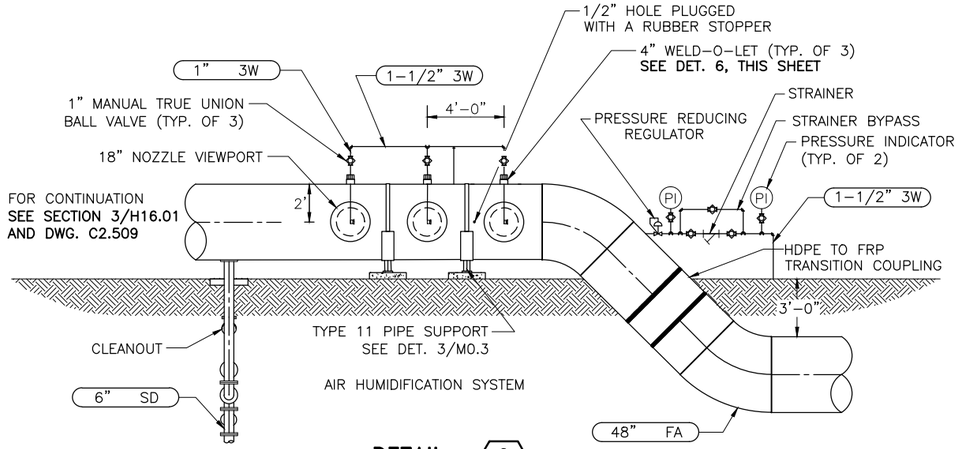
02/28/06 9:40 a.m.



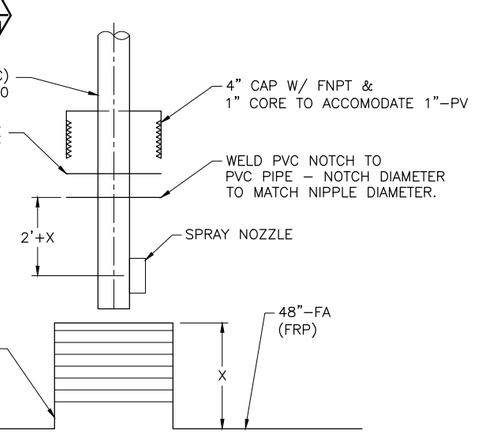
DETAIL 1 / M16.01
SCALE: 1/4"=1'-0"



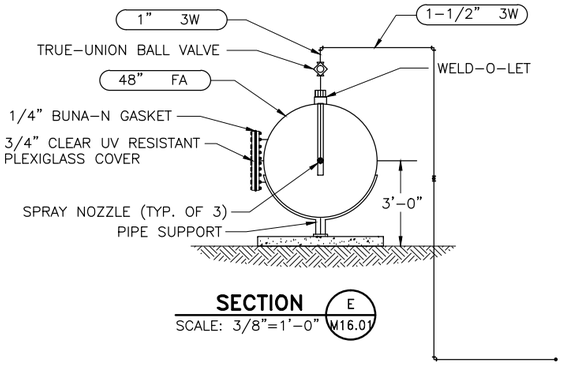
SECTION D / –
SCALE: 1/4"=1'-0"



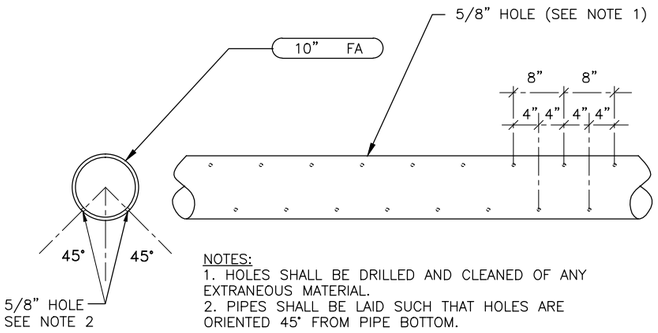
DETAIL 2 / M16.01
SCALE: 1/4"=1'-0"



DETAIL 6 / –
NTS

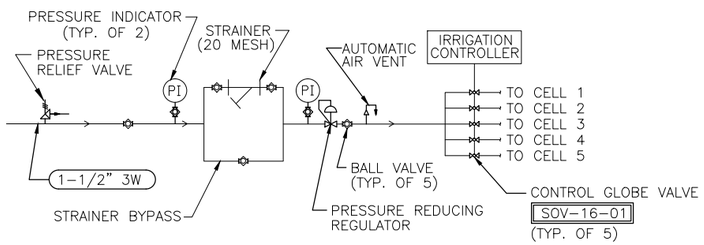


SECTION E / M16.01
SCALE: 3/8"=1'-0"

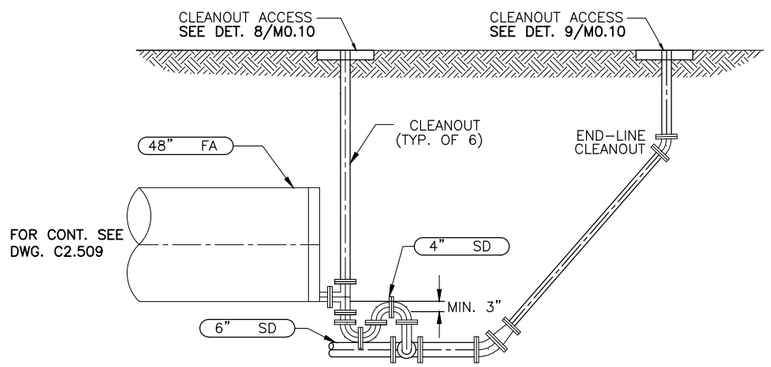


NOTES:
1. HOLES SHALL BE DRILLED AND CLEANED OF ANY EXTRANEOUS MATERIAL.
2. PIPES SHALL BE LAID SUCH THAT HOLES ARE ORIENTED 45° FROM PIPE BOTTOM.

PERFORATION PATTERN DETAIL 3 / M16.01
SCALE: 1"=1'-0"



IRRIGATION SYSTEM
DETAIL 4 / M16.02
NOT TO SCALE



DETAIL 5 / M16.01
SCALE: 3/8"=1'-0"

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: J. DE LA TORRE
CHECKED BY: B.R. TRESAN
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET~~
~~NOT TO SCALE~~

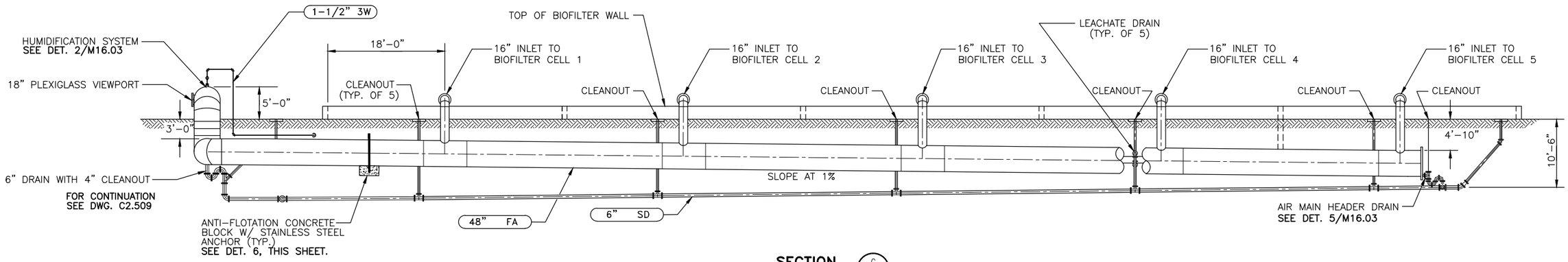
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

ODOR CONTROL BIOFILTER
SECTION AND DETAILS

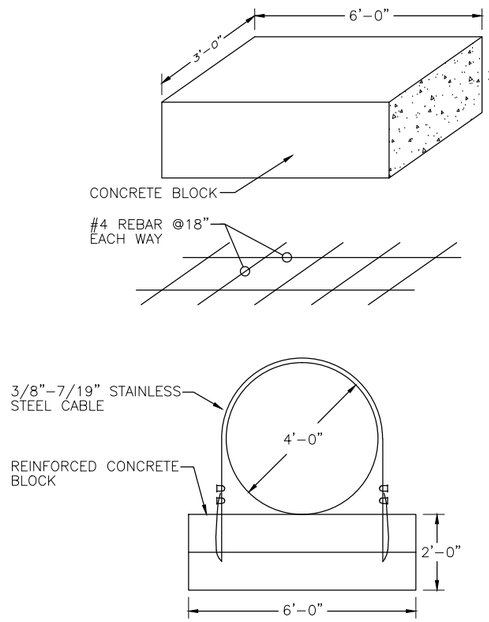
SCALE: AS NOTED
DRAWING NUMBER: M16.03
SHEET NUMBER: OF SHEETS

\\SAS\PROJECT\ N:\SA1224\EXPANSION\SCHEDULE-B\Cadd\Conformed\Mechanical\ SCH-BM1603.DWG NONE
02/28/06 9:40 a.m.

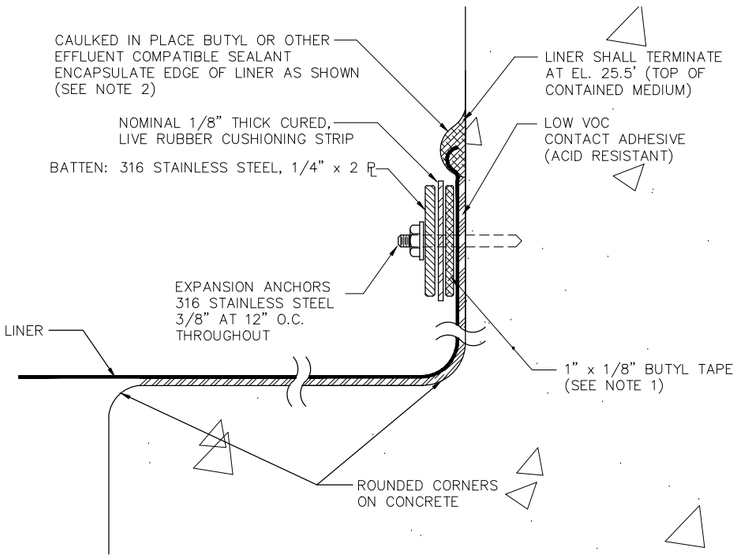


SECTION C
SCALE: 1/8"=1'-0" M16.01

NOTE:
1. REINFORCED CONCRETE ANTI-FLOTATION BLOCKS TO BE INSTALLED EVERY 10'.



ANTI-FLOTATION CONCRETE BLOCK DETAIL 6
SCALE: 1/2"=1'-0"



NOTES:
1. PLACE A CONTINOUS PIECE OF BUTYL TAPE OR OTHER ACID RESISTANT SEALANT UNDER THE CUSHIONING STRIP CENTERED AT THE FASTENER LINE TO SEAL THE LINER MATERIAL FASTENER PENETRATIONS WHEN THE BATTEN STRIP IS TIGHTENED TO THE WALL.
2. FLOOD-COAT EXPOSED SCRIM NO LOOSE EDGE ON TOP SIDE

LINER ANCHOR DETAIL 7 M16.02
NOT TO SCALE

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. AIT-LASRI
CHECKED BY: B.R. TRESAN
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
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4			
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1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
ODOR CONTROL BIOFILTER - SECTION AND DETAILS

SCALE: AS NOTED
DRAWING NUMBER: **M16.04**
SHEET NUMBER: OF SHEETS

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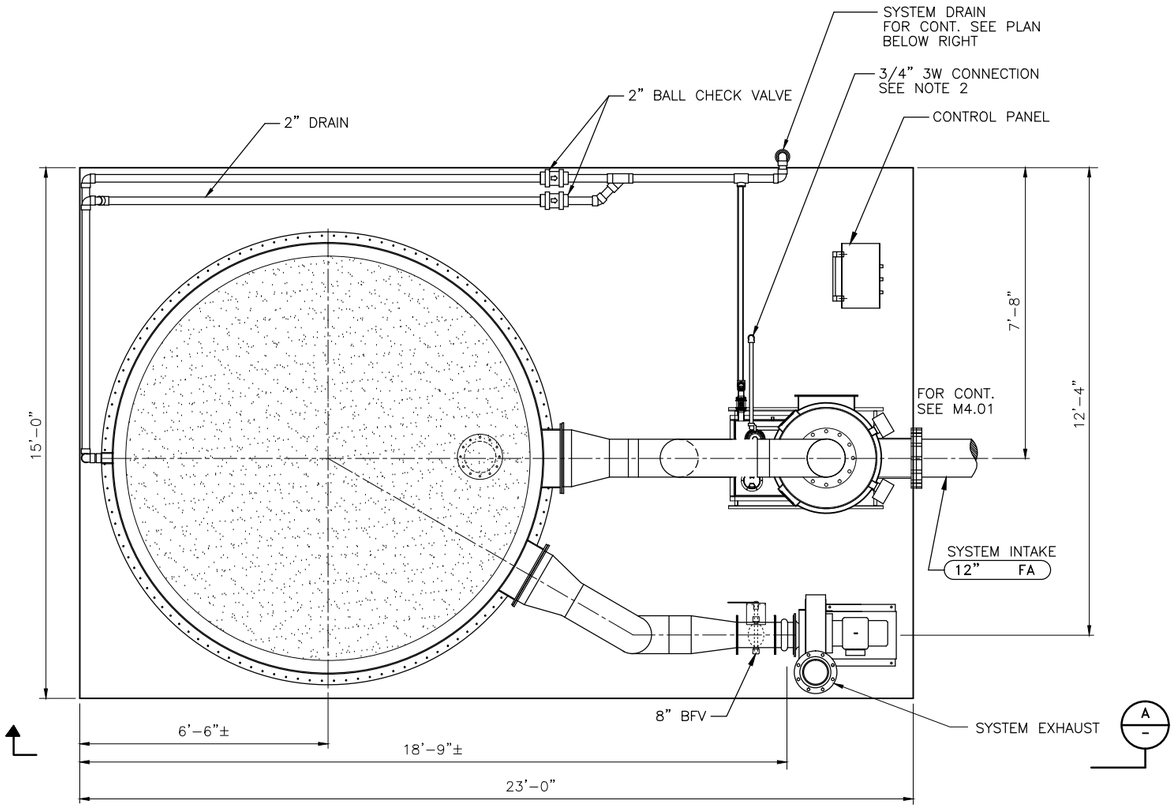
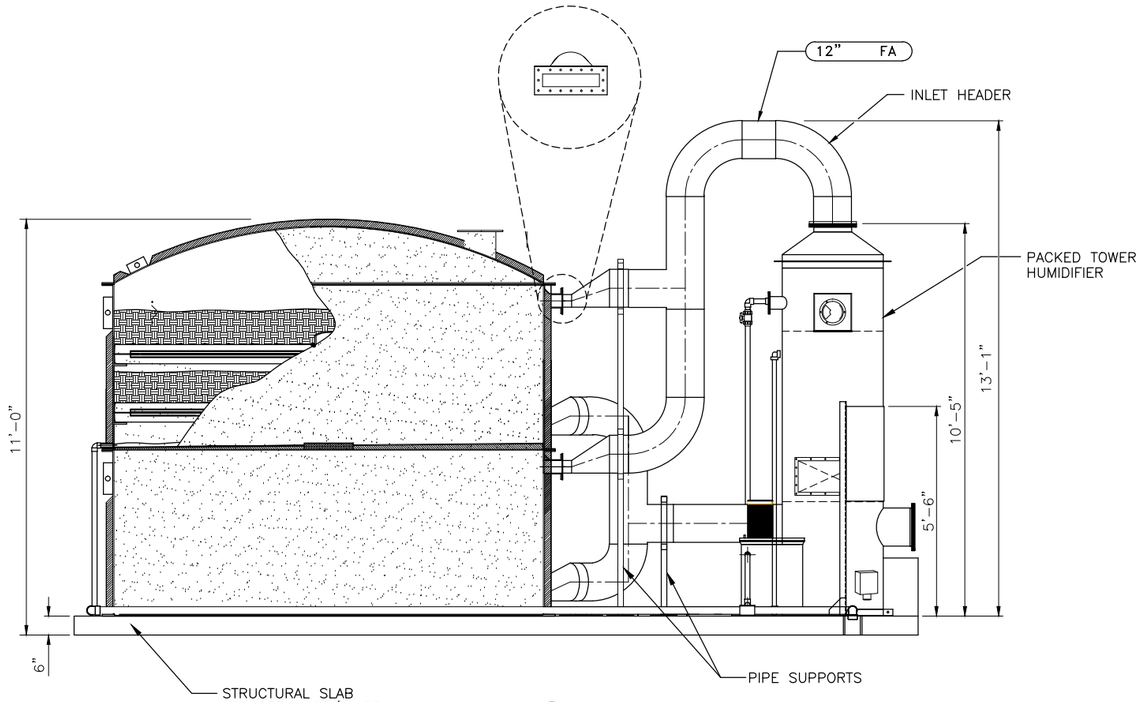
02/28/06 9:40 a.m.



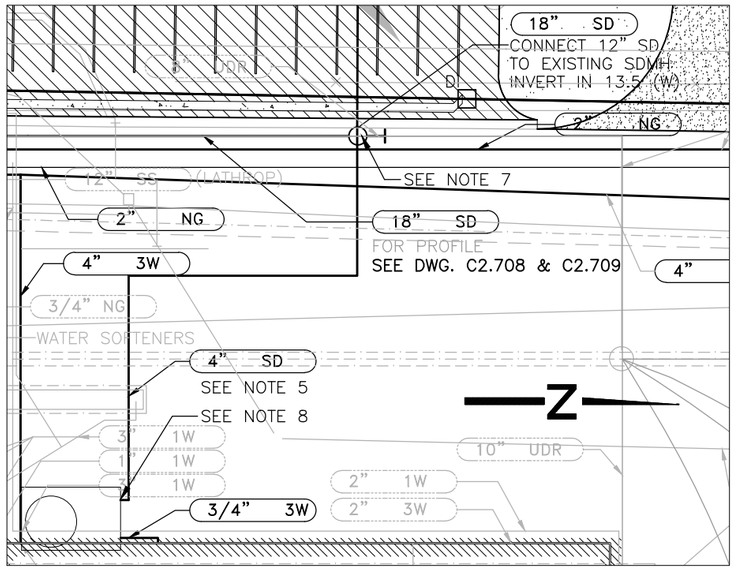
PLAN
SCALE: 1/2"=1'-0"

NOTES:

1. BLOWER MAY NEED TO BE SHIMMED TO ALIGN WITH SYSTEM OUTLET PIPING.
2. PIPE SPACING NOT TO SCALE FOR CLARITY.
3. PIPE SUPPORTS NOT SHOWN FOR CLARITY.
4. REROUTE EXISTING 3W AND 1W LINES AROUND BIOFILTER SLAB.
5. CONNECT 4" SD LINE FROM BIOFILTER TO EXISTING SD MANHOLE.
6. FOR ADDITIONAL DETAIL SEE M16.03.
7. SEE DWG. C2.507 FOR CONNECTION TO EXISTING SD MH.
8. TRANSITION TO 4" SD BELOW GRADE.



SECTION
SCALE: 1/2"=1'-0" (A / W16.01)



BIOFILTER SYSTEM WATER AND DRAIN PIPING
NOT TO SCALE

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J. S. HENRIKSON
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

NORTHSIDE BIOFILTER PLAN AND SECTION

SCALE: AS NOTED
DRAWING NUMBER: M16.05
SHEET NUMBER: OF SHEETS

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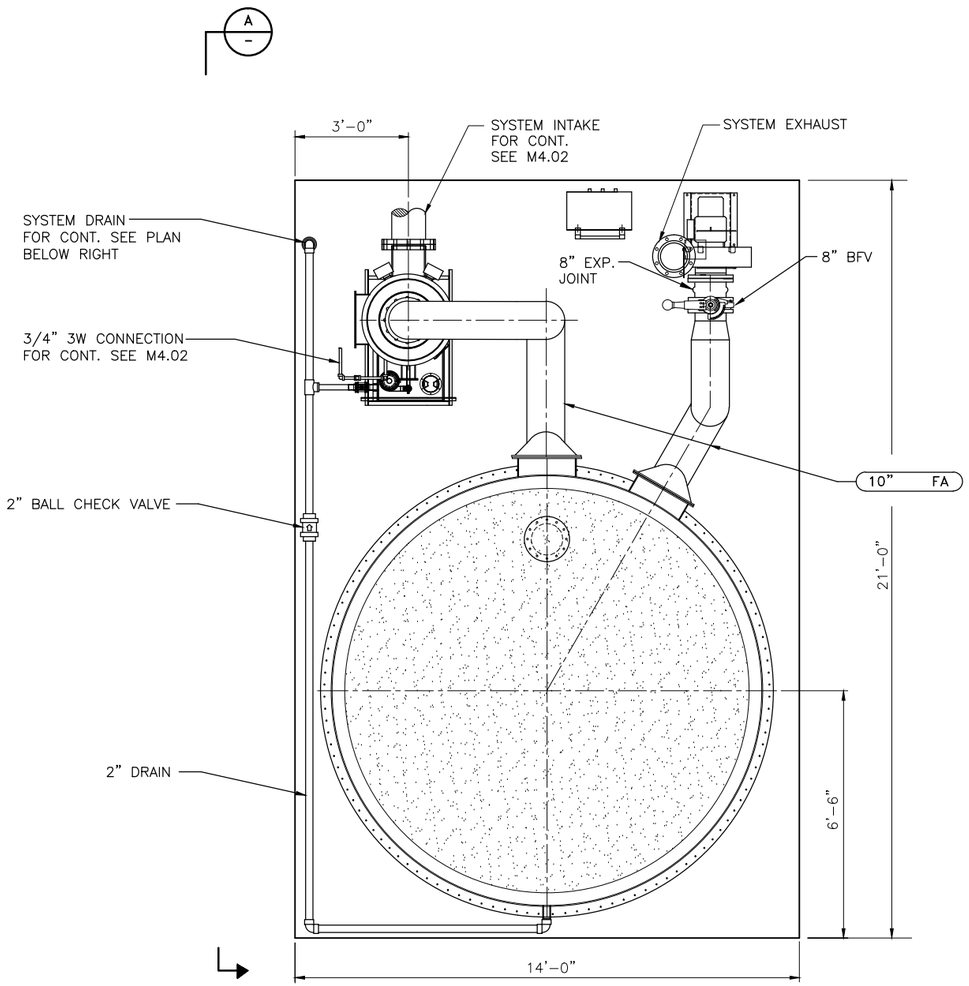
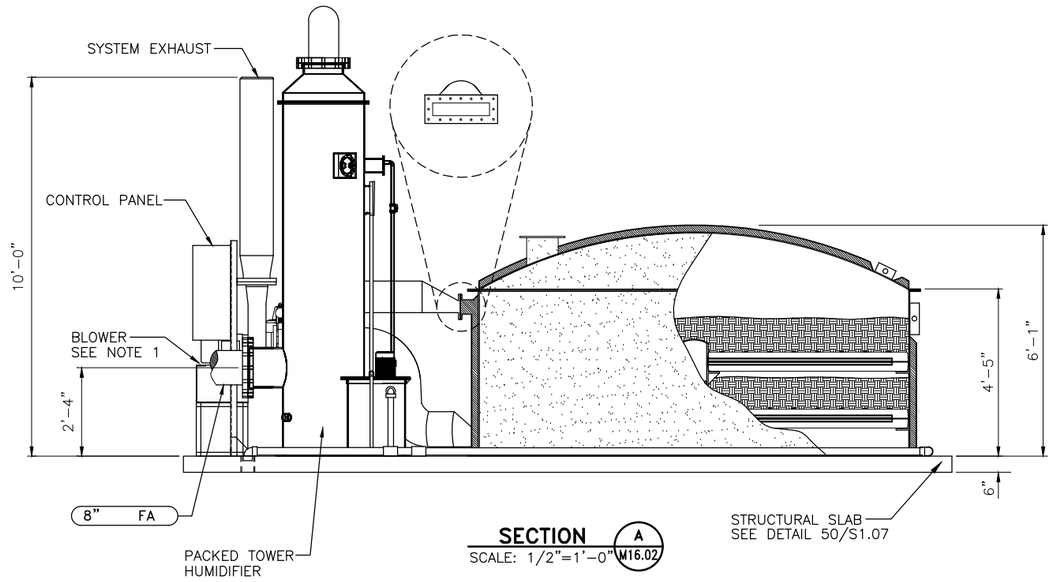
06/13/05 2:19 p.m.



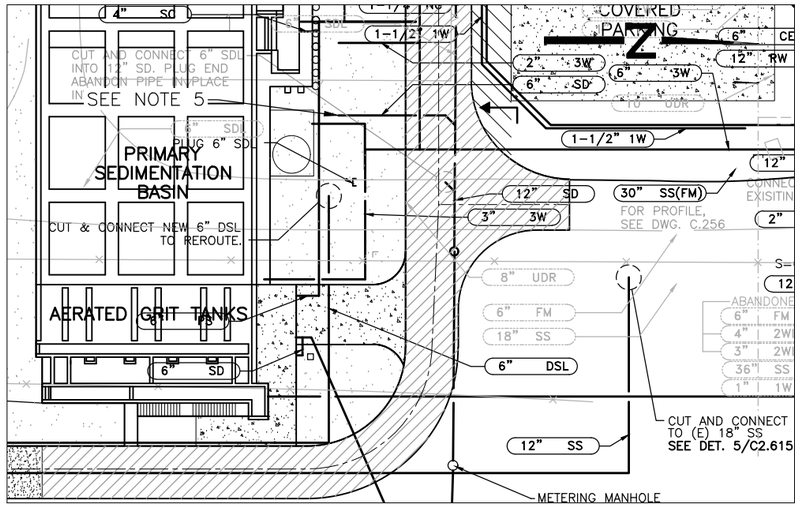
PLAN
SCALE: 1/2"=1'-0"

NOTES:

1. BLOWER MAY NEED TO BE SHIMMED TO ALIGN WITH SYSTEM OUTLET PIPING.
2. PIPE SPACING NOT TO SCALE FOR CLARITY.
3. PIPE SUPPORTS NOT SHOWN FOR CLARITY.
4. FOR ADDITIONAL DETAILS, SEE DWG. M16.03.
5. TRANSITION TO 6" SD BELOW GRADE.



SECTION A M16.02
SCALE: 1/2"=1'-0"



BIOFILTER SYSTEM WATER AND DRAIN PIPING
NOT TO SCALE

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J. S. HENRIKSON
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SOUTHSIDE BIOFILTER PLAN AND SECTION

SCALE: AS NOTED
DRAWING NUMBER: M16.06
SHEET NUMBER: OF SHEETS

SCH-DM1602.DWG NONE
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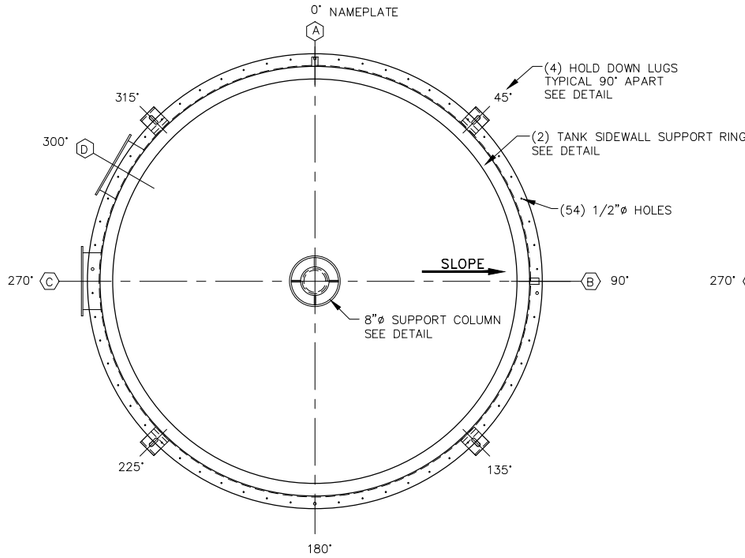
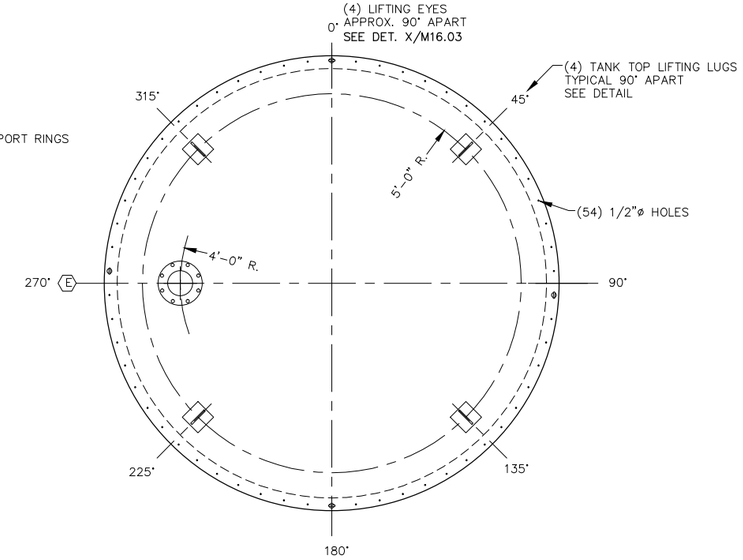
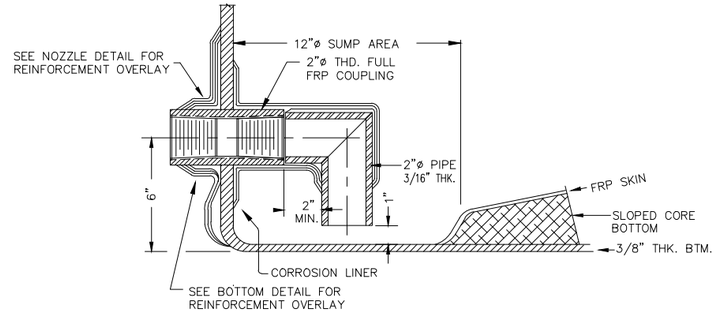


TANK PLAN



COVER PLAN



SIPHON
NOZZLE "B"

DETAIL 4 TYP
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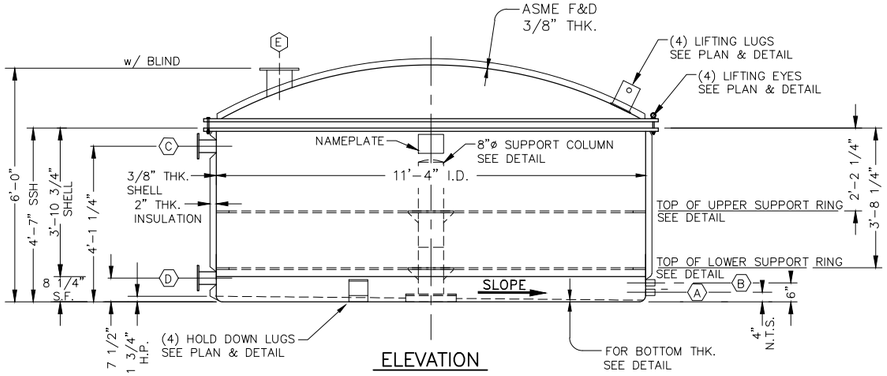
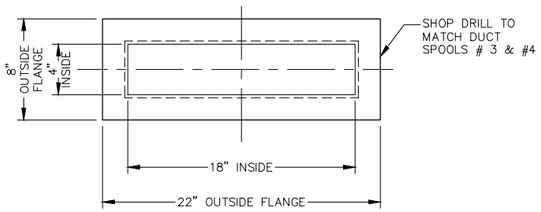


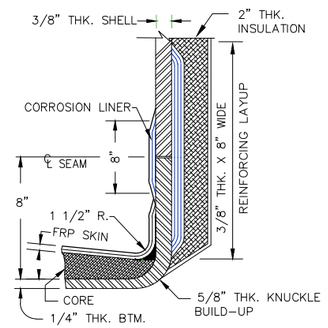
ELEVATION

DETAIL 1 TYP
NOT TO SCALE



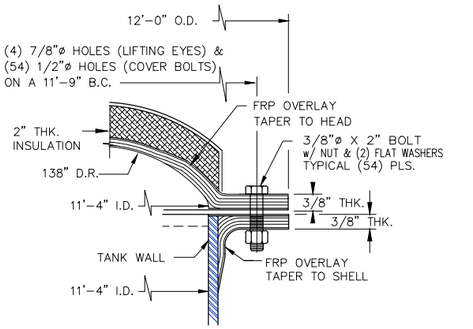
NOZZLES "C" & "D" FLANGE
NOZZLE "A"

DETAIL 2 TYP
NOT TO SCALE



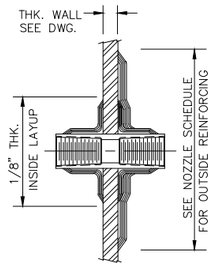
FLANGE & COVER BOLT

DETAIL 3 TYP
NOT TO SCALE



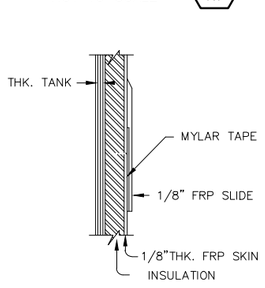
FLANGE & COVER BOLT

DETAIL 10 TYP
NOT TO SCALE



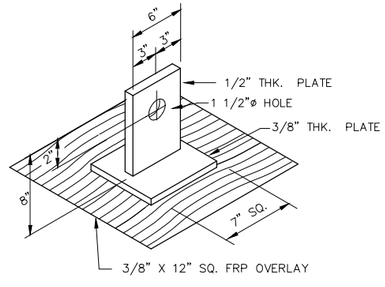
FULL COUPLING
NOZZLE "A"

DETAIL 5 TYP
NOT TO SCALE



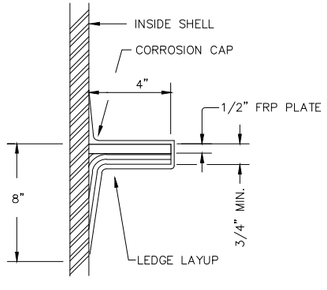
TANK INSULATION

DETAIL 6 TYP
NOT TO SCALE



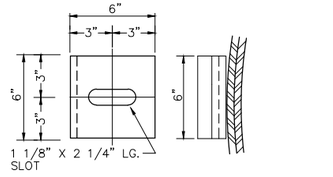
VERTICAL LIFTING LUG

DETAIL 7 TYP
NOT TO SCALE



TANK SIDEWALL 360° SUPPORT RING

DETAIL 8 TYP
NOT TO SCALE



HOLD DOWN LUG WITH DOG CLIP

NOTE : THIS DETAIL IS NOT TO BE USED FOR DETERMINING EXACT ANCHOR BOLT CIRCLE. SHIM UNDER HOLD DOWN LUGS, BEFORE ANCHORING.

DETAIL 9 TYP
NOT TO SCALE

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J. S. HENRIKSON
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: R. AIT-LASRI

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6			
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

BIOFILTER DETAILS

SCALE: AS NOTED
DRAWING NUMBER: M16.07
SHEET NUMBER: OF SHEETS

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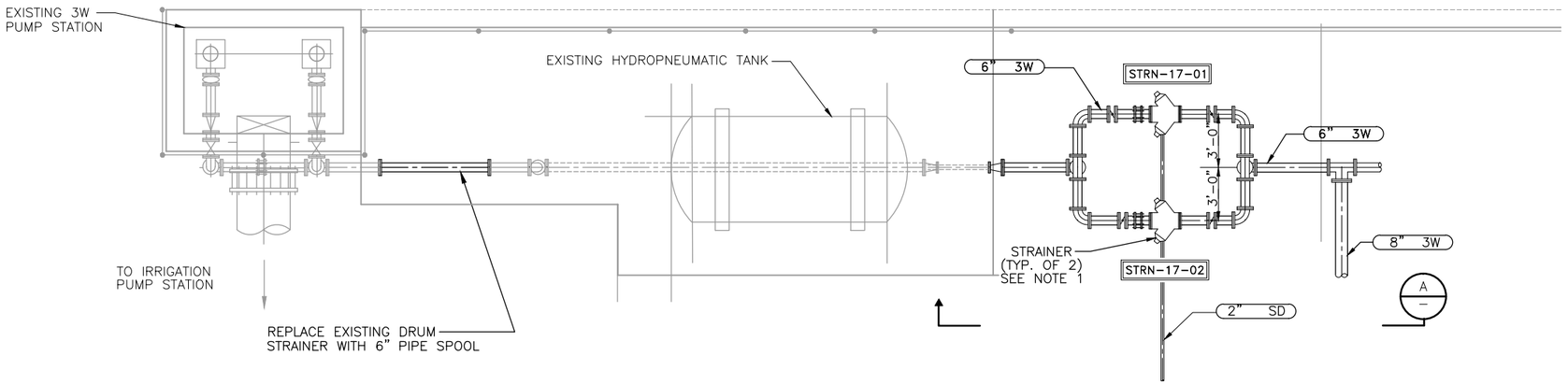
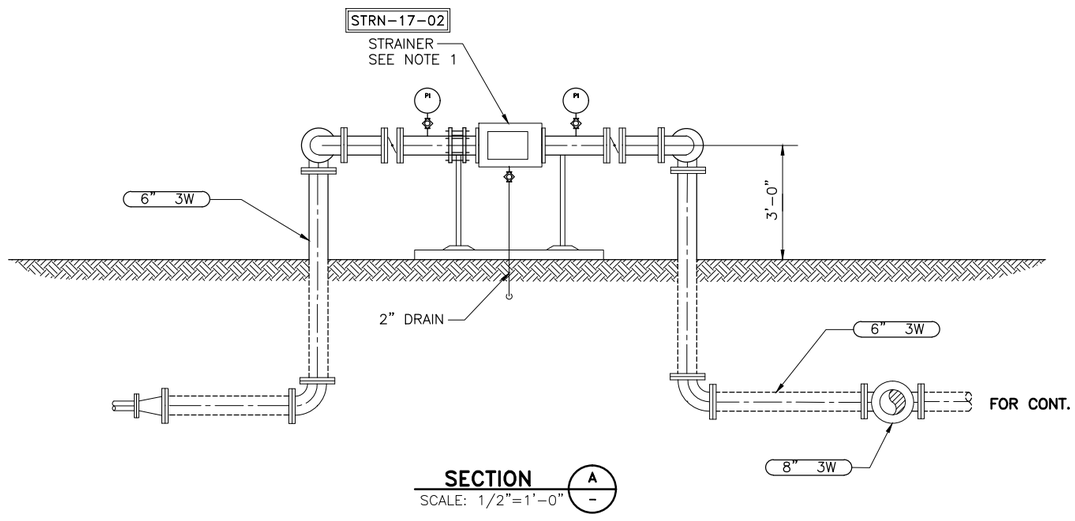


PLAN
SCALE: 1/4"=1'-0"

FOR CONT. SEE DWG C2.511



SECTION A —
SCALE: 1/2"=1'-0"

FOR CONT. SEE DWG C2.511

NOTES:

1. STRAINER SHALL BE 6" AUTOMATIC HELLAN STRAINER WITH 1/32" (20 MESH) PERFORATIONS, OR EQUAL. MODEL #HCP-A2D CONTROL PANEL OR EQUAL SHALL BE PROVIDED.

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 781-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-1520 ☐ SAN JOSE (408) 287-9400 ☐ SAN DIEGO (619) 374-0382 ☐ WALNUT CREEK (510) 934-0382
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER
David Richard
No. 33479
EXP.
CIVIL
STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. AIT-LASRI
CHECKED BY: B.R. TRESAN
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: B.R. TRESAN

NO.	BY	DATE	REVISIONS
6			
5			REDUCED RECORD SET NOT TO SCALE
4			
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

3W SYSTEM PUMP STATION PLAN AND SECTION

SCALE: AS NOTED
DRAWING NUMBER: **M17.01**
SHEET NUMBER: OF SHEETS

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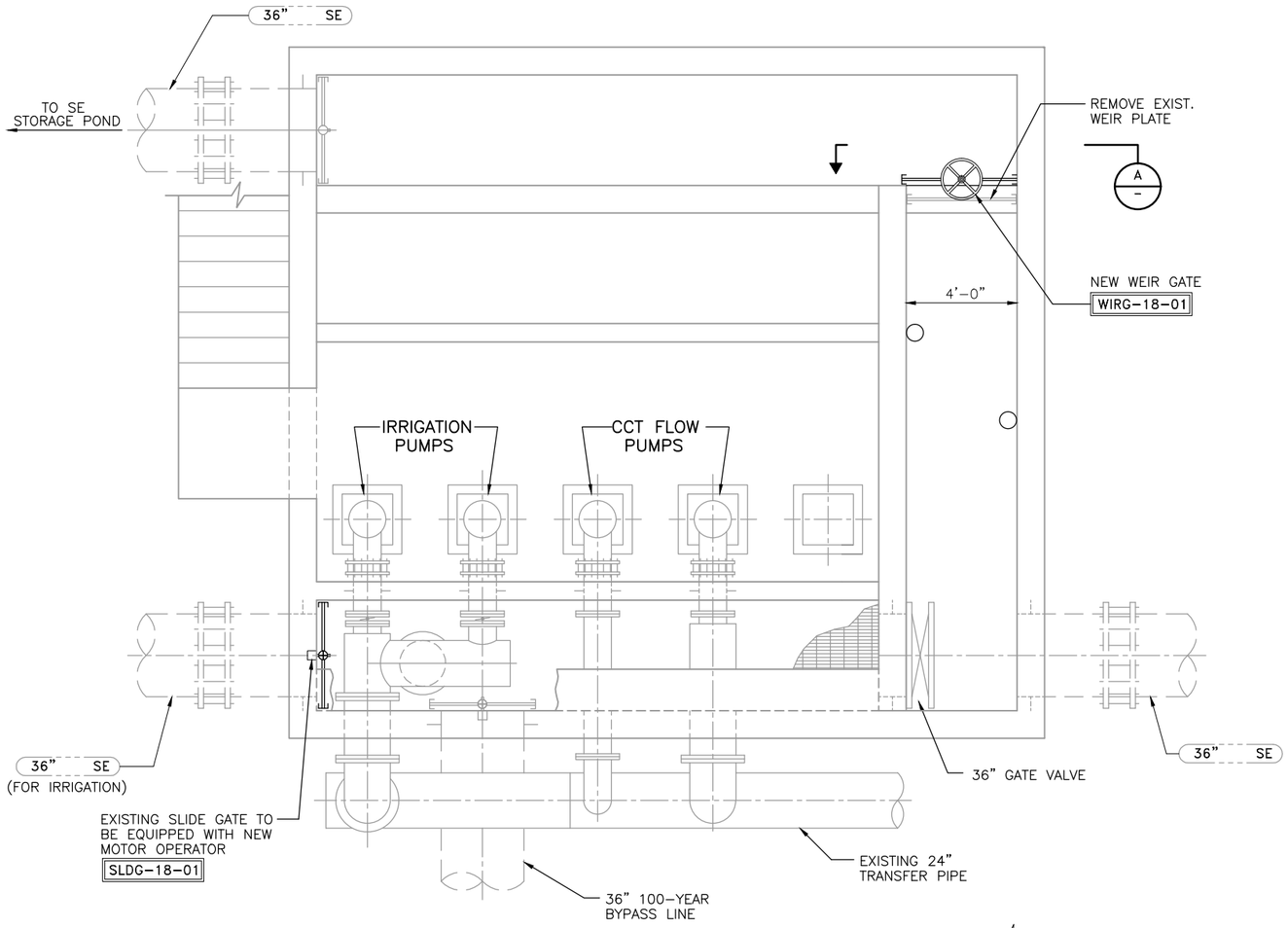
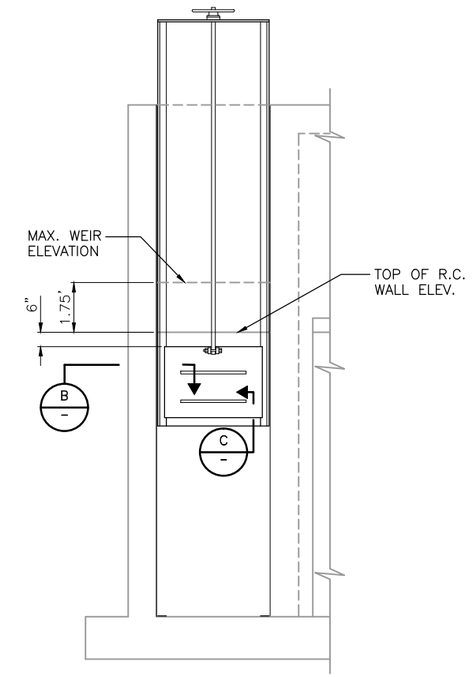
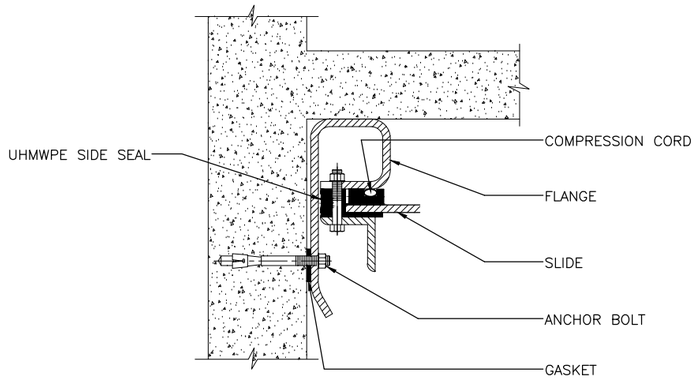


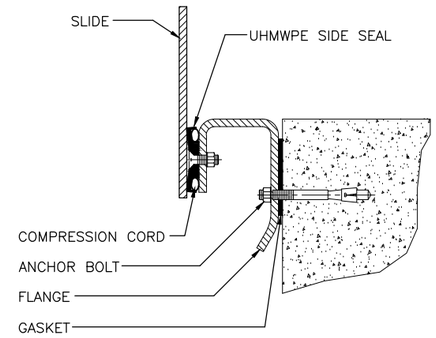
PLAN
SCALE: 3/8"=1'-0"



SECTION A
SCALE: 3/8"=1'-0"



SECTION B
NOT TO SCALE



SECTION C
NOT TO SCALE

NOTE:

SECTION B SHOWS ONE SIDE OF THE NEW WEIR GATE WILL BE MOUNTING AGAINST A CORNER OF TWO WALLS. THE GATE SIDE FRAME DETAIL SHOWN IS FOR ILLUSTRATION ONLY. THE GATE MANUFACTURER SHALL BE RESPONSIBLE FOR DEVELOPING THE SIDE FRAME FOR ITS GATE SUITABLE FOR MOUNTING PROPERLY ON THE WALL CORNER.

RECORD SET

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BEYOND ENGINEERING
DENVER (303) 791-0656 | MANTECA (209) 239-9080 | ORANGE COUNTY (714) 362-7400 | SACRAMENTO (916) 641-9100 | SAN JOSE (408) 287-9100 | SAN DIEGO (619) 378-9282 | WALNUT CREEK (510) 954-8080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.C. HAYES
CHECKED BY: J.Y. AU
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: J.Y AU

NO.	BY	DATE	REVISIONS
6			REDUCED RECORD SET NOT TO SCALE
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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

EXISTING IRRIGATION PUMP STATION PLAN AND SECTIONS

SCALE: AS NOTED
DRAWING NUMBER: M18.01
SHEET NUMBER: OF SHEETS

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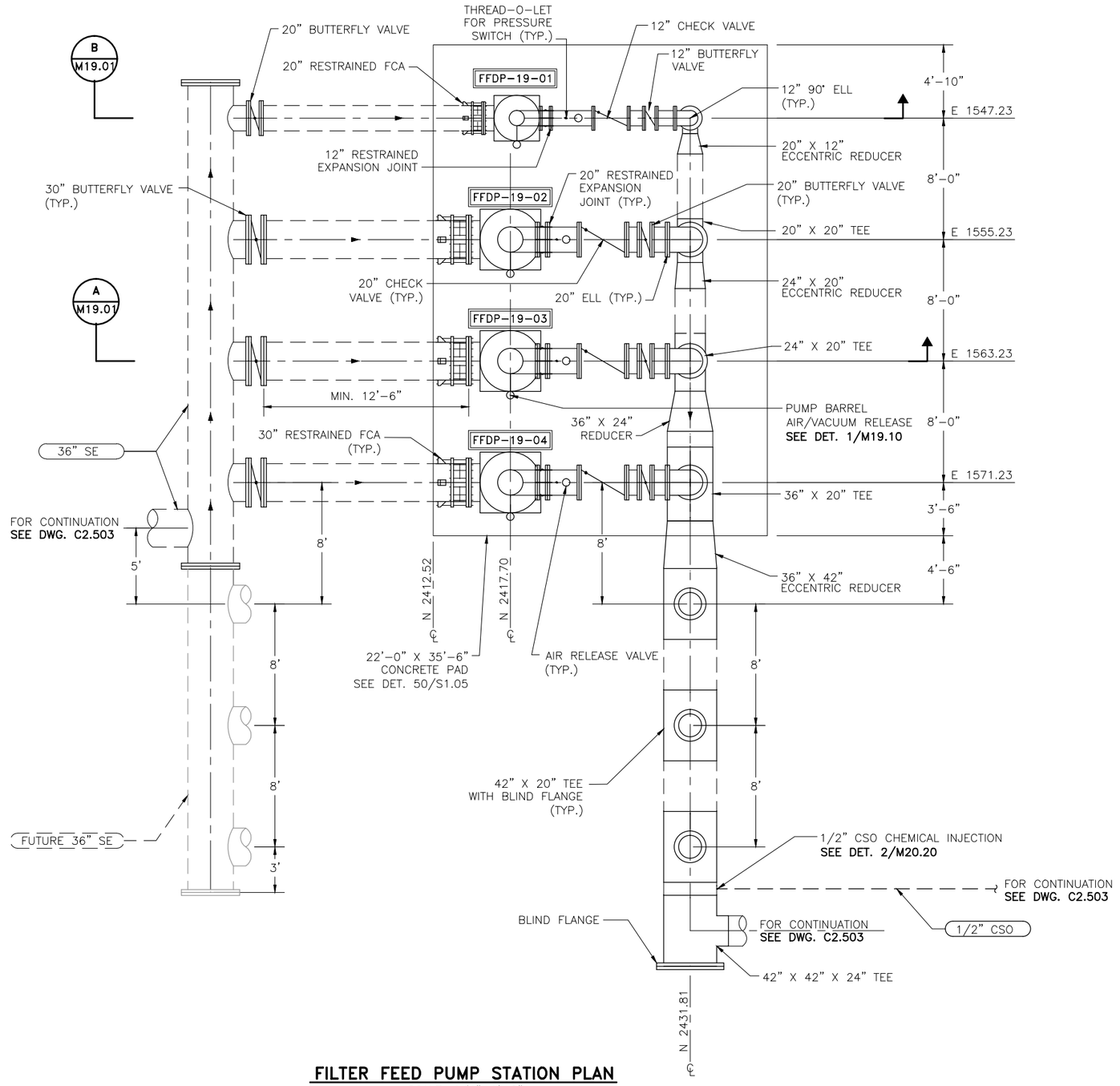

FILTER FEED PUMP STATION PLAN

SCALE: 1/4"=1'-0"

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-9100 ☐ SAN JOSE (408) 287-3400 ☐ SAN DIEGO (619) 276-9282 ☐ WALNUT CREEK (925) 934-8002
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

FILTER FEED PUMP STATION PLAN

SCALE: AS NOTED

DRAWING NUMBER: **M19.00**

SHEET NUMBER: OF SHEETS

SCH-DM1900.DWG NONE

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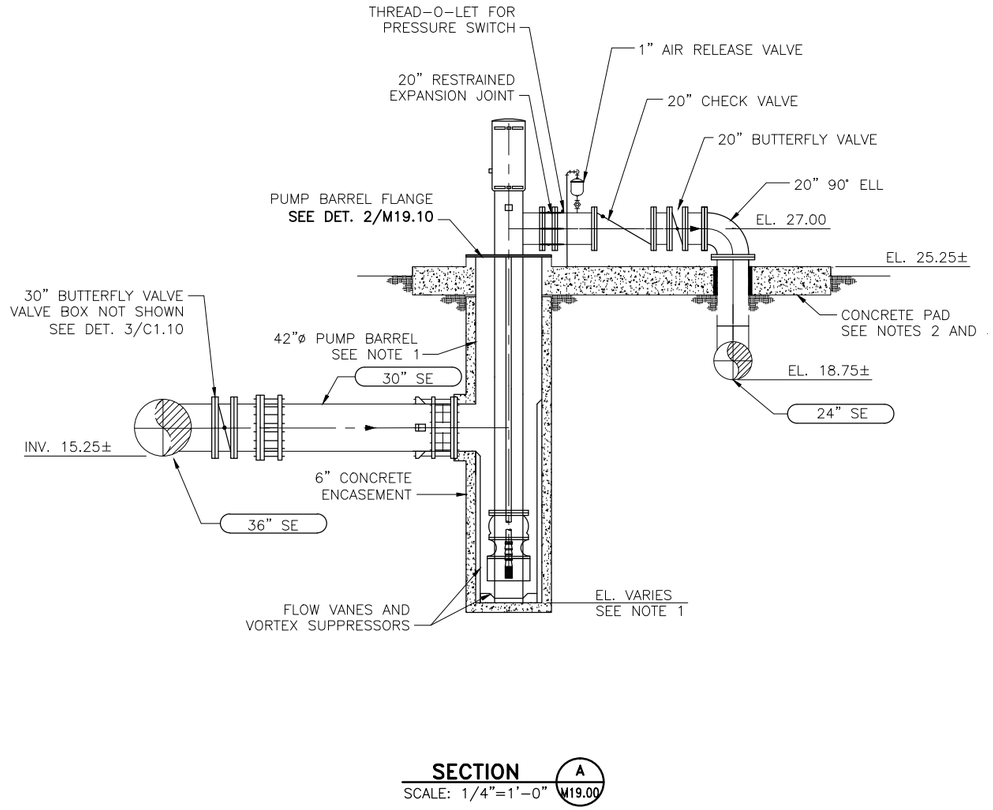
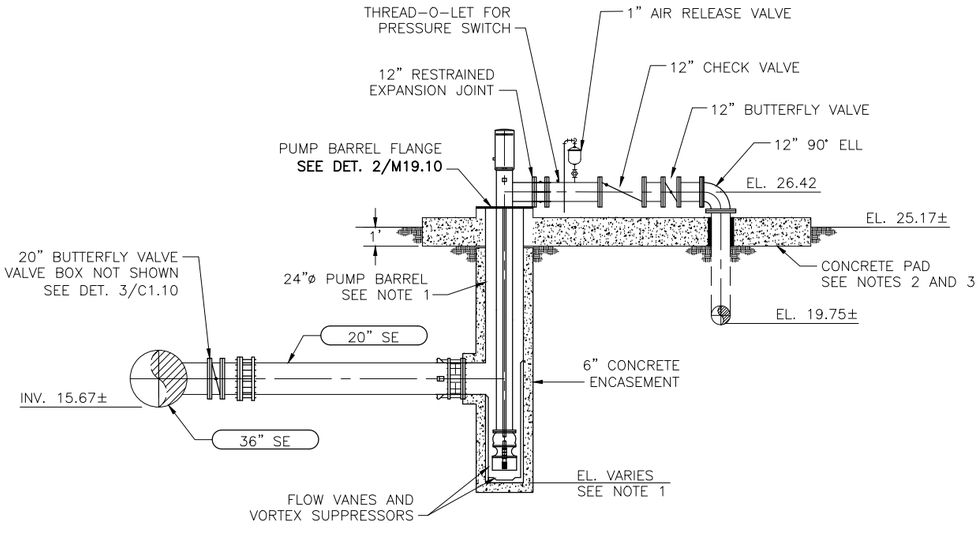
06/10/05



SECTION A — SCALE: 1/4"=1'-0" — M19.00



SECTION B — SCALE: 1/4"=1'-0" — M19.00

NOTE:
1. FINAL LENGTH OF BARREL TO BE DETERMINED BY PUMP MANUFACTURER.
2. FOR CONCRETE PAD REINFORCEMENT SEE DET. 50/S1.07.
3. FOR ADDITIONAL REINFORCEMENT AT SLAB OPENINGS SEE DET. 20/S1.04.

RECORD SET

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NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 791-0444 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 282-1600 ☐ SACRAMENTO (916) 641-9150 ☐ SAN JOSE (408) 487-2450 ☐ SAN DIEGO (619) 378-9280 ☐ WALNUT CREEK (510) 934-0480
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
6			
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4			REDUCED RECORD SET NOT TO SCALE
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2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
FILTER FEED PUMP STATION SECTION

SCALE: AS NOTED
DRAWING NUMBER: M19.01
SHEET NUMBER: OF SHEETS

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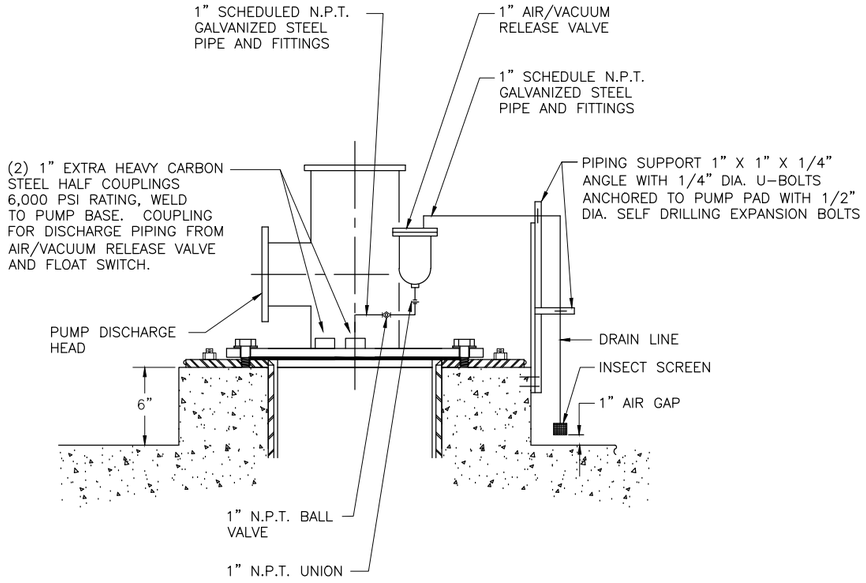
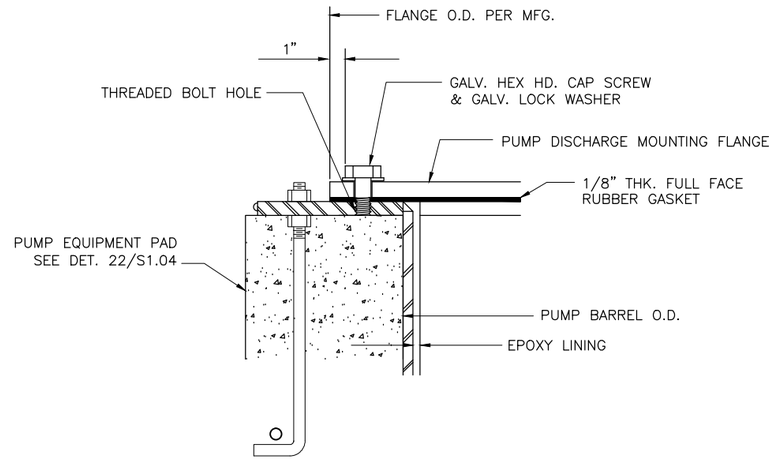


PUMP BARREL AIR/VACUUM RELEASE DETAIL (1 / M19.00)

NOT TO SCALE



PUMP BARREL FLANGE DETAIL (2 / M19.01)

NOT TO SCALE

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
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4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

FILTER FEED PUMP STATION DETAILS

SCALE: AS NOTED

DRAWING NUMBER: M19.10

SHEET NUMBER: OF SHEETS

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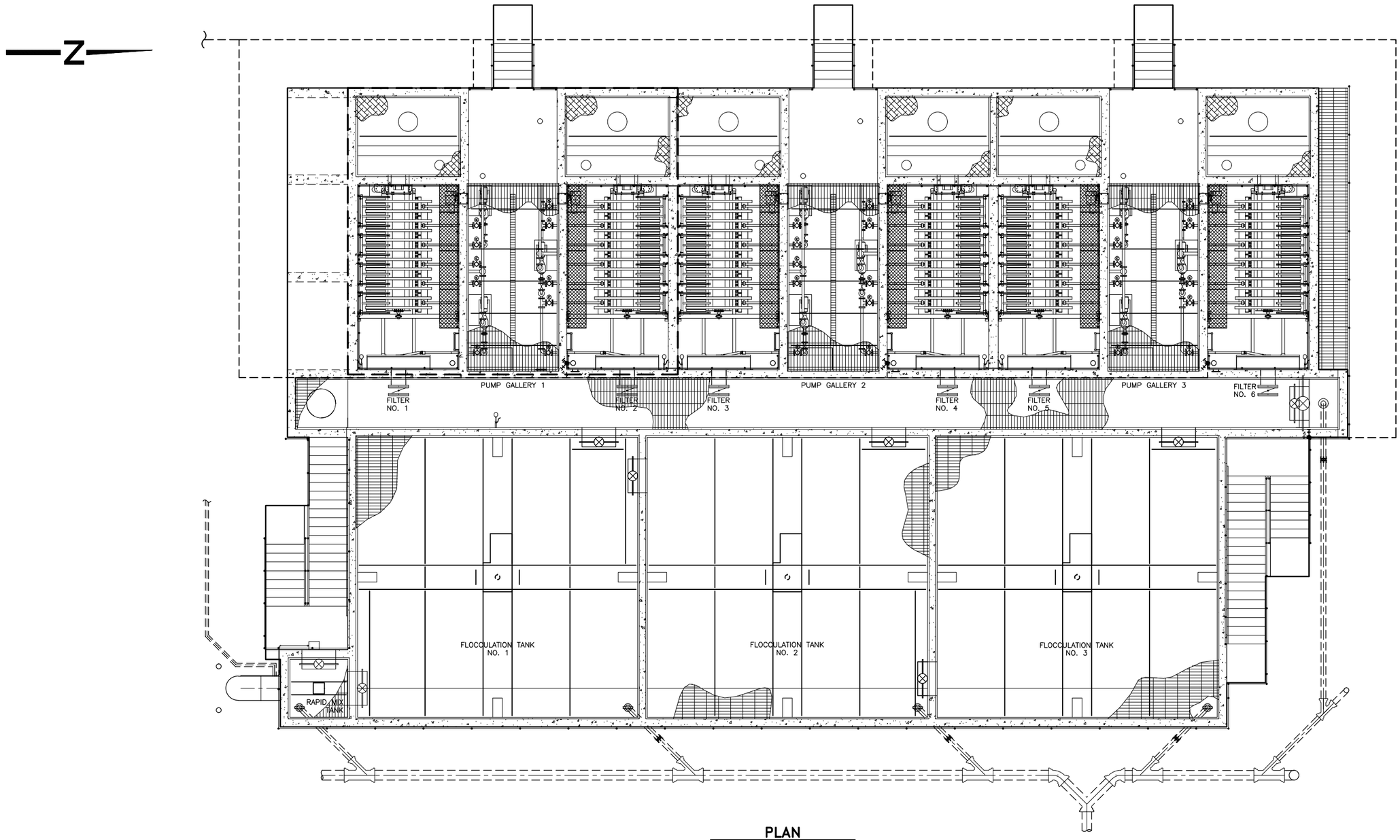

PLAN
SCALE: 3/16"=1'-0"

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE:	XXXXXX
PROJECT NO.:	SA1224
DRAWN BY:	K.M. PERALTA
CHECKED BY:	A.G. CALCIANO
PROJ. MGR.:	D. RICHARD
PROJ. ENGR.:	A.K. FURUYA

NO.	BY	DATE	REVISIONS
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4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

RAPID MIXING, FLOCCULATION, AND FILTERS OVERALL PLAN

SCALE: AS NOTED

DRAWING NUMBER: **M20.00**

SHEET NUMBER: OF SHEETS

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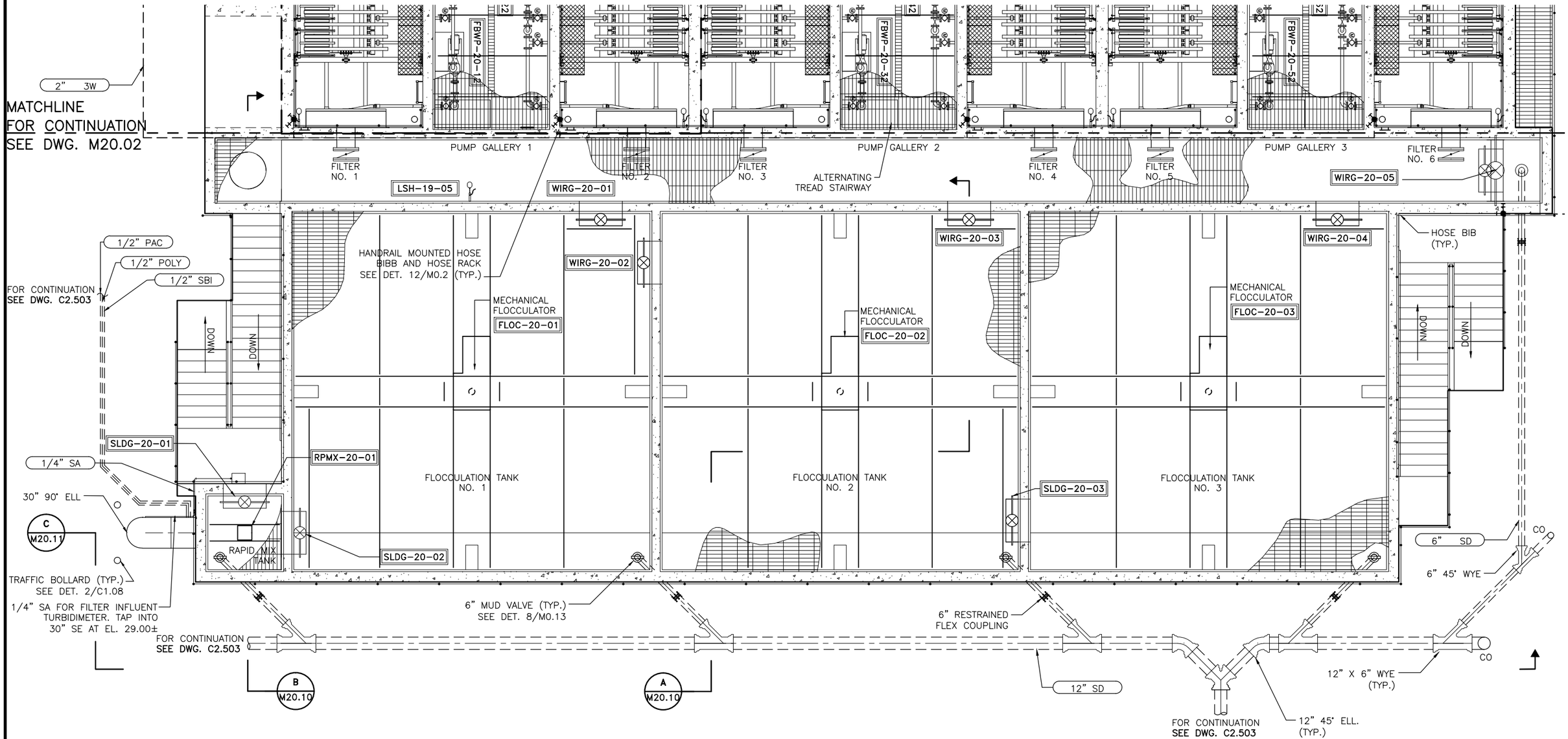

ENLARGED PLAN
SCALE: 1/4"=1'-0"

—Z—

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
RAPID MIXING, FLOCCULATION, AND FILTERS ENLARGED PLAN I

SCALE: AS NOTED
DRAWING NUMBER: M20.01
SHEET NUMBER: OF SHEETS

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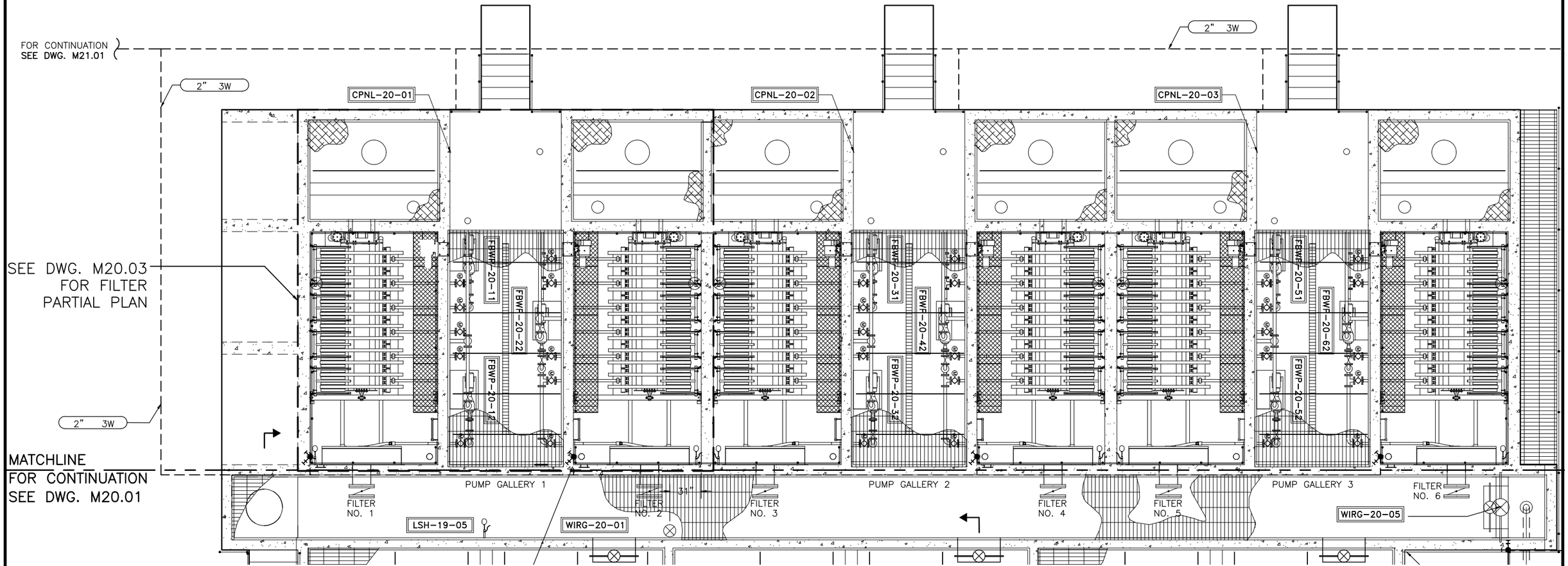

ENLARGED PLAN

SCALE: 1/4"=1'-0"

Z

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

RAPID MIXING, FLOCCULATION, AND FILTERS
ENLARGED PLAN II

SCALE: AS NOTED
DRAWING NUMBER: **M20.02**
SHEET NUMBER: OF SHEETS

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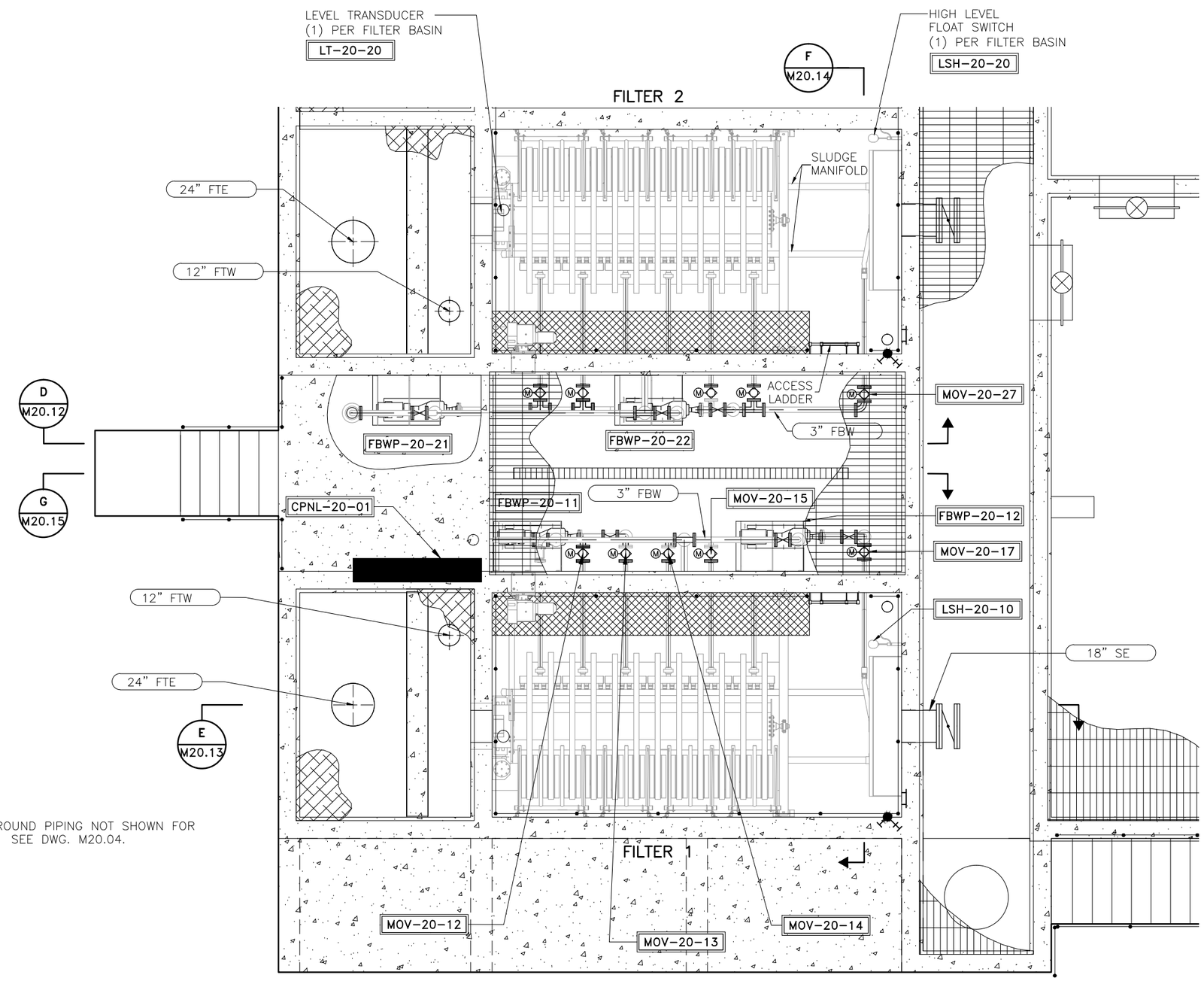

NOTES:

1. UNDERGROUND PIPING NOT SHOWN FOR CLARITY. SEE DWG. M20.04.

FILTERS PARTIAL PLAN

SCALE: 3/8"=1'-0"

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

RAPID MIXING, FLOCCULATION, AND FILTERS
FILTER PARTIAL PLAN

SCALE: AS NOTED
DRAWING NUMBER: M20.03
SHEET NUMBER: OF SHEETS

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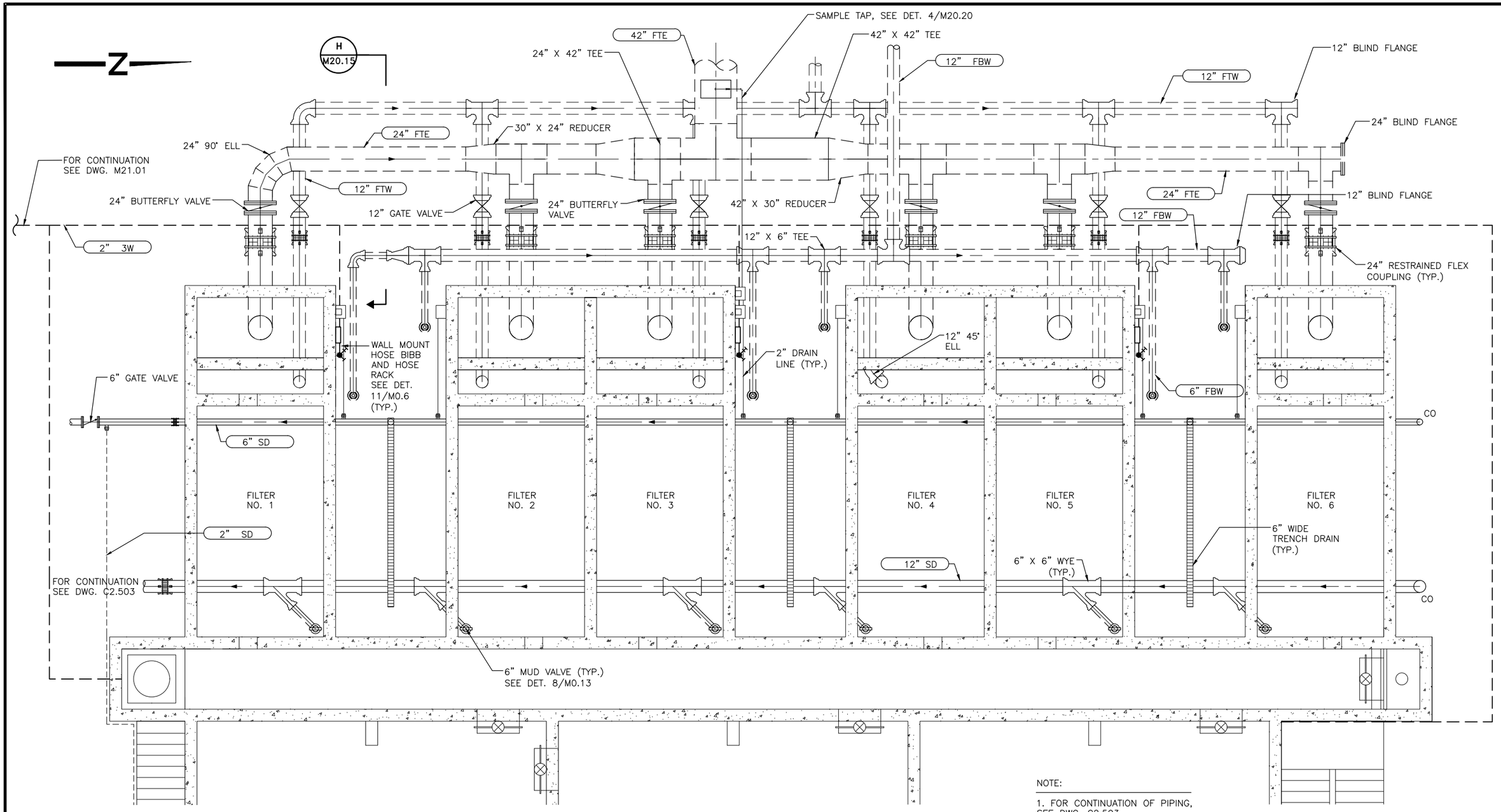

NOTE:

1. FOR CONTINUATION OF PIPING, SEE DWG. C2.503

FILTER BASIN UNDERDRAIN PLAN

SCALE: 1/4"=1'-0"

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
BEYOND ENGINEERING

☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-1500 ☐ SAN JOSE (408) 287-3400 ☐ SAN DIEGO (619) 378-9382 ☐ WALNUT CREEK (925) 924-9080

302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

RAPID MIXING, FLOCCULATION, AND FILTERS UNDERDRAIN PLAN

SCALE: AS NOTED

DRAWING NUMBER: **M20.04**

SHEET NUMBER: OF SHEETS

SCH-DM2004.DWGNONE

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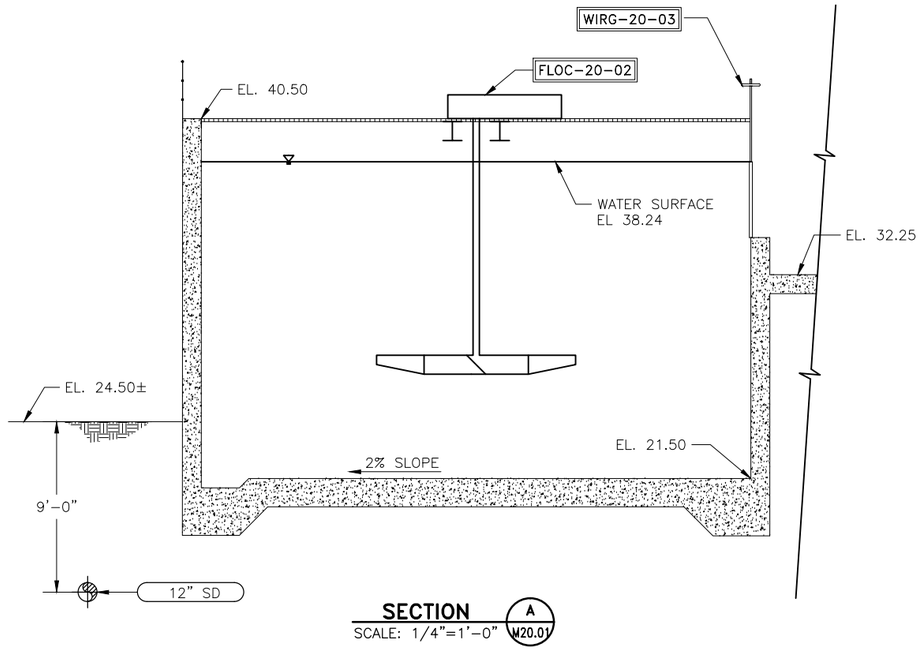
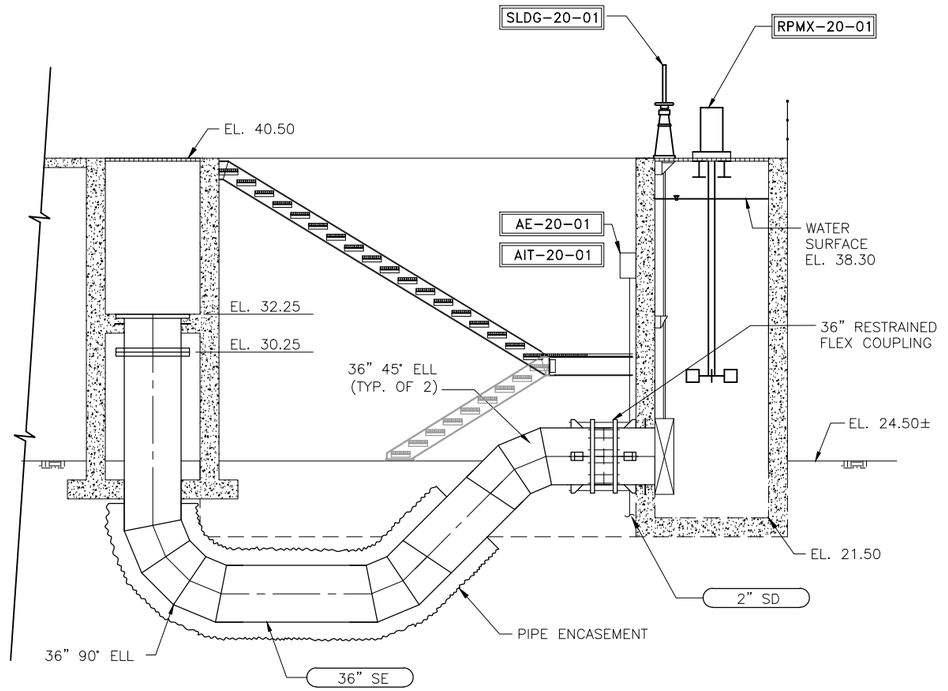


SECTION A M20.01
SCALE: 1/4"=1'-0"



SECTION B M20.01
SCALE: 1/4"=1'-0"

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 382-7600 ☐ SACRAMENTO (916) 641-9100 ☐ SAN JOSE (408) 287-9100 ☐ SAN DIEGO (619) 378-9282 ☐ WALNUT CREEK (925) 934-9080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

RAPID MIXING, FLOCCULATION, AND FILTERS SECTION - I

SCALE: AS NOTED
DRAWING NUMBER: M20.10
SHEET NUMBER: OF SHEETS

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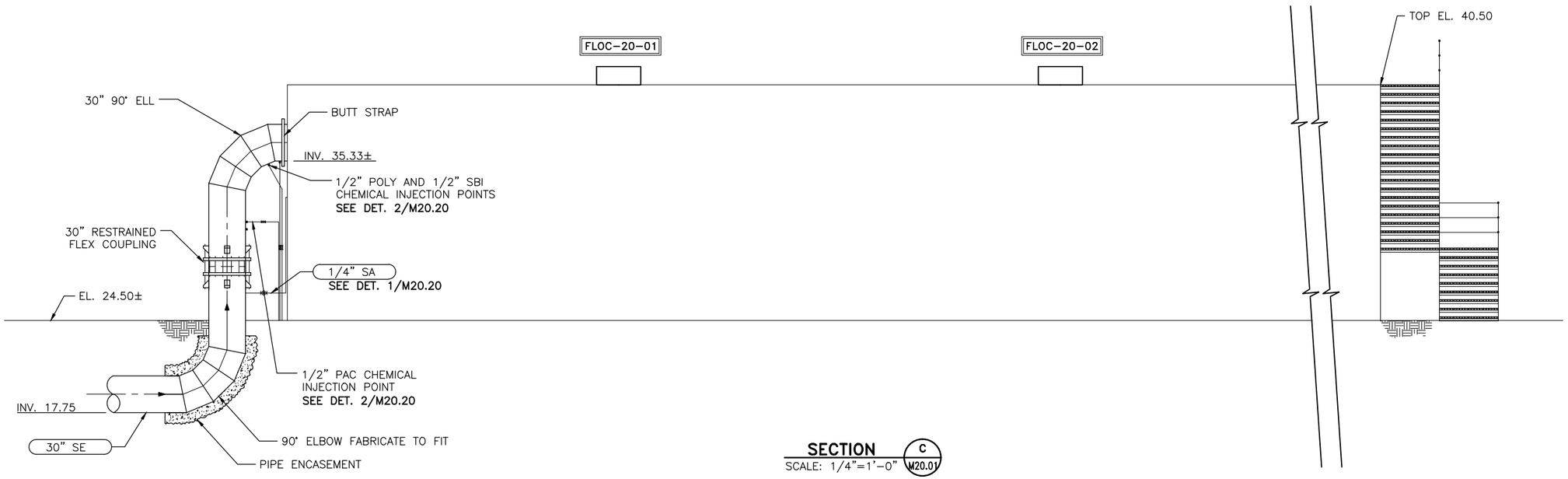

SECTION C
SCALE: 1/4"=1'-0" M20.01

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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☐ DENVER (303) 781-0466 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 282-1505 ☐ SACRAMENTO (916) 641-9100 ☐ SAN JOSE (408) 487-2430 ☐ SAN DIEGO (619) 378-4382 ☐ WALNUT CREEK (510) 934-0282
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
6			
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4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

RAPID MIXING, FLOCCULATION, AND FILTERS SECTION - II

SCALE: AS NOTED

DRAWING NUMBER: M20.11

SHEET NUMBER: OF SHEETS

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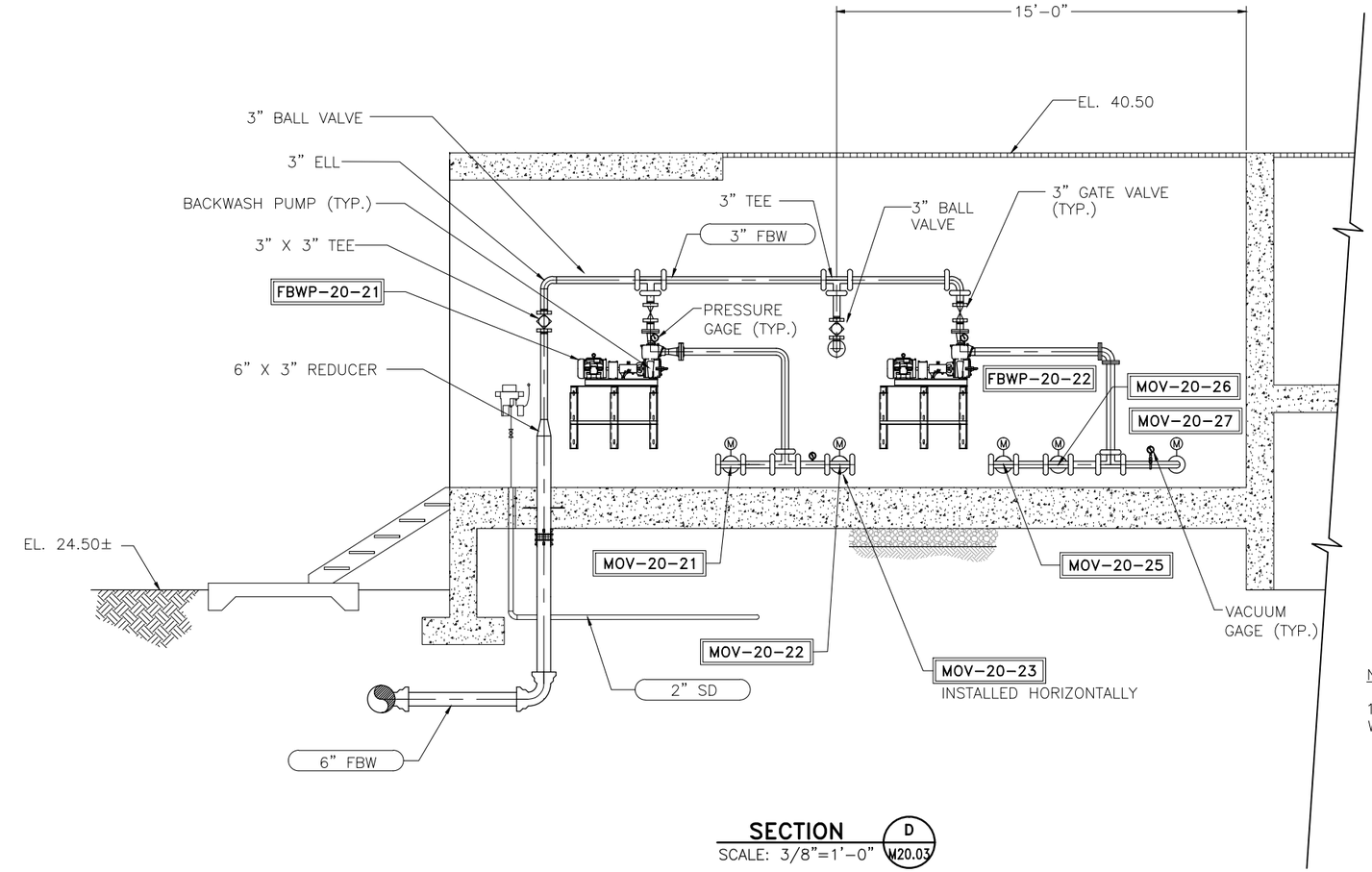

SECTION D
SCALE: 3/8"=1'-0" M20.03

NOTES:

1. SECTION SHOWN IS TYPICAL FOR NORTH WALL OF PUMP GALLERIES 2 AND 3

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 781-0444 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-9100 ☐ SAN JOSE (408) 487-2620 ☐ SAN DIEGO (619) 678-9382 ☐ WALNUT CREEK (510) 934-0480
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
RAPID MIXING, FLOCCULATION, AND FILTERS
SECTION - III

SCALE: AS NOTED
DRAWING NUMBER: M20.12
SHEET NUMBER: OF SHEETS

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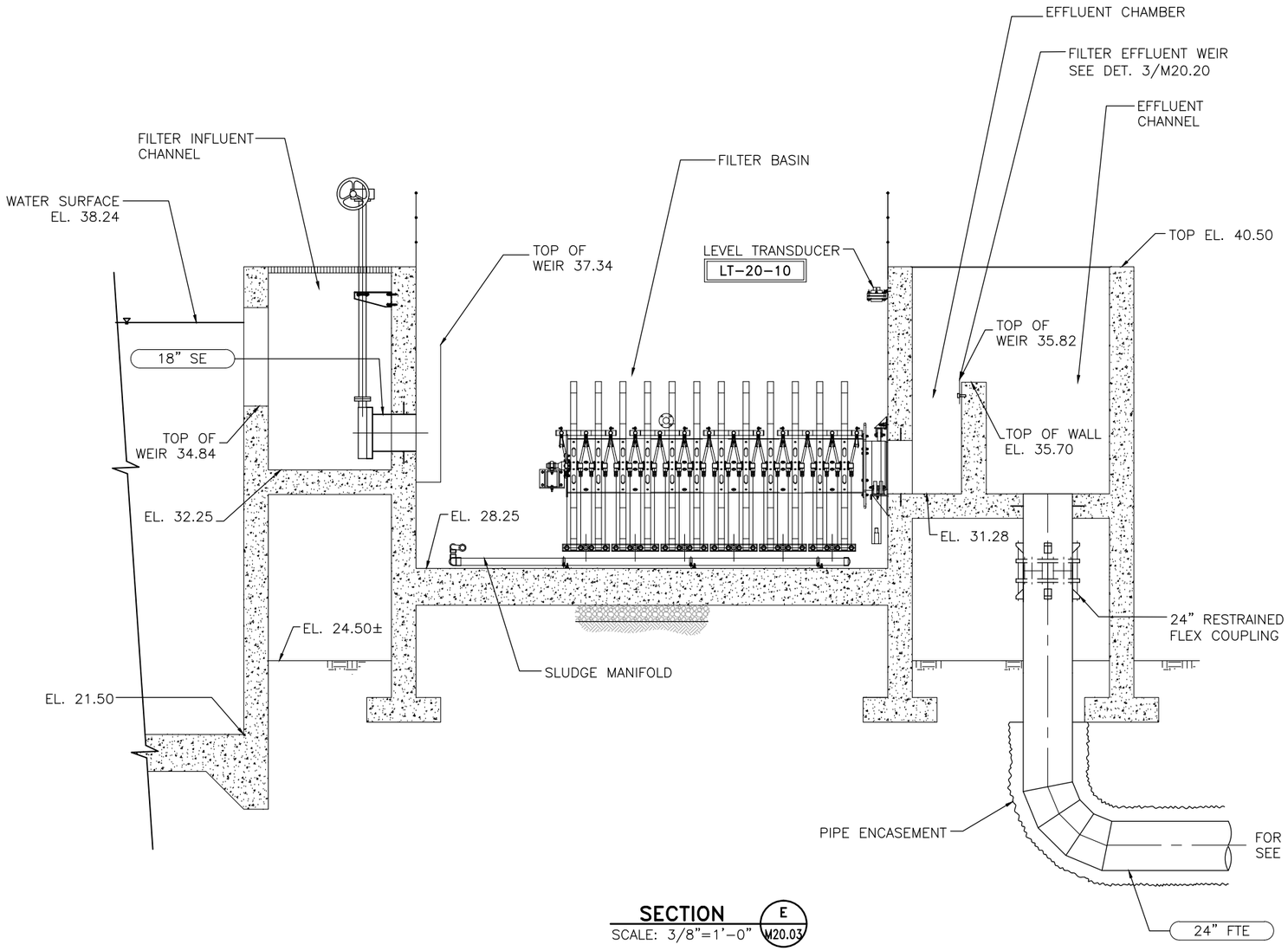

SECTION (E / M20.03)
SCALE: 3/8"=1'-0"

SCH-DM2013.DWG NONE

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06/10/05 11:32 a.m.

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-1500 ☐ SAN JOSE (408) 287-3400 ☐ SAN DIEGO (619) 378-9382 ☐ WALNUT CREEK (510) 934-8080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

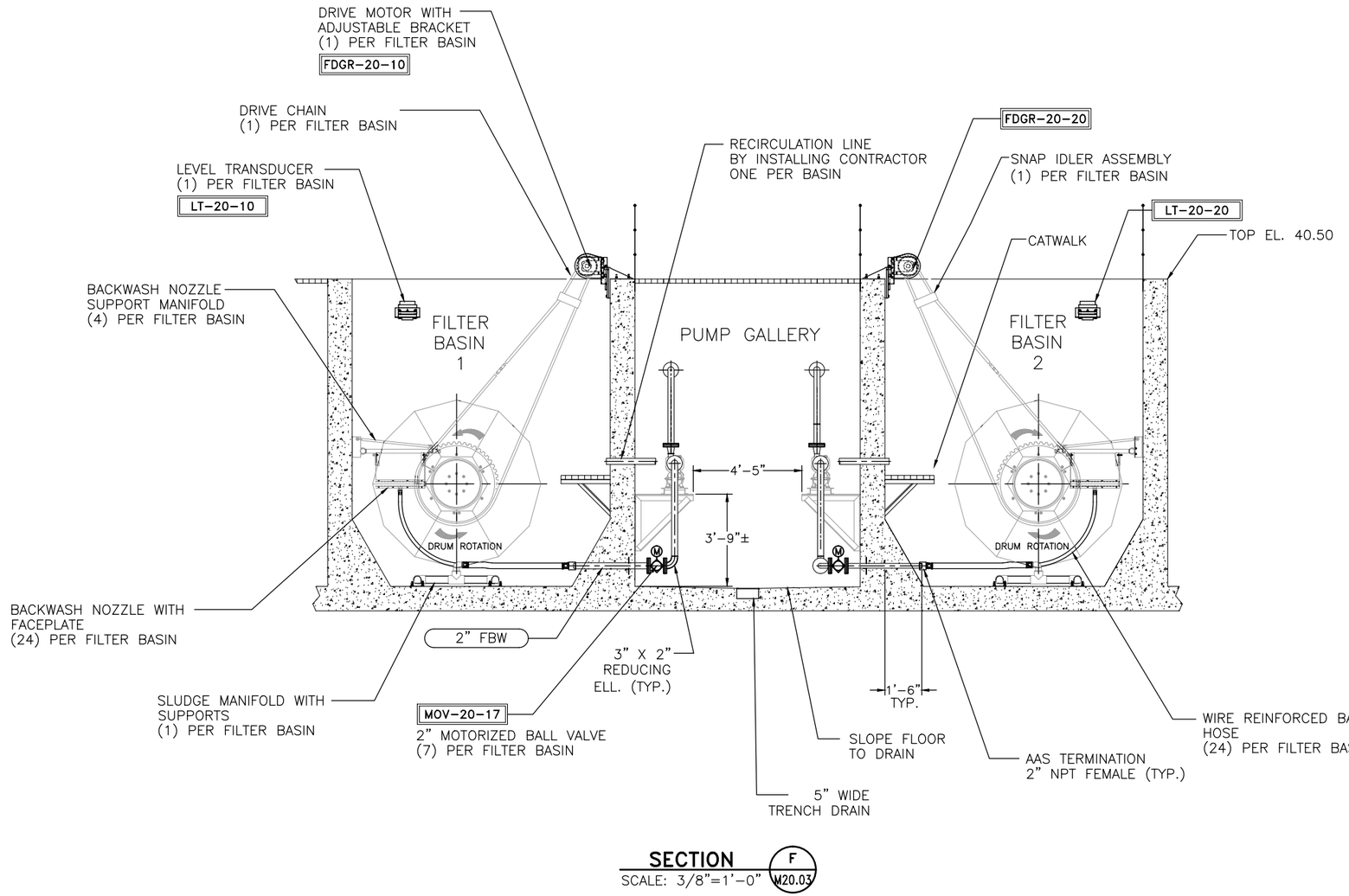
~~REDUCED RECORD SET NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

RAPID MIXING, FLOCCULATION, AND FILTERS SECTION - IV

SCALE: AS NOTED
DRAWING NUMBER: M20.13
SHEET NUMBER: OF SHEETS



SECTION F
SCALE: 3/8"=1'-0" M20.03

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-9500 ☐ SAN JOSE (408) 287-3450 ☐ SAN DIEGO (619) 378-9382 ☐ WALNUT CREEK (925) 934-8060
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
6			
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4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

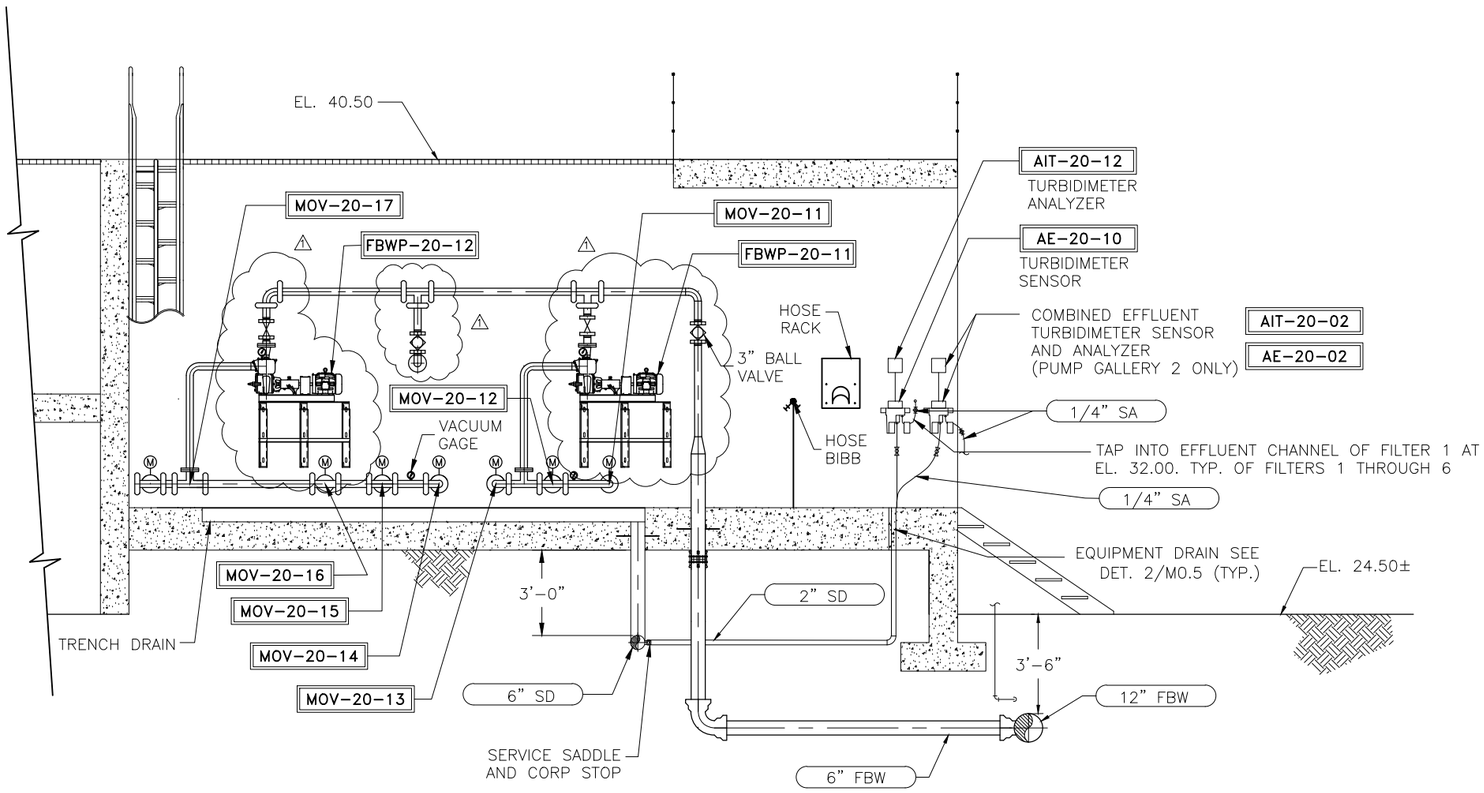
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

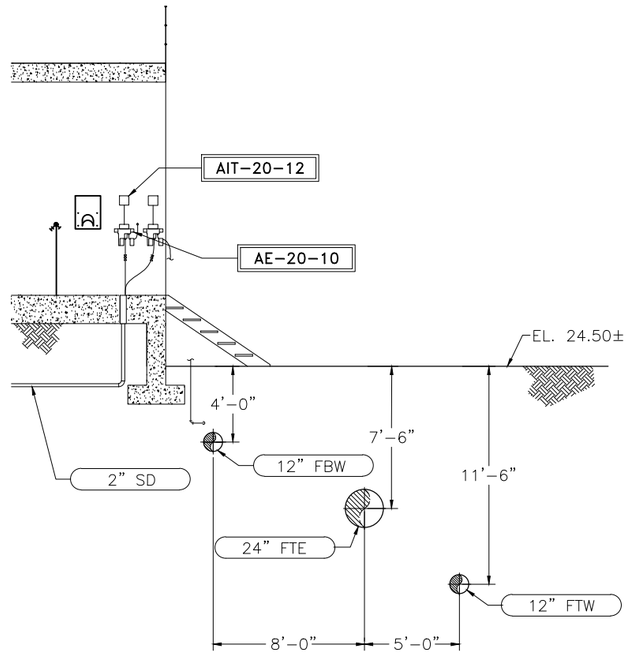
RAPID MIXING, FLOCCULATION, AND FILTERS SECTION - V

SCALE: AS NOTED
DRAWING NUMBER: M20.14
SHEET NUMBER: OF SHEETS

SCH-DM2014.DWG
\\SAS1\PROJECT\N\SA1224_11\CADD\Mechanical\20\
06/10/05 11:34 a.m.



SECTION G
SCALE: 3/8"=1'-0" M20.03



SECTION H
SCALE: 1/4"=1'-0" M20.04

NOTES:

1. SECTION SHOWN IS TYPICAL FOR SOUTH WALL OF PUMP GALLERIES 1 AND 3 EXCEPT FOR COMBINED EFFLUENT TURBIDIMETER.

2. SECTION SHOWN IS TYPICAL FOR SOUTH WALL OF PUMP GALLERY 2.

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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BEYOND ENGINEERING
☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-7600 ☐ SACRAMENTO (916) 641-9100 ☐ SAN JOSE (408) 287-3100 ☐ SAN DIEGO (619) 378-9382 ☐ WALNUT CREEK (925) 934-9080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
6			REDUCED RECORD SET NOT TO SCALE
5			
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2	SEM	09/11	RECORD SET
1	KMP	3/16/06	MODELED TO MATCH SUBMITTAL #41

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
RAPID MIXING, FLOCCULATION, AND FILTERS SECTION - VI

SCALE: AS NOTED
DRAWING NUMBER: M20.15
SHEET NUMBER: OF SHEETS

SCH-DM2015.DWG NONE
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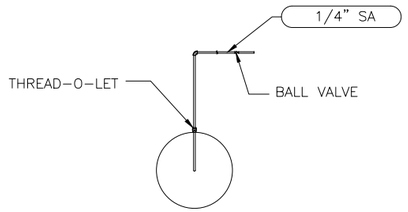
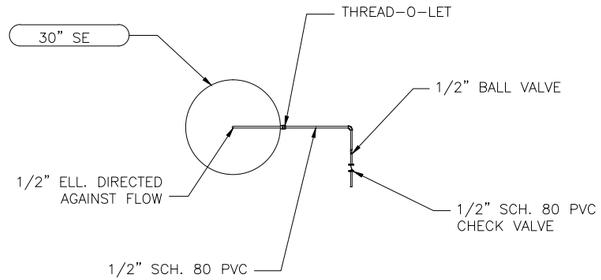
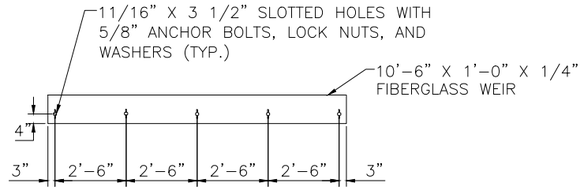
06/10/05



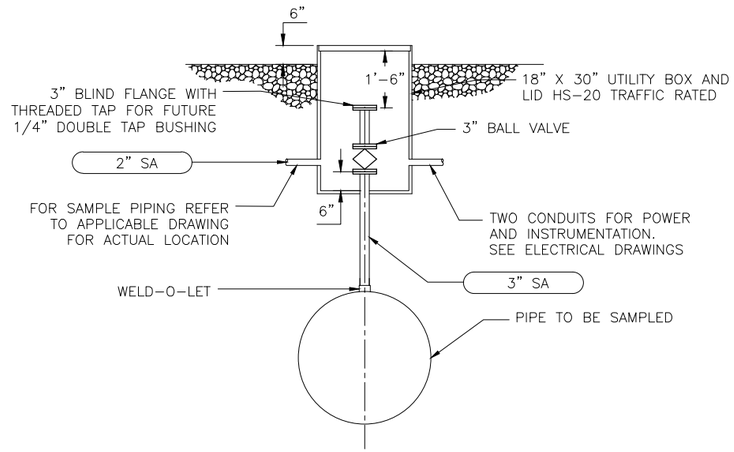
INFLUENT TURBIDIMETER SAMPLE TAP DETAIL (1 / M20.11)
SCALE: 1/2"=1'-0"



EXPOSED CHEMICAL DIFFUSOR DETAIL (2 / M20.11)
SCALE: 1/2"=1'-0"



FILTER EFFLUENT WEIR DETAIL (3 / M20.13)
SCALE: 3/8"=1'-0"



SAMPLE TAP DETAIL (4 / M20.04)
SCALE: 1/2"=1'-0"

RECORD SET

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NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 781-0444 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 282-1600 ☐ SACRAMENTO (916) 641-9130 ☐ SAN JOSE (408) 487-2430 ☐ SAN DIEGO (619) 378-4382 ☐ WALNUT CREEK (510) 934-0282
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
6			
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4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

RAPID MIXING, FLOCCULATION, AND FILTERS DETAILS

SCALE: AS NOTED
DRAWING NUMBER: M20.20
SHEET NUMBER: OF SHEETS

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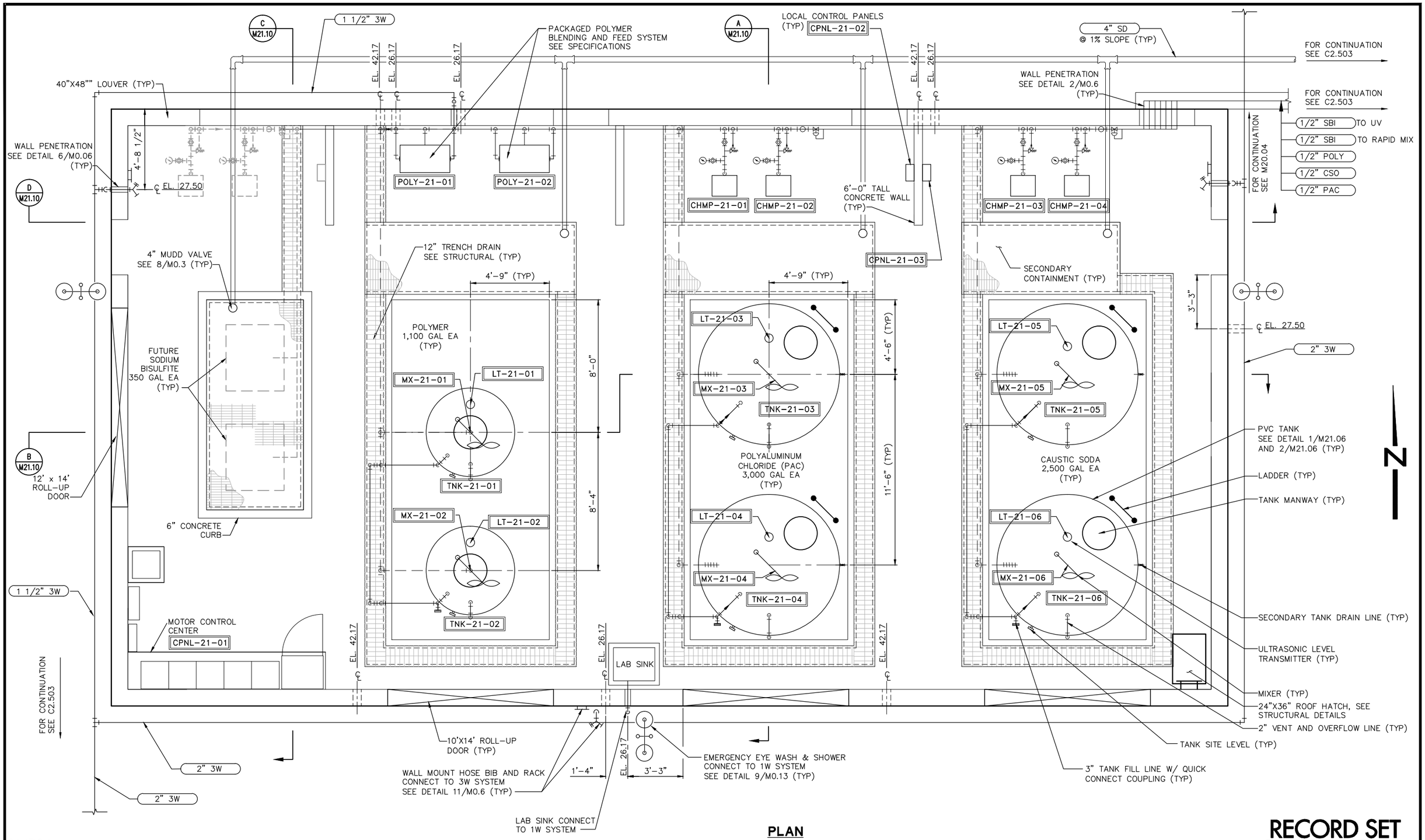

PLAN

RECORD SET

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BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. ROWDEN
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: N. ESPINOSA

NO.	BY	DATE	REVISIONS
6			
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4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

CHEMICAL HANDLING BUILDING MECHANICAL PLAN

SCALE 3/8" = 1'

DRAWING NUMBER M21.01

SHEET NUMBER OF SHEETS

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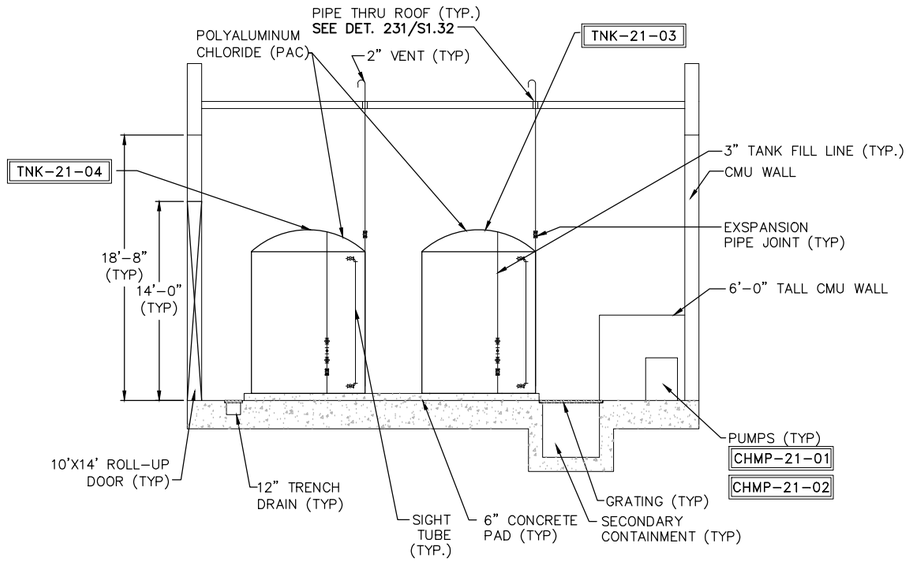
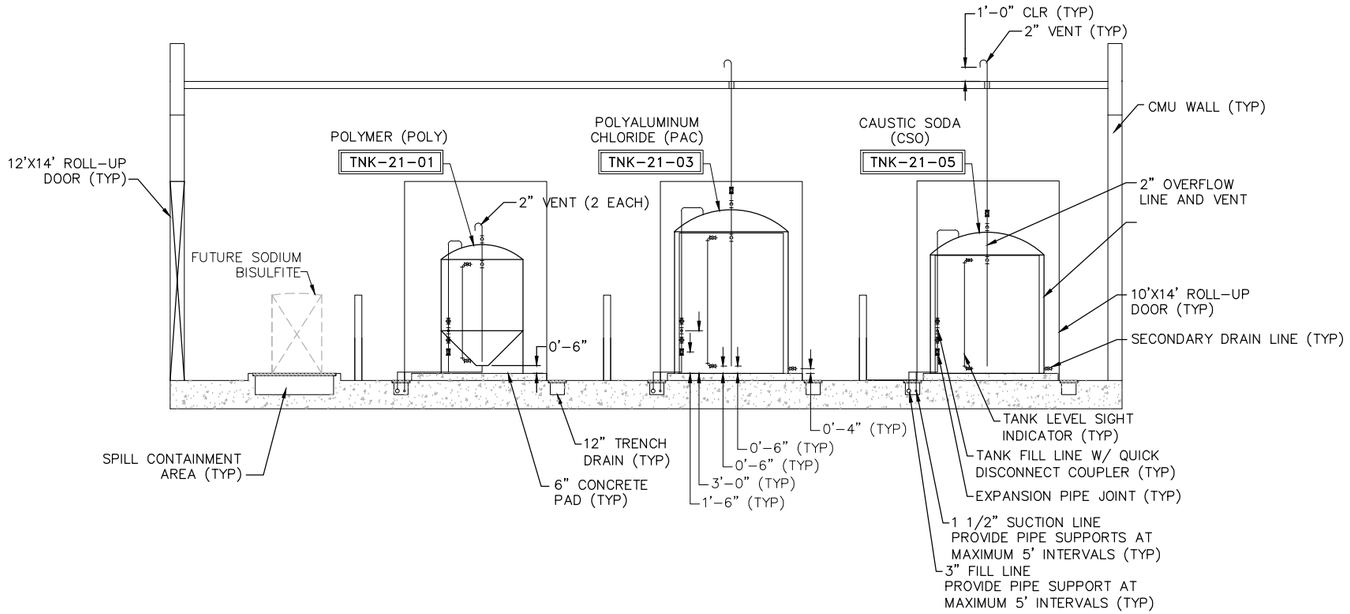
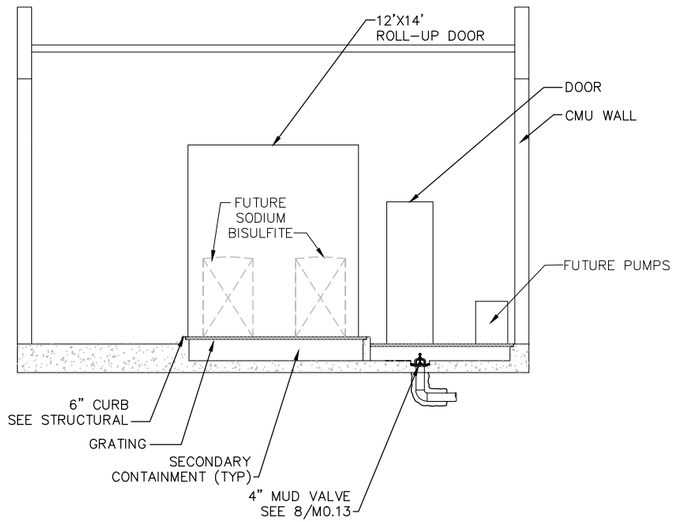


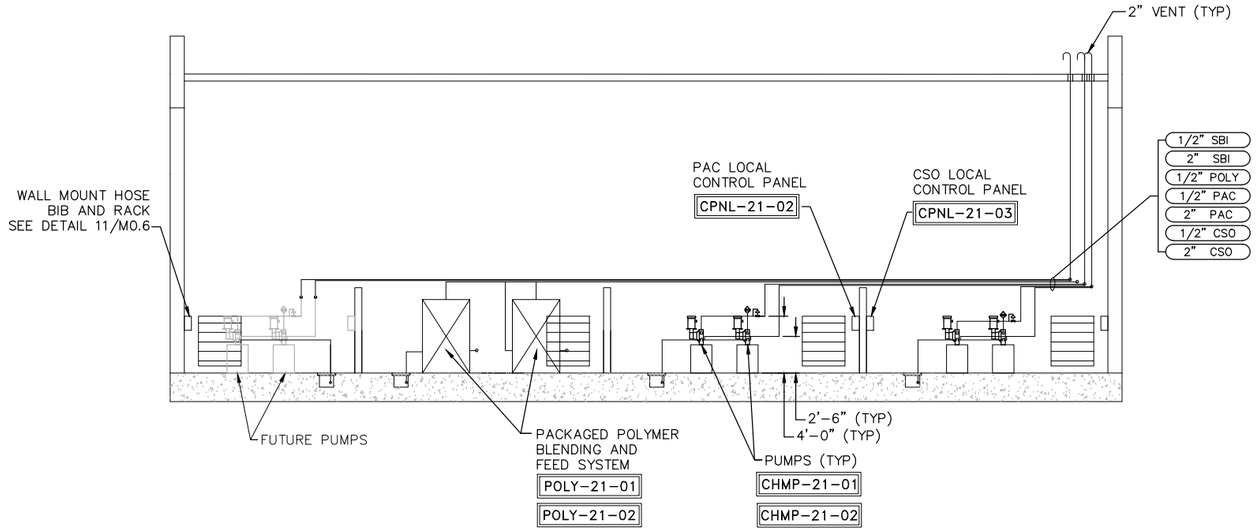
SECTION A M21.01



SECTION B M21.01



SECTION C M21.01



SECTION D M21.01

RECORD SET

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BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. ROWDEN
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: N. ESPINOSA

NO.	BY	DATE	REVISIONS
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4			REDUCED RECORD SET NOT TO SCALE
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2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

CHEMICAL HANDLING BUILDING MECHANICAL PLAN SECTIONS

SCALE 3/16" = 1'

DRAWING NUMBER **M21.02**

SHEET NUMBER OF SHEETS

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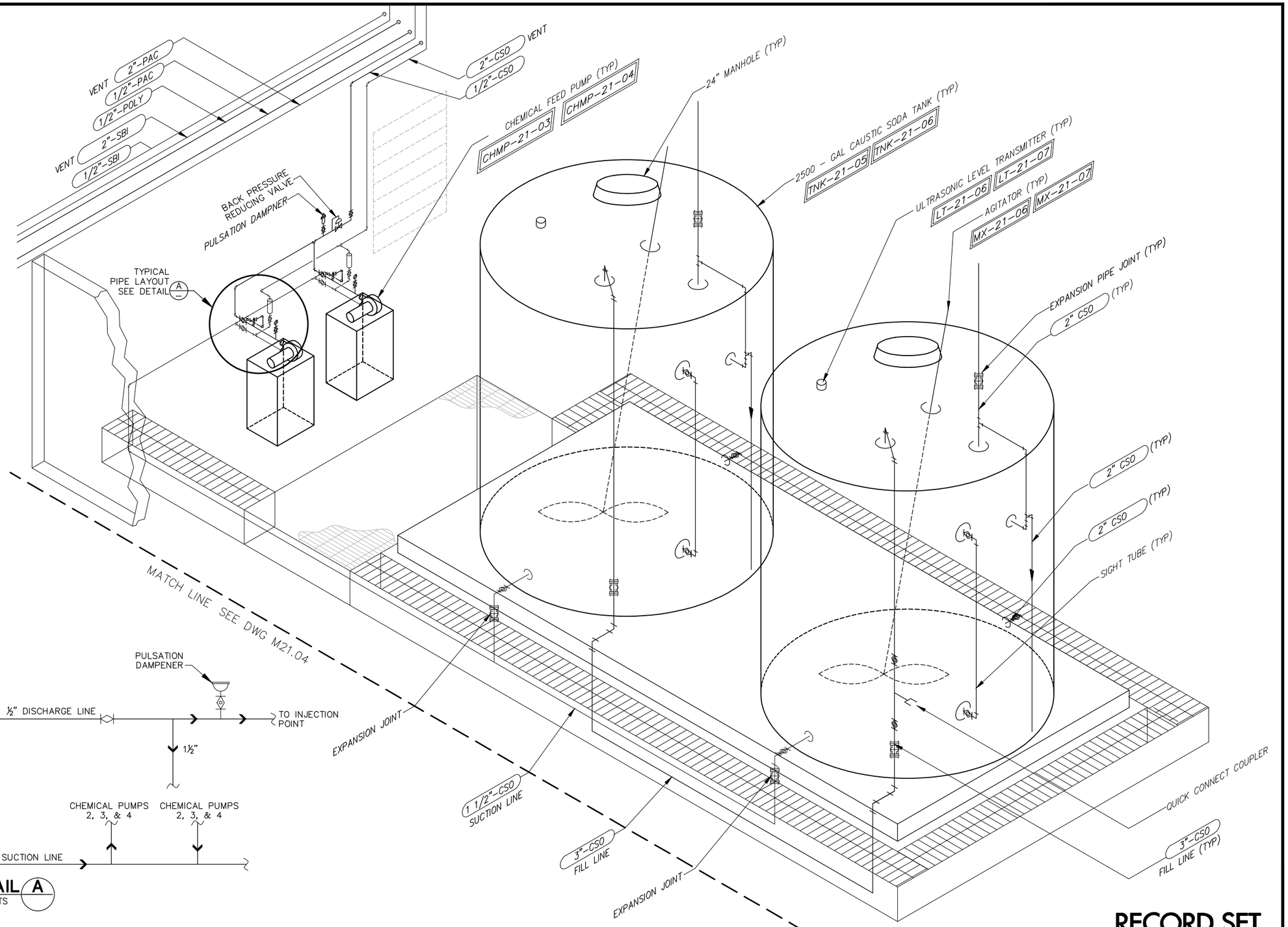

RECORD SET

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NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 781-0444 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 282-9600 ☐ SACRAMENTO (916) 641-9130 ☐ SAN JOSE (408) 487-2430 ☐ SAN DIEGO (619) 378-6382 ☐ WALNUT CREEK (510) 934-0282
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: R. ROWDEN
CHECKED BY: A.G. CALICIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: N. ESPINOSA

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

CHEMICAL HANDLING BUILDING
ISOMETRIC DIAGRAM - CAUSTIC SODA

SCALE: NTS
DRAWING NUMBER: M21.03
SHEET NUMBER: OF SHEETS

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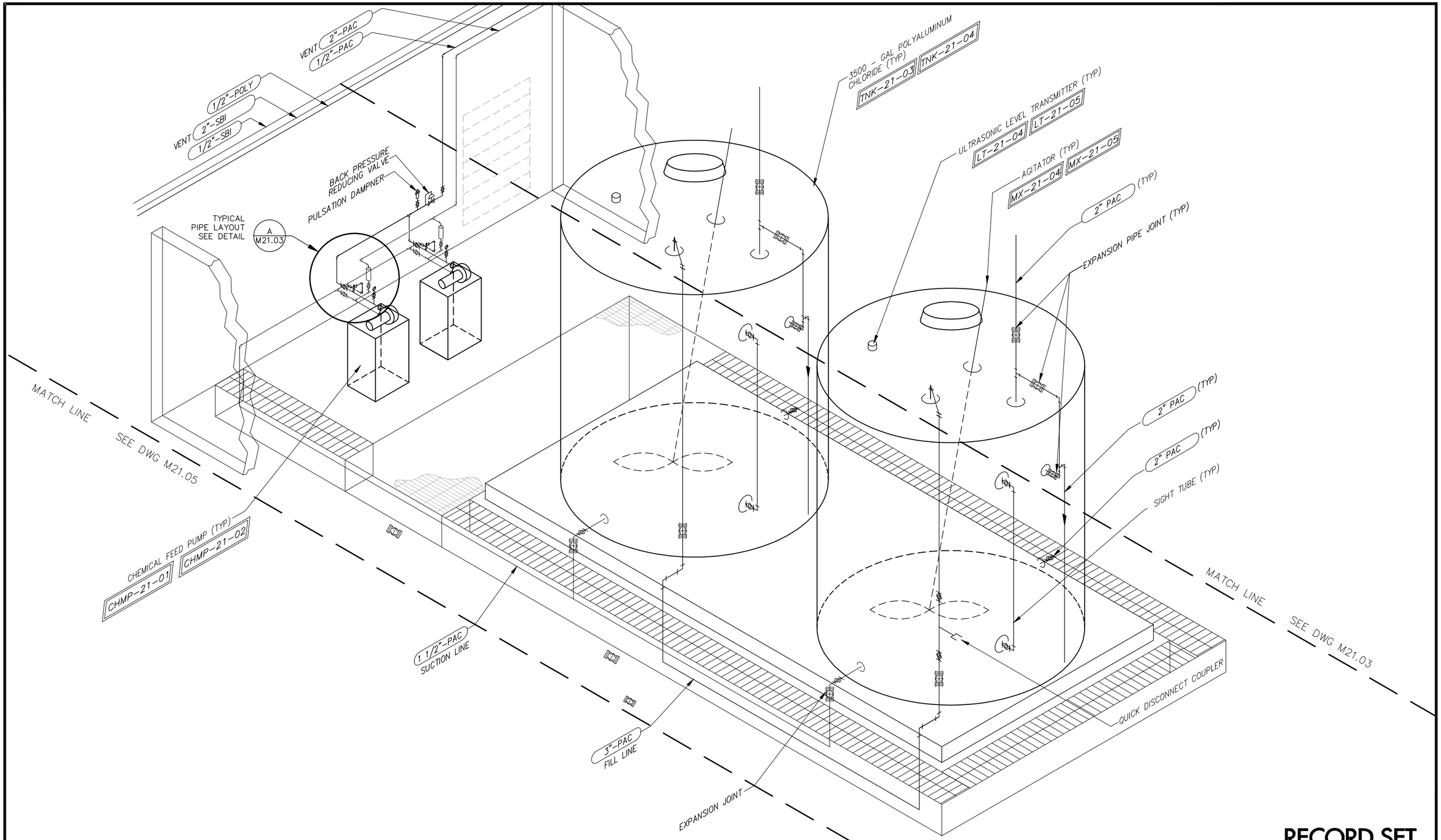

RECORD SET

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NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 791-0444 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 282-1600 ☐ SACRAMENTO (916) 641-9150 ☐ SAN JOSE (408) 287-9150 ☐ SAN DIEGO (619) 378-9282 ☐ WALNUT CREEK (510) 934-0480
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David RICHARD No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE:	XXXXXX
PROJECT NO.:	SA1224
DRAWN BY:	R. ROWDEN
CHECKED BY:	A.G. CALICIANO
PROJ. MGR.:	D. RICHARD
PROJ. ENGR.:	N. ESPINOSA

NO.	BY	DATE	REVISIONS
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4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

CHEMICAL HANDLING BUILDING ISOMETRIC DIAGRAM - PAC

SCALE: AS NOTED
DRAWING NUMBER: M21.04
SHEET NUMBER: OF SHEETS

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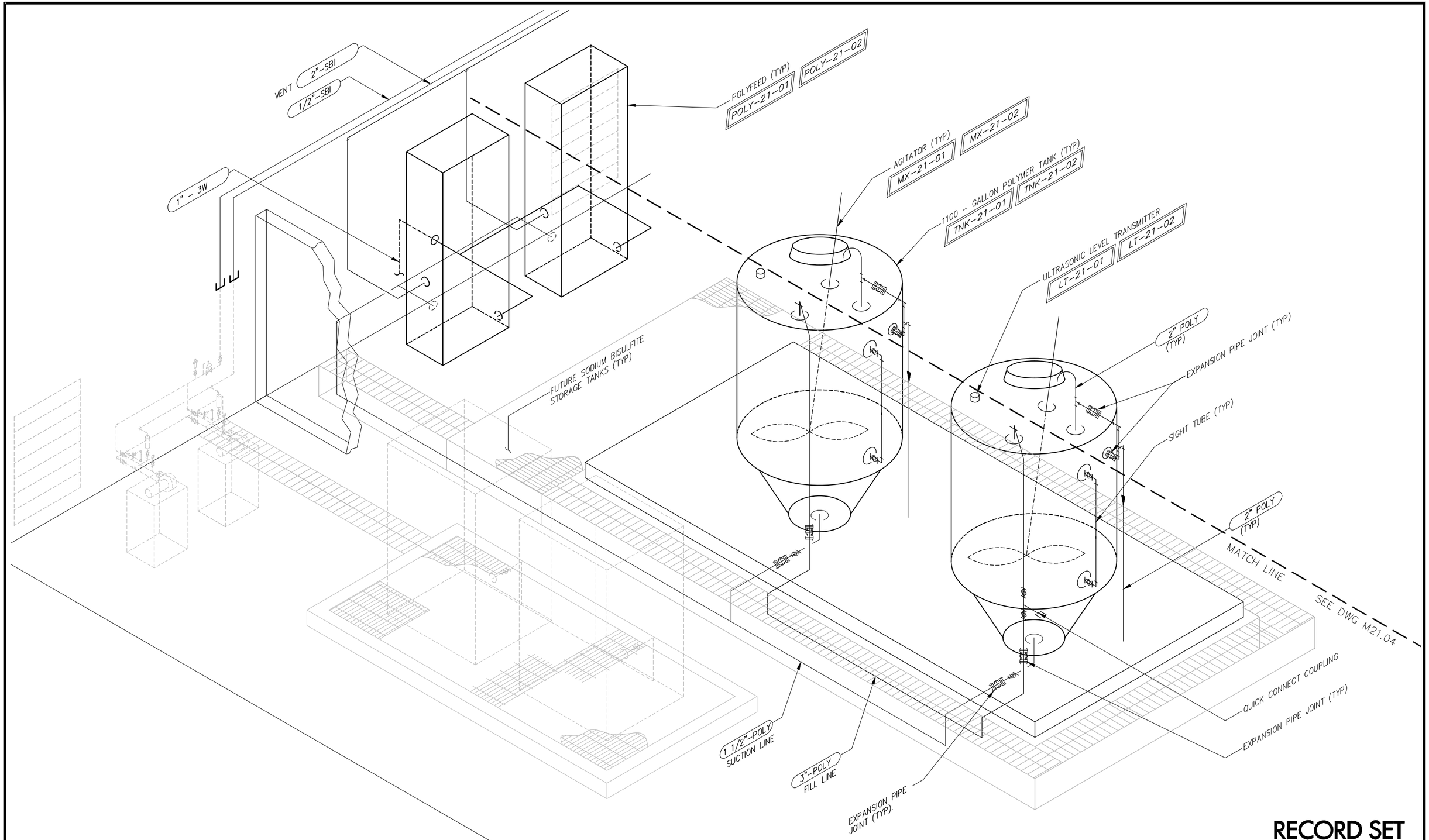

RECORD SET

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NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 382-7600 ☐ SACRAMENTO (916) 641-9100 ☐ SAN JOSE (408) 287-9100 ☐ SAN DIEGO (619) 378-9382 ☐ WALNUT CREEK (925) 934-9080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: RBR
CHECKED BY: NFE
PROJ. MGR.: TKS
PROJ. ENGR.: NFE

NO.	BY	DATE	REVISIONS
6			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

CHEMICAL HANDLING BUILDING
ISOMETRIC DIAGRAM - POLY AND FUTURE SBI

SCALE: N.T.S.
DRAWING NUMBER: M21.05
SHEET NUMBER: OF SHEETS

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06/13/05 5:21 p.m.
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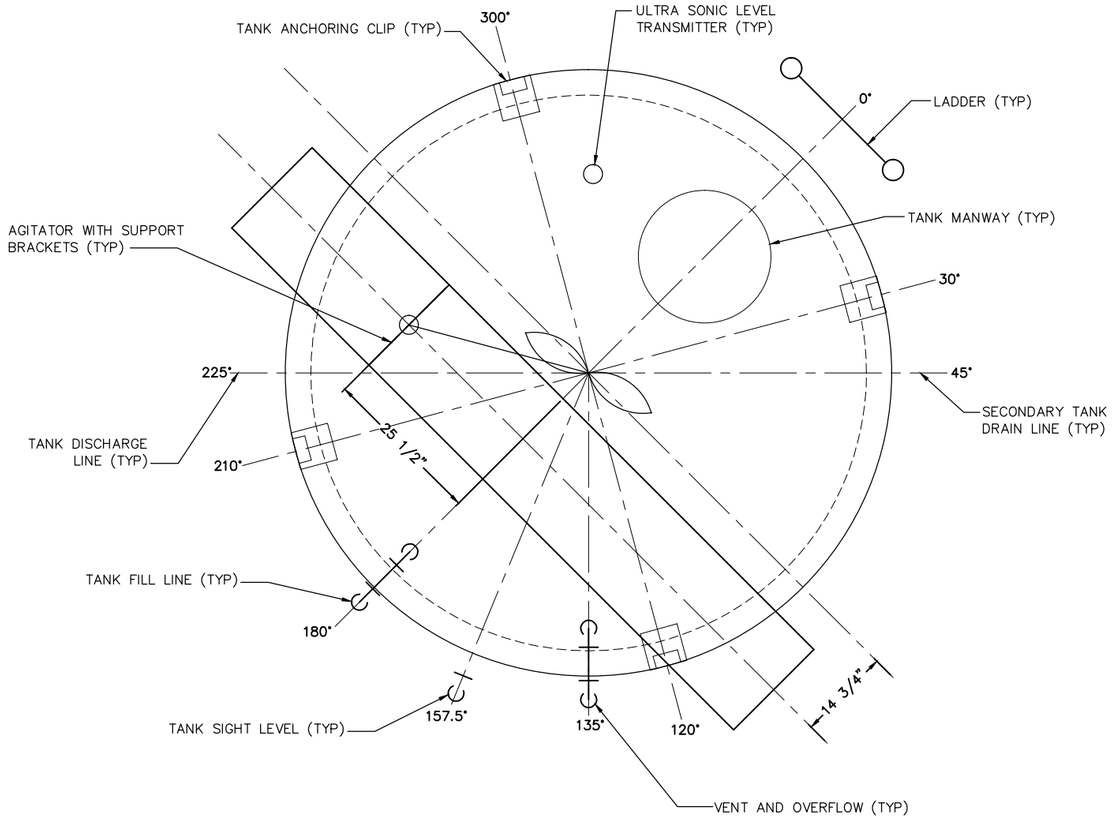
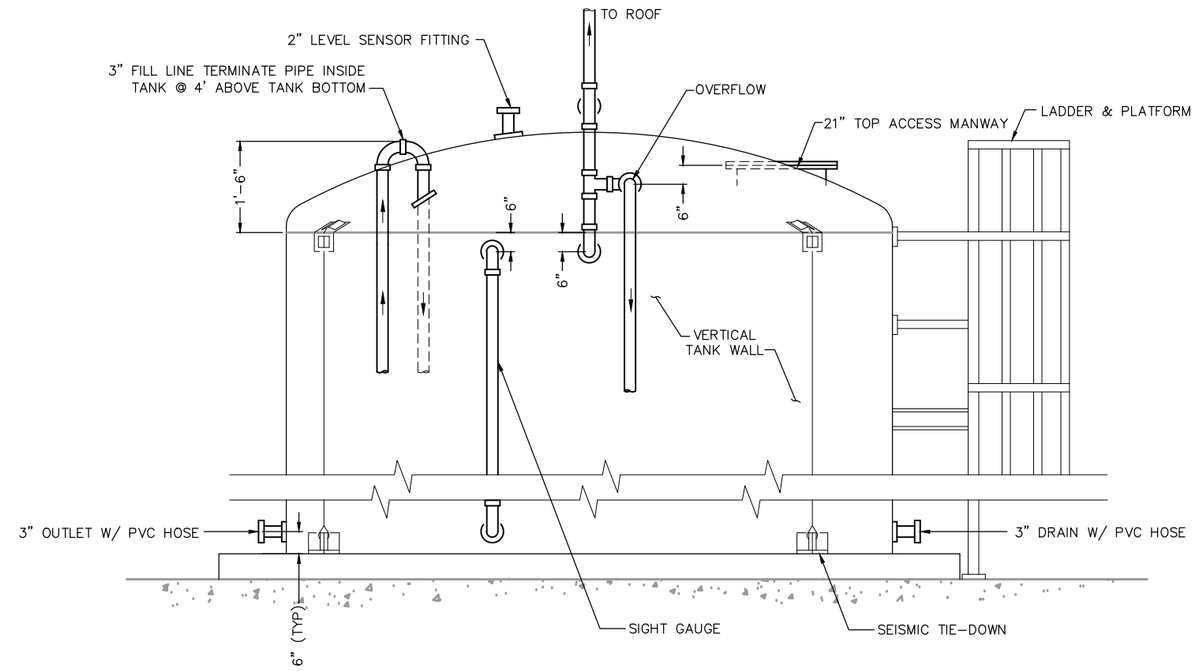


TYPICAL TANK – PLAN

DETAIL 1 TYP

NOT TO SCALE



TYPICAL TANK – ELEVATION

DETAIL 2 TYP

NOT TO SCALE

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: JUNE 2005
PROJECT NO.: SA1224
DRAWN BY: R. ROWDEN
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: N. ESPINOSA

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

CHEMICAL HANDLING BUILDING DETAILS

SCALE: NOT TO SCALE

DRAWING NUMBER: **M21.06**

SHEET NUMBER: OF SHEETS

SCH-DM2106.DWG
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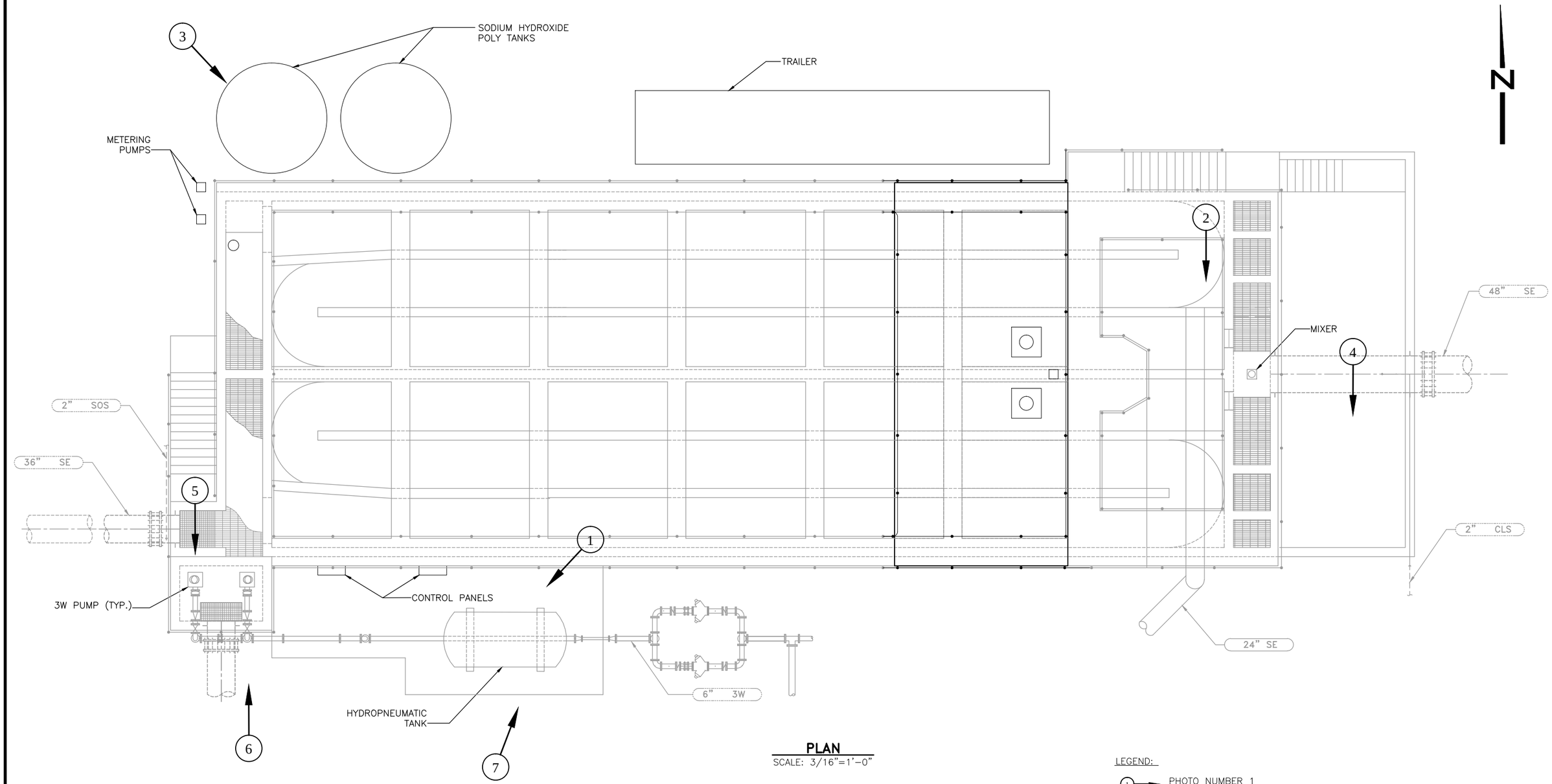

PLAN
SCALE: 3/16"=1'-0"

LEGEND:

(1) → PHOTO NUMBER 1
(TAKEN IN DIRECTION ARROW IS POINTING)
SEE DRAWINGS M22.01 AND M22.02
PHOTOGRAPHS WERE TAKEN 01-25-05 AND
07-08-05 TO DEPICT EXISTING CONDITIONS

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

PHOTO INDEX - EXISTING CHLORINE CONTACT TANK AND PLANT WATER PUMP STATION

SCALE 3/16"=1'-0"
DRAWING NUMBER M22.00
SHEET NUMBER OF SHEETS

\\SAS1\PROJECT\ N:\SA1224_11\CADD\MECH\ASCII\M22.00.22012202.DWG 10/11/05 3:03 p.m.

PHOTO 1

HYDROPNEUMATIC TANK AND PLANT WATER PUMP STATION

PHOTO 2

ABANDONED MIXER AT CCT INLET

PHOTO 3

SODIUM HYPOCHLORITE STORAGE TANKS (TO BE REMOVED BY THE CITY)

PHOTO 4

EQUIPMENT GALLERY

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

PHOTOGRAPHS TAKEN AT CHLORINE CONTACT TANK - 1 DEMOLITION PLAN

SCALE: NOT TO SCALE
DRAWING NUMBER: M22.01
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT, N:\SA1224_11\CADD\MECHANICAL\M22300.2201.2202.DWG 10/11/05 3:03 p.m.

PHOTO 5

PLANT WATER PUMPS – 3W SUMP AT CORNER OF CCT

PHOTO 6

DISCHARGE PIPING – PLANT WATER PUMP STATION

PHOTO 7

HYDROPNEUMATIC TANK

RECORD SET

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by preparer of these plans.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET~~
~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

PHOTOGRAPHS AT CHLORINE CONTACT TANK - 2
DEMOLITION PLAN

SCALE: NOT TO SCALE
DRAWING NUMBER: M22.02
SHEET NUMBER: OF SHEETS

\\SAS1\PROJECT, N\SA1224_11\CADD\MECHANICAL\M22.02 2201,2202.DWG
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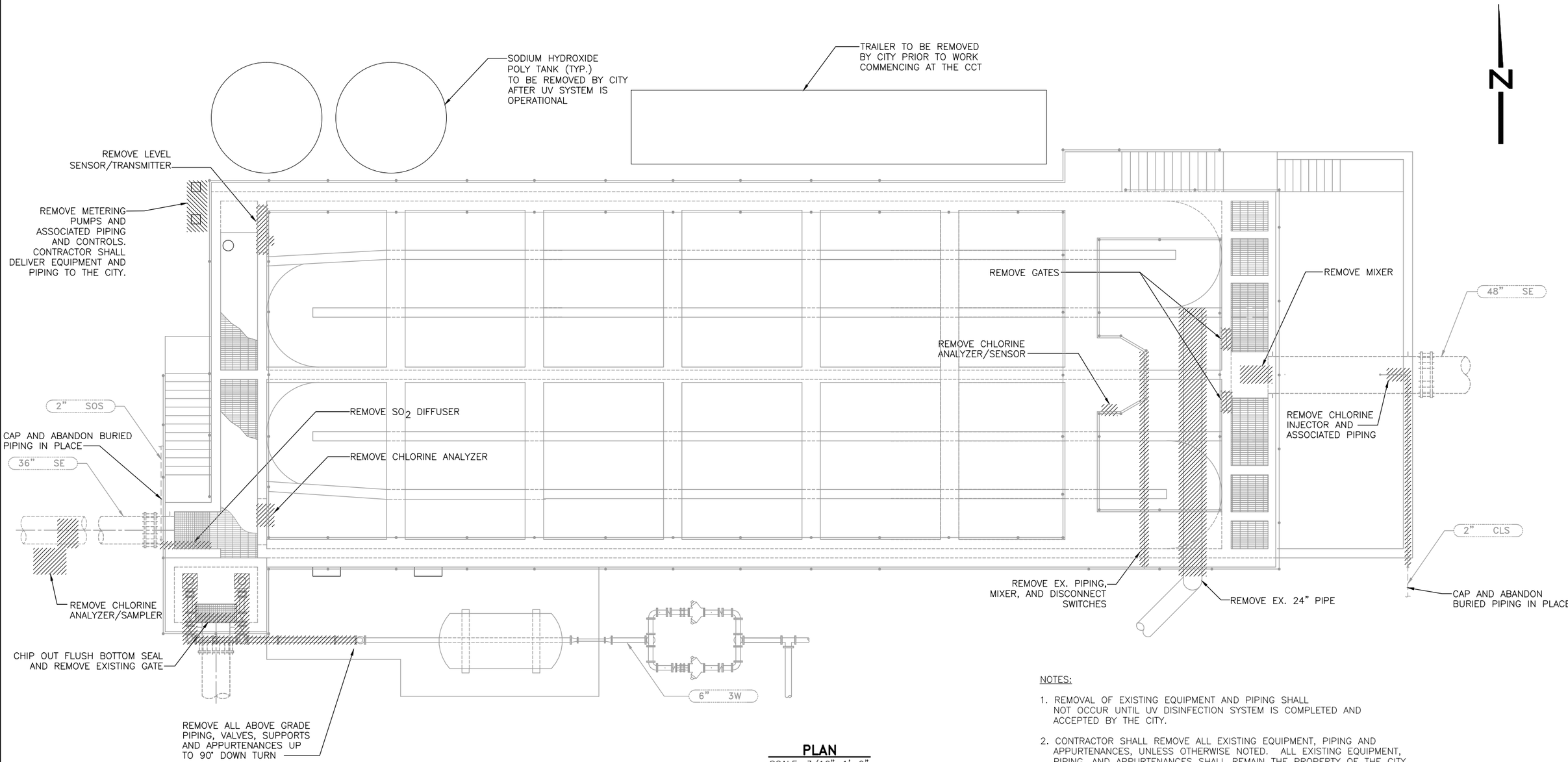

PLAN
SCALE: 3/16"=1'-0"

NOTES:

1. REMOVAL OF EXISTING EQUIPMENT AND PIPING SHALL NOT OCCUR UNTIL UV DISINFECTION SYSTEM IS COMPLETED AND ACCEPTED BY THE CITY.
2. CONTRACTOR SHALL REMOVE ALL EXISTING EQUIPMENT, PIPING AND APPURTENANCES, UNLESS OTHERWISE NOTED. ALL EXISTING EQUIPMENT, PIPING, AND APPURTENANCES SHALL REMAIN THE PROPERTY OF THE CITY, UNLESS DESIGNATED OTHERWISE, AND SHALL BE TRANSPORTED TO A NEARBY FACILITY TO BE DESIGNATED BY THE CONSTRUCTION MANAGER.
3. ALL EXISTING PIPING AND CONDUITS WHICH PENETRATE THE FINISH GRADE SHALL BE CAPPED 2-INCHES ABOVE GRADE.

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
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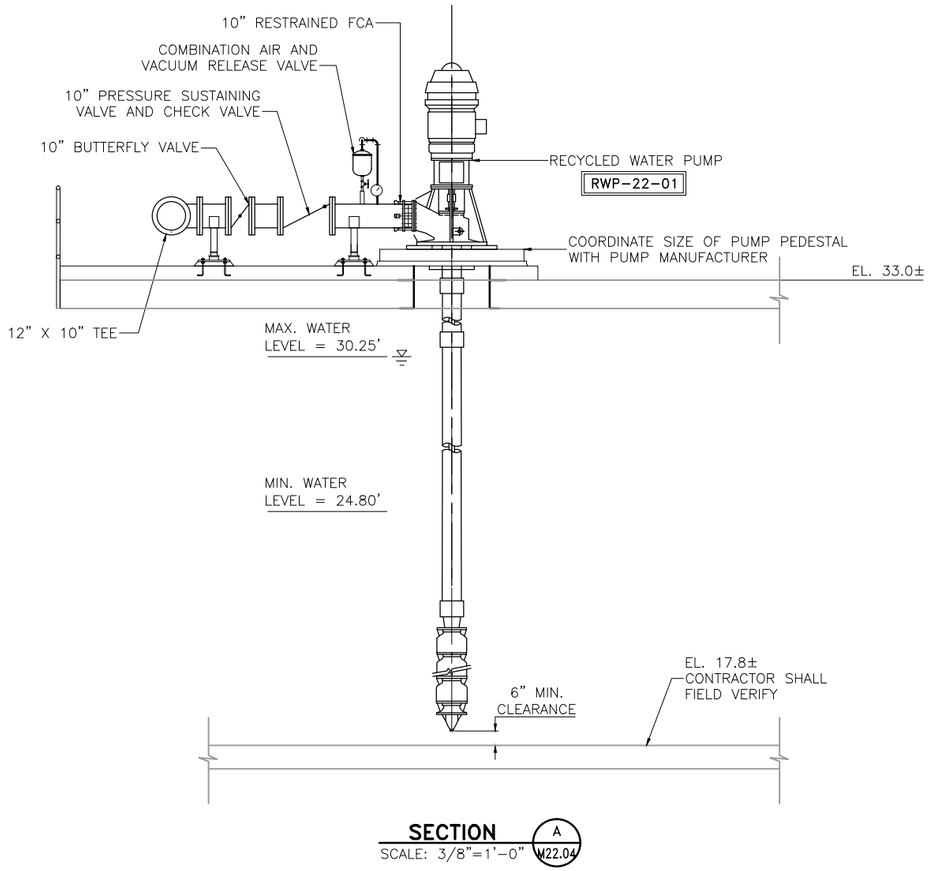
1	SEM	09/11	RECORD SET

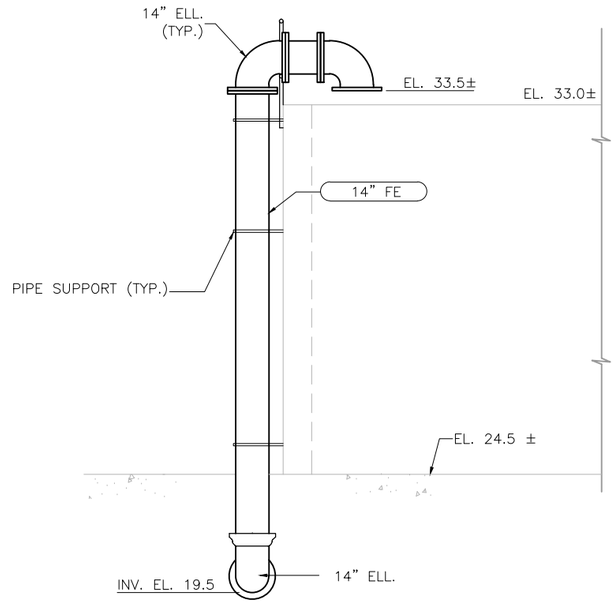
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
CCT CONVERSION - DEMOLITION PLAN

SCALE: 3/16"=1'-0"
DRAWING NUMBER: M22.03
SHEET NUMBER: OF SHEETS

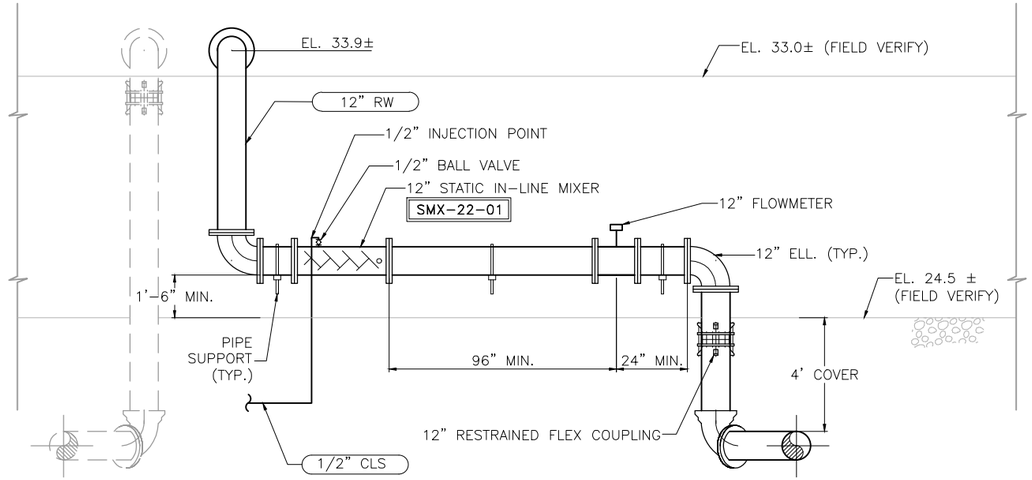
\\SAS1\PROJECT, N:\SA1224_11\CADD\MECHANICAL\M22303.DWG NONE
10/11/05 3:13 p.m.



SECTION A
SCALE: 3/8"=1'-0" M22.04



SECTION B
SCALE: 3/8"=1'-0" M22.04



SECTION C
SCALE: 3/8"=1'-0" M22.04

RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER David Richard No. 33479 EXP. CIVIL STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: K.M. PERALTA
CHECKED BY: A.G. CALCIANO
PROJ. MGR.: D. RICHARD
PROJ. ENGR.: A.K. FURUYA

NO.	BY	DATE	REVISIONS
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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
RECYCLED WATER PUMP STATION - SECTIONS

SCALE: AS NOTED
DRAWING NUMBER: M22.10
SHEET NUMBER: OF SHEETS

SCH-DM2210.DWG NONE
\\SAS1\PROJECT\ N:\SA1224_11\CADD\MECHANICAL\22\
10/11/05 3:24 p.m.

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FIXTURE SCHEDULE

FIXTURE	SYMBOL	VENT	WASTE		COLD WATER		HOT WATER	
			BRANCH	OUTLET	BRANCH	OUTLET	BRANCH	OUTLET
WATER CLOSET, (FV)	WC	2"	4"	4"	1?"	1"	–	–
URINAL, WALL	UR	1?"	2"	2"	1"	?"	–	–
LAVATORY	L	1?"	2"	1?"	?"	?"	?"	?"
SERVICE SINK, 2"	SS	2"	2"	2"	?"	?"	?"	?"
SINK	S	1?"	2"	1?"	?"	?"	?"	?"
FLOOR DRAIN	FD	2"	2"	2"	–	–	–	–
FLOOR DRAIN	FD	2"	3"	3"	–	–	–	–

EQUIPMENT SCHEDULE

SYMBOL	LOCATION	DESCRIPTION
LV 12-1	B114	LAB VACUUM "BUSCH" MODEL R5-0021 OR EQUAL, 15 SCFM, 25" HG MERCURY, 1 HP, 208V/3ø, 18"x12"x11" HIGH, PROVIDE WITH MANUFACTURERS RECOMENDED EXHAUST THRU ROOF. WEIGHT: 400 LBS.
LA 12-1	B114	LAB AIR COMPRESSOR "CHAMPION" MODEL 12T7VTS35 OR EQUAL, OIL FREE, 25 SCFM @ 60 PSI, 7.5 HP, 460V/3ø, 69"x37?"x67" HIGH + CLEARANCES. PROVIDE WITH COALESCING FILTER & REFRIGERATED AIR DRYER; "CHAMPION" TYPE CCD CYCLING, 115V/1ø, 7.3 AMP, 14"x13"x15" HIGH, PROVIDE 120 GALLON HORIZONTAL ASME RECEIVER. SYSTEM WEIGHT: 1530 LBS.
ANT 12-1	SITE	ACID NEUTRALIZER TANK ENFIELD MODEL # T0150, 150 GALLON CAPACITY, TANK DIAMETER 36?" X 48" HIGH ?" WALL THICKNESS, 4" MAX INLET/OUTLET SIZE, PROVIDE 1,750lbs. OF LIMESTONE CHIPS AT START UP.
GWH 12-1	B114	GAS WATER HEATER A.O. SMITH "CYCLONE" MODEL # BTH-199(A), 100 GALLON STORAGE, 199,000 BTU/H INPUT, 283? TEMP RISE AT 80??, 3" PVC VENT (FORCED DRAFT) AND INTAKE, (UP TO 50', 4" PVC UP TO 120'), 94% EFFECIENT. BLOWER 15 AMP, 120V/1?. SET WATER HEATER TEMPERATURE AT 140°. SEE DETAIL 4/P1.02. FOR FLUE DETAIL SEE 5/P1.02
GWH 12-2	JANITOR	GAS WATER HEATER A.O. SMITH "CYCLONE" MODEL # BTH-120(A), 60 GALLON STORAGE, 125,000 BTU/H INPUT, 178? TEMP RISE AT 80??, 3" PVC VENT (FORCED DRAFT) AND INTAKE (UP TO 50', 4" PVC UP TO 120'), 94% EFFECIENT. BLOWER 15 AMP, 120V/1?. SEE DETAIL 4/P1.02. FOR FLUE DETAIL SEE 5/P1.02
ET 12-1	B114	EXPANSION TANK AMTROL MODEL # ST-12-C, 4.7 GALLON, 34LBS. SHIPPED WEIGHT. DIMENSIONS: 12?" HIGH X 12" DIAMETER.
ET 12-2	JANITOR	EXPANSION TANK AMTROL MODEL # ST-12-C, 4.7 GALLON, 34LBS. SHIPPED WEIGHT. DIMENSIONS: 12?" HIGH X 12" DIAMETER.
CP 12-1	B114	RECIRCULATION PUMP BELL & GOSSET MODEL # PL-36 CIRC PUMP, 22 GPM @ 20 FT.HD., MAX TEMP. 225?, MAX PRESSURE 150PSI, 1/6 HP, 120V/1?. ALL BRONZE CONSTRUCTION. PUMP POWERED BY DIST. PANEL 12-04, 20A-1P BREAKER IN THE PANEL. 6"x6"x4" NEMA 1 JUNCTION BOX WITH 4-POINT TERMINAL STRIP & WIRE 120VAC.
HT 1	LAB AREA	HEAT TRACE TAPE RAYCHEM MODEL HWAT-B2, .006 AMP/FT AT 105?, 15 AMP CIRCUIT BREAKER AT 800' MAX, 208V/1?.
TMV 1	LAB AREA	THERMOSTATIC MIXING VALVE LEONARD MODEL NO. TYPE TM-50-E-RF, ?" INLETS, 1" OUTLET. SEE DETAIL 3/P1.03.
GPR 1	LAB BUILDING	GAS PRESSURE REGULATOR EQUIMETER OR EQUAL, MIN, 720 CFH AT 7" W.C. DISCHARGE, 5 PSI ENTERING PRESSURE (CONTRACTOR TO VERIFY EXACT PRESSURE ON SITE). SEE DETAIL 2/P1.02.

PLUMBING LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
A	A	COMPRESSED AIR
	CW	COLD WATER
DI	DI	DEIONIZED WATER
	(E)	EXISTING TO BE REMOVED
G	G	GAS – LOW PRESSURE
	HW (105°)	TEMPERED HOT WATER PIPING
	HWR	HOT WATER RETURN
CD	CD	CONDENSATE DRAIN
D	D	INDIRECT DRAIN
LV	LV	LAB VACUUM
O	O	OXYGEN
AW	AW	ACID RESISTENT SOIL, WASTE OR SANITARY SEWER BELOW FLOOR
	S, W	SOIL, WASTE OR SANITARY SEWER BELOW FLOOR
SD	SD	STORM DRAIN, RAINWATER DRAIN BELOW FLOOR
OF	OF	STORM, RAINWATER OVERFLOW
	TP	TRAP PRIMER
AV	AV	ACID RESISTENT VENT PIPING
	V	VENT PIPING
		BRANCH – TOP CONNECTION
		BRANCH – BOTTOM CONNECTION
or		BRANCH – SIDE CONNECTION
	CKV	CHECK VALVE
CO CO	CO	CLEANOUT PLUG
Ø	FCO	FLOOR CLEANOUT
Ø	GCO	GRADE CLEANOUT
	WCO	WALL CLEANOUT
	CP	CIRCULATING PUMP
	POC	POINT OF CONNECTION
	FD	FLOOR DRAIN
OR	GSCK	GAS COCK
OR	RV or P&TRV	RELIEF VALVE OR PRESSURE & TEMPERATURE RELIEF VALVE
		RISER DOWN (ELBOW)
		RISER UP (ELBOW)
	A, G, LV, O	BACK MOUNTED LAB GAS OUTLET
	A, G, LV, O	DECK MOUNTED LAB GAS OUTLET
	ABC	ABOVE CEILING
	AFF	ABOVE FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	AF , BF	ABOVE FLOOR , BELOW FLOOR
	?	CENTER LINE
	?F	DEGREES FAHRENHEIT
	? , ?	DIAMETER , SQUARE (FEET)
	FV , FT	FLUSH VALVE , FLUSH TANK
	FU	FIXTURE UNIT
	(FA) , (TA)	FROM ABOVE , TO ABOVE
	(FB) , (TB)	FROM BELOW , TO BELOW
	IE	INVERT ELEVATION
	GPM	GALLONS PER MINUTE
	(N) , (E)	NEW , EXISTING
	(R) , (D)	RISE , DROP
	TYP.	TYPICAL
	V , VR , VTR	VENT , VENT RISER , VENT THRU ROOF
	CA	COMBUSTION AIR INTAKE
	ICW	INDUSTRIAL COLD WATER
	IHW	INDUSTRIAL HOT WATER
	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
HW (140°)	HW (140°)	140° HOT WATER PIPING

Capital Engineering Consultants, Inc.
Sacramento, California
TJ/LC DESIGNER/DRAFTER
01003.00 PROJECT NO.

CAUTION:
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RECORD SET

NOLTE
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☐ DENVER (303) 781-0888 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 282-1400 ☐ SACRAMENTO (916) 631-9600 ☐ SAN JOSE (408) 207-0400 ☐ SAN DIEGO (858) 270-5882 ☐ WALNUT CREEK (925) 934-4400
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: JMY
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
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REDUCED RECORD SET
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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

LEGEND & SCHEDULES
PLUMBING

SCALE: NONE
DRAWING NUMBER: P1.01
SHEET NUMBER
OF SHEETS

01003.00\P1-01.FH7 - December 30, 2003 - 08:30

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PLUMBING FIXTURE SPECIFICATION

ADA	SYMBOL	FIXTURE	FIXTURE MANUFACTURER AND MODEL No.	FAUCET OR VALVE MANUFACTURER AND MODEL No.	TRIM MANUFACTURER AND MODEL No.	REMARKS	VENT	WASTE		COLD WATER		HOT WATER	
								BRANCH	OUTLET	BRANCH	OUTLET	BRANCH	OUTLET
	WC-1	**WATER CLOSET** FLOOR MOUNTED FLUSH VALVE STANDARD	"AMERICAN STANDARD" MADERA EL 1.6, NO. 2234.015 FLOOR MOUNTED, ELONGATED, SIPHON JET ACTION 1-1/2" TOP SPUD, 14-1/8" RIM HEIGHT.	"SLOAN" ROYAL 111, ADA COMPLIANT, 1.6 GPF. OR "ZURN" Z-6000AV-WS1.	SEAT: "OLSONITE" MODEL 10SSC. PROVIDE WITH SELF-SUSTAINING CONCEALED CHECK HINGES, ONE PIECE STAINLESS STEEL POST HINGES, WHITE COLOR.	WHERE USED FOR ADA ACCESSIBLE WATER CLOSETS, THE FLUSH VALVE HANDLE SHALL BE MOUNTED ON THE WIDE SIDE OF THE	2"	4"	4"	1?"	1"	–	–
	WC-2	**WATER CLOSET** FLOOR MOUNTED FLUSH VALVE ADA	"AMERICAN STANDARD" MADERA EL 1.6, NO. 2305.100 FLOOR MOUNTED, ELONGATED, SIPHON JET ACTION 1-1/2" TOP SPUD, 16-1/8" RIM HEIGHT.	"SLOAN" ROYAL 111, ADA COMPLIANT, 1.6 GPF. OR "ZURN" Z-6000AV-WS1.	SEAT: "OLSONITE" MODEL 10SSC. PROVIDE WITH SELF-SUSTAINING CONCEALED CHECK HINGES, ONE PIECE STAINLESS STEEL POST HINGES, WHITE COLOR.	WHERE USED FOR ADA ACCESSIBLE WATER CLOSETS, THE FLUSH VALVE HANDLE SHALL BE MOUNTED ON THE WIDE SIDE OF THE **WATER CLOSET ENCLOSURE.**	2"	4"	4"	1?"	1"	–	–
	UR-1	**URINAL** WALL MOUNTED FLUSH VALVE ADA	"AMERICAN STANDARD" ALLBROOK NO. 6541.132 WALL HUNG, VITREOUS CHINA, SIPHON JET ACTION. 3/4" TOP SPUD, 2" THREADED OUTLET	"SLOAN" ROYAL 186-1, OR "ZURN" Z-6003AV-WS1. ADA COMPLIANT, 1.0 GPF.	CARRIER: "J.R. SMITH" 644 SERIES OR "ZURN" Z1222	MOUNT AT HEIGHT INDICATED ON ARCHITECTURAL DRAWINGS.	1?"	2"	2"	1"	?"	–	–
	L-1	**LAVATORY** COUNTER MOUNTED HOT AND COLD WATER ADA/STANDARD	"AMERICAN STANDARD" AQUALYN NO. 0476.028 COUNTERTOP, VITREOUS CHINA, FRONT OVERFLOW, 4" CENTERS, 20" x 17" WITH FITTING LEDGE, SELF-RIMMING STYLE.	"CHICAGO" 3300 FAUCET, PUSH LEVER WITH AERATOR WITH 0.5 GPM FLOW RATE. WITH VANDAL RESISTANT ECONO-FLO SPRAY OUTLET. WITH IPS CONNECTIONS, ADA COMPLIANT. SET MAXIMUM WATER TEMPERATURE STOP TO RESTRICT WATER TEMPERATURE TO 110° F.	ADA COMPLIANT. LAVATORY GRID DRAIN WITH 1-1/4" OFFSET TAILPIECE, INTEGRAL PERFORATED GRID NO. 7723.018, CHROME FINISH. MOUNT P-TRAP FLUSH TO WALL.	COUNTER MOUNTED	1?"	2"	1?"	?"	?"	?"	?"
	SS-1	**SERVICE SINK** FLOOR MOUNTED HOT AND COLD WATER JANITORS	"WILLIAMS" SB-900, SERVICEPTOR, 24" x 24" x 12" DEEP FLOOR MOUNTED, TERRAZZO, WITH STAINLESS STEEL CAP ON ALL FOUR TOP SURFACES.	"WILLIAMS" T-15-VB FAUCET WITH POLISHED CHROME FINISH, VACUUM BREAKER AND ADJUSTABLE TOP BRACE, T-35 HOSE AND WALL BRACKET AND T-40 STAINLESS STEEL MOP HANGER, WITH 3 SPRING LOADED RUBBER GRIPS.		AS PART OF ROUGH-IN FOR FAUCET, BRACE.	2"	3"	3"	?"	?"	?"	?"
	SH-1	**SHOWER** FLUSH MOUNTED	"BRADLEY" MODEL WS-1F-EF/LBJ FLUSH MOUNTED INDIVIDUAL WALL SHOWER	COMPLETE WITH HOT AND COLD WATER PRESSURE BALANCED MIXING VALVES, 2 GPM FLOW CONTROL, EQUA-FLO PRESSURE BALANCED MIXING VALVE,	INTEGRAL	MOUNT AT HEIGHT INDICATED ON ARCHITECTURAL DRAWINGS.	–	–	–	?"	?"	?"	?"
	SH-2	**SHOWER** FLUSH MOUNTED ADA	SEE SPECIFICATION SECTION 10990	INTEGRAL	INTEGRAL	MOUNT AT HEIGHT INDICATED ON ARCHITECTURAL DRAWINGS. SEE PLAN FOR ADA SEAT AND BAR LOCATION	2"	2"	2"	?"	?"	?"	?"
△	RS-1	**RINSE STATION** WALL MOUNTED HOT AND COLD WATER		"ZURN" PRE-RINSE MODEL Z841X1, POLISHED CHROME-PLATED FAUCET, QUARTER TURN CERAMIC DISC CARTRIDGES, 2?" LONG SWIVEL INLETS WITH INTEGRAL STOPS, CHECK STOPS, VANDAL RESISTANT COLOR-CODED LEVER HANDLES. FURNISH WITH 24" RISER, 72" STAINLESS STEEL SPRING HOSE, SELF-CLOSING PRE-RINSE HAND-HELD VALVE WITH AN INSULATED HANDLE, A STAY OPEN RING, A PIPE SUPPORT, AND A HOOK.		AS PART OF ROUGH-IN FOR FAUCET, PROVIDE SUITABLE BLOCKING FOR TOP PIPE RISER SUPPORT.	–	–	–	?"	?"	?"	?"
	HB	**HOSE BIBB**	SEE SPECIFICATION SECTION 15400				–	–	–	?"	?"	–	–
	FD	**FLOOR DRAIN**	SEE SPECIFICATION SECTION 15400				2"	2"	2"	–	–	–	–
	FD-2	**FLOOR DRAIN**	SEE SPECIFICATION SECTION 15400		PROVIDE WITH TRACTOR GATE AND SLOTTED SEDIMENT BUCKET.		2"	3"	3"	–	–	–	–
	FS	**FLOOR SINK**	SEE SPECIFICATION SECTION 15400				2"	2"	2"	–	–	–	–
	HD	**HOPPER DRAIN**	SEE SPECIFICATION SECTION 15400				2"	2"	2"	–	–	–	–
	RD/OF	**ROOF DRAIN OVERFLOW**	SEE SPECIFICATION SECTION 15400				–	3" 4"	3" 4"	–	–	–	–

MISC. EQUIPMENT SCHEDULE

UNIT	DESCRIPTION
GWH 13-1	GAS WATER HEATER: "A.O. SMITH" CYCLONE Xi MODEL BTH-120(A), 60 GALLON STORAGE, 120,000 BTUH INPUT, 173 GPH RECOVERY AT 80'F TEMPERATURE RISE, 3" PVC VENT (FORCED DRAFT) AND COMBUSTION AIR INTAKE, 95% THERMAL EFFICIENCY. BLOWER 15 AMP, 120v/1ø/60Hz. PROVIDE WITH OPTIONAL CONCENTRIC VENT KIT. SHIPPING WT. = 490 LBS.
ET 13-1	EXPANSION TANK: "AMTROL" MODEL THERM-X-TROL ST-12-C, 6.4 GALLONS TOTAL VOLUME SHIPPING WT. = 26 LBS.
GPR 13-1	GAS PRESSURE REGULATOR: "EQUIMETER" OR EQUAL, MIN. 200 CFH AT 7" W.C. DISCHARGE, 5 PSI ENTERING PRESSURE (CONTRACTOR TO VERIFY EXACT PRESSURE ON SITE). SEE DETAIL 3/P1.03
GPR 14-1	GAS PRESSURE REGULATOR: "EQUIMETER" OR EQUAL, MIN. 350 CFH AT 7" W.C. DISCHARGE, 5 PSI ENTERING PRESSURE (CONTRACTOR TO VERIFY EXACT PRESSURE ON SITE). SEE DETAIL 3/P1.03
GPR 15-1	GAS PRESSURE REGULATOR: "EQUIMETER" OR EQUAL, MIN. 200 CFH AT 7" W.C. DISCHARGE, 5 PSI ENTERING PRESSURE (CONTRACTOR TO VERIFY EXACT PRESSURE ON SITE). SEE DETAIL 3/P1.03

RECORD SET

Capital Engineering Consultants, Inc.
Sacramento, California
011003.00 PROJECT NO.
DESIGNER/DRAFTER

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DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 282-1600 ☐ SACRAMENTO (916) 641-9500 ☐ SAN JOSE (408) 287-2420 ☐ SAN DIEGO (619) 276-9282 ☐ WALNUT CREEK (925) 934-9080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

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DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY:
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
MECHANICAL
PLUMBING SCHEDULES

SCALE: NO SCALE
DRAWING NUMBER: P1.02
SHEET NUMBER: XX OF SHEETS

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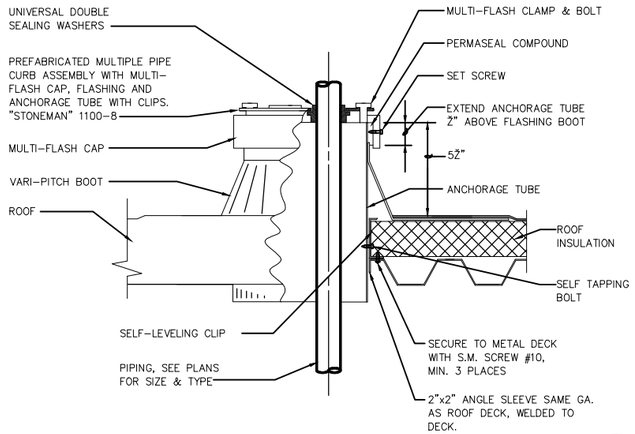
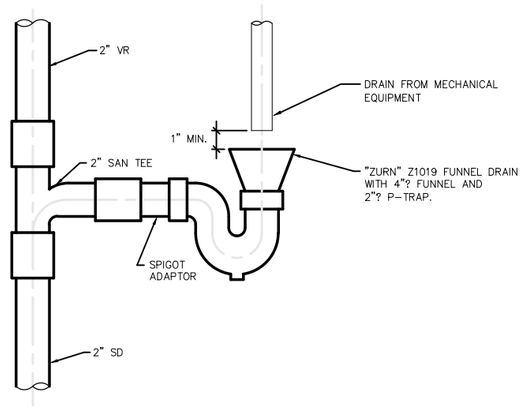


PIPING ROOF CURB DETAIL

SCALE : NONE

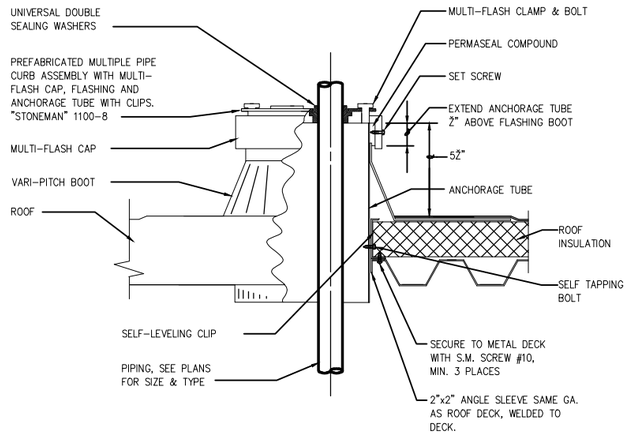
6 P1.03



WALL HOPPER DRAIN DETAIL

SCALE : NONE

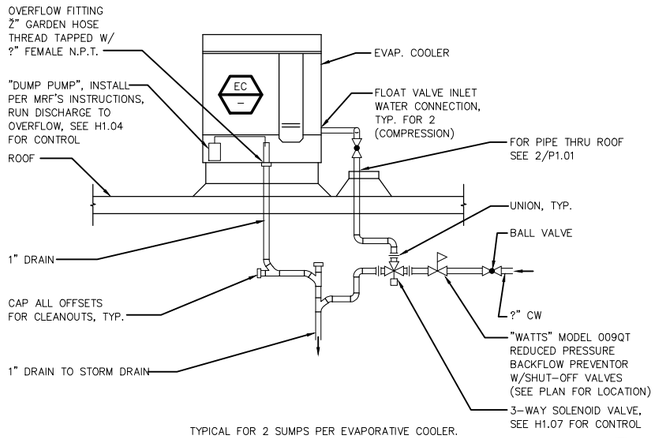
4 P1.03



PIPING ROOF CURB DETAIL

SCALE : NONE

2 P1.03

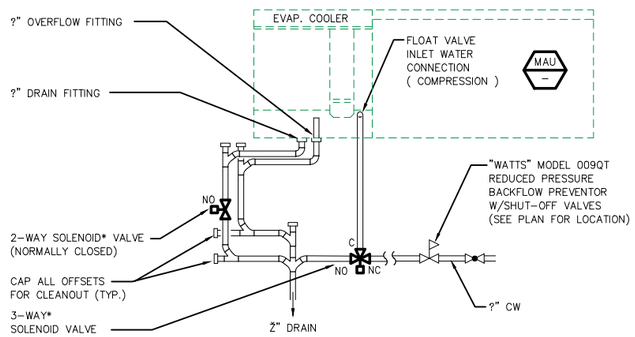


TYPICAL FOR 2 SUMPS PER EVAPORATIVE COOLER.

EVAPORATIVE COOLER PIPING DETAIL

SCALE : NONE

5 P1.03



NOTES:

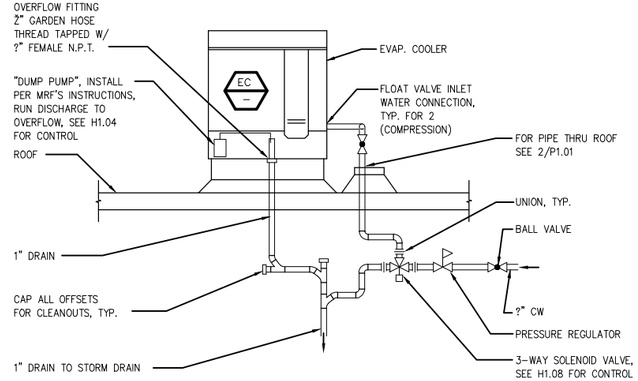
1. VERIFY & COORDINATE W/MECHANICAL ALL CONNECTION LOCATION & SIZES.

* SUPPLIED, WIRED AND INSTALLED BY DIV. 15000. PROVIDE CONTROL PANEL W/TIMER & CONTROLS FOR EVAP. COOLER DRAIN & BLEED-OFF CONTROL

EVAPORATIVE COOLER PIPING DETAIL

SCALE : NONE

3 P1.03



TYPICAL FOR 2 SUMPS PER EVAPORATIVE COOLER.

EVAPORATIVE COOLER PIPING DETAIL

SCALE : NONE

1 P1.03

Capital Engineering Consultants, Inc.
Sacramento, California
011003.00 PROJECT NO.
DESIGNER/DRAFTER

NOLTE
BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

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RECORD SET

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY:
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2	SEM	09/11	RECORD SET
1	WV	8-8-05	ADDENDUM #1

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

PLUMBING LEGENDS & DETAILS

SCALE: NONE

DRAWING NUMBER: P1.03

SHEET NUMBER OF SHEETS

H:\Customer\2005\050509.00\P01-01.FBJ - August 11, 2005 - WV - 4

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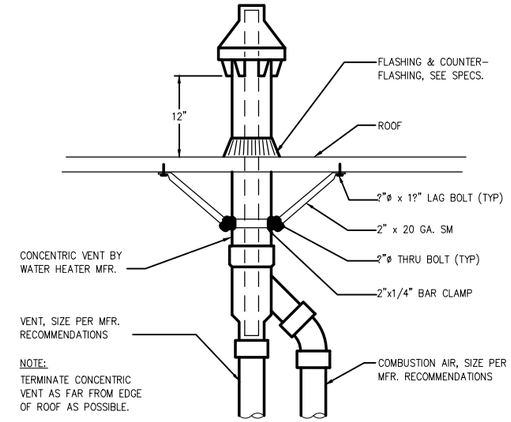
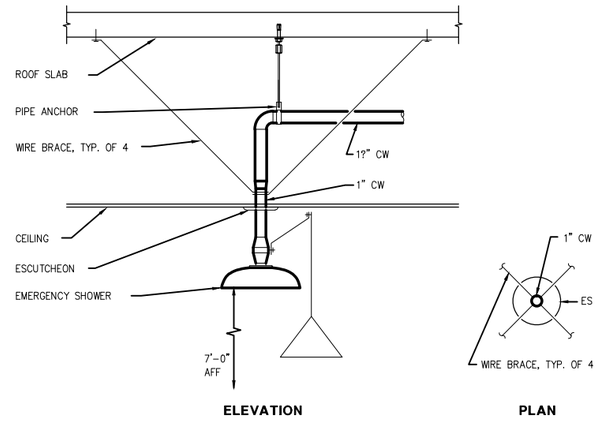


VENT & COMBUSTION AIR PIPING

5 P1.04

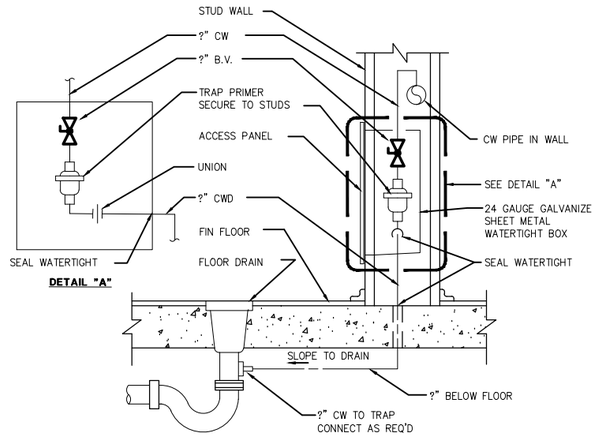
SCALE : NONE



EMERGENCY SHOWER SUPPORT

3 P1.04

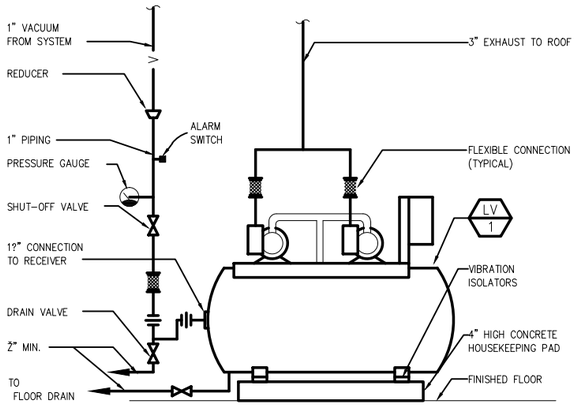
SCALE : NONE



TRAP PRIMER TO FLOOR DRAIN

1 P1.04

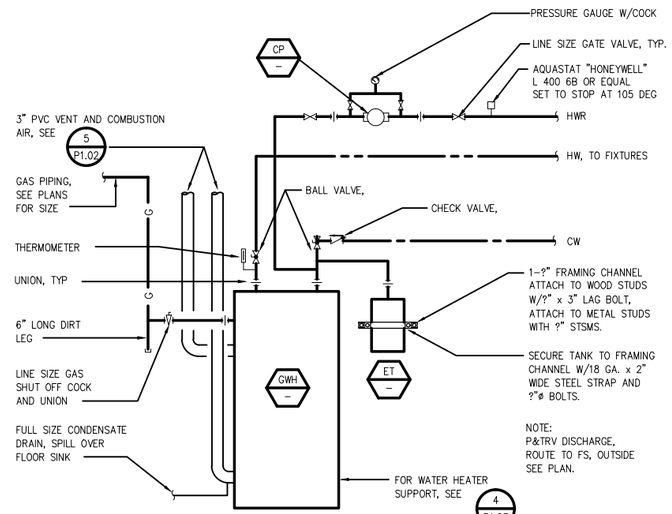
SCALE : NONE



LABORATORY VACUUM PUMP

6 P1.04

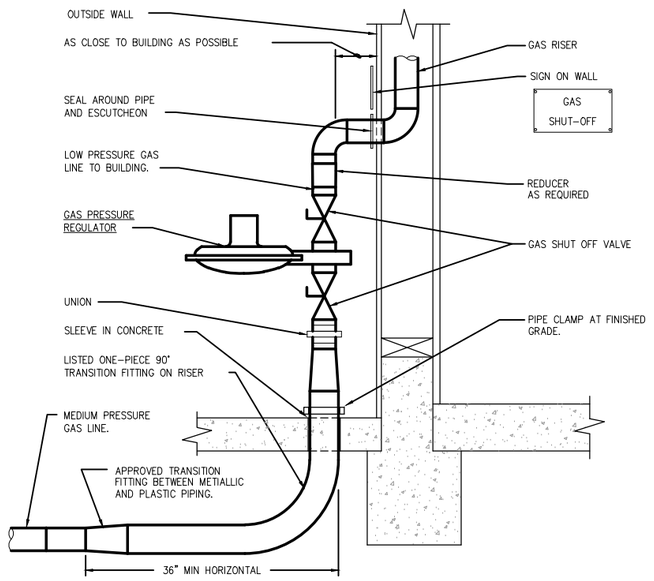
SCALE : NONE



GAS WATER HEATER PIPING

4 P1.04

SCALE : NONE



GAS RISER WITH REGULATOR DETAIL

2 P1.04

SCALE : NONE

Capital Engineering Consultants, Inc.
Sacramento, California
TGJ/LC DESIGNER/DRAFTER
011003.00 PROJECT NO.

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REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2	SEM	09/11	RECORD SET
1	SEM	10/09/03	RECORD SET NO. 1

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

PLUMBING DETAILS

SCALE: NONE
DRAWING NUMBER: P1.04
SHEET NUMBER
OF SHEETS

011003.00\V1-02.FRV - December 30, 2003 - DA - 25

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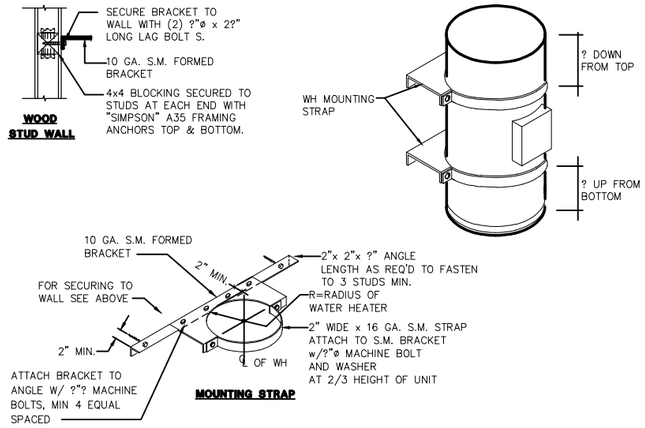
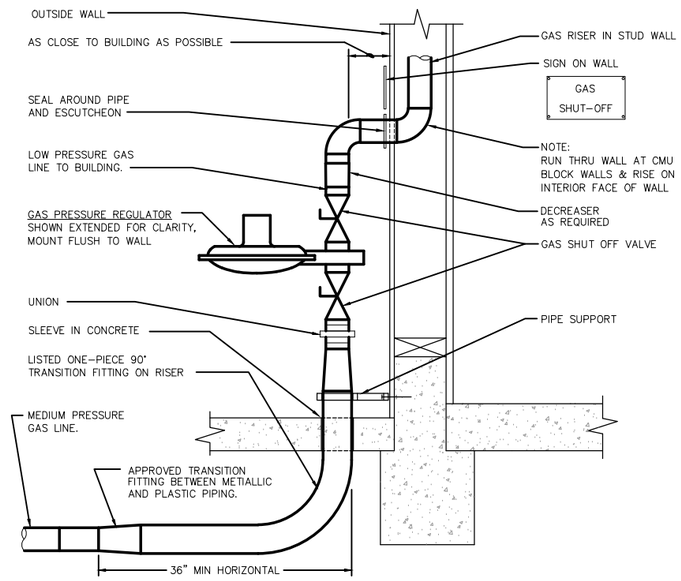


WATER HEATER SUPPORT

SCALE : NONE

2 P1.05



GAS PIPING DETAIL

SCALE : NONE

1 P1.05

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Sacramento, California
011003.00 PROJECT NO.
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

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NO.	BY	DATE	REVISIONS
6			
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4			
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2			
1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET~~
~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

PLUMBING

PLUMBING DETAILS

SCALE: NONE
DRAWING NUMBER: P1.05
SHEET NUMBER: OF SHEETS

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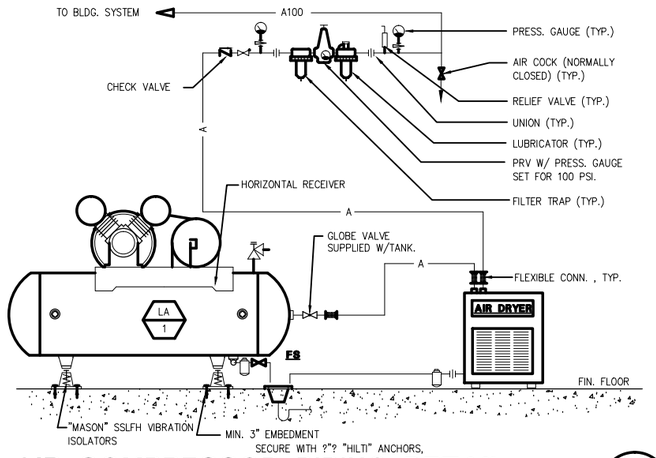
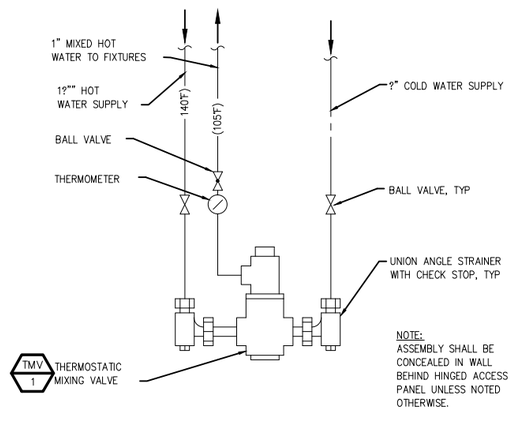


AIR COMPRESSOR PIPING DETAIL

5 P1.06

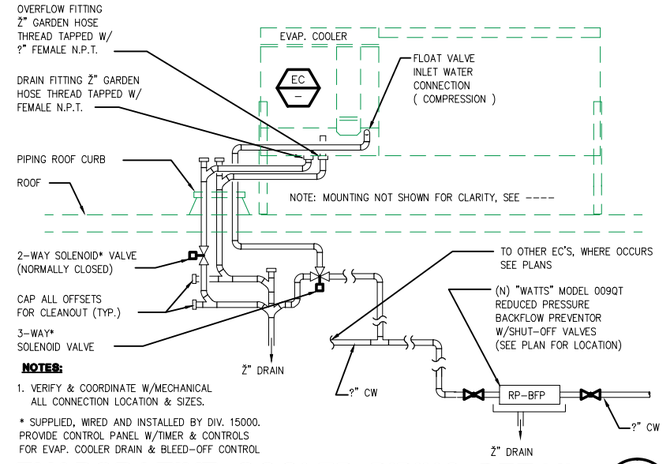
SCALE : NONE



THERMOSTATIC CONTROL VALVE

3 P1.06

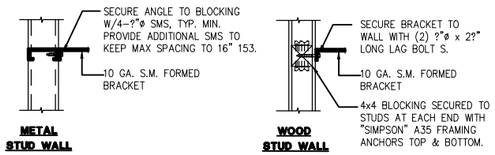
SCALE : NONE

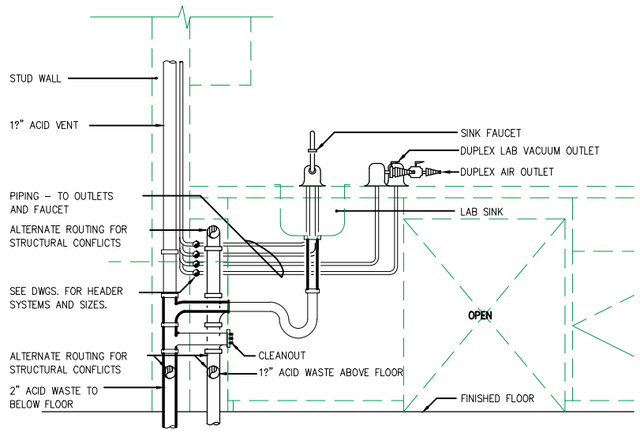


EVAPORATIVE COOLER PIPING DETAIL

1 P1.06

SCALE : NONE

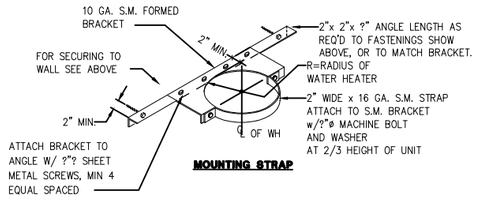


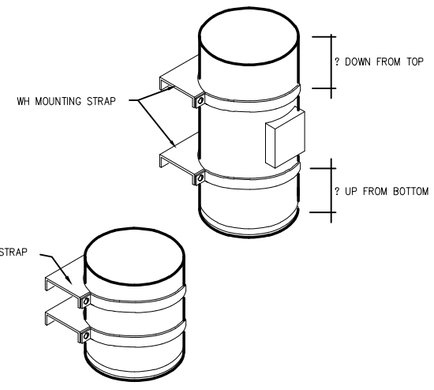


TYPICAL PERIMETER LAB SINK DETAIL

6 P1.06

SCALE : NONE



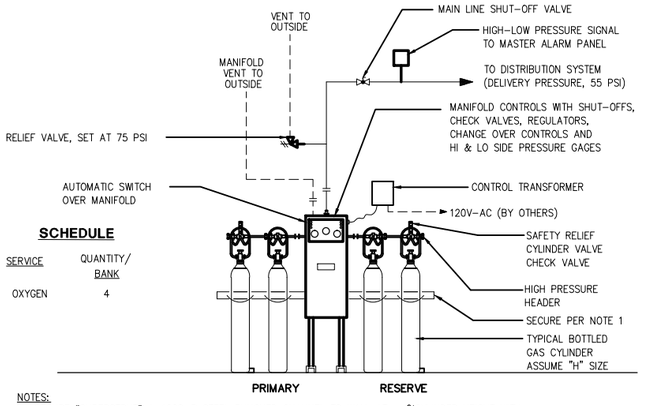


WATER HEATER SUPPORT

20 GAL OR LARGER - FLOOR INSTALLATION

4 P1.06

SCALE : NONE



SCHEDULE

SERVICE	QUANTITY/ BANK
OXYGEN	4

NOTES:
1. SECURE "SUPERSTRUT" A-1200-P STEEL PUNCHED CHANNEL TO WALL AT ⅔CYLINDER HEIGHT WITH ?"ø "ITW" DYNABOLT WITH MIN. 2?" EMBEDMENT INTO GROUT AT 16" O.C., TEST 50% TO 544 LBS TENSION. SECURE CYLINDERS TO CHANNEL WITH METAL LINK CHAIN, "SUPERSTRUT" E-130-?"ø EYELET WITH STUD AND ?"ø CHANNEL SPRING NUT.
2. HIGH LINE PRESSURE SET TO 65 PSIG AND LOW LINE PRESSURE SET TO 45 PSIG.

OXYGEN MANIFOLD

2 P1.06

SCALE : NONE

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TGJ/LC DESIGNER/DRAFTER
01I003.00 PROJECT NO.

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REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
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3			
2	SEM	09/11	RECORD SET
1	SEM	10/09/03	RECORD SET NO. 1

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

PLUMBING DETAILS

SCALE: NONE
DRAWING NUMBER: P1.06
SHEET NUMBER
OF SHEETS

01I003.00\P1-03.FBV - December 30, 2003 - DA - 25

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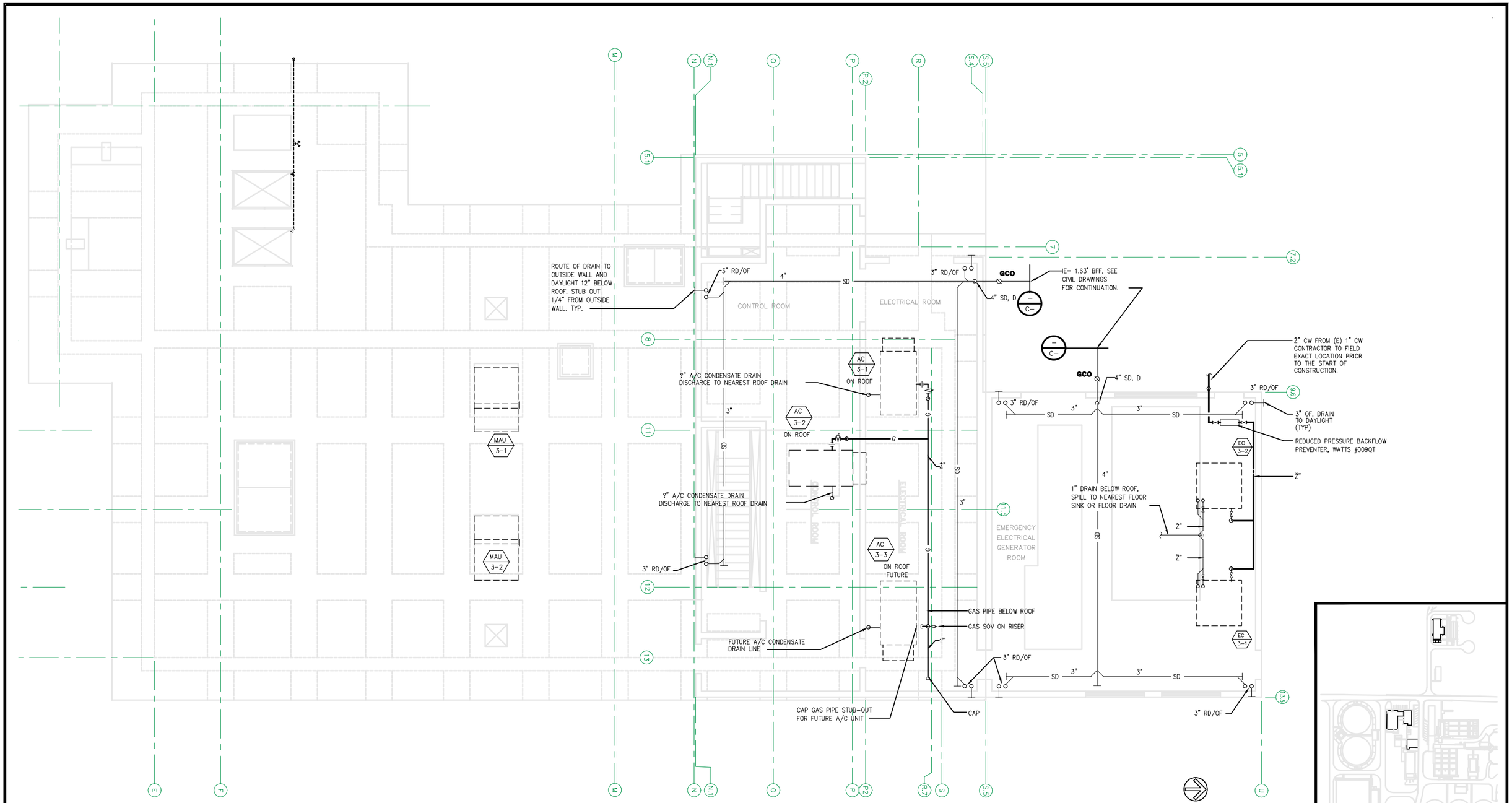

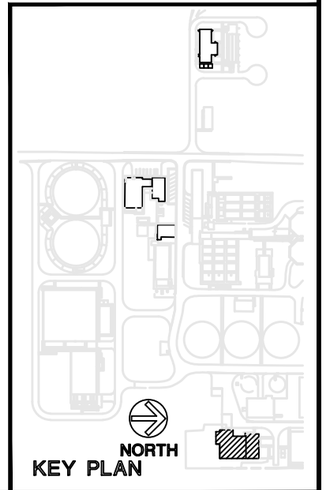

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011003.00 PROJECT NO.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LONELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
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2	SEM	09/11	RECORD SET
1	LS	10/9/03	ADDENDUM NO. 1

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~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

INFLUENT PUMP STATION
UPPER PLAN
PLUMBING

SCALE 3/16" = 1'-0"
DRAWING NUMBER P3.01
SHEET NUMBER
OF SHEETS

011003.00\P3-01.FBW - December 30, 2003 - DA - 22

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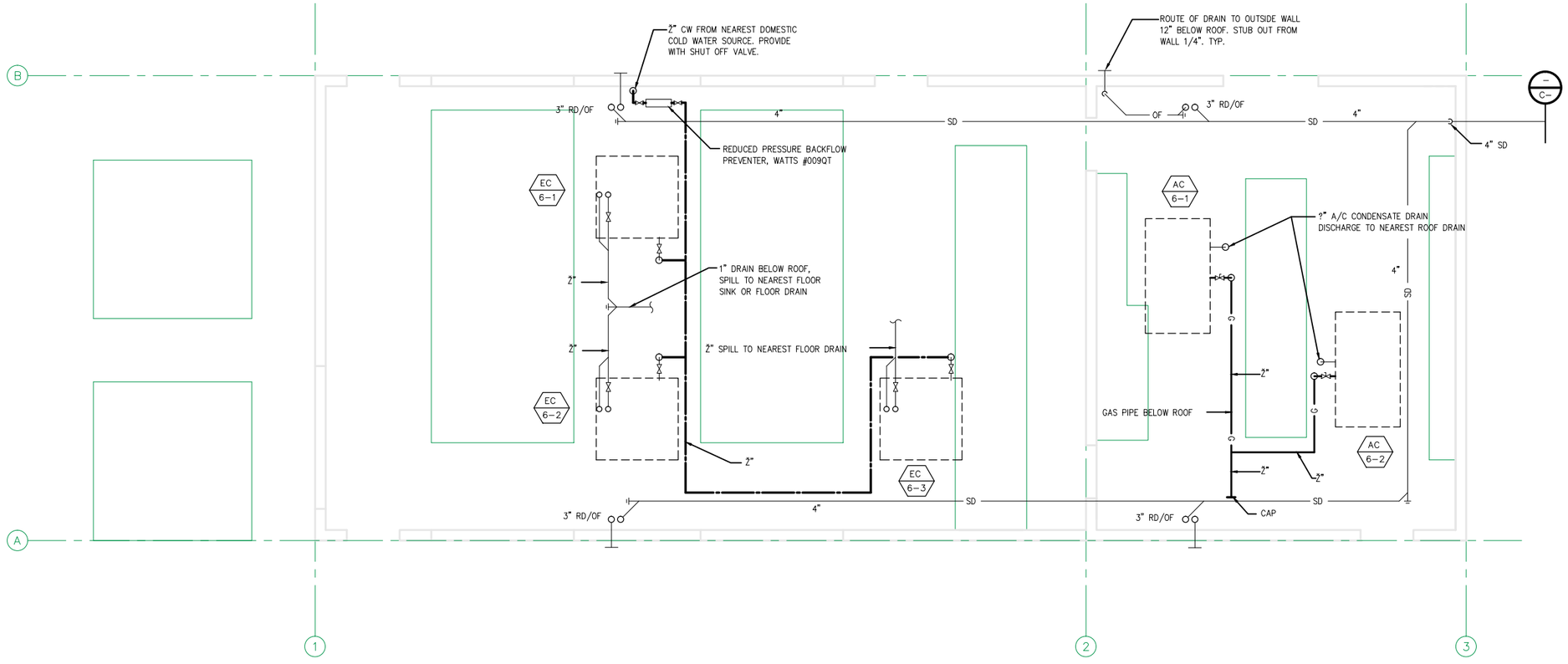

NORTH

KEY PLAN

NORTH

RECORD SET

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TJ/LC DESIGNER/DRAFTER
011003.00 PROJECT NO.

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REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
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PROJ. MGR.:
PROJ. ENGR.:

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1	LS	10/9/03	ADDENDUM NO. 1

~~REDUCED RECORD SET~~
~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

SOUTHSIDE MCC/ GENERATOR BUILDING PLUMBING PLAN

SCALE 1/4" = 1'-0"

DRAWING NUMBER **P6.01**

SHEET NUMBER OF SHEETS

011003.00\P6-01.FBV – December 30, 2003 – DA – 22

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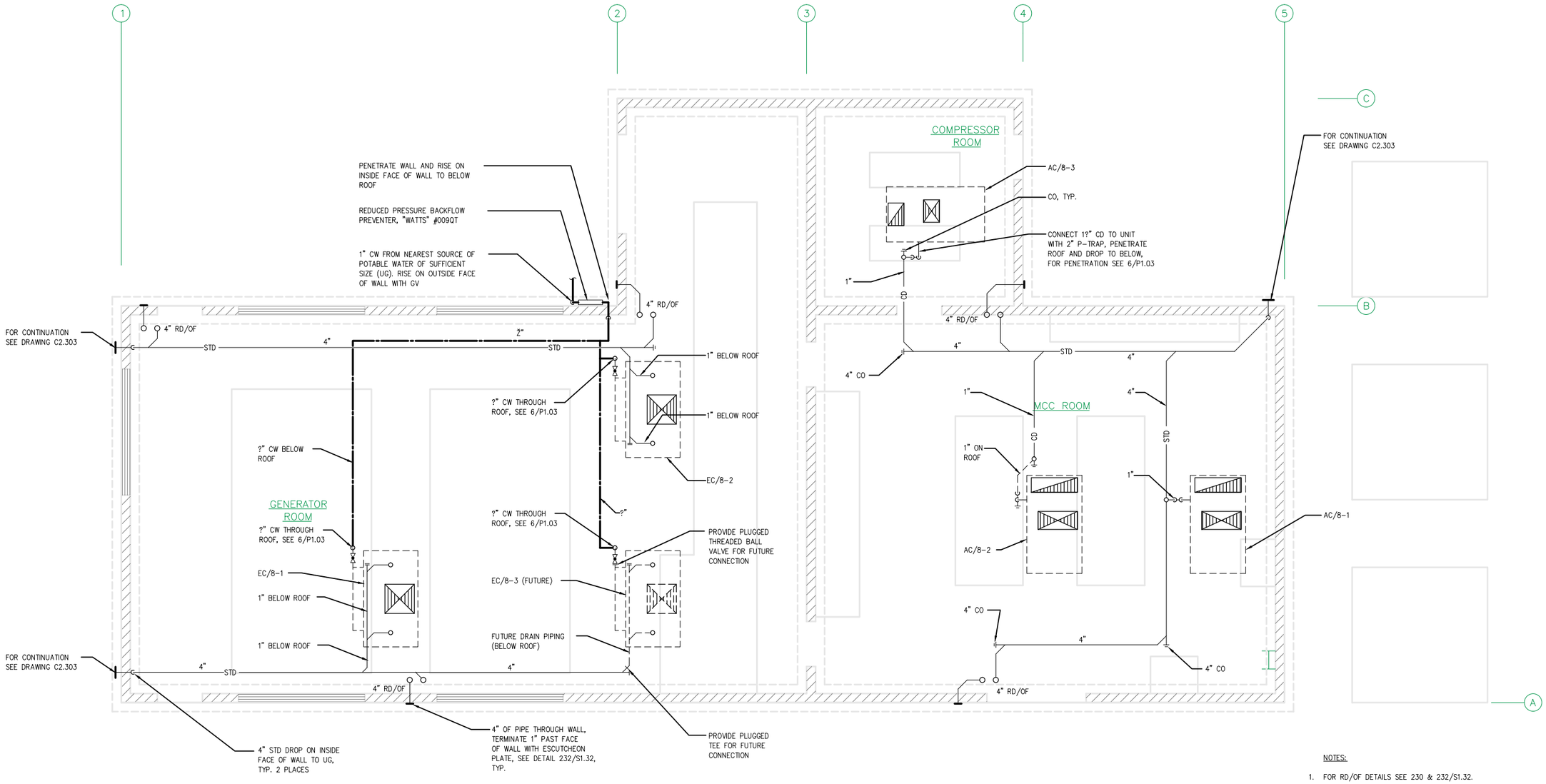

NOTES:

1. FOR RD/OF DETAILS SEE 230 & 232/S1.32.
2. EXCERCISE CAUTION WHEN ROUTING STORM DRAIN, CONDENDSATE, AND WATER PIPING SO THAT PIPING DOES NOT RUN OVER ELECTRICAL EQUIPMENT. SEE ELECTRICAL DRAWINGS TO VERIFY ELECTRICAL EQUIPMENT LOCATIONS.

FLOOR PLAN

SCALE : 1/4" = 1'-0"

1 / P8.01

N

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01003.00
PROJECT NO.

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REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

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PROJ. MGR.:
PROJ. ENGR.:

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

EFFLUENT MCC BUILDING PLUMBING PLAN

SCALE 1/4" = 1'-0"
DRAWING NUMBER P8.01
SHEET NUMBER OF SHEETS

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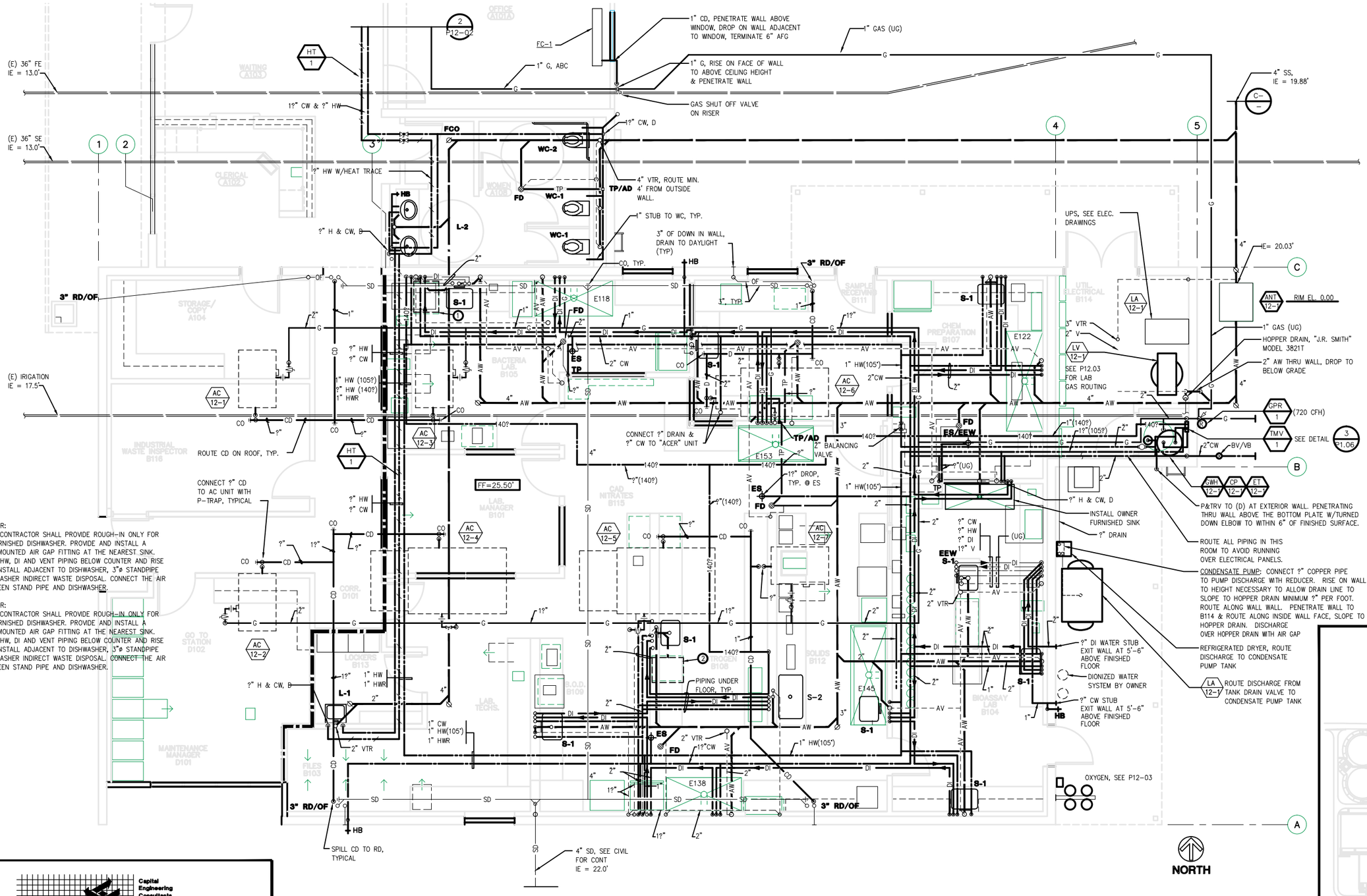

① DISHWASHER:
PLUMBING CONTRACTOR SHALL PROVIDE ROUGH-IN ONLY FOR OWNER FURNISHED DISHWASHER. PROVIDE AND INSTALL A COUNTER MOUNTED AIR GAP FITTING AT THE NEAREST SINK. RUN 140? HW, DI AND VENT PIPING BELOW COUNTER AND RISE IN WALL. INSTALL ADJACENT TO DISHWASHER, 3"ø STANDPIPE FOR DISHWASHER INDIRECT WASTE DISPOSAL. CONNECT THE AIR GAP BETWEEN STAND PIPE AND DISHWASHER.

② DISHWASHER:
PLUMBING CONTRACTOR SHALL PROVIDE ROUGH-IN ONLY FOR OWNER FURNISHED DISHWASHER. PROVIDE AND INSTALL A COUNTER MOUNTED AIR GAP FITTING AT THE NEAREST SINK. RUN 140? HW, DI AND VENT PIPING BELOW COUNTER AND RISE IN WALL. INSTALL ADJACENT TO DISHWASHER, 3"ø STANDPIPE FOR DISHWASHER INDIRECT WASTE DISPOSAL. CONNECT THE AIR GAP BETWEEN STAND PIPE AND DISHWASHER.

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011003.00 PROJECT NO.

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REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

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2	SEM	09/11	RECORD SET
1	LS	10/9/03	ADDENDUM NO. 1

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

LABORATORY
PLUMBING PLAN

SCALE 1/4" = 1'-0"
DRAWING NUMBER P12.01
SHEET NUMBER OF SHEETS

011003.00\P12-01.FBV — December 30, 2003 — DA — 20

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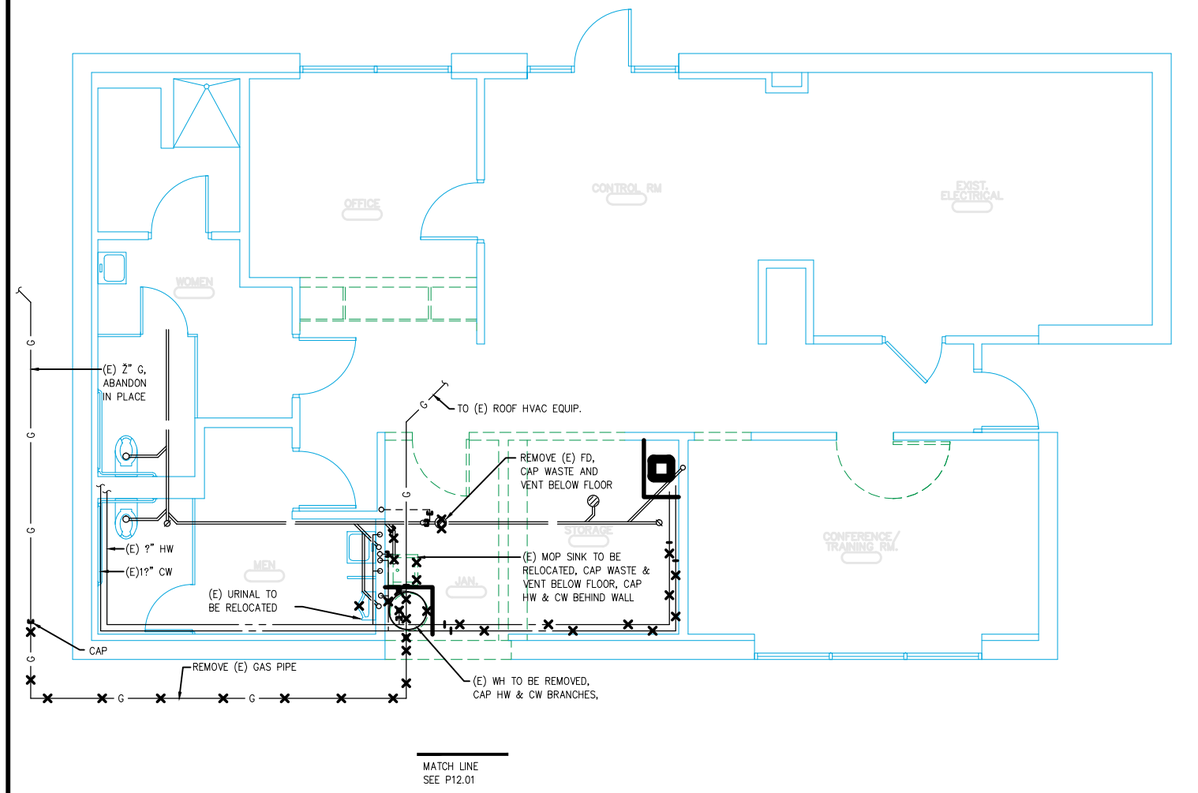
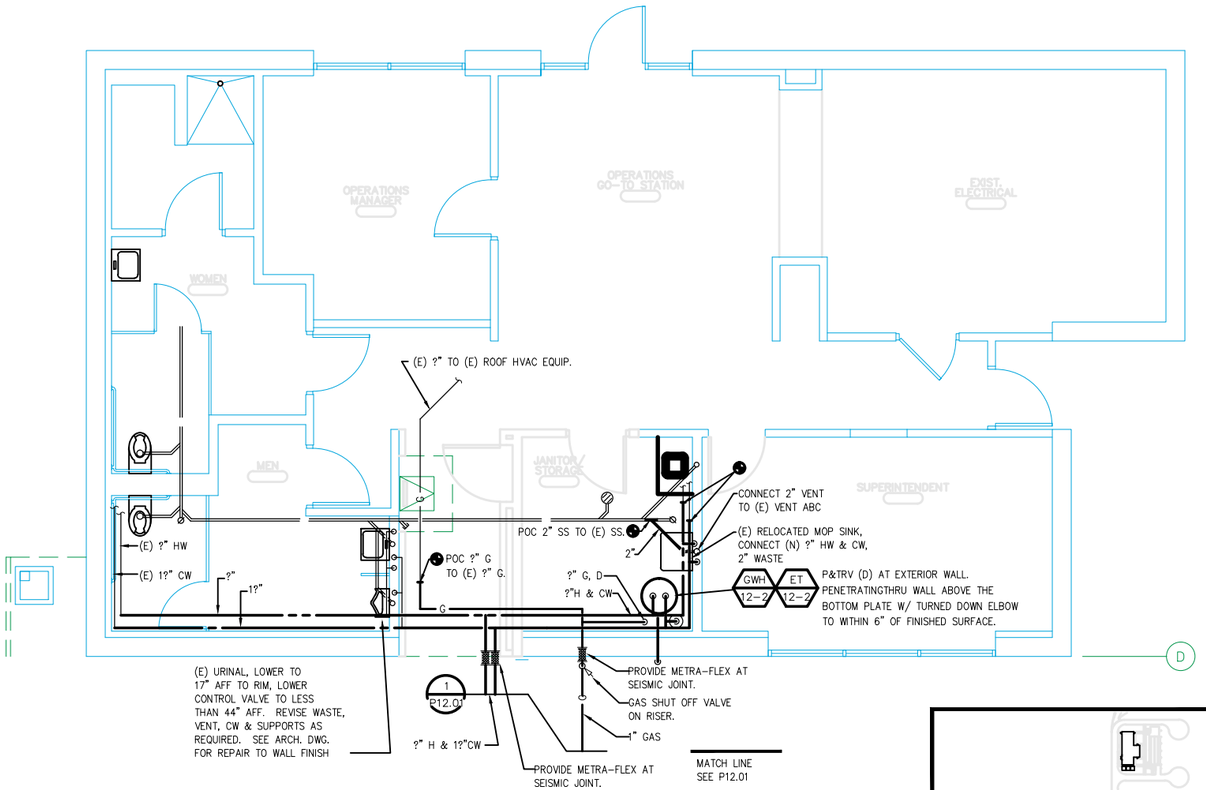


ADMIN. BLDG. PLUMBING DEMOLITION PLAN

1 P12.02

SCALE : 1/4" = 1'-0"

NORTH

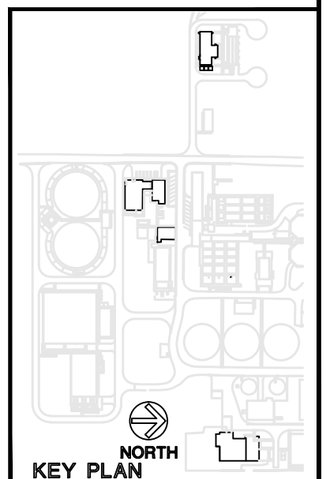


ADMIN. BLDG. PLUMBING PLAN

2 P12.02

SCALE : 1/4" = 1'-0"

NORTH



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REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
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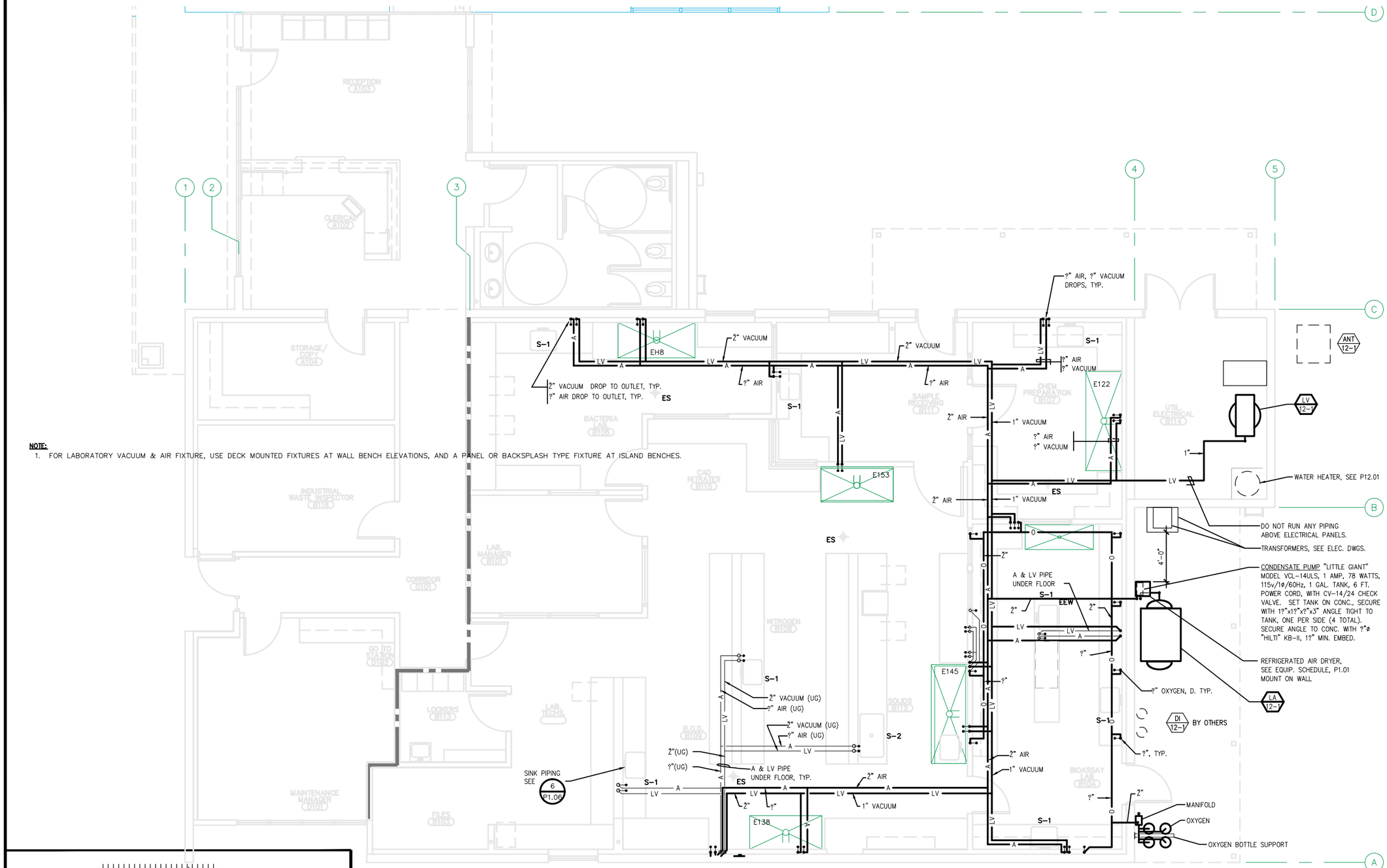
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

ADMIN. BUILDING PLUMBING PLANS

SCALE 1/4" = 1'-0"
DRAWING NUMBER P12.02
SHEET NUMBER
OF SHEETS

01003.00\P12-02.FIV - December 30, 2003 - DA - 32

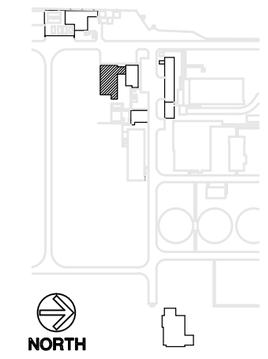


NOTE:

1. FOR LABORATORY VACUUM & AIR FIXTURE, USE DECK MOUNTED FIXTURES AT WALL BENCH ELEVATIONS, AND A PANEL OR BACKSPLASH TYPE FIXTURE AT ISLAND BENCHES.

NORTH

RECORD SET



KEY PLAN

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

LABORATORY LAB GAS PLAN

SCALE 1/4" = 1'-0"

DRAWING NUMBER **P12.03**

SHEET NUMBER OF SHEETS

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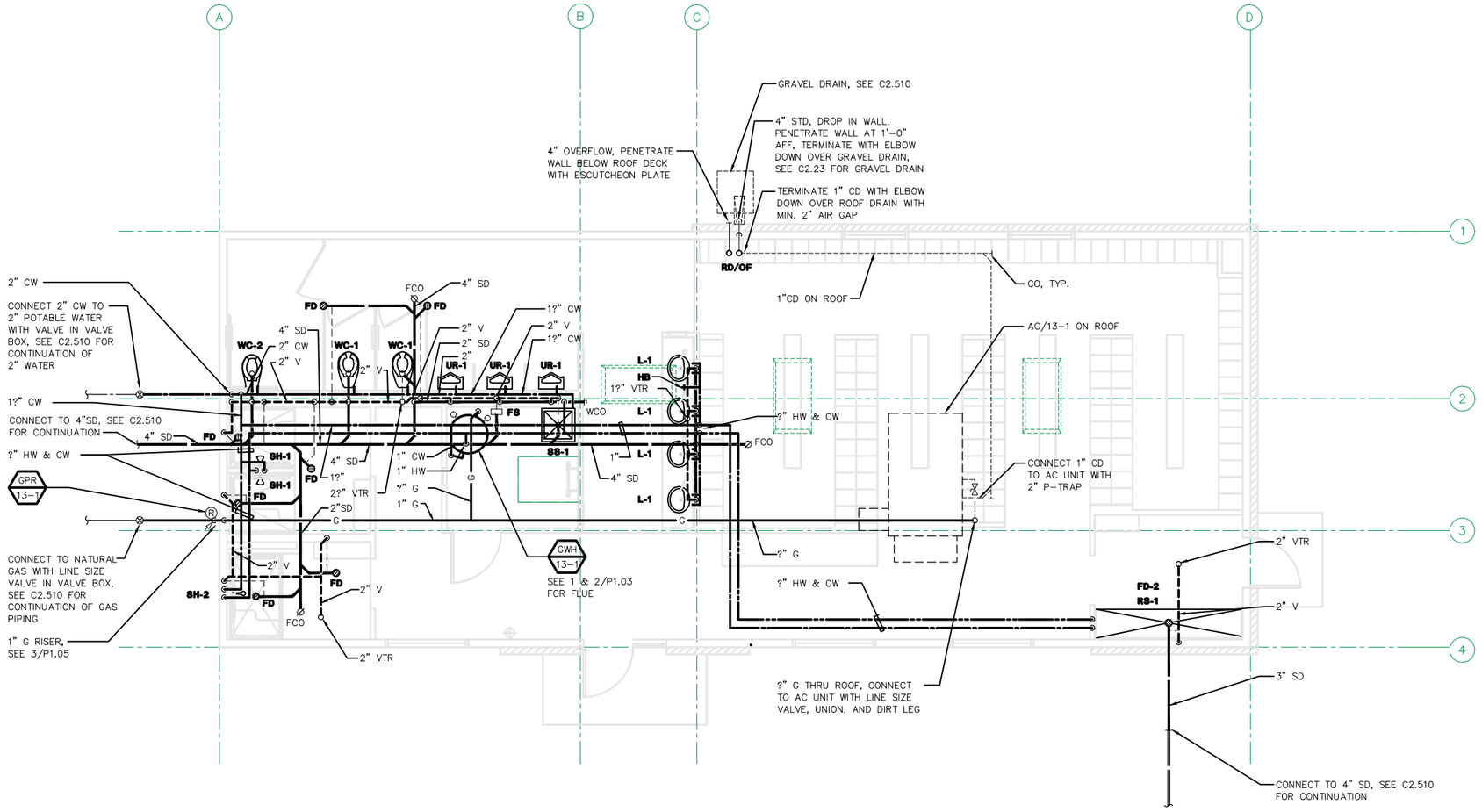

LOCKER / SHOWER PLUMBING PLAN

SCALE : 1/4" = 1'-0"

1 / P13.01

N

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REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
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PROJ. MGR.:
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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

LOCKER ROOM BUILDING HVAC PLAN

SCALE: 1/4" = 1'-0"
DRAWING NUMBER: P13.01
SHEET NUMBER: XX OF SHEETS

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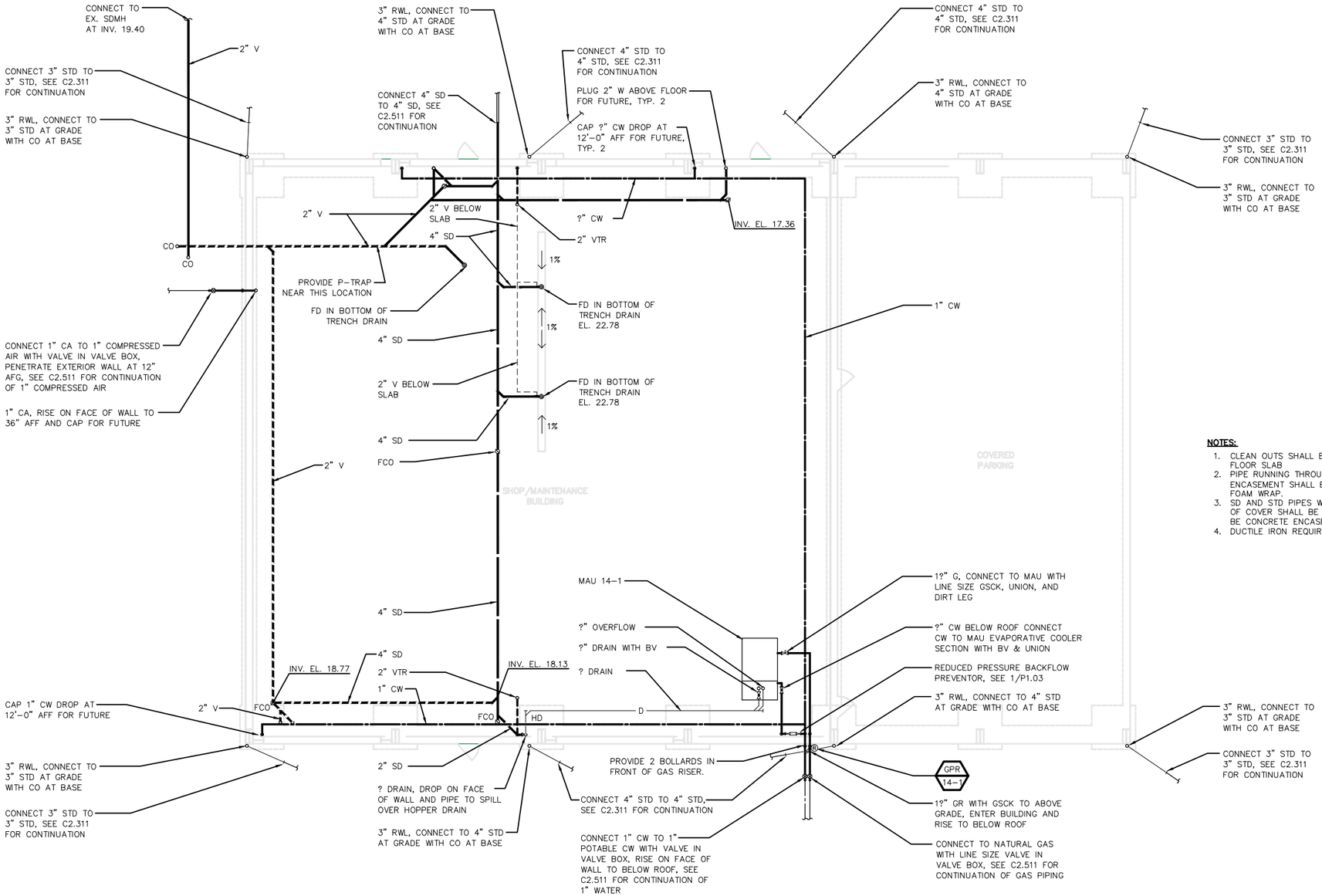

NOTES:

1. CLEAN OUTS SHALL BE INSTALLED FLUSH WITH FLOOR SLAB
2. PIPE RUNNING THROUGH CONCRETE ENCASEMENT SHALL BE WRAPPED WITH ⅛" FOAM WRAP.
3. SD AND STD PIPES WITH LESS THAN 2.5 FEET OF COVER SHALL BE DUCTILE IRON PIPE AND BE CONCRETE ENCASED PER DETAIL 2/C1.09.
4. DUCTILE IRON REQUIRED FOR SD PIPING.

SHOP / MAINTENANCE BUILDING

SCALE : 1/8" = 1'-0"

1 / P14.01

N

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NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SHOP / MAINTENANCE BUILDING PLUMBING PLAN

SCALE: 1/8" = 1'-0"
DRAWING NUMBER: P14.01
SHEET NUMBER: XX OF SHEETS

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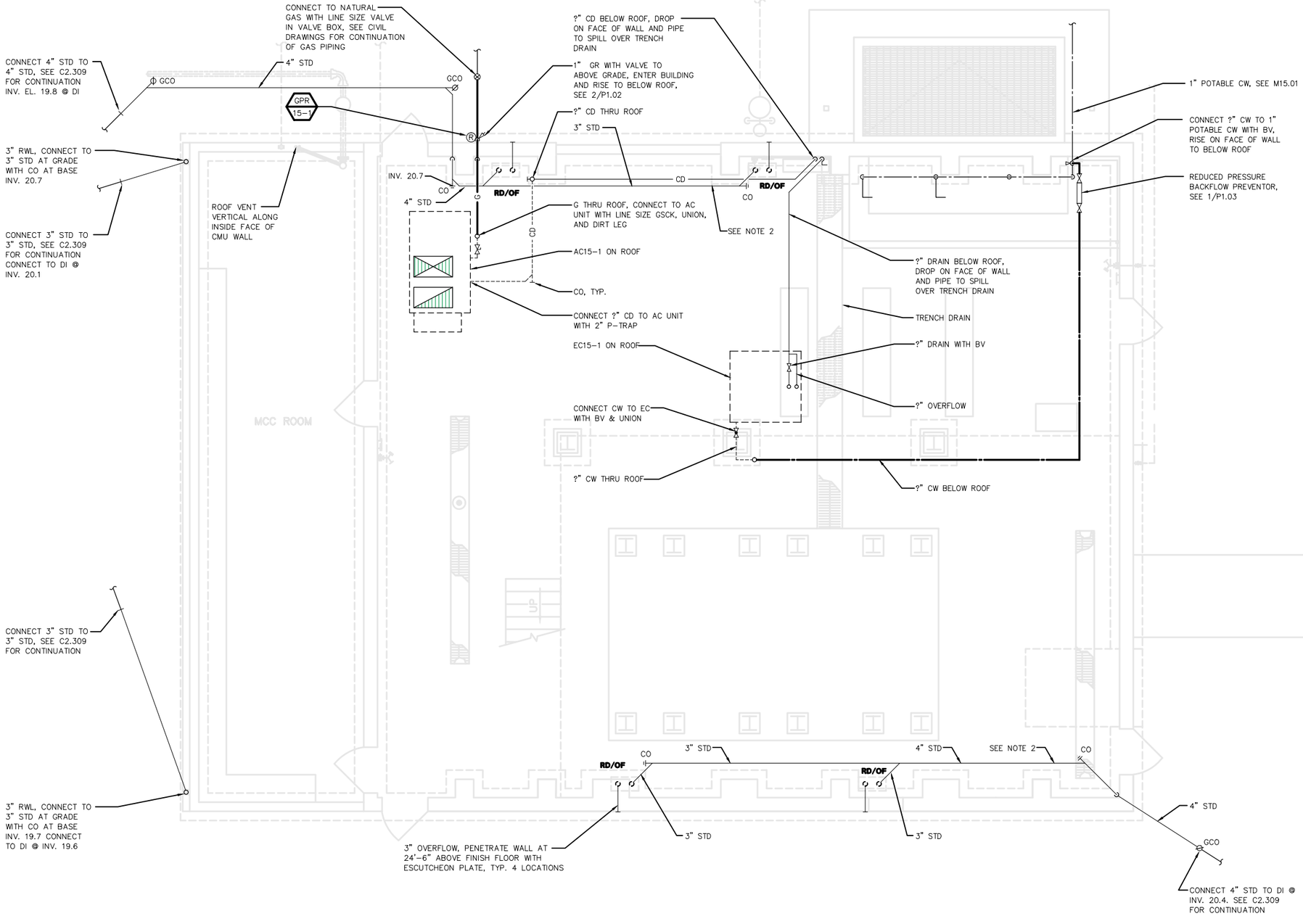

NOTES:
1. FOR EVAPORATIVE COOLER WATER AND DRAIN PIPING, SEE DETAIL 1/P1.03.
2. STD PIPING WITHIN BUILDING IS SUPPORTED BELOW ROOF. DROP TO BELOW GRADE OCCURS IN CORNER. PROVIDE MIN. SLOPE OF ¼" PER FOOT.
3. PROVIDE SLOPE OF ¼" PER FOOT ON STD & SD PIPES, 4-INCH DIAMETER AND SMALLER.

MECHANICAL DEWATERING BUILDING PLUMBING PLAN

1 / P15.21

SCALE : 1/4" = 1'-0"

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Sacramento, California
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY:
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
6			
5			
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3			
2			
1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

PLUMBING

MECHANICAL DEWATERING BUILDING PLUMBING PLAN

SCALE 1/4"=1'-0"

DRAWING NUMBER P15.21

SHEET NUMBER OF SHEETS

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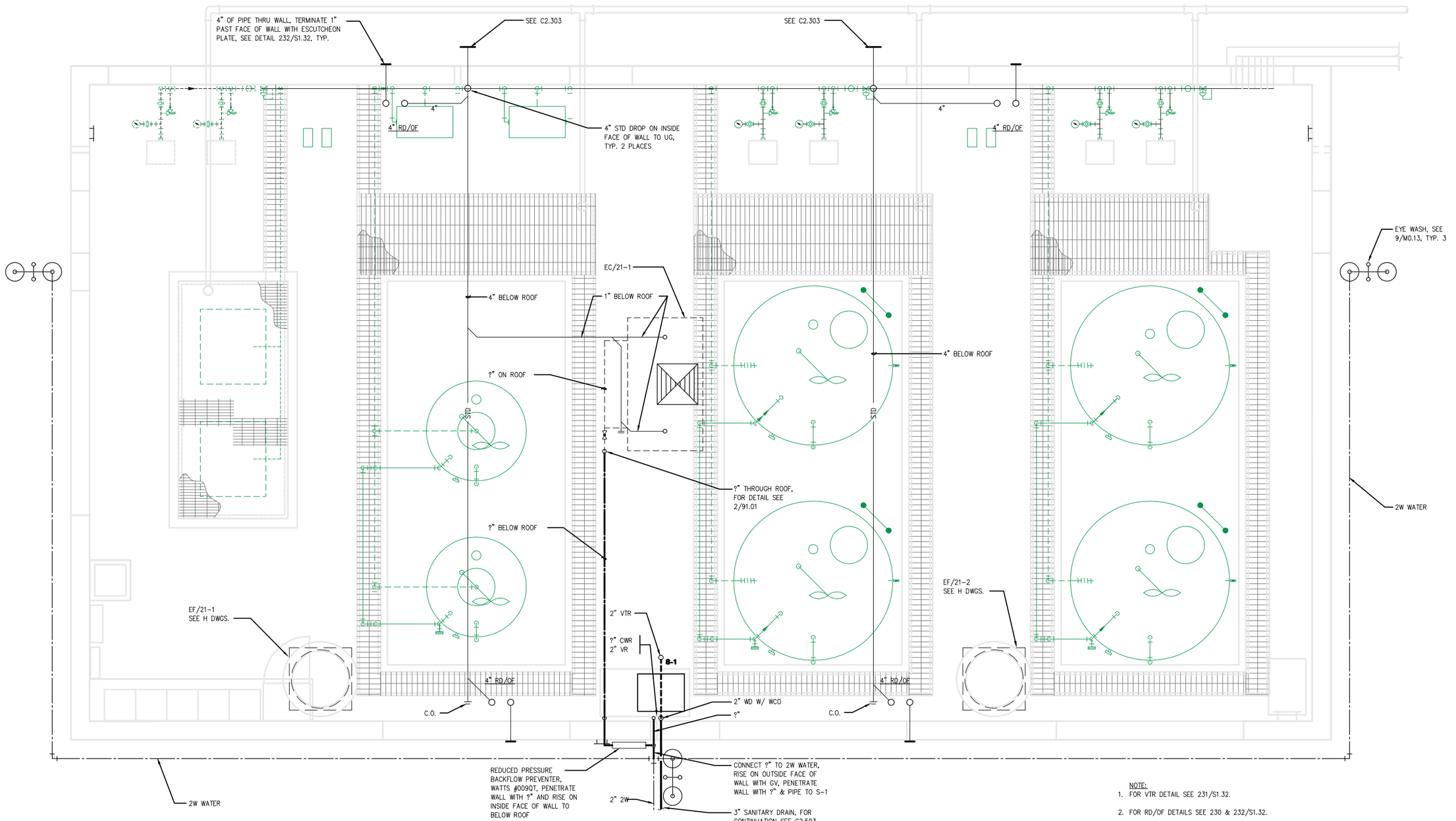

NOTE:
1. FOR VTR DETAIL SEE 231/S1.32.
2. FOR RD/OF DETAILS SEE 230 & 232/S1.32.

FLOOR PLAN

SCALE : 3/8" = 1'-0"

1 / P21.01

N

Capital Engineering Consultants, Inc.
Sacramento, California
DESIGNER/DRAFTER
01003.00
PROJECT NO.

CAUTION:
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RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHELTON — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

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PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
6			
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3			REDUCED RECORD SET NOT TO SCALE
2	SEM	09/11	RECORD SET
1	WV	8-8-05	ADDENDUM #1

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

CHEMICAL HANDLING BUILDING
PLUMBING PLAN

SCALE 3/8" = 1'-0"
DRAWING NUMBER P21.01
SHEET NUMBER
OF SHEETS

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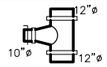
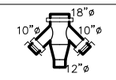
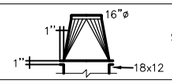
ROUND DUCT LEGEND

SINGLE LINE SYMBOL	DOUBLE LINE SYMBOL AND DESCRIPTION	
		45° REDUCING LATERAL FITTING
		90° TEE FITTING
		45° DOUBLE REDUCING LATERAL
		SQUARE TO ROUND
		USE DIE FORMED OR SEGMENTED WITH 5 SEGMENTS ON 90?, 4 ON 60? AND 3 ON 45?

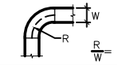
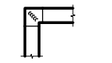
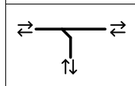
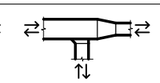
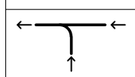
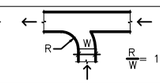
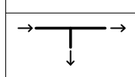
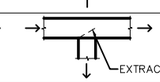
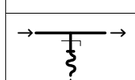
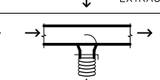
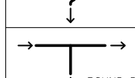
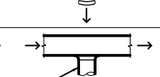
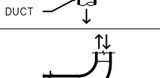
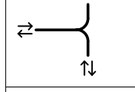
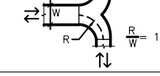
DIFFUSER, REGISTER & GRILLE SCHEDULE

SYMBOL	DESCRIPTION	TITUS	TUTTLE & BAILEY	METALAIRE	KRUEGER
CD	MODULAR CORE SURFACE MOUNT CEILING DIFFUSER FLAT FRAME WITH OBD	MCD – BORDER TYPE 1, WITH OBD	AQDV	9000–1–OBDR	1240 OBD FRAME 22
CDL	MODULAR CORE LAY–IN CEILING DIFFUSER FOR T–BAR CEILING 24x24 PANEL WITH OBD	MCD – BORDER TYPE 3, WITH OBD	AQDV–L4	9000–6P–OBDR	1240 OBD FRAME 23
CR	CEILING RETURN WITH ?" EGG CRATE CORE SURFACE MOUNT	50 F – BORDER TYPE 1	CRE–507	CC5	EGC–5
CRL	CEILING RETURN WITH ?" EGG CRATE CORE IN 24x24 PANEL FOR T–BAR CEILING, OBD	50 F – BORDER TYPE 3 WITH AG–15 OBD	CRE–507–L4 WITH OBD	CC5D–TBD	EGC–5TB OBD
S OR SR	DOUBLE DEFLECTION SUPPLY GRILLE WITH VERTICAL FRONT BARS, 2" SPACING	300 RL	T 64	V 4004 S	880 V
R, CG, E, ER, WALL TRANSER GRILLE, OR CEILING TRANSFER GRILL	RETURN OR EXHAUST GRILLE WITH 35° OR 45° HORIZONTAL BARS.	350 RL	T 77D	SRH	S 80 H
ES	EXHAUST GRILLE WITH 35° HORIZIZONTAL BARS 316 STAINLESS STEEL	350 RL–SS	T70DSS	---	9S80H
DL	DRUM LOUVER SUPPLY GRILLE, ?25° ROTATION EXTRUDED ALUMINUM	DL	STRJ	RL	DPL

NOTES:

1. PROVIDE DIFFUSERS WITH 4–WAY AIR FLOW PATTERN OR AS INDICATED ON DRAWINGS WITH FLOW ARROWS.
2. FURNISH ALL PRODUCTS OF A SINGLE MANUFACTURER.
3. COORDINATE DIFFUSER TYPE WITH REFLECTED CEILING PLAN.
4. SEE NOTES ON DRAWINGS FOR ITEMS THAT ARE TO BE STAINLESS STEEL.

RECTANGULAR DUCT LEGEND

SINGLE LINE SYMBOL	DOUBLE LINE SYMBOL	DESCRIPTION
		SUPPLY AIR DUCT IN SECTION
		RETURN AND OUTSIDE AIR DUCT IN SECTION
		EXHAUST AIR DUCT IN SECTION
24x12	24x12	RECTANGULAR DUCT – WIDTH x DEPTH
26x14L	26x14L	ACOUSTICALLY LINED RECTANGULAR DUCT–DIMENSIONS ARE OUTSIDE
		FLEXIBLE DUCT
		MANUAL AIR DAMPER
R OR D	RISE OR DROP	RISE OR DROP DUCT IN DIRECTION OF AIR FLOW
	OR	RECTANGULAR TO RECTANGULAR TRANSISTION , MAX. SLOPE OF 1:3 RECTANGULAR TO ROUND TRANSITION , MAX. SLOPE OF 1:3
		ELBOW, RECTANGULAR, SMOOTH RADIUS, WITHOUT TURNING VANES
		SQUARE/RECTANGULAR DUCT ELBOW WITH TURNING VANES
		CONVERGING OR DIVERGING TEE, 45? ENTRY, RECTANGULAR MAIN AND BRANCH. WHEN REDUCING MAIN, SIDE OF TAKE OFF OR ENTRY BRANCH TO BE FLAT, OTHER SIDES MAX. SLOPE OF 1:3
		CONVERGING WYE, RECTANGULAR
		TEE, RECTANGULAR MAIN AND BRANCH WITH EXTRACTOR
		CONICAL DUCT TAKE OFF FROM RECTANGULAR VIA SPIN–IN W/DAMPER AND SCOOP
		ROUND DUCT TAKE OFF FROM RECTANGULAR VIA SMOOTH CONVERGING BELL MOUTH
		SYMMETRICAL WYE, DOVETAIL, RECTANGULAR RECTANGULAR (CONVERGING OR DIVERGING)
		ELBOWS, 90? RECTANGULAR TEE SHAPE WITH SQUARE ELBOWS, SPLITTER DAMPER OR MAD'S ON THE 2 BRANCHES

MECHANICAL LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
ABC		ABOVE CEILING
AFF		ABOVE FINISHED FLOOR
AC		AIR CONDITIONING
BDD		BACKDRAFT DAMPER
BHP		BRAKE HORSE POWER
BTU(H)		BRITISH THERMAL UNITS (PER HOUR)
CEF		CEILING EXHAUST FAN
CD		CONDENSATE DRAIN
COND.		CONDENSER
CONN.		CONNECT OR CONNECTION
CONT.		CONTINUATION
?	CFM	CUBIC FEET OF AIR FLOW PER MINUTE
DB		DRY BULB (DEGREES FAHRENHEIT)
?	DIA.	DIAMETER , PHASE
EDB		ENTERING DRY BULB
EWT		ENTERING WATER TEMPERATURE
EW		ENTERING WATER
EWB		ENTERING WET BULB
EVAP.		EVAPORATOR
EC		EVAPORATIVE COOLER
EA		EXHAUST AIR
EAD		EXHAUST AIR DAMPER
EF		EXHAUST FAN
(E), EXIST.		EXISTING
ESP		EXTERNAL STATIC PRESSURE
°F		DEGREES FAHRENHEIT
FIN.		FINISH
FD		FIRE DAMPER
FC		FLEXIBLE CONNECTION
FLR.		FLOOR
FLA		FULL LOAD AMPS
GPM		GALLONS PER MINUTE
GALV.		GALVANIZED
KW		KILOWATTS
LBS		POUNDS
LDB		LEAVING DRY BULB IN DEGREES FAHRENHEIT
LWB		LEAVING WET BULB IN DEGREES FAHRENHEIT
LRA		LOCKED ROTOR AMPERES
MAV		MANUAL AIR VENT
MFR.		MANUFACTURER
MAX.		MAXIMUM
MBH		THOUSAND BRITISH THERMAL UNITS PER HOUR
MIN.		MINIMUM
(N)		NEW
OA		OUTSIDE AIR
	POC	POINT OF CONNECTION
RA		RETURN AIR
RLA		RUNNING LOAD AMPS
RPM		REVOLUTIONS PER MINUTE
SA		SUPPLY AIR
SP		STATIC PRESSURE
SS		STAINLESS STEEL
TCP		TEMPERATURE CONTROL PANEL
TYP.		TYPICAL
TSP		TOTAL STATIC PRESSURE
	AD , AP	ACCESS DOOR , ACCESS PANEL
		EXISTING EQUIP, DUCT, ETC. TO BE REMOVED
	FD	FIRE DAMPER
	MAD	MANUAL AIR DAMPER
T X	T	THERMOSTAT, "X" INDICATES DEVICE CONTROLLED
CD	CD	CONDENSATE DRAIN
D	D	DRAIN
	GV	GATE VALVE

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Sacramento, California
011003.00 PROJECT NO.
DESIGNER/DRAFTER

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REGISTERED PROFESSIONAL ENGINEER – David Richard – No. 33479 EXP. – CIVIL – STATE OF CALIFORNIA

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REDUCED RECORD SET
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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT
HVAC
HVAC LEGENDS & SCHEDULE

SCALE: NONE
DRAWING NUMBER: H1.01
SHEET NUMBER: OF SHEETS

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EXHAUST FAN SCHEDULE

LOCATION	SYMBOL	MFR.	MODEL	CFM	S.P.	HP	VOLTAGE	WEIGHT (LBS.)	NOTES	MOUNTING	CONTROLS
LABORATORY BLDG. 12	EF 12-1	GREENHECK	SWB-12	1660	1.5"	3/4	460V, 3ø	180	1,2 & 3	2/H1.04	SHEET H1.10
LABORATORY BLDG. 12	EF 12-2	GREENHECK	SWB-12	1170	1.5"	1/2	460V, 3ø	180	1,2 & 3	2/H1.04	SHEET H1.10
LABORATORY BLDG. 12	EF 12-3	GREENHECK	SWB-12	1170	1.5"	1/2	460V, 3ø	180	1,2 & 3	2/H1.04	SHEET H1.10
LABORATORY BLDG. 12	EF 12-4	GREENHECK	SWB-12	1660	1.5"	3/4	460V, 3ø	220	1,2 & 3	2/H1.04	SHEET H1.10
LABORATORY BLDG. 12	EF 12-5	GREENHECK	GB-70	120	.25"	1/6	120V, 1ø	45	6	6/H1.04	SWITCH W/ LIGHTS
LABORATORY BLDG. 12	EF 12-6	GREENHECK	GB-80	300	.25"	1/4	120V, 1ø	50	6	6/H1.04	T-STAT CONTROL
LABORATORY BLDG. 12	EF 12-7	GREENHECK	GB-80	300	.25"	1/6	120V, 1ø	50	6	6/H1.04	SWITCH W/ LIGHTS
LOCKER BLDG. 13	EF 13-1	GREENHECK	GB-091	700	.25"	1/4	120V, 1ø	100	1, 8	–	–
SHOP/MAINTEN. BLDG. 14	EF 14-1	GREENHECK	SB-1H30	6200	.20"	1/2	480V, 3ø	160	9	–	–
BIO-FILTER BLDG.	EF 16-1	GREENHECK	40 AFSW-41	22,000 / 33,000 *	10.0"	77 BHP / 100 HP *	460V, 3ø	3,500	1, 2, 3, 4 & 5.	3/H16.01 4/H16.01	CONTINUOUS 24/7 OPERATION
CHEMICAL HANDLING BLDG. 21	EF 21-1	GREENHECK	RBU-1H30-5	6950	0.20"	?	460V, 3ø	300	3, 4, 10 & 11	4/H1.05	–
CHEMICAL HANDLING BLDG. 21	EF 21-2	GREENHECK	RBU-1H30-5	6950	0.20"	?	460V, 3ø	300	3, 4, 10 & 11	3/H1.05	–

NOTES:

1. PROVIDE ROOF EXHAUST FANS WITH MANUFACTURER'S BACKDRAFT DAMPER.
2. EXTEND DISCHARGE OF EF 12-1, 2, 3 & 4 TO MIN. 10'-0" ABOVE ROOF & SIZE AT 3000 FPM DISCHARGE VELOCITY.
3. FAN, DUCTWORK & BACKDRAFT DAMPER (BDD) TO BE TYPE #304 STAINLESS STEEL.
4. COAT ALL INTERNAL SURFACES AND FAN BLADES WITH CORROSION PROTECTION, SPRAY ON TYPE HIGH PERFORMANCE EPOXY (GREENKOTE).
5. SET EF/16-1 FOR 22,000 CFM FOR PHASE III AND 33,000 CFM FOR FINAL BUILDOUT. PROVIDE VFD.
6. PROVIDE ROOF EXHAUST FANS WITH MANUFACTURER'S ROOF CURB AND BACKDRAFT DAMPER.
7. DUCTWORK AT FAN CONNECTIONS AND BACKDRAFT DAMPER (BDD) TO BE TYPE #304 STAINLESS STEEL.
8. INTERLOCK WITH AC/13-1.
9. PROVIDE SIDEWALL PROPELLER FANS WITH WALL COLLAR, OSHA MOTOR SIDE GUARD, WEATHER HOOD, AND BACKDRAFT DAMPER.
10. FAN TO RUN CONTINUOUSLY.
11. PROVIDE ROOF EXHAUST FANS WITH MANUFACTURER'S ROOF CURB, OUTLET SCREEN, AND ALUMINUM BUTTERFLY BACKDRAFT DAMPER.

EVAP COOLER SCHEDULE

EC NO.	LOCATION	MODEL NO.	CFM	S.P. (IN. W.G.)	FAN			PUMP			OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
					RPM	HP	VOLT/PH	GPH	WATTS	VOLT/PH				
EC 3-1	INFLUENT PUMP STATION BLDG. 3	'ARVIN' ED213	15,000	0.25	425	7.5	460/3	96	80	120/1	1240	–	–	–
EC 3-2	INFLUENT PUMP STATION BLDG. 3	'ARVIN' ED213	15,000	0.25	425	7.5	460/3	96	80	120/1	1240	–	–	–
EC 6-1	SOUTHSIDE MCC / GEN. BLDG. 6	'ARVIN' ED213	15,000	0.25	425	7.5	460/3	96	80	120/1	1240	–	–	–
EC 6-2	SOUTHSIDE MCC / GEN. BLDG. 6	'ARVIN' ED213	15,000	0.25	425	7.5	460/3	96	80	120/1	1240	–	–	–
EC 6-3	SOUTHSIDE MCC / GEN. BLDG. 6	'ARVIN' ED213	15,000	0.25	425	7.5	460/3	96	80	120/1	1240	–	–	–
EC 8-1	EFFLUENT MCC BLDG. 8	'ESSICK AIR' AD150	15,000	0.25	505	7.5	460/3	68	73	120/1	1000	–	–	–
EC 8-2	EFFLUENT MCC BLDG. 8	'ESSICK AIR' AD150	15,000	0.25	505	7.5	460/3	68	73	120/1	1000	–	–	–
EC 8-3	EFFLUENT MCC BLDG. 8	'ESSICK AIR' AD150	15,000	0.25	505	7.5	460/3	68	73	120/1	1000	–	–	FUTURE
EC 15-1	DEWATERING BLDG. 15	'ESSICK AIR' AD100	10,000	0.20	–	5	460/3	–	–	–	720	1/H1.05	1/H1.08	SEE NOTES 1, 2
EC 21-1	CHEMICAL HANDLING BLDG. 21	'ESSICK AIR' AD150	15,000	0.25	505	7.5	460/3	68	73	120/1	1000	–	–	–

NOTE:

1. PROVIDE EC UNITS WITH MANUFACTURER'S ROOF CURB.
2. PROVIDE SMOKE DETECTOR IN EVAP. COOLER DISCHARGE DUCT.
3. PROVIDE WITH MODEL 310587 AUTOMATIC BLEED-OFF KIT & MODEL 70791 DUMP PUMP KIT, TWO EACH PER EVAPORATIVE COOLER.
4. MOUNTING SHALL BE SIMILAR TO 4/H1.04.
5. FOR CONTROL DIAGRAMS, SEE SHEET H1.09.

MAKE-UP AIR UNIT SCHEDULE

UNIT	LOCATION	MODEL NO.	CFM	MIN. O.A. (CFM)	ESP (IN. W.G)	GAS HEATING		ELECTRICAL DATA				PUMP		MEDIA DEPTH TYPE	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM
						INPUT (MBH)	OUTPUT (MBH)	VOLT/PH	RPM	HP	FLA	VOLT/PH	HP				
MAU 3-1		"TRANE" AHOA40	9240	–	1.4	–	–	460c/3ø	–	5	13.0	–	–	–	1025	4/H1.04	
MAU 3-2		"TRANE" AHOA40	8190	–	1.2	–	–	460c/3ø	–	5	6.5	–	–	–	1000	4/H1.04	
MAU 14-1	SHOP/MAINT. BLDG. 14	"REZNOR" SDH-350	6200	6200	1.5	350	283.5	480c/3ø	1283	5	9.6	115v/1ø	1/50	12" CELDEK	995	2/H1.05	1/H1.08

NOTES:

1. SMOKE DETECTION WITH AUTOMATIC SHUTOFF IS NOT REQUIRED BY UNIT WITH CFM GREATER THAN 2000 BECAUSE OF CMC SECTION 609 EXCEPTION 2, ROOMS WITH DIRECT EXIT AND TRAVEL DISTANCE LESS THAN 100 FEET.
2. FAN TO RUN CONTINUOUSLY, 24/7

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REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

HVAC SCHEDULES

SCALE: NONE
DRAWING NUMBER: H1.02
SHEET NUMBER: OF SHEETS

01003.00\H1-02.FRV - December 30, 2003 - DA - 27

QC	
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AIR CONDITIONING UNIT SCHEDULE

LOCATION	UNIT	"TRANE" MODEL NO. (SEE NOTE #4)	"YORK" MODEL NO.	CFM	MIN OSA (CFM)	E.S.P.	TOTAL COOL. CAP. MBH	SENS. COOL. CAP. MBH	EDB (°F) / EWB (°F)	GAS HEATING INPUT MBH	GAS HEATING OUTPUT MBH	ELECTRICAL DATA VOLT.	SUPPLY FAN HP	SUPPLY FAN FLA	COMPRESSOR LRA	COMPRESSOR RLA	PWR EXHAUST HP	PWR EXHAUST FLA	COND. FAN FLA	COMB. FAN FLA	MCA	UNIT OPER. WT. (LBS.)	SEASON. ENER. EFFIC. RATIO
INFLUENT PUMP STATION BLDG. 3	AC 3-1	YHC092A4	–	3000	600	0.75	80.1	61.0	79.4 / 63.7	120	97.2	460V 3ø 60 HZ.	2	3.1	(2) 44	(2) 6.4	–	–	1.75	0.4	–	1500	11.5 EER
INFLUENT PUMP STATION BLDG. 3	AC 3-2	YHC060A4	–	2000	400	0.75	56.0	42.2	79.4 / 63.7	90	73	460V 3ø 60 HZ.	1	2.5	49.5	8.5	–	–	1.2	0.4	–	960	12.0 EER
INFLUENT PUMP STATION BLDG. 3	AC 3-3	(FUTURE UNIT)	–	1800	360	–	54.8	39.8	79.4 / 63.7	90	73	460V 3ø 60 HZ.	(FUTURE UNIT)										
SOUTHSIDE MCC / GEN. BLDG. 6	AC 6-1	YHC092A4	–	3000	600	0.75	80.1	61.0	79.4 / 63.7	120	97.2	460V 3ø 60 HZ.	2	3.1	(2) 44	(2) 6.4	–	–	1.75	0.4	–	1500	11.5 EER
SOUTHSIDE MCC / GEN. BLDG. 6	AC 6-2	YHC092A4	–	3000	600	0.75	80.1	61.0	79.4 / 63.7	120	97.2	460V 3ø 60 HZ.	2	3.1	(2) 44	(2) 6.4	–	–	1.75	0.4	–	1500	11.5 EER
EFFLUENT MCC BLDG. 8	AC 8-1	–	DH078C	3000	200	0.5	73.5	60.0	80 / 67	–	–	460V 3ø 60 HZ.	1?	3.1	2 @ 45	2 @ 5.8	?	2.2	2 @ 0.8	–	30	1200	10.0 EER
EFFLUENT MCC BLDG. 8	AC 8-2	–	DH078C	3000	200	0.5	73.5	60.0	80 / 67	–	–	460V 3ø 60 HZ.	1?	3.1	2 @ 45	2 @ 5.8	?	2.2	2 @ 0.8	–	30	1200	10.0 EER
EFFLUENT MCC BLDG. 8	AC 8-3	–	DHE060	2000	100	0.5	57	43	80 / 67	–	–	460V 3ø 60 HZ.	1?	3.0	69.0	8.3	–	–	1.4	–	14.3	850	12.0
LABORATORY BLDG. 12	AC 12-1	YCC024F	–	800	150	0.75	20.9	19.5	79.1 / 63.6	50	40	208V 1ø 60 HZ.	?	1.6	67	10	–	–	1.6	0.6	–	520	10
LABORATORY BLDG. 12	AC 12-2	YCC024F	–	800	130	0.75	22.2	16.2	78.6 / 63.5	50	40	208V 1ø 60 HZ.	?	1.6	67	10	–	–	1.6	0.6	–	520	10
LABORATORY BLDG. 12	AC 12-3	YCC018F	–	600	60	0.75	17.3	11.9	77.3 / 63.2	50	40	208V 1ø 60 HZ.	?	1.6	48	8	–	–	1.6	0.6	–	500	10
LABORATORY BLDG. 12	AC 12-4	YHC120A4	–	4000	2000	1.0	116.0	92.6	86.0 / 65.4	150	121.5	460V 3ø 60 HZ.	3.0	4.6	(2) 62	(2) 9.0	–	–	2.8	0.5	–	1600	11.2 EER
LABORATORY BLDG. 12	AC 12-5	YHC120A4	–	4000	2000	1.0	116.0	92.6	86.0 / 65.4	150	121.5	460V 3ø 60 HZ.	3.0	4.6	(2) 62	(2) 9.0	–	–	2.8	0.5	–	1600	11.2 EER
LABORATORY BLDG. 12	AC 12-6	YHC060A4	–	1990	1170	0.75	63.4	60.1	87.8 / 65.7	90	73	460V 3ø 60 HZ.	1	2.5	49.5	8.5	–	–	1.2	0.4	–	960	12.0 EER
LABORATORY BLDG. 12	AC 12-7	YCC018F	–	600	100	0.75	17.3	11.9	78.6 / 63.5	50	40	208V 1ø 60 HZ.	?	1.6	48	8	–	–	1.6	0.6	–	500	11.2 EER
LOCKER BLDG. 13	AC 13-1	YSC072A4	–	2000	700	0.8	70.0	50.7	80 / 67	80.0	64.8	460V 3ø 60 HZ.	1	2.5	75	10.1	–	–	2.5	–	–	990	10.2 EER
DEWATERING BLDG. 15	AC 15-1	YSC120A4	–	4000	1000	0.8	112.2	90.7	80 / 67	200 / 150	162 / 121.5	460V 3ø 60 HZ.	3	4.6	63 / 46	9.5 / 7.4	–	–	2.5	0.42	–	1250	10.2 EER

NOTES:

1. PROVIDE AC UNITS WITH MANUFACTURER'S ROOF CURB. PROVIDE POWER EXHAUST AND 100% OUTSIDE AIR ECONOMIZER ON UNITS 1800 CFM & LARGER. FOR AC/12-6 DELETE THE POWER EXHAUST ECONOMIZER AND ADD "SPEC-AIR, ACER", 5 TON ENERGY RECOVERY UNIT WITH 1" ALUMINUM PRE-FILTERS, INDIRECT EVAPORATIVE COOLING SECTION, ECONOMIZER (ENERGY RECOVERY) WITH OSA AND RA DAMPER ASSEMBLY, HORIZONTAL VAPORIZER FAN DISCHARGE AND FREEZE SAFE (HEAT TAPE). INDIRECT (COOL) 54 MBH AT 105 F DEGREE DB/70 F DEGREE WB EAT; 81.1 F DEGREE DB / 62.6 DEGREE LAT, 0.43 APD, 10 GPM. DX COIL PRECOOLING 81.8 F DEGREE DB/ 62.6 F WB EAT. INDIRECT (HEAT) 32 F DB EAT AND LAT. 1 HP SUPPLY MOTOR, 0.5 HP INDIRECT MOTOR, 460V/60HZ/3PH.
2. PROVIDE TWO STAGE HEATING WHERE AVAILABLE. RATINGS SHOWN ARE SECOND (HIGH) STAGE CAPACITIES.
3. BASED ON 105°F EAT ON AIR COOLED CONDENSER.
4. PROVIDE SMOKE DETECTORS IN SA DUCT OF AC UNITS GREATER THAN 2,000?, TO SHUT DOWN A/C UNIT ON SMOKE DETECTION.
5. PROVIDE MIN 1" DRAIN OR UNIT DRAIN SIZE TO NEAREST FD/FS, OR DRAIN TO DAYLIGHT WITH CONCRETE SPLASHBLOCK ON ROOF.
6. FOR MOUNTING DETAIL, SEE H1.07.
7. FOR CONTROLS, SEE SHEETS H1.09 AND H1.10.
8. PROVIDE WITH PROGRAMMABLE THERMOSTAT WITH PUSH-BUTTON BY-PASS TIMER BY UNIT MANUFACTURER.
9. PROVIDE MIN 1" CONDENSATE DRAIN, SEE PLUMBING PLANS FOR CONNECTION TO UNIT AND ROUTING OF PIPING.
10. PROVIDE WITH OPTIONAL 120v GFCI CONVENIENCE OUTLET

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REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
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1	SEM	10/09/03	RECORD SET NO. 1

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

HVAC SCHEDULES

SCALE: NONE
DRAWING NUMBER: H1.03
SHEET NUMBER: OF SHEETS

011003.00\H1-02.DWG - December 30, 2003 - DA - 27

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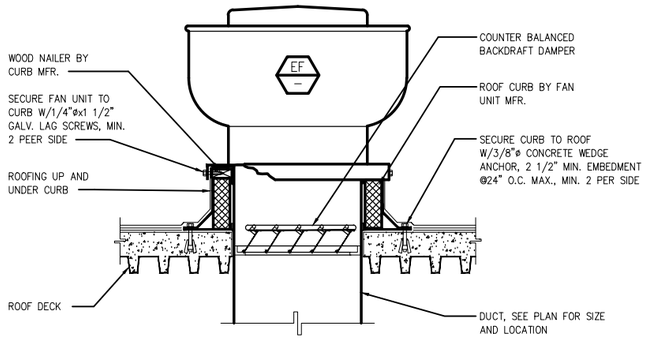
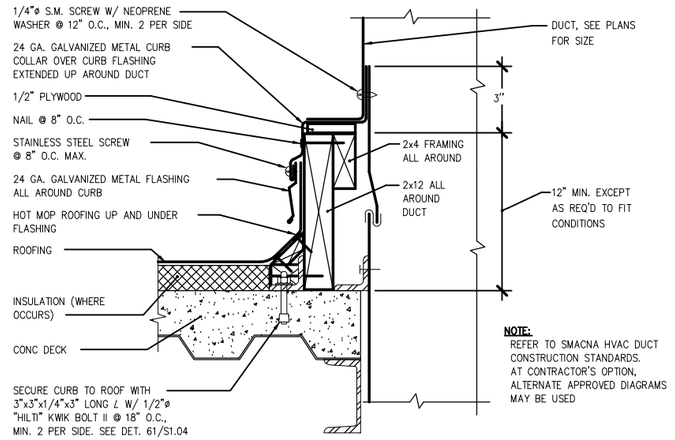


NOTE:
1. GUY WIRE MAY BE REPLACED WITH A MIN. 2x2x¼ ANGLE IRON OR WITH A THICKER PIPE (1" OR LARGER).

EXHAUST FAN MOUNTING DETAIL

SCALE : NONE

6 / H1.04

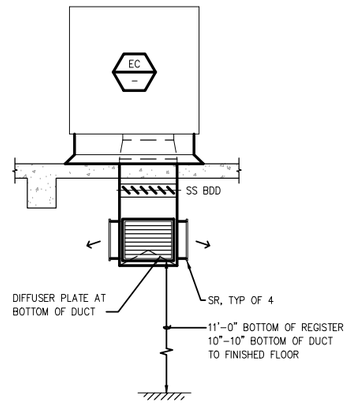


NOTE:
REFER TO SMACNA HVAC DUCT CONSTRUCTION STANDARDS. AT CONTRACTOR'S OPTION, ALTERNATE APPROVED DIAGRAMS MAY BE USED

DUCT THRU ROOF DETAIL

SCALE : NONE

3 / H1.04



EC DETAIL

SCALE : NONE

1 / H1.04

MOUNTING DETAIL

SCALE : NONE

5 / H1.04

NOTE:
1. MOUNTING OF EVAP COOLING UNIT IS SIMILAR.
2. MAU TO BE SECURED TO CURB ON EQUIPMENT PAD, REFER TO SHEET S3.07.

MAU MOUNTING DETAIL

SCALE : NONE

4 / H1.04

NOTE:
1. FOR FLEX CONNECTOR, SEE SPECIFICATION SECTION 15800, 2.13.

ROOF EXHAUST FAN DETAIL

SCALE : NONE

2 / H1.04

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PHASE III EXPANSION PROJECT

HVAC DETAILS

SCALE: NONE
DRAWING NUMBER: H1.04
SHEET NUMBER
OF SHEETS

01I003.00\H1-03.FBV - December 30, 2003 - DA - 23

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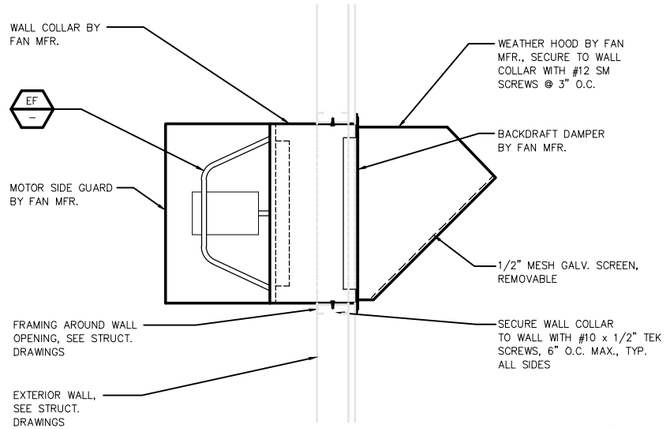
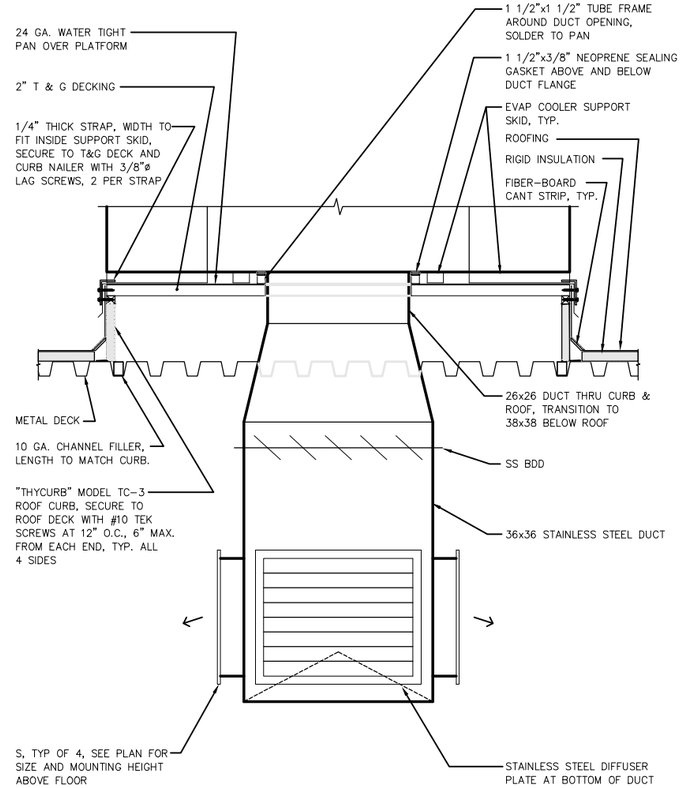


WALL MOUNT EXHAUST FAN

3 H1.05

SCALE : NONE

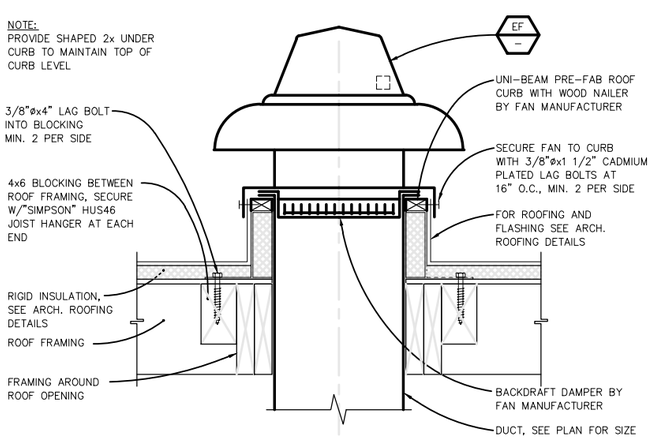


TYPICAL EC DETAIL

1 H1.05

SCALE : NONE

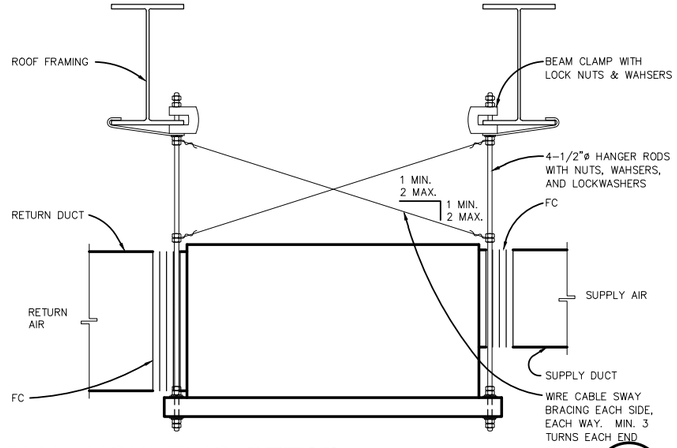
NOTE:
PROVIDE SHAPED 2x UNDER CURB TO MAINTAIN TOP OF CURB LEVEL



EF MOUNTING @ WOOD DECK

4 H1.05

SCALE : NONE



MAU MOUNTING DETAIL

2 H1.05

SCALE : NONE

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

HVAC

HVAC DETAILS

SCALE: NONE

DRAWING NUMBER: H1.05

SHEET NUMBER

OF SHEETS

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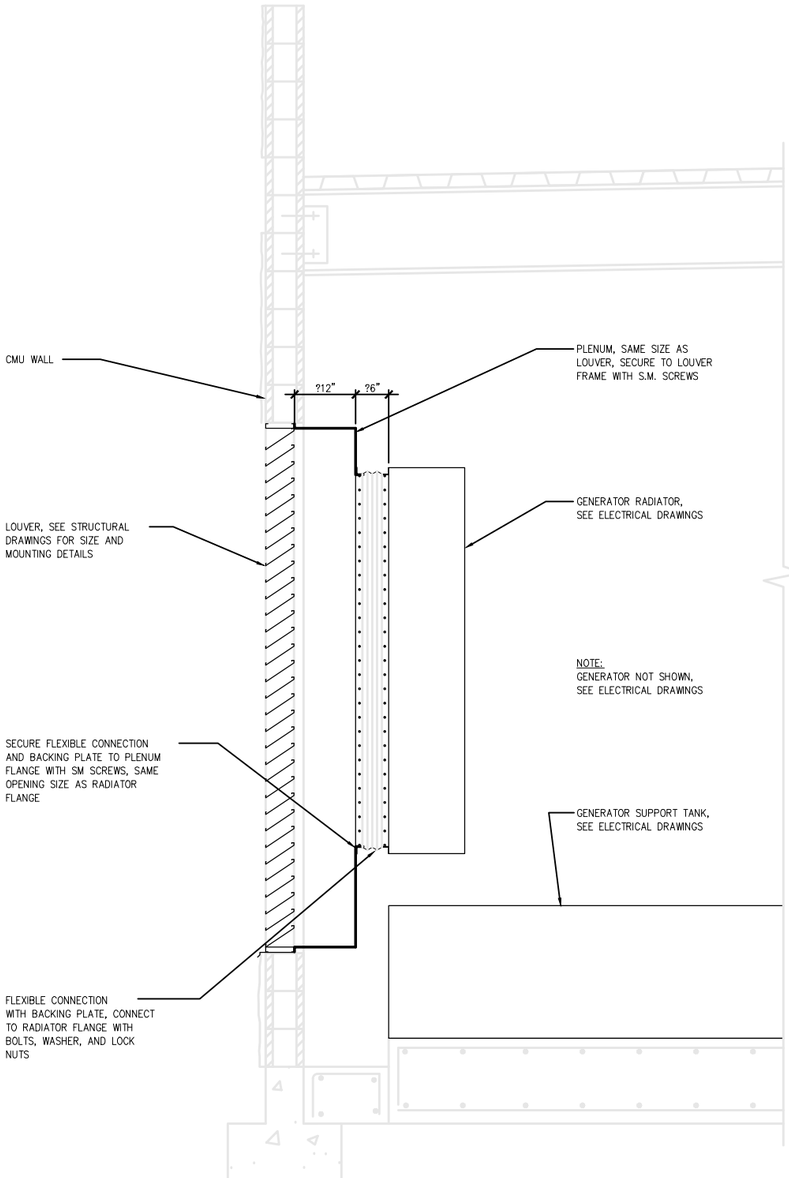
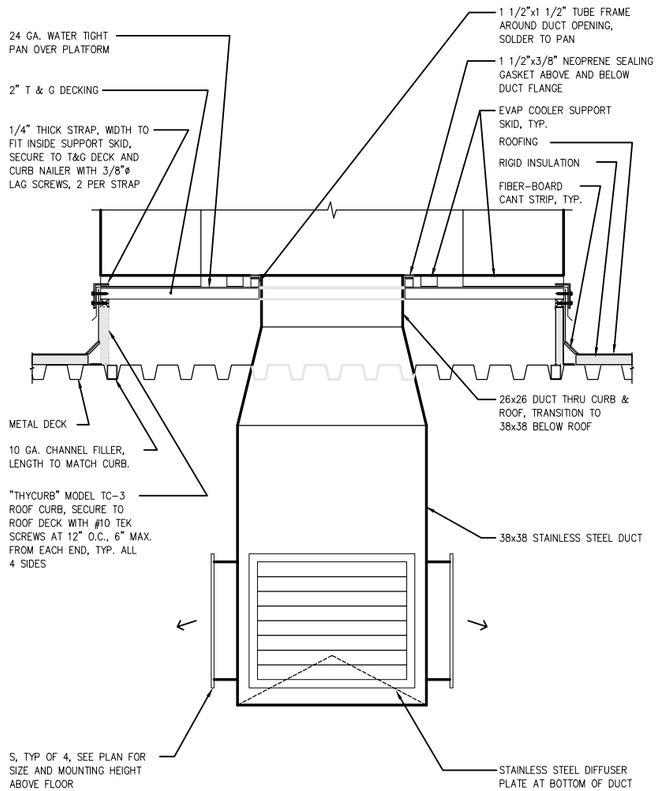


SECTION @ GENERATOR LOUVER

SCALE : 3/4" = 1'-0"

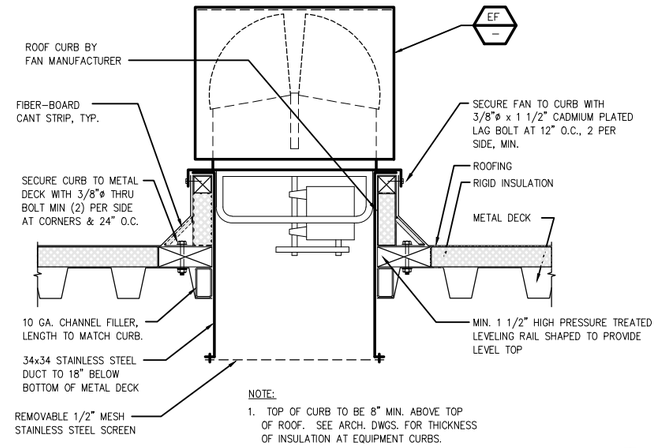
4 H1.06



TYPICAL EC DETAIL

SCALE : NONE

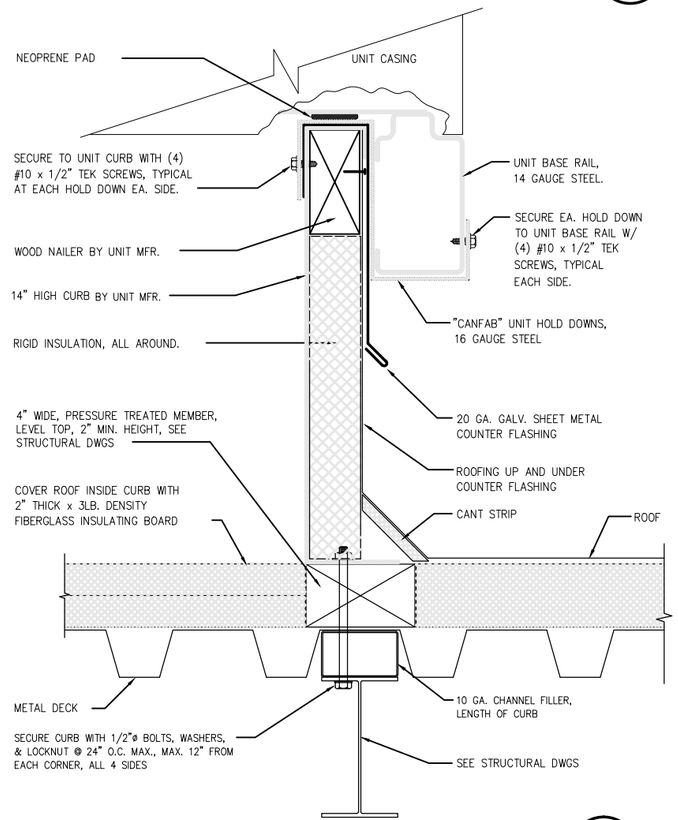
3 H1.06



TYPICAL EF MOUNTING

SCALE : NONE

2 H1.06



TYPICAL A.C. UNIT MOUNTING

SCALE : NONE (CURB INTERNAL TO INSULATION AND NAILER)

1 H1.06

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1	WV	8-8-05	ADDENDUM #1

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

HVAC DETAILS

SCALE: NONE
DRAWING NUMBER: H1.06
SHEET NUMBER OF SHEETS

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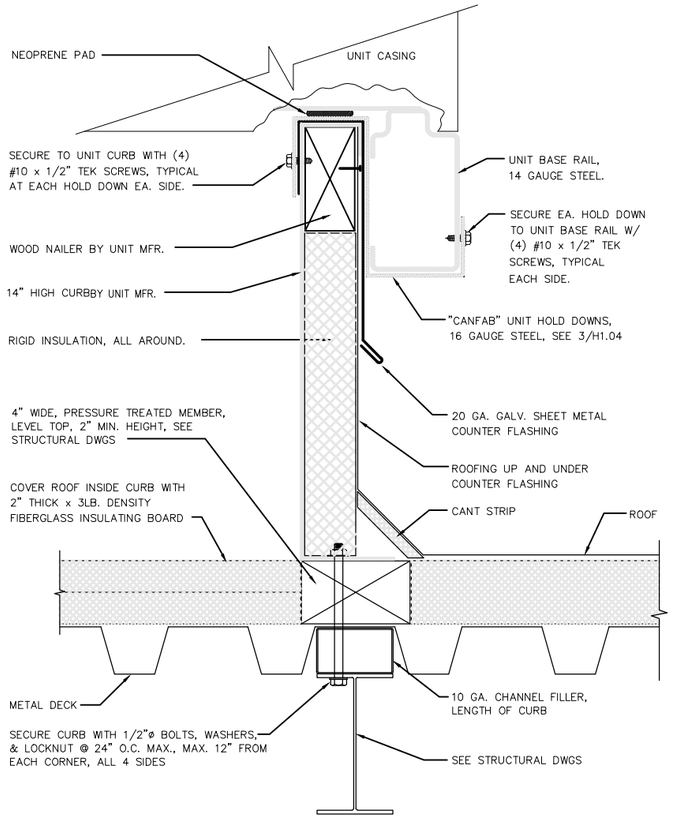
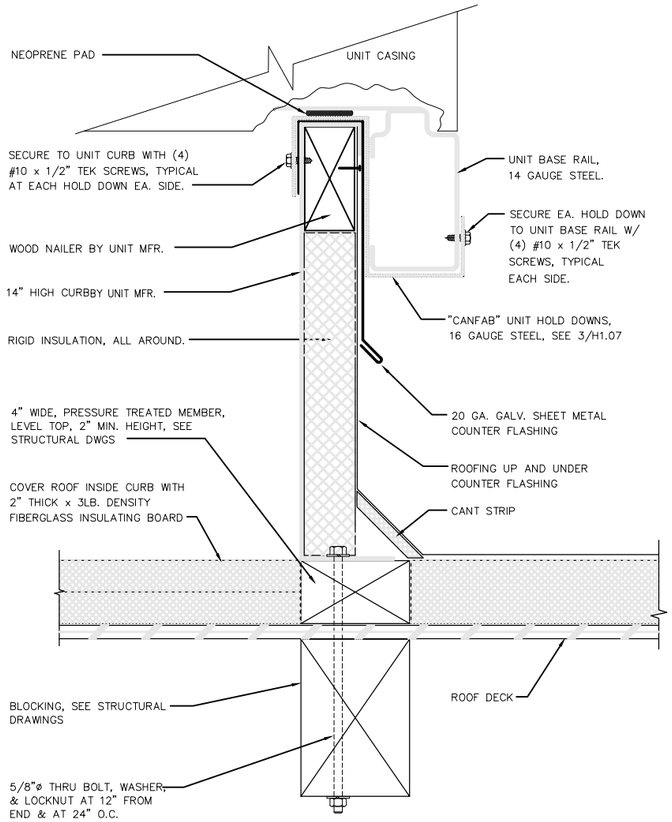


AC UNIT MOUNTING DETAIL

SCALE : NONE

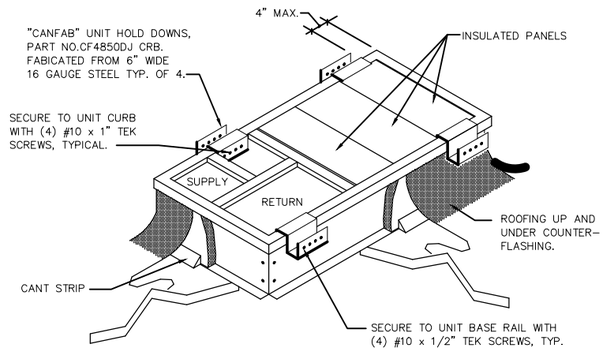
1 H1.07



AC UNIT MOUNTING DETAIL

SCALE : NONE

2 H1.07



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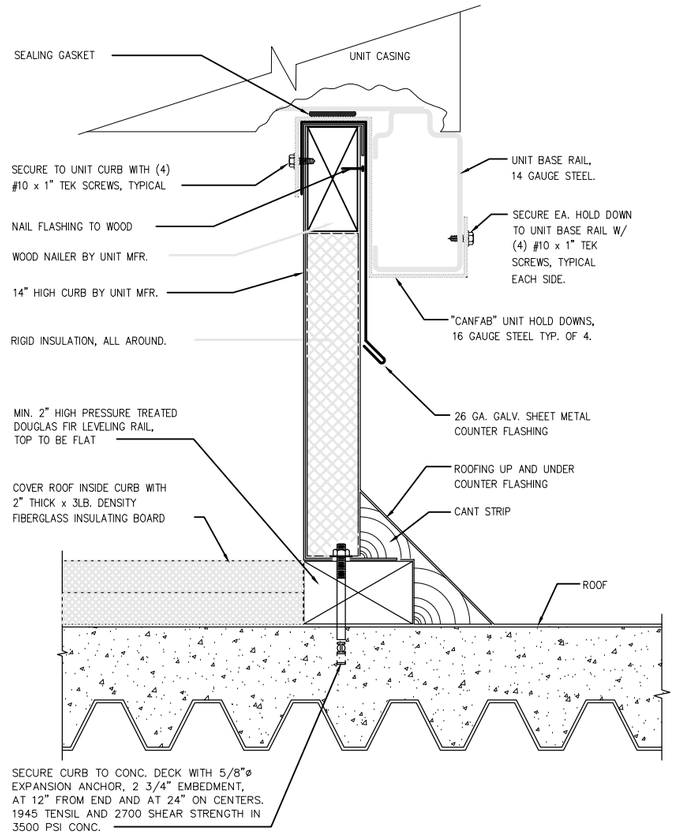
SCALE : NONE

3 H1.07



CURB ATTACHMENT DETAIL

SCALE : NONE

4 H1.07

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Sacramento, California
DESIGNER/DRAFTER
011003.00
PROJECT NO.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHEARS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY:
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
6			
5			
4			
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2			
1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET~~
~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

HVAC

HVAC DETAILS

SCALE: NONE

DRAWING NUMBER: H1.07

SHEET NUMBER
OF SHEETS

H:\Customers\2007\070812.00\H1-04.PBJ — November 5, 2007 — WV — 11

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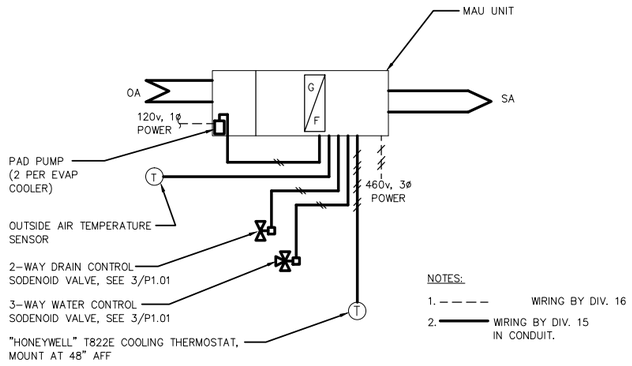
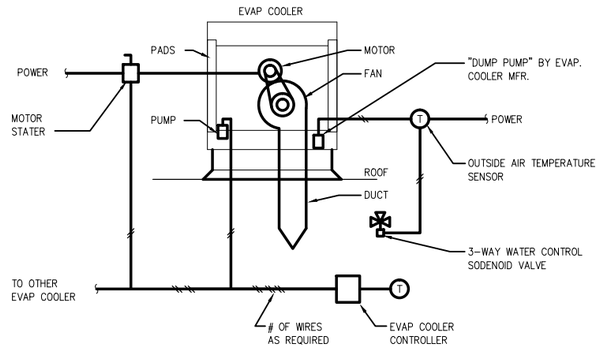


MAU 14-1 CONTROL DIAGRAM



EVAPORATIVE COOLER UNIT CONTROL DIAGRAM

SEQUENCE OF OPERATION

GENERAL
OPERATING SCHEDULES SHALL BE DETERMINED BY THE OWNER. THE PROGRAMMABLE THERMOSTAT WILL BE PROGRAMMED WITH THE OCCUPIED/UNOCCUPIED SCHEDULE.

WHENEVER A PARTICULAR SYSTEM IS NOT IN OPERATION ITS OUTDOOR AIR DAMPER SYSTEM SHALL SPRING RETURN TO THE CLOSED OUTSIDE AIR POSITION.

A PUSH BUTTON SWITCH LOCATED ON THE SIDE OF THE ROOM THERMOSTAT SHALL PROVIDE A PROGRAMMED PERIOD OF SYSTEM OPERATION FOR THAT AC UNIT SYSTEM WHEN ACTIVATED DURING SCHEDULED "OFF" HOURS.

SAFETY CONTROLS – SMOKE SHUTDOWN:
THE SUPPLY FAN SHALL SHUT DOWN IF A SUPPLY AIR DUCT DETECTOR SIGNALS A SMOKE CONDITION. ADDITIONALLY; WHICHEVER DEVICE THAT CAUSED THE SHUT DOWN SHALL BE REPORTED BY THE FIRE ALARM SYSTEM.

PACKAGE AC SYSTEMS

UPON A CALL FOR HEATING THE ECONOMIZER DAMPERS SHALL BE POSITIONED AT THE MINIMUM OUTSIDE AIR SETTING AND THE HEATING SHALL BE ENERGIZED.

UPON A CALL FOR COOLING, AND THE OUTSIDE AIR TEMPERATURE IS BELOW 60°F (ADJUSTABLE), OA/EA DAMPERS TO MODULATE TO 100% OPEN. UPON AN ADDITIONAL CALL FOR COOLING, OR WHEN OUTSIDE AIR TEMPERATURE IS ABOVE 60°F,, OA DAMPER TO MODULATE TO MINIMUM SETTING AND THERMOSTAT TO CYCLE THE MECHANICAL COOLING. OA DAMPER TO CLOSE WHEN THE UNIT IS OFF.

ECONOMIZER DAMPER MINIMUM OUTSIDE AIR POSITION SHALL BE DETERMINED AT THE TIME OF SYSTEM STARTUP AND AIR BALANCING.

ROOM TEMPERATURE SET POINT SHALL BE ADJUSTABLE.

EVAPORATIVE COOLING UNIT CONTROL

24 HOUR OPERATION UNIT
EC UNIT FAN SHALL BE ENABLED TO RUN CONTINUOUSLY. UPON A CALL FOR COOLING THE EC UNIT PUMP SHALL BE ENABLED.

WHEN OUTSIDE AIR TEMPERATURE DROPS BELOW 40°F, 3-WAY WATER CONTROL VALVE IS TO CLOSE WATER SUPPLY AND ALLOW WATER LINE TO UNIT TO DRAIN. A SIGNAL SHALL ALSO BE PROVIDED TO ENERGIZE "DUMP PUMP". "DUMP PUMP" INTERNAL CONTROLS SHALL SHUT PUMP OFF ONCE SUMP HAS BEEN EMPTIED. WHEN OUTSIDE AIR TEMPERATURE IS ABOVE 40°F DUMP PUMP" IS TO BE DE-ENERGIZED AND 3-WAY WATER CONTROL VALVE SHALL OPEN WATER SUPPLY LINE AND CLOSE DRAIN PATH.

MAKE-UP AIR UNIT CONTROL

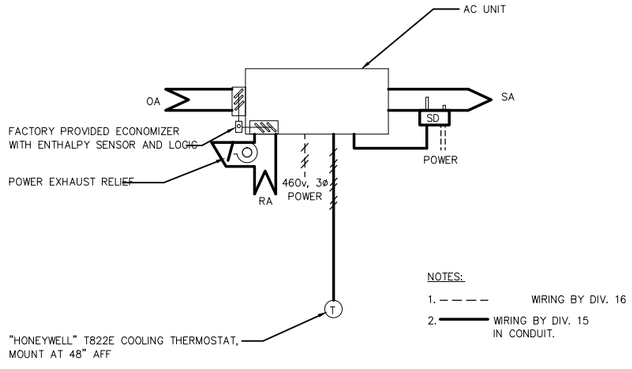
GAS FIRED, EVAPORATIVE COOLED MAKE-UP AIR UNIT SHALL BE CONTROLLED BY PROGRAMABLE THERMOSTAT AND INTEGRAL UNIT CONTROLS.

UPON A CALL FOR HEATING UNIT INTEGRATED CONTROLS SHALL ENERGIZE THE IGNITION SEQUENCE AND THE FIRST STAGE GAS VALVE. UPON A FURTHER CALL FOR HEATING THE SECOND STAGE GAS VALVE SHALL BE ENERGIZED. UPON ROOM TEMPERATURE BEING SATISFIED, GAS VALVE IS DE-ENERGEIZED.

UPON A CALL FOR COOLING THE EC UNIT FAN SHALL BE ENERGIZED. UPON A FURTHER CALL FOR COOLING THE EC UNIT PUMP SHALL BE ENERGIZED.

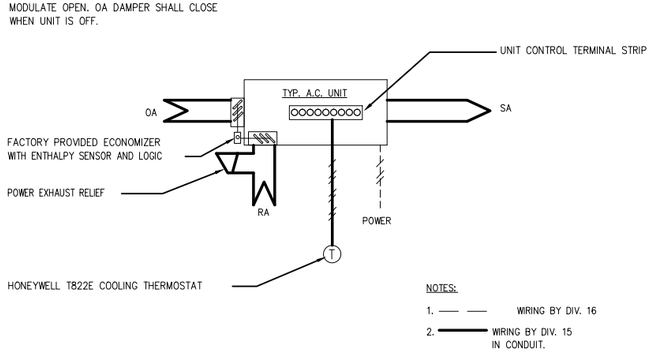
WHEN OUTSIDE AIR TEMPERATURE DROPS BELOW 40°F, 3-WAY WATER CONTROL VALVE IS TO CLOSE WATER SUPPLY AND ALLOW WATER LINE TO DRAIN. A SIGNAL SHALL ALSO BE PROVIDED TO OPEN 2-WAY DRAIN CONTROL VALVE TO EMPTY EVAP COOLER SUMP. WHEN OUTSIDE AIR TEMPERATURE IS ABOVE 40°F 3-WAY WATER CONTROL VAVLE SHALL OPEN WATER SUPPLY LINE AND CLOSE DRAIN PATH AND 2-WAY DRAIN CONTROL VALVE SHALL CLOSE.

ROOM TEMPERATURE SET POINT SHALL BE ADJUSTABLE.



AC UNIT AC 15-1 CONTROL DIAGRAM

DESCRIPTION OF OPERATION:
CYCLE UNIT ON AND OFF WITH THERMOSTAT. OA DAMPER SHALL OPEN TO MININUM OA WHEN UNIT IS ON. UPON A CALL FOR COOLING FROM THEMOSTAT THE OUTSIDE AIR DAMPER SHALL MODULATE OPEN. OA DAMPER SHALL CLOSE WHEN UNIT IS OFF.



AC 8-1, AC 8-2, AC 8-3 and AC 8-4 CONTROL DIAGRAM

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PROJECT NO.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SNELGROVE — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY:
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1	SEM	09/11	RECORD SET

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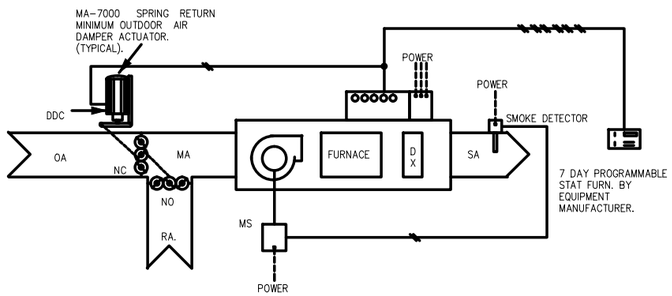
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

HVAC CONTROLS

SCALE: NONE
DRAWING NUMBER: **H1.08**
SHEET NUMBER: XX OF XX SHEETS

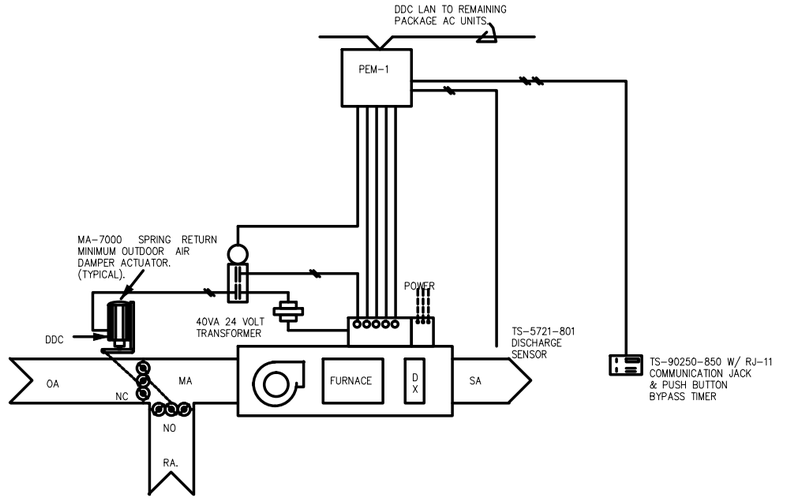
H:\Customers\2003\003509.00\H1-04.PMJ – June 9, 2005 – WV – 3



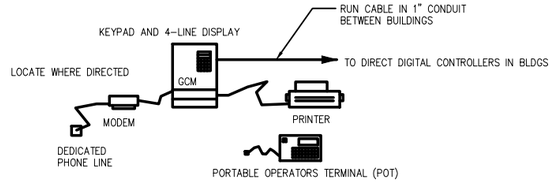
NOTES:

1. AC 6-1 & AC 6-2 CONTROL SIMILAR
2. FURNISH DUCT SMOKE DETECTOR ON AC 3-1 WHICH SHALL SHUT AC UNIT UPON DETECTION OF SMOKE.

AC 3-1 and AC 3-2 CONTROL DIAGRAM



AC 12-1, AC 12-2, AC 12-3, AC 12-6 and AC 12-7 CONTROL DIAGRAM



DIGITAL CONTROL ARCHITECTURE DIAGRAM

SEQUENCE OF OPERATION

NOTE: THE SETPOINTS AND OTHER VARIABLES REFERRED TO IN THE FOLLOWING SEQUENCES ARE TO BE CONSIDERED AS INITIAL SETTINGS ONLY. THE CONTRACTOR SHALL UTILIZE THE "TRENDING" CAPABILITIES OF THE FACILITY'S DDC SYSTEM TO ESTABLISH THE OPTIMUM SETTINGS, RATES OF CHANGE ETC. TO BE UTILIZED FOR CONTROL OF THE HVAC SYSTEMS FURNISHED FOR THIS PROJECT.

THE CENTRALIZED "HOST" STATION (GCM) SHALL BE BE PROVIDED WITH A COMPLETE ALPHA-NUMERIC KEYPAD AND LCD DISPLAY AND SHALL BE PROGRAMMED TO PROVIDE A CONTINUOUS ROTATING DISPLAY (CURRENT STATUS) OF UP TO 20 USER SELECTED POINTS (SPACE TEMPERATURES, OPERATIONAL STATUS AND/OR SUPPLY AIR TEMPERATURES, ETC.). THIS DISPLAY SHALL BE CONTINUOUS.

WITH THE PROPER PASSWORD, AN OPERATOR AT THE ALPHA-NUMERIC KEYPAD AND DISPLAY INTEGRAL TO THE "GCM" SHALL BE ABLE TO COMMUNICATE TO ANY OF THE MECHANICAL SYSTEM CONTROLS ON THE LAN NETWORK FOR CHECKOUT, RE-PROGRAMMING OR OVERRIDE.

THE FACILITY MANAGEMENT SYSTEM SHALL BE FURNISHED WITH AN ATARI PORTFOLIO PORTABLE COMPUTER SYSTEM, WITH XPSI SOFTWARE INSTALLED. THIS PORTABLE SYSTEM SHALL BE CAPABLE OF CONNECTION TO ANY OF THE STAND ALONE UNITARY DIGITAL CONTROLLERS (PEM-1 OR MZ-2) OR ANY OF THE INDICATED ROOM TEMPERATURE SENSORS AND WHEN CONNECTED SHALL BE CAPABLE OF COMMUNICATION, RE-PROGRAMMING OR OVERRIDE TO ANY OF THE MECHANICAL SYSTEMS CONTROLS ON THAT "LAN" NETWORK.

START/STOP CONTROL, AIR HANDLING UNITS (AHU'S)
THE "GCM" SHALL BE PROGRAMMED TO PROVIDE THE OPERATING SCHEDULES OF EACH OF THE NETWORKED AC SYSTEMS INDIVIDUALLY. OPERATING SCHEDULES SHALL BE DETERMINED BY OWNER AND SHALL BE PROGRAMMABLE FOR THE ENTIRE YEAR WITH AUTOMATIC COMPENSATION FOR DAYLIGHT SAVINGS TIME.

WHENEVER A PARTICULAR SYSTEM IS NOT IN OPERATION ITS OUTDOOR AIR DAMPER SYSTEM SHALL SPRING RETURN TO THE CLOSED OUTSIDE AIR POSITION.

A PUSH BUTTON SWITCH LOCATED ON THE SIDE OF THE ROOM TEMPERATURE SENSOR SHALL PROVIDE A PROGRAMMED PERIOD OF SYSTEM OPERATION FOR THAT AC UNIT SYSTEM WHEN ACTIVATED DURING SCHEDULED "OFF" HOURS.

SAFETY CONTROLS:
THE SUPPLY, FAN SHALL SHUT DOWN IF A SUPPLY AIR DUCT DETECTOR SIGNALS A SMOKE CONDITION. ADDITIONALLY; WHICHEVER DEVICE THAT CAUSED THE SHUT DOWN SHALL BE REPORTED BY THE "BUILDING AUTOMATION SYSTEM" (BAS).

NIGHT SET-BACK
IF A SPACE TEMPERATURE FALLS BELOW 50', THE AIR HANDLING SYSTEM SERVING THIS SPACE SHALL BE ENABLED IN THE "WARM-UP" MODE AND SHALL BE DE-ENERGIZED WHEN THIS SPACE TEMPERATURE RISES ABOVE

SPACE TEMPERATURE CONTROL, PACKAGE AC SYSTEMS

THE FACILITY MANAGEMENT SYSTEM, WITH TEMPERATURE INPUT FROM A ROOM SENSOR LOCATED WHERE SHOWN ON THE PLANS, SHALL ENABLE THE HEATING, CONTROL AND THE COOLING, IN SEQUENCE, AS DESCRIBED BELOW, TO MAINTAIN ROOM AIR TEMPERATURE AS SET.

UPON A CALL FOR HEATING THE ECONOMIZER DAMPERS SHALL BE POSITIONED AT THE MINIMUM OUTSIDE AIR SETTING AND THE HEATING SHALL BE ENERGIZED.

ECONOMIZER DAMPER MINIMUM OUTSIDE AIR POSITION SHALL BE DETERMINED AT THE TIME OF SYSTEM STARTUP AND AIR BALANCING.

ROOM TEMPERATURE SET POINT SHALL BE ADJUSTABLE TROUGH SOFTWARE PROGRAMMING ONLY.

FURNACE WITH EVAP. COOLING CONTROL

THESE UNITS SHALL HAVE THE SAME SEQUENCE AS DEFINED ABOVE FOR PACKAGE AC UNITS EXCEPT THE ECONOMY CYCLE DAMPERS WILL REMAIN OPEN WHEN THERE IS A COOLING DEMAND. ADDITIONALLY EVAPORATIVE COOLING SHALL CYCLE AS REQUIRED TO SATISFY MAXIMUM COOLING DEMAND.

LABORATORY FUME HOOD AND AC UNIT CONTROL

LABORATORY FUME HOOD SASH FACE VELOCITY SHALL BE MAINTAINED BY A "TSI" MONITOR / CONTROLLER THROUGH MODULATING ITS RESPECTIVE FUME HOOD'S EXHAUST DAMPER AS SET. THE "TSI" MONITOR / CONTROLLER SHALL ALARM IF THE FACE VELOCITY IS HIGHER OR LOWER THAN ITS PROGRAMMED LIMITS.

IF A FUME HOOD IS MANUALLY ENABLED, THE AC UNIT OR UNITS SERVING ITS LAB AREA SHALL BE ENABLED FOR THE PURPOSE OF FRESH AIR MAKE-UP.

A "TSI" ROOM PRESSURE CONTROLLER SHALL MODULATE ITS RESPECTIVE LAB'S AC UNITS OUTDOOR AIR DAMPERS AS REQUIRED TO MAINTAIN LAB PRESSURE AT MINUS .005" WITH RESPECT TO AN ADJACENT REFERENCED AREA.

WHEN AN AC UNIT IS ENABLED BY THE DDC SYSTEM AT LEAST ON FUME HOOD IN THE LAB IT SERVES SHALL BE ENABLED TO EXHAUST THE AC UNITS MINIMUM OUTDOOR AIR SETTING.

RECORD SET

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011003.00 PROJECT NO.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

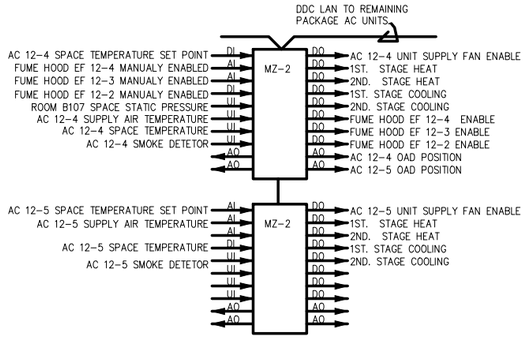
NO.	BY	DATE	REVISIONS
6			
5			REDUCED RECORD SET NOT TO SCALE
4			
3			
2	SEM	09/11	RECORD SET
1	SEM	10/09/03	RECORD SET NO. 1

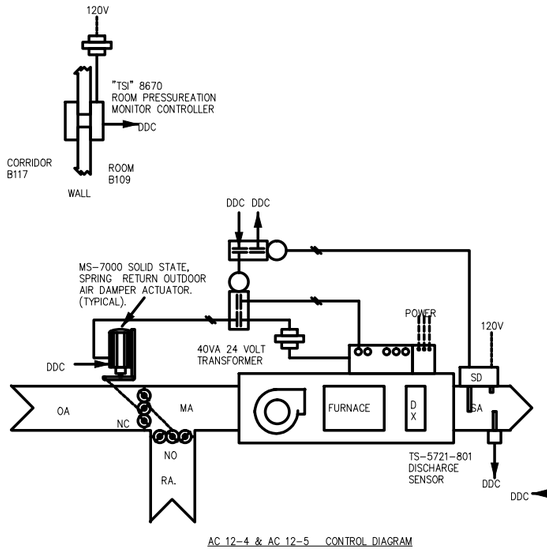
MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

HVAC CONTROLS

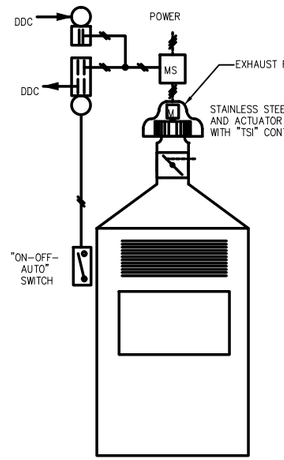
SCALE: NONE
DRAWING NUMBER: H1.09
SHEET NUMBER
OF SHEETS

011003.00\H1-05.FBV -- December 30, 2003 -- DA - 23



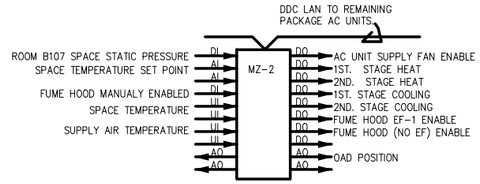


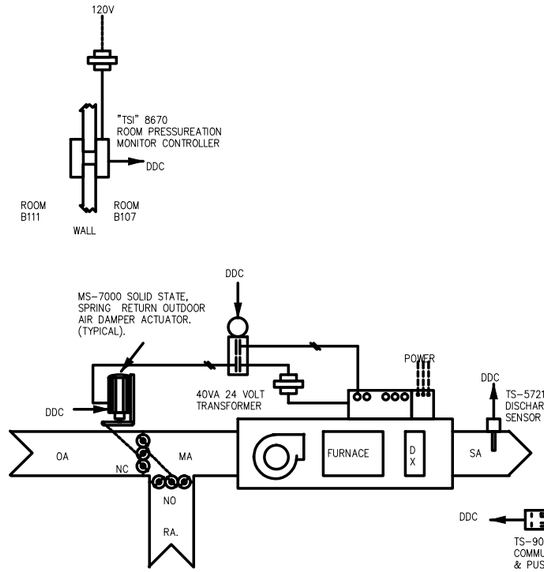
AC 12-4 & AC 12-5 CONTROL DIAGRAM



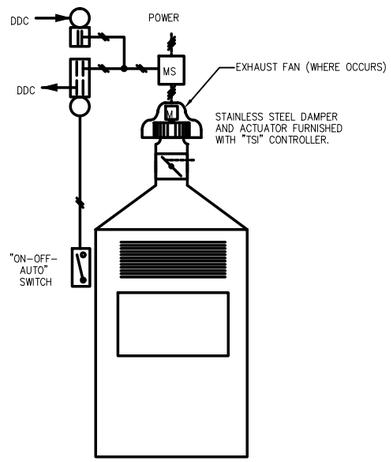
FUME HOOD MONITOR & CONTROL DIAGRAM
(TYP. OF 3)

LABS B108, B109, B112 and B115 CONTROL DIAGRAM





AC 12-3 & AC 12-6 CONTROL DIAGRAM



FUME HOOD MONITOR & CONTROL DIAGRAM
(TYP OF 2)

LAB B107 CONTROL DIAGRAM

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Sacramento, California
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01003.00 PROJECT NO.

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DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
6			
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2	SEM	09/11	RECORD SET
1	SEM	10/09/03	RECORD SET NO. 1

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MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

HVAC CONTROLS

SCALE: NONE
DRAWING NUMBER: H1.10
SHEET NUMBER: OF SHEETS

01003.00\H1-06.FBV - December 30, 2003 - DA - 23

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AIR SYSTEM REQUIREMENTS — Part 1 of 2 — MECH-2-C

PROJECT NAME: Manteca WQCF _ Sched C | DATE: 9/4/2007

SYSTEM FEATURES

		AIR SYSTEMS: Central or Single Zone		
ITEM OR SYSTEM TAG(S)		AC-1;H-1		
Number of Systems		1		
MANDATORY MEASURES	**T-24 Section**		**Reference on Plans or Specification [1]**	
Heating Equipment Efficiency	112(b)	81% AFUE		
Cooling Equipment Efficiency	112(b)	10.2 EER		
Heat Pump Thermostat	112(b)	n/a		
Furnace Controls	112(a), 110(b)	n/a		
Natural Ventilation	121(b)	Yes		
Minimum Ventilation	121(b)	700 cfm		
VAV Minimum Position Control	121(c)	No		
Demand Control Ventilation	121(c)	No		
Time Control	121(c), 122(k)	Programmable Setback		
Setback and Setup Control	122(k)	Heating Required		
Outdoor Damper Control	122(f)	Auto		
Isolation Zones	122(g)	n/a		
Pipe Insulation	123			
Duct Insulation	124	R-4.0		
PRESCRIPTIVE MEASURES				
Calculated Heating Capacity $e_{1.42}$ [2]	144 (a,b,c)	69,209 btu/h		
Proposed Heating Capacity [2]	144 (a,b,c)	69,000 btu/h		
Calculated Sensible Cooling Capacity $e_{1.42}$ [2]	144 (a,b,c)	62,773 btu/h		
Proposed Sensible Cooling Capacity [2]	144 (a,b,c)	60,929 btu/h		
Fan Control	144 (c)	Constant Volume		
DP Sensor Location	144 (c)			
Supply Pressure Reset (DDC only)	144 (c)	Yes		
Simultaneous Heat/Cool	144 (d)	No		
Economizer	144 (e)	Diff. Temp. (integrated)		
Heating Air Supply Reset	144 (f)	Constant Temp		
Cooling Air Supply Reset	144 (f)	Constant Temp		
Duct Sealing for Prescriptive Compliance [3]	144 (k)	No		

1. For each central and single zone air systems (or group of similar units) fill in the reference to sheet number and/or specification section and paragraph number where the required features are documented. If a requirement is not applicable, put "N/A" in the column.

2. Not required for hydronic heating and cooling. Either enter a value here or put in reference plans and specifications per footnote 1.

3. Enter Yes if System is: Constant Volume, Single Zone, Serves < 5,000 sq.ft., Has > 25% duct in unconditioned space. Duct sealing is required for Prescriptive Compliance, see §R2-5-1 for performance method duct sealing requirements.

NOTES TO FIELD - For Building Department Use Only

CERTIFICATE OF COMPLIANCE — (Part 2 of 2) MECH-1-C

PROJECT NAME: Manteca WQCF _ Sched C | DATE: 9/4/2007

Designer

This form is to be filled by the designer and attached to the plans. Listed below are all the acceptance tests for mechanical systems. The designer is required to check the boxes by all acceptance tests that apply and list all equipment that requires an acceptance test. If all equipment of a certain type requires a test, list the equipment description and the number of systems to be tested in parentheses. The NJ number designates the Section in the Appendix of the Nonresidential ACM Manual that describes the test. Also indicate the person responsible for performing the tests (i.e. the installing contractor, design professional or an agent selected by the owner). Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

Building Departments:

SYSTEM ACCEPTANCE. Before an occupancy permit is granted for a newly constructed building or space, or a new space-conditioning system serving a building or space is operated for normal use, all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance.

In addition a Certificate of Acceptance, MECH-1A Form shall be submitted to the building department that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of Section 10-103(b) and Title 24 Part 6.

STATEMENT OF COMPLIANCE

☐ MECH-2-A Ventilation System Acceptance Document
- -Variable Air Volume Systems Outdoor Air Acceptance
- -Constant Air Volume Systems Outdoor Air Acceptance

Equipment requiring acceptance testing: _____

Test required on all new systems both New Construction and Retrofit.

☐ MECH-3-A Packaged HVAC Systems Acceptance Document
Equipment requiring acceptance testing: _____

Test required on all new systems both New Construction and Retrofit.

☐ MECH-4-A Air-Side Economizer Acceptance Document
Equipment requiring acceptance testing: _____

Test required on all new systems both New Construction and Retrofit. Units with economizers that are installed at the factory and certified with the commission do not require equipment testing but do require construction inspection.

☐ MECH-5-A Air Distribution Acceptance Document
Equipment requiring acceptance testing: _____

This test required if the unit serves 5,000 SQ of space or less and 25% or more of the ducts are in unconditioned or semiconditioned spaces like a attic. New systems that meet the above requirements (Retrofit systems that meet the above requirements and either extend ducts, replace ducts or replace the package) and.

☐ MECH-6-A Demand Control Ventilation Acceptance Document
Equipment requiring acceptance testing: _____

All new DCV controls installed on new or existing packaged systems must be tested.

☐ MECH-7-A Supply Fans Variable Flow Control Acceptance Document
Equipment requiring acceptance testing: _____

All new VAV fan volume controls installed on new or existing systems must be tested.

☐ MECH-8-A -Hydronic System Control Acceptance Document
- -Variable Flow Controls *Applies to chilled and hot water systems.*
- -Automatic Isolation Controls *Applies to new boilers and chillers and the primary pumps are connected to a common header.*
- -Supply Water Temperature Reset Controls
  Applies to new constant flow chillers and hot water systems that have a design capacity greater than or equal to 500,000 Btu/hr.
- -Waterloop Heat Pump Controls
  Applies to all new waterloop heat pump systems where the combined loop pumps are greater than 5 hp.
- -Variable Frequency Controls *Applies to all new distribution pumps on new variable flow chilled, hydronic heat pump or condenser water systems where the pumps motors are greater than 10hp.*

Equipment requiring acceptance testing: _____

CERTIFICATE OF COMPLIANCE — (Part 1 of 2) MECH-1-C

PROJECT NAME: Manteca WQCF _ Sched C | DATE: 9/4/2007

PROJECT ADDRESS: Manteca | Building Permit #:

PRINCIPAL DESIGNER - MECHANICAL: Stephen A Myers (Capital Engineering) | TELEPHONE: (916) 851-3500

DOCUMENTATION AUTHOR: Capital Engineering Consultants, Inc. | TELEPHONE: (916) 851-3500 | Checked by City/County Enforcement Agency: Date

GENERAL INFORMATION

DATE OF PLANS	BUILDING CONDITIONED FLOOR AREA	CLIMATE ZONE
	1,397 sq.ft.	12

BUILDING TYPE	[X] NONRESIDENTIAL	☐ HIGH RISE RESIDENTIAL	☐ HOTEL/MOTEL GUEST ROOM	
PHASE OF CONSTRUCTION	[X] NEW CONSTRUCTION	☐ ADDITION	☐ ALTERATION	☐ UNCONDITIONED (File Attic/Vol)
METHOD OF MECHANICAL COMPLIANCE	[X] PRESCRIPTIVE	☐ PERFORMANCE		
PROOF OF ENVELOPE COMPLIANCE	☐ PREVIOUS ENVELOPE PERMIT	☐ ENVELOPE COMPLIANCE ATTACHED		

STATEMENT OF COMPLIANCE

This Certificate of Compliance lists the building features and performance specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to building mechanical requirements.

The documentation preparer hereby certifies that the documentation is accurate and complete.

DOCUMENTATION AUTHOR	SIGNATURE	DATE
Aaron Wintersmith		

The Principal Mechanical Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the mechanical requirements contained in the applicable parts of Sections 100, 101, 102, 110 through 115, 120 through 126, 142, 144, and 145.

- ☐ The plans & specifications meet the requirements of Part 1 (Sections 10-103a).
- ☐ The installation certificates meet the requirements of Part 1 (10-103a 3).
- ☐ The operation & maintenance information meets the requirements of Part 1 (10-103c).

Please check one: (These sections of the Business and Professions Code are printed in full in the Nonresidential Manual.)

- ☐ I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, or mechanical engineer or I am a licensed architect.
- ☐ I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code by Section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.
- ☐ I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described pursuant to Business and Professions Code sections 5537, 5538, and 6737.1.

PRINCIPAL MECHANICAL DESIGNER - NAME	SIGNATURE	DATE	LIC #
Stephen A Myers (Capital Engineering)			

INSTRUCTIONS TO APPLICANT

- ☑ MECH-1-C Certificate of Compliance. Part 1, 2, 3 of 3 are required on plans for all submittals.
- ☑ MECH-2-C Air/Water/Service/Water Pools Requirements. Part 1 of 3, 2 of 3, 3 of 3 are required for all submittals, but may be on plans.
- ☑ MECH-3-C Mechanical Ventilation and Reheat is required for all submittals with mechanical ventilation, but may be on plans.
- ☑ MECH-4-C HVAC Misc. Prescriptive Requirements is required for all prescriptive submittals, but may be on plans.
- ☐ MECH-5-C Mechanical Equipment Details are required for all performance submittals.

MECHANICAL MANDATORY MEASURES — Part 2 of 2 — MECH-MM

PROJECT NAME: Manteca WQCF _ Sched C | DATE: 9/4/2007

Description	Designer	Enforcement
Ventilation		
[X] §121(a) Controls shall be provided to allow outside air dampers or devices to be operated at the ventilation rates as specified on these plans.		
[X] §122(f) Gravity or automatic dampers interlocked and closed on fan shutdown shall be provided on the outside air intakes and discharges of all space conditioning and exhaust systems.		
[X] §122(f) All gravity ventilating systems shall be provided with automatic or readily accessible manually operated dampers in all openings to the outside, except for combustion air openings.		
[X] §121(f)1 Air Balancing: The system shall be balanced in accordance with the National Environmental Balancing Bureau (NEBB) Procedural Standards (1983), or Associated Air Balance Council (AABC) National Standards (1989), or		
☐ §121(f)2 Outside Air Certification: The system shall provide the minimum outside air as shown on the mechanical drawings, and shall be measured and certified by the installing licensed C-20 mechanical contractor and certified by (1) the design mechanical engineer, (2) the installing licensed C-20 mechanical contractor, or (3) the person with overall responsibility for the design of the ventilation system; or		
☐ §121(f)3 Outside Air Measurement: The system shall be equipped with a calibrated local or remote device capable of measuring the quantity of outside air on a continuous basis and displaying that quantity on a readily accessible display device; or		
☐ §121(f)4 Another method approved by the Commission.		
Service Water Heating Systems		
[X] §113(b)2 If a circulating hot water system is installed, it shall have a control capable of automatically turning off the circulating pump(s) when hot water is not required.		
[X] §112(c) Lavatories in restrooms of public facilities shall be equipped with controls to limit the outlet temperature to 110 degrees F.		

MECHANICAL MANDATORY MEASURES — Part 1 of 2 — MECH-MM

PROJECT NAME: Manteca WQCF _ Sched C | DATE: 9/4/2007

DESCRIPTION	Designer	Enforcement
Equipment and Systems Efficiencies		
[X] §111 Any appliance for which there is a California standard established in the Appliance Efficiency Regulations will comply with the applicable standard.		
[X] §115(a) Fan type central furnaces shall not have a pilot light.		
[X] §123 Piping, except that conveying fluids at temperatures between 55 and 105 degrees Fahrenheit, or within HVAC equipment, shall be insulated in accordance with Standards Section 123.		
[X] §124 Air handling duct systems shall be installed and insulated in compliance with Sections 601, 602, 603, 604, and 605 of the 2001 CMC Standards.		
Controls		
§122(a) Each space conditioning system shall be installed with one of the following:		
[X] §122(a)1A Each space conditioning system serving building types such as offices and manufacturing facilities (and all others not explicitly exempt from the requirements of Section 112 (a)) shall be installed with an automatic time switch with an accessible manual override that allows operation of the system during off-hours for up to 4 hours. The time switch shall be capable of programming different schedules for weekdays and weekends and have program backup capabilities that prevent the loss of the device's program and time setting for at least 10 hours if power is interrupted; or		
☐ §122(a)1B An occupancy sensor to control the operating period of the system; or		
[X] §122(a)1C A 4-hour timer that can be manually operated to control the operating period of the system.		
[X] §122(a)2 Each space conditioning system shall be installed with controls that temporarily restart and temporarily operate the system as required to maintain a setback heating and/or a setup cooling thermostat setpoint.		
☐ §122(g) Each space conditioning system serving multiple zones with a combined conditioned floor area more than 25,000 square feet shall be provided with isolation zones. Each zone: shall not exceed 25,000 square feet; shall be provided with isolation devices, such as valves or dampers, that allow the supply of heating or cooling to be setback or shut off independently of other isolation areas; and shall be controlled by a time control device as described above.		
[X] §122(a)3A Each space conditioning system shall be controlled by an individual thermostat that responds to temperature within the zone. Where used to control heating, the control shall be adjustable down to 55 degrees F or lower. For cooling, the control shall be adjustable up to 85 degrees F or higher. Where used for both heating and cooling, the control shall be capable of providing a deadband of at least 5 degrees F within which the supply of heating and cooling is shut off or reduced to a minimum.		
[X] §123(c) Thermostats shall have numeric setpoints in degrees Fahrenheit (F) and adjustable setpoint stops accessible only to authorized personnel.		
☐ §112(d) Heat pumps shall be installed with controls to prevent electric resistance supplementary heater operation when the heating load can be met by the heat pump alone.		

RECORD SET

Capital Engineering Consultants, Inc.
Sacramento, California
DESIGNER/DRAFTER
01003.00
PROJECT NO.

CAUTION:
The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans.
All changes to the plans must be in writing and must be approved by preparer of these plans.

NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-1600 ☐ SACRAMENTO (916) 641-1600 ☐ SAN JOSE (408) 287-3400 ☐ SAN DIEGO (619) 378-9382 ☐ WALNUT CREEK (925) 934-9080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY:
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

HVAC

HVAC TITLE 24

SCALE: NONE

DRAWING NUMBER: H1.11

SHEET NUMBER: OF SHEETS

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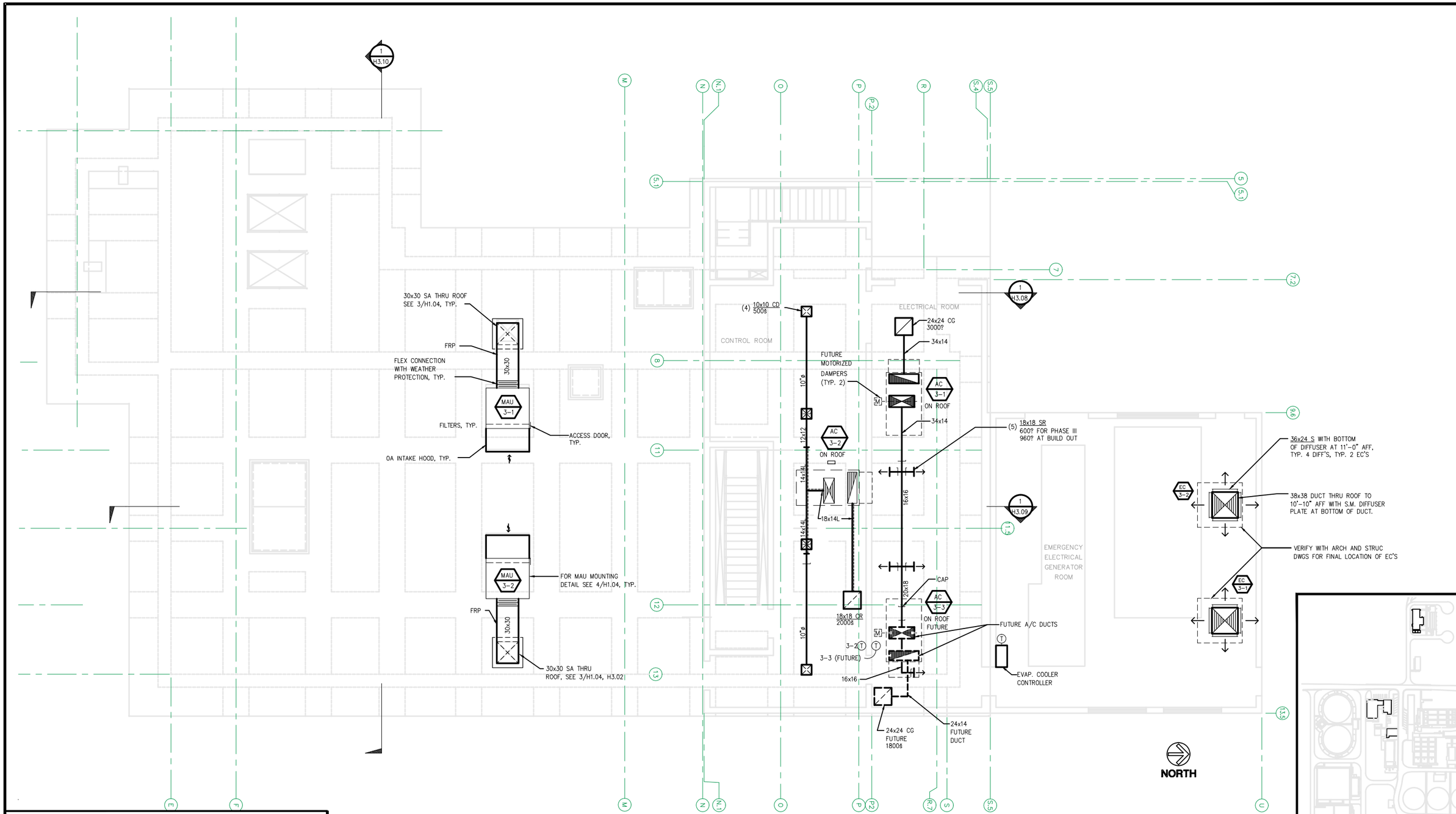

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Capital Engineering Consultants, inc.
Sacramento, California
LC/CDF DESIGNER/DRAFTER
011003.00 PROJECT NO.

NOLTE
BEYOND ENGINEERING
☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-2060 ☐ ORANGE COUNTY (714) 383-1650 ☐ SACRAMENTO (916) 641-9020 ☐ SAN JOSE (408) 287-9400 ☐ SAN DIEGO (619) 378-9282 ☐ WALNUT CREEK (925) 934-9282
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

INFLUENT PUMP STATION UPPER PLAN HVAC

SCALE 3/16" = 1'-0"
DRAWING NUMBER H3.01
SHEET NUMBER XX OF SHEETS

011003.00\H3-01.ftw - January 14, 2002 - ACC - 12

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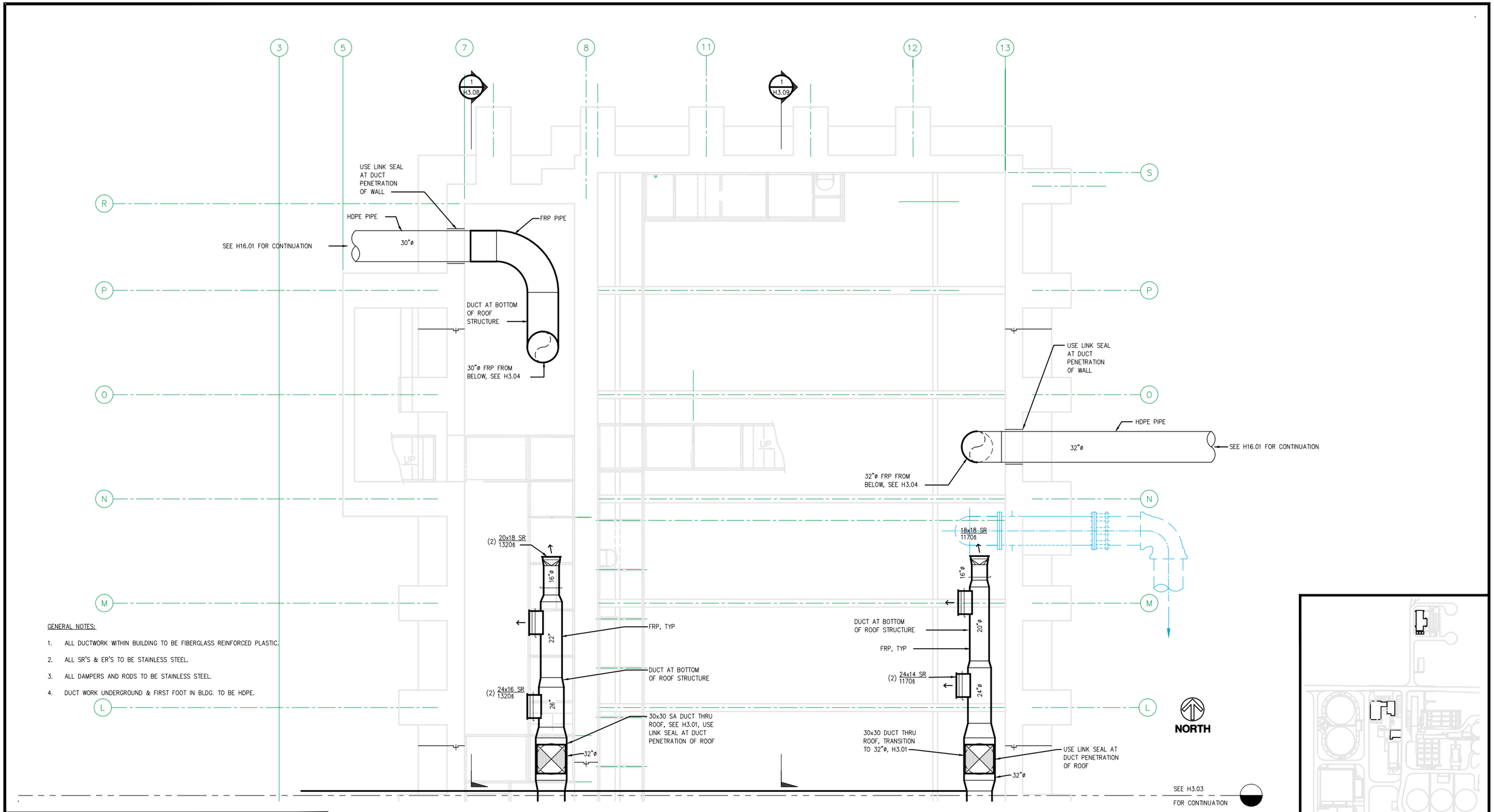
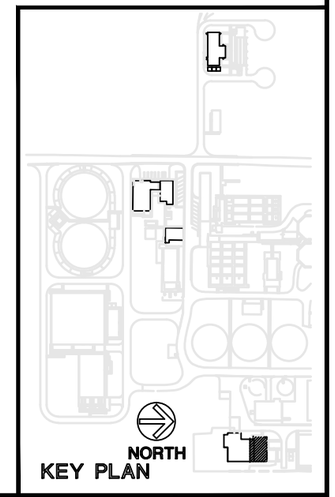


GENERAL NOTES:

1. ALL DUCTWORK WITHIN BUILDING TO BE FIBERGLASS REINFORCED PLASTIC.
2. ALL SR'S & ER'S TO BE STAINLESS STEEL.
3. ALL DAMPERS AND RODS TO BE STAINLESS STEEL.
4. DUCT WORK UNDERGROUND & FIRST FOOT IN BLDG. TO BE HDPE.



Capital Engineering Consultants, Inc.
Sacramento, California
LC/CDF
DESIGNER/DRAFTER
011003.00
PROJECT NO.

CAUTION:
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RECORD SET

NOLTE
BEYOND ENGINEERING
DENVER (303) 781-0666 · MANTECA (209) 239-9080 · ORANGE COUNTY (714) 362-1600 · SACRAMENTO (916) 641-9100 · SAN JOSE (408) 287-2400 · SAN DIEGO (619) 374-0382 · WALNUT CREEK (925) 934-0382
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.: D. RICHARD
PROJ. ENGR.:

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REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

INFLUENT PUMP STATION
INTERMEDIATE PLAN AT EL. +15.0
HVAC

SCALE
1/4" = 1'-0"

DRAWING NUMBER
H3.02

SHEET NUMBER
XX OF SHEETS

011003.00\H3-02.HB+ - November 1, 2001 - ACC - 8

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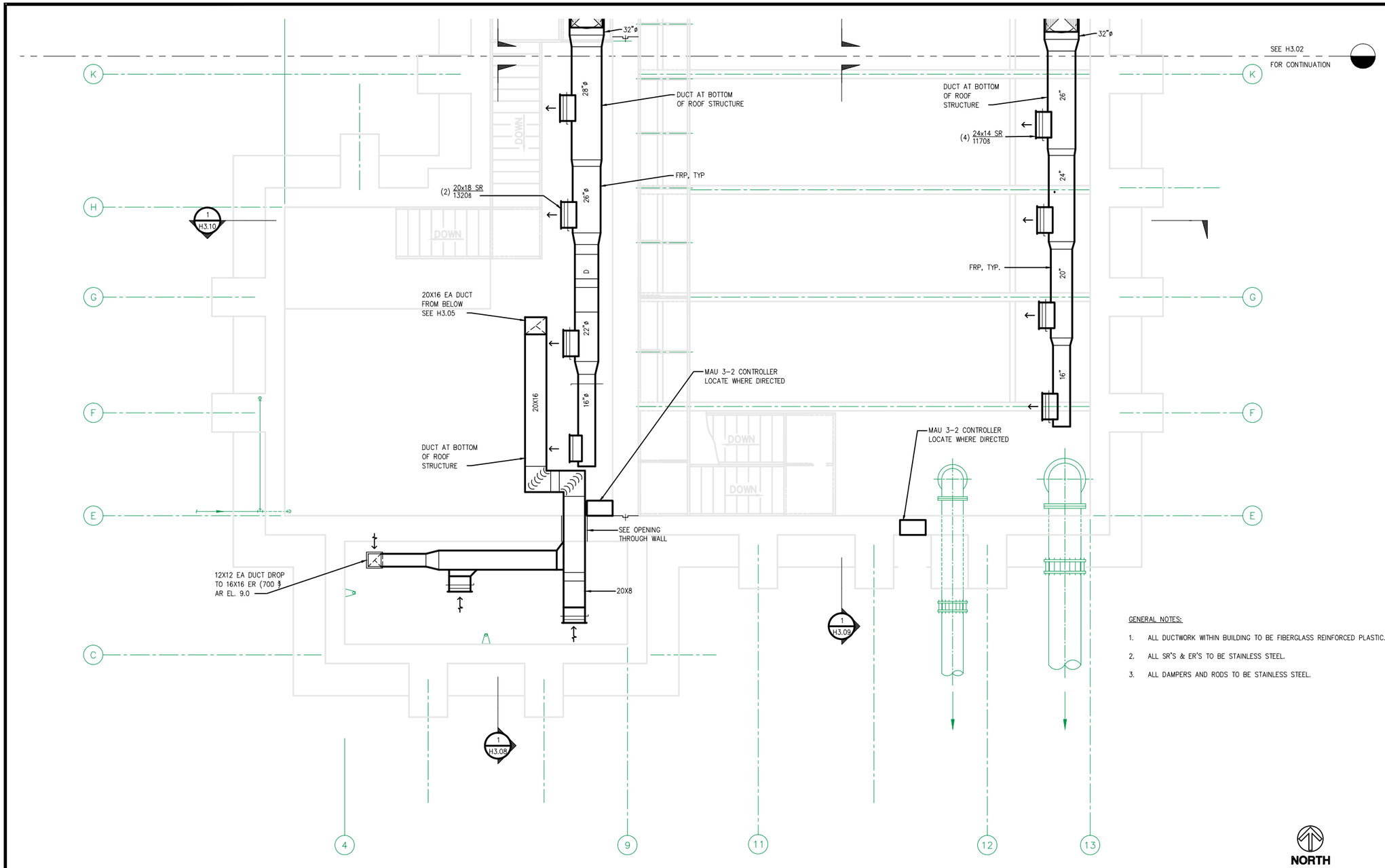

GENERAL NOTES:

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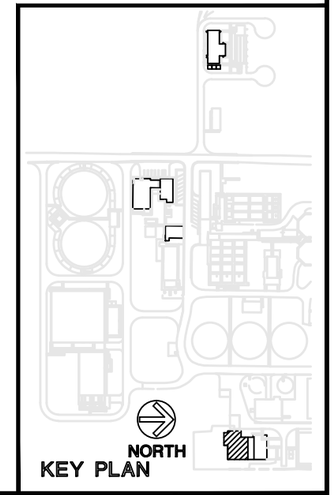
2. ALL SR'S & ER'S TO BE STAINLESS STEEL.
3. ALL DAMPERS AND RODS TO BE STAINLESS STEEL.

NORTH



Capital Engineering Consultants, Inc.
Sacramento, California

LC/CDF
DESIGNER/DRAFTER

011003.00
PROJECT NO.

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RECORD SET

NOLTE
BEYOND ENGINEERING

□ DENVER (303) 791-1666 ■ MANTECA (209) 239-9080 □ ORANGE COUNTY (714) 362-7400 □ SACRAMENTO (916) 631-7800 □ SAN JOSE (408) 467-9400 □ SAN DIEGO (619) 374-8282 □ WALNUT CREEK (510) 934-0282

302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER
LOWELL E. SHIELDS
M 21583
EXPIRES 6/03
MECHANICAL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
David Richard
No. 33479
EXP.
CIVIL
STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.: D. RICHARD
PROJ. ENGR.:

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~~REDUCED RECORD SET~~
~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

INFLUENT PUMP STATION
INTERMEDIATE PLAN AT EL. +15.0
HVAC

SCALE
1/4" = 1'-0"

DRAWING NUMBER
H3.03

SHEET NUMBER
XX OF SHEETS

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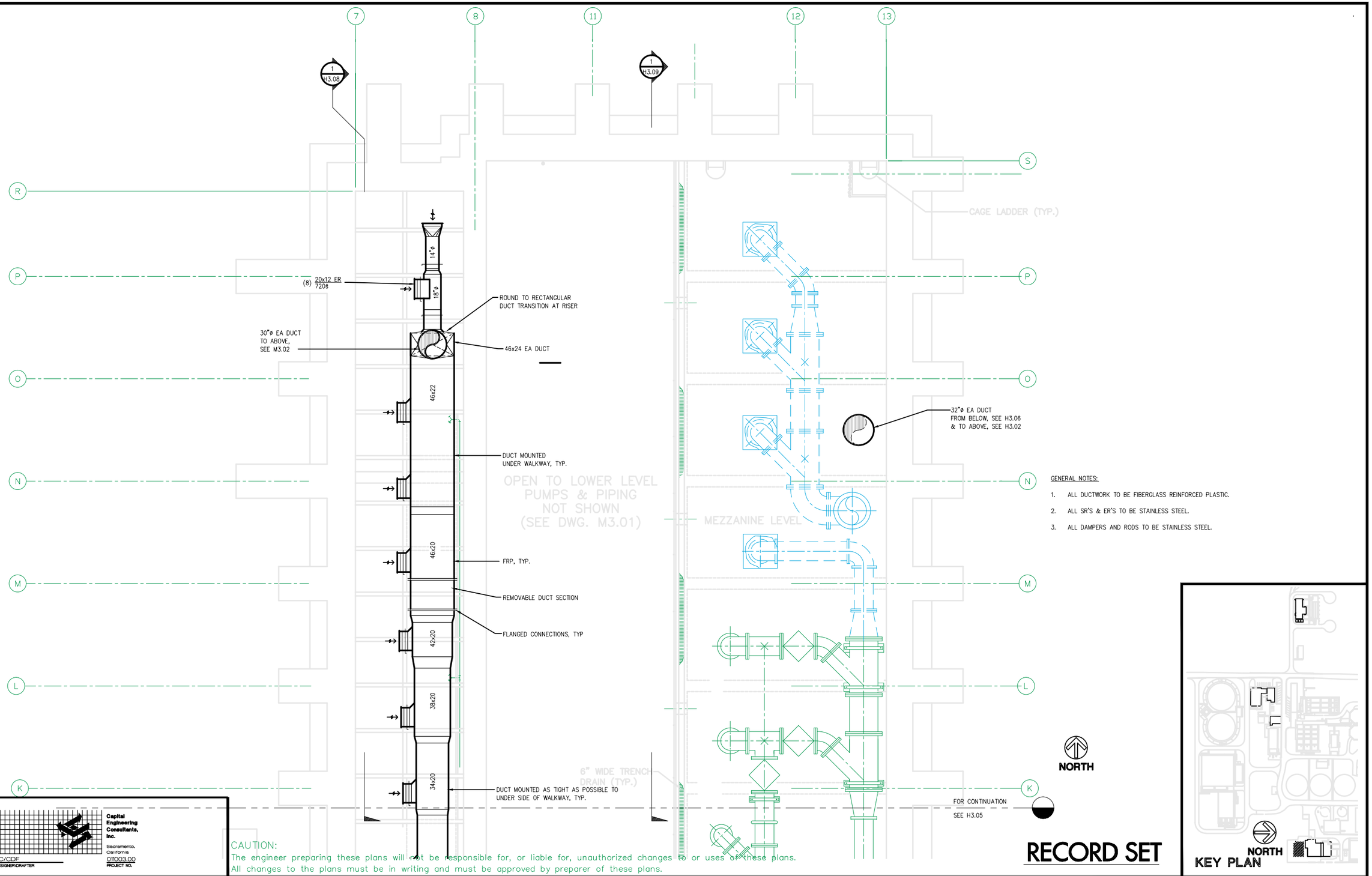

GENERAL NOTES:

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3. ALL DAMPERS AND RODS TO BE STAINLESS STEEL.

RECORD SET

Capital Engineering Consultants, Inc.
Sacramento, California
LC/CDF
DESIGNER/DRAFTER
011003.00
PROJECT NO.

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NOLTE
BEYOND ENGINEERING
DENVER (303) 751-0741 | MANTECA (209) 239-9080 | ORANGE COUNTY (714) 282-1505 | SACRAMENTO (916) 641-9050 | SAN JOSE (408) 287-3435 | SAN DIEGO (619) 574-0383 | WALNUT CREEK (510) 934-0280
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LONELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

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~~REDUCED RECORD SET~~
~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

INFLUENT PUMP STATION
INTERMEDIATE PLAN AT EL. +1.0
HVAC

SCALE
1/4" = 1'-0"

DRAWING NUMBER
H3.04

SHEET NUMBER
OF SHEETS

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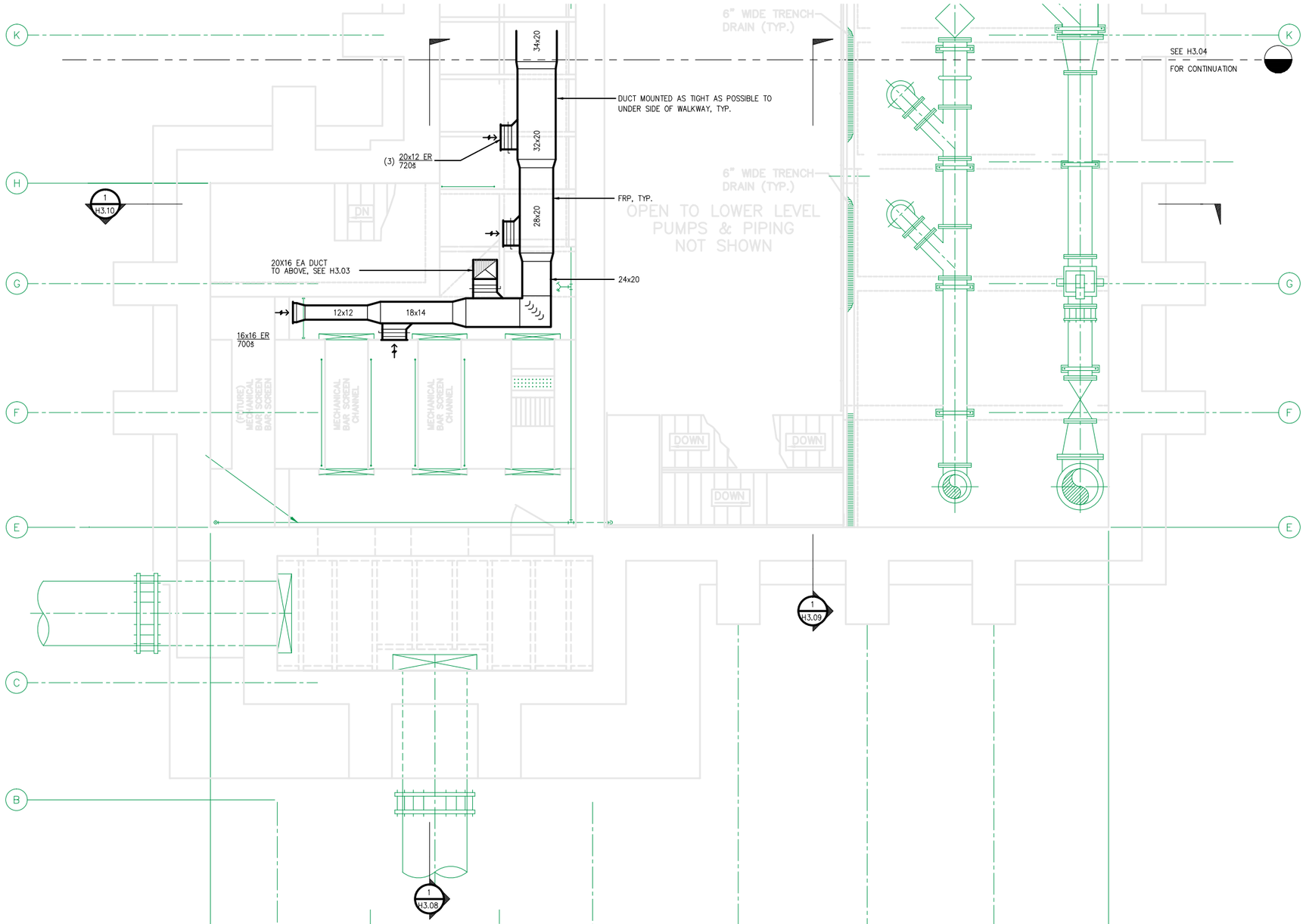

GENERAL NOTES:

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NORTH

KEY PLAN

NORTH

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RECORD SET

Capital Engineering Consultants, Inc.
Sacramento, California
LC/CDF — DESIGNER/DRAFTER
011003.00 — PROJECT NO.

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BEYOND ENGINEERING
☐ DENVER (303) 791-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 382-7600 ☐ SACRAMENTO (916) 641-9100 ☐ SAN JOSE (408) 287-3100 ☐ SAN DIEGO (619) 378-9280 ☐ WALNUT CREEK (925) 934-9002
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SNELLINGS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
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3			
2	SEM	09/11	RECORD SET
1	LS	10/9/03	ADDENDUM NO. 1

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

INFLUENT PUMP STATION INTERMEDIATE PLAN AT EL. +1.0 HVAC

SCALE: 1/4" = 1'-0"

DRAWING NUMBER: H3.05

SHEET NUMBER: OF SHEETS

011003.00\H3-05.FBV – December 30, 2003 – DA – 19

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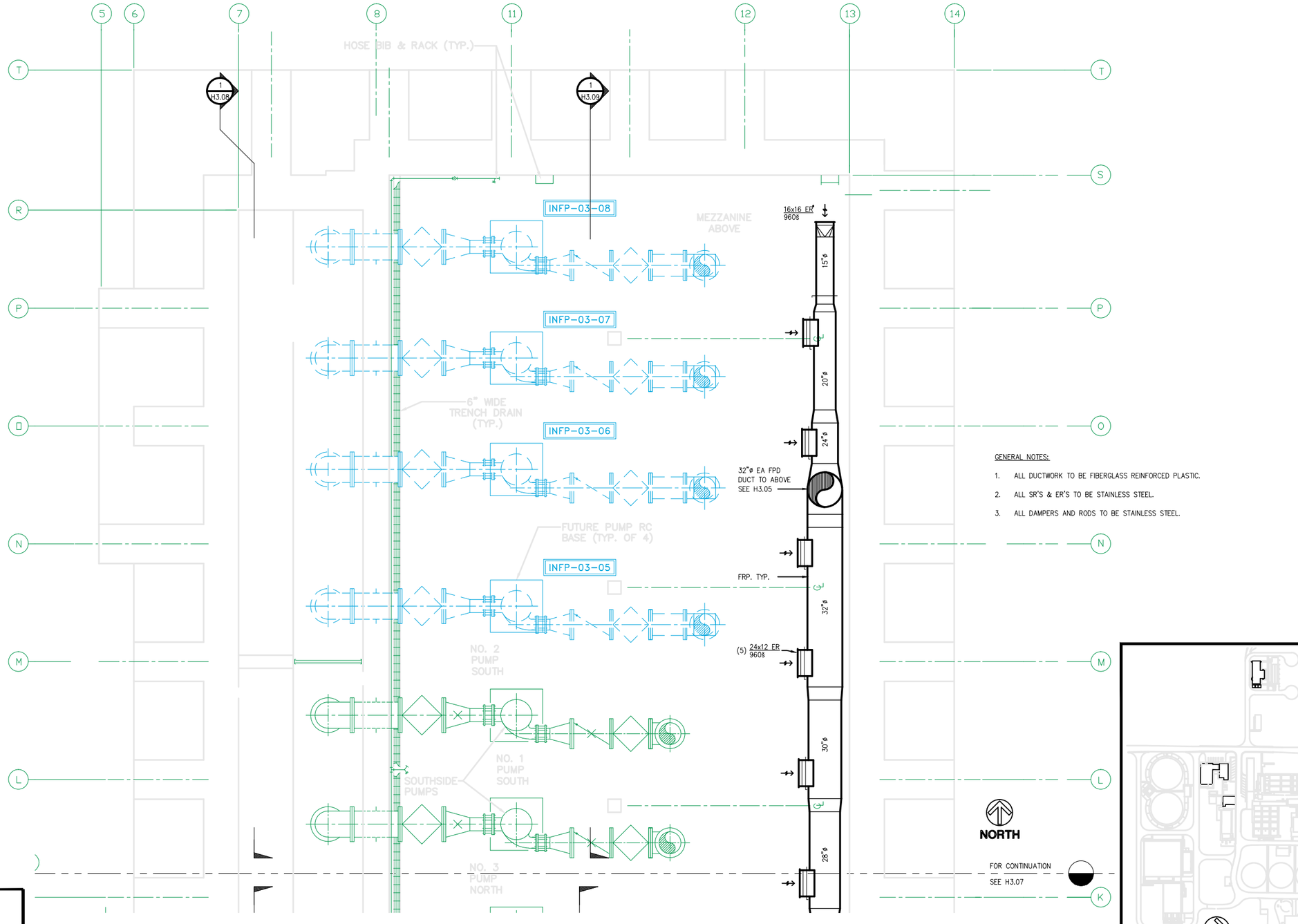

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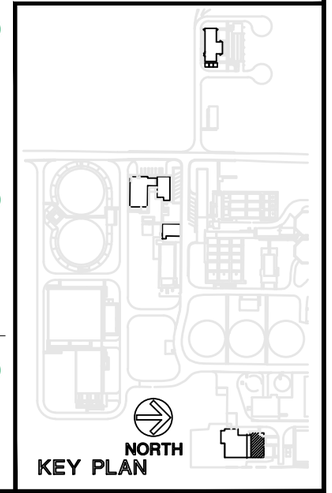

Capital Engineering Consultants, Inc.
Sacramento, California

LC/CDF
DESIGNER/DRAFTER

011003.00
PROJECT NO.

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RECORD SET

NOLTE
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.: D. RICHARD
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
6			
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

INFLUENT PUMP STATION
INTERMEDIATE PLAN AT EL. -15.0
HVAC

SCALE
1/4" = 1'-0"

DRAWING NUMBER
H3.06

SHEET NUMBER
XX OF SHEETS

011003.00\H3-06.HB+ - November 1, 2001 - ACC - 8

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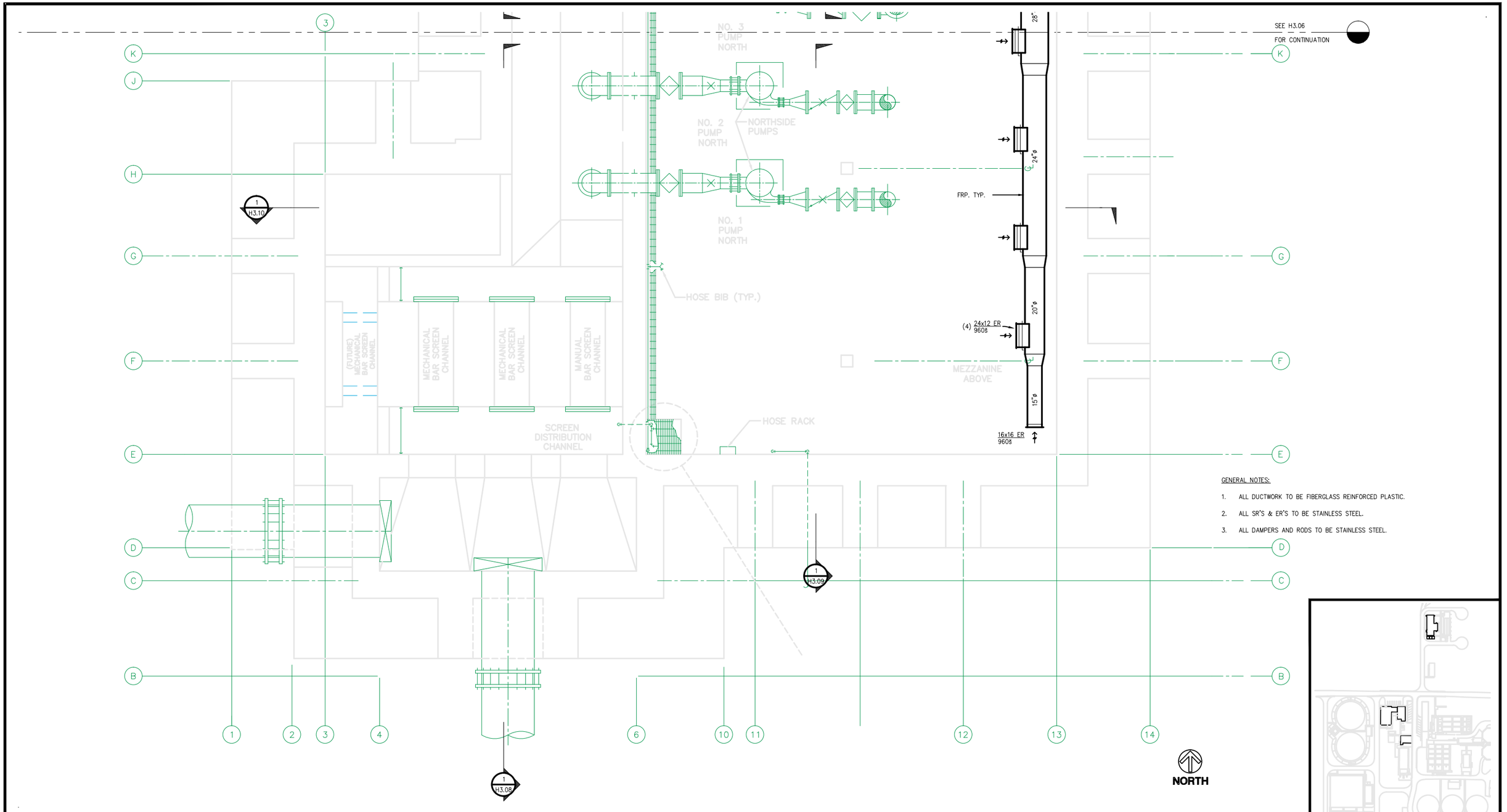
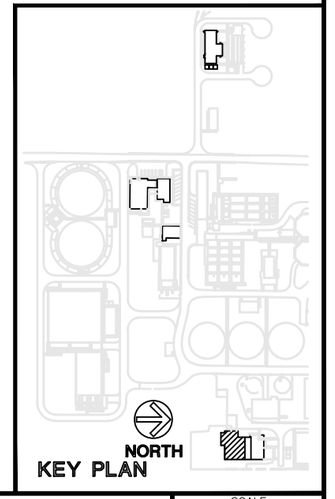


GENERAL NOTES:

1. ALL DUCTWORK TO BE FIBERGLASS REINFORCED PLASTIC.
2. ALL SR'S & ER'S TO BE STAINLESS STEEL.
3. ALL DAMPERS AND RODS TO BE STAINLESS STEEL.



Capital Engineering Consultants, Inc.
Sacramento, California

LC/CDF
DESIGNER/DRAFTER

011003.00
PROJECT NO.

CAUTION:
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RECORD SET

NOLTE
BEYOND ENGINEERING

□ DENVER (303) 781-0666 ■ MANTECA (209) 239-9080 □ ORANGE COUNTY (714) 362-7600 □ SACRAMENTO (916) 641-9120 □ SAN JOSE (408) 287-2400 □ SAN DIEGO (619) 276-9382 □ WALNUT CREEK (510) 934-9082

302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER
LOWELL E. SPIEGOS
M 21583
EXPIRES 6/03
MECHANICAL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
David Richard
No. 33479
EXP.
CIVIL
STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.: D. RICHARD
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

INFLUENT PUMP STATION
INTERMEDIATE PLAN AT EL. -15.0
HVAC

SCALE
1/4" = 1'-0"

DRAWING NUMBER
H3.07

SHEET NUMBER
XX OF SHEETS

011003.00\H3-07.HB+ - November 1, 2001 - ACC - 8

QC	
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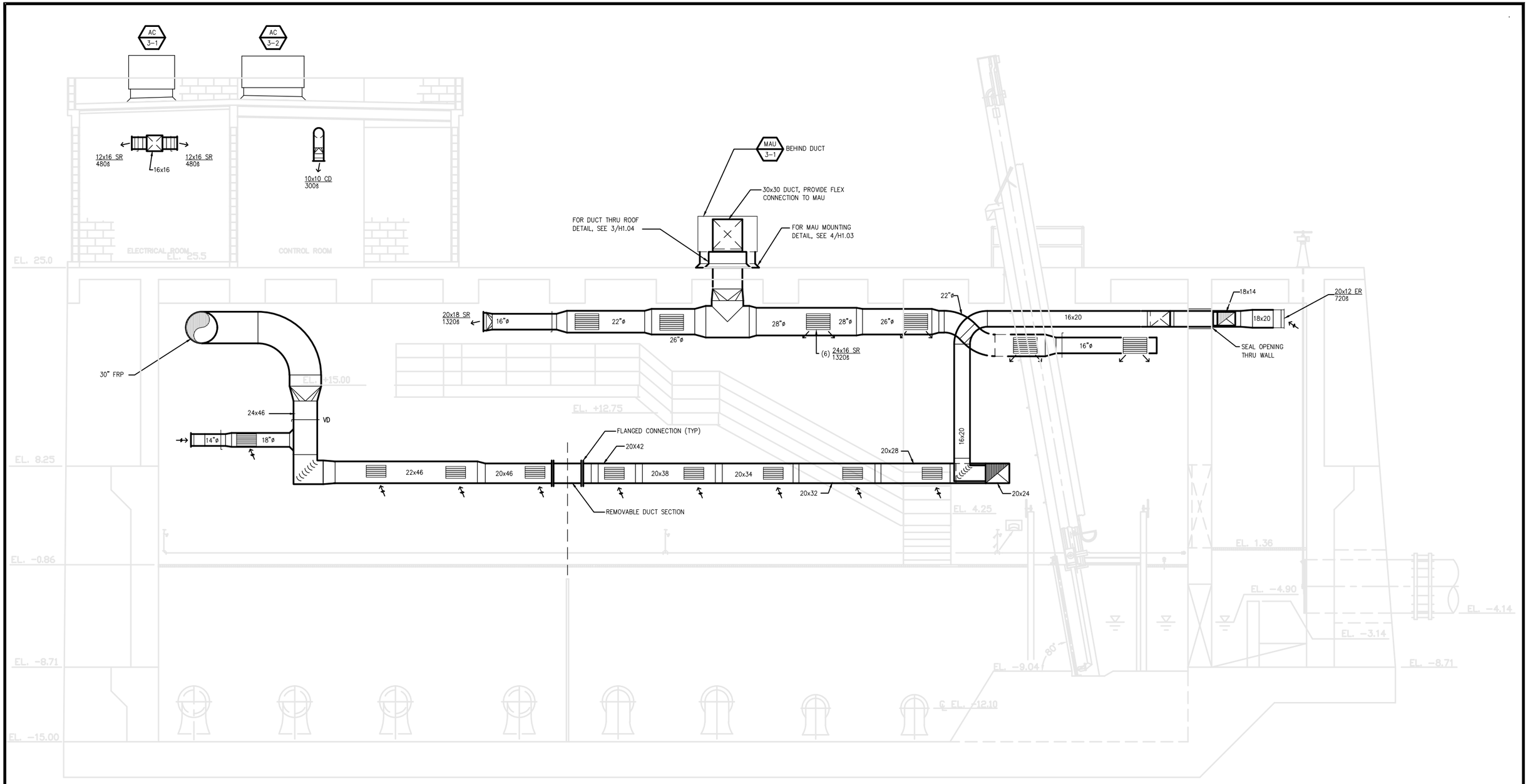

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TGJ/LC
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011003.00
PROJECT NO.

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RECORD SET

NOLTE
BEYOND ENGINEERING

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER
LORELLE SHELLEY
M 21583
EXPIRES 6/03
MECHANICAL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
David Richard
No. 33479
EXP.
CIVIL
STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

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~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

INFLUENT PUMP STATION
SECTIONS
HVAC

SCALE
1/4" = 1'-0"
DRAWING NUMBER
H3.08
SHEET NUMBER
XX OF SHEETS

011003.00\VS-08.fh+ - January 11, 2002 - ACC - 16

QC	
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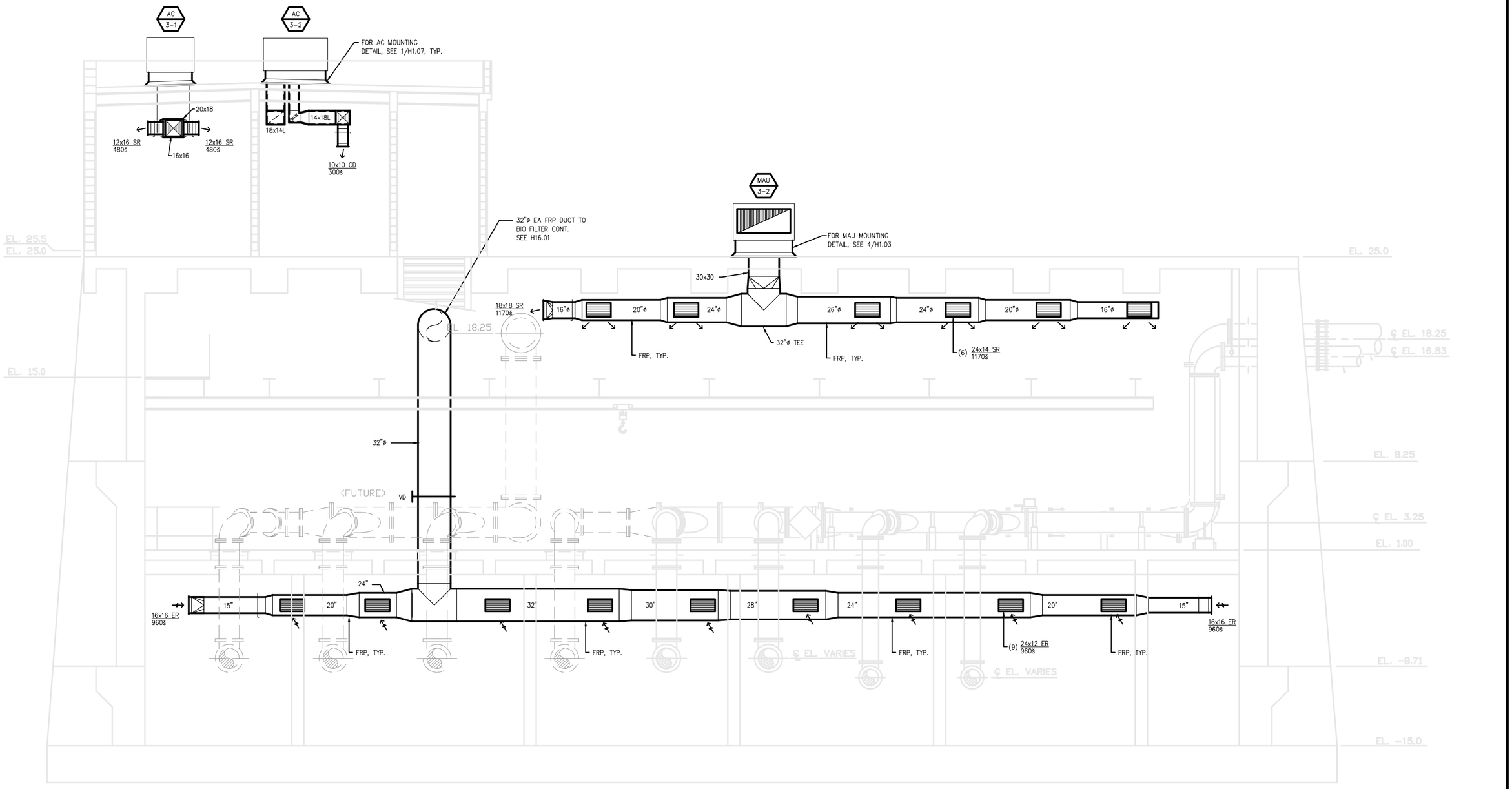

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011003.00 PROJECT NO.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LONELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
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2	SEM	09/11	RECORD SET
1	SEM	10/09/03	RECORD USE NO. 1

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

INFLUENT PUMP STATION SECTIONS HVAC

SCALE 1/4" = 1'-0"
DRAWING NUMBER H3.09
SHEET NUMBER
OF SHEETS

011003.00\H3-09.DWF - December 30, 2003 - 04 - 25

QC	
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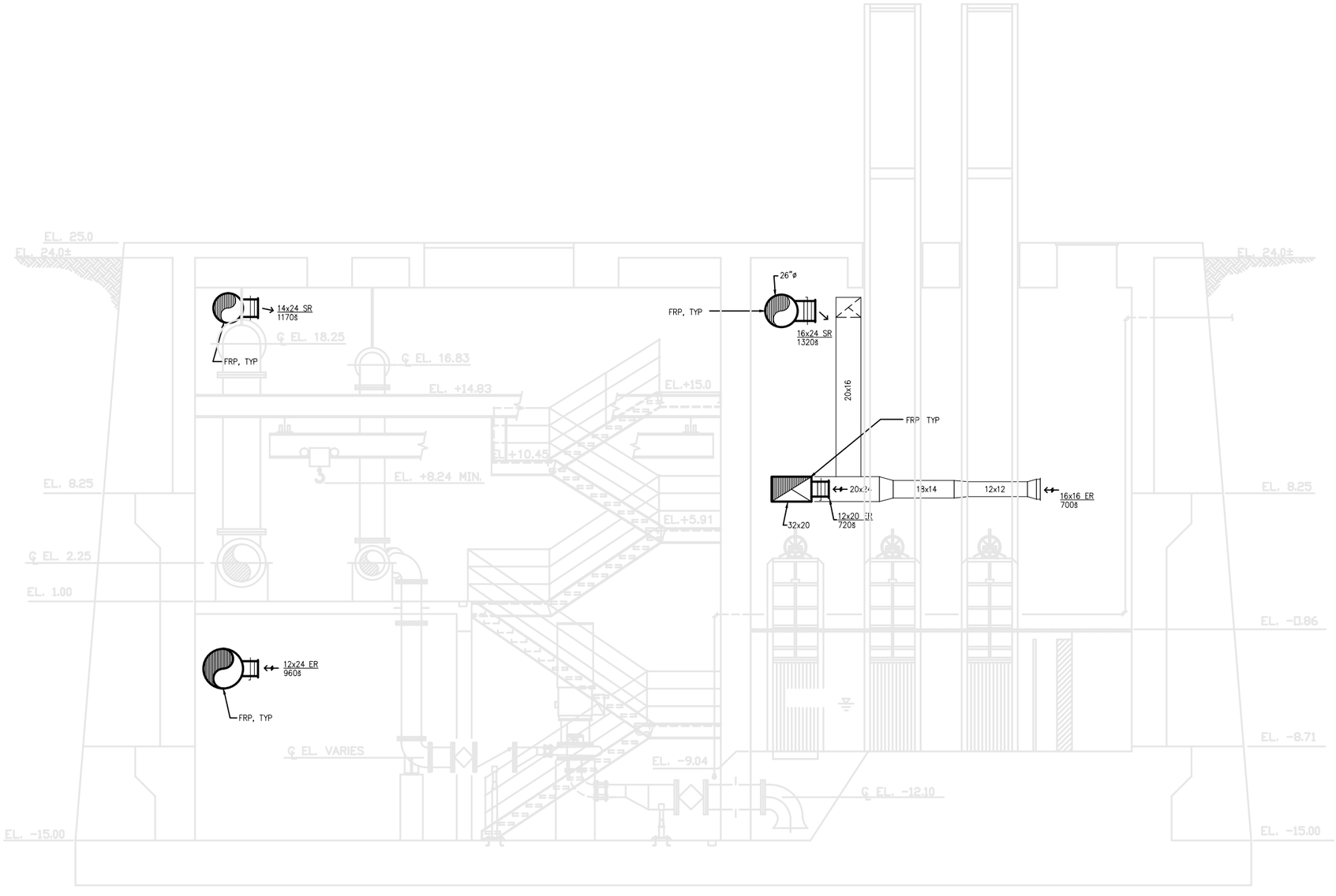

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011003.00 PROJECT NO.
TGJ/LC DESIGNER/DRAFTER

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RECORD SET

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BEYOND ENGINEERING
DENVER (303) 780-8886 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-7600 ☐ SACRAMENTO (916) 641-1900 ☐ SAN JOSE (408) 287-2100 ☐ SAN DIEGO (619) 272-0097 ☐ WALNUT CREEK (925) 951-2000
302 CHERRY LANE, SUITE 201 MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHEDDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.: D. RICHARD
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

INFLUENT PUMP STATION
SECTION
HVAC

SCALE
1/4" = 1'-0"

DRAWING NUMBER
H3.10

SHEET NUMBER
XX OF SHEETS

011003.00\H3-10.HB+ - November 1, 2001 - ACC - 14

QC	
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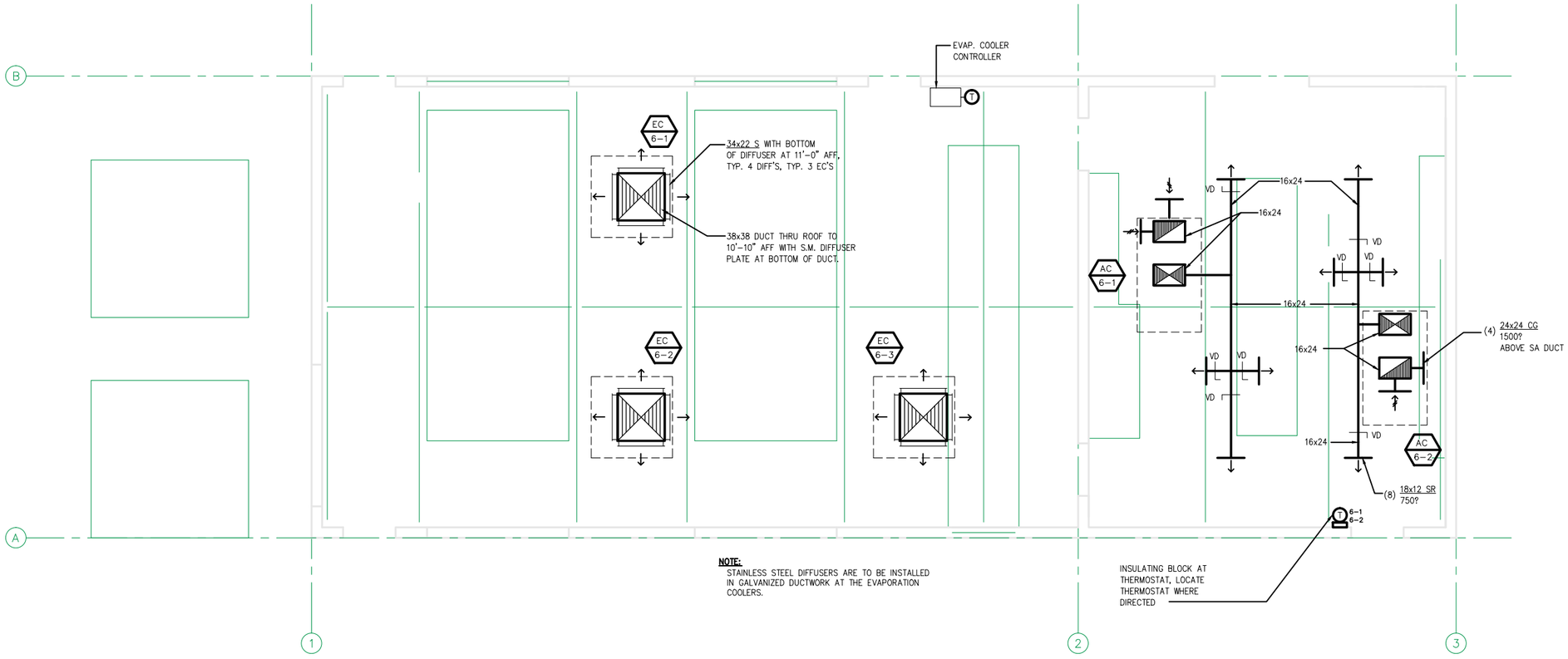
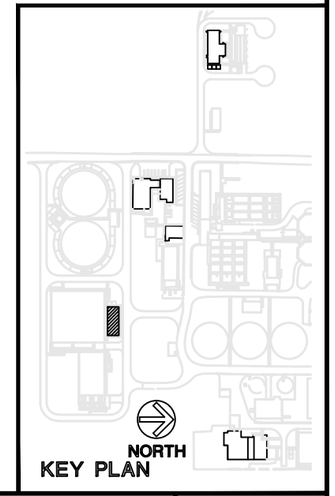


NOTE:
STAINLESS STEEL DIFFUSERS ARE TO BE INSTALLED IN GALVANIZED DUCTWORK AT THE EVAPORATION COOLERS.

NORTH



RECORD SET

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Sacramento, California
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011003.00 PROJECT NO.

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NOLTE
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☐ DENVER (303) 791-1666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 362-7400 ☐ SACRAMENTO (916) 631-1919 ☐ SAN JOSE (408) 467-3400 ☐ SAN DIEGO (619) 374-6382 ☐ WALNUT CREEK (510) 934-6060
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
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2	SEM	09/11	RECORD SET
1	LS	10/9/03	ADDENDUM NO. 1

~~REDUCED RECORD SET~~
~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

SOUTHSIDE MCC/ GENERATOR BUILDING HVAC PLAN

SCALE 1/4" = 1'-0"
DRAWING NUMBER **H6.01**
SHEET NUMBER OF SHEETS

011003.00\V6-01.FBV – December 30, 2003 – DA – 20

QC	
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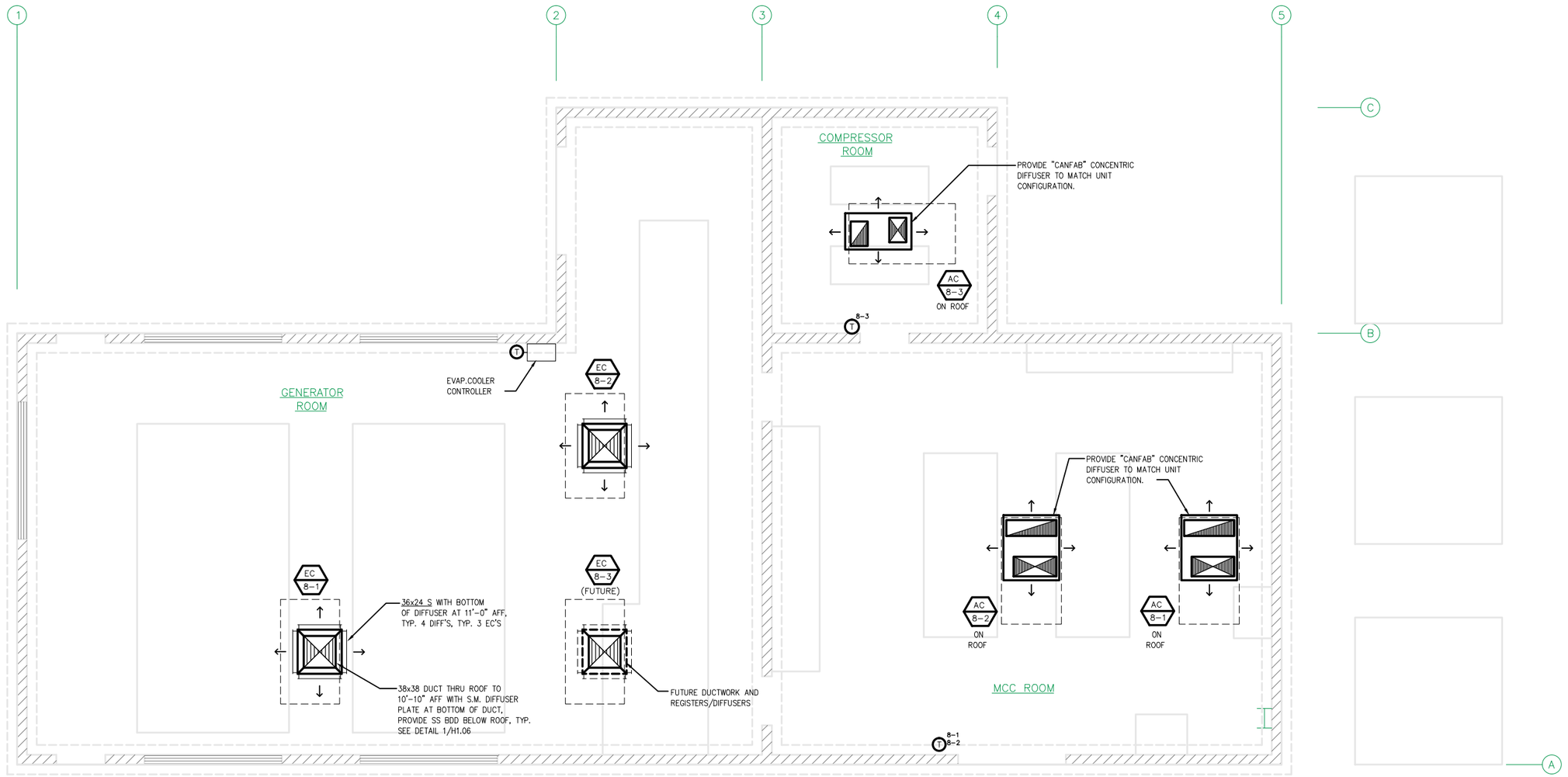

NOTE:
SEE SPECIFICATION SECTION 15800, 2.04, L, 3 FOR PHASE PROTECTION/MOTOR STARTERS FOR THE HVAC EQUIPMENT ON THE MCC BUILDING.

FLOOR PLAN

SCALE : 1/4" = 1'-0"

1 / H8.01

N

Capital Engineering Consultants, Inc.
Sacramento, California
011003.00 PROJECT NO.
DESIGNER/DRAFTER

NOLTE
BEYOND ENGINEERING
DENVER (303) 781-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 282-1600 ☐ SACRAMENTO (916) 641-9500 ☐ SAN JOSE (408) 287-3400 ☐ SAN DIEGO (619) 376-0382 ☐ WALNUT CREEK (925) 934-0900
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

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DATE: XXXXXX
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PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

EFFLUENT MCC BUILDING
HVAC PLAN

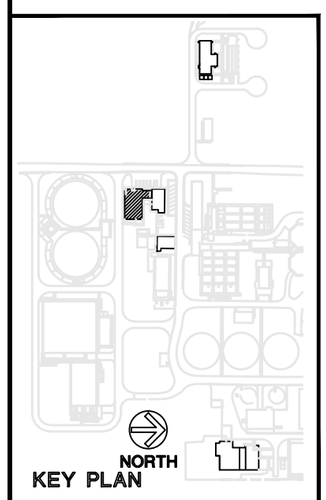
SCALE 1/4" = 1'-0"
DRAWING NUMBER H8.01
SHEET NUMBER XX OF XX SHEETS

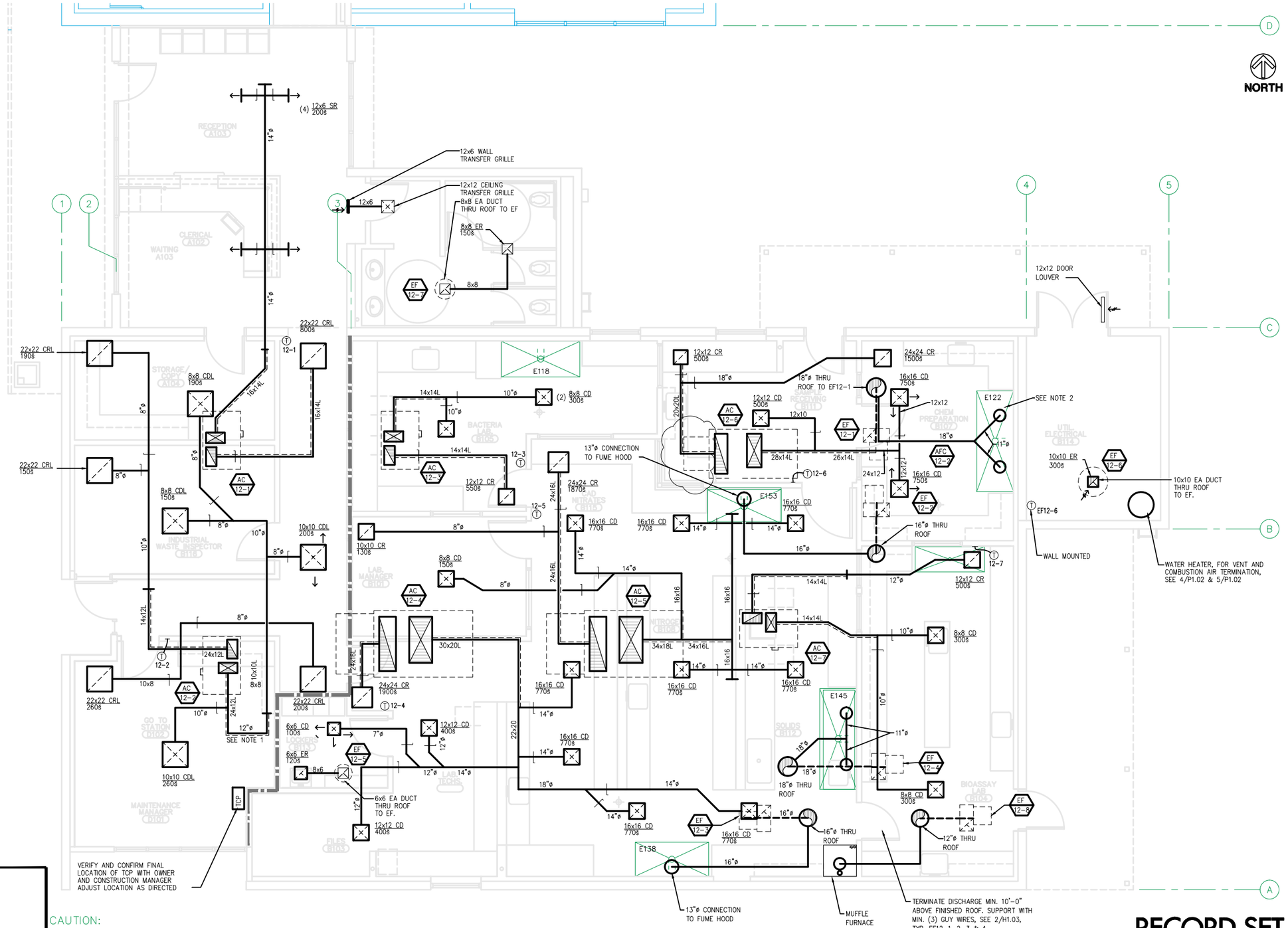
H:\Customers\2005\050509.00\H8-01.DWJ - June 9, 2005 - WV - 20

QC	
INI	%

NOTES:

1. AFTER LINING FOR 24"x12"L TERMINATES, TRANSITION TO 12"ø.
2. INSTALL (2) SMALL PLENUM BOXES TO ALLOW FOR CONNECTION OF THE (2) 11" DUCTS FOR THE FLUME HOOD.





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RECORD SET

Capital Engineering Consultants, Inc.
Sacramento, California
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011003.00 PROJECT NO.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LIONELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
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DRAWN BY: XX
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PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
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1	LS	10/9/03	ADDENDUM NO. 1

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

LABORATORY BUILDING HVAC PLAN

SCALE 1/4" = 1'-0"
DRAWING NUMBER H12.01
SHEET NUMBER
OF SHEETS

011003.00\H12-01.FBV — December 30, 2003 — DA - 14

QC	
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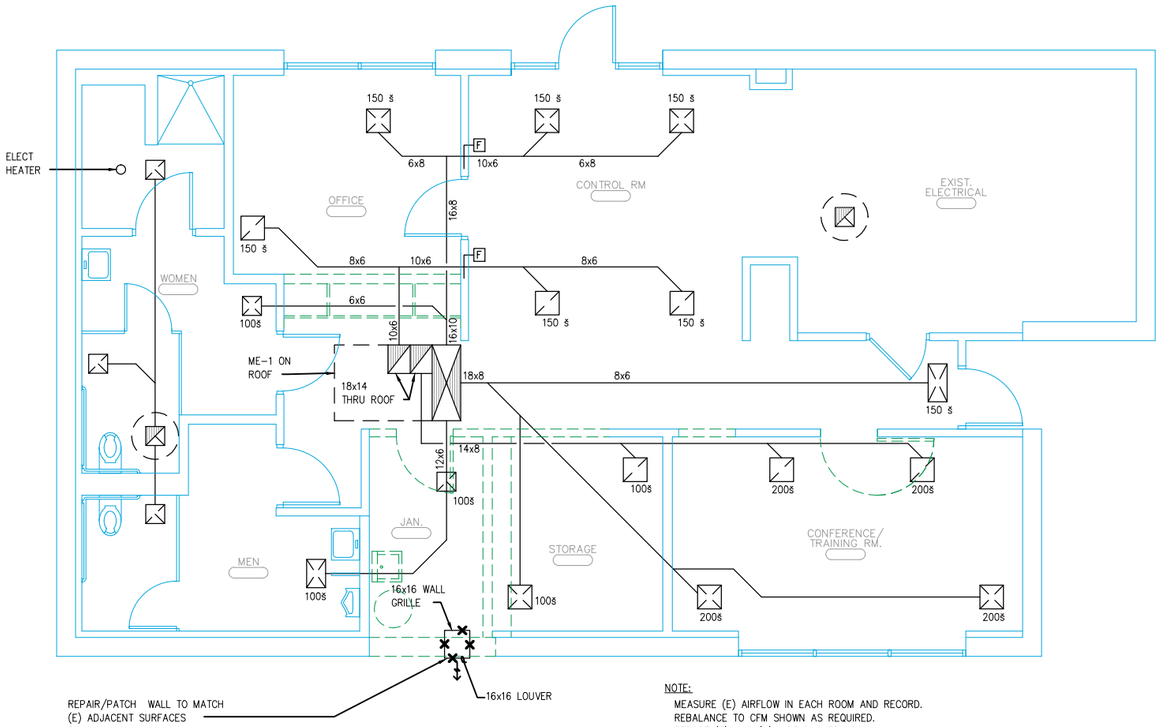


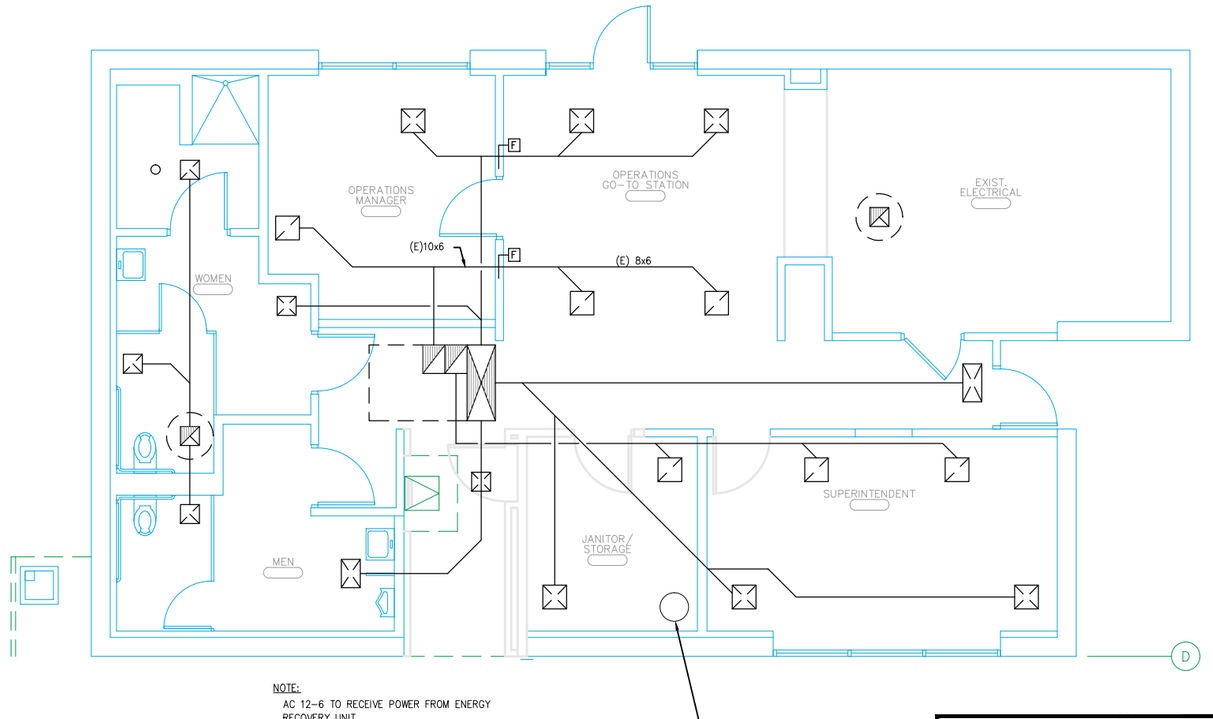
NOTE:
MEASURE (E) AIRFLOW IN EACH ROOM AND RECORD.
REBALANCE TO CFM SHOWN AS REQUIRED.
REPORT (E) AND (N) AIRFLOWS TO ARCH.

ADMIN. BLDG. HVAC DEMOLITION PLAN

1 H12.02

SCALE : 1/4" = 1'-0"

NORTH



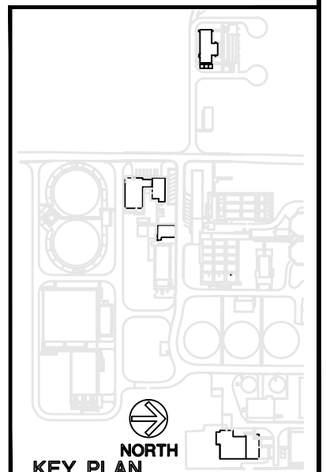
NOTE:
AC 12-6 TO RECEIVE POWER FROM ENERGY RECOVERY UNIT.

ADMIN. BLDG. HVAC PLAN

2 H12.02

SCALE : 1/4" = 1'-0"

NORTH



Capital Engineering Consultants, Inc.
Sacramento, California

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011003.00
PROJECT NO.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY: XX
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PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
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2	SEM	09/11	RECORD SET
1	SEM	10/09/03	RECORD SET NO. 1

REDUCED RECORD SET
NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

ADMIN. BUILDING
HVAC PLANS

SCALE 1/4" = 1'-0"

DRAWING NUMBER H12.02

SHEET NUMBER OF SHEETS

011003.00\H12-02.FBV - December 30, 2003 - DA - 27

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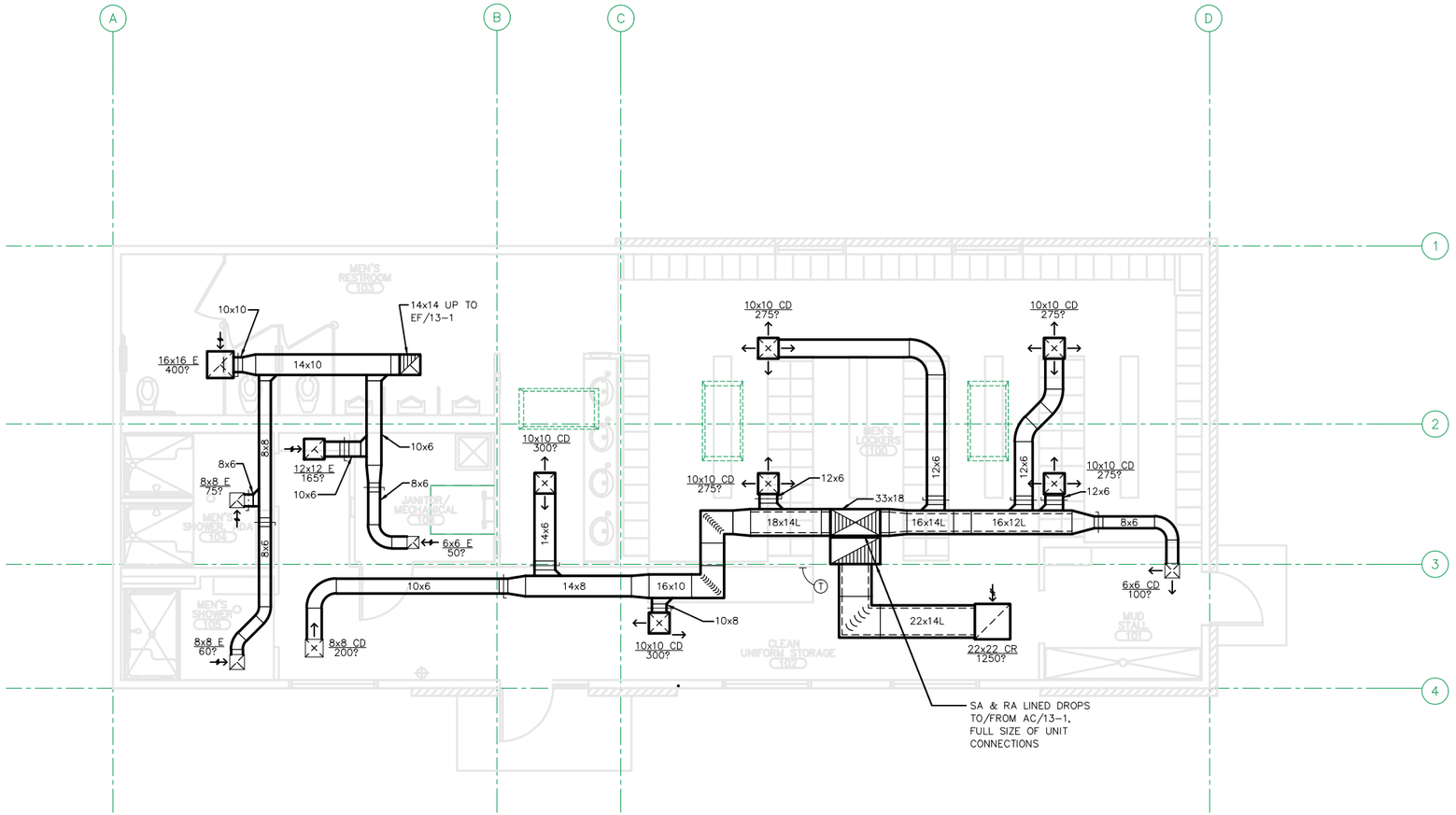

LOCKER / SHOWER HVAC PLAN

SCALE : 1/4" = 1'-0"

1 / H13.01

N

Capital Engineering Consultants, Inc.
Sacramento, California
DESIGNER/DRAFTER
011003.00
PROJECT NO.

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RECORD SET

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LONELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY:
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
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4			REDUCED RECORD SET NOT TO SCALE
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1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

LOCKER ROOM BUILDING HVAC PLAN

SCALE 1/4" = 1'-0"

DRAWING NUMBER H13.01

SHEET NUMBER XX OF SHEETS

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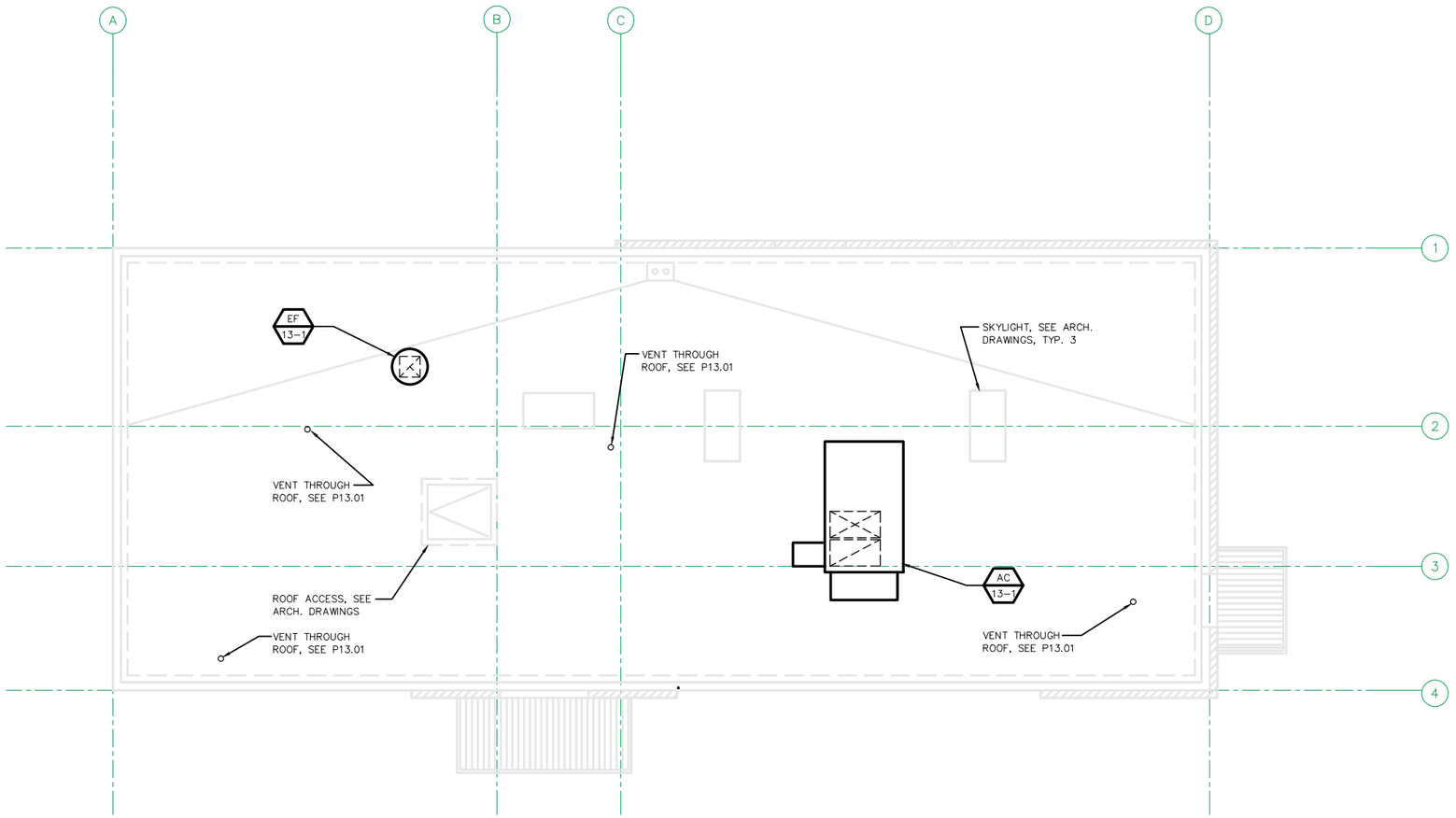

LOCKER / SHOWER HVAC ROOF PLAN

SCALE : 1/4" = 1'-0"

1 / H13.02

N

Capital Engineering Consultants, Inc.
Sacramento, California
011003.00 PROJECT NO.
DESIGNER/DRAFTER

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
PROJECT NO.: SA1224
DRAWN BY:
CHECKED BY:
PROJ. MGR.:
PROJ. ENGR.:

NO.	BY	DATE	REVISIONS
6			
5			
4			REDUCED RECORD SET NOT TO SCALE
3			
2			
1	SEM	09/11	RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

LOCKER ROOM BUILDING HVAC ROOF PLAN

SCALE: 1/4" = 1'-0"
DRAWING NUMBER: H13.02
SHEET NUMBER: XX OF SHEETS

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QC	
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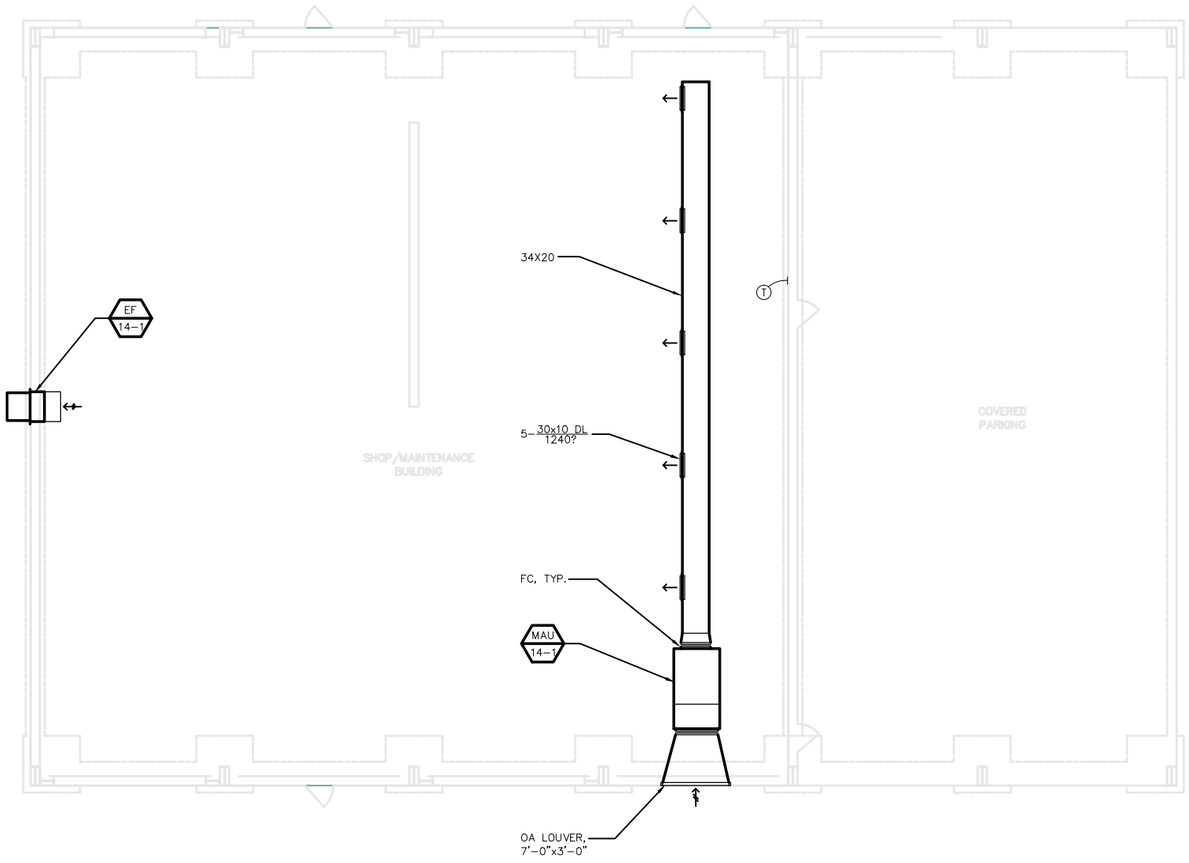

SHOP / MAINTENANCE BUILDING

SCALE : 1/8" = 1'-0"

1 / H14.01

N

CAUTION:
The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans.
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RECORD SET

Capital Engineering Consultants, Inc.
Sacramento, California
011003.00 PROJECT NO.
DESIGNER/DRAFTER

NOLTE
BEYOND ENGINEERING
□ DENVER (303) 781-0606 ■ MANTECA (209) 239-9080 □ ORANGE COUNTY (714) 283-1100 □ SACRAMENTO (916) 641-1929 □ SAN JOSE (408) 287-3400 □ SAN DIEGO (619) 378-9280 □ WALNUT CREEK (925) 934-9080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
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PROJ. ENGR.:

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4			
3			
2			
1	SEM	09/11	RECORD SET

~~REDUCED RECORD SET~~
~~NOT TO SCALE~~

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

MECHANICAL

SHOP / MAINTENANCE BUILDING
HVAC PLAN

SCALE: 1/8" = 1'-0"
DRAWING NUMBER: H14.01
SHEET NUMBER: XX OF SHEETS

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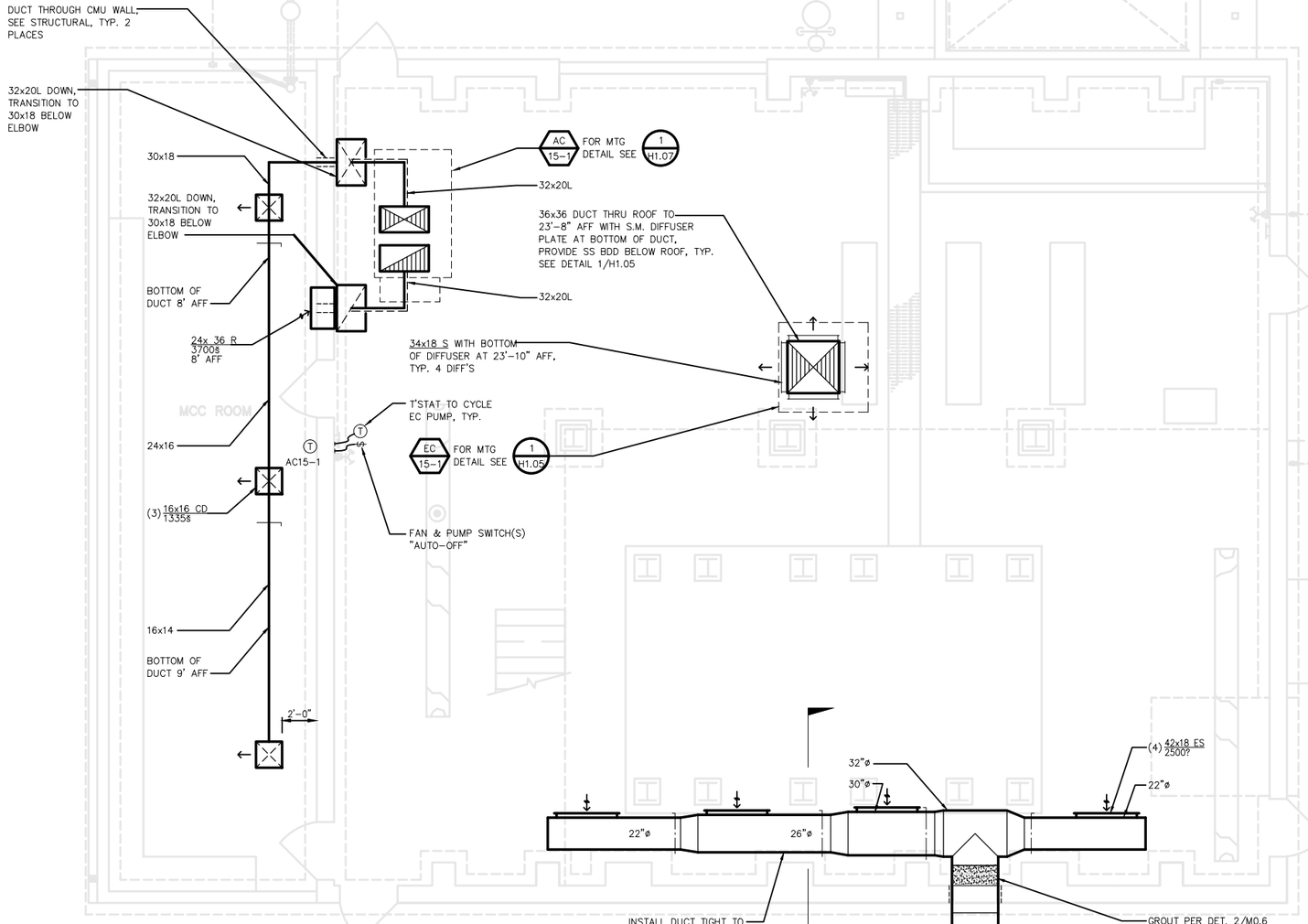
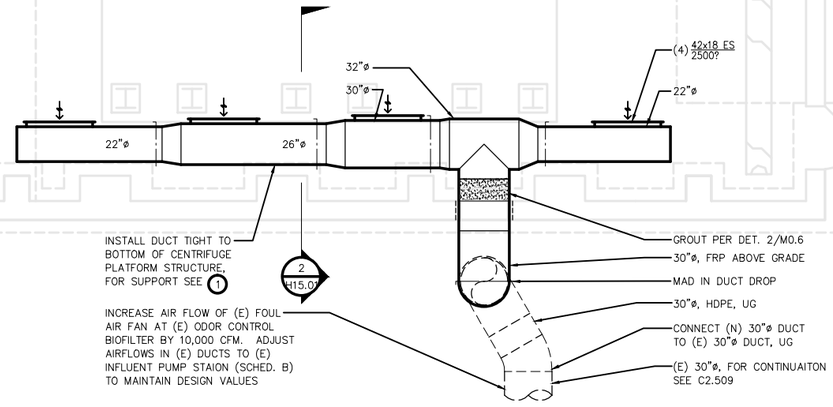
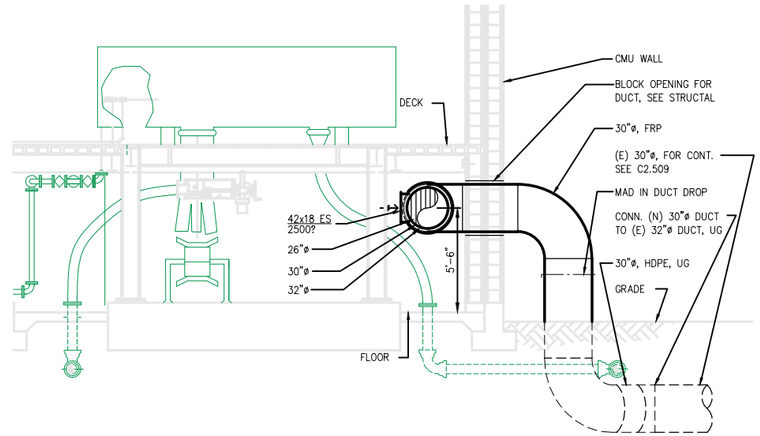




MECHANICAL DEWATERING BUILDING HVAC PLAN

1 H15.01

SCALE : 1/4" = 1'-0"



SECTION

SCALE : 1/4" = 1'-0"

2 H15.01

SHEET NOTES:

1. SUPPORT DUCT FROM PLATFORM FLOOR STEEL WITH 3" WIDE x 14 GA GALV. SHEET METAL STRAPS AT EACH W16x31. SECURE STRAP TO W16x31 WITH STANDARD DUTY BEAM CLAMPS, "GRINNELL" FIG. 134 OR EQUAL.
2. ALL FOUL AIR EXHAUST DUCT ABOVE GRADE TO BE FIBERGLASS REINFORCED PLASTIC.
3. ALL DAMPERS AND RODS IN FOUL AIR EXHAUST DUCT TO BE FRP W/ STAINLESS STEEL HARDWARE.

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RECORD SET

Capital Engineering Consultants, Inc.
Sacramento, California
011003.00 PROJECT NO.
DESIGNER/DRAFTER

NOLTE BEYOND ENGINEERING
DENVER (303) 781-0666 ■ MANTECA (209) 239-9080 ☐ ORANGE COUNTY (714) 282-1600 ☐ SACRAMENTO (916) 641-9525 ☐ SAN JOSE (408) 287-3400 ☐ SAN DIEGO (619) 276-6382 ☐ WALNUT CREEK (925) 934-9080
302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
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1	SEM	09/11	RECORD SET

REDUCED RECORD SET NOT TO SCALE

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

HVAC

MECHANICAL DEWATERING BUILDING HVAC PLAN

SCALE 1/4" = 1'-0"

DRAWING NUMBER H15.01

SHEET NUMBER OF SHEETS

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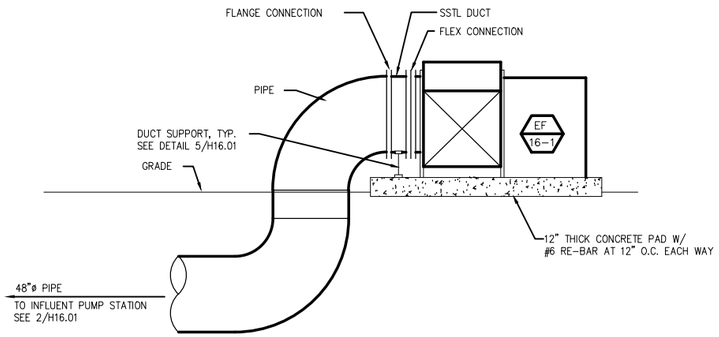
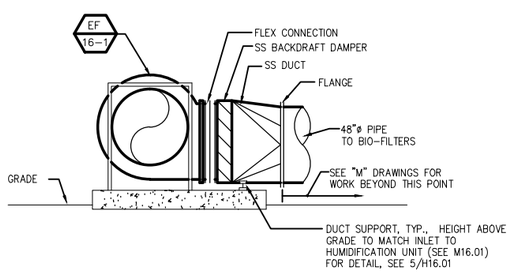


SECTION A - BIOFILTER AREA

SCALE : 1/4" = 1'-0"

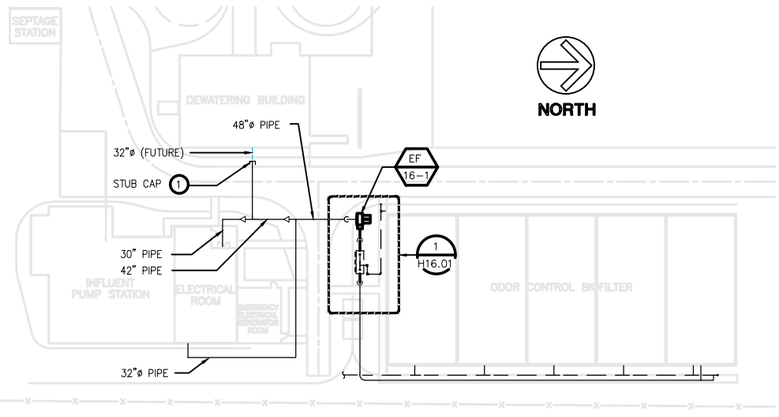
3 / H16.01



SECTION B - BIOFILTER AREA

SCALE : 1/4" = 1'-0"

4 / H16.01

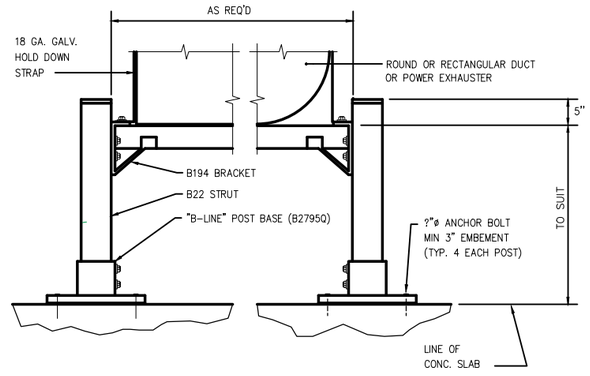


NOTES:
1. LOCATION OF STUB TO BE DETERMINED IN FIELD.

SITE PLAN

SCALE : 1" = 40'-0"

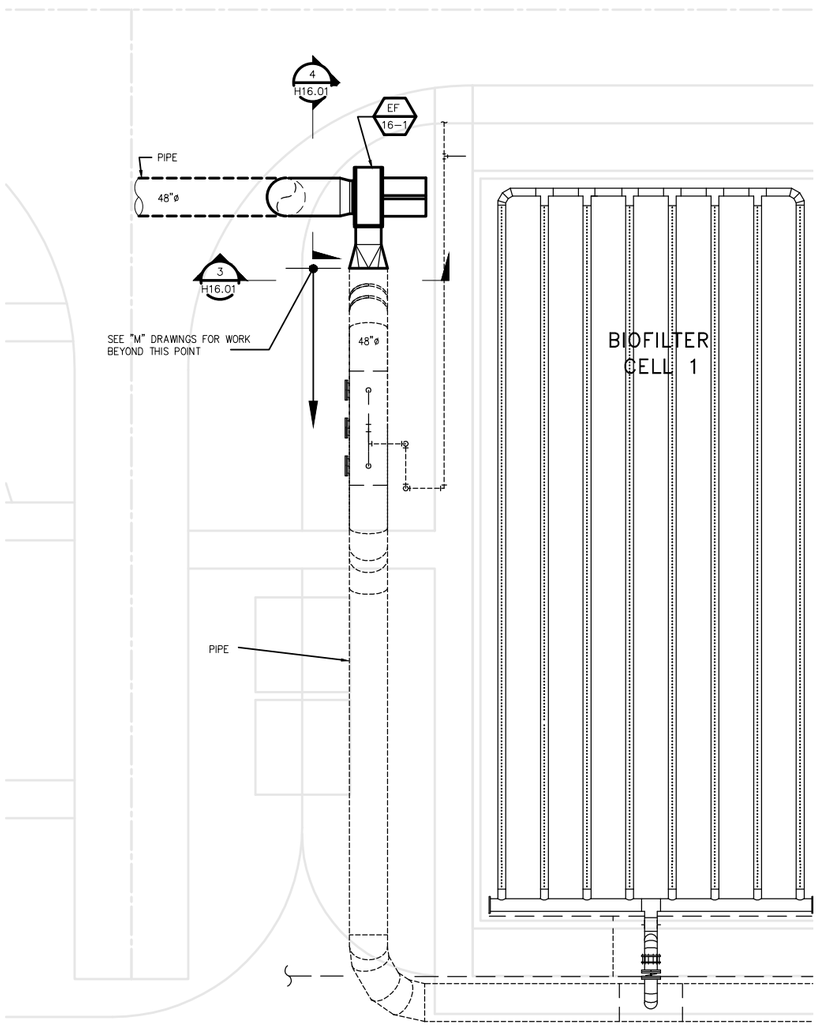
2 / H16.01



DUCT ON GROUND SUPPORT

SCALE : NONE

5 / H16.01



ENLARGED PLAN - BIOFILTER AREA

SCALE : 1/8" = 1'-0"

1 / H16.01

Capital Engineering Consultants, Inc.
Sacramento, California
LC/CDF DESIGNER/DRAFTER
01003.00 PROJECT NO.

NOLTE
BEYOND ENGINEERING
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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHELTON — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
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2	SEM	09/11	RECORD SET
1	LS	10/9/03	ADDENDUM NO. 1

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RECORD SET

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

ODOR CONTROL BIOFILTER
PLANS AND SECTIONS
HVAC

SCALE 1" = 20'-0"
DRAWING NUMBER H16.01
SHEET NUMBER
OF SHEETS

01003.00\H16-01.FBV — December 30, 2003 - DA - 18

QC	
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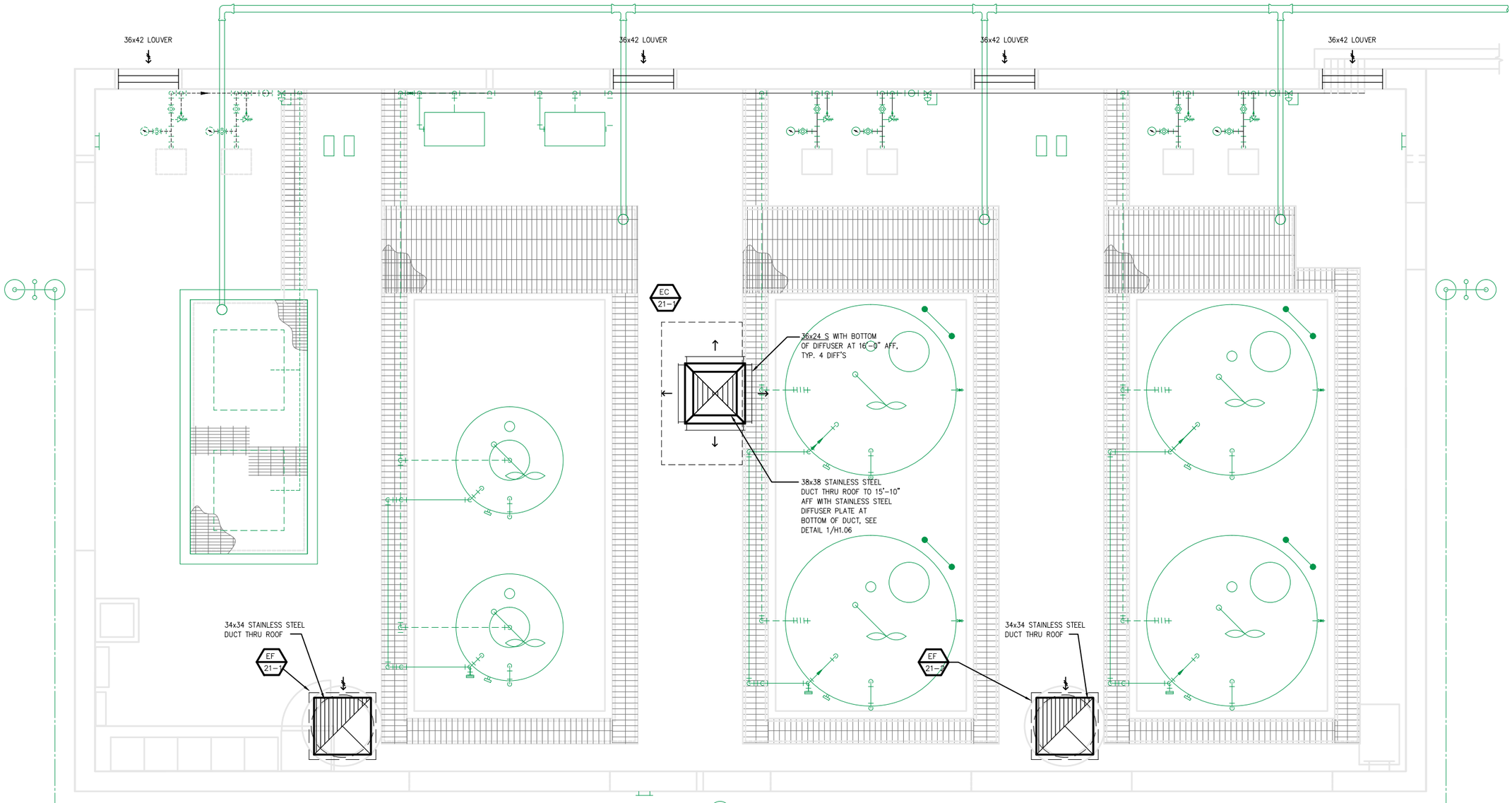

FLOOR PLAN

SCALE : 3/8" = 1'-0"

1 / H21.01

N

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PROJECT NO.

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302 CHERRY LANE, SUITE 201, MANTECA, CA 95337 (209) 239-9080

REGISTERED PROFESSIONAL ENGINEER — LANELL E. SHIELDS — M 21583 — EXPIRES 6/03 — MECHANICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — David Richard — No. 33479 — EXP. — CIVIL — STATE OF CALIFORNIA

DATE: XXXXXX
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PROJ. ENGR.:

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5			REDUCED RECORD SET NOT TO SCALE
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2	SEM	09/11	RECORD SET
1	WV	8-8-05	ADDENDUM NO. 1

MANTECA WASTEWATER QUALITY CONTROL FACILITY
PHASE III EXPANSION PROJECT

CHEMICAL HANDLING BUILDING
HVAC PLAN

SCALE 3/8" = 1'-0"
DRAWING NUMBER H21.01
SHEET NUMBER
OF SHEETS

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