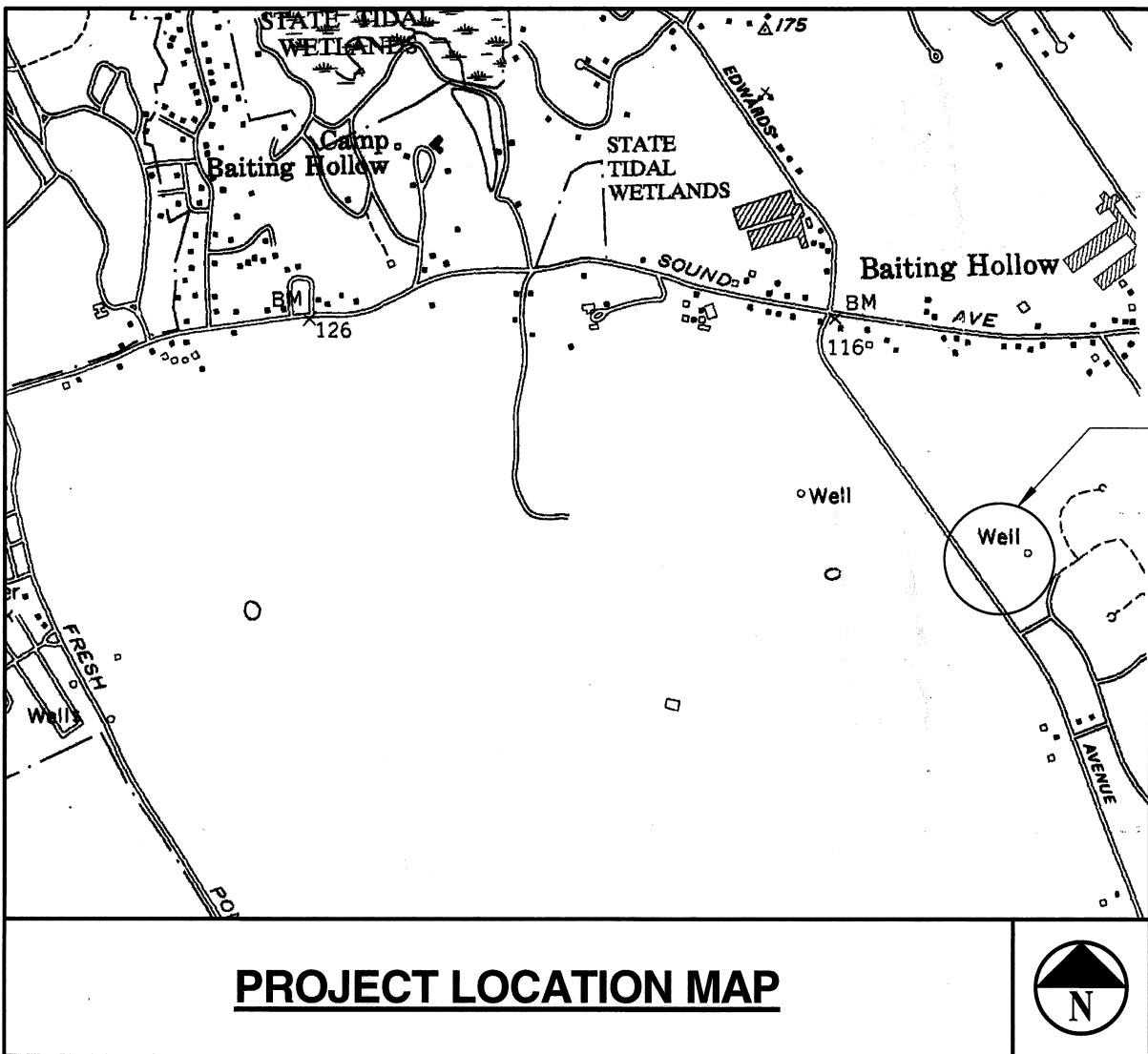


RIVERHEAD WATER DISTRICT

WELLHEAD TREATMENT FOR PERCHLORATE REMOVAL - PLANT NO. 16 EDWARDS AVENUE, CALVERTON, TOWN OF RIVERHEAD RDWD 14-06 FEBRUARY 2015

CONTRACT B - BUILDING AND PIPING INSTALLATION



TOWN SUPERVISOR

SEAN WALTER

TOWN COUNCIL

JOHN DUNLEAVY

GEORGE E. GABRIELSEN

JODI GIGLIO

JAMES WOOTEN

TOWN CLERK

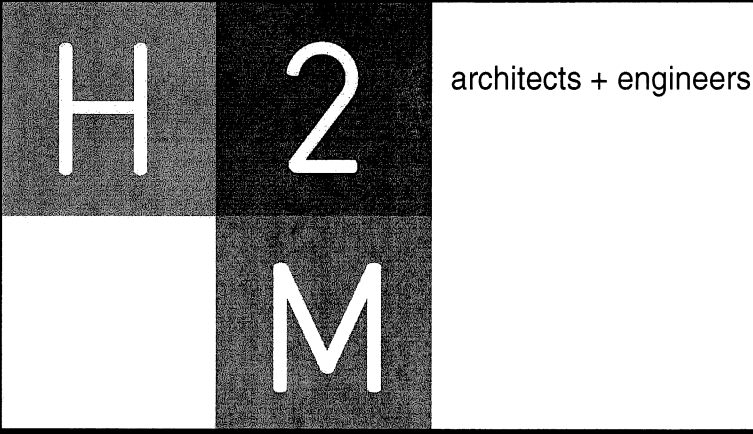
DIANE WILHELM

SUPERINTENDENT

MARK CONKLIN

SHEET LIST:

- G1.0 TITLE SHEET
- C1.0 EXISTING SITE PLAN
- C2.0 DIMENSIONAL SITE AND GRADING PLAN
- C3.0 SITE PIPING PLAN
- S1.0 FOUNDATION AND SLAB PLAN
- S2.0 FOUNDATION SECTIONS AND DETAILS
- A1.0 FLOOR PLAN, PARTITION TYPES & NOTES
- A2.0 ROOF PLAN & NOTES
- A3.0 BUILDING ELEVATIONS & NOTES
- A3.1 BUILDING ELEVATIONS & NOTES
- A4.0 BUILDING SECTIONS
- A5.0 DETAILS
- PD1.0 PROCESS DIAGRAM
- M1.0 TREATMENT BUILDING MECHANICAL PLANS
- M2.0 TREATMENT BUILDING SECTION AND DETAILS
- E1.0 ELECTRICAL FLOOR PLAN
- E2.0 ELECTRICAL DETAILS AND SCHEDULES



538 Broad Hollow Road
4th Floor East
Melville, NY 11747
P:(631)756-8000
F:(631)694-4122

Melville, NY 11747
Albany, NY 12205
White Plains, NY 11601
New City, NY 10956
Parsippany, NJ 07054
Howell, NJ 11601

PROJECT #:
RDWD 14-06

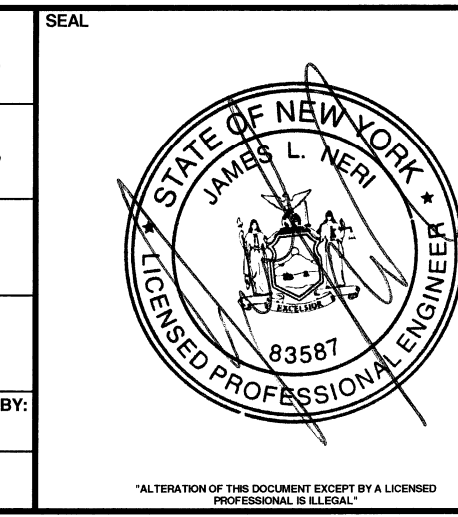
DATE:
FEBRUARY 2015

DESIGNED BY:
JRC / AMM

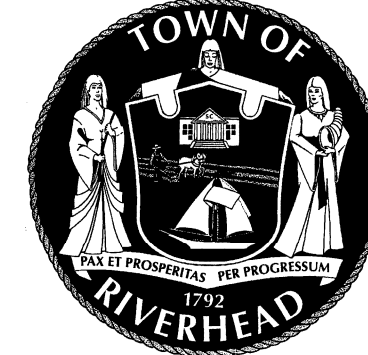
DRAWN BY:
AMM

CHECKED BY:
JRC

REVIEWED BY:



RIVERHEAD WATER DISTRICT
Wellhead Treatment for Perchlorate Removal - Plant No. 16

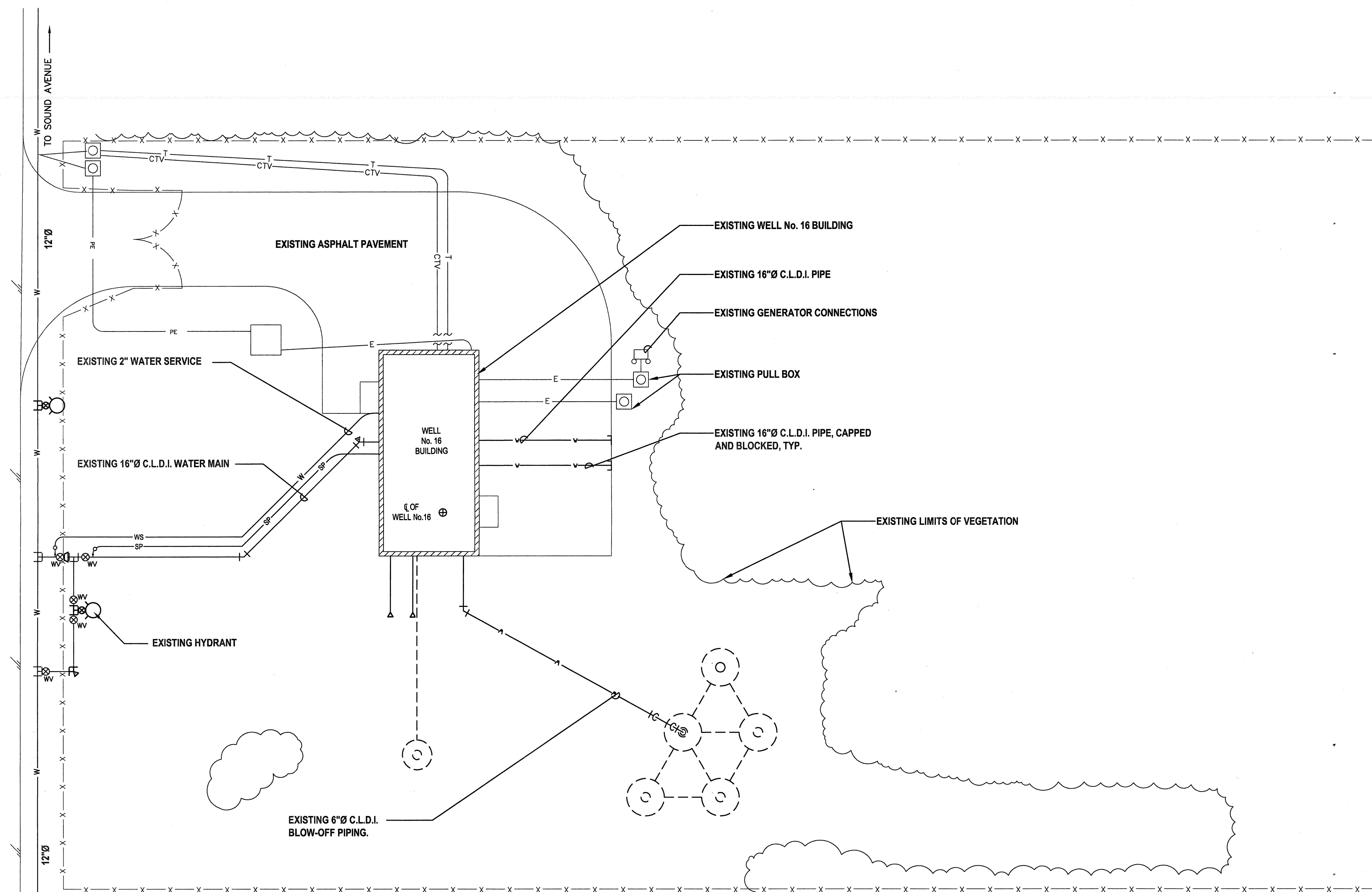


NUMBER
G1.0



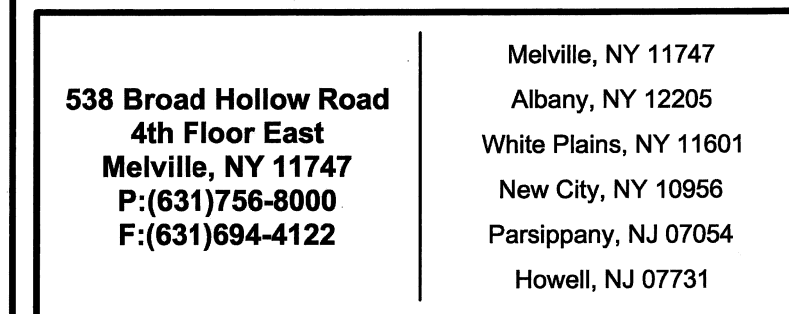
EDWARDS

ASPHALT PAVEMENT



(IN FEET)
1 inch = 20 ft.

1. LOCATION OF ALL UNDERGROUND UTILITIES BOTH PUBLIC AND CUSTOMER OWNED, WERE OBTAINED FROM EITHER OLD MAPS, SURVEYS, DRAWINGS AND RECORDS SUPPLIED BY OTHERS. THE OWNER AND ENGINEER DO NOT GUARANTEE OR ACCEPT RESPONSIBILITY FOR ANY DAMAGE TO SUCH FACILITIES DUE TO DISCREPANCIES IN LOCATION AND SIZE SHOWN ON THE PLANS OR THOSE UTILITIES NOT SHOWN, NOR WILL ANY COMPENSATION BE MADE TO THE CONTRACTOR FOR ANY INCONVENIENCE CAUSED HIM BY ENCOUNTERING THE AFORESAID UTILITIES OR FOR THOSE UTILITIES WHICH ARE NOT SHOWN, OR ARE INCORRECTLY SHOWN ON THE PLANS. ANY CONTRACTOR PERFORMING EXCAVATION IS RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL UNDERGROUND UTILITIES.



CONSULTANTS:

[illegible]

PROJECT #	RDWD 14-06
DATE:	FEBRUARY 2015
DESIGNED BY:	JRC
DRAWN BY:	JRC
CHECKED BY:	REVIEWED BY:
<i>JRC</i>	

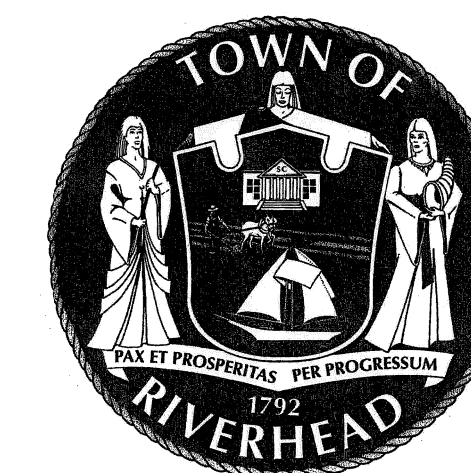
Seal of the State of New York, featuring a shield with a sun, a river, and a plow, surrounded by the text "STATE OF NEW YORK" and "JAMES L. NEWMAN".

"ALTERATION OF THIS DOCUMENT CANNOT BE BY A LICENSEE"

CLIENT

**RIVERHEAD WATER
DISTRICT**

Wellhead Treatment for Perchlorate Removal - Plant No. 16



CONTRACT

CONTRACT B
BUILDING AND PIPING
INSTALLATION

STATUS

FINAL BID DOCUMENT

SHEET TITLE

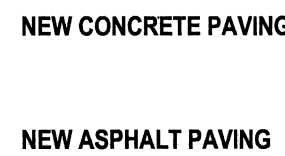
EXISTING SITE PLAN

SHEET #

C1.0

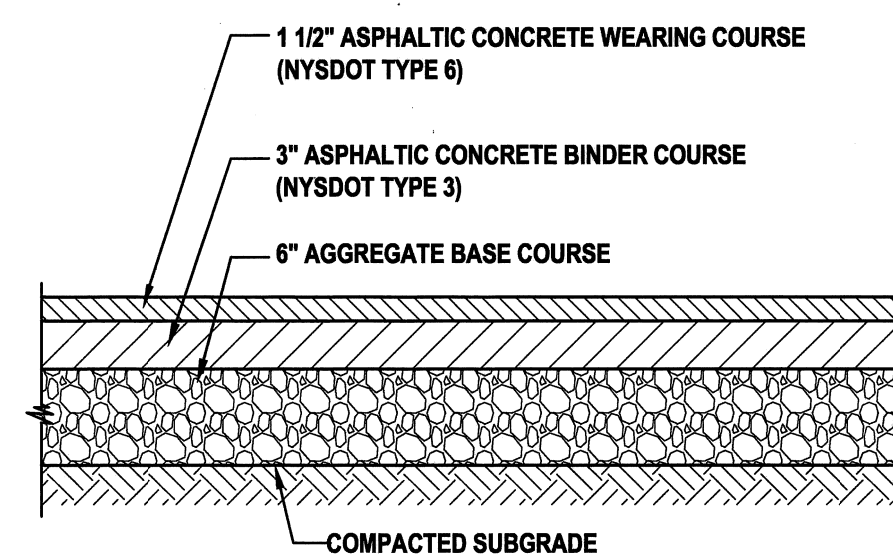
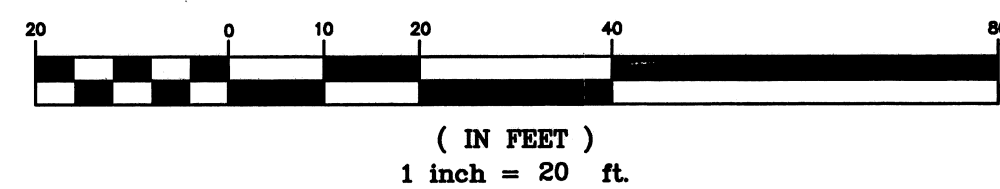


1. CONTRACTOR SHALL INSPECT CONSTRUCTION SITE PRIOR TO SUBMISSION OF BIDS AND SHALL MAKE NO ADDITIONAL CLAIMS REGARDING SITE CONDITIONS THEREAFTER.
2. THE CONTRACTOR SHALL NOTIFY THE OWNER AND H2M AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF THE WORK. THE SAME NOTICE SHALL BE REQUIRED WHEN RESUMING WORK AFTER ANY STOPPAGE OR DELAY.
3. LOCATION OF ALL UNDERGROUND UTILITIES, ELECTRIC AND TELEPHONE CONDUITS, STORM DRAINS AND UNDERGROUND PIPING SHALL BE MARKED OUT BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF UNDERGROUND UTILITIES, GAS MAINS, ELECTRIC AND TELEPHONE CONDUITS. NO EXCAVATION SHALL COMMENCE UNTIL COMPLETE MARK-OUT HAS BEEN PERFORMED.
4. LOCATION OF ALL UNDERGROUND UTILITIES BOTH PUBLIC AND CUSTOMER OWNED, WERE OBTAINED FROM THE CITY OF DALLAS, DRAINAGE DEPARTMENT, RECORDS AND RECORDS SUPPLIED BY OTHERS. THE OWNER AND ENGINEER DO NOT GUARANTEE OR ACCEPT RESPONSIBILITY FOR ANY DAMAGE TO SUCH FACILITIES DUE TO DISCREPANCIES IN LOCATION AND SIZE SHOWN ON THE PLANS OR THOSE UTILITIES NOT SHOWN, NOR WILL ANY COMPENSATION BE MADE TO THE CONTRACTOR FOR ANY INCONVENIENCE CAUSED HIM BY ENCOUNTERING THE AFOREMENTIONED UTILITIES OR FOR THOSE UTILITIES WHICH ARE NOT SHOWN, OR ARE INCORRECTLY SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL UNDERGROUND UTILITIES.
5. CONTRACTOR SHALL HAND DIG TO LOCATE AND EXPOSE EXISTING UTILITIES. ANY DAMAGE TO EXISTING UTILITIES MUST BE REPAIRED IMMEDIATELY BY CONTRACTOR AT NO COST TO OWNER.
6. THE CONTRACTOR SHALL BE REQUIRED TO COMPLETE ALL SURVEY, LAYOUT, LINES, GRADES, AS REQUIRED, TO PROPERLY COMPLETE THE WORK. NEITHER H2M OR THE OWNER SHALL PERFORM ANY LAYOUT.
7. THE CONTRACTOR SHALL PERFORM DAILY CLEANUP OPERATIONS WHICH INCLUDE REMOVAL OF DEBRIS AND EXCESS CONSTRUCTION MATERIAL, AND DRIVEWAY/ STREET CLEANING TO THE SATISFACTION OF THE OWNER AND THE ENGINEER.
8. DURING ALL NON-WORKING HOURS, THE CONTRACTOR WILL BE REQUIRED TO STORE ALL EQUIPMENT AND MATERIALS WITHIN THE AREA DESIGNATED BY THE ENGINEER AT THE PROJECT SITE.
9. ALL DIMENSIONS SHOWN ARE APPROXIMATE AND SUBJECT TO REVISION. ALL DIMENSIONS SHOWN REFER TO THE FACE OF CURB. ALL DIMENSIONS BETWEEN CURVES REFER TO POINT OF CURVATURE AND POINT OF TERMINATION.
10. CONSTRUCTION OF FACILITY SHALL CONFORM TO ALL APPLICABLE STATE AND LOCAL CODE REQUIREMENTS, THE CONTRACT AND SUBJECT TO THE APPROVAL OF THE ENGINEER.
11. CONTRACTOR SHALL SECURE CONSTRUCTION SITE IN ACCORDANCE WITH APPLICABLE SAFETY STANDARDS.
12. CONTRACTOR SHALL COORDINATE ACTIVITIES WITH OWNER/ENGINEER SO AS TO MINIMIZE INTERRUPTION TO THE OWNERS OPERATIONS.
13. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF SURROUNDING AREAS DAMAGED DURING CONSTRUCTION. ALL AREAS DISTURBED BY WORK SHALL BE RESTORED TO PRE-EXISTING OR SPECIFIED NEW CONDITIONS.
14. RESTORE ALL DISTURBED GRASS AREAS WITH 6" OF TOPSOIL AND SEED.
15. REPLACE ANY CURBS, DRIVEWAY, ETC., SCHEDULED TO REMAIN WHICH ARE DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES AT NO COST TO OWNER.
16. CONCRETE SIDEWALKS SHALL BE SAWCUT BACK TO EXPANSION/CONTROL JOINTS
17. CONTRACTOR SHALL PROVIDE TEMPORARY FENCING TO PROTECT WORK AREAS.
18. CONTRACTOR SHALL MINIMIZE REMOVAL OF EXISTING TREES. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE LAYOUT OF ALL WORK AND TAGGING TREES TO BE REMOVED. OWNER SHALL APPROVE TREES TO BE REMOVED PRIOR TO ACTUAL REMOVALS.



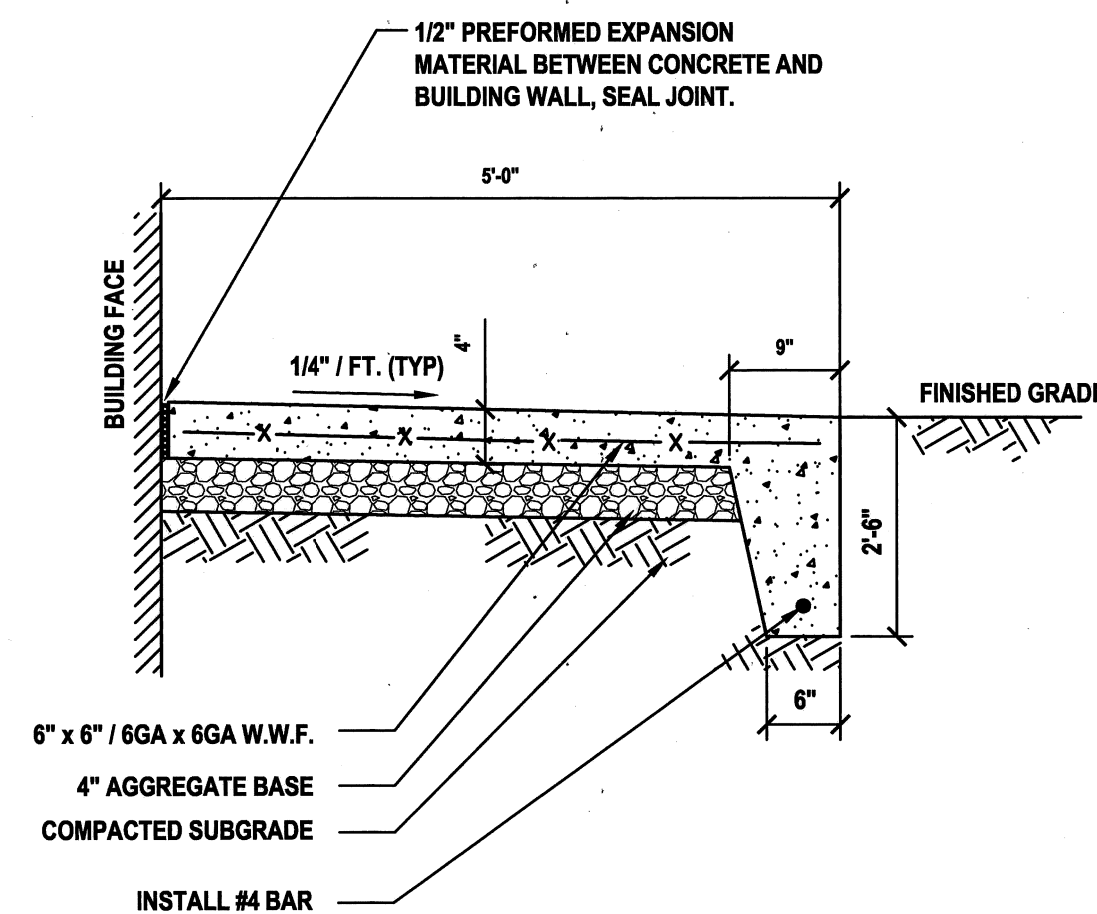
Dimensional Plan

GRAPHIC SCALE



NOTE:
COMPACT SUBGRADE TO 95% MAXIMUM DENSITY IN
ACCORDANCE WITH ASTM D1557.

1 Asphalt Pavement - Heavy Duty
NTS (321216.13 H2MX2) - U



NOTES:

1. **WOOD FLOAT AND BROOM FINISH ON ALL SURFACES ABOVE GRADE.**
2. **CONCRETE TO ACHIEVE 4,000 P.S.I. AT 28 DAYS.**
3. **COMPACT SUBGRADE TO 95% MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D1557.**

2 Concrete Landing
NTS (321315.00 H2MX1) - U

Melville, NY 11747
Albany, NY 12205
White Plains, NY 11601
New City, NY 10956
Parsippany, NJ 07054
Howell, NJ 07731

CONSULTANTS:

[illegible]

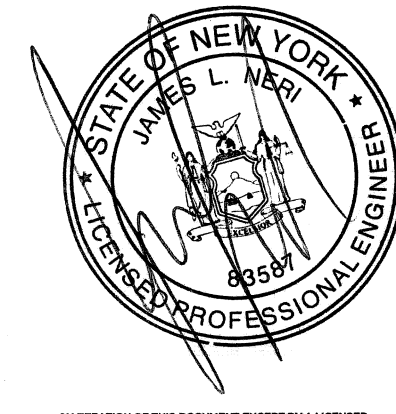
PROJECT #:
RDWD 14-06

DATE: FEBRUARY 2015

DESIGNED BY: JI

DRAWN BY:

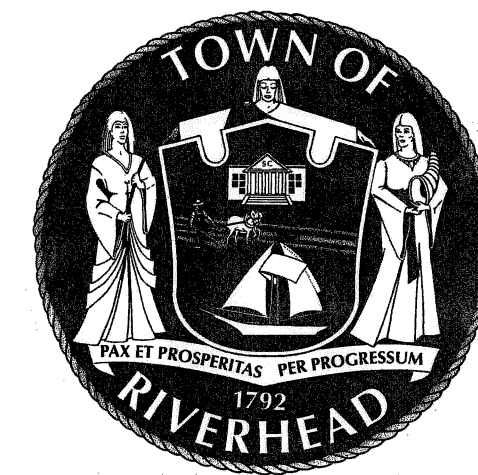
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CLIENT

**RIVERHEAD WATER
DISTRICT**

Wellhead Treatment for Perchlorate Removal - Plant No. 16



CONTRACT

CONTRACT B
BUILDING AND PIPING
INSTALLATION

STATUS

FINAL BID DOCUMENT

SHEET TITLE

DIMENSIONAL SITE PLAN

SHEET #

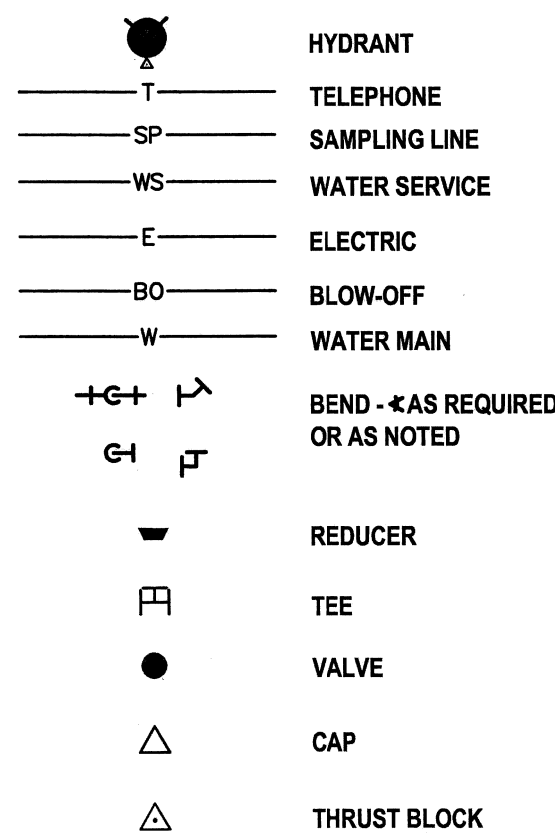
C2.0



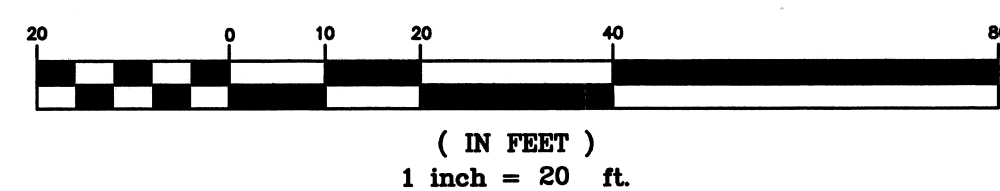
1. THE CONTRACTOR SHALL COORDINATE ALL SHUTDOWNS OF EXISTING MAINS WITH THE WATER DISTRICT.
2. LOCATION AND SIZES OF ALL EXISTING WATER MAINS AND VALVES SHOWN ON THE DRAWINGS WERE DETERMINED FROM OLD RECORDS OR FIELD INSPECTIONS. THE ACTUAL SIZES, LOCATIONS AND TYPES SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.
3. LOCATIONS OF ALL UNDERGROUND UTILITIES, GAS MAINS, ELECTRIC AND TELEPHONE CONDUITS, AND STORM DRAINS WERE OBTAINED FROM OLD MAPS, SURVEYS, DRAWINGS OR RECORDS SUPPLIED BY OTHERS OR FIELD INSPECTIONS PERFORMED BY UTILITY COMPANIES AND OTHERS. THE WATER AUTHORITY OF WESTERN NASSAU COUNTY AND THE CONSULTING ENGINEERS DO NOT GUARANTEE OR ACCEPT RESPONSIBILITY FOR ANY DAMAGE TO SUCH FACILITIES DUE TO DISCREPANCIES IN LOCATION AND SIZE SHOWN ON THE PLANS. NOR WILL ANY COMPENSATION BE MADE TO THE CONTRACTOR FOR ANY INCONVENIENCE CAUSED HIM BY ENCOUNTERING THE AFOREMENTIONED UTILITIES WHICH ARE NOT SHOWN, OR INCORRECTLY SHOWN, ON THE PLANS.
4. THE CONTRACTOR SHALL DIG TEST HOLES TO LOCATE TOP AND BOTTOM OF ALL MARKED AND KNOWN BURIED UTILITY FACILITIES PRIOR TO DOING ANY EXCAVATION. NO ADDITIONAL PAYMENT WILL BE MADE FOR DELAYS ASSOCIATED WITH HITTING OF MARKED OR MIS-MARKED UTILITIES DUE TO LACK OF DIGGING THE PROPER SIZE, QUANTITY AND DEPTH OF TEST HOLES.
5. PROVIDE PROTECTION OF UNDERGROUND UTILITIES SUCH AS DRAINS, ELECTRICAL CABLES, GAS MAINS, CONDUITS, SEWER AND SEWER LATERALS, ETC., INCLUDING ADDITIONAL COSTS TO CROSS UNDER, OVER OR ADJACENT TO THESE UNDERGROUND UTILITIES.

SITE SAFETY:

1. DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THE CONTRACTOR SHOULD HAVE THEIR INSURANCE COMPANY SAFETY ENGINEER VISIT THE JOB SITE PERIODICALLY.
2. THE PROPOSED PROJECT IS IN THE VICINITY OF A DEVELOPED AREA AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT SUFFICIENT SAFETY PRECAUTIONS ARE TAKEN DURING THE COMPLETION OF THIS CONTRACT. CONSEQUENTLY, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY SAFETY RELATED PROBLEMS THAT MAY OCCUR.
3. THE RIVERHEAD WATER DISTRICT RESERVES THE RIGHT (AFTER 24 HOURS NOTICE IN WRITING) TO REMEDY ANY NEGLIGENCE ON THE PART OF THE CONTRACTOR REGARDING THE PROTECTION OF THE WORK WHICH MAY COME TO ITS ATTENTION; EXCEPT THAT IN CASES OF EMERGENCY, IT SHALL HAVE THE RIGHT TO REMEDY ANY NEGLIGENCE WITHOUT NOTICE; AND IN EITHER CASE TO DEDUCT THE COST OF SUCH REMEDY FROM MONEY DUE THE CONTRACTOR.
3. PROVIDE ANY SHEETING REQUIRED TO SUPPORT EXISTING FACILITIES DUE TO THE LOCATION OF THE NEW WATER MAIN AND PROXIMITY OF EXISTING UTILITIES, CURBS, SIDEWALKS, DRIVEWAY APRONS, ETC.
5. THE CONTRACTOR SHALL INSTALL CONCRETE BLOCKING, STEEL TIE-RODS AND RETAINER GLANDS AT ALL MECHANICAL CONNECTIONS.
6. THE CONTRACTOR SHALL UTILIZE THE APPROPRIATE SHORING, BOXES, ETC. IN CASES WHERE SUCH DEVICES ARE REQUIRED BY OSHA.



Site Piping Plan
GRAPHIC SCALE



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New York

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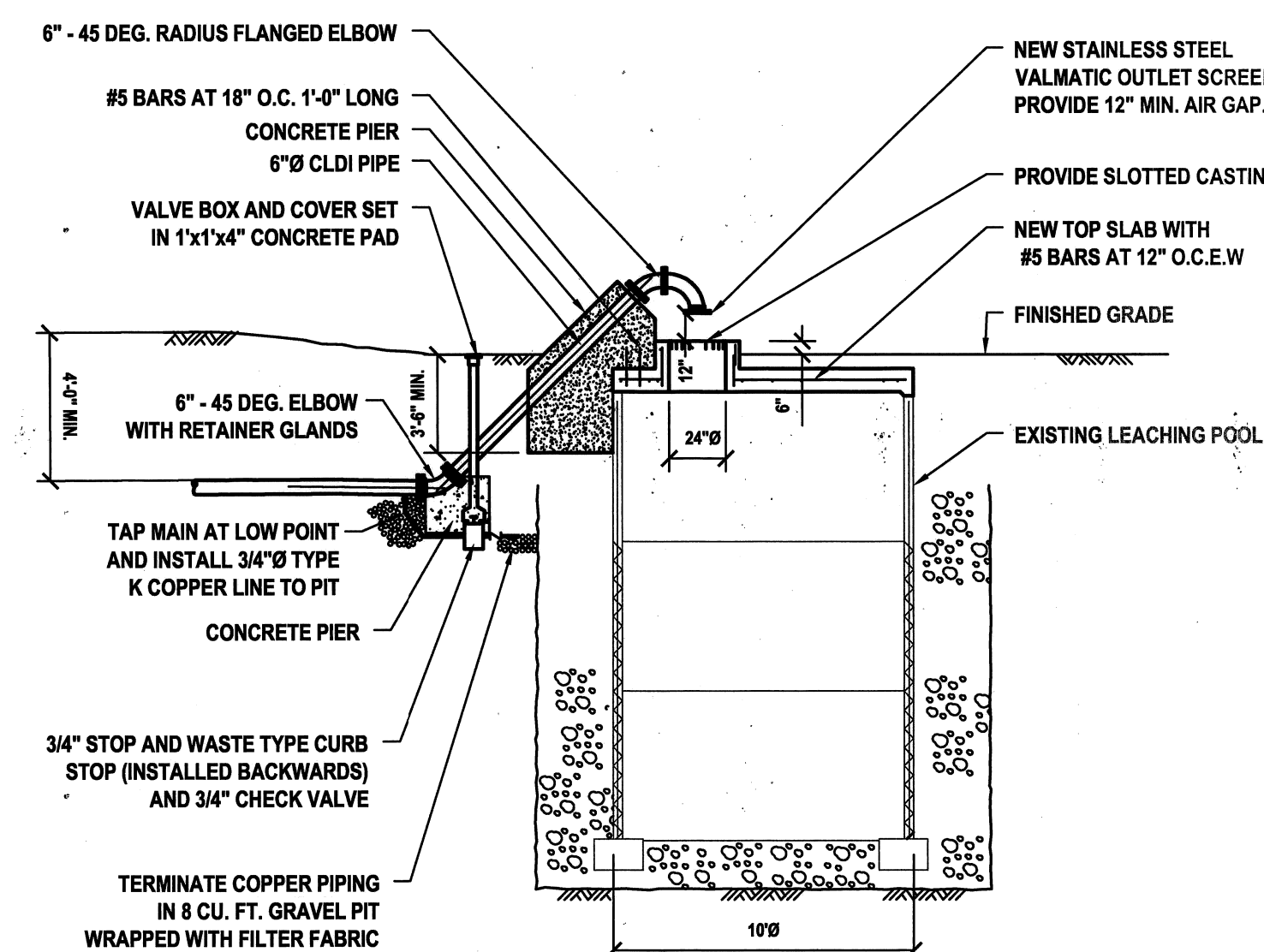


1. CONCRETE BLOCKING SHALL BE APPLIED ON ALL PIPE LINES 4-INCH IN DIAMETER AND LARGER AT ALL TEES, PLUGS, CAPS, AND AT BENDS DEFLECTING 22 1/2 DEGREES OR MORE. BLOCKING SHALL BE OF CONCRETE OF A MIX HAVING A COMPRESSIVE STRENGTH OF NOT LESS THAN 4,000 PSI, AND BLOCKING SHALL BE PLACED BETWEEN SOLID GROUND AND THE FITTING TO BE ANCHORED. THE BLOCKING SHALL BE SO PLACED THAT THE PIPE AND FITTING JOINTS WILL BE ACCESSIBLE FOR REPAIR.
2. FOR ALL VERTICAL BENDS, 3/4-INCH DIAMETER TIE RODS AND PIPE CLAMPS OR RETAINER GLANDS SHALL BE PROVIDED IN ADDITION TO THE CONCRETE BLOCKING SPECIFIED ABOVE FOR BENDS DEFLECTING 22-1/2 DEGREES OR MORE.
3. ALL CONCRETE BLOCKING SHALL BE 4,000 PSI POURED PORTLAND CEMENT CONCRETE.
4. THE SQUARE FOOT BEARING AREA OF THE BLOCKING ON SOLID GROUND SHALL BE INDICATED IN THE TABLE FOLLOWING OR AS INDICATED BY THE ENGINEER:

CONCRETE BEARING AREA (SF)				
PIPE SIZE	DEAD END OR TEE	90° BEND	45° BEND	22 1/2° BEND
4"	1	1-1/2	3/4	1/2
6"	2	3	2	1
8"	4	5-1/2	3	1
10"	6	8-1/2	4-1/2	2-1/2
12"	9	12	6-1/2	3-1/2
16"	12	15-1/2	8-1/2	4-1/2

1 Thrust Block Location Details

NO SCALE



② Blowoff Pit Modifications

NTS

**538 Broad Hollow Road
4th Floor East
Melville, NY 11747
P:(631)756-8000
F:(631)694-4122**

Melville, NY 11747
Albany, NY 12205
White Plains, NY 11601
New City, NY 10956
Parsippany, NJ 07054
Howell, NJ 07731

CONSULTANTS:

[illegible]

PROJECT #:
RDWD 14-06

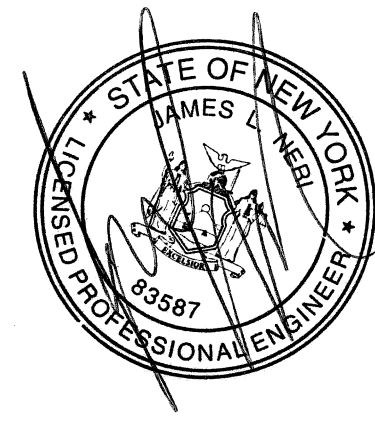
FEBRUARY 2015

DESIGNED BY: JF

DRAWN BY:

CHECKED BY:	REVIEWED
18-	

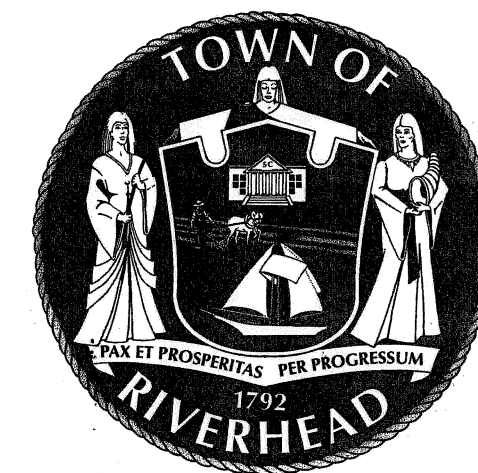
JKF	
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CLIENT

**RIVERHEAD WATER
DISTRICT**

Wellhead Treatment for Perchlorate Removal - Plant No. 16



CONTRACT

CONTRACT B
BUILDING AND PIPING
INSTALLATION

STATUS

FINAL BID DOCUMENT

SHEET TITLE

SITE PIPING PLAN

SHEET

C3.0

CONSULTANTS:

[illegible]

PROJECT #:
RDWD 14-06

FEBRUARY 2015

DESIGNED BY:

DRAWN BY:

CHECKED BY:	REVIEWED BY:
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REAL



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RIVERHEAD WATER DISTRICT

Wellhead Treatment for Perchlorate Removal - Plant No. 16



CONTRACT

CONTRACT B
BUILDING AND PIPING
INSTALLATION

STATUS

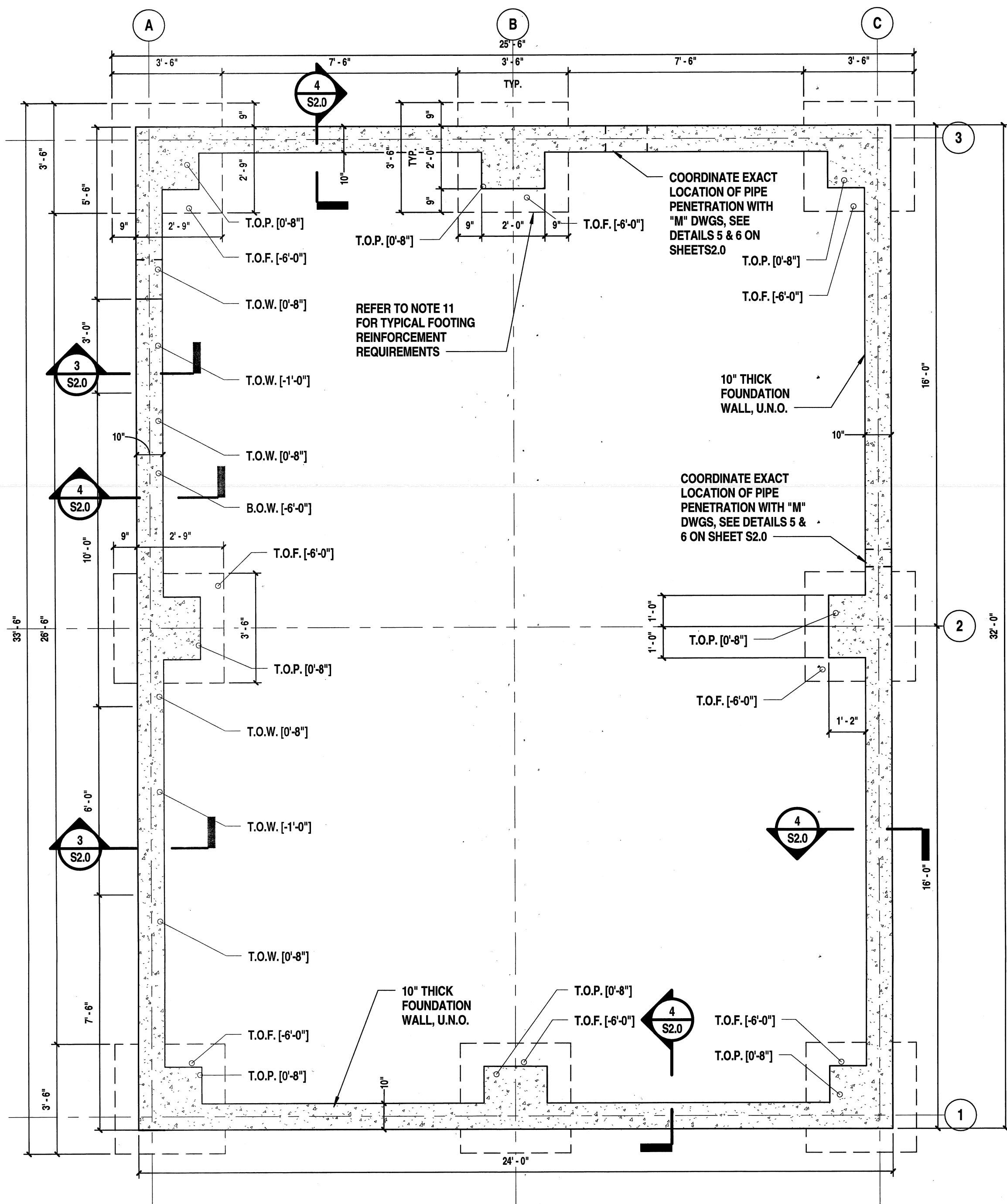
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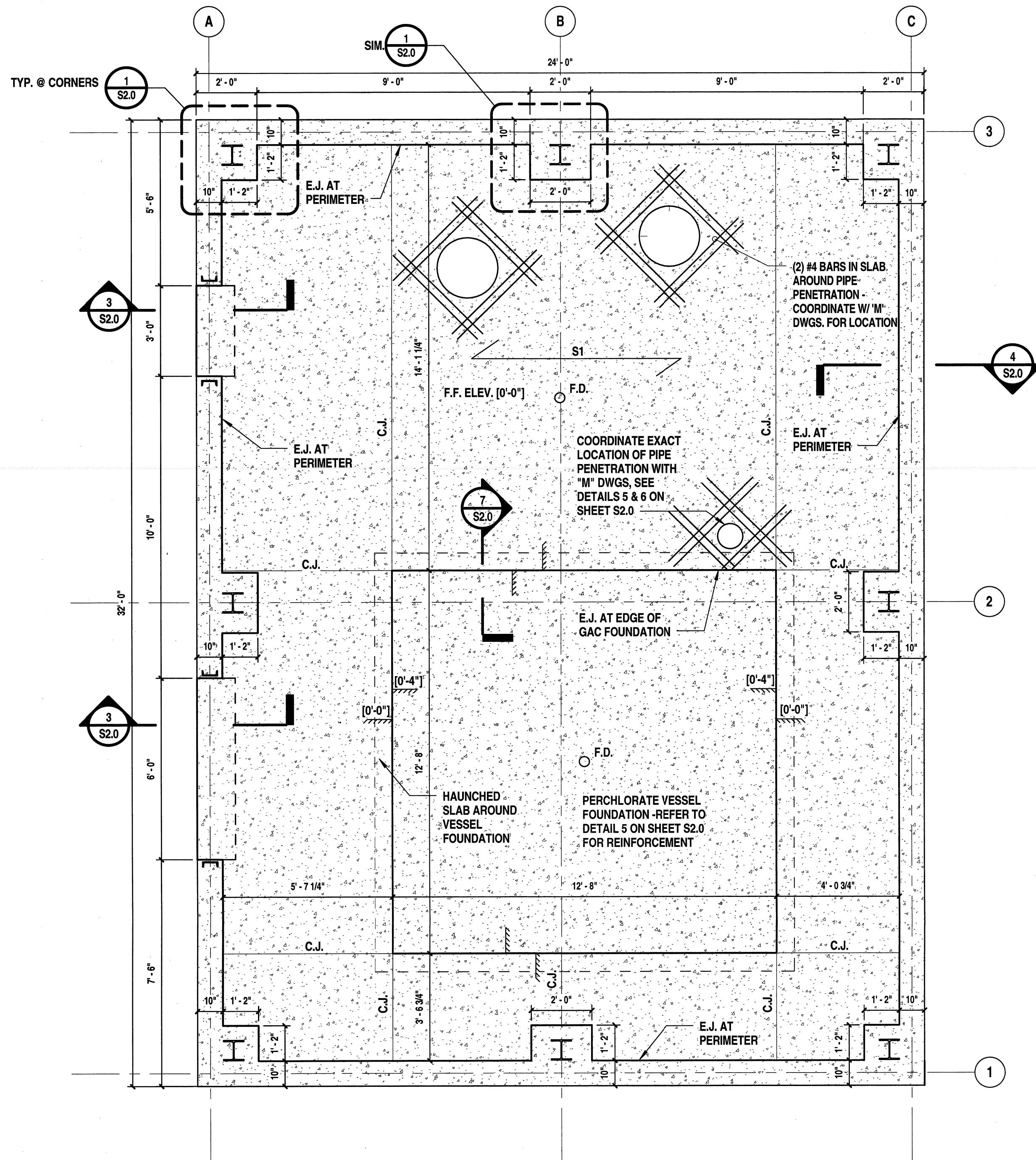
FOUNDATION AND SLAB PLAN

SHEET #

S1.0



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



2 Slab Plan 
SCALE: 3/8" = 1'-0"

FOUNDATION DESIGN LOADS:

1. **BUILDING DESIGN LOADS:**
FIRST FLOOR LIVE LOAD = 100 PSF
FIRST FLOOR DEAD LOAD = SELF-WEIGHT
2. **SOIL BEARING CAPACITY: 2.0 TONS/S.F.**
AS REFERENCED BY SUB-SURFACE SOILS INVESTIGATION
PERFORMED BY SOIL MECHANICS DRILLING CORP. (JUNE 2010)

PRE-FABRICATED BUILDING DESIGN LOADS:

1. SNOW LOADS:
- | | |
|---|---|
| GROUND SNOW LOAD,
(EXPOSURE)
(THERMAL)
(IMPORTANCE)
FLAT ROOF SNOW LOAD | $P_g = 20 \text{ PSF}$
$C_e = 1.0$
$C_t = 1.0$
$I_s = 1.1$
$P_F = I_s * P_g = 22 \text{ PSF}$ |
|---|---|
2. WIND LOADS:
- | | |
|---|---|
| BASIC WIND SPEED:
EXPOSURE:
IMPORTANCE FACTOR:
EXPOSURE ADJUSTMENT FACTOR:
INTERNAL PRESSURE COEFFICIENT: | 115 MPH
B
$I_w = 1.15$
1.0
$G_{cpi} = \pm 0.18$ |
|---|---|
3. SEISMIC CRITERIA:
- | | |
|--|---|
| SITE CLASS: D
(IMPORTANCE) $I_e = 1.25$
$F_a = 1.00$
$S_s = 0.207g$
$S_{ms} = 0.320$
$S_{ds} = 0.213$ | $F_V = 2.4$
$S_I = 0.057g$
$S_{m1} = 0.120$
$S_{d1} = 0.080$ |
|--|---|
- SEISMIC DESIGN CATEGORY: B
EQUIVALENT LATERAL FORCE PROCEDURE
STRUCTURAL STEEL FRAMING
- | | |
|-----------|---------------|
| $R = 2.0$ | $C_s = 0.133$ |
|-----------|---------------|

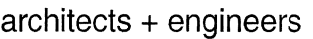
FOUNDATION & SLAB PLAN NOTES:

- | | |
|---|--|
| 1. ELEVATIONS SHOWN THUS [] ARE RELATIVE TO FINISHED FIRST FLOOR ELEVATION [0'-0"]. | 7. GRID LOCATIONS AND DESIGNATIONS ARE SHOWN FOR REFERENCE. INDIVIDUAL COLUMN SIZES, LOCATIONS, AND ANCHOR BOLT OFFSETS SHALL BE ESTABLISHED FROM THE FOUNDATION EDGE AS PER THE APPROVED BUILDING MANUFACTURER'S DETAILS. |
| 2. EXCAVATION OF EXISTING GRADE IS ANTICIPATED TO EXTEND TO A DEPTH OF NO LESS THAN 2'-0" BELOW EXISTING GRADE BELOW INTERIOR SLAB. | 8. CONTRACTOR SHALL COORDINATE SIZE AND LOCATIONS OF ALL REQUIRED PIPING AND CONDUIT PENETRATIONS THROUGH FOUNDATION WALL AND FLOOR SLAB WITH "M" DWGS. PROVIDE PIPE SLEEVES AND REINFORCEMENT AROUND PENETRATIONS AS PER DETAILS 5 AND 6 ON SHEET S2.0. |
| 3. ALL EXCAVATED EARTH SHALL BE REPLACED WITH TYPE 'C' CONTROLLED FILL AS PER SPECIFICATION SECTION 31223.13. | 9. REFER TO 'A' DWGS FOR WATERPROOFING REQUIREMENTS. |
| 4. ALL CONCRETE PEDESTALS SHALL BE 2'-0" x 2'-0" AND CONSTRUCTED AS PER DETAILS 1 AND 2 ON S2.0 UNLESS OTHERWISE NOTED. | 10.  INDICATES #6 CONCRETE SLAB ON GRADE REINFORCED WITH 6#6 - W2.9/29 W.W.F. |
| 5. ALL COLUMN FOOTINGS SHALL BE CENTERED ON THE CONCRETE PIERS UNLESS OTHERWISE NOTED. | 11. COLUMN FOOTINGS SHALL BE 3'-6" x 3'-6" x 1'-0" THICK AND REINFORCED WITH #8 BARS @ 12" O.C., E.W. |
| 6. THE DESIGN OF THE BUILDING FOUNDATIONS HAS BEEN PERFORMED AS PER PRELIMINARY FRAMING PLANS AND SCHEMATIC FRAMING LAYOUT PROVIDED BY MBMI. FORCES IN THE FOUNDATIONS WERE DETERMINED FROM THE BUILDING CODE OF NEW YORK STATE DEFINED LOADS APPLIED TO A PRE-MANUFACTURED BUILDING. THIS FOUNDATION DESIGN IS VOID AND TO BE CONSIDERED INADEQUATE IF ANY DEVIATION FROM THE PRELIMINARY FRAMING PLANS IDENTIFIED ABOVE ARE IMPLEMENTED PRIOR TO THE ENGINEER OF RECORD REVIEWING AND APPROVING THE SUBSTITUTION. | |

7. GRID LOCATIONS AND DESIGNATIONS ARE SHOWN FOR REFERENCE. INDIVIDUAL COLUMN SIZES, LOCATIONS, AND ANCHOR BOLT OFFSETS SHALL BE ESTABLISHED FROM THE FOUNDATION EDGE AS PER THE APPROVED BUILDING MANUFACTURER'S DETAILS.
8. CONTRACTOR SHALL COORDINATE SIZE AND LOCATIONS OF ALL REQUIRED PIPES AND CONNECTIONS THROUGH THE FOUNDATION WALL AND FLOOR SLAB WITH M/DWGS. PROVIDE PIPE SLEEVES AND REINFORCEMENT AROUND PENETRATIONS AS PER DETAILS 5 AND 6 ON SHEET S2.0.
9. REFER TO 'A' DWGS FOR WATERPROOFING REQUIREMENTS.
10.  INDICATES 6" CONCRETE SLAB ON GRADE REINFORCED WITH 6x6 - W2.9xW2.9 W.U.F.
11. COLUMN FOOTINGS SHALL BE 3'-6" x 3'-6" x 1'-0" THICK AND REINFORCED WITH #5 BARS @ 12" O.C., E.W.

LEGEND:

U.N.O. = UNLESS OTHERWISE NOTED
F# = FOOTING DESIGNATION
B.O.W. = BOTTOM OF FROST WALL
T.O.F. = TOP OF FOOTING
T.O.W. = TOP OF WALL
T.O.P. = TOP OF PEDESTAL
T.O.S. = TOP OF SLAB
F.D. = FLOOR DRAIN
C.J. = CONTROL JOINT
E.J. = 1/2" PREMOLDED EXPANSION JOINT
/// INDICATES CHANGE IN SLAB ELEVATION



Melville, NY 11747
Albany, NY 12205
White Plains, NY 11601
New City, NY 10956
Parsippany, NJ 07054
Howell, NJ 07731

[illegible]

PROJECT #:	RDWD 14-06
DATE:	FEBRUARY 2015
DESIGNED BY:	BRG
DRAWN BY:	BRG
CHECKED BY:	REVIEWED BY:

SEAL



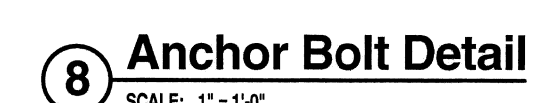
*ALTERNATION OF THIS DOCUMENT EXCEPT BY A LICENSED
SPECIALIST IS TO BE A VIOLATION*

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Wellhead Treatment for Perchlorate Removal - Plant No. 16



S2.0



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New City, NY 10956
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A3.1

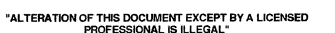


1. FOR ALL DOORS DENOTED AS SEE DOOR SCHEDULE AND DETAILS ON DRAWING A1.0 FOR ADDITIONAL INFORMATION.
2. ALL EXTERIOR PREFABRICATED METAL PANEL WALL AND ROOF SYSTEMS SHALL BE PRE-FINISHED BY THE MANUFACTURER.
3. COORDINATE THE WORK INDICATED HERE WITH ALL CONTRACT DOCUMENTS AND SPECIFICATIONS.
4. ACCOMMODATE THE CONSTRUCTION TO ACCEPT ALL PIPING, CONDUITS, EQUIPMENT, ETC., EITHER SPECIFIED OR DETAILED TO BE RECESSED OR CONCEALED IN ALL WALL TYPES AS REQUIRED. COORDINATE THE LOCATION OF ANY RECESSED OR CONCEALED ITEMS WITH ALL TRADES.
5. COORDINATE THE WORK REQUIRED ON THIS DRAWING WITH ALL CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS.
6. FINISHED FIRST FLOOR ELEVATION IS 0'-0" UNLESS NOTED OTHERWISE.
7. CONTRACTOR SHALL TOUCH UP PAINT ALL PREFINISHED PREMANUFACTURED BUILDING COMPONENTS AS NECESSARY.
8. ALL PAINTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS CONTAINED IN SECTION 09900 OF THE PROJECT MANUAL.
9. CONTRACTOR SHALL NOTE THAT TOP OF FOUNDATION (T.O.F.) IS 8" A.F.F. CONTRACTOR SHALL COORDINATE ALL DOOR, LOUVER & BUILDING HEIGHTS ACCORDINGLY.

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 Parsippany, NJ 07054
 Howell, NJ 07731

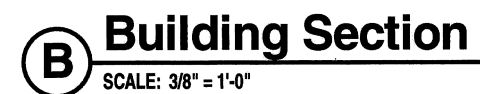
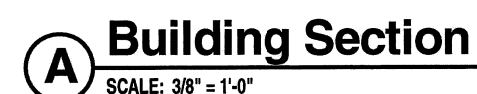
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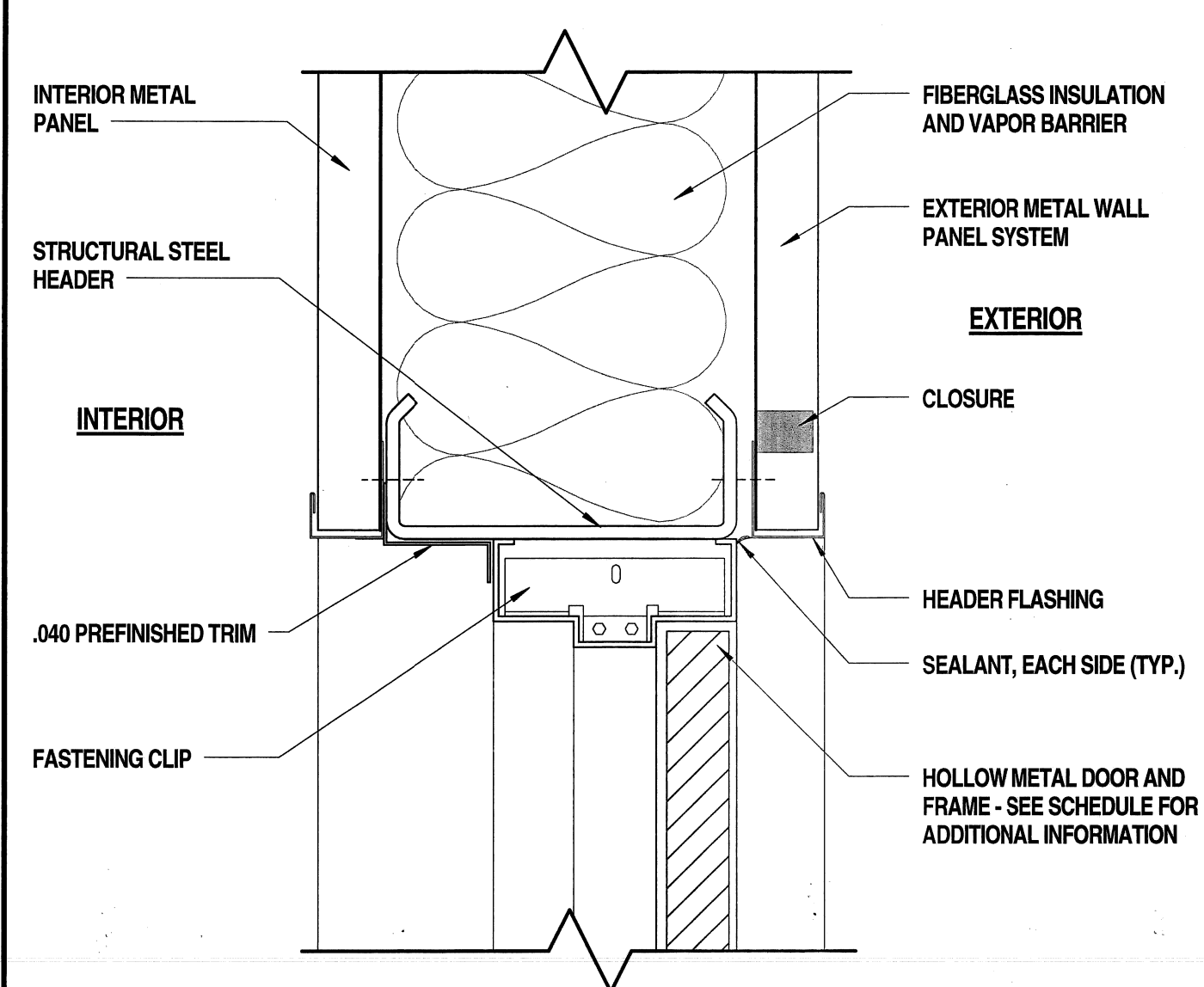


SHEET #

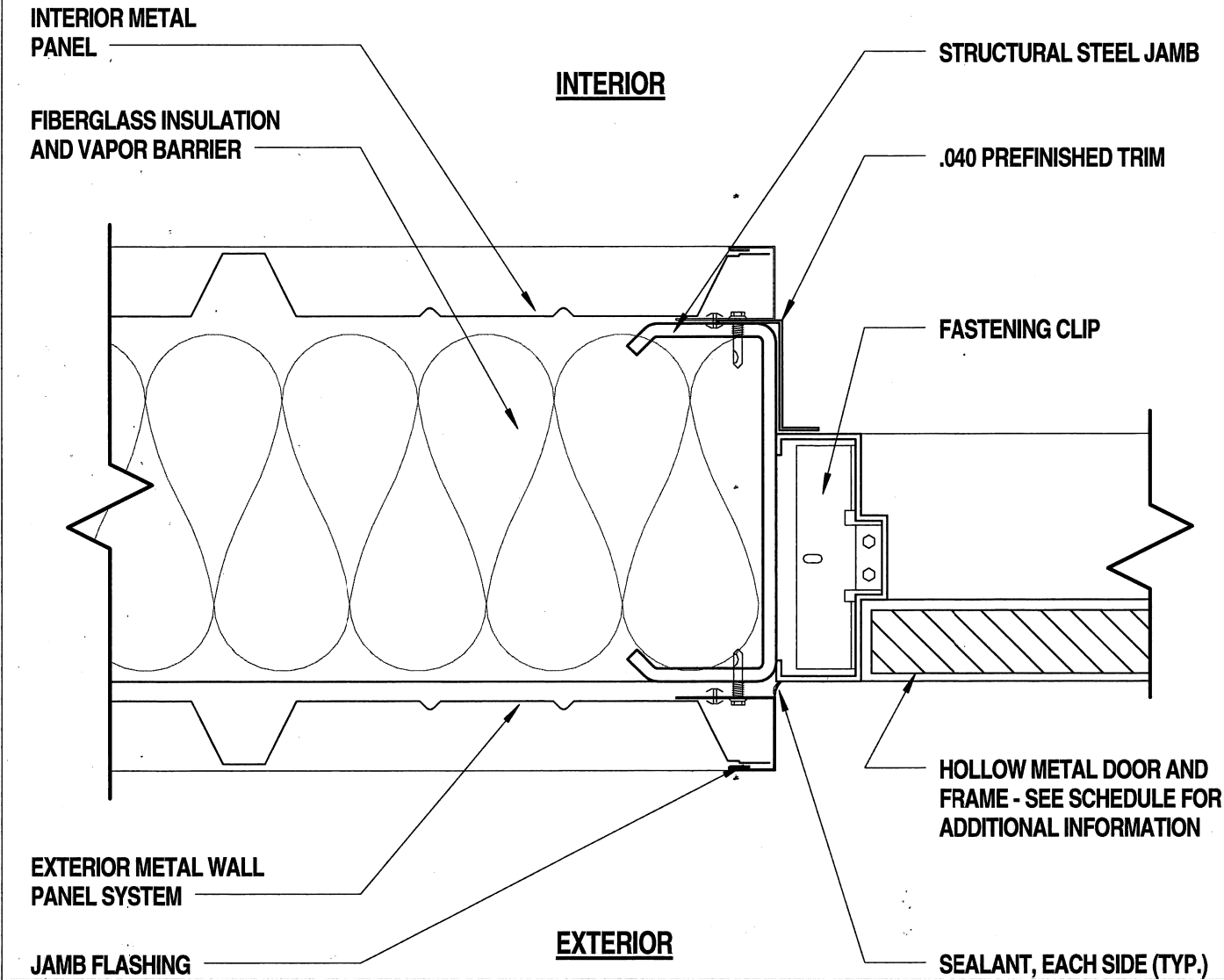
A4.0



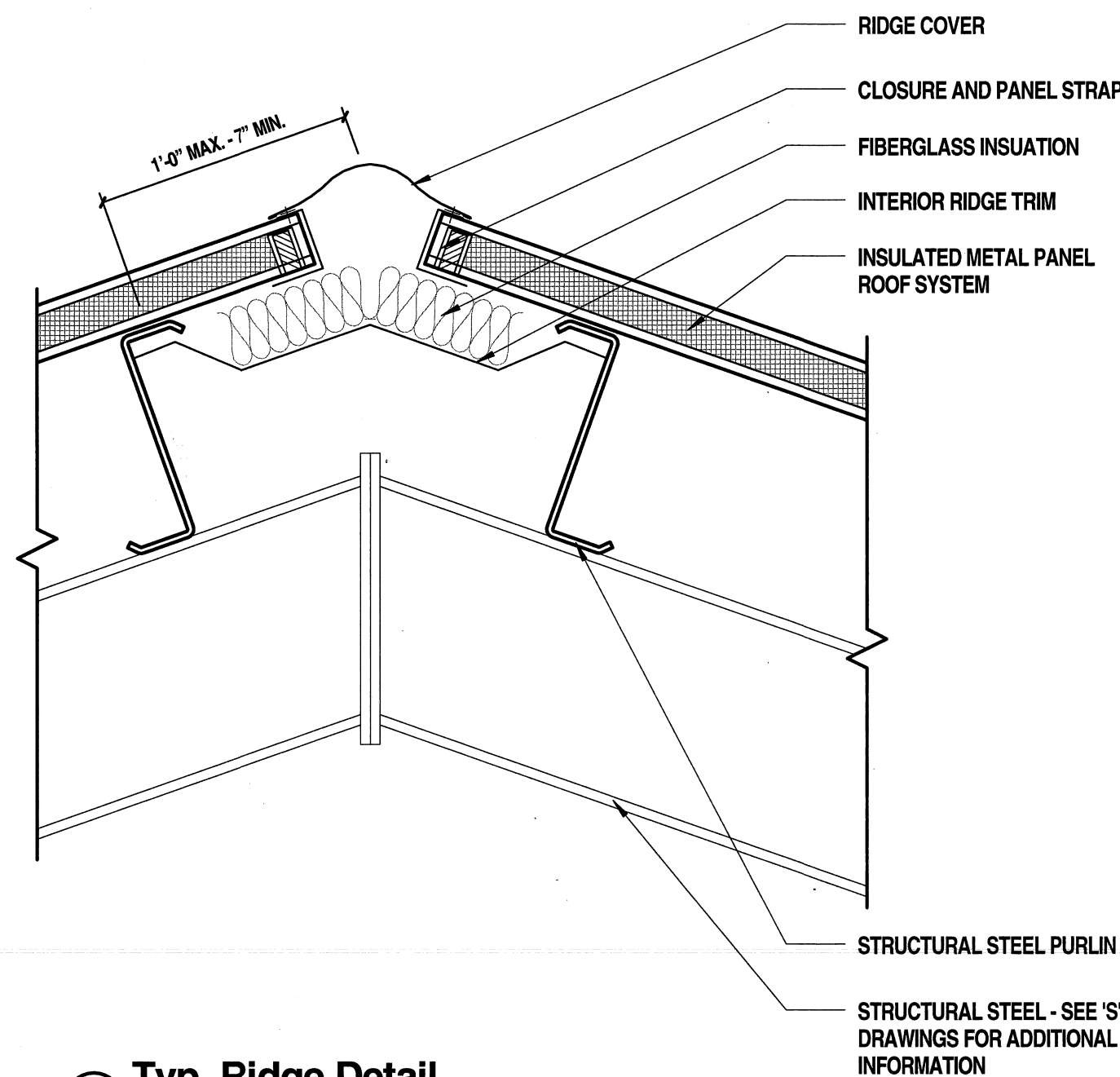
1. FOR ALL DOORS DENOTED AS SEE DOOR SCHEDULE AND DETAILS ON DRAWING A.1.0 FOR ADDITIONAL INFORMATION.
2. ALL EXTERIOR PREFABRICATED METAL PANEL WALL AND ROOF SYSTEMS SHALL BE PRE-FINISHED BY THE MANUFACTURER.
3. COORDINATE THE WORK INDICATED HERE WITH ALL CONTRACT DOCUMENTS AND SPECIFICATIONS.
4. ACCOMMODATE THE CONSTRUCTION TO ACCEPT ALL PIPING, CONDUITS, EQUIPMENT, ETC., EITHER SPECIFIED OR DETAILED TO BE RECESSED OR CONCEALED IN ALL WALL TYPES AS REQUIRED. COORDINATE THE LOCATION OF ANY RECESSED OR CONCEALED ITEMS WITH ALL TRADES.
5. COORDINATE THE WORK REQUIRED ON THIS DRAWING WITH ALL CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS.
6. FINISHED FIRST FLOOR ELEVATION IS 0'-0" UNLESS NOTED OTHERWISE.
7. ALL CONCRETE FOUNDATIONS ARE SHOWN FOR DIAGRAMATIC PURPOSES ONLY. REFER TO 'S' DRAWINGS FOR SIZES, DEPTHS AND REINFORCING INFORMATION.
8. CONTRACTOR SHALL TOUCH UP PAINT ALL PREFINISHED PREMANUFACTURED BUILDING COMPONENTS AS NECESSARY.
9. ALL PAINTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS CONTAINED IN SECTION 09900 OF THE PROJECT MANUAL.



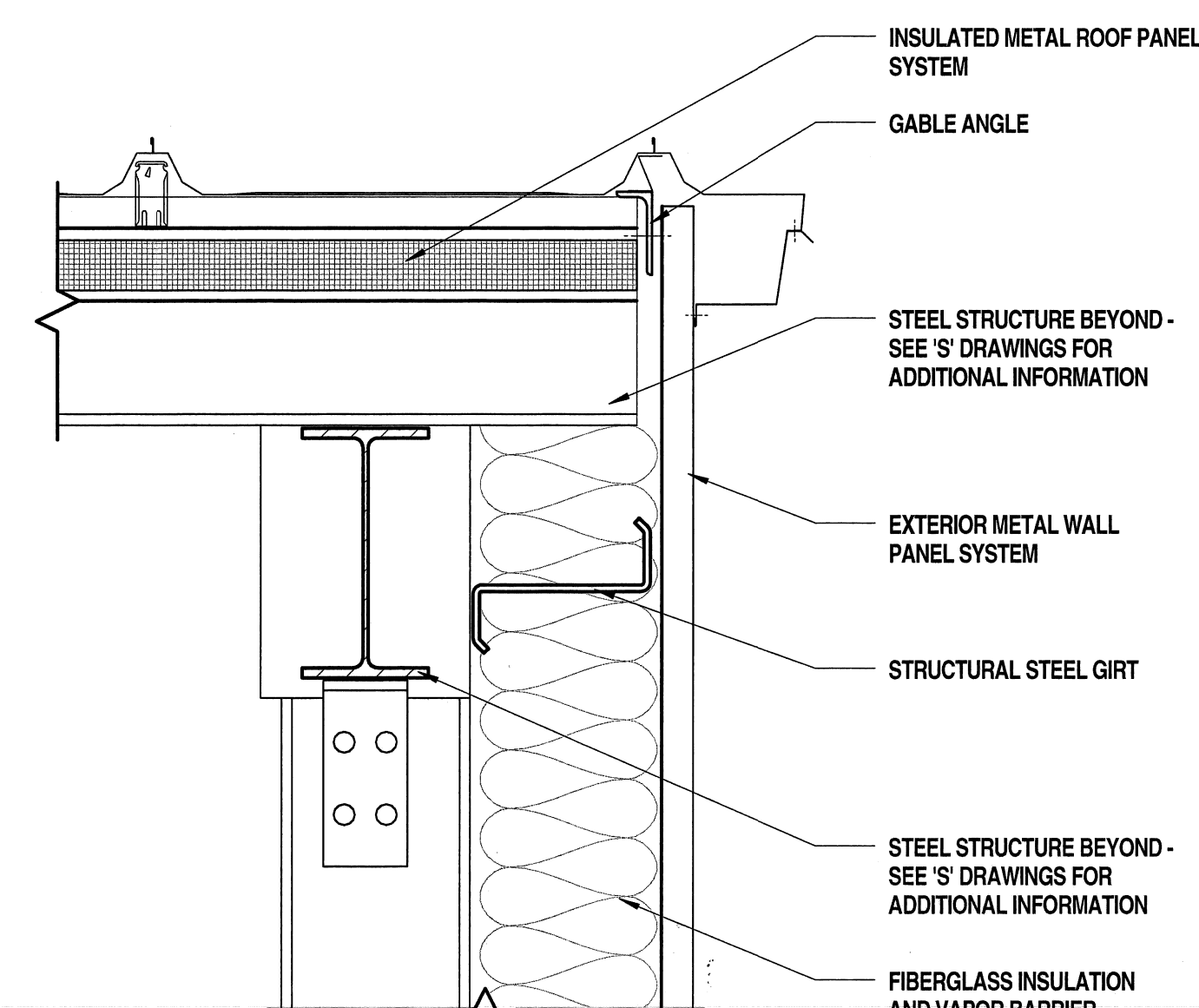
1 Door Head Detail



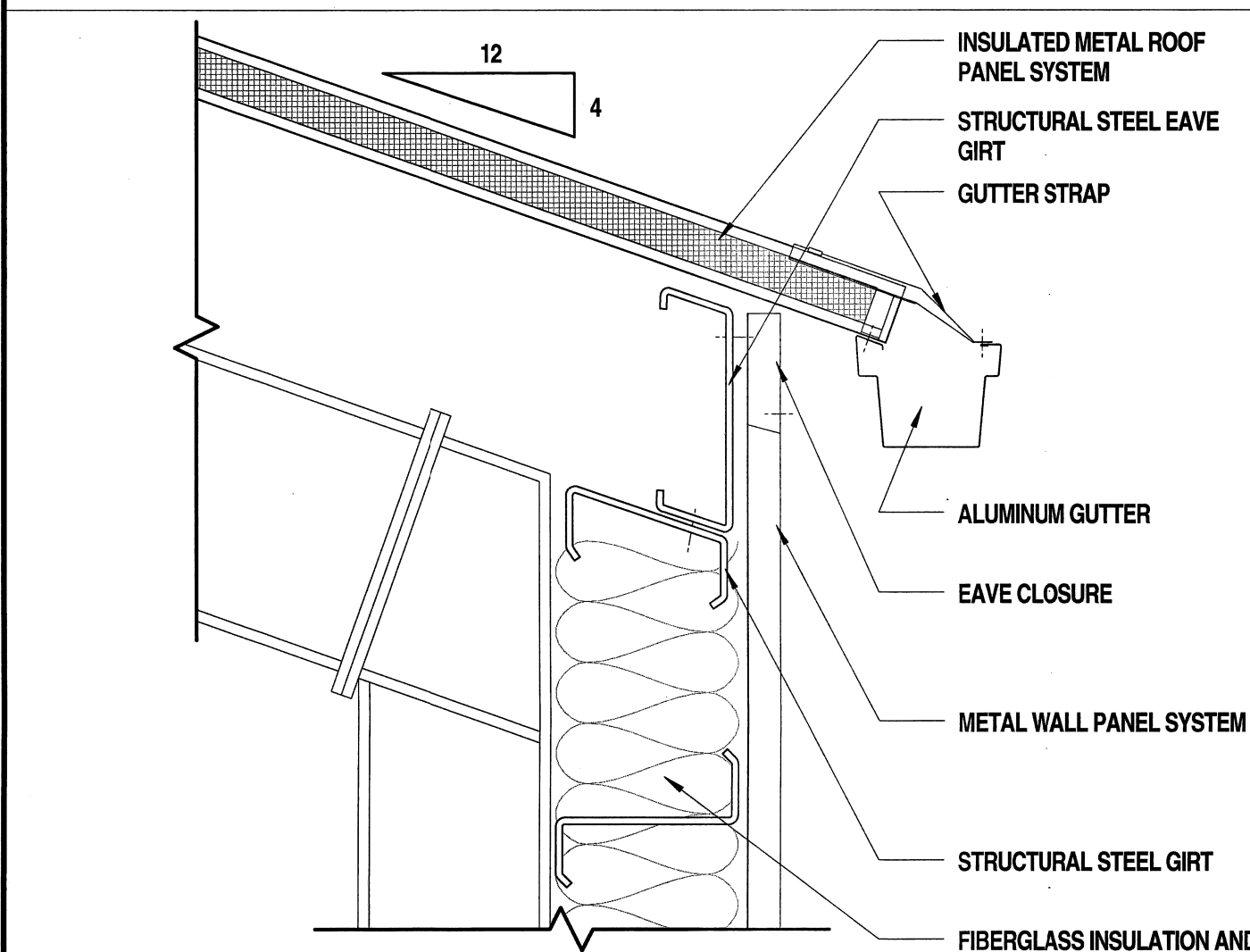
5 Door Jamb Detail



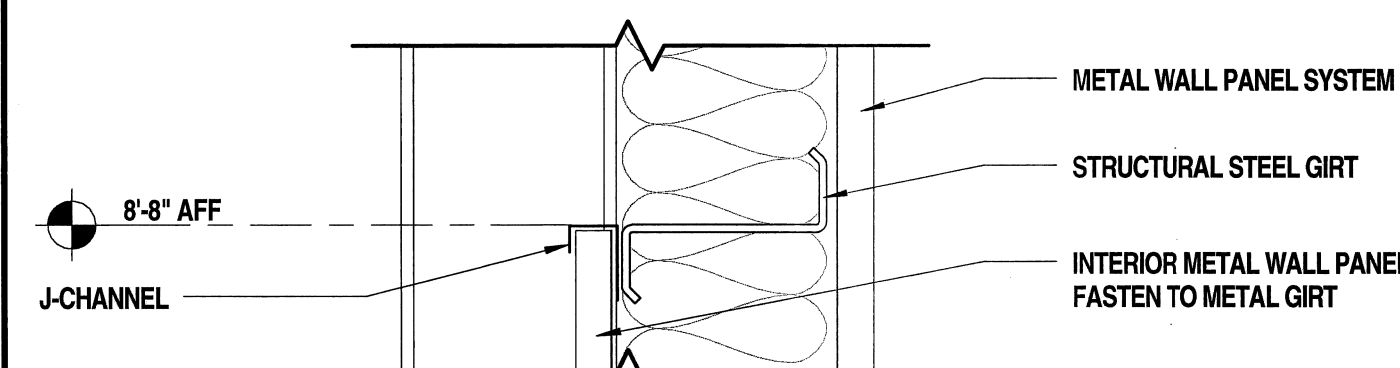
8 Typ. Ridge Detail
SCALE: 1 1/2" = 1'-0"



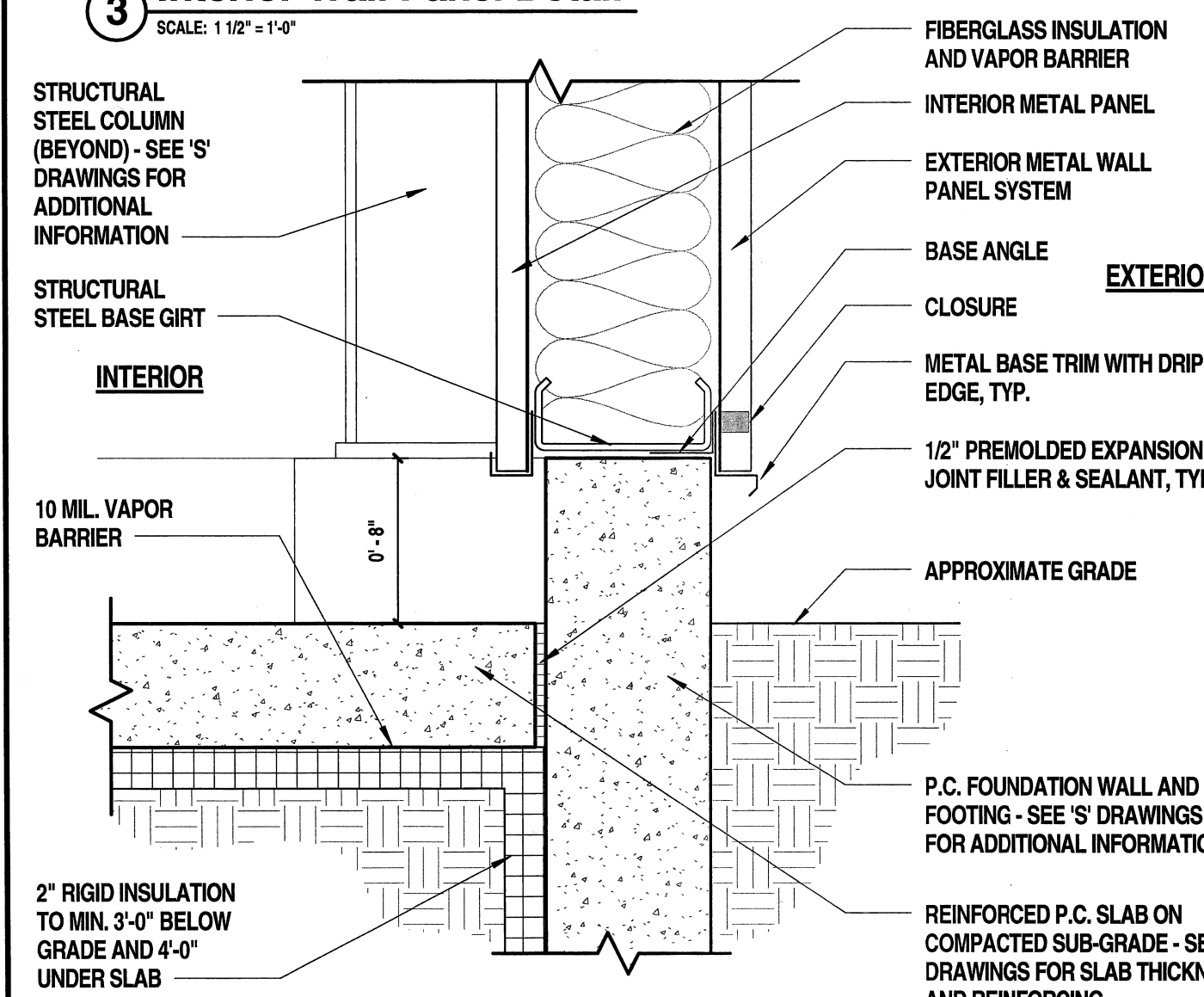
10 Gable End Detail
SCALE: 1 1/2" = 1'-0"



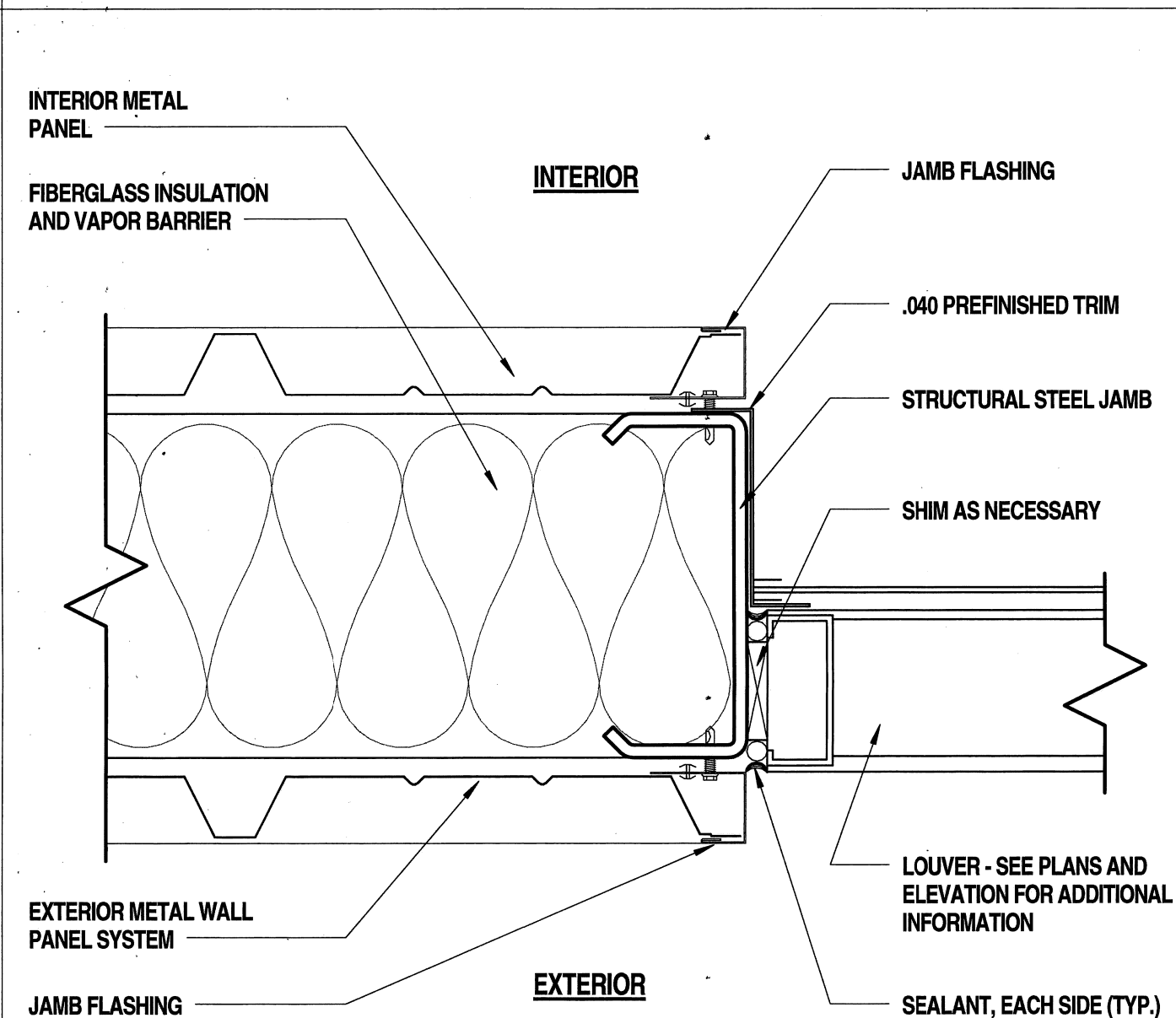
2 Roof Edge Detail



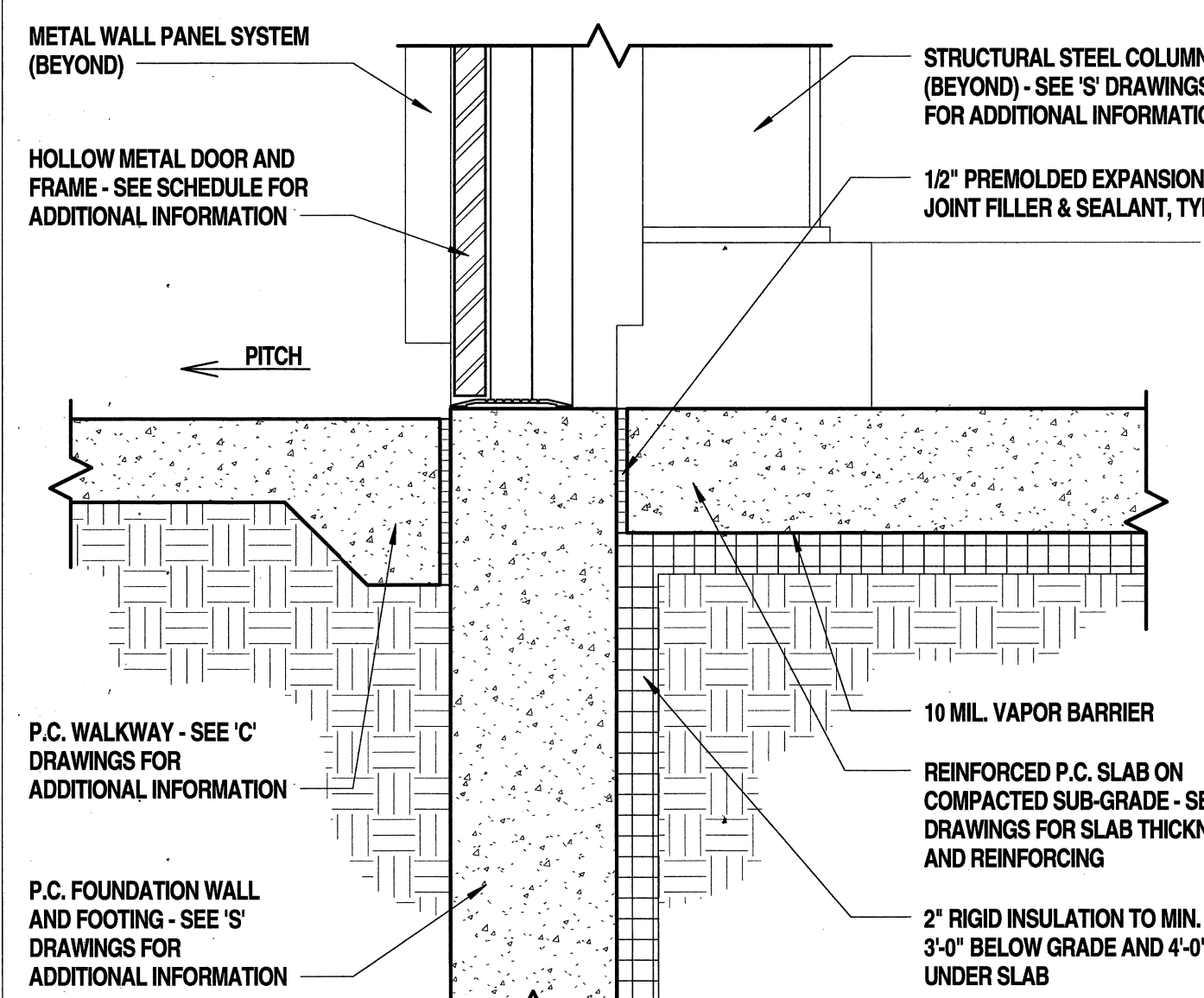
3 Interior Wall Panel Detail



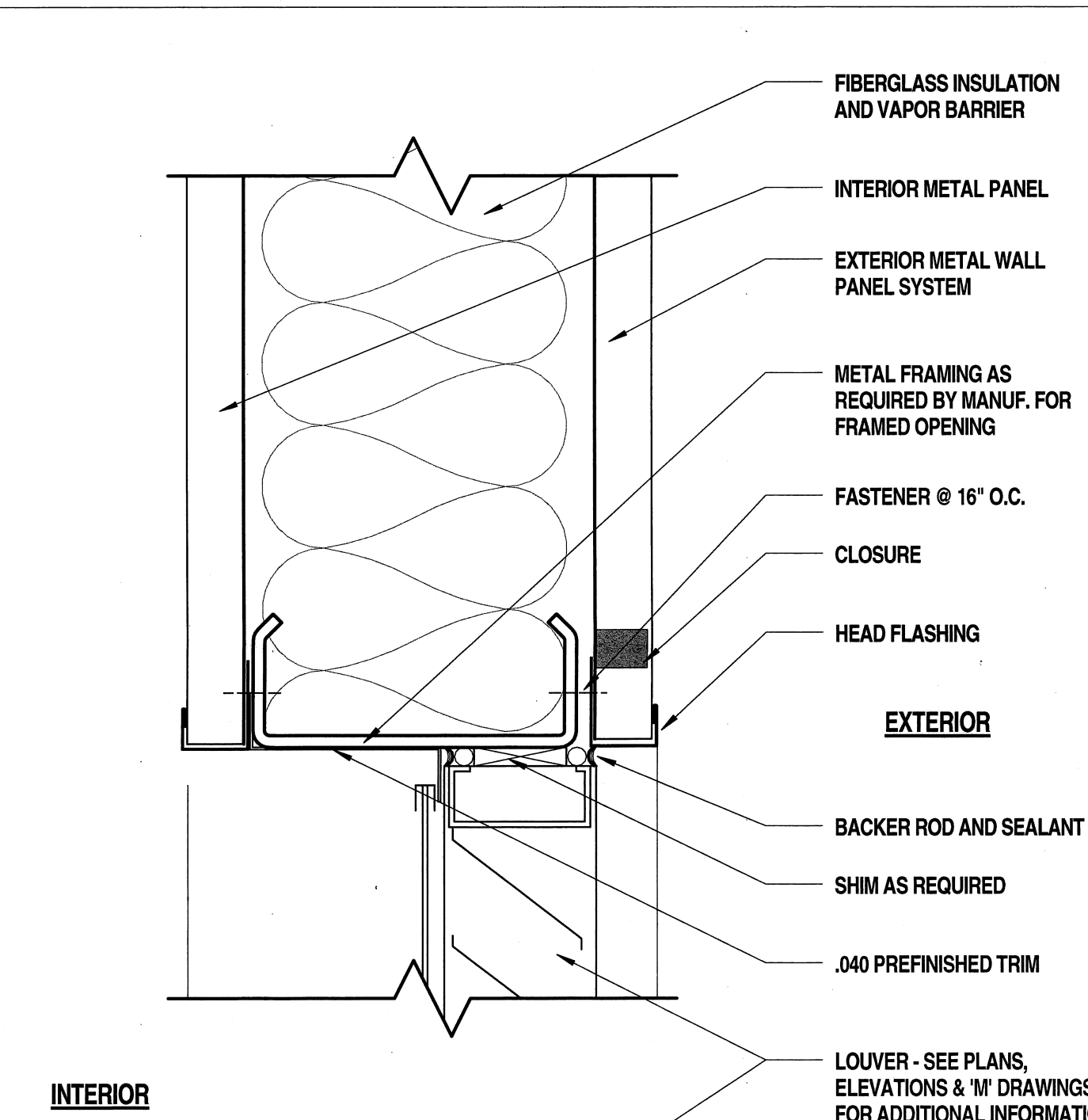
4 Typ. Wall Base Detail
SCALE: 1 1/2" = 1'-0"



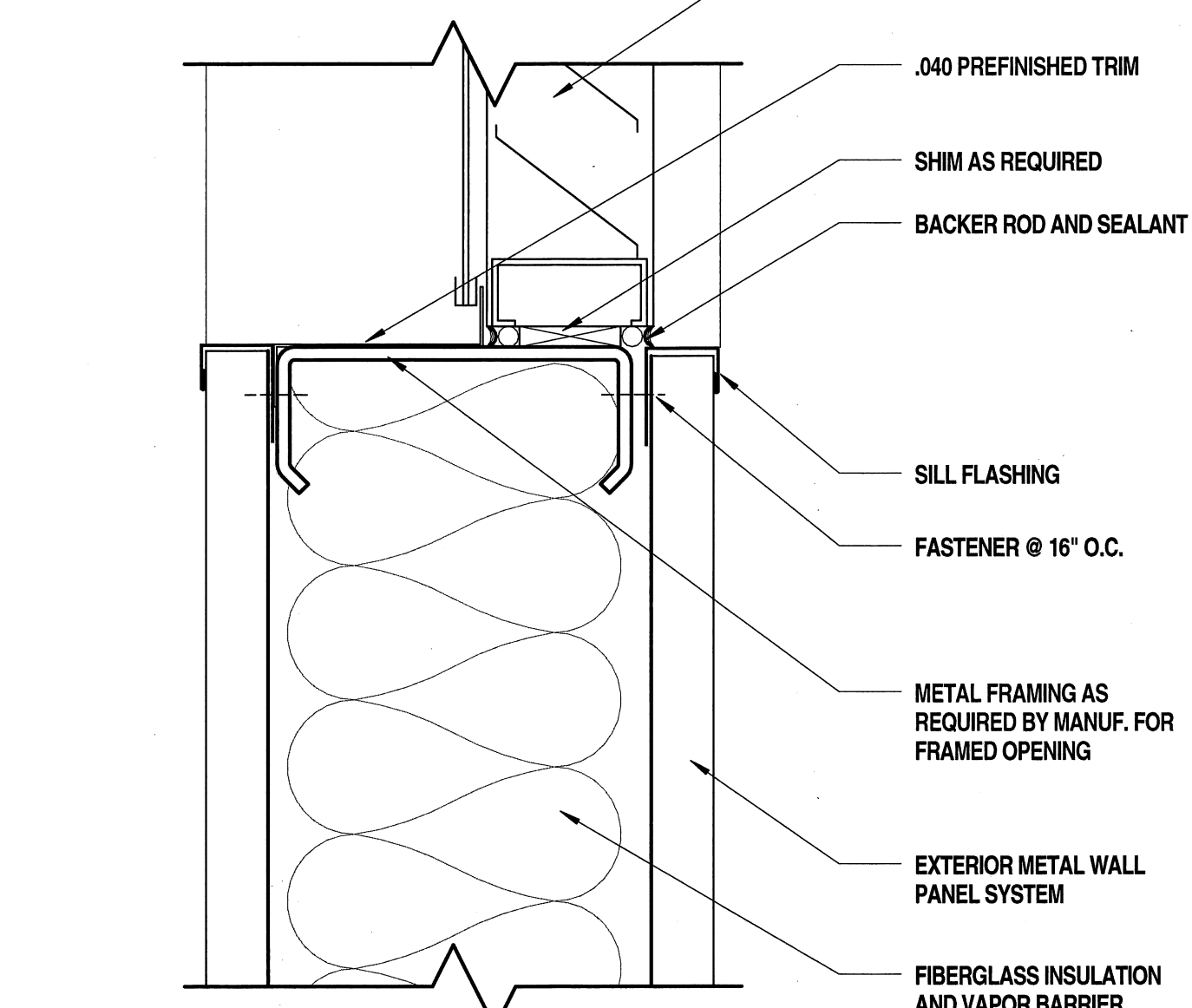
6 Louver Jamb Detail



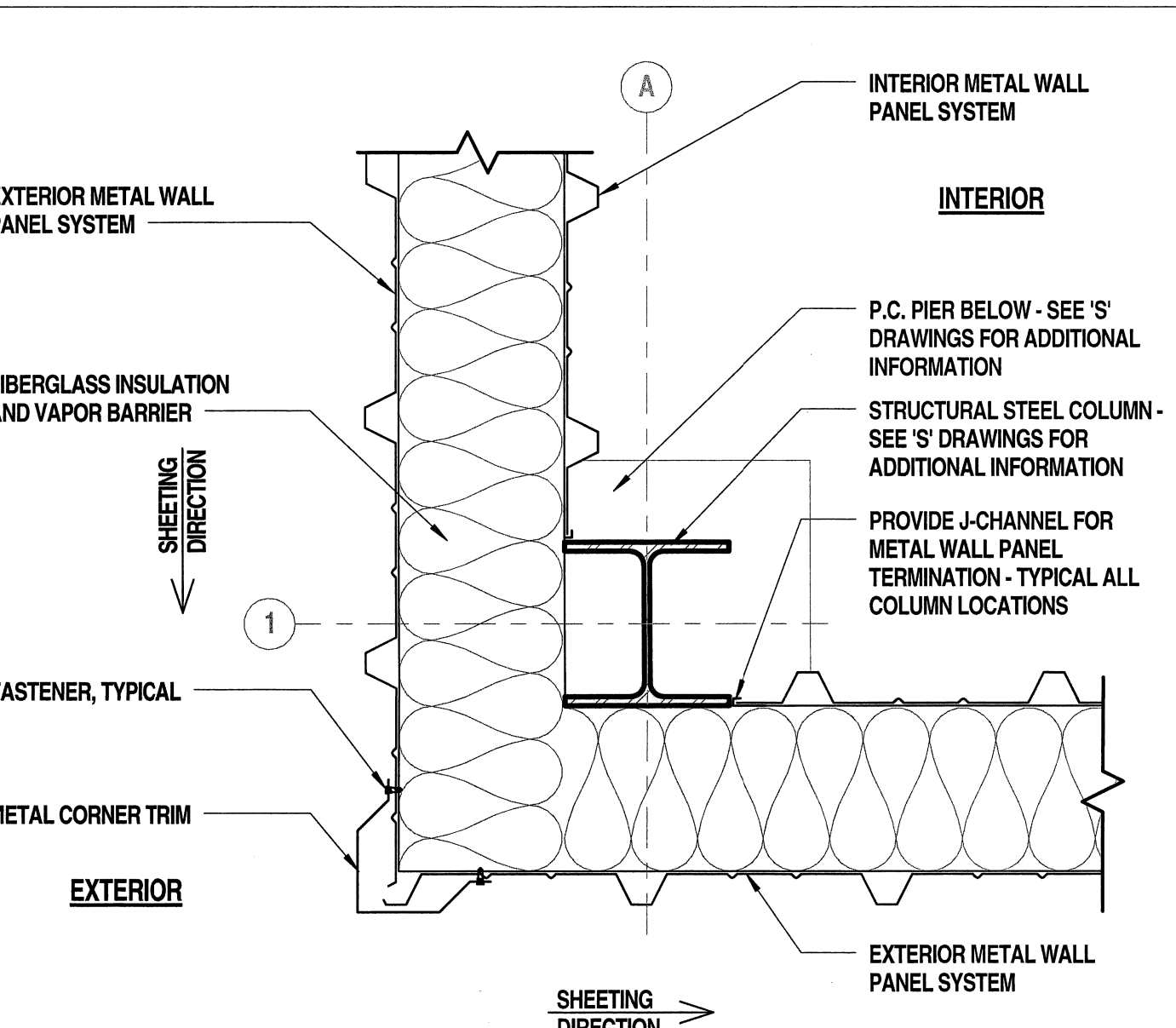
7 Door Transition Detail



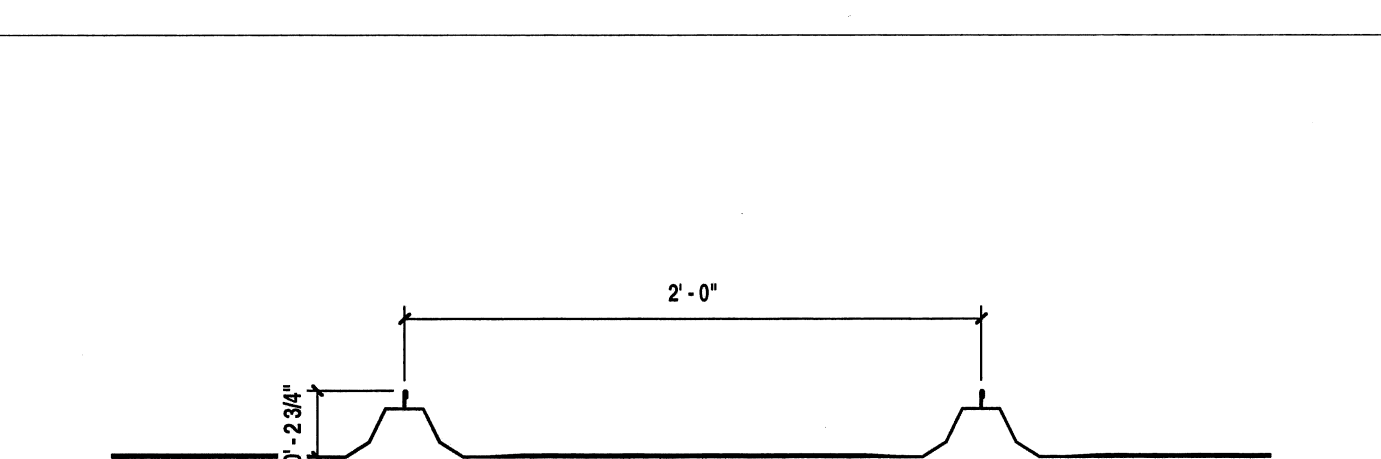
INTERIOR



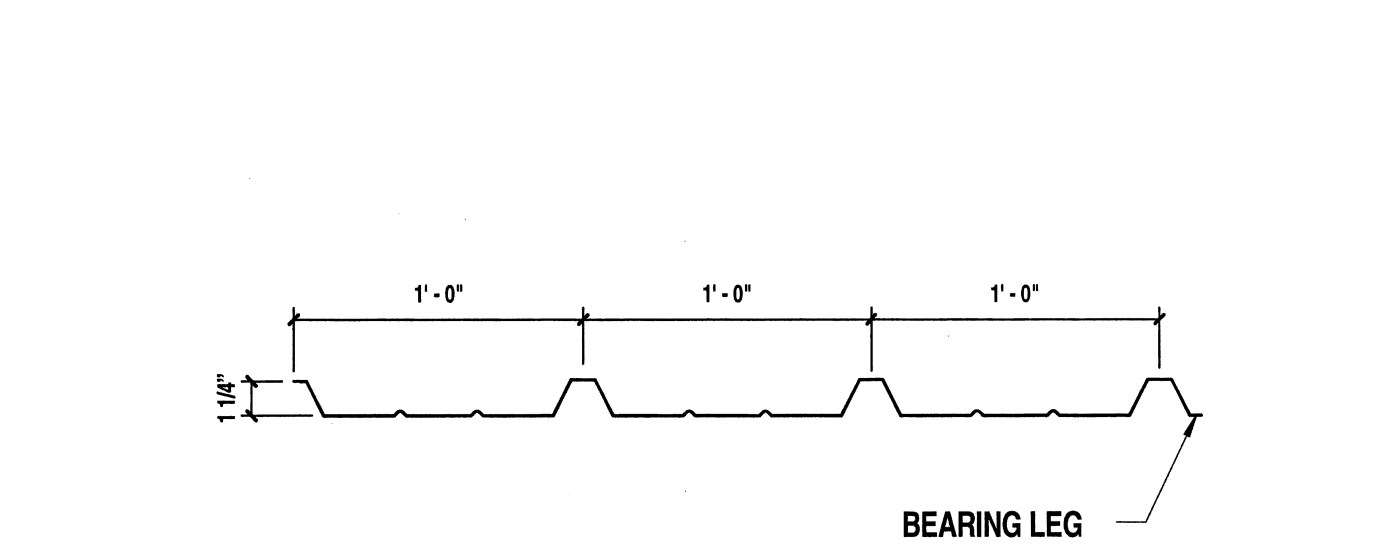
9 Louver Head & Sill Detail
SCALE: 3" = 1'-0"



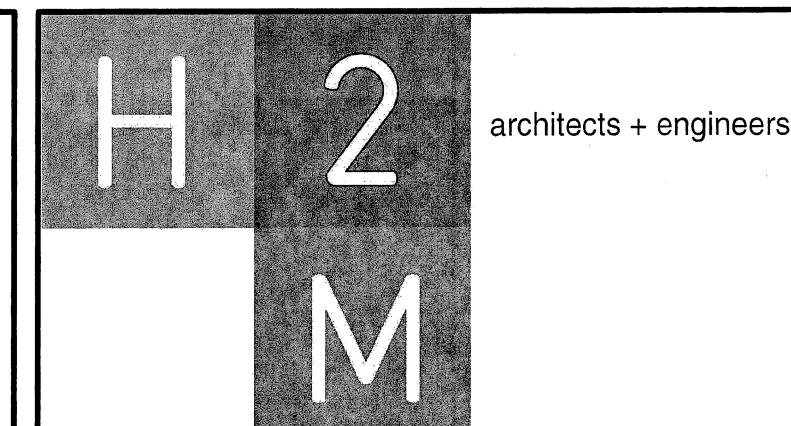
11 Typ. Corner Wall Detail
SCALE: 1 1/2" = 1'-0"



12 Typical Roof Panel Detail
SCALE: 1 1/2" = 1'-0"



13 Typical Wall Panel Profile
SCALE: 1 1/2" = 1'-0"



538 Broad Hollow Road
4th Floor East
Melville, NY 11747
P:(631)756-8000
F:(631)694-4122

CONSULTANTS:

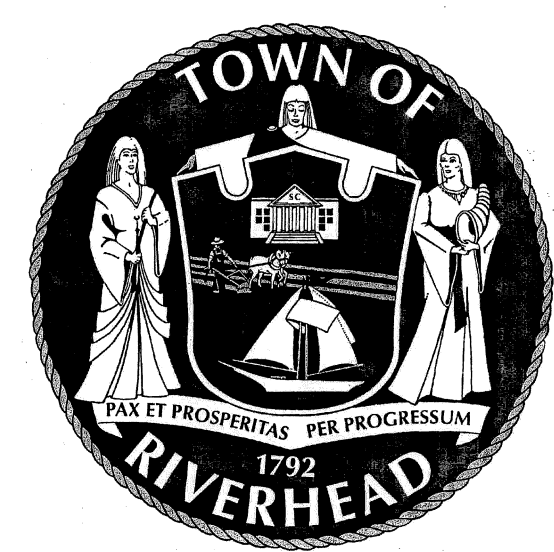
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PROJECT #:	RDWD 14-06	SEAL
DATE:	FEBRUARY 2015	
DESIGNED BY:	RFB/POS	
DRAWN BY:	POS	
CHECKED BY:	REVIEWED BY:	
		

CLIENT

RIVERHEAD WATER DISTRICT

Wellhead Treatment for Perchlorate Removal - Plant No. 16



CONTRACT

CONTRACT B

BUILDING AND PIPING

INSTALLATION

STATUS	FINAL BID DOCUMENT
--------	--------------------

SHEET TITLE

DETAILS

SHEET # **A5.0**

	ANTI-SIPHON VALVE		BLIND FLANGE		BAG FILTER		STRUCTURE
	AUTOMATIC AIR VENT		BLOW OFF GOOSENECK		PERCHLORATE VESSEL		VERTICAL PUMP
	BALL VALVE		CONCENTRIC REDUCER				
	BACK PRESSURE VALVE		ECCENTRIC REDUCER				
	BUTTERFLY VALVE		FLANGED CONNECTING PIPE JOINT				
	BUTTERFLY VALVE (NORMALLY CLOSED)		FLEXIBLE CONNECTION				
	CHECK VALVE		PIPE PLUG				
	DIAPHRAGM VALVE		QUICK CONNECTION COUPLING				
	DOUBLE CHECK VALVE		VENT				
	GATE VALVE		ELECTROMAGNETIC FLOW METER				
	MOTORIZED BALL VALVE		ORIFICE PLATE				
	MOTORIZED BUTTERFLY VALVE		TURBINE FLOW METER				
	MOTORIZED BUTTERFLY VALVE (NORMALLY CLOSED)		VENTURI FLOW METER				

BE	BACKWASH / WASTE EFFLUENT
BI	BACKWASH INFLUENT
BO	BLOW-OFF
FE	FILTER EFFLUENT
FI	FILTER INFLUENT
PR	PRESSURE RELIEF
RW	RAW WATER
WST	WASTE

01
02
03

WELL DISCHARGE
PERCHLORATE TREATMENT
FINISHED WATER

(DPG)	DIFFERENTIAL PRESSURE GAUGE	[CL]	CHLORINE ANALYZER
(DPS)	DIFFERENTIAL PRESSURE SWITCH	[pH]	pH ANALYZER
(DPT)	DIFFERENTIAL PRESSURE TRANSMITTER		
(FT)	FLOW TRANSMITTER		
(LS)	LIMIT SWITCH		
(PG)	PRESSURE GAUGE		
(PS)	PRESSURE SWITCH		
(PT)	PRESSURE TRANSMITTER		

06 - 01 - B0

— SERVICE ABBREVIATION

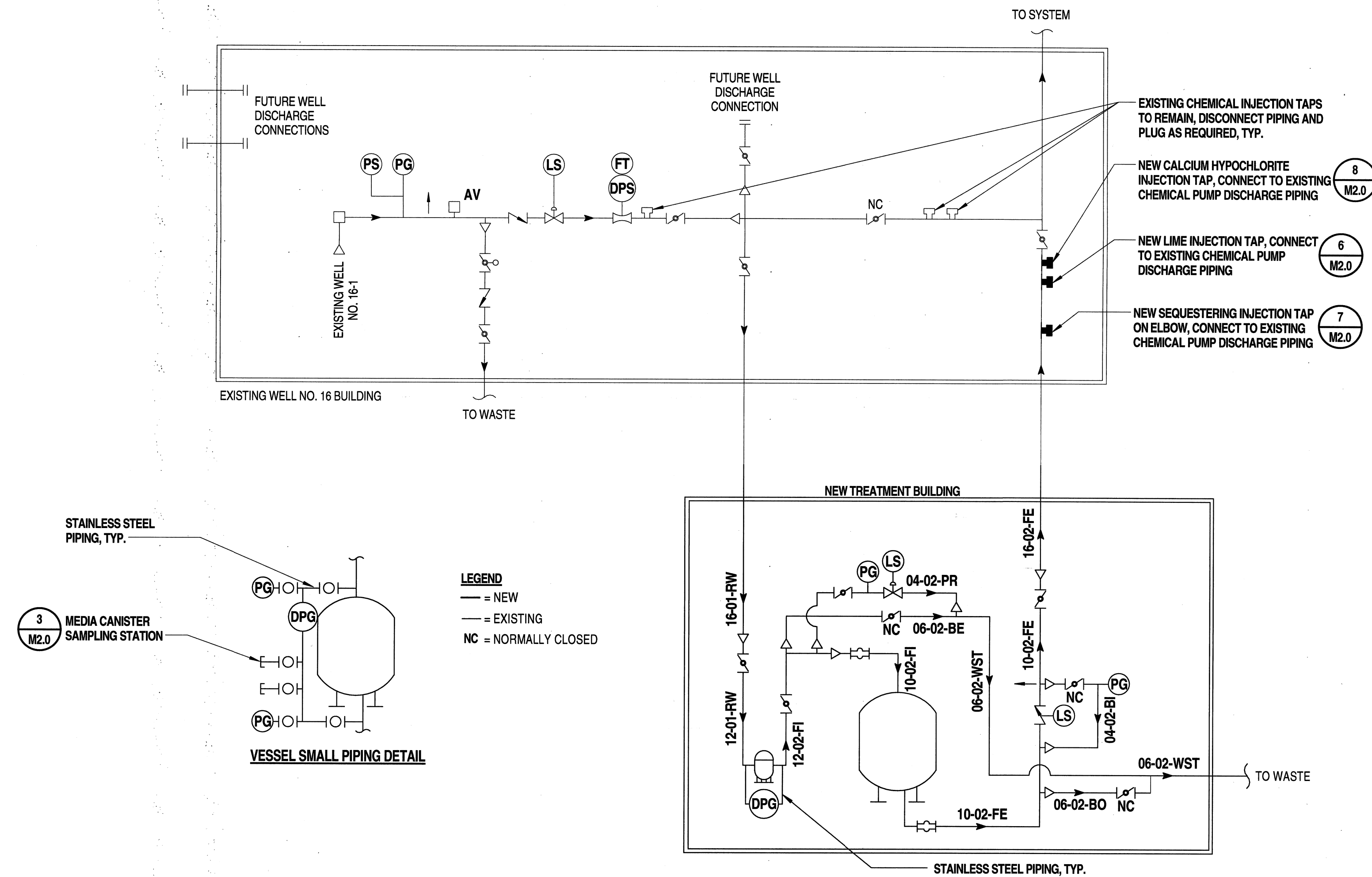
— AREA CODE

— PIPE SIZE, NOMINAL DIAMETER

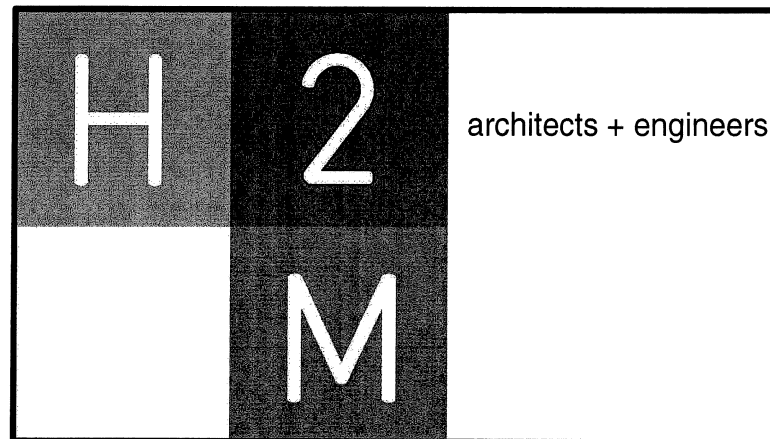
**TIE-IN CONTINUED ELSEWHERE
ON SAME SHEET**

06-01-BO
→

FLOW DIRECTION



1 Plant No. 16 Process Diagram
SCALE: NTS



**538 Broad Hollow Road
4th Floor East
Melville, NY 11747
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F:(631)694-4122**

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New City, NY 10956
Parsippany, NJ 07054
Howell, NJ 07731

CONSULTANTS:

[illegible]

PROJECT #:
RDWD 14-06

DATE: FEBRUARY 2015

DESIGNED BY:
JRC / AMM

DRAWN BY:
AMM

CHECKED BY: JEC	REVIEWED BY:
--------------------	--------------



CLIENT

RIVERHEAD WATER DISTRICT

Wellhead Treatment for Perchlorate Removal - Plant No. 16



CONTRACT

CONTRACT B
BUILDING AND PIPING
INSTALLATION

STATUS

FINAL BID DOCUMENT

SHEET TITLE

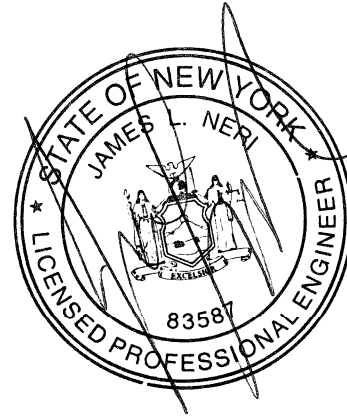
PROCESS DIAGRAM

SHEET 4

PD1.0

CONSULTANTS:		

MARK	DATE	DESCRIPTION

PROJECT #: RDWD 14-06	SEAL
DATE: FEBRUARY 2015	
DESIGNED BY: JRC / AMM	
DRAWN BY: AMM	
CHECKED BY: SEC	
REVIEWED BY:	

CLIENT

RIVERHEAD WATER DISTRICT

Wellhead Treatment for Perchlorate Removal - Plant No. 16

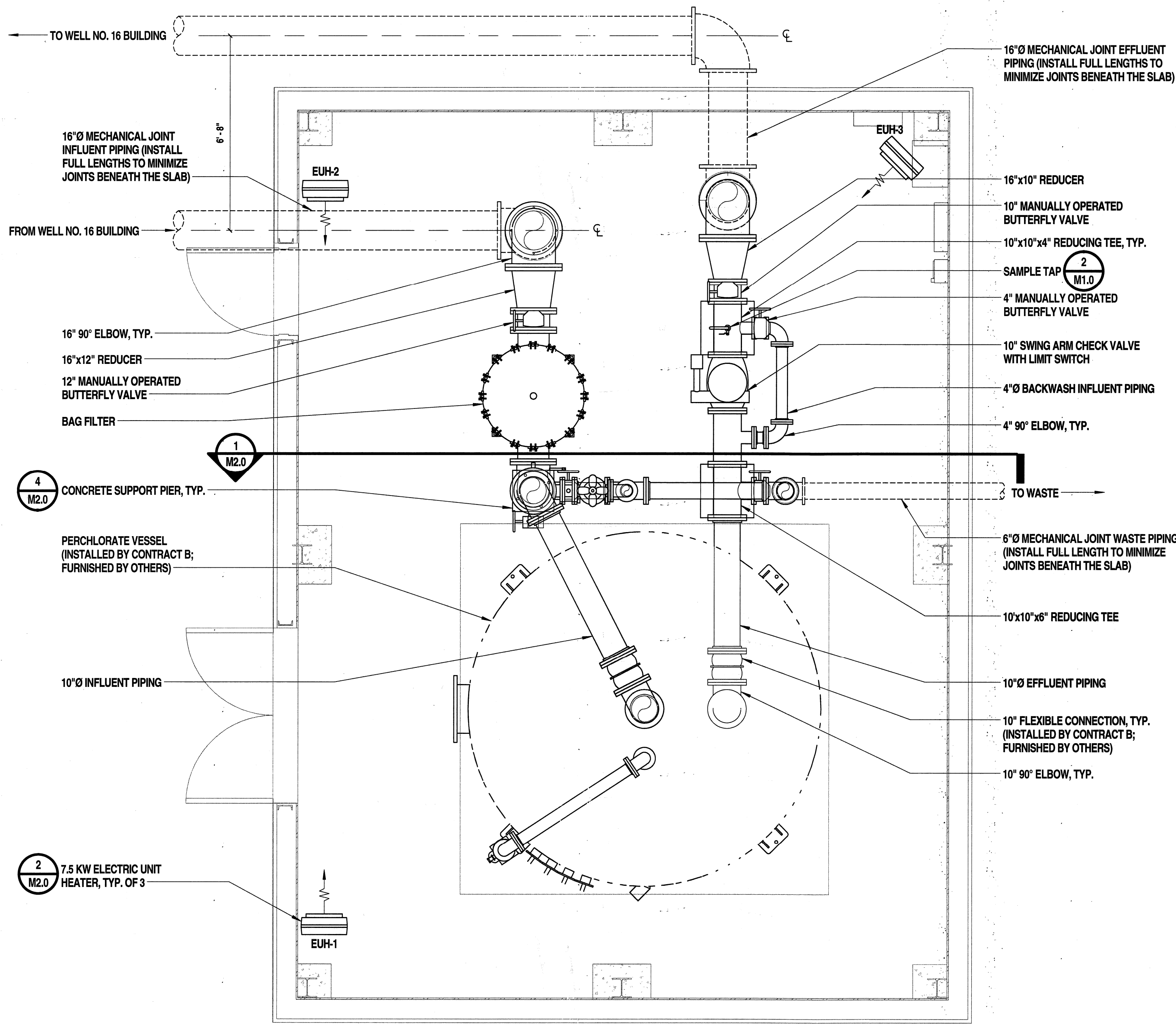


CONTRACT	CONTRACT B BUILDING AND PIPING INSTALLATION
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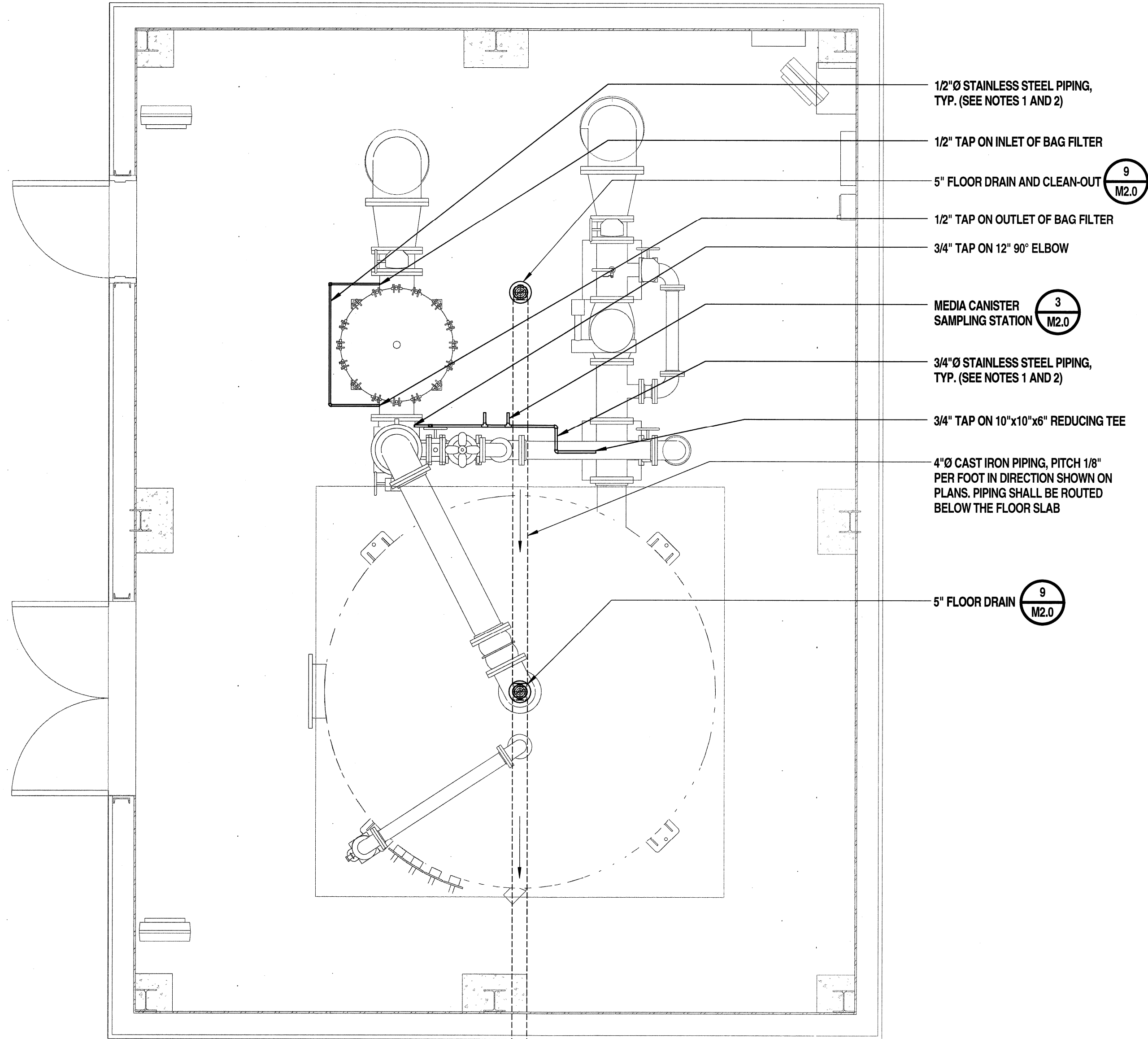
STATUS	FINAL BID DOCUMENT
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SHEET TITLE	TREATMENT BUILDING MECHANICAL PLANS
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SHEET #	M1.0
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1 Treatment Building Mechanical Plan
SCALE: 3/8" = 1'-0"



2 Treatment Building Small Piping and Drainage Plan
SCALE: 3/8" = 1'-0"

- NOTES:
- INSTALL ALL SMALL PIPING APPURTENANCES AND VALVES AS PER THE PLANT NO. 16 PROCESS DIAGRAM ON SHEET PD1.0.
 - ALL SMALL PIPING SHOW FOR CLARITY. ALL SMALL PIPING SHALL BE ROUTED NEATLY AND ORDERLY USING STAINLESS STEEL HARDWARE.

GENERAL NOTES

- THE DRAWING AND SPECIFICATION ARE COMPLEMENTARY. THE PROJECT SEPARATELY BOUND, CONTAINS THE CONDITIONS OF THE CONTRACT, PROCEDURES AND TECHNICAL SPECIFICATIONS.
- ALL CONTRACTORS ARE TO VISIT THE SITE AND BECOME FAMILIAR WITH THE CONDITIONS OF THE SITE AND DIFFICULTIES ATTENDING THE WORK.
- DO NOT SCALE MEASURE ANY DRAWING. VERIFY THE FIGURES, DIMENSIONS AND DESIGN INTENTION SHOWN ON THE DRAWINGS BEFORE BEGINNING LAYOUT OF THE WORK.
- REPORT ANY ERRORS, INACCURACIES, MISSING DIMENSIONAL REQUIREMENTS OR CONFLICTS TO THE ARCHITECT/ENGINEER IN WRITING BEFORE BEGINNING ANY WORK.
- VERIFY EXACT LAYOUT CAPABILITY WITH ALL EXISTING CONDITIONS AND COORDINATE ALL WORK TO BE UNDERTAKEN PRIOR TO BEGINNING ANY WORK. NOTIFY THE ARCHITECT/ENGINEER IN WRITING BEFORE BEGINNING WORK IF ANY DISCREPANCIES ARE FOUND WITH CONDITIONS ENCOUNTERED, AS WELL AS ITEMS COVERED IN 8 AND 9. CONTRACTOR WILL BE RESPONSIBLE FOR ALL TEMPORARY MEASURES, TIME LOST, CHANGES TO THE WORK SCOPE WITHOUT ANY ADDITIONAL COMPENSATION IF CONTRACTOR FAILS TO PROVIDE AFOREMENTIONED VERIFICATIONS AND COORDINATION PRIOR TO COMMENCING WORK.
- DISTURB ONLY THOSE AREAS OF THE SITE AFFECTED BY NEW CONSTRUCTION, UNLESS NOTED OTHERWISE. PROTECT ALL OTHER AREAS.
- PROTECT ADJOINING PROPERTIES WHEN CONDUCTING WORK.
- ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, LAWS, AGENCIES HAVING JURISDICTION, AND STATUS AS REQUIRED.
- CONTRACTOR SHALL STRICTLY ADHERE TO MANUFACTURER'S PRINTED INSTRUCTION.
- VERIFY ALL CHANGES TO WORK IN WRITING WITH THE ARCHITECT/ENGINEER AND OWNER BEFORE BEGINNING RELATED WORK.
- PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING PERIMETER, PITCH 1/4" PER FOOT. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES WITH THIS REQUIREMENT BEFORE PROCEEDING.
- DIMENSIONS NOTED AS "EQUAL" OR "EQ" WITHIN A ROOM REFER TO A DISTANCE RELATIONSHIP CONTAINED ONLY IN THAT ROOM AT AN OPPOSING OR PARALLEL WALL UNLESS NOTED OTHERWISE.
- VERIFY AND ADJUST APPROXIMATE DIMENSIONS (+/-) IN THE FIELD. VERIFY WITH ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION.
- ALL ITEMS DETAILED OR SPECIFIED TO RUN WITHIN OR ATTACHED TO WALLS AND CEILINGS ARE TO BE CONCEALED OR RECESSED UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL LOCATE ALL PENETRATIONS REQUIRED TO ACCOMMODATE ALL WORK DETAILED OR SPECIFIED FOR THEIR SCOPE, AND COORDINATE THIS WORK WITH OTHERS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING WATER-TIGHT WEATHER PROTECTION THROUGHOUT ALL WORK AREA & EXISTING AREAS IMMEDIATELY ADJACENT TO THOSE WORK AREAS, FOR THE DURATION OF THE ENTIRE PROJECT.
- CONTRACTOR SHALL PROTECT ALL ADJACENT EXISTING CONSTRUCTION, ITEMS, FINISHES, ETC. AND SHALL PATCH, REPAIR AND/OR REPLACE, AND REFINISH AS REQUIRED TO RESTORE ANY AND ALL AREAS DAMAGED DURING CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE, AND COORDINATE THE INSTALLATION OF, ALL ACCESS PANELS THAT ARE NEEDED TO ACCESS OR SERVICE FOR ALL ITEMS INSTALLED AS PART OF THEIR SCOPE OF WORK.

REFERENCED MECHANICAL NOTES:

- THE CONTRACTOR SHALL SUBMIT, FOR ENGINEER'S REVIEW AND APPROVAL, PIPING LAYOUT DRAWINGS TO A SCALE OF 1/4"=1'-0". THE CONTRACTOR SHALL NOT INSTALL INSERTS IN CONCRETE OR BOX FOR WALL AND DECK OPENINGS UNTIL THE LOCATIONS AND ELEVATIONS OF ALL SLAB AND WALL PENETRATIONS HAVE BEEN VERIFIED AND CHECKED FOR ACCURACY BY THE CONTRACTOR. THE LOCATIONS OF WALL SLEEVES, OPENINGS AND OTHER CONCRETE INSERTS SHOWN ON THE DRAWINGS ARE BASED ON EQUIPMENT AND VALVES WHICH MAY OR MAY NOT HAVE DIMENSIONS EQUAL TO THAT BEING USED FOR THE PROJECT. LAYOUT DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 013300 - SUBMITTALS. THE LAYOUT DRAWINGS SHALL USE THE DIMENSIONS OF EQUIPMENT AND VALVES BEING USED FOR THE PROJECT OR PROVISIONS SHALL BE MADE TO ACCOUNT FOR DIMENSIONAL DIFFERENCES IN EQUIPMENT. THE CONTRACTOR SHALL SUBMIT THE LAYOUT DRAWINGS FAR ENOUGH IN ADVANCE SO THAT CONCRETE INSERTS CAN BE ORDERED AND INSTALLED IN SEQUENCE AND IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE. PREPARE PIPE LAYOUT DRAWINGS FOR ALL PROCESS PIPING, BOTH BURIED AND EXPOSED, WITH A DIAMETER EQUAL TO OR GREATER THAN 6".
- THE CONTRACTOR SHALL SUPPORT AND ANCHOR ALL EXPOSED PIPING IN ACCORDANCE WITH THE PERFORMANCE REQUIREMENTS CONTAINED IN SECTION 220529 - PIPE HANGERS. WHERE METHODS OF SUPPORT ARE SHOWN, SUCH METHODS SHALL BE CONSIDERED AS SUGGESTED. SUCH SUGGESTED METHODS SHALL NOT RELIEVE THE CONTRACTOR FROM INSTALLING ALL PIPING IN ACCORDANCE WITH SECTION 220529 REQUIREMENTS.
- THE CONTRACTOR SHALL SUBMIT DETAILS OF SUPPORT FOR ALL PIPING GREATER THAN OR EQUAL TO 4" IN DIAMETER.
- ALL MEASUREMENT AND CONTROL PRIMARY ELEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. MAINTAIN MANUFACTURER'S REQUIRED DISTANCE UPSTREAM AND DOWNSTREAM BETWEEN FLOW METERS AND PIPING ELEMENTS SUCH AS FITTINGS AND VALVES. SHOW SEPARATION DISTANCES ON PIPING LAYOUT DRAWINGS SPECIFIED TO BE PROVIDED.
- UNUSED MANUFACTURER SUPPLIED FIELD SERVICES SHALL BE CREDITED TO THE OWNER AS SPECIFIED IN SECTION 014500 - QUALITY CONTROL.
- THE CONTRACTOR SHALL PROVIDE JOINT RESTRAINT FOR ALL FLANGED ADAPTERS AND PIPE COUPLINGS. EACH FLANGED ADAPTER AND PIPE COUPLING JOINT SHALL BE TIE RODDED USING STEEL THREADED ROD, USE 3/4" DIA. ROD USE TWO (2) RODS PER JOINT (EQUALLY SPACED) AND RODDED BACK TO THE NEAREST FLANGED JOINT OR DRILL AND EPOXY ROD INTO NEAREST FLOOR/WALL. ALL NUTS SHALL BE STAINLESS STEEL. INSTALL JAM NUTS. THE CONTRACTOR'S METHOD OF INSTALLING RODS SHALL BE MECHANICALLY RESTRAINED.
- ALL MECHANICAL JOINT FITTINGS SHALL BE PROVIDED WITH THRUST BLOCKING AS DETAILED ON THE DRAWINGS. IN ADDITION TO THRUST BLOCKING, EACH MECHANICAL JOINT FITTING SHALL BE MECHANICALLY RESTRAINED.
- CONSTRUCT THRUST BLOCKS WHERE SHOWN ON THE DRAWINGS. DOWEL THRUST BLOCKS INTO SLAB AS SPECIFIED.
- POUR CONCRETE SUPPORT PEDESTALS FOR ALL PIPING IN LOCATIONS SHOWN ON THE PLAN SHEETS. HEIGHT AS REQUIRED TO SUPPORT PIPING. PEDESTALS SHALL BE POURED USING A BAG MIX AND DOWELED INTO THE SLAB WITH FOUR (4) 5/8" DIA. THREADED ROD WITH A MINIMUM PROJECTION OF 6" EQUALLY SPACED.

PAINT COLOR SCHEDULE FOR EXPOSED PIPING

LOCATION/USE	COLOR
RAW WATER (PRE PERCHLORATE TREATMENT)	OLIVE GREEN
TREATED WATER (POST PERCHLORATE REMOVAL; PRE CHEMICAL INJECTION)	AQUA
BLOW-OFF/WASTE	LIGHT BROWN/TAN
DRAIN PIPING	NONE

NOTES:

- ALL NEW PIPING SHALL BE PREPARED, PRIMED, AND PAINTED IN ACCORDANCE WITH SECTION 089744 - MECHANICAL PIPING COATING SYSTEM.
- FINAL COLORS SHALL BE AS APPROVED BY THE OWNER/ENGINEER.
- ALL NEW CHEMICAL PIPING SHALL BE PAINTED IN ACCORDANCE WITH 10 STATES STANDARDS.

