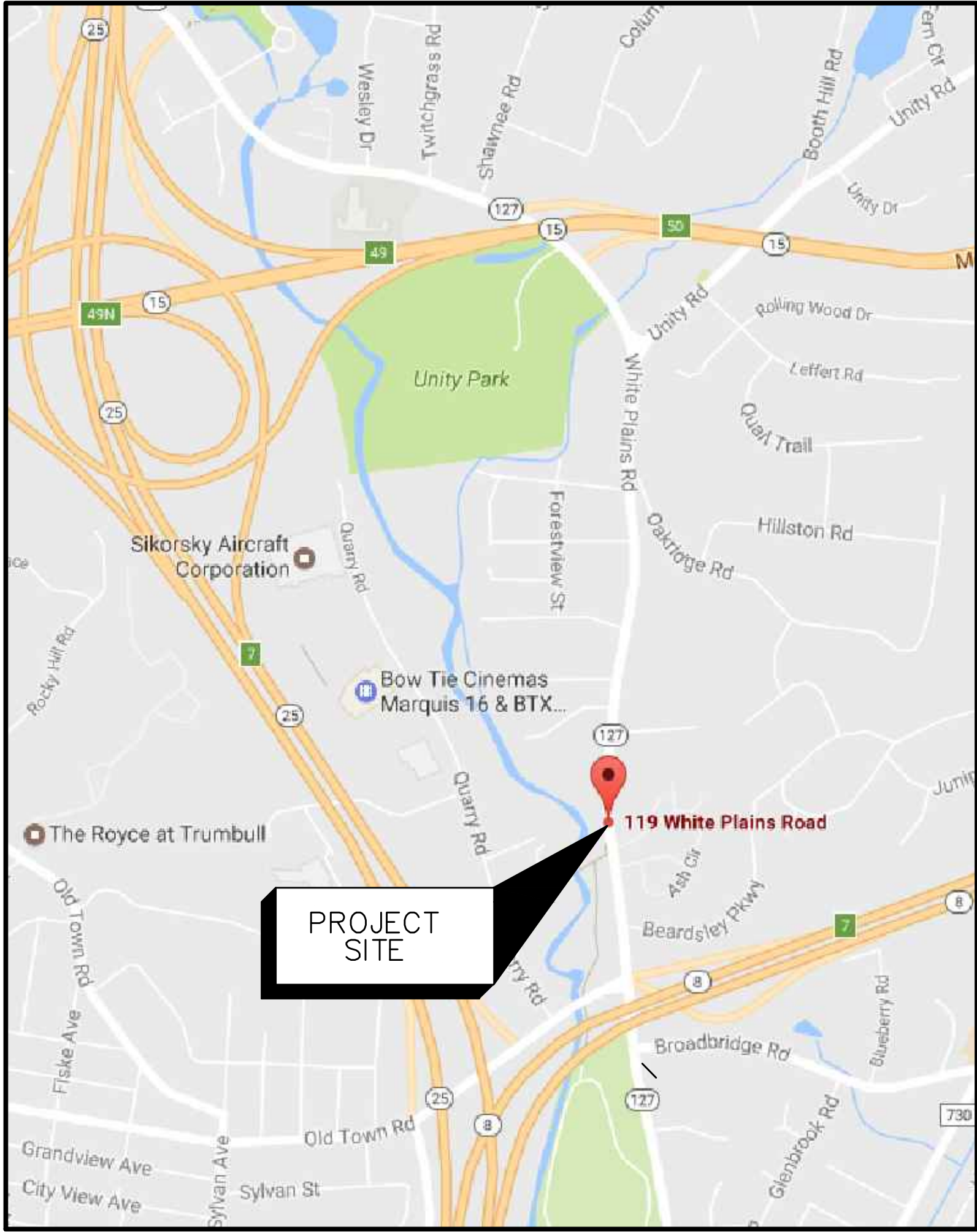
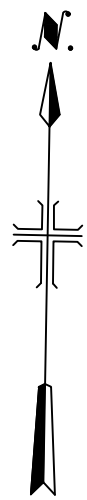




TOWN OF TRUMBULL, CT WPCA BEARDSLEY PUMP STATION COMPREHENSIVE UPGRADE BID



LOCATION MAP
NOT TO SCALE



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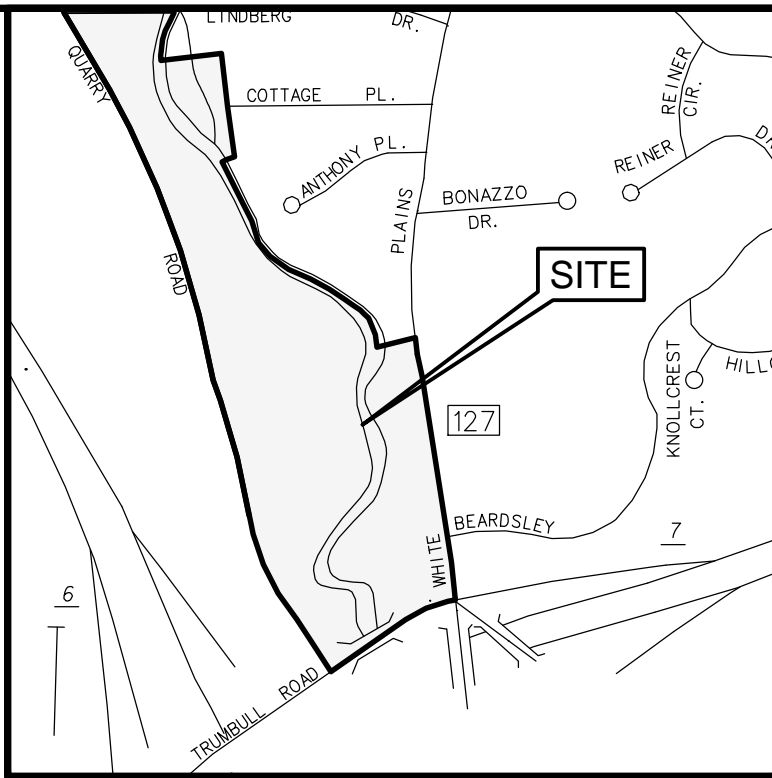
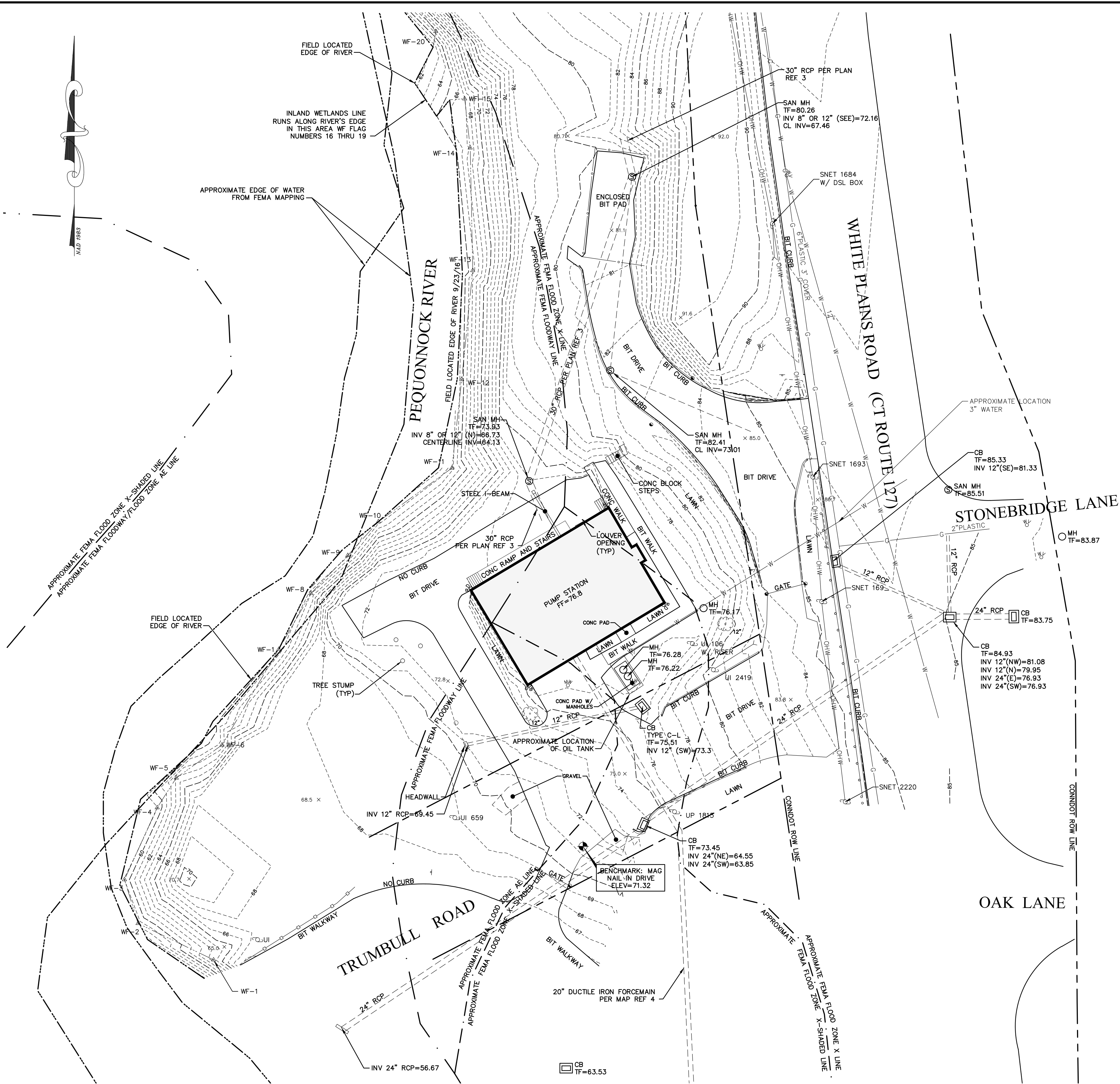
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SEPTEMBER 2017

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LOCATION MAP
NOT TO SCALE

SURVEY NOTES:

- THIS SURVEY AND MAP HAVE BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.
- THE TYPE OF SURVEY PERFORMED IS AN IMPROVEMENT LOCATION SURVEY INTENDED TO DEPICT EXISTING CONDITIONS
- THE BOUNDARY DETERMINATION/OPINION IS BASED UPON A RESURVEY OF MAP REFERENCE 1 AND 2.
- THIS SURVEY CONFORMS TO HORIZONTAL ACCURACY CLASS A-2, VERTICAL ACCURACY CLASS V-3, AND TOPOGRAPHIC ACCURACY CLASS T-2.
- THE ELEVATIONS DEPICTED HEREON ARE BASED UPON NAVD 1988 DATUM DERIVED FROM A VRS GNSS SURVEY OF JUNE 2016.
- THE NORTH ARROW DEPICTED HEREON IS BASED UPON THE CONNECTICUT STATE COORDINATE SYSTEM NAD 1983 DERIVED FROM A VRS GNSS SURVEY OF JUNE 2016.
- THE BASE FLOOD ELEVATION IS 72'±. THE SUBJECT PARCEL APPEARS TO LIE WITHIN FLOOD ZONE(S) AE, X-SHADED, AND X AS DEPICTED ON FEMA'S FLOOD INSURANCE RATE MAP (FIRM) ENTITLED, FAIRFIELD COUNTY, CONNECTICUT (ALL JURISDICTIONS); PANEL 431 OF 626; MAP NUMBER 09001C0431F; EFFECTIVE DATE: JUNE 18, 2010; SCALE: 1"=500'. ANY FEMA FLOODPLAIN AND/OR FLOODWAY INFORMATION DEPICTED HEREON IS APPROXIMATE ONLY AND DOES NOT IN ANY WAY CONSTITUTE AN OPINION OR REPRESENTATION OF ACTUAL FLOODPLAIN AND/OR FLOODWAY INFORMATION BY PEREIRA ENGINEERING, LLC (PE). PE DOES NOT WARRANT THE ACCURACY OF THIS INFORMATION, AND MAKES NO REPRESENTATIONS UPON WHICH THE CLIENT SHOULD RELY IN CONNECTION WITH THE FLOOD ZONE OF THE SUBJECT PARCEL OR ANY FEMA FLOODPLAIN AND/OR FLOODWAY INFORMATION DEPICTED HEREON.
- UTILITY INFORMATION DEPICTED HEREON IS APPROXIMATE AND IS BASED ON VISIBLE EVIDENCE OF SURFACE AND OVERHEAD STRUCTURE LOCATIONS AND AS COMPILED FROM EXISTING RECORD MAPPING AVAILABLE DURING THE PREPARATION OF THE SURVEY. ALL CONTRACTORS SHOULD CONTACT "CALL BEFORE YOU DIG" AT (800)822-4455 FOR VERIFICATION OF UTILITY INFORMATION PRIOR TO START OF ANY WORK.

MAP REFERENCES:

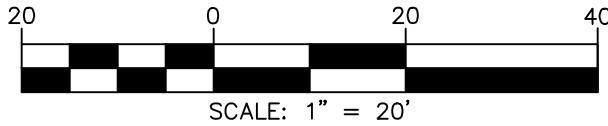
- "PROPERTY OF THE STATE OF CONNECTICUT; QUARRY ROAD, TRUMBULL ROAD, OLD TOWN ROAD AND WHITE PLAINS ROAD, TRUMBULL, CONNECTICUT (ALL JURISDICTIONS); PANEL 431 OF 626; MAP NUMBER 09001C0431F; EFFECTIVE DATE: JUNE 18, 2010; SCALE: 1"=500'; REVIS: DECEMBER 22, 2012; PREPARED BY TOWN OF TRUMBULL ENGINEERING DEPARTMENT.
- "CONNECTICUT DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP, WHITE PLAINS ROAD FROM GENERAL SAMUEL JASKILKA HIGHWAY NORTHERLY TO UNITY ROAD, TRUMBULL, CONNECTICUT; PREPARED FOR CONNECTICUT DEPARTMENT OF TRANSPORTATION, TOWN OF TRUMBULL"; SCALE: 1"=40'; DATED: MARCH 1, 1989; PREPARED BY CONNECTICUT DEPARTMENT OF TRANSPORTATION.
- "RECORD PLAN CROSS COUNTRY (PUMPING STATION TO ANTHONY PL.) PLAN AND PROFILE TRUMBULL, CONN." VERT. SCALE: 1"=4'; HORIZONTAL SCALE: 1"=40'; DATED: MAY 1970; PREPARED BY: WHITMAN & HOWARD INC.
- "RIVER ROAD PLAN AND PROFILE OF FORCE MAIN TRUMBULL, CONN." VERT. SCALE: 1"=4'; HORIZONTAL SCALE: 1"=40'; DATED: MAY 1970; PREPARED BY: WHITMAN & HOWARD INC."

LEGEND

---	PROPERTY LINE	---	CONTOURS
---	RIGHT OF WAY	---	SPOT ELEVATION
---	EASEMENT LINE	---	CONIFEROUS TREE
---	STONE WALL	---	DECIDUOUS TREE
---	STRUCTURE	---	BUSH
---	EDGE OF PAVEMENT	---	CHAIN LINK FENCE
---	TEST BORING	---	WOOD FENCE
---	CATCH BASIN	---	GUIDERAIL
---	STORM MANHOLE	---	LIGHT POLE
---	SANITARY MANHOLE	---	UTILITY POLE
---	WATER	---	HYDRANT
---	GAS	---	WATER VALVE
---	ELECTRIC	---	GAS VALVE
---	TELEPHONE	---	MONUMENT FOUND
---	FIBER OPTIC LINE	---	IRON PIPE OR PIN FOUND
---	OVERHEAD WIRES	---	DRILL HOLE FOUND

MAP / LOT:
H-11 / 163

DEED REFERENCE:
VOL 781 / PG 52

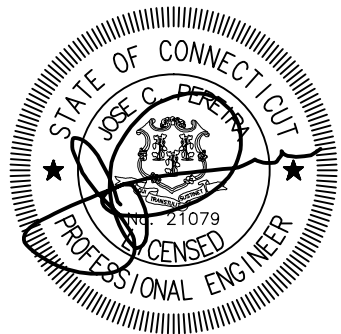


LEGAL ENTITY:
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PEREIRA
ENGINEERING, LLC
Civil • Environmental • Land Surveying
One Enterprise Drive, Suite 312 Phone: (203) 944-9944
Shelton, CT 06484 Fax: (203) 944-9945

SEALS



TOWN OF TRUMBULL,
CONNECTICUT

BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY

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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: 1108SP00

DESIGNED BY: K. BUDA

DRAWN BY: E. HOMBURG

CHECKED BY: J. PEREIRA

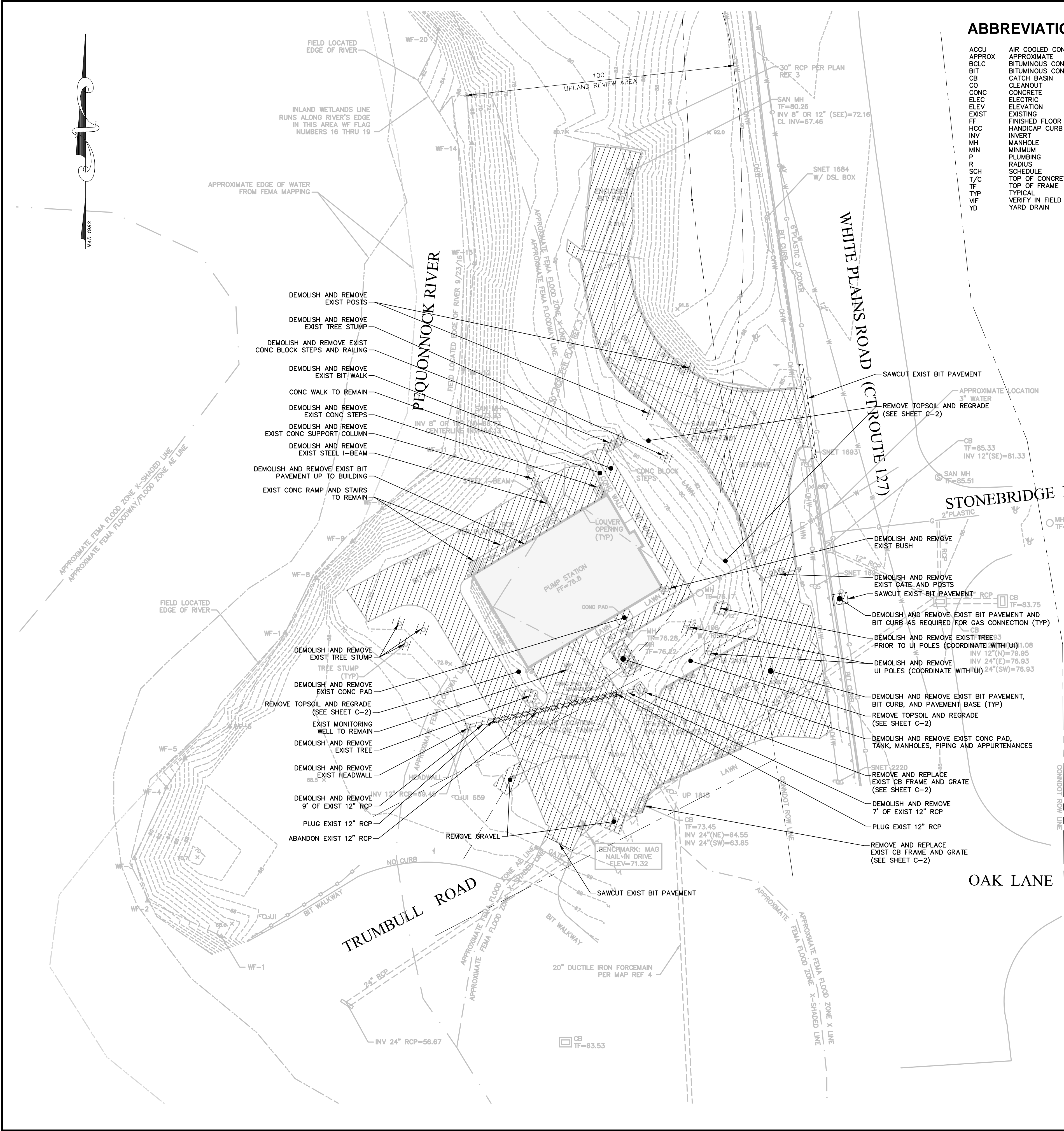
SHEET TITLE

EXISTING CONDITIONS
MAP

SCALE: 1"=20'

G-0

SHEET 1 OF 69



ABBREVIATIONS

ACCU	AIR COOLED CONDENSING UNIT
APPROX	APPROXIMATE
BCLC	BITUMINOUS CONCRETE LIP CURB
BIT	BITUMINOUS CONCRETE
CB	CATCH BASIN
CO	CLEANOUT
CONC	CONCRETE
ELEC	ELECTRIC
ELEV	ELEVATION
EXIST	EXISTING
FF	FINISHED FLOOR ELEVATION
HCC	HANDICAP CURB CUT
INV	INVERT
MH	MANHOLE
MIN	MINIMUM
P	PLUMBING
R	RADIUS
SCH	SCHEDULE
T/C	TOP OF CONCRETE
TF	TOP OF FRAME
TFP	TYPICAL
VF	VERIFY IN FIELD
VD	YARD DRAIN

GENERAL DEMOLITION NOTES:

- ALL WORK SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE LOCAL MUNICIPALITY OR IN THE ABSENCE THEREOF TO THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 817 (LATEST EDITION).
- THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG (CBYD)" LOCATING SERVICE AT 1-(800)-922-4455 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE START OF CONSTRUCTION IN ORDER TO HAVE ALL UTILITIES LOCATED AND MARKED. CONTRACTOR SHALL HIRE A PRIVATE UTILITY LOCATING SERVICE (AT HIS OWN EXPENSE) TO VERIFY AND LOCATE ALL UTILITIES THAT CBYD DOES NOT LOCATE. ALL REFERENCES ON DRAWINGS TO "UTILITIES" INCLUDES ALL TYPES OF BUILDING AND SITE SERVICES AS WELL.
- THE CONTRACTOR SHALL LOCATE ALL DRAINAGE INFRASTRUCTURE AND MAINTAIN ADEQUATE STORM DRAINAGE THROUGHOUT CONSTRUCTION.
- THE CONTRACTOR SHALL MAINTAIN THE SAFETY AND PROTECTION OF BOTH PEDESTRIANS AND MOTORISTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TAKE ALL NECESSARY PRECAUTIONARY AND PROTECTIVE MEASURES, INCLUDING, BUT NOT LIMITED TO, SIGNS, LIGHTS, BARRIERS, FENCING, AND TRAFFIC FLAGMEN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS.
- THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL UTILITIES SERVICING THE EXISTING BUILDING THAT ARE TO REMAIN.
- THE CONTRACTOR SHALL REMOVE AND LEGALLY DISPOSE OF ALL EXCESS MATERIAL AND DEMOLITION DEBRIS WITHIN THE PROJECT LIMITS (UNLESS INDICATED TO REMAIN) AT NO ADDITIONAL COST TO OWNER.
- THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND APPURTENANCES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE ENGINEER. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- THE PROPOSED LIMITS OF DEMOLITION SHOWN ARE APPROXIMATE AND MAY VARY BASED ON ACTUAL FIELD CONDITIONS AND CONTRACTOR'S METHODS OF DEMOLITION/CONSTRUCTION. CONTRACTOR SHALL DEMOLISH AND REMOVE ANY AND ALL ITEMS AS REQUIRED TO CONSTRUCT PROPOSED WORK AT NO ADDITIONAL COST TO OWNER.
- DEMOLITION AND ABANDONMENT OF EXISTING UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH RESPECTIVE UTILITY COMPANY'S REQUIREMENTS AND STANDARDS. CONTRACTOR SHALL COORDINATE DEMOLITION AND ABANDONMENT WITH UTILITY COMPANIES PRIOR TO START OF CONSTRUCTION. UTILITIES SHALL BE CAPPED AT PROPERTY LINES UNLESS OTHERWISE NOTED OR REQUIRED BY UTILITY COMPANIES.
- CONTRACTOR SHALL PROPERLY ABANDON OR DEMOLISH AND REMOVE ANY AND ALL UNEXPECTED UTILITIES DISCOVERED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
- EXCAVATION OPERATIONS SHALL BE EXECUTED CAREFULLY AT ALL LOCATIONS ADJACENT TO EXISTING UNDERGROUND UTILITIES AND VAULTS. PROTECTION OF EXISTING UTILITIES WITHIN THE WORK LIMIT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL WORK WILL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANIES.
- ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION (OR BETTER) OR AS INDICATED ON THE CONTRACT DRAWINGS.
- ANY DAMAGE TO EXISTING PAVEMENT, CURBS, SIDEWALKS, STRUCTURES OR ANY OTHER APPURTENANCES DURING CONSTRUCTION SHALL BE REPLACED (IN-KIND OR BETTER) BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE. SAW-CUT DAMAGED SECTIONS BACK TO THE NEAREST JOINT WHERE APPROPRIATE AND MATCH EXISTING MATERIALS, THICKNESSES, AND PATTERNS.
- CONTRACTOR SHALL SAW-CUT BITUMINOUS AND CONCRETE SURFACES AT LIMITS OF DEMOLITION AS REQUIRED SO AS TO ACHIEVE A SMOOTH TRANSITION BETWEEN EXISTING SURFACES (TO REMAIN) AND NEW SURFACES. APPLY/INSTALL TACK COATS AND EXPANSION JOINTS AS REQUIRED. ANY EXISTING SURFACES LOCATED DIRECTLY ADJACENT TO THE LIMIT OF DEMOLITION THAT ARE DAMAGED SHALL ALSO BE REPLACED AND INCLUDED IN THE WORK AT NO ADDITIONAL COST TO THE OWNER. THE INTENT IS TO AVOID LEAVING DAMAGED SURFACES LOCATED DIRECTLY ADJACENT TO NEWLY REPLACED WORK.
- TREE REMOVAL INCLUDES REMOVAL OF TREE TRUNK, BRANCHES, LEAVES, AND STUMP. NO STUMPS, BRUSH, BUILDING DEBRIS, OR UNSUITABLE MATERIALS ARE TO BE BURIED ON SITE. REMOVE ALL TREES WITHIN PROJECT LIMITS UNLESS OTHERWISE NOTED.
- ABANDONMENT PROCEDURES FOR EXISTING BURIED TANKS AND VAULTS SHALL BE AS FOLLOWS (UNLESS OTHERWISE REQUIRED): THE CONTRACTOR SHALL PUMP OUT THE EXISTING TANKS AND VAULTS, THEN CRUSH THE TOP AND BOTTOM OF THE STRUCTURES AND BACKFILL AND COMPACT THE EXCAVATION. PIPES FROM THE EXISTING TANKS AND VAULTS SHALL BE CAPPED AND ABANDONED. TANK AND VAULT CONTENTS SHALL BE LEGALLY DISPOSED OF OFF SITE.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY 8 FT. HIGH CHAIN LINK FENCING. THE FENCING SHALL BE DESIGNED TO MAINTAIN SECURITY AND PROVIDE SAFETY FOR THE CONSTRUCTION SITE.
- REFER TO OTHER DRAWINGS, DETAILS, AND SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING DEMOLITION.

LEGEND

EXISTING	
650	CONTOURS
671.5	SPOT ELEVATION
X	PROPERTY LINE
100' UPLAND REVIEW LINE	
WATERCOURSE	
STRUCTURE	
15" RCP STORM	EDGE OF PAVEMENT
8" SANITARY	STORM SEWER PIPE
MANHOLE	SANITARY SEWER PIPE
CATCH BASIN	
WATER	
GAS	
SANITARY LATERAL	
UTILITY POLE	
OVERHEAD WIRE	
GUIDERAIL	
DEMOLISH AND REMOVE	
ABANDONED	

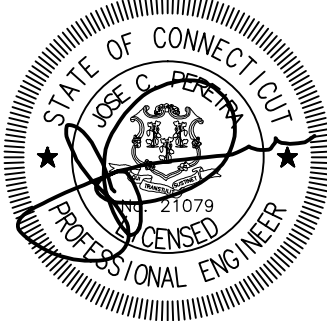


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SEALS



TOWN OF TRUMBULL,
CONNECTICUT

BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: 1108SP01

DESIGNED BY: K. BUDA

DRAWN BY: E. HOMBURG

CHECKED BY: J. PEREIRA

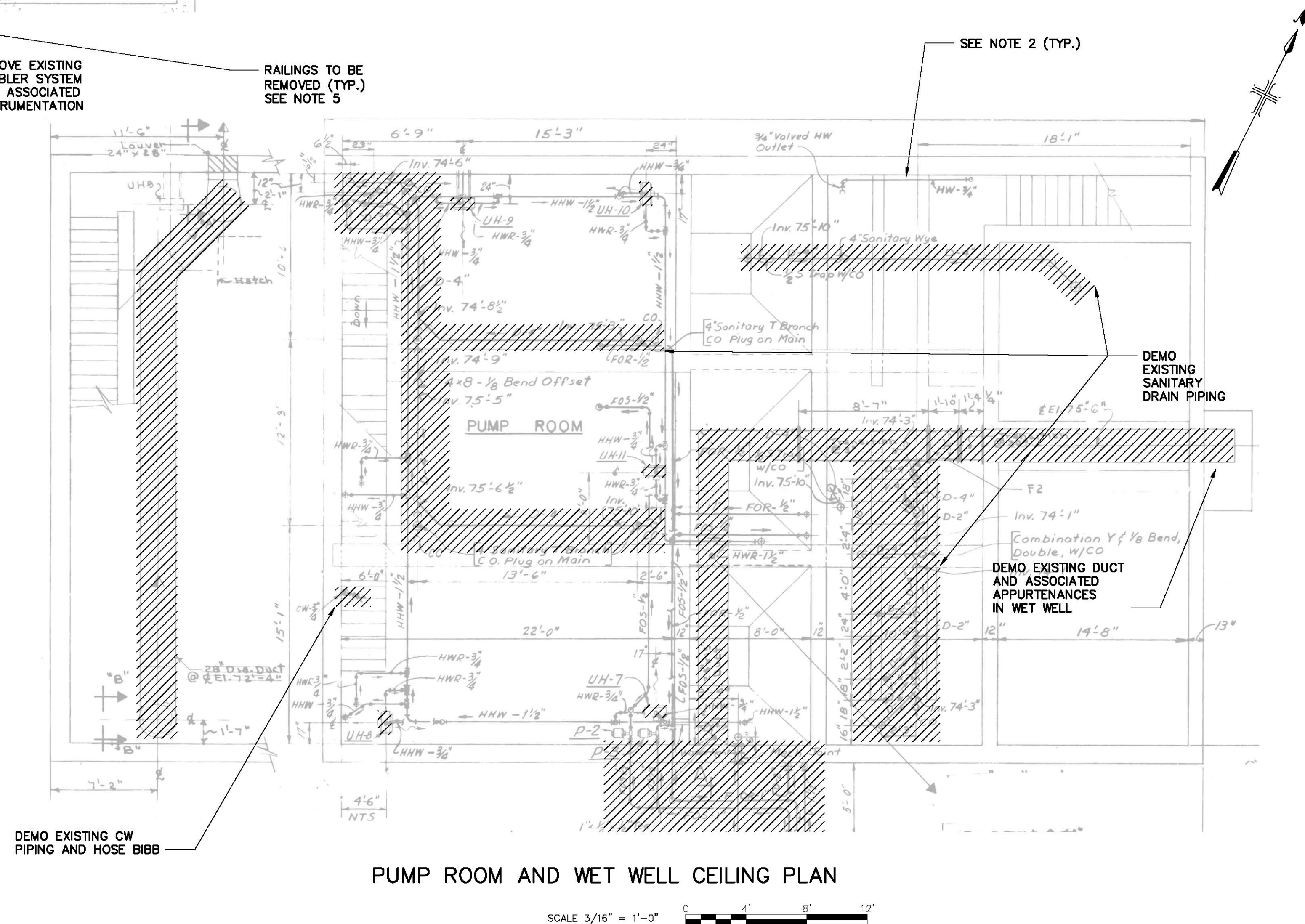
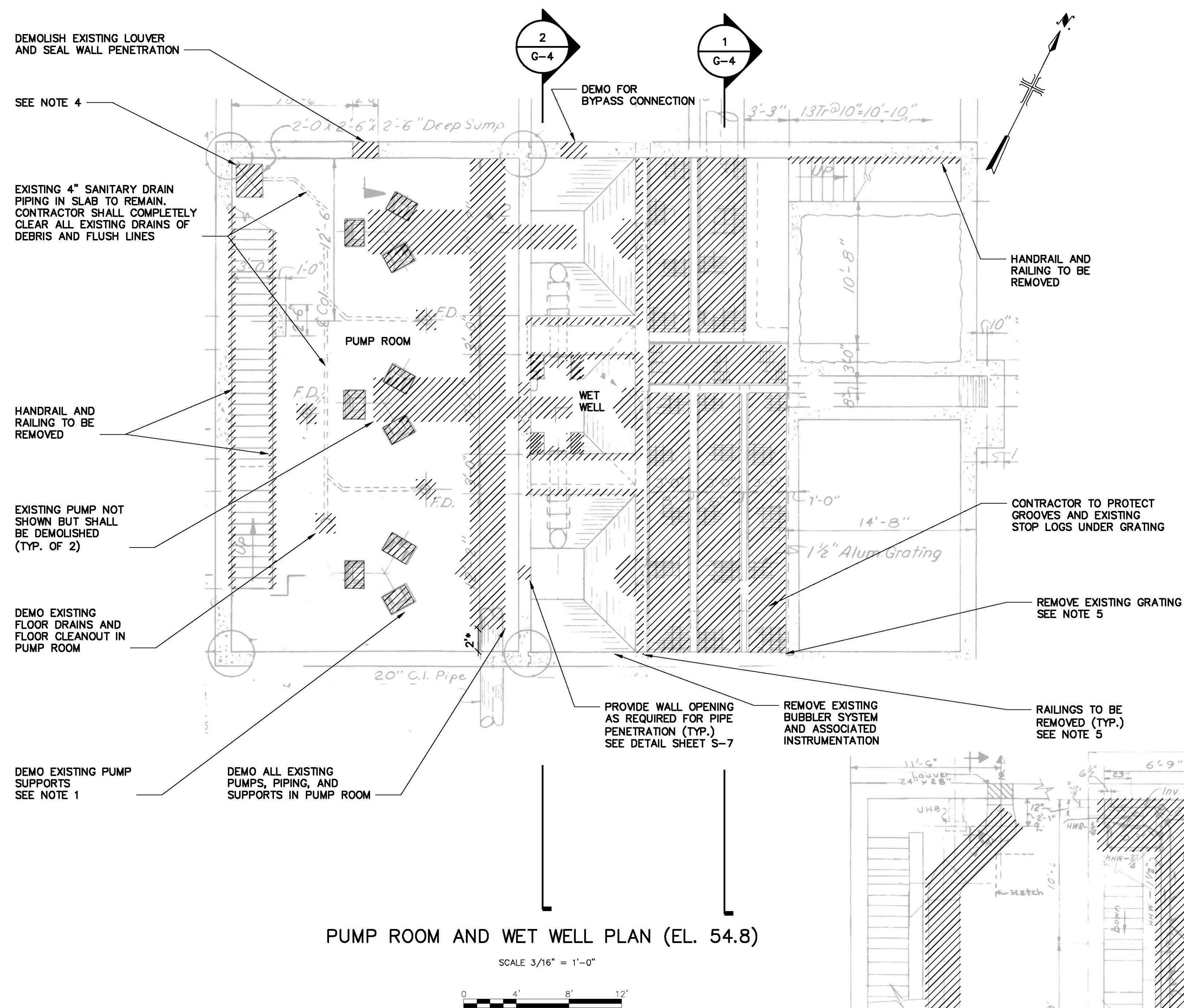
SHEET TITLE

DEMOLITION SITE PLAN

SCALE: 1"=20'

G-1

SHEET 2 OF 69



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TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

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DATE:	SEPTEMBER 2017
PROJECT NO.:	06532002.0000
FILE NAME:	G-2
DESIGNED BY:	T. O'CONNELL
DRAWN BY:	K. BYRNE
CHECKED BY:	V. MCPHERSON

SHEET TITLE

DEMOLITION FLOOR PLANS I

SCALE: AS SHOWN

G-2

SHEET 3 OF 69



TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION COMPREHENSIVE UPGRADE

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DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: G-3

DESIGNED BY: T. O'CONNELL

DRAWN BY: K. BYRNE

CHECKED BY: V. MCPHERSON

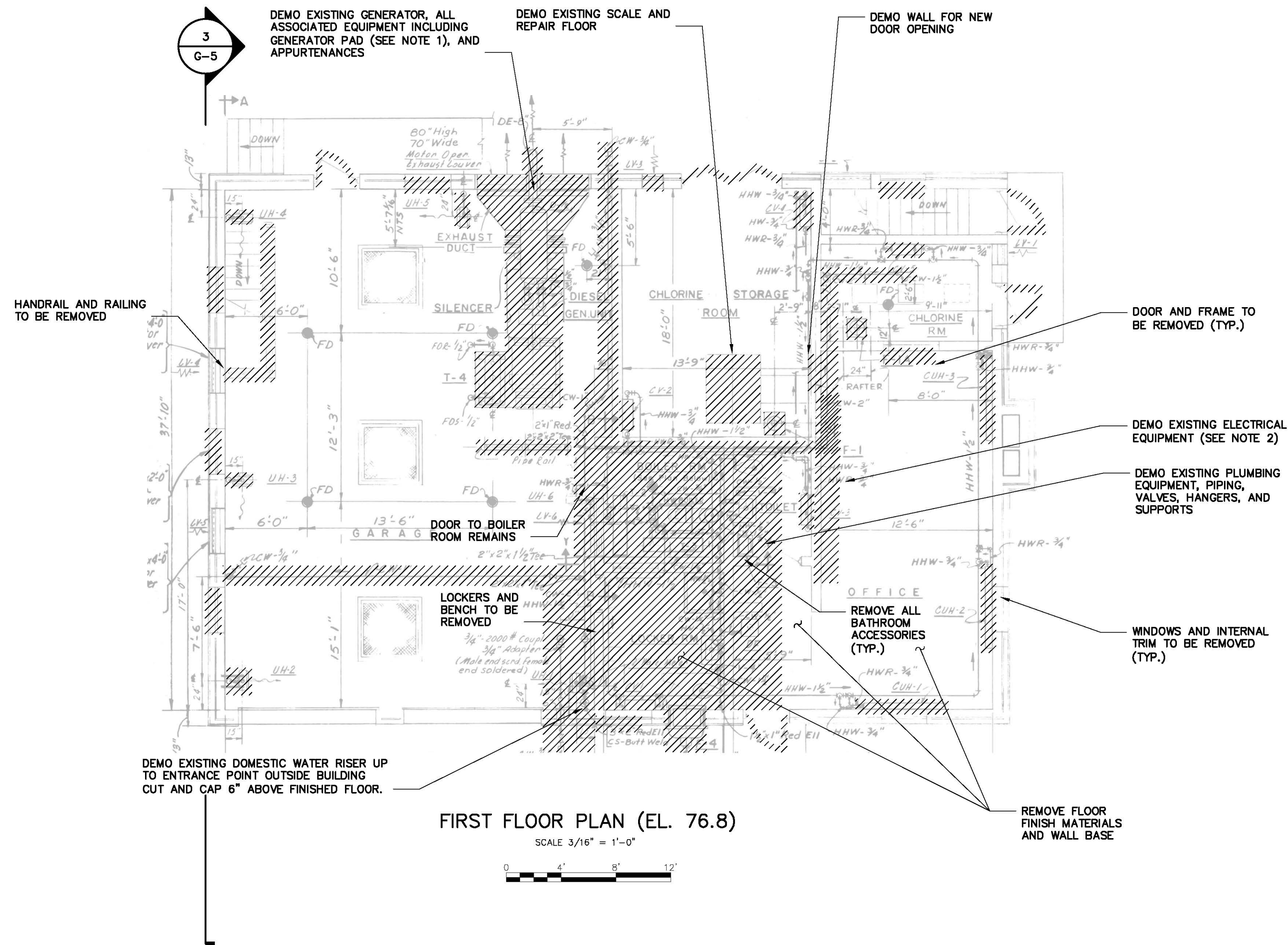
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DEMOLITION FLOOR
PLANS II

SCALE: AS SHOWN

G-3

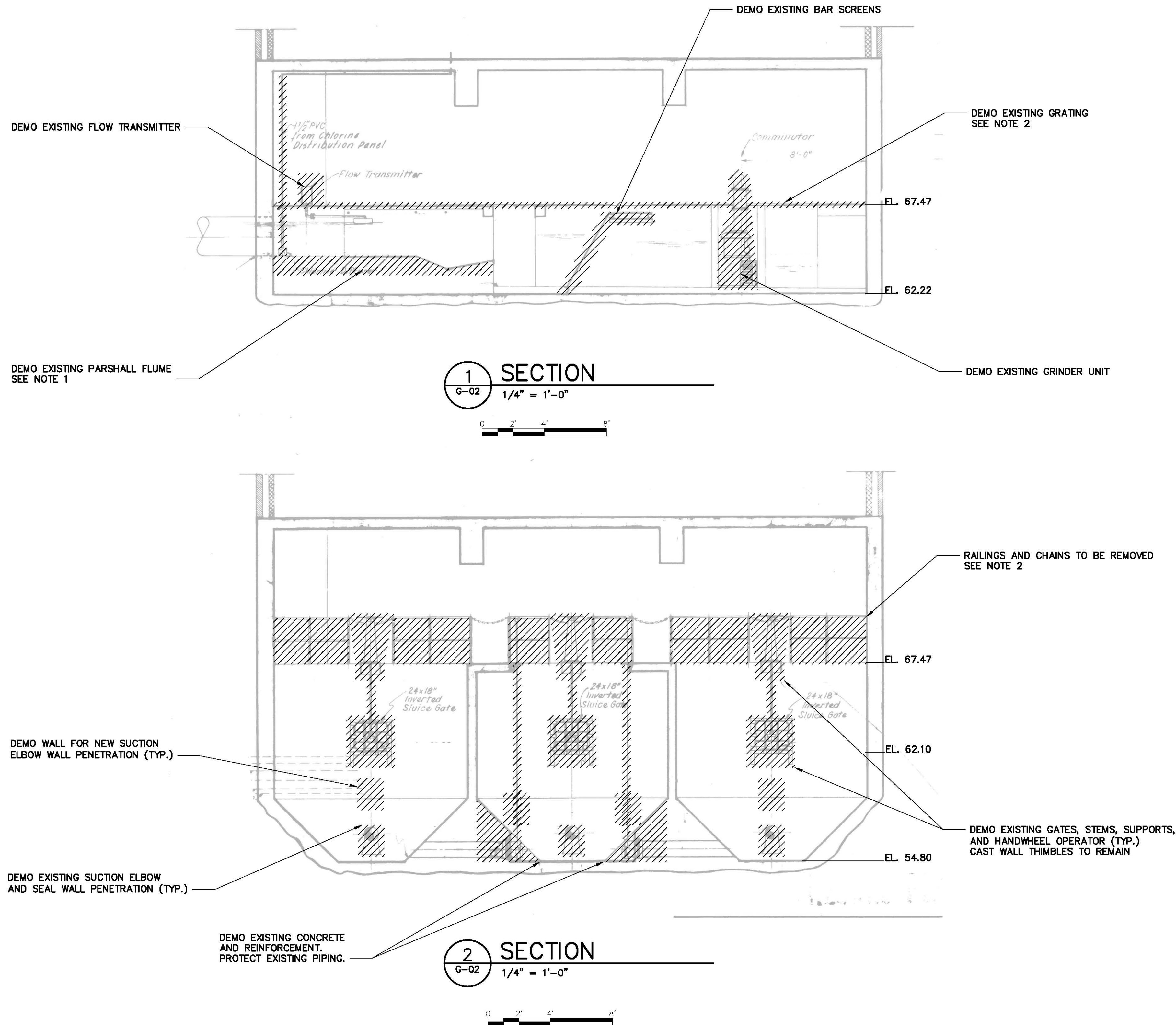
SHEET 4 OF 69



NOTES:

1. SAWCUT 3/4" ALL AROUND. REMOVE EXISTING CONCRETE DOWN TO 2" BELOW TOP OF EXISTING SLAB. SEE S-DWGS FOR REPAIR DETAILS.
2. ALL EXISTING ELECTRICAL EQUIPMENT AND LIGHTING EQUIPMENT IS TO BE DEMOLISHED UNLESS OTHERWISE SPECIFIED.
3. DEMOLISH ALL INTERIOR PLUMBING PIPING, VALVES, AND EQUIPMENT UNLESS OTHERWISE SHOWN OR NOTED.
4. ALL PIPE HANGERS, SUPPORTS, ETC. SHALL BE DEMOLISHED AND EXISTING STRUCTURE SHALL BE REPAIRED. ALL UNUSED EXISTING FLOOR AND WALL PENETRATIONS SHALL BE REPAIRED. REFERENCE SECTION 01 73 29 CUTTING AND PATCHING.
5. REMOVE EXISTING CONDENSATE HEATER AND ASSOCIATED PIPING, VALVES, AND APPURTENANCES.
6. REMOVE ALL EXISTING PLUMBING FIXTURES AND TRIMS.
7. REMOVE ALL EXTERIOR HOSE BIBBS AND WALL HYDRANTS. PENETRATIONS SHALL BE MODIFIED TO ACCEPT NEW FIXTURES OR REPAIRED TO NEW CONDITION (REFER TO PLUMBING DRAWINGS FOR LOCATIONS OF NEW EQUIPMENT).
8. A HAZARDOUS ENVIRONMENTAL CONDITION, DESCRIBED IN THE CONTRACT, WILL AFFECT DEMOLITION WORK.

User: NBAID Spec: AUS-NCSMOD File: \\ACAD\\PROJ\\06532002.0000\\SHEETS\\GENERAL\\G-4.DWG Scale: 1/4" = 1'-0" Date: 9/26/2017 Time: 12:09 Plot Date: 9/27/2017 14:55 Layout: G-4



NOTES:

1. SEE "S" DWGS FOR CONCRETE SURFACE REPAIR DETAILS.
2. REMOVAL OF GRATING AND PROVISION OF COVER SYSTEM IS A BID ALTERNATE TO THE CONTRACT. REFER TO SECTION 01 22 13, MEASUREMENT AND PAYMENT. EXISTING GRATING AND RAILING WHERE NOTED TO REMAIN IF ALTERNATE IS NOT AWARDED.



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TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

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DATE: SEPTEMBER 2017
PROJECT NO.: 06532002.0000
FILE NAME: G-4
DESIGNED BY: T. O'CONNELL
DRAWN BY: K. BYRNE
CHECKED BY: V. MCPHERSON

SHEET TITLE

DEMOLITION
SECTIONS I

SCALE: AS SHOWN

G-4
SHEET 5 OF 69



TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

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DATE: SEPTEMBER 2017PROJECT NO.: 06532002.0000FILE NAME: G-5

DESIGNED BY: T. O'CONNELL

RAWN BY: K. BYRNE

CHECKED BY: V. MCPHERSON

SHEET TITLE

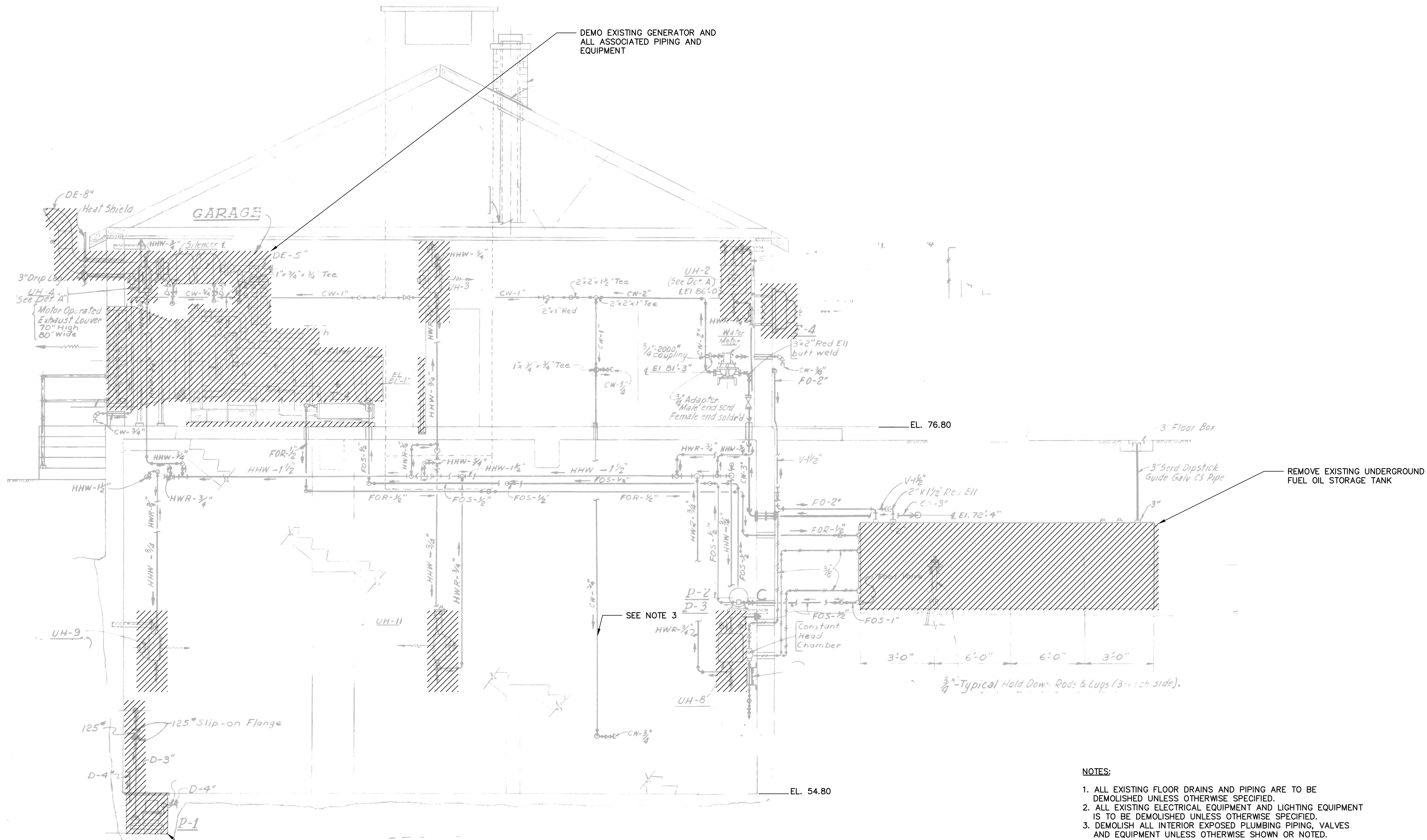
DEMOLITION SECTIONS II

CALE:

AS SHOWN

G-5

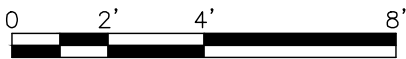
SHEET 6 OF 69



NOTES

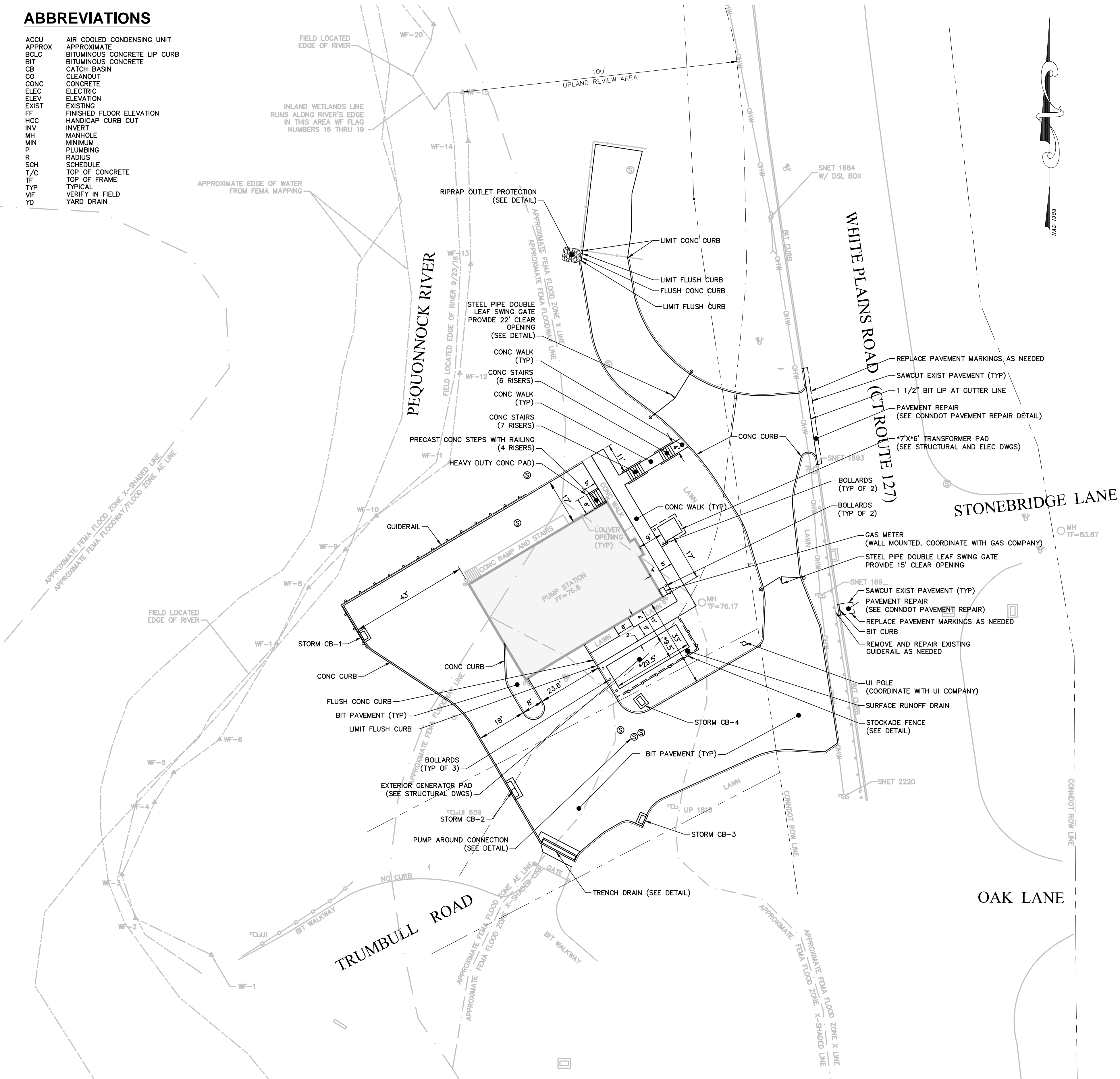
1. ALL EXISTING FLOOR DRAINS AND PIPING ARE TO BE DEMOLISHED UNLESS OTHERWISE SPECIFIED.
2. ALL EXISTING ELECTRICAL EQUIPMENT AND LIGHTING EQUIPMENT IS TO BE DEMOLISHED UNLESS OTHERWISE SPECIFIED.
3. DEMOLISH ALL INTERIOR EXPOSED PLUMBING PIPING, VALVES AND EQUIPMENT UNLESS OTHERWISE SHOWN OR NOTED.

3 SECTION
G-03 1/4" = 1'-0"



ABBREVIATIONS

ACCU	AIR COOLED CONDENSING UNIT
APPROX	APPROXIMATE
BCLC	BITUMINOUS CONCRETE LIP CURB
BIT	BITUMINOUS CONCRETE
CB	CATCH BASIN
CO	CLEANOUT
CONC	CONCRETE
ELEC	ELECTRIC
ELEV	ELEVATION
EXIST	EXISTING
FF	FINISHED FLOOR ELEVATION
HCC	HANDICAP CURB CUT
INV	INVERT
MH	MANHOLE
MIN	MINIMUM
P	PLUMBING
R	RADIUS
SCH	SCHEDULE
T/C	TOP OF CONCRETE
TF	TOP OF FRAME
TYP	TYPICAL
VF	VERIFY IN FIELD
YD	YARD DRAIN



GENERAL NOTES:

- ALL WORK SHALL CONFORM TO THE TOWN OF TRUMBULL STANDARDS AND SPECIFICATIONS OR IN THE ABSENCE THEREOF TO THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 817 (LATEST EDITION).
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SITE CONDITIONS AND SHALL IMMEDIATELY REPORT ANY AND ALL DISCREPANCIES TO THE ENGINEER.
- THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND APPURTENANCES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE ENGINEER. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" (CBYD) LOCATING SERVICE AT 1-(800)-922-4455 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE START OF CONSTRUCTION IN ORDER TO HAVE ALL UTILITIES LOCATED AND MARKED. CONTRACTOR SHALL HIRE A PRIVATE UTILITY LOCATING SERVICE (AT HIS OWN EXPENSE) TO VERIFY AND LOCATE ALL UTILITIES THAT CBYD DOES NOT LOCATE. ALL REFERENCES ON DRAWINGS TO "UTILITIES" INCLUDES ALL TYPES OF BUILDING AND SITE SERVICES AS WELL.
- SURVEY AND TOPOGRAPHIC INFORMATION WAS TAKEN FROM A MAP ENTITLED "IMPROVEMENT LOCATION SURVEY OF PROPERTY LOCATED AT 7 QUARRY ROAD, TRUMBULL, CONNECTICUT, PREPARED FOR TOWN OF TRUMBULL WPCA", DATED SEPTEMBER 29, 2016; SCALE: 1"=20'; PREPARED BY PEREIRA ENGINEERING, LLC.
- WETLAND DELINEATION PROVIDED BY WILLIAM KENNY ASSOCIATES, LLC AND FIELD LOCATED BY PEREIRA ENGINEERING, LLC ON SEPTEMBER 23, 2016.
- ALL ELEVATIONS ON THIS PROJECT ARE BASED ON NAVD 1988 DATUM.
- MODIFIED RIPRAP SHALL CONFORM TO THE FOLLOWING GRADATION:

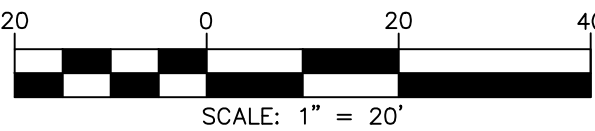
STONE SIZE	% OF MASS
10" OR OVER	0
6" TO 10"	20-50
4" TO 6"	30-60
2" TO 4"	30-40
1" TO 2"	10-20
LESS THAN 1"	0-10
- ALL UTILITY WORK TO BE DONE IN ACCORDANCE WITH THE RESPECTIVE UTILITY'S REQUIREMENTS AND STANDARDS. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE UTILITY RELATED WORK WITH THE RESPECTIVE UTILITIES. ALL COSTS, INCLUDING PERMIT FEES, SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF WORK UNDER THIS CONTRACT.
- THE SUBJECT PARCEL APPEARS TO LIE WITHIN FLOOD ZONE(S) AE, X-SHADED, X, AND BASE FLOOD ELEVATION IS 72'± AS DEPICTED ON FEMA'S FLOOD INSURANCE RATE MAP (FIRM) ENTITLED: FAIRFIELD COUNTY, CONNECTICUT(ALL JURISDICTIONS); PANEL 431 OF 626; MAP NUMBER 09001C0431F; EFFECTIVE DATE: JUNE 18, 2010; SCALE: 1"=500'. ANY FEMA FLOODPLAIN AND/OR FLOODWAY INFORMATION DEPICTED HEREON IS APPROXIMATE ONLY AND DOES NOT IN ANY WAY CONSTITUTE AN OPINION OR REPRESENTATION OF ACTUAL FLOODPLAIN AND/OR FLOODWAY INFORMATION BY PEREIRA ENGINEERING, LLC (PE). PE DOES NOT WARRANT THE ACCURACY OF THIS INFORMATION, AND MAKES NO REPRESENTATIONS UPON WHICH THE CLIENT SHOULD RELY IN CONNECTION WITH THE FLOOD ZONE OF THE SUBJECT PARCEL OR ANY FEMA FLOODPLAIN AND/OR FLOODWAY INFORMATION DEPICTED HEREON.
- DIMENSIONS WITH * ARE TO BE COORDINATED WITH EQUIPMENT FURNISHED.
- THIS SITE HAS BEEN IDENTIFIED AS AN AREA WITH KNOWN EXTANT POPULATIONS *Terrapene carolina* (EASTERN BOX TURTLE) OF STATE SPECIAL CONCERN IN THE VICINITY BY CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION (CT DEEP). CONTRACTOR SHALL REFER TO LETTER PREPARED BY CT DEEP, DATED AUGUST 28, 2017, NDDB DETERMINATION NO. 201706334, FOR RESTRICTIONS AND RECOMMENDATIONS RELATED TO CONSTRUCTION ACTIVITIES.

CONNECTICUT DEPARTMENT OF TRANSPORTATION CONSTRUCTION NOTES:

- REMOVAL OF PAVEMENT MARKINGS ALONG STATE ROADWAYS SHALL BE COMPLETED BY A NON-DESTRUCTIVE METHOD IN COMPLIANCE WITH THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION FORM 817 SECTION 12.11 AS REVISED.
- NEW PAVEMENT MARKINGS SHALL BE PAINTED WITH EPOXY RESIN PAINT IN COMPLIANCE WITH THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION FORM 817 SECTION 12.10 AS REVISED.
- NEW SIGN MATERIAL AND SHEETING SHALL BE MADE OF REFLECTIVE MATERIAL IN COMPLIANCE WITH STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION FORM 817 SECTION 12.08 AS REVISED. TYPE 1 REFLECTIVE SHEETING SHALL BE USED FOR SIGNS WITH WHITE BACKGROUND, TYPE 3 REFLECTIVE SHEETING SHALL BE USED FOR SIGNS WITH COLORED BACKGROUND EXCEPT FOR SIGNS WITH RED BACKGROUND THAT SHALL BE TYPE 8 OR 9 REFLECTIVE SHEETING.
- ALL SIGNS AND PAVEMENT MARKINGS INSTALLED ALONG THE STATE ROAD MUST CONFORM WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE LATEST STATE OF CONNECTICUT CATALOG OF SIGNS AND STANDARDS AS REVISED.
- ANY DAMAGE TO THE EXISTING CURB, SIDEWALK OR ANY OTHER HIGHWAY APPURTENANCES DURING THE DEVELOPMENT OF THE PERMITTED SITE WILL BE REPLACED BY THE CONTRACTOR AS DIRECTED BY THE DISTRICT 3 PERMIT SECTION AT NO COST TO THE STATE.
- ALL WORK WITHIN THE STATE RIGHT OF WAY WILL COMPLY WITH THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION FORM 817 WITH THE LATEST SPECIAL PROVISIONS AND TYPICAL STATE STANDARD DETAILS.

LEGEND

EXISTING		PROPOSED
650	CONTOURS	650
671.5	SPOT ELEVATION	671.5
X	PROPERTY LINE	X
	100' UPLAND REVIEW LINE	
	WATERCOURSE	
	STRUCTURE	
15" RCP STORM	EDGE OF PAVEMENT	24" RCP
8" SANITARY	STORM SEWER PIPE	8" PVC
	SANITARY SEWER PIPE	
	MANHOLE	
	CATCH BASIN	
	WATER	
	GAS	
	SANITARY LATERAL	
	ROOF DRAIN	
	STORM DRAIN	
	UTILITY POLE	
	OVERHEAD WIRE	
	GUIDERAIL	

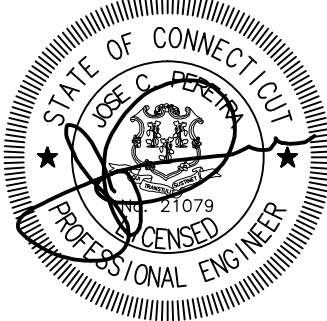


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SEALS



TOWN OF TRUMBULL,
CONNECTICUT

BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY
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DATE: SEPTEMBER 2017
PROJECT NO.: 06532002.0000
FILE NAME: 1108SP02
DESIGNED BY: K. BUDA
DRAWN BY: E. HOMBURG
CHECKED BY: J. PEREIRA

SHEET TITLE

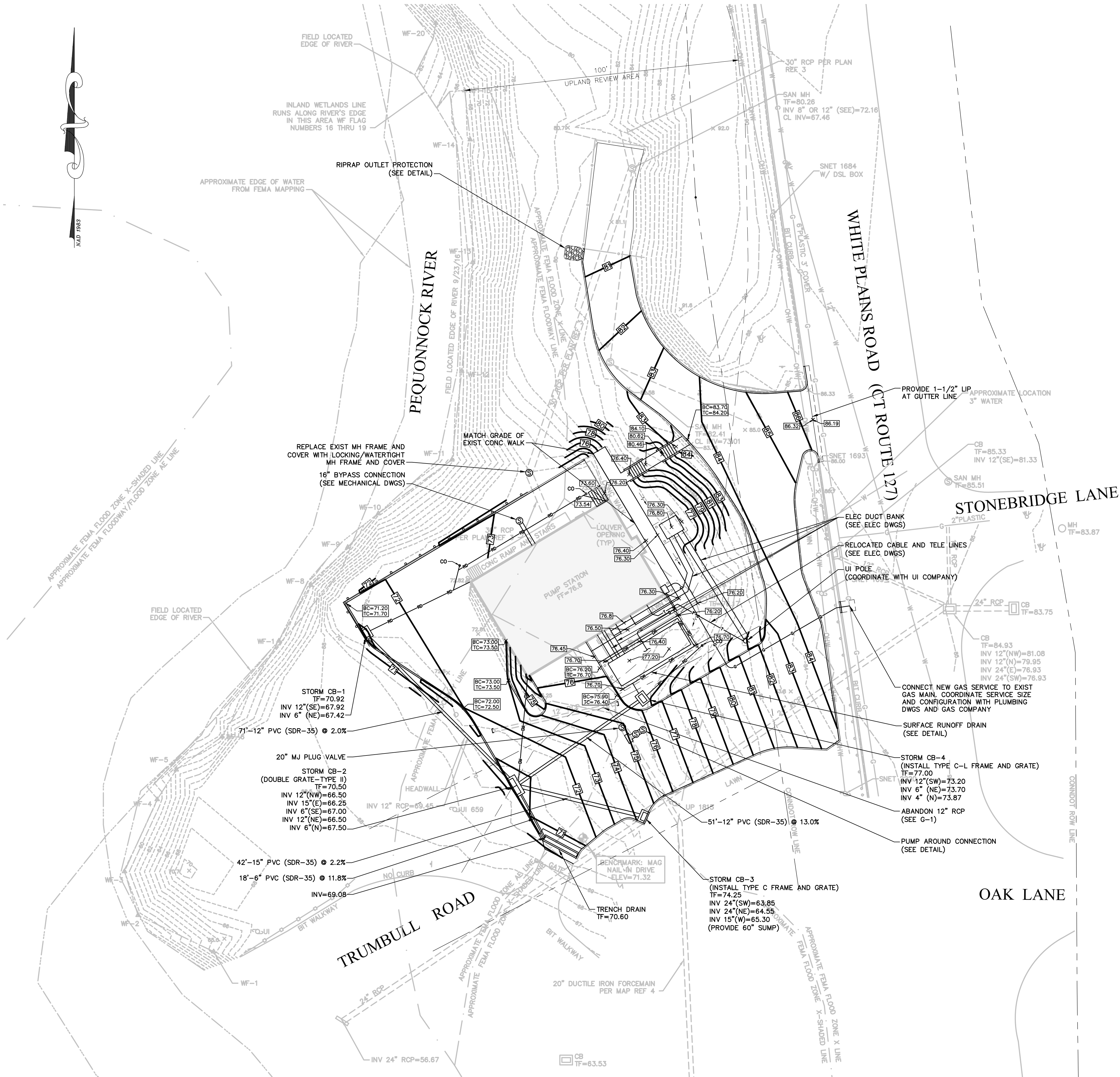
SITE PLAN

SCALE: 1"=20'

C-1

SHEET 7 OF 69

User:ERIC Spec:AUS-NC5MOD File:G:\1108\DWG\1108SP03.DWG Scale:1:1 Saved:9/27/2017 12:28:11 Plot Date: 9/27/2017 Time:10:46 Plot Date: Eric Homburg, 9/27/2017, 12:28:11 Layout:8



GRADING AND UTILITY NOTES:

1. THE CONTRACTOR SHALL PRESERVE AND PROTECT EXISTING TREES WHERE POSSIBLE REFER TO "SOIL EROSION AND SEDIMENT CONTROL PLAN" FOR LIMIT OF DISTURBANCE AND NOTES.
2. ALL TOPSOIL SHALL BE STRIPPED FROM PROPOSED DISTURBED AREAS AND STOCKPILED FOR USE IN FINAL LANDSCAPING. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL AS APPROVED BY ENGINEER AT NO ADDITIONAL COST TO OWNER. ADDITIONAL (SCREENED) TOPSOIL REQUIRED FOR FINAL LANDSCAPING SHALL BE PROVIDED AT NO ADDITIONAL COST TO OWNER. FINAL TOPSOIL DEPTHS SHALL BE 6-INCHES FOR LAWN AREAS AND 9-INCHES FOR PLANT BEDS.
3. THE CONTRACTOR SHALL COMPACT FILL UNDER ALL PARKING, BUILDING, AND DRIVE AREAS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557(MODIFIED PROCTOR TEST), OR AS DIRECTED BY THE ENGINEER.
4. GRADE AWAY FROM BUILDINGS AT 2% MINIMUM. MINIMUM GRADE IN PAVED AREAS AND SIDEWALKS IS 1% (TYPICALLY 2%).
5. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEMS CAPABLE OF SUPPORTING EXCAVATION SIDEWALLS AND OF RESISTING SOIL AND HYDROSTATIC PRESSURE AND SUPERIMPOSED AND CONSTRUCTION LOADS.
6. MANHOLE RIMS, CATCH BASIN GRATES, VALVE COVERS, AND OTHER SIMILAR STRUCTURES SHALL BE SET TO ELEVATIONS SHOWN, AND SHALL BE ADJUSTED 1/4" BELOW GRADE WITHIN PAVED AREAS. ALL EXISTING MANHOLE RIMS, CATCH BASIN GRATES, VALVE COVERS, AND OTHER SIMILAR STRUCTURES SHALL BE RESET FLUSH WITH FINAL GRADES AS REQUIRED. ANY DAMAGED RIMS, TOPS, GRATES, AND VALVE COVERS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
7. ALL EXISTING PAVEMENT WHERE UTILITIES ARE TO BE INSTALLED SHALL BE SAWCUT. AFTER UTILITY INSTALLATION IS COMPLETED, THE CONTRACTOR SHALL INSTALL TEMPORARY AND PERMANENT PAVEMENT REPAIR AS DETAILED ON THE DRAWINGS OR AS REQUIRED.
8. INFORMATION ON EXISTING UTILITIES HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY AND MUNICIPAL RECORD MAPS AND FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF UTILITIES INCLUDING SERVICES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" LOCATING SERVICE AT 1-(800)-922-4455 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO CONSTRUCTION AND VERIFY UNDERGROUND AND OVERHEAD UTILITY LOCATIONS. CONTRACTOR SHALL HIRE A PRIVATE UTILITY LOCATING SERVICE (AT HIS OWN EXPENSE) TO VERIFY AND/OR LOCATE ANY/ALL UTILITIES THAT CBYD DOES NOT LOCATE. ANY/ALL REFERENCES ON DRAWINGS TO "UTILITIES" INCLUDES ANY/ALL TYPES OF BUILDING AND/OR SITE "SERVICES" AS WELL.
9. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ALL UTILITY COMPANIES PRIOR TO SUBMITTAL OF BID TO ENSURE THAT ALL UTILITY COMPANIES' STANDARDS (AND SPECIFICATIONS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. CONTRACTOR SHALL PROVIDE AND INSTALL ALL ADDITIONAL APPURTENANCES REQUIRED BY UTILITY COMPANIES INCLUDING, BUT NOT LIMITED TO, METERS, METER PITS, VALVES, HAND HOLES, ETC.
10. ALL UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANY'S REQUIREMENTS AND STANDARDS. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES. ALL COSTS, INCLUDING PERMIT FEES, SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF WORK UNDER THIS CONTRACT.
11. UTILITY CONNECTION DESIGN AS REFLECTED ON THIS PLAN MAY CHANGE SUBJECT TO UTILITY COMPANY REQUIREMENTS.
12. ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION PRIOR TO APPROVAL FOR BACKFILL, IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANY AND TOWN REQUIREMENTS.
13. CONTRACTOR SHALL PROVIDE CONCRETE ENCASUREMENT OF PIPING AND UTILITIES WHERE SEPARATION DISTANCES BETWEEN PIPING AND UTILITY CROSSINGS ARE 12" OR LESS. ADDITIONAL PROTECTION MEASURES MAY ALSO BE REQUIRED BY ENGINEER AND WILL BE PROVIDED BY CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
14. ALL DISTURBANCE INCURRED TO TOWN, STATE, OR OTHER PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE RESPECTIVE TOWN, STATE, OR OTHER AUTHORITY.
15. THIS PLAN DETAILS PIPES UP TO 5' FROM THE BUILDING FACE. REFER TO DRAWINGS BY OTHERS FOR ADDITIONAL INFORMATION. SITE CONTRACTOR SHALL SUPPLY AND INSTALL PIPE FITTINGS AND ADAPTERS AS NECESSARY AT BUILDING CONNECTION POINT(S) OR AT EXISTING UTILITY OR PIPE CONNECTION POINT(S).
16. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE SEWERS CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT THE SITE ENGINEER IN THE EVENT OF ANY UNFORESSEEN CONFLICTS BETWEEN EXISTING AND PROPOSED UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE. NO SEPARATE PAYMENT WILL BE MADE FOR TEST PITS.
17. SANITARY SEWER CONSTRUCTION SHALL COMPLY WITH LOCAL SEWER DEPARTMENT AND WPCA STANDARDS.
18. NEW STORM SEWER PIPING SHALL BE RELOCATED AS REQUIRED TO AVOID CONFLICTS WITH EXISTING PIPING AND UTILITIES AT NO ADDITIONAL COST TO OWNER.
19. EARTHEN SLOPES SHALL BE NO STEEPER THAN 2H:1V (3H:1V SLOPES MAX FOR LAWN AREAS). STEEPER SLOPES SHALL BE REINFORCED WITH RIPRAP AND MAY BE GRADED AT 1.5H:1V (MAX), UNLESS OTHERWISE DETAILED. THIS WORK SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
20. IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL INSTALL TEMPORARY PUMPING SYSTEMS, UNDERDRAINS, CURTAIN DRAINS, AND OTHER MEASURES AS REQUIRED OR AS REQUESTED BY ENGINEER IN ORDER TO PROVIDE DRY, STABLE SUBGRADES. THIS WORK SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
21. ALL GUTTERS AND ROOF DRAINS SHALL BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM AS REQUIRED BY ENGINEER. CONNECT DOWNSPOUTS TO ROOF DRAIN PIPING WITH CAST-IRON DOWNSPOUT SHOES/BOOTS (AT GRADE) AS MANUFACTURED BY NEENAH FOUNDRY COMPANY (MODEL: R-4926-29 SERIES DOWNSPOUT SHOES) OR JAY R. SMITH MFG CO (MODEL: DOWNSPOUT BOOTS). SUBMIT CUT-SHEETS TO ENGINEER PRIOR TO CONSTRUCTION FOR APPROVAL.
22. ALL SOLID ROOF DRAIN PIPING SHALL BE 6" SCHEDULE 40 PVC PLASTIC PIPE (ASTM D1785) WITH SOLVENT WELDED JOINTS.
23. PROVIDE CLEANOUT CONNECTIONS WITH CAST-IRON ACCESS FRAMES AND COVERS (TO GRADE) AT ALL CHANGES IN DIRECTION EXCEEDING 22-1/2" FOR FOOTING DRAINS, ROOF DRAINS, AND SANITARY LATERALS AS DIRECTED BY ENGINEER. CONTRACTOR SHALL ALSO INSTALL CLEANOUTS WITH ACCESS FRAMES AND COVERS FOR FOOTING DRAINS, ROOF DRAINS, AND SANITARY LATERALS DISCOVERED DURING CONSTRUCTION. ACCESS FRAMES AND COVERS SHALL BE PROVIDED AS MANUFACTURED BY CAMPBELL FOUNDRY COMPANY (PATTERN NUMBER 4155). SUBMIT CUT-SHEETS TO ENGINEER PRIOR TO CONSTRUCTION FOR APPROVAL.
24. CONTRACTOR SHALL RELOCATE, REMOVE, AND OTHERWISE MODIFY ANY EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION AS REQUIRED TO AVOID CONFLICTS WITH THE PROPOSED WORK AS DIRECTED BY ENGINEER AT NO ADDITIONAL COST TO OWNER.
25. ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY CONTRACTOR AS DIRECTED BY ENGINEER AT NO ADDITIONAL COST TO OWNER.
26. CONTRACTOR SHALL FLUSH AND CLEANOUT ALL NEW AND EXISTING STORM SEWER SYSTEM (INCLUDING, BUT NOT LIMITED TO, CATCH BASINS, MANHOLES, AND STORMPIPING) LOCATED WITHIN PROJECT WORK AREA INCLUDING ANY STORM STRUCTURES & PIPING LOCATED DOWNSTREAM OF PROJECT WORK AREA TO ENSURE UNINHIBITED FLOW OF STORMWATER TO DISCHARGE POINT.
27. ANY AND ALL EXISTING SEWERS, DRAINS, AND UTILITIES ENCOUNTERED OR DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/RECONNECTED TO OPERATING SEWERS, DRAINS, AND UTILITIES AS DIRECTED BY ENGINEER AT NO ADDITIONAL COST TO OWNER.

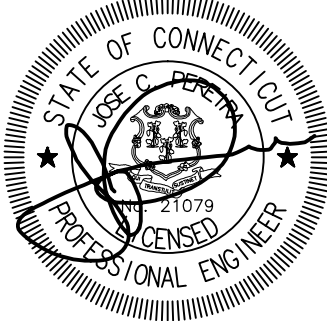


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SEALS



TOWN OF TRUMBULL,
CONNECTICUT

BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY

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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: 1108SP03

DESIGNED BY: K. BUDA

DRAWN BY: E. HOMBURG

CHECKED BY: J. PEREIRA

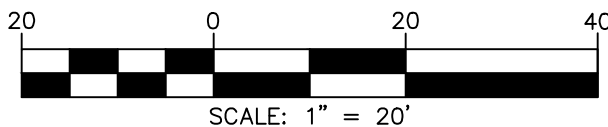
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GRADING AND
UTILITIES PLAN

SCALE: 1"=20'

C-2

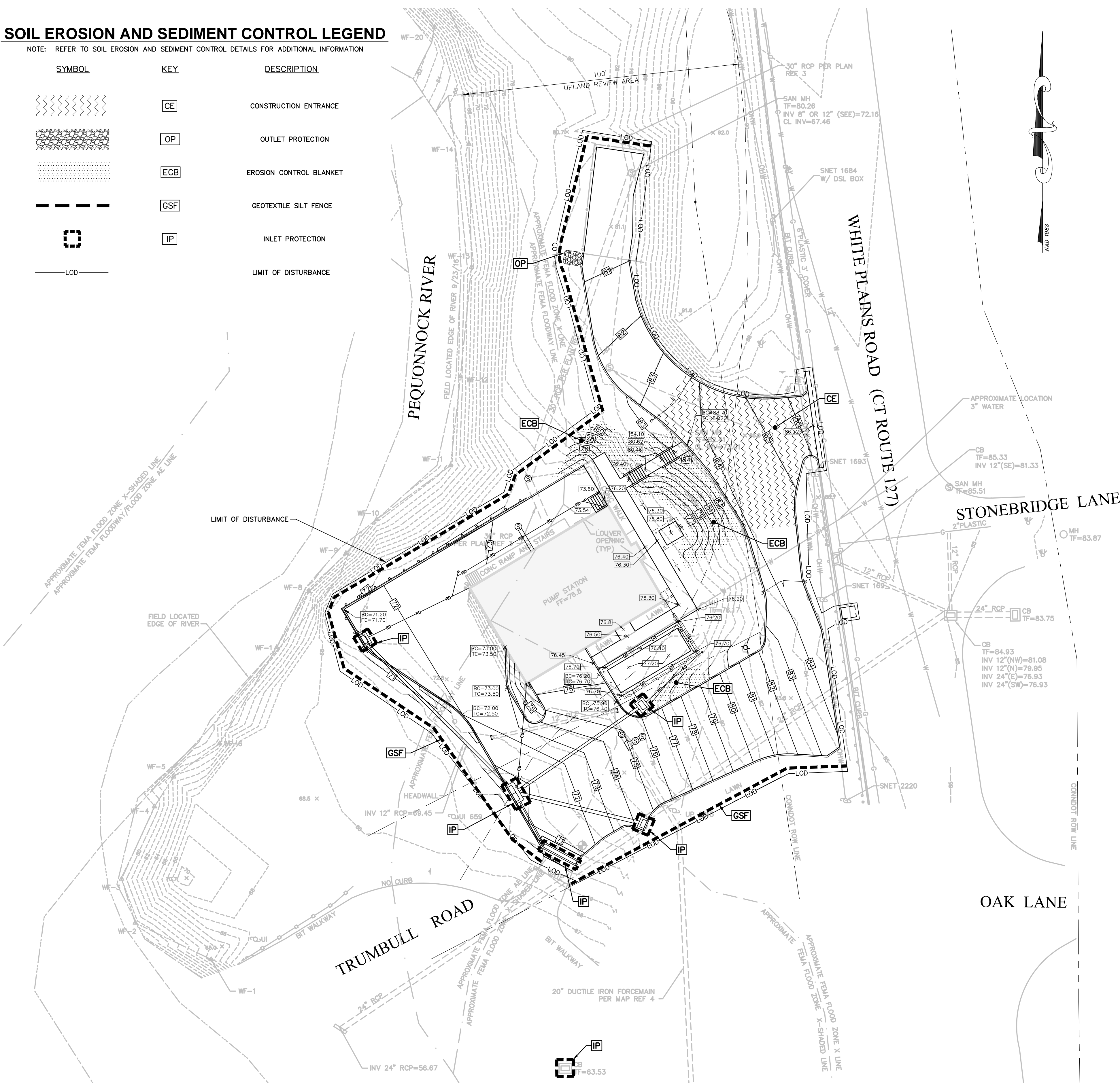
SHEET 8 OF 69



SOIL EROSION AND SEDIMENT CONTROL LEGEND

NOTE: REFER TO SOIL EROSION AND SEDIMENT CONTROL DETAILS FOR ADDITIONAL INFORMATION

SYMBOL	KEY	DESCRIPTION
	CE	CONSTRUCTION ENTRANCE
	OP	OUTLET PROTECTION
	ECB	EROSION CONTROL BLANKET
	GSF	GEOTEXTILE SILT FENCE
	IP	INLET PROTECTION
		LIMIT OF DISTURBANCE



SOIL EROSION AND SEDIMENT CONTROL NOTES:

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CONNECTICUT "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" (LATEST EDITION).
- ALL LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM AND RESTABILIZATION OF ANY DISTURBED AREAS SHALL BE SCHEDULED AS SOON AS PRACTICAL.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION WHENEVER POSSIBLE.
- ALL CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
- ADDITIONAL CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, SILT FENCES, HAYBALE FILTERS, CONSTRUCTION ENTRANCES, RIPRAP, AND EROSION CONTROL BLANKETS SHALL BE INSTALLED DURING THE CONSTRUCTION PERIOD AS NECESSARY OR REQUIRED BY ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
- ALL CONTROL STRUCTURES SHALL BE INSPECTED AND CLEANED PERIODICALLY. ALL SEDIMENT REMOVED FROM CONTROL STRUCTURES SHALL BE DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THE PLAN.
- FOR EROSION AND SILTATION CONTROL, SILT FENCES AND HAYBALE FILTERS SHALL BE INSTALLED AROUND ALL STOCKPILES OF FILL MATERIALS; OR AS DIRECTED BY THE LOCAL AUTHORITY. ONCE STOCKPILES ARE IN PLACE THEY SHALL BE SEED TO PREVENT EROSION.
- IF DISTURBED AREAS CANNOT BE SEED IMMEDIATELY DUE TO TIME OF YEAR, THEN MULCH AREA UNTIL SEEDING CAN OCCUR. REMOVE MULCH AND SEED AND REMULCH WHEN SEASON PERMITS.
- CATCH BASINS SHALL BE PROTECTED BY SILT SACK FILTERS AND AS SHOWN ON THE DRAWINGS THROUGHOUT THE CONSTRUCTION PERIOD UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED.
- HAYBALE FILTERS AND SILT FENCES WILL BE INSTALLED AT ALL CULVERT OUTLETS AND ALONG THE TOE OF ALL CRITICAL CUT AND FILL SLOPES.
- STORMWATER DISCHARGE AREAS WILL BE PROTECTED WITH RIPRAP CHANNELS AND ENERGY DISSIPATORS AS REQUIRED AND NECESSARY.
- ALL DEWATERING PUMPING MUST HAVE SEDIMENT AND EROSION CONTROL PROVISIONS TO MAINTAIN CLEAR WATER DISCHARGE (NOT MUDDY). EACH DEWATERING PUMP SHALL DISCHARGE INTO THE EXISTING OR PROPOSED STORM DRAINAGE SYSTEM IN A MANNER THAT WILL NOT CAUSE EROSION, SEDIMENTATION, NUISANCE, OR SAFETY HAZARDS. EACH DEWATERING PUMP INTAKE SHALL BE PLACED IN A CLEAN, PERFORATED 55-GALLON DRUM, SURROUNDED BY AT LEAST 18 INCHES OF 3/4" CLEAN, CRUSHED STONE. THE ENTIRE SURFACE OF THE DRUM (SIDES, TOP, AND BOTTOM) SHALL BE PROTECTED FROM SILTY WATER ENTERING THE DRUM. IF NECESSARY, THE PUMP DISCHARGE SHALL PASS THROUGH A SETTLEMENT BASIN OF ADEQUATE SIZE TO FURTHER CLARIFY THE PUMP DISCHARGE PRIOR TO ENTERING THE STORM DRAINAGE SYSTEM. SUCH BASIN COULD BE MADE FROM AN EXCAVATED PIT OR BY USING A SEALED TRASH DUMPSTER. THE BASIN WOULD HAVE A PIPED OVERFLOW LEADING INTO THE STORM DRAINAGE SYSTEM. ALTERNATIVE METHODS MAY BE USED, SUCH AS WELL POINTS, OTHER TYPES OF PUMP INTAKE FILTERS, AND SETTLEMENT BASINS, IF APPROVED BY THE ENGINEER AND COVERING AGENCIES. ALL PUMP DISCHARGE FROM DEWATERING SHALL BE CLEAR AT THE POINT WHERE IT FLOWS OFF THE PROPERTY.
- THE CONTRACTOR SHALL KEEP ALL PUBLIC ROADWAYS CLEAN AND CLEAR OF ALL MUD DURING CONSTRUCTION AND SHALL IMPLEMENT WHATEVER MEASURES DIRECTED BY THE LOCAL AUTHORITY. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE CONSTRUCTION OF CONSTRUCTION ENTRANCES (ANTI-TRACKING PADS) 12" DEEP WHERE SHOWN ON PLAN OR AS DIRECTED BY THE LOCAL AUTHORITY.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AS RELATED TO SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, DEEP PERMITS.
- THE CONTRACTOR IS DESIGNATED AS SITE MONITOR AND IS RESPONSIBLE FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, NOTIFYING THE INLAND WETLANDS COMMISSION OF ANY TRANSFER OF THIS RESPONSIBILITY, AND FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED.

SOIL EROSION AND SEDIMENT CONTROL NARRATIVE:

- THE PROPOSED IMPROVEMENTS INCLUDES THE FOLLOWING: (1) DEMOLITION OF EXISTING BITUMINOUS AND CONCRETE PAVEMENTS, AND ASSOCIATED APPURTENANCES; (2) INSTALLATION OF NEW BITUMINOUS AND CONCRETE PAVEMENTS; (3) INSTALLATION OF STORMWATER DRAINAGE SYSTEM, UTILITY PADS AND ASSOCIATED GRADING; (4) INSTALLATION OF NEW PUMP AROUND CONNECTION. THE EXISTING BUILDING IS SERVICED BY PUBLIC WATER AND SANITARY SEWERS. THE TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 0.48 ACRES.
- PRIOR TO COMMENCEMENT OF CONSTRUCTION, A PRECONSTRUCTION MEETING IS TO BE HELD WITH THE DESIGN ENGINEER, OWNER, GENERAL CONTRACTOR, AND REPRESENTATIVES FROM THE TOWN OF TRUMBULL (INCLUDING THE TOWN ENGINEER, AND/OR ZONING ENFORCEMENT OFFICER, AND/OR WETLANDS ENFORCEMENT OFFICER).
- MAINTENANCE OF THE EROSION CONTROLS SHALL CONSIST OF INSPECTION AT THE START OF EACH WORK DAY WITH SPECIAL ATTENTION AFFORDED FOLLOWING STORM EVENTS. NOTED DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY. BUILT UP SEDIMENT SHALL BE REMOVED FROM EROSION CONTROL DEVICES AND DISPOSED OF IN A MANNER CONSISTENT WITH THIS PLAN. ADDITIONAL SEEDING OR MULCHING SHALL BE EMPLOYED AS REQUIRED. WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED OR HAVE TEMPORARILY BEEN SUSPENDED FOR MORE THAN SEVEN DAYS, OR WHEN FINAL GRADES ARE REACHED IN ANY PORTION OF THE SITE, STABILIZATION PRACTICES SHALL BE IMPLEMENTED WITHIN THREE DAYS. AREAS WHICH REMAIN DISTURBED BUT INACTIVE FOR AT LEAST THIRTY DAYS SHALL RECEIVE TEMPORARY SEEDING AND MULCHING IN ACCORDANCE WITH THE SOIL EROSION GUIDELINES.

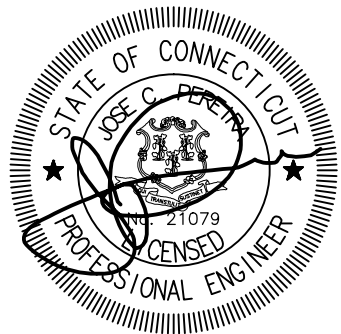


LEGAL ENTITY:
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SEALS



TOWN OF TRUMBULL,
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BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

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DATE: SEPTEMBER 2017
PROJECT NO.: 06532002.0000
FILE NAME: 1108SP04
DESIGNED BY: K. BUDA
DRAWN BY: E. HOMBURG
CHECKED BY: J. PEREIRA

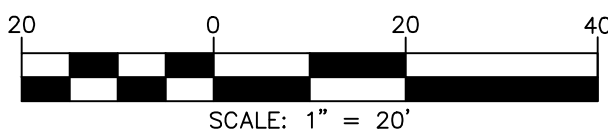
SHEET TITLE

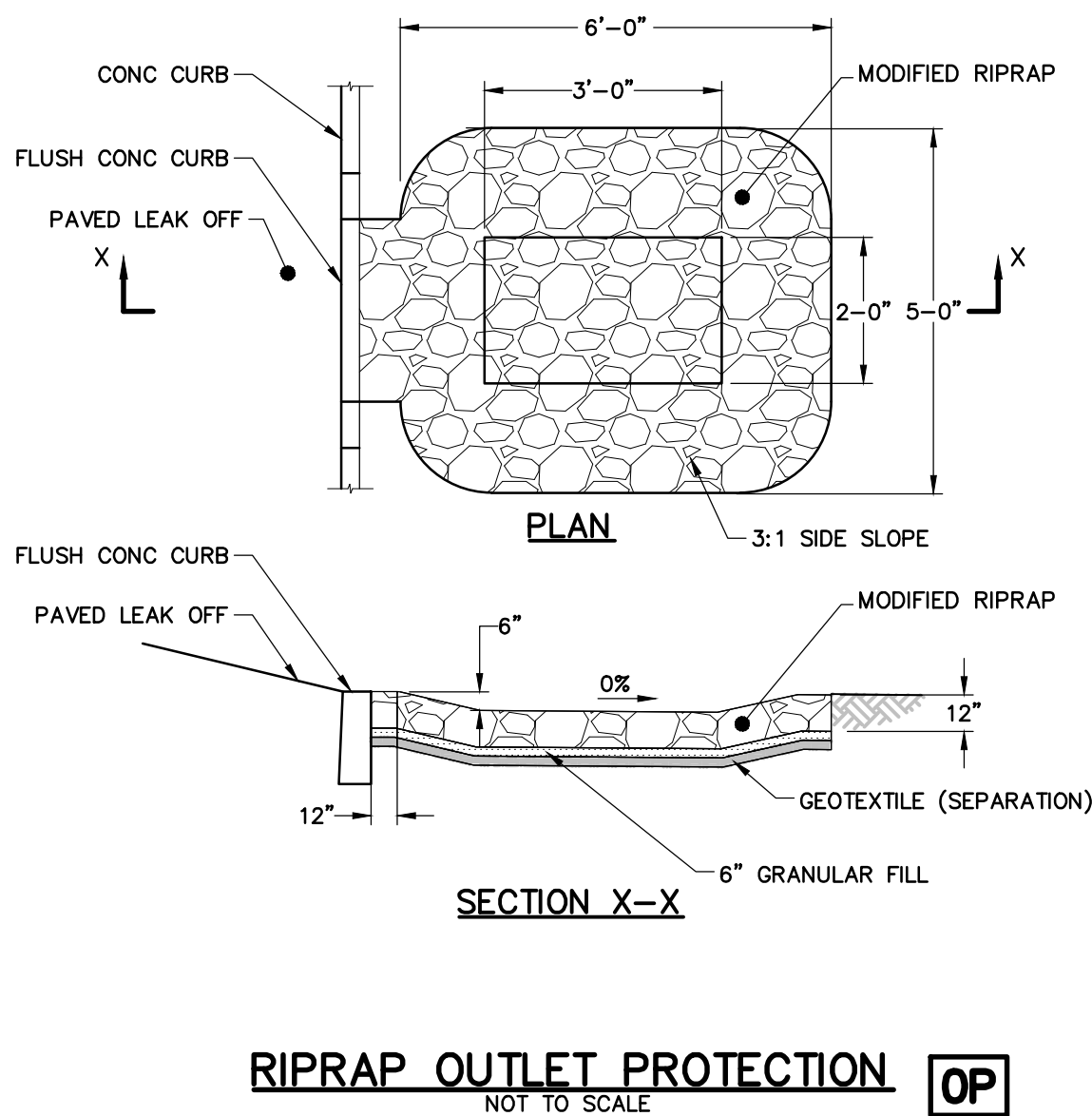
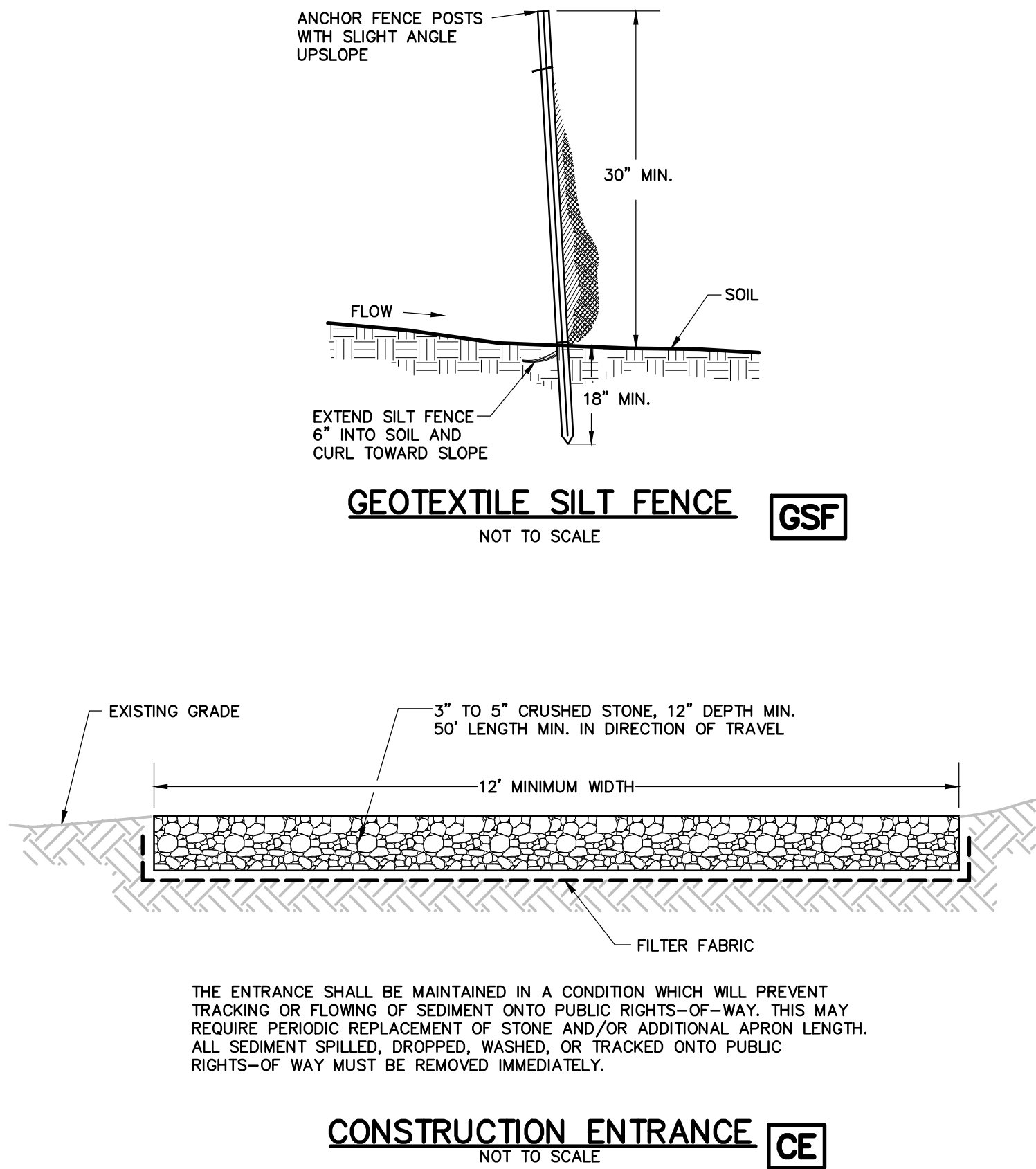
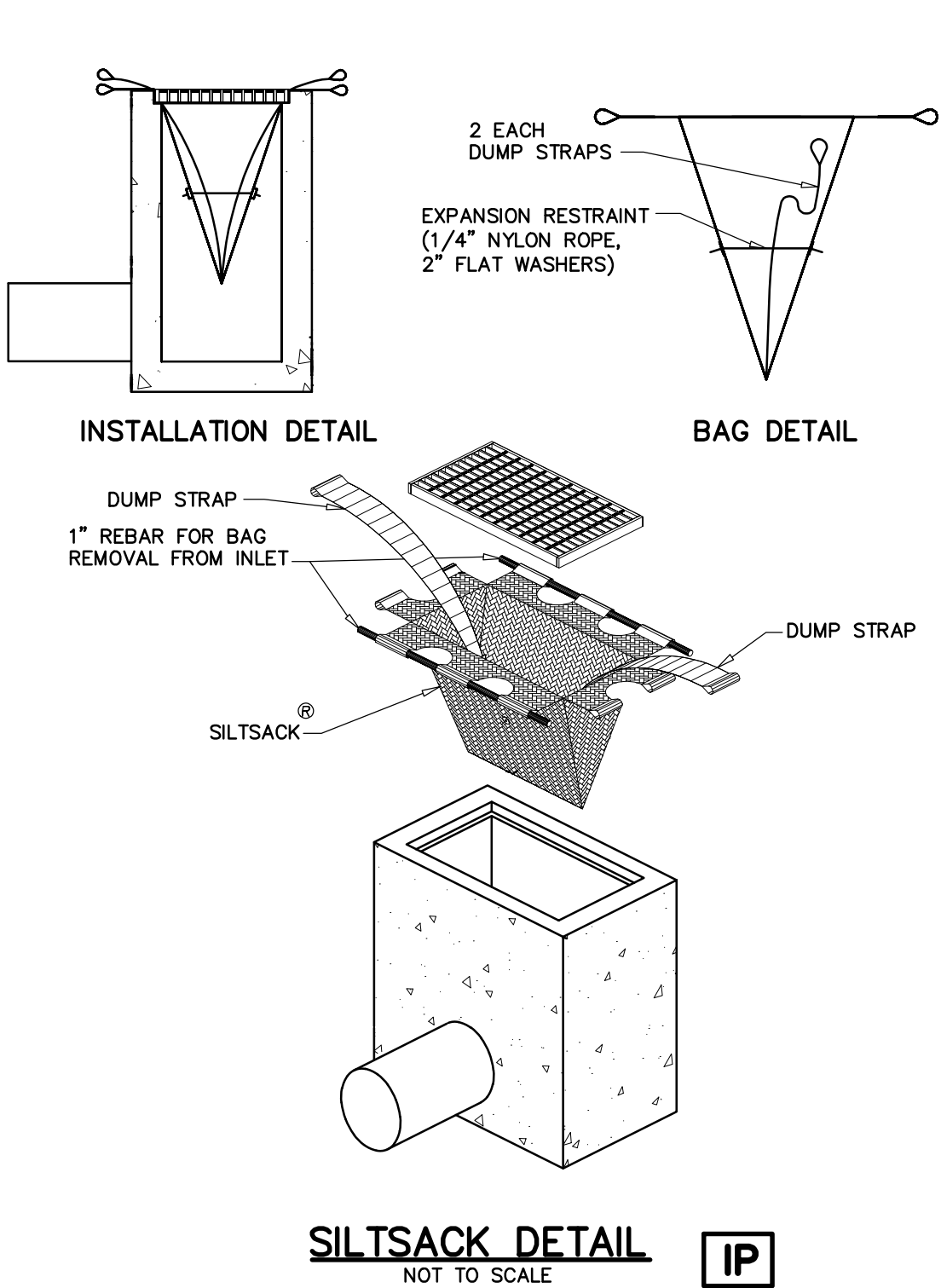
SOIL EROSION AND
SEDIMENT CONTROL
PLAN

SCALE: 1"=20'

C-3

SHEET 9 OF 69





1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
 2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
 3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
 4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
 5. CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.
 6. SPECIFICATION: THE EROSION CONTROL BLANKET SHALL BE A MACHINE-PRODUCED MAT OF 100% AGRICULTURAL STRAW MATRIX WITH A FUNCTIONAL LONGEVITY OF APPROXIMATELY 12 MONTHS. (NOTE: FUNCTIONAL LONGEVITY MAY VARY DEPENDING UPON CLIMATIC CONDITIONS, SOIL, GEOGRAPHIC LOCATION, AND ELEVATION).
- THE BLANKET SHALL BE OF CONSISTENT THICKNESS WITH THE STRAW EVENLY DISTRIBUTED OVER THE ENTIRE AREA OF THE MAT. THE BLANKET SHALL BE COVERED ON THE TOP AND BOTTOM SIDES WITH LIGHTWEIGHT PHOTODEGRADABLE SEWN TOGETHER ON 1.50 INCH (3.81 CM) CENTERS (50 STITCHES PER ROLL WIDTH) WITH DEGRADABLE THREAD.
- INSTALLATION STAPLE PATTERNS SHALL BE CLEARLY MARKED ON THE EROSION CONTROL BLANKET WITH ENVIRONMENTALLY SAFE PAINT. THE BLANKET SHALL BE MANUFACTURED WITH A COLORED LINE OR THREAD STITCHED ALONG BOTH OUTER EDGES (APPROXIMATELY 2-5 INCHES [5-12.5 CM] FROM THE EDGE) TO ENSURE PROPER MATERIAL OVERLAPPING.
- THE STRAW EROSION CONTROL BLANKET SHALL BE MODEL S150 AS MANUFACTURED BY NORTH AMERICAN GREEN, OR EQUIVALENT. (LOCAL DISTRIBUTOR: CONSTRUCTION MATERIALS (203) 335-1873)
- NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

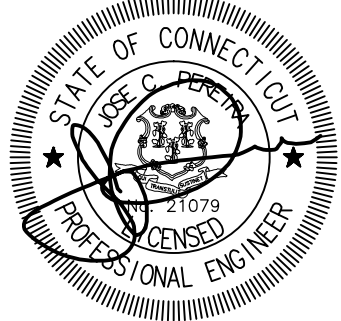


LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS



SEALS



TOWN OF TRUMBULL,
CONNECTICUT

BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY
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2017

DATE: SEPTEMBER 2017
PROJECT NO.: 06532002.0000
FILE NAME: 1108DT01
DESIGNED BY: K. BUDA
DRAWN BY: E. HOMBURG
CHECKED BY: J. PEREIRA

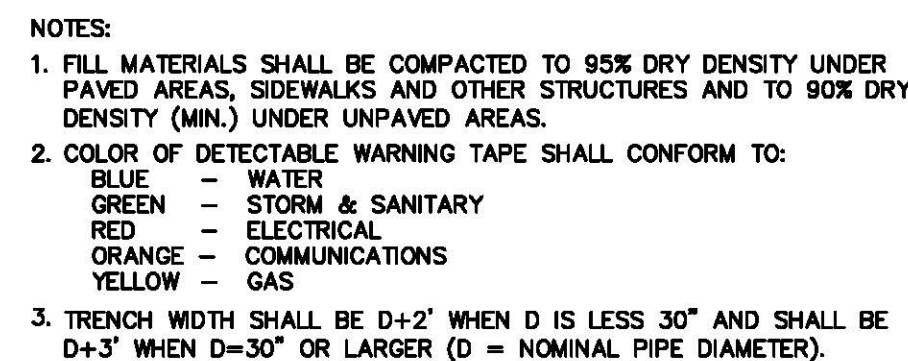
SHEET TITLE

SOIL EROSION AND
SEDIMENT CONTROL
DETAILS

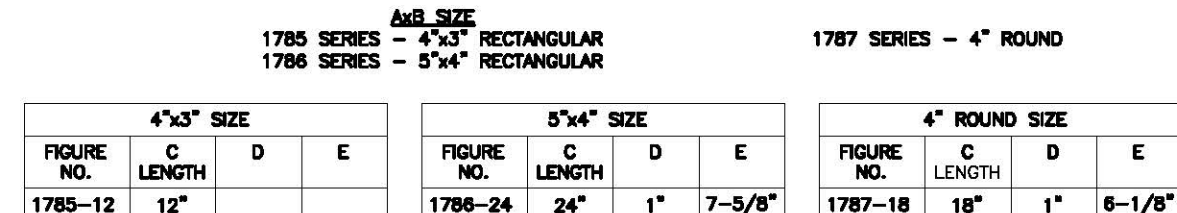
SCALE: AS NOTED

C-4

SHEET 10 OF 69

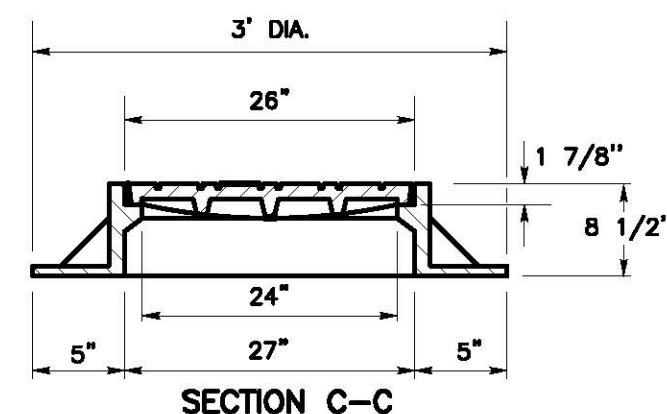


TYPICAL UTILITY TRENCH
NOT TO SCALE

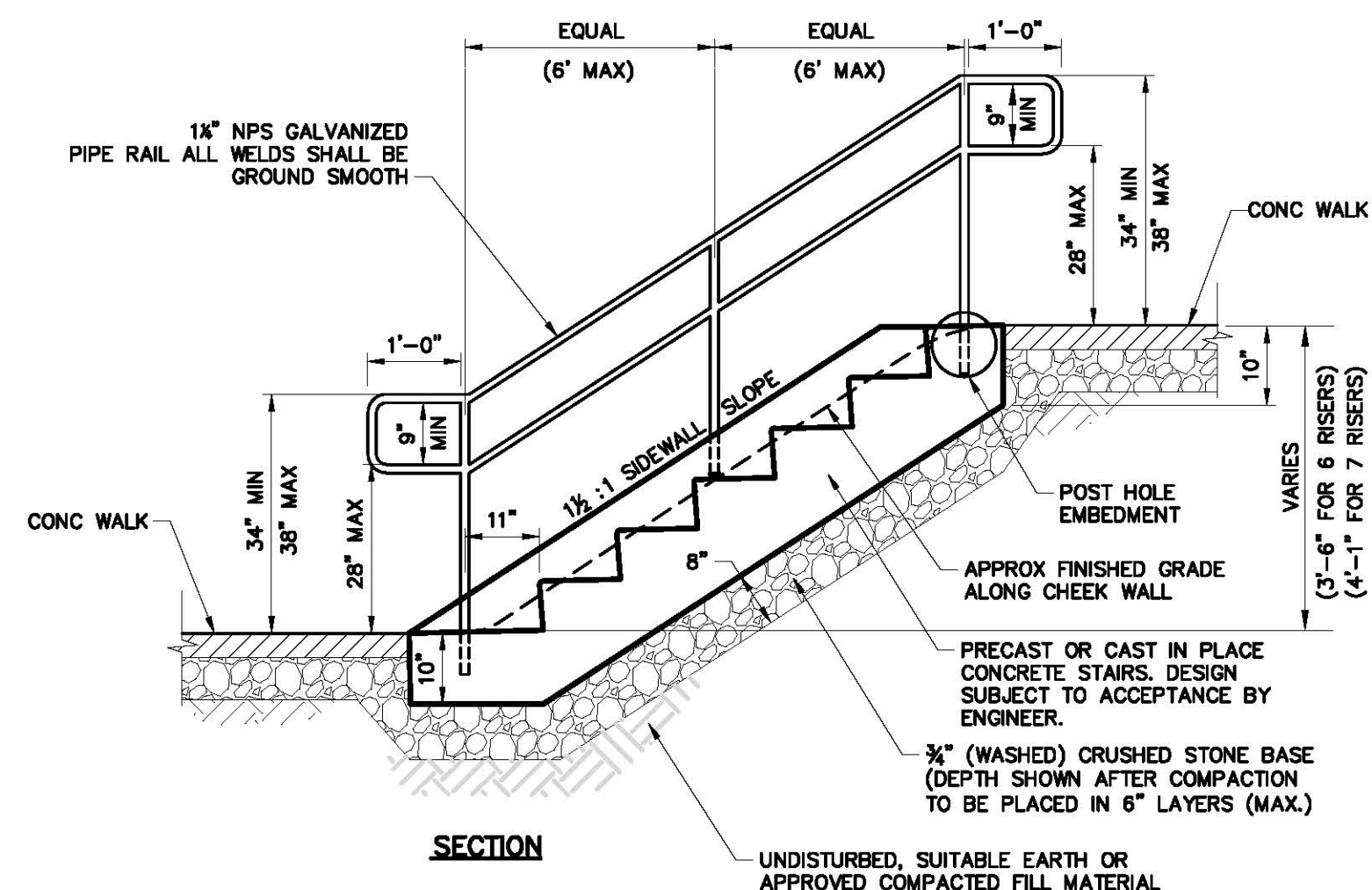
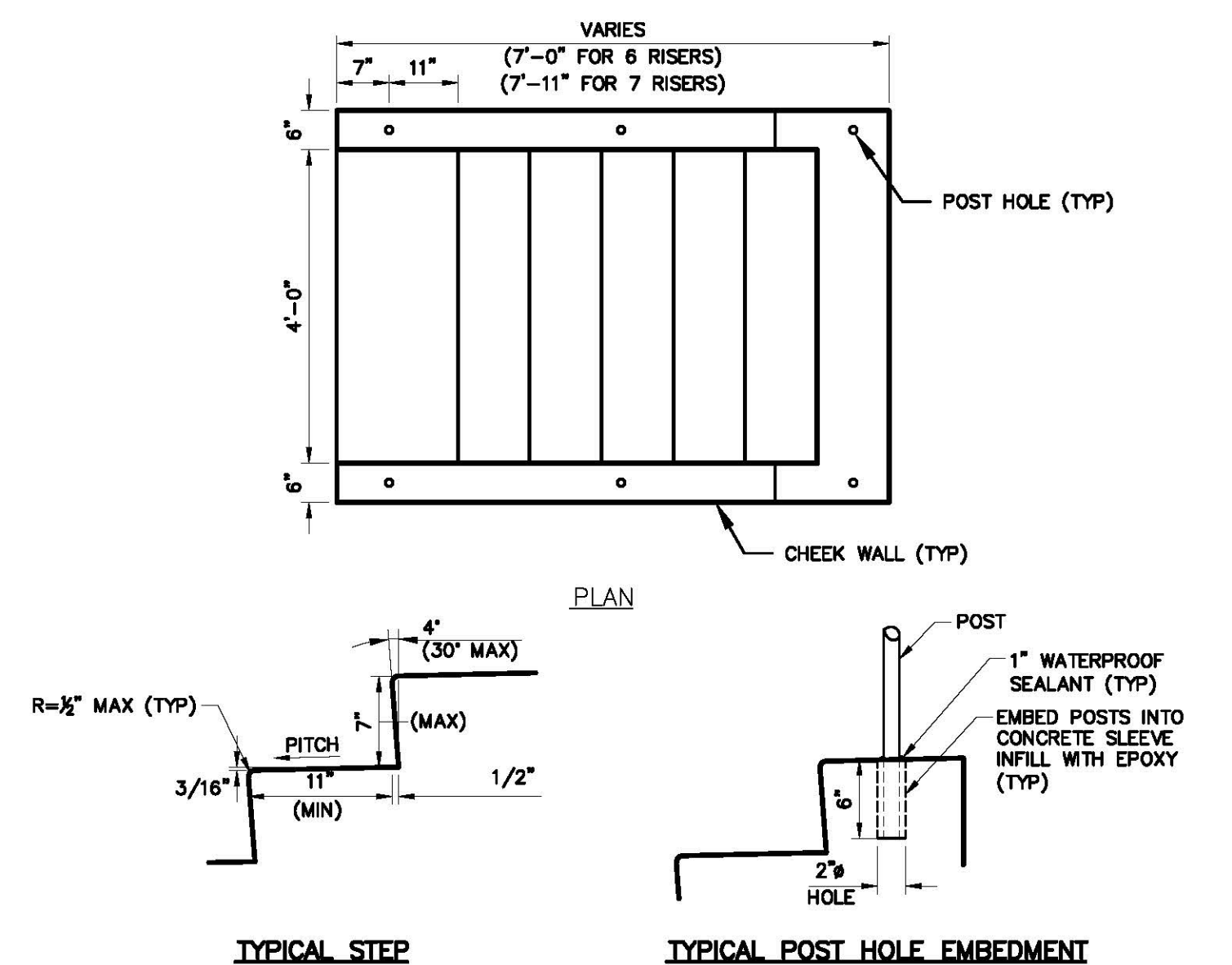


- NOTES:
1. ALL DOWNSPOUT BOOTS HAVE 4" SPIGOT END CONNECTION WITH 4" PIPE.
 2. CONTRACTOR SHALL COORDINATE SIZE & LENGTH OF DOWNSPOUT BOOTS WITH SIZE OF DOWNSPOUTS AND ROOF DRAINS AS NECESSARY.
 3. DOWNSPOUT BOOTS TO BE AS MANUFACTURED BY JAY R. SMITH MFG. CO. OR APPROVED EQUAL.

DOWNSPOUT BOOT DETAIL
NOT TO SCALE

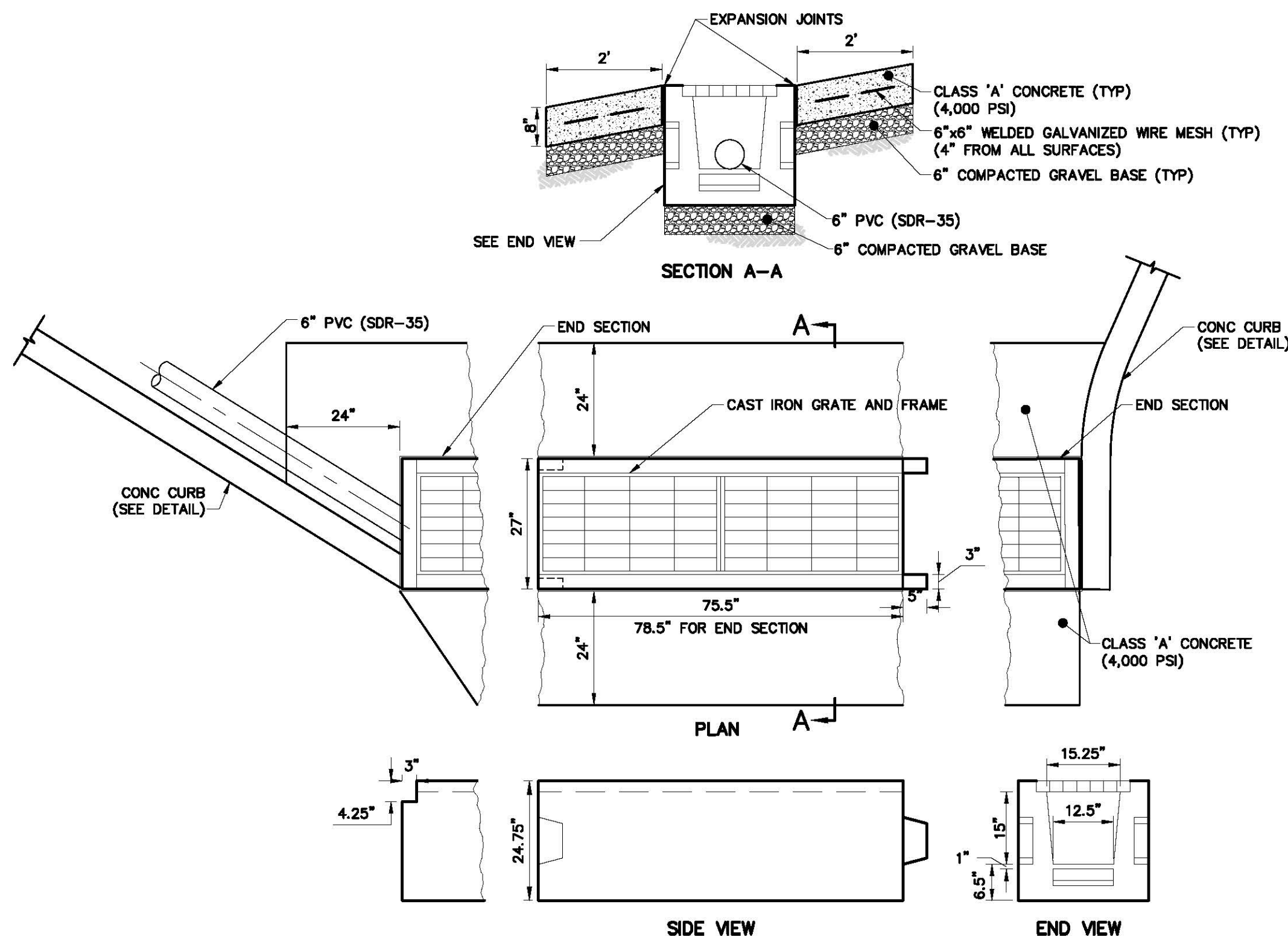


MANHOLE FRAME & COVER
NOT TO SCALE



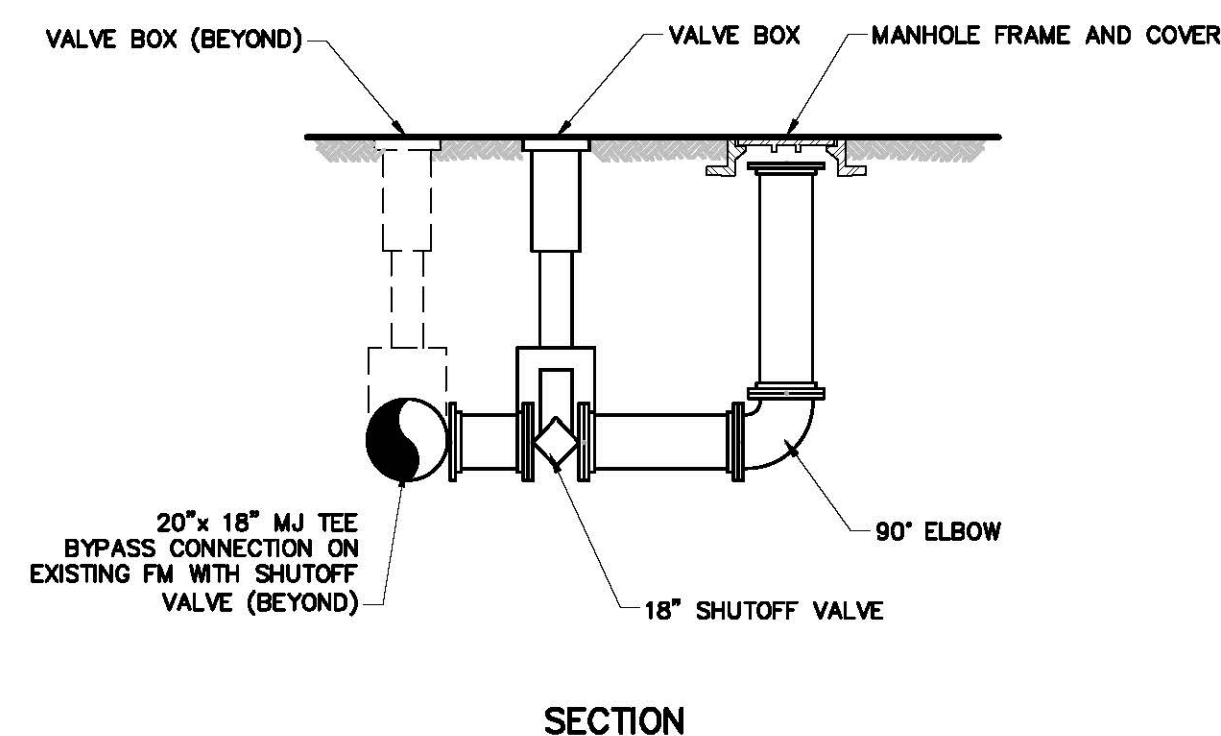
- NOTES:
1. CONTRACTOR SHALL SUBMIT A SHOP DRAWING FOR REVIEW AND APPROVAL BASED ON ACTUAL FIELD CONDITIONS PRIOR TO CONSTRUCTION OF STAIRS. SHOP DRAWING SHALL BE SIGNED AND SEALED BY A QUALIFIED LICENSED ENGINEER.
 2. STAIR TREAD SURFACE SHALL BE SKID RESISTANT.
 3. ALL STEPS SHALL HAVE UNIFORM RISER HEIGHTS AND UNIFORM TREAD DEPTHS. RISERS SHALL BE A MINIMUM OF 4" HIGH TO A MAXIMUM OF 7". HIGHEST TREADS SHALL BE A MINIMUM OF 11" DEEP MEASURED FROM RISER TO RISER.
 4. A HAND RAIL IS REQUIRED ON BOTH SIDES OF STEPS WHERE THE DIFFERENCE IN ELEVATION BETWEEN THE HIGHEST WALKING SURFACE AND THE LOWEST WALKING SURFACE IS GREATER THAN 30".
 5. POSTS SHALL BE NO MORE THAN 48" APART.
 6. THE RAILING BASE CONNECTIONS SHALL BE DESIGNED TO PROVIDE STRENGTH FOR A 251.8 POUND FORCE APPLIED IN ANY LOCATION OR DIRECTION ON THE RAIL.
 7. CONTRACTOR SHALL ENSURE THAT AT ANY POINT ON THE STAIRS, THERE SHALL BE NO MORE THAN A 30" MAX. HEIGHT BETWEEN THE STAIR TREAD AND ADJACENT GRADE.

CONCRETE STAIRS
NOT TO SCALE



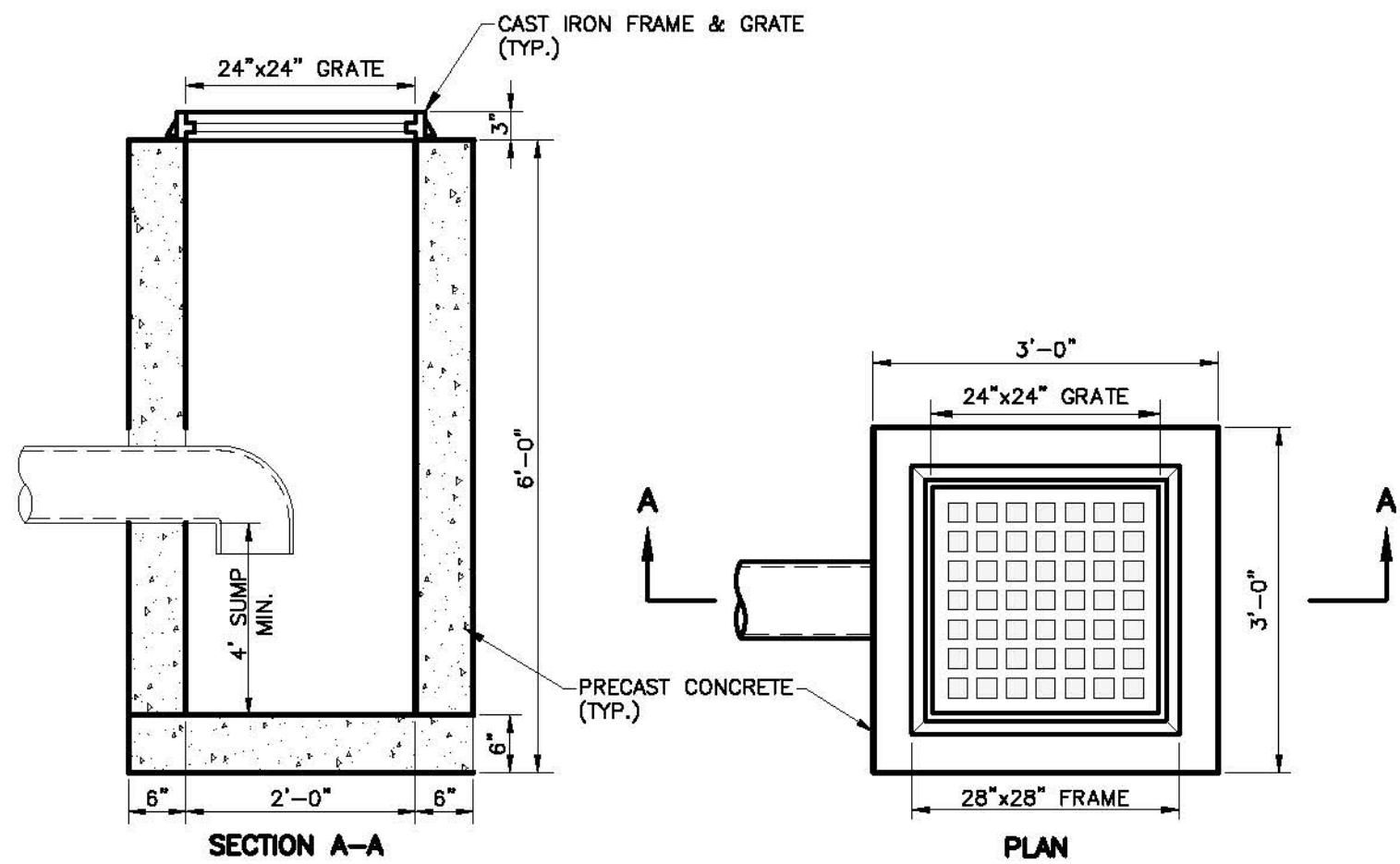
- NOTES:
1. PROVIDE TRENCH DRAIN AS MANUFACTURED BY M&M PRECAST CORPORATION (1-800-247-5559) OR APPROVED EQUIVALENT.
 2. BASE SHALL BE KEPT THOROUGHLY WET DURING COMPACTON AND SHALL BE DAMP WHEN CONCRETE IS POURED (NO POOLS ALLOWED).
 3. ADDITIONAL EXPANSION JOINTS TO BE PROVIDED WHERE THE PAD JOINS ANY RIGID STRUCTURES SUCH AS CURBS, EXISTING TIE WALLS, CURBS, BUILDINGS, WALLS, APRONS, SIDEWALKS, OTHER PAVS, ETC.
 4. EXPANSION JOINT FILLER SHALL BE PREFORMED BITUMINOUS CELLULAR (FIBER) TYPE OR AASHTO M 213 REQUIREMENTS.
 5. CONTRACTOR SHALL REMOVE UNSUITABLE MATERIAL AND REPLACE WITH FILL MATERIAL APPROVED BY THE OWNER AT AN ADDITIONAL COST TO THE OWNER.

TRENCH DRAIN DETAIL
NOT TO SCALE



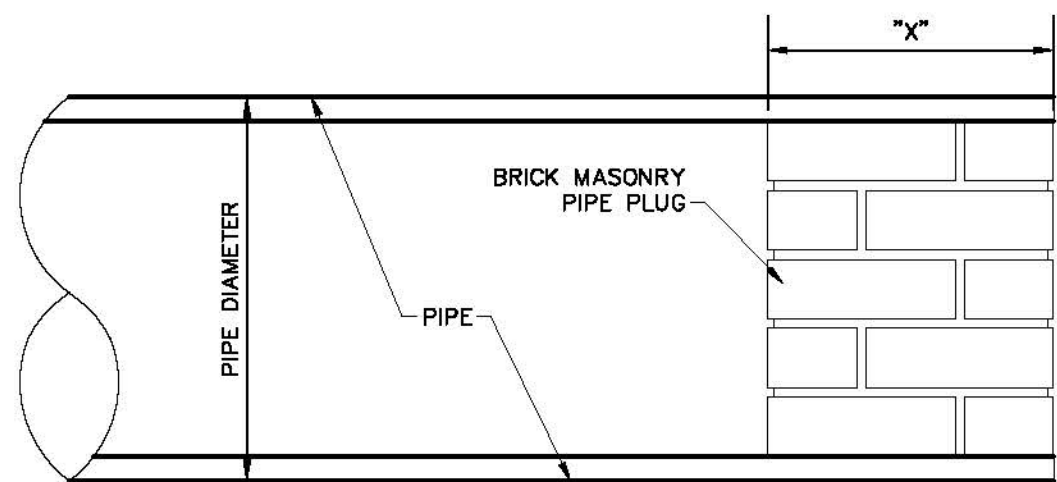
PUMP AROUND CONNECTION DETAIL
NOT TO SCALE

User:ERIC Spec:AUS-NGSMD File:G:\1108\DWG\1108DT05.DWG Scale:1:1 SavedDate:9/27/2017 Time:10:59 Plot Date: Eric Hamburg; 9/27/2017, 12:06 ; Layout:14



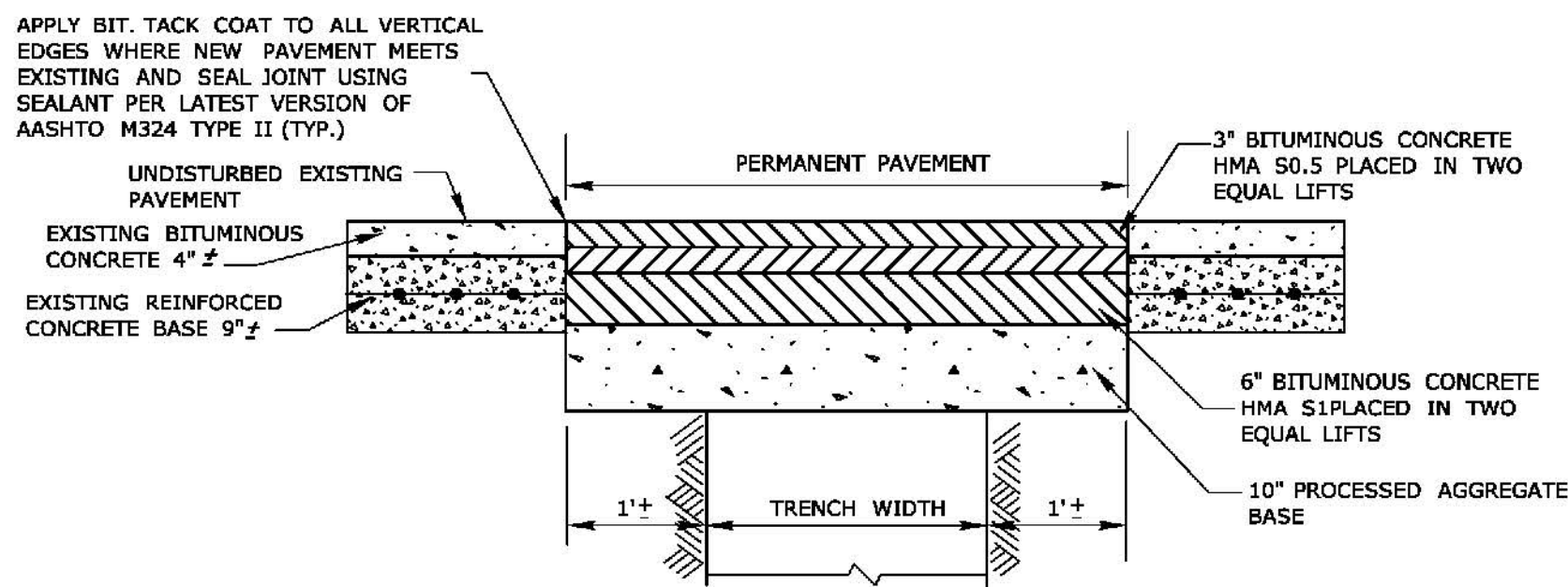
NOTE:
YARD DRAIN TO BE AS MANUFACTURED BY CONNECTICUT PRECAST CORP., MONROE, CT OR EQUIVALENT.

YARD DRAIN
NOT TO SCALE



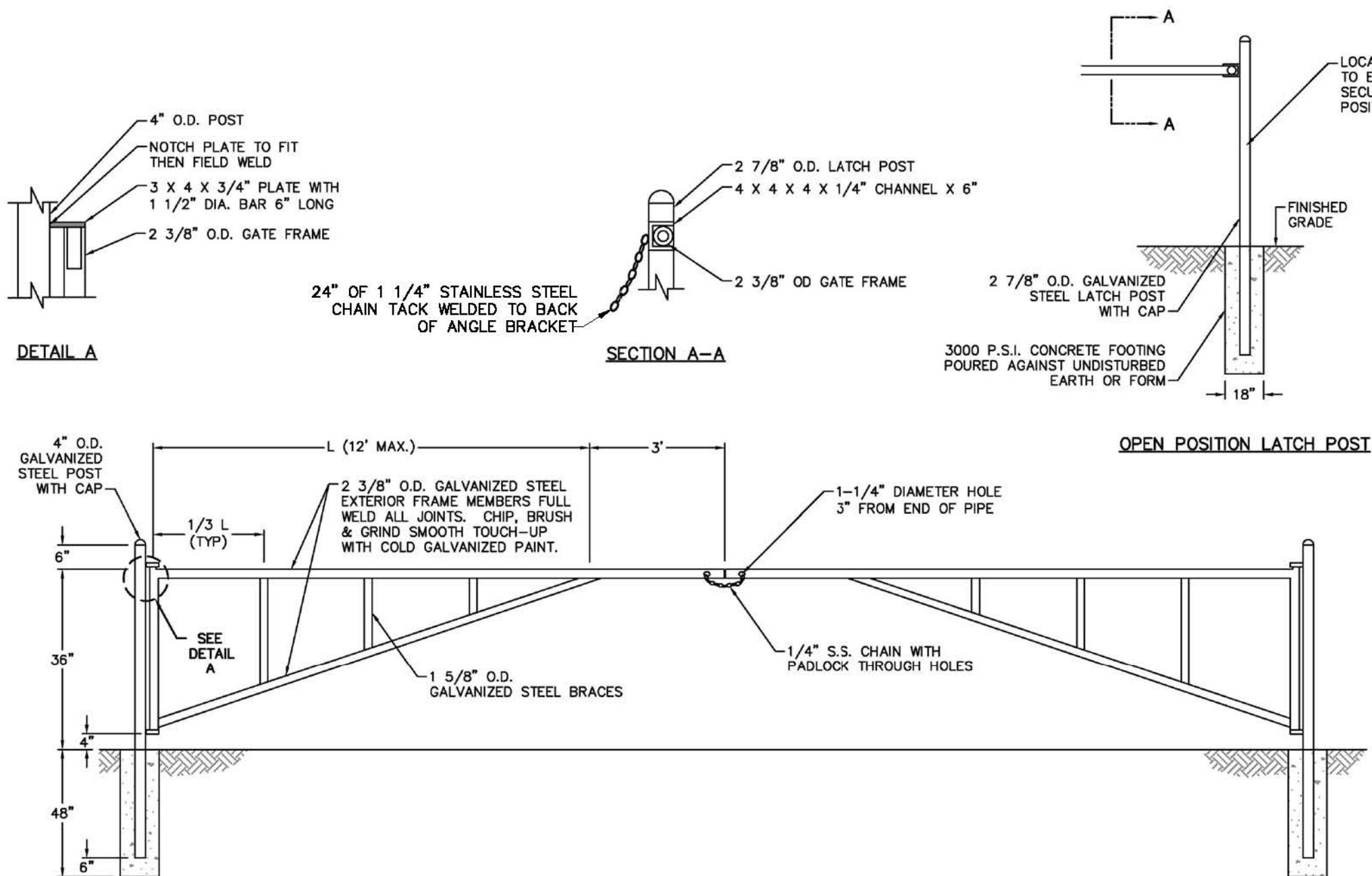
NOTE:
X=12" (FOR PIPE DIAMETER <=12")
X=18" (FOR PIPE DIAMETER >12" & <48)
X=24" (FOR PIPE DIAMETER >=48")

PIPE PLUG DETAIL
NOT TO SCALE

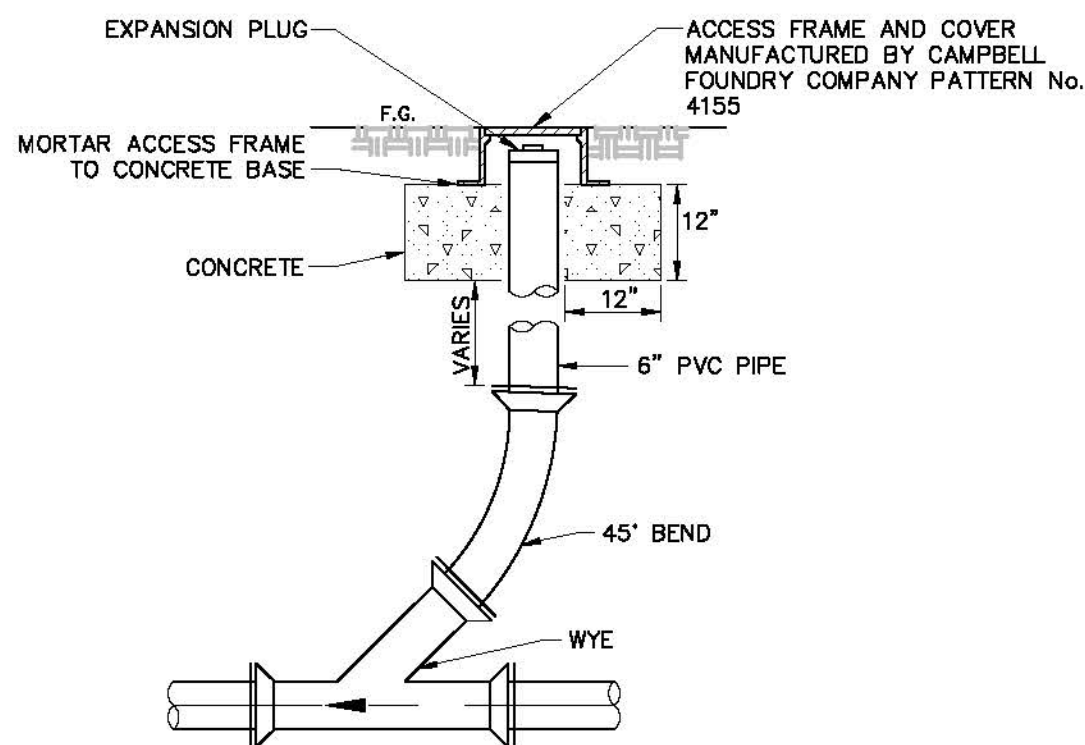


PERMANENT PAVEMENT TRENCH DETAIL
TRENCH PARALLEL TO EDGE OF PAVEMENT

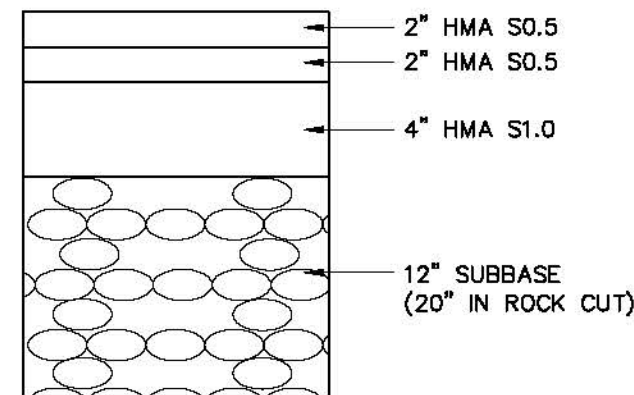
CONNDOT PAVEMENT REPAIR
NOT TO SCALE



STEEL PIPE DOUBLE LEAF SWING GATE
NOT TO SCALE



CLEANOUT
NOT TO SCALE



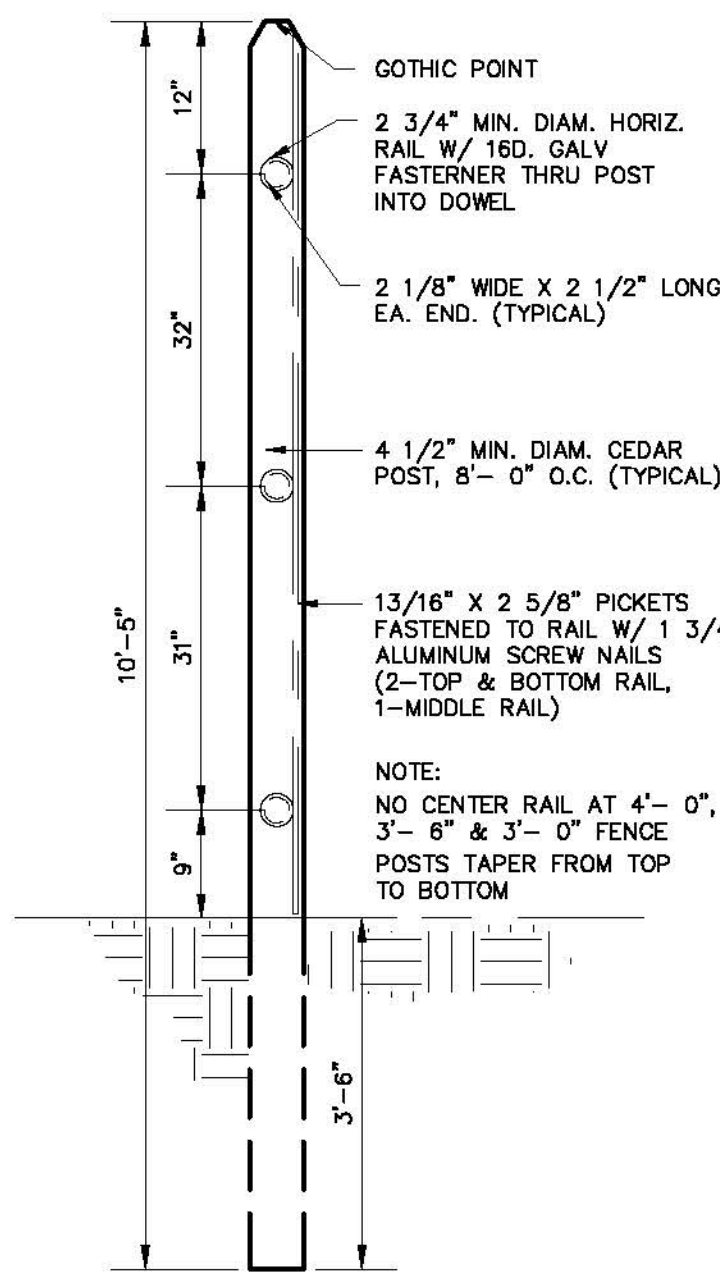
CT DOT PAVEMENT STRUCTURE 3
NOT TO SCALE

NOTICE TO CONTRACTOR - SUPERPAVE DESIGN LEVEL INFORMATION

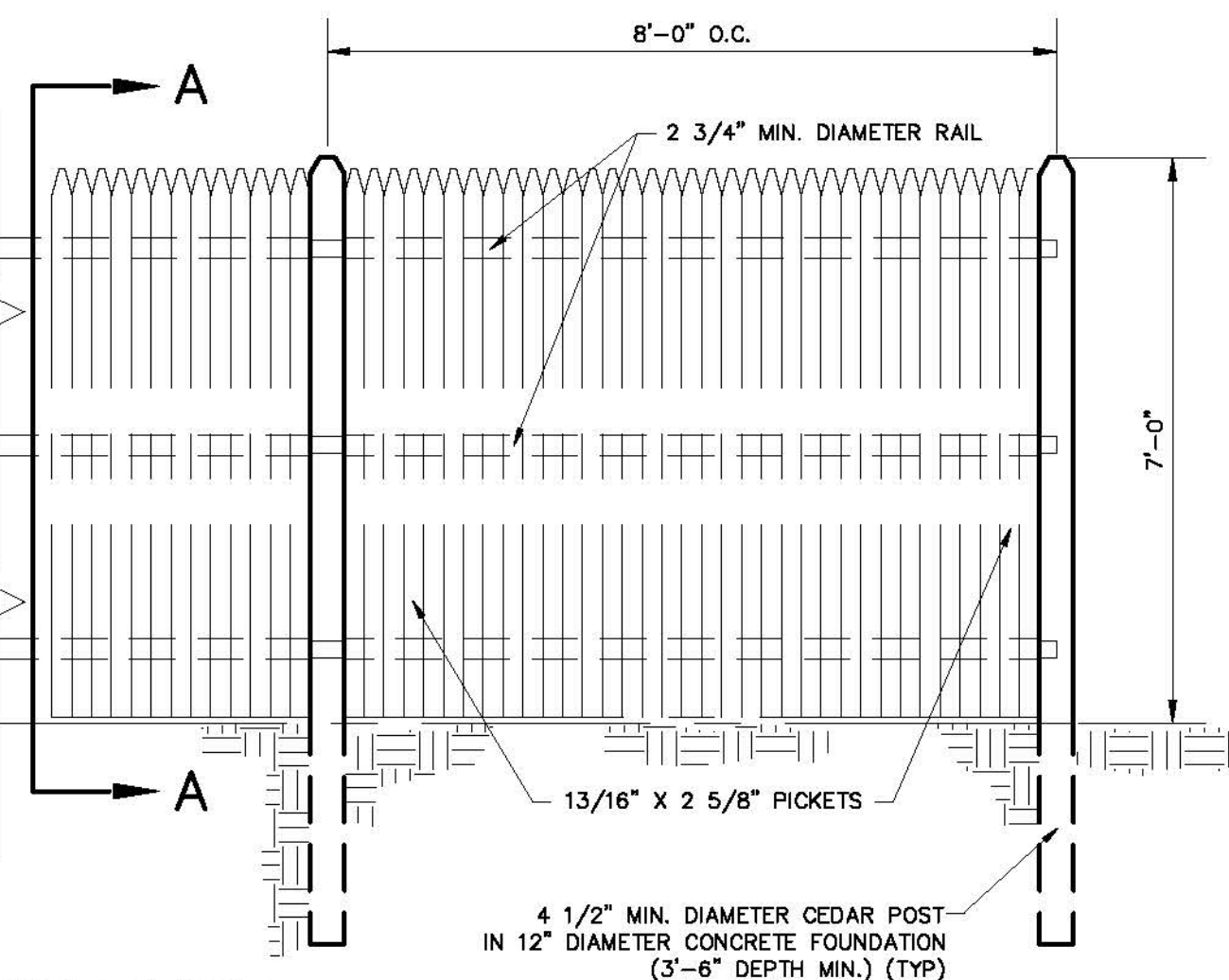
HOT-MIX ASPHALT (HMA) CONSTRUCTED ACCORDING TO THE SUPERPAVE MIX-DESIGN SYSTEM IS REQUIRED TO ATTAIN A SUPERPAVE DESIGN LEVEL AND IS REQUIRED TO USE A PERFORMANCE GRADED (PG) BINDER. THE SUPERPAVE DESIGN LEVEL REQUIRED FOR THIS PROJECT IS LISTED IN TABLE 1. THE REQUIRED PG BINDER IS INDICATED FOR EACH MIX WITH AN "X" IN THE APPROPRIATE BOX IN TABLE 1.

TABLE 1 - SUPERPAVE DESIGN LEVEL AND PERFORMANCE GRADED (PG) BINDER

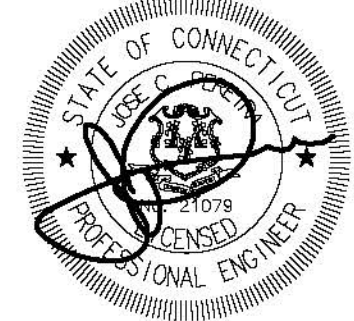
MIX DESIGNATION	PG BINDER PG64-22	ROUTE 127 DESIGN LEVEL	ROUTE - DESIGN LEVEL	ROUTE - DESIGN LEVEL
HMA S0.25	X	2	-	-
HMA S0.375	X	2	-	-
HMA S0.5	X	2	-	-
HMA S1	X	2	-	-



NOTE:
1. ALL FENCING MATERIAL SHALL BE PRESSURE TREATED NORTHERN WHITE TYPE CEDAR ACQ, SAWN TO THE DIMENSIONS SHOWN ON THE DRAWING.
2. ALL FENCE POSTS SHALL BE STAINED AND SEALED AS DIRECTED BY THE CLIENT.
3. POSTS SHALL MAINTAIN A DEPTH OF 3'-6" IN GROUND AND SHALL BE RACKED TO ACCOMMODATE ANY CHANGES IN GRADE.
4. LINE OF FENCE TOP & BOTTOM SHALL BE INSTALLED STRAIGHT AND TRUE. ALL POSTS AND FACING BOARDS OR SLATS SHALL BE INSTALLED PARALLEL AND PLUMB. ALL RAILS SHALL BE INSTALLED PARALLEL AND TRUE.
5. POSTS SHALL BE EMBEDDED IN CONCRETE FOOTINGS (12"DIAM. X 42" DEEP, MIN.)



STOCKADE FENCE
NOT TO SCALE



[illegible]

NO.	DATE	ISSUED FOR	BY
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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: 1108DT06

DESIGNED BY: K. BUDA

DRAWN BY: E. HOMBURG

CHECKED BY: J. PEREIRA

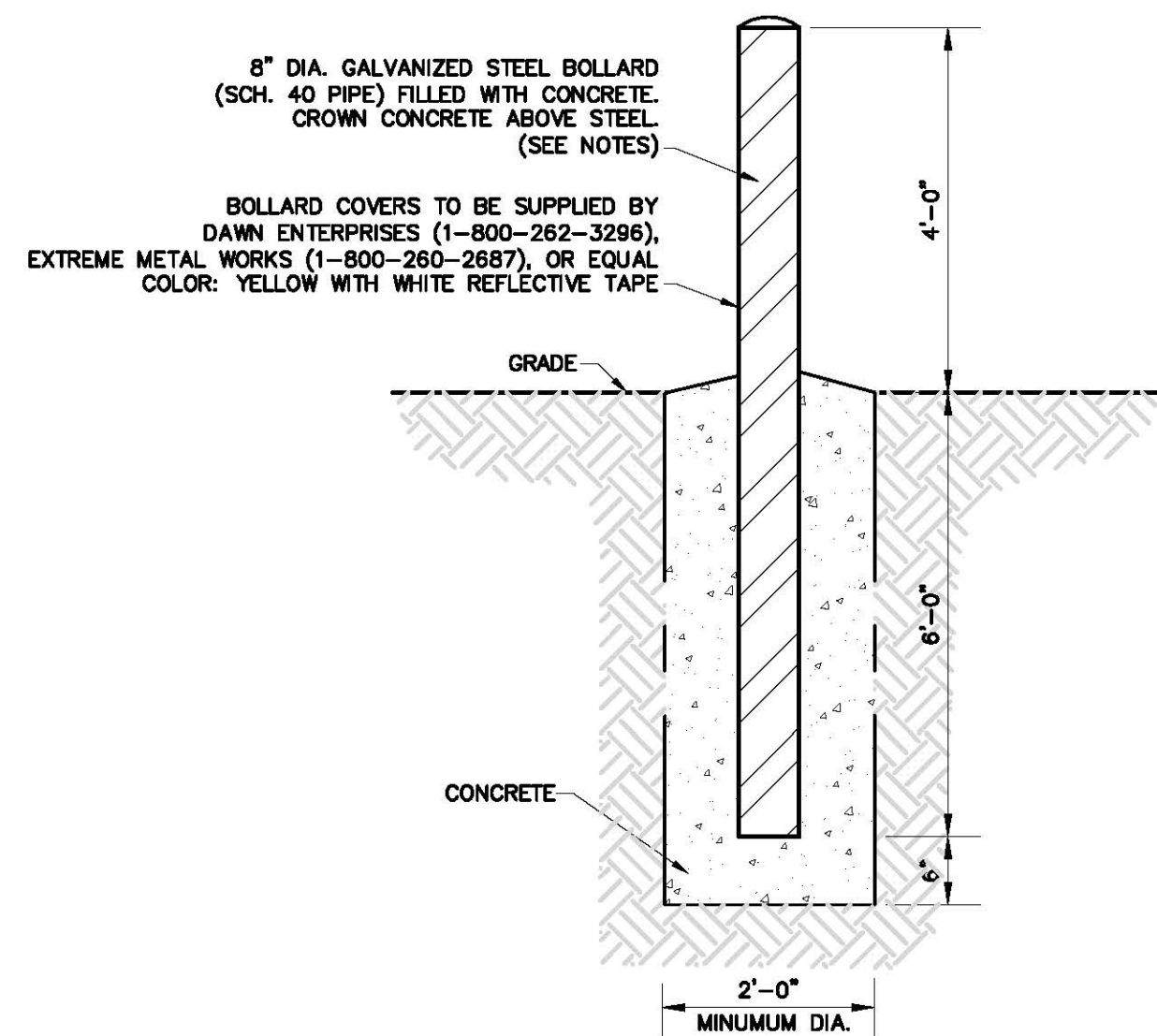
SHEET TITLE

DETAILS V

SCALE: AS NOTED

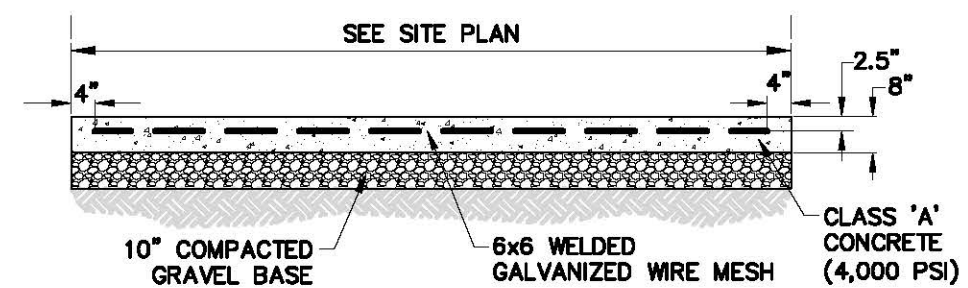
C-9

SHEET 15 OF 69



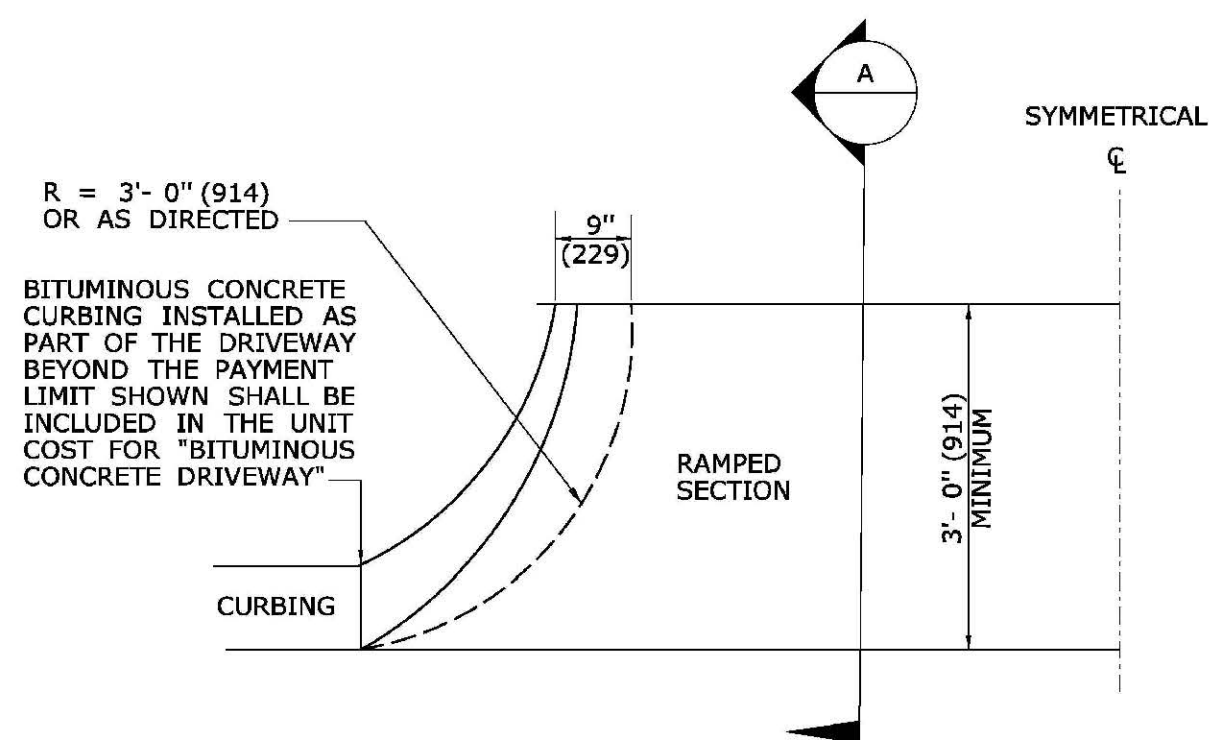
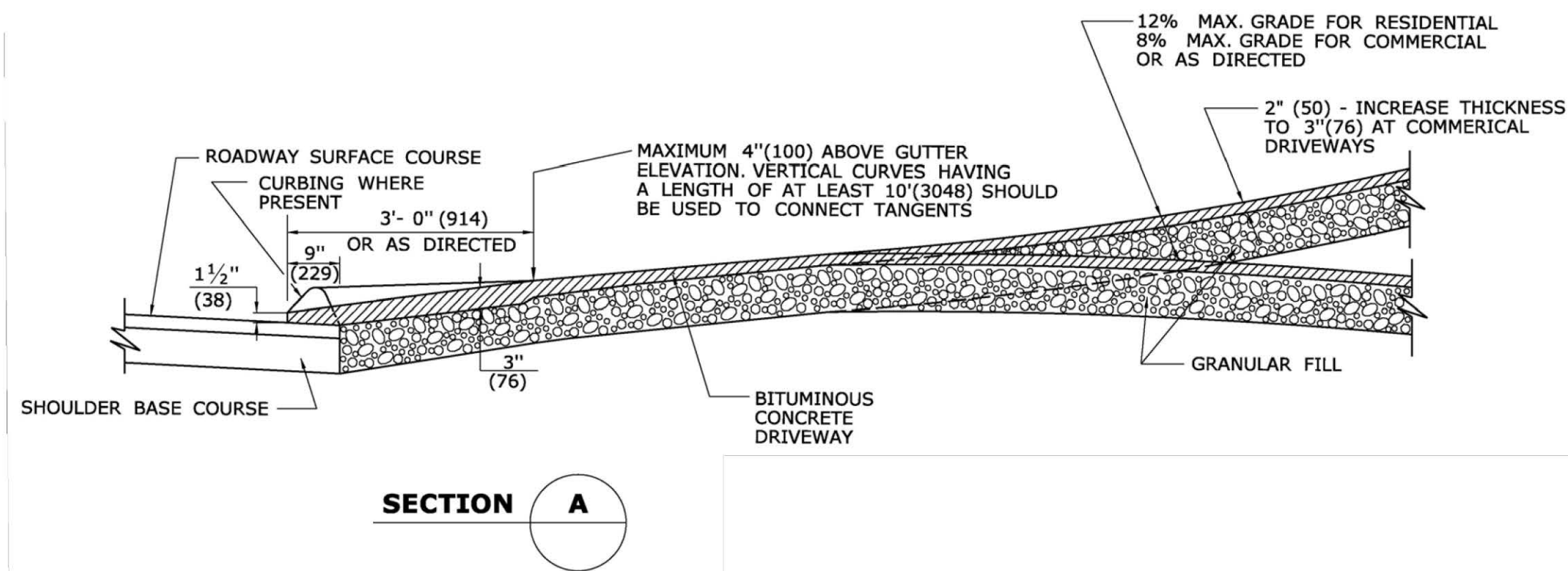
- NOTES:
1. CONTRACTOR SHALL PREPARE SURFACE OF POSTS IN ACCORDANCE WITH RECOMMENDATIONS BY SHERWIN WILLIAMS REPRESENTATIVE (PHONE: 203-377-1711). PREPARATION INCLUDES REMOVAL OF GREASE AND CONTAMINANTS WITH A SOLVENT CLEANER OR WITH AN AQUEOUS CLEANER SUCH AS HURRISAFE (5910).
 2. PAINT WITH ONE COAT OF 2-PART EPOXY PRIMER (SHERWIN WILLIAMS MACROPOXY 646 OR EQUAL) AND TWO COATS OF 2-PART EURETHANE (SHERWIN WILLIAMS ACROLOX 218HS OR EQUAL), COLOR: SAFETY YELLOW.

BOLLARD DETAIL
NOT TO SCALE

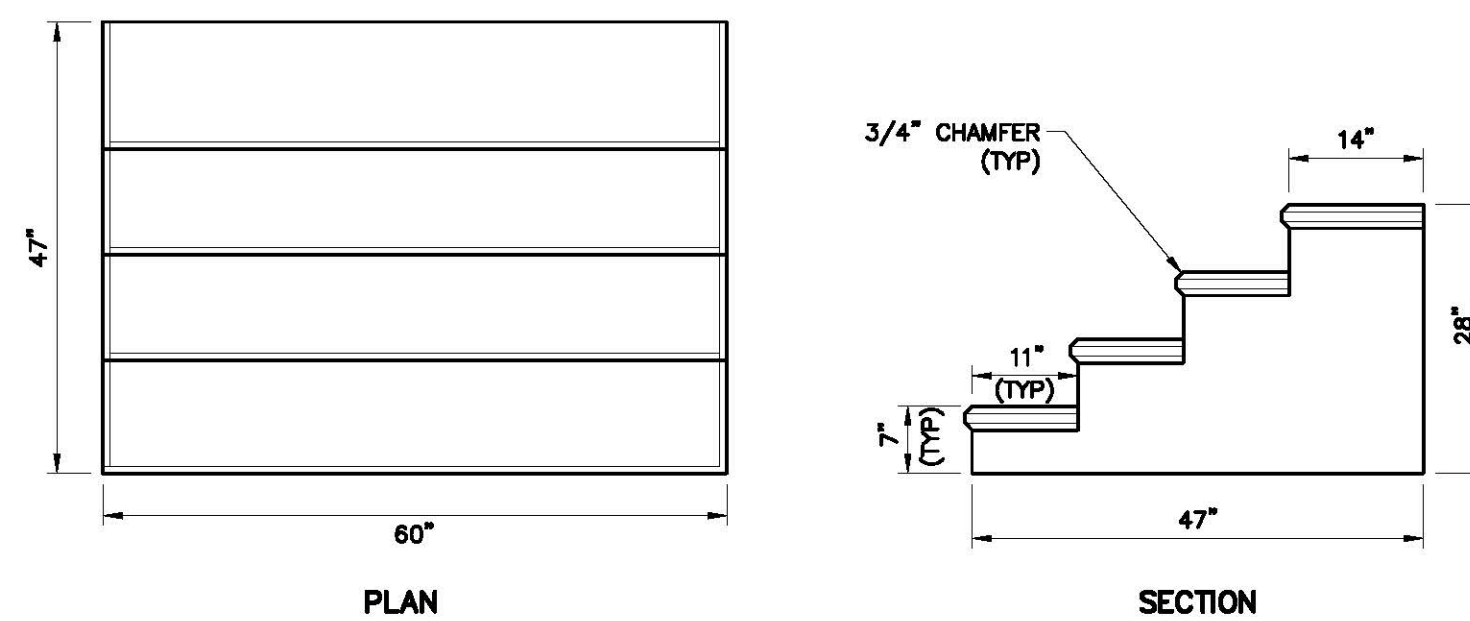


- NOTES:
1. BASE SHALL BE KEPT THOROUGHLY WET DURING COMPACTION AND SHALL BE DAMP WHEN CONCRETE IS POURED (NO POOLS ALLOWED).
 2. ADDITIONAL EXPANSION JOINTS TO BE PROVIDED WHERE THE PAD JOINS ANY RIGID STRUCTURES INCLUDING, BUT NOT LIMITED TO, CURBS, BUILDINGS, WALLS, APRONS, SIDEWALKS, OTHER PADS, ETC.
 3. EXPANSION JOINT FILLER SHALL BE PREFORMED BITUMINOUS CELLULAR (FIBER) TYPE PER AASHTO M 213 REQUIREMENTS.
 4. CONTRACTOR SHALL REMOVE UNSUITABLE MATERIAL AND REPLACE WITH FILL MATERIAL APPROVED BY ENGINEER AT NO ADDITIONAL COST TO THE OWNER.

HEAVY DUTY CONCRETE PAD
NOT TO SCALE



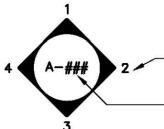
CONNDOT
HALF BITUMINOUS CONCRETE
DRIVEWAY PLAN
NOT TO SCALE



- NOTES:
1. PRECAST CONCRETE STEPS ARE TO HAVE MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI CONCRETE @ 28 DAYS. CONCRETE TO BE REINFORCED WITH REBAR.
 2. PROVIDE 1 1/4" NPS GALVANIZED PIPE RAIL ON BOTH SIDES (NOT SHOWN). ALL WELDS SHALL BE GROUND SMOOTH. ATTACH RAILING TO STEPS PER MANUFACTURERS RECOMMENDATION.

PRECAST CONCRETE STEPS
NOT TO SCALE

ACOUSTICAL	ACOUSTICAL	INCH
ACT	ACOUSTICAL CEILING TILE	INSIDE DIMENSION
ADH	ADHESIVE	INSULATION
ADMIN	ADMINISTRATION	INTERIOR
AFF	ABOVE FINISH FLOOR	JANITOR'S CLOSET
ALUM	ALUMINUM	JOINT
ANSI	AMERICAN NATIONAL STANDARDS	LAB
	INSTITUTE	LAV
ALT	ALTERNATE	LP
&	AND	MFR
A	ARCHITECTURAL	MATL
Ø	AT	MAX
B & B	BALLED & BURLAPPED	MECH
BSMT	BASEMENT	MECH
BM	BEAM	MTL
BTWN	BETWEEN	MEZZ
BITUM	BITUMINOUS	MIN
BLK	BLACK	MISC
BD	BOARD	MOD
BOT	BOTTOM	NEC
BO	BOTTOM OF	NEMA
BRK	BRICK	
BC	BRICK COURSES	NFPA
BLDG	BUILDING	N
CAB	CABINET	NTS
CPT	CARPET	NO
CIP	CAST IN PLACE	OC
CLG	CEILING	OPNG
CT	CERAMIC TILE	OPP
C/S	CIVIL SANITARY	OPH
CLO	CLOSET	OD
COL	COLUMN	OCD
CONC	CONCRETE	OSD
CB	CONCRETE BLOCK	PNT
CMU	CONCRETE MASONRY UNIT	PNL
CONSTR	CONSTRUCTION	PART
CONT	CONTINUOUS	P
CJ	CONTROL JOINT	PL
CORR	CORRIDOR	PLBG
CSK	COUNTERSUNK	PVC
CU	CUBIC	PVF
CLR	CLEAR	PCP
DBL	DOUBLE	PSJ
DEMO	DEMOLITION	PF
DETS	DETAILS	PT
DF	DRINKING FOUNTAIN	QUAN
DIA	DIAMETER	QT
DIM	DIMENSION	RAD
DN	DOWN	REF
DO	DOOR OPENING	REINF
DPT	DEPTH	REQD
DR	DOOR	R
DWL	DOWEL	RD
DWG	DRAWING	RM
EA	EACH	RO
E	EAST	SECT
EWC	ELECTRIC WATER COOLER	SHTHG
ELEC	ELECTRICAL	SHT
EL	ELEVATION	SMS
EMBED	EMBEDMENT	SIM
ENGR	ENGINEER	S
EQ	EQUAL	SPECS
EQUIP	EQUIPMENT	SQ
EX	EXISTING	SST
EXP	EXPANSION	STD
EJ	EXPANSION JOINT	STA
EXT	EXTERIOR	STL
FT	FEET	STOR
FRP	FIBER REINFORCED PLASTIC	STRUCT
FWP	FIBROUS WOOD PANEL	SUSP
FIN	FINISH	SYS
FIN FLR	FINISH FLOOR	TEMP
FE	FIRE EXTINGUISHER	TER
FIXT	FIXTURE	TC
FLR	FLOOR	THK
FD	FLOOR DRAIN	TOS
FDTN	FOUNDATION	TOPP
FO	FUTURE OPENING	TRANS
GA	GAGE	T
GALV	GALVANIZED	TYP
GEN	GENERAL	UL
GL	GLASS	UON
GST	GLAZED STRUCTURAL TILE	UNFIN
GR	GRADE	VAR
GCFFB	GROUND AND CEMENTITIOUS	VERT
	FILLED FACE CONCRETE BLOCK	VIF
	GROUND AND CEMENTITIOUS	VT
	FILLED FACE - SLOTTED	VP
	ACOUSTICAL BLOCK	WC
GYP	GYPSSUM	WT
GWB	GYPSSUM WALLBOARD	W
HDN	HARDENER	W/
HDW	HARDWARE	W/O
HVAC	HEATING, VENTILATING AND AIR	WD
	CONDITIONING	WDT
HDCT	HEAVY DUTY CONCRETE TOPPING	
HT	HEIGHT	
HP	HIGH POINT	
HM	HOLLOW METAL	
HORIZ	HORIZONTAL	
INFO	INFORMATION	

	STRUCTURAL COLUMN CENTERLINE, WALL CENTERLINE IF NOT COLUMN		BRICK MASONRY
#	NUMBER		CONCRETE MASONRY
	ACCESSORY, LAB FURNITURE & EQUIPMENT KEY		CONCRETE
	BUILDING ELEVATION THIS SIDE		GROUT
⌀	CENTERLINE		STEEL
∅	DIAMETER		EARTH
	WALL ELEVATION SYMBOL WALL NUMBER		RIGID INSULATION
	SHEET NUMBER		GRATING
	ROOM NUMBER		BATT INSULATION
	WINDOW NUMBER SYMBOL		
	WALL PARTITION TYPE		
	ELEVATION INDICATION		

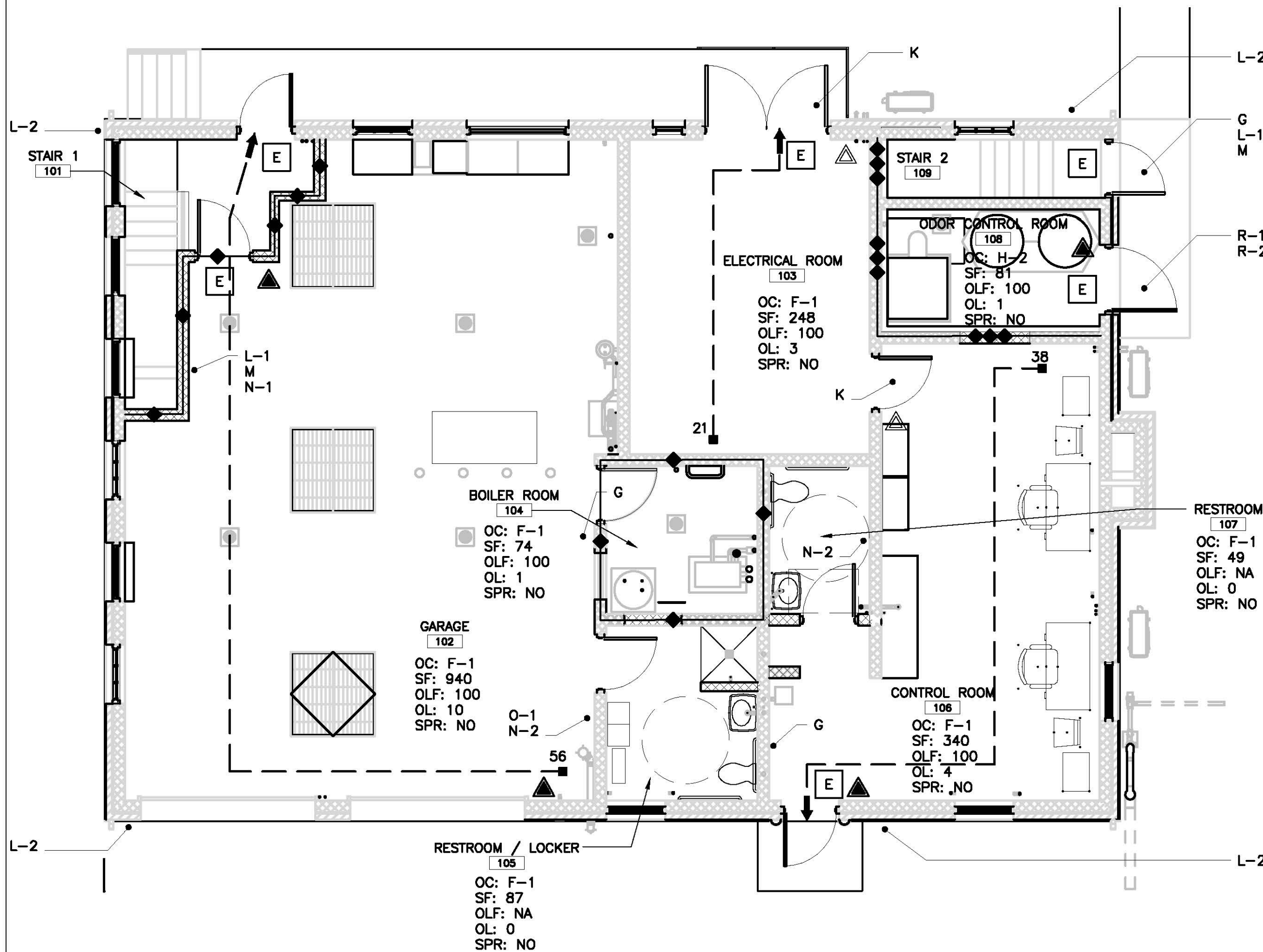
1. THE LEGEND AND ABBREVIATIONS LIST ON THIS SHEET IS A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE ON ALL PROJECTS. THEREFORE NOT ALL THE SYMBOLS AND ABBREVIATIONS CONTAINED IN THIS LIST ARE NECESSARILY USED ON THIS PARTICULAR PROJECT AND SHOULD BE USED FOR CLARIFICATION ONLY.
2. ITEMS NOT NOTED ON DRAWINGS SHALL BE CONSIDERED THE SAME AS NOTED ITEMS WHICH ARE GRAPHICALLY REPRESENTED IN THE SAME MANNER.
3. ASTERISK (*) INDICATES VERIFY DIMENSION WITH MANUFACTURER OF EQUIPMENT SUPPLIED.
4. FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS. ALSO, VERIFY DIMENSIONS WITH MANUFACTURER OF EQUIPMENT SUPPLIED.
5. FOR CONCRETE AND STEEL SIZES AND CONFIGURATIONS SEE 'S' DRAWINGS.
6. FOR LOCATION OF HVAC EQUIPMENT AND PADS COORDINATE WITH 'H' DRAWINGS.
7. FOR FLOOR DRAIN LOCATIONS SEE 'P' DRAWINGS.
8. FOR FINAL GRADING SEE 'C' DRAWINGS.
9. FOR EXACT LOCATION OF MECHANICAL EQUIPMENT VENTS COORDINATE WITH 'M', 'P' AND 'H' DRAWINGS.
10. COORDINATE WITH ELECTRICAL DRAWINGS FOR LOCATION AND SIZE OF RECESSED ELECTRICAL DEVICES IN WALLS. SEE ELECTRICAL DRAWINGS FOR LOCATIONS AND DETAILS.
11. COORDINATE WITH ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND LOCATIONS.
12. FOR EXTENT OF METAL GRATING, PLATES AND DETAILS SEE 'S' DRAWINGS.
13. COORDINATE WITH 'M', 'P', 'H' AND 'G' DRAWINGS FOR THE EXISTING PIPE PENETRATIONS.
14. COORDINATE WITH STRUCTURAL DRAWINGS FOR THE SIZE AND SPACING OF ALL VERTICAL AND HORIZONTAL REINFORCING BARS.
15. ALL DOOR OPENINGS SHOWN ON THE FLOOR PLANS ARE NOMINAL DIMENSIONS.
16. COORDINATE EXTENT OF DEMOLITION WORK WITH EACH DISCIPLINES DRAWINGS.
17. PROVIDE METAL BASE AND COUNTER FLASHING FOR ALL ROOF PENETRATIONS. FLASHINGS SHALL BE COORDINATED WITH ROOFING MANUFACTURER AT THE TIME OF THE SHOP DRAWING SUBMITTAL. PROVIDE TREATED WOOD BLOCKING AROUND PERIMETER OF ALL ROOF PENETRATIONS AS NEEDED.
18. ALL INTERIOR MASONRY WALLS SHALL EXTEND TO UNDERSIDE OF THE ROOF OR SLAB ABOVE, U.O.N.
19. WHERE NEW AND EXISTING BRICK MEET, TOOTH-IN-NEW BRICK TO EXISTING FOR A CLEAN, SMOOTH FINISH. REFER TO SPECIFICATIONS.
20. SCOPE OF WORK IS CLASSIFIED AS ALTERATION-LEVEL 3 AS PER THE IIBC 2012.

1. INSTALL DOOR FRAMES AS SHOWN AND SPECIFIED AS THE WORK PROGRESSES. DO NOT HANG DOORS AND INSTALL FINISH HARDWARE UNTIL ALL WORK BY ALL CONTRACTORS HAS BEEN COMPLETED IN AN AREA AND THERE IS NO FURTHER CONSTRUCTION ACTIVITIES OR REQUIRED ENTRY BY ANY CONTRACTOR. DOORS AND FINISHED HARDWARE INSTALLED AND SUBSEQUENTLY DAMAGED IN ANY WAY FOR ANY REASON SHALL BE IMMEDIATELY REPLACED BY GENERAL CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. IMMEDIATELY MEANS FROM THE TIME THE DAMAGE IS OBSERVED AND REPORTED TO THE GENERAL CONTRACTOR BY CONSTRUCTION MANAGEMENT TO THE TIME OF REINSTALLATION SHALL NOT BE MORE THAN ONE MONTH.
2. DOORS FRAMES SHALL BE BOXED OUT IN WOOD TO PREVENT CONSTRUCTION DAMAGE.
3. INSTALL TEMPORARY 3/4" PLYWOOD DOORS AND LOCKS. REMOVE WHEN CONSTRUCTION ACCESS AND ACTIVITIES ARE COMPLETED IN THE AREA. WHEN BOXED OUT WOOD METAL DOORS AND FINISH HARDWARE ARE INSTALLED.
4. PAINTING -- COORDINATE INSTALLATION OF PAINTING IN ORDER TO PERFORM WORK BEFORE INSTALLATION OF WORK PERFORMED.

1. FOR RAILING, REFERENCE SHEET A-10.
2. FOR DOOR SCHEDULE AND DETAILS, REFERENCE SHEETS A-11.
3. FOR ROOM FINISH SCHEDULE, REFERENCE SHEETS A-11.
4. FOR WALL PARTITION TYPES, REFERENCE SHEET A-6.
5. FOR SIGNAGE TYPES REFERENCE SHEET A-12.
6. FOR BOLLARDS, REFERENCE CIVIL SHEETS. BOLLARD LOCATION
DIMENSIONS SHOWN ARE APPROXIMATE AND WILL BE FIELD
VERIFIED DURING CONSTRUCTION.

1. FOR BUILDING CODE CHART REFERENCE DRAWING A-2.
2. FOR SIGNAGE NOTES REFERENCE DRAWING A-12.

	INDICATES DIRECTION OF EGRESS PATH ## IS DISTANCE IN FEET TO EXIT FROM SQUARE DOT TO ARROW
SF	SQUARE FEET
OLF	OCCUPANT LOAD FACTOR
OL	OCCUPANT LOAD
SPR	SPRINKLER
NA	NOT APPLICABLE
	EXIT SIGN LOCATION
	INDICATES 1 HOUR FIRE RATING
	INDICATES 3 HOUR FIRE RATING
	FIRE EXTINGUISHER, MULTI-PURPOSE DRY CHEMICAL WALL MOUNTED
	CARBON DIOXIDE FIRE EXTINGUISHER, MULTI-PURPOSE DRY CHEMICAL WALL MOUNTED
C-2 	SIGN TYPE, REFER TO SHEET A-12



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



CONSULTANTS



BEARDSLEY PUMP STATION COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 08532002.0000

NO.	DATE	ISSUED FOR	BY

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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: A-1

DESIGNED BY: R. BELLO

DRAWN BY: R. BRIDGE

CHECKED BY: E. DAWKINS

SHEET TITLE

GENERAL NOTES, LEGEND, ABBREVIATIONS AND CODE PLAN

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

A-1

SHEET 16 OF 69

User: BELLO_Spec: AUS-NC3MOD File: I:\ACAD\PROJ\06532002.0000\SHEETS\ARCHITECTURAL\A-2.DWG Scale: 1:1 Saved Date: 9/27/2017 Time: 15:05 Plot Date: O'Connell, Timothy: 9/27/2017: 15:26 : Layout: A-2

ENERGY EFFICIENCY: (IECC 2012 AS MODIFIED BY THE STATE OF CONNECTICUT)		
CLIMATE ZONE (CHAPTER 3)	5	MOIST-(A)
	BUILDING ENVELOPE REQUIREMENTS (TABLE C402.2 or ALT C402.1.2)	BEARDSLEY PUMP STATION
ROOF ASSEMBLIES:		
INSULATION ENTIRELY ABOVE DECK	R-25ci / U-0.039	R-30CI / U-0.032
METAL BUILDING	R-19+R-11 Ls / U-0.035	NA
ATTIC AND OTHER - WOOD FRAMING	R-38 / U-0.027	NA
ATTIC AND OTHER - STEEL FRAMING	R-38 / U-0.027	NA
WALLS BELOW GRADE:		
BELOW-GRADE WALL	R-7.5ci / C-0.119	R-7.5CI / C-0.119
WALLS ABOVE GRADE:		
MASS	R-11.4ci / U-0.078	R-95CI / U0.104
METAL BUILDING	R-13+R-13ci / U-0.058	NA
METAL FRAMED	R-13+R-7.5ci / U-0.064	NA
WOOD-FRAMED AND OTHER	R-13+R-3.8ci OR R-20/ U-0.064	NA
FLOORS OVER OUTDOOR AIR OR UNCONDITIONED SPACE:		
MASS	R-10ci / U-0.074	NA
JOIST/ FRAMING	R-30 / U-0.033	NA
OPAQUE DOORS (< 50% GLASS):		
SWINGING	U-0.37	U-0.20
ROLL-UP OR SLIDING	R-4.75	R-9.09
SLAB ON GRADE FLOORS:		
UNHEATED	R-10.24 IN / F-0.54	R-15.24 IN / F-0.520
HEATED (FOR 36 INCHES)	R-15: / F-0.58	NA
FENESTRATION BUILDING ENVELOPE REQUIREMENTS (TABLE 402.3)		
BUILDING WINDOW AND GLAZED PERCENTAGE	30%	BEARDSLEY PUMP STATION: LESS THAN 30%
FRAMING MATERIALS OTHER THAN METAL WITH OR WITHOUT METAL REINFORCEMENT OR CLADDING:		
U-FACTOR	0.32	NA
FENESTRATION:		
FIXED FENESTRATION U-FACTOR	0.38	NA
OPERABLE FENESTRATION U-FACTOR	0.45	NA
ENTRANCE DOORS U-FACTOR	0.77	NA
SHGC - ALL FRAME TYPES:		
SHGC: PF < 0.25	0.25	NA
SHGC: 0.25 PF < 0.5	0.33	NA
SHGC: PF 0.5	0.4	NA
SKYLIGHTS (3% MAXIMUM):		
SHGC	0.4	NA
AIR LEAKAGE (TABLE C402.4.3)		
WALL ASSEMBLIES (C402.4.1.2.2)	MAX 0.04 CFM/SF at 0.3 INCHES W.G.	COMPLY
BUILDING TEST REQUIRED (C402.4.1.2.3)	MAX 0.40 CFM/SF at 0.3 INCHES W.G.	COMPLY
LOUVER DAMPERS (C402.4.5)	MAX 4.00 CFM/SF at 1.0 INCHES W.G.	COMPLY
MAX AIR INFILTRATION RATES	TABLE C402.4.3	
WINDOW, SLIDING DOOR ASSEMBLIES	MAX 0.20 CFM/SF or 0.30 CFM/SF at 6.24 PSF	NA
SWINGING DOORS	MAX 0.20 CFM/SF or 0.30 CFM/SF at 6.24 PSF	NA
SKYLIGHTS - WITH CONDESATION WEEPAGE OPENINGS	MAX 0.30 CFM/SF	NA
SKYLIGHTS - ALL OTHER	MAX 0.20 CFM/SF or 0.30 CFM/SF at 6.24 PSF	NA
CURTAIN WALLS	MAX 0.06 CFM/SF	NA
STOREFRONT GLAZING	MAX 0.06 CFM/SF	NA
COMMERCIAL GLAZED SWINGING ENTRANCE DOORS	MAX 1.00 CFM/SF	NA
REVOLVING DOORS	MAX 1.00 CFM/SF	NA
GARAGE DOOR	MAX 0.40 CFM/SF	NR
ROLLING DOOR	MAX 1.00 CFM/SF	NA
NR - NOT REQUIRED; NA - NOT APPLICABLE		

VENTILATION NOTES:

- CONTINUOUS VENTILATION RATES: AIR CHANGES PER HOUR
- GARAGE, ELECTRICAL ROOM, AND OFFICE: NA, SEASONAL.
 - DRY WELL: 6.
 - WET WELL: 6/30.

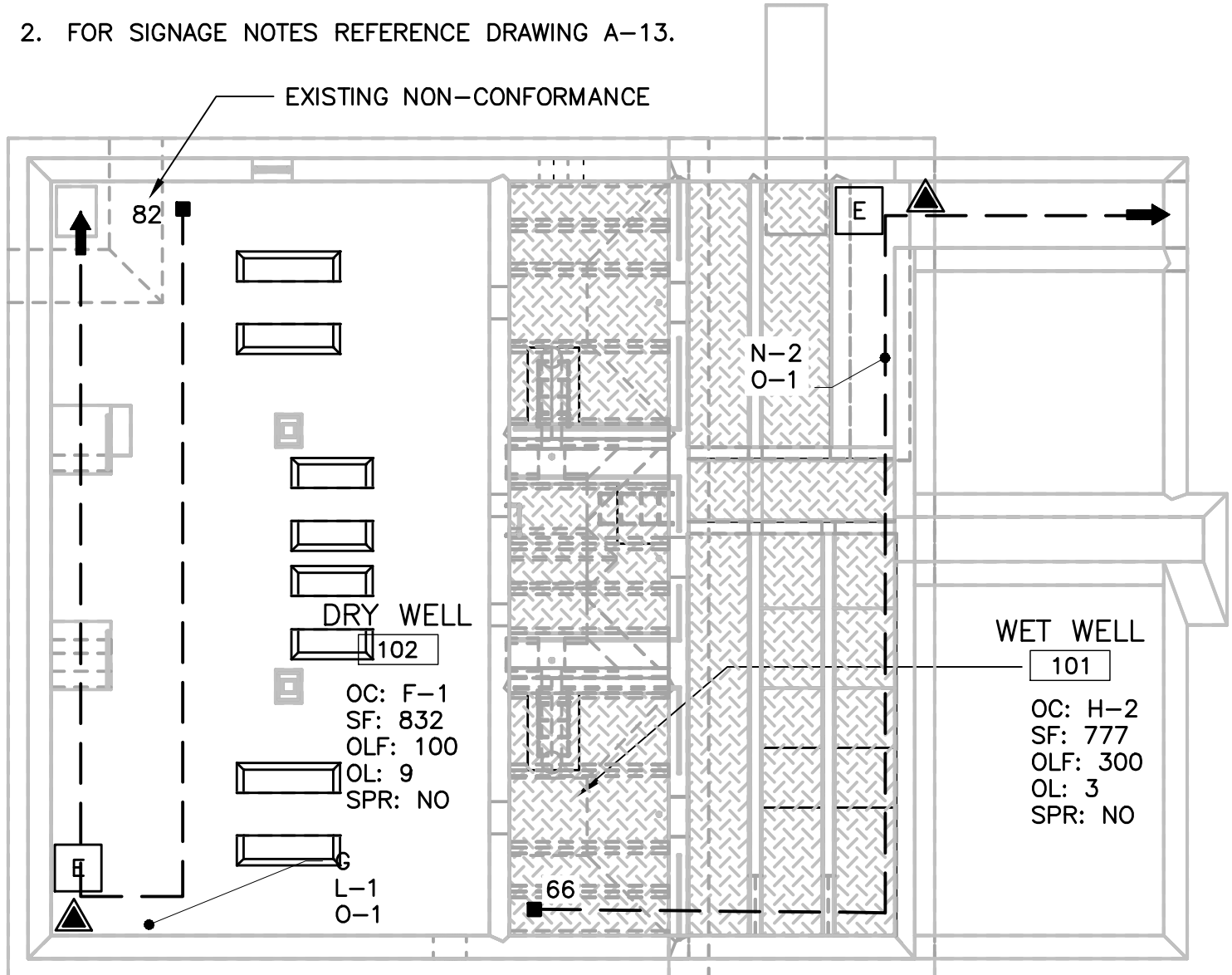
BUILDING CODE CHART: (IBC 2012 AS MODIFIED BY THE STATE OF CONNECTICUT)		
	BEARDSLEY PUMP STATION	
NFPA 820 CLASSIFICATION	DRY WELL: UNCLASSIFIED WET WELL: CLASS 1 DIV 1 ODOR CONTROL RM: CLASS 1 DIV 1	
BUILDING (MAIN) OCCUPANCY (CHAPTER 3)	F-1	
MIXED USE FACILITY/ACCESSORY	YES	
ROOM OCCUPANCY/ SEPARATION RATING	H-2 TO F-1	3 HRS
CONSTRUCTION CLASSIFICATION (CHAPTER 6)	III-B	
NUMBER OF STORIES	ALLOWABLE	ACTUAL
	3	1
BUILDING HEIGHT	ALLOWABLE	ACTUAL
	55	20'-5"
ALLOWABLE AREA PER FLOOR	ALLOWABLE	ACTUAL
	18,000	2,080
FIRE SEPARATION DISTANCE RATINGS (TABLE 602):		
	REQUIRED	PROVIDED
DISTANCE LESS THAN 5'	1	NA
DISTANCE BETWEEN 5' & 10'	1	NA
DISTANCE BETWEEN 10' & 30'	1	NA
DISTANCE MORE THAN 30'	0	NA
FIRE RESISTANCE RATING REQ'TS FOR BLDG ELEMENTS (TABLE 601):		
	REQUIRED	PROVIDED
PRIMARY STRUCTURAL FRAMING	0	0
BEARING WALLS - EXTERIOR	2	2
BEARING WALLS - INTERIOR	0	0
NON BEARING WALLS - EXTERIOR	SEE FIRE SEPARATION DISTANCE RATINGS	
NON BEARING WALLS - INTERIOR	0	0
FLOOR CONSTRUCTION	0	0
ROOF CONSTRUCTION	0	0
INTERIOR FINISHES (TABLE 803.11) :		
VERTICAL EXITS AND EXIT PASSAGEWAYS	B	B
EXIT ACCESS CORRIDORS & OTHER EXITWAYS	C	C
ROOMS AND ENCLOSED SPACES	C	C
FIRE PROTECTION SYSTEMS (CHAPTER 9):		
	REQUIRED	PROVIDED
AUTOMATIC SPRINKLER SYSTEMS (SECTION 903)	NO	NO
ALT. AUTOMATIC FIRE-EXTINGUISHING SYSTEMS (SECTION 904)	NO	NO
STANDPIPE SYSTEMS (SECTION 905)	NO	NO
PORTABLE FIRE EXTINGUISHERS (SECTION 906)	YES	YES
FIRE ALARM AND DETECTION SYSTEMS(SECTION 907)	NO	NO
EMERGENCY ALARM SYSTEMS (SECTION 908)	YES IN H-2	YES IN H-2
EMERGENCY RESPONDER SAFETY FEATURES (SECTION 914)	NA	NA
MEANS OF EGRESS (CHAPTER 10):		
	REQUIRED/ ALLOWABLE	PROVIDED
OCCUPANT LOAD CHART (TABLE 1004.1.2)	REFERENCE CODE COMPLIANCE PLAN	
EGRESS WIDTH PER OCCUPANT LOAD - STAIRWAYS (SECTION 1005.3)	36 INCHES REQ'D MIN.	36 INCHES
EGRESS WIDTH PER OCCUPANT LOAD - OTHER COMPONENTS (SECTION 1005.3)	36 INCHES REQ'D MIN.	36 INCHES
STORIES WITH ONE MEANS OF EGRESS (TABLE 1021.2)	F OCCUP. MAX LOAD 23, TRAVEL DISTANCE 75-FEET (H-2 OCCUPANCY, MAX LOAD 4, TRAVEL DISTANCE 25-FEET, EXIST'G NON-CONFORMING)	
SPACES WITH ONE MEANS OF EGRESS (TABLE 1015.1)	F OCCUPANCY MAX OCCUPANT LOAD 23 (H-2 OCCUPANCY, MAX LOAD 4, EXIST'G NON-CONFORMING)	
EXIT ACCESS TRAVEL DISTANCE	REFERENCE CODE COMPLIANCE PLAN	
CORRIDOR FIRE-RESISTANCE RATING	1	1
ACCESSIBILITY (ANSI/ ADAAG):		
	REQUIRED	PROVIDED
CONSTRUCTION SITES	NO	EXEMPT 1103.2.6
ACCESSIBLE ROUTE	NO	EXEMPT 1104

ACCESSIBLE ENTRANCE	YES	EXEMPT 1103.2.9
EQUIPMENT SPACES AND PUMP STATIONS	NO	EXEMPT 1103.2.9
PARKING	YES	EXEMPT 1103.2.9
SIGNAGE	NA	YES

DISC.	GENERAL CODE CRITERIA	
	PROJECT CODES	GENERAL
A/S	ADMINISTRATIVE CODE	2016 CONNECTICUT STATE BUILDING CODE
A/S	BUILDING CODE	2016 CONNECTICUT STATE BUILDING CODE (2012 IBC)
H/A	FIRE CODE	2016 CONNECTICUT STATE FIRE SAFETY CODE (2012 IFC)
H	PLUMBING CODE	2016 CONNECTICUT PLUMBING CODE (2012 IPC)
H	MECHANICAL CODE	2016 CONNECTICUT MECHANICAL CODE (2012 IMC)
E	ELECTRICAL CODE	2016 CONNECTICUT STATE BUILDING CODE (NFPA 70-2014, NEC)
A	ENERGY CODE	2016 CONNECTICUT ENERGY CONSERVATION CODE (2012 IEC)
A/S	EXISTING BUILDING CODE	2016 CONNECTICUT BUILDING CODE (2012 IEBC)
A/S	ACCESSIBILITY	2016 CONNECTICUT BUILDING CODE (2009 ICC/ANSI A117.1)
A/S	FUEL GAS	2016 CONNECTICUT STATE BUILDING CODE (NFPA 2, 54 & 58)
	SITE	
S	SOIL CLASSIFICATION (SITE CLASS)	D
S	WIND SPEED	135 MPH
S	WIND EXPOSURE	B
S	SPECTRAL RESPONSE ACCELERATION COEFFICIENT	Ss=20.6%, S1=6.5%
S	NON STRUCTURAL COMPONENT SEISMIC DESIGN REQUIRED	NO
	BUILDING/STRUCTURE NAME	BEARDSLEY PUMP STATION
A	OCCUPANCY OF BUILDING	F-1
A	CONSTRUCTION TYPE	III-B
A	NUMBER OF STORIES	1
A	BUILDING HEIGHT	Existing/Unchanged 20'-5"
A	FLOOR AREA	Existing/Unchanged 4,108 SF
S	WIND PRESSURE (COMPONENTS AND CLADDING)	35 PSF
S	OCCUPANCY CATEGORY	III
S	SEISMIC DESIGN CATEGORY	B

NOTES:

- FOR BUILDING CODE CHART REFERENCE THIS DRAWING.
- FOR SIGNAGE NOTES REFERENCE DRAWING A-13.



BASE'T CODE/SIGNAGE PLAN-EL. 67.47

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

LEGEND FOR CODE & SIGNAGE PLANS	
## →	INDICATES DIRECTION OF EGRESS PATH ## IS DISTANCE IN FEET TO EXIT FROM SQUARE DOT TO ARROW
SF	SQUARE FEET
OLF	OCCUPANT LOAD FACTOR
OL	OCCUPANT LOAD
SPR	SPRINKLER
NA	NOT APPLICABLE
E	EXIT SIGN LOCATION
◆	INDICATES 1 HOUR FIRE RATING
◆◆◆	INDICATES 3 HOUR FIRE RATING
▲	FIRE EXTINGUISHER, MULTI-PURPOSE DRY CHEMICAL WALL MOUNTED
▲	CARBON DIOXIDE FIRE EXTINGUISHER, MULTI-PURPOSE DRY CHEMICAL WALL MOUNTED
C-2	SIGN TYPE, REFER TO SHEET A-12



LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS



TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

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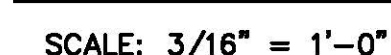
DATE: SEPTEMBER 2017
PROJECT NO.: 06532002.0000
FILE NAME: A-2
DESIGNED BY: R. BELLO
DRAWN BY: R. BRIDGE
CHECKED BY: E. DAWKINS

SHEET TITLE

CODE DATA AND CODE
PLAN

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

A-2
SHEET 17 OF 69



[illegible]

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DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000FILE NAME: A-4DESIGNED BY: R. BRIDGE

RAWN BY: R. BELLO

CHECKED BY: E. DAWKINS

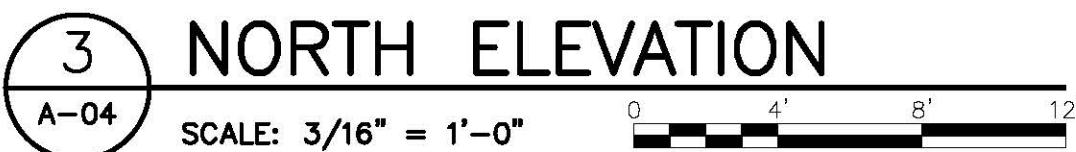
SHEET TITLE

BUILDING ELEVATIONS

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

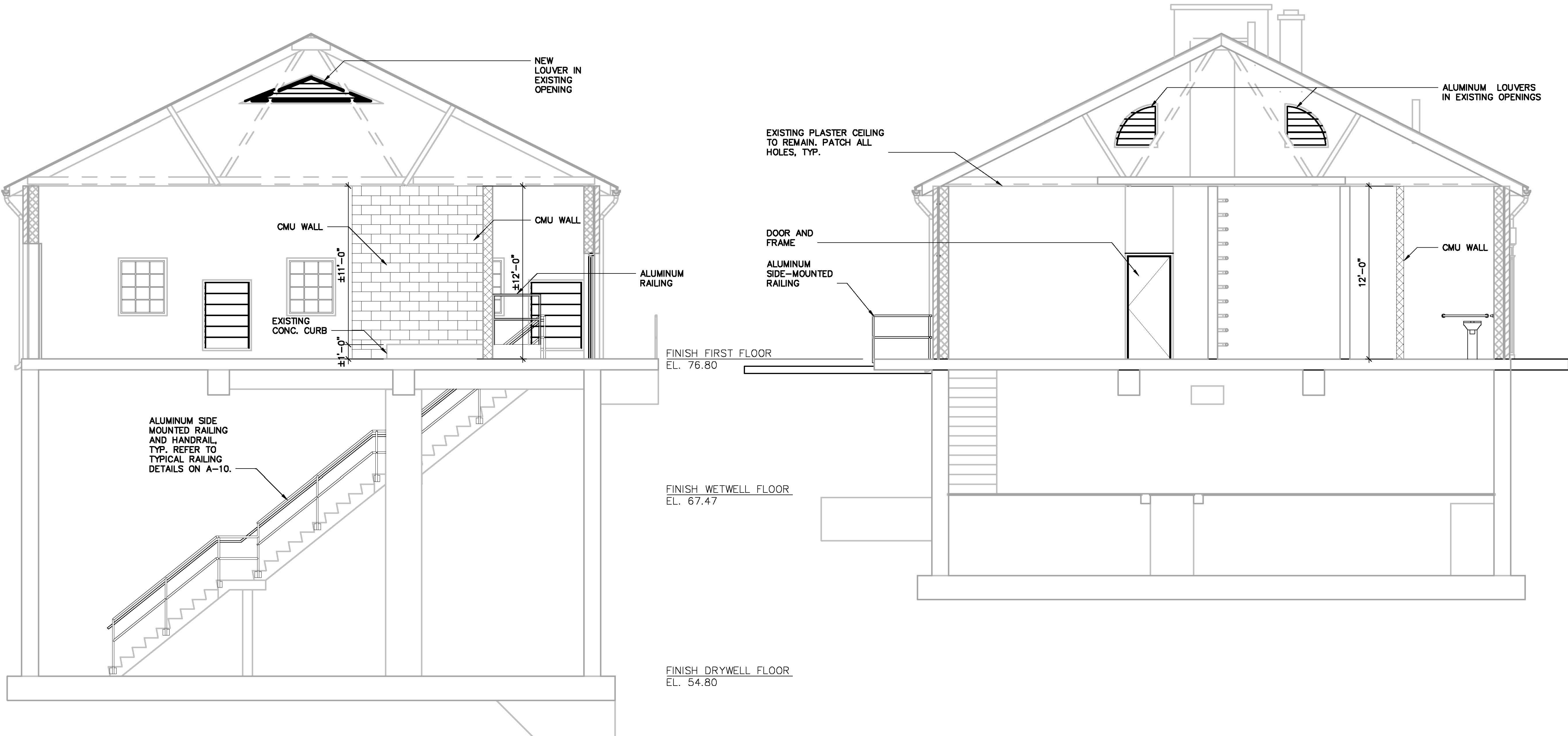
A-4

SHEET 19 OF 69



NOTE 1:
THOROSEAL T1019, BY BASF, OR
EQUAL.
USE ACRYL 60 ADMIX AS
REQUIRED.
FOLLOW MANUFACTURER'S
RECOMMENDED INSTRUCTIONS.

User: NPAID, Spec: AUS-NCSMOD, File: \\ACAD\\PROJ\\06532002.0000\\SHEETS\\ARCHITECTURAL\\A-5.DWG, Scale: 1/4" = 1'-0", Plot Date: 9/28/2017, Time: 14:41, Plot Path: \\ACAD\\PROJ\\06532002.0000\\SHEETS\\ARCHITECTURAL\\A-5.DWG, Scale: 1/4" = 1'-0", Plot Date: 9/28/2017, Time: 14:41, Plot Path: \\ACAD\\PROJ\\06532002.0000\\SHEETS\\ARCHITECTURAL\\A-5.DWG

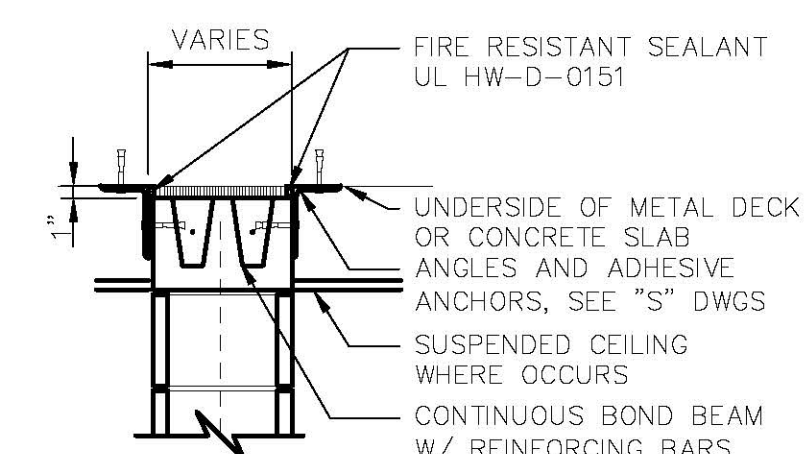
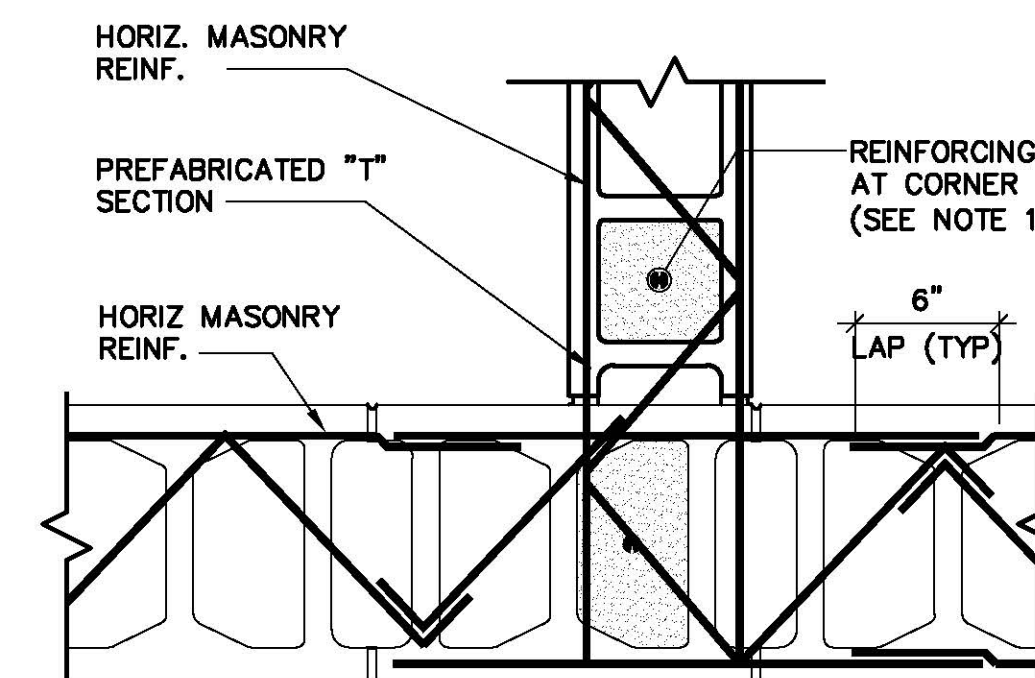
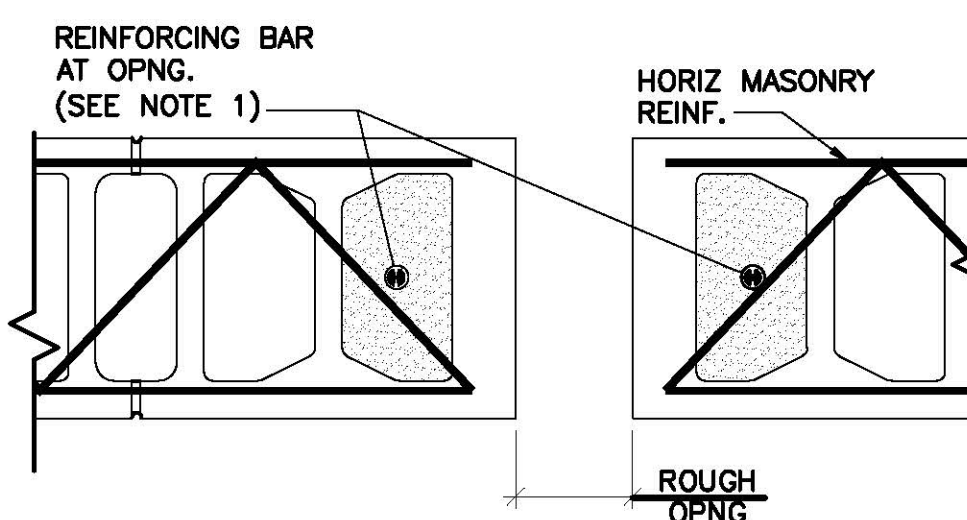
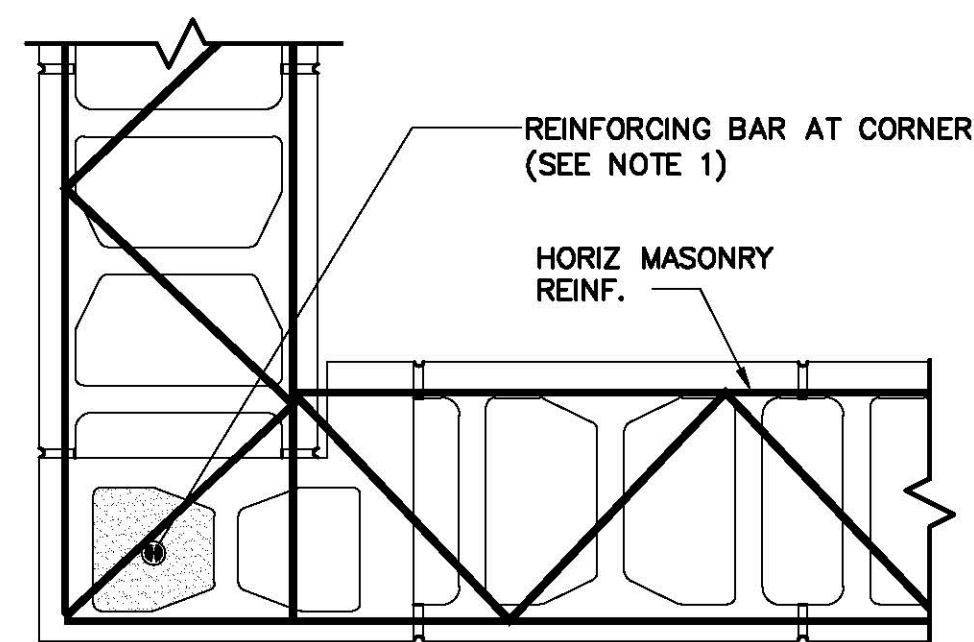
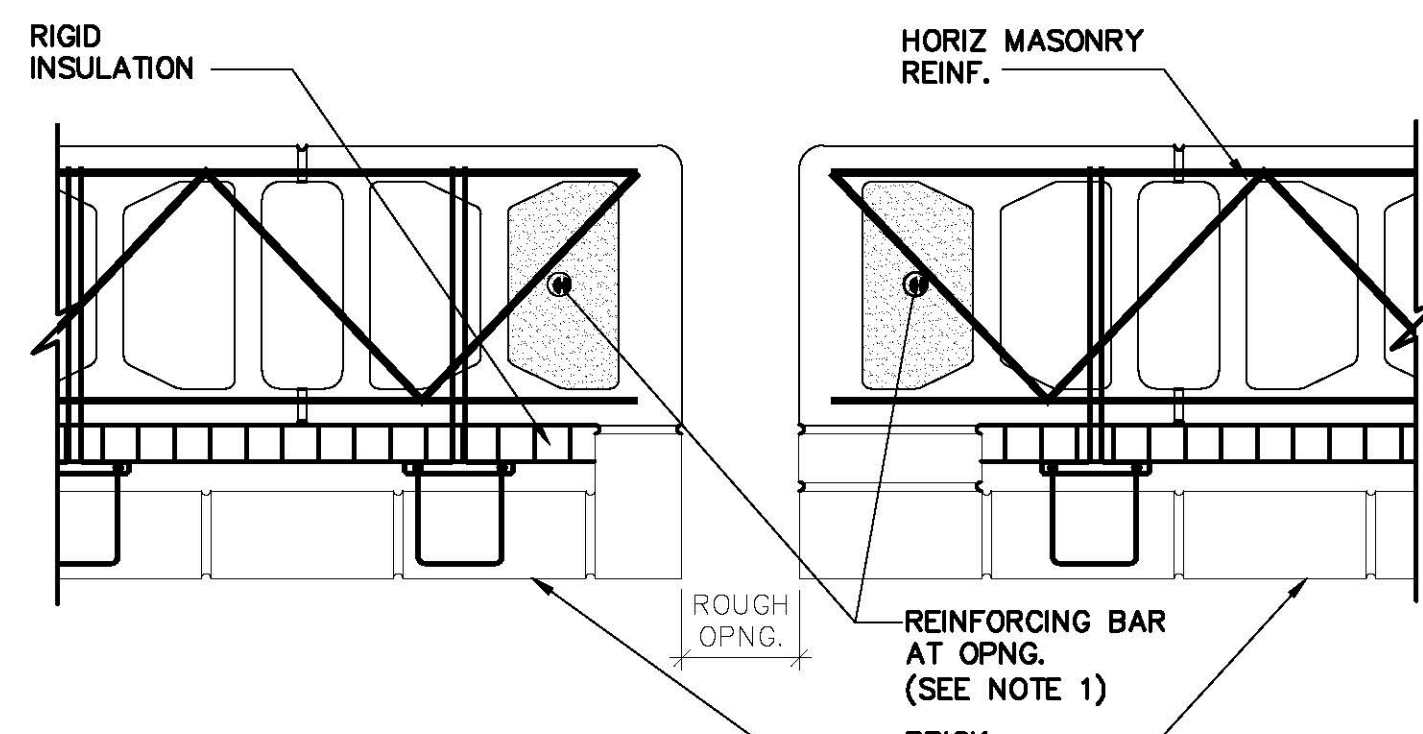
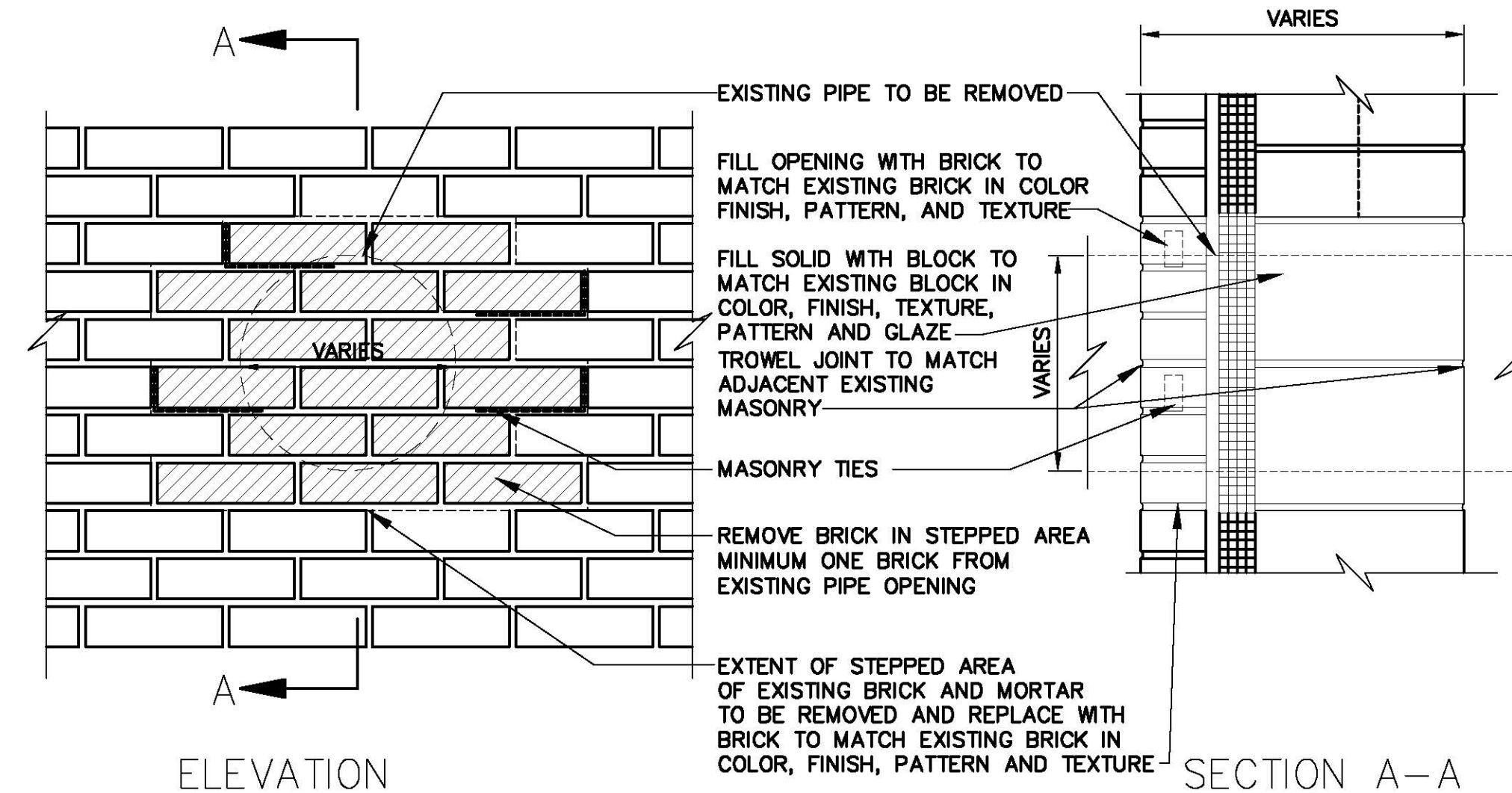
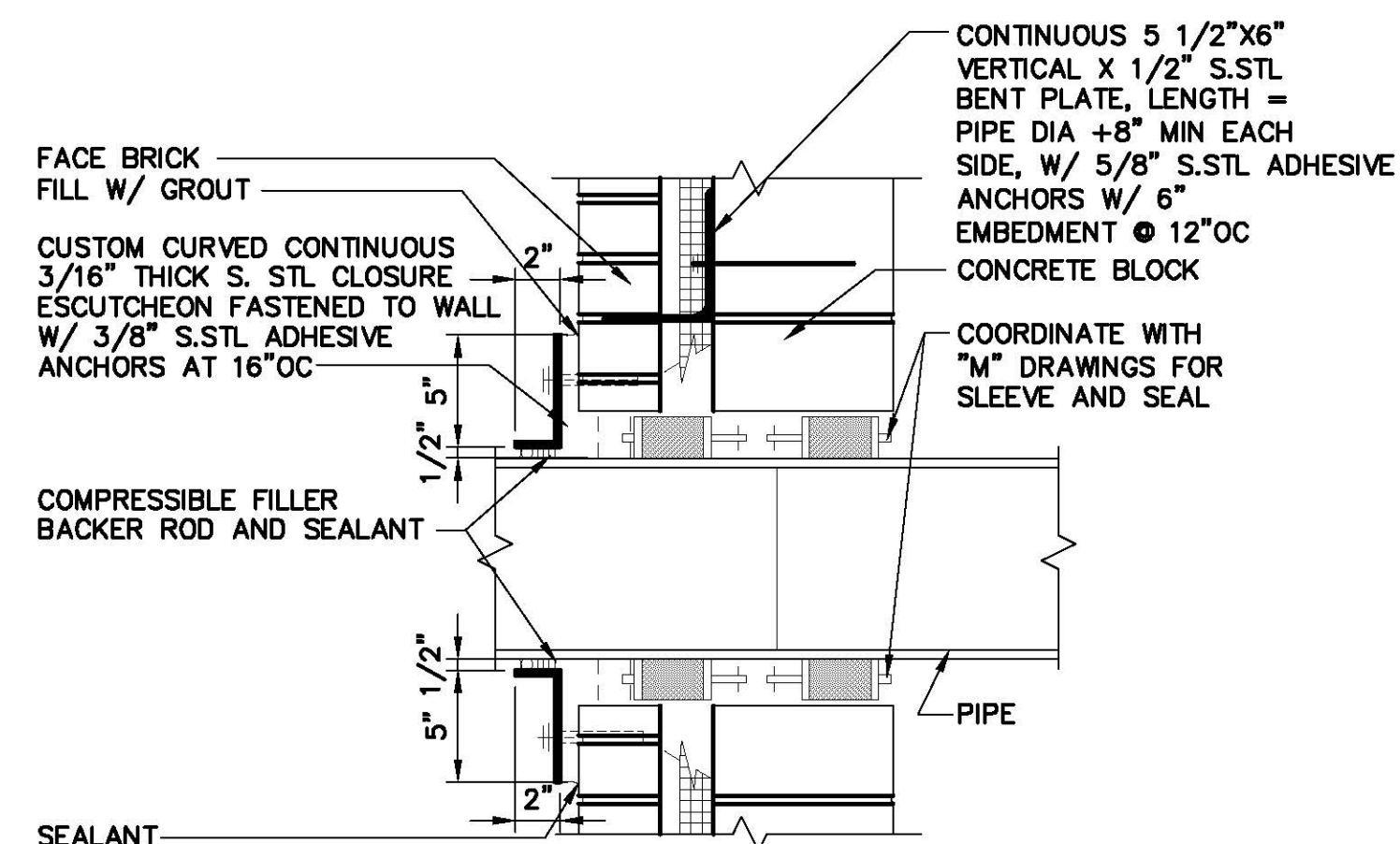
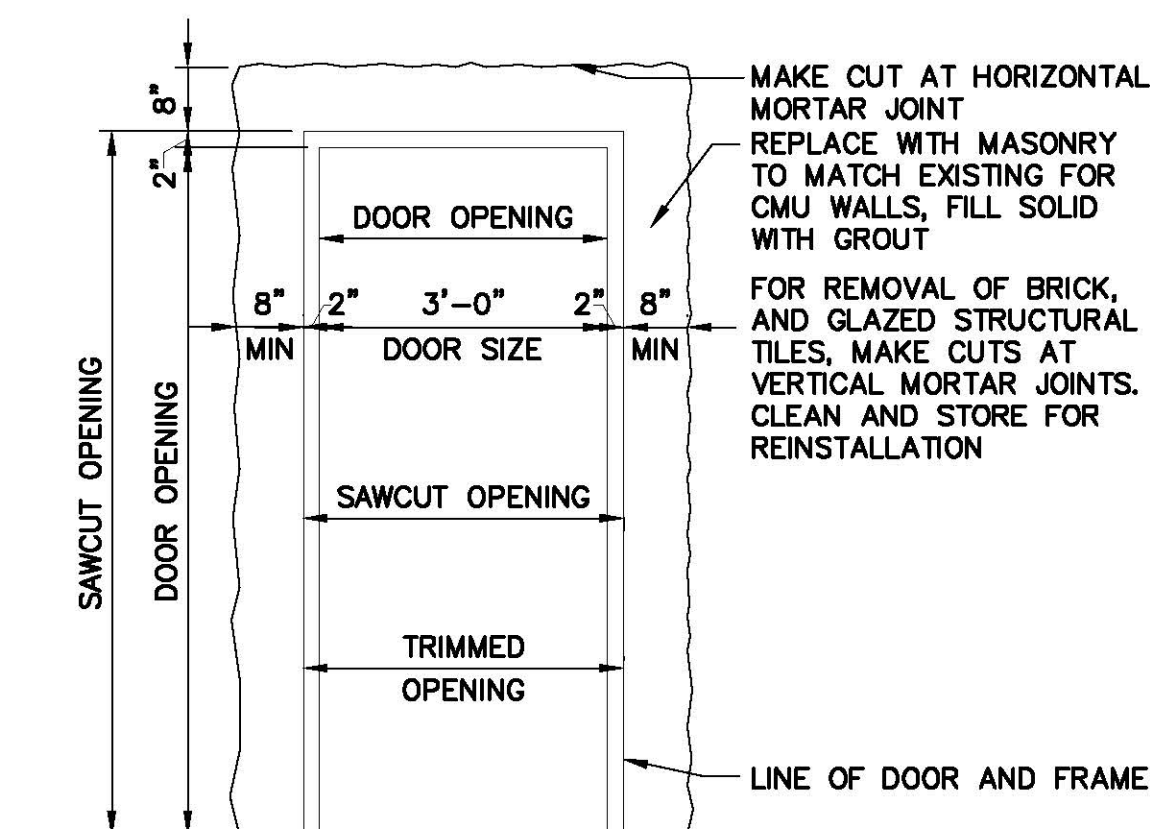


1 SECTION
A-03 SCALE: 1/4" = 1'-0" 0 2' 4' 8'

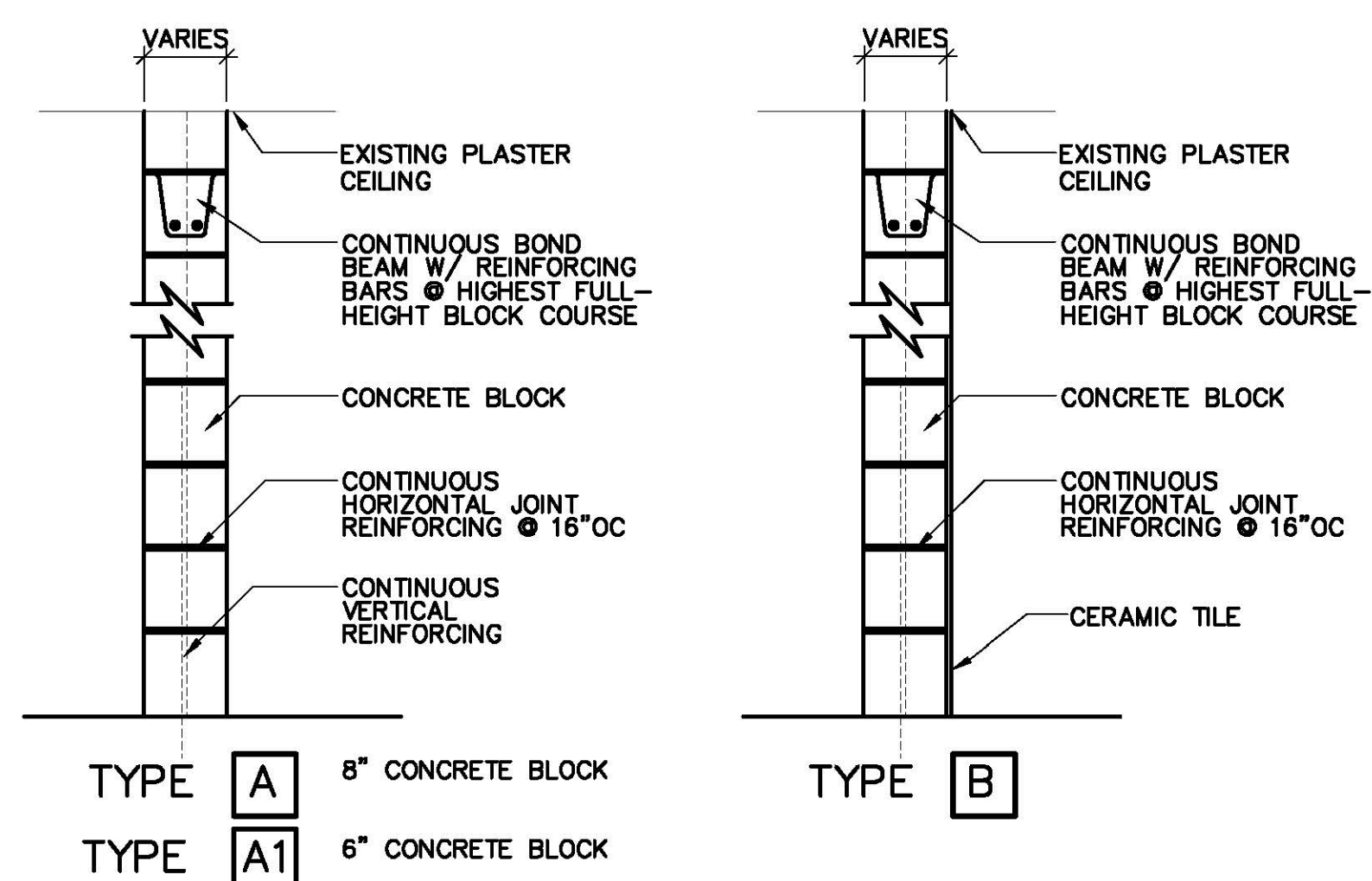
2 SECTION
A-03 SCALE: 1/4" = 1'-0" 0 2' 4' 8'



NO.	DATE	ISSUED FOR	BY



TYPICAL MASONRY DETAILS



- REINFORCING BAR NOTES:**

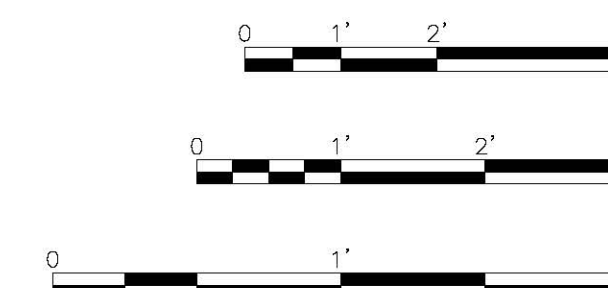
1. PROVIDE ONE BAR FULL HEIGHT AT ALL CORNERS, OPENINGS AND ENDS OF WALLS TO MATCH THE SIZE OF PRIMARY VERTICAL REINFORCING AND SPACED AT 32" OC UNLESS OTHERWISE NOTED. FILL CELLS SOLID WITH GROUT.

- GENERAL NOTES:

1. PROVIDE FIRE-RATED SOUND ATTENUATION BLANKETS IN ALL METAL STUD WALLS AND CEILINGS. SOUND ATTENUATION BLANKET SHALL BE MINERAL WOOL TYPE.
2. EXPOSED SEALANTS SHALL BE PAINTABLE.
3. ALL PENETRATIONS THROUGH WALLS SHALL BE SEALED, PROVIDE FIRE STOPPING WITH UL DESIGN AT ALL FIRE RESISTANCE RATED WALLS AND FLOORS.

- MASONRY NOTES:

1. MINIMUM 1-DUALL HEIGHT CONTINUOUS VERTICAL BAR WITH MATCHING DOWEL TO MATCH SIZE OF TYPICAL WALL REINFORCING UON.
2. FULL HEIGHT CONTINUOUS DOUBLE VERTICAL BARS W/ MATCHING DOWELS. REFER TO STRUCTURAL DRAWINGS FOR SIZE AND SPACING.
3. FIRST LAYER AND ADDITIONAL LAYER OF HORIZONTAL TRUSS-TYPE REINFORCEMENT ABOVE AND BELOW ALL OPENINGS SHALL BE CONTINUOUS THROUGH CONTROL JOINTS. ALL OTHER LAYERS OF HORIZONTAL TRUSS-TYPE REINFORCEMENT SHALL NOT BE CONTINUOUS AT THE CONTROL JOINTS.



CONSULTANTS

SEALS



**TOWN OF TRUMBULL, CT
WPCA**

BEARDSLEY PUMP STATION COMPREHENSIVE UPGRADE

MARCADIS PROJ. NO. 06532002.0000[illegible]

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DATE:	SEPTEMBER 2017
PROJECT NO.:	06532002.0000
FILE NAME:	A-7
DESIGNED BY:	R. BELLO
DRAWN BY:	R. BRIDGE
CHECKED BY:	E. DAWKINS

SHEET TITLE

ACCESSORY PLANS

SALE: AS SHOWN

A-7

SHEET 22 OF 69



FURNITURE & FIXTURE LEGEND

- (A) CHAIR
- (B) SINK
- (C) DESK CHAIR
- (D) TOILET
- (E) SHOWER
- (F) DESK
- (G) 5 DRAWER LATERAL FILE
- (H) OPEN SHELVING UNIT
- (I) KITCHEN SINK

APPLIANCE LEGEND

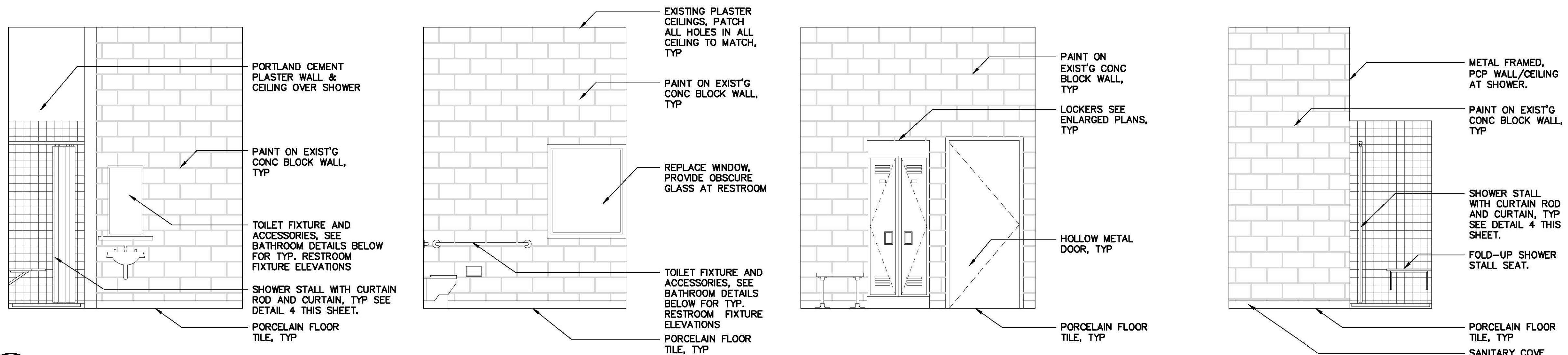
- 1 REFRIGERATOR/UNDERCOUNTER
2 COUNTERTOP MICROWAVE

CONSTRUCTION NOTES:

1. SEE A-11 FOR ROOM FINISH SCHEDULE.
2. SEE A-11 FOR DOOR SCHEDULE.
3. SEE A-6 FOR PARTITION TYPES.
4. PROVIDE MARBLE SADDLE AT RESTROOMS.

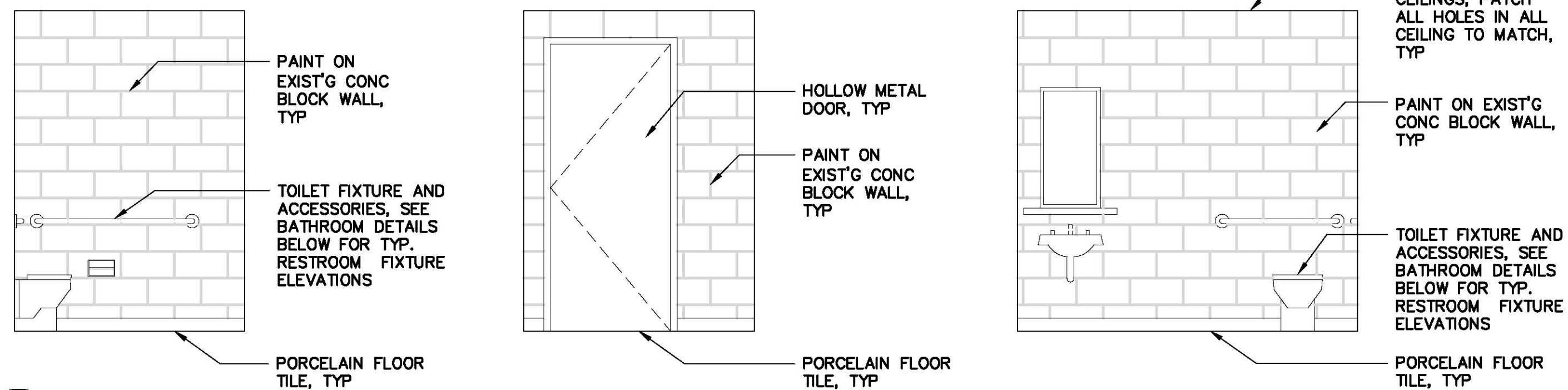
ACCESSORY LIST

- ① MIRROR
- ② SOAP DISPENSER
- ③ GRAB BARS
- ④ TOILET TISSUE DISPENSER
- ⑤ PAPER TOWEL DISPENSER
- ⑥ NOT USED
- ⑦ NOT USED
- ⑧ LOCKER ROOM BENCH
- ⑨ LOCKER
- ⑩ SHOWER ROD WITH HOOKS AND CURTAIN
- ⑪ TOWEL AND ROBE HOOKS
- ⑫ NOT USED
- ⑬ SHOWER STALL FOLDING SEAT
- ⑭ RECYCLING BIN/TRASH RECEPTACLES,
SUPPLIED BY OWNER
- ⑮ COMBINATION SHELF WITH UTILITY HOOKS AND MOP
STRIP, PROVIDE 1 @ SERVICE SINK IN GARAGE
- ⑯ CLOTHES HANGING ROD



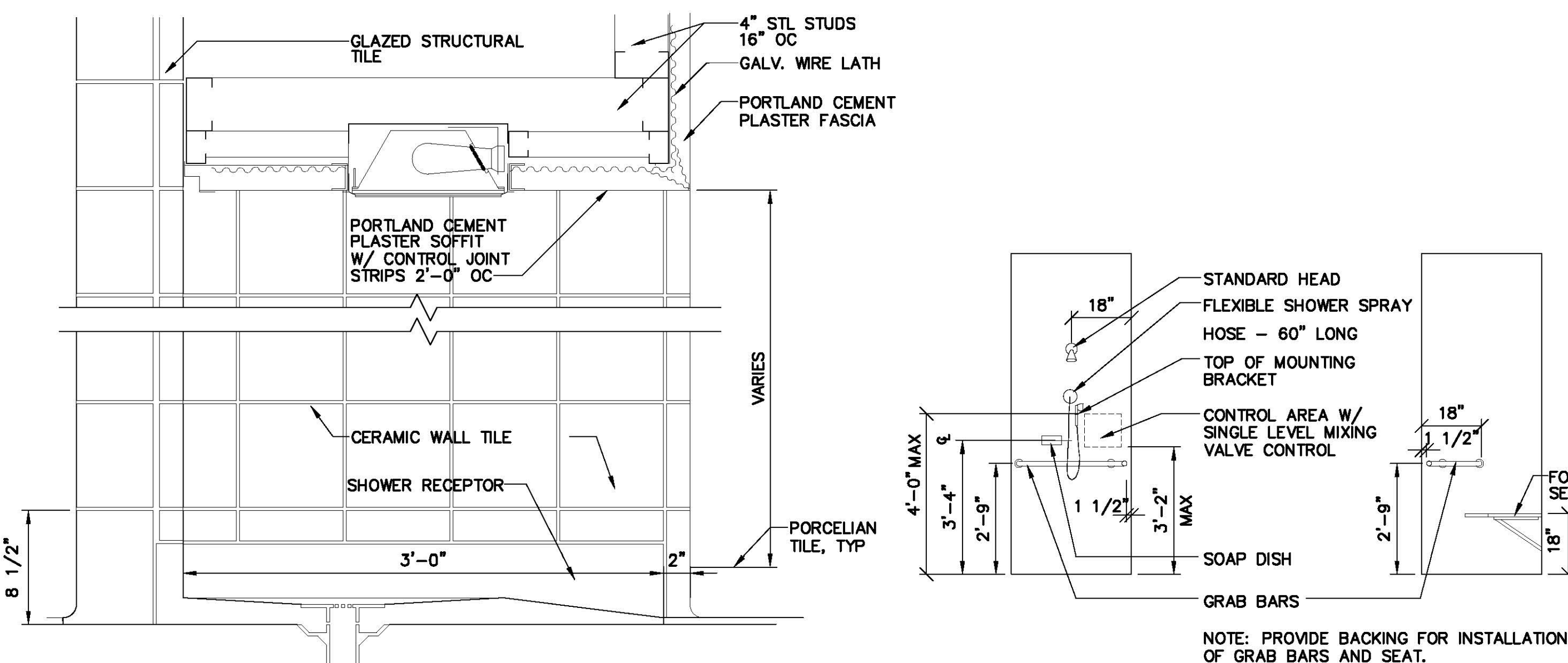
1 RESTROOM 105 INTERIOR ELEVATIONS

A-7 SCALE: 3/8" = 1'-0"



2 RESTROOM 107 INTERIOR ELEVATIONS

A-7 SCALE: $3/8" = 1'-0"$

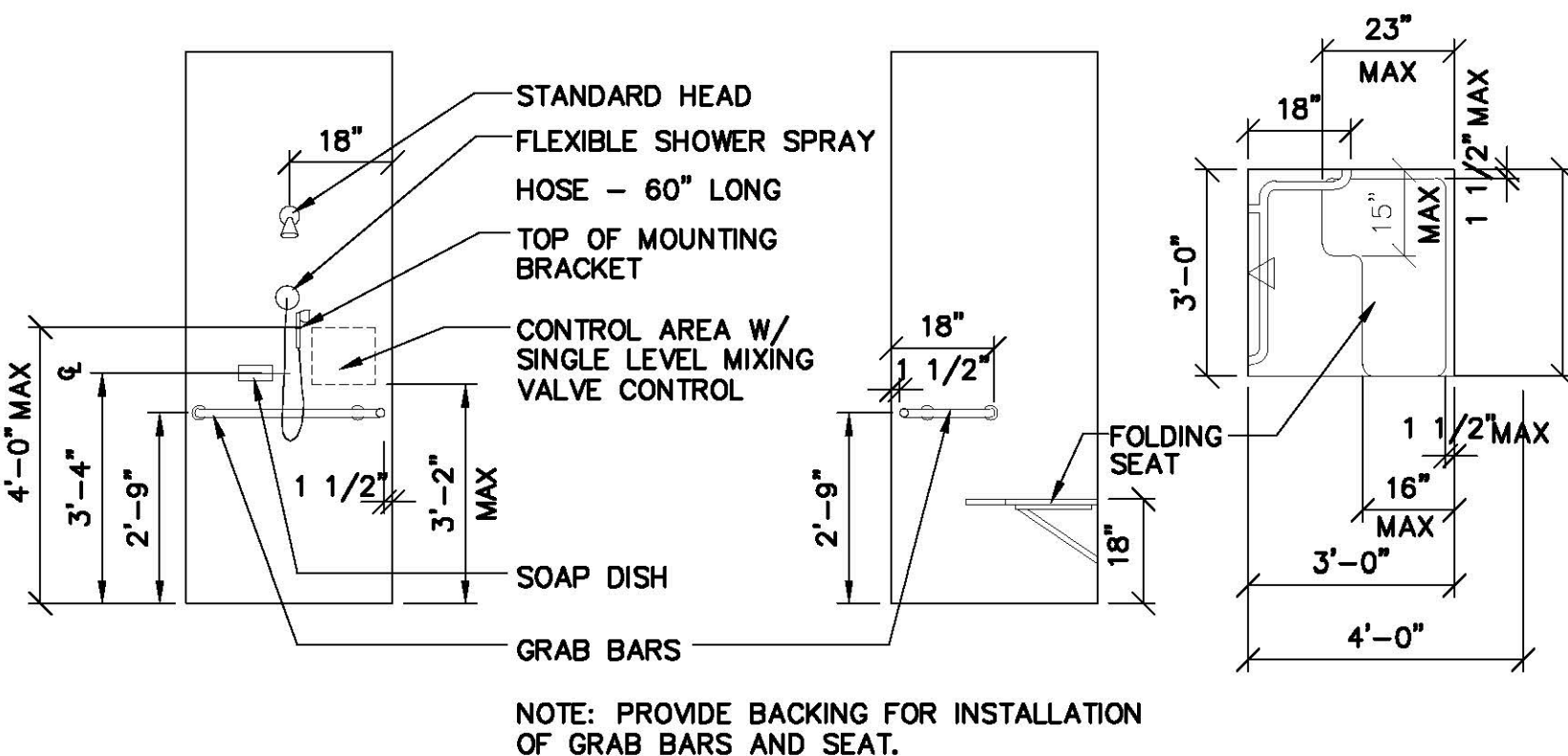


SHOWER DETAIL

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

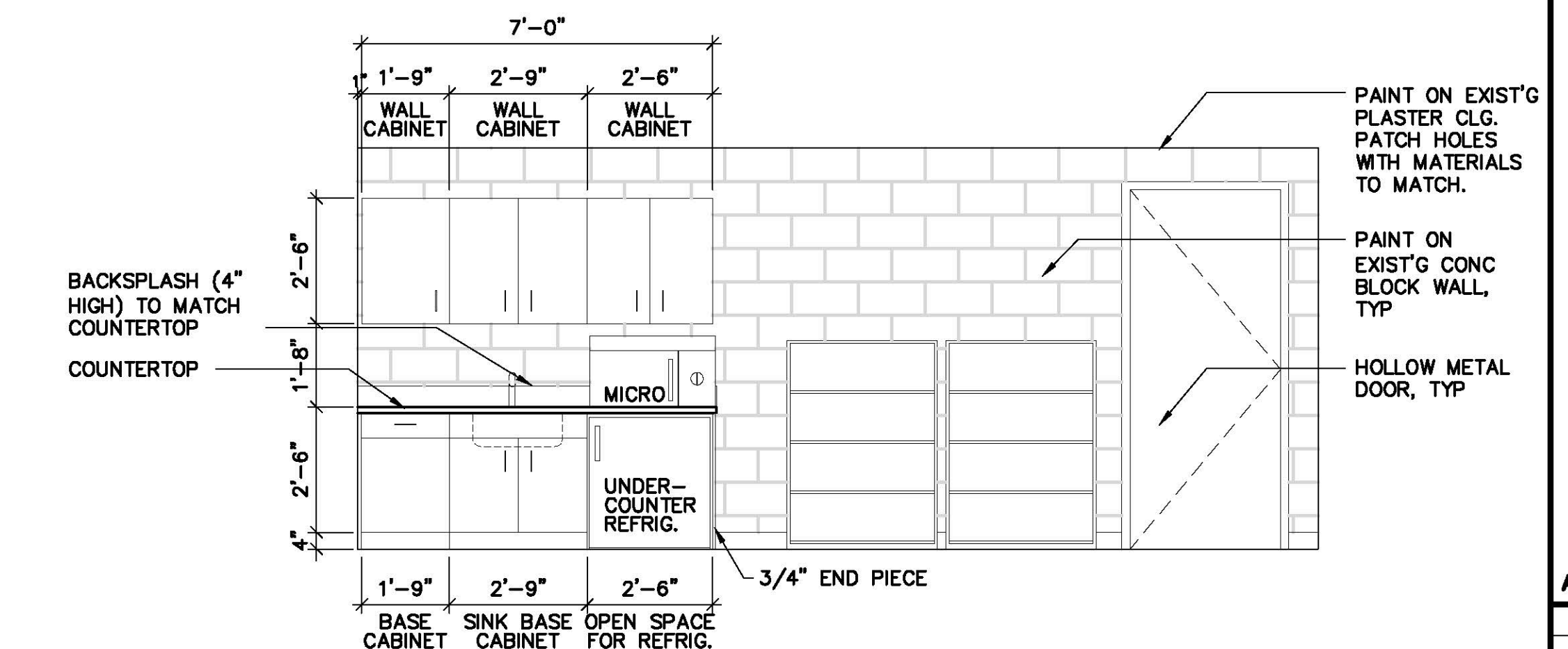
4 SHOWER DETAIL

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



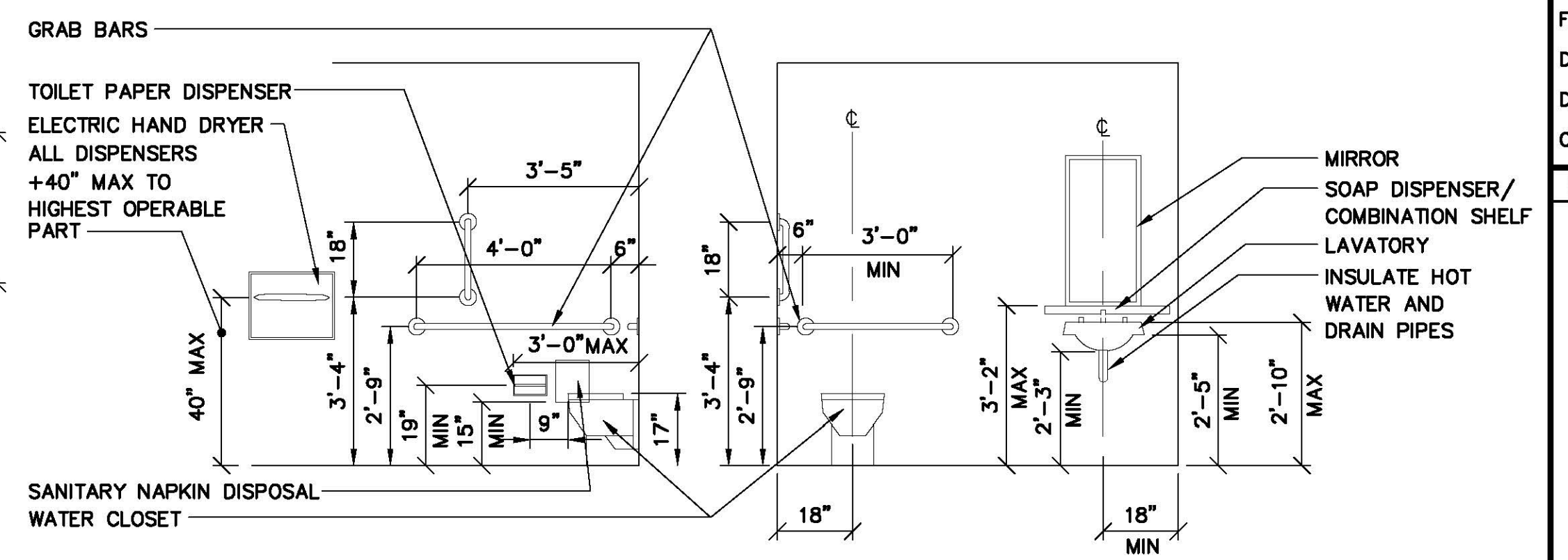
5 TYP. SHOWER ELEVATIONS AND PLAN

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



3 CONTROL ROOM 106 INTERIOR ELEVATION

A-7 SCALE: 3/8" = 1'-0"

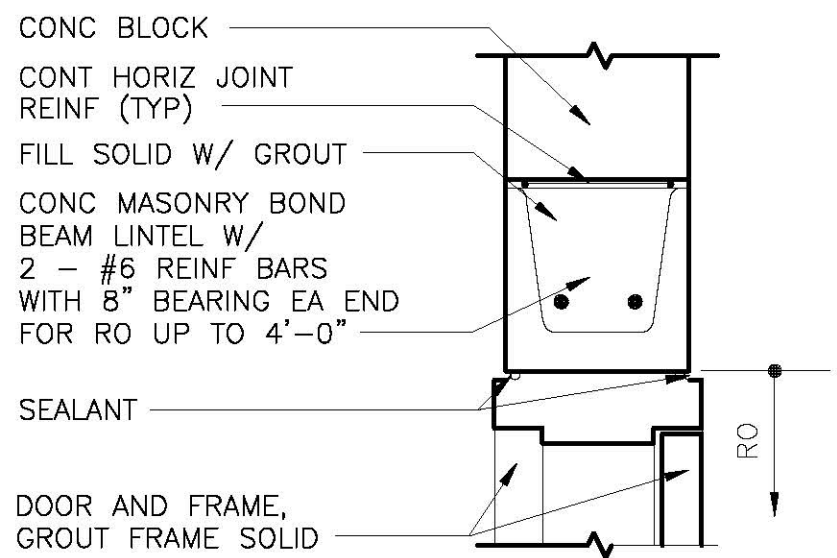


6 TYP. RESTROOM FIXTURE ELEVATIONS

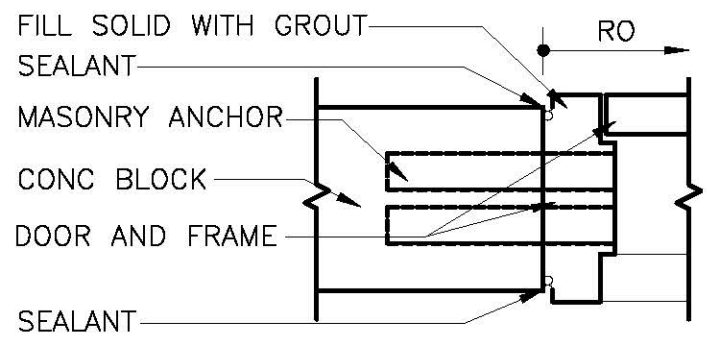
SCALE: $3/8" = 1'-0"$



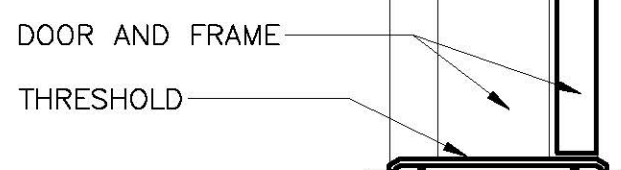
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HEAD A

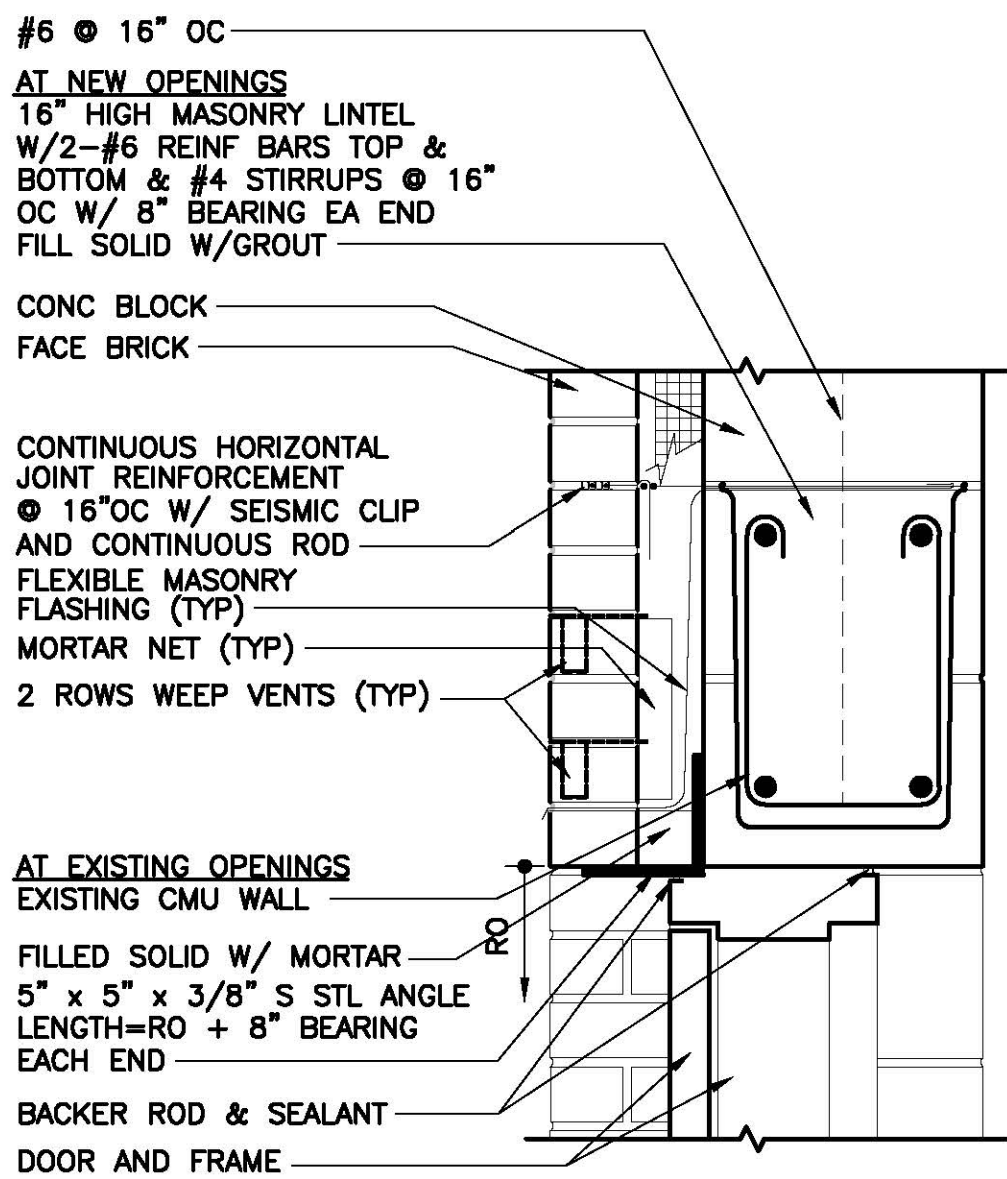


JAMB A

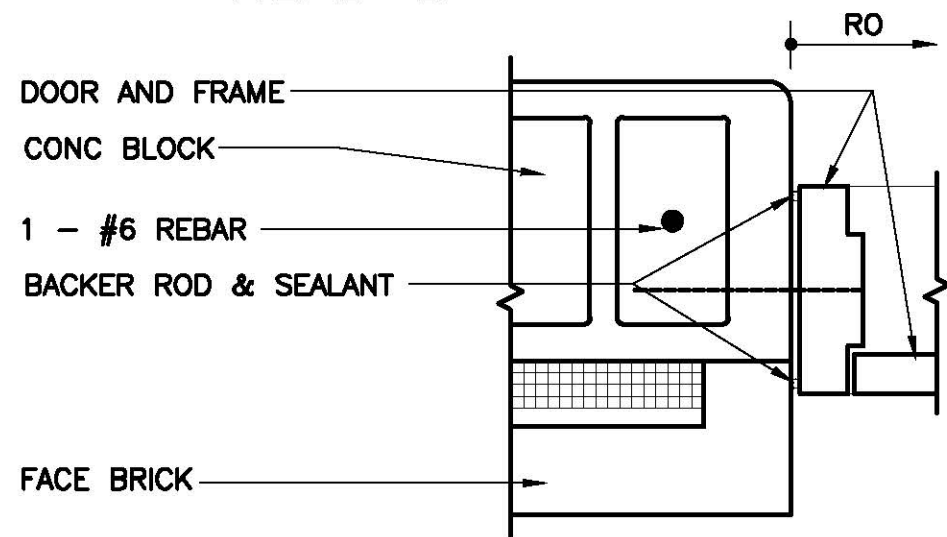


THRESHOLD A

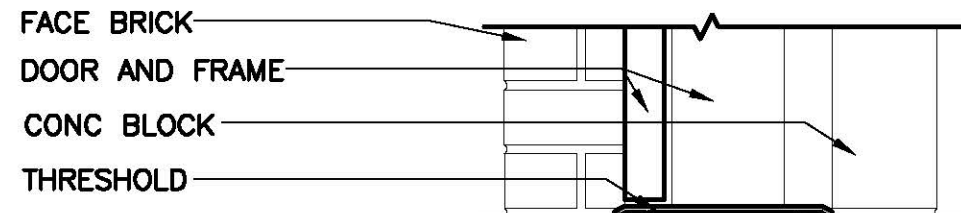
A DOOR DETAILS
Scale: 1 1/2"=1'-0"



HEAD B

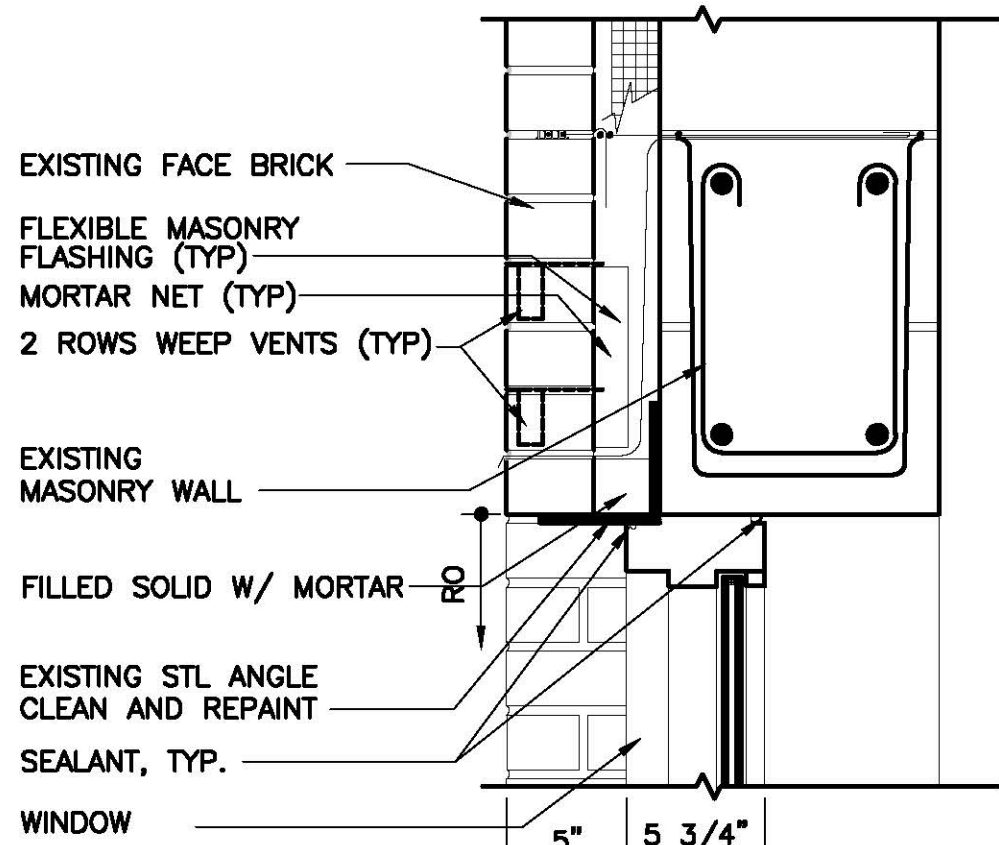


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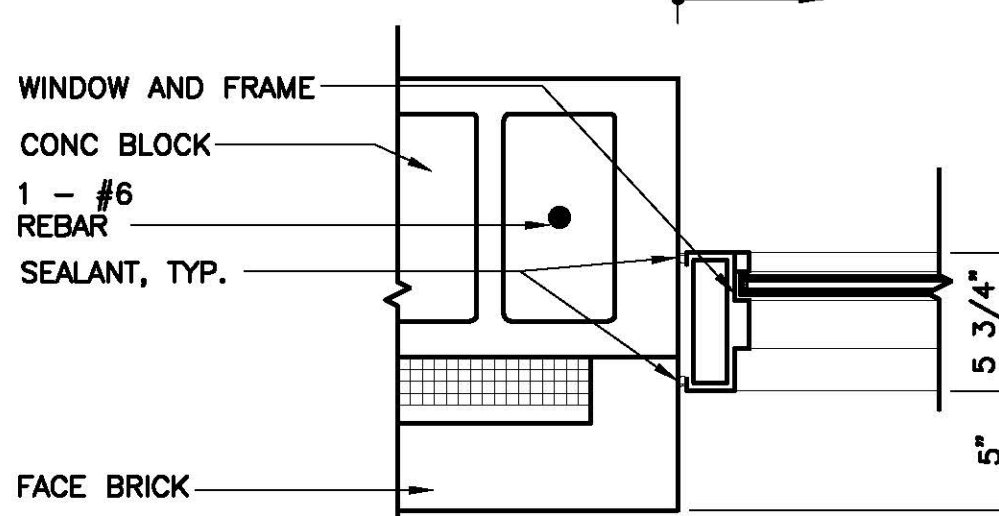


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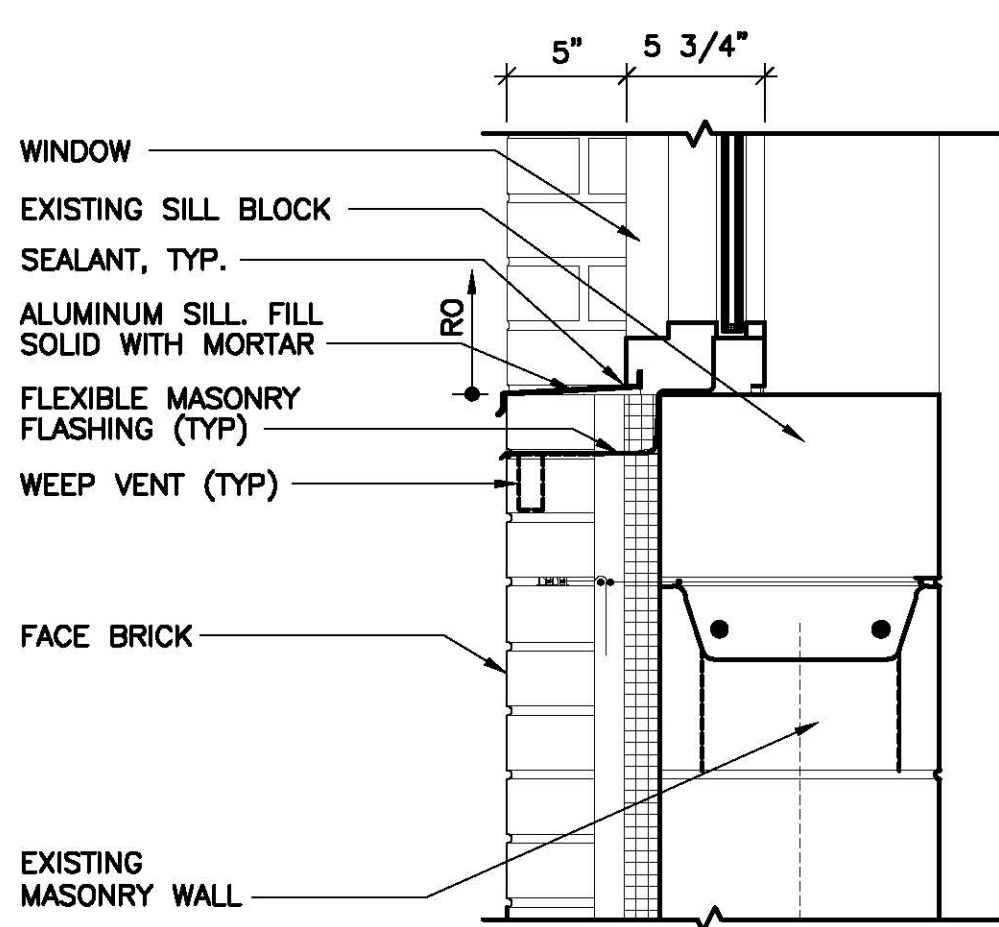
B DOOR DETAILS
Scale: 1 1/2"=1'-0"



WINDOW HEAD W1

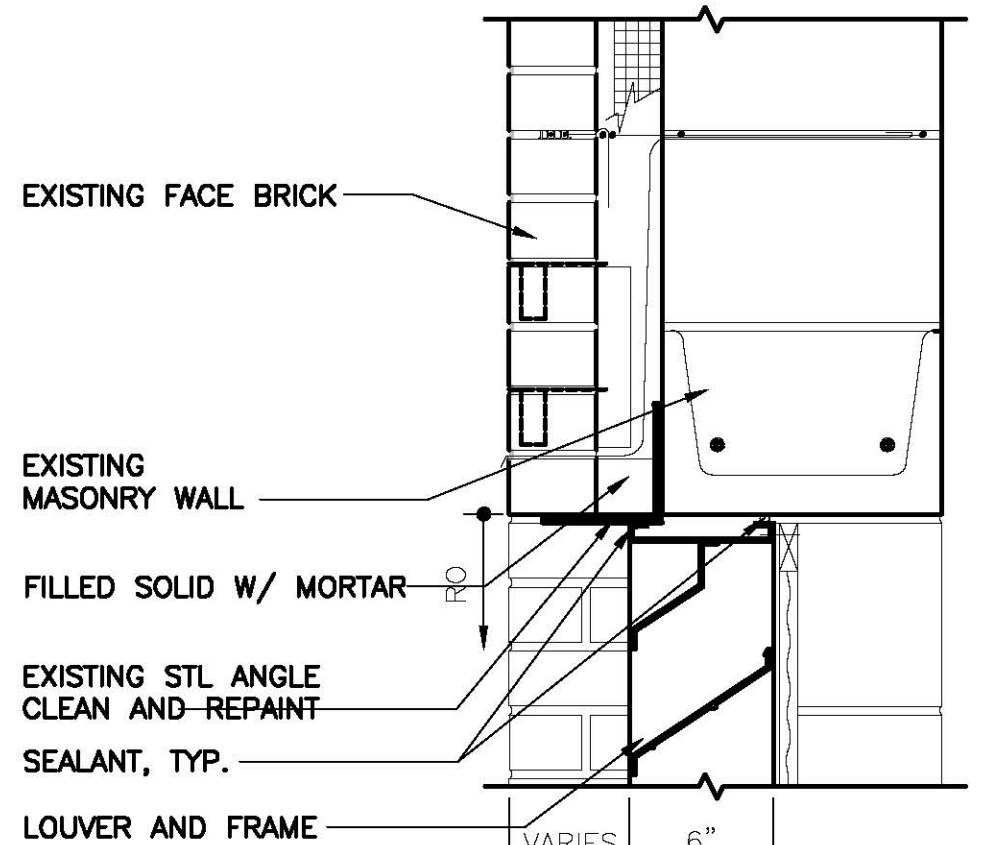


WINDOW JAMB W1

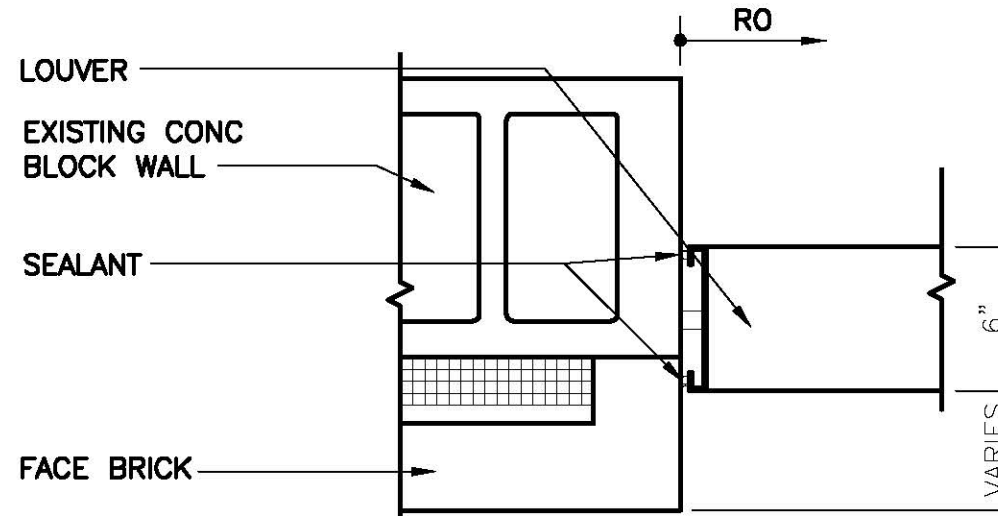


WINDOW SILL W1

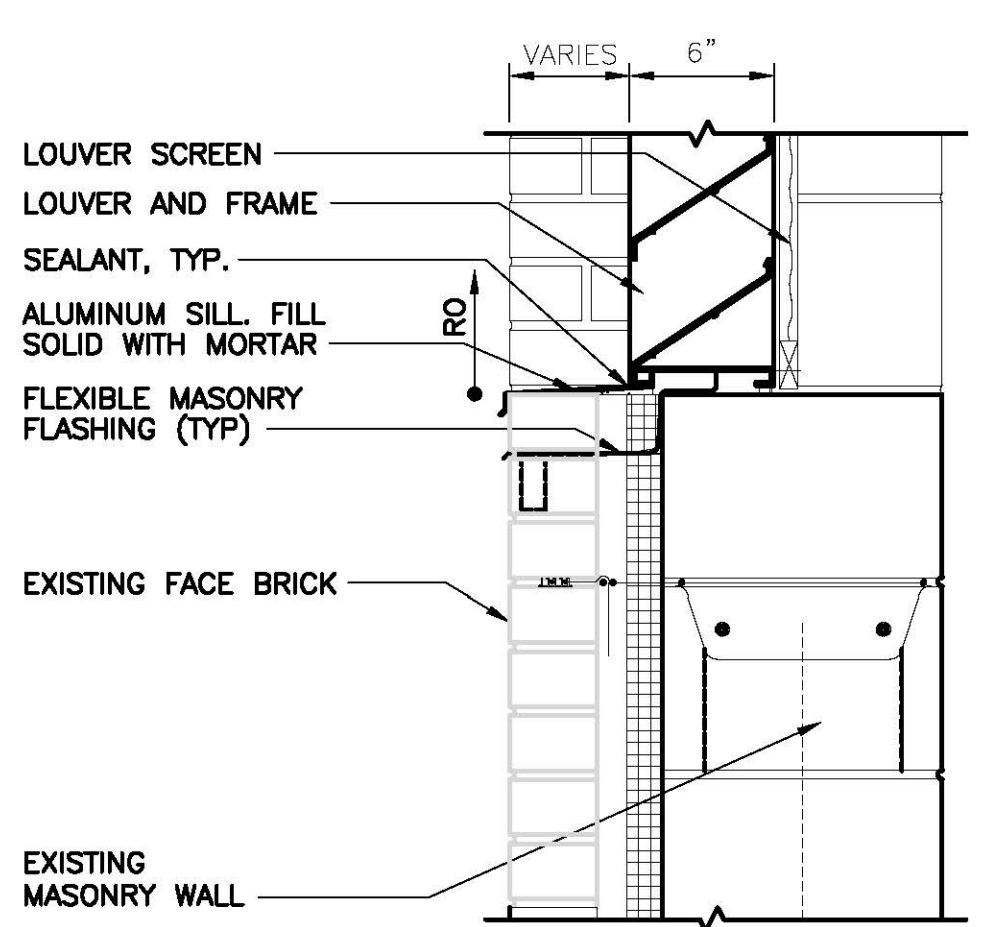
C WINDOW DETAILS
Scale: 1 1/2"=1'-0"



LOUVER HEAD L1



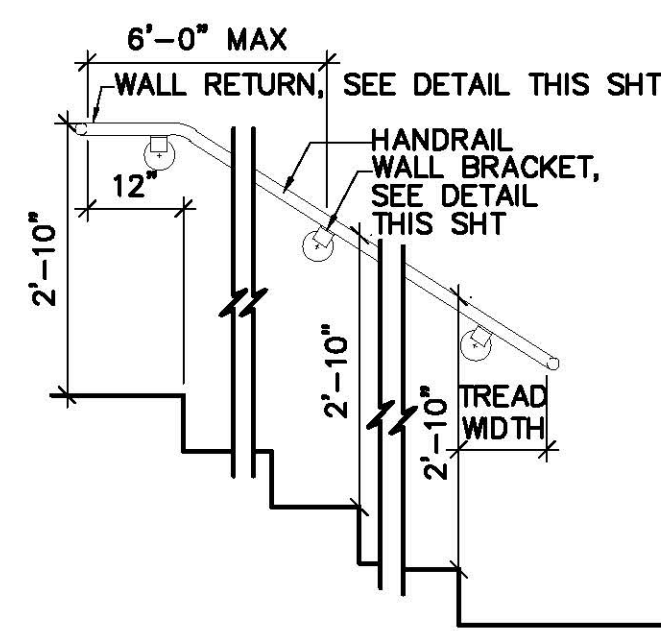
LOUVER JAMB L1



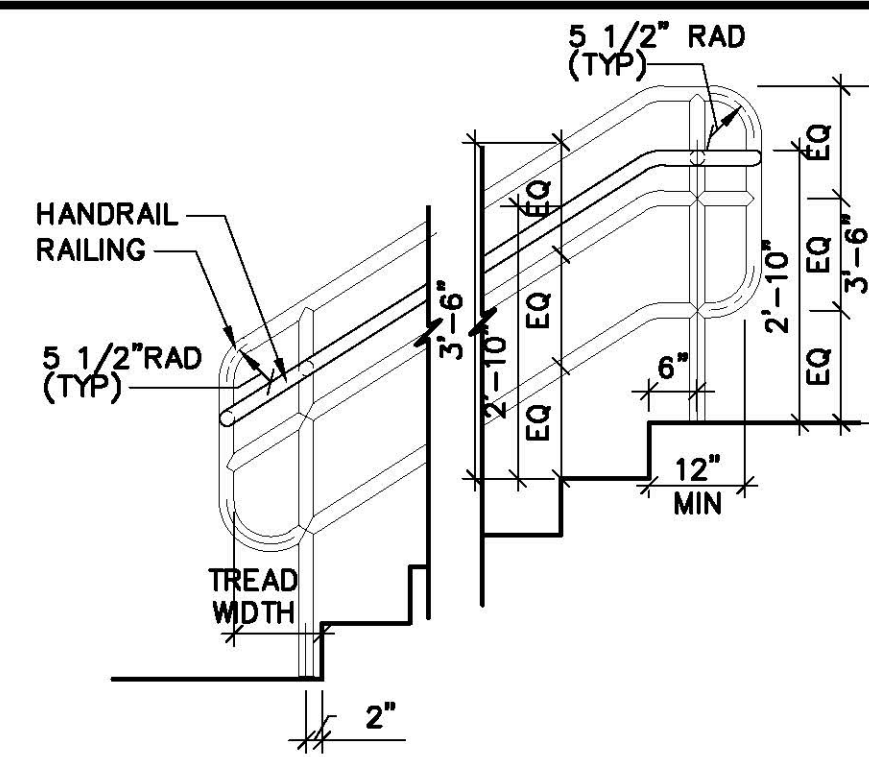
LOUVER SILL L1

D LOUVER DETAILS
Scale: 1 1/2"=1'-0"

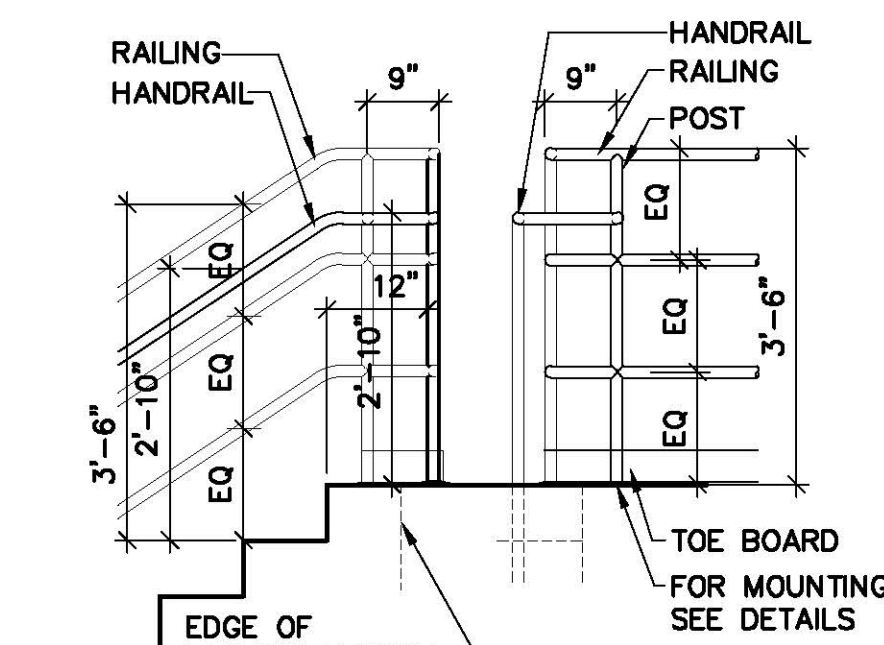




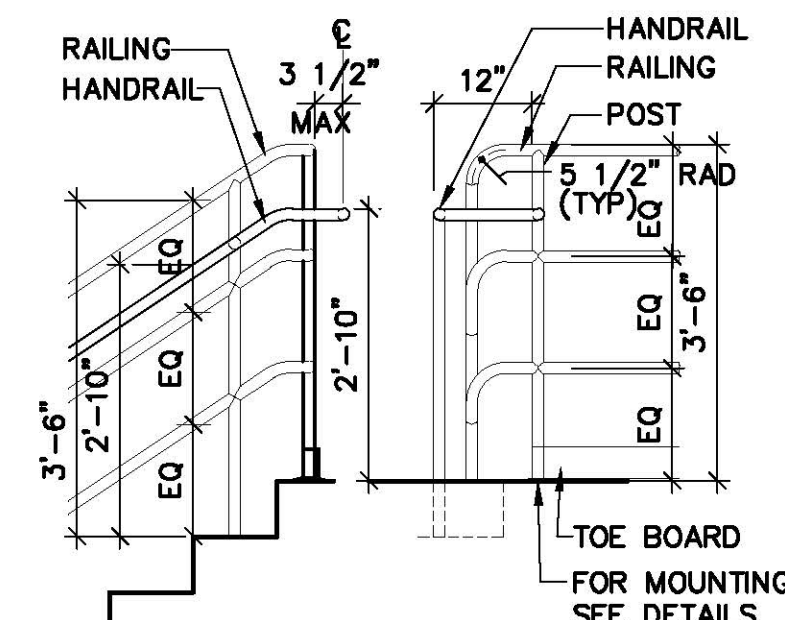
TYPICAL
HANDRAIL DETAIL
SCALE: 1/2" = 1'-0"



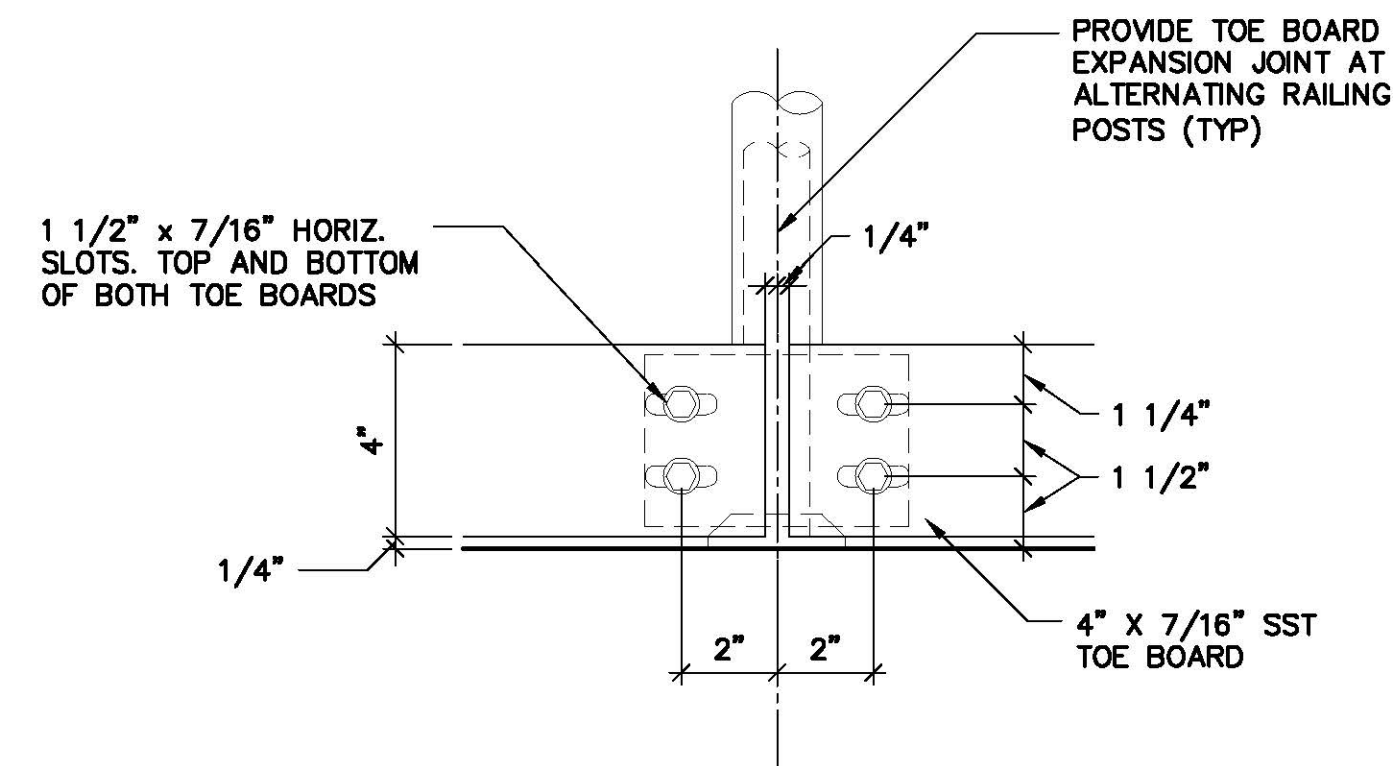
TYPICAL STAIR
END DETAILS
SCALE: 1/2" = 1'-0"



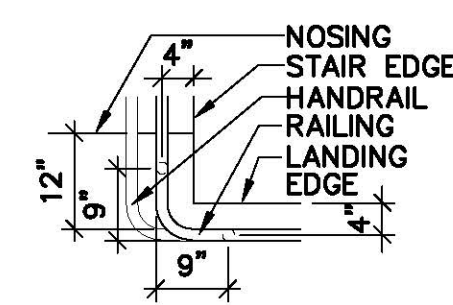
TYPICAL RAILING TO
RAILING STAIR CORNER
(RAILING CONTINUOUS AROUND CORNER)
(LANDING EDGE AND NOSING EDGE DO NOT ALIGN)
SCALE: 1/2" = 1'-0"



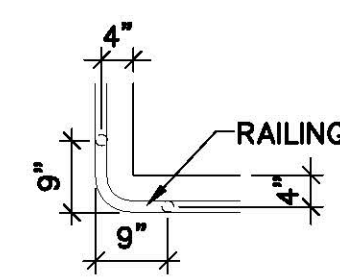
ALT STAIR CORNER
SCALE: 1/2" = 1'-0"
USE ONLY IN LOCATIONS WHERE THE DESIGN
FOR THE DISABLED IS NOT REQUIRED.
LOCATIONS ARE TO BE APPROVED BY THE
ENGINEER.



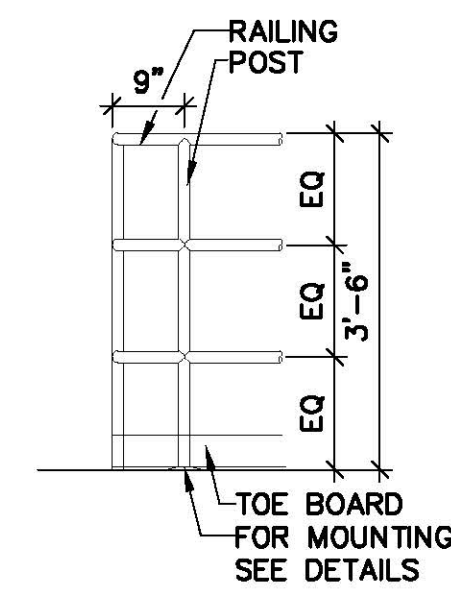
ELEVATION
TOE BOARD EXPANSION JOINT DETAIL
SCALE: 3" = 1'-0"



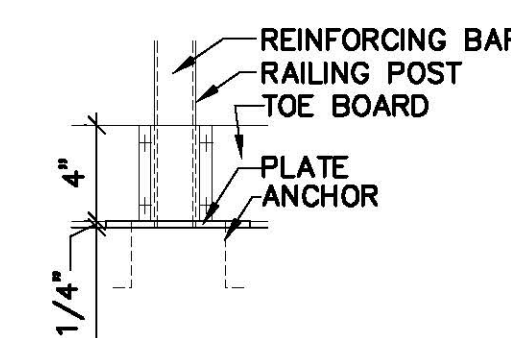
TYPICAL STAIR
CORNER PLAN
SCALE: 1/2" = 1'-0"
TO EDGE OF NOSING



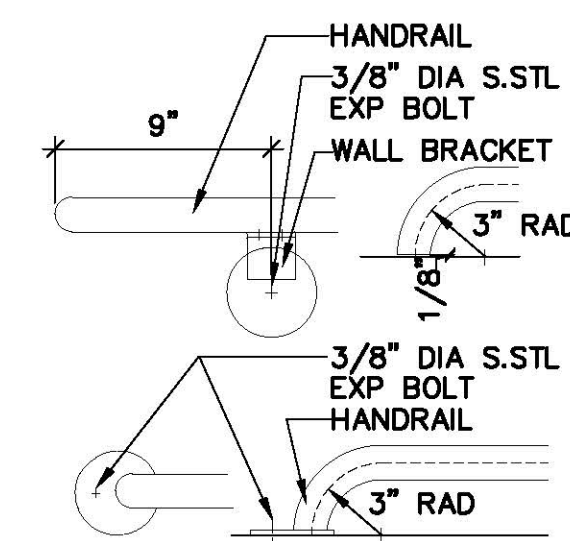
TYPICAL
CORNER PLAN
SCALE: 1/2" = 1'-0"



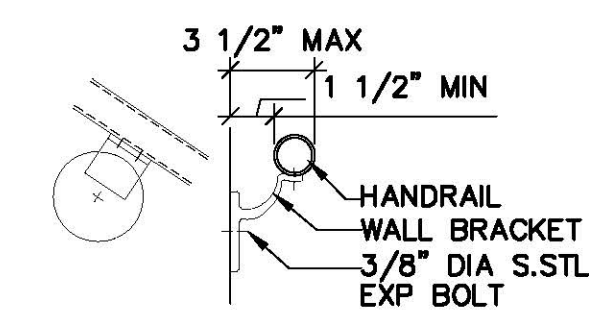
TYPICAL
RAILING CORNER
SCALE: 1/2" = 1'-0"



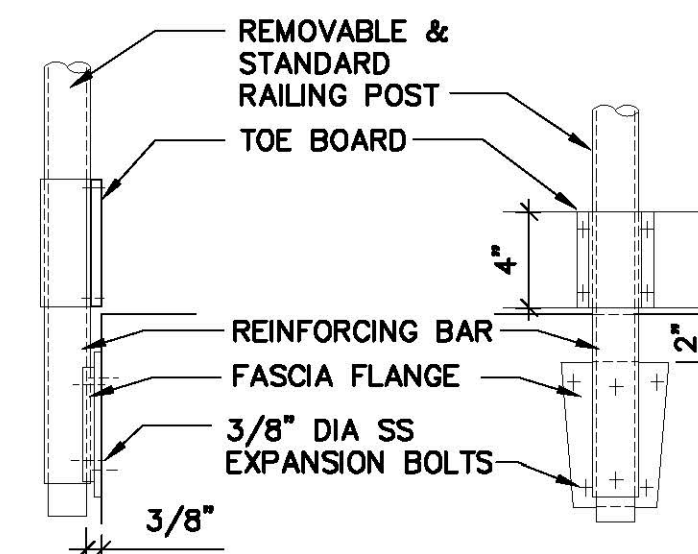
FIXED RAIL
DETAIL
SCALE: 1 1/2" = 1'-0"



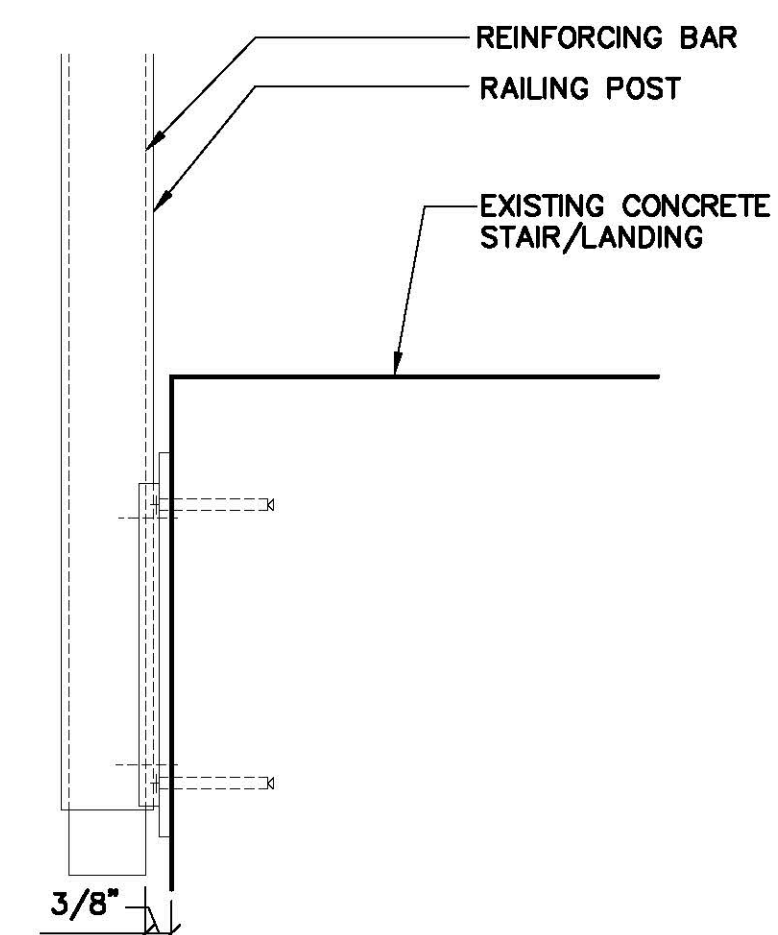
TYPICAL WALL
RETURN DETAILS
SCALE: 1 1/2" = 1'-0"



WALL BRACKET
DETAIL
SCALE: 1 1/2" = 1'-0"

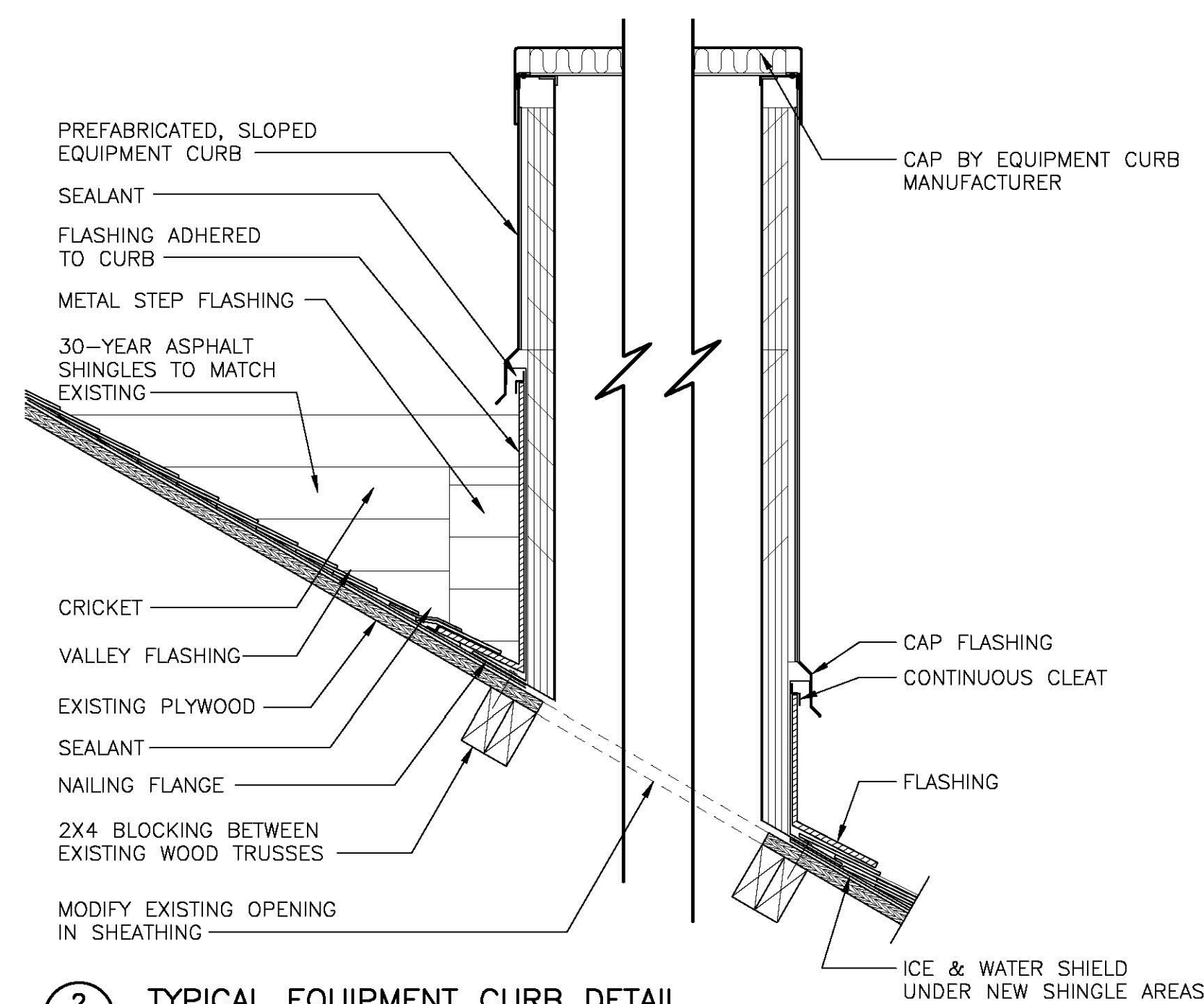


SIDE MOUNT DETAIL
SCALE: 1 1/2" = 1'-0"

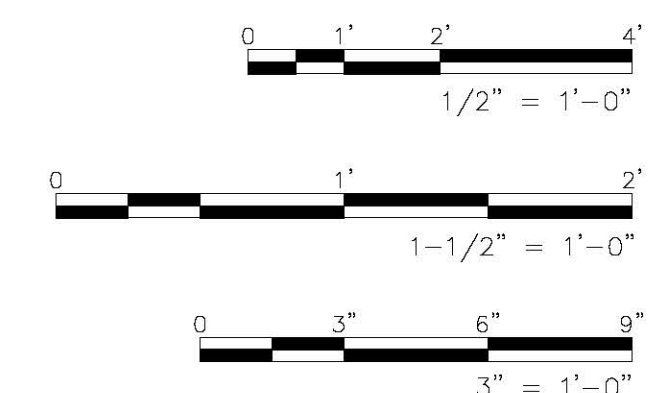


TYPICAL STRINGER DETAIL

SCALE: 3" = 1'-0"

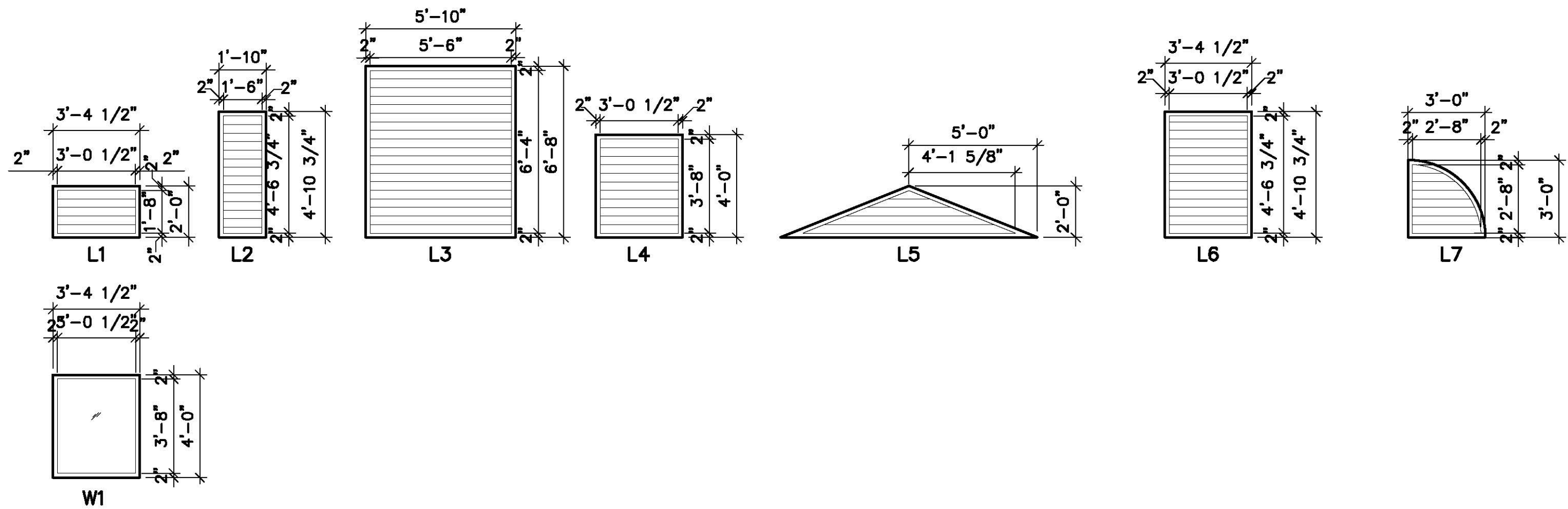
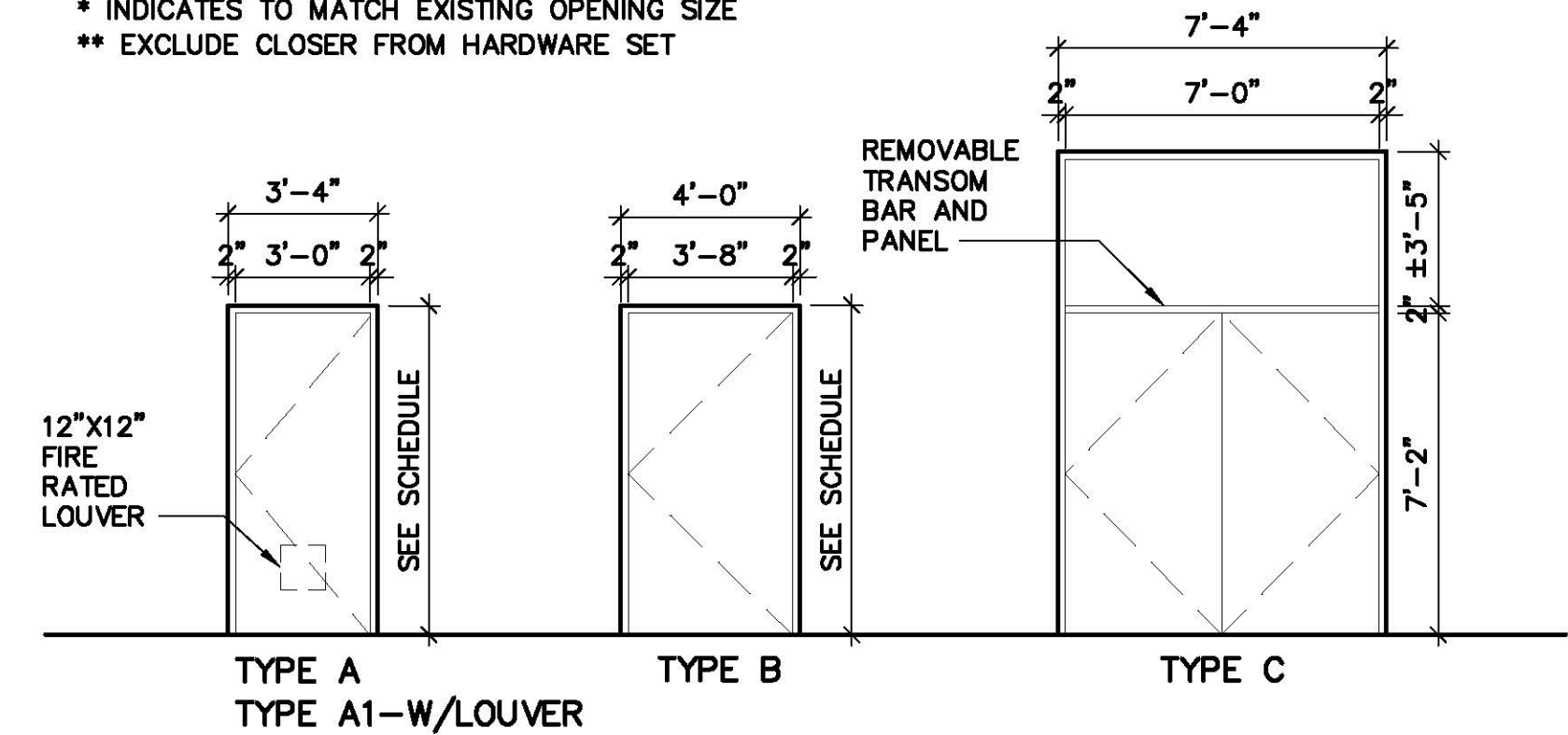


2 TYPICAL EQUIPMENT CURB DETAIL
- Scale: 1 1/2"=1'-0"

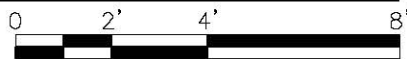


DOOR SCHEDULE															
BUILDING NAME	DOOR NUMBER	DOOR		ROUGH OPENING / FRAME SIZE		DETAILS			DOOR MATERIAL	DOOR ELEV	UL RATED	HARDWARE TYPE	ACCESS AND CONTROL	REMARKS	
		WIDTH	HEIGHT	WIDTH	HEIGHT	HEAD	JAMB	THRESHOLD							
BEARDSLEY PUMP STATION	101-1*	3'-0	7'-2"	3'-4"	7'-4"	B	B	B	1	A	-	1	N		
	102-1*	EX	EX	EX	EX	-	-	-	EX	EX	-	EX	N	SECTIONAL DOOR	
	102-2*	EX	EX	EX	EX	-	-	-	EX	EX	-	EX	N	SECTIONAL DOOR	
	102-3	3'-0	7'-2"	3'-4"	7'-4"	A	A	A	1	A	B	3	N		
	103-1*	7'-0"	7'-2"	7'-0"	10'-9"	B	B	B	1	C	-	2	N	SEE NOTE 5	
	103-2*	3'-0	7'-2"	3'-4"	7'-4"	A	A	A	1	A	-	5	N		
	104-1*	3'-0	7'-2"	3'-4"	7'-4"	A	A	A	1	A-1	B	5	N	FIRE-RATED LOUVER	
	105-1	3'-0	7'-2"	3'-4"	7'-4"	A	A	A	1	A	-	4	N		
	106-1*	3'-0	7'-2"	3'-4"	7'-4"	B	B	B	1	A	-	1	N		
	107-1	3'-0	7'-2"	3'-4"	7'-4"	A	A	A	1	A	-	4**	N		
	108-1	3'-8"	7'-2"	4'-0"	7'-4"	B	B	B	1	B	-	1	N		
	109-1*	3'-0	7'-2"	3'-4"	7'-4"	B	B	B	1	A	-	1	N		

EX = EXISTING TO REMAIN
* INDICATES TO MATCH EXISTING OPENING SIZE
** EXCLUDE CLOSER FROM HARDWARE SET



DOOR, WINDOW & LOUVER ELEVATIONS



ROOM FINISH SCHEDULE										
ROOM NUMBER	ROOM NAME	WALL MATERIAL				FLOOR		CEILING		REMARKS
		N	E	S	W	MATERIAL	BASE	TYPE	HEIGHT	
BEARDSLEY PUMP STATION										
B01	WET WELL	CONC	CONC	CONC	CONC	CO/PL	—	CONC	EXISTING	
B02	DRY WELL	CONC	CONC	CONC	CONC	CO	—	CONC	EXISTING	
101	STAIR 1	CB	CB	CB	CB	CO	RT	PCP/GYP**	EXISTING	
102	GARAGE	CB	CB	CB	CB	CO	RT	PCP	EXISTING	
103	ELECTRICAL ROOM	CB	CB	CB	CB	CO	RT	PCP	EXISTING	
104	BOILER ROOM	CB	CB	CB	CB	CO	EX	PCP/GYP**	EXISTING	
105	RESTROOM/LOCKER ROOM	CB/CT	CB/CT	CB	CB	PT	RT/CT	PCP	EXISTING	SHOWER CEILING AT 8'-0" AFF
106	CONTROL ROOM	CB	CB	CB	CB	RT	CT	PCP	EXISTING	
107	RESTROOM	CB	CB	CB	CB	PT	RT	PCP	EXISTING	
108	ODOR CONTROL ROOM	CB	CB	GYP	GYP	CO	RT	PCP	EXISTING	
109	STAIR 2	CB	CB	CB	GYP	CO	RT	PCP	EXISTING	

** ADD ONE LAYER OF 5/8" TYPE 'X' GYPSUM WALLBOARD TO CEILINGS AT STAIR 1 AND BOILER ROOM 104.

FINISH LEGEND			
FLOORING			
CT	CERAMIC TILE	PT	PORCELAIN TILE
CO	CONCRETE TO REMAIN		
RT	RUBBER TILE		
RUB	RUBBER COVE BASE		
PL	PLANKS (SEE STRUCTURAL)		
CEILING			
CONC	CONCRETE		
GYP	GYPSUM WALLBOARD - PAINT		
PCP	PORTLAND CEMENT PLASTER ON LATHING SYSTEM - PAINT		
WALLS			
CT	CERAMIC TILE		
CB	CONCRETE BLOCK, PAINT*		
CPC	CAST IN PLACE CONCRETE		
CONC	CONCRETE		
GYP	GYPSUM WALLBOARD - PAINT		
LOCKER FINISHES			
MEN'S & WOMEN'S LOCKER ROOM - COLORS SHALL BE COORDINATED AT THE TIME OF SHOP DRAWING SUBMITTAL			
DOOR AND FRAME FINISHES			
HOLLOW METAL DOORS AND FRAMES TO BE PAINTED. COORDINATE WITH DOOR SCHEDULE.			

NOTES:

1. FOR BLIND LOCATIONS SEE SPECIFICATION SECTION — 12 21 00.
2. REFER TO PAINTING SPECIFICATION 09 91 00, SECTION 3.9 FOR PAINTING SCHEDULE.

LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS



**TOWN OF TRUMBULL, CT
WPCA**

BEARDSLEY PUMP STATION COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY

COPYRIGHT: ARCADIS U.S., INC.
2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: A-11

DESIGNED BY: R. BELLODRAWN BY: R. BELLO

CHECKED BY: E. DAWKINS

SHEET TITLE

**DOOR AND ROOM
FINISH SCHEDULES
DOOR, WINDOW,
LOUVER ELEVATIONS**

SCALE: AS SHOWN

A-11

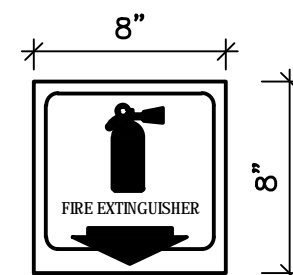
SHEET 26 OF 69



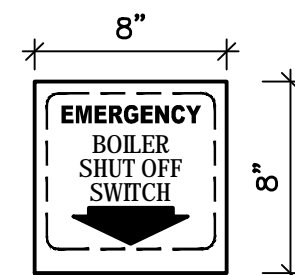
TYPE G:
EXIT / FIRE
PREVENTION SIGN
NOTE: CONFORM WITH BUILDING
CODE STANDARDS.



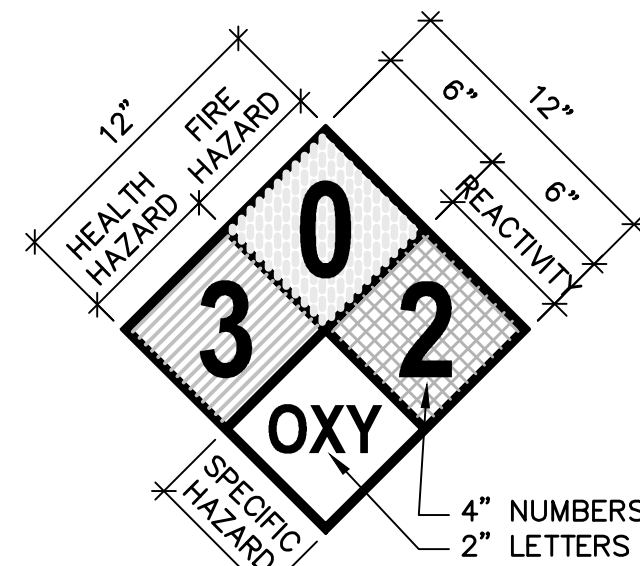
TYPE O-1:
GENERAL
SAFETY



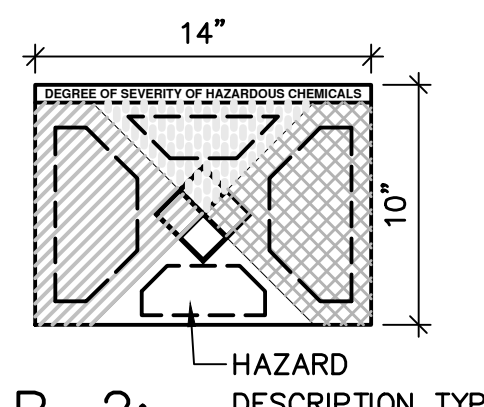
TYPE Q:
FIRE EQUIPMENT
2-WAY SIGN



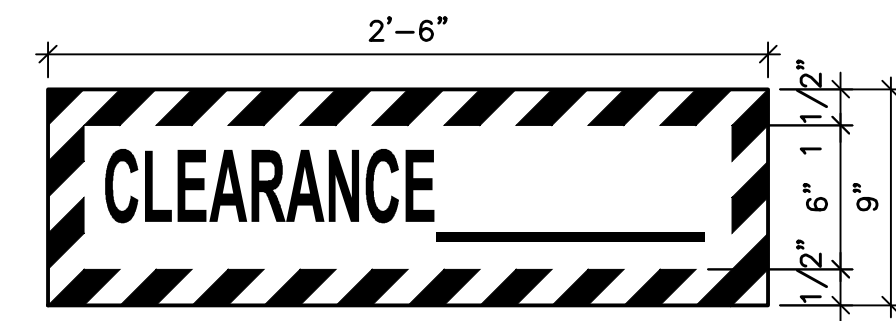
TYPE Q-2:
MESSAGE
EMERGENCY
2-WAY SIGN



TYPE R-1:
HAZARD RATING SIGN



TYPE R-2:	HAZARD RATING	DESCRIPTION	TYP
SIGN W/ EMERGENCY GUIDE			



TYPE S-1:
NOTICEABLE MESSAGE

21. PROVIDE AN ADDITIONAL TEN (10) SIGNS OF VARYING TYPES. TYPES AND QUANTITIES WILL BE DETERMINED AS PROJECT NEEDS ARISE DURING CONSTRUCTION.

SHEET 27 OF 69

User: SANGALANG Spine: AUS-HCSMOD File: I:\ACAD\PROJ\06532002.0000\SHEETS\STRUCTURAL\SS-1.DWG Scale: 1:1 SavedDate: 9/25/2017 Time: 14:14 Plot Date: O'Connell, Timothy, 9/27/2017, 15:03 Layout: SS-1

GENERAL

G-1	THESE NOTES ARE GENERAL AND SUPPLEMENTAL TO THE SPECIFICATIONS. THESE NOTES APPLY TO THE ENTIRE PROJECT UNLESS MODIFIED OR NOTED OTHERWISE IN THE CONTRACT DOCUMENTS.
G-2	STANDARD DETAILS, SHOWN ON DRAWINGS S-7 & S-8 SHALL BE USED WHEN REFERRED TO, UNLESS LESS RESTRICTIVE OR DIFFERENT DETAILS ARE SHOWN ON THE DRAWINGS.
G-3	DESIGN IS IN ACCORDANCE WITH AND CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE 2016 CONNECTICUT STATE BUILDING CODE EXCEPT WHERE OTHER APPLICABLE CODES AND THE CONTRACT DOCUMENTS ARE MORE RESTRICTIVE.
G-4	LIVE LOADS: AS SHOWN ON DRAWINGS.
G-5	ROOF SNOW LOAD: <div><div>1. GROUND SNOW LOAD, Pg = 30 PSF</div><div>2. FLAT-ROOF SNOW LOAD, Pf = 23.1 PSF</div><div>3. SNOW IMPORTANCE FACTOR, IS = 1.1</div><div>4. THERMAL FACTOR, Ct = 1.0</div></div>
G-6	SEISMIC DESIGN DATA: <div><div>1. SEISMIC IMPORTANCE FACTOR, IE = 1.25</div><div>2. RISK CATEGORY: III</div><div>3. MAPPED SPECTRAL RESPONSE ACCELERATIONS:<div><div>A) Ss = 20.6%</div><div>B) Si = 6.5%</div></div></div><div>4. SITE CLASS = D</div><div>5. SPECTRAL RESPONSE COEFFICIENTS:<div><div>A) Sds = 22.0%</div><div>B) Sdi = 10.4%</div></div></div><div>6. SEISMIC DESIGN CATEGORY = B</div><div>7. BASIC SEISMIC FORCE RESISTING SYSTEM = ORDINARY REINFORCED MASONRY SHEAR WALLS.</div><div>8. BASE SHEAR = 13.73% X W</div><div>9. RESPONSE MODIFICATION FACTOR = 2.</div><div>10. ANALYSIS PROCEDURE = ASCE 7-12.8</div></div>
G-7	WIND DESIGN DATA: <div><div>1. ULTIMATE WIND SPEED: 135 MPH</div><div>2. WIND IMPORTANCE FACTOR: 1.0</div><div>3. WIND EXPOSURE: B</div><div>4. APPLICABLE INTERNAL PRESSURE COEFFICIENT:<div><div>a. ENCLOSED = ±0.18</div><div>b. PARTIALLY ENCLOSED = ±0.55</div></div></div></div>
G-8	ALL DIMENSIONS INDICATED (*) ARE TO BE VERIFIED EITHER BY FIELD MEASUREMENTS FOR EXISTING STRUCTURES OR BY SHOP DRAWINGS FOR EQUIPMENT FURNISHED. STRUCTURAL DIMENSIONS NOT SHOWN BUT CONTROLLED BY OR RELATED TO EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR WITH THE MANUFACTURER PRIOR TO CONSTRUCTION.
G-9	EQUIPMENT ANCHOR BOLT SIZES, TYPES, AND PATTERNS SHALL BE VERIFIED WITH THE MANUFACTURER. ALL BOLT PATTERNS SHALL BE TEMPLATED TO INSURE ACCURACY OF PLACEMENT.
G-10	STRUCTURAL DRAWINGS SHALL BE USED IN COORDINATION WITH DRAWINGS OF ALL OTHER DISCIPLINES AND MANUFACTURER'S SHOP DRAWINGS.
G-11	IF A CONFLICT IS FOUND BETWEEN DIFFERENT PORTIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY. CONTINUED CONSTRUCTION OF THE AREA IN CONFLICT SHALL BE AT THE CONTRACTOR'S OWN RISK UNTIL THE CONFLICT IS RESOLVED BY THE OWNER.
G-12	STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURE. DURING CONSTRUCTION, THE STRUCTURES SHALL BE PROTECTED BY BRACING AND TEMPORARY SUPPORTS WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR. OVERSTRESSING OF ANY STRUCTURAL ELEMENT IS PROHIBITED.
G-13	NO BACKFILL SHALL BE PLACED AGAINST ANY WALL UNLESS ALL SUPPORTING ELEMENTS OF THE STRUCTURE HAVE BEEN CONSTRUCTED AND HAVE REACHED THE SPECIFIED MINIMUM CONCRETE STRENGTH.
G-14	DO NOT SCALE THESE DRAWINGS, USE DIMENSIONS.
G-15	CONTRACTOR'S CONSTRUCTION AND ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.
G-16	WHERE CONNECTIONS TO OR MODIFICATIONS OF EXISTING STRUCTURES ARE SHOWN, EXISTING FOUNDATIONS, WALLS, COLUMNS, SLABS, BEAMS, FLOORS, DECKS, (CONCRETE, STEEL, TIMBER, ETC.) ARE ASSUMED TO BE IN GOOD CONDITION. THIS MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR. UNSOUND CONDITIONS SHALL BE REPORTED TO THE OWNER. ALL UNSOUND STRUCTURAL ELEMENTS SHALL BE REPAIRED TO SOUND CONDITION AS APPROVED BY THE OWNER. EXISTING CONSTRUCTION: DIMENSIONS SHALL BE VERIFIED BY THE GENERAL CONTRACTOR BEFORE WORK COMMENCES. VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS SHALL BE REPORTED TO THE OWNER.
G-17	PROVIDE ADDITIONAL REINFORCEMENT AT OPENINGS AND AT WALL INTERSECTIONS AS SHOWN IN TYPICAL DETAILS.
G-18	FOR SIZES AND LOCATIONS OF EQUIPMENT SUPPORTS AND PIPE OPENINGS, SEE OTHER DISCIPLINE DRAWINGS. OPENING SIZES LESS THAN 12" ARE NOT SHOWN ON STRUCTURAL DRAWINGS, REFERENCE OTHER DISCIPLINE DRAWINGS FOR LOCATIONS.

GENERAL (CON'T)

G-19	NO COLD WEATHER CONSTRUCTION OR HOT WEATHER CONSTRUCTION, AS DEFINED IN SPECIFICATION SECTION 03 00 05, IS PERMITTED WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
G-20	OPENINGS AND PENETRATIONS: THE CONTRACTOR SHALL SUBMIT COMPOSITE DRAWINGS INDICATING ALL FLOOR OPENINGS AND PENETRATIONS THROUGH STRUCTURAL MEMBERS REQUIRED TO ACCOMMODATE THE HVAC, PLUMBING AND ELECTRICAL WORK. THE CONTRACTOR SHALL FOLLOW THE TYPICAL FRAMING DETAILS AT OPENINGS AND REINFORCEMENT DETAILS AT PENETRATIONS THROUGH STRUCTURAL MEMBERS. ACCORDINGLY, THE CONTRACTOR SHALL SUBMIT SHOP DETAILS TO THE ENGINEER FOR REVIEW.
G-21	ALL GRATING TO BE ALUMINUM, UNLESS NOTED OTHERWISE.

FOUNDATIONS

F-1	DESIGN ASSUMPTIONS: <div><div>A) ALLOWABLE BEARING PRESSURE: 1500 PSF</div><div>B) GROUNDWATER:<div>1) BASE FLOOD ELEVATION: EL 74.50±</div></div></div>
F-2	CONCRETE GENERAL NOTES APPLY TO FOUNDATIONS.
F-3	MINIMUM DEPTH FROM ADJACENT FINISHED GRADE TO BOTTOM OF FOUNDATION 3'-6" UON.

CONCRETE

C-1	CONCRETE 28-DAY COMPRESSIVE STRENGTH: <div><div>CLASS A - 4500 PSI</div><div>CLASS B - 3000 PSI</div></div>
C-2	REINFORCEMENT: ASTM A615, GRADE 60.
C-3	CONCRETE COVER FOR REINFORCING: <div><div>A) SURFACES CAST AGAINST SUBGRADE<div>3"</div></div><div>B) TOP SURFACES OF SLABS WHERE PVC WATERSTOP IS REQUIRED IN WALLS<div>3"</div></div><div>C) FORMED SURFACES IN CONTACT WITH WEATHER, SOIL, OR LIQUID<div>2"</div></div><div>D) BOTTOM SURFACES OF SLABS OVER LIQUID<div>2"</div></div><div>F) SURFACES NOT IN CONTACT WITH WEATHER, SOIL, OR LIQUID<div>1 1/2"</div></div></div>
C-4	CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS. WHERE NOT SHOWN, CONSTRUCTION JOINTS SHALL BE LOCATED AT NO MORE THAN 40' ON CENTER. CONSTRUCTION JOINT LOCATIONS SHALL BE AS APPROVED BY THE ENGINEER.
C-5	WHERE HORIZONTAL CONSTRUCTION JOINTS, LOCATED ABOVE THE FOUNDATION SLAB, EXTEND BEYOND WHERE NEEDED, TERMINATE AT A VERTICAL CONSTRUCTION JOINT AS APPROVED BY THE ENGINEER.
C-6	PROVIDE WATERSTOPS IN ALL FOUNDATION, TANKS AND OTHER SUBSTRUCTURES UP TO AN ELEVATION AT LEAST 12 INCHES ABOVE GRADE OR TO AN ELEVATION AT LEAST 12 INCHES ABOVE LIQUID LEVEL IN TANKS, WHICHEVER IS HIGHER, WHETHER SHOWN OR NOT.
C-7	EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND REVEALS NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUIRED BY OTHER CONTRACT DOCUMENTS, SHALL BE PROVIDED FOR PRIOR TO PLACING CONCRETE.
C-8	AT ALL TYPICAL CURBS, EQUIPMENT PADS, AND PIPE SUPPORT PIERS, REINFORCING DOWELS SHOWN MAY BE REPLACED WITH MATCHING DOWELS SET IN EPOXY IN DRILLED HOLES AS SPECIFIED. DOWELS LOCATED CLOSER THAN 3 INCHES FROM ANY EDGE OF CONCRETE SHALL NOT BE REPLACED WITH DRILLED DOWELS.
C-9	WHERE DRILLED EPOXY DOWELS ARE PLACED INTO HARDENED CONCRETE, ADJUST THE DOWEL LOCATIONS AS NEEDED TO AVOID DRILLING THROUGH ANY REINFORCING BARS. IF THE DOWEL LOCATION NEEDS TO BE MODIFIED, CONTACT THE ENGINEER.
C-10	DOWELS, ANCHOR BOLTS, PIPES, AND OTHER EMBEDDED ITEMS SHALL BE HELD SECURELY IN POSITION WHILE CONCRETE IS BEING PLACED.
C-11	CONDUITS AND PIPES EMBEDDED IN OR PENETRATING THROUGH CONCRETE SHALL BE SPACED ON CENTER NOT LESS THAN 3 TIMES THEIR OUTSIDE DIMENSION, BUT NOT LESS THAN 2 1/2 INCHES CLEAR. OUTSIDE DIMENSION OF EMBEDDED ITEMS SHALL NOT EXCEED 1/3 OF THE CONCRETE MEMBER THICKNESS. CLEAR SPACING REQUIREMENTS SHALL APPLY FOR EMBEDDED CONDUITS OR PIPES CROSSING AT AN ANGLE LESS THAN 60 DEGREES.
C-12	THE EFFECTIVE DIMENSION USED TO MEET MEMBER THICKNESS LIMITATIONS SHALL BE THE SUM OF THE OUTER DIMENSIONS OF CROSSING ELEMENTS.
C-13	EMBEDDED CONDUITS AND PIPES SHALL BE LOCATED BETWEEN THE LAYERS OF REINFORCEMENT AND A MINIMUM OF 2 1/2 INCHES CLEAR FROM APPROXIMATELY PARALLEL REINFORCING BARS. REQUIREMENTS FOR EMBEDDED ELEMENTS CROSSING REINFORCING BARS SHALL BE AS REQUIRED FOR CROSSING EMBEDDED ELEMENTS.

CONCRETE (CON'T)

C-14	CONDUITS AND PIPES SHALL NOT BE EMBEDDED IN OR PASS THROUGH COLUMNS OR BEAMS UNLESS INDICATED OTHERWISE OR AUTHORIZED BY ENGINEER.
C-15	REINFORCING BARS AND ACCESSORIES SHALL NOT BE IN CONTACT WITH ANY METAL PIPE, PIPE FLANGE, METAL CONDUIT, OR OTHER METAL PARTS EMBEDDED IN CONCRETE. A MINIMUM CLEARANCE OF 2 INCHES SHALL BE PROVIDED.
C-16	CONTRACTOR SHALL PROVIDE 3/4 INCH CHAMFER USING WOOD CHAMFER STRIPS ON ALL EXPOSED CORNERS OF COLUMNS, BEAMS AND WALLS OR AS REQUIRED TO MATCH EXISTING.
C-17	LAP SPLICES SHALL BE IN ACCORDANCE WITH THE TABLE SHOWN ON DRAWING S-7.
C-18	PROVIDE ADDITIONAL REINFORCEMENT AT OPENINGS AND WALL INTERSECTIONS AS SHOWN ON TYPICAL DETAILS (UON).

SPECIAL INSPECTION

I-1	THE FOLLOWING ITEMS SHALL BE SUBJECT TO SPECIAL INSPECTION, MADE AND WITNESSED BY OR UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. TEST REPORTS, CERTIFICATES OF INSPECTION SHALL BE PREPARED AND FILED WITH THE DEPARTMENT OF BUILDINGS: <div><div>A. SHORING, BRACING, STRUCTURAL STABILITY</div><div>B. CONCRETE INSPECTION PER SPECIFICATIONS</div><div>C. MASONRY INSPECTION PER SPECIFICATIONS</div><div>D. CONCRETE ANCHORS AND ANCHOR BOLTS</div><div>E. SUBGRADE COMPACTION</div></div>
I-2	THE DESIGNATED INSPECTING AGENCY FOR SPECIAL INSPECTION SHALL PERFORM ON SITE INSPECTION IN ACCORDANCE WITH THE 2016 CONNECTICUT STATE BUILDING CODE UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT.
I-3	THE DESIGNATED INSPECTING AGENCY IS RESPONSIBLE FOR ALL REQUIRED TESTING AND INSPECTION INCLUDING SPECIAL INSPECTION. THE SPECIAL INSPECTION ENGINEERS ARE RESPONSIBLE FOR FILING AND OBTAINING APPROVAL OF ALL STATEMENTS, TEST AND INSPECTION REPORTS, INCLUDING STEEL AND CONCRETE PRODUCER'S CERTIFICATES.
I-4	CONTRACTOR TO NOTIFY THE SPECIAL INSPECTION ENGINEERS AT LEAST 48 HOURS PRIOR TO START OF WORK.

STRUCTURAL METALS

S-1	DETAIL, FABRICATE, AND ERECT STRUCTURAL STEEL IN ACCORDANCE WITH AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, LATEST EDITION.
S-2	STEEL MATERIAL: <div><div>A) STRUCTURAL TUBING, ASTM A 500, GRADE B</div><div>B) STRUCTURAL PIPE, ASTM A 53, GRADE B</div><div>C) W SHAPES, ASTM A992.</div><div>D) STRUCTURAL CHANNELS, ASTM A 572.</div><div>E) ALL OTHER SHAPES AND PLATES, ASTM A 36 UON.</div></div>
S-3	PROVIDE MIN. 3/4" DIAMETER ASTM A 325 OR ASTM F3125 TYPE X HIGH STRENGTH BOLTS, FULLY TIGHTENED CONNECTIONS.
S-4	PROVIDE TYPICAL STEEL BEAM CONNECTIONS FOR A CAPACITY OF NOT LESS THAN THE TOTAL UNIFORM LOAD CAPACITY TABULATED IN THE AISC TABLES FOR ALLOWABLE LOADS OF BEAMS.
S-5	DO NOT PAINT STEEL SURFACES WHICH ARE TO BE WELDED OR ENCASED IN CONCRETE.
S-6	ALL GROOVE AND BUTT WELDS SHALL BE FULL PENETRATION UON.
S-7	FILLET WELD SIZES SHALL BE THE MINIMUM SIZE REQUIRED BY AISC CODE FOR PLATE SIZES TO BE CONNECTED AND SHALL BE APPLIED TO THE ENTIRE JOINT CONTACT LENGTH, BUT NOT LESS THAN 3/16 INCH.
S-8	STAINLESS STEEL SHALL BE TYPE 316L-ASTM A276.
S-9	STAINLESS STEEL TYPE 316L SHALL BE USED IN ALL AREAS TO BE SUBMERGED AND AS SHOWN ON DWGS.
S-10	IF STAINLESS STEEL MEMBERS ARE NOT AVAILABLE. CONTRACTOR SHALL PROVIDE EQUIVALENT STAINLESS STEEL SECTIONS, BUILT UP OUT OF STAINLESS STEEL PLATES.
S-11	ALL BOLTS, ANCHOR BOLTS, AND CONCRETE ANCHORS CONNECTING STAINLESS STEEL SHALL BE TYPE 316 STAINLESS STEEL.
S-12	WHENEVER ONE MEMBER IS FASTENED TO ANOTHER WITH FASTENINGS (BOLTS, WELDS, ETC.) SET AT A UNIFORM SPACING, THERE SHALL BE A MINIMUM OF TWO FASTENINGS PER PIECE CONNECTED AND THE FIRST AND LAST FASTENINGS SHALL BE LOCATED NOT TO EXCEED 1/4 SPACE FROM EACH END.

ABBREVIATIONS

AB	ANCHOR BOLTS	ID	INSIDE DIAMETER
ADD'L	ADDITIONAL	IF	INSIDE FACE
AL	ALUMINUM	INV	INVERT
ALT	ALTERNATE		
ANCH	ANCHOR	JT	JOINT
APPROX	APPROXIMATE	KO	KNOCK OUT
A	ARCHITECTURAL	L	ANGLE (STRUCTURAL SHAPE)
		LG	LONG
BAL	BALANCE	LL	LIVE LOAD
BET	BETWEEN	LLH	LONG LEG HORIZ
BL	BUILDING LINE	LLV	LONG LEG VERT
BLDG	BUILDING	LOC	LOCATION
BLK	BLOCK	LP	LOW POINT
BM	BEAM	LW	LONG WAY
BOT	BOTTOM		
BRG	BEARING		
		MAS	MASONRY
C	CHANNEL STRUCTURAL SHAPE	MAX	MAXIMUM
CANT'L	CANTILEVER	MECH	MECHANICAL
CJ	CONSTRUCTION JOINT	MEZZ	MEZZANINE
CL	CLEAR	MFR	MANUFACTURE, MANUFACTURER
CMU	CONCRETE MASONRY UNIT	MH	MANHOLE
		MID	MIDDLE
COL	COLUMN	MIN	MINIMUM
COMP	COMPRESSIBLE	MO	MASONRY OPENING
CONC	CONCRETE	N	NORTH
CONN	CONNECTION	NF	NEAR FACE
CONST	CONSTRUCTION	#	NUMBER
CONT	CONTINUOUS	NTS	NOT TO SCALE
CSTG	CASTING		
C/C	CENTER TO CENTER	OC	ON CENTER
CTR	CENTER	OD	OUTSIDE DIAMETER
		OF	OUTSIDE FACE
DET	DETAIL	OPNG	OPENING
DIA	DIAMETER	OPP	OPPOSITE
DIAG	DIAGONAL		
DIM	DIMENSION	PC	PRECAST CONCRETE
DL	DEAD LOAD	PCO	PILE CUT OFF
DN	DOWN	PL	PLATE
DO	DITTO	PSF	POUNDS PER SQUARE FOOT
DP	DEEP		
DWG	DRAWING	PVC	POLYVINYL CHLORIDE
DWL	DOWEL		
		R	RISER
E	EAST	RAD	RADIUS
EA	EACH	RD	ROOF DRAIN
EF	EACH FACE	REINF	REINFORCEMENT
EJ	EXPANSION JOINT	REQD	REQUIRED
ELEV	ELEVATION	RM	ROOM
ELEC	ELECTRICAL	RO	ROUGH OPENING
EMB	EMBEDMENT		
ENCL	ENCLOSURE	S	SOUTH
EQ	EQUAL	SECT	SECTION
EQUIP	EQUIPMENT	SHT	SHEET
ES	EACH SIDE	SIM	SIMILAR
EW	EACH WAY	SL	SLAB
EW T&B	EACH WAY TOP & BOTTOM	SP	SPIRAL
EXIST	EXISTING	SPA	SPACING/SPACES
EXP	EXPANSION	SPEC	SPECIFICATION
EXT	EXTERIOR	SQ	SQUARE
		ST STL	STAINLESS STEEL
FB	FLOOR BEAM	STD	STANDARD
FD	FLOOR DRAIN	STIR	STIRRUP
FDN	FOUNDATION	STL	STEEL
FF	FAR FACE	STRUCT	STRUCTURAL
FIN	FINISH	SW	SHORT WAY
FL	FLOOR		
FTG	FOOTING	T&B	TOP AND BOTTOM
		TOC	TOP OF CONCRETE
GA	GAUGE	THK	THICK
GALV	GALVANIZE	T/	TOP OF
GB	GRADE BEAM	T	TREAD
GR	GRADE	TYP	TYPICAL
GRTG	GRATING	UON	UNLESS OTHERWISE NOTED
		VERT	VERTICAL
H	HIGH	W	WEST
HT	HEIGHT	WF	WIDE FLANGE STRUCTURAL
HORIZ	HORIZONTAL		SHAPE, WIDTH, WEST
HP	HIGH POINT		
HS	HIGH STRENGTH	W/	WITH
HVAC	HEATING, VENTILATING & AIR CONDITIONING	WP	WORKING POINT
		WS	WATERSTOP

PROTECTIVE COATING SYSTEM

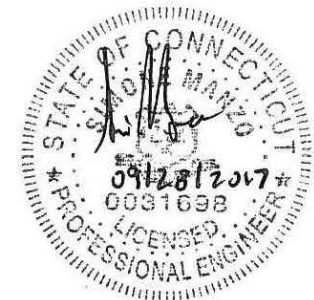
- ALL CONCRETE WALLS AND SLABS IN WET WELLS & CHANNELS THAT ARE COVERED BY ALUMINUM PLANKS SHALL RECEIVE PROTECTIVE COATING SYSTEMS. FOR EXTENTS AND LIMITS OF COATING SYSTEM, SEE S-8 AND SPECIFICATION 09 91 00, PAINTING.



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ARCADIS U.S., INC.

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SEALS



TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: S-1

DESIGNED BY: A. WIDDISON

DRAWN BY: Z. SANGALANG

CHECKED BY: S. MANZO

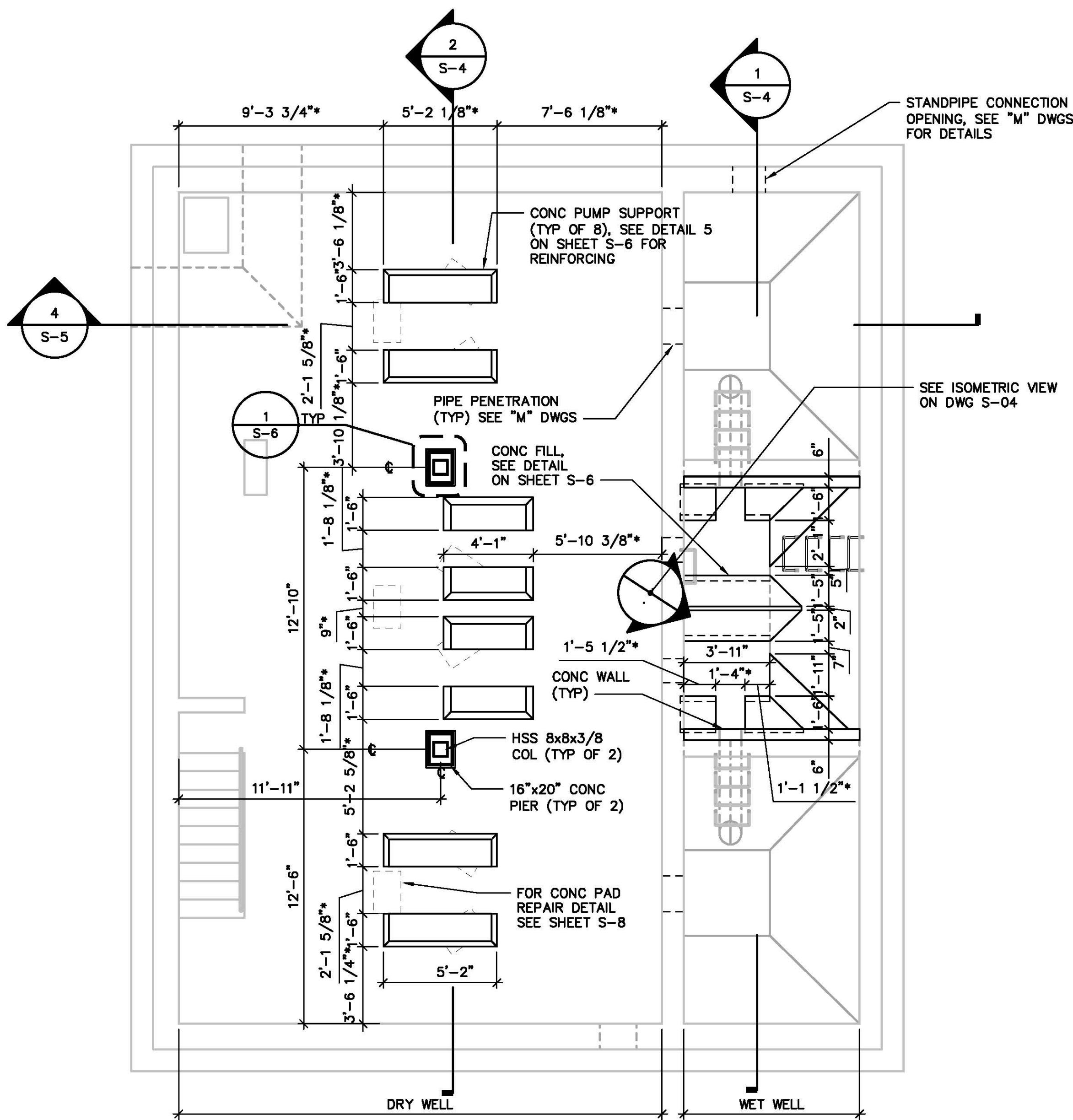
SHEET TITLE

ABBREVIATIONS &
GENERAL NOTES

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NO SCALE

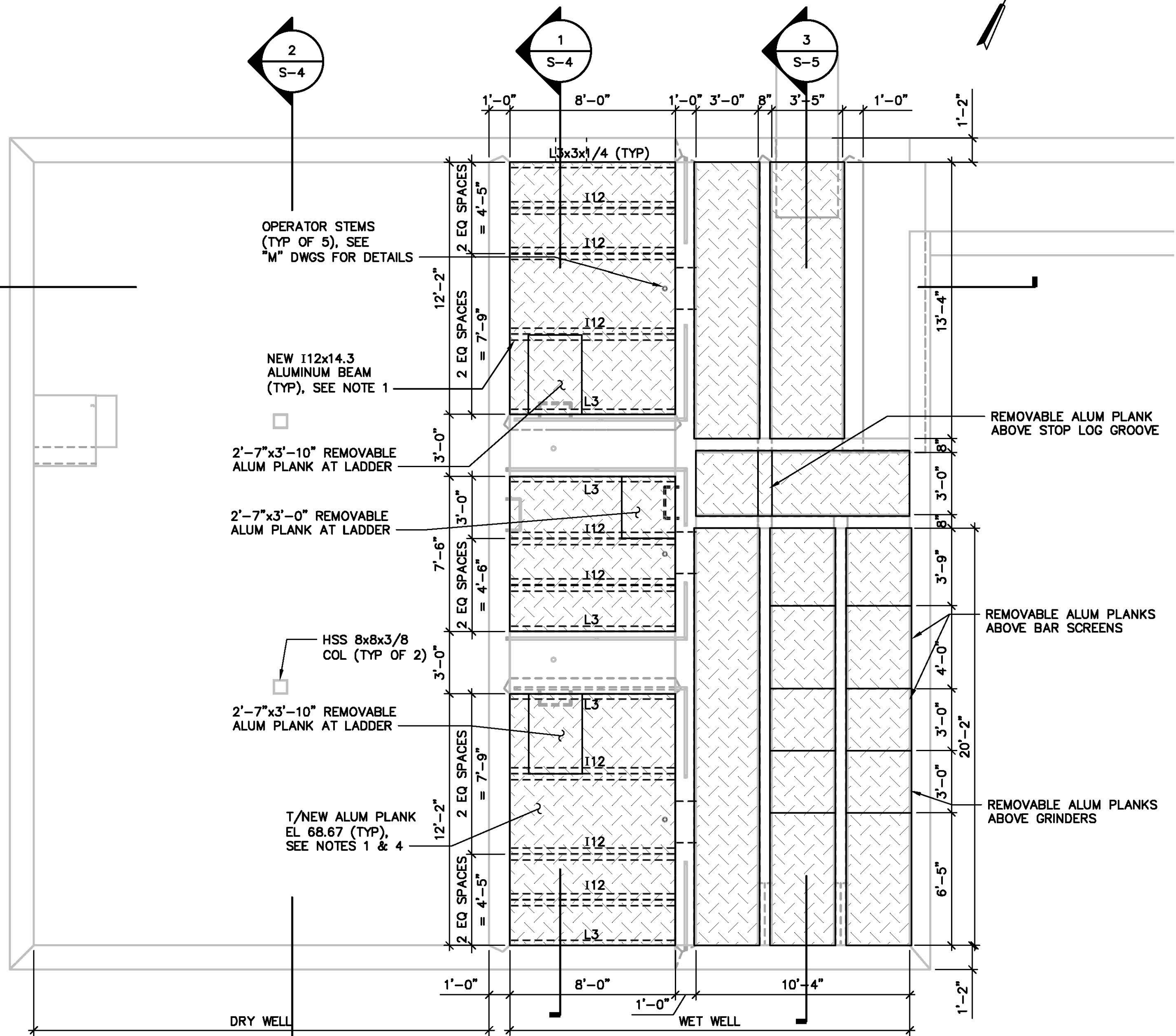
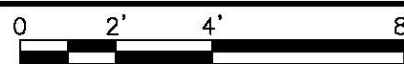
S-1
SHEET 28 OF 69

User: TOCONNELL, Space: AUS-NC5MOD, File: I:\ACAD\PROJECTS\06532002.0000\DWG\STRUCTURAL\13-2.DWG, Scale: 1/4" = 1'-0", Plot Date: 9/27/2017, Time: 12:38, Saved Date: 9/27/2017, Time: 12:38, Saved By: S-2, Layout: S-2



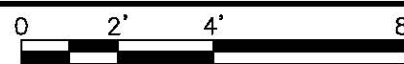
BASEMENT PLAN AT EL 54.80

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



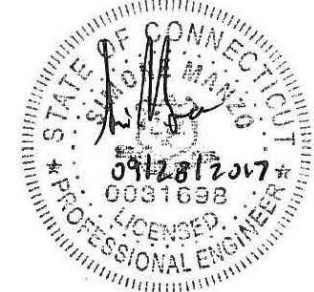
INTERMEDIATE PLAN AT EL 67.47

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



NOTES:

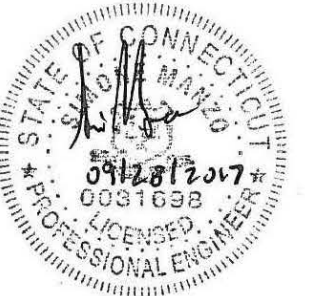
1. PROVISION OF WET WELL COVER SYSTEM IS A BID ALTERNATE TO THE CONTRACT. REFER TO SECTION 01 22 13. EXISTING GRATING TO REMAIN IF ALTERNATE IS NOT AWARDED.
2. FLOOR DESIGN LL = 100 PSF
3. COORDINATE OPENINGS IN ALUMINUM PLANK SYSTEM AS REQUIRED FOR GATES, INSTRUMENTATION AND APPURTENANCES.
4. ALUMINUM PLANKS SHALL BE 1 1/2" UNPUNCHED PLANKS WITH INTERLOCK SIDES.
5. USE EXISTING GRATING SUPPORTS WHERE APPLICABLE.
6. SEE "M" DRAWINGS FOR ADDITIONAL INFORMATION ABOUT SIZE AND LOCATION OF PENETRATIONS AND OPENINGS.



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TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: S-3

DESIGNED BY: A. WIDDISON

DRAWN BY: Z. SANGALANG

CHECKED BY: S. MANZO

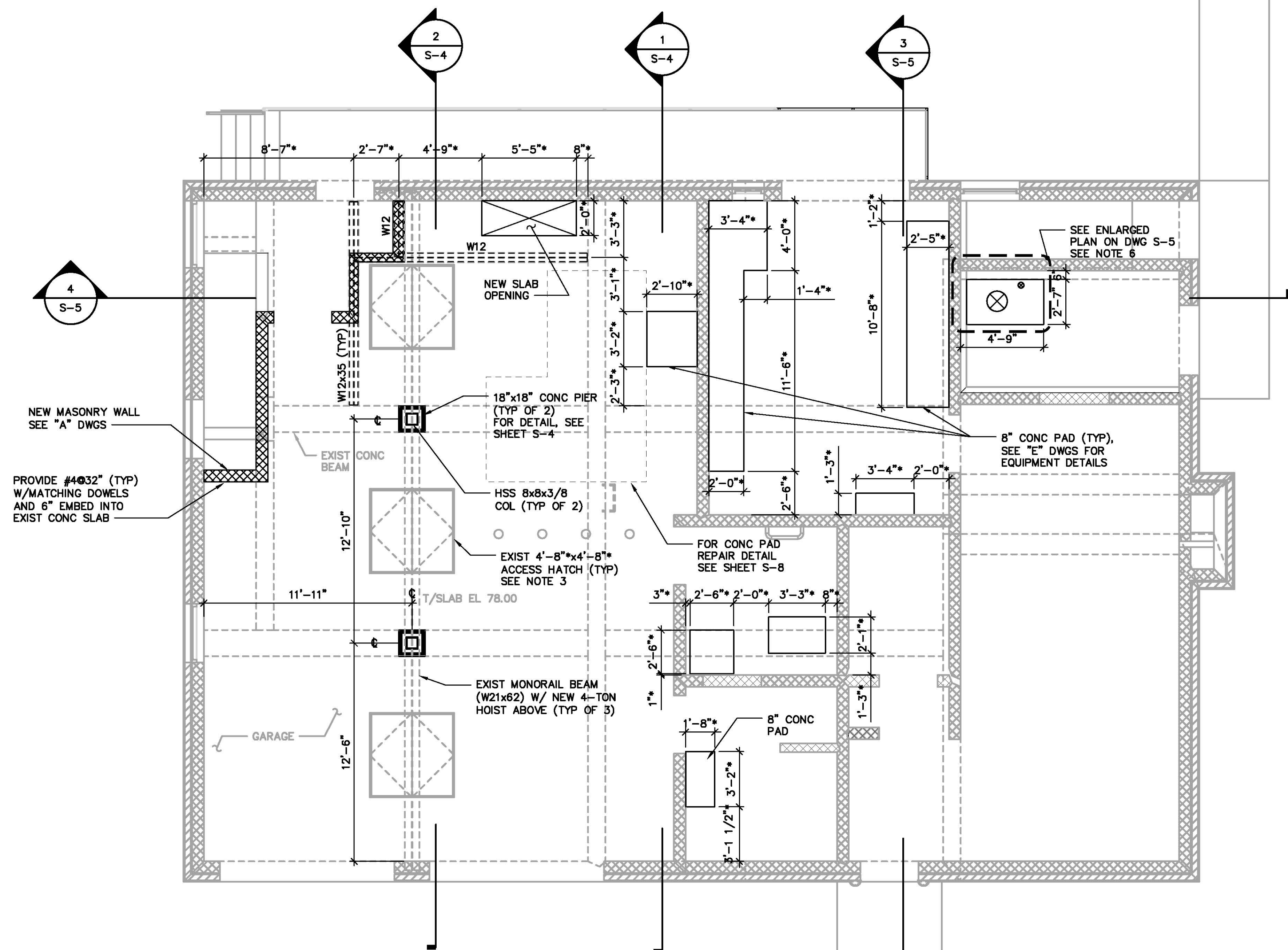
SHEET TITLE

FLOOR PLAN

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

S-3

SHEET 30 OF 69



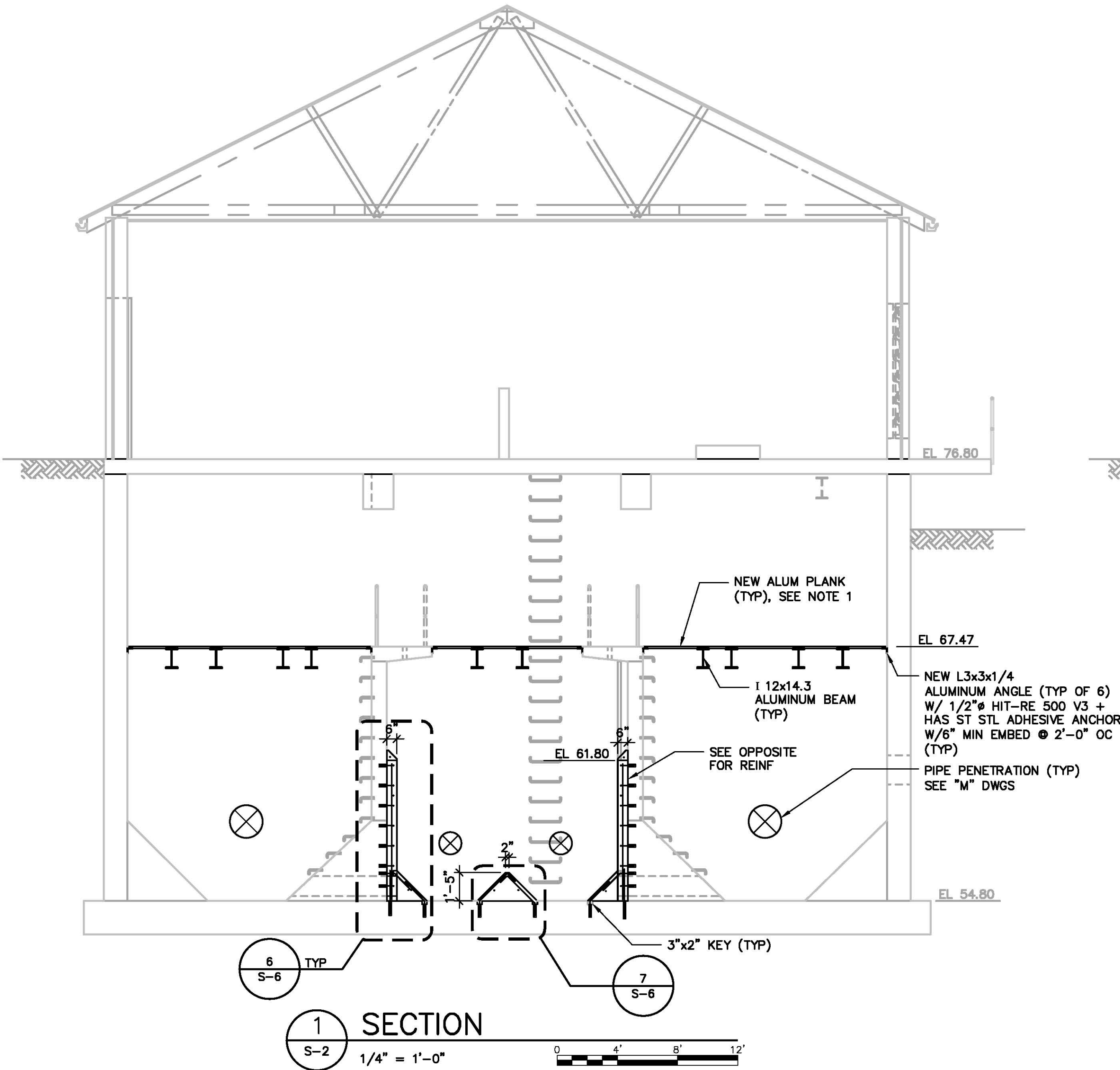
FLOOR PLAN AT EL 76.80

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

NOTES:

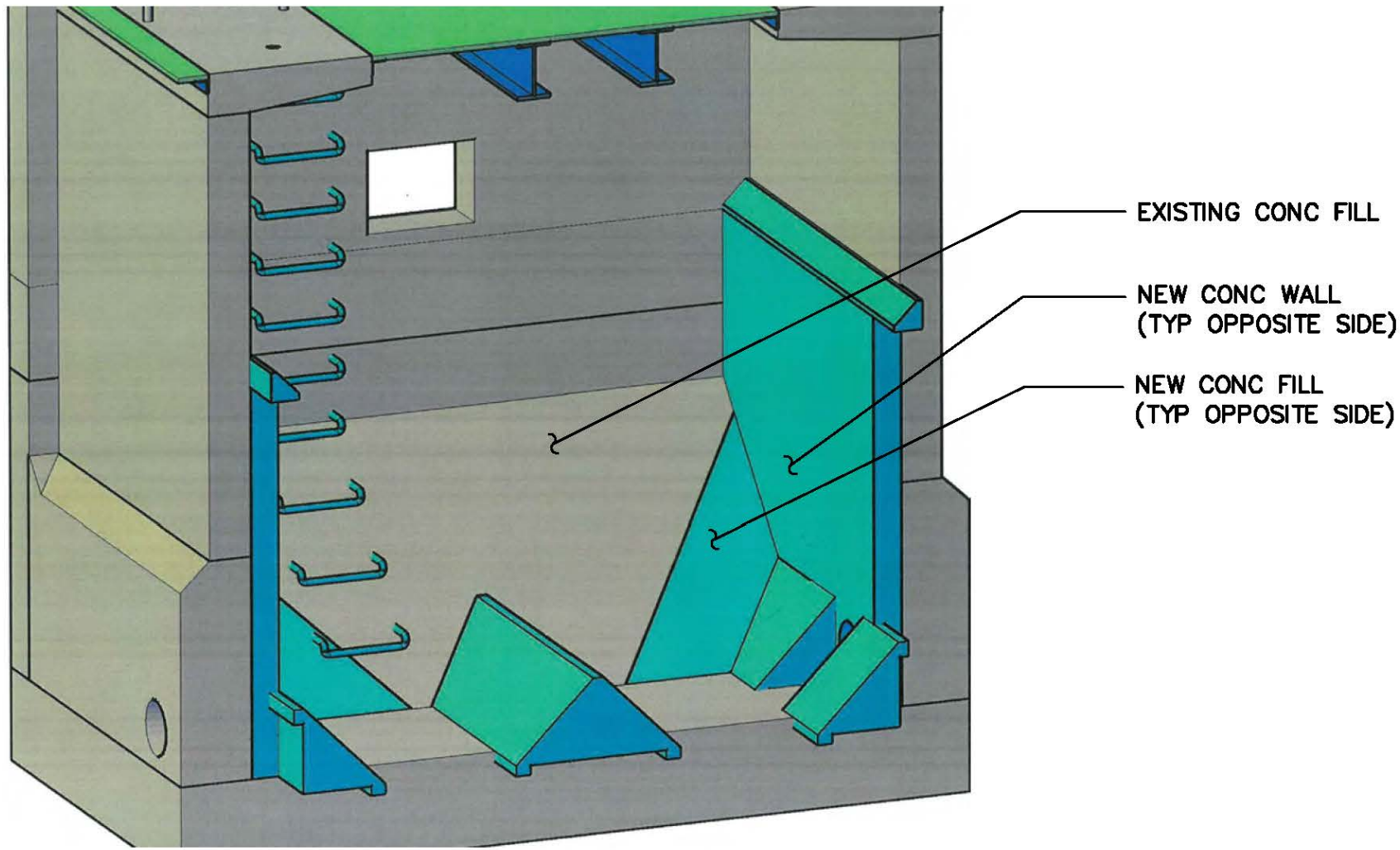
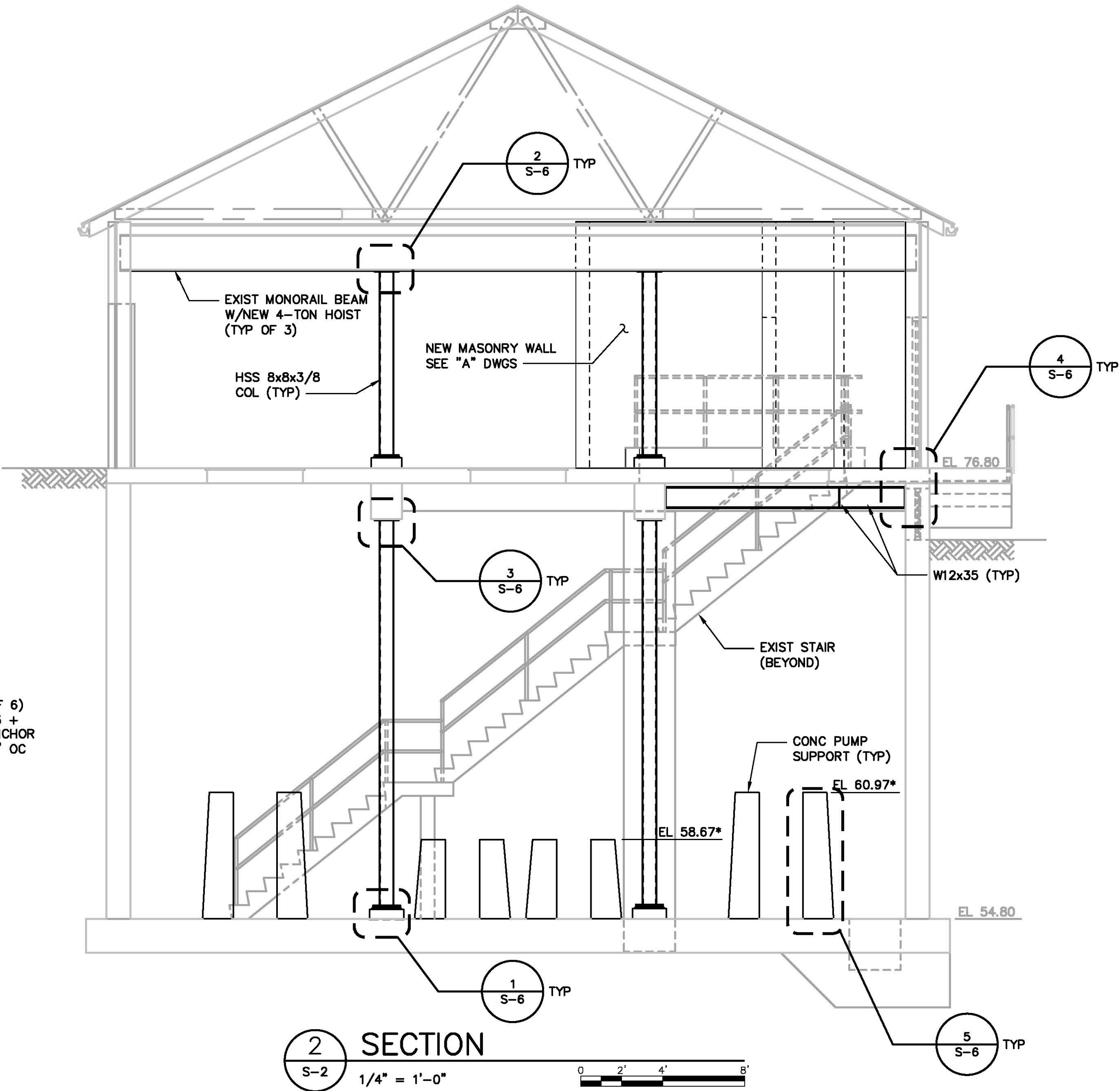
1. FLOOR LL = 100 PSF
2. GARAGE LL = 250 PSF
3. PROVIDE GASKETING AND FALL THROUGH PROTECTION NET SYSTEM UNDER EXISTING ACCESS HATCHES. NET SYSTEM SHALL BE MANUFACTURED FROM HIGH STRENGTH POLYESTER WITH 316 SS HARDWARE, HOOKS AND ANCHORS.
4. SEE "A", "M", "H" AND "E" DWGS FOR EQUIPMENT PAD LOCATIONS AND SIZES. NOT ALL REQUIRED PADS SHOWN FOR CLARITY.
5. INSTALL W12 STEEL BEAMS PRIOR TO INSTALLING MASONRY WALL.
6. PROVISION OF ODOR CONTROL SYSTEM IS A BID ALTERNATIVE TO THE CONTRACT. REFER TO SECTION 01 22 13.

User: SANGALANG Spw: AUS-HCSMOD File: I:\ACAD\PROJ\06532002.0000\SHEETS\STRUCTURAL\S-4.DWG Scale: 1/4" = 1'-0" Plot Date: 9/27/2017 Time: 08:59 Plot Path: I:\ACAD\PROJ\06532002.0000\SHEETS\STRUCTURAL\S-4.DWG



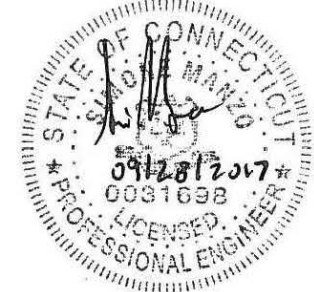
NOTES:

1. PROVISION OF WET WELL COVER SYSTEM IS A BID ALTERNATE TO THE CONTRACT. REFER TO SECTION 01 22 13. EXISTING GRATING TO REMAIN IF ALTERNATE IS NOT AWARDED.
2. MAXIMUM ADJACENT WATER ELEVATION DURING WET WELL DEMOLITION AND RECONSTRUCTION WORK SHALL BE NO HIGHER THAN EL 60.00.

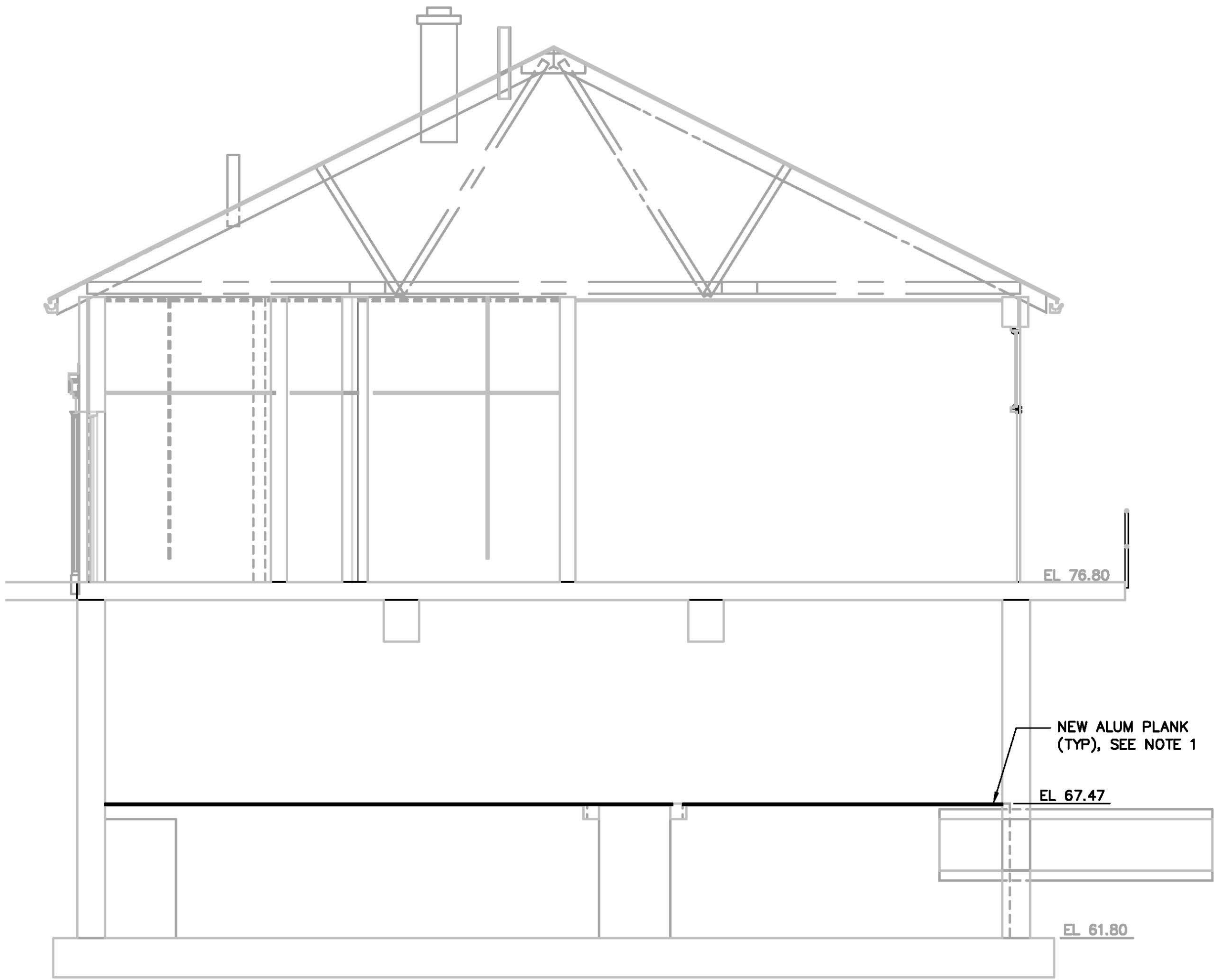


ISOMETRIC VIEW

SCALE: NTS



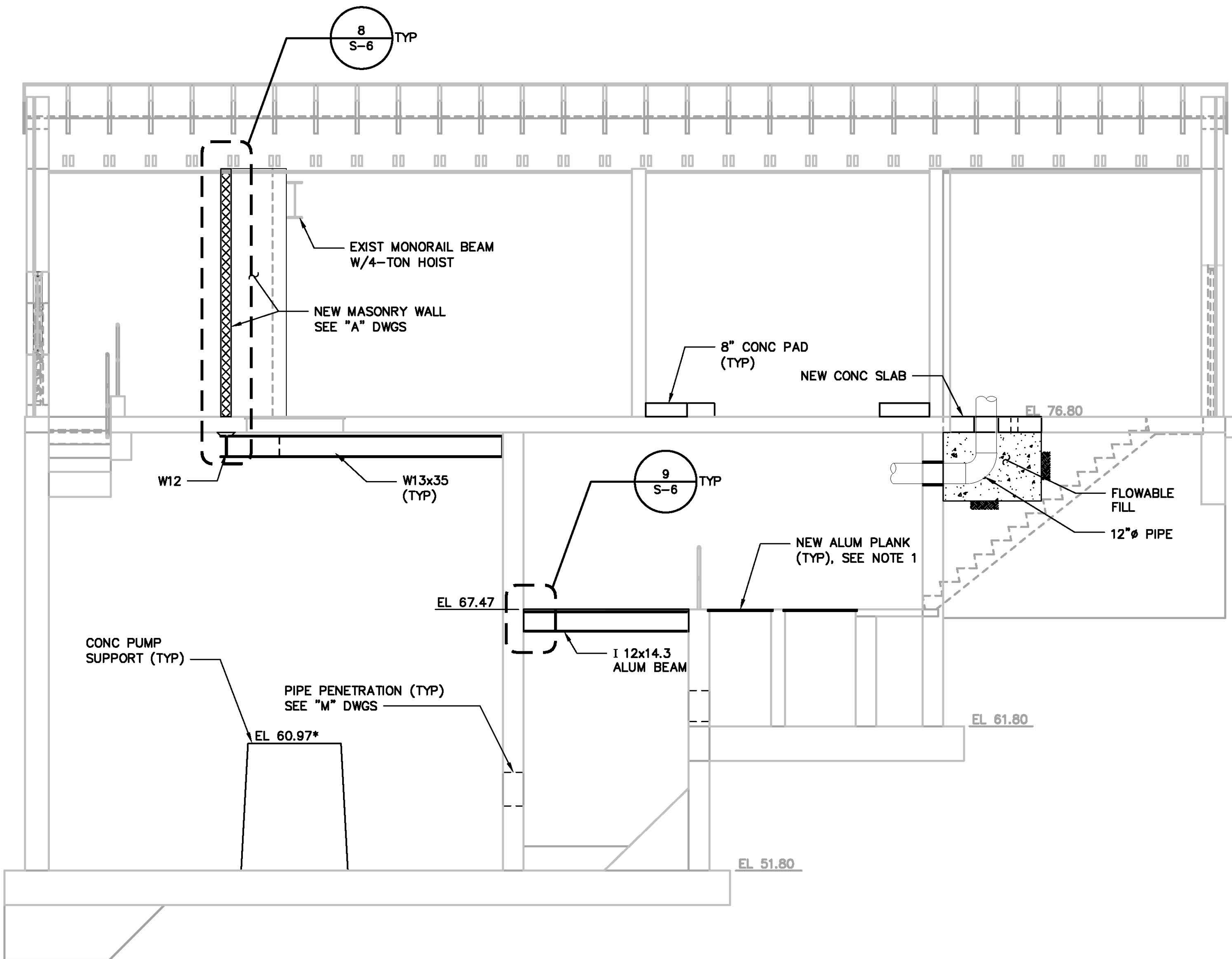
User: SANGALANG Spw: AUS-HCSMOD File: I:\ACAD\PROJ\06532002.0000\SHEETS\STRUCTURAL\S-5.DWG Scale: 1:1 SavedDate: 9/27/2017 Time: 09:06 Plot Date: O'Connell, Timothy: 9/27/2017: 15:04 Layout: S-5



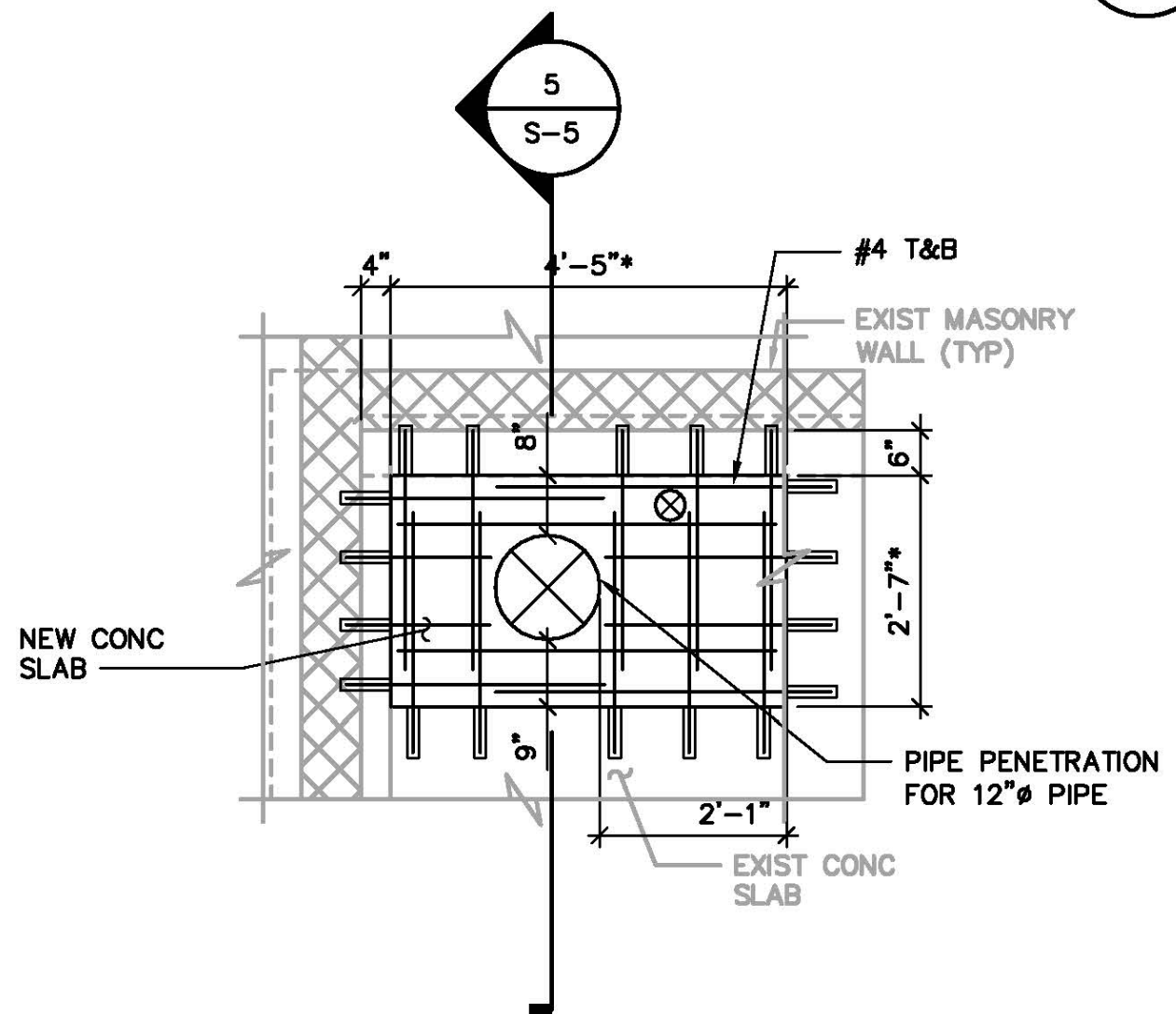
3 SECTION
S-2
1/4" = 1'-0"
0 2' 4' 8'

NOTES:

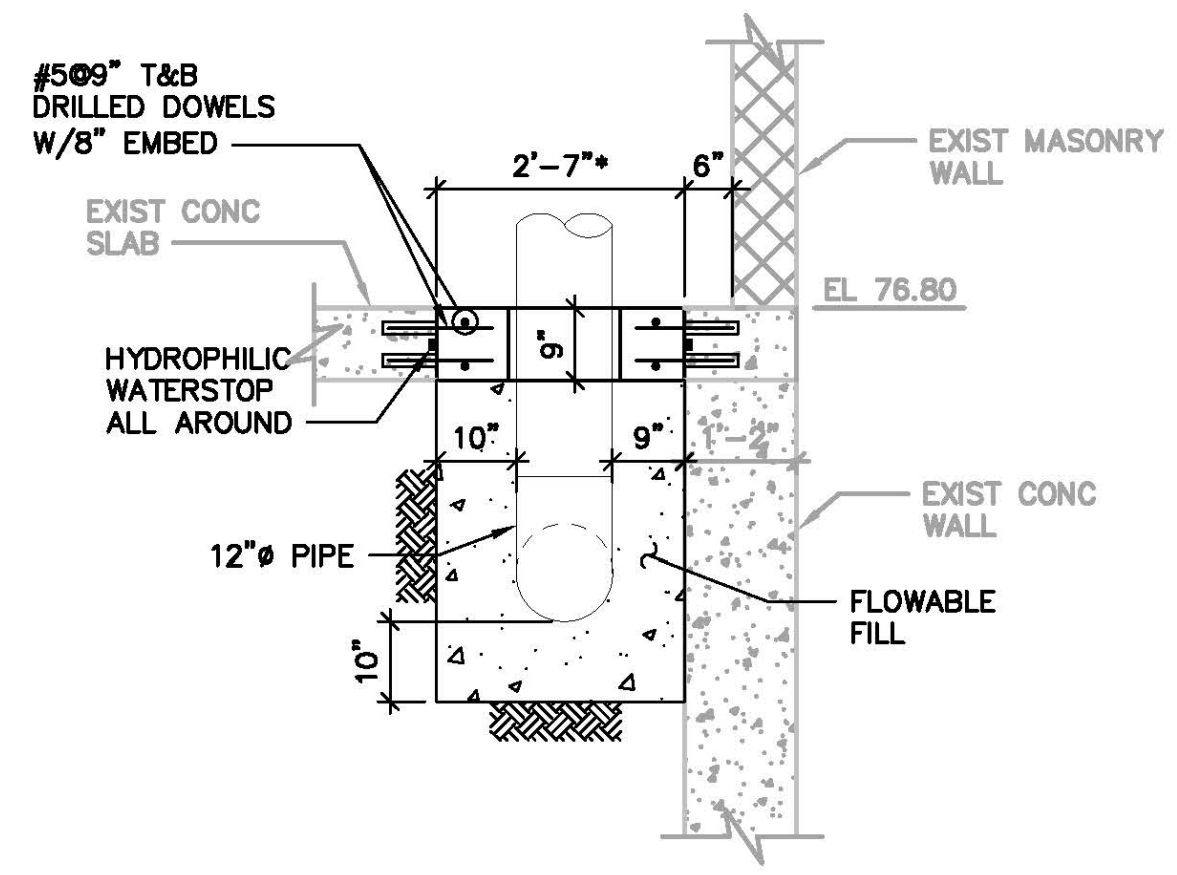
1. PROVISION OF WET WELL COVER SYSTEM IS A BID ALTERNATE TO THE CONTRACT. REFER TO SECTION 01 22 13. EXISTING GRATING TO REMAIN IF ALTERNATE IS NOT AWARDED.



4 SECTION
S-2
1/4" = 1'-0"
0 2' 4' 8'



ENLARGED PLAN AT EL 76.80
SCALE: 1/2" = 1'-0"
0 1' 2' 4'



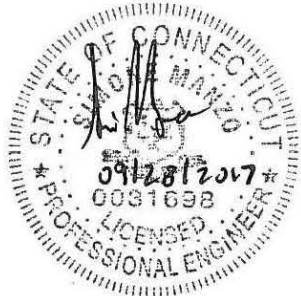
5 SECTION
S-5
1/2" = 1'-0"
0 1' 2' 4'



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TOWN OF TRUMBULL, CT
WPCA

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COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY

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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: S-5

DESIGNED BY: A. WIDDISON

DRAWN BY: Z. SANGALANG

CHECKED BY: S. MANZO

SHEET TITLE

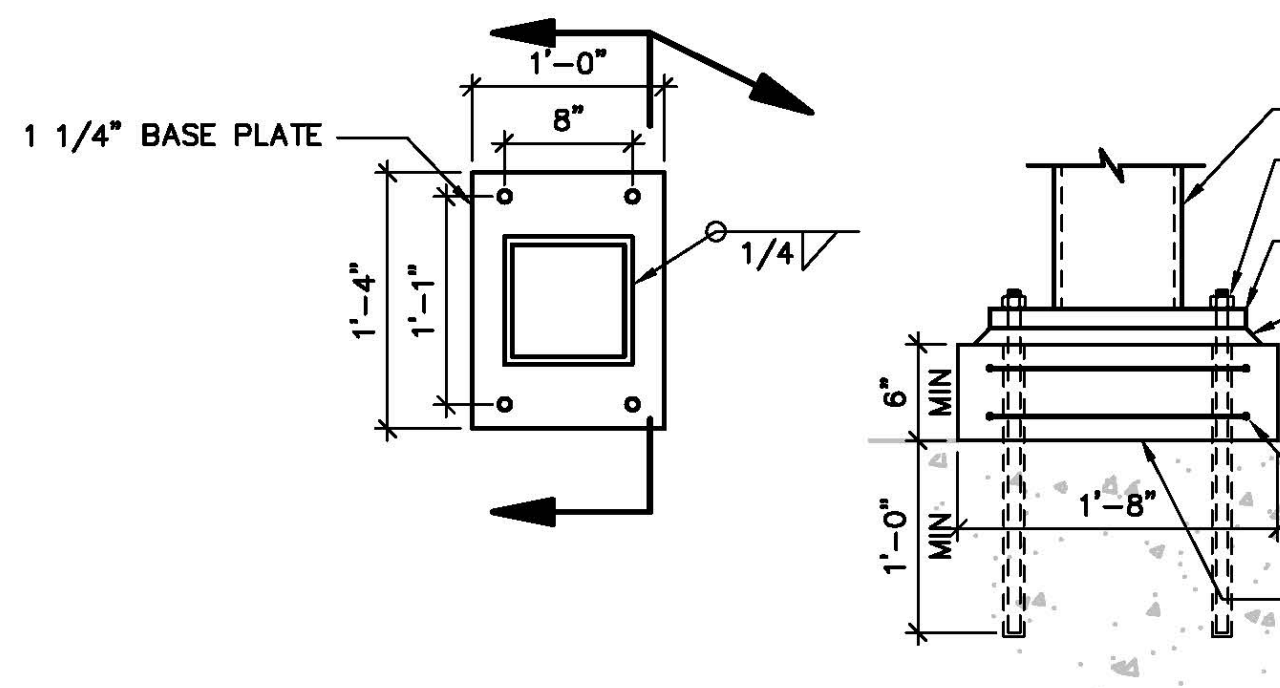
SECTIONS II

SCALE: AS SHOWN

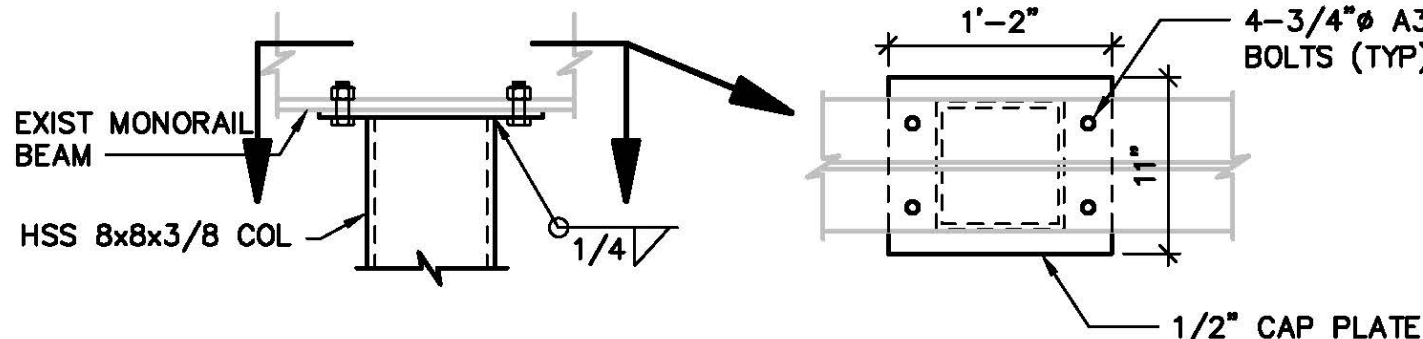
S-5

SHEET 32 OF 69

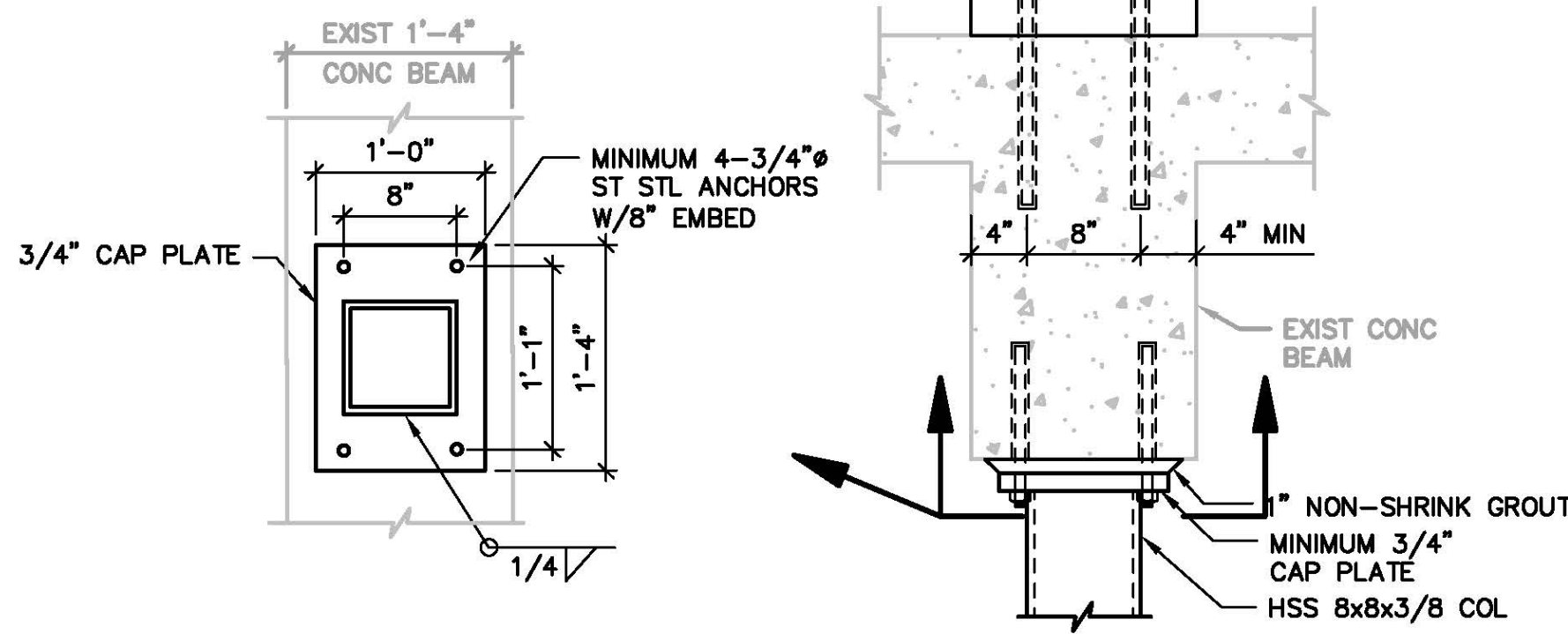
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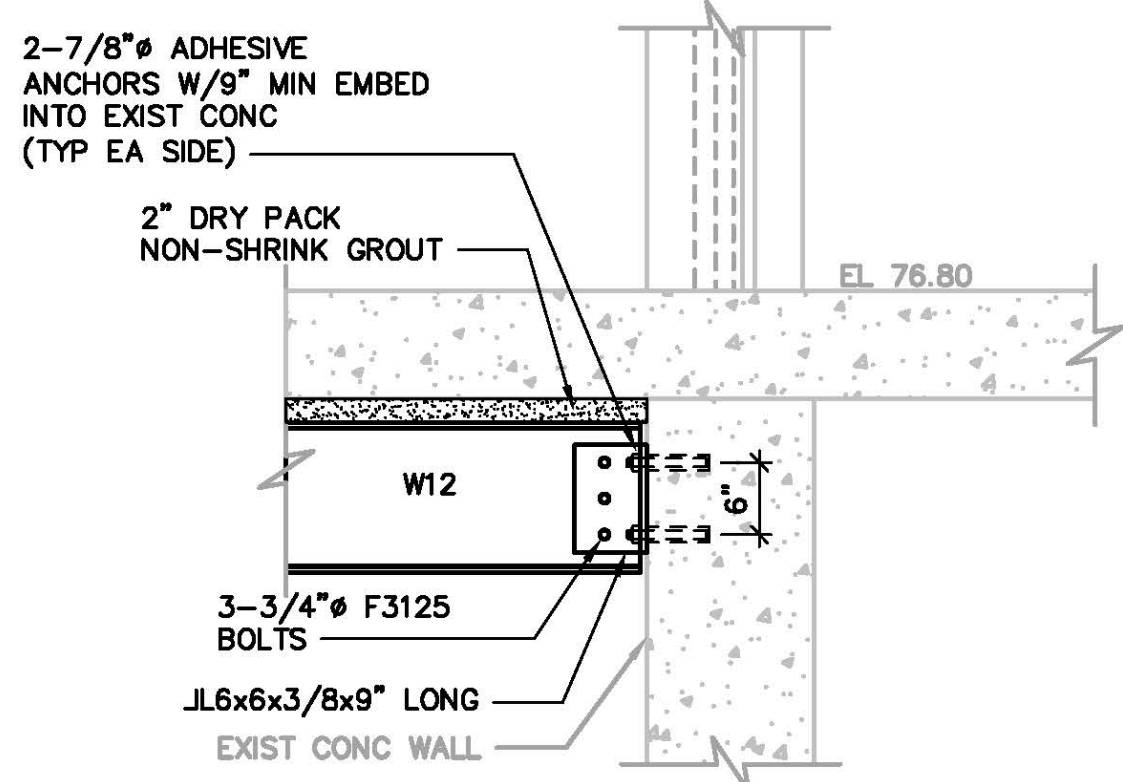
1 DETAIL
S-2 1" = 1'-0"



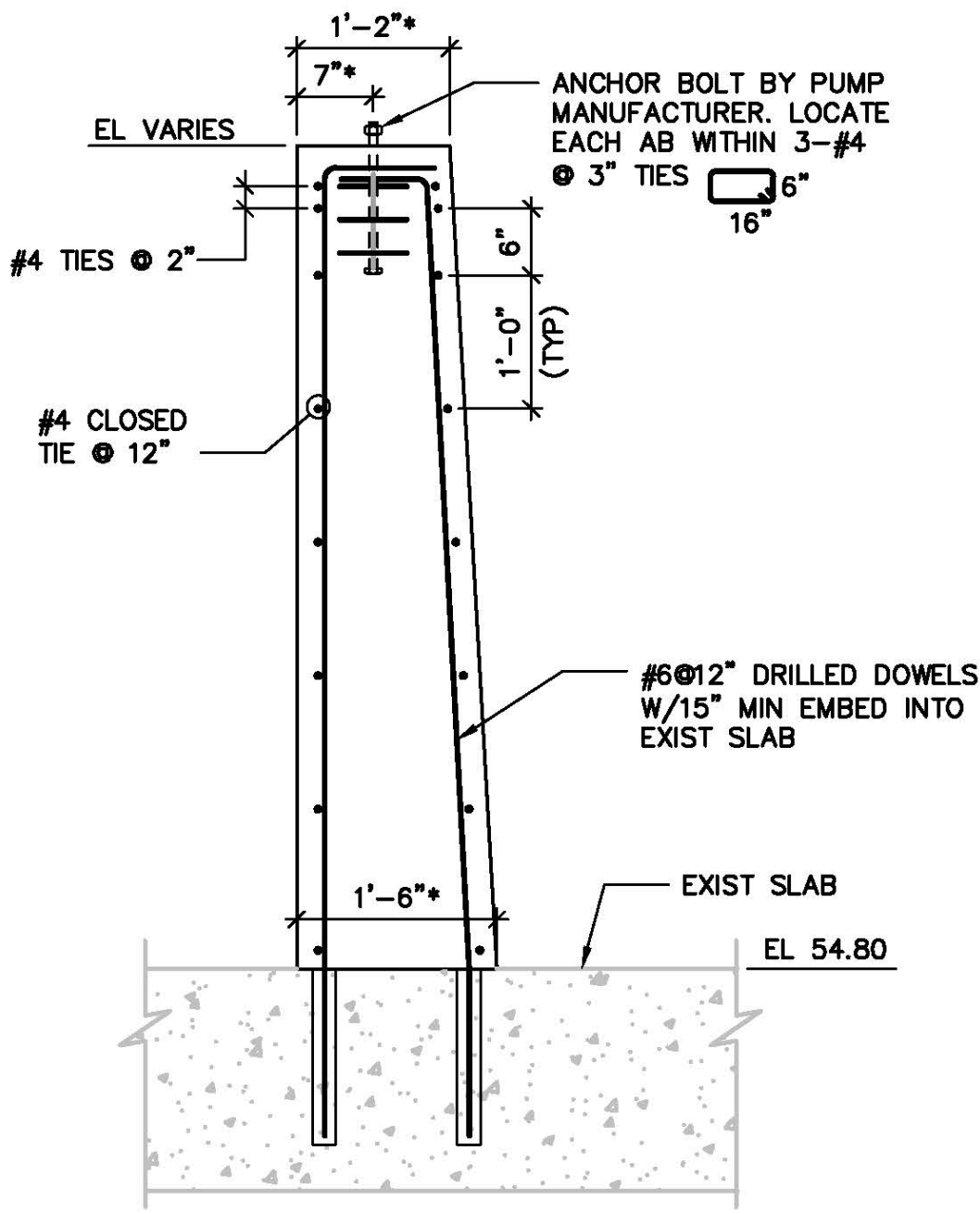
2 DETAIL
S-4 1" = 1'-0"



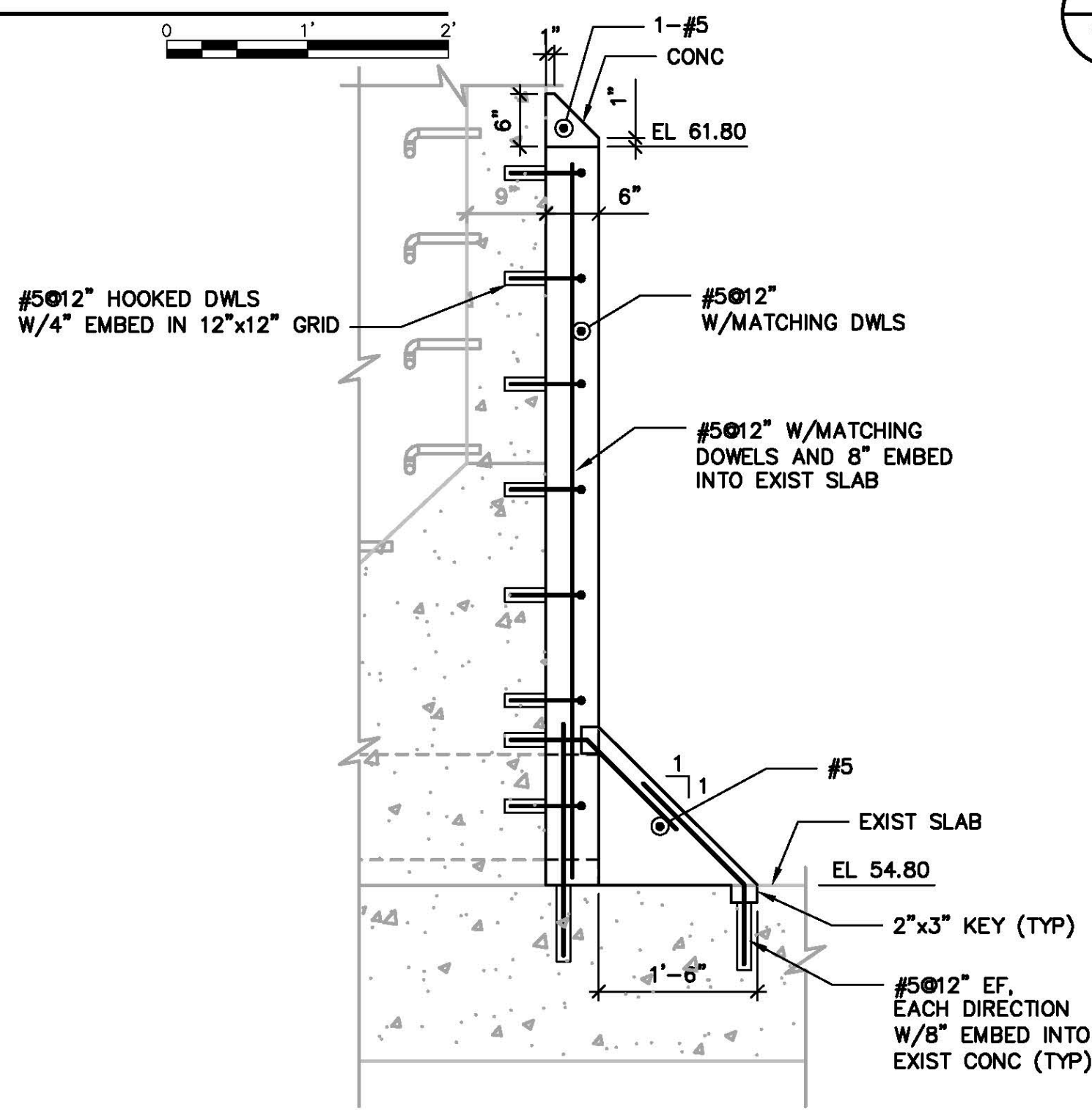
3 DETAIL
S-4 1" = 1'-0"



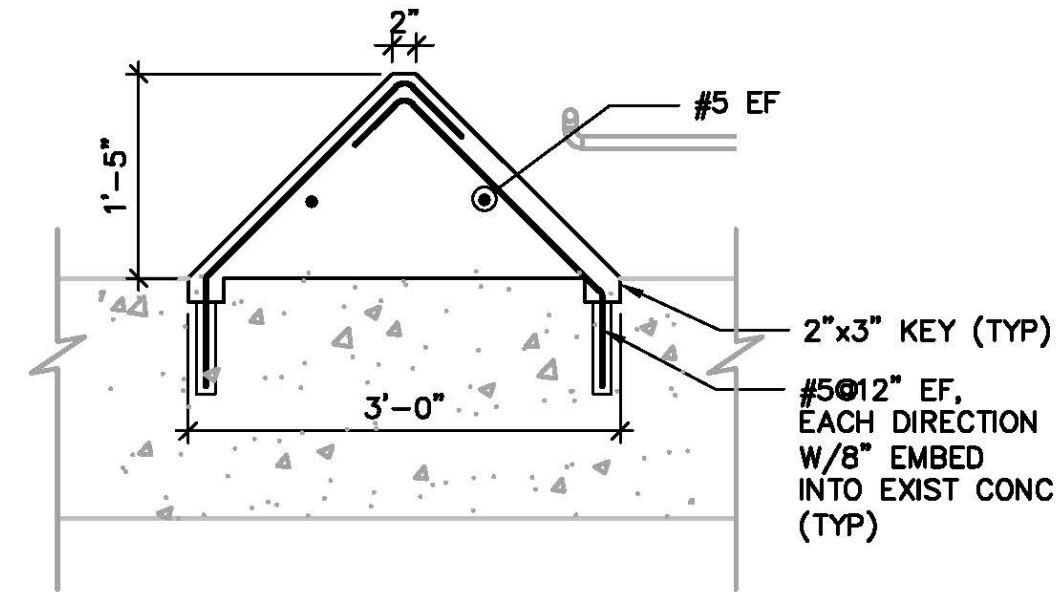
4 DETAIL
S-4 3/4" = 1'-0"



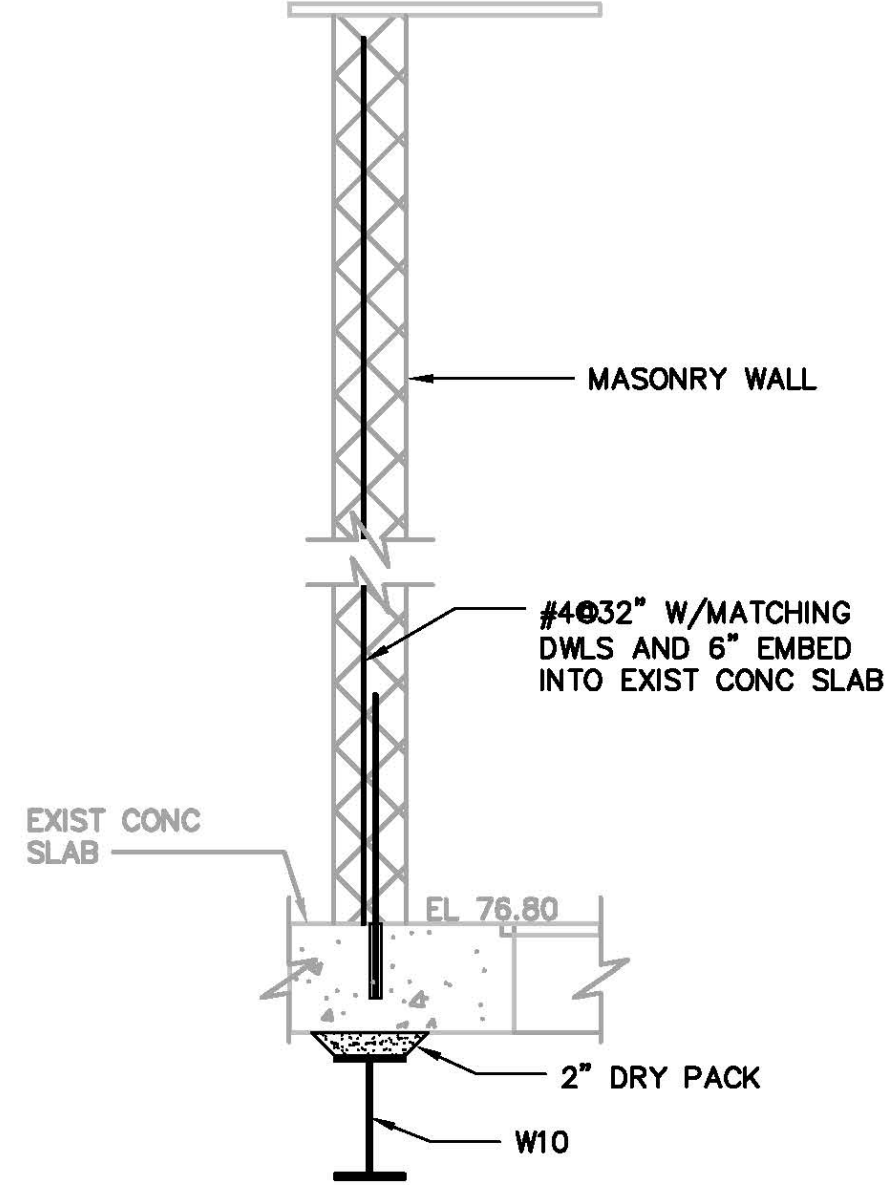
5 DETAIL
S-4 3/4" = 1'-0"



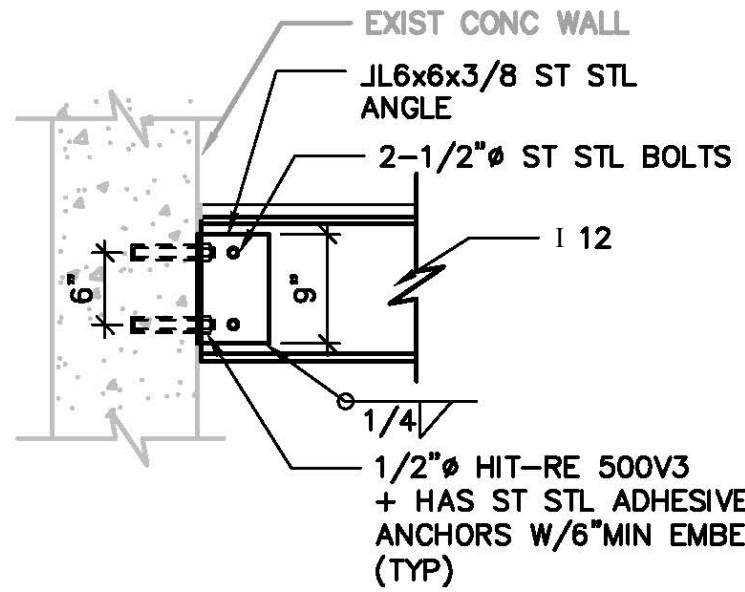
6 DETAIL
S-4 3/4" = 1'-0"



7 DETAIL
S-4 3/4" = 1'-0"

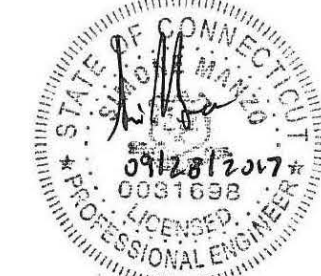


8 DETAIL
S-5 3/4" = 1'-0"

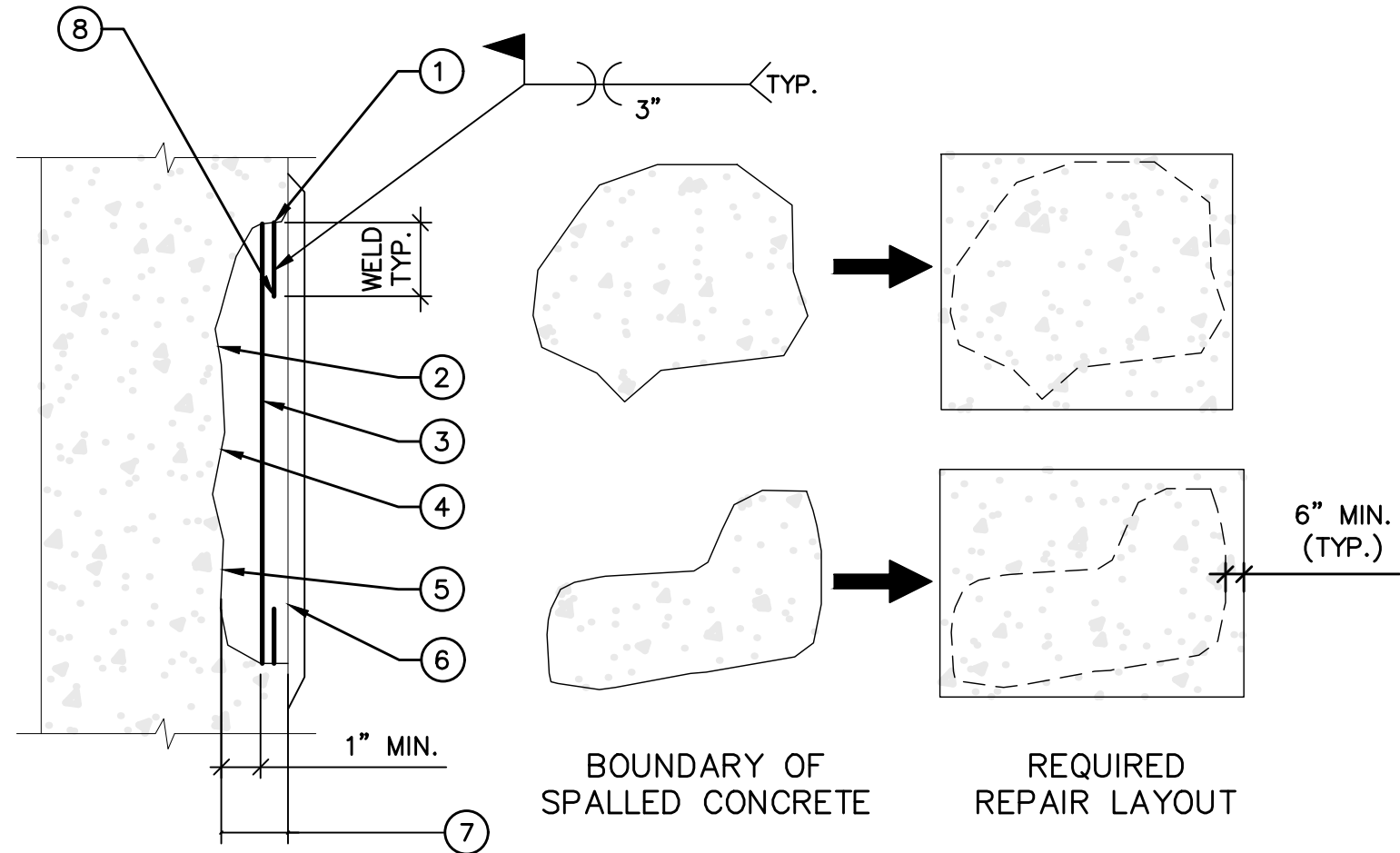


9 DETAIL
S-5 3/4" = 1'-0"

- GENERAL NOTES:
1. ROUGHEN EXISTING CONCRETE SURFACE TO AN AMPLITUDE OF 1/4".
 2. APPLY EPOXY AGENT BONDING AGENT PRIOR TO POURING CONCRETE.



User: SANGALANG Spec: AUS-NCS3MOD File: I:\ACAD\PROJ\06532002.0000\SHEETS\STRUCTURAL\S-8.DWG Scale: 1:1 SaveDate: 9/26/2017 Time: 16:10 Plot Date: O'Connell, Timothy, 9/27/2017, 15:05 Layout: S-8



SECTION

ELEVATION

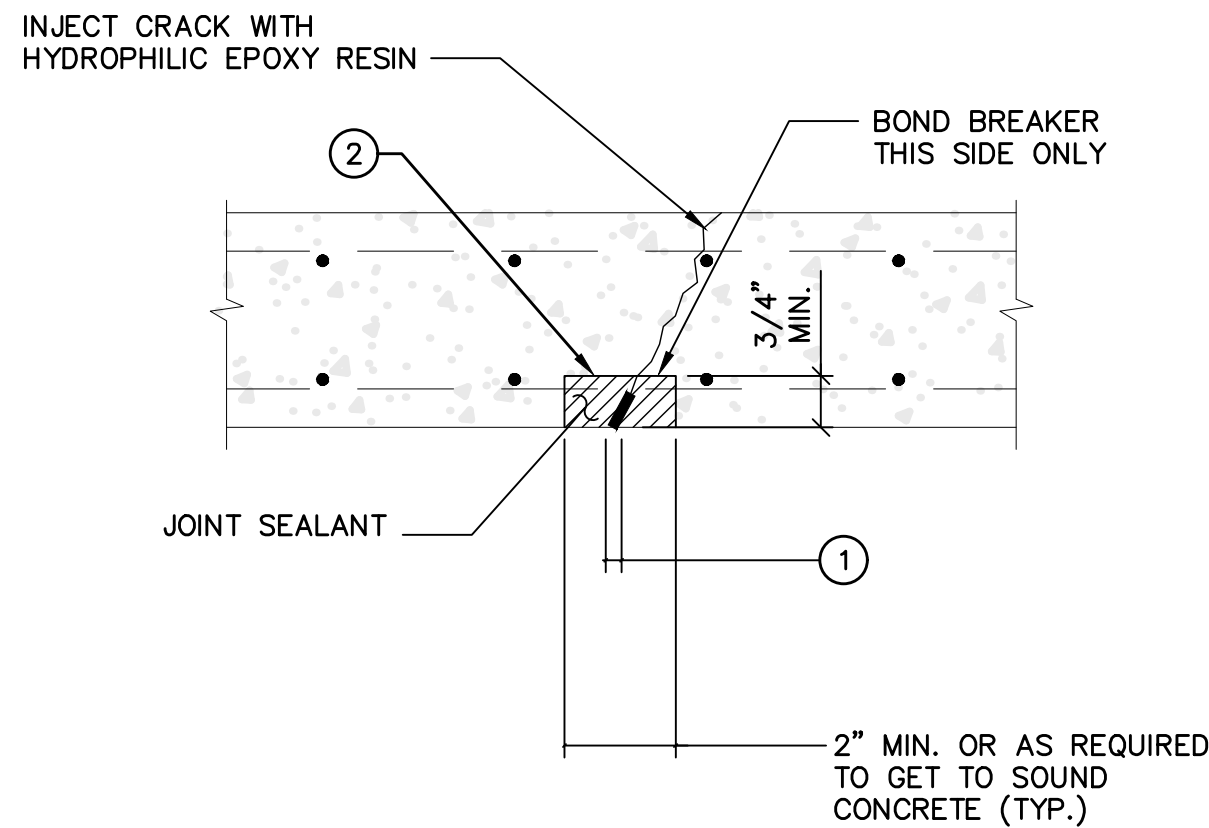
- DO NOT CUT REINFORCING UNLESS NECESSARY TO REMOVE ALL DETERIORATED CONCRETE.
- REMOVE ALL DETERIORATED CONCRETE TO SOUND CONCRETE. CHIP CONCRETE SUBSTRATE TO OBTAIN A SURFACE PROFILE OF 1/8-INCH IN DEPTH WITH A NEW FRACTURED AGGREGATE SURFACE.
- WHERE REINFORCING STEEL WITH ACTIVE CORROSION IS ENCOUNTERED, ENGINEER TO REVIEW CONDITION OF CORRODED REBARS PRIOR TO REPAIR. REPLACEMENT IS REQUIRED WHERE LOSS ON REBAR CROSS SECTION IS OVER 25%. AFTER REPAIR WHERE REINFORCING REMAINS, CLEAN REINFORCING STEEL TO REMOVE ALL CONTAMINANTS AND RUST. REMOVE CONCRETE TO A DEPTH OF 1-INCH MINIMUM BEHIND REINFORCING BAR AS SHOWN.
- SURFACE SHALL BE DAMP BUT FREE OF STANDING WATER.
- INSTALL CONCRETE REPAIR MATERIALS PER THE MANUFACTURER'S REQUIREMENTS.
- REPAIR MORTAR SHALL BE ADDED SO THAT THE MINIMUM COVER OVER EXISTING REINFORCING STEEL IS 1 1/2".
- THE CONTRACTOR SHALL BE PERMITTED TO PLACE REPAIR MORTAR RESULTING IN LOCALLY RAISED AREAS, WHERE NEEDED TO PROVIDE COVER. TRANSITION TO EXISTING SURFACE WITH 4:1 OR FLATTER SLOPE.
- REFER TO THE GENERAL NOTES FOR ADDITIONAL EXISTING CONCRETE NOTES, SPECIFIED PRODUCTS AND REQUIREMENTS FOR COORDINATION OF WORK.
- FOR BID PURPOSES, ASSUME TOTAL DEPTH OF REPAIR IS 4-INCHES.
- CUT EXISTING CORRODED REINFORCING BAR AS REQUIRED AND WELD NEW REBAR SAME SIZE.

TYPICAL CONCRETE SURFACE REPAIR DETAIL – TYPE 1 (WITH OR WITHOUT REBAR REPAIR) SCALE: N.T.S.

CONCRETE REPAIRS ESTIMATED QUANTITIES					
REPAIR TYPE	LOCATION	WET WELL	DRY WELL	GARAGE AND SUPERSTRUCTURE	REMARKS
1	WALL AND BASE SLAB	320 FT2	40 FT2	40 FT2	WITHOUT REBAR REPAIR
1	WALL AND BASE SLAB	120 FT2	60 FT2	-	WITH REBAR REPAIR
2	WALLS	630 FT	50 FT	-	
3	WALLS	315 FT	-	-	
4	WALLS	1950 FT2	-	-	PART OF BID ALTERNATE TO THE CONTRACT. SEE INTERMEDIATE PLAN NOTE 1 ON S-2.

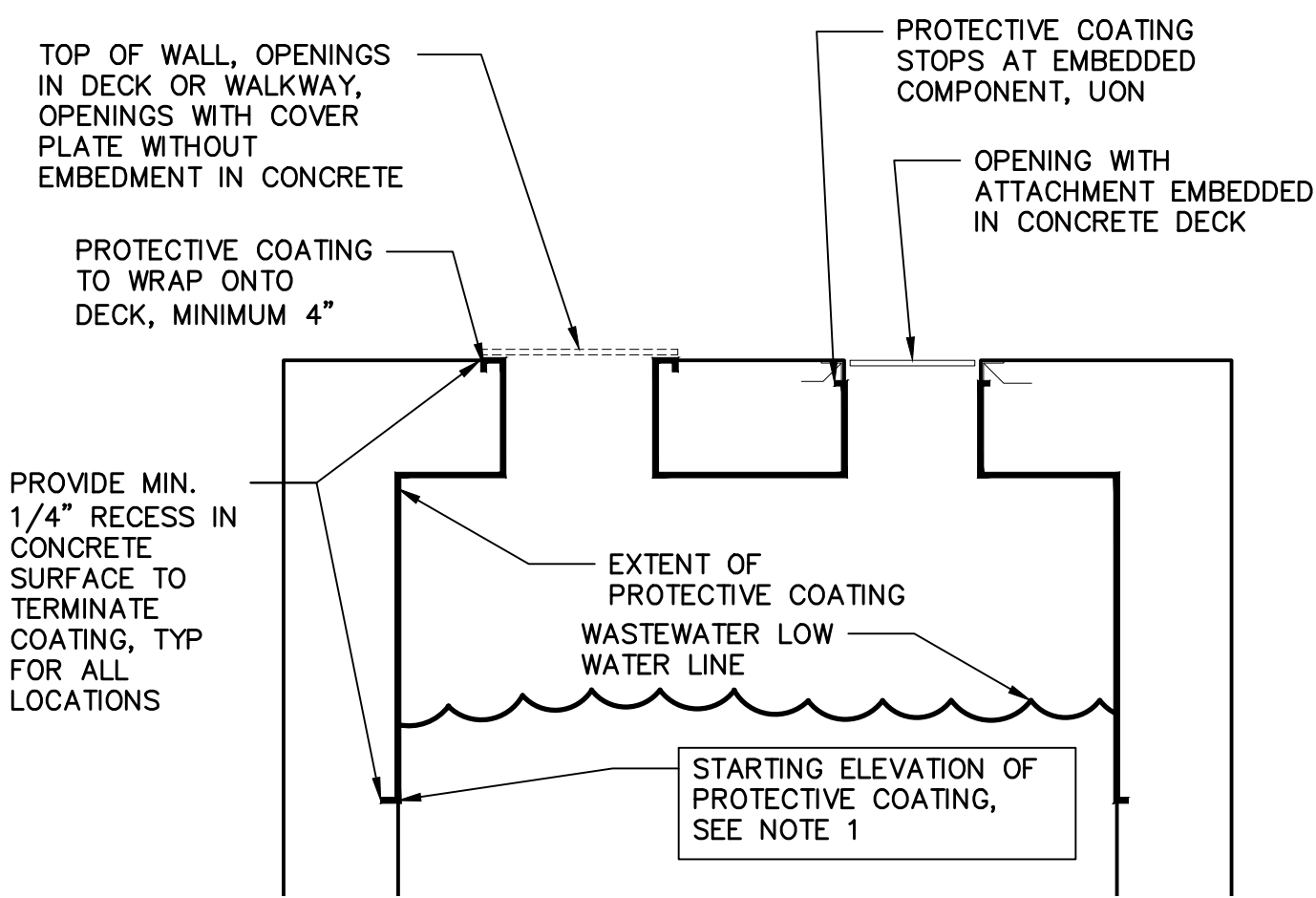
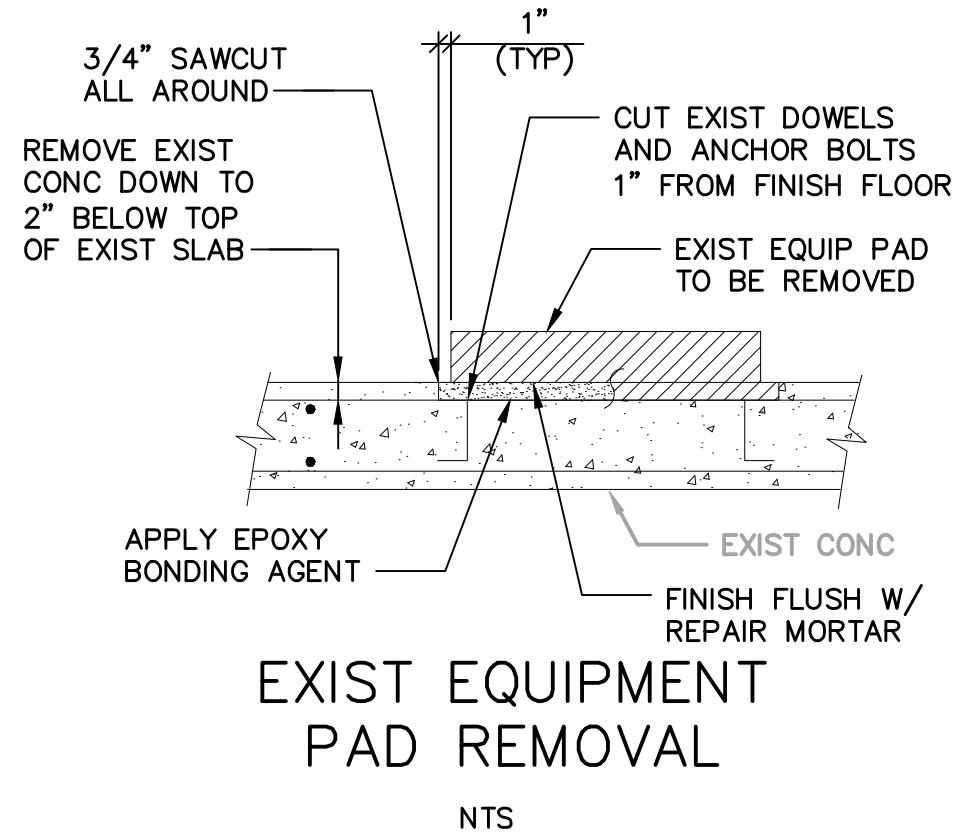
NOTES:

- ENGINEER SHALL INSPECT AND MARK THE SURFACE AREAS TO BE REPAIRED AFTER CONTRACTOR HAS DRAINED, POWER WASHED AND DISINFECTED THE WET WELL AND CHANNELS.
- ENGINEER SHALL IDENTIFY AND MARK REPAIR TYPES ON SURFACES.
- DAMAGED CONCRETE SHALL BE REMOVED TO A DEPTH UNTIL SOUND CONCRETE IS ENCOUNTERED AND REPAIRED.
- FOR REPAIR DETAILS SEE DWG S-8.
- ESTIMATED QUANTITIES ARE FOR BID PURPOSES ONLY.
- TABLE ABOVE DOES NOT INCLUDE ESTIMATED REPAIR QUANTITIES FOR EQUIPMENT PAD REPAIR.



- FOR CRACKS WIDER THAN 1/8" CUT CONCRETE AS SHOWN AND INSTALL BOND BREAKER AND JOINT SEALANT BONDED TO THE SIDES. FOR CRACKS LESS THAN 1/8-INCH, BOND BREAKER AND JOINT SEALANT AND CONCRETE GROOVE DEMO NOT REQUIRED.
- WHERE EXISTING REINFORCING BARS ARE EXPOSED, REPAIR AS PER REPAIR TYPE 1.

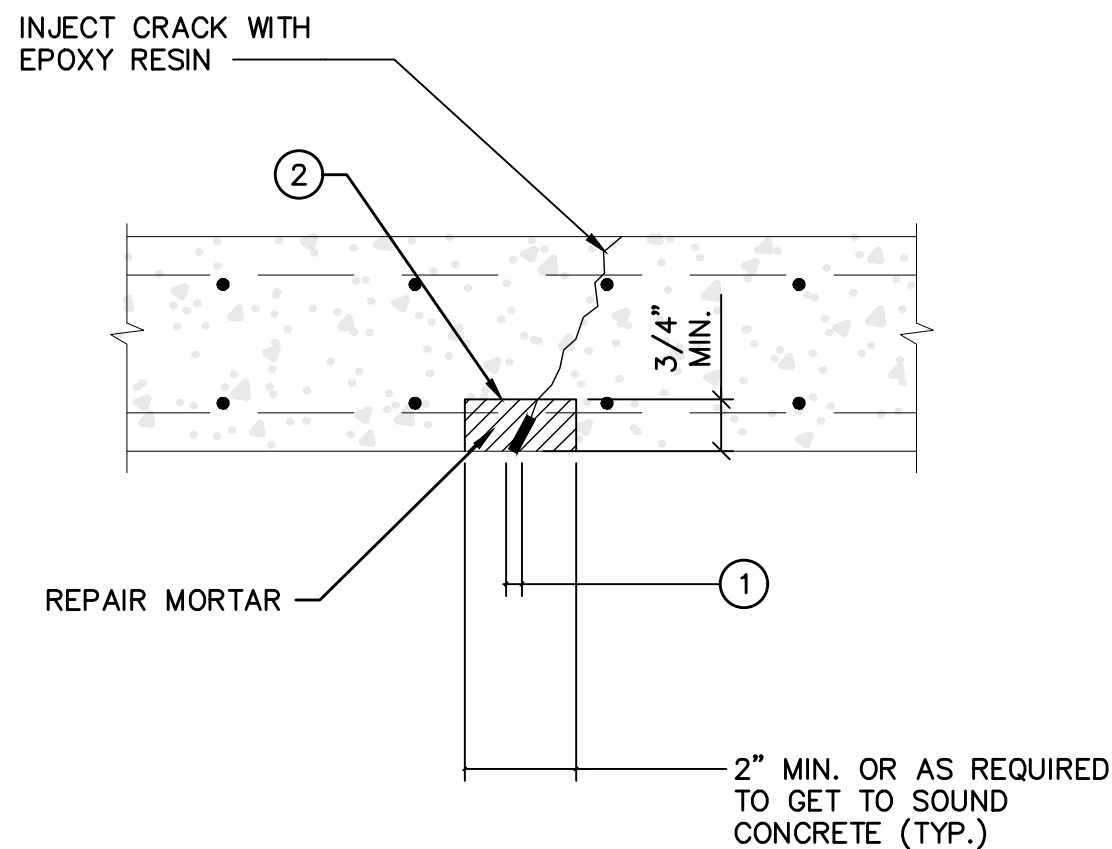
NON STRUCTURAL CRACK REPAIR – TYPE 2 SCALE: N.T.S.



TYP PROTECTIVE COATING DETAIL SCALE: N.T.S.

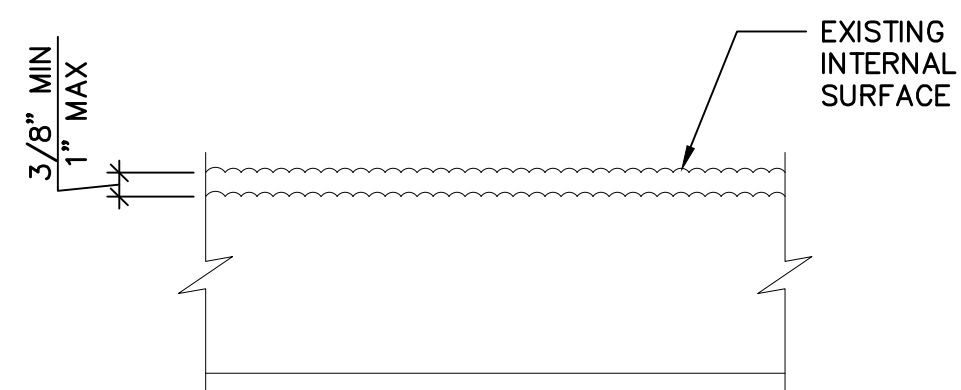
NOTES:

- STARTING ELEVATION OF PROTECTIVE COATING:
a. WET WELL CHAMBERS: EL 59.00
b. WET WELL CHANNELS: EL 64.00



- FOR CRACKS WIDER THAN 1/8" CUT CONCRETE AS SHOWN AND PATCH AS PER REPAIR TYPE 1. FOR CRACKS LESS THAN 1/8", REMOVAL OF CONCRETE AND REPAIR MORTAR NOT REQUIRED.
- WHERE EXISTING REINFORCING BARS ARE EXPOSED, REPAIR AS PER REPAIR TYPE 1.

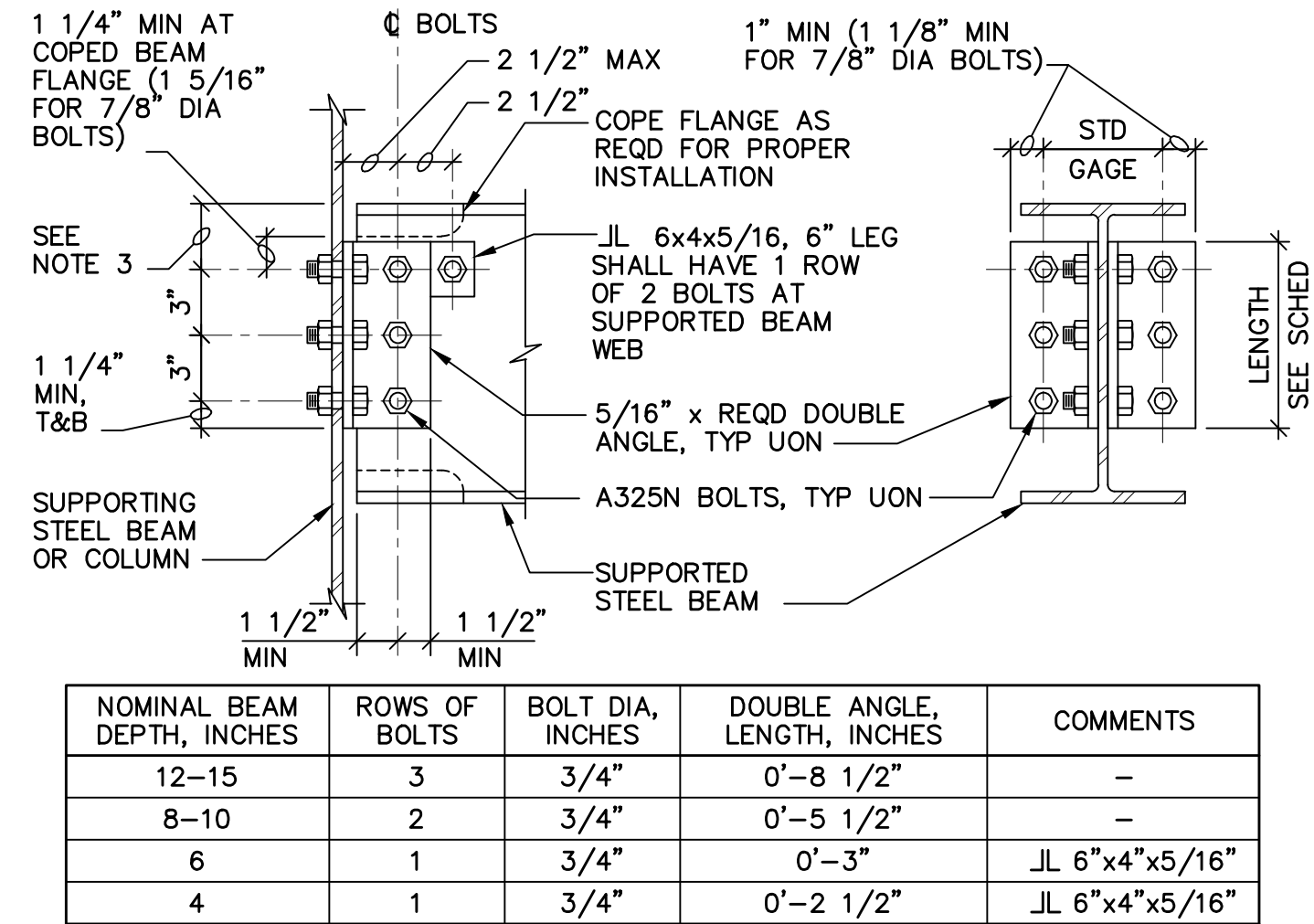
STRUCTURAL CRACK REPAIR – TYPE 3 SCALE: N.T.S.



NOTES:

- REMOVE DETERIORATED CONCRETE BY HYDROBLASTING. DAMAGED CONCRETE SHALL BE REMOVED TO A DEPTH UNTIL SOUND CONCRETE IS ENCOUNTERED AND REPAIRED PER SPECIFICATION SECTION 03 01 30. CONTRACTOR SHALL USE 1" MAX FOR BIDDING PURPOSES.
- REPAIR CRACKS PER DETAIL 3 AS DIRECTED BY ENGINEER.
- APPLY REPAIR MORTAR ON SURFACE TO RESTORE SURFACE TO ORIGINAL CONDITION.
- COATING SHALL BE APPLIED AFTER ALL REPAIR TYPES ARE COMPLETED AND ON AREA IN ACCORDANCE WITH SPECIFICATION SECTION 09 91 00.

TYPICAL EXPOSED AGGREGATE REPAIR – TYPE 4 SCALE: N.T.S.



NOTES:

- ALL BEAM FRAMING CONNECTIONS SHALL CONFORM TO THIS DETAIL UNLESS SPECIFICALLY NOTED OTHERWISE OR APPROVED IN WRITING BY THE ENGINEER.
- PROVIDE ADDITIONAL 1 1/2" LENGTH TO DOUBLE ANGLE FOR STAGGERED BOLT CONNECTIONS WHEN REQUIRED OR USED.
- DIMENSION SHALL BE 3" UNLESS OTHERWISE REQUIRED FOR PROPER FABRICATION.

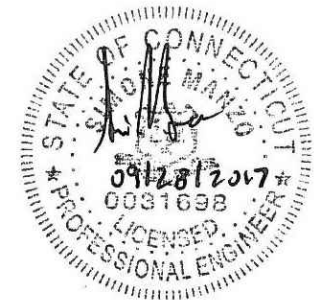
TYPICAL BEAM CONNECTION – STEEL



LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS



TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: S-8

DESIGNED BY: A. WIDDISON

DRAWN BY: Z. SANGALANG

CHECKED BY: S. MANZO

SHEET TITLE

TYPICAL DETAILS II

SCALE: AS SHOWN

S-8

SHEET 35 OF 69



TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY

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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: M-1

DESIGNED BY: T. O'CONNELL

DRAWN BY: T. O'CONNELL

CHECKED BY: V. MCPHERSON

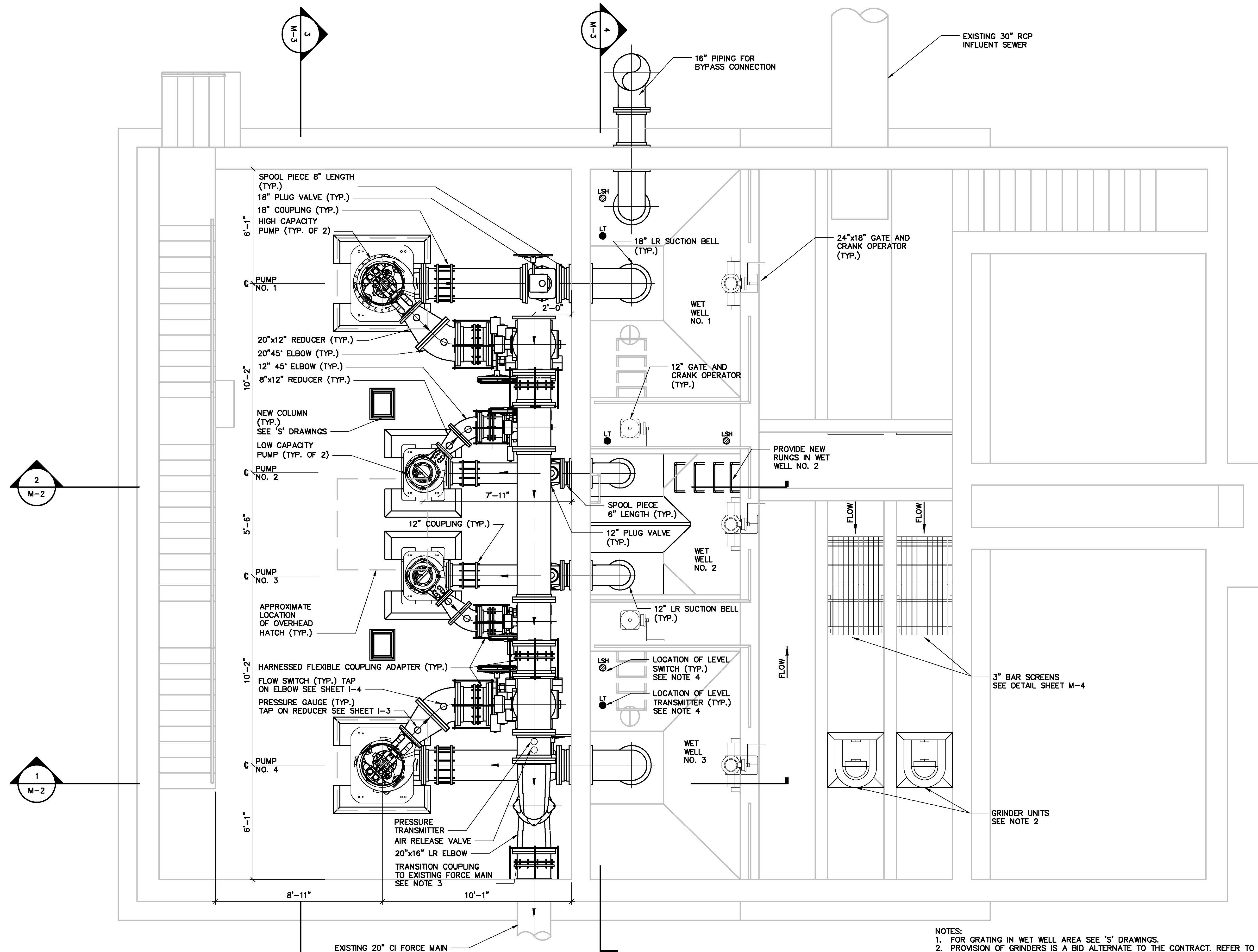
SHEET TITLE

FLOOR PLAN

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

M-1

SHEET 36 OF 69



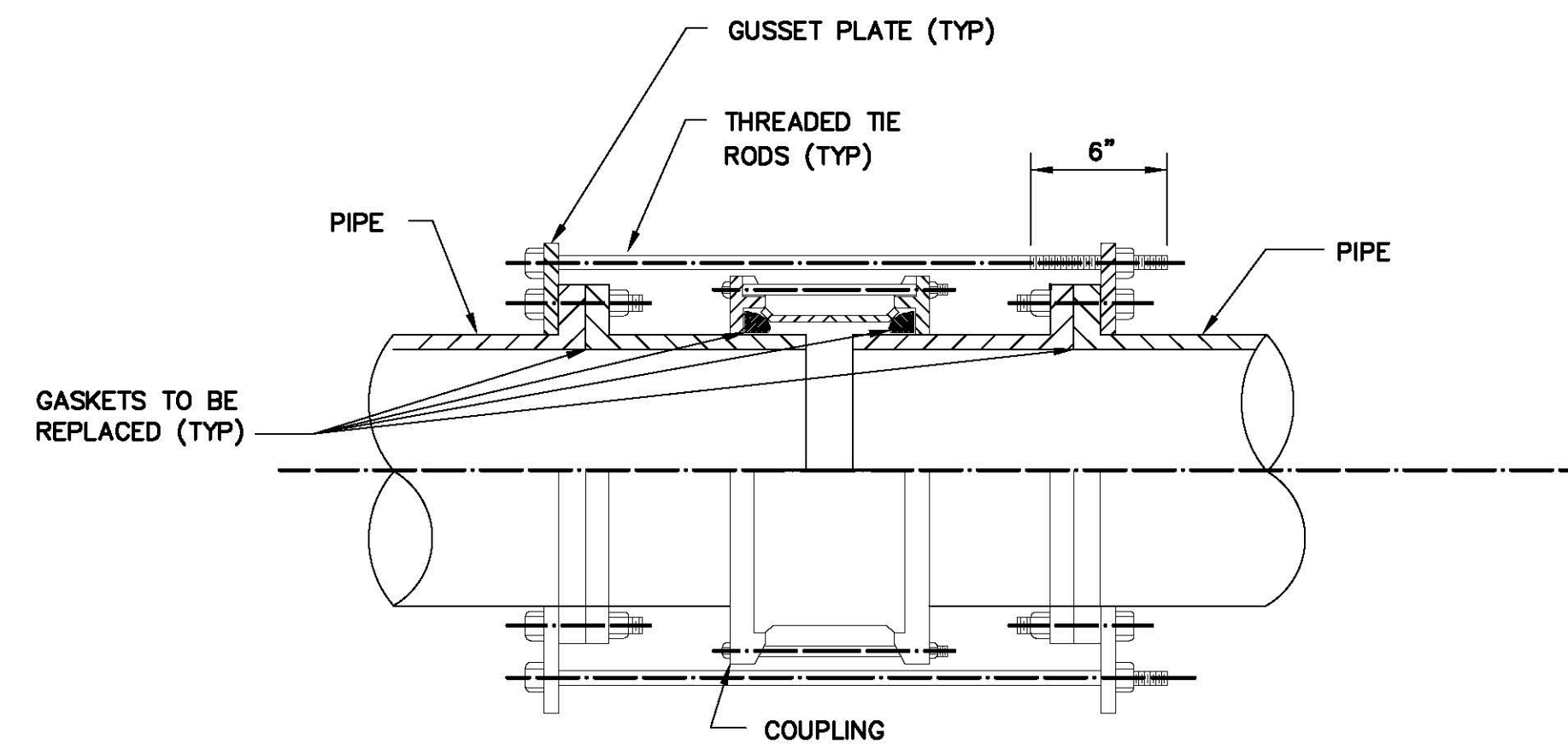
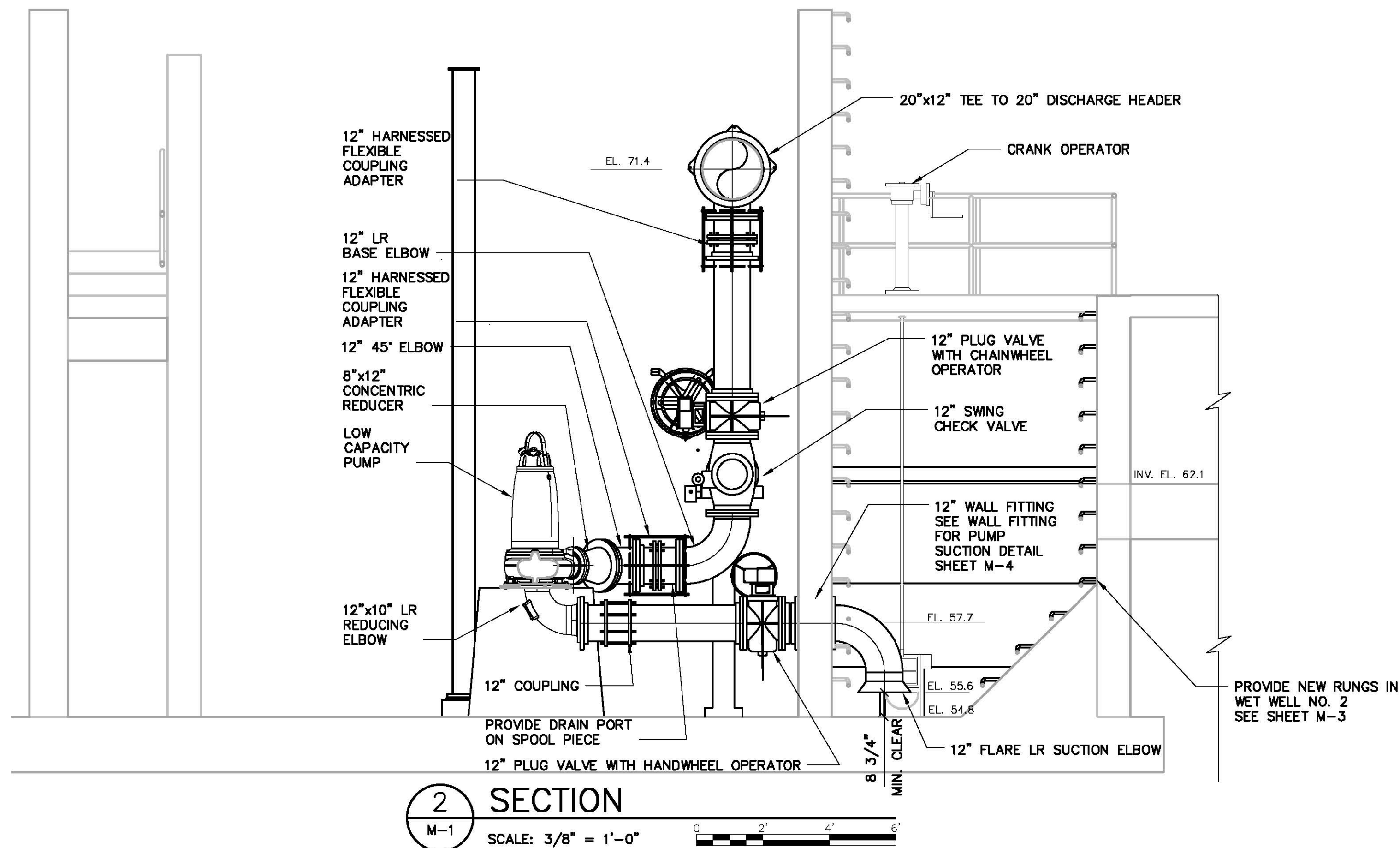
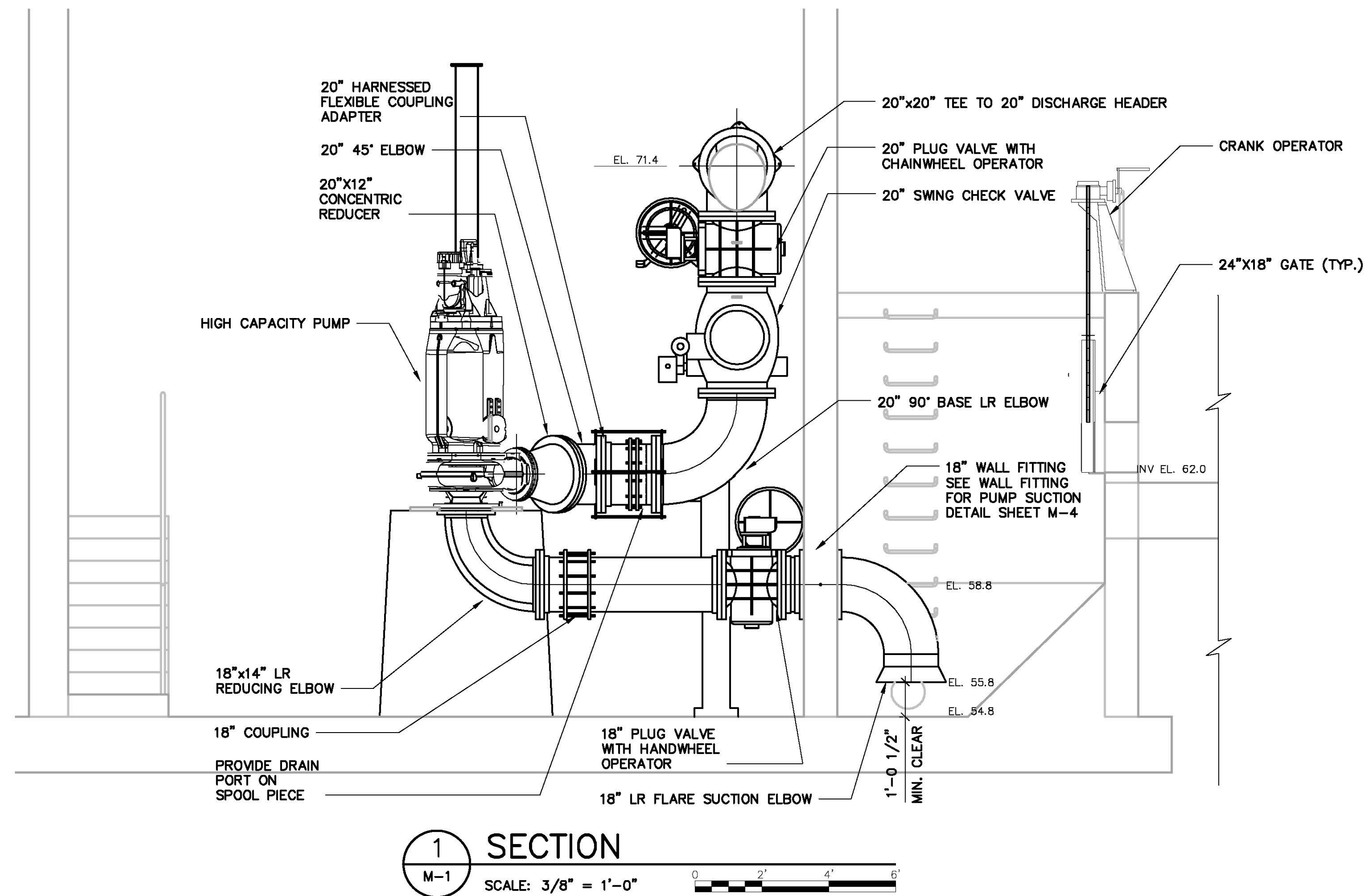
- NOTES:
1. FOR GRATING IN WET WELL AREA SEE 'S' DRAWINGS.
 2. PROVISION OF GRINDERS IS A BID ALTERNATE TO THE CONTRACT. REFER TO SECTION 01.22.13.
 3. EXISTING FORCE MAIN IS 20" DIAMETER CAST IRON PIPE. CUSTOM TRANSITION HARNESS COUPLING TO BE FABRICATED AS REQUIRED FOR CONNECTION BETWEEN NEW DUCTILE IRON PIPING AND EXISTING CAST IRON FORCE MAIN.
 4. GRATING/PLATE PENETRATIONS TO BE PROVIDED FOR LEVEL TRANSMITTERS AND SWITCHES AS REQUIRED.

PLAN OF BASEMENT AND WET WELL

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



User: T. O'CONNELL, Space: AUS - NCSM00, File: \\ACAD\\PROJ\\06532002.0000\\SHEETS\\MECHANICAL\\M-2.DWG, Scale: 1:1, Saved Date: 9/27/2017, Time: 11:42, Plot Date: 9/27/2017, 12:13, Layout: M-2



- NOTES:
1. PROVIDE NEW HARNESING RODS PER THIS DETAIL WHERE NOTED ON THE DRAWINGS.
 2. THE NUMBER OF TIE RODS, HARNES LUGS CONFIGURATION AND MATERIAL THICKNESS SHALL BE IN ACCORDANCE WITH AWWA M-11, STEEL PIPE - A GUIDE FOR DESIGN AND INSTALLATION.

HARNESSED FLEXIBLE COUPLING DETAIL
NOT TO SCALE

- NOTES:
1. NOT ALL PIPE SUPPORTS ARE SHOWN. DESIGN OF SUPPORT SYSTEM DELEGATED TO CONTRACTOR. REFER TO SECTION 40 05 07 FOR PIPE HANGER AND SUPPORT REQUIREMENTS.



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DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: M-2

DESIGNED BY: T. O'CONNELL

DRAWN BY: T. O'CONNELL

CHECKED BY: V. MCPHERSON

SHEET TITLE

SECTIONS &
DETAILS I

SCALE:

M-2

SHEET 37 OF 69

CONSULTANTS

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TOWN OF TRUMBULL, CT
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BEARDSLEY PUMP STATION COMPREHENSIVE UPGRADE

MARCADIS PROJ. NO. 08532002.0000[illegible]

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DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: M-4

DESIGNED BY: T. O'CONNELL

RAWN BY: T. O'CONNELL

CHECKED BY: V. MCPHERSON

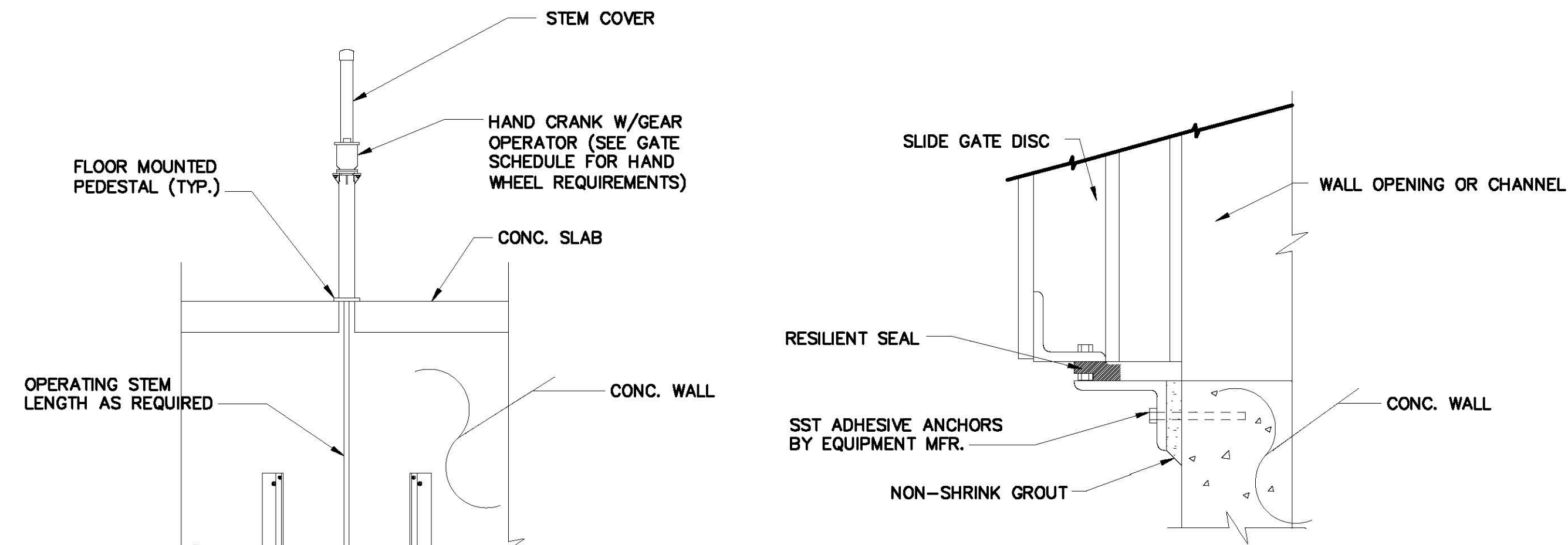
SHEET TITLE

SECTIONS & DETAILS

SCALE: AS SHOWN

M-4

SHEET 39 OF 69



FACE MOUNTED INVERT
CLOSURE DETAIL

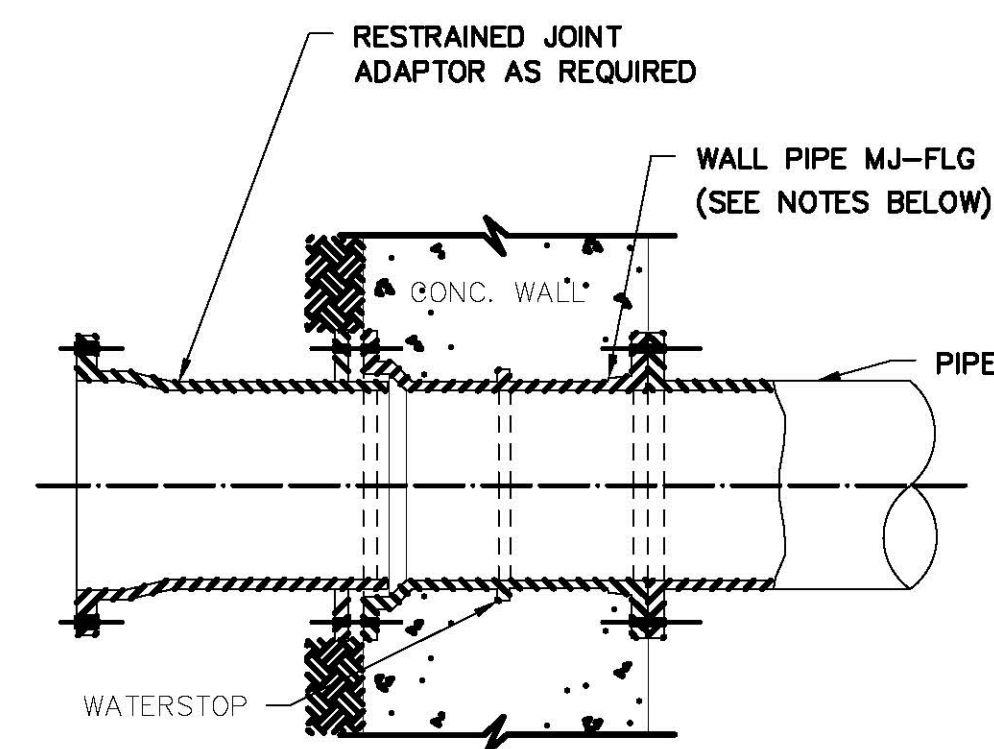
SCALE: N.T.S.

NON-SELF CONTAINED
PEDESTAL MOUNTED SLIDE
GATE TYPICAL DETAIL

SCALE: N.T.S.

- NOTES:

1. GATE DETAILS SHOWN VARY BY MANUFACTURER. CONTRACTOR TO COORDINATE GATE DETAILS OF CONSTRUCTION, INCLUDING MOUNTING ARRANGEMENTS, SIZES, AND DIMENSIONS WITH EQUIPMENT FURNISHED.
2. CONTRACTOR TO COORDINATE HAND CRANK OPERATOR ORIENTATION SO AS TO AVOID INTERFERENCES WITH ADJACENT STRUCTURES AND EQUIPMENT. SEE PLANS FOR GATE LOCATIONS.
3. PROVIDE STOP BARS AND STEM GUIDES ON OPERATING STEM AS REQUIRED.
4. SEE SPEC FOR SIZES OF OPENINGS AND REQUIRED GATE TRAVEL HEIGHT.
5. FACE MOUNTED SLIDE GATES SHOWN ABOVE. COORDINATE DETAILS WITH EQUIPMENT FURNISHED.
6. * - DENOTES DIMENSION TO BE COORDINATED WITH EQUIPMENT FURNISHED. SEE NOTE 1.

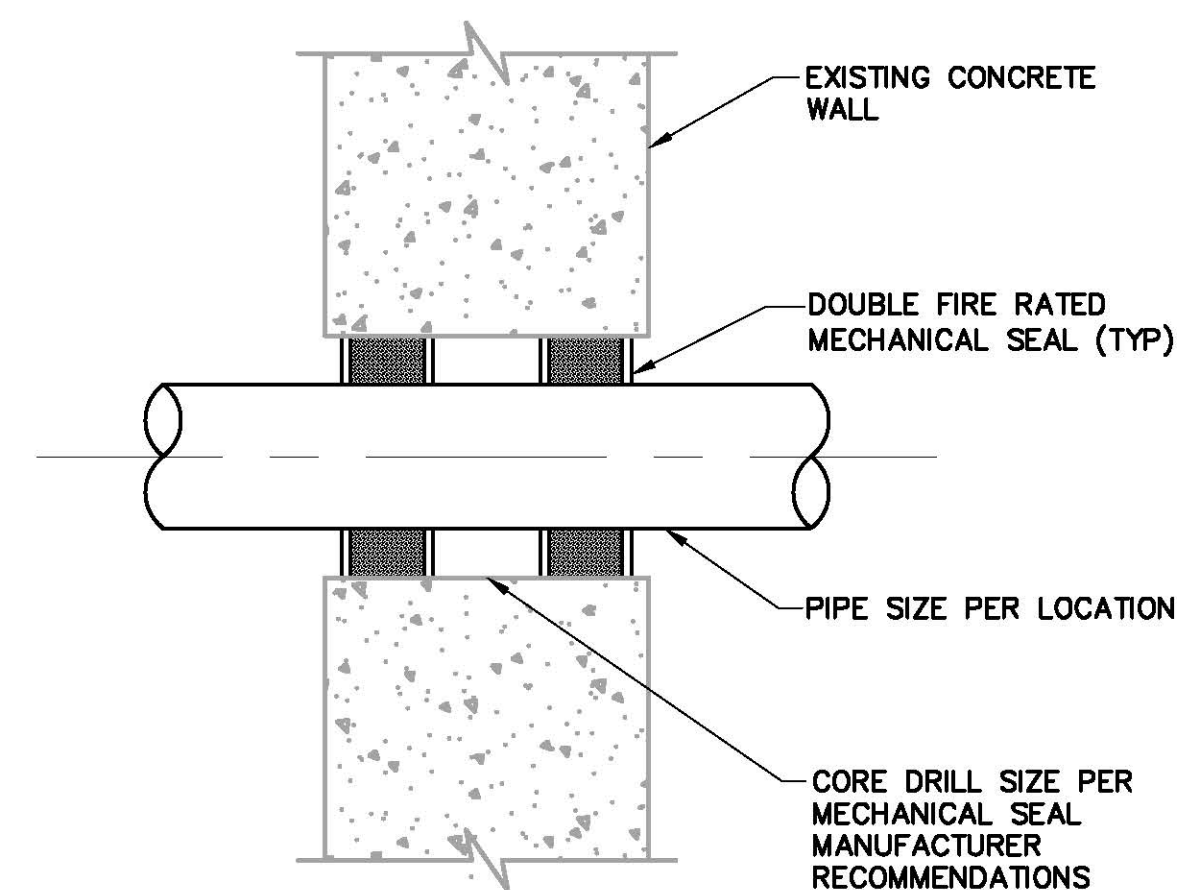


WALL FITTING FOR PUMP SUCTION

SCALE: N.T.S.

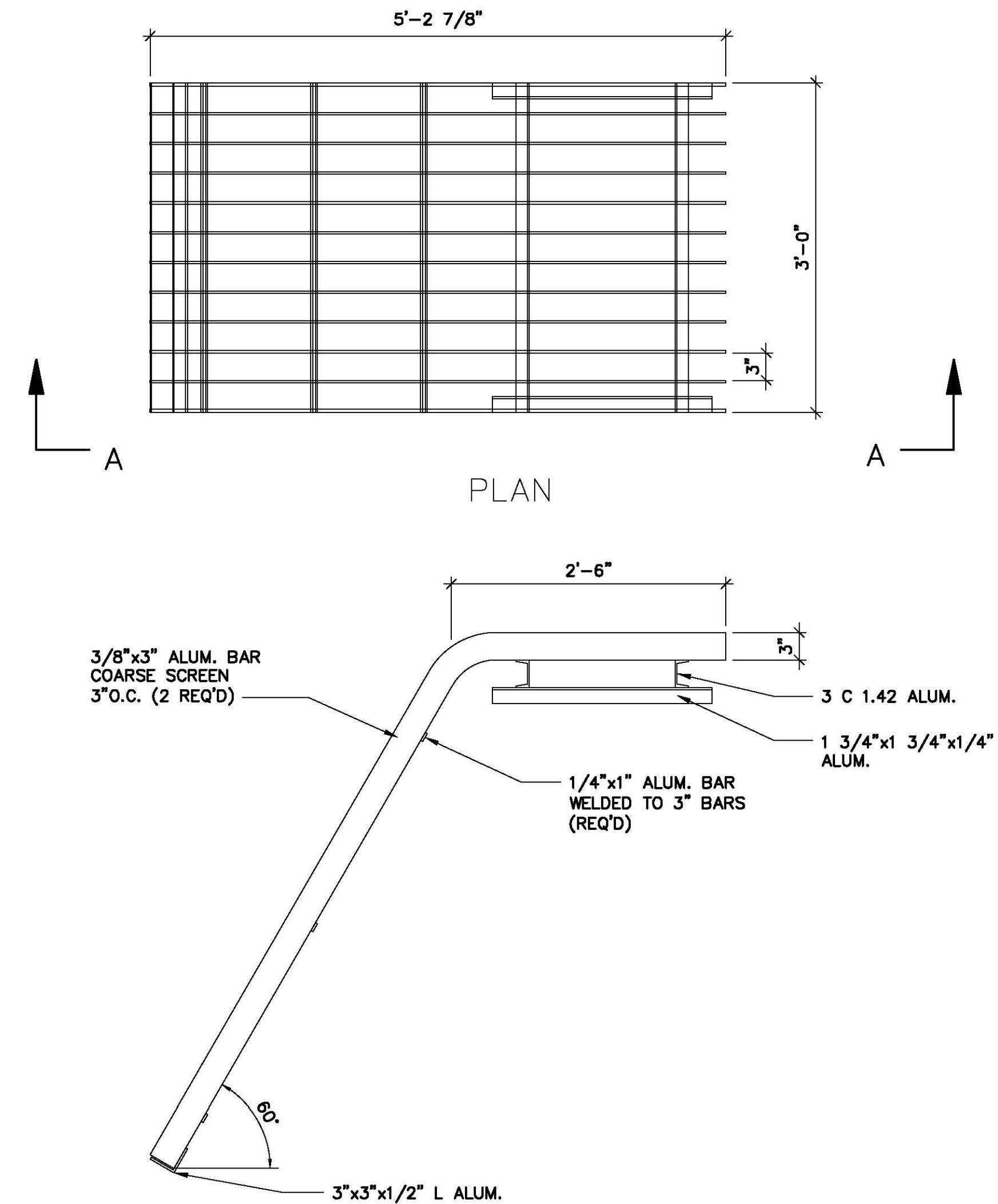
- NOTES:

1. WALL PIPE CAN BE MJ-FLG (SHOWN ABOVE), FLG-FLG, MJ-PE AND FLG-PE.
2. WALL PIPE IS TO BE SET FLUSH WITH WALL UNLESS OTHERWISE NOTED.
3. FLANGES & MJ SHOULD BE DRILLED AND TAPPED FOR STUDS.



TYPICAL PIPE PENETRATION THROUGH WALLS

SCALE: N.T.S.

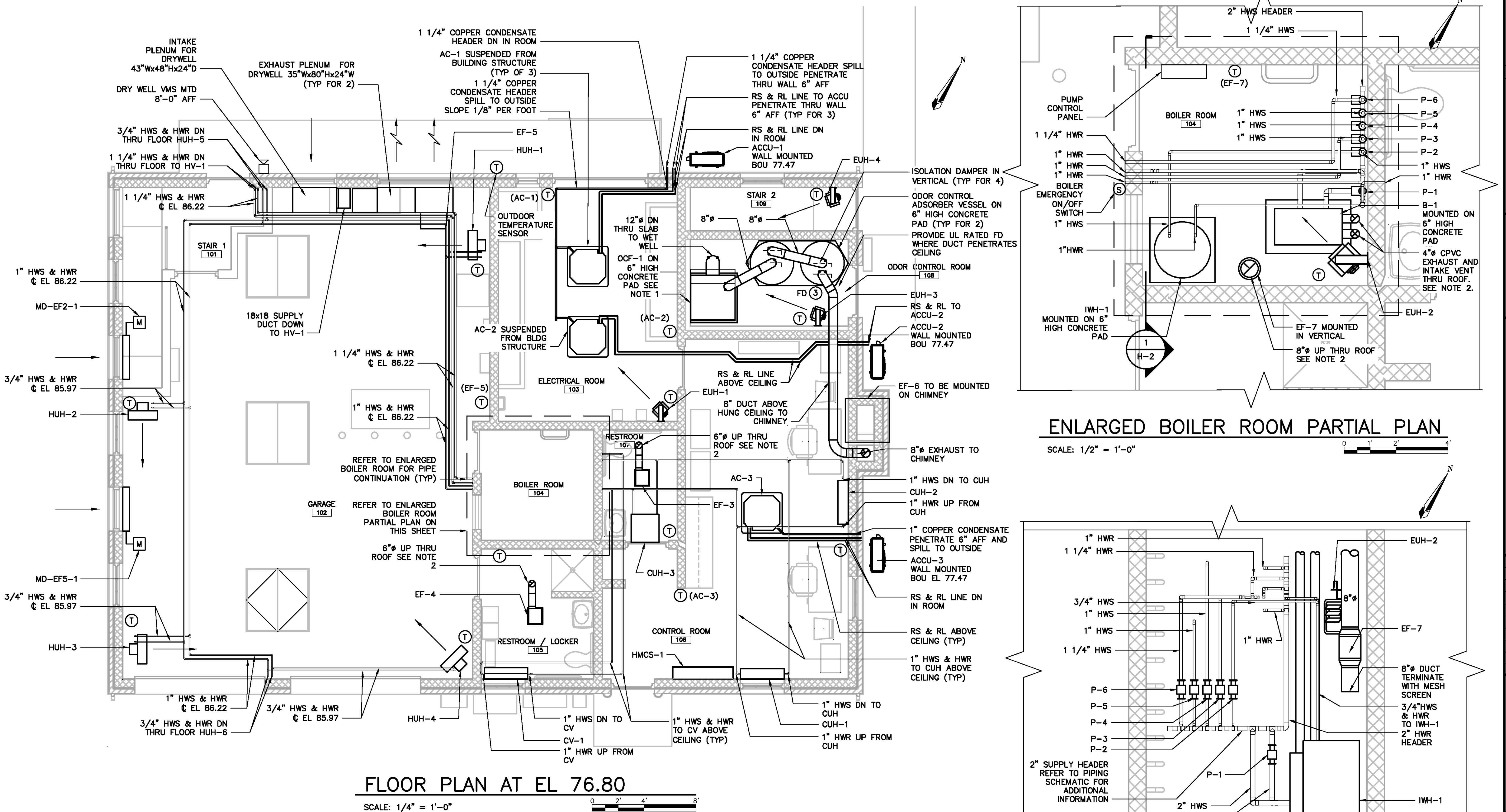


SECTION A-A

BAR SCREEN DETAIL

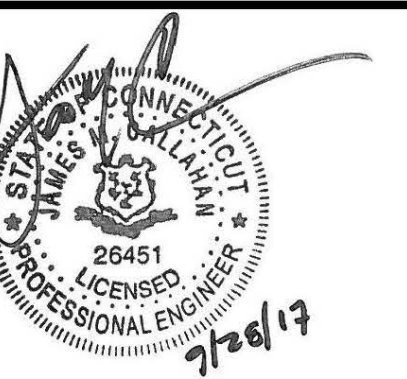
SCALE: 1" = 1'-0"

ABBREVIATIONS		PIPING SYMBOLS		DUCTWORK SYMBOLS		GENERAL NOTES	
<div><div>HVAC</div><div>ACHAIR CHANGES PER HOUR ADACCESS DOOR AFFABOVE FINISHED FLOOR AFRABOVE FINISHED ROOF ALALUMINIUM AMBAMBIENT APPROXAPPROXIMATE ATCAUTOMATIC TEMPERATURE CONTROL AUTOAUTOMATIC BBOBATTERY BACK UP OPEN BDDBACKDRAFT DAMPER BHPBRAKE HORSE POWER BLDGBUILDING BODBOTTOM OF DUCT BOGBOTTOM OF GRILLE BOT ELBOTTOM ELEVATION BOUBOTTOM OF UNIT BTU/HRBRITISH THERMAL UNITS PER HOUR BTUHBRTISH THERMAL UNITS PER HOUR CLCENTER LINE CDCEILING DIFFUSER CFMCUBIC FEET OF AIR PER MINUTE CGDCOMBUSTION GAS DETECTOR COCLEAN OUT CONCCONCRETE CONDCONDENSATE CONNCONNECTION CONTCONTINUATION DIADIAMETER DNDOWN DWGDRAWING DXDIRECT EXPANSION EAEACH EATENTERING AIR TEMPERATURE ECAVEXHAUST CONSTANT AIR VOLUME EGEXHAUST GRILLE ELELEVATION EREXHAUST REGISTER ESPEXTERNAL STATIC PRESSURE EQUIPEQUIPMENT EWTENTERING WATER TEMPERATURE EVAVEXHAUST VARIABLE AIR VOLUME EXHEXHAUST EXISTEXISTING F&BFACE & BYPASS FDFIRE DAMPER FLRFLOOR FOFUEL OIL FORFUEL OIL RETURN FOSFUEL OIL SUPPLY FOPRFUEL OIL PRESSURE RELIEF FPMFEET PER MINUTE FTFEET GALGALVANIZED GBDGRAVITY BACKDRAFT DAMPER GPMGALLONS PER MINUTE HHWRHEATING HOT WATER RETURN HHWSHEATING HOT WATER SUPPLY HPHORSEPOWER HVACHEATING, VENTILATION & AIR CONDITIONING KWKILOWATT LLOUVER LATLEAVING AIR TEMPERATURE LBGLINEAR BAR GRILLE LCDLIQUID CRYSTAL DISPLAY LWTLEAVING WATER TEMPERATURE MAXMAXIMUM MBHTHOUSAND BTUH MCA MINIMUM CIRCUIT AMPACITY MDMOTORIZED DAMPER MERV MINIMUM EFFICIENCY REPORTING VALUE MECHMECHANICAL MINMINIMUM MFRMANUFACTURER MOPMAX OVERCURRENT PROTECTION MTDMOUNTED NANOT APPLICABLE NKNECK NONORMALLY OPEN NCNORMALLY CLOSED NFA NET FREE AREA NTSNOT TO SCALE OAOUSIDE AIR OAI OUSIDE AIR INTAKE OPNGOPENING PD PRESSURE DROP PEPNEUMATIC/ELECTRIC PVPOLYVINYL CHLORIDE RECIPRECIPROCATING RDROOF DRAIN</div></div>		<div><div>RGRETURN GRILLE RLREFRIGERANT LIQUID RMRROOM RRRETURN REGISTER ROROOF OPENING RSREFRIGERANT SUCTION RVRELIEF VENT SCSPRING CLOSE SCAVSUPPLY CONSTANT AIR VOLUME SCHSCHEDULE SCR SILICON CONTROLLED RECTIFIER SDSMOKE DETECTOR OR SANITARY DRAIN SGSUPPLY GRILLE SMDSMOKE DAMPER SOSPRING OPEN SPSTATIC PRESSURE SRVSAFETY RELIEF VALVE SRSUPPLY REGISTER SSSTAINLESS STEEL SVAVSUPPLY VARIABLE AIR VOLUME TODTOP OF DUCT TSTOTAL STATIC TSPTOTAL STATIC PRESSURE TVSTEMPORARY VENTILATION STATION TYP TYPICAL VASVENTILATION ALARM STATION VDMANUAL VOLUME DAMPER VHVALVE HEATING VMSVENTILATION MONITORING STATION WBWET BULB WGWATER GAUGE WPDWATER PRESSURE DROP W/WITH</div><div>EQUIPMENT</div><div>ACC AIR CONDITIONING UNIT ACC AIR COOLED CONDENSER ACCU AIR COOLED CONDENSING UNIT AHUAIR HANDLING UNIT CFCIRCULATING FAN CHCHILLER CRACCOMPUTER ROOM AIR CONDITIONER CUHCABINET UNIT HEATER CVCONVECTOR CWHCABINET WALL HEATER DDC DIRECT DIGITAL CONTROL DHDEHUMIDIFICATION UNIT EBHELECTRIC BASEBOARD HEATER EFEXHAUST FAN EUHELECTRIC UNIT HEATER FACPFIRE ALARM CONTROL PANEL FBPFIBER BRANCH PANEL FPPFIBER PATCH PANEL GDCGLYCOL DRY COOLER HUHHOT WATER UNIT HEATER HVHEATING AND VENTILATING UNIT HVACHEATING, VENTILATING, AIR CONDITIONING UNIT HWB HOT WATER BOILER HWP HOT WATER PUMP HWPPHOT WATER PRIMARY PUMP HWSPHOT WATER SECONDARY PUMP IWHINDIRECT WATER HEATER MAU MAKE-UP AIR UNIT PPUMP PSPPURGE STATION PANEL PTACPACKAGED TERMINAL AC UNIT RHPRADIANT HEATING PANEL SFSUPPLY FAN SPPSMOKE PURGE PANEL</div></div>	<div><div><div><div><div><div></div><div>HWS</div><div>HOT WATER SUPPLY</div></div><div><div><div></div><div>HWR</div><div>HOT WATER RETURN</div></div><div><div><div></div><div>CA</div><div>COMPRESSED AIR</div></div><div><div><div></div><div>CHWS</div><div>CHILLED WATER SUPPLY</div></div><div><div><div></div><div>CHWR</div><div>CHILLED WATER RETURN</div></div><div><div><div></div><div>DG</div><div>DIGESTER GAS</div></div><div><div><div></div><div>EFWS</div><div>EFFLUENT WATER SUPPLY</div></div><div><div><div></div><div>EFWR</div><div>EFFLUENT WATER RETURN</div></div><div><div><div></div><div>D</div><div>DRAIN</div></div><div><div><div></div><div>FOS</div><div>FUEL OIL SUPPLY</div></div><div><div><div></div><div>FOR</div><div>FUEL OIL RETURN</div></div><div><div><div></div><div>V</div><div>VENT</div></div><div><div><div></div><div>FOV</div><div>FUEL OIL VENT</div></div><div><div><div></div><div>FOG</div><div>FUEL OIL GAUGE</div></div><div><div><div></div><div>NG</div><div>NATURAL GAS</div></div><div><div><div></div><div>CW</div><div>COLD WATER</div></div><div><div><div></div><div>MU</div><div>MAKE-UP WATER</div></div><div><div><div></div><div></div><div>EXPANSION JOINT</div></div><div><div><div></div><div></div><div>DIRECTION OF PITCH</div></div><div><div><div></div><div></div><div>ELBOW UP</div></div><div><div><div></div><div></div><div>ELBOW DOWN</div></div><div><div><div></div><div></div><div>TEE DOWN</div></div><div><div><div></div><div></div><div>TEE UP</div></div><div><div><div></div><div></div><div>PIPE CAP</div></div><div><div><div></div><div></div><div>CONNECTION UP</div></div><div><div><div></div><div></div><div>CONNECTION DOWN</div></div><div><div><div></div><div></div><div>ALIGNMENT GUIDE</div></div><div><div><div></div><div></div><div>ANCHOR</div></div><div><div><div></div><div></div><div>CONTROL VALVE, (2-WAY) ELECTRIC MOTOR OPERATED</div></div><div><div><div></div><div></div><div>CONTROL VALVE, (3-WAY) ELECTRIC MOTOR OPERATED</div></div></div></div></div><div>MISCELLANEOUS SYMBOLS</div><div><div><div><div><div></div><div>T</div><div>THERMOSTAT/TEMPERATURE SENSOR</div></div><div><div><div></div><div>P</div><div>PUMP OR FAN</div></div><div><div><div></div><div>CB</div><div>CIRCUIT BREAKER</div></div><div><div><div></div><div></div><div>VENTILATION ALARM OR MONITORING STATION</div></div><div><div><div></div><div></div><div>XXX-HV1-MD-1</div></div><div><div><div></div><div></div><div>DAMPER NUMBER</div></div><div><div><div></div><div></div><div>MOTORIZED DAMPER</div></div><div><div><div></div><div></div><div>EQUIPMENT DAMPER IS ASSOCIATED WITH</div></div><div><div><div></div><div></div><div>BUILDING DESIGNATION</div></div></div></div><div><div><div></div><div></div><div>EXISTING TO NEW WORK INTERFACE</div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div>	<div><div><div><div><div></div><div></div><div>ISOLATION VALVE TYPE DESIGNATED IN SPECIFICATION</div></div><div><div><div></div><div></div><div>BUTTERFLY VALVE</div></div><div><div><div></div><div></div><div>CHECK VALVE</div></div><div><div><div></div><div></div><div>GATE VALVE</div></div><div><div><div></div><div></div><div>GLOBE VALVE</div></div><div><div><div></div><div></div><div>TRIPLE DUTY VALVE (STRAIGHT, ANGLE PATTERN)</div></div><div><div><div></div><div></div><div>BALANCING VALVE</div></div><div><div><div></div><div></div><div>BALL VALVE</div></div><div><div><div></div><div></div><div>SOLENOID VALVE</div></div><div><div><div></div><div></div><div>Y STRAINER</div></div><div><div><div></div><div></div><div>FLOW SWITCH</div></div><div><div><div></div><div></div><div>REDUCER (CONCENTRIC)</div></div><div><div><div></div><div></div><div>REDUCER (ECCENTRIC)</div></div><div><div><div></div><div></div><div>UNION</div></div><div><div><div></div><div></div><div>THERMOMETER</div></div><div><div><div></div><div></div><div>PRESSURE GAUGE</div></div><div><div><div></div><div></div><div>FLEXIBLE CONNECTION</div></div><div><div><div></div><div></div><div>REFRIGERANT LIQUID LINE</div></div><div><div><div></div><div></div><div>HOT GAS LINE</div></div><div><div><div></div><div></div><div>REFRIGERANT SUCTION LINE</div></div><div><div><div></div><div></div><div>CONTROL SWITCH</div></div><div><div><div></div><div></div><div>PRESSURE SWITCH</div></div><div><div><div></div><div></div><div>EXISTING PIPING/EQUIPMENT</div></div><div><div><div></div><div></div><div>NEW PIPING/EQUIPMENT</div></div><div><div><div></div><div></div><div>HIDDEN PIPING/EQUIPMENT</div></div></div></div></div><div><div><div><div><div></div><div></div><div>SUPPLY AIR</div></div><div><div><div></div><div></div><div>RETURN OR EXHAUST AIR</div></div><div><div><div></div><div></div><div>DUCT, DIRECTION OF FLOW, SIZE</div></div><div><div><div></div><div></div><div>DUCT SECTION, SUPPLY</div></div><div><div><div></div><div></div><div>DUCT SECTION, EXHAUST</div></div><div><div><div></div><div></div><div>DUCT SECTION, RETURN</div></div><div><div><div></div><div></div><div>DROP (D) CHANGE OF ELEVATION RISE (R),</div></div><div><div><div></div><div></div><div>FLEXIBLE CONNECTION</div></div><div><div><div></div><div></div><div>FLEXIBLE DUCT</div></div><div><div><div></div><div></div><div>MITERED ELBOW W/ TURNING VANES</div></div><div><div><div></div><div></div><div>DUCT ELBOW DOWN. SUPPLY SHOWN</div></div><div><div><div></div><div></div><div>DUCT ELBOW UP, SUPPLY SHOWN</div></div><div><div><div></div><div></div><div>VOLUME DAMPER</div></div><div><div><div></div><div></div><div>SUPPLY REGISTER OR GRILLE</div></div><div><div><div></div><div></div><div>EXHAUST REGISTER OR GRILLE</div></div><div><div><div></div><div></div><div>RETURN REGISTER OR GRILLE</div></div><div><div><div></div><div></div><div>FOUR WAY BLOW SUPPLY DIFFUSER / REGISTER</div></div><div><div><div></div><div></div><div>THREE WAY BLOW SUPPLY DIFFUSER / REGISTER</div></div><div><div><div></div><div></div><div>1.0 I.S.F. 100 CFM</div></div><div><div><div></div><div></div><div>DOOR LOUVER, SIZE</div></div><div><div><div></div><div></div><div>DOOR UNDERCUT</div></div><div><div><div></div><div></div><div>DUCTWORK WITH INTERNAL INSULATION</div></div><div><div><div></div><div></div><div>MOTORIZED DAMPER (ELECTRIC)</div></div><div><div><div></div><div></div><div>SMOKE DAMPER</div></div><div><div><div></div><div></div><div>GRAVITY BACKDRAFT DAMPER</div></div><div><div><div></div><div></div><div>FIRE DAMPER W/ ACCESS DOOR # DESIGNATES FIRE WALL RATING</div></div><div><div><div></div><div></div><div>TWO WAY BLOW SUPPLY DIFFUSER</div></div><div><div><div></div><div></div><div>ONE WAY BLOW SUPPLY DIFFUSER</div></div><div><div><div></div><div></div><div>LINEAR DIFFUSER</div></div><div><div><div></div><div></div><div>EXISTING DUCTWORK/EQUIPMENT</div></div><div><div><div></div><div></div><div>NEW DUCTWORK/EQUIPMENT</div></div><div><div><div></div><div></div><div>HIDDEN DUCTWORK/EQUIPMENT</div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div>	<div><div>1. THE SYMBOLS AND ABBREVIATIONS LIST ON THIS SHEET IS A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE ON ALL PROJECTS. NOT ALL THE SYMBOLS AND ABBREVIATIONS CONTAINED ARE NECESSARILY USED.</div><div>2. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO BEGINNING WORK SHOWN.</div><div>3. LOCATION, ELEVATION AND DIMENSIONS OF EXISTING PIPING, DUCTWORK, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACT</div></div>		



NOTES:

1. THE ODOR CONTROL SYSTEM IS INCLUDED AS A BID ALTERNATE TO THE CONTRACT.
2. ALL EXHAUST FAN EXHAUST DUCT AND BOILER VENTS SHALL BE THRU NORTH SIDE OF ROOF. ROUTE DUCT/VENT IN ATTIC ACCORDINGLY AND TERMINATE ALL DUCTS THROUGH A COMMON CUSTOM CURB BY THYBAR OR EQUAL. CONTRACTOR SHALL PROVIDE CUSTOM ROOF CURB COMPATIBLE FOR PITCHED ROOF. REFER TO ARCH DRAWINGS FOR ROOF PENETRATION LOCATION AND FLASHING DETAIL. ROUGH OPENING FOR CURB IS 2'-6" x 3'-6". EACH EXHAUST DUCT SHALL TERMINATE WITH A GOSENECK. COMBUSTION INTAKE AIR DUCT FOR BOILER SHALL BE A VERTICAL TYPE WITH WEATHER INTAKE CAP PER THE BOILER MANUFACTURER'S RECOMMENDATION. CONTRACTOR SHALL FURNISH AND INSTALL WEATHER RESISTANT METAL CURB CAP WITH PIPE BOOT ADAPTERS FOR INTAKE AND EXHAUST VENTS THRU CHIMNEY. INTAKE AND EXHAUST VENT SPACING AND HEIGHTS FOR BOILER SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.



TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION COMPREHENSIVE UPGRADE

MARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY

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017

DATE: SEPTEMBER 2017PROJECT NO.: 06532002.0000FILE NAME: H-3DESIGNED BY: S. CHHEA

RAWN BY: S. CHHEA

CHECKED BY: J. CALLAHAN

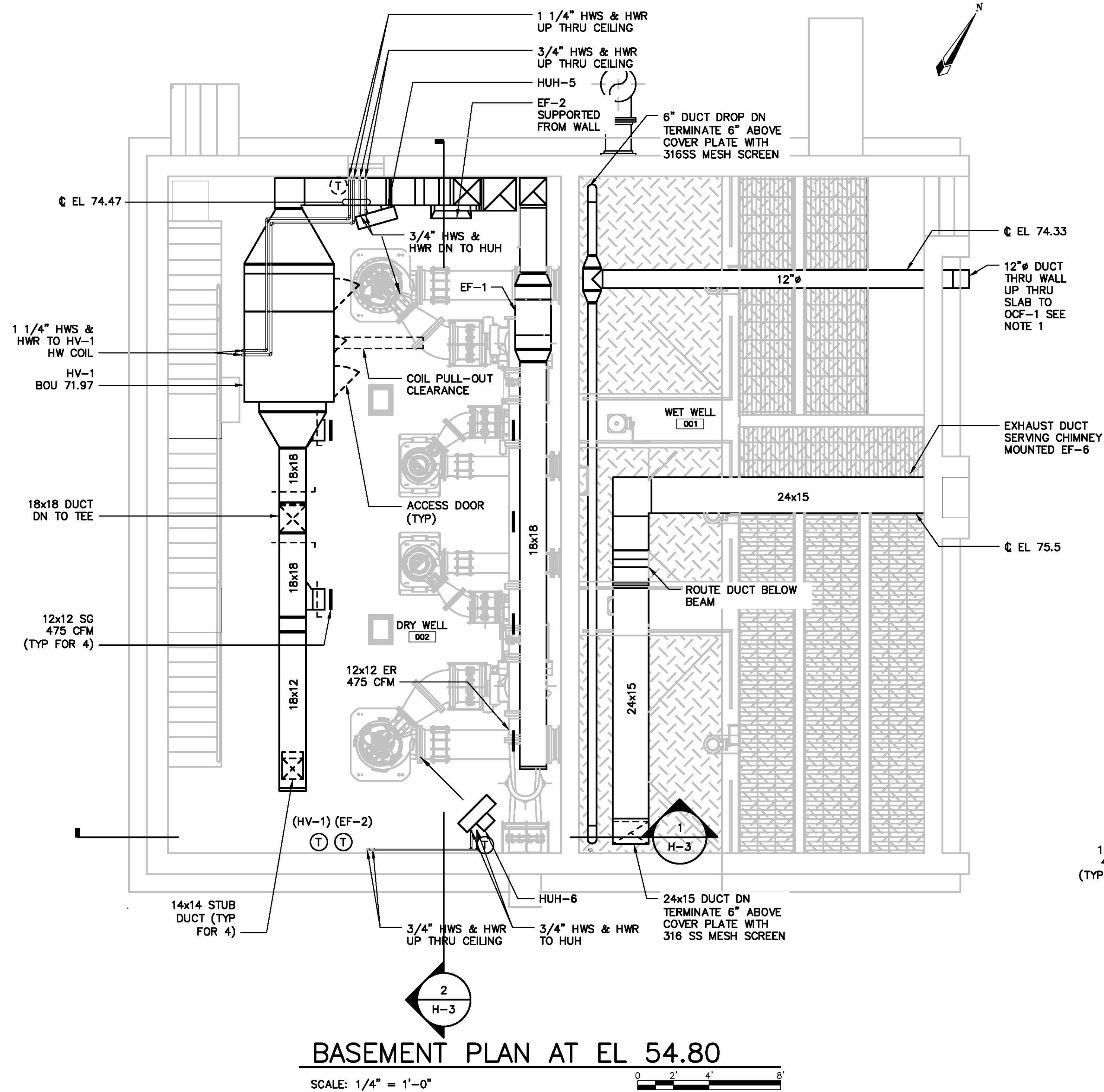
SHEET TITLE

LOWER LEVEL PLAN & SECTIONS

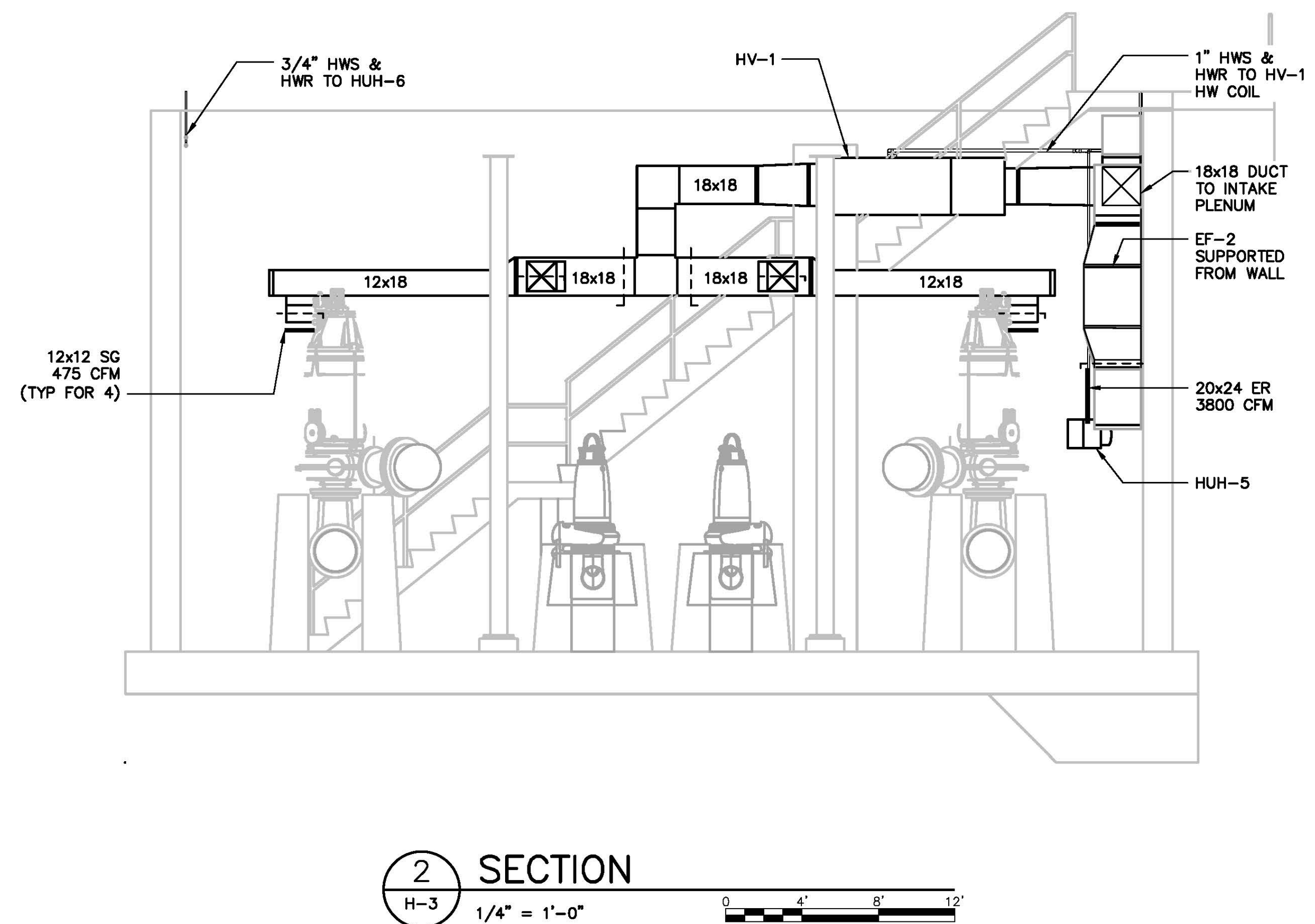
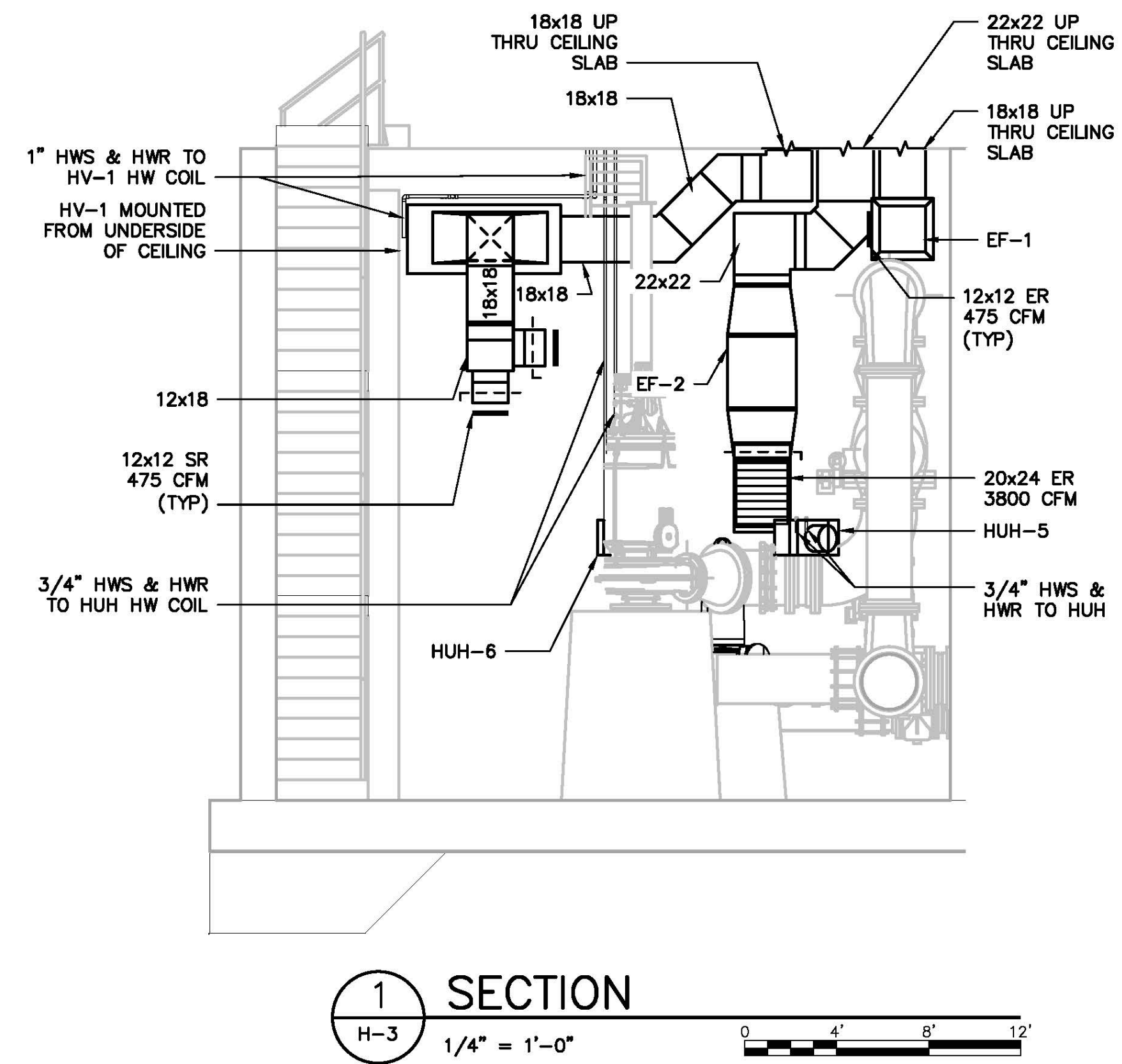
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4-3

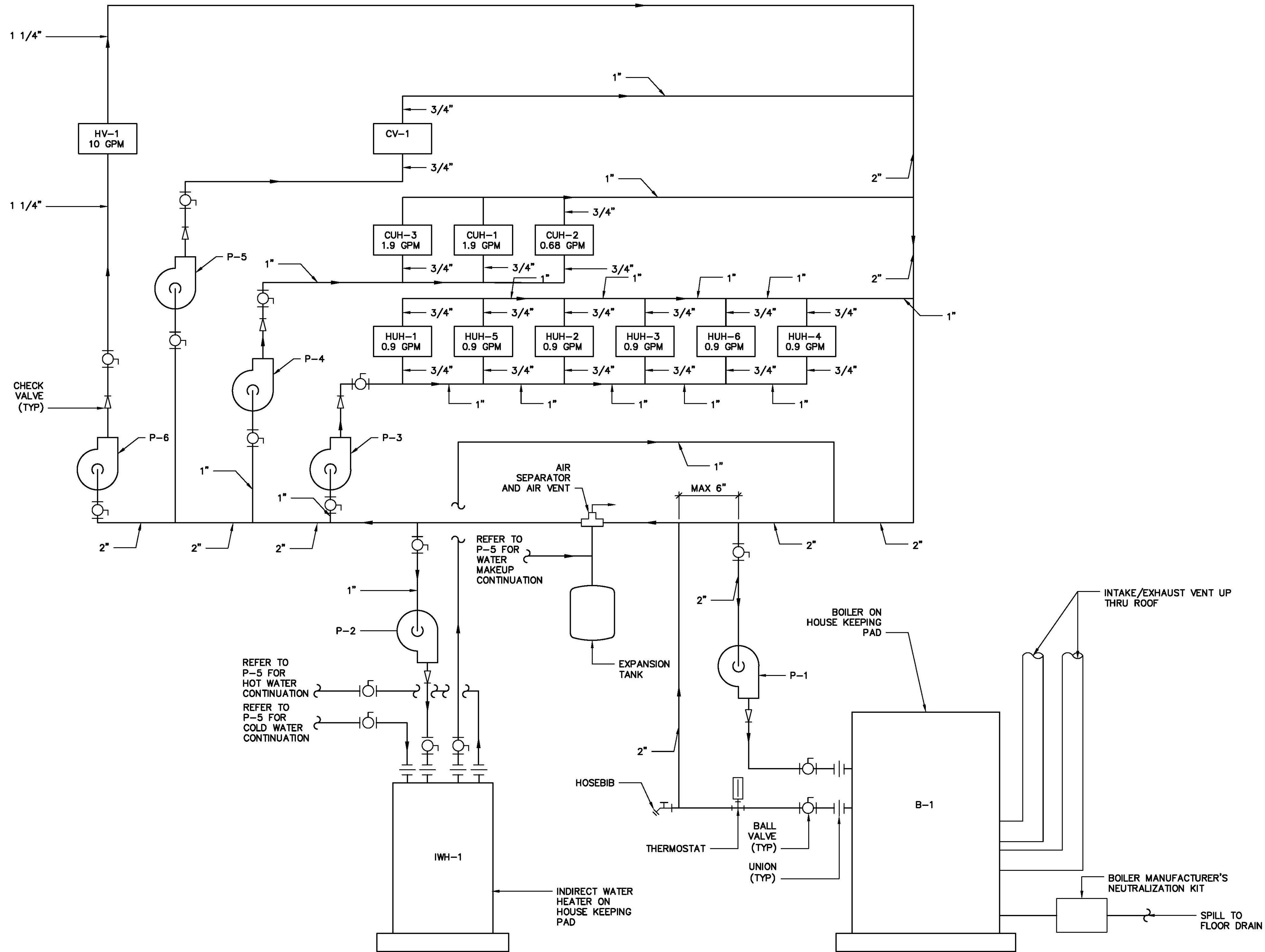
SHEET 42 OF 69



NOTES:
1. THE ODOR CONTROL SYSTEM IS INCLUDED AS A BID ALTERNATE TO THE CONTRACT.



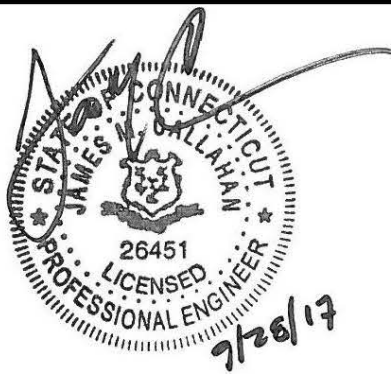
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TOWN OF TRUMBULL, CT
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BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY	

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DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: H-4

DESIGNED BY: S. CHIEA

DRAWN BY: S. CHIEA

CHECKED BY: J. CALLAHAN

SHEET TITLE

PIPING SCHEMATIC

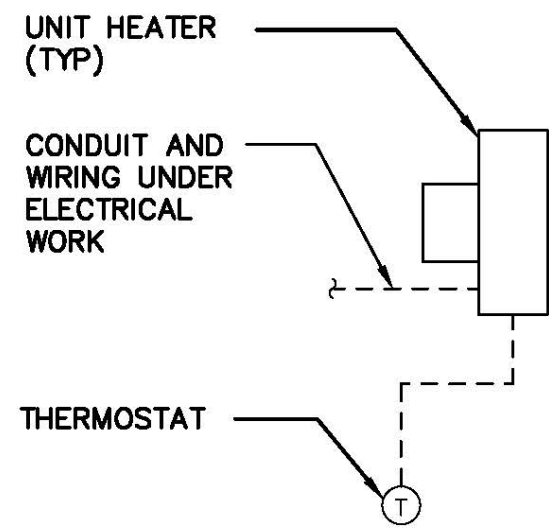
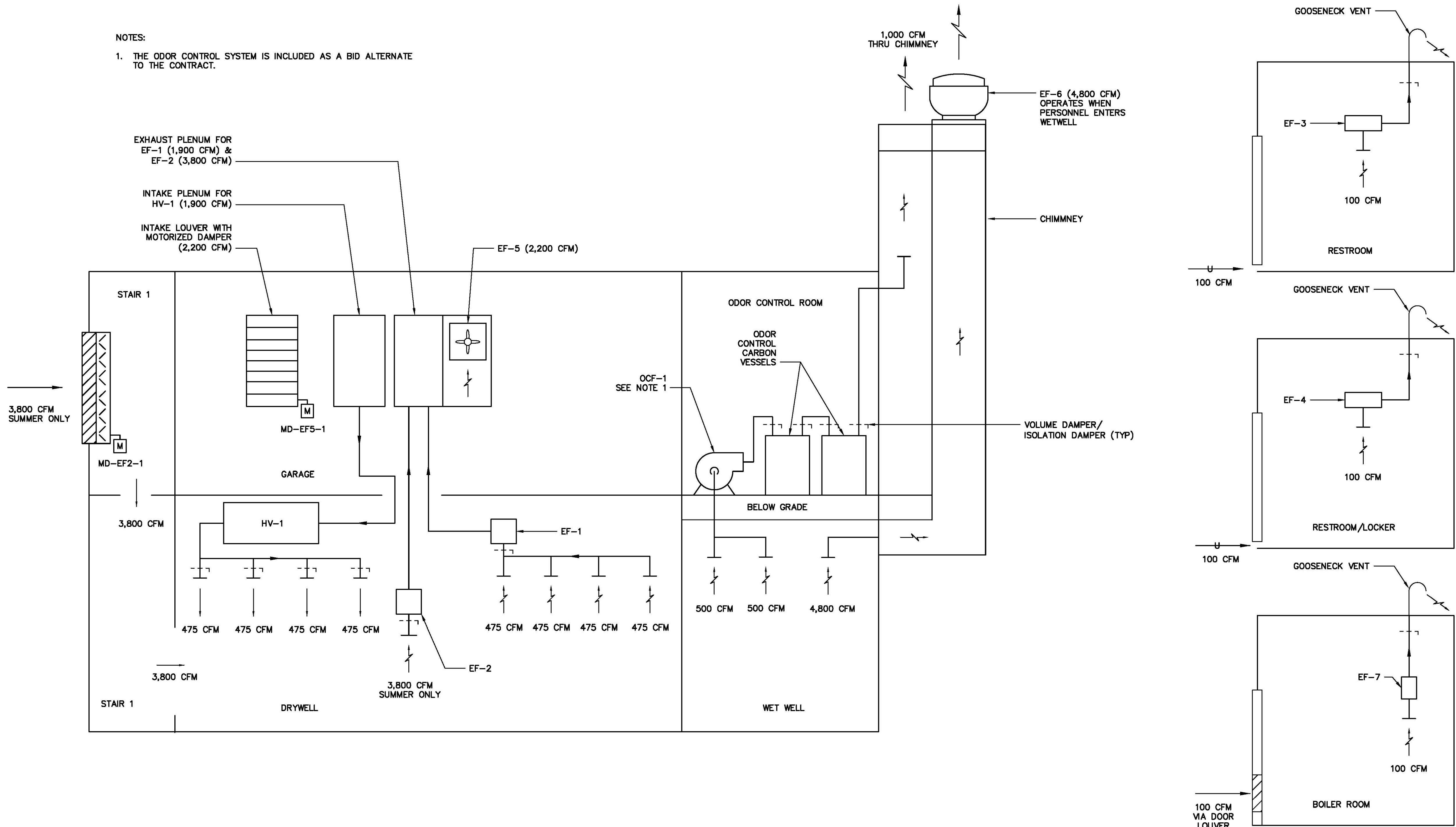
SCALE:
NO SCALE

H-4

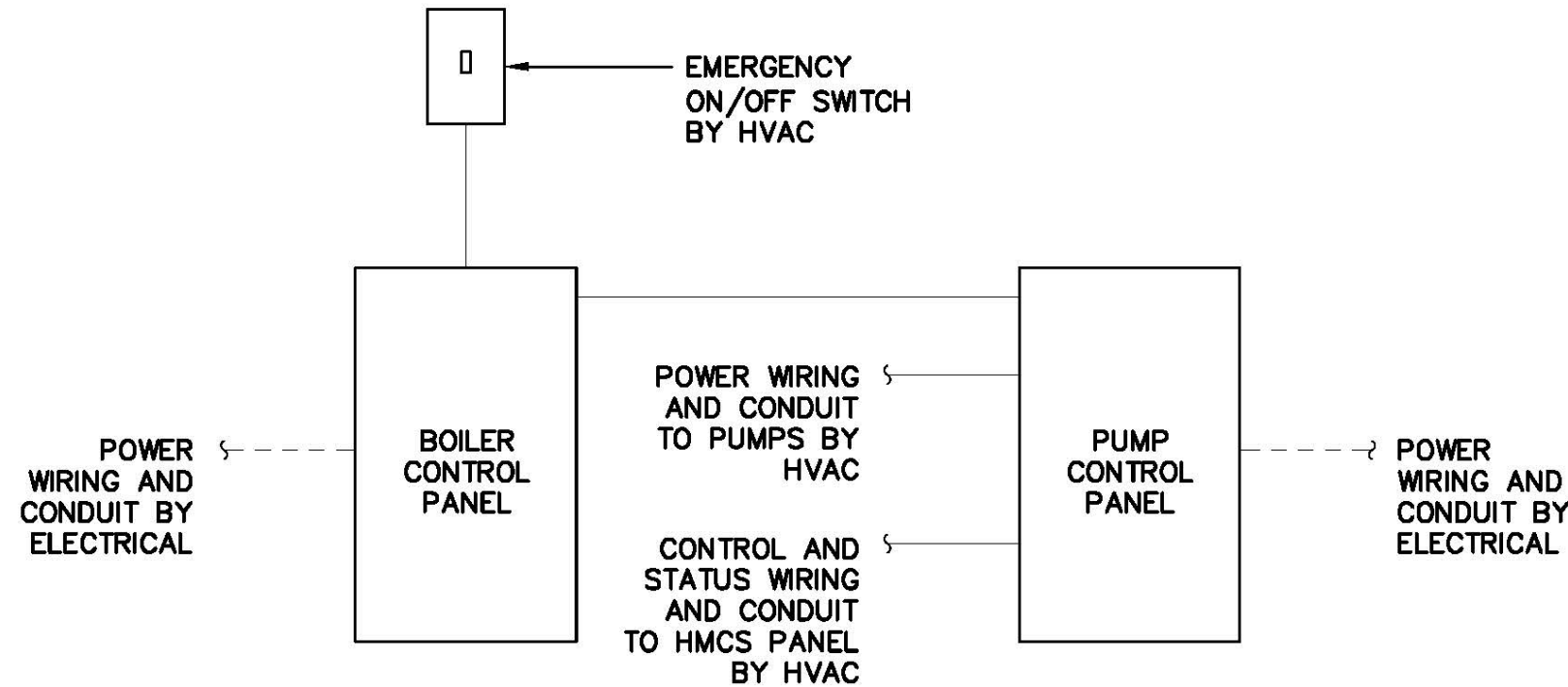
SHEET 43 OF 69

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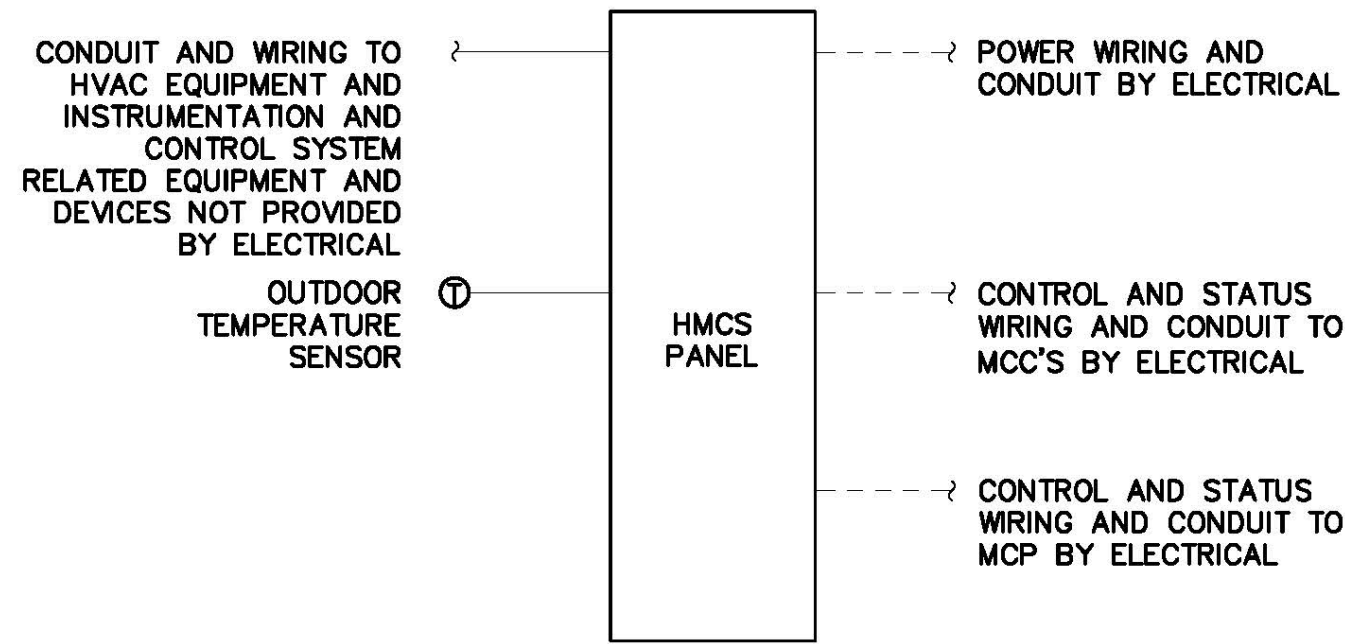
- NOTES:
1. THE ODOR CONTROL SYSTEM IS INCLUDED AS A BID ALTERNATE TO THE CONTRACT.



TYPICAL UNIT HEATER CONTROL SCHEMATIC



BOILER AND PUMP CONTROL PANEL SCHEMATIC



- NOTES:
1. REFER TO SPECIFICATION SECTION 23 09 00 FOR CONTROL EQUIPMENT AND SEQUENCE OF OPERATIONS.

HMCS PANEL SCHEMATIC



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COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

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DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: H-5

DESIGNED BY: S. CHIEA

DRAWN BY: S. CHIEA

CHECKED BY: J. CALLAHAN

SHEET TITLE

FLOW DIAGRAM &
CONTROL SCHEMATICS

SCALE:
AS SHOWN

H-5
SHEET 44 OF 69

User: CHHEA Spec: AUS-NCSMOD File: I:\ACAD\PROJ\06532002.0000\SHEETS\HVAC\HV-6.DWG Scale: 1:1 Saved Date: 9/27/2017 Time: 13:17 Plot Date: O'Connell, Timothy, 9/27/2017, 14:58 Layout: H-6

HEATING AND VENTILATING UNIT SCHEDULE																																
MARK NO.	LOCATION	SERVICE	SUPPLY FAN DATA										HEATING COIL DATA												FILTER DATA		TOTAL POWER		WEIGHT (LBS)	MFR	MODEL	NOTES
			TOTAL AIRFLOW (CFM)	OUTSIDE AIR FLOW (CFM)	T.S.P. (IN W.G.)	E.S.P. (IN W.G.)	FAN RPM	DRIVE	HP	BHP	MOTOR RPM	V/PH	TYPE	PROPYLENE GLYCOL/WATER MIX (%)	TOTAL MBH	FACE AREA (SQ. FT.)	WATER VELOCITY (FPS)	ROWS	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	MAX WATER PD (FT)	FLOW (GPM)	THICKNESS (IN)	MERV RATING	MCA (AMPS)	MOP (AMPS)				
HV-1	DRYWELL	DRYWELL	1,900	1,900	1.0	0.75	1134	DIRECT	4	0.52	2750	460/3	WATER	50/50	132.0	7.22	4.33	1	10	67.4	180	150.4	8.7	10	4	8	6	15	800	AAON	H3	1
NOTES:																																
1. DISCONNECT PROVIDED BY ELECTRICAL.																																

FAN SCHEDULE																
MARK NO.	LOCATION	SERVICE	TYPE	DRIVE	AIRFLOW (CFM)	ESP (IN. W.G.)	SPEED (RPM)	MOTOR DATA					WEIGHT (LBS)	MFR	MODEL	NOTES
								INPUT WATTS	HP	BHP	RPM	V/PH				
OCF-1	ODOR CONTROL ROOM	WET WELL	CENTRIFUGAL	BELT	1,000	9.00	1780	N/A	3	1.99	1780	460/3	500	NEW YORK BLOWER	PRESSURE BLOWER	1, 3
EF-1	DRYWELL	DRYWELL	CENTRIFUGAL	DIRECT	1,900	0.50	1725	N/A	3/4	0.60	1725	460/3	100	LOREN COOK	SQND	1
EF-2	DRYWELL	DRYWELL	CENTRIFUGAL	DIRECT	4,066	0.50	1725	N/A	2	1.49	1725	460/3	125	LOREN COOK	SQND	1
EF-3	RESTROOM	RESTROOM	CENTRIFUGAL CEILING CABINET	DIRECT	123	0.33	N/A	38	N/A	N/A	1075	115/1	25	LOREN COOK	GN	1
EF-4	RESTROOM	RESTROOM	CENTRIFUGAL CEILING CABINET	DIRECT	123	0.33	N/A	38	N/A	N/A	1075	115/1	25	LOREN COOK	GN	1
EF-5	GARAGE	GARAGE	WALL PROPELLER	DIRECT	2,200	0.33	1521	N/A	1/2	0.26	1725	460/3	100	LOREN COOK	AWD	1
EF-6	OUTDOORS	WET WELL	UBLAST	BELT	4180	0.75	2008	N/A	2	1.49	2008	460/3	150	HARTZELL	A37	1, 2, 3
EF-7	BOILER ROOM	BOILER ROOM	INLINE	DIRECT	225	0.325	2119	56.8	N/A	N/A	2119	120/1	25	FANTECH	PRIOAIR 8	1
NOTES: 1. DISCONNECT PROVIDED BY ELECTRICAL. 3. EXPLOSION PROOF MOTOR RATED FOR CLASS I DIV I 2. STACK CAP.																

DUCTLESS SPLIT SYSTEM SCHEDULE																								
MARK NO. EVAPORATOR (INDOOR)	MARK NO. CONDENSING UNIT (OUTDOOR)	INDOOR UNIT LOCATION	CONDENSING UNIT LOCATION	REFRIGERANT	EVAPORATOR (INDOOR) UNIT										CONDENSING (OUTDOOR) UNIT						ELECTRICAL DATA	SEER	NOTES	
					TOTAL COOLING CAPACITY (MBH)	SENSIBLE COOLING CAPACITY (MBH)	AIR FLOW (CFM)	V/PH	FAN FLA	MCA	MOUNTING	WEIGHT (LBS)	MFGR	MODEL	V/PH	FAN FLA	MCA	WEIGHT	MFGR	MODEL	BREAKER (AMPS)			
AC-1	ACCU-1	ELECTRICAL ROOM	OUTDOOR	R-410A	30.0	30.0	705	208/1	0.43	1	WALL	50	MITSUBISHI	PKA	208/1	0.75	25	170	MITSUBHISHI	PUY	30	13	1, 2	
AC-2	ACCU-2	ELECTRICAL ROOM	OUTDOOR	R-410A	30.0	30.0	705	208/1	0.43	1	WALL	50	MITSUBISHI	PKA	208/1	0.75	25	170	MITSUBHISHI	PUY	30	13	1, 2	
AC-3	ACCU-3	CONTROL ROOM	OUTDOOR	R-410A	36	36.0	990	208/1	1.25	2	CEILING	75	MITSUBISHI	PLA	208/1	0.75	25	175	MITSUBHISHI	PUY	30	13.1	1, 2	
NOTES: 1. INDOOR UNIT POWERED FROM OUTDOOR UNIT. 2. DISCONNECT PROVIDED BY ELECTRICAL.																								

ELECTRIC UNIT HEATER SCHEDULE																			
MARK NO.	LOCATION	SERVICE	COIL DATA			MOTOR DATA			TOTAL AMPS	CFM	EAT (°F)	LAT (°F)	THROW (FT)	DISCHARGE ORIENTATION	MTG. HEIGHT (AFF)	WEIGHT (LBS)	MFR	MODEL	NOTES
			MBH	KW	V/PH	RPM	HP	V/PH											
EUH-1	ELECTRICAL ROOM	ELECTRICAL ROOM	17.1	5.0	480/3	1550	1/35	480/3	6.3	380	55	97	12	HORIZONTAL	8	50	CHROMALOX	LUH	1
EUH-2	MECHANICAL ROOM	MECHANICAL ROOM	17.1	5.0	480/3	1550	1/35	480/3	6.3	380	55	97	12	HORIZONTAL	8	50	CHROMALOX	LUH	1
EUH-3	ODOR CONTROL ROOM	ODOR CONTROL ROOM	17.1	5.0	480/3	1725	1/4	480/3	5.6	700	55	77	28	HORIZONTAL	8	135	INDEECO	ULTRA-SAFE EXP	1
EUH-4	STAIRWELL	STAIRWELL	17.1	5.0	480/3	1725	1/4	480/3	5.6	700	55	77	28	HORIZONTAL	8	135	INDEECO	ULTRA-SAFE EXP	1
NOTES: 1. DISCONNECT PROVIDED BY ELECTRICAL.																			

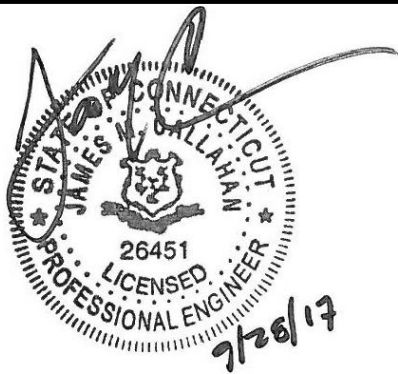
HOT WATER UNIT HEATER SCHEDULE																						
MARK NO.	LOCATION	SERVICE	COIL DATA								FAN		EAT (°F)	TEMP RISE (°F)	THROW (FT)	DISCHARGE ORIENTATION	MOUNTING HEIGHT AFF (FT)	WEIGHT (LB)	MFR	MODEL	NOTES	
			MBH	EWT (°F)	LWT (°F)	FLOW (GPM)	MAX WATER PD (FT)	RPM	HP	V/PH/HZ	TOTAL AMPS	QTY										CFM
HUH-1 THRU 4	PROCESS AREA	PROCESS AREA	17.2	180	140	0.9	0.2	850	1/20	115/1/60	1.1	1	420	60	97.9	18	HORIZONTAL	8	50	SIGMA	030H	1
HUH-5 THRU 6	DRYWELL	DRYWELL	17.2	180	140	0.9	0.2	850	1/20	115/1/60	1.1	1	420	60	97.9	18	HORIZONTAL	8	50	SIGMA	030H	1
CUH-1 & 2	CONTROL ROOM	CONTROL ROOM	23.2	180	140	1.19	0.4	1075	1/10	120/1/60	1.9	2	300	60	N/A	N/A	HORIZONTAL	0.5	125	SIGMA	SFF03	1
CUH-3	REST ROOM	REST ROOM	13.6	180	140	0.68	0.1	1075	1/10	120/1/60	1.9	1	200	60	97.9	18	CEILING FLUSHED	CEILING FLUSH	75	SIGMA	SFF02	1, 2
CV-1	REST ROOM	REST ROOM	12.5	180	140	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	HORIZONTAL-ANGLED	0.33	125	SIGMA	CWS	2
NOTES: 1. DISCONNECT PROVIDED BY ELECTRICAL. 2. RECESSING COLLAR.																						



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TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY

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2017

DATE: SEPTEMBER 2017
PROJECT NO.: 06532002.0000
FILE NAME: H-6
DESIGNED BY: S. CHHEA
DRAWN BY: S. CHHEA
CHECKED BY: J. CALLAHAN

SHEET TITLE

EQUIPMENT
SCHEDULES I

SCALE: NO SCALE

H-6
SHEET 45 OF 69

User: CHHEA Spec: AUS-NCSMOD File: I:\ACAD\PROJ\06532002.0000\SHEETS\HVAC\H-7.DWG Scale: 1:1 SavedDate: 9/26/2017 Time: 16:09 Plot Date: O'Connell, Timothy, 9/27/2017, 14:58 Layout: H-7

CONDENSING HOT WATER BOILER SCHEDULE																							
MARK NO.	LOCATION	SERVICE	TYPE	FUEL TYPE	MIN GAS PRESSURE (IN WC)	MAX GAS PRESSURE (IN WC)	CAPACITY			LIQUID HANDLED					BURNER TURN DOWN	THERMAL EFFICIENCY AT FULL LOAD (%)	WET WEIGHT (LB)	V/PH/HZ	MOCp (AMPS)	INTAKE/ VENT DIAMETER (INCH)	MFR	MODEL	NOTES
							INPUT (MBH)	MINIMUM OUTPUT (MBH)	MAXIMUM OUTPUT (MBH)	PROPYLENE GLYCOL/WATER MIX (%)	NOMINAL FLOWRATE (GPM)	ENTERING TEMPERATURE (°F)	LEAVING TEMPERATURE (°F)	WATER VOLUME (GAL)									
B-1	MECHANICAL ROOM	PUMP STATION	CONDENSING	NATURAL GAS	4.5	13.5	625	125	594	50/50	33	140	180	3.8	MODULATING 5:1	95.0	400	120/1/60	20	4/6	BURNHAM	ALP500C	1, 2
NOTES 1. DISCONNECT BY ELECTRICAL. 2. PROVIDE INDIRECT HOT WATER STORAGE TANK: 70 GALLONS, MAX 1ST HOUR RATING AT 135°F G/HR: 294.																							

PUMP SCHEDULE													
MARK NO.	LOCATION	SERVICE	FLUID	PUMP TYPE	FLOW (GPM)	TOTAL HD (FT)	MOTOR DATA			WEIGHT (LBS)	MFR	MODEL	NOTES
							HP	RPM	V/PH				
P-1	MECHANICAL ROOM	B-1	WATER	CENTRIFUGAL	33.9	1.6	1/6	1800	115/1	15	GRUNDFOS	UPS43-44FC	1
P-2	MECHANICAL ROOM	IWH-1	WATER	CENTRIFUGAL	6	11	1/25	1800	115/1	15	GRUNDFOS	UPS15-42F	1
P-3	MECHANICAL ROOM	HUH-1 THRU 6	WATER	CENTRIFUGAL	5.2	11	1/25	1800	115/1	15	GRUNDFOS	UPS15-58FC	1
P-4	MECHANICAL ROOM	CUH-1 THRU 3	WATER	CENTRIFUGAL	2.3	7	1/25	1800	115/1	15	GRUNDFOS	UPS15-42F	1
P-5	MECHANICAL ROOM	CV-1	WATER	CENTRIFUGAL	1.3	5	1/25	1800	115/1	15	GRUNDFOS	UPS15-42F	1
P-6	MECHANICAL ROOM	HV-1	WATER	CENTRIFUGAL	10	15.4	1/25	1800	115/1	15	GRUNDFOS	UPS15-42F	1
NOTES: 1. DISCONNECT PROVIDED BY ELECTRICAL.													

MOTORIZED DAMPER AND ACTUATOR SCHEDULE													
MARK NO.	LOCATION	SERVICE	SIZE WxH (IN)	DAMPER				ACTUATOR					
				FLOW (CFM)	TYPE	MFR	MODEL	ENCLOSURE	VOLTS	TYPE	MFR	MODEL	NOTES
MD-EF2-1	STAIR 1 - 101	EF-2		3,800	OPPOSED	RUSKIN	CD60	NEMA 4X	120	2-POS. SR, NC	BELIMO	AF	1
MD-EF5-1	GARAGE - 102	EF-5		1,900	OPPOSED	RUSKIN	CD60	NEMA 4X	120	2-POS. SR, NC	BELIMO	AF	1
NOTES: 1. DISCONNECT PROVIDED BY ELECTRICAL.													



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WPCA

BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY

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PROJECT NO.: 06532002.0000
FILE NAME: H-7
DESIGNED BY: S. CHHEA
DRAWN BY: S. CHHEA
CHECKED BY: J. CALLAHAN

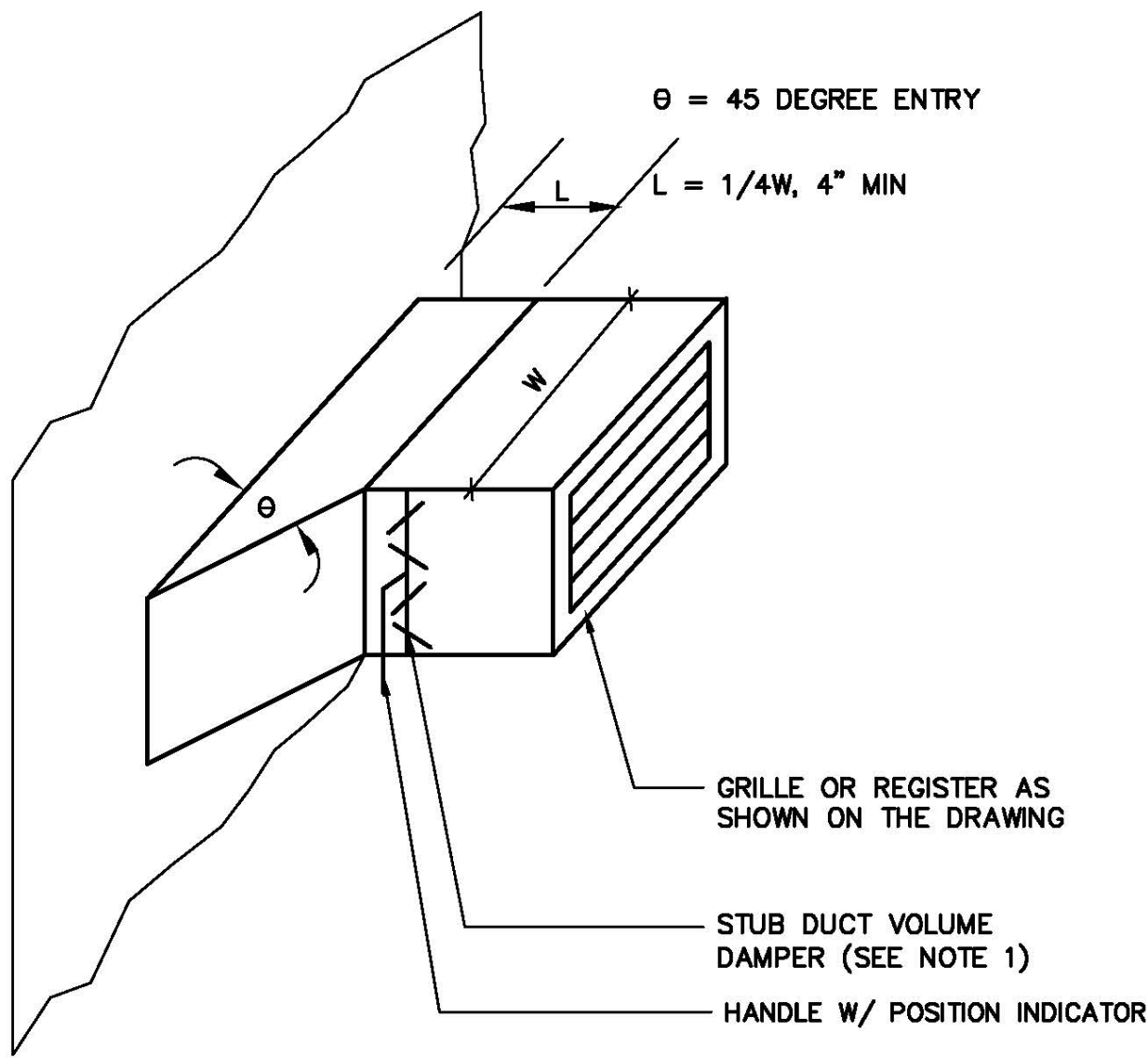
SHEET TITLE

EQUIPMENT
SCHEDULES II

SCALE: NO SCALE

H-7
SHEET 46 OF 69

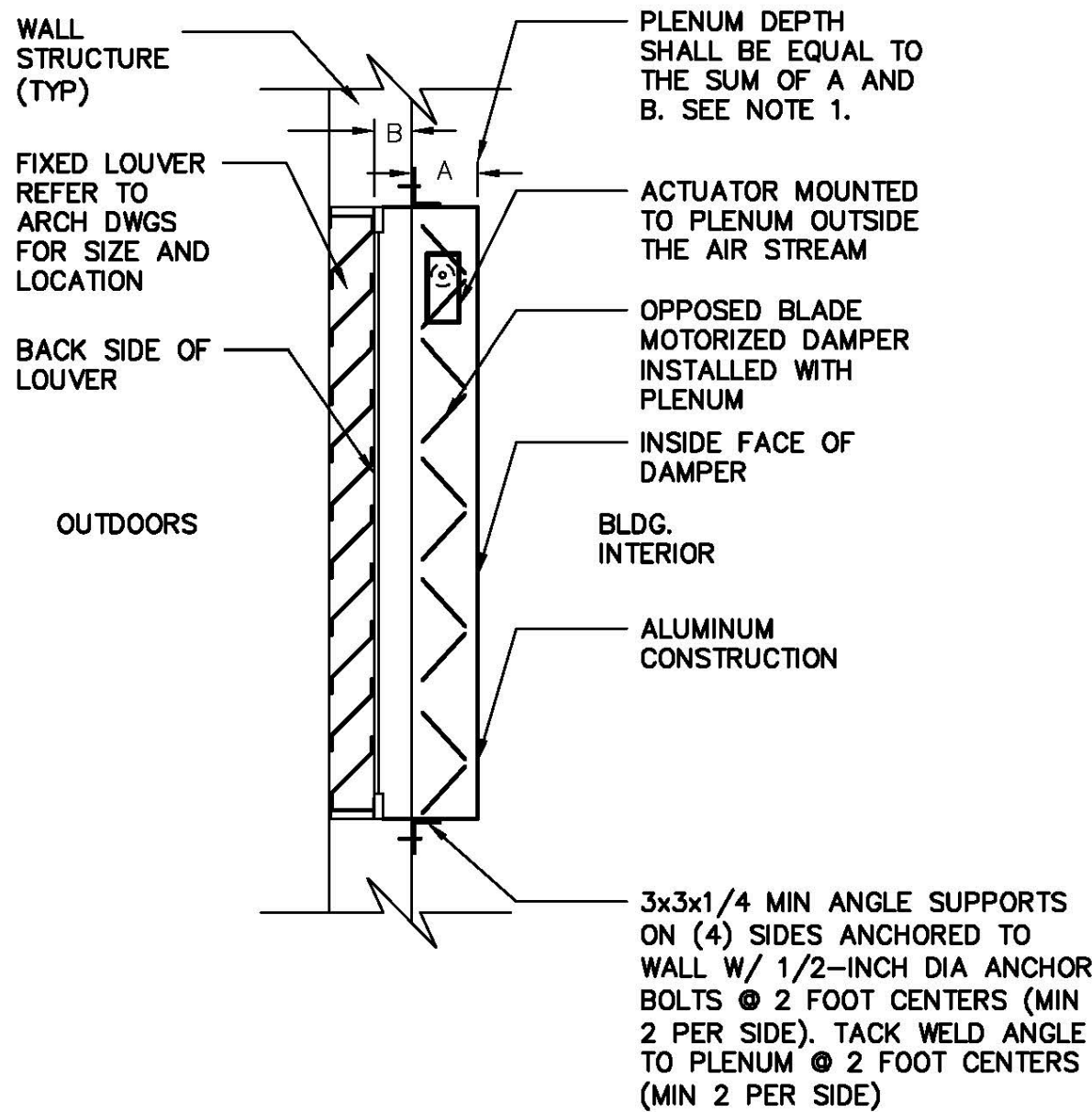
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STUB DUCT DETAIL

NOTES:

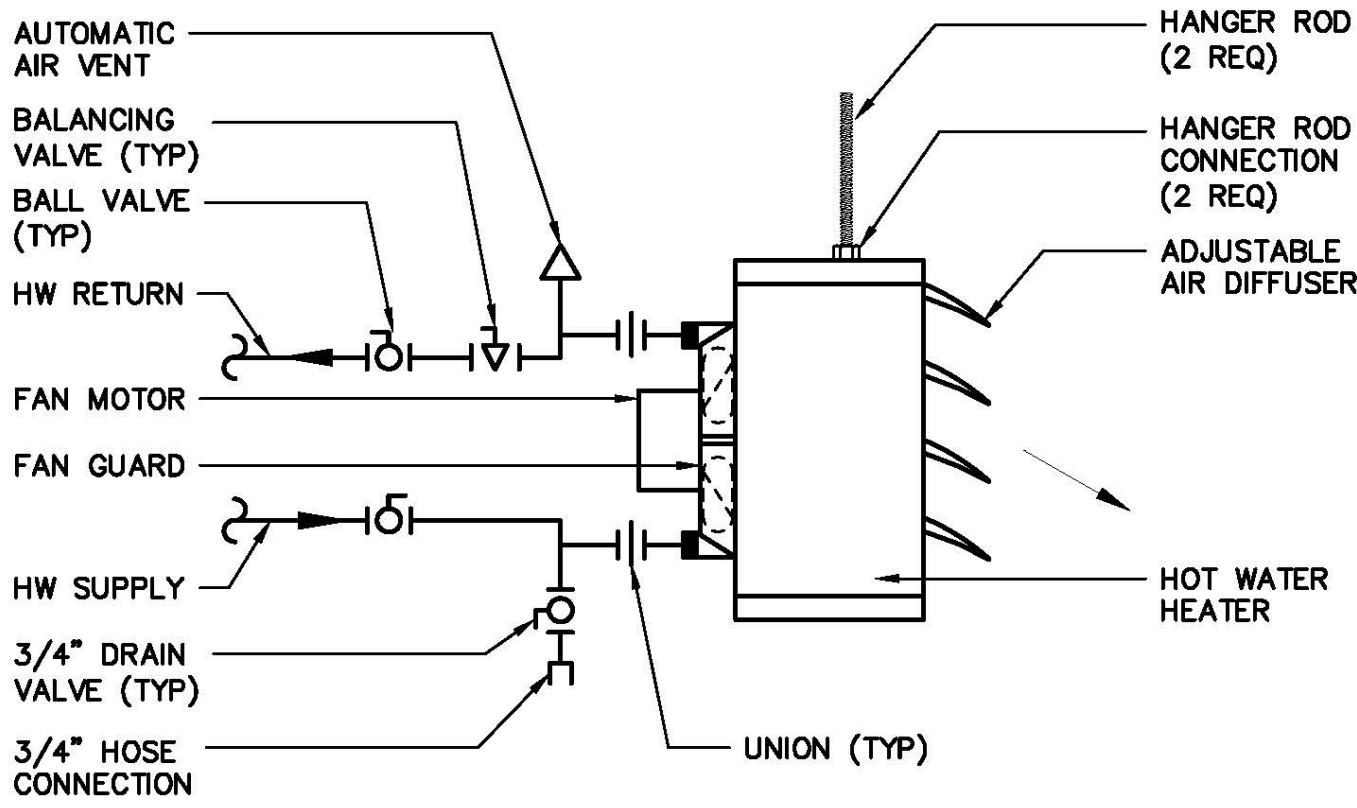
- VOLUME DAMPERS SHOWN OR SPECIFIED ON THE DRAWINGS ARE IN ADDITION TO DAMPERS SPECIFIED WITH REGISTERS. REGISTER DAMPERS ARE NOT SHOWN ON THE DWGS.



LOUVER DAMPER MOUNTING DETAIL

NOTES:

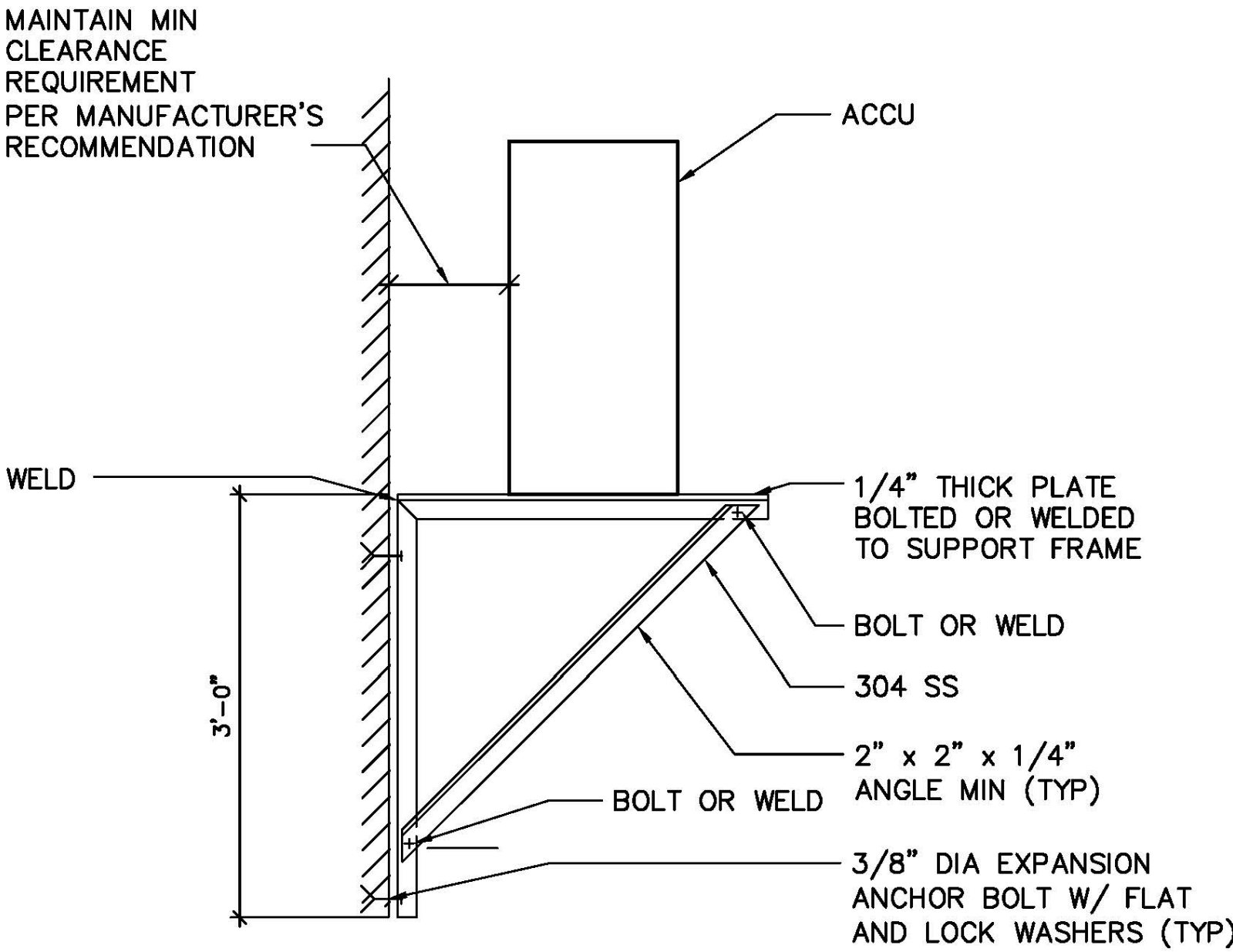
- PLENUM SHALL BE CONTINUOUS FROM INSIDE FACE OF DAMPER FRAME TO THE BACK SIDE OF THE LOUVER. "A" DIMENSION SHALL BE THE DEPTH OF THE DAMPER PLUS CLEARANCE REQUIRED TO MOUNT THE ACTUATOR INCLUDING ACTUATOR ENCLOSURE. "B" DIMENSION SHALL BE THE DEPTH OF THE WALL MINUS THE LOUVER DEPTH.



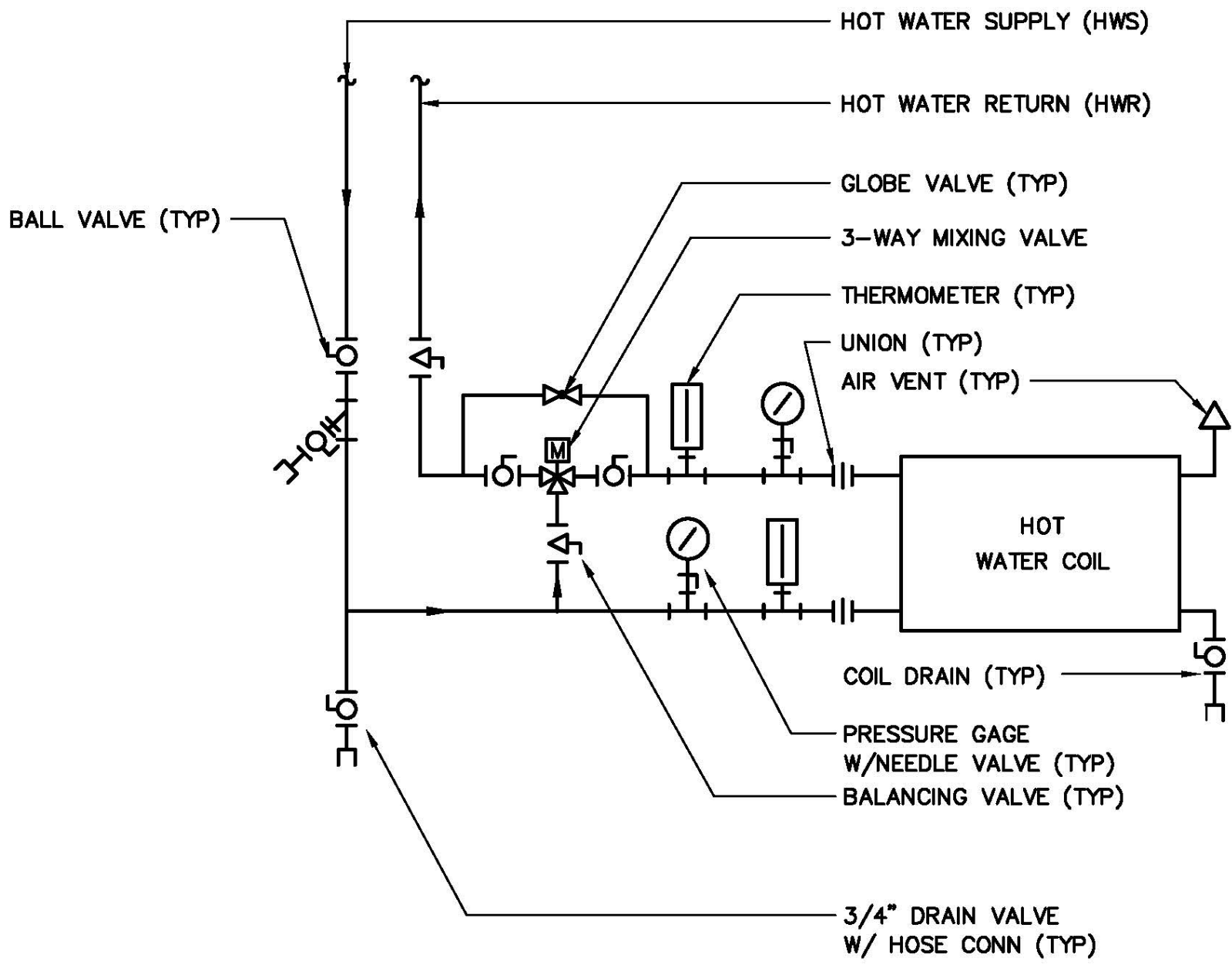
TYPICAL HOT WATER UNIT HEATER DETAIL

NOTES:

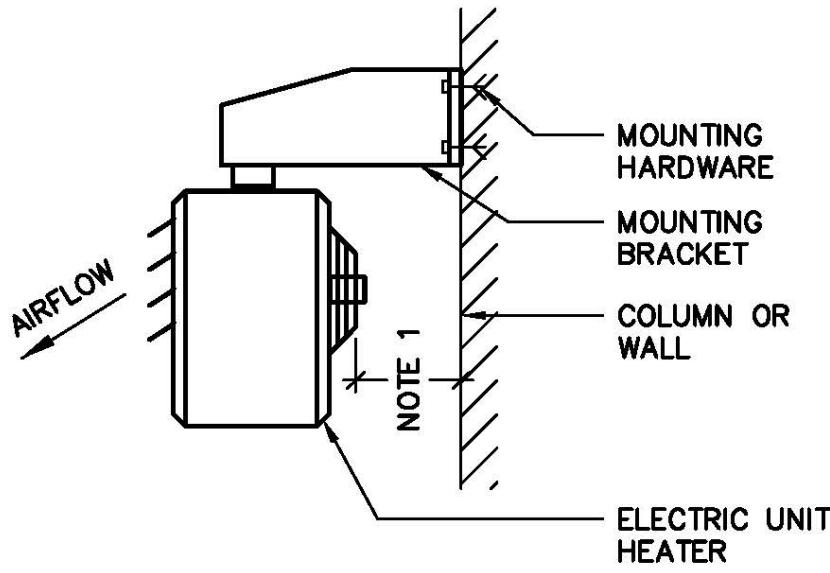
- WALL OR CEILING MOUNT UNIT AS INDICATED ON THE DRAWINGS. PROVIDE ATTACHMENT BRACKETS AND HARDWARE TO ACCOMMODATE MOUNTING CONFIGURATION.
- MOUNT UNIT IN ACCORDANCE W/ THE MANUFACTURER'S CLEARANCE REQUIREMENTS.



ACCU WALL SUPPORT DETAIL



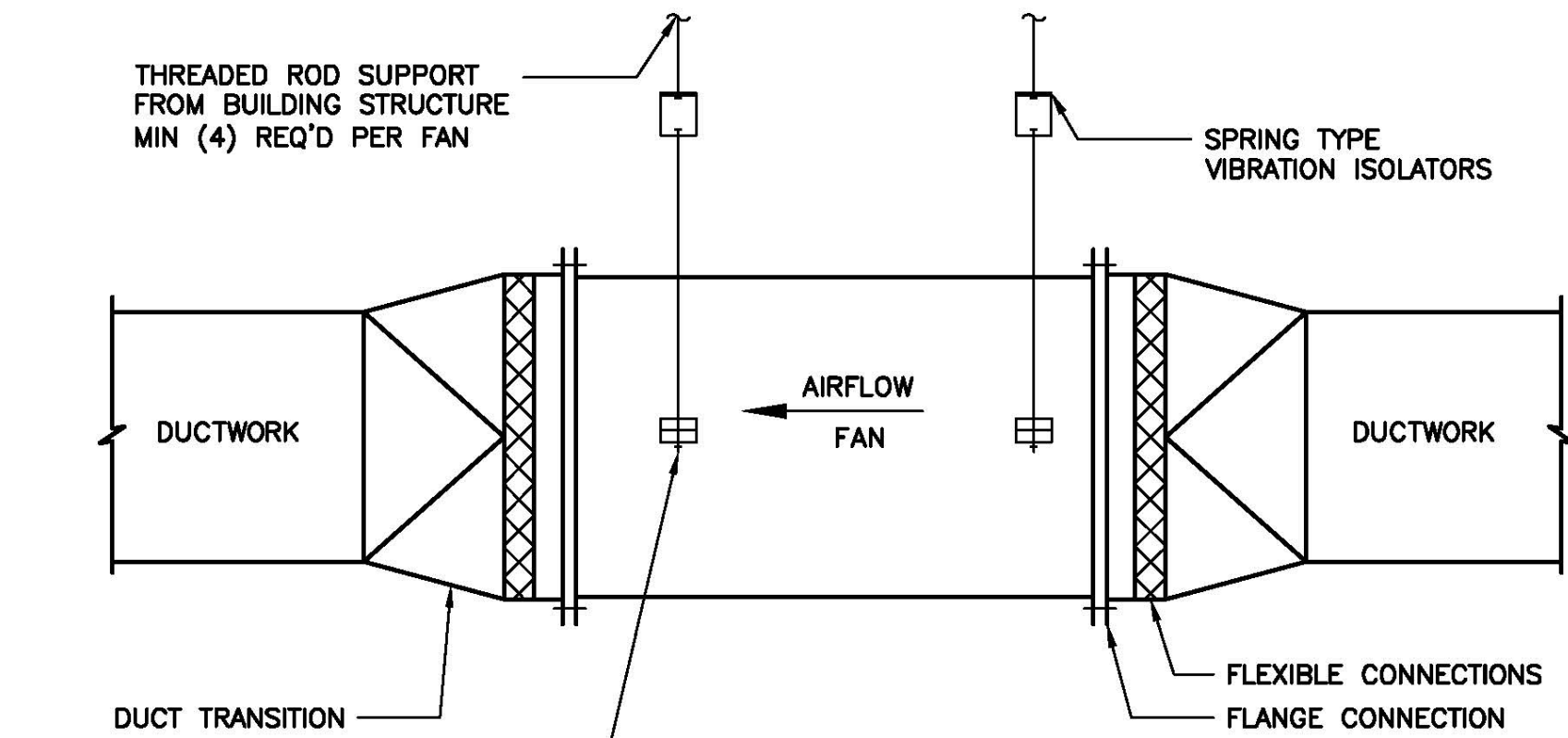
TYPICAL HV HOT WATER COIL DETAIL



ELECTRIC UNIT HEATER MOUNTING DETAIL

NOTES:

- MAINTAIN MANUFACTURER'S MINIMUM CLEARANCE REQUIREMENTS.



IN-LINE FAN DETAIL



LEGAL ENTITY:
ARCADIS U.S., INC.

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SEALS



TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY

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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: H-8

DESIGNED BY: S. CHIEA

DRAWN BY: S. CHIEA

CHECKED BY: J. CALLAHAN

SHEET TITLE

DETAILS

SCALE:
NOT TO SCALE

H-8
SHEET 47 OF 69

SYMBOLS

SYMBOL	DESCRIPTION
	MAIN PIPING (TYPE OF SERVICE AS SPECIFIED OR NOTED)
	BELOW SLAB MAIN PIPING (TYPE OF SERVICE AS SPECIFIED OR NOTED)
	BRANCH PIPING (TYPE OF SERVICE AS SPECIFIED OR NOTED)
	PIPE RISE, UNLESS OTHERWISE NOTED
	PIPE DROP, UNLESS OTHERWISE NOTED
	BRANCH - TOP OR BOTTOM CONNECTION
	RISE OR DROP IN RUN OF PIPE
	BRANCH CONNECTION - SIDE
	CAP ON END OF PIPE
	VALVE IN VERTICAL
	CLEANOUT PLUG
	CONCENTRIC REDUCER
	GATE VALVE (OS&Y)
	CHECK VALVE
	LUBRICATED PLUG VALVE
	BALL VALVE
	WATER METER - 2" & SMALLER
	WATER METER - 3" & LARGER
	REDUCED PRESSURE ZONE BACKFLOW PREVENTER 2" & SMALLER
	REDUCED PRESSURE ZONE BACKFLOW PREVENTER 2 1/2" & LARGER
	HOSE REEL
	HOSE RACK
	FLOOR DRAIN
	ROOF DRAIN
	FLOOR CLEANOUT
	EMERGENCY EYEWASH & SHOWER
	EMERGENCY EYEWASH (WALL MTD)
	SERVICE SINK
	WALL HYDRANT
	P-TRAP
	HOSE BIBB

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AD	AREA DRAIN
AFB	ABOVE FINISHED FLOOR
ARCH	ARCHITECTURAL
AVB	ATMOSPHERIC VACUUM BREAKER
BFPD	BACKFLOW PREVENTER DRAIN
BLDG	BUILDING
BTU	BRITISH THERMAL UNIT
CD	CHEMICAL DRAIN
CFH	CUBIC FEET PER HOUR
CI	CAST IRON
CL	CENTERLINE
CLG	CEILING
CO	CLEANOUT
COND	CONDENSATE
CONN	CONNECT/CONNECTION
CONT	CONTINUATION
CU	COPPER
CW	COLD WATER
DCV-BFP	DOUBLE CHECK VALVE-BACKFLOW PREVENTER
DEG	DEGREES
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DN	DOWN (PENETRATES FLOOR SLAB)
DR	DRAIN
DW	DISH WASHER
EL	ELEVATION
EES	EMERGENCY EYEWASH AND SHOWER
EW	EYE WASH
EWB	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXIST	EXISTING
FCO	FLOOR CLEANOUT
FIXT	FIXTURE
FD	FLOOR DRAIN
FIN FL	FINISHED FLOOR
FP	FIRE PROTECTION
FT	FEET
G	GAS
GAL	GALLONS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GS	GALVANIZED STEEL
HB	HOSE BIBB
HC	HOSE CONNECTION
HR	HOSE RACK
HTR	HEATER
HW	HOT WATER
IE	INVERT ELEVATION
IW	INDIRECT WASTE
IN	INCH
KS	KITCHEN SINK
KW	KILOWATT
LS	LAB SINK
LAV	LAVATORY
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MECH	MECHANICAL
MIN	MINIMUM
MTD	MOUNTED
NC	NORMALLY CLOSED
NG	NATURAL GAS
NH	NO-HUB
NPT	NATIONAL PIPE THREAD
NPW	NON-POTABLE WATER
NTS	NOT TO SCALE

ABBREVIATIONS

ABBREVIATION DESCRIPTION	
OD	OUTSIDE DIAMETER
PG	PROPANE GAS
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH (GAUGE)
PVC	POLYVINYL CHLORIDE
PW	POTABLE WATER
PWH	PROPANE WATER HEATER
RD	ROOF DRAIN
RPDA-BFP	REDUCED PRESSURE DETECTOR ASSEMBLY-BACKFLOW PREVENTER
RPZ-BFP	REDUCED PRESSURE ZONE-BACKFLOW PREVENTER
S	SOIL
SAN	SANITARY
SED	SEWAGE EJECTOR DISCHARGE
SD	STORM DRAIN
SH	SHOWER
SHT	SHEET
SPD	SUMP PUMP DISCHARGE
SQ FT	SQUARE FOOT
SS	STAINLESS STEEL
SS	SERVICE SINK
SW	SERVICE WATER
TPV	TRAP PRIMER VALVE
TW	TEPID WATER
TWBS	TEPID WATER BLENDING SYSTEM
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UP	UP (PENETRATES FLOOR SLAB)
UR	URINAL
V	VENT
VAC	VACUUM
VB	VACUUM BREAKER
VIV	VALVE IN VERTICAL
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WG	WATER GAUGE
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTER
WM	WASHING MACHINE
W/	WITH

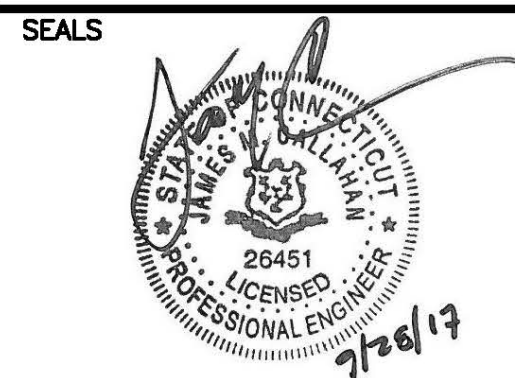
GENERAL NOTES:

1. THE SYMBOLS AND ABBREVIATIONS LIST ON THIS SHEET IS A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE ON ALL PROJECTS. THEREFORE NOT ALL THE SYMBOLS AND ABBREVIATIONS CONTAINED IN THIS LIST ARE NECESSARILY USED ON THIS PARTICULAR PROJECT AND SHOULD BE USED FOR CLARIFICATION ONLY.
2. ALL FLOOR DRAINS ARE AT LOW POINTS OF FLOORS AND SHALL BE INSTALLED FLUSH WITH THE FINISHED FLOOR. LOCATIONS ARE SHOWN ON THE STRUCTURAL DRAWINGS. EXISTING FLOOR DRAINS SHALL BE REPLACED IN ORIGINAL LOCATIONS.
3. ALL FLOOR DRAINS FOR EQUIPMENT SHALL BE FIELD COORDINATED AND LOCATED ADJACENT TO THE EQUIPMENT PADS IN THE APPROXIMATE LOCATIONS SHOWN ON THE DRAWINGS.
4. ALL BRANCH PIPING TO EQUIPMENT OR FIXTURES SHALL BE PROVIDED WITH SHUT-OFF VALVES, WHETHER SHOWN, OR NOT SHOWN ON DRAWINGS.
5. ALL PIPING SHALL BE CONCEALED WITHIN WALLS, PIPE SPACES AND HUNG CEILINGS, WHERE POSSIBLE, EXCEPT IN MECHANICAL SPACES OR WHERE NOTED. PIPING RUN IN SPACES SHALL BE RUN AS HIGH AS POSSIBLE AGAINST CEILING.
6. CHANGES IN DIRECTION IN DRAINAGE PIPING SHALL BE MADE BY THE USE OF 45 DEGREE ELBOWS, LONG SWEEPS, 90 DEGREE WYES WITH CLEANOUTS OR BY A COMBINATION OF EQUIVALENT FITTINGS. THERE SHALL BE NO DOUBLE WYES IN THE HORIZONTAL PLANE.
7. SANITARY TEES AND QUARTER BENDS MAY BE USED IN DRAINAGE LINES ONLY WHERE DIRECTION OF FLOW IS FROM HORIZONTAL TO THE VERTICAL.
8. ALL VENT RISERS RUN STRAIGHT THROUGH ROOF SHALL HAVE AN APPROVED EXPANSION JOINT SYSTEM INSTALLED BELOW ROOF.
9. ALL CONTROL WIRING SHALL BE 120 VOLTS UNLESS OTHERWISE SPECIFIED. TRANSFORMERS SHALL BE PROVIDED WHERE REQUIRED.
10. ALL EQUIPMENT AND CONTROL MECHANISMS SHALL BE PIPED THROUGH UNION CONNECTIONS.
11. ALL WYE TYPE STRAINERS SHALL HAVE A 3-INCH LONG THREADED NIPPLE, THREADED END BALL VALVE AND PLUG ON BLOWDOWN SIDE.
12. ALL DRAINAGE PIPING 2 1/2" AND LESS SHALL SLOPE AT A MINIMUM OF 1/4" PER FOOT, 3" & LARGER SHALL SLOPE TO A MINIMUM OF 1/8" PER FOOT.
13. AN ACCESSIBLE CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH SOIL STACK, WASTE STACK AND ROOF LEADER.
14. ALL HOT, COLD, TEPID AND HORIZONTAL STORM DRAIN PIPING SHALL BE INSULATED. PROVIDE FITTING AND VALVE INSULATION AND JACKETING WHERE REQUIRED FOR COMPLETE SYSTEM COVERAGE. INSULATED PIPING, FITTINGS AND VALVES IN WET WELL AREA SHALL BE PROVIDED WITH WEATHERPROOF JACKETING.
15. TRAPS WITH 1/2" PRIMER CONNECTIONS SHALL BE PROVIDED AT ALL FLOOR DRAINS EXCEPT WHERE NOTED.
16. VENT LINES SERVING FLOOR DRAIN HEADERS SHALL BE TAKEN OFF ABOVE THE CENTERLINE OF THE SOIL PIPE, AND THE VENT PIPE SHALL RISE AT AN ANGLE NOT MORE THAN 45°.
17. ALL EXPOSED PIPING, FITTINGS AND VALVES IN FINISHED WASHROOMS SHALL BE CHROME PLATED.
18. DOMESTIC HOT WATER PIPING SHALL BE ELECTRICALLY HEAT TRACED TO MAINTAIN 110°F. TEPID WATER PIPING SERVING EMERGENCY EYEWASH STATIONS SHALL BE ELECTRICALLY HEAT TRACED TO MAINTAIN 85°F.
19. WHERE EXISTING WALLS AND FLOORS REQUIRE PARTIAL DEMOLITION OR MODIFICATION TO ACCEPT INSTALLATION OF NEW PLUMBING FIXTURES AND/OR ROUGH-IN, WALLS AND FLOORS SHALL BE REPAIRED TO NEW CONDITION.



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TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 08532002.0000

[illegible]

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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: P-1

DESIGNED BY: J.TORRESDRAWN BY: J.TORRES

SHEET TITLE

SYMBOLS
ABBREVIATIONS &
GENERAL NOTES

SCALE: AS SHOWN

P-1

SHEET 48 OF 69

User: TOCONNELL, Spec: AUS-NC5MOD, File: I:\ACAD\PROJ\06532002.0000\06532002.0000\PLUMBING\P-2.DWG, Scale: 1/4" = 1'-0", Date: 9/27/2017, Time: 14:48, Plot Date: 9/27/2017, Time: 15:00, Layout: P-2

GENERAL SHEET NOTES

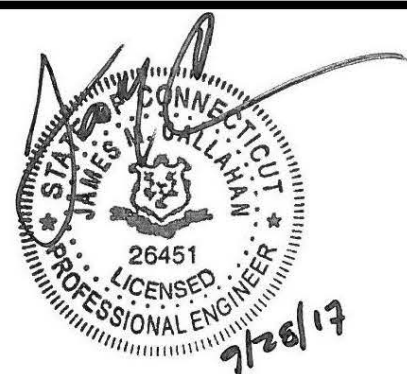
1. FOR SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG NO. P-1.
2. FOR DETAILS SEE DWG NO. P-6 & P-7.
3. ALL FLOOR DRAIN P-TRAPS SHALL BE PROVIDED WITH A 1/2" TRAP PRIMER CONN. RUN 1/2" COPPER TUBING (NOT SHOWN) FROM TRAP PRIMER VALVE TO ALL FLOOR DRAINS. FIELD ROUTE PIPING IN AND BELOW SLAB AS REQUIRED. CONTRACTOR SHALL PROVIDE ALL PIPE, FITTINGS SUPPORTS AND APPURTENANCES TO COMPLETE THE INSTALLATION.
4. MODIFY/CHOP OUT FLOOR SLAB AROUND FLOOR DRAINS TO BE REPLACED. SET NEW DRAIN FLUSH WITH FINISHED FLOOR. REGRADE FLOOR PITCH AS REQUIRED TO FACILITATE PROPER DRAINAGE. REPAIR SURROUNDING FLOOR SLAB TO ORIGINAL NEW CONDITION.
5. REUSE EXISTING WALL AND FLOOR PENETRATIONS WHERE POSSIBLE. PROVIDE NEW DOUBLE MECHANICAL LINK-TYPE SEALS. SEE DETAIL SHEETS. REMOVE ALL UNUSED PENETRATIONS AND REPAIR WALLS/FLOOR TO ORIGINAL NEW CONDITION.
6. COORDINATE FLOOR DRAIN LOCATION IN ODOR CONTROL ROOM WITH INSTALLATION OF DUCT PASSING THRU FLOOR AND ODOR CONTROL ADSORBER VESSEL (SEE SHEET H-2). SEE STRUCTURAL SHEET S-3 FOR FLOOR SLAB MODIFICATIONS. EXISTING FLOOR DRAIN PIPING TO REMAIN THRU WALL PENETRATION IF ODOR CONTROL BID ALTERNATE IS NOT AWARDED. DRAIN BODY TO BE REPLACED IN KIND REGARDLESS OF AWARD OF ALTERNATE.



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TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY

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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: P-2

DESIGNED BY: J. TORRES

DRAWN BY: J. TORRES

CHECKED BY: R. BORJA

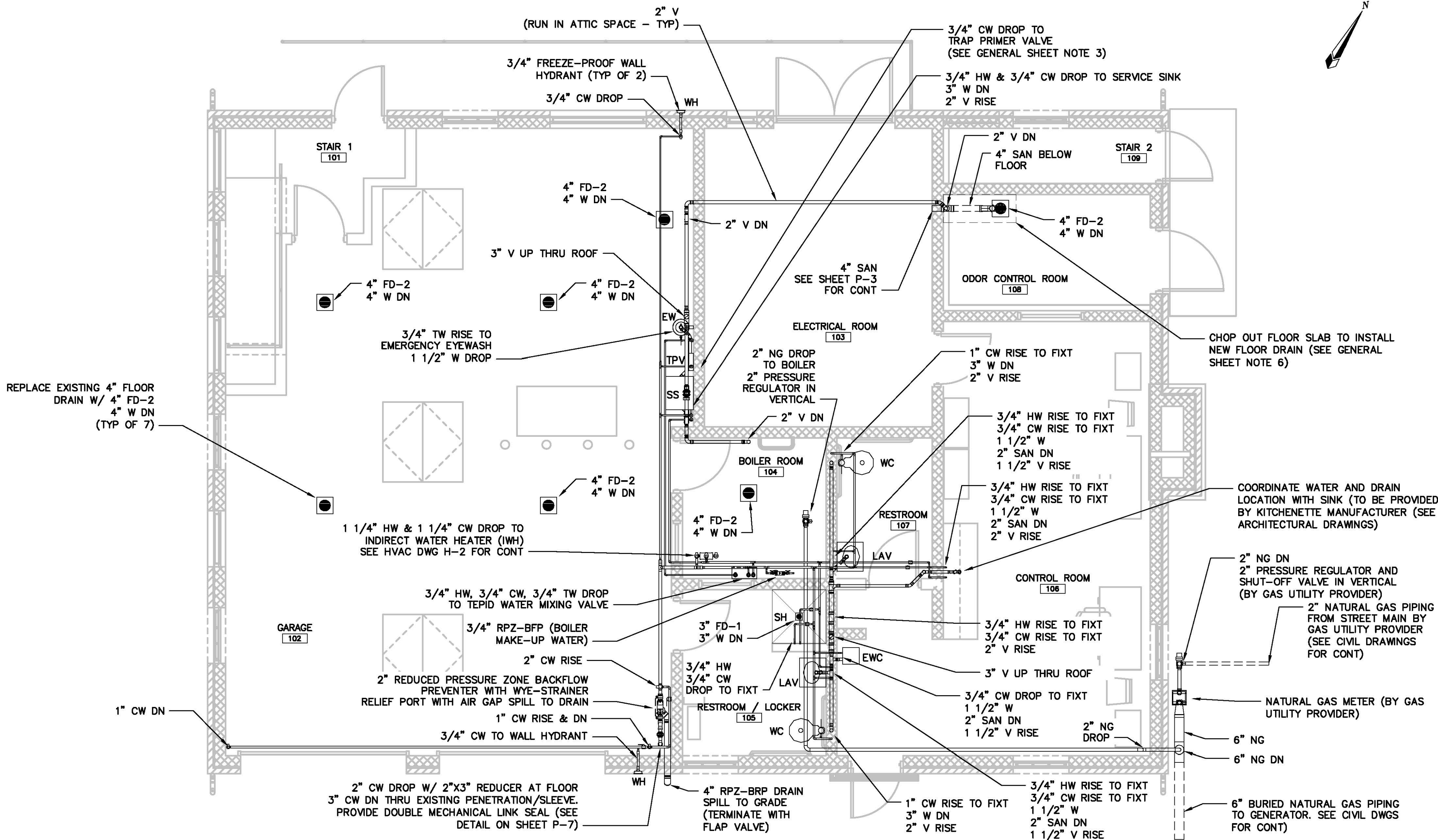
SHEET TITLE

FIRST FLOOR PLAN

SCALE: AS SHOWN

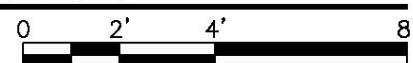
P-2

SHEET 49 OF 69



FLOOR PLAN AT EL 76.80

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



User: TORRESJ, Spc: AUS-NCSMOD, File: \\ARCAD\PROJECTS\06532002\0000\SHEETS\PLUMBING\06532002\0000\06532002.P-3.DWG, Scale: 1/4" = 1'-0", Date: 9/27/2017, Time: 15:01, Layout: P-3

GENERAL SHEET NOTES

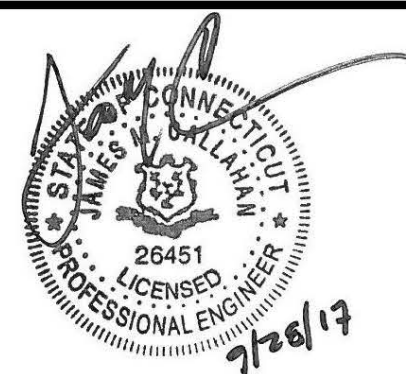
1. FOR SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG NO. P-1.
2. FOR DETAILS SEE DWG NO. P-6 & P-7.
3. CONTRACTOR SHALL REMOVE EXISTING FLOOR DRAIN AND IDENTIFY TYPE. FOR FLOOR DRAIN TYPE FD-3, A SIDE OUTLET STYLE VARIATION SHALL BE USED AS REQUIRED TO CONNECT TO EXISTING EMBEDDED SANITARY PIPING AND MAINTAIN PROPER SLOPE (MODIFY AS REQUIRED TO ACCEPT NEW FLOOR DRAIN. MODIFY/CHOP OUT FLOOR SLAB AROUND FLOOR DRAINS AND FLOOR CLEANOUTS TO BE REPLACED, AS REQUIRED. SET NEW FLOOR DRAIN FLUSH WITH FINISHED FLOOR. REPAIR SURROUNDING FLOOR SLAB TO ORIGINAL NEW CONDITION.
4. REUSE EXISTING WALL AND FLOOR PENETRATIONS WHERE POSSIBLE. PROVIDE NEW DOUBLE MECHANICAL LINK-TYPE SEALS. SEE DETAIL SHEETS. REMOVE ALL UNUSED PENETRATIONS AND REPAIR WALLS/FLOOR TO ORIGINAL NEW CONDITION.
5. PROVIDE NEW 1 HP SUBMERSIBLE SUMP PUMP WITH LEVEL CONTROLS, HIGH WATER ALARM AND SECURED GRATING. SUMP DISCHARGE PIPING SHALL BE ROUTED ALONG PUMP ROOM CEILING AND SPILL TO WET WELL.
6. CONTRACTOR SHALL FIELD VERIFY MATERIAL OF EXISTING INCOMING DOMESTIC WATER SERVICE AND PROVIDE A DIELECTRIC FLANGE AT THE CONNECTION POINT WHERE DISSIMILAR METALS ARE PRESENT WHEN CONNECTING NEW DOMESTIC WATER COPPER PIPE. ALL FITTINGS SHALL BE NSF APPROVED FOR POTABLE WATER USE.
7. ALL INSULATED PIPING IN WET WELL AREA SHALL HAVE WEATHERPROOF JACKETING.



LEGAL ENTITY:
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TOWN OF TRUMBULL, CT
WPCA

BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY
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DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: P-3

DESIGNED BY: J. TORRES

DRAWN BY: J. TORRES

CHECKED BY: R. BORJA

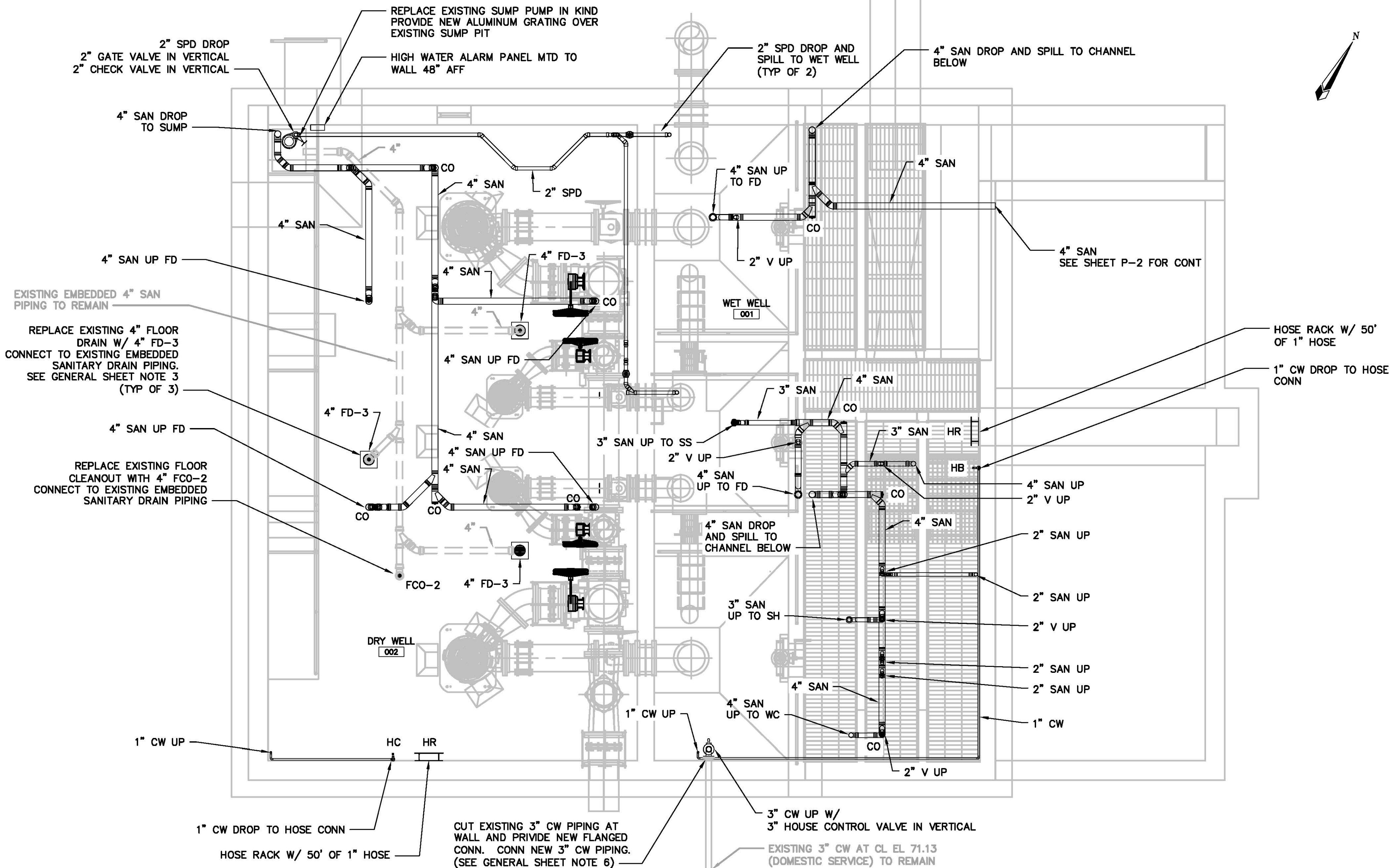
SHEET TITLE

BASEMENT FLOOR
PLAN

SCALE:
AS SHOWN

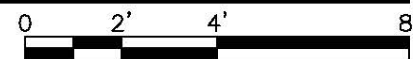
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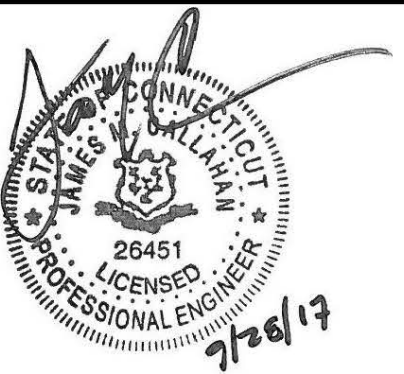
SHEET 50 OF 69



BASEMENT PLAN AT EL 54.80

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





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BEARDSLEY PUMP STATION COMPREHENSIVE UPGRADE

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DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: P-4DESIGNED BY: J. TORRES

RAWN BY: J. TORRES

HECKED BY: R. BORJA

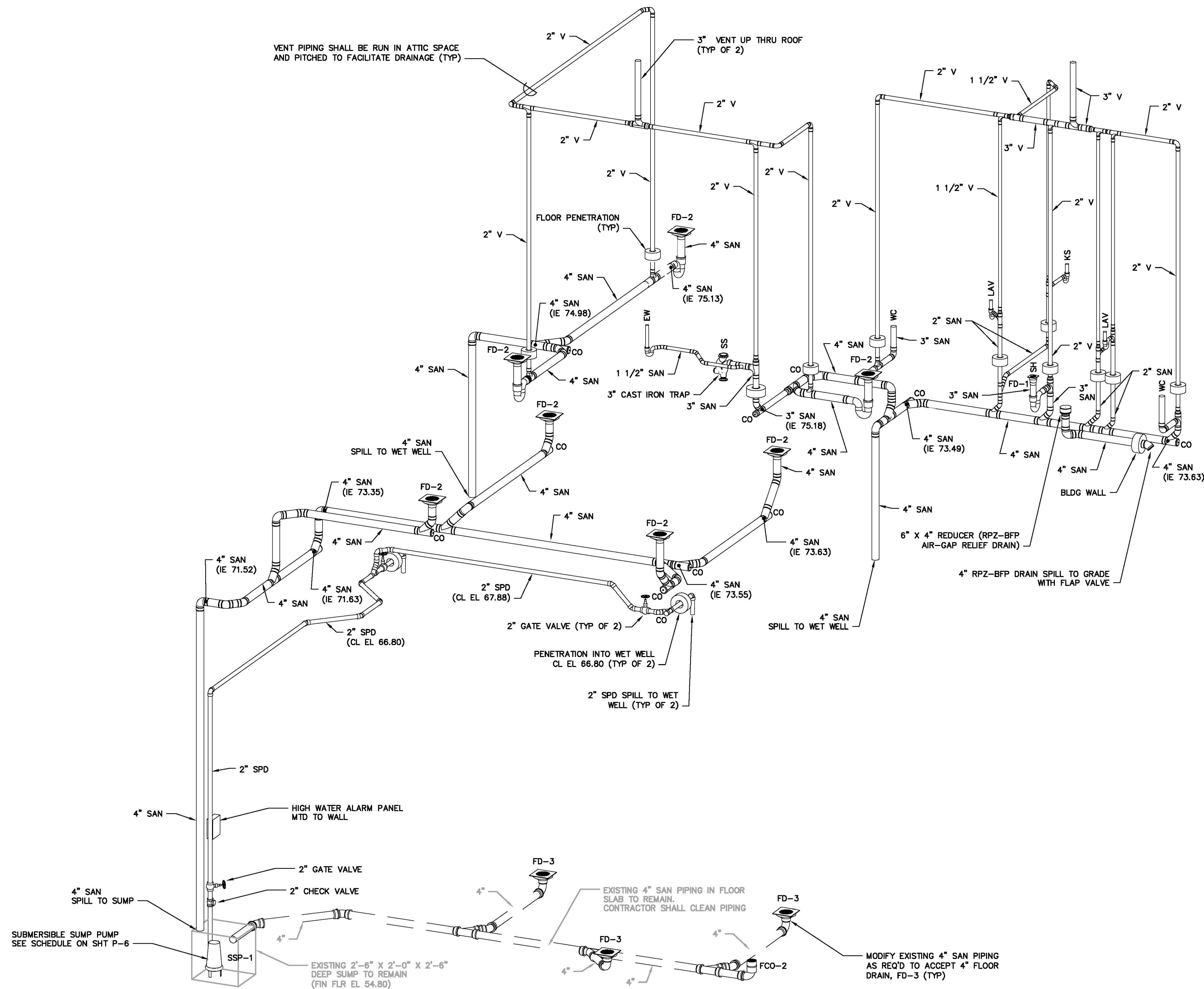
SHEET TITLE

RISER DIAGRAMS I

SALE: AS SHOWN

D-4

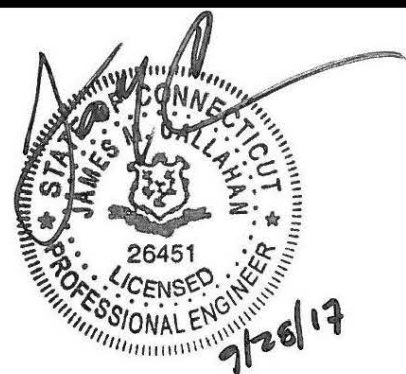
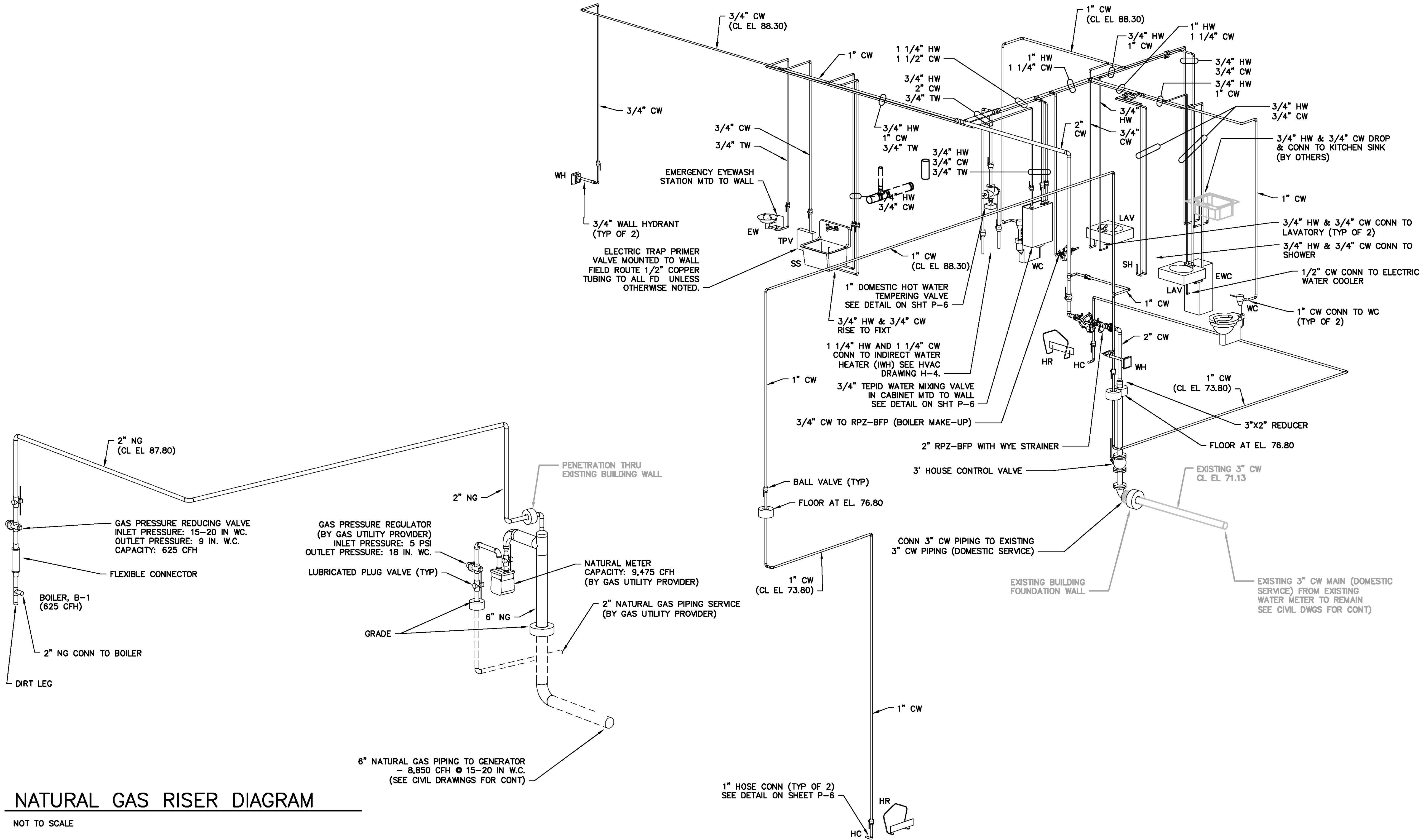
SHEET 51 OF 69



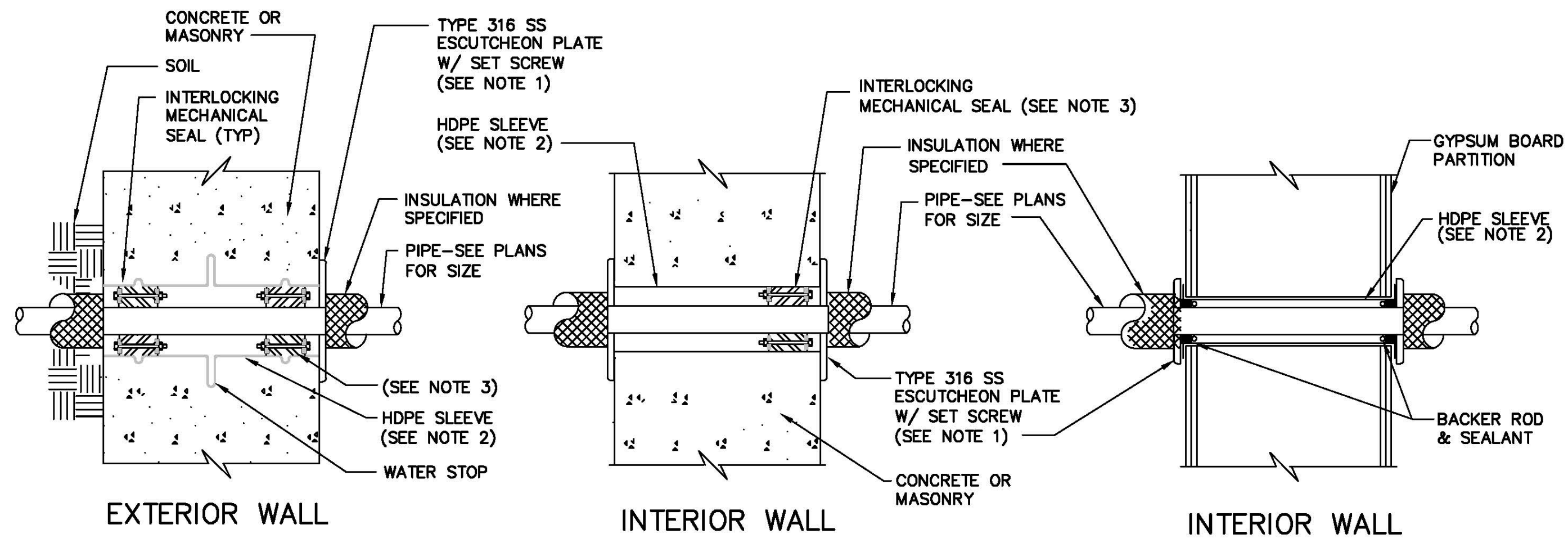
SANITARY RISER DIAGRAM

NOT TO SCALE

User: TORRESJ Spec: AUS-NCSMOD File: I:\ACAD\PROJ\06532002.0000\SHEETS\PLUMBING\P-5.DWG Scale: 1:1 Saved: 9/26/2017 Time: 18:03 Plot Date: 9/27/2017 15:02 Layout: P-5

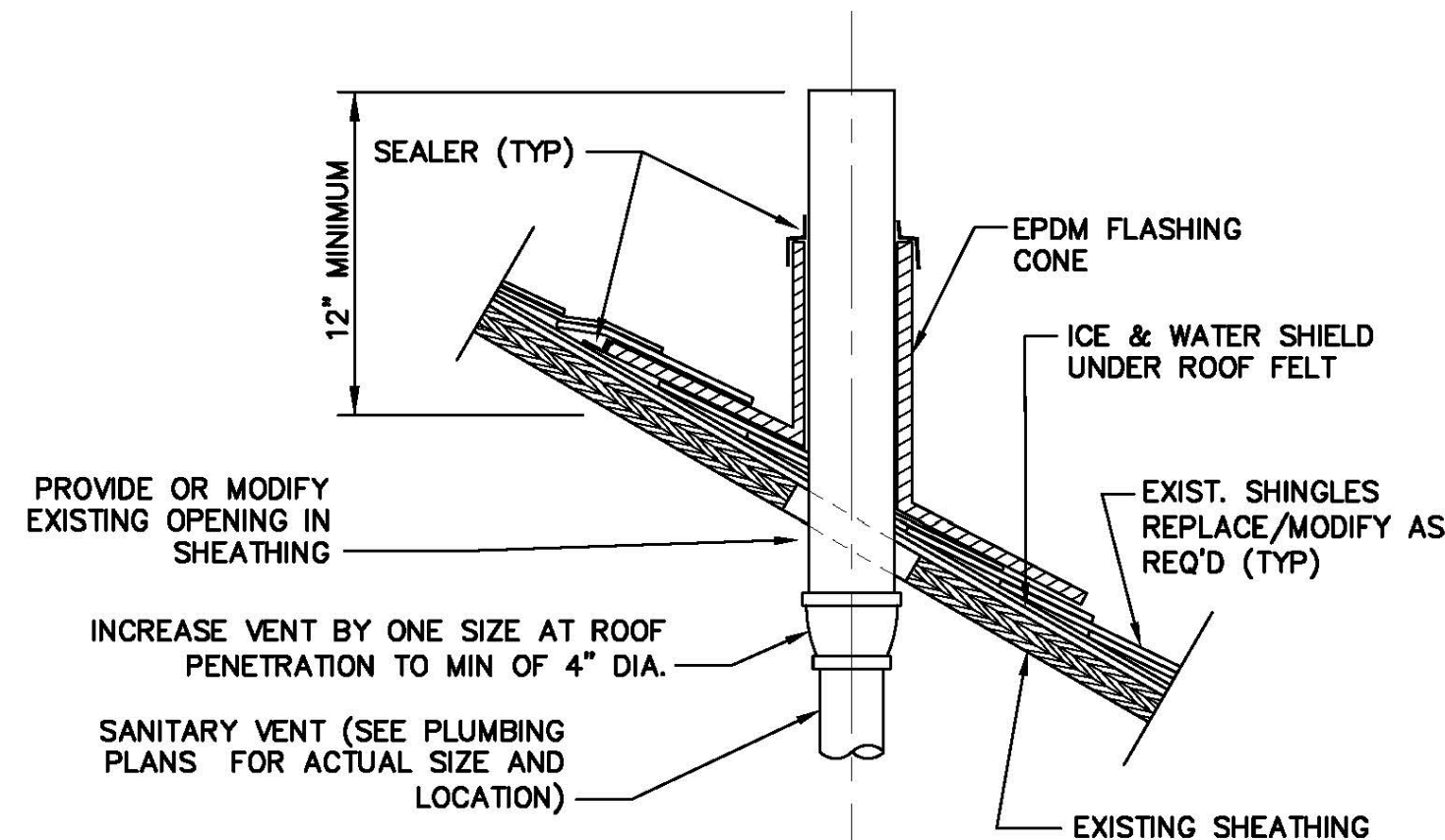


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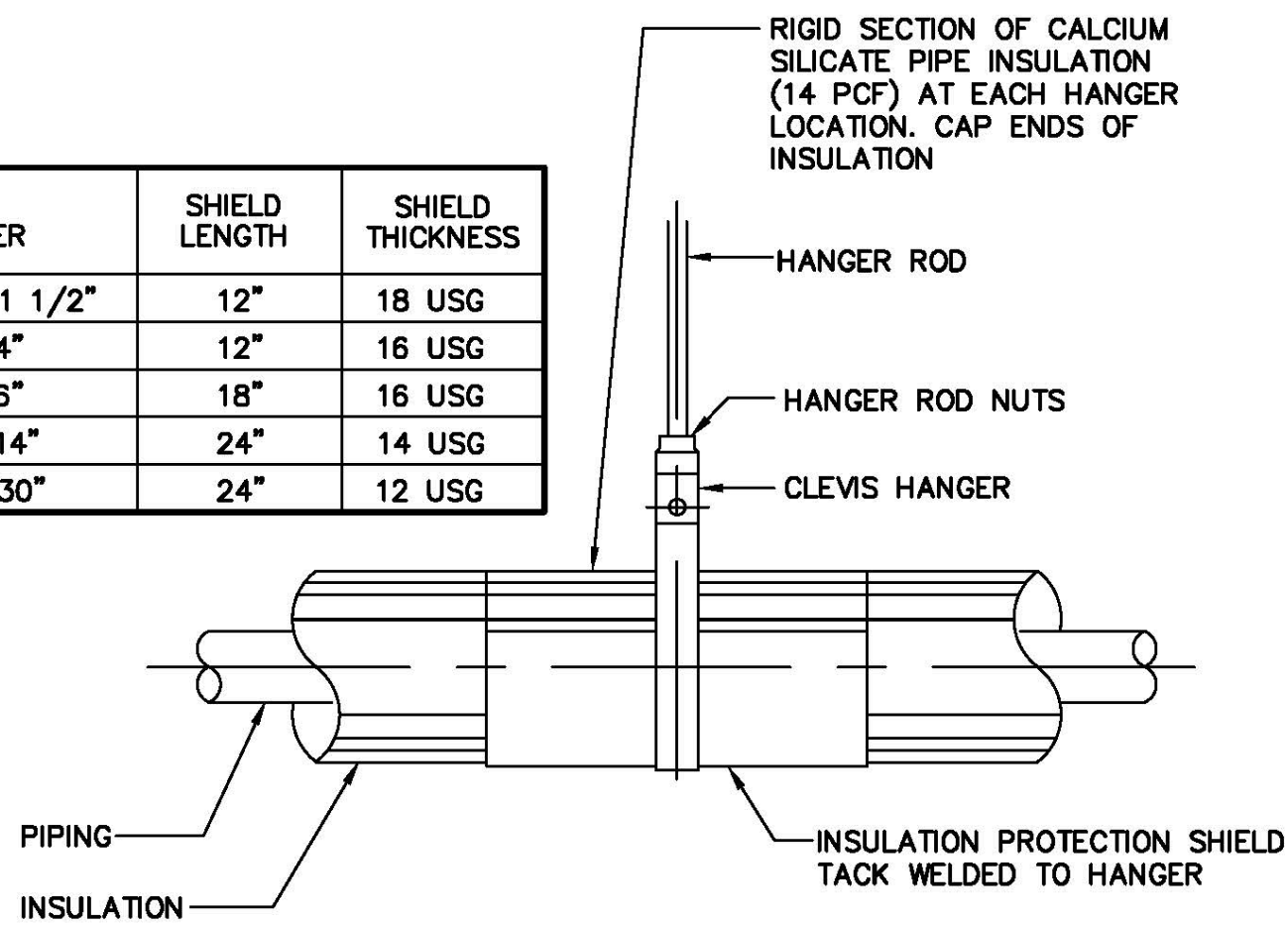
NOTES:

1. WHERE PIPE IS IN CONTACT WITH SOIL, ELIMINATE ESCUTCHEON PLATE.
2. FOR FIRE RATED WALL PENETRATION SUBSTITUTE STEEL SLEEVE FOR HDPE.
3. FOR ONE HOUR FIRE RATED PENETRATION PROVIDE ONE FIRE RATED MECHANICAL SEAL.
4. WHERE PIPES PASS THRU EXISTING CONSTRUCTION, CORE DRILL OPENING AND INSTALL MECHANICAL SEALS WITHOUT THE USE OF SLEEVES.

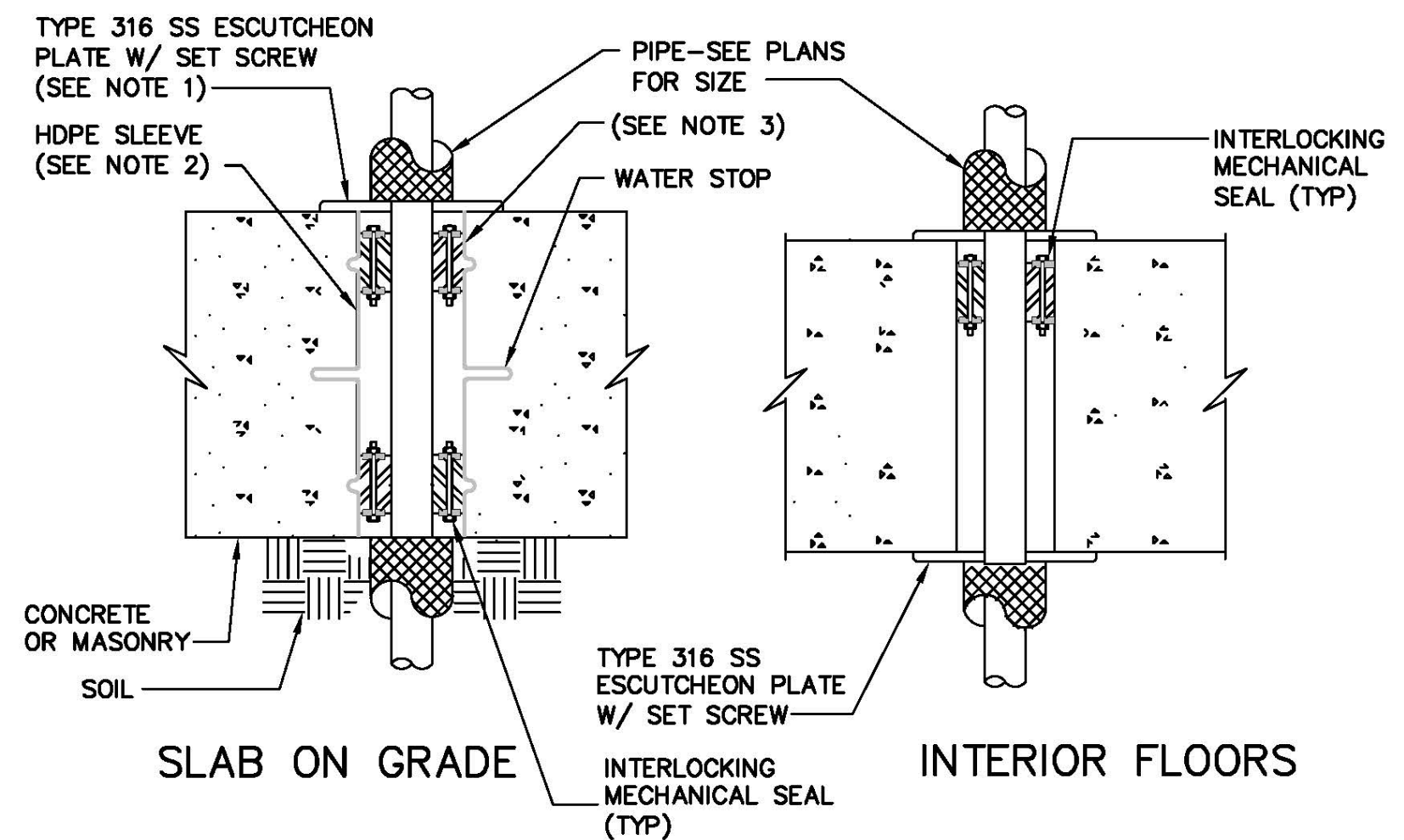


VENT THRU ROOF DETAIL
NOT TO SCALE

PIPE DIAMETER	SHIELD LENGTH	SHIELD THICKNESS
1/2" TO 1 1/2"	12"	18 USG
2" TO 4"	12"	16 USG
5" TO 6"	18"	16 USG
8" TO 14"	24"	14 USG
16" TO 30"	24"	12 USG

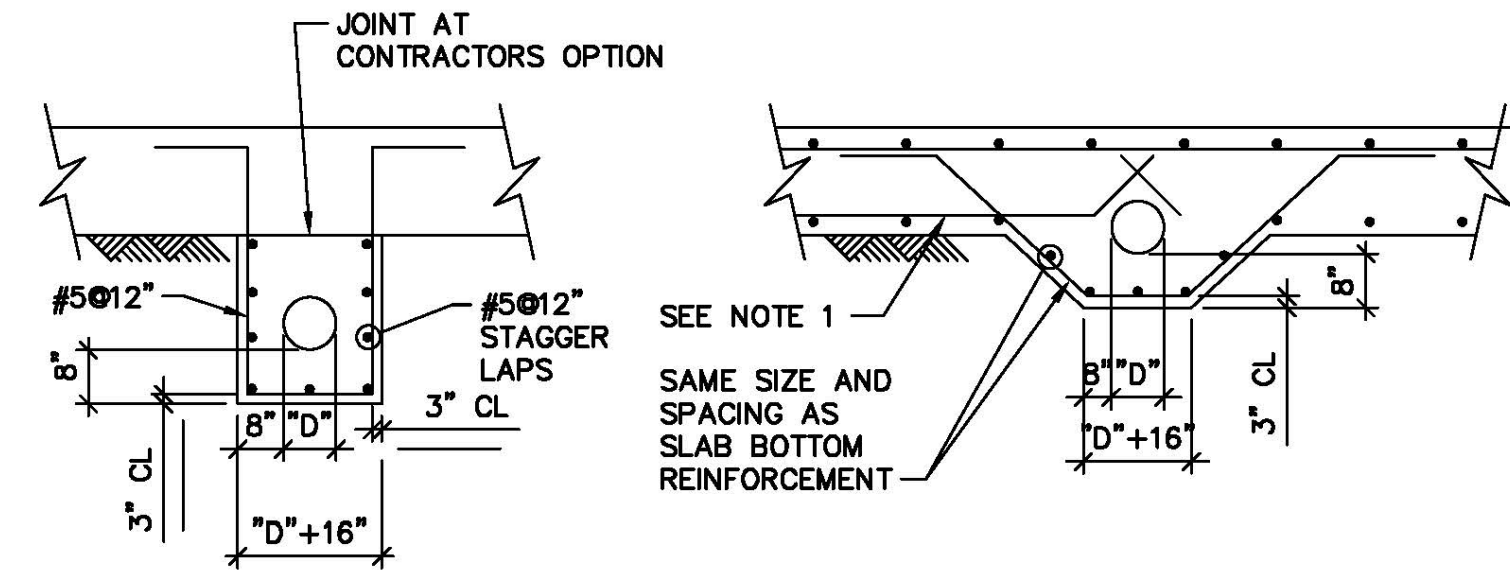


TYPICAL DETAIL HANGER
ARRANGEMENT OF INSULATED PIPING
NOT TO SCALE



NOTES:

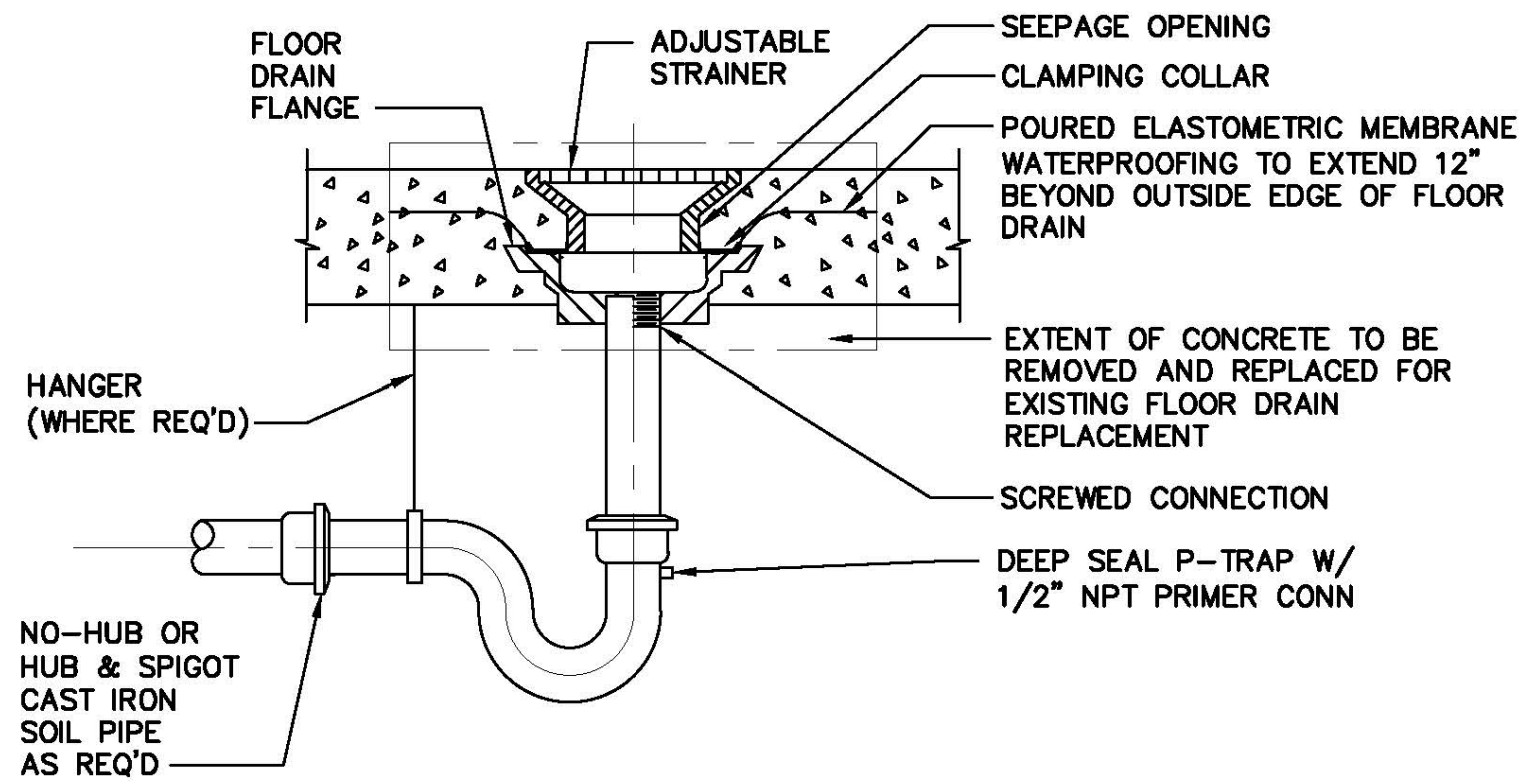
1. WHERE PIPE IS IN CONTACT WITH SOIL, ELIMINATE ESCUTCHEON PLATE.
2. FOR FIRE RATED FLOOR PENETRATION SUBSTITUTE STEEL SLEEVE FOR HDPE.
3. FOR ONE HOUR FIRE RATED PENETRATION PROVIDE ONE FIRE RATED MECHANICAL SEAL.
4. WHERE PIPES PASS THRU EXISTING CONSTRUCTION, CORE DRILL OPENING AND INSTALL MECHANICAL SEALS WITHOUT THE USE OF SLEEVES.



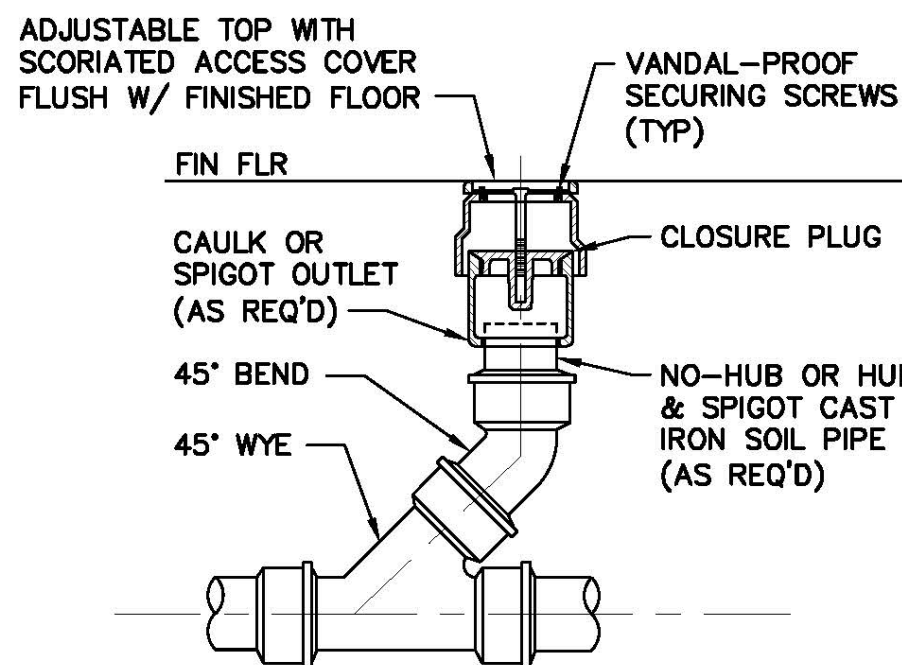
NOTES:

1. BOTTOM REINFORCEMENT TO BE CONTINUOUS WHERE POSSIBLE.
2. FOR PIPE SIZE "D" AND ELEVATION, SEE PLUMBING DRAWINGS.
3. ALL PIPES LOCATED BENEATH BASE SLABS SHALL BE ENCASED IN CONCRETE UNLESS OTHERWISE NOTED.

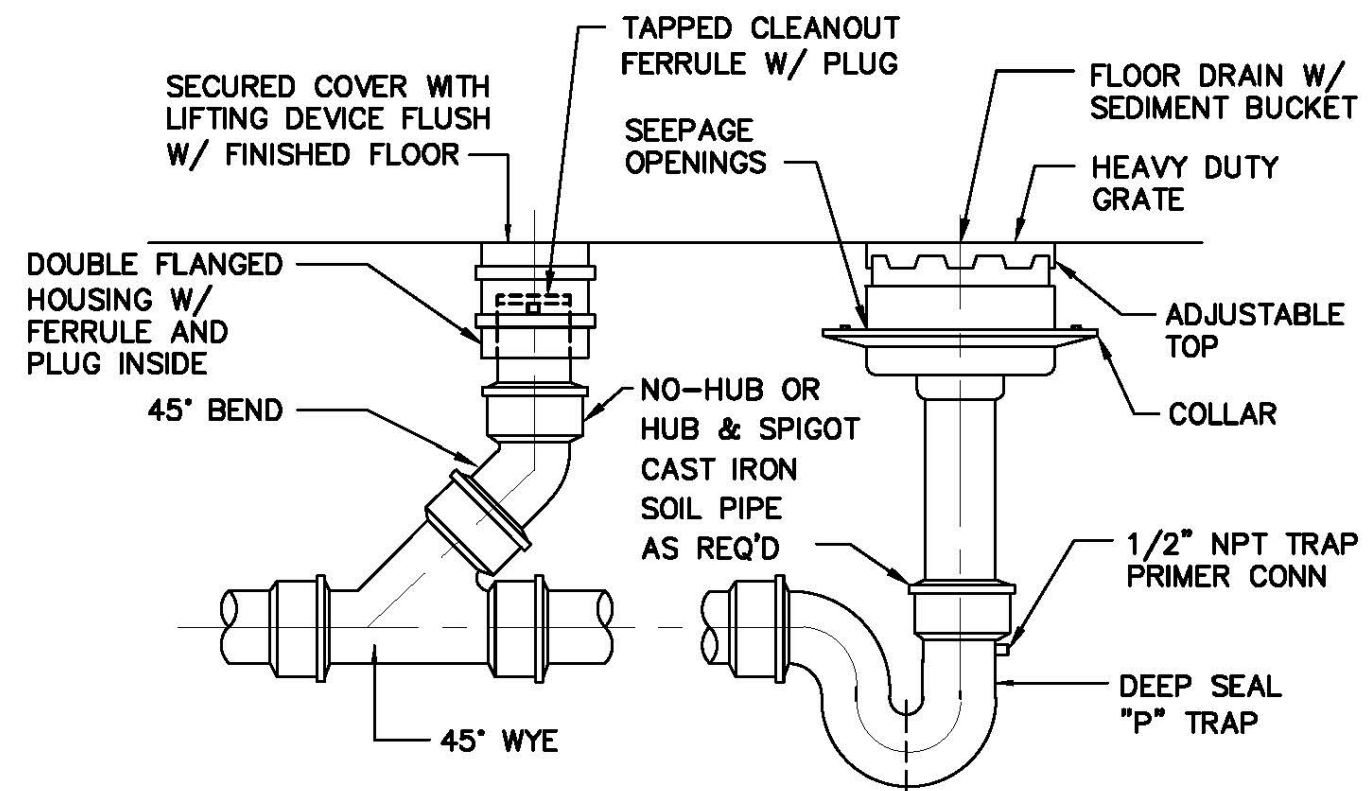
PIPE ENCASEMENT DETAIL
NOT TO SCALE



FD-1 FLOOR DRAIN DETAIL
NOT TO SCALE





FLOOR CLEANOUT (FCO-1) DETAIL
NOT TO SCALE





FCO-2 CLEANOUT FD-2 FLOOR DRAIN
NOT TO SCALE





GENERAL NOTES



HAND SWITCH (MANUAL SELECTOR)

FUNCTION SUBSCRIPT (LOCATION MAY VARY)



PUSHBUTTON

FUNCTION SUBSCRIPT (LOCATION MAY VARY)

FUNCTION SUBSCRIPTS FOR HAND SWITCH AND PUSHBUTTON CONTROLS:
 E/STOP E-STOP
 F/O/R FORWARD-OFF-REVERSE
 F/O/JR FORWARD-OFF-JOG REVERSE
 H/O/A HAND-OFF-AUTO
 H/O/R HAND-OFF-REMOTE
 H/O/SBY HAND-OFF-STANDBY
 L/O/R LOCAL-OFF-REMOTE
 M/A MANUAL-AUTO
 M/O/A MANUAL-OFF-AUTO
 O/C OPEN-CLOSE
 O/O ON-OFF
 O/S/C OPEN-STOP-CLOSE
 RS RESET
 R/L REMOTE-LOCAL
 R/O RUN-OFF
 SC SPEED CONTROL POTENTIOMETER
 SCR SILICON CRYSTAL RECTIFIER
 S/S START-STOP
 S/SLO START-STOP WITH LOCKOUT

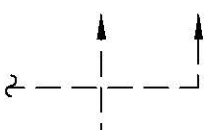

INDICATING LIGHT UNIT
 G-GREEN (OFF, STOP, CLOSED)
 R-RED (RUN, START, OPEN)
 W-WHITE (POWER ON)
 A-AMBER (ALARM CONDITION)
 F-FLASHES ON ELECTRIC OR MECHANICAL MALFUNCTION



















INTERLOCK
 1 = NOTE NUMBER


ELECTRONIC HORN

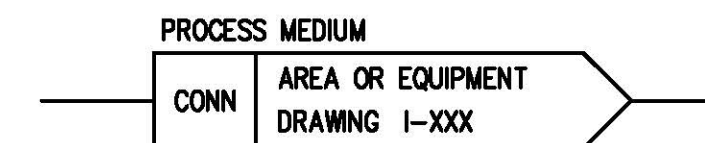

STROBE LIGHT
 A - AMBER
 W - WHITE
 R - RED
 B - BLUE

INTERCONNECTING LINES WITH DOT INDICATING ROUTING OF THE SAME SIGNAL.

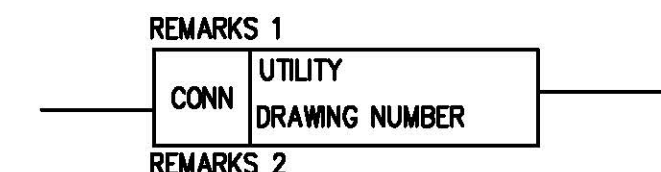

INTERCONNECTING LINES WITHOUT DOT INDICATE ROUTING OF MORE THAN ONE SIGNAL

- | | |
|---|----------------------------------|
|  | SOFTWARE LINK, SYSTEM FUNCTION |
|  | CONNECTION OR COMMUNICATION LINK |
|  | MODBUS COMMUNICATION |
|  | ETHERNET COMMUNICATION |
|  | DEVICENET COMMUNICATION |
|  | MAIN PROCESS LINE |
|  | AUXILIARY SYSTEMS |
|  | EQUIPMENT PACKAGE LIMIT |
|  | ELECTRIC (ELECTRONIC) SIGNAL |
|  | PNEUMATIC SIGNAL |
|  | CAPILLARY LINE |
|  | HYDRAULIC SIGNAL |
|  | SONIC SIGNAL |
|  | HEAT TRACED AND INSULATED |
|  | TELEPHONE LINK |
|  | FUTURE |
|  | EXISTING |

PROCESS LINES (ON/OFF PAGE):



UTILITY LINES (ON/OFF PAGE):



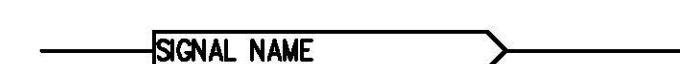
INSTRUMENT SIGNAL LINES (ON/OFF PAGE):



PROCESS LINE
NOT WITHIN THE BOUNDARY OF THIS SET OF DRAWINGS



INSTRUMENT SIGNAL LINE
NOT WITHIN THE BOUNDARY OF THIS SET OF DRAWINGS



CONN: CONNECTION NUMBER

[illegible]

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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: I-1

DESIGNED BY: F.ARANGO/R.HARTMANN

DRAWN BY: G.PAUL

CHECKED BY: E.KOWA

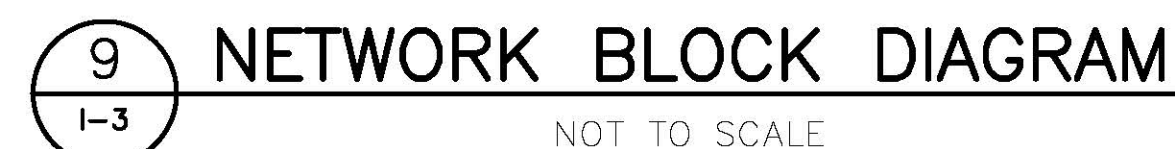
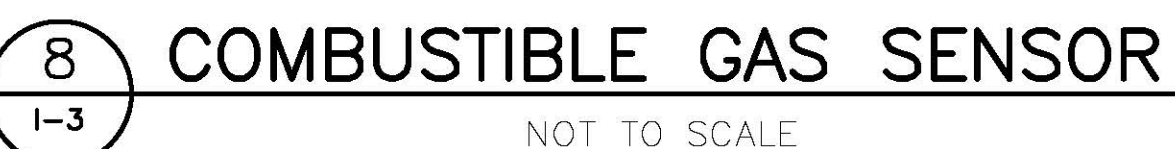
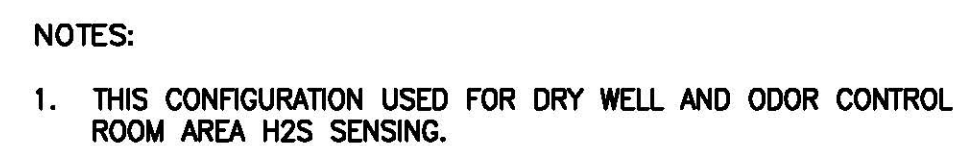
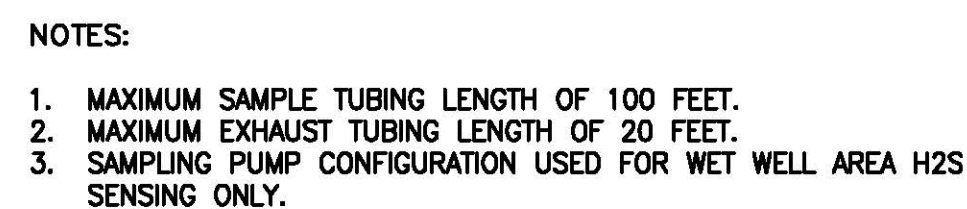
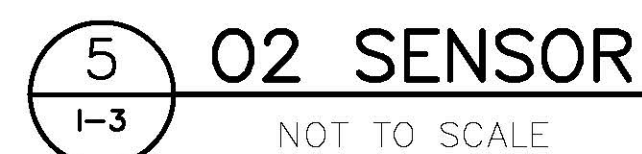
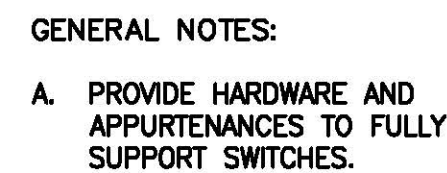
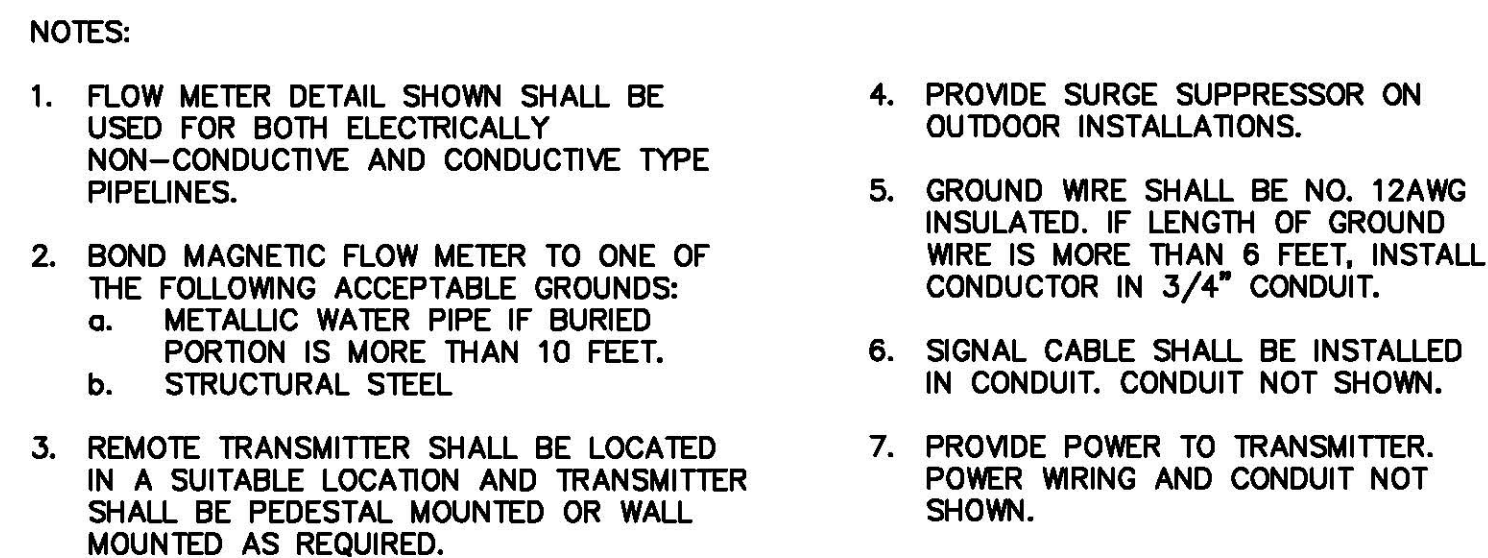
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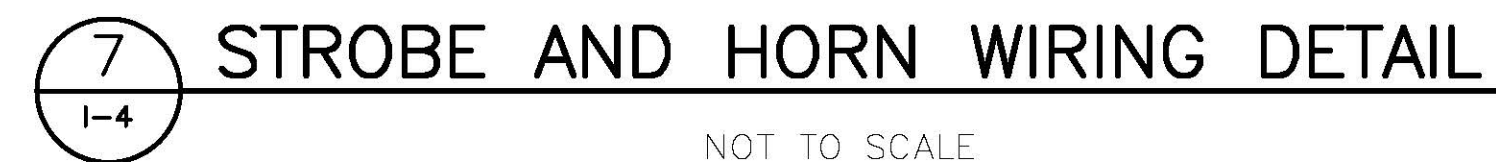
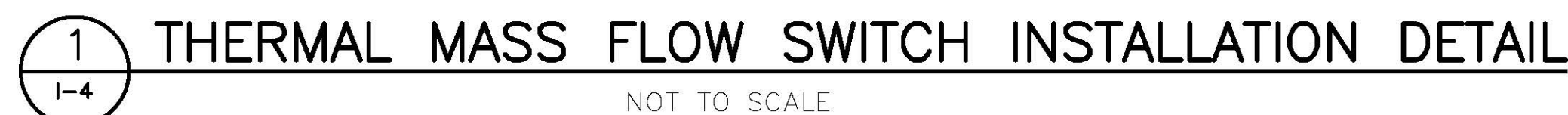
INSTRUMENTATION

SYMBOLS, ABBREVIATIONS & GENERAL NOTES

SCALE: AS SHOWN


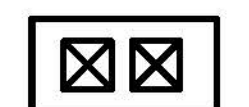



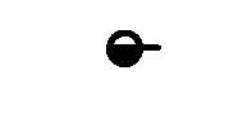


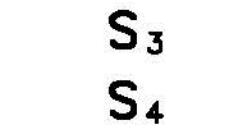


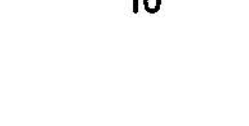
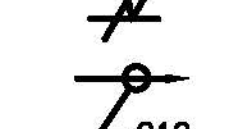
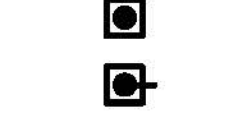
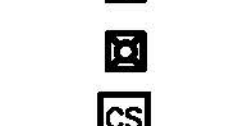

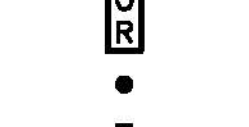
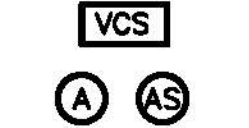
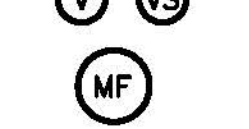
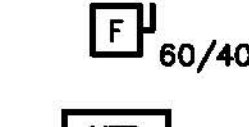
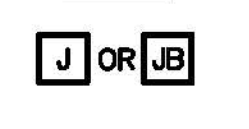

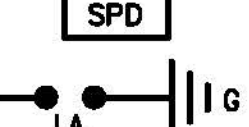

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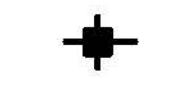

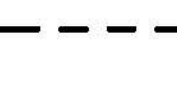
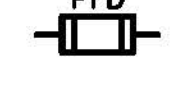

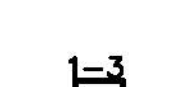















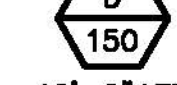
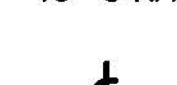


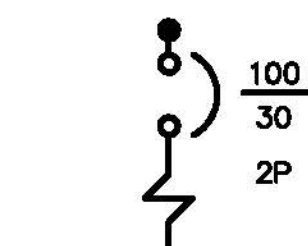
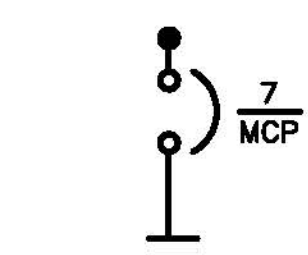
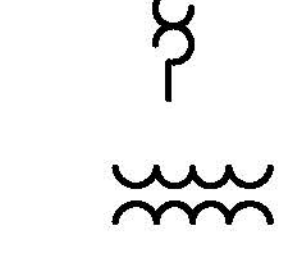
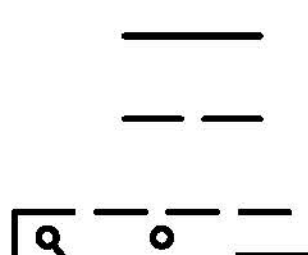
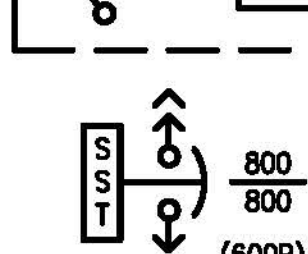


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ELECTRICAL SYMBOLS

	MOTOR STARTER/CONTROLLER (NON-COMBINATION - COMBINATION - MANUAL) RV DENOTES REDUCED VOLTAGE
	LOCAL CONTROL PANEL WITH CONTROLLERS FURNISHED BY EQUIPMENT VENDOR.
	DUPLEX CONVENIENCE RECEPTACLE, 2 POLE, 3 WIRE, 120 VOLTS A.C. 20 AMP RECEPTACLE DESIGNATIONS WITH NEMA 5-20R, FIRST NUMBER DENOTES PANEL, SECOND NUMBER DENOTES CIRCUIT NUMBER. GF-DENOTES GROUND FAULT TYPE. SS-DENOTES SURGE SUPPRESSION TYPE
	SINGLE CONVENIENCE RECEPTACLE, 2 POLE, 3 WIRE. REFER TO DRAWINGS FOR AMPERE AND VOLTAGE RATING.
	POWER RECEPTACLE, 3 PHASE, 4 WIRE, 480V A.C. WITH DISCONNECT SWITCH. REFER TO DRAWINGS FOR AMPERE RATING.
	POWER RECEPTACLE, 2 POLE, 3 WIRE 250 VOLTS A.C. REFER TO DRAWINGS FOR AMPERE RATINGS
	RECEPTACLE AS NOTED
	POWER ON-OFF SNAP SWITCH, 1PH, 120V AC, 20A
	SINGLE POLE SWITCH - LOWER CASE LETTER DENOTES SWITCHING.
	TWO POLE SWITCH
	THREE-WAY SWITCH
	FOUR-WAY SWITCH
	SINGLE POLE MANUAL STARTER
	TWO OR THREE POLE MANUAL STARTER, 20A
	LETTERS AND NUMERALS INDICATE PANEL AND CIRCUIT NUMBER (LP1-2). CROSS LINES INDICATE NUMBER OF CONDUCTORS. HALF HASH MARKS INDICATES NEUTRAL. NUMBER DENOTES WIRE SIZE WHEN NOT #12 AWG. CONTINUE CONDUIT AND WIRE RUN FROM BOX TO DEVICE IN ROOM OR AREA AS NOTED BY BRANCH CIRCUIT NUMBER #10 AWG WRING SHALL BE USED FOR RUNS BETWEEN PANEL AND FIRST LIGHTING FIXTURE OR RECEPTACLE EXCEEDING 50 FT, UNLESS OTHERWISE NOTED ON DRAWING.
	INDICATES GROUND CONDUCTOR
	INDICATES HOMERUN AND CONDUIT TAG; REFER TO ONE LINE AND INTERCONNECTION DIAGRAM
	PUSHBUTTON STATION
	PUSHBUTTON STATION WITH LOCK-OUT FEATURE
	SELECTOR SWITCH
	INDICATING LIGHT
	CONTROL STATION
	HAND-OFF-AUTOMATIC SELECTOR SWITCH CONTROL STATION
	LOCAL-OFF-REMOTE SELECTOR SWITCH CONTROL STATION
	DEVICE LOCATED IN FIELD AT OR NEAR MOTOR
	DEVICE LOCATED IN CONTROL PANEL
	CONTROL STATION FURNISHED BY EQUIPMENT VENDOR
	AMMETER - AMMETER SWITCH
	VOLTMETER - VOLTMETER SWITCH
	METERING FUNCTIONS
	LINE SWITCH DISCONNECT - UNFUSED OR FUSED F DENOTES FUSING, ONLY WHERE INDICATED. FIRST NUMBER DENOTES SWITCH AMP RATING, SECOND NUMBER DENOTES FUSE SIZE WHEN PROVIDED.
	VARIABLE FREQUENCY DRIVE
	JUNCTION BOX; SIZE AS REQUIRED BY N.E.C.
	TERMINAL BOX; SIZE AS REQUIRED BY N.E.C. AND TO ACCOMMODATE ALL TERMINATIONS ON TERMINAL BLOCKS. TERMINATIONS TO INCLUDE SPARE WIRING.
	MULTI FUNCTIONAL METERING DEVICE
	SURGE PROTECTION DEVICE
	LIGHTNING ARRESTOR





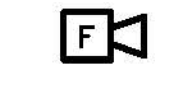










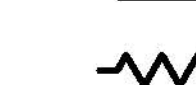
	PULL BOX; SIZE AS REQUIRED BY N.E.C.
	LOCK FOR RESPECTIVE KEY INTERLOCK WITH KEY CAPTIVE IN LOCK
	OVERTEMPERATURE DEVICE
	RESISTIVE TEMPERATURE DEVICE
	MOTOR SPACE HEATER
	ELECTRIC MOTOR (NUMBER INDICATES HORSEPOWER).
	PROVIDE CHANNEL SUPPORT. FOR 120 VOLT BRANCH CIRCUIT MOTORS, NUMERALS DENOTES DISTRIBUTION OR LIGHTING PANEL AND BRANCH CIRCUIT NUMBER.
	MOTORIZED VALVE WITH CONTROLLER
	MOTORIZED DAMPER WITH CONTROLLER
	GROUND TEST POINT
	GROUND ROD
	GROUND GRID CABLE CONNECTION
	GROUND
	#4/0 GROUND CABLE BURIED 2'-6" BELOW GRADE
	FUSE-PFD DENOTES PULL FUSE DISCONNECT TYPE
	PHOTOCELL
	LED LIGHTING FIXTURE - CEILING OR PENDANT MOUNTED. SEE LIGHTING FIXTURE SCHEDULE FOR TYPE. FIRST NUMERAL DENOTES LIGHTING PANEL (LP1), SECOND NUMBER DENOTES BRANCH CIRCUIT NUMBER.
	LED LIGHTING FIXTURE WITH BATTERY PACK - CEILING OR PENDANT MOUNTED. SEE LIGHTING FIXTURE SCHEDULE FOR TYPE. FIRST NUMERAL DENOTES LIGHTING PANEL (LP1), SECOND NUMBER DENOTES BRANCH CIRCUIT NUMBER.
	CEILING OR PENDANT MOUNTED LIGHTING FIXTURE. SEE LIGHTING FIXTURE SCHEDULE FOR TYPE.
	CEILING OR PENDANT MOUNTED LIGHTING FIXTURE WITH QUARTZ BACKUP. SEE LIGHTING FIXTURE SCHEDULE FOR TYPE.
	WALL MOUNTED LIGHTING FIXTURE. SEE LIGHTING FIXTURE SCHEDULE FOR TYPE.
	POLE OR STANCHION MOUNTED LIGHTING FIXTURE. SEE LIGHTING FIXTURE SCHEDULE FOR TYPE.
	TWO (2) POLE OR STANCHION MOUNTED LIGHTING FIXTURES
	POLE MOUNTED FIXTURE WITH GF RECEPTACLE
	2 LAMP SELF CONTAINED DC EMERGENCY LIGHTING UNIT. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. LETTER DENOTES FIXTURE TYPE. CONNECT TO ROOM LIGHTING CIRCUIT AHEAD OF SWITCH.
	EXIT SIGN, BATTERY BACKUP TYPE. CONNECT TO ROOM LIGHTING CIRCUIT AHEAD OF SWITCH
	FIXTURE DESIGNATION SYMBOL. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION AND TYPE. ALL FIXTURES SHOWN IN A ROOM WITH THIS SYMBOL SHALL BE OF TYPE INDICATED BY LETTER; NUMBER IN SYMBOL INDICATES LAMP WATTAGE AND NUMBER OF LAMPS WHERE MORE THAN ONE (UNLESS OTHERWISE NOTED). NUMBER BELOW SYMBOL INDICATES MOUNTING HEIGHT ABOVE FINISHED FLOOR OR AS NOTED.
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
	UNIT HEATER-NUMERAL DENOTES LIGHTING PANEL AND BRANCH CIRCUIT NUMBER
	1-24
	THERMOSTAT

	(FRAME SIZE) (TRIP SIZE) THERMAL-MAGNETIC BREAKER 2P DENOTES 2 POLE
	(CONTINUOUS RATING) (MOTOR CIRCUIT PROTECTOR) AC COMBINATION FULL VOLTAGE NON-REVERSING STARTER WITH MAGNETIC BREAKER
	TRANSFORMER- TYPE AND SIZE AS NOTED ON THE THE DRAWINGS AND IN SPECIFICATIONS INDICATES NEW EQUIPMENT/CONDUIT INDICATES EXISTING EQUIPMENT/CONDUIT INDICATES CONCEALED OR UNDERGROUND EQUIPMENT/CONDUIT
	INDICATES AUTOMATIC TRANSFER SWITCH WITH SOLID STATE CONTROLS AND ACCESSORIES
	(FRAME SIZE) (SENSOR RATING) DENOTE PLUG RATING DRAWOUT POWER CIRCUIT BREAKER WITH RMS TYPE SOLID STATE TRIP

INSTRUMENTS

	INSTRUMENT DEVICE: LETTERS IDENTIFY DEVICE FUNCTION, NUMBERS WHERE INDICATED DENOTE LOOP NUMBER		ANALYSIS TRANSMITTER (AE DENOTES ANALYSIS ELEMENT)
	PRESSURE SWITCH (PSH DENOTES PRESSURE SWITCH HIGH AND PSL DENOTES PRESSURE LOW)		TEMPERATURE TRANSMITTER (TE DENOTES TEMPERATURE ELEMENT)
	FLOW SWITCH (FSH DENOTES FLOW SWITCH HIGH AND FSL DENOTES FLOW SWITCH LOW)		TEMPERATURE SWITCH (TSH DENOTES TEMPERATURE SWITCH HIGH AND TSL DENOTES TEMPERATURE SWITCH LOW)
	LIMIT SWITCH		LEVEL SWITCH (LSH DENOTES LEVEL SWITCH HIGH AND LSL DENOTES LEVEL SWITCH LOW)
	PRESSURE TRANSMITTER (I DENOTES INDICATING TYPE)		MOTORIZED VALVE
	INDICATING LIGHT LETTER "A" DENOTES AMBER COLOR LETTER "R" DENOTES RED COLOR		SOLENOID VALVE
	STROBE LIGHT		LEVEL TRANSMITTER (LE DENOTES LEVEL ELEMENT)
			FLOW TRANSMITTER (FE DENOTES FLOW ELEMENT)

MISCELLANEOUS SPECIAL SYSTEMS

	ALARM CONTROL PANEL		SPEAKER HORN H = HORN PS = PAGING SPEAKER C = CEILING MOUNTED SPEAKER
	FIRE ALARM CONTROL PANEL		AUDIO VISUAL DEVICE
	FIRE ALARM SYSTEM STROBE LIGHT/HORN COMBINATION		AUDIO VISUAL STATION
	FIRE ALARM SYSTEM MANUAL PULL STATION		ALARM BEACON
	SMOKE DETECTOR D = DUCT TYPE (BY HVAC CONTRACTOR)		DUPLEX ETHERNET JACKET
	SMOKE DETECTOR A= AREA TYPE		TELEPHONE JACKET
	FLAME DETECTOR		EMERGENCY PULL CORD
	HEAT DETECTOR XXX = RATING (135 OR 200)		END OF LINE RESISTOR

ABBREVIATIONS

AC	ALTERNATING CURRENT	NCTC	NORMALLY CLOSED, TIMED TO CLOSE
ACSR	ALUMINIUM CONDUCTOR STEEL-REINFORCED CABLE	NCTO	NORMALLY CLOSED, TIMED TO OPEN
ARPF	ASH RECYCLING AND PROCESSING FACILITY	NOTC	NORMALLY OPEN, TIMED TO CLOSED
AFP	ABOVE FINISH FLOOR	NOTO	NORMALLY OPEN, TIMED TO OPEN
AFG	ABOVE FINISHED GRADE	NTS	NOT TO SCALE
ATC	AUTOMATIC TEMPERATURE CONTROL PANEL	OL'S	MOTOR OVERLOAD HEATERS
ATS	AUTOMATIC TRANSFER SWITCH	OT	OVER TEMPERATURE
AWG	AMERICAN WIRE GAUGE	PB	PULL BOX
BKR	BREAKER	PNL	PANEL
C	CONDUIT	PP	POWER PANEL
CBV	CABLE BY VENDOR, INSTALLED BY CONTRACTOR	PT	POTENTIAL TRANSFORMER
CKT	CIRCUIT	PWR	POWER
CNT	CONTROL	R1	RELAY #1
CP	CONTROL PANEL	RECEP	RECEPTACLE
CPT	CONTROL POWER TRANSFORMER	RVNR	REDUCED VOLTAGE NON-REVERSING
CT	CURRENT TRANSFORMER	(S) (SH)	SHIELDED CABLE
DP	DISTRIBUTION PANEL	SE	SERVICE ENTRANCE
EC	EMPTY CONDUIT	SS	SPARE
EGC	EQUIPMENT GROUND CONDUCTOR	SP	SELECTOR SWITCH
EF	EXHAUST FAN	SWBD	SWITCHBOARD
EL	ELEVATION	SWGR	SWITCHGEAR
EXP	EXPLOSION PROOF	TEMP	TEMPERATURE
EXIST	EXISTING	TEW	THERMOCOUPLE EXTENSION WIRE
FDR	FEEDER	UON	UNLESS OTHERWISE NOTED
FVNR	FULL VOLTAGE NON-REVERSING	V	VOLT
G OR GND	GROUND	VFD	VARIABLE FREQUENCY DRIVE
GF	GROUND FAULT	VP	WEATHERPROOF
H/O/A	HAND-OFF-AUTOMATIC	WT	WINDING TEMPERATURE RELAY
HMCS	HVAC MONITORING CONTROL SYSTEM	XFMR	TRANSFORMER
JB	JUNCTION BOX	NEC	NATIONAL ELECTRIC CODE
LCP	LOCAL CONTROL PANEL	(TYP)	TYPICAL
LP	LIGHTING PANELBOARD	#	PHASE NUMBER
LTG	LIGHTING		
M	MOTOR		
MCC	MOTOR CONTROL CENTER		
MCM	ONE THOUSAND CIRCULAR MILS		
MMD	MICROPROCESSOR-BASED METERING DEVICE		
MTS	MANUAL TRANSFER SWITCH		
NA	NON-AUTOMATIC		

ANSI DEVICE RELAY AND FUNCTION DESIGNATIONS

25	- AUTO SYNCHRONIZER	N	- DENOTES NEUTRAL
25C	- SYNC CHECK WITH DEAD BUS	V	- GENERATOR
	FEATURE	59	- OVER VOLTAGE
26Q	- LIQUID TEMPERATURE	63PG	- PRESSURE GAUGE
27	- UNDER VOLTAGE WITH TIME DELAY	63PR	- PRESSURE RELIEF
30	- ANNUNCIATOR RELAY	67	- AC DIRECTIONAL OVER CURRENT
32	- DIRECTIONAL POWER	81	- FREQUENCY
U	- UNDER	u	- UNDER
R	- REVERSE	o	- OVER
33	- POSITION SWITCH	83	- AUTOMATIC TRANSFER
40	- LOSS OF EXCITATION	86	- LOCKOUT HAND RESET
43	- MANUAL SWITCH	87	- PHASE DIFFERENTIAL
46	- PHASE-BALANCE CURRENT	T	- DENOTES TRANSFORMER
47	- PHASE-SEQUENCE VOLTAGE	B	- DENOTES BUS
49	- THERMAL	G	- DENOTES GENERATOR
T	- DENOTES TRANSFORMER HOT SPOT	71Q	- LIQUID LEVEL GAGE
M	- DENOTES MOTOR		
50,51	- INSTANTANEOUS OVERCURRENT AND TIME DELAY OVERCURRENT		
G	- DENOTES GROUND		

GENERAL NOTES

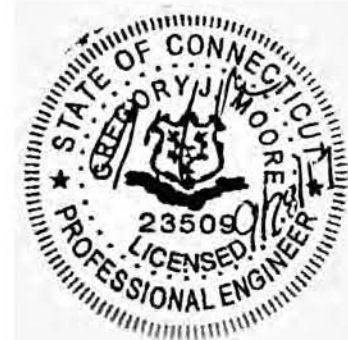
- THE SYMBOLS AND ABBREVIATIONS LIST ON THIS SHEET IS A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE ON ALL PROJECTS. THEREFORE NOT ALL THE SYMBOLS AND ABBREVIATIONS CONTAINED IN THIS LIST ARE NECESSARILY USED ON THIS PARTICULAR PROJECT AND SHOULD BE USED FOR CLARIFICATION ONLY.
- ALL MATERIALS AND EQUIPMENT SHALL CONFORM TO THE AREA CLASSIFICATION REQUIREMENTS SPECIFIED IN SECTION 16050. INDOOR AREA DESIGNATIONS FOR WET, CORROSIVE AND CLASSIFIED LOCATIONS ARE INDICATED ON THE DRAWINGS.
- ALL WORK AT THE PROJECT SITE SHALL BE IN ACCORDANCE WITH JOB CONDITIONS SPECIFIED IN SECTION 26000.
- PROVIDE JUNCTION BOX FOR ANY DEVICE WITH PIG TAIL SUCH AS SOLENOID VALVES, LIMIT SWITCHES, SMOKE DETECTORS AND ETC. FOR PROPER ELECTRICAL CONNECTION. PROVIDE ALL HARDWARE FOR MOUNTING OF JUNCTION BOX.
- PROVIDE INDEPENDENT SUPPORT FOR DISCONNECT SWITCHES, CONTROL STATIONS, BOXES, PANELS, ETC. WHERE NO WALLS OR OTHER STRUCTURAL SURFACE EXISTS.
- EQUIPMENT SIZES AND LOCATIONS ARE APPROXIMATE. ACTUAL DIMENSIONS TO BE DETERMINED BY EQUIPMENT FURNISHED.



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BEARDSLEY PUMP STATION
COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

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2017

DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: E-1

DESIGNED BY: W.JUNG

DRAWN BY: W.JUNG

CHECKED BY: G.MOORE

SHEET TITLE

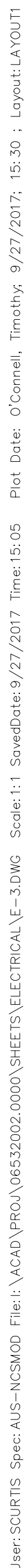
ELECTRICAL

SYMBOLS AND LEGEND

SCALE: NTS

E-1

SHEET 59 OF 69



SHEET 61 OF 69



ARCADIS PROJ. NO. 06532002.0000

[illegible]

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DATE:	SEPTEMBER 2017
PROJECT NO.:	06532002.0000
FILE NAME:	E-5
DESIGNED BY:	V.PANEGAL
DRAWN BY:	V.PANEGAL
CHECKED BY:	G.MOORE

SHEET TITLE

ELECTRICAL

LIGHTING PLAN I

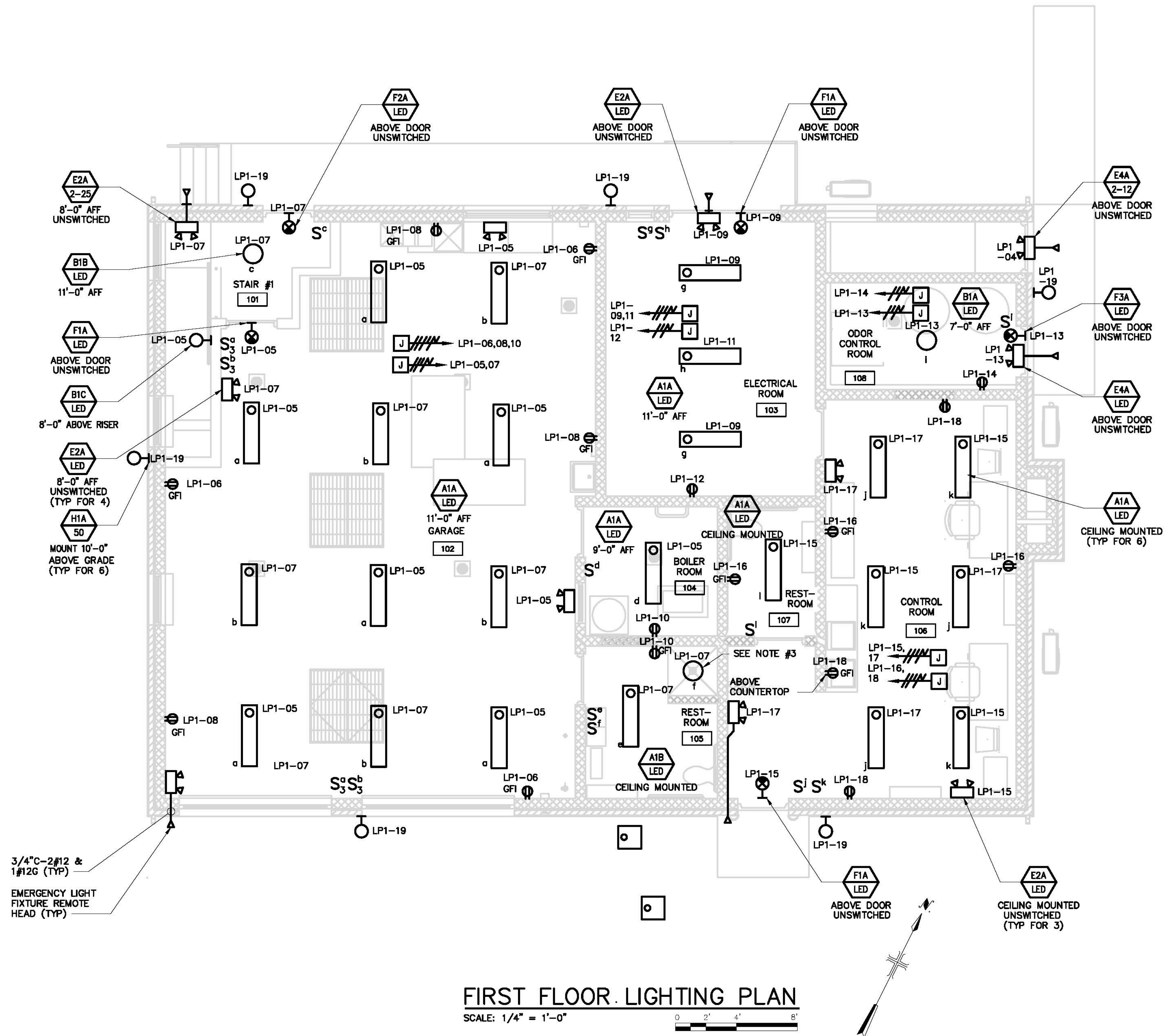
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E-5

SHEET 63 OF 69

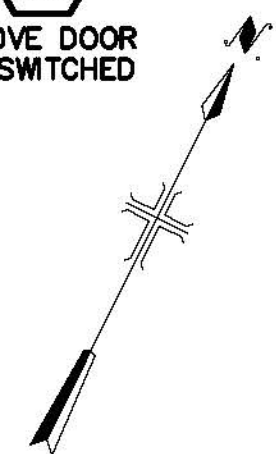
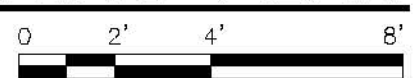
NOTES:

1. ODOR CONTROL ROOM IS CONSIDERED CLASS I, DIVISION 1 HAZARDOUS LOCATION. GARAGE AREA, RESTROOMS, BOILER ROOM, ELECTRICAL ROOM, AND CONTROL ROOM ARE CONSIDERED DUSTY LOCATION. STAIR #1 IS CONSIDERED A WET AND CORROSIVE LOCATION. PROVIDE MATERIALS, EQUIPMENT AND INCIDENTALS AS REQUIRED.
2. CONDUIT PENETRATIONS THROUGH WALLS AND FLOOR SHALL HAVE SPACE A MINIMUM OF 6 INCH BETWEEN EACH CONDUIT.
3. PROVIDE AND INSTALL 6" RECESSED SHOWER LIGHT WITH 19 WATT LED LAMP, OPERATING AT 120V. FIXTURE SHALL BE PROVIDED WITH 6" RECESSED HOUSING, WITH CHROME TRIM, AND A FROSTED GLASS LENS. PROVIDE PEGASUS NT-23C OR EQUAL.

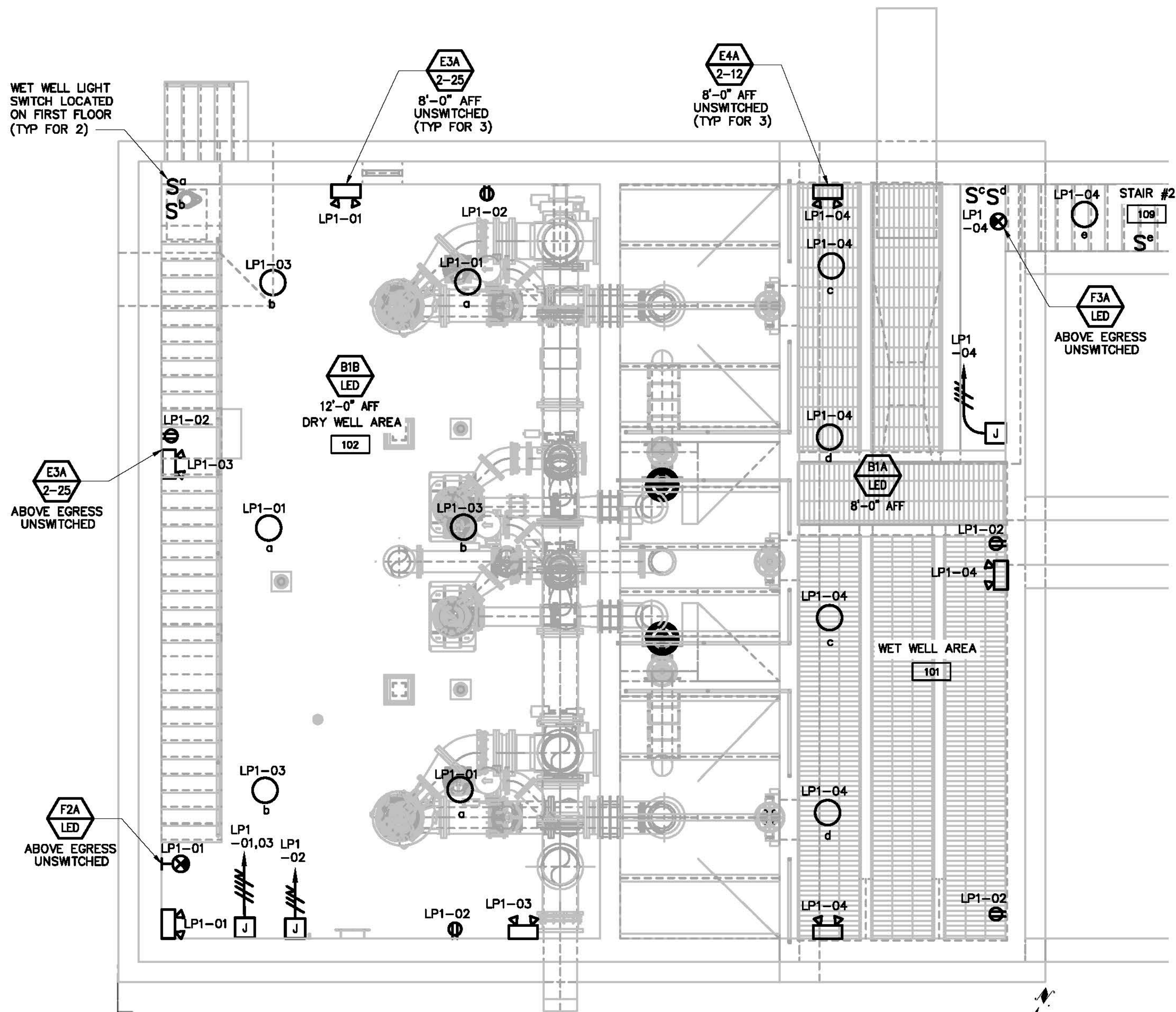


FIRST FLOOR. LIGHTING PLAN

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

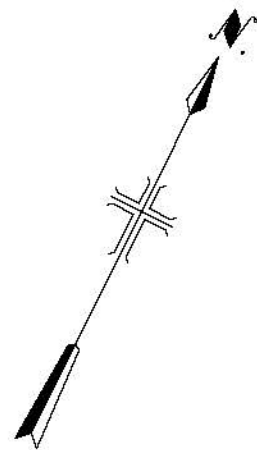


User: SCURTIS Spec: AUS-NC5000 File: I:\ACAD\PROJ\06532002.0000\SHEETS\ELECTRICAL\E-6.DWG Scale: 1:1 Saved Date: 9/27/2017 Time: 15:05 Plot Date: 9/27/2017 15:31 : Layout: LAYOUT1



BASEMENT LIGHTING PLAN AT EL 56.00

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



NOTES:

1. WET WELL AREA IS CONSIDERED A CLASS I, DIVISION 1 AND CORROSIVE LOCATION. DRY WELL IS CONSIDERED A WET AND CORROSIVE LOCATION. PROVIDE MATERIALS, EQUIPMENT, INCIDENTALS ETC. AS REQUIRED.
2. CONDUIT PENETRATIONS THROUGH WALLS AND FLOOR SHALL HAVE SPACE A MINIMUM OF 6 INCH BETWEEN EACH CONDUIT.

LIGHTING FIXTURE SCHEDULE		
FIXTURE TYPE	DESCRIPTION	MANUFACTURER
A1A	PENDANT MOUNTED, 31 WATT LED LINEAR FIXTURE, 1 FOOT BY 4 FOOT, WITH MINIMUM LIGHT OUTPUT OF 4000 LUMENS. COLOR TEMPERATURE SHALL BE 4000K. FIXTURE SHALL BE ENCLOSED, GASKETED AND SUITABLE FOR DUSTY LOCATION. FIXTURE SHALL HAVE IP65, IP66 AND IP67 RATING. FIXTURE SHALL OPERATE 120 VOLT. FIXTURE SHALL BE RATED FOR L87 OF 60,000 HOURS AT 25 CELSIUS DEGREE WITH AMBIENT TEMPERATURE FROM -35 TO 45 CELSIUS DEGREE. FIXTURE SHALL BE UL LISTED. ALL MOUNTING ACCESSORIES AND INCIDENTALS SHALL BE PROVIDED FOR PENDANT MOUNTED FIXTURE.	HOLOPHANE EMS LED, HALOPHANE EMW OR EQUAL
A1B	CEILING MOUNTED, 60 WATT LED LINEAR FIXTURE, 1 FOOT BY 4 FOOT, WITH MINIMUM LIGHT OUTPUT OF 4000 LUMENS. COLOR TEMPERATURE SHALL BE 4000K. FIXTURE SHALL BE ENCLOSED, GASKETED AND SUITABLE FOR DAMP LOCATION. FIXTURE SHALL HAVE IP65, IP66 AND IP67 RATING. FIXTURE SHALL OPERATE 120 VOLT. FIXTURE SHALL BE RATED FOR L87 OF 60,000 HOURS AT 25 CELSIUS DEGREE WITH AMBIENT TEMPERATURE FROM -35 TO 45 CELSIUS DEGREE. FIXTURE SHALL BE UL LISTED. ALL MOUNTING ACCESSORIES AND INCIDENTALS SHALL BE PROVIDED FOR PENDANT MOUNTED FIXTURE.	HALOPHANE EMW OR EQUAL
B1A	50 WATT LED LIGHT FIXTURE, SUITABLE FOR CLASS I, DIVISION 1 HAZARDOUS LOCATION HAVING ROBUST CAST ALUMINUM HOUSING WITH LOW COPPER CONTENT THAT WITHSTANDS HARSH OR HOSTILE ENVIRONMENTS. MINIMUM 6150 LUMEN OUTPUTS WITH TYPE 5 LOW ANGLE DISTRIBUTION AT 4000K COLOR TEMPERATURE. FIXTURE SHALL BE RATED FOR 120-277VAC OPERATING VOLTAGE, OPERATING TEMPERATURE UP TO 55 DEGREE CELSIUS, UL LISTED, DLC LISTED AND IP66 RATED. MINIMUM 5 YEAR WARRANTY INCLUDING LED BOARD AND DRIVER. ALL MOUNTING ACCESSORIES AND INCIDENTALS SHALL BE PROVIDED FOR PENDANT MOUNTED FIXTURE.	HOLOPHANE PETROLUX LED EATON PVM DIALIGHT DUROSITE SERIES
B1B	50 WATT LED LIGHT FIXTURE, HAVING ROBUST CAST ALUMINUM HOUSING WITH LOW COPPER CONTENT RATED TO WITHSTAND CORROSIVE ENVIRONMENTS. MINIMUM 6150 LUMEN OUTPUTS WITH TYPE 5 LOW ANGLE DISTRIBUTION AT 4000K COLOR TEMPERATURE. FIXTURE SHALL BE RATED FOR 120-277VAC OPERATING VOLTAGE, OPERATING TEMPERATURE UP TO 55 DEGREE CELSIUS, UL LISTED, DLC LISTED AND IP66 RATED. MINIMUM 5 YEAR WARRANTY INCLUDING LED BOARD AND DRIVER. ALL MOUNTING ACCESSORIES AND INCIDENTALS SHALL BE PROVIDED FOR PENDANT MOUNTED FIXTURE.	HOLOPHANE PETROLUX LED EATON PVM DIALIGHT DUROSITE SERIES
B1C	WALL MOUNTED, 30 WATT LED LINEAR FIXTURE, 1 FOOT BY 4 FOOT, WITH MINIMUM LIGHT OUTPUT OF 3,600 LUMENS. COLOR TEMPERATURE SHALL BE 4000K. FIXTURE SHALL BE SUITABLE FOR CORROSIVE LOCATIONS. FIXTURE SHALL OPERATE 120 VOLT. FIXTURE SHALL BE UL LISTED. ALL MOUNTING ACCESSORIES AND INCIDENTALS SHALL BE PROVIDED FOR WALL MOUNTED FIXTURE.	CHAMP MLL SERIES OR EQUAL
E2A	EMERGENCY LIGHT FIXTURE WITH NICKEL CADMIUM BATTERY BACKUP. FIXTURE SHALL INCLUDE TWO, 6 VOLT, 18 WATT LT24 LED LAMPS FOR 90 MINUTES OF OPERATION AND BE ENCLOSED AND GASKETED SUITABLE FOR DUSTY AREAS. FIXTURE INPUT SHALL OPERATE AT 120 VOLT. FIXTURE SHALL MEET UL 924, UL50, NFPA 101, NFPA 70-NEC AND OSHA ILLUMINATION STANDARDS.	HOLOPHANE DESOTO M90X SERIES OR EQUAL
E3A	EMERGENCY LIGHT FIXTURE WITH NICKEL CADMIUM BATTERY BACKUP. FIXTURE SHALL INCLUDE TWO, 12 VOLT, 25 WATT HALOGEN LAMPS FOR 90 MINUTES OF OPERATION AND BE ENCLOSED AND GASKETED SUITABLE FOR CORROSIVE LOCATIONS. FIXTURE INPUT SHALL OPERATE AT 120 VOLT. WHEN SHOWN ON DRAWINGS PROVIDE REMOTE HEADS.	HOLOPHANE DESOTO M70 LIGHTALARMS E12N SERIES OR EQUAL
E4A	EMERGENCY LIGHT FIXTURE WITH NICKEL CADMIUM BATTERY BACKUP. FIXTURE SHALL INCLUDE TWO, 12 VOLT, 12 WATT HALOGEN LAMPS FOR 90 MINUTES OF OPERATION AND BE ENCLOSED AND GASKETED SUITABLE FOR CLASS I, DIVISION 1 HAZARDOUS LOCATIONS. FIXTURE INPUT SHALL OPERATE AT 120 VOLT.	HOLOPHANE DESOTO HZ SERIES LIGHTALARMS EXP-12N SERIES OR EQUAL
F1A	INDUSTRIAL EMERGENCY EXIT SIGN WITH NICKEL CADMIUM BATTERY BACKUP, AND RED LED LIGHTS. SIGNS SHALL BE WALL MOUNTED, SINGLE OR DOUBLE FACE, ENCLOSED AND GASKETED SUITABLE FOR DUSTY LOCATIONS. EXIT SIGN INPUT SHALL OPERATE AT 120 VOLT.	COOPER LIGHTING SURE LITES SERIES LIGHTALARMS SEVERE XV SERIES OR EQUAL
F2A	INDUSTRIAL EMERGENCY EXIT SIGN WITH NICKEL CADMIUM BATTERY BACKUP, AND RED LED LIGHTS. SIGNS SHALL BE WALL MOUNTED, SINGLE OR DOUBLE FACE, ENCLOSED AND GASKETED SUITABLE FOR CORROSIVE LOCATIONS. EXIT SIGN INPUT SHALL OPERATE AT 120 VOLT.	HOLOPHANE DELEON HD LIGHTALARMS SEVERE XVHZ OR EQUAL
F3A	INDUSTRIAL EMERGENCY EXIT SIGN WITH NICKEL CADMIUM BATTERY BACKUP, AND RED LED LIGHTS. SIGNS SHALL BE WALL MOUNTED, SINGLE OR DOUBLE FACE, ENCLOSED AND GASKETED SUITABLE FOR CLASS I, DIVISIONS 1 HAZARDOUS LOCATIONS. EXIT SIGN INPUT SHALL OPERATE AT 120 VOLT.	HOLOPHANE HDX SERIES CRESCENT HIGH LITES HEX SERIES OR EQUAL
T1B	18 WATT RECESSED LED 2 FOOT BY 2 FOOT TROFFER LIGHT FIXTURE HAVING COLD ROLLED STEEL HOUSING WITH WHITE PAINTED FINISH. MINIMUM 2,000 LUMEN OUTPUT AT 4000K COLOR TEMPERATURE. FIXTURE SHALL HAVE 120-277VAC OPERATING VOLTAGE. FIXTURE SHALL HAVE INTEGRAL DRIVER AND SHALL BE UL OR CSA CERTIFIED TO MEET U.S. STANDARD, DLC LISTED, L80/60,000 HOURS AT MINIMUM. MINIMUM 5 YEAR WARRANTY INCLUDING LED BOARD AND DRIVER. ALL MOUNTING ACCESSORIES AND INCIDENTALS SHALL BE PROVIDED.	LITHONIA ALL COLUMBIA LIGHTING LCAT22 EATON METALUX
H1A	50 WATT LED WALLPACK FIXTURE WITH A MINIMUM LIGHT OUTPUT OF 3500 LUMENS. FIXTURE SHALL HAVE AN DIE-CAST ALUMINUM HOUSING AND BRONZE FINISH. FIXTURE SHALL HAVE A INTEGRAL DRIVER AND HEAT SINK. FIXTURE COLOR TEMPERATURE SHALL BE BETWEEN 3500K AND 4000K. FIXTURE SHALL BE ENCLOSED, SUITABLE FOR WET LOCATIONS. FIXTURE SHALL HAVE AN IP66 RATING. FIXTURE SHALL OPERATE AT 120 VOLT AND SHALL BE PROVIDED WITH AN INTEGRAL PHOTO CELL.	PHILIPS GARDCO 120 LINE LED COPPER CROSSTOUR MAXX LED OR EQUAL



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COMPREHENSIVE UPGRADE

ARCADIS PROJ. NO. 06532002.0000

NO.	DATE	ISSUED FOR	BY
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DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: E-6

DESIGNED BY: V.PANEGAL

DRAWN BY: V.PANEGAL

CHECKED BY: G.MOORE

SHEET TITLE

ELECTRICAL

LIGHTING PLAN II,
LIGHTING FIXTURES AND
PANEL SCHEDULE

SCALE: AS SHOWN

E-6

SHEET 64 OF 69



NO.	DATE	ISSUED FOR	BY

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DATE: SEPTEMBER 2017

PROJECT NO.: 06532002.0000

FILE NAME: E-7DESIGNED BY: W.JUNG

RAWN BY: W.JUNG

CHECKED BY: G.MOOR

SHEET TITLE

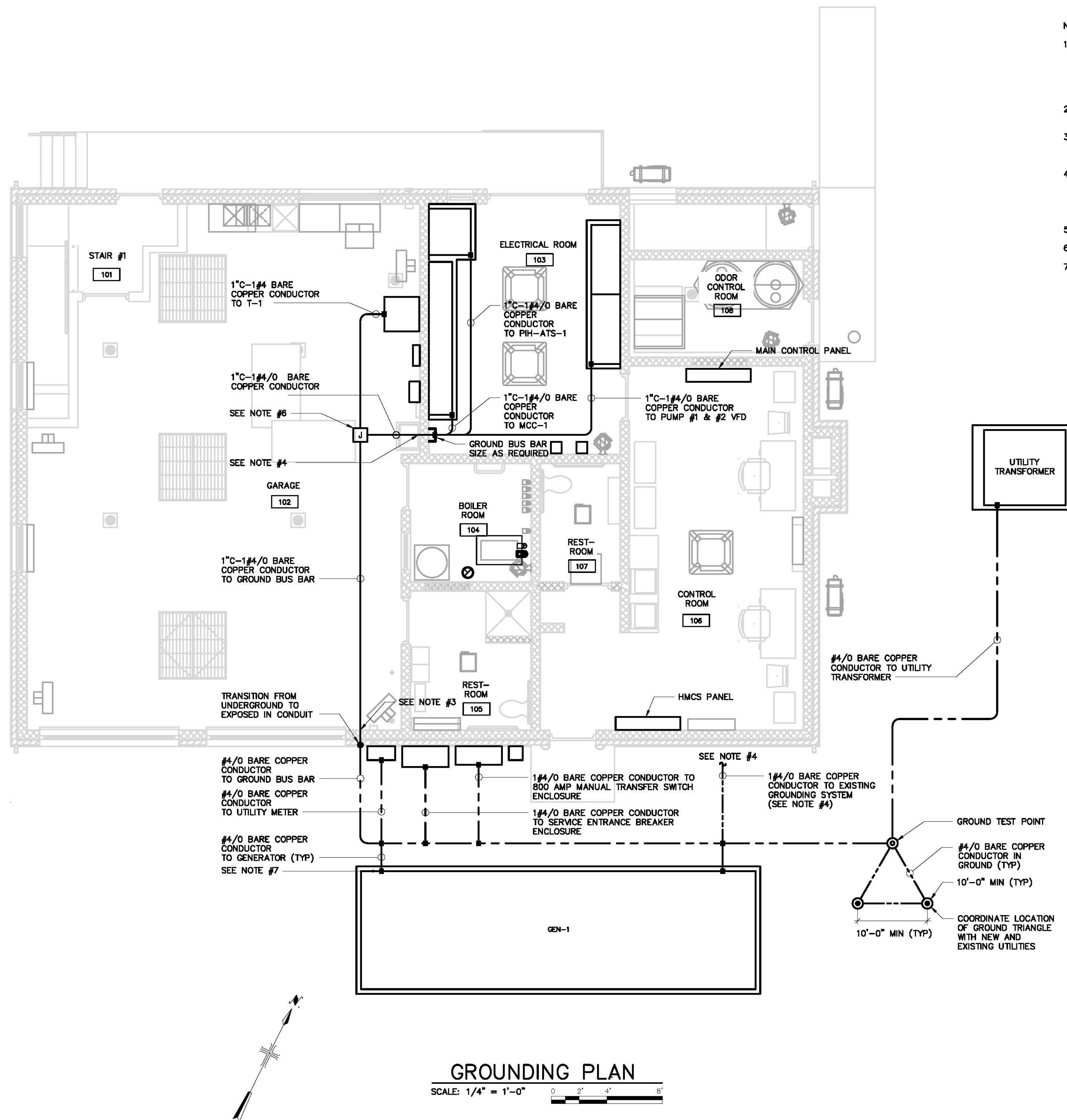
ELECTRICAL

GROUNDING PLAN

SALE: AS SHOWN

E-7

SHEET 65 OF 69



GROUNDING PLAN

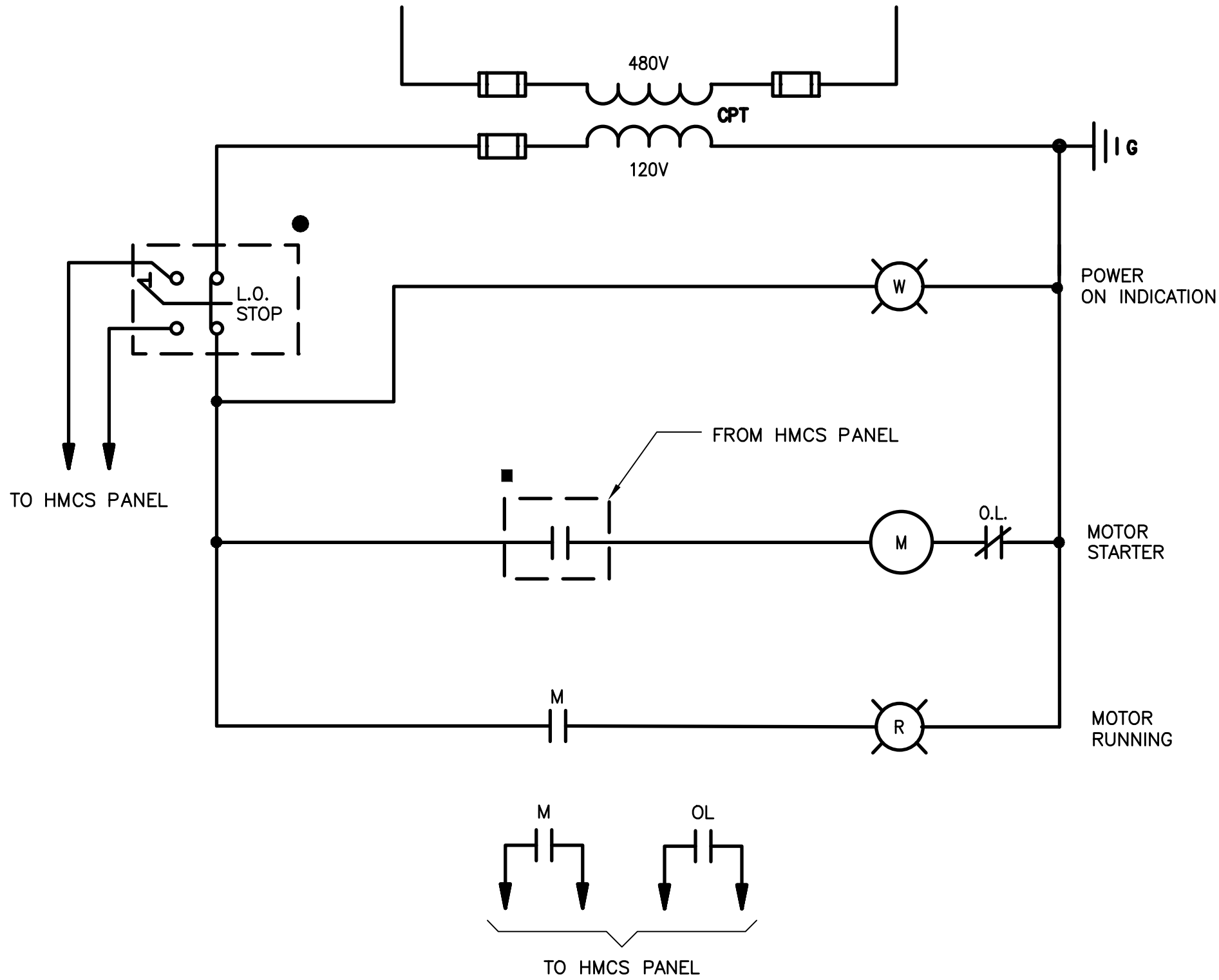
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CKT NO.	TRIP AMP S	DESCRIPTION OF LOAD	LOAD KVA	KVA PER PHASE			LOAD KVA	DESCRIPTION OF LOAD	TRIP AMP S	CKT NO.
				A	B	C				
1	20 3P	EUH-1	1.67	3.0			1.33	HV-1	20 3P	2
3			1.67		3.0		1.33			4
5			1.67			3.0	1.33			6
7	20 3P	EUH-2	1.67	1.7			0.00	SPARE	20 3P	8
9			1.67		1.7		0.00			10
11			1.67			1.7	0.00			12
13	20 3P	EUH-3	1.67	1.7			0.00	SPARE	20 3P	14
15			1.67		1.7		0.00			16
17			1.67			1.7	0.00			18
19	20 3P	EUH-4	1.67	2.0			0.33	MOTORIZED HOIST #1	20 3P	20
21			1.67		2.0		0.33			22
23			1.67			2.0	0.33			24
25	20 3P	SPARE	0.00	0.3			0.33	MOTORIZED HOIST #2	20 3P	26
27			0.00		0.3		0.33			28
29			0.00			0.3	0.33			30
31	20 3P	SPARE	0.00	0.3			0.33	MOTORIZED HOIST #3	20 3P	32
33			0.00		0.3		0.33			34
35			0.00			0.3	0.33			36
POWER PANEL : PP-1 LOCATION :GARAGE 102			TOTAL KVA		9.0	9.0	9.0	SERVICE CHARACTERISTICS: 480 VOLT – 3 PHASE – 3 WIRE – 60 HZ PROVIDE 225AF/225AT MAIN BREAKER & GROUND BUS 65,000 AMP RMS SYM BRACING		
			GRAND CONNECTED TOTAL KVA		27.0					

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	KVA PER PHASE			LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
				A	B	C				
1	20	LTG – DRY WELL AREA	0.35	1.3			0.90	RECEP – DRY & WET WELL AREA	20	2
3	20	LTG – DRY WELL AREA	0.17		0.4		0.27	LTG – WET WELL AREA & STAIR #2	20	4
5	20	LTG – GARAGE & BOILER ROOM	0.26			0.8	0.54	RECEP – GARAGE	20	6
7	20	LTG – GARAGE, STAIR #1 & RESTROOM 105	0.29	0.8			0.54	RECEP – GARAGE	20	8
9	20	LTG – ELECTRICAL ROOM	0.06		0.4		0.36	RECEP – BOILER RM & REST RM 105	20	10
11	20	LTG – ELECTRICAL ROOM	0.03			0.2	0.18	RECEP – ELECTRICAL ROOM	20	12
13	20	LTG – ODOR CONTROL ROOM	0.03	0.2			0.18	RECEP – ODOR CONTROL ROOM	20	14
15	20	LTG – CONTROL ROOM & RESTROOM 107	0.10		0.5		0.36	RECEP – CONT. RM & REST RM 107	20	16
17	20	LTG – CONTROL ROOM	0.10			0.5	0.36	RECEP – CONTROL ROOM	20	18
19	20	LTG – EXTERIOR	0.33	0.3			0.00	SPARE	20	20
21	20	SPARE	0.00		0.0		0.00	SPARE	20	22
23	20	MASTER CONTROL PANEL	1.00			1.0	0.00	SPARE	20	24
25	20	SPARE	0.50	0.7			0.24	FSL–032, FSL–056	20	26
27	20	SPARE	0.50		0.7		0.24	FSL–044, FSL–068	20	28
29	20	EF–7	0.05			0.2	0.10	FIT–076	20	30
31	20	EF–3, EF–4	0.10	2.6			2.50	ACCU–1	30 2P	32
33	20	HUH–1 THRU 4	0.25		2.8		2.50		34	
35	20	HUH–5 THROU 6	0.25			2.8	2.50	ACCU–2	30 2P	36
37	20	CUH–1, 2 & 3	0.30	2.8			2.50		38	
39	30	PUMP CONTROL PANEL	1.50		4.0		2.50	ACCU–3	30 2P	40
41	30	SUMP PUMP CONTROL PANEL	0.60			3.1	2.50		42	
43	15 2P	EYEWASH HEAT TRACE	0.15	3.7			3.50	GENERATOR MISC POWER	40 2P	44
45			0.15		3.7		3.50		46	
47	20	SPARE	0.00			0.0	0.00	SPARE	20	48
49	20	SPARE	0.00	0.0			0.00	SPARE	20	50
51	20	SPARE	0.00		0.0		0.00	SPARE	20	52
53	20	SPARE	0.00			0.0	0.00	SPARE	20	54
55	20	SPARE	0.00	0.0			0.00	SPARE	20	56
57	20	SPARE	0.00		0.0		0.00	SPARE	20	58
59	20	SPARE	0.00			0.0	0.00	SPARE	20	60
LIGHTING PANEL : LP–1 LOCATION : GARAGE 102		TOTAL KVA		12.4	12.5	8.5	SERVICE CHARACTERISTICS: 208/120 VOLT – 3 PHASE – 4 WIRE – 60 HZ PROVIDE 100AF/100AT MAIN BREAKER & SOLID NEUTRAL & GROUND BUS			
		GRAND CONNECTED TOTAL KVA		33.3						

* PROVIDE GFCI BREAKER



TYPICAL HVAC CONTROL SCHEMATIC



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DATE: SEPTEMBER 2017
PROJECT NO.: 06532002.0000
FILE NAME: E-8
DESIGNED BY: W.JUNG
DRAWN BY: W.JUNG
CHECKED BY: G.MOORE

SHEET TITLE

ELECTRICAL

PANEL SCHEDULE
& CONTROL SCHEMATIC

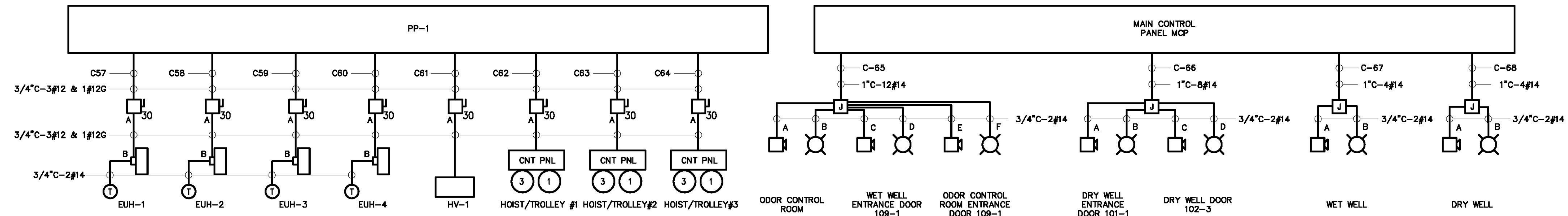
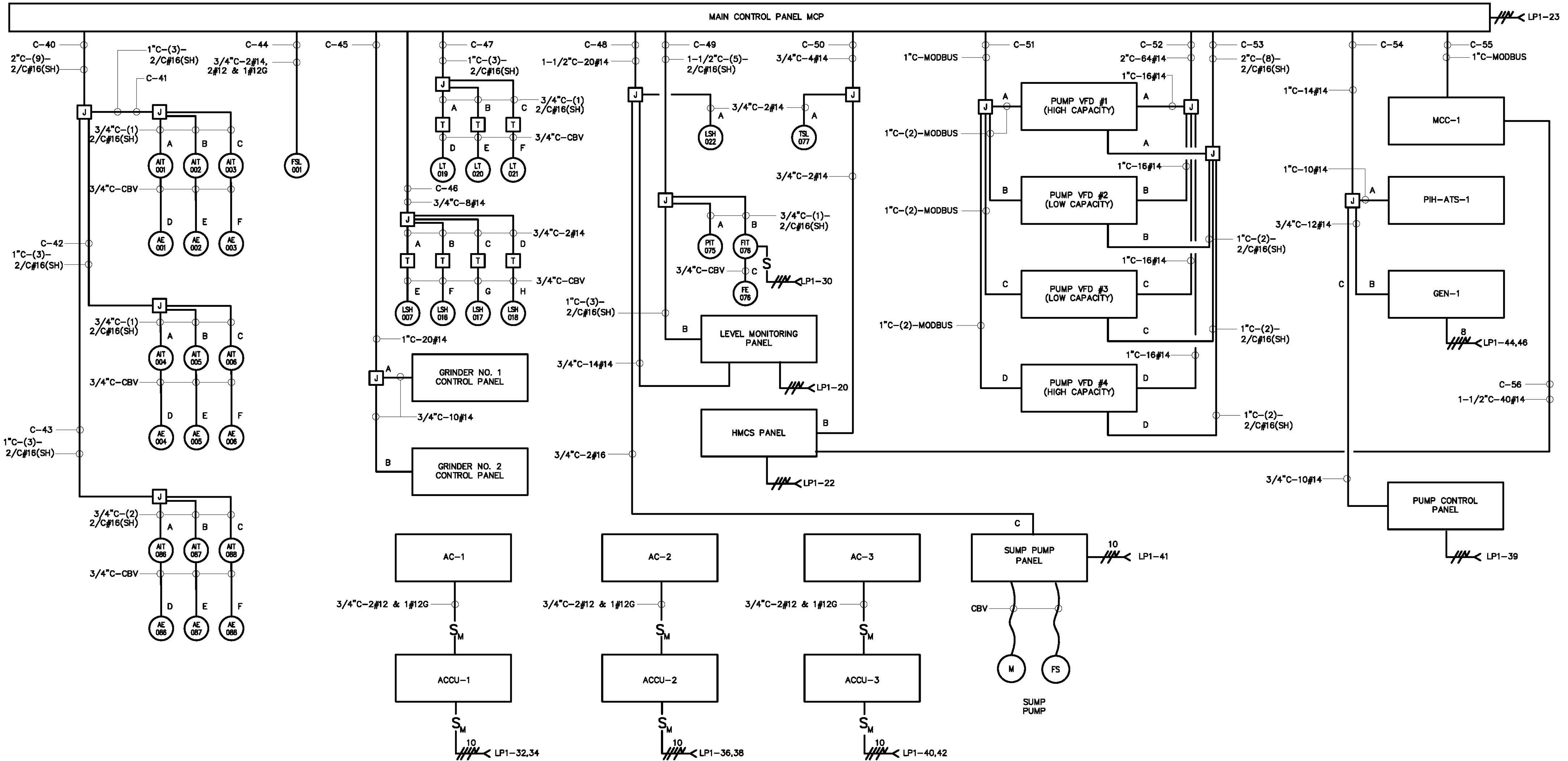
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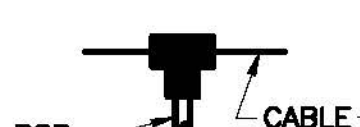
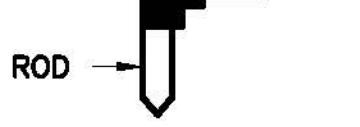
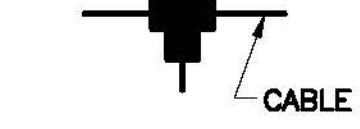
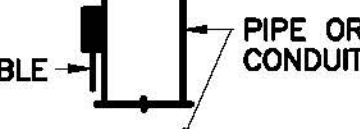



E-8

SHEET 66 OF 69

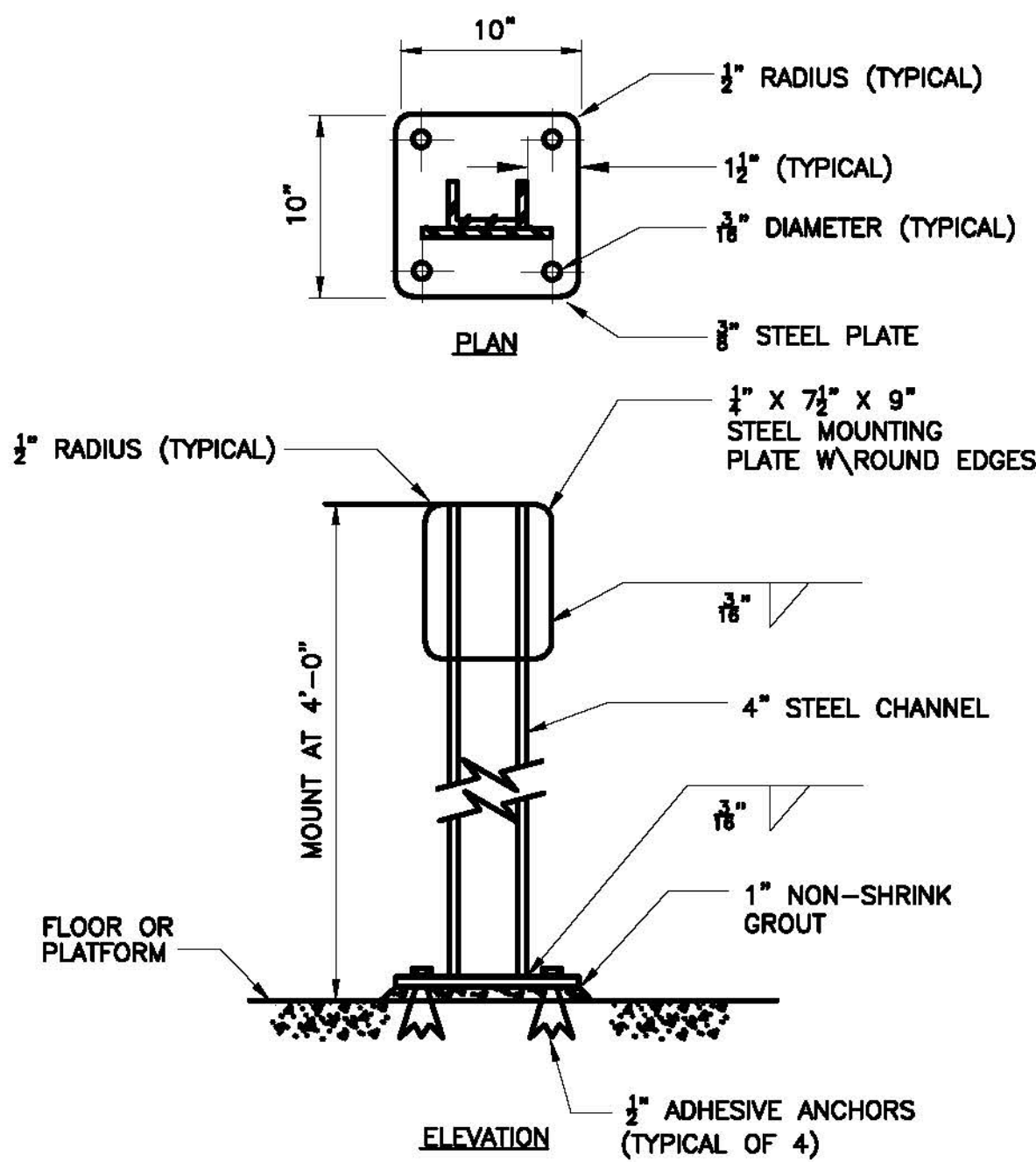
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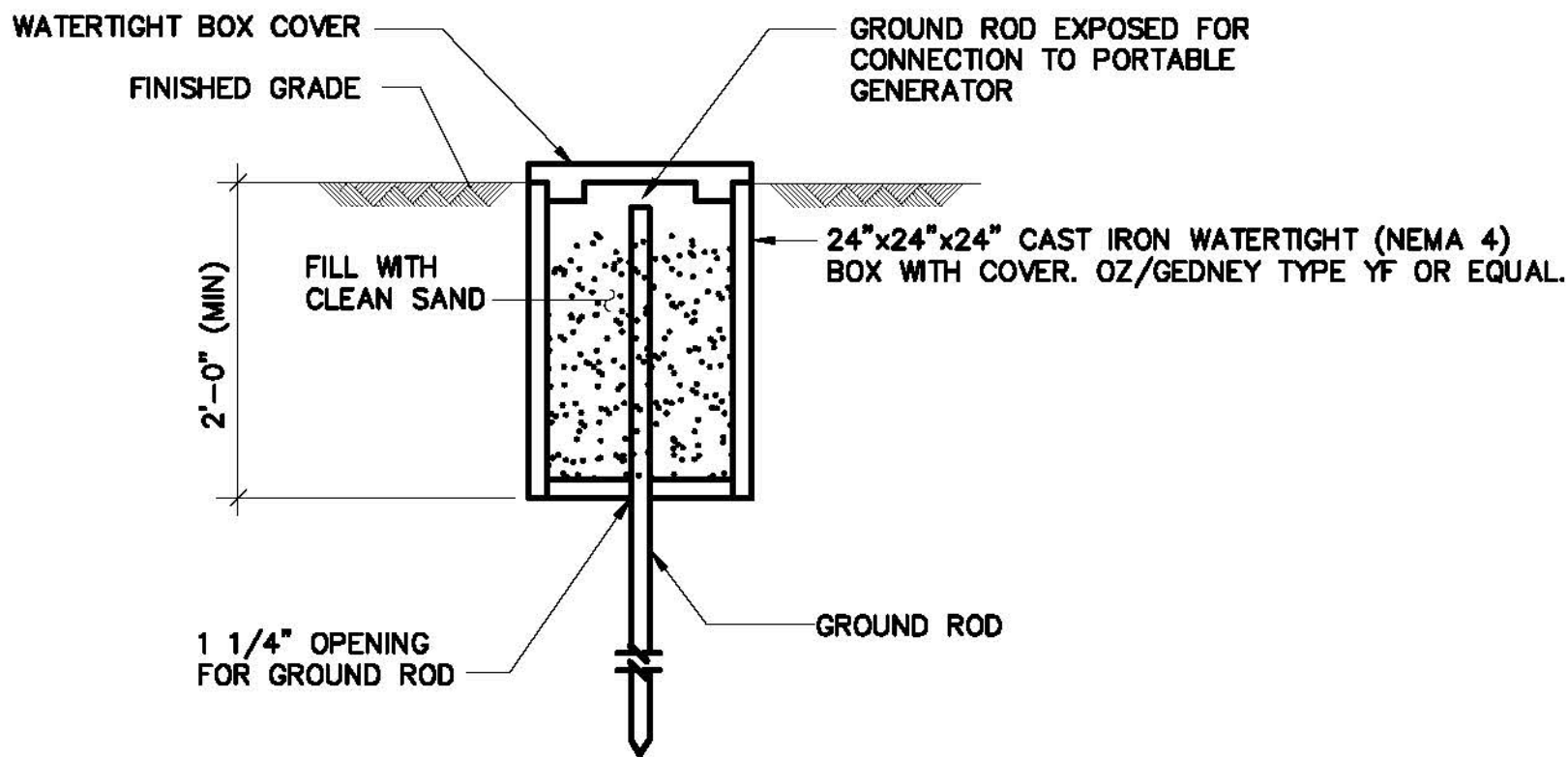
TYPE OF CONNECTION	BOLTED OR COMPRESSION		WELDED
	BURNDY CAT#	T&B CAT#	CADWELL CAT#
CABLE TO LUG 	YA	54000 SERIES	LA
CABLE TO ROD 	-	53000 SERIES	GT
ROD TO ROD 	GAR	-	GR
CABLE TO CABLE 	GX	53000 SERIES	TV OR TA
CABLE TO PIPE 	-	-	HA OR VS
CABLE TO PIPE OR CONDUIT 	GAR OR GD	3900 SERIES	-
CABLE TO FLAT SURFACE 	GB	-	HA OR HS
BRAID TO PIPE 	GG	-	-

GROUNDING CONNECTIONS



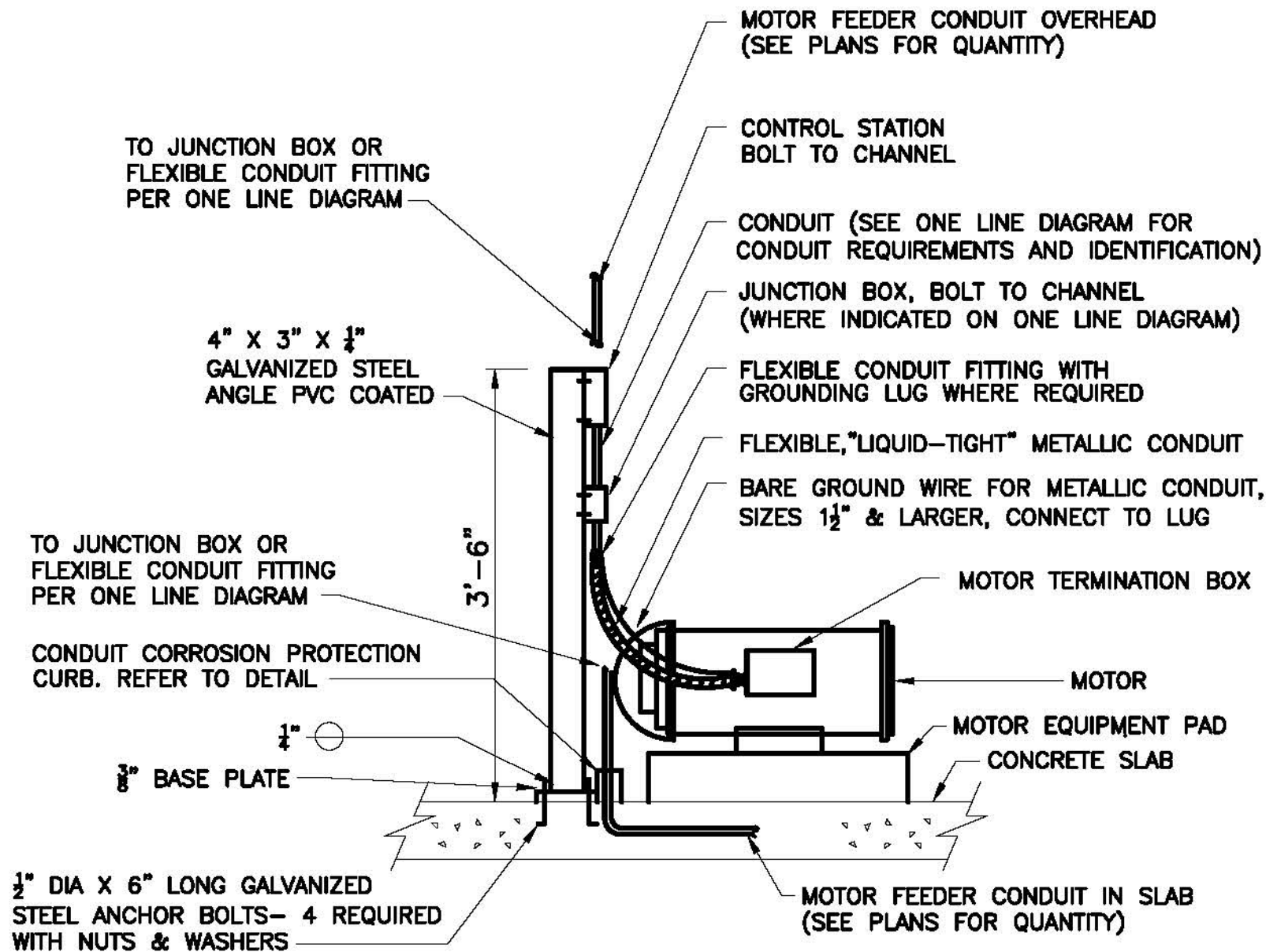
EQUIPMENT MOUNTING
PEDESTAL DETAIL

NOTE:
1. USE WASHERS AND SPLIT LOCK-WASHERS UNDER ALL NUTS.

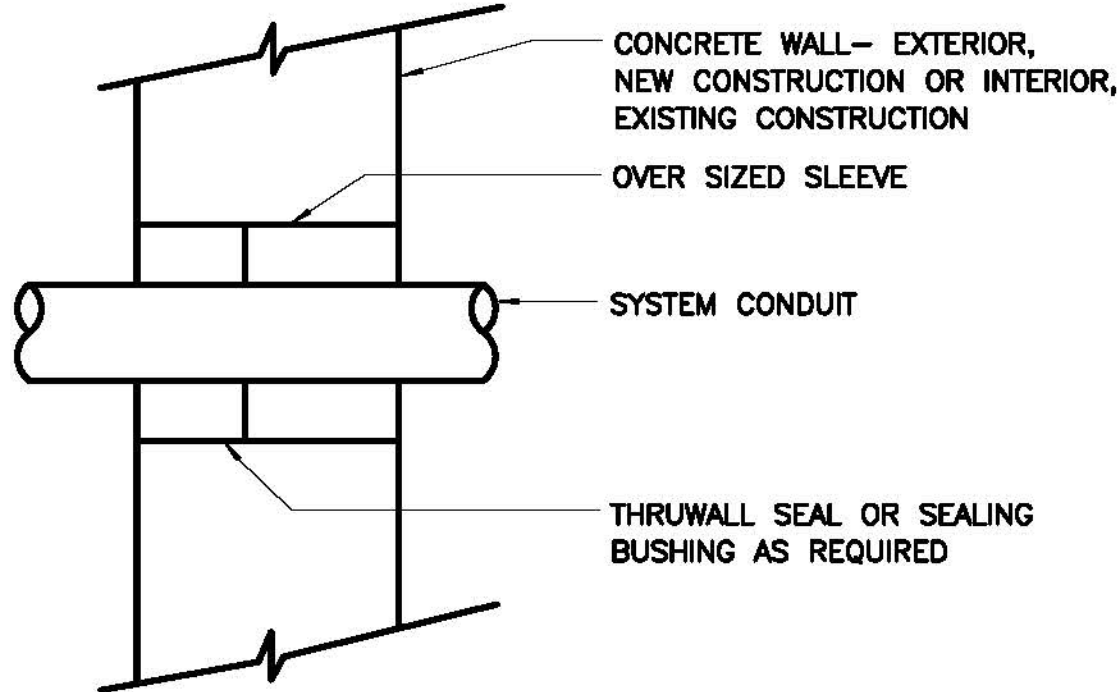


EXTERIOR GROUND CONNECTION POINT

NOTES:
1. BOX SHALL BE RATED FOR H-20 LOADING



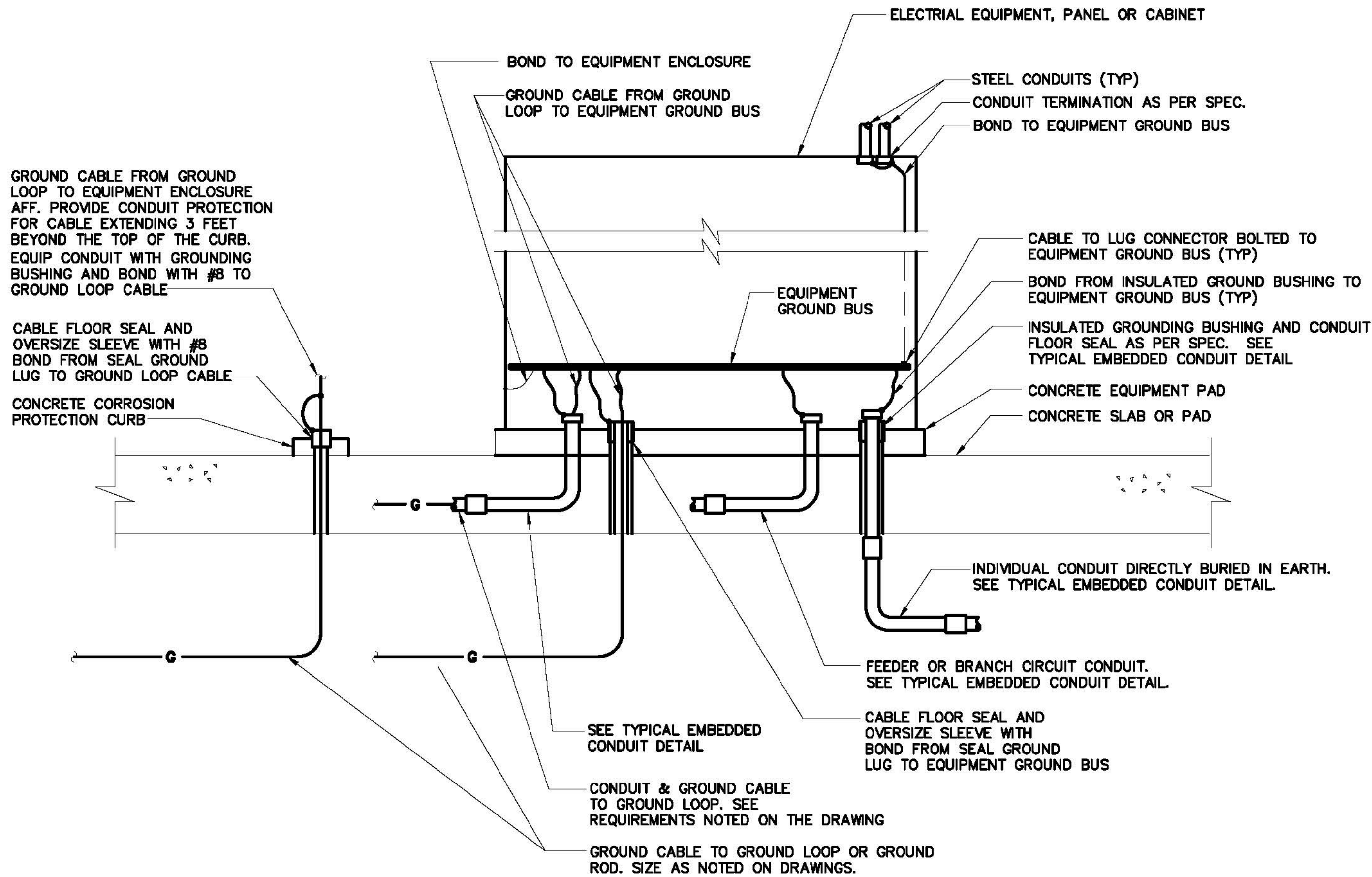
ELECTRIC MOTOR TERMINATION
AND DEVICE MOUNTING DETAIL



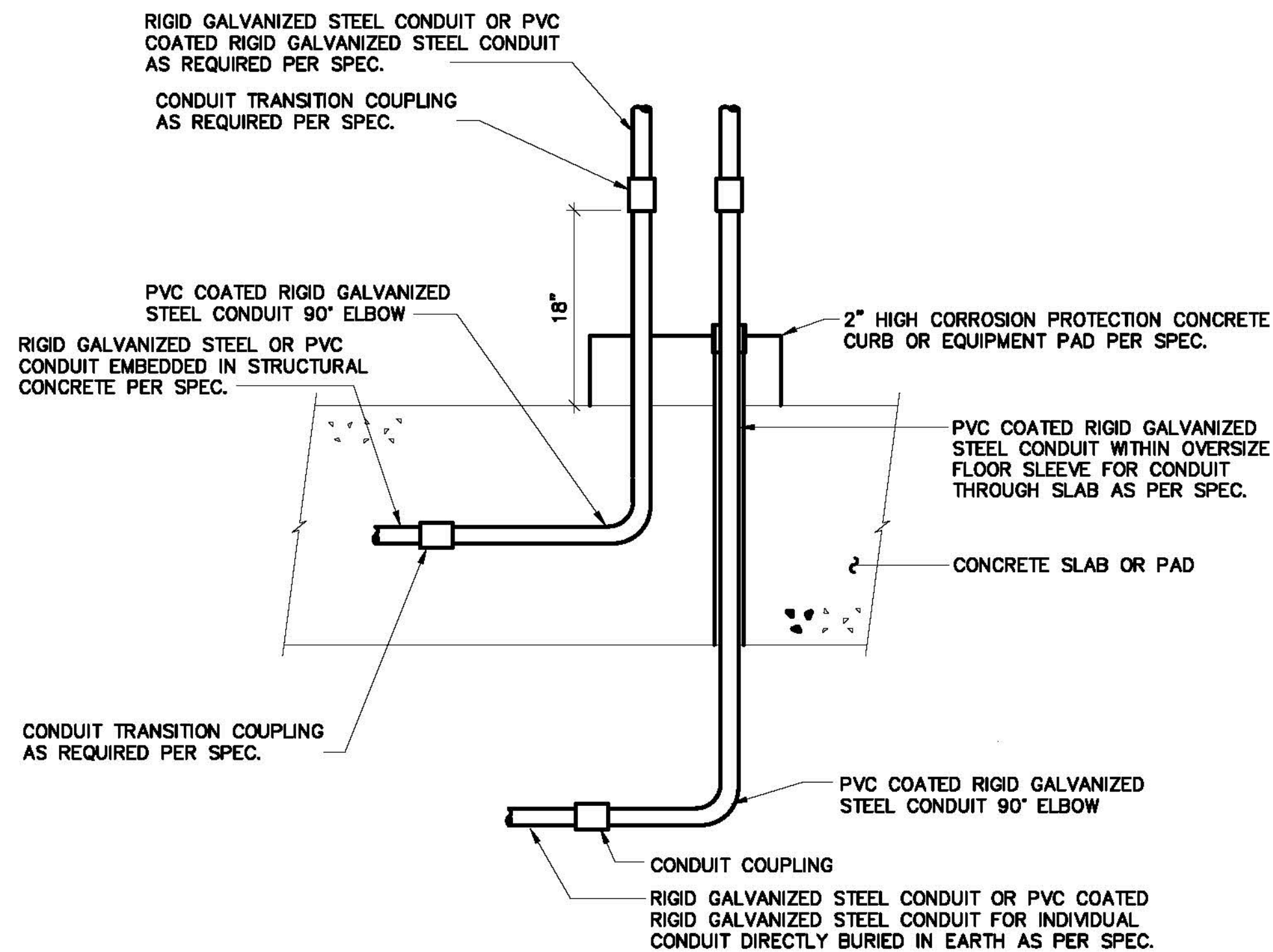
WALL CORING
DETAIL



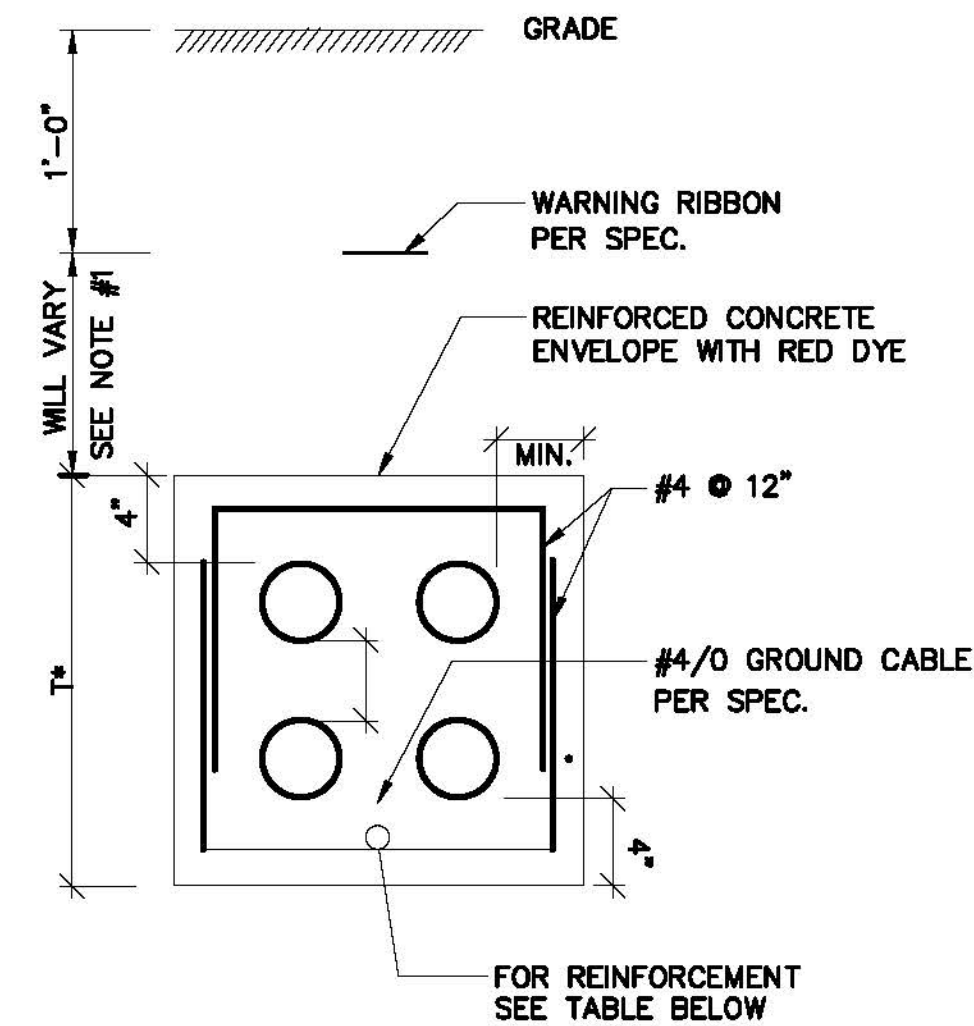
User: SCURTIS Spec: AUS-NC500D File: I:\ACAD\PROJ\06532002.0000\SHEET\ELECTRICAL\E-11.DWG Scale: 1:1 Saved Date: 9/27/2017 Time: 15:06 Plot Date: 9/27/2017 15:30 : Layout LAYOUT1



TYPICAL EQUIPMENT GROUNDING DETAIL



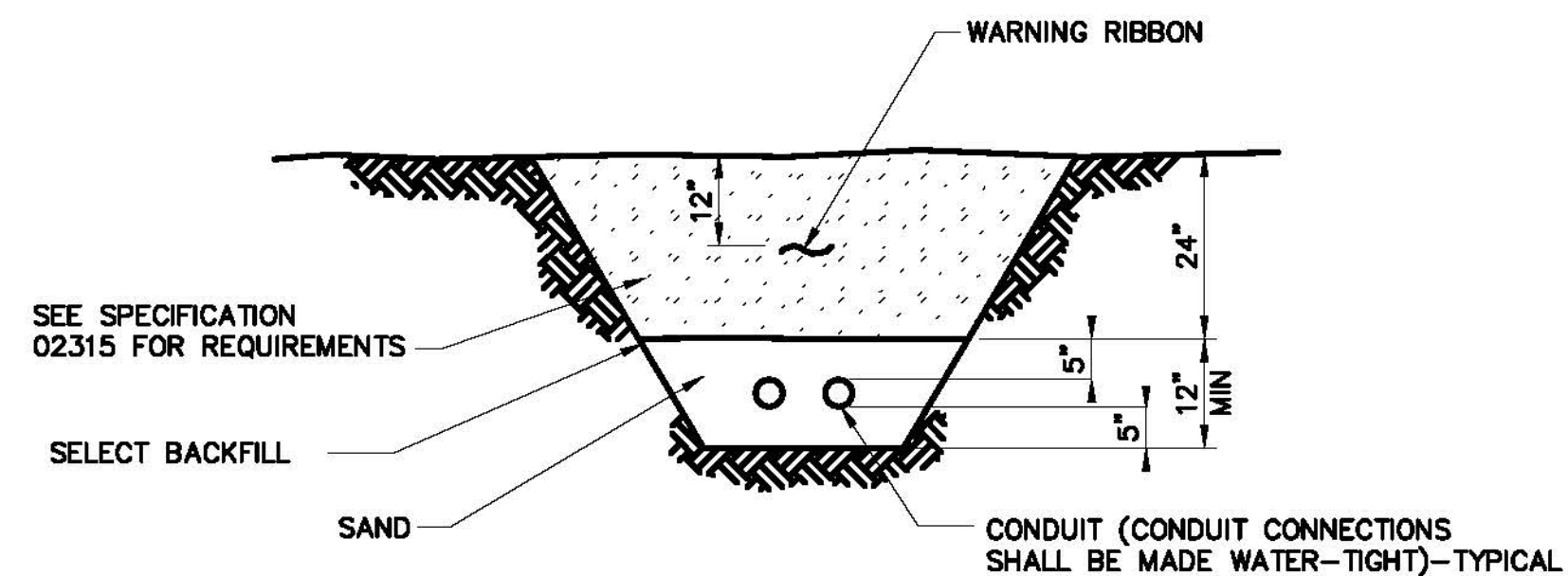
TYPICAL EMBEDDED CONDUIT DETAIL AND CONDUIT CORROSION PROTECTION DETAIL



REINFORCEMENT TABLE		
DUCT BANK THICKNESS SEE NOTE #2	UNDER ROADWAY*	AT NON-TRAFFIC AREA
T < 18"	#3 @ 12" (MIN) ALL AROUND	#6 @ 12" ALL AROUND
T ≥ 18"	#7 @ 12" (MIN) ALL AROUND	#5 @ 12" ALL AROUND

- NOTES:
1. DUCT BANK DIMENSION (1'-0" MINIMUM) VARIES TO CLEAR OTHER UNDERGROUND SYSTEMS AND TO MAINTAIN SLOPE AS REQUIRED.
 2. DUCT BANK DEPTH AND WIDTH VARIES, REFER TO PLAN DRAWINGS FOR SIZES.

TYPICAL DUCT BANK SECTION



TYPICAL DIRECT BURIED CONDUIT DETAIL

