

LITTLETON WATER DEPARTMENT
TOWN OF LITTLETON, MASSACHUSETTS
**LITTLETON WATER RESOURCE
RECOVERY FACILITY**

IFB-2022-LITTLETON WRRF

GENERAL MANAGER

NICK LAWLER

BOARD OF WATER COMMISSIONERS

JAMES KARR, CHAIRMAN
SCOTT LARSEN
IVAN PAGACIK
DICK TAYLOR
BRUCE TRUMBULL

WATER & WASTEWATER SUPERINTENDENT

COREY GODFREY



APRIL 2022

**SITE PLAN REVIEW
NOT FOR CONSTRUCTION**

**CDM
Smith**
BOSTON, MASSACHUSETTS

Water

Environment

Transportation

Energy

Facilities

CIVIL/SITE ABBREVIATIONS

<u>SYMBOL</u>	<u>DESCRIPTION</u>
TC	TOP OF CURB
BC	BOTTOM OF CURB
BW	BOTTOM OF WALL
TW	TOP OF WALL
CB	CATCH BASIN
CLF	CHAIN LINK FENCE
CS	CRUSHED STONE
D-PVC	POLYVINYL CHLORIDE DRAIN
DMH	DRAIN MANHOLE
FES	FLARED END SECTION
MH	MANHOLE
TS	TOP OF STEP/SLAB
BS	BOTTOM OF STEP
RCP	REINFORCED CONCRETE PIPE
MJ	MECHANICAL JOINT
DI	DUCTILE IRON
FFE	FINISHED FLOOR ELEVATION
DN	DOWN
VGC	VERTICAL GRANITE CURB
UP	UTILITY POLE
PVC	POLYVINYL CHLORIDE
INV. EL.	INVERT ELEVATION
S	SLOPE
GV	GATE VALVE
EFF	EFFLUENT

GENERAL NOTES

1. BEFORE CONSTRUCTION, ALL UTILITIES, PUBLIC AND PRIVATE MUST BE NOTIFIED (SEE MASSACHUSETTS GENERAL LAWS, CHAPTER 82 SECTION 40.) CALL "DIG SAFE" 1 (888) 344-7233 [HTTP://WWW.DIGSAFE.COM](http://WWW.DIGSAFE.COM).
2. FOR BORING INFORMATION AND LOCATIONS SEE EXISTING CONDITIONS DRAWINGS AND APPENDIX TO SPECIFICATIONS.
3. THE CONTRACTOR SHALL PREPARE AN EROSION AND SEDIMENT CONTROL PLAN AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AS SPECIFIED TO PROTECT THE SITES FROM EROSION AND PREVENT THE MOVEMENT OF SEDIMENT AND DEBRIS.
4. ALL AREAS OUTSIDE THE LIMIT OF DISTURBANCE SHALL BE PROTECTED AT ALL TIMES UNLESS OTHERWISE DIRECTED BY THE OWNER AND/OR ENGINEER.
5. ALL MATERIALS TO BE REMOVED WITHIN THE LIMIT OF DISTURBANCE SHALL BE REMOVED TO A LOCATION ARRANGED BY THE CONTRACTOR AND APPROVED BY THE OWNER AND/OR ENGINEER. THE LOCATION OF STOCKPILED TOPSOIL SHALL BE IN AREAS APPROVED BY THE OWNER AND/OR ENGINEER.
6. CONTRACTOR SHALL PROVIDE SITE SECURITY THROUGHOUT CONSTRUCTION PERIOD.
7. STRIP EXISTING VEGETATION AND 6" LAYER TOPSOIL UNLESS OTHERWISE SHOWN TO BE PROTECTED WITHIN LIMIT OF DISTURBANCE.
8. WHEN EXCAVATING AROUND EXISTING STRUCTURES, EXCAVATE SOILS UNIFORMLY AROUND THE STRUCTURE UNLESS INDICATED OTHERWISE. CONTROL EXCAVATION LEVELS AROUND THE ENTIRE PERIMETER OF THE STRUCTURE SUCH THAT THE GRADE DIFFERENTIAL DOES NOT EXCEED 2 FT.
9. WHEN BACKFILLING AROUND STRUCTURES, BRING UP BACKFILL UNIFORMLY AROUND STRUCTURE UNLESS INDICATED OTHERWISE. CONTROL BACKFILL LEVELS AROUND THE ENTIRE PERIMETER OF THE STRUCTURE SUCH THAT THE GRADE DIFFERENTIAL DOES NOT EXCEED 2 FT.
10. GAS MAINS ARE ASSUMED TO HAVE THREE FEET OF COVER UNLESS SHOWN OTHERWISE. LOCAL WATER MAINS ARE ASSUMED TO HAVE 5 FEET OF COVER. IT IS NOT WARRANTED THAT ALL UTILITIES ARE SHOWN OR ARE SHOWN AT THE CORRECT ELEVATION.
11. ALL UNDERGROUND SERVICES TO HOUSES ARE NOT SHOWN.
12. BORING LOGS HAVE BEEN APPENDED TO THE SPECIFICATION DOCUMENTS. BORINGS ARE INCLUDED FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT BE SHOWN AT EXACT LOCATIONS.
13. LIMITS OF CLEARING AND GRUBBING ARE SHOWN ON SHEET C-3. SITE PREPARATION AND EROSION AND SEDIMENTATION CONTROL PLAN. CONTRACTOR SHALL MINIMIZE CLEARING AND GRUBBING AS MUCH AS POSSIBLE. ALL CROSS-COUNTRY AREAS SHALL BE LOAMED AND SEEDED OR SODDED TO THE LIMITS DISTURBED BY CONSTRUCTION UNLESS OTHERWISE NOTED.
14. CONTRACTOR SHALL NOT DISTURB ANY LAND OUTSIDE THE LIMITS OF WORK.
15. WHEN THE HORIZONTAL SEPARATION BETWEEN THE NEW SEWER AND EXISTING OR RELOCATED WATER MAIN IS LESS THAN 10-FT AND THE VERTICAL SEPARATION IS LESS THAN 18-IN THE NEW SEWER SHALL BE CONSTRUCTED OF RESTRAINED MJ DI OR CONCRETE ENCASED PIPE FOR A MINIMUM OF 10-FT BEYOND WHERE THE SPACING IS LESS THAN 10-FT HORIZONTAL AND 18-IN VERTICAL.
16. IF A WATER MAIN CROSSES UNDER THE NEW SEWER, BOTH PIPES SHALL BE RESTRAINED MJ DI OR CONCRETE ENCASED FOR A MINIMUM OF 10-FT TO EITHER SIDE OF THE RESPECTIVE CENTER LINES. DUCTILE IRON PIPE SHALL BE PAID UNDER THE RESPECTIVE PIPE ITEMS. CONCRETE ENCASEMENT SHALL BE PAID UNDER MISCELLANEOUS CONCRETE ITEM.
17. IF NECESSARY TO WORK IN LIVE SEWER MANHOLES CONTRACTOR SHALL FOLLOW ALL FEDERAL, STATE AND LOCAL REQUIREMENTS FOR SAFETY WHEN IN CONFINED SPACES. THE CONTRACTOR IS ALSO REFERRED TO RECOMMENDATIONS IN THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH PUBLICATION NO. 80-106, "WORKING IN CONFINED SPACES".
18. CONTRACTOR TO MAINTAIN FLOW IN EXISTING DRAINS AT ALL TIMES.

LAYOUT NOTES:

1. FOR LAYOUT PURPOSES AND TO ESTABLISH THE COORDINATE SYSTEM SEE SURVEY NOTES G-1.
2. CONTRACTOR SHALL VERIFY ALL PROPERTY AND SURVEY INFORMATION.
3. CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY AND PROTECT ALL ON-SITE STRUCTURES AND VEGETATION TO BE RETAINED ON THE SITE THROUGHOUT THE CONSTRUCTION PROJECT.
4. CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS AND ALL UTILITY SERVICES THROUGHOUT THE DURATION OF THE CONTRACT, UNLESS OTHERWISE SPECIFIED.
5. LOCATIONS OF BURIED UTILITIES, VAULTS AND CONCRETE PADS ARE APPROXIMATE ONLY. FINAL LOCATIONS SHALL BE DETERMINED IN THE FIELD AFTER STAKING BY THE CONTRACTOR BASED ON ACTUAL SITE CONDITIONS AS APPROVED BY THE OWNER AND/OR ENGINEER.
6. ALL DISTURBED AREAS NOT COVERED WITH PAVEMENT, PADS, CRUSHED STONE, SOD, OR STRUCTURES SHALL RECEIVE 6" LAYER OF LOAM AND SEED AS SPECIFIED, UNLESS NOTED OTHERWISE.
7. DIMENSIONS FOR STRUCTURES ARE TO OUTSIDE FACE OF WALL. DIMENSIONS TO CONCRETE PADS ARE TO EDGE OF PAD. DIMENSIONS TO FENCES AND GATES ARE ON-CENTER.
8. ALL ITEMS TO BE REMOVED, UNLESS OTHERWISE INDICATED ON THE DRAWINGS, SHALL BE DISPOSED OFF SITE IN A LEGAL MANNER.

YARD PIPING NOTES

1. THE LOCATION OF EXISTING UTILITIES AND OTHER UNDERGROUND STRUCTURES SHOWN ON THE DRAWINGS IS APPROXIMATE, AND THEIR ACTUAL LOCATIONS MAY VARY FROM THAT SHOWN. FURTHER, IT IS NOT WARRANTED THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND FEATURES THAT MAY BE AFFECTED BY THE WORK.
2. NEW WATER MAINS SHALL HAVE A MINIMUM COVER OF 5 FEET UNLESS OTHERWISE INDICATED AND SHALL PASS UNDER EXISTING UTILITIES AS NECESSARY TO MEET THIS REQUIREMENT.
3. ALL NEW WATER PIPES, INCLUDING FIRE PROTECTION LINES, AND OTHER PRESSURE PIPES INCLUDING FORCE MAINS, SHALL HAVE RESTRAINED JOINTS AS SPECIFIED.
4. TEST PITS SHALL BE DUG TO LOCATE EXISTING PIPES TO WHICH NEW PIPES ARE TO BE CONNECTED, AND WHERE NECESSARY TO DETERMINE EXACT LOCATIONS OF EXISTING UTILITIES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL FINAL CONNECTIONS TO PIPES.
6. ABANDONED PIPES, VALVES AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION MAY BE REMOVED AS REQUIRED. PIPES LEFT IN PLACE SHALL BE PLUGGED AND ABANDONED AS SPECIFIED AND AS APPROVED BY THE ENGINEER.
7. WALKWAYS AND PAVEMENTS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED WITHOUT ADDITIONAL EXPENSE BY OWNER.

GRADING NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING GRADES AND LOCATION OF UTILITIES. MAJOR DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
2. TO ESTABLISH PROPER GRADES, CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF GRADE STAKES. THE NUMBER AND LOCATION SHALL BE DETERMINED IN THE FIELD AND APPROVED BY THE ENGINEER.
3. ALL AREAS DISTURBED BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE IN A MANNER APPROVED BY THE ENGINEER.

DESIGNED BY: M.DODSON
 DRAWN BY: J. BRONENKANT
 SHEET CHK'D BY: M.DODSON
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: APRIL 2022

CDM
Smith
 75 State Street, Suite 701
 Boston, MA 02109
 Tel: (617) 452-6000

REV. NO. DATE DRWN CHKD
 REMARKS

LITTLETON WATER DEPARTMENT
 LITTLETON WATER RESOURCE
 RECOVERY FACILITY

CIVIL GENERAL NOTES
 AND ABBREVIATIONS

PROJECT NO. 263387-261886
 FILE NAME: C025STPL.dwg
 SHEET NO.
 C-1

KING STREET

FLOODPLAIN ELEVATION 211

EXISTING BARN

BORING BH-02=217.5

house corner

EXISTING HOUSE

EXISTING POOL AND POOL HOUSE

PARCEL U36-7-0
BOOK/PAGE 02265/64

1" = 20'

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

4/12/22

DESIGNED BY: _____ M.DODSO
DRAWN BY: _____ J. BRONENKAN
SHEET CHK'D BY: _____ M.DODSO
CROSS CHK'D BY: _____
APPROVED BY: _____
DATE: _____ APRIL 202

The logo for CDM Smith. It features the letters 'CDM' in a large, bold, black sans-serif font. Below 'CDM', the word 'Smith' is written in a slightly smaller, bold, black sans-serif font. The 'h' in 'Smith' is stylized with a long, thin vertical stroke extending downwards, and a horizontal stroke that curves upwards and to the right from the middle of the 'h'.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	M.DODSO
DRAWN BY:	J. BRONENKAN
SHEET CHK'D BY:	M.DODSO
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	APRIL 202

The logo for CDM Smith. It features the letters 'CDM' in a large, bold, black sans-serif font, with 'Smith' in a slightly smaller but also bold black font directly below it. To the left of the logo, there is a vertical column of characters: 'N' on the top line, 'T' on the second line, 'N' on the third line, a short horizontal line on the fourth line, 'X' on the fifth line, and '2' on the bottom line. Below the logo is a horizontal line. Underneath this line, the address '75 State Street, Suite 701' is written in a black sans-serif font. Below the address, 'Boston, MA 02109' is written in a slightly smaller black font. At the bottom, the phone number 'Tel: (617) 452-6000' is written in a black font.

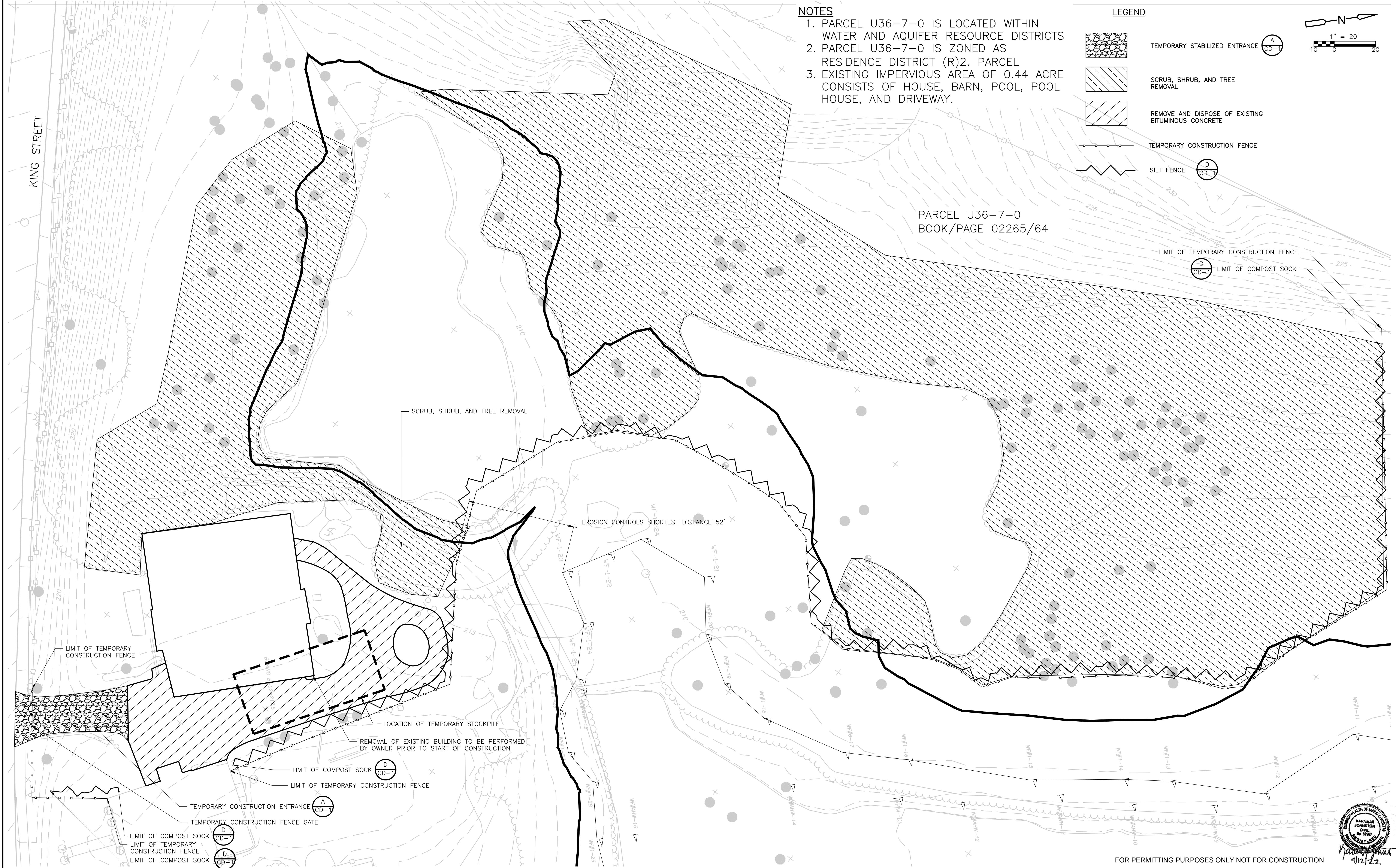
LITTLETON WATER DEPARTMENT

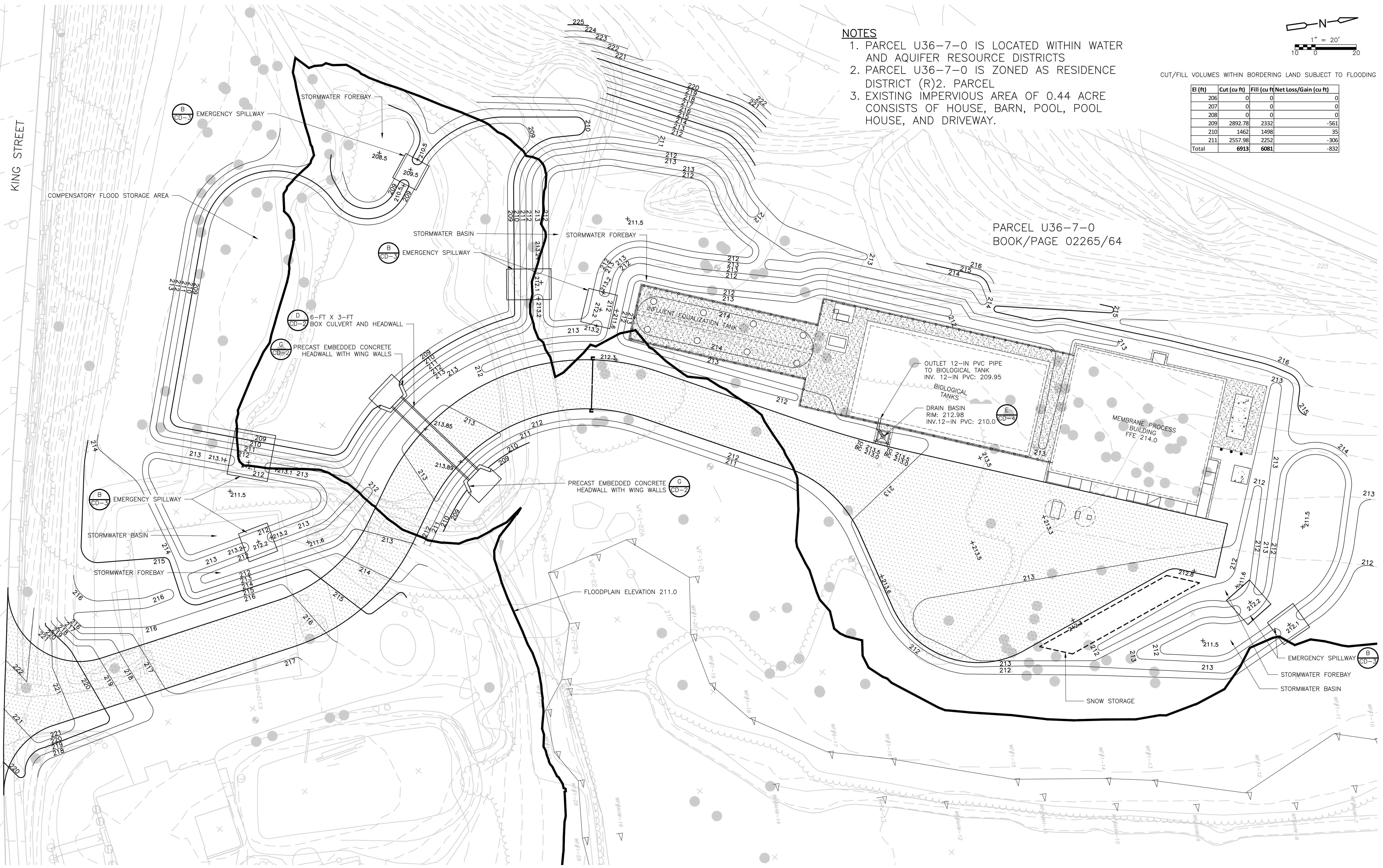
LITTLETON WATER RESOURCE RECOVERY FACILITY

CIVIL EXISTING CONDITIONS PLAN

PROJECT NO. 263387-261886
FILE NAME: C025STPL.dwg
SHEET NO.
C-2

90% SUBMITTAL - NOT FOR CONSTRUCTION





DESIGNED BY: M. DODSON
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: M. DODSON
CROSS CHK'D BY: _____
APPROVED BY: X
DATE: APRIL 2022

REV. NO. DATE DRWN CHKD

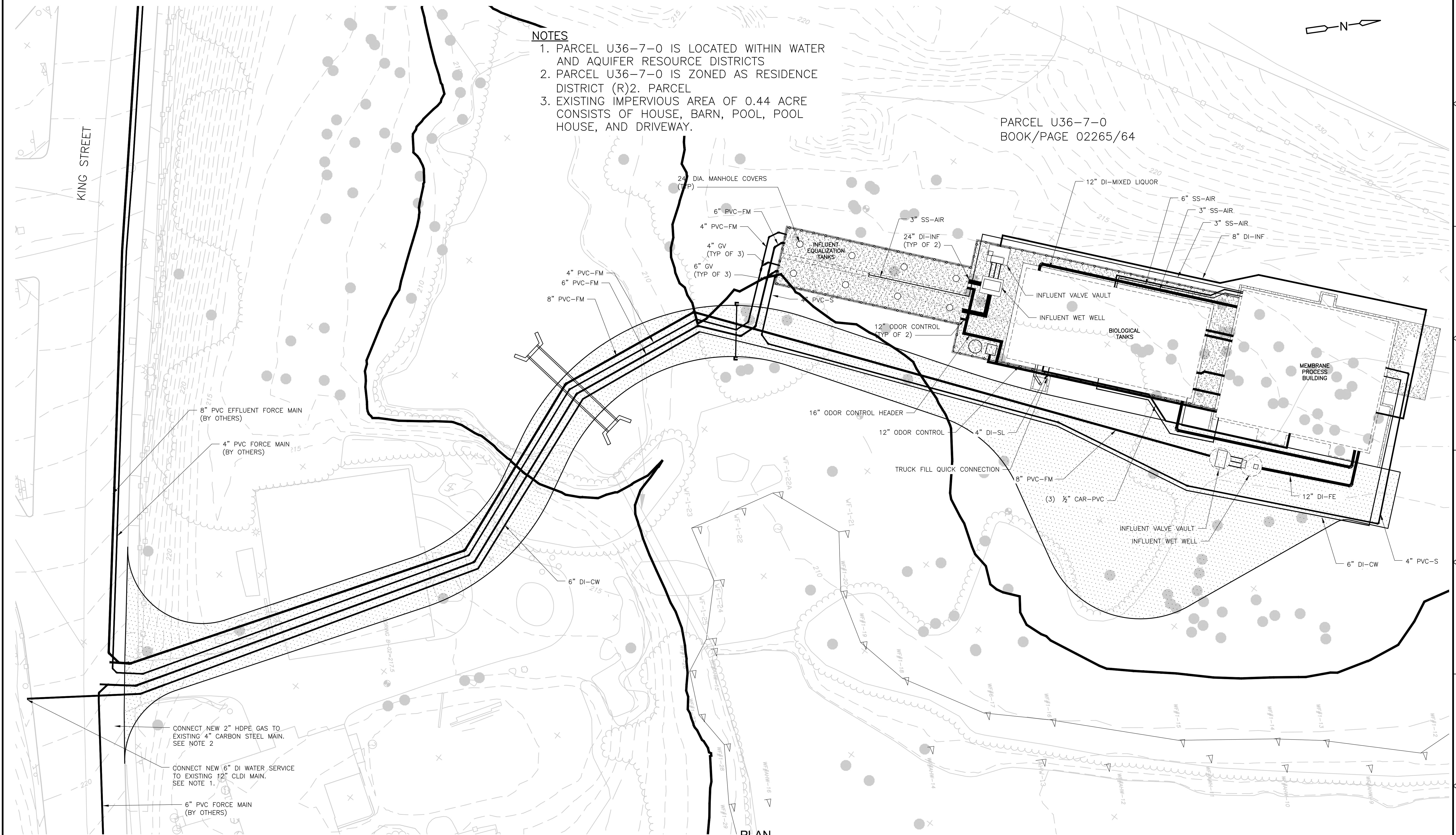
REMARKS

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LITTLETON WATER DEPARTMENT
LITTLETON WATER RESOURCE
RECOVERY FACILITY

CIVIL GRADING AND DRAINAGE PLAN

PROJECT NO. 263387-261886
FILE NAME: C005STPL
SHEET NO. C-5



DESIGNED BY:	W. LENGYEL
DRAWN BY:	S. ENGEL
sheet CHK'D BY:	
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	APRIL 2022

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REMARKS

LITTLETON WATER DEPARTMENT
LITTLETON WATER RESOURCE
RECOVERY FACILITY

PROJECT NO.	263387-261886
FILE NAME:	CO06YPP1
sheet NO.	C-6

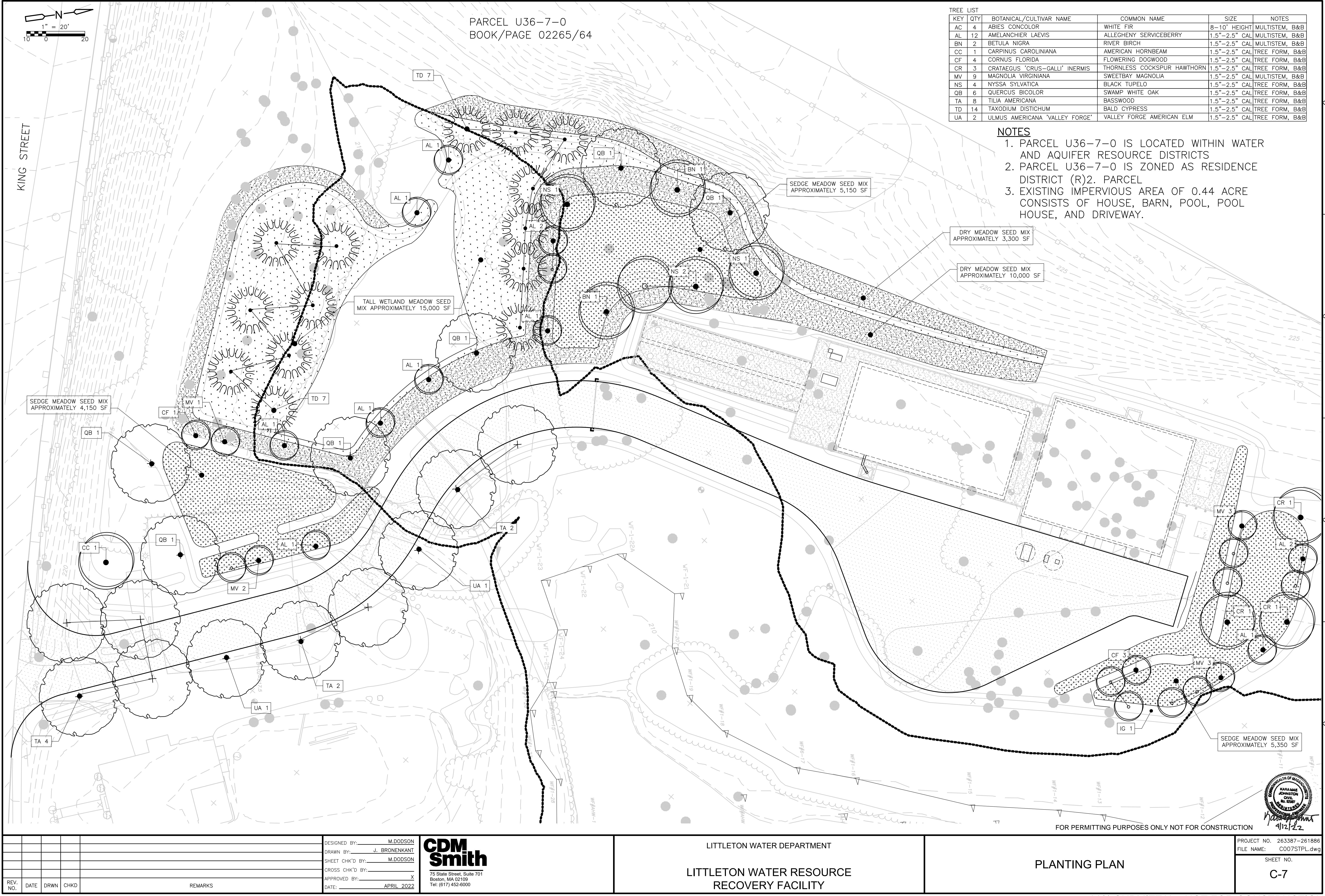
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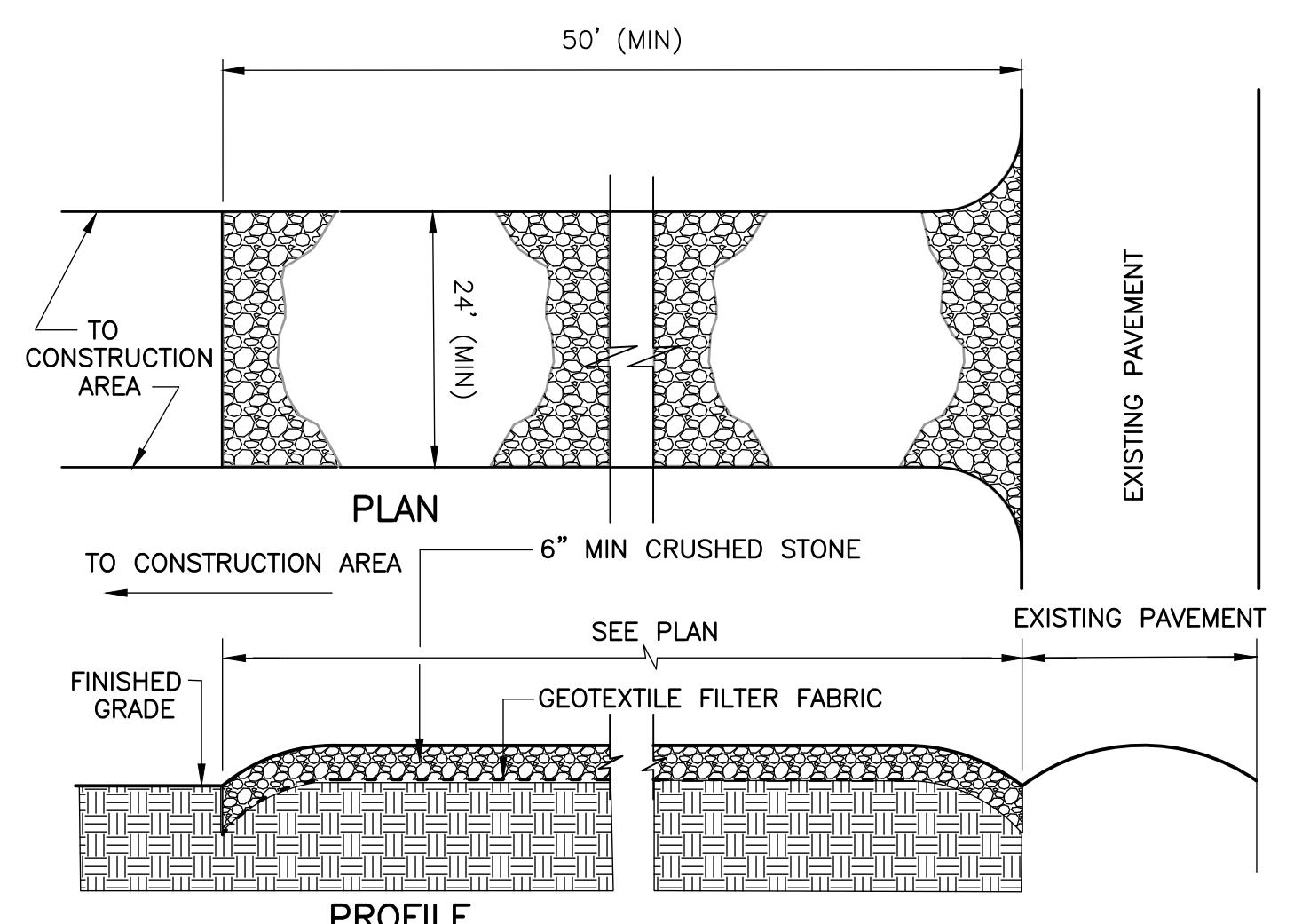
- NOTES:**
1. COORDINATE THE TIE-IN OF THE PROPOSED WATER LINE WITH LITTLETON WATER DEPARTMENT.
 2. COORDINATE THE TIE-IN OF THE PROPOSED GAS LINE WITH NATIONAL GRID.

YARD PIPING
PLAN



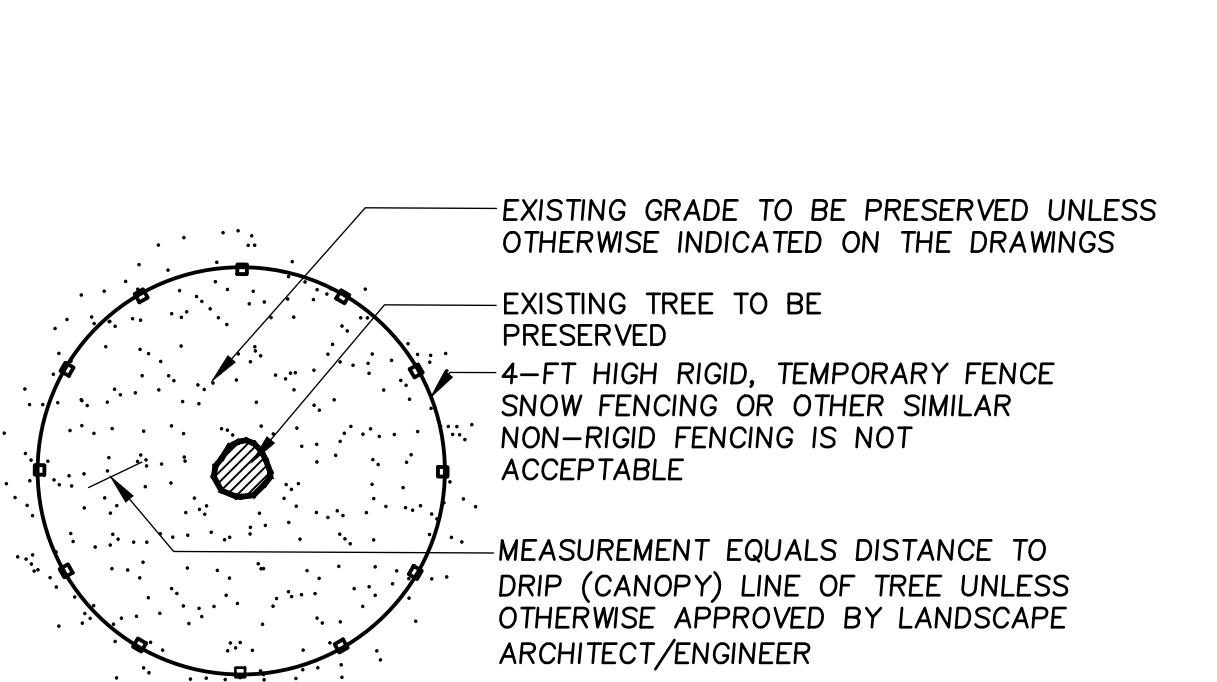
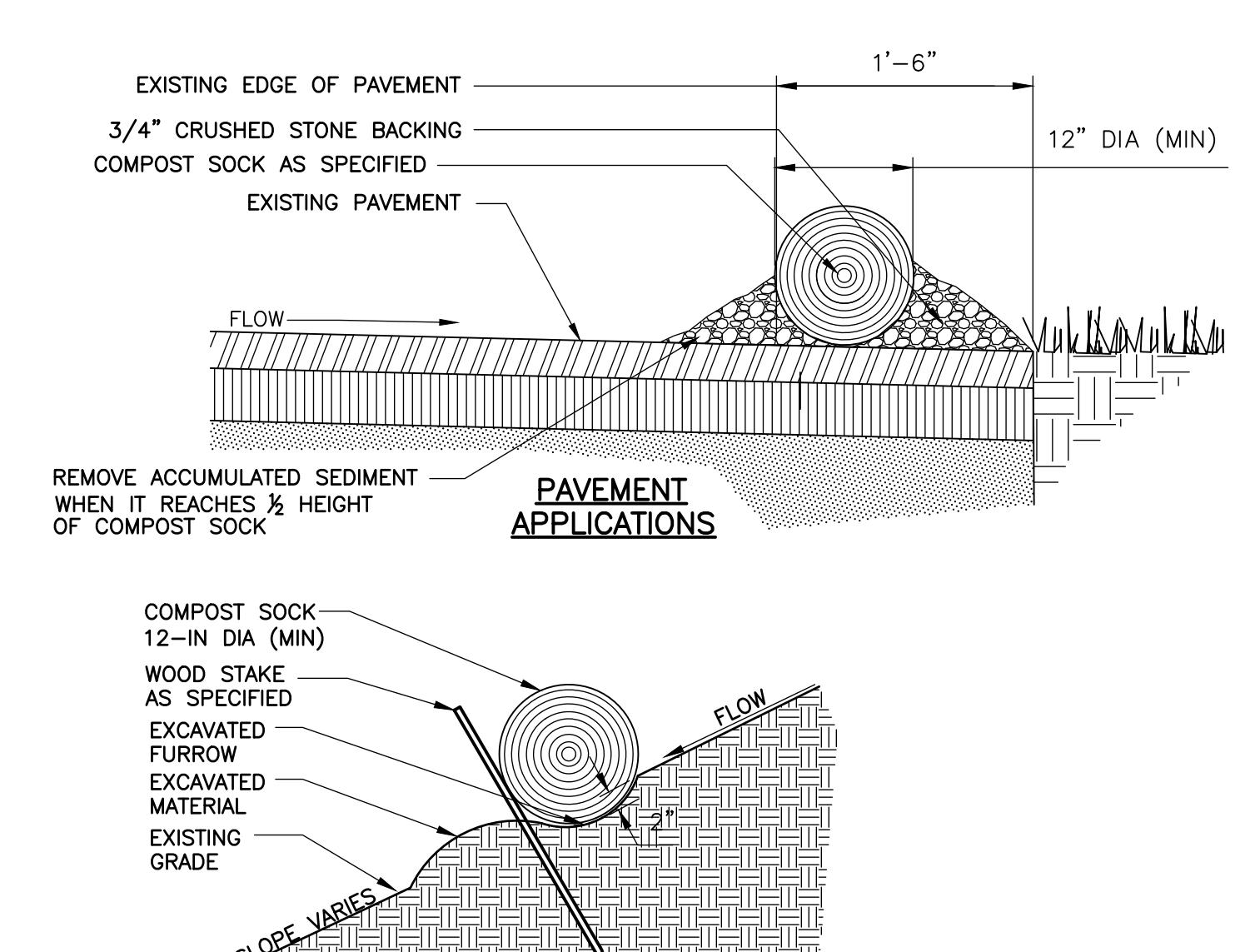
4/12/22





NOTES:

- 1.) PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND EXISTING PAVEMENT.
- 2.) LIMITS OF STABILIZED CONSTRUCTION ENTRANCE SHALL BE AS SHOWN ON PLANS AND APPROVED BY THE ENGINEER.
- 3.) THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDING STONE TO THE LENGTH OF THE ENTRANCE.
- 4.) REPAIR AND CLEANOUT MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO EXISTING PAVEMENT SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.

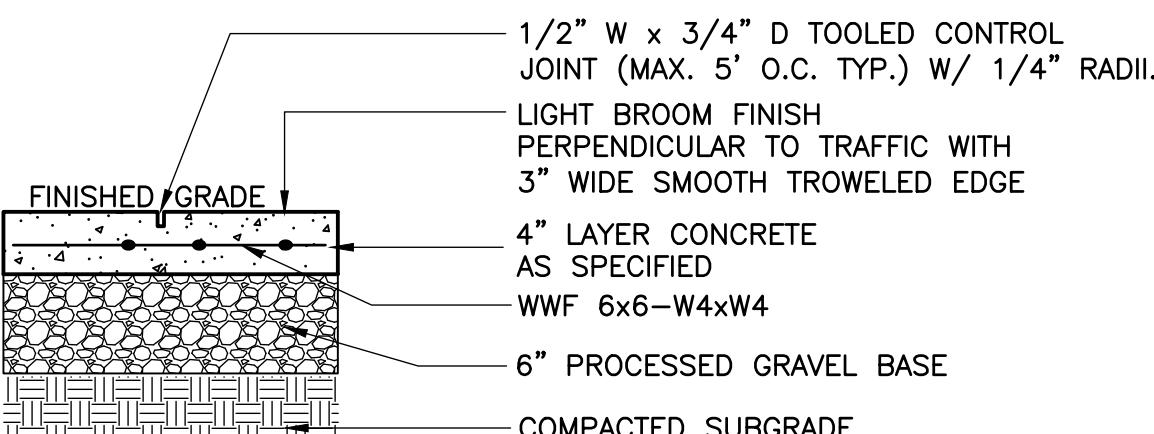


NOTES:

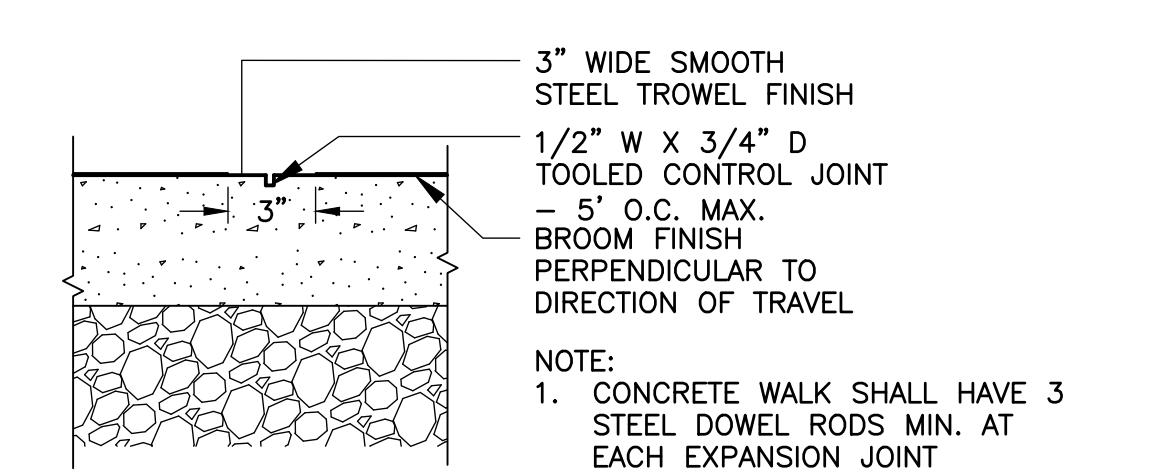
- 1.) FENCING SHALL BE INSTALLED AROUND PERIMETER OF ALL EXISTING TREES TO BE PRESERVED WITHIN THE LIMIT OF WORK.
- 2.) FENCING MAY BE REMOVED TEMPORARILY, ONLY AS REQUIRED, TO PERFORM THE WORK SHOWN ON THE DRAWINGS.
- 3.) FENCING SHALL REMAIN IN PLACE & BE MAINTAINED THROUGHOUT CONSTRUCTION AND THEN REMOVED COMPLETELY.

CRUSHED STONE MOW STRIP

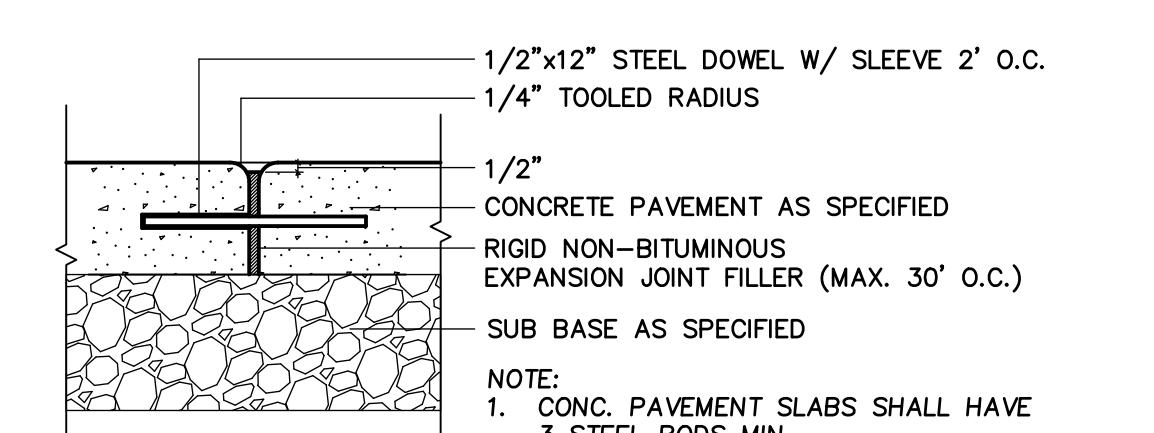
DETAIL **J**
NTS
CD-1



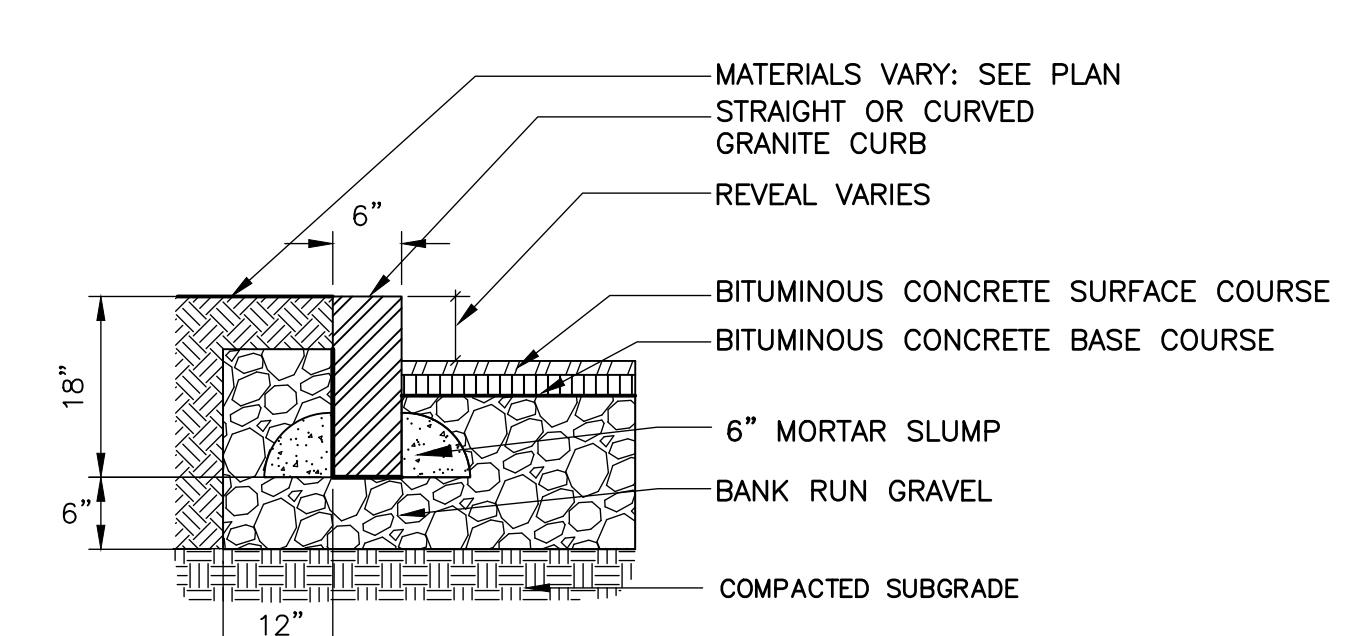
CONCRETE WALKWAY
DETAIL **K**
NOT TO SCALE
CD-1



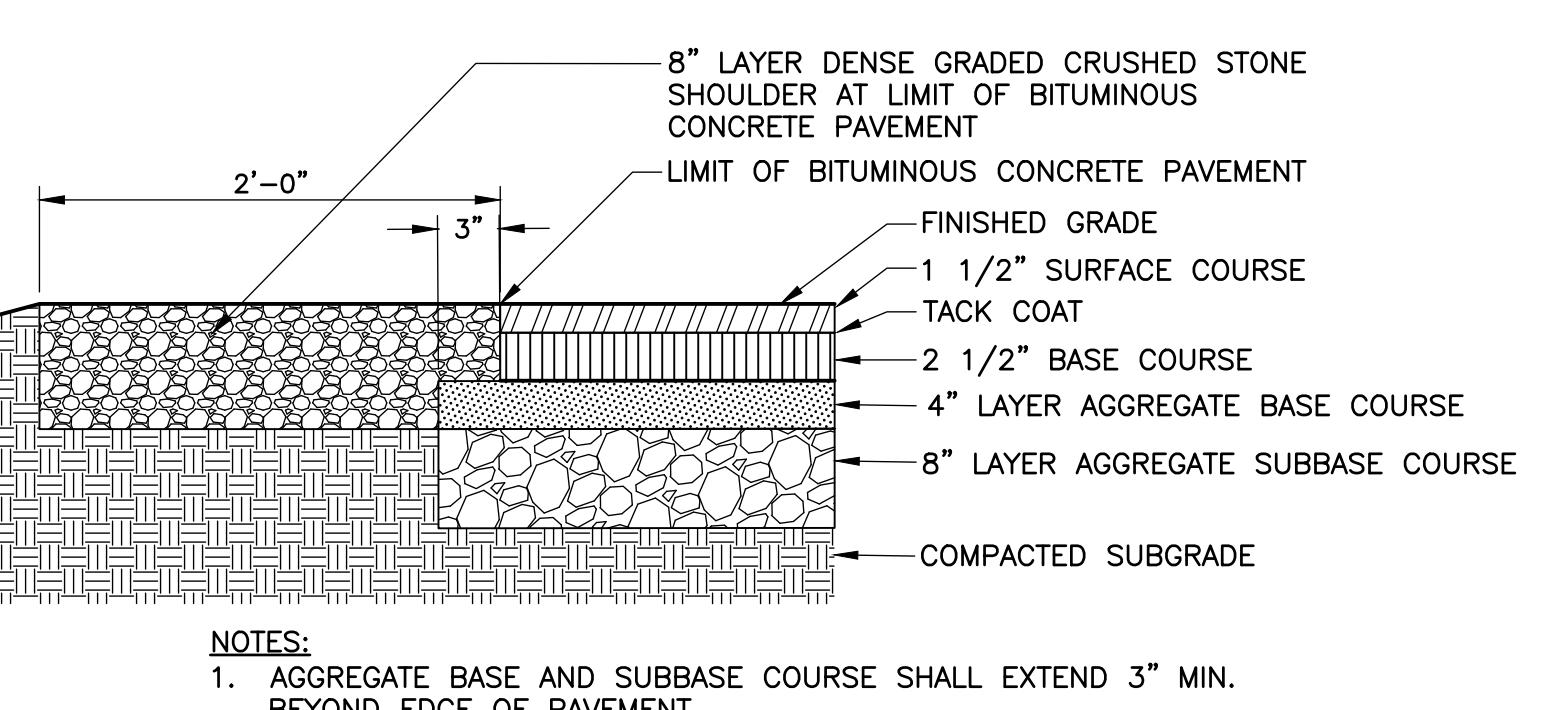
CONTROL JOINT
DETAIL **L**
NOT TO SCALE
CD-1



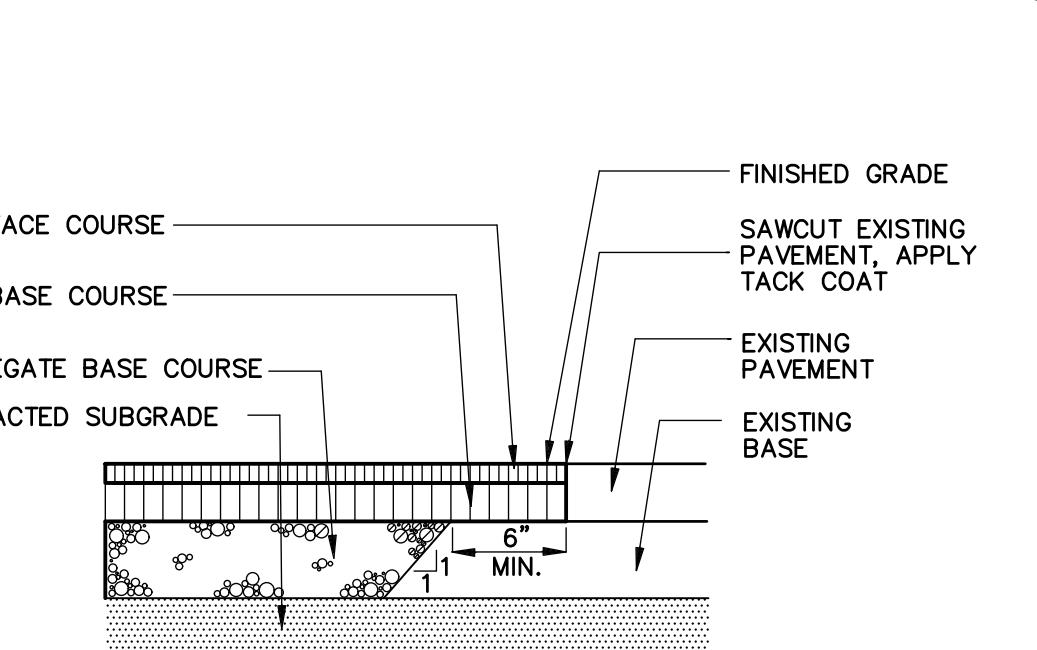
EXPANSION JOINT
DETAIL **M**
NOT TO SCALE
CD-1



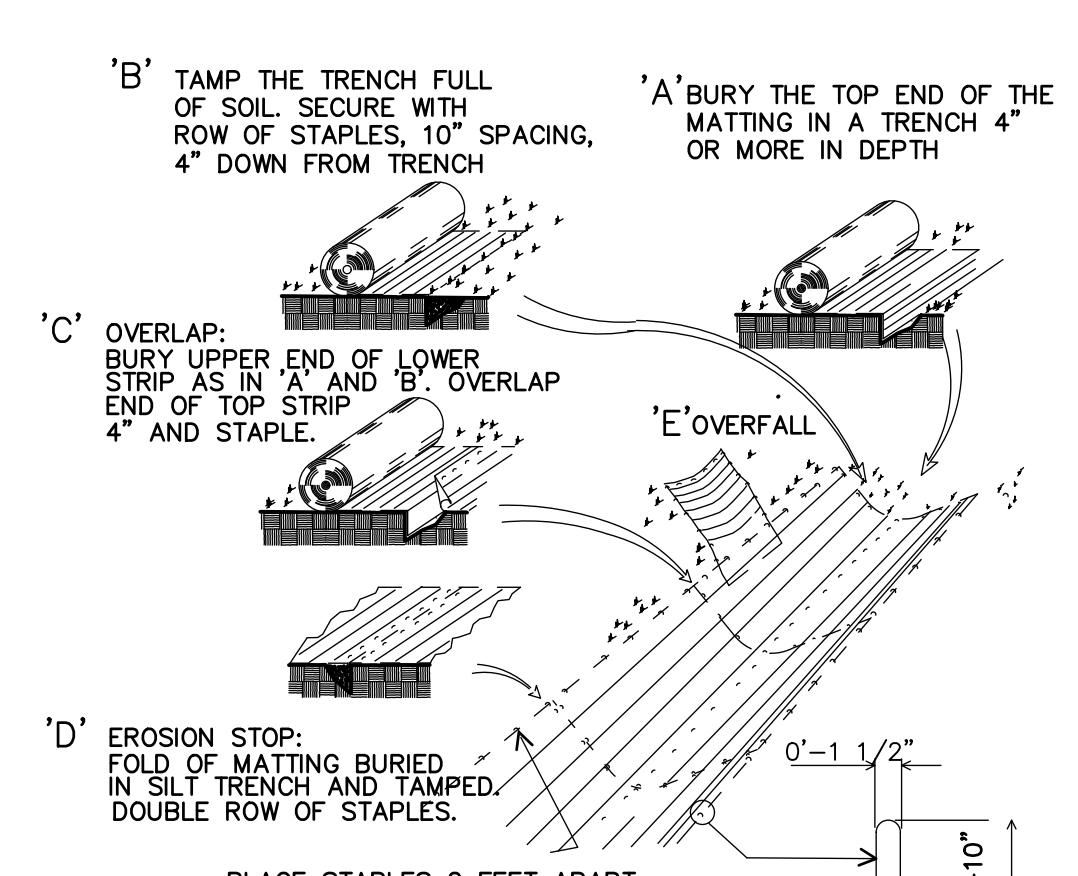
VERTICAL GRANITE CURB
DETAIL **N**
NOT TO SCALE
CD-1



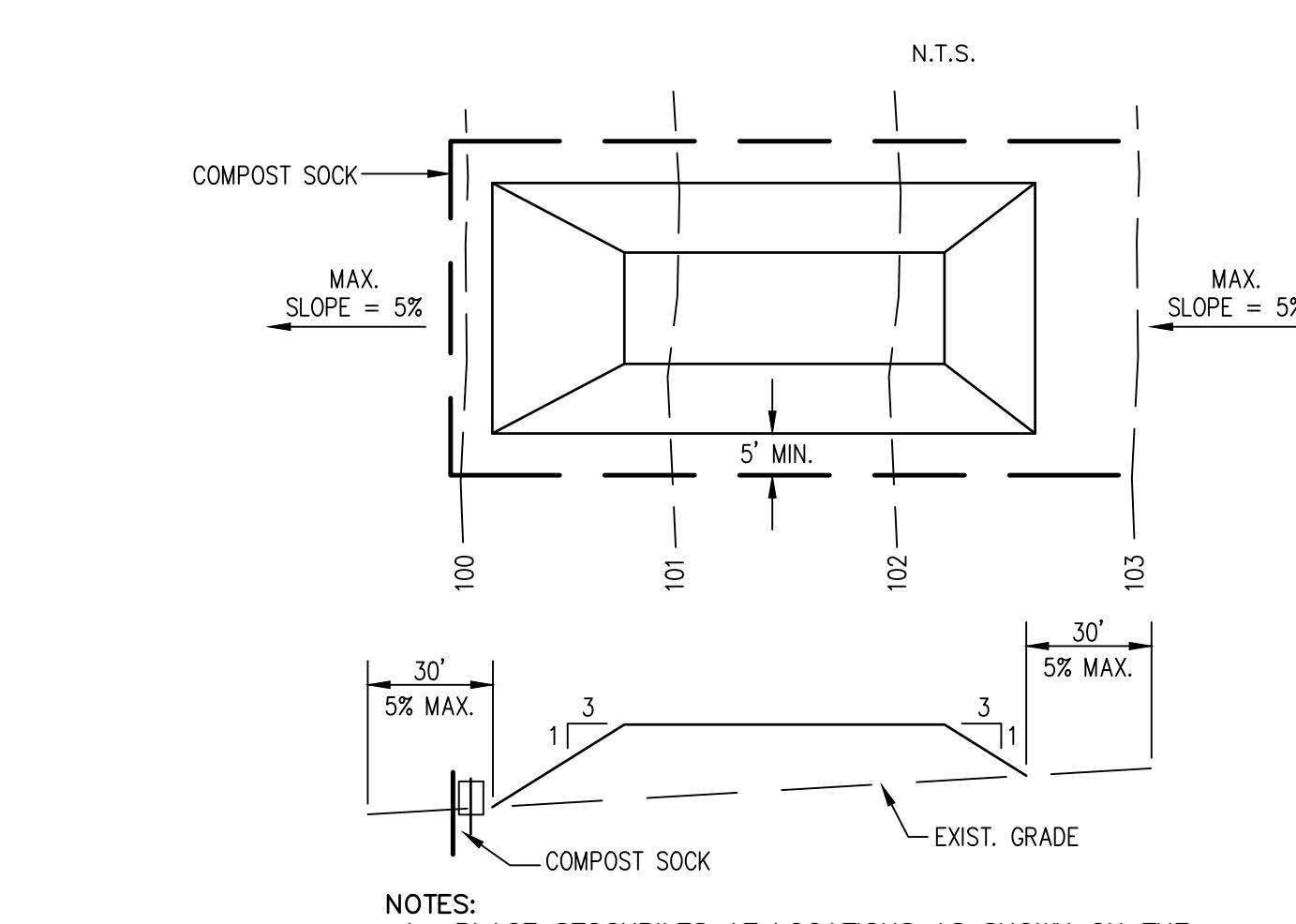
BITUMINOUS CONCRETE PAVEMENT
DETAIL **B**
NOT TO SCALE
CD-1



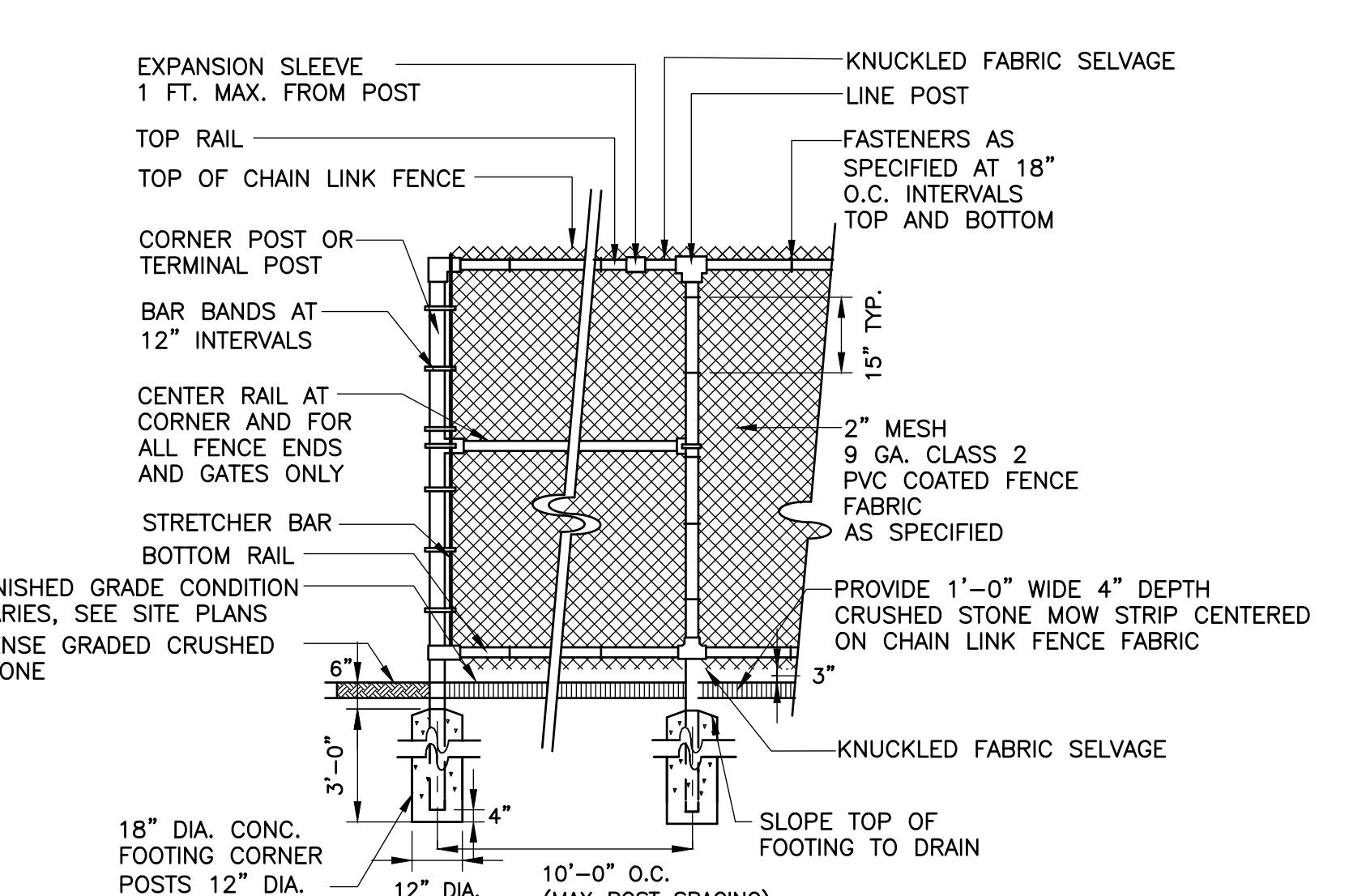
PAVEMENT MATCH
DETAIL **E**
NOT TO SCALE
CD-1



EROSION CONTROL BLANKET
DETAIL **C**
NOT TO SCALE
CD-1



SOIL STOCKPILE
DETAIL **F**
NOT TO SCALE
CD-1



6-FT HIGH CHAIN LINK FENCE
DETAIL **I**
NOT TO SCALE
CD-1

DESIGNED BY: M.DODSON
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: M.DODSON
CROSS CHK'D BY: _____
APPROVED BY: X
DATE: APRIL 2022

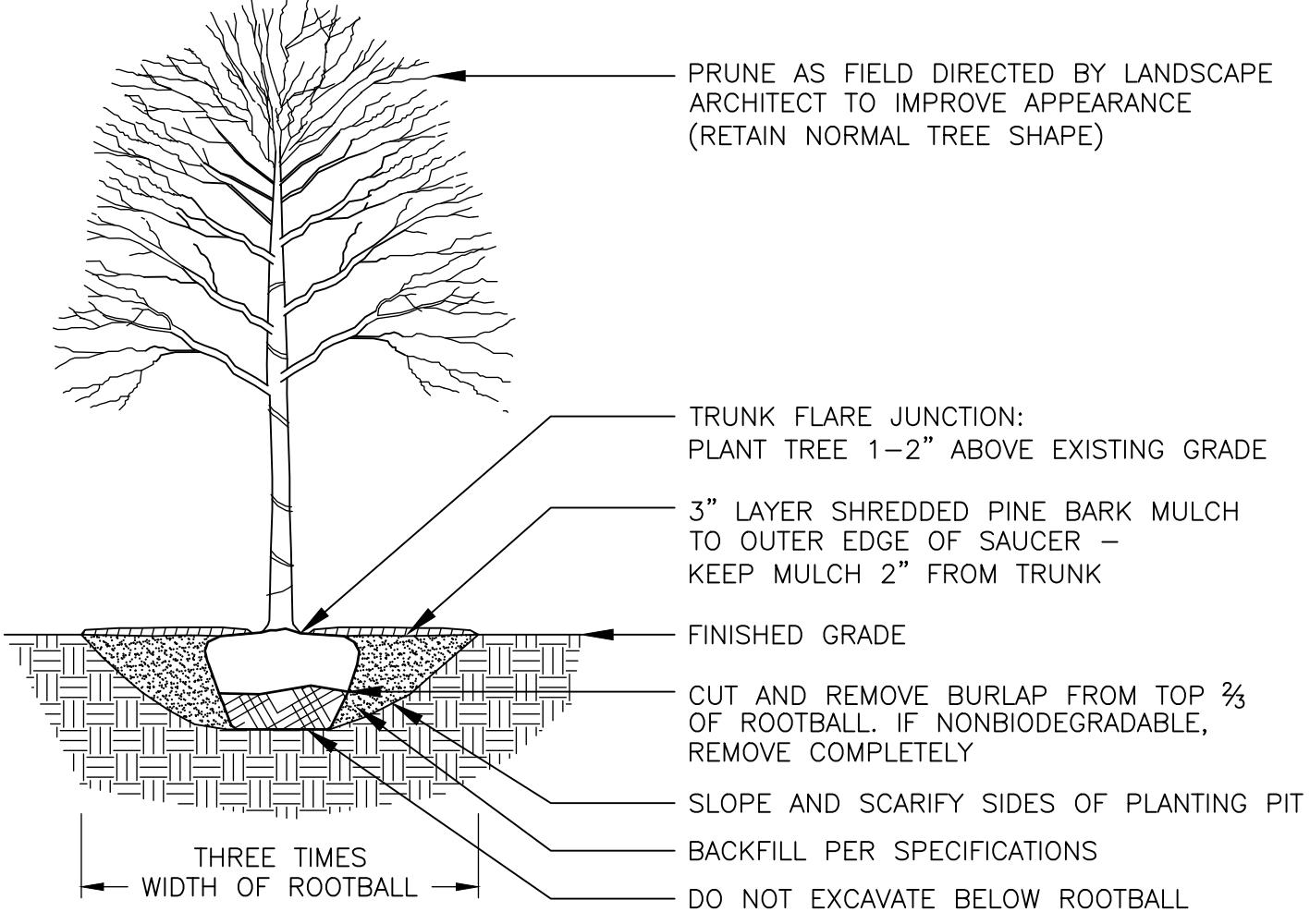
CDM
Smith

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REV. NO. DATE DRWN CHKD
REMARKS

LITTLETON WATER DEPARTMENT
LITTLETON WATER RESOURCE
RECOVERY FACILITY

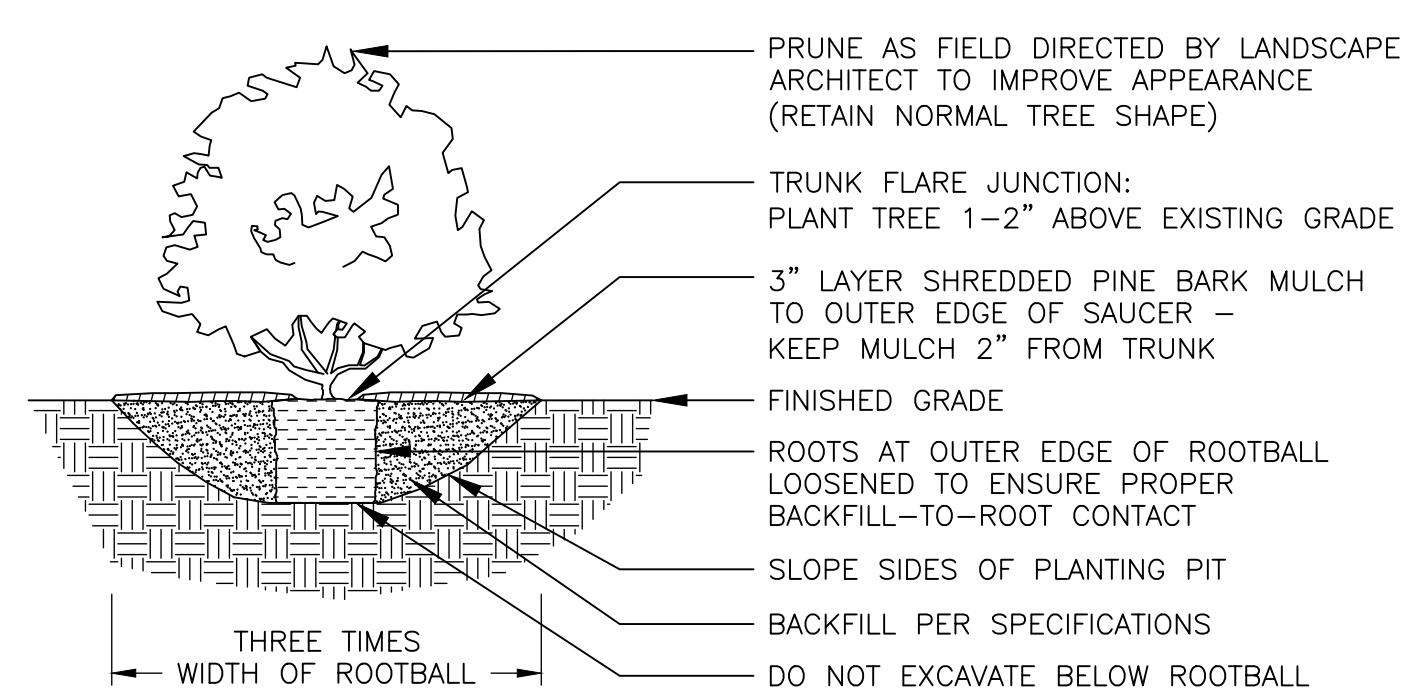
PROJECT NO. 263387-261886
FILE NAME: CD001STDT
SHEET NO.
CD-1



DECIDUOUS TREE PLANTING

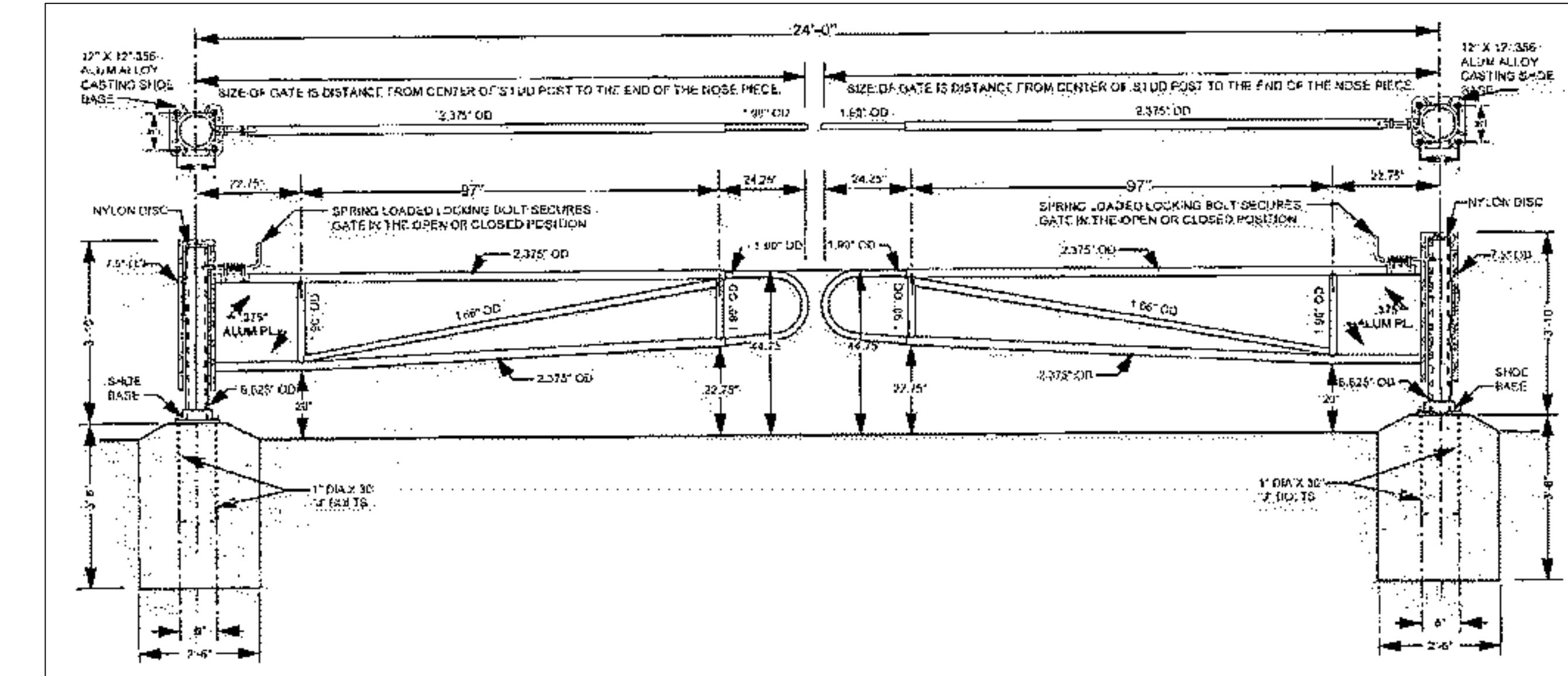
DETAIL

NOT TO SCALE



SHRUB PLANTING

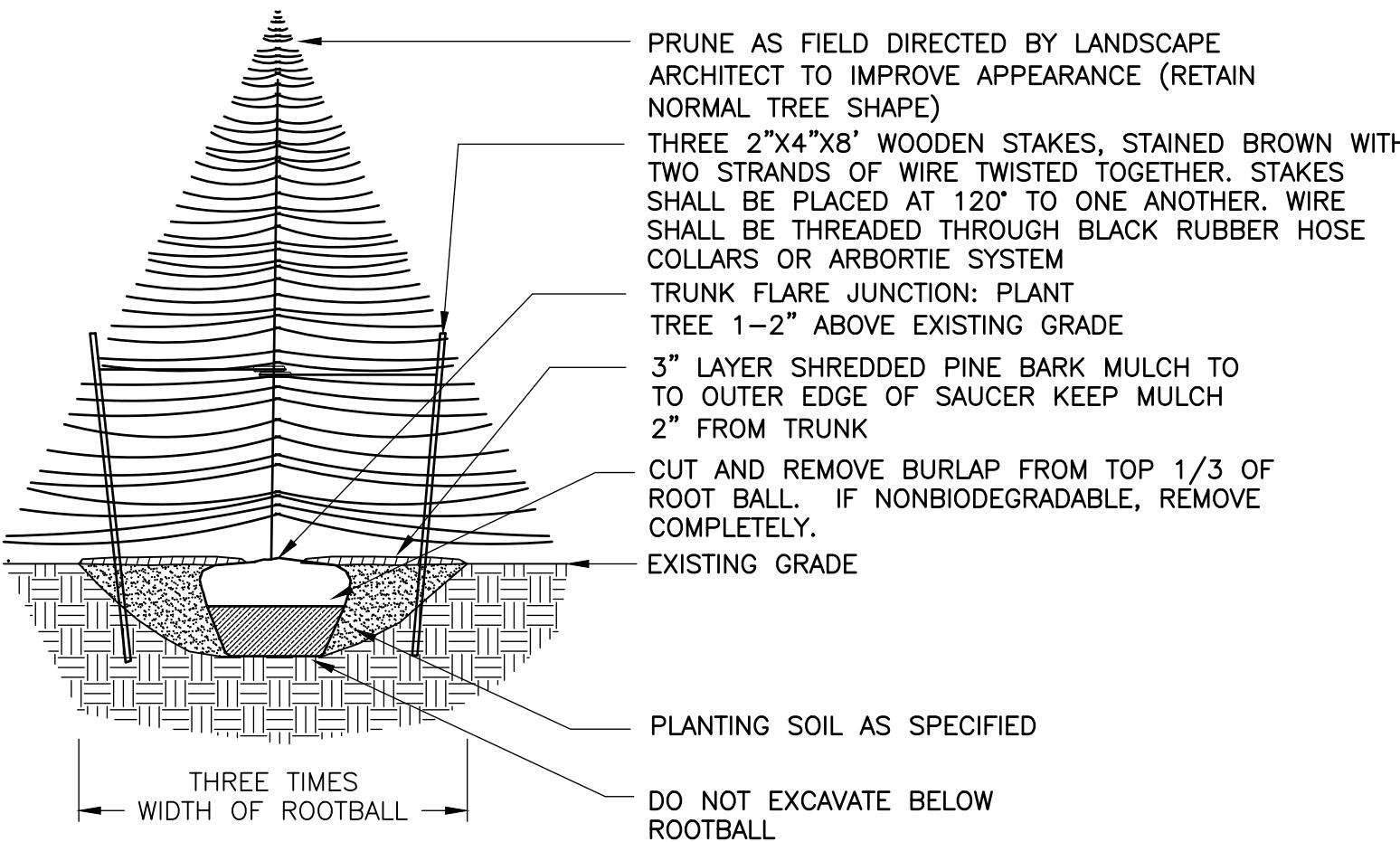
DETAIL
NOT TO SCALE



24'-0" OPENING DOUBLE VEHICLE BARRIER GATE

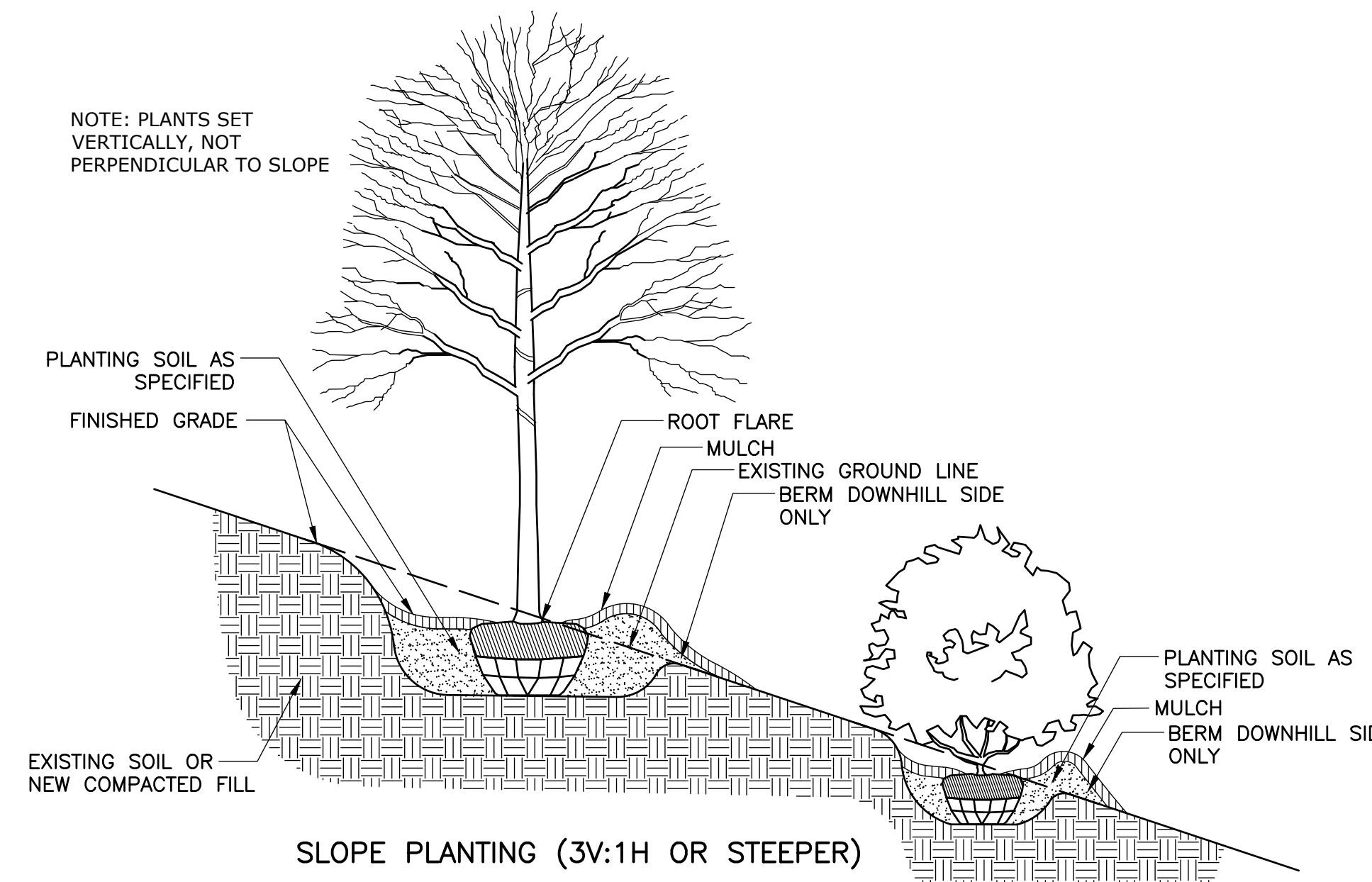
DETAIL

NOT TO SCALE



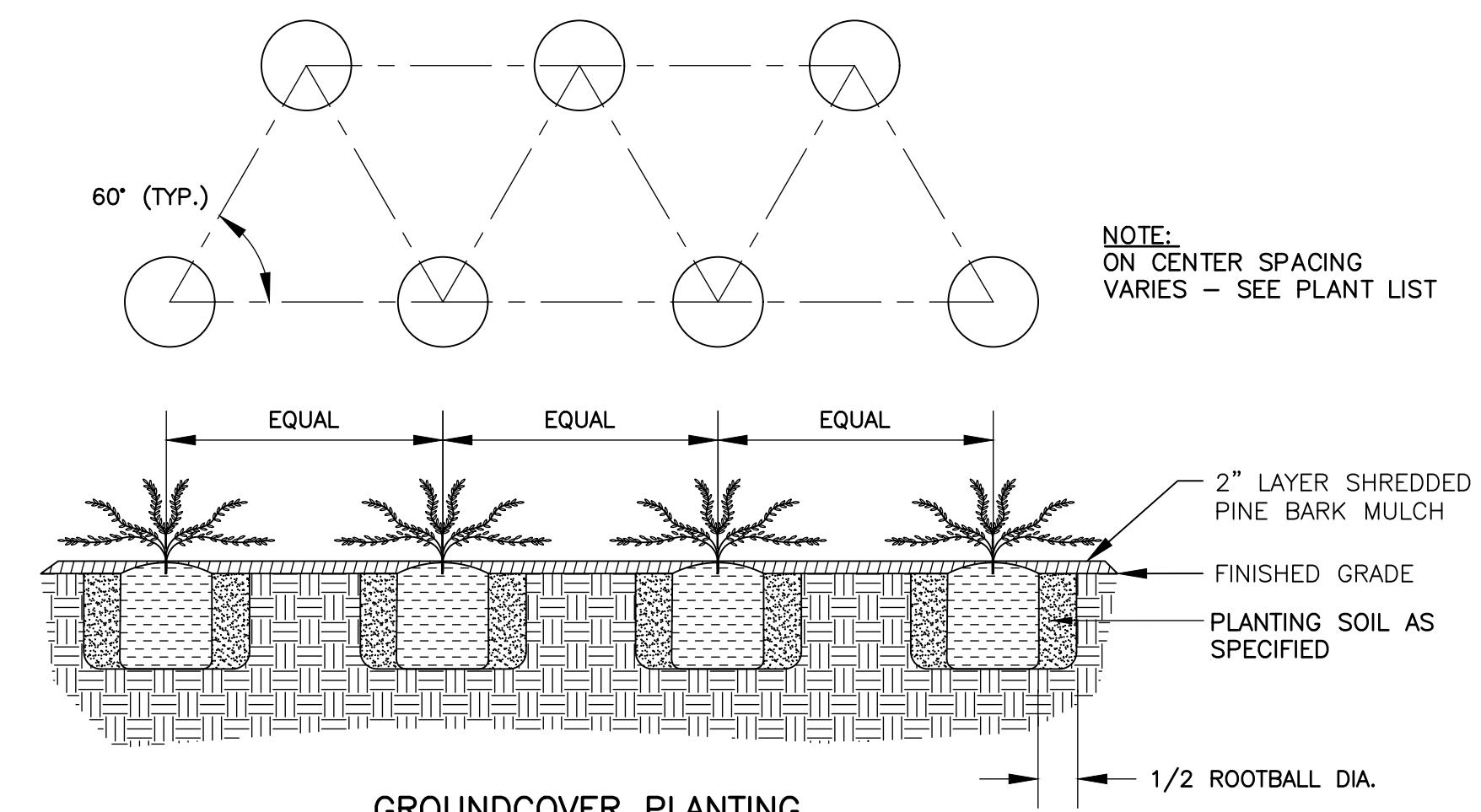
DETAIL B
NOT TO SCALE

NOT TO SCALE



DETAIL

NOT TO SCALE



GROUNDCOVER PLANTING

DETAIL

NOT TO SCALE



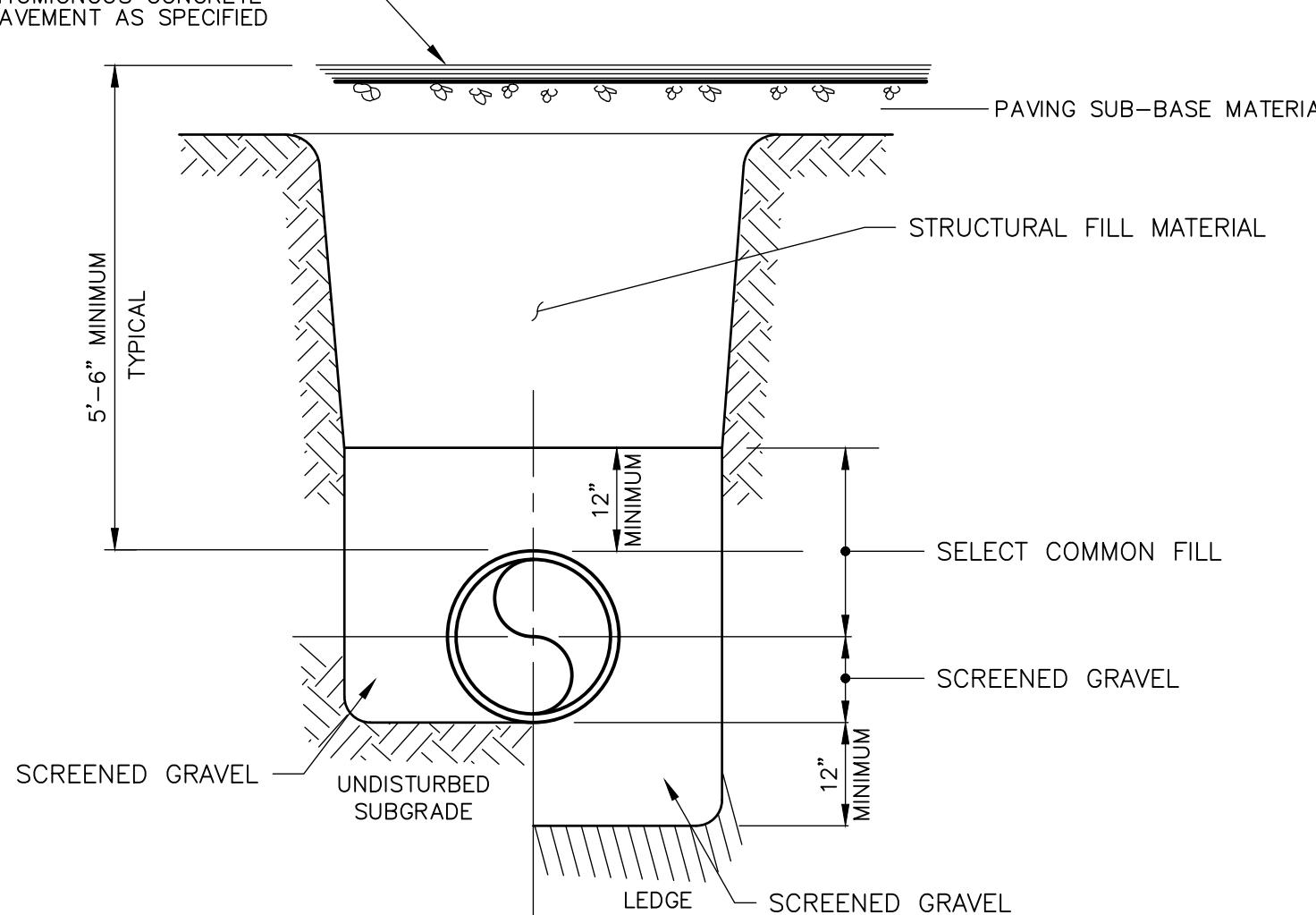
75 State Street, Suite 701
Boston, MA 02109
Tel: (617) 452-6000

LITTLETON WATER DEPARTMENT

LITTLETON WATER RESOURCE RECOVERY FACILITY

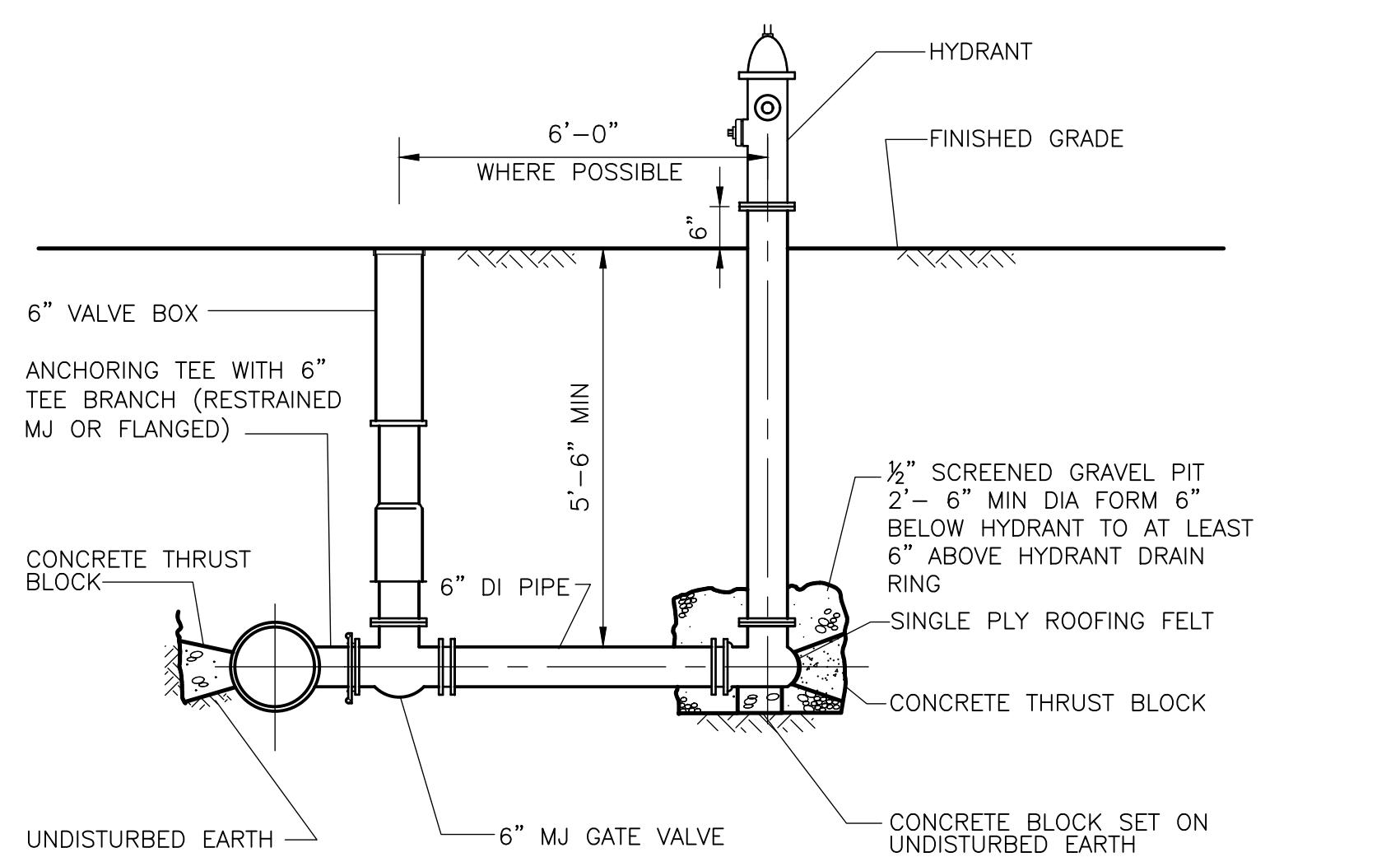
CIVIL DETAILS III

PROJECT NO.	263387-261886
FILE NAME:	CD003STDT
SHEET NO.	
CD-3	



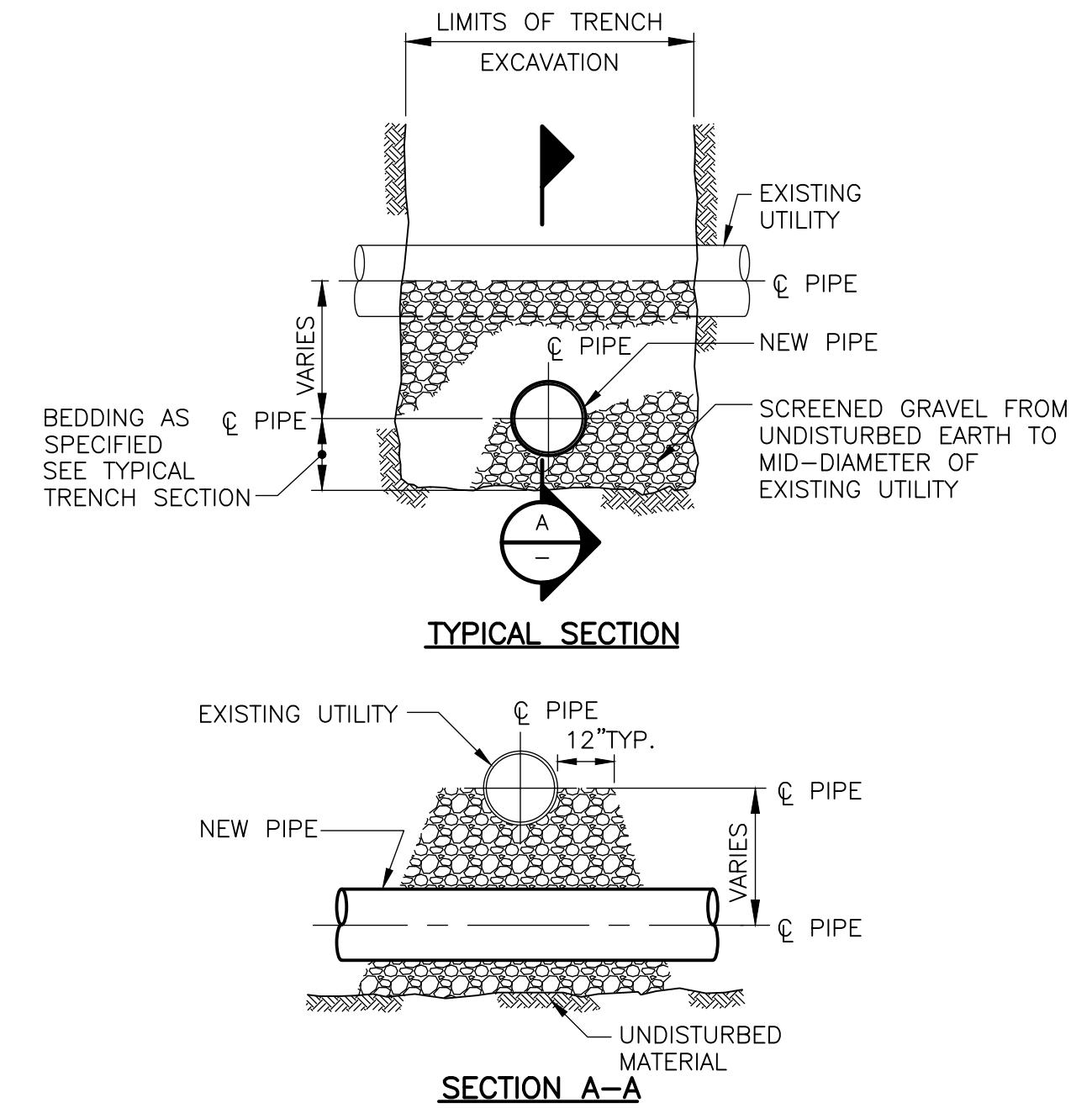
DUCTILE IRON PIPE TRENCH
DETAIL A
N.T.S. CD-4

- NOTES
1. PIPE SHALL HAVE 1'-0" MIN. CLEARANCE TO BEDROCK
 2. TRENCH WIDTH FOR ROCK EXCAVATION = $D + 2'-0"$
 3. ALL NEW WATER MAIN SHALL BE POLYETHYLENE ENCASED (POLYWRAP) FOR CORROSION PROTECTION.

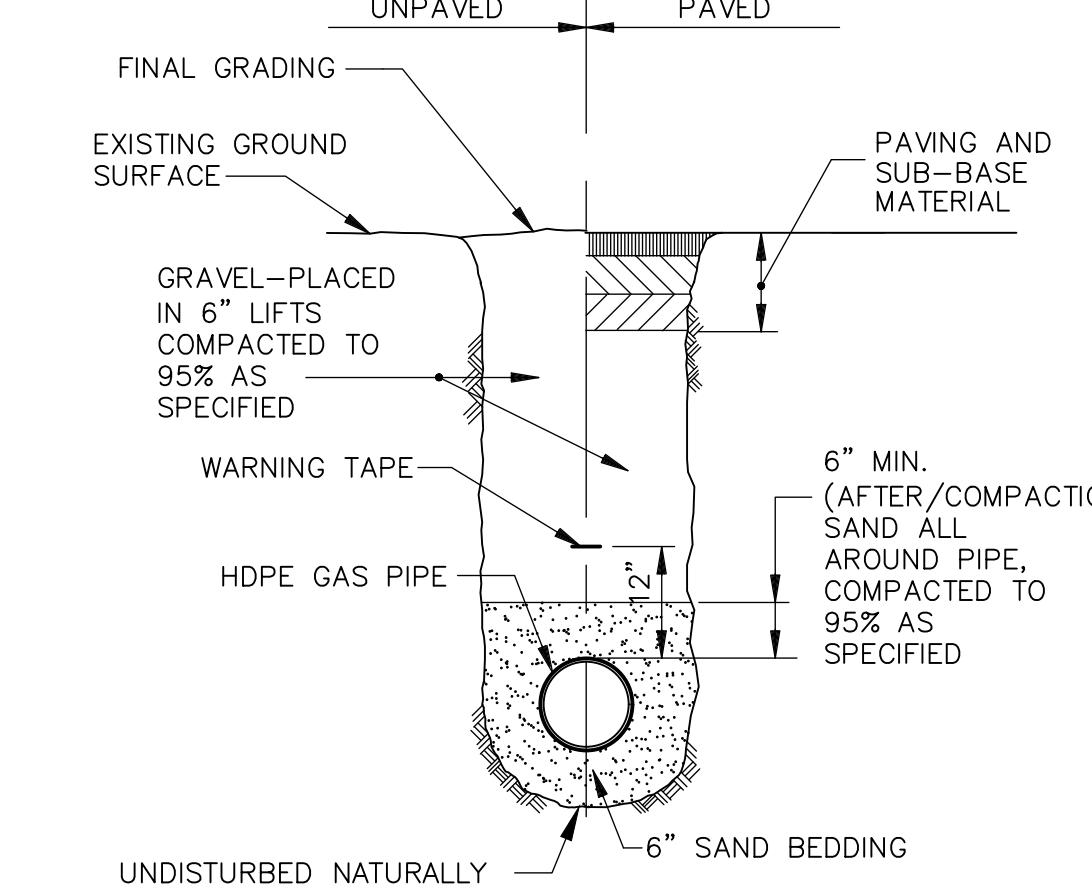


STANDARD HYDRANT
DETAIL B
N.T.S. CD-4

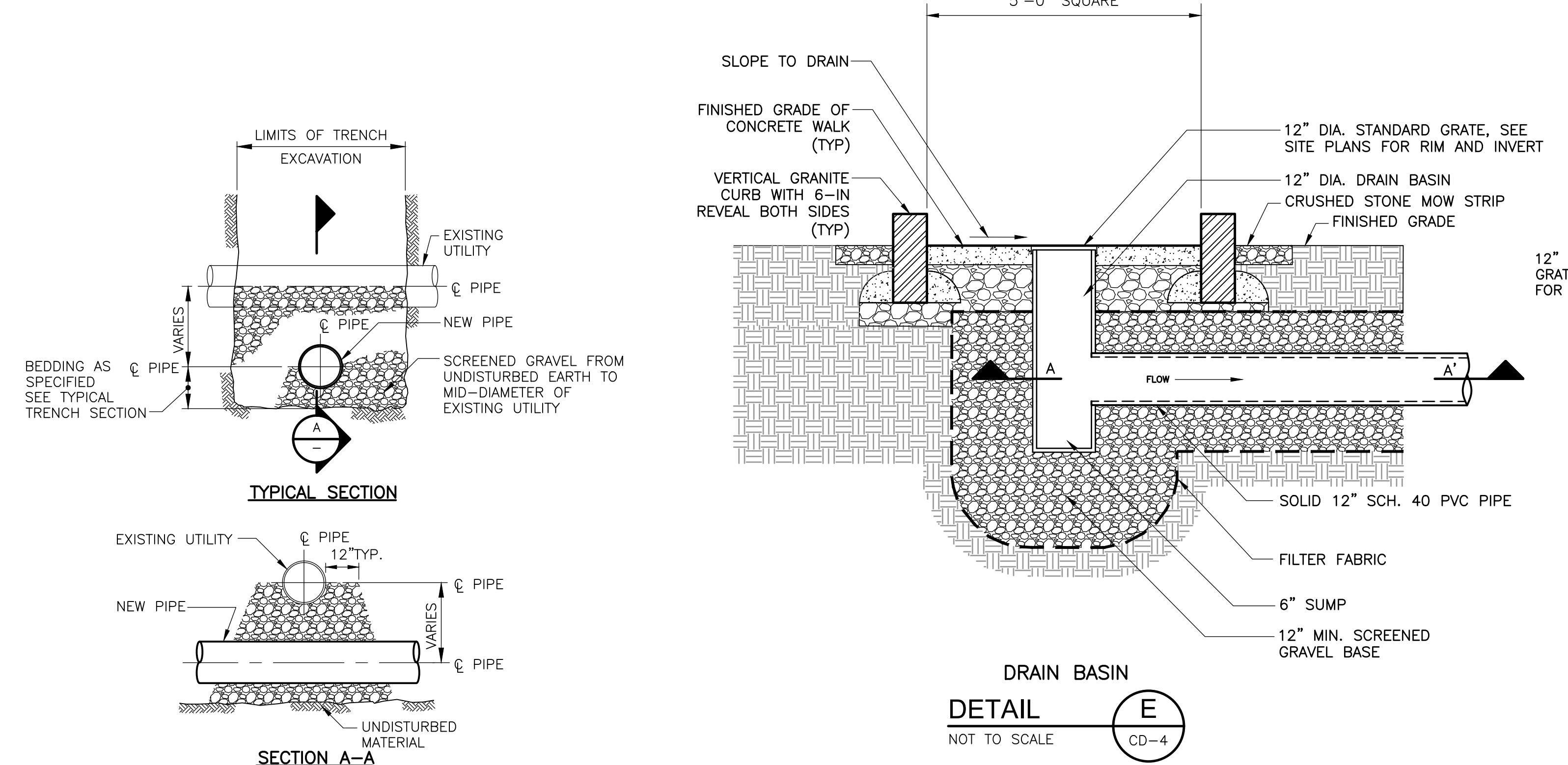
- NOTE:
ALL PIPING BETWEEN THE WATER MAIN, GATE VALVE, AND HYDRANT SHALL BE FULLY RESTRAINED.



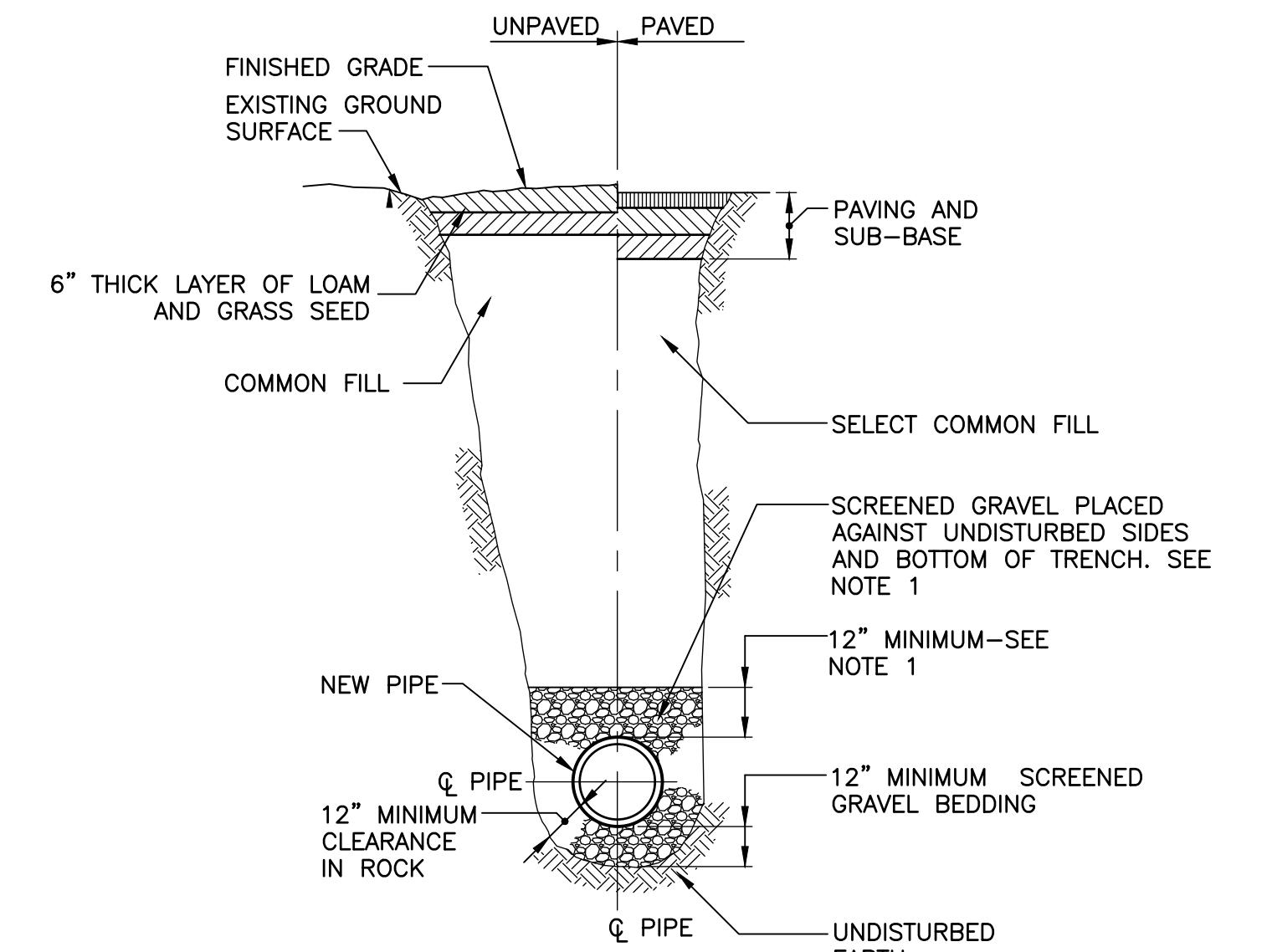
EXISTING UTILITY CROSSING
DETAIL C
N.T.S. CD-4



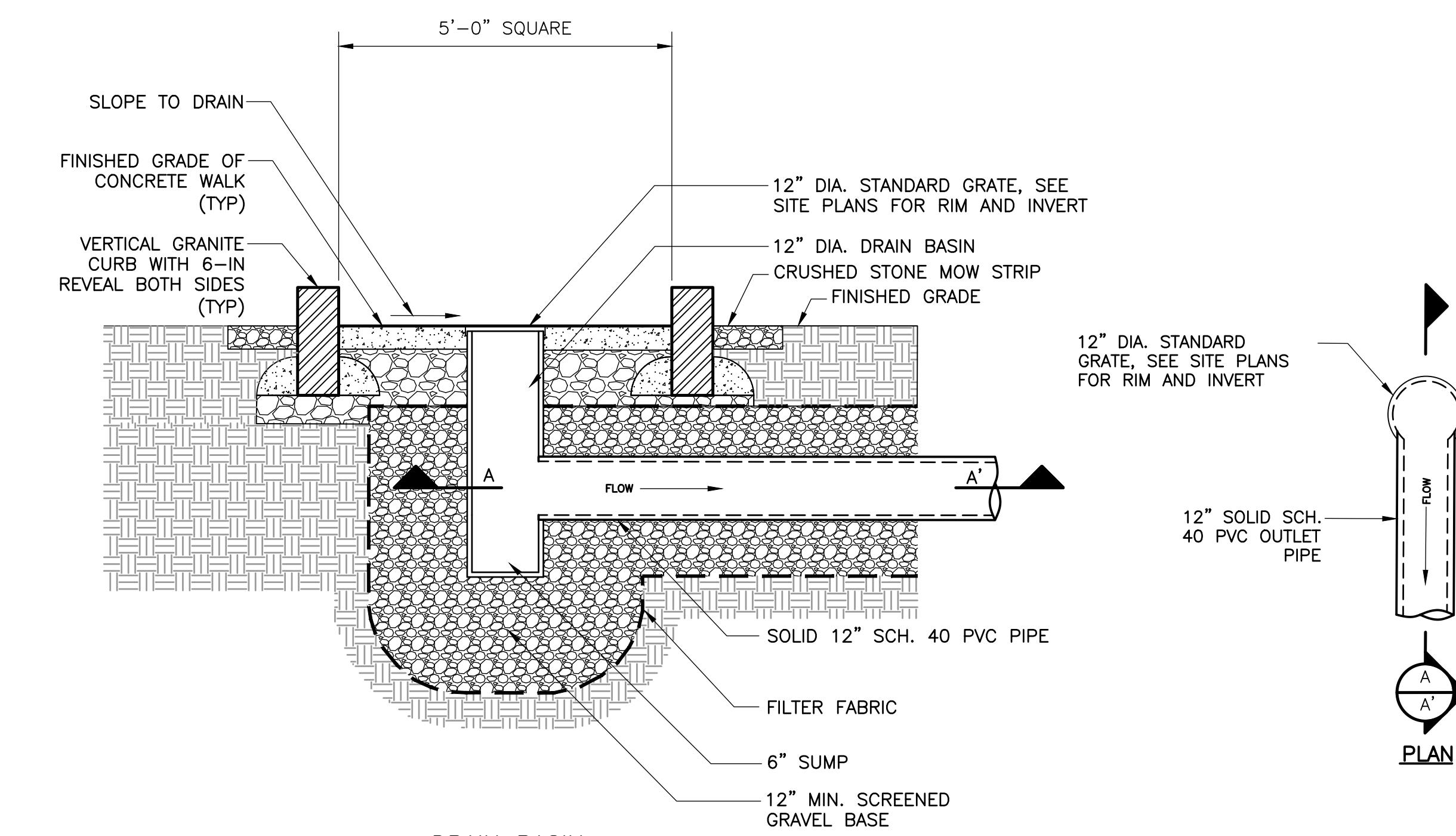
Typical Trench Detail for Buried Piping
DETAIL D
N.T.S. CD-4



DRAIN BASIN
DETAIL E
NOT TO SCALE CD-4



Typical Trench Detail
DETAIL F
NOT TO SCALE CD-4



PLAN

DESIGNED BY:	M. DODSON
DRAWN BY:	J. BRONENKANT
Sheet Chkd By:	M. DODSON
Cross Chkd By:	
Approved By:	X
Date:	APRIL 2022

REMARKS

ABBREVIATIONS

AND	GB	GLASS BLOCK	REF	ROOF EXHAUST FAN
ANGLE	GRT	GRATING	REINF	REINFORCE (D, ING)
AT	GYP	GYPSUM	REQ'D	REQUIRED
ANCHOR BOLT	GBW	GYPSUM WALL BOARD	REV	REVISED
ABOVE	HARD	HARDENER	RF	ROOF FAN
ACM	HD	HEAVY DUTY	RFG	ROOFING
ABV	HDWD	HARDWOOD	RGH	ROUGH
AFF	HDWR	HARDWARE	RJ	REVEAL/RUSTICATION JOINT
AFG	HGR	HANGER	RL	RAIN LEADER
AL, ALUM	HGT	HEIGHT	RLG	RAILING
AMP	HM	HOLLOW METAL	RM	ROOM
ANOD	HOR	HORIZONTAL	RO	ROUGH OPENING
ASSY	HP	HIGH POINT	RT	RUBBER TILE
BBT	HR	HANDRAIL	RWL	RAIN WATER LEADER
BD	IN	INCH	S	STEEL S-SHAPED DESIGNATION
BEV	INST	INSTRUMENTATION	SAT	SUSPENDED ACOUSTICAL TILE
BLDG	INSUL	INSULATION	SB	SEAMLESS BASE
BLK	JC	JANITOR'S CLOSET	SCHD	SCHEDULE
BLKG	JT	JOINT	SCRN	SCREEN(ED, ING)
BRG	JT FLR	JOINT FILLER	SECT	SECTION
BRK	L	LINE OF STRUCTURAL ANGLE DESIGNATION	SF	SEAMLESS FLOORING
BRS	LAB	LABORATORY	SGFT	STRUCTURAL GLAZED FACING TILE
BRZ	LAD	LADDER	SHT	SHEET
BTM	LAM	LAMINATED	SIM	SIMILAR
C TO C	LAV	LAVATORY	SK	SINK
CAB	LG	LAMINATED GLASS	SL	SLOPE
CEM	LINO	LINOLEUM	SLNT	SEALANT
CF	LKR	LOCKER	SPEC	SPECIFICATION, SPECIFIED
CFMF	LNTL	LINTEL	SST	STAINLESS STEEL
CGFB	LP	LOW POINT	STD	STANDARD
CH	LT	LIGHT(S)	STL	STEEL
CHAM	MAS	MASONRY	STOR	STORAGE
CHAN	MATL	MATERIAL	STRU	STRUCTURE(S, URAL)
CIP	MAX	MAXIMUM	STWY	STAIRWAY
CJ	MEMB	MEMBRANE	SUPT	SUPERINTENDENT
CL OR C	MFR	MANUFACTURER	SUSP	SUSPENDED
CLG	MIN	MINIMUM	T	TREAD(S)
CLKG	MISC	MISCELLANEOUS	TBM	TRAFFIC BEARING MEMBRANE
CMU	MO	MASONRY OPENING	T&G	TONGUE AND GROOVE
COL	MR	MOISTURE RESISTANT	TEMP	TEMPERATURE
COMP	MRAT	MOISTURE RESISTANT ACOUSTICAL TILE	TEMP	TEMPERED
CONC	MTD	MOUNTED	TEMP	TEMPORARY
CONT	MTG	MOUNTING	TER	TERRAZZO
CRPT	MTL	METAL	TERB	TERRAZZO BASE
CRS	NIC	NOT IN CONTRACT	THK	THICKNESS
CT	NOM	NOMINAL	THR	THRESHOLD
CET	NTS	NOT TO SCALE	TKBD	TACKBOARD
DF	OC	ON CENTER	TOB	TOP OF BRICK
DIA	OH	OVERHANG	TOC	TOP OF CONCRETE
DIAG	OPNG	OPENING	TOIL	TOILET
DIM	OPP HD	OPPOSITE HAND	TOM	TOP OF MASONRY
DISP	ORD	OVERFLOW ROOF DRAIN	TOPG	TOPPING
DN	OSB	ORIENTED STRAND BOARD	TOS	TOP OF STEEL
DP	OV	OVER	TS	STRUCTURAL TUBING (STEEL UNLESS NOTE)
DR	OVHD	OVERHEAD	TSL	TOP OF SLAB
ELEC	PERIM	PERIMETER	TWF	THROUGH WALL FLASHING
ELEV	PL	PLATE	TYP	TYPICAL
EQ	PL	PROPERTY LINE	UC	UNDERCUT
EQPT	PLAS	PLASTER	UON	UNLESS OTHERWISE NOTED
EWC	PLK	PLANK	UR	URINAL
EXP	PLYWD	PLYWOOD	VB	VAPOR BARRIER
EJ	PM	PRESSED METAL	VCT	VINYL COMPOSITE TILE
EXIST, (E)	PR	PAIR	VERT	VERTICAL
FD	PRD	PROMENADE ROOF DRAIN	VEST	VESTIBULE
FE	PRCST	PRECAST	VTR	VENT THRU ROOF
FF	PREFAB	PRE-FABRICATED	W	WITH
FGL	PT	PRESSURE TREATED	W/	WITH
FIN	PT	PREMOLDED	W/A	WHERE APPLICABLE
FLG	PRMLD	POUNDS PER SQUARE FOOT	W/O	WITHOUT
FL	PSF	PAINTED	WC	WATER CLOSET
FLR	PTD	QUARRY TILE	WD	WOOD
FR	QT	QUARRY TILE BASE	WDW	WINDOW
FRP	QTB	RISER(S)	WF	WIDE FLANGE
FO	R	BACKER ROD & SEALANT	WPG	WATERPROOFING
FV	R+S	RUBBER BASE	WT	STEEL TEE-SHAPE DESIGNATION
FXD	RB	ROOF DRAIN	WWF	WELDED WIRE FABRIC
GA	RD	RECEPTACLE		
GALV	RECT			
GL				

GENERAL NOTES

1. HEIGHT OF INTERIOR STUD AND CMU PARTITIONS ARE FROM FLOOR TO THE UNDERSIDE OF ROOF DECK UNLESS OTHERWISE NOTED. PROVIDE DEFLECTION HEADS AT TOP OF WALL, TYPICAL.
 2. NOT ALL EQUIPMENT IS SHOWN FOR CLARITY. REFER TO THE APPROPRIATE DISCIPLINE SHEETS FOR SPECIFIC EQUIPMENT LAYOUT AND OTHER REQUIREMENTS.
 3. SEE CIVIL SHEETS FOR SIDEWALK, ROAD PAVING AND FINISH GRADE ELEVATIONS.
 4. SEE STRUCTURAL SHEETS FOR SIZE AND LOCATION OF CONCRETE PADS, TRENCHES, VAULTS, SUMPS, ETC.
 5. SEE STRUCTURAL SHEETS FOR CONCRETE AND MASONRY REINFORCEMENT.
 6. PATCH AND REPAIR ANY MATERIALS OR SURFACES DAMAGED DURING THE CONSTRUCTION PROCESS TO MATCH THE EXISTING ADJACENT SURFACES.
 7. ALL ITEMS TO BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE.
 8. ALL JOINTS, VOIDS AND PENETRATIONS THROUGH FIRE-RATED WALL SYSTEMS ARE TO BE FILLED/SEALED WITH UL APPROVED FIRESAFING/FIRESTOPPING MATERIALS TO ACHIEVE THE REQUIRED FIRE-RATING. REFER TO LIFE SAFETY PLANS FOR LOCATIONS.
 9. DO NOT SCALE FROM THE DRAWINGS.
 10. NOTIFY ARCHITECT IF CONSTRUCTION DOCUMENTS DIFFER FROM ACTUAL FIELD CONDITIONS PRIOR TO FABRICATION OR NEW CONSTRUCTION.
 11. THIS DRAWING CONTAINS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS. NOT ALL ITEMS SHOWN HERE APPEAR ON THE CONTRACT DRAWINGS.

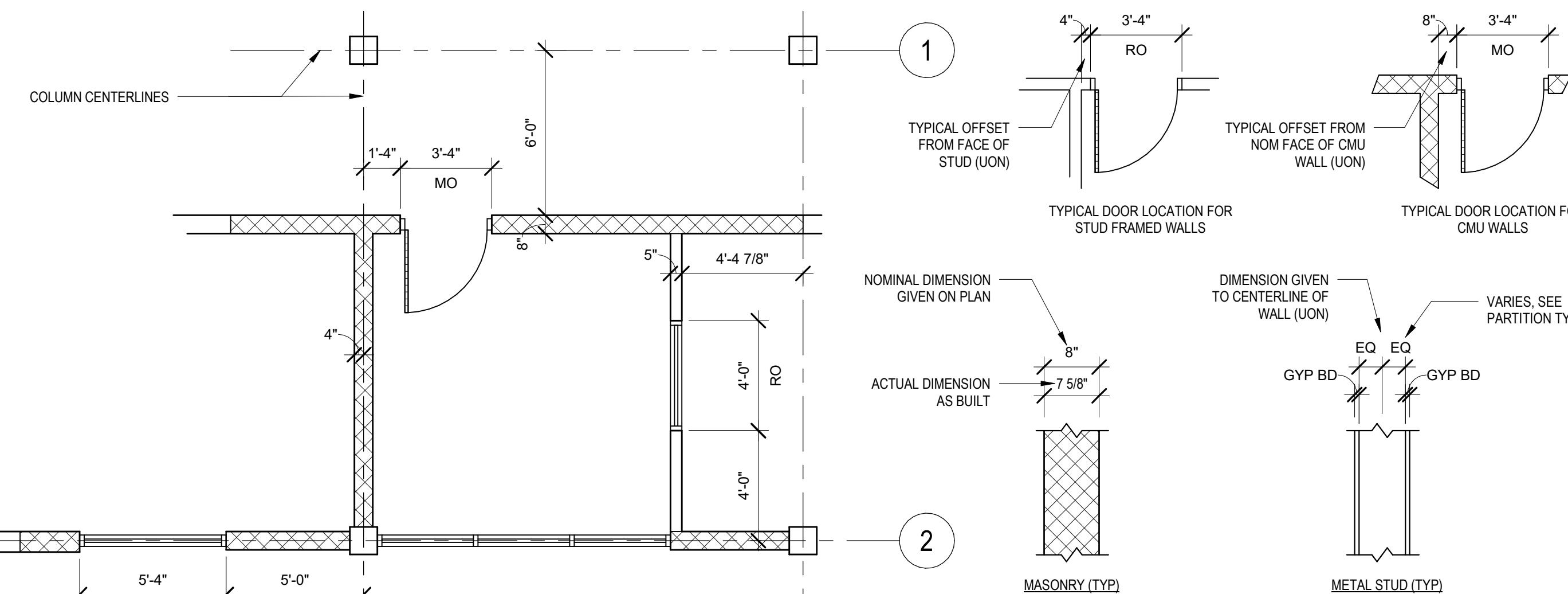
LINE TYPES

(UNLESS OTHERWISE NOTED)

DIMENSIONING SYSTEM

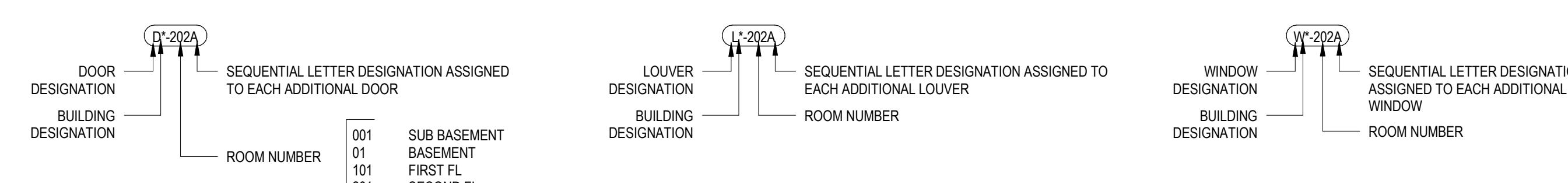
MATERIAL SYMBOLS

	EARTH
	GRAVEL
	BRICK
	CONCRETE MASONRY UNIT (CMU)
	PRECAST CONCRETE
	CAST-IN-PLACE CONCRETE
	WOOD BLOCKING
	WOOD FINISH
	PLYWOOD
	RIGID INSULATION
	BLANKET INSULATION
	STEEL
	ALUMINUM
	STUCCO / GROUT
	CAULK

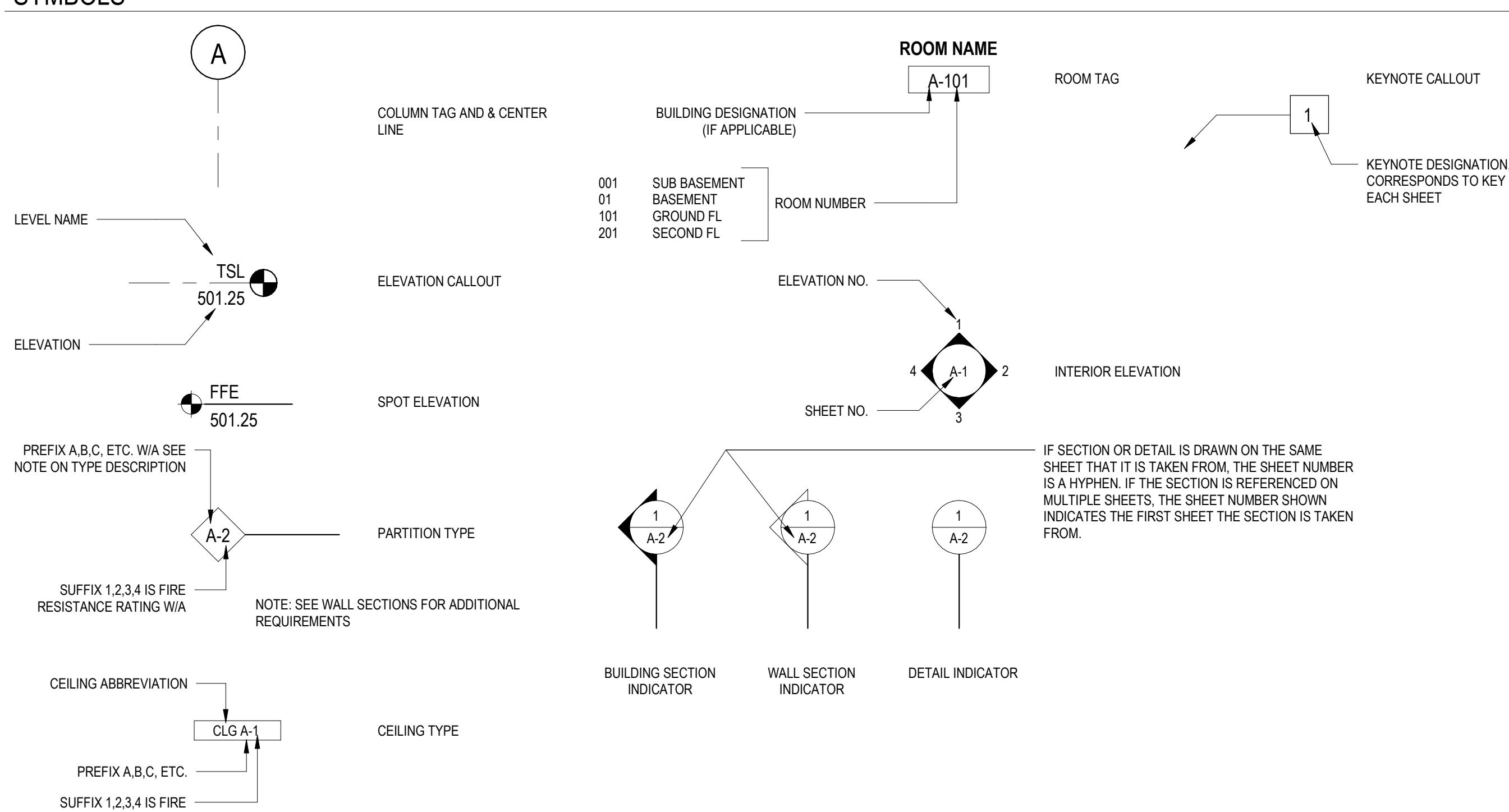


OPENINGS

USUALLY LABELED IN PLAN VIEW; HOWEVER, OPENINGS NOT SHOWN IN PLAN ARE LABELED ON ELEVATIONS



SYMBOLS



- IF SECTION OR DETAIL IS DRAWN ON THE SAME SHEET THAT IT IS TAKEN FROM, THE SHEET NUMBER IS A HYPHEN. IF THE SECTION IS REFERENCED ON MULTIPLE SHEETS, THE SHEET NUMBER SHOWN INDICATES THE FIRST SHEET THE SECTION IS TAKEN FROM.

3/31/22

REV. NO.	DATE	DRWN	CHKD	REMARKS



75 State Street, Suite 701
Boston, MA 02109
Tel: (617) 452-6000

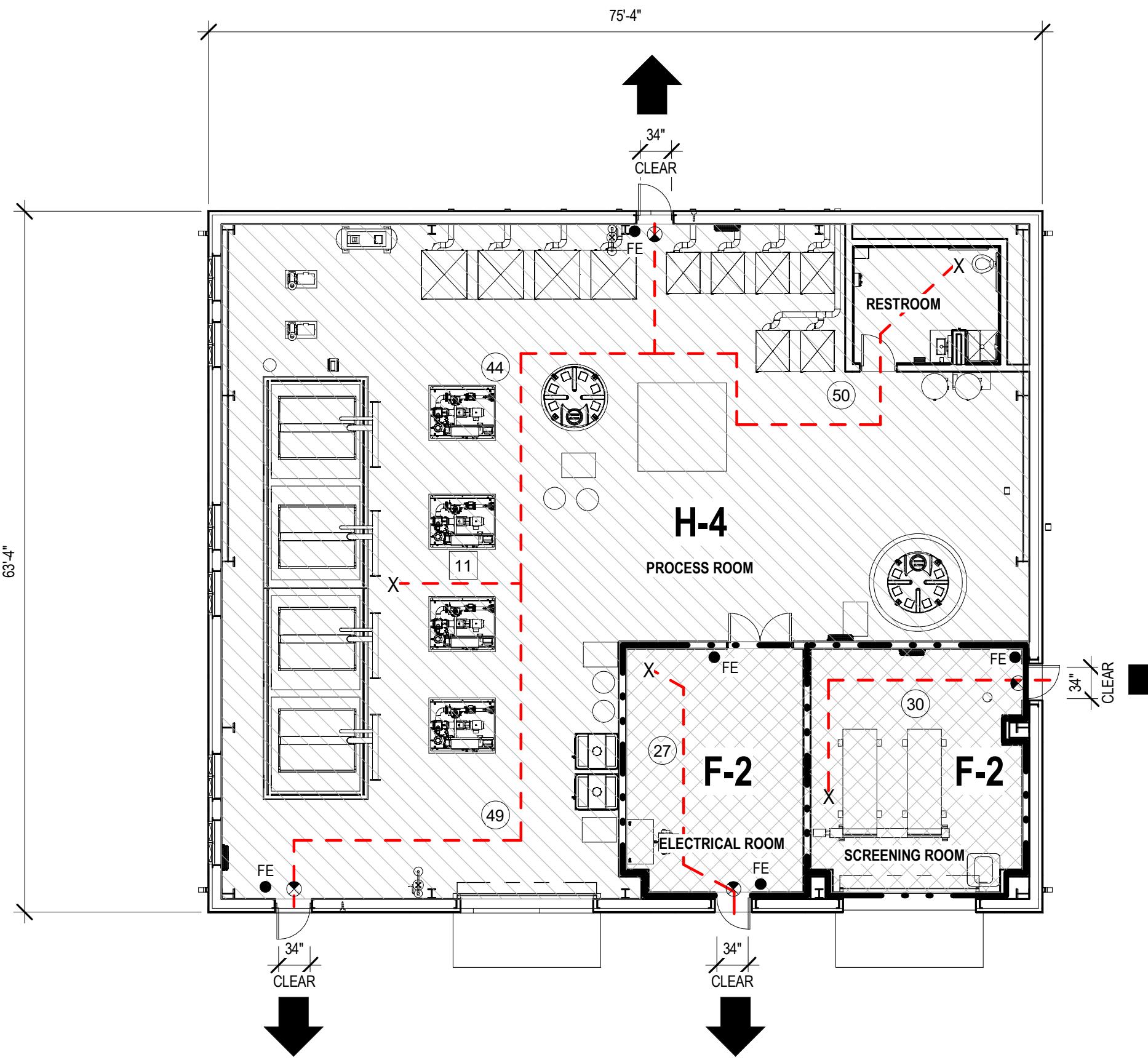
**LITTLETON
WATER DEPARTMENT**

**KING STREET WATER RESOURCE
RECOVERY FACILITY**

ARCHITECTURAL ABBREVIATIONS AND SYMBOLS

A circular notary seal for the Commonwealth of Massachusetts. The outer ring contains the text "COMMONWEALTH OF MASSACHUSETTS" at the top and "NOTARY PUBLIC" at the bottom. The inner circle contains "KARA MAE JOHNSON" on the top two lines, "CIVIL" on the third line, and "NO. 27967" on the bottom line. Below the inner circle, the word "AUTHORIZED" is printed. At the bottom of the seal, there is a handwritten signature of "Kara M. Johnson" and the date "3/31/22" written below it.

FOR CONSTRUCTION
PROJECT NO. 263387-2
FILE NAME: AWZ000P
SHEET NO.
A-1



LIFE SAFETY PLAN

3/32" = 1'-0"

LIFE SAFETY PLAN LEGEND

- · — 2 HOUR FIRE RATING
- · — EGRESS PATH
- EXIT DISCHARGE
- ↗ AREA OR SPACE EXIT
- ✖ EXIT SIGN
- FE FIRE EXTINGUISHER - MULTIPURPOSE DRY-CHEMICAL TYPE
- ✖ TRAVEL DISTANCE (FEET)
- ✖ COMMON PATH OF TRAVEL (FEET)
- X POINT OF ORIGIN
- ▨ FACTORY INDUSTRIAL, F-2 OCCUPANCY CLASSIFICATION
- ▨ HIGH-HAZARD, H-4 OCCUPANCY CLASSIFICATION

Building Code Summary			
Owner:	Littleton Water Department	Date:	March 2022
Project Name:	King Street Water Resource Recovery Facility	Location:	Littleton, MA
Project No:	263387-261886	Architect of Record:	CDM Smith
Building Name:	Water Resource Recovery Facility		
Work Scope:	Construction of process building (New Structure)		
Applicable Ordinances, Codes, and Standards			
Building Code	780 CMR Ninth Edition (2015 IBC with MA amendments)		
Mechanical Code	780 CMR Ninth Edition (2015 IMC with MA amendments)		
Energy Code	780 CMR Ninth Edition (2015 IECC with MA amendments)		
Fire / Life Safety Code	NFPA 1 - 2015 Edition, with MA amendments		
Electrical Code	NFPA 70 - 2020 Edition, with MA amendments		
Plumbing Code	248 CMR 10.00: Uniform State Plumbing Code		
Accessibility Code	521 CMR - 2006 Edition		
Use and Occupancy Classification			
IBC Reference			
Chapter 3			
Mixed Use (Yes/No)	Yes	See Section 508	Remarks
Section 306	Factory Group F	306.3 Low-hazard factory industrial, Group F-2	F-2 Electrical Room
Section 307	High-Hazard Group H	307.6 High-hazard, Group H-4	H-4 applies: over 500 gallons of aggregate corrosives in liquid storage
Chemical Storage	Yes	See Chemical Storage Summary Chart	
Special Detailed Requirements Based on Use and Occupancy			
Chapter 4			
Section 414	Hazardous Materials		
414.3	Ventilation	Complies with Fire Code and Mechanical Code	
Section 415	Groups H-1, H-2, H-3, H-4 and H-5		
415.3	Automatic Fire Detection Systems	Required	
415.4	Automatic Sprinkler System	Required	
415.5	Emergency Alarms	Required	
General Building Heights and Areas			
Chapter 5			
Section 504	Building Height and Number of Stories		
Table 504.3	Allowable Building Height in Feet Above Grade Plane	Allowable	Proposed
	Group F-2 Type IIB - No Sprinklers	55 Feet	28 Feet
	Group H-4 Type IIB - Sprinklers	75 Feet	28 Feet
Table 504.4	Allowable Number of Stories Above Grade Plane		
	Group F-2 Type IIB - No Sprinklers	3 Stories	1 Story
	Group H-4 Type IIB - Sprinklers	4 Stories	1 Story
Section 506	Building Area		
Table 506.2	Allowable Area Factor		
	Group F-2 Type IIB - No Sprinklers	40,250 SF	317 SF
	Group H-4 Type IIB - Sprinklers	83,125 SF	4,453 SF
	TOTALS	123,375 SF	4,770 SF
506.2.2	Mixed-occupancy, one-story buildings	Use Equation 5-1 from 506.2.1 for each occupancy	
	Allowable Area Determination (F-2)	$A_3 = A_1 + (NS \times I) = 23,000 + (23,000 \times 0.75) = 23,000 + 17,250 = 40,250$	
	Allowable Area Determination (H-4)	$A_3 = A_1 + (NS \times I) = 70,000 + (17,500 \times 0.75) = 70,000 + 13,125 = 83,125$	
506.3	Frontage Increase	Use Equation 5-5 from 506.3.3	
Section 508	Mixed Use and Occupancy		
508.2.4	Separated Occupancies	See Table 508.4	
	Required Separation of Occupancies (Hours)		
Table 508.4	Occupancy	Required Separation	Proposed
	F-2 and H-4 (Sprinklers)	2	2

CHEMICAL STORAGE SUMMARY										
CHEMICAL DESCRIPTION	WATER RESOURCE RECOVERY FACILITY	CLASSIFICATION	INFLAMMABILITY	CORROSIVENESS	HARMFULNESS	STABILITY	STORAGE	USE: OPEN SYSTEM	FIRE FIGHTER PLACARD	PHYSICAL HAZARDS
		STATE	CONCENTRATION (%)	TOTAL STORAGE - ACTUAL (GALLONS)	MAX ALLOWABLE QUANTITY (IBC 7.7.2, Table 207.1.10)	MAX ALLOWABLE QUANTITY (NEPA Table 214.2.1.3)	ON DANGER CLASS	UNSTABLE REACTIVE	WATER-REACTIVE	CORROSIVE
1	POTASSIUM HYDROXIDE (NEW) CAS no. 1310-58-3	H-4/ 4	L	51	STORAGE: 1500 CLOSED SYSTEM: N/A OPEN SYSTEM: N/A	STORAGE: 100 CLOSED SYSTEM: N/A OPEN SYSTEM: N/A	Y N/A N/A	3 0 0	W1 — —	WR1 COR —
2	CHLORINE (NEW) CAS no. 56-81-5	H-4/ N/A	L	25	STORAGE: 275 CLOSED SYSTEM: N/A OPEN SYSTEM: N/A	STORAGE: 500 CLOSED SYSTEM: N/A OPEN SYSTEM: N/A	Y N/A N/A	3 1 0	— — —	— IRR —
3	SODIUM HYPOCHLORITE (NEW) CAS no. 7681-52-9	H-4/ 4	L	13.5	STORAGE: 275 CLOSED SYSTEM: N/A OPEN SYSTEM: N/A	STORAGE: 500 CLOSED SYSTEM: N/A OPEN SYSTEM: N/A	Y N/A N/A	3 0 0	— — —	— COR —
4	CITRIC ACID (NEW) CAS no. 77-92-9	H-4/ N/A	L	50	STORAGE: 275 CLOSED SYSTEM: N/A OPEN SYSTEM: N/A	STORAGE: N/A CLOSED SYSTEM: N/A OPEN SYSTEM: N/A	Y N/A N/A	2 0 0	— — —	— IRR —

*NOTE: AGGREGATE CORROSIVE STORAGE QUANTITY IS THE CONTROLLING HEALTH HAZARD USED IN THIS TABLE TO ESTABLISH H-4 AS APPLICABLE IBC USE AND OCCUPANCY CLASSIFICATION.

Types of Construction			
Chapter 6	Construction Classification		
Section 602	602.2	Types I and II, Non Combustible	Type IIB Construction
Fire and Smoke Protection Features			
Chapter 7			
Table 707.3.10		Fire-Resistance Rating Requirements for Fire Barrier Assemblies or Horizontal Assemblies Between Fire Areas (Hours)	
Occupancy		Required Separation	Proposed
F-2 and H-4 (Sprinklers)		2	2
Fire Protection and Life Safety Systems			
Chapter 9			
Section 903	Automatic Sprinkler Systems	Not required for Group F-2 occupancy	Required per 415.4 and 903.2.5 for Group H occupancies
Section 906	Portable Fire Extinguishers	Required in accordance to 906.2 and NFPA 10	
Section 907	907.2.4	Fire Alarm and Detection Systems	Not required for Group F-2 occupancy
	907.2.5	Group F	F-2 < 2 stories < 500 occupant load above/below lowest level of exit discharge
	907.2.5	Group H	Required per 907.2.5 for Group H occupancies
Section 908	Emergency Alarm Systems		
908.1	Group H occupancies	Required per 415.5 for Group H occupancies	
Means of Egress			
Chapter 10			
Section 1004	Occupant Load	Maximum Floor Area Allowances per Occupant	
	Function of Space	Occupant Load Factor	Area/Occupant Load Factor
	Mechanical Equipment Room	300 gross	(4,770 / 300) = 16
Section 1017		Exit Access Travel Distance	
	Occupancy	without Sprinklers (feet)	with Sprinklers (feet)
Table 1017.2	F-2	300	N/A
	H-4	Not Permitted	175
Accessibility			
Chapter 11			
Section 1103	Scoping Requirements		
1103.2.9	Equipment spaces are not required to comply with this chapter		
Accessible Elements and Spaces: Scope and Technical Requirements			
ADAAG Reference			
Chapter 4			
Section 4.1.1	Application		
4.1.1.5	General Exceptions		
4.1.1.5. ii.	non-occupiable spaces accessed only by ladders, catwalks, crawl spaces, very narrow passageways, tunnels, or freight (non-passenger) elevators, and frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment; such spaces may include, but are not limited to, elevator pits, elevator perches, piping or equipment catwalks, water or sewage treatment pump rooms and stations, electric substations and transformer vaults, and highway and tunnel utility facilities;		
International Energy Conservation Code (IECC)			
		Compliance requirements indicated by COMcheck report.	

0 4' 8' 12' 20'

SCALE: 3/32" = 1'-0"

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

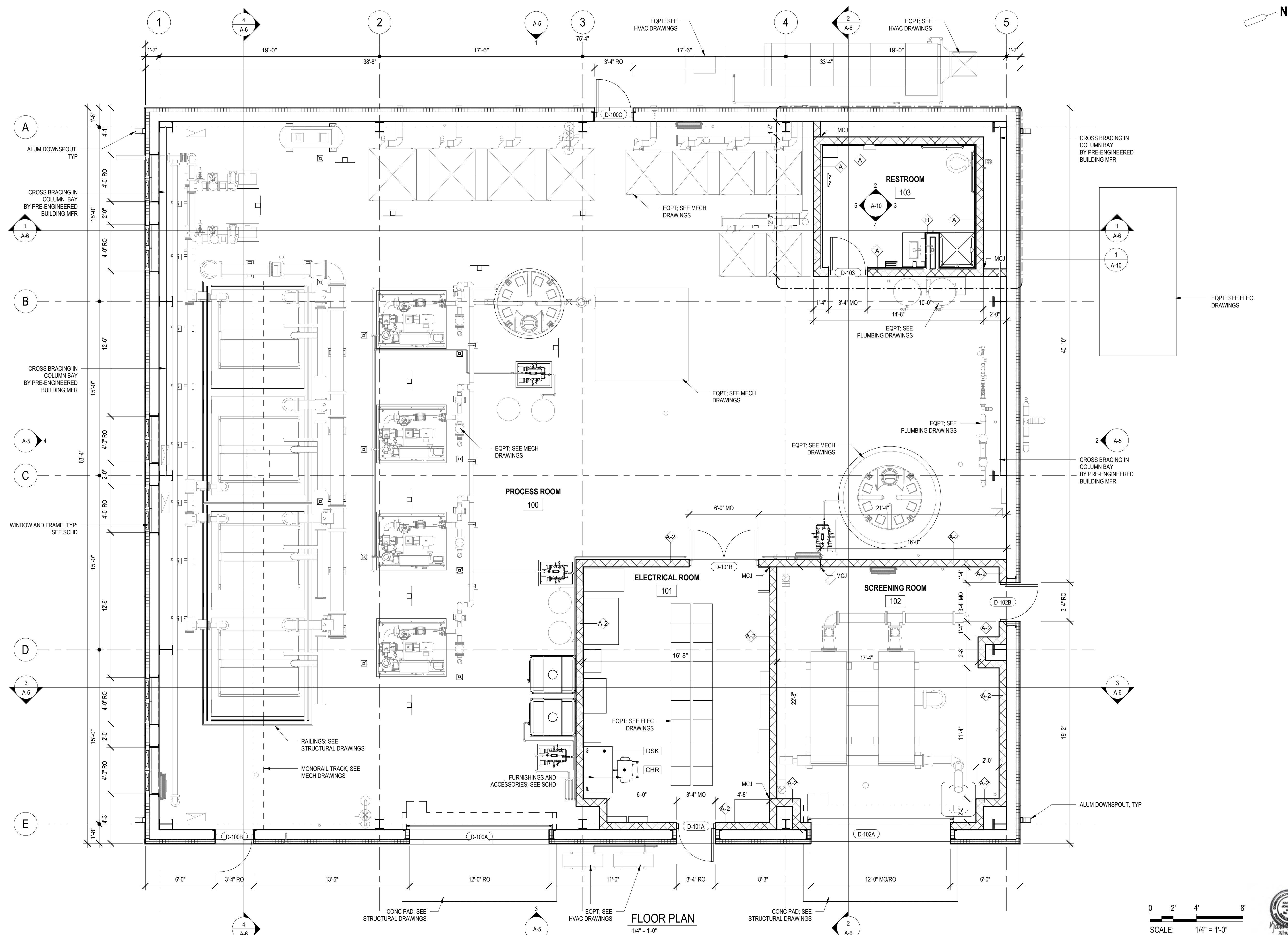
DESIGNED BY: R. MARSHALL	DRAWN BY: R. MARSHALL		
SHEET CHKD BY: S. BRADFORD	CROSS CHKD BY: B. GIORGI		
APPROVED BY: K. JOHNSTON	DATE: MARCH 2022		
REV. NO.	DATE	DRWN	CHKD
REMARKS			

CDM Smith
75 State Street, Suite 701
Boston, MA 02109
Tel: (617) 452-6000

LITTLETON
WATER DEPARTMENT
KING STREET WATER RESOURCE
RECOVERY FACILITY

ARCHITECTURAL CODE SUMMARY AND LIFE SAFETY
PLAN

PROJECT NO. 263387-261886
FILE NAME: AWZ000PB.RVT
SHEET NO. A-2
90% SUBMITTAL - NOT FOR CONSTRUCTION



SCALE. 1/4 - 1-0 33122
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REUSE OF DOCUMENTS:					
REV. NO.	DATE	DRWN	CHKD	REMARKS	

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DRAWN BY: R. MARSHALL
SHEET CHK'D BY: S. BRADFORD
CROSS CHK'D BY: B. GIORGI
APPROVED BY: K. JOHNSTON
DATE: MARCH 2022

h
—
701

LITTLETON
WATER DEPARTMENT

FLOOR PLAN

PROJECT NO. 263387-26188
FILE NAME: AWZ000PB.RV

SHEET NO.

A-3



ROOF PLAN

1/4" = 1'-0"

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

0 2' 4' 8'
SCALE: 1/4" = 1'-0"
3/8/22

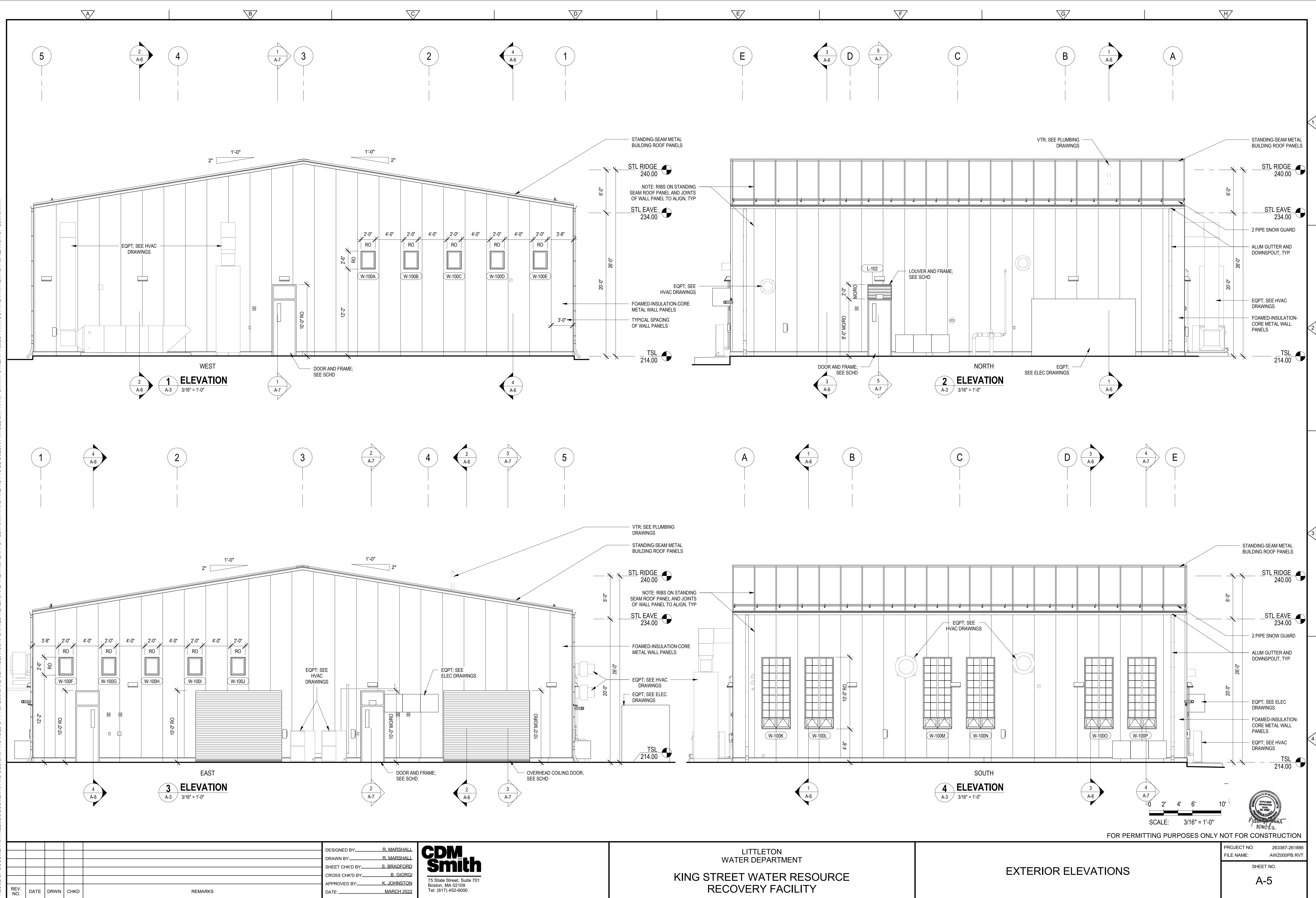
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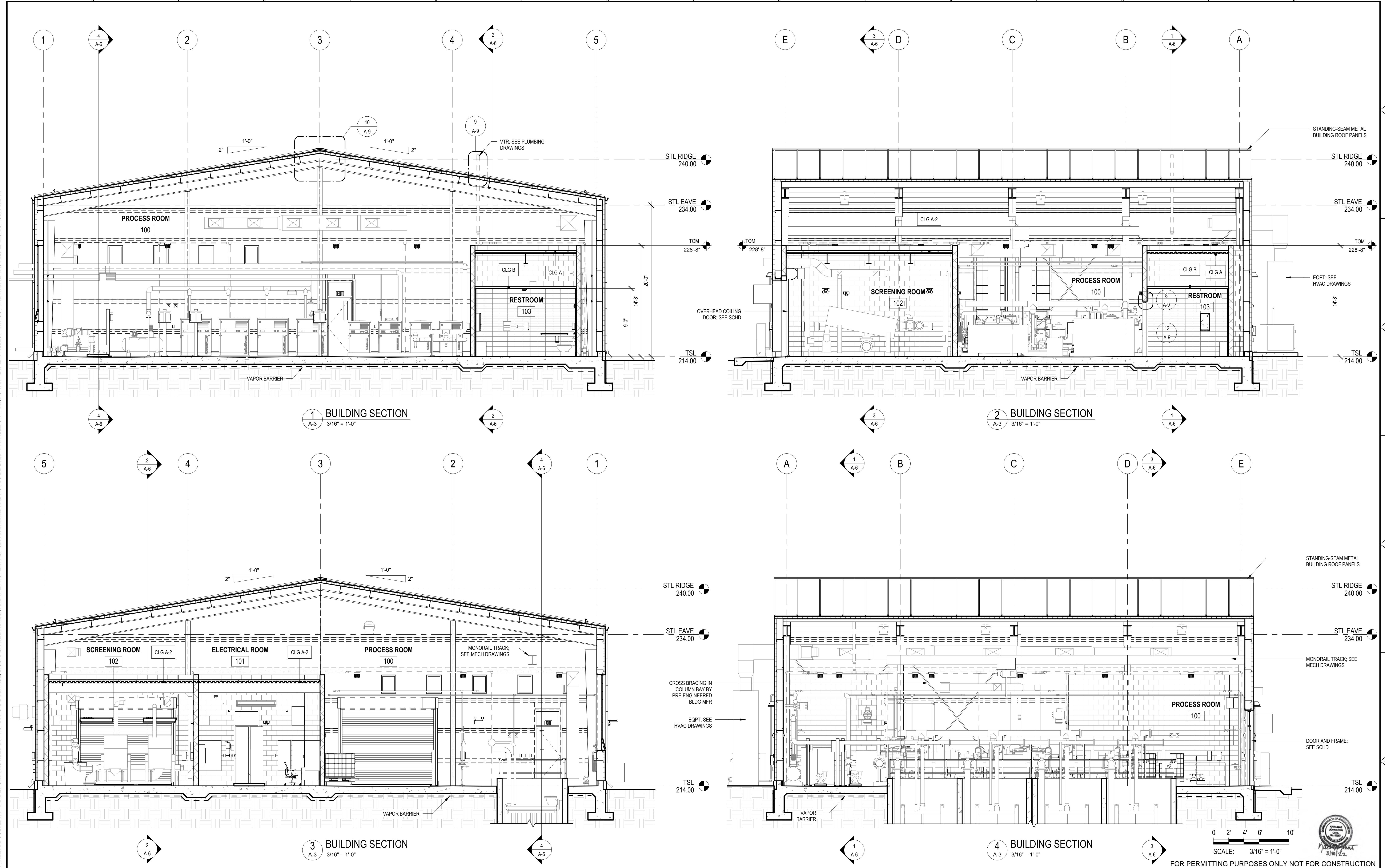
REMARKS

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LITTLETON
WATER DEPARTMENT
KING STREET WATER RESOURCE
RECOVERY FACILITY

PROJECT NO. 263387-261886
FILE NAME: AWZ000PB.RVT
SHEET NO. A-4





REV. NO.	DATE	DRWN	CHKD	REMARKS

The logo for CDM Smith. The word "CDM" is in a large, bold, black sans-serif font. The word "Smith" is in a slightly smaller, bold, black sans-serif font, positioned directly below "CDM". A thin horizontal line is located below the "Smith" text.

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Boston, MA 02109
Tel: (617) 452-6000

134

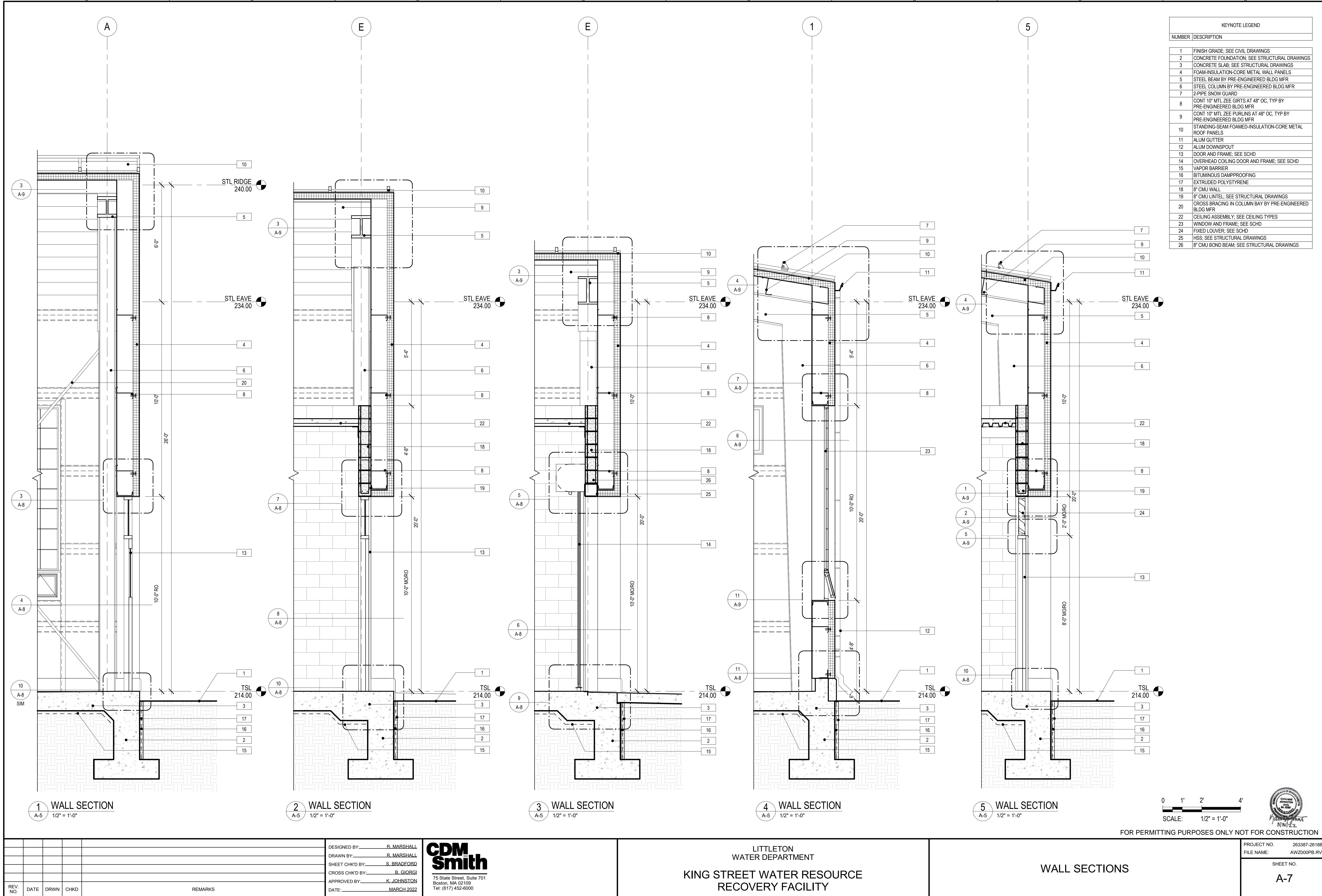
LITTLETON
WATER DEPARTMENT

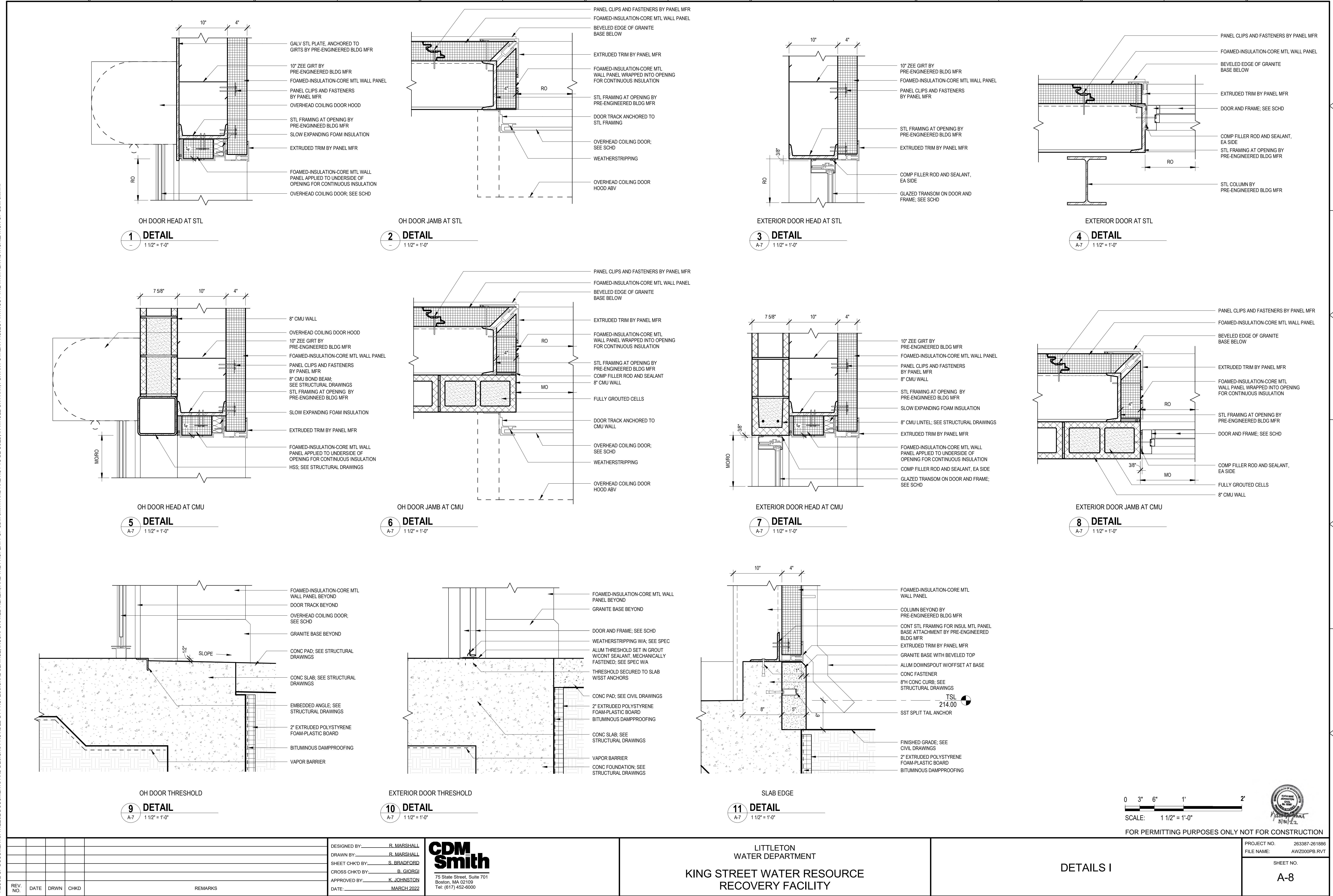
**KING STREET WATER RESOURCE
RECOVERY FACILITY**

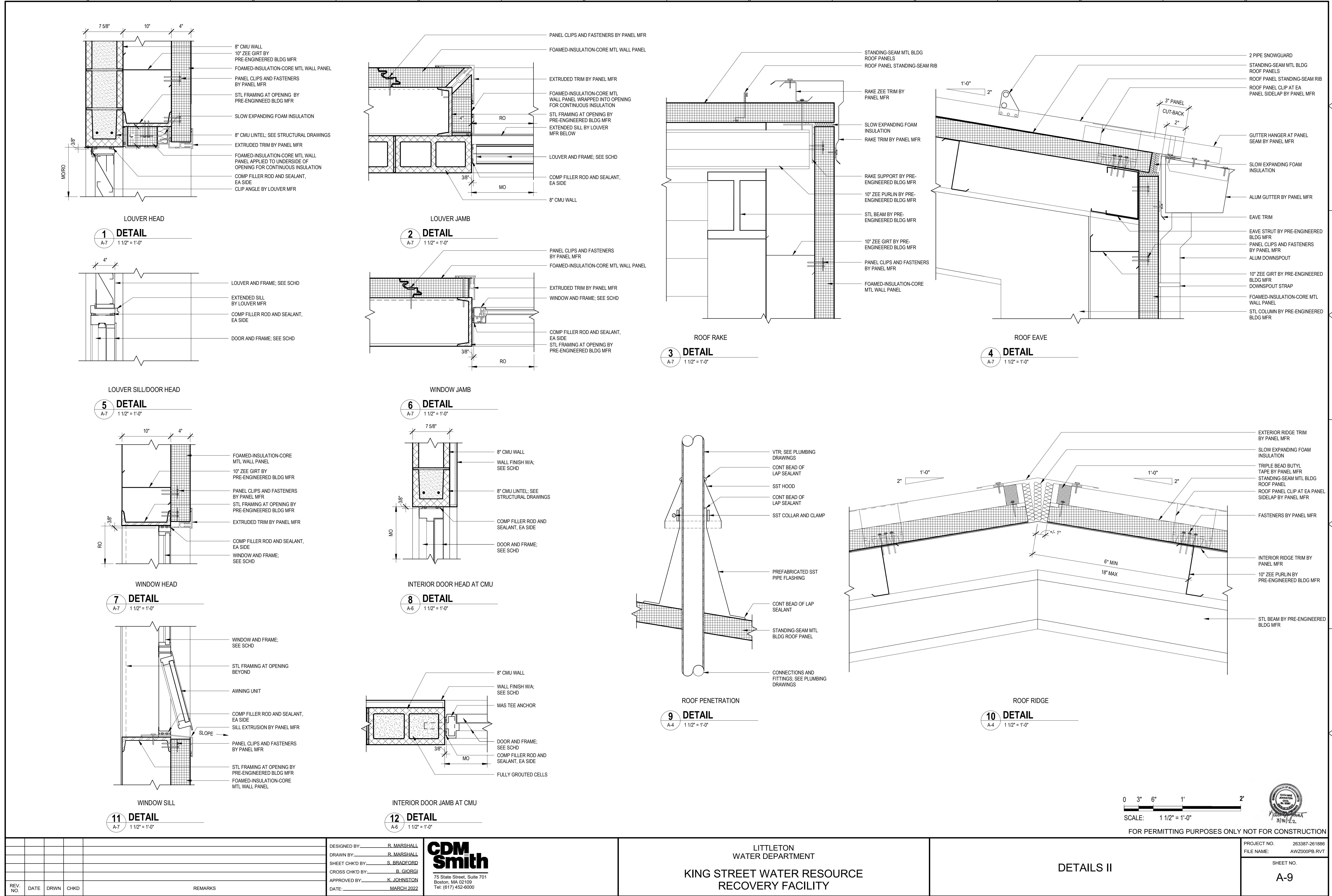
BUILDING SECTIONS

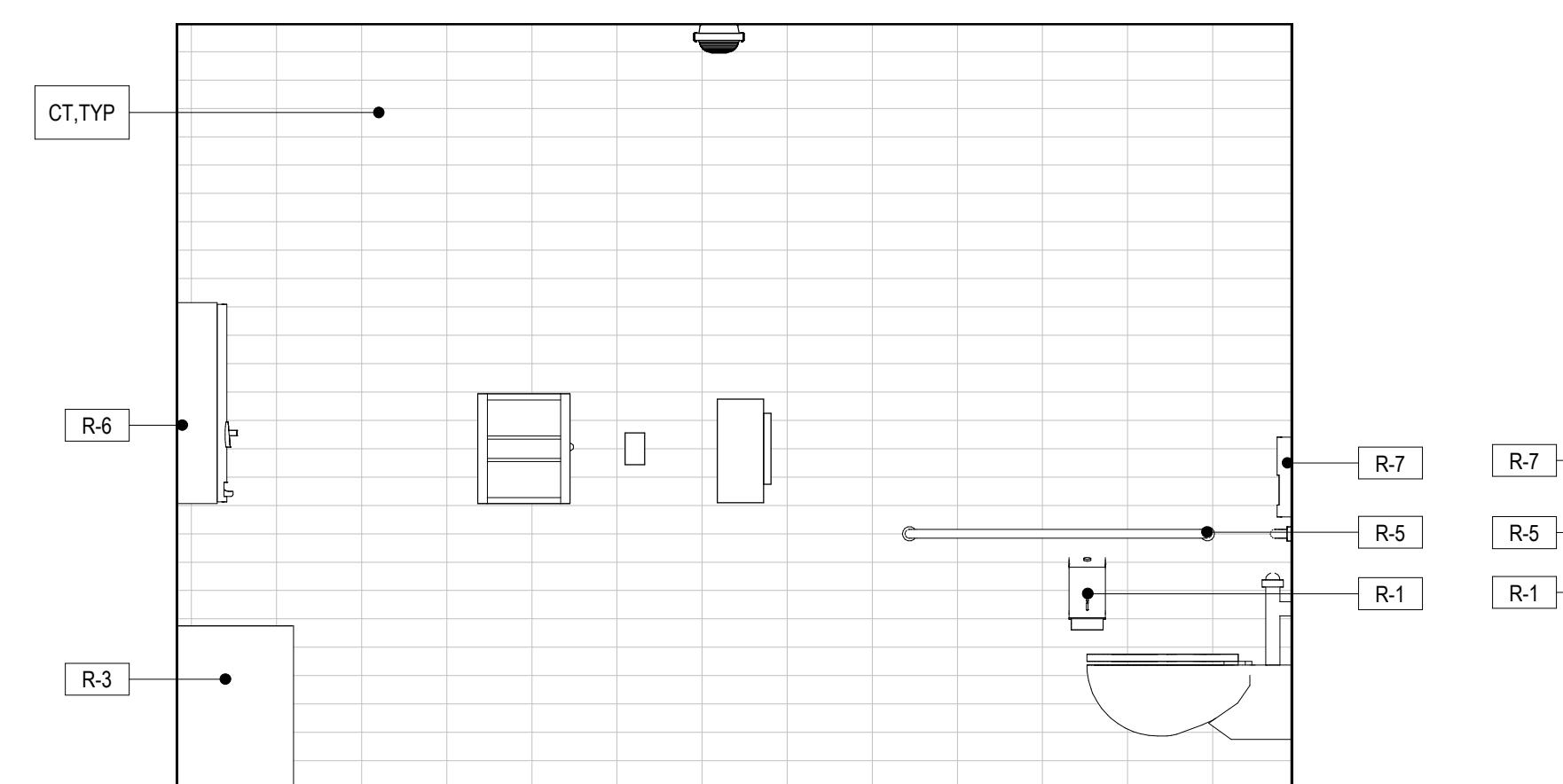
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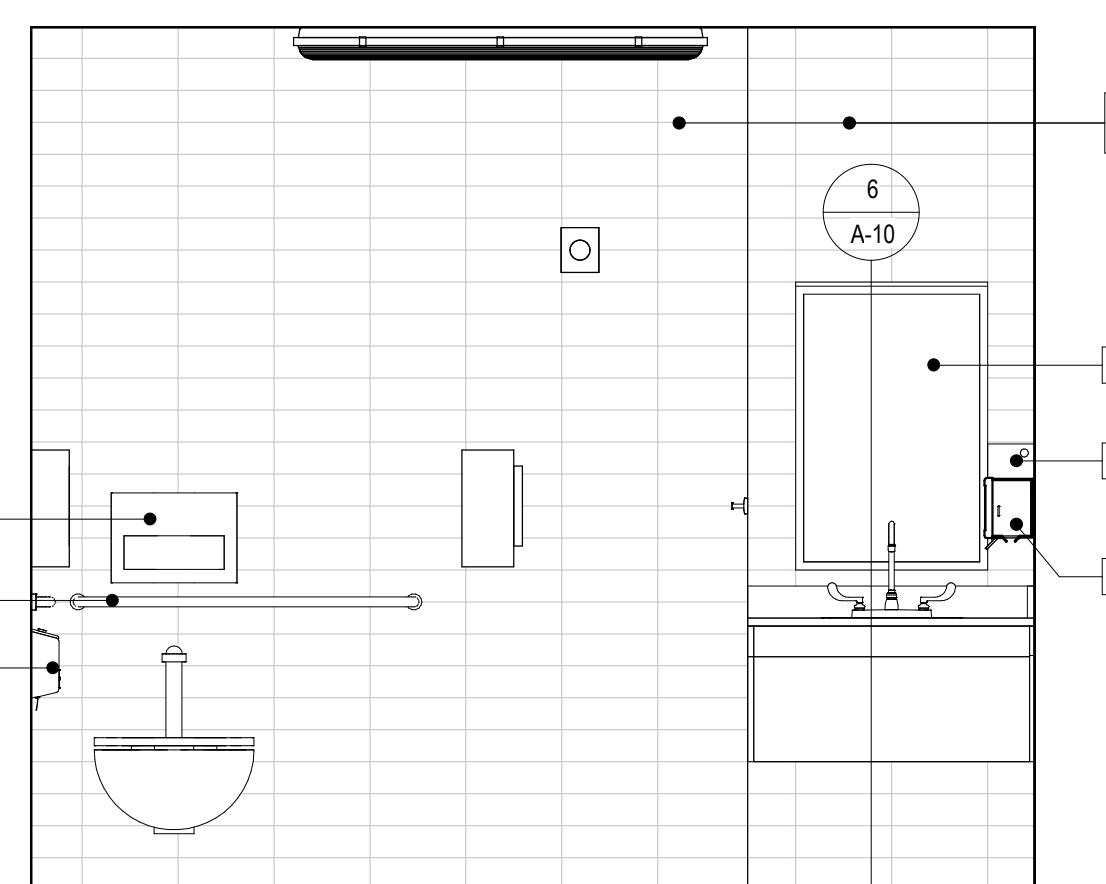




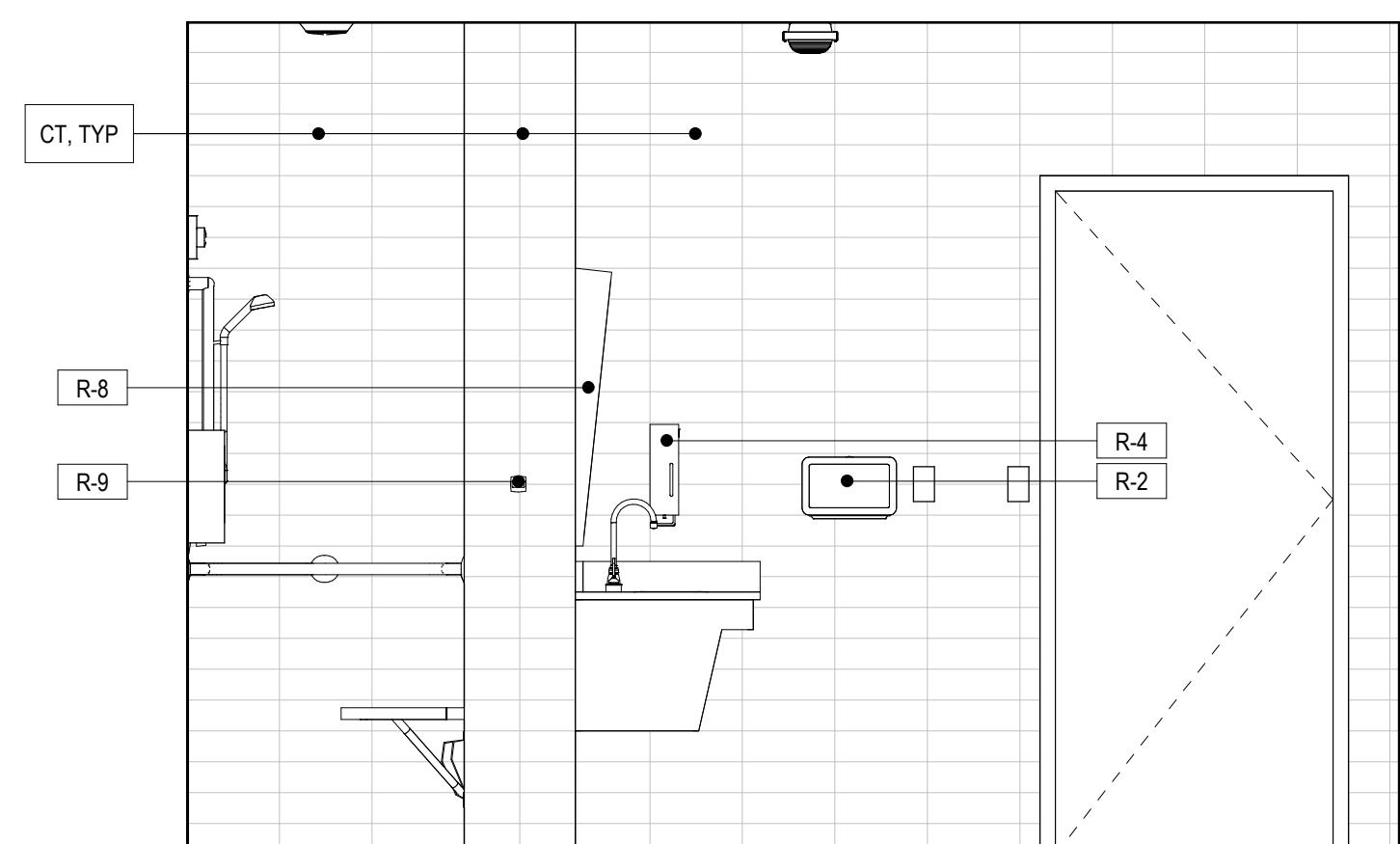




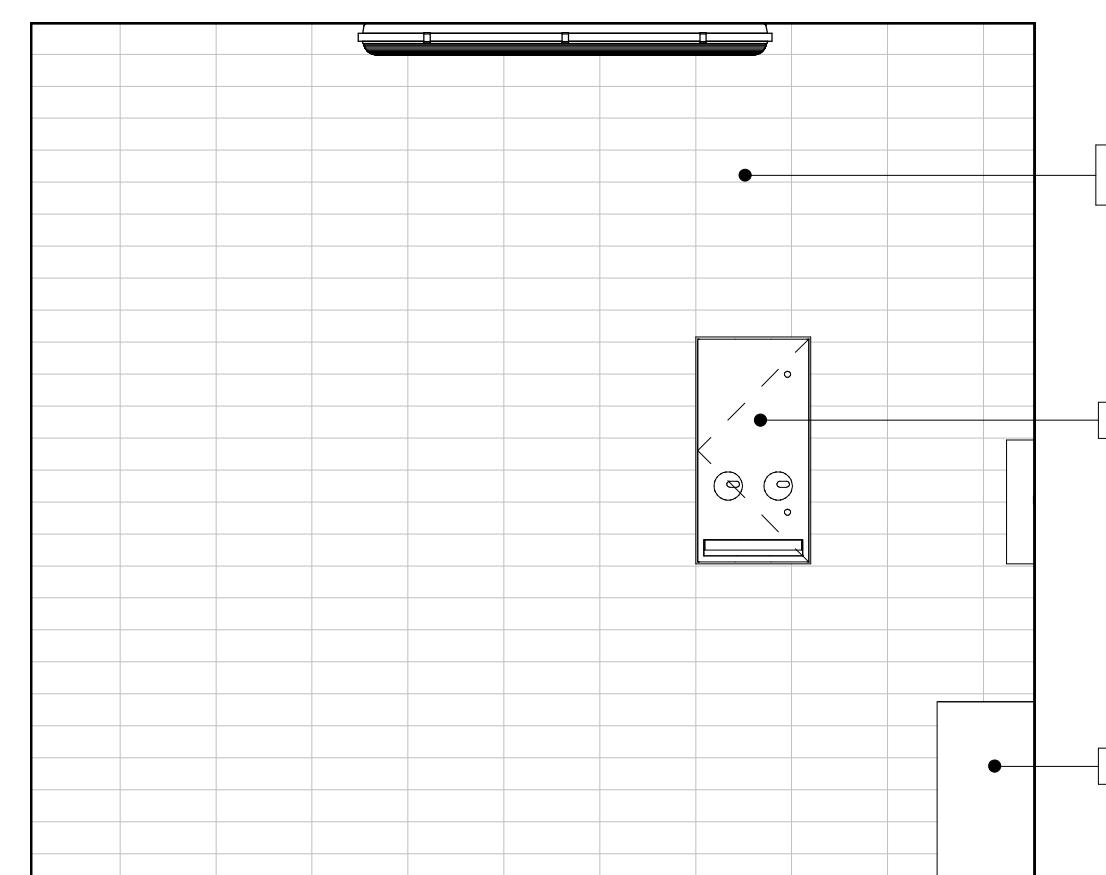
RESTROOM WEST
2 ELEVATION
A-3 1/2" = 1'-0"



RESTROOM NORTH
3 ELEVATION
A-3 1/2" = 1'-0"

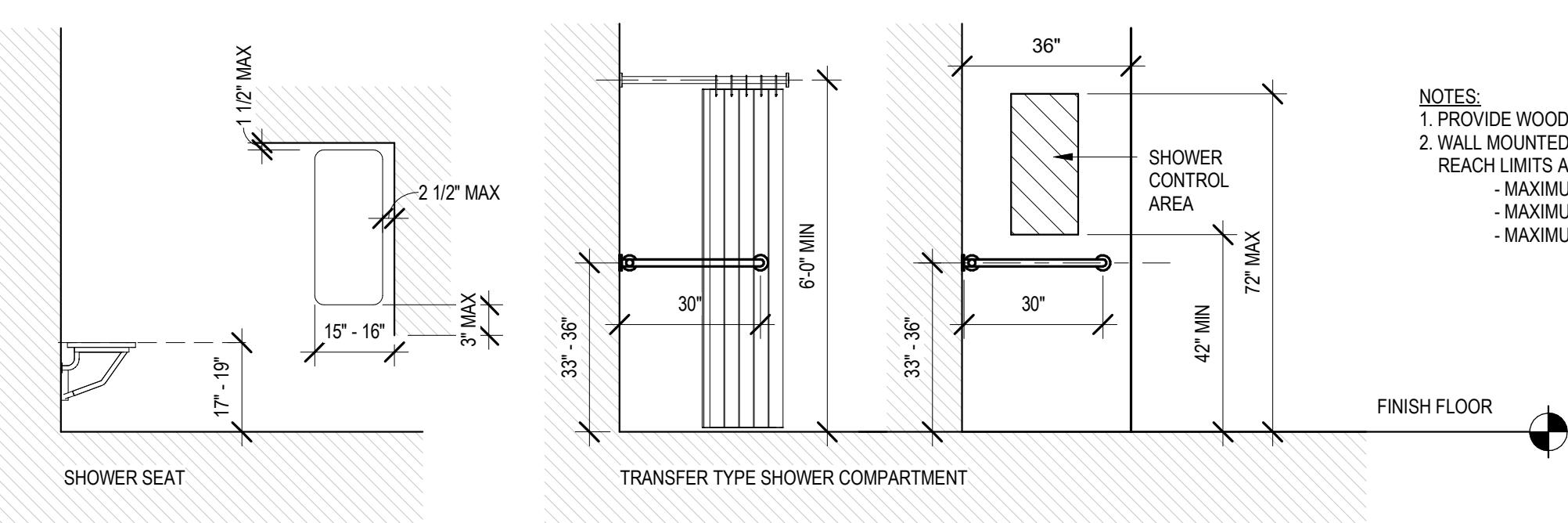


RESTROOM EAST
4 ELEVATION
A-3 1/2" = 1'-0"

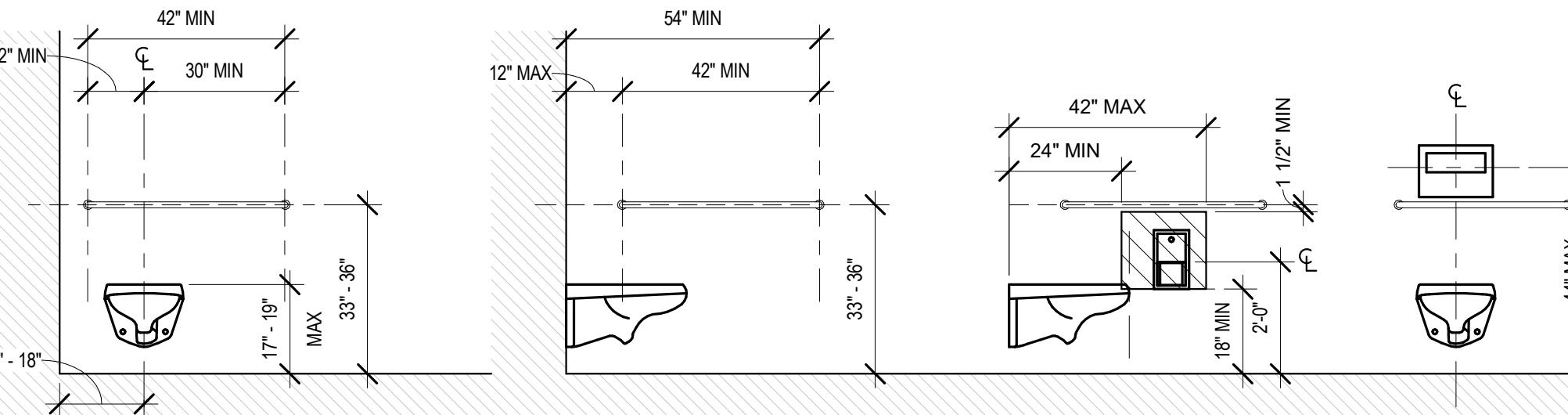


RESTROOM SOUTH
5 ELEVATION
A-3 1/2" = 1'-0"

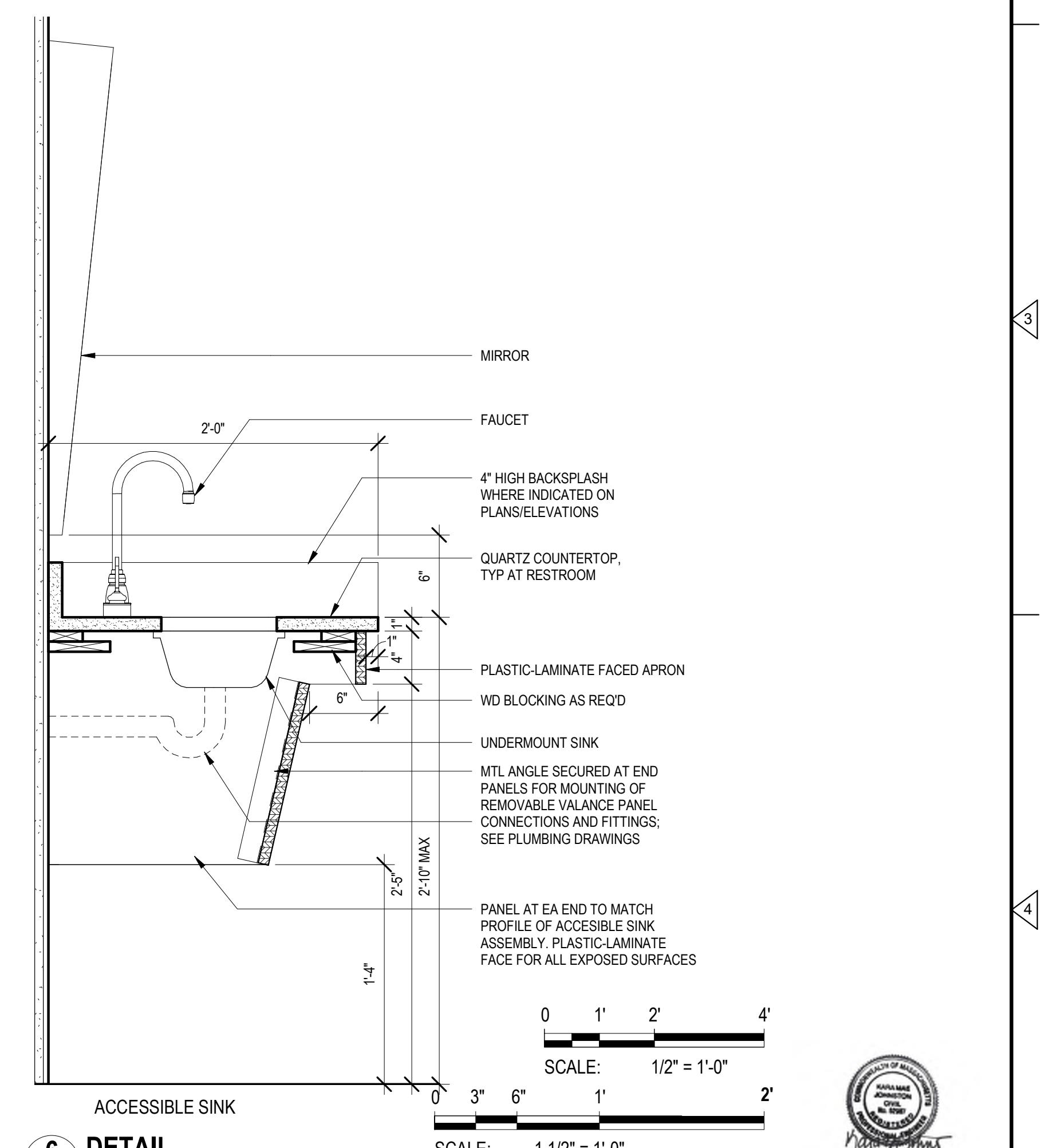
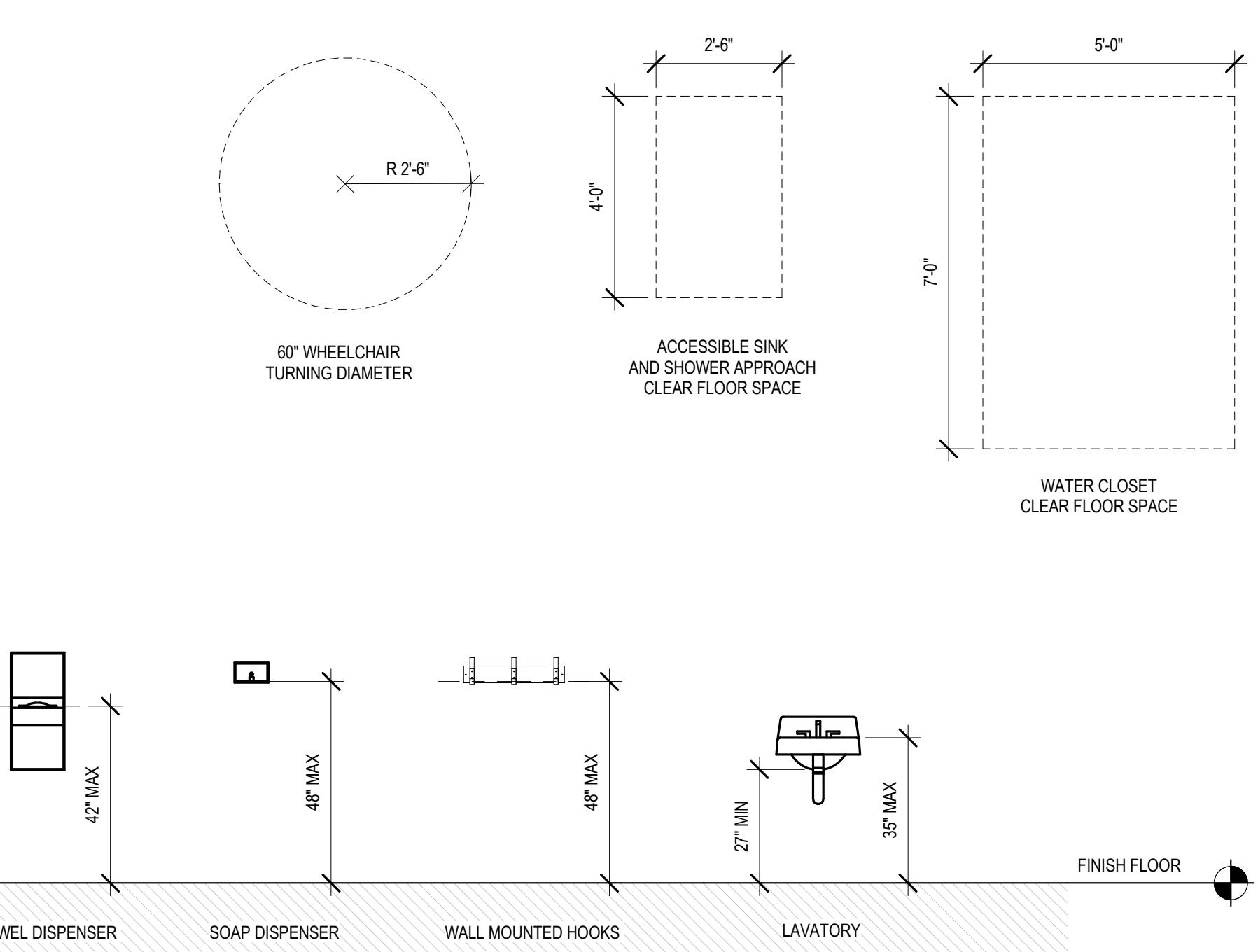
ACCESSIBLE MOUNTING HEIGHTS



NOTES:
1. PROVIDE WOOD BLOCKING AS REQUIRED FOR ALL TOILET ACCESSORIES.
2. WALL MOUNTED ACCESSORIES SHALL BE MOUNTED IN ACCORDANCE WITH REACH LIMITS APPLICABLE TO INSTALLATION LOCATION.
- MAXIMUM OBSTRUCTED FORWARD OR SIDE REACH IS 48".
- MAXIMUM OBSTRUCTED FORWARD REACH IS 44".
- MAXIMUM OBSTRUCTED SIDE REACH IS 46".



ACCESSIBLE FLOOR CLEARANCES



6 DETAIL

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

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

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LITTLETON
WATER DEPARTMENT
KING STREET WATER RESOURCE
RECOVERY FACILITY

PROJECT NO. 263387-261886
FILE NAME: AWZ000PB.RVT
SHEET NO. A-10

FINISH SCHEDULE																		
ROOM NUMBER	ROOM NAME	FLOOR		WALL		CEILING		NOTES										
		MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	BASE	MATERIAL	FINISH	HEIGHT							
100	PROCESS ROOM	CONC	HARD	CMU/STL	PTD/PTD	CMU/STL	PTD/PTD	CMU/STL	PTD/PTD	STL	PTD	CONC	11A-8	EXP	PTD	-		
101	ELECTRICAL ROOM	CONC	RT	CMU	PTD	CMU	PTD	CMU	PTD	CMU	PTD	RB	A	STL	EXP	13'-7"	1	
102	SCREENING ROOM	CONC	RES	CMU	PTD	CMU	PTD	CMU	PTD	RES	CID	STL	EXP	13'-7"	1			
103	RESTROOM	CONC	CT	CT	FF	CT	FF	CT	FF	CT	FF	CT	B	GWB	PTD	9'-0"	2	

DOOR SCHEDULE														
DOOR NUMBER	ROOM NAME	SIZE		DOOR		FRAME		DETAILS		FIRE RATING (MINUTES)		HARDWARE SET	NOTES	
		WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	GLAZING	TYPE	MATERIAL	FINISH	HEAD	JAMB	THRESHOLD	
D-100A	PROCESS ROOM	12'-0"	10'-0"	OH	ALUM	PTD	-	STL	PTD	1/A-8	2/A-8	9/A-8	-	
D-100B	PROCESS ROOM	3'-0"	7'-10"	NV	ALUM	FF	F3	ALUM	FF	3/A-8	4/A-8	10/A-8	-	2
D-100C	PROCESS ROOM	3'-0"	7'-10"	NV	ALUM	FF	F3	ALUM	FF	3/A-8	4/A-8	10/A-8	-	2
D-101A	ELECTRICAL ROOM	3'-0"	7'-10"	NV	ALUM	FF	F3	ALUM	FF	7/A-8	8/A-8	10/A-8	90	2
D-101B	ELECTRICAL ROOM	2'-10"	7'-2"	NV	HM	PTD	F2	HM	PTD	8/A-9 SIM	10/A-8 SIM	10/A-8	90	1,2
D-102A	SCREENING ROOM	12'-0"	10'-0"	OH	ALUM	PTD	-	STL	PTD	5/A-8	6/A-8	9/A-8	-	2
D-102B	SCREENING ROOM	3'-0"	7'-10"	NV	ALUM	FF	F1	ALUM	FF	5/A-9	8/A-8	10/A-8	90	2
D-103	RESTROOM	3'-0"	7'-2"	F	HM	PTD	F1	HM	PTD	8/A-9	12/A-9	10/A-8 SIM	-	

LOUVER SCHEDULE													
LOUVER NUMBER	ROOM NAME	SIZE		TYPE	MATERIAL	FINISH	DEPTH	DETAILS		HEAD	JAMB	SILL	NOTES
		WIDTH	HEIGHT					HEAD	JAMB				
L-102	SCREENING ROOM	3'-4"	2'-0"	L1	ALUM	FF	4"	1/A-9	2/A-9	5/A-9			

WINDOW SCHEDULE													
WINDOW NUMBER	ROOM NAME	SIZE		TYPE	FRAME		GLAZING	DETAILS		HEAD	JAMB	SILL	NOTES
		HEIGHT	WIDTH		MATERIAL	FINISH		HEAD	JAMB				
W-100A	PROCESS ROOM	2'-6"	2'-0"	W1	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9 SIM			
W-100B	PROCESS ROOM	2'-6"	2'-0"	W1	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9 SIM			
W-100C	PROCESS ROOM	2'-6"	2'-0"	W1	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9 SIM			
W-100D	PROCESS ROOM	2'-6"	2'-0"	W1	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9 SIM			
W-100E	PROCESS ROOM	2'-6"	2'-0"	W1	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9 SIM			
W-100F	PROCESS ROOM	2'-6"	2'-0"	W1	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9 SIM			
W-100G	PROCESS ROOM	2'-6"	2'-0"	W1	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9 SIM			
W-100H	PROCESS ROOM	2'-6"	2'-0"	W1	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9 SIM			
W-100I	PROCESS ROOM	2'-6"	2'-0"	W1	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9 SIM			
W-100J	PROCESS ROOM	2'-6"	2'-0"	W1	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9 SIM			
W-100K	PROCESS ROOM	10'-0"	4'-0"	W2	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9			
W-100L	PROCESS ROOM	10'-0"	4'-0"	W2	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9			
W-100M	PROCESS ROOM	10'-0"	4'-0"	W2	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9			
W-100N	PROCESS ROOM	10'-0"	4'-0"	W2	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9			
W-100O	PROCESS ROOM	10'-0"	4'-0"	W2	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9			
W-100P	PROCESS ROOM	10'-0"	4'-0"	W2	ALUM	FF	SEE SPEC	7/A-9	6/A-9	11/A-9			

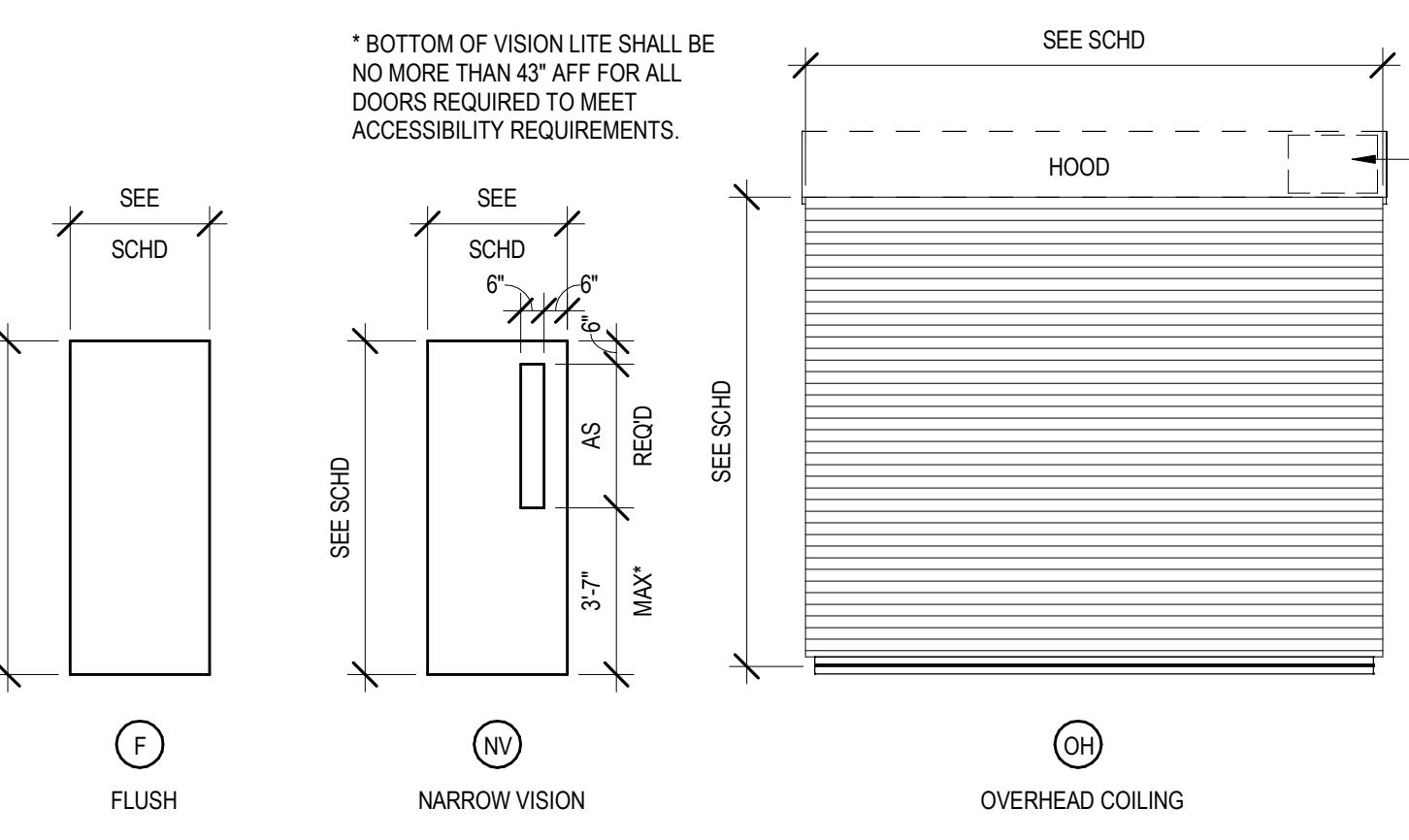
DOOR SCHEDULE NOTES

1. PAIR OF DOORS.
2. KEY CARD ENTRY ACCESS REQUIRED.

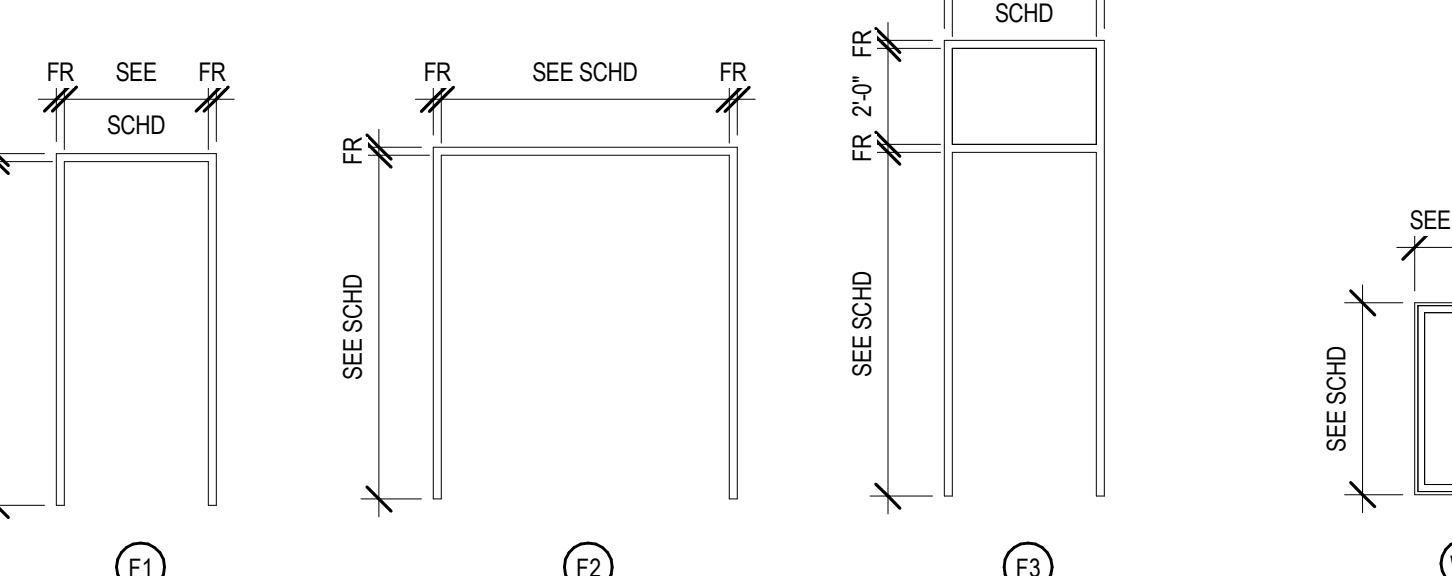
FINISH SCHEDULE NOTES

1. CEILING TYPE CLG A-2.
2. CEILING TYPE CLG A WITH DROP CEILING TYPE CLG B BELOW.

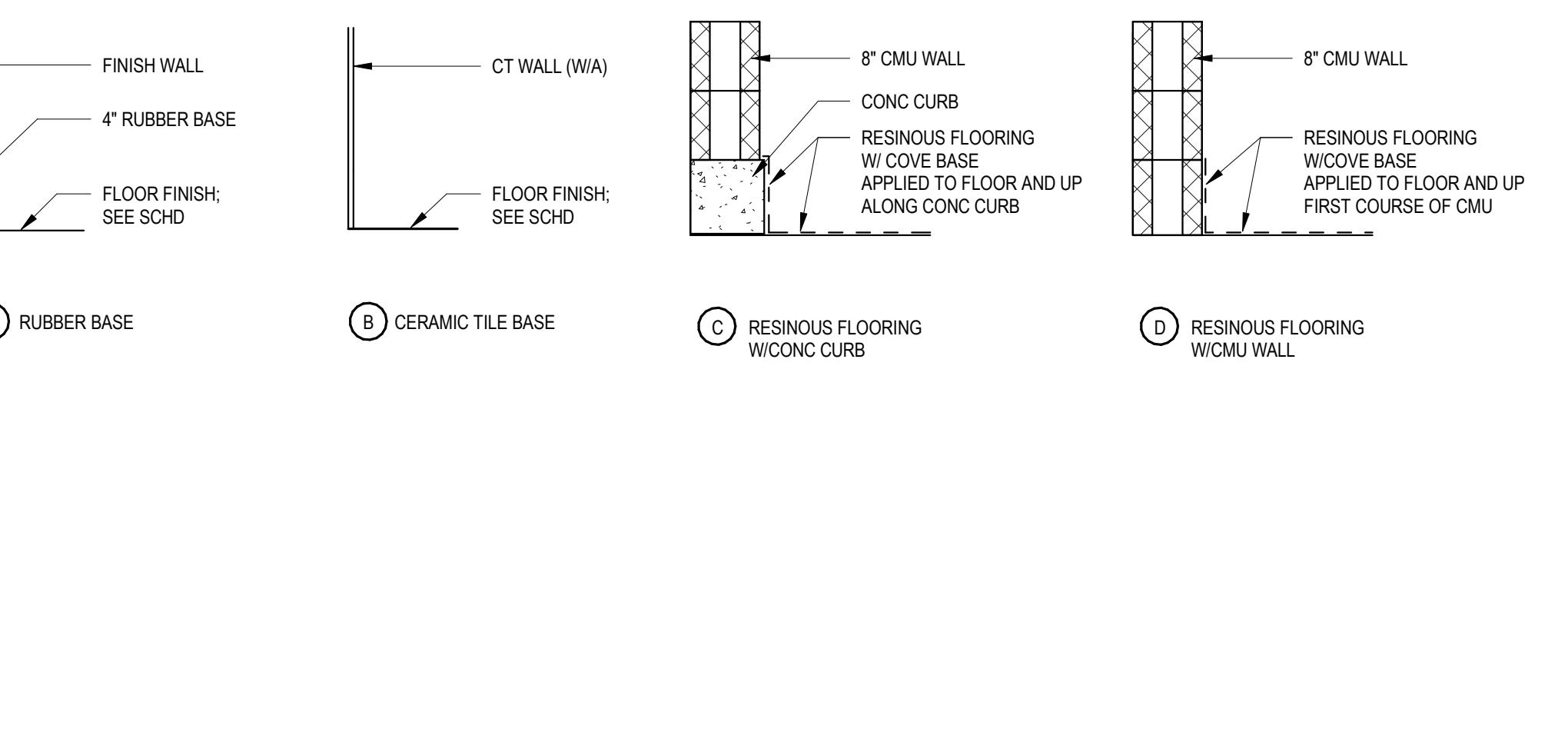
DOOR TYPES



FRAME TYPES

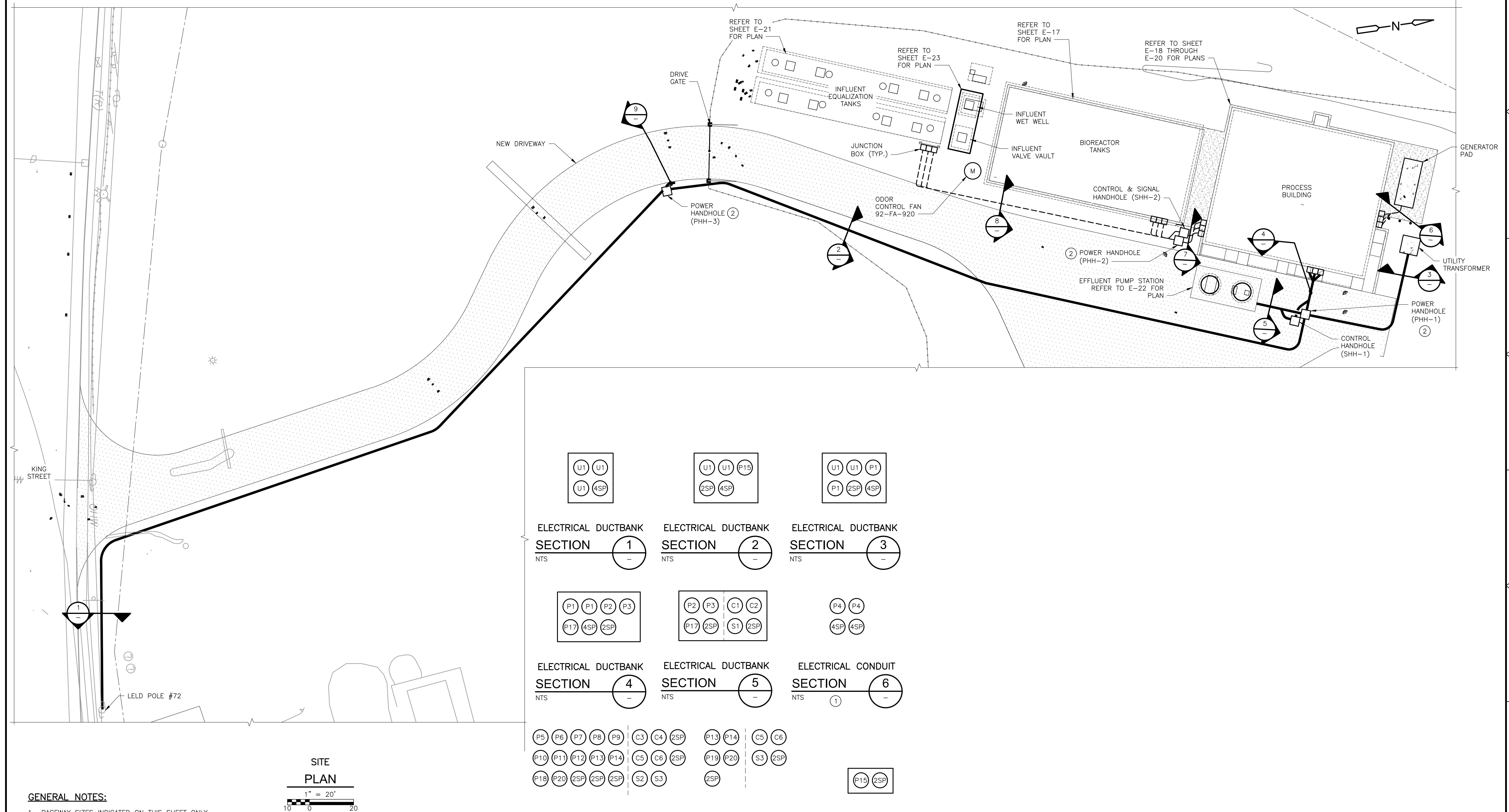


BASE AND FLOOR FINISH DETAILS



FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

REVISION NO.	DATE	DRWN	CHKD	REMARKS
DESIGNED BY:	R. MARSHALL	</		



SITE PLAN

GENERAL NOTES:

1. RACEWAY SIZES INDICATED ON THIS SHEET ONLY APPLY TO UNDERGROUND CONDUITS AND DUCTBANKS. SEE ONE-LINE DIAGRAMS FOR EXPOSED CONDUIT SIZES.

KEYED NOTES:

- ① SCHEDULE 80 PVC DIRECT BURIED CONDUITS.
NOT IN CONCRETE ENCASED DUCTBANKS.
 - ② PROVIDE SEPARATE HANDHOLES FOR POWER CONDUITS
AND CONTROL/SIGNAL CONDUITS.

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION



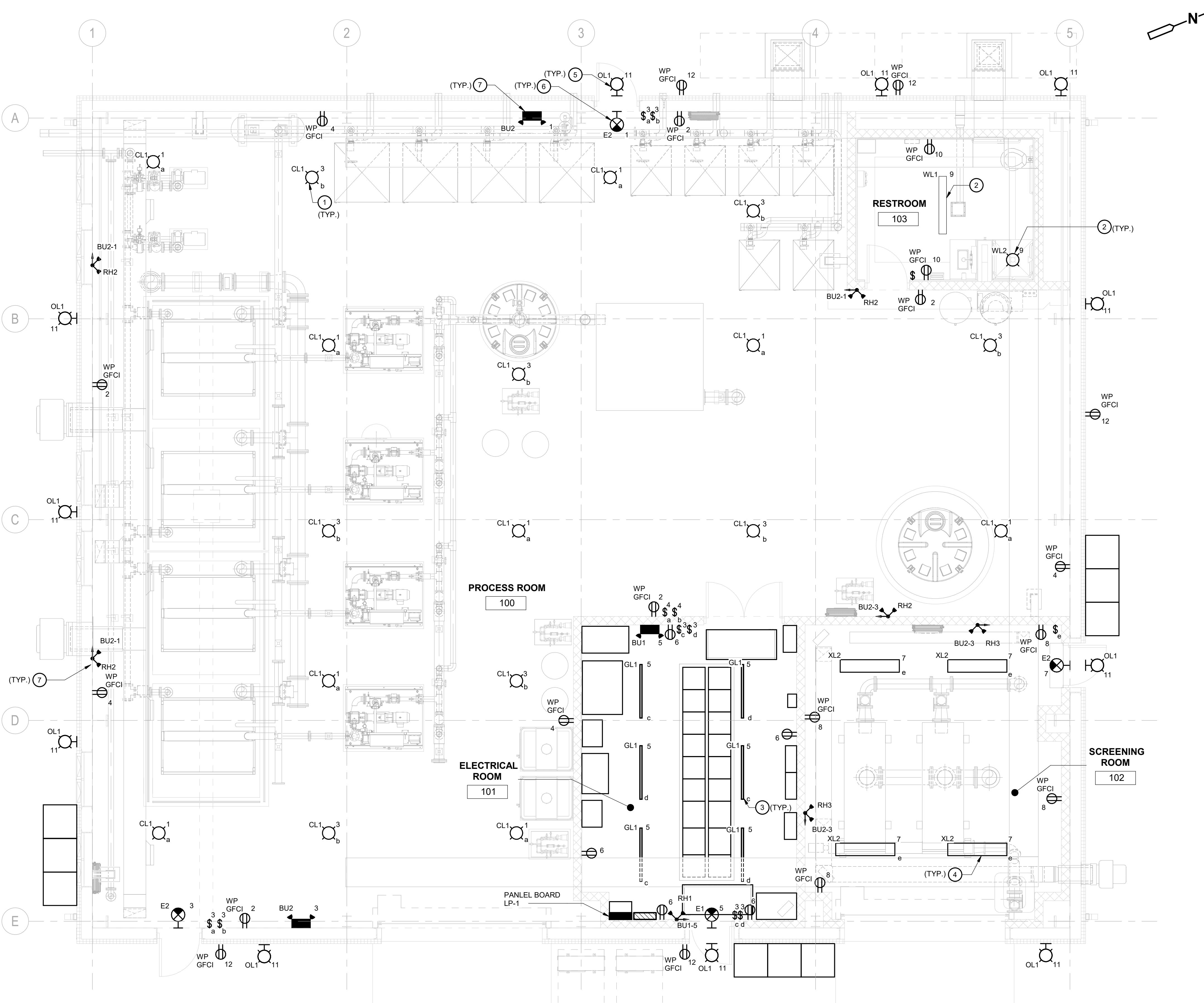
75 State Street, Suite 701
Boston, MA 02109
Tel: (617) 452-6000

LITTLETON WATER DEPARTMENT

LITTLETON WATER RESOURCE RECOVERY FACILITY

ELECTRICAL SITE PLAN AND UNDERGROUND DUCT BANK SECTIONS AND SCHEDULE

PROJECT NO. 263387-261886
FILE NAME: E004NFLG.dwg
SHEET NO.
E-4



PROCESS BUILDING LIGHTING AND SMALL POWER
PLAN

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

GENERAL NOTES:

1. ALL LIGHTING FIXTURES AND RECEPTACLE SHALL BE CONNECTED TO PANELBOARD LP-1.
2. REFER TO SHEET E-9 FOR LIGHTING FIXTURE SCHEDULE.
3. REFER TO DRAWING G-6 FOR AREA CLASSIFICATION.

KEYED NOTES:

1. ALL XL1 FIXTURES SHALL BE PENDANT MOUNTED 15'-0" A.F.F.
2. SURFACE MOUNT WL1 & WL2 FIXTURE IN RESTROOM.
3. GL1 FIXTURES SHALL BE PENDANT MOUNTED AT 10'-0" A.F.F.
4. XL2 FIXTURES SHALL BE PENDANT MOUNTED AT 9'-0" A.F.F.
5. ALL EXTERIOR LIGHTING FIXTURES SHALL BE WALL-MOUNTED AT 10'-6" A.F.F. OR ABOVE THE DOOR.
7. WALL MOUNT THE EXIT SIGN SHALL BE AT 8'-0" OR ABOVE THE DOOR.
8. BATTERY UNIT AND REMOTE HEADS SHALL BE WALL-MOUNTED AT 8'-0" A.F.F.

PROJECT NO.	263387-261886
FILE NAME:	EWZ000PB.rvt
SHEET NO.	E-19

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

DESIGNED BY:	N. PARI
DRAWN BY:	K. NARASWARA RAO
SHEET CHKD BY:	X
CROSS CHKD BY:	X
APPROVED BY:	X
DATE:	FEBRUARY 2022
REV. NO.	DATE DRWN CHKD
REMARKS	

CDM
Smith
75 State Street, Suite 701
Boston, MA 02109
Tel: (617) 452-6000

LITTLETON
WATER DEPARTMENT
KING STREET WATER RESOURCE
RECOVERY FACILITY

ELECTRICAL
PROCESS BUILDING
LIGHTING AND SMALL POWER PLAN

60% SUBMITTAL - NOT FOR CONSTRUCTION