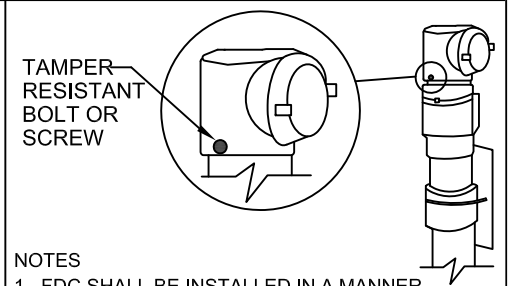
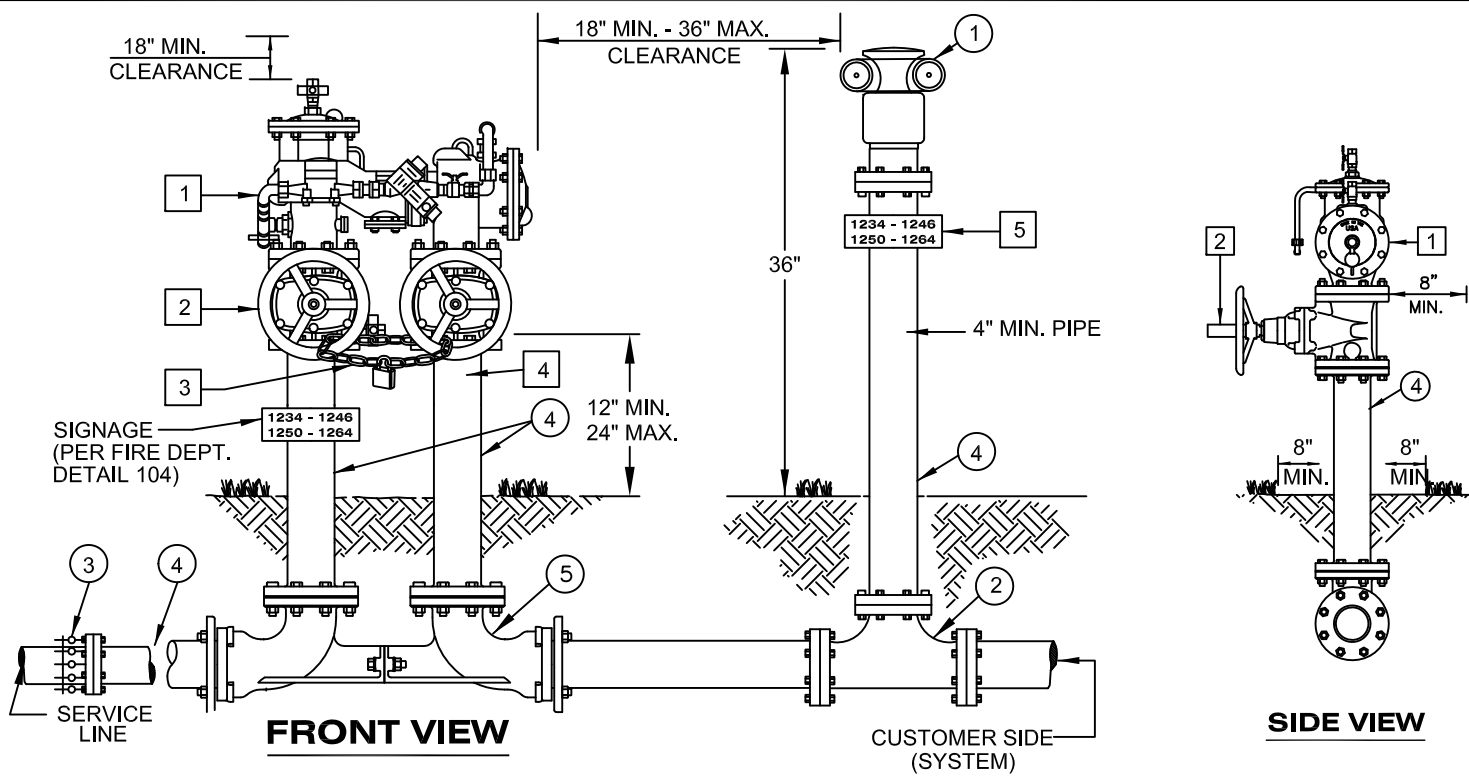


FIRE DEPARTMENT DETAILS

<u>Detail</u>	<u>Revised</u>	<u>Title</u>
FD 102	2020	Fire Line Installation (No On-Site Hydrants Required)
FD 103	2020	Fire Line Installation (On-Site Hydrant Required)
FD 104	2020	Fire Department Valve Signage
FD 105	2020	Fire Sprinkler System Riser Commercial Installation
FD 106	2020	Fire Riser Room and Fire Alarm Panel Signage
FD 107	2020	Temporary Fire Dept Access Road Signage
FD 108	2020	Fire Dept Emergency Access Gate Signage
FD 109	2020	Emergency Access Barrier
FD 111	2020	Fire Lane Signing and Marking
FD 115	2020	Blocked Door Signage
FD 141	2020	Fire Apparatus Roadways and Turnarounds
FD 143	2020	Fire Apparatus Roadways and Turnarounds Private Residential Cul-De-Sac
FD 144	2020	Fire Sprinkler Riser W/ Backflow Prevention (Approved by Fire Marshal Only)
FD 151	2020	Address Identification



NOTES

1. FDC SHALL BE INSTALLED IN A MANNER TO PREVENT TAMPERING AND/OR THEFT.
2. PRIOR TO INSTALLING THE FDC ON THE CHECK CHECK VALVE, THREADLOCKER, OR EQUIVALENT, SHALL BE PLACED ON THE THREADS.
3. TAMPER RESISTANT BOLT OR SCREW SHALL BE INSTALLED IN THE BASE OF THE FDC BY DRILLING A 3/8 INCH HOLE THROUGH THE MANIFOLD CASE AND INNER THREADS.

- LIST OF MATERIALS**
1. FIRE DEPT. SIAMESE CONNECTION (FDC) (RED).
 2. FLANGED TEE.
 3. FLANGED ADAPTER, (WHEN REQUIRED).
 4. PIPE SPOOL. (FLANGED D.I.P.)
 5. 90° ELBOW. (FLANGED D.I.P.)

NOTES:

1. DOUBLE CHECK DETECTOR ASSEMBLY WITH BYPASS METER SHALL BE UL LISTED OR FM APPROVED FOR FIRE PROTECTION USE AND SHALL BE AS APPROVED BY U.S.C. FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH. THIS ASSEMBLY IS TO BE USED FOR POLLUTION HAZARDS ONLY AS RECOMMENDED IN THE AWWA-M14 MANUAL.
2. ALL PIPING, VALVES, FITTINGS AND APPURTENANCES DOWNSTREAM OF THE SERVICE LINE O.S.& Y. VALVE SHALL BE APPROVED FOR FIRE PROTECTION USE AND INSTALLED PER N.F.P.A. #24.
3. THE ENTIRE ASSEMBLY SHALL BE SECURED WITH CHAIN AND LOCK.
4. BACKFLOW DEVICES SHALL BE PAINTED TO MATCH THE LANDSCAPE (DESERT BROWN).
5. FDC'S AND PIV'S SHALL BE PAINTED RED AND SIGNED PER FIRE DEPT. DETAIL NO. FD104 SIGNAGE.
6. FIRE SPRINKLER RISER SHALL BE DESIGNED PER FIRE DEPT. DETAIL NO. FD105.

GENERAL NOTES:

1. FDC'S SHALL BE LOCATED WITHIN 150 FEET OF A PUBLIC (YELLOW) FIRE HYDRANT ON THE SAME SIDE OF DRIVEWAY, AT THE ENTRANCE TO THE SITE.
2. A REGISTERED STRUCTURAL ENGINEER SHALL SEAL THE DESIGN OF THE THRUST BLOCKS, SUPPORTS AND TIE ROD ASSEMBLIES.
3. MAINTAIN 3 FEET CLEARANCE AROUND PIV AND FDC (NO TREES, BUSHES, FENCES, CACTUS OR RIVER ROCK).
4. MAX DISTANCE BETWEEN FDC AND BACKFLOW MAY BE MODIFIED ONLY AS APPROVED BY THE FIRE MARSHAL.

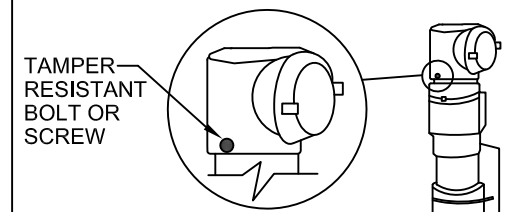
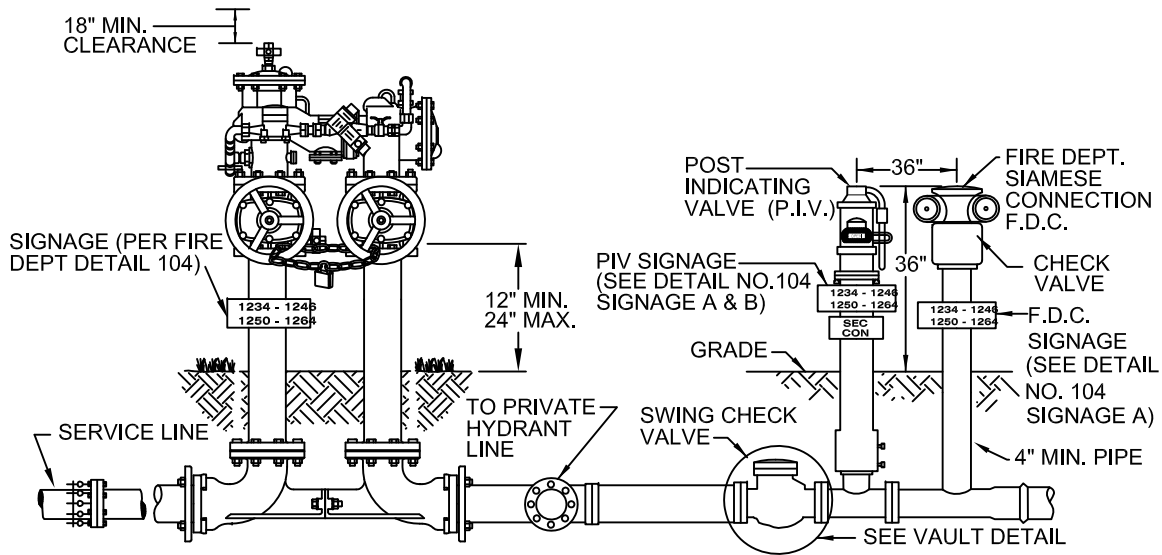
DETAIL NO.
FD102
NTS



**FIRE LINE INSTALLATION
(NO ON-SITE HYDRANTS REQUIRED)**

APPROVED: *M. Jensen-Klank*
FIRE MARSHAL
DATE: 01-09-2020

DETAIL NO.
FD102
NTS

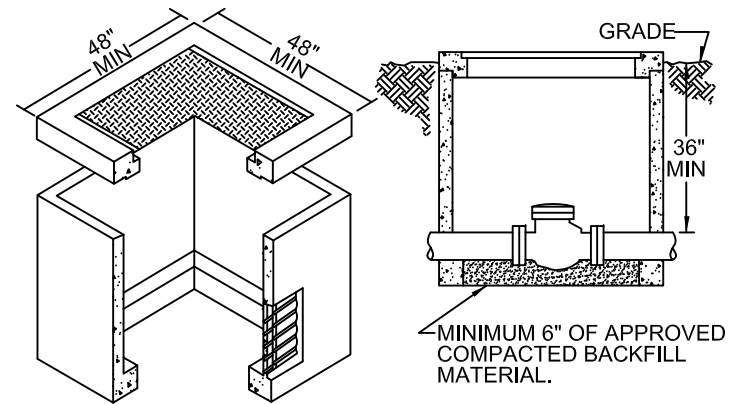


NOTES

1. FDC SHALL BE INSTALLED IN A MANNER TO PREVENT TAMPERING AND/OR THEFT.
2. PRIOR TO INSTALLING THE FDC ON THE CHECK VALVE, THREADLOCKER, OR EQUIVALENT, SHALL BE PLACED ON THE THREADS.
3. TAMPER RESISTANT BOLT OR SCREW SHALL BE INSTALLED IN THE BASE OF THE FDC BY DRILLING A 3/8 INCH HOLE THROUGH THE MANIFOLD CASE AND INNER THREADS.

NOTES:

1. ALL FD102 NOTES, GENERAL NOTE AND LIST OF MATERIALS SHALL APPLY TO FD103 DESIGN. (EXCEPT GENERAL NOTE #4).
2. FDC'S SHALL BE LOCATED WITHIN 150 FEET OF A PUBLIC (YELLOW) FIRE HYDRANT ON THE SAME SIDE OF DRIVEWAY AT THE ENTRANCE TO THE SITE.
3. SWING CHECK VALVES USED ON UNDERGROUND FIRE LINES SHALL BE INSTALLED WITHIN A VAULT IN ACCORDANCE WITH THIS DETAIL. THE CHECK VALVE AND VAULT ASSEMBLY SHALL BE INSTALLED AFTER THE PRIVATE HYDRANT LINE (PRIVATE HYDRANTS SHALL BE PAINTED YELLOW WITH A BLACK BONNET).
4. FIRE SPRINKLER LINES SHALL HAVE A SECTIONAL CONTROL PIV INSTALLED BETWEEN THE SWING CHECK VALVE AND THE FDC. A SECTIONAL CONTROL PIV SHALL BE INSTALLED AT MID POINT ON THE LOOPED FIRE LINE TO PROVIDE FOR ISOLATION OF THE FIRE LINE.
5. FIRE SPRINKLER RISER SHALL BE DESIGNED PER FIRE DEPT. DETAIL NO. FD105. FIRE SPRINKLER (FS) SYSTEM RISER (FD105) SHALL BE SHOWN ON CIVIL AND FS BUILDING PLANS. PROVIDE A KEY BOX FOR FIRE DEPARTMENT ACCESS.
6. ALL STUB OUT AND FUTURE DEVELOPMENT PADS (PHASED PROJECTS) SHALL END WITH A PIV PAINTED FOREST GREEN.



VAULT DETAIL

DETAIL NO.

FD103
NTS



**FIRE LINE INSTALLATION
(ON-SITE HYDRANT REQUIRED)**

APPROVED:

M. Marshall

FIRE MARSHAL

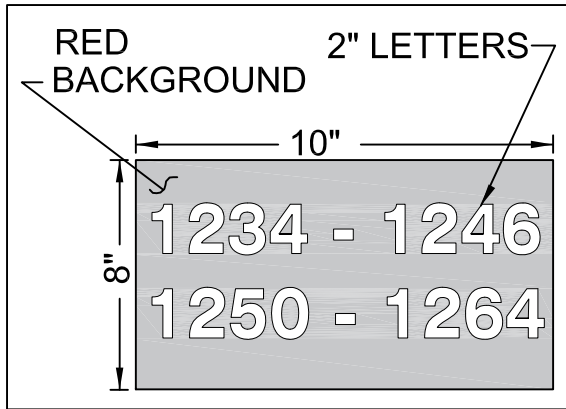
DATE:

01-09-2020

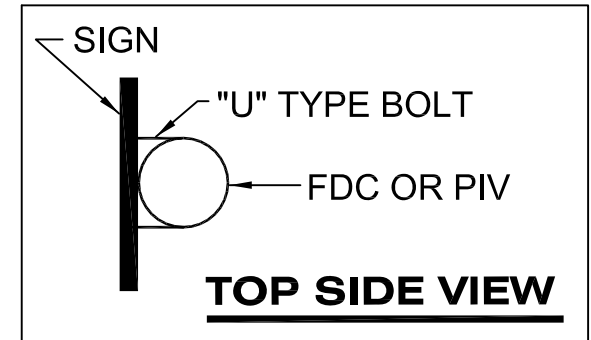
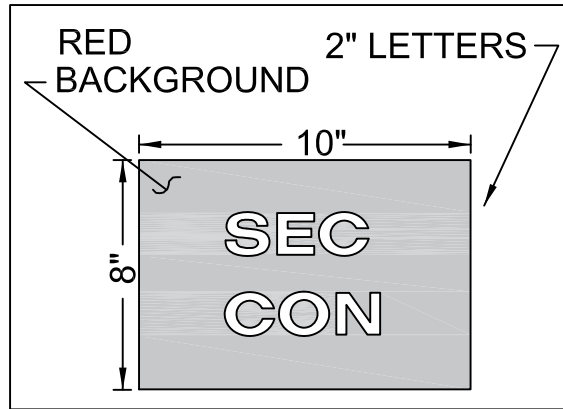
DETAIL NO.

FD103
NTS

SIGNAGE A



SIGNAGE B



NOTES:

1. THE SIGNS SHALL INCLUDE THE ADDRESS(S) OF THE PREMISE(S) SERVING THE FDC OR PIV.
2. THE SIGNS SHALL BE RED IN COLOR WITH WHITE REFLECTIVE LETTERING AND SHALL BE 0.08 GAUGE ALUMINUM AND SHALL BE SECURELY ATTACHED TO THE FDC OR PIV WITH "U" TYPE BOLTS.

DETAIL NO.

FD104
NTS



**FIRE DEPARTMENT
VALVE SIGNAGE**

APPROVED: _____

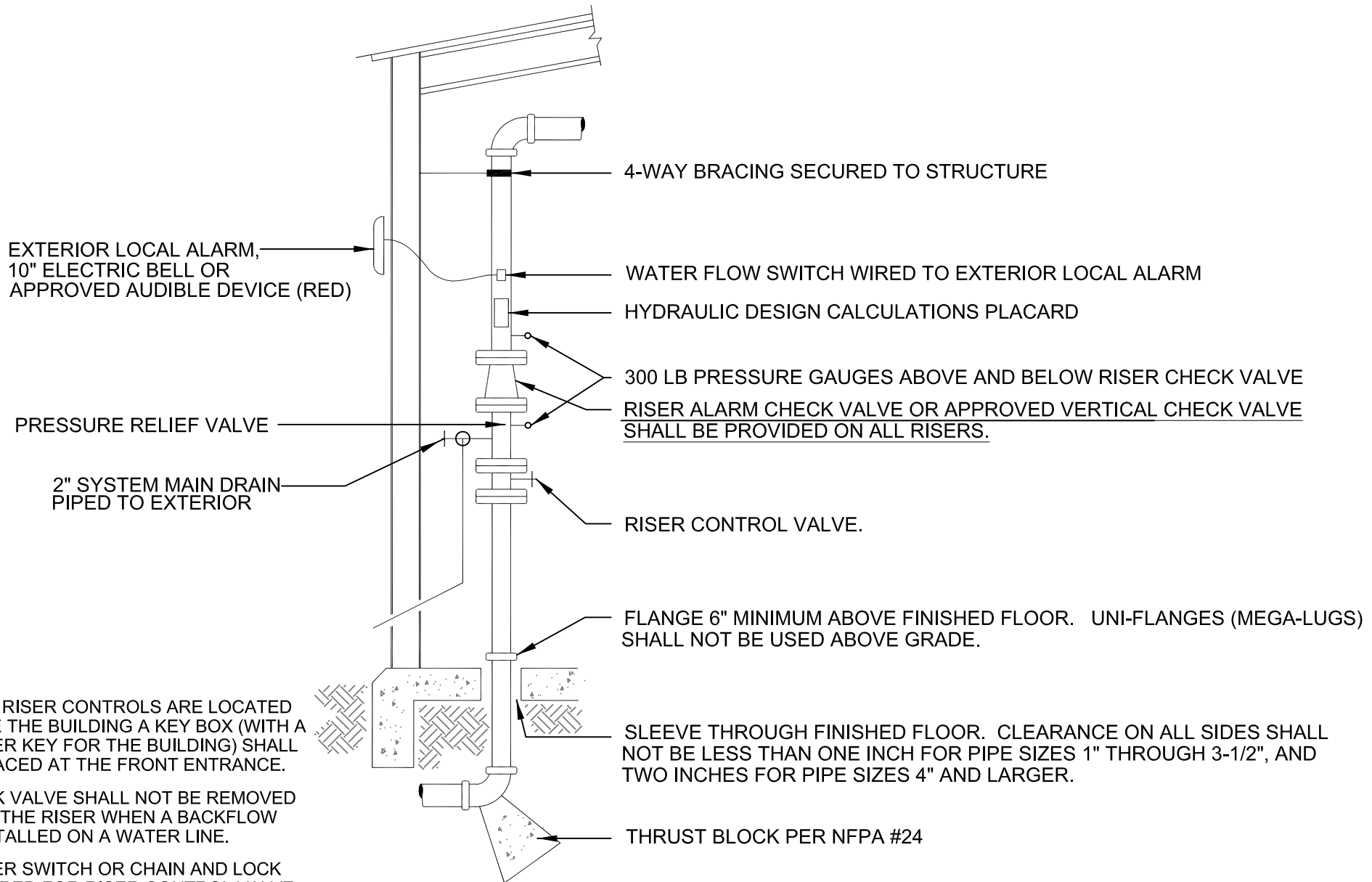
M. Marshall
FIRE MARSHAL

DATE: _____

01-09-2020

DETAIL NO.

FD104
NTS



NOTE:

1. WHEN RISER CONTROLS ARE LOCATED INSIDE THE BUILDING A KEY BOX (WITH A MASTER KEY FOR THE BUILDING) SHALL BE PLACED AT THE FRONT ENTRANCE.
2. CHECK VALVE SHALL NOT BE REMOVED FROM THE RISER WHEN A BACKFLOW IS INSTALLED ON A WATER LINE.
3. TAMPER SWITCH OR CHAIN AND LOCK REQUIRED FOR RISER CONTROL VALVE.

DETAIL NO.

FD105
NTS



**FIRE SPRINKLER SYSTEM RISER
COMMERCIAL INSTALLATION**

APPROVED:

M. Jensen
FIRE MARSHAL

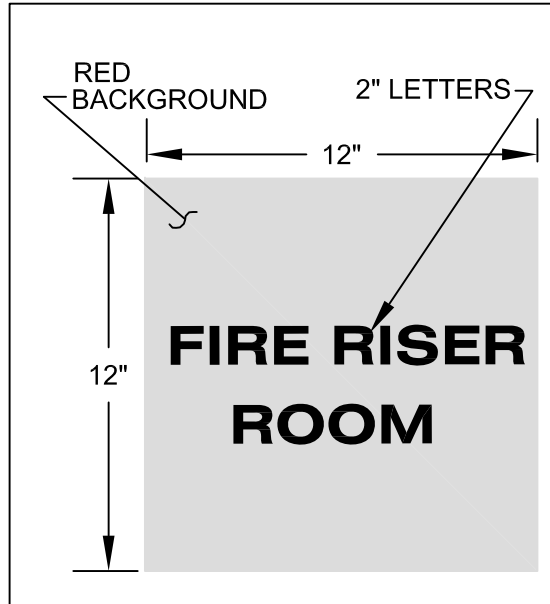
DATE:

01-09-2020

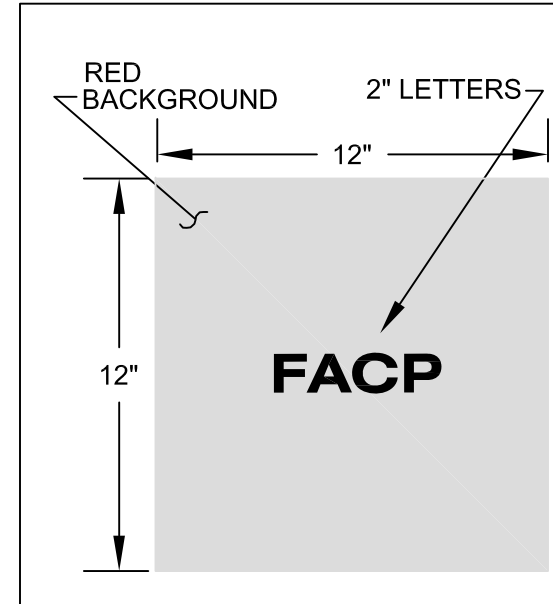
DETAIL NO.

FD105
NTS

SIGNAGE A



SIGNAGE B



NOTES:

1. ALL SIGNS SHALL RED IN COLOR WITH WHITE REFLECTIVE LETTERING.
2. OUTSIDE SIGNS SHALL BE 0.08 GAUGE ALUMINUM OR EQUIVILANT, SECURED TO THE DOOR, OR THE SIGN MAY BE STENCILED ON THE DOOR. STENCILING SHALL BE RED BACKGROUND WITH WHITE REFLECTIVE LETTERING.
3. INSIDE SIGNS SHALL BE OF DURABLE MATERIAL.

DETAIL NO.

FD106
NTS



**FIRE RISER ROOM AND FIRE
ALARM PANEL SIGNAGE**

APPROVED:

M. Jensen-Kand

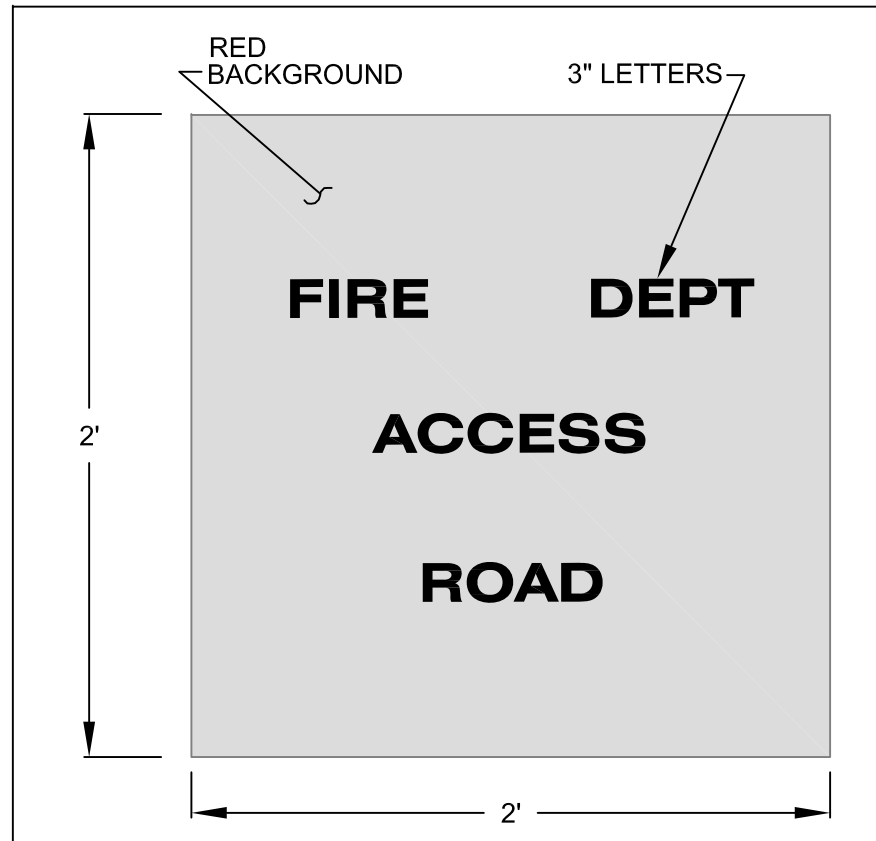
FIRE MARSHAL

DATE:

01-09-2020

DETAIL NO.

FD106
NTS



NOTES:

1. ALL SIGNS SHALL RED IN COLOR WITH WHITE REFLECTIVE LETTERING.
2. SIGNS SHALL BE POSTED AT ALL FIRE DEPT ACCESS POINTS TO THE SITE.
3. SIGNS SHALL BE MADE OF DURABLE OR ALL WEATHER MATERIALS.
4. TOP OF SIGN SHALL BE 6-8 FEET FROM FINISH GRADE.
5. SIGNS SHALL BE POSTED WHEN TEMPORARY FIRE DEPARTMENT ACCESS ROADS ARE INSTALLED.
6. SIGNS SHALL BE REMOVED WHEN PERMANENT ROADS ARE COMPLETED.

DETAIL NO.

FD107
NTS



**TEMPORARY FIRE DEPT
ACCESS ROAD SIGNAGE**

APPROVED:

M. J. ...

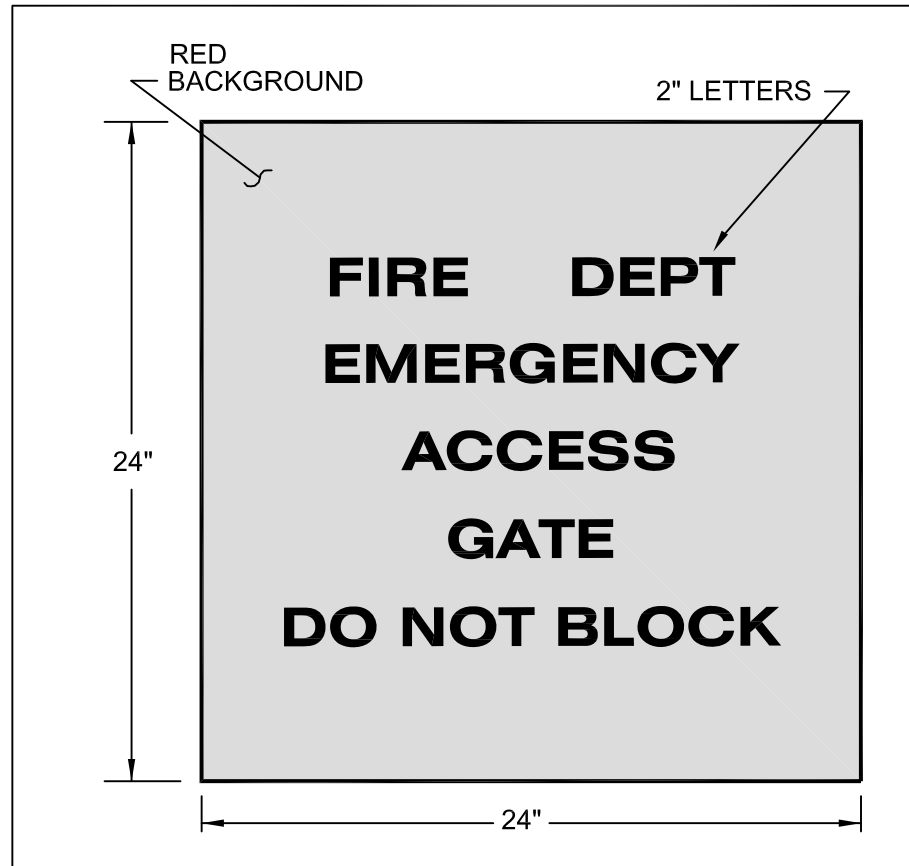
FIRE MARSHAL

DATE:

01-09-2020

DETAIL NO.

FD107
NTS



NOTES:

1. ALL SIGNS SHALL USE 3M RED HIGH INTENSITY PRISMATIC SHEETING WITH WHITE REFLECTIVE LETTERING.
2. SIGNS SHALL BE POSTED AT ALL FIRE DEPT EMERGENCY GATE ACCESSSES.
3. SIGNS SHALL BE MADE OF DURABLE OR ALL WEATHER MATERIALS.
4. SIGNS SHALL BE MOUNTED ON BOTH SIDES OF THE GATE.

DETAIL NO.

FD108
NTS



**FIRE DEPT EMERGENCY
ACCESS GATE SIGNAGE**

APPROVED:

M. Jensen-Kand

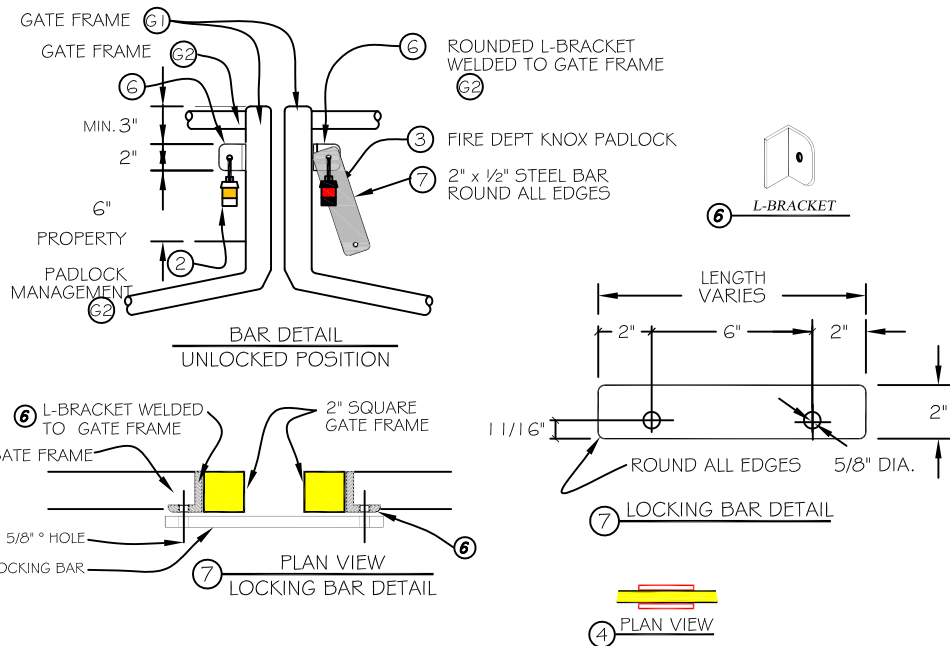
FIRE MARSHAL

DATE:

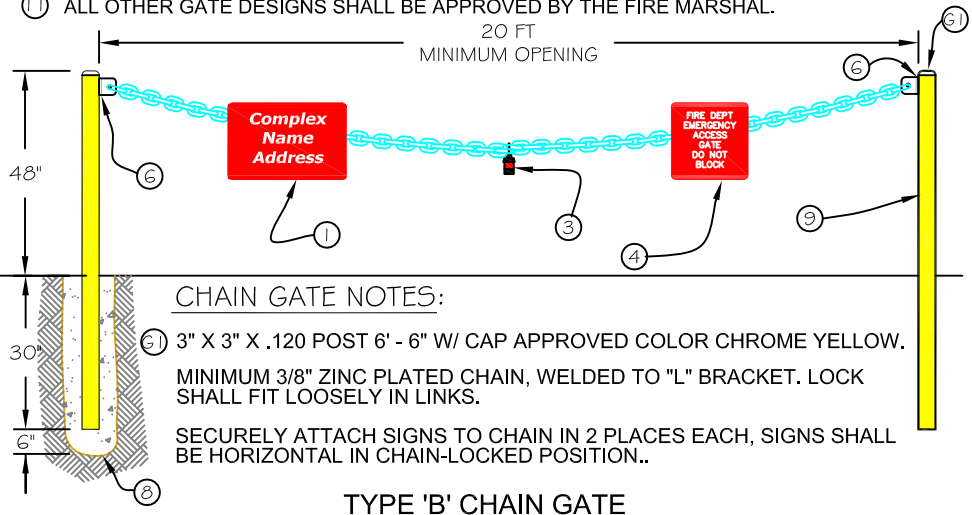
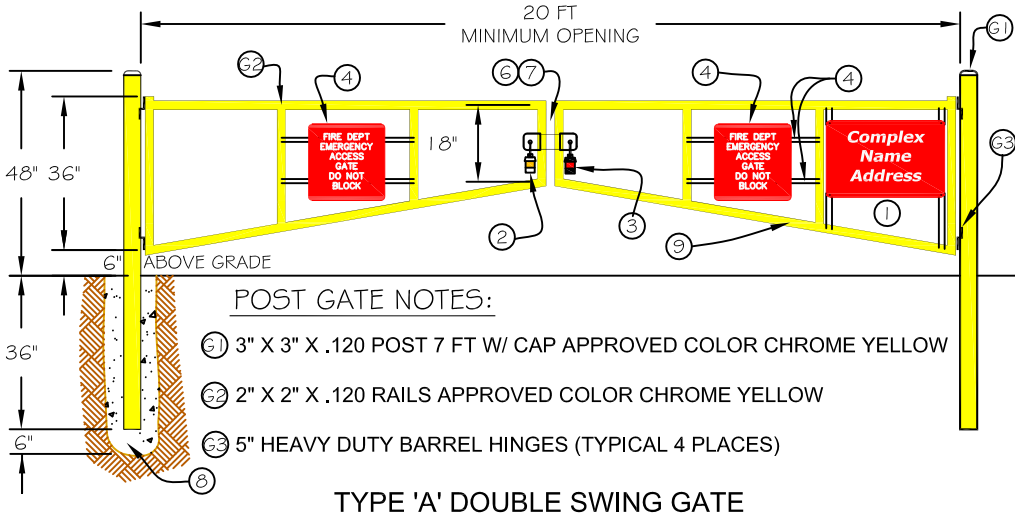
01-09-2020

DETAIL NO.

FD108
NTS



- GENERAL NOTES:**
- ① APPROVED SIGN, (2" LETTERS HELVETICA MEDIUM, 36" x 24"), SHALL USE 3M RED HIGH INTENSITY PRISMATIC SHEETING WITH WHITE REFLECTIVE LETTERING, TO IDENTIFY THE NAME OF THE COMPLEX AND THE LOCATION (ADDRESS). 1/4" X 1 1/2" MOUNTING STRAPS.
 - ② PROPERTY OWNER/MANAGEMENT PADLOCK (ONLY LONG HASP LOCKS ARE ALLOWED).
 - ③ KNOX PADLOCK SHALL BE ACCESSIBLE FROM BOTH SIDES OF GATE. (KNOX PADLOCK CAN BE PURCHASED AT www.knoxbox.com, enter "chandler" for the City.)
 - ④ "FD EMERGENCY ACCESS DO NOT BLOCK" FD108 SIGNS (2" LETTERS, 24" x 24"), SHALL USE 3M RED HIGH INTENSITY PRISMATIC SHEETING WITH WHITE REFLECTIVE LETTERING, PLACED BACK TO BACK AND FASTENED ON ALL 4 CORNERS. 1/4" X 1 1/2" MOUNTING STRAPS.
 - ⑤ THE MINIMUM OVERALL WIDTH OF THE GATE OPENING SHALL BE 20 FT.
 - ⑥ WELD MODIFIED L-BRACKET TO GATE FRAME OR POST. ROUND ALL EDGES. (TYPICAL 2 PLACES)
 - ⑦ LOCKING BAR LENGTH IS DETERMINED BY THE FRAME WIDTH AND THE GAP WIDTH BETWEEN THE 2 GATES. REMOVE ALL SHARP EDGES / ROUND ALL CORNERS.
 - ⑧ 24" DIAMETER CONCRETE POST FOOTINGS. (TYPICAL)
 - ⑨ POSTS AND GATES SHALL BE PAINTED CHROME YELLOW.
 - ⑩ GATES / BARRIERS SHALL BE SET OFF THE ROADWAY FIFTY-FIVE (55') TO ALLOW SAFE DISTANCE TO PULL OFF THE ROADWAY.
 - ⑪ ALL OTHER GATE DESIGNS SHALL BE APPROVED BY THE FIRE MARSHAL.



DETAIL NO.
FD109
NTS



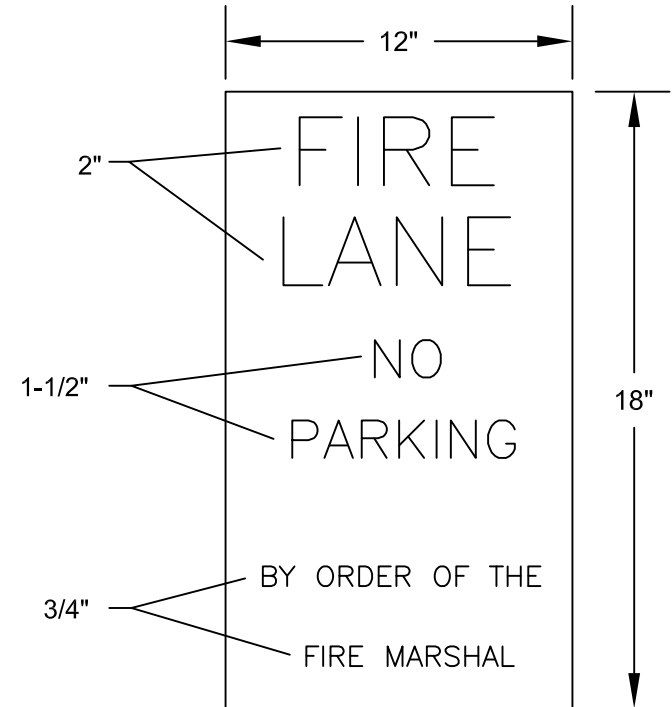
EMERGENCY ACCESS BARRIER

APPROVED: *M. Marshall*
FIRE MARSHAL
DATE: 01-09-2020

DETAIL NO.
FD109
NTS

NOTES:

1. 2" LETTERS ARE 5/8" WIDE.
2. 1-1/2" LETTERS ARE 1/2" WIDE.
3. 3/4" LETTERS ARE 1/8" WIDE.
4. ALL LETTERS ARE RED WITH A WHITE REFLECTIVE BACKGROUND.
5. THE SIGNS ARE TO BE MOUNTED ON A POST AS PER MAG STD. DTL. 131.
6. THE BOTTOM OF THE SIGN IS TO BE 7' ABOVE GRADE AND SPACED NO MORE THAN 75' APART.
7. CURBING SHALL BE PAINTED BRILLIANT RED WITH WHITE 2" LETTERING "NO PARKING-FIRE LANE".
8. THESE SIGNS ARE NOT SUPPLIED BY THE CITY OF CHANDLER.
9. FOR APPLICATION OF THIS DETAIL REFER TO TABLE 2 IN STREET DESIGN AND ACCESS CONTROL (TDM# 4) OR AS OTHERWISE DIRECTED BY THE FIRE MARSHAL.



DETAIL NO.

FD111
NTS



**FIRE LANE SIGNING
AND MARKING**

APPROVED:

M. Jensen-Klach
FIRE MARSHAL

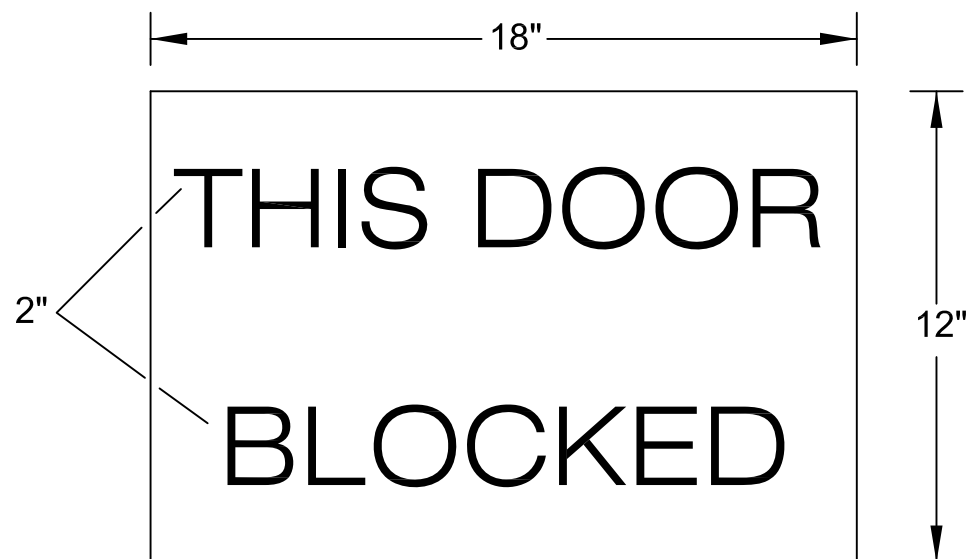
DATE:

01-09-2020

DETAIL NO.

FD111
NTS

EXTERIOR DOORS AND OPENINGS



NOTES:

1. LETTERS SHALL HAVE A PRINCIPAL STROKE OF NOT LESS THAN 3/4 INCH (19.1mm) .
2. LETTERING SHALL BE WHITE REFLECTIVE WITH A RED BACKGROUND.
3. SIGNS SHALL BE 0.08 GAUGE ALUMINUM.
4. SIGNS SHALL BE SECURED TO THE DOOR IN A PERMANENT FASHION. NO GLUE. SIGN MAY BE STENCILED ON DOOR.
5. TOP OF SIGN SHALL BE 6' ABOVE FINISHED GRADE.

DETAIL NO.

FD115
NTS



BLOCKED DOOR SIGNAGE

APPROVED:

M. Jensen-Kand

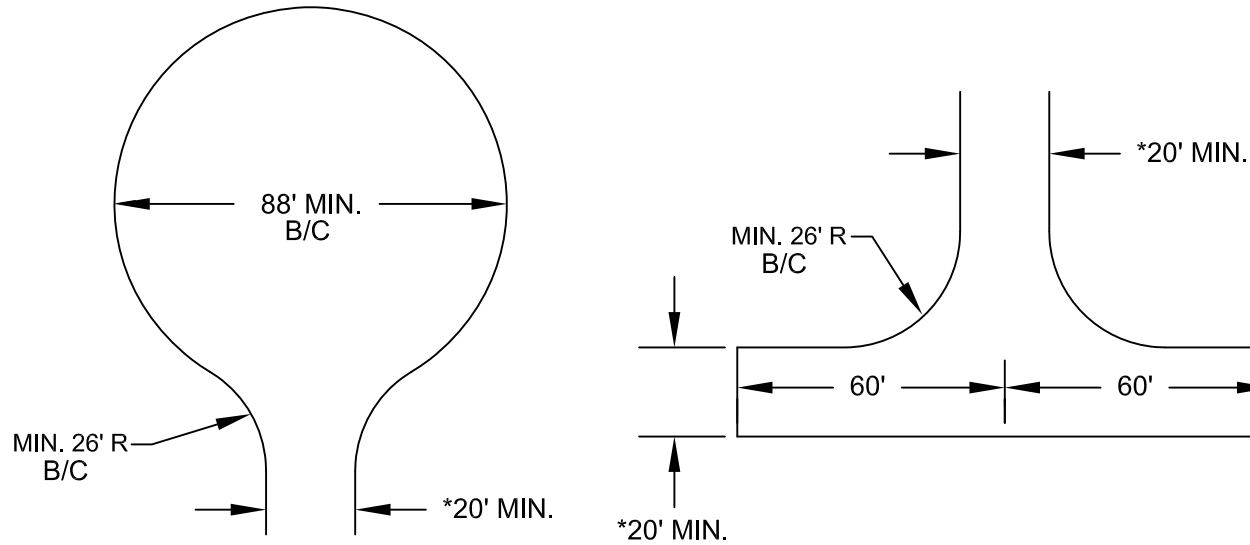
FIRE MARSHAL

DATE:

01-09-2020

DETAIL NO.

FD115
NTS



TURNAROUNDS: ALL DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH APPROVED APPARATUS TURNAROUNDS.

SURFACE: FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS (80,000 LBS. MIN) AND SHALL BE PROVIDED WITH A SURFACE SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES.

HEIGHT: UNOBSTRUCTED VERTICAL CLEARANCE SHALL BE NOT LESS THAN 15 FEET.

WIDTH*: UNOBSTRUCTED ROADWAY WIDTH SHALL NOT BE LESS THAN 20 FEET.

DETAIL NO.

FD141
NTS



**FIRE APPARATUS
ROADWAYS AND TURNAROUNDS**

APPROVED:

M. Jensen-Klein

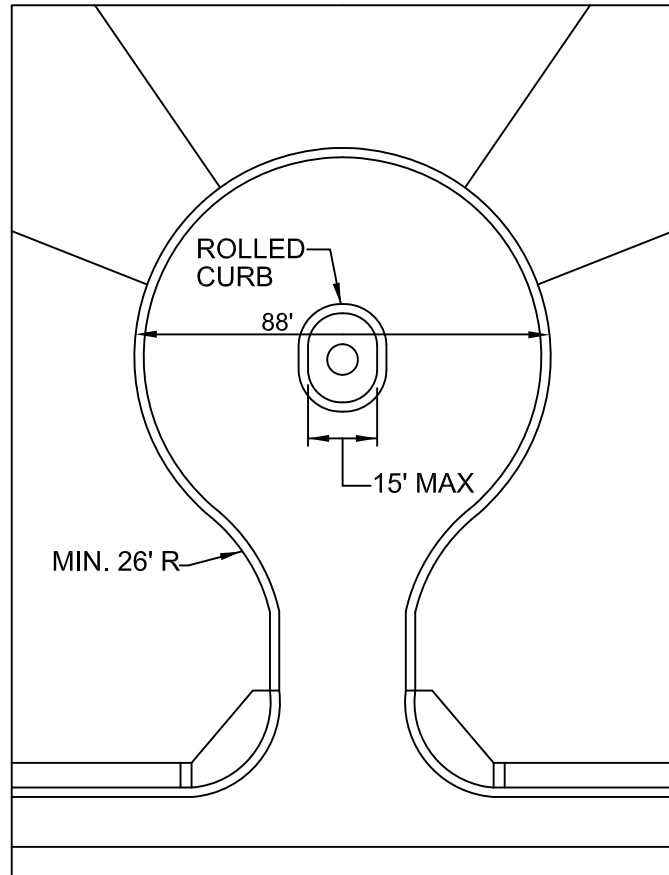
FIRE MARSHAL

DATE:

01-09-2020

DETAIL NO.

FD141
NTS



LANDSCAPE IN CUL-DE-SAC

NOTE:
SEE ALSO FD141 FOR MORE DETAILS

DETAIL NO.

FD143
NTS



**FIRE APPARATUS
ROADWAYS AND TURNAROUNDS
PRIVATE RESIDENTIAL CUL-DE-SAC**

APPROVED:

M. J. ...

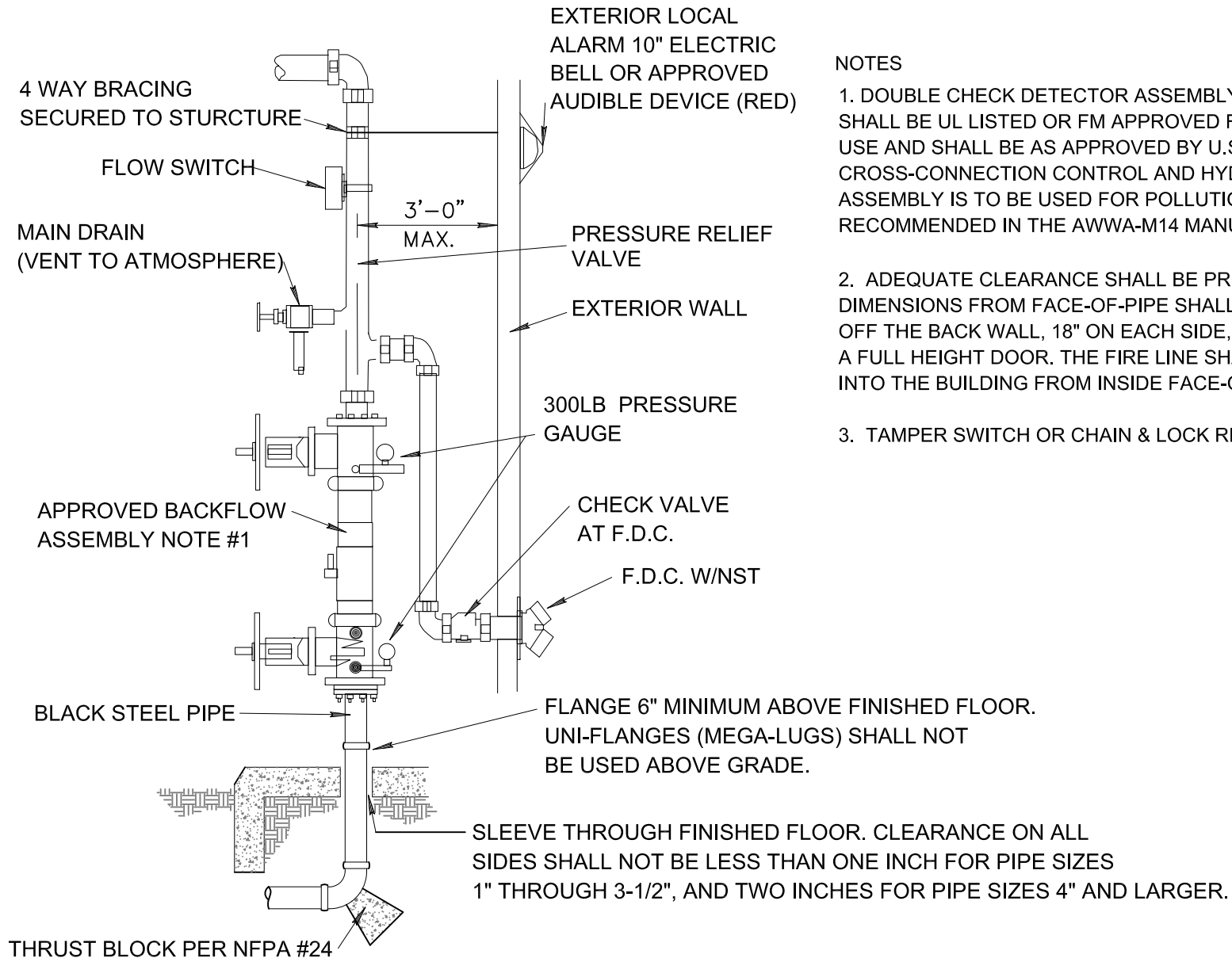
FIRE MARSHAL

DATE:

01-09-2020

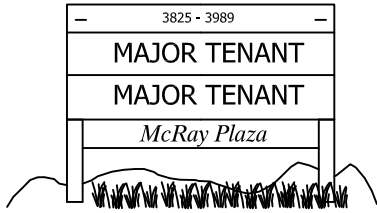
DETAIL NO.

FD143
NTS

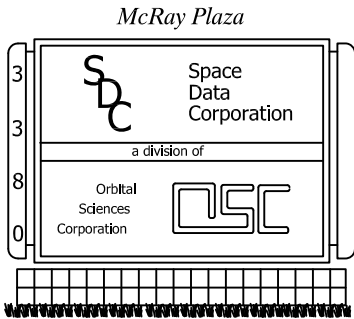


- NOTES
1. DOUBLE CHECK DETECTOR ASSEMBLY WITH BYPASS METER SHALL BE UL LISTED OR FM APPROVED FOR FIRE PROTECTION USE AND SHALL BE AS APPROVED BY U.S.C. FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH. THIS ASSEMBLY IS TO BE USED FOR POLLUTION HAZARDS ONLY AS RECOMMENDED IN THE AWWA-M14 MANUAL.
 2. ADEQUATE CLEARANCE SHALL BE PROVIDED AROUND FIRE RISER. DIMENSIONS FROM FACE-OF-PIPE SHALL MEASURE A MINIMUM OF 12" OFF THE BACK WALL, 18" ON EACH SIDE, AND 36" CLEAR IN FRONT WITH A FULL HEIGHT DOOR. THE FIRE LINE SHALL EXTEND A MAXIMUM OF 36" INTO THE BUILDING FROM INSIDE FACE-OF-WALL TO CENTER OF PIPE.
 3. TAMPER SWITCH OR CHAIN & LOCK REQUIRED FOR CONTROL VALVES.

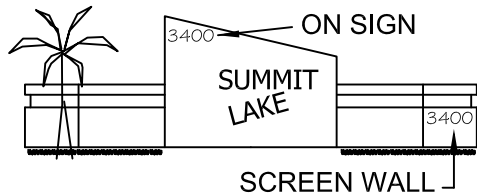
DETAIL NO. FD144 NTS	 	<p align="center"> FIRE SPRINKLER RISER W/ BACKFLOW PREVENTION (APPROVED BY FIRE MARSHAL ONLY) </p>	APPROVED:  FIRE MARSHAL DATE: 01-09-2020	DETAIL NO. FD144 NTS
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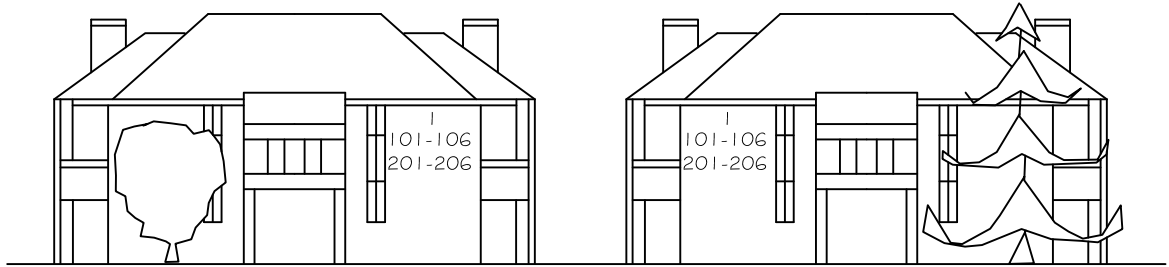
THE ADDRESS NUMBERS SHALL BE POSTED ON THE TOP CENTER IDENTIFICATION SIGN AT MAIN ENTRANCE OF COMMERCIAL MALL, CENTER, VILLAGE, OR SQUARE, SO AS TO BE VISIBLE FROM A NORTH-SOUTH OR EAST-WEST DIRECTION.



PERMANENT FIXTURE WITH THE SITUS ADDRESS SHALL BE PLACED IN A CONSPICUOUS LOCATION IF NOT VIEWABLE FROM THOROUGHFARE FRONTAGE SO AS TO BE VISIBLE FROM A NORTH-SOUTH OR EAST-WEST DIRECTION.



ADDRESS SHALL BE DISPLAYED ON THE TOP PORTION OF THE COMPLEX IDENTIFICATION SIGN OR ON THE TOP PORTION OF THE SCREEN WALL AT THE MAIN ENTRANCE SO AS TO BE VISIBLE FROM A NORTH-SOUTH OR EAST-WEST DIRECTION



- IDENTIFICATION NUMBERS AND SUFFIXES ASSIGNED TO BUILDINGS SHALL BE DISPLAYED IN THE UPPER, RIGHT HAND CORNER AT THE END OF EACH BUILDING SO AS TO BE PLAINLY VISIBLE FROM THE ACCESS THOROUGHFARE.
- MULTI-FAMILY DEVELOPMENTS WITH INTERNAL DRIVES, BUILDING NUMBER AND RANGE OF SUFFIXES SHALL BE POSTED ON EACH SIDE OF BUILDING SO AS TO BE CLEARLY VISIBLE FROM ALL ACCESS DRIVES AND THOROUGHFARES.
- COLOR OF NUMBERS AND BACKGROUND SHALL CONTRAST AND CONFORM TO REQUIREMENTS FOR HELVETICA MEDIUM NUMBERING. DISTANCE AT WHICH NUMBERS SHALL BE LEGIBLE FROM CENTER OF THOROUGHFARE:

APPLIES TO SINGLE FAMILY RESIDENTIAL, MULTI-FAMILY, AND ALL COMMERCIAL BUILDINGS. DISTANCE TO BE MEASURED FROM CENTER OF ACCESS DRIVE TO STRUCTURE(S):

- Minimum:
 0-50' - 4"
 50-200' - 12"
 201-300' - 14"
 301-400' - 16"

NOTES:

1. THERE SHALL BE NO LANDSCAPING OR SCREEN WALL THAT COVERS OR HINDERS THE VIEW OF THE MONUMENT SIGN FROM THE ROADWAY.
2. ALL SUITES SHALL HAVE THE ADDRESS AND SUITE NUMBER ON BOTH THE FRONT AND BACK DOOR(S).

DETAIL NO.

FD151
NTS



ADDRESS IDENTIFICATION

APPROVED: *M. Jensen-Kank*
 FIRE MARSHAL
 DATE: 01-09-2020

DETAIL NO.

FD151
NTS