DOWLING ARCHITECTS

ADDENDUM NO. 1

HELENA FIRE STATION #3

DATE: November 6, 2025

PROJECT: Helena Fire Station #3
Helena, Montana

BID DATE: Tuesday, November 25, 2025

ARCHITECT: DOWLING Architects
734 North Last Chance Gulch
Helena, MT 59601
406-457-5470

TO: All Planholders of Record

This Addendum forms a part of the Contract Documents and modifies them as follows:

GENERAL CLARIFICATIONS:

In reference to special inspections and tests per IBC **section 1704.2**, the owner or owner's authorized agent, other than the contractor, shall employ one or more approved agencies to provide special inspections and tests during construction & identify the approved agencies to the building official. (Reference IBC Section 1704 for additional information regarding special inspections & tests)

RAISED QUESTIONS & CLARIFICATIONS (Architecture)

1. **Question**: C3-1 Calls for a "Future L Trench Prop (Bid Alternate)". Per the bid form and bid sheet, there do not appear to be any bid alternates on this project. Please confirm that there is no bid alternate for a future L trench prop.

   Answer: The "(Bid Alternate)" has been removed from C3-1 for the next addendum.

2. **Question**: Please provide a thickness for the commercial rated compacted road base shown on C3-1.

   Answer: Geotechnical recommendation as follows:

Excavate and remove topsoil/uncontrolled fill/debris.

Moisture condition subgrade to plus/minus 2% optimum moisture content and compact to minimum standard relative compaction of 95%.

Geogrid:

1. If area is to be saturated/flooded as part of training exercises and/or heavy firetrucks to be turning sharply on aggregate surface, place geogrid across compacted subgrade. Geogrid to meet or exceed the engineering properties of Propex Gridpro BXP11.
2. Geogrid not warranted if conditions listed above are not applicable.

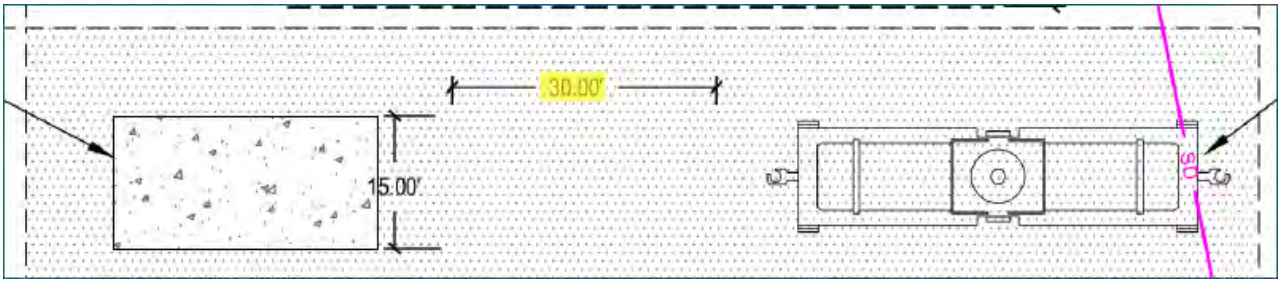
Provide min. 12" compacted base course

1. Base course shall meet Montana Public Works 1.5" minus crushed base course (same as specified in geo report).

2. Place base course in 8-inch (max) loose lift thickness and compact each lift to a minimum standard relative compaction of 95%.
3. Use additional base course, if needed, to meet design grade based on subgrade preparation (removal of topsoil/fill/debris).

Routine maintenance and grading will be required.

3. **Question**: There is a 30' dimensions shown on sheet C3-1 between the concrete pad for dumpster prop and the future rail car prop, but the dimension does not appear to be measuring anything. If this dimension is relevant, please provide information on the plan sheet as to what it is for.



Answer : These dimensions were intended to go to the adjacent concrete pad to the west - this has been revised in C3-1 for the next addendum.

4. **Question**: C3-1 and C3-2 identify the perimeter pedestrian path as gravel but L0.0 identifies this path as decomposed granite. Please clarify the material to be used for this perimeter pedestrian path.

Answer: This has been revised to indicate decomposed granite.

5. **Question**: L0.0 calls for areas on the south side of the property to be "Firewise Demonstration Garden to be designed by others." Please confirm that the design and construction of the Firewise demonstration garden are not part of this contract.

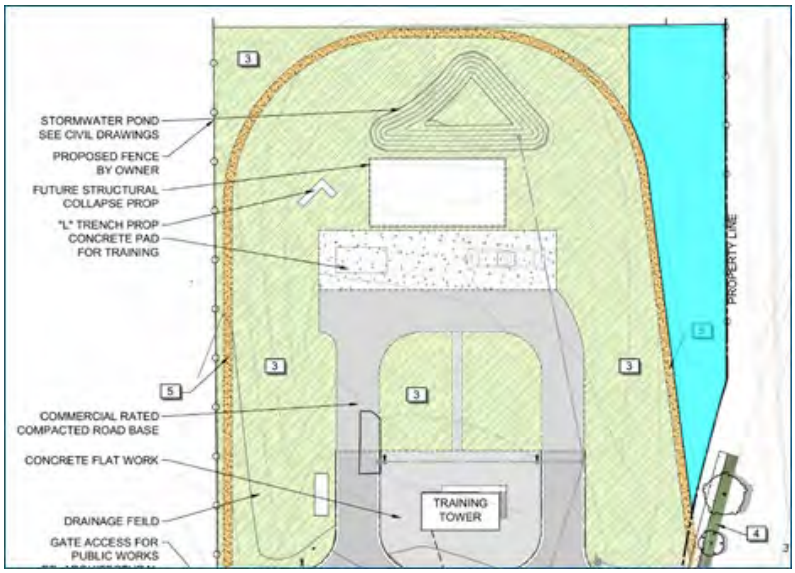
Answer: Decomposed granite paths as shown on A2-2 are part of this contract.

6. **Question**: Detail 1/A2-2 is showing all 6 benches being memorial benches constructed out of repurposed wooden beams, as shown in Detail 2 and 3 on A2-2. Keynote 9 on L0.0 identifies 4 of the benches as Victor Stanley Benches, not custom benches. Please confirm that the benches are as identified on L0.0, not A2-2.

Answer: All benches are per A2-2.

7. **Question**: Neither sheet L0.0 or L2.0 identify what landscaping is required in the blue highlighted area. Please define what the landscaping requirements for this area.

Answer: Treat area in blue the same as adjacent callout #3, see mix. The area in blue is approximately 11.000 SF.



8. **Question**: Please define what the landscaping requirements are in the pink highlighted areas below that fall outside of the identified Parking Lot Landscape Area Boundaries.

Answer: Treat as per callout #1 <u>excluding topspoil</u>: 2"-3" DEPTH ANGULAR ROCK MULCH OVER NON-WOVEN GEOTEXTILE FABRIC

9. **Question**: Please confirm that the scope of this project is to bring the Firewise demonstration garden area to design subgrade and excludes the placement of topsoil in the area.

Answer: That is correct.

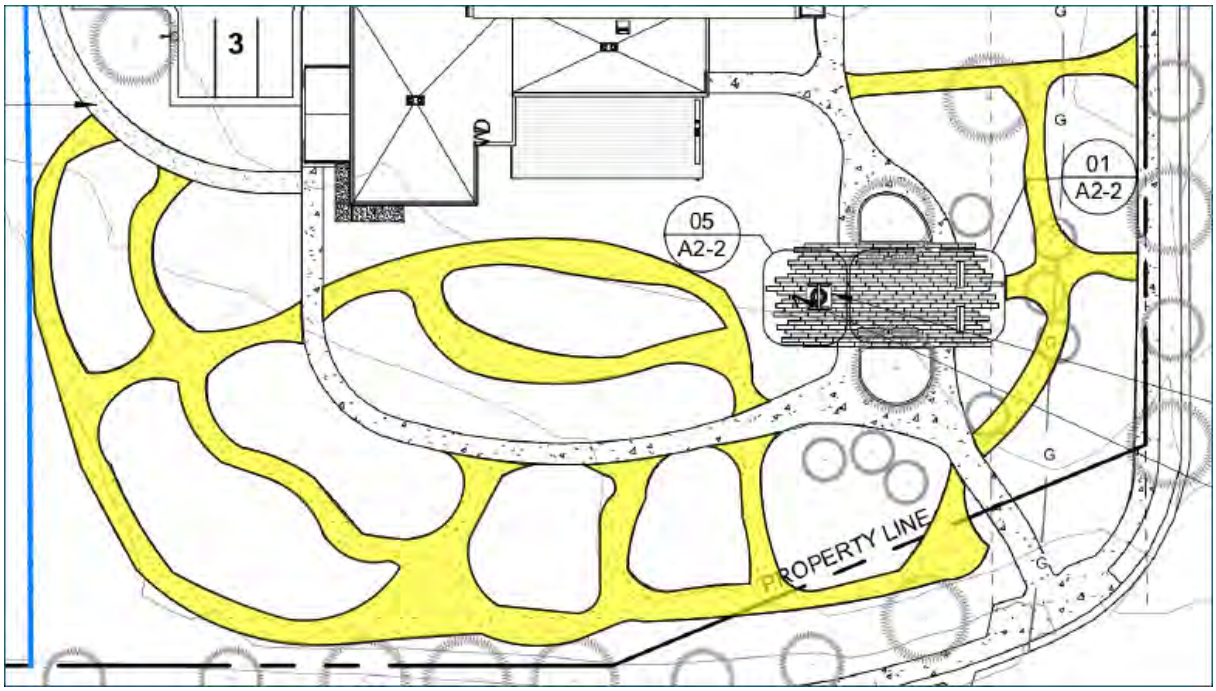
10. **Question**: Please reference the green highlighted area in the screenshot from L0.0 below. This area is defined as a Firewise demonstration garden where per Keynote 2 on L0.0, planting is by others. Please clarify if the trees shown in this area are included in this contract or are in fact, by others under a different contract.

    Answer: All planting shown on L2.1, including trees and shrubs depicted in the firewise area, are part of this contract.

11. **Question**: Please confirm that the Firewise demonstration garden area is the entire area highlighted in yellow below, and not just the red parts shown in these areas on L0.0. **Answer: Correct, confirmed.**

12. **Question**: The granite paths highlighted yellow in the below screen shot of A2-2, are in the firewise garden areas. Please confirm that that paths highlighted in yellow below are not part of this contract.

Answer: The paths in yellow ARE part of this contract.



SHEET MODIFICATIONS:

- **Sheet A1-2 (Wall Assemblies E3, E4, & E5)** Walls E3, E4, E5 adjusted notes regarding batt insulation, see attached drawing **ATT1**.
- **Sheet A1-3 Door & Window Schedule in its entirety,** Added note for window type F & G requiring hollow metal frame due to fire rated assembly. Added Door Frame Type 4, and Door Type H. Clarified schedule items for door 101A & 102
- **Sheet A2-1 Site Information,** removed notes regarding bid alternatives for L Trench Prop & Asphalt Flat Work. Reference attached drawing **ATT3**
- **Sheet A3-6 F.F. & E in its entirety,** refined for increased clarity, specifically in regards to what items are OFOI, OFCI, or CFCI
- **Sheet A3-7 Roof Plan,** note added to for the crickets shown on roof plan. Reference attached drawing **ATT2**
- **Sheet A7-3 Detail 01,** Added note/drawing for cabinetry casework to enclose safe haven baby box w/ electronic code lock. Cabinetry to match adjacent casework aesthetically and be enclosed on the sides, front, and top (top to provide air ventilation as drawn in ATT-4), but not the back. Cabinetry will need to leave toe kick open to allow airflow inside in the event of use. Reference attached drawing **ATT4**
- **Sheet T3-0,** Adjusted site conduit and routing to meet requirements for fiber tie in to Helena Wastewater Maintenance building.

- **Sheet C3-1,** Bid Alternate removed from Future L Trench Prop, dimensioning concrete pad adjustment, clarification of landscape path being proposed granite, additional detail for gravel road base
- **Sheet C3-2,** Covered parking removed, added additional clean out notations
- **Sheet C4-1,** Added material types on the storm piping
- **Sheet C4-2,** Added material types on the storm piping, added new manhole per COH Stormwater Comments,

SPECIFICATION CLARIFICATIONS

- **Section 06 4100 Architectural Wood Casework, Paragraph 1.05 QUALITY ASSURANCE**. Removed sub-paragraph A.1 Accredited participant in the specified certification program prior to the commencement of fabrication and throughout the duration of the project.
- **Section 09 6700 Fluid Applied Flooring, Paragraph 2.02 Fluid Applied Flooring Systems, Sub-Paragraph A.4 –** specifies the basis of design product as Torginal Epoxy Flooring, Flake Flooring: Torginal.com & removes hybrid flooring from specification
- **Section 09 5426 Suspended Wood Ceiling –** re-issued section in its entirely.
- **Section 01 2500 Substitution Procedures-** new section added to the specifications

APPROVED MATERIAL SUBSTITUTIONS:

All material supplied to the project must meet or exceed the quality, performance, and have features similar and exceeding in quality of the product originally specified. It is the contractor's responsibility to ensure that the substituted equipment matches the exterior dimensions, weight, and configuration of the specified product.

- **Section 07 5400 Thermoplastic Membrane Roofing Paragraph 2.01A** VersiWeld TPO (045 Mil) is an acceptable substitution.
- **Section 07 4623 Wood Siding Paragraph 2.01** Timber Forge Shou Sugi Ban in Burned & Brushed (texture), burnt ember (color), & cedar (species) is an acceptable substitution. Ref. serial # TF00015. Supplied by Glacier Millworks (glaciermillworks.com 406. 643.3944)
- **Section 23 0900 HVAC Controls** LONG Building Technologies is an acceptable installer of DDC Systems.
- **Section 23 0548 Vibration and Seismic Controls for HVAC Piping and Equipment** Mason Industries is an acceptable provider of delegated design services and products.
- **Section 23 2116 Hydronic Piping Specialties** AA Tanks is an acceptable manufacturer of buffer tanks.
- **Section 23 2116 Hydronic Piping Specialties** JL Wingert is an acceptable manufacturer of glycol feeders.
- **Section 23 3113 Metal Ducts** OMNI Duct is an acceptable manufacturer of round duct.
- **Section 23 7416 Packaged, Small-Capacity, Rooftop Air-Conditioning Units** Trane is an acceptable manufacturer of rooftop air handling units.
- **Section 26 5110 Lighting**
    - Type CF1
        - Visual Comfort & Co. Approved.
    - Type L1-6' & L1E-6'
        - Prudential. Approved as noted. Confirm fixture can be mounted in wood slate ceiling.

- **Section 26 0923 Lighting Controls**
  - Acuity nLight. Approved
- **Section 28 2300 Video Surveillance Paragraph 2.02** Genetec is not approved.

CIVIL/ STRUCTURAL/ MECHANCIAL / PLUMBING / ELECTRICAL / FIRE SUPPRESSION/ IT/ LANSCAPING CLARIFICATIONS & NOTES

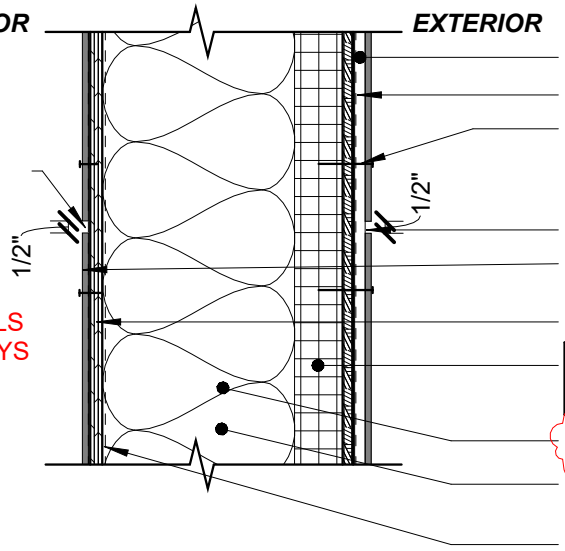
- **ICT Q&A Notes:**
  - *"It looks like a lot of the Phoenix G2 system is provided by owner (assuming they have a contractor set aside for this scope or will self perform install) however, my question is regarding the cable rough in to support the device end equipment (specifically the ceiling speakers and any interconnection between them and the head end equipment) as it shows some Cat6 cabling to certain devices but no spec on cabling to the ceiling mounted speakers or strobe lights as shown on plan sheet T3-3. If the owner is planning to provide cabling rough in outside the simplex data needed for the two device types noted on plan sheet T1-1 we can omit anything else…. I'm reaching out to see if the ceiling speaker cabling needs to be factored in at the time of rough in. If you'd like us as the Division 27 bidder to include this cabling and if so, does the ceiling speaker cabling terminate in ELEC MECH Room #114 along with the other Cat6 cabling."*
    - **On the Phoenix G2 system, conduit and box rough-in and network connections for devices requiring network connections are part of the GC scope. Refer to the T sheets for those requirements. All other items are by Owner.**
- **Civil and Plumbing Q&A Notes:**
  - *"Is SDR35 the only acceptable pipe? Or would A2000 or ADS N-12 be an acceptable alternate?"*
    - ***Per the COH Design Standards – Gravity sewer service piping shall consist of the following materials for the following situations: PVC meeting ASTM D3034, SDR-35 & -26 or PVC Schedule 40 – Solvent Weld or SBR Gasket Joint for normal installations, PVC Schedule 40 or Cement Lined Ductile Iron for installations within 2' of a building foundation, PVC Schedule 40 for water main or water service crossing, 16 PVC Schedule 40 with acrylonitrile butadiene (NBR) gaskets for installations in areas of hydrocarbon contamination.***
      For storm piping the COH has the following acceptable pipe materials, RCP meeting ASTM C-76, PVC pipe must be at least SDR 35, CPE pipe meeting the requirements of AASHTO M294 and M252, Type S, HDPE pipe meeting ASTM F714. Refer to page 32 of the Helena Standards for more detailed information for alternate piping.
  - *"The plans state there is to be a cleanout installed every 100 LF. However, there are not shown on the plans."*
    - ***Cleanouts have been added at the appropriate locations***
  - *"For the roof drain assemblies and connections, is there a more detailed page that shows all of the roof drain connection points and where they would tie into the storm main? The plans only show one 6" line for the roof drain line that ties into the storm main."*
    - ***There is only one roof drain line exiting the building on the north side.***

- *"Is there a detail for the sewer Oil/water separator that is called for in the plans?"*
  - **See 5/P6-1.**
- *"Is there a bid item sheet or schedule that is available that shows an itemized list of items to be bid?"*
  - **Please refer to schedules and plans on civil and plumbing plans. Civil will cover project components outside the building footprint, while plumbing will cover project components within the building footprint and 5' beyond.**
- *"Is this an AIS or BABA project?"*
  - **No.**
- *"The plans do not show if geotextile is to be used/placed under the new pavement or concrete. Is separation fabric not being used under the new pavement and concrete?"*
  - ***Plans call out the sections specified in the Geotech report – for additional detail refer to the report done by Pioneer August 7, 2025. They have not specified fabric for their asphalt or concrete sections.***

ATTACHMENTS:

- **Architectural Revision Drawings: ATT 1, ATT 2, ATT 3, ATT 4, A1-3, A3-6**
- **Specifications noted above**
- **Addendum 1- Civil**
- **Addendum 1- ICT**

END OF ADDENDUM #1



SEE INT. ELEVATIONS FOR REVEAL LOCATIONS.SHEATHING TO BE PAINTED BLACK AT ALL REVEAL LOCATIONS

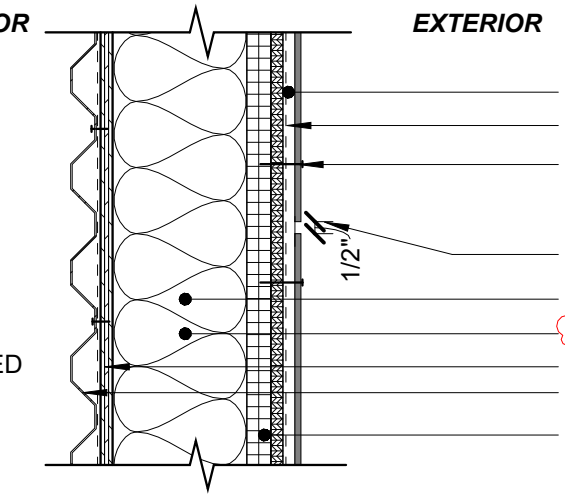
EAST & WEST WALLS OF FIRE TRUCK BAYS T.O. SLAB TO 10'

E3

CITADEL PANEL & CEMENT FIBER INSULATED

1/2" AIR GAP MIN.
BLACK FELT PAPER
CITADEL - PANEL 20 , ANCHORED TO SHEATHING W/ VERTICAL HAT CHANNEL SYSTEM. SEE SHEET A6-6
SEE ELEVATIONS FOR REVEAL LOCATIONS
FIBER CEMENT PANELS UP TO 10' ON ALL APP. BAY WALLS. 5/8" GYP ABOVE
1/2" PLYWOOD SHEATHING
2 1/2" R-6 ZIP SHEATHING SYSTEM @ APPARATUS BAY
8" R-25 BATT INSULATION
2X8 METAL STUDS
VAPOR BARRIER

1



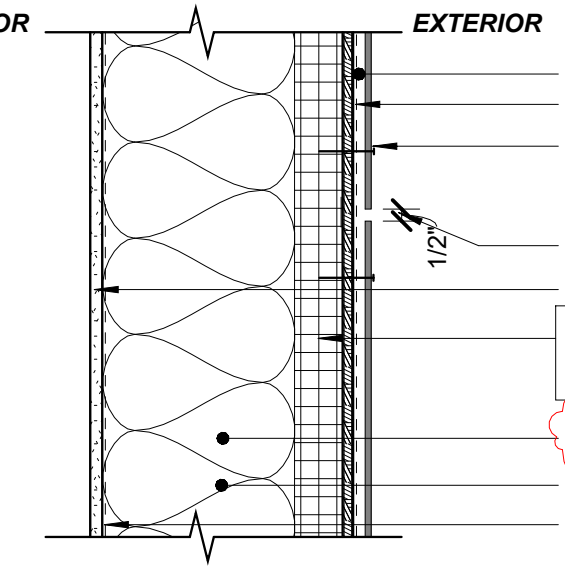
TOP FLOOR OF FIRE TOWER

E4

CITADEL PANEL & HORIZ. CORRIGATED METAL INSULATED

1/2" AIR GAP MIN.
BLACK FELT PAPER
CITADEL - PANEL 20 , ANCHORED TO SHEATHING W/ VERTICAL HAT CHANNEL SYSTEM. SEE SHEET A6-6
SEE ELEVATIONS FOR REVEAL LOCATIONS
2X6 WD STUDS
5 1/2" R-21 BATT. INSULATION
SHEATHING
HORIZONTAL CORRIGATED METAL SIDING
1 1/2" R-6 ZIP SHEATHING SYSTEM

1



EAST & WEST WALLS OF FIRE TRUCK BAYS

10' ABOVE T.O. SLAB TO B.O. STRUCTURE

E5

CITADEL PANEL & GWB INSULATED

1/2" AIR GAP MIN.
BLACK FELT PAPER
CITADEL - PANEL 20 , ANCHORED TO ZIP SYSTEM W/ VERTICAL HAT CHANNEL SYSTEM. SEE SHEET A6-6
SEE ELEVATIONS FOR REVEAL LOCATIONS
5/8" GWB. FINISH PAINT COLOR TBD
2 1/2" R-6 ZIP SHEATHING SYSTEM @ APPARATUS BAY
8" R-25 BATT INSULATION
2X8 METAL STUDS
VAPOR BARRIER

1

DOWLING ARCHITECTS
734 N. Last Chance Gulch | Helena, MT 59601 | 406.457.5470

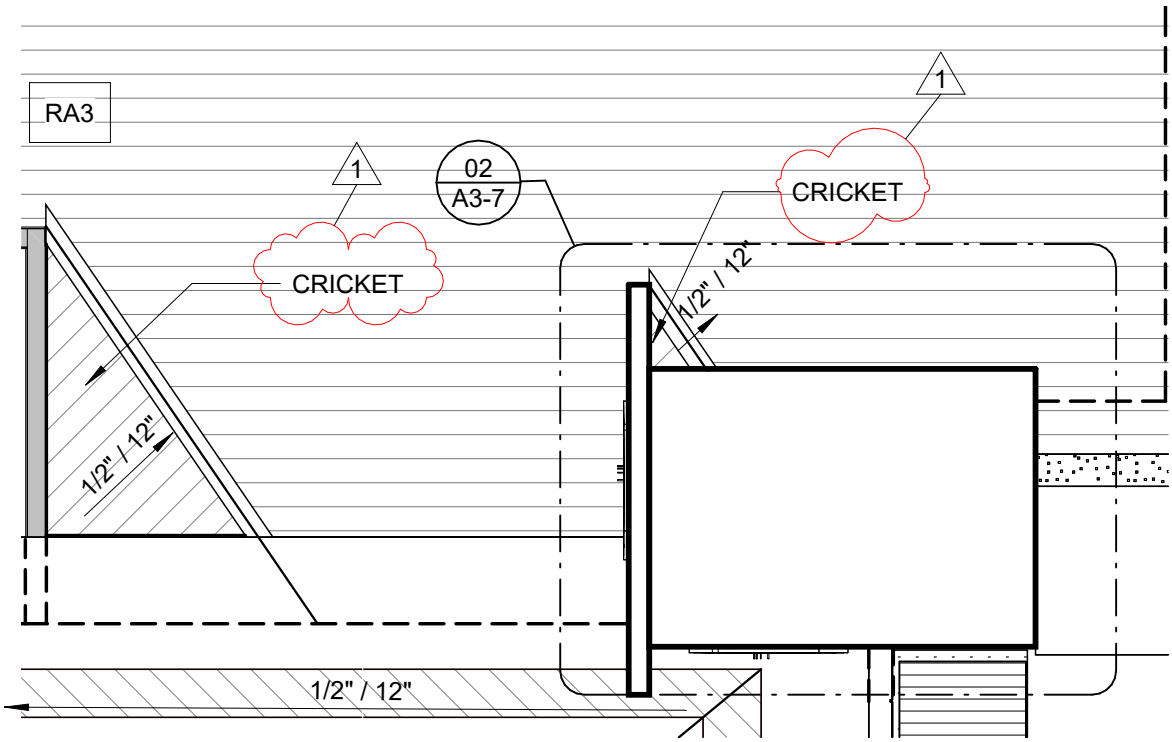
HELENA FIRESTATION #3

DRAWN BY: CC

PROJECT#: 25-668

SHEET #: **ATT-1**

11/04/25



1 / ATT-2 ROOF PLAN REVISION
1/8" = 1'-0"

DOWLING ARCHITECTS
734 N. Last Chance Gulch | Helena, MT 59601 | 406.457.5470

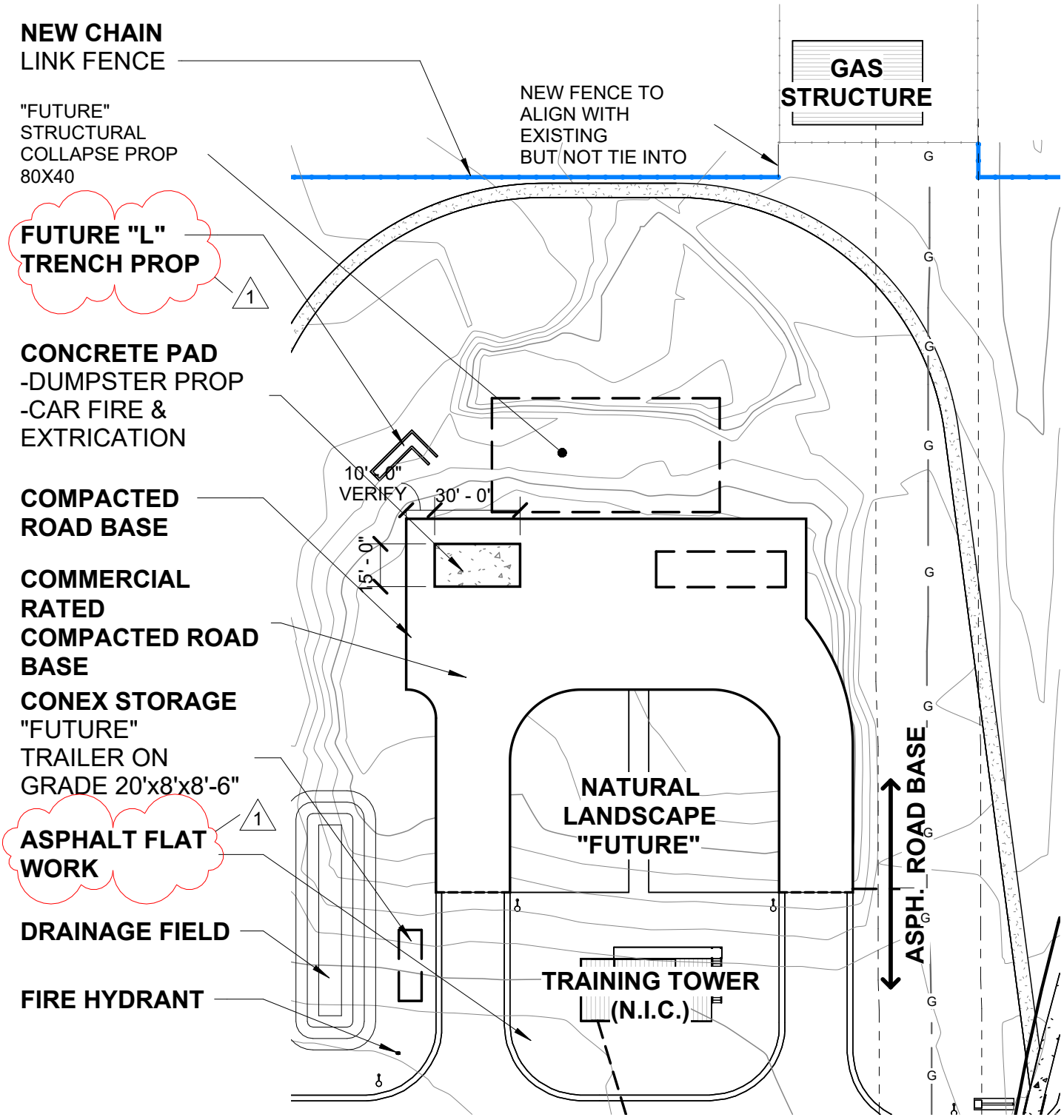
HELENA FIRESTATION #3

DRAWN BY: CC

PROJECT#: 25-668

SHEET #: **ATT-2**

11/04/25



1 SITE PLAN ADDENDUM

1" = 50'-0"

DOWLING ARCHITECTS
734 N. Last Chance Gulch | Helena, MT 59601 | 406.457.5470

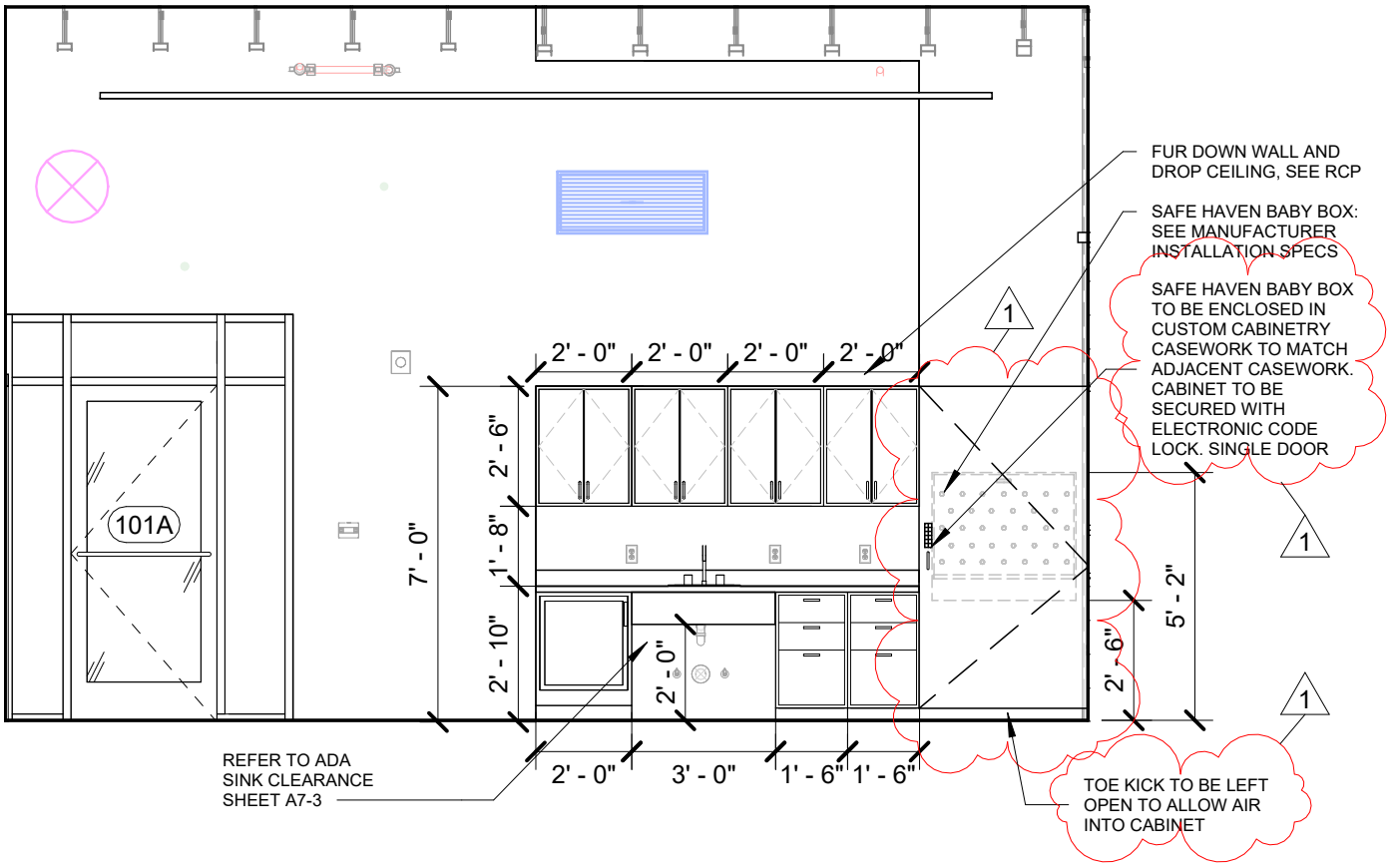
HELENA FIRESTATION #3

DRAWN BY: CC

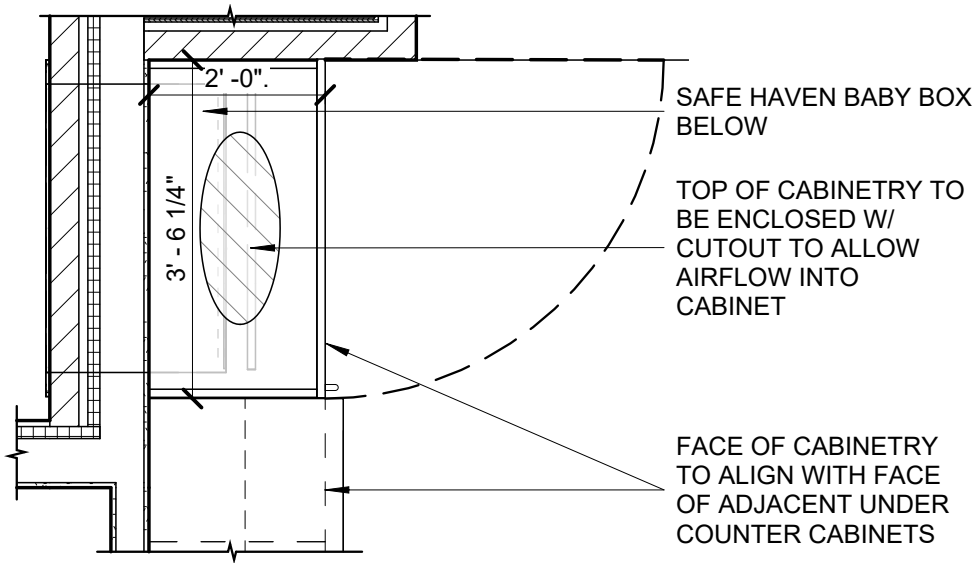
PROJECT#: 25-668

SHEET #: ATT-3

11/04/25



1 / ATT-4 A7-3 DETAIL 01 REVISION
1/4" = 1'-0"



2 / ATT-4 ATT-3 BABY BOX CABINET PLAN VIEW
1/2" = 1'-0"

DOWLING ARCHITECTS
734 N. Last Chance Gulch | Helena, MT 59601 | 406.457.5470

HELENA FIRESTATION #3

DRAWN BY: CC
PROJECT#: 25-668

SHEET #: **ATT-4**
11/04/25

WINDOW TYPES

NOTES

1. ALL DIMENSIONS ARE NOMINAL; COORDINATE R.O. WITH ACTUAL DIMENSIONS .
2. FIELD VERIFY ALL DIMENSIONS @ NEW WINDOWS IN EXISTING OPENINGS.
3. TYPICAL EXTERIOR GLAZING IS TYPE IG-1 UNO.
4. TYPICAL INTERIOR GLAZING IS TYPE G-2, UNO.
5. SEE SPECS. FOR SPECIFICS ON STOREFRONT AND CURTAINWALL SYSTEMS
6. SEE EXT./INT. ELEVATIONS FOR WINDOW SILL HEIGHTS

LEGEND

HATCH PATTERN INDICATES SAFETY GLASS: GLAZING TYPE IG-2 AT EXTERIOR GLAZING TYPE G-3 AT INTERIOR

DOOR SCHEDULE & ELEVATIONS

NOTES

1. SEE SPECIFICATIONS FOR DOOR HARDWARE DESCRIPTIONS.
2. ALL EXTERIOR DOORS TO HAVE - CLOSERS, WEATHERSTRIPPING, & LOW PROFILE ALUM. THRESHOLDS
3. ALL DOORS WITH ADA HARDWARE
4. ALL BATHROOMS DOORS TO HAVE CLOSERS.

ABBREVIATIONS

FACT FACTORY FINISH
HM HOLLOW METAL
P PAINT
TS TRANSPARENT FINISH - STAINED
WD WOOD - SOLID CORE
ALUM ALUMINUM

LEGEND

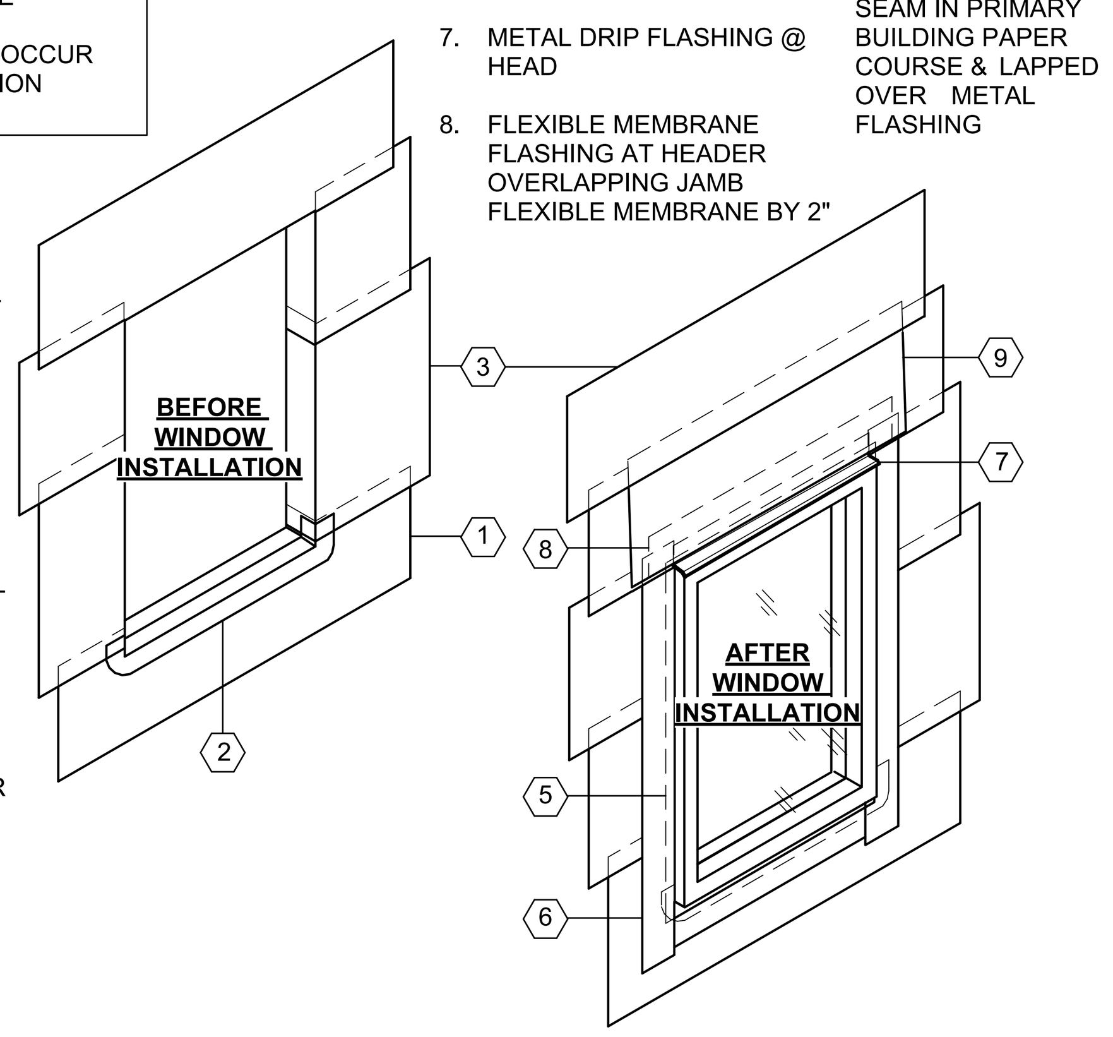
HATCH PATTERN INDICATES SAFETY GLASS: GLAZING TYPE IG-2 AT EXTERIOR GLAZING TYPE G-3 AT INTERIOR

DOOR SCHEDULE

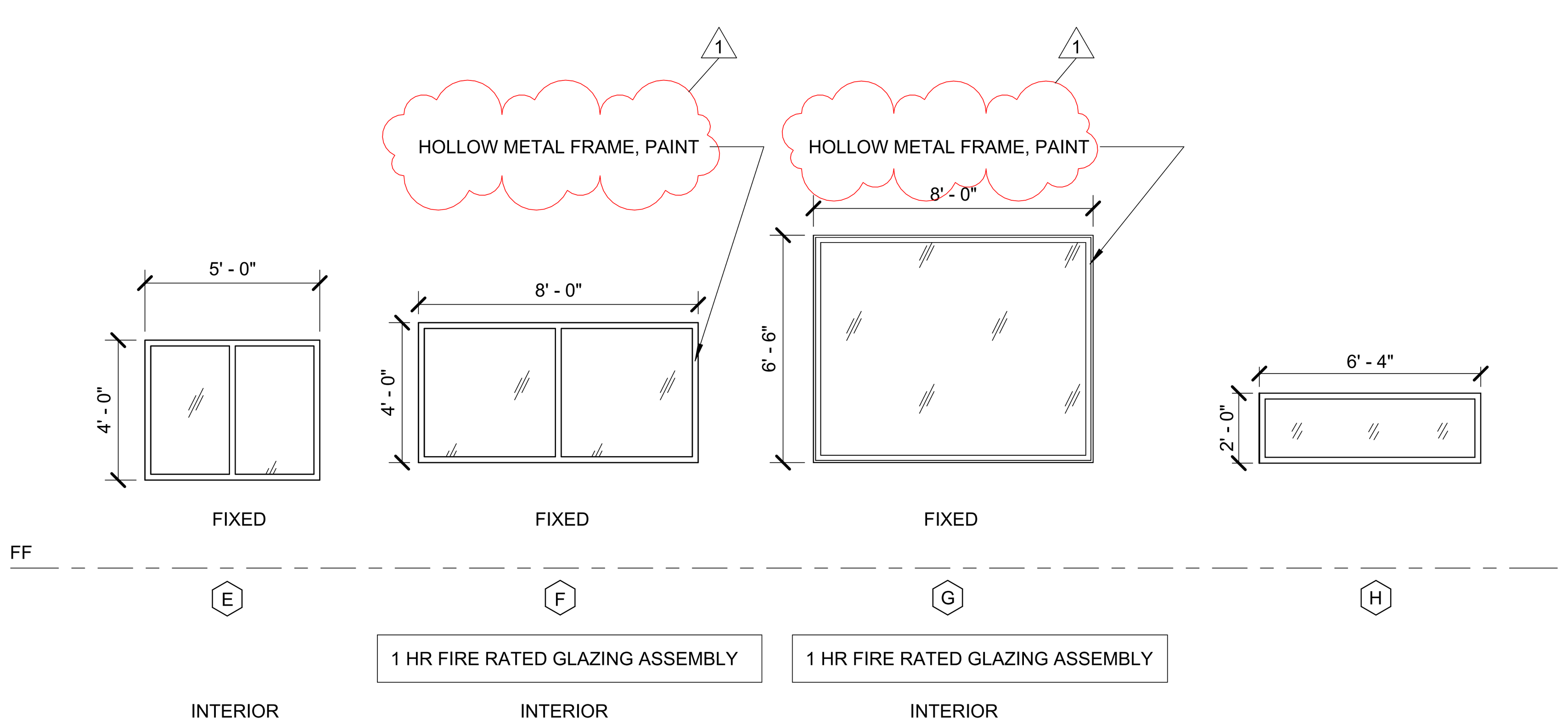
DOOR NO.	DOOR TYPE	ROOM NAME	WIDTH	HEIGHT	THICKNESS	FRAME TYPE	HARDWARE GROUP	Door Material	Comments
100A	A	VESTIBULE	6' - 0"	8' - 0"	2"	2	NO. AL-01	ALUM.	
100B	A	VESTIBULE	6' - 0"	8' - 0"	2"	2	NO. AL-02	ALUM.	
101A	B	LOBBY	3' - 0"	7' - 0"		3	NO. 06	WOOD	
101B	F	LOBBY	3' - 0"	7' - 0"	1 3/4"	1	NO. 10	WOOD	
102	H	CLASSROOM	3' - 0"	7' - 0"	2"	4	NO. 03	WOOD	
103	D	STORAGE	3' - 0"	7' - 0"	1 3/4"	1	NO. 10	WOOD	NOTE : UNDERCUT DOOR BY 1" FOR AIR FLOW
104	D	I.T.	3' - 0"	7' - 0"	1 3/4"	1	NO. 10	WOOD	NOTE : UNDERCUT DOOR BY 1" FOR AIR FLOW
105	D	BR	3' - 0"	7' - 0"	1 3/4"	1	NO. 17	WOOD	
106	D	BR	3' - 0"	7' - 0"	1 3/4"	1	NO. 17	WOOD	
108	E	OFFICE 1	3' - 0"	7' - 0"	1 3/4"	1	NO. 15	WOOD	
109	E	OFFICE 2	3' - 0"	7' - 0"	1 3/4"	1	NO. 15	WOOD	
110	E	OFFICE 3	3' - 0"	7' - 0"	1 3/4"	1	NO. 15	WOOD	
111	E	OFFICE 4	3' - 0"	7' - 0"	1 3/4"	1	NO. 15	WOOD	
112	E	CONFERENCE ROOM	3' - 0"	7' - 0"	1 3/4"	1	NO. 10	WOOD	
113A	E	HALLWAY	3' - 0"	7' - 0"	1 3/4"	1	NO. 19	WOOD	
113B	E	HALLWAY	3' - 0"	7' - 0"	1 3/4"	1	NO. 07	WOOD	45 MIN. FIRE RATED/CLOSER
114	G	ELEC. MECH.	3' - 0"	7' - 0"	1 3/4"	1	NO. 08	WOOD	45 MIN. FIRE RATED/CLOSER
115A	E	TURNOUT	3' - 0"	7' - 0"	1 3/4"	1	NO. 09	WOOD	45 MIN. FIRE RATED/CLOSER
115B	E	TURNOUT	3' - 0"	7' - 0"	1 3/4"	1	NO. 20	WOOD	
116A	G	SCBA	3' - 0"	7' - 0"	1 3/4"	1	NO. 01	STEEL	
116B	G	SCBA	3' - 0"	7' - 0"	1 3/4"	1	NO. 18	WOOD	
117A	H	APPARATUS BAY	14' - 0"	14' - 0"	2"	1	NO. OH-01	STEEL	
117B	H	APPARATUS BAY	14' - 0"	14' - 0"	2"	1	NO. OH-01	STEEL	
117C	H	APPARATUS BAY	14' - 0"	14' - 0"	2"	1	NO. OH-01	STEEL	
117D	G	APPARATUS BAY	3' - 0"	7' - 0"	1 3/4"	1	NO. 04	STEEL	
117E	G	APPARATUS BAY	3' - 0"	7' - 0"	1 3/4"	1	NO. 04	STEEL	
117F	I	APPARATUS BAY	14' - 0"	14' - 0"	2"	1	NO. OH-01	STEEL	
117G	I	APPARATUS BAY	14' - 0"	14' - 0"	2"	1	NO. OH-01	STEEL	
117H	I	APPARATUS BAY	14' - 0"	14' - 0"	2"	1	NO. OH-01	STEEL	
118A	G	HOSE TOWER	3' - 0"	7' - 0"	1 3/4"	1	NO. 11	WOOD	45 MIN. FIRE RATED/CLOSER
118B	C	HOSE TOWER	6' - 0"	6' - 8"	1 3/4"		NO. 14.01	STEEL	INSULATED W/ WEATHER STRIPPING AND LOW PROFILE THRESHOLD
119	G	GENERAL STORAGE	3' - 0"	7' - 0"	1 3/4"	1	NO. 11	WOOD	45 MIN. FIRE RATED/CLOSER
121A	E	HALLWAY	3' - 0"	7' - 0"	1 3/4"	1	NO. 07	WOOD	45 MIN. FIRE RATED/CLOSER
121B	E	HALLWAY	3' - 0"	7' - 0"	1 3/4"	1	NO. 19	WOOD	
122	E	WATCH ROOM	3' - 0"	7' - 0"	1 3/4"	1	NO. 10	WOOD	
123A	E	HALLWAY	3' - 0"	7' - 0"	1 3/4"	1	NO. 12	WOOD	PROVIDE VINYL , WINDOW TINTING FOR DORMS
123B	G	HALLWAY	3' - 0"	7' - 0"	1 3/4"	1	NO. 03	STEEL	
124	D	BR	3' - 0"	7' - 0"	1 3/4"	1	NO. 17	WOOD	
125	D	BR	3' - 0"	7' - 0"	1 3/4"	1	NO. 17	WOOD	
126	G	FIRE R.	3' - 0"	7' - 0"	1 3/4"	1	NO. 05	STEEL	
132	D	DORM 5	3' - 0"	7' - 0"	1 3/4"	1	NO. 16	WOOD	
133	D	DORM 4	3' - 0"	7' - 0"	1 3/4"	1	NO. 16	WOOD	
134	D	DORM 3	3' - 0"	7' - 0"	1 3/4"	1	NO. 16	WOOD	
135	D	DORM 2	3' - 0"	7' - 0"	1 3/4"	1	NO. 16	WOOD	
136	D	DORM 1	3' - 0"	7' - 0"	1 3/4"	1	NO. 16	WOOD	
137	D	HALLWAY	3' - 0"	7' - 0"	1 3/4"	1	NO. 13	WOOD	
138A	B	KITCH / DAYROOM	3' - 0"	8' - 0"	1 3/4"	2	NO. 03	WOOD	
138B	C	KITCH / DAYROOM	4' - 0"	7' - 0"	1 3/4"	1	NO. 14	WOOD	
138C	C	KITCH / DAYROOM	4' - 0"	7' - 0"	1 3/4"	1	NO. 14	WOOD	
139A	E	HALLWAY	3' - 0"	7' - 0"	1 3/4"	1	NO. 12	WOOD	
139B	A	FITNESS	6' - 0"	7' - 0"	2"	2	NO. 02	ALUM.	
Grand total: 51									

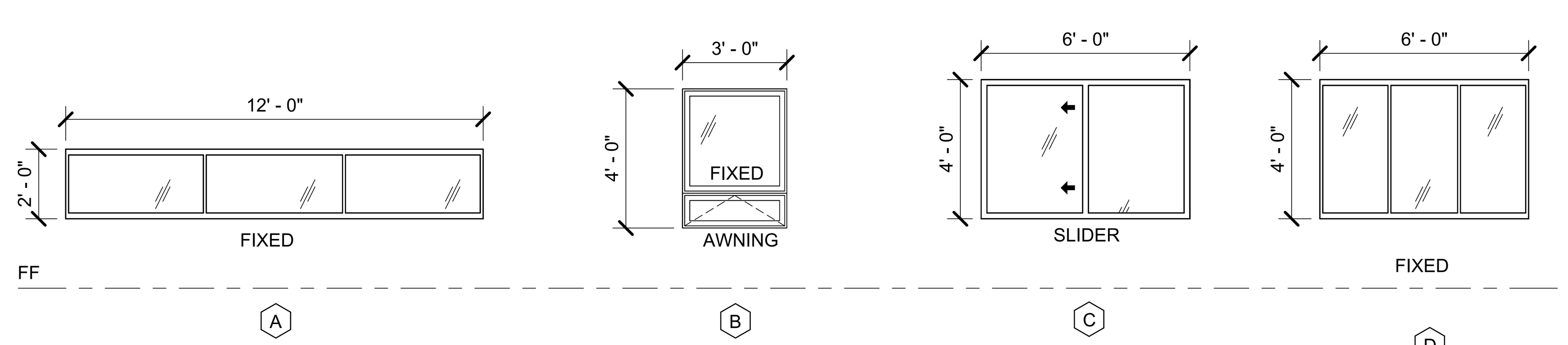
NOTES:
1. WINDOW OPENING SHOWN. DOORS ARE SIMILAR. SEE ASSOCIATED DETAILS.
2. THE FOLLOWING NOTES OCCUR IN ORDER OF INSTALLATION SEQUENCE.

1. BLDG PAPER BENEATH WINDOW
2. FLEXIBLE MEMBRANE SILL PAN COVERING SILL AND EXTENDING UP JAMB 4" TO 6"
3. BLDG PAPER AROUND JAMBS AND HEADER OVERLAPPING FLEXIBLE MEMBRANE SILL PAN 2"
4. CAULK BEHIND NAILING FLANGE (EXCEPT AT SILL FLANGE) PRIOR TO INSTALLATION. LAP EXTERIOR FACE OF FLANGE
5. WINDOW OR DOOR - WINDOW FLANGE UNDER FLEXIBLE MEMBRANE FLASHING
6. FLEXIBLE MEMBRANE FLASHING
7. METAL DRIP FLASHING @ HEAD
8. FLEXIBLE MEMBRANE FLASHING AT HEADER OVERLAPPING JAMB FLEXIBLE MEMBRANE BY 2"
9. BUILDING PAPER BIB TUCKED UNDER SEAM IN PRIMARY BUILDING PAPER COURSE & LAPPED OVER METAL FLASHING

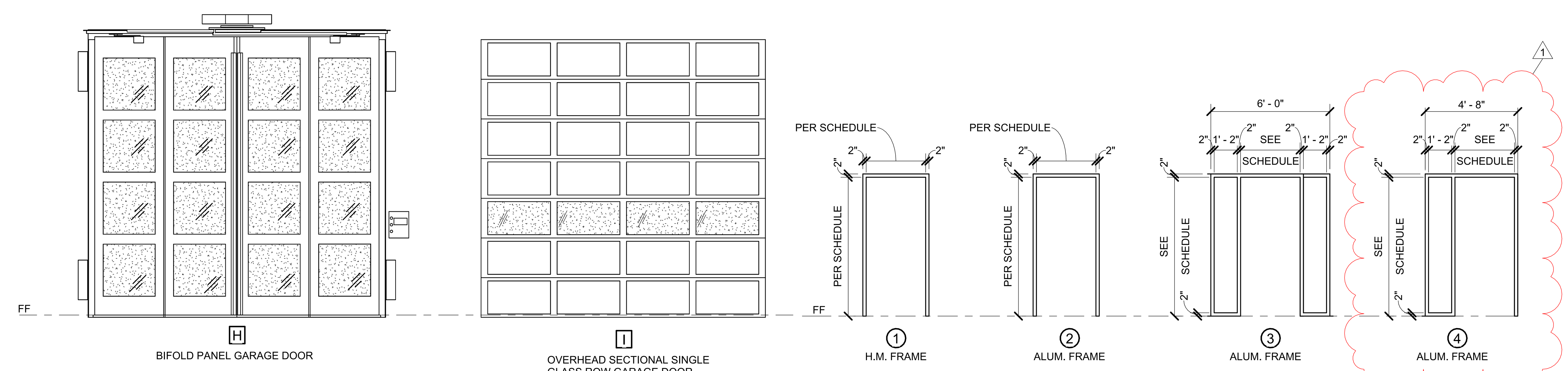


4 A1-3 WINDOW FLASHING DETAIL
3" = 1'-0"

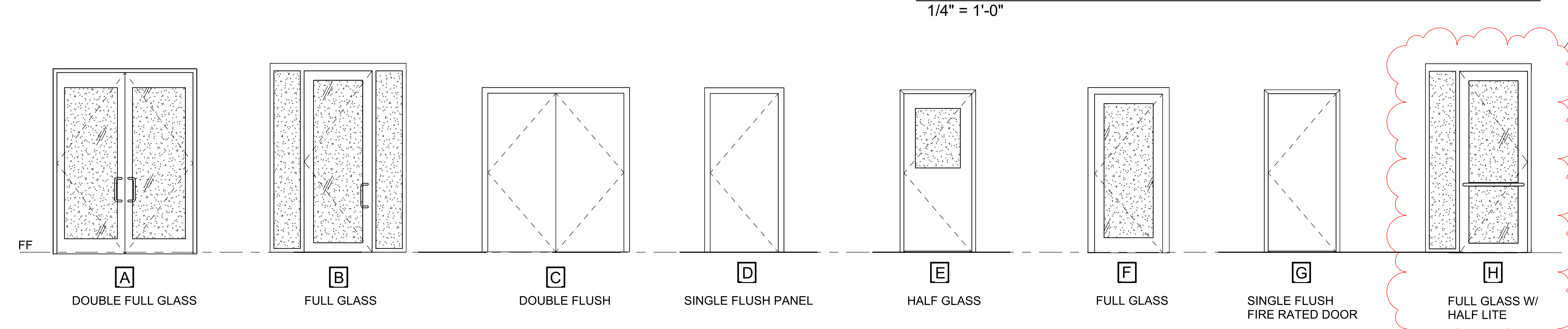




WINDOW TYPES
1/4" = 1'-0"



FRAME TYPES
1/4" = 1'-0"



DOOR TYPES
1/4" = 1'-0"

REGISTERED ARCHITECT MICHAEL W. DOWLING LIC. #1087 STATE OF MONTANA

HELENA FIRESTATION #3
1872 KELLEHER LANE, HELENA, MT 59602

SHIVEHATTERY ARCHITECTURE + ENGINEERING

DOWLING ARCHITECTS
734 N. Last Chance Gulch | Helena, MT 59601 | 406.457.5470 www.dow-arch.com

DOOR & WINDOW SCHEDULES & ELEVATIONS

PROJECT #: 25-668

ISSUE DATES:

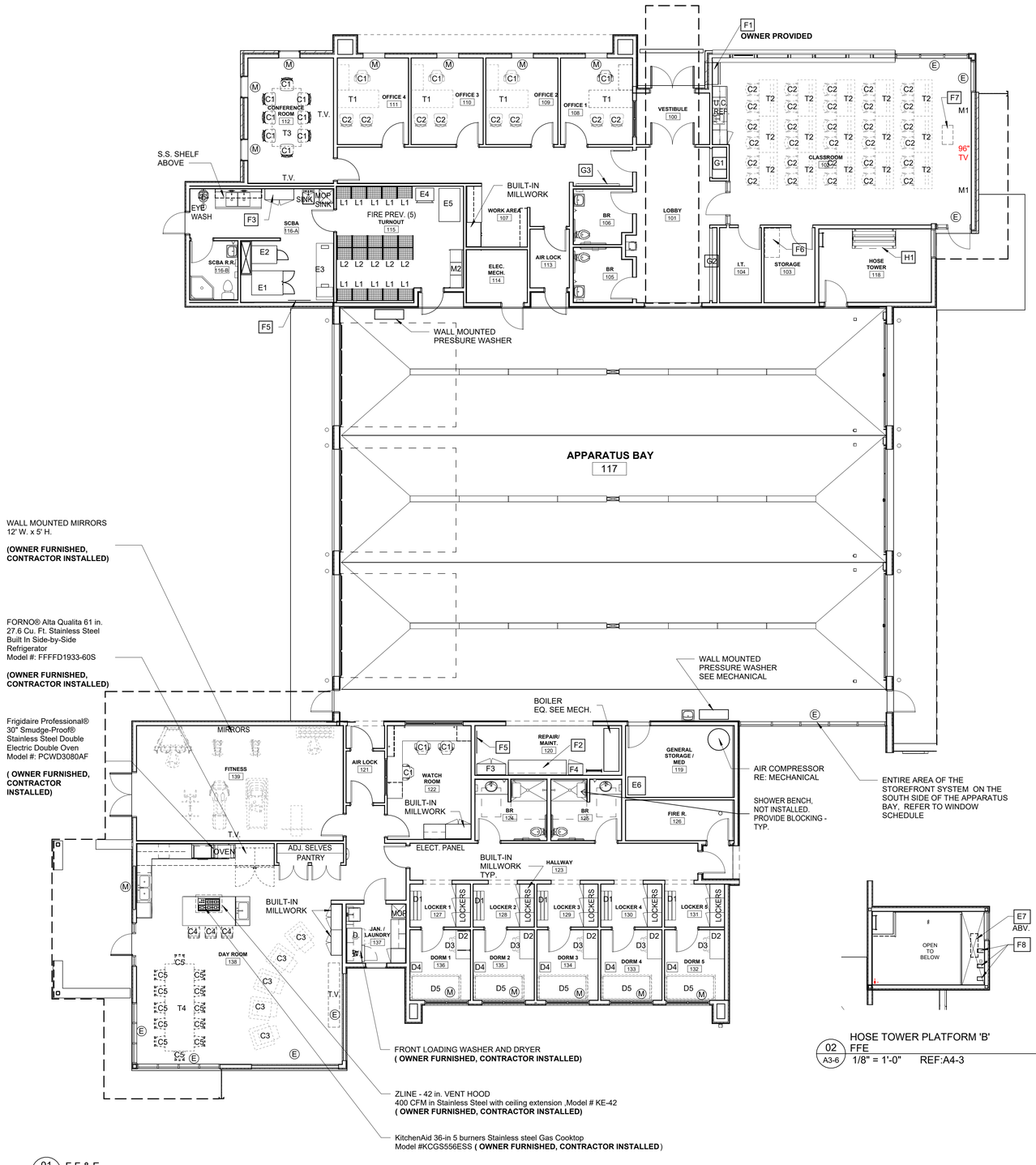
Revision 1	Date 1

DRAWN BY: JS/CC

A1-3

100% CONSTRUCTION SET

10.22.25



01 A3-6 F.F.& E.
1/8" = 1'-0"

02 A3-6 HOSE TOWER PLATFORM 'B' FFE
1/8" = 1'-0" REF:A4-3

N

GENERAL FF&E NOTES:

1. QUANTITIES SHALL BE VERIFIED WITH THE ARCHITECT AND OWNER PRIOR TO PURCHASE OF FURNITURE.
2. GC TO PROVIDE WALL BLOCKING AS REQUIRED FOR WALL MOUNTED FIXTURES / EQUIPMENT & TELEVISIONS.
3. GC TO PROVIDE ALL EQUIPMENT NOTED

OFOI - OWNER FURNISHED OWNER INSTALLED

OFCI - OWNER FURNISHED CONTRACTOR INSTALLED

CFCI - CONTRACTOR FURNISHED CONTRACTOR INSTALLED

(M) **MANUAL SHADE - CONTRACTOR SOURCED AND INSTALLED**

(E) **ELECTRIC, MOTORIZED SHADES - CONTRACTOR SOURCED AND INSTALLED**

FURNITURE SCHEDULE

MARK	DESCRIPTION	FURNISHING DESIGNATION
T1	FURNITURE - OFFICE TABLE	OFOI
C1	FURNITURE - ADJUSTABLE OFFICE CHAIR	OFOI
C2	FURNITURE - FIXED CHAIRS	OFOI
T2	FURNITURE - TRAINING ROOM TABLES	OFOI
T3	FURNITURE - CONFERENCE TABLE	OFOI
L1	FURNITURE - GEARGRID - STANDARD FREESTANDING , SINGLE SIDED 24"W X 20" D X 72	CFCI
L2	FURNITURE - GEARGRID - STANDARD FREESTANDING , DOUBLE SIDED 24"W X 20" D X 72"	CFCI
M1	MAGNETIC STEEL DRY ERASE BOARD - 4'X3' , ULINE H-5828	CFCI
M2	GEARGRID - MODULAR STORAGE - SEATTLE SYSTEM 3 PACK 75"W X 32" D X 82" H	CFCI
H1	THREE TIER FIRE HOSE CART (6FT) - FIRE HOSE DIRECT, ITEM# FHC3T6 - GC PROVIDED.	CFCI
C3	FURNITURE - DAYROOM RECLINERS DUTY- BUILT ULTIMATE FIREFIGHTER RECLINER FIRE FSF STATION FURNITURE.COM	OFOI
C4	FURNITURE - KITCHEN ISLAND CHAIRS	OFOI
T4	FURNITURE - DAYROOM KITCHEN TABLE	OFOI
C5	FURNITURE - DAYROOM KITCHEN CHAIRS	OFOI
D1	MILLWORK - WOOD BENCH ON WALL MOUNT STEEL BRACKETS	CFCI
D2	MILLWORK - DORM DESK ON WALL MOUNT STEEL BRACKETS	CFCI
D3	FURNITURE - DORM DESK CHAIR	OFOI
D4	FURNITURE - DORM NIGHT STAND, FIRE FSF STATION FURNITURE.COM BUILT FIREHOUSE TOUGH SOLID WOOD NIGHTSTAND	OFOI
D5	FURNITURE - DORM BEDROOMS, FIRE FSF STATION FURNITURE.COM BUILT FIREHOUSE STRONG ADJUSTABLE HEIGHT STEEL -BED TWIN XL	OFOI
G1	RECESSED GLASS DISPLAY - CLARIDGE 370 SERIES , 4'X4'X2', W/ LED LIGHTING	CFCI
G2	RECESSED GLASS DISPLAY - CLARIDGE 370 SERIES , 4'X10'X1', W/ LED LIGHTING	CFCI
G3	BULLETIN BOARD, SURFACE MOUNT, IMPERIAL - CLARIDGE, 4' X6'	CFCI
F1	SAFE HAVEN - BABY BOX , https://www.shbb.org/	OFCI
F2	ULINE, MODULAR DRAWER 96X30" , BLACK , W/ MAPLE TOP: H- 10197-MAP ULINE, POLY PEGBOARD 96X48 , BLACK : H-8498BL ULINE, 43 PIECE PEGBOARD ASSORTMENT, BLACK : H-7136	CFCI
F3	ULINE, JUMBO HEAVY DUTY STORAGE CABINET - 49X 18 X 78: H3617BL	CFCI
F4	ULINE, FLAMMABLE STORAGE CABINET- SLIMLINE , SELF CLOSING: H-2570S-Y	CFCI
F5	ULINE, TOOLFEX BROOM , MOP, SHOVEL , WALL HOLDER : H-7867BL	CFCI
F6	SHELVING UNIT , 48W x 72H x 24D	OFOI
F7	ULINE, LECTERN : H - 7825	OFOI
F8	FIRE HOSE SADDLE RACK WALL MOUNTED RED GALVANIZED STEEL SR-12 , FIREHOSE SUPPLY.COM	CFCI

EQUIPMENT SCHEDULE

MARK	DESCRIPTION
E1	Decon SCBA Extractor - Roto-Decon by Circul-Air Corp SKU: CAC-DECON-240-NA
E2	Commercial Washer - Continental Girbau Inc / RMG040
E3	Continental Express Dry Turnout Gear Dryer, 6 set CON-XD-6
E4	Containment Fill Station CFS5.5-2S Bauer Compressors 2-Position 5.5 Sku: CFSF.F-2S
E5	Cylinder Fill Station, Bauer Verticus, VAC13H-E1, Single Phase 6000 psi
E6	Ice Machine - Vibekio, 22.2 400 lb - Commercial Free standing Ice Maker , auto cleaning Model # CIM-01
E7	SVOPES Electric Hoist. 1760 lbs Capacity. 120V Winch with 328 ft Wireless Remote Control. Item #6907374 Model #SVOPESDDGSSHL10469V1

NOTE. GC TO PROVIDE ACCESSORY STANDS/ PLATFORMS THAT WOULD BE AN ADDITION TO THE BASE MODEL(S) , SEE MANUFACTURERS RECOMMENDATIONS.

ALL ITEMS IN THE EQUIPMENT SCHEDULE ARE TO BE SUPPLIED AND INSTALLED BY THE CONTRACTOR

REGISTERED ARCHITECT
MICHAEL W. DOWLING
LIC. #3857
STATE OF MONTANA

HELENA FIRESTATION #3

1872 KELLEHER LANE, HELENA, MT 59602

SHIVEHATTERY ARCHITECTURE + ENGINEERING
DOWLING ARCHITECTS
2734 N. Last Chance Gulch | Helena, MT 59601 | 406.457.8470
www.dowlingarch.com
F.F.&E.

PROJECT #: 25-668

ISSUE DATES:

Revision 1	Date 1

DRAWN BY: JS/CC

100% CONSTRUCTION SET

A3-6

10.22.25

SECTION 09 5426
SUSPENDED WOOD CEILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Linear wood planks.

B. Metal suspension system.

1.02 REFERENCE STANDARDS

A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.

B. ASTM C635/C635M - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2013a.

C. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2019 (Reapproved 2025).

D. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2024a.

E. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2019.

F. CISCA (WC) - Wood Ceilings Technical Guidelines; 2009.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Sequence work to ensure ceilings are not installed until building is enclosed, dust generating activities have terminated, and overhead work is completed.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Shop Drawings: Indicate grid layout and related dimensioning, attachment of wood ceiling components to grid, accessory attachments, junctions with other ceiling finishes, and mechanical and electrical items installed in the ceiling.

C. Product Data: Provide data on wood ceiling components and suspension system components.

D. Samples: Submit two full size samples illustrating material and finish of wood ceiling components.

E. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section, with at least three years documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver wood ceiling components to project site in original, unopened packages.

B. Store in fully enclosed space, flat, level and off the floor.

1.07 FIELD CONDITIONS

A. Do not install suspended wood ceiling system until wet construction work is complete and permanent heat and air conditioning is installed and operating.

PART 2 PRODUCTS

2.01 SUSPENDED WOOD CEILING SYSTEM

A. Performance Requirements:
   1. Design for maximum deflection of 1/360 of span.

B. Linear Wood Planks: Composite wood core with wood veneer finish.

1. Classification: ASTM E1264, Class A, Type F, Form F1, perforated.
    a. Backing: Glass fiber acoustical backing.
2. Type: Pre-assembled module of linear planks with battens attached perpendicularly to back of planks.
    a. Plank Thickness: 3/4 inch.
    b. Plank Width: 4 inches, nominal.
3. Solid Wood Species: Cherry.
    a. Factory Finish: Clear sealer.
4. Suspension System: Type specified below.
5. Products:
    a. 9Wood; 2300 Continuous Linear: www.9wood.com/ceilings/#sle.
    b. Certainteed Architectural; Wood - Linear Planks: www.certainteed.com/ceilings-and-walls/#sle.
    c. Madrid, Inc; Linear Wood: www.madridinc.com/#sle.
    d. Substitutions: See Section 01 6000 - Product Requirements.

C. Metal Suspension System:
1. General: Comply with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold down clips, stabilizer bars, clips, and splices as required.
    a. Materials:
        1) Steel Grid: ASTM A653/A653M, G30 coating, unless otherwise indicated.
2. Concealed Suspension System: Hot-dipped galvanized steel grid and cap.
    a. Structural Classification: Heavy-duty, when tested in accordance with ASTM C635/C635M.
    b. Profile: Tee; 15/16 inch face width.
    c. Finish/Color: Baked enamel, black.
3. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement.

D. Accessories: Manufacturer's standard accessories for installation method indicated, seismic requirements and above-ceiling accessibility.

2.02 FABRICATION

A. Shop fabricate wood ceiling components to the greatest extent possible.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Do not install ceiling until after interior wet work is dry.

3.02 INSTALLATION

A. General: Install suspended wood ceiling system in accordance with CISCA (WC).

B. Suspension System:
1. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.
2. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
3. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
4. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
5. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
6. Do not eccentrically load system or induce rotation of runners.

C. Wood Ceiling:
   1. Install wood ceilings in accordance with manufacturer's instructions.
   2. Fit wood components in place, free from damaged edges or other defects detrimental to appearance and function.
   3. Install components in uniform plane, and free from twist, warp, and dents.
   4. Cut to fit irregular grid and perimeter edge trim.
   5. Make field cut edges of same profile as factory edges, seal and finish according to manufacturer.

3.03 CLEANING

A. Clean and touch up minor finish damage. Remove and replace components that cannot be successfully cleaned and repaired.

END OF SECTION

SECTION 01 2500
SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedural requirements for proposed substitutions.

1.02 DEFINITIONS

A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
   1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
   2. Agrees to provide the same warranty for the substitution as for the specified product.
   3. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
   4. Waives claims for additional costs or time extension that may subsequently become apparent.

B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.

C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
   1. No specific form is required. Contractor's Substitution Request documentation must include the following:
      a. Project Information:
      b. Substitution Request Information:
         1) Reference to particular Contract Document(s) specification section number, title, and article/paragraph(s).
         2) Description of Substitution.
         3) Differences between proposed substitution and specified item.
         4) Description of how proposed substitution affects other parts of work.
      c. Attached Comparative Data: Provide point-by-point, side-by-side comparison addressing essential attributes specified, as appropriate and relevant for the item:
         1) Physical characteristics.
         2) Visual effect.
         3) Warranties.
         4) Other salient features and requirements.
         5) Include, as appropriate or requested, the following types of documentation:
            (a) Product Data:
            (b) Samples.
            (c) Certificates, test, reports or similar qualification data.
      d. Impact of Substitution:
         1) Savings to Owner for accepting substitution.
         2) Change to Contract Time due to accepting substitution.

D. Limit each request to a single proposed substitution item.
   1. Submit an electronic document, combining the request form with supporting data into single document.

3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT

A. Submittal Form (before award of contract):
   1. Submit substitution requests by completing the form provided by contractor.

B. Owner will consider requests for substitutions only if submitted at least 10 days prior to the date for receipt of bids.

3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

A. Submittal Form (after award of contract):
   1. Submit substitution requests by completing CSI/CSC Form 13.1A - Substitution Request. See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.

B. DOWLING Architects will consider requests for substitutions only within 15 days after date of Agreement.

C. Submit request for Substitution for Convenience immediately upon discovery of its potential advantage to the project, but not later than 14 days prior to time required for review and approval by DOWLING Architects, in order to stay on approved project schedule.
   1. In addition to meeting general documentation requirements, document how the requested substitution benefits the Owner through cost savings, time savings, greater energy conservation, or in other specific ways.
   2. Document means of coordinating of substitution item with other portions of the work, including work by affected subcontractors.

D. Substitutions will not be considered under one or more of the following circumstances:
   1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
   2. Without a separate written request.
   3. When acceptance will require revisions to the Contract Documents.

3.04 RESOLUTION

A. DOWLING Architects may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.

B. DOWLING Architects will notify Contractor in writing of decision to accept or reject request.

3.05 ACCEPTANCE

A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

3.06 CLOSEOUT ACTIVITIES

A. See Section 01 7800 - Closeout Submittals, for closeout submittals.

END OF SECTION

GENERAL NOTES:

1. STANDARD SYMBOLS AND LINE TYPES ARE SHOWN IN THE LEGEND. SOME SYMBOLS OR LINE TYPES SHOWN MAY NOT BE SHOWN ON THE PLANS.
2. IN GENERAL, EXISTING STRUCTURES AND FACILITIES ARE NOTED AS "EXISTING" AND ARE SHOWN IN LIGHT LINE WEIGHTS OR AS SCREENED BACKGROUND. NEW STRUCTURES OR FACILITIES ARE SHOWN IN HEAVY LINE WEIGHTS.

CONSTRUCTION NOTES:

1. ALL IMPROVEMENTS ON THIS PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH THE MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS, SEVENTH EDITION DATED APRIL 2021 (MPWSS); THE CITY OF HELENA DESIGN STANDARDS; AND THE PROJECT SPECIFICATIONS.
2. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE DIVISION OF INDUSTRIAL REGULATIONS (OSHA) SAFETY STANDARDS. IF REQUESTED BY THE INSPECTOR, THE CONTRACTOR SHALL PROVIDE PROOF OF A PERMIT FROM SAID DIVISION.
3. THE CONTRACTOR'S OPERATIONS SHALL BE CONFINED WITHIN THE PROJECT LIMITS. MATERIALS AND EQUIPMENT SHALL BE STORED ON THE PROJECT SITE WHERE APPROVED BY THE OWNER. IT SHALL BE UNDERSTOOD THAT THE RESPONSIBILITY FOR PROTECTION AND SAFEKEEPING OF EQUIPMENT AND MATERIALS ON OR NEAR THE SITE WILL BE ENTIRELY THAT OF THE CONTRACTOR AND THAT NO CLAIM SHALL BE MADE AGAINST THE OWNER BY REASON OF ANY ACT OF AN EMPLOYEE OR TRESPASSER.
4. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES FOUND ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OR CONTINUATION OF CONSTRUCTION ACTIVITIES.
5. REFERENCE ALL SURVEY MONUMENTS, SECTION CORNERS, 1/4 CORNERS, AND PROPERTY CORNERS PRIOR TO BEING DISTURBED BY CONSTRUCTION. ANY MONUMENTS AND CORNERS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF MONTANA.
6. A PRE-CONSTRUCTION MEETING (AS REQUIRED) SHALL BE HELD WITH THE GENERAL CONTRACTOR, SITE SUBCONTRACTOR, CITY OF HELENA, OWNER, AND MORRISON-MAIERLE, INC. PRIOR TO THE START OF CONSTRUCTION.
7. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE CITY, COUNTY, AND/OR STATE INSPECTOR 48 HOURS PRIOR TO COMMENCING CONSTRUCTION AND 24 HOURS IN ADVANCE OF SPECIFIC INSPECTION NEEDS DURING THE COURSE OF THE WORK. ALL WORK SHALL BE PERFORMED DURING NORMAL WORKING HOURS AND SUBJECT TO THE AVAILABILITY OF AN INSPECTOR AND APPROVED BY THE ENGINEER. THE CONTRACTOR WILL BE BILLED FOR SAID INSPECTION SERVICES AS PROVIDED IN THE MOST RECENTLY ADOPTED FEES FOR SUCH SERVICES.
8. THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION ACTIVITIES IN A MANNER TO MINIMIZE INCONVENIENCE TO THE ADJACENT BUSINESSES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PUBLIC AND PRIVATE PROPERTY INSOFAR AS IT MAY BE AFFECTED BY THESE OPERATIONS, ALL COSTS FOR PROTECTING, REMOVING, AND RESTORING EXISTING IMPROVEMENTS SHALL BE BORNE SOLELY BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL AT ALL TIMES TAKE WHATEVER MEASURES ARE NECESSARY TO ASSURE THE PROPER CONTAINMENT AND DISPOSAL OF POLLUTANTS ON THE SITE IN ACCORDANCE WITH ANY AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
11. THE CONTRACTOR SHALL IMMEDIATELY CLEAN UP ANY CONSTRUCTION MATERIALS INADVERTENTLY DEPOSITED ON EXISTING STREETS, SIDEWALKS, OR OTHER PUBLIC RIGHTS-OF-WAY AND MAKE SURE STREETS AND WALKWAYS ARE CLEANED AT THE END OF EACH WORKING DAY.
12. CONSTRUCTION WORK ZONE TRAFFIC SIGNS SHALL BE FURNISHED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF THE REGULATORY AGENCIES HAVING JURISDICTION. A TRAFFIC CONTROL PLAN, PREPARED BY THE CONTRACTOR, MAY BE REQUIRED BY THE CITY OR STATE. "CONSTRUCTION AHEAD" WARNING SIGNS ARE TO TO BE INSTALLED ALONG ADJACENT ROADS OR DRIVEWAYS. FLASHERS WITH CAUTION TAPE ARE TO BE INSTALLED WHERE ANY CONSTRUCTION ACTIVITY CROSSES A SIDEWALK OR PEDESTRIAN PATH IN ACCORDANCE WITH THE SPECIFICATIONS AND ANY OR ALL LOCAL REGULATIONS.
13. AREAS ON THE SITE TO BE GRADED SHALL BE CLEARED AND GRUBBED OF ALL VEGETATION AND DEBRIS. THESE MATERIALS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.
14. SURFACE SOILS WITHIN THE PROJECT LIMITS CONTAINING ROOTS AND ORGANIC MATTER SHALL BE STRIPPED DOWN AND STOCKPILED OR DISCARDED AS DIRECTED BY THE OWNER OR ENGINEER. SOIL BORING INFORMATION IS PROVIDED IN THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY PIONEER ON AUGUST 7, 2025. DEEPER STRIPPING WHERE REQUIRED TO REMOVE WEAK SOILS OR ACCUMULATIONS OR ORGANIC MATTER, SHALL BE PERFORMED WHEN DETERMINED BY THE ENGINEER OR OWNER'S AUTHORIZED REPRESENTATIVE. STRIPPING SHALL BE REMOVED FROM THE SITE OR STOCKPILED AT A LOCATION DESIGNATED BY THE OWNER.
15. THE GROUND SURFACE EXPOSED BY STRIPPING SHALL BE SCARIFIED TO A MINIMUM DEPTH OF EIGHT INCHES (8"), MOISTURE CONDITIONED TO THE PROPER MOISTURE CONTENT FOR COMPACTION, AND COMPACTED AS REQUIRED FOR COMPACTED FILL. RECOMPACTION SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACING FILL.
16. NO STOPPING, PARKING, OR STORING OF CONSTRUCTION MATERIALS IN THE PUBLIC STREETS/ROADS, RIGHTS-OF-WAY, OR ANY DRIVEWAY IS ALLOWED.
17. THE CONTRACTOR SHALL RESTORE ALL ROADWAY SURFACES TO EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO EXCAVATION AS DETERMINED BY AGENCY, OWNER, AND/OR ENGINEER.
18. ASPHALT AND CONCRETE SHALL BE SAW CUT OR NEAT CUT AS APPROVED BY THE ENGINEER.
19. THE CONTRACTOR SHALL UTILIZE COMPACTION EQUIPMENT SUITABLE FOR THE SOIL TYPES AND SURFACE MATERIALS ENCOUNTERED ON THE PROJECT.
20. SUBGRADE, SUB-BASE, BASE, AND SURFACE COURSE COMPACTION SHALL CONFORM TO ALL APPLICABLE SPECIFICATIONS NOTED IN THE MPWSS; CITY OF HELENA DESIGN STANDARDS; AND THE CITY OF HELENA FIRE STATION #3 GEOTECHNICAL REPORT AUGUST 7, 2025 .
21. CONCRETE SHALL BE CLASS M-4000 UNLESS OTHERWISE SPECIFIED.
22. CONTRACTION JOINTS SHALL BE CONSTRUCTED BY SAWING OR SCORING. WHEN SCORING, A TOOL SHALL BE USED THAT WILL LEAVE CORNERS ROUNDED AND TO DESTROY AGGREGATE INTERLOCK FOR SPECIFIED MINIMUM DEPTH.
23. GRADE ELEVATIONS INDICATED BY "XX.XX" ON PLANS ARE +3800' TO PROJECT DATUM.
24. SIDE SLOPES FROM DRIVE AND PARKING AREAS SHALL BE 4:1 MAX UNLESS OTHERWISE SPECIFIED.
25. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT THERE IS A CONSTRUCTION PERMIT APPROVED BY THE MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY (MDEQ) OR LOCAL GOVERNING AGENCY AS APPROPRIATE FOR THE CONTROL OF STORM WATER RUNOFF. IF THERE IS NOT AN APPROVED PERMIT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY APPROVALS FROM MDEQ OR THE LOCAL GOVERNING AGENCY.
26. CONTRACTOR IS RESPONSIBLE FOR PROJECT DUST CONTROL.
27. ACCESSIBLE ROUTES SHALL HAVE A MAXIMUM. RUNNING SLOPE OF 5%.

GENERAL UTILITY NOTES:

1. THE LOCATION, DEPTH, AND SIZE OF EXISTING UTILITIES SHOWN ON THESE PLANS IS APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTENCE, LOCATION, DEPTH, SIZE, LINE, AND GRADE OF EXISTING UTILITY CONNECTIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING FACILITIES DUE TO FAILURE TO LOCATE OR PROVIDE PROPER PROTECTION WHEN LOCATION IS KNOWN.
2. LOCATION OF SITE UTILITIES SHALL BE VERIFIED BY GENERAL CONTRACTOR AND THE UTILITY COMPANY PROVIDING SERVICE. ANY PROPOSED ADJUSTMENTS TO DRY UTILITY LOCATION SHALL BE COORDINATED WITH UTILITY COMPANIES.
3. PRIOR TO SUBMITTING PIPING DRAWINGS FOR ANY NEW PIPE THAT IS TO CONNECT TO AN EXISTING PIPE OR STRUCTURE, THE CONTRACTOR SHALL EXPOSE THE EXISTING PIPE OR STRUCTURE TO VERIFY ITS EXACT LOCATION, SIZE, MATERIALS, INVERT ELEVATIONS, AND GRADE.
4. THE CONTRACTOR SHALL NOTIFY THE MONTANA ONE CALL CENTER @ 811 OR (800) 551-8344 FOR ON-SITE UTILITY LOCATION. ALL KNOWN EXISTING UTILITIES SHALL BE MARKED BEFORE DIGGING.
5. SITE TO BE ROUGH GRADED PRIOR TO INSTALLATION OF UTILITIES TO ASSURE 6.5 FEET (78 INCHES) OF MINIMUM COVER ON BURIED WATER PIPING OR DEEPER AS SPECIFIED. IF 6.5 FEET OF MINIMUM COVER CANNOT BE OBTAINED, INSULATION OF BURIED WATER PIPING MAY BE REQUIRED.
6. GENERAL CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER ANY UTILITY SYSTEM PRIOR TO INSTALLATION.
7. CONTRACTOR TO COORDINATE WITH CITY ENGINEER PRIOR TO CONNECTING TO EXISTING WATER LINES OWNED AND MAINTAINED BY THE CITY OF HELENA.
8. ALL WATER VALVES OWNED AND OPERATED BY THE CITY OF HELENA SHALL BE OPERATED BY CITY OF HELENA PUBLIC WORKS DEPARTMENT PERSONNEL ONLY.
9. SEWER AND WATER CONNECTIONS SHALL BE PERFORMED BY A LICENSED PLUMBER.
10. GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR ALL TAP AND TIE-IN FEES REQUIRED, AS WELL AS THE COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
11. ALL GRAVITY SANITARY SEWER SERVICES SHALL BE SDR -35 & -26 PVC IN ACCORDANCE WITH ASTM D 3034, UNLESS OTHERWISE NOTED.
12. FIRE SERVICE PIPE MATERIAL SHALL BE CLASS 51 DUCTILE IRON MEETING AWWA C151.
13. DOMESTIC WATER SERVICE PIPE MATERIAL SHALL BE CLASS 51 DUCTILE IRON MEETING AWWA C151.
14. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING.
15. THE PIPE GRADES SHOWN ARE CALCULATED FROM ACTUAL DISTANCES, EDGE-OF-MANHOLE TO EDGE-OF-MANHOLE FOR BOTH SANITARY SEWER AND STORM DRAIN AS APPLICABLE. THE DISPLAYED PIPE LINEAL FEET REFLECTS THE DISTANCE FROM CENTER-OF-MANHOLE TO CENTER-OF-MANHOLE ON ALL GRAVITY PIPING.
16. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.
17. SIZE OF FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
18. THRUST BLOCKS ARE NOT GENERALLY SHOWN ON THE DRAWINGS. ALL FITTINGS, INCLUDING BENDS EQUAL TO OR GREATER THAN TWENTY-TWO AND ONE-HALF DEGREES (22.5°), TEES, AND PLUGS, SHALL BE THRUST BLOCKED IN CONFORMANCE WITH MPWSS, CITY OF HELENA DESIGN STANDARDS, OR MUST HAVE MECHANICALLY RESTRAINED JOINTS WHERE INDICATED ON THE PLANS.
19. ALL VALVES SHALL BE INSTALLED WITH THRUST BLOCKING AND VALVE BOXES IN ACCORDANCE WITH MPWSS AND CITY OF HELENA STANDARDS.
20. VALVE BOXES ARE REQUIRED FOR ALL VALVES IN A BURIED SERVICE.
22. REFER TO BUILDING PLAN FOR LOCATION OF SEWER, DOMESTIC, FIRE, ROOF DRAIN (AS APPLICABLE), AND IRRIGATION CONNECTIONS.
23. GENERAL CONTRACTOR SHALL TRENCH FOR DRY UTILITIES (NATURAL GAS, POWER, CABLE, PHONE, ETC.). DRY UTILITIES ARE TO BE INSTALLED AS NOTED IN AGREEMENT(S) WITH THE UTILITY COMPANY OR COMPANIES.
24. THE CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING VALVE BOXES, CURB BOXES, AND MANHOLES TO FINAL GRADE UPON COMPLETION OF ALL CONSTRUCTION. ANY BOXES OR MANHOLES DAMAGED OR OTHERWISE DISTURBED BY THE CONTRACTOR OR ANY SUBCONTRACTOR SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR. THIS WORK SHALL BE INCIDENTAL TO THE PROJECT. SEPARATE PAYMENT WILL NOT BE MADE.

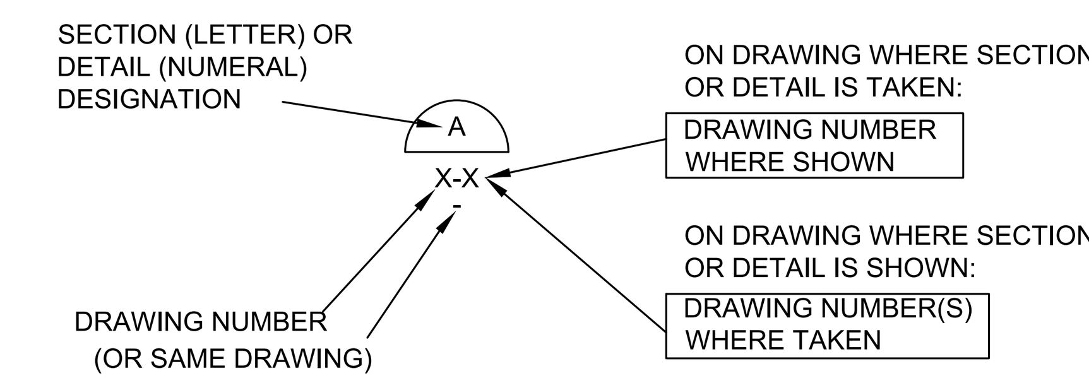
DIGITAL FILES AND MACHINE CONTROL

1. IF THE CONTRACTOR UTILIZES A COMPUTERIZED GRADE CONTROL SYSTEM WHEN GRADING/FINISHING SUBGRADE, SUB-BASE COURSE AND BASE COURSE, UTILITIES, CURB AND GUTTER, OR FOR CONSTRUCTING ANY OTHER FEATURE OR FOR ANY OTHER PURPOSE, THEN THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING THEIR OWN MACHINE CONTROL FILES. THE CONTRACTOR MAY CREATE THIS DATA FROM SUPPLEMENTAL CAD INFORMATION AND THE INFORMATION PROVIDED ON THE PLANS IN THE CONTRACT DOCUMENTS. THE ENGINEER MAY PROVIDE THE CONTRACTOR SUPPLEMENTAL CAD INFORMATION IN THE FORM OF AN XML SURFACE AND/OR CAD LINE WORK (DERIVED FROM AUTOCAD CIVIL 3D). THE XML SURFACE AND/OR CAD LINE WORK DEVELOPED BY THE ENGINEER WAS PREPARED SOLELY FOR THE PURPOSE OF DEVELOPING THE PRINTED PLANS AND WAS NOT DEVELOPED FOR ANY OTHER USE. ELECTRONIC DATA PROVIDED TO THE CONTRACTOR IS CURRENT AS OF THE TIME TRANSMITTED TO THE CONTRACTOR AND MAY NOT INCLUDE LATER REVISIONS MADE AND COMMUNICATED ON THE CONSTRUCTION PLANS.
2. THE CONTRACTOR SHALL SIGN AND PROVIDE AN MMI-SPECIFIC ELECTRONIC INFORMATION RELEASE FORM WHEN REQUESTING THE SUPPLEMENTAL CAD INFORMATION AND SHALL RECOGNIZE THAT THE PRINTED PLANS AND SPECIFICATIONS AND INFORMATION FOUND THEREIN ARE THE CONTRACT DOCUMENTS AND AS SUCH, THEY GOVERN OVER ANY CAD INFORMATION PROVIDED. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY USE OF THIS CAD INFORMATION OR MODIFICATIONS MADE THERETO.

LEGEND

Symbol	Description	Symbol	Description
	EXISTING FIRE HYDRANT	SS	PROPOSED GRAVITY SAN SEWER SERVICE
	EXISTING WATER VALVE	WS	PROPOSED DOMESTIC WATER SERVICE
S	EXISTING SANITARY SEWER MANHOLE	FIRE	PROPOSED FIRE SERVICE
SD	EXISTING STORM DRAIN FACILITIES	UTIL	PROPOSED UTILITY CONDUIT
MH	EXISTING FIBER/TELEPHONE FACILITIES	IRRIG	PROPOSED IRRIGATION SLEEVE
E	EXISTING ELECTRICAL FACILITIES		EXISTING BUILDING
G	EXISTING GAS FACILITIES		EXISTING BUILDING ROOF
W	EXISTING WELL		EXISTING CONCRETE
	EXISTING TRAFFIC SIGN		EXISTING CURB FACE
	EXISTING CMP CULVERT		EXISTING CURB FLOWLINE
	EXISTING RCP CULVERT		EXISTING TOP BACK OF CURB
SD	EXISTING STORM SEWER MAIN		EXISTING PARKING STRIPE
S	EXISTING SAN SEWER MAIN		EXISTING ASPHALT
SS	EXISTING SAN SEWER SERVICE		EXISTING GRAVEL EDGE
FM	EXISTING SAN SEWER FORCE MAIN		EXISTING SIDEWALK
F	EXISTING FIBER OPTIC		PROPOSED BUILDING
BP	EXISTING UNDERGROUND POWER		PROPOSED CONCRETE
BT	EXISTING UNDERGROUND TELEPHONE		PROPOSED CURB FLOWLINE
C	EXISTING UNDERGROUND CABLE		PROPOSED TOP BACK OF CURB
G	EXISTING GAS LINE		PROPOSED PARKING STRIPE
OHP	EXISTING OVERHEAD POWER		PROPOSED ASPHALT
OHT	EXISTING OVERHEAD TELEPHONE		PROPOSED GRAVEL EDGE
PETRO	EXISTING PETROLEUM LINE		PROPOSED SIDEWALK
W	EXISTING WATER MAIN		GRAPHICAL SIDEWALK JOINT
WS	EXISTING WATER SERVICE		PROPOSED ASPHALT GRADE BREAK
	PROPOSED SAN SEWER CLEANOUTS	38XX	EXISTING MAJOR CONTOUR
	PROPOSED STORM DRAIN INLET	38XX.00	EXISTING MINOR CONTOUR
	PROPOSED STORM DRAIN MANHOLE		PROPOSED MAJOR CONTOUR
SD	PROPOSED STORM DRAIN	38XX.00	PROPOSED MINOR CONTOUR
RD	PROPOSED ROOF DRAIN		

DETAIL AND SECTION DESIGNATION



811
Know what's **below.**
Call before you dig.

ABBREVIATIONS

Abbreviation	Meaning
ABDN	ABANDON
AC	ASPHALTIC CONCRETE, ALUMINUM CAP
ADA	AMERICANS WITH DISABILITIES ACT
ADDL	ADDITIONAL
ADJ	ADJACENT, ADJUST
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECTURE, ARCHITECTURAL
ARCP	ARCHED REINFORCED CONCRETE PIPE
ASPH	ASPHALT
AVG	AVERAGE
BC	BUILDING CORNER
BFF	BELOW FINISHED FLOOR
BH	BOREHOLE
BLDG	BUILDING
BLK	BLOCK
BM	BENCHMARK
BRG	BEARING
BW	BOTTOM OF WALL
CHK	CHECK
CI	CAST IRON
CIPC	CAST IN-PLACE CONCRETE
CIRC	CIRCULAR
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNITS
CO	CLEANOUT
COB	CITY OF BOZEMAN
COMB	COMBINATION
CONC	CONCRETE
CONN	CONNECT, CONNECTION
COORD	COORDINATE
CP	CONTROL POINT
CPP	CORRUGATED PLASTIC PIPE
CSP	CORRUGATED STEEL PIPE
CTR	CENTER
CU	CUBIC
CU FT, CF	CUBIC FEET
CU IN	CUBIC INCH
CULV	CULVERT
CU YD	CUBIC YARD
D & L	D&L FOUNDRY AND SUPPLY
DBL	DOUBLE
DI	DUCTILE IRON, DRAIN INLET
DIA, Ø	DIAMETER
DIM	DIMENSION
DIR	DIRECTION
DTL	DETAIL
DWG	DRAWING
E	EAST
EA	EACH, EDGE OF ASPHALT
EC	EDGE OF CONCRETE
EG	EDGE OF GRAVEL, EXISTING GROUND
EJIW	EAST JORDAN IRON WORKS
EL, ELEV	ELEVATION
ELEC	ELECTRIC, ELECTRICAL
ENGR	ENGINEER
EP	EDGE OF PAVEMENT
EXC	EXCAVATE
EX	EXISTING
EXT	EXTERIOR
FD	FLOOR DRAIN
FDN	FOUNDATION
FES	FLARED END SECTION
FET	FLARED END TERMINAL
FF	FINISHED FLOOR
FG	FINISHED GRADE
FHYD	FIRE HYDRANT
FL	FLOWLINE
FLR	FLOOR
FT	FOOT, FEET
FTG	FOOTING
GA	GAGE, GAUGE
GAL	GALLON
GB	GRADE BREAK
GFA	GROSS FLOOR AREA
GND	GROUND
GSP	GALVANIZED STEEL PIPE
GVL	GRAVEL
HC	HANDICAP
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HP	HIGH POINT
HT	HEIGHT
HWY	HIGHWAY
HYD	HYDRANT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
INSUL	INSULATE
INT	INTERIOR
INV	INVERT
LAT	LATITUDE
LF	LINEAR FEET
LONG	LONGITUDE, LONGITUDINAL
LT	LEFT
LVL	LEVEL
MATL	MATERIAL
MAX	MAXIMUM
MDT	MONTANA DEPARTMENT OF TRANSPORTATION
MECH	MECHANICAL
MFD	MANUFACTURED
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
N	NORTH
NE	NORTHEAST
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OD	OUTSIDE DIAMETER
OHP	OVERHEAD POWER
PC	POINT OF CURVE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PRELIM	PRELIMINARY
PROP	PROPERTY
PT	POINT, POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
RACET	ROAD APPROACH CULVERT END TERMINAL
R, RAD	RADIUS
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD, ROOF DRAIN
REF	REFERENCE
REQD	REQUIRED
RT	RIGHT
R/W	RIGHT-OF-WAY
S	SOUTH
SAN	SANITARY
SCH	SCHEDULE
SD	STORM DRAIN
SE	SOUTHEAST
SEC	SECTION
SPEC	SPECIFICATION
SQ	SQUARE
SQ FT, SF	SQUARE FOOT
SQ IN	SQUARE INCH
STA	STATION
SS	SANITARY SEWER
STD	STANDARD
SVC	SERVICE
SW	SIDEWALK, SOUTHWEST
TB	THRUST BLOCK
TBC	TOP BACK OF CURB
TEMP	TEMPORARY, TEMPERATURE
TOC	TOP OF CONCRETE
TRANS	TRANSITION
TW	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
UTIL	UTILITY
VERT	VERTICAL
VOL	VOLUME
VPD	VEHICLES PER DAY
W	WEST
W/	WITH
W/O	WITHOUT
WL	WATERLINE
TR	WATER
WSEL	WATER SURFACE ELEVATION
WV	WATER VALVE
XFMR	TRANSFORMER
YD	YARD

NOTE:
FOR ABBREVIATIONS NOT LISTED, CONTACT THE ENGINEER.

VICINITY MAP
NOT TO SCALE

MONTANA CELINE SAUTER 45499 LICENSED PROFESSIONAL ENGINEER 10/22/2025

Morrison Maierle
engineers · surveyors · planners · scientists
1055 Mount Ave. Missoula, MT 59801
406.542.8880
www.m-m.net

HELENA FIRE STATION #3
HELENA, MT 59602

SHIVEHATTERY
ARCHITECTURE + ENGINEERING

DOWLING ARCHITECTS
734 N. Last Chance Gulch | Helena, MT 59601 | 406.457.5470
www.dao-mt.com

GENERAL NOTES

PROJECT #: 25-668

ISSUE DATES:

Addendum 1	11/5/2025

DRAWN BY: JZ

100% CONSTRUCTION DOCUMENTS

C1-0

10.22.25

P:\2929-DOWLING_STUDIO_ARCH\1110-00_HELENA FIRE STATION #3 PH 1\ACAD\CIVIL\SHEETS\CIVIL
10/16/2025 9:16:07 AM

PURPOSE OF SURVEY: DESIGN SURVEY FOR PROPOSED FIRE STATION IMPROVEMENTS

DATE OF SURVEY: MARCH–APRIL 2025

SURVEY AREA: SOUTHEAST PORTION OF TRACT 1 OF COS#3137037, BEING THE CITY OF HELENA PUBLIC WORKS YARD, ALONG WITH THE KELLEHER LANE RIGHT–OF–WAY, AND PORTIONS OF LOT 15 OF BURNHAM RANCH SUBDIVISION, PHASE 1.

OWNERS OF RECORD: CITY OF HELENA

SURVEY COMMISSIONED BY: DOWLING SANDHOLM ARCHITECTS

UTILITIES: INFORMATION OBTAINED FROM CITY OF HELENA GIS AND HAS BEEN COMBINED WITH OBSERVED EVIDENCE AND MARKS PROVIDED BY MT ONE CALL TO DEVELOP A VIEW OF UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND UTILITIES CANNOT BE ACCURATELY, COMPLETELY, OR RELIABLY DEPICTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY.

A HIGH–PRESSURE NATURAL GAS MAIN EXISTS IN A 40' EASEMENT CROSSING THE PROPERTY. CONTACT NORTHWEST ENERGY DAMAGE PREVENTION REPRESENTATIVE RACHEL D'AMICO (406–497–2215) FOR DESIGN COORDINATION AND JOE CARMODY (406–422–3276) WHEN WORKING WITHIN 25' OF THE LOCATED UTILITY.

BOUNDARY & EASEMENTS: BOUNDARIES OF PROPERTIES IN THE SURVEY AREA SHOWN ARE ESTABLISHED FROM FIELD–LOCATED MONUMENTS OF RECORD. ADJACENT PROPERTIES MAY BE SHOWN BASED CALCULATIONS FROM RECORD DIMENSIONS. A TITLE COMMITMENT WAS NOT PROVIDED FOR THIS SURVEY, THUS NOT ALL EASEMENTS OR OTHER ENCUMBRANCES ON TITLE MAY BE SHOWN.

BASIS OF BEARINGS

CITY OF HELENA LDP
GEODETIC NORTH OBTAINED BY GPS OBSERVATION
DATUM: NAD83(2011)(EPOCH 2010.00)
PROJECTION: TRANSVERSE MERCATOR
CENTRAL MERIDIAN: W 111°57'00" (–111.95°)
PROJECT ORIGIN LATITUDE: N 46°30'00" (46.5°)
SCALE FACTOR AT CENTRAL MERIDIAN: 1.000191
FALSE NORTHING: 1000,000.00 ift (30,480m)
FALSE EASTING: 200,000.00 ift (60,960m)

Control Point Table

Point #	Northing	Easting	Elevation	Raw Description
50	143276.8440	187635.7660	3800.272	1.5" RPC "M-M CP"
51	142803.6060	187105.1070	3808.481	1.5" RPC "M-M CP"
52	143165.5350	187172.0710	3804.467	1.5" RPC "M-M CP"

LEGEND

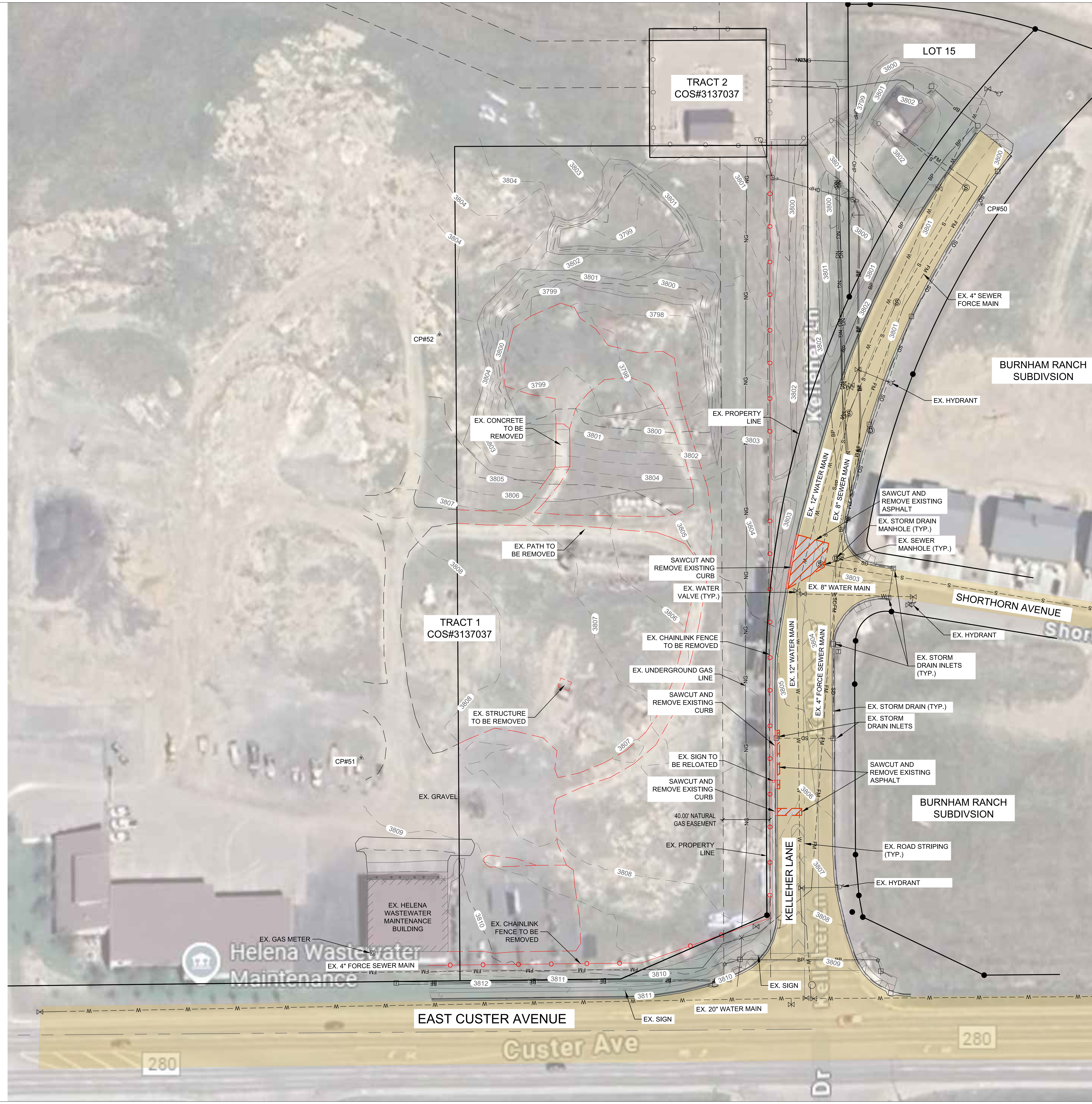
CONTOURS (1 FOOT INTERVAL)
CONTOUR DEPRESSION
EXISTING BUILDING
SUBJECT PARCEL BOUNDARY
EXISTING EASEMENT, AS NOTED
FOUND SURVEY MONUMENT
EXISTING CURB
EXISTING FENCE
EXISTING CENTERLINE OF ROAD
SD EXISTING STORM DRAIN
W EXISTING WATER MAIN
S EXISTING SANITARY SEWER
BP EXISTING BURIED POWER
NG EXISTING NATURAL GAS
BT EXISTING BURIED COMMUNICATION
EXISTING MANHOLE - STORM SEWER
EXISTING MANHOLE - SANITARY SEWER
EXISTING WATER VALVE
EXISTING CLEANOUT
EXISTING STORM INLET
EXISTING FIRE HYDRANT
EXISTING IRRIGATION CONTROL VALVE
EXISTING DELINEATOR POST
EXISTING POWER POLE
EXISTING GUY ANCHOR
EXISTING TELEPHONE PEDESTAL
EXISTING SIGN POST
EXISTING DECIDUOUS TREE
EXISTING LIGHT POLE

LEGEND

EXISTING ASPHALT
EXISTING MAJOR CONTOUR
EXISTING MINOR CONTOUR

N

40 20 0 40 80
SCALE IN FEET



HELENA FIRE STATION #3

HELENA, MT 59602

Morrison Maierle
engineers · surveyors · planners · scientists
1055 Mount Ave.
Missoula, MT 59801
406.542.8880
www.m-m.net

CELINE M. SAUCIER No. 49499 LICENSED PROFESSIONAL ENGINEER MONTANA
10/22/2025

SHIVEHATTERY
ARCHITECTURE + ENGINEERING

DOWLING ARCHITECTS
734 N. Last Chance Gulch | Helena, MT 59601 | 406.457.5470
www.dsa-mt.com

EXISTING SITE FEATURES AND TOPOGRAPHY

100% CONSTRUCTION DOCUMENTS

PROJECT #: 25-668

ISSUE DATES:

Addendum 1	11/5/2025

DRAWN BY: JZ

C2-0

10.22.25

P:\2929-DOWLING_STUDIO_ARCH\110-00_HELENA FIRE STATION #3 PH 1\ACAD\CIVIL\SHEETS\CIVIL

10/16/2025 9:16:07 AM

LEGEND	
	ASPHALT PAVEMENT (LIGHT DUTY - 1/C5.0)
	ASPHALT PAVEMENT (HEAVY DUTY - 2/C5.0)
	PROPOSED CONCRETE (LIGHT DUTY - 3/C5.0)
	PROPOSED CONCRETE (HEAVY DUTY - 4/C5.0)
	PROPOSED GRAVEL
	EXISTING ASPHALT

GENERAL NOTES:

1. ALL IMPROVEMENTS ON THIS PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH THE MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS, 7TH EDITION DATED APRIL 2021 (MPWSS); THE CITY OF HELENA DESIGN STANDARDS; AND THE PROJECT SPECIFICATIONS.
2. THE CONTRACTOR SHALL RESTORE ALL ROADWAY SURFACES TO EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO EXCAVATION AS DETERMINED BY AGENCY, OWNER, AND/OR ENGINEER.
3. ASPHALT, CONCRETE CURB, AND SIDEWALK SHALL BE SAW CUT OR NEAT CUT AS APPROVED BY AGENCY AND/OR ENGINEER.
4. ALL TEXT AND FEATURES SHOWN SHADED ARE EXISTING. SEE SHEET C2-0 FOR MORE COMPLETE DEPICTION OF EXISTING IMPROVEMENTS.
5. PAVEMENT MARKINGS WITHIN THE SITE SHALL BE FOUR INCH (4") YELLOW PAINTED MARKINGS WHERE SHOWN ON THE SITE PLAN IN ACCORDANCE WITH SECTION 02851 OF THE MPWSS UNLESS OTHERWISE INDICATED OR DIRECTED BY THE ENGINEER OR OWNER.
6. BASE COURSE AND SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698.
7. CONSTRUCTION JOINTS FOR CURB SHALL BE PLACED AT TEN FOOT (10') INTERVALS ALONG TANGENT CURB SECTIONS AND A MINIMUM OF 5.25' WITHIN THE RADIUS OF ANY CURVES, HAVING A MINIMUM DEPTH OF THREE-QUARTER INCHES (3/4") AND WIDTH OF ONE-EIGHTH INCH (1/8").
8. ONE-HALF INCH (1/2") EXPANSION JOINT MATERIAL SHALL BE PLACED AT ALL PC'S, PT'S, CURB RETURNS, AND AT NOT MORE THAN 300' INTERVALS. THE EXPANSION JOINT MATERIAL SHALL EXTEND THROUGH THE FULL DEPTH OF CURB AND GUTTER.
9. NO CURB AND GUTTER SHALL BE PLACED WITHOUT A FINAL FORM INSPECTION BY THE OWNER, THEIR AUTHORIZED REPRESENTATIVE, AND/OR THE CITY OF HELENA (AS REQUIRED).
10. CONCRETE SHALL BE CLASS M-4000 UNLESS OTHERWISE SPECIFIED.
11. EXTEND CRUSHED BASE COURSE BEYOND THE BACK OF CURB A MINIMUM DISTANCE OF NINE INCHES (9"). MINIMUM THICKNESS OF CRUSHED BASE COURSE BENEATH CURB AND GUTTER SHALL BE SIX INCHES (6").

ENLARGED SITE & UTILITY PLAN - C301
ENLARGED GRADING PLAN - C401

ENLARGED SITE & UTILITY PLAN - C302
ENLARGED GRADING PLAN - C402

PROPOSED FIRE STATION

KELLEHER LANE

SHORTHORN AVENUE

N

40 20 0 40 80
SCALE IN FEET

OVERALL SITE PLAN

MONTANA
CELINE SAUCIER
14499
REGISTERED PROFESSIONAL ENGINEER
STATE OF MONTANA

1055 Mount Ave.
Missoula, MT 59801
406.542.8880
www.m-m.net

Morrison Maierle
engineers - surveyors - planners - scientists

SHIVEHATTERY
ARCHITECTURE + ENGINEERING

DOWLING ARCHITECTS
724 N. Last Chance Gulch | Helena, MT 59601 | 406.457.4370
www.dowlingarchitects.com

HELENA FIRE STATION #3
HELENA, MT 59602

100% CONSTRUCTION DOCUMENTS

PROJECT #: 25-668

ISSUE DATES:

Addendum 1	11/5/2025

DRAWN BY: JZ

C3-0

10.22.25

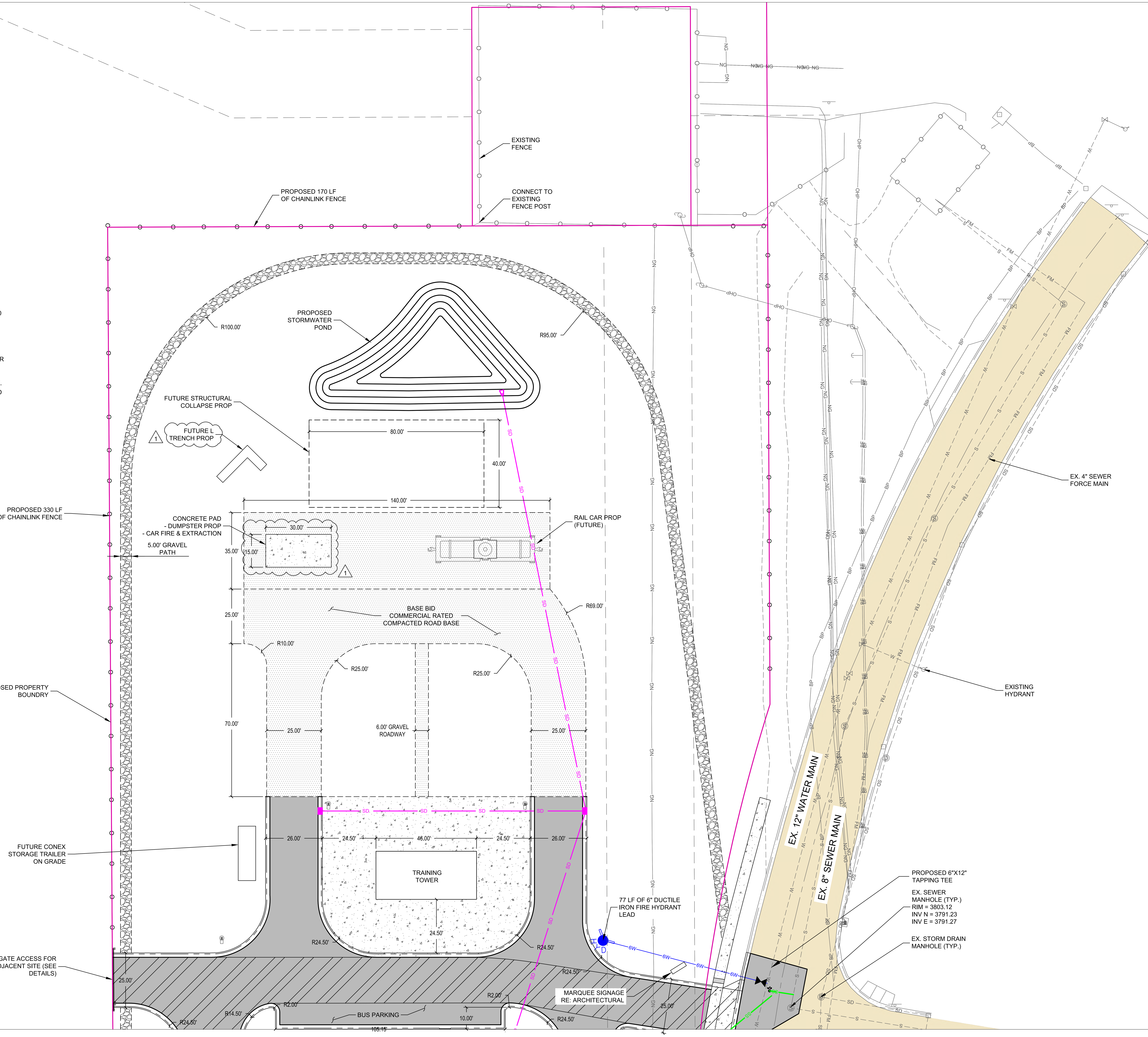
LEGEND

	ASPHALT PAVEMENT (LIGHT DUTY - 1/C5.0)
	ASPHALT PAVEMENT (HEAVY DUTY - 2/C5.0)
	PROPOSED CONCRETE (LIGHT DUTY - 3/C5.0)
	PROPOSED CONCRETE (HEAVY DUTY - 4/C5.0)
	PROPOSED GRAVEL (ROAD BASE - 5/C5.0)
	PROPOSED PATH - DECOMPOSED GRANITE SEE L0.0
	EXISTING ASPHALT

UTILITY NOTES

1. ALL IMPROVEMENTS ON THIS PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH THE MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS, 7TH EDITION DATED APRIL 2021 (MPWSS); THE CITY OF HELENA DESIGN STANDARDS; AND THE PROJECT SPECIFICATIONS.
2. THE CONTRACTOR SHALL RESTORE ALL ROADWAY SURFACES TO EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO EXCAVATION AS DETERMINED BY AGENCY, OWNER, AND/OR ENGINEER.
3. ASPHALT, CONCRETE CURB, AND SIDEWALK SHALL BE SAW CUT OR NEAT CUT AS APPROVED BY AGENCY AND/OR ENGINEER.
4. ALL TEXT AND FEATURES SHOWN SHADED ARE EXISTING. SEE SHEET C2-0 FOR MORE COMPLETE DEPICTION OF EXISTING IMPROVEMENTS.
5. THE LOCATION, DEPTH, AND SIZE OF THE EXISTING UTILITIES SHOWN ON THESE PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, DEPTH, AND SIZE OF THE UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING FACILITIES DUE TO FAILURE TO LOCATE OR PROPERLY PROVIDE PROTECTION WHEN LOCATION IS KNOWN.
6. ALL WATER VALVES OWNED AND OPERATED BY THE CITY OF HELENA SHALL BE OPERATED BY AUTHORIZED CITY OF HELENA PERSONNEL ONLY.
7. SEWER AND WATER CONNECTIONS SHALL BE PERFORMED BY A LICENSED PLUMBER.
8. GENERAL CONTRACTOR TO COORDINATE DRY UTILITY AND IRRIGATION REQUIREMENTS.
9. INSTALL INSULATION OVER ALL SEWER PIPE WITH LESS THAN 4 FEET OF COVER
10. INSTALL CLEANOUTS AS DETAILED ON THE PLAN AND AT MAXIMUM SPACING OF 100 FT.

(X) = NUMBER OF PARKING SPACES IN ROW OR GROUP



N

20 10 0 20 40
SCALE IN FEET

P:\2929-DOWLING_STUDIO_ARCH\110-00_HELENA FIRE STATION #3 PH 1\ACAD\CIVIL\SHEETS\CIVIL

10/16/2025 9:16:07 AM

MONTANA CELINE SAUCIER 45499 LICENSED PROFESSIONAL ENGINEER

Morrison Maierle
engineers · surveyors · planners · scientists
1055 Mount Ave. Missoula, MT 59801
406.542.8880
www.m-m.net

SHIVEHATTERY
ARCHITECTURE + ENGINEERING

DOWLING ARCHITECTS
734 N. Last Chance Gulch | Helena, MT 59601 | 406.457.5470 | www.dws-mt.com

HELENA FIRE STATION #3
HELENA, MT 59602

ENLARGED SITE AND UTILITY PLAN

100% CONSTRUCTION DOCUMENTS

PROJECT #: 25-668

ISSUE DATES:

Addendum 1	11/5/2025

DRAWN BY: JZ

C3-1

10.22.25

LEGEND

	ASPHALT PAVEMENT (LIGHT DUTY - 1/C5.0)
	ASPHALT PAVEMENT (HEAVY DUTY - 2/C5.0)
	PROPOSED CONCRETE (LIGHT DUTY - 3/C5.0)
	PROPOSED CONCRETE (HEAVY DUTY - 4/C5.0)
1	PROPOSED GRAVEL (ROAD BASE - 5/C5.0)
	PROPOSED PATH - DECOMPOSED GRANITE SEE L0.0
	EXISTING ASPHALT

UTILITY NOTES

1. ALL IMPROVEMENTS ON THIS PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH THE MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS, 7TH EDITION DATED APRIL 2021 (MPWSS); THE CITY OF HELENA DESIGN STANDARDS; AND THE PROJECT SPECIFICATIONS.
2. THE CONTRACTOR SHALL RESTORE ALL ROADWAY SURFACES TO EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO EXCAVATION AS DETERMINED BY AGENCY, OWNER, AND/OR ENGINEER.
3. ASPHALT, CONCRETE CURB, AND SIDEWALK SHALL BE SAW CUT OR NEAT CUT AS APPROVED BY AGENCY AND/OR ENGINEER.
4. ALL TEXT AND FEATURES SHOWN SHADED ARE EXISTING. SEE SHEET C2-0 FOR MORE COMPLETE DEPICTION OF EXISTING IMPROVEMENTS.
5. THE LOCATION, DEPTH, AND SIZE OF THE EXISTING UTILITIES SHOWN ON THESE PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, DEPTH, AND SIZE OF THE UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING FACILITIES DUE TO FAILURE TO LOCATE OR PROPERLY PROVIDE PROTECTION WHEN LOCATION IS KNOWN.
6. ALL WATER VALVES OWNED AND OPERATED BY THE CITY OF HELENA SHALL BE OPERATED BY AUTHORIZED CITY OF HELENA PERSONNEL ONLY.
7. SEWER AND WATER CONNECTIONS SHALL BE PERFORMED BY A LICENSED PLUMBER.
8. GENERAL CONTRACTOR TO COORDINATE DRY UTILITY AND IRRIGATION REQUIREMENTS.
9. INSTALL INSULATION OVER ALL SEWER PIPE WITH LESS THAN 4 FEET OF COVER
10. INSTALL CLEANOUTS AS DETAILED ON THE PLAN AND AT MAXIMUM SPACING OF 100 FT.

(X) = NUMBER OF PARKING SPACES IN ROW OR GROUP

N

20 10 0 20 40
SCALE IN FEET

GATE ACCESS FOR ADJACENT SITE (SEE DETAILS)
PROPOSED TRASH ENCLOSURE, SEE ARCHITECTURAL PLANS FOR ENCLOSURE AND SCREENING
PROPOSED PROPERTY BOUNDRY
PROPOSED 340 LF OF CHAINLINK FENCE
BUS PARKING
RETURN DRIVE
RESPONSE DRIVE
PROPOSED BIKE RACKS SEE LANDSCAPE PLANS
BACKUP GENERATOR STORAGE
DIESEL STORAGE
VAN ACCESSIBLE ADA SIGNS SEE C5-2
40.00' NATURAL GAS EASEMENT
PROPOSED HELENA FIRE STATION #3 BUILDING FFE = 3807.50
135 LF OF 2" DOMESTIC TYPE K WATER SERVICE 6.5' COVER SEE PLUMBING PLANS FOR BUILDING CONTINUATION
135 LF OF 4" DI C151 FIRE SERVICE 6.5' COVER SEE PLUMBING PLANS FOR BUILDING CONTINUATION
9.5 LF OF 4" SEWER SERVICE @ 2% MIN SLOPE INV: 3803.00' SEE PLUMBING PLANS FOR BUILDING CONTINUATION
1,000 SAND OIL SEPARATOR INV IN: 3,802.81 INV OUT: 3,802.56
CLEANOUT INV: 3791.51
CLEANOUT INV: 3792.46
CLEANOUT INV: 3795.58
CLEANOUT INV: 3798.50
CLEANOUT INV: 3801.41
4" TAP INTO 8" SEWER MAIN CONTRACTOR TO APPROXIMATELY INV: 3791.00 CONTRACTOR TO VERIFY INV ELEVATION
EX. 8" SEWER MAIN
EX. SEWER MANHOLE (TYP.) RIM = 3803.12 INV N = 3791.23 INV E = 3791.27
EX. STORM DRAIN MANHOLE (TYP.)
BOULEVARD DRIVEWAY APPROACH SEE COH STD DWG 5-5B
EX. 8" WATER MAIN
SHORTHORN AVENUE
324 LF OF 4" SEWER SERVICE @ 3.5\% MIN SLOPE
EX. 12" WATER MAIN
KELLEHER LANE
EX. STORM DRAIN (TYP.)
EX. STORM DRAIN INLETS
EX. 4" FORCE SEWER MAIN
PROPOSED 2"X8" TAPPING TEE CONTRACTOR TO VERIFY EXISTING ELEVATION
PROPOSED 4"X8" TAPPING TEE CONTRACTOR TO VERIFY EXISTING ELEVATION
EX. ROAD STRIPING (TYP.)
EX. PROPERTY LINE
EX. UNDERGROUND GAS LINE
EX. HYDRANT
MONUMENT/MEMORIAL HISTORIC BELL LOCATION
FIREWISE DEMONSTRATION GARDEN AREAS SEE LANDSCAPE PLANS
PROPOSED CONCRETE PAVERS SEE LANDSCAPE PLAN
EX. HELENA WASTEWATER MAINTENANCE BUILDING
CONNECT TO EXISTING FENCE POST
EX. GAS METER
EX. 4" FORCE SEWER MAIN
EX 5' SIDEWALK
EX. SIGN
EX. 20" WATER MAIN
EAST CUSTER AVENUE

MONTANA CELINE SAUCIER 24145 REGISTERED PROFESSIONAL ENGINEER
1055 Mount Ave. Missoula, MT 59801
406.542.8880
www.m-m.net
Morrison Maierle engineers - surveyors - planners - scientists
SHIVEHATTERY ARCHITECTURE + ENGINEERING
DOWLING ARCHITECTS 734 N. Last Chance Gulch | Helena, MT 59601 | 406.457.4070 www.dowlingarchitects.com

HELENA FIRE STATION #3
HELENA, MT 59602

ENLARGED SITE AND UTILITY PLAN

100% CONSTRUCTION DOCUMENTS

PROJECT #: 25-668

ISSUE DATES:

Addendum 1	11/5/2025

DRAWN BY: JZ

C3-2

10.22.25

GENERAL NOTES

1. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS, 7TH EDITION DATED APRIL 2021 (MPWSS), THE CITY OF HELENA DESIGN STANDARDS, LATEST EDITION, AND THE PROJECT SPECIFICATIONS.
2. LOCATIONS OF EXISTING OVERHEAD AND BURIED UTILITIES SHOWN ON THIS DRAWING ARE APPROXIMATE, AND SHALL BE VERIFIED AND MARKED UNDER THE DIRECTION OF THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES AND SHALL REPAIR ANY FACILITIES DAMAGED DURING PERFORMANCE OF THE WORK.
3. ALL STORM DRAIN INLETS AND MANHOLES SHALL BE THE SIZE INDICATED, AND CONSTRUCTED PER CITY OF HELENA STANDARD DETAILS: DETAIL # 4-1.

   MANHOLES INDICATING "RIM=" SHALL HAVE SOLID COVERS, THOSE INDICATING "GRATE=" SHALL HAVE SLOTTED (GRATED) COVERS, AND THOSE INDICATING "TBC=" SHALL HAVE CURB INLET TYPE SLOTTED COVERS.

   ALL PIPES LABELED "SD" (STORM DRAIN) ARE 12" DIA. OR LARGER AND SDR 35.
4. ALL ROOF/PATIO DRAINS SHALL CONNECT TO STORM DRAIN PIPING ON SITE AT 1.00% MIN. SLOPE. MINIMUM PIPE SIZE IS 6 INCH (5 FEET BEYOND BUILDING/PATIO WALL). USE SCH. 40 WITHIN 5 FEET OF BUILDING/PATIO WALL AND SDR 35 BEYOND. INSTALL CLEANOUTS AT 100-FOOT MAX. SPACING. COORDINATE PIPE LENGTHS AND LOCATIONS WITH THE ARCHITECTURAL PLANS AS REQUIRED TO COLLECT ALL DOWNSPOUTS. CONNECT TO STORM DRAIN PIPE WITH WYE FITTING.
5. SPOT ELEVATIONS ALONG CURB & GUTTER ARE TOP BACK OF CURB (TBC) ELEVATIONS FOR STANDARD (FULL HEIGHT) CURB, UNLESS INDICATED OTHERWISE. CURB FLARES, FLUSH CURBS AND TRANSITIONS MAY ALSO INCLUDE EDGE OF GUTTER (EG) ELEVATIONS. TO OBTAIN EG ELEVATION FOR STANDARD CURB SECTION, SUBTRACT 0.58' (SPILL CURB) OR 0.42' (CATCH CURB) FROM TBC ELEVATIONS ON PLAN.
7. LANDSCAPE SHALL BE GRADED TO DRAIN AWAY FROM ALL BUILDINGS. 6" OF BUILDING FOUNDATION REVEAL SHALL BE PROVIDED UNLESS NOTED OTHERWISE.
8. FOR CLARITY, SPOT ELEVATIONS HAVE BEEN TRUNCATED TO TWO DIGITS BEFORE THE DECIMAL. ADD BASE ELEVATION OF 3800.00 FEET TO REACH ACTUAL ELEVATIONS ON PROJECT DATUM.

LEGEND	
(blue dashed line)	CATCH CURB
(double line)	SPILL CURB
(hatched)	LAYDOWN CURB
T	TRANSITION CURB (T)
—>—	FLOW LINE
(red dashed line)	GRADE BREAK
XXXX	PROPOSED CONTOUR (WHOLE)
MEG	MATCH EXISTING GRADE

KEY NOTES

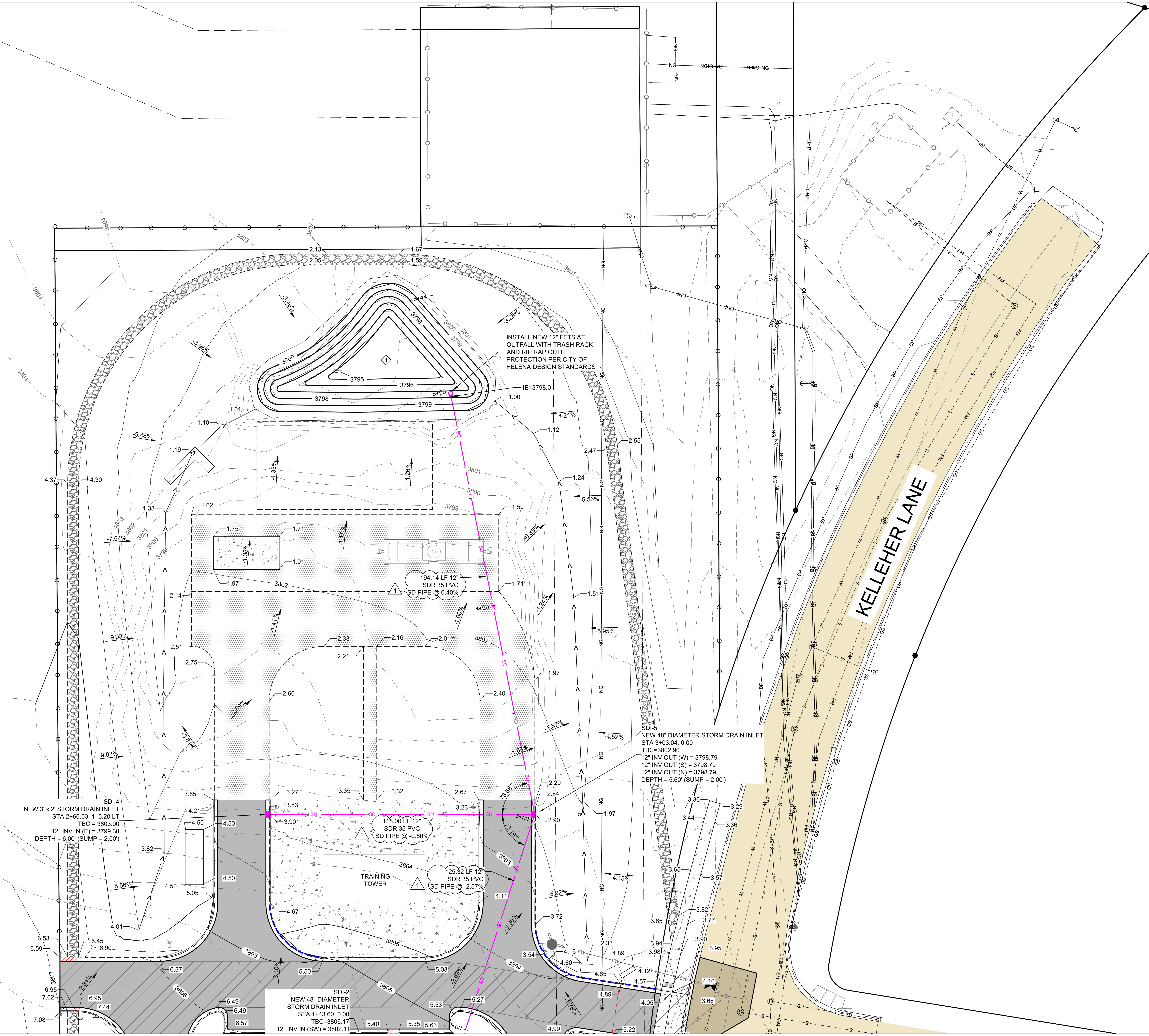
1. RETENTION POND P-1
   VOLUME = 10,827 CF
   POND BOTTOM = 3795.00
   POND TOP = 3801.00
   4:1 SIDE SLOPES

811 Know what's below. Call before you dig.

THIS SITE HAS BEEN DESIGNED TO BE ACCESSIBLE TO INDIVIDUALS WITH DISABILITIES IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT.

N

20 10 0 20 40
SCALE IN FEET



P:\2929-DOWLING_STUDIO_ARCH\110-00_HELENA FIRE STATION #3 PH 1\ACAD\CIVIL\SHEETS\CIVIL

10/16/2025 9:16:07 AM

DOWLING ARCHITECTS, P.C.

MONTANA CELINE SAUCIER 45499 PE LICENSED PROFESSIONAL ENGINEER 10/22/2025

Morrison Maierle
engineers · surveyors · planners · scientists
1055 Mount Ave. Missoula, MT 59801
406.542.8880
www.m-m.net

HELENA FIRE STATION #3
HELENA, MT 59602

SHIVE HATTERY ARCHITECTURE + ENGINEERING

DOWLING ARCHITECTS
734 N. Last Chance Gulch | Helena, MT 59601 | 406.457.5470 www.dsa-mt.com

ENLARGED GRADING PLAN

100% CONSTRUCTION DOCUMENTS

PROJECT #: 25-668

ISSUE DATES:	
Addendum 1	11/5/2025

DRAWN BY: JZ

C4-1

10.22.25

GENERAL NOTES

1. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS, 7TH EDITION DATED APRIL 2021 (MPWSS), THE CITY OF HELENA DESIGN STANDARDS, LATEST EDITION, AND THE PROJECT SPECIFICATIONS.
2. LOCATIONS OF EXISTING OVERHEAD AND BURIED UTILITIES SHOWN ON THIS DRAWING ARE APPROXIMATE, AND SHALL BE VERIFIED AND MARKED UNDER THE DIRECTION OF THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES AND SHALL REPAIR ANY FACILITIES DAMAGED DURING PERFORMANCE OF THE WORK.
3. ALL STORM DRAIN INLETS AND MANHOLES SHALL BE THE SIZE INDICATED, AND CONSTRUCTED PER CITY OF HELENA STANDARD DETAILS: DETAIL # 4-1.

   MANHOLES INDICATING "RIM=" SHALL HAVE SOLID COVERS, THOSE INDICATING "GRATE=" SHALL HAVE SLOTTED (GRATED) COVERS, AND THOSE INDICATING "TBC=" SHALL HAVE CURB INLET TYPE SLOTTED COVERS.

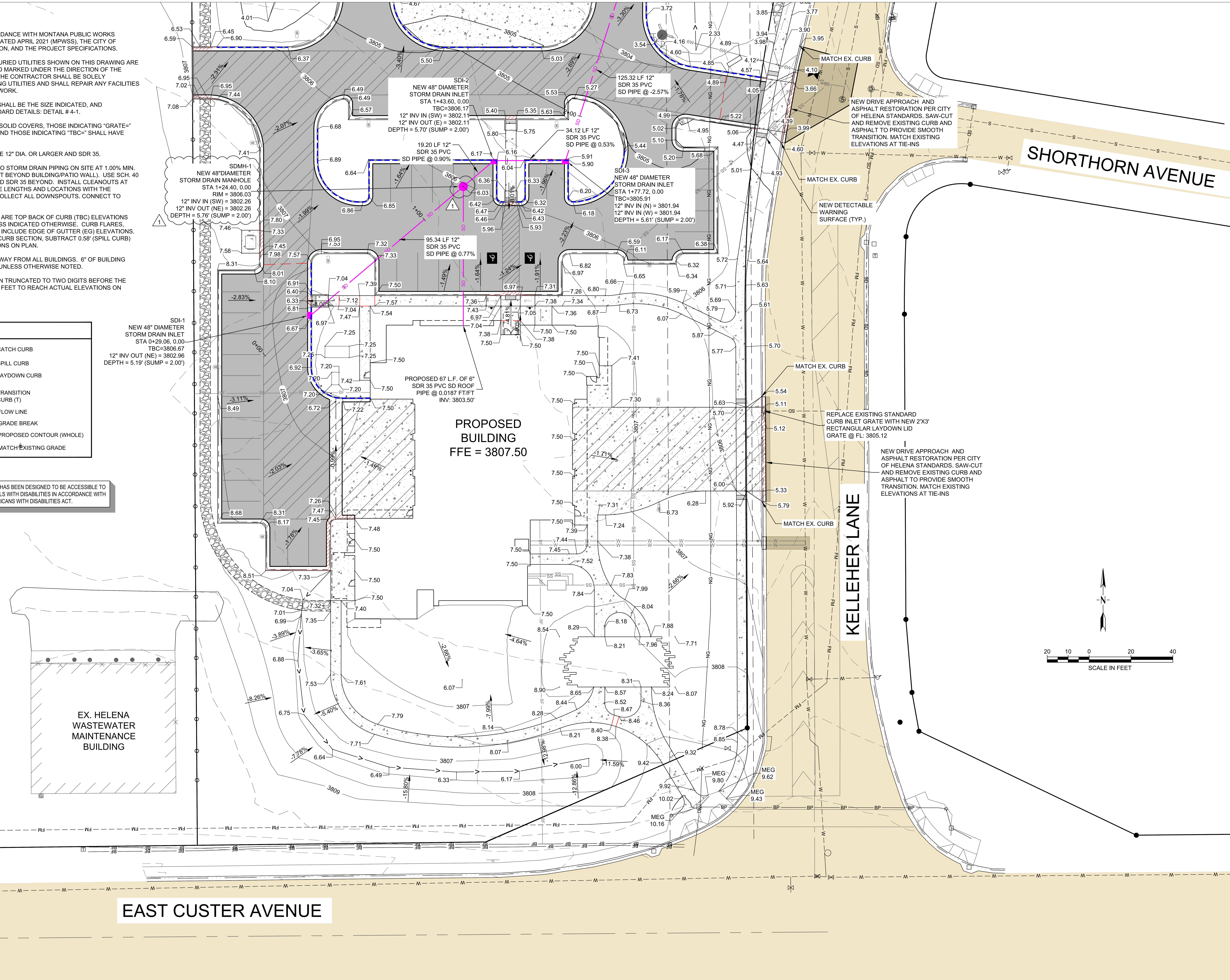
   ALL PIPES LABELED "SD" (STORM DRAIN) ARE 12" DIA. OR LARGER AND SDR 35.
4. ALL ROOF/PATIO DRAINS SHALL CONNECT TO STORM DRAIN PIPING ON SITE AT 1.00% MIN. SLOPE. MINIMUM PIPE SIZE IS 6 INCH (5 FEET BEYOND BUILDING/PATIO WALL). USE SCH. 40 WITHIN 5 FEET OF BUILDING/PATIO WALL AND SDR 35 BEYOND. INSTALL CLEANOUTS AT 100-FOOT MAX. SPACING. COORDINATE PIPE LENGTHS AND LOCATIONS WITH THE ARCHITECTURAL PLANS AS REQUIRED TO COLLECT ALL DOWNSPOUTS. CONNECT TO STORM DRAIN PIPE WITH WYE FITTING.
5. SPOT ELEVATIONS ALONG CURB & GUTTER ARE TOP BACK OF CURB (TBC) ELEVATIONS FOR STANDARD (FULL HEIGHT) CURB, UNLESS INDICATED OTHERWISE. CURB FLARES, FLUSH CURBS AND TRANSITIONS MAY ALSO INCLUDE EDGE OF GUTTER (EG) ELEVATIONS. TO OBTAIN EG ELEVATION FOR STANDARD CURB SECTION, SUBTRACT 0.58' (SPILL CURB) OR 0.42' (CATCH CURB) FROM TBC ELEVATIONS ON PLAN.
7. LANDSCAPE SHALL BE GRADED TO DRAIN AWAY FROM ALL BUILDINGS. 6" OF BUILDING FOUNDATION REVEAL SHALL BE PROVIDED UNLESS OTHERWISE NOTED.
8. FOR CLARITY, SPOT ELEVATIONS HAVE BEEN TRUNCATED TO TWO DIGITS BEFORE THE DECIMAL. ADD BASE ELEVATION OF 3800.00 FEET TO REACH ACTUAL ELEVATIONS ON PROJECT DATUM.

LEGEND

	CATCH CURB
	SPILL CURB
	LAYDOWN CURB
T	TRANSITION CURB (T)
	FLOW LINE
	GRADE BREAK
XXXX	PROPOSED CONTOUR (WHOLE)
MEG	MATCH EXISTING GRADE

THIS SITE HAS BEEN DESIGNED TO BE ACCESSIBLE TO INDIVIDUALS WITH DISABILITIES IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT.

811 Know what's below. Call before you dig.



P:\2929-DOWLING_STUDIO_ARCH\110-00_HELENA FIRE STATION #3 PH 1\ACAD\CIVIL\SHEETS\CIVIL

10/16/2025 9:16:07 AM

Morrison Maierle
engineers · surveyors · planners · scientists
1055 Mount Ave.
Missoula, MT 59801
406.542.8880
www.m-m.net

HELENA FIRE STATION #3

HELENA, MT 59602

SHIVEHATTERY ARCHITECTURE + ENGINEERING

DOWLING ARCHITECTS
734 N. Last Chance Gulch | Helena, MT 59601 | 406.457.5470
www.dow-mt.com

ENLARGED GRADING PLAN

100% CONSTRUCTION DOCUMENTS

PROJECT #: 25-668

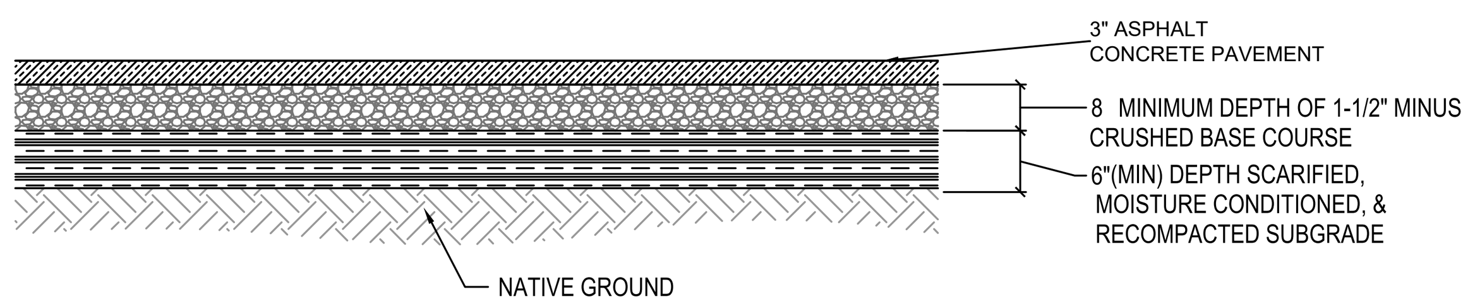
ISSUE DATES:

Addendum 1	11/5/2025

DRAWN BY: JZ

C4-2

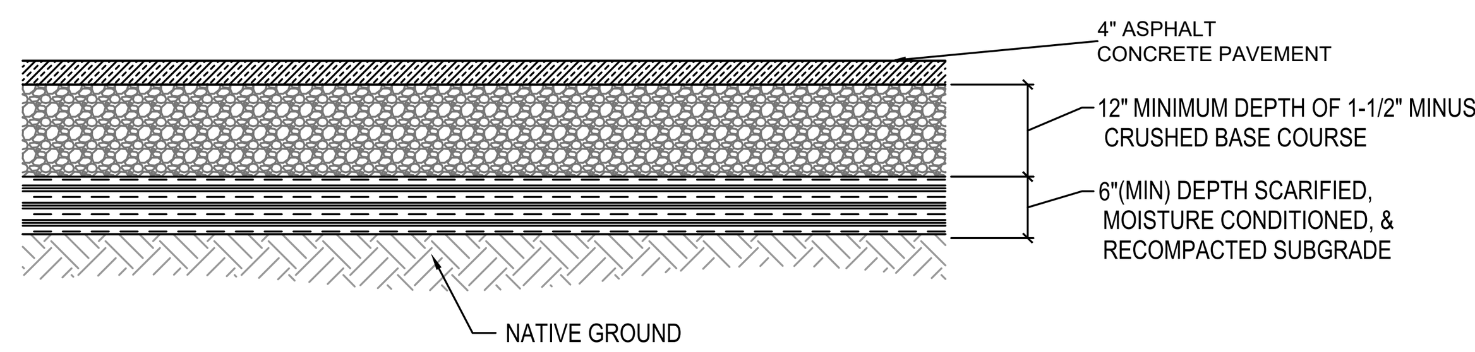
10.22.25



1. SECTION TO FOLLOW THE CITY OF HELENA FIRE STATION #3 GEOTECHNICAL REPORT AUGUST 7, 2025 - PIONEER TECHNICAL SERVICES
2. EXCAVATE AND REMOVE ANY TOPSOIL, EXISTING FILL, EXISTING ASPHALT, AND/OR DERIS FROM ASPHALT PAVEMENT FOOTPRINT. EXCAVATE TO DESIGN SUBGRADE ELEVATIONS.
3. MOISTURE CONDITION SUBGRADE SOIL TO PLUS OR MINUS 2% OF OPTIMUM MOISTURE CONTENT AND COMPACT THE EXCAVATION SURFACE TO A STANDARD RELATIVE COMPACTION (ASTM D698) OF AT LEAST 95%
4. PROVIDE BASE COURSE MEETING GRADATION REQUIREMENTS LISTED IN TABLE 5 OF THE REPORT. PLACE AND COMPACT BASE COURSE IN 8-INCH (MAXIMUM) LOOSE LIFTS AND COMPACT EACH LIFT TO A STANDARD RELATIVE COMPACTION OF AT LEAST 95%.
5. PROVIDE ASPHALT PLANT MIX WITH BINDER MATERIAL MEETING PG 58-28 GRADE AND AGGREGATES MEETING MPW TYPE B GRADING REQUIREMENTS
6. COMPACT ASPHALT TO AT LEAST 93% OF ITS RICE DENSITY (AASHTO T209)
7. THE FINISHED SURFACE MUST BE FREE OF RUTS, DEPRESSIONS, OR OTHER SURFACE DEFECTS EXCEEDING ONE-QUARTER INCH (1/4") AS MEASURED WITH A TEN FOOT (10') STRAIGHT EDGE PARALLELING THE FINISHED SURFACE. MAKE CORRECTIONS BY SCARIFYING AND RELAYING THE MIXTURE AT CONTRACTOR EXPENSE.

1 PAVEMENT DETAIL - LIGHT DUTY

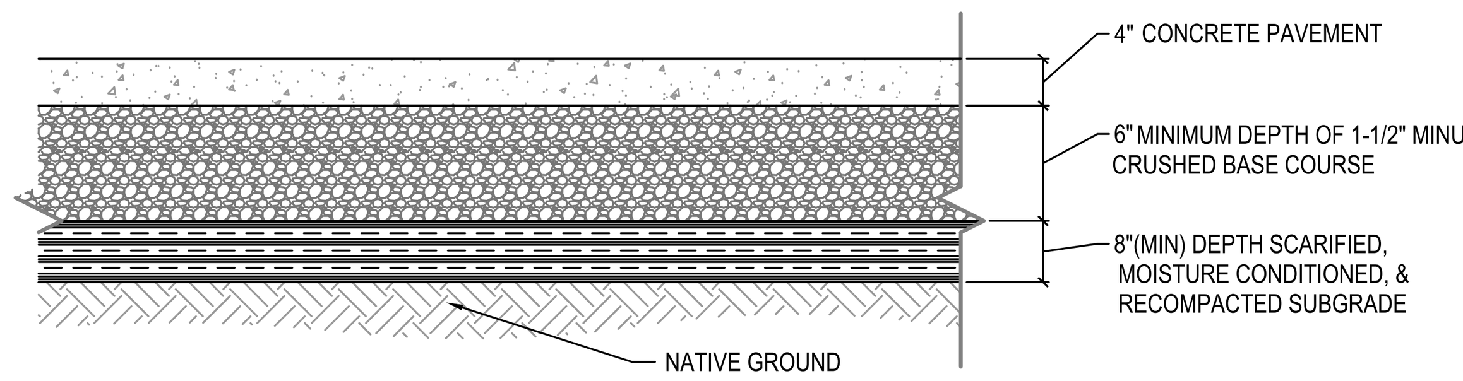
NOT TO SCALE



1. SECTION TO FOLLOW THE CITY OF HELENA FIRE STATION #3 GEOTECHNICAL REPORT AUGUST 7, 2025 - PIONEER TECHNICAL SERVICES
2. EXCAVATE AND REMOVE ANY TOPSOIL, EXISTING FILL, EXISTING ASPHALT, AND/OR DERIS FROM ASPHALT PAVEMENT FOOTPRINT. EXCAVATE TO DESIGN SUBGRADE ELEVATIONS.
3. MOISTURE CONDITION SUBGRADE SOIL TO PLUS OR MINUS 2% OF OPTIMUM MOISTURE CONTENT AND COMPACT THE EXCAVATION SURFACE TO A STANDARD RELATIVE COMPACTION (ASTM D698) OF AT LEAST 95%
4. PROVIDE BASE COURSE MEETING GRADATION REQUIREMENTS LISTED IN TABLE 5 OF THE REPORT. PLACE AND COMPACT BASE COURSE IN 8-INCH (MAXIMUM) LOOSE LIFTS AND COMPACT EACH LIFT TO A STANDARD RELATIVE COMPACTION OF AT LEAST 95%.
5. PROVIDE ASPHALT PLANT MIX WITH BINDER MATERIAL MEETING PG 58-28 GRADE AND AGGREGATES MEETING MPW TYPE B GRADING REQUIREMENTS
6. COMPACT ASPHALT TO AT LEAST 93% OF ITS RICE DENSITY (AASHTO T209)
7. THE FINISHED SURFACE MUST BE FREE OF RUTS, DEPRESSIONS, OR OTHER SURFACE DEFECTS EXCEEDING ONE-QUARTER INCH (1/4") AS MEASURED WITH A TEN FOOT (10') STRAIGHT EDGE PARALLELING THE FINISHED SURFACE. MAKE CORRECTIONS BY SCARIFYING AND RELAYING THE MIXTURE AT CONTRACTOR EXPENSE.

2 PAVEMENT DETAIL - HEAVY DUTY

NOT TO SCALE

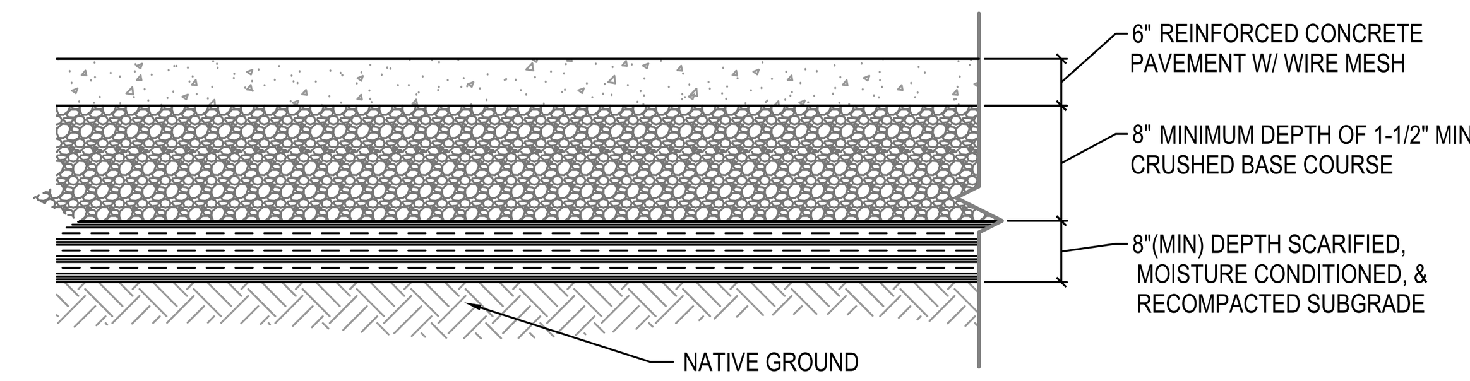


NOTES:

1. SECTION TO FOLLOW THE CITY OF HELENA FIRE STATION #3 GEOTECHNICAL REPORT AUGUST 7, 2025 - PIONEER TECHNICAL SERVICES
2. EXCAVATE TO DESIGN SUBGRADE. 6 INCHES OF BASE COURSE IS RECOMMENDED BELOW CONCRETE FLAT WORK AT PEDESTRIAN LOCATIONS.
3. MOISTURE CONDITION SUBGRADE SOIL TO PLUS OR MINUS 2% OF OPTIMUM MOISTURE CONTENT AND COMPACT THE EXCAVATION SURFACE TO A STANDARD RELATIVE COMPACTION (ASTM D698) OF AT LEAST 95%.
4. PLACE BASE COURSE MEETING THE GRADATION SPECIFICATIONS LISTED IN TABLE 5. PLACE IN 8-INCH (MAXIMUM) LOOSE LIFTS AND COMPACT EACH LIFT TO A STANDARD RELATIVE COMPACTION OF AT LEAST 95% PRIOR TO FORMING FOR THE CONCRETE FLATWORK.
5. EXTERIOR SLABS FOR PEDESTRIAN USE SHOULD BE AT LEAST 4 INCHES THICK.
6. TO HELP CONTROL SHRINKAGE CRACKING, PIONEER SUGGESTS CONCRETE SLABS BE REINFORCED WITH NUMBER 4 REBAR PLACED AT 18 INCHES ON-CENTER, EACH WAY OR WIRE MESH REINFORCEMENT (6X6 W2.9XW2.9 WWF). PROVIDE WIRE SUPPORTS AND SPACERS TO SUPPORT ALL REINFORCEMENT IN THE PROPER LOCATIONS AND TIE ADEQUATELY AT INTERSECTIONS TO HOLD REINFORCEMENT FIRMLY IN POSITION WHILE CONCRETE IS PLACED. WIRE SUPPORTS AND SPACERS THAT REST ON EXPOSED SURFACES SHOULD BE HOT DIPPED GALVANIZED OR PLASTIC COATED. CENTER THE REINFORCEMENT IN THE SLAB.
7. SPACE CONSTRUCTION AND CONTROL JOINTS A MAXIMUM OF 8 FEET ON-CENTER. ALL SAW CUT JOINTS WILL BE 'SOFT CUT' SAWN AS SOON AS ALLOWED BY THE SAW MANUFACTURER'S RECOMMENDATIONS.AFTER THE SLAB FINISHING HAS BEEN COMPLETED, CONSTRUCT JOINTS WITHIN 4 HOURS IN HOT WEATHER AND WITHIN 12 HOURS IN COLD WEATHER AFTER SLAB FINISH IS COMPLETED.
8. INSTALL EXPANSION JOINTS BETWEEN SLABS NO MORE THAN 40 FEET APART, AT THE SIDEWALK/DRIVEWAY AND SIDEWALK/DOORWAY ENTRY INTERFACES. AT EACH OF THESE LOCATIONS, PROVIDE EXPANSION JOINTS HAVING A MINIMUM ¾-INCH WIDTH. FILL ALL EXPANSION JOINTS WITH A FIELD-MOLDED SEALANT.

3 LIGHT DUTY CONCRETE

NOT TO SCALE

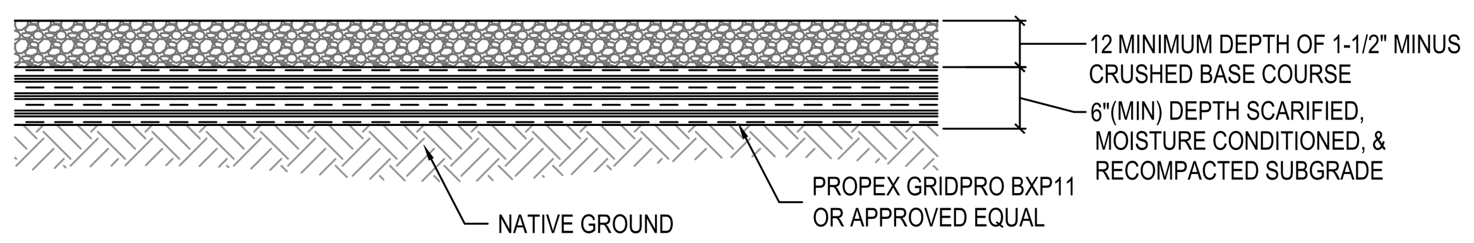


NOTES:

1. SECTION TO FOLLOW THE CITY OF HELENA FIRE STATION #3 GEOTECHNICAL REPORT AUGUST 7, 2025 - PIONEER TECHNICAL SERVICES
2. STRIP AND REMOVE TOPSOIL AND UNCONTROLLED FILL FROM PAVEMENT FOOTPRINT. EXCAVATE TO DESIGN ELEVATIONS
3. MOISTURE CONDITION SUBGRADE SOIL TO PLUS OR MINUS 2% OF OPTIMUM MOISTURE CONTENT AND COMPACT THE EXCAVATION SURFACE TO A STANDARD RELATIVE COMPACTION OF AT LEAST 95%.
4. PROVIDE BASE COURSE MEETING GRADATION REQUIREMENTS LISTED IN TABLE 5. PLACE AND COMPACT BASE COURSE IN 8-INCH (MAXIMUM) LOOSE LIFTS AND COMPACT EACH LIFT TO A STANDARD RELATIVE COMPACTION OF AT LEAST 95%.
5. PROVIDE CONCRETE WITH A MINIMUM 28-DAY FLEXURAL STRENGTH OF 500 POUNDS PER SQUARE INCH (PSI), COMPRESSIVE STRENGTH OF 4,000 PSI, AND AIR-ENTRAINED (4.5 PLUS OR MINUS 1.5%).
6. PROVIDE AND PLACE DISTRIBUTED STEEL REINFORCEMENT (REBAR). SPECIFICALLY PLACE NUMBER 4 REBAR AT 18 INCHES ON-CENTER, EACH WAY. PROVIDE SUPPORTS TO POSITION REBAR 2-INCHES FROM TOP OF SLAB AND TIE ADEQUATELY AT INTERSECTIONS TO HOLD REINFORCEMENT FIRMLY IN POSITION WHILE CONCRETE IS PLACED.
7. MAXIMUM JOINT (CONTRACTION AND CONSTRUCTION) SPACING OF 15 FEET. TO EXTENT PRACTICAL, JOINT PATTERNS SHOULD DIVIDE PAVEMENT INTO APPROXIMATE SQUARE PANELS. JOINT PATTERNS ACROSS LANES SHOULD BE CONTINUOUS.
8. PLACE ISOLATION JOINTS AT CONCRETE PAVEMENT INTERFACES WITH OTHER STRUCTURES/FIXED OBJECTS.
9. CONTRACTION JOINTS CAN BE CONSTRUCTED WITH TOOLING OR SAW CUTTING. SAW CUTTING SHOULD BE PERFORMED AS SOON AS ALLOWABLE PER SAW MANUFACTURE GUIDELINES. THE DEPTH OF THE JOINT SHOULD BE 1.5-INCHES (¼ SLAB DEPTH) FOR TRADITIONAL SAWS OR 1-INCH FOR EARLY-ENTRY SAWS. JOINTS SHOULD BE 1/8 TO ¼-INCH WIDE.
10. FILL AND SEAL JOINTS TO MINIMIZE SURFACE WATER INFILTRATION.

4 HEAVY DUTY CONCRETE - FIRE TRUCK ACCESS ROUTE/DRIVEWAY

NOT TO SCALE

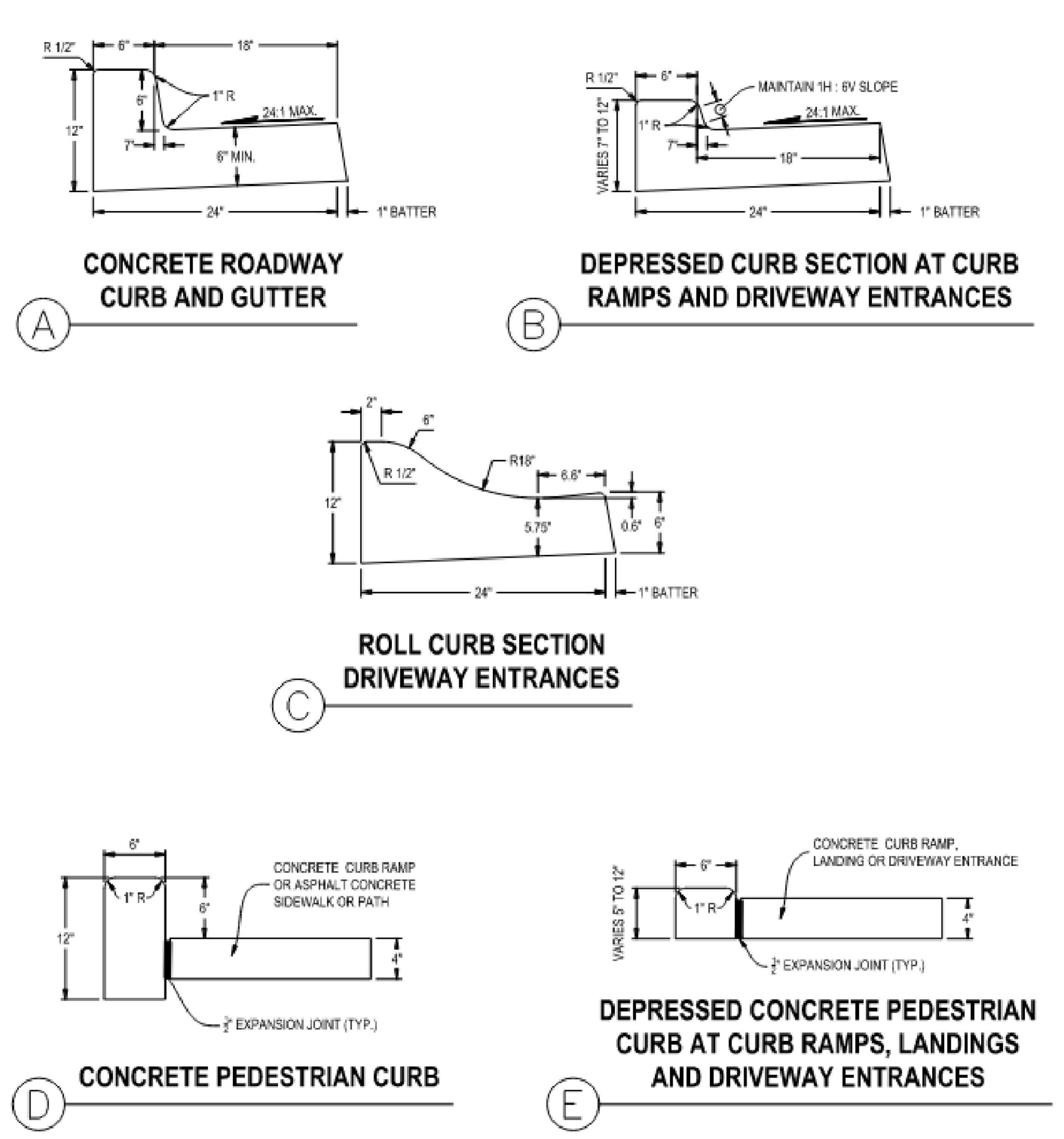


1. EXCAVATE AND REMOVE TOPSOIL/ UNCONTROLLED FILL AND DEBRIS
2. MOISTURE CONDITION SUBGRADE TO PLUS/MINUS 2% OPTIMUM MOISTURE CONTENT AND COMPACT TO MINIMUM STANDARD RELATIVE COMPACTION OF 95%
3. GEOGRID:
   - 3.1. PLACE GEOGRID ACROSS COMPACTED SUBGRADE. GEOGRID TO MEET OR EXCEED THE ENGINEERING PROPERTIES OF PROPEX GRIDPRO BXP11
4. PROVIDE MINIMUM 12" COMPACTED BASE COURSE
   - 4.1. BASE COURSE SHALL MEET MONTANA PUBLIC WORKS 1.5" MINUS CRUSHED BASE COURSE AS SPECIFIED IN GEOTECH REPORT
   - 4.2. PLACE BASE COURSE IN 8-INCH (MAX) LOOSE LIFT THICKNESS AND COMPACT EACH LFIT TO A MINIMUM STANDARD RELATIVE COMPACTION OF 95%
   - 4.3. USE ADDITIONAL BASE COURSE, IF NEEDED, TO MEET DESIGN GRADE BASED ON SUBGRADE PREPARATIO (REMOVAL OF TOPSOIL/FILL/DEBRIS)
5. ROUTINE MAINTENANCE AND GRADING WILL BE REQUIRED

1

5 GRAVEL ROAD BASE

NOT TO SCALE

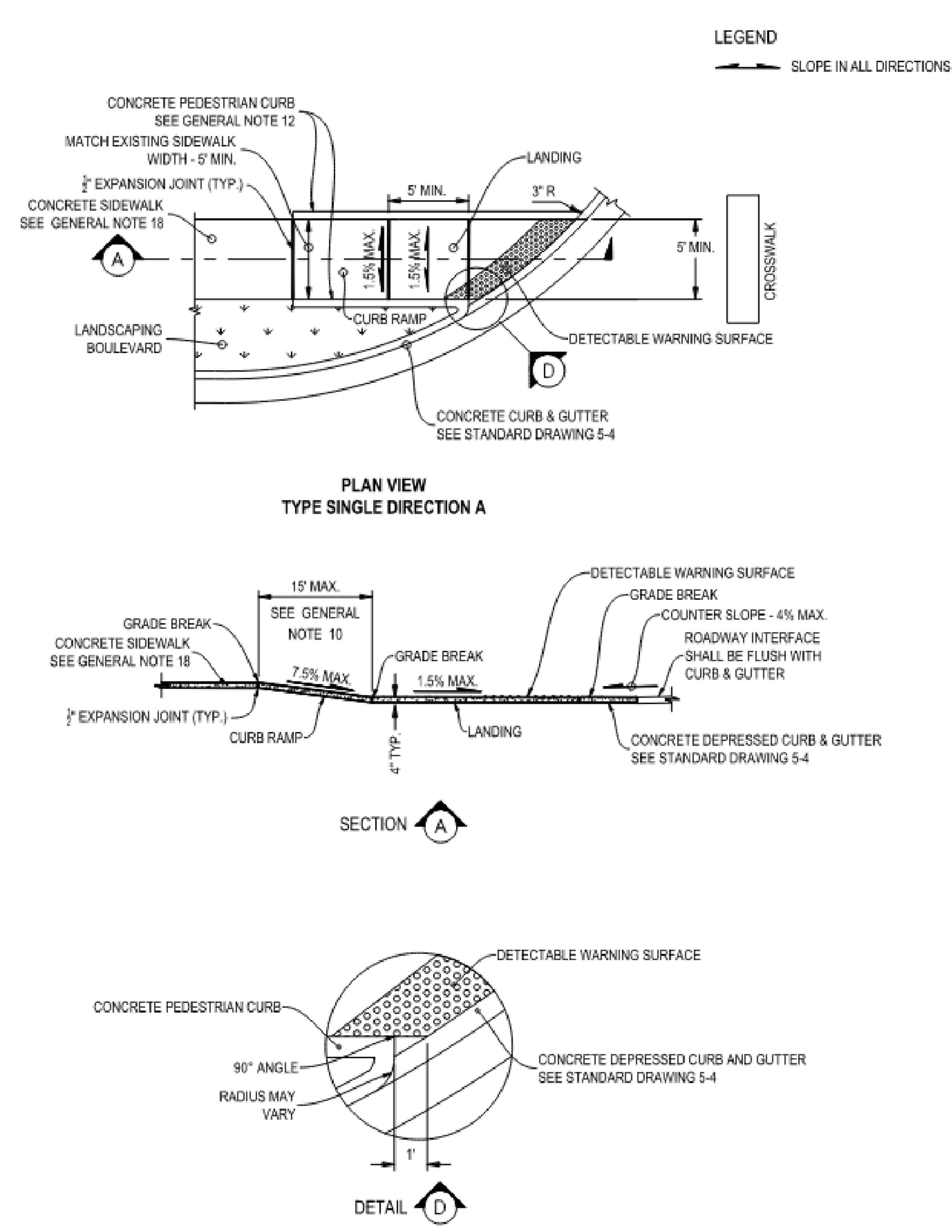


CITY OF HELENA ENGINEERING STANDARDS	CURB TYPES	STANDARD DRAWING: 5-4
REVISED: 1/28/22 / SCALE: NONE		

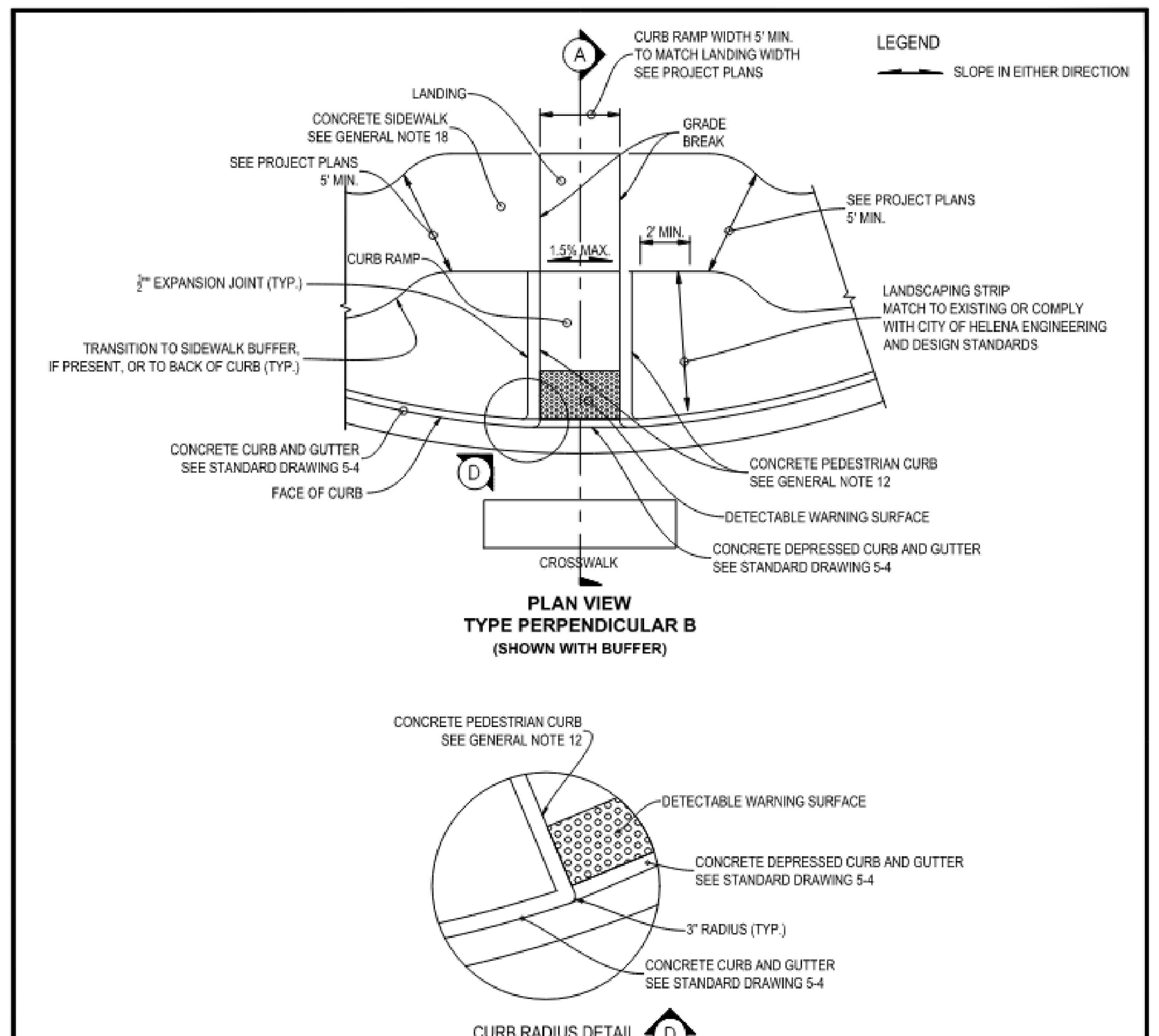
GENERAL NOTES

1. ANY DEVIATIONS FROM THE CITY OF HELENA ENGINEERING AND DESIGN STANDARDS REQUIRES A DEVIATION REQUEST TO BE SUBMITTED TO CITY STAFF FOR REVIEW PRIOR TO ANY CONSTRUCTION.
2. CURB RAMP LOCATION SHALL BE PLACED WITHIN THE WIDTH OF THE ASSOCIATED CROSSWALK, OR AS SHOWN IN THE PROJECT PLANS.
3. SIDEWALKS SHALL BE 6 INCHES THICK ACROSS DRIVEWAYS AND 4 INCHES THICK ELSEWHERE.
4. ALL SIDEWALKS SHALL BE A MINIMUM WIDTH OF 5 FEET.
5. INTEGRAL CURB AND GUTTER SHALL BE USED ON ALL ROADWAYS. A MAXIMUM SLOPE OF 24:1 FROM THE LIP OF GUTTER TO THE FLOWLINE OF THE GUTTER.
6. PAVEMENT MUST BE INSTALLED BETWEEN ¼" TO ½" ABOVE THE LIP.
7. ½" EXPANSION JOINTS SHALL CONFORM TO AASHTO M213.
8. WHERE "GRADE BREAK" IS CALLED OUT, THE ENTIRE LENGTH OF THE GRADE BREAK BETWEEN THE TWO ADJACENT SURFACE PLANES SHALL BE FLUSH.
9. DO NOT PLACE GRATINGS, JUNCTION BOXES, ACCESS COVERS OR OTHER APPURTENANCES IN FRONT OF THE CURB RAMP OR ON ANY PART OF THE CURB RAMP OR LANDING.
10. THE CURB RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS FEASIBLE.
11. CURB RAMPS, LANDINGS AND FLARES SHALL RECEIVE BROOM FINISH.
12. PEDESTRIAN CURB MAY BE OMITTED IF THE GROUND SURFACE AT THE BACK OF THE CURB RAMP AND/OR LANDING WILL BE AT THE SAME ELEVATION AS THE CURB RAMP OR LANDING AND THERE WILL BE NO MATERIAL TO RETAIN.
13. THE DETECTABLE WARNING SURFACE SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP (EXCLUSIVE OF FLARES) OR THE LANDING.
14. THE DETECTABLE WARNING SURFACE SHALL BE PLACED AT THE BACK OF CURB, AND NEED NOT FOLLOW THE RADIUS.
15. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED TO BE PERPENDICULAR TO THE GRADE BREAK AT THE BACK OF CURB.
16. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED TO BE PARALLEL TO THE DIRECTION OF TRAVEL.
17. IF CURB AND GUTTER ARE NOT PRESENT, SUCH AS A SHARED-USE PATH CONNECTION, THE DETECTABLE WARNING SURFACE SHALL BE PLACED AT THE PAVEMENT EDGE.
18. SEE STANDARD DRAWINGS FOR SIDEWALK AND CURB RAMP DETAILS.
19. WHEN THE GRADE BREAK BETWEEN THE CURB RAMP AND THE LANDING IS LESS THAN OR EQUAL TO 5 FT. FROM THE BACK OF CURB AT ALL POINTS, PLACE THE DETECTABLE WARNING SURFACE ON THE BOTTOM OF THE CURB RAMP.

CITY OF HELENA ENGINEERING STANDARDS	ADA CURB RAMP GENERAL NOTES	STANDARD DRAWING: 5-6
REVISED: 1/28/22 / SCALE: NONE		



CITY OF HELENA ENGINEERING STANDARDS	SINGLE DIRECTION CURB RAMP	STANDARD DRAWING: 5-7A
REVISED: 1/28/22 / SCALE: NONE		



NOTES

1. PROVIDE A SEPARATE CURB RAMP FOR EACH MARKED OR UNMARKED CROSSWALK. CURB RAMP LOCATION SHALL BE PLACED WITHIN THE WIDTH OF THE ASSOCIATED CROSSWALK OR AS SHOWN IN THE CONTRACT PLANS.
2. SEE THE CONTRACT PLANS FOR THE CURB DESIGN SPECIFIED. SEE STANDARD PLAN F-10.12 FOR CURB, CURB AND GUTTER, DEPRESSED CURB AND GUTTER, AND PEDESTRIAN CURB DETAILS.

CITY OF HELENA ENGINEERING STANDARDS	PERPENDICULAR CURB RAMP	STANDARD DRAWING: 5-8B
REVISED: 1/28/22 / SCALE: NONE		

MONTANA CELINE SAUCIER PROFESSIONAL ENGINEER LICENSED

Morrison Maierle
engineers · surveyors · planners · scientists
1055 Mount Ave. Missoula, MT 59801
406.542.8880
www.m-m.net

SHIVEHATTERY
ARCHITECTURE + ENGINEERING

DOWLING ARCHITECTS
734 N. Last Chance Gulch | Helena, MT 59601 | 406.457.5470

HELENA FIRE STATION #3
HELENA, MT 59602

SITE DETAILS

100% CONSTRUCTION DOCUMENTS

PROJECT #: 25-668

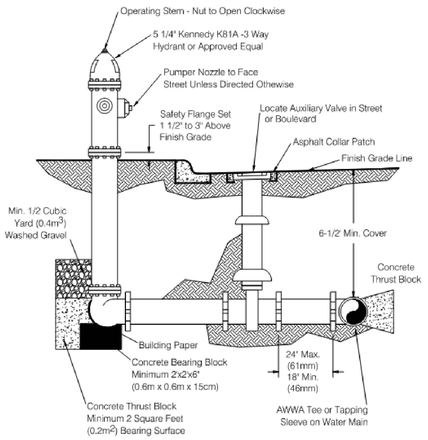
ISSUE DATES:

Addendum 1	11/5/2025

DRAWN BY: JZ

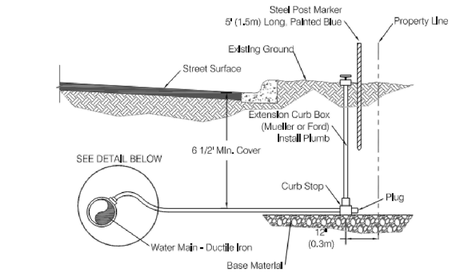
C5-0

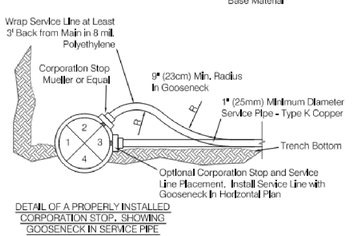
10.22.25



Notes:
1. Thrust blocking to be in conformance with MPW standard drawing 02660-1.
2. For bolted fittings, blocking shall not obstruct bolts.
3. Hydrant weep holes to remain unobstructed.
4. Thrust block shall bear horizontally against undisturbed soil.

CITY OF HELENA ENGINEERING STANDARDS		Fire Hydrant Setting	STANDARD DRAWING: 2-2
REVISED: 2/12/13	SCALE: NONE		

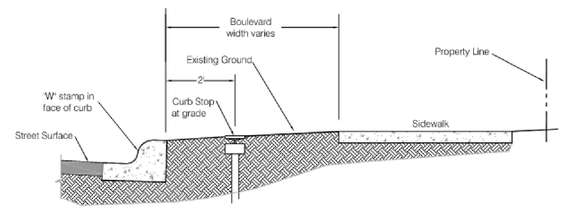




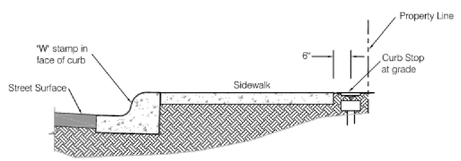
DETAIL OF A PROPERLY INSTALLED CORPORATION STOP, SHOWING GOOSENECK IN SERVICE PIPE

Notes:
1. Minimum cover for service lines shall be measured from existing ground line when ground is level or falling away from street, and measured from top of street curb when ground is rising from street.
2. Water service lines shall be installed where shown on the drawings or as specified.
3. Bedding shall be 1 Inch (25mm) diameter maximum within 6" (15cm) of service pipe.

CITY OF HELENA ENGINEERING STANDARDS		Water Service Line	STANDARD DRAWING: 2-3
REVISED: 2/12/13	SCALE: NONE		

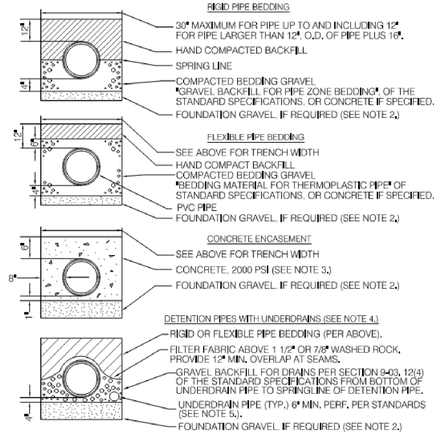


CURB STOP LOCATION W/ BOULEVARD



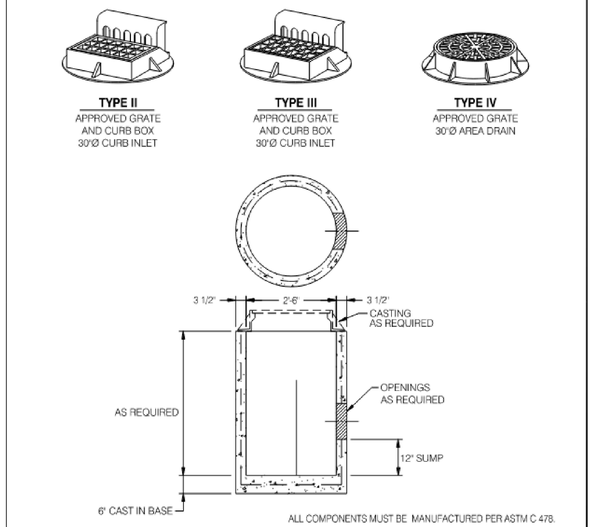
CURB STOP LOCATION CURBSIDE SIDEWALK

CITY OF HELENA ENGINEERING STANDARDS		Water Service Line Curb Stop Location	STANDARD DRAWING: 2-3A
REVISED: 1/12/22	SCALE: NONE		



NOTES:
1. COMPACTED CRUSHED SURFACING TOP COURSE, CRUSHED SURFACING, CAN ALSO BE USED AS BEDDING GRAVEL.
2. EXCAVATE UNSTABLE MATERIAL DOWN TO FIRM SOIL AND REPLACE WITH FOUNDATION GRAVEL BALLAST.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANCHORING PIPE TO PREVENT FLOTATION DURING CONCRETE PLACEMENT.
4. WHEN THE DESIGN OF TANKS OR PIPES DOES NOT TAKE INTO ACCOUNT BOUYANCY, UNDERDRAINS SHALL BE PROVIDED.
5. PROVIDE CLEANOUTS ON UNDERDRAIN PIPE, EVERY 100 FEET, AND AT BENDS OR JUNCTIONS.

CITY OF HELENA ENGINEERING STANDARDS		Pipe Bedding	STANDARD DRAWING: 2-7
REVISED: 2/12/13	SCALE: NONE		



ALL COMPONENTS MUST BE MANUFACTURED PER ASTM C 478.

CITY OF HELENA ENGINEERING STANDARDS		Standard Specification Inlets	STANDARD DRAWING: 4-1
REVISED: 2/12/13	SCALE: NONE		

MONTANA CELINE SAUCIER 14499 REGISTERED PROFESSIONAL ENGINEER
Morrison Maierle engineers · surveyors · planners · scientists
1055 Mount Ave. Missoula, MT 59801 406.542.8880 www.m-m.net

HELENA FIRE STATION #3
HELENA, MT 59602

SHIVEHATTERY ARCHITECTURE + ENGINEERING
DOWLING ARCHITECTS 234 N. Last Chance Gulch | Helena, MT 59601 | 406.457.4070 www.dowling.com

UTILITY DETAILS

100% CONSTRUCTION DOCUMENTS

PROJECT #: 25-668

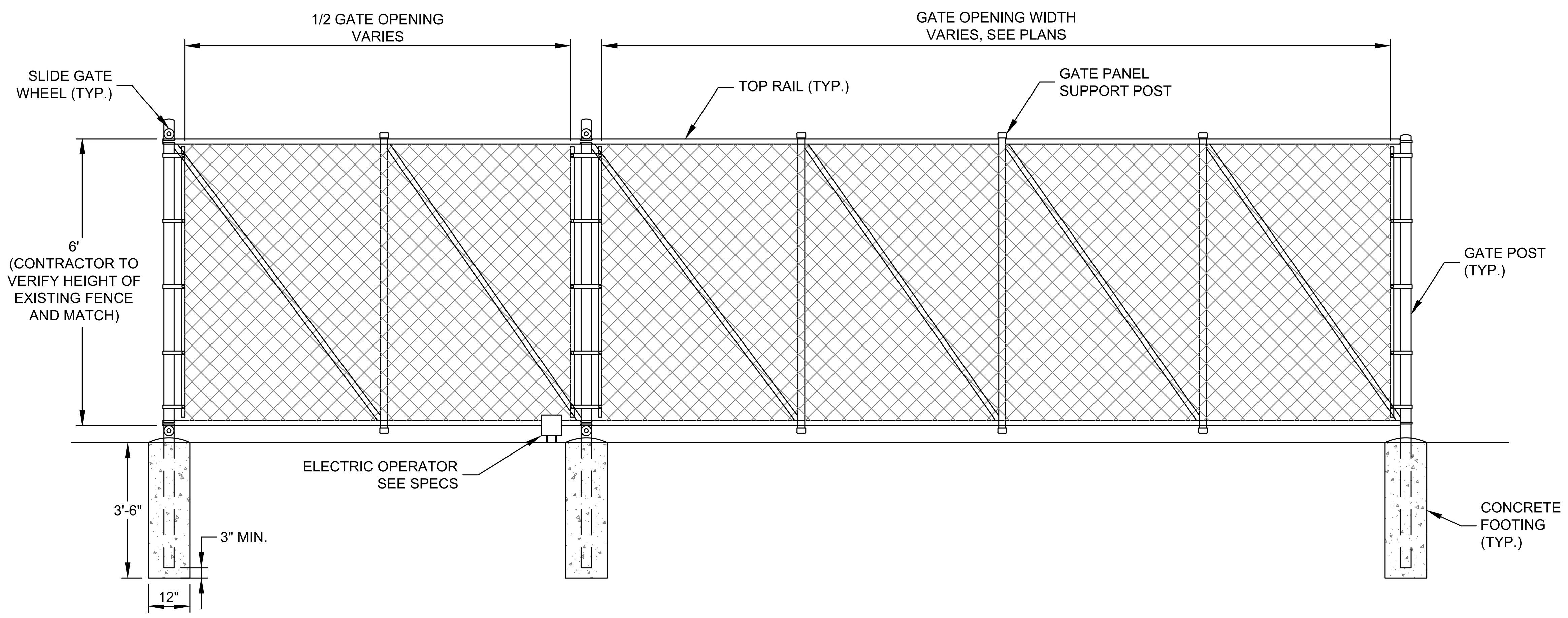
ISSUE DATES:

Addendum 1	11/5/2025

DRAWN BY: JZ

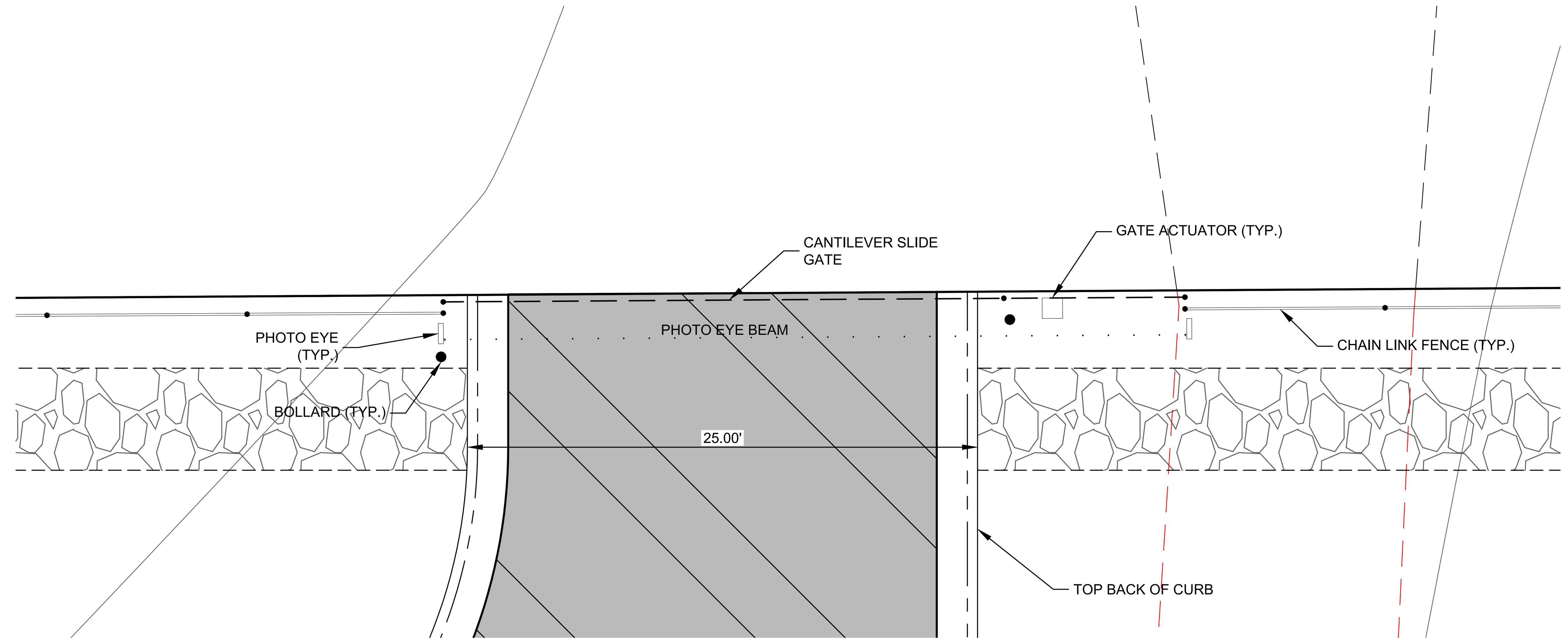
C5-1

10.22.25



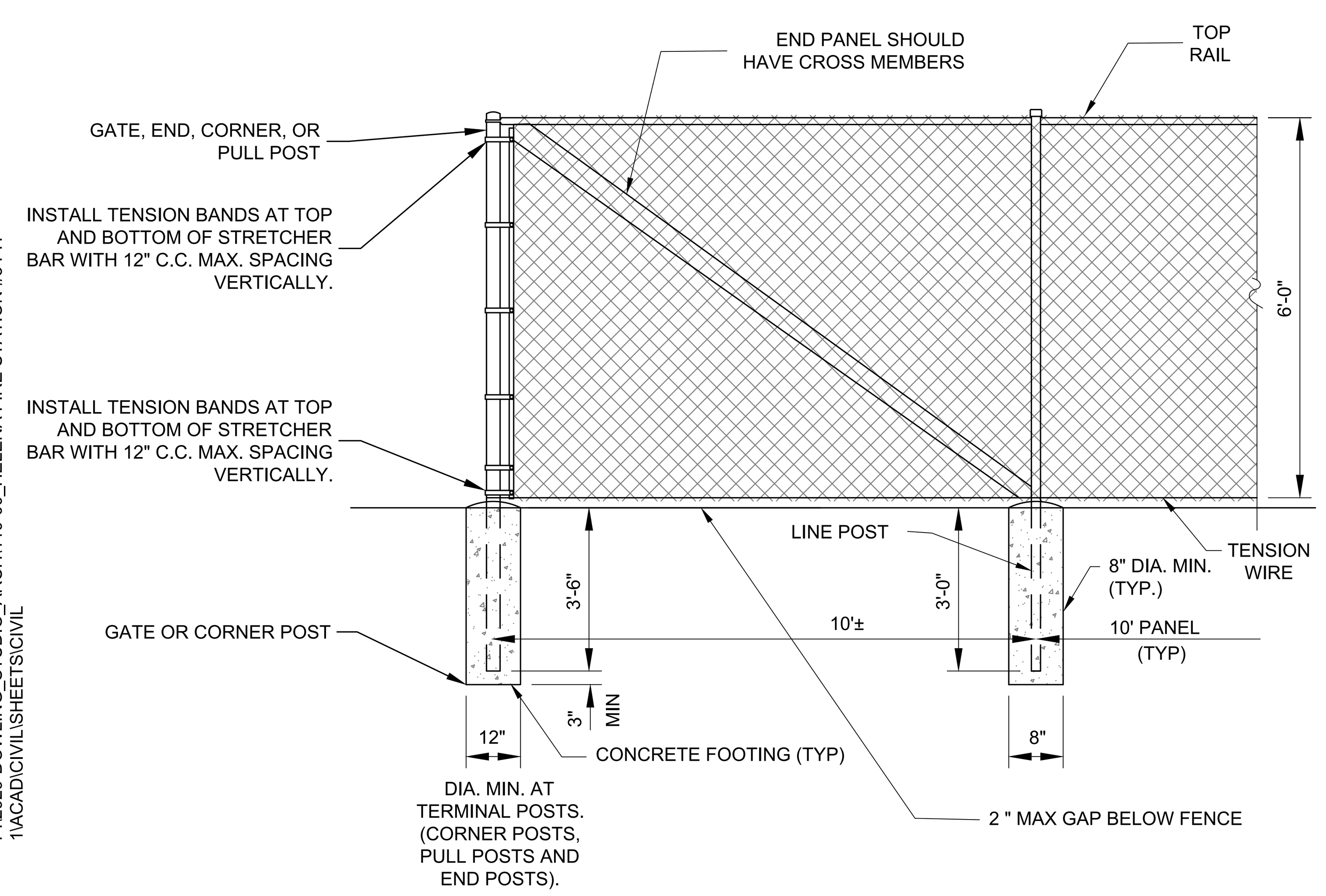
NOTES:
1. AUTOMATED GATE SHALL BE CANTILEVERED SLIDE GATE STYLE.
2. TYPICAL CANTILEVER PANEL SHALL BE 1/2 WIDTH OF GATE OPENING PANEL. CONFIRM WITH GATE SUPPLIER.
3. GATE SUPPORT PANELS PER MANUFACTURER'S RECOMMENDATIONS.
4. CONTRACTOR SHALL PROVIDE DESIGN DETAILS TO ENGINEER FOR CANTILEVER SLIDE GATE PRIOR TO ORDERING AND CONSTRUCTION.
5. GATE SHALL BE CHAIN LINK OF GALVANIZED MATERIAL. MATCH EXISTING COLOR AND FINISH OF OTHER SITE FENCING, SEE SPECS.
6. GATE HEIGHT SHALL BE 6-FT AND RUN ABOVE TOP BACK OF CURB.

1 CANTILEVER SLIDE GATE DETAIL
SCALE: NTS



NOTES:
1. GATE LAYOUT IS SHOWN GRAPHICALLY, FINAL LAYOUT SHALL BE DETERMINED BY CONTRACTOR AND GATE SUPPLIER.
2. CONTRACTOR SHALL PROVIDE FINAL LAYOUT AND DETAILS TO ENGINEER PRIOR TO ORDERING AND CONSTRUCTION.
3. COORDINATE WITH ELECTRICAL AND LOW VOLTAGE DESIGN FOR POWER SUPPLY AND LAYOUT.
4. GATE PANELS PER MANUFACTURER'S RECOMMENDATIONS.

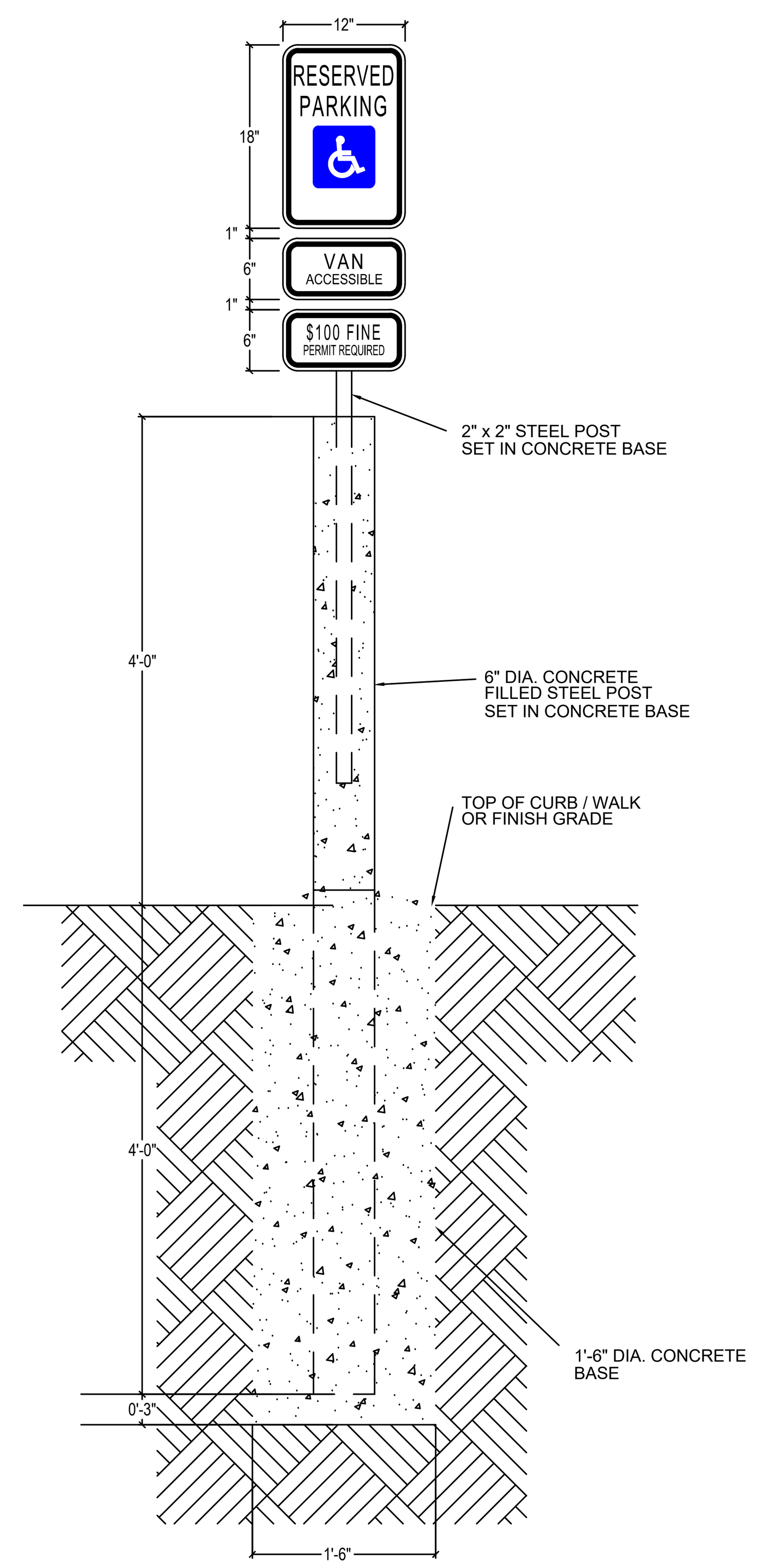
2 CANTILEVER SLIDE GATE LAYOUT DETAIL
SCALE: NTS

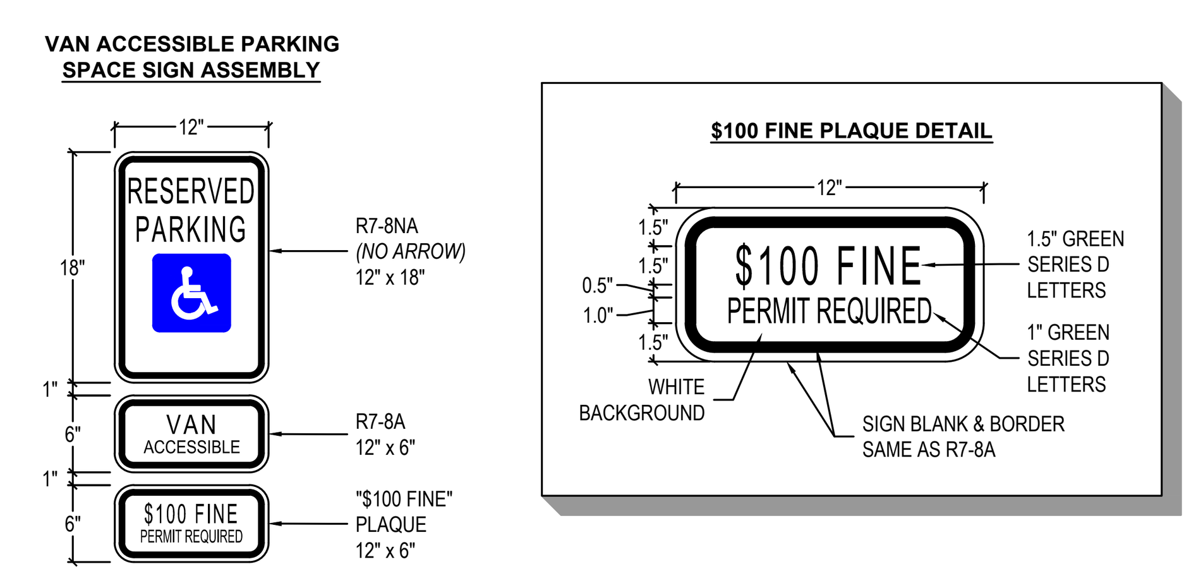


TYPICAL END PANEL

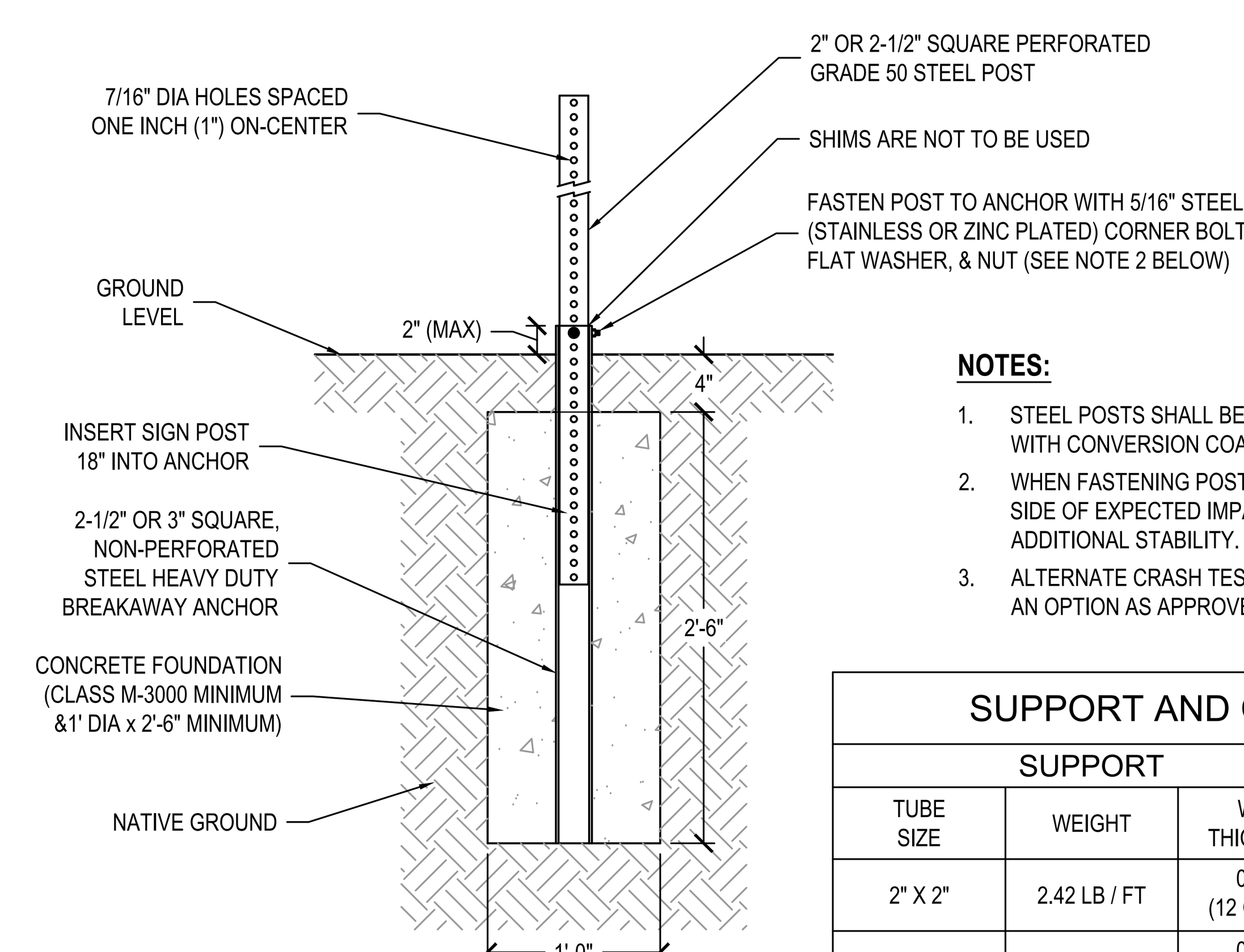
NOTE:
1. FENCE SHALL BE CHAIN LINK MATCHING EXISTING COLOR AND FINISH. SEE SPECS.
2. FENCE HEIGHT SHALL BE 6-FT.
3. FENCE POSTS SHALL BE 10' APART FOR LINES POSTS AND END PANELS.
4. FENCING SHALL BE 9 GUAGE

3 CHAIN LINK FENCE DETAIL
SCALE: NTS





NOTES:
1. SIGNS MAY ALSO BE MOUNTED ON BUILDING FACE AS APPLICABLE AND APPROVED BY OWNER.
2. SIGNS SHALL BE MOUNTED TO POST OR BUILDING USING NEOPRENE, FIBROUS, OR OTHER APPROVED NON-METALLIC WASHERS.

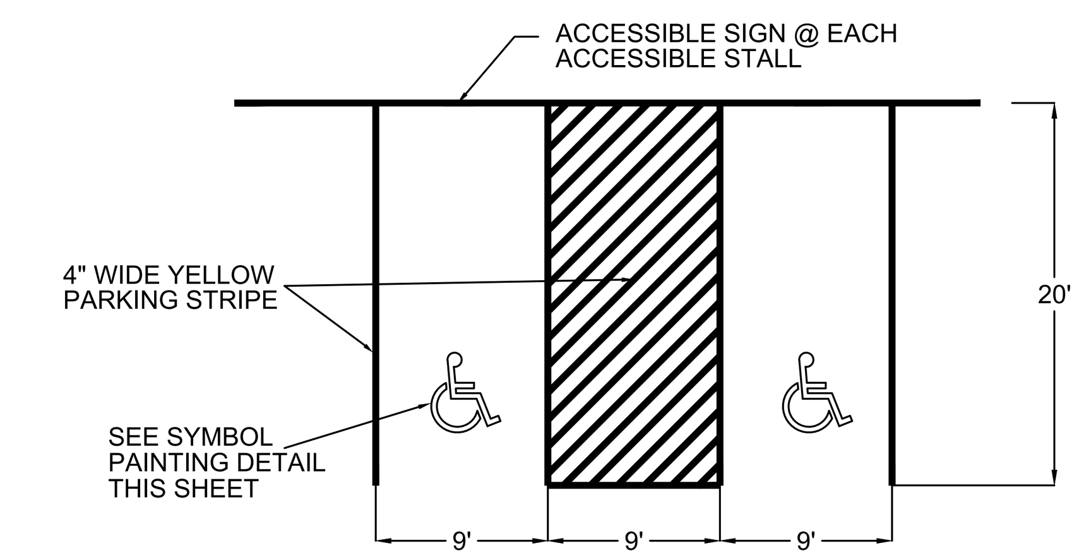


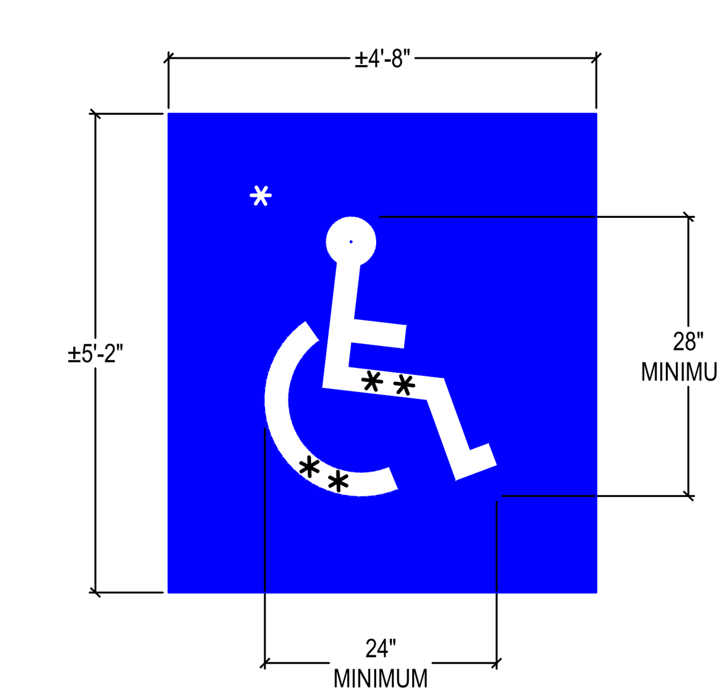
NOTES:
1. STEEL POSTS SHALL BE HOT-DIPPED IN GALVANIZED ZINC COATING AND FINISHED WITH CONVERSION COATING AND A CLEAR ORGANIC TOP COAT.
2. WHEN FASTENING POST TO ANCHOR, INSERT CORNER BOLT HEAD FROM OPPOSITE SIDE OF EXPECTED IMPACT. INSERT DRIVE RIVET INTO OPPOSITE SIDE FOR ADDITIONAL STABILITY.
3. ALTERNATE CRASH TESTED AND APPROVED BREAKAWAY DEVICES MAY BE USED AS AN OPTION AS APPROVED BY THE ENGINEER.

SUPPORT AND CORRESPONDING ANCHOR

SUPPORT			ANCHOR		
TUBE SIZE	WEIGHT	WALL THICKNESS	TUBE SIZE	WEIGHT	WALL THICKNESS
2" X 2"	2.42 LB / FT	0.105" (12 GAUGE)	2-1/2" X 2-1/2"	18.4 LB / EA	0.188" (7 GAUGE)
2-1/2" X 2-1/2"	3.14 LB / FT	0.105" (12 GAUGE)	3" X 3"	23.0 LB / EA	0.188" (7 GAUGE)

4 TRAFFIC RATED ACCESSIBLE SIGN AND POST DETAIL
SCALE: NTS





* BLUE PAINT
** WHITE PAINT - STROKE WIDTH = 3" (MIN)

REFER TO "STANDARD HIGHWAY SIGNS, 2004 EDITION" APPENDIX (PAGE 6-31) FOR HANDICAPPED SYMBOL DESIGN

5 ACCESSIBLE PARKING DETAIL
SCALE: NTS

P:\2929-DOWLING_STUDIO_ARCH\1110-00_HELENA FIRE STATION #3 PH 1\ACAD\CIVIL\SHEETS\CIVIL

10/16/2025 9:16:07 AM

CELINE M. SAUCIER No. 49499 LICENSED PROFESSIONAL ENGINEER MONTANA 10/22/2025

Morrison Maierle
engineers • surveyors • planners • scientists
1055 Mount Ave. Missoula, MT 59801
406.542.8880
www.m-m.net

HELENA FIRE STATION #3
HELENA, MT 59602

SHIVEHATTERY
ARCHITECTURE + ENGINEERING

DOWLING ARCHITECTS
734 N. Last Chance Gulch | Helena, MT 59601 | 406.457.5470
www.dsa-mt.com

FENCING AND SIGNAGE DETAILS

100% CONSTRUCTION DOCUMENTS

PROJECT #: 25-668

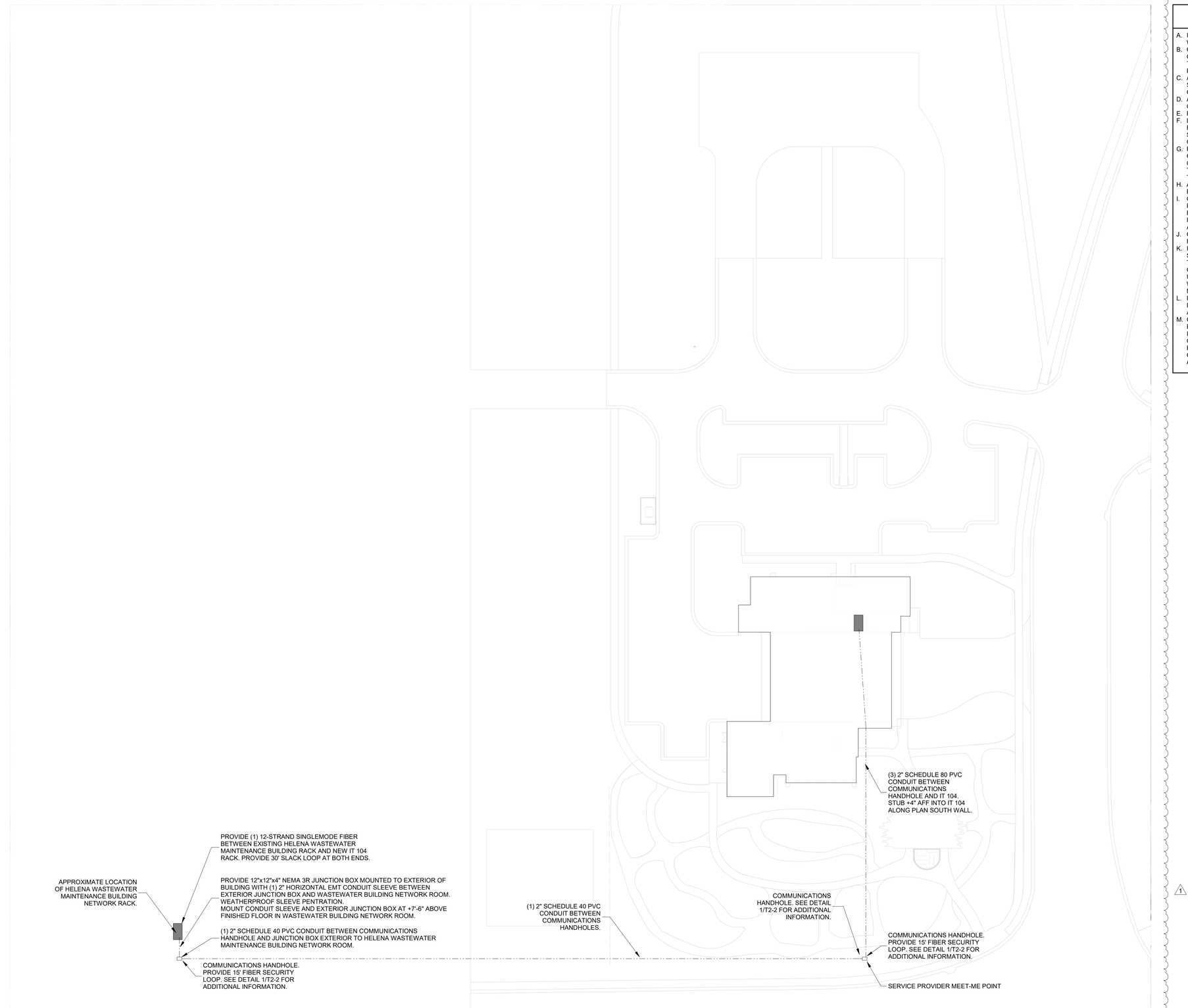
ISSUE DATES:

Addendum 1	11/5/2025

DRAWN BY: JZ

C5-2

10.22.25



1 T3-0 ICT SITE PLAN
1" = 30'-0"

GENERAL ICT SITE NOTES

A. IT IS ABSOLUTELY NECESSARY FOR ALL TRADES INVOLVED TO COORDINATE WITH EACH OTHER.
B. CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING OF FLOORS, WALLS, CEILINGS, AND ROOFS TO PERFORM THE REQUIRED WORK DEPICTED IN THESE DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL PATCHING OF HOLES TO THE SATISFACTION OF THE ARCHITECT/ENGINEER.
C. ALL SIZING, PLACEMENT, AND QUANTITIES FOR CONDUITS, CONDUIT SLEEVES, CABLE TRAY, AND LADDER RACK CALLED OUT ON STRUCTURED CABLING PLANS AND/OR ENLARGED VIEWS.
D. ALL CONDUIT ENDS SHALL BE FURNISHED WITH PLASTIC BUSHINGS FOR CABLE PROTECTION.
E. PROVIDE PULL STRINGS FOR ALL CONDUITS INSTALLED GREATER THAN 10'.
F. LINES SHOWN ON THE PLAN FROM ICT BASED DEVICES TO THE BUILDING REPRESENT THE PROPOSED ROUTING PATH FOR PATHWAYS. CONTRACTOR SHALL SELECT BEST PATH WHEN ROUTING FOR THE LEAST IMPACT ON SITE OR BUILDING.
G. PRIOR TO ANY TRENCHING, CONTACT 811 'CALL BEFORE YOU DIG' AND COORDINATE WITH OWNER AND UTILITIES TO LOCATE ALL BURIED POWER, COMMUNICATIONS, GAS, WATER, SEWER, IRRIGATION PIPING, ETC. FROM THIS INFORMATION, ESTABLISH THE BEST ROUTING AND PLAN FOR AREAS THAT WILL REQUIRE HAND DIGGING.
H. ALL PATHWAYS ON SITE SHALL HAVE A MINIMUM OF 36" OF CLEAN, PROPERLY COMPACTED COVER.
I. CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING OF SIDEWALKS, PAVEMENT, FLOORS, WALLS, CEILINGS, ROOFS, ETC. TO PERFORM THE REQUIRED WORK DEPICTED IN THESE DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL PATCHING OF HOLES TO THE SATISFACTION OF THE ARCHITECT/ENGINEER.
J. CAREFULLY CUT AND RETAIN SOD ALIVE FOR REINSTALLATION. SAW CUT, REMOVE, AND LEGALLY DISPOSE OF CONCRETE AND ASPHALT.
K. INSTALL MOLDED PLASTIC INTERMEDIATE (HORIZONTAL) SPACERS EVERY SIX FEET WHENEVER TWO OR MORE CONDUITS ARE INSTALLED IN A TRENCH. MAINTAIN A MINIMUM 12-INCH SEPARATION BETWEEN POWER AND COMMUNICATIONS CONDUITS. WHERE TRENCH IS SHARED WITH OTHER UTILITIES, A MINIMUM 24-INCH SEPARATION SHALL BE MAINTAINED FROM WATER, GAS, OR SEWER LINES. ALL CONDUIT SEPARATIONS ARE MEASURED SURFACE-TO-SURFACE AND NOT CENTER-TO-CENTER.
L. FILL TRENCH AND COMPACT TO MATCH ADJACENT UNDISTRUBED SOIL. REPLACE SOD TO MATCH EXISTING. POUR CONCRETE AND REPLACE ASPHALT TO MATCH ADJACENT SURFACES.
M. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO EXISTING BURIED POWER, COMMUNICATIONS, GAS, WATER, SEWER, IRRIGATION PIPING, ETC. AND SHALL HIRE TRAINED AND CERTIFIED CRAFTSMEN TO PERFORM THE REPAIRS AND BRING THEM BACK TO 'LIKE EXISTING CONDITIONS'. REPARI WORK WILL NOT BE CONSIDERED COMPLETE UNTIL ALL SYSTEMS ARE ONCE AGAIN FUNCTIONING PROPERLY AND OWNER IS SATISFIED WITH THE REPAIRS.

MONTANA
PAUL HEFFERNAN
No. 91429 PE
LICENSED PROFESSIONAL ENGINEER

Morrison Maierle
engineers · surveyors · planners · scientists
1055 Mount Ave.
Missoula, MT 59801
406.542.8880
www.m-m.net

SHIVEHATTERY
ARCHITECTURE + ENGINEERING

DOWLING ARCHITECTS
734 N Last Chance Gulch | Helena, MT 59601 | 406.457.2400
www.dowlingarch.com

HELENA FIRESTATION #3

HELENA, MT. 59602

ICT SITE PLAN

100% CONSTRUCTION DOCUMENTS

PROJECT #: 25-668

ISSUE DATES:

Addendum 1	11/5/2025

DRAWN BY: MMI

T3-0

10.22.25

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Pete Weber
BICSI ID # 338372
EXPIRES 12-31-28
RCDD